



Symptom & Possible solution

Booting Problem

Display Problem

Measurement Problem

Software Problem

Others

Troubleshooting

LM-TS6100_How to disassemble the external case

LM-TS6101_How to replace MAIN PCB ASS'Y

LM-TS6102_How to replace MONITOR ASS'Y

LM-TS6103_SMPS voltage check and replacement

LM-TS6104_How to replace PLM-6100(PD) THPrinter PCB Ass'y and PRINTER

LM-TS6105_Solution on when 'Boot mode' is on at booting stage

LM-TS6106_How to replace Main-LCDCon cable

LM-TS6107_Calibration of touch screen

LM-TS6108_Solution on 'Make sure on the lens holder, please remove the problem' message

LM-TS6109_CMOS Check Manual

LM-TS6110_OD Setup

LM-TS6111_Software upgrade

LM-TS6112_Data Recovery

Booting Problem

Symptom	Possible solution
No image for booting process	<p>Q1 : Did you check SMPS voltage?</p> <p>Solution : Please refer to 'LM-TS6103_SMPS voltage check and replacement.'</p> <p>If it is defective, replace SMPS.</p> <p>if it is normal, move to Q2 below.</p> <p>Q2 : Does beep sound hear during booting?</p> <p>A : No, it does not.</p> <p>Solution : Replace Main PCB.</p> <p>Please refer to 'LM-TS6101_How to replace MAIN PCB ASS'Y' for the direction.</p>

Display Problem

Symptom	Possible solution
No image & Abnormal color on screen	<p>Q1 : Does beep sound hear, but is there no image? / Is the color on screen abnormal?</p> <p>Solution : Please refer to 'LM-TS6106_How to replace Main-LCDCon cable.'</p> <p>Q2 : Is symptom same even after replacement of 'Main-LCDCon cable'?</p> <p>Solution : Please refer to 'LM-TS6102_How to replace MONITOR ASS'Y.'</p>
Defective touch screen	<p>Q1 : Is touch screen not working?</p> <p>Solution : Please refer to 'LM-TS6107_Calibration of touch screen.'</p> <p>Q2 : Is symptom same even after calibration of touch screen?</p> <p>Solution : Please refer to 'LM-TS6102_How to replace MONITOR ASS'Y.'</p> <p>Q3 : Is symptom same even after replacement of MONITOR ASS'Y?</p> <p>Solution : Please refer to 'LM-TS6101_How to replace MAIN PCB ASS'Y.'</p>
Boot mode is on instead of main image	<p>Q1 : Is boot mode on instead of the main image in booting process?</p> <p>Solution : Please refer to 'LM-TS6105_Solution on when 'Boot mode' is on at booting stage.'</p> <p>Q2 : Is it same after applying solution above?</p> <p>Solution : Please refer to 'LM-TS6102_How to replace MONITOR ASS'Y.'</p>



Measurement Problem

Symptom	Possible solution
Measurement value error	Q1 : Is the measurement value different from the actual value of the lens? Solution : Please refer to ' LM-TS6108_Solution on 'Make sure on the lens holder, please remove the problem' message '. Q2 : Is it same after applying solution above? Solution : Please transmit the data to Potec after referring to ' LM-TS6109_CMOS Check Manual '.
0D Setup	Q1 : Is the measurement value on, even if no lens is set?(Latest version of software is equipped and there is no error of measurement value) Solution : Please refer to ' LM-TS6110_0D Setup '.

Software Problem

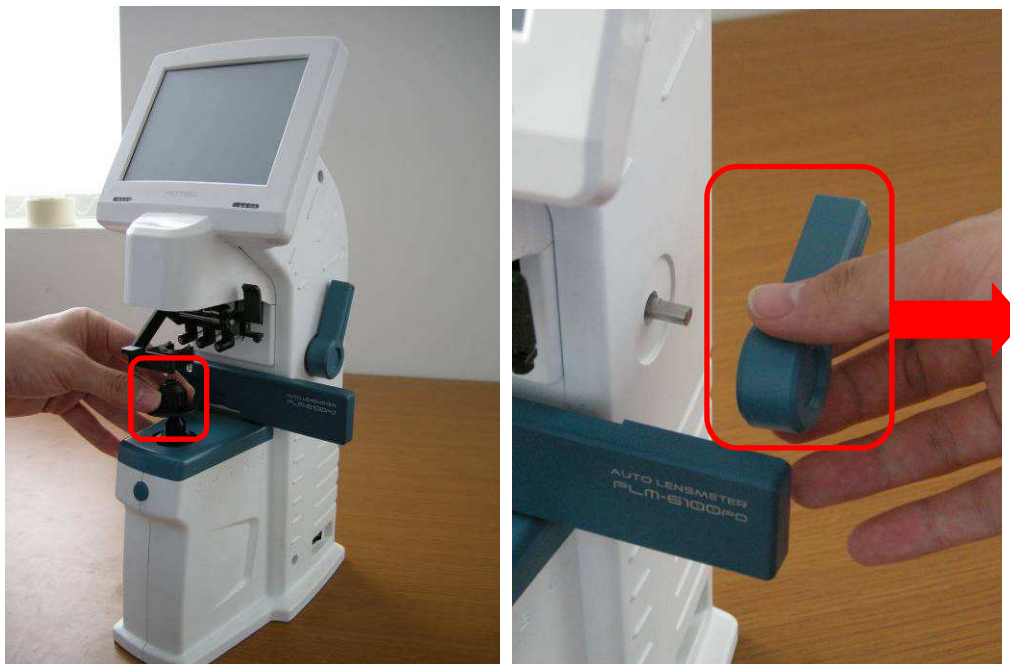
Symptom	Possible solution
Software upgrade	*There are 2 types of software upgrade for PLM-6100(PD). Solution : Please refer to ' LM-TS6111_Software upgrade '.
Data Recovery	Q1 : Do you have " ERROR-Setup Data !!! Please, A/S Call " message? Solution : Please refer to ' LM-TS6112_Data Recovery '.

Others

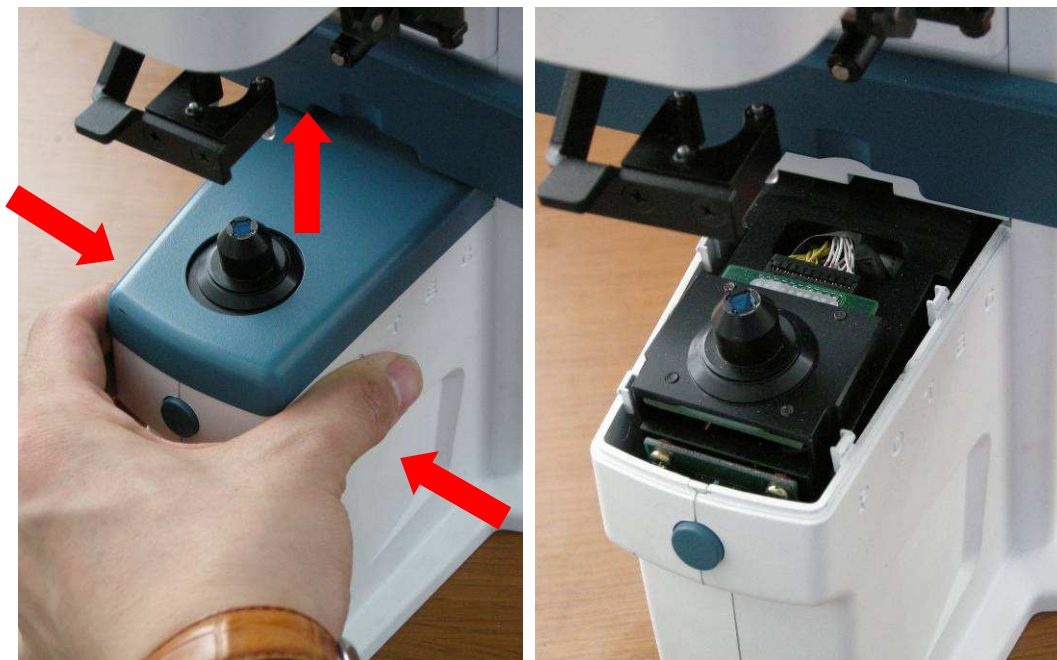
Symptom	Possible solution
Defective printer	Q1 : Does not the printer work? Solution : Please refer to ' LM-TS6104_How to replace PLM-6100(PD) THPrinter PCB Ass'y and PRINTER '.
Omitted accessory in the package	Q1 : Is the accessory omitted in the product package? Solution : Please refer to the part number in 'Parts List' and request it.

LM-TS6100_How to disassemble the external case

1. Remove 'Lens Holder' and 'Table Lever'.



2. Give the pressure to 'Main Cover(R)/(L)' as in the picture and remove 'Table Cover' by pulling it up.



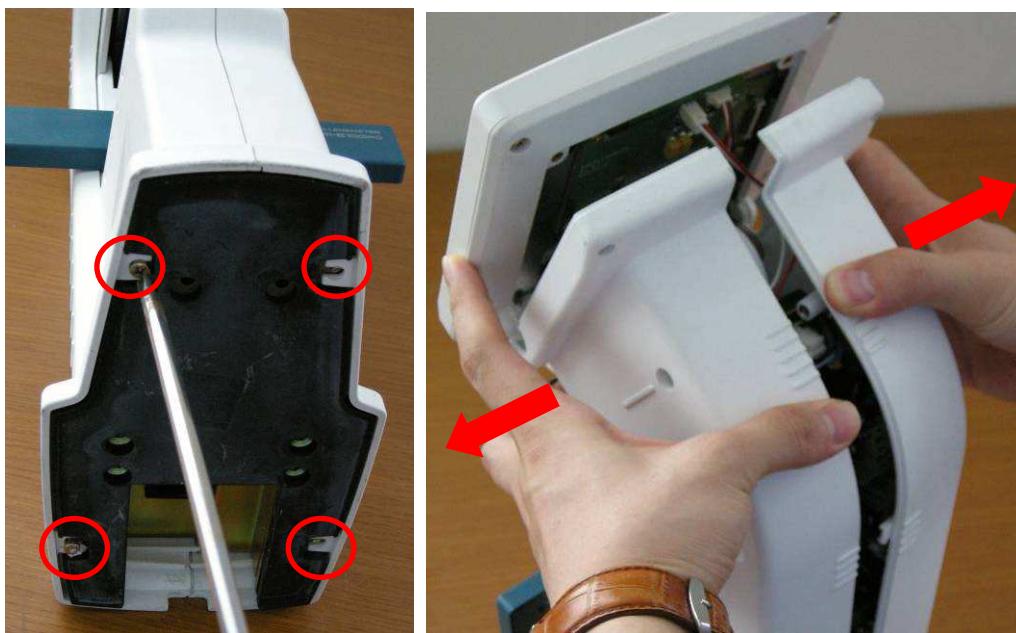
3. Remove screws connected to 'LCD ASS'Y'.



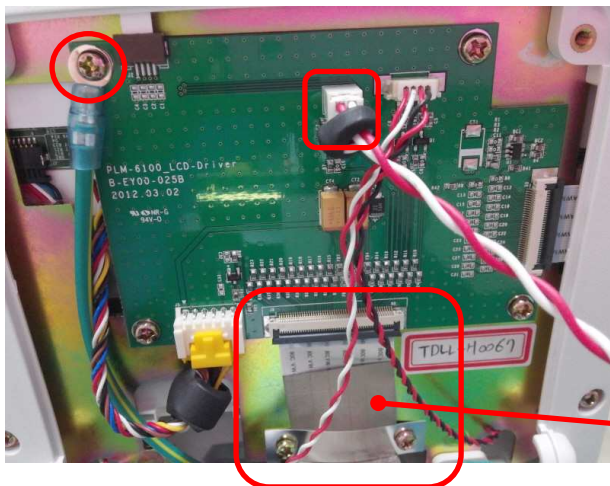
4. Remove screws as in the picture below.



5. Remove screws from the bottom and detach 'Main Cover(R)/(L)' by pulling it to the direction of the arrows.



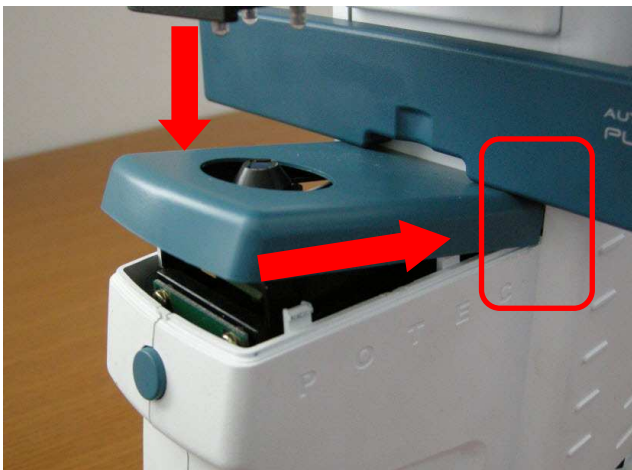
6. Remove the screw(red circle), detach the cable and take 'MONITOR ASS'Y' out of 'PLM-6100(PD).



Main-LCDCon(FFC_Harness)

7. When assembling, be cautious of the following direction.

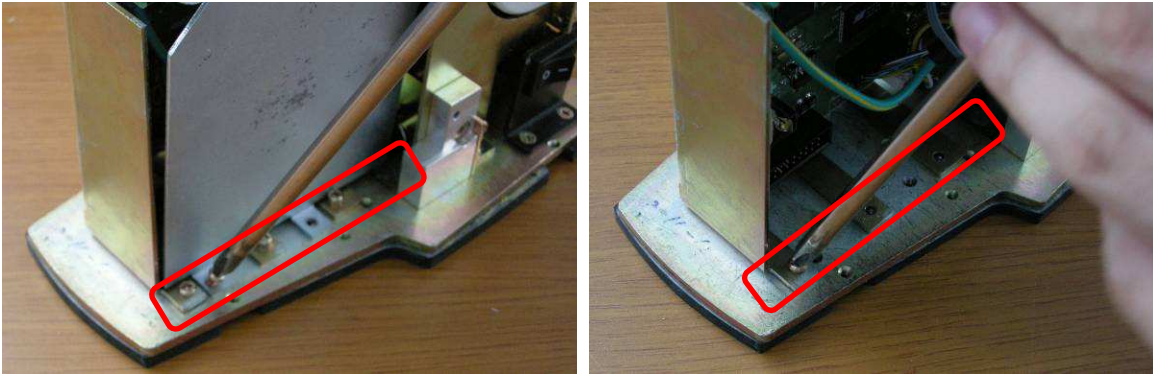
- When assembling 'Table Cover', push it to the inner gap and press it down.



