MATRIX	**Service Bulletin** Matrix T7xe/7xe consoles troubleshooting	
Effective Date: June 12, 2015	**Models Affected:** Matrix T7xe/7xe consoles	**Bulletin Num.** NB-1507008
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DESCRIPTION

Troubleshooting for 7xe console. Tables are organized by symptoms:

Table 1 – GUI Application Crash or Frozen Screen

Table 2 – Other Error Message

COMMON CASES

7xe console symptoms are on Table 1 and Table 2 below. Follow the steps in order to troubleshoot. 1, 2, 3, 4, etc. indicate troubleshooting steps. Click on the page number to navigate to a case, or click on a troubleshooting step to view instructions.

Table 1: 7xe Console – GUI Application Crash or Frozen Screen

Case	Photo	Symptom (P: Persistent; I: Intermittent)	Check iPod cable	Recon-nect TV cable	Check LVDS wire	Use iPod dongle to WIN CE	Re-calibrate touch function	Re-install GUI S/W	Re-install UCB S/W	Replace LMM board (UCB)	Replace WiFi board	Replace 15" Panel	Page
1		WIN CE screen(P)	1					2	3	4			P. 3
2		TV tab shows color screen(P)		1					2				P. 9
3		Display fuzzy or Wrong color(I)			1					2		3	P. 10
4		Touch panel no reaction(I) Quick key still can operate					1		2		3	4	P. 12
5		Console Frozen (P) Quick key can't operate					2		3	4	1	5	P. 14
6		Matrix loading screen(P)	1		2			3	4	5			P. 16
		TM.001.exe error message	1		2			3	4	5			

Table 2: 7xe Console – Other Error

Case	Photo	Symptom (P: Persistent; I: Intermittent)	Check wire connection	Check keypad type	Check VA board	Check SD card	Check inverter wire	Check LVDS wire	Upgrade LCB S/W	Replace LMM board (UCB)	Upgrade GUI, I/O	Upgrade VA firmware	Page
7		VA function(P)	1		2	3						4	P. 25
8		Blank screen(P)					1	2		3			P. 28
9		Low Battery / 04B0(I)	1					2					P. 30
10		Keypad / Quick key(P)	1							2			P. 31
11		S/W upgrade error remind(I)			1						2		P. 34
12		Can't catch USB device(P)	1		2						3		P. 35
13		"Unplug iPod wire" message(P)	2	1									P. 38
14		Wrong e-stop screen		1									P. 39

P.S. Follow the steps in order to troubleshoot.

Case 1: WIN CE screen (Or "TM.001.exe" error)

SYMPTOM

1. T7xe/7xe Console loads to WIN CE mode.

SOLUTION

Solution 1- Check iPod cable
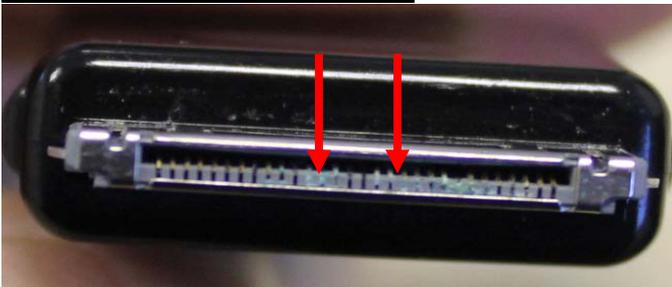
| 1. | Check the iPod cable. If the connecter pin is rusty, replace the cable. |

Solution 2- Reinstall GUI S/W

1. Re-boot the machine.
2. If console still enters WIN CE blue screen mode, you will need to reload the GUI software. First, double-click "My Device" in the left top of screen.

   Note: If the touch screen doesn't function, attach a mouse and keyboard, then select "Calibration" on the desktop. Press "Enter" and perform the touch screen calibration.
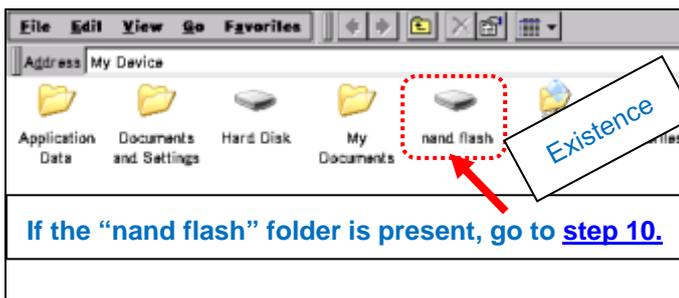
Existence

If the "nand flash" folder is present, go to step 10.

3. Check if the "nand flash" folder is in the My Device folder.
   - If the folder displays, move to **step 10** to reinstall the GUI software.
   - If the folder does not display, continue to **step 4**.

Not existence

If the "nand flash" folder has disappeared, continue to step 4.
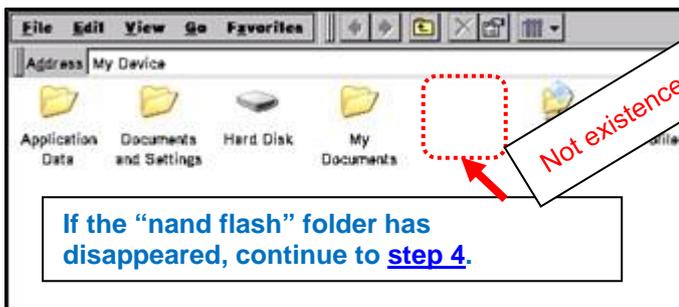
A- [Recover nand flash]
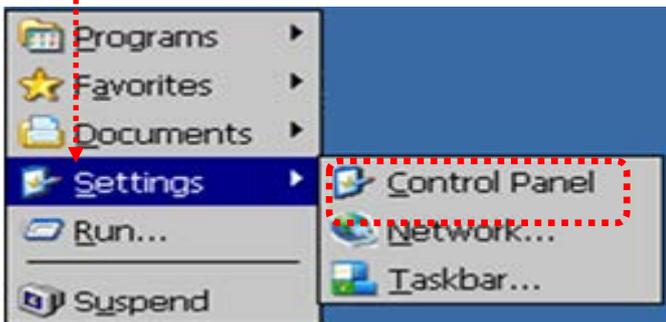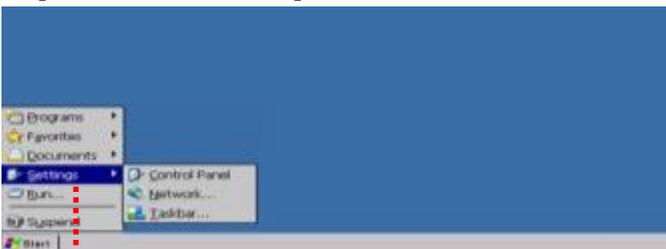
4. Click on "Start", and then select "Control Panel".

Solution 2- Reinstall GUI S/W – continued
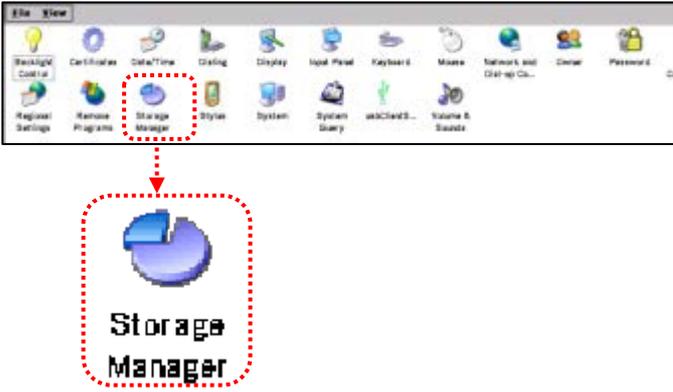
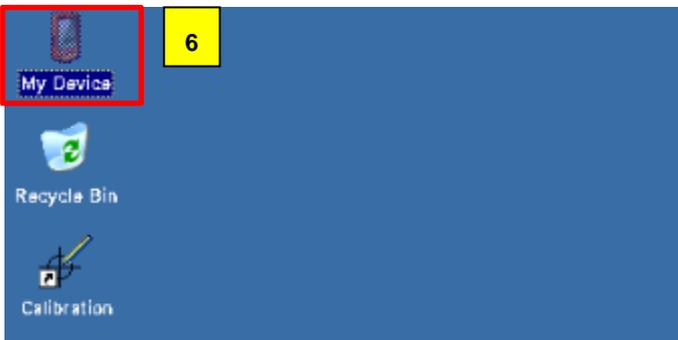5. Select "Storage Manager".

