



General-Purpose AC Servo

MELSERVO

Servo Configuration Software

MODEL

MRZJW3- SETUP161E

INSTALLATION GUIDE

Thank you for choosing the Mitsubishi general-purpose AC servo MELSERVO Servo Configuration Software.



To optimize the use of the Servo Configuration Software, please read over this Installation Guide and the corresponding AC servo Installation Guide before using the software. After reading the Installation Guide, always place this Installation Guide in a safe place.

● Safety Instructions ●

(Always read these instructions before using the equipment.)





Do not attempt to install, operate, maintain or inspect the servo amplifier and servo motor until you have read through this Installation Guide, and appended documents carefully and can use the equipment correctly. Do not use the servo amplifier and servo motor until you have a full knowledge of the equipment, safety information and instructions.

In this Installation Guide, the safety instruction levels are classified into "WARNING" and "CAUTION".

 WARNING	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
 CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight injury to personnel or may cause physical damage.


Note that the CAUTION level may lead to a serious consequence according to conditions. Please follow the instructions of both levels because they are important to personnel safety.

What must not be done and what must be done are indicated by the following diagrammatic symbols:

	Indicates what must not be done. For example, "No Fire" is indicated by  .
	Indicates what must be done. For example, grounding is indicated by  .

In this Installation Guide, instructions at a lower level than the above, instructions for other functions, and so on are classified into "POINT".

After reading this Installation Guide, always keep it accessible to the operator.

 CAUTION	• Before executing the test mode, always read Section 2.3 "Precaution for test mode".
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1. INTRODUCTION

1. INTRODUCTION

1.1 Specifications

Using the communication function of the servo amplifier, the Servo Configuration Software allows functions, such as parameter setting change, point data maintenance, graph, program operation mode and test mode, to be implemented from a personal computer.

Servo amplifier		MR-	MR-	MR-	MR-	MR-J2S-B-	MR-J2S-B-	MR-J2S-A-	MR-J2S-	MR-J2S-	MR-J2S-
		J2S-A	J2S-B	J2S-CP	J2S-CL	PY096 MR-J2S-B-S096	S009U	PY091 MR-J2S-A-S091	CP-S084	□A4	□B4
Item											
Communication signal		Conforms to RS-232C									
Baud rate	9600bps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	19200bps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	38400bps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	57600bps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
System	Station selection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Axis selection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Automatic demo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitor	Display all * High speed monitor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Multi-axis listing (Multi-station listing)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Trend graph	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alarm	Display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	History	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Amplifier data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diagnostic	I/O display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Function device display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	No motor rotation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Total power-on time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Software number display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Motor data display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Tuning data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Absolute encoder data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Automatic voltage control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Axis name setting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Unit composition listing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Fully closed diagnostics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Linear diagnostics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parameters	Parameter list	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Tuning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Change list	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Detailed information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	IFU parameter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	DRU parameter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Test	Device setting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Jog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Positioning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Operation w/o motor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Forced output	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Demo mode	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Single-step feed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Program test	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Advanced-function	Machine analyzer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Gain search	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Machine simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Point-data	Point table	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Program-data	Program data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Indirect-addressing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1. INTRODUCTION

Item		Servo amplifier MR-J2S-A-S040U MR-J2S-A-S240U	MR-J2M-P8A		MR-J2M-P8B	
			IFU	DRU	IFU (Axis 0)	DRU (Axis 1 to 8)
Communication signal		Conforms to RS-232C				
Baud rate	9600bps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	19200bps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	38400bps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	57600bps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
System	Station selection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Axis selection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Automatic demo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitor	Display all • High speed monitor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Multi-axis listing (Multi-station listing)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Trend graph	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Alarm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diagnostic	Display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	History	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Amplifier data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	I/O display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Function device display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	No motor rotation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Total power-on time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Software number display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Motor data display	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Tuning data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Absolute encoder data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Automatic voltage control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Axis name setting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parameters	Unit composition listing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Fully closed diagnostics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Linear diagnostics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Parameter list	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Tuning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Change list	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Detailed information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Test	IFU parameter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	DRU parameter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Device setting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Jog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Positioning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Operation w/o motor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Forced output	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advanced-function	Demo mode	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Machine analyzer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Gain search	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Point-data	Machine simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Point table	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Program-data	Program data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Indirect-addressing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1. INTRODUCTION

1.2 System configuration

1.2.1 Components

To use the Servo Configuration Software, the following components are required in addition to the servo amplifier and servo motor. Configure the system according to the Installation Guide of each equipment:

Model	(Note 1) Description
(Note 2) Personal computer	IBM PC-AT compatible where the English version of Windows® 95, Windows® 98, Windows® 98 Second Edition, Windows® Me, Windows NT® Workstation 4.0, Windows® 2000 Professional, Windows® XP Professional or Windows® XP Home Edition operates Processor: Pentium 133MHz or more (Windows® 95, Windows® 98, Windows® 98 Second Edition, Windows NT® Workstation 4.0, Windows® 2000 Professional) Pentium 150MHz or more (Windows® Me) Memory: 16MB or more (Windows® 95), 24MB or more (Windows® 98) 32MB or more (Windows® Me, Windows NT® Workstation 4.0, Windows® 2000 Professional) 128MB or more (Windows XP Professional, Windows XP Home Edition) Free hard disk space: 60MB or more Serial port used
OS	Windows® 95, Windows® 98, Windows® 98 Second Edition, Windows® Me, Windows NT® Workstation 4.0, Windows® 2000 Professional, Windows® XP Professional, Windows® XP Home Edition (English version)
Display	One whose resolution is 800 × 600 or more and that can provide a high color (16 bit) display. Connectable with the above personal computer.
Keyboard	Connectable with the above personal computer.
Mouse	Connectable with the above personal computer. Note that a serial mouse is not used.
Printer	Connectable with the above personal computer.
Communication cable	MR-CPCATCBL3M When this cannot be used, refer to Section 1.2.2 and fabricate.
RS-232C/RS-422 converter	Needed to use the RS-422 multidrop communication function of the servo amplifier. (Note 3)

Note 1. Windows and Windows NT are the registered trademarks of Microsoft Corporation in the United State and other countries.

2. On some personal computers, this software may not run properly.

3. This function is available for the MR-J2S-A * MR-J2M-P8A.


1. INTRODUCTION

1.2.2 Communication cable

(1) Selection

Use a communication cable for connection of the personal computer and the servo amplifier. Choose the communication cable according to the shape of the RS-232C connector of the personal computer used.