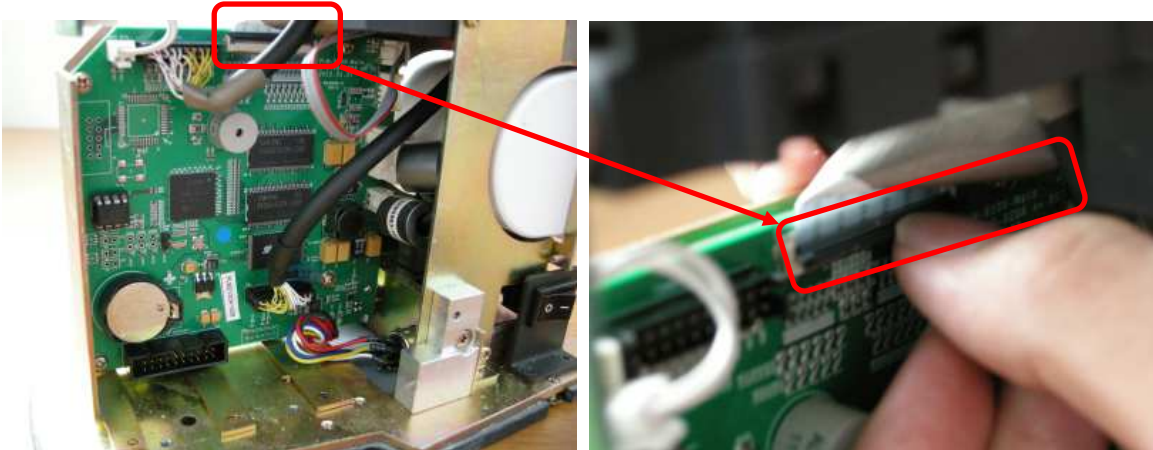
LM-TS6101_How to replace MAIN PCB ASS'Y

Ref No.	Name of Part	Code of Part	Description	Q'ty
	PCB ASS'Y	B-EY00-A01	PLM-6100_Main PCB ASS'Y	1

1. Remove the external case, referring to 'LM-TS6100_How to disassemble the external case'.
2. Remove 5 screws as in the picture below.



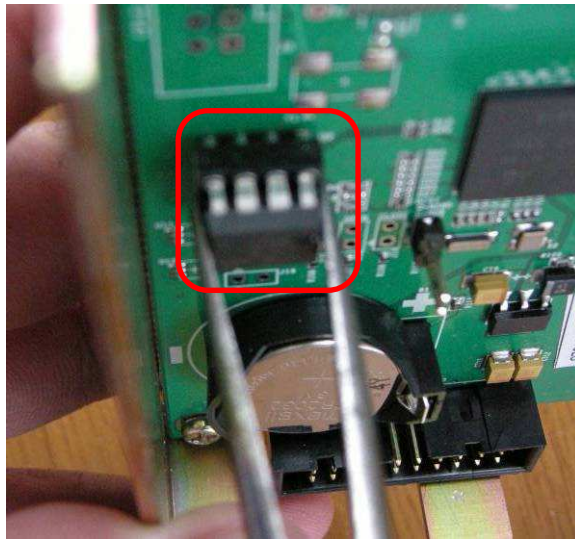
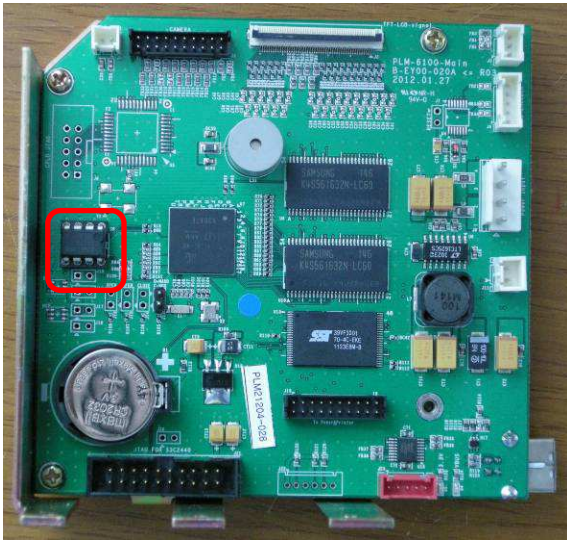
3. Pull the black part of the connector down and detach 'FFC cable'.



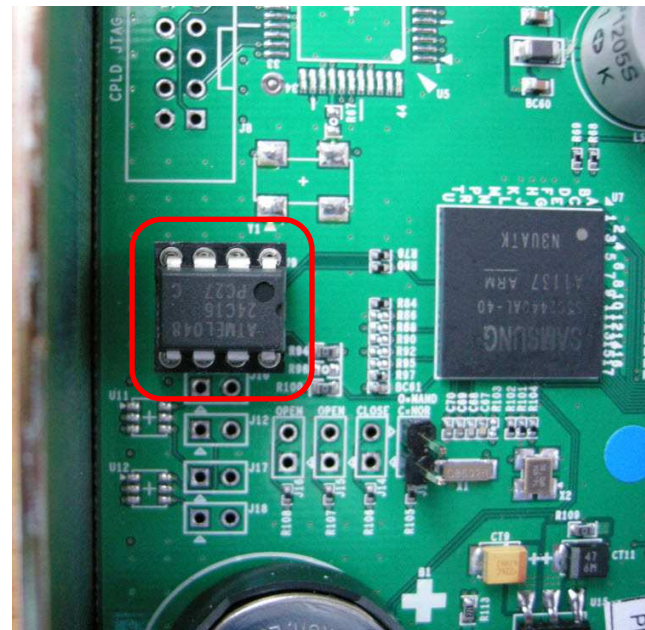
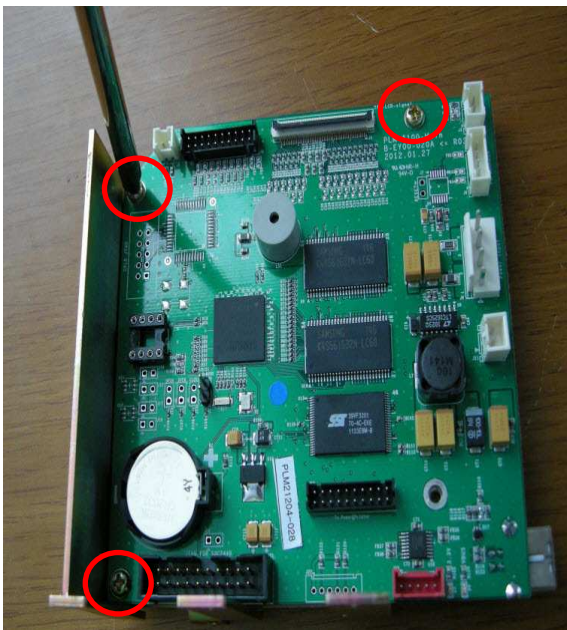
4. Remove all ground cables.



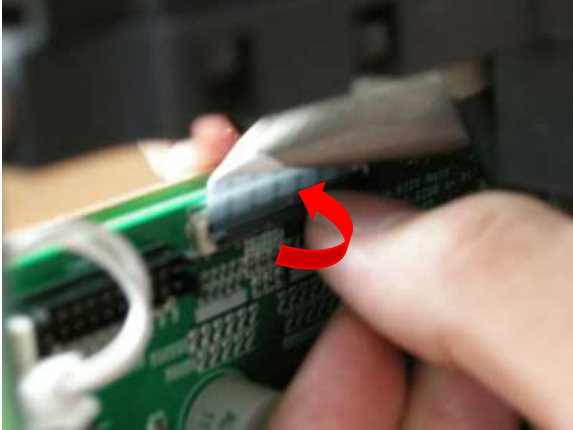
5. Detach 'MAIN PCB ASS'Y' from PLM-6100(PD). Subsequently, take 'EEPROM(24C16 Data Chip)' out of 'MAIN PCB ASS'Y'.



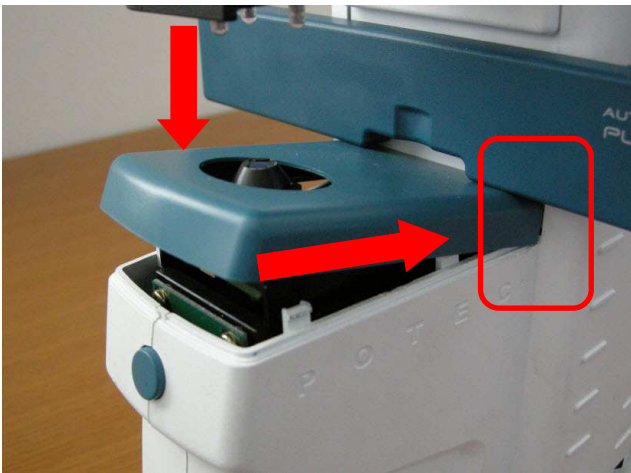
6. Remove screws (red circle) to detach 'MAIN PCB ASS'Y' from 'MAIN PCB BRACKET' and assemble the new 'MAIN PCB ASS'Y'. Subsequently, assemble 'EEPROM(24C16 Data Chip)' separated in no.5 procedure above to 'MAIN PCB ASS'Y'. (check the assembling direction for 'EEPROM(24C16 Data Chip)').



7. The assembly is the reverse of disassembly. When assembling, please refer to the following directions.
- When assembling 'LCD cable(FFC cable)', connect the cable in the condition that the connector is tiled.
- After connecting the cable, pull the connector up to complete assembly.



- When assembling 'Table Cover', push it to the inner gap and press it down.



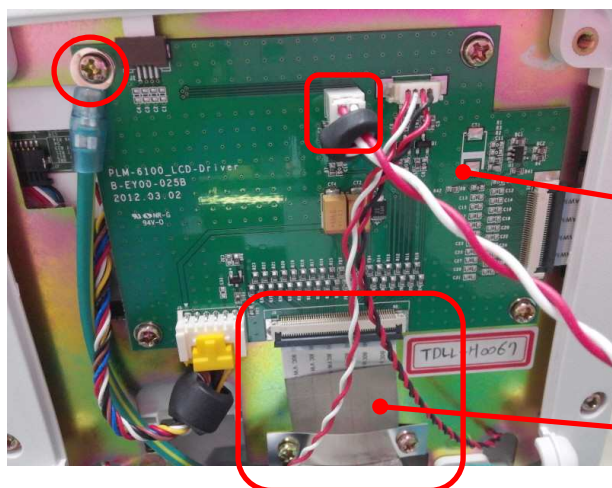
LM-TS6102_How to replace MONITOR ASS'Y

Ref No.	Name of Part	Code of Part	Description	Q'ty
	MONITOR ASS'Y	B-ASLO-035		1

1. Remove 2 screws as in the picture below.



2. Remove the screw(red circle), detach the cable and take 'MONITOR ASS'Y' out of 'PLM-6100(PD)'.
3. Replace to the new 'MONITOR ASS'Y' and assemble it in the reverse way of disassembly.



LCD CONTROL PCB ASS'Y

Main-LCDCon(FFC_Harness)

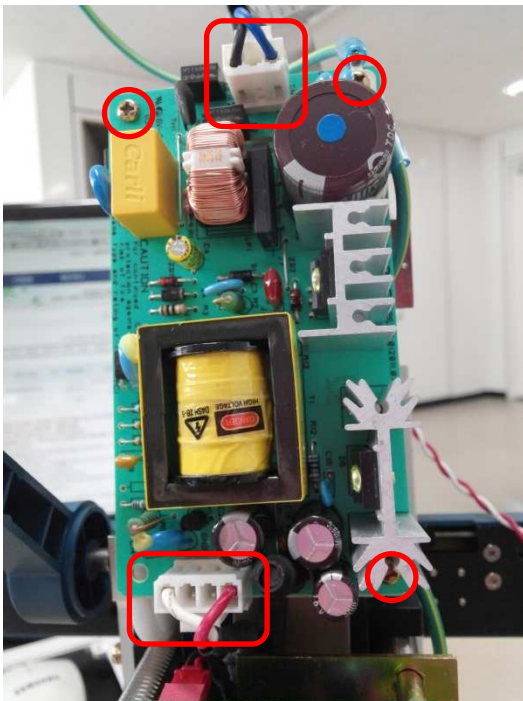
LM-TS6103_SMPS voltage check and replacement

Ref No.	Name of Part	Code of Part	Description	Q'ty
	SMPS	C-EX00-C01	Sun-1250p	1

1. Remove the external case, referring to '**LM-TS6100_How to disassemble the external case**'.
2. Connect the tester to 'SMPS' and check the voltage.
(Voltage range : 11.40~12.60V) – If the voltage is low in the standard of the voltage range, SMPS might be defective. Replacement is required.



