

DX100

UPGRADE PROCEDURE MANUAL

Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and retain for future reference.

MOTOMAN INSTRUCTIONS

MOTOMAN-□□□ INSTRUCTIONS
DX100 INSTRUCTIONS
DX100 OPERATOR'S MANUAL
DX100 MAINTENANCE MANUAL

The DX100 operator's manual above corresponds to specific usage.
Be sure to use the appropriate manual.

Part Number: 161409-1CD
Revision: 1



MANDATORY

- This manual explains the upgrading procedures of the DX100 system. Read this manual carefully and be sure to understand its contents before handling the DX100.
- General items related to safety are listed in the Chapter 1: Safety of the DX100 Instructions. To ensure correct and safe operation, carefully read the DX100 Instructions before reading this manual.



CAUTION

- Some drawings in this manual are shown with the protective covers or shields removed for clarity. Be sure all covers and shields are replaced before operating this product.
- The drawings and photos in this manual are representative examples and differences may exist between them and the delivered product.
- YASKAWA may modify this model without notice when necessary due to product improvements, modifications, or changes in specifications. If such modification is made, the manual number will also be revised.
- If your copy of the manual is damaged or lost, contact a YASKAWA representative to order a new copy. The representatives are listed on the back cover. Be sure to tell the representative the manual number listed on the front cover.
- YASKAWA is not responsible for incidents arising from unauthorized modification of its products. Unauthorized modification voids your product's warranty.

Notes for Safe Operation

Read this manual carefully before installation, operation, maintenance, or inspection of the DX100.

In this manual, the Notes for Safe Operation are classified as “WARNING”, “CAUTION”, “MANDATORY”, or “PROHIBITED”.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to personnel.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury to personnel and damage to equipment. It may also be used to alert against unsafe practices.



MANDATORY

Always be sure to follow explicitly the items listed under this heading.



PROHIBITED

Must never be performed.

Even items described as “CAUTION” may result in a serious accident in some situations. At any rate, be sure to follow these important items.



To ensure safe and efficient operation at all times, be sure to follow all instructions, even if not designated as “CAUTION” and “WARNING”.



WARNING

- Before operating the manipulator, check that servo power is turned off when the emergency stop buttons on the front door of the DX 100 and programing pendant are pressed. When the servo power is turned off, the SERVO ON LED on the programing pendant is turned off.

Injury or damage to machinery may result if the emergency stop circuit cannot stop the manipulator during an emergency. The manipulator should not be used if the emergency stop buttons do not function.

Fig. : Emergency Stop Button



- Once the emergency stop button is released, clear the cell of all items which could interfere with the operation of the manipulator. Then turn the servo power ON.

Injury may result from unintentional or unexpected manipulator motion.

Fig. : Release of Emergency Stop



- Observe the following precautions when performing teaching operations within the P-point maximum envelope of the manipulator:
 - View the manipulator from the front whenever possible.
 - Always follow the predetermined operating procedure.
 - Ensure that you have a safe place to retreat in case of emergency.

Improper or unintended manipulator operation may result in injury.

- Confirm that no person is present in the P-point maximum envelope of the manipulator and that you are in a safe location before:
 - Turning on the power for the DX100.
 - Moving the manipulator with the programming pendant.
 - Running the system in the check mode.
 - Performing automatic operations.

Injury may result if anyone enters the working envelope of the manipulator during operation. Always press an emergency stop button immediately if there are problems.

- The emergency stop button is located on the right of the front door of the DX 100 and programing pendant.



CAUTION

- Perform the following inspection procedures prior to conducting manipulator teaching. If problems are found, repair them immediately, and be sure that all other necessary processing has been performed.
 - Check for problems in manipulator movement.
 - Check for damage to insulation and sheathing of external wires.
- Always return the programming pendant to the hook on the cabinet of the DX100 after use.

The programming pendant can be damaged if it is left in the manipulator's work area, on the floor, or near fixtures.

- Read and understand the Explanation of Warning Labels in the DX100 Instructions before operating the manipulator.

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Descriptions of the programming pendant keys, buttons, and displays are shown as follows:

Equipment		Manual Designation
Programming Pendant	Character Keys	The keys which have characters printed on them are denoted with []. ex. [ENTER]
	Symbol Keys	The keys which have a symbol printed on them are not denoted with [] but depicted with a small picture. ex. page key  The cursor key is an exception, and a picture is not shown.
	Axis Keys Numeric Keys	"Axis Keys" and "Numeric Keys" are generic names for the keys for axis operation and number input.
	Keys pressed simultaneously	When two keys are to be pressed simultaneously, the keys are shown with a "+" sign between them, ex. [SHIFT]+[COORD]
	Displays	The menu displayed in the programming pendant is denoted with { }. ex. {JOB}

Description of the Operation Procedure

In the explanation of the operation procedure, the expression "Select . . ." means that the cursor is moved to the object item and the SELECT key is pressed.

Registered Trademark

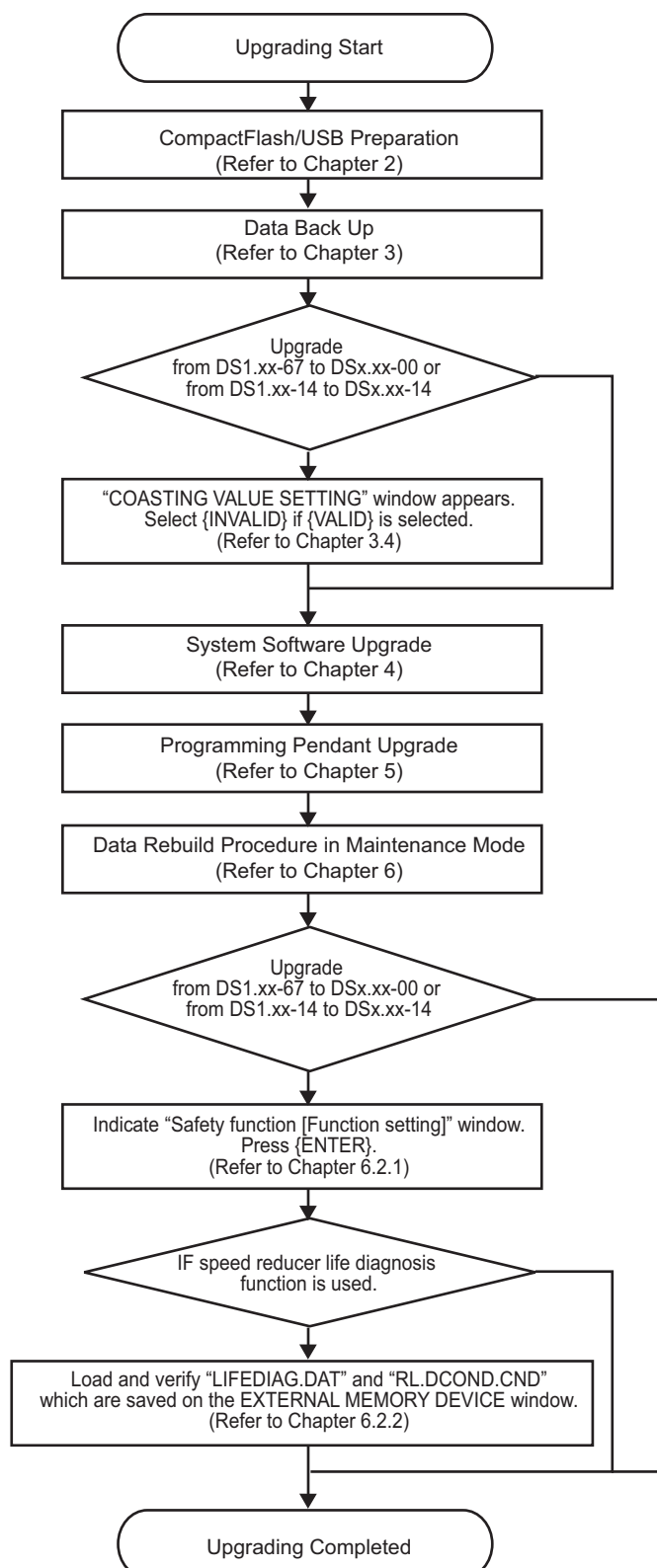
In this manual, names of companies, corporations, or products are trademarks, registered trademarks, or brand names for each company or corporation. The indications of (R) and TM are omitted.

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1 Outline

1.1 Outline of Upgrade Procedure

The upgrading procedures for the DX100 is outlined as follows:



	2	CompactFlash/USB Preparation
DX100	2.1	Prearrangements

2 CompactFlash/USB Preparation

To upgrade the DX100, it is required to set a CompactFlash memory card (hereinafter referred to as “CompactFlash”) or a USB memory stick (hereinafter referred to as “USB”) into the programming pendant.

This chapter describes on how to prepare the CompactFlash or USB for upgrading the DX100.

2.1 Prearrangements

Prepare the following items when making the CompactFlash/USB for the DX100 upgrade.

- Personal computer with Windows operating system, available to use CompactFlash/USB. (Windows is a registered trademark of Microsoft Corporation.)
- Data file for upgrade.
- CompactFlash
The following types are recommended for DX100.

<Recommended CompactFlash>

No.	Manufacturer	Model	Remarks
1	Hagiwara Sys-Com	MCF10P-256MS-YE2	256MB
2	Hagiwara Sys-Com	MCF10P-512MS	512MB
3	Hagiwara Sys-Com	MCF10P-A01GS	1GB
4	Hagiwara Sys-Com	MCF10P-A02GS	2GB
5	SiliconSystems, Inc.	SSD-CxxM-3512	“xx” represents the capacity (up to 2GB.)

- USB
The following type is recommended for DX100.

< Recommended USB Memory>

No.	Manufacturer	Model	Remarks
1	Hagiwara Sys-Com	UDG3-GA series	1GB or 2GB



The above mentioned CompactFlash with different capacity (xxMB) is also available to use.

2 CompactFlash/USB Preparation

2.2 Preparing CompactFlash/USB for Upgrade

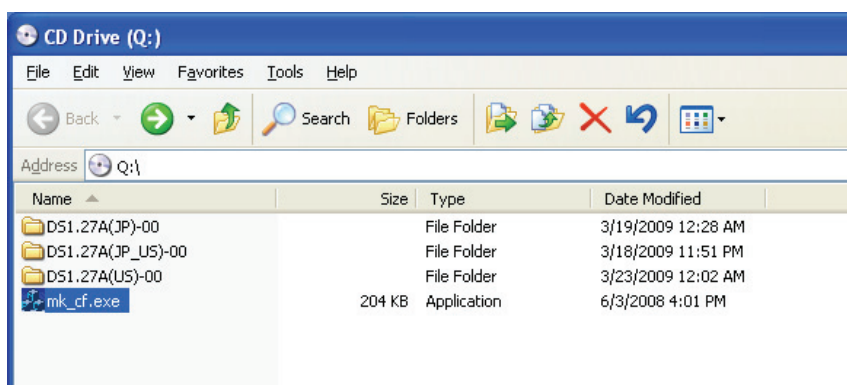
2.2 Preparing CompactFlash/USB for Upgrade

Prepare the CompactFlash/USB for upgrade with a personal computer.

