

Technical Memo

Subject: The Menu CPU Board Battery Replacement Method and the Required Related Procedure

Applicable Model (s)/ (Destination)	Serial Number (s)	Number of Unit (s)
MKS-8010 SYL	ALL	
MKS-9011 SYL	ALL	
MKS-9012 SYL	ALL	

1. Description

PC/AT Interchange Board (MAGIC-765 Board, Part Number: 1-761-445-11) contains an IC that has the internally built-in lithium battery. Because this lithium battery is a consumable part and can exhaust after a certain period of time. When the battery exhaustion occurs, the BIOS setting that is saved in the IC memory will be lost so that the trouble occurs resulting in the symptom that the Menu Panel does not start up normally.

This Technical Memo describes the lithium battery replacement method and the required procedure of setting up the BIOS after replacement of the lithium battery.

2. Key Points

- [1] We specify this lithium battery as a periodic replacement part of every 3 years.
- [2] When the lithium battery is going to be replaced, or if any trouble occurs due to exhaustion of the lithium battery occurs, replace the lithium battery and perform the re-setting of the BIOS setup following the instructions described in this Technical Memo.
- [3] The lithium batteries that are contained in the following two types of the printed circuit board are included as the target batteries of this Technical Memo. Therefore, if you have obtained any of the following two types of printed circuit board from our Repair Parts Center as a repair part, be sure to replace the lithium battery contained in the repair part, with the new replacement lithium battery because the lithium battery exhausts gradually while it is stocked in Repair Parts Warehouse. At the same time, be sure to set the BIOS setup again whenever a lithium battery is replaced, in accordance with this Technical Memo.

Target parts of this Technical Memo

PC/AT Interchange Board (1-761-445-11)

CPU Assembly (A-8329-337-A)

[4] The MKS-8010A / 9011A / 9012A do not have this trouble because they use the hardware of different hardware structure.

3. Trouble Symptom

When the main power is turned ON, the Menu Panel freezes at the following screen.

This trouble is characterized by the screen display as shown below that the error message "CMOS checksum error – Default loaded" is displayed on the screen.



4. Cause of the Trouble

After long hours of use the lithium battery that is used as the memory backup battery for the BIOS data memory back on the PC/AT Interchange Board exhausts gradually. When the battery output voltage decreases lower than the specified voltage, the BIOS setup can no longer be memorized and be lost.

5. Parts Required

- New piece of the lithium battery
(Part number: 1-767-156-11, Crystal oscillator (Lithium battery built-in type))
- A pair of tweezers
- USB interface key board
- Philips-head screwdriver 0

6. Remedial Measure

Replace the lithium battery in accordance with the following procedure.

At the same time, be sure to execute the BIOS re-setting whenever the lithium battery is replaced.

[1] For the MKS-8010

- (1) Turn OFF all the powers of the MKS-8010, remove the power cords.
- (2) Open the front panel of the MKS-8010 and remove the board retainer.
- (3) Draw out the MENU CPU ASSEMBLY that has been plugged in to the bottom-most slot.
- (4) Replace the lithium battery on the PC/AT Interchange Board in accordance with chapter [7. Lithium Battery Replacement Method] (on page 8)
- (5) Install the MENU CPU ASSEMBLY back to the original position.
- (6) Install the Front Panel and the Board Retainer.
- (7) Connect the USB key board to the DEVICE connector (USB) on the rear of the MKS-8025 / 8025MS or of the MKS-8010.
- (8) Connect the power cords to the system and turn ON the powers.
- (9) Re-set the BIOS in accordance with [8. BIOS Setup Procedure] (on page 9).

[2] For the MKS-9011/9012

Remove both of the two power cables of the MKS-9011/9012.