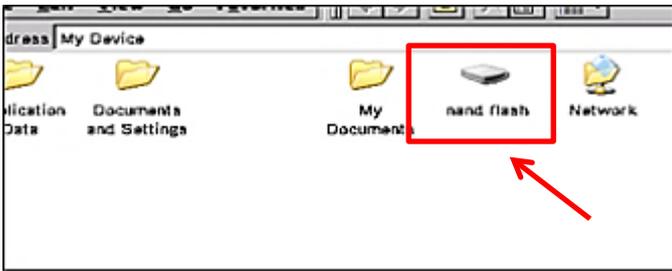**A- [Recover nand flash- continued]**
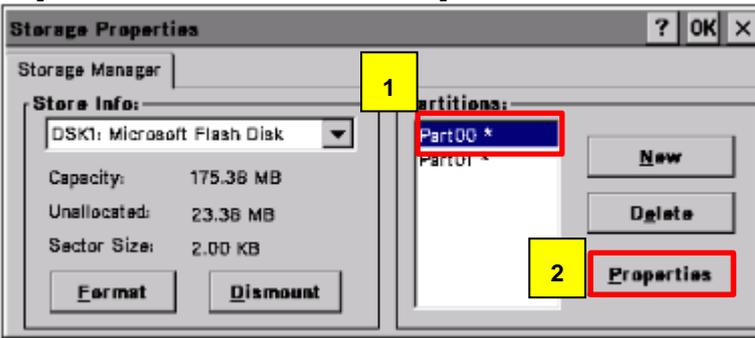
6. Select "Part00*", then click "Properties".
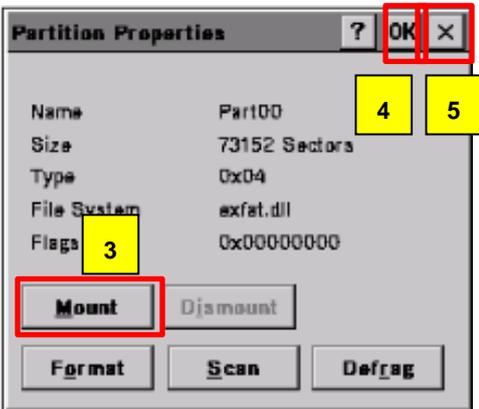
7. Select "Mount", click "OK", and then click "X".

8. Double-click "My Device", then click the "Hard Disk" icon. Check whether the "nand flash" folder is recovered.
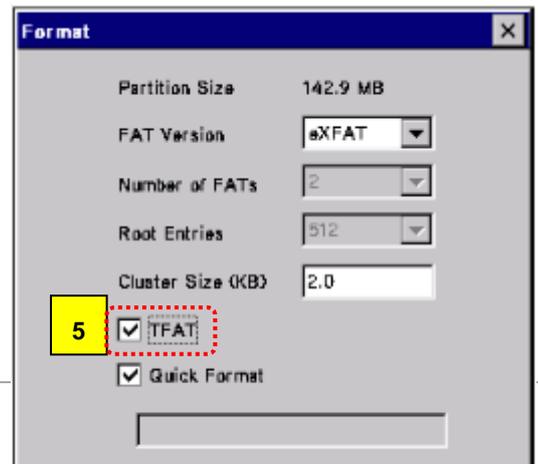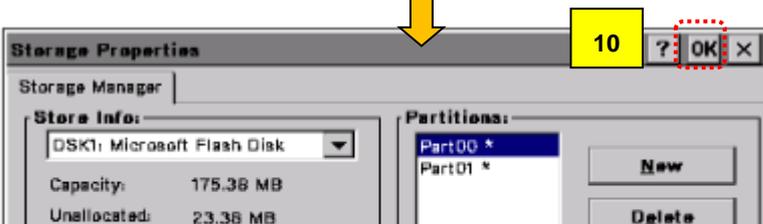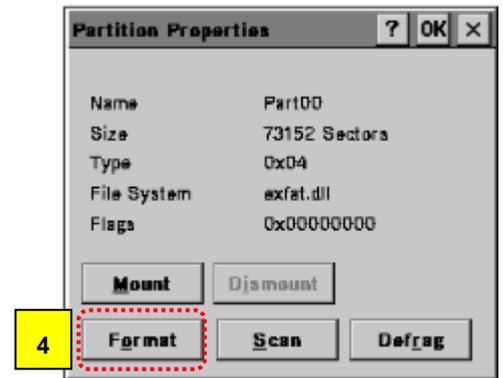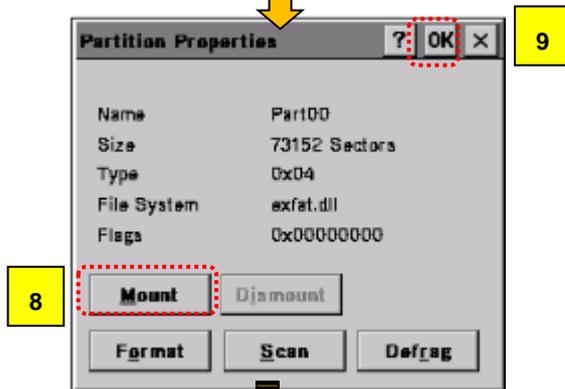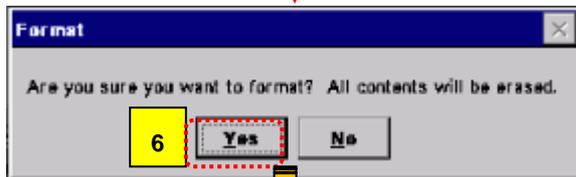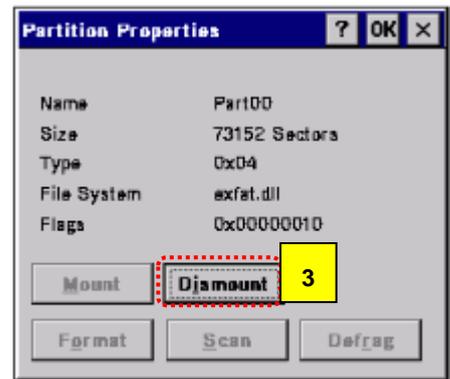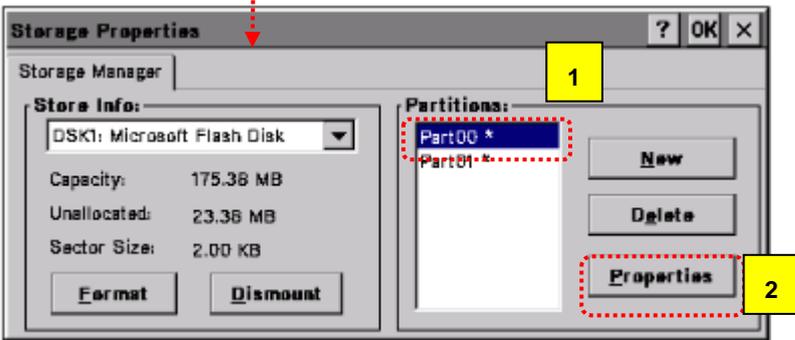
Solution 2- Reinstall GUI S/W – continued

B- format "nand flash" folder

9. Select ① Part00*-> ② Properties-> ③ Dismount-> ④ Format-> ⑤ Select TFAT then "Start"->⑥ Yes-> ⑦ OK-> ⑧ Mount-> ⑨ OK.-> ⑩ OK to leave Storage Properties
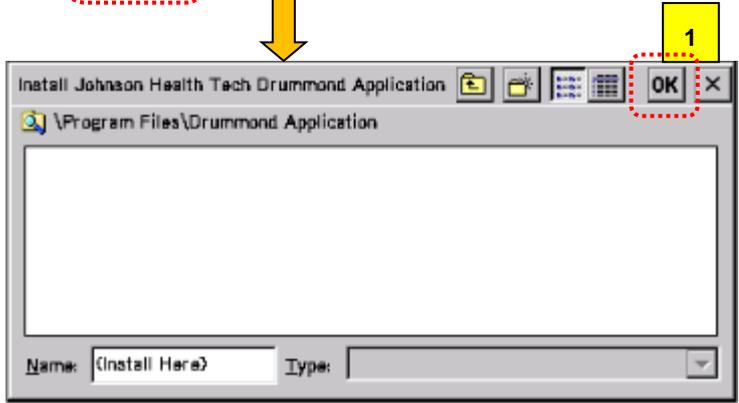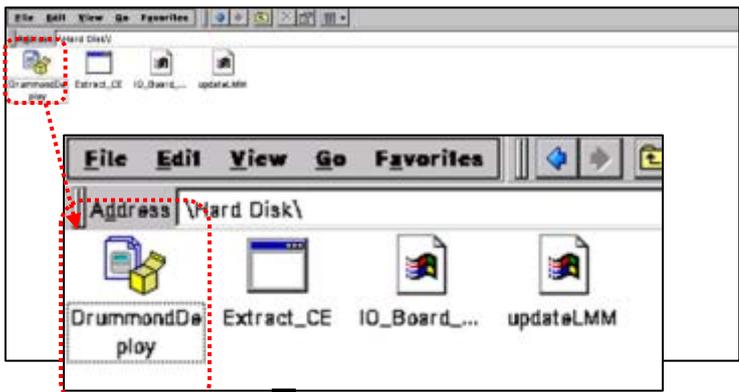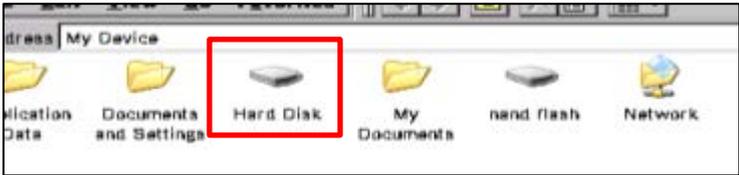
5