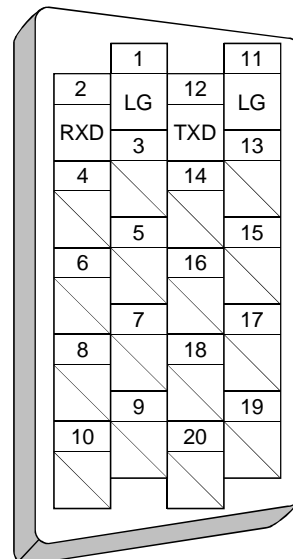
POINT
<ul style="list-style-type: none"> Depending on the personal computer used, any of the following cables may be used. <p>Confirm the RS-232C connector signal carefully, refer to this section and fabricate the cable.</p>

Type	Length [m(feet)]	Application	Description
MR-CPCATCBL3M	3 (9.84)	For IBM series (D-SUB 9 pins)	Connector: 10120-6000EL Connector: DE-9SF-N Shell kit: 10320-3210-000 Case: DE-C1-J6-S6 (3M) (Japan Aviation Electronics) 

For fabrication, refer to the connection diagram in this section. When fabricating the cable, read and follow the instructions below:

- 1) Always use a multi-core cable with a shield and connect the shield to FG securely.
- 2) Wiring distance depends on surrounding environment but should be as short as possible.
 - Maximum distance is 15m(49.2feet) in environmentally good places with little noise, e.g. offices.

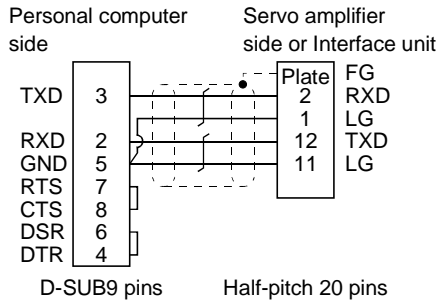
(2) Communication connector signal pin-outs (CN3)



1. INTRODUCTION

(3) Cable connection diagrams

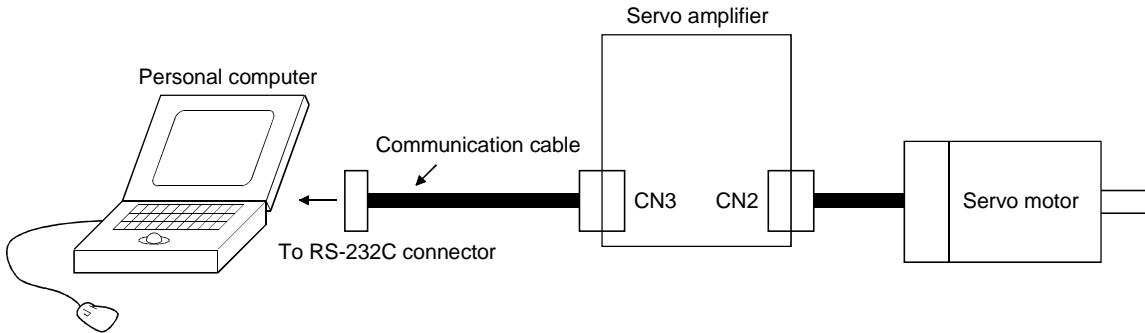
▪ MR-CPCATCBL3M



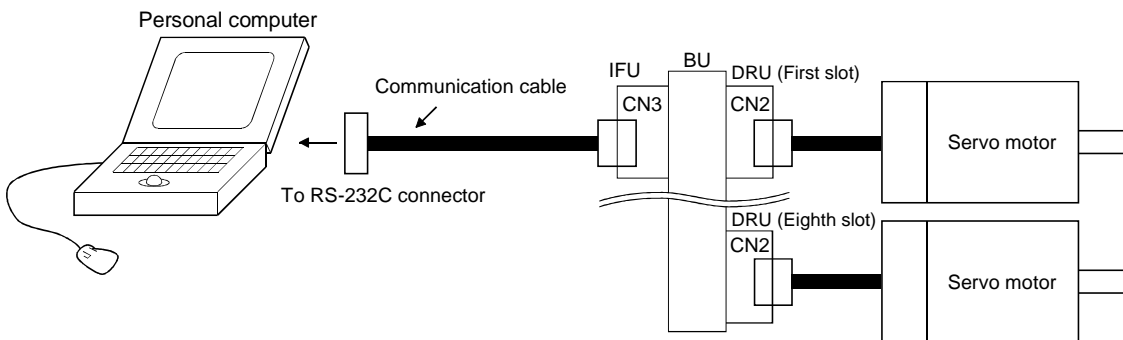
Note. Check the RS-232C connector shape of your personal computer.

1.2.3 Configuration diagrams

- (1) MR-J2S-A • MR-J2S-B • MR-J2S-CP • MR-J2S-CL • MR-J2S-B-PY096 • MR-J2S-B-S096 • MR-J2S-B-S099U • MR-J2S-A-PY091 • MR-J2S-A-S091 • MR-J2S-CP-S084 • MR-J2S-A-S040U • MR-J2S-A-S240U



- (2) MR-J2M-P8A • MR-J2M-P8B



1. INTRODUCTION

1.3 Basic terms

1) Mouse pointer

An on-screen arrow which moves with movements of the mouse.

2) Point

To move the mouse pointer to a particular item or position on the screen.

3) Click

To press and release the left button of the mouse once.

4) Double-click

To press and release the left button of the mouse twice.

5) Drag

To hold down the left button of the mouse and move the mouse.

6) Focus

Highlights characters, button or the like when the menu or button is ready to accept an input from the keyboard.

7) Text box

Box used to enter characters.

8) List box

Box used to select one of several items.



9) Combo box


Box used to select one of several items.



10) Check box

Box used to select one or more of several items. When a choice is made a mark appears in the box.

11) Option button

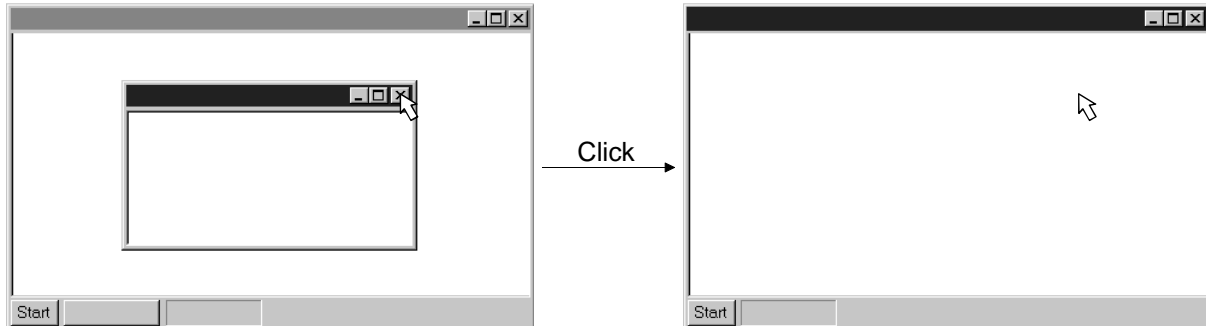
Button used to select only one of several items. When a choice is changed  moves to a new choice.