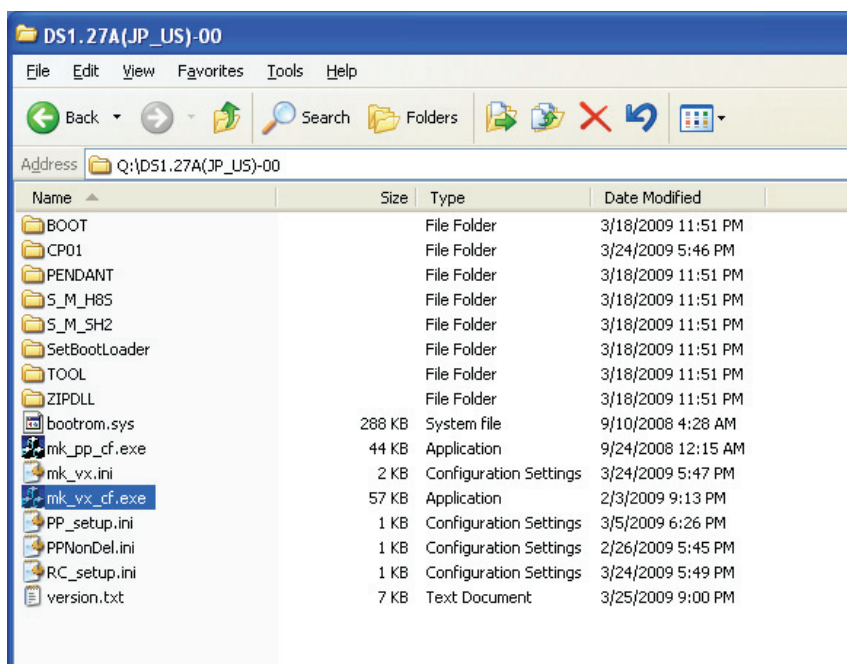


Be sure to delete all the data in the CompactFlash/USB before starting the operation.

1. Select the subject file of upgrade.
 - The figure below is an example in case where data exists in a CD.



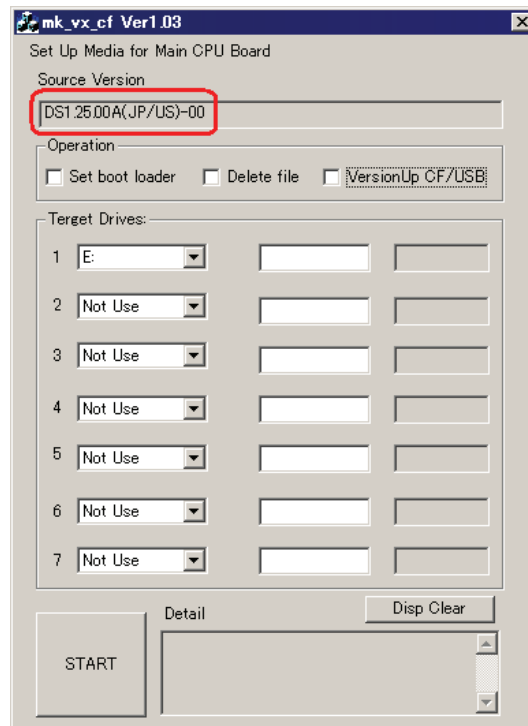
2. Run "MK_VX_CF.EXE".



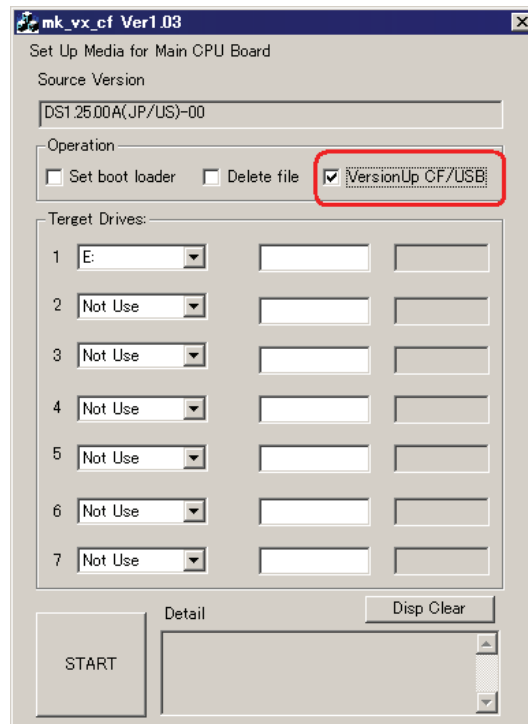
2 CompactFlash/USB Preparation

2.2 Preparing CompactFlash/USB for Upgrade

3. Check if the "Source Version" is correct.



4. Select "VersionUp CF/USB".

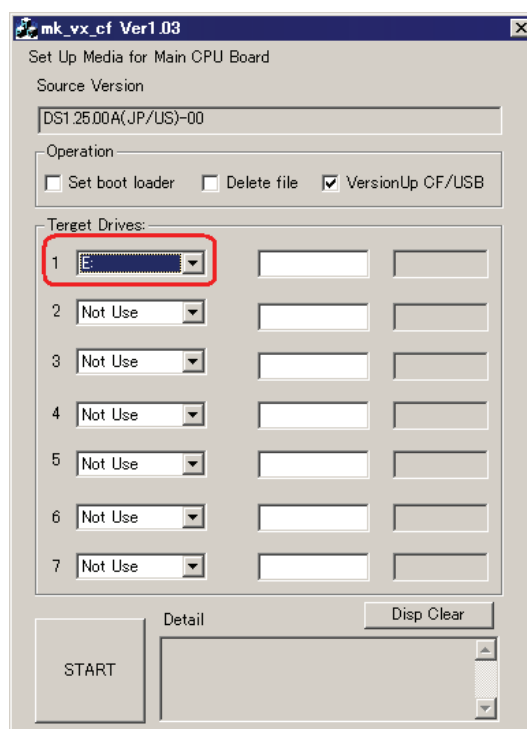


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2 CompactFlash/USB Preparation

2.2 Preparing CompactFlash/USB for Upgrade

5. Select a drive to prepare CompactFlash/USB for upgrade.

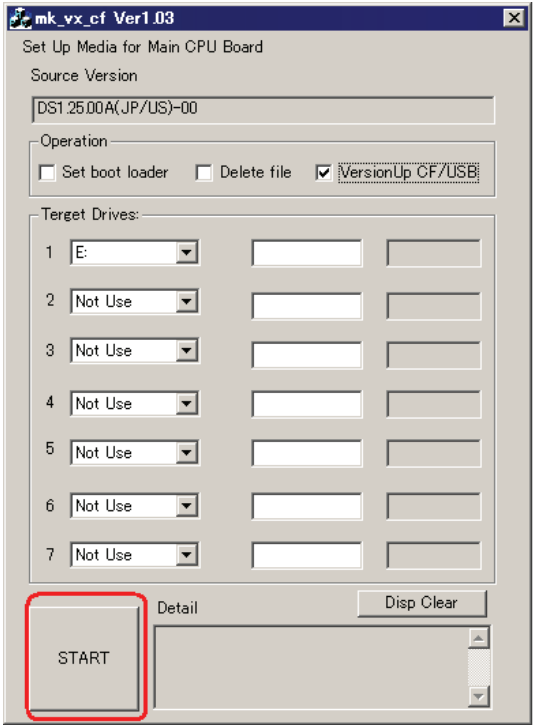


- Up to seven CompactFlash/USB for upgrade can be prepared at a time. (Depends on the number of drives for CompactFlash/USB.)
- The operation will not be executed in case when selecting "Not Use".

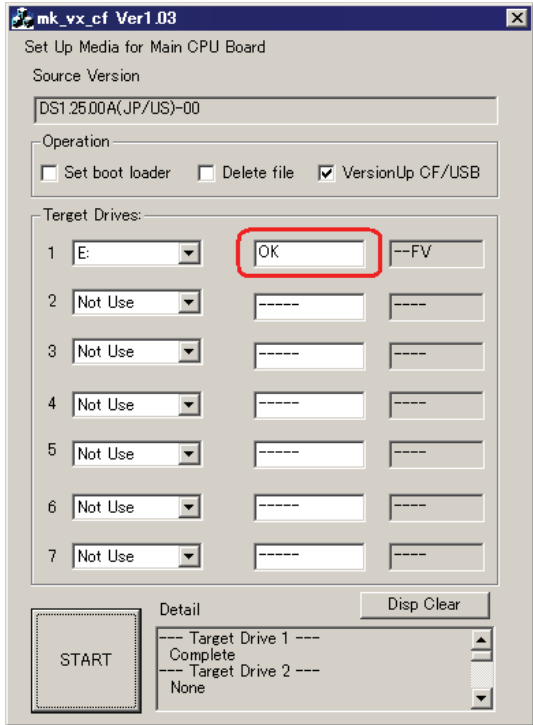
2 CompactFlash/USB Preparation

2.2 Preparing CompactFlash/USB for Upgrade

6. Start writing data on the CompactFlash/USB for upgrade by selecting "START".



7. "OK" indication appears 40 seconds later when the CompactFlash/USB preparation is successfully completed.

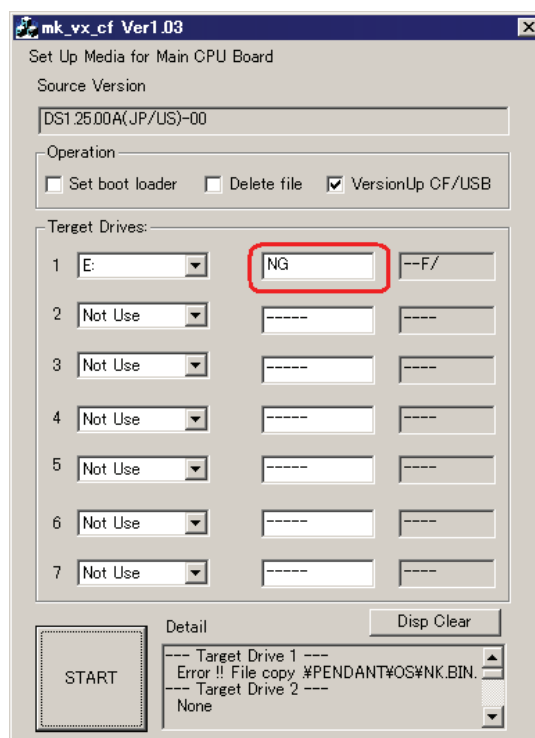


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2 CompactFlash/USB Preparation

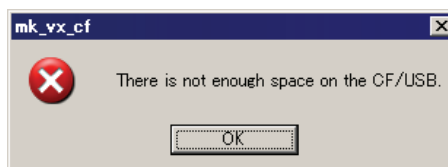
2.2 Preparing CompactFlash/USB for Upgrade

– "NG" indication appears as follows if the operation is unsuccessful.



<Error causes and countermeasures>

Cause 1: Out of available space in the CompactFlash/USB.



Countermeasure: Delete all the data in the CompactFlash/USB, and retry the process.

Cause 2: Use of the CompactFlash/USB not specified in this manual.

Countermeasure: Use the specified CompactFlash/USB in *chapter 2.1 "Prearrangements" at page 2-1*.

Cause 3: Damage in the CompactFlash/USB.

Countermeasure: Replace it with a new one.

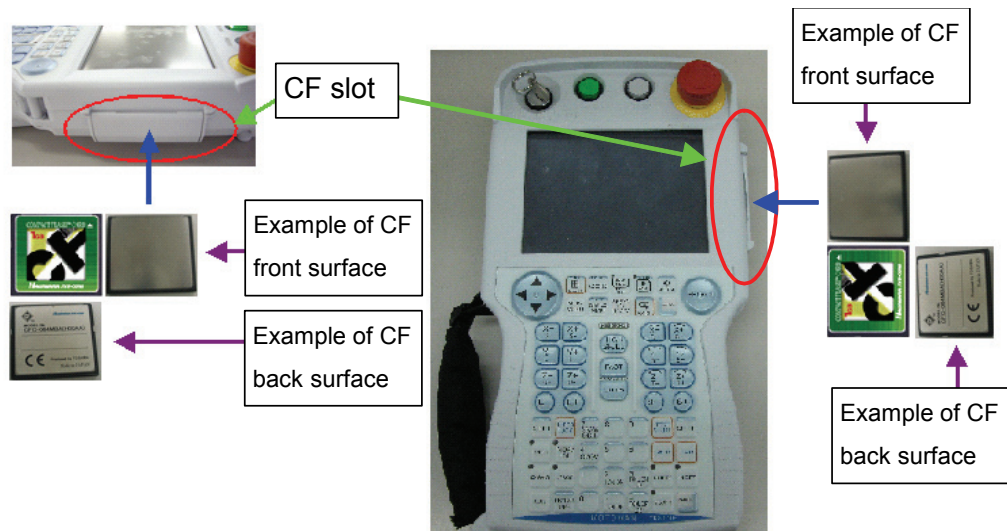
3 Data Back Up

Perform the following operation in advance so that the data can be restored if upgrading is unsuccessful.

