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User's Manual



PM+ Ver. 6.30

Project Manager

Target Devices

78K0R Microcontrollers

V850 Microcontrollers

Document No. U18416EJ1V0UM00 (1st edition)

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PREFACE

Readers: The PM+ is an integrated development environment platform that enables efficient controls of programs running in Windows.
This manual is intended for user engineers who wish to develop application systems using the PM+ on Windows.

Purpose: This manual explains how to operate PM+ on Windows.
For the Windows operations, refer to the function guides provided with the Windows OS.

Organization: This manual consists of the following contents:

- GENERAL
- INSTALLATION
- STARTING AND EXITING
- QUICK TOUR
- METHOD OF OPERATION
- WINDOW REFERENCE
- MESSAGES

How to Read This Manual: It is assumed that the readers of this manual have a general knowledge of microcomputers and a basic knowledge of how to operate Windows 98, Windows Me, Windows 2000, or Windows XP.

Related Documents: When using this manual, also refer to the following documents.
 Some related documents may be preliminary versions. Note, however, that whether a related document is preliminary is not indicated in this document.

Documents related to 78K0R Microcontroller development tools (User's Manual)

Document Name		Document No.
CC78K0R Ver. 1.00 C Compiler	Operation	U17838E
	Language	U17837E
RA78K0R Ver. 1.00 Assembler Package	Operation	U17836E
	Language	U17835E
SM+ System Simulator	Operation	U18010E
PM+ Ver. 6.30 Project Manager		This manual
ID78K0R-QB Ver. 3.20 Integrated Debugger	Operation	U17839E

Documents related to V850 Microcontroller development tools (User's Manual)

Document Name		Document No.
CA850 Ver. 3.00 C Compiler Package	Operation	U17293E
	C Language	U17291E
	Assembly Language	U17292E
	Link Directives	U17294E
ID850 Ver. 3.00 Integrated Debugger	Operation	U17358E
ID850NW Ver. 3.00, 3.10 Integrated Debugger	Operation	U17369E
ID850NWC Ver. 2.51 Integrated Debugger	Operation	U16525E
ID850QB Ver. 3.20 Integrated Debugger	Operation	U17964E
SM+ System Simulator	Operation	U17246E
	User Open Interface	U17663E
SM850 Ver. 2.50 System Simulator	Operation	U16218E
SM850 Ver. 2.00 or later System Simulator	External Part User Open Interface Specifications	U14873E
RX850 Ver. 3.20 Real-Time OS	Basics	U13430E
	Installation	U17419E
	Technical	U13431E
	Task Debugger	U17420E
RX850 Pro Ver. 3.20 Real-Time OS	Basics	U13773E
	Installation	U17421E
	Technical	U13772E
	Task Debugger	U17422E
RD850 Ver. 3.01 Task Debugger		U13737E
AZ850 Ver. 3.30 System Performance Analyzer		U17423E
PG-FP4 Flash Memory Programmer		U15260E
TW850 Ver. 2.00 Performance Analysis Tuning Tool		U17241E
PM+ Ver. 6.30 Project Manager		This manual

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CHAPTER 1 GENERAL

1.1 Overview

The project manager (PM+) is an integrated development environment platform for NEC Electronics microcontrollers (78K0R, 78K0, 78K0S and V850 Microcontrollers).

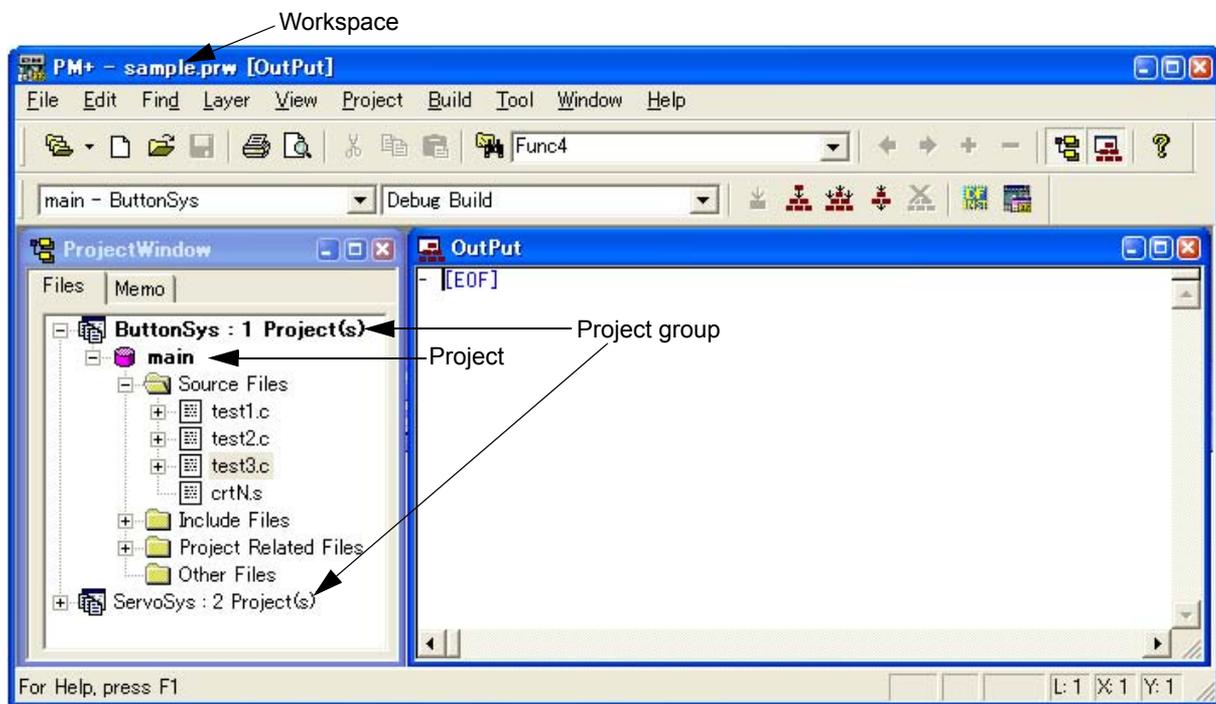
A series of operations in user program development can be performed from PM+ such as editor startup, builder startup, and debugger startup.

1.2 Terminology

The terms used for PM+ are defined below.

Figure 1-1 shows the image of the Main window.

Figure 1-1 Main Window of PM+



Workspace

A "workspace" is the unit which manages the file name of multiple project files.

PM+ saves the file names of multiple project files into a workspace file (*.prw), and refers to it.

Project

A "project" is a unit managed by PM+. It indicates an application system developed under PM+ and its environment. PM+ saves the information, such as the source files, target device name, tool options for creating a load module, and editor or debugger, to be used for the application system into each project file (*.prj) as "project information" and refers to it.

Build or debug is performed in project units. Therefore, the project to be built or debugged have to be set as "active project" (by selecting the [Project] menu -> [Select Active Project...]).

Project group

Multiple registered projects can be arranged with related projects in a group. Note that each project to be registered in a project group must target a common device (i.e. only one device file can be assigned to a project group).

IDL file

An IDL file is a file used to save the layer information for PM+ (idea-L information file).

1.3 Functions and Features

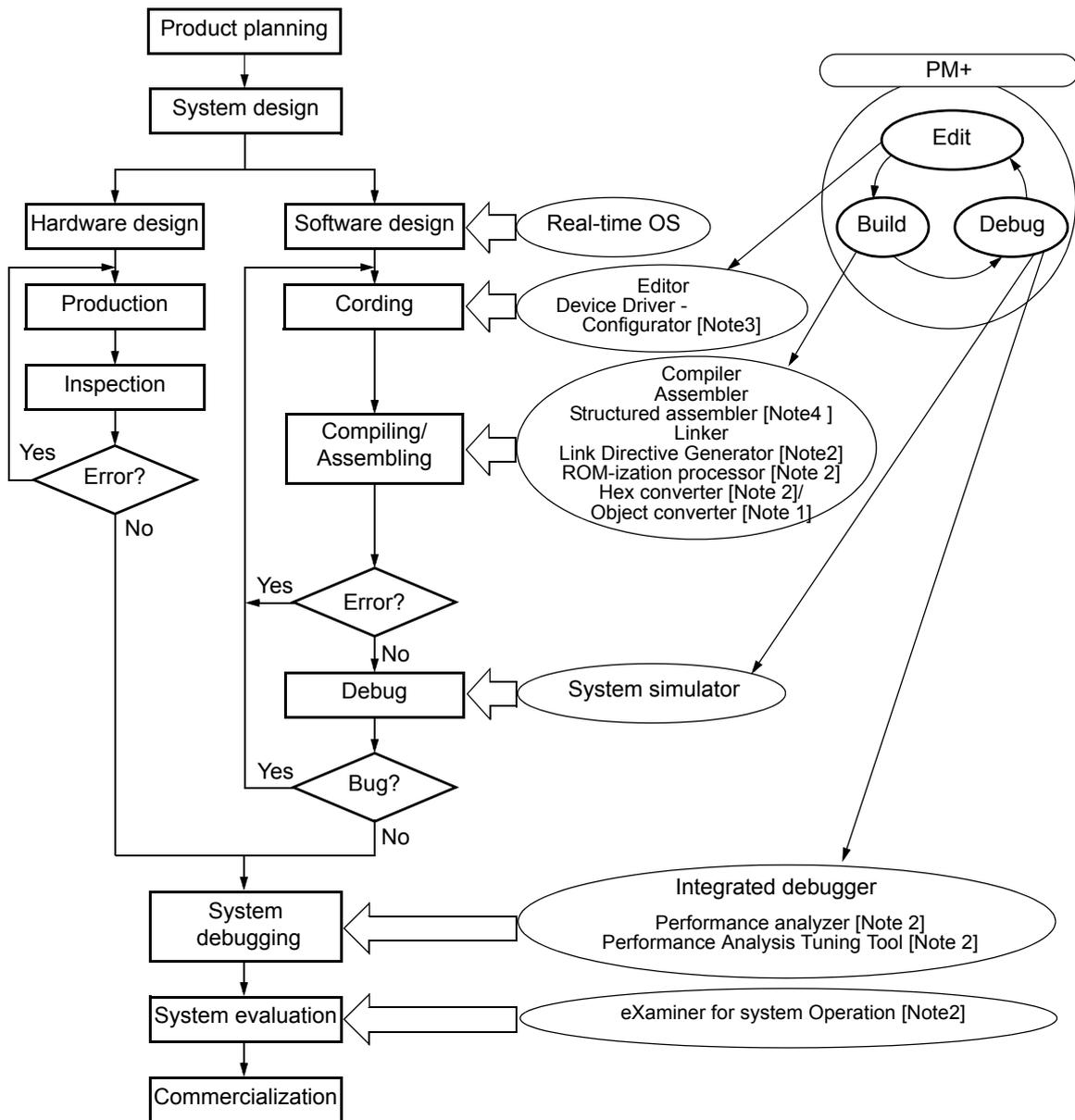
The major functions and features of PM+ are as follows:

- Managing multiple projects
PM+ can manage multiple project files collectively by using concepts such as workspace and project group.
- Starting a builder
PM+ can be used to start tools required for generating application systems (a compiler, structured assembler (only 78K0 or 78K0S Microcontrollers), assembler, linker, ROM-ization processor necessary for storing programs in ROM, and a hex converter).
- Starting editor
PM+ can be used to create or modify the source files to be used for a project by the editor function which PM+ provides. Furthermore, an external editor can also be registered and started from PM+.
- Starting a debugger
PM+ can be used to start NEC Electronics debugger or system simulator. When a correction of the source program is issued from the debugger, PM+ displays a specified line of the specified file.
- Registering and executing external tools
Other applications the user often uses can be included in the menu of PM+ and started from this menu.
- Linking with a source management tool
Version management of the source program in the software development process can be performed more easily by linking with a source management tool.
- Linking with a source analysis tool
Quality management of the source program in the software development process can be performed more easily by linking with a commercial source analysis tool.
- Correspondence of comments with specification
PM+ supports a function that is effective in adjustment of specification at the processes of its review (idea processor function). This makes it possible to reflect the adjusted contents to a source program as comments.

1.4 Positioning of PM+

Figure 1-2 shows the relationship between the software used for program development and PM+.

Figure 1-2 Relationship between Software for Program Development and PM+



- [Note 1] 78K Microcontrollers only
- [Note 2] V850 Microcontrollers only
- [Note 3] 78K0R Microcontrollers only
- [Note 4] 78K0 or 78K0S Microcontrollers only

1.5 Operating Environments

The following environments are required in order to use PM+.

[Caution]

The operation of PM+ is not guaranteed in a network environment. Do not use PM+ in a network environment.

(1) Host machine

- CPU: Pentium II™ 400MHz or higher
- Memory: 128 Mbytes or more
- OS: Windows®2000, Windows XP Professional, Windows XP Home Edition

[Caution]

Regardless of which OS is used, higher and the latest Service Pack must be installed.

(2) DLL

The following DLL files provided by Microsoft Corp. are required.

- mfc42.dll V6.0.8665.0 or more (It is provided when PM+ is installed.)
- msvctr.dll V6.1 or more (It is provided when PM+ is installed.)
- ComCtl32.dll V5.81 or more (It is necessary to install in addition to PM+.)

(3) Related development tools

[78K Microcontrollers]

- Compiler/Assembler:
 - Compiler: CC78K0R (Ver.1.00 or later), CC78K0 (Ver.4.00 later), CC78K0S (Ver.2.00 later)
 - Assembler: RA78K0R (Ver.1.00 or later), RA78K0 (Ver.4.00 later), RA78K0S (Ver.2.00 later)
- Integrated debugger/System simulator
 - Integrated debugger: ID78K0R-QB (Ver.3.20 or later)
 - System simulator: SM+ for 78K0R (Ver.2.20 or later)
- Device File
 - A device file of target device to be used
- Device Driver Configurator (for 78K Microcontrollers: if necessary)
 - Applilet®2 (Under development)

[V850 Microcontrollers]

- Compiler
 - CA850 (Ver.3.00 or later)
- Integrated debugger/System simulator
 - Integrated debugger: ID850 (Ver.3.10 or later), ID850NW (Ver.3.10 or later), or ID850QB (Ver.3.10 or later)
 - System simulator: SM850 (Ver.3.00 or later), or SM+ for V850 (Ver.2.00 or later)
- Device File
 - A device file of target device to be used
- Performance analysis tuning tool (if necessary)
 - TW850 (Ver.2.00 or later)
- Link Directive Generator (if necessary)
 - LDG (Ver.1.01 or later)
- eXaminer for system Operation (if necessary)
 - XO850 (Ver.3.20 or later)

1. 6 Files Created/Managed by PM+

The files created and managed by PM+ are as follows.

Refer to the user's manual of each tool for files created by other tools linked with PM+.

(1) Workspace file (*.prw)

File in which workspace information is saved.

It is created by selecting the [File] menu -> [New Workspace...], or when an existing project file (*.prj) is opened. Information such as the project file name registered in the workspace and batch build information is stored in this file.

(2) Project file (*.prj)

File in which project information is saved.

It is created when a project is created (refer to "[5. 6. 1 Creating a project file](#)"). Various kinds of information set to the project and information such as options set to tools linked with PM+ are saved in this file.

(3) User environment setting file (*.prk)

File in which information specific to the user, such as window locations and toolbar display information, is saved.

This file is always updated when PM+ is terminated, so this file does not need source management.

If this file is deleted, user-dependant environment settings are cleared.

(4) Dependency data file (*.sdb)

File in which the dependency with the source file is registered.

Aiming to accelerate the opening of a project, this file is updated when the project is closed. (It is newly created if the file does not exist.)

(5) Function information file (*.fni)

File in which information on the functions included in the source file is registered.

Aiming to accelerate the opening of a project, this file is updated when the project is closed. (It is newly created if the file does not exist.)

(6) Make file (*.mak)

File automatically created at build.

This file is updated during the build after settings such as options have been changed (refer to "[5. 6. 10 Exporting a make file](#)").

(7) Log file (*.plg)

File in which the contents of the [\[OutPut\] window](#) are saved.

This file is updated during a build. (It is newly created if the file does not exist.)

CHAPTER 2 INSTALLATION

2.1 Installing PM+

PM+ is included with an assembler package (RA78Kx) or a compiler package (CA850).

When RA78Kx or CA850 are installed, PM+ can be also installed if necessary, as it is supplied in the same package.

For the details on how to install the assembler package or the compiler package, refer to the user's manual of each tool.

2.2 Uninstalling PM+

To uninstall PM+, start "Add or Remove Programs" ("Add/Remove Programs" in Windows other than Windows XP) on the Control Panel of Windows and select the following items.

- NEC EL PM+ V6.30
- NEC EL PM+ V6.30 Documents

CHAPTER 3 STARTING AND EXITING

3.1 Starting

PM+ can be started by either of the following methods.

[When starting PM+ without using parameters]

- Select Windows Start menu -> [Program] -> [NEC Electronics Tools] -> [PM+ V6.30]
- Double-click the existing workspace file (*.prw) (The selected workspace file automatically opens.)

[When starting PM+ using parameters]

- Input the command line as shown below.

[Format]

`pmplus.exe Δ filename1 Δ -Ln Δ filename2 Δ -Ln Δ filename3 Δ -Ln` Δ : space

The diagram shows the command line `pmplus.exe Δ filename1 Δ -Ln Δ filename2 Δ -Ln Δ filename3 Δ -Ln`. Solid arrows point from the text "File names opened at startup" to the three file names: `filename1`, `filename2`, and `filename3`. Dashed arrows point from the text "Line numbers in which the caret is placed (n = line number)" to the three line number placeholders: `-Ln`, `-Ln`, and `-Ln`.

[Caution]

If a workspace file (*.prw) or project file (*.prj) is specified for the file name, specification of the line number will be ignored.

[Example]

`pmplus.exe Δ F:\SRC\CALLTREEVIEW.CPP Δ -L12`

-> "F:\SRC\CALLTREEVIEW.CPP" is loaded to the [Edit window](#) and the caret is placed on the 12th line.

`pmplus.exe Δ F:\PRJ\CALLTREE.PRW Δ -L12 Δ F:\SRC\CALLTREEVIEW.CPP Δ -L12`

-> "F:\PRJ\CALLTREE.PRW" opens and -L12 is ignored

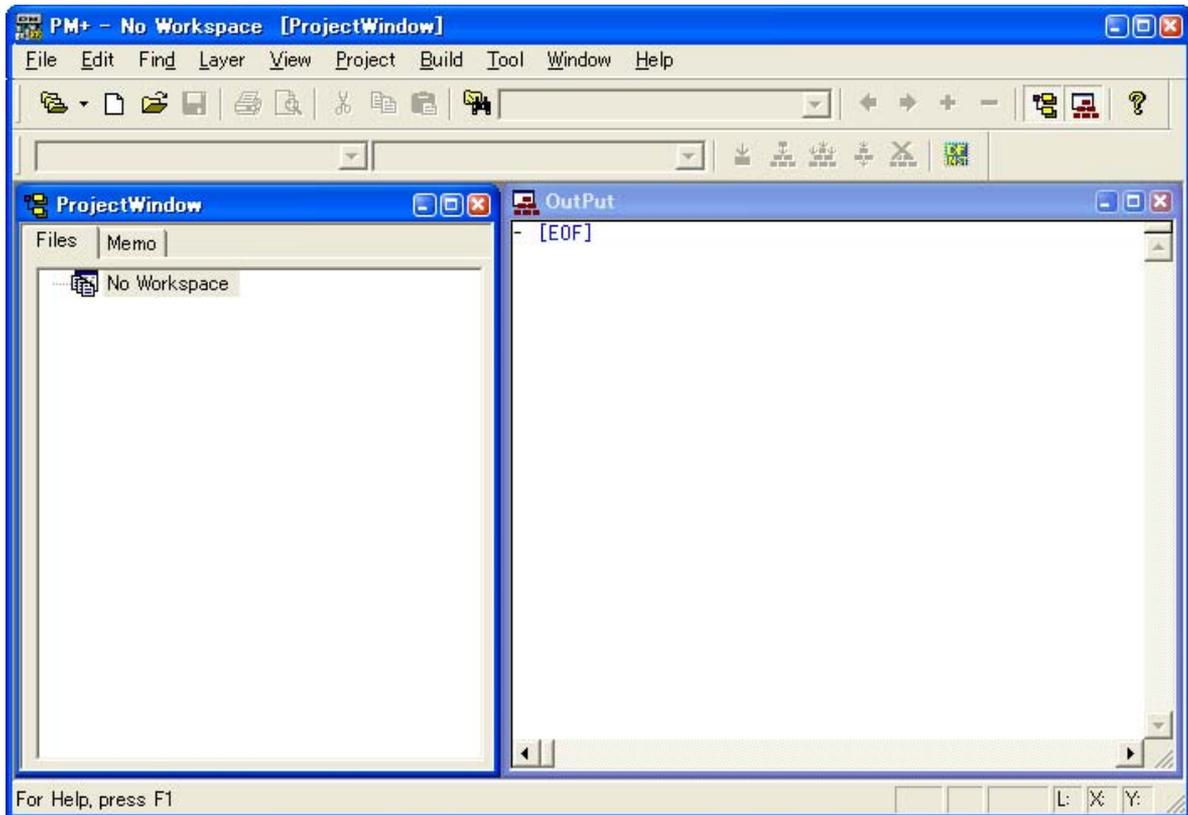
"F:\SRC\CALLTREEVIEW.CPP" is loaded to the [Edit window](#) and the caret is placed on the 12th line.

[Caution]

Multiple instances of PM+ cannot be started at the same time. If an attempt is made to start a new PM+ while PM+ is already running, the currently running PM+ will be displayed on the forefront.

The [Main window](#) will be displayed after PM+ is started.

Figure 3-1 Main Window at Starting (When Starting PM+ from Windows Start Menu)



[Caution]

Multiple PM+ cannot be activated. Therefore, if an attempt is made to start PM+ while PM+ has already run, already-running PM+ will be displayed on the forefront.

3.2 Exiting

To terminate PM+, select the [File] menu -> [Exit PM+] on the [Main window](#) or click the [Close] button.

For any window that has been edited, a message for confirming whether to save the changes is displayed, then the PM+ is terminated.

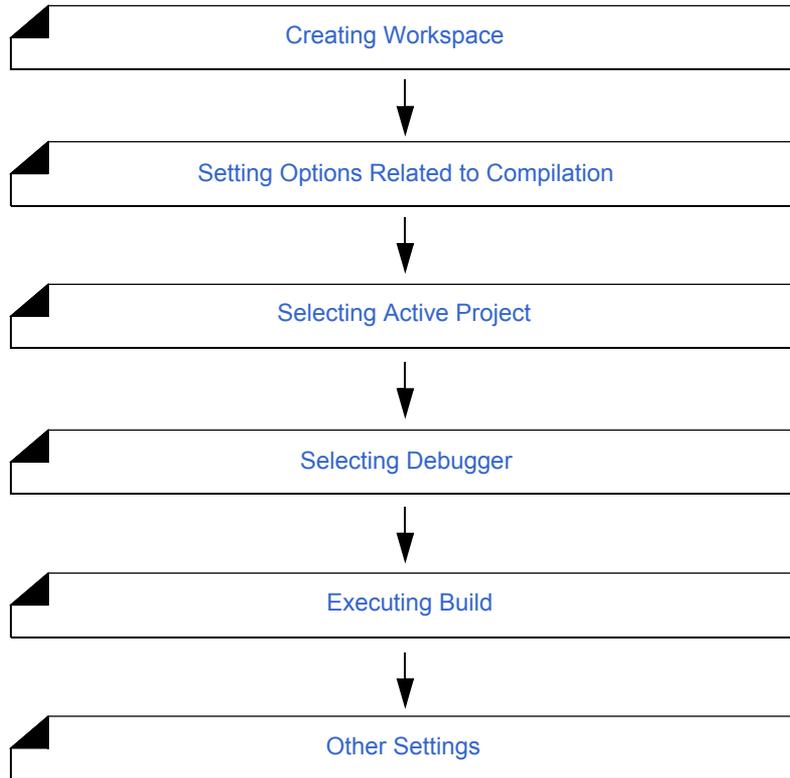
Note that PM+ cannot be terminated during build execution.

CHAPTER 4 QUICK TOUR

4.1 Overview

This chapter describes the operation flow from project registration to debugging for first-time users of PM+.

Figure 4-1 Operation Flow until Debugging



4.2 Creating Workspace

The development flow using PM+ begins with the registration of a project. In order to register a project, a "workspace" to manage it must be created. A workspace can be created using one of the following three methods. Refer to the appropriate method in accordance with the environment used.

(1) Creating a new workspace

A new workspace can be created by specifying the necessary project information in order in a wizard format.
[Refer to]: "[5. 1. 6 Creating a new workspace](#)"

(2) Creating a workspace using a project file created by the PM (V3.xx) or PM plus (V5.xx)

In PM+, a workspace can be created by reading a project file or workspace file created by the PM (V3.xx) or PM plus (V5.xx).
[Refer to]: "[5. 1. 5 Opening a project file generated by the previous version](#)"

(3) Creating a workspace using a project file created by a NEC Electronics debugger/simulator

A workspace can be created by using a project file that has been updated the project information for PM+ in a wizard format.
[Refer to]: "[5. 1. 7 Opening a workspace](#)"

Multiple projects can be registered to one workspace.
[Refer to]: "[5. 6. 3 Adding a new project to a workspace](#)"

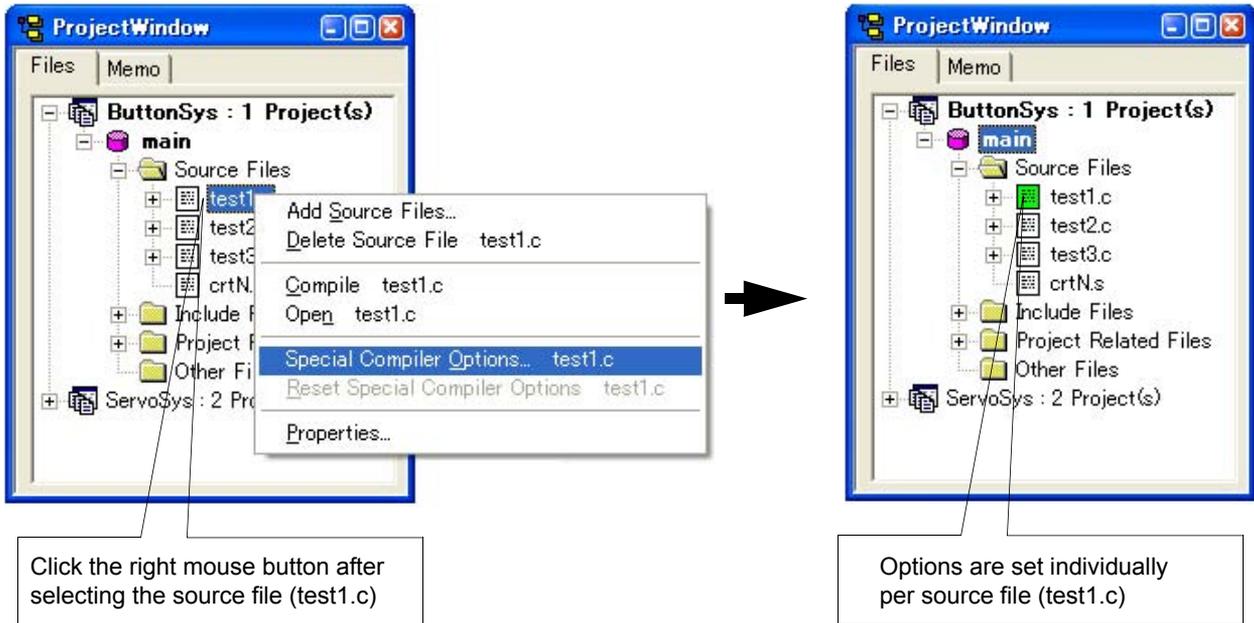
4.3 Setting Options Related to Compilation

Options related to compilation can be set for each project from the [Tool] menu.

Refer to the user's manual of the compiler for details of each option.

To set option individually in source file units, select the appropriate file on the [Project] window and click the right mouse button. When option is set individually, the icon of the source file will change to green on the [Project] window.

Figure 4-2 Setting Options Related to Compilation



In PM+, individual options related to the compiler can be set for each registered source file.

4. 4 Selecting Active Project

In PM+, multiple projects can be registered to one workspace.

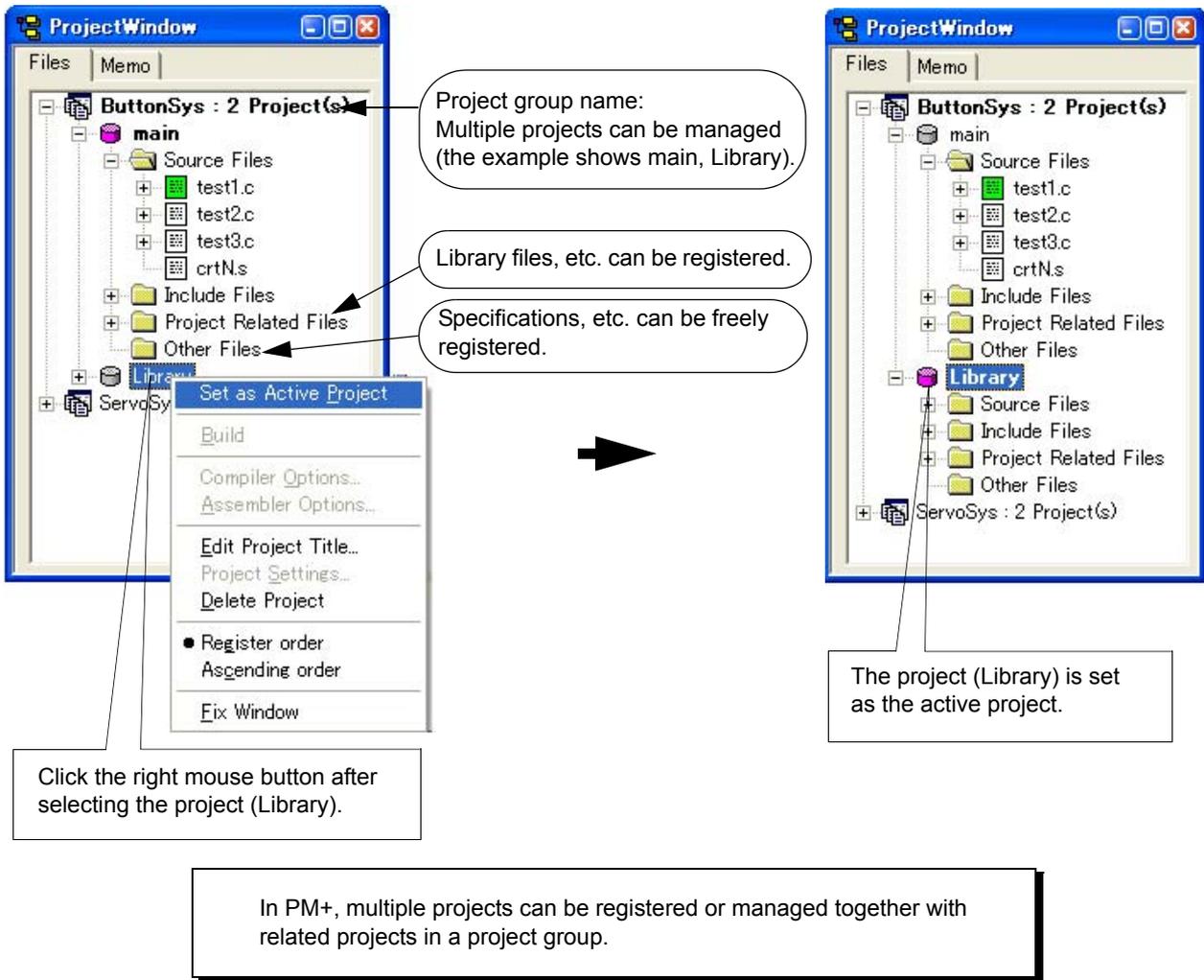
When build is executed, therefore, the project to be built must be pre-specified.

To specify the active project, select the appropriate project on the [Project] window and click the right mouse button. The icon of the project will change from gray to pink when selected as an active project.

Only an active project is built or debugged.

[Refer to]: "5. 6. 2 Selecting active project"

Figure 4-3 Selecting Active Project



4.5 Selecting Debugger

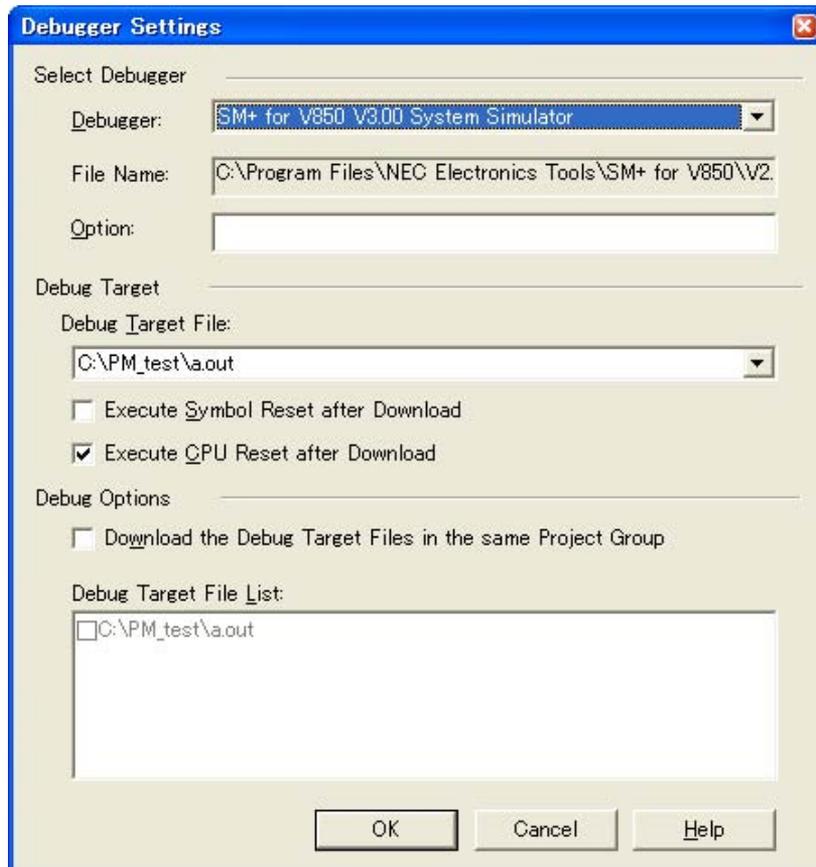
Selecting the [Tool] menu -> [Debugger Settings...] displays the [Debugger Settings] dialog box in which the debugger to be used can be set.

In this dialog box, all the NEC Electronics debuggers and simulators that are specified as the tools to be used and their versions can be displayed and selected.

After executing build by selecting the [Build] menu -> [Build and Debug], the debugger that is set here starts up automatically and downloads a load module file at the same time to facilitate the debug operation.

[Refer to]: [Debugger Settings] dialog box, "5. 6. 18 Changing the tools used"

Figure 4-4 Selecting Debugger



4.6 Executing Build

selecting the [Build] menu -> [Build and Debug] starts batch processing from build to debug for the active project.

If build ends correctly, the set debugger starts up automatically and loads the created load module file (if the debugger does not have to be started up, execute build by selecting the [Build] menu -> [Build]). At this time, a make file (*.mak) is also created automatically in default condition.

The messages that are output from the language processing tool during build execution are displayed on the [\[OutPut\] window](#). At this time, place the caret on the error/warning line that is displayed and double-click the left mouse button to open the source file and tag-jump to the relevant error/warning line.

[Refer to]: "[5.7.1 Building and debugging](#)"

4.7 Other Settings

There are many other functions is provided to enable more efficient and smooth execution of the debug operation flow using the PM+ platform.

- Setting the layer rule

[Refer to]: "[5.4.17 Applying a layer rule](#)"

- Registration of external tools and customization of menu/toolbars

[Refer to]: "[5.8.5 Registering external tools](#)", "[5.8.11 Customizing settings](#)"

- Word-based searching in all the source files of the project

[Refer to]: "[5.3.23 Searching for a character string within a project](#)"

- Setting the tool to be used

[Refer to]: "[5.6.18 Changing the tools used](#)"

CHAPTER 5 METHOD OF OPERATION

5. 1 File Management

Operations related to the file handling in PM+ are shown below.

The operations described in this section are performed using the [File] menu in the [Main window](#).

- [Creating a new file](#)
- [Opening a existing file](#)
- [Inserting a file](#)
- [Closing a window](#)
- [Opening a project file generated by the previous version](#)
- [Creating a new workspace](#)
- [Opening a workspace](#)
- [Saving a workspace](#)
- [Closing a workspace](#)
- [Saving a file by overwriting](#)
- [Saving a file with a new name](#)
- [Saving all files](#)
- [Saving all files \(Changed files only\)](#)
- [Saving and closing all files](#)
- [Closing all windows](#)
- [Closing all windows without saving](#)
- [Changing a source file name](#)
- [Saving all source files](#)
- [Checking printing status](#)
- [Printing](#)
- [Printing directly](#)
- [History of files](#)
- [History of workspaces](#)
- [Exiting PM+](#)

5. 1. 1 Creating a new file

Selecting the [File] menu -> [New] opens a new [Edit window](#).

Up to 64 [Edit window](#) can be opened together with the [Search result display window](#) and the [\[OutPut\] window](#).

5. 1. 2 Opening a existing file

Selecting the [File] menu -> [Open] opens the [\[Open\] dialog box](#) to open a selected file.

5. 1. 3 Inserting a file

Selecting the [File] menu -> [Insert file...] opens the [\[Insert File\] dialog box](#) to insert a specified file at the caret position in the currently active [Edit window](#).

The files that can be inserted are "IDL file" and "text file".

5. 1. 4 Closing a window

Selecting the [File] menu -> [Close] closes the window being edited. If the contents of the window has been modified, a message for confirming whether to save the changes is displayed.

Note that if there are any files with read-only having the same name, those files will all be closed.

5. 1. 5 Opening a project file generated by the previous version

Selecting the [File] menu -> [Open Workspace...] opens the [\[Open Workspace\] dialog box](#) to read a project file (*.prj) or workspace file (*.prw) that was generated by the previous version, PM (V3.xx) or PM plus (V5.xx).

At this time, PM+ outputs a message that prompt the user to confirm that PM+ is going to convert the file format into the workspace file format of PM+ (V6.xx). Click the [OK] button; the file format is then automatically converted as follows and read.

- Workspace file name (If a project file is read);
"project file name + extension (*.prw)"
- Project group name (If a project file is read);
"device microcontrollers name" (e.g. V850 Microcontrollers)
- Project title name (If a project file is read);
If a title setting has been performed with the read file, it remains as its title.
If no title setting has been performed with the read file, the project file name is set as its title.
- [Select Debugger] information (Only PM plus (V5.xx));
Deleted
- Version information;
PM+ (V6.xx)

The workspace name can not be renamed. However, the project group name or the project title name can be renamed by clicking the right mouse button on its name in the [\[Project\] window](#).

If a project file generated by the other NEC Electronics tools (debugger, etc.) is to be opened, refer to "[5. 1. 7 Opening a workspace](#)".

5. 1. 6 Creating a new workspace

Selecting the [File] menu -> [New Workspace...] creates a new workspace.

To create a new workspace and its project, the [\[New WorkSpace\] wizard](#) is displayed.

Enter/select the necessary information in each dialog box to be displayed and click the [Next>] button to proceed. Clicking the [Finish] button in the dialog box at the last step ([\[New WorkSpace - Step 9/9 \[Confirmation\]\] dialog box](#)) causes a make file to be created automatically. refer to "[5. 6. 10 Exporting a make file](#)" for details of make file creation.

5. 1. 7 Opening a workspace

selecting the [File] menu -> [Open Workspace...] or moving the workspace file using a drag-and-drop operation opens a workspace.

Selecting the [File] menu -> [Open Workspace...] displays the [\[Open Workspace\] dialog box](#) and opens the selected workspace file (*.prw) on the [\[Project\] window](#). At this time, closes the currently opened workspace file and project file. If a project file (*.prj), rather than a workspace file, is specified, a message is displayed, after which the prw file corresponding to prj is opened. At this time, the project file (*.prj) of PM (V3.xx) format can also be specified in this dialog box (refer to "[5. 1. 5 Opening a project file generated by the previous version](#)").

If a workspace file is dragged to the main frame, [Edit window](#), [Search result display window](#), [\[OutPut\] window](#), and

[\[Project\] window](#), opens the workspace file that was dropped. At this time, closes the currently opened workspace file. If a project file (*.prj), rather than a workspace file, is moved using a drag-and-drop operation, a prw file corresponding to prj is opened.

If an attempt is made to open a project file created by another NEC Electronics tool (debugger or simulator), a message is displayed, after which the [\[Project Settings\] wizard](#) for updating the project information for PM+ are opened.

Enter/select the necessary information in each dialog box and click the [Next>] button to proceed.

5. 1. 8 Saving a workspace

Selecting the [File] menu -> [Save Workspace] saves the currently opened workspace.

The information of the opened workspace and the project(s) is saved into the current file. (by overwriting)

5. 1. 9 Closing a workspace

Selecting the [File] -> [Close Workspace] closes all the currently opened windows. At this time, you can select whether all the [Edit window](#) are to be closed. After the all windows are closed, "No Workspace" will appear on the [File] tag in the [\[Project\] window](#).

5. 1. 10 Saving a file by overwriting

Selecting the [File] menu -> [Save] saves an IDL file or and a source file are saved into the each current file (by overwriting). All the current file information including such as the layer information and the location of the caret in the [Edit window](#) is saved into the IDL file.

By specifying the [Layer Indent] area ([Tool] menu -> [PM+ Settings...] - [Source File by idl file] tab), the indent by layer can be replaced with the Tab code or a single-byte space.

If the following files are active, the [\[Save As\] dialog box](#) is displayed to specify the name of the file.

- A newly created [Edit window](#)
A default file name is created based on the contents of the first line in the [Edit window](#).
- A Search result display window
A default file name is created based on the contents of the first line in the [Edit window](#).
- An IDL backup file opened by selecting the [Open] menu or the history of the file.
A default file name is "backup file name.idl".
- An [Edit window](#) in which multiple files were read.
A default file name is created based on the contents of the first line in the [Edit window](#).
- A file saved automatically
A default file name is created based on the contents of the first line in the [Edit window](#).
- A newly created source file
A default file name is created based on the contents of the first layer line of each file in the [Edit window](#).

5. 1. 11 Saving a file with a new name

Selecting the [File] menu -> [Save as...] opens the [\[Save As\] dialog box](#) to assign a name to the file being edited and save it. In addition, the indent by the layer and the setting of the Tab can be specified with the [\[Save Source Files Options\] dialog box](#).

5. 1. 12 Saving all files

Selecting the [File] menu -> [Save All] saves all of the files currently open in the [Edit window](#) by overwriting. The contents of the [Edit window](#) including those that have not been modified are also saved, however, the contents of the [Edit window](#), [\[OutPut\] window](#) and [Search result display window](#) that have the read-only attribute are not saved.

Note that [Save All (Changed files Only)] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 1. 13 Saving all files (Changed files only)

By selecting the [File] menu -> [Save All (Changed files Only)], the contents of all the [Edit window](#) currently opened are saved by the same file name. However, the contents of the [Edit window](#) including those that have not been modified is not saved.

Note that [Save All (Changed files Only)] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 1. 14 Saving and closing all files

Selecting the [File] menu -> [Save and Close All] saves all of the files currently open in the [Edit window](#) and then closes the windows. The [\[Project\] window](#) and the [\[OutPut\] window](#) are not closed.

Note that [Save and Close All] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 1. 15 Closing all windows

Selecting the [File] menu -> [Close All] closes all the [Edit window](#) currently open. If any of the contents have been changed, a message for confirming whether the changes are to be saved is displayed. The [\[Project\] window](#) and the [\[OutPut\] window](#) are not closed.

Note that [Close All] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 1. 16 Closing all windows without saving

Selecting the [File] menu -> [Destroy All] closes all the [Edit window](#) currently open without saving. The [\[OutPut\] window](#) and the [\[Project\] window](#) are not closed.

5. 1. 17 Changing a source file name

Selecting the [File] menu -> [Change Source File Name...] opens the [\[Change Source File Names\] dialog box](#) in which the name of the source file can be changed.

5. 1. 18 Saving all source files

Selecting the [File] menu -> [Save All Source Files] saves all the source files by overwriting regardless of whether the contents are modified or not.

5. 1. 19 Checking printing status

Selecting the [File] menu -> [Print Preview] displays the printing status of the active [Edit window](#) in the condition set in the [\[Print\] dialog box](#).

The following functions are supported on the print preview window:

[Print]	Displays the [Print] dialog box .
[Next Page]	Displays the next screen.
[Prev Page]	Displays the previous screen.
[One Page/Two Page]	Toggles the display mode between one-page or two-page.
[Zoom In]	Expands the display in two steps.
[Zoom Out]	Reduces the display in two steps.
[Close]	Closes the print preview window.

5. 1. 20 Printing

Selecting the [File] menu -> [Print...] opens the [\[Print\] dialog box](#) to print the contents of the active [Edit window](#).

5. 1. 21 Printing directly

Selecting the [File] menu -> [Print Direct] prints the contents of the active [Edit window](#) without opening the [\[Print\] dialog box](#).

5. 1. 22 History of files

The bottom of the [File] menu displays the names of the ten most recently edited/saved files. Selecting any one of them causes the [Edit window](#) for that file to open.

5. 1. 23 History of workspaces

The bottom of the [File] menu displays the names of the ten most recently opened workspace files or project files.

5. 1. 24 Exiting PM+

To exit the PM+, select the [File] menu -> [Exit PM+] or the [Close] button. For any window that has been edited, a message for confirming whether to save the changes is displayed, then the PM+ is exited.

Note that PM+ cannot be terminated during build execution.

5.2 Edit Functions

Operations related to editing files in PM+ are shown below.

The operations described in this section are performed using the [Edit] menu in the [Main window](#).

- Canceling an edit operation
- Canceling an [Undo] operation
- Cutting off character strings
- Copying character strings
- Cutting off character strings (Cut for Append)
- Copying character strings (Copy for Append)
- Copying character strings as a screen image
- Inserting the contents of clipboard
- Inserting the contents of clipboard with specified format
- Deleting character strings
- Deleting a word
- Deleting characters to the end of a word
- Deleting a line
- Deleting character strings to the top of line
- Deleting character strings to the end of line
- Selecting a word at the caret
- Selecting a word to the left of the caret
- Selecting a word to the right of the caret
- Selecting a range to the top of line
- Selecting a range to the end of line
- Selecting entire contents
- Grouping by keyword
- Restoring color of grouping line
- Creating function prototypes
- Inserting a new object
- Setting links for objects
- Object

5. 2. 1 Canceling an edit operation

Selecting the [Edit] menu -> [Undo] cancels the effect of an edit operation and restores the previous state. Up to 1024 edit operations can be undone.

[Undo] is effective for the following edit operations:

- Entry of characters into the [Edit window](#). (The key input is canceled for each one character including the [Tab], [Delete], [BackSpace] and [Enter] keys.)
- [File] -> [Insert file...]
- [Edit] -> [Cut]
- [Edit] -> [Paste]
- [Edit] -> [Paste Special...]
- [Edit] -> [Delete]
- [Edit] -> [Delete the Line]
- [Edit] -> [Insert New Object...]
- Replacement of a character string using [Find] -> [Replace...] (except [Replace All])
- Copying of lines by dragging of mouse
- Movement of lines by dragging of mouse
- Insertion of a tab character at the beginning of a line
- Deletion of a tab character at the beginning of a line
- [Layer] -> [Promote]
- [Layer] -> [Demote]

5. 2. 2 Canceling an [Undo] operation

Selecting the [Edit] menu -> [Redo] cancels the effect of an [Undo] operation and restores the previous state. Up to 1024 edit operations can be redone.

[Redo] is effective for the following edit operations:

- Entry of characters into the [Edit window](#). (The key input is canceled for each one character including the [Tab], [Delete], [BackSpace] and [Enter] keys.)
- [File] -> [Insert file...]
- [Edit] -> [Cut]
- [Edit] -> [Paste]
- [Edit] -> [Paste Special...]
- [Edit] -> [Delete]
- [Edit] -> [Delete the Line]
- [Edit] -> [Insert New Object...]
- Replacement of a character string using [Find] -> [Replace...] (except [Replace All])
- Copying of lines by dragging of mouse
- Movement of lines by dragging of mouse
- Insertion of a tab character at the beginning of a line
- Deletion of a tab character at the beginning of a line
- [Layer] -> [Promote]
- [Layer] -> [Demote]

5. 2. 3 Cutting off character strings

Selecting the [Edit] menu -> [Cut] sends the character string or lines selected with range selection to the clipboard and deletes them from the [Edit window](#).

If the lines selected with range selection have lower layers, the contents of the lower layer lines will also be sent to the clipboard regardless of whether the layers are expanded or collapsed.

When a character string is cut, the caret position will not be changed. When lines are cut, the caret will be positioned to the beginning of the line following the cut position. When the last line of a document is cut, the caret will be positioned to the end of the new last line.

5. 2. 4 Copying character strings

Selecting the [Edit] menu -> [Copy] sends the character string or the lines selected with range selection to the clipboard.

If the lines selected with range selection have lower layers, the contents of the lower layer lines will also be sent to the clipboard regardless of whether the layers are expanded or collapsed.

5. 2. 5 Cutting off character strings (Cut for Append)

Selecting the [Edit] menu -> [Cut for Append] adds the contents of the character strings or the lines selected with range selection to the end of the clipboard and deletes them from the [Edit window](#). This menu item does not erase the previous contents of the clipboard but instead appends the copy portion to the end of the contents of the clipboard.

If the lines selected with range selection have lower layers, the contents of the lower layer lines will also be sent to the clipboard regardless of whether the layers are expanded or collapsed.

When a character string is cut, the caret position will not be changed. When lines are cut, the caret will be positioned to the beginning of the line following the cut position. When the last line of a document is cut, the caret will be positioned to the end of the new last line.

Note that [Cut for Append] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 6 Copying character strings (Copy for Append)

Selecting the [Edit] menu -> [Copy for Append] adds the contents of the character string or the lines selected with range selection to the end of the clipboard. This menu item does not erase the previous contents of the clipboard but instead appends the copy portion to the end of the contents of the clipboard.

If the lines selected with range selection have lower layers, the contents of the lower layer lines will also be sent to the clipboard regardless of whether the layers are expanded or collapsed.

Note that [Copy for Append] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 7 Copying character strings as a screen image

Selecting the [Edit] menu -> [Image Copy] sends the character string or lines selected with range selection to the clipboard exactly as they are displayed on the screen (as a screen image).

When the contents of the lines are sent to the clipboard, no layer information is sent. Each time the layer is demoted by one, a space or Tab code is written. The code to write can be specified with [Image Copy] on the [Tool] menu -> [PM+ Settings...] - [\[Edit\] tab](#). Furthermore, the number of the indent characters can be specified with [Indent Characters] on the same [\[Edit\] tab](#).

If the lines selected with range selection have lower layers, the contents of the lower layer lines that have been collapsed will not be sent to the clipboard. Note that objects cannot be copied.

5. 2. 8 Inserting the contents of clipboard

Selecting the [Edit] menu -> [Paste] reads the contents of the clipboard and inserts them at the caret position. At this time, the layer information is also inserted.

When a character string is pasted, the caret will move to the position following the character string in the default condition. If, however, [Don't Move Caret as Paste] is selected on the [Edit] tab on the [Option] menu - [PM+ Settings...], the caret will not move.

When lines are pasted, they are inserted to the line above the caret position and the screen is redisplayed without moving of the caret position. If, however, the caret is positioned to the top line of the screen or if is not visible on the screen, the screen is scrolled and redisplayed so that the caret is positioned to the middle of the screen.

If you perform [Paste] while performing range selection, the lines selected with range selection will be deleted and the contents of the clipboard will be inserted to the position occupied by the lines selected with range selection. At this time, the caret will be positioned to the top of the line following the inserted position. If, however, the caret is positioned to the top line of the screen or if is not visible on the screen, the screen is scrolled and redisplayed so that the caret is positioned to the middle of the screen.

If the first layer line having a lower layer is copied or cut off from the other file and pasted to the first layer of the IDL file being edited, the source file name of the copy source is set as is. If the same source file name exists in the IDL file being edited, however, the information of the source file name of the copy source will be deleted. If an attempt is made to save the IDL file being edited in this case, a message prompting you to change the path of the source file name will be displayed, then if you will select [Yes] in response to this message, the [\[Change Source File Names\] dialog box](#) will be displayed. In this dialog box, specify the name of the source file to be created from the IDL file being edited.

5. 2. 9 Inserting the contents of clipboard with specified format

Selecting the [Edit] menu -> [Paste Special...] opens the Paste Special dialog box to select the format in which the contents of the clipboard are to be pasted, and then inserts the contents of the clipboard to the caret position. In the dialog box, the processing depends on MFC (Microsoft® Foundation Class).

5. 2. 10 Deleting character strings

Selecting the [Edit] menu -> [Delete] deletes the character string or the lines selected with range selection. The character string or the lines selected with range selection are not sent to the clipboard.

When a character string is deleted, the caret position will not be changed. When lines are deleted, the caret will be positioned to the beginning of the line following the deleted position. When the last line of a document is deleted, the caret will be positioned to the end of the new last line.

5. 2. 11 Deleting a word

Selecting the [Edit] menu -> [Delete the Word] deletes a single word at the caret position. The deleted characters are not sent to the clipboard. Refer to the [Edit window](#) for definitions of "words".

Note that [Delete the Word] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 12 Deleting characters to the end of a word

Selecting the [Edit] menu -> [Delete to End of Word] deletes the portion of the word that is to the right of the caret position. The deleted characters are not sent to the clipboard. Refer to the [Edit window](#) for definitions of "words".

Note that [Delete to the End of Word] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 13 Deleting a line

Selecting the [Edit] menu -> [Delete the Line] deletes a single line at the caret position. If multiple lines are selected with range selection, [Delete the Line] cannot be selected. The contents of the deleted line is not sent to the clipboard.

5. 2. 14 Deleting character strings to the top of line

Selecting the [Edit] menu -> [Delete to the Top of Line] deletes the portion of the line from the caret position to the beginning of the line. The contents of the deleted line is not sent to the clipboard. After the portion is deleted, the caret will be positioned to the beginning of the line.

Note that [Delete to the Top of Line] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 15 Deleting character strings to the end of line

Selecting the [Edit] menu -> [Delete to the End of Line] deletes the portion of the line from the caret position to the end of the line. The contents of the deleted line is not sent to the clipboard. After the portion is deleted, the caret position will not be changed.

Note that [Delete to the End of Line] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 16 Selecting a word at the caret

Selecting the [Edit] menu -> [Select to the Word] selects a word at the caret position.

Refer to the [Edit window](#) for definitions of "words".

Note that [Select to the Word] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 17 Selecting a word to the left of the caret

Selecting the [Edit] menu -> [Select to the Top of Word] selects the portion of the word that is to the left of the caret position, with range selection.

Refer to the [Edit window](#) for definitions of "words".

Note that [Select to the Top of Word] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 18 Selecting a word to the right of the caret

Selecting the [Edit] menu -> [Select to the End of Word] selects the portion of the word that is to the right of the caret position, with range selection.

Refer to the [Edit window](#) for definitions of "words".

Note that [Select to the End of Word] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 19 Selecting a range to the top of line

Selecting the [Edit] menu -> [Select to the Top of Line] selects the range from the caret position to the beginning of the line is selected with range selection.

Note that [Select to the Top of Line] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 20 Selecting a range to the end of line

Selecting the [Edit] menu -> [Select to the End of Line] selects the range from the caret position to the end of the line with range selection.

Note that [Select to the End of Line] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 2. 21 Selecting entire contents

Selecting the [Edit] menu -> [Select All] selects the entire contents of the [Edit window](#).

5. 2. 22 Grouping by keyword

Selecting the [Edit] menu -> [Grouping by Keyword...] opens the [\[Grouping by Keyword\] dialog box](#) in which the lines that contain a specified character string can be collected.

5. 2. 23 Restoring color of grouping line

Selecting the [Edit] menu -> [Restore Color of Grouping Lines] restores the color assigned to the lines collected with [Grouping by Keyword...].

5. 2. 24 Creating function prototypes

Selecting the [Edit] menu -> [Make Function Prototypes...] opens the [\[Select the way of Function Prototypes\] dialog box](#) in which a function prototype can be created automatically.

5. 2. 25 Inserting a new object

Selecting the [Edit] menu -> [Insert New Object...] opens the Insert Object dialog box to insert a new embedded object. In the dialog box, the processing depends on MFC (Microsoft Foundation Class).

5. 2. 26 Setting links for objects

Selecting the [Edit] menu -> [Link...] opens the Links dialog box to edit link objects, change sources, and cancel links. In the dialog box, the processing depends on MFC (Microsoft Foundation Class).

5. 2. 27 Object

Selecting the [Edit] menu -> [Object] (the end of the menu list) starts an application and converts a file type for a selected object.

The character strings and functions displayed on this menu item differ depending on the type of the selected object.

5.3 Search Functions

Operations related to searching in PM+ are shown below.

The operations described in this section are performed using the [Search] menu in the [Main window](#).

- Searching for a character string
- Searching for a character string upward
- Searching for a character string downward
- Searching for a word upward
- Searching for a word downward
- Replacing a character string
- Jumping to a specified line
- Jumping to a specified line in a specified source file
- Jumping to a marked line
- Moving the caret to the top of line
- Moving the caret to the end of line
- Moving the caret to the top of file
- Moving the caret to the end of file
- Moving the caret to the index line
- Moving the caret to the top layer
- Moving the caret to the layer line of the same depth upward
- Moving the caret to the layer line of the same depth downward
- Moving the caret to the position before a jump
- Moving the caret to the function definition line
- Searching for matching braces
- Searching for a character string within multiple files
- Replacing a character string within multiple files
- Searching for a character string within a project
- Jumping to a desired line (tag jump)
- Returning from a tag jump
- Continuing a tag jump downward
- Continuing a tag jump upward
- Moving the caret one word to the right
- Moving the caret one word to the left
- Moving the caret up by one line
- Moving the caret down by one line
- Moving the caret one character to the right
- Moving the caret one character to the left
- Making the search character string specification combo box active

5.3.1 Searching for a character string

Selecting the [Find] menu -> [Find...] opens [\[Find String\] dialog box](#) to search for a character string.

5. 3. 2 Searching for a character string upward

Selecting the [Find] menu -> [Find Upward] searches for a specified character string in the upward direction (toward the beginning of the text).

If you have not specified a character string to search for, the [\[Find String\] dialog box](#) will be opened.

If [Don't Stop Finding at Top Line/End Line] is selected on the [Tool] menu -> [PM+ Settings...] - [Find/Replace] tab, a message confirming whether to continue the search is output once the search to the top line is completed. If this check box is not selected, it terminates after searching to the top line.

Note that [Find Upward] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 3 Searching for a character string downward

Selecting the [Find] menu -> [Find Downward] searches for a specified character string in the downward direction (toward the end of the text).

If you have not specified a character string to search for, the [\[Find String\] dialog box](#) will be opened.

If [Don't Stop Finding at Top Line/End Line] is selected on the [Tool] menu -> [PM+ Settings...] - [Find/Replace] tab, a message confirming whether to continue the search is output once the search to the end line is completed. If this check box is not selected, it terminates after searching to the end line.

Note that [Find Downward] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 4 Searching for a word upward

Selecting the [Find] menu -> [Find the Word Upward] searches for the word at the caret position in the upward direction.

If [Register String for Direct Search as a Candidate of further Finding] is selected on the [Tool] menu -> [PM+ Settings...] - [Find/Replace] tab, the word at the caret position will be stored as a search string, and included in the search string history in the [\[Find String\] dialog box](#).

If this check box is not selected, the word will not be stored as a search string.

Note that [Find the Word Upward] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 5 Searching for a word downward

Selecting the [Find] menu -> [Find the Word Downward] searches for the word at the caret position in the downward direction.

If [Register String for Direct Search as a Candidate of further Finding] is selected on the [Tool] menu -> [PM+ Settings...] - [Find/Replace] tab, the word at the caret position will be stored as a search string, and included in the search string history in the [\[Find String\] dialog box](#).

If this check box is not selected, the word will not be stored as a search string.

Note that [Find the Word Downward] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 6 Replacing a character string

Selecting the [Find] menu -> [Replace...] opens [\[Replace String\] dialog box](#) to replace a character string.

5. 3. 7 Jumping to a specified line

Selecting the [Find] menu -> [To a Specific Line...] opens [\[Jump to Specified Line\] dialog box](#) to jump to a specified destination line number.

5. 3. 8 Jumping to a specified line in a specified source file

Selecting the [Find] menu -> [To the Specific Line in the Source file...] opens [\[Jump to Specified Line in the Source file\] dialog box](#) to jump to a specified destination line number in a specified source file.

Note that [To the Specific Line in the Source file...] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 9 Jumping to a marked line

Selecting the [Find] menu -> [Mark Jump...] opens [\[Mark Jump\] dialog box](#) to register the current caret position as a mark, or to jump to a marked line.

5. 3. 10 Moving the caret to the top of line

Selecting the [Find] menu -> [To the Top of Line] moves the caret to the top of the line to which the caret is currently positioned.

5. 3. 11 Moving the caret to the end of line

Selecting the [Find] menu -> [To the End of Line] moves the caret to the end of the line to which the caret is currently positioned.

5. 3. 12 Moving the caret to the top of file

Selecting the [Find] menu -> [To the Top of File] moves the caret to the top of the top line (the top layer line) of a file.

When [\[Release Range Selected Before Jump\]](#) is selected on the [Tool] menu -> [\[PM+ Settings...\]](#) - [\[Edit\] tab](#), if range selection has been performed, the selected range is released and the caret moves to the top of the top line. When this check box is not selected, if range selection has been performed, the range from the position where range selection started to the top line is re-selected. If, however, a layer higher than that of the line where range selection started exists between the range selection start position and the top line, the range up to the line immediately before the line with that higher layer is re-selected.

5. 3. 13 Moving the caret to the end of file

Selecting the [Find] menu -> [To the End of File] moves the caret to the end of the last line of a file.

When [\[Release Range Selected Before Jump\]](#) is selected on the [Tool] menu -> [\[PM+ Settings...\]](#) - [\[Edit\] tab](#), if range selection has been performed, the selected range is released and the caret moves to the end of the last line. When this check box is not selected, if range selection has been performed, the range from the position where range selection started to the last line is re-selected. If, however, a layer higher than that of the line where range selection started exists between the range selection start position and the last line, the range immediately before that higher layer line is re-selected.

5. 3. 14 Moving the caret to the index line

Selecting the [Find] menu -> [To the Index Line] moves the caret to the top of the index line at the current caret position (line with a layer higher by one).

When [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab, if range selection has been performed in the [Edit window](#), the selected range is released and the caret moves to the top of the index line. When this check box is not selected, if range selection has been performed in the [Edit window](#), the range from the position where range selection started to the index line is re-selected. If, however, a layer higher than that of the line where the range selection started exists between the range selection start position and the index line, the range up to the line immediately before the index line is re-selected because that higher layer cannot be selected by range selection.

5. 3. 15 Moving the caret to the top layer

Selecting the [Find] menu -> [To the Top Layer at caret] moves the caret to the top layer line at the caret position.

When [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab, if range selection has been performed in the [Edit window](#), the selected range is released and the caret moves to the top layer at the caret position. If, however, a layer higher than that of the line where range selection started exists between the range selection start position and the top layer at the caret position, the range immediately before that higher layer line is re-selected.

5. 3. 16 Moving the caret to the layer line of the same depth upward

Selecting the [Find] menu -> [Same Layer Line Up] moves the caret to the layer line of the same depth at a position one line above the caret (in the upward direction).

if range selection has been performed in the [Edit window](#), the selected range is released and then the caret moves regardless of whether [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

Note that [Same Layer Line Up] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 17 Moving the caret to the layer line of the same depth downward

Selecting the [Find] menu -> [Same Layer Line Down] moves the caret to the layer line of the same depth at a position one line below the caret (in the downward direction).

if range selection has been performed in the [Edit window](#), the selected range is released and then the caret moves regardless of whether [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

Note that [Same Layer Line Down] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 18 Moving the caret to the position before a jump

Selecting the [Find] menu -> [Back Jump] moves the caret back to the position immediately before the previous jump.

This menu item becomes valid if the following jump is performed:

- [Mark Jump]
- [To the Specific Line...]
- [To the Specific Line in the Source file...]
- [To the Top of File]
- [To the Index Line]

- [To the Top Layer at caret]
- [To the End of File]
- [To the Function Definition]
- [To the Matching Brace]
- Jump from [Function List...] of the [View] menu
- Jump from [Layer List...] of the [View] menu
- [Some Layer Line Up]
- [Some Layer Line Down]

if range selection has been performed in the [Edit window](#), the selected range is released and then the caret moves regardless of whether [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

Note that [Back Jump] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [Menu] tab.

5. 3. 19 Moving the caret to the function definition line

Selecting the [Find] menu -> [To the Function Definition] moves the caret to the definition line of the function name that is at the current caret position, or is selected with range selection. Specification except for a function cannot be performed.

If a project is opened, it searches for the definition line in all the files registered with the project. If a project is not opened, it searches for the definition line within all the files open in the active [Edit window](#).

5. 3. 20 Searching for matching braces

Selecting the [Find] menu -> [To the Matching Brace] searches for the matching brace that at the caret position and moves the caret to that brace in the [Edit window](#). PM+ can search for the following three types of braces: (), { }, and []. If no matching brace can be found, the caret position does not move. Any braces in comments are ignored.

If range selection has been performed in the [Edit window](#), the selected range is released and then the caret moves regardless of whether [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

[Example]

```

> :Sub title
*.....
*.....
* bitIdeal. NotUpdate = TRUE ; .....
* nWork = 0;
* for (pscWork = 0; pscWord != NULL && nWork < WORDCHAIN_NUM.....)
* .....if (pscWork->szWordList[0] != NULL)
* ]

```

The matching brace:No.1 The matching brace:No.3 The matching brace:No.2

The caret position is alternately moved to the matching brace by the input of the [Ctrl] + [L] key combination.

```

> :Sub title
*.....
*.....
* bitIdeal. NotUpdate = TRUE ; .....
* nWork = 0;
* for (pscWork = 0; pscWord != NULL && nWork < WORDCHAIN_NUM.....)
* .....if (pscWork->szWordList[0] != NULL)
* ]

```

The matching brace:No.2 The matching brace:No.3 The matching brace:No.1

5. 3. 21 Searching for a character string within multiple files

Selecting the [Find] menu -> [Find in Files...] opens [Find in Files] dialog box to search for a character string within multiple files in a specified folder.

5. 3. 22 Replacing a character string within multiple files

Selecting the [Find] menu -> [Replace in Files...] opens [Replace in Files] dialog box to replace a character string within multiple files in a specified folder.

When [Replace in Files...] is executed, the History of Replace in files window is opened to show the file history message of the replacement in files. The message begins with the search key, replacement character string, file type, and searched folder. The body of the history contains the name of the searched files, number of the lines for which the replacement was performed, source file names (where applicable), and the contents of the lines before the replacement.

Figure 5-1 [History of Replace in files] Window

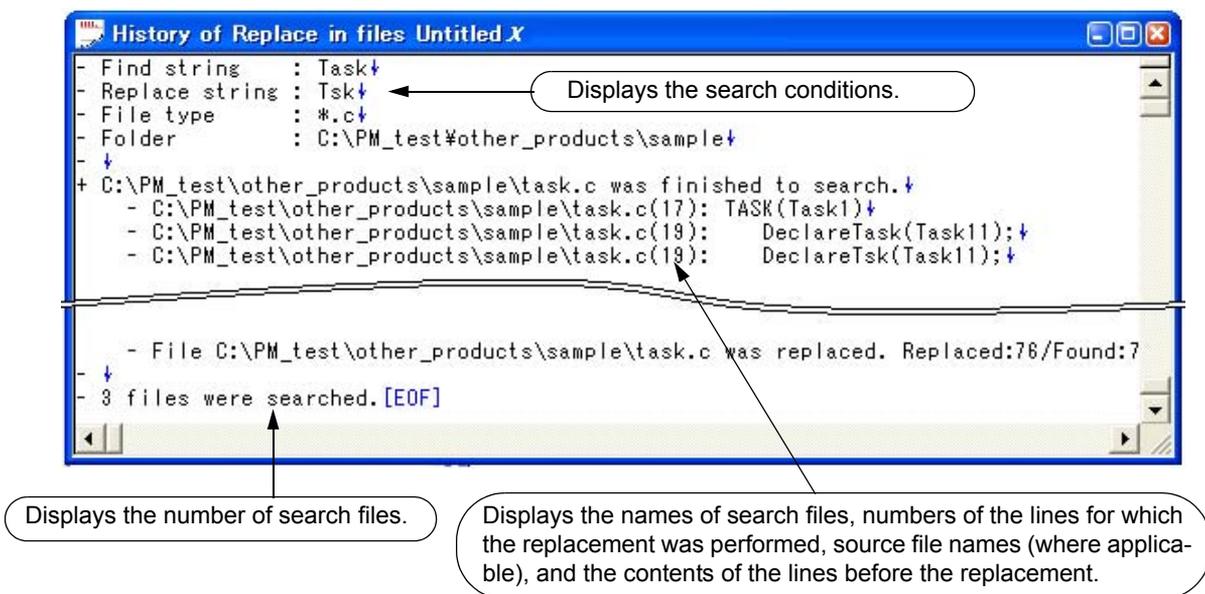


Table 5-1 shows the messages on the History of Replace in files window.

Table 5-1 Messages on the History of Replace in files Window

Messages	Description
The folder of xxx is invalid.	The specified folder is invalid.
The extension of xxx is invalid.	The extension of the specified file is invalid.
The System File of xxx is invalid.	An attempt was made to replace in a system file.
The Hidden File of xxx is invalid.	An attempt was made to replace in a hidden file.
The Read Only File of xxx is invalid.	The replacement cannot be performed in the specified file because of a read-only attribute.
The Binary File of xxx is invalid.	The replacement cannot be performed in the specified file because of a binary file.
File xxx was Replaced. Replaced: xxx/Found: yyy	The replacement and saving were performed in the specified file. xxx: the number of the replacement yyy: the number of the detection
File xxx was closed. Found: xxx	The specified file was closed. xxx: the number of the detected search character strings

Messages	Description
The using file xxx is skipped.	The specified file was skipped because it was under editing. When the message whether the search will be performed in a file under editing is displayed, the above message is displayed after selecting the [No] button.
The search string was not found into the using file xxx.	The search character string was not detected in the specified file under editing.
The processing of using file xxx was canceled. Found: xxx	Search of the specified file currently being edited was stopped. xxx: the number of the detected search character strings
The using file xxx was replaced. Replaced: xxx/Found: yyy	The replacement was performed in the specified file under editing. Replaced: the number of the replaced character strings xxx: the number of the detected search character strings
The using file xxx was searched. Found: xxx	The searching was performed in the specified file under editing. When the searching was performed to the end of the file under editing, this message is displayed after selecting the [Find Next] button. xxx: the number of the detected search character strings

5. 3. 23 Searching for a character string within a project

Selecting the [Find] menu -> [Find in Project] searches for a character string to which the caret is positioned, or selected with range selection, within all of the source files registered to a project.

The search result are displayed in the [Search result display window](#) to be newly opened.

- This menu item is effective when a project file is open.
- In the case of a search for a character string at the caret position, this menu item cannot be selected if the caret is positioned to a character other than an alphanumeric character or "_". In the case of a search for a character string selected with range selection, this menu item cannot be selected if lines are selected with range selection.
- Up to 5,119 characters are displayed as the search results in the format of "file-name (number-of-the-line-on-which-the-character-string-is found) contents-of-the line-on-which- character-string-is-found". Note that 5120 or more character cannot be displayed.
- The search can be interrupted by pressing the [Esc] key.
- The search conditions are as specified in the [\[Find in Files\] dialog box](#). Of the conditions that can be set in the [\[Find in Files\] dialog box](#), only the following items are effective for [Find in Project].
 - [Match Case]
 - [Match Whole Word Only]
 - [Show File Names]

5. 3. 24 Jumping to a desired line (tag jump)

If a file name and a line number are displayed on the line to which the caret is positioned, selecting the [Find] menu -> [Tag Jump] opens the file and jumps to the desired line.

This makes it possible to jump from an error message displayed during a build to the corresponding error line in the source file.

- A tag jump can be performed only in the format of "file-name delimiter line-number". The following four characters are handled as delimiters:
 - Single-byte space character
 - Tab character

- Parentheses "(" and ")"
- If the file name exceeds 260 single-byte characters, this is regarded as a tag jump format error, and a jump cannot be performed.
- A file name containing any of the following symbols is not regarded as being a file name, and jump cannot be performed.
/, ;, *, ?, ", <, >, |
- If the line number does not consist of single-byte digits, the caret will be positioned to the top line of the jump destination file.
- If the jump destination line is in a collapsed layer, that layer will be expanded before a jump.
- If [Select a String between Double (")/Single (') Quotations as Tag Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab, and a character string enclosed in " " or ' ' exists on the line from which a jump is to be performed, PM+ searches for the character string in the jump destination line, and the character string is selected with range selection. If multiple occurrences of the character string are found, the first occurrence is selected with range selection.
- If the jump destination file has already been opened in an [Edit window](#), and range selection has been performed in the window, the selected range will be released when a jump is performed.
- When a tag jump is performed, if the IDL file from which the source file was created cannot be found, a message is displayed. Clicking [OK] button in the message dialog box opens the Select IDL File dialog box, so that the IDL file or source file to be opened can be selected.

5. 3. 25 Returning from a tag jump

After a tag jump has been performed, selecting the [Find] menu -> [To the Tag File] returns from the tag jump destination to the window from which the tag jump was performed. If the corresponding line in the window from which the tag jump was performed cannot be found, a jump is performed to the top line of the window from which the tag jump was performed.

5. 3. 26 Continuing a tag jump downward

Once a tag jump has been performed, selecting the [Find] menu -> [Next Tag Jump] continues the search for the line in tag jump format in the window from which the tag jump has been performed, in the downward direction, and performs a tag jump to the next occurrence. On the display, it is not possible to return to the window from which a tag jump is performed.

5. 3. 27 Continuing a tag jump upward

Once a tag jump has been performed, selecting the [Find] menu -> [Next Tag Jump Upward] continues the search for the line in a tag jump format in the window from which the tag jump has been performed, in the upward direction, and performs a tag jump to the next occurrence. On the display, it is not possible to return to the window from which a tag jump is performed.

Note that [Next Tag Jump Upward] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 28 Moving the caret one word to the right

Selecting the [Find] menu -> [One Word Right] moves the caret one word to the right. If the caret is positioned to the right end of a line, the caret dose not move.

The definitions of "words" are as follows:

- Consecutive single-byte alphanumeric characters and underscores
- Consecutive characters other than the above (excluding spaces and tabs)

When [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab, if range selection has been performed, the selected range is released and the caret moves one word to the right. When this check box is not selected, if range selection has been performed, the caret moves one word to the right, and the range from the position where range selection started to the new caret position is re-selected. If lines have been selected with range selection, nothing is performed.

Note that [One Word Right] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [Menu] tab.

5. 3. 29 Moving the caret one word to the left

Selecting the [Find] menu -> [One Word Left] moves the caret one word to the left. If the caret is positioned to the left end of a line, the caret dose not move.

The definitions of "words" are as follows:

- Consecutive single-byte alphanumeric characters and underscores
- Consecutive characters other than the above (excluding spaces and tabs)

When [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab, if range selection has been performed in the [Edit window](#), the selected range is released and the caret moves one word to the left. When this check box is not selected, if range selection has been performed in the [Edit window](#), the caret moves one word to the left, and the range from the position where range selection started to the new caret position is re-selected. If lines have been selected with range selection, nothing is performed.

Note that [One Word Left] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [Menu] tab.

5. 3. 30 Moving the caret up by one line

Selecting the [Find] menu -> [One Line Up] moves the caret up by one line.

If range selection has been performed in the [Edit window](#), the selected range is released and the caret moves regardless of whether [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

Note that [One Line Up] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [Menu] tab.

5. 3. 31 Moving the caret down by one line

Selecting the [Find] menu -> [One Line Down] moves the caret down by one line.

If range selection has been performed in the [Edit window](#), the selected range is released and the caret moves regardless of whether [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

Note that [One Line Down] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [Menu] tab.

5. 3. 32 Moving the caret one character to the right

Selecting the [Find] menu -> [One Character Right] moves the caret one character to the right.

If range selection has been performed in the [Edit window](#), the selected range is released and the caret moves regardless of whether [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

Note that [One Character Right] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 33 Moving the caret one character to the left

Selecting the [Find] menu -> [One Character Left] moves the caret one character to the left.

If range selection has been performed in the [Edit window](#), the selected range is released and the caret moves regardless of whether [Release Range Selected Before Jump] is selected on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

Note that [One Character Left] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 3. 34 Making the search character string specification combo box active

selecting the [Find] menu -> [Direct Search] makes the Search Character String Specification combo box of the toolbar active. After directly inputting the character string to be searched, press the [Enter] key to search the specified character string in the currently active [Edit window](#).

Note that [Direct Search] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5.4 Layer Management

Operations related to layers in PM+ are shown below.

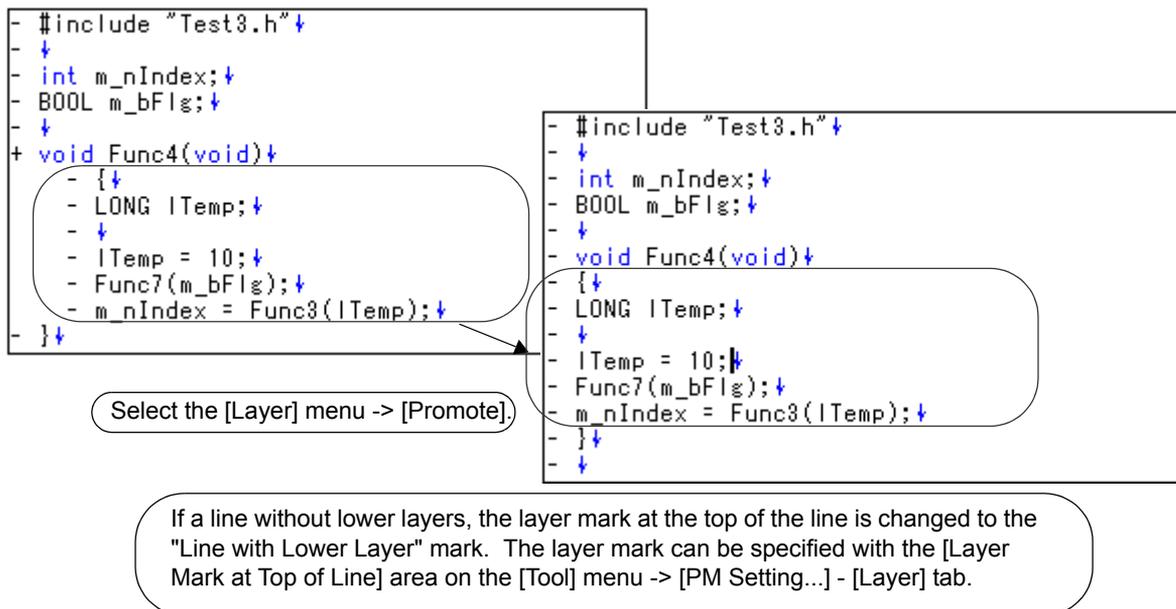
The operations described in this section are performed using the [Layer] menu in the [Main window](#).

- Promoting layers
- Demoting layers
- Expanding or collapsing one of the lower layers
- Expanding one of the lower layers
- Collapsing one of the lower layers
- Expanding all of the lower layers
- Expanding all of the layers
- Collapsing all of the layers
- Expanding a specified number of layers
- Collapsing a specified number of layers
- Displaying the top layer only
- Displaying the first and second layers
- Displaying the first to third layers
- Displaying the first to fourth layers
- Displaying the first to fifth layers
- Collapsing a layer at the caret
- Applying a layer rule

5.4.1 Promoting layers

Selecting the [Layer] menu -> [Promote] promotes the layer of the line to which the caret is positioned or the line selected with range selection, by one, as well as the layers of its lower layer lines, if any.

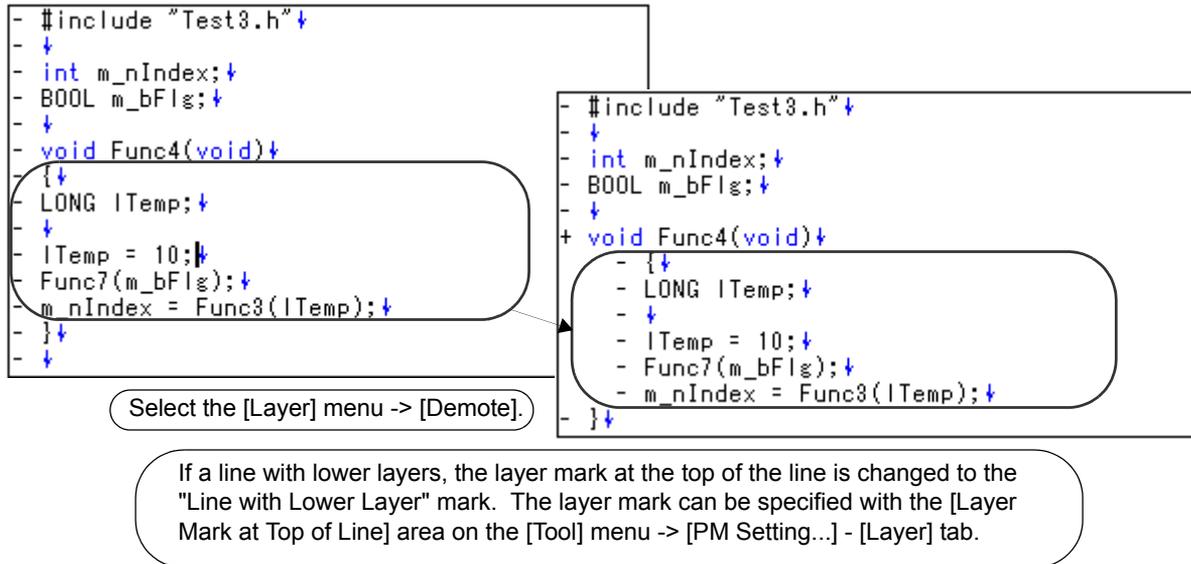
Figure 5-2 Promoting Layers



5. 4. 2 Demoting layers

Selecting the [Layer] menu -> [Demote] demotes the layer of the line to which the caret is positioned or the line selected with range selection, by one, as well as the layers of its lower layer lines, if any.

Figure 5-3 Demoting Layers



5. 4. 3 Expanding or collapsing one of the lower layers

Selecting the [Layer] menu -> [Expand/Collapse] expands one of the lower layers of the line to which the caret is positioned or the line selected with range selection if it is collapsed, and collapses it if expanded.

When a lower layer is expanded, if not all of the lines with the expanded lower layer can be displayed, the screen will be scrolled so that the caret line is positioned to the top of the screen.

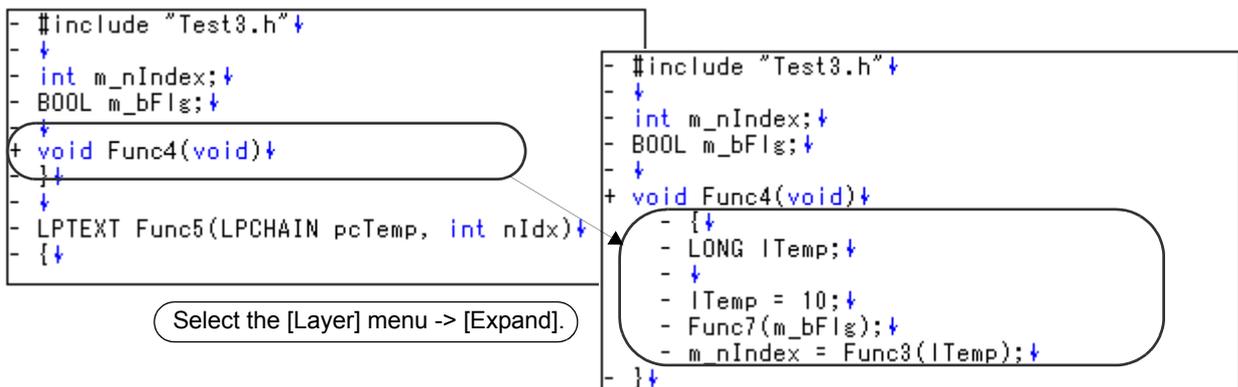
5. 4. 4 Expanding one of the lower layers

Selecting the [Layer] menu -> [Expand] expands one of the lower layers of the line to which the caret is positioned or the line selected with range selection.

When a lower layer is expanded, if not all of the lines with the expanded lower layer can be displayed, the screen will be scrolled so that the caret line is positioned to the top of the screen.

Note that [Expand] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [Menu] tab.