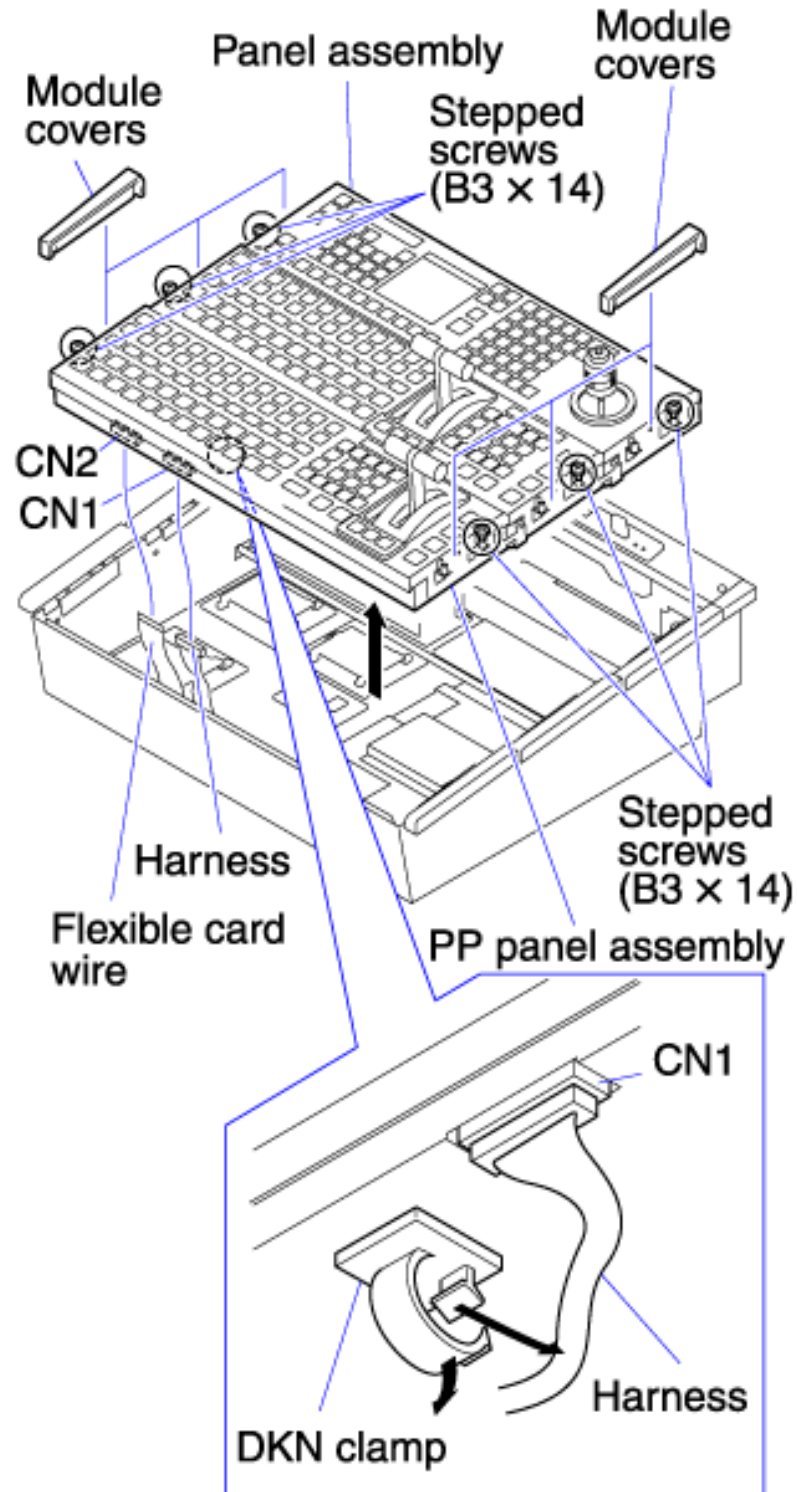
Perform the following steps by referring to the CCP-9000 MAINTENANCE MANUAL Series 1, Release 0.0e 9-968-000-71, [PP/AUX/ME Panel Removal] and [Service Position of Power Supply Unit].

- (1) Remove the six Module Covers.
- (2) Loosen the six screws and raise the Panel Assembly.

