



HITACHI
S10 α SERIES

SOFTWARE MANUAL
OPTION

EXTERNAL SERIAL LINK
For Windows[®]

2 α
S10mini
SERIES

Applicable to :

HITACHI-S10/2 α	NESP-S25E
HITACHI-S10/2 α E	NESP-2 α E
HITACHI-S10/2 α H	NESP-2 α H
HITACHI-S10/2 α Hf	NESP-2 α Hf
S10mini model S	
S10mini model H	
S10mini model F	
S10mini model D	

NOTE

All information in this manual is based on the latest product information available at the time of printing. Hitachi has reviewed the accuracy of this manual, but assumes no responsibility for any omissions or errors which may appear. The design of the product is under constant review and, while every effort is made to keep this manual up to date, the right is reserved to change specifications and equipment at any time without prior notice.

PROHIBITION

These products should not be used for medical, power supply, nuclear, water supply, drainage plants, traffic control, military, space, nor disaster prevention equipment.

Diversion and/or resale of these products without this manual is prohibited.

Reproduction of the contents of this manual in whole or in part, without written permission of Hitachi, is prohibited.

TRADEMARKS

HITACHI-S10/2 α , S10/4 α and PSE α are registered trademarks of Hitachi, Ltd.

FIRST EDITION, JUNE, 1997, SAE - 3 - 143 (A) (out of print)
SECOND EDITION, AUGUST, 1998, SAE - 3 - 143 (B) (out of print)
THIRD EDITION, OCTOBER, 2000, SAE - 3 - 143 (D) (out of print)
FORTH EDITION, OCTOBER, 2001, SAE - 3 - 143 (E) (out of print)
FIFTH EDITION, AUGUST, 2003, SAE - 3 - 143 (F)
All Rights Reserved, Copyright © 1997, 2003, Hitachi, Ltd.

LIMITED WARRANTY

Hitachi, Ltd., warrants its products to be manufactured in accordance with published specifications and free from defects in materials and/or workmanship.

Hitachi, Ltd., warrants its products against defects in parts and workmanship for one full year from date of purchase.

HITACHI, LTD., MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED EXCEPT AS PROVIDED HEREIN, INCLUDING WITHOUT LIMITATION THEREOF, WARRANTIES AS TO MARKETABILITY FOR A PARTICULAR PURPOSE OF USE, OR AGAINST INFRINGEMENT OF ANY PATENT. IN NO EVENT SHALL HITACHI BE LIABLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE, OR COSTS, CHARGES, LOSSES OR EXPENSES RESULTING FROM ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.

SOFTWARE UP-TO DATE POLICY

Hitachi, Ltd., constantly reviews its software so as to incorporate the latest technology. Hitachi reserves the right to make changes to any software to improve reliability, function, or design. Hitachi cannot be held responsible for any errors in its software.



SAFETY PRECAUTIONS

- Read this manual thoroughly and follow all the safety precautions and instructions given in this manual before operations such as system configuration and program creation.
- Keep this manual handy so that you can refer to it any time you want.
- If you have any question concerning any part of this manual, contact your nearest Hitachi branch office or service engineer.
- Hitachi will not be responsible for any accident or failure resulting from your operation in any manner not described in this manual.
- Hitachi will not be responsible for any accident or failure resulting from modification of software provided by Hitachi.
- Hitachi will not be responsible for reliability of software not provided by Hitachi.
- Make it a rule to back up every file. Any trouble on the file unit, power failure during file access or incorrect operation may destroy some of the files you have stored. To prevent data destruction and loss, make file backup a routine task.
- Furnish protective circuits externally and make a system design in a way that ensures safety in system operations and provides adequate safeguards to prevent personal injury and death and serious property damage even if the product should become faulty or malfunction or if an employed program is defective.
- If an emergency stop circuit, interlock circuit, or similar circuit is to be formulated, it must be positioned external to the programmable controller. If you do not observe this precaution, equipment damage or accident may occur when the programmable controller becomes defective.
- Before changing the program, generating a forced output, or performing the RUN, STOP, or like procedure during an operation, thoroughly verify the safety because the use of an incorrect procedure may cause equipment damage or other accident.



“RUN/STOP” SWITCH CAUTION

The “RUN/STOP” switch only stops execution of the ladder logic program or HI-FLOW program. Digital and analog outputs are left in the active state when execution stops, unless the optional rungs described in the CPU manual have been added. The “RUN/STOP” switch does not affect the operation of C-language or FA-BASIC language programs. Outputs can still be produced in response to C-language or FA-BASIC programs, or by the action of programmers typing in commands in these languages, while the “RUN/STOP” switch is in the “STOP” position.