Figure 5-4 Expanding One of the Lower Layers

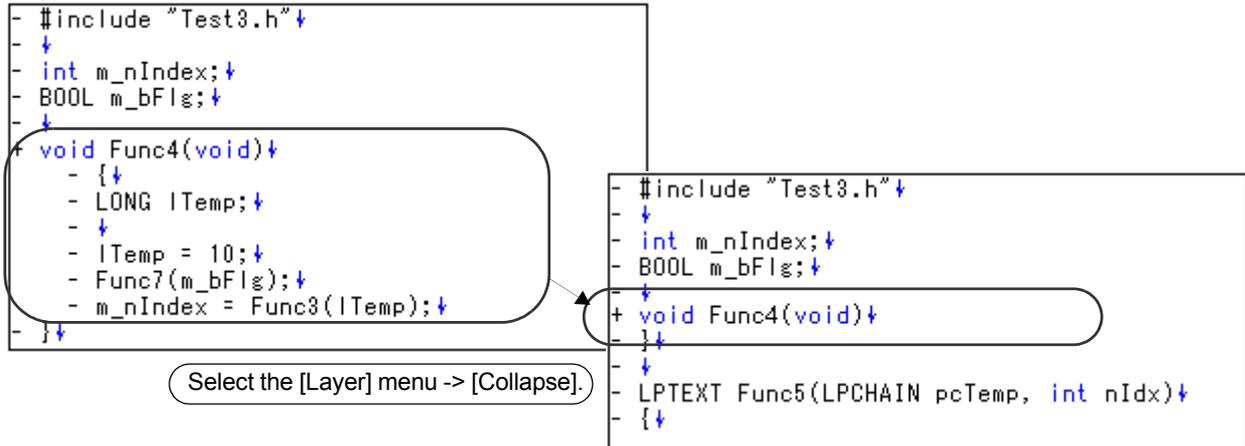


5. 4. 5 Collapsing one of the lower layers

Selecting the [Layer] menu -> [Collapse] collapses one of the lower layers of the line to which the caret is positioned or the line selected with range selection.

Note that [Collapse] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [Menu] tab.

Figure 5-5 Collapsing One of the Lower Layers

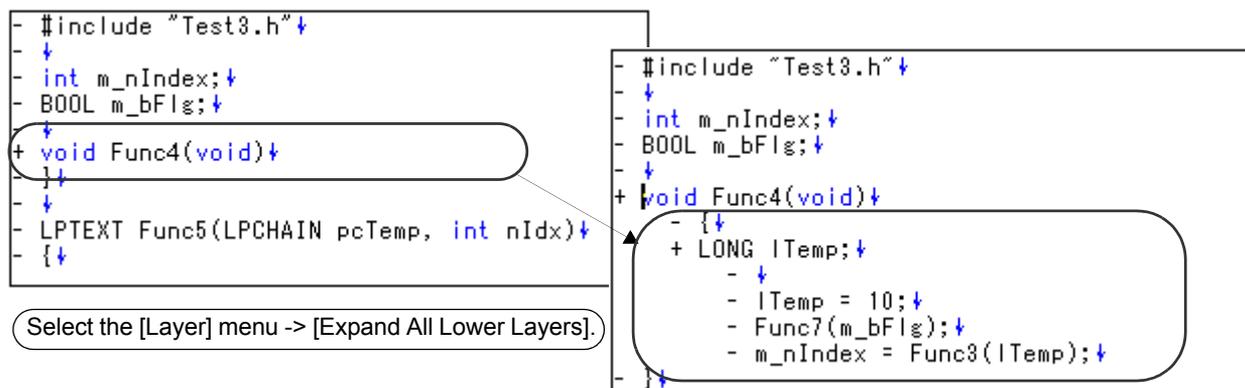


5. 4. 6 Expanding all of the lower layers

Selecting the [Layer] menu -> [Expand All Lower Layers] expands all of the lower layers of the line to which the caret is positioned or the line selected with range selection.

When a lower layer is expanded, if not all of the lines with the expanded lower layer can be displayed, the screen will be scrolled so that the caret line is positioned to the top of the screen.

Figure 5-6 Expanding All of the Lower Layers



5. 4. 7 Expanding all of the layers

Selecting the [Layer] menu -> [Expand All] expands all of the layers in the active [Edit window](#).

5. 4. 8 Collapsing all of the layers

Selecting the [Layer] menu -> [Collapse All] collapses all of the layers in the active [Edit window](#). If the caret is positioned to a collapsed layer, it will be moved to the top layer.

5. 4. 9 Expanding a specified number of layers

Selecting the [Layer] menu -> [Expand the Specific Layer...] opens the [\[Expand to Specified Layer\] dialog box](#) to expand a specified number of layers.

A value within the range of 1 to 127 can be specified in this dialog box. The last setting is displayed in the default condition. When this value is specified for the first time, 127 is displayed.

5. 4. 10 Collapsing a specified number of layers

Selecting the [Layer] menu -> [Collapse the Specific Layer...] opens the [\[Collapse to Specified Layer\] dialog box](#) to collapse a specified number of layers.

A value within the range of 1 to 127 can be specified in this dialog box. The last setting is displayed in the default condition. When this value is specified for the first time, 1 is displayed.

5. 4. 11 Displaying the top layer only

Selecting the [Layer] menu -> [Shown Index 1] collapses lower layers and displays the top layer only.

If the caret is positioned to a layer other than the top layer, it will be positioned to the top layer.

Note that [Show Index 1] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 4. 12 Displaying the first and second layers

Selecting the [Layer] menu -> [Shown Index 2] collapses the third and subsequent layers and displays the first and second layers.

If the caret is positioned to a layer below the second layer, it will be positioned to the second layer.

Note that [Show Index 2] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 4. 13 Displaying the first to third layers

Selecting the [Layer] menu -> [Shown Index 3] collapses the fourth and subsequent layers and displays the first to third layers.

If the caret is positioned to a layer below the third layer, it will be positioned to the third layer.

Note that [Show Index 3] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 4. 14 Displaying the first to fourth layers

Selecting the [Layer] menu -> [Shown Index 4] collapses the fifth and subsequent layers and displays the first to fourth layers.

If the caret is positioned to a layer below the fourth layer, it will be positioned to the fourth layer.

Note that [Show Index 4] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 4. 15 Displaying the first to fifth layers

Selecting the [Layer] menu -> [Shown Index 5] collapses the sixth and subsequent layers and displays the first to fifth layers.

If the caret is positioned to a layer below the fifth layer, it will be positioned to the fifth layer.

Note that [Show Index 5] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 4. 16 Collapsing a layer at the caret

Selecting the [Layer] menu -> [Collapse This Layer] collapses the layer of the line to which the caret positioned. If the caret line has lower layers and these lower layers are expanded, the lower layers will also be collapsed.

5. 4. 17 Applying a layer rule

Selecting the [Layer] menu -> [Apply Layer Rule...] opens the [\[Set Layer Rule\] dialog box](#) in which a layer rule can be applied to the contents of the [Edit window](#).

5.5 Display Functions

Operations related to display in PM+ are shown below.

The operations described in this section are performed using the [Display] menu in the [Main window](#).

- [Displaying a list of functions](#)
- [Displaying a list of layers](#)
- [Displaying the standard bar](#)
- [Displaying the build bar](#)
- [Displaying the option bar](#)
- [Displaying the external tool bar](#)
- [Displaying the status bar](#)
- [Displaying the \[Project\] window](#)
- [Displaying the \[OutPut\] window](#)
- [Displaying an object as contents or icon](#)
- [Displaying all objects as contents](#)
- [Displaying all objects as icons](#)

5.5.1 Displaying a list of functions

Selecting the [View] menu -> [Function List...] opens the [\[Function List\] dialog box](#) to list the functions of the file displayed in the active [Edit window](#). The list of functions can be saved in the TEXT or CSV format with the [\[Save the Function List\] dialog box](#).

5.5.2 Displaying a list of layers

Selecting the [View] menu -> [Layer List...] opens the [\[Layer List\] dialog box](#) to list the layers of the file displayed in the active [Edit window](#).

5.5.3 Displaying the standard bar

Selecting the [View] menu -> [Standard Bar] toggles the standard bar between on and off.

5.5.4 Displaying the build bar

Selecting the [View] menu -> [Build Bar] toggles the build bar between on and off.

5.5.5 Displaying the option bar

Selecting the [View] menu -> [Option Bar] toggles the option bar between on and off.

5.5.6 Displaying the external tool bar

Selecting the [View] menu -> [Ex-tool Bar] toggles the external tool bar between on and off.

5. 5. 7 Displaying the status bar

Selecting the [View] menu -> [Status Bar] toggles the status bar between on and off.

5. 5. 8 Displaying the [Project] window

Selecting the [View] menu -> [Project Window] toggles the [\[Project\] window](#) between on and off.

5. 5. 9 Displaying the [OutPut] window

Selecting the [View] menu -> [Output Window] toggles the [\[OutPut\] window](#) between on and off.

5. 5. 10 Displaying an object as contents or icon

Selecting the [View] menu -> [Display Object as Content]/[Display Object as Icon] toggles the display format of an embedded object between contents and icon.

When an object displayed as contents is selected, this menu item is displayed as [Display Object as Icon]. Selecting this menu item causes the object to be displayed as an icon.

When an object displayed as an icon is selected, this menu item is displayed as [Display Object as Content]. Selecting this menu item causes the object to be displayed as contents.

5. 5. 11 Displaying all objects as contents

selecting the [View] menu -> [Display All Object as Content] displays all the objects in the currently active [Edit window](#) as contents.

5. 5. 12 Displaying all objects as icons

selecting the [View] menu -> [Display All Object as Icons] displays all the objects in the currently active [Edit window](#) as icons.

5. 6 Project Management

Operations related to projects in PM+ are shown below.

The operations described in this section are performed using the [File] menu or [Project] menu in the [Main window](#), or the right-click menus on the [\[Project\] window](#).

- [Creating a project file](#)
- [Selecting active project](#)
- [Adding a new project to a workspace](#)
- [Inserting a project into a workspace](#)
- [CVS update](#)
- [CVS commit](#)
- [CVS log](#)
- [CVS status](#)
- [CVS comparison](#)
- [Exporting a make file](#)
- [Setting project information](#)
- [Adding a source file](#)
- [Adding a project-related file](#)
- [Adding other files](#)
- [Making the active project selection combo box active](#)
- [Changing a project group name](#)
- [Changing a project title](#)
- [Changing the tools used](#)
- [Moving a project](#)

5. 6. 1 Creating a project file

Up to 128 source projects can be registered per workspace.

[When registering a project to a new workspace]

A project file can be created using one of the following three methods. Refer to the appropriate method when creating the workspace.

- [Creating a new project file](#)

A new workspace can be created by specifying the necessary project information in order in a wizard format.

Refer to: "[5. 1. 6 Creating a new workspace](#)"

- [Creating a workspace using a project file created by the PM\(V3.xx\)](#)

In PM+, a workspace can be created by reading a project file created by the PM(V3.xx).

Refer to: "[5. 1. 5 Opening a project file generated by the previous version](#)"

- [Creating a workspace using a project file created by an NEC Electronics debugger/simulator](#)

A workspace can be created by using a project file that has been updated the project information for PM+ in a wizard format.

Refer to: "[5. 1. 7 Opening a workspace](#)"

[When registering a project to an existing workspace]

- [Creating a new project file](#)

Refer to: "[5. 6. 3 Adding a new project to a workspace](#)"

5. 6. 2 Selecting active project

Selecting the [Project] menu -> [Select Active Project...] displays the [\[Select Active Project\] dialog box](#) in which the active project can be selected.

The active project means the project to be built or debugged.

5. 6. 3 Adding a new project to a workspace

Selecting the [Project] menu -> [Add New Project...] can be added a new project to a workspace.

A new project can also be added by selecting a project group on the [\[Project\] window](#), clicking the right mouse button, and selecting [Add New Project...].

In order to add a new project to the workspace currently open, the [\[Add New Project\] wizard](#) is displayed.

Enter/select the necessary information in each dialog box and click the [Next>] button to proceed. Clicking the [Finish] button in the dialog box at the last step ([\[Add New Project - Step 9/9 \[Confirmation\]\] dialog box](#)) causes a make file to be created automatically. Refer to "[5. 6. 10 Exporting a make file](#)" for details of make file creation.

5. 6. 4 Inserting a project into a workspace

Selecting the [Project] menu -> [Insert Project...] opens [\[Insert Project\] dialog box](#) to insert an existing project into the project group.

5. 6. 5 CVS update

Selecting the [Project] menu -> [CVS Update...] allows the CVS update command to be executed for the selected file and a file registered in the repository to be acquired.

The following operations must be performed before executing this menu item.

- Set the folder that includes cvs.exe using the PATH variable of Windows.
- Set the repository of CVS.
- If the CVS server is being used, log onto the server.

5. 6. 6 CVS commit

Selecting the [Project] menu -> [CVS commit...] executes the CVS commit command for the selected file and reflects the file in the repository.

The following operations must be performed before executing this menu item.

- Set the folder that includes cvs.exe using the PATH variable of Windows.
- Set the repository of CVS.
- If the CVS server is being used, log onto the server.

5. 6. 7 CVS log

Selecting the [Project] menu -> [CVS Log...] executes the CVS log command for the selected file and displays the log contents of the file on the [\[OutPut\] window](#).

The following operations must be performed before executing this menu item.

- Set the folder that includes cvs.exe using the PATH variable of Windows.
- Set the repository of CVS.
- If the CVS server is being used, log onto the server.

5. 6. 8 CVS status

Selecting the [Project] menu -> [CVS Status...] executes the CVS status command for the selected file and displays the status of the file on the [OutPut] window.

The following operations must be performed before executing this menu item.

- Set the folder that includes cvs.exe using the PATH variable of Windows.
- Set the repository of CVS.
- If the CVS server is being used, log onto the server.

5. 6. 9 CVS comparison

Selecting the [Project] menu -> [CVS Diff] executes the CVS comparison command for the selected file and compares that file with the previous version. The comparison result is displayed on the [OutPut] window.

The following operations must be performed before executing this menu item.

- Set the folder that includes cvs.exe using the PATH variable of Windows.
- Set the repository of CVS.
- If the CVS server is being used, log onto the server.

5. 6. 10 Exporting a make file

Selecting the [Project] menu -> [Export Makefile] creates a make file corresponding to the currently active project.

When a make file is created, a parameter file dependent on the language product may be created for the language processing program. Therefore the created file will differ depending on the microcontrollers to be used.

The make file is created under the name "Project file name + .mak". If a make file already exists, it is overwritten.

5. 6. 11 Setting project information

Selecting the [Project] menu -> [Project Settings...] opens [Project Settings] dialog box ,in which the project information can be set.

Note that the name of project group can not be changed in the [Project Settings] dialog box. To change the name, select the project group name on the [Project] window, click the right mouse button, and use the [Edit Project Group Name...] menu that is displayed.

5. 6. 12 Adding a source file

Selecting the [Project] menu -> [Add Source Files...] displays the [Add Source Files] dialog box in which the source file can be added to the active project.

5. 6. 13 Adding a project-related file

Selecting the [Project] menu -> [Add Project Related Files...] displays the [Add Project Related Files] dialog box in which the project-related file can be added to the active project.

5. 6. 14 Adding other files

Selecting the [Project] menu -> [Add Other Files...] displays the [Add Other Files] dialog box in which any file can be added to the active project as other file.

5. 6. 15 Making the active project selection combo box active

selecting the [Project] menu -> [Direct Select Active Project] makes the Active Project Selection combo box of the toolbar active. Active projects can be switched by selecting a project.

5. 6. 16 Changing a project group name

To change the project group name, select the project group name on the [\[Project\] window](#), click the right mouse button, and use the [Edit Project Group Name...] menu that is displayed.

5. 6. 17 Changing a project title

To change the project title, select the project title on the [\[Project\] window](#), click the right mouse button, and use the [Edit Project Title...] menu that is displayed.

The project title can also be changed with the [Project] menu -> [Project Settings...].

5. 6. 18 Changing the tools used

To change the tools specified for use in a project included in a project group at once, select the project group name on the [\[Project\] window](#) click the right mouse button, and use the [Select Tools...] menu that is displayed.

To change the tools used by an active project, select the project title name on the [\[Project\] window](#) click the right mouse button, and use the [Project Settings...] menu that is displayed.

5. 6. 19 Moving a project

To move the project to another project group, follow the procedure shown below on the [\[Project\] window](#).

1. Select the name of the project title to be moved, click the right mouse button, and delete the project using the [Delete Project] menu.
2. Select the name of the project group to which the project is to be moved, click the right mouse button, and insert the deleted project using the [Insert Project...] menu.

5.7 Build Functions

Operations related to build in PM+ are shown below.

The operations described in this section are performed using the [Build] menu in the [Main window](#).

- [Building and debugging](#)
- [Rebuilding and debugging](#)
- [Compiling](#)
- [Building](#)
- [Stopping build](#)
- [Rebuilding](#)
- [Batch building](#)
- [Batch rebuilding](#)
- [Updating dependency relationship of files](#)
- [Cleaning](#)
- [Editing](#)
- [Debugging](#)
- [Downloading multiple load module files](#)
- [Selecting build mode](#)
- [Setting build options](#)
- [Setting batch build](#)
- [Making the build mode selection combo box active](#)

5.7.1 Building and debugging

Selecting the [Build] menu -> [Build and Debug] executes batch processing from build to debug for the active project.

If build ends correctly, the debugger starts up automatically and loads the load module file created by build processing. However, if a program is under execution on the debugger, an error will occur. When an error occurs during build, the processing stops and the debugger does not start up.

The messages output from the language processing tools during build are output to a log file. The log file is created in the project folder, under the name "project file name.plg".

To stop build, select the [Build] menu -> [Stop Build].

5.7.2 Rebuilding and debugging

Selecting the [Build] menu -> [Rebuild and Debug] executes batch processing from rebuild to debug for the active project. With [Build and Debug] menu item, source files are built only when the time stamp is updated after the source files and their dependent files have been scanned, whereas with [Rebuild and Debug] menu item, all the source files are built unconditionally.

If rebuild ends correctly, the debugger starts up automatically and loads the load module file created by rebuild processing. However, if a program is under execution on the debugger, an error will occur. When an error occurs during rebuild, the processing stops and the debugger does not start up.

The messages output from the language processing tools during build are output to a log file. The log file is created in the project folder, under the name "project file name.plg".

To stop rebuild, select the [Build] menu -> [Stop Build].

5. 7. 3 Compiling

Selecting the [Build] menu -> [Compile] executes a language tool (assembler, compiler) for the selected file on the [Project] window. "Compile" is a part of "Build", except that object file linking is not executed within "Compile". Execution of "Compile" will also start up the assembler for the assembler source code.

The messages output from the language processing tools during compilation are output to a log file and displayed on the [OutPut] window. The log file is created in the project folder, under the name "project file name.plg".

5. 7. 4 Building

Selecting the [Build] menu -> [Build] starts up a set of language tools (assembler, compiler, and link commands) for the active project. With [Build] menu item, source files are built only when the time stamp is updated after the source files and their dependent files have been scanned.

The make file is created during build in default condition, under the name "project file name.mak". This make file is updated during build by default if options and other settings are changed.

The messages output from the language processing tools during build are output to a log file and displayed on the [OutPut] window. The log file is created in the project folder, under the name "project file name.plg".

To stop build, select the [Build] menu -> [Stop Build].

[Caution]

In PM(Ver.3.xx), if the [Build] menu item is executed while the debugger is activated, a load module file is downloaded automatically, but in PM+, a load module file is not downloaded. To perform batch processing from build to download, use the [Build and Debug] menu item.

5. 7. 5 Stopping build

If [Build] menu -> [Stop Build] is selected during build execution, build processing is stopped. If [Build] menu -> [Stop Build] is selected during batch build or batch rebuild execution, a question message is displayed and build processing is paused.

5. 7. 6 Rebuilding

Selecting the [Build] menu -> [Rebuild] starts up a set of language tools (assembler, compiler, and link commands) for the active project.

With [Build] menu item, source files are built only when the time stamp is updated after the source files and their dependent files have been scanned, whereas with [Rebuild] menu item, all the source files are built unconditionally.

The messages output from the language processing tools during rebuild are output to a log file and displayed on the [OutPut] window. The log file is created in the project folder, under the name "project file name.plg".

To stop rebuild, select the [Build] menu -> [Stop Build].

[Caution]

In PM(Ver.3.xx), if the [Rebuild] menu item is executed while the debugger is activated, a load module file is downloaded automatically, but in PM+, a load module file is not downloaded. To perform batch processing from rebuild to download, use the [Rebuild and Debug] menu item.

5. 7. 7 Batch building

Selecting the [Build] menu -> [Batch Build...] opens [Edit Batch Build Settings] dialog box and executes building of the projects specified in the [Edit Batch Build Settings] dialog box from multiple projects registered to the workspace.

5. 7. 8 Batch rebuilding

Selecting the [Build] menu -> [Batch Rebuild...] opens [\[Edit Batch Build Settings\] dialog box](#) and executes rebuilding of the projects specified in the [\[Edit Batch Build Settings\] dialog box](#) from multiple projects registered to the workspace.

5. 7. 9 Updating dependency relationship of files

Selecting the [Build] menu -> [Update dependencies] updates the dependency relationship of the source files and include files, and reflects the update contents in the [\[Project\] window](#).

[Caution]

If a change that affects the dependency relationship (change of include file path, etc.) has been made in the compiler option settings or assembler option settings, the dependency relationship must be updated.

5. 7. 10 Cleaning

Selecting the [Build] menu -> [Clean] deletes all the intermediate files and output files generated by building projects. The user is not asked for confirmation when these files are deleted.

5. 7. 11 Editing

Selecting the [Build] menu -> [Edit] enables the file selected on the [\[Project\] window](#) to be opened with the set editor.

If a file that cannot be edited is selected on the [\[Project\] window](#), an external editor is opened and the file is edited as a new document.

5. 7. 12 Debugging

Selecting the [Build] menu -> [Debug] starts up the debugger and downloads a load module file. During downloading, the name of the load module file is displayed on the [\[OutPut\] window](#).

At this time, if a program is being executed on the debugger, an error will occur. Therefore, Select the [Debug] menu item after stopping the program.

5. 7. 13 Downloading multiple load module files

Selecting the [Build] menu -> [Download Some Load Module Files] enables the multiple load module files to be loaded onto the debugger. This menu item become valid only when a project that uses a V850 Microcontrollers device is active.

The load module files to be loaded are those specified as the debug target files of an active project, or the files in the [Debug Target File List] on the [\[Debugger Settings\] dialog box](#) (the [Download the Debug Target Files in the same Project Group] check box must be selected).

When downloading files to the debugger, the names of the downloaded files are displayed on the [\[OutPut\] window](#).

[Caution]

This menu item is available only when a project that uses a V850 microcontroller is active.

5. 7. 14 Selecting build mode

Selecting the [Build] menu -> [Select Build Mode...] opens [\[Build Mode\] dialog box](#) in which the build mode can be selected, added and deleted.

5. 7. 15 Setting build options

Selecting the [Build] menu -> [Build Settings...] opens [\[Build Settings\] dialog box](#) in which the build options can be set. The settable items are follows:

- Options during build
- Processing to be executed before build
- Processing to be executed after build

5. 7. 16 Setting batch build

Selecting the [Build] menu -> [Batch Build Settings...] opens [\[Build Settings\] dialog box](#) in which the project for batch build or rebuild can be selected and the build sequence can be set.

5. 7. 17 Making the build mode selection combo box active

selecting the [Build] menu -> [Direct Build Mode Selection] makes the Build Mode Selection combo box of the toolbar active. The build mode can be selected.

5.8 Tool Management

Operations related to tools in PM+ are shown below.

The operations described in this section are performed using the [Tool] menu in the [Main window](#).

- [Setting options for each tool](#)
- [Selecting the real-time OS to be used](#)
- [Dumping the load module file or the object file](#)
- [Selecting and setting the debugger to be used](#)
- [Registering external tools](#)
- [Starting up external tools](#)
- [Comparing files](#)
- [Inserting device file](#)
- [Setting environment](#)
- [Setting font](#)
- [Customizing settings](#)
- [Recording key operations](#)
- [Playing back key operations](#)
- [Saving key operations](#)
- [Commands corresponding to key operations](#)
- [Reading key operations](#)
- [Executing macro](#)
- [Registering macro](#)
- [Executing registered macro](#)

5.8.1 Setting options for each tool

The [Tool] menu displays the menu items for setting the tool options executed on PM+. Refer to the user's manual of each tool for the operation of the selected menu.

5.8.2 Selecting the real-time OS to be used

Selecting the [Tool] menu -> [Select RTOS...] opens the [\[Select RTOS\] dialog box](#) and select the real-time OS used by the active project.

[Caution]

This menu item is available only when a real-time OS for the microcontrollers used is installed.

5.8.3 Dumping the load module file or the object file

Selecting the [Tool] menu -> [dump850] opens the [\[dump850\] dialog box](#) and starts up the dump command "dump850". The results are displayed on the [Edit window](#).

The object to be analyzed are the load module file of the active project specified with the [\[dump850\] dialog box](#) or the object file generated from the source files selected on the active [Edit window/\[Project\] window](#). If the active [Edit window](#) is an IDL file, the object file generated from the source file indicated by the caret is analyzed.

The analyzed results are saved under the file name "project file name.dmp". If the same file name already exists, the previous file is renamed "project file name.dmp.bak".

The execution of dump850 can be stopped by using the [Esc] key. In this case, the results are not displayed.

Refer to the CA850 compiler package user's manual for details on dump850.

[Caution]

This menu item is available only when a project that uses a V850 microcontroller is active and the CA850 (Ver.3.10 or earlier) is selected as the tool to be used.

5. 8. 4 Selecting and setting the debugger to be used

Selecting the [Tool] menu -> [Debugger Settings...] opens the [\[Debugger Settings\] dialog box](#). The debugger to be used, the load module files to be downloaded, and other options can be set in this dialog box.

5. 8. 5 Registering external tools

Selecting the [Tool] menu -> [Register Ex-tool...] opens the [\[Register External Tool\] dialog box](#) in which the external tools to be used can be registered. Up to 10 external tools can be registered.

The icons of the tools set as external tools are displayed as buttons on the external toolbar.

5. 8. 6 Starting up external tools

The [Tool] menu includes items for starting up the external tools registered with the [Tool] menu -> [Register Ex-tool...].

The arguments at startup and the current folder are based on those set in the [\[Register External Tool\] dialog box](#).

5. 8. 7 Comparing files

Selecting the [Tool] menu -> [File Compare...] opens the [\[File Compare\] dialog box](#) in which the contents of the selected [Edit window](#) can be compared.

5. 8. 8 Inserting device file

Selecting the [Tool] menu -> [Device File Installer...] starts up the device file installer (DFINST).

If there is no corresponding device file, download the applicable file from the following web site:

<http://www.necel.com/micro/ods/eng/index.html>

This download site can also be accessed by selecting the [Help] menu -> [NEC Electronics Microcontrollers Web].

5. 8. 9 Setting environment

Selecting the [Tool] menu -> [PM+ Settings...] opens [\[PM+ Settings\] dialog box](#) in which the environment of PM+ can be set. The following environment settings are available:

- Options related to workspace
- External editors
- File-related items
- Source files generated by IDL files
- Window size and position
- Path-related items
- Editing-related items
- Window display
- Layer-related items
- Edit window-related items
- Search/replace-related items

5. 8. 10 Setting font

Selecting the [Tool] menu -> [Font...] opens the [\[Font\] dialog box](#) in which the type and size of the font on the [Edit window](#) can be selected.

5. 8. 11 Customizing settings

Selecting the [Tool] menu -> [Customize...] opens [\[Customize\] dialog box](#) in which each setting can be customized. The following settings are available:

- Shortcut keys assigned to each menu
- Menu items to be displayed
- Toolbar items to be displayed
- Right mouse button menu items and shortcut menu items
- Highlight display and color for keywords

5. 8. 12 Recording key operations

Selecting the [Tool] menu -> [Record the Key Operations/Stop Recording the Key Operations] starts and stops recording of the key operations.

While key operations are not being recorded, this menu item is [Record the Key Operations], and selecting this menu item starts recording of the key operations.

While key operations are not being recorded, this menu item is [Record the Key Operations], and selecting this menu item starts recording of the key operations.

While key operations are being recorded, "(Recording)" is displayed on the window title.

5. 8. 13 Playing back key operations

Selecting the [Tool] menu -> [Play Back] plays back the recorded key operations. If this menu item is selected during recording, the recording stops and the operations start to be played back.

If the previous key operation is read by selecting the [Tool] menu -> [Load the Macro File...], that key operation is played back.

5. 8. 14 Saving key operations

Selecting the [Tool] menu -> [Save the Key Operations...] opens the [\[Save the Key Operation\] dialog box](#) in which the recorded key operations can be saved to a file.

The extension of the file (macro file) in which the operations are saved is "*.imc".

5. 8. 15 Commands corresponding to key operations

When the recorded key operations are saved, the command corresponding to each key operation is described in a macro file (.imc).

The macro file is text file, and can therefore be referenced or modified. Addition is also possible, in accordance with the prescribed format (refer to "[APPENDIX B COMMANDS FOR KEYBOARD MACROS](#)").

5. 8. 16 Reading key operations

Selecting the [Tool] menu -> [Load the Macro File...] opens the [\[Load the Macro File\] dialog box](#) in which a key operation can be read from the specified file (*.imc). To play back the key operation, select the [Tool] menu -> [Play Back the Macro File...].

5. 8. 17 Executing macro

Selecting the [Tool] menu -> [Play Back the Macro File...] opens the [\[Play back the Macro File\] dialog box](#) in which a key operation is read from the specified file (*.imc) and played back.

5. 8. 18 Registering macro

Selecting the [Tool] menu -> [Register the Macro Files...] opens the [\[Entry Macro Files\] dialog box](#) in which the specified file (*.imc) can be registered to a key.

5. 8. 19 Executing registered macro

Selecting the [Tool] menu -> [Play Back the Register Macro] plays back the macro registered with [Register the Macro Files...].

5.9 Window Management

Operations related to windows in PM+ are shown below.

The operations described in this section are performed using the [Window] menu in the [Main window](#).

- [Arranging windows so they overlap](#)
- [Arranging windows horizontally](#)
- [Arranging windows vertically](#)
- [Splitting a window](#)
- [Moving the caret to the other split window](#)
- [Activating the next window](#)
- [Activating the previous window](#)
- [Displaying a list of windows](#)

5.9.1 Arranging windows so they overlap

Selecting the [Window] menu -> [Cascade] overlaps all currently displayed windows with one another in such a way that their titles are visible (cascading).

5.9.2 Arranging windows horizontally

Selecting the [Window] menu -> [Tile Horizontally] tiles all currently displayed windows horizontally.

5.9.3 Arranging windows vertically

Selecting the [Window] menu -> [Tile Vertically] tiles all currently displayed windows vertically.

5.9.4 Splitting a window

Selecting the [Window] menu -> [Split] splits the currently active [Edit window](#) into two. At this time, the editing operations performed in one part of the window are reflected in the other.

To split a window, use either of the following:

- After selecting the [Window] menu -> [Split], specify the split position with mouse.
- When the mouse cursor is positioned to the top of the vertical scroll bar in the [Edit window](#), the split-enabling cursor is displayed, and specify the split position by it .

To return a split window to the previous state, use either of the following:

- Move the split line toward the top or bottom of the window with mouse.
- Double-click the left mouse button on the split line.

5.9.5 Moving the caret to the other split window

Selecting the [Window] menu -> [To the Next Split Window] moves the caret from the split window to the other split window.

5. 9. 6 Activating the next window

Selecting the [Window] menu -> [To the Next Window] activating the window following the currently active one, according to Z order(window superposition order).

Note that [To the Next Window] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 9. 7 Activating the previous window

Selecting the [Window] menu -> [To the Previous Window] activating the window preceding the currently active one, according to Z order (window superposition order).

Note that [To the Previous Window] menu item is not displayed in the default condition. If you wish to make this menu item display, specify it with the [Tool] menu -> [Customize...] - [\[Menu\] tab](#).

5. 9. 8 Displaying a list of windows

Selecting the [Window] menu -> [Window List...] opens the [\[Window List\] dialog box](#) to display a list of currently open windows.

5. 10 Help Functions

Operations related to the help in PM+ are shown below.

The operations described in this section are performed using the [Help] menu in the [Main window](#).

- [Starting up the PM+ help](#)
- [Displaying the help of the Main window](#)
- [Displaying the help of a current window](#)
- [Displaying a list of shortcut keys](#)
- [Accessing to NEC Electronics microcontrollers web site](#)
- [Starting up a external help 1](#)
- [Starting up a external help 2](#)
- [Starting up a external help 3](#)
- [Displaying the version information about PM+](#)

5. 10. 1 Starting up the PM+ help

Selecting the [Help] menu -> [PM+ Help] starts up the PM+ help.

5. 10. 2 Displaying the help of the Main window

Selecting the [Help] menu -> [Main Window] displays the help topic of the [Main window](#).

5. 10. 3 Displaying the help of a current window

Selecting the [Help] menu -> [Current Window] displays the help topic of the current active window.

5. 10. 4 Displaying a list of shortcut keys

Selecting the [Help] menu -> [Shortcut List...] opens [\[Shortcut List\] dialog box](#) to list the shortcut keys specified for the PM+ menu items.

5. 10. 5 Accessing to NEC Electronics microcontrollers web site

Selecting the [Help] menu -> [NEC Electronics Microcontrollers Web] accesses the NEC Electronics microcontrollers web site.

http://www.necel.com/micro/index_e.html

5. 10. 6 Starting up a external help 1

Selecting the [Help] menu -> [External HELP 1] starts up the help specified with [External HELP "(1) [Shift]+[F1]"] area on the [Tool] menu -> [PM+ Settings...] - [Path] tab.

5. 10. 7 Starting up a external help 2

Selecting the [Help] menu -> [External HELP 2] starts up the help specified with [External HELP "(2) [Ctrl]+[F1]"] area on the [Tool] menu -> [PM+ Settings...] - [Path] tab.

5. 10. 8 Starting up a external help 3

Selecting the [Help] menu -> [External HELP 3] starts up the help specified with [External HELP "(3) [Shift]+[Ctrl]+[F1]"] area on the [Tool] menu -> [PM+ Settings...] - [Path] tab.

5. 10. 9 Displaying the version information about PM+

Selecting the [Help] menu -> [About PM+...] displays the version information about PM+.

When a project file is opened, the version information about NEC Electronics tools and device files that are corresponding to the project is also displayed.

CHAPTER 6 WINDOW REFERENCE

6.1 Window Composition

PM+ has the following windows, wizards and dialog boxes.

Table 6-1 Window/Wizard/Dialog Box List

Window/Wizard/Dialog Box Name	Contents
Main window	This window is the first window to be opened after PM+ is started. To use PM+, start operation from this window.
[Project] window	This window is used to display various information on the projects currently opened.
Edit window	This window is used to edit source programs.
Search result display window	This window is used to display the results of search.
[OutPut] window	This window is used to display the execution status of the make file during build processing.
[New WorkSpace] wizard	This wizard is used to create a new workspace and its project.
[Add New Project] wizard	This wizard is used to add a new project to a workspace.
[Project Settings] wizard	This wizard is used to update the project information for PM+ If an attempt is made to open a project file created by another NEC Electronics tool (debugger or simulator).
[Open] dialog box	This dialog box is used to open a specified file.
[Insert File] dialog box	This dialog box is used to insert the contents of a specified file to the current caret position in the active Edit window .
[Open Workspace] dialog box	This dialog box is used to open a specified workspace file.
[Save As] dialog box	This dialog box is used to save the current active file into a specified file.
[Save Source Files Options] dialog box	This dialog box is used to set options when a source file is saved.
[Change Source File Names] dialog box	This dialog box is used to change the name of the source file to be created from an IDL file being edited to a specified file name.
[Change Selected Source File Name] dialog box	This dialog box is used to rename the source file selected in the [Change Source File Names] dialog box .
[Change Selected Source File Names] dialog box	This dialog box is used to rename multiple source files selected in the [Change Source File Names] dialog box .
[Set Comment Mark] dialog box	This dialog box is used to change a comment mark for a specified file.
[Print] dialog box	This dialog box is used to print the contents of the window being edited.
[Font] dialog box (Print)	This dialog box is used to specify the font and size of the characters to be printed.
[Set Header/Footer] dialog box	This dialog box is used to specify the contents of the header or footer to be printed.

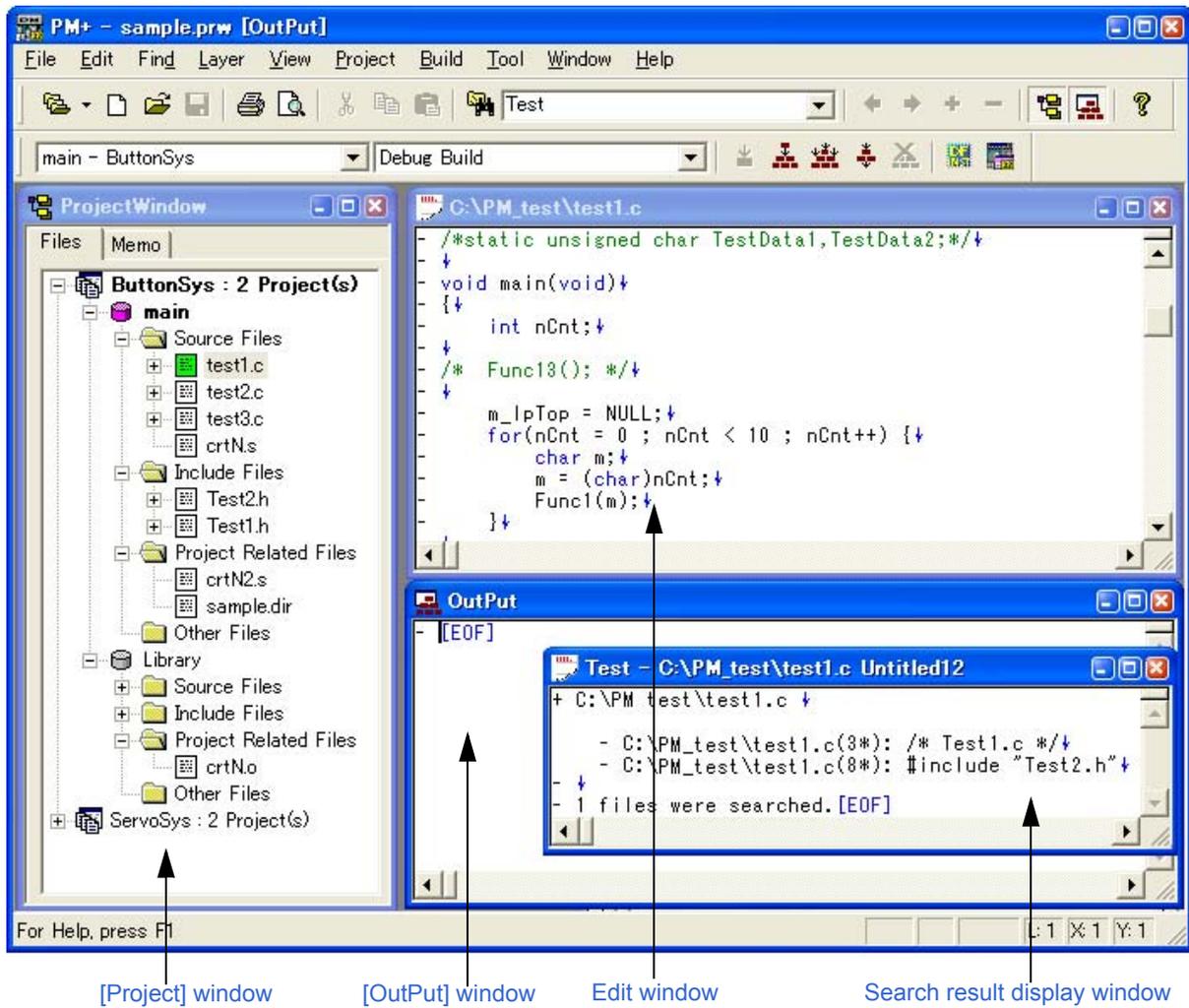
Window/Wizard/Dialog Box Name	Contents
[Grouping by Keyword] dialog box	This dialog box is used to collect lines including a specified character string and display the collected results at the top of the Edit window . In the collected results, the search key is displayed in the first layer, and the collected lines are displayed in the second layer.
[Select the way of Function Prototypes] dialog box	This dialog box is used to automatically generate the prototype declaration of a function.
[Find String] dialog box	This dialog box is used to find a character string.
[Replace String] dialog box	This dialog box is used to replace a character string.
[Jump to Specified Line] dialog box	This dialog box is used to make a jump to a specified destination line number in the current file.
[Jump to Specified Line in the Source file] dialog box	This dialog box is used to make a jump to a specified destination line number in a specified source file.
[Mark Jump] dialog box	This dialog box is used to specify the current caret position as a mark or to make a jump to a marked line.
[Find in Files] dialog box	This dialog box is used to search through multiple files in a specified folder for a character string.
[Replace in Files] dialog box	This dialog box is used to replace a character string in multiple files in a specified folder.
[Expand to Specified Layer] dialog box	This dialog box is used to expand specified layers.
[Collapse to Specified Layer] dialog box	This dialog box is used to collapse specified layers.
[Set Layer Rule] dialog box	This dialog box is used to apply a layer rule to the current contents of the Edit window , or set the layer rule to be applied when files are read.
[Function List] dialog box	This dialog box is used to lists the functions of the file displayed in the active Edit window .
[Save the Function List] dialog box	This dialog box is used to save the functions displayed in the [Function List] dialog box to a file.
[Layer List] dialog box	This dialog box is used to list the layers of the file displayed in the active Edit window .
[Select Active Project] dialog box	This dialog box is used to select the active project.
[Insert Project] dialog box	This dialog box is used to insert an existing project into a project group.
[CVS Update] dialog box	This dialog box is used to execute the CVS update command for the selected file and acquire files registered in the repository.
[CVS Commit] dialog box	This dialog box is used to execute the CVS commit command for the selected file and reflect the file in the repository.
[CVS Log] dialog box	This dialog box is used to execute the CVS log command for the selected file and display the file's log contents in the [OutPut] window .
[CVS Status] dialog box	This dialog box is used to execute the CVS status command for the selected file and display the file's status in the [OutPut] window .
[Project Settings] dialog box	This dialog box is used to set the information on the current active project.
[Add Source Files] dialog box	This dialog box is used to add source files to a project.
[Add Project Related Files] dialog box	This dialog box is used to add project-related files to a project.

Window/Wizard/Dialog Box Name	Contents
[Add Other Files] dialog box	This dialog box is used to add any files to a project as other files.
[Project Group Name] dialog box	This dialog box is used to change a project group name.
[Project Title] dialog box	This dialog box is used to change a project title.
[Tool Version Settings] dialog box	This dialog box is used to change the tools to be used by a project included in the selected project group at once.
[Tool Version Detail Setting] dialog box	This dialog box is used to select the tools to be used and their versions.
[Properties] dialog box	This dialog box is used to displays the path information and read attribute of the selected file.
[Add New Memo] dialog box	This dialog box is used to add a new memo.
[Startup File] dialog box	This dialog box is used to specify a startup file when an existing file is used as a startup file.
[Copy Startup File from] dialog box	This dialog box is used to specify a startup file to be a copy source when an existing file is copied and used as a startup file.
[Startup File to register] dialog box	This dialog box is used to specify a startup file to register.
[Link Directive File] dialog box	This dialog box is used to specify a link directive file when an existing file is used as a link directive file.
[Copy Link Directive File from] dialog box	This dialog box is used to specify a link directive file to be a copy source when an existing file is copied and used as a link directive file.
[Link Directive File to register] dialog box	This dialog box is used to specify a link directive file when an existing file is used as a link directive file.
[Select Project] dialog box	This dialog box is used to specify the project to be added when a source file is dragged to the [Project] window while a workspace file or project file is open.
[Edit Batch Build Settings] dialog box	This dialog box is used to select the project for batch build or rebuild and set the build sequence.
[Build Mode] dialog box	This dialog box is used to select, add and delete build modes.
[Add Build Mode] dialog box	This dialog box is used to add a new build mode.
[Build Settings] dialog box	This dialog box is used to set options related to build.
[Add Command] dialog box	This dialog box is used to specify the commands used to execute any processing required before or after build (copying of output files to another folder, etc.).
[Edit Command] dialog box	This dialog box is used to edit commands specified as required processing either during build execution, before or after build processing.
[Select RTOS] dialog box	This dialog box is used to select the real-time OS used by the current active project.
[dump850] dialog box	This dialog box is used to activate the dump command, dump850.
[Debugger Settings] dialog box	This dialog box is used to set the details of the debugger to be used.
[Register External Tool] dialog box	This dialog box is used to register (add), change, and delete external tools to be used. Up to 10 tools can be registered. The currently set tools are displayed.
[Select External Tool] dialog box	This dialog box is used to specify a external tool to be used.

Window/Wizard/Dialog Box Name	Contents
[File Compare] dialog box	This dialog box is used to compare the contents of two Edit windows.
[PM+ Settings] dialog box	This dialog box is used to make various environment settings.
[User Setting] dialog box	This dialog box is used to set arbitrary keywords for the smart lookup function.
[Font] dialog box	This dialog box is used to select the type and size of characters to be displayed in the Edit window .
[Customize] dialog box	This dialog box is used to set the options of keyboard, menu, toolbar, user menu, keyword.
[Edit User keyword] dialog box	This dialog box is used to edit the keywords defined by the user to highlight arbitrary character strings.
[Edit C Language's reserve words] dialog box	This dialog box is used to edit the keywords for highlighting of reserved words in C language.
[Save the Key Operation] dialog box	This dialog box is used to save the recorded key operation in a file.
[Load the Macro File] dialog box	This dialog box is used to read a saved macro file.
[Play back the Macro File] dialog box	This dialog box is used to read the key operation from a saved macro file and execute the macro.
[Entry Macro Files] dialog box	This dialog box is used to register a macro file to a key.
[Add the Macro file] dialog box	This dialog box is used to add a macro file for macro registration.
[Change the Macro file] dialog box	This dialog box is used to change the stored contents of a macro file.
[Window List] dialog box	This dialog box is used to list the windows that are currently open.
[Shortcut List] dialog box	This dialog box is used to display a list of the shortcut keys set in PM+.
[About PM+] dialog box	This dialog box is used to display the version information about PM+.

Figure 6-1 shows a screen image when displaying the various windows.

Figure 6-1 Window Composition of PM+



6.2 Input Rules

This section explains the rules for inputting characters in the windows, or dialog boxes of PM+.

(1) File names

- File names are composed of a to z, A to Z, 0 to 9, ., _, +, and -.
- File names cannot be prefixed by a period (.), +, or -.
- File names cannot be suffixed by a period (.).
- Uppercase characters and lowercase characters are not distinguished for file names.
- A file name consists of up to 259 characters including the path.

[Caution]

A workspace file name, or a project file name consists of up to 255 characters.

(2) Path names

- Path names are composed of a to z, A to Z, 0 to 9, ., _, +, -, and one-byte spaces.
- Path names cannot be prefixed by a period (.), +, -, or one-byte space.
- Path names cannot be suffixed by a period (.), or one-byte space.
- Uppercase characters and lowercase characters are not distinguished for path names.
- A path name consists of up to 259 characters.

6.3 Explanation of Windows/Wizards/Dialog boxes

This section explains each window/wizard/dialog box of PM+ as follows:

Window/Wizard/Dialog box name

Briefly explains the function of the window, wizard or dialog box and points to be noted.

In addition, the screen image of the window or dialog box is illustrated. Item of related operation are also explained.

Opening

Explains how to open the window, wizard or dialog box.

If two or more methods of opening are listed, the window or dialog box can be opened by any of them.

Explanation of each area

Explains items to be set to or displayed in each area of the window or dialog box.

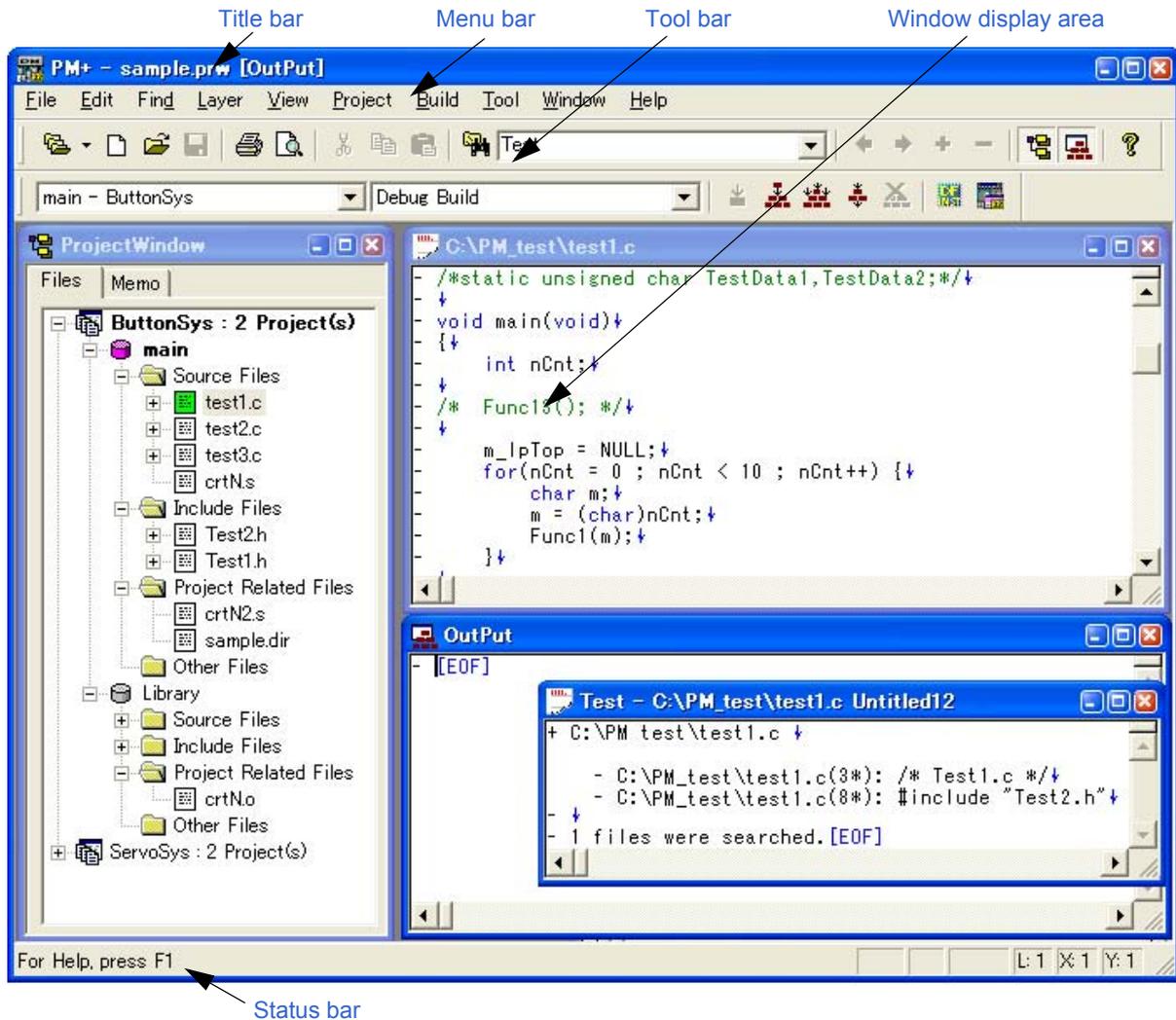
Function buttons

Explains the operation of each button in the window or dialog box.

Main window

The Main window is the first window to be opened after PM+ is started. To use PM+, start operation from this window.

Figure 6-2 Main Window



This section describes the following items:

- Title bar
- Menu bar
- Tool bar
- Window display area
- Status bar
- Drag-and-drop function

Title bar

The title bar displays the following information.

PM+ - the name of the workspace or the project file ["file name" or "window name"]



[Caution]

In ["file name"], the name of the file which is opened in the active [Edit window](#) is displayed.

If you wish to make it display with the path, specify it with the [Tool] menu -> [PM+ Settings...] - [View] tab.

Menu bar

The menu bar consists of the following menus.

- (1) [File] menu
- (2) [Edit] menu
- (3) [Find] menu
- (4) [Layer] menu
- (5) [View] menu
- (6) [Project] menu
- (7) [Build] menu
- (8) [Tool] menu
- (9) [Window] menu
- (10) [Help] menu

(1) [File] menu

<u>N</u> ew	Opens a new Edit window newly. Up to 64 Edit windows can be opened including the Search result display windows and the [OutPut] windows.
<u>O</u> pen...	Loads a existing file and opens the Edit window . The name of the file loaded is displayed on the title of the Edit window . Opens the [Open] dialog box .
<u>I</u> nsert file...	Inserts a specified file at the caret position in the currently active Edit window . Opens the [Insert File] dialog box .
<u>C</u> lose	Closes the currently active Edit window or Search result display window. If there are any files with read-only having the same name, those files will be closed.
<u>N</u> ew Workspace...	Opens the wizard to create a workspace newly.
Open <u>W</u> orkspace...	Opens a Workspace. Opens the [Open Workspace] dialog box . Refer to: "5. 1. 7 Opening a workspace"
Save <u>W</u> orkspace	Saves the contents of the workspace by overwriting.
Close <u>W</u> orkspace	Closes the currently open workspace.
<u>S</u> ave	Overwrites the file currently being edited. Refer to: "5. 1. 10 Saving a file by overwriting"
Save <u>A</u> s...	Saves the file currently being edited to the file whose name is specified. Opens the [Save As] dialog box .

Save All...	Overwrites all the files that are currently open in the Edit windows. The contents of the Edit windows including those that have not been modified are saved. However, the contents of the Edit windows, [OutPut] windows and Search result display windows which have the read-only attribute are not saved. [Note]
Save All (C <h>h</h> anged files Only)	Overwrites all modified files that are currently open in the Edit windows. [Note]
Save and C <h>h</h> ose All	Saves all the files that are currently open in the Edit windows and then closes the windows. [Note]
C <h>h</h> ose All	Closes all the Edit windows currently open. [Note]
Destroy All	Closes all the Edit windows currently open. Any changes made to the files will not be saved. The [Project] window and the [OutPut] windows cannot be closed. [Note]
Change Source E <h>h</h> ile Name...	Changes the names of the source files that are currently being edited. Opens the [Change Source File Names] dialog box.
Save All Sour <h>h</h> ce Files	Updates all of the source files that are currently being edited.
Print P <h>h</h> review	Displays the printing status of the window currently being edited.
P <h>h</h> rint...	Prints the contents of the window currently being edited. Opens the [Print] dialog box.
P <h>h</h> rint Direct	Prints the contents of the window currently being edited. The [Print] dialog box is not opened. [Note]
<i>Recent File</i>	Displays the name of the ten most recently edited or saved files.
<i>Recent Workspace</i>	Displays the name of the ten most recently opened workspaces.
E <h>h</h> xit PM+	Exits from PM+.

[Note]

This menu item in the above table is not displayed by default. To display this menu item, customize the settings for the [File] menu by selecting the [Tool] menu -> [Customize...] - [Menu] tab.

(2) [Edit] menu

U <h>h</h> ndo	Cancels the effect of an edit operation to restore the previous state. Refer to: "5. 2. 1 Canceling an edit operation"
R <h>h</h> edo	Cancels the effect of an [Undo] operation. Refer to: "5. 2. 2 Canceling an [Undo] operation"
Cu <h>h</h> t	Sends the character string or lines selected with range selection to the clipboard and deletes them.
C <h>h</h> opy	Sends the character string or lines selected with range selection to the clipboard.
Cu <h>h</h> t for Append	Sends the character string or the lines selected with range selection to the clipboard and deletes them. This command does not erase the previous contents of the clipboard but instead appends the cut portion to the end of the contents of the clipboard. [Note]
C <h>h</h> opy for Append	Sends the character string or the lines selected with range selection to the clipboard. This command does not erase the previous contents of the clipboard but instead appends the cut portion to the end of the contents of the clipboard. [Note]
I <h>h</h> mage Copy	Sends the character string or the lines selected with range selection to the clipboard exactly as they are displayed on the screen. Refer to: "5. 2. 7 Copying character strings as a screen image"
P <h>h</h> aste	Inserts the contents of the clipboard at the caret position. Refer to: "5. 2. 8 Inserting the contents of clipboard"
P <h>h</h> aste S <h>h</h> pecial...	Inserts the contents of the clipboard by the specified format at the caret position.

<u>D</u> elete	Deletes the character string or the lines selected with the range selection.
Delete the <u>W</u> ord	Deletes a single word at the caret position. [Note]
Delete to the <u>E</u> nd of Word	Deletes the portion of the word at the caret position that is to the right of the caret position. [Note]
Delete the <u>L</u> ine	Deletes a single line at the caret position.
Deleting to the Top of <u>L</u> ine	Deletes the portion of the line from the caret position to the beginning of the line. [Note]
Dele <u>t</u> e to the End of Line	Deletes the portion of the line from the caret position to the end of the line. [Note]
Select to the <u>W</u> ord	Selects the word at the caret position with the range selection. [Note]
Select to the <u>T</u> op of Word	Selects the portion of the word at the caret position that is to the left of the caret position, with range selection. [Note]
Select to the End of <u>W</u> ord	Selects the portion of the word at the caret position that is to the right of the caret position, with range selection. [Note]
Select to the <u>T</u> op of Line	Selects the portion of the line from the caret position to the beginning of the line with range selection. [Note]
Select to the <u>E</u> nd of Line	Selects the portion of the line from the caret position to the end of the line with range selection. [Note]
Select <u>A</u> ll	Selects the entire contents of the Edit window .
Grouping by <u>K</u> eyword...	Collects the lines containing a specified character string. Opens the [Grouping by Keyword] dialog box .
Restore Color of Grouping <u>L</u> ines	Restores the color assigned to the lines collected with the [Grouping by Keyword...].
<u>M</u> ake Function Prototypes...	Makes the function prototypes automatically. Opens the [Select the way of Function Prototypes] dialog box .
Insert New Object...	Inserts new embedded objects. Opens the Insert Object dialog box.
Link...	Edits the linked object and changes the link information. Opens the Links dialog box.
<u>O</u> bject	Starts an application and converts a file type for a selected object.

[Note]

This menu item in the above table is not displayed by default. To display this menu item, customize the settings for the [Edit] menu by selecting the [Tool] menu -> [Customize...] - [Menu] tab.

(3) [Find] menu

<u>F</u> ind...	Searches for the specified character string. Opens the [Find String] dialog box .
Find <u>U</u> pward	Searches for the specified character string toward the beginning of the file. [Note]
Find <u>D</u> ownward	Searches for the specified character string toward the end of the file. [Note]
Find the Word <u>U</u> pward	Searches for the word at the caret position toward the beginning of the file. [Note]
Find the Word <u>D</u> ownward	Searches for the word at the caret position toward the end of the file. [Note]
Replace...	Replaces the specified character string with the replacement character string. Opens the [Replace String] dialog box .
To a Specific <u>L</u> ine...	Moves the caret position to the specified line. Opens the [Jump to Specified Line] dialog box .

To the Specific Line in the Source File...	Moves the caret position to the specified line in the specified source file. Opens the [Jump to Specified Line in the Source file] dialog box . [Note]
Mark Jump...	Registers the current caret position as a mark, or moves the caret position to the marked line. Opens the [Mark Jump] dialog box .
To the Top of Line	Moves the caret position to the top of the line.
To the End of Line	Moves the caret position to the end of the line.
To the Top of File	Moves the caret position to the top of the top line of the file.
To the End of File	Moves the caret position to the end of the last line of the file.
To the Index Line	Moves the caret position to the top of the index line at the current caret position.
To the Top Layer at caret	Moves the caret position to the top layer line at the current caret position.
Same Layer Line Up	Moves the caret position to the layer line of the same depth at a position one line above the current caret. [Note]
Same Layer Line Down	Moves the caret position to the layer line of the same depth at a position one line below the current caret. [Note]
Back Jump	Moves the caret position to the position before the previous jump. [Note] Refer to: " 5. 3. 18 Moving the caret to the position before a jump "
To the Function Definition	Moves the caret position to the definition line for the function.
To the Matching Brace	Searches for the matching brace that at the current caret position and moves the caret to that brace. Refer to: " 5. 3. 20 Searching for matching braces "
Find in Files...	Searches for the specified character string within multiple files. Opens the [Find in Files] dialog box .
Replace in Files...	Replaces the specified character string within multiple files. Opens the [Replace in Files] dialog box .
Find in Project	Searches for the specified character string within multiple files registered in the project. Refer to: " 5. 3. 23 Searching for a character string within a project "
Tag Jump	Performs a tag jump. Refer to: " 5. 3. 24 Jumping to a desired line (tag jump) "
To the Tag File	Returns from the tag jump destination to the window from which the tag jump was made.
Next Tag Jump	Continues the search for the line in tag jump format.
Next Tag Jump Upward	Continues the search for the line in tag jump format upward from a tag jump that has been made. [Note]
One Word Right	Moves the caret position rightward by one word. [Note]
One Word Left	Moves the caret position leftward by one word. [Note]
One Line Up	Moves the caret position upward by one line. [Note]
One Line Down	Moves the caret position downward by one line. [Note]
One Character Right	Moves the caret position rightward by one character. [Note]
One Character Left	Moves the caret position leftward by one character. [Note]
Direct Search	Make the Search Character String Specification combo box of the toolbar active. Searches for the specified character string in the currently active Edit window by pressing [Enter] key. [Note]

[Note]

This menu item in the above table is not displayed by default. To display this menu item, customize the settings for the [Find] menu by selecting the [Tool] menu -> [Customize...] - [Menu] tab.

(4) [Layer] menu

Promote	Promotes the layer of line to which the current caret positioned or the line selected with range selection by one. Refer to: "5. 4. 1 Promoting layers"
Demote	Demotes the layer of line to which the current caret positioned or the line selected with range selection by one. Refer to: "5. 4. 2 Demoting layers"
Expand/Collapse	Expands/Collapses one of the lower layers of the line to which the current caret is positioned or the line selected with range selection.
Expand	Expands one of the lower layers of the line to which the current caret is positioned or the line selected with range selection. [Note] Refer to: "5. 4. 4 Expanding one of the lower layers"
Collapse	Collapses one of the lower layers of the line to which the current caret is positioned or the line selected with range selection. [Note] Refer to: "5. 4. 5 Collapsing one of the lower layers"
Expand All Lower Layers	Expands all of the lower layers of the line to which the current caret is positioned or the line selected with range selection.
Expand All	Expands all of the layers in the active Edit window .
Collapse All	Collapses all of the layers in the active Edit window .
Expand the Specific Layer...	Expands a specified number of layers. Opens the [Expand to Specified Layer] dialog box .
Collapse the Specific Layer...	Collapses a specified number of layers. Opens the [Collapse to Specified Layer] dialog box .
Show Index 1	Collapses lower layers and displays the top layer only. [Note]
Show Index 2	Collapses the third and subsequent layers and displays the first and second layers. [Note]
Show Index 3	Collapses the fourth and subsequent layers and displays the first to third layers. [Note]
Show Index 4	Collapses the fifth and subsequent layers and displays the first to fourth layers. [Note]
Show Index 5	Collapses the sixth and subsequent layers and displays the first to fifth layers. [Note]
Collapse This Layer	Collapses the layer of the line to which the current caret is positioned.
Apply Layer Rule...	Applies a layer rule to the current contents of the Edit window . Opens the [Set Layer Rule] dialog box .

[Note]

This menu item in the above table is not displayed by default. To display this menu item, customize the settings for the [Layer] menu by selecting the [Tool] menu -> [Customize...] - [Menu] tab.

(5) [View] menu

Function List...	Lists the functions of the file displayed in the active Edit window . Opens the [Function List] dialog box .
Layer List...	Lists the layers of the file displayed in the active Edit window . Opens the [Layer List] dialog box .
Standard Bar	Toggles the display of the standard bar between on and off.
Build Bar	Toggles the display of the build bar between on and off.
Option Bar	Toggles the display of the option bar between on and off.
Ex-tool Bar	Toggles the display of the external tool bar between on and off.
Status Bar	Toggles the display of the status bar between on and off.
Project Window	Toggles the display of the [Project] window between on and off.
Output Window	Toggles the display of the [OutPut] window between on and off.
Display Content/Icon	Toggles the display format of an object between contents or icon. When an object displayed as icon is selected, this menu item is displayed as [Display Object as Content] . When an object displayed as contents is selected, this menu item is displayed as [Display Object as Icon] .
Display All Object as Content	Displays all the objects in the currently active Edit window as contents.
Display All Object as Icon	Displays all the objects in the currently active Edit window as icons.

(6) [Project] menu

Select Active Project...	Selects the project to be the target for the build processing. Opens the [Select Active Project] dialog box .
Add New Project...	Opens the wizard to add a new project into the workspace.
Insert Project ...	Inserts an existing project into the workspace. Opens the [Insert Project] dialog box .
CVS Update...	Acquires the source files registered in the server when CVS is used.
CVS Commit...	Reflects the contents of the modification of source files into the server when CVS is used.
CVS Log...	Displays the log contents of the file when CVS is used.
CVS Status...	Displays the status of the file when CVS is used.
CVS Diff	Displays the difference between the files when CVS is used.
Export Makefile	Creates a make file for the project.
Project Settings...	Sets the project information. Opens the [Project Settings] dialog box .
Add Source Files...	Adds source files to an active project. Opens the [Add Source Files] dialog box .
Add Project Related Files...	Adds project-related files to an active project. Opens the [Add Project Related Files] dialog box .
Add Other Files...	Adds any files to an active project as other files. Opens the [Add Other Files] dialog box .
Direct Select Active Project	Make the Active Project Selection combo box of the toolbar active. Active projects can be switched by selecting a project. [Note]

[Note]

This menu item in the above table is not displayed by default. To display this menu item, customize the settings for the [\[Project\]](#) menu by selecting the [\[Tool\]](#) menu -> [\[Customize...\]](#) - [\[Menu\]](#) tab.

(7) [Build] menu

Build and Debug	Performs the build processing and then starts the debugger. Refer to: "5. 7. 1 Building and debugging"
Rebuild and Debug	Performs the rebuild processing and then starts the debugger. Refer to: "5. 7. 2 Rebuilding and debugging"
Compile	Compiles the selected file. Refer to: "5. 7. 3 Compiling"
Build	Performs the build processing for the active project. Refer to: "5. 7. 4 Building"
Stop Build	If during build execution, build processing is stopped. If during batch build or batch rebuild execution, a question message is displayed and build processing is paused.
Rebuild	Performs the rebuild processing for the active project. Refer to: "5. 7. 6 Rebuilding"
Batch Build	Executes building of the projects specified in the [Edit Batch Build Settings] dialog box from multiple projects registered to the workspace.
Batch Rebuild	Executes rebuilding of the projects specified in the [Edit Batch Build Settings] dialog box from multiple projects registered to the workspace.
Update dependencies	Updates the dependency relationship of the source files and include files.
Clean	Deletes the intermediate files and hexadecimal code files that have been generated by the build processing.
Edit	Starts the specified editor to open the selected file.
Debug	Starts the debugger.
Download Some Load Module Files	Downloads multiple load module files registered as the same project group to the debugger. Refer to: "5. 7. 13 Downloading multiple load module files"
Select Build Mode...	Specifies the build mode. Opens the [Build Mode] dialog box.
Build Settings...	Performs the setting for the build processing. Opens the [Build Settings] dialog box.
Batch Build Settings...	Selects the project for batch build or rebuild and sets the build sequence. Opens the [Edit Batch Build Settings] dialog box.
Direct Build Mode Selection	Make the Build Mode Selection combo box of the toolbar active. Build mode can be selected. [Note]

[Note]

This menu item in the above table is not displayed by default. To display this menu item, customize the settings for the [Build] menu by selecting the [Tool] menu -> [Customize...] - [Menu] tab.

[Caution]

If the project file to which no source file is registered is opened, some build-related menu items may be invalid.

(8) [Tool] menu

<i>Tool's name</i>	Specifies the tool options executed on PM+. Each name of the menu items depends on the tool.
Select RT <u>OS</u> ...	Select the real-time OS used. Opens the [Select RTOS] dialog box . Refer to: "5. 8. 2 Selecting the real-time OS to be used"
dump <u>8</u> 50	Executes a dump command. (executes "dump850".) Opens the [dump850] dialog box . Refer to: "5. 8. 3 Dumping the load module file or the object file"
<u>D</u> ebugger Settings...	Sets up the debugger to be used and specifies the files to be downloaded. Opens the [Debugger Settings] dialog box .
Register Ex-tool...	Registers the external tool which is started from PM+. Opens the [Register External Tool] dialog box .
Start up Ex-tool	Starts the registered external tool. The name of this menu item is displayed as the designation at the time of registering the external tool.
File Comp <u>a</u> re...	Compares the selected files. Opens the [File Compare] dialog box .
Device File I <u>n</u> staller	Starts the device file installer (DFINST). Refer to: "5. 8. 8 Inserting device file"
PM+ <u>S</u> ettings...	Sets up the operating environment for PM+. Opens the [PM+ Settings] dialog box .
<u>F</u> ont...	Specifies the type and size of the font used in the Edit window . Opens the [Font] dialog box .
<u>C</u> ustomize...	Customizes the menu bar, tool bar and so on. Opens the [Customize] dialog box .
<u>R</u> ecord the Key Operations /Stop <u>R</u> ecording the Key Operations	Starts and stops recording of the key operations.
<u>P</u> lay Back	Plays back the currently recorded key operations.
Sa <u>v</u> e the Key Operations...	Saves the recorded key operations to a macro file. Opens the [Save the Key Operation] dialog box . Refer to: "5. 8. 15 Commands corresponding to key operations"
<u>L</u> oad the Macro File...	Loads the macro file to which the key operations have been saved, and enables a use of [Play Back] menu item. Opens the [Load the Macro File] dialog box .
Play <u>B</u> ack the Macro File...	Loads the macro file to which the key operations have been saved, and executes the key operations. Opens the [Play back the Macro File] dialog box .
Register the Macro Files...	Registers the macro file, and adds to the cascade menu of the [Play Back the Register Macro]. Opens the [Entry Macro Files] dialog box .
Play Back the Register <u>M</u> acro	Executes the macro registered with the [Register the Macro Files...].

(9) [Window] menu

<u>C</u> ascade	Overlaps all the currently open windows with one another in such a way that their titles are visible.
Tile <u>H</u> orizontally	Tiles all the currently open windows horizontally.
Tile <u>V</u> ertically	Tiles all the currently open windows vertically.
<u>S</u> plit	Splits the currently active Edit window into two. Refer to: " 5. 9. 4 Splitting a window "
To the <u>N</u> ext Split Window	Moves the caret from the split screen to which the caret is positioned to column 1 of the other split screen.
To the <u>N</u> ext Window	Activates the window following the currently active one, according to Z order (window superposition order). [Note]
To the <u>P</u> revious Window	Activates the window preceding the currently active one, according to Z order (window superposition order). [Note]
<u>W</u> indow List...	Displays a list of currently open windows. Opens the [Window List] dialog box .
<i>Open window information</i>	Displays the window title of the window currently being edited and makes the selected window the top window.

[Note]

This menu item in the above table is not displayed by default. To display this menu item, customize the settings for the [Window] menu by selecting the [Tool] menu -> [Customize...] - [Menu] tab.

(10) [Help] menu

<i>Tool Help</i>	Displays the help file for each tool. The menu item names differ for each tool. When a project is opened, its menu items are added.
PM+ <u>H</u> elp	Starts the PM+ help.
<u>M</u> ain Window	Starts the PM+ help to display the topic of the Main window.
<u>C</u> urrent Window	Starts the PM+ help to display the topic of the currently active window.
<u>S</u> hortcut List...	Lists the shortcut keys specified for the PM+ menu items. Opens the [Shortcut List] dialog box .
<u>N</u> EC Electronics Microcontrollers Web	Accesses the NEC microcontrollers web site. http://www.necel.com/micro/index_e.html
External HELP <u>1</u>	Displays the help topic specified in [External HELP (1)] on the [Path] tab displayed by selecting the [Tool] -> [PM+ Settings...].
External HELP <u>2</u>	Displays the help topic specified in [External HELP (2)] on the [Path] tab displayed by selecting the [Tool] -> [PM+ Settings...].
External HELP <u>3</u>	Displays the help topic specified in [External HELP (3)] on the [Path] tab displayed by selecting the [Tool] -> [PM+ Settings...].
<u>A</u> bout PM+...	Displays the version information about PM+.

Tool bar

The tool bar is a collection of buttons and combo boxes that can execute often-used commands with a single action. The kind of tool bar is as follows:

- (1) Standard bar
- (2) Build bar
- (3) Option bar
- (4) External tool bar

The standard bar and the build bar can be customized with the [Tool] menu -> [Customize...] - [Toolbar] tab.

(1) Standard bar

The standard bar consists of the buttons and combo box that are related to the operation or the modification of files.

Table 6-2 shows the list of items on the standard bar in the default condition.

Table 6-2 Standard Bar

Item	Function
	Lists the names of the files opened.
	Opens a Edit window newly. Up to 64 Edit windows can be opened including the Search result display windows and the [OutPut] windows.
	Loads a existing file and opens the Edit window . The name of the file loaded is displayed on the title of the Edit window . Opens the [Open] dialog box .
	Overwrites the file currently being edited.
	Prints the contents of the window currently being edited.
	Displays the printing status of the window currently being edited.
	Sends the character string or lines selected with range selection to the clipboard and deletes them.
	Sends the character string or lines selected with range selection to the clipboard.
	Inserts the contents of the clipboard at the caret position.
	Searches for the specified character string within multiple files.
	Specifies a character string to be searched for. Searches for the specified character string in the currently active Edit window by pressing [Enter] key
	Promotes the layer of line to which the current caret positioned or the line selected with range selection by one.
	Demotes the layer of line to which the current caret positioned or the line selected with range selection by one.
	Expands/Collapses one of the lower layers of the line to which the current caret is positioned or the line selected with range selection.
	Expands one of the lower layers of the line to which the current caret is positioned or the line selected with range selection.

Item	Function
	Opens the [Project] window. Closes the [Project] window when the [Project] window is already opened.
	Opens the [OutPut] window. Closes the [OutPut] window when the [OutPut] window is already opened.
	Starts the PM+ help.

(2) Build bar

The build bar consists of the buttons and combo boxes that are related to the build processing.

Table 6-3 shows the list of items on the build bar in the default condition.

Table 6-3 Build Bar

Item	Function
	This is the Active Project Selection combo box. Active projects can be switched by selecting a project.
	This is the Active Project Selection combo box. The following build modes can be specified in the default condition. This specification will be reflected in the [Build] menu -> [Select Build Mode...]. [Debug Build] Creates the object file with the debug information. [Release Build] Creates the object file without the debug information.
	Compiles the selected file.
	Performs the build processing for a active project.
	Performs the rebuild processing for a active project.
	Performs the build processing and then starts the debugger.
	Stops the current build processing.
	Starts the device file installer.

(3) Option bar

The option bar consists of the buttons that are related to the option settings. The order of display of the buttons depends on the loaded tool.

[78K Microcontrollers]

Table 6-4 Option Bar (78K Microcontrollers)

Button	Function
	Opens the Structured Assembler Options dialog box. (except 78K0R Microcontrollers)
	Opens the Assembler Options dialog box.
	Opens the Linker Options dialog box.
	Opens the Object Converter Options dialog box.
	Opens the List Converter Options dialog box.
	Opens the Compiler Options dialog box.

[V850 Microcontrollers]

Table 6-5 Option Bar (V850 Microcontrollers)

Button	Function
	Opens the Compiler Common Options dialog box.
	Opens the Section File Generator Options dialog box.
	Opens the Compiler Options dialog box.
	Opens the Assembler Options dialog box.
	Opens the Linker Options dialog box.
	Opens the ROM processor Options dialog box.
	Opens the Hex Converter Options dialog box.
	Opens the Static performance analyzer Options dialog box.

(4) External tool bar

The external tool bar consists of the icons that are registered with the [Tool] menu -> [Register Ex-tool...]. The order of display of the icons depends on the order registered with [Register Ex-tool...] menu item.

Window display area

This area is displayed various windows.

For details on the function of each window, refer to the following.

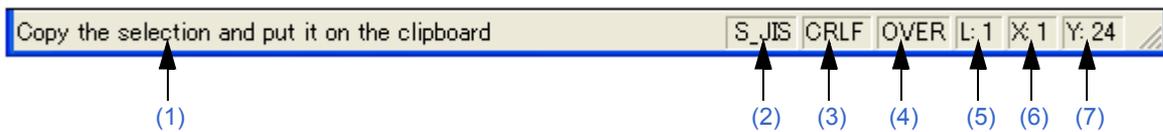
- [Project] window
- Edit window
- Search result display window
- [OutPut] window

Status bar

The status bar displays brief description of the menu that has been activated by clicking and indicates the other various information.

Figure 6-3 shows an image of the status bar.

Figure 6-3 Status Bar



(1) Brief description

Displays the following descriptions.

- The description of the menu that has been activated by clicking
- The contents of the line corresponding to a tag jump destination
- The name of the source file to be output. (When editing an IDL file)

Displays "For Help, press F1" in the default condition.

(2) Character code type

Displays the character code type used for the file currently edited.

(3) Line feed code type

Displays the line feed code type used for the file currently edited.

(4) Key input mode

Displays the key input mode. In the overwrite mode, "OVER" is displayed.

(5) Depth of layers

Displays the depth of the layers at the current caret position.

(6) Number of columns

Displays the number of columns at the caret position.

(7) Number of lines

Displays the number of lines at the current caret position.

Drag-and-drop function

The following operations are achieved by dropping a file in the main frame.

- When dropping a workspace file (.prw extension)

Opens the dropped workspace. If another workspace is already open, closes that workspace and then opens the workspace that was dropped.

Multiple workspace files cannot be dropped. A workspace file and project file cannot be dropped together.

- When dropping a project file (.prj extension)

Opens the workspace corresponding to the project file that was dropped. If another workspace is already open, closes that workspace and then opens the workspace corresponding to the project file that was dropped.

Multiple project files cannot be dropped. A workspace file and project file cannot be dropped together.

- When dropping a file other than a workspace file or project file

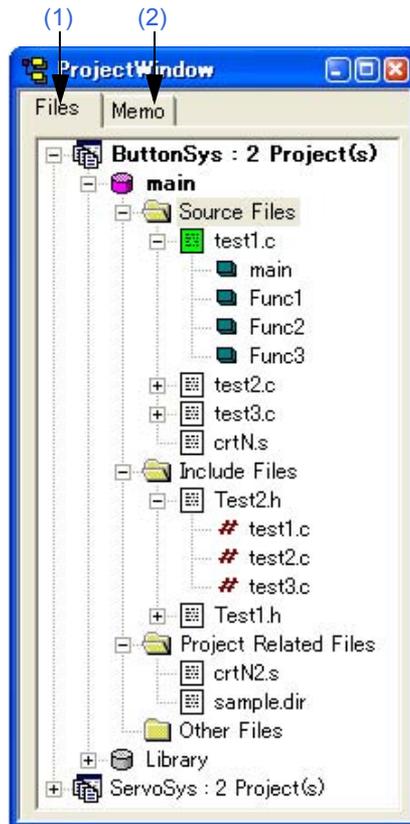
Opens the file that was dropped in the [Edit window](#). If "Untitled1" exists in the [Edit window](#) while the [\[OutPut\] window](#) is not displayed, "Untitled1" is closed when the file that was dropped is opened.

Multiple files can be dropped.

[Project] window

The [Project] window is used to display various information on the projects currently opened.

Figure 6-4 [Project] Window



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Drag-and-drop function](#)

Opening

- Select the [View] menu -> [Project Window].

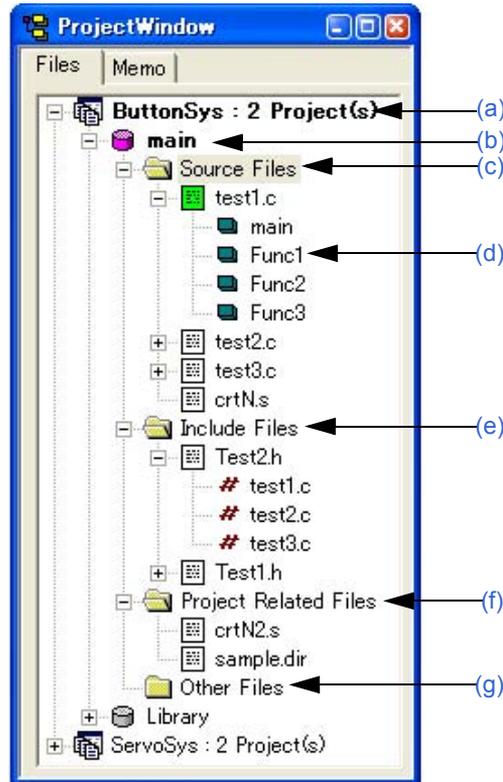
Explanation of each area

(1) [Files] tab

The [File] tab displays the file information to be managed by a project file. When there are multiple projects, the information is displayed in project units.

A file can be added into a project by dragging and dropping the file onto this tab (refer to "[Drag-and-drop function](#)").

Figure 6-5 [Project] Window - [File] Tab



(a) Project group name

Multiple registered projects can be arranged with related projects in a group. The project group name can be set by the user freely, and up to 127 characters names can be set.

The initial setting for the project group name is made when a workspace is created. Up to 20 projects can be registered in one project group. Register the same device file for multiple registered projects, as they are managed as a project group.

When the mouse cursor is placed on the project group name, the device name used in the projects affiliated with that project group is displayed as a pop-up.

Clicking the right mouse button on the project group name displays the following menus:

E <u>dit</u> Project Group Name...	Opens the [Project Group Name] dialog box.
A <u>dd</u> New Project...	Opens a wizard to add a new project into the project.
I <u>nsert</u> Project...	Opens the [Insert Project] dialog box.
S <u>elect</u> T <u>ools</u> ...	Opens the [Tool Version Settings] dialog box.
R <u>egister</u> order	Displays the file names in the order in which they were registered.
A <u>scending</u> order	Displays the file names in the ascending order.
F <u>ix</u> Window	Fixes the location of the [Project] window.

(b) Project title name

The project title is displayed. If a title is not set, the file name without the path and extension is displayed. The project title name can be set by the user freely, and up to 127 characters can be set.

When the mouse cursor is placed on the project title name, the device name used in the projects is displayed as a pop-up.

[Meaning of icons]

	Project set as the active project (by selecting the [Project] menu -> [Select Active Project...] or right mouse button -> [Set as Active Project])
	Project not set as active project

Clicking the right mouse button on the project title name displays the following menus:

Set as Active <u>P</u> roject	Makes the selected project active.
<u>B</u> uild	Starts the build processing.
Compiler <u>O</u> ptions...	Opens the Compiler Options dialog box.
<u>A</u> ssembler Options...	Opens the Assembler Options dialog box.
<u>E</u> dit Project Title...	Opens the [Project Title] dialog box.
Project <u>S</u> ettings...	Opens the [Project Settings] dialog box. Changes the project title and so on.
<u>D</u> elete Project	Deletes a selected project.
Register order	Displays the file names in the order in which they were registered.
Asc <u>e</u> nding order	Displays the file names in the ascending order.
<u>F</u> ix Window	Fixes the location of the [Project] window.

(c) Source Files folder

Source files and assembler files registered in the project are grouped here. The names of the source files registered to the project are displayed under the Source File folder. Double-clicking a file name or pressing the [Enter] key after selecting a file name opens the file under the set editor (refer to [PM+ Settings] dialog box). Up to 2048 source files can be registered per project.

When the mouse cursor is placed on the source file folder, "Source Files" is displayed in a pop-up menu. When the mouse cursor is placed on the source file name, the source file name indicated by the mouse cursor is displayed as a full path in a pop-up.

[Meaning of icons]

	Source file to which no compiler or assembler options have been set individually (by clicking the right mouse button -> [Special Compiler Options...] or [Special Assembler Options...])
	Source file to which compiler or assembler options have been set individually
	[Note] Only for projects using a real-time OS Source file created by the configurator and to which no compiler or assembler options have been set individually The name given by the tool DLL of the real-time OS is used as the file name.
	[Note] Only for projects using a real-time OS Source file created by the configurator and to which compiler or assembler options have been set individually The name given by the tool DLL of the real-time OS is used as the file name.
	[Note] Only for projects using Applilet2 Source file created by Applilet2 and to which no compiler or assembler options have been set individually
	[Note] Only for projects using Applilet2 Source file created by Applilet2 and to which compiler or assembler options have been set individually

Clicking the right mouse button on the source file folder or the source file name displays the following menus:

[When a Source File folder is selected]

Add <u>S</u> ource Files...	Opens the [Add Source Files] dialog box .
Compiler <u>O</u> ptions...	Opens the Compiler Options dialog box.
<u>A</u> ssembler Options...	Opens the Assembler Options dialog box.

[When a source file name is selected]

Add <u>S</u> ource Files...	Opens the [Add Source Files] dialog box .
<u>D</u> elete Source File	Deletes a selected source file from the project.
<u>C</u> ompile	Compiles a selected file.
<u>O</u> pen	Opens a selected file under the set editor.
Special Compiler <u>O</u> ptions...	Opens the Compiler Options dialog box. When options are set to a file, the icon of the file displays in green.
<u>R</u> eset Special Compiler Options	Cancel compiler options set to a file.
<u>P</u> roperties...	Opens the [Properties] dialog box to display the properties of a selected file.

[When an assembler source file is selected]

Add <u>S</u> ource Files...	Opens the [Add Source Files] dialog box .
<u>D</u> elete Source File	Deletes a selected source file from the project.
<u>C</u> ompile	Compiles a selected file.
<u>O</u> pen	Opens a selected file under the set editor.
Special <u>A</u> ssembler Options...	Opens the Assembler Options dialog box. When options are set to a file, the icon of the file displays in green.
<u>R</u> eset Special Assembler Options	Cancel assembler options set to a file.
<u>P</u> roperties...	Opens the [Properties] dialog box to display the properties of a selected file.

