Changes for the Better



CNC MELD/IS/M/IGIC64

SETUP INSTRUCTION MANUAL



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Introduction

This manual is a guide to use of the MELDASMAGIC series. This manual describes the NC card setting method, software installation method, etc. Before starting NC card connection or software installation, please read this manual carefully.

To use the MELDASMAGIC series safely, please use the product after fully understanding the "SAFETY PRECAUTIONS" on the next page.

Precautions for Safety

Before starting installation, operation, programming or maintenance/inspection, always read the specification issued by the machine manufacturer, this manual, relevant manuals and supplied documents carefully to use the product correctly. Use the product after fully understanding all the knowledge, safety information and precautions of this numeral control unit. In this manual, the safety instructions are ranked as "DANGER", "WARNING" and "CAUTION".



Note that the "ACAUTION" level may lead to a serious consequence according to the circumstances. Always follow the instructions because they are important.

Not applicable in this manual.

WARNING

Not applicable in this manual.

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1. Outline

This setup instruction manual explains how to set up the MELDASMAGIC64 NC Card, and how to install the software.

Before setup, read the instruction manuals attached to the products, and the README_E.TXT (English)/README_J.TXT (Japanese) files on the respective floppy disks. These files include the latest information not described in this instruction manual.

2. Introduction

2.1 Types of NC Card

Two types are available as MELDASMAGIC64 NC Card: one type is connected to the PCI bus and the other connected to the ISA bus. In this manual, the former type is referred to as PCI NC Card and the latter type as ISA NC Card.

System requirements for using NC Card are different between PCI NC Card and ISA NC Card. Check "2.2 System Requirements" to set up NC Card.

Figure 2.1 PCI NC Card



HR655A+HR183 card

Figure 2.2 ISA NC Card



2.2 System Requirements

Table 2.1 System Requirements

-		PCI NC Card	ISA NC Card	
Applicable PC		IBM PC/AT or its compatible computer		
CPU/clock		Depends on the OS used (Refer to the table below).		
Memory		Depends on the OS used (Re	fer to the table below).	
Hard disk capa	city	A free space of 20 MB or more		
Floppy disk driv	ve unit	One or more floppy disk drive of 3.5 in. and 1.44 MB		
Pointing device)	A mouse or its compatibl	e pointing device	
Display device		Display device with a resolution and 256 colors	Display device with a resolution of 640x480 dots or more and 256 colors or more	
		PCI bus (PCI bus standard 2.0 or more)	ISA bus	
Expansion slot		Card size: 90 x 175 mm	Card size: 100 x 249 mm	
		+3V (0.2A or more) supply needed	-	
		+5V (2.5A or more)		
		+12V (0.5A or more)		
Drooping characteristic of internal power supply when PC is turned off		It must take 1 ms or more for + +4.5V to +4	5V voltage to drop from .0V.	
	Windows95	-	0	
	Windows98	-	0	
Applicable OS	Windows98 Second Edition	0	0	
	WindowsNT4.0	-	0	
	Windows2000	0	-	
	WindowsXP	0	-	

Applicable OS, and recommended CPU/clock and memory

		CPU/clock	Memory
	Windows95 OSR2	Pentium/100 MHz or more Pentium /150 MHz or more recommended	16 MB or more 24 MB or more recommended
	Windows98	Pentium/200 MHz or more Pentium /233 MHz or more recommended	16 MB or more 24 MB or more recommended
Applicable OS	Windows98 Second Edition	Pentium/200 MHz or more Pentium /233 MHz or more recommended	24 MB or more 32 MB or more recommended
	Windows NT4.0 Workstation (SP3 or later)	Pentium/200 MHz or more Pentium /233 MHz or more recommended	24 MB or more 32 MB or more recommended
	Windows2000	Pentium/300 MHz or more	64 MB or more 128 MB or more recommended
	WindowsXP	Pentium/300 MHz or more	128 MB or more

Note: The recommended values above are standards and do not guarantee the comfortable operation of the software you add.

3. Outline of Setup Operations

3.1 New Setup

When newly setting up MELDASMAGIC64 in the personal computer, follow the procedures below.

Set up the MELDASMAGIC64 system



3.2 Upgrading Software Version

3.2.1 Upgrading NC System Version

There are two methods for upgrading version of NC System as shown below.

- Method 1: Carry out change operations on the device driver.
- Method 2: Reinstall the device driver.

The method to be used depends on the changed object of the software. The followings are the typical examples of which methods is used for what.

- When the device driver for NC Card is changed ______Method 1
- When the NC System software is changed_____Method 1
- When NC Card is replaced with a card of a different model (for example HR621B, HR623C) ______Method 2

When using Windows NT/2000/XP_____Method 2

The above methods are only applicable to general cases. For more details, refer to the instruction manual attached to each version of NC System software, and README_E.TXT (English) / README_J.TXT(Japanese).

When NC Card is replaced, it is necessary to copy the data saved in the NC Card to the new card. Be sure to follow the directions on the instruction manual attached to the product to perform the copy operation.

■ Method 1: Change NC System Device Driver

Use the [Change Driver] button on the property sheet of NC System Device Driver to change NC System Device Driver. In this case, personal computer's resources (memory, I/O port, and IRQ) used by the NC Card is not changed. Therefore, setting up NC Card is not needed.

Method 2: Reinstall NC System Device Driver

Reinstall NC System Device Driver by deleting the currently used device driver once and then installing NC System Device Driver again. In this case, personal computer's resources (memory, I/O port, and IRQ) used by the NC Card may be changed. Consequently, setting up NC Card is necessary when you use ISA NC Card. For PCI NC Card, resources are set up automatically, and setting up NC Card is not needed.

When reinstalling NC System Device Driver, set the same NC Card No. as the one used before deletion. If a different NC Card No.is set, environment settings may be erased.

3.2.2 Upgrading Other Application Version

Version upgrade of other applications can be executed basically by overwriting the currently used software. Be careful about using this method because information customized by the user, such as software operational environment or execution information, may be erased.

For practical upgrading methods, refer to the instruction manual attached to each application software.

4. Setting up MELDASMAGIC64 System

4.1 Before You Begin Setup

4.1.1 Backing Up Environment Files

When using PCI NC Card, the procedures of this chapter are not needed. Proceed to chapeter 4.2.1.

When using ISA NC Card, be sure to save the personal computer's environment files before setup. The files saved here will be necessary for restoration in case the further installation operations cause failure in the personal computer.

The backup methods of environment files depend on the OS type. For Windows 95 or Windows 98 (including Second Edition), proceed to chapter 4.1.1.1. For Windows NT, proceed to chapter 4.1.1.2.

4.1.1.1 Backing up Windows 95/98 Environment Files

Save the Windows environment files. Create a backup directory (C:\backup\), and save the copies of the following files. (If any file is not displayed, refer to Problem 1 of chapter 6.3.)
The following files in the root directory (normally C:\) of the boot drive
autoexec.bat
config.sys
The following files in the Windows 95/98 directory (normally C:\Windows\)
system.ini
win.ini
user.dat
system.dat
[Procedures]
(1) Start "Explorer."
1) Click [Start] - [Program] - [Explore].
(2) Create a folder titled "backup" in the C:\ folder.
1) Select drive C, and click [File] - [New] – [Folder].
Select the created "New folder", click [File] – [Rename]

3) Input "backup", and press the Enter key.

 (3) Copy the following files from the C:\ folder and C:\Windows folder to C:\backup folder.
 *Note: Be sure to copy these file. If these files are moved, return to the original location. autoexec.bat file in the C:\ folder config.sys file in the C:\ folder system.ini file in the C:\Windows folder win.ini file in the C:\Windows folder user.dat file in the C:\Windows folder system.dat file in the C:\Windows folder

- 1) Click autoexec.bat in the C:\ folder.
- 2) Click [Edit] [Copy].
- 3) Open the C:\backup folder.
- 4) Click [Edit] [Paste].
- 5) By the same operation, copy other files to C:\backup folder.

4.1.1.2 Backing Up Windows NT Environment Files

■ Copy the hardware profile.

To copy the hardware profile, you must log in Windows NT as Administrator.

When all the setup operations have completed without failure, delete the copied hardware profile. [Procedures]

- (1) Click the [Settings] [Control Panel] menus on the [Start] menu.
- (2) The "Control Panel" window is displayed. Double-click the [System] icon.



(3) Click the [Hardware Profiles] tab.

stem Properties	? X	
General Performance Environment Startup/Shutdown Hardware Profiles User Profile	s	
Hardware Profiles provide a way to create hardware configurations that you can choose from at startup.		
Available Hardware Profiles:		
Original Configuration (Current)	Ĵ	
Properties Copy Bename Delete		
At startup, if Windows NT cannot determine which hardware profile to use, it should:		
Wait indefinitely for user selection.		
 Wait for user selection for 30 and seconds, then select the highest-order preference. 		
OK Cancel App	aly	

(4) Select "Original Configuration (Current)" from [Available Hardware Profiles], and click the [Copy...] button.



(5) Enter "Backup Configuration" in the "To:" field of the profile, and click the [OK] button.



(6) Click the [OK] button.

System Properties		? ×			
General Startup/Shutdown	Performance Hardware Profiles	Environment User Profiles			
Hardware Prol configurations	Hardware Profiles provide a way to create hardware configurations that you can choose from at startup.				
Available Hardware Profile	s:				
Original Configuration (Cu	rrent)				
Backup Configuration		t			
Properties Cop	y <u>R</u> ename	Delete			
– Multiple Hardware Profile	is				
At startup, if Windows NT cannot determine which hardware profile to use, it should:					
O Wait indefinitely for user selection.					
 Wait for user selection for 30 = seconds, then select the highest-order preference. 					
		Cancel <u>Apply</u>			

4.2 Setting Up NC Card and Device Driver (PCI NC Card)

This chapter describes the installation of NC System Device Driver for PCI NC Card and the procedures for mounting NC Card. (For ISA NC Card, refer to chapter 4.3) By installing NC System Device Driver, the device driver for NC Card and the MELDASMAGIC64 NC System Software are installed.

For the details of the method for mounting NC Card, refer to "Connection Manual (BNP-B2203)."

The installation procedures of NC System Device Driver differ by each Windows model.

For Windows 2000/XP, refer to chapter 4.2.1. For Windows 98 Second Edition, refer to chapter 4.2.2.

* PCI NC Card cannot be used for any OS other than Windows 2000/XP or Windows 98 Second Edition.

Be sure to remove <u>NC Card out of the personal computer</u> before installing NC Device Driver.

4.2.1 Installing NC System Device Driver for Windows 2000/XP

4.2.1.1 Installing NC System Device Driver

Install NC System Device Driver according to the procedures below.

- Install Device Driver by executing Setup on NC System Disk. [Procedures]
 - (1) Turn on the personal computer. After Windows starts up, insert the floppy disk titled "NC System Disk 1" into drive A.
 - (2) Click [Run...] on the [Start] menu of the task bar.

Display sample	for WindowsXP
Internet Internet Explorer E-mail Outlook Express Set Program Access and Defaults MSN Explorer	Wy Documents My Recent Documents My Pictures My Music Image: My Computer
Windows Media Player Windows Messenger	Control Panel
Tour Windows XP	 Help and Support Search Run
All Programs 🕨	2 Log Off 🚺 Turn Off Computer

Display sample for Windows2000



(3) The [Run...] window appears.

Fill in the [Open:] field as below, and then click [OK]. a:\setup.exe

Run 🥐 🔀	Run 🤶 🕅
Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open: a:\setup.exe	Open: a:\setup.exe
OK Cancel Browse	OK Cancel Browse

(4) Install the software according to the directions of the installation program. With the default screen displayed, select [Next >], and then click [Finish] at the end.