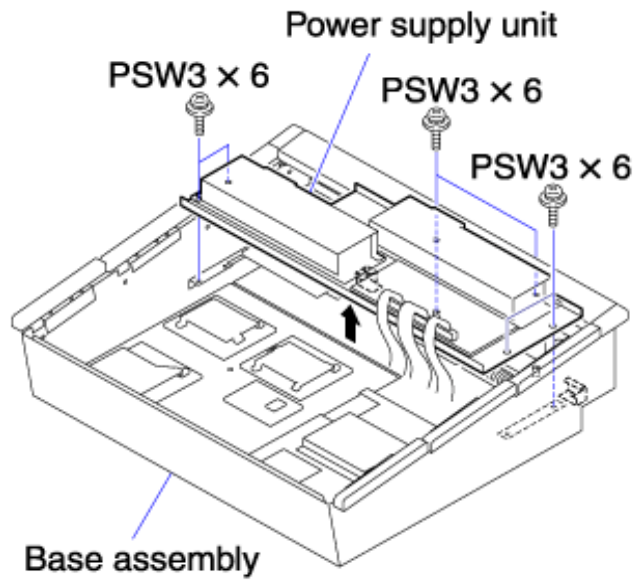
Caution: When raising the Panel Assembly, do not grasp the left-bottom of the front. Otherwise, the flexible card wires and the connectors can be damaged.

- (3) Remove the harness that is fixed by the DKN clamp of the PP panel.
- (4) Remove the harness and the flexible card wire from the connectors CN1 and CN2 of the PP panel, and remove the Panel Assembly.

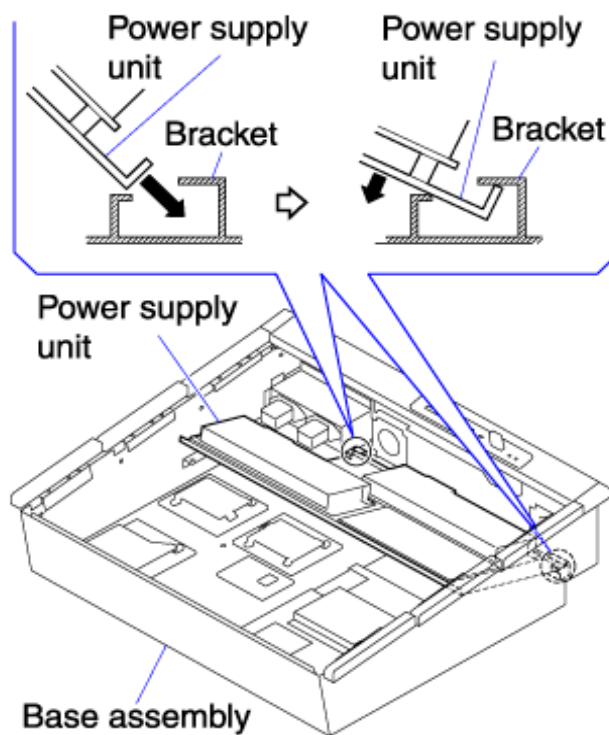
Caution: When handling the removed panel assembly, place the removed panel assembly on a work bench with care so that the wires and connectors on the bottom of the Panel Assembly must not be damaged.