[When a structured assembler source file is selected]

These menu items become valid only when a project that uses a 78K0 or 78K0S Microcontrollers is active.

Add <u>S</u> ource Files...	Opens the [Add Source Files] dialog box .
<u>D</u> elete Source File	Deletes a selected source file from the project.
<u>C</u> ompile	Compiles a selected file.
<u>O</u> pen	Opens a selected file under the set editor.
Special <u>S</u> tructured Assembler Options...	Opens the Structured Assembler Options dialog box. When options are set to a file, the icon of the file displays in green.
<u>R</u> eset Special Structured Assembler Options	Cancel structured assembler options set to a file.
<u>P</u> roperties...	Opens the [Properties] dialog box to display the properties of a selected file.

[Caution]

The source file added using the [Add Source Files...] menu is added at the end of the source file list.
The source file order can be changed on the [Source File] tab in the [\[Project Settings\] dialog box](#).
Source files can also be added by directly dragging the source file into the [Project] window.

(d) Function name

The names of the functions in C language existing in the source files are displayed. Double-clicking a function name or pressing the [Enter] key after selecting a function name displays the function definition line under the set editor (refer to [\[PM+ Settings\] dialog box](#)).

When the mouse cursor is placed on the function file name, the function name indicated by the mouse cursor is displayed in a pop-up.

Clicking the right mouse button on the function file name displays the following menus:

Add <u>S</u> ource Files...	Opens the [Add Source Files] dialog box .
<u>D</u> elete Source File	Deletes a selected source file from the project.
<u>C</u> ompile	Compiles a selected file.
Open	Opens a selected file under the set editor.
Special Compiler <u>O</u> ptions...	Opens the Compiler Options dialog box.
<u>R</u> eset Special Compiler Options	Cancels compiler options set to a file.
<u>P</u> roperties...	Opens the [Properties] dialog box to display the properties of a selected file.

[Caution]

- The source file added using the [Add Source Files...] menu is added at the end of the source file list. The source file order can be changed on the [Source File] tab in the [\[Project Settings\] dialog box](#). Source files can also be added by directly dragging the source file into the [Project] window.
- If, after a function name has been changed in the [Edit window](#) and the function name is updated in the [Project] window, the [Edit window](#) change status is undone using the [Undo]/[Redo] menu items, the function name is not updated even if the [Project] window is made active. It is updated when build or save is performed.

(e) Include Files folder

Include files registered in the project are grouped here. Source files that have a dependency relationship with include files are also displayed. Double-clicking a file name or pressing the [Enter] key after selecting a file name opens the file under the set editor.

When the mouse cursor is placed on the include file folder, "Include Files" is displayed in a pop-up menu. When the mouse cursor is placed on the file name, the file name indicated by the mouse cursor is displayed as a full path in a pop-up.

[Meaning of icons]

	File format in other than binary
	[Note] Only for projects using a real-time OS File created by the configurator The name given by the tool DLL of the real-time OS is used as the file name.
	[Note] Only for projects using Applilet2 File created by the configurator The name given by the tool DLL of the real-time OS is used as the file name.

Clicking the right mouse button on the include file folder, the file name or displays the following menus:

[When a Include Files folder is selected]

Update Dependencies	Updates a dependency relationship between source files and include files, and reflects the updated contents in the [Project] window.
Compiler Options...	Opens the Compiler Options dialog box.
Assembler Options...	Opens the Assembler Options dialog box.

[When a include file name is selected]

Update Dependencies	Updates a dependency relationship between source files and include files, and reflects the updated contents in the [Project] window.
Open	Opens a selected file under the set editor.
Compiler Options...	Opens the Compiler Options dialog box.
Assembler Options...	Opens the Assembler Options dialog box.
Properties...	Opens the [Properties] dialog box to display the properties of a selected file.

[When a dependency relationship file name is selected]

Update Dependencies	Updates a dependency relationship between source files and include files, and reflects the updated contents in the [Project] window.
Open	Opens a selected file under the set editor.
Compiler Options...	Opens the Compiler Options dialog box.
Assembler Options...	Opens the Assembler Options dialog box.
Properties...	Opens the [Properties] dialog box to display the properties of a selected file.

(f) Project Related Files folder

The related files (link directive files and library files) to build the project are grouped here. Double-clicking a file name or pressing the [Enter] key after selecting a file name opens the file under the set editor. (refer to [\[PM+ Settings\] dialog box](#)).

When the mouse cursor is placed on the project-related file folder, "Project Related Files" is displayed in a pop-up menu. When the mouse cursor is placed on the project-related file name, the project-related file name indicated by the mouse cursor is displayed as a full path in a pop-up.

In a project that uses a real-time OS, the name of the configuration file used is automatically registered.

[Meaning of icons]

	File format in other than binary
	Binary file, such as an object file or library file (cannot be edited)

Clicking the right mouse button on the project-related file folder or the project-related file name displays the following menus:

[When a Project Related Files folder is selected]

Add Project Related Files...	Opens the [Add Project Related Files] dialog box .
Compiler Options...	Opens the Compiler Options dialog box.
Assembler Options...	Opens the Assembler Options dialog box.

[When a project related file name is selected]

Add Project <u>R</u> elated Files...	Opens the [Add Project Related Files] dialog box .
<u>D</u> elete Project Related Files	Deletes a selected file.
Open <u>u</u>	Opens a selected file under the set editor.
Open with <u>L</u> ink Directive Generator <i>filename</i>	Opens a selected file using the LDG. This menu item is valid only when all the following conditions are satisfied. - A link directive file has been selected. - The LDG has been installed. - A project that uses a V850 Microcontrollers device is active.
Compiler <u>O</u> ptions...	Opens the Compiler Options dialog box.
<u>A</u> ssembler Options...	Opens the Assembler Options dialog box.
<u>P</u> roperties...	Opens the [Properties] dialog box to display the properties of a selected file.

(g) Other Files folder

The user can register any file freely. Double-clicking a file name or pressing the [Enter] key after selecting a file name starts up an application in accordance with the file association. Up to 100 other files can be registered per project.

When the mouse cursor is placed on the other file folder, "Other Files" is displayed in a pop-up menu. When the mouse cursor is placed on the other file name, the other file name indicated by the mouse cursor is displayed as a full path in a pop-up.

Clicking the right mouse button on the other file folder or the other file name displays the following menus:

[When an Other Files folder is selected]

Add Other <u>F</u> iles...	Opens the [Add Other Files] dialog box .
Compiler <u>O</u> ptions...	Opens the Compiler Options dialog box.
<u>A</u> ssembler Options...	Opens the Assembler Options dialog box.

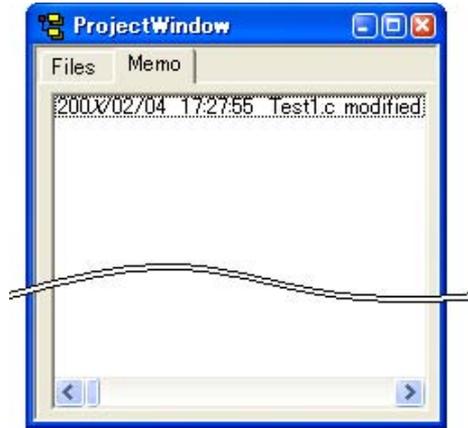
[When an other file name is selected]

Add Other <u>F</u> iles...	Opens the [Add Other Files] dialog box .
<u>D</u> eletes Other Files	Deletes a selected file from the Other Files folder
Open <u>u</u>	Starts up an application in accordance with the file association.
Open with <u>E</u> ditor	Opens a selected file under the set editor.
Compiler <u>O</u> ptions...	Opens the Compiler Options dialog box.
<u>A</u> ssembler Options...	Opens the Assembler Options dialog box.
<u>P</u> roperties...	Opens the [Properties] dialog box to display the properties of a selected file.

(2) [Memo] tab

The [Memo] tab displays the memo information specified for a workspace. Memo information is managed in workspace units.

Figure 6-6 [Project] Window - [Memo] Tab



The contents of the memo can be added with the right mouse button.

Add Memo...	Opens the [Add New Memo] dialog box . Records the contents of the memo with the date and time onto the [Memo] tab
Delete Memo...	Deletes a selected memo.

Drag-and-drop function

The following operations are achieved by dropping a file in the [Project] window. The operation differs depending on whether or not the workspace is open.

[When not opening a workspace]

- When dropping a workspace file (.prw extension)
 - Opens the dropped workspace.
 - Multiple workspace files cannot be dropped. A workspace file and project file cannot be dropped together.
- When dropping a project file (.prj extension)
 - Opens the workspace corresponding to the project file that was dropped.
 - Multiple project files cannot be dropped. A workspace file and project file cannot be dropped together.
- When dropping a file other than a workspace file or project file
 - Opens the file that was dropped in the [Edit window](#). If "Untitled1" exists in the [Edit window](#) while the [\[OutPut\] window](#) is not displayed, "Untitled1" is closed when the file that was dropped is opened.
 - Multiple files can be dropped.

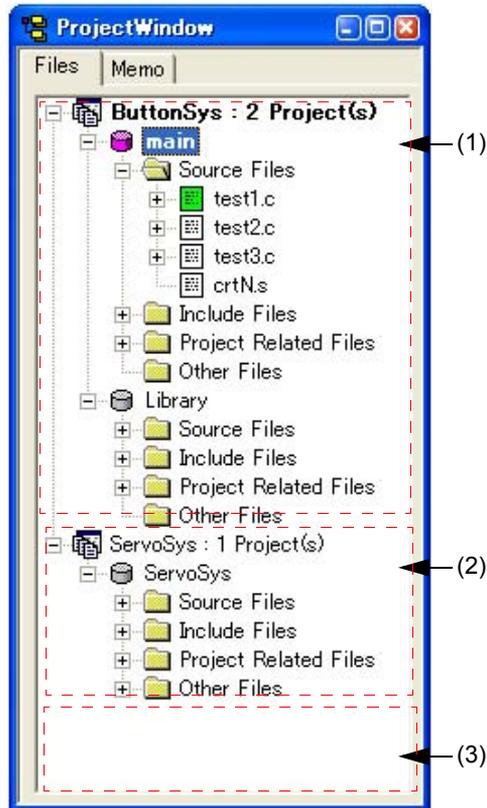
[When opening an empty workspace file]

- When dropping a workspace file (.prw extension)
 - Closes the workspace and then opens the workspace that was dropped.
 - Multiple workspace files cannot be dropped. A workspace file and project file cannot be dropped together.
- When dropping a project file (.prj extension)
 - Creates a project group newly and add a project file. The newly created project group name is the device microcontrollers name used in the added project file.
 - When multiple project files are dropped, if the dropped project file uses the same device, it is registered to the same project group. If the device microcontrollers is the same but the device name differs, a number is suffixed to the project group name. Such numbers are suffixed from "1". A workspace file and project file cannot be dropped together.
- When dropping a file other than a workspace file or project file
 - Opens the file that was dropped in the [Edit window](#). If "Untitled1" exists in the [Edit window](#) while the [\[OutPut\] window](#) is not displayed, "Untitled1" is closed when the file that was dropped is opened.
 - Multiple files can be dropped.
- When dropping a workspace file and a file other than the workspace file together
 - Closes the workspace and then opens the workspace that was dropped. Opens other files that was dropped in the [Edit window](#). If "Untitled1" exists in the [Edit window](#) while the [\[OutPut\] window](#) is not displayed, "Untitled1" is closed when the file that was dropped is opened.
- When dropping a project file and a file other than the project file together
 - Creates a project group newly and add a project file. Other dropped file is added as a source file to the added project and opened in the [Edit window](#).

[When opening a workspace for which project is registered]

When opening a workspace for which project is registered is opened, the operation differs depending on the location where the file was dropped.

Figure 6-7 Position where a File is Dropped in a Workspace for which Project is Registered



- When dropping a workspace file (.prw extension)

The operation is the same regardless of where the file is dropped. Closes the workspace and then opens the workspace that was dropped.

Multiple workspace files cannot be dropped. A workspace file and project file cannot be dropped together.

- When dropping a project file (.prj extension)

The operation differs depending on where the file was dropped.

If the project file is dropped at (1) or (2), a project is added to the project group at the drop location.

If the project file is dropped at (3), a newly project group is created and the file is added. The newly created project group name is the device microcontrollers name used in the added project file.

Multiple files can be dropped. A workspace file and project file cannot be dropped together.

- When dropping a file other than a workspace file or project file

Operation is performed considering that a source file was added. The operation differs depending on where the file was dropped.

If the file is dropped at (1), the [\[Select Project\] dialog box](#) is displayed to select the project to which the source file is added. The projects that can be selected are projects affiliated with the project group at the drop location.

If the file is dropped at (2), the file is added as a source file treating that project as the addition target project since there is one project affiliated with the project group at the drop location.

(If the file is dropped at (3), the [\[Select Project\] dialog box](#) is displayed to select the project to which the source file is added. The projects that can be selected are all projects registered to the workspace.

Multiple files can be dropped.

[Caution]

The source file is added at the end of the source file list.

The source file order can be changed using the [Source File] tab in the [\[Project Settings\] dialog box](#).

- When dropping a workspace file and a file other than the workspace file together

Closes the workspace and then opens the workspace that was dropped. Opens other files that was dropped in the [Edit window](#). If "Untitled1" exists in the [Edit window](#) while the [\[OutPut\] window](#) is not displayed, "Untitled1" is closed when the file that was dropped is opened.

- When dropping a project file and a file other than the project file together

The operation differs depending on where the file was dropped.

(If the file is dropped at (1) or (2), a project is added to the project group at the drop location. Other dropped file is considered that was added as a source file and the [\[Select Project\] dialog box](#) is displayed to select the project to which the source file is added.

If the project file is dropped at (3), a newly project group is created and the file is added. The newly created project group name is the device microcontrollers name used in the added project file. Other dropped file is considered that was added as a source file and the [\[Select Project\] dialog box](#) is displayed to select the project to which the source file is added. The projects that can be selected are all projects registered to the workspace.

[Caution]

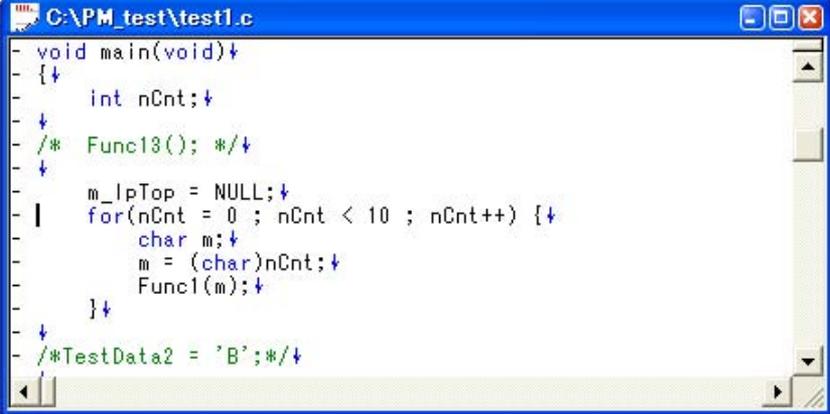
The source file is added at the end of the source file list.

The source file order can be changed using the [Source File] tab in the [\[Project Settings\] dialog box](#).

Edit window

The Edit window is used to edit source programs.

Figure 6-8 Edit Window



```

C:\PM_test\test1.c
- void main(void){
- {
-     int nCnt;
-
-     /* Func13(); */
-
-     m_lpTop = NULL;
-     for(nCnt = 0 ; nCnt < 10 ; nCnt++) {
-         char m;
-         m = (char)nCnt;
-         Func1(m);
-     }
-
-     /*TestData2 = 'B';*/
  
```

This section describes the following items:

- Opening
- Character input
- Definitions of words
- Range selection
- Moving lines/layers
- Copying lines/layers
- Operations performed by double-clicking the mouse button
- Operations performed with the right mouse button
- Scrolling
- Smart lookup function
- Drag-and-drop function
- Restrictions on the Edit window

Opening

- Select the [File] menu -> [New].
- Select the [Build] menu -> [Edit].
- Select the [File] menu -> [Open...], and specify the file to be open.
- Double-click a icon of the file on the [Project] window.

Character input

When editing files in the Edit window, you must observe the following character input rules:

- If the [Enter] key is used, a new line is inserted following the current line. If, at this time, the current line does not have any lower layer, or if the lower layer has been collapsed, the new line will have the same layer as the current line. If the current line has a lower layer and the layer is expanded, the new line will have the lower layer.
- When you are selecting a range or moving lines by dragging, character input is ignored.
- Selecting a line range and then pressing the [Tab] key causes a Tab code to be inserted at the beginning of the selected lines. At this time, the Tab code is also inserted at the lines of layer which has been collapsed.
- Selecting a line range and then pressing the [Shift] + [Tab] key combination causes the Tab code at the beginning of the selected lines to be deleted. At this time, the Tab code at the lines of layer which has been collapsed is also deleted.

Definitions of words

When handling a word in the Edit window, the definitions of "words" are as follows:

- Consecutive single-byte alphanumeric characters and underscores.
- Consecutive characters other than the above (excluding tabs and spaces).

Range selection

When handling a range selection in the Edit window, you must observe the following range selection rules:

- A range can be selected by dragging, using the [Shift] + [arrow] key, or by using [Shift] + click.
- With a single line, a range can be selected in units of characters. (character strings range selection)
- With multiple lines, a range can be selected between the beginning and end of each line. (lines range selection)
- If multiple lines with a layer are selected as a range, any lower layers are automatically included in the range.
- When you select multiple lines toward the beginning of file, if a layer higher than that of the range selection start line appears, the range selection cannot be performed any further.
- When you select multiple lines toward the end of file, if a layer higher than that of the range selection start line appears, the range selection cannot be performed any further.
- When you select multiple lines toward the beginning of file, if you select a line with a expanded lower layer, the lower layer is included in the range.
- When you select multiple lines toward the end of file, if you select a line with a expanded lower layer, the lower layer is included in the range.
- When you select a range using [Shift] + click, if you cannot select the range up to the click position, the range up to the last line where range selection is possible is selected, and the screen is scrolled so that line is visible.
- Range selection is canceled at the point when an operation that causes the caret to move is performed. Then the caret moves to a new location. If, however, range selection is canceled by pressing an [arrow] key, the new caret position will be as follows:

[Right arrow] key or [Down arrow] key:

Right end of the selected character string range, end of the last line (toward the end of text) of the selected line range

[Left arrow] key or [Up arrow] key:

Left end of the selected character string range, beginning of the first line (toward the beginning of text) of the selected line range

- While you are selecting a range, pressing the [Esc] key causes the range selection to be canceled.

Moving lines/layers

When you drag the mark at the beginning of line, the line(s) is moved with either of the following marks displayed.

-  Moves a single line only.
-  Moves multiple lines.

Dragging the mark of a line with a lower layer causes the line and the lower layer to be moved. Dragging the mark of a line to the right or left causes the layer level to be changed.

Copying lines/layers

When you drag the mark at the beginning of line while holding down the [Ctrl] key, the line(s) is copied with either of the following marks displayed.

-  Copies a single line only.
-  Copies multiple lines.

Dragging the mark of a line with a lower layer causes the line and the lower layer to be copied.

Operations performed by double-clicking the mouse button

The operation performed by double-clicking the mouse button can be specified as either of the following, with the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

- Expands a collapsed layer or collapses an expanded layer.
- Selects a word range.

Operations performed with the right mouse button

When you click the right mouse button in the Edit window, the following menu items are displayed:

These menu items can be changed with the [Tool] menu -> [Customize...].

C <u>u</u> t	Sends the character string or lines selected with range selection to the clipboard and deletes them.
C <u>o</u> py	Sends the character string or lines selected with range selection to the clipboard.
P <u>a</u> ste	Inserts the contents of the clipboard at the caret position.
U <u>n</u> do	Cancel the effect of an edit operation to restore the previous state.
R <u>e</u> do	Cancel the effect of an [Undo] operation.
F <u>i</u> nd...	Searches for the specified character string.
R <u>e</u> place...	Replaces the specified character string with the replacement character string.
E <u>x</u> pand	Expands one of the lower layers.
C <u>o</u> llapse	Collapses one of the lower layers.
P <u>r</u> omote	Promotes the layer of line by one.
D <u>e</u> mote	Demotes the layer of line by one.

Scrolling

The operation of scrolling can be specified with the [Tool] menu -> [PM+ Settings...] - [Scroll] tab. Also, the scroll bars can be toggled between on and off by specifying with the [Tool] menu -> [PM+ Settings...] - [View] tab.

Smart lookup function

The smart look-up function helps users input data by displaying a list of function names after just a part of the code is written during coding.

To use the smart lookup function, select the [Smart Look up Function Use] check box on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

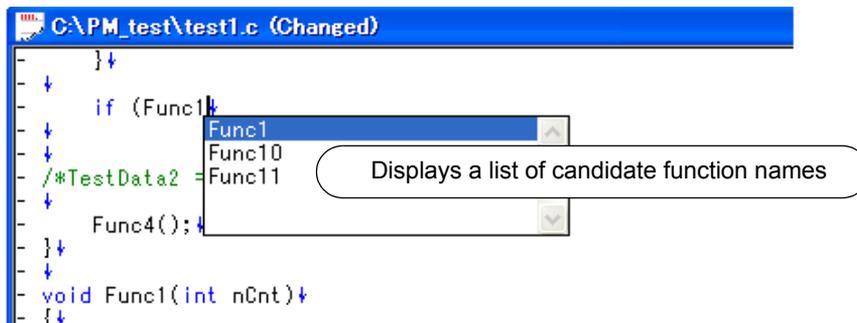
[Note]

When using a real-time OS, the system call name also is regarded as the target of the smart lookup function using the keyword file provided by the real-time OS.

(1) List of candidate function names

The function names that match the specified number of characters are displayed. Up to 1998 function name characters can be recognized. The maximum number of user registered function candidates is 64.

To use this function, select the [Function List display] check box on the [Tool] menu -> [PM+ Settings...] - [Edit] tab. And also, the number of characters is specified with the [Display the List at more than xxx character(s)] on the same [Edit] tab.

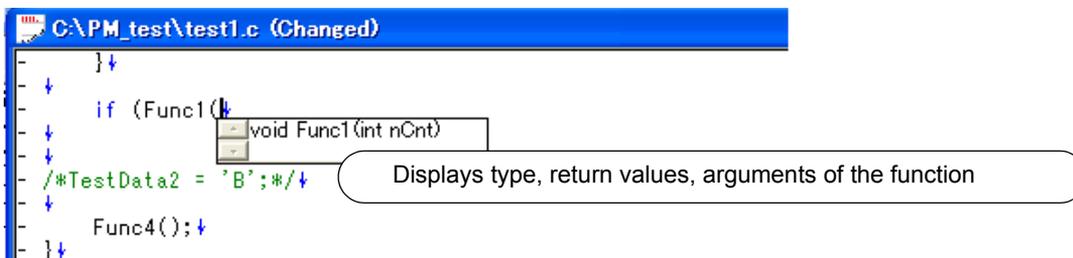


[Caution]

If there is only one candidate in the function name list, the list is not displayed even by pressing the [Up arrow] key and [Down arrow] keys on the keyboard. To hide the list, press the [Esc] key.

(2) Detailed display of functions

When a "(" is entered, if the character string preceding the "(" matches the name of an existing function, the details of the function (type, return values, and arguments) are displayed.



(3) Data creation

When a new file is created and not yet assigned a file name, or when a file is being edited and not yet saved, any functions added as a result of editing are reflected in the smart lookup function as data.

The timing for creating data used by the smart lookup function is as follows:

- When a file is saved.
- When the [Smart Look up Function Use] is selected.
- When a file is saved automatically before a build (only modified files).
- When a workspace is opened.

[Caution]

- A function name cannot be recognized with the compiler control instructions indicated below:
 - When the function name differs according to the value of #ifdef

```
void
#ifdef ENGLISH
    FncEng
#else
    FncJapan
#endif
(int Cnt, int Mode)
{ ...
```

- When function name extends over 2 lines with "\"

```
void Function      \
Name
(int Cnt. int Mode)
{ ...
```

- When variable declaration is performed between function name and "{"

```
#ifdef ENGLISH
int main( argc, argv[])
int argr;
char* argv[];
{
}
```

- In the case of a function name without a return value, such as shown below, the character on the preceding line are judged to be the return value. In such a case, declare the function type.

```
a.def
main(){}
```

(4) Display specifications

The function name candidate and function details displayed by the smart lookup function differ depending on whether the workspace is opened or closed.

[When editing source file affiliated with workspace, with workspace in opened state]

The function name candidates are displayed based on the information of the source file affiliated with the workspace. If multiple projects exist, the function name candidates are displayed based on the function information of all the projects.

[When editing source file not affiliated with workspace, with workspace in opened state]

The function name candidates are displayed based on the function information in that Edit window. The function name candidates of the source file affiliated with the workspace are not displayed.

[When workspace is in closed state]

The function name candidates are displayed based on the function information in that Edit window.

Drag-and-drop function

The following operations are achieved by dropping a file in the Edit window.

- When dropping a workspace file (.prw extension)
 - Opens the dropped workspace. If another workspace is already open, closes that workspace and then opens the workspace that was dropped.
 - Multiple workspace files cannot be dropped. A workspace file and project file cannot be dropped together.
- When dropping a project file (.prj extension)
 - Opens the workspace corresponding to the project file that was dropped. If another workspace is already open, closes that workspace and then opens the workspace corresponding to the project file that was dropped.
 - Multiple project files cannot be dropped. A workspace file and project file cannot be dropped together.
- When dropping a file other than a workspace file or project file
 - Opens the file that was dropped in the Edit window. If "Untitled1" exists in the Edit window while the [\[OutPut\] window](#) is not displayed, "Untitled1" is closed when the file that was dropped is opened.
 - Multiple files can be dropped.

Restrictions on the Edit window

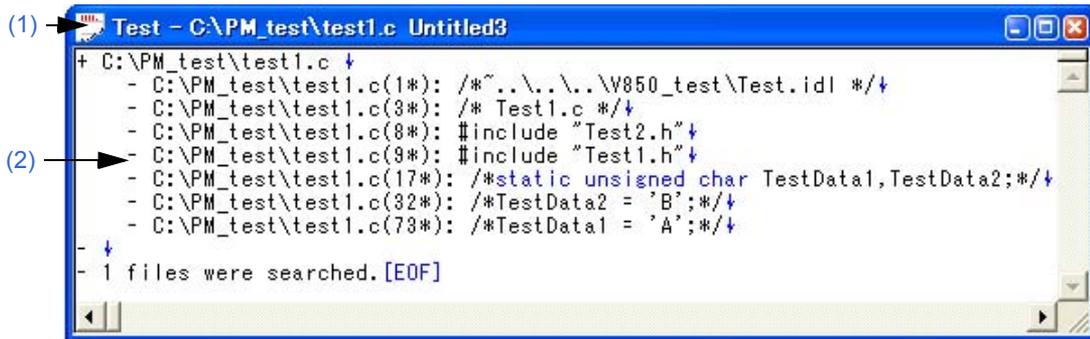
The following restrictions apply in the Edit window.

- A maximum of 5,119 characters can be entered per line.
- The maximum allowable number of layers is 127. A line for which 128 or more layers is specified is corrected to a line with 127 layers. No message is displayed.
- The maximum allowable number of lines is 2,097,152. If an attempt is made to enter more lines, a message is displayed.
- When a file being edited is deleted, a message is displayed.

Search result display window

The Search result display window displays the result of the search performed by selecting [Find in Files...] or [Find in Project] menu item.

Figure 6-9 Search Result Display Window



This section describes the following items:

- Opening
- Explanation of each area
- Search results display area
- Drag-and-drop function

Opening

- Select the [Find] menu -> [Find in Files...].
- Select the [Find] menu -> [Find in Project].

Explanation of each area

(1) Title bar

This area displays information "*searched-character-string - searched-file-name search-result-file-name*". If this window is newly opened, "Untitledx" (x: number) is displayed for "search-result-file-name".

(2) Search results display area

This area displays the results of the search.

Up to 5,119 characters are displayed as the search results in the format of "file-name (number-of-the-line-on-which-the-character-string-is found) contents-of-the line-on-which- character-string-is-found".

Note that 5120 or more character cannot be displayed.

Operations performed by double-clicking the mouse button

Double-clicking a line without a lower layer will tag-jump to the corresponding place in the [Edit window](#).

Double-clicking a line with a lower layer will follow the setting on the [Tool] menu -> [PM+ Settings...] - [Edit] tab. On the [Edit] tab, either of the following can be selected.

- Expands a collapsed layer or collapses an expanded layers.
- Selects a word.

Drag-and-drop function

The following operations are achieved by dropping a file in the Search result display window.

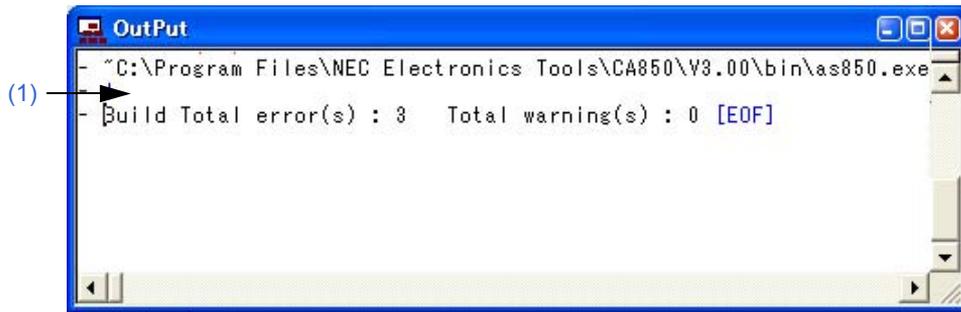
- When dropping a workspace file (.prw extension)
 - Opens the dropped workspace. If another workspace is already open, closes that workspace and then opens the workspace that was dropped.
 - Multiple workspace files cannot be dropped. A workspace file and project file cannot be dropped together.
- When dropping a project file (.prj extension)
 - Opens the workspace corresponding to the project file that was dropped. If another workspace is already open, closes that workspace and then opens the workspace corresponding to the project file that was dropped.
 - Multiple project files cannot be dropped. A workspace file and project file cannot be dropped together.
- When dropping a file other than a workspace file or project file
 - Opens the file that was dropped in the [Edit window](#). If "Untitled1" exists in the [Edit window](#) while the [\[OutPut\] window](#) is not displayed, "Untitled1" is closed when the file that was dropped is opened.
 - Multiple files can be dropped.

[OutPut] window

The [OutPut] window displays the execution status of the make file during build processing. On second and subsequent opens, this window re-displays the status when the window was exited previously.

Regarding the execution status, error lines and warning lines are displayed in red and blue, respectively.

Figure 6-10 [OutPut] Window



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Tag jump function](#)
- [Operations performed with the right mouse button](#)
- [Drag-and-drop function](#)

Opening

- Select the menu item that perform build or compile processing from the [Build] menu.
- [Select the [View] menu -> [Output Window].

Explanation of each area

(1) Execution status display area

This area displays the execution status of the make file during build processing.

Tag jump function

When a caret is placed on an error or warning line in the [OutPut] window, double-clicking the left mouse button will make tag jump from the line at the caret position to the corresponding error or warning line.

When a caret is placed on an error or warning number, pressing the [F1] key will display the help topic for the corresponding error or warning.

Operations performed with the right mouse button

When you click the right mouse button in the [OutPut] window, the following menu items are displayed: These menu items can be modified with [Tool] menu -> [Customize...].

C <u>o</u> py	Sends the character string or lines selected with range selection to the clipboard.
Clea <u>r</u>	Clears the contents of the [OutPut] window.
F <u>i</u> nd...	Searches for the specified character string.
Find in Project	Searches for the specified character string within the source files and the header files registered to a project.
Fix <u>W</u> indow	Fixes the location of the [OutPut] window.

Drag-and-drop function

The following operations are achieved by dropping a file in the [OutPut] window.

- When dropping a workspace file (.prw extension)
 - Opens the dropped workspace. If another workspace is already open, closes that workspace and then opens the workspace that was dropped.
 - Multiple workspace files cannot be dropped. A workspace file and project file cannot be dropped together.
- When dropping a project file (.prj extension)
 - Opens the workspace corresponding to the project file that was dropped. If another workspace is already open, closes that workspace and then opens the workspace corresponding to the project file that was dropped.
 - Multiple project files cannot be dropped. A workspace file and project file cannot be dropped together.
- When dropping a file other than a workspace file or project file
 - Opens the file that was dropped in the Edit window.
 - Multiple files can be dropped.

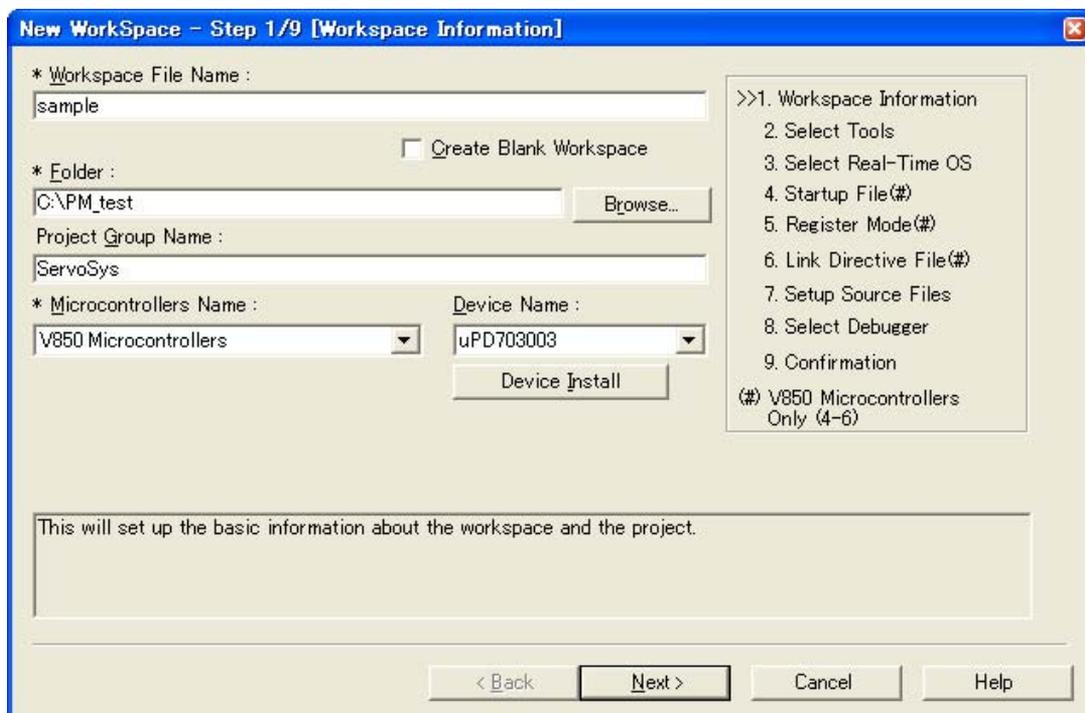
[New WorkSpace] wizard

This wizard is used to create a new workspace and its project.

This wizard displays the following dialog boxes. Enter/select the necessary information in each dialog box and click the [Next>] button to proceed.

- [\[New WorkSpace - Step 1/9 \[Workspace Information\]\]](#) dialog box
- [\[New WorkSpace - Step 2/9 \[Select Tools\]\]](#) dialog box
- [\[New WorkSpace - Step 3/9 \[Select Real-Time OS\]\]](#) dialog box
- [\[New WorkSpace - Step 4/9 \[Startup File\]\]](#) dialog box
- [\[New WorkSpace - Step 5/9 \[Register Mode\]\]](#) dialog box
- [\[New WorkSpace - Step 6/9 \[LinkDirective File\]\]](#) dialog box
- [\[New WorkSpace - Step 7/9 \[Setup Source Files\]\]](#) dialog box
- [\[New WorkSpace - Step 8/9 \[Select Debugger\]\]](#) dialog box
- [\[New WorkSpace - Step 9/9 \[Confirmation\]\]](#) dialog box

Figure 6-11 [New WorkSpace] Wizard at Starting



This section describes the following items:

- [Opening](#)
- [Wizard flow](#)
- [Explanation of each dialog box](#)

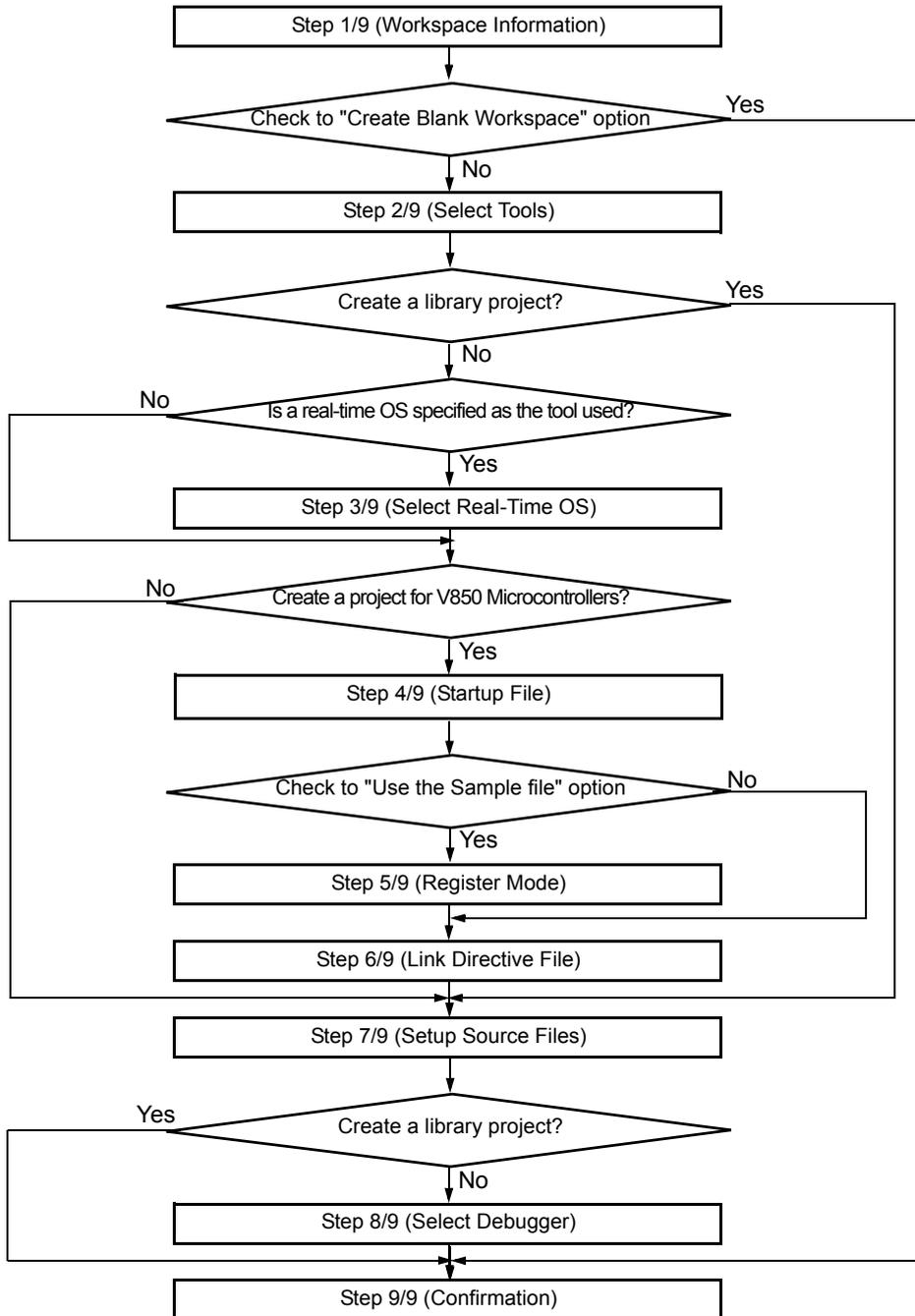
Opening

- Select the [File] menu -> [New Workspace...]

Wizard flow

The dialog boxes to be displayed differ depending on the selection. The wizard flow of each selection is shown below:

Figure 6-12 Wizard Flow for Creating New Workspace



Explanation of each dialog box

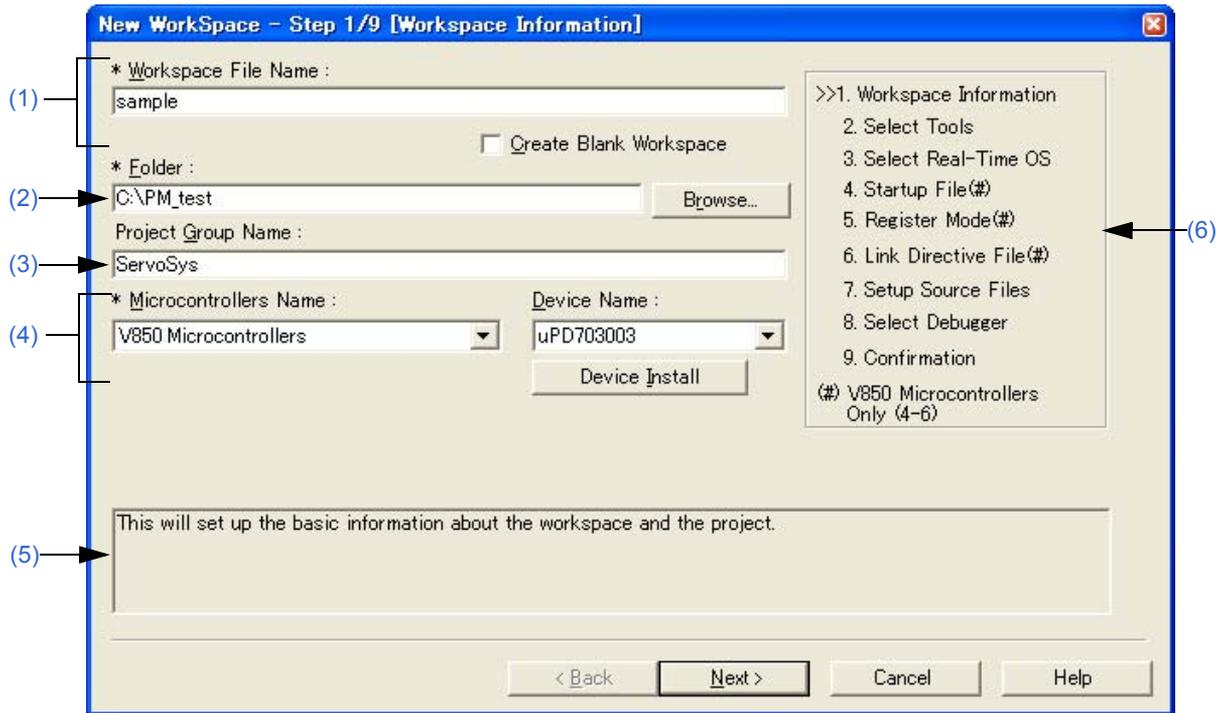
The following explains each dialog box displayed in this wizard.

[New WorkSpace - Step 1/9 [Workspace Information]] dialog box

Specify a workspace file name, a folder position, a project group name, and the device microcontrollers name of the target device to be used.

The specification of the item marked with "*" in this dialog box can not be omitted (i.e. the [Next>] button can not be selected).

Figure 6-13 [New WorkSpace - Step 1/9 [Workspace Information]] Dialog Box



(1) Workspace File Name

Specify the name of the file to save the workspace information. Up to 255 characters can be specified.

The file extension is ".prw". If the extension is omitted, it is automatically set to ".prw". The file name which changed the workspace file extension "prw" to "prj" is assigned as the project file name.

In addition, if a existing workspace file name is specified, the message dialog box is displayed after the [Next>] button is clicked, and then the existing workspace file will be renamed as backup file (e.g. test.prw -> test.prw.bak).

If [Create Blank Workspace] is selected, only a workspace is created. In this case, [Project Group Name], [Microcontrollers Name], and [Device Name] become invalid.

(2) Folder

Specify the folder in which the workspace file and project file are stored.

Selecting the [Browse...] button opens the [Browse for Folder] dialog box in which to specify the project folder position. The folder in which PM+.exe exists is default folder.

(3) Project Group Name

Specify the name of the project group to be displayed on the [Project] window. Up to 127 characters can be specified.

If the specification of this area is omitted, the name of the project group displayed on the [Project] window is the same as the name of the workspace file.

In addition, the project title of the project newly created by this wizard is assigned the name of the project group specified with this area. If you wish to change a project title, select the [Edit Project Title...] menu by clicking the mouse right button on the target project title in the [Project] window.

(4) Microcontrollers Name and Device Name

Select the item to be created and the device file to be used from the drop-down list.

Clicking the [Device Install] button starts the device file installer to register the new device file.

(5) Message area

The function of the dialog box and applicable cautions are described in this area.

(6) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box.

If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

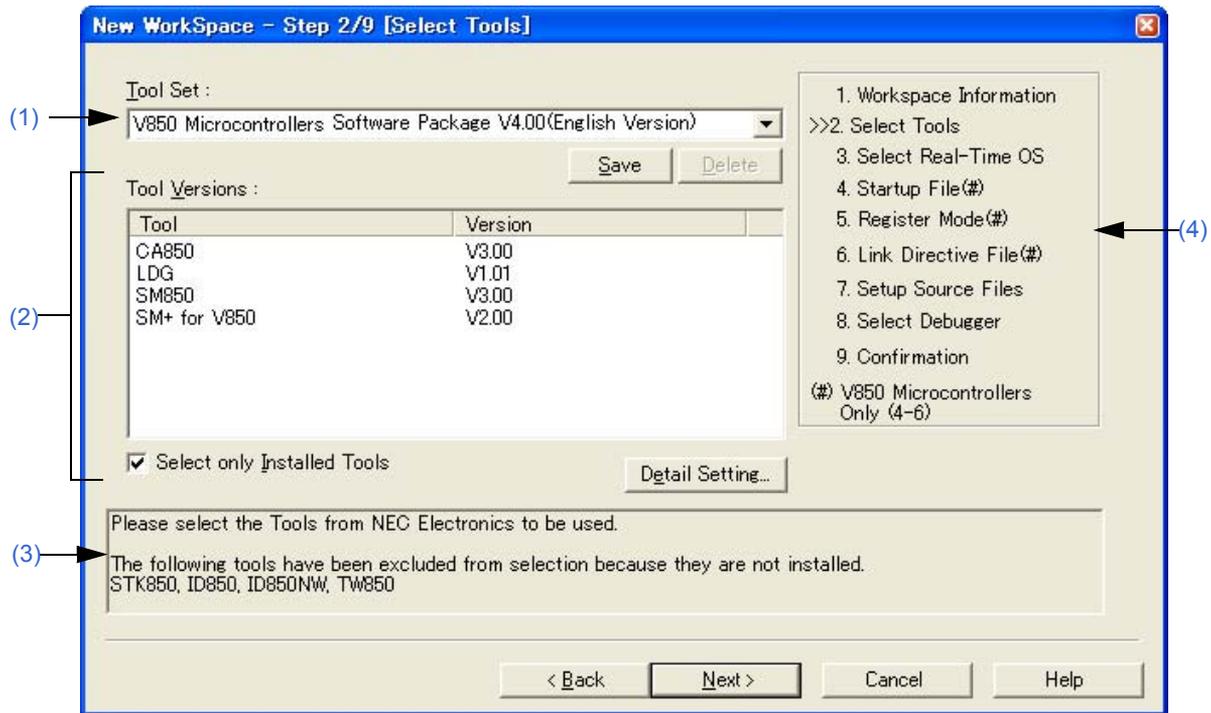
(7) Function buttons

Button	Function
<Back	This button is always disabled.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to " Figure 6-12 Wizard Flow for Creating New Workspace ".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[New WorkSpace - Step 2/9 [Select Tools]] dialog box

Specify the tool to be used in this dialog box.

Figure 6-14 [New WorkSpace - Step 2/9 [Select Tools]] Dialog Box

**(1) Tool Set**

The combination of tools to be used and their versions is regarded as a tool set, and the tool set name can be selected from the drop-down list.

The existing tool set and recommended tool set ("78Kx Microcontrollers Software Package Vx.xx" in the case of the 78K Microcontrollers, and "V850 Microcontrollers Software Package Vx.xx" in the case of the V850 Microcontrollers) are listed on the drop-down list.

If the tool set has been changed in the [Tool Version Detail Setting] dialog box opened by clicking the [Detail Setting...] button, "(Changed)" is appended at the top of the tool set name. If the tool set name already exists, the indication appended varies from "(Changed01)" to "(Changed99)". After "(Changed99)", the tool set name is displayed as "UserSet".

Button	Function
Save	Saves the tool set currently selected in [Tool Set]. This button is not available (appears dimmed) if the tool set file is read-only.
Delete	Deletes the tool set name selected in [Tool Set] from the list (also deletes the corresponding tool set file). This button is not available (appears dimmed) if there are no tool set files corresponding to the selected tool set or the tool set file is read-only.

[Remark]

A file is saved as "tool-set-name.extension". The extension varies depending on the product used, as shown below.

78K0R Microcontrollers (including libraries): t0r
 78K0 Microcontrollers (including libraries): tk0
 78K0S Microcontrollers (including libraries): t0s
 V850 Microcontrollers (including libraries): t85

The file is saved under "NEC Electronics\PM+" in the "Application Data" folder, which is accessible by all users. If this folder does not exist, it is automatically created when PM+ is started up (for example, "C:\Documents and Settings\All Users\Application Data\NEC Electronics\PM+" in the case of Windows XP).

(2) Tool Versions

Combinations of tools to be used and their versions are displayed in this area.

When a tool set name is selected on the [Tool Set] drop-down list, the tools included in the tool set and their versions are displayed.

The tools included in the default tool set selected on the [Tool Set] drop-down list and their versions are displayed by default.

The [Tool Version Detail Setting] dialog box is opened by clicking the [Detail Setting...] button. Tools to be used and their versions can be selected in this dialog box.

(a) Tool

All the installed tools and tools included in the selected tool set are displayed in this area (tools that have not been installed are displayed in gray).

(b) Version

The tool versions specified in the selected tool set are displayed in this area.

However, "Unused" is displayed for a tool whose version is not specified in the tool set.

(c) Select only Installed Tools

If this check box is selected, tools that have not been installed are excluded from the [Tool Versions] list box which corresponds to the tool set selected in the [Tool Set] (default).

"(Selected01)" is appended to the top of the name of the tool set with which this check box is selected (if the tool set name actually exists, "(Selected0n)" is appended).

This check box cannot be selected (grayed) if there are no dimmed tools (all the listed tools have been installed).

(3) Message area

The function of the dialog box and applicable cautions are described in this area.

(4) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box.

If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(5) Function buttons

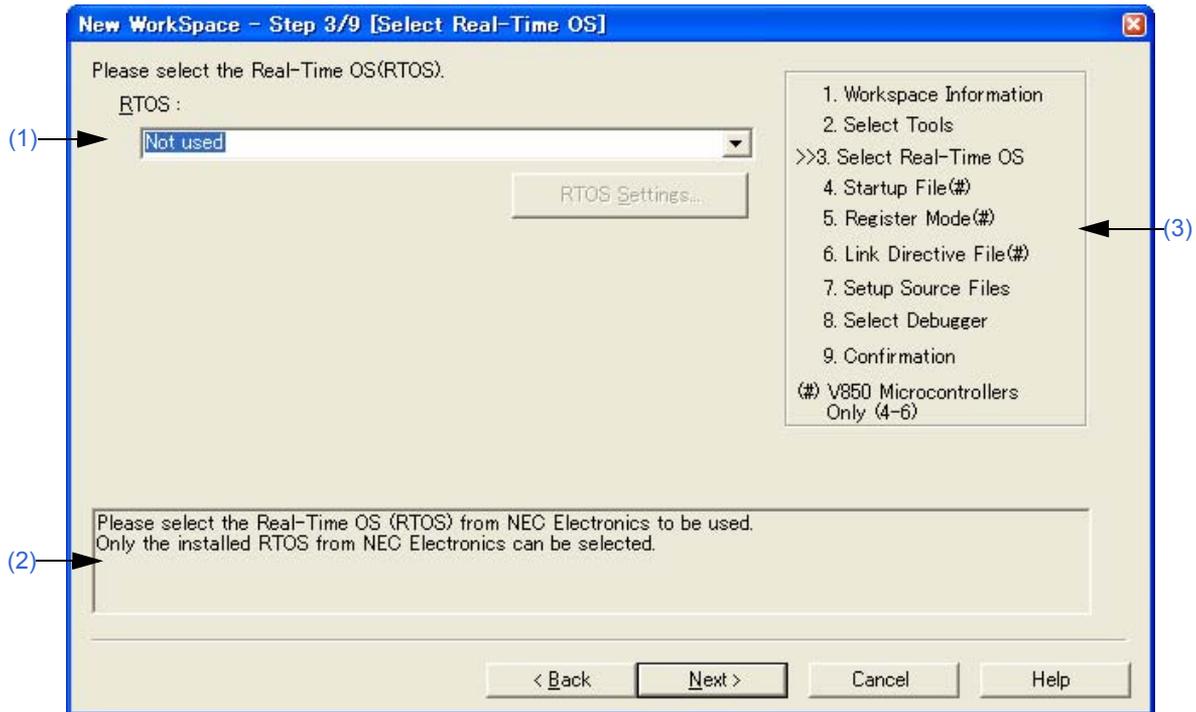
Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to " Figure 6-12 Wizard Flow for Creating New Workspace ".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[New WorkSpace - Step 3/9 [Select Real-Time OS]] dialog box

Specify whether or not to use NEC Electronics real-time OS.

This dialog box is displayed only when a real-time OS has been selected as the combination of tools to be used in the [\[New WorkSpace - Step 2/9 \[Select Tools\]\] dialog box](#).

Figure 6-15 [New WorkSpace - Step 3/9 [Select Real-Time OS]] Dialog Box

**(1) RTOS**

When using the NEC Electronics real-time OS, select "*the name of real-time OS*", when not using that, select "Not use" from the drop-down list.

"Not use" and all the names of the real-time OSs for the NEC Electronics V850 Microcontrollers that have been specified in the [\[New WorkSpace - Step 2/9 \[Select Tools\]\] dialog box](#) are displayed on the drop-down list.

If the name of the real-time OS to be used is selected, the [RTOS Settings...] button becomes valid, and clicking this button opens the dialog box for setting the selected real-time OS in detail. Refer to the user's manual of the real-time OS for details on the setting.

(2) Message area

The function of the dialog box and applicable cautions are described in this area.

(3) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(4) Function buttons

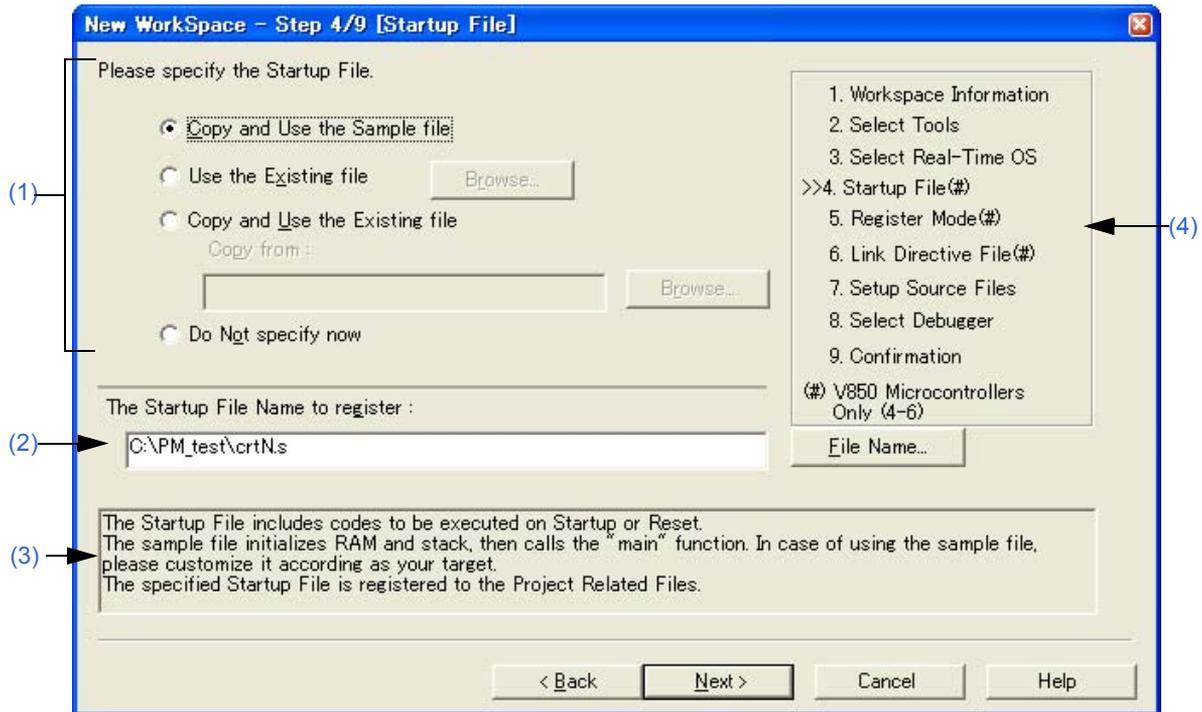
Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to " Figure 6-12 Wizard Flow for Creating New Workspace ".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[New WorkSpace - Step 4/9 [Startup File]] dialog box

Specify a startup file.

This dialog box is displayed only when "V850 Microcontrollers" has been specified as the microcontrollers name in the [\[New WorkSpace - Step 1/9 \[Workspace Information\]\] dialog box](#).

Figure 6-16 [New WorkSpace - Step 4/9 [Startup File]] Dialog Box



(1) Startup file specification area

(a) Copy and Use the Sample file

If this option button is selected, the startup file of the sample that corresponds to the register mode set in the next wizard step is copied to the project folder and registered to the project-related files. The name of the startup file to be registered is displayed in [The Startup File Name to register] edit box as an absolute path.

The startup file name to be registered can be changed by clicking the [File Name...] button, or by directly inputting the name in the [The Startup File Name to register] edit box using the keyboard.

If real-time OS is selected for use in the previous wizard step ([\[New WorkSpace - Step 3/9 \[Select Real-Time OS\]\] dialog box](#)), this option button cannot be selected.

(b) Use the Existing file

When an existing startup file is used, select this option button.

If [Browse...] button is clicked, the [\[Startup File\] dialog box](#) is opened to select the any startup file. The name of the startup file to be registered is displayed in [The Startup File Name to register] edit box as an absolute path.

The startup file name to be registered can be changed by directly inputting the name in the [The Startup File Name to register] edit box using the keyboard.

If this option button is selected, the [File Name...] button cannot be selected.

(c) Copy and Use the Existing file

When an existing startup file is copied and used, select this option button. Specify the startup file name to be the copy source and the startup file name to be the copy destination.

If [Browse...] button is clicked, the [\[Copy Startup File from\] dialog box](#) is opened to select the any startup file. The name of the startup file to be the copy source is displayed in [Copy from] edit box as an absolute path. Alternatively, the file name to be specified can also be input in the [Copy from] edit box either as an absolute path or a

relative path using the keyboard.

The startup file name to be registered can be changed by clicking the [File Name...] button, or by directly inputting the name in [The Startup File Name to register] edit box using the keyboard.

(d) Do Not specify now

When no startup file is specified now, select this option button.

In this case, a startup file can be specified by selecting the project-related file folder on the [Project] window and then selecting [Add Project Related files...] using the right mouse button, or selecting the [Tool] menu -> [Linker Options...].

(2) The Startup File Name to register

Specify the name of the startup file to be registered.

If [File Name...] button is clicked, the [Startup File to register] dialog box is opened to select the any startup file.

Alternatively, the file name to be specified can also be input in this edit box either as an absolute path or a relative path using the keyboard.

(3) Message area

The function of the dialog box and applicable cautions are described in this area.

(4) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box.

If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(5) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to "Figure 6-12 Wizard Flow for Creating New Workspace".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Caution]

If after selecting "Do Not specify now" for the startup file and registering the source file in the [New WorkSpace - Step 7/9 [Setup Source Files]] dialog box, and then returning to this dialog box and specifying the source file registered in the [New WorkSpace - Step 7/9 [Setup Source Files]] dialog box as the startup file, and ending the wizard as is, the following linker option setting message is displayed, and the startup file is registered to both the source file and project-related files.

"Startup file specification is illegal."

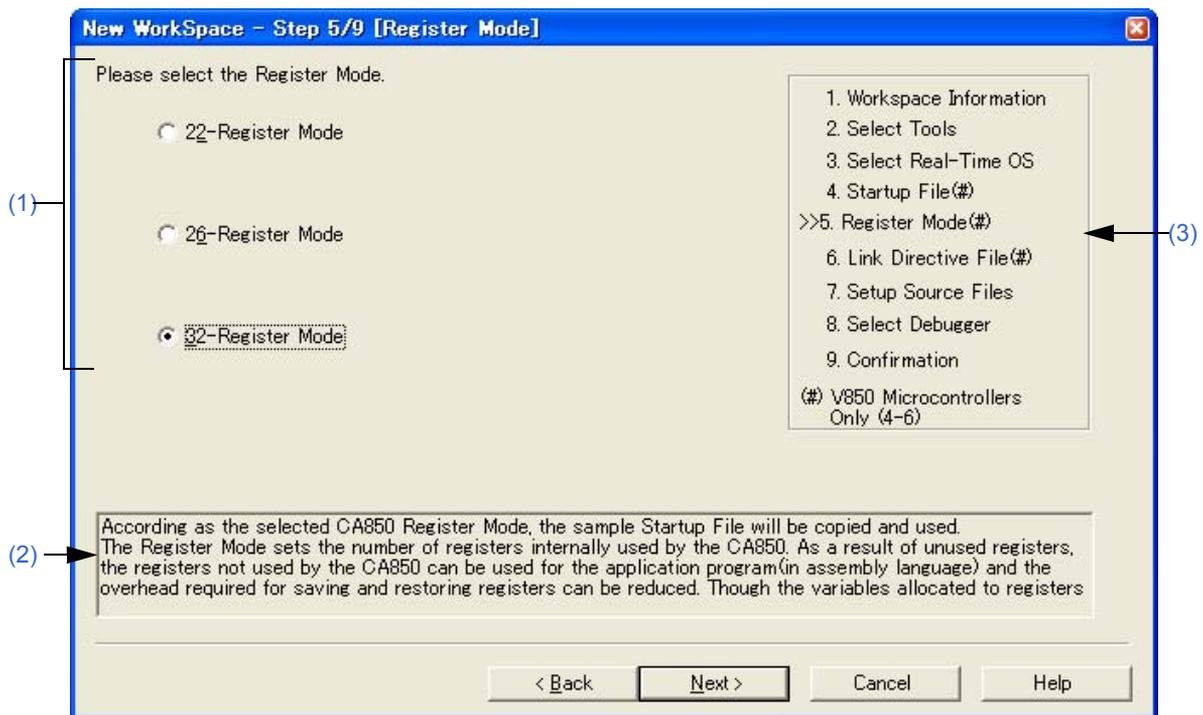
Delete the startup file registered to the source file.

[New WorkSpace - Step 5/9 [Register Mode]] dialog box

Specify the register mode option for the compiler. The sample file of the startup file corresponding to the register mode which is selected in this dialog box is copied to the project folder, and registered to the project-related files.

This dialog box is displayed only when "V850 Microcontrollers" has been specified as the microcontrollers name in the [New WorkSpace - Step 1/9 [Workspace Information]] dialog box and [Copy and Use the Sample file] has been selected in the previous wizard step ([New WorkSpace - Step 4/9 [Startup File]] dialog box).

Figure 6-17 [New WorkSpace - Step 5/9 [Register Mode]] Dialog Box



(1) Register mode specification area

- (a) 22-Register Mode
The startup file is determined as the 22-register mode.
- (b) 26-Register Mode
The startup file is determined as the 26-register mode.
- (c) 32-Register Mode
The startup file is determined as the 32-register mode.

(2) Message area

The function of the dialog box and applicable cautions are described in this area.

(3) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(4) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection.)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Caution]

If the register mode of the compiler option is changed after a new workspace is created, the quasi directive indicating the register mode in the startup file may indicate a different mode from the register mode of the other source files. Therefore, execute the relevant processing/measure from those shown below:

- Modify the quasi directive that indicates the register mode in the startup file as follows:

*) In 22-register mode

```
#-----
# register mode
#-----
.option reg_mode 5 5
```

*) In 26-register mode

```
#-----
# register mode
#-----
.option reg_mode 7 7
```

*) In 32-register mode

Deletes ".option reg_mode " line.

- Ignore the following warning displayed at linking.

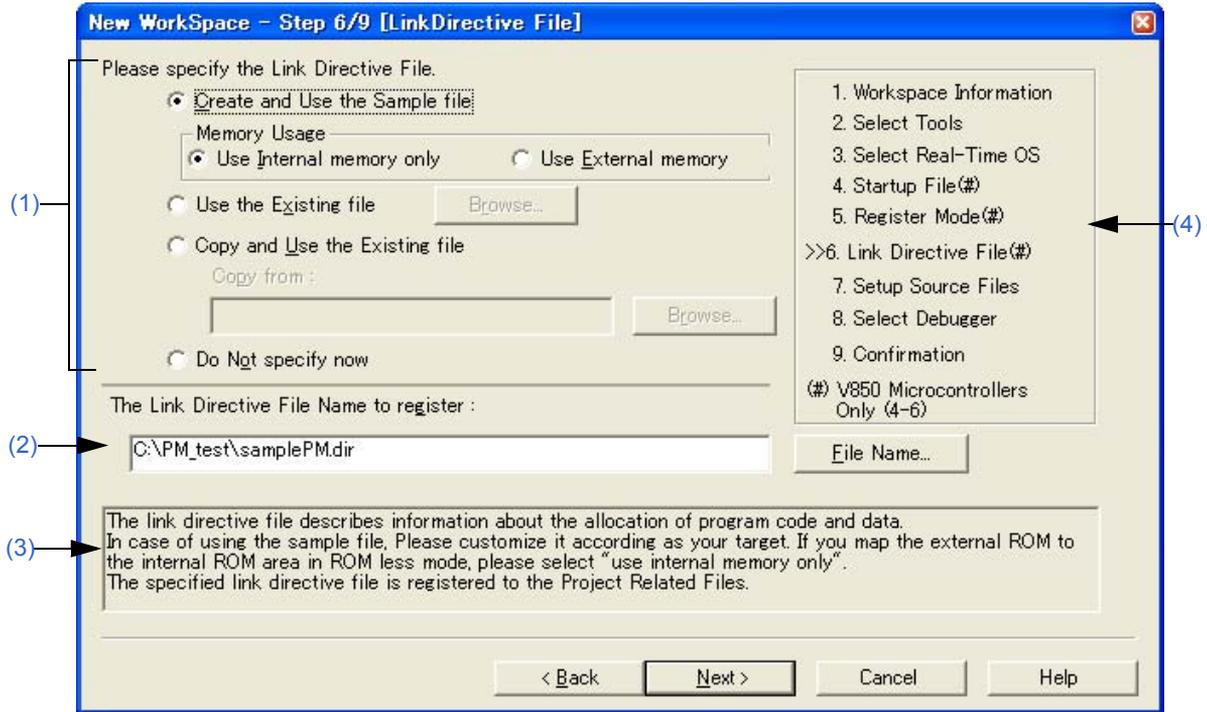
ld850: W4608: input file have different register modes, use "-rc" option for more information.

[New WorkSpace - Step 6/9 [LinkDirective File]] dialog box

Specify a link directive file. The specified link directive file is registered to the project-related files.

This dialog box is displayed only when "V850 Microcontrollers" has been specified as the microcontrollers name in the [\[New WorkSpace - Step 1/9 \[Workspace Information\]\] dialog box](#).

Figure 6-18 [New WorkSpace - Step 6/9 [LinkDirective File]] Dialog Box

**(1) Link directive file specification area****(a) Create and Use the Sample file**

If this option button is selected, a sample link directive file is created in the project folder in accordance with the selection in [Memory Usage] area and the selection of the OS in the [\[New WorkSpace - Step 3/9 \[Select Real-Time OS\]\] dialog box](#). The link directive file is created under the name "project file name.dir" and registered to the project-related files automatically.

- Memory Usage

Use Internal memory only	The external ROM is mapped to the internal ROM area when the compiler is used in ROMless mode.
Use External memory	The TEXT sections are mapped to the internal memory, and the DATA sections to the external memory.

The link directive file that is created is registered to the project-related files automatically. The name of the link directive file to be registered is displayed in The Link Directive File Name to register edit box as an absolute path. The link directive file name to be registered can be changed by clicking the [File Name...] button, or by directly inputting the name in the "The Link Directive File Name to register" edit box using the keyboard.

Refer to "[APPENDIX A SAMPLE LINK DIRECTIVE FILE](#)" for the detail of the link directive file to be created.

[Caution]

The link directive file that is created must be customized in accordance with the target specification or user-defined sections.

(b) Use the Existing file

When an existing link directive file is used, select this option button.

If [Browse...] button is clicked, the [Link Directive File] dialog box is opened to select the any startup file. The name of the link directive file to be registered is displayed in [The Link Directive File Name to register] edit box as an absolute path.

The link directive file name to be registered can be changed by directly inputting the name in the [The Link Directive File Name to register] edit box using the keyboard.

If this option button is selected, the [File Name...] button cannot be selected.

(c) Copy and Use the Existing file

When an existing link directive file is copied and used, select this option button. Specify the link directive file name to be the copy source and the link directive file name to be the copy destination.

If [Browse...] button is clicked, the [Copy Link Directive File from] dialog box is opened to select the any startup file. The name of the link directive file to be the copy source is displayed in [Copy from] edit box as an absolute path. Alternatively, the file name to be specified can also be input in the [Copy from] edit box either as an absolute path or a relative path using the keyboard.

The link directive file name to be registered can be changed by clicking the [File Name...] button, or by directly inputting the name in [The Link Directive File Name to register] edit box using the keyboard.

(d) Do Not specify now

When no link directive file is specified, select this option button.

A link directive file can be specified by selecting a project-related file folder on the [Project] window and then selecting [Add Project Related files...] using the right mouse button, or selecting the [Tool] menu -> [Linker Options...] after exiting the wizard.

(2) The Link Directive File Name to register

Specify the name of the link directive file to be registered.

If [File Name...] button is clicked, the [Link Directive File to register] dialog box is opened to select the any startup file. Alternatively, the file name to be specified can also be input in this edit box either as an absolute path or a relative path using the keyboard.

(3) Message area

The function of the dialog box and applicable cautions are described in this area.

(4) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

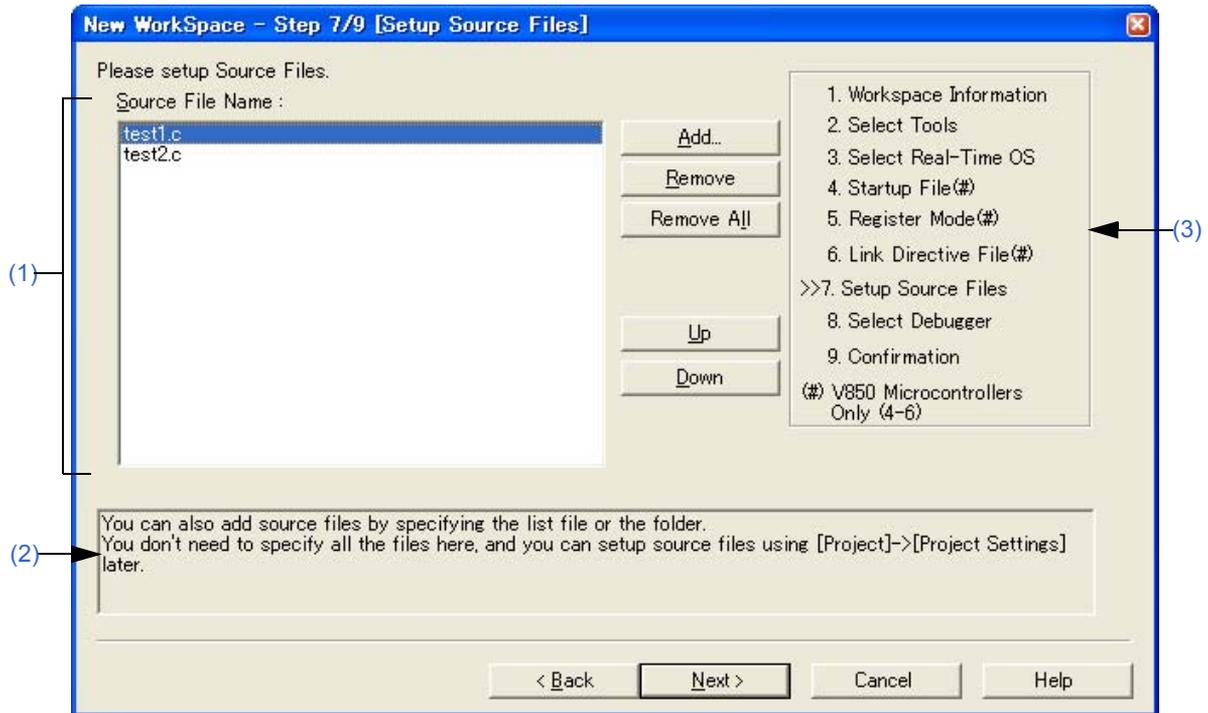
(5) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection.)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[New WorkSpace - Step 7/9 [Setup Source Files]] dialog box

Specify the name of the source file to be registered into the project.

Figure 6-19 [New WorkSpace - Step 7/9 [Setup Source Files]] Dialog Box

**(1) Source File Name**

The names of the source files to be registered into the project are displayed in the source file list box.

The source files are registered to the project file in the order currently shown in this list box. In addition, the build processing are performed in the registered order.

Button	Function
Add...	Opens the [Add Source Files] dialog box to specify the source code files to be registered to the project. Up to 2048 source files can be registered per project. The extension of source code file differs depending on the microcontrollers name registered to the project.
Remove	Removes the selected file from the source file list box. By selecting a file name while holding down the [Shift] or [Ctrl] key, multiple source file names can be selected at once. The names of the removed files are not registered to the project. If no source file is selected or listed in the source file list box, this button can not be selected.
Remove All	Removes all the source files from the source file list box. The names of the removed files are not registered to the project. If no source file is selected or listed in the source file list box, this button can not be selected.
Up	Moves the selected file up within the source file list box.
Down	Moves the selected file down within the source file list box.

[Cautions]

- If the compiler and assembler are not installed, source file addition is not possible.
- If, after a source file is added, the microcontrollers name is changed by returning to the [\[New WorkSpace - Step 1/9 \[Workspace Information\]\] dialog box](#), files among the previously added file other than those with extensions corresponding to the microcontrollers after the change are also displayed in the source file list box. In this case, delete these source files.

- It is possible to proceed to the next step by clicking the [Next>] button even if no source files are specified in this dialog box. In this case, source files can be registered into the project by specifying with the [\[Project Settings\] dialog box](#) or dragging and dropping the source files to be registered onto the [\[Project\] window](#).

(2) Message area

The function of the dialog box and applicable cautions are described in this area.

(3) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(4) Function buttons

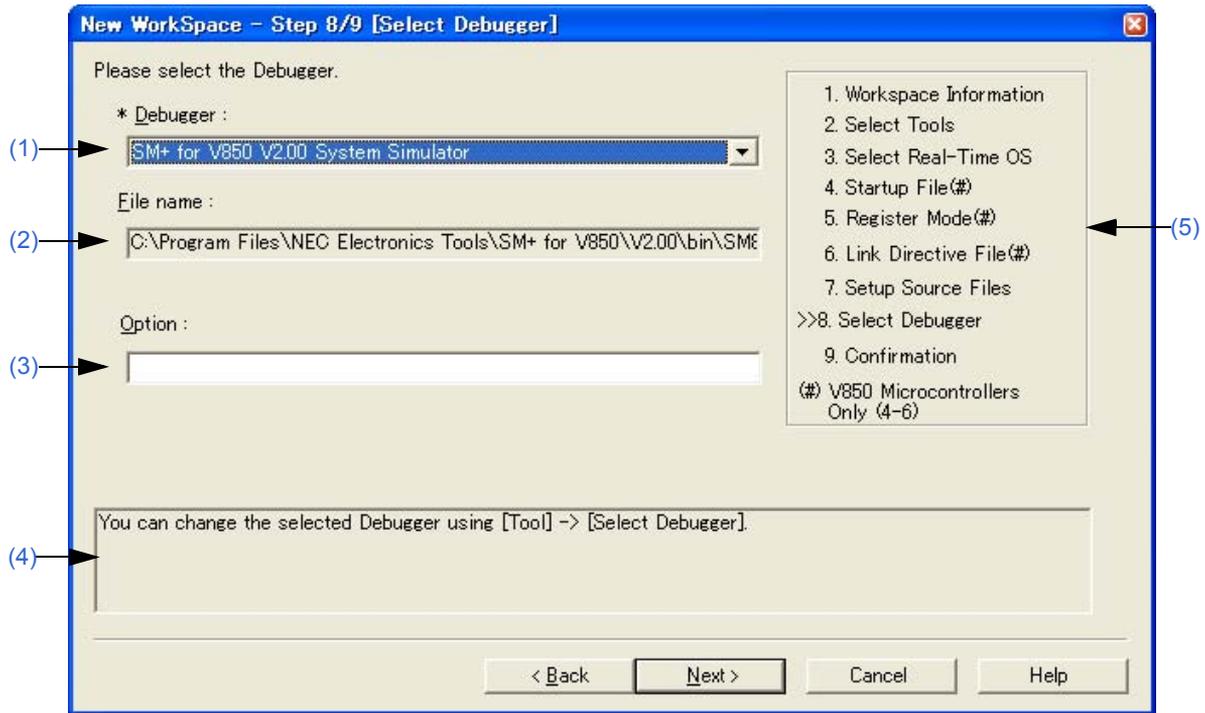
Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to " Figure 6-12 Wizard Flow for Creating New Workspace ".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[New WorkSpace - Step 8/9 [Select Debugger]] dialog box

Select the debugger which debug the project to be created newly.

The specification of the item marked with "*" in this dialog box can not be omitted (i.e. the [Next>] button can not be selected). The debugger specified with this dialog box can be changed after exiting this wizard.

Figure 6-20 [New WorkSpace - Step 8/9 [Select Debugger]] Dialog Box

**(1) Debugger**

Select the debugger to be used from the drop-down list. All the NEC Electronics debuggers that have been installed are displayed in the drop-down list together with the corresponding microcontrollers name.

When a debugger is selected from this list, the file name of the debugger is displayed in the [File Name] text box and the selected debugger will start up automatically when a debug operation is executed.

If you wish to change the debugger to be used after exiting the wizard, select the [Tool] menu -> [Debugger Setting...].

(2) File name

The file name of the debugger to be used for debugging is displayed. When the debugger is selected by the [Debugger] drop-down list, that file name is displayed with the path automatically.

This text box cannot be edited.

(3) Option

Specify the options for when starting up the debugger.

If this specification is omitted, no option is specified for starting up the debugger.

(4) Message area

The function of the dialog box and applicable cautions are described in this area.

(5) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box.

If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

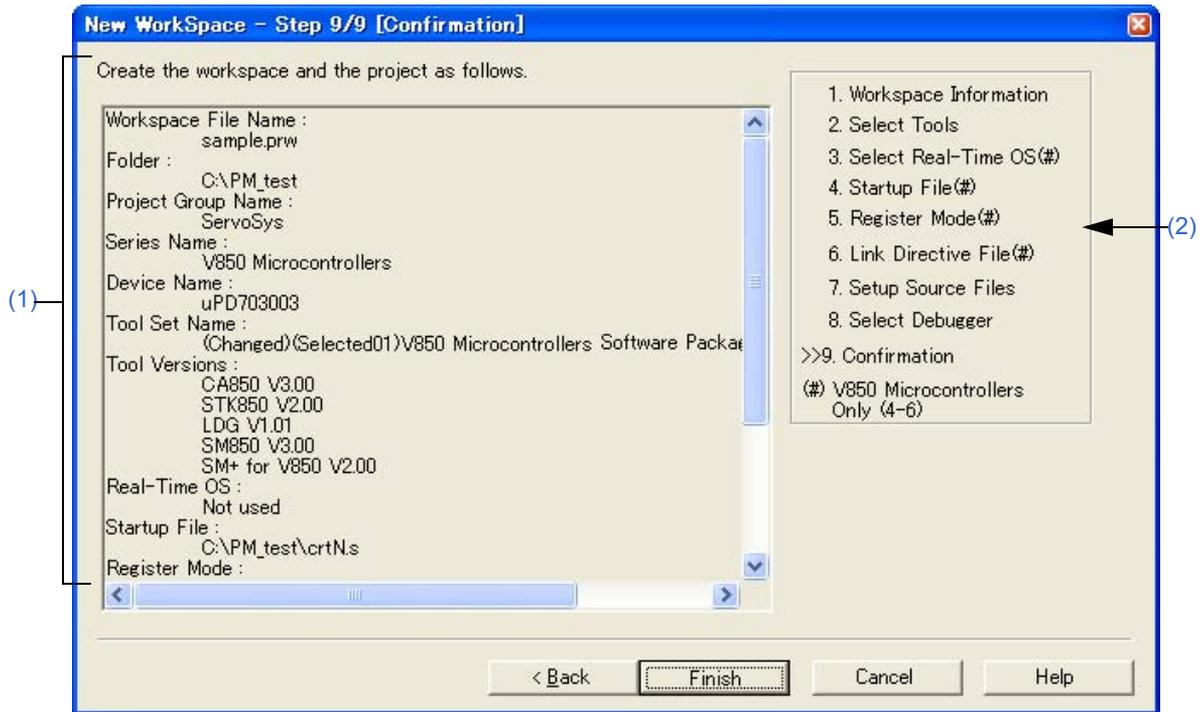
(6) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the last step dialog box.
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[New WorkSpace - Step 9/9 [Confirmation]] dialog box

The contents of the specification are confirmed and the wizard for creating a new workspace is terminated.

Figure 6-21 [New WorkSpace - Step 9/9 [Confirmation]] Dialog Box



(1) Confirmation area

The various information specified with this wizard for creating a new workspace is displayed.

If the contents shown in this dialog box are correct, click the [Finish] button to terminate this wizard. Then PM+ generates a new workspace file and a project file belonging to that workspace, according to the information displayed.

Also generates a make file (*project-file-name.mak*) automatically.

(2) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box.

If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(3) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Finish	Terminates this wizard for creating a new workspace, and generates a new workspace file and a project file belonging to that workspace, according to the displayed information. Also generates a make file (<i>project-file-name.mak</i>) automatically.
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

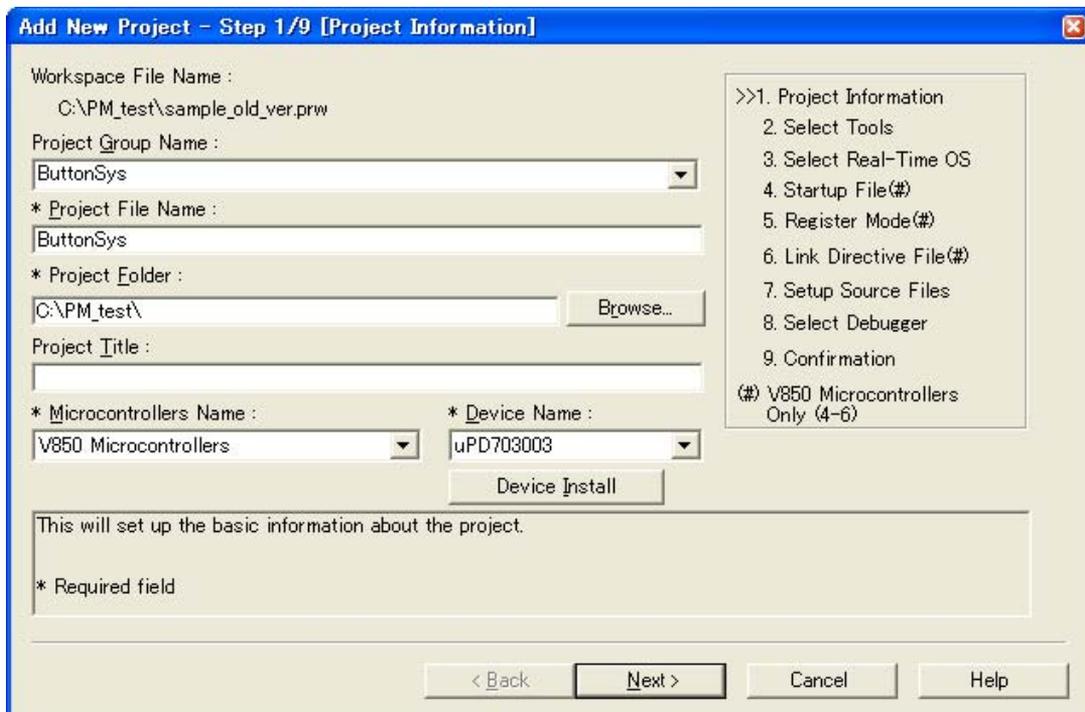
[Add New Project] wizard

This wizard is used to add a new project to a workspace.

This wizard displays the following dialog boxes. Enter/select the necessary information in each dialog box and click the [Next>] button to proceed.