(5) The following message is displayed. Click [Continue Anyway].



*The screen does not exist for Windows2000.

(6) If the "Insert Disk" window is displayed, insert the next disk into drive A, and then click [OK].



(7) A message confirming the shutdown of the personal computer (exit Windows and turn off the personal computer) is displayed. Click [Yes].

	S
to exit and restart Windows so that the new setting can take effer imputer now?	

(8) Exit Windows and turn off the personal computer. (In some cases, the personal computer is turned off automatically.)

*Take out the floppy disk.

4.2.1.2 Mounting NC Card

Mount NC Card according to the procedures below.

Be sure to <u>unplug the personal computer</u> before mounting NC Card. In case this operation is executed with the power on, the devices may be damaged.

Set the rotary switch on NC Card.

- [Procedure]
 - (1) Refer to the following NC Card layout, and set the rotary switch (CDNO). If there is only one NC Card to be mounted, set 0. If there is more than one NC Card to be mounted, set the switches on the respective NC Cards to different values.



■ Mount NC Card on the personal computer.

[Procedures]

- (1) Mount the battery on NC Card.
- (2) Attach NC Card to the personal computer's PCI bus. *When mounting two or more NC cards, mount all the NC cards at once.
- (3) Connect peripheral devices.
- * For the details of NC Card mounting and peripheral device connection, refer to "Connection Manual (BNP-B2203)."

4.2.1.3 Installing NC System Device Driver (2)

- Installation of the device driver is continued automatically. [Procedures]
 - (1) Check the connection of NC Card, and then turn on the personal computer.
 - Operation: The following message appears on the lower right corner of the screen, and then the "Found New Hardware" wizard is opened.

Display sample for WindowsXP





Found New Hardware Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A) Installing ...

* This message disappears after a period of time.

(2) Click [Next >].



* In some cases, it takes several minutes for this screen to appear.



For Windows2000, uncheck all the boxes under "Optional search locations" and click [Next>].

	Found New Hardware Wizard
	Locate Driver Files Where do you want Windows to search for driver files?
* This screen does not exist	Search for driver files for the following hardware device:
	Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A)
for WindowsXP.	The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
	To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
	Optional search locations: Floppy disk drives CD-RDM drives Specify a location
	☐ Microsoft Windows Hedate
	Found New Hardware Wizard
	Driver Files Search Results The wizard has finished searching for driver files for your hardware device.
	The wizard found a driver for the following device:
	Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A)
* This screen does not exist	Windows found a driver for this device. To install the driver Windows found, click Next.
for WindowsXP.	c:\winnt\inf\meIncpci inf

(3) The following message is displayed with WindowsXP. Click [Continue Anyway].



*This screen does not exist for Windows2000.

(4) "Completing the Found New Hardware Wizard" is displayed. Click [Finish]. Now the installation of NC System Device Driver has been completed.



4.2.1.4 Confirm NC System Device Driver Operation

Confirm the installed Device Driver operating normally according to the procedures below.

Open Device Manager

[Procedures]

- (1) For WindowsXP, click the [Control Panel] menus of the [Start] menu. For Windows2000, click the [Settings] - [Control Panel] menus of the [Start] menu.
- (2) The "Control Panel" window is displayed.

For WindowsXP, click the "Performance and Maintenance" icon on "Control Panel", and click "System" icon on the "Performance and Maintenance" window.

For Windows2000, Double-click the "System" icon on Control Panel.

Display sample for WindowsXP





Display sample for Windows2000



*This screen does not exist for Windows2000.

(3) Click the [Hardware] tab, and click the [Device Manager] button. The "Device Manager" window is displayed.



- Confirm the [Device Status] of NC System Device Driver [Procedures]
 - (1) Select [Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A)] below [Other devices], and then click the [Action] [Properties] menus.
 - (2) The "Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A) Properties" window is displayed. If the message of "This device is working properly" is displayed in the "Device status" field, the device is in the normal condition.



Mitsubishi PC-Based NC MELDASMAGIC64 (HR	655A) Properties 🙎 🗙	
General Settings Driver Resources		
Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A)		
Device type: Other devices		
Manufacturer: Mitsubishi		
Location: PCI Slot 5 (PCI bus 1	1, device 11, function 0)	
Device status This device is working properly. If you are having problems with this device, clic start the troubleshooter.	* Troubleshooter to	
Device usage:		
Use this device (enable)		
	OK Cancel	

4.2.1.5 Initializing the NC Card Memory

Initialize the NC Card memory when starting up NC Card for the first time or replacing the battery of NC Card.

All the memory information (such as parameters, machining programs, and ladders) in NC Card is erased when the memory is initialized. <u>When initializing the memory of the NC Card in use</u>, be sure to <u>back up the parameters and so on</u>, as needed, prior to initialization.

Initialize the NC Card memory according to the procedures below.

Open the "Settings" page of "Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A) Properties" screen, and clear the memory of NC Card.

[Procedures]

(1) Display the "Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A) Properties" window. Refer to chapter 4.2.1.4 "Confirming NC System Device Driver Operation" for more details on displaying.



·iicsubisii	PC-based NC PI				
General	Settings Driver	Resources			
P	Mitsubishi PC-Ba	sed NC MELDASMAGIC64 (HR655A)			
	Device type:	Other devices			
	Manufacturer:	Mitsubishi			
	Location:	PCI Slot 5 (PCI bus 1, device 11, function 0)			
Device status This device is working properly. If you are having problems with this device, click Troubleshooter to start the troubleshooter.					
Device	usage:				
Use thi	is device (enable)	<u> </u>			
		OK Cancel			

(2) Click the [Settings] tab, and then click the [Memory Clear] button.

Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A) P ? 🔀	Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A) Properties ?X
General Settings Driver Resources	Genera Settings Driver Resources
Card setting	Card setting
Channel Number: &h 00	Channel Number: &h 00
Configuration	Configuration
NC Card Number(01-FF): &h	NC Card Number(01-FF): &h 01
Rotary Switch	Rotary Switch
Value(F0-FF): &h F0 Apply Now	Value(F0-FF): &h F0Apply Now
Reboot NC Card Click this button to reboot NC Card Reboot NC Card	Reboot NC Card Click this button to reboot NC Card. Reboot NC Card
Memory clear	Memory clear
Click this button to clear all data in the	Click this button to clear all data in the
memory mounted on NC Card.	memory mounted on NC Card.
OK Cancel Help	OK Cancel

(3) A confirmation message whether to execute memory clear is displayed.



Operation: The mouse cursor changes to an hourglass, and the NC Card memory is cleared. It takes approximately 1 minute to clear the memory. When the memory clear has finished, the "Memory clear complete!" message is displayed.

(4) Close all the open windows.

4.2.1.6 Confirming NC Card Operation

Confirm the installed Device Driver operating normally according to the procedures below.

- Confirm the display status of the 7-segment LED on NC Card.
 - [Procedure]

(1) NC Card is working normally if the 7-segment LED on the NC Card is blinking.

Proceed to chapter 4.4.

4.2.2 Installing NC System Device Driver for Windows 98 (Second Edition)

4.2.2.1 Installing NC System Device Driver

Install NC System Device Driver according to the procedures below.

■ Install Device Driver by executing Setup on NC System Disk.

[Procedures]

- (1) Turn on the personal computer. After Windows starts up, insert the floppy disk titled "NC System Disk 1" into drive A.
- (2) Click [Run...] on the [Start] menu of the task bar.



(3) The "Run..." window appears.

Fill in the [Open:] field as below, and then click [OK]. a:\setup.exe



Welcome to Setup.
The Setup program for the Mitsubishi PC-Based NC for Microsoft Windows installs the MELDASMAGIC NC System Software. Each Setup dialog has basic instructions for completing a step of the installation.
To install the MELDASMAGIC on your computer now, click Next or press Enter.
To exit Setup without installing the Product, click Cancel at any time.
< Back Next > Cancel

Jelect Devic		
****	Click the model that matches your hardware, and then click OK. If your hardware is not listed, click Cancel. This list shows only what was found on the installation disk.	
Mo <u>d</u> els	:	
Mitsub	ishi PC-Based NC MELDASMAGIC64 (HR655A)	
	\frown	
	< Back Next > Cancel	

Complete Insta	sii 💦 🔀
	The Setup program for the Product is ready to complete. To install the MELDASMAGIC on your computer now, click Finish or press Enter.
	To exit Setup without installing the Product, click Cancel at any time.
	< Back Finish Cancel

(5) If the "Insert Disk" window is displayed, insert the next disk into drive A, and then click [OK].



(6) A message confirming the shutdown of the personal computer (exit Windows and turn off the personal computer) is displayed. Click [Yes].
Setup



(7) Exit Windows and turn off the personal computer. (In some cases, the personal computer is turned off automatically.)

*Take out the floppy disk.

4.2.2.2 Mounting NC Card

Mount NC Card according to the procedures below.

Be sure to <u>unplug the personal computer</u> before mounting NC Card. In case this operation is executed with the power on, the devices may be damaged.

■ Set the rotary switch on NC Card.

[Procedure]

(1) Refer to the following NC Card layout, and set the rotary switch (CDNO). If there is only one NC Card to be mounted, set 0. If there is more than one NC Card to be mounted, set the switches on the respective NC Cards to different values.



■ Mount NC Card on the personal computer.

[Procedures]

- (1) Attach the battery to NC Card.
- (2) Mount NC Card on the personal computer's PCI bus. *When mounting two or more NC Cards, mount all the NC Cards at once.
- (3) Connect peripheral devices.
- * For the details of NC Card mounting and peripheral device connection, refer to "Connection Manual (BNP-B2203)."

4.2.2.3 Installing NC System Device Driver (2)

- Installation of the device driver is continued automatically. [Procedures]
 - (1) Check the connection of the NC Card, and then turn on the personal computer. When "Add New Hardware Wizard" opens, click [Next>].



(2) Click [Next >].



(3) Uncheck all the check boxes as shown in the figure below, and then click [Next >].



(4) Click [Next >].



(5) The installation has been completed.

When you click [Finish], a message confirming restart is displayed. Click [Yes].



4.2.2.4 Confirm NC System Device Driver Operation

Confirm the installed Device Driver operating normally according to the procedures below.

Open Device Manager

[Procedures]

- (1) After the personal computer is restarted, click [Settings] [Control Panel] menus of the [Start] menu.
- (2) The "Control Panel" window is displayed. Double-click the "System" icon on Control Panel.



(3) The "System Properties" window is displayed. Click the "Device Manager" tab.



- Confirm the [Device Status] of NC System Device Driver [Procedures]
 - (1) Select [Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A)] below [Other devices], and then click the [Properties] button.

System Properties ? 🔀
General Device Manager Hardware Profiles Performance
C View devices by type C View devices by connection
Computer Compu
Properties Refresh Remove Print

(2) The "Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A) Properties" window is displayed. If the message of "This device is working properly" is displayed in the "Device status" field, the device is in the normal condition.

MICSUDISHI FC-DASEU NC MEEDASMAUICO4 (HHOSSA)	^
General Settings Driver Resources	
Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A)	
Device type: Other devices	
Manufacturer: Mitsubishi	
Hardware version: 000	
Device status	
This device is working properly.	
Device usage	
Disable in this hardware profile	
Exists in all hardware profiles	
	4
OK Cancel	
	_
4.2.2.5 Initializing the NC Card Memory

Initialize the NC Card memory when you start up NC Card first or replace the battery of NC Card.

All the memory information (such as parameters, machining programs, and ladders) in NC Card is erased when the memory is initialized. <u>When initializing the memory of the NC Card in use</u>, be sure to <u>back up the parameters and so on</u>, as needed, prior to initialization.

Initialize the NC Card memory according to the procedures below.