DO NOT DEPEND ON THE STOP SWITCH TO STOP MOVING PARTS OR TO PREVENT UNEXPECTED MOTION OR ENERGIZATION. USE HARDWIRED SAFETY DISCONNECT AND LOCK OUT POWER AND CONTROL VOLTAGES BEFORE WORKING ON ELECTRICAL CIRCUITS OR PARTS THAT CAN MOVE.

PREFACE

We greatly appreciate your purchase of this external serial link system.

The external serial link system operates on a personal computer, and executes various setup operations for the external serial link module and RS-232C module.

The external serial link module and RS-232C module enable data communication between the external devices (personal computers, printers, etc.) having the RS-232C or RS-422 interface and PCs.

This manual describes the operation of the external serial link system.

This manual is applicable to the following system versions.

System name/version
EXTERNAL SERIAL LINK SYSTEM For Windows® 07-02

System versions 05-00 and earlier do not support the Microsoft® Windows® 98 operating system.

They support the Microsoft® Windows® 95 operating system only.

For the external serial link module and RS-232C module, refer to the following manuals, which are supplied along with the modules.

<Related manuals>

- OPTION MANUAL SERIAL INTERFACE (LWE046) (Manual number SP-62-207)
- OPTION MANUAL 2-CHANNEL RS-232C (LWE450) (Manual number SP-62-221)
- HARDWARE MANUAL OPTION RS-232C (Manual number SME-1-105)

See the following list when you use the NESP
(Nissan Electronic Sequence Processor) series.

【HITACHI-S10 α series】		【NESP series】
HITACHI-S10/2 α	NESP-S25E
HITACHI-S10/2 α E	NESP-2 α E
HITACHI-S10/2 α H	NESP-2 α H
HITACHI-S10/2 α Hf	NESP-2 α Hf

<Trademarks>

- Microsoft® Windows® operating system, Microsoft® Windows® 95 operating system, Microsoft® Windows® 98 operating system, Microsoft® Windows® 2000 operating system, Microsoft® Windows® XP operating system are registered trademarks of Microsoft Corporation in the United States and/or other countries.
- Ethernet is a registered trademark of Xerox Corp.

Other product names written in this manual are the trademarks of each manufacturer.

<Definitions of Terms>

- N coil: A ladder program converted into a form that can be run on the PCs by pasting a symbol on the sheet displayed on a PC.
- Process: A HI-FLOW program converted into a form that can be run on the PCs by pasting a symbol on the sheet displayed on a PC.
- Compile: To convert an application program such as a ladder chart and HI-FLOW into a form (N coil, process, etc.) that can be run on the PCs.
- Build: To compile only a corrected application program.
- Rebuild: To compile every existing application program.
- Sheet: Paper to prepare an application program of ladder chart and HI-FLOW, etc. This paper is controlled on a PC.
- PCs: An abbreviation of Programmable Controllers.
This is a general term for PLC such as the S10α and S10mini series.
- PLC: An abbreviation of Programmable Logic Controller.
This is an industrial electronic device to exert sequence control, having an incorporated program.
The S10α and S10mini series come under this PLC.

<Note for storage capacity calculations>

- Memory capacities and requirements, file sizes and storage requirements, etc. must be calculated according to the formula 2^n . The following examples show the results of such calculations by 2^n (to the right of the equals signs).
1 KB (kilobyte) = 1024 bytes
1 MB (megabyte) = 1,048,576 bytes
1 GB (gigabyte) = 1,073,741,824 bytes
- As for disk capacities, they must be calculated using the formula 10^n . Listed below are the results of calculating the above example capacities using 10^n in place of 2^n .
1 KB (kilobyte) = 1000 bytes
1 MB (megabyte) = 1000^2 bytes
1 GB (gigabyte) = 1000^3 bytes

Systems Supported by Windows® 2000 and Windows® XP

The systems supported by Microsoft® Windows® 2000 operating system (hereafter abbreviated as Windows® 2000) and Microsoft® Windows® XP operating system (hereafter abbreviated as Windows® XP) are shown in the following table.

Systems of earlier versions than those shown in the following table are not supported by Windows® 2000 and Windows® XP but supported by only Microsoft® Windows® 95 operating system (hereafter abbreviated as Windows® 95) and Microsoft® Windows® 98 operating system (hereafter abbreviated as Windows® 98). (The system names in the following table are hereafter abbreviated as each system.)

