CUSTOMER NOTIFICATION

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CP(K),O

V850 Series Integrated Debugger ID850 V2.52 Operating Precautions

For PC-9800 Series (Windows™ based)
and IBM PC/AT Compatibles (Windows™ based)

Be sure to read this document before using the product.

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Thank you for purchasing the integrated debugger ID850 V2.52.
This document describes the points to be noted when using this integrated debugger. Be sure to read this document before using the integrated debugger.
For details of how to use and the functions of the integrated debugger, refer to the online help supplied with the product or User's Manual "ID850 Integrated Debugger Ver.2.50 Operation (Windows-Based)" (document number: U16217E). Also refer to **APPENDIX B DOCUMENT MODIFICATIONS**.

1. ID850 V2.52 OPERATING ENVIRONMENT

(1) Host machine

An environment in which one of the following OSs operates is required.

Windows 98, Windows NT 4.0, Windows 2000, Windows Me, Windows XP

* It is recommended to install the latest service pack for each OS.

(2) Supported devices

Target Device	Target In-Circuit Emulator
V851, V852, V853, V854, V850/SA1, V850/SB1, V850/SB2, V850/SV1, V850/SF1, V850/SC1, V850/SC2, V850/SC3	IE-703002-MC
V850E/MS1, V850E/MS2	IE-703102-MC
V850E/MA1, V850E/MA2, V850E/SV2	IE-V850E-MC-A
V850E/IA1, V850E/IA2	IE-V850E-MC
V850ES/SA2, V850ES/SA3, V850ES/KF1, V850ES/KG1, V850ES/KJ1, V850ES/SG1, V850ES/SG2, V850ES/PM1	IE-V850ES-G1
V850ES/KF1, V850ES/KG1, V850ES/KJ1	IE-V850ESK1-ET

(3) Supported tools

Supported language: NEC Electronics C compiler package CA850 V2.50 or later

Supported driver: NEC Electronics IE-PC Driver V2.10 or later

Supported interface card:

Connected IE	Supported Interface Card
IE-703002-MC, IE-703102-MC	IE-70000-98-IF-B/-C, IE-70000-PC-IF-B/-C, IE-70000-PCI-IF or IE-70000-PCI-IF-A, and IE-70000-CD-IF-A
IE-V850E-MC(-A), IE-V850ES-G1, IE-V850ESK1-ET	IE-70000-PCI-IF or IE-70000-PCI-IF-A, and IE-70000-CD-IF-A

2. FILES NECESSARY FOR EXECUTING ID850 V2.52

The following files are necessary for using ID850 V2.52.

(1) ID850 system file (this product)

Included in the folder “id850” in the CD-ROM.

(2) Device driver (supplied with this product)

Included in the folder “Driver” in the CD-ROM.

(3) Device file (separately available)

Programs unique to each device are supplied in the device file. Use the device file for the device to be debugged.

Note that with some devices, the version of the device file differs depending on the version of the Eva chip. Refer to the user’s manual of the device file or in-circuit emulator used.

<Reference>

Install the device file that corresponds to the control code of the in-circuit emulator when installing a device file of the V850E/MAx and V850E/IAx.

V850E/IAx

IE-V850E-MC	Device File
Control code A	DF for EVA chip ES2.0
Control code B or later	DF for EVA chip ES3.0/ ES4.0

V850E/MAx, NB85E core

IE-V850E-MC	Device File
Control code B Control code C	DF for EVA chip ES2.0
Control code D or later	DF for EVA chip ES3.0/ ES4.0

3. INSTALLATION

Before installing ID850 V2.52, it is necessary to install the following.

- Device driver
- ID850
- Device file

3.1 Device Driver

Install the device driver by following the instructions in "README_E.TXT" in the folder “Driver” on the CD-ROM.

3.2 ID850

3.2.1 Notes on installation

(1) Because it may be necessary to restart the computer after installation, terminate all other applications.

(2) Do not install this product in a directory to which an older version of ID850 (older than V2.00) is installed. Because versions before V2.00 support Win16, if ID850 V2.52, which supports Win32, exists in the same location as the old version, the software may not operate correctly.

(3) To re-install ID850 V2.52, uninstall the copy of ID850 V2.52 already installed. If this product is installed in a different directory without uninstalling the first copy of ID850 V2.52, the first copy of ID850 V2.52 already installed cannot be uninstalled.

(4) Do not install ID850 V2.52 in a directory with a name containing a space; otherwise the related tools, such as the project manager, that are installed in the same directory as this product may not be correctly executed depending on their version.

(5) The following file will be created after ID850 V2.52 has been installed. This file is necessary for uninstalling ID850 V2.52 and must not be deleted (the installation destination is assumed to be C:\NECTools32).

C: \NECTools32\SETUP*.*

(6) The ID850 help is supplied in the HTML help format. If the help is not displayed correctly, proceed as follows.

- Install Microsoft Internet Explorer 4.0 Service Pack 2 or later (IE5.0 or later recommended)
- Activate “hhctrl.ocx 1.32 installer” included in ID850 V2.52

(Select [Start] → [Program] → [NEC Tools 32] → [hhctrl.ocx 1.32 installer])

This procedure is not required when using a host machine in which Windows 98, Windows 2000, or Windows XP is installed.

(7) The font size of the help menu is affected by the font settings in Internet Explorer. The display is too large in the default size ("Medium") of Internet Explorer. Therefore, change the font size to "Smallest" in [Fonts] from the [View] menu and restart the help.
In case of IE 4.0, however, the font size for the help menu cannot be changed.

(8) The project manager is not supported in ID850 V2.52 or later. Use PM plus.
PM plus is included in CA850 V2.50 or later, so upgrade to CA850 to V2.50 or later. If the project manager is used with ID850 V2.50 or earlier, the following warning is displayed.
Wf109: project manager cannot be used with the debugger of this version. Please use PM plus.

(9) ID850 V2.52 cannot be installed in the Japanese Windows environment.
If an attempt is made to install ID850 V2.52 in a Japanese Windows environment, a message indicating a file transfer error is displayed and the installation is aborted.
This situation also occurs if Japanese is specified as the system language in the "Regional Settings Properties" tab.

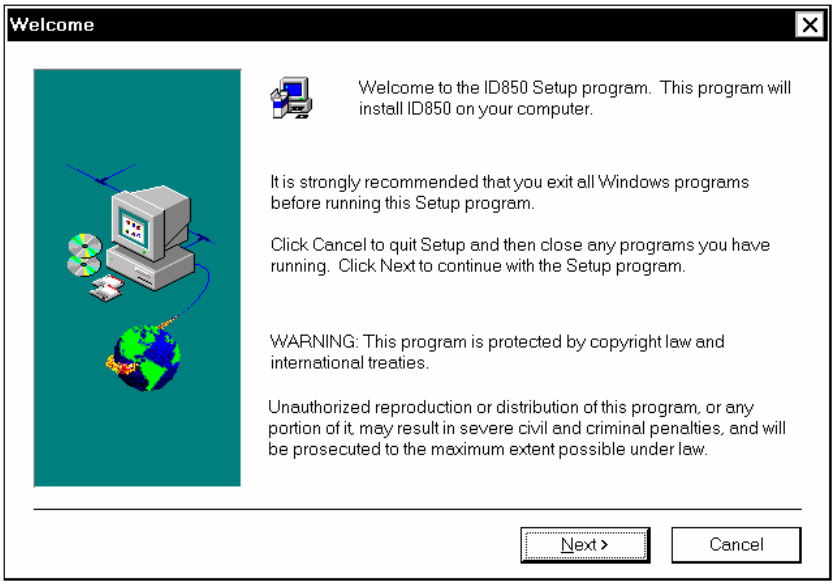
3.2.2 Installation procedure

This section explains the installation procedure, assuming that ID850 V2.52 is installed under the directory "C:\nectools32".

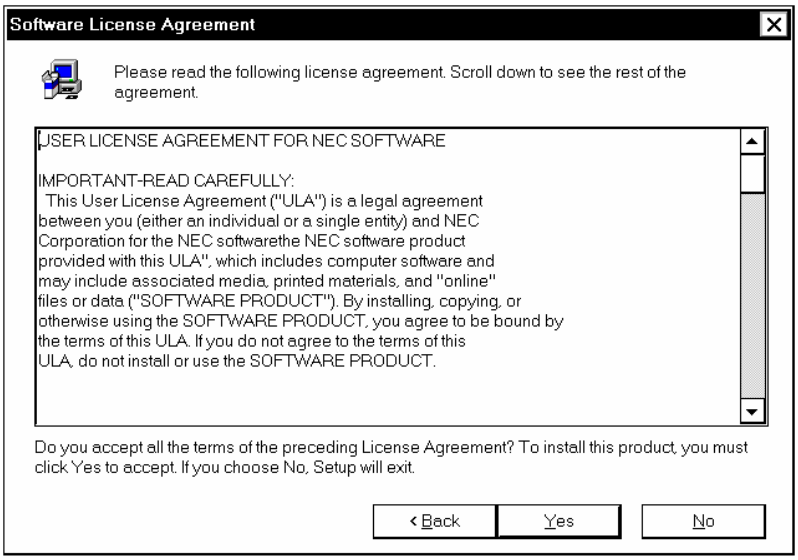
(1) Turn on power to the host machine and start Windows.

(2) Insert the CD-ROM in the CD-ROM drive. The installer is started automatically.
If it does not start automatically, start the program "setup.exe" from the directory DISK1.

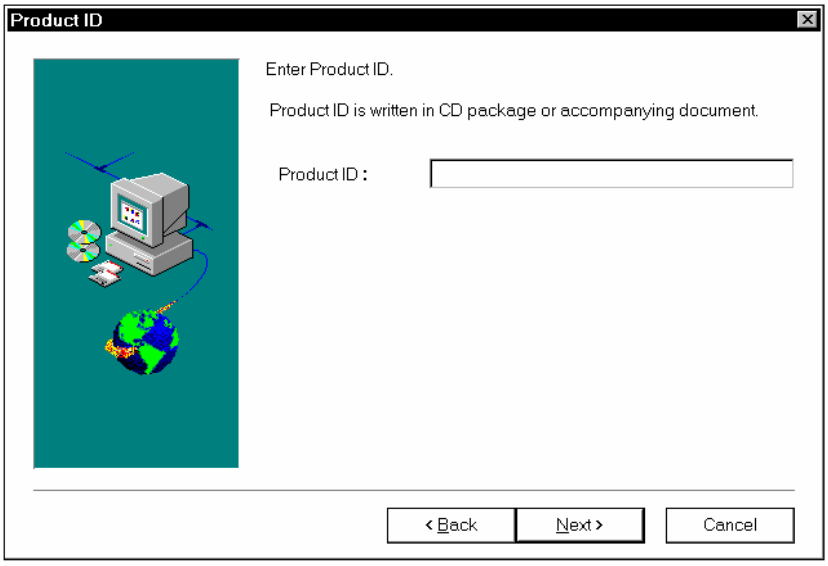
(3) The setup program will be started after initialization of setup. Click the [Next >] button. Click the [Cancel] button to stop installation.