Open the [Settings] page of the "NC System Device Driver's Properties" screen, and clear the memory of NC Card.

[Procedures]

(1) Display the "Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A) Properties" window. Refer to chapter 4.2.2.4 "Confirming NC System Device Driver Operation" for more details on displaying. Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A)... ? X



(2) Click the [Settings] tab, and then click the [Memory Clear] button.

Mitsubishi PC-Based NC MELDASMAGIC64 (HR655A)	?	×
General Settings Diver Resources		
Card setting		
Channel Number: &h 00		
NC Card Number(01-rr): «n		
- Botaru Switch		
Value(F0-FF): &h F0 Apply Now		
Reboot NC Card		
Click this button to reboot NC Card. Reboot NC Card		
Memory clear		
Click this button to clear all data in the memory mounted on NC Card.	\mathbb{D}	
ок с	ancel	

(3) A confirmation message whether to execute memory clear is displayed. Click the [Yes] button.

This will clear all data in the memory mounted on NC Card. Do you want to clear now ?	×.
	This will clear all data in the memory mounted on NC Card. Do you want to clear now ?

Operation: The mouse cursor changes to an hourglass, and the NC Card memory is cleared. It takes approximately 1 minute to clear the memory. When the memory clear has finished, the "Memory clear complete!" message is displayed.

(4) Close all the open windows.

4.2.2.6 Confirming NC Card Operation

Using the procedures below to confirm whether the installed NC Card is working normally.

Confirm the display status of the 7-segment LED on NC Card. [Procedure]

(1) NC Card is working normally if the 7-segment LED on the NC Card is blinking.

Proceed to chapter 4.4.

4.3 Setting up NC Card and Device Driver (ISA NC Card)

This chapter describes the installation of NC System Device Driver for ISA NC Card and the procedures for mounting NC Card. (For PCI NC Card, refer to chapter 4.2)

Be sure to install NC System Device Driver <u>before mounting NC Card on the expansion slot of</u> the personal computer.

If NC Card has already been mounted on the personal computer, unplug the personal computer and remove NC Card before installing the software.

By installing NC System Device Driver, the device driver for the NC Card and MELDASMAGIC64 NC System Software are installed.

The installation procedures of NC System Device Driver differ by each Windows model. For Windows95, refer to chapter 4.3.1. For Windows98 (including Second Edition), refer to chapter 4.3.2. For WindowsNT, refer to chapter 4.3.3.

4.3.1 Installing NC System Device Driver for Windows 95

4.3.1.1 Installing NC System Device Driver

Install NC System Device Driver according to the procedures below.

- Install Device Driver using a hardware wizard. (Hardware is not detected automatically.) [Procedures]
 - (1) Click the [Settings] [Control Panel] menus of the [Start] menu on the task bar.
 - (2) When the "Control Panel" window is displayed, double-click the "Add New Hardware" icon.



(3) The "Add New Hardware Wizard" window appears. Click [Next>].



(4) A window confirming the automatic detection of new hardware is displayed. Select the [No] option button, and then click [Next >].

	If your hardware is already installed, you should have Windows detect it. When Windows detects new hardware, it automatically determines the current settings for the device and installs the correct driver. Do you want Windows to search for your new hardware?	
< Back Next> Cancel		

(5) A window for selecting the type of the hardware to be installed is displayed. Click [Other devices], and then click [Next >].

	Select the type of hardware you want to install.	
	Hardware types:	_
	📽 Keyboard 📃	
	Memory Technology Drivers (MTDs)	
	See Modem	
	Mouse	1
	Multi-function adapters	
	Network adapters	
	Cher devices	
	PCMCIA socket	
	Ports (COM & LPT)	
Ť	💓 Printer 📃 💽	·
	< Back Next > Cance	1

(6) A window for selecting the manufacturer and model of the hardware is displayed. Click the [Have Disk...] button.

Add Nev	w Hardware Wizard	1
\diamond	Click the manufacturer and model of your hardware. If your hardware is not listed, or if you have an installation disk, click Have Disk. If your hardware is still not listed, click Back, and then select a different hardware type. To see all hardware choices, click Unknown Hardware.	
<u>M</u> anufa	cturers:	Mo <u>d</u> els:
(detect (Multi-fi (Standa (Standa (Standa (Standa	ed net drivers) unction PC Card Par ard display types) ard floppy disk contro ard hard disk drivers ard infrared devices	Existing Ndis2 Driver Existing ODI Driver
		Have Disk
		·
		< <u>B</u> ack Next > Cancel

(7) The "Install From Disk" window is displayed.

Insert the floppy disk titled "NC System Disk 1" into drive A, and then click the [OK] button.

nstall Fr	om Disk	×
	Insert the manufacturer's installation disk into the drive selected, and then click OK.	ОК
_		Cancel
	Copy manufacturer's files from:	
	A:\	<u>B</u> rowse

(8) A window for selecting the manufacturer and model of the hardware is displayed. Select "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx)," and then click [Next >]. (Specify the xx of HR62xx according to the NC Card to be used.)

AUG NEW	r Hardware wizard
\diamond	Click the manufacturer and model of your hardware. If your hardware is not listed, or if you have an installation disk, click Have Disk. If your hardware is still not listed, click Back, and then select a different hardware type. To see all hardware choices, click Unknown Hardware.
Models	
Models	
Mitsubi	shi PC-Based NC MELDASMAGIC64 (HR621A)
Mitsubi	shi PC-Based NC MELDASMAGIC64 (HR621B)
Mitsubi	shi PC-Based NC MELDASMAGIC64 (HR623C)
\sim	
,	
	<u>H</u> ave Disk
	< <u>B</u> ack Next> Cancel
	Modelse Mitsubi Mitsubi

(9) A window for confirming the setup conditions of the hardware to be installed is displayed. Make a note of the displayed resource type and its setting, and then click [Next>].

Add New Hardware Wizard			
\bigtriangleup	Windows can install your hardware, using the following settings.		
\sim	WARNING: Your hardware may not be set to use the resources listed. If you need to, you can adjust these settings by using the Device Manager in the System control panel before restarting your computer. To change your hardware settings, see the documentation that came with your hardware.		
To continue installing the software needed by your hardware, click Next.			
	Resource tupe	Catting	- Drint
	Input/Output Range Interrupt Request Memory Range	0120 - 0123 07 000D8000 - 000DFFFF	<u></u> Im
		< <u>B</u> ack (Next >	Cancel

Fill in:

Resource type (The rotaty switch of card)	Setting
I/O port address (IOPADR)	
IRQ (IRQ)	
Memory range (DPADR)	
The actting may differ every time per installation	

* The setting may differ every time per installation.

Since the setting will be necessary for the future installation (4.3.1.2 Mounting NC Card), be sure to make a note of it.

(10) Here, if the message of "The software for this device is now installed, but this device conficts with one or more other devices..." is displayed, installation cannot be continued. Click [Cancel]. In this case, refer to Problem 2 of chapter 6.3 "Troubleshooting," and fix the hardware conflict before installing the software again.

Add New Hardware Wizard			
	The software for this device is now installed, but this device conflicts with one or more other devices. To try to resolve the conflict now, click Start Conflict Troubleshooter.		
	Start Conflict Troubleshooter		

If hardware conflict occurs, <u>be sure to click the [Cancel] button to abort installation</u>. If you click [Next >] to continue to install the software, <u>the personal computer may not start up normally.</u>

(11) Files are copied. A message prompting a disk change is displayed while the files are copied. Insert the floppy disk into drive A according to the message, and then click [OK].



(12) Copying the files is continued. When copying the files has finished, the finish window is displayed. Click [Finish].



(13) The "System Settings Change" window is displayed.

Click [Yes].		
System	Settings Change 🗾	
?	To finish installing your hardware, you must shut down your computer, turn it off, and install the card for your hardware now.	
	Yes No	

- (14) Windows is shutdown, and you can turn off the computer.
- (15) Turn off the personal computer. (In some cases, the personal computer is turned off automatically.)
 *Take out the floppy disk.

Now the installation of NC System Device Driver has been completed. Proceed to chapter "4.3.1.2 Mounting NC Card."

Do not turn on the personal computer until you mount NC Card according to the procedures of chapter 4.3.1.2 "Mounting NC Card." If you turn on the personal computer <u>without mounting</u> NC Card, the personal computer may not start up properly.

4.3.1.2 Mounting NC Card

Mount NC Card according to the procedures below.

Be sure to <u>unplug the personal computer</u> before mounting NC Card. In case this operation is executed with the power on, the devices may be damaged.

- Set the rotary switch on NC Card.
 - [Procedure]
 - (1) Refer to the following table of correspondence between NC Card layout and rotary switch settings, and set the DPADR, IOPADR, and IRQ settings of the rotary switch to the resource settings of the personal computer of which you made a note in chapter 4.3.1.1 "Installing NC System Device Driver."



Settings of the IRQ rotary switch

Enable IRQ	Switch on the NC Card	
	(IRQ)	
None	0	
IRQ5	1	
IRQ7	2	
IRQ9	4	
IRQ10	8	

Settings of the IOPADR rotary switch

I/O port address	Switch on NC Card (IOPADR)	I/O port address	Switch on NC Card (IOPADR)
120-123	0	220-223	8
140-143	1	240-243	9
160-163	2	260-263	A
180-183	3	280-283	В
1A0-1A3	4	2A0-2A3	С
1C0-1C3	5	2C0-2C3	D
1E0-1E3	6	2E0-2E3	E
200-203	7	300-303	F

Settings of the DPADR rotary switch

8	
2 port memory	Switch on the NC Card
	(DPADR)
D8000 - DFFFF	0
D0000 - D7FFF	1
C8000 - CFFFF	2
C0000 - C7FFF	3

■ Mount NC Card on the personal computer.

[Procedures]

- (1) Attach the battery to NC Card.
- (2) Mount NC Card on the personal computer's ISA bus.
- (3) Connect peripheral devices.
- * For the details of NC Card mounting and peripheral device connection, refer to "Connection Manual (BNP-B2203)."

4.3.1.3 Confirming NC System Device Driver Operation

Confirm the installed Device Driver operating normally according to the procedures below.

Open Device Manager.

[Procedures]

(1) Turn on the personal computer.

Operation: Windows starts up.

If the message below is displayed for the version B5 or later of NC System, reboot Windows. Press the [OK] button and wait for about 30 seconds, then Windows starts up. After the startup of Windows has finished, reboot Windows once.

Caution: The operation above is necessary only once right after installation. Since this message is not displayed for the NC System version B4 or older, the operation above is not

	necessary.
Μ	lelDLoad.dll 🛛 🕅
	MELDASMAGIC64 NC system is just restored. Please reboot windows again.
	OK

(2) Click the [Settings] - [Control Panel] menus of the [Start] menu. The "Control Panel" window appears. Double-click the "System" icon.



vides system information and changes advanced settings

- Confirm the device status of NC System Device Driver [Procedures]
 - (1) The "System Properties" window appears. Click the "Device Manager" tab. Select "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx)" below "Other devices," and then click the [Properties] button.

System Properties
Convert Device Manager Handware Bacillar Declamana
General Device Manager Hardware Profiles Performance
View devices by type C View devices by connection
Computer CDRDM CDRDM CDRDM CDBJay adapters Floppy disk controllers CDBJay adapters CDBJay adapters CDB
Properties Refresh Remove Print
OK Cancel

(2) The "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx) Properties" window is displayed. If the message of "This device is working properly" is displayed in the "Device status" field, the device is in the normal condition.