Solution 2- Reinstall GUI S/W – continued
C- Reinstall GUI software to "nand flash" folder

10. Insert the USB flash drive with GUI software into the USB port on the front of the console. The "Hard Disk" icon shows in My device. Note: For help downloading software to a USB flash drive, review the document Matrix Software Box Instructions in the category Software Information.

11. Double click "My Device" and then go to the "Hard Disk" folder.

12. Double click on the "DrummondDeploy" icon and select ① OK . The console will start to install.

13. After the software installation is completed, safely remove the USB flash drive.
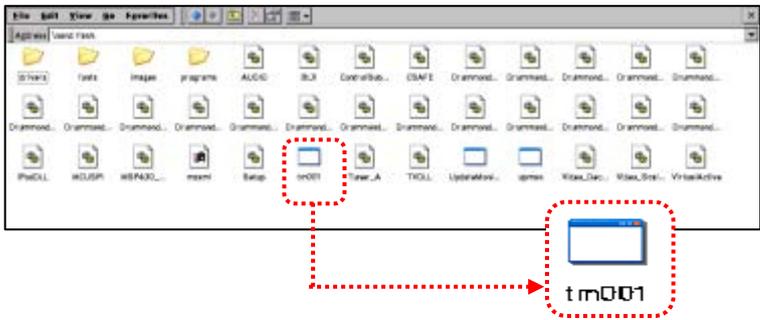
14. Double click "My Device" >nand flash> TM001 to access the Matrix Go screen.

15. After the console displays the "Go" screen, use channel ▲/▼ to reboot the console.

16. Once the home screen loads, press "Enter 3 0 0 1 Enter" to access Service Mode. In the Setup tab, select the correct Machine Type and change the Service On Boot setting to NO.

17. Turn off the machine, wait 30 seconds, and then turn on the machine.

Solution 3- Reinstall UCB S/W

Re-install the latest GUI and I/O software versions.

Solution 4- Replace LMM board (UCB)

Replace UCB.
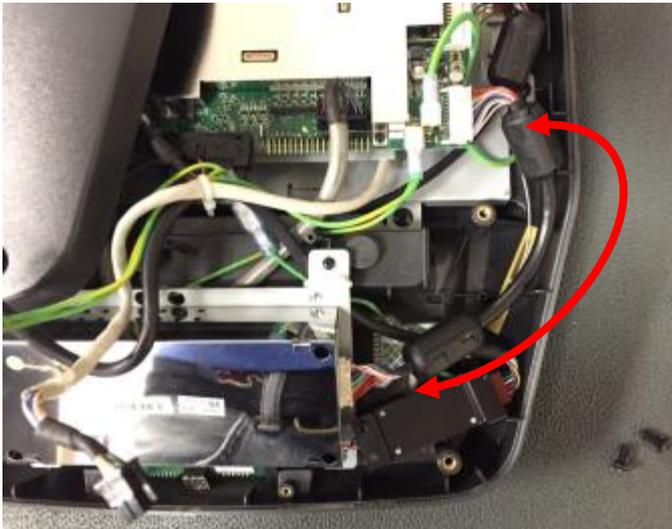
Case 2: TV tab shows color screen

SYMPTOM

Console shows color screen or can't recall OSD screen, as shown in the below picture,

SOLUTION

Solution 1- Reconnect TV cable

1. Turn off the machine.
2. Disconnect TV signal wire, re-plug in and cycle power.
3. Replace TV signal wire if it is damaged.
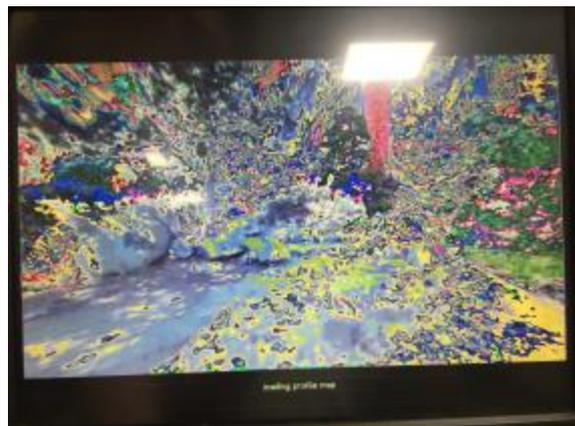
Solution 2- Reinstall UCB S/W

Re-install the latest software GUI and I/O software versions.

Case 3:   Display fuzzy or wrong color

SYMPTOM

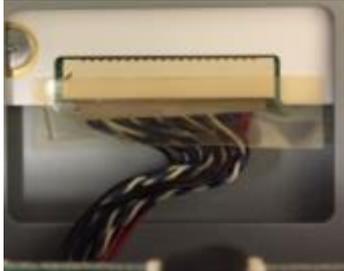Console has unusual color display or fuzzy screen as shown below.

SOLUTION

Solution 1- Check LVDS wire

1. Remove UCB.
2. Check LVDS wire connection on the LCD and the UCB. Unplug both sides and re-plug them.
3. If display issue is not solved, replace the LVDS wire. Make sure to install Mylar tape over the LCD connection.

Solution 2- Replace LMM board (UCB)

Replace UCB.

Return to Top

Solution 3- Replace 15" Panel

Replace 15" panel.

Case 4: Touch panel no reaction
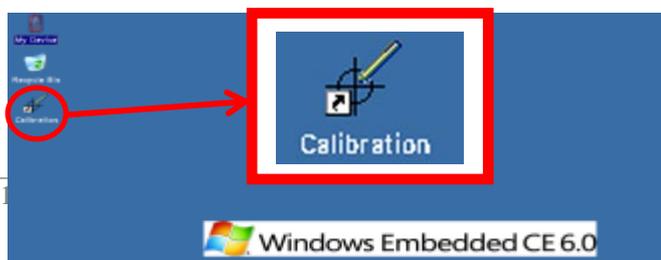
SYMPTOM

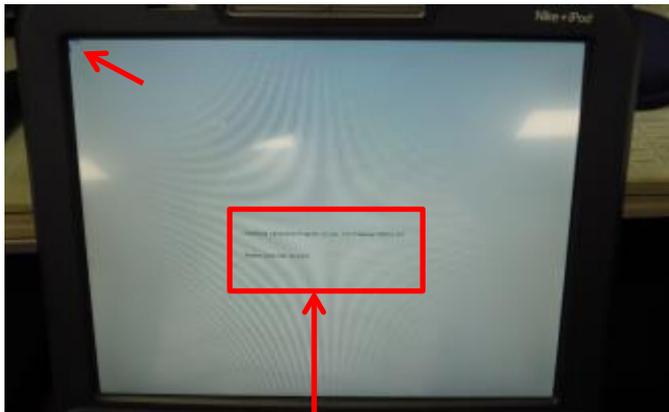Touch panel no reaction.

SOLUTION

Solution 1- Recalibrate touch function

1. Press "enter 3 0 0 1 enter" to access Service Mode.
2. Click "Test"-> "Touch Calibration"->"Start" to enter the touch panel calibration program.

3. Or press "enter 4 0 0 6 enter" (four times) to enter Win CE mode and click the "Calibration" icon to do the touch panel calibration.

PenMount Calibration Program. Driver: 2.9, Firmware: 6000.6.0.0

Please touch the red point.

| 4. Complete the touch panel calibration. |

Solution 2- Reinstall UCB S/W

Re-install the latest software GUI and I/O software versions.

Solution 3- Replace Wifi board

1. If the touch screen still has no reaction, but keypad still "beeps" when you press.
2. Disconnect the WiFi board and cycle power.
3. Check if console works fine after WiFi board is disconnected.
   - If yes, replace WiFi board.
   - If not, go to solution 4.