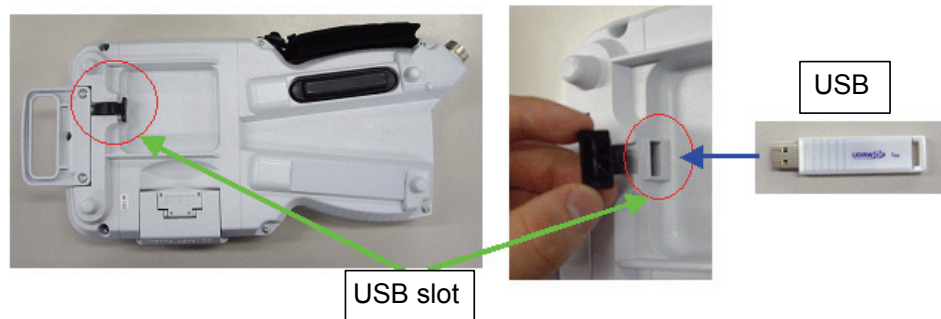
3.1 Data Back Up

Back up the data which is required for setting up the data after the upgrade in the following procedures:

1. Check if the main power of the DX100 is turned OFF.
 2. Insert the CompactFlash/USB prepared in *chapter 2.2 "Preparing CompactFlash/USB for Upgrade"* at *page 2-2* into the programming pendant.
- When inserting the CompactFlash, open the CF slot cover. Pay attention to insert the CompactFlash in the correct direction. After that, close the CF slot cover.



- When inserting the USB, remove the rubber cap on the USB slot on the back of the programming pendant.

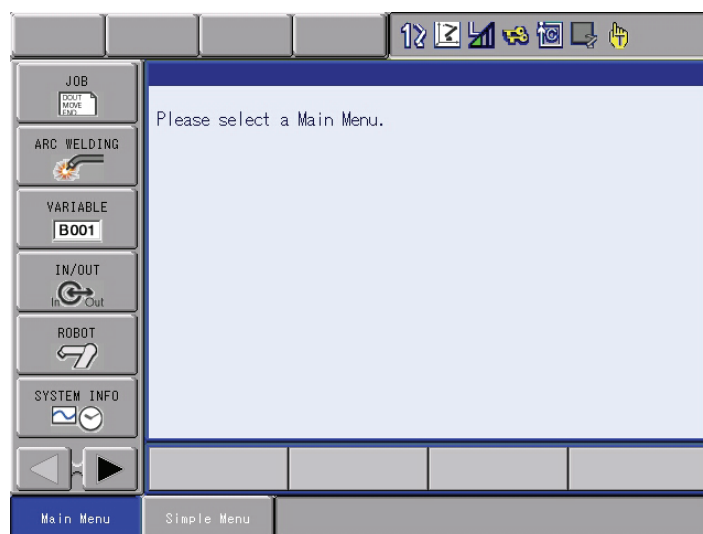


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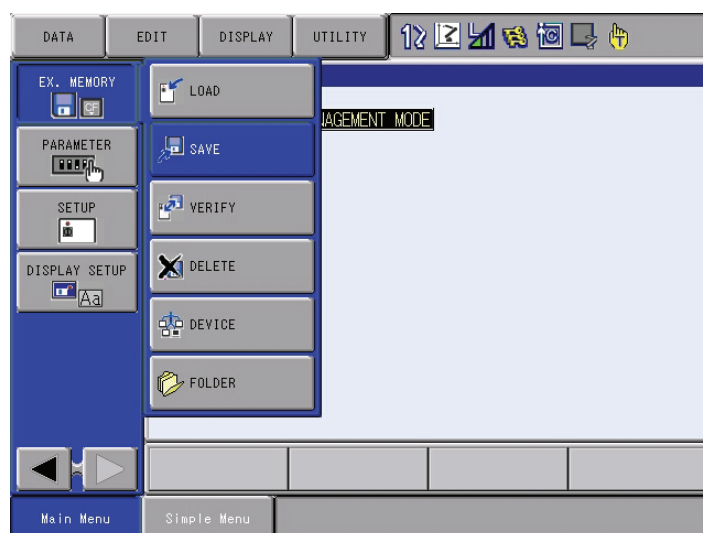
3 Data Back Up

3.1 Data Back Up

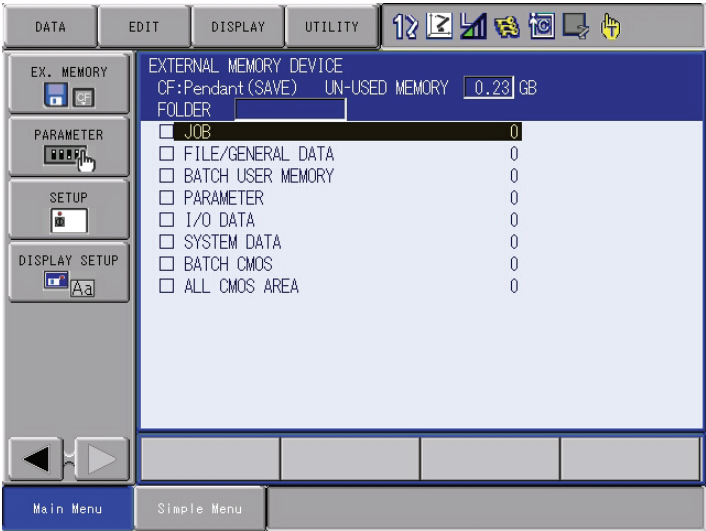
3. Turn ON the main power of the DX100.
 - Approx. 60 seconds later, the main menu window appears on the display of the programming pendant.



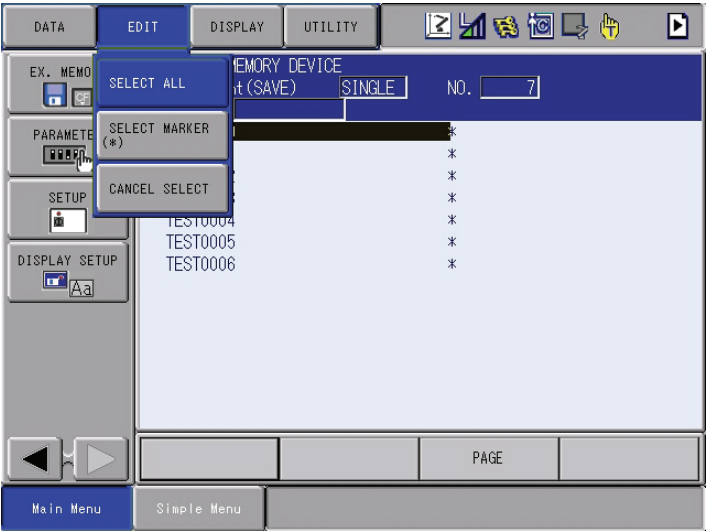
4. Change the security mode to the management mode.
5. Select {EX. MEMORY} under the main menu. Select {SAVE}, and save all the following data individually:
 - JOB
 - FILE/GENERAL DATA
 - PARAMETER
 - I/O DATA
 - SYSTEM DATA



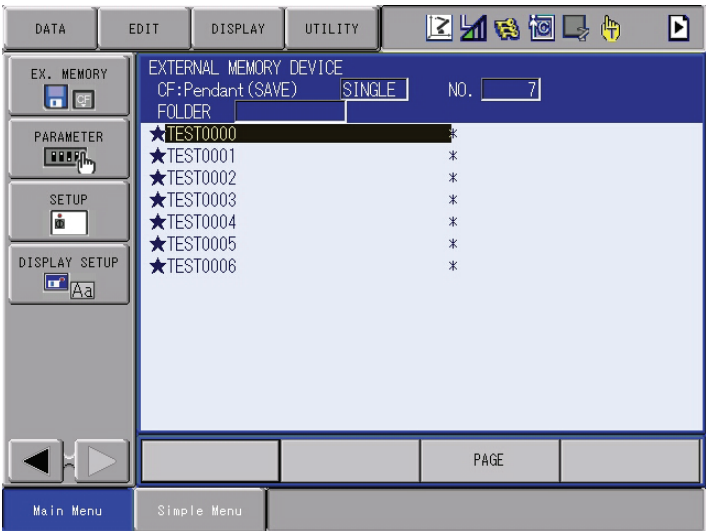
6. Move the cursor to {JOB} and press [SELECT].



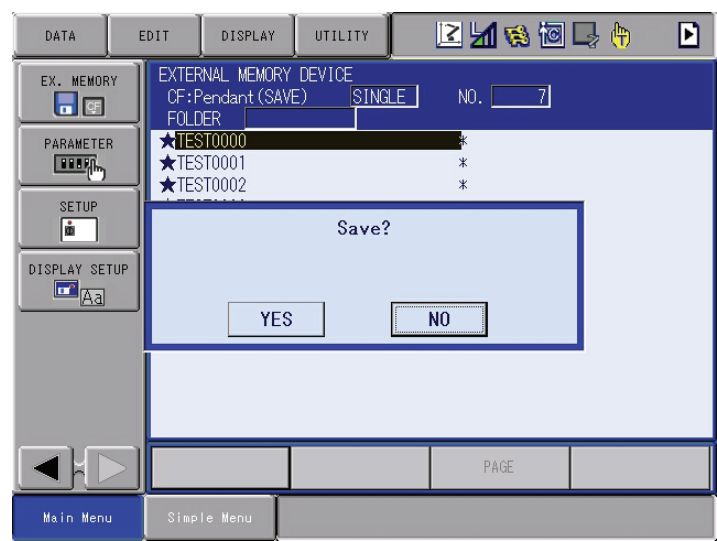
7. Select {EDIT}, then select {SELECT ALL}.



8. When the job is selected, it will be indicated with "★" mark. Press [ENTER] when all the jobs are selected.

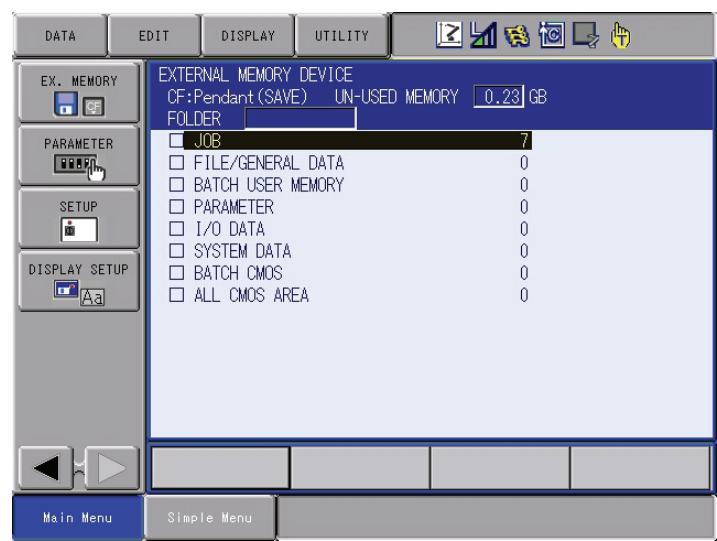


9. Select {YES} to start the data saving.



Select [STOP] to stop saving the data.
In this case, the window will return to the {JOB LIST} on the step 7.