- [Add New Project - Step 1/9 [Project Information]]dialog box
- [Add New Project - Step 2/9 [Select Tools]] dialog box
- [Add New Project - Step 3/9 [Select Real-Time OS]]dialog box
- [Add New Project - Step 4/9 [Startup File]] dialog box
- [Add New Project - Step 5/9 [Register Mode]] dialog box
- [Add New Project - Step 6/9 [LinkDirective File]] dialog box
- [Add New Project - Step 7/9 [Setup Source Files]] dialog box
- [Add New Project - Step 8/9 [Select Debugger]] dialog box
- [Add New Project - Step 9/9 [Confirmation]] dialog box

Figure 6-22 [Add New Project] Wizard at Starting



This section describes the following items:

- Opening
- Wizard flow
- Explanation of each dialog box

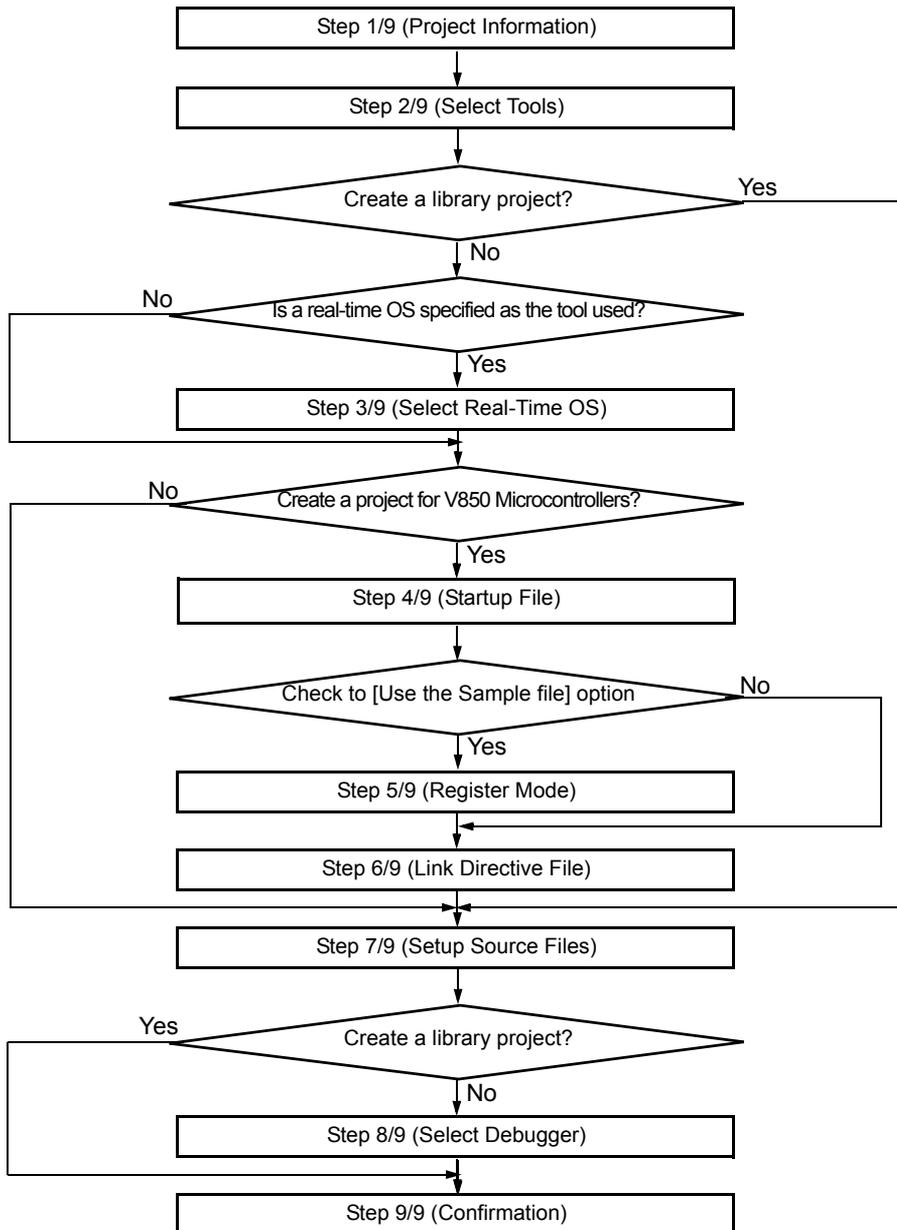
Opening

- Select the [Project] menu -> [Add New Project...]
- Click the right mouse button at a project group on the [Project] window, and select the [Add New Project...].

Wizard flow

The dialog boxes to be displayed differ depending on the selection. The wizard flow of each selection is shown below:

Figure 6-23 Wizard Flow for Add New Project



Explanation of each dialog box

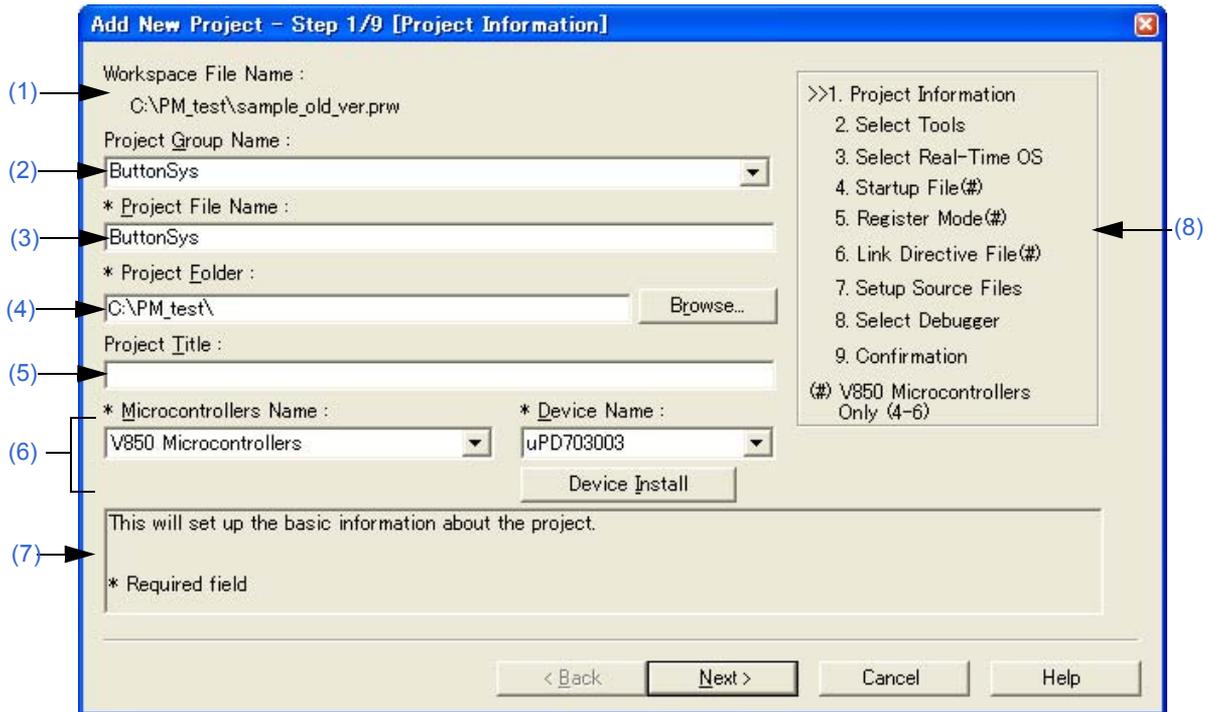
The following explains each dialog box displayed in this wizard.

[Add New Project - Step 1/9 [Project Information]] dialog box

Specify a project group name, a project file name, a project folder position, a project title and the device microcontrollers name of the target device to be used.

The specification of the item marked with "*" in this dialog box can not be omitted (i.e. the [Next>] button can not be selected).

Figure 6-24 [Add New Project - Step 1/9 [Project Information]] Dialog Box

**(1) Workspace File Name**

The file name of the workspace currently open is displayed with an absolute path.

(2) Project Group Name

Specify the name of the project group to be displayed on the [Project] window. Up to 127 characters can be specified.

To insert a project in an existing group, select the relevant group name from the drop-down list.

If this specification is omitted, the name of the project group displayed on the [Project] window will be set as [Workspace File Name] without the path and extension.

(3) Project File Name

Specify the name of the file to save the project information of the newly added project. Up to 255 characters can be specified.

The extension of the file is ".prj", which is appended automatically when the extension is omitted. In addition, if an existing project file name is specified, the existing project file will be renamed as backup file (e.g. test.prj -> test.prj.bak) after the [Next>] button is clicked. Then the message dialog box whether to create a new project file will be displayed.

(4) Project Folder

Specify the folder to save the project file of the newly added project.

Selecting the [Browse...] button opens the Browse for Folder dialog box in which to specify the project folder position.

(5) Project Title

Specify the project title to be displayed in the [\[Project\] window](#). Up to 127 characters can be specified. If this specification is omitted, the project title will be set as the project file name without the path and extension.

(6) Microcontrollers Name and Device Name

Select the item to be created and the device file to be used from the drop-down list. If an existing project group name is displayed in [Project Group Name], the microcontroller name and device name that are set to the project are fixed (shaded). If the device file for the device to be used has not been installed, the following message will be displayed under the device name displayed.

"The device file that has been selected is not registered."

When this message is displayed, clicking the [Device Install] button starts the device file installer to register the new device file.

(7) Message area

The function of the dialog box and applicable cautions are described in this area.

(8) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

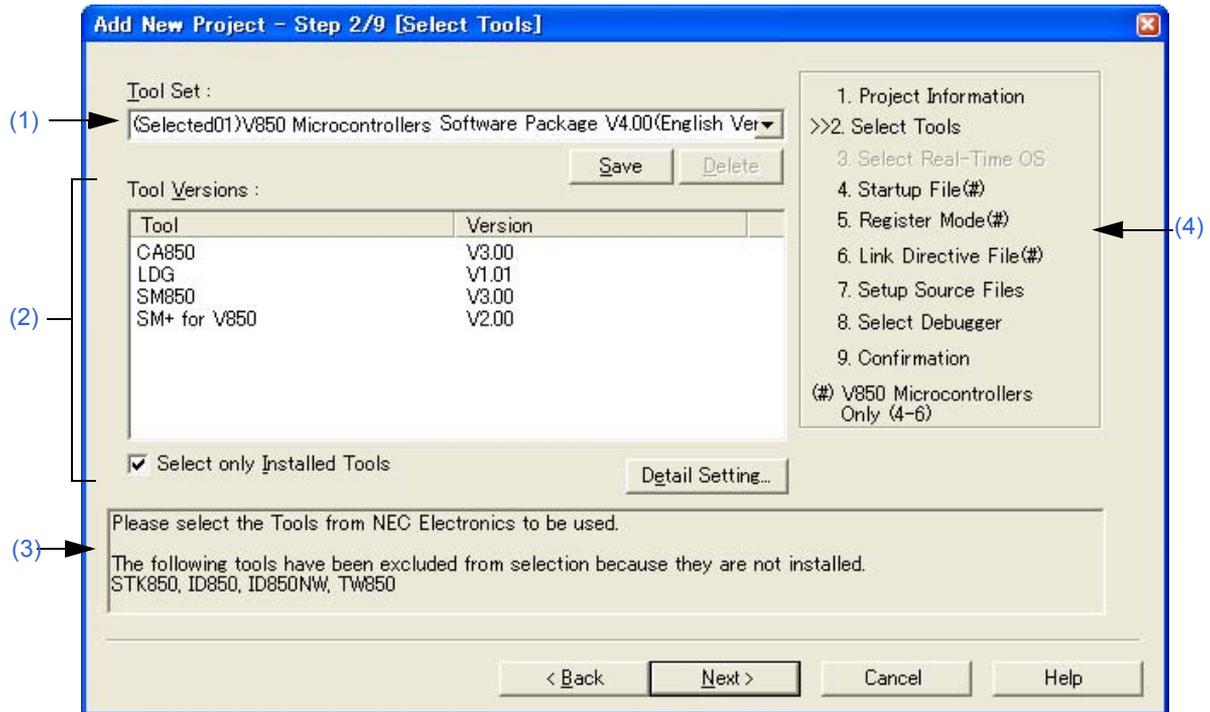
(9) Function buttons

Button	Function
<Back	This button is always disabled.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to " Figure 6-23 Wizard Flow for Add New Project ".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Add New Project - Step 2/9 [Select Tools]] dialog box

Specify the tool to be used in this dialog box.

Figure 6-25 [Add New Project - Step 2/9 [Select Tools]] Dialog Box



(1) Tool Set

The combination of tools to be used and their versions is regarded as a tool set, and the tool set name can be selected from the drop-down list.

The existing tool set and recommended tool set ("78Kx Microcontrollers Software Package Vx.xx" in the case of the 78K Microcontrollers, and "V850 Microcontrollers Software Package Vx.xx" in the case of the V850 Microcontrollers) are listed on the drop-down list.

If the tool set has been changed in the [Tool Version Detail Setting] dialog box opened by clicking the [Detail Setting...] button, "(Changed)" is appended at the top of the tool set name. If the tool set name already exists, the indication appended varies from "(Changed01)" to "(Changed99)". After "(Changed99)", the tool set name is displayed as "UserSet".

Button	Function
Save	Saves the tool set currently selected in [Tool Set]. This button is not available (appears dimmed) if the tool set file is read-only.
Delete	Deletes the tool set name selected in [Tool Set] from the list (also deletes the corresponding tool set file). This button is not available (appears dimmed) if there are no tool set files corresponding to the selected tool set or the tool set file is read-only.

[Remark]

A file is saved as "tool-set-name.extension". The extension varies depending on the product used, as shown below.

78K0R Microcontrollers (including libraries): t0r
 78K0 Microcontrollers (including libraries): tk0
 78K0S Microcontrollers (including libraries): t0s
 V850 Microcontrollers (including libraries): t85

The file is saved under "NEC Electronics\PM+" in the "Application Data" folder, which is accessible by all users. If this folder does not exist, it is automatically created when PM+ is started up (for example, "C:\Documents and Settings\All Users\Application Data\NEC Electronics\PM+" in the case of Windows XP).

(2) Tool Versions

Combinations of tools to be used and their versions are displayed in this area.

When a tool set name is selected on the [Tool Set] drop-down list, the tools included in the tool set and their versions are displayed.

The tools included in the default tool set selected on the [Tool Set] drop-down list and their versions are displayed by default.

The [Tool Version Detail Setting] dialog box is opened by clicking the [Detail Setting...] button. Tools to be used and their versions can be selected in this dialog box.

(a) Tool

All the installed tools and tools included in the selected tool set are displayed in this area (tools that have not been installed are displayed in gray).

(b) Version

The tool versions specified in the selected tool set are displayed in this area.

However, "Unused" is displayed for a tool whose version is not specified in the tool set.

(c) Select only Installed Tools

If this check box is selected, tools that have not been installed are excluded from the [Tool Versions] list box which corresponds to the tool set selected in the [Tool Set] (default).

"(Selected01)" is appended to the top of the name of the tool set with which this check box is selected (if the tool set name actually exists, "(Selected0n)" is appended).

This check box cannot be selected (grayed) if there are no dimmed tools (all the listed tools have been installed).

(3) Message area

The function of the dialog box and applicable cautions are described in this area.

(4) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box.

If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(5) Function buttons

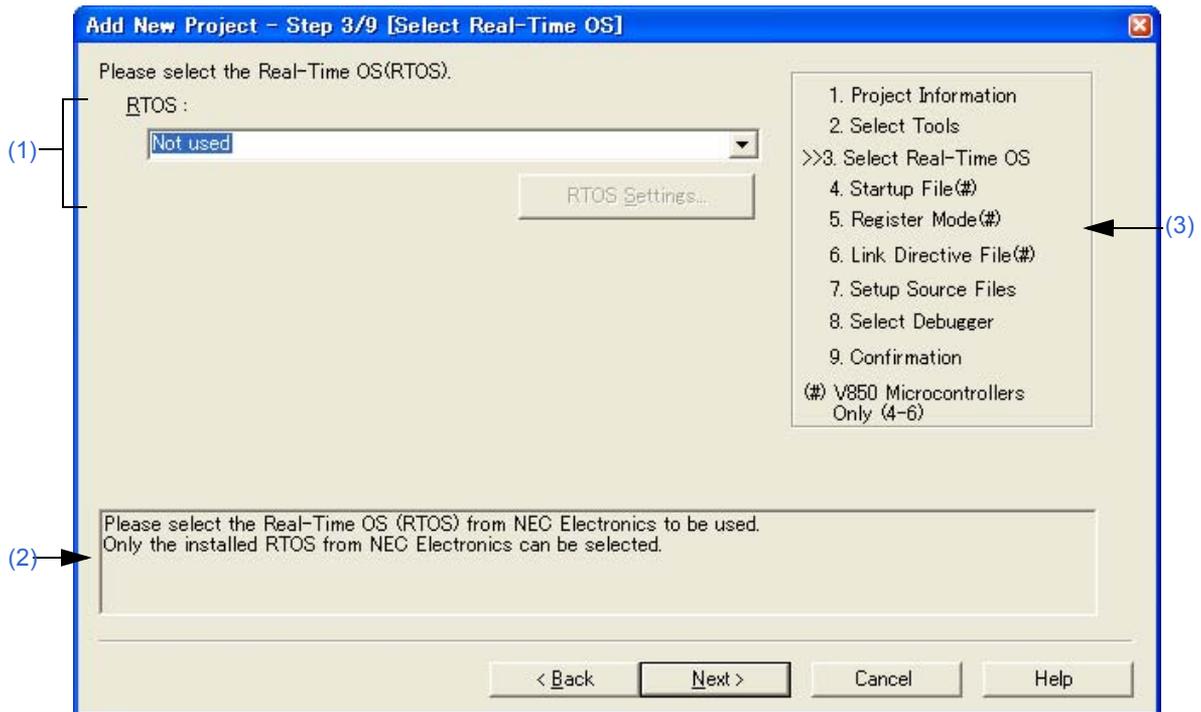
Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to " Figure 6-23 Wizard Flow for Add New Project ".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Add New Project - Step 3/9 [Select Real-Time OS]]dialog box

Specify whether or not to use NEC Electronics real-time OS.

This dialog box is displayed only when a real-time OS has been selected as the combination of tools to be used in the [\[Add New Project - Step 2/9 \[Select Tools\]\] dialog box](#).

Figure 6-26 [Add New Project - Step 3/9 [Select Real-Time OS]] Dialog Box



(1) RTOS

When using the NEC Electronics real-time OS, select "*the name of real-time OS*", when not using that, select "Not use" from the drop-down list.

"Not use" and all the names of the real-time OSs for the NEC Electronics V850 Microcontrollers that have been specified in the [\[Add New Project - Step 2/9 \[Select Tools\]\] dialog box](#) are displayed on the drop-down list.

If the name of the real-time OS to be used is selected, the [RTOS Settings...] button becomes valid, and clicking this button opens the dialog box for setting the selected real-time OS in detail. Refer to the user's manual of the real-time OS for details on the setting.

(2) Message area

The function of the dialog box and applicable cautions are described in this area.

(3) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(4) Function buttons

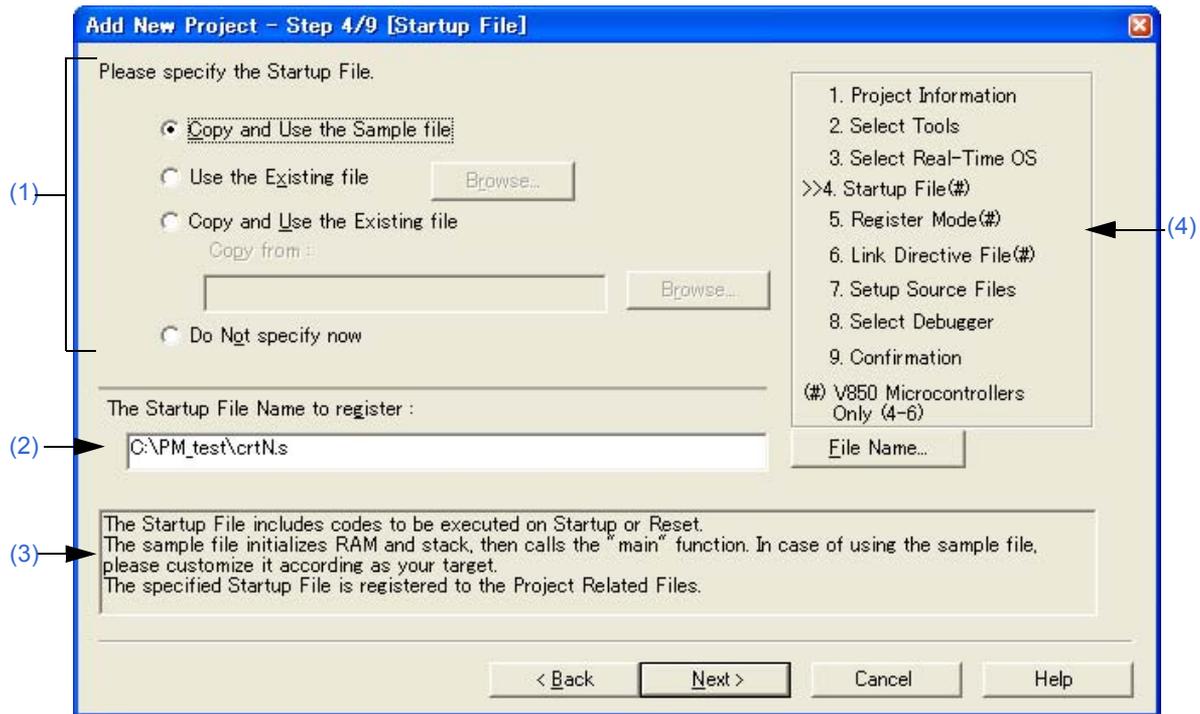
Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to " Figure 6-23 Wizard Flow for Add New Project ".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Add New Project - Step 4/9 [Startup File]] dialog box

Specify the startup file to be used by a option button.

This dialog box is displayed only when "V850 Microcontrollers" has been specified as the microcontrollers name in the [\[Add New Project - Step 1/9 \[Project Information\] \]dialog box](#).

Figure 6-27 [Add New Project - Step 4/9 [Startup File]] Dialog Box

**(1) Startup file specification area****(a) Copy and Use the Sample file**

If this option button is selected, the startup file of the sample that corresponds to the register mode set in the next wizard step is copied to the project folder and registered to the project-related files. The name of the startup file to be registered is displayed in [The Startup File Name to register] edit box as an absolute path.

The startup file name to be registered can be changed by clicking the [File Name...] button, or by directly inputting the name in the [The Startup File Name to register] edit box using the keyboard.

If real-time OS is selected for use in the previous wizard step ([\[Add New Project - Step 3/9 \[Select Real-Time OS\] \]dialog box](#)), this option button cannot be selected.

(b) Use the Existing file

When an existing startup file is used, select this option button.

If [Browse...] button is clicked, the [\[Startup File\] dialog box](#) is opened to select the any startup file. The name of the startup file to be registered is displayed in [The Startup File Name to register] edit box as an absolute path.

The startup file name to be registered can be changed by directly inputting the name in the [The Startup File Name to register] edit box using the keyboard.

If this option button is selected, the [File Name...] button cannot be selected.

(c) Copy and Use the Existing file

When an existing startup file is copied and used, select this option button. Specify the startup file name to be the copy source and the startup file name to be the copy destination.

If [Browse...] button is clicked, the [\[Copy Startup File from\] dialog box](#) is opened to select the any startup file. The name of the startup file to be the copy source is displayed in [Copy from] edit box as an absolute path. Alternatively, the file name to be specified can also be input in the [Copy from] edit box either as an absolute path or a

relative path using the keyboard.

The startup file name to be registered can be changed by clicking the [File Name...] button, or by directly inputting the name in [The Startup File Name to register] edit box using the keyboard.

(d) Do Not specify now

When no startup file is specified now, select this option button.

In this case, a startup file can be specified by selecting the project-related file folder on the [Project] window and then selecting [Add Project Related files...] using the right mouse button, or selecting the [Tool] menu -> [Linker Options...].

(2) The Startup File Name to register

Specify the name of the startup file to be registered.

If [File Name...] button is clicked, the [Startup File to register] dialog box is opened to select the any startup file.

Alternatively, the file name to be specified can also be input in The Startup File Name to register edit box edit box either as an absolute path or a relative path using the keyboard.

(3) Message area

The function of the dialog box and applicable cautions are described in this area.

(4) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box.

If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(5) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to "Figure 6-23 Wizard Flow for Add New Project".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Caution]

If after selecting "Do Not specify now" for the startup file and registering the source file in the [Add New Project - Step 7/9 [Setup Source Files]] dialog box, and then returning to this dialog box and specifying the source file registered in the [Add New Project - Step 7/9 [Setup Source Files]] dialog box as the startup file, and ending the wizard as is, the following linker option setting message is displayed, and the startup file is registered to both the source file and project-related files.

"Startup file specification is illegal."

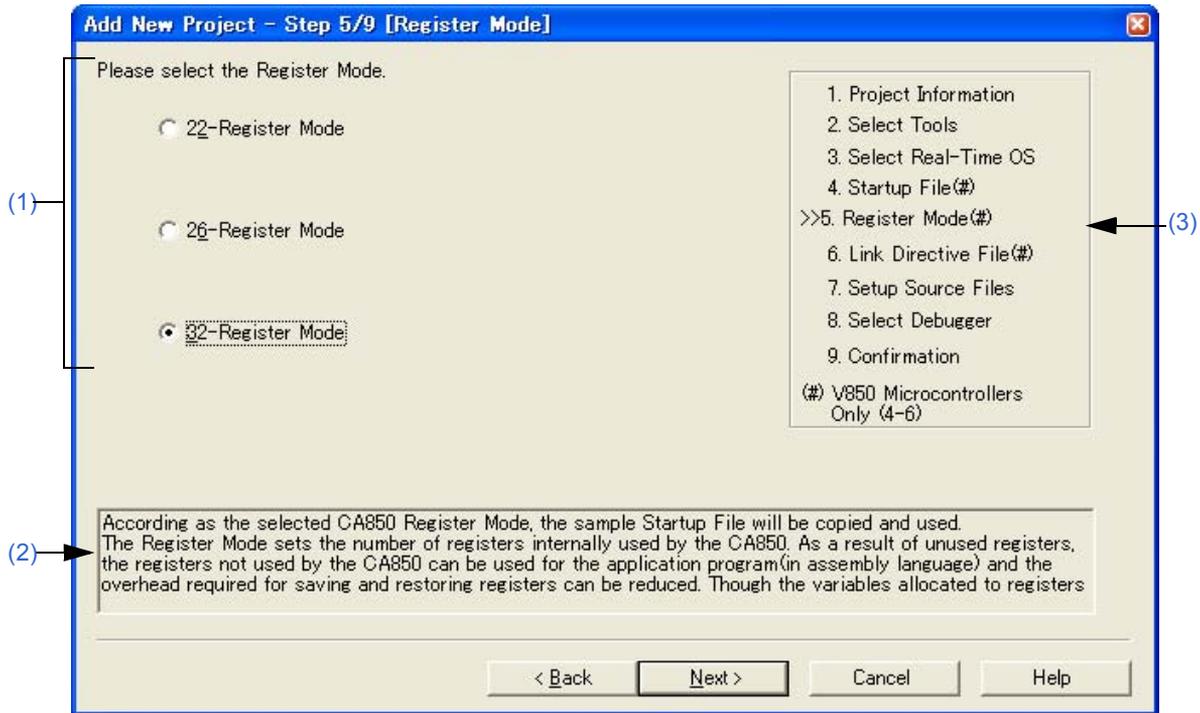
Delete the startup file registered to the source file.

[Add New Project - Step 5/9 [Register Mode]] dialog box

Specify the register mode option for the compiler. The sample file of the startup file corresponding to the register mode which is selected in this dialog box is copied to the project folder, and registered to the project-related files.

This dialog box is displayed only when "V850 Microcontrollers" has been specified as the microcontrollers name in the [Add New Project - Step 1/9 [Project Information]]dialog box and [Copy and Use the Sample file] has been selected in the previous wizard step ([Add New Project - Step 4/9 [Startup File]] dialog box).

Figure 6-28 [Add New Project - Step 5/9 [Register Mode]] Dialog Box



(1) Register mode specification area

(a) 22-Register Mode

The startup file is determined as the 22-register mode.

(b) 26-Register Mode

The startup file is determined as the 26-register mode.

(c) 32-Register Mode

The startup file is determined as the 32-register mode.

(2) Message area

The function of the dialog box and applicable cautions are described in this area.

(3) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(4) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection.)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Caution]

If the register mode of the compiler option is changed after a new workspace is created, the quasi directive indicating the register mode in the startup file may indicate a different mode from the register mode of the other source files. Therefore, execute the relevant processing/measure from those shown below:

- Modify the quasi directive that indicates the register mode in the startup file as follows:

*) In 22-register mode

```
#-----
# register mode
#-----
.option reg_mode 5 5
```

*) In 26-register mode

```
#-----
# register mode
#-----
.option reg_mode 7 7
```

*) In 32-register mode

Deletes ".option reg_mode " line.

- Ignore the following warning displayed at linking.

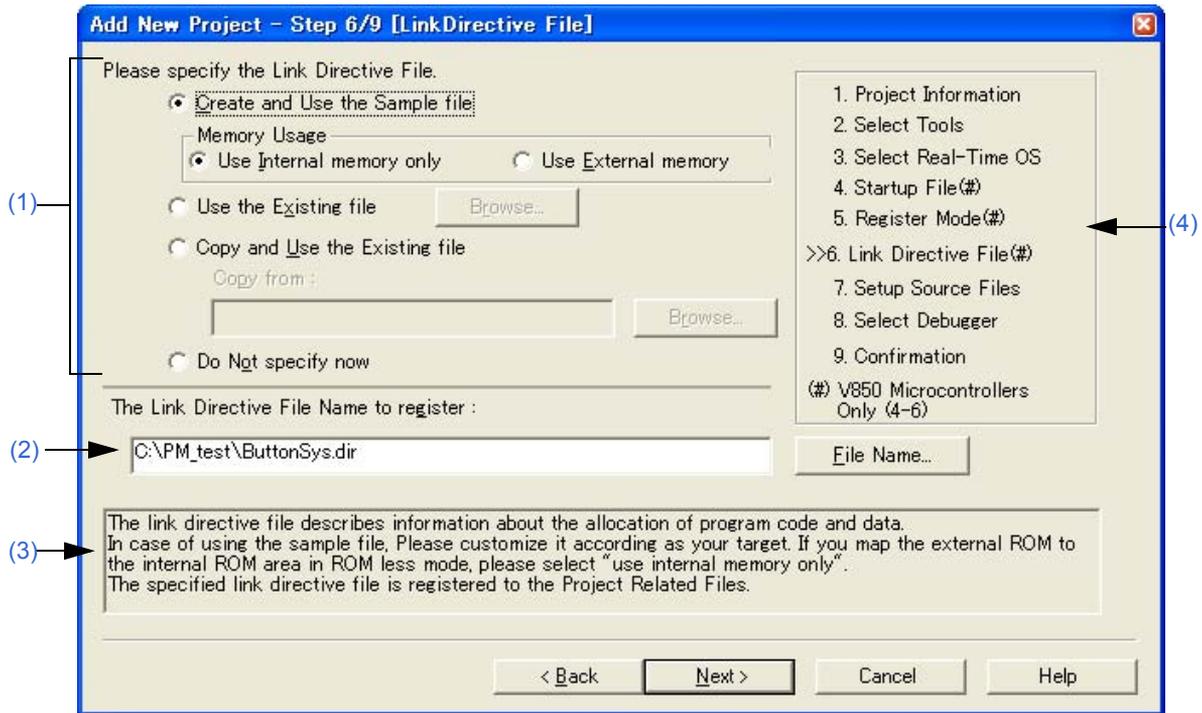
ld850: W4608: input file have different register modes, use "-rc" option for more information.

[Add New Project - Step 6/9 [LinkDirective File]] dialog box

Specify a link directive file. The specified link directive file is registered to the project-related files.

This dialog box is displayed only when "V850 Microcontrollers" has been specified as the microcontrollers name in the [\[Add New Project - Step 1/9 \[Project Information\] \]dialog box](#).

Figure 6-29 [Add New Project - Step 6/9 [LinkDirective File]] Dialog Box

**(1) Link directive file specification area****(a) Create and Use the Sample file**

If this option button is selected, a sample link directive file is created in the project folder in accordance with the selection in [Memory Usage] area and the selection of the OS in the [\[Add New Project - Step 3/9 \[Select Real-Time OS\] \]dialog box](#). The link directive file is created under the name "project file name.dir" and registered to the project-related files automatically.

- Memory Usage

Use Internal memory only	The external ROM is mapped to the internal ROM area when the compiler is used in ROMless mode.
Use External memory	The TEXT sections are mapped to the internal memory, and the DATA sections to the external memory.

The link directive file that is created is registered to the project-related files automatically. The name of the link directive file to be registered is displayed in The Link Directive File Name to register edit box as an absolute path. The link directive file name to be registered can be changed by clicking the [File Name...] button, or by directly inputting the name in the "The Link Directive File Name to register" edit box using the keyboard.

Refer to "[APPENDIX A SAMPLE LINK DIRECTIVE FILE](#)" for the detail of the link directive file to be created.

[Caution]

The link directive file that is created must be customized in accordance with the target specification or user-defined sections.

(b) Use the Existing file

When an existing link directive file is used, select this option button.

If [Browse...] button is clicked, the [\[Link Directive File\] dialog box](#) is opened to select the any startup file. The name of the link directive file to be registered is displayed in [The Link Directive File Name to register] edit box as an absolute path.

The link directive file name to be registered can be changed by directly inputting the name in the [The Link Directive File Name to register] edit box using the keyboard.

If this option button is selected, the [File Name...] button cannot be selected.

(c) Copy and Use the Existing file

When an existing link directive file is copied and used, select this option button. Specify the link directive file name to be the copy source and the link directive file name to be the copy destination.

If [Browse...] button is clicked, the [\[Copy Link Directive File from\] dialog box](#) is opened to select the any startup file. The name of the link directive file to be the copy source is displayed in [Copy from] edit box as an absolute path. Alternatively, the file name to be specified can also be input in the [Copy from] edit box either as an absolute path or a relative path using the keyboard.

The link directive file name to be registered can be changed by clicking the [File Name...] button, or by directly inputting the name in [The Link Directive File Name to register] edit box using the keyboard.

(d) Do Not specify now

When no link directive file is specified, select this option button.

A link directive file can be specified by selecting a project-related file folder on the [\[Project\] window](#) and then selecting [Add Project Related files...] using the right mouse button, or selecting the [Tool] menu -> [Linker Options...] after exiting the wizard.

(2) The Link Directive File Name to register

Specify the name of the link directive file to be registered.

If [File Name...] button is clicked, the [\[Link Directive File to register\] dialog box](#) is opened to select the any startup file. Alternatively, the file name to be specified can also be input in The Link Directive File Name to register edit box edit box either as an absolute path or a relative path using the keyboard.

(3) Message area

The function of the dialog box and applicable cautions are described in this area.

(4) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

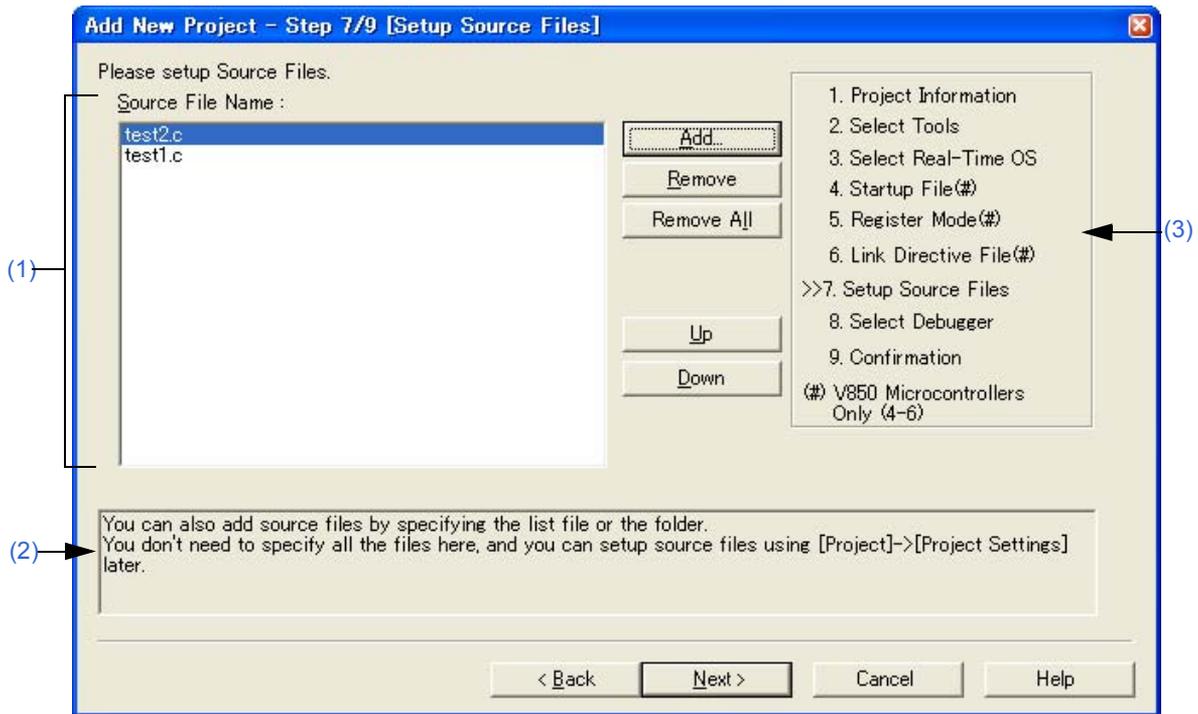
(5) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection.)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Add New Project - Step 7/9 [Setup Source Files]] dialog box

Specify the name of the source file to be registered into the project.

Figure 6-30 [Add New Project - Step 7/9 [Setup Source Files]] Dialog Box



(1) Source File Name

The names of the source files to be registered into the project are displayed in the source file list box.

The source files are registered to the project file in the order currently shown in this list box. In addition, the build processing are performed in the registered order.

Button	Function
Add...	Opens the [Add Source Files] dialog box to specify the source code files to be registered to the project. Up to 2048 source files can be registered per project. The extension of source code file differs depending on the microcontrollers name registered to the project.
Remove	Removes the selected file from the source file list box. By selecting a file name while holding down the [Shift] or [Ctrl] key, multiple source file names can be selected at once. The names of the removed files are not registered to the project. If no source file is selected or listed in the source file list box, this button can not be selected.
Remove All	Removes all the source files from the source file list box. The names of the removed files are not registered to the project. If no source file is selected or listed in the source file list box, this button can not be selected.
Up	Moves the selected file up within the source file list box.
Down	Moves the selected file down within the source file list box.

[Cautions]

- If the compiler and assembler are not installed, source file addition is not possible.
- If, after a source file is added, the microcontrollers name is changed by returning to the [\[Add New Project - Step 1/9 \[Project Information\] \]dialog box](#), files among the previously added file other than those with extensions corresponding to the microcontrollers after the change are also displayed in the source file list box. In this case, delete these source files.
- It is possible to proceed to the next step by clicking the [Next>] button even if no source files are specified in this dialog box. In this case, source files can be registered into the project by specifying with the [\[Project Settings\] dialog box](#) or dragging and dropping the source files to be registered onto the [\[Project\] window](#).

(2) Message area

The function of the dialog box and applicable cautions are described in this area.

(3) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(4) Function buttons

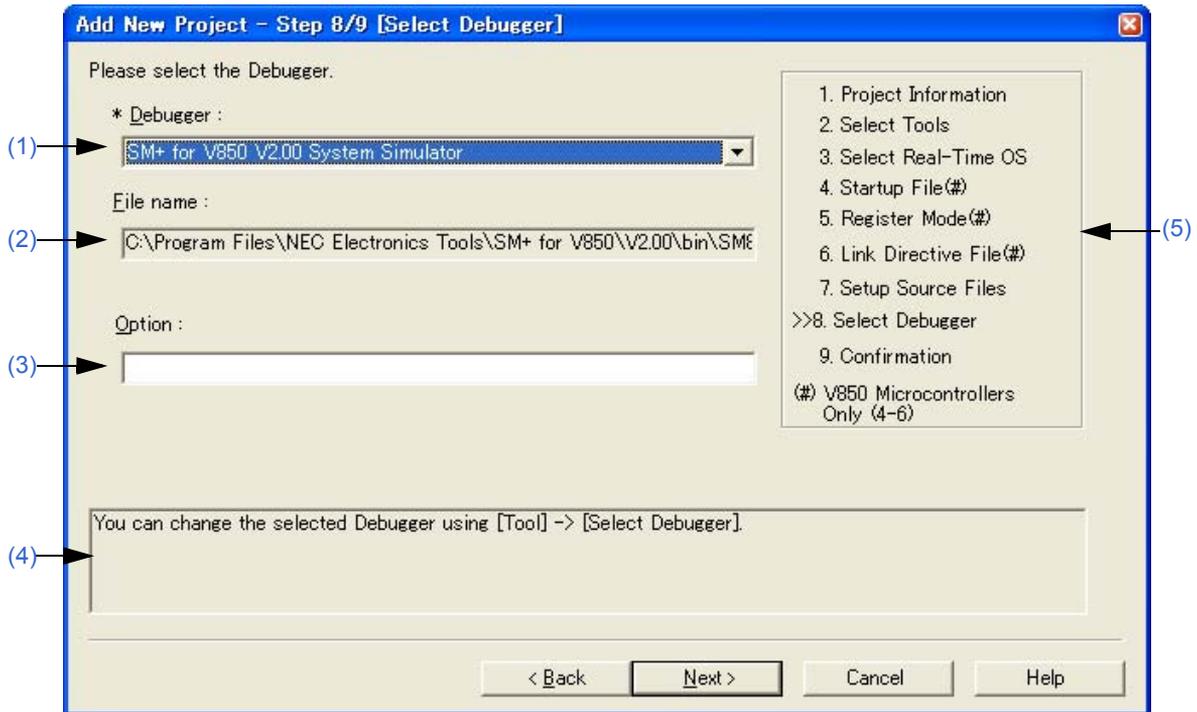
Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection. Refer to " Figure 6-23 Wizard Flow for Add New Project ".)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Add New Project - Step 8/9 [Select Debugger]] dialog box

Select the debugger which debug the project to be created newly.

The specification of the item marked with "*" in this dialog box can not be omitted (i.e. the [Next>] button can not be selected). The debugger specified with this dialog box can be changed after exiting this wizard.

Figure 6-31 [Add New Project - Step 8/9 [Select Debugger]] Dialog Box



(1) Debugger

Select the debugger to be used from the drop-down list. All the NEC Electronics debuggers that have been installed are displayed in the drop-down list together with the corresponding microcontrollers name.

When a debugger is selected from this list, the file name of the debugger is displayed in the [File Name] text box and the selected debugger will start up automatically when a debug operation is executed.

If you wish to change the debugger to be used after exiting the wizard, select the [Tool] menu -> [Debugger Setting...].

(2) File name

The file name of the debugger to be used for debugging is displayed. When the debugger is selected by the [Debugger] drop-down list, that file name is displayed with the path automatically.

This text box cannot be edited.

(3) Option

Specify the options for when starting up the debugger.

If this specification is omitted, no option is specified for starting up the debugger.

(4) Message area

The function of the dialog box and applicable cautions are described in this area.

(5) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box. If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

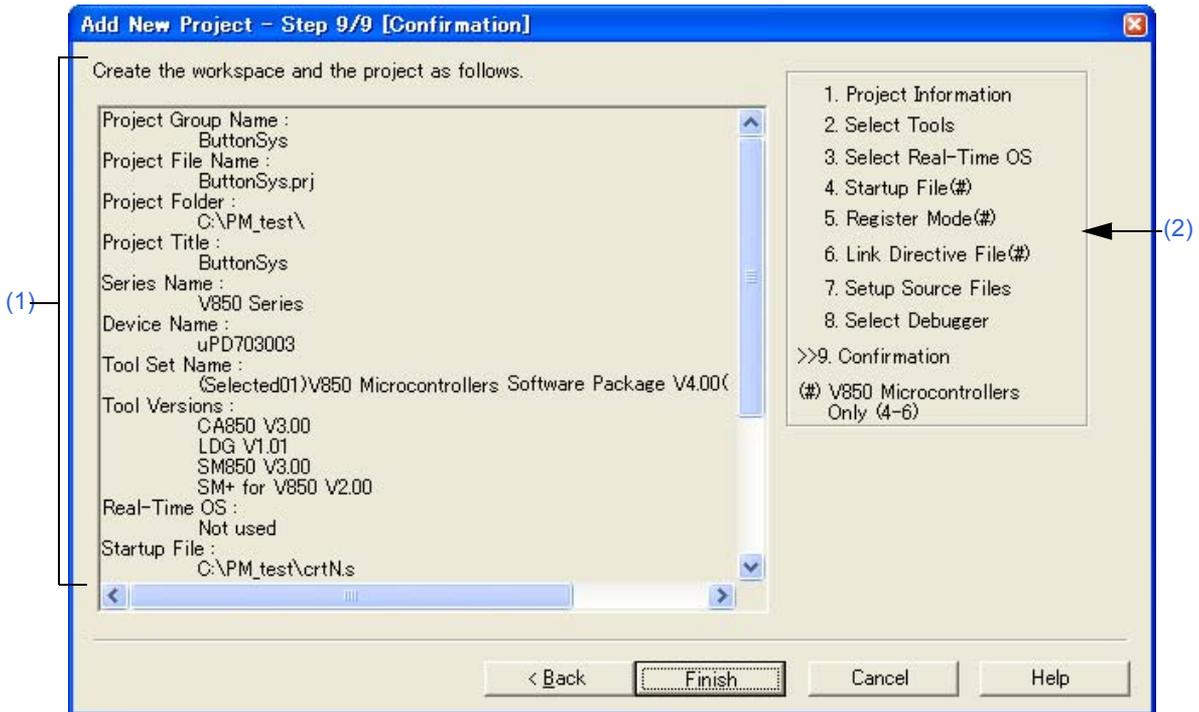
(6) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next step dialog box. (The next step dialog box to be opened differs depending on the selection.)
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Add New Project - Step 9/9 [Confirmation]] dialog box

The contents of the setting are confirmed and the wizard for creating a new project is terminated.

Figure 6-32 [Add New Project - Step 9/9 [Confirmation]] Dialog Box



(1) Confirmation area

The information set by this wizard for creating a new project is displayed here.

If there are no errors in settings, click the [Finish] button to terminate this wizard. The workspace and the project file belonging to that workspace will then be created in accordance with the displayed information.

Also generates a make file (project-file-name.mak) automatically.

(2) Current position area

The whole flow of the wizard is displayed in this area. ">>" mark signifies the position of the current dialog box.

If the flow changes according to the selection of information, the steps to be skipped are displayed in gray.

(3) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Finish	Terminates this wizard for creating a new workspace, and generates a new workspace file and a project file belonging to that workspace, according to the displayed information. Also generates a make file (project-file-name.mak) automatically.
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Project Settings] wizard

This wizard is used to update the project information for PM+. If an attempt is made to open a project file created by another NEC Electronics tool (debugger or simulator).

This wizard displays the following dialog boxes. Enter/select the necessary information in each dialog box and click the [Next>] button to proceed.

- [Project Settings - Step 1/3 [Project Information]] dialog box
- [Project Settings - Step 2/3 [Select Tools]] dialog box
- [Project Settings - Step 3/3 [Setup Source Files]] dialog box

Figure 6-33 [Project Settings] Wizard at Starting

The screenshot shows a Windows-style dialog box titled "Project Settings - Step 1/3 [Project Information]". It has a blue title bar with a close button in the top right corner. The main area is light beige and contains several labeled fields:

- Project File Name :** RD_850.prj
- Folder :** C:\PM_test\other_products\sample
- Workspace File Name :** C:\PM_test\other_products\sample\RD_850.prw
- Project Group :** RD_850
- Project Title :** An empty text input field.
- Microcontrollers Name :** A dropdown menu showing "V850 Series".
- Device Name :** A dropdown menu showing "uPD703107".
- Device Install :** A button located to the right of the Device Name dropdown.

At the bottom of the dialog box, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

This section describes the following items:

- Opening
- Explanation of each dialog box

Opening

- Select the [File] menu -> [Open Workspace...]

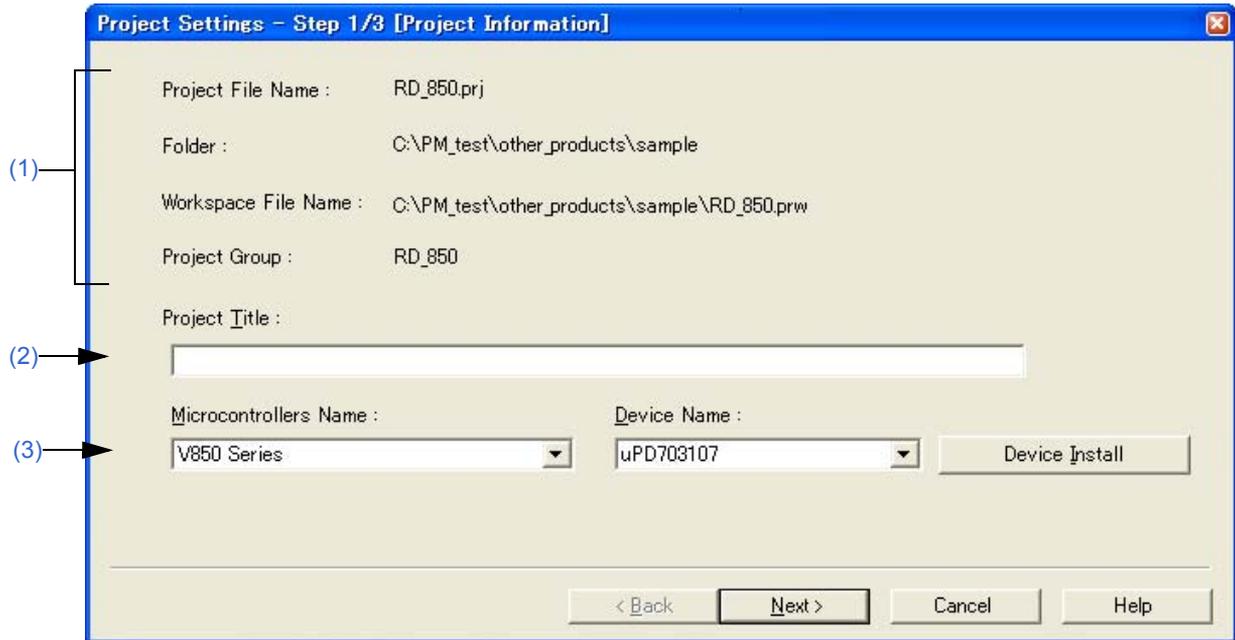
Explanation of each dialog box

The following explains each dialog box displayed in this wizard.

[Project Settings - Step 1/3 [Project Information]] dialog box

Confirms the project information and modify the project title and the device microcontrollers name of the target device to be used.

Figure 6-34 [Project Settings - Step 1/3 [Project Information]] Dialog Box

**(1) Information display area****(a) Project File Name**

The name of the project file is displayed.

(b) Folder

The project folder specified in the project file is displayed.

(c) Workspace File Name

The name of the workspace file to which the project belongs is displayed with an absolute path.
The file name is automatically determined as project file name + extension (*.prw).

(d) Project Group

The name of the project group to which the project belongs is displayed.

If you wish to change the name of the project group, after this wizard terminates, click the name of that project group with the right mouse button in the [Project] window and select the [Edit Project Group Name...] menu.

(2) Project Title

The project title to be displayed in the [Project] window is displayed.

If the project title is modified here, the modification is reflected in the [Project] window.

Up to 127 characters can be entered for a project title.

(3) Microcontrollers Name and Device Name

The microcontrollers and device name of the target device to be used are displayed.

They can be changed by selecting from the drop-down lists.

If the device file for the device to be used has not been installed, the following message will be displayed under the device name displayed.

"The device file that has been selected is not registered."

When this message is displayed, clicking the [Device Install] button starts the device file installer to register the new device file.

If multiple projects are registered into the project group, or if the debugger/simulator is running, these drop-down lists are invalid.

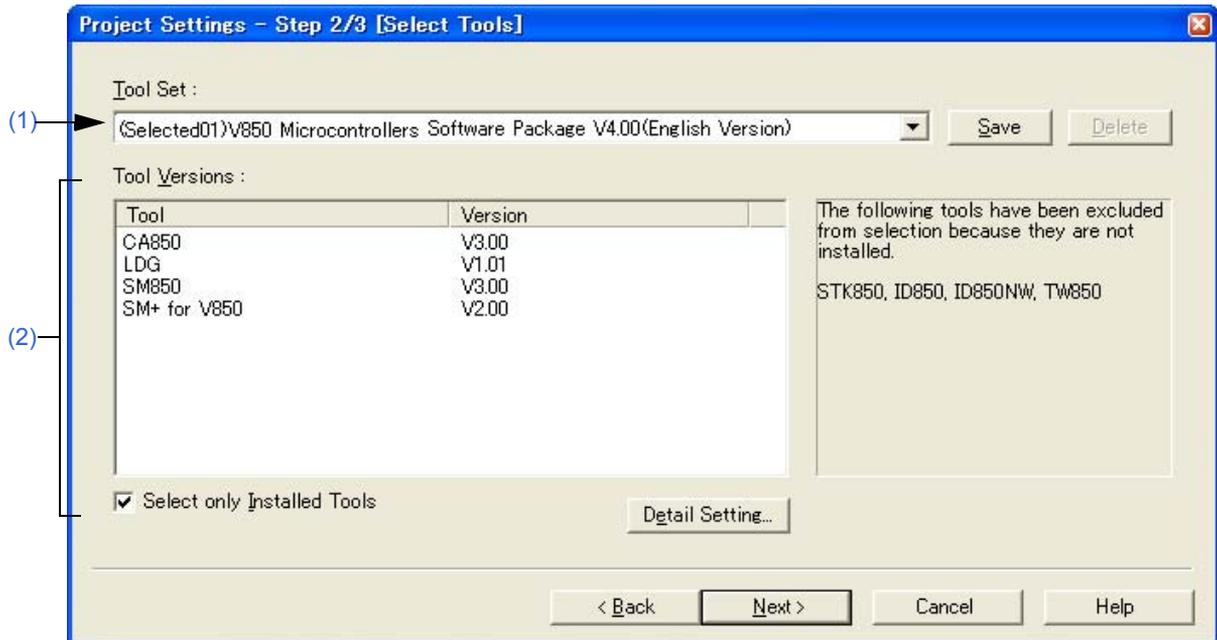
(4) Function buttons

Button	Function
<Back	This button is always disabled.
Next>	Opens the next wizard.
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Project Settings - Step 2/3 [Select Tools]] dialog box

Specify the tool to be used in this dialog box.

Figure 6-35 [Project Settings - Step 2/3 [Select Tools]] Dialog Box



(1) Tool Set

The combination of tools to be used and their versions is regarded as a tool set, and the tool set name can be selected from the drop-down list.

The existing tool set and recommended tool set ("78Kx Microcontrollers Software Package Vx.xx" in the case of the 78K Microcontrollers, and "V850 Microcontrollers Software Package Vx.xx" in the case of the V850 Microcontrollers) are listed on the drop-down list.

If the tool set has been changed in the [Tool Version Detail Setting] dialog box opened by clicking the [Detail Setting...] button, "(Changed)" is appended at the top of the tool set name. If the tool set name already exists, the indication appended varies from "(Changed01)" to "(Changed99)". After "(Changed99)", the tool set name is displayed as "UserSet".

Button	Function
Save	Saves the tool set currently selected in [Tool Set]. This button is not available (appears dimmed) if the tool set file is read-only.
Delete	Deletes the tool set name selected in [Tool Set] from the list (also deletes the corresponding tool set file). This button is not available (appears dimmed) if there are no tool set files corresponding to the selected tool set or the tool set file is read-only.

[Remark]

A file is saved as "tool-set-name.extension". The extension varies depending on the product used, as shown below.

78K0R Microcontrollers (including libraries): t0r
 78K0 Microcontrollers (including libraries): tk0
 78K0S Microcontrollers (including libraries): t0s
 V850 Microcontrollers (including libraries): t85

The file is saved under "NEC Electronics\PM+" in the "Application Data" folder, which is accessible by all users.

If this folder does not exist, it is automatically created when PM+ is started up (for example, "C:\Documents and Settings\All Users\Application Data\NEC Electronics\PM+" in the case of Windows XP).

(2) Tool versions

Combinations of tools to be used and their versions are displayed in this area.

When a tool set name is selected in the [Tool Set] drop-down list, the tools included in the tool set and their versions are displayed.

The tools specified in the [Tool Set] drop-down list and their versions are displayed by default.

The [Tool Version Detail Setting] dialog box is opened by double-clicking this area or by clicking the [Detail Setting...] button. Tools to be used and their versions can be selected in this dialog box.

(a) Tool

All the installed tools and tools included in the selected tool set are displayed in this area (tools that have not been installed are displayed in gray).

(b) Version

The tool versions specified in the selected tool set are displayed in this area.

However, "Unused" is displayed for a tool whose version is not specified in the tool set.

(c) Select only Installed Tools

If this check box is selected, tools that have not been installed are excluded from the [Tool Versions] list box which corresponds to the tool set selected in the [Tool Set] (default).

"(Selected01)" is appended to the top of the name of the tool set with which this check box is selected (if the tool set name actually exists, "(Selected0n)" is appended).

This check box cannot be selected (grayed) if there are no dimmed tools (all the listed tools have been installed).

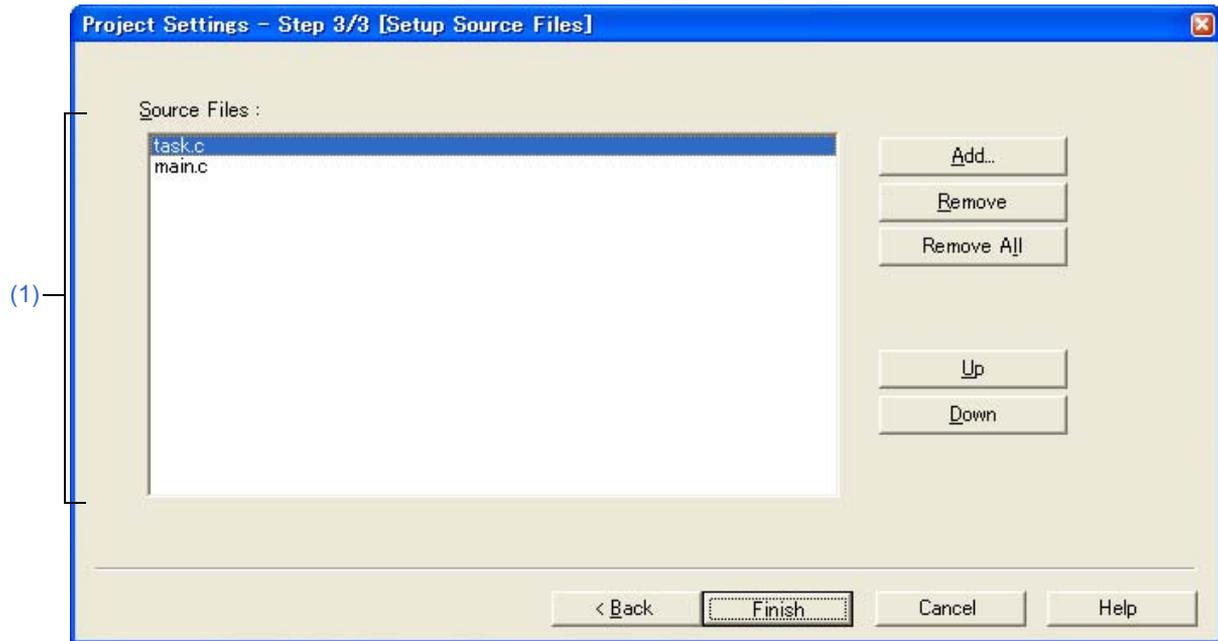
(3) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Next>	Opens the next wizard.
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

[Project Settings - Step 3/3 [Setup Source Files]] dialog box

Specifies the source file information on the project.

Figure 6-36 [Project Settings - Step 3/3 [Setup Source Files]] Dialog Box

**(1) Source Files**

The names of the source files specified by the project file are displayed in the order the build processing with the relative path on the basis of the project folder.

Up to 2048 source files can be registered.

Button	Function
Add...	Opens [Add Source Files] dialog box to add the source file to the project.
Remove	Removes the selected source file from the list.
Remove All	Removes all the source files from the list.
Up	Moves the selected source file up within the list.
Down	Moves the selected source file down within the list.

[Cautions]

- If the compiler and assembler are not installed, source file addition is not possible.
- Make is assembled/compiled in accordance with the program type, in the order the files are displayed in the list of source files. The path of project folder is being used for the path name of the source file when executing make.
The order of linkage depends on the linker of the microcontrollers to be used.

(2) Function buttons

Button	Function
<Back	Returns to the previous wizard step.
Finish	Terminates this wizard for creating a new workspace, and generates a new workspace file and a project file belonging to that workspace, according to the displayed information.
Cancel	Stops the operation for creating a new workspace file, and returns to its previous status (in which the previously read workspace file is available for use).
Help	Opens the help for this dialog box.

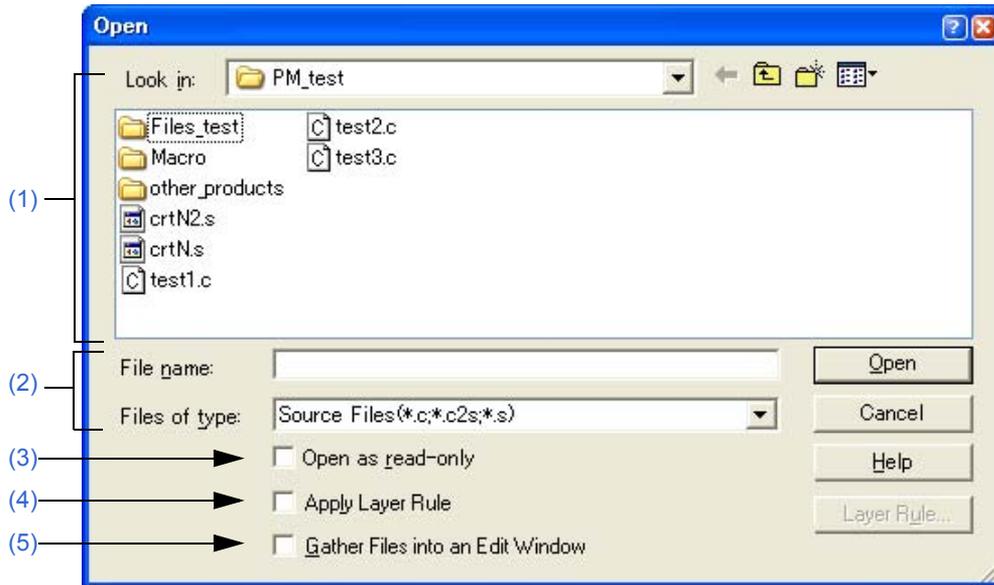
[Open] dialog box

This dialog box is used to open a specified file.

Multiple files being edited can be opened in a read-only attribute.

When closing files, if there are multiple files opened in the read-only status whose names are the same, all of these files are closed.

Figure 6-37 [Open] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [File] menu -> [Open].

Explanation of each area

(1) Look in

Select the drive or folder in which the specified file exists from the drop-down list.

The files existing in the specified location are displayed in area below.

(2) File name and Files of type

(a) File name

Specify the name of the file to be opened.

The file name can be directly entered in the text box or can be selected from the list above.

(b) Files of type

Select the type of the specified file from the drop-down list. The following types are displayed in the default condition.

[When opening a workspace file]

- Source Files

[Caution]

The source file extension corresponding to the currently active project is displayed.

- Include Files (*.h,*.inc)
- idl Files (*.idl)
- Text Files (*.txt)
- All Files (*.*)

[When not opening a workspace file]

- Source Files (*.c,*.cpp,*.asm,*.s)
- Include Files (*.h,*.inc)
- idl Files (*.idl)
- Text Files (*.txt)
- All Files (*.*)

If a file whose extension is "*.bak" is selected, it is identified as a backup file. File types (user-specified extension, etc.) can be added with the [Tool] menu -> [Customize...].

(3) Open as read-only

The specified file is opened as a read-only attribute.

This check box is not selected in the default condition.

(4) Apply Layer Rule

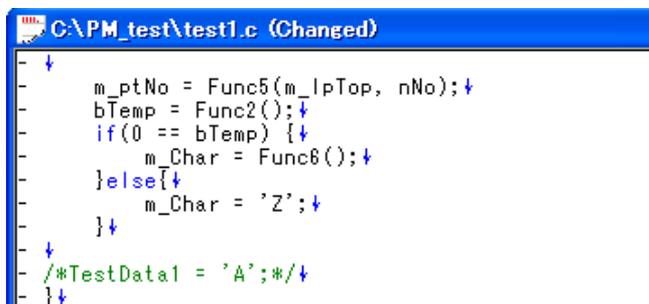
The specified file is read applying a specified layer rule.

This check box is not selected in the default condition, however, if [Apply Layer Rule in Opening File(s)] is selected on the [File] tab in the [PM+ Settings] dialog box, this check box is selected automatically and dimmed.

The [Layer Rule...] button can only be valid when [Apply Layer Rule] check box is selected. Refer to the [Set Layer Rule] dialog box for details on the layer rule.

[Example]

- Opening a file without checking the check box

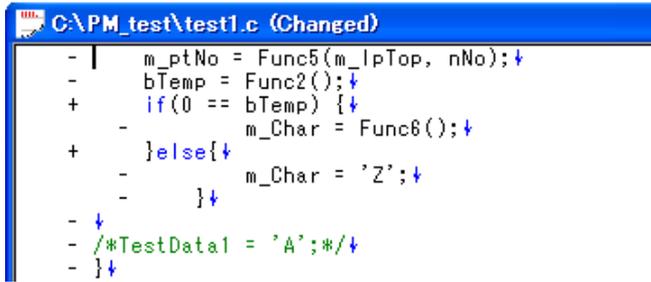


```

C:\PM_test\test1.c (Changed)
-
+
- m_ptNo = Func5(m_lpTop, nNo);+
- bTemp = Func2();+
- if(0 == bTemp) {+
-     m_Char = Func6();+
- }else{+
-     m_Char = 'Z';+
- }+
+
- /*TestData1 = 'A';*/+
- }+

```

- Opening a file with checking the check box



```

- | m_ptNo = Func5(m_lpTop, nNo);↑
- | bTemp = Func2();↑
+ | if(0 == bTemp) {↑
- |     m_Char = Func6();↑
+ | }else{↑
- |     m_Char = 'Z';↑
- | }↑
- | ↑
- | /*TestData1 = 'A';*/↑
- | }↑

```

(5) Gather Files into an Edit Window

Multiple specified files are read into one [Edit window](#).

When this check box is selected, [Open as read-only] check box becomes invalid.

Function buttons

Button	Function
Open	Opens the specified file.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Layer Rule...	Opens the [Set Layer Rule] dialog box to set the layer rule to be applied when reading a file. This button is available only when the [Apply Layer Rule] check box is selected. This button is unavailable when the [Enable All Layer Rule's Options] check box is selected on the [File] tab in the [PM+ Settings] dialog box .

[Insert File] dialog box

This dialog box is used to insert the contents of a specified file to the active [Edit window](#).

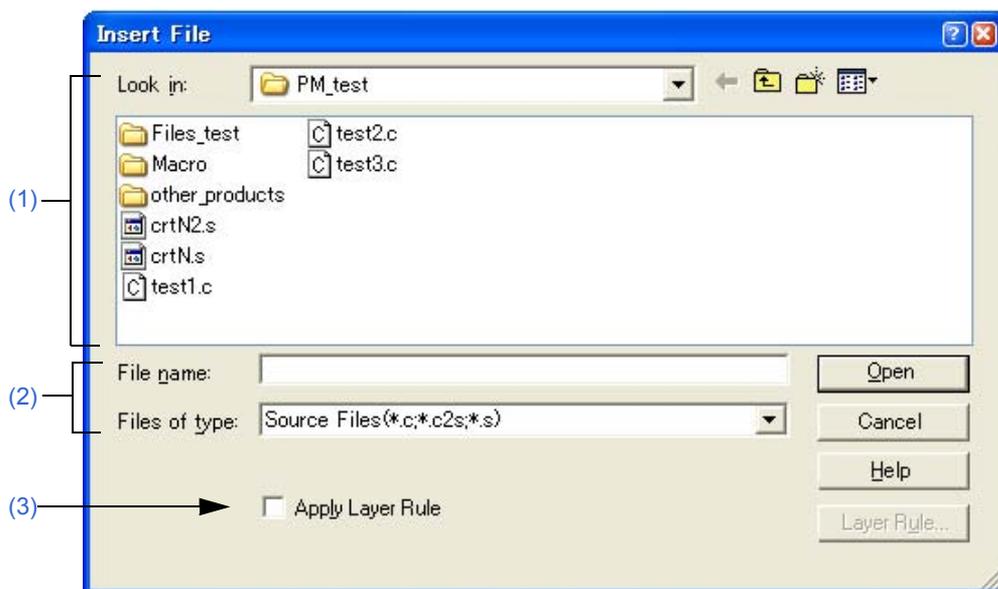
The contents of the file will be inserted in the line immediately above the line where the caret is placed.

The caret position does not change after the file insertion. (If the caret is placed in the middle of a line, however, the caret will move to the beginning of the line).

The files that can be inserted are as follows:

- IDL file
- Text file

Figure 6-38 [Insert File] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [File] menu -> [Insert file...].

Explanation of each area

(1) Look in

Select the drive or folder in which the specified file exists from the drop-down list.

The files existing in the specified location are displayed in area below.

(2) File name and Files of type**(a) File name**

Specify the name of the file to be opened.

The file name can be directly entered in the text box or can be selected from the list above.

(b) Files of type

Select the type of the specified file from the drop-down list. The following types are displayed in the default condition.

[When opening a workspace file]

- Source Files

[Caution]

The source file extension corresponding to the currently active project is displayed.

- Include Files (*.h,*.inc)

- idl Files (*.idl)

- Text Files (*.txt)

- All Files (*.*)

[When not opening a workspace file]

- Source Files (*.c,*.cpp,*.asm,*.s)

- Include Files (*.h,*.inc)

- idl Files (*.idl)

- Text Files (*.txt)

- All Files (*.*)

File types (user-specified extension, etc.) can be added with the [Tool] menu -> [Customize...].

(3) Apply Layer Rule

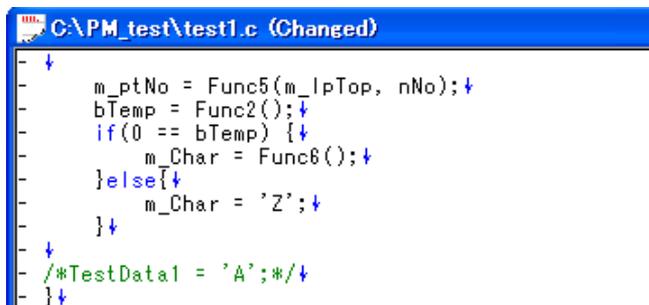
The specified file is inserted applying a specified layer rule.

This check box is not selected in the default condition, however, if [Apply Layer Rule in Opening File(s)] is selected on the [File] tab in the [PM+ Settings] dialog box, this check box is selected automatically and dimmed.

The [Layer Rule...] button can only be valid when [Apply Layer Rule] check box is selected.

[Example]

- Opening a file without checking the check box



```

C:\PM_test\test1.c (Changed)
-
+
- m_ptNo = Func5(m_lpTop, nNo);+
- bTemp = Func2();+
- if(0 == bTemp) {+
-     m_Char = Func6();+
- }else{+
-     m_Char = 'Z';+
- }+
+
- /*TestData1 = 'A';*/+
- }+
  
```

- Opening a file with checking the check box

```

C:\PM_test\test1.c (Changed)
- |   m_ptNo = Func5(m_lpTop, nNo);+
-   bTemp = Func2();+
+   if(0 == bTemp) {+
-     m_Char = Func6();+
+   }else{+
-     m_Char = 'Z';+
-   }+
- +
- /*TestData1 = 'A';*/+
- }+

```

Function buttons

Button	Function
Open	Inserts the contents of the specified file.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Layer Rule...	Opens the [Set Layer Rule] dialog box to set the layer rule to be applied when reading a file. This button is available only when the [Apply Layer Rule] check box is selected. This button is unavailable when the [Enable All Layer Rule's Options] check box is selected on the [File] tab in the [PM+ Settings] dialog box .

[Open Workspace] dialog box

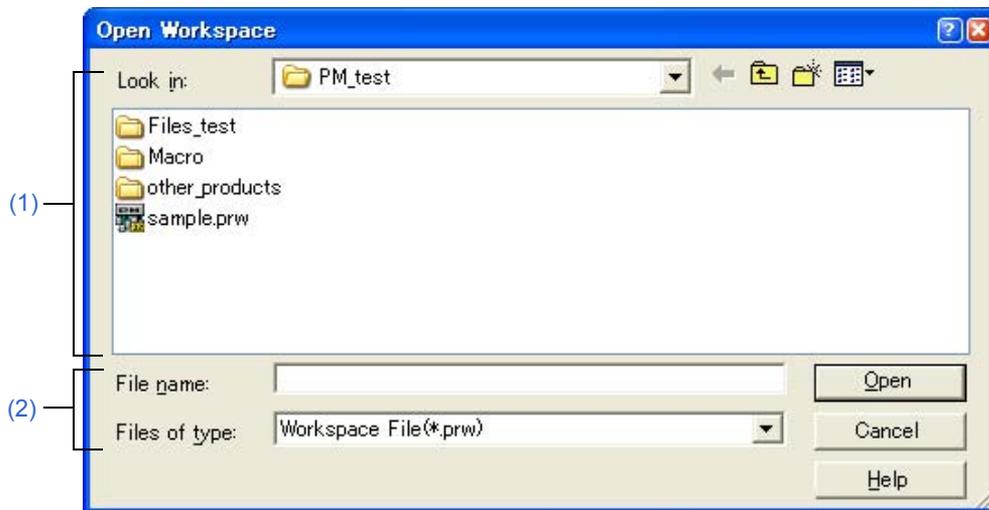
This dialog box is used to open a specified workspace file.

If a workspace file or a project file is already opened, a workspace to be opened is displayed after the workspace file or the project file is closed.

If a project file created with PM (Ver.3.xx) or PM plus (Ver.5.xx) is specified, a message will be displayed, and the file is converted into a workspace file then opened (refer to "5. 1. 5 Opening a project file generated by the previous version").

If an attempt is made to open a project file created with another NEC Electronics tool (such as a debugger or simulator), the [Project Settings] wizard will be displayed and update its project information for compatibility with PM+.

Figure 6-39 [Open Workspace] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [File] menu -> [Open Workspace...].

Explanation of each area

(1) Look in

Select the drive or folder in which the specified file exists from the drop-down list. The files existing in the specified location are displayed in area below.

(2) File name and Files of type

(a) File name

Specify the name of the file to be opened. Up to 255 characters can be entered.

The file name can be directly entered in the text box or can be selected from the list above.

(b) Files of type

Select the type of the specified file from the drop-down list. The following types are displayed in the default condition.

- Workspace File (*.prw)
- Project File (*.prj)
- All Files (*.*)

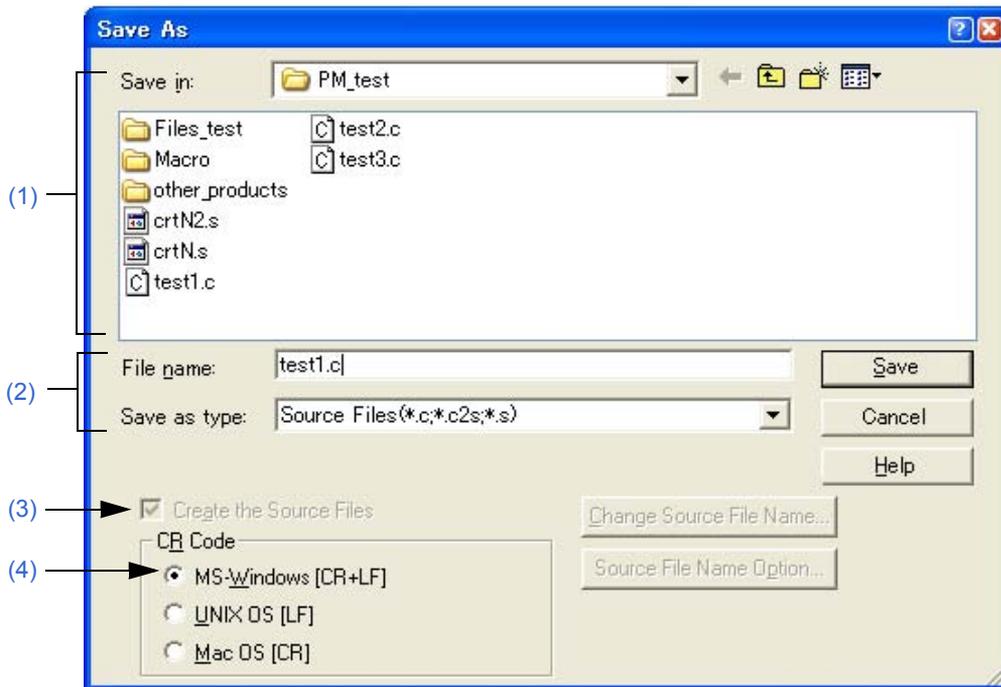
Function buttons

Button	Function
Open	Opens the specified file.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Save As] dialog box

This dialog box is used to save the current active file into a specified file.

Figure 6-40 [Save As] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [File] menu -> [Save As...].

Explanation of each area

(1) Save in

Select the drive or folder in which the file is to be saved from the drop-down list. The files existing in the specified location are displayed in area below.

(2) File name and Save as type

(a) File name

Specify the name of the file to be saved.

If the file has no name, a file name created based on the contents of the first line is displayed. If the first line has no characters, the file name is displayed as "Untitled".

The file name can be directly entered in the text box or can be selected from the list above

(b) Save as type

Select the type of the specified file from the drop-down list. The following types are displayed in the default condition.

- Source Files (*.c,*.c2s,*.s)
- Include Files (*.h,*.inc)
- idl Files (*.idl)
- Text Files (*.txt)
- All Files (*.*)

(3) Create the Source Files

This check box is available only when the file to be saved is an IDL file.

If this check box is selected, a source file is also created. In this case, the [Change Source File Name...] and [Source File Name Option...] buttons become valid.

If this check box is not selected, only the IDL file is saved, and no source file is created. In this case, the [Change Source File Name...] and [Source File Name Option...] buttons become invalid.

Note that if the [Search result display window](#) is active, this check box is always invalid.

(4) CR Code

This setting is valid when a file is saved in text file format. If a text file that has already been read is specified, the linefeed code when the file was read is displayed.

The linefeed code that can be saved are as follows:

Code	Description
MS-Windows [CR+LF]:	Linefeed code has 2 bytes CR code and LF code.
UNIX OS [LF]:	Linefeed code: LF code
Mac OS [CR]:	Linefeed code: CR code

Function buttons

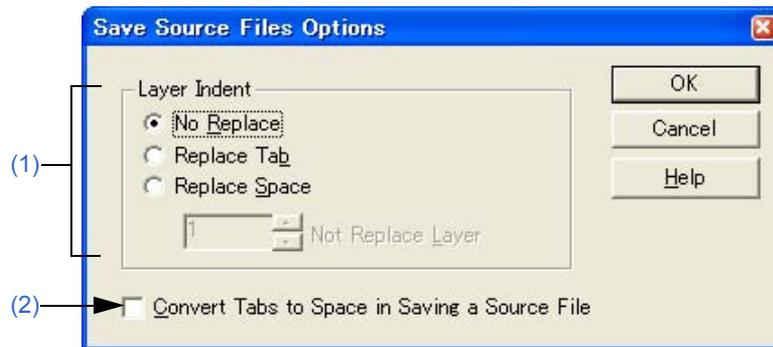
Button	Function
Save	Saves the file with the specified name.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Change Source File Name...	Opens the [Change Source File Names] dialog box in which the source file name and the comment mark can be changed.
Source File Name Option...	Opens the [Save Source Files Options] dialog box in which the options for the source file to be created can be set.

[Save Source Files Options] dialog box

This dialog box is used to set options when a source file is saved.

The settings made in this dialog box have the same meaning as the settings made on the [Source File by idl file] tab in the [PM+ Settings] dialog box. The default settings correspond to the settings in the [PM+ Settings] dialog box. The settings here are also reflected in the [PM+ Settings] dialog box.

Figure 6-41 [Save Source Files Options] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [File] menu -> [Save As...], and click the [Source File Name Option...] button.

Explanation of each area

(1) Layer Indent

This area specifies whether an indent for a layer is replaced with a specified character when a source file is saved.

- (a) No Replace
The indent of layers is not replaced.
- (b) Replace Tab
The indent of one layer is replaced with one Tab code.
- (c) Replace Space
The indent of one layer is replaced with the number of space codes specified with [Indent Tab Characters] on the [View] tab in the [PM+ Settings] dialog box.
- (d) Not Replace Layer
The indents to the specified layer are not replaced with Tab or space codes.
If "2" is specified, the lines of the first and second layers are not replaced with Tab codes, but the lines of the third and subsequent layers are replaced with Tab codes.

(2) Convert Tabs to Space in Saving a Source File

If this check box is selected, Tab codes are replaced with the number of space codes specified with [Indent Tab Characters] on the [View] tab in the [\[PM+ Settings\] dialog box](#). A two-byte space is replaced with two one-byte space codes.

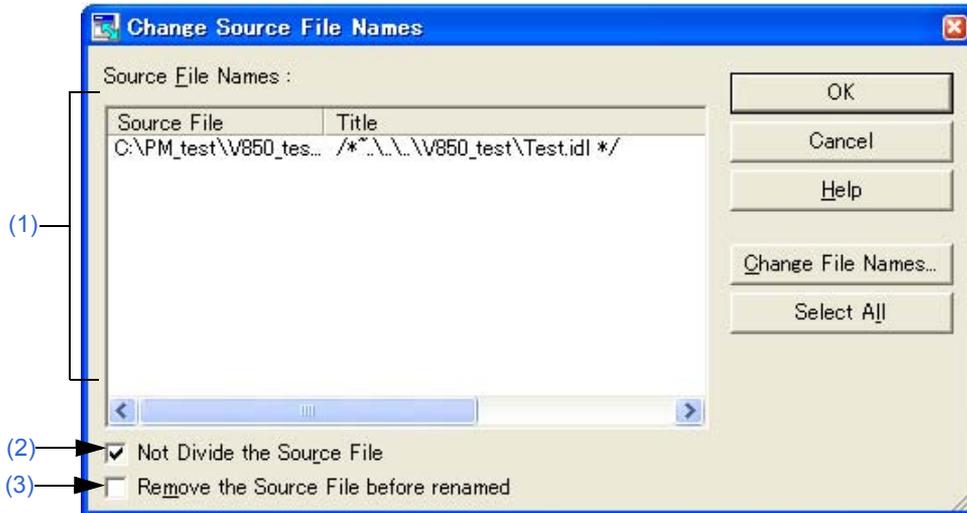
Function buttons

Button	Function
OK	Saves the file with the specified options.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Change Source File Names] dialog box

This dialog box is used to change the name of the source file to be created from an IDL file being edited to a specified file name.

Figure 6-42 [Change Source File Names] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [File] menu -> [Change Source File Name...].
- Select the [File] menu -> [Save As...], and click the [Change Source File Name...] button.

Explanation of each area

(1) Source File Names

(a) Source File

After selecting a source file name, inline editing can be performed by clicking the left mouse button. Up to 259 characters can be specified. Moreover, after selecting a source file name, double-clicking it or clicking the [Change File Names...] button opens the [Change Selected Source File Name] dialog box.

At this time, if multiple source file names are selected, the [Change Selected Source File Names] dialog box is opened.

If the name of the source file has not been set, the contents of the first layer line, which corresponds to the first line of the source file, will be the source file name. If there are any other source files with the same name, that name suffixed by a 4-digit number is displayed as the source file name.

If the first layer line contains no characters, a 4-digit number + extension will be the source file name. The extension will be "c" if there are any C language comments (*/**/*, *//*) between the first and 300th lines, or "asm" if there are no comments.

(b) Title

The contents of the first layer line, which corresponds to the first line of the source file, are extracted and displayed.

(2) Not Divide the Source File

If this check box is selected, the source file is not divided. The entire file is saved as a single source file.

If the check box is cleared then selected again, the previous file name for the file not to be divided is displayed.

Note that when the [Edit window](#) is closed, the name becomes invalid.

This check box is not selected in the default condition.

(3) Remove the Source File before renamed

If this check box is selected, the file with original name is deleted when the source file name is changed.

This check box is not selected in the default condition.

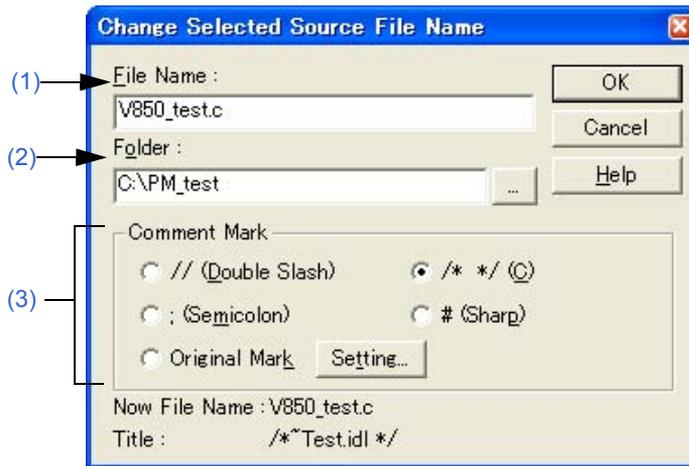
Function buttons

Button	Function
OK	Changes the IDL file name to the specified file name.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Change File Names...	Opens the [Change Selected Source File Name] dialog box , when a single source file name is selected. Opens the [Change Selected Source File Names] dialog box , when multiple file names are selected.
Select All	Selects all files listed in [Source File Names].