1. INTRODUCTION

1.4 Basic operations

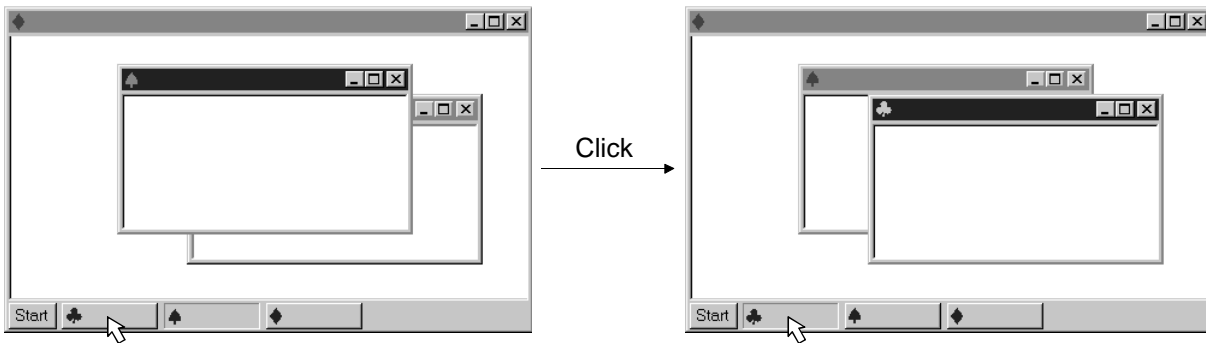
(1) Closing the window

Click the closing bottom at top right corner of the window.



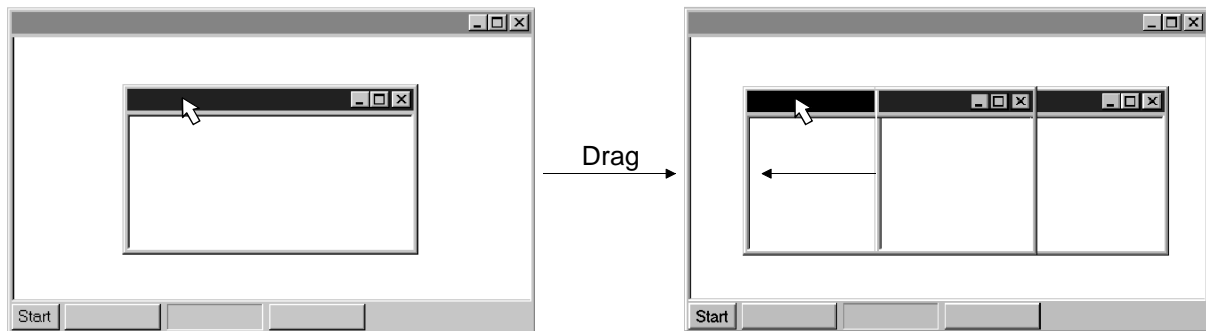
(2) Moving the focus from one window to another

Click the button of the task bar corresponding to the window to be used.



(3) Moving the window

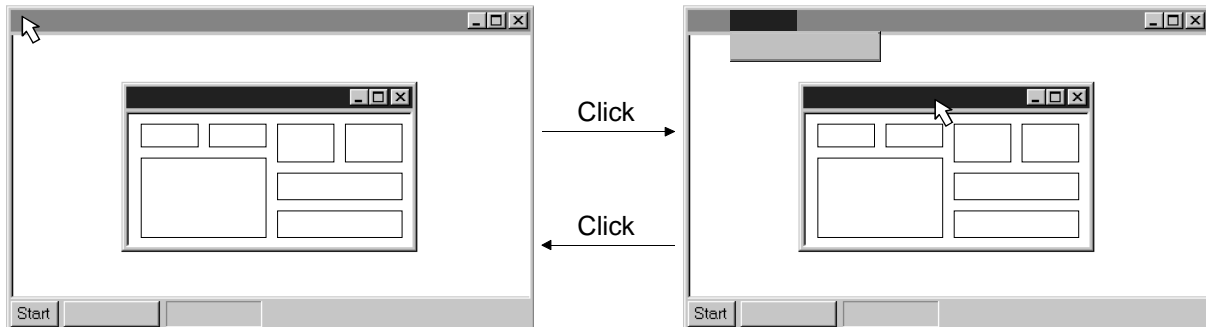
Point to the title bar, drag the window to the required position, and release the button.



1. INTRODUCTION

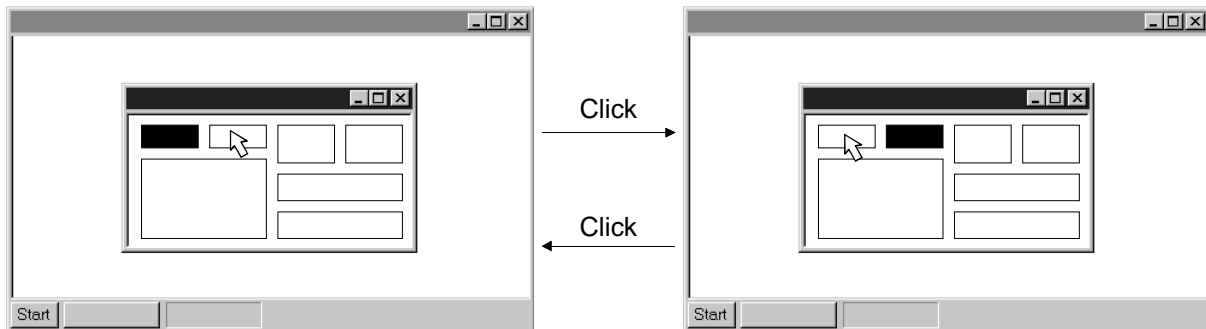
(4) Moving the focus to the menu bar

Click the menu bar. To move the focus to a window, click the window.



(5) Moving the focus inside the window

Click the object to be operated (such as a text box). When the object to be operated is a button, clicking it will start its processing.