10. Each job data is saved individually when the figure on the display changed as shown below.



11. Save the other data individually in the same way.

3.2 Recording Other Information

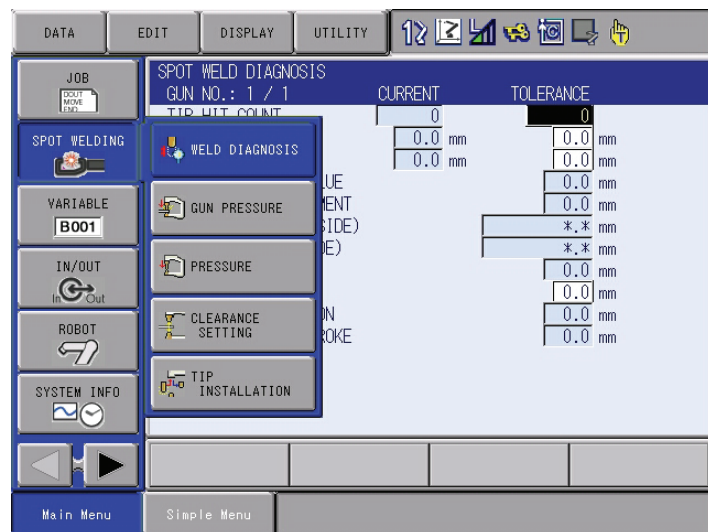
The information listed below should be recorded individually because the data are not saved in the CompactFlash/USB.

1. Common

- MASTER JOB
- KEY ALLOCATION
- GROUP COMBINATION
- USER ID
- REGISTER SETTING

2. For Motor Gun Application

- Since the weld diagnosis data are not saved, record the information in {WELD DIAGNOSIS} under {SPOT WELDING}.

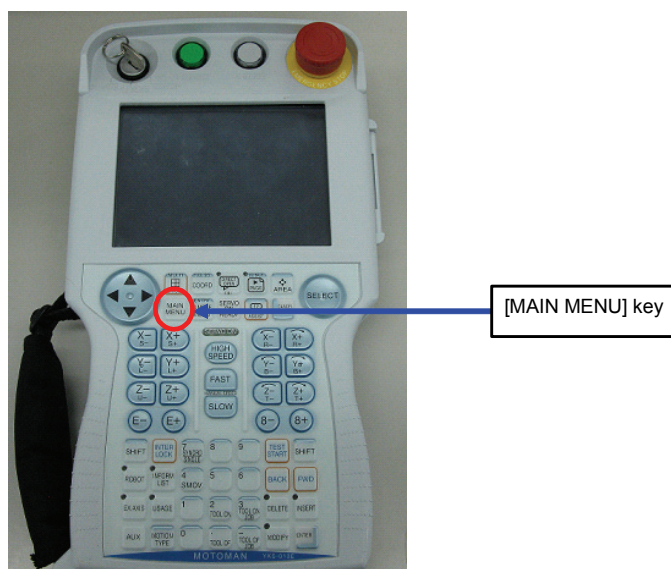


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- 3 Data Back Up
- 3.3 Recording Information in Maintenance Mode

3.3 Recording Information in Maintenance Mode

1. Turn ON the power supply of the DX100 while pressing [MAIN MENU] simultaneously.



2. Approx. 60 seconds later, the top window of the maintenance mode appears on the display of the programming pendant.

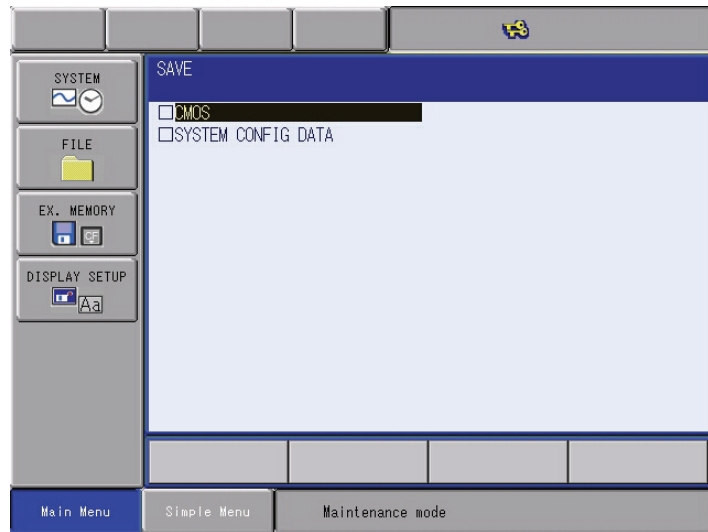


3. Select {SETUP} under the {SYSTEM}, then save the following data:
 - LANGUAGE
 - CONTROL GROUP (Data of axes configurations, data set for external axis motor, SERVOPACK, etc.)
 - APPLICATION
 - OPTION BOARD (Detailed settings of expansion boards, etc.)
 - OPTION FUNCTION (Detailed settings of optional functions, etc.)

3 Data Back Up

3.3 Recording Information in Maintenance Mode

4. Select {EX. MEMORY}, then select {Save}.
Select {CMOS} to save the binary file "CMOS.BIN".



5. Turn OFF the main power of the DX100 after the CMOS save is completed.

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3 Data Back Up

3.4 Procedures Ahead of Upgrading the System with Safety Function

3.4 Procedures Ahead of Upgrading the System with Safety Function

Following operations are required when upgrading the version from:

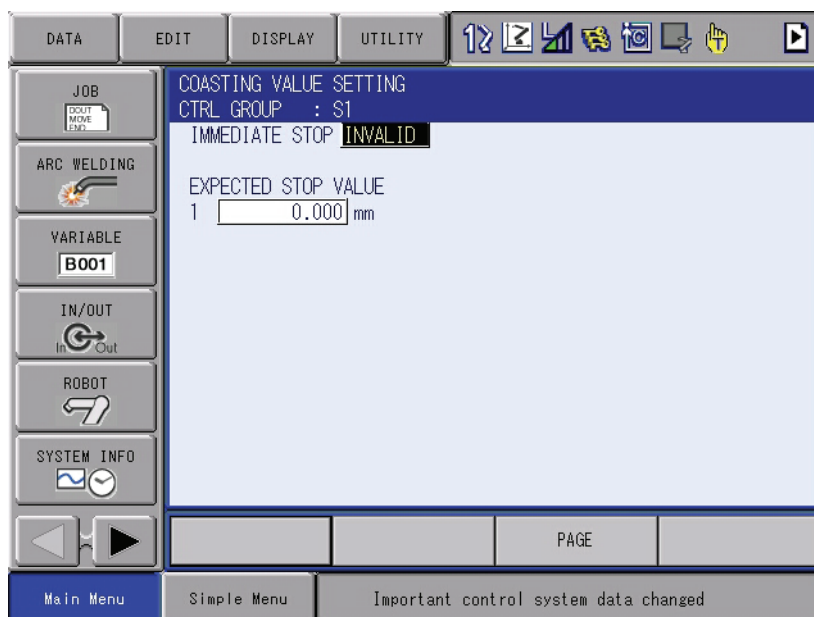
- DS1.xx-67 to DSx.xx-00 (DS3.00-00 or later)
or
- DS1.xx-14 to DSx.xx-14 (DS3.00-14 or later)

1. Select {ROBOT}, then {COASTING VALUE SETTING} in the security mode of Maintenance mode or higher.

No action is required if {COASTING VALUE SETTING} is not shown.



2. Select {INVALID} if {VALID} is selected to {IMMEDIATE STOP}.
No action is required if {INVALID} is already selected.



	4	System Software Upgrade
DX100	4.1	System Software Upgrade

4 System Software Upgrade

4.1 System Software Upgrade

Upgrade the system software following the procedures below.

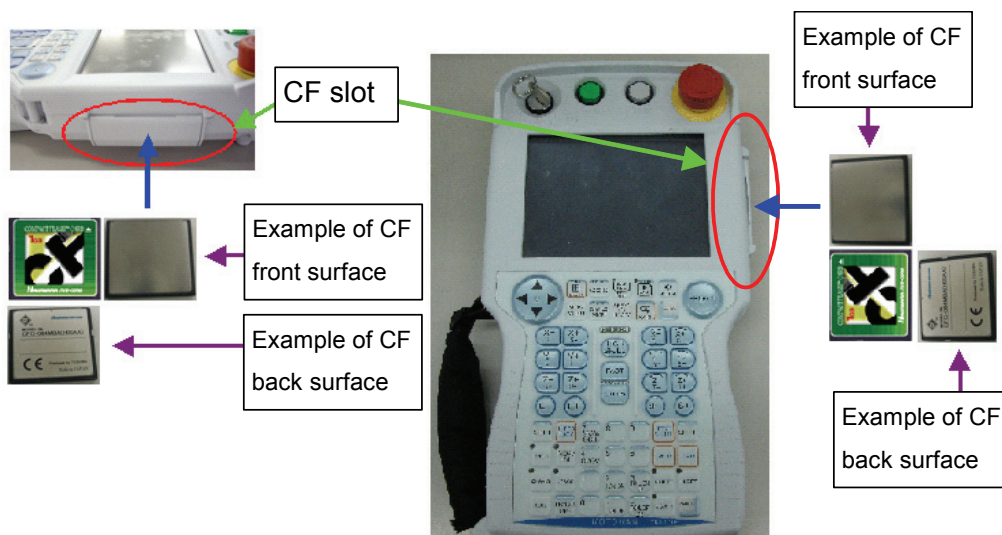
The upgrade is performed using either the CompactFlash or USB. If both the CompactFlash and USB are inserted in the programming pendant, the upgrade is performed using the CompactFlash.

4 System Software Upgrade

4.1 System Software Upgrade

4.1.1 Upgrade Using CompactFlash

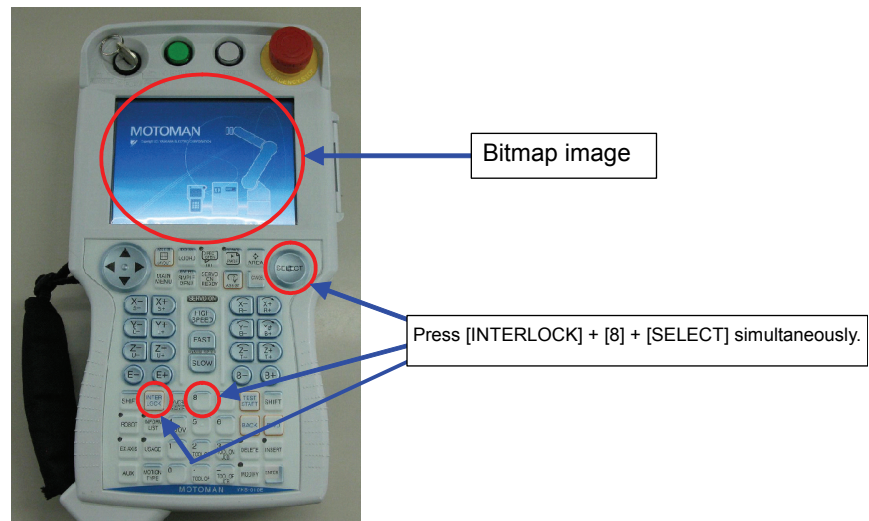
1. Check if the main power of the DX100 is turned OFF.
 2. Open the CF slot cover on the programming pendant, and insert the CompactFlash prepared in *chapter 2.2 "Preparing CompactFlash/USB for Upgrade"* at *page 2-2*, then close the CF slot cover.
- Pay attention to insert the CompactFlash in the correct direction.