[Change Selected Source File Name] dialog box

This dialog box is used to rename the source file selected in the [\[Change Source File Names\] dialog box](#).

Figure 6-43 [Change Selected Source File Name] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select [\[Change File Names...\]](#) with a single source file name selected in the [\[Change Source File Names\] dialog box](#).

Explanation of each area

(1) File Name

Specify the newly set file name. Up to 259 characters can be specified.

The file name selected in the [\[Change Source File Names\] dialog box](#) is displayed in the default condition.

(2) Folder

The current folder is displayed.

Clicking the [...] button opens the dialog box to select the folder.

(3) Comment Mark

Select a comment mark from the option buttons.

If the contents of the [Edit window](#) is a C source, `/* */` is selected by default. Otherwise, a semicolon (`;`) is selected by default.

Selecting the `[Original Mark]` or clicking the `[Setting...]` button opens the [\[Set Comment Mark\] dialog box](#) in which a desired comment mark can be specified.

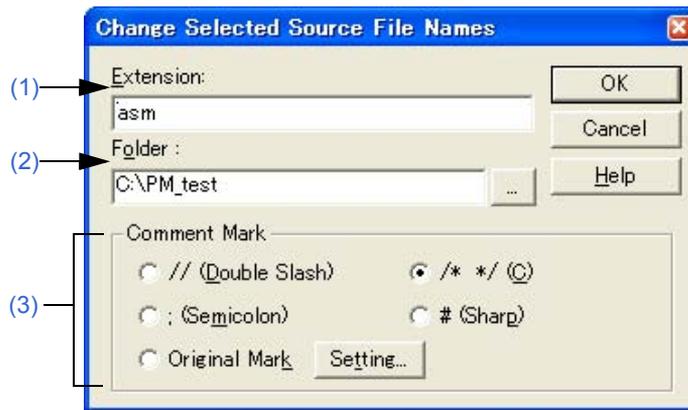
Function buttons

Button	Function
OK	Changes the IDL file name to the specified file name.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Setting...	Opens the [Set Comment Mark] dialog box in which the comment mark for the specified file can be changed.

[Change Selected Source File Names] dialog box

This dialog box is used to rename multiple source files selected in the [\[Change Source File Names\] dialog box](#).

Figure 6-44 [Change Selected Source File Names] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select [\[Change File Names...\]](#) with multiple source file names selected in the [\[Change Source File Names\] dialog box](#).

Explanation of each area

(1) Extension

If all the selected files have the same extension, the extension is displayed. If the files have different extensions, this area is left blank.

(2) Folder

If all the selected files are saved in the same folder, the folder is displayed. If the files have different settings, this area is left blank.

Clicking the [...] button opens the dialog box to select the folder.

(3) Comment Mark

Select a comment mark from the option buttons.

If all the selected files have the same comment marks, the current comment mark is selected. Otherwise, nothing is selected by default.

Selecting the [\[Original Mark\]](#) or clicking the [\[Setting...\]](#) button opens the [\[Set Comment Mark\] dialog box](#) in which a desired comment mark can be specified.

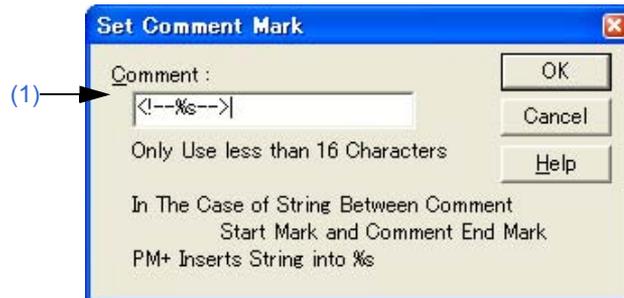
Function buttons

Button	Function
OK	Changes the IDL file name to the specified file name.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Setting...	Opens the [Set Comment Mark] dialog box in which the comment mark for the specified file can be changed.

[Set Comment Mark] dialog box

This dialog box is used to change a comment mark for a specified file.

Figure 6-45 [Set Comment Mark] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Original Mark] or [Setting...] button in the [Change Selected Source File Name] dialog box.
- Select the [Original Mark] or [Setting...] button in the [Change Selected Source File Names] dialog box.

Explanation of each area

(1) Comment

Specify the symbol to be used as a comment mark, as well as %s.

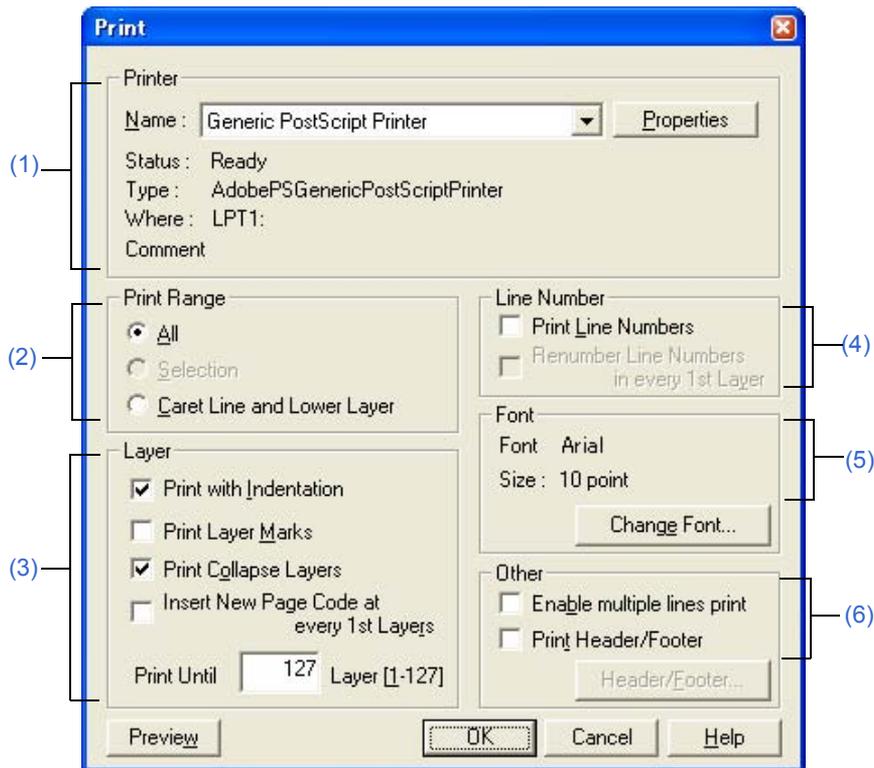
Function buttons

Button	Function
OK	Enables the specified comment mark. This button is invalid until a character is entered in [Comment].
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Print] dialog box

This dialog box is used to print the contents of the window being edited.

Figure 6-46 [Print] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [File] menu -> [Print...].
- Select the [Print] button on the [File] menu -> [Print Preview].

Explanation of each area

(1) Printer

(a) Name

Select the printer to be used from the drop-down list.

The name of the printer specified as the default printer is displayed by default.

Clicking the [Properties] button can change the printer settings.

(2) Print Range

- (a) All
Prints all of the contents of the window.
- (b) Selection
Prints the selected portion in the window.
- (c) Caret Line and Lower Layer
Prints a line and subsequent lower layer lines, at the caret position.

(3) Layer

- (a) Print with Indentation
Prints lower layers with indent aligning a first line of the selected range with the left end. The number of space characters for the indent is specified with [Indent Characters] on the [Tool] menu -> [PM Settings...] - [Layer] tab.
- (b) Print Layer Marks
Prints specified layer marks as well.
- (c) Print Collapse Layers
Prints currently collapsed layers as well.
- (d) Insert New Page Code at every 1st Layers
Prints the contents, Inserting a new page code for each first layer.
- (e) Print Until x Layer [1-127]
Prints the contents for up to the specified layer.

(4) Line Number

- (a) Print Line Numbers
Prints line numbers at the left end.
- (b) Renumber Line Numbers in every 1st Layer
Renumbers lines from 1 for each layer-1 line.

(5) Font

The currently set font type and font size are displayed.

Clicking the [Change Font...] button opens the [\[Font\] dialog box \(Print\)](#) in which a desired font type can be specified.

(6) Other

- (a) Enable multiple lines print
Enables multi-line printing.
- (b) Print Header/Footer
Prints the headers or footers.
- (c) [Header/Footer...] button
Opens the [\[Set Header/Footer\] dialog box](#) in which the contents of the header and footer can be specified. When the [Print Header/Footer] check box is not selected, this button becomes invalid.

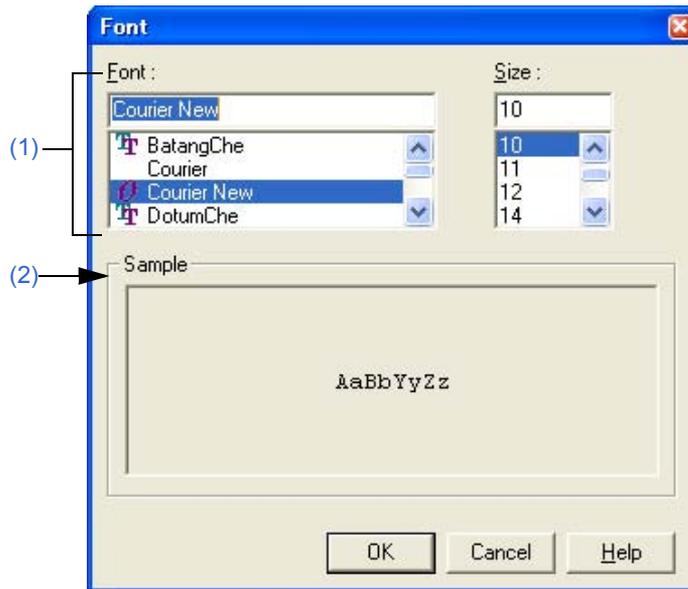
Function buttons

Button	Function
Preview	Opens the Print Preview window.
OK	Starts printing.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Font] dialog box (Print)

This dialog box is used to specify the font and size of the characters to be printed.

Figure 6-47 [Font] Dialog Box (Print)



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Change Font...] button in the [Print] dialog box.

Explanation of each area

(1) Font and Size

- (a) Font
Displays the font type under currently set. Select a desired font type by the scroll bar.
- (b) Size
Displays the font size under currently set. Select a desired font size by the scroll bar.

(2) Sample

Displays sample characters in the selected font and size.

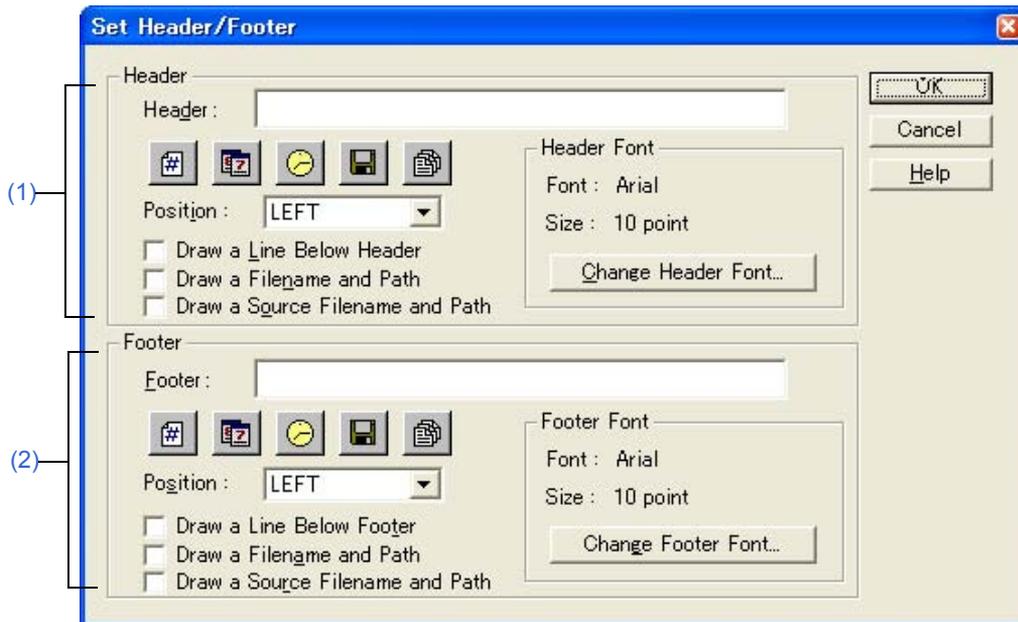
Function buttons

Button	Function
OK	Enables the specified font and size.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Set Header/Footer] dialog box

This dialog box is used to specify the contents of the header or footer to be printed.

Figure 6-48 [Set Header/Footer] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Header/Footer...] button in the [Print] dialog box.

Explanation of each area

(1) Header

(a) Header

Specify the contents to be printed as headers, by clicking any of the following buttons. When a button is clicked, the corresponding characters are entered in the text box.

Button	Function
	Page number (%p)
	Date (%d)
	Time (%t)
	Time (%t)
	Source file name (%s)

(b) Position

Specify the position at which the contents of the header.

(c) Draw a Line Below Header

Draws a line below the contents of headers.

(d) Draw a Filename and Path

Prints a file name with the path name if the file name is printed in the header.

(e) Draw a Source Filename and Path

Prints a source file name with the path name if the source file name is printed in the header.

(f) Header Font

Displays the font type and font size under currently set in the header.

Clicking the [Change Header Font...] button opens the [\[Font\] dialog box \(Print\)](#) in which a desired font type can be specified.

(2) Footer

(a) Footer

Specify the contents to be printed as footers, by clicking any of the following buttons. When a button is clicked, the corresponding characters are entered in the text box.

Button	Function
	Page number (%p)
	Date (%d)
	Time (%t)
	Time (%t)
	Source file name (%s)

(b) Position

Specify the position at which the contents of the footer.

- (c) Draw a Line Below Footer
Draws a line below the contents of footers.
- (d) Draw a Filename and Path
Prints a file name with the path name if the file name is printed in the footer.
- (e) Draw a Source Filename and Path
Prints a source file name with the path name if the source file name is printed in the footer.
- (f) Footer Font
Displays the font type and font size under currently set in the footer.
Clicking the [Change Header Font...] button opens the [\[Font\] dialog box \(Print\)](#) in which a desired font type can be specified.

Function buttons

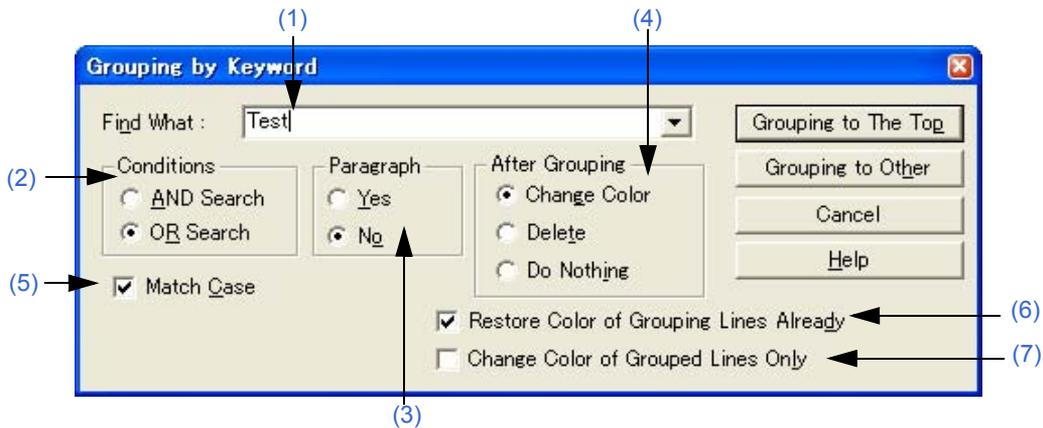
Button	Function
OK	Enables the specified items.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Grouping by Keyword] dialog box

This dialog box is used to collect lines including a specified character string and display the collected results at the top of the [Edit window](#). In the collected results, the search key is displayed in the first layer, and the collected lines are displayed in the second layer.

The collected lines also remain in their original positions unless [Delete] is selected in [After Grouping].

Figure 6-49 [Grouping by Keyword] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)
- [Cautions](#)

Opening

- Select the [Edit] menu -> [Grouping by Keyword...].

Explanation of each area

(1) Find What

Specify a character string to be used as a keyword of grouping. Multiple character strings can be specified by placing a semicolon (;) between the character strings.

The word at the caret position is displayed by default. If there is no corresponding word, the character string used last for grouping is displayed. If grouping is being performed for the first time, this area is left blank.

Up to ten of the latest search keys are stored.

(2) Conditions

- (a) AND Search
Collects lines having all the character strings specified in [Find What].
- (b) OR Search
Collects lines having any of the character strings (default).

(3) Paragraph

(a) Yes

Collects lines in units of paragraph. If a collected line has a lower layer, the line is collected with the lower layer included as is.

(b) No

Collects lines including the specified character string regardless of the paragraph (default).
The definitions of "paragraph" are as follows:

Beginning of a paragraph : Line preceded by a blank or a higher layer.

End of a paragraph : Line followed by a blank or a higher layer.

(4) After Grouping

(a) Change Color

Displays the collected lines in blue (default).

(b) Delete

Deletes the collected lines from the original positions.
If [Yes] is selected in [Paragraph], the lines cannot be deleted.

(c) Do Nothing

Performs no processing on the collected lines.

(5) Match Case

Collects lines including a character string that matches both the search key in [Find What] and the case of the characters in the search key.

(6) Restore Color of Grouping Lines Already

Collects lines in the original color, which was changed by the previous grouping (default).

(7) Change Color of Grouped Lines Only

Collects no lines and instead only changes the color of the lines including the search key specified in [Find What]. If this check box is selected, the setting made in [After Grouping] is disabled.

By default, this check box is not selected.

Function buttons

Button	Function
Grouping to The Top	Collects lines including the search key and displays the collected lines at the top of the searched Edit window in the order in which the lines are found.
Grouping to Other	Collects lines including the search key and displays the collected lines at the top of a new Edit window in the order in which the lines are found.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

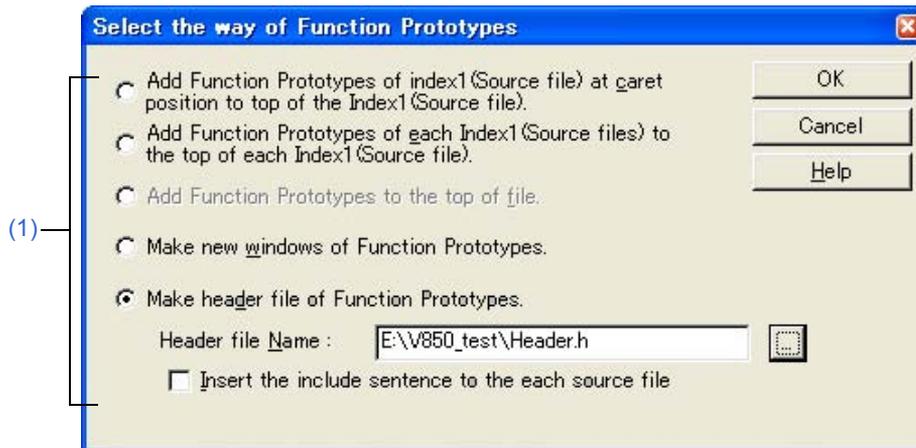
Cautions

- If [Grouping to Other] is selected, the new window is titled "Grouping- search-key UntitledX(Changed)."
- The settings of the check boxes and option buttons are stored and displayed when the next grouping is performed.
- Collected lines cannot be deleted from a read-only file. If [Change Color of Grouped Lines Only] is selected, the [Grouping to The Top] button can be selected.
- If lines are collected from a read-only file by selecting [Grouping to Other], [Delete] key cannot be selected in the new window of the collected results.

[Select the way of Function Prototypes] dialog box

This dialog box is used to automatically generate the prototype declaration of a function.

Figure 6-50 [Select the way of Function Prototypes] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)
- [Cautions](#)

Opening

- Select the [Edit] menu -> [Make Function Prototypes...].

Explanation of each area

(1) Generation method selection area

Select a generation method from the following option buttons.

The selectable buttons depend on the file type.

- (a) Add Function Prototypes of index1(Source file) at caret position to top of the Index1(Source file).
Adds the function defined in the first layer (Source file) at the caret position in the [Edit window](#) as a prototype declaration, at the top of the layer.
- (b) Add Function Prototypes of each Index1(Source files) to the top of each Index1(Source file).
Adds the function defined in each first layer (Source file) in the [Edit window](#) as a prototype declaration, at the top of the layer. No addition is made to a read-only file.
- (c) Add Function Prototypes to the top of file.
Adds a function defined in the [Edit window](#) as a prototype declaration, to the top of the file.
- (d) Make new windows of Function Prototypes.
Creates a function defined in the [Edit window](#) as a prototype declaration, to a new window.

(e) Make header file of Function Prototypes.

Creates a new first layer (header file) at the top of the IDL file being edited and creates a function defined in the IDL file being edited as a prototype declaration. This IDL file must be that which has a source file and divides the source file in units of first layers. The header file name to be created can be directly input in [Header file Name] or can be specified in the Select Include File dialog box, displayed by selecting the [...] button. The default include file extension is ".h".

- Insert the include sentence to the each source file

This option is enabled if [Make header file of Function Prototypes.] is selected. When a header file is newly created, the "include statement + set header file name" is added to the top of each first layer (source file).

Function buttons

Button	Function
OK	Generates the prototype declaration of a function in the specified way.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

Cautions

- In the following cases, a prototype declaration may not be created correctly.
 - If a created prototype declaration is copied and pasted, the pasted prototype declaration is not updated.
 - If the prototype declaration created in the first layer is brought to a lower layer, the prototype declaration created initially becomes a different declaration.
- When a prototype declaration is created, undo buffer is cleared. Therefore, the original state cannot be restored.
- A function name cannot be recognized with the control instructions indicated below:
 - When the function name differs according to the value of #ifdef

```

void
#ifdef ENGLISH
    FncEng
#else
    FncJapan
#endif
(int Cnt, int Mode)
{ ...

```

- When function name extends over 2 lines with "\"

```

void Function      \
Name
(int Cnt, int Mode)
{ ...

```

- When variable declaration is performed between function name and "{"

```
#ifdef ENGLISH
int main( argc, argv[])
int argr;
char* argv[];
{
}
```

- In the case of a function name without a return value, such as shown below, the character on the preceding line are judged to be the return value. In such a case, declare the function type.

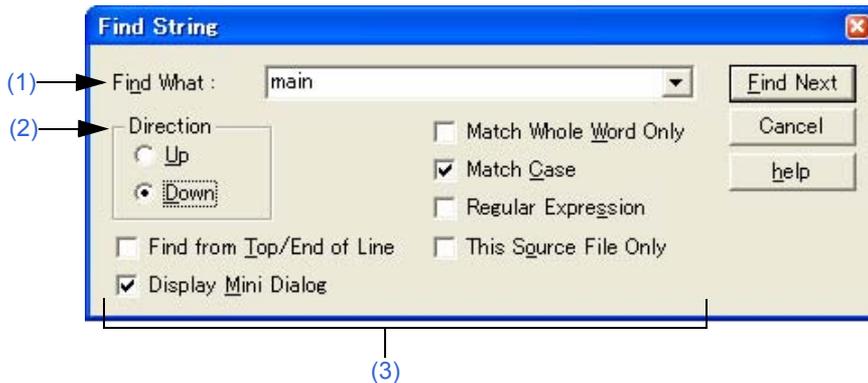
```
a.def
main() {}
```

[Find String] dialog box

This dialog box is used to find a character string.

The search is performed also to the lines in lower layers which are not expanded, and if a search key is found in the lower layer, the layer is expanded to show the character string.

Figure 6-51 [Find String] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons
- Cautions

Opening

- Select the [Find] menu -> [Find...].
- Select the [Find...] button on the tool bar.

Explanation of each area

(1) Find What

This area specifies a search key.

A word at the caret position is displayed as the search key by default. If there is no corresponding word, the character string used last for searching is displayed. If there is no previously search key, this area is left blank.

Up to ten of the latest search keys are stored. If there are over ten search keys, the oldest one will be deleted.

The search keys can be saved into an IDL file by checking [Memorize Find What in ideal-L File] check box on the [Tool] menu -> [PM+ Settings...] - [Find/Replace] tab. The setting of the search key(s) can be changed by checking [Show String You Selected or Word of Caret Position to Find What] check box on the same tab.

(2) Direction

Specify a search direction.

(a) Up

Starts an upward search toward the top of the file from the second character to the rightmost one of the character string in the range selection or from the end of the lines in the range selection.

(b) Down

Starts a downward search toward the end of the file from the second character to the leftmost one of the character string in the range selection or from the beginning of the lines in the range selection (default).

(3) Search options area**(a) Find from Top/End of Line**

The search does not start from the caret position. If [Up] is selected, the search starts from the last line. If [Down] is selected, the search starts from the first line.

(b) Display Mini Dialog

If this check box is selected, the dialog box turns into a mini dialog box when the [Find Next] button is next selected (default).

Figure 6-52 shows an image of the Find String dialog box (mini).

Figure 6-52 [Find String] Dialog Box (Mini)



Button	Function
Down	Continues a downward search for a character string matching the specified search key.
Up	Continues an upward search for a character string matching the specified search key.
Details	Displays the normal Find String dialog box in which the search conditions can be changed.
Cancel	Close this dialog box.
Help	Opens the help for this dialog box.

(c) Match Whole Word Only

If this box is selected, a whole word match for the search key is searched for.

(d) Match Case

If this box is selected, a character string that matches both the search key in [Find What] and the case of the characters in the search key is searched for (default).

(e) Regular Expression

If this box is selected, regular expressions are supported in global searching.

The following regular expressions are supported:

Expression	Description
Character	Represents the character itself.
XY	X and Y appear in the stated order. (concatenation)
X Y	X or Y appears. (selection)
X*	X appears zero or more times.
(X)	Same as X
(X)+	X appears one or more times.

- Meta-characters *, |, (,), and + have special meanings. If any of those characters need to be searched, \ must be used. If character \ needs to be searched, \\ must be specified.

Other special characters are specified as follows:

Tab character	\t	-
Beginning of line	^	Valid only when specified at the beginning of a character string. Otherwise, character ^ itself is searched for.
End of line	\$	Valid only when specified at the beginning of a character string. Otherwise, character \$ itself is searched for.

- In regular expressions, repetition, concatenation, and selection are assigned decreasing priorities, in the stated order. The priority can be adjusted by enclosing the corresponding part in parentheses,(and).

[How to use regular expressions]

- A character is a regular expression that indicates the character itself (except meta-characters).
E.g.: "a" is a regular expression indicating that the character "a" will appear.
- Connection
XY, in which the regular expressions X and Y are described in order, is a regular expression indicating that X and Y will appear in that order.
E.g.: abc is a regular expression indicating that characters a, b, and c will appear in that order.
- Selection
X|Y, in which "|" is described between X and Y, is a regular expression indicating that either X or Y will appear.
E.g.: a|b|c is a regular expression indicating that one of the characters a, b or c will appear.
- Repetition
X*, in which "*" is described just after a regular expression X, is a regular expression indicating that X will appear repeatedly 0 times or more.
E.g.: a* is a regular expression indicating that "a" will appear repeatedly 0 times or more.

(a, aa, aaa, aaaa, ...Null character strings will appear.)
X+, in which "+" is described just after a regular expression X, is a regular expression indicating that X will appear repeatedly once or more.
E.g.: a+ is a regular expression indicating that "a" will appear repeatedly once or more.

(a, aa, aaa, aaaa, ...Null character strings are not included.)

a* means that "a" will appear repeatedly 0 times or more, while aa* means that "a" will appear repeatedly once or more and null character strings are not permitted, which is the same operation as the description of a+.
- To indicate the repetition of ab, namely ab, abab, ababab... (ab)* must be specified, not ab* (Since repetition has a higher priority than connection, use parentheses to change the priority.)
- The regular expression indicating that the first character is a or b, the second is c, and the third is x or y is (a|b) c (x|y) (Since connection has a higher priority than selection, use parentheses to change the priority). If parentheses are omitted, one of a, bcx, or y is searched.
- The regular expression indicating that one of the characters enclosed in "[" and "]" will appear is not supported. It can be described using "selection" as follows:
E.g.: [abc] -> (a|b|c) This means that one of a, b or c will appear.

(f) This Source File Only

If this box is selected, only the source file to which the caret is currently positioned is searched.

Function buttons

Button	Function
Find Next	Searches for a match for the search key. If [Display Mini Dialog] is selected, the dialog box turns into a mini dialog box.
Cancel	Does not enable the settings, and closes this dialog box.
help	Opens the help for this dialog box.

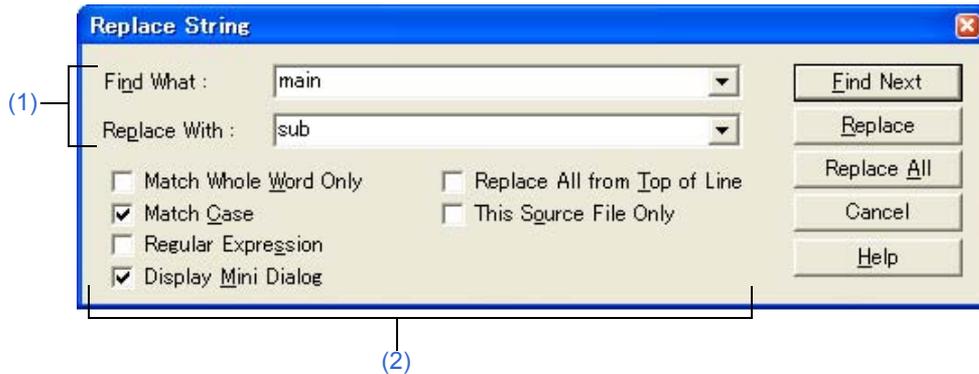
Cautions

- When the [Esc] key is pressed, the search is aborted.
- The settings of the check boxes and option buttons are stored and displayed at the next search.
- If a search cannot find any match for the search key, the operator is notified by the issue of a message or beep, depending on the setting of [Warning for Find/Replace] on the [Tool] menu -> [PM Settings...] - [Find/Replace] tab.

[Replace String] dialog box

This dialog box is used to replace a character string.

Figure 6-53 [Replace String] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons
- Cautions

Opening

- Select the [Find] menu -> [Replace...].
- Select the [Replace...] button on the too bar.

Explanation of each area

(1) Character strings specification area

(a) Find What

This area specifies the character string to be replaced.

A word at the caret position is displayed as the search key by default. If there is no corresponding word, the character string used last for searching is displayed. If there is no previously search key, this area is left blank. Up to the ten most recently specified character strings to be replaced are stored. If there are over ten character strings, the oldest one will be deleted.

The character strings to be replaced can be saved into an IDL file by checking [Memorize Find What in ideal-L File] check box on the [Tool] menu -> [PM+ Settings...] - [Find/Replace] tab. The setting of the character string to be replaced can be changed by checking [Show String You Selected or Word of Caret Position to Find What] check box on the same tab.

(b) Replace With

This area specifies a replacement character string.

The last-specified replacement character string is displayed by default. If no replacement has been made, this area is left blank.

A replacement character string can be saved into an IDL file by checking [Memorize Find What in ideal-L File] check box on the [Tool] menu -> [PM+ Settings...] - [Find/Replace] tab. The setting of a replacement character string can be changed by checking [Show String You Selected or Word of Caret Position to Replace With] check box on the same tab.

(2) Replacement options area

(a) Match Whole Word Only

If this box is selected, a whole word match for the search key is searched for.

(b) Match Case

If this box is selected, a character string that matches both the search key in [Find What] and the case of the characters in the search key is searched for (default).

(c) Regular Expression

If this box is selected, regular expressions are supported in the replacement.

The following regular expressions are supported:

Expression	Description
Character	Represents the character itself.
XY	X and Y appear in the stated order. (concatenation)
X Y	X or Y appears. (selection)
X*	X appears zero or more times.
(X)	Same as X
(X)+	X appears one or more times.

- Meta-characters *, |, (,), and + have special meanings. If any of those characters need to be searched, \ must be used. If character \ needs to be searched, \\ must be specified.

Other special characters are specified as follows:

Tab character	\t	-
Beginning of line	^	Valid only when specified at the beginning of a character string. Otherwise, character ^ itself is searched for.
End of line	\$	Valid only when specified at the beginning of a character string. Otherwise, character \$ itself is searched for.

- In regular expressions, repetition, concatenation, and selection are assigned decreasing priorities, in the stated order. The priority can be adjusted by enclosing the corresponding part in parentheses,(and).

[How to use regular expressions]

- A character is a regular expression that indicates the character itself (except meta-characters).

E.g.: "a" is a regular expression indicating that the character "a" will appear.

- Connection

XY, in which the regular expressions X and Y are described in order, is a regular expression indicating that X and Y will appear in that order.

E.g.: abc is a regular expression indicating that characters a, b, and c will appear in that order.

- Selection

X|Y, in which "|" is described between X and Y, is a regular expression indicating that either X or Y will appear.

E.g.: a|b|c is a regular expression indicating that one of the characters a, b or c will appear.

- Repetition

X*, in which "*" is described just after a regular expression X, is a regular expression indicating that X will appear repeatedly 0 times or more.

E.g.: a* is a regular expression indicating that "a" will appear repeatedly 0 times or more.

(a, aa, aaa, aaaa, ...Null character strings will appear.)

X+, in which "+" is described just after a regular expression X, is a regular expression indicating that X will appear repeatedly once or more.

E.g.: a+ is a regular expression indicating that "a" will appear repeatedly once or more.

(a, aa, aaa, aaaa, ...Null character strings are not included.)

a* means that "a" will appear repeatedly 0 times or more, while aa* means that "a" will appear repeatedly once or more and null character strings are not permitted, which is the same operation as the description of a+.

- To indicate the repetition of ab, namely ab, abab, ababab... (ab)* must be specified, not ab* (Since repetition has a higher priority than connection, use parentheses to change the priority.)

- The regular expression indicating that the first character is a or b, the second is c, and the third is x or y is (a|b) c (x|y) (Since connection has a higher priority than selection, use parentheses to change the priority). If parentheses are omitted, one of a, bcx, or y is searched.

- The regular expression indicating that one of the characters enclosed in "[" and "]" will appear is not supported. It can be described using "selection" as follows:

E.g.: [abc] -> (a|b|c) This means that one of a, b or c will appear.

(d) Display Mini Dialog

If this check box is selected, the dialog box turns into a mini dialog box when the [Find Next] button is next selected (default).

Figure 6-54 shows an image of the Replace String dialog box (mini).

Figure 6-54 [Replace String] Dialog Box (Mini)



Button	Function
Down	Continues the downward search for a character string matching the specified search key.
Up	Continues the upward search for a character string matching the specified search key.
Replace+Down	Replaces the found characters string then continues the downward search.
Replace All	Searches for matches, from the current caret position or the end of the specified edit range toward the end of the text, and replaces all the character strings that match the search key.
Details	Displays the normal Replace String dialog box in which the search conditions can be changed.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

- (e) Replace All from Top of Line
If this box is selected, the replacement starts from the first line, regardless of the position of the caret.
- (f) This Source File Only
If this box is selected, only the source file to which the caret is currently positioned is searched.

Function buttons

Button	Function
Find Next	Searches for a match for the search key.
Replace	Replaces the character string and continues searching for another match for the search key. If a read-only file is active, this button cannot be selected.
Replace All	Performs a search from the current caret position, and replaces all the character strings that match the search key without confirming. If a read-only file is active, this button cannot be selected.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

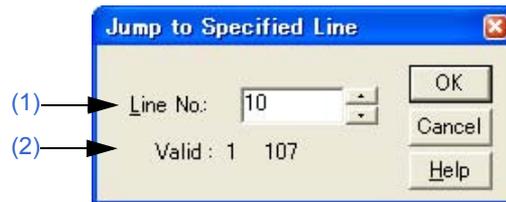
Cautions

- When the [Esc] key is pressed, the search is aborted.
- The settings of the check boxes and option buttons are stored and displayed at the next replacement.
- If the replacement ends without finding any match for the character string to be replaced, the operator is notified by the issue of a message or beep, depending on the setting of [Warning for Find/Replace] on the [Tool] menu -> [PM Settings...] - [Find/Replace] tab.

[Jump to Specified Line] dialog box

This dialog box is used to make a jump to a specified destination line number in the current file.

Figure 6-55 [Jump to Specified Line] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Find] menu -> [To a Specific Line...].
- Select the [To a Specific Line...] button on the tool bar.

Explanation of each area

(1) Line No.

Specify a destination line number. A jump to the specified line is performed by clicking the [OK] button.

(2) Valid

The valid range is from the first line to the last line on the display.

[Note]

If there is a range selection in the [Edit window](#), the operation is as follows according to the status of [Release Range Selected Before Jump] check box on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

[Selected]

The range selection is released and the caret is moved to the top of the specified line.

[Not selected]

The range selection will cover from the start position to the specified line. If, however, a layer higher than that of the line at which the range selection starts appears between the start position and the specified line, the range selection will cover until just before the higher layer line.

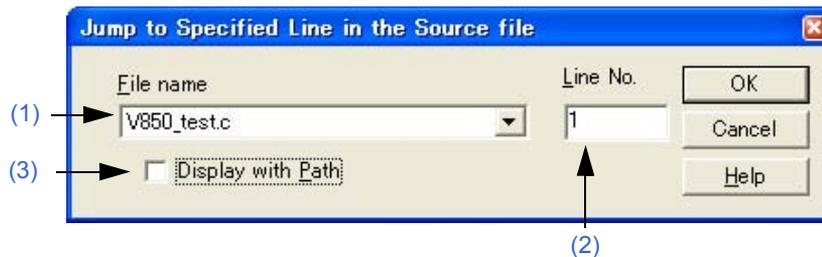
Function buttons

Button	Function
OK	Makes a jump to the specified line.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Jump to Specified Line in the Source file] dialog box

This dialog box is used to make a jump to a specified destination line number in a specified source file.

Figure 6-56 [Jump to Specified Line in the Source file] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Find] menu -> [To a Specific Line in the Source file...].

Explanation of each area

(1) File name

Specify a destination file name.

If the active window has source files, the drop-down list sequentially lists the source file names. If the active window does not have a source file (a text file, etc.), the drop-down list displays only the file name.

(2) Line No.

Specify a destination line number.

If a value exceeding the highest line number of the file is specified, a jump is made to the last line.

(3) Display with Path

If this check box is selected, displays the file name with the path. This check box is not selected in the default condition.

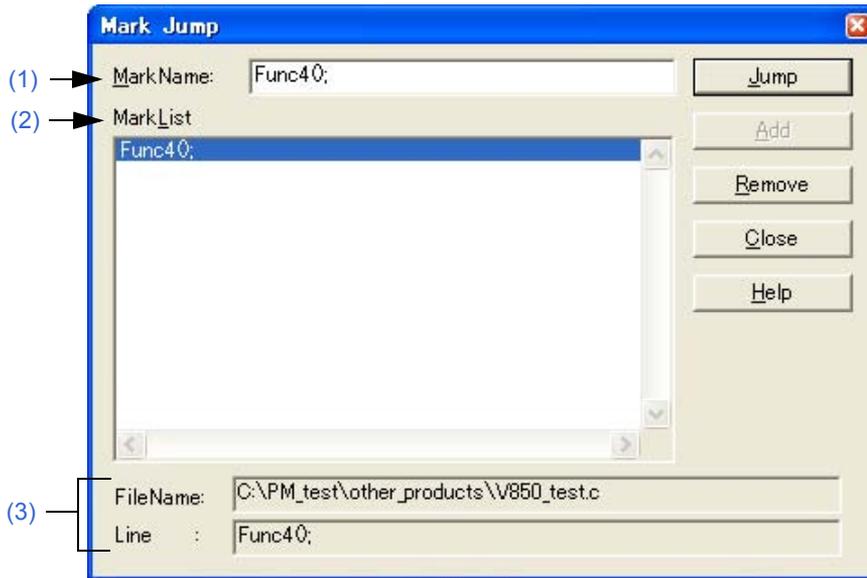
Function buttons

Button	Function
OK	Makes a jump to the specified line.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Mark Jump] dialog box

This dialog box is used to specify the current caret position as a mark or to make a jump to a marked line.

Figure 6-57 [Mark Jump] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons
- Cautions

Opening

- Select the [Find] menu -> [Mark Jump...].

Explanation of each area

(1) MarkName

Sets the mark names. The contents of that line at the caret position are displayed by default.

The mark name can be set by the user freely, and up to 5,119 characters can be set. Moreover, uppercase characters and lowercase characters are distinguished for the mark name.

Clicking the [Add] button, register a mark. Up to 20 marks can be registered. Note that the same name cannot be set more than once.

(2) MarkList

Selects the marks.

If a mark is registered, the registered mark name is displayed. When the mark name is selected, the selected mark name is displayed in the Mark Name edit box.

- Selecting mark and jumping
Clicking the [Jump] button after selecting a mark, or double-clicking a mark makes a jump to the mark position in the window being edited.
- Selecting mark and deleting
Clicking the [Remove] button or the [Delete] key after selecting a mark, deletes the selected mark. Multiple marks can be added.

(3) FileName and Line

The file name registered for the mark displayed in the Mark Name edit box and the contents of that line are displayed.

Function buttons

Button	Function
Jump	Clicking the [Jump] button after selecting a mark makes a jump to the mark position in the window being edited.
Add	Clicking the [Add] button after setting the mark names in the Mark Name edit box, register a mark.
Remove	Deletes a selected mark. A mark can also be deleted with [Delete] key.
Close	Does not enable the specified items, and closes this dialog box.
Help	Opens the help for this dialog box.

Cautions

- In the following cases, the mark is deleted from the list in this dialog box.
 - If the registered mark line has disappeared (due to [Cut] or [Delete] menu item, etc.)
 - When the untitled [Edit window](#) is closed without saving, while there is a mark added in the untitled [Edit window](#).
 - When build or compile is executed and the contents of the [\[OutPut\] window](#) are updated, after a mark has been set in the [\[OutPut\] window](#). When the [\[OutPut\] window](#) is closed.
- The way to release the range selection when a jump is made differs depending on the status of [Release Range Selected Before Jump] on the [Edit] tab in the [\[PM+ Settings\] dialog box](#).

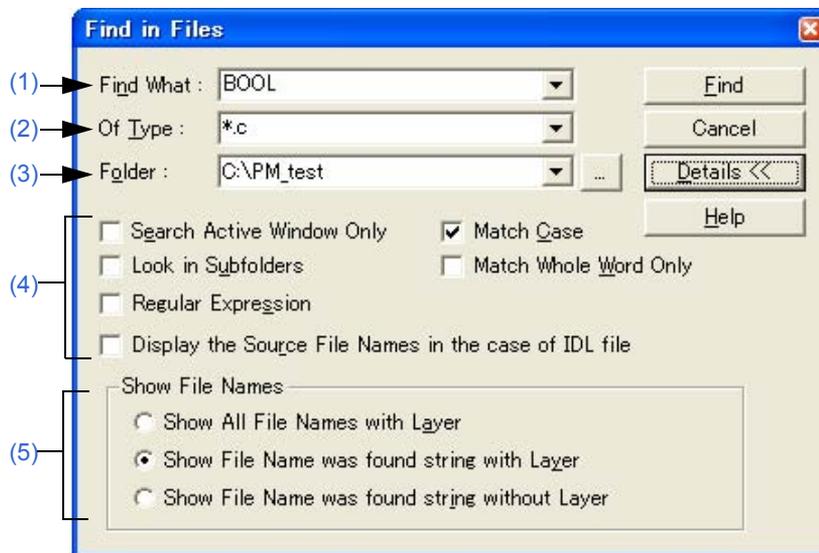
[Find in Files] dialog box

This dialog box is used to search through multiple files in a specified folder for a character string.

Figure 6-58 [Find in Files] Dialog Box



Figure 6-59 [Find in Files] Dialog Box (Details)



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons
- Cautions

Opening

- Select the [Find] menu -> [Find in Files...].
- Select the [Find in Files] button on the tool bar.

Explanation of each area

(1) Find What

This area specifies the character string to be searched for.

A word at the caret position is displayed as the search key by default. If there is no corresponding word, the character string used last for searching is displayed. If there is no previously search key, this area is left blank.

Up to ten of the latest search keys are stored. If there are over ten character strings, the oldest one will be deleted.

The setting of the search key(s) can be changed by the status of [Show String You Selected or Word of Caret Position to Find What] on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

(2) Of Type

This area specifies the name of the file to be searched

The wild card can also be used for file names. Multiple file names can be specified by separating them with a semi-colon ";".

Up to 10 file names can be stored.

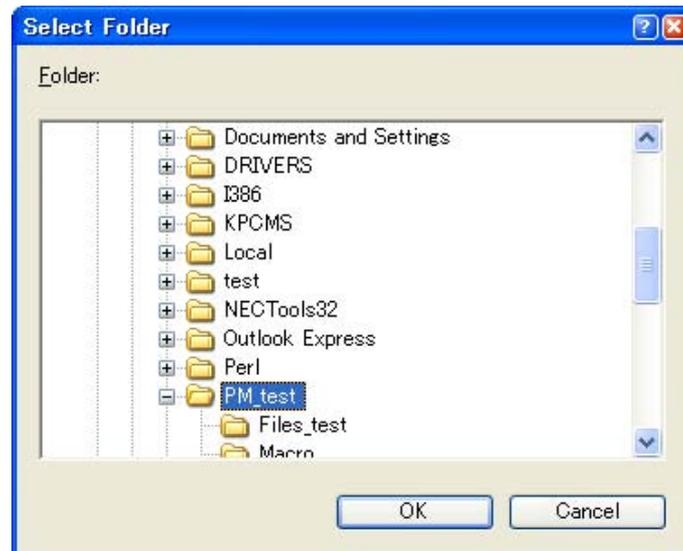
(3) Folder

This area specifies the folder to be searched.

A desired folder can be directly input or can be changed by clicking the [...] button to open the Select Folder dialog box.

Figure 6-60 shows an image of the Select Folder dialog box.

Figure 6-60 [Select Folder] Dialog Box



After selecting a folder in this dialog box, clicking the [OK] button can be specify the folder. If the [Cancel] button is clicked, a folder cannot be selected.

(4) Search options area

(a) Search Active Window Only

If this button is selected, only the file being edited is searched (default).

Accordingly, [Of Type], [Folder], and [Look in Subfolders] are disabled.

(b) Look in Subfolders

If this button is selected, the subfolders of the specified folder are also searched through.

(c) Regular Expression (only details)

If this box is selected, regular expressions are supported in global searching.

Expression	Description
Character	Represents the character itself.
XY	X and Y appear in the stated order. (concatenation)
X Y	X or Y appears. (selection)
X*	X appears zero or more times.
(X)	Same as X
(X)+	X appears one or more times.

- Meta-characters *, |, (,), and + have special meanings. If any of those characters need to be searched, \ must be used. If character \ needs to be searched, \\ must be specified.

Other special characters are specified as follows:

Tab character	\t	-
Beginning of line	^	Valid only when specified at the beginning of a character string. Otherwise, character ^ itself is searched for.
End of line	\$	Valid only when specified at the beginning of a character string. Otherwise, character \$ itself is searched for.

- In regular expressions, repetition, concatenation, and selection are assigned decreasing priorities, in the stated order. The priority can be adjusted by enclosing the corresponding part in parentheses,(and).

[How to use regular expressions]

- A character is a regular expression that indicates the character itself (except meta-characters).

E.g.: "a" is a regular expression indicating that the character "a" will appear.

- Connection

XY, in which the regular expressions X and Y are described in order, is a regular expression indicating that X and Y will appear in that order.

E.g.: abc is a regular expression indicating that characters a, b, and c will appear in that order.

- Selection

X|Y, in which "|" is described between X and Y, is a regular expression indicating that either X or Y will appear.

E.g.: a|b|c is a regular expression indicating that one of the characters a, b or c will appear.

- Repetition

X*, in which "*" is described just after a regular expression X, is a regular expression indicating that X will appear repeatedly 0 times or more.

E.g.: a* is a regular expression indicating that "a" will appear repeatedly 0 times or more.

(a, aa, aaa, aaaa, ...Null character strings will appear.)

X+, in which "+" is described just after a regular expression X, is a regular expression indicating that X will appear repeatedly once or more.

E.g.: a+ is a regular expression indicating that "a" will appear repeatedly once or more.

(a, aa, aaa, aaaa, ...Null character strings are not included.)

a* means that "a" will appear repeatedly 0 times or more, while aa* means that "a" will appear repeatedly once or more and null character strings are not permitted, which is the same operation as the description of a+.

- To indicate the repetition of ab, namely ab, abab, ababab... (ab)* must be specified, not ab* (Since repetition has a higher priority than connection, use parentheses to change the priority.)
 - The regular expression indicating that the first character is a or b, the second is c, and the third is x or y is (a|b) c (x|y) (Since connection has a higher priority than selection, use parentheses to change the priority). If parentheses are omitted, one of a, bcx, or y is searched.
 - The regular expression indicating that one of the characters enclosed in "[" and "]" will appear is not supported. It can be described using "selection" as follows:
E.g.: [abc] -> (a|b|c) This means that one of a, b or c will appear.
- (d) Display the Source File Names in the case of IDL file (only details)
If this button is selected, the source file name is also displayed for an IDL file (default).
- (e) Match Case
If this box is selected, a character string that matches both the search key in [Find What] and the case of the characters in the search key is searched for (default).
- (f) Match Whole Word Only (only details)
If this box is selected, a whole word match for the search key is searched for.

(5) Show File Names (only details)

- (a) Show All File Names with Layer
Displays the names of all searched files in the [Search result display window](#).
- (b) Show File Name was found string with Layer
Displays only the names of files in which a match for the search key was found in the [Search result display window](#), with layer (default).
- (c) Show File Name was found string without Layer
Displays only the names of files in which a match for the search key was found in the [Search result display window](#), without layer.

Function buttons

Button	Function
Find	Searches for a character string that matches the search key. Opens the Search result display window to display the search results.
Cancel	Does not enable the settings, and closes this dialog box.
Details>> Details<<	Updates the Find in Files dialog box and displays the detailed version. If this button is clicked while this dialog box is the detailed version, the dialog box changes back to the original Find in Files dialog box.
Help	Opens the help for this dialog box.

Cautions

- The search results are displayed under "File name (searched line number): contents of searched line", up to 5,119 characters (the lines after the 5120th character are not displayed).

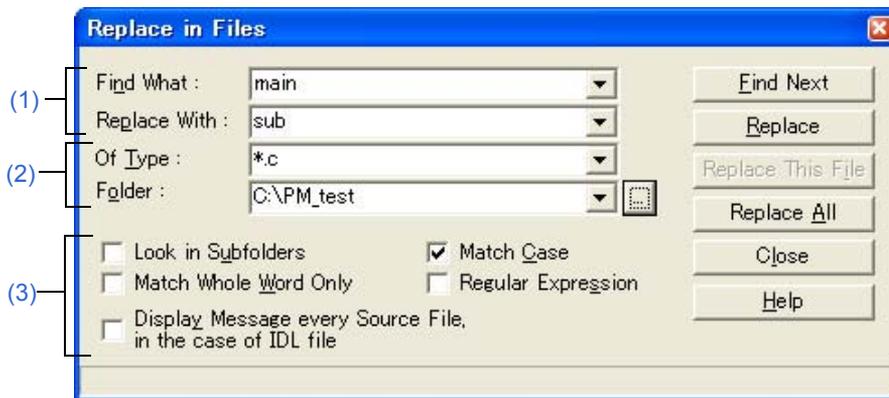
[Replace in Files] dialog box

This dialog box is used to replace a character string in multiple files in a specified folder.

When the replacement in files is performed, the [History of Replace in files] window is opened to display the search key, replacement character string, file type, and searched folder. The contents of the history contains the names of search files, numbers of the lines for which the replacement was performed, and the information of the lines before the replacement.

While a file is being searched/replaced, the name of the file currently being searched is displayed in the lower part of the dialog box.

Figure 6-61 [Replace in Files] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Search/replacement result
- Function buttons
- Cautions

Opening

- Select the [Find] menu -> [Replace in Files...].

Explanation of each area

(1) Character strings specification area

(a) Find What

This area specifies the character string to be replaced.

A word at the caret position is displayed as the search key by default. If there is no corresponding word, the character string used last for searching is displayed. If there is no previously search key, this area is left blank.

The setting of the search key(s) can be changed by the status of [Show String You Selected or Word of Caret Position to Find What] on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

(b) Replace With

This area specifies a replacement character string.

The last-specified replacement character string is displayed by default. If no replacement has been made, this area is left blank.

The setting of the search key(s) can be changed by the status of [Show String You Selected or Word of Caret Position to Replace With] on the [Tool] menu -> [PM+ Settings...] - [Edit] tab.

(2) Files specification area

(a) Of Type

This area specifies the name of the file to be searched

The wild card can also be used for file names, but not for the extensions. Note that files with the following extensions cannot be specified:

.exe, .com, .dll, .ocx, .hlp, .fnc, .lib, .ilb, .bkl, .bkm, .idm, .bak, .dat, .cab, .sys, .ini, .vxd, .inf, .lzh, .zip, .sdb, .plg, .xrf, .prn, \$~\$

Multiple file names can be specified by separating them with a semicolon (;). However, a file with "idl" extension cannot be specified in multiple.

(b) Folder

This area specifies the folder to be searched.

A desired folder can be directly input or can be changed by clicking the [...] button to open the Select Folder dialog box.

After selecting a folder in this dialog box, clicking the [OK] button can be specify the folder. If the [Cancel] button is clicked, a folder cannot be selected.

(3) Replacement options area

(a) Look in Subfolders

If this button is selected, the subfolders of the specified folder are also searched through. This setting is linked with the setting made in the [\[Find in Files\] dialog box](#).

(b) Match Whole Word Only

If this box is selected, a whole word match for the search key is searched for. This setting is linked with the setting made in the [\[Find in Files\] dialog box](#).

(c) Display Message every Source File, in the case of IDL file

If this box is selected, if the replacement target file is an IDL file used to create a source file, the name of the source file in which the search key was found is displayed as the message Q2205.

Clicking the [Yes] button performs search/replacement for the displayed source file.

Clicking the [No] button makes search/replacement skip from the displayed source file to the next source file. A read-only source file line is not replaced, in this case, the message box will not appear and the search will skip to the next source file.

(d) Match Case

If this box is selected, a character string that matches both the search key in [Find What] and the case of the characters in the search key is searched for (default). This setting is linked with the setting made in the [\[Find in Files\] dialog box](#).

(e) Regular Expression

If this box is selected, regular expressions are supported in global searching.

Expression	Description
Character	Represents the character itself.
XY	X and Y appear in the stated order. (concatenation)
X Y	X or Y appears. (selection)

Expression	Description
X*	X appears zero or more times.
(X)	Same as X
(X)+	X appears one or more times.

- Meta-characters *, |, (,), and + have special meanings. If any of those characters need to be searched, \ must be used. If character \ needs to be searched, \\ must be specified.

Other special characters are specified as follows:

Tab character	\t	-
Beginning of line	^	Valid only when specified at the beginning of a character string. Otherwise, character ^ itself is searched for.
End of line	\$	Valid only when specified at the beginning of a character string. Otherwise, character \$ itself is searched for.

- In regular expressions, repetition, concatenation, and selection are assigned decreasing priorities, in the stated order. The priority can be adjusted by enclosing the corresponding part in parentheses,(and).

[How to use regular expressions]

- A character is a regular expression that indicates the character itself (except meta-characters).

E.g.: "a" is a regular expression indicating that the character "a" will appear.

- Connection

XY, in which the regular expressions X and Y are described in order, is a regular expression indicating that X and Y will appear in that order.

E.g.: abc is a regular expression indicating that characters a, b, and c will appear in that order.

- Selection

X|Y, in which "|" is described between X and Y, is a regular expression indicating that either X or Y will appear.

E.g.: a|b|c is a regular expression indicating that one of the characters a, b or c will appear.

- Repetition

X*, in which "*" is described just after a regular expression X, is a regular expression indicating that X will appear repeatedly 0 times or more.

E.g.: a* is a regular expression indicating that "a" will appear repeatedly 0 times or more.

(a, aa, aaa, aaaa, ...Null character strings will appear.)

X+, in which "+" is described just after a regular expression X, is a regular expression indicating that X will appear repeatedly once or more.

E.g.: a+ is a regular expression indicating that "a" will appear repeatedly once or more.

(a, aa, aaa, aaaa, ...Null character strings are not included.)

a* means that "a" will appear repeatedly 0 times or more, while aa* means that "a" will appear repeatedly once or more and null character strings are not permitted, which is the same operation as the description of a+.

- To indicate the repetition of ab, namely ab, abab, ababab... (ab)* must be specified, not ab* (Since repetition has a higher priority than connection, use parentheses to change the priority.)

- The regular expression indicating that the first character is a or b, the second is c, and the third is x or y is (a|b) c (x|y) (Since connection has a higher priority than selection, use parentheses to change the priority). If parentheses are omitted, one of a, bcx, or y is searched.

- The regular expression indicating that one of the characters enclosed in "[" and "]" will appear is not supported. It can be described using "selection" as follows:

E.g.: [abc] -> (a|b|c) This means that one of a, b or c will appear.

Search/replacement result

When searching or replacing in a file ends, the following [History of Replace in files] window will be opened to show the file history message of the replacement in files. The message begins with the search key, replacement character string, file type, and searched folder. The body of the history contains the name of the searched files, number of the lines for which the replacement was performed, source file names (where applicable), and the contents of the lines before the replacement.

Figure 6-62 [History of Replace in files] Window

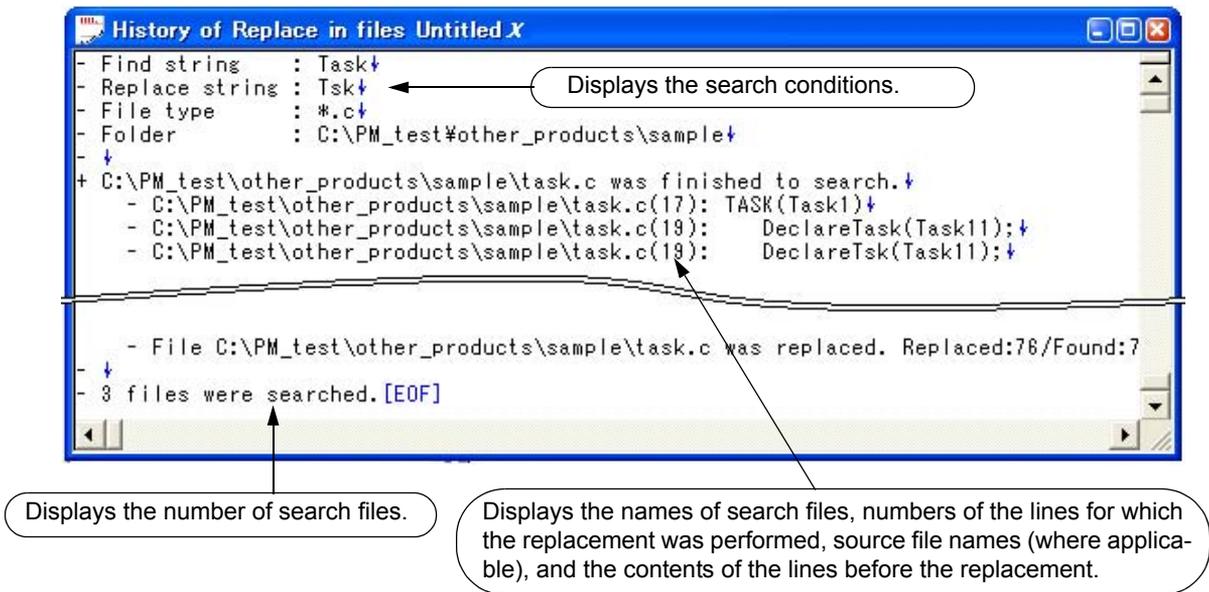


Table 6-6 shows the messages on the History of Replace in files window.

Table 6-6 Messages on the History of Replace in files Window

Messages	Description
The folder of xxx is invalid.	The specified folder is invalid.
The extension of xxx is invalid.	The extension of the specified file is invalid.
The System File of xxx is invalid.	An attempt was made to replace in a system file.
The Hidden File of xxx is invalid.	An attempt was made to replace in a hidden file.
The Read Only File of xxx is invalid.	The replacement cannot be performed in the specified file because of a read-only attribute.
The Binary File of xxx is invalid.	The replacement cannot be performed in the specified file because of a binary file.
File xxx was Replaced. Replaced: xxx/Found: yyy	The replacement and saving were performed in the specified file. xxx: the number of the replacement yyy: the number of the detection
File xxx was closed. Found: xxx	The specified file was closed. xxx: the number of the detected search character strings

Messages	Description
The using file xxx is skipped.	The specified file was skipped because it was under editing. When the message whether the search will be performed in a file under editing is displayed, the above message is displayed after selecting the [No] button.
The search string was not found into the using file xxx.	The search character string was not detected in the specified file under editing.
The processing of using file xxx was canceled. Found: xxx	Search of the specified file currently being edited was stopped. xxx: the number of the detected search character strings
The using file xxx was replaced. Replaced: xxx/Found: yyy	The replacement was performed in the specified file under editing. xxx: the number of the replacement yyy: the number of the detection
The using file xxx was searched. Found: xxx	The searching was performed in the specified file under editing. When the searching was performed to the end of the file under editing, this message is displayed after selecting the [Find Next] button. xxx: the number of the detected search character strings

Function buttons

Button	Function
Find Next	Performs a search until a match for the search key is found. During the search, this button is grayed.
Replace	Replaces the found character string and continues the search. During the search, this button is grayed.
Replace This File	Replaces all matches for the search key following that in the range selection. No confirmation message is displayed. After the replacement in the current file ends, the next file is searched.
Replace All	A message notifying the risk of the replacement in files is displayed first. If the [Yes] button is selected, replaces all matches for the search key following that in the range selection.
Close	Closes the dialog box. During a file search or replacement, this button displays "Cancel".
Cancel	Stops the search or replacement. When the search stops, this button displays "Close".
Help	Opens the help for this dialog box.

Cautions

- If [Find Next] or [Replace] is selected, the file in which a match for the search key is found is displayed in the [Edit window](#), and a range selection is assigned to the corresponding character string. By selecting a button in this state, the replacement is skipped, continued, or stopped.
- If a character string is replaced in a file, a backup file is created in the same folder. The extension of the backup file is as specified in [Extension of Backup File] on the [Tool] menu -> [PM+ Settings...] - [File] tab. The backup file is always created, regardless of whether [Make a Backup File] is selected or not.
- In a search through a file being edited, a message confirming the replacement is displayed. If the [Yes] button is selected, the replacement is performed for the file being edited. Meanwhile, the file is not saved.
- If the contents of an IDL file are replaced and saved, the corresponding source file is saved with the same contents.
- A read-only source file line is not replaced. The read-only source file is skipped, and the next source file is searched.

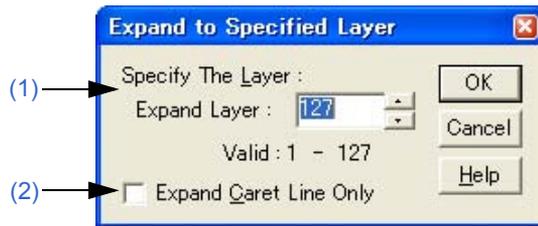
- The following files are not searched:
 - Read-only, system, and hidden files
 - Binary file (Contains NULL.)
 - File with an inhibited extension (refer to "(a) Of Type")
 - File that cannot be opened in the write mode

- The following folders are not searched:
 - Windows folder and its subfolders

[Expand to Specified Layer] dialog box

This dialog box is used to expand specified layers.

Figure 6-63 [Expand to Specified Layer] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons
- Cautions

Opening

- Select the [Layer] menu -> [Expand the Specific Layer].

Explanation of each area

(1) Specify The Layer

Specify the number of layers to be expanded. A value within the range of 1 to 127 can be specified. The last setting is displayed by default. When this value is specified for the first time, 127 is displayed.

(2) Expand Caret Line Only

When this check box is selected, only the layers lower than the line at the caret position are expanded.
When this check box is not selected, all of the specified lower layers are expanded (default).

Function buttons

Button	Function
OK	Expands the specified number of layers.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

Cautions

- If a layer higher than the one specified is already expanded, there is no change. If, however, [Collapse Deeper Layer than Specified Layer as Expand Specified Layer Command] is selected on the [Tool] menu -> [PM+ Settings...] - [Layer] tab, the layer lower than the one specified are collapsed.
- If the current caret position is lower than the specified layer, the updated caret position will differ depending on the following settings:

A: [Expand Caret Line Only] check box (which is in this dialog box.)

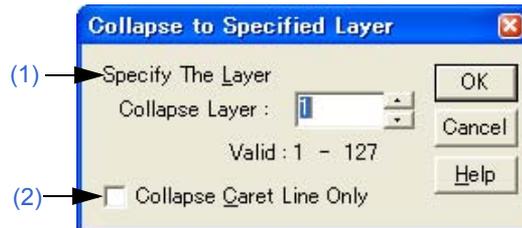
B: [Collapse Deeper Layer than Specified Layer as Expand Specified Layer Command] check box (which is on the [Tool] menu -> [PM+ Settings...] - [Layer] tab.)

A	B	The Position of the Caret
OFF	OFF	Moves to the index line of the specified layer that includes the current caret.
OFF	ON	Moves to the index line of the specified layer that includes the current caret. The layers lower than the one specified are collapsed.
ON	OFF	Moves to the index line of the specified layer that includes the current caret.
ON	ON	Not moves. The layers lower than the caret position are collapsed.

[Collapse to Specified Layer] dialog box

This dialog box is used to collapse specified layers.

Figure 6-64 [Collapse to Specified Layer] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [Layer] menu -> [Collapse the Specific Layer...].

Explanation of each area

(1) Specify The Layer

Specify the number of layers to be collapsed. A value within the range of 1 to 127 can be specified. The last setting is displayed by default. When this value is specified for the first time, 1 is displayed.

(2) Collapse Caret Line Only

When this check box is selected, only the layers lower than the line at the caret position are collapsed. When this check box is not selected, all of the specified lower layers are expanded (default).

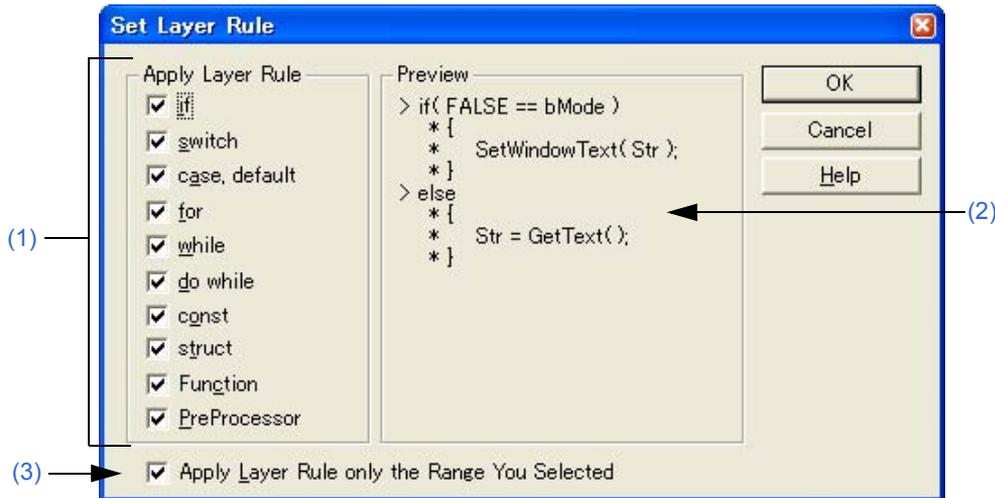
Function buttons

Button	Function
OK	Collapses the specified number of layers. If a layer higher than the one specified is already collapsed, there is no change.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Set Layer Rule] dialog box

This dialog box is used to apply a layer rule to the current contents of the [Edit window](#), or set the layer rule to be applied when files are read. By default, all check boxes are selected.

Figure 6-65 [Set Layer Rule] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)
- [Cautions](#)

Opening

- Select the [Layer] menu -> [Apply Layer Rule...].
- Click the [Layer Rule...] button in the [\[Open\] dialog box](#).
- Click the [Layer Rule...] button in the [\[Insert File\] dialog box](#).

Explanation of each area

(1) Apply Layer Rule

Select the coding to be subjected to the layer rule. By default, all check boxes are selected. The layer rule for each item is follows:

- (a) if

For an if statement or else if statement, the lines from that following ")" of if to ")" are indented. If ")" is followed by a source coding, the lines up to that preceding ")" are indented.
- (b) switch

The contents of a switch statement are indented.

- (c) case, default
The lines after a case statement are indented up to the next case statement or default statement. default statement, the lines up to that preceding "}" are indented.
- (d) for
The lines from that following ")" of a for statement to "}" are indented.
- (e) while
The lines from that following ")" of a while statement to "}" are indented.
- (f) do while
The lines from that following a do statement to the last line of the while statement are indented.
- (g) const
The lines following a const statement are indented.
- (h) struct
The lines following a struct statement are indented.
- (i) Function
The lines from that following a function definition line to the end of the function are indented.
- (j) PreProcessor
The lines from that following a preprocessor instruction to that preceding the next preprocessor instruction or to that preceding #endif are indented.
However, #elseif is not hierarchically organized. Use #elif .

(2) Preview

This area displays samples of how the items currently selected by [Apply Layer Rule] are subjected to the layer rule.

(3) Apply Layer Rule only the Range You Selected

This check box is displayed only if this dialog box is opened by selection the [Layer] menu -> [Apply Layer Rule...]. This check box becomes valid when the [Apply Layer Rule...] menu item is performed with a range selection in the [Edit window](#). If this check box is selected, the layer rule is applied to the specified range only.

Function buttons

Button	Function
OK	Applies the layer rule to the current contents of the Edit window.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

Cautions

- When the layer rule is applied, the undo buffer is cleared. This means that the status existing prior to applying the layer rule cannot be restored.
- If [Apply Layer Rule only to the Range You Selected] check box is selected, the following caution is required:
 - If the range selection does not extend from "{" following an instruction to "}", the layer rule is not applied.

```

1:void SetStatus( int State)
2:{
3:   if( State > 0x50 ){
4:       m_nState = State;
5:   }
6:   else if(
7:       State != OFF )
8:   {
9:       m_nState = OFF;
10:  }else{
11:       m_nState = NULL;
12:  }
13:}

```

Because the '}' in the fifth line is not included in the range selection, the layer rule is not applied.

- If the range selection does not cover the switch statement corresponding to a case or default statement, the layer rule is not applied.

```

1:void SetStatus( int State)
2:{
3:   switch(State){
4:       case 0x50 :
5:           m_nState = State;
6:           break;
7:       case OFF :
8:           m_nState = OFF;
9:
10:          default:
11:              m_nState = NULL;
12:          }
13:}

```

Because the switch statement in the third line is not included in the range selection, the layer rule is not applied.

- If the range selection does not extend to the breakpoint of a case or default statement, the layer rule is not applied.

```

1:void SetStatus( int State)
2:{
3:   switch(State){
4:       case 0x50 :
5:           m_nState = State;
6:           break;
7:       case OFF :
8:           m_nState = OFF;
9:
10:          default:
11:              m_nState = NULL;
12:          }
13:}

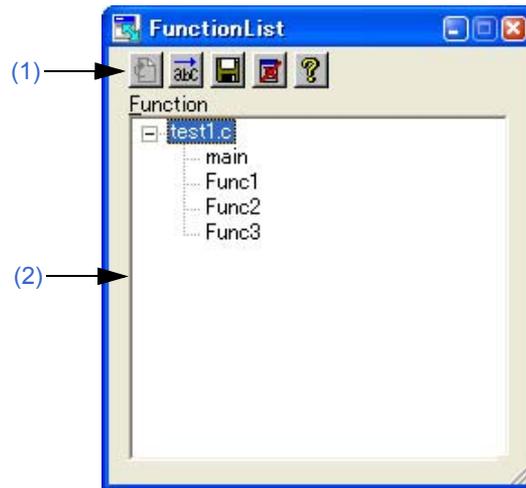
```

The case statement in the fourth line is applied to the layer rule, but the case statement in the seventh line is not applied to the layer rule.

[Function List] dialog box

This dialog box is used to lists the functions of the file displayed in the active [Edit window](#). If multiple Edit windows are open, the function list is updated when any position in the Function List dialog box is clicked after updating the active window.

Figure 6-66 [Function List] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Cautions](#)

Opening

- Select the [View] menu -> [Function List...].

Explanation of each area

(1) Buttons

Button	Function
	Jumps to the function definition line in the Edit window when a function is selected in [Function] area. This is the same as double-clicking a function name. This button is invalid if a function name is not selected in [Function] area.
	Displays, in the ascending order, the functions of each source file displayed in the order in which they have been searched from the beginning of the Edit window . If the functions are displayed in the ascending order, they are displayed in the order in which they have been searched. By default, they are displayed in the order in which they have been searched.
	Displays the [Save the Function List] dialog box and a function list can be saved into a file.
	Closes this dialog box.
	Opens the help for this dialog box.

(2) Function

This area displays a list of the functions of the file displayed in the active [Edit window](#).

If this dialog box is opened or made active with a range selection placed on the character string of a function name in the [Edit window](#), the specified function name is selected.

Double-clicking the left mouse button or clicking the jump button after selecting a function name in [Function] area jumps to the function definition line in the [Edit window](#).

Note that because this area lists the functions in the active [Edit window](#), when multiple Edit windows are open, the contents of the function list will be update each time the window focus is moved.

Cautions

- The function name is not recognized because the function name differs according to the value of `#ifdef`.

```

void
#ifdef ENGLISH
    FncEng
#else
    FncJapan
#endif
(int Cnt, int Mode)
{ ...

```

- The function name is not recognized because the function name covers two lines due to "\".

```

void Function      \
Name
(int Cnt, int Mode)
{ ...

```

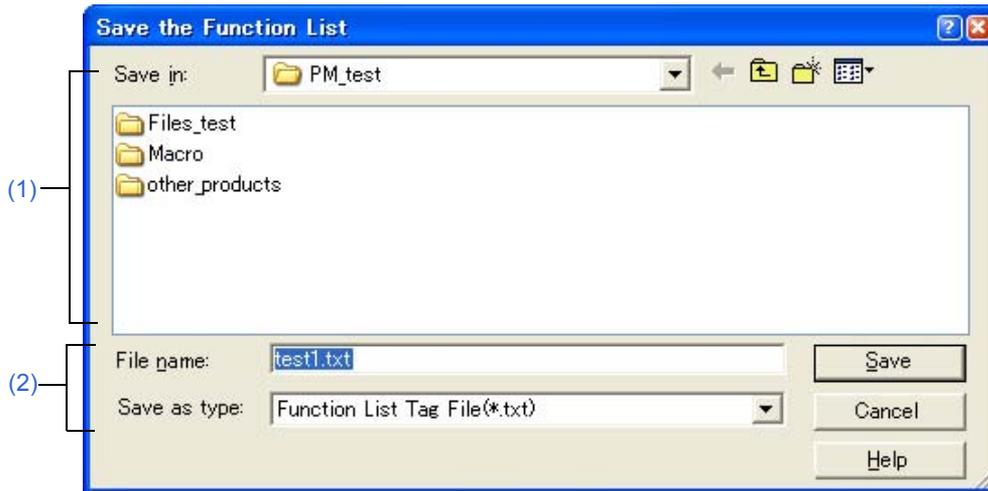
- The function name is not recognized because variable declaration is performed between function name and '{'.

```
#ifdef ENGLISH
int main( argc, argv[])
int argr;
char* argv[];
{
}
```

[Save the Function List] dialog box

This dialog box is used to save the functions displayed in the [Function List] dialog box to a file.

Figure 6-67 [Save the Function List] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Save] button in the [Function List] dialog box.

Explanation of each area

(1) Save in

Specify the folder in which the file is saved. By default, the current folder is displayed.

(2) File name and Save as type

(a) File name

Specify the name of the file to be saved. Directly enter the file name in the text box. Alternatively, select the file name from the list. Note that the extension cannot be changed to other than ".txt" or ".csv".

(b) Save as type

Specify the type (extension) of the file to be saved.

Select the file type from the drop-down list. From this drop-down list, "Function List Tag File(*.txt)" or "Function List Csv File(*.csv)" can be selected.

If "Function List Tag File" is selected, the function list is saved to a file of tag jump format.

If "Function List Csv File" is selected, the function list is saved to a CSV file. CSV file can be read by spreadsheet software.

By default, "Function List Tag File" is selected.

[Tag File]

```
C:\PM_test\test1.c(19): main
C:\PM_test\test1.c(37): Func1
C:\PM_test\test1.c(76): Func2
C:\PM_test\test1.c(91): Func3
```

The names of files defined in the functions (Defined line number): Function name

[CSV File]

```
FileName,Line,Function Name
C:\PM_test\test1.c,19,main
C:\PM_test\test1.c,37,Func1
C:\PM_test\test1.c,76,Func2
C:\PM_test\test1.c,91,Func3
```

The names of files defined in the functions, Defined line number, Function name

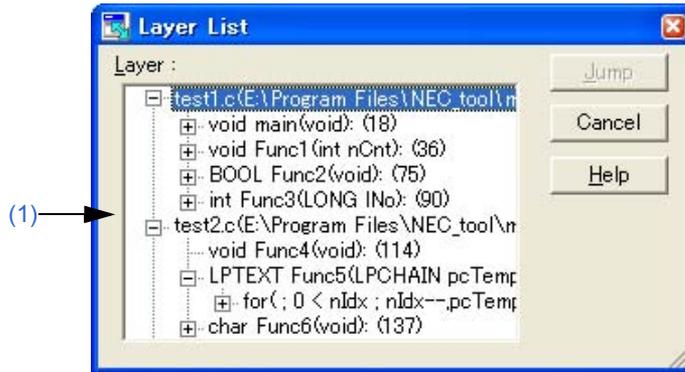
Function buttons

Button	Function
Save	Saves the function list to the specified file.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Layer List] dialog box

This dialog box is used to list the layers of the file displayed in the active [Edit window](#).

Figure 6-68 [Layer List] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [View] menu -> [Layer List...].

Explanation of each area

(1) Layer

The list indicates the text and line number with lower layers. If the first layer has a file name, the file name is displayed as well.

Clicking "+" displays a list of the layers lower than the line. Clicking "-" hides the list.

Double-clicking a layer or clicking the [Jump] button with a layer selected makes a jump to the selected layer in the [Edit window](#).

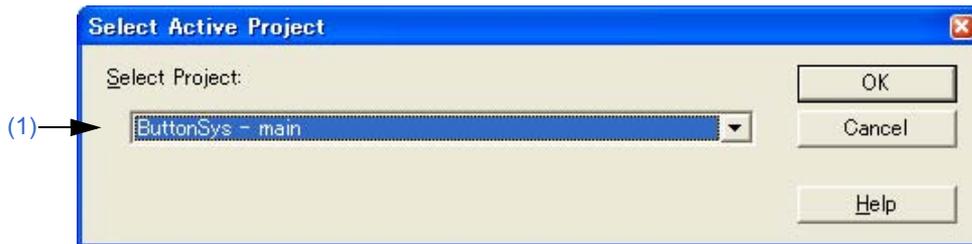
Function buttons

Button	Function
Jump	Jumps to the layer selected in [Layer].
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Select Active Project] dialog box

This dialog box is used to select the active project.

Figure 6-69 [Select Active Project] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Project] menu -> [Select Active Project...].

Explanation of each area

(1) Select Project

This area displays the currently selected project name.

To change the active project, select from the drop-down list, in which all the currently registered project name are displayed.

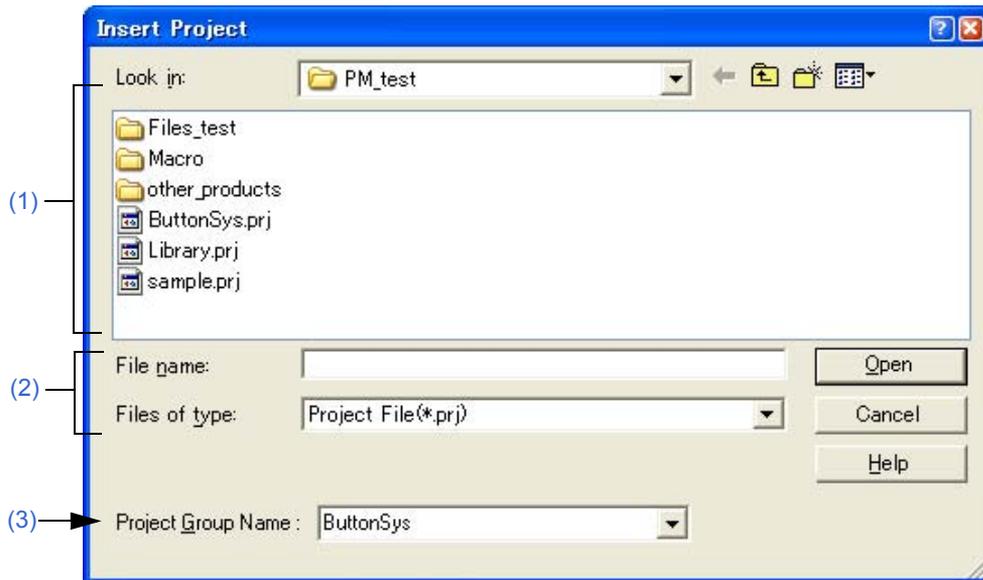
Function buttons

Button	Function
OK	Makes the selected project active.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Insert Project] dialog box

This dialog box is used to insert an existing project into a project group.
The project added here will be the active project.

Figure 6-70 [Insert Project] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Project] menu -> [Insert Project...].
- Select the right mouse button menu -> [Insert Project...] with a project group name selected in the [Project] window.

Explanation of each area

(1) Look in

Select the drive or folder that includes the project file to be inserted from the drop-down list.

(2) File name and Files of type

Specify the name of the project file to be inserted. The project file extension is ".prj". Files with any other extensions cannot be specified.

(3) Project Group Name

Select the project group name to which the project is added. Up to 20 projects can be registered per project group. If a new project group is added, enter the group name in the combo box directly.

Function buttons

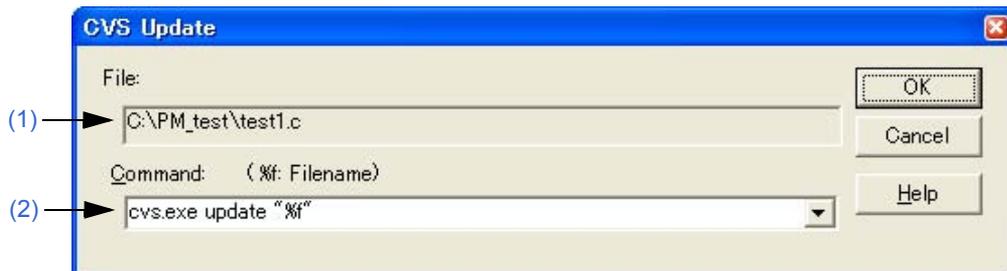
Button	Function
Open	Inserts the selected project group into the workspace.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[CVS Update] dialog box

This dialog box is used to execute the CVS update command for the selected file and acquire files registered in the repository.

The result is displayed on the [\[OutPut\] window](#).

Figure 6-71 [CVS Update] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)
- [Cautions](#)

Opening

- Select the [\[Project\]](#) menu -> [\[CVS Update...\]](#).

Explanation of each area

(1) File

The name of the file for which the command is to be executed is displayed.

The file is determined as follows:

[If the [\[Project\]](#) window is active]

Selected source file name, function name, include file name, project related file name, or other file name

[If the Edit window is active]

File name on the [Edit window](#), or name of generated file at the caret position if idl file

(2) Command

The command to be executed is displayed. %f indicates the name of a file currently selected for command execution.

Command options can be added here to set detailed options related to CVS. The added command options are executed when the CVS command is executed.

Up to 10 executed commands are stored and can be selected from the drop-down list.

Function buttons

Button	Function
OK	Executes the specified command. The result is displayed on the [OutPut] window .
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

Cautions

The following operations must be performed before executing this menu item.

- Set the folder that includes cvs.exe using the PATH variable of OS.
- Set the repository of CVS.
- If the CVS server is being used, log onto the server.

[CVS Commit] dialog box

This dialog box is used to execute the CVS commit command for the selected file and reflect the file in the repository. The result is displayed on the [\[OutPut\] window](#).

Figure 6-72 [CVS Commit] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)
- [Cautions](#)

Opening

- Select the [Project] menu -> [CVS Commit...].

Explanation of each area

(1) Commit File

The name of the file for which the command is to be executed is displayed.

The file is determined as follows:

[If the [Project] window is active]

Selected source file name, function name, include file name, project related file name, or other file name

[If the Edit window is active]

File name on the [Edit window](#), or name of generated file at the caret position if idl file

(2) Log Message

Enter the log message to be added when commit is executed.

(3) Command

The command to be executed is displayed. %f indicates the name of a file currently selected for command execution.

Command options can be added here to set detailed options related to CVS. The added command options are executed when the CVS command is executed.

Up to 10 executed commands are stored and can be selected from the drop-down list.