Solution 4- Replace 15" Panel

Replace 15" panel.

Case 5: Console Frozen

SYMPTOM

Console touch panel no reaction, keypad no function (without beep sound when press)

SOLUTION

### Solution 1- Replace Wifi board

1. The touch screen has no reaction and keypad has no "beep" sound when press.
2. Disconnect WiFi board and cycle power.
3. If console works fine after WiFi board is disconnected, replace WiFi board.
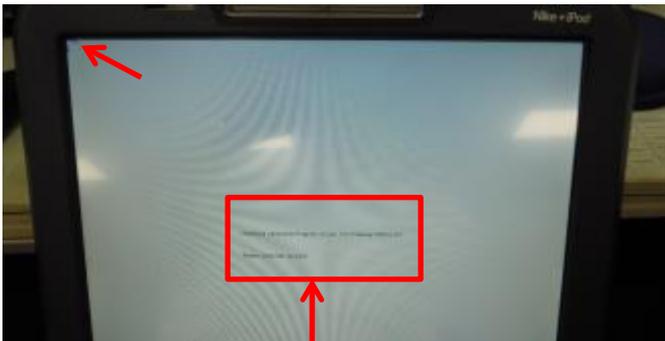
Solution 2- Recalibration touch function

1. Press "enter 3 0 0 1 enter" to access Service Mode.
2. Click "Test"-> "Touch Calibration"->"Start" to enter the touch panel calibration program.
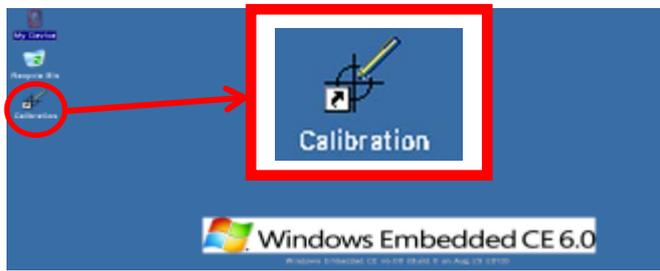
3. Or press "enter 4 0 0 6 enter" (four times) to enter Win CE mode and click the "Calibration" icon to do the touch panel calibration.

4. Complete the touch panel calibration.

Solution 3- Reinstall UCB S/W

Re-install the latest software GUI and I/O software versions.

Solution 4- Replace LMM board (UCB)

| | Replace UCB. |

Solution 5- Replace 15" Panel

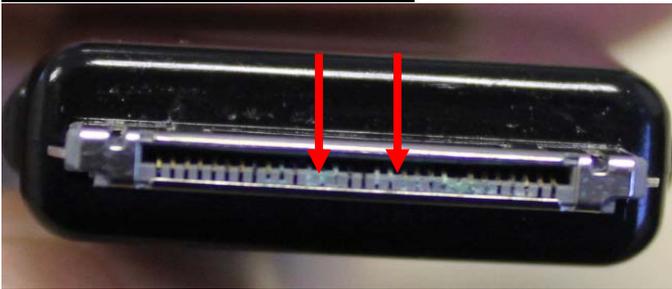| | Replace 15" panel. |

Case 6: Matrix loading screen

SYMPTOM

Console shows "Matrix system loading" and can't access the "Go" screen or shows the TM.001.exe error message.
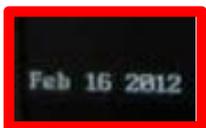
SOLUTION

NOTE: The following troubleshooting does not work on MMM units. If an MMM console is stuck on the Matrix System Loading screen, the console must be replaced.

Solution 1- Check iPod cable

1. Check and change the iPod cable if the connecter pin is rusty.

Solution 2- Use iPod dongle to get in WIN CE

1. Check if the screen on the left bottom has date code message (e.g. Feb 16 2012).
   - If not, update the E-boot software (complete steps 2-14 and Solution 3).
   - If yes, go to steps 2-6 and then go to Solution 3 (Reinstall GUI S/W).

System Loading... Please Wait

Feb 16 2012

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iPod dongle
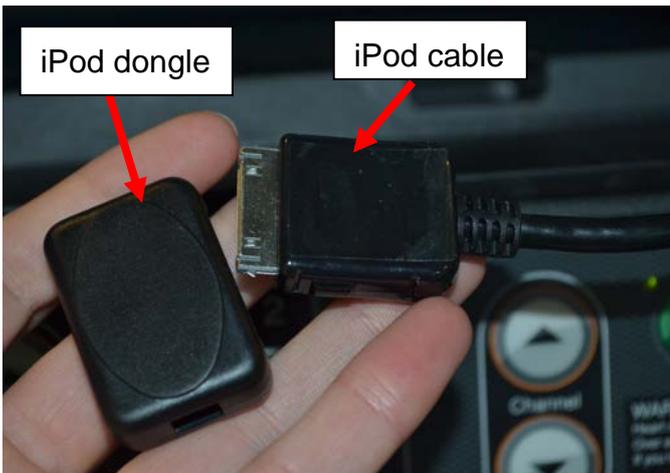
iPod cable

2. Turn off machine power.

3. Insert the iPod cable into the iPod dongle (part number #1000371126). **Important:** If you do not have the corresponding iPod cable, you must order it.

Update process... 4/4
Erase User Space Partition Success

100%
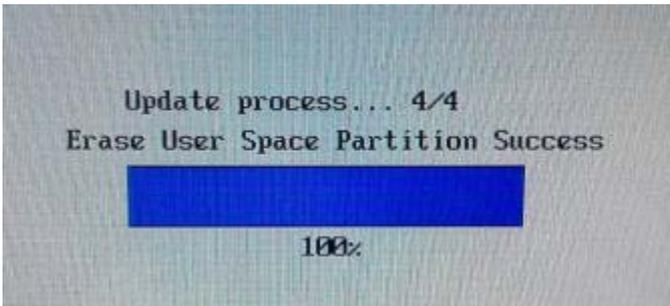
4. Turn on machine power.

5. The screen will run update process from 1/4 to 4/4 automatically. When the update process is completed, the console will enter WIN CE screen.

6. Remove iPod dongle.

Windows Embedded CE 6.0

My Device

[Eboot program upgrade]

Note: As mentioned in step 1, if the screen has no date code message on left-bottom corner, continue to do the E-Boot program upgrade (Solution 3).

7. Insert the USB device with E-Boot program into the USB port at the front of console first. Then double-click "My Device" to enter the folder.
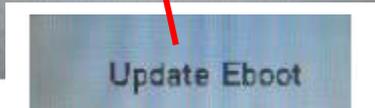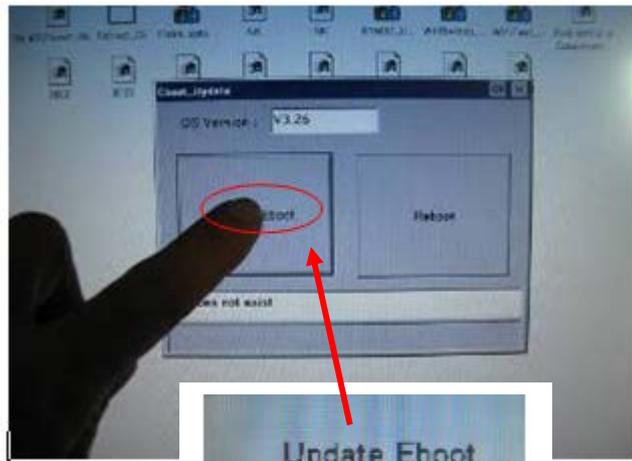