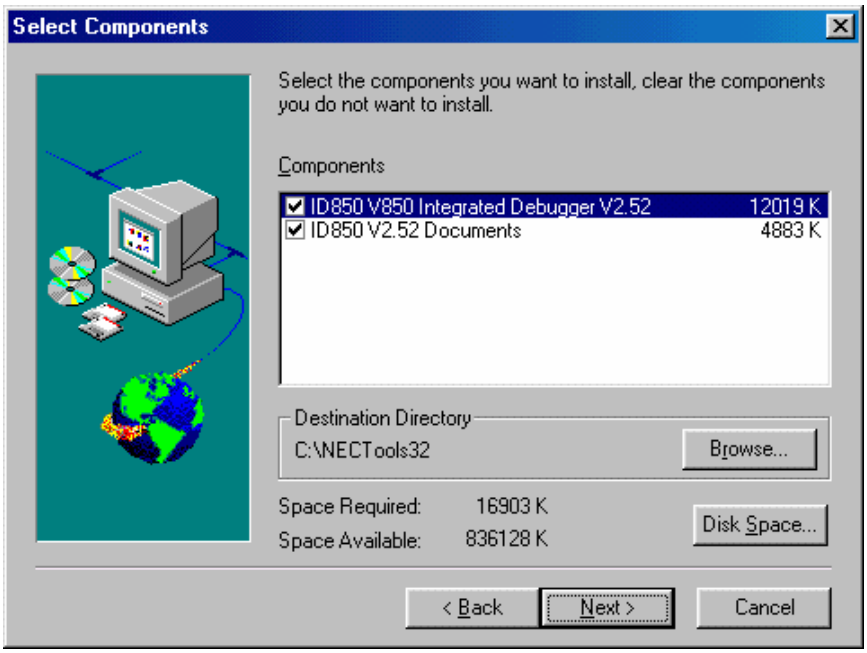
(4) Click the [Yes] button to install ID850 V2.52 when the software license agreement screen is displayed. Click the [No] button to stop installation. Click the [< Back] button to return to the previous screen.



(5) Enter the product ID. The product ID is shown on the CD-ROM case.

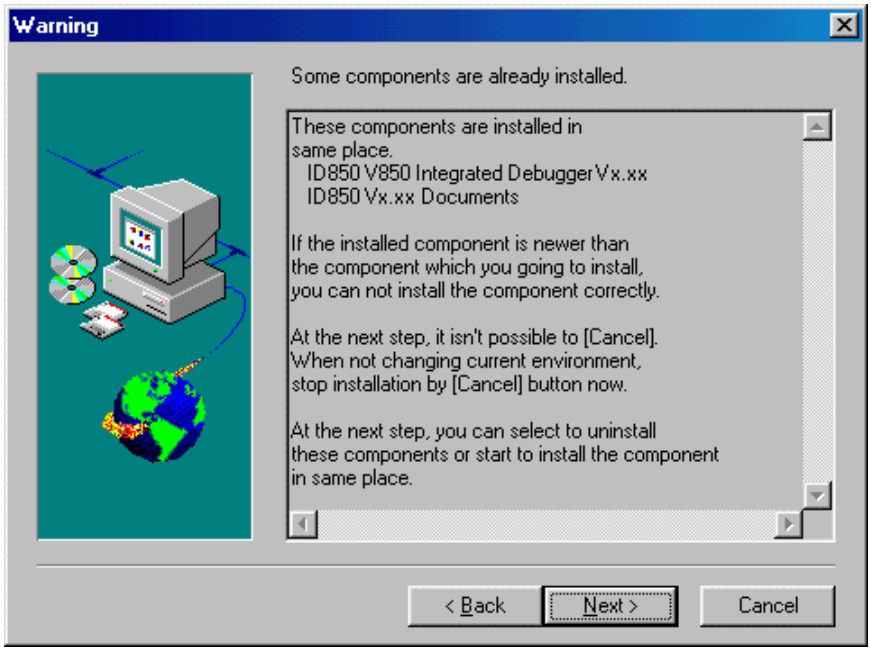


(6) Select the item to be installed and the drive and directory for installation. Uncheck the components that are not to be installed. The drive and directory in which the ID850 is to be installed are C:\nectools32 by default. It is recommended that the default drive and directory be used, especially when the other NEC Electronics tools are used. Click the [Browse] button to change the drive or directory. After completing all settings, click the [Next >] button. Click the [Cancel] button to stop installation. Click the [< Back] button to return to the previous screen.

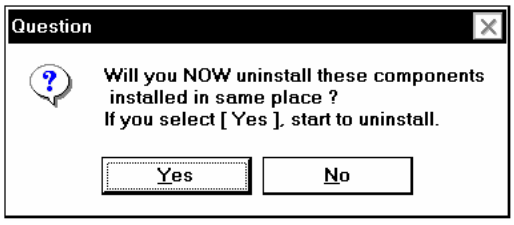


(7) To install the ID850 for the first time, or after uninstalling a previously installed version of the ID850, proceed to step (8).

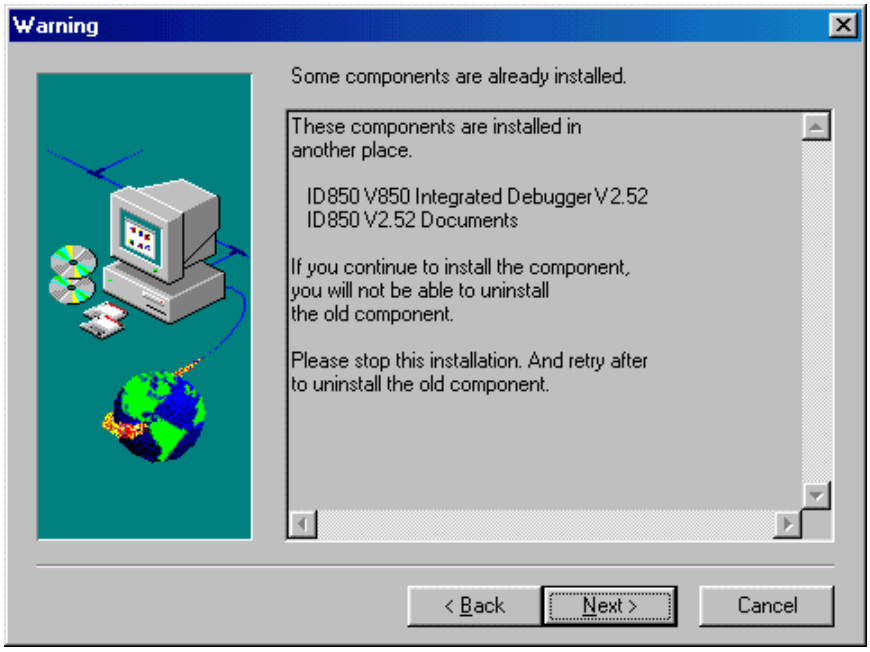
1) If the ID850 has been already installed in the directory specified in (6), the following message is displayed.



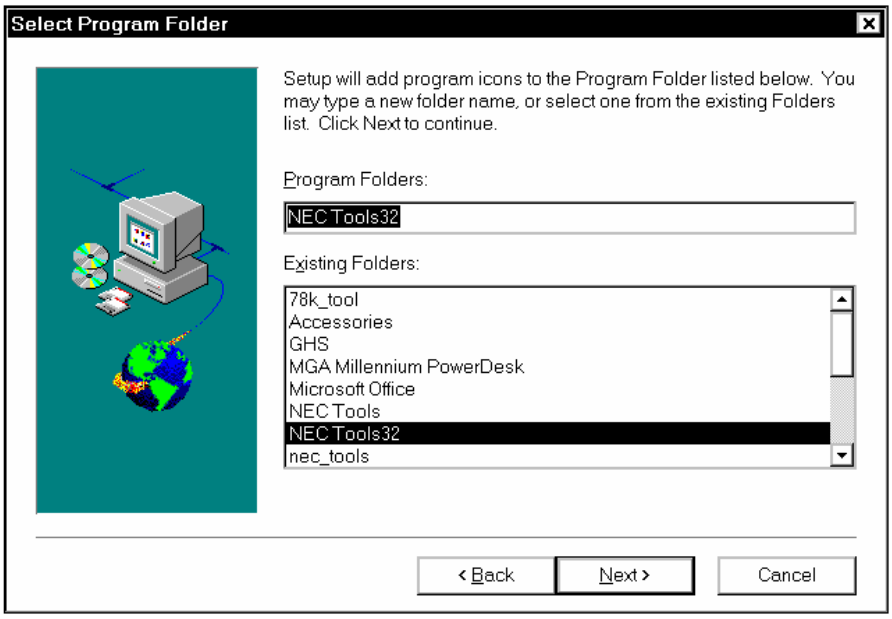
If the [Next >] button is clicked, the following dialog box is displayed. Note that the [Cancel] button cannot be selected in this dialog box. Click the [Yes] button to uninstall the ID850. If the [No] button is clicked, the ID850 is not uninstalled and the screen shown in step (8) below is displayed.



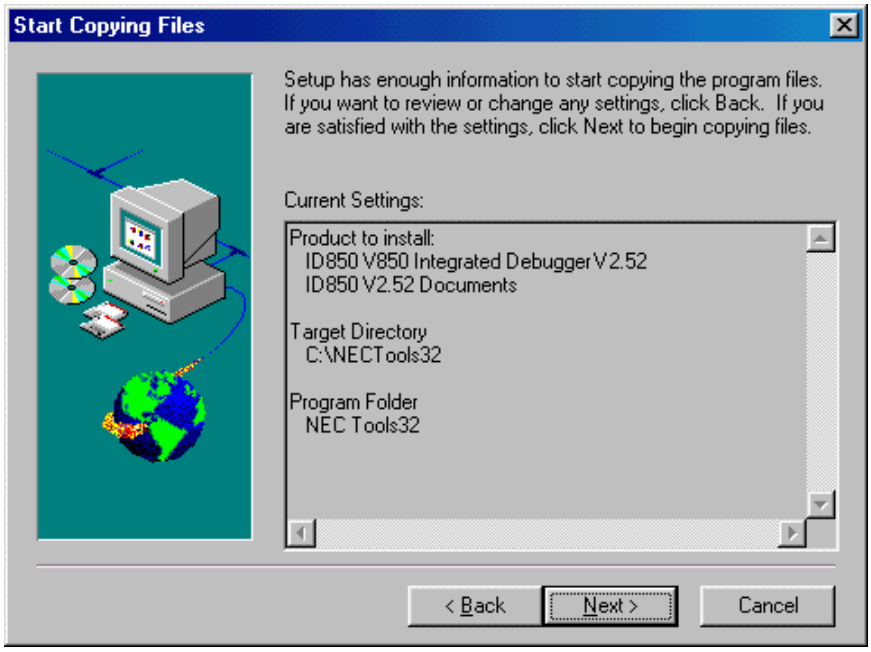
2) If the ID850 has been already installed in a directory other than specified in step (6), the following message is displayed. If the [Next >] button is clicked, the screen shown in step (8) below is displayed, and the uninstaller is not executed.



(8) Specify the name of a folder in which the icons are to be registered. The default folder name is "NECTools32". Specify the folder name and click the [Next >] button. Click the [Cancel] button to stop installation. Click the [< Back] button to return to the previous screen.