Function buttons

Button	Function
OK	Executes the specified command. The result is displayed on the [OutPut] window .
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

Cautions

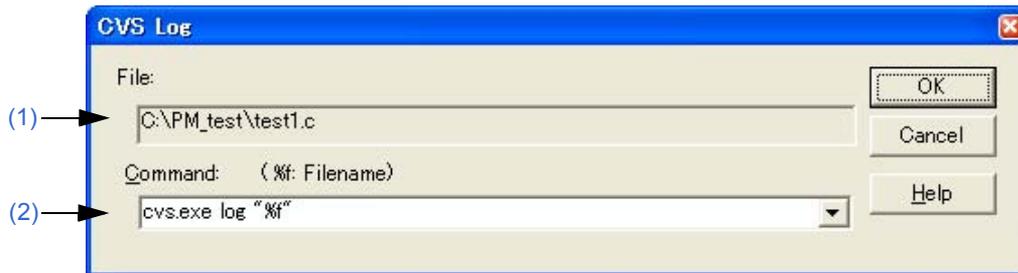
The following operations must be performed before executing this menu item.

- Set the folder that includes cvs.exe using the PATH variable of OS.
- Set the repository of CVS.
- If the CVS server is being used, log onto the server.

[CVS Log] dialog box

This dialog box is used to execute the CVS log command for the selected file and display the file's log contents in the [OutPut] window.

Figure 6-73 [CVS Log] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons
- Cautions

Opening

- Select the [Project] menu -> [CVS Log...].

Explanation of each area

(1) File

The name of the file for which the command is to be executed is displayed.

The file is determined as follows:

[If the [Project] window is active]

Selected source file name, function name, include file name, project related file name, or other file name

[If the Edit window is active]

File name on the [Edit window](#), or name of generated file at the caret position if idl file

(2) Command

The command to be executed is displayed. %f indicates the name of a file currently selected for command execution.

Command options can be added here to set detailed options related to CVS. The added command options are executed when the CVS command is executed.

Up to 10 executed commands are stored and can be selected from the drop-down list.

Function buttons

Button	Function
OK	Executes the specified command. The result is displayed on the [OutPut] window .
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

Cautions

The following operations must be performed before executing this menu item.

- Set the folder that includes cvs.exe using the PATH variable of OS.
- Set the repository of CVS.
- If the CVS server is being used, log onto the server.

[CVS Status] dialog box

This dialog box is used to execute the CVS status command for the selected file and display the file's status in the [Out-Put] window.

Figure 6-74 [CVS Status] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons
- Cautions

Opening

- Select the [Project] menu -> [CVS Status...].

Explanation of each area

(1) File

The name of the file for which the command is to be executed is displayed.

The order of files to be executed is determined as follows:

[If the [Project] window is active]

Selected source file name -> function name -> include file name -> project related file name, -> other file name

[If the Edit window is active]

File name on the [Edit window](#), or name of generated file at the caret position if idl file

(2) Command

The command to be executed is displayed. %f indicates the name of a file currently selected for command execution.

Command options can be added here to set detailed options related to CVS. The added command options are executed when the CVS command is executed.

Up to 10 executed commands are stored and can be selected from the drop-down list.

Function buttons

Button	Function
OK	Executes the specified command. The result is displayed on the [OutPut] window .
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

Cautions

The following operations must be performed before executing this menu item.

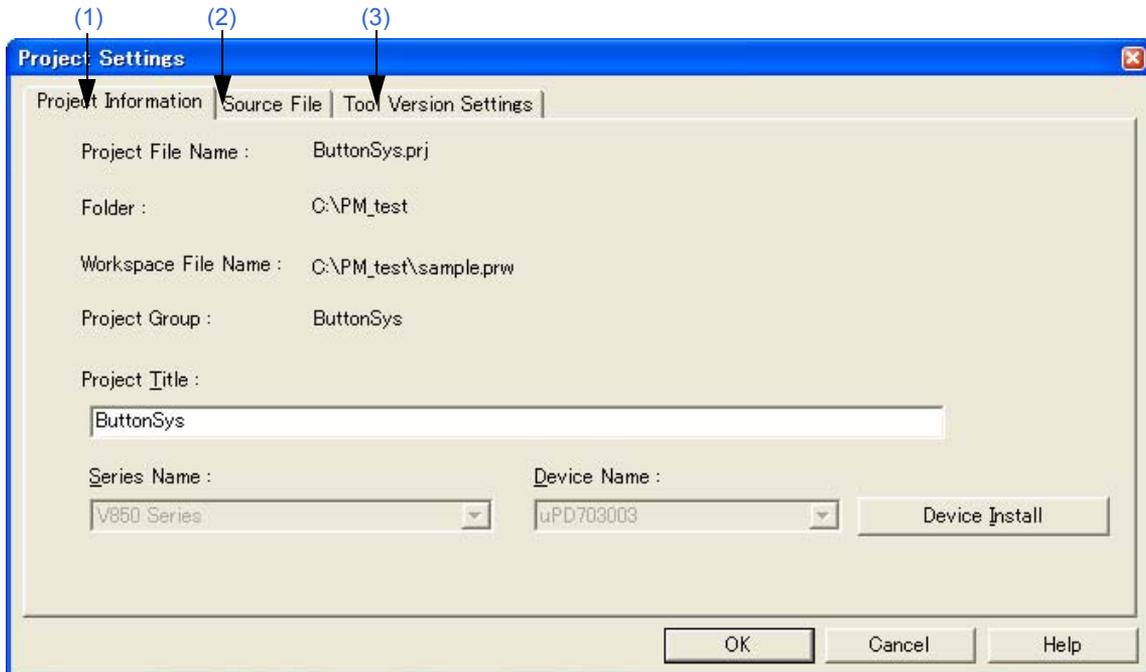
- Set the folder that includes cvs.exe using the PATH variable of OS.
- Set the repository of CVS.
- If the CVS server is being used, log onto the server.

[Project Settings] dialog box

This dialog box is used to set the information on the current active project. The information is set on the following tabs.

- (1) [Project Information] tab
- (2) [Source File] tab
- (3) [Tool Version Settings] tab

Figure 6-75 [Project Settings] Dialog Box



This section describes the following items:

- Opening
- Explanation of each tab
- Function buttons
- Cautions

Opening

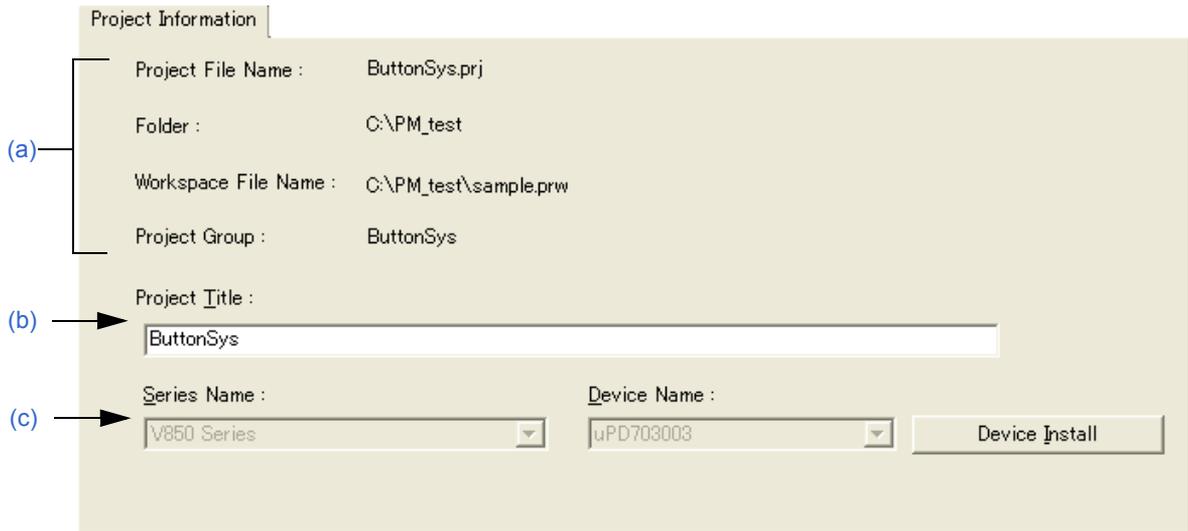
- Select the [Project] menu -> [Project Settings...].
- Select the right mouse button menu -> [Project Settings...] with a project name selected in the [Project] window.

Explanation of each tab

(1) [Project Information] tab

This tab displays the information on the current active project and changes the project title or the device name.

Figure 6-76 [Project Settings] Dialog Box - [Project Information] Tab



(a) Information display area

- Project File Name

The project file name of the active project is displayed.

- Folder

The project folder specified with the project file is displayed.

- Workspace File Name

The name of the workspace file to which the active project belongs is displayed with an absolute path.

- Project Group

The name of the project group to which the active project belongs is displayed. If you wish to change the name of the project group, click the right mouse button on the project group name in the [\[Project\] window](#) and select the [\[Edit Project Group Name...\]](#) menu.

(b) Project Title

The project title to be displayed in the [\[Project\] window](#) is displayed.

When the project title is modified here, that modification is reflected in the [\[Project\] window](#).

Up to 127 characters can be entered for project title.

(c) Microcontrollers Name and Device Name

The microcontrollers and device name of the target device to be used are displayed.

They can be changed by selecting from the drop-down lists.

If the device file for the device to be used has not been installed, the following message will be displayed under the device name displayed.

"The device file that has been selected is not registered."

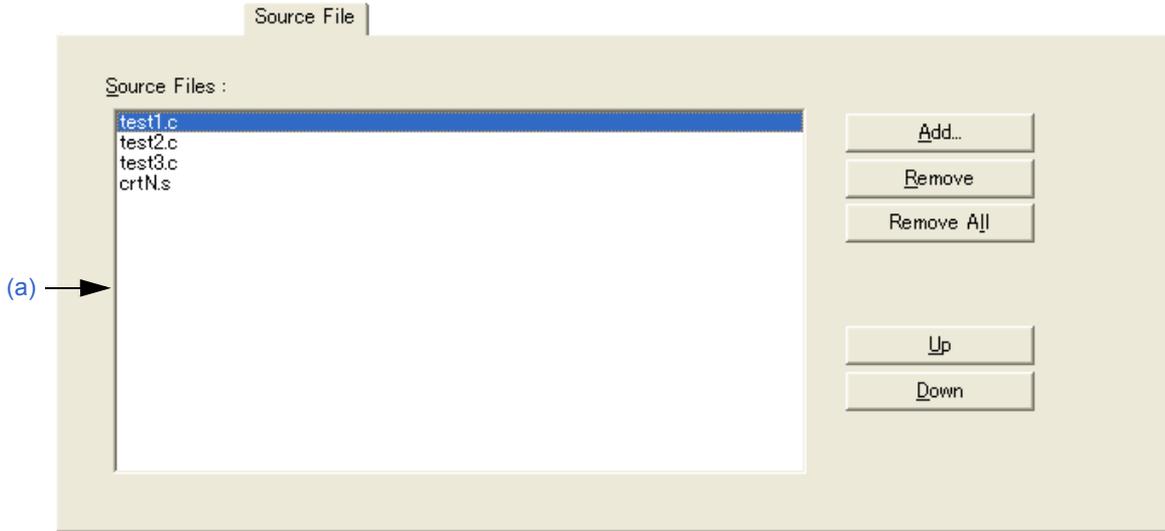
When this message is displayed, clicking the [\[Device Install\]](#) button starts the device file installer to register the new device file.

If multiple projects are registered into the project group, or if the debugger/simulator is running, these drop-down lists are invalid.

(2) [Source File] tab

This tab specifies the source file information on the current active project.

Figure 6-77 [Project Settings] Dialog Box - [Source File] Tab

**(a) Source Files**

This area displays the names of the source files set in the active project in build order, including the relative path starting from the project folder.

Up to 2048 source files can be registered.

Button	Function
Add...	Opens [Add Source Files] dialog box to add the source file to the project.
Remove	Removes the selected source file from the list.
Remove All	Removes all the source files from the list.
Up	Moves the selected source file up within the list.
Down	Moves the selected source file down within the list.
OK	Sets the project information on the currently active project.
Cancel	Does not enable the specified items, and closes this dialog box.
Help	Opens the help for this dialog box.

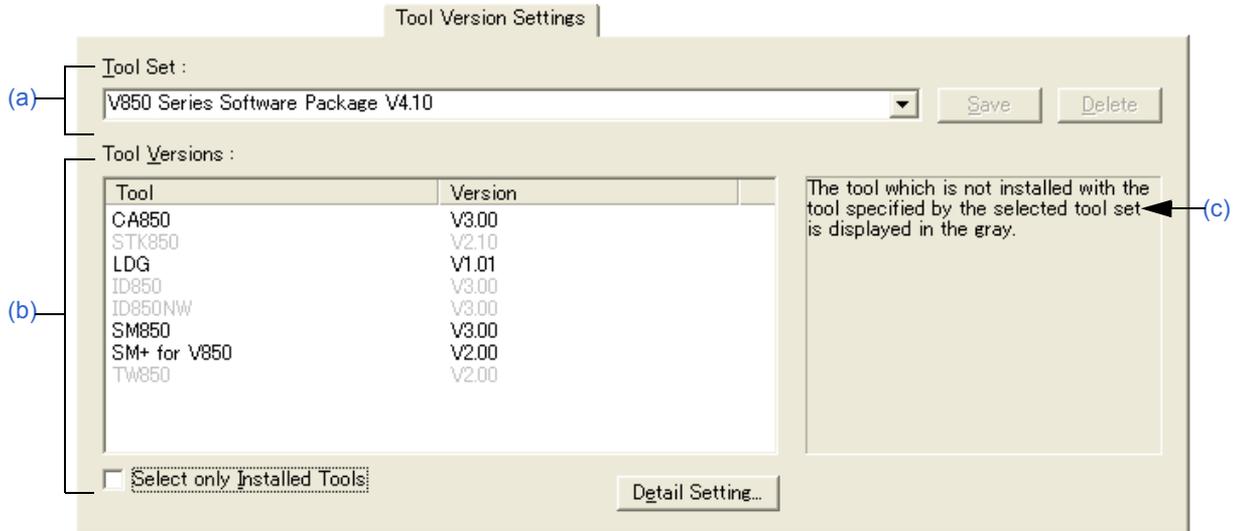
[Cautions]

- If the compiler and assembler are not installed, source file addition is not possible.
- Executing make assembles/compiles the source files in the order displayed in the source file list, in accordance with the program type. The path of the project folder is used for the path name of a source file during make. In addition, the linking order depends on the linker of the microcontrollers used.

(3) [Tool Version Settings] tab

This tab specifies the tools used for the current active project.

Figure 6-78 [Project Settings] Dialog Box - [Tool Version Settings] Tab

**(a) Tool Set**

The combination of tools to be used and their versions is regarded as a tool set, and the tool set name can be selected from the drop-down list.

The existing tool set and recommended tool set ("78Kx Microcontrollers Software Package Vx.xx" in the case of the 78K Microcontrollers, and "V850 Microcontrollers Software Package Vx.xx" in the case of the V850 Microcontrollers) are listed on the drop-down list. The name of the tool set specified for use in the current active project is displayed by default.

If the tool set has been changed in the [Tool Version Detail Setting] dialog box opened by clicking the [Detail Setting...] button, "(Changed)" is appended at the top of the tool set name. If the tool set name already exists, the indication appended varies from "(Changed01)" to "(Changed99)". After "(Changed99)", the tool set name is displayed as "UserSet".

Button	Function
Save	Saves the tool set currently selected in [Tool Set]. This button is not available (appears dimmed) if the tool set file is read-only.
Delete	Deletes the tool set name selected in [Tool Set] from the list (also deletes the corresponding tool set file). This button is not available (appears dimmed) if there are no tool set files corresponding to the selected tool set or the tool set file is read-only.

[Remark]

A file is saved as "tool-set-name.extension". The extension varies depending on the product used, as shown below.

78K0R Microcontrollers (including libraries): t0r

78K0 Microcontrollers (including libraries): tk0

78K0S Microcontrollers (including libraries): t0s

V850 Microcontrollers (including libraries): t85

The file is saved under "NEC Electronics\PM+" in the "Application Data" folder, which is accessible by all users. If this folder does not exist, it is automatically created when PM+ is started up (for example, "C:\Documents and Settings\All Users\Application Data\NEC Electronics\PM+" in the case of Windows XP).

(b) Tool Versions

Combinations of tools to be used and their versions are displayed in this area.

When a tool set name is selected on the Tool Set drop-down list, the tools included in the tool set and their versions are displayed.

If you wish to change tools to be used and their versions, click the [Detail Setting...] button to open the [\[Tool Version Detail Setting\] dialog box](#).

The tools used by the active project and their versions are displayed by default.

- Tool

All the installed tools and tools included in the selected tool set (including tools that have not been installed) are displayed in this area.

However, tools that have not been installed are dimmed.

- Version

The tool versions specified in the selected tool set are displayed in this area.

However, tools that have not been installed are dimmed, and "Unused" is displayed for a tool whose version is not specified in the tool set.

- Select only Installed Tools

If this check box is selected, tools that have not been installed are excluded from the [Tool Versions] which corresponds to the tool set selected in the [Tool Set].

"(Selected01)" is appended to the top of the name of the tool set with which this check box is selected (if the tool set name actually exists, "(Selected *nn*)" is appended).

This check box cannot be selected (grayed) if there are no dimmed tools (all the listed tools have been installed). This check box is not selected in the default condition.

(c) Brief description area

A message is displayed when a dimmed item is displayed in the Tool Versions area.

Function buttons

Button	Function
OK	Sets the project information on the currently active project.
Cancel	Closes this dialog box.
Help	Opens the help for this dialog box.

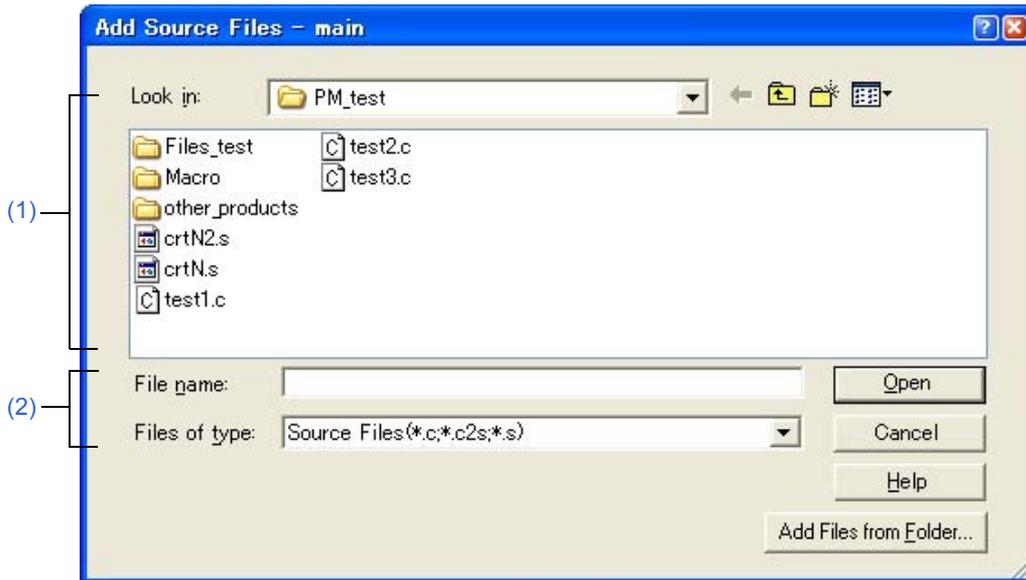
Cautions

- To transfer a project group, select a project title in the [\[Project\] window](#), delete the registered project by clicking the right mouse button and executing [Delete Project], and then transfer the project to the new location by executing [Insert Project...] from the [Project] menu.

[Add Source Files] dialog box

This dialog box is used to add source files to a project.

Figure 6-79 [Add Source Files] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [Project] menu -> [Add Source Files...].
- Select the [Project] menu -> [Project Settings...] - [Source File] tab.
- Click the [Add...] button on the [\[New WorkSpace - Step 1/9 \[Workspace Information\]\]](#) dialog box.
- Select the right mouse button menu -> [Add Source Files...] in the [\[Project\]](#) window.

Explanation of each area

(1) Look in

Select the drive or folder that includes the source files to be inserted from the drop-down list.

(2) File name and Files of type

Specify the name of the source file to be inserted. Up to 256 characters can be specified. The source file extension depends on the microcontrollers name registered in the project.

If a list file in which source file names are described is specified for the file name (*.lst, *.csv), the source files described in the list file are added to the project. A list file is a text file with a file name described on each line (*.lst), or a CSV file (*.csv).

Function buttons

Button	Function
Open	Adds the specified source files to the project. Multiple source files can be added.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Add Files from Folder...	Opens the Brows for Folder dialog box from which the source files to be added are specified in the folder unit. All of the source files in the selected folder are added to the project.

[Add Project Related Files] dialog box

This dialog box is used to add project-related files to a project.

Figure 6-80 [Add Project Related Files] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Project] menu -> [Add Project Related Files...].
- Select the right mouse button menu -> [Add Project Related Files...] with the Project Related Files folder selected in the [Project] window.

Explanation of each area

(1) Look in

Select the drive or folder that includes the project-related files to be added from the drop-down list.

(2) File name and Files of type

Specify the name of the project-related files to be added. Up to 259 characters can be specified.

A list of the file types that can be added are displayed in the drop-down list. The contents of [Open as] change according to this selection.

(3) Open As

Select the application of the file to be added from the drop-down list. The contents of [Files of type] change according to this selection.

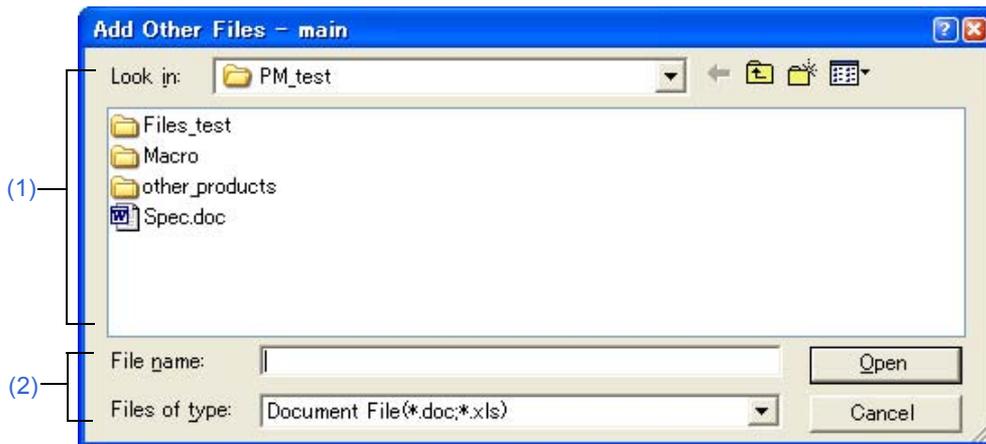
Function buttons

Button	Function
Open	Adds the specified files to the Project Related Files folder.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Add Other Files] dialog box

This dialog box is used to add any files to a project as other files.

Figure 6-81 [Add Other Files] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Project] menu -> [Add Other Files...].
- Select the right mouse button menu -> [Add Other Files...] with the Other Files folder/any file selected in the [Project] window.

Explanation of each area

(1) Look in

Select the drive or folder that includes any files to be added from the drop-down list. Multiple files can be added.

(2) File name and Files of type

Specify the name of the any files to be added. Up to 259 characters can be specified.

The extension of the file is "*.doc", "*.xls" or "*.**".

Function buttons

Button	Function
Open	Adds the specified files to the Other Files folder.
Cancel	Does not enable the settings, and closes this dialog box.

[Project Group Name] dialog box

This dialog box is used to change a project group name.

Figure 6-82 [Project Group Name] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the right mouse button menu -> [Edit Project Group Name...] with a project group name selected in the [Project] window.

Explanation of each area

(1) Old Project Group

The name of the project group currently selected in the [Project] window is displayed.

(2) New Project Group

Specify the newly set project group name directly in this area. Up to 127 characters can be entered.

Function buttons

Button	Function
OK	Changes to the specified project group name.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Project Title] dialog box

This dialog box is used to change a project title.

Figure 6-83 [Project Title] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the right mouse button menu -> [Edit Project Title...] with a project title selected in the [\[Project\] window](#).

Explanation of each area

(1) Old Project Title

The name of the project title currently selected in the [\[Project\] window](#) is displayed.

(2) New Project Title

Specify the newly set project title directly in this area. Up to 127 characters can be entered.

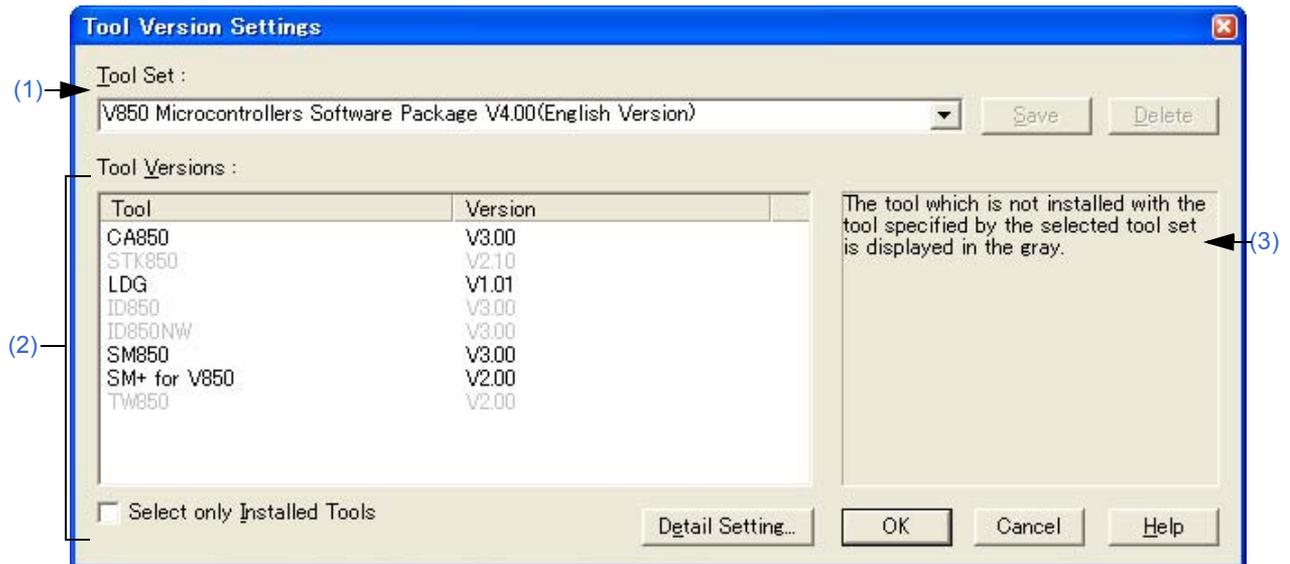
Function buttons

Button	Function
OK	Changes to the specified project title.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Tool Version Settings] dialog box

This dialog box is used to change the tools to be used by a project included in the selected project group at once.

Figure 6-84 [Tool Version Settings] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the right mouse button menu -> [Select Tools...] with a project group name selected in the [Project] window.

Explanation of each area

(1) Tool Set

The combination of tools to be used and their versions is regarded as a tool set, and the tool set name can be selected from the drop-down list.

The existing tool set and recommended tool set ("78Kx Microcontrollers Software Package Vx.xx" in the case of the 78K Microcontrollers, and "V850 Microcontrollers Software Package Vx.xx" in the case of the V850 Microcontrollers) are listed on the drop-down list.

If the tool set has been changed in the [Tool Version Detail Setting] dialog box opened by clicking the [Detail Setting...] button, "(Changed)" is appended at the top of the tool set name. If the tool set name already exists, the indication appended varies from "(Changed01)" to "(Changed99)". After "(Changed99)", the tool set name is displayed as "UserSet".

Button	Function
Save	Saves the tool set currently selected in [Tool Set]. This button is not available (appears dimmed) if the tool set file is read-only.
Delete	Deletes the tool set name selected in [Tool Set] from the list (also deletes the corresponding tool set file). This button is not available (appears dimmed) if there are no tool set files corresponding to the selected tool set or the tool set file is read-only.

[Remark]

A file is saved as "tool-set-name.extension". The extension varies depending on the product used, as shown below.

78K0R Microcontrollers (including libraries): t0r
 78K0 Microcontrollers (including libraries): tk0
 78K0S Microcontrollers (including libraries): t0s
 V850 Microcontrollers (including libraries): t85

The file is saved under "NEC Electronics\PM+" in the "Application Data" folder, which is accessible by all users. If this folder does not exist, it is automatically created when PM+ is started up (for example, "C:\Documents and Settings\All Users\Application Data\NEC Electronics\PM+" in the case of Windows XP).

(2) Tool Versions

Combinations of the tools in the tool set specified in the Tool Set area and their versions are listed.

When a tool set name is selected on the Tool Set drop-down list, the tools included in the tool set and their versions are displayed.

The tools included in the default tool set selected on the Tool Set drop-down list and their versions are displayed by default.

The [Tool Version Detail Setting] dialog box is opened by clicking the [Detail Setting...] button. Tools to be used and their versions can be selected in this dialog box.

(a) Tool

All the installed tools and tools included in the selected tool set (including tools that have not been installed) are displayed in this area.

However, tools that have not been installed are dimmed.

(b) Version

The tool versions specified in the selected tool set are displayed in this area.

However, tools that have not been installed are dimmed, and "Unused" is displayed for a tool whose version is not specified in the tool set.

(c) Select only Installed Tools

If this check box is selected, tools that have not been installed are excluded from the [Tool Versions] which corresponds to the tool set selected in the [Tool Set].

"(Selected01)" is appended to the top of the name of the tool set with which this check box is selected (if the tool set name actually exists, "(Selected *nn*)" is appended).

This check box cannot be selected (grayed) if there are no dimmed tools (all the listed tools have been installed). This check box is not selected in the default condition.

(3) Brief description area

A message is displayed when a dimmed item is displayed in the Tool Versions area.

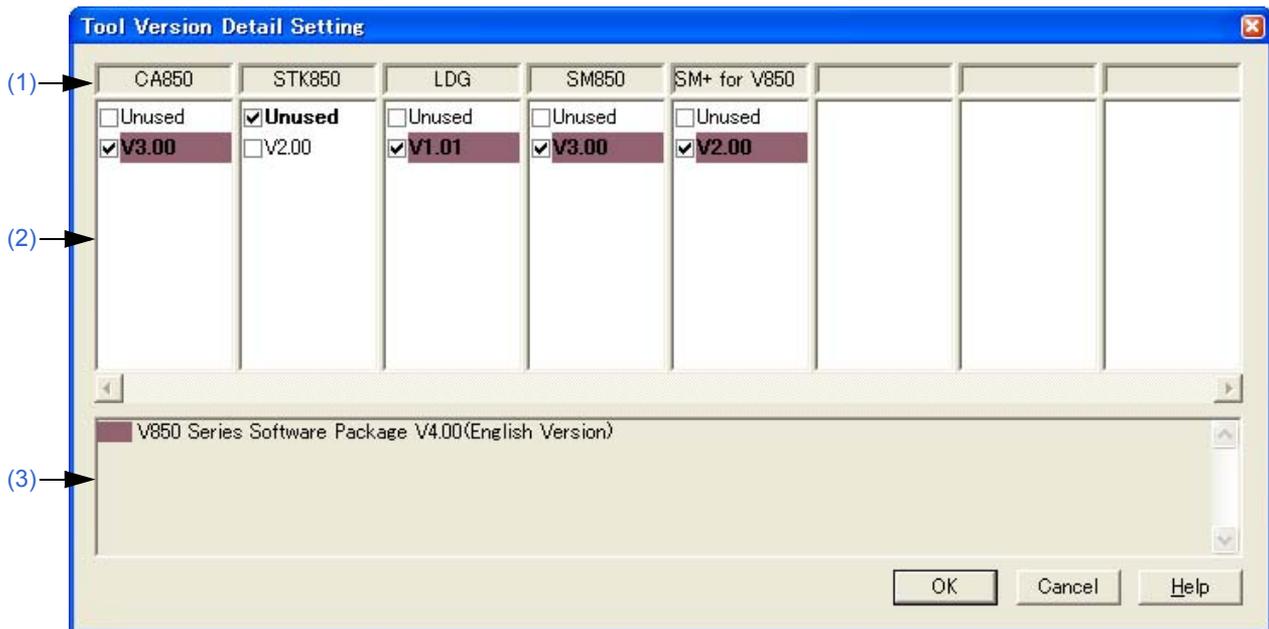
Function buttons

Button	Function
OK	Changes the tools to be used by a project included in the selected project group at once.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Tool Version Detail Setting] dialog box

This dialog box is used to select the tools to be used and their versions.

Figure 6-85 [Tool Version Detail Setting] dialog box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Detail Setting...] button on the [\[Project Settings\] dialog box](#) - [Tool Version Settings] tab.
- Click the [Detail Setting...] button or double-click the [Tool Versions] area on the [\[Tool Version Settings\] dialog box](#).
- Click the [Detail Setting...] button on the [\[New WorkSpace - Step 2/9 \[Select Tools\]\] dialog box](#).
- Click the [Detail Setting...] button on the [\[Add New Project - Step 2/9 \[Select Tools\]\] dialog box](#).

Explanation of each area

(1) Tool name area

Displays the names of the installed tools.

If the tool name is too long to fit in the field, the name is displayed left-aligned. Pointing to the character string with the pointer causes the character string to pop up.

(2) Version selection area

Selects the version of the tool to be used.

The version specified in the [\[Tool Version Settings\] dialog box](#) is selected by default.

The version specified in the [\[Tool Version Settings\] dialog box](#) is highlighted, or "Unused" is highlighted if the product with that version has not been installed.

In addition, the version of the product included in the recommended tool set is highlighted by a background color.

Multiple versions cannot be selected, nor can the version be left unselected.

(3) Brief description area

Indicates which tool set the background color highlighting the version in the version selection area corresponds to.

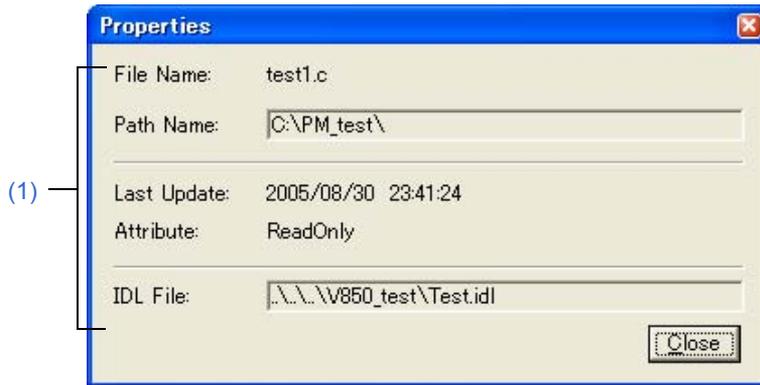
Function buttons

Button	Function
OK	Reflects the modified contents in the [Tool Version Settings] dialog box if the version setting of a tool to be used has been modified.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Properties] dialog box

This dialog box is used to displays the path information and read attribute of the selected file.

Figure 6-86 [Properties] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the right mouse button menu -> [Propertes...] with a file/function name selected in the [\[Project\] window](#).

Explanation of each area

(1) Information area

- (a) File Name and Path Name
Displays the name and the location of the selected file with the full path.
- (b) Last Update
Displays the date and time of the last update.
- (c) Attribute
This is displayed when the selected file has a read attribute.
- (d) IDL File
If the selected file is a source file generated from an IDL file, the IDL file name is displayed with the relative path starting from the source file.

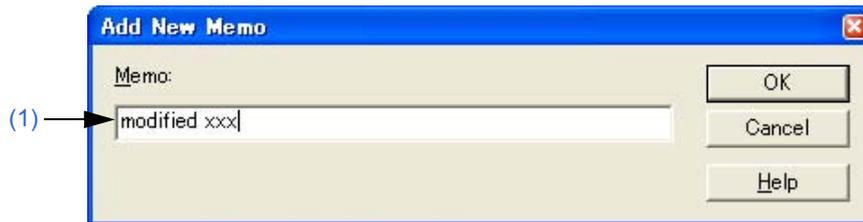
Function buttons

Button	Function
Close	Closes this dialog box.

[Add New Memo] dialog box

This dialog box is used to add a new memo.

Figure 6-87 [Add New Memo] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the right mouse button menu -> [Add New Memo...] on the [Memo] tab in the [\[Project\] window](#).

Explanation of each area

(1) Memo

Enter a new memo directly. The date and time of addition is also displayed on the [\[Project\] window](#).

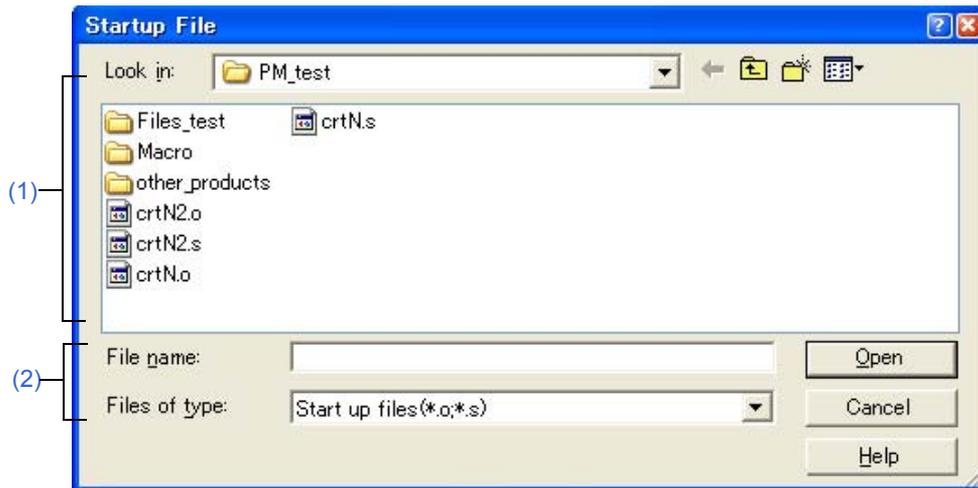
Function buttons

Button	Function
OK	Adds the memo newly.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Startup File] dialog box

This dialog box is used to specify a startup file when an existing file is used as a startup file.

Figure 6-88 [Startup File] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Browse...] button on the [\[New Workspace - Step 4/9 \[Startup File\]\]](#) dialog box.
- Click the [Browse...] button on the [\[Add New Project - Step 4/9 \[Startup File\]\]](#) dialog box.

Explanation of each area

(1) Look in

Select the drive or folder that includes the startup file to be specified from the drop-down list.

(2) File name and Files of type

Specify the name of the startup file. The extension of startup file is ".o" or ".s" by default.

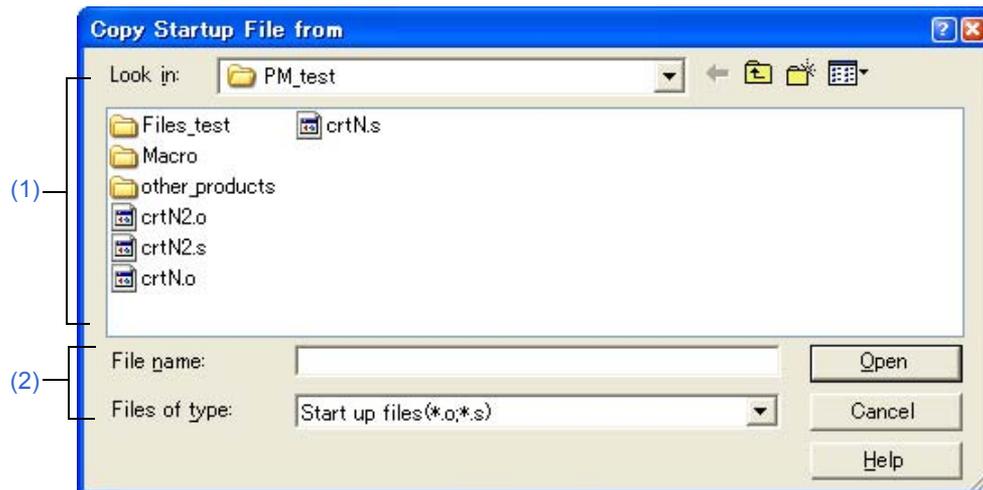
Function buttons

Button	Function
Open	Sets the specified file as a startup file. The specified startup file is registered to the project related files.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Copy Startup File from] dialog box

This dialog box is used to specify a startup file to be a copy source when an existing file is copied and used as a startup file.

Figure 6-89 [Copy Startup File from] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Browse...] button after selecting Copy and Use the Existing file on the [\[New Workspace - Step 4/9 \[Startup File\]\] dialog box](#).
- Click the [Browse...] button after selecting Copy and Use the Existing file on the [\[Add New Project - Step 4/9 \[Startup File\]\] dialog box](#).

Explanation of each area

(1) Look in

Select the drive or folder that includes the startup file to be the copy source from the drop-down list.

(2) File name and Files of type

Specify the name of the startup file to be the copy source. The extension of startup file is ".o" or ".s" by default.

Function buttons

Button	Function
Open	Sets the specified file as a startup file to be the copy source.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Startup File to register] dialog box

This dialog box is used to specify a startup file to register. The file is to be the copy destination when a sample file or an existing file is copied and used as a startup file.

Figure 6-90 [Startup File to register] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Click the [File Name...] button on the [\[New WorkSpace - Step 4/9 \[Startup File\]\]](#) dialog box.
- Click the [File Name...] button on the [\[Add New Project - Step 4/9 \[Startup File\]\]](#) dialog box.

Explanation of each area

(1) Look in

Select the drive or folder that includes the startup files to register from the drop-down list.

(2) File name and Files of type

Specify the name of the startup file to be registered. The extension of startup file is ".o" or ".s" by default.

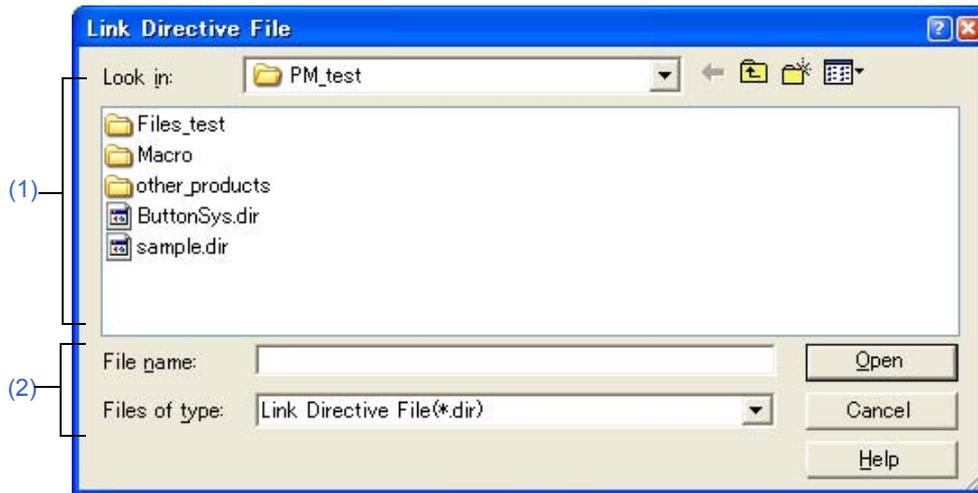
Function buttons

Button	Function
Open	Sets the specified file as a startup file to register. The specified startup file is registered to the project-related files.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Link Directive File] dialog box

This dialog box is used to specify a link directive file when an existing file is used as a link directive file.

Figure 6-91 [Link Directive File] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Browse...] button after selecting the [Use the Existing file] on the [New Workspace - Step 6/9 [LinkDirective File]] dialog box.
- Click the [Browse...] button after selecting the [Use the Existing file] on the [Add New Project - Step 6/9 [LinkDirective File]] dialog box .

Explanation of each area

(1) Look in

Select the drive or folder that includes the link directive file to be specified from the drop-down list.

(2) File name and Files of type

Specify the name of the link directive file.

Function buttons

Button	Function
Open	Sets the specified file as a link directive file. The specified link directive file is registered to the project related files.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Copy Link Directive File from] dialog box

This dialog box is used to specify a link directive file to be a copy source when an existing file is copied and used as a link directive file.

Figure 6-92 [Copy Link Directive File from] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Browse...] button after selecting the [Copy and Use the Existing file] on the [[New Workspace - Step 6/9 LinkDirective File](#)] dialog box.
- Click the [Browse...] button after selecting the [Copy and Use the Existing file] on the [[Add New Project - Step 6/9 LinkDirective File](#)] dialog box.

Explanation of each area

(1) Look in

Select the drive or folder that includes the link directive file to be the copy source from the drop-down list.

(2) File name and Files of type

Specify the name of the link directive file to be the copy source.

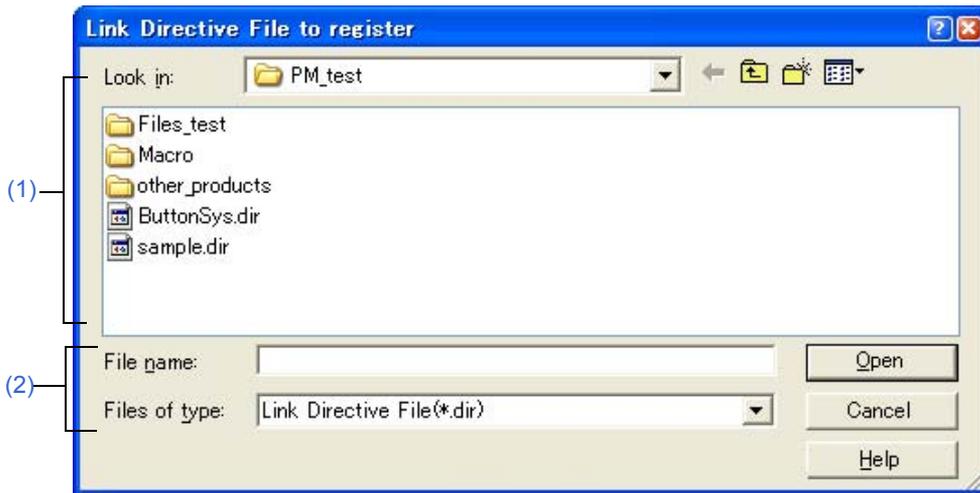
Function buttons

Button	Function
Open	Sets the specified file as a link directive file to be the copy source.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Link Directive File to register] dialog box

This dialog box is used to specify a link directive file when an existing file is used as a link directive file.

Figure 6-93 [Link Directive File to register] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [File Name...] button on the [\[New Workspace - Step 6/9 \[LinkDirective File\]\]](#) dialog box.
- Click the [File Name...] button on the [\[Add New Project - Step 6/9 \[LinkDirective File\]\]](#) dialog box.

Explanation of each area

(1) Look in

Select the drive or folder that includes the link directive file to register from the drop-down list.

(2) File name and Files of type

Specify the name of the link directive file to be registered.

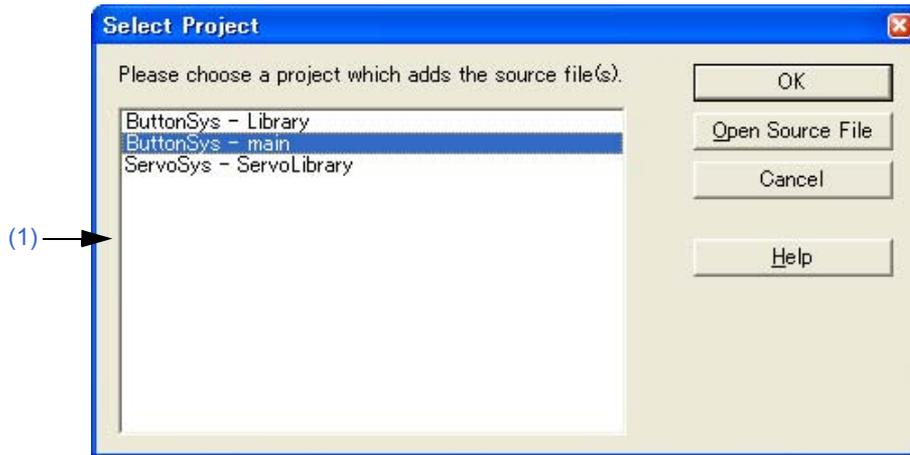
Function buttons

Button	Function
Open	Sets the specified file as a link directive file to register. The specified link directive file is registered to the project-related files.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Select Project] dialog box

This dialog box is used to specify the project to be added when a source file is dragged to the [Project] window while a workspace file or project file is open.

Figure 6-94 [Select Project] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Drag and drop a new source file to the [Project] window.

Explanation of each area

(1) Project selection area

Select the project which registers the source file.

The project group and project names in the currently open project are displayed by default.

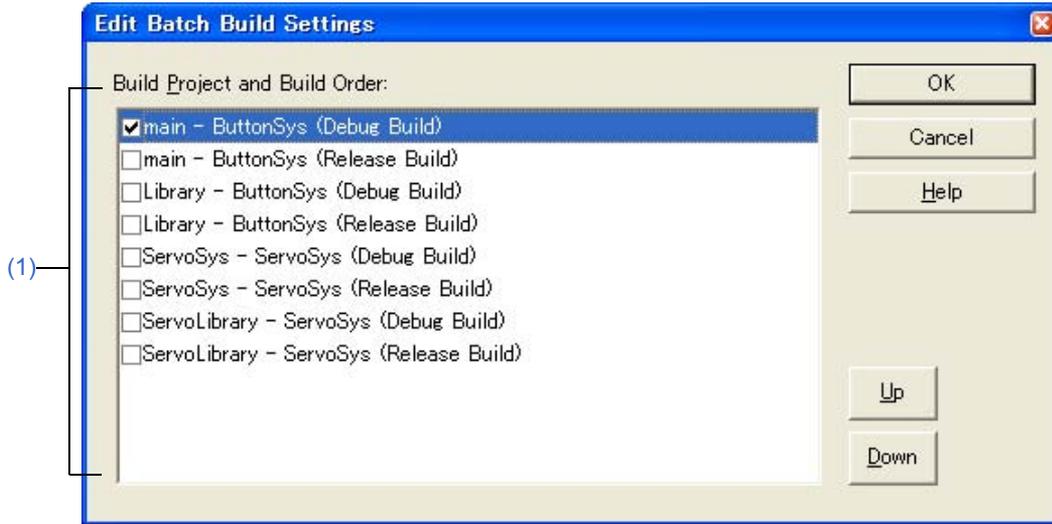
Function buttons

Button	Function
OK	Newly registers the dragged source file in the selected project.
Open Source File	Opens the source file in the Edit window without registering it to a project.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Edit Batch Build Settings] dialog box

This dialog box is used to select the project for batch build or rebuild and set the build sequence. The settings in this dialog box are saved in a workspace file when the workspace is saved.

Figure 6-95 [Edit Batch Build Settings] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons
- Cautions

Opening

- Select the [Build] menu -> [Batch Build Settings...].

Explanation of each area

(1) Build Project and Build Order

This area displays the names of the projects registered in the open workspace, with their build modes. Select the check box of the build mode of the project for which build is to be performed.

The build mode of the currently active project is selected by default.

Build is executed in order from the top of the list. To change the order, select the project and use the [Up] or [Down] button.

Multiple projects can be selected. When multiple projects have been selected, and the check box one of the selected projects is manipulated, the check boxes of the other selected projects are manipulated likewise.

Function buttons

Button	Function
OK	Closes this dialog box.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Up	Moves the selected project up within the list. When the project at the top of the list is selected and this button is clicked, the selected project moves to the bottom of the list. When multiple projects are selected, this button is disabled.
Down	Moves the selected project down within the list. When the project at the bottom of the list is selected and this button is clicked, the selected project moves to the top of the list. When multiple projects are selected, this button is disabled.

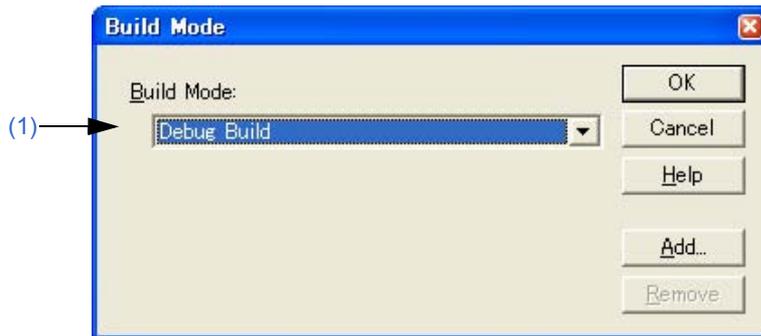
Cautions

- If the project/build Mode is added after closing the Batch Build dialog box, the next time the Batch Build dialog box is opened, the added project/build mode item is added to the Build Project and Build Order to be built.
- If the project/build Mode is deleted after closing the Batch Build dialog box, the next time the Batch Build dialog box is opened, the deleted project/build mode item is deleted to the Build Project and Build Order to be built.

[Build Mode] dialog box

This dialog box is used to select, add and delete build modes.

Figure 6-96 [Build Mode] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [Build] menu -> [Select Build Mode...].

Explanation of each area

(1) Build Mode

The currently selected build mode is displayed. Select the build mode using this combo box as required. There are two default build modes.

- Debug Build: If build is executed in this mode, symbol information is output (default).
- Release Build: If build is executed in this mode, symbol information is not output.

Function buttons

Button	Function
OK	Sets the specified build mode. The set, added, or deleted build mode is saved in a project file.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Add...	Opens the [Add Build Mode] dialog box . If a language product that does not support build mode is used, this button is invalid.
Remove	Deletes the currently selected build mode and selects the build mode registered at the top. Note that "Debug Build" and "Release Build" cannot be deleted. If a language product that does not support build mode is used, this button is invalid.

[Add Build Mode] dialog box

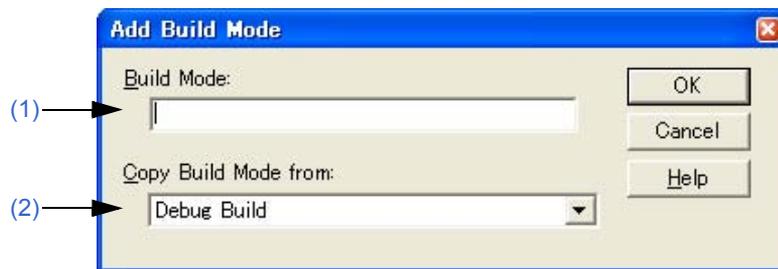
This dialog box is used to add a new build mode.

There are two default build modes.

- Debug Build: If build is executed in this mode, symbol information is output (default).
- Release Build: If build is executed in this mode, symbol information is not output.

In this dialog box, options can be added and deleted and any build mode can be defined, based on these build modes.

Figure 6-97 [Add Build Mode] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [Build] menu -> [Select Build Mode...], and click the [Add...] button in the [\[Build Mode\] dialog box](#).

Explanation of each area

(1) Build Mode

The name of the build mode to be added newly is entered in this area. Up to 128 characters can be entered.

(2) Copy Build Mode from

The currently set build mode is displayed by default. Select the build mode using this combo box as required.

Function buttons

Button	Function
OK	Selects the added build mode and returns to the [Build Mode] dialog box . If nothing is entered under [Build Mode], this button cannot be selected.
Cancel	Does not enable the settings, and returns to the [Build Mode] dialog box .
Help	Opens the help for this dialog box.

[Build Settings] dialog box

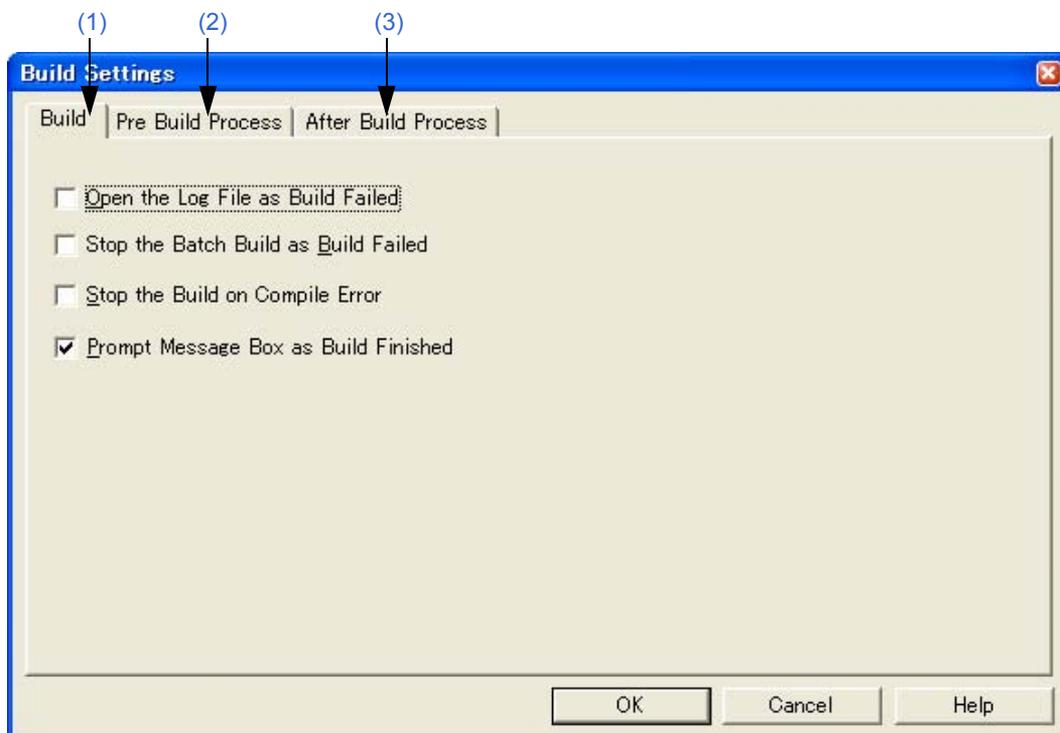
This dialog box is used to set options related to build. This settings in this dialog box are saved in the registry and become valid at the next time the project is opened.

The following items can be set:

- Options during build ([Build] tab)
- Processing to be executed before build ([Pre Build Process] tab)
- Processing to be executed after build ([After Build Process] tab)

Note that the settings in the [Build] tab are saved in the registry, the settings are applied to the use environment (the settings in the [Pre Build Process] or [After Build Process] tab are saved in each project file).

Figure 6-98 [Build Settings] Dialog Box



This section describes the following items:

- Opening
- Explanation of each tab
- Function buttons

Opening

- Select the [Build] menu -> [Build Settings...].

Explanation of each tab

(1) [Build] tab

This tab sets the options for executing build.

Figure 6-99 [Build Settings] Dialog Box - [Build] Tab



(a) Open the Log File as Build Failed

When a build error occurs during build, a log file is opened. If an external editor is set, it is displayed on the external editor.

(b) Stop the Batch Build as Build Failed

If during batch build/batch rebuild, a build error occurs upon build termination, batch build/batch rebuild stops at that instant.

(c) Stop the Build on Compile Error

If even one error occurs during build, building stops when compilation of that source file has finished.

When this box is not selected, even if an error occurs during build, building does not stop until compilation of all the target source files has finished.

(d) Prompt Message Box as Build Finished

When build is finished, a message box is displayed (default).

If this box is not selected, end of build is indicated only by a sound.

(2) [Pre Build Process] tab

If there is any processing required prior to build (conversion processing or backing up of source files), this processing is set here. The set items are always executed when build is executed. The order of execution is from the top of the list.

Commands can be specified in the [\[Add Command\] dialog box](#) by clicking the [Add...] button.

Figure 6-100 [Build Settings] Dialog Box - [Pre Build Process] Tab

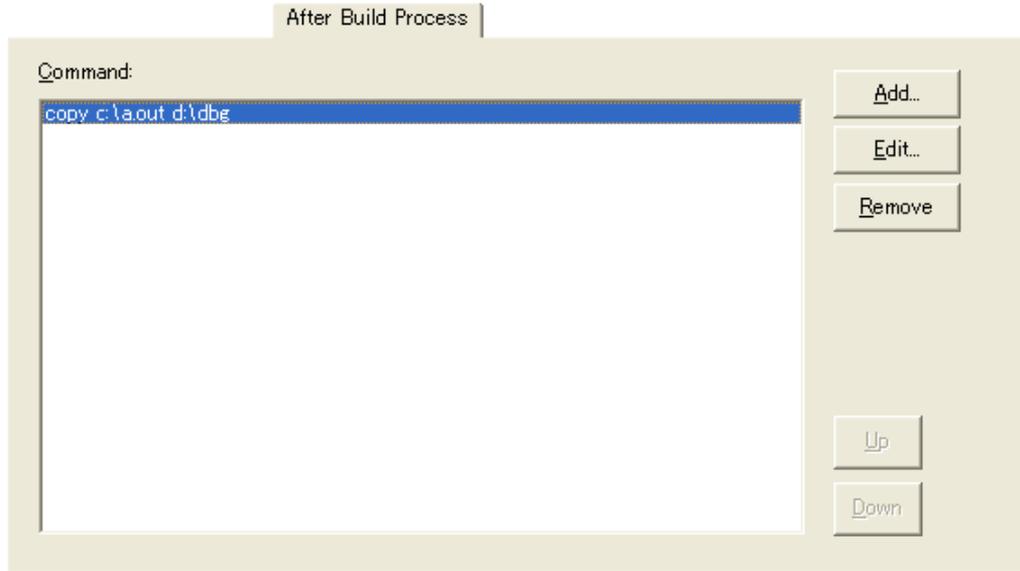


Button	Function
Add...	Opens the [Add Command] dialog box . The specified command is inserted to the currently selected position in the command list box.
Edit...	Opens the [Add Command] dialog box . Changes the command contents selected in the Command list box to the edited contents.
Remove	Deletes the command selected in the command list box.
Up	Moves the selected command up within the command list.
Down	Moves the selected command down within the command list.

(3) [After Build Process] tab

If there is any processing required after build (copying of output files to another folder, etc), this processing is set here. The set items are always executed after build. The order of execution is from the top of the list. Commands can be specified in the [\[Add Command\] dialog box](#) by clicking the [Add...] button.

Figure 6-101 [Build Settings] Dialog Box - [After Build Process] Tab



Button	Function
Add...	Opens the [Add Command] dialog box . The specified command is inserted to the currently selected position in the command list box.
Edit...	Opens the [Add Command] dialog box . Changes the command contents selected in the Command list box to the edited contents.
Remove	Deletes the command selected in the command list box.
Up	Moves the selected command up within the command list.
Down	Moves the selected command down within the command list.

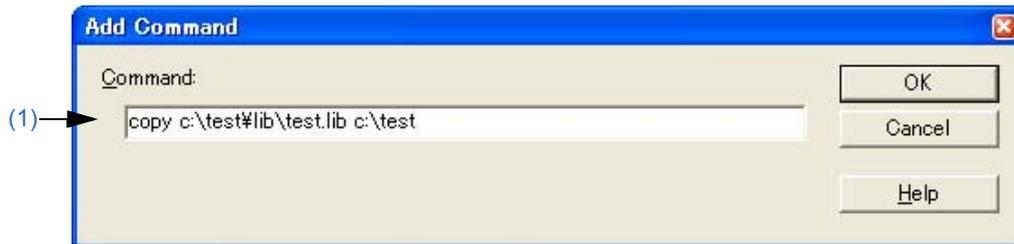
Function buttons

Button	Function
OK	Enables the specified settings.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Add Command] dialog box

This dialog box is used to specify the commands used to execute any processing required before or after build (copying of output files to another folder, etc.).

Figure 6-102 [Add Command] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Add...] button on the [Build] menu -> [Build Settings...] - [Pre Build Process] tab.
- Click the [Add...] button on the [Build] menu -> [Build Settings...] - [After Build Process] tab.

Explanation of each area

(1) Command

Describe the DOS command to be executed before or after build. Up to 127 characters can be specified as a command.

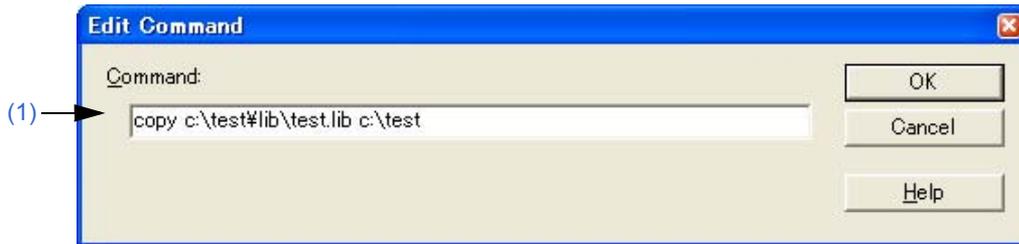
Function buttons

Button	Function
OK	Adds the specified command to the command list box.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Edit Command] dialog box

This dialog box is used to edit commands specified as required processing either during build execution, prior to/after build processing.

Figure 6-103 [Edit Command] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Click the [Edit...] button after selecting each command in the command list box on the [Build] menu -> [Build Settings...] - [Pre Build Process] tab.
- Double-click each command in the command list box on the [Build] menu -> [Build Settings...] - [Pre Build Process] tab.
- Click the [Edit...] button after selecting each command in the command list box on the [Build] menu -> [Build Settings...] - [After Build Process] tab.
- Double-click each command in the command list box on the [Build] menu -> [Build Settings...] - [After Build Process] tab.

Explanation of each area

(1) Command

Describe the DOS command to be executed before or after build. Up to 127 characters can be specified as a command.

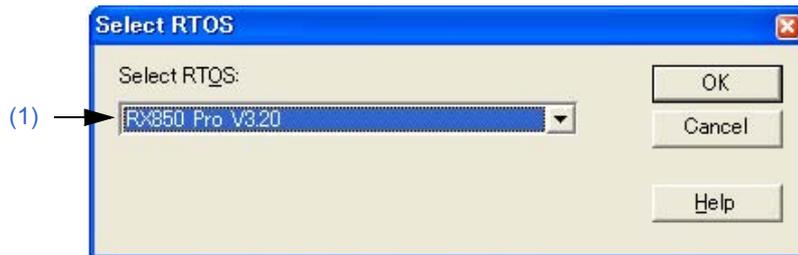
Function buttons

Button	Function
OK	Edits the command with the specified contents.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Select RTOS] dialog box

This dialog box is used to select the real-time OS used by the current active project.

Figure 6-104 [Select RTOS] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Tool] menu -> [Select RTOS...].

Explanation of each area

(1) Select RTOS

The real-time OS used by the current active project can be selected in this area.

The real-time OS name specified on the [Tool Version Settings] tab in the [Project Settings] dialog box is displayed on the drop-down list. The real-time OS name set by the current active project is displayed by default.

Function buttons

Button	Function
OK	Opens the dialog box for setting the real-time OS that has been selected in this dialog box. Refer to the user's manual of the real-time OS for setting details.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[dump850] dialog box

This dialog box is used to activate the dump command, dump850.

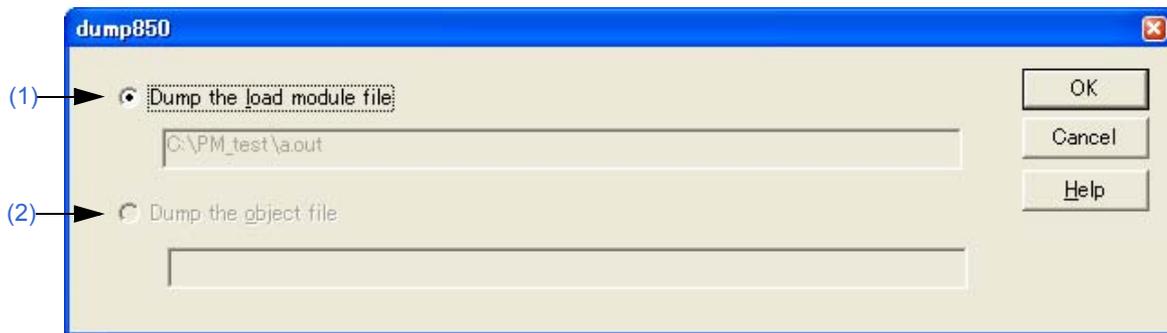
The analysis results are saved under "project file name.dmp" and displayed in the [Edit window](#).

The execution of dump850 can be stopped by pressing the [Esc] key.

This dialog box is available only when a project that uses a V850 microcontroller is active and the CA850 (Ver.3.10 or earlier) is selected as the tool to be used. (The dump function is provided in CA850 (Ver. .20 or later)).

Refer to the CA850 compiler package user's manual for details on dump850.

Figure 6-105 [dump850] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [Tool] menu -> [dump850].

Explanation of each area

(1) Dump the load module file

This button is selected when a load module file is to be dumped (default).

The analysis target files are the load module file of the currently active project.

The file name (.out) to be output by the linker which is the analysis target file is displayed in the edit box.

(2) Dump the object file

This button is selected when an object file is to be dumped .

The analysis target file is the object file generated by the source file selected in the currently active [Edit window](#) or [\[Project\] window](#). However, if the active [Edit window](#) is an IDL file, the object file generated from the source file at the caret position is the analysis target file.

The object file name is displayed in the edit box. If no source file is specified, nothing will be displayed.

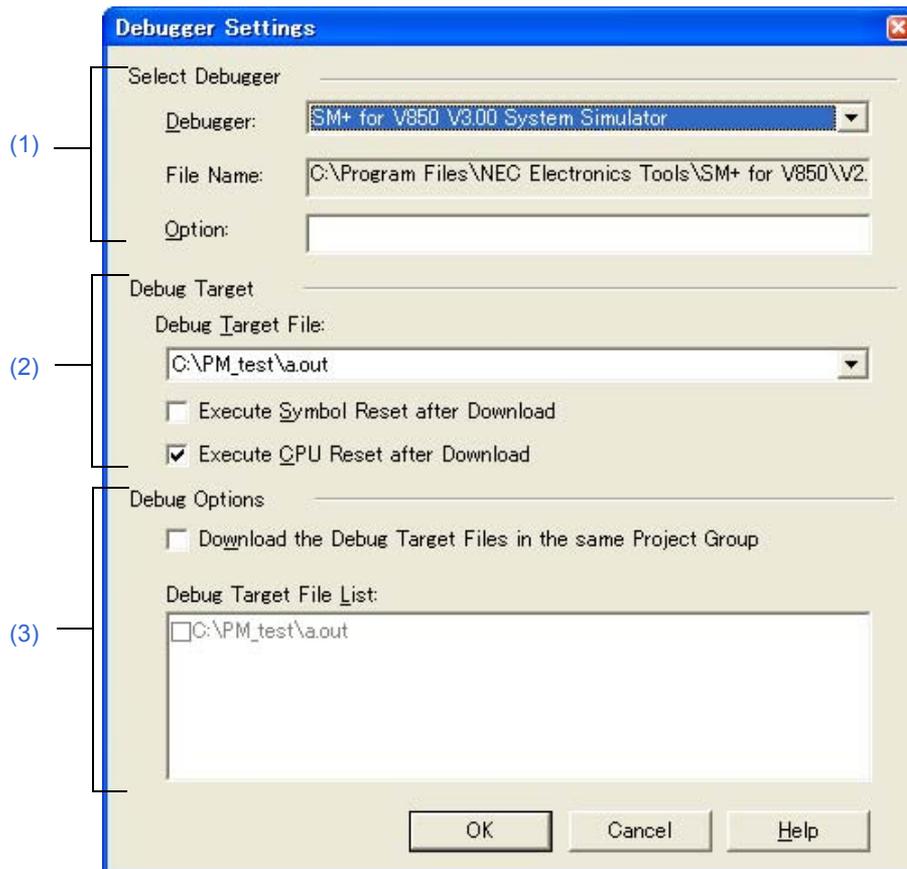
Function buttons

Button	Function
OK	Activates the dump command, dump850. The analysis results are saved under "project file name.dmp" and displayed in the Edit window . If a dmp file already exists, the file is renamed as a bak file under "project file name.dmp.bak".
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Debugger Settings] dialog box

This dialog box is used to set the details of the debugger to be used.

Figure 6-106 [Debugger Settings] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Tool] menu -> [Debugger Settings...].

Explanation of each area

(1) Select Debugger

(a) Debugger

The debugger to be used is selected here.

The name of the debugger specified for use and its version are displayed on the drop-down list.

If a debugger is newly selected, the debugger type set in the project opened previously is displayed by default.

(b) File Name

The path for the selected debugger is displayed here.

A path for another debugger can also be entered directly. In this case, if this dialog box is opened after being closed by the [OK] button, "User selected debugger" is displayed on the [Debugger] combo box.

(c) Option

Specify the options for when starting up the debugger.

Nothing will be displayed in the default condition.

(2) Debugger Target

(a) Debug Target File

The file to be downloaded to debugger is selected here.

The load module file names and HEX file names output from the language product are displayed on the drop-down list.

(b) Execute Symbol Reset after Download

Checking this check box executes a symbol reset when a file is downloaded.

[Caution]

This check box becomes valid only when a project that uses a V850 Microcontrollers device is active.

(c) Execute CPU Reset after Download

Checking this box executes a CPU reset via the debugger when a file is downloaded.

(3) Debug Options

(a) Download the Debug Target Files in the same Project Group

Checking this check box downloads the debug target files of the projects belonging to the same project group as the currently active project following the files specified by [Debug Target File].

This is a function corresponding to the multiple load module files download function of the debugger.

[Caution]

This check box becomes valid only when a project that uses a V850 Microcontrollers device is active.

(b) Debug Target File List

Select the debug target files to be downloaded in the same group.

If the [Download the Debug Target Files in the same Project Group] check box is selected, the files selected here are downloaded when the debugger starts up, following the files specified by [Debug Target File].

When the files specified here are downloaded, the symbol and CPU resets are not executed.

The debug target files set in each project are displayed on the list. Therefore, to change the debug target files in each project, make the project that generates the corresponding debug target files active, and open this dialog box.

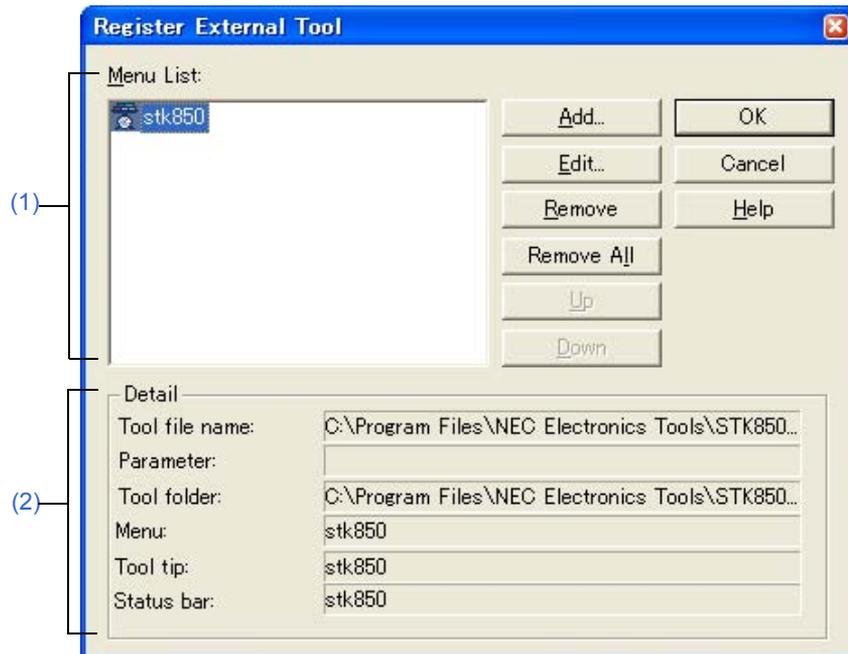
Function buttons

Button	Function
OK	Enables the specified settings.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Register External Tool] dialog box

This dialog box is used to register (add), change, and delete external tools to be used. Up to 10 tools can be registered. The currently set tools are displayed.

Figure 6-107 [Register External Tool] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons
- Cautions

Opening

- Select the [Tool] menu -> [Register Ex-tool...].

Explanation of each area

(1) Menu List

The menu item names of the currently registered external tools. The menu item names are the [Menu String] specified in the [\[Select External Tool\] dialog box](#) using the [Add...] button.

The menu item names are displayed as a pop-up menu of [Start up EX-tool]. The menu items are displayed in the order of [Menu List].

The icons of the external tools set here are displayed as buttons on the external toolbar.

Button	Function
Add...	Opens the [Select External Tool] dialog box for registering external tools. The added tool is displayed at the end of [Menu List]. Up to 10 external tools can be registered. Therefore, if 10 external tools are already set, this button is dimmed.
Edit...	Opens the [Select External Tool] dialog box for the selected tool in [Menu List].
Remove	Removes the external tool selected in [Menu List].
Remove All	Removes all of the external tools in [Menu List].
Up	Moves the selected external tool up within [Menu List].
Down	Moves the selected external tool down within [Menu List].

(2) Detail

The information on the external tool selected in [Menu List] is displayed.

This information is the contents set by the [\[Select External Tool\] dialog box](#).

Function buttons

Button	Function
OK	Registers the external tool, and closes this dialog box.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

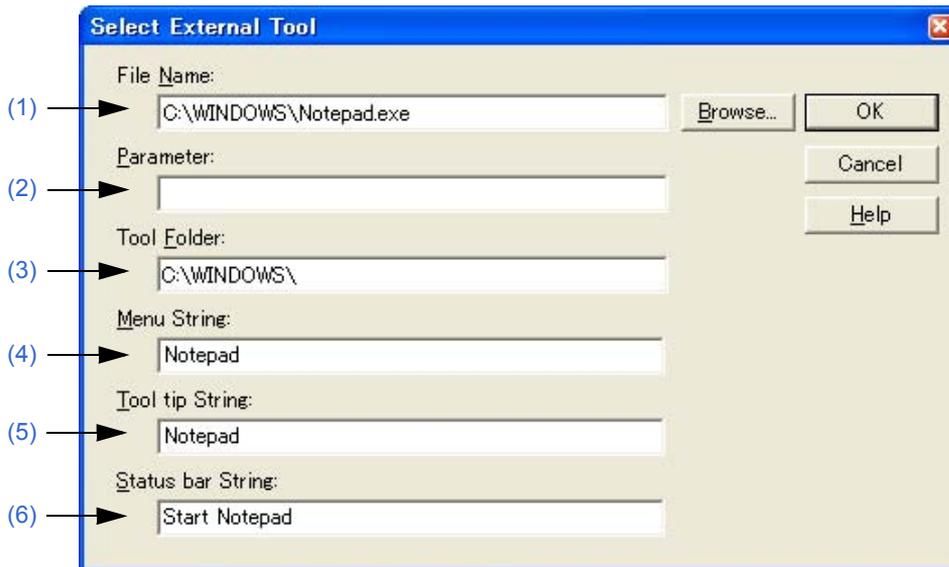
Cautions

- The external tools are common setting item in PM+. They cannot be set in project units.

[Select External Tool] dialog box

This dialog box is used to specify a external tool to be used.

Figure 6-108 [Select External Tool] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Click the [Add...] button in the [\[Register External Tool\] dialog box](#).
- Click the [Edit...] button in the [\[Register External Tool\] dialog box](#).

Explanation of each area

(1) File Name

Specify the name of the execution file for the external tool to be registered with the full path. Up to 260 characters can be entered.

If [Browse...] button is clicked, the [\[Open\] dialog box](#) is opened to select the any file.

(2) Parameter

The arguments used when executing the external tool can be specified here as required. Up to 260 characters can be entered.

(3) Tool Folder

Specify the current folder for starting up the external tool. Up to 260 characters can be entered.

(4) Menu String

Specify the menu name to be displayed when the [Start up Ex-tool] menu item is selected. Up to 32 characters can be entered. If no character string is specified, the name will be the tool execution file name without the path and extension.

Note that the same name cannot be set more than once.

(5) Tool tip String

Specify the character string to be displayed as the tool tip on the toolbar. Up to 32 characters can be entered.

(6) Status bar String

Specify the character string to be displayed on the status bar when a menu item is selected. Up to 32 characters can be entered.

Function buttons

Button	Function
OK	Sets the external tool, and closes this dialog box. The set tool is displayed on [Menu List] in the [Register External Tool] dialog box .
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[File Compare] dialog box

This dialog box is used to compare the contents of two Edit windows.

Figure 6-109 [File Compare] Dialog Box

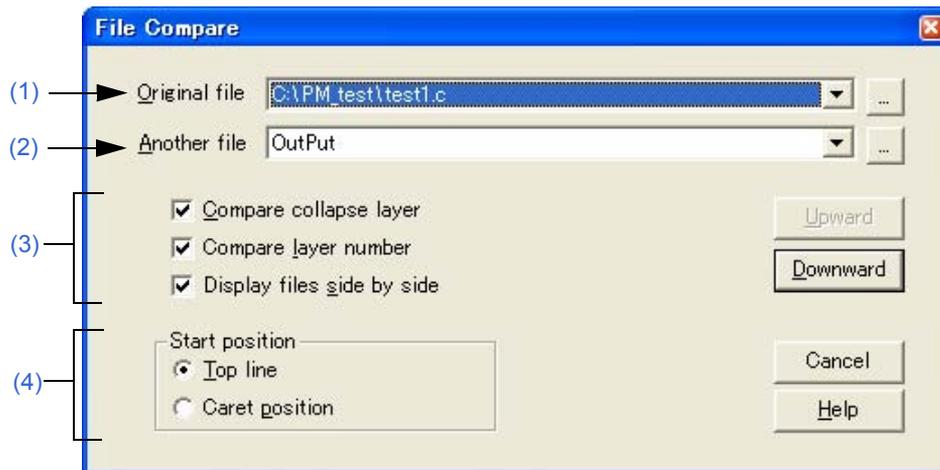
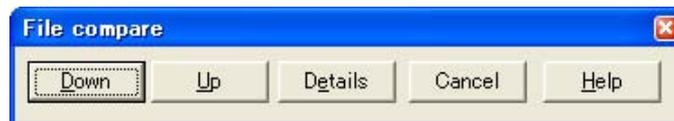


Figure 6-110 [File Compare] Dialog Box (Mini)



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [Tool] menu -> [File Compare...].

Explanation of each area

(1) Original file

Select the original file to be compared from the drop-down list.

If there is an active [Edit window](#), the name of the file in that window is selected. If there is no active [Edit window](#), this area is left blank.

A list of all the files currently being edited is displayed on the drop-down list.

If the [...] button is clicked, the [\[Open\] dialog box](#) is opened to select the any file. In the [\[Open\] dialog box](#), the [\[Apply Layer Rule\]](#) and [\[Gather Files into an Edit Window\]](#) check boxes, and the [\[Layer Rule...\]](#) button are invalid.

(2) Another file

Select the file to be compared from the drop-down list.

If the "Original file" is opened first, the name of the file opened second is displayed.

If the "Another file" is other than the file opened first, the name of the file opened first is displayed.

A list of all the files currently being edited is displayed on the drop-down list. If the selected file is the same as the "Original file", the file name is not displayed.

If the [...] button is clicked, the [Open] dialog box is opened to select the any file. In the [Open] dialog box, the [Apply Layer Rule] and [Gather Files into an Edit Window] check boxes, and the [Layer Rule...] button are invalid.

(3) Way of comparison setting area**(a) Compare collapse layer**

If this check box is selected, the contents of collapsed layers are also compared (default).

If it is not selected, the contents of collapsed layers are not compared.

(b) Compare layer number

If this check box is selected, differences in the layer positions are also compared (default).

If it is not selected, differences in the layer positions are not compared.

(c) Display files side by side

If this check box is selected, the "Original file" and the "Another file" are displayed side by side (default).

If it is not selected, they are displayed in the status they were in during comparison.

(4) Start position**(a) Top line**

If this button is selected, comparison starts from the first line of the file (default).

(b) Caret position

If this button is selected, comparison starts from the caret position.

Function buttons

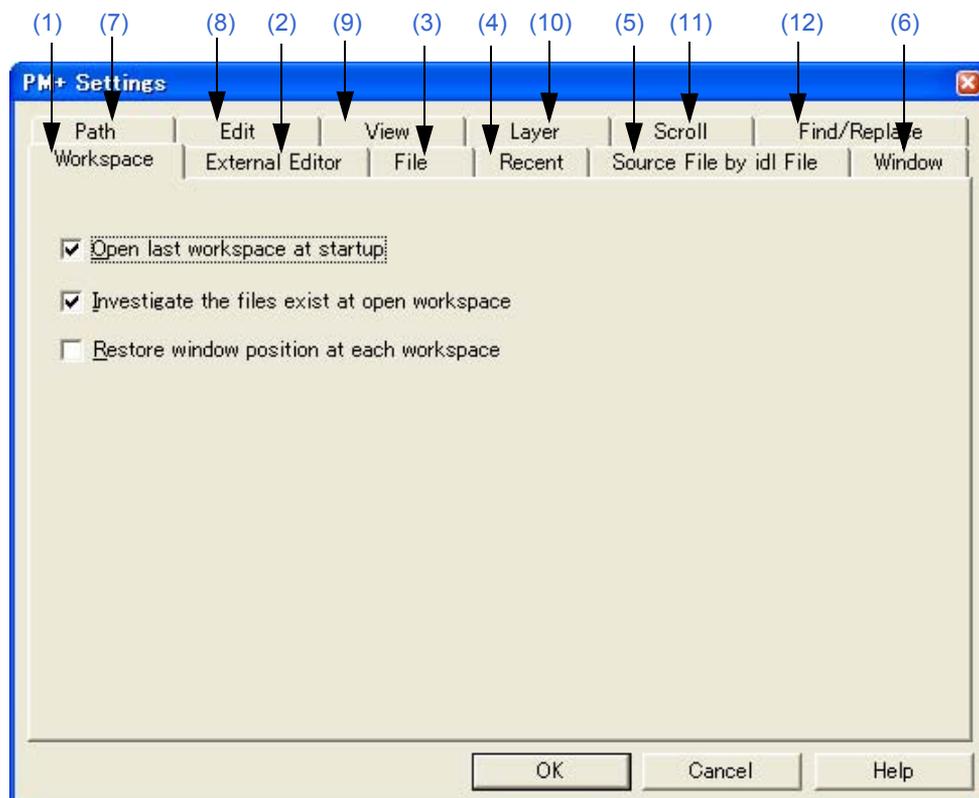
Button	Function
Upward	Compares files in the upward direction. This dialog box becomes mini version after the comparison. If a difference in file contents is found, the caret moves to the line including the difference. Note that when the [Top line] button is selected, this button is dimmed.
Downward	Compares files in the downward direction. This dialog box becomes mini version after the comparison. If a difference in file contents is found, the caret moves to the line including the difference.
Details (only mini version)	Opens the normal File Compare dialog box.
Cancel	Does not enable the specified items, and closes this dialog box.
Help	Opens the help for this dialog box.