General Settings Driver Resources Image: Settings Mitsubishi PC-Based NC MELDASMAGIC64 (HR623C) Device type: Other devices Manufacturer: Mitsubishi Hardware version: Not available Device status This device is working properly. Device usage Device usage Disable in this hardware profile
Mitsubishi PC-Based NC MELDASMAGIC64 (HR623C) Device type: Other devices Manufacturer: Mitsubishi Hardware version: Not available Device status This device is working properly. Device usage © Device usage
Device type: Other devices Manufacturer: Mitsubishi Hardware version: Not available Device status This device is working property. Device usage Device usage
Manufacturer: Mitsubishi Hardware version: Not available Device status This device is working properly. Device usage Device usage
Hardware version: Not available Device status This device is working properly. Device usage I Disable in this hardware profile
Device status This device is working properly. Device usage Disable in this hardware profile
This device is working properly. Device usage Device usage Disable in this hardware profile
Device usage
Device usage
Device usage Disable in this hardware profile
Device usage Disable in this hardware profile
Disable in this hardware profile
Bemove from this hardware profile
Trenove non uns haidware prone
UK Cancel

4.3.1.4 Initializing NC Card Memory

Initialize the NC Card memory when starting up NC Card for the first time or replacing the battery of NC Card.

All the memory information (such as parameters, machining programs, and ladders) in NC Card is erased when the memory is initialized. <u>When initializing the memory of the NC Card in use</u>, be sure to <u>back up the parameters and so on</u>, as needed, prior to initialization.

Initialize the NC Card memory according to the procedures below.

Open the "Settings" page of the NC System Device Driver Properties screen, and clear the NC Card memory.

[Procedures]

(1) Display the "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx) Properties" window. For the method of displaying the window, refer to chapter 4.3.1.3 "Confirming NC System Device Driver Operation."

Mitsubishi PC-Based NC MELDASMAGIC64 (HR6230) ? ×
General Settings Driver Resources	
Mitsubishi PC-Based NC MELDASMAGIC64 (HR	323C)
Device type: Other devices	
Manufacturer: Mitsubishi	
Hardware version: Not available	
Device status	
This device is working properly.	
Device usage Disable in this hardware profile Remove from this hardware profile	
OK	Cancel

(2) Click the [Settings] tab, and then click the [Memory Clear] button.

SUDISHI FC-DASEU NC MEEDASMAGIC04 (HING	2363
Referal Settings priver Resources	
Configuration	
NC Card Number(01-FF): &h	
	_
Rotary Switch	
Value(F0-FF); &h F0 Apply Now	
Reboot NC Card	
Click this button to reboot NC Card.	
Beboot NC Card	
Memory clear	
Click this button to clear all data in the memory	
mounted on NC Card.	\
Memory Clear	
ок	Cancel

(3) A confirmation message whether to execute memory clear is displayed. Click the [Yes] button.

×
This will clear all data in the memory mounted on NC Card. Do you want to clear now ?
Yes No

Operation: The mouse cursor changes to an hourglass, and the NC Card memory is cleared. It takes approximately 1 minute to clear the memory. When the memory clear has finished, the "Memory clear complete!" message is displayed.

(4) Close all the open windows.

4.3.1.5 Confirming NC Card Operation

Confirm the installed Device Driver operating normally according to the procedures below.

 Confirm the display status of the 7-segment LED on NC Card. [Procedure]
 (1) NC Card is working normally if the 7-segment LED on the NC Card is blinking.

Proceed to chapter 4.4.

4.3.2 Installing NC System Device Driver for Windows 98

4.3.2.1 Installing NC System Device Driver

Install NC System Device Driver according to the procedures below.

Install Device Driver using the hardware wizard. (Hardware is not detected automatically.)

[Procedures]

- (1) Click the [Settings] [Control Panel] menus of the [Start] menu on the task bar.
- (2) When the [Control Panel] window is displayed, double-click the "Add New Hardware" icon.



(3) The "Add New Hardware Wizard" window appears. Close all the open applications, then click [Next >].

Add New Hardware Wiz	ard
	This wizard installs the software for a new hardware device. Before continuing, close any open programs. To begin installing the software for your new device, click Next.
	< Back Next > Cancel

(4) Click [Next >].



- (5) A window for selecting the device to be installed is displayed.
 - Select the [No, the device isn't in the list] option button, and then click [Next >]. * This window may not be displayed according to environments.

Add New Hardware Wizard	
	Is the device that you want to install listed below? No, the device isn't in the list Yes, the device is in the list. Select the device that you want to install, and then click Next. Devices: PCI Ethernet Controller Standard PCI Graphics Adapter (VGA)
	< Back Next > Cancel

(6) A window confirming the automatic detection of new hardware is displayed. Select the [No] option button, and then click [Next >].

Add New Hardware Wiza	ard
	Windows can now search for hardware that is not Plug and Play compatible, or you can select your hardware from a list. When Windows detects new hardware, it automatically determines the current settings for the device and installs the correct driver. For this reason it is strongly recommended that you have Windows search for your new hardware. Do you want Windows to search for your new hardware? Yes (Recommended) Mo, I want to select the hardware from a list
	< Back Next > Cancel

(7) A window for selecting the manufacturer and model of the hardware is displayed. Click [Other devices], and then click [Next >].

	Select the type of hardware you want to install.	
	<u>H</u> ardware types:	
	Infrared devices	
	🕸 Keyboard	
	Memory Technology Drivers (MTDs)	
	Modem	
	💻 Monitors	
	Mouse	
	Multi-function adapters	
	Network adapters	
	C Ther devices	
Ť	PUMUA socket	•
	< Back Next > C	ancel

(8) A window for selecting the manufacturer and model of the hardware is displayed. Click the [Have Disk...] button.

ridd from fru	uware wizara			
Select the manufacturer and model of your hardware. If your hardware is not listed, or if you have an installation disk, click Have Disk.If your hardware is still not listed, click Back, and then select a different hardware type.				
Manufacturer:	s: Mo	o <u>d</u> els:		
(detected ne (Generic USE (Generic USE (Infrared CON (legacy serial (Multi-fracetic	Audio) Audio) Hub) Hub) Infrared devic	xisting Ndis2 Driver xisting ODI Driver		
				Have Disk
		< <u>B</u> ack	Next >	Cancel

(9) The "Install From Disk" window is displayed.

Insert the floppy disk titled "NC System Disk 1" into drive A, and then click the [OK] button.

Install Fr	om Disk	×
_	Insert the manufacturer's installation disk into the drive selected, and then click DK.	OK Cancel
	Copy manufacturer's files from: A:\	Browse

(10) A window for selecting the manufacturer and model of the hardware is displayed. Select "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx)," and then click [Next >]. (Specify the xx of HR62xx according to the NC Card to be used.)

Add New	v Hardware Wizard		
\diamond	Select the manufacturer and model of your hardware. If your hardware is not listed, or if you have an installation disk, click Have Disk.If your hardware is still not listed, click Back, and then select a different hardware type.		
Modeler			
Mitsubia Mitsubia Mitsubia	shi PC-Based NC MELDASMAGIC64 (HR621A) shi PC-Based NC MELDASMAGIC64 (HR621B) shi PC-Based NC MELDASMAGIC64 (HR623C)		
	<u>H</u> ave Disk		
	< Back Next > Cancel		

(11) A window confirming the setup conditions of the hardware to be installed is displayed.

 Add New Hardware Wizard

Windows can install your hardware, using the following settings. Warning: Your hardware may not be set to use the resources listed. You can use Device Manager to adjust these settings before restarting your computer. Click start, point to Settings, click Control Panel, click System, and then click the Device Manager tab. To change your hardware settings, see the documentation that came with your hardware. To continue installing the software needed by your hardware, click Next.			
	Resource type Setting Print Input/Output Range 0120 - 0123 1 Interrupt Request 10 10 Memory Range 000D8000 - 000DFFFF 1		
		< Back Next >	Cancel

Fill in:

Resource type (The rotaty switch of card)	Setting
IRQ (IRQ)	
I/O port address (IOPADR)	
Memory range (DPADR)	

* The setting may differ per installation.

Since the setting is necessary for the future installation (chapter 4.3.2.2 "Mounting NC Card"), be sure to make a note of it.

(12) Here, if the message of "The software for this device is now installed, but this device conficts with one or more other devices..." is displayed, installation cannot be continued. Click [Cancel]. In this case, refer to Problem 2 of chapter 6.3 "Troubleshooting," and fix the hardware conflict before installing the software again.

The software for this device is now installed, but this device conflicts with one or more other devices. To view properties for the device, and to see the problem and proposed solution, click Finish.
< Back Finish Cancel

If hardware conflict occurs, <u>be sure to click the [Cancel] button to abort installation.</u> If you click [Next >] to continue to install the software, <u>the personal computer may not start up properly.</u>

(13) Files are copied. A message prompting a disk change is displayed while the files are copied. Insert the floppy disk into drive A according to the message, and then click [OK].

Insert Di	sk 🔣 🔀
	The disk labeled 'MitsubishiPC-BasedNCInstallDisk2' is now required.
\mathbf{v}	This disk is provided by your computer manufacturer.
	Click OK to continue.

(14) Copying the files is continued. When the copy has finished, the finish window is displayed. Click [Finish].

Add New Hardware Wiz	zard
	Windows has finished installing the software necessary to support your new hardware.
	< Back Finish Cancel

(15) The "System Settings Change" window is displayed.

Click [Y	esj.
System S	iettings Change 🛛 🕺
?	To finish installing your hardware, you must shut down your computer, turn it off, and install the card for your hardware. Do you want to shut down your computer now?
	<u>Yes</u> <u>No</u>

- (16) Windows is shutdown, and you can turn off the computer.
- (17) Turn off the personal computer. (In some cases, the personal computer is turn off automatically.) *Take out the floppy disk.

Now installing NC System Device Driver has finished. Proceed to chapter 4.3.2.2 "Mount NC Card."

Do not turn on the personal computer until you mount NC Card according to the procedures of chapter 4.3.2.2 "Mounting NC Card." If you turn on the personal computer <u>without mounting</u> NC Card, the personal computer may not start up properly.

4.3.2.2 Mounting NC Card

Mount NC Card according to the procedures below.

Be sure to <u>unplug the personal computer</u> before mounting NC Card. In case this operation is executed with the power on, the devices may be damaged.

- Set the rotary switch on NC Card.
 - [Procedure]
 - (1) Refer to the following table of correspondence between NC Card layout and rotary switch settings, and set the DPADR, IOPADR, and IRQ settings of the rotary switch to the resource settings of the personal computer of which you made a note in chapter 4.3.2.1 "Installing NC System Device Driver."



Settings of the IRQ rotary switch

Enable IRQ	Switch on the NC Card	
	(IRQ)	
None	0	
IRQ5	1	
IRQ7	2	
IRQ9	4	
IRQ10	8	

Settings of the IOPADR rotary switch

I/O port address	Switch on NC Card (IOPADR)	I/O port address	Switch on NC Card (IOPADR)
120-123	0	220-223	8
140-143	1	240-243	9
160-163	2	260-263	А
180-183	3	280-283	В
1A0-1A3	4	2A0-2A3	С
1C0-1C3	5	2C0-2C3	D
1E0-1E3	6	2E0-2E3	E
200-203	7	300-303	F

Settings of the DPADR rotary switch

0	
2-port memory	Switch on the NC Card
	(DPADR)
D8000 - DFFFF	0
D0000 - D7FFF	1
C8000 - CFFFF	2
C0000 - C7FFF	3

■ Mount NC Card on the personal computer. [Procedures]

- (1) Mount the battery on NC Card.
- (2) Attach NC Card to the personal computer's ISA bus.
- (3) Connect peripheral devices.
- * For the details of NC Card mounting and peripheral device connection, refer to "Connection Manual (BNP-B2203)."

4.3.2.3 Confirming NC System Device Driver Operation

Confirm the installed Device Driver operating normally according to the procedures below.