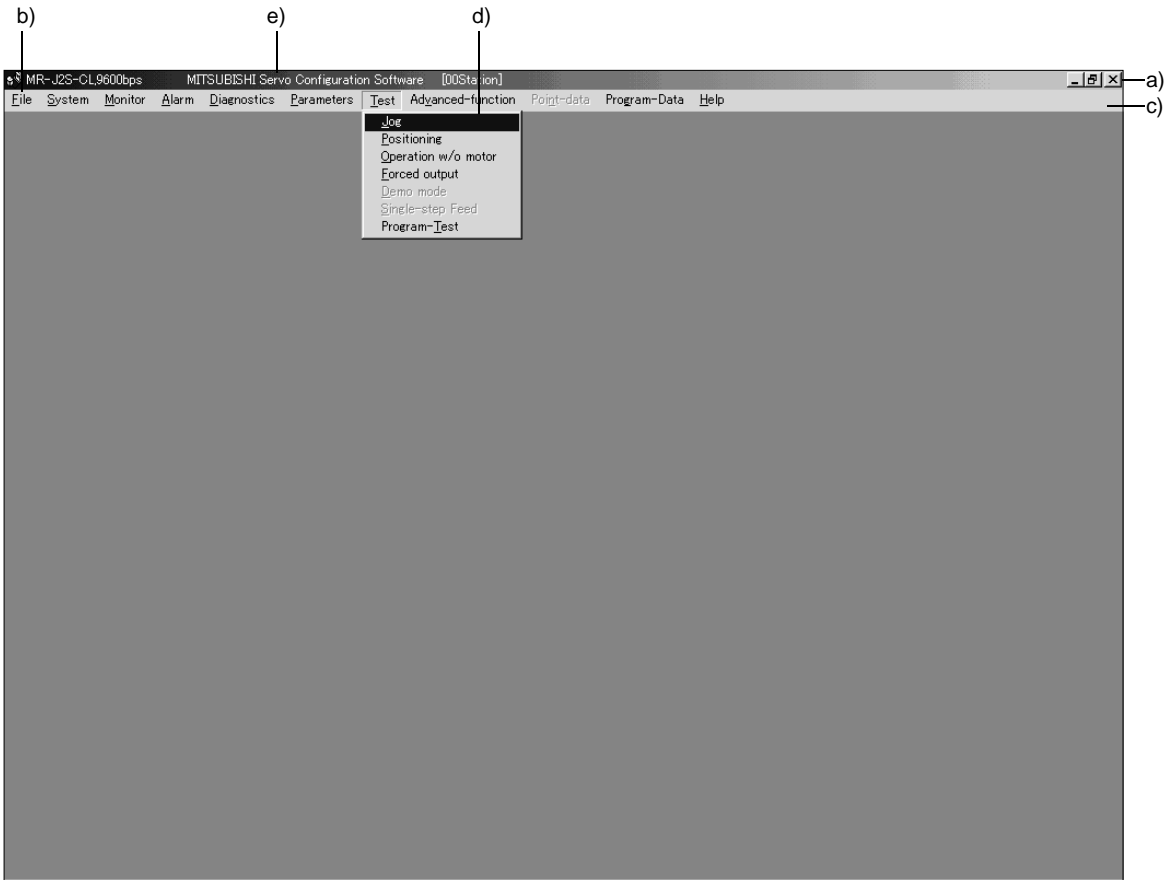
<Short-cut keys>

Any of the following short-cut keys may be used to perform operation from the keyboard:

Intended operation	Keyboard
Show help	"F1"
End program	"Alt" + "F4"
Show start menu	"Ctrl" + "Esc"
Change window	"Alt" + "Tab"
Change object	"Tab"

1. INTRODUCTION

1.5 Screen definitions



- a) Title bar
- b) Menu title
- c) Menu bar
Shows the menu title.
- d) Menu
Command menu in tier 1
- e) System setting display area
Shows the servo amplifier and baud rate which have been set.

1. INTRODUCTION

1.6 Installation procedure

In this procedure, it is assumed that the hard disk drive of the personal computer is C and the CD drive is D.

Before running this program, always close all Windows programs.

- 1) Insert CD-ROM in Drive D (CD drive). Then, click the "Start" button of the task bar to open the start menu, specify the file name, and click "Run". When the following window has appeared, type "D:\SETUP161E\DISK\SETUP.EXE" and click the "OK" button.

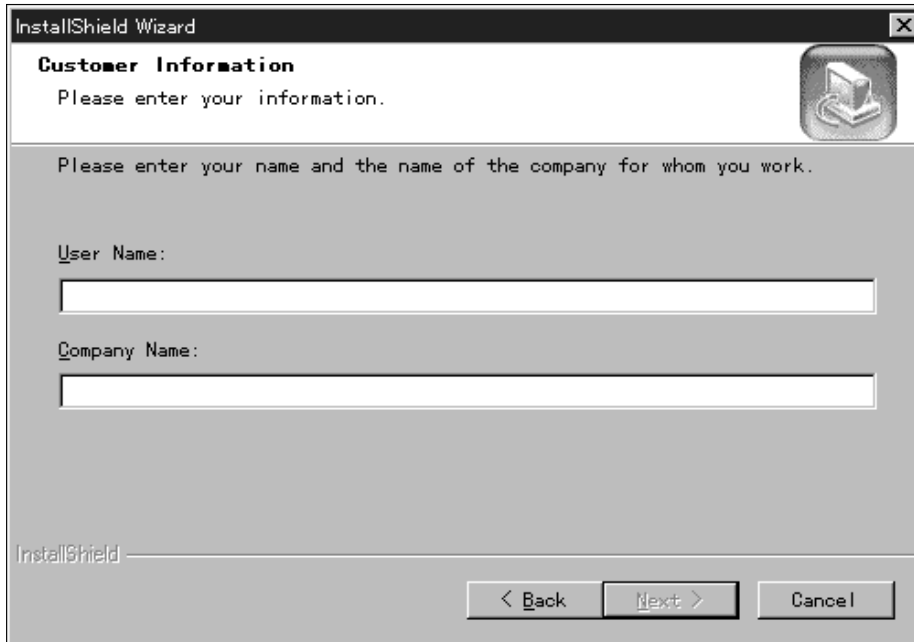


- 2) After the above window, the following window appears. Click "Next>" button.

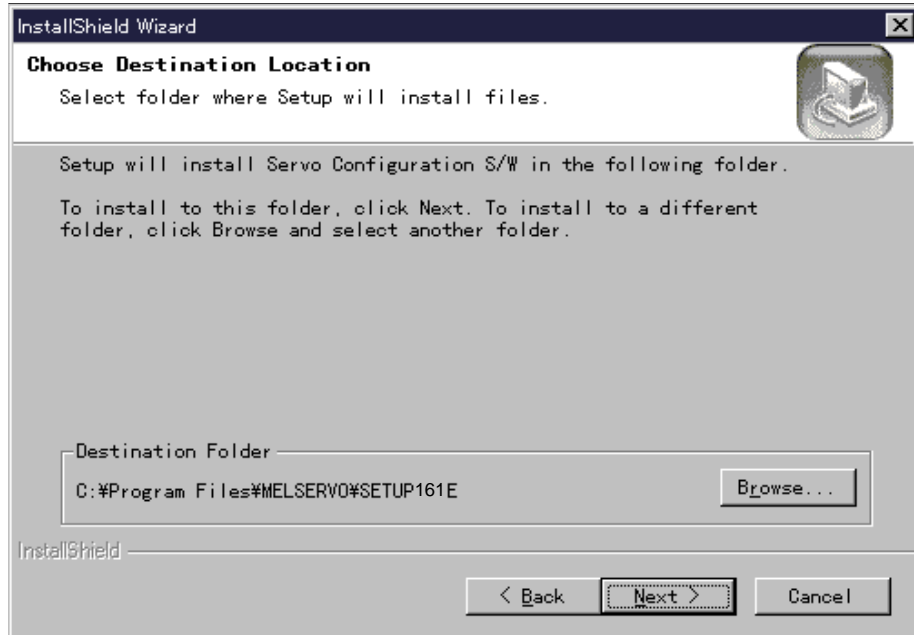


1. INTRODUCTION

- 3) The User Information screen appears. Type your full name and company name and click “Next>” button.