<Table of Systems Supported by Windows® 2000 and Windows® XP>

No.	System name	Type	Version	Windows® 2000	Windows® XP
1	S10Tools SYSTEM	S-7890-01	07-05	√	√
2	LADDER CHART SYSTEM	S-7890-02	07-05	√	√
3	HI-FLOW SYSTEM	S-7890-03	07-02	√	√
4	CPMS LOADING SYSTEM	S-7890-04	07-04	√	√
5	CPMSE LOADING SYSTEM	S-7890-05	07-04	√	√
6	CPMS DEBUGGER SYSTEM	S-7890-06	07-02	√	√
7	CPMSE DEBUGGER SYSTEM	S-7890-07	07-02	√	√
8	GP-IB LOADING SYSTEM	S-7890-08	07-01	√	√
9	BACKUP RESTORE SYSTEM	S-7890-09	08-01	√	√
10	RPDP/S10 SYSTEM	S-7891-10	03-03	√ (*2)	ns (*1)
11	NX/Tools-S10 SYSTEM	S-7890-13	07-02	√	√
12	4α LADDER CHART SYSTEM	S-7890-17	07-05	√	√
13	4αH LADDER CHART SYSTEM	S-7890-18	07-05	√	√
14	LADDER COMMENT CONVERTER SYS	S-7890-19	06-01	√	√
15	HIGH SPEED REMOTE I/O SYSTEM	S-7890-21	07-01	√	√
16	CPU LINK SYSTEM	S-7890-22	07-01	√	√
17	4ch ANALOG PULSE COUNTER SYS	S-7890-23	07-01	√	√
18	EXTERNAL SERIAL LINK SYSTEM	S-7890-24	07-02	√	√
19	S10ET LINK SYSTEM	S-7890-25	07-02	√	√
20	J.NET SYSTEM	S-7890-27	07-02	√	√
21	OD.RING/SD.LINK SYSTEM	S-7890-28	07-03	√	√
22	ET.NET SYSTEM	S-7890-29	07-01	√	√
23	FL.NET SYSTEM	S-7890-30	07-03	√	√
24	D.NET SYSTEM	S-7890-31	07-04	√	√
25	LADDER CHART MONITOR SYSTEM	S-7890-34	07-04	√	√
26	HI-FLOW MONITOR SYSTEM	S-7890-35	07-01	√	√
27	IR.LINK SYSTEM	S-7890-36	07-02	√	√
28	Crossing C compiler (manufactured by Mentor graphics company)	MCP68K	5.3	√ (*2)	ns (*1)

√: Supported ns: Not supported

(*1) Crossing C compiler (No.28) is not supported by Windows® XP. Use it on Windows® 2000.

(*2) Crossing C compiler (No.28) must be a version supported by Windows® 2000 (later than version 5.3) as a premise.

CONTENTS

1	BEFORE USE.....	1
1.1	System Overview	2
1.2	Hardware and Software Requirements.....	2
2	INSTALLATION.....	5
2.1	Installing the System	6
2.2	Uninstalling the System	7
2.3	Starting Up the System.....	8
2.4	Terminating the System	9
3	COMMANDS.....	11
3.1	Command System	12
3.2	Transmit System Program.....	12
3.3	Compare System Program.....	13
3.4	Register LGB	14
3.5	MCS	15
3.6	Delete All Channels of Task System	16
3.7	Change Connection	17

1 BEFORE USE

1 BEFORE USE

This manual is intended for users who use Windows® personal computer programming.

1.1 System Overview

The external serial link system for Windows® (hereinafter simply called the external serial link system) transfers the system programs of the HITACHI-S10α series and S10mini series external serial link module and RS-232C module (LWE046, LWE450, LQE060 or LQE160), RS-422 module (LQE165) and registers line group blocks (LGBs) for the existing programmable controllers (PCs), through operations as done on general Windows® applications.

1.2 Hardware and Software Requirements

Using each system requires the following hardware and software.

<Personal Computers (hereafter abbreviated as PC)>

Item \ OS	Windows® 95 (*1)	Windows® 2000 (*1)	Windows® XP (*1)
	Windows® 98 (*1)		(*2)
CPU	Pentium 133 MHz or more		Pentium 300 MHz or more
Memory (RAM)	32 MB or more	64 MB or more	128 MB or more
Free hard disk capacity (*3)	20 MB or more/system (However, 10 MB or more/system for OS loading and option module support software)		
Floppy disk drive	1 unit or more (required to install software by FD)		
CD-ROM drive	1 unit or more (required to install software by CD-ROM)		
Ethernet (10BASE-T)	1 port or more (required to connect a PC with the ET.NET module)		
Serial (D-sub 9-pin)	1 port or more (required to connect the PCs with a PC by RS-232C or set an IP address for the ET.NET module)		
PC card (conforming to the PC Card Standard (JEITA V4.2) TYPE II or TYPE III)	1 slot or more (required to connect a PC with the parallel interface module (LWZ400). At this time, the following GP-IB card is also required.) GP-IB card: PCMCIA-GPIB (Model: 777438-02) (manufactured by National Instruments Corporation)		
Display	Resolution of 800 × 600 pixels or more		
Microsoft® Internet Explorer	Version 4.01 or later		

(*1) For the OS service pack, refer to the attached reference materials for software.