Open Device Manager.

[Procedures]

(1) Turn on the personal computer.

Operation: Windows starts up.

If the message below is displayed for the version B5 or later of NC System, reboot Windows. Press the [OK] button and wait for about 30 seconds, then Windows starts up. After the startup of Windows has finished, reboot Windows once.

Caution: The operation above is necessary only once right after installation. Since this message is not displayed for the NC System version B4 or older, the operation above is not

necessary.
MelDLoad.dll 🛛 🔀
MELDASMAGIC64 NC system is just restored. Please reboot windows again.
ОК

(2) Click the [Settings] - [Control Panel] menus of the [Start] menu. The "Control Panel" window appears. Double-click the "System" icon.



- Confirm the "Device status" of NC System Device Driver. [Procedures]
 - (1) The "System Properrties" window appears. Click the "Device Manager" tab. Select "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx)" from "Other devices," and then click the [Properties] button.

System Properties
General Device Manager Pardware Profiles Performance
• View devices by type • • • • • • • • • • • • • • • • • • •
Computer Com
Properties Refresh Remove Print
OK Cancel

(2) The "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx) Properties" window is displayed. If the message of "This device is working properly" is displayed in the "Device status" field, the device is in the normal condition.

Mitsubishi PC-Based NC MELDASMAGIC64 (HR623C) 🍸 🗙				
General Settings Driver Resources				
Mitsubishi PC-Based NC MELDASMAGIC64 (HR623	C)			
Device type: Other devices				
Manufacturer: Mitsubishi				
Hardware version: Not available				
Device status				
find of the field and group of the				
Device usage				
Disable in this hardware profile				
<u>Bemove from this hardware profile</u>				
OK Car				

4.3.2.4 Initializing NC Card Memory

Initialize the NC Card memory when starting up NC Card for the first time or replacing the battery of NC Card.

All the memory information (such as parameters, machining programs, and ladders) in NC Card is erased when the memory is initialized. <u>When initializing the memory of the NC Card in use</u>, be sure to <u>back up the parameters and so on</u>, as needed, prior to initialization.

Initialize the NC Card memory according to the procedures below.

Open the "Settings" page of the NC System Device Driver's Properties screen, and clear the NC Card memory.

[Procedures]

(1) Display the "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx) Properties" window. For the method of displaying the window, refer to chapter 4.3.2.3 "Confirming NC System Device Driver Operation."



(2) Click the [Settings] tab, and then click the [Memory Clear] button.

Mitsubishi PC-Based NC MELDASMAGIC64 (HR623C) 🖪	×
General Settings Driver Resources	
NC Card Number(U1-FF): &h]	
Rotary Switch	
Value(F0-FF): %h F0 Apply Now	
Reboot NC Card	
Click this button to reboot NC Card.	
Reboot NL Lard	
Memory clear	
Click this button to clear all data in the memory mounted on NC Card.	
Memory Clear	
OK Cancel	

(3) A confirmation message whether to execute memory clear is displayed. Click the [Yes] button.

	×
<u>.</u>	This will clear all data in the memory mounted on NC Card. Do you want to clear now ?
	Yes No

- Operation: The mouse cursor changes to an hourglass, and the NC Card memory is cleared. It takes approximately 30 seconds to clear the memory. When the memory clear has finished, the "Memory clear complete!" message is displayed.
- (4) Close all the open windows.

4.3.2.5 Confirming NC Card Operation

Using the procedures below to confirm whether the installed NC Card is working normally.

- Confirm the display status of the 7-segment LED on NC Card. [Procedure]
 - (1) NC Card is working normally if the 7-segment LED on NC Card is blinking.

Proceed to chapter 4.4.

4.3.3 Installing NC System Device Driver for Windows NT

4.3.3.1 Installing NC System Device Driver

Install NC System Device Driver according to the procedures below.

Install Device Driver by executing setup.exe on the NC System Disk 1 floppy disk. (Hardware is not detected automatically.)

When you install NC System Device Driver, be sure to log in Windows NT as Administrator.

[Procedures]

- (1) Insert the floppy disk titled "NC System Disk 1" into drive A.
- (2) Click [Run...] on the [Start] menu of the task bar.
- (3) Fill in the [Open:] field as below, and then click [OK]. a:\setup.exe
- (4) The "Welcome" window is displayed. Click [Next >].

Welcome	
	Welcome to Setup.
	The Setup program for the Mitsubishi PC-Based NC for Microsoft Windows NT installs the MELDASMAGIC NC System Software. Each Setup dialog has basic instructions for completing a step of the installation.
	To install the MELDASMAGIC on your computer now, click Next or press Enter.
	To exit Setup without installing the Product, click Cancel at any time.
	< Back

(5) The "Select Device" window is displayed.

Select "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx)," and then click [Next >]. (Specify the xx of HR62xx according to the NC Card you use.)____

- P.			
		Click the model that matches your hardware, and then click OK. If your hardware is not listed, click Cancel. This list shows only found on the installation disk.	
\langle	Modela Mitsub Mitsub Mitsub Mitsub	ishi PC-Based NC MELDASMAGIC64 (HR655A) ishi PC-Based NC MELDASMAGIC64 (HR623C) ishi PC-Based NC MELDASMAGIC64 (HR621B) ishi PC-Based NC MELDASMAGIC64 (HR621A)	
		< <u>B</u> ack Next > Cancel	

(6) The "Resource Settings" window is displayed.

Resource Set	tings	
Please set the resource of installation desired.		
	IO Port:	120-123
	Memory:	D8000-DFFFF
	IRQ:	7
		< Back Next > Cancel

Set the resources used by NC Card. Resource type and setup range depend on the type of the NC Card. Setup range for each selected NC Card is set in the combo box of each resource in advance. Select a value you want to use from the list.

The resource value available for NC Card depends on the status of the personal computer to which the software is installed. The status of the resource in the destination personal computer can be confirmed via the [Resource] tab page on the [Start] - [Program] - [Management Tool (Common)] - [Windows NT Diagnostic Program] menus. Assign a resource not used by other device currently to the NC Card.

Make a note of the selected resource type and setting, and then click [Next >].

Fill in:

Resource type (The rotaty switch of card)	Setting
I/O port (IOPADR)	
Memory (DPADR)	
IRQ (IRQ)	

(7) The "Complete Install" window is displayed. Click [Finish].

ener [i ii	lien].		
Complete Insta	Complete Install		
	The Setup program for the Product is ready to complete.		
	To install the MELDASMAGIC on your computer now, click Finish or press Enter.		
	To exit Setup without installing the Product, click Cancel at any time.		
	< Back Finish Cancel		

(8) Files are copied. A message for indicating to change the disk is displayed while the files are copied. Insert the floppy disk into drive A according to the message, and then click [OK].



(9) Copying the files is continued. When the copy has finished, the finish window is displayed. Click [Yes].

⚠	You will need to exit and restart Windows NT so that the new setting can take effect. Shutdown computer now?
	Yes No

- (10) Windows is shutdown.
- (11) Turn off the personal computer. (In some cases, the personal computer is turned off automatically.)
 *Take out the floppy disk.

Now installing NC System Device Driver has finished. Proceed to chapter "4.3.3.2 Mounting NC Card".

Do not turn on the personal computer until you mount NC Card according to the procedures of chapter 4.3.3.2 "Mounting NC Card." If you turn on the personal computer <u>without mounting</u> NC Card, the personal computer may not start up properly.

4.3.3.2 Mounting NC Card

Mount NC Card according to the procedures below.

Be sure to <u>unplug the personal computer</u> before mounting NC Card. In case this operation is executed with the power on, the devices may be damaged.

- Set the rotary switch on NC Card.
 - [Procedure]
 - (1) Refer to the following table of correspondence between NC Card layout and rotary switch settings, and set the DPADR, IOPADR, and IRQ settings of the rotary switch to the resource settings of the personal computer of which you made a note in chapter 4.3.3.1 "Installing NC System Device Driver."



Settings of the IRQ rotary switch

Enable IRQ	Switch on the NC Card
	(IRQ)
None	0
IRQ5	1
IRQ7	2
IRQ9	4
IRQ10	8

Settings of the IOPADR rotary switch

I/O port address	Switch on NC Card (IOPADR)	I/O port address	Switch on NC Card (IOPADR)
120-123	0	220-223	8
140-143	1	240-243	9
160-163	2	260-263	A
180-183	3	280-283	В
1A0-1A3	4	2A0-2A3	С
1C0-1C3	5	2C0-2C3	D
1E0-1E3	6	2E0-2E3	E
200-203	7	300-303	F

Settings of the DPADR rotary switch

2-port memory	Switch on the NC Card
	(DPADR)
D8000 - DFFFF	0
D0000 - D7FFF	1
C8000 - CFFFF	2
C0000 - C7FFF	3

■ Mount NC Card on the personal computer.

[Procedures]

- (1) Attach the battery to NC Card.
- (2) Mount NC Card to the personal computer's ISA bus.
- (3) Connect peripheral devices.
- * For the details of NC Card mounting and peripheral device connection, refer to "Connection Manual (BNP-B2203)."

4.3.3.3 Confirming NC System Device Driver's Operation

Confirm the installed device driver working properly according to the procedures below.

- Open Device Manager.
 - [Procedures]
 - (1) Turn on the personal computer. Operation: Windows starts up.
 - (2) Click the [Settings] [Control Panel] menus of the [Start] menu.
 - The "Control Panel" window appears. Double-click the "Devices" icon.



(3) The "Devices" window appears.

Confirm that "Mitsubishi PC-Based NC" is found on the "Devices" list. If "Status" indicates "Started," the device is working properly.

)e <u>v</u> ice	Status	Startup		
Keyboard Class Driver	Started	System		Close
<secdd< td=""><td>Started</td><td>System</td><td></td><td></td></secdd<>	Started	System		
nga		Disabled		Start
nga_mil		Disabled		
Microsoft NDIS System Driver	Started	System		Stop
Mitsubishi PC-Based NC	Started	System		
mitsumi		Disabled		Sta <u>r</u> tup
mkecr5xx		Disabled		HW/ Profiles
Modem		Manual		<u></u>
Mouse Class Driver	Started	System	-	Li ala

(4) Click the [Close] button.

4.3.3.4 Initializing NC Card Memory

Initialize the NC Card memory when starting up NC Card for the first time or replacing the battery of NC Card.

All the memory information (such as parameters, machining programs, and ladders) in NC Card is erased when the memory is initialized. <u>When initializing the memory of the NC Card in use</u>, be sure to <u>back up the parameters and so on</u>, as needed, prior to initialization.

Initialize the NC Card memory according to the procedures below.

Open the "Settings" page of the NC System Device Driver's Properties screen, and clear the NC Card memory.

[Procedures]

(1) Double-click the "Numerical Controller" icon on "Control Panel." The "Numerical Controller" window appears.

Click "MELDASMAGIC64 (HR62xx)" on the "Devices:" field of the "Numerical Controller" window, and then click the [Settings...] button.

For the method of displaying Control Panel, refer to chapter 4.3.3.3 "Confirming NC System Device Driver's Operation."





(2) The "MELDASMAGIC64 (HR62xx) Properties" window is displayed. Click the "Setting" tab, and click the [Memory Clear] button.

	MELDASMAGIC64 (HR623C) Properties ? 🗙
(Settings Resource
	Configuration NC Card Number(01-FF): &h
	Rotary Switch Value(F0-FF): &h F0 Apply Now
	Reboot NC Card Click this button to reboot NC Card. Reboot NC Card
	Memory clear Click this button to clear all data in the memory mounted on NC Card.
	OK Cancel Apply

(3) A confirmation message whether to execute memory clear is displayed. Click the [Yes] button.