[PM+ Settings] dialog box

This dialog box is used to make various environment settings. The environment settings are performed on the following tabs.

- (1) [Workspace] tab
- (2) [External Editor] tab
- (3) [File] tab
- (4) [Recent] tab
- (5) [Source File by idl File] tab
- (6) [Window] tab
- (7) [Path] tab
- (8) [Edit] tab
- (9) [View] tab
- (10) [Layer] tab
- (11) [Scroll] tab
- (12) [Find/Replace] tab

Figure 6-111 [PM+ Settings] Dialog Box



This section describes the following items:

- Opening
- Explanation of each tab
- Function buttons

Opening

- Select the [Tool] menu -> [PM+ Settings...].
- Select the [PM+ Settings...] from the right mouse click menu on the toolbar in the [Main window](#)

Explanation of each tab

(1) [Workspace] tab

This tab is used to make settings related to the workspace.

Figure 6-112 [PM+ Settings] Dialog Box - [Workspace] Tab

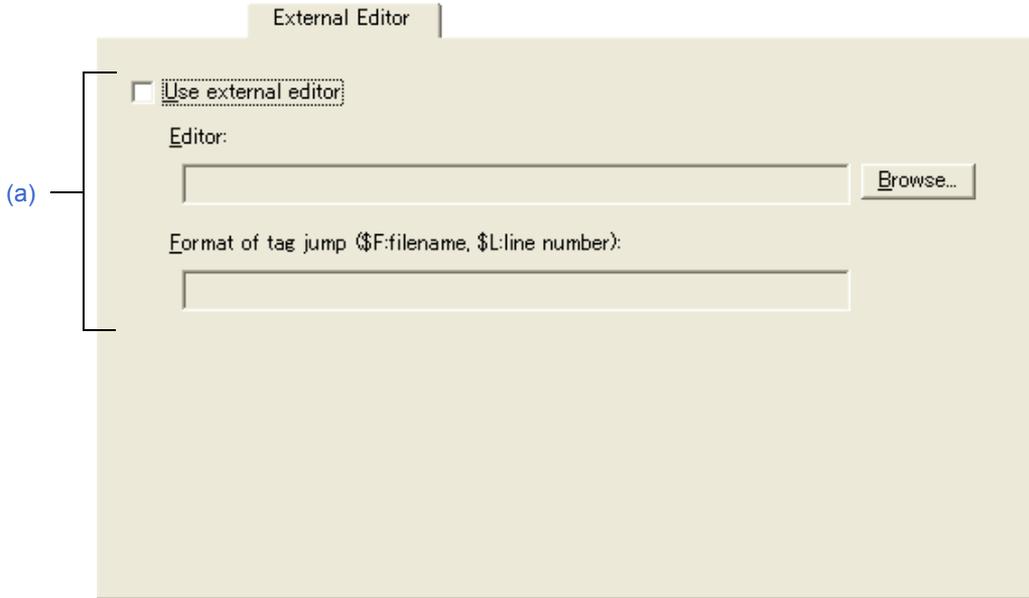


- (a) Open last workspace at startup
If this check box is selected, the workspace file (project file) when PM+ finished previously is opened when PM+ starts up (default).
- (b) Investigate the files exist at open workspace
If this check box is selected, when a workspace (project) is opened, it is selected whether there are any files registered in the project (default).
- (c) Restore window position at each workspace
If this box is selected, a workspace (project) is opened at the same window location as the previous time for every workspace.

(2) [External Editor] tab

This tab is used to set an external editor.

Figure 6-113 [PM+ Settings] Dialog Box - [External Editor] Tab

**(a) Use external editor**

If this check box is selected, the external editor path setting and the tag jump format can be entered. By setting the path and tag jump here, an external editor can be started up from PM+.

- Editor

Specify the external editor. Clicking the [Browse...] button opens a reference dialog box in which the editor can be selected.

- Format of tag jump

Specify the tag jump format when an external editor is used. A tag jump format specific to the external editor is specified using the file name specification macro "\$F" and line number specification macro "\$L". Refer to the manual of each editor for details. If the format is blank, it is considered as "\$F".

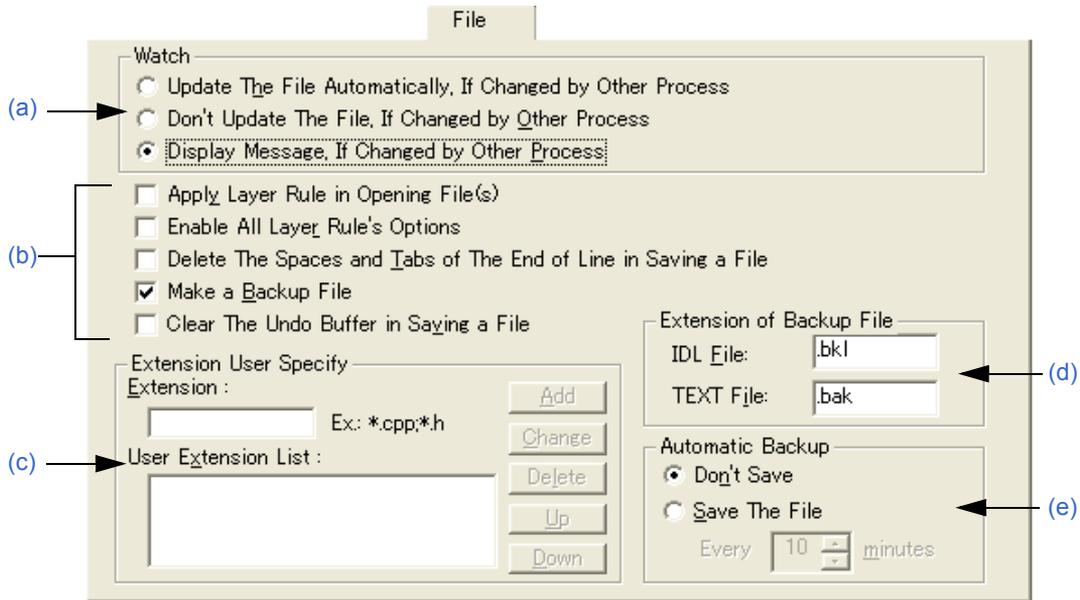
Examples of typical editors are shown below.

MIFES : \$F+\$L

(3) [File] tab

This tab is used to make settings related to files.

Figure 6-114 [PM+ Settings] Dialog Box - [File] Tab

**(a) Watch**

This area specifies the operation when the file being edited is updated by another application.

- Update The File Automatically, If Changed by Other Process

When a file that is opened in PM+ is changed by another process (such as an editor), the file is read again automatically.

- Don't Update The File, If Changed by Other Process

When a file that is opened in PM+ is changed by another process (such as an editor), the file is not read again.

- Display Message, If Changed by Other Process

When a file that is opened in PM+ is changed by another process (such as an editor), a message is displayed to verify whether the file is read again or not (default).

(b) File setting area

- Apply Layer Rule in Opening File(s)

If this check box is selected, files are always read with layer when they are opened (including all the drag-and-drop operations and file histories).

- Enable All Layer Rule's Options

If this check box is selected, all the options of the layer rule used when opening a files are valid. If it is not selected, the options accord with the status of the [\[Set Layer Rule\] dialog box](#).

- Delete The Spaces and Tabs of The End of Line in Saving a File

If this check box is selected, null characters at the end of a line are deleted when a file is stored. If it not selected, the file is saved with null characters remaining at the end of a line.

- Make a Backup File

If this check box is selected, a backup file is created when a file is stored (default). The extension of the backup file can be specified freely in the [\[Extension of Backup File\] area](#).

- Clear The Undo Buffer in Saving a File

If this check box is selected, the undo buffer is cleared when a file is stored.

If the [Delete The Spaces and Tabs of The End of Line in Saving a File] check box is selected, this box is selected and dimmed (invalid).

(c) Extension User Specify

The specified extension is displayed in the drop-down list of the [Files of type] in the [Open] dialog box, [Save As] dialog box, and [Insert File] dialog box. The order in the drop-down list is as displayed in the list of user extensions.

Up to four extensions can be added.

- Extension

Enters the extensions to be added. If multiple file extensions are compiled into one, they are delimited by ";". Examples are shown below.

To display a CPP file: *.cpp

To display a CPP file and an H file: *.cpp;*.h

- User Extension List

Displays the added extensions.

Button	Function
Add...	Adds the extensions to User Extension List.
Change	Changes the extension selected in User Extension List.
Delete	Deletes the extension selected in User Extension List.
Up	Moves the selected extension up within User Extension List.
Down	Moves the selected extension down within User Extension List.

(d) Extension of Backup File

Specify the extensions for creating backup files. IDL file and text file extensions can be specified. Up to 3 characters of extensions can be set.

- IDL File

Specify the extensions for creating backup IDL files. The default is "bkl".

- TEXT File

Specify the extensions for creating backup text files. The default is "bak".

(e) Automatic Backup

This area selects whether a file is automatically saved in the folder specified by the environmental variable Temp while it is being edited.

- Don't Save

Auto backup is not executed (default).

- Save The File

A temporary file is created each set time. The time can be set in 1-minute units, from 1 to 120.

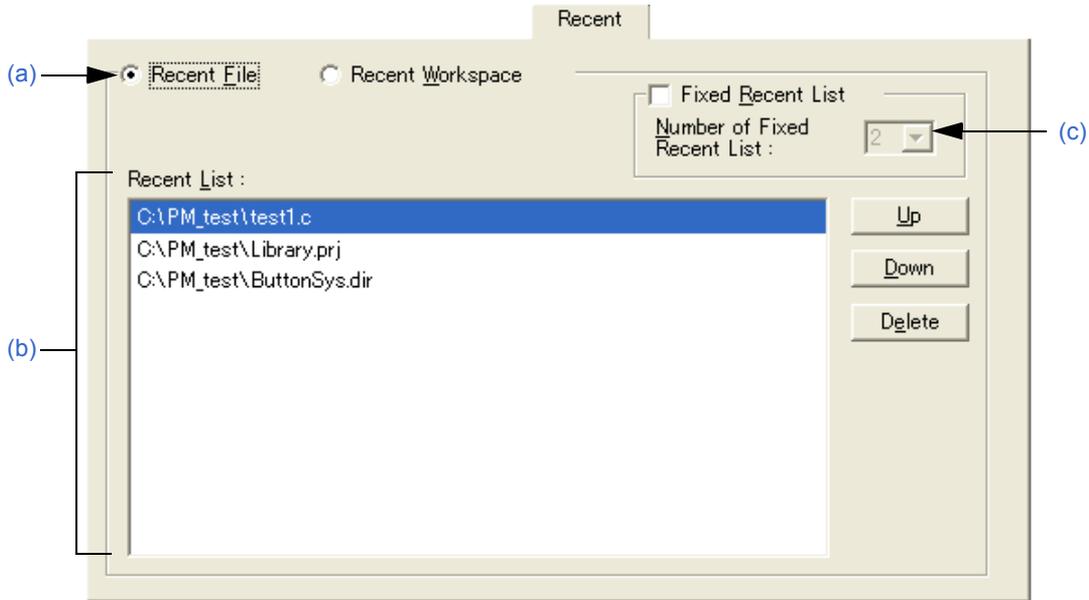
If PM+ is exited incorrectly due to an unexpected event at startup, this temporary file is opened when PM+ is started up next time.

The temporary file is automatically deleted when PM+ is exited correctly.

(4) [Recent] tab

This tab is used to make settings related to files.

Figure 6-115 [PM+ Settings] Dialog Box - [Recent] Tab

**(a) History type selection area**

Specifies the type of history to be edited.

- Recent File

A list of the file names displayed to [File] menu -> [File History] is displayed in the Recent List (default).

- Recent Workspace

In the Recent List, display a list of workspace file names displayed in [File] menu -> [File History].

(b) Recent List

Specifies the history to be edited. display a list of workspace file names displayed in [File] menu -> [File History] in the default condition.

Multiple histories can be added.

Button	Function
Up	Moves the selected history up within the list. When the history at the top of the list is selected and this button is clicked, the selected history moves to the bottom of the list. When no history is selected or when multiple histories are selected, this button is disabled.
Down	Moves the selected history down within the list. When the history at the top of the list is selected and this button is clicked, the selected history moves to the bottom of the list. When no history is selected or when multiple histories are selected, this button is disabled.
Delete	Deletes the selected history. When no history is selected, this button is disabled.

(c) Fixed Recent List

Specifies the number of histories that are not to be changed during file/workspace history updating (when file/workspace is opened or saved) with drop-down list. The number of histories that are not to be changed can be set from 1 to 5. The default number is 2.

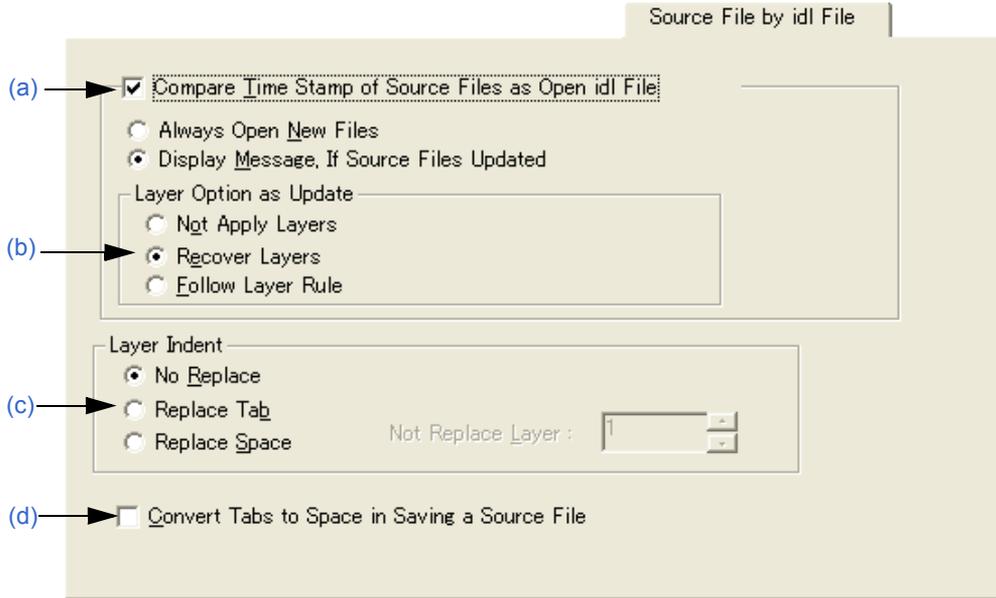
When this check box is selected, the specified number of histories from the top history in [Recent List] is not changed. By default, this check box is not selected.

The background color of unchanged histories in the [Recent List] is displayed in light blue.

(5) [Source File by idl File] tab

This tab is used to make settings related to the source files generated by IDL files.

Figure 6-116 [PM+ Settings] Dialog Box - [Source File by idl File] Tab



(a) Compare Time Stamp of Source Files as Open idl File

If this check box is selected, the time stamps of the IDL file and source file are compared when the IDL file is opened (default). The operation to be performed if the time stamps are different is also selected here.

- Always Open New Files

The file with the later time stamp is always read.

- Display Message, If Source Files Updated

A message is displayed when the source file is newer than the IDL file. If the [OK] button is clicked in this message dialog box, the source file is read instead of the first layer corresponding to the file. When read, the layer option settings is applied to the file at the that time. If the [No] button is clicked, the IDL file is read. The source file is not updated.

If [Apply to all update files] is selected, all source files found subsequently later are updated without any messages being displayed.

(b) Layer Option as Update

This area sets the layer when the source file is read.

- Not Apply Layers

When a new source file is read, it is read again without layer.

- Recover Layers

When a new source file is read, the layer set in the previous source file is restored (default).

- Follow Layer Rule

When a new source file is read, the layer rule is applied to the file.

(c) Layer Indent

- No Replace

When a new source file is saved, the indent of layer is not replaced (default).

- Replace Tab

The layer indent is replaced by a Tab and the source file is saved.

- Replace Space

The layer indent is replaced by a one-byte space and the source file is saved.

- Not Replace Layer

A layer indent is not used for a layer higher than the one specified.

(d) Convert Tabs to Space in Saving a Source File

If this check box is selected, Tab characters and two-byte spaces are replaced by one-byte spaces when the source file is saved.

(6) [Window] tab

This tab is used to make settings related to windows.

Figure 6-117 [PM+ Settings] Dialog Box - [Window] Tab



(a) Window Size

This area is used to select the size of the [Edit window](#).

- Maximize

Opens the [Edit window](#) in its maximum size.

- Default of PM+

Opens the [Edit window](#) in the size of the PM+ screen, which is not its maximum size.

- Default of Windows

Opens the [Edit window](#) in cascade to show each caption (default). However, the [Edit window](#) opens in the default size selected when the [\[Project\] window](#) or [\[OutPut\] window](#) is displayed.

- Previous Size

Only files recorded in the file history information are opened in the size they were when closed previously. Files not saved in the file history information are opened in the default size of PM+.

(b) Memorize of Windows Position

This area is used to select whether the window position is saved during editing. If the relevant check box is selected, the window position is saved when the window is closed. If it is not selected, the window position is not saved. By default, all check boxes are selected.

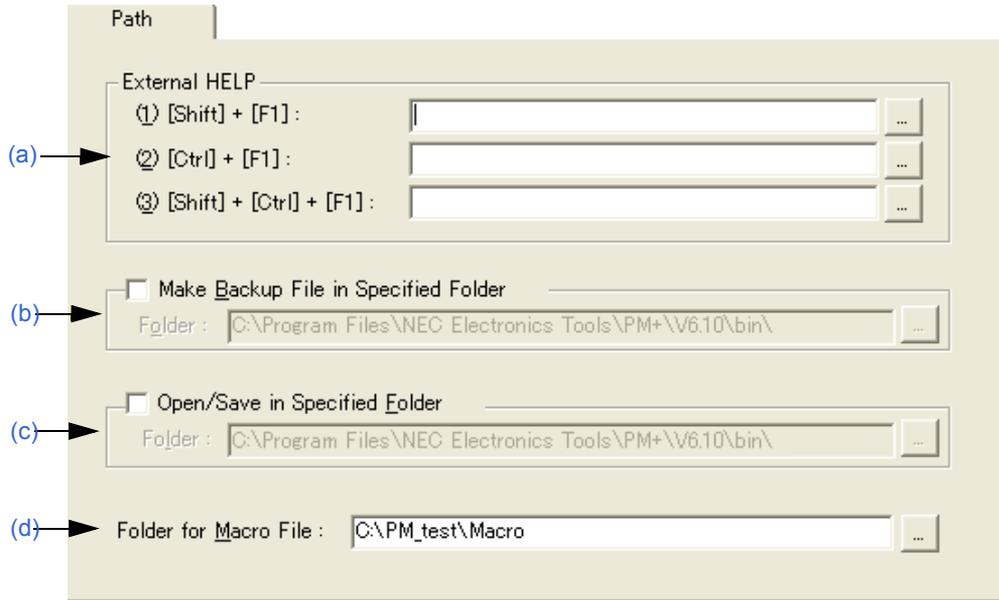
(c) Always Maximize PM+

If this check box is selected, the previous information is ignored and PM+ starts up in the maximum size.

(7) [Path] tab

This tab is used to make settings related to paths.

Figure 6-118 [PM+ Settings] Dialog Box - [Path] Tab

**(a) External HELP**

This area specifies the paths for the external help files to be referenced during editing.

- (1) [Shift] + [F1]

Specify the external help file to open by pressing the [Shift] + [F1] keys. The file can be entered directly in the text box or selected by the [...] button.

- (2) [Ctrl] + [F1]

Specify the external help file to open by pressing the [Ctrl] + [F1] keys. The file can be entered directly in the text box or selected by the [...] button.

- (3) [Shift] + [Ctrl] + [F1]

Specify the external help file to open by pressing the [Shift] + [Ctrl] + [F1] keys. The file can be entered directly in the text box or selected by the [...] button.

(b) Make Backup File in Specified Folder

This area specifies the folder in which the backup file is created for the file being edited. If there is no specification, the backup file is created in the same folder as the file being edited.

Specify the folder by checking the box and entering the folder. The folder can be entered directly in the text box or selected by the [...] button.

(c) Open/Save in Specified Folder

This area specifies the folder to be displayed first when a file is manipulated. If there is no specification, the current folder is displayed.

Specify the folder by checking the box and entering the folder. The folder can be entered directly in the text box or selected by the [...] button.

(d) Folder for Macro File

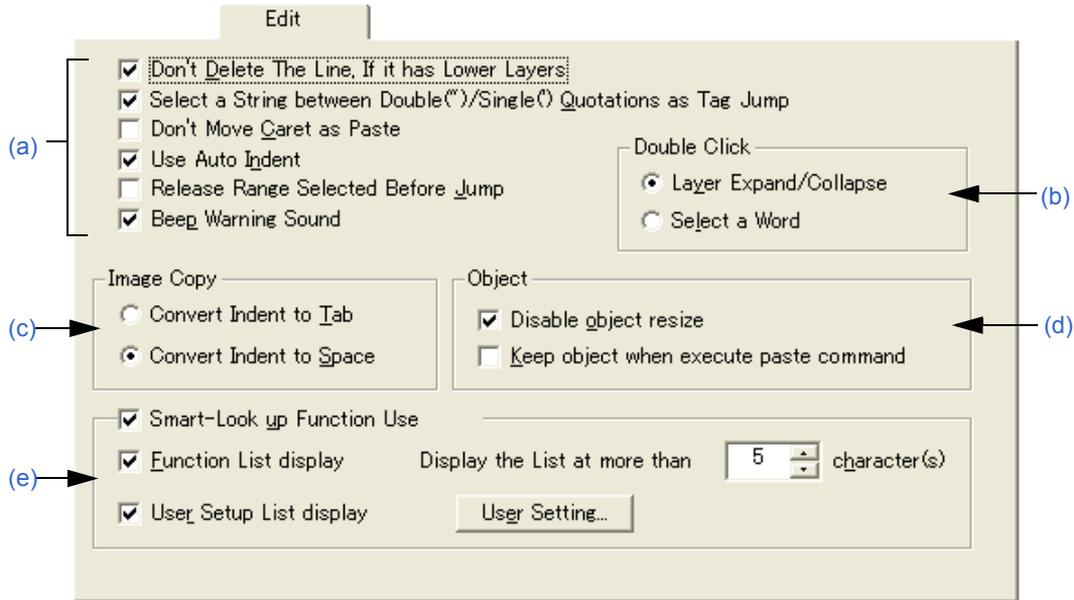
Specify the folder in which macro files are saved. If there is no specification, the macro files are saved in the same folder as PM+.

The folder can be entered directly in the text box or selected by the [...] button.

(8) [Edit] tab

This dialog box is used to make settings related to edits.

Figure 6-119 [PM+ Settings] Dialog Box - [Edit] Tab

**(a) Setting at the time of edit area****- Don't Delete The Line, If it has Lower Layers**

If this check box is selected, lines with lower layers are not deleted when the line delete command is executed (default). If it is not selected, lines are deleted regardless of whether they have lower layers.

- Select a String between Double(")/Single(') Quotations as Tag Jump

If this check box is selected, if a character string enclosed by " or "' at the jump origin is at the jump destination when a tag jump is executed, that character string is range selection (default). If it is not selected, range selection is not executed.

- Don't Move Caret as Paste

If this check box is selected, the caret position is not moved to the place where character string or line is pasted. If it is not selected, the caret position is moved to the paste location.

- Use Auto Indent

If this check box is selected, the caret is moved to the previous indent line when a linefeed occurs (default). If it is not selected, the caret is displayed on the first line when a linefeed occurs.

- Release Range Selected Before Jump

If this check box is selected, the range selection is cleared before the caret is moved when a menu related to jump is executed. If it is not selected, the caret is moved from the starting position to the destination of the caret or the closest position to it while range selection is being executed.

- Beep Warning Sound

If this check box is selected, an alarm sound is output when warning message is displayed.

(b) Double Click

This area is used to select the double-click operation.

- Layer Expand/Collapse

Expands or collapses the lower layers.

- Select a Word

Selects a word including the caret with range selection when the mouse is double-clicked on the [Edit window](#).

(c) Image Copy

This area is used to select whether a layer is replaced by a space or a Tab when an image is copied.

- Convert Indent to Tab

The layer is replaced by a Tab.

- Convert Indent to Space

The layer is replaced by a space (default).

(d) Object

- Disable object resize

If this check box is selected, the size of an object pasted in a document cannot be changed (default).

- Keep object when execute paste command

If this check box is selected, an object is pasted as an object, even if it can be pasted as text. To paste it as text, use the [Paste Special...] menu item.

(e) Smart-Look up Function Use

If this check box is selected, the smart lookup function can be used.

- Function List display

If this check box is selected, the candidate function names with the corresponding number of the characters are displayed.

- Display the List at more than xxx character(s)

Sets the number of the characters at which the candidate functions are displayed. 1 to 30 can be selected. The default number is 5.

- User Setup List display

If this check box is selected, character strings other than function names can be added to the candidate list by setting an arbitrary keyword. The keyword can be set by clicking the [User Setting...] button.

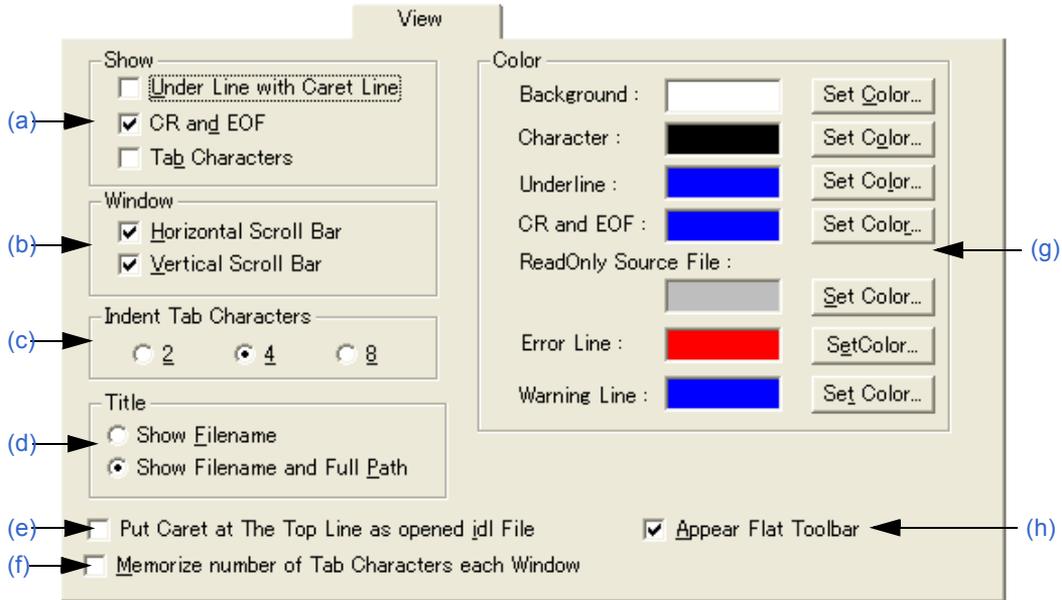
- [User Setting...] button

Opens the [\[User Setting\] dialog box](#).

(9) [View] tab

This tab is used to make settings related to window display.

Figure 6-120 [PM+ Settings] Dialog Box - [View] Tab

**(a) Show**

- Under Line with Caret Line

If this check box is selected, an underline is displayed at the caret line on the [Edit window](#).

- CR and EOF

If this check box is selected, a blue "|" is displayed for a linefeed code (CR) and "[EOF]" is displayed for a terminating code (EOF) (default).

- Tab Characters

If this check box is selected, a Tab code is displayed in a gray.

(b) Window

- Horizontal Scroll Bar

If this check box is selected, a horizontal scroll bar is displayed at the bottom of each [Edit window](#) (default).

- Vertical Scroll Bar

If this check box is selected, a vertical scroll bar is displayed at the right side of each [Edit window](#) (default).

(c) Indent Tab Characters

This area sets the number of characters for a Tab indent. 2, 4 or 8 characters can be set.

(d) Title

This area is used to select the method to display the title bar on the [Edit window](#).

- Show Filename

Only file names are displayed on the title bar in the [Edit window](#).

- Show Filename and Full Path

The title bar on the [Edit window](#) is displayed with the full path (default).

(e) Put Caret at The Top Line as opened idl File

If this check box is selected, the caret is displayed at the first line when an IDL file is opened. If it is not selected, the caret is displayed at the position saved the previous time.

(f) Memorize number of Tab Characters each Window

If this check box is selected, the number of Tab character expansions is set for each [Edit window](#). If it is not selected, the setting is executed for the entire PM+.

(g) Color

- Background

Sets the background color of the [Edit window](#). The currently set color is displayed in the text box next to "character". The color can be changed by clicking the [Set Color...] button.

- Character

Sets the underline color of the [Edit window](#). The currently set color is displayed in the text box next to "character". The color can be changed by clicking the [Set Color...] button.

- Underline

Sets the underline color of the [Edit window](#). The currently set color is displayed in the text box next to "underline". The color can be changed by clicking the [Set Color...] button.

- CR and EOF

Sets the linefeed code and EOF color of the [Edit window](#). The currently set color is displayed in the text box next to "CR and EOF". The color can be changed by clicking the [Set Color...] button.

- ReadOnly Source File

Sets the character color of the source files set as read-only in the IDL files. The currently set color is displayed in the text box next to "ReadOnly Source File". The color can be changed by clicking the [Set Color...] button.

- Error Line

Specifies the color used to highlight characters in the error indication line in the [\[OutPut\] window](#). The currently set color is displayed in the text box next to "Error Line".

The color can be changed by clicking the [Set Color...] button.

- Warning Line

Specifies the color used to highlight characters in the warning indication line in the [\[OutPut\] window](#). The currently set color is displayed in the text box next to "Warning Line".

The color can be changed by clicking the [Set Color...] button.

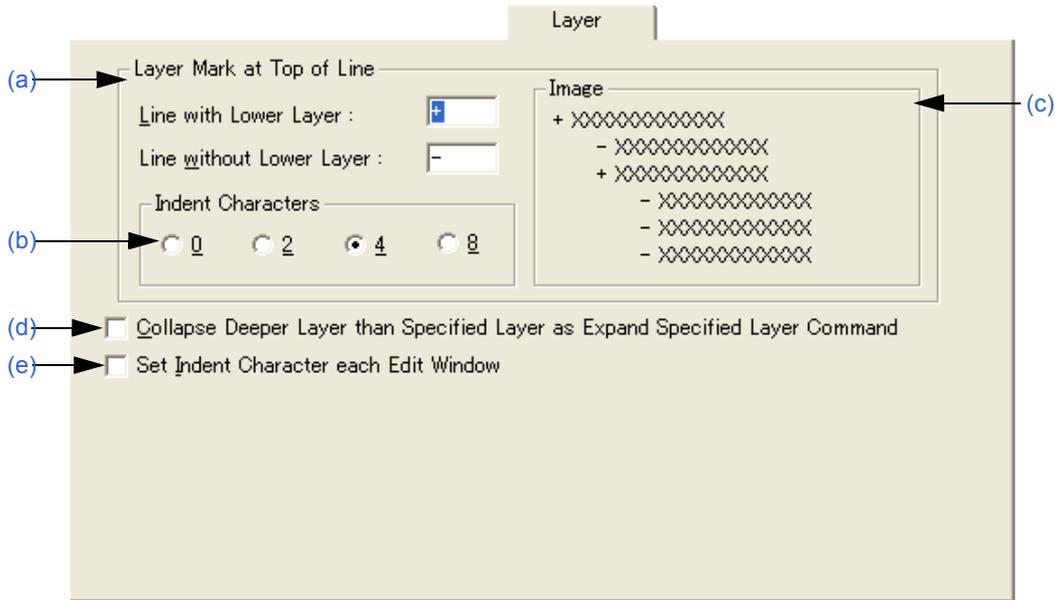
(h) Appear Flat Toolbar

If this check box is selected, the toolbar is displayed flat (default).

(10) [Layer] tab

This tab is used to make settings related to layers.

Figure 6-121 [PM+ Settings] Dialog Box - [Layer] Tab

**(a) Layer Mark at Top of Line**

This area sets the layer mark displayed at the top of a line.

- Line with Lower Layer

Sets the layer mark displayed at the top of a line with lower layers. The default is "+".

- Line without Lower Layer

Sets the layer mark displayed at the top of a line without lower layers. The default is "-".

(b) Indent Characters

Specify the number of layer indent characters used when a layer is displayed. 0, 2, 4 or 8 characters can be set.

(c) Image

This area displays an image with the set layer mark.

(d) Collapse Deeper Layer than Specified Layer as Expand Specified Layer Command

If this check box is selected, all the layers higher than the one specified are collapsed when [Expand the Specific Layer...] is selected from the [Layer] menu. If it is not selected, the already expanded layers higher than one specified are left as is.

(e) Set Indent Character each Edit Window

If this check box is selected, the number of indent characters is set for each [Edit window](#). If it is not selected, the setting is executed for the entire PM+.

(11) [Scroll] tab

This tab is used to make settings related to scrolling in the [Edit window](#).

Figure 6-122 [PM+ Settings] Dialog Box - [Scroll] Tab

**(a) Way of scrolling setting area**

- Move Caret in High Speed by Ctrl + Up/Down arrow Keys

If this check box is selected, the caret is moved quickly (by 5 lines) by pressing the [Ctrl] + [UP/DOWN arrow] keys (default). If it is not selected, the caret is not moved quickly.

- Move Caret with Page Scroll

If this check box is selected, the caret is also scrolled when the screen is scrolled (default). If it is not selected, the caret does not move when the screen is scrolled.

- Scroll Half Page as Page UP/Down

If this check box is selected, the screen is scrolled by half a screen by pressing the Page Up/Page Down keys. If it is not selected, the Page Up/Page Down keys perform their normal operation.

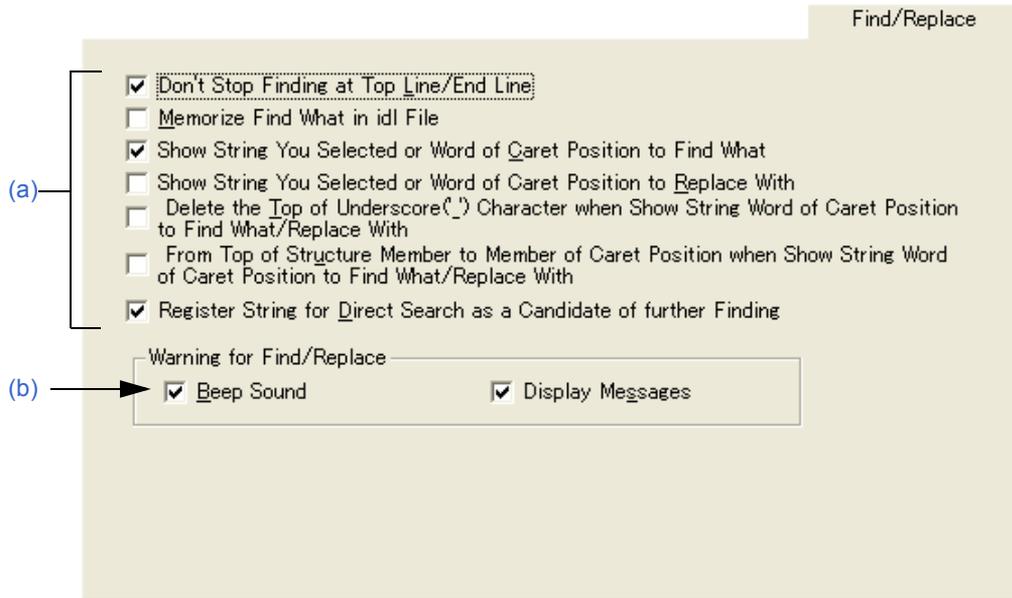
(b) Mouse Wheel

This area sets the number of lines to be scrolled when using the wheel button of Microsoft's IntelliMouse.

(12) [Find/Replace] tab

This tab is used to make settings related to a search and replacement.

Figure 6-123 [PM+ Settings] Dialog Box - [Find/ Replace] Tab



(a) Way of search/replacement setting area

- Don't Stop Finding at Top Line/End Line

If this check box is selected, a message is displayed when the downward search finishes at the final line or the upward search finishes at the first line (default). If the [Enter] key or the key displayed on the message is clicked, the search goes on. If it is not selected, the search finishes at the final or the first line.

- Memorize Find What in idl File

If this box is selected, the character strings (last 10) or file names (last 10) searched in the [\[Find String\] dialog box](#), [\[Replace String\] dialog box](#), or [\[Find in Files\] dialog box](#) are saved in an IDL file, and are valid the next time the IDL file is opened. If it is not selected, the information is saved in the registry.

- Show String You Selected or Word of Caret Position to Find What

If this check box is selected, the character string with range selection for searching is displayed when the [\[Find String\] dialog box](#) is opened. If it is not selected, the previously searched character string is displayed.

- Show String You Selected or Word of Caret Position to Replace With

If this check box is selected, the character string with range selection for replacement is displayed when the [\[Replace String\] dialog box](#) is opened. If it is not selected, the previously replaced character string is displayed.

- Delete the Top of Underscore('_') Character when Show String Word of Caret Position to Find What/Replace With

If this check box is selected, the character string to be searched is displayed ignoring the underscore character ('_') at the head of a word.

- From Top of Structure Member to Member of Caret Position when Show String Word of Caret Position to Find What/Replace With

If this check box is selected, when a character string to be searched or replaced is displayed, a words at which the caret is placed is considered to be a C language structure, and that structure becomes the target character string from the start of the structure. The structures are recognized by "->" or ".". Examples are shown below.

pcWork->dwInfo=OLE_BIT

↑
The character string to be searched is set "pcWork->dwInfo".

pcWork.dwInfo=OLE_BIT

↑
The character string to be searched is set "pcWork.dwInfo".

- Register String for Direct Search as a Candidate of further Finding

If this check box is selected, character strings searched directly are added to the candidate character strings in the [\[Find String\] dialog box](#) (default). If it is not selected, character strings searched directly are not added to the candidate character strings.

(b) Warning for Find/Replace

This area sets the operation mode when a character string cannot be found.

- Beep Sound

If this check box is selected, a beep sound is output when the search finishes. This can be set when the [\[Beep Warning Sound\]](#) check box on the [\[Edit\]](#) tab is selected.

- Display Messages

If this check box is selected, a message is displayed when the search finishes.

Function buttons

Button	Function
OK	Enables the specified settings.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

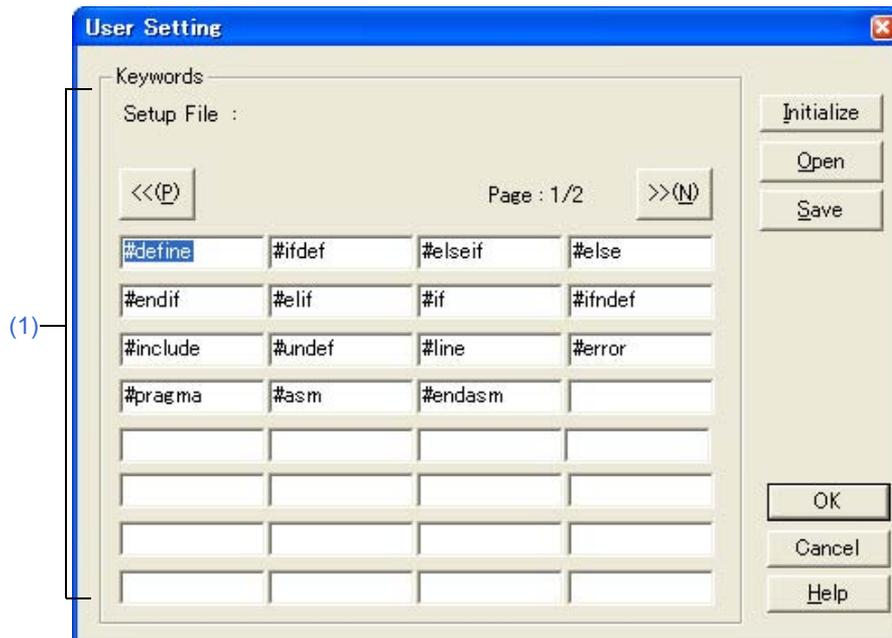
[User Setting] dialog box

This dialog box is used to set arbitrary keywords for the smart lookup function.

The dialog box consists of two pages and up to 64 keywords can be set.

The keywords set in this dialog box can be saved as a keyword file. A keyword file is a text file and can be edited easily with an arbitrary editor.

Figure 6-124 [User Setting] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [User Setting...] button on the [Edit] tab in the [PM+ Settings] dialog box.

Explanation of each area

(1) Keywords

Specify keywords directly. Up to 64 keywords can be set.

If the keyword file (*.kwd) is read by clicking the [Open] button, the name of the file read is displayed following after "Setup File :".

Button	Function
<<	Displays the previous page.
>>	Displays the next page.

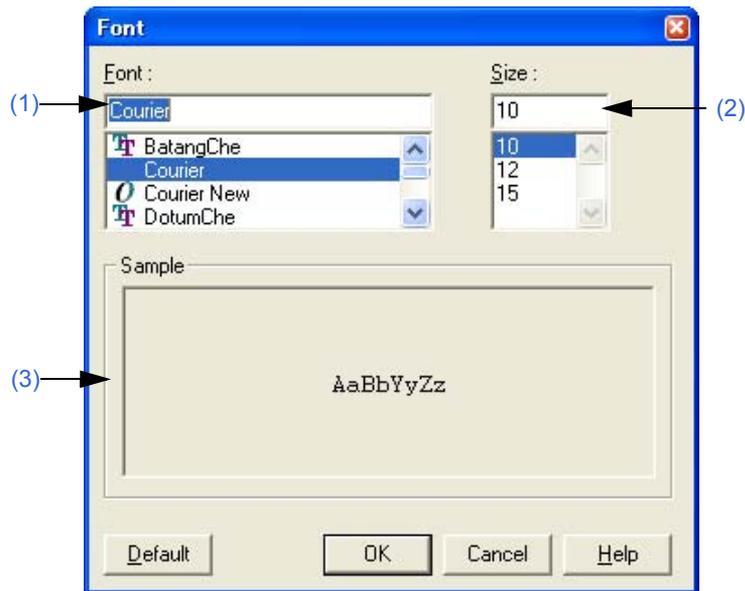
Function buttons

Button	Function
Initialize	Deletes all the set keywords. If there were any setting files being read, that file name is cleared.
Open	Opens the [Open Keyword File] dialog box and reads the keyword file (*.kwd). At this time, the previous keyword is deleted. If there are over 65 keywords in the setting file, the 65th and subsequent keywords are ignored.
Save	Opens the [Save Keyword File] dialog box and saves the keywords in a setting file.
OK	Sets the keywords.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Font] dialog box

This dialog box is used to select the type and size of characters to be displayed in the [Edit window](#).

Figure 6-125 [Font] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [Tool] menu -> [Font...].

Explanation of each area

(1) Font

Specify a desired font.

(2) Size

Specify a desired size.

(3) Sample

This area displays the sample characters of the selected font and size.

Function buttons

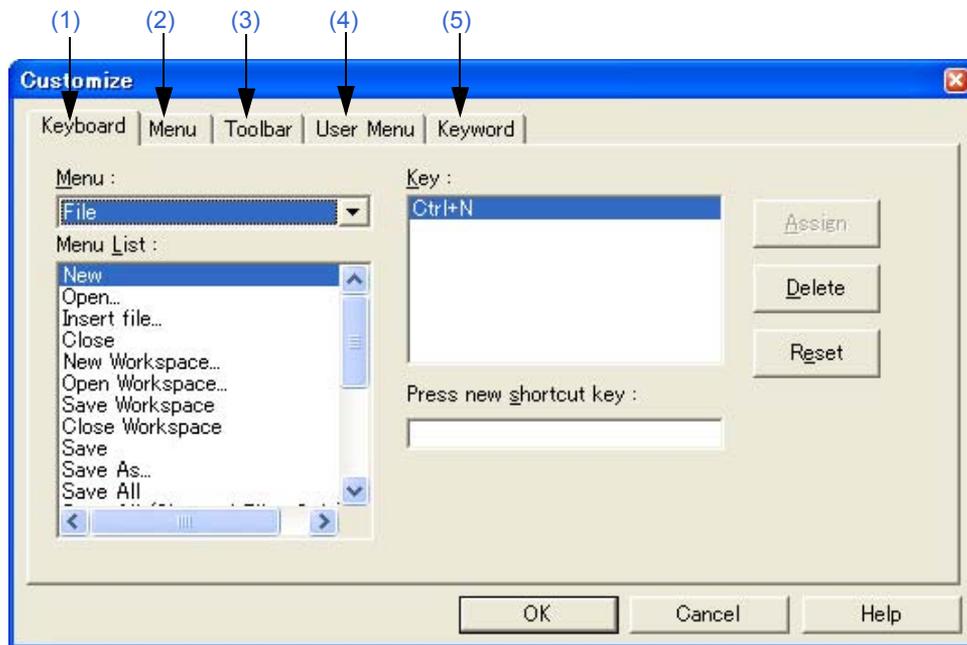
Button	Function
Default	Registers the font specified here as the default font to be used when displaying a new Edit window or when loading a file.
OK	Enables the specified items and closes the dialog box.
Cancel	Does not enable the specified items, and closes this dialog box.
Help	Opens the help for this dialog box.

[Customize] dialog box

This dialog box is used to set the following options. The option settings are performed on the following tabs.

- (1) [Keyboard] tab
- (2) [Menu] tab
- (3) [Toolbar] tab
- (4) [User Menu] tab
- (5) [Keyword] tab

Figure 6-126 [Customize] Dialog Box



This section describes the following items:

- Opening
- Explanation of each tab
- Function buttons

Opening

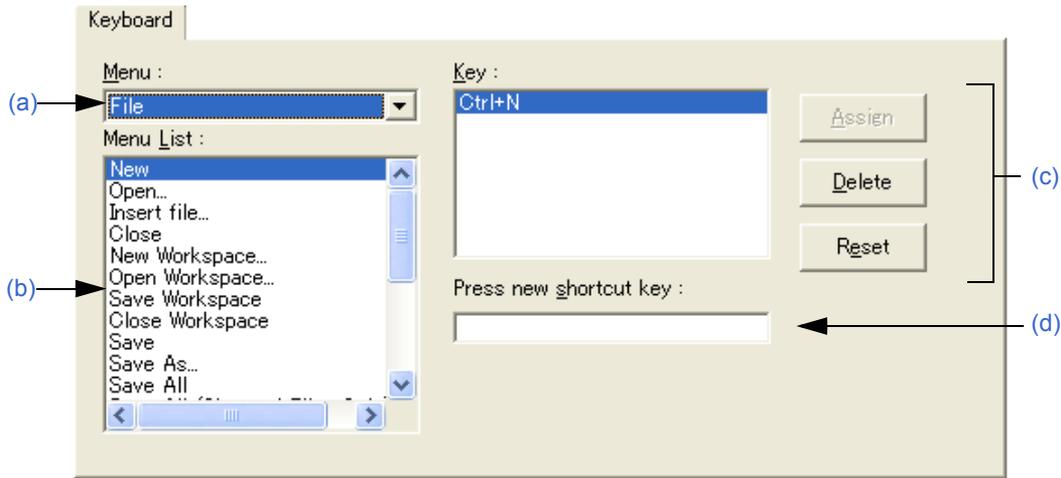
- Select the [Tool] menu -> [Customize...].
- Select the [Customize...] from the right mouse click menu on the toolbar in the [Main window](#).

Explanation of each tab

(1) [Keyboard] tab

This tab sets the options for the keyboard.

Figure 6-127 [Customize] Dialog Box - [Keyboard] Tab



(a) Menu

This area is used to select a menu that includes the menu item to assign keys from the drop-down list.

(b) Menu List

This area lists the menu items included in the menu selected from [Menu]. Select a menu item to which a shortcut key is assigned.

(c) Key

This area displays the keys that are currently assigned to the menu item selected in [Menu List].

Button	Function
Assign	Assigns the entered key to the selected menu item. If the input shortcut key has already been assigned to another menu item, the assignment to the menu is cleared.
Delete	Deletes the shortcut key assigned to the selected menu item.
Reset	Clears all assigned shortcut keys and restores the default state (refer to " APPENDIX C SHORTCUT KEYS ").

(d) Press new shortcut key

Type the desired key on the keyboard; that key is then displayed in the text box. To execute a menu item using a two-stroke key entry, enter the second key following the first. However, if a key cannot be used as a shortcut, it will not be displayed.

If the entered key has already been assigned to another menu item, the current assignment of the shortcut key is displayed as "Currently assigned to:". If the second key is assigned to the first key, it is displayed as "Prefixed Key". Multiple keys can be assigned to a single command.

[Cautions]

- The following key allocations are not possible, so allocate different keys.

[Alt]+[A], [Alt]+[D], [Alt]+[E], [Alt]+[Shift]+[A], [Alt]+[Shift]+[D], [Alt]+[Shift]+[E]

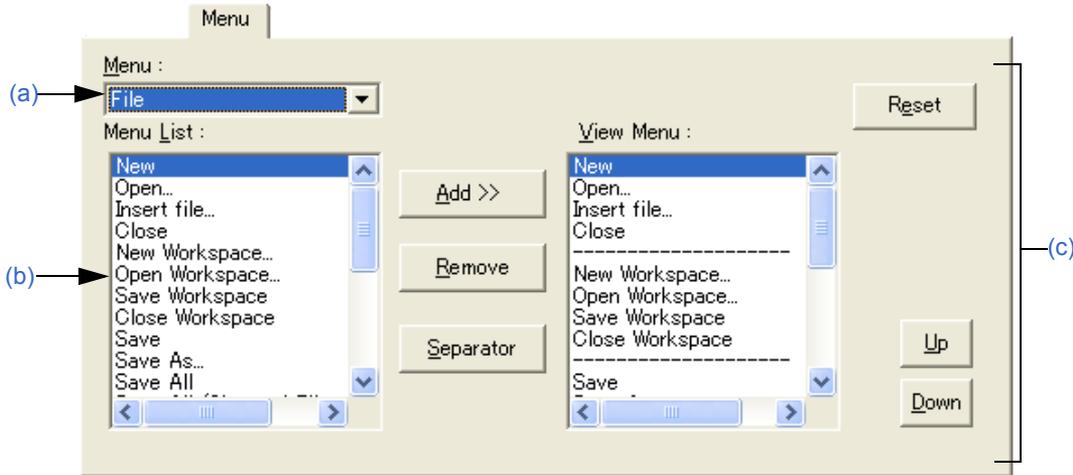
- The shortcut keys for [Help] menu -> [External HELP 1] to [External HELP 3] are fixed.

- The [Delete] key is assigned to the [Edit] menu -> [Delete]. The assignment of the [Delete] key cannot be changed. However, keys other than the [Delete] key can also be assigned.
- If the [Edit]menu [Object] command is allocated to a shortcut key, the shortcut key allocated to the [Object] menu item is not displayed.

(2) [Menu] tab

This tab sets the options for menus.

Figure 6-128 [Customize] Dialog Box - [Menu] Tab



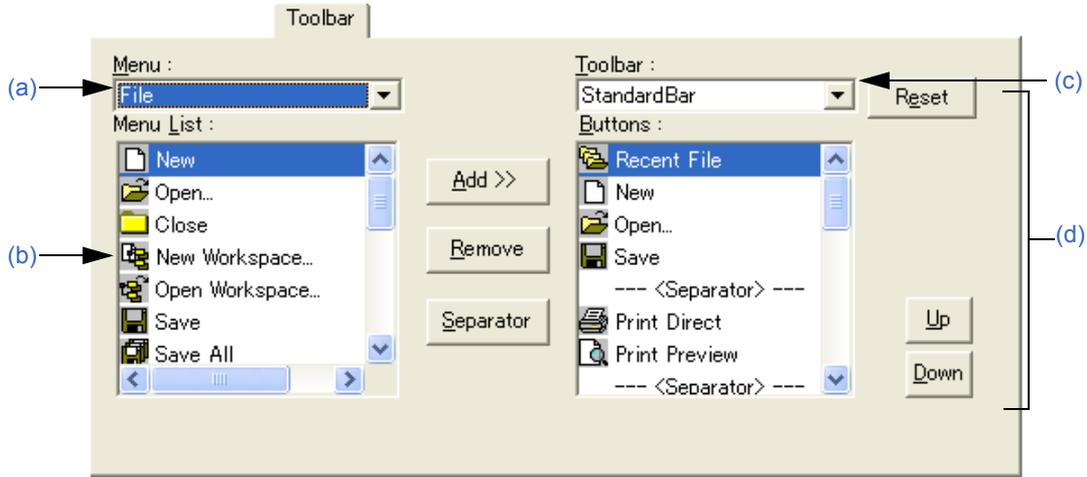
- (a) Menu
This area is used to select a menu that includes the menu item to be added from the drop-down list.
- (b) Menu List
This area lists menu items that can be included in the menu selected in [Menu]. Select a menu item to be set.
- (c) View Menu
This area displays the menu items currently specified for the menu selected in [Menu].

Button	Function
Add>>	Inserts the menu item selected in [Menu List] at the position selected in [View Menu].
Remove	Deletes the menu item selected in [View Menu].
Separator	Inserts a separating line at the position selected in [View Menu].
Reset	Returns the configuration of the selected menu to the default state.
Up	Moves the menu item selected in [View Menu] up.
Down	Moves the menu item selected in [View Menu] down.

(3) [Toolbar] tab

This tab sets the options for the toolbar.

Figure 6-129 [Customize] Dialog Box - [Toolbar] Tab



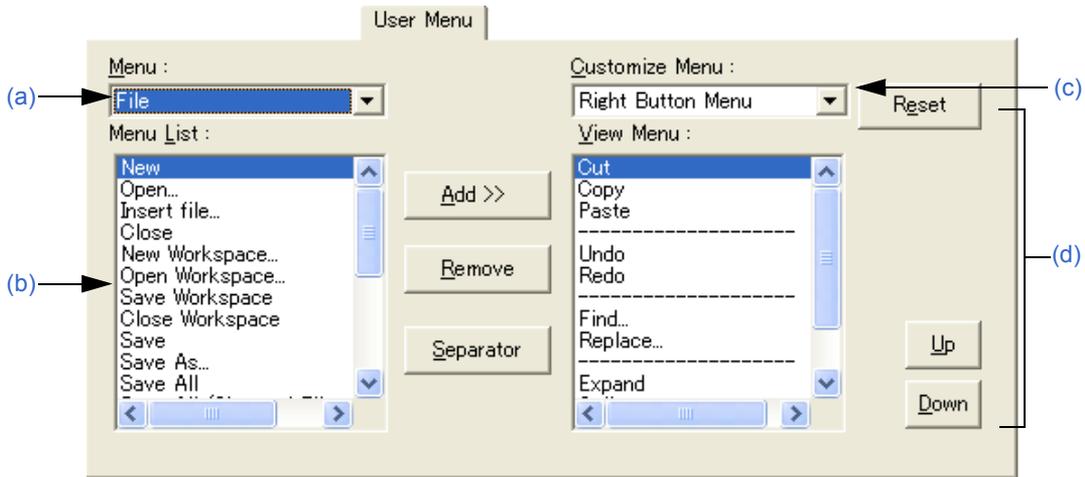
- (a) Menu
This area is used to select a menu that includes the menu item to be set from the drop-down list.
- (b) Menu List
This area lists the buttons and menu items included in the menu selected from [Menu]. Select a button to be added.
- (c) Toolbar
This area is used to select the toolbar to be customized.
The standard bar and build bar can be customized.
- (d) Buttons
This area displays the buttons and menu items currently specified for the toolbar selected in [Toolbar].

Button	Function
Add>>	Inserts the menu item selected in [Menu List] at the position selected in [Buttons].
Remove	Deletes the menu item selected in [Buttons].
Separator	Inserts a separating line at the position selected in [Buttons].
Reset	Returns the configuration of the toolbar to the default state.
Up	Moves the menu item selected in [Buttons] up.
Down	Moves the menu item selected in [Buttons] down.

(4) [User Menu] tab

This tab is used to set the menu displayed by the right mouse button or by the assigned shortcut key.

Figure 6-130 [Customize] Dialog Box - [User Menu] Tab



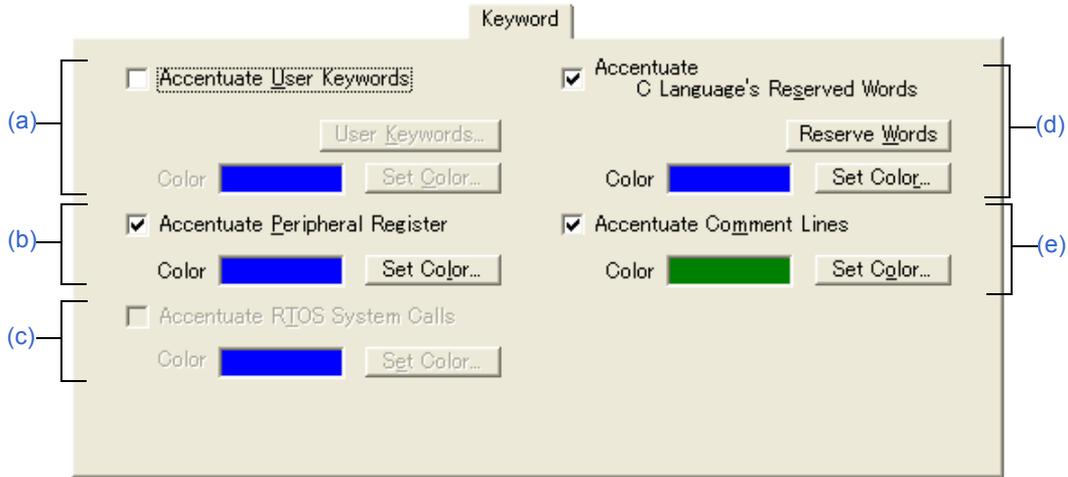
- (a) Menu
This area is used to select a menu that includes the menu item to be set from the drop-down list.
- (b) Menu List
This area lists menu items included in the menu selected in [Menu]. Select a menu item to be added.
- (c) Customize Menu
This area is used to select the menu to be customized.
- (d) View Menu
This area displays the menu items currently specified for the menu selected in [Customize Menu].

Button	Function
Add>>	Inserts the menu item selected in [Menu List] at the position selected in [View Menu].
Remove	Deletes the menu item selected in [View Menu].
Separator	Inserts a separating line at the position selected in [View Menu].
Reset	Returns the configuration of the selected menu to the default state.
Up	Moves the menu item selected in [View Menu] up.
Down	Moves the menu item selected in [Buttons] down.

(5) [Keyword] tab

This tab is used to set the keywords to be highlighted with a color.

Figure 6-131 [Customize] Dialog Box - [Keyword] Tab

**(a) Accentuate User Keywords**

If this check box is selected, the keywords defined by the user are displayed in the set color.

You can define the keywords with the [\[Edit User keyword\] dialog box](#) opened by clicking the [\[User Keywords...\]](#) button, and select the color with the Color dialog box opened by clicking the [\[Set Color...\]](#) button.

(b) Accentuate Peripheral Register

If this check box is selected, the peripheral register names of the device used in the project are displayed in the set color (default).

You can select the color with the Color dialog box opened by clicking the [\[Set Color...\]](#) button.

(c) Accentuate RTOS System Calls

If this check box is selected, the real-time OS keywords (system calls) are displayed in the set color. This check box is valid only when a real-time OS of a supported version is installed.

You can select the color with the Color dialog box opened by clicking the [\[Set Color...\]](#) button.

(d) Accentuate C Language's Reserved Words

If this check box is selected, the C language keywords are displayed in the set color.

The C language keywords are set by default, but they can be customized by the user with the [\[Edit C Language's reserve words\] dialog box](#) opened by clicking the [\[Reserve Words\]](#) button.

You can select the color with the Color dialog box opened by clicking the [\[Set Color...\]](#) button.

(e) Accentuate Comment Lines

If this check box is selected, the comment parts are displayed in the set color.

In an IDL file, the comments are highlighted by the comment mark set in [\[Change Source File Name...\]](#) on the [\[File\]](#) menu.

You can select the color with the Color dialog box opened by clicking the [\[Set Color...\]](#) button.

Function buttons

Button	Function
OK	Enables the specified items and closes the dialog box.
Cancel	Does not enable the specified items, and closes this dialog box.
Help	Opens the help for this dialog box.

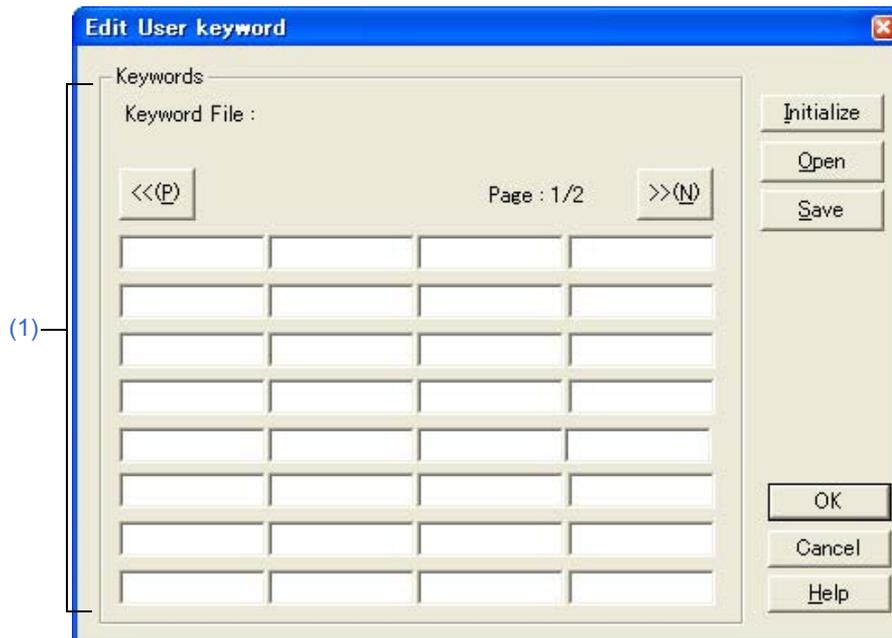
[Edit User keyword] dialog box

This dialog box is used to edit the keywords defined by the user to highlight arbitrary character strings.

The dialog box consists of two pages and up to 64 keywords can be set.

The keywords set in this dialog box can be saved as a keyword file. A keyword file is a text file and can be edited easily with an arbitrary editor.

Figure 6-132 [Edit User keyword] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [User Keywords...] button on the [Tool] menu -> [Customize...] - [Keyword] tab.

Explanation of each area

(1) Keywords

Specify keywords directly. Up to 64 keywords with 32 or fewer one-byte characters can be set.

If the keyword file (*.kwd) is read by clicking the [Open] button, the name of the file read is displayed following after "Keyword File :".

Button	Function
<<	Displays the previous page.
>>	Displays the next page.

Function buttons

Button	Function
Initialize	Deletes all the set keywords. If there were any keyword file being read, that file name is cleared from "Keyword File :" area.
Open	Opens the [Open Keyword File] dialog box and reads the keyword file (*.kwd). At this time, the previous keyword is deleted. If there are over 65 keywords in the setting file, the 65th and subsequent keywords are ignored.
Save	Opens the [Save Keyword File] dialog box and saves the keywords to the keyword file (*.kwd)
OK	Sets the user keywords.
Cancel	Does not enable the specified items, and closes the dialog box.
Help	Opens the help for this dialog box.

[Edit C Language's reserve words] dialog box

This dialog box is used to edit the keywords for highlighting of reserved words in C language. The dialog box consists of two pages and up to 64 keywords can be set.

Figure 6-133 [Edit C Language's reserve words] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Reserve Words] button on the [Tool] menu -> [Customize...] - [Keyword] tab.

Explanation of each area

(1) Keywords

Specify keywords directly. Up to 64 keywords with 32 or fewer one-byte characters can be set.

Button	Function
<<	Displays the previous page.
>>	Displays the next page.

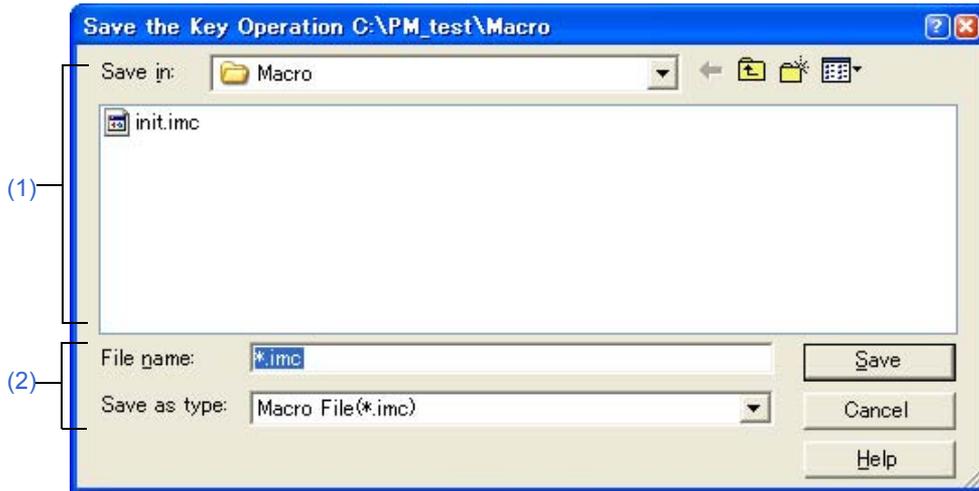
Function buttons

Button	Function
Initialize	Erases all specified keywords and displays default reserved words only. [Reserved words by default] __asm, auto, break, case, char, const, continue, default, do, double, else, enum, extern, float, for, goto, if, int, long, register, return, short, signed, sizeof, static, struct, switch, typedef, union, unsigned, void, volatile, while
OK	Enables the specified items and closes the dialog box.
Cancel	Does not enable the specified items, and closes the dialog box.
Help	Opens the help for this dialog box.

[Save the Key Operation] dialog box

This dialog box is used to save the recorded key operation in a file.

Figure 6-134 [Save the Key Operation] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Tool] menu -> [Save the Key Operations...].

Explanation of each area

(1) Save in

This area displays the folder in which the file is to be saved. The folder name specified in [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab, is displayed. If there is no specification, the folder will be the same as the folder when PM+ was started up.

The folder in which the file is to be saved cannot be changed here. To change the folder, change the specification of [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab.

(2) File name and Save as type

Specify the name of the file to be saved. Only a file name with extension ".imc" can be specified.

Only "Macro File (*.imc)" is available as [Save as type].

Function buttons

Button	Function
Save	Saves the file with the specified name.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

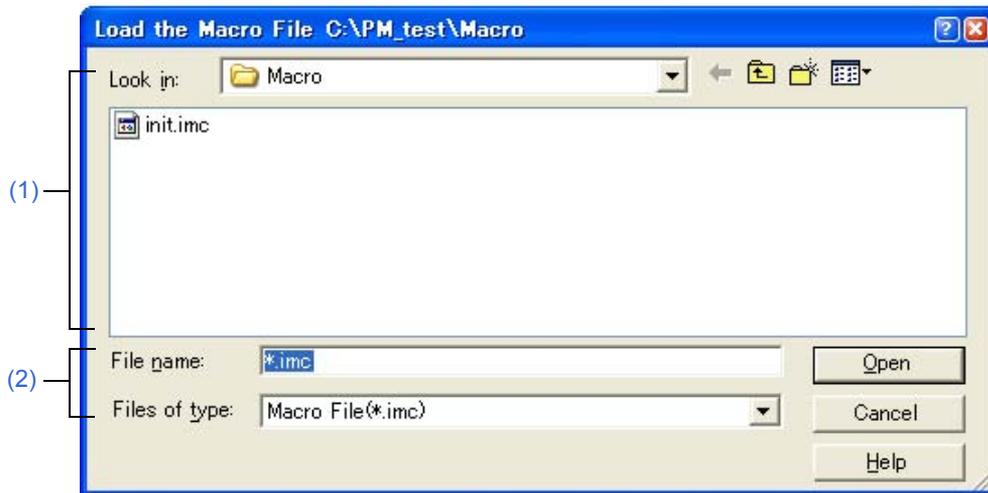
Caution

- The command corresponding to each key operation is described in a macro file (*.imc)
The macro file is text file, and can therefore be referenced or modified. Addition is also possible, in accordance with the prescribed format.
Refer to "[APPENDIX B COMMANDS FOR KEYBOARD MACROS](#)" for details.

[Load the Macro File] dialog box

This dialog box is used to read a saved macro file.

Figure 6-135 [Load the Macro File] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Tool] menu -> [Load the Macro File...].

Explanation of each area

(1) Look in

This area displays the folder that includes the macro file to be read. The folder name specified in [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab, is displayed. If there is no specification, the folder will be the same as the folder when PM+ was started up.

The folder in which the file is to be saved cannot be changed here. To change the folder, change the specification of [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab.

(2) File name and Files of type

Specify the name of the macro file to be loaded. Only a file name with extension ".imc" can be specified.

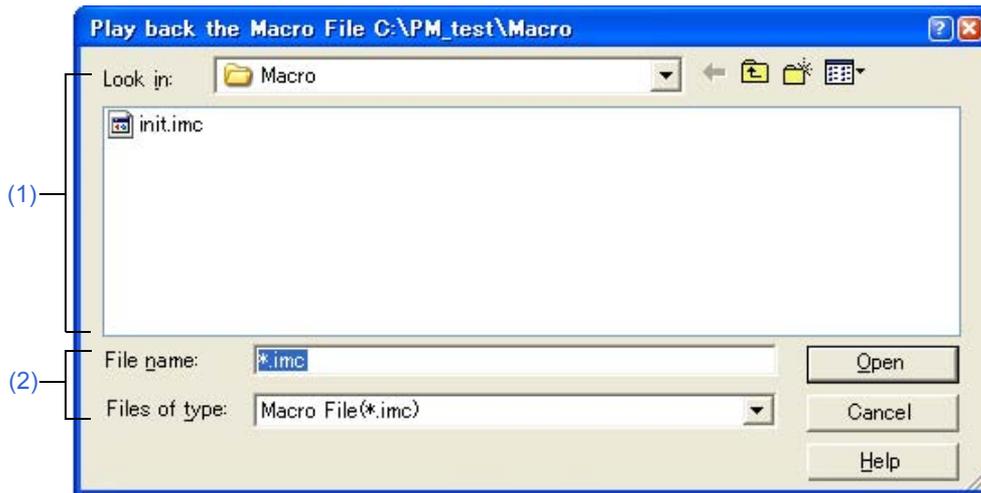
Function buttons

Button	Function
Open	Opens the specified file.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Play back the Macro File] dialog box

This dialog box is used to read the key operation from a saved macro file and execute the macro.

Figure 6-136 [Play back the Macro File] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Tool] menu -> [Play back the Macro File...].

Explanation of each area

(1) Look in

This area displays the folder containing the macro file to be executed. The folder name specified in [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab, is displayed. If there is no specification, the folder will be the same as the folder when PM+ was started up.

The folder in which the file is to be saved cannot be changed here. To change the folder, change the specification of [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab.

(2) File name and Files of type

Specify the name of the macro file to be executed. Only a file name with extension ".imc" can be specified.

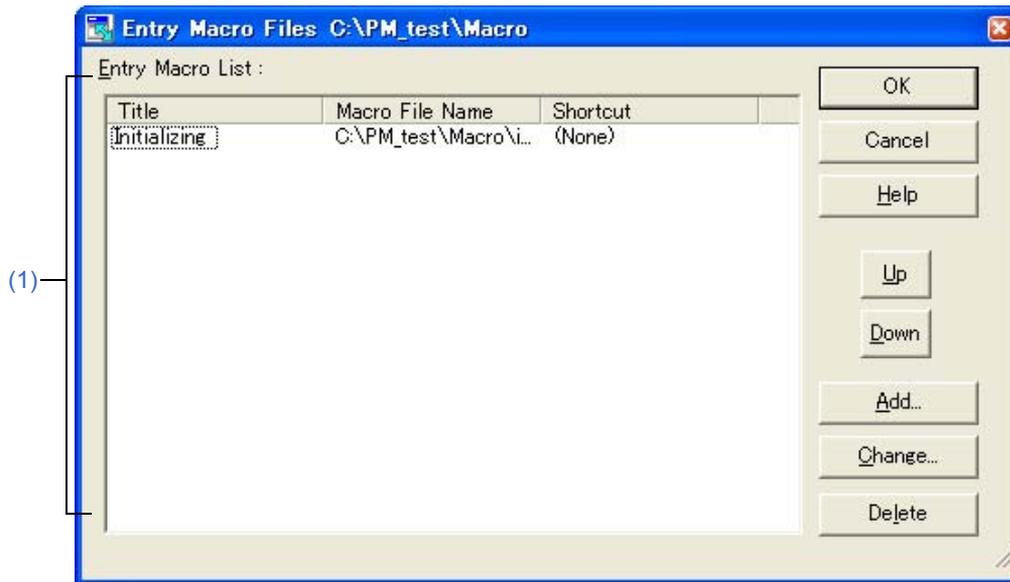
Function buttons

Button	Function
Open	Loads the specified file and executes the saved key operations.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Entry Macro Files] dialog box

This dialog box is used to register a macro file to a key.

Figure 6-137 [Entry Macro Files] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Tool] menu -> [Register the Macro Files...].

Explanation of each area

(1) Entry Macro List

This area displays a list of the macro files that are already registered. Files are added to the [Play Back the Register Macro] menu in order from the top.

A registered macro is selected by selecting the title.

(a) Title

Displays the titles of the macros that are already registered. The title is set by the [Add...] or [Change...] button. The title can also be changed by selecting the character string displayed on the title and clicking it again. The set title becomes the menu character string when a file is added to the [Play Back the Register Macro] menu.

(b) Macro File Name

Displays the registered macro file names.

(c) Shortcut:

Displays the shortcut keys set in the macro file. The shortcut keys are set on the [Tool] menu -> [Customize...] - [Keyword] tab.

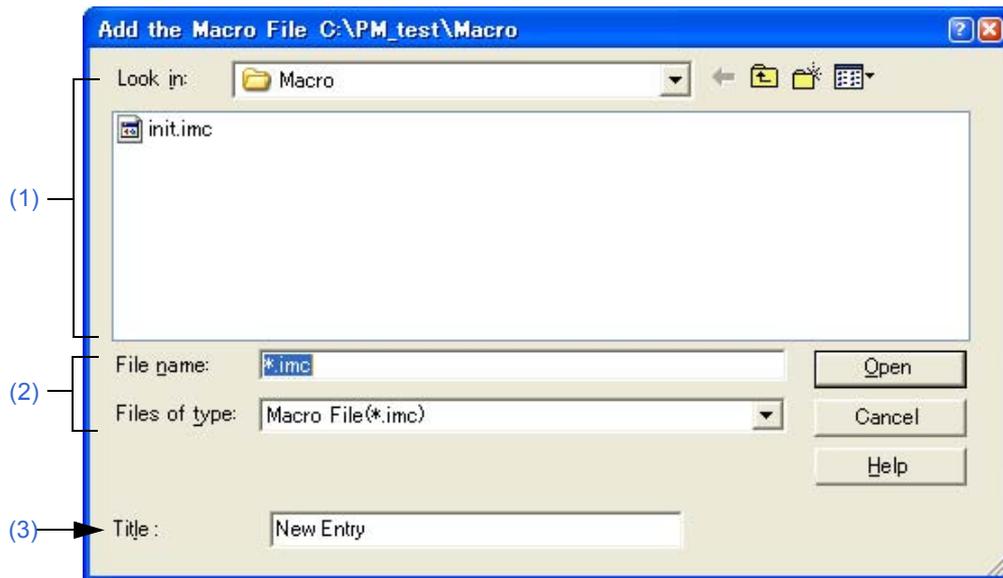
Function buttons

Button	Function
OK	Enables the specified items, and closes the dialog box.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.
Up	Raises the selected macro to the position directly above.
Down	Lowers the selected macro to the position directly below.
Add...	Opens the [Add the Macro file] dialog box to add a new macro. Up to 32 macros can be registered.
Change...	Opens the [Change the Macro file] dialog box to change the contents of the macro selected from the entry macro list.
Delete	Deletes the selected macro.

[Add the Macro file] dialog box

This dialog box is used to add a macro file for macro registration.

Figure 6-138 [Add the Macro file] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Add...] button in the [Tool] menu -> [Register the Macro Files...].

Explanation of each area

(1) Look in

This area displays the folder that includes the macro file to be registered. The folder name specified in [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab, is displayed. If there is no specification, the folder will be the same as the folder when PM+ was started up.

The folder in which the file is to be saved cannot be changed here. To change the folder, change the specification of [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab.

(2) File name and Files of type

Specify the name of the macro file to be added. Only a file name with extension ".imc" can be specified.

(3) Title

This area specifies the title of the registered macro. Up to 32 characters can be set. The set title becomes the menu character string when a file is added to the [Play Back the Register Macro] menu.

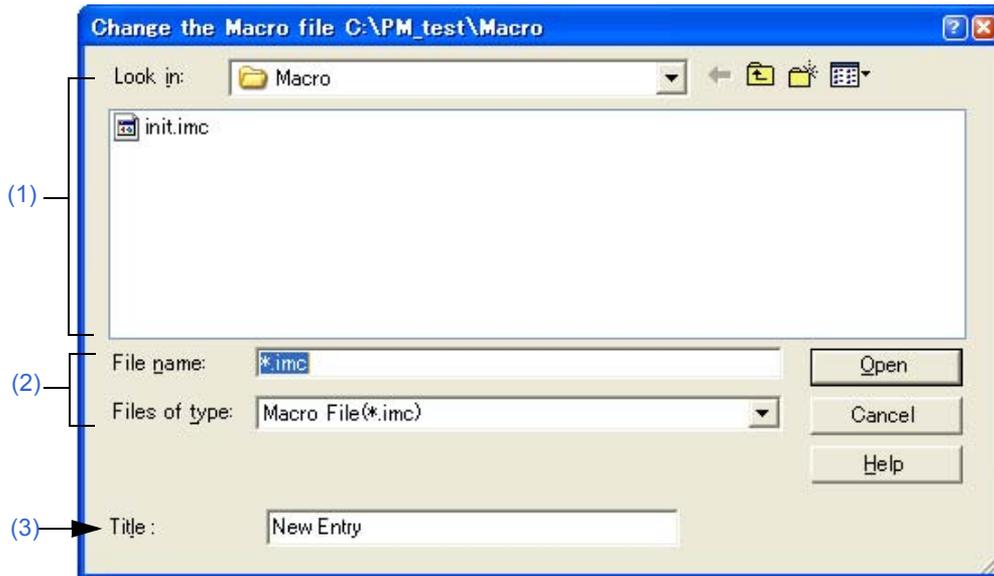
Function buttons

Button	Function
Open	Adds the specified file.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Change the Macro file] dialog box

This dialog box is used to change the stored contents of a macro file.

Figure 6-139 [Change the Macro file] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Click the [Change...] button in the [Tool] menu -> [Register the Macro Files...].

Explanation of each area

(1) Look in

This area displays the folder containing the selected macro file. The folder name specified in [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab, is displayed. If there is no specification, the folder will be the same as the folder when PM+ was started up.

The folder in which the file is to be saved cannot be changed here. To change the folder, change the specification of [Folder for Macro File] on the [Tool] menu -> [PM+ Settings...] - [Path] tab.

(2) File name and Files of type

Specify the name of the macro file to be changed. Only a file name with extension ".imc" can be specified.

(3) Title

This area specifies the title of the registered macro. Up to 32 characters can be set. The set title becomes the menu character string when a file is added to the [Play Back the Register Macro] menu.

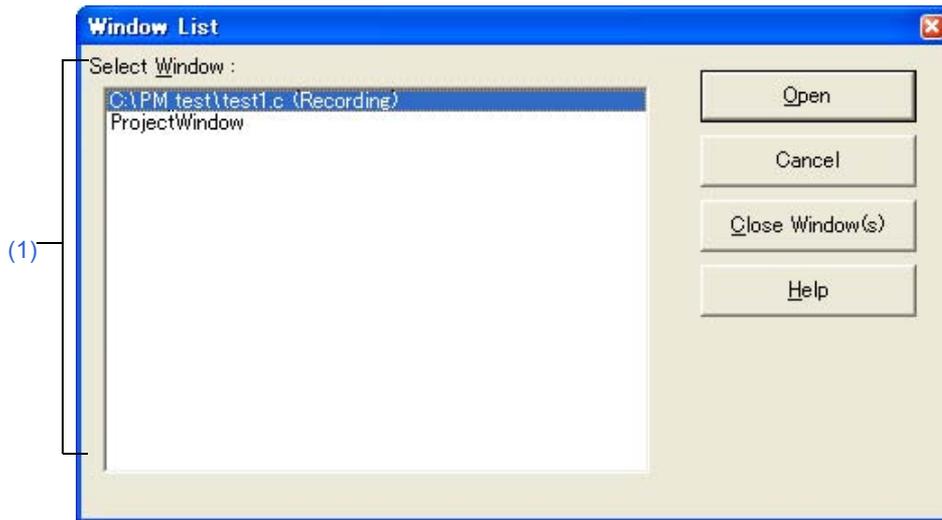
Function buttons

Button	Function
Open	Changes the stored contents of the specified macro file.
Cancel	Does not enable the settings, and closes this dialog box.
Help	Opens the help for this dialog box.

[Window List] dialog box

This dialog box is used to list the windows that are currently open. Double-clicking a window in the list makes that window active.

Figure 6-140 [Window List] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [Window] menu -> [Window List...].

Explanation of each area

(1) Select Window

Displays the names of open windows. Double-clicking a window name in the list makes the window active.

Function buttons

Button	Function
Open	Makes the selected window active.
Cancel	Does not enable the specified items, and closes this dialog box.
Close Window(s)	Closes the selected window(s). Multiple windows can be closed at a time.
Help	Opens the help for this dialog box.

[Shortcut List] dialog box

This dialog box is used to display a list of the shortcut keys set in PM+.

Figure 6-141 [Shortcut List] Dialog Box



This section describes the following items:

- [Opening](#)
- [Explanation of each area](#)
- [Function buttons](#)

Opening

- Select the [Help] menu -> [Shortcut List...].

Explanation of each area

(1) Shortcut List

This area displays a list of the shortcut keys currently set in PM+.

If a shortcut key is customized on the [Tool] menu -> [Customize...] - [Keyword] tab, the contents are reflected on this list.

For default shortcut keys, refer to "[APPENDIX C SHORTCUT KEYS](#)".

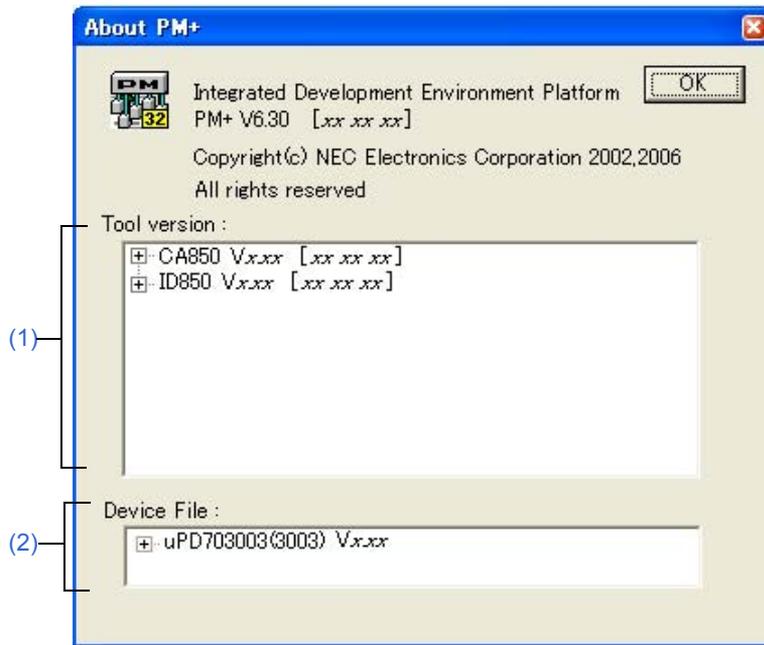
Function buttons

Button	Function
Close	Closes the dialog box.
Help	Opens the help for this dialog box.

[About PM+] dialog box

This dialog box is used to display the version information about PM+. If a project file is open, the version of the NEC Electronics tools corresponding to that project and the device file is also displayed.

Figure 6-142 [About PM+] Dialog Box



This section describes the following items:

- Opening
- Explanation of each area
- Function buttons

Opening

- Select the [Help] menu -> [About PM+...].

Explanation of each area

(1) Tool version

This area displays the version of the tool to be used among the tools selected in the project file currently opened, in the format "product name, version [date]".

If the tree is opened, the file name is displayed with the full path.

(2) Device File

This area displays the device name, file name, and version of the device file used in the currently open project file under "device name (device file name), version [date]".