(*2) No.10 and No.28 in <Table of Systems Supported by Windows® 2000 and Windows® XP> in “PREFACE” are excepted.

(*3) This is a capacity required to install each system. A free capacity to save user programs is also required.

<Hardware other than PC>

- CPU for HITACHI-S10 α series (2 α , 2 α E, 2 α H, 2 α Hf) or S10mini series
- Power supply for HITACHI-S10 α series or S10mini series
- Backboard for HITACHI-S10 α series or S10mini series
- HITACHI S10 α series external unit link module (LWE046) and RS-232C module (LWE450) or S10mini series RS-232C module (LQE060 or LQE160) and RS-422 module (LQE165)
- Connection cable between the personal computer and PCs
- Remote I/O stations, other power supplies and backboards, cards, and wiring as required

NOTICE

Users of this product require knowledge of the Windows® environment and user interface. The external serial link system conforms to the Windows® standard. This manual is intended for users who have mastered the basic usage of Windows®.

NOTE

When the external serial link module is used along with the F link module or high-speed remote I/O module in an HIACS S10mini series system, the channel setting of the external serial link module must be made to 0 or 1. Be sure to set the RS-232C module to 0. If it is erroneously made to 2 or 3 (or 1, 2, or 3 for the RS-232C module), operation of the module is not guaranteed (this is not the case when the S10mini series machine is used). When you use a personal computer with the suspend function, disable the function. The personal computer may malfunction if the suspend function remains enabled during execution of the CPMSE debugger system.

THIS PAGE INTENTIONALLY LEFT BLANK.

2 INSTALLATION

2 INSTALLATION

2.1 Installing the System (*)

First, check if your CD is correct.

To install each system, double-click the Setup.exe file saved in the DISK1 folder of the system CD. After installing it, an installed program window is not displayed.

To install each system, install Microsoft® Internet Explorer 4.01 or later. If it is not installed, install each system after installing it.

NOTE

- To operate each system, install Microsoft® Internet Explorer 4.01 or later. If it is not installed, each system does not operate normally.
- Before installing each system, be sure to terminate such a program residing in the memory as virus monitoring software. If each system is installed without terminating the program, an error may occur. In this case, uninstall the system by referring to “2.2 Uninstalling the System” and terminate all Windows® programs. Then, install each system once again.
- To install and uninstall each system by using Windows® 2000, set “Administrator” or “Member of Administrators” as the user account to be logged on.
- To install and uninstall each system by using Windows® XP, set “Computer administrator” as the user account to be logged on. If “Account with limitations” is set, each system does not operate normally.

(*) No.10 and No.28 in <Table of Systems Supported by Windows® 2000 and Windows® XP> in “PREFACE” are excepted.

2.2 Uninstalling the System (*)

To uninstall each system for version-up, observe the following procedure.

(1) Uninstalling from Windows® 95 or Windows® 98

Open [Settings] in the [Start] menu – [Control Panel]. Double-click [Add/Remove Programs], select “Each System” by the [Install/Uninstall] tab, and click the button. When the [Confirm File Deletion] window is displayed, click the button.

(2) Uninstalling from Windows® 2000

Open [Settings] in the [Start] menu – [Control Panel]. Double-click [Add/Remove Programs], click [Change or Remove Programs], select “Each System,” and click the button. When the [Confirm File Deletion] window is displayed, click the button.

(3) Uninstalling from Windows® XP

Open ([Settings] –) [Control Panel] in the [Start] menu. Double-click [Add or Remove Programs], click [Change or Remove Programs], select “Each System,” and click the button. When the [Confirm File Deletion] window is displayed, click the button.

When a shortcut of each system executable file has been created on the desktop, etc. delete this shortcut.

NOTE

- When the [Remove Shared File?] window is displayed while each system is uninstalled on Windows®, click not to delete the shared file.
- To install and uninstall each system by using Windows® 2000, set “Administrator” or “Member of Administrators” as the user account to be logged on.
- To install and uninstall each system by using Windows® XP, set “Computer administrator” as the user account to be logged on.
- If the [Add/Remove Programs] window is locked (inoperable) when each system is uninstalled by using Windows® 2000, log off from [Shut Down] in the [Start] menu of Windows®, and then log on again on the [Log On to Windows] window.

(*) No.10 and No.28 in <Table of Systems Supported by Windows® 2000 and Windows® XP> in “PREFACE” are excepted.

2 INSTALLATION

2.3 Starting Up the System (*)

- (1) The system to be installed by each system is automatically registered in the [Start] menu of Windows®. From this [Start] menu, select [Programs (All Programs)] – [Hitachi S10] – “Each System” to start the system.