3. Detach the cables(see the picture) and take 'SMPS' off by removing screws.

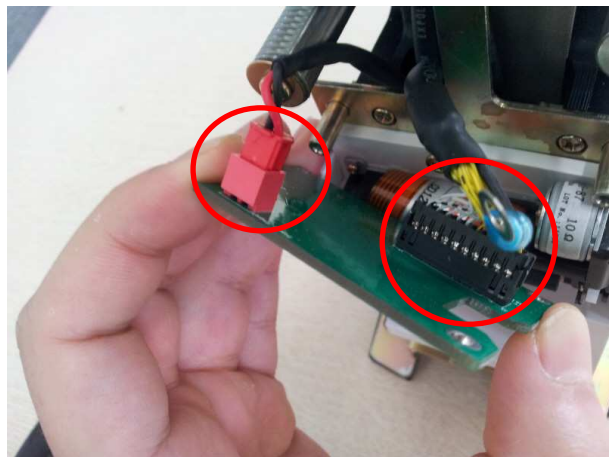
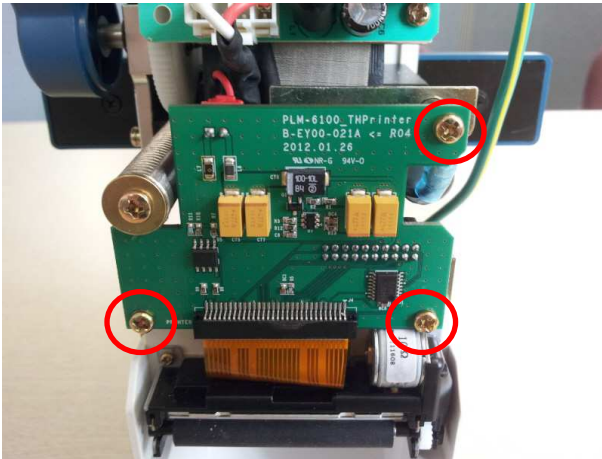


4. Assemble the new SMPS in the reverse way of disassembly.

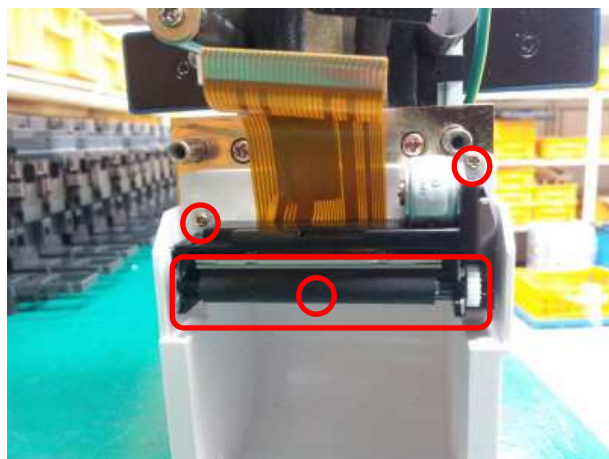
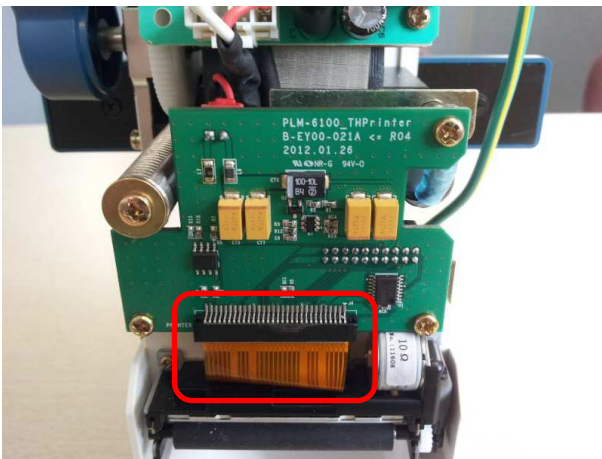
LM-TS6104_How to replace PLM-6100(PD) THPrinter PCB Ass'y and PRINTER

Ref No.	Name of Part	Code of Part	Description	Q'ty
	THPrinter PCB ASS'Y	B-EY00-021		1
	PRINTER	B-EB00-051	SMP-685	1

1. Remove the external case, referring to 'LM-TS6100_How to disassemble the external case'.
2. Remove screws(red circle) from 'THPrinter PCB ASS'Y' and detach the cable.



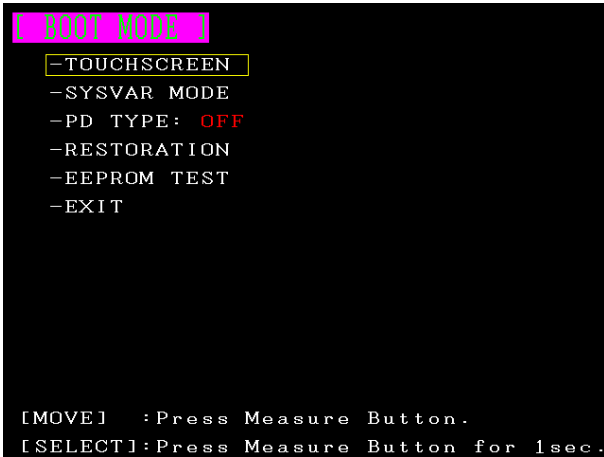
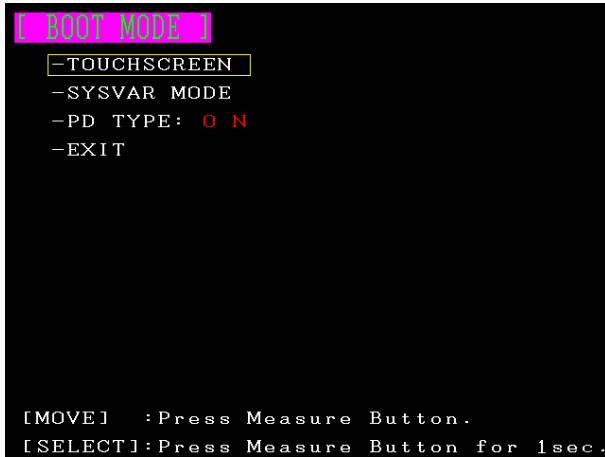
3. Detach the cable and 'PRINTER ROLLER'. Subsequently, take 'PRINTER' off by removing screws.



4. Assembly is the reverse of the disassembly.

LM-TS6105_Solution on when 'Boot mode' is on at booting process

- If 'Boot mode' image pops up at initial booting process instead of the main image, the touch screen might be pressed by the external case. Follow the direction below.('Boot mode' image can be different according to software version.)



1. Slightly loosen 2 screws(red circle) and re-boot it.

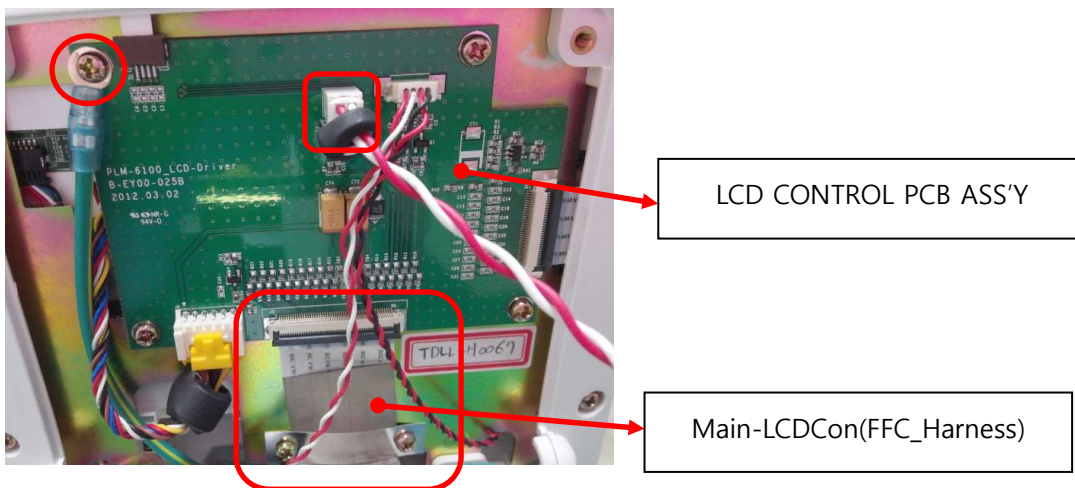


The direction above does not work, follow another direction below.

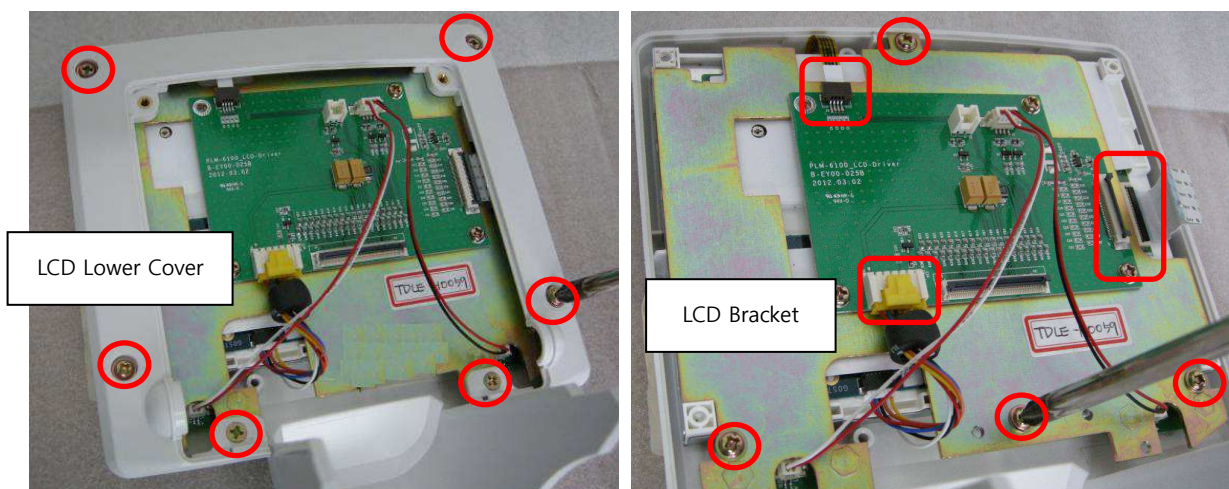
1. Remove 2 screws as in the picture.



2. Detach 'MONITOR ASS'Y' from the main body and remove the cable.



3. Remove screws as in the picture below and detach 'Monitor Lower Cover'. Subsequently, take the cable off and detach 'LCD BRACKET' by removing screws.



4. Put 'M3 flat washers' on the red circled parts below and assemble LCD BRACKET separated in no.3 procedure above.

POTEC QUALITY CONTROL TEAM



5. The assembly is the reverse of the disassembly.

* 'M3 flat washer'

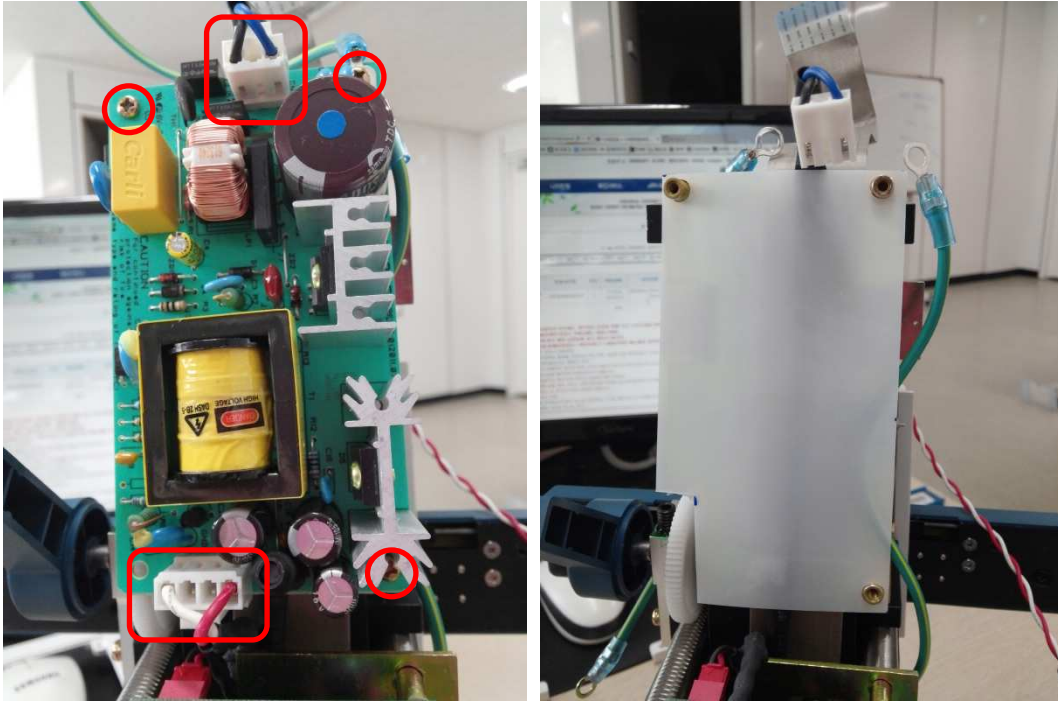


- In spite of 2 directions above, if the same symptom happens, the replacement of Monitor Ass'y(B-ASLO-035) is required.

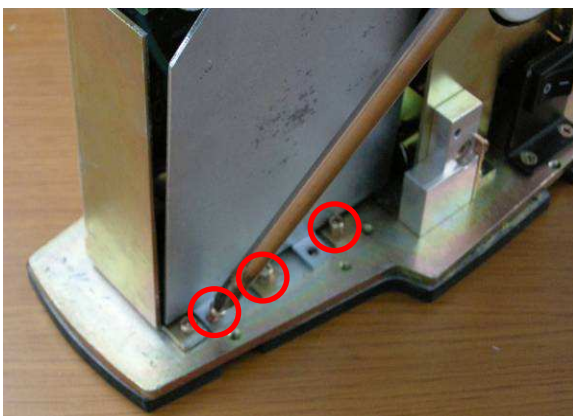
LM-TS6106_How to replace Main-LCDCon cable

Ref No.	Name of Part	Code of Part	Description	Q'ty
	Cable Harness	B-EZ00-061	Main-LCDCon	1

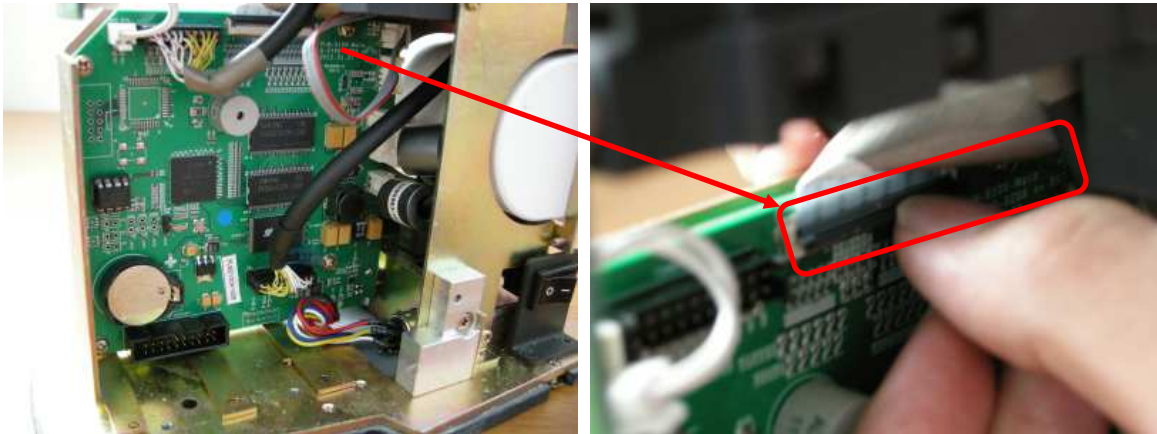
1. Remove the external case, referring to '**LM-TS6100_How to disassemble the external case**'.
2. Detach the cables(see the picture) and take 'SMPS' off by removing screws.