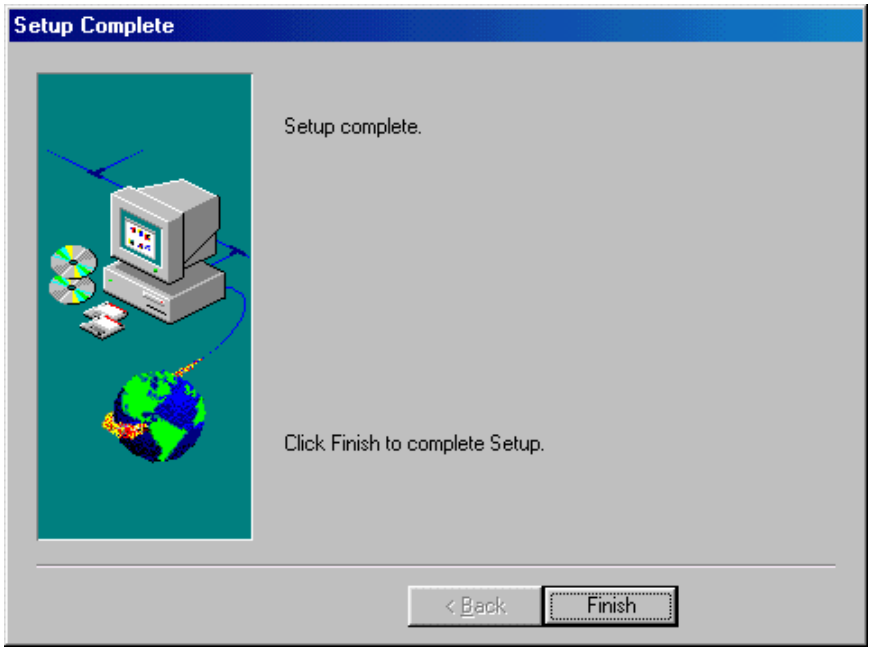
(9) The final confirmation before starting installation is displayed. Click the [Next >] button if it is all right to start installation with the settings made in steps (6) to (8) above. Click the [< Back] button if there are any problems. Click the [Cancel] button to stop installation.



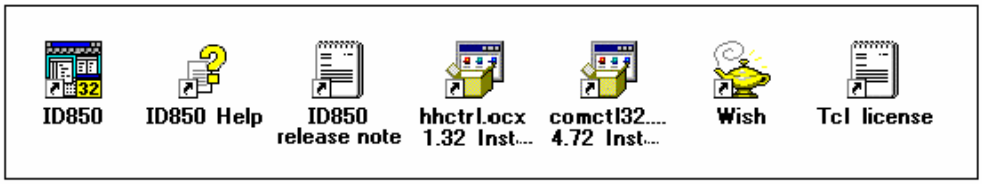
(10) Copying the files is started.

The contents of the folder “id850” will automatically be copied.

After the files have been copied, a dialog box indicating completion of setup will be displayed. Click the [OK] button. This completes installation of the ID850.



(11) The icons of the ID850 are registered in the folder specified in (8).



3.3 Device File

To install the device file, use the dedicated installer "DFINST.EXE" supplied with ID850 V2.52 or other 32-bit version products. This installer allows the device file to be installed in the Win32 environment.

The installer "SETUP.EXE" on the disk of the device file is compatible with the Win16 environment and registers the device file information in "NECDEV.INI". In the Win32 environment of ID850 V2.52, be sure to use "DFINST" because it is necessary to register the device file information in the registry.

The procedure for installing the device file is explained below. Refer to the online help provided in DFINST for details of the dedicated installer DFINST.

(1) Start "DFINST.EXE". To install a new device file, click the [install...] button on the opening screen that is displayed after the installer has been started, and select the install information file "NECSETUP.INI" from the device file product disk.

(2) To move a device file already registered in "NECDEV.INI" to the Win32 environment, select "Select Source" in DFINST and specify "NECDEV.INI". Select a model from those displayed in the "Source" field and click the [Move] button.

(3) To uninstall the device file, select a model from those displayed in the "Registry" field in DFINST, check "Delete File", and then click the [UnRegister] button.

4. UNINSTALLATION

4.1 ID850

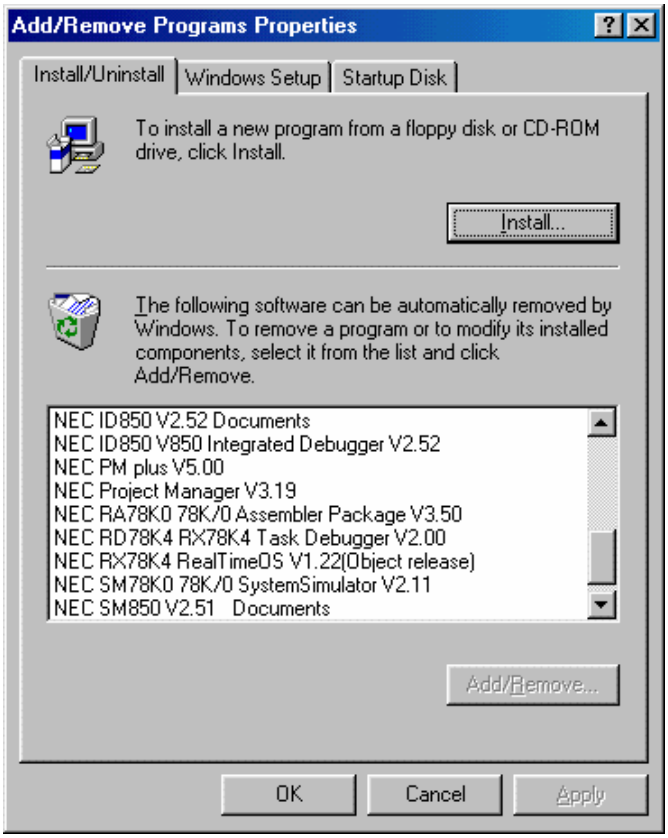
This section describes how to uninstall ID850 V2.52.

(1) Turn on power to the host machine and start Windows.

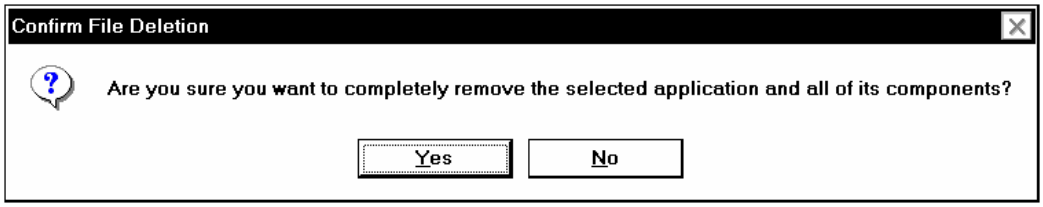
(2) Start "Add or Remove Programs"[Note] in the Control Panel.

Note In the case of Window XP

(3) Select "NEC ID850 V850 Integrated Debugger V2.52" and/or "NEC ID850 V2.52 Documents" from the list displayed in "Install/Uninstall" and click the [Add/Remove...] button. If "NEC ID850 V2.52 Documents" is selected, the user's manual and other documents are uninstalled.



(4) A dialog box for confirming deletion of files will be displayed. Click the [Yes] button. Deleting of the files will be started.



(5) When the completion message is displayed, click the [OK] button.

(6) This completes uninstalling ID850 V2.52.

5. MAJOR CHANGES FROM ID850 V2.51 TO V2.52

(1) Addition of Environment menu
This menu can be opened by selecting “Environment” on the File menu.

(2) Registers of the FCAN controller included in the V850/SF1, V850/SC1, V850/SC2, and V850/SC3 are now displayed in the peripheral I/O register window. In line with this change, the area from 0x3FF800 to 0x3FFFFF in the Memory window is displayed as [??].

(3) The ROM size defined in the device file is now regarded as the initial value in the internal ROM setting area in the Configuration dialog box.

(4) The counter of the watchdog timer is now cleared during a break in a device supporting the IE-703002-MC.

(5) Correction of a restriction that trace data is not displayed normally when operating with the subclock.

(6) Correction of a bug that an error dialog box may be displayed if step execution is performed when operating with the subclock.

(7) Correction of a bug that a break temporarily occurs during program execution if a variable outside the real-time RAM area is registered and opened in the Watch window.

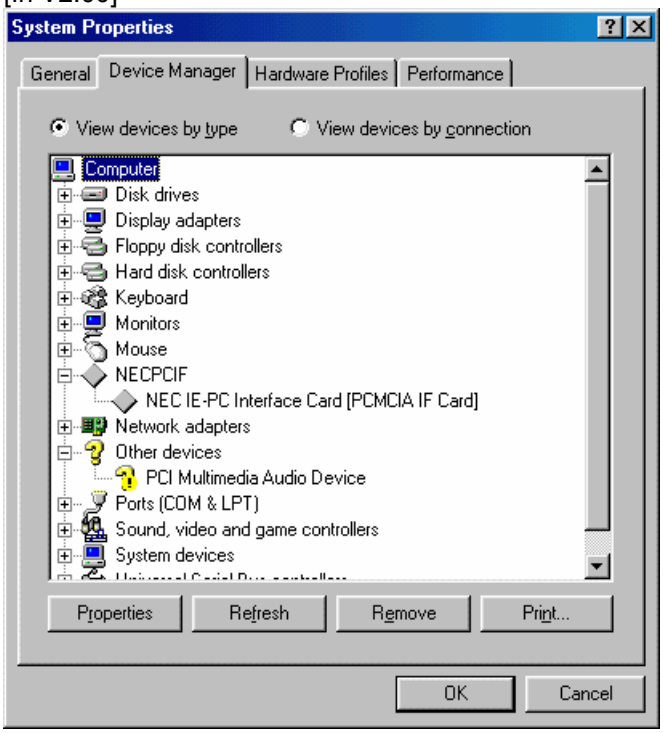
(8) The error message “F0c31: STOP mode under continuation. Can not compulsory break. Please release STOP mode or reset the CPU.” is now output when a forcible break occurs in standby mode in the V850E/ES Series.
When this message is displayed, release STOP mode using the CPU reset button or by generating an interrupt.

(9) The error message “F0c31: STOP mode under continuation. Can not compulsory break. Please release STOP mode or reset the CPU.” is now output when an error occurs during DMM or RRM in standby mode in the V850E/ES Series
When this message is displayed, release STOP mode using the CPU reset button or by generating an interrupt.

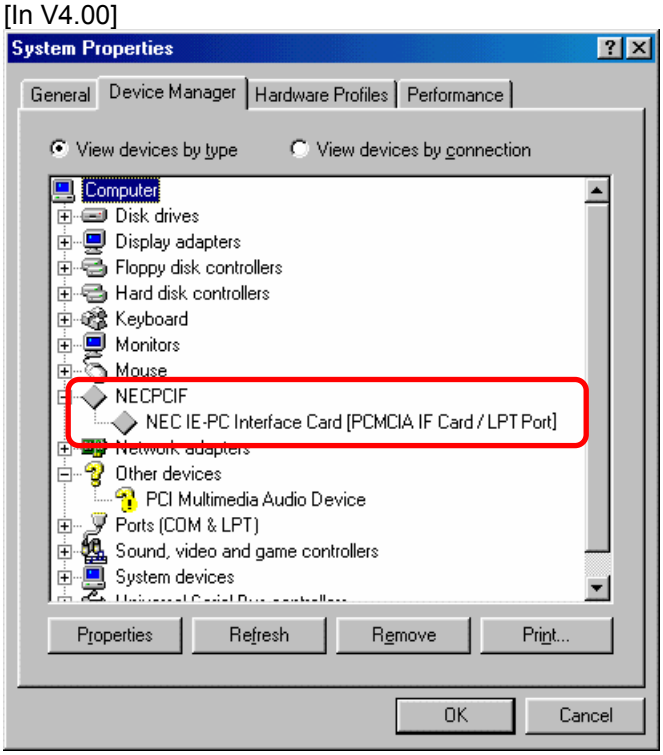
(10) The option byte is now supported.
The emulation register is set to the contents of address 0x7a when the debugger is activated.
However, this operation applies only when the option byte is supported by the device file.

(11) The driver included with ID850 V2.52 has been upgraded from V2.00 to V4.00.
The design of the device manager has been changed.

[In V2.00]



[In V4.00]



(12) When used in combination with NEC IE-PC Driver V4.00, the speed of downloading is accelerated by two or three times on average if the highest clock is used.

6. RESTRICTIONS AND CAUTIONS

This section explains the restrictions and cautions when using ID850 V2.52.