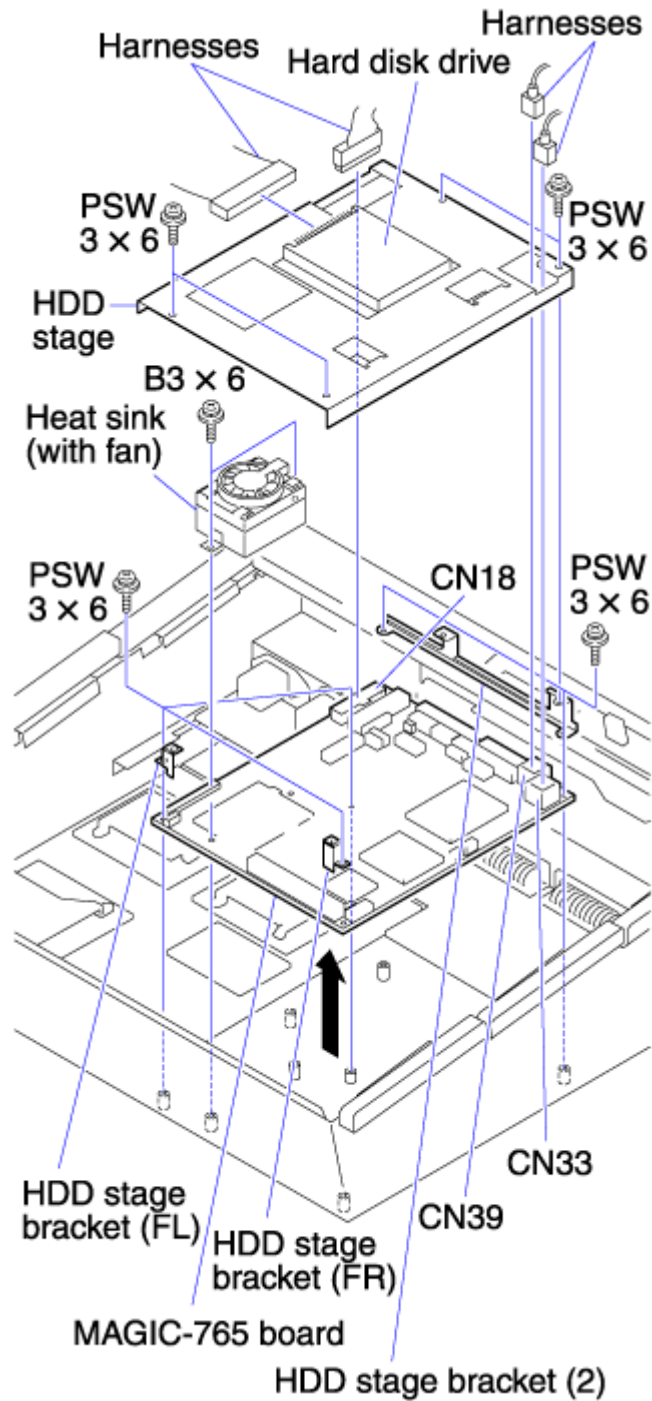
- (5) Remove the six screws and raise the Power Supply Unit.



- (6) Insert the Power Supply Unit into the bracket of the Base Assembly as shown in the illustration below, to fix it.



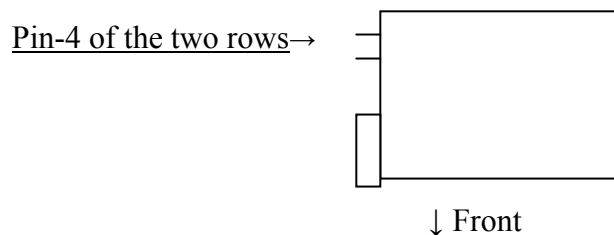
- (7) Remove the harness that are connected to the connectors CN18, CN33 and CN39 of the MAGIC-765 board, and to the hard disk.
- (8) Remove the four screws and remove the HDD stage.



- (9) Replace the lithium battery with the new one on the PC/AT Interchange Board by referring to chapter [7. Lithium Battery Replacement Method] (Page 8).
- (10) Re-assemble the parts to the original state by reversing the above steps from (1) to (8).

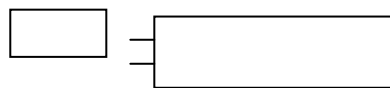
Caution: When installing the HDD stage, install it with care that the harness that is routed on top of the PC/AT Interchange Board must not be pinched.

- When connecting harness back to the HDD, insert the harness in the way that the pin-4 of the two rows must be left blank as shown below.



TOP VIEW

- When connecting the harness to the HDD, the harness can be connected to the wrong position that is one column upward from the normal position as shown below.
Be very careful not to connect the harness in the wrong position that is one column upward from the normal position as shown below.
If the harness is connected in the wrong position by mistake, the HDD Error will be displayed at the startup of the system.