Solution 2- Use iPod dongle to WIN CE- continued

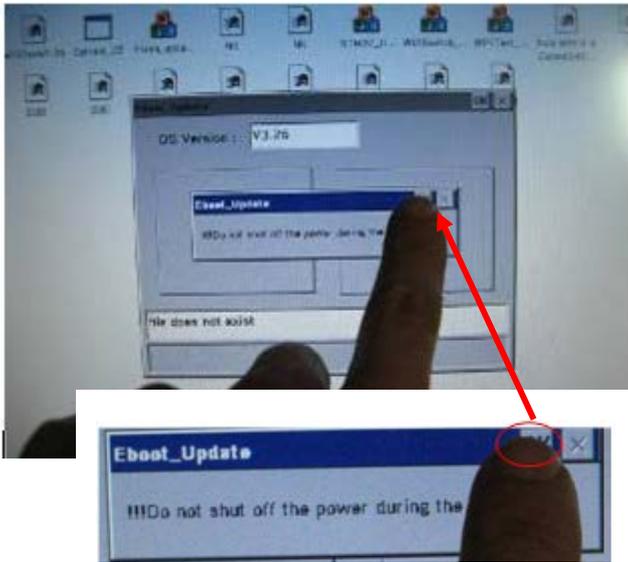8. Double-click "Hard Disk" to access USB folder.
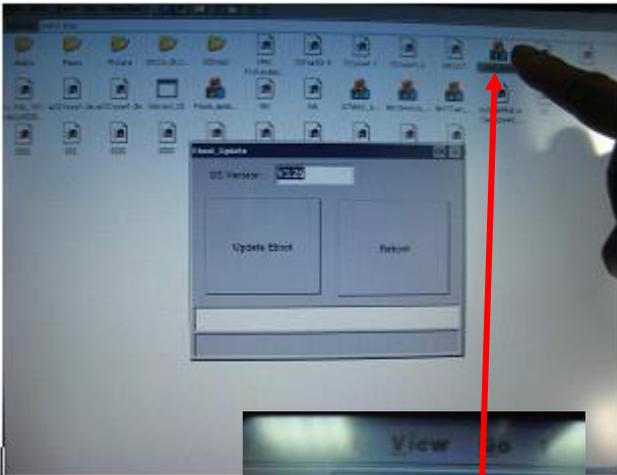
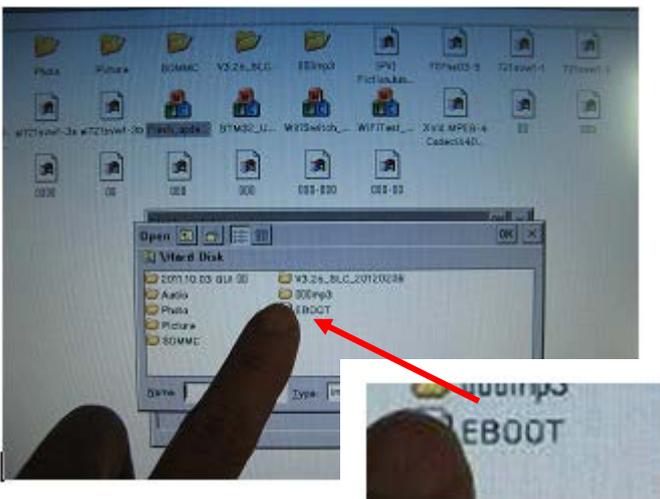9. Double click "Eboot_Update" and flash-update icon will show up.

10. Continue to select and double click "Update Eboot".

Solution 2- Use iPod dongle to WIN CE- continue

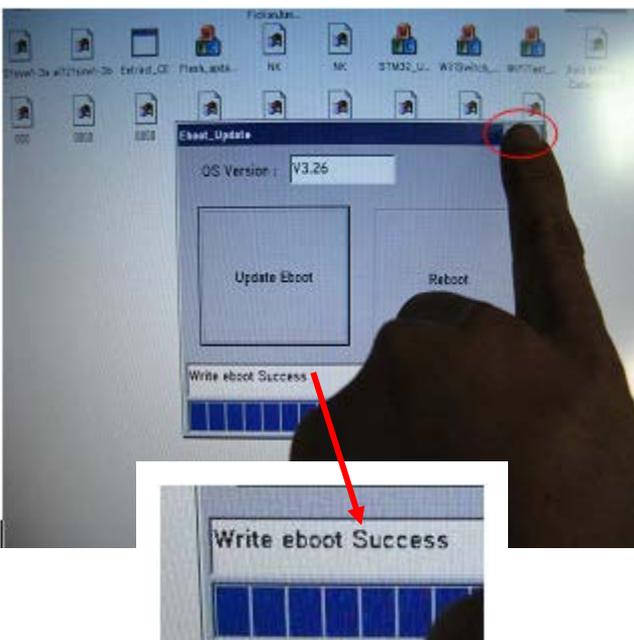11. A prompt shows "Eboot_Update". Press "OK" and Hard Disk icon appears.

12. Double click "Eboot" program to start upgrade process.

 Important: Do not power off during upgrade process.

13. When the screen shows the message "write eboot Success", that means the update is complete.
 13.1 Please press "X" to close this window after update complete.
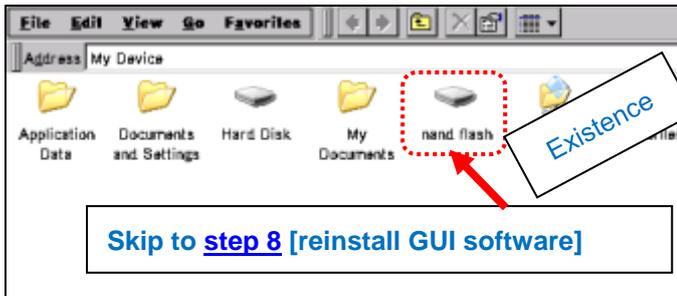 13.2 Remove the USB device.

14. Continue to Solution 3.

Solution 3- Reinstall GUI S/W

1. Click "My Device" on the left top of screen.

Skip to **step 8** [reinstall GUI software]

2. Check if the "nand flash" folder is in the My Device folder.
   - If the folder displays, move to **step 10** to reinstall the GUI software.
   - If the folder does not display, continue to **step 4**.

"nand flash" folder disappear
Continue with step 3 to recover nand
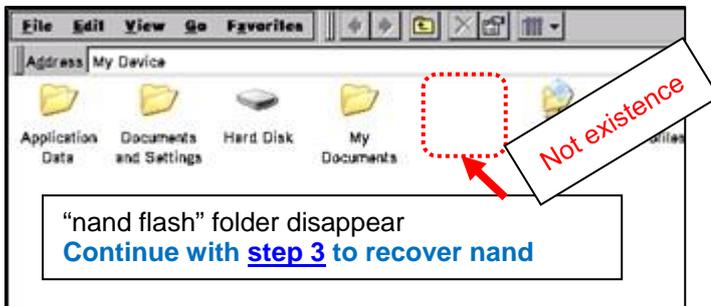
A- [Recover nand flash]
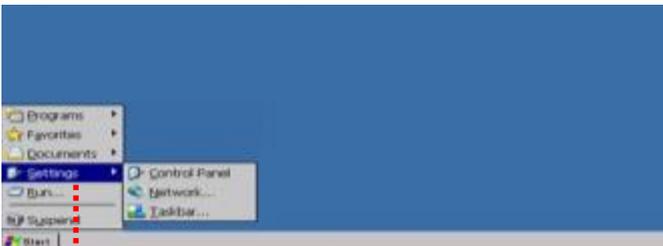
3. Click on "Start", and then select "Control Panel".
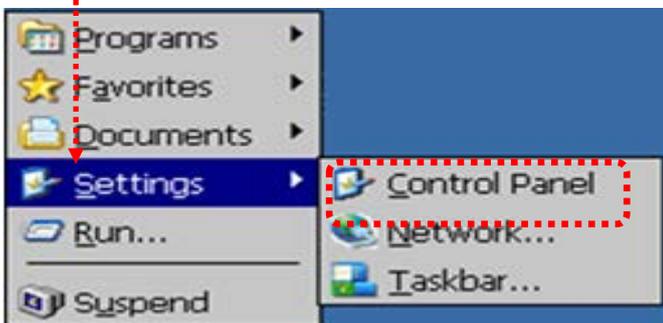
4. Select "Storage Manager".

A- [Recover nand flash- continued]