If the logged-on user name in installing each system is different from the user name in starting each system, each system is not displayed in the [Start] menu. In this case, create a shortcut of the executable file (extension .exe) for each system shown below and then double-click this shortcut to start each system.

<Executable File Storage Directory Table>

No.	System name	Type	Executable file storage directory (*1)	Executable file name
1	S10Tools SYSTEM	S-7890-01	C:\Hitachi\S10	S10Ladder.exe
				S10Tool.exe
2	LADDER CHART SYSTEM	S-7890-02	C:\Hitachi\S10\2ALDC	S10Ladder.exe
3	HI-FLOW SYSTEM	S-7890-03	C:\Hitachi\S10\HF	S10Tool.exe
4	CPMS LOADING SYSTEM	S-7890-04	C:\Hitachi\S10\CPMS	Cpms.exe
5	CPMSE LOADING SYSTEM	S-7890-05	C:\Hitachi\S10\CPMSE	Cpmse.exe
6	CPMS DEBUGGER SYSTEM	S-7890-06	C:\Hitachi\S10\DEBUG	Debugger.exe
7	CPMSE DEBUGGER SYSTEM	S-7890-07	C:\Hitachi\S10\DEBUGE	DebuggerE.exe
8	GP-IB LOADING SYSTEM	S-7890-08	C:\Hitachi\S10\GPIB	Gpib.exe
9	BACKUP RESTORE SYSTEM	S-7890-09	C:\Hitachi\S10\BACKUP	SysAllSaveLoad.exe
10	NX/Tools-S10 SYSTEM	S-7890-13	C:\Hitachi\S10\NX	NXTool.exe
11	4α LADDER CHART SYSTEM	S-7890-17	C:\Hitachi\S10\4ALDC	S10Ladder_4A.exe
12	4αH LADDER CHART SYSTEM	S-7890-18	C:\Hitachi\S10\4AHLDC	S10Ladder_4AH.exe
13	LADDER COMMENT CONVERTER SYS	S-7890-19	C:\Hitachi\S10\CFCONV	Cfconv.exe
14	HIGH SPEED REMOTE I/O SYSTEM	S-7890-21	C:\Hitachi\S10\HISRIO	HiSpeedRIO.exe
15	CPU LINK SYSTEM	S-7890-22	C:\Hitachi\S10\CPULINK	CpuLink.exe
16	4ch ANALOG PULSE COUNTER SYS	S-7890-23	C:\Hitachi\S10\ANALOG	AnalogPuls.exe
17	EXTERNAL SERIAL LINK SYSTEM	S-7890-24	C:\Hitachi\S10\EXLINK	ExLink.exe
18	S10ET LINK SYSTEM	S-7890-25	C:\Hitachi\S10\ETLINK	EtherNet.exe
19	J.NET SYSTEM	S-7890-27	C:\Hitachi\S10\JNET	JNet.exe
20	OD.RING/SD.LINK SYSTEM	S-7890-28	C:\Hitachi\S10\ODRING-SDLINK	ODRing.exe
21	ET.NET SYSTEM	S-7890-29	C:\Hitachi\S10\ETNET	Et_Net.exe
22	FL.NET SYSTEM	S-7890-30	C:\Hitachi\S10\FLNET	FLnet.exe
23	D.NET SYSTEM	S-7890-31	C:\Hitachi\S10\DNET	DNet.exe
24	LADDER CHART MONITOR SYSTEM	S-7890-34	C:\Hitachi\S10\2ALDCM	S10LadderM.exe
25	HI-FLOW MONITOR SYSTEM	S-7890-35	C:\Hitachi\S10\HFM	S10ToolM.exe
26	IR.LINK SYSTEM	S-7890-36	C:\Hitachi\S10\IRLINK	IrLink.exe

(*1) Directory name when “C” is the drive name of installing destination.

(*) No.10 and No.28 in <Table of Systems Supported by Windows® 2000 and Windows® XP> in “PREFACE” are excepted.

- (2) The [EXTERNAL SERIAL LINK SYSTEM] window is displayed. In this state, the external serial link system has been started up. Then, click the button of the desired command.

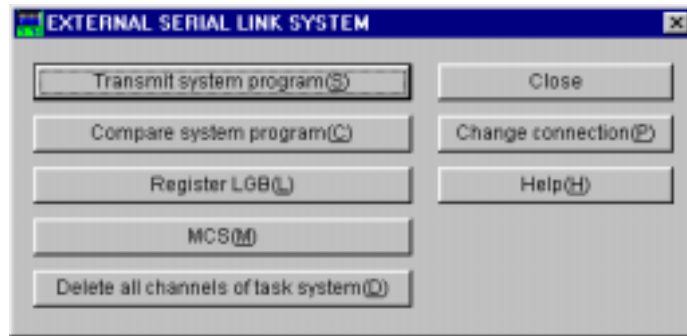


Figure 2-1 [EXTERNAL SERIAL LINK SYSTEM] Window

2.4 Terminating the System

Click the or button on the [EXTERNAL SERIAL LINK SYSTEM] window shown in Figure 2-1.