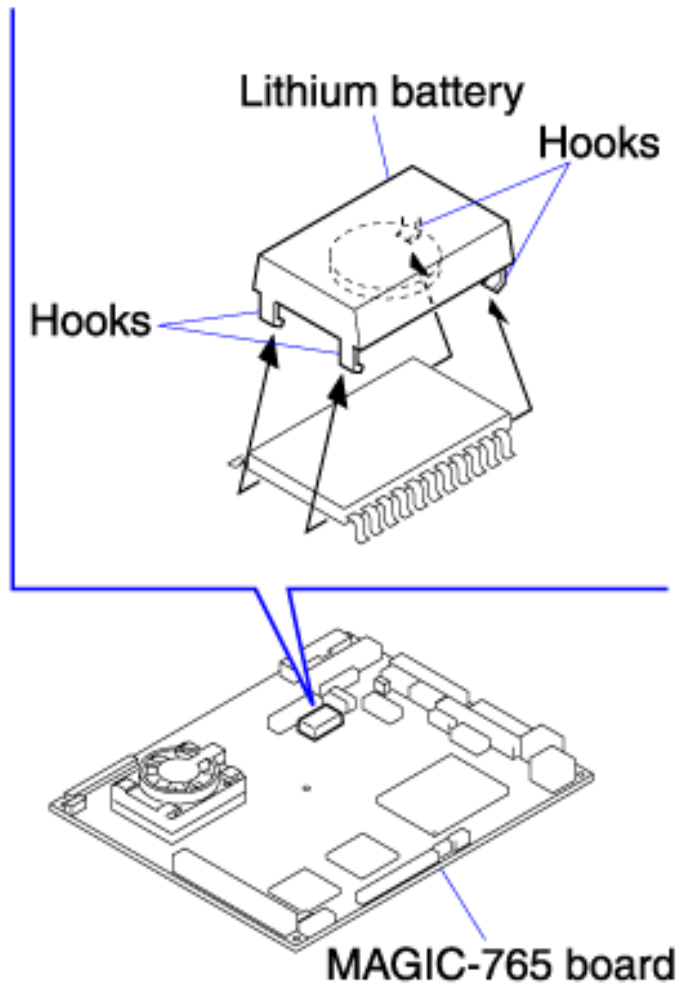


Side view (Illustration showing mis-connection of harness to HDD)

- (11) Connect the USB key board to the DEVICE connector (USB) on the top panel of the machine.
- (12) Connect the power cords correctly to the system and turn on the power .
- (13) Re-set the BIOS in accordance with chapter [8. BIOS Setup Procedure] (Page 9).

7. Lithium Battery Replacement Method

- (1) While opening wide the two claws on one side with a pair of tweezers, raise the lithium battery straight upward. (Two claws can be broken.)
- (2) Open the two claws on the other side with a pair of tweezers in the same way, remove the lithium battery.
- (3) Install a new lithium battery.



8. BIOS Setup Procedure

(1) When “OK” is displayed on the “Memory Test” line on the screen display of the MKS-8011(Menu Panel), press the **DEL** key of the USB key board.

(If you press the **DEL** key several times until the screens are switched, it is more secure.)

Award Modular BIOS vx.xxPG, An Energy Star Ally
Copyright (C) xxxx-xxxx, Award Software INC.

MAGIC-765 V1.2 12/5/2000

CELERON™ CPU at xxxMHz (xx x xx)

Memory Test : xxxxxxK OK

The CMOS SETUP UTILITY screen is displayed.

ROM PCI/ISA BIOS (xxxxxxxx)	
CMOS SETUP UTILITY	
AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS	INTEGRATED PERIPHERALS SUPERVISER PASSWORD USER PASSWORD IDE HDD AUTO DETECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color

(2) Move the cursor and select **”STANDARD CMOS SETUP”**. (It is high-lighted on display.)

(3) Press the **ENTER** key.

The STANDARD CMOS SETUP screen is displayed.

Date (mm:dd:yy) : xxx, xxx xx 20xx							
Time (hh:mm:ss) : xx : xx : xx							
HARD DISKS		TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ
SECTOR MODE							

Primary Master	: AUTO	0	0	0	0	0	0 AUTO
Primary Slave	: AUTO	0	0	0	0	0	0 AUTO
Secondary Master	: AUTO	0	0	0	0	0	0 AUTO
Secondary Slave	: AUTO	0	0	0	0	0	0 AUTO
Drive A : Auto							
Drive B : None							
Video : EGA/VGA							
Halt On : All, But keyboard							

(4) Move the cursor and select the “TYPE” column of “Primary Master”.

(It is high-lighted on display.)

(5) Press the **Page Up** key to change it to “None”.

(6) Move the cursor and select the “TYPE” column of “Primary Slave”.

(It is high-lighted on display.)

(7) Press the **Page Up** key to change it to “None”.

(8) Move the cursor and select the “TYPE” column of “Secondary Slave”.

(It is high-lighted on display.)

(9) Press the **Page Up** key to change it to “None”.

(10) Move the cursor to select the column to the right of “Drive A”.