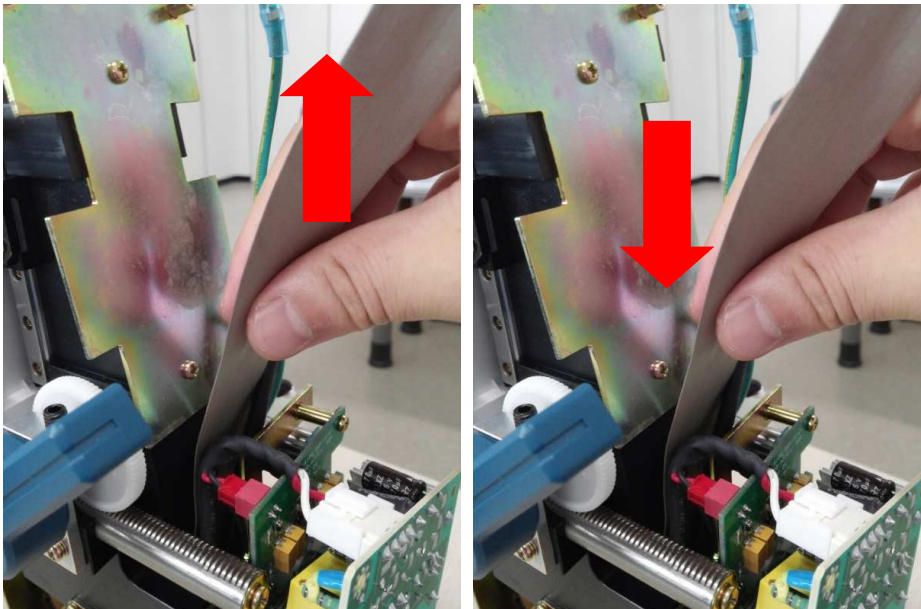
3. Detach 'MAIN PCB COVER' by removing screws(red circle).



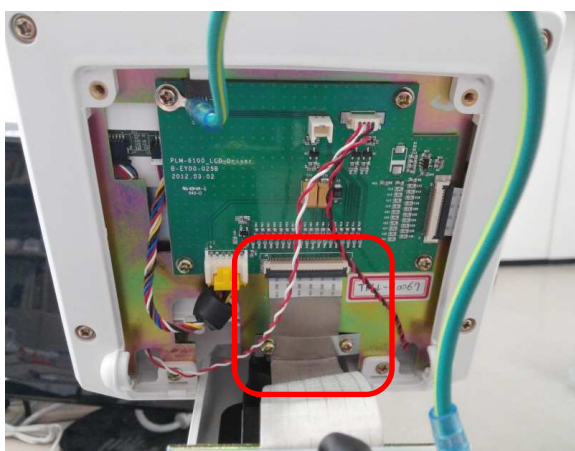
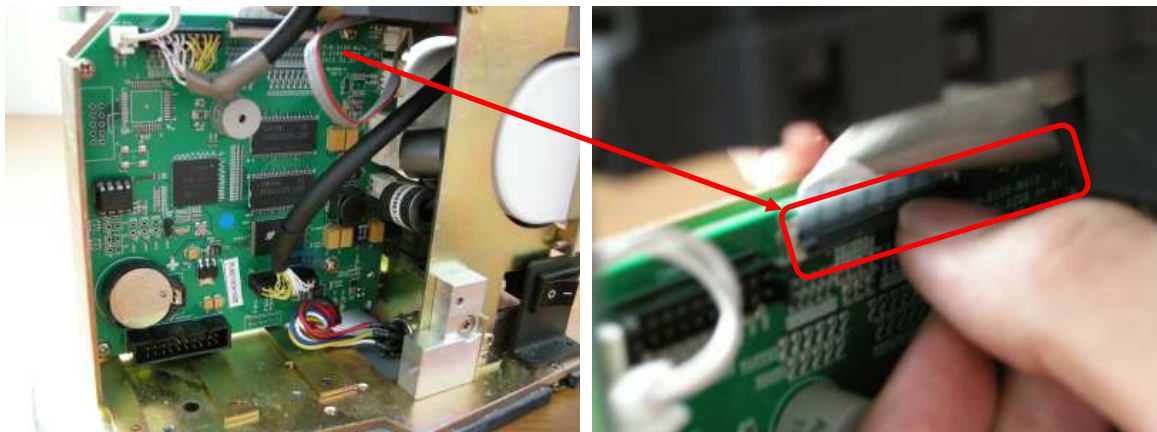
4. Detach Main-LCDCon from 'Main PCB ASS'Y'. Pull the black part of the connector down by using the finger nail and detach the cable.



5. Pick 'Main-LCDCon' cable out and insert the new 'Main-LCDCon' cable. Subsequently, assemble 'SMPS' separated in the procedure no.2.



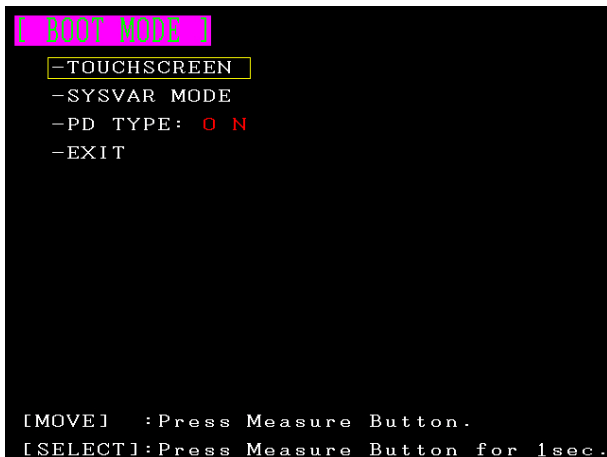
6. Again, connect 'Main-LCDCon cable' to 'MAIN PCB ASS'Y connector' and 'LCD Control PCB ASS'Y connector'.



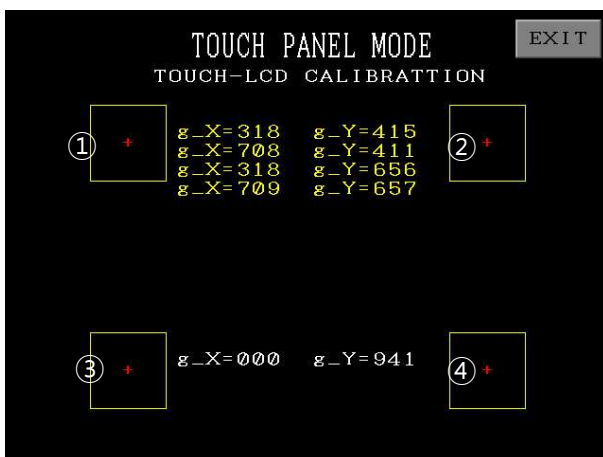
7. The assembly is the reverse of the disassembly.

LM-TS6107_Touch Calibration

1. Turn PLM-6100(PD) on as you already pressed LCD by the finger. Once 'BOOT MODE' is conducted, check if the yellow box is on 'TOUCHSCREEN' menu. If so, press the measurement button for about 3 seconds.



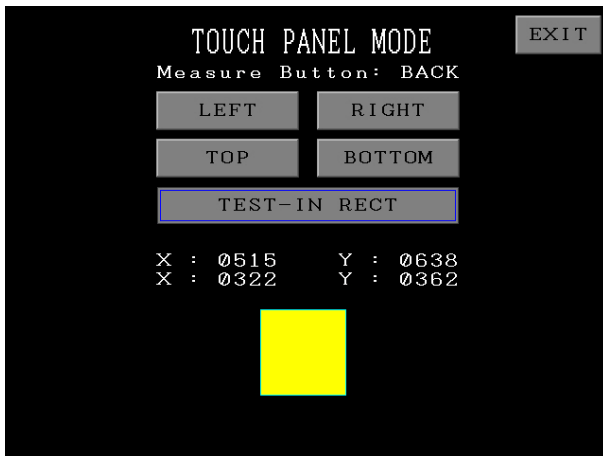
2. From ① to ④ each, as you touch the red cross mark in the yellow box by ball point pen, press the measurement button.



3. Touch 'Yes' button.



4. Touch each button to check if the touch value is set well. If it is clear, touch 'EXIT'.



5. Re-boot PLM-6100(PD) and check if touch screen works normally. If it does not work, the replacement of 'MONITOR ASS'Y' is required.

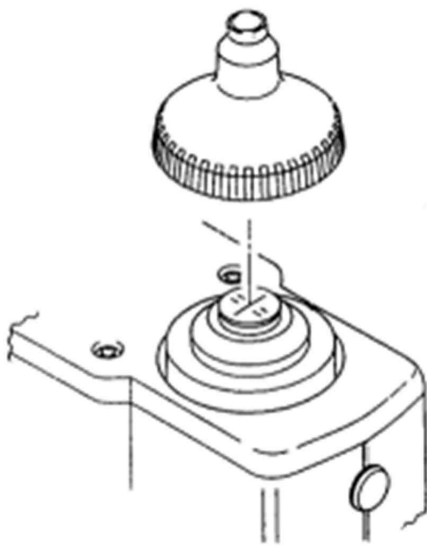
LM-TS6108_Solution on 'Make sure on the lens holder, please remove the problem' message

If the message is on the screen as below, please follow the direction.

ERROR - Initial Error !!!

Make Sure on the Lens holder Please, remove the problem!!!

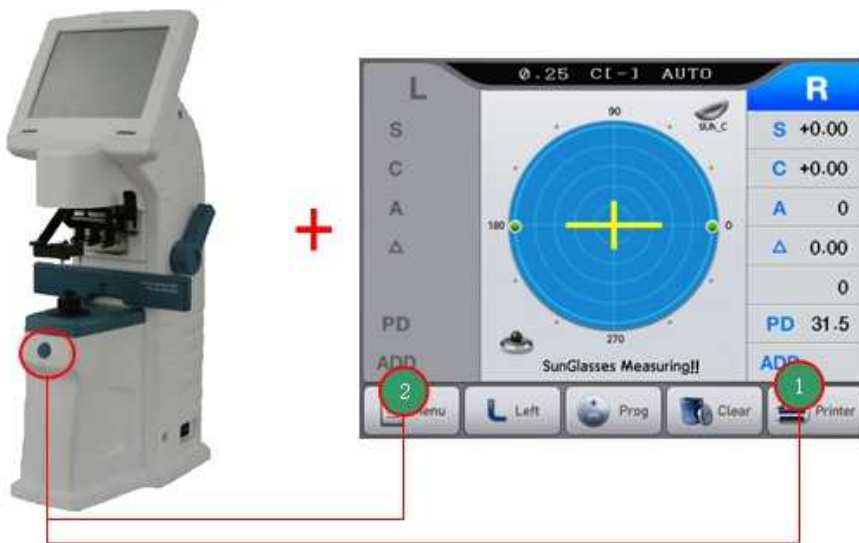
- In case of abnormal measured value without the message the value is measured.
1. It is the case of dust or alien substances is under the lens holder.
 2. To handle such case, measure after reinstalling the lens holder when dust or alien substances are all removed.
 3. Please contact sales team of Potec, if the problem continuously occurs.



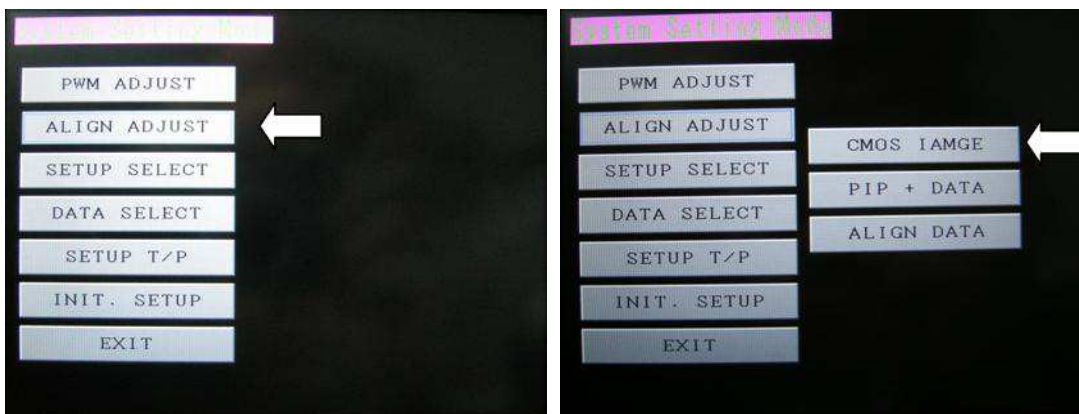
LM-TS6109_CMOS Check Manual

- If the measurement value has the error, check CMOS image by referring to the following direction.
**If there is dust inside of light source of CMOS, the repair should be performed in the factory POTECH.*
- Before doing the procedure, clean the external surface of CMOS after removing 'Lens Holder'.
Please refer to 'LM-TS6108_Solution on 'Make sure on the lens holder, please remove the problem' message'.