THIS PAGE INTENTIONALLY LEFT BLANK.

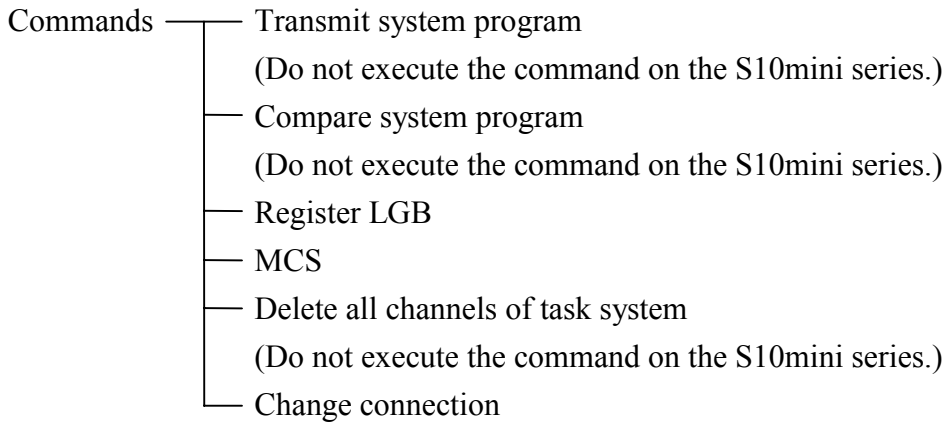
3 COMMANDS

3 COMMANDS

3.1 Command System

The command system of the external serial link is shown below.

Each of these commands is described in Section 3.2 and later. For details on each command, refer to Help.



3.2 Transmit System Program

Do not perform this procedure on the S10mini series, because the system program is stored in ROM.

Function: Transfers the system program of the external serial link system to the PCs.

Operation: See the operation procedure below.

- (1) Click the Transmit system program button on the [EXTERNAL SERIAL LINK SYSTEM] window (Figure 3-1).

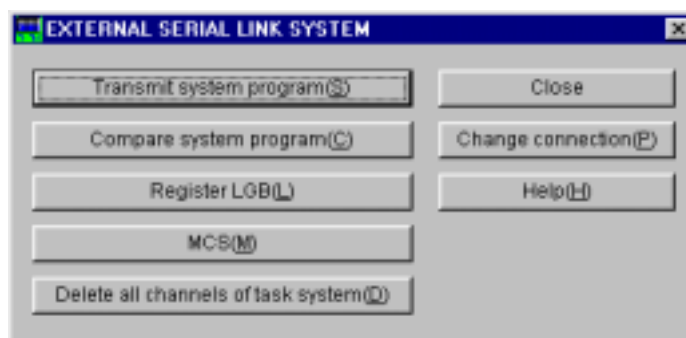
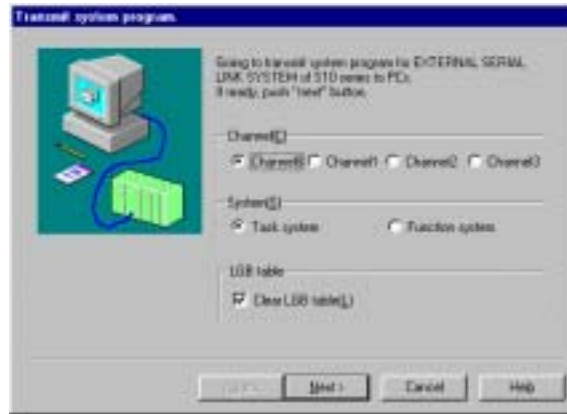


Figure 3-1 [EXTERNAL SERIAL LINK SYSTEM] Window

- (2) The [Transmit system program.] window is displayed.



- (3) Select a “Channel,” “System,” and “LGB table” clearance, and click the **Next** button. Then, system program transfer is started. When the system program is not to be transferred, click the **Cancel** button.

NOTE

When a system program transfer is made on the S10mini series, be sure to reset the CPU module.