- 4) The Choose Destination Location screen appears. When you specify the destination folder and click “Next>” button, installation starts.



1. INTRODUCTION

5) When installation ends, any of the following screens appears. Click the “Finish” button to exit from Setup.



POINT

- In the corresponding window, to stop installation, click the “Cancel” button or press the “Escape”.

2. HOW TO USE THE SOFTWARE

2. HOW TO USE THE SOFTWARE

2.1 Operation

The method of selecting the command is the operation procedures using the mouse.
Unavailable commands are grayed out.

2.1.1 Start-up

- 1) Click the "Start" button of the task bar to open the menu.
- 2) Point to submenu "MELSERVO", "SETUP_Software" from "Programs".
- 3) Click "SETUP161E".

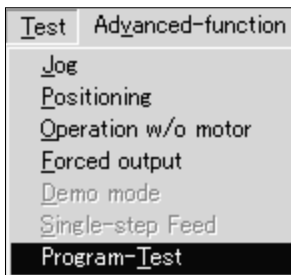
2.1.2 Command selection procedures

1. Clicking method

- 1) Click the menu title on the menu bar to open the menu.
- 2) Point to and click the command to be selected.

2. Dragging method

Point to the menu title on the menu bar, hold down the left button and drag the mouse to the command to be selected, and release the button.



2. HOW TO USE THE SOFTWARE

2.1.3 Operation procedures within the window

Within the operation window, enter data and/or press the button.

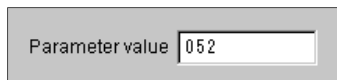
(1) Pressing a button

Click the button in the window.



(2) Entering data

Click the setting area to move the focus there, and enter data from the keyboard.




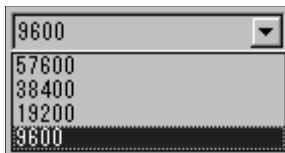
(3) Selecting data

Click the data to be selected.



(4) Selecting the combo box data, etc.

- 1) Click  on the right of the setting portion to open the combo box.
- 2) Make selection by clicking the data or like to be chosen.



(5) Pressing the option button

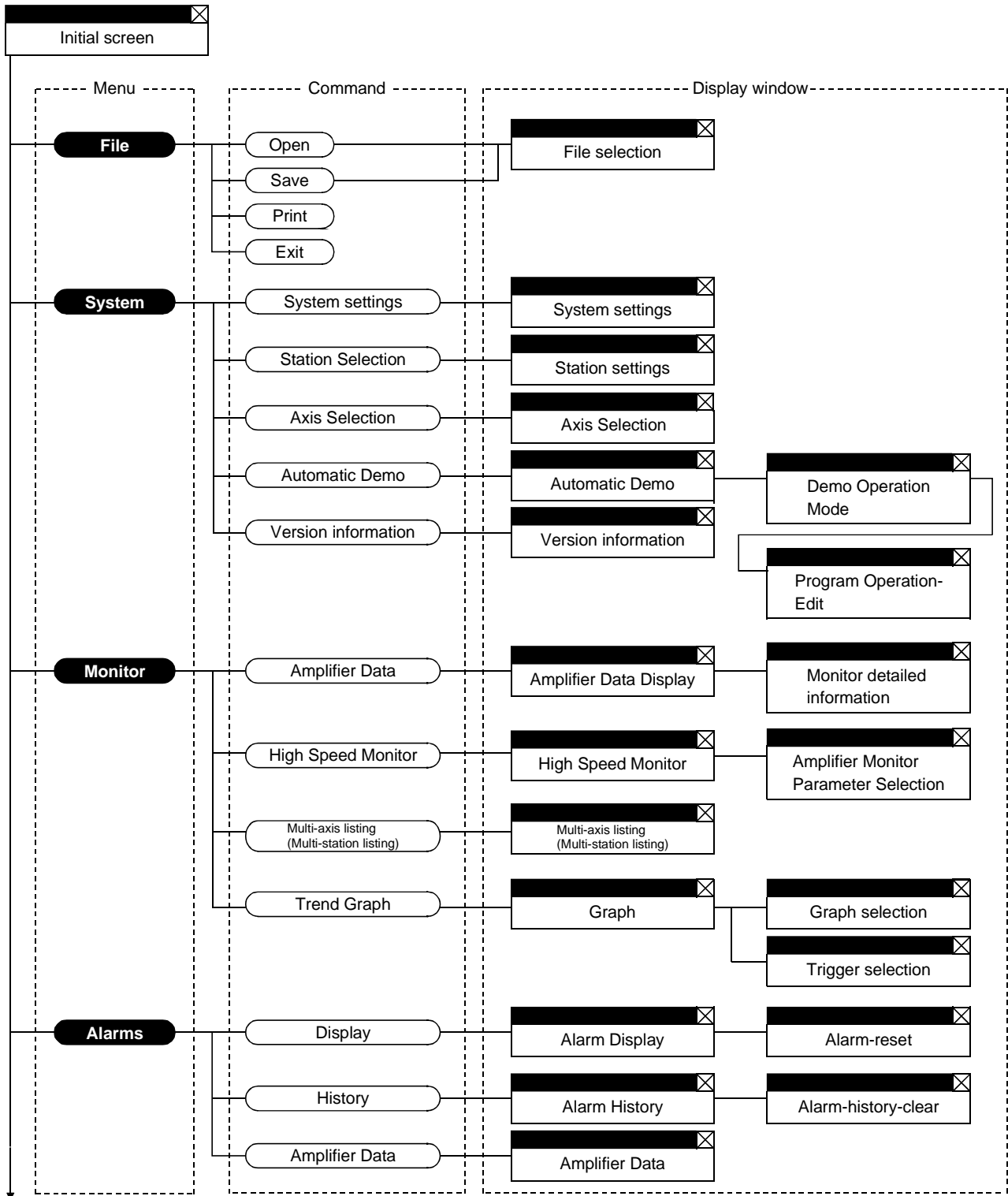
Click the item or button.