1. Turn PLM-6100(PD) on. Touch 'Printer' and 'Menu' in turn as you already pressed the measurement button. Subsequently, enter 'System Setting Mode.'



2. In 'System Setting Mode', touch 'ALIGN ADJUST' and 'CMOS IMAGE' in turn.



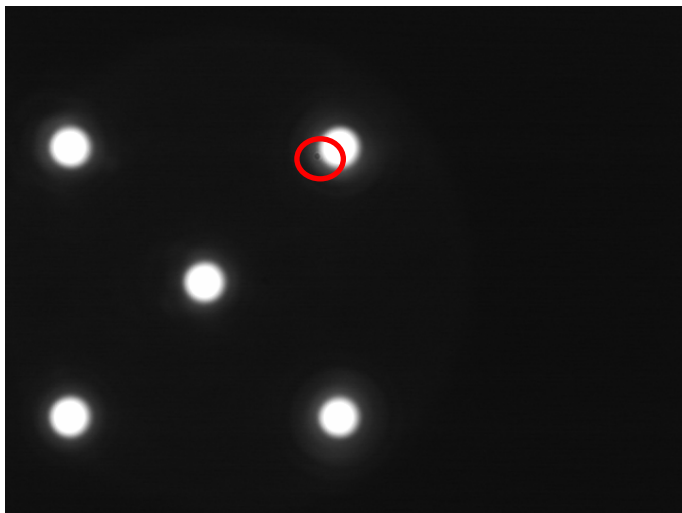
3. Check 'CMOS image'. Take a picture for the image and transmit it to Potec. If you put LENS and move it around, you can verify the size of image and also cleanliness on the external surface of CMOS.

<Examples of CMOS Images>

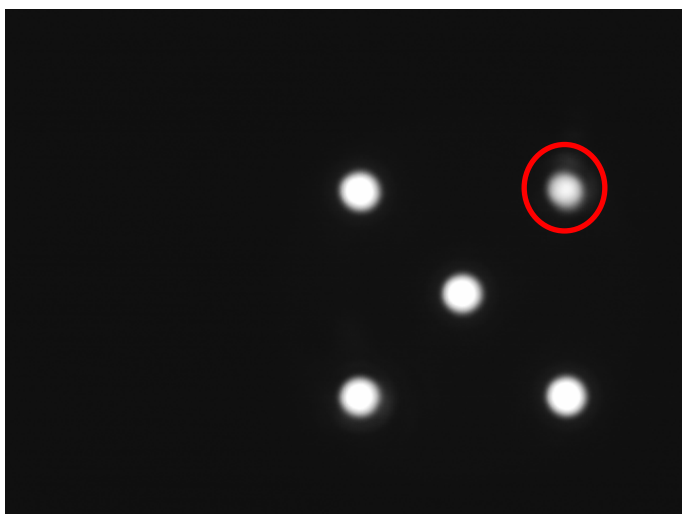
- Normal image of light source of CMOS



- Abnormal image of light source of CMOS by fine dust



- Abnormal image of light source of CMOS by the scratched lens

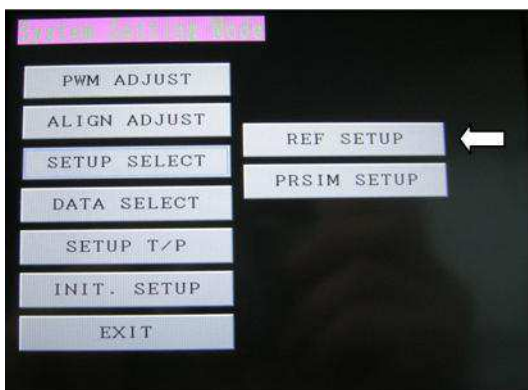


LM-TS6110_0D Setup

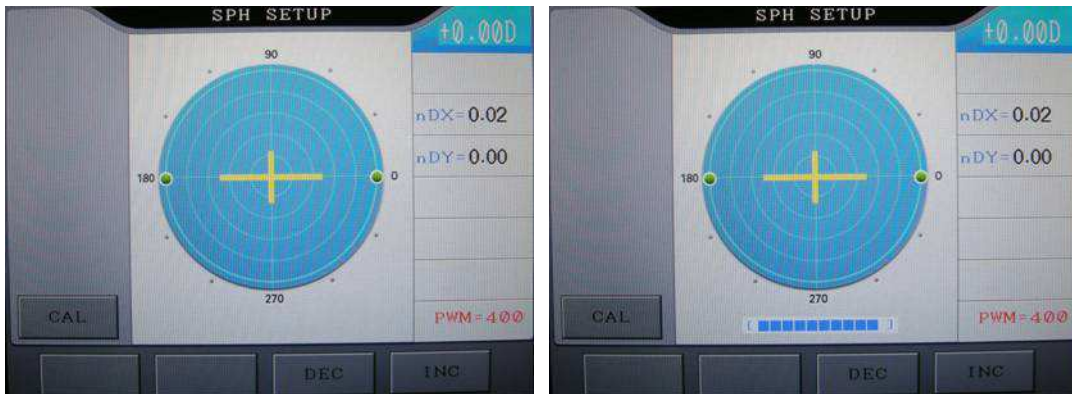
- Before doing the procedure, clean the external surface of CMOS after removing 'Lens Holder'.
Please refer to 'LM-TS6108_Solution on 'Make sure on the lens holder, please remove the problem' message'.
- Turn PLM-6100(PD) on. Touch 'Printer' and 'Menu' in turn as you already pressed the measurement button. Subsequently, enter 'System Setting Mode.'



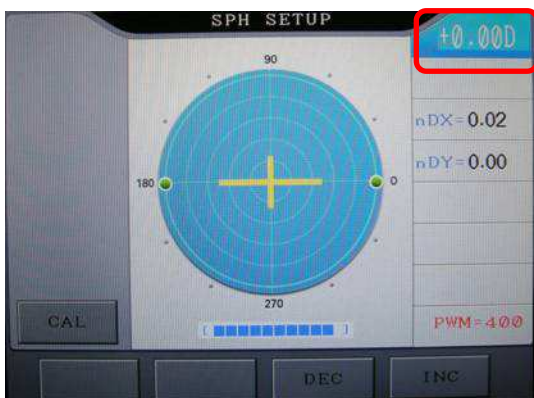
- In 'System Setting Mode', enter 'SETUP SELECT' menu and 'REF SETUP' menu in turn.



3. Press the measurement button in 'SPH SETUP' page without putting lens. Wait until the bar in the bottom of the image is completely filled with blue color and touch 'CAL' button.



4. Touch '0.00D Test'.

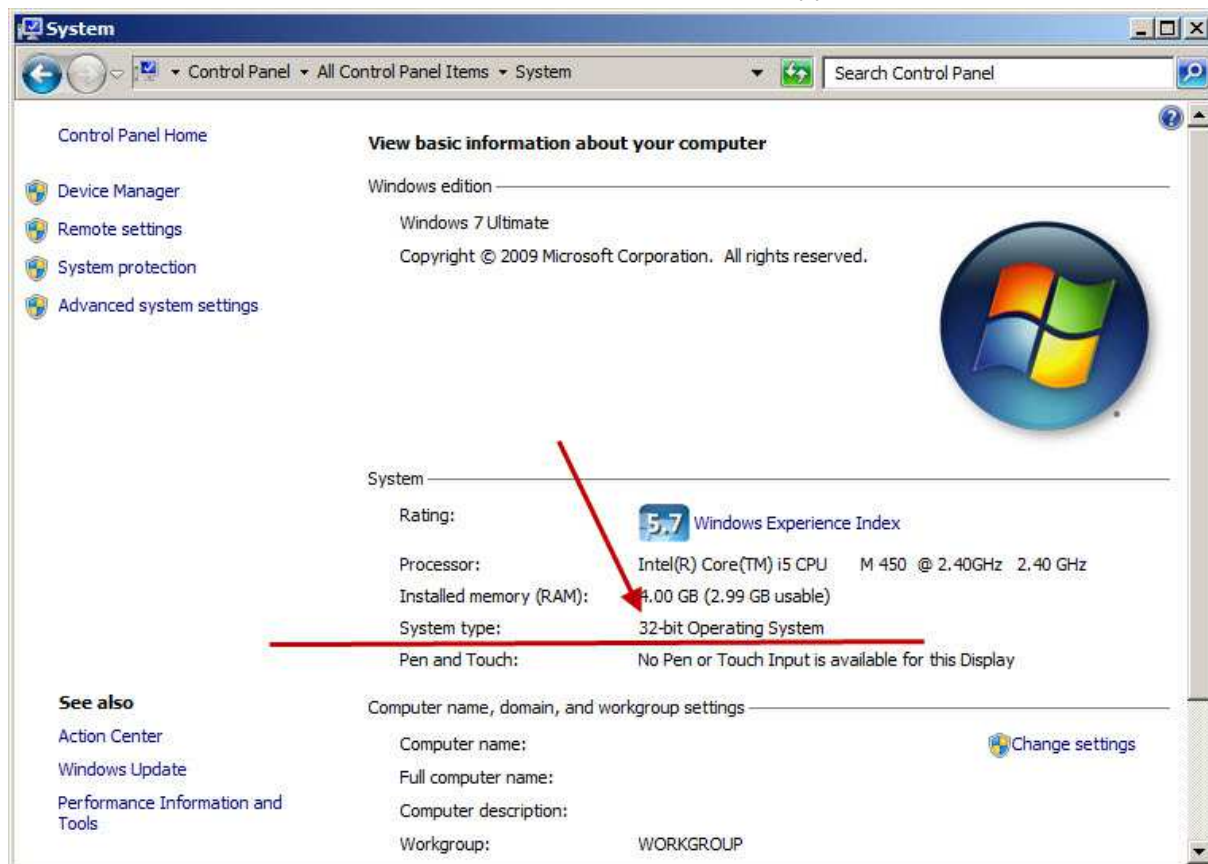


5. Save it by touching 'YES' button and turn off and on PLM-6100(PD).



LM-TS6111_Data recovery

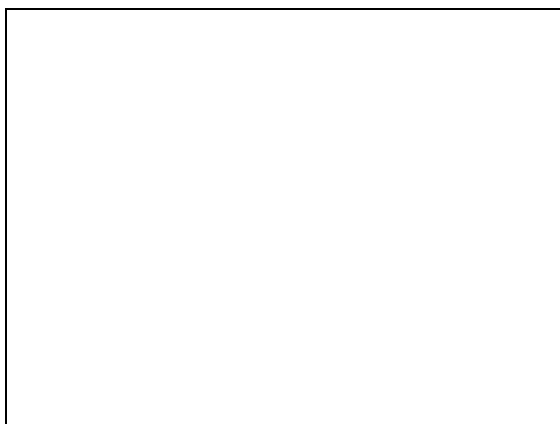
- **PC specification for software upgrade and data recovery of PLM-6100(PD)**
 - Available for 32bit of Windows 2000/XP/7(64bit is not supported)



- There are 3 types of data recovery for PLM-6100(PD). Select one of 3 types and conduct it, based on the following direction.

****Data recovery is conducted to solve the error message 'ERROR-Setup Data !!! Please, A/S Call !!!'.**

- 1) Turn the device on, keeping pressing the measurement button.
- 2) If [Picture 1] is on the screen, use xDN program.(USB driver should be installed on PC) ①
If [Picture 2] is on the screen, use PLM-Manger.(USB driver should be installed on PC) ②
If software version is after 0.89s, data recovery is available on PLM-6100(PD) without PC connection ③



[Picture 1]



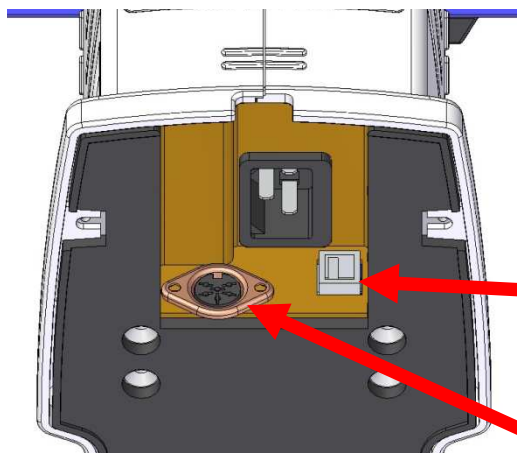
[Picture 2]

- **Installation of USB driver**

1. Connect the cable to PLM-6100(PD).

1) xDN program – ‘USB Cable’, ‘USB to RS-232’ and ‘PLM1x DIN6P to PC’ are needed.

2) PLM Manager – Only ‘USB Cable’ is needed.



‘USB Cable’(Please get it in the local)



Connect it to PC USB

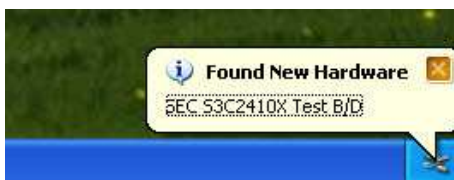
Connect it to PC USB Port



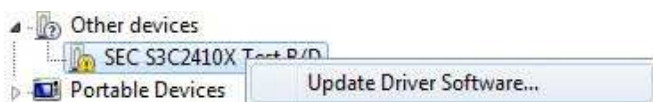
‘B-EZ00-012A PLM1x DIN6P to PC’(Potec provides it)

‘USB to RS-232’(Please get it in the local)

2. Connect PLM-6100(PD) to PC by using usb cable, and then power on PC as you press the measurement button of PLM-6100(PD). Subsequently, you can see the message indicating that the new hardware is detected on your screen(Please refer to the picture below).