5. Select "Part00*", then click "Properties".

6. Select "Mount", click "OK", and then click "X".

7. Double-click "My Device", then click the "Hard Disk" icon. Check whether the "nand flash" folder is recovered.

Solution 3- Reinstall GUI S/W - continued

B- format "nand flash" folder

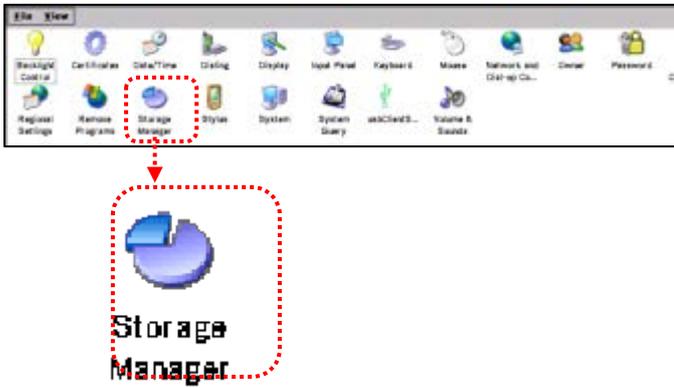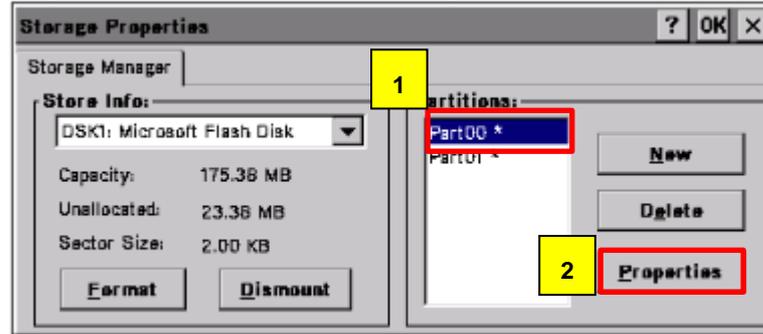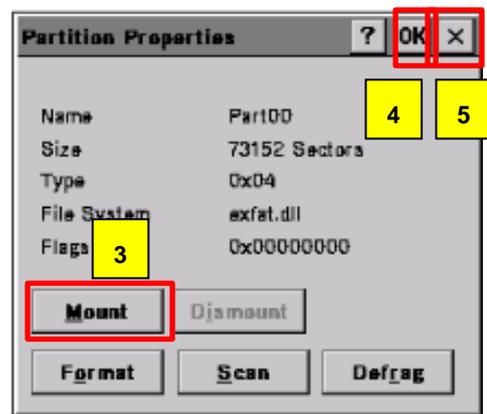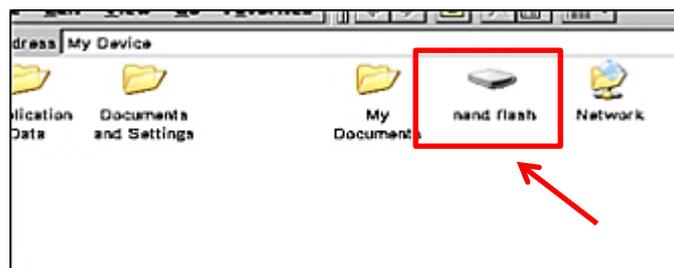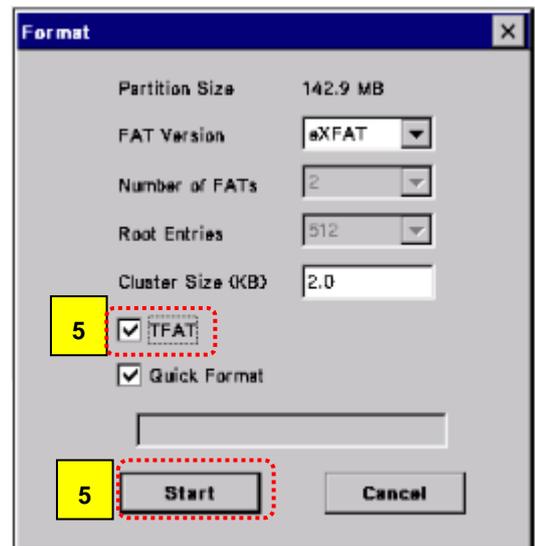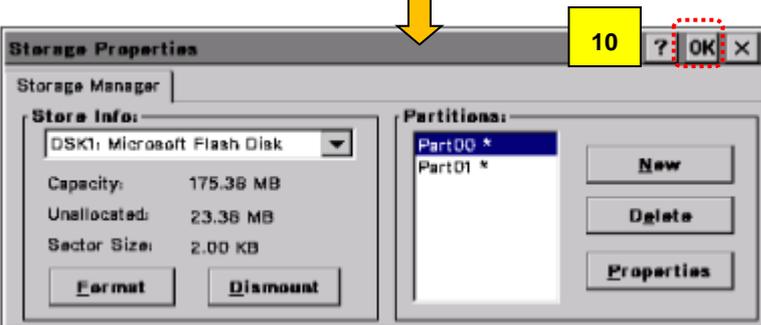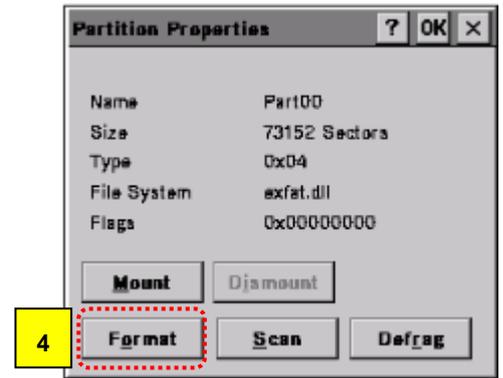8. Select ① Part00*-> ② Properties-> ③ Dismount-> ④ Format-> ⑤ Select TFAT then "Start"->⑥ Yes-> ⑦ OK-> ⑧ Mount-> ⑨ OK.-> ⑩ OK to leave Storage Properties

Storage Properties

Storage Manager

Store Info:
DSK1: Microsoft Flash Disk

Capacity: 175.38 MB
Unallocated: 23.38 MB
Sector Size: 2.00 KB

Format   Dismount

Partitions: **1**
Part00 *
Part01 *

New
Delete
Properties   **2**

Partition Properties   ? OK ×

Name   Part00
Size   73152 Sectors
Type   0x04
File System exfat.dll
Flags   0x00000010

Mount   Dismount **3**
Format   Scan   Defrag

Format   ×

Are you sure you want to format? All contents will be erased.

6 Yes   No

7 Format OK ×
Format Complete

Partition Properties   ? OK ×   **9**

Name   Part00
Size   73152 Sectors
Type   0x04
File System exfat.dll
Flags   0x00000000

8 Mount   Dismount
Format   Scan   Defrag

Partition Properties   ? OK ×

Name   Part00
Size   73152 Sectors
Type   0x04
File System exfat.dll
Flags   0x00000000

Mount   Dismount
4 Format   Scan   Defrag

Format   ×

Partition Size   142.9 MB
FAT Version   exFAT
Number of FATs   2
Root Entries   512
Cluster Size (KB) 2.0

5 ☑ TFAT
☑ Quick Format

5 Start   Cancel

Storage Properties   **10** ? OK ×

Storage Manager

Store Info:
DSK1: Microsoft Flash Disk

Capacity: 175.38 MB
Unallocated: 23.38 MB
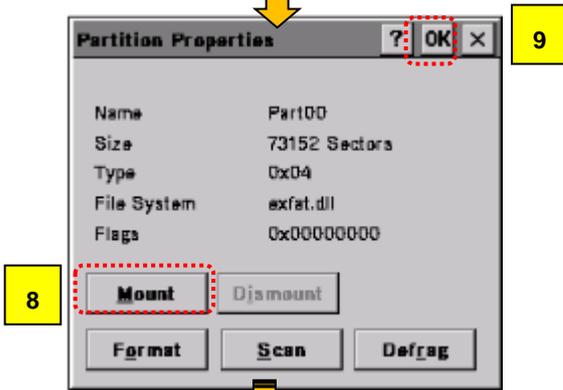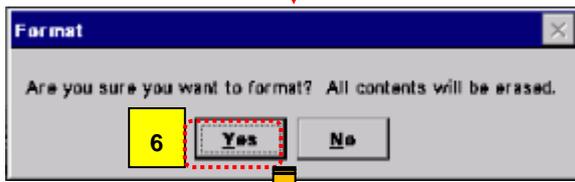Sector Size: 2.00 KB

Format   Dismount

Partitions:
Part00 *
Part01 *

New
Delete
Properties

Solution 3- Reinstall GUI S/W – continued
C- Reinstall GUI software to "nand flash" folder

9. Insert the USB flash drive with GUI software into the USB port on the front of the console. The "Hard Disk" icon shows in My device. Note: For help downloading software to a USB flash drive, review the document Software Box Instructions in the category Software Information.

10. Double click "My Device" and then go to the "Hard Disk" folder.

11. Double click on the "DrummondDeploy" icon and select ① OK . The console will start to install.

12. After the software installation is completed, safely remove the USB flash drive.

13. Double click "My Device" >nand flash> TM001 to access the Matrix Go screen.

14. After the console displays the "Go" screen, use channel ▲/▼ to reboot the console.

15. Once the home screen loads, press "Enter 3 0 0 1 Enter" to access Service Mode. In the Setup tab, select the correct Machine Type and change the Service On Boot setting to NO.

16. Turn off the machine, wait 30 seconds, and then turn on the machine.

Solution 4- Reinstall UCB S/W

Reinstall the latest software GUI and I/O software versions.

Solution 5- Replace LMM board (UCB)

Replace LMM board.

Case 7: VA function

SYMPTOM

VA is not working.

SOLUTION

Solution 1- Check wire connection

Check the connection from the VA board to UCB.