6.1 Restrictions

This section describes the restrictions of ID850 V2.52. **[XXX]** in the following table indicates to which the restriction applies.

×: Restriction applies
√: Restriction already removed
–: Restriction does not apply due to different specification

No.	Description
1	Even if an area that is not the target memory is set to I/O protected, an error message is not displayed. [Workaround] None
2	When setting an I/O protected area, if an area is set that is not aligned with the access size, the protect function is not effective. [Workaround] Set an area whose size is aligned with the access size.
3	When the PC is in the prologue of a function during step execution in the mixed display mode in the source text window, the PC marker and current PC line (yellow) are not displayed. [Workaround] None
4	When the Source window is in mixed display mode, if the cursor is moved in the downward direction, it may inadvertently jump. Also, in mixed display mode, the end of the source line cannot be displayed without using the scroll. [Workaround] None
5	"divh r0, register name" instruction cannot be line-assembled correctly. An illegal code “dbint” or “dbtrap” is displayed.
6	The setting of the radix display of the item in the nest of a variable with nest cannot be correctly downloaded from a file on the watch window. [Workaround] None
7	If the data in the Local Variable window is moved by the cursor while emulation is being executed, the display changes to “**”. [Workaround] None
8	Non-map area and IOR area cannot be avoided in memory search. [Workaround] Specify a search range avoiding these areas.
9	If the cursor is placed in the ASCII display area of the Memory window and then control is shifted to another window, the cursor will inadvertently return to the data display area. [Workaround] None.
10	The tracer is not displayed unless tracer and coverage is stopped during program execution. [Workaround] Stop the program first.
11	An event does not occur even if the status of the event used is changed from Execution to R/W (or vice versa). [Workaround] Disable the event condition after changing it and then re-enable it, or delete the event condition.

No.	Description
12	Timer stop/start on the Run menu does not work. [Workaround] None
13	Period (.) must not be used in a symbol name. [Workaround] None
14	**[IE-703002-MC]** If the halt instruction is Stepped, the debugger hangs up for a while (for 30 seconds). [Workaround] None
15	If step or execution is carried out on the last line[Note] of the source, an error occurs. **Note** The last line of main() in C source or the last line of the code in an assembler source. [Workaround] None
16	If one line contains too many instructions (more than 1000 assembler instructions) in source line step, the processing may be aborted even in the middle of step execution. [Workaround] None
17	In the ROM/flash memory **relink** function supported by the compiler, it is not possible to perform step-in to a function on the flash memory side from the boot side. [Workaround] Cause a break in the function on the flash memory side by setting a breakpoint in that function.
18	Debugging of programs that use program code copied to the internal RAM after being passed through a ROMization processor is not supported. There is no problem in the ROMization of data. [Workaround] Do not pass programs through a ROMization processor when compiling.
19	Bug that a breakpoint cannot be set in the Source window [Description] A breakpoint cannot be set in the Source window if there is a source file that includes a “-” (hyphen) or “+” (plus) in its name. [Workaround] Modify the source file name so that it does not include a “-” (hyphen) or “+” (plus). Specify a file name using 0 to 9, a to z, A to Z, and _. [Action] Regard this as a usage restriction.
20	Restriction on setting access break in Watch window [Description] A variable other than **global** (structure/union member, array member, bit field member, etc.) cannot be specified for an access break in the Watch window. [Workaround] None
21	Restriction on setting access break in Source window [Description] A variable other than **global** (structure/union member, array member, bit field member, etc.) cannot be specified for an access break in the Source window. [Workaround] None

6.2 Cautions

The cautions when using ID850 V2.52 are described below. **[XXX]** in the following table that the point applies only to the specified model.

1	**[V854]** Single Chip Mode 2 of the V854 is not supported because of the restrictions of the EVA chip. [Workaround] None
2	The operation is not guaranteed if internal ROM/RAM size is changed in versions of the V850/SBx with internal RAM greater than 20KB. [Workaround] None. Use internal ROM/RAM with the default size.
3	**[IE-V850E-MC(-A), IE-703102-MC IE-V850ES-G1, IE-V850ESK1-ET]** The DBPC and DBPSW registers cannot be manipulated in the register window because of the device specifications. [Workaround] None
4	The access event break is delayed because of the specifications of the EVA chip (the specified address is passed before execution stops). [Workaround] None
5	If break and snap conditions occur at the same time, snap is recorded in the trace data even if a break occurs before execution. [Workaround] None [Remark] This caution is not applicable to the IE-V850ESK1-ET.
6	If a forcible termination is executed in software Stop mode, a monitor timeout may occur. [Workaround] None.
7	**[IE-V850E-MC(-A), IE-703102-MC IE-V850ES-G1, IE-V850ESK1-ET]** IOR (SFR) safe break does not occur during execution. [Workaround] None
8	**[IE-V850E-MC(-A), IE-703102-MC IE-V850ES-G1, IE-V850ESK1-ET]** Safe break does not occur during step execution because of the specification of the Eva chip. [Workaround] None
9	**[IE-V850E-MC(A), V850/SF1]** If the emulation memory of ROM mapping is written, protect break occurs but the contents are rewritten because of the specification of the EVA chip. [Workaround] None
10	The debugger cannot change the Way0 state if Way0 of the instruction cache is locked. Because of this, even if the instruction code of the area cached to Way0 is changed (downloaded or online assembled), the program cached to Way0 before the change will be executed upon program execution. Moreover, even if a software breakpoint has been set in the area cached to Way0, it will not be detected during program execution. Therefore, do not perform these operations while Way0 is locked.
11	If an instruction that writes to an IOR used for write protection, such as PRCMD or PHCMD, is Step-executed, or if Go is executed from such an instruction, immediately after this, an instruction that writes to the write-protected IOR will not be able to write to the IOR even if executed, due to the effect on the internal processing of the corresponding instruction cache of the debugger. Therefore, do not perform these operations for instructions that write to PRCMD or PHCMD.

12	In the in-circuit emulator, the VPP bit of the FLPMC register is R/W enabled. Also note that VPP bit data can be overwritten during 8-bit access regardless of the status of the VPP pin. However, overwrite protection via the PHCMD register (or PRCMD register, depending on the product) is performed in the same way as in the real chip.
13	Note that in the in-circuit emulator, even if the VPP bit is 0, or the VPPDIS bit is 1, flash self-programming will be executed as usual.
14	It takes at least 0.3 second to execute one flash self-programming interface command. If writing to the entire flash memory area is performed with a small memory size, it takes a long time to complete writing because the write command is executed numerous times. It is therefore recommended to use a large memory size (e.g. 1024 bytes) when writing to the flash memory area.
15	Maskable and non-maskable interrupts are not executed during command execution (about 0.3 second).
16	Set the CPU operation clock during command execution to at least 8 MHz. (Ensure that the frequency of the divided CPU operation clock is not below 8 MHz.) If a command is executed by a clock with a frequency lower than 8 MHz, the user program may inadvertently break during command execution.
17	When the IE-703002-MC is being used for the in-circuit emulator, an IOR illegal access is not detected when flash self-programming mode is ON.
18	When the IE-703002-MC is being used for the in-circuit emulator, non-mapping access in 0xF00000 to 0xFFFFFF (highest megabyte) is not detected when flash self-programming mode is ON. Note, however, that if emulation memory or target memory is mapped in this area, non-mapping access is only not detected in 0xFF0000 to 0xFFFFFF (highest 64 KB).
19	Old version of project files (ID850 V2.00 or earlier) cannot be opened.
20	Disassembled program cannot be edited when both C and disassembled program are displayed together in the source text window. [Workaround] Edit in the Assemble window.
21	Lines cannot be deleted and radices cannot be changed by selecting multiple lines on the Watch window. [Workaround] Select one line at a time.
22	The maximum number of lines that can be displayed in the watch window is 10000. [Workaround] None
23	Lines cannot be scrolled up/down by selecting multiple lines in the Peripheral IOR Select dialog box. [Workaround] Select one line at a time.
24	When a download or project file load is performed, the hardware breakpoints or events may shift in the middle of an instruction. [Workaround] Delete the hardware breakpoints or events and then re-set them.
25	When a software breakpoint has been set in a module file with no debug information and a download or project file load is performed, the software breakpoint will be deleted. [Workaround] Re-set the breakpoint.

26	If the project file is saved after the CPU has been reset, the reset value of the MM* register is saved and therefore, downloading may fail when the project is opened next time. * The IOR register which requires the setting to access the external memory space differs depending on the model used. [Remark] The Peripheral I/O register setting can be performed before downloading by using “Hook”, which is described in **APPENDIX A EXPANSION WINDOW**.
27	The device selected at the ID850 activation cannot be changed after activation. Even if the project file of a device different from the target device is downloaded, the device specified by the project file is not used.
28	The combo box of the type of a file is not in association with the extension of a file in a file-manipulating dialog box (the file is handled in the format selected as "File Type").
29	If one line in a window contains more than 400 characters (ANK characters), the 400th character and those that follow cannot be displayed.
30	The number of lines that can be specified for a C source file (one file) is 65536.
31	The maximum length of the character string that can be searched for in the Source window is 150 (ANK characters).
32	IORs with the same address but different names cannot be distinguished in the disassemble display.
33	If the Assemble window is scrolled up (toward the direction in which the addresses are decremented), illegal mnemonics may be displayed.
34	The maximum length of the character string that can be searched for in the assemble window is 150 (ANK).
35	Arrays with five dimensions or more are not supported.
36	If the PC is not in the body (other than prologue/epilogue) of the current function, the information on local variables in the function cannot be obtained.
37	The maximum length of the character string that can be searched for in the memory window is 150 (ANK characters).
38	Because the coverage data is not initialized when the ID is started, initialize the coverage data before coverage measurement. [Remark] This caution is not applicable to the IE-V850ESK1-ET.
39	The maximum value of a time tag in the Trace window is 65535. At this value, the time tag overflows (especially when the total value of the time tag is displayed). The division ratio of the counter used can be changed when the time tag is displayed on the Trace window of the Extended Option dialog box.
40	The trace time tag value is considerably high during step execution.
41	Qualify trace cannot be created using the event link condition (integrated event).

42	The specification of trace delay differs between the ID850 and SM850. **[ID850]** The event that causes a delay is the event set by "Trace End". In this case, a delay frame is generated only when "Conditional Trace" is executed. To identify a frame that has caused a delay (delay trigger frame), "T" is displayed in the point mark display area. In addition, "D" is displayed in the trace mode display area to identify a delay frame.  tttt dddd dddd dddd dddd tttt: Delay trigger frame, dddd: Delay frame **[SM850]** The event that causes a delay is the event set by "Delay Trigger". In this case, a delay frame is generated only when "Unconditional Trace" is executed. To identify a frame that has caused a delay, "D" is displayed in the point mark display area. In addition, "A" is displayed in the trace mode display area to identify a delay frame.  tttt dddd dddd dddd dddd
43	**[V850E/MS1, V850E/MA1, V850E/IA1]** Normally, trace data for 6-/8-byte instructions outputs two discontinuous frames. During qualify or section trace, however, only a single frame is output. In this case, the disassemble display cannot identify the instruction, and displays “**** ”.
44	The event settings are not cleared even if the load module is re-loaded.
45	An event link cannot be used for snap.
46	If a software break is specified for external memory (excluding ROM), confirm that the value of the MM* register indicates the external extension mode immediately before the program is executed. When the software break command is issued, a dedicated software break instruction is overwritten to the address where the software break is specified to execute the break. If access is disabled, the software break is not perfomed even though B mark is displayed on the screen because the address cannot be overwritten. * The IOR register which requires the setting to access the external memory space differs depending on the model used.
47	Use the stub function in the break mode after execution. Otherwise, the stub function is repeatedly executed. In addition, because the stub function is restored by jmp [r31], the contents of the r31 (lp) register do not return to the value before the stub function was called.