[Windows XP]

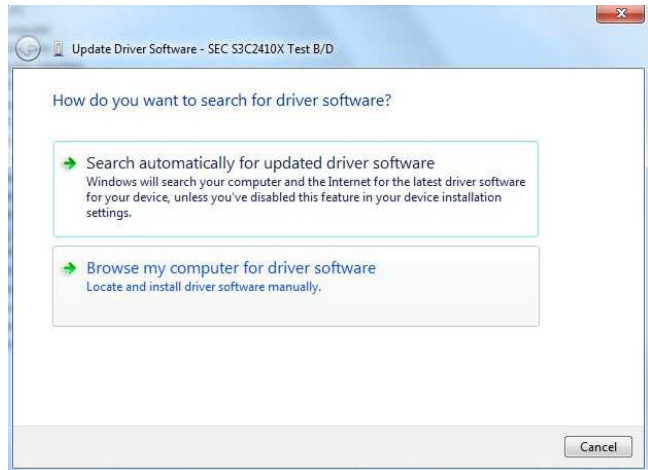


[Windows 7]

3. Install the USB Driver provided from Potec. ("secbulk.inf" & "secbulk.sys")



[Windows XP]



[Windows 7]

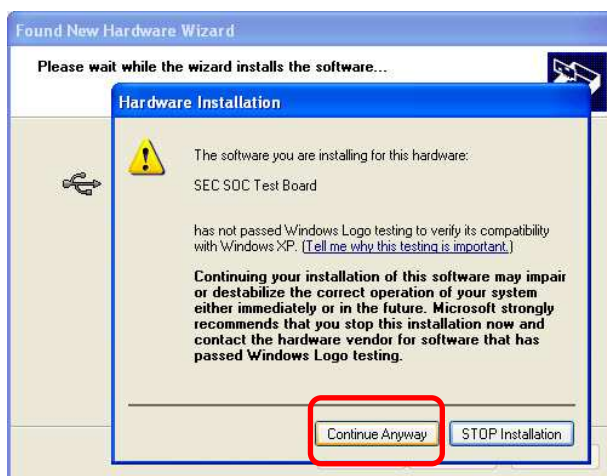
4. Select 'Install from a list or specific location(Advanced)' and 'Browse my computer for driver software' in turn. Designate the folder named 'USB Driver' ("secbulk.inf" & "secbulk.sys") provided from Potec to complete installation(Refer to pictures below).



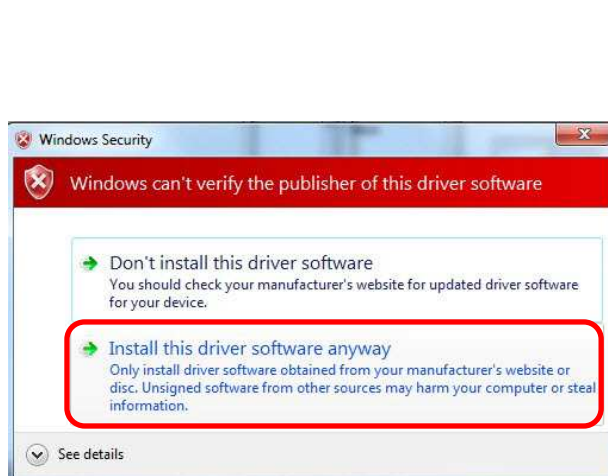
[Windows XP]



[Windows 7]



[Windows XP]



[Windows 7]



[Windows XP]



[Windows 7]

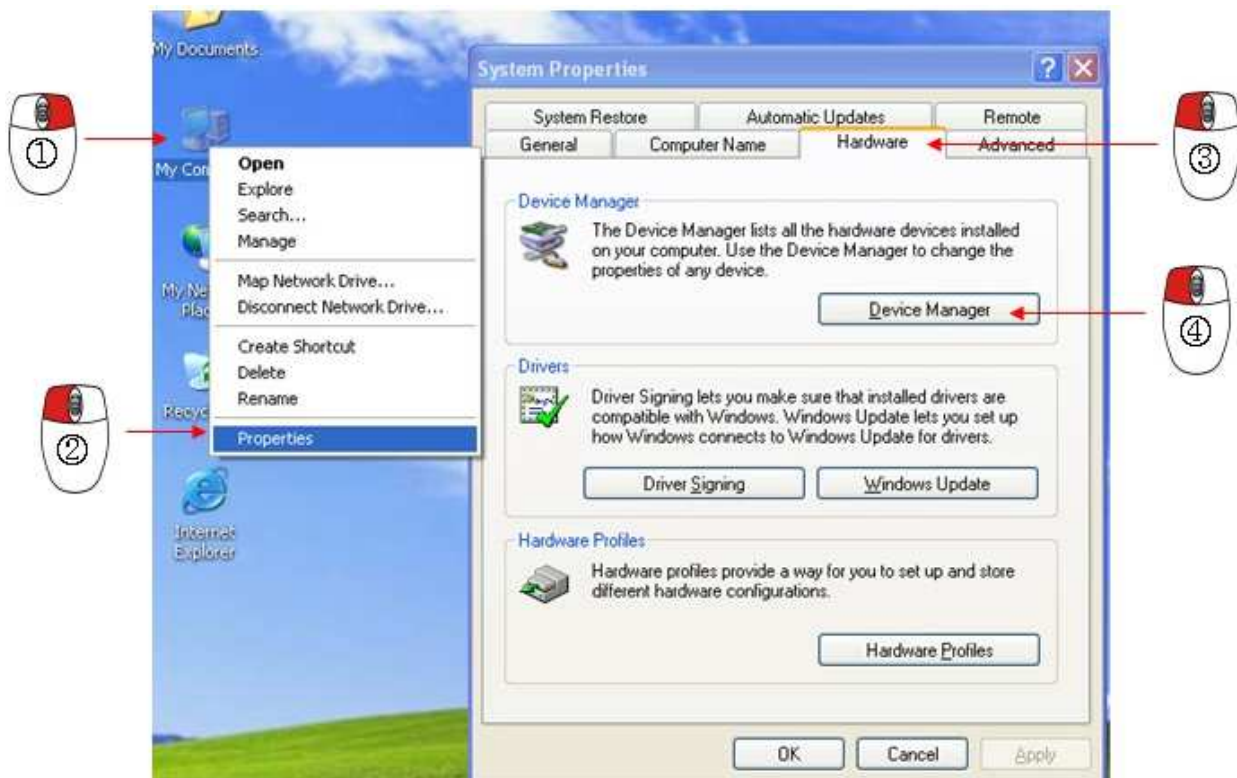
5. Once the installation is completed well, you can see the phrase [USB:OK] as in the picture below when you conduct 'xDN/PLM Manager'.

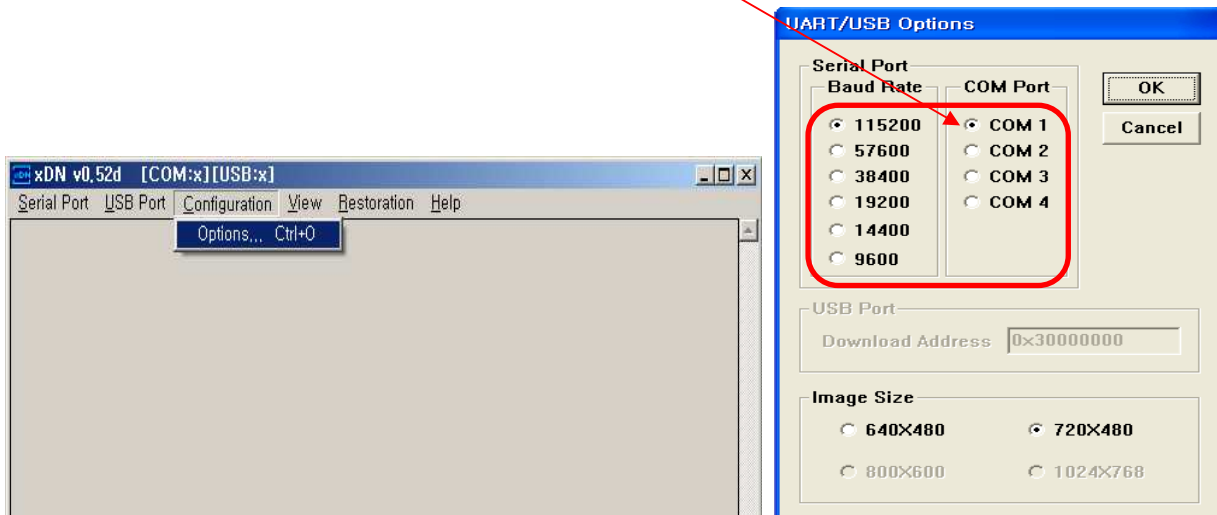
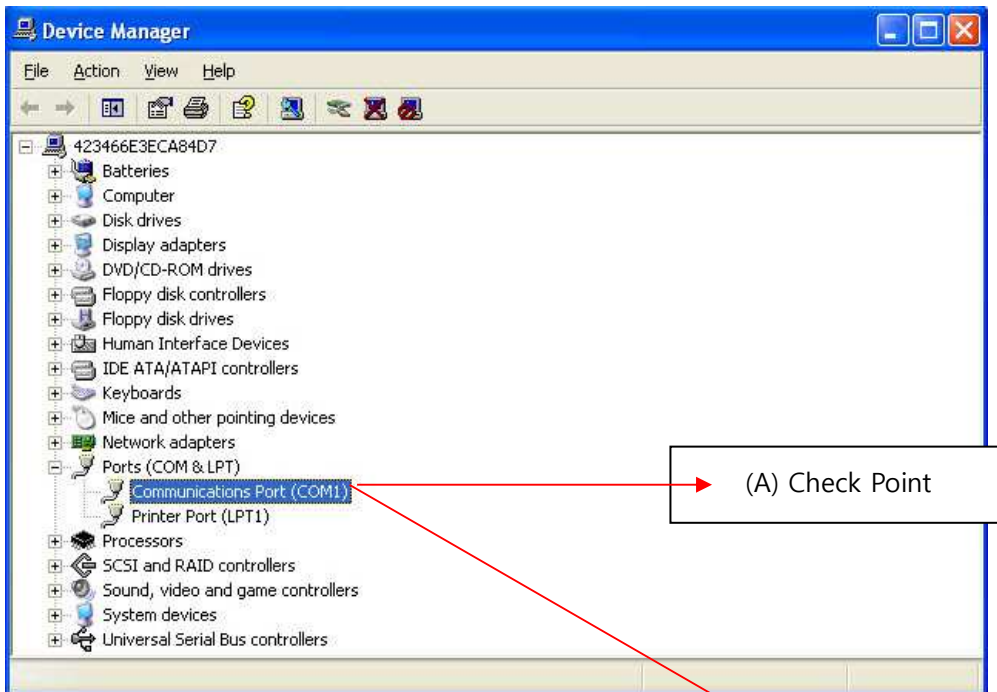


- **Data recovery for PLM-6100(PD) by using xDN program**
(Connect 'USB Cable', 'USB to RS-232' and 'PLM1x DIN6P to PC')

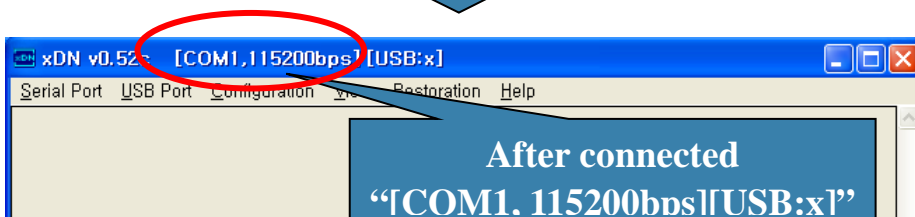
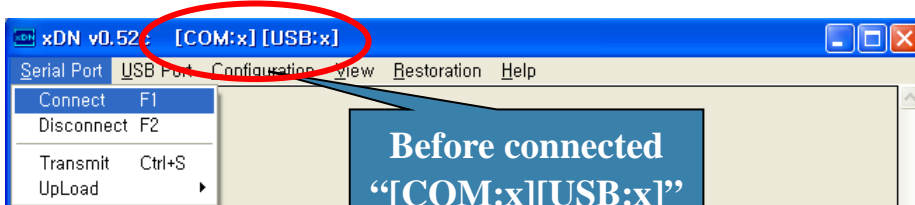
****Please Use 'xDN 0.52d, 37000000 version'.**

1. After USB driver of PLM-6100(PD) is installed completely, conduct xDN program. Subsequently, set the speed of communication and the port.