Solution 2- Check VA board

1. Press "enter 1 0 0 1 enter" to access Manager Mode. Press "Other"->"Virtual Active" and select it to "On".
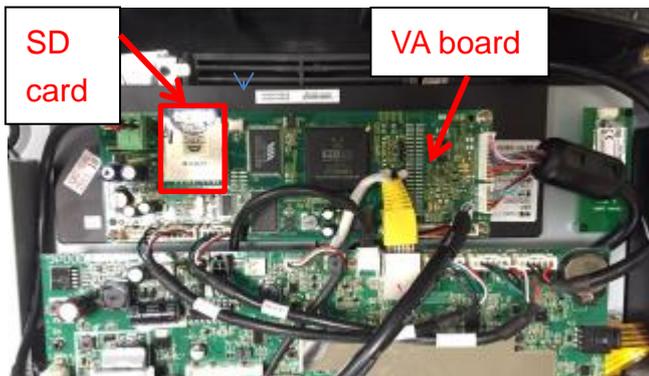

2. Press "About" to check if VA software version is "291.
   - If it's "0", replace VA board.
   - If it's 291, but the VA icon is still grey instead of red, please go to solution 3.
   - If it's 285, please go to solution 3 and 4.
     (P.S. The VA firmware must be upgraded to the latest version 291).

Solution 3- Check SD card

1. Check the SD card connection on the VA board.
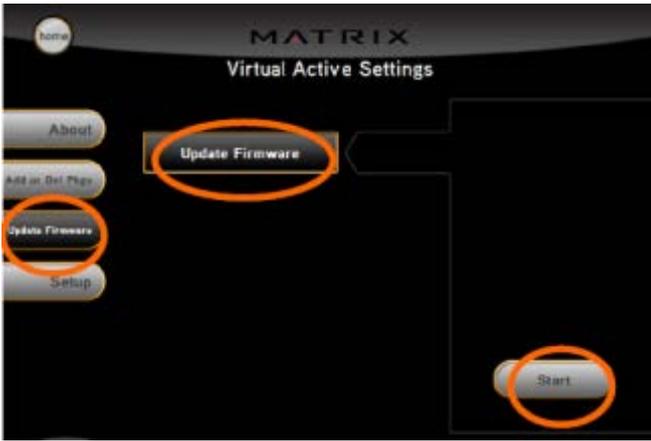   - Remove the SD card from VA board and plug it in again

2. Press "enter 2 0 0 7 enter" to access ""Virtual Active Settings".
3. Check if Virtual Active Setting can display SD card VA package and default volume.
   - If not, replace SD card.

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Solution 4- Upgrade VA firmware

1. Insert the USB Drive with VA firmware into the USB port in the console.
2. Select "Update Firmware" and press "Start".

3. The screen will show "install Virtual Active Software", press "Yes".

4. After a few seconds, the machine will auto run the upgrade.
   Important: Don't power down the machine during the program update.

5. When the display shows "Update complete = 100%", remove the USB and turn off power.

Solution 4- Upgrade VA firmware - continued

6. Press "enter 1 0 0 1 enter" to access Manager Mode. Press "About" to check if "Software Version" is the new one.
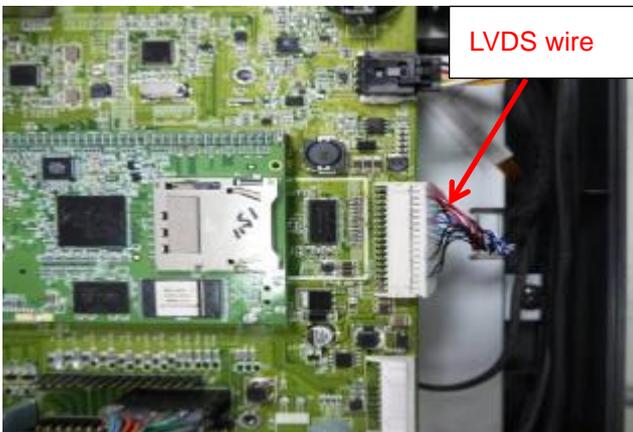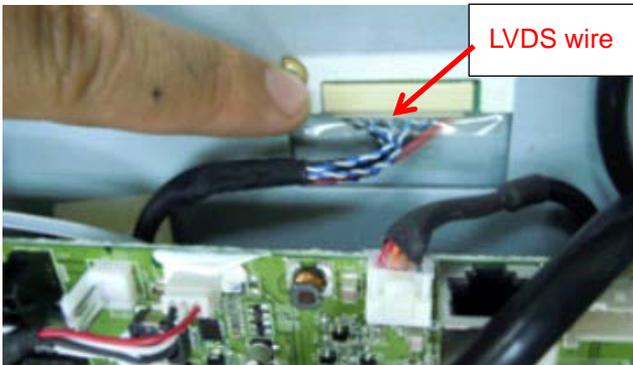
Case 8: Blank screen

SYMPTOM

Console shows blank screen, but LCM (lower display) is on.

The LCM screen is on

SOLUTION

Solution 1- Check LVDS wire

LVDS wire
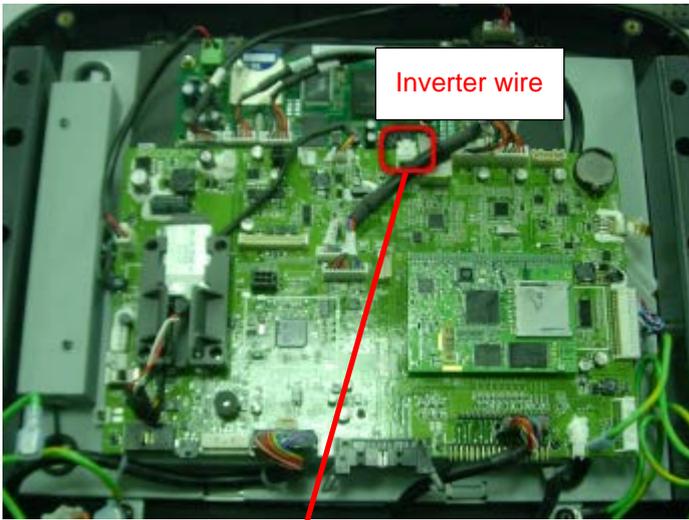

LVDS wire

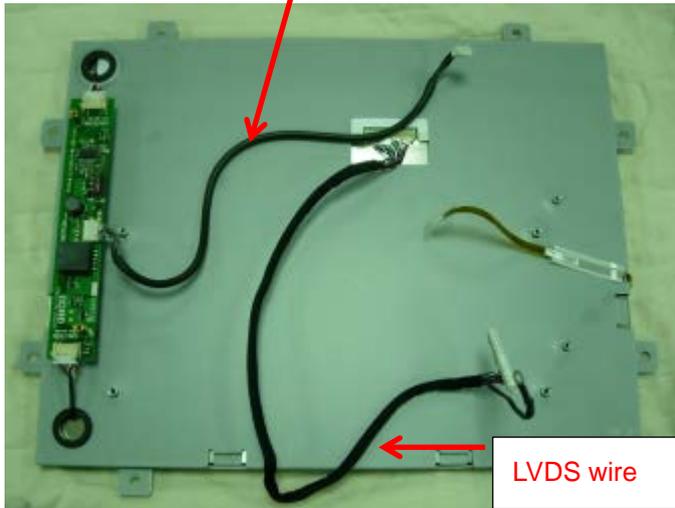Check the LVDS wire connection on the UCB and TFT panel. Replace the LVDS wire if it's damaged.
If the issue persists, please continue with solution 2.

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Solution 2- Check inverter wire

Inverter wire

LVDS wire

Check the inverter wire connection on the UCB and inverter. Replace the inverter wire if it's damaged.

Solution 3- Replace LMM board (UCB)

Replace LMM board.

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Case 9: Low Battery / 04B0

SYMPTOM

Console is showing pedal faster, low battery then 04B0 error code (only happens with self-power mode).

SOLUTION

1. Check the connection of the console communication cable on console and the MCB.

2. This is a software data loss issue of LCB1. Require upgrade LCB software or replace LCB. Please refer to NB-1311006.

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Case 10: Keypad / Quick key

SYMPTOM

No Keypad or Quick Key response.