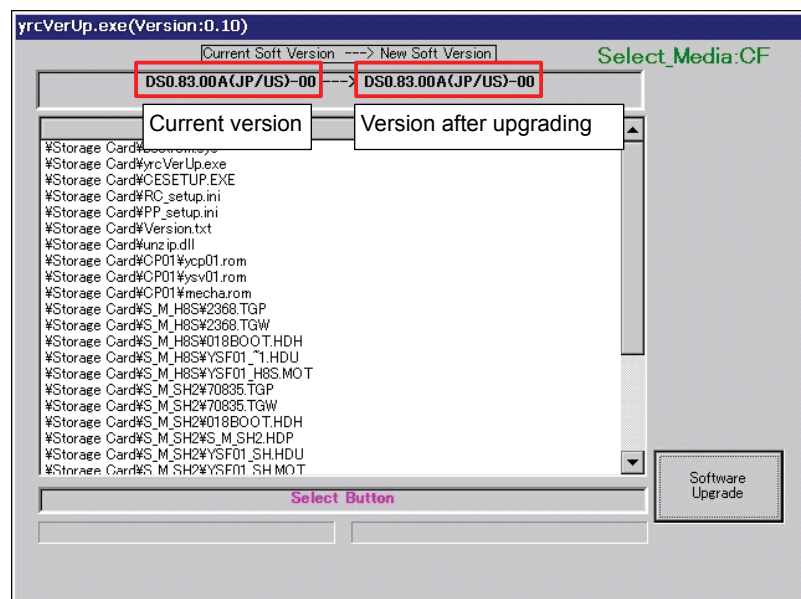
4 System Software Upgrade

4.1 System Software Upgrade

3. Turn ON the main power of the DX100 while pressing [INTERLOCK] + [8] + [SELECT].
 - Release [INTERLOCK] + [8] + [SELECT] when the bitmap image as shown below appears or when the programming pendant beeps.



4. The following window appears. Check the version and select {Software Upgrade}.
 - The upgrade starts.



If the above mentioned window does not appear, or if an error message appears, perform the corrective actions as follows:

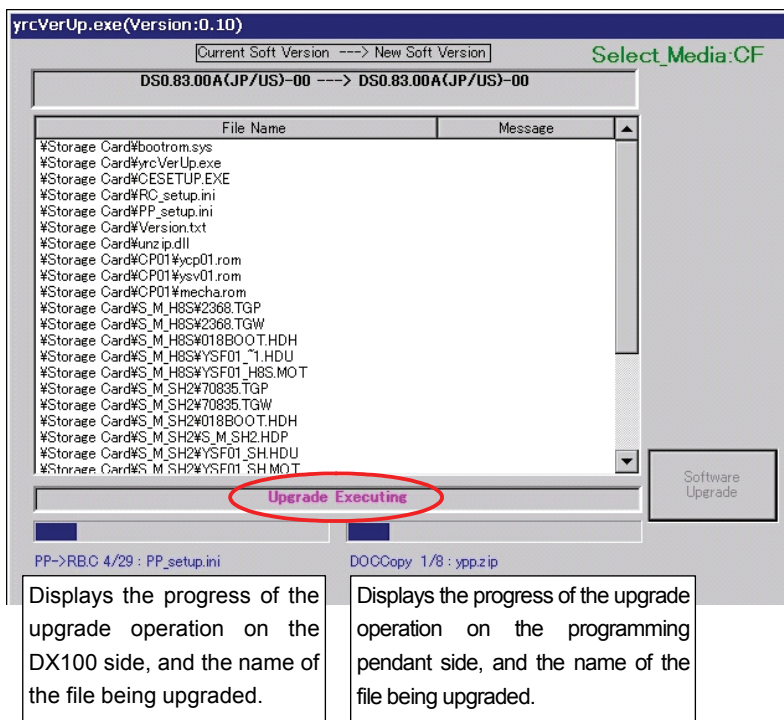


- (1) Turn OFF the main power of the DX100, then remove the CompactFlash from the CF slot on the programming pendant. Retry the upgrading procedures from *chapter 2.2 "Preparing CompactFlash/USB for Upgrade"* at page 2-2.
- (2) If the error status persists in spite of performing the corrective action (1), replace the CompactFlash or USB with a new one.

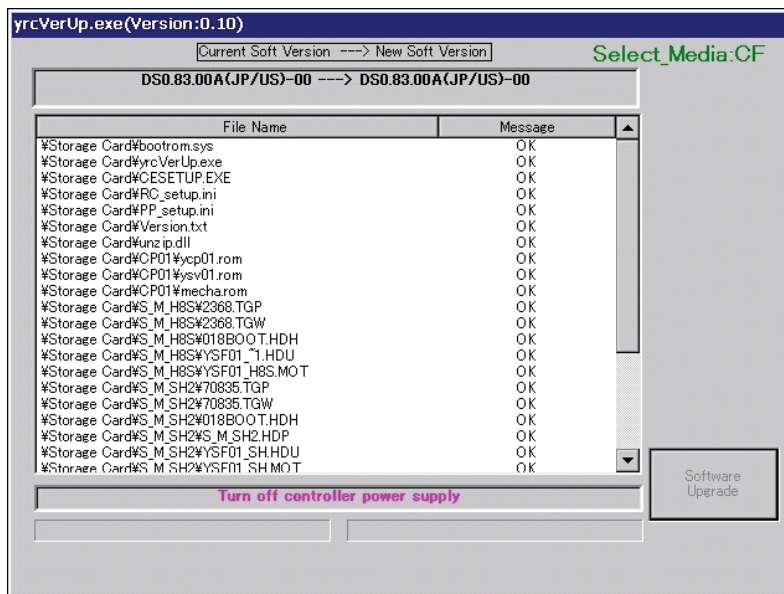
4 System Software Upgrade

4.1 System Software Upgrade

- During the upgrade, the “HOLD” button of the programming pendant lights, the message “Upgrade Executing” blinks, and the upgrade progress bar and the name of the file being upgraded are shown.



5. When the message “Turn off controller power supply” appears, turn OFF the main power of the DX100.

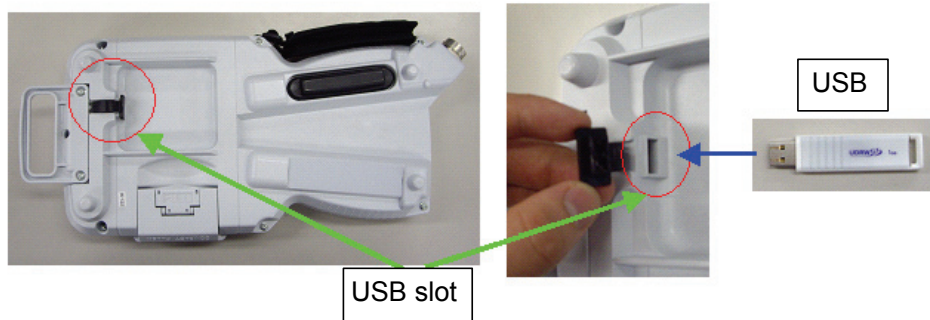


4 System Software Upgrade

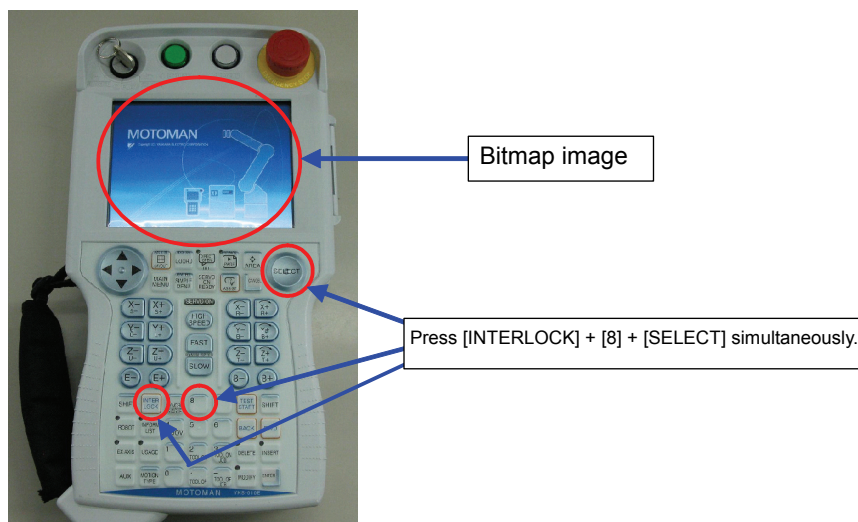
4.1 System Software Upgrade

4.1.2 Upgrade Using USB

1. Check if the main power of the DX100 is turned OFF.
2. Remove the rubber cap on the back of the programming pendant, and insert the USB prepared in *chapter 2.2 "Preparing CompactFlash/USB for Upgrade"* at page 2-2.



3. Turn ON the main power of the DX100 while pressing [INTERLOCK] + [8] + [SELECT].
 - Release [INTERLOCK] + [8] + [SELECT] when the bitmap image as shown below appears or when the programming pendant beeps.



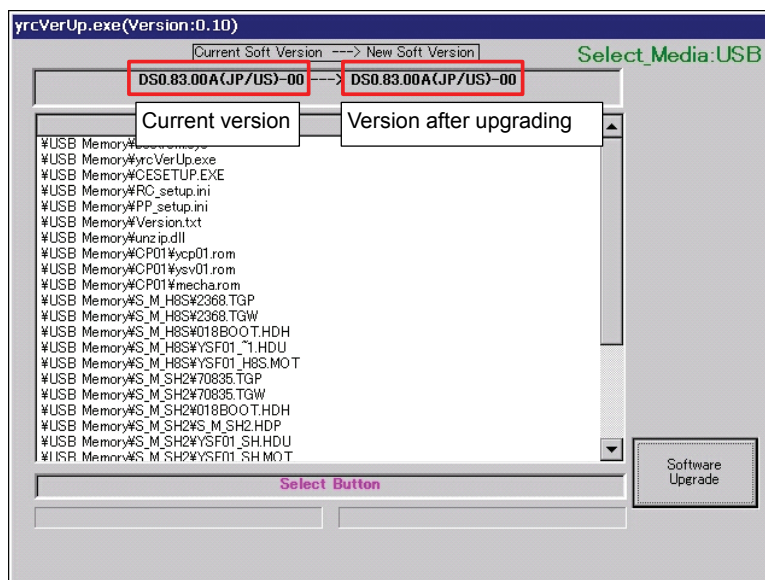
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4 System Software Upgrade

4.1 System Software Upgrade

4. The following window appears. Check the version and select {Software Upgrade}.

– The upgrade starts.



If the above mentioned window does not appear, or if an error message appears, perform the corrective actions as follows:



- (1) Turn OFF the main power of the DX100, then remove the USB from the USB slot on the programming pendant. Retry the upgrading procedures from *chapter 2.2 "Preparing CompactFlash/USB for Upgrade"* at page 2-2.
- (2) If the error status persists in spite of performing the corrective action (1), replace the USB with a new one.

4

System Software Upgrade

4.1

System Software Upgrade

- During the upgrade, the “START” button of the programming pendant lights, the message “Upgrade Executing” blinks, and the upgrade progress bar and the name of the file being upgraded are shown. .

yrVerUp.exe(Version:0.10)

Current Soft Version ---> New Soft Version

Select_Media:USB

DS0.83.00A(JP/US)-00 ---> DS0.83.00A(JP/US)-00

File Name	Message
¥USB Memory#bootrom.sys	
¥USB Memory#yrVerUp.exe	
¥USB Memory#CESETUP.EXE	
¥USB Memory#RC_setup.ini	
¥USB Memory#PP_setup.ini	
¥USB Memory#Version.txt	
¥USB Memory#unzip.dll	
¥USB Memory#CP01#ycp01.rom	
¥USB Memory#CP01#ysv01.rom	
¥USB Memory#CP01#mecha.rom	
¥USB Memory#S_M_H8S#2368.TGP	
¥USB Memory#S_M_H8S#2368.TGW	
¥USB Memory#S_M_H8S#018BOOT.HDH	
¥USB Memory#S_M_H8S#YSF01_1.HDU	
¥USB Memory#S_M_H8S#YSF01_H8S.MOT	
¥USB Memory#S_M_SH2#70835.TGP	
¥USB Memory#S_M_SH2#70835.TGW	
¥USB Memory#S_M_SH2#018BOOT.HDH	
¥USB Memory#S_M_SH2#S_M_SH2.HDP	
¥USB Memory#S_M_SH2#YSF01_SH.HDU	
¥ISR Memory#S_M_SH2#YSF01_SH.MOT	

Upgrade Executing

PP->RBC 7/29 : ycp01.rom

DCCopy 3/8 : font.zip

Displays the progress of the upgrade operation on the DX100 side, and the name of the file being upgraded.