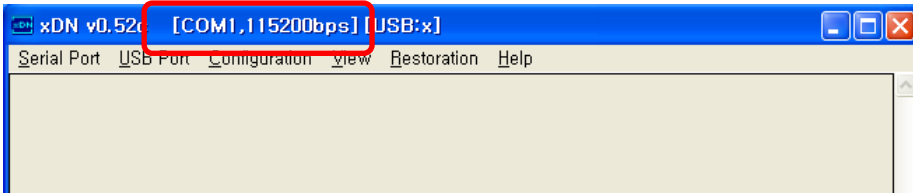




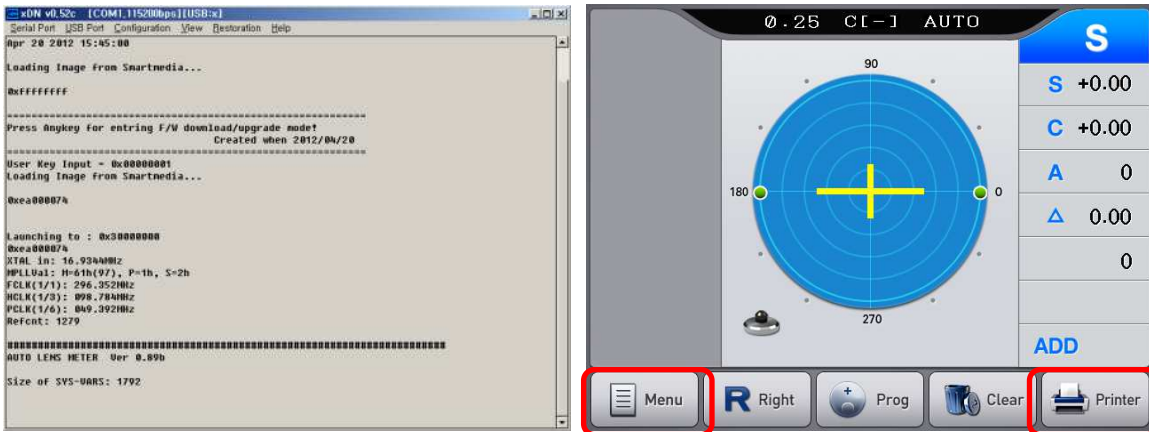
2. Select 'COM1' in 'COM Port' list. Subsequently, click 'Serial Port' and 'Connect' in turn. Check if it is well-connected.(See the blue box)



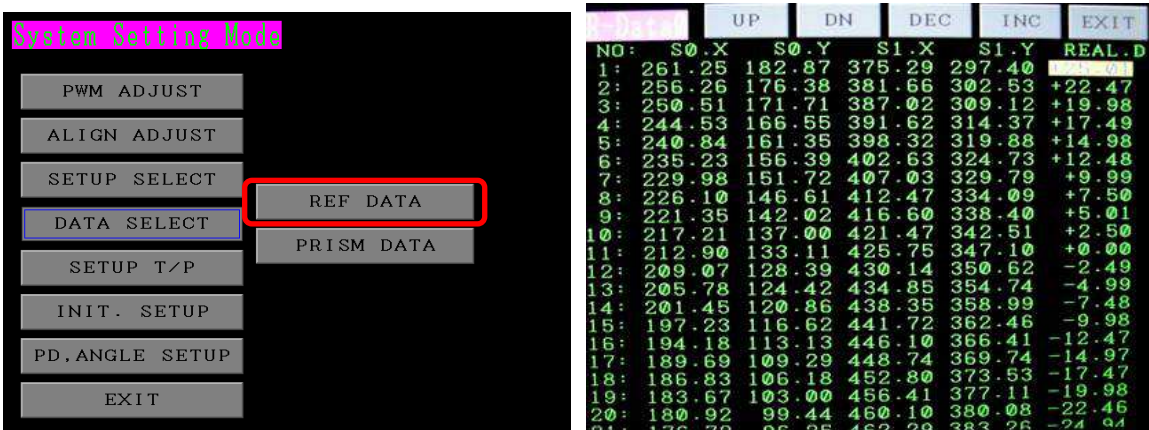
3. Check if the connection is okay on xDN program.(See the red box)



4. Turn PLM-6100(PD) on, and check if the message is indicated on xDN program as below. Keeping pressing the measurement button, press 'Printer' and 'Menu' button in turn to enter 'System Setting Mode'.

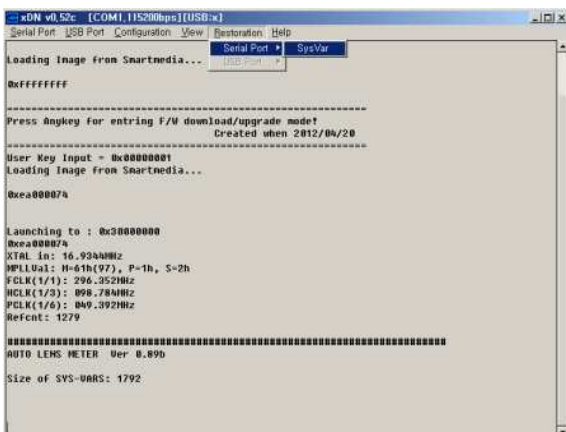


5. Select 'DATA SELECT' and 'REF DATA' in turn.



6. Select 'Restoration', 'Serial Port', 'SysVar' and the file(ex: L61BF15AA.bin) provided by Potec.

****Choose the file matching the serial number of the product that data recovery will be conducted.**

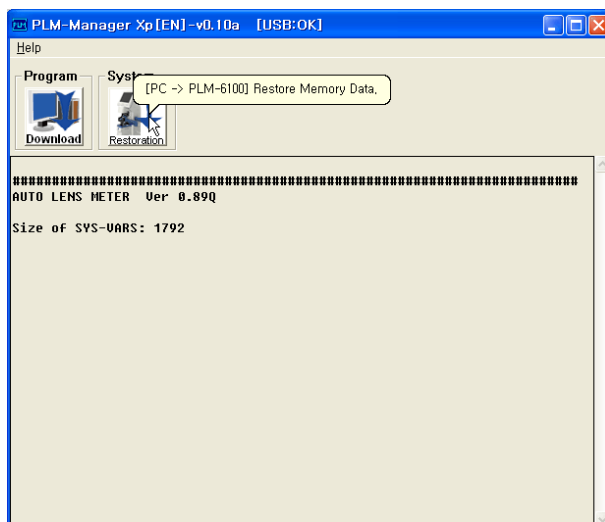


7. After completing data recovery, turn PLM-6100(PD) off and on.

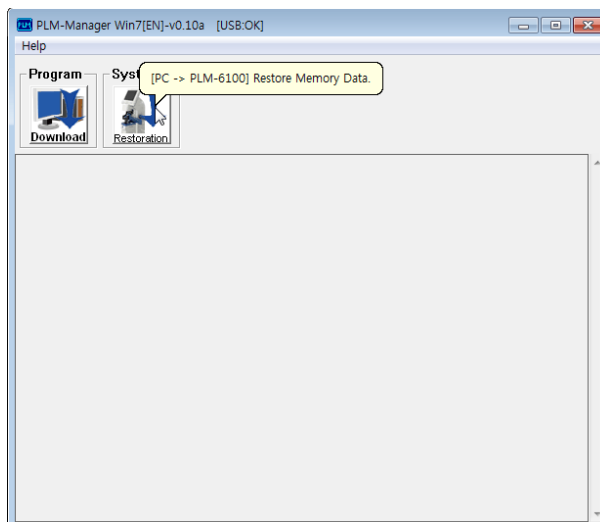
- **Data recovery for PLM-6100(PD) by using PLM-Manager.(Connect 'USB Cable' only) ②**

1. After USB driver of PLM-6100(PD) is installed completely, conduct PLM-Manager. Subsequently, turn PLM-6100(PD) on. Click 'Restoration' button and select the file(ex: L61BF15AA.bin) provided by Potec.
2. Click 'Restoration' button and select the file(ex: L61BF15AA.bin) provided by Potec.

****Choose the file matching the serial number of the product that data recovery will be conducted.**



[Windows XP]



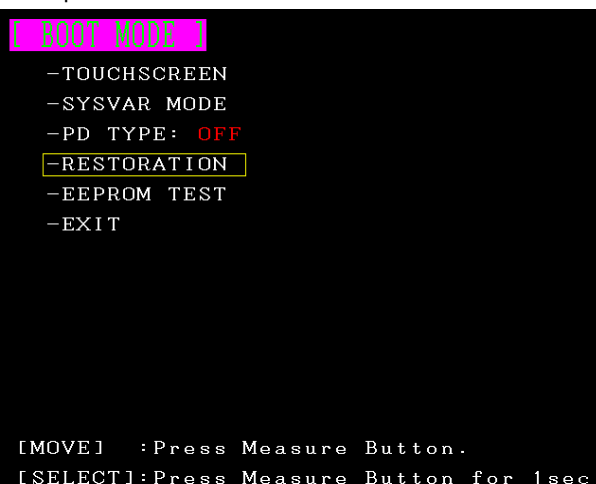
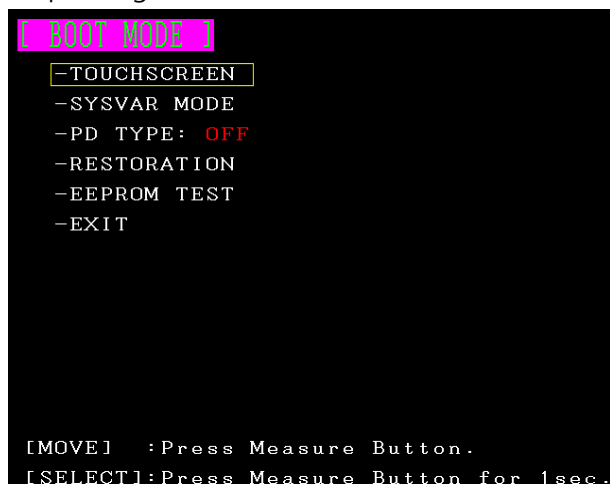
[Windows 7]

3. After completing data recovery, turn PLM-6100(PD) off and on.

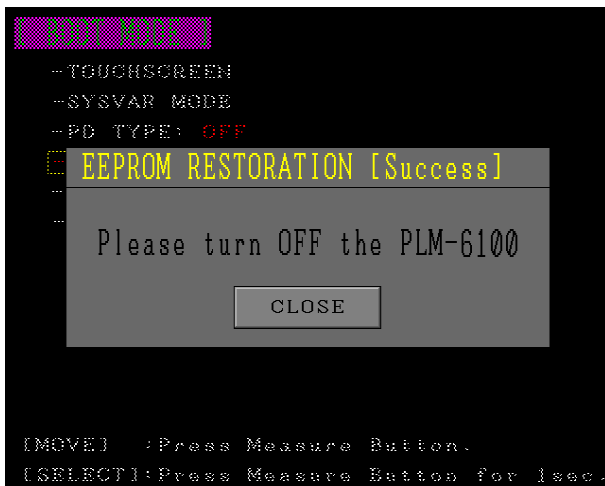
- **Data recovery on PLM-6100(PD) without PC**

****If software version is after 0.89s, data recovery is available on PLM-6100(PD) without PC connection.**

1. Turn PLM-6100PD on, keeping touching LCD screen to enter 'Boot Mode'. Move to 'RESTORATION' by pressing the measurement button 3 times and then press the measurement button for more than 1 sec.

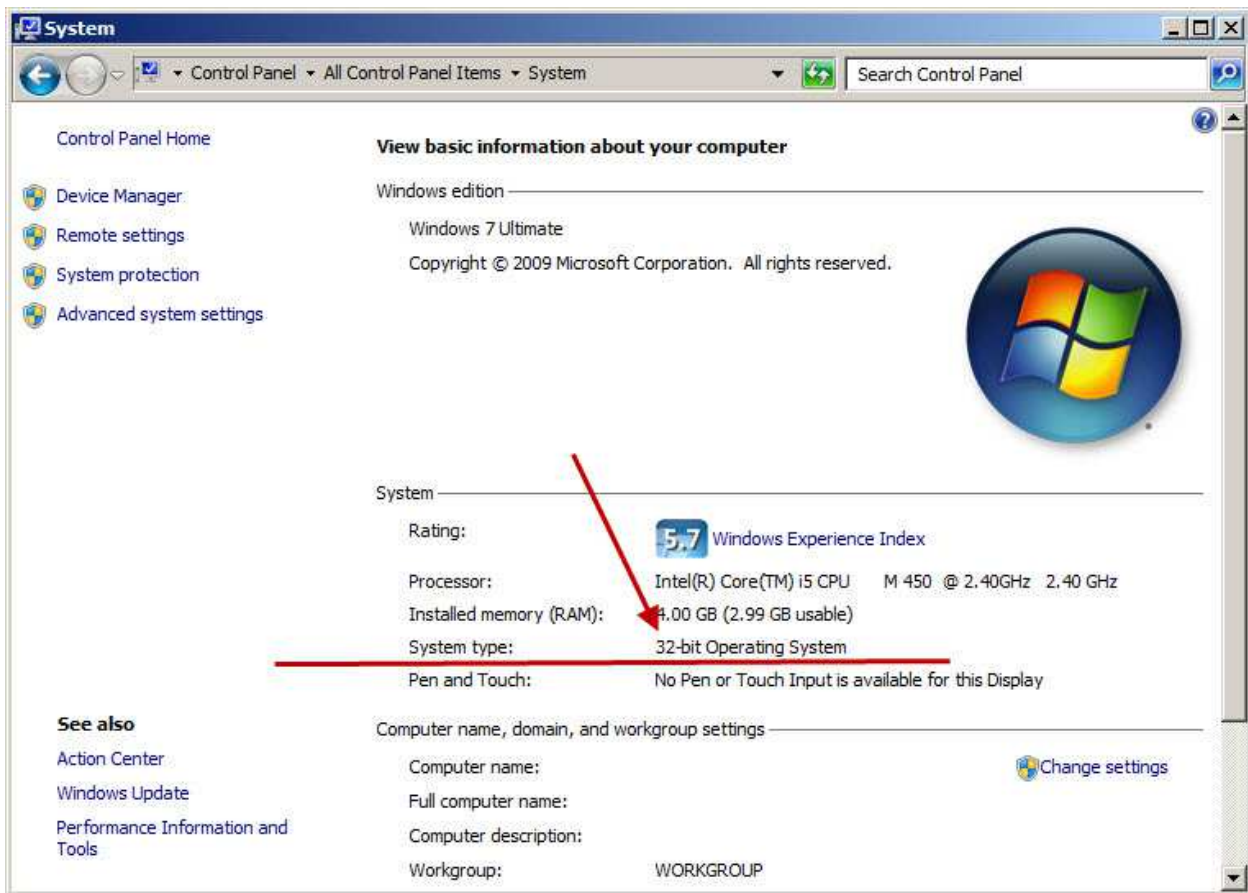


2. If the message is on the screen as below, data recovery succeeded. Press 'CLOSE' and re-boot the device.



LM-TS6111_Software upgrade

- **PC specification for software upgrade and data recovery of PLM-6100(PD)**
 - Available for 32bit of Windows 2000/XP/7(64bit is not supported)



- There are 2 types of software upgrade for PLM-6100(PD). Select one of 2 types and conduct it, based on the following direction.
 - 1) Turn the device on, keeping pressing the measurement button.
 - 2) If [Picture 1] is on the screen, use xDN program.(USB driver should be installed on PC)
If [Picture 2] is on the screen, use PLM-Manger.(USB driver should be installed on PC)



[Picture 1]



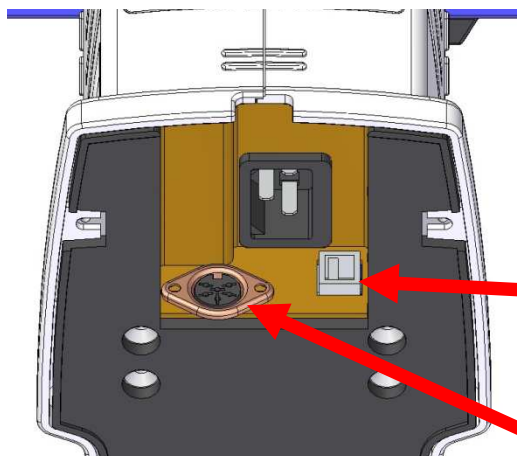
[Picture 2]

- **Installation of USB driver**

1. Connect the cable to PLM-6100(PD).

1) xDN program – ‘USB Cable’, ‘USB to RS-232’ and ‘PLM1x DIN6P to PC’ are needed.