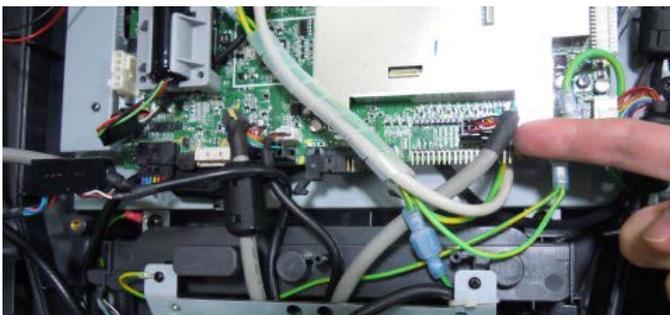Keypad

Quick Keypad

Ex. U7xe

SOLUTION

Solution 1- Check wire connection

A. Check the console keypad wire connection
1. Press "enter 3 0 0 1 enter" to access Service Mode.
2. Use Keypad test to confirm if the buttons are functional.
3. Check keypad wire connection and replace it if necessary.

Ex. U7xe (console keypad)

B. Check the quick Key wire connection
- Check the quick keypad wire connection and replace it if necessary.
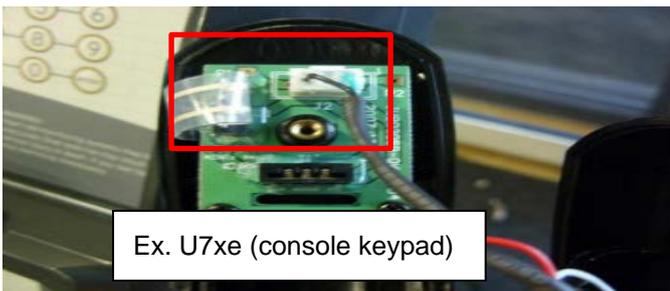
Solution 2- Replace LMM board (UCB)

Replace LMM board.

Case 11: S/W upgrade error remind
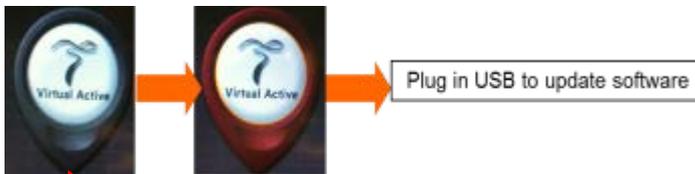
SYMPTOM

During software update, console shows error message as below.

There has been an error updating the application! Please reboot and try again. Contact technical support if this error persists.

SOLUTION

Solution 1- Check VA board

Plug in USB to update software

If VA is installed on the console, wait until the Virtual Active icon on the standard display picture turns red prior to updating the software.

If this console is installed with VA board, please wait for the VA icon to turn red.
(**Reason:** Grey VA icon results in this issue.)

Solution 2- Upgrade GUI, I/O

Reinstall the latest GUI and I/O software.
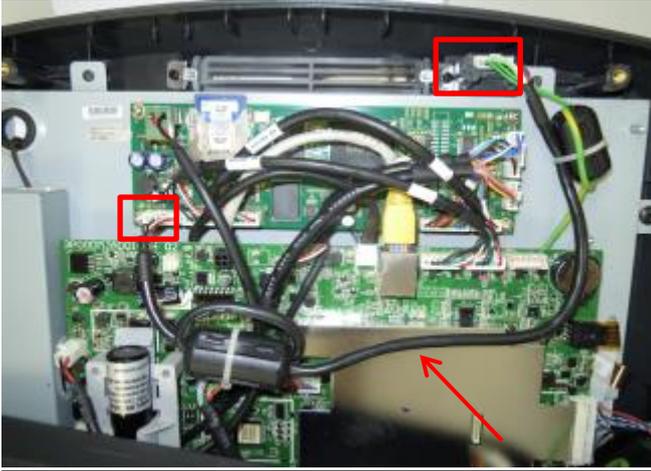
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Case 12: Can't catch USB device

SYMPTOM

When USB is plugged in to upgrade S/W, the console cannot auto-run install process.
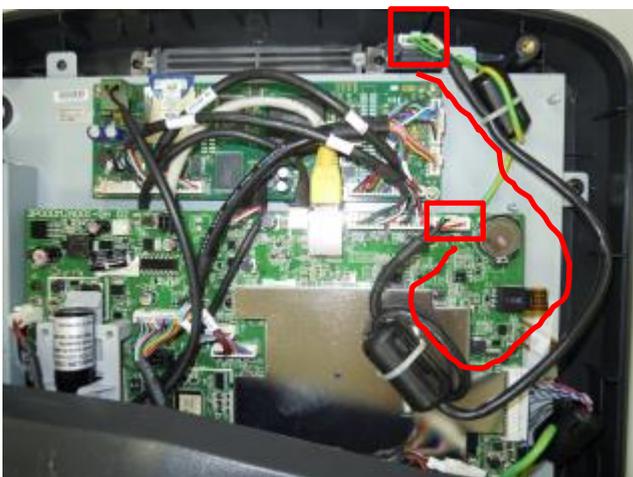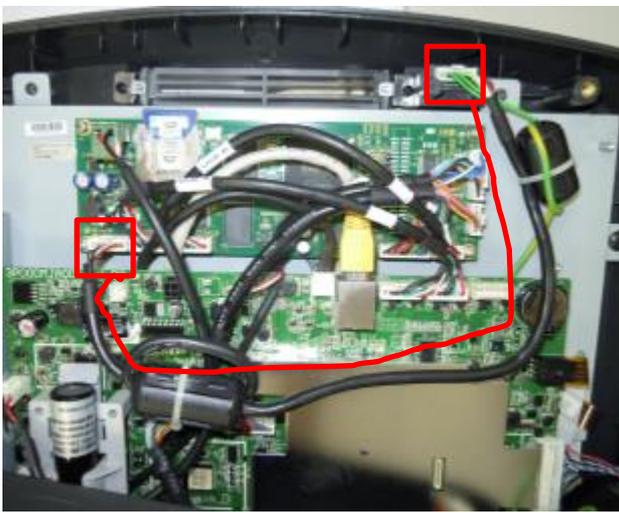
SOLUTION

Solution 1- Check wire connection

Check the USB wire connection and replace it if necessary.

Solution 2- Check VA board

1. This situation will happen on T7xe/7xe with VA board.
2. Press "enter 4006 enter" four times to enter WIN CE mode.
3. Select "My Device." If there is no "Hard Disc", go to step 4.
   Note: To identify this issue, plug in the USB after enter WIN CE mode.

4. Unplug the USB cable from the VA board.
5. Plug in the USB cable to console control board directly. Reboot the machine to start software upgrade process.

The purpose is to bypass the failure on the VA board. If the VA is damaged, replace it if necessary.

Solution 3- Upgrade GUI, I/O

Reinstall the latest GUI and I/O software.

Case 13: Unplug iPod wire

SYMPTOM

"Unplug iPod wire" message cannot be cleared from the screen.

SOLUTION

Solution 1- Check keypad type

1. Enter Service Mode by pressing "ENTER 3 0 0 1 ENTER" on the number keypad.
2. Press the "Test" tab, then press "Keypad Type" and select "LAM".
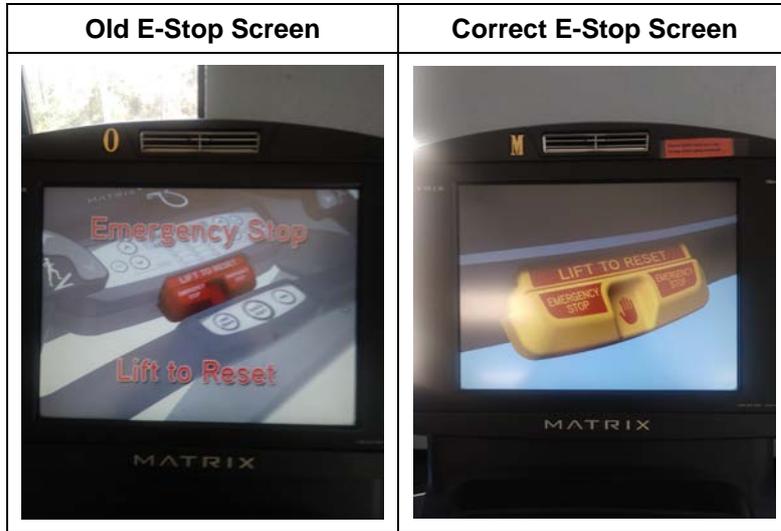3. Cycle power.

Solution 2- Disconnect iPod wire

1. Disconnect the iPod wire.
2. Cycle power.

Case 14: Wrong E-Stop Screen

SYMPTOM

After replacing the UCB, the console shows an older e-stop screen.

Old E-Stop Screen	Correct E-Stop Screen

SOLUTION

Solution 1- Check keypad type

1. Enter Service Mode by pressing "ENTER 3 0 0 1 ENTER" on the number keypad.
2. Press the "Test" tab, then press "Keypad Type" and select "LAM".
3. Cycle power.