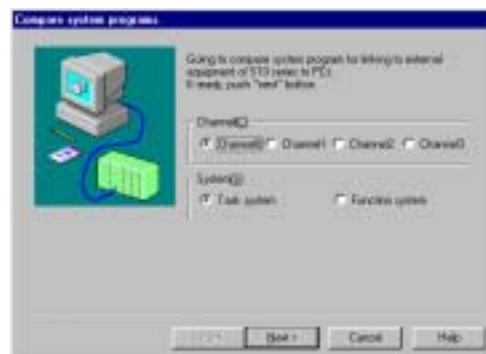
3.3 Compare System Program

Whenever you perform this procedure on the S10mini series, a mismatch occurs (because the system program dedicated to the S10mini series is stored in ROM).

Function: Compares the system programs of the external serial link system with the contents of the PCs.

Operation: See the operation procedure below.

- (1) Click the **Compare system program** button on the [EXTERNAL SERIAL LINK SYSTEM] window (Figure 3-1).
- (2) The [Compare system programs.] window is displayed.



3 COMMANDS

- (3) Select a “Channel” and the associated “System,” and click the **Next** button. Then, comparison is started. When comparison is not to be made, click the **Cancel** button.

3.4 Register LGB

Function: Sets the communication specifications with external devices for each channel.

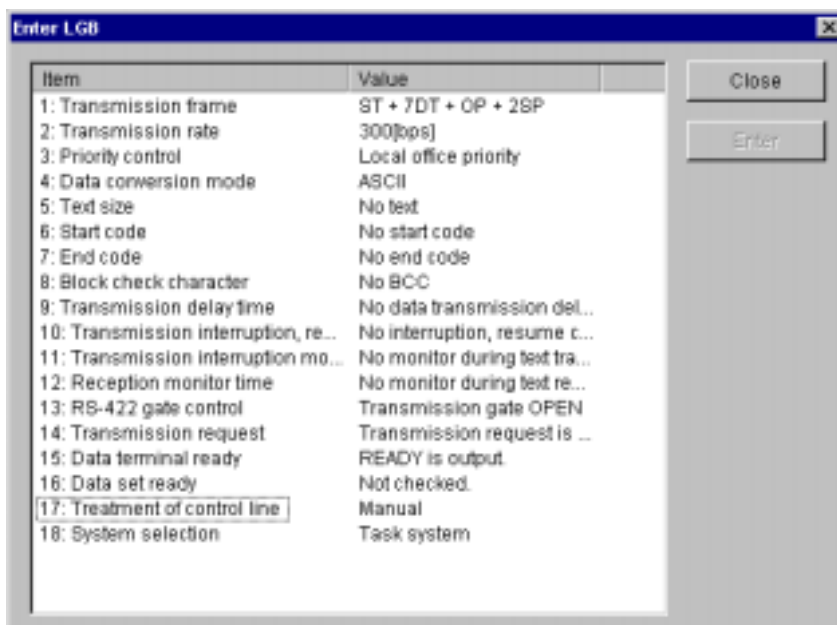
Operation: See the operation procedure below.

- (1) Click the **Register LGB** button on the [EXTERNAL SERIAL LINK SYSTEM] window (Figure 3-1).

- (2) The [Choose channel] window is displayed.



- (3) Select the channel to be subjected to LGB registration, and click the **OK** button. Then, the [Enter LGB] window is displayed. To change the setting, double-click the item or select it, click the **Enter** button and make the new setting according to the instructions on the resulting window. Then, click the **Close** button.



NOTE

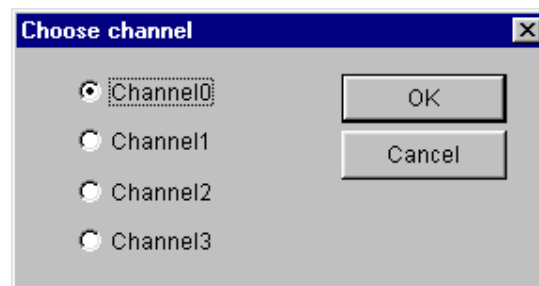
- For the S10mini series, be sure to perform a reset after a click on the button. The entered settings are invalidated after the power is turned OFF and then back ON again (so that the system reverts to the previous settings). In such an instance, perform setup again.
- The reception monitoring time is a time period for monitoring a timeout of reception of data. The end of text is recognized by the timeout. The meanings and units of the reception monitoring time vary according to the preset text sizes as follows:
 - Fixed text size: A time interval between the texts of a specified text size is monitored. The unit of the time interval is 100 ms.
 - Flexible text size: A time interval between the characters is monitored. The unit of the time interval is 1 ms.

3.5 MCS

Function: Reads/writes data from/to the memories of the external serial link module and RS-232C module.