2. HOW TO USE THE SOFTWARE

2.2 Commands and display windows

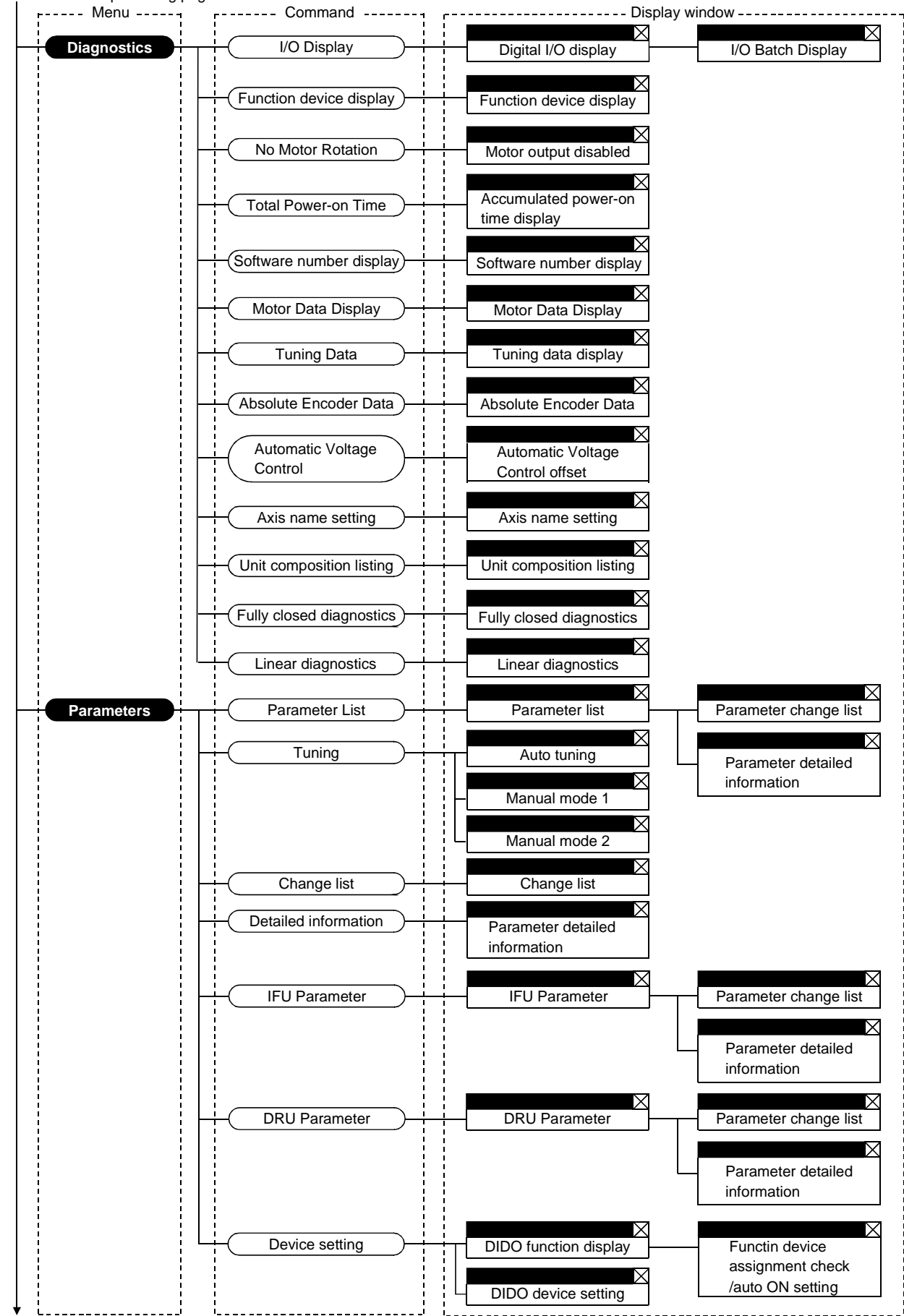
The following diagram shows a sequence of commands and windows.