	×
⚠	This will clear all data in the memory mounted on NC Card. Do you want to clear now ?
	Yes No

Operation: The mouse cursor changes to an hourglass, and the NC Card memory is cleared. It takes approximately 1 minute to clear the memory. When the memory clear has finished, the "Memory clear complete!" message is displayed.

(4) Close all the open windows.

4.3.3.5 Confirming NC Card Operation

Using the procedures below to confirm whether the installed NC Card is working properly.

 Confirm the display status of the 7-segment LED on NC Card. [Procedure]
 (1) The NC Card is working properly if the 7-segment LED on NC Card is blinking.

4.4 Setting Up Runtime Library

Here, set up Runtime Library for controlling NC Card from application software on the personal computer. In the setup operation, install Runtime Library and configure NC Card.

4.4.1 Installing Runtime Library

Install Runtime Library according to the procedures below.

- Install Runtime Library by executing setup.exe on the "Custom API Library Runtime Disk 1" floppy disk.
 - [Procedures]
 - (1) Insert the floppy disk titled "Custom API Library Runtime Disk 1" into drive A.
 - (2) Click the [Run...] menu of the [Start] menu on the task bar. Operation: The [Run...] window appears.
 - (3) Enter the following in the [Open:], and then click [OK].A:\setup.exeOperation: The installation program is started up.
 - (4) Install the software according to the directions from the installation program.

In ordinary cases, leave the settings default and select [Next >]. If "Setup Needs The Next Disk" window appears, insert the next disk into drive A, and then click IOK1.

Welcome to the InstallShield Wizard for MELDASMAGIC Custom API Runtime Library The InstallShield® Wizard will instal MELDASMAGIC Custom API Runtime Library on your computer. To
The InstallShield® Wizard will install MELDASMAGIC Custom API Runtime Library on your computer. To
continue, click Next.
< Beck Next> Cancel
and the set of the second float the second float the second float the second float the second s
ntime Library Setup
al files.
Custom API Runtime Library in the following folder.
To install to a different folder, click Browse and select
Browse
Blowse

MELDASMAGIC Custom API Runtime Library Setup	×
Start Copying Files	and a second
Review settings before copying files.	and the second
Setup has enough information to start copying the program files. If yo change any settings, click Back. If you are satisfied with the settings copying files.	u want to review or . click. Next to begin
Current Settings:	
Target Dir Folder : c.\melpono	
<	<u>~</u>
netal/Chintel	
	ext > Cancel

(5) If a window confirming overwriting the environment setup files used by Runtime Library is displayed, select "No."

* When the software is installed for the first time, this window is not displayed.

Questio	ı 🛛
?	C:\WINDOWS\melcfg.ini file is already exist. Environment setting information of the Mitsubishi PC-Based NC is included in this file. Overwrite it?
	Yes No

(6) For Windows95, Windows98 (including Second Edition), and WindowsNT, since the location for saving Runtime Library is specified in AUTOEXEC.BAT, the window below is displayed. When the window is displayed, select "Let Setup modify the AUTOEXEC.BAT file" and click [Next >]. (This window is not displayed for windows2000/XP.)

MELDASMAGIC Custom API Runtime Library Setup	×
Modifying File This product requires changes to be made to an existing file.	
The following line(s) need to be added to your file:	
PATH = c:\melponc\bin32	×
4	Þ
Select what you want setup to do	
Let Setup modify the AUTOEXEC.BAT file.	
Save the required changes to AUTOEXEC.NEW file.	
C Do not make any changes.	
Installiblield	Cancel

(7) Select "Set up it from a control panel," and then click [Next >].



4.4.2 Assigning an NC Card No. to PCI NC Card

Here, assign an NC Card No. to NC Card. This NC Card No. allows the application operating NC Card to identify the NC Card.

The NC Card No. is necessary even if only one NC Card is actually mounted on the personal computer.

Assign an NC Card No. according to the procedures below.

Input the NC Card No. on the [Settings] page of "Mitsubishi PC-Based NC MELDASMAGIC64 (HR6xxx) Properties" window.

[Procedures]

(1) Double-click [Other Device] on [Device Manager], and [Mitsubishi PC-Based NC MELDASMAGIC64 (HR6xxx) Properties].

For WindowsNT, [Numerical Controller] window is displayed. Click [MELDASMAGIC64 (HR62xx)] on [Devices], and then click [Settings...] button.

Display sample for WindowsXP

A Device Manager	
Ele Action View Help	
□ - ▲ PC123	
😑 😼 Computer	
🗈 🛥 Disk drives	
🕀 😼 Display adapters	
🕀 🥝 DVD/CD-ROM drives	
🗄 😁 Floppy disk controllers	
🖲 🚜 Floppy disk drives	
IDE ATA/ATAPI controllers	
🖲 🦢 Keyboards	
Mice and other pointing devices	
🖲 🧕 Monitors	
and a set work adapters	
😑 🍄 Other devices	
Mtsubishi PC-Based NC MELDASMAGIC64 (HR655A)	
Borts (COM & LPT)	
🕑 📾 Processors	
🐵 🖳 System devices	
🗄 🙀 Universal Serial Bus controllers	
-	

* For the method of displaying the [Device Manager], refer to each chapter as follows.

For WindowsXP	chapter 4.2.1.4
For Windows2000	chapter 4.2.1.4
For Windows98/98SE	chapter 4.2.2.4
For Windows95	chapter 4.3.1.3

* For WindowsNT, [Numerical Controller] is displayed. For the method of displaying the window, refer to chapter 4.3.3.4.

Display sample for WindowsNT

Mitsubishi PC-Ba	sed NC MELDASMAGIC64 (HR655A)
Device type:	Other devices
Manufacturer:	Mitsubishi
Location:	PCI Slot 5 (PCI bus 1, device 11, function 0)
Jevice status	
This device is working	oroperly.
f you are having proble start the troubleshooter.	ms with this device, click Troubleshoot to
	Tracklashaat
e usage:	Iroubleshoot


(2) Click the [Settings] tab, and then input NC Card No.



- * For ISA NC Card, the [Card setting] does not exist.
- * For WindowsNT, [General] and [Driver] tabs do not exist.

- Set an NC Card No. in [NC Card Number(01-FF): &h] of [Configuration]. The setup range for an NC Card No. is 01-FF in hex. If one NC Card is used only, set 01 normally. Example: NC Card Number (01-FF): &h01
- Note: When reinstalling or upgrading NC System Device Driver, set the same NC Card No. as the one used so far. If a different NC Card No. is set, the environment setup may be erased.
 - (3) Click the [OK] button.Operation: The "Properties" window is closed.
 - (4) Close [Device Manager].

After the operation is	s finished, the following window is display	ed.
MELDASMAGIC Custom API	Runtime Library Setup	
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed MELDASMAGIC Custom API Runtime Library. Before you can use the program, you must restart your computer. Yes, I want to restart my computer now. No, I will restart my computer later. Remove any disks from their drives, and then click Finish to	
	complete setup.	

(5) Take out the floppy disk, and then click [Finish] button. Proceed to chapter 4.5 after rebooting the personal computer.

4.5 Setting Up the Utility

Here, set up the utility software for MELDASMAGIC. In the utility, many convenient tools are available for using MELDASMAGIC. Refer to "Utility Instruction Manual (BNP-B2196)" for details on the utility.

4.5.1 Installing the Utility

Install the utility according to the procedures below.

- Install the utility by executing "setup.exe" in the "Utility Software Disk 1" floppy disk [Procedures]
 - (1) Insert the floppy disk titled "Utility Software Disk 1" into drive A.
 - (2) Click the [Run...] menu of the [Start] menu on the task bar. Operation: The "Run" window appears.
 - (3) Enter the following in the [Open:], and then click [OK].A:\setup.exeOperation: The installation program is started up.
 - (4) Install the software according to the directions from the installation program.

4.6 Setting up MELDASMAGIC Monitor

Here, set up MELDASMAGIC Monitor. MELDASMAGIC Monitor is a maintenance tool used for the adjustment of MELDASMAGIC NC parameters and so on. Refer to "MELDASMAGIC Monitor Operation Manual (BNP-B2192)" for details on MELDASMAGIC Monitor. Be sure to install the utility before using MELDASMAGIC Monitor.

4.6.1 Installing MELDASMAGIC Monitor

Install MELDASMAGIC Monitor according to the procedures below.

Install MELDASMAGIC Monitor by executing "setup.exe" on the "MELDASMAGIC Monitor" floppy disk.

[Procedures]

- (1) Insert the floppy disk titled "MELDASMAGIC Monitor" into drive A.
- (2) Click the [Run...] menu of the [Start] menu on the task bar. Operation: The "Run" window appears.
- (3) Enter the following in the [Open:], and then click [OK].A:\setup.exeOperation: The installation program is started up.
- (4) Install the software according to the directions from the installation program.

4.7 Setting Up NC data

Parameters, ladder programs and so on will be lost when NC Card is started up for the first time or NC Card memory is erased in changing batteries. In this case, set up these data according to the procedures below.

4.7.1 Installing NC Standard Parameters

Install NC standard parameters using the file transfer utility (magictrs.exe) to copy the NC standard parameter file to NC Card.

Install NC standard parameters according to the procedures below.

■ Overwrite the "paramet.bin" file on the "NC Data (64x)" floppy disk to the "\PRM\PARAMET.BIN" file on NC Card using the file transfer utility (magictrs.exe).



[Procedures]

- (1) Insert the floppy disk titled "NC Data (64x)" into drive A.
 * Here, select M, L, D, or G for the x of "64x".
- (2) Click [Programs] [MELDASMAGIC] [File Transfer] menus from the taskbar [Start] menu, and then start the file transfer utility.
- (3) Select the "A:\paramet.bin" file on the [PC] side of the "File Transfer" window.
- (4) Select the "Mxx:\PRM\" directory on the [NC] side.* Here, specify the NC Card No. being set up on the xx of "Mxx."
- (5) Click the button for copying parameters (from the personal computer to NC Card) to copy parameters.
 Operation: Files are overwritten.
- Exit the file transfer utility.
- Exit Windows, and restart the personal computer.

4.7.2 Installing NC Option Functions

If you have purchased the NC option functions of MELDASMAGIC, install NC option data. Install the NC option data according to the procedures below.

- Start the installer (setup.exe) of NC option data on the floppy disk. [Procedures]
 - (1) Insert the floppy disk titled "NC Option" into drive A.
 - (2) Click the [Run...] menu from the taskbar [Start] menu. Operation: The [Run...] window appears.
 - (3) Enter the following in the [Open:], and then click [OK].A:\setup.exeOperation: The installer of NC option data starts.
- Install NC option data according to the directions on the screen.
- Exit Windows, and restart the personal computer.

4.7.3 Setting Up NC Parameters

Here, set up and adjust NC parameters according to the machine configuration and machine specifications. Use MELDASMAGIC Monitor to set up and adjust NC parameters.

- Start MELDASMAGIC Monitor (magicmon.exe).
 - [Procedures]
 - (1) Click the [Programs] [MELDASMAGIC] [MELDASMAGIC Monitor] menus from the taskbar [Start] menu, and start MELDASMAGIC Monitor.