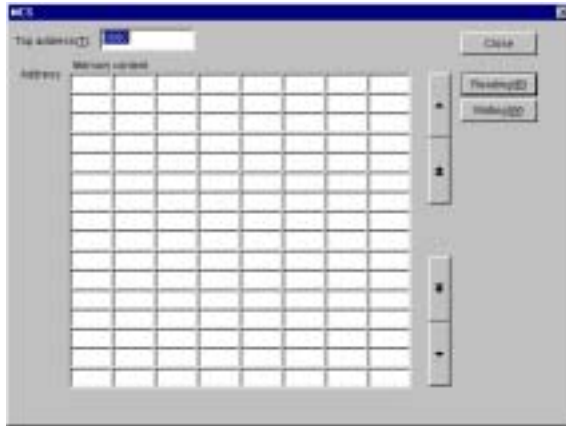
Operation: See the operation procedure below.

- (1) Click the button on the [EXTERNAL SERIAL LINK SYSTEM] window.
- (2) The [Choose channel] window is displayed.



3 COMMANDS

- (3) Select the channel to be subjected to MCS (man-machine communication system), and click the **OK** button. Then, the [MCS] window is displayed. To read the memory contents, enter the [Top address] and click the **Reading** button. To write data to the memory, enter the [Top address] and click the **Writing** button.



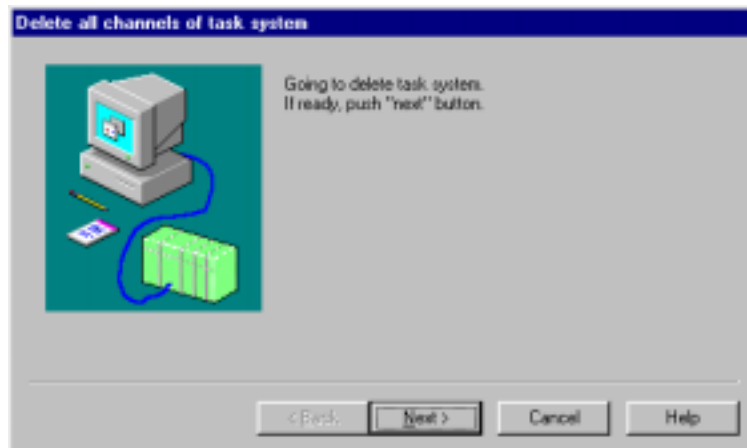
3.6 Delete All Channels of Task System

Do not perform this procedure on the S10mini series.

Function: Deletes the system programs of the external serial link system already transferred to the external serial link module and RS-232C module.

Operation: See the operation procedure below.

- (1) Click the **Delete all channels of task system** button on the [EXTERNAL SERIAL LINK SYSTEM] window (Figure 3-1).
- (2) The [Delete all channels of task system] window is displayed.



- (3) If the **Next** button is clicked, the task systems of all channels are deleted. When the task systems are not to be deleted, click the **Cancel** button.

NOTE

If all the system program channels are deleted on the S10mini series, be sure to reset the CPU module.

3.7 Change Connection

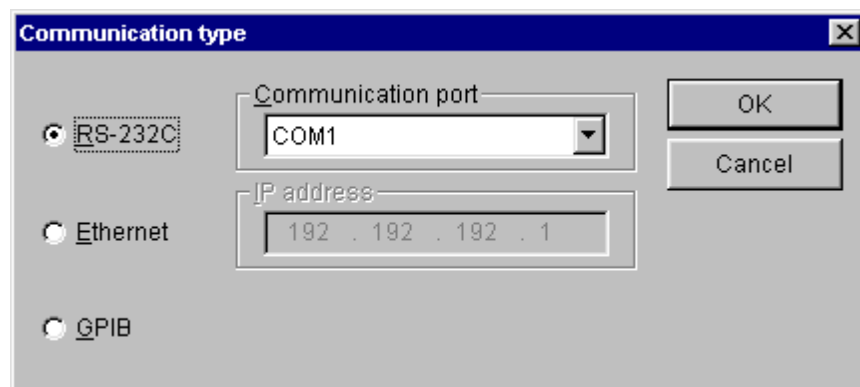
Function: Sets the communication type for the PCs and personal computer.

Operation: See the operation procedure below.

- (1) Click the **Change connection** button on the [EXTERNAL SERIAL LINK SYSTEM] window (Figure 3-1).
- (2) The [Communication type] window is displayed.



- (3) When the communication type is RS-232C, click the “RS-232C” radio button and select a “Communication port.”



3 COMMANDS

- (4) When the communication type is Ethernet, click the “Ethernet” radio button and enter the “IP address” of the connected station.



- (5) When the communication type is GP-IB, click the “GPIB” radio button.



NOTE

When connecting a personal computer to the S10mini series, select RS-232C or Ethernet because the S10mini series does not support GP-IB.

- (6) After the setting ends, click the button. When no setting is to be made, click the button.