If the tree is opened, the device file name is displayed with the full path.

Function buttons

Button	Function
OK	Closes the dialog box.

CHAPTER 7 MESSAGES

7.1 Display Format

The messages output by PM+ are displayed in the message dialog box shown in [Figure 7-1](#).

There are four kinds of messages. When a message is displayed, a letter indicating the message type is prefixed to the message number. The meaning of each message type is shown in [Table 7-1](#).

Figure 7-1 Message Dialog Box



Table 7-1 The Meaning of each Message Type

Prefix	Type	Explanation
F	Fatal Error	This message is displayed when a fatal error occurred.
E	Operation Error	This message is displayed when an operating error occurred and execution is not possible.
Q	Question	This message is displayed when some kind of choice is required for the operation.
I	Information	This message is displayed to report some kind of information.

7.2 Fatal Error

The fatal error messages output by PM+ are listed below together the cause and action to take in response to the message, in message number order. All fatal error messages have "F" prefixed to the message number.

Table 7-2 Fatal Error Message List

Number	Description	
F0001	Message	Memory is not enough. Please terminate other applications.
	Cause	Memory could not be secured.
	Action by User	Close other applications to free up memory.
F0002	Message	Failed to initialize Object Linking and Embedding.
	Cause	The object library DLL could not be read at startup.
	Action by User	Since the OS is likely to be unstable, restart the machine.
F0003	Message	Failed to executing the command.
	Cause	The DOS command could not be executed.
	Action by User	Check whether the command can be executed correctly at the DOS prompt and set so that the command can operate. If this message is displayed prior to build execution, create the make file again using [Export Makefile] from the [Project] menu and execute build.
F0004	Message	Make file is broken. Make sure that the make file is remade.
	Cause	An attempt to execute build failed because the make file was damaged.
	Action by User	Create the make file again using [Export Makefile] from the [Project] menu and execute build.
F0100	Message	Cannot read the file. Make sure that this file has broken.
	Cause	An error occurred when the file was read.
	Action by User	Check if the file is damaged and try again.
F0101	Message	Cannot save this file. This file is used by the other process or specified illegal file name or the disk is full.
	Cause	A file already specified by another process is being used for storing source files, or the disk capacity is smaller than the volume of the files to be written.
	Action by User	If the specified file is being used by another application, close the application. If the disk is full, free up memory. If the file name is illegal, specify it with usable characters.
F0102	Message	Failed to change(make) the file name of the source file by IDL file. Make sure the IDL file memorized this source file by IDL file.
	Cause	A source file generated by an IDL file could not be changed or created when being stored.
	Action by User	The IDL file is likely to be damaged. Check if the file is damaged or not.
F0103	Message	Failed to change(make) the file name of the source file by IDL file. Make sure that the correct path and filename given or disk space.
	Cause	The specified path is invalid, the file name is illegal, or the specified disk is full.
	Action by User	Check the path and specify a valid one. If illegal characters have been used for the file name, use legal ones. If the disk is full, free up memory.
F0104	Message	Failed to change(make) the file name of the source file by IDL file. The original source file by IDL file cannot be opened.
	Cause	When changing the name of a source file generated by IDL, the original source file could not be opened.
	Action by User	Check the path for the source file and specify the correct path using [Change Source File Name...] from the [File] menu.

Number	Description	
F0105	Message	Failed to open the project file. Cannot accentuate the register.
	Cause	The project file could not be found, or the project file could not be opened because it is damaged.
	Action by User	Check the path for the project file, or verify that the project file is not damaged.
F0106	Message	Failed to open the device file. Cannot accentuate the register.
	Cause	The device file could not found, or the device file could not be opened because it is damaged.
	Action by User	Check the path for the device file, or verify that the device file is not damaged.
F0107	Message	Failed to read the device file. Make sure that this file has broken.
	Cause	A reading error occurred for the device file.
	Action by User	Verify that the device file is not damaged.
F0108	Message	Failed to open object. Make sure that this IDL file has broken.
	Cause	An object could not be read when the file was read.
	Action by User	Verify that the IDL file is not damaged.
F0109	Message	Cannot save object. Memory may be not enough.
	Cause	An object could not be saved when the file was stored.
	Action by User	The disk for storing is full, so free up disk space.
F0110	Message	Failed to read the macro file %s. Make sure that the correct path and filename given.
	Cause	The macro file could not be read. %s indicates the file name.
	Action by User	Check that the specified file exists.
F0111	Message	The macro file %s cannot be created. Make sure that the correct path and filename given or disk space.
	Cause	The macro file could not be saved. %s indicates the file name.
	Action by User	Check whether the characters used in the specified file name are legal, and specify legal characters. If the disk is full, free up memory.
F0112	Message	Cannot load the IDL file of Ver3.X format. Make sure that this IDL file has broken.
	Cause	The format of the IDL file from an old version (Ver.3.xx) of idea-L is illegal, or the IDL file is damaged.
	Action by User	Check if the specified file is damaged or not.
F0113	Message	%s Failed to save this project file. Make sure that disk space or this file has broken or this file using with other application.
	Cause	The disk space is full, the file is damaged, or the file may be being used by another application. %s indicates the file name.
	Action by User	Check the disk capacity, verify that the file is not damaged, and execute again. If the file is being used by another application, close the application and execute again.
F0114	Message	%s Cannot be found this file. Please check the NEC Electronics tool is installed correctly.
	Cause	The tool including the tool DLL displayed in the message could not be found. %s indicates the file name.
	Action by User	Check if the tool is installed. If not, reinstall it.
F0115	Message	Failed to create temporary file. Make sure that work folder exist or the disk is full.
	Cause	When creating a temporary file, the disk capacity is smaller than the volume of the file to be written, or the operating folder specified in the [PM+ Settings] dialog box does not exist.
	Action by User	Check the disk capacity or the operating folder, and execute again.
F0116	Message	Failed to open the temporary file.
	Cause	The temporary file could not be found or the file is damaged.
	Action by User	Check if the file exists and is damaged, and execute again.

Number	Description	
F0117	Message	%s Failed to read the workspace file. Make sure that this file has broken.
	Cause	The workspace file could not be read. %s indicates the workspace file name.
	Action by User	Verify that the workspace file is not damaged.
F0118	Message	Failed to read the project file. Make sure that a this file has broken.
	Cause	The project file could not be read.
	Action by User	Verify that the file is not damaged, and execute again.
F0119	Message	Same project files cannot be read.
	Cause	When reading the workspace, some of the registered project files could not be read.
	Action by User	Search for the cause of the failure, and execute again.
F0120	Message	All project file cannot be read.
	Cause	On reading workspace, all the files could not be read among the registered project files.
	Action by User	Search for the cause of the failure, and execute again.
F0121	Message	%s Failed to save this workspace file. Make sure that disk space or this file has broken or this file using with other application.
	Cause	The disk capacity is full or the file is damaged. Or, the specified file is being used by another application. %s indicates the file name.
	Action by User	Check the disk capacity, verify that the file is not damaged, and execute again. If the file is being used by another application, close the application and execute again.
F0122	Message	Failed to create the backup file. Make sure that the backup file is used by the other process or the disk is full.
	Cause	The backup file being created is already being used by another process, or the disk capacity is smaller than the volume of the file to be written.
	Action by User	If the backup file is being used by another application, close the application. Check the disk capacity and execute again.
F0123	Message	%s Failed to delete temporary file. Aborted to create a new workspace.
	Cause	The displayed temporary file could not be deleted when [New Workspace...] on the [File] menu was executed. %s indicates the name of the file that could not be deleted.
	Action by User	When specifying the workspace file name on the [New WorkSpace - Step 1/9 [Workspace Information]] dialog box , if overwriting the workspace file is enabled, the original file is left with the extension .bak. Restore this file.
F0124	Message	Failed to rename the file name %s1 to %s2. Aborted to create a new workspace.
	Cause	The displayed temporary file could not be renamed as the original file when [New Workspace...] on the [File] menu was executed. %s1 indicates the name of the temporary file and %s2 indicates the name of the original file.
	Action by User	When specifying the workspace file name on the [New WorkSpace - Step 1/9 [Workspace Information]] dialog box , if overwriting the workspace file is enabled, the temporary file is the original file. Restore this file.
F0125	Message	%s Failed to create the sample file. Make sure that disk space or the same name file exists that is read only or the other process using.
	Cause	Failed to create the sample file. %s indicates the sample file name.
	Action by User	Free up disk space. Check whether or not a file with the same name is read-only or being used by another application. If the file is read-only, clear the attribute and execute again. If the file is being used by another application, close the application and execute again.

Number	Description	
F0126	Message	Cannot found the data file for creating the sample link directive file. Make sure that PM+ has installed correctly.
	Cause	When creating a link directive file sample, the data file to be used could not be found.
	Action by User	In the last dialog box of the wizard, click the [Cancel] button, close PM+ and install PM+ again. Or, return to the [New Workspace - Step 6/9 [LinkDirective File]] dialog box and select other than [Create and Use the sample File].
F0127	Message	Cannot read the data file for creating the sample link directive file. Make sure that PM+ has installed correctly.
	Cause	The data file to be used for creating the link directive file sample is damaged.
	Action by User	In the last dialog box of the wizard, click the [Cancel] button, close PM+ and install PM+ again. Or, return to the [New Workspace - Step 6/9 [LinkDirective File]] dialog box and select other than [Create and Use the sample File].
F0128	Message	%s The internal RAM area information not found. The sample link directive file cannot be created.
	Cause	The name of a device with no internal RAM was specified. %s indicates the specified device name.
	Action by User	Return to the [New Workspace - Step 6/9 [LinkDirective File]] dialog box and select other than [Create and Use the sample File]. Select any other device with internal RAM in the [New Workspace - Step 1/9 [Workspace Information]] dialog box .
F0129	Message	%s Failed to start up NEC Electronics tool. Please check the NEC Electronics tool is installed correctly.
	Cause	The DLL of the NEC Electronics tool could not be loaded. %s indicates the name of the file that could not be loaded.
	Action by User	Verify that the NEC Electronics tool product is installed correctly.
F0130	Message	Failed to copy the file. Failed to copy the file. The original file cannot be opened or disk space may be not enough or the other process may be using the destination file. Copy from: %s1 Copy to: %s2
	Cause	Failed to copy the file. %s1 indicates the name of the file to be the copy source and %s2 indicates the name of the file to be the copy destination.
	Action by User	Check whether there is a Read attribute in the file to be the copy source. If there is no attribute, assign the Read attribute, and execute again. Free up disk space. Check if the file is being used by another application. If the file is being used by another application, close the application and execute again.
F0131	Message	Failed to remove the file. Make sure that this file is read-only or the other process using this file.
	Cause	The file could not be deleted when the [Clean] command on the [Build] menu was executed. The [OutPut] window indicates the file name that could not be deleted.
	Action by User	Check whether the file displayed in the [OutPut] window has the Read-Only attribute or is used in another process, and if required, cancel the Read-Only attribute, or close the other applications that use this file.
F0200	Message	Failed to make the edit window. Memory may be not enough. Please terminate other application.
	Cause	The Edit window could not be created because the memory was insufficient or the OS was not stable.
	Action by User	Close the other applications and free up memory, or restart the OS.
F0201	Message	Cannot open any more window. Please close other window.
	Cause	An attempt was made to open more than 64 Edit, Output, and Search result display windows in total.
	Action by User	Close the other windows and try again.

Number	Description	
F0202	Message	This file is too large size. Please divide this file.
	Cause	An attempt was made to edit more than the maximum number of lines (2,097,152) on the Edit window .
	Action by User	Divide the file being edited using the copy or paste function.
F0203	Message	Cannot input more.
	Cause	More than 5,119 characters were entered in a line.
	Action by User	Decrease the number of the characters per line and enter again.
F0210	Message	This file has been used by another process. Please terminate using application.
	Cause	A file currently being edited by another application was edited on PM+. However, this message only functions if the application using the same file is an application that has exclusive file access control, such as Word.
	Action by User	Close the application using this file.
F0211	Message	Failed to create Object.
	Cause	A new object could not be created.
	Action by User	Verify that the specified object is installed correctly.
F0212	Message	Failed to copy clipboard. Memory may be not enough. Please terminate other application.
	Cause	The object could not be copied to the clipboard because the memory was insufficient or the OS was not stable.
	Action by User	Close the other applications and free up memory, or restart the OS.
F0213	Message	Failed to paste from clipboard. Memory may be not enough. Please terminate other application.
	Cause	Object could not be pasted from the clipboard because the memory was insufficient or the OS was not stable.
	Action by User	Close the other applications and free up memory, or restart the OS.
F0214	Message	Failed to Undo commands. Cannot undo over there. Memory may be not enough. Please terminate other application.
	Cause	The undo operation could not be executed successfully because the memory was insufficient or the OS was not stable.
	Action by User	Close the other applications and free up memory, or restart the OS.
F0215	Message	Failed to Repeat commands. Cannot repeat over there. Memory may be not enough. Please terminate other application.
	Cause	The redo operation could not be executed successfully because the memory was insufficient or the OS was not stable.
	Action by User	Close the other applications and free up memory, or restart the OS.
F0216	Message	This selection is too many characters for copy operation. Please select more small range.
	Cause	The characters copied to the clipboard exceeded 16 Mbytes.
	Action by User	Decrease the selected characters and try again.
F0217	Message	Over the max instructions 64. PM+ has stopped recording.
	Cause	When recording key operations, the recorded instructions exceeded 64, which is the maximum number of recordable instructions.
	Action by User	Record key operations within 64 instructions.
F0218	Message	Over the max instructions 64. PM+ has stopped loading the macro file. (%d): %s
	Cause	When reading a macro file, the recorded instructions exceeded 64, which is the maximum number of recordable instructions. %d indicates the line with the error, and %s indicates the character string with the error.
	Action by User	Decrease the number of instructions in the macro file and execute again.

Number	Description	
F0219	Message	Too big print font, so cannot print any more.
	Cause	When printing was executed with a large font after text wrap-around, line numbers, and hierarchy symbols were specified to be printed in the [Print] dialog box, printing was canceled because a linefeed occurred between the line numbers and layer marks and the characters.
	Action by User	Set a smaller font and try again.
F0300	Message	%s Failed to delete temporary file. Aborted to add a new project into workspace.
	Cause	The displayed temporary file could not be deleted when the [Add New Project...] command was executed. %s indicates the file name that could not be deleted.
	Action by User	When specifying the project file name on [Add New Project...], if overwriting the project file is enabled, the original file is left with the extension .bak. Restore this file.
F0301	Message	Failed to rename the file name %s1 to %s2. Aborted to add a new project into workspace.
	Cause	The displayed temporary file could not be renamed as the original file when the [Add New Project...] command was executed. %s1 indicates the name of the temporary file and %s2 indicates the name of the original file.
	Action by User	When specifying the project file name on [Add New Project...], if overwriting the project file is enabled, the temporary file is the original file. Restore this file.
F0400	Message	Syntax error. Please check the make file.
	Cause	There was a syntax error in the make file.
	Action by User	Check the syntax of the make file and correct the error.
F0401	Message	A line has too many characters in make file.
	Cause	The characters in one line after the macro was expanded in a make file exceeded 5120.
	Action by User	Set 5120 or fewer characters per line description.
F0601	Message	%s The object file was required in order to execute the [dump850] command. Please execute build to generate the object file.
	Cause	The object file could not be found when the [dump850] command on the [Tool] menu was executed. %s indicates the object file name.
	Action by User	Execute build, generate an object file, and try again.
F0602	Message	Failed to remove the file. Make sure that this file is read-only or the other process using this file.
	Cause	The displayed file could not be deleted when [dump850] command on the [Tool] menu was executed. %s indicates the name of the file that could not be deleted.
	Action by User	Check if the displayed file is read-only or if it is being used by another application. If it is read-only, clear it and try again. If it is being used by another application, close the application and try again.
F0603	Message	%s Failed to rename the filename. Make sure that other process using this file.
	Cause	The displayed file could not be renamed when the [dump850] command on the [Tool] menu was executed. %s indicates the name of the file that could not be renamed.
	Action by User	Check if the displayed file is being used by another application. If it is being used by another application, close the application and try again.
F0604	Message	%s The load module file was required in order to execute the [dump850] command. Please execute build to generate it.
	Cause	The load module file could not be found when the [dump850] command on the [Tool] menu was executed. %s indicates the name of the load module file that could not be found.
	Action by User	Execute build, generate a load module file, and try again.
F0700	Message	ToolLinkManager is not running.
	Cause	During connection to the server, the communication path of ToolLink (TIS/TLM) returned its own fatal error.
	Action by User	Restart the tool to be used.

Number	Description	
F0701	Message	cannot communicate with %s.
	Cause	During connection to the server, the server was logged out and the communication path of ToolLink (TIS/TLM) returned an error. %s indicates the name of the logged out tool.
	Action by User	Restart the displayed tool.

7.3 Operation Error

The operation error messages output by PM+ are listed below together the cause and action to take in response to the message, in message number order. All operation error messages have "E" prefixed to the message number.

Table 7-3 Operation Error Message List

Number	Description	
E1000	Message	%s This path has not be found. Make sure that the correct path given.
	Cause	When specifying a path, the specified path did not exist. %s indicates the specified path.
	Action by User	Check the path and try again.
E1001	Message	%s This file has not be found. Make sure that the correct path and filename given.
	Cause	When opening a file, the specified file did not exist. %s indicates the specified file name.
	Action by User	Check the file name and try again.
E1002	Message	Cannot change to the using file name.
	Cause	An attempt was made to save a file under the name of the file currently being edited.
	Action by User	Use the name of a file that is not being edited and try again.
E1003	Message	The file %s is read-only, Please input other file name.
	Cause	An existing read-only file was specified. %s indicates the specified file name.
	Action by User	Use the name of a file that is not read-only and try again.
E1004	Message	Found the Layer in the Text File. Please save to IDL format file.
	Cause	The open text file has layers when it was overwritten and saved.
	Action by User	Save layer information in an IDL file format.
E1005	Message	The layer state is different when the file opened. If you save layer information, please save to IDL format file.
	Cause	The user applied layers to a file after reading it with layer and tried to save it in a text file format.
	Action by User	Save layer information in an IDL file format.
E1006	Message	The file name is too long.
	Cause	The file name set when tag jump is performed is too long for saving the file under another name.
	Action by User	Change the file name to a shorter name and try again.
E1007	Message	PM+ cannot divide the source files, there were the 1st layers hasn't lower layer.
	Cause	[Not Divide the Source File] was not selected when saving a source file or changing a source file name, but the file could not be divided because there was a first layer without the lower layers.
	Action by User	Attach lower layers to the first layer line.
E1008	Message	A file name cannot contain any of the characters. \/:*?"<>
	Cause	An attempt was made to create a file with a file name that includes prohibited characters.
	Action by User	Set the file name using characters other than the displayed prohibited ones.
E1009	Message	This filename already exists. Please enter other filename.
	Cause	When changing the source file name, an attempt was made to change the file name to an existing source file name.
	Action by User	Set a different file name and try again.

Number	Description	
E1010	Message	The filename was not set.
	Cause	The source file name has not been set in the [Change Source File Names] dialog box.
	Action by User	Set the file name and try again.
E1011	Message	%s was not found.
	Cause	%s used to specify a character string when setting the user comment mark of the source file name was not entered.
	Action by User	Enter %s in the set user comment and try again.
E1012	Message	Cannot include %s many times.
	Cause	When setting the comment mark, multiple %s were set.
	Action by User	Enter one %s in the set user comment and try again.
E1013	Message	IDL Control Error. Please set the Control Mark to same comment mark of the source file by [Change Source File Names] .
	Cause	When tag jumping from the [OutPut] window to the first error line in the source file, the comment symbols associated with the IDL file were not set in the first line in the source file.
	Action by User	Using [Change Source File Name...] , set the same mark for the comment in the source file with the build error as the comment line being used in the source file.
E1014	Message	This file was not the source file by IDL file corresponding to the specific IDL file.
	Cause	When the IDL file that included the specified source file could not be found during tag jump, an IDL file that was not corresponding to the source file was specified in the Select IDL File dialog box.
	Action by User	Specify an IDL file that is corresponding to the source file.
E1015	Message	The selected IDL file cannot be found.
	Cause	When the IDL file that created the specified source file could not be found during tag jump, the IDL file could not be found in the Select IDL File dialog box.
	Action by User	Select an existing IDL file.
E1016	Message	The IDL file corresponding to the source file was not be found . Choose the IDL file. Alternatively select Source button to use the source file itself.
	Cause	During tag jump, the IDL file that was registered in the specified source file could not be found.
	Action by User	Select the original IDL file or open the source file.
E1017	Message	The Specific drive for the IDL source files cannot be found. Do you wish to save the IDL source files to the same folder of IDL file?
	Cause	The drive of the source file specified when saving the IDL file could not be found.
	Action by User	Change the source file output destination using [Change Source File Name...] or generate a source file in the same folder as the IDL file.
E1018	Message	The IDL source file's path cannot be found. Do you wish to change the path?
	Cause	The source files save to the same folder of IDL file, if you select [No]. The path specified by the source file when saving an IDL file could not be found.
	Action by User	Change the source file output destination using [Change Source File Name...] or generate a source file in the same folder as the IDL file.
E1019	Message	The path of IDL source file has not be found. This file will be save to the same IDL file's folder.
	Cause	The path specified by the source file when saving an IDL file or changing the source file name could not be found.
	Action by User	Change the source file output destination using [Change Source File Name...] or generate a source file in the same folder as the IDL file.

Number	Description	
E1020	Message	Cannot convert to new path. Make sure that the path is correct.
	Cause	The path could not be changed when opening a project file copied from a different folder.
	Action by User	Open the project file with an editor and verify the path.
E1021	Message	The file extension was wrong. Please change the file extension.
	Cause	An unsupported extension was specified.
	Action by User	Change the extension and try again.
E1022	Message	%s This file cannot save settings because of read-only attribute. Please change read-only attribute.
	Cause	An attempt was made to write a read-only file. %s indicates the file name.
	Action by User	Clear the Read-Only attribute with Explorer, etc. and set the file again.
E1023	Message	Some files cannot be found. Please check the files exist.
	Cause	The source and include files registered in the workspace file (project file) specified to be opened could not be found. If this message is displayed, the same contents are also displayed in the [OutPut] window .
	Action by User	Check that all the source and include files registered in the workspace (project) exist.
E1024	Message	%s Project file cannot be found. Make sure that the correct path and filename given.
	Cause	The specified project file could not be found. %s indicates the specified project file name.
	Action by User	Check that the specified project file exists.
E1025	Message	%s Cannot create the folder.
	Cause	The folder name was illegal or a folder without access rights was specified. %s indicates the specified folder name.
	Action by User	Specify the correct folder name or specify a folder with access rights.
E1026	Message	Enter the folder name with absolute path.
	Cause	The specified folder name has a relative path.
	Action by User	Specified the folder name with an absolute path.
E1027	Message	%s Cannot register the filename with space character. Please register the file after rename it.
	Cause	When adding source file, a file name with one-byte spaces was specified. %s indicates the specified folder name.
	Action by User	Rename the file using a file name without one-byte spaces and register it again.
E1028	Message	Please specify the same file extension of copy file.
	Cause	The extension of the specified file name to be the copy source and the file name to be registered differ.
	Action by User	Specify the same extension for the file name to be the copy source and the file name to be registered.
E1029	Message	The file names of copy file and register file are identical. Please specify the different file name to register.
	Cause	Copying is not possible because the specified file name to be the copy source and the file name to be registered are the same.
	Action by User	Specify the same extension for the file name to be the copy source and the file name to be registered.
E1030	Message	%s Cannot register the file name with space character. Please register the file after rename it. Do you wish to continue to add source files?
	Cause	When adding source file, a file name with one-byte spaces was specified. %s indicates the file name. This message is displayed when multiple source files are selected and added to a project.
	Action by User	Rename the file using a file name without one-byte spaces and register it again.

Number	Description	
E1031	Message	A file name cannot contain any of the characters. \:*\?"<> Do you wish to continue to add source files?
	Cause	An attempt was made to create a file with a file name that includes prohibited characters. This message is displayed when multiple source files are selected and added to a project.
	Action by User	Set the file name using characters other than the displayed prohibited ones.
E1032	Message	%s Cannot use the network path.
	Cause	The specified folder was a network path. %s indicates the specified folder name.
	Action by User	Specified the folder other than the network path.
E1033	Message	%s Cannot use the network path. Do you wish to continue to add source files?
	Cause	The specified folder was a network path. %s indicates the specified folder name. This message is displayed when multiple source files are selected and added to a project.
	Action by User	Specified the folder other than the network path.
E1035	Message	Two or more workspace files or project files cannot be dropped.
	Cause	Multiple workspace files and project files were dropped in a main frame or the Edit window .
	Action by User	If dropping a workspace or project in a main frame or the Edit window , specify only one such item.
E1036	Message	A workspace is not opened during user program execution. Please open a workspace after stopping a program.
	Cause	An attempt was made to drop and open a workspace during user program execution.
	Action by User	Stop the user program via the debugger and open a workspace again.
E1037	Message	The addition of a project cannot be performed during user program execution.
	Cause	An attempt was made to drop and add a project file during user program execution.
	Action by User	Stop the user program via the debugger and add a project file again.
E1100	Message	This object cannot edit.
	Cause	An attempt was made to edit a non-editable object.
	Action by User	Edit an editable object.
E1200	Message	Cannot specify the extension IDL and the other extensions.
	Cause	When setting [Of Type] during global replacement, IDL and another extension were set at the same time.
	Action by User	When an IDL file the target of replacement, specify only IDL files.
E1201	Message	%s The file extension was wrong. Please change the file extension.
	Cause	When setting [Of Type] during global replacement, an extension other than the global replacement target extensions was set. %s indicates the specified extension.
	Action by User	Specify a target extension and execute global replacement.
E1202	Message	%s Cannot specify the wild card for the file without extension.
	Cause	When setting [Of Type] during global replacement, wildcards ('*', '?') were specified instead of extensions. %s indicates the specified extension.
	Action by User	Execute without specifying wildcards.
E1400	Message	The file extension is not PRW/PRJ.
	Cause	The specified workspace file has an extension other than prw.
	Action by User	Specify the file with a prw or prj extension, and execute.
E1401	Message	The workspace file name not specified. Please enter it.
	Cause	The workspace file name is not specified.
	Action by User	Specify a workspace file name, and execute.

Number	Description	
E1402	Message	The project file name not specified. Please enter it.
	Cause	The project file name is not specified.
	Action by User	Specify a project file name, and execute.
E1403	Message	%s The file already exists. Please enter other file name.
	Cause	An existing file name was specified. %s indicates the specified file name.
	Action by User	Specify another file name and execute again.
E1404	Message	%s The file was not specified the device. Do you wish to specify it? You can specify it with [Project Settings] command after this time.
	Cause	No device is specified in the open project file. %s indicates the specified project file name.
	Action by User	Build cannot be executed in this status. Specified a device here now, or later using the [Project Settings...] command.
E1405	Message	%s1 The device file was not found. (Device:%s2) Please install a device file by the device file installer.
	Cause	The device file set to the specified project file could not be found. %s1 indicates the project file name and %s2 indicates the device name.
	Action by User	Check that the device file is installed. If the device file is not installed, install it by the device file installer.
E1406	Message	The file %s already entered.
	Cause	The specified file has already been registered in the project. %s indicates the file name.
	Action by User	Rename the file using a different file name, and register it again.
E1407	Message	This project file is not a project file generated with PM+(Project Manager). Please update this project.
	Cause	The specified project file was created by a different NEC Electronics tool (debugger, etc), not PM+ or PM.
	Action by User	Update the project information to that for PM+.
E1408	Message	This type cannot be selected multiple. Please select one file.
	Cause	When adding a file related to the project, a file type that could only be specified once was specified more than once in the project.
	Action by User	Select just one file and execute it.
E1409	Message	Project group name is not specified. Please enter project group name.
	Cause	An attempt was made to close the [Project Group Name] dialog box with the [OK] button without setting a project group name.
	Action by User	Set a project group name in the [Project Group Name] dialog box.
E1410	Message	This project group name is using. Please enter other project group names.
	Cause	A name that had already been used in the workspace was set in the [Project Group Name] dialog box and the [OK] button was clicked.
	Action by User	Set a character string that is not currently being used as a project group name.
E1411	Message	%s This file cannot edit.
	Cause	The [Open] command was selected for a non-editable project-related file. %s indicates the file name.
	Action by User	Select an editable file with the [Open] command.
E1412	Message	The device file information cannot be found in project file. It does not show the device file version.
	Cause	The device file information could not be found in the project file.
	Action by User	Install a device file to be used.

Number	Description	
E1413	Message	Cannot add the file %s to the project because of the wrong extension.
	Cause	The extension specified a file name that was not applicable to a source file. %s indicates the specified file name.
	Action by User	Change the extension and try again.
E1414	Message	Cannot add the file %s to the project because of the wrong extension. Do you wish to continue to add source files?
	Cause	The extension specified a file name that was not applicable to a source file. %s indicates the specified file name.
	Action by User	Change the extension and try again.
E1415	Message	The file %s has already set.
	Cause	The specified file has already been set for a source file. %s indicates the specified file name.
	Action by User	Rename the file using a different file name and add the source file again.
E1416	Message	The file %s has already set. Do you wish to continue to add source files?
	Cause	The specified file has already been set for a source file. %s indicates the specified file name.
	Action by User	Rename the file using a different file name and add the source file again.
E1417	Message	%s Syntax error. Please check the list file.
	Cause	There was a syntax error in the list file. %s indicates the specified file name.
	Action by User	Check the syntax of the list file and correct the error.
E1418	Message	%s The project which already supports other devices is registered into this project group. Please change the device of a project or change the project group of a registration place.
	Cause	An attempt was made to add a project supporting a device that was different from the one supported by the registered project to the project group. %s indicates the project file name.
	Action by User	Open another project and acquire a device of the same type, or register the project in another project group.
E1419	Message	%s A project cannot be registered into this project group any more. Please register with other project groups.
	Cause	An attempt was made to register more than the maximum number of projects, 20, in a project group. %s indicates the project file name.
	Action by User	Delete the projects in the project group and register them again, or register them in another project group.
E1420	Message	%s This file has already specified as the startup file.
	Cause	An attempt was made to add a file specified at startup as a linker option. %s indicates the name of the file attempted to be added.
	Action by User	Check the linker option.
E1421	Message	Cannot register the file any more.
	Cause	When adding source file or other files, an attempt was made to register more than the maximum number of files (source files: 2048, other files: 100).
	Action by User	Register the file after deleting the unnecessary file.
E1422	Message	%s The file except extension has already set.
	Cause	The specified file name (without extension) has already been set as a source file. %s indicates the specified file name.
	Action by User	Rename the file using a different file name and add the source file again.
E1423	Message	The file except extension has already set. Do you wish to continue to add source files?
	Cause	The specified file name (without extension) has already been set as a source file. %s indicates the specified file name.
	Action by User	Rename the file using a different file name and add the source file again.

Number	Description	
E1424	Message	The project %s already entered.
	Cause	When adding a new project or inserting a project, a project file name that has already been registered was specified. %s indicates the project file name.
	Action by User	Set another file name and register it.
E1425	Message	A project group cannot be registered into this workspace any more. Please register the project into the existing project group.
	Cause	When adding a new project or inserting a project, an attempt was made to add more than the maximum number of project groups, 128, when a new project group was specified.
	Action by User	Register the project in an existing project group.
E1426	Message	%s This file has already specified as the startup file. Do you wish to continue to add source files?
	Cause	An attempt was made to add a file specified at startup as a linker option. %s indicates the name of the file attempted to be added.
	Action by User	This message is displayed when multiple source files are selected and added to a project.
E1427	Message	A project cannot be registered into this workspace any more. Please delete an unnecessary project or register the project into the other workspace.
	Cause	Registration of a number of projects exceeding the maximum number (128) of projects that can be registered to a workspace was attempted.
	Action by User	Add the projects after deleting the unnecessary ones. Or add the projects to a different workspace.
E1428	Message	%s The specific some tools cannot be found. Please select tools.
	Cause	The tool specified in the project file has not been installed in the PC currently operating.
	Action by User	Select the tool to be used from the installed tools.
E1429	Message	The tool-set name was not set. Please enter it.
	Cause	An attempt was made to move to another page leaving the tool set name unspecified on the [Tool Version Settings] tab in the [Project Settings] dialog box.
	Action by User	Select a tool set name.
E1430	Message	A Toolset name cannot contain any of the following characters: \\ / : * ? \" < >
	Cause	An attempt was made to use a character which can not be used for the tool set name.
	Action by User	Specify the tool set name using the character which can be used.
E1500	Message	Cannot exit PM+ while a build is in progress. Select the Stop Build command before exit PM+.
	Cause	An attempt was made to close PM+ during build.
	Action by User	Cancel build before closing PM+.
E1501	Message	Cannot exit PM+ while make file creating.
	Cause	An attempt was made to close PM+ while a make file was being created.
	Action by User	Cancel make file creation before closing PM+.
E1502	Message	Failed to execute build. Make sure that compiler and assembler was installed correctly.
	Cause	Build could not be started up. The compiler or assembler is likely to have been installed incorrectly.
	Action by User	Check that the compiler or the assembler is installed correctly.

Number	Description	
E1503	Message	%s Failed to start up the editor. Make sure that the correct path and file name given.
	Cause	The external editor could not be started up. %s indicates the path of the editor that could not be started up.
	Action by User	Check whether the set external editor exists. If not, use another editor or the editing function of PM+.
E1504	Message	%s Failed to start up the debugger. Make sure that the correct path and file name given.
	Cause	The debugger could not be started up. %s indicates the path of the debugger that could not be started up.
	Action by User	Check whether the set debugger exists. If not, install it or specify another one.
E1505	Message	User program is running. Please stop it to execute the command.
	Cause	The [New Workspace...], [Add New Project...], [Insert Project...], [Open Workspace], [Build and Debug], or [Debug] command was executed while the user program was being executed.
	Action by User	Stop the user program via the debugger and execute it again.
E1506	Message	Cannot execute this command while the debugger executing.
	Cause	While the debugger was starting up, an unexecutable command was selected.
	Action by User	Close the debugger and execute it again.
E1507	Message	The file %s was not found. Abort to compile.
	Cause	The source file specified when executing compilation could not be found. The source file name for which compile was executed is displayed to %s.
	Action by User	Check whether the specified source file exists. If not, then create it.
E1508	Message	Cannot add the build mode. Please conform using the latest version compiler/assembler.
	Cause	Build mode was added in a language product that does not support build mode.
	Action by User	Verify that the compiler/assembler used is the latest version.
E1509	Message	Cannot remove the build mode. Please conform using the latest version compiler/assembler.
	Cause	Build mode was added in a language product that does not support build mode.
	Action by User	Verify that the compiler/assembler used is the latest version.
E1510	Message	Cannot execute this command while the debugger downloading. Please execute it after the debugger downloading.
	Cause	An attempt was made to execute download again during downloading of the debugger.
	Action by User	Try again after finishing the download.
E1511	Message	Cannot execute this command without the debugger start up. Please start up the debugger.
	Cause	Multiple load module files were downloaded while the debugger was not started up.
	Action by User	Start up the debugger and try again.
E1512	Message	The batch build settings is not set up. Please set up the batch build settings by [Batch Build Settings...].
	Cause	After workspace creation, [Batch Build] or the [Batch Rebuild] menu item was executed before the batch build setting was performed.
	Action by User	After opening the [Edit Batch Build Settings] dialog box from the [Batch Build Settings...] menu item and performing the batch build setting, execute [Batch Build] or the [Batch Rebuild] menu item again.

Number	Description	
E1513	Message	The build or rebuild project is not specified. Please set up the batch build settings by [Batch Build Settings].
	Cause	[Batch Build] or the [Batch Rebuild] menu item was executed with not even one project specified for building in the batch build setting.
	Action by User	After opening the [Edit Batch Build Settings] dialog box from the [Batch Build Settings...] menu item and performing the batch build setting, execute [Batch Build] or the [Batch Rebuild] menu item again.
E1600	Message	Cannot change to the folder for macro file.
	Cause	A macro folder other than the file specified when reading/saving the macro file was set.
	Action by User	Specify the set folder for the macro file.
E1601	Message	Over 32 characters.
	Cause	When registering the macro, an attempt was made to set more than 32 characters for the title of the macro.
	Action by User	Set a title with fewer than 32 characters.
E1610	Message	Not enough the options. (%d): %s
	Cause	The options set by the macro instruction are insufficient (such as no specification of the line number by the specified line jump). %d indicates the line number with the error, and %s indicates the line contents.
	Action by User	Correct the macro with the correct option setting.
E1611	Message	Wrong the specific number.(%d): %s
	Cause	A value other than a decimal number was specified for the numeric setting of a macro instruction. %d indicates the line number with the error, and %s indicates the line contents.
	Action by User	Specify the value with a decimal number.
E1612	Message	Cannot specify these options in the same time. (%d): %s
	Cause	Options that could not be specified simultaneously for a macro instruction were set at the same time. %d indicates the line number with the error, and %s indicates the line contents.
	Action by User	Delete one of the options and try again.
E1613	Message	Wrong the specific string. (%d): %s
	Cause	Character strings in a macro instruction were not enclosed by " ". %d indicates the line number with the error, and %s indicates the line contents.
	Action by User	Enclose character strings by " ".
E1614	Message	Divide by Zero. (%d): %s
	Cause	An attempt was made to perform division by 0 while a macro instruction was being executed. %d indicates the line with the error, and %s indicates the character string with the error.
	Action by User	Check the division formula and do not perform 0 division.
E1615	Message	Over 255 characters in the line. (%d) A macro instruction line has more than 255 characters. %d indicates the line number with the error. Set a macro instruction with 255 characters or fewer.
	Cause	A macro instruction line has more than 255 characters. %d indicates the line number with the error.
	Action by User	Set a macro instruction with 255 characters or fewer.
E1616	Message	Syntax Error (%d): %s
	Cause	There was a syntax error in the macro instruction. %d indicates the line number with the error, and %s indicates the character string with the syntax error.
	Action by User	Correct the character string syntax and try again.

Number	Description	
E1617	Message	Invalid option. (%d): %s
	Cause	Invalid options were set for a macro instruction. %d indicates the line number with the error, and %s indicates the line contents.
	Action by User	Specify valid options and try again.
E1618	Message	Invalid command. (%d): %s
	Cause	There was an invalid instruction when executing a macro file. %d indicates the line number with the error, and %s indicates the invalid instruction.
	Action by User	Set the correct macro instruction and try again.
E1700	Message	%s Failed to start up the ex-tool. Make sure that the correct path and file name given.
	Cause	The external tool could not be started up. %s indicates the full path name for the external tool.
	Action by User	Check the set path and verify that the external tool exists.
E1701	Message	The Ex-Editor was not entered.
	Cause	An external editor is not set.
	Action by User	Set an external editor.
E1702	Message	%s Failed to start up DFINST. Make sure that the correct path and file name given.
	Cause	DFINST could not be started up. %s indicates the executed full path name.
	Action by User	Check the set path and verify that DFINST exists.
E1703	Message	Cannot register only box or separator. Please register one or more command buttons.
	Cause	An attempt was made to register only combo boxes and partition lines when customizing the standard bar or build bar.
	Action by User	Register more than one command button and then click the [OK] button.
E1704	Message	%s Cannot open this file. Choose the application that open file.
	Cause	The specified file could not be opened. %s indicates the specified file name.
	Action by User	Make an association with the application to be started up using Explorer.
E1705	Message	Cannot open URL you specified. Choose the application to open URL.
	Cause	The specified URL could not be opened. %s indicates the specified URL.
	Action by User	Check if the browser used normally is set.
E1706	Message	%s Cannot start up this application. Make sure that the correct path and given.
	Cause	The specified application could not be opened. %s indicates the full path name of the application.
	Action by User	Check that the path for the application is correct and try again.
E1707	Message	A reserved word cannot contain any of the characters: () + - / ; = { } < * ? : % ^ ~ & [] < ! > . @ \ \ ' \$ \ \
	Cause	Prohibited characters were specified for the keywords of reserved words.
	Action by User	Specify characters other than prohibited ones for the keywords.
E1708	Message	The Title menu string is already in use.
	Cause	An attempt was made to set a menu character string that had already been set.
	Action by User	Change the menu name to one that has not been set and set again.
E1709	Message	Wrong the tag jump format. It needs '\$F' and '\$L'.
	Cause	There is an error in the tag jump format in the external editor setting.
	Action by User	\$F and \$L need to be specified in the tag jump format.

Number	Description	
E1710	Message	Cannot exit PM+ while TW analyzing.
	Cause	An attempt was made to close PM+ while TW850 was executing analysis.
	Action by User	Close PM+ after TW850 has finished.
E1711	Message	%s The path or file name is illegal. Enter The correct path or filename.
	Cause	An attempt was made to specify an incorrect path or file name. %s indicates the file name.
	Action by User	Specify a correct path or file name.
E1712	Message	%s The filename is illegal. Enter the correct filename.
	Cause	An incorrect file name was specified. This includes the specification of a reserved device such as con and com1. %s indicates the specified file name.
	Action by User	Specify a correct file name.
E1714	Message	%s The file was not the latest object file. Please execute build command and update the object file.
	Cause	When executing dump850, the .v file, which is a target analysis file, is older than the source file.
	Action by User	Execute build, update the object, and try the command again.
E1715	Message	Failed to start up the Link Directive Generator. Make sure that it was installed correctly.
	Cause	The [Open with Link Directive Generator filename] menu was selected with the right mouse button on the [Project] window, but LDG could not be started up.
	Action by User	This is displayed when tool DLL for LDG is not installed. Install the LDG and try the command again.
E1716	Message	Failed to start up the RTOS settings. Make sure that the NEC Electronics RTOS was installed correctly.
	Cause	When creating a new workspace or adding a new project, the [RTOS settings...] button was selected, but the OS setting dialog box could not be displayed.
	Action by User	Check whether the OS product is installed correctly. If not, install it.
E1717	Message	The version information not found in the registry. Make sure that the NEC Electronics tools with this function installed correctly.
	Cause	On displaying version information, registry information could not acquired.
	Action by User	Check if the NEC Electronics tool product that is adapted to the function to display version is installed correctly. If not, install it.
E1718	Message	%s The file was not the latest load module file. Please execute build command and update the load module file.
	Cause	When executing dump850, the .out file, which is a target analysis file, is older than the source file. %s indicates the .out file name, which is a target analysis file.
	Action by User	Execute build, update the load module file, and try the command again.
E1719	Message	%s The folder name is illegal. Enter the correct folder name.
	Cause	An incorrect folder name was specified. %s indicates the specified folder name.
	Action by User	Specify a correct folder name.
E1720	Message	The Debugger not selected to execute TW. Please select the debugger with [Debugger Settings].
	Cause	When executing TW850, the debugger to be used was not set.
	Action by User	Set the debugger to be used from [Debugger Settings...] on the [Tool] menu and try again.

7.4 Question

The question messages output by PM+ are listed below together the cause and action to take in response to the message, in message number order. All question messages have "Q" prefixed to the message number.

When these messages are displayed, the users must select a button in the message dialog box.

Table 7-4 Question Message List

Number	Description	
Q2000	Message	Do you wish to save %s ?
	Cause	When closing PM+ or the Edit window , the windows were not saved. %s indicates the character string on the caption of the window.
	Action by User	[Yes]: Saves. [No]: Closes the window without saving. [Cancel]: Returns to the Edit window .
Q2001	Message	Another process has changed %s. Do you wish to reload it?
	Cause	The contents of the currently open file were changed by another application. %s indicates the updated file name.
	Action by User	[Yes]: Reads the new file. [No]: Displays the Edit window without reading the file.
Q2002	Message	%s is already using. It is opened as read-only.
	Cause	An attempt was made to read a file that has already been read. %s indicates the specified file name.
	Action by User	[OK]: Opens the file as Read-Only. [Cancel]: Cancels reading.
Q2003	Message	%s is already using. Do you wish to open it as read-only? Revert to the original file, if you select [No].
	Cause	An attempt was made to read a file that is already open and being edited. %s indicates the specified file name.
	Action by User	[Yes]: Opens the file as Read-Only. [No]: Discards the edited contents and opens the specified file. [Cancel]: Cancels reading.
Q2004	Message	%s was not be found. Do you wish to close this window?
	Cause	A file on the currently open window has been deleted from the disk. %s indicates the deleted file name.
	Action by User	[Yes]: Closes the Edit window . [No]: Dose not close the Edit window .
Q2005	Message	%s was not found. Do you wish to save this file?.
	Cause	The file was deleted from the disk when an attempt was made to close the window being edited. %s indicates the caption of the window
	Action by User	[Yes]: Displays the [Save As] dialog box . [No]: Closes the window without saving. [Cancel]: Returns to the window without doing anything.
Q2006	Message	The file %s already exists. Do you wish to rename to this file name?
	Cause	The file already exists. %s indicates the source file name.
	Action by User	[Yes]: Renames the source file. The existing file will be deleted. The existing file will be deleted. [No]: Does not change the name of the file.

Number	Description	
Q2007	Message	The file %s is read-only. Do you wish to rename to this file name?
	Cause	The name of source file that was attempted to be changed in the [Change Source File Names] dialog box is the same as an existing file name. Also, the file was read-only. %s indicates the source file name.
	Action by User	[Yes]: Renames the source file. The existing file will be deleted. The existing file will be deleted. [No]: Does not change the name of the file.
Q2008	Message	Another process has changed %s . Do you wish to load it?
	Cause	The source file was changed by another editor after saving the IDL file. %s indicates the file name.
	Action by User	[Yes]: Reads the updated source file. [No]: Reads the IDL file without reading the source file. [Apply to all update files]: Reads all the files that are updated without an update message if this check box is selected.
Q2009	Message	Do you wish to close all windows?
	Cause	This is to check whether all the windows are to be closed on when a workspace or project file is closed.
	Action by User	[Yes]: Closes all the windows. [No]: Leaves all the windows open.
Q2010	Message	%s The workspace file already exists. Do you wish to rename old file to %s.bak and replace it?
	Cause	The workspace file name that was specified in the dialog box to create a new workspace file is the same as an existing file name. %s indicates the specified file name.
	Action by User	[Yes]: Overwrites the workspace file and save the existing file with the extension .bak. [No]: Returns to the window without doing anything.
Q2011	Message	%s This folder cannot be found. Do you wish to create it?
	Cause	The specified folder does not exist. %s indicates the specified folder name.
	Action by User	[Yes]: Creates the folder. [No]: Does not create the folder.
Q2100	Message	Specified to delete in the after grouping. Delete the lines and clear the undo buffer, if you select [Yes]. Don't delete, if you select [No].
	Cause	When grouping by keyword, an operation to delete after grouping was specified.
	Action by User	[Yes]: Deletes the grouped lines from the Edit window of the original search document. [No]: Groups the lines without deleting.
Q2101	Message	There were the read-only source file's line in the deleting lines. Do you wish to delete it?
	Cause	A Read-Only source file is included in the range to be deleted.
	Action by User	[Yes]: Deletes the lines that contain a read-only source file also. [No]: Does not delete.
Q2102	Message	Do you wish to update the function prototypes? The previous prototypes will be deleted as update.
	Cause	An attempt was made to create a prototype declaration more than once.
	Action by User	[Yes]: Creates a new prototype declaration. [No]: Returns to the active Edit window without doing anything. [This message is not to be shown until restart]: By checking this check box, this message is not displayed even if the same operation is performed while PM+ is running.

Number	Description	
Q2103	Message	Do you wish to clear the undo buffer? Do nothing, if you select No.
	Cause	This is to verify whether the undo buffer is cleared when creating a prototype declaration.
	Action by User	[Yes]: Clears undo buffer and create prototype declaration. [No]: Returns to the active Edit window without doing anything. [This message is not to be shown until restart]: By checking this check box, this message is not displayed even if the same operation is performed while PM+ is running.
Q2104	Message	The read only source file(s) was found. Do you wish to make prototypes for the source file but the read-only file(s)?
	Cause	A read-only source file was discovered while creating a prototype declaration.
	Action by User	[Yes]: Creates a prototype declaration for a source file that is not read-only. [No]: Returns to the active Edit window without doing anything
Q2200	Message	PM+ has finished searching this file. Do you wish to continue it from the top of file? Continue it from the top of file, if you select [%s].
	Cause	Searching finished at the last line. %s indicates the key assigned to [Down].
	Action by User	[Yes]: Searches from the first line. [No]: Stops searching.
Q2201	Message	PM+ has finished searching this file. Do you wish to continue it from the end of file? Continue it from the end of file, if you select [%s].
	Cause	Searching finished at the first line. %s indicates the key assigned to [Up].
	Action by User	[Yes]: Searches from the last line. [No]: Stops searching.
Q2202	Message	PM+ has finished searching this IDL source file. Do you wish to continue it from the top of IDL source file? Continue it from the top of IDL source file, if you select [%s].
	Cause	No character string could be discovered during the character string search in the source file. %s indicates the key assigned to [Down].
	Action by User	[Yes]: Continues searching from the start of the source file. [No]: Stops searching.
Q2203	Message	PM+ has finished searching this IDL source file. Do you wish to continue it from the end of IDL source file? Continue it from the end of IDL source file, if you select [%s].
	Cause	No character string could be discovered during the character string search in the source file. %s indicates the key assigned to [Up].
	Action by User	[Yes]: Continues searching from the start of the source file. [No]: Stops searching.
Q2204	Message	Do you wish to replace all the files?
	Cause	Replacement of all the files was selected in global replacement.
	Action by User	[Yes]: Replaces all the files. [No]: Returns to the active Edit window without doing anything.
Q2205	Message	The search string was found in the IDL source file %s. Do you wish to replace in it?
	Cause	During global replacement, the character string to be searched was found in the source files of an IDL file. This message is displayed when the of [Display Message every Source File, in the case of IDL file] check box is selected. %s indicates the source file name.
	Action by User	[Yes]: Executes replacement in the displayed source file. [No]: Skips replacement in the displayed source file and continue searching. [This message is not to be shown until new searching.]: If this check box is selected and [Yes] is clicked, global replacement continues without a message until the next global replacement is executed.

Number	Description	
Q2206	Message	Do you wish to replace in the using file %s?
	Cause	An attempt was made to execute global replacement in the file being edited. %s indicates the name of the file being edited.
	Action by User	[Yes]: Executes replacement in the file being edited. [No]: Skips replacement in the file being edited and continue searching.
Q2207	Message	%s occurrence(s) have been replaced. Do you wish to continue it from the top of file?
	Cause	Replacement finished at the last line in character string replacement. %s indicates the number of items replaced.
	Action by User	[Yes]: Continues replacement from the first line. [No]: Stops replacement.
Q2208	Message	Do you wish to cancel replacement?
	Cause	The [Esc] key was pressed during replacement of a character string to stop replacement.
	Action by User	[Yes]: Stops replacement. [No]: Continues replacement.
Q2300	Message	Do you wish to apply layer rule?
	Cause	An attempt was made to open a file with layers. This message is displayed when the [Apply Layer Rule in Opening File(s)] check box on the [File] tab under [PM+ Settings...] on the [Tool] menu is selected. The [This message is not to be shown until restart] check box is valid only when [Yes] is selected.
	Action by User	[Yes]: Opens the file with layers. [No]: Opens the file without layers.
Q2301	Message	Do you wish to clear the undo buffer? Do nothing, if you select [No].
	Cause	This is to verify whether the undo buffer is cleared when applying layer rule to a file.
	Action by User	[Yes]: Clears the undo buffer. [No]: Returns to the active Edit window without doing anything. [This message is not to be shown until restart]: By checking this check box, this message is not displayed even if the same operation is performed while PM+ is running.
Q2400	Message	%s has already set. Do you wish to change a setting? Now: %s2 After: %s3
	Cause	When adding a project-related file, an attempt was made to add a file type that has already been set. The type of file (startup file, etc.) to be set is displayed to %s1, the currently set file name is set to %s2, and the file name to be newly set is set to %s3. Select [Yes] button to change the setting, and [No] button to not change the setting.
	Action by User	[Yes]: Changes the setting and returns to the [Project] window . [No]: Returns to the [Project] window without changing the setting.
Q2401	Message	%s This project file was generated by a previous version of Project Manager. PM+ converts to the new format.
	Cause	An attempt was made to open a project file created in PM V3.xx. %s indicates the specified project file name.
	Action by User	[OK]: Changes to a new format. [Cancel]: Cancels the operation to open the project file.
Q2402	Message	%s The project file already exists. Do you wish to rename old file to %s.bak and replace it?
	Cause	The project file name that was specified in the [Add New Project - Step 1/9 [Project Information] dialog box] is the same as an existing file name. %s indicates the specified file name.
	Action by User	[Yes]: Overwrites the project file and save the existing file with the extension .bak. [No]: Returns to the window without doing anything.

Number	Description	
Q2403	Message	%s The file was not found. Do you wish to create it?
	Cause	The specified file does not exist. %s indicates the specified file name.
	Action by User	[Yes]: Creates a vacant file with the specified file name and continue adding a source file. [No]: Makes the specified file name invalid and continues adding a source file. [This message is not be shown until next adding the source files.]: If this check box is selected, this message is not displayed until the next source file addition.
Q2404	Message	%s This file generated by the configurater. Do you wish to add it to the project?
	Cause	An attempt was made to register a source file automatically generated by the configurator to the project. %s indicates the specified file name.
	Action by User	[Yes]: Registers the specified file to the project. [No]: Makes the specified file invalid and does not register it to the project.
Q2405	Message	The NEC Electronics tool to be used was changed. When these tools are changed, it is necessary to compile all source files at the time of next build. Are all object files deleted in order to compile all source files at the time of next build?
	Cause	An attempt was made to change the configuration of the tool to be used in the [Tool Version Settings] dialog box .
	Action by User	[Yes]: Deletes all the object files of the modified project. [No]: Does nothing and closes the message.
Q2406	Message	%s This Workspace was generated by a previous of Project Manager. Do you want to convert all projects? After being converted, they cannot read by a previous version of Project Manager.
	Cause	An attempt was made to open a workspace file generated by the PM plus V5.xx. %s indicates the workspace file name.
	Action by User	[Yes]: Converts all projects and reads the workspace file. [No]: Does nothing and closes the message.
Q2407	Message	%s An old version has been selected in this project. %s was found. It is newer than the version that had been selected. Is a compiler (or assembler) used changed? The Tools Version Setting dialog opens when [YES] button is pushed.
	Cause	The PM+ found the compiler of the later version than the using compiler. The first %s indicates the project file name, and the second %s indicates the tool name and its version.
	Action by User	[Yes]: Opens the [Tool Version Settings] dialog box . [No]: Does nothing and closes the message.
Q2500	Message	Do you wish to stop building all projects. [No] will stop building project only.
	Cause	The [Stop Build] command was selected while batch build was being executed.
	Action by User	[Yes]: Stops all building and return to the active window. [No]: Stops only the build currently being executed and execute build for the next project. [Cancel]: Cancels stopping build and continues the build.
Q2501	Message	%s The file was not found. Do you wish to build it?
	Cause	The load module file downloaded to the debugger could not be found. %s indicates the load module file name. Download it after executing build.
	Action by User	[Yes]: Downloads after build. [No]: Starts the debugger without executing build. [Cancel]: Returns to the active window without doing anything.
Q2600	Message	This file already exists. Do you wish to replace it?
	Cause	The file specified to be overwritten and saved by the macro already exists.
	Action by User	[Yes]: Overwrites the file. [No]: Does not overwrite the file.

Number	Description	
Q2700	Message	PM+ has finished comparing the file %s. Do you wish to continue it from the top of file?
	Cause	When comparing the files, comparison finished at the last line. %s indicates the file name.
	Action by User	[Yes]: Compares from the start. [No]: Does nothing.
Q2701	Message	PM+ has finished comparing the file %s. Do you wish to continue it from the last of file?
	Cause	When comparing the files, comparison finished at the start. %s indicates the file name.
	Action by User	[Yes]: Compares from the last line. [No]: Does nothing.
Q2702	Message	Set the default font. This is applied to create a new file and open an existing text file.
	Cause	An attempt was made to change the set font value for when a new document is created or a text file is read by selecting the [Default] button in the [Font] dialog box .
	Action by User	[OK]: Changes the set value of the font. [Cancel]: Returns to the [Font] dialog box without doing anything.
Q2703	Message	The debugger was not selected. Do you wish to select the debugger?
	Cause	The [Debug] menu item was selected but the debugger was not selected.
	Action by User	[OK]: Opens the [Debugger Settings] dialog box . [Cancel]: Returns to the active window.
Q2704	Message	The tag jump format not specified. Cannot jump to the error line, if you don't set this. Do you wish do it?
	Cause	The tag jump format has not been specified when using an external editor is selected.
	Action by User	[Yes]: If another environmental setting page is selected, move to that page. If the [OK] button is clicked, return to the active window. [No]: Returns to the external editor page.
Q2705	Message	Found key settings of Project Manager standard editor(idea-L). Do you wish to use this settings?
	Cause	The key setting of idea-L could be found.
	Action by User	[Yes]: Copys the key setting of idea-L so that it can also be used in PM+. [No]: Does not use the key setting of idea-L, and uses the default key setting of PM+.

7.5 Information

The information messages output by PM+ are listed below together with the cause and action to take in response to the message, in message number order. All information messages have "I" prefixed to the message number.

When these messages are displayed, the users must click the [OK] button as consent.

Table 7-5 Information Message List

Number	Description	
I3000	Message	Another process has changed %s. If you wish to reload it. Please change read-only attribute.
	Cause	The source file has been updated but the IDL file is Read-Only, and could not be read again. %s indicates the source file name in the IDL file.
I3001	Message	PM+ will open the backup file.
	Cause	The backup file of the IDL file was specified when the file was read.
I3002	Message	%s This file is using by the other process. It is opened as read-only.
	Cause	A file opened by another application was specified to be opened. %s indicates the file name.
I3003	Message	%s This file is binary file. It is opened as read-only.
	Cause	PM+ judged that the file to be read was a binary file. %s indicates the file name.
I3004	Message	%s This file is read-only. It is opened as read-only.
	Cause	The file specified to be opened was Read-Only. %s indicates the open file name.
I3005	Message	A workspace %s1 will be opened instead of the specified project %s2.
	Cause	*A *.prj file was specified but it has a corresponding workspace, so an attempt is being made to open that workspace. %s1 indicates the name of the workspace file to be opened that corresponds with the project, and %s2 indicates the project file name specified by the user.
I3200	Message	The search string was not found.
	Cause	The specified character string could not be found during a character string search.
I3201	Message	The string %s has not be found in the file %s.
	Cause	The specified character string could not be found during global searching with the [Search Active Window Only] check box selected. The first %s indicates the character string specified to be searched and the second %s indicates the file name.
I3202	Message	PM+ has finished searching the files. The string %s has not been found in %d files.
	Cause	The specified character string could not be found during a global search. %d indicates the number of searched files and %s indicates the searched character string.
I3203	Message	%s occurrence(s) have been replaced.
	Cause	All replacement has finished and the number of replaced character strings is displayed. %s indicates the number of replaced character strings the replacement.
I3204	Message	PM+ has canceled search command.
	Cause	The [Esc] key was pressed during searching and searching was canceled.
I3205	Message	PM+ has finished replace in files.
	Cause	Global searching has finished.
I3206	Message	Function Definition Name cannot be found: %s.
	Cause	The function definition line could not be found. %s indicates the specified function name.
I3207	Message	%s has been searched.
	Cause	Global searching is being executed now. %s indicates the name of the file name currently being searched.
I3400	Message	This IDL file has added or deleted the IDL source files. Please add or delete the source file from the project file by [Project]-[Project Settings...] Command.
	Cause	When closing an IDL file, the source files of the IDL file are added or deleted.

Number	Description	
I3401	Message	The version of the device file specified by the project file differs from the version of the device file installed. Make sure that the version of the installed device file is right. The device file specified by the project file: %s1 The installed device file: %s2
	Cause	The device version described in the project file and the version of the installed device differ. %s1 indicates the device version described in the project file. %s2 indicates the version of the installed device.
I3500	Message	Build completed normally.
	Cause	The build operation finished with 0 errors.
I3501	Message	Error detected on termination.
	Cause	Building resulted in build errors.
I3502	Message	Stop build.
	Cause	Build was stopped by selecting [Stop Build] from the [Build] menu.
I3600	Message	Aborted to play back the key operations.
	Cause	The [Esc] key was pressed while a key operation was being played back.
I3700	Message	The difference was not found.
	Cause	The compared files were the same.
I3701	Message	This setting will take effect as restart the debugger.
	Cause	The debugger to be used was changed, but the new debugger is only valid the next time the debugger is started up.

APPENDIX A SAMPLE LINK DIRECTIVE FILE

This appendix shows the sample link directive files.

These files are created when the [Create and Use the sample file] check box is selected in the "[New WorkSpace - Step 6/9 [LinkDirective File]] dialog box" or "[Add New Project - Step 6/9 [LinkDirective File]] dialog box".

The sample link directive file that is created in this process depends on the items specified on each of the wizards. The combinations are shown below.

- When [Not use RTOS] and [Use Internal memory only] are selected
- When [Not use RTOS] and [Use External memory] are selected

The sample link directive file that was created in this process is saved in the project folder and registered in a project-related file.

The name of the sample link directive file is "project file name.dir".

[Caution]

The following sample files are all for cases when the start address of the internal RAM is 0xffe000.

In actual fact, a sample link directive file corresponding to the start address of the internal memory of the specified device is created.

In the space for copyright and other notices, the version information of PM+, device name, device file name, and start and end addresses of the internal RAM area are described as well as the copyright notice.

The link directive file that was created has to be customized by the user according to the specifications of the target or the user defined sections.

When [Not use RTOS] and [Use Internal memory only] are selected

```

# Sample link directive file (not use RTOS/use internal memory only)
# (copyright and other notices)

SCONST : !LOAD ?R {
    .sconst          = $PROGBITS    ?A .sconst;
};

CONST : !LOAD ?R {
    .const           = $PROGBITS    ?A .const;
};

TEXT : !LOAD ?RX {
    .pro_epi_runtime = $PROGBITS    ?AX .pro_epi_runtime;
    .text            = $PROGBITS    ?AX .text;
};

SIDATA : !LOAD ?RW V0xffe000 {
    .ti data.byte    = $PROGBITS    ?AW .ti data.byte;
    .ti bss.byte     = $NOBITS      ?AW .ti bss.byte;
    .ti data.word    = $PROGBITS    ?AW .ti data.word;
    .ti bss.word     = $NOBITS      ?AW .ti bss.word;
    .ti data         = $PROGBITS    ?AW .ti data;
    .ti bss          = $NOBITS      ?AW .ti bss;
    .si data         = $PROGBIT     ?AW .si data;
    .si bss          = $NOBITS      ?AW .si bss;
};

DATA : !LOAD ?RW V0xffe100 {
    .data            = $PROGBITS    ?AW .data;
    .sdata           = $PROGBITS    ?AWG .sdata;
    .sbss            = $NOBITS      ?AWG .sbss;
    .bss             = $NOBITS      ?AW .bss;
};

__tp_TEXT @ %TP_SYMBOL;
__gp_DATA @ %GP_SYMBOL &__tp_TEXT{DATA};
__ep_DATA @ %EP_SYMBOL;

```

[Caution]

The example above is for a case in which the start address of the internal RAM is 0xffe000.

When [Not use RTOS] and [Use External memory] are selected

```

# Sample link directive file (not use RTOS/use external memory)
# (copyright and other notices)

SCONST : !LOAD ?R {
    .sconst          = $PROGBITS    ?A .sconst;
};

TEXT : !LOAD ?RX {
    .pro_epi_runtime = $PROGBITS    ?AX .pro_epi_runtime;
    .text           = $PROGBITS    ?AX .text;
};

DATA : !LOAD ?RW V0x100000 {
    .data          = $PROGBITS    ?AW .data;
    .sdata         = $PROGBITS    ?AWG .sdata;
    .sbss          = $NOBITS      ?AWG .sbss;
    .bss           = $NOBITS      ?AW .bss;
};

CONST : !LOAD ?R {
    .const          = $PROGBITS    ?A .const;
};

SEDATA : !LOAD ?RW V0xff6000 {
    .sedata         = $PROGBITS    ?AW .sedata;
    .sebss          = $NOBITS      ?AW .sebss;
};

SIDATA : !LOAD ?RW V0xffe000 {
    .ti data.byte  = $PROGBITS    ?AW .ti data.byte;
    .ti bss.byte   = $NOBITS      ?AW .ti bss.byte;
    .ti data.word  = $PROGBITS    ?AW .ti data.word;
    .ti bss.word   = $NOBITS      ?AW .ti bss.word;
    .ti data       = $PROGBITS    ?AW .ti data;
    .ti bss        = $NOBITS      ?AW .ti bss;
    .si data       = $PROGBITS    ?AW .si data;
    .si bss        = $NOBITS      ?AW .si bss;
};

__tp_TEXT @ %TP_SYMBOL;
__gp_DATA @ %GP_SYMBOL &__tp_TEXT{DATA};
__ep_DATA @ %EP_SYMBOL;

```

[Caution]

The example above is for a case in which the start address of the internal RAM is 0xffe000.

APPENDIX B COMMANDS FOR KEYBOARD MACROS

This appendix shows the command format that can be used for modifying macro files (*.imc) that have been saved as key commands.

[How to read command format]

- "< >" indicates an argument that cannot be omitted, and "[]" indicates an argument that can be omitted.
- "|" indicates selection of either side.

File Menu

Table B-1 Command Format for Keyboard Macro (File menu)

Contents	Command Format
New	newfile [idl] idl: Creates new IDL file.
Open	openfile <"filename"> [readonly] [layer] [autoselect sjis euc jis unicode] filename: Specify the file name with full path. readonly: Opens the file as a read only file. layer: Reads the file with layer rule. autoselect: Detects automatically. sjis: Reads the files with Shift-JIS codes. euc: Reads the files with EUC codes. jis: Reads the files with JIS codes unicode: Reads the files with Unicode.
Insert file	insertfile <"filename"> filename: Specify the file name with full path.
Open workspace	openworkspace <"filename"> filename: Specify the file name with full path.
Close workspace	closeworkspace [nosave]
Close	closefile [nosave] nosave: Closes the edited file without saving.
Save	save
Save As	saveas <"filename"> [makesource [notdivide]] [replace] [crf lf cr] [sjis euc jis unicode] filename: Specify the file name with full path. makesource: Creates a source file. notdivide: Does not divide the source file. replace: Overwrites without displaying message to verify. crf: Saves a line feed code as CR+LF. lf: Saves a line feed code as LF. cr: Saves a line feed code as CR. sjis: Saves as Shift-JIS code. euc: Saves as EUC code. jis: Saves as JIS code. unicode: Saves as Unicode.
Print	print

Edit Menu

Table B-2 Command Format for Keyboard Macro (Edit menu)

Contents	Command Format
Undo	undo
Redo	redo
Cut	Combination of copy command and delete command
Copy	copy
Image Copy	imagecopy
Paste	paste
Delete	delete
Delete the Word	deleteword <all> all: Required to distinguish from "Delete to the End of Word"
Delete to the End of Word	deleteword
Delete the Line	deleteline
Delete to the Top of Line	deletebefore
Delete to the End of Line	deleteafter
Select to the Top of Line	selectbefore
Select to the End of Line	selectafter
Select to the Word	selectword
Select to the Top of Word	selectleftword
Select to the End of Word	selectrightword
Select All	selectall
Grouping by Keyword	grouping <character string to be searched> [and or] [color delete none coloronly] [undocolor] [window] <character string to be searched>:Specify the character string to be searched with " ". [and]: AND search [or]: OR search [matchcase]: Distinguishes a uppercase and lowercase character. [zen]: Distinguishes a two-byte and one-byte character. [paragraph]: Specifies a paragraph (when omitted, no paragraph is specified). [color]: Changes the color after grouping. [delete]: Deletes after grouping. [none]: Does nothing after grouping. [coloronly]: Only changes the color (cannot be specified at same time as process after grouping). [undocolor]: Restores the original color of grouped lines. [window]: Groups lines in a new Edit window .
Restore Color of Grouping Lines	undogroupcolor

Find Menu

Table B-3 Command Format for Keyboard Macro (Find menu)

Contents	Command Format
Find Upward	findup <character string to be searched> [word] [matchcase] [zen] [special] [[[loop] [ask-loop]]] [frombottom]] [source] <character string to be searched>: Specify the character string to be searched with " " word: Search word matchcase: Distinguishes a uppercase and lowercase character. zen: Distinguishes a two-byte and one-byte character. special: Regular expression loop: Does not end the search at the top or bottom line. askloop: Displays a message to verify when the search does not end at the top or bottom line. frombottom: Searches from the top or bottom line. source: Searches only source files with caret.
Find Downward	finddown <character string to be searched> [word] [matchcase] [zen] [special] [[[loop] [ask-loop]]] [frombottom]] [source] <character string to be searched>:Specify the character string to be searched with " ". word: Search word matchcase: Distinguishes a uppercase and lowercase character. zen: Distinguishes a two-byte and one-byte character. special: Regular expression loop: Does not end the search at the top or bottom line. askloop: Displays a message to verify when the search does not end at the top of bottom line. frombottom: Searches from the top or bottom line. source: Searches only source files with caret.
Replace	replace <character string before replacement> <character string after replacement> [word] [matchcase] [zen] [special] [[[loop] [askloop]]] [frombottom]] [source] [all] <character string before replacement>:Specify the character string before replacement with " ". <character string after replacement>: Specify the character string after replacement with " ". word: Search word matchcase: Distinguishes a uppercase and lowercase character. zen: Distinguishes a two-byte and one-byte character. special: Regular expression loop: Does not end the search at the top or bottom line. askloop: Displays a message to verify when search does not end at the top or bottom line. frombottom: Searches from the top or bottom line. source: Searches only source files with caret. all: Replace all (when omitted, same as the operation of [Replace] button.

Contents	Command Format
Find in Files (When searching through multiple files)	<pre>grepfile <character string to be searched> <file type> <folder> [subfolder] [word] [match- case] [zen] [special] [source] [findalllayer foundlayer foundnotlayer] [autoselect sjis euc jis unicode]</pre> <p><character string to be searched>: Specify the character string to be searched with " ".</p> <p><file type>: Specify the file type character string with " ".</p> <p><folder>: Specify the folder character string with " ".</p> <p>subfolder: Also search sub folders.</p> <p>word: Search word</p> <p>matchcase: Distinguishes a uppercase and lowercase character.</p> <p>zen: Distinguishes a two-byte and one-byte character.</p> <p>special: Regular expression</p> <p>source: Also displays source file name.</p> <p>findalllayer: Displays all searched files with layers.</p> <p>foundlayer: Displays files in which character strings are found, with layers.</p> <p>foundnotlayer: Displays files in which character strings are found, without layers.</p> <p>autoselect: Detects automatically.</p> <p>sjis: Reads the files with Shift-JIS codes.</p> <p>euc: Reads the files with EUC codes.</p> <p>jis: Reads the files with JIS codes.</p> <p>unicode: Reads the files with Unicode.</p>
Find in Files (When searching through the current edit window)	<pre>gredit <Character string to be searched> [word] [matchcase] [zen] [special] [source] [fin- dalllayer foundlayer foundnotlayer] [autoselect sjis euc jis unicode]</pre> <p><character string to be searched>: Specify the character string to be searched with " ".</p> <p>word: Searches for word.</p> <p>matchcase: Distinguishes a uppercase and lowercase character.</p> <p>zen: Distinguishes a two-byte and one-byte character.</p> <p>special: Regular expression</p> <p>source: Displays the source file name as well.</p> <p>findalllayer: Displays all searched files with layers.</p> <p>foundlayer: Displays the files in which character strings are found, with layers.</p> <p>foundnotlayer: Displays the files in which character strings are found, without layers.</p> <p>autoselect: Detects automatically.</p> <p>sjis: Reads the files with Shift-JIS codes.</p> <p>euc: Reads the files with EUC codes.</p> <p>jis: Reads the files with JIS codes.</p> <p>unicode: Reads the files with Unicode.</p>
Copy for Append	copyforappend
Cut for Append	cutforappend
Find in Project	findinproject

Layer Menu

Table B-4 Command Format for Keyboard Macro (Layer menu)

Contents	Command Format
Promote	onelevelup
Demote	oneleveldown
Expand	expand
Collapse	collapse
Expand All Lower Layers	expandalllower
Expand All	expandall
Collapse All	collapseall
Expand the Specific Layer	expandspecified [caret] caret: Limits the action to those layers below the caret position.
Collapse the Specific Layer	collapsespecified [caret] caret: Limits the action to those layers below the caret position.
Show Index 1	displaylayer1
Show Index 2	displaylayer2
Show Index 3	displaylayer3
Show Index 4	displaylayer4
Show Index 5	displaylayer5
Collapse This Layer	collapsethislayer

Jump-related

Table B-5 Command Format for Keyboard Macro (jump-related)

Contents	Command Format
To the Top of Line	topofline
To the End of Line	endofline
Mark Jump (Adding the current caret position as a marked line)	addmark
Mark Jump (Jumping to a marked line)	markjump <mark-number> <mark-number>: Specifies number of mark beginning with 1 (in display order of [Mark Jump] dialog box).
To the Specific Line	jump <line number> <line number>: Specify line number appearing on top of file as first line (excluding collapsed layers).
To the Top of File	topline
To the Index Line	indexline
To the End of File	bottomline
Tag Jump	tagjump
Next Tag Jump	nexttagjump
Next Tag Jump Upward	upwardnexttag
One Word Right	rightword
One Word Left	leftword

Contents	Command Format
To the Matching Brace	jumpparent
To the Tag File	backtagjump
To the Function Definition	fuctiondefinition
To the Top Layer at caret	toplayer
One Line Up	up [line count] line count: Specify the number of lines to be jumped (default is 1)
One Line Down	down [line count] line count: Specify the number of lines to be jumped (default is 1)
One Character Left	up [character count] character count: Specify the number of characters to be jumped (default is 1)
One Character Right	right [character count] character count: Specify the number of characters to be jumped (default is 1)
Some Layer Line Up	upsamelayer
Same Layer Line Down	downsamelayer
Back Jump	backjump

Help Menu

Table B-6 Command Format for Keyboard Macro (Help menu)

Contents	Command Format
External HELP 1	externalhelp1
External HELP 2	externalhelp2
External HELP 3	externalhelp3

No Menu

Table B-7 Command Format for Keyboard Macro (no menu)

Contents	Command Format
Insert character	insert <character string> <character string>: Specify the character string with " ". [Caution] Inserts characters independently of insert/overwrite mode.
Overwrite character	overwrite <character string > <character string>: Specify the character string with " ". [Caution] Inserts characters independently of insert/overwrite mode.
Enter character	input <character string > <character string>: Specify the character string with " ". [Caution] Inserts characters dependently of insert/overwrite mode. Input mode can be switched between insertmode, overwritemode, overwriteswitch, etc.
Enter new line	insertreturn [count] count: Specify an input count (default is 1).
Next Page	nextpage
Previous page	prevpage
Begin select	beginsel [Caution] After executing beginsel, execute a character move command or line move command to specify a range.
End select	endsel [Caution] Releases the range selection mode set by beginsel.
Enter backspace	backspace [count] count: Specify an input count (default is 1).
Fast caret up	upfast [count] count: Specify a movement count (default is 1).
Fast caret down	downfast [count] count: Specify a movement count (default is 1).
Insert mode	insertmode
Overwrite mode	overwritemode
Edit window selection	window <window name> [readonly [= ReadOnly No]] <window name>: Specify the file name of the Edit window with full path. If the file name is not determined, specify the title character string of the caption. This is a character string specification, so enclose with " ". ReadOnly = ReadOnly No: Specifies [readonly] when selecting the Edit window of Read-only. If ReadOnly number is displayed on the caption, specify the number as [readonly=1], etc.

Control Command-related

Table B-8 Command Format for Keyboard Macro (control command-related)

Contents	Command Format
Exit PM+	exit
Switch overwrite/insert mode	overwriteswitch
Start up external execution module	<p>exec <parameter> <parameter>: Specify the name of the execution module and all the execution module arguments with " " .</p> <p>[Example] exec "dir" exec "dir /od *.txt" exec "z:\hide\hidemaru.exe" // startup z:\hide\hidemaru.exe</p>
Numeric variable definition	<p>#variable name #variable name = "initial value" "initial value": Specify the initial value of the variable.</p> <p>[Caution] An arbitrary variable name can be set for the variable name. When the initial value is omitted, 0 is assumed.</p> <p>[Example] #cnt // initialized to 0 #cnt2=5 // initialized to 5</p>
Character string variable definition	<p>\$character string variable name \$character string variable name = "initial value" "initial value": Specify the initial value of the variable.</p> <p>[Caution] An arbitrary character string name can be set for the character string variable name. When the initial value is omitted, " " is assumed.</p> <p>[Example] \$str // initialized to " " \$str2="ABC" // initialized to "ABC"</p>
Operator	<p>++, --, +=, -=, *=, /=, =, +, -</p> <p>[Example] #cnt++ #value-- #value += 5 #cnt-=12 #idx *= #cnt #idx /= #cnt #idx=#idx+2-#cnt</p>
Conditional expression	<p><, >, ==, <=, >=, !=</p> <p>[Example] #a<#b // #a is smaller than #b. #a>10 // #a is larger than 10. #a==#b // #a is equal to #b. #a<=5 // #a is 5 or less. #a>=8 // #a is 8 or more. #a!=#b // #a is not equal to #b.</p>
while statement	<p>while (conditional expression) { process }</p> <p>[Example] // routine to insert 1 ten times #cnt = 0 while (#cnt < 10) { insert "1" // insert 1 insertreturn // return #cnt++ // add #cnt }</p>

Contents	Command Format
break statement	<pre>break [Example] #cnt = 0 while (1) { // infinite loop insert "1" // insert 1 insertreturn // return if (#cnt == 5) { break // finish after 5 loops } #cnt++ // add #cnt }</pre>
continue statement	<pre>continue [Example] #cnt = 0 while (#cnt < 10) { // ten loops if (#cnt == 0) { insert "1" // insert 1 insertreturn // return } else{ continue // go back to top of while } #cnt++ // add #cnt }</pre>
if statement	<pre>if (conditional expression) { process } elseif { process } else { process } [Example] #cnt = 0 while (#cnt < 10) { // ten loops if (#cnt == 0) { insert "0" // insert 0 insertreturn // return } elseif (#cnt == 1) { insert "1" insertreturn // return } else{ continue // go back to top of while } #cnt++ // add #cnt }</pre>
Display message box	<pre>msgbox <character string> <character string>: Specify the character string to be displayed with " ". [Caution] If the [OK] button is selected, the message box closes.</pre>
Obtaining the character at the caret	<pre>\$x = getchar \$x: Character string type variable [Return values] One character (or character string) returned at the caret</pre>
Checking the title line at the caret	<pre>#x = istitle #x: Integer type variable [Return values] 1: Title line 0: Not title line</pre>

Contents	Command Format
Checking the title line at the caret (expand/collapse)	#x = istitleopen #x: Integer type variable [Return values] 1: The layer of the title line is expanded. 0: The layer of the title line is collapsed.
Checking the first line at the caret	#x = istop #x: Integer type variable [Return values] 1: Top line 0: Not top line
Checking the last line at the caret	#x = isbottom #x: Integer type variable [Return values] 1: Bottom line 0: Not bottom line [Caution] Even if the caret line appears to be a bottom line (lower layers collapsed), 1 is returned.
Checking the end of line	#x = isendofline #x: Integer type variable [Return values] 1: The caret is at the end of the line. 0: The caret is not at the end of the line.
Checking the end of file (EOF)	#x = iseof #x: Integer type variable [Return values] 1: The caret is at the end of the file. 0: The caret is not at the end of the file. [Caution] Even if the caret line appears to be a bottom line (lower layers collapsed), 1 is returned.
Obtaining the column position of the caret (tab character = 1 character)	#x = getcol #x: Integer type variable [Return values] The column number of the caret is returned. Leftmost column = 1.
Obtaining the column position of the caret (tab character = specified number of space characters)	#x = getdispcol #x: Integer type variable [Return values] The column number of the caret is returned. Leftmost column = 1.
Obtaining the line position of the caret (excluding collapsed layers)	#x = getdispline #x: Integer type variable [Return values] The line number of the caret is returned. First line = 1.
Obtaining the line position of the caret (including collapsed layers)	#x = getabsline #x: Integer type variable [Return values] The line number of the caret is returned. First line = 1.
Checking the em-size character at the caret	#x = isdbcs #x: Integer type variable [Return values] 1: Two-byte character 0: one-byte character
Inserting the current time into the caret position	time
Inserting the current date into the caret position	date

APPENDIX C SHORTCUT KEYS

Table C-9 lists the shortcut keys in the default condition of the PM+.

Table C-9 List of Shortcut Keys (Default Condition)

Menu Item		Shortcut Key	Note
File	New	[Ctrl]+ [N]	
	Open...	[Ctrl]+ [O]	
	Save	[Ctrl]+ [S]	
	Print...	[Ctrl]+ [P]	
Edit	Undo	[Ctrl]+ [Z]	
	Redo	[Ctrl]+ [Y]	
	Cut	[Ctrl]+[X]	
	Copy	[Ctrl]+ [C]	
	Paste	[Ctrl]+ [V]	
	Delete the Word	[Ctrl]+ [T]	
	Delete	[Delete]	
	Delete the Line	[Ctrl]+ [G]	
	Deleting to the Top of Line	[Ctrl]+ [U]	[Note 1]
	Delete to the End of Line	[Ctrl]+ [K]	
	Select to the Top of Line	[Shift] + [Home]	
Select to the End of Line	[Shift] + [End]		
Find	Find...	[Ctrl]+ [F]	
	Find Upward	[Shift] + [F3]	[Note 1]
	Find Downward	[F3]	
	Find the Word Upward	[Ctrl]+ [W]	
	Find the Word Downward	[Ctrl]+ [Q]	
	Replace...	[Ctrl]+ [H]	
	Mark Jump...	[Ctrl]+ [J]	
	To the Top of Line	[Home]	
	To the End of Line	[End]	
	To the Top of File	[Ctrl]+ [Home]	
	To the End of File	[Ctrl]+ [End]	
	To the Index Line	[Ctrl]+ [Shift] + [up arrow]	
	To the Matching Brace	[Ctrl]+ [L]	
	Tag Jump	[F10]	
	To the Tag File	[Shift] + [F10]	
	Next Tag Jump	[F9]	
	Next Tag Jump Upward	[Shift] + [F9]	[Note 1]
	One Word Right	[Ctrl]+ [D]	
	One Line Up	[Ctrl]+ [A]	
	Direct Search	[Ctrl]+ [Shift] + [F]	

Menu Item		Shortcut Key	Note
Layer	Promote	[Ctrl]+ [Shift] + [left arrow]	
	Demote	[Ctrl]+ [Shift] + [right arrow]	
	Expand	[Ctrl]+ [+]	Input "+" on the numeric keypad
	Collapse	[Ctrl]+ [-]	Input "-" on the numeric keypad
	Expand All Lower Layers	[Ctrl]+ [*]	Input "*" on the numeric keypad
	Show Index 1	[Ctrl]+ [1]	[Note 1]
	Show Index 2	[Ctrl]+ [2]	
	Show Index 3	[Ctrl]+ [3]	
	Show Index 4	[Ctrl]+ [4]	
	Show Index 5	[Ctrl]+ [5]	
Build	Build and Debug	[F5]	
	Compile	[Ctrl]+ [F7]	
	Build	[F7]	
Help	Current Window	[F1]	
	External HELP 1	[Shift] + [F1]	
	External HELP 2	[Ctrl]+ [F1]	
	External HELP 3	[Ctrl]+ [Shift] + [F1]	

[Note 1]

This menu item is not displayed by default.

To display this menu item on the toolbar, change the setting by selecting the [Tool] menu -> [Customize...] - [\[Menu\]](#) tab.

[Note 2]

The settings of the above shortcut keys, except for some keys, can be changed on the [\[Keyboard\]](#) tab in the [\[Customize\]](#) dialog box, which is opened by selecting the [Tool] menu -> [Customize...].

The shortcut keys can also be checked in the [\[Shortcut List\]](#) dialog box. This dialog box lists modified shortcut key settings and newly set shortcut keys.

APPENDIX D QUANTITATIVE LIMIT LIST

Table D-10 lists the quantitative limit list of PM+.

Table D-10 Quantitative Limit List

Item		Limit
Workspace-related	Length of workspace file name	255 characters
	Length of project group name	127 characters
	Number of projects that can be registered per workspace	128
	Number of projects that can be registered per project group	20
Project-related	Length of project file name	255 characters
	Length of project title	127 characters
	Length of source file name	259 characters
	Length of project-related file name	259 characters
	Length of other file names	259 characters
	Number of source files that can be registered per project	2,048
	Number of other files that can be registered per project	100
Build-related	Lengths of command character strings that can be set in pre build process and past build process	127 characters
Edit window-related	Number of characters per line	5,119 characters
	Maximum number of lines	2,097,152
	Maximum number of layers	127
	Number of 1st layers that can be split	128
	Number of source files generated in IDL file	128
Mark jump-related	Number of marks that can be registered	20
Smart lookup-related	Length of function name that can be recognized	1,998 characters
	Maximum number of function candidates that user can register	64
External tool-related	Number of external tools that can be registered	10
	Length of menu that can be set for external tools	32 characters
	Length of tool tip that can be set for external tools	32 characters
	Length of status bar that can be set for external tools	32 characters
Macro-related	Maximum number of macro instructions that can be recorded	64
	Maximum number of macro registrations	32
	Length of title that can be set for macro registration	32 characters
Keyword-related	Maximum number of keywords that can be registered by user	64
	Maximum number of C language keywords	64

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