🕮 MELDASMAGIC	Monitor				
<u>Eile S</u> creen					
MELDASMACTO	70	ID 2150100 P1			ARD SELECT(F6)
Monitor (F7/Ctr1+M)	Tool.param (F8/Ctrl+T)	Edit.mdi (F9/Ctrl+E)	Diagn.in/out (F10/Ctr1+D)	Sfg (F11/Ctr1+S)	F0 (F12/Ctr1+F)
[POSITI O	ON] 1/	2 1: 1 N	23 MO 0-0	NITOR	1
< з и в > о		Ν			
х	0	. 0 0	0		
Y	0	. 0 0	0		0 0)
Z	0	. 0 0	0	T M	
С	0	. 0 0	0	Fc	0.00
G 2 8 Z O G 2 8 X O					
POSI	COORDI	соим	AND SEA	RCH	MENU
Fl	F2	F	3	F4	F5
RESET(Esc) C.B(Home)	DELETE (Delete INPUT (Enter)	e) INS(Inser CAN(Ctrl+	t) N) CALC(Ctrl	PREVI +L) NEXT(OUS(Page Up) Page Down)
Ready					

Set up and adjust NC parameters according to the machine configuration and machine specifications.

Refer to "MELDASMAGIC Monitor Operation Manual (BNP-B2192)" for MELDASMAGIC Monitor handling. Refer to "MELDAS60/60S series Operation Manual (BNP-B2180)" for the screens and parameters.

- Exit Windows, and restart the personal computer.
- Start the MELDASMAGIC monitor again.
- Format the NC file system.
 - [Procedures]
 - (1) Open the "Setup Parameters" menu from MELDASMAGIC Monitor.
 - (2) Set "1" on the [#1060 Setup] parameter of [BASE SPEC. PARAM], and then press the Enter key. Operation: The message of " BASE PARA SET (Y/N)" appears in the MELDASMAGIC Monitor window.
 - (3) Set "N," and then press the Enter key. Operation: The message of "FORMAT ? (Y/N)" appears in the MELDASMAGIC Monitor window.
 - (4) Set "Y," and then press the Enter key. Operation: The NC file system is formatted. When formatting has finished, the message of "SETUP COMPLETE" is displayed.

4.7.4 Backing Up NC Parameters

When NC data have been set up, create a backup file for the parameters.

CAUTION If NC data are lost due to some unforeseen problem, the parameters can be restored using the file created here. <u>Be sure to create the backup file.</u>

Create the backup file according to the procedures below.

- Insert the formatted floppy disk into drive A.
 - Use the file transfer utility (magictrs.exe) to copy the "\PRM\PARAMET.BIN" file on NC Card to the A drive of the personal computer.

😤 File Transfer	
<u>F</u> ile <u>H</u> elp	
PC Directories: a:\ a:\ File Name:	NC Directories: M01:\PRM\ M01: PRM M01: ✓ File Name: PARAMET.BIN ALL.PRM PARAMET.BIN FILESYS.BIN

[Procedures]

- (1) Click the [Programs] [MELDASMAGIC] [File Transfer] menus from the taskbar [Start] menu to start the file transfer utility.
- (2) Select the "Mxx:\PRM\PARAMET.BIN" file on the [NC] side of the "File Transfer" window. * Specify the NC Card No. being set up on the xx of "Mxx."
- (3) Select the "A:\" directory on the [PC] side.
- (4) Click the 🚺 button (for copying the file from NC Card to the personal computer) to copy the file. Operation: The file is copied.
- Exit the file transfer utility.
- Store the floppy disk with the copied parameter file in a safe place.

5. Installing the Option Software

If you have purchased the option software, install the software according to the procedures below.

5.1 Installing MELDASMAGIC MMI

MELDASMAGIC MMI is an application for displaying the operation status of MELDASMAGIC, editing machining programs, and setting up user parameters.

Refer to the following documents attached to the software for the installation method of MELDASMAGIC MMI. "MELDASMAGIC MMI Operation Manual (D/M)(BNP-B2193)" or "MELDASMAGIC MMI Operation Manual (L/G)(BNP-B2194)"

5.2 Installing Custom API Library

The Custom API Library is a software development kit for creating applications to operate MELDASMAGIC.

Refer to the following document attached to the software for the installation method of Custom API Library.

"Custom Application Interface Library Instruction Manual (Programming Edition) (BNP-B2197)"

5.3 Installing Personal Computer Direct Operation Function

Personal Computer Direct Operation Function is a function by which NC Card operates the memory as directly reading machining programs on the personal computer's drive.

Refer to the following document attached to the software for the installation method of this function. "Personal Computer Direct Operation Instruction Manual (BNP-B2195)"

6. Troubleshooting

6.1 Checklist (PCI NC Card)

If a problem occurs during setup, check the items below.

<Items to be checked after the personal computer is turned Refer to: off>

Be sure to turn off the personal computer before confirming the items below.

- 1. Check that all cables are correctly connected.
- Check that the mounted NC Card is securely inserted into the PCI bus slot.
- 3. Check that the rotary switch on NC Card (CDNO) is set up properly.

<Items to be checked after the personal computer is turned on>

- 1. Check that NC System Device Driver has been installed.
- 2. Check that Runtime Library has been installed.
- 3. Check that an NC Card number has been set properly.
- 4. Check that the utility and MELDASMAGIC Monitor have been installed.
- 5. Check that the station number of the PCI NC Card set on the rotary switch of NC Card is not duplicated with that of other PCI NC Card.

- 4.2 Setting Up NC Card and Device Driver (PCI NC Card)
- 4.2 Setting Up NC Card and Device Driver (PCI NC Card)
- 4.2 Setting Up NC Card and Device Driver (PCI NC Card)

Refer to:

- 4.2 Setting Up NC Card and Device Driver (PCI NC Card)
- 4.4 Setting Up Runtime Library
- 4.4.2 Assigning an NC Card No. of PCI NC Card
- 4.5.1 Installing the Utility
- 4.6.1 Installing MELDASMAGIC Monitor
- 4.2 Setting Up NC Card and Device Driver (PCI NC Card)

If the problem is not fixed even after carrying out these steps, try operations again after turning on the personal computer again. If the problem still remains, refer to chapter 6.3 "Troubleshooting."

6.2 Checklist (ISA NC Card)

If a problem occurs during setup, check the items below.

those selected on the way to installation.

<items after="" be="" checked="" computer="" is="" off="" personal="" the="" to="" turned=""></items>	Refer to:
CAUTION Be sure to turn off the personal computer before confirming the items below.	
 Check that all the cables are correctly connected. Check that the mounted NC Card is securely inserted into the 	4.3 Setting Up NC Card and Device Driver (ISA NC Card)4.3 Setting Up NC Card and Device
PCI bus slot.	Driver (ISA NC Card)
 Check that the rotary switches on NC Card (DPADR, IOPADR, and IRQ) are set up properly. 	4.3 Setting Up NC Card and Device Driver (ISA NC Card)
<items after="" be="" checked="" computer="" is="" on="" personal="" the="" to="" turned=""></items>	Refer to:
 Check that NC System Device Driver has been installed. 	4.3 Setting Up NC Card and Device Driver (ISA NC Card)
2. Check that Runtime Library has been installed.	4.4 Setting Up Runtime Library
3. Check that an NC Card number has been set properly.	4.4.3 Assigning an NC Card No. of ISA NC Card
4. Check that the utility and MELDASMAGIC Monitor have been installed.	4.5.1 Installing the UtilityInstalling MELDASMAGIC Monitor
Check that the memory address and IO port address set on the rotary switch of NC Card is the same as	4.3 Setting Up NC Card and Device Driver (ISA NC Card)

If the problem is not fixed even after carrying out these steps, try operations again after turning on the personal computer again. If the problem still remains, refer to chapter 6.3 "Troubleshooting."

6.3 Troubleshooting

Problem 1: The environment files backed up are not found.

The file view option may not be set properly in Explorer. Change the [file view] option to [Display All Files.]

- [Procedures]
- (1) Click the [View] [Option...] menus (or [Folder Option]) to open the [View] page.
- (2) Click the [Display All Files] option button of the [file view] group. (Select a setting so that all files are displayed.)
- (3) Uncheck the check box of [Not display the extensions of registered files.] (Select a setting so that extensions are displayed.)
- (4) Click [OK].

Problem 2: When NC System is installed, the message of "You are using other hardware that conflicts with the hardware you are trying to install." appears, and installation is stopped (for ISA NC Card).

Examine the vacancy of the resources (memory, I/O port, and IRQ) used by the personal computer, and adjust the resources used by each expansion card. [Procedures]

- (1) Click [Settings] [Control Panel] menus from the [Start] menu. Operation: The "Control Panel" window appears.
- (2) Double-click the "System" icon of "Control Panel." Operation: The "System Properties" window appears.
- (3) Click the "Device Manager" tab.
- (4) Select [Computer], and click [Properties].

System Properties	X
General Device Manager Hardware Profiles Performance	
• View devices by type • • • • • • • • • • • • • • • • • • •	
Computer CDROM CD	
Ports (COM & LPT) System devices Properties Refresh Remove Pringt	
OK Cancel	

(5) Click the [Interrupt request (IRQ)] option button, and check that an IRQ is available for NC Card.

There is no problem concerning IRQ if one or more of IRQ5, IRQ7, IRQ9, and IRQ10 is not used. When all the IRQ are used by other hardware, change the IRQ of the hardware if the IRQ can be changed. If the IRQ cannot be changed, the hardware must be removed before NC Card can be installed.

(6) Click the [Inport/outport (I/O)] option button, and check that an IO port is available for NC Card. There is no problem concerning the I/O port address if one or more following addresses set is not used:

120-123, 140-143, 160-163, 180-183, 1A0-1A3, 1C0-1C3, 1E0-1E3, 200-203, 220-223, 240-243, 260-263, 280-283, 2A0-2A3, 2C0-2C3, 2E0-2E3, and 300-303. When all the I/O port addresses are used by other hardware, change the IO port addresses of the hardware if the addresses can be changed. If the addresses cannot be changed, the hardware must be removed before NC Card can be installed.

- (7) Click the [Memory] option button, and check if any of the following (a) to (c) address ranges is available.
 - (a) C0000 C7FFF
 - (b) C8000 CFFFF
 - (c) D8000 DFFFF
 - (d) D8000 DFFFF

There is no problem concerning the memory if any of the above ranges is vacant. If none of the ranges is vacant, change the settings of the hardware or memory driver being used to reserve one of the above four ranges.

Problem 3: After installing NC System Device Driver, Windows will not start up when the personal computer is turned on.

- The screen disappears on the way to starting up Windows.
- The wallpaper appears, however, the mouse cursor stays as an hourglass, and other symptoms.

Possible causes are as follows:

- NC Card is not mounted on the personal computer properly.
- The rotary switch on NC Card is not set up properly.
- Device Driver was added before the older version of Device Driver was removed.

Check the settings and mounting of the NC Card. In addition, check the installation of the Device Driver using the procedures below.

[Procedures]

- (1) Start Windows in the Safe mode.
- (2) Display the "Device Manager" from "System" on "Control Panel."
- (3) Check that the number of NC System Device Drivers is equal to the number of the NC Cards mounted on the personal computer.
- (4) If the number of installed NC System Device Drivers is larger than the number of the NC Cards, delete the NC System Device Drivers and install them again.

If Windows will not start up after carrying out the above procedures, delete all the NC System Device drivers. If Windows will not start up even after deleting all the NC System Device Drivers, restore the Windows environment according to the procedures below, and then install Device Drivers again.

[Procedures]

- (1) Start Windows in the Safe mode.
- (2) Overwrite the environment files of the personal computer with the files saved before installation.
- (3) Restart Windows.

Problem 4: After installing NC System Device Driver, the message of "NC Card not respond!" appears when Windows is started up.

Possible causes are as follows:

- NC Card is not mounted on the personal computer properly.
- The rotary switch on NC Card is not set up properly.
- Check the settings and mounting of NC Card.
- In addition, the following causes are also possible.
- An old version of BIOS is installed on the personal computer.
- BIOS is not set properly on the personal computer.