2) PLM Manager – Only ‘USB Cable’ is needed.



‘USB Cable’(Please get it in the local)



Connect it to PC USB

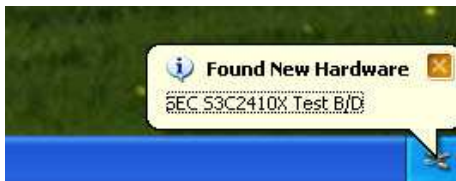
Connect it to PC USB Port



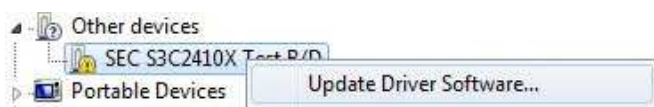
‘B-EZ00-012A PLM1x DIN6P to PC’(Potec provides it)

‘USB to RS-232’(Please get it in the local)

2. Connect PLM-6100(PD) to PC by using usb cable, and then power on PC as you press the measurement button of PLM-6100(PD). Subsequently, you can see the message indicating that the new hardware is detected on your screen(Please refer to the picture below).



[Windows XP]

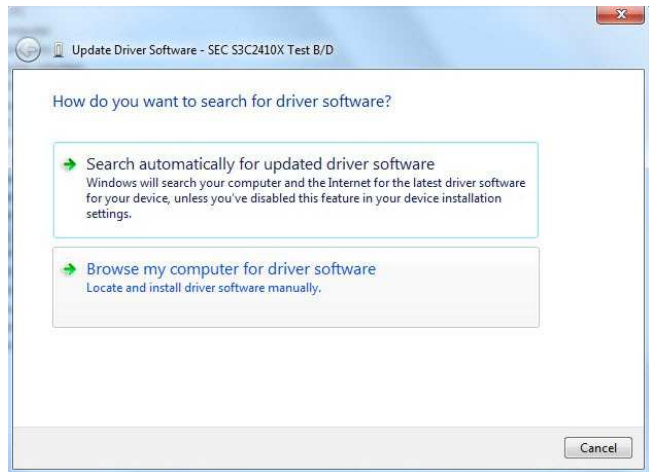


[Windows 7]

3. Install the USB Driver provided from Potec. ("secbulk.inf" & "secbulk.sys")



[Windows XP]



[Windows 7]

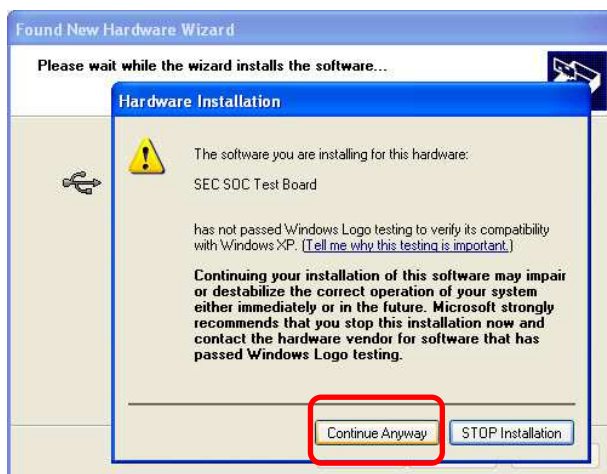
4. Select 'Install from a list or specific location(Advanced)' and 'Browse my computer for driver software' in turn. Designate the folder named 'USB Driver' ("secbulk.inf" & 'secbulk.sys') provided from Potec to complete installation(Refer to pictures below).



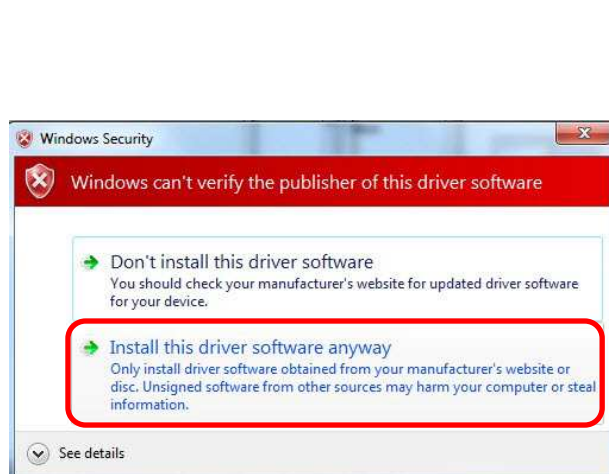
[Windows XP]



[Windows 7]



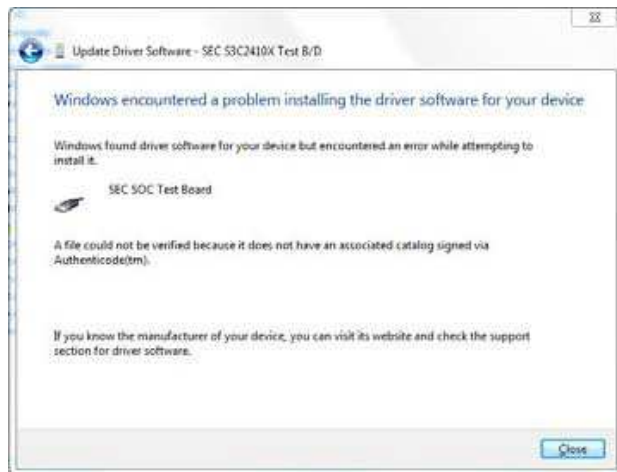
[Windows XP]



[Windows 7]

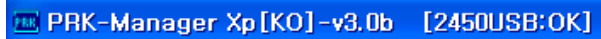


[Windows XP]



[Windows 7]

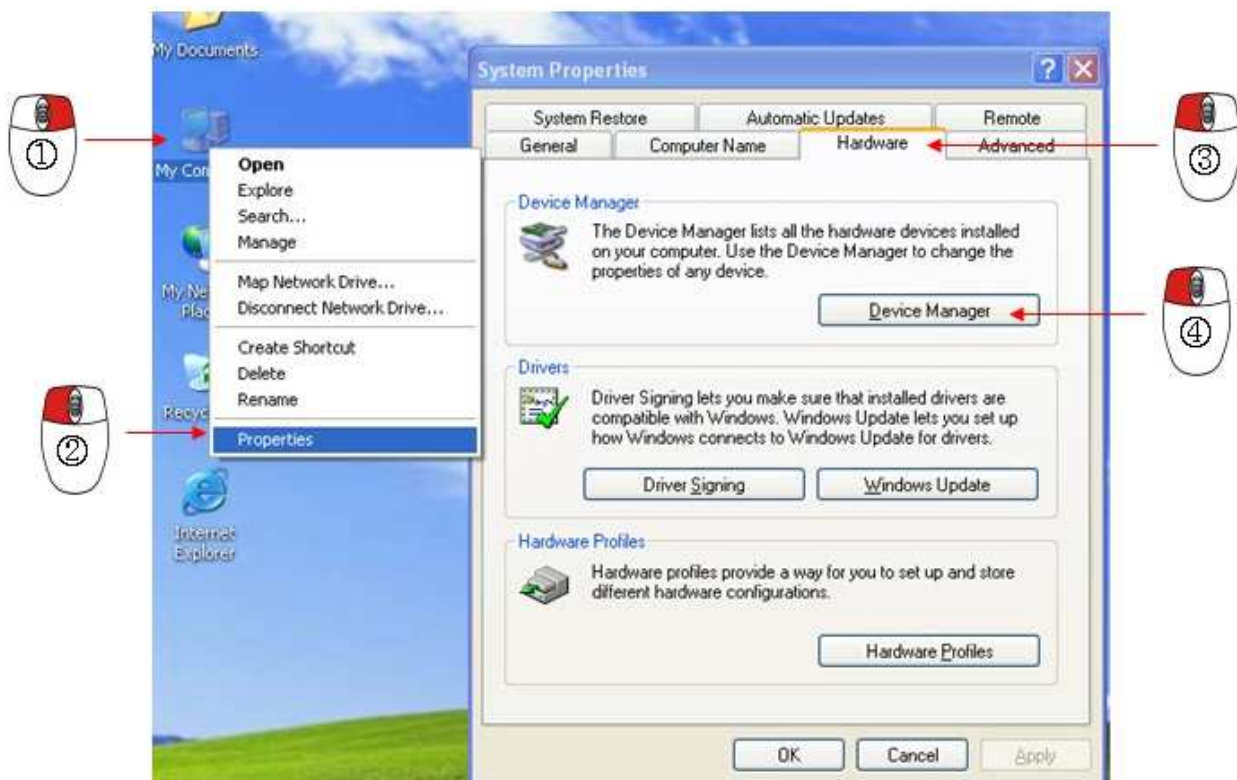
- Once the installation is completed well, you can see the phrase [USB:OK] as in the picture below when you conduct 'xDN/PLM Manager'.

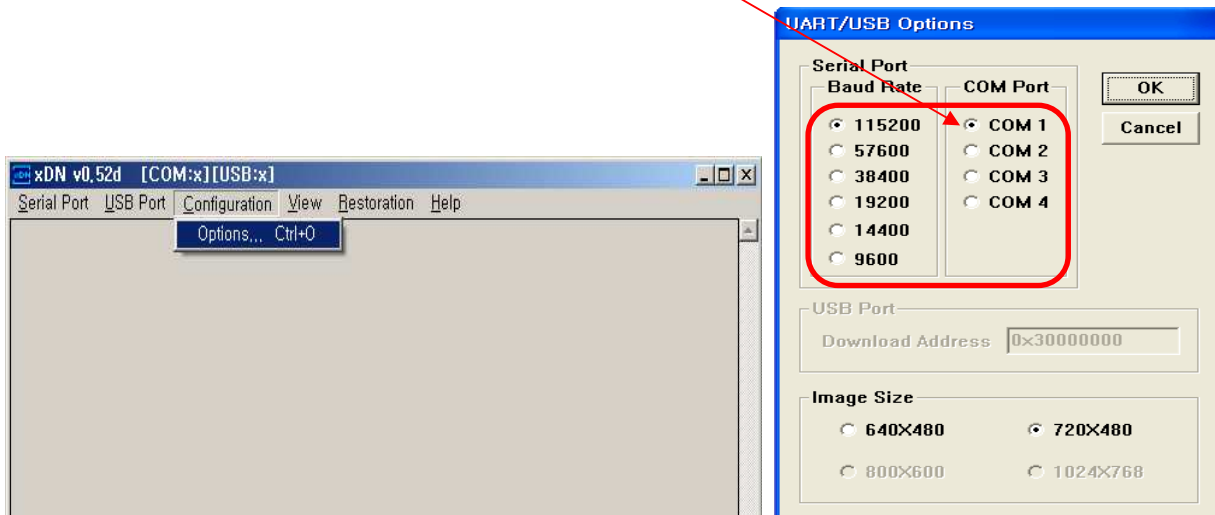
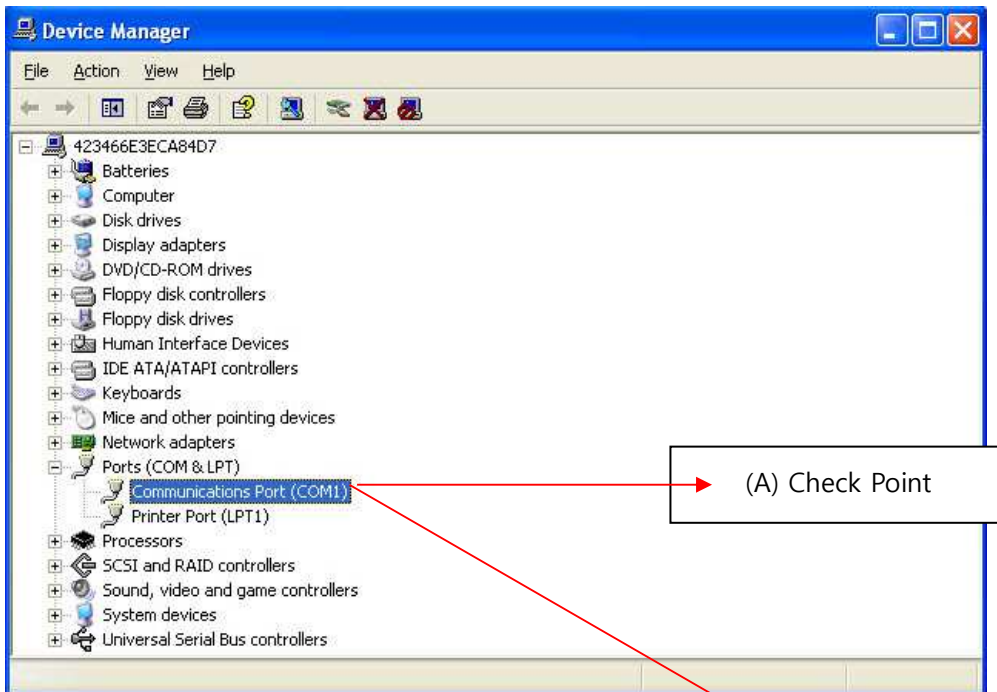


- Software upgrade for PLM-6100(PD) by using xDN program**
(Connect 'USB Cable', 'USB to RS-232' and 'PLM1x DIN6P to PC')