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2. HOW TO USE THE SOFTWARE

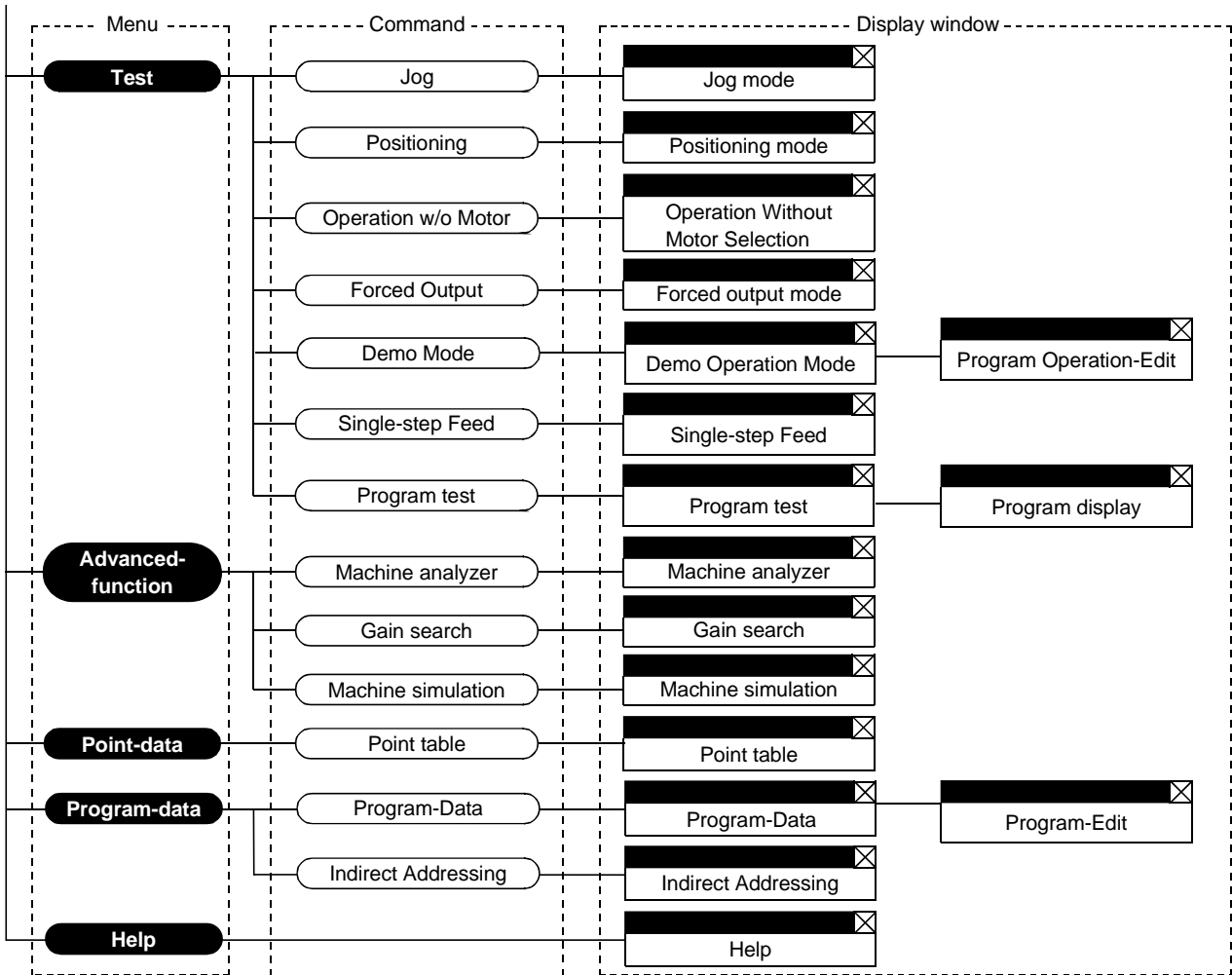
Continued from preceding page



To next page

2. HOW TO USE THE SOFTWARE

Continued from preceding page



2. HOW TO USE THE SOFTWARE

2.3 Precautions for test mode

⚠ WARNING

- Always touch the switches with dry hands. You may get an electric shock if you touch them with wet hands.
- Always operate the equipment with the front cover installed. Removing the front cover will expose the terminals and charged area having high voltages, which may lead to an electric shock.
- Keep the front cover closed while power is on the equipment is running. Otherwise, you may get an electric shock.

⚠ CAUTION

- Before starting operation, make sure that the parameters are set to correct values. Depending on machines, they may operate unpredictably.
- While power is on or for some time after power-off, keep clear of the servo amplifier's heat sink and regenerative brake resistor, the servo motor, etc. as they may be high temperatures. Otherwise, you may get burned.

(1) Servo on

In the Jog, Positioning, Demo Mode or Single-step Feed available in the Test, the servo amplifier's digital input signal SON is automatically switched on in the servo amplifier to start operation, independently of the ON/OFF status of SON. Also, any external command pulse or input signal (except emergency stop) is not accepted until the test mode window is closed to terminate the command.

SON is automatically switched on by the following operation:

Test mode	Mouse
Jog	Click the "Forward" or "Reverse" button. The servo motor rotates while you are clicking the button.
Positioning	Click the "Forward" or "Reverse" button.
Demo Mode	Click the "Start" button.

(2) Stop

POINT

- To make an emergency stop, switch off the emergency stop signal of the servo amplifier or shut off the input power.

1) Perform the following operation to stop the test mode:

Test mode	Mouse
Jog	Click the "Pause" button.
Positioning	Click the "Pause" button.
Demo Mode	Click the "Reset" button.

2) The servo motor will stop if either of the following situations occurs in the test mode:

- The communication cable is disconnected.
- If the window is dragged or the other menu is opened, communication between the personal computer and the servo amplifier may be suspended temporarily, stopping the servo motor temporarily.

2. HOW TO USE THE SOFTWARE

2.4 Simple language for program operation

The language used in the program operation-edit window will be described below.

2.4.1 Language

The chart below describes the commands in the program operation-edit window to execute the program operation mode, in which the MR-J2S-A goes into the position control mode.

Describe a program in upper case characters and Enter or Return at the end of a line. Up to 300 lines may be described.

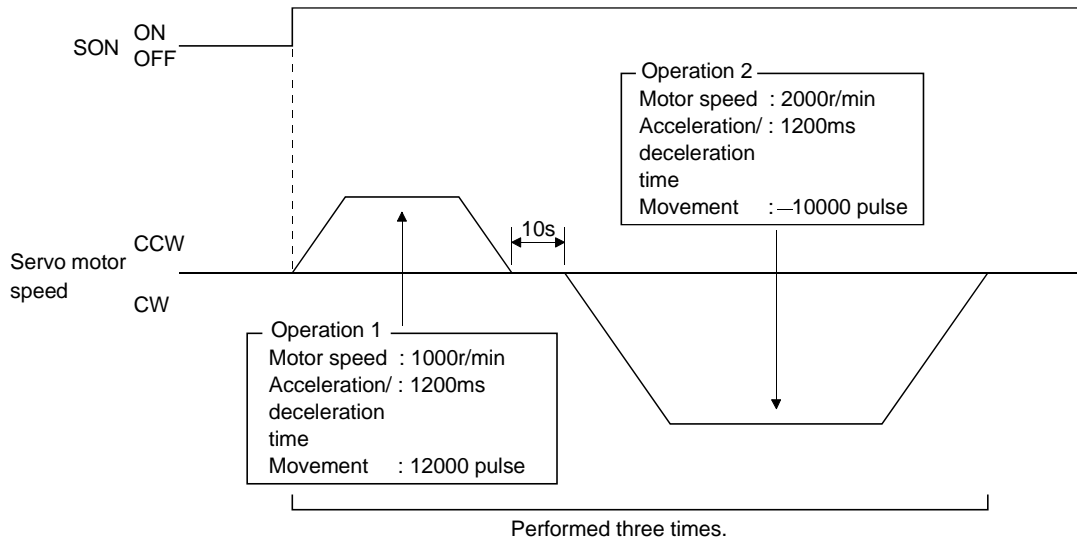
Command	Name	Setting (**: Set value)	Setting range	Unit	Description																																										
SPN	Feedrate	SPN (**)	0 to permissible instantaneous speed	r/min	Used to set the command speed given to the servo motor for positioning. The set value should be not more than the permissible speed of the servo motor used.																																										
STC	Acceleration/deceleration time	STC (**)	0 to 50000	ms	Used to set the acceleration/deceleration time. (Time required to reach the rated speed of the corresponding servo motor)																																										
MOV	Move command	MOV (**)	–9999999 to 9999999	pulse	Used to execute movement by the preset pulses. Positioning operation is performed with the set values of the feedrate (SPN) and acceleration /deceleration time (STC). No symbol: CCW rotation, –: CW rotation																																										
SYNC	Waiting external signal to switch on	SYNC (**)	As listed in the table at right.		<p>This command is available for the MR-J2S-A * MR-J2M-P8A.</p> <p>Used to hold the next operation until the preset digital input signal (DI) of the servo amplifier switches on. By setting 99, the next operation will be performed unconditionally. Set the input signal as listed below:</p> <p>For the MR-J2S-A, any signal not allocated by signal assignment in the position control mode using parameters No. 43 to 48 will be invalid if it is selected.</p> <p>For the MR-J2M-P8A, any signal not allocated by device setting will be invalid if it is selected here.</p> <table border="1"> <thead> <tr> <th>Set Value</th> <th>MR-J2S-A</th> <th>MR-J2M-P8A</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>SON</td> <td>SON</td> </tr> <tr> <td>1</td> <td>LSP</td> <td>LSP</td> </tr> <tr> <td>2</td> <td>LSN</td> <td>LSN</td> </tr> <tr> <td>3</td> <td>TL</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>PC</td> <td>PC</td> </tr> <tr> <td>6</td> <td>RES</td> <td>RES</td> </tr> <tr> <td>7</td> <td>CR</td> <td>CR</td> </tr> <tr> <td>8</td> <td></td> <td></td> </tr> <tr> <td>9</td> <td></td> <td></td> </tr> <tr> <td>10</td> <td></td> <td></td> </tr> <tr> <td>11</td> <td></td> <td></td> </tr> <tr> <td>99</td> <td>Unconditional</td> <td>Unconditional</td> </tr> </tbody> </table>	Set Value	MR-J2S-A	MR-J2M-P8A	0	SON	SON	1	LSP	LSP	2	LSN	LSN	3	TL		4			5	PC	PC	6	RES	RES	7	CR	CR	8			9			10			11			99	Unconditional	Unconditional
Set Value	MR-J2S-A	MR-J2M-P8A																																													
0	SON	SON																																													
1	LSP	LSP																																													
2	LSN	LSN																																													
3	TL																																														
4																																															
5	PC	PC																																													
6	RES	RES																																													
7	CR	CR																																													
8																																															
9																																															
10																																															
11																																															
99	Unconditional	Unconditional																																													
TIM	Dwell command time	TIM (**)	1 to 50	s	Used to hold the next operation until the preset time elapses.																																										
TIMES	Program count command	TIMES (**)	1 to 99	Times	Used to specify the number of cycles or times (from TIMES to STOP) that the positioning is to be repeated. Enter the TIMES (**) at the beginning and STOP at the end of a cycle. Not required for one positioning cycle.																																										
STOP	Program stop				Used to stop the program being executed. Need not be described on the last line.																																										