For some types of BIOS, it may be necessary to set up the cache of expansion memory addresses and memory shadow. In this case, set the cache of expansion memory addresses and memory shadow to "Disabled."

Problem 5: There is no rotary switch (DPADR, IOPADR, and IRQ) on ISA NC Card. You may use an incorrect NC Card. Check that the card name printed on the NC Card reads HR621B or HR623C. In addition, confirm that card's present state (an alphabet stamped on the card in ink) is one of C-Z.

Problem 6: Windows starts up, however, the LED of NC Card is not blinking but remains "8." NC System Device Driver has not been installed or disabled temporarily. Display the "Device Manager" of "System" from Control Panel, and confirm that NC System Device Driver is installed. Install Device Driver if it has not been installed. In addition, confirm that the [Device usage] checkbox is checked on the [General] page of the Properties sheet of NC System Device Driver. Check the checkbox if it has not been checked.

Problem 7: Although Windows starts up normally when the personal computer is turned on, the LED of NC Card is not blinking. (Expect "8." is displayed in the LED.) NC data have been destroyed or NC System has gone down. First, turn on the personal computer again. If condition does not change after the computer is restarted, initialize the NC

Card memory. If the memory is initialized properly, install NC standard parameters. Here, use the file saved in the chapter of "Backing Up NC parameters" to install the NC parameter file (parmet.bin). If the memory is not initialized successfully, open "System" from "Control Panel," and delete NC System Device Driver before installing NC System Device Driver again.

Problem 8: When starting the file transfer utility or an MMI application, "device cannot open" or error No. 0x82000008 is displayed.

The device driver for Runtime Library may not be installed properly. The device driver is installed when Runtime Library is installed. Refer to chapter 4.4.1 "Installing Runtime Library" and install the device driver for Runtime Library.

Problem 9: When you attempted to select an NC Card drive using the file transfer utility, the target drive name could not be found.

NC Card No. may not be set. Refer to "4.4.2 Assigning an NC Card No. of PCI NC Card" to set an NC Card number.

Problem 10: After ISA NC Card is removed, Windows will not start, or an error occurs during startup.

NC Device Driver may be still in the condition of "in use" even after NC Card is removed. Start Windows in the Safe mode, and then refer to chapter 7.2 "Removing NC Card," and delete the NC Device Driver or disable it temporarily.

Problem 11: When the file transfer utility was started, the message of "File Not Found" appeared, and the file transfer utility could not be started.

The PATH environment variable may not be set properly. Check the setting of the PATH environment variable using the procedures below.

[Procedures]

- (1) Open the C:\autoexec.bat file using an editor such as Notepad.
- (2) On the row of the PATH environment variable, check that the path of the directory to which Runtime Library was installed is found.

Example: When "C:\melpcnc\" is specified on the destination,

(This directory is the default destination.)

Check that there is a search path of "C:\melpcnc\bin32."

- (3) Add the setting of the PATH environment variable if it is not found at step (2).
- (4) Check the order of search paths if the PATH environment variable is found at step (2). If "C:\melpcnc\bin" is found on the setting of the PATH environment variable, set

"C:\melpcnc\bin32" before the setting of "C:\melpcnc\bin."

Example:

PATH=%PATH%;C:\mlepcnc\bin;C:\melpcnc\mmi

PATH=%PATH%;C:\melpcnc\bin32;C:\melpcnc\bin;C:\melpcnc\mmi

(5) Check that there is no mistake on the expression of the PATH environment variable. Example: PATH=%PATH%;C:melpcnc\bin32;... (There is no \ after the C:)

Problem 12: An NC drive name not used actually is displayed on the [NC Card Select] of MELDASMAGIC Monitor or the drive list on the [NC] side of the file transfer utility. A contradiction may have occurred in the content of the MELCFG.INI file in the Windows directory. Check that there is no unnecessary [MachineXX] (XX is 01-FF) section in the MELCFG.INI file, and delete any unnecessary [MachineXX] section. Problem 13: An error message indicating "An error occurred while files are copied: -115" was displayed when the installation program is executed, so that files could not be installed.

An application such as MMI may have been executed during the installation. Exit all Windows applications before executing the installation program. In addition, if the "PC Direct file server" icon is displayed on the indicator area of the taskbar (in the area opposite to the [Start] menu button) or "NcPccom" is found on the task list (displayed by pressing [Ctrl] + [Alt] + [Delete]), exit these applications. You can exit "PC Direct file server" via the pop-up menu displayed by pointing to and right-clicking the icon on the indicator.

 Problem 14: A message indicating "NC card setting error. PCI channel number is conflict. (CDNO:xx)" is displayed on the way to starting Windows (for PCI NC Card).
 The PCI NC Card's station number may be duplicated. When you use more than one PCI NC Card, respective NC Cards must have different station numbers. Change the station number so that the settings of the rotary switches (CDNO) on the respective NC Cards are not duplicated each other.

7. Appendices

7.1 How to Remove NC Card (PCI NC Card)

Remove NC Card according to the procedures below.

7.1.1 Removing NC Card

Remove NC card out of the personal computer according to the procedures below.

- Exit Windows, and turn off the personal computer.
- Remove NC Card.

7.1.2 Removing NC Card Temporarily

Remove NC Card temporarily out of the personal computer according to the procedures below.

- Exit Windows, and turn off the personal computer.
- Remove NC Card.

7.1.3 Resuming Using NC Card Removed Temporarily

Resume the use of temporarily removed NC Card according to the procedures below.

- Exit Windows, and turn off the personal computer.
- Mount NC Card, and connect peripheral devices.

Mount NC Card on the same slot as used before removing it. If you mount the card on the different slot, NC System Device Driver must be installed again.

7.2 How to Remove NC Card (ISA NC Card)

If you remove the NC Card in use out of the personal computer, be sure to delete or temporarily disable NC System Device Driver. If you remove NC Card with NC System Device Driver enabled, an error may occur when Windows is started or Windows may not start. Remove the NC Card according to the procedures below.

7.2.1 Removing NC Card

Remove the NC Card out of the personal computer according to the procedures below.

Open Device Manager.

[Procedures]

- (1) Turn on the personal computer. Operation: Windows starts up.
- (2) Click the [Settings] [Control Panel] menus from the [Start] menu. Operation: The "Control Panel" window appears.
- (3) Double-click the "System" icon of "Control Panel." Operation: The "System Properties" window appears.
- (4) Click the "Device Manager" tab.

- Delete NC System Device Driver.
 - [Procedures]
 - (1) Select [Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx)] below [Other devices,] and click the [Delete] button.

System Properties	×
General Device Manager Hardware Profiles Performance	
 View devices by type View devices by connection Computer CDROM Disk drives Display adapters Floppy disk controllers Hard disk controllers Keyboard Monitor Monitor Other devices With the devices With the devices System devices 	
Properties Refresh Remove Print	

Operation: The "Confirm Device Removal" window is displayed.

Confirm D)evice Removal 🛛 🔋 🗙
₽ <mark>₽</mark> ₽	Mitsubishi PC-Based NC MELDASMAGIC64 (HR623C)
Warning:	You are about to remove this device from your system.
	OK Cancel

- (2) Click the [OK] button. Operation: The "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx)" device is deleted.
- (3) Click the [OK] button on the "System Properties" window. Operation: The "System Properties" window is closed.
- Exit Windows, and turn off the personal computer.
- Remove NC Card.

7.2.2 Removing NC Card Temporarily

Remove the NC Card temporarily out of the personal computer according to the procedures below.

- Open Device Manager.
 - [Procedures]
 - (1) Turn on the personal computer. Operation: Windows starts up.
 - (2) Click the [Settings] [Control Panel] menus of the [Start] menu. Operation: The "Control Panel" window appears.
 - (3) Double-click the "System" icon of "Control Panel." Operation: The "System Properties" window appears.
 - (4) Click the "Device Manager" tab.
- Quit using NC System Device Driver.

[Procedures]

(1) Select "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx)" below "Other devices," and click the [Properties] button.

Operation: The "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx) Properties" window is displayed.



(2) Uncheck the boxes in the [Device Usage] group.



(3) Click the [OK] button.

Operation: The "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx) Properties" window is closed.

- (4) Click the [OK] button on the "System Properties" window. Operation: The "System Properties" window is closed.
- Exit Windows, and turn off the personal computer.
- Remove NC Card.

7.2.3 Resuming Using NC Card Removed Temporarily

Resume the use of temporarily removed NC Card according to the procedures below.

- Exit Windows, and turn off the personal computer.
- Mount NC Card, and connect peripheral devices.
- Open Device Manager. [Procedures]
 - (1) Turn on the personal computer. Operation: Windows starts up.
 - (2) Click the [Settings] [Control Panel] menus of the [Start] menu. Operation: The "Control Panel" window appears.
 - (3) Double-click the "System" icon of "Control Panel." Operation: The "System Properties" window appears.
 - (4) Click the "Device Manager" tab.

- Resume Using NC System Device Driver. [Procedures]
 - (1) Select [Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx)] below [Other Devices,] and click the [Properties] button.

Operation: The "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx) Properties" window appears.

Mitsubishi PC-Based NC MELDASMAGIC64 (HR623C) 🎴 🗙
General Settings Driver Resources
Mitsubishi PC-Based NC MELDASMAGIC64 (HR623C)
Device type: Other devices
Manufacturer: Mitsubishi
Hardware version: Not available
Device status
This device is disabled. (Code 22.)
Device usage Disable in this hardware profile Remove from this hardware profile
OK Cancel

(2) Check the check boxes in the [Device Usage] group.

General Settings Driver Resources
Mitsubishi PC-Based NC MELDASMAGIC64 (HR623C)
Device type: Other devices
Manufacturer: Mitsubishi
Hardware version: Not available
Device status
This device is disabled. (Code 22.)
Device usage
Disable in this hardware profile
Remove from this hardware profile
OK Cancel

(3) Click the [OK] button.

Operation: The "Mitsubishi PC-Based NC MELDASMAGIC64 (HR62xx) Properties" window is closed.

(4) Click the [OK] button of the "System Properties" window. Operation: The "System Properties" window is closed.

7.3 Data Compatibility with MELDASMAGIC50

USERPLC.LAD and data (parameters and so on) other than machining programs, created by MAGIC50, cannot be used by MAGIC64.

The ladder program files (USERPLC.LAD) created by MAGIC50 can be converted into the ladder program file for MAGIC64 using the cnv4bmm.exe and chgcx.exe tools. (Refer to operation of 1) and 2) in the figure below.)

The machining program files created by MAGIC50 can be used directly by MAGIC64.



7.4 List of Related Documents

"MELDAS60/60S Series Operation Manual (BNP-B2180)"
"Connection Manual (BNP-B2203)"
"MELDASMAGIC Monitor Operation Manual (BNP-B2192)"
"MELDASMAGIC MMI Operation Manual (D/M) (BNP-B2193)"
"MELDASMAGIC MMI Operation Manual (L/G) (BNP-B2194)"
"Personal Computer Direct Operation Instruction Manual (BNP-B2195)"
"Utility Instruction Manual (BNP-B2196)"
"Custom Application Interface Library Instruction Manual (Programming Edition) (BNP-B2197)"

Revision History

Date of revision	Manual No.	Revision details
Mar. 1998	BNP-B2191*	First edition
Aug. 2003	BNP-B2191A	Description on ISA NC Card for Windows 98/NT was added.
		Description on PCI NC Card was added.

Notice

Every effort has been made to keep up with software and hardware revisions in the contents described in this manual. However, please understand that in some unavoidable cases simultaneous revision is not possible.

Please contact your Mitsubishi Electric dealer with any questions or comments regarding the use of this product.

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MODEL	MAGIC64
MODEL CODE	008-087
Manual No.	BNP-B2191A(ENG)