Displays the progress of the upgrade operation on the programming pendant side, and the name of the file being upgraded.

Software Upgrade

5. When the message “Turn off controller power supply” appears, turn OFF the main power of the DX100.

yrVerUp.exe(Version:0.10)

Current Soft Version ---> New Soft Version

Select_Media:USB

DS0.83.00A(JP/US)-00 ---> DS0.83.00A(JP/US)-00

File Name	Message
¥USB Memory#bootrom.sys	OK
¥USB Memory#yrVerUp.exe	OK
¥USB Memory#CESETUP.EXE	OK
¥USB Memory#RC_setup.ini	OK
¥USB Memory#PP_setup.ini	OK
¥USB Memory#Version.txt	OK
¥USB Memory#unzip.dll	OK
¥USB Memory#CP01#ycp01.rom	OK
¥USB Memory#CP01#ysv01.rom	OK
¥USB Memory#CP01#mecha.rom	OK
¥USB Memory#S_M_H8S#2368.TGP	OK
¥USB Memory#S_M_H8S#2368.TGW	OK
¥USB Memory#S_M_H8S#018BOOT.HDH	OK
¥USB Memory#S_M_H8S#YSF01_1.HDU	OK
¥USB Memory#S_M_H8S#YSF01_H8S.MOT	OK
¥USB Memory#S_M_SH2#70835.TGP	OK
¥USB Memory#S_M_SH2#70835.TGW	OK
¥USB Memory#S_M_SH2#018BOOT.HDH	OK
¥USB Memory#S_M_SH2#S_M_SH2.HDP	OK
¥USB Memory#S_M_SH2#YSF01_SH.HDU	OK
¥ISR Memory#S_M_SH2#YSF01_SH.MOT	OK

Turn off controller power supply

Software Upgrade

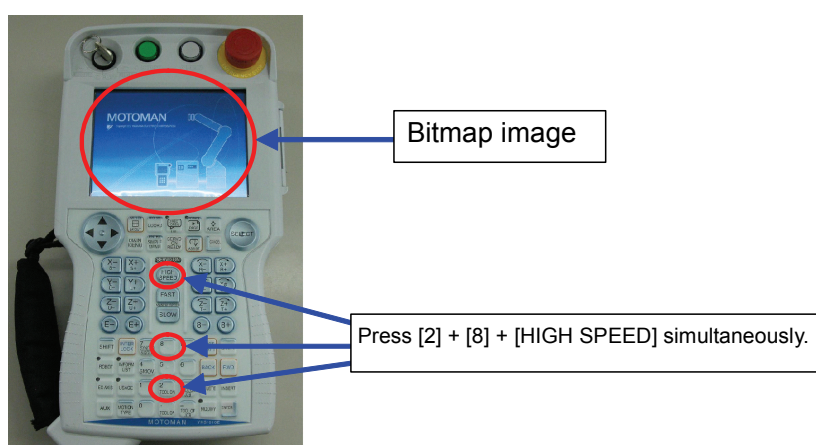
5 Programming Pendant Upgrade

This operation is not necessary when performing a normal upgrade.
Additional information will be provided if this operation is required.

5.1 Programming Pendant Upgrade

Upgrade the system software following the procedures below:

1. Check if the main power of the DX100 is turned OFF.
2. Turn ON the main power of the DX100 while pressing [2] + [8] + [HIGH SPEED].
 - Release [2] + [8] + [HIGH SPEED] when the bitmap image as shown below appears or when the programming pendant beeps.



In case where an alarm sound of the programming pendant does not stop with all the LED indications light up, perform the corrective actions as follows:

(1) Turn OFF the main power of the DX100, then remove the CompactFlash/USB from the programming pendant. Retry the upgrading procedures from *chapter 2.2 “Preparing CompactFlash/USB for Upgrade”* at page 2-2.

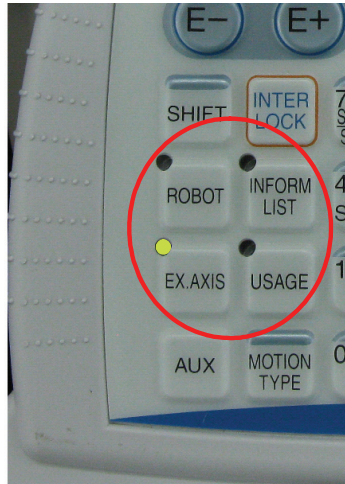
(2) If the error status persists in spite of performing the corrective action (1), replace the CompactFlash/USB with a new one.

5 Programming Pendant Upgrade

5.1 Programming Pendant Upgrade

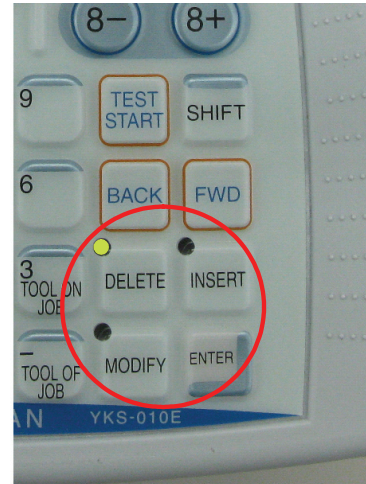
- NK.BIN (OS: Windows CE) in the CompactFlash is written into SDRAM first; the NK.BIN (in the SDRAM) then be written into FlashRom of the programming pendant. The LED indications during the process change as described below:

(When reading NK.BIN from CompactFlash to SDRAM)



Data reading from CompactFlash to SDRAM:
4 LED indications blink clockwise.
The blink interval is irregular.
(The interval may be 1 to 2 seconds or 4 to 5 seconds.)
The time required for reading is approx. 3 minutes.

(When writing NK.BIN from SDRAM to FlashRom)



Data writing from SDRAM to FlashRom:
3 LED indications blink clockwise.
The blink interval is 1 to 2 seconds.
The time required for writing is approx. 4 minutes.



The total time required for data transfer and writing from CompactFlash to FlashRom is approx. 7 minutes.

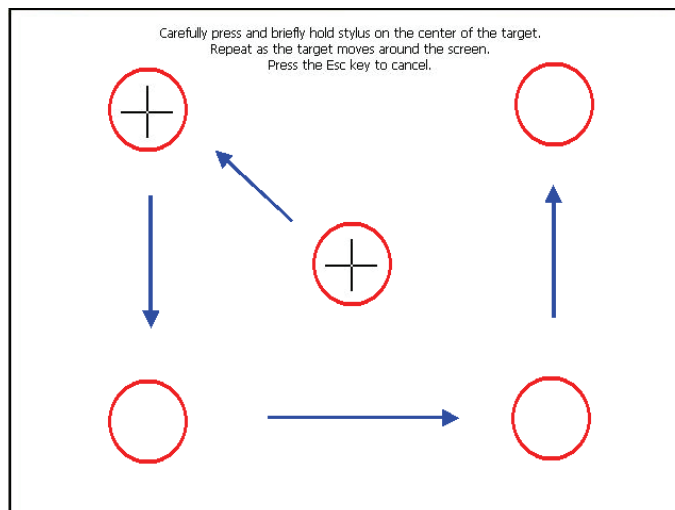
3. The touch panel calibration appears on the display of the programming pendant approx. 7 minutes after turning ON the main power of the DX100.
 - Press the center of the display panel with a stylus for touch panel for approx. 2 seconds to perform the touch calibration.
If a stylus for touch panel is not available, use a pointed tool with a soft point, such as a ballpoint pen cap, as a substitute.

DX100

5 Programming Pendant Upgrade

5.1 Programming Pendant Upgrade

4. A crosshair cursor at the center of the display moves in the following order: Center → Upper left → Lower left → Lower right → Upper right.
 - Press the center of the cursor for approx. 2 seconds at each point.
 - If the touch calibration is failed, the crosshair cursor returns to the center of the display. In this case, retry the calibration.



- When the touch calibration is successfully completed, the following display appears.

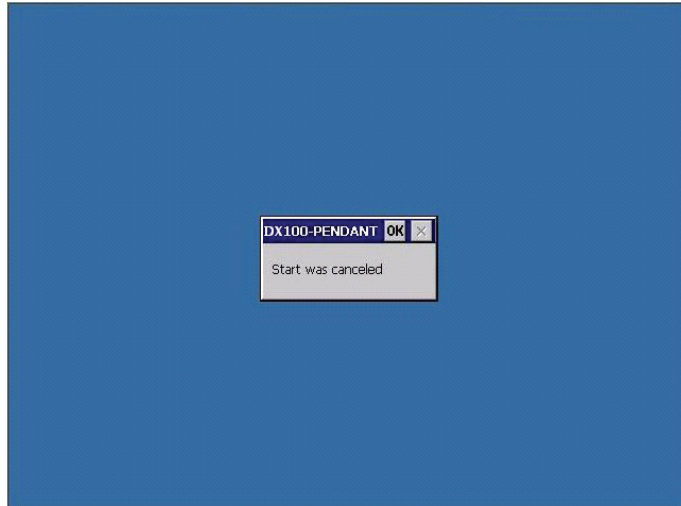


5 Programming Pendant Upgrade

5.1 Programming Pendant Upgrade

5. The following display appears by pressing [ENTER] button on the programming pendant or by touching the display.

- (1) Select [OK] to close the dialog box.
- (2) Make sure the dialog box has closed, then turn OFF the main power of the DX100.



- (3) After turning OFF the main power of the DX100, be sure to remove the CompactFlash from the CF slot or the USB from the USB slot of the programming pendant.

DX100

5 Programming Pendant Upgrade

5.1 Programming Pendant Upgrade

6. Turn ON the main power of the DX100.
 - The main menu window appears approx. 60 seconds later.



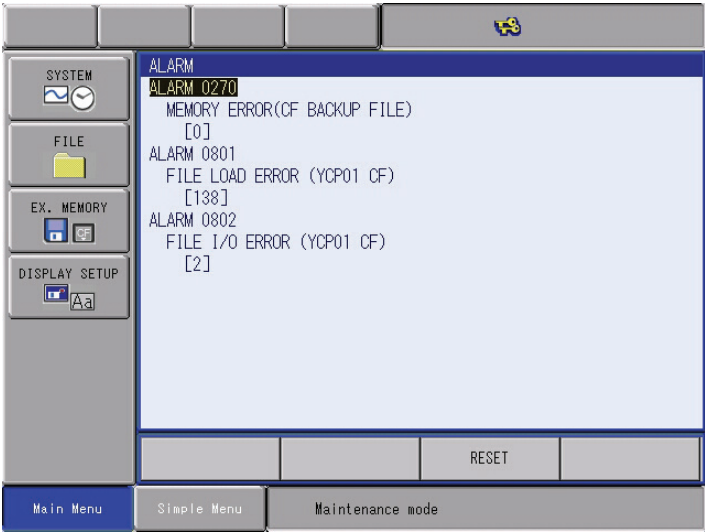
7. Select {SYSTEM INFO} and then {VERSION} under the main menu to confirm the version data.