2. HOW TO USE THE SOFTWARE

2.4.2 Program example

As soon as the “Start” button is clicked, SON is switched on automatically to start operation.

Timing chart



Program

TIMES (3) Repeats the program up to STOP three times.

SYNC (0) Holds the program from running until the input signal with the set value of 0 (SON) switches on.

SPN (1000) Sets the command speed to 1000r/min.

STC (1200) Sets the acceleration/deceleration time to 1200ms.

MOV (12000) Executes movement by 12000 pulses in the CCW direction.

TIM (10) Hold the next operation for 10s.

SPN (2000) Sets the command speed to 2000r/min.

MOV (-100000) Executes movement by 100000 pulses in the CW direction.

STOP

} Operation 1

} Operation 2

In this example, the acceleration/deceleration time in Operations 1 and 2 are the same.

In this case, the acceleration/deceleration time in Operation 2 need not be set. In this way, set values different from those in the preceding operation need only be described in the operation program.

2.4.3 Instruction

When the program operation mode is executed with the program operation mode window and another window (Amplifier Data Display window) being displayed at the same time, the program may progress slower, making the dwell command time longer than the set value.

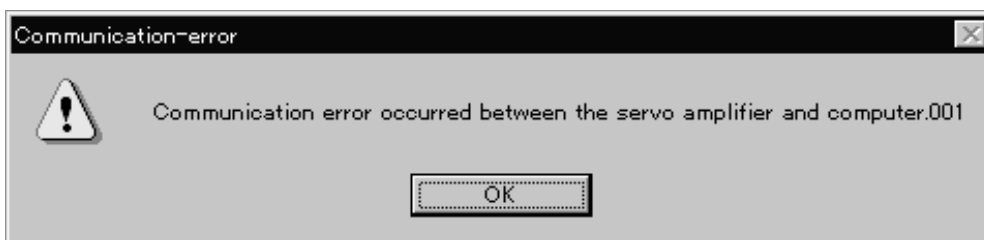
3. TROUBLESHOOTING

3. TROUBLESHOOTING

3.1 Communication error

If communication between the personal computer and the servo amplifier is suspended and the communication error as shown in the following window occurs, check the code on the right of the error message and remove its cause.

<Possible cause> Noise entry, hard disk fault, wiring fault, etc.



Code	Definition
001	Parity error occurred in the data sent from the personal computer.
002	Checksum error occurred in the data sent from the personal computer.
003	Character not given in the specifications was sent to the servo amplifier.
004	Command not given in the specifications was sent to the servo amplifier.
005	Data number not given in the specifications was sent to the servo amplifier. Data outside the permissible range was sent to the servo amplifier.
None	Checksum error occurred in the data received by the personal computer.

3.2 Screen unprintable

If a screen is not printed after printing is started, open the Windows setup window and change the display setting to 256 colors or less.

REVISIONS

*The manual number is given on the bottom left of the back cover.

Print Data	*Manual Number	Revision
Jun., 2000	IB(NA)0300017-A	First edition
Feb., 2001	IB(NA)0300017-B	Overall changes to the form
Dec., 2001	IB(NA)0300017-C	Updated from SETUP121E to SETUP151E Section 1.1 Table change Section 1.3.1 Table change Section 1.3.2 Addition of MR-J2S-CP, MR-J2M-P8A, MR-J2M-P8B servo amplifiers Section 1.3.3 Addition of MR-J2S-CP, MR-J2M-P8A, MR-J2M-P8B servo amplifiers Section 1.6 Screen change Section 1.7 POINT addition Installation screen change Section 2.1.2 Screen change Section 2.1.3 Partial screen change Section 2.2 Menu addition Section 2.4.1 Addition of MR-J2M-P8A servo amplifier
Nov., 2002	IB(NA)0300017-D	Section 1.1 Addition of MR-J2S-CL, MR-J2S-B-PY098/-S096/-S009U Addition of full-closed diagnosis, linear diagnosis, program test operation and program data Section 1.2 Deletion of Inspection at Delivery Section 1.2.1 Table reexamination Section 1.2.2 (1) Addition of MR-J2S-CL, MR-J2S-B-PY098/-S096/-S009U Section 1.2.2 (2) Text deletion Section 1.2.3 (1) MR-J2S-CL, MR-J2S-B-PY098/-S096/-S009U Section 1.5 Screen change Section 1.6 POINT deletion, text modification, reexamination Section 2.1.2 Screen change Section 2.2 Addition of full-closed diagnosis and linear diagnosis to the diagnosis commands Addition of program test operation to the test commands Addition of program data to the menu
Aug., 2003	IB(NA)0300017-E	Section 1.1 Addition of MR-J2S-CP-S084, MR-J2S-B-PY091, MR-J2S-□A4, MR-J2S-□B4 servo amplifier Section 1.2.1 Addition of Windows XP Professional, Windows XP Home Edition Section 1.2.3 Addition of MR-J2S-CP-S084, MR-J2S-B-PY091, MR-J2S-□A4, MR-J2S-□B4 servo amplifier Section 1.5 Screen change
Feb., 2004	IB(NA)0300017-F	Section 1.1 Addition of MR-J2S-A-S040U, MR-J2S-A-S240U servo amplifier Section 1.2.1 Reexamination of description on Windows Addition of Windows® 98 Second Edition Change of Free hard disc space to 60MB. Section 1.2.3 Addition of MR-J2S-A-S040U, MR-J2S-A-S240U

MODEL	
MODEL CODE	



MITSUBISHI ELECTRIC CORPORATION

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