(It is high-lighted on display.)

(11) Press the **Page Up** key to change it to “None”.

(12) Press the **ESC** key (Quit).

The display returns to the CMOS SETUP UTILITY screen.

(13) Move the cursor to select ” **BIOS FEATURES SETUP**”.

(It is high-lighted on display.)

(14) Press the **ENTER** key.

The BIOS FEATURES SETUP screen is displayed.

Virus Warning : Disabled	Video BIOS Shadow : Enabled
CPU Internal Cache : Enabled	C8000-CBFFF Shadow : Disabled
External Cache : Enabled	CC000-CFFFF Shadow : Disabled
CPU L2 Cache ECC Checking : Enabled	D0000-D3FFF Shadow : Disabled
Processor Number Feature : Enabled	D4000-D7FFF Shadow : Disabled
Quick Power On Self Test : Disabled	D8000-DBFFF Shadow : Disabled
Boot Sequence : A,C,SCSI	DC000-DFFFF Shadow : Disabled
Swap Floppy Drive : Disabled	
Boot Up Floppy Seek : Enabled	
Boot Up NumLock Status : Off	
Gate A20 Option : Fast	
Typematic Rate Setting : Disabled	
Typematic Rate (Chars/Sec): 6	
Typematic Rate (Msec) : 250	
Security Option : Setup	ESC :
PCI/VGA Palette Snoop : Disabled	F1 :
OS Select For DRAM > 64MB : Non-OS2	F5 :
Report No FDD For WIN 95 : Yes	F6 :
	F7 :

(15) Move the cursor to select the column to the right of ” **Quick Power On Self Test**”.

(It is high-lighted on display.)

(16) Press the **Page Up** key to change it to ” **Enable**”.

(17) Move the cursor to select the column to the right of ” **Boot Sequence**”.

(It is high-lighted on display.)

(18) Press the **Page Up** key to change it to ” **C Only**”.

(19) Press the **ESC** key (Quit).

The display returns to the CMOS SETUP UTILITY screen.

(20) Move the cursor to select ” **INTEGRATED PERIPHERALS**”.

(It is high-lighted on display.)

(21) Press the **ENTER** key.

The INTEGRATED PERIPHERALS screen is displayed.

IDE HDD Block Mode : Enabled	
IDE Primary Master PIO : Auto	
IDE Primary Slave PIO : Auto	
IDE Secondary Master PIO : Auto	
IDE Secondary Slave PIO : Auto	
IDE Primary Master UDMA : Auto	
IDE Primary Slave UDMA : Auto	
IDE Secondary Master UDMA : Auto	
IDE Secondary Slave UDMA : Auto	
On-chip Primary PCI IDE : Enabled	
On-chip Secondary PCI IDE : Enabled	
USB Keyboard support : Disabled	
Init Disable First : PCI Slot	
ACPI Disable Method : Disabled	
KBC input clock : 8 MHz	
Onboard FDC Controller : Enabled	
Onboard Serial Port1 : 3F8/IRQ4	
Onboard Serial Port2 : 2F8/IRQ3	
Onboard IR Controller : Disabled	
	Onboard Parallel Port : 378/IRQ7
	Parallel Port Mode : SPP
	Onboard Serial Port 3 : 3E8H
	Serial Port 3 Use IRQ : IRQ10
	Onboard Serial Port 4 : 2E8H
	Serial Port 4 Use IRQ : IRQ11
	VGA Expansion : Enabled
	ESC :
	F1 :
	F5 :
	F6 :
	F7 :

(22) Move the cursor to select the column to the right of "USB Keyboard support".

(It is high-lighted on display.)

(23) Press the **Page Up** key to change it to "Enable".

(24) Press the **ESC** key (Quit).

The display returns to the CMOS SETUP UTILITY screen.

(25) Press the **F10** key (Save & Exit Setup).

The message "SAVE to CMOS and EXIT (Y/N)? N" is displayed on screen.

(26) Press the **Y** key.

The characters "N" at the end of the line is changed to the character "y".

(27) Press the **Enter** key.

The screen display disappears and the system is rebooted.

Remove the USB key board.

9. Verification Method

Reboot the system to verify that the normal Menu screen is displayed on the MKS-8011 (Menu Display)