48	The RUN-Break value in the Timer dialog box is not guaranteed if the number of timer/event conditions created and validated equals the number of conditions* that can be used with the RUN-Break value. * The number of timer/event conditions that can be used with the RUN-Break value: IE-V850E-MC, IE-V850E-MC-A, IE-V850ES-G1: Three Other than above: One
49	A function that has been expanded in-line cannot be stepped in. Because the original function code is created separately from the part that has been expanded in-line, it is possible to set an event there, but the event does not occur because the original code is not executed (whether in-line expansion has been performed can be checked by the mixed display on source window).
50	Assembler instructions enclosed by '#pragma asm' and '#pragma endasm' can be executed on a step-by-step basis in the source mode. The instructions written in a '_asm()' statement cannot be executed.
51	If step execution is performed and '}' at the end of a function is executed, execution line moves to '{' to perform the epilogue processing of the function.
52	If step execution is performed in the source mode, it is judged whether an interrupt is serviced, based on the NP, EP, and DP flags of the PSW register. If the above flags or registers have been changed because nesting is used, return execution and stack display may not be correctly executed.
53	If return execution is performed when a function is recursively called (stack is generated by the recursive processing), the PC moves to the position where the processing of the function called last (leaf function) ended. Even if this symptom appears, the subsequent operation is performed normally. **Example** If the same function is called five times because of recursive processing 1:main() 2:fnuc01() Function is called. Execution exits from function. 3:func01() ↓ (*) ↑ 4:func01() 5:func01() 6:func01() If return execution (that generates the stack) is performed when functions are called in the order of 2, 3, 4, 5, and 6 (*), the address moves the position at which processing 6 is completed. If return execution (which deletes the stack) is performed when execution exits from functions 6, 5, 4, 3, and 2, in that order, execution correctly returns to the main function, from 5 to 4, from 3 to 2, and so on.
54	Step in or breakpoints cannot be set in an #include statement. • Step or break cannot be executed in an include file written in assembler. • Step or break can be executed in an include file with a C source if functions are written in the include file.

55	**[IE-V850E-MC, IE-V850E-MC-A, IE-V850ES-G1]** When two instructions are executed simultaneously **Example 1.** When a breakpoint is not set Address A: MOV r1, r2 Address A+2: XOR r1, r2 Two instructions are stepped from Address A, where one instruction should be stepped. **Example 2.** When a breakpoint is set at address A+2 Address A: MOV r1, r2 [B] Address A+2: XOR r1, r2 A break does not occur at address A+2 if instructions are “executed continuously” from address A. **Example 3.** When a hardware break is set at address A+2 before execution of instructions Address A: MOV r1, r2 [B] Address A+2: XOR r1, r2 The instruction at Address A is executed and break occurs if instructions are “executed in steps” from address A
56	The Search menu of each window is dimmed during program execution.
57	**[IE-V850E-MC, IE-V850E-MC-A, IE-V850ES-G1]** With the in-circuit emulator, the multiplication of the clock cannot be set when connected to the IE-V850E-MC, IE-V850E-MC-A, or IE-V850ES-G1. Therefore, set the CKC register on the debugger. With the default settings, operation speed is slower.
58	An event is reserved when support of flash self-programming mode is set to ON. Because of this, when break/trace/timer etc. are enabled, they all become disabled immediately.
59	The following events are reserved when support of flash self-programming mode is set to ON. Because of this, the number of usable events decreases by the number of these reserved events. • Access event (1) • Execution event (1) • Event link (1)
60	One event link is reserved when support of flash self-programming mode is set to ON, so the number of section timers that can be used decreases by 1. Also, if the number of usable event links is used up by that reserved event link and section timer, a section trace can no longer be performed. This is because a section timer or section trace uses one event link internally.
61	Execution of the user program is temporarily stopped internally in order to emulate the flash self-programming interface. Execution of the user program is subsequently resumed, but if a section trace was being performed, the trace starts again from the beginning. This also occurs if the tracer was stopped by a trace full-stop.
62	Execution of the user program is temporarily stopped internally in order to emulate the flash self-programming interface. When execution of the user program resumes, the results of the Run-Break timer measured until the program was stopped are cleared, and the Run-Break timer starts again from the beginning.
63	Perform VPP check-related debugging after first changing the VPP bit data to 1 using a register command in the debugger’s IOR or Console window. (Note that the IOR bit name “VPP” may not be registered, depending on the device file. In this case, change the value of “FLPMC”.)

64	The ID850 becomes difficult to operate while the flash self-programming interface is being emulated. Difficulties include mouse or keyboard operations hanging up temporarily or slow window updating. The enabled/disabled switching of the RUN/TRC/TIM/COV display on the status bar or the buttons and menus on the toolbar also slows down.
65	The value of “VPP” may not be able to be changed in the IOR or Watch window immediately after Flash Sel Mode is switched ON in the Extended Option dialog box. In this case, execute a Refresh in the window and then change the value. (Note that the IOR bit name “VPP” may not be registered, depending on the device file.)
66	Specify the -force option before changing the VPP value using a register command in the Console window. (Note that the IOR bit name “VPP” may not be registered, depending on the device file.)
67	Flash self-programming in a mode in which the internal ROM is allocated from the address 0x100000 is not supported. Use the mode to in which the internal ROM is allocated from the address 0x0.
68	A fail-safe break may not occur because the capacity of the internal ROM or internal RAM differs between the EVA chip and real chip. For example, even if the internal RAM size is set to 10K in the Configuration dialog box when the IE-V850E-MC(-A) is used, 12K is set in the actually mounted EVA chip. Therefore, even if the range 0xFFFE800 to 0xFFFEFFF is accessed, no illegal access error will occur.
69	**[IE-703002-MC]** It is not possible to shift to idle mode or stop mode by Step execution. Instead, use Go execution. The specifications prescribe that idle mode or stop mode is released when Step execution is performed.
70	In the conditional statement of an if-else statement, a line that should not be executed may be passed. When such a case occurs, select the mixed display mode in the Source window and confirm that the else statement has not been executed.
71	The ROM correction function cannot be emulated. There is no workaround. Regard this as a permanent restriction.
72	Big endian is not supported. However, the big- or little-endian mode can be selected only in the Memory window.
73	**[IE-703002-MC]** The watchdog timer does not stop even during break.
74	An NMI and other interrupts are not acknowledged during step execution.
75	Line assemble in the Assemble window does not optimize instructions, as is performed in the CA850 assembler.
76	Coverage clear and coverage search cannot be aborted. [Workaround] None [Remark] This caution is not applicable to the IE-V850ESK1-ET.
77	If a selected range is changed in the Coverage-Condition Setting dialog box, the coverage data before change is cleared. [Workaround] None [Remark] This caution is not applicable to the IE-V850ESK1-ET.
78	Event Status can be accessed for read or write on the event dialog box, and not for fetch.

79	The PC indicates the address after halt if a break occurs in the HALT status. [Workaround] None
80	Before performing real-time execution, step execution is first performed on an instruction located at the PC. This causes an error in the time measurement result in the timer. In addition, when the program operation is checked using the oscilloscope or logic analyzer, the measured timing may differ between when Go is executed at a certain location and Go is executed one instruction before that location.
81	When NMI2 is input in a device with NMI2 (at present, only the SOC device applies), the NMI2 interrupt routine of the user program is executed even if a break is taking effect. [Workaround] Do not input NMI2 during a break period.
82	When the IE-V850E-MC or IE-V850E-MC-A is used with the instruction cache set, if a software breakpoint is set to the emulation ROM, emulation RAM, or target memory area during user program execution, the breakpoint pauses the program more than several μs. [Workaround] None
83	A fail-safe break cannot be detected at the moment a software breakpoint is set to the emulation ROM area during user program execution. [Workaround] None
84	If an event break or software break occurs when a software breakpoint has been set during user program execution, the break does not take effect. [Workaround] None
85	A fail-safe break cannot be detected at the moment data is overwritten when DMM is performed on the emulation ROM area during user program execution. [Workaround] None
86	If an event break or software break occurs when data is overwritten by DMM, the break does not take effect. [Workaround] None
87	**[IE-703002-MC]** The internal RAM area cannot be fetched due to the restriction in the in-circuit emulator. If a program is executed on the internal RAM area, the program stops. [Workaround] Map the 64 KB area including internal RAM area to the emulation ROM (or the emulation RAM) in the Configuration dialog box.
88	When using the AZ850, unselect [Add Up Timetag] in the Extended Option dialog box of the ID850; otherwise the time is not displayed correctly.

89	**[V850ES/KF1,V850ES/KG1,V850ES/KJ1]** Since the operating clock is degraded to approx. 500 kHz after a CPU reset, users may feel the speed for downloading a load module, initialization, copy, and comparison of the memory is degraded. These operations can be accelerated by setting the Peripheral I/O register. Set the Hook window of the expansion window as shown below. (See **APPENDIX A EXPANSION WINDOW**.) (1) Accelerating download Set as shown below on the [BeforeDownload] tab. register prcmd 0x0 register pcc 0x0 register pllctl 0x3 Note, however, that these settings forcibly change the values so that the clock speed of the Peripheral I/O register PCC and PLLCTL becomes the maximum. (2) Accelerating initialization, copy, and comparison of the memory Set as shown below on the [AfterCpuReset] tab. register prcmd 0x0 register pcc 0x0 register pllctl 0x3 Note, however, that these settings forcibly change the values so that the clock speed of the Peripheral I/O register PCC and PLLCTL becomes the maximum.
90	When the function to assign external variables to a register is used in CA850 V2.60 or later, the value of the assigned variable cannot be referenced or set in the Watch window. [Workaround] Reference or set the variable in the Register window or register the relevant register in the Watch window before referencing or setting the variable.
91	If use of the programmable peripheral I/O register is selected (by inputting the start address) in the Configuration dialog box, the debugger automatically sets the BPC register (in order to display the programmable peripheral I/O register in the IOR register window). Consequently, the programmable peripheral I/O register can be accessed even if the user program does not set the BPC register. [Action] This item will be corrected in the next upgrade of the debugger.

APPENDIX A. EXPANSION WINDOW

A.1 Overview

The expansion window is implemented in ID850 V2.51 or later.
The Tcl (Tool Command Language) interpreter and the command for controlling the debugger is implemented in the ID850. This Tcl is used for creating the GUI (window). Users can create windows using this Tcl.

Samples for the following expansion windows are included.

Window Name	Function
List	Displays a list of the source files and functions.
Grep	Searches a character string.
RRM	This is the memory window for real-time RAM monitoring.
Hook	Sets the hook procedure.
Memory Mapped I/O	Writes to or reads from the specified address only.

A.2 Activation

The expansion window can be activated by selecting List, Grep, RRM, Hook, or Memory in [Others] on the [Browse] menu.
Each .tcl file is installed in D:\NECTools32\BIN\idtcl\tools.