	6	Data Rebuild Procedure in Maintenance Mode
DX100	6.1	Data Rebuild Procedure in Maintenance Mode

6 Data Rebuild Procedure in Maintenance Mode

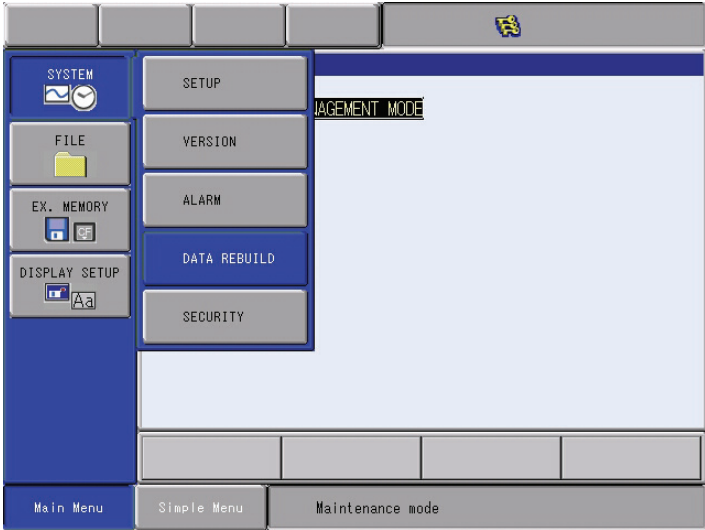
Following alarms occur if there is a difference in the CMOS data before and after the upgrade.



For these alarms, follow the corrective instructions below.

6.1 Data Rebuild Procedure in Maintenance Mode

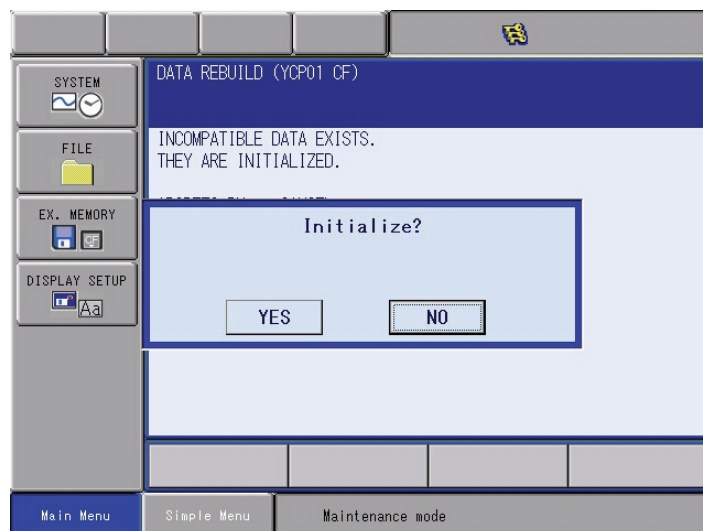
1. Select {SYSTEM} then {DATA REBUILD} in management mode in maintenance mode.



DX100

6 Data Rebuild Procedure in Maintenance Mode
6.1 Data Rebuild Procedure in Maintenance Mode

2. Continue the operation by pressing [ENTER]. Select {YES} when “Initialize?” appears.



3. Turn the power OFF after initialization.
4. Turn the power ON again to confirm the version No.

	6	Data Rebuild Procedure in Maintenance Mode
DX100	6.2	Procedures After Upgrading the System with Safety Function

6.2 Procedures After Upgrading the System with Safety Function

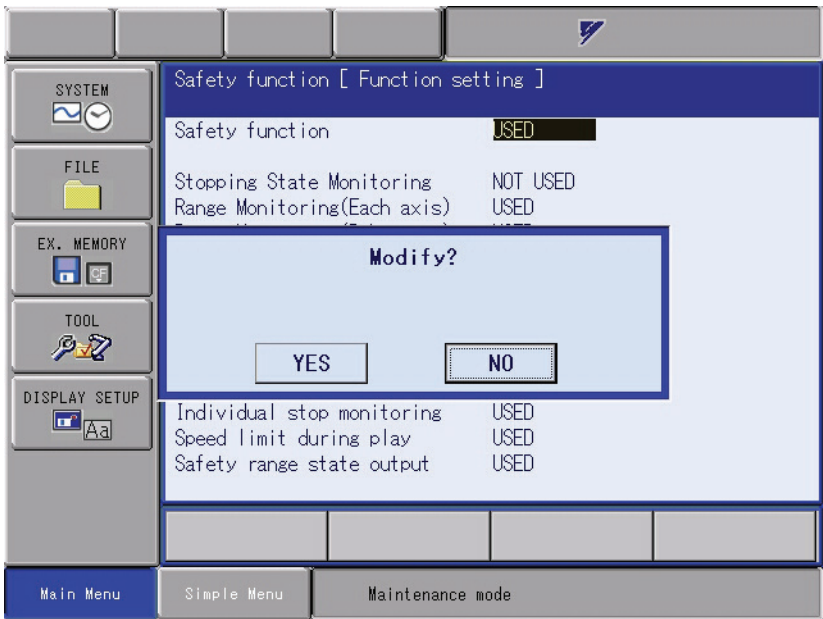
Following operations are required after upgrading the version from:

- DS1.xx-67 to DSx.xx-00 (DS3.00-00 or later)
or
- DS1.xx-14 to DSx.xx-14 (DS3.00-14 or later)

6.2.1 Safety Function Setting

Change the mode to YASKAWA MODE in the Maintenance mode.
Select {SYSTEM} → {SETUP} → {OPTION FUNCTION} → {Safety function}.

Press {ENTER} in the “Safety function [function setting]” window, then a dialog box appears asking “Modify?”. Then, select {YES}.



Select {FILE}→ {INITIALIZE} → {Safety unit FLASH data set again}.

A dialog box asking “Data set again” appears. Select {YES}.

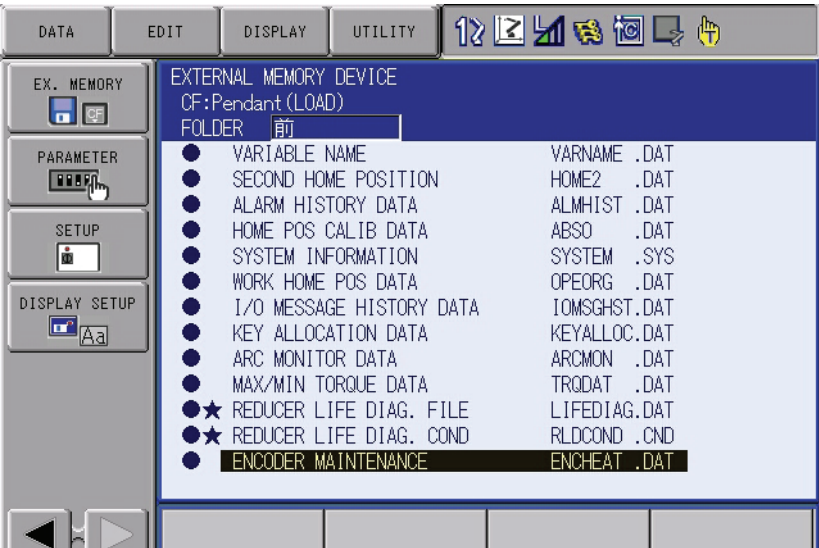
Confirm that no alarm occurs and the DX100 starts normally after the power supply of the DX100 is turned ON again.

DX100

6	Data Rebuild Procedure in Maintenance Mode
6.2	Procedures After Upgrading the System with Safety Function

6.2.2 Speed Reducer Life Diagnosis Relevant Data Loading

When the speed reducer life diagnosis function is used, load “LIFEDIAG.DAT” and “RL.DCOND.CND” which are saved by following procedures shown in *chapter 3 “Data Back Up”*.



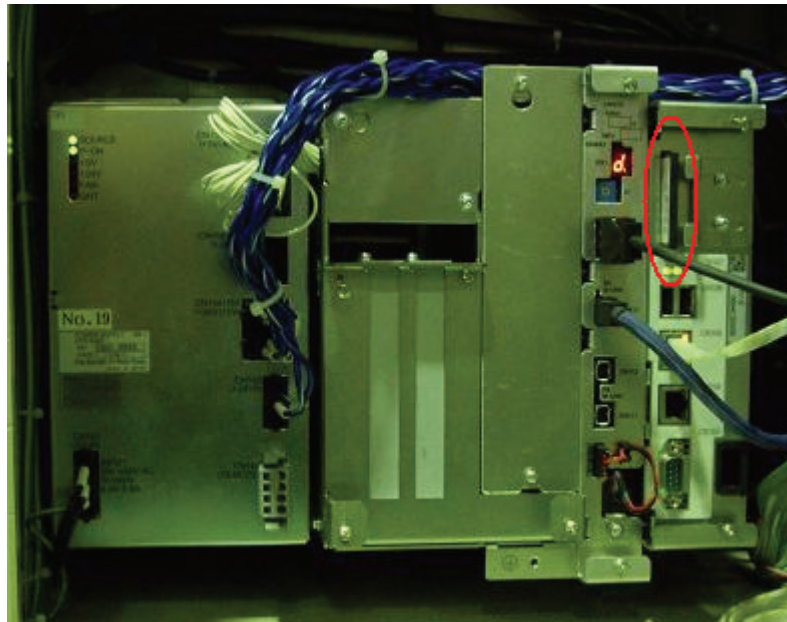
After loading “LIFEDIAG.DAT” and “RL.DCOND.CND”, verify them so that an error “3130: VERIFY ERROR” does not occur.

7 Troubleshooting

Perform the following operation if the DX100 does not start up normally or does not operate correctly.

7.1 Back Up the CompactFlash

If the DX100 does not start up normally, or if a file load error occurs although the DX100 does start up after initialization or data reconstruction, restore the CompactFlash in the YCP01 board following the instructions below.



1. Remove the CompactFlash from the YCP01 board.
2. Connect the CompactFlash with a personal computer, save the data in the CompactFlash to an appropriate location.
3. Then delete all the data from the CompactFlash.
 - If no error occurs when deleting all the data from the CompactFlash, proceed to the following procedures starting from step 4 on page 7-3.

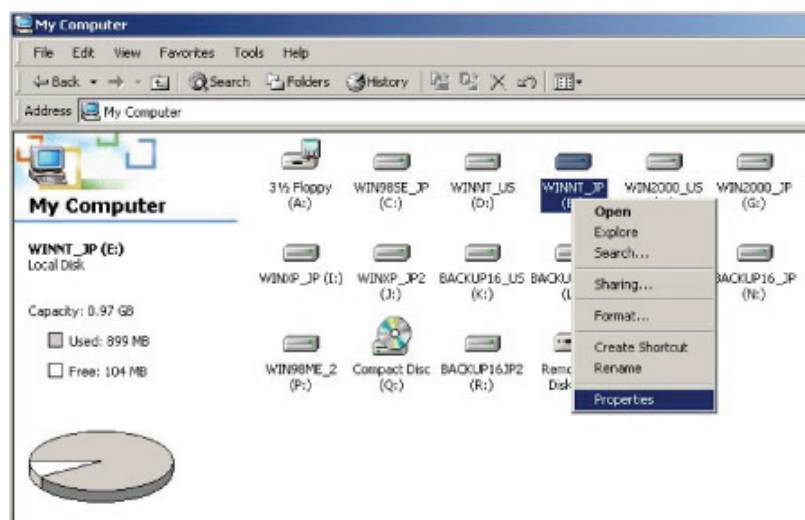
DX100

7 Troubleshooting

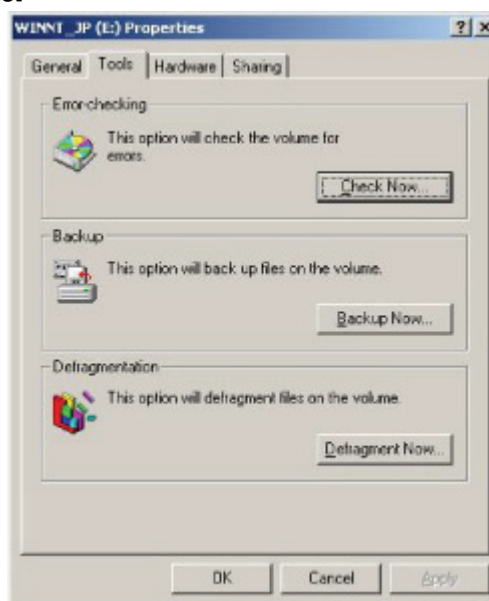
7.1 Back Up the CompactFlash

– If an error occurs at this point, follow the procedure below.