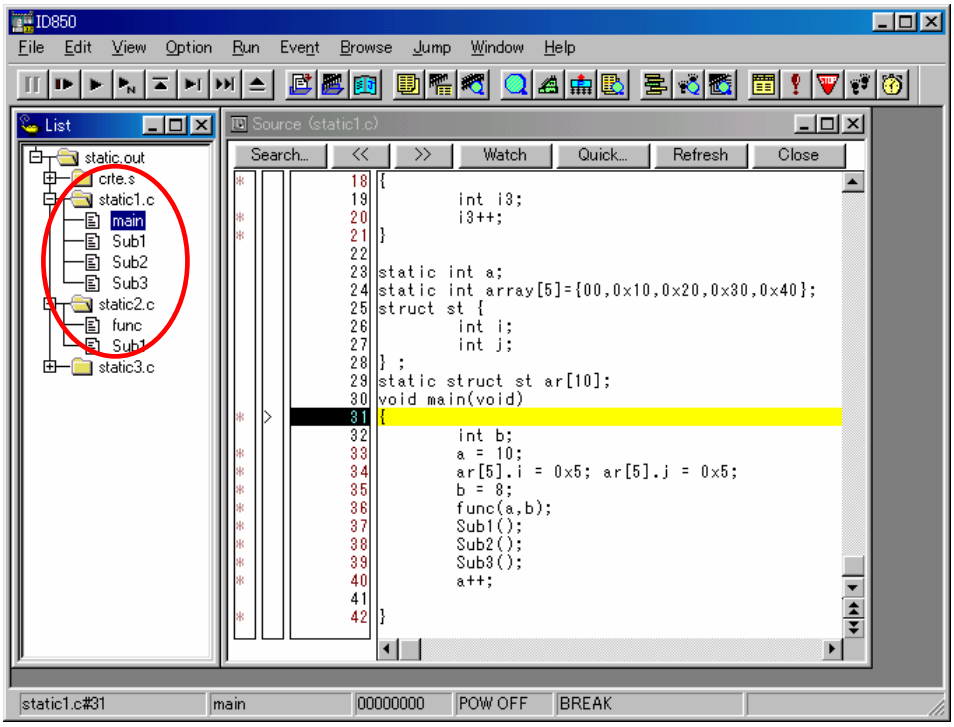
A.3 Explanation of Each Window

A.3.1 Explanation of List window

[Function]

The lists of the source files and functions are displayed in a tree format in this window.

When a function name in the list is clicked, the corresponding source is displayed.

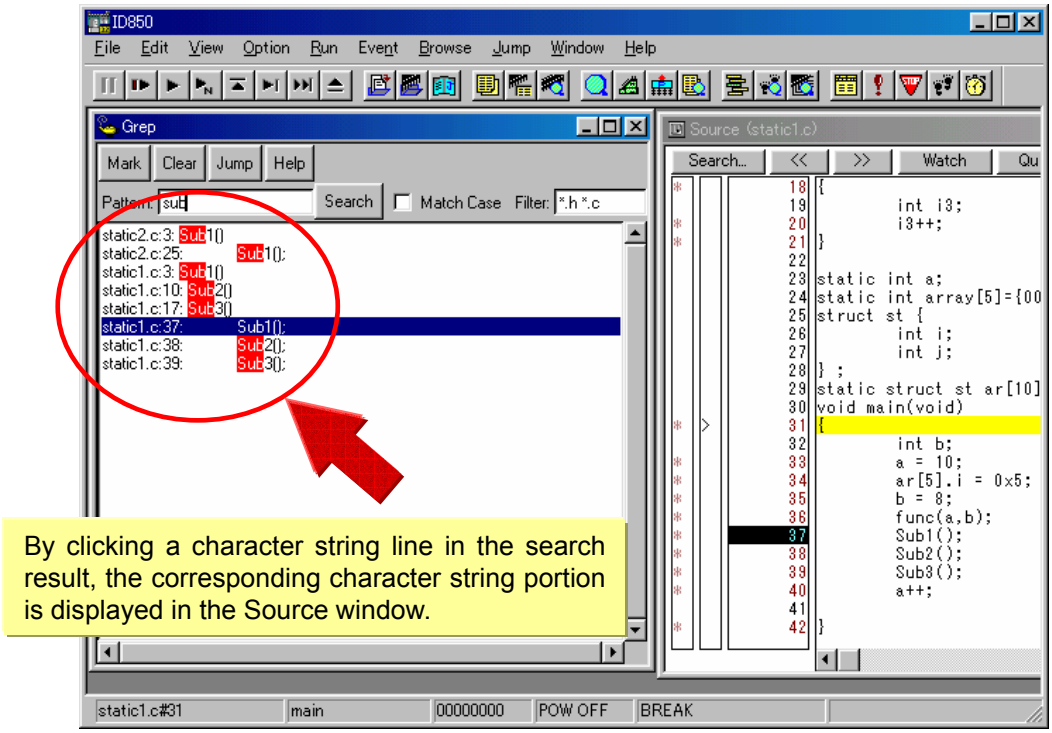


A.3.2 Explanation of Grep window

[Function]

Search for a character string is performed in the files under the source path.

When the search result is clicked, the corresponding source is displayed.



Pattern field	Input the character string to be searched.
Mark button	Marks the searched character string.
Clear button	Clears the marking.
Jump button	Put the cursor on a section in the search result and click this button to open the corresponding file.
Match Case field	Select whether or not to distinguish uppercase and lowercase.
Filter field	Specify the type of the file to be searched.

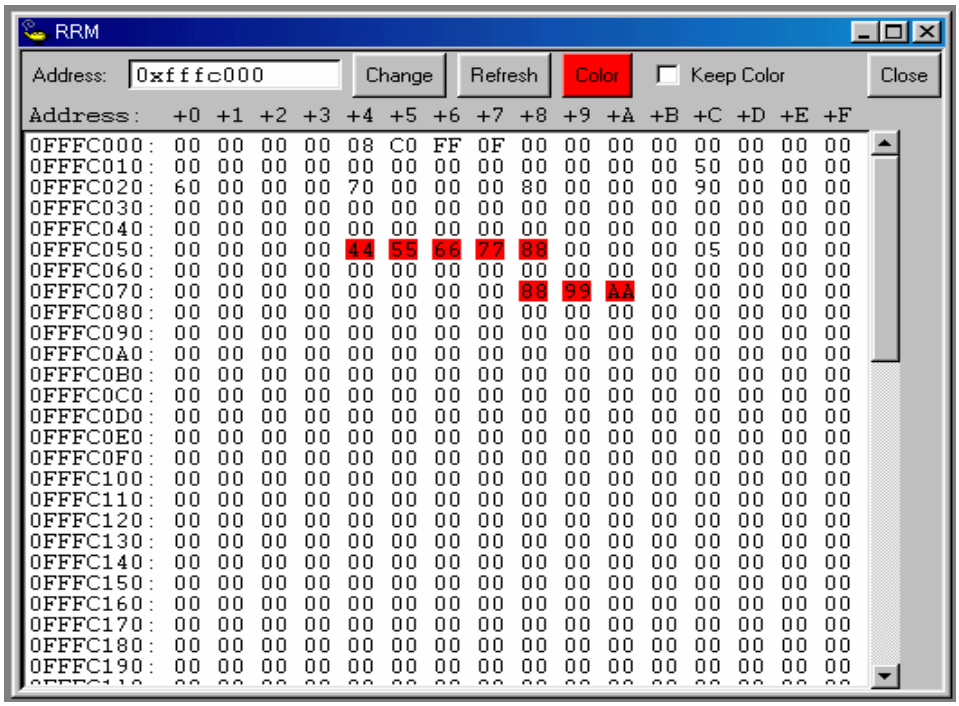
A.3.3 Explanation of RRM window

[Function]

This is a dedicated window for real-time RAM monitoring

The address area in which a value was changed in the internal RAM area during program execution is highlighted with a color, so the changed value can be checked easily.

The start address of the real-time RAM area was changed in the Extended Options dialog box in the previous version, but it is now possible to change it during program execution.



Address field	Input the start address to be displayed (automatically aligned to 1 KB.)
Change button	Switch the start address display.
Refresh button	Reads data from the memory.
Color button	The color can be customized. The default color is red.
Keep Color	Specify whether or not to hold the color highlighting. This item is unselected by default. Selected: Once a value is changed, the color highlighting is held until a break occurs. Unselected: The color is cleared if there is no change of values.
Close button	Closes the RRM window.

Cautions 1. In the ID850, a break occurs for a moment when an address is switched during program execution. This event does not occur in the SM850.

2. If the address in the Address field is changed, the address specified for the real-time internal RAM sampling range in the Extended Options dialog box is also changed.

3. Data can be displayed in a 1 KB range in this window.

A.3.4 Explanation of Hook window

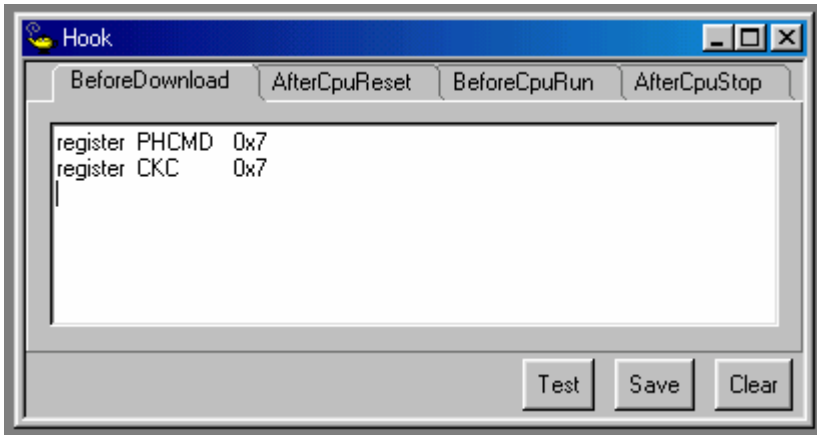
[Function]

Hooks can be set to the debugger using the hook procedure.

The hook procedure enables changing the register value before downloading a program, or after a CPU reset. The Hook window is a window used to facilitate this hook procedure setting. In particular, the [BeforeDownload] tab can be used to set the peripheral I/O register before downloading a load module, which is effective to accelerate downloading.

Setting this tab is also effective when accessing the external memory because it is necessary to set the peripheral I/O register.

If the setting is saved as “project-file-name.tcl” in the directory where the project is stored, the setting is executed when the project is next opened.



BeforeDownload	Hook before download. When downloading is performed, the register values input to the BeforeDownload tab before downloading a load module file are automatically overwritten by the specified value.
AfterCpuReset	Hook after a CPU reset. When a CPU reset is applied, the register values input to the AfterCpuReset tab are automatically overwritten by the specified value.
BeforeCpuRun	Hook before starting an execution. When Go execution is executed, the register values input to the BeforeCpuRun tab before Go execution are automatically overwritten by the specified value.
AfterCpuStop	Hook after a break. When a break occurs during execution, the register values input to the AfterCpuStop tab after the break are automatically overwritten by the specified value.
Test button	All the commands described on the tabs are tested.

Save button	Saves all the tab contents to a file. If the ID850 was activated from a project file, the file is saved as "project-file-name.tcl".
Clear button	Clears all the descriptions on the tabs.

Caution Specify the program register and the peripheral I/O register for the register name.

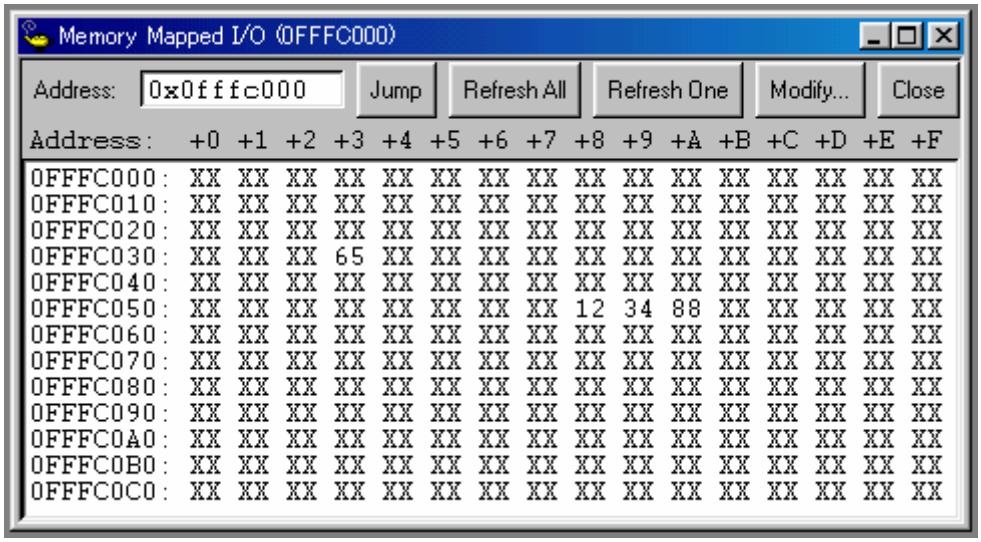
A.3.5 Explanation of Memory Mapped I/O window

[Function]

Data is explicitly read or written to a specified address in this window. When a write is performed in the Memory window, the data is internally read and verified by the ID850.

In addition, the memory can also be read by scrolling in the Memory window. Therefore, this window is useful depending on the customer's system, to read or write a specific address.

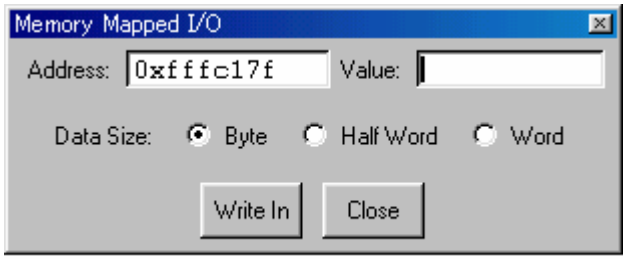
Memory Mapped I/O window



Address field	Input the address to display. The display target address changes by pressing the return key or clicking the Jump button. The data contents are not read at this time, so the address (numerical value) is displayed in the address display section, but "XX" is displayed in the data section.
Jump button	Jumps to the address input in the Address field.
Refresh All button	Reads all the areas currently displayed only once. "ZZ" will be displayed in the data section when an attempt is made to read an unmapped area, or when an error occurs upon a read.

Refresh One button	Reads data in the memory of the address at which the cursor is placed only once. The read data size depends on the display format. "ZZ" will be displayed in the data section when an attempt is made to read an unmapped area, or when an error occurs upon a read.
Modify... button	Opens the Memory Mapped I/O dialog box. The address at which the cursor is placed is the input address displayed in the Memory Mapped I/O dialog box. If this button is clicked after the cursor position is changed in the Memory Mapped I/O dialog box, the Address field in the Memory Mapped I/O dialog box is also changed.
Close button	Closes the Memory Mapped IO window.
Right-clicking the mouse on the window	Select the display format from Byte, HalfWord, and Word.

Memory Mapped I/O dialog box



Address field	Input the address to be written. The address corresponding to the data for which the cursor is placed in the Memory Mapped I/O window is displayed.
Value field	Input the value to be written.
Data Size	Select the size of the data to be written. The size specified in the Memory Mapped I/O window is selected by default.
Write in button	Data is written to the specified address with the specified size. Clicking this button does not close this dialog box.
Close button	Closes the Memory Mapped I/O dialog box.

Cautions 1. When the area to which data is written is displayed in the Memory window or Watch window, data is read in these windows after the Write in button is clicked.

2. If the data size is smaller than the access size specified in the Configuration dialog box, the ID850 first reads data according to the access size, modifies the relevant portion of the read data, and writes the modified data according to the access size.

APPENDIX B. DOCUMENT MODIFICATIONS

This section summarizes the changes in the V850 Series Integrated Debugger ID850 V2.50 Operation User's Manual.
The revisions listed in [Major revisions] below have been made in ID850 V2.52, in line with support of the IE-V850ESK1-ET.

The user's manual covered by this document is as follows.

- ID850 Integrated Debugger Ver. 2.50 Operation User's Manual
  (Document number: U16217EJ1V0UM)

B.1 Changes in “Configuration Dialog Box” in CHAPTER 7 WINDOW REFERENCE

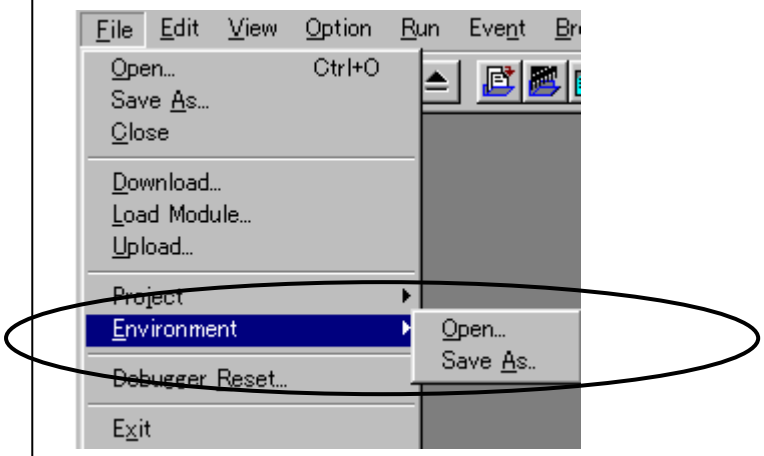
B.1 1 Addition of “Environment” menu to File menu in menu bar

p. 60

Before change:

Project	Manipulates a project file.
Open…	Opens a project file. Opens Project File Load dialog box.
Save	Overwrites the current status to the project file currently being read to the ID850NW.
Save As…	Saves the current status to a specified project file. Opens Project File Save dialog box.

After change: Addition of description



Project	Manipulates a project file.
Open…	Opens a project file. Opens Project File Load dialog box.
Save	Overwrites the current status to the project file currently being read to the ID850NW.
Save As…	Saves the current status to a specified project file. Opens Project File Save dialog box.
Environment	Manipulates project files of the IOR window, Watch window, and Event Manager window.
Open…	Opens an environment file. Opens the Environment File Load dialog box.
Save As…	Saves the current status as the specified environment file. Opens the Environment File Save dialog box.

[Supplement]

Setting information on the IOR window, Watch window, and Event Manager window is saved or loaded using the Environment menu. Saving and loading a display can be performed using [Open…] or [Save As…] in the File menu.

B.2 Changes in 1.4.1 HARDWARE ENVIRONMENT

B.2.1 Addition of IE-V850ESK1-ET to (2) In-circuit emulator

p. 18

After change:

- IE-703002-MC
- IE-703102-MC
- IE-V850E-MC or IE-V850E-MC-A
- IE-V850ES-G1
- IE-V850ESK1-ET

B.3 Changes in "MAIN WINDOW" in CHAPTER 7 WINDOW REFERENCE

Since coverage and snap-shot functions are not provided in the IE-V850ESK1-ET, the display of the coverage menu, coverage button and snap-shot menu are dimmed.

B.3.1 Addition of IE-V850ESK1-ET description on coverage button in "Tool bar"

p. 59

After change: Addition of description

 Cov	Displays coverage measurement results. Opens Coverage window (refer to P239). Same function as [Browse] --> [Coverage] on the menu bar When the IE-V850ESK1-ET is connected, this button is dimmed.

B.3.2 Addition of IE-V850ESK1-ET to description on Pick Up menu in "Trace window-dedicated items" in (3) [View] menu

p. 67

After change: Addition of description

Snap	Picks up and displays a snap frame. When the IE-V850ESK1-ET is connected, this menu is dimmed.

B.3.3 Addition of IE-V850ESK1-ET to description on Coverage ON menu in (4) [Option] menu

p. 69

After change: Addition of description

Coverage ON	Turns ON/OFF coverage measurement (default: ON). This item cannot be selected during user program execution. When the IE-V850ESK1-ET is connected, this menu is dimmed.

B.3.4 Addition of IE-V850ESK1-ET to description on coverage start/coverage stop function in (5) [Run] menu

p. 71

After change: Addition of description

Coverage Start	Starts coverage measurement when it is stopped, or stops it when it is in progress. This item is invalid if the program is not being executed or if the coverage function is OFF (if [Option] --> [Coverage ON] is not checked). Immediately after program execution has been started with the coverage function ON, coverage measurement is in progress. When the IE-V850ESK1-ET is connected, this menu is dimmed.

B.3.5 Addition of IE-V850ESK1-ET to description on Snap Shot menu in (6) [Event] menu

p. 72

After change: Addition of description

Snapshot…	Registers and sets a snap event condition. Opens Snap Shot dialog box. When the IE-V850ESK1-ET is connected, this menu is dimmed.

B.3.6 Addition of IE-V850ESK1-ET to description on Coverage menu in (7) [Browse] menu

p. 73

After change: Addition of description

Coverage	Displays coverage measurement results. Opens Coverage window. Same operation as the Cov button. When the IE-V850ESK1-ET is connected, this menu is dimmed.

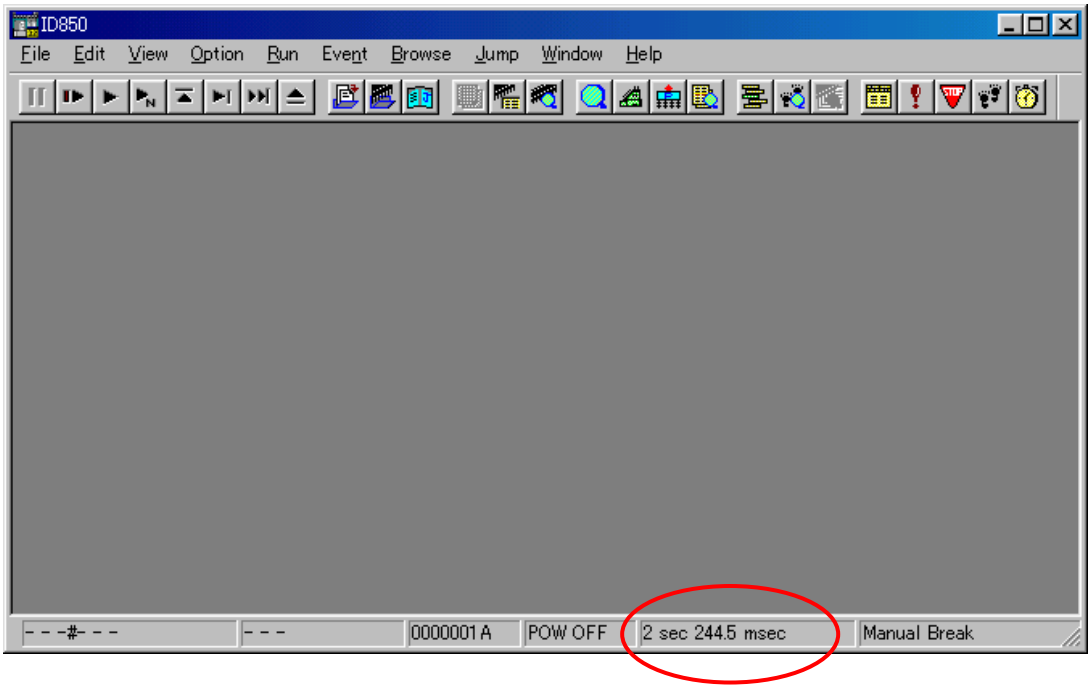
B.3.7 Addition of IE-V850ESK1-ET to description on Coverage menu in (8) [Jump] menu

p. 74

After change: Addition of description

Coverage	Displays coverage measurement results from the jump destination address specified by the data value selected in the current window. Opens Coverage window. If an active Coverage window is open, that window is displayed in the forefront (so that it can be manipulated). When the IE-V850ESK1-ET is connected, this menu is dimmed.

B.3.8 Addition of IE-V850ESK1-ET to description in “Status bar” in (5) IE Status.



p. 76

After change: Addition of description

(5) IE status	Displays the status of the in-circuit emulator. RUN...User program execution in progress (the color of the status bar changes). STEP...Step execution in progress TRC...Tracer operating TIM... Timer operating COV...Coverage operation in progress BREAK...Break occurring When the IE-V850ESK1-ET is connected, “BREAK” is not displayed. This section indicates the time from when a program is started to when a break occurs. From 0.1 ms up to 50 hours 54 minutes 11 seconds can be measured. The time indicated in the status bar does not always match the time in the RUN-Break in the Timer dialog box, because they are measured by a separate clock. The result of measurement is displayed in one of the following formats. XX hour XX min XX sec X hour XX min XX.X sec XX min XX.XX sec X min XX sec XXX msec XX sec XXX.X msec X sec XXX.X msec XXX.X msec XX.X msec X.X msec TIMER OVERFLOW (Displayed when the measurement result overflows.)

B.4 Changes in “CONFIGURATION DIALOG BOX” in CHAPTER 7 WINDOW REFERENCE

The IE-V850ESK1-ET has been added to the description in the Configuration dialog box.

B.4.1 Addition of IE-V850ESK1-ET to Table 7-3 Settable Sizes as Internal ROM/RAM

p. 81

After change:

Table 7-3 Settable Sizes as Internal ROM/RAM

Emulator used	Internal ROM Both alignment and settable range (KByte)	Internal RAM Both alignment and settable range (Byte)
IE-703002-MC	0, 32, 64, 128, 256, 512	1024, 2048, 3072, 4096, 6144, 8192, 10240, 12288, 16384, 20480, 24576, 28672
IE-703102-MC	0, 32, 64, 128, 256, 512	1024, 2048, 3072, 4096, 6144, 8192, 10240, 12288, 16384, 20480, 24576, 28672, 36864, 45056, 53248, 61440
IE-V850E-MC or IE-V850E-MC-A IE-V850ES-G1, IE-V850ESK1-ET	0, 32, 64, 128, 256, 512	4096, 12288, 28672, 61440

B.4.2 Addition of IE-V850ESK1-ET to description in (4) Clock (CPU clock source selection area)

p. 82

After change: Addition of description

The clock source can be selected only when the IE-703102-MC, IE-V850E-MC or IE-V850E-MC-A is connected to the ID850. If the IE-703002-MC or IE-V850ESK1-ET is connected to the ID850, this area is always fixed to Internal and dimmed because the clock is changed by a jumper setting.

B.4.3 Addition of IE-V850ESK1-ET to description in table in (5) Emulation Memory (wait selection area)

p. 84

After change:

IE-V850E-MC, IE-V850E-MC-A, IE-V850ES-G1, IE-V850ESK1-ET

Wait Type		Emulation Memory Access	External Memory Access
0 Wait Access	Data wait	Fixed to 0 waits. The WAIT signal is masked.	Depends on the DWC register setting. The WAIT signal is masked.
	Idle wait	Fixed to 0 waits.	Depends on the ASC or AWC register setting.
	Idle state	Fixed to 0 waits.	Depends on the BCC register setting.

B.4.4 Addition of description on mapping attribute to (7) Memory Mapping (mapping setting area)

pp. 85 and 86

After change: Addition of description

Memory Attribute **(mapping attribute specification)**

The following types of mapping attributes can be selected. Select a mapping attribute according to the usage (refer to “Mapping function”).

Emulation ROM and Emulation RAM are not displayed because they are not provided in the IE-V850ESK1-ET.

Emulation ROM	Selects the in-circuit emulator alternate ROM.
Emulation RAM	Selects the in-circuit emulator alternate RAM.
Target	Selects the target memory.
I/O Protect	Selects the I/O protect area. This area can be set only in the area set as Target.

B.5 Changes in “EXTENDED OPTIONS DIALOG BOX” in CHAPTER 7 WINDOW REFERENCE

B.5.1 Addition of IE-V850ESK1-ET to description in (1) Trace Timetag Count Rate (trace time tag counter division ratio selection area)

p. 91

After change: Addition of description

The division ratios are differs depending on the IE connected. However, the display of Trace Timetag Count Rate is dimmed because the time tag trace function is not provided in the IE-V850ESK1-ET.

B.5.2 Addition of IE-V850ESK1-ET to description in (3) Add Up Timetag (total time tag specification area)

p. 91

After change: Addition of description

This check box is not checked by default, and the time tags are not totaled. However, the display of Add Up Timetag is dimmed because the time tag trace function is not provided in the IE-V850ESK1-ET.

B.5.3 Addition of IE-V850ESK1-ET to description in (4) RAM Monitor (real-time internal RAM sampling time setting area)

p. 92

After change:

Table 7-7 Address Range and Valid Size

Connected IE	Area	Valid Size	Alignment of Start Address
IE-703002-MC or IE-703102-MC	Internal RAM only	1 KB	1 KB alignment
IE-V850E-MC, IE-V850E-MC-A, IE-V850ES-G1, or IE-V850ESK1-ET	Unlimited	1 KB	1 KB alignment

B.5.4 Addition of IE-V850ESK1-ET to description in (5) Break condition (break mode setting area)

p. 95

After change: Addition of description

This setting affects only hardware breaks. This area is invalid if the IE-V850E-MC, IE-V850E-MC-A, IE-V850ES-G1, or IE-V850ESK1-ET is connected.

B.6 Changes in “TRACE WINDOW” in CHAPTER 7 WINDOW REFERENCE

Time tag and external sense clip functions are not provided in the IE-V850ESK1-ET, so the descriptions have been modified as shown below.

B.6.1 Addition of description to (3) Trace result display area (b) Time (time tag display)

p. 226

After change: Addition of description

This area displays how many clocks the target chip has required since execution of the preceding trace contents was started until execution of the current trace contents is started. As the display contents, display of the number of clocks or display of time can be selected in the Trace Data Select dialog box. In addition, the division rate of the number of counts can be selected up to 1M in the Extended Option dialog box. The number of clocks and time tag value correspond as follows. The Time (time tag display) area is not provided in the IE-V850ESK1-ET.

B.6.2 Addition of description to (3) Trace result display area (e) ExtProbe (external sense data display)

p. 228

After change: Addition of description

Only when the IE-703102-MC, IE-V850E-MC or IE-V850E-MC-A is connected to the ID850, eight external sense clips are used; otherwise four external sense clips are used. If four external sense clips are used, the higher 4 bits are always fixed to 0. The Time (time tag display) area is not provided in the IE-V850ESK1-ET.

B.7 Changes in “TRACE SEARCH DIALOG BOX” in CHAPTER 7 WINDOW REFERENCE

An external sense clip function is not provided in the IE-V850ESK1-ET.

B.7.1 Addition of IE-V850ESK1-ET to Caution in (5) Ext Probe, Mask (external sense data setting area)

p. 238

After change: Addition of description

Caution Only when the IE-703102-MC, IE-V850E-MC or IE-V850E-MC-A is connected to the ID850, eight external sense clips are used; otherwise four external sense clips are used. If four external sense clips are used, the higher 4 bits are always fixed to 0. When the IE-V850ESK1-ET is connected, this area is dimmed.

B.8 Changes in “TRACE DATA SELECT DIALOG BOX” in CHAPTER 7 WINDOW REFERENCE

B.8.1 Addition of IE-V850ESK1-ET to description in (1) Item (trace display item selection area)

p. 242

After change: Addition of description

This area is used to select items to be displayed in the Trace window. Displaying the following items may or may not be selected. The field checked is displayed.
When the IE-V850ESK1-ET is connected, the item Timetag and External Probe are dimmed.

B.8.2 Addition of IE-V850ESK1-ET to description in (2) Radix (trace display radix selection area)

p. 242

After change: Addition of description

This area is used to select the radix in which data is to be displayed. Displaying the following items may or may not be selected.
When the IE-V850ESK1-ET is connected, the item Pick Up Snap Frame is dimmed.

B.8.3 Addition of IE-V850ESK1-ET to description in (3) Pick Up (pickup selection area)

p. 244

After change: Addition of description

This area is used to select a pickup condition.
When the IE-V850ESK1-ET is connected, the item Pick Up Snap Frame is dimmed.

B.9 Changes in “EVENT MANAGER” in CHAPTER 7 WINDOW REFERENCE

B.9.1 Addition of IE-V850ESK1-ET to description in Table 7-31 Maximum Number of Valid Events for Each Event Condition

p. 261

After change: Addition of description

Table 7-31 Maximum Number of Valid Events for Each Event Condition

IE Using	Event		Event link	Break	Trace	Snapshot	Stub	Timer
	Execution	Access						
IE-703002-MC	14	8	3[a.b.]	22	1[b.]	1[c.]		1[a.]
IE-703002-MC	14	8	3[a.b.]	22	1[b.]	1[c.]		3[a.]
IE-V850E-MC or IE-V850E-MC-A, IE-V850ES-G1, IE-V850ESK1-ET	14[d.]	8	3[a.b.]	22	1[b.]	1[c.]		3[a.]

c. The relationship between a snap shot event and a stub event is exclusive.
The snap-shot function is not provided in the IE-V850ESK1-ET.

B.10 Changes in "EVENT DIALOG BOX" in CHAPTER 7 WINDOW REFERENCE

An external sense clip cannot be connected to the IE-V850ESK1-ET. In addition, a snap-shot function is not provided in the IE-V850ESK1-ET, so the descriptions have been modified as shown below.

B.10.1 Addition of IE-V850ESK1-ET to Caution in (6) Ext Probe, Mask (external sense data setting area)

p. 279

After change: Addition of description

Caution Only when the IE-703102-MC, IE-V850E-MC or IE-V850E-MC-A is connected to the ID850, eight external sense clips are used; otherwise four external sense clips are used. If four external sense clips are used, the higher 4 bits are always fixed to 0.
When the IE-V850ESK1-ET is connected, this area is dimmed.

B.10.2 Addition of IE-V850ESK1-ET to description of Snap Shop…button in "Function buttons"

p. 280

After change: Addition of description

Buttons for opening each event setting dialog box

Snap Shot…	Opens Snap Shot dialog box. When the IE-V850ESK1-ET is connected, this button is dimmed.

B.11 Changes in "EVENT LINK DIALOG BOX" in CHAPTER 7 WINDOW REFERENCE

B.11.1 Addition of description to Table 7-40 Various Event Conditions for Which Event Link Condition Can Be Use

p. 282

After change: Addition of description

Table 7-40 Various Event Conditions for Which Event Link Condition Can Be Use

Using IE	Break condition	Trace condition	Snapshot condition	Stub condition	Timer condition
IE-703002-MC	OK[a.]	•[b.]	NG	NG	OK
IE-703002-MC	OK[a.]	•[b.]	NG	NG	OK
IE-V850E-MC or IE-V850E-MC-A, IE-V850ES-G1, IE-V850ESK1-ET	OK[a.]	•[b.]	NG	NG	OK

a. An event link condition which is used for a break event condition cannot be used for a trace or timer event condition. Alternately, In a similar manner, an event link condition which is used for a trace or timer event condition cannot be used for a break event condition.

b. It cannot be used for a qualify condition or section trace condition.

The snap-shot function is not provided in the IE-V850ESK1-ET.

B.12 Other

The error message related to communication with the ICE, which was displayed after the OK button was clicked in the Configuration dialog box, was modified so that it is displayed before the Configuration dialog box is opened.