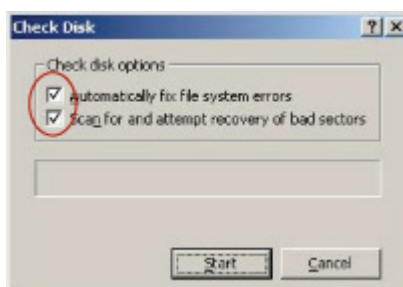
- (1) Right-click on the removable disk drive where the CompactFlash is inserted, and click [Properties].



- (2) Then, click the [Tools] tab and click "Check Now" in the [Error-checking] box.



- (3) Tick the check boxes in the [Check disk options] and click [Start].



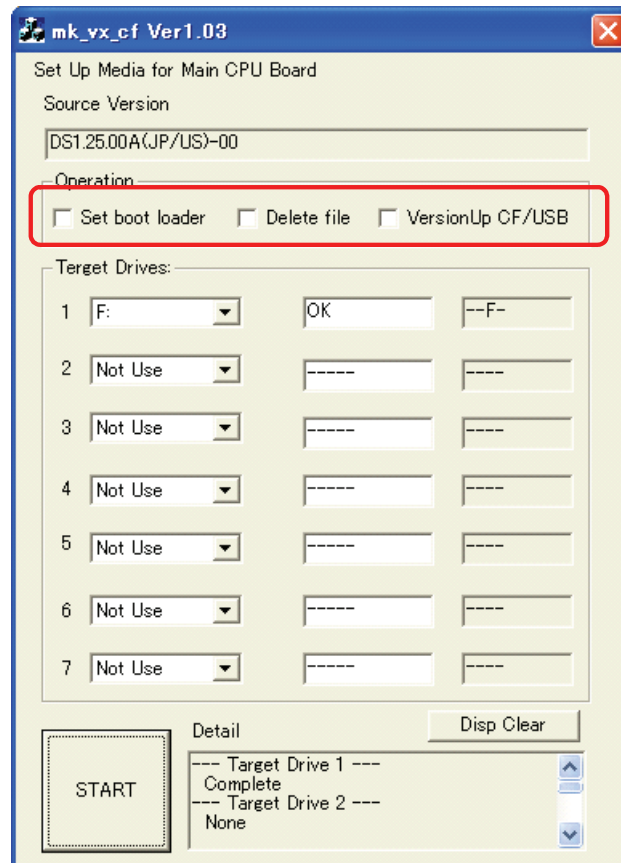
7 Troubleshooting

7.1 Back Up the CompactFlash

DX100

4. Perform the same operations as described in *chapter 2.2 “Preparing CompactFlash/USB for Upgrade” at page 2-2*. At this time, do not check any item in the “Operation” box, and just click [START].

- Only the files used in the YCP01 board are copied into the CompactFlash.



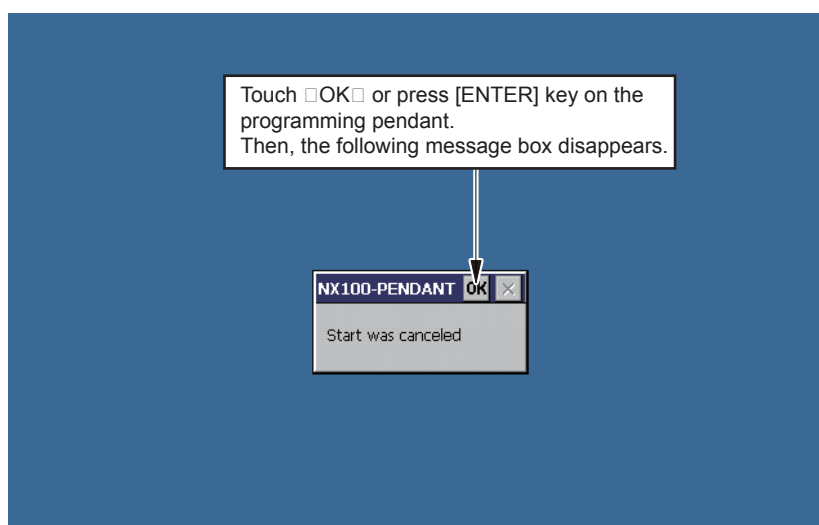
5. After the files are copied into the CompactFlash, return it to the YCP01 board.
6. Perform initialization in the maintenance mode.

7.2 How to Repair Programming Pendant when Fonts are Garbled

Followings are the procedures for repairing the garbled characters on the programming pendant window.

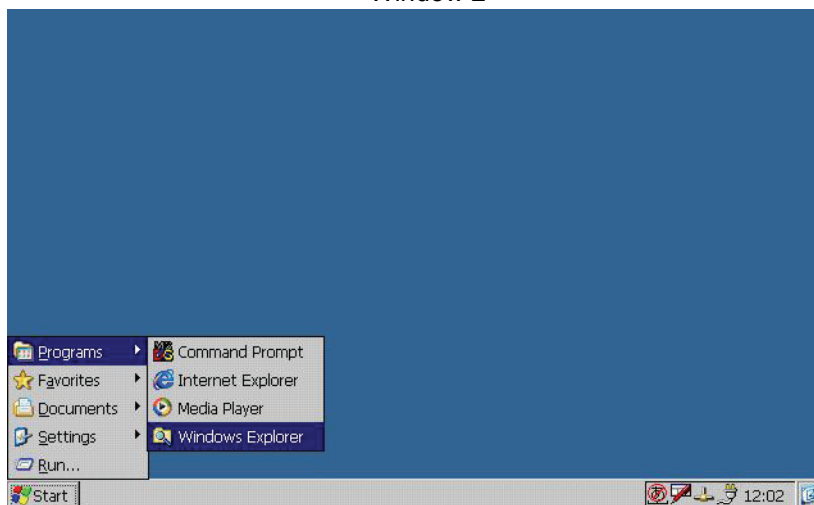
1. Prepare the CompactFlash for upgrading the DX100.
The CompactFlash can be replaced with the USB.
The preparing procedure using the CompactFlash is described in this manual.
2. Insert the CompactFlash for upgrading the DX100 to the CF slot on the programming pendant. Turn ON the main power of the DX100 by pressing [2] + [8] + [HIGH SPEED]. The DX100 is started-up in the OS(WindowsCE) writing mode. Then, calibrate the touch panel.
Window 1 appears as follows when the calibration is completed.

Window1



3. Select [Start] + [Programs] + [Windows Explorer] in Window 2.
Then, Window 3 appears.

Window 2



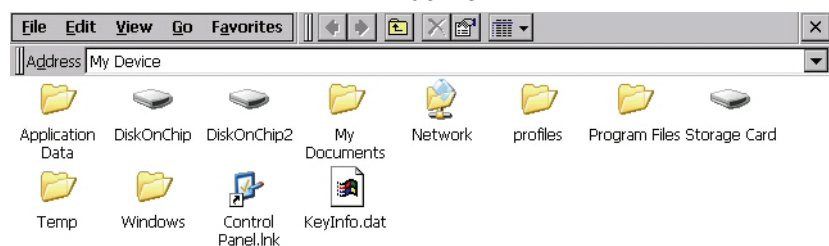
7 Troubleshooting

7.2 How to Repair Programming Pendant when Fonts are Garbled

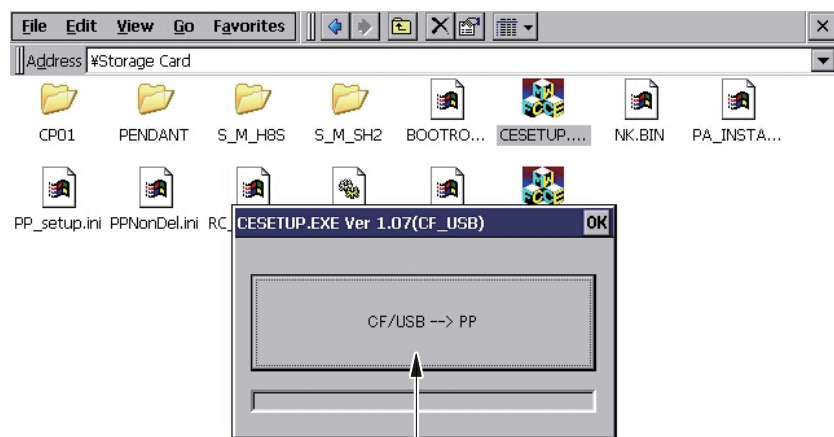
4. When Window 3 appeared as follows, either double click "DiskOnchip2" folder or move the cursor to "DiskOnchip2" folder and press [ENTER] key.
Then the list of files stored in "DiskOnchip2". After the list appears, delete all files. After the files are deleted, return to the list of folders like Window 3.
5. Double click "Storage Card" folder or move the cursor to "Storage Card" folder and press [ENTER] key.
The list of files stored in "Storage Card" folder appears.
Double click "CESETUP.EXE" folder or move the cursor to "CESETUP.EXE" folder and press [ENTER] key.
Then, Window 4 appears.

Select "USB Memory" in place of "Storage Card" in case USB is used for the repairing operation.

Window 3



Window 4



Press ☐CF--> PP☐ button, then the programming pendant application file stored in {Storage Card} folder (CompactFlash) is copied to {DeskOnChip} or {DiscOnchip2} folder.
After copying is completed, Window 5 appears .

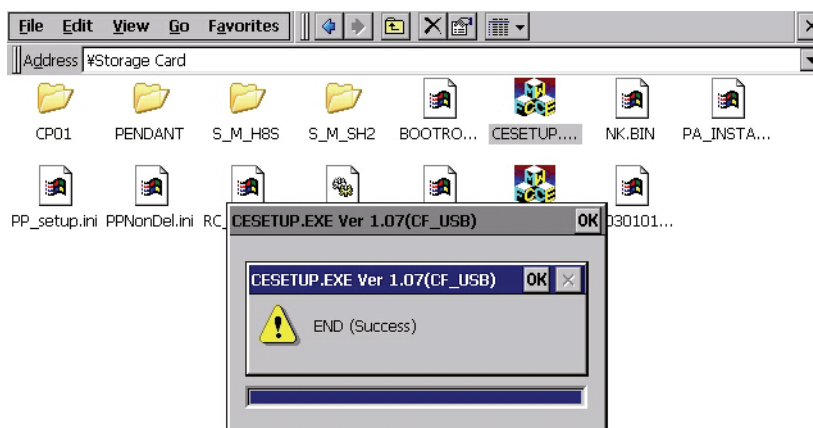
DX100

7 Troubleshooting

7.2 How to Repair Programming Pendant when Fonts are Garbled

6. When Window 5 appeared, turn OFF the main power of the DX100. Insert the CompactFlash for upgrading the DX100, then turn ON the main power again by pressing [INTERLOCK] + [8] + [SELECT]. The window for upgrade appears, then, select {Software Upgrade} to execute upgrade.

Window 5



7. When upgrade operation is completed, turn OFF the main power of the DX100.

DX100

UPGRADE PROCEDURE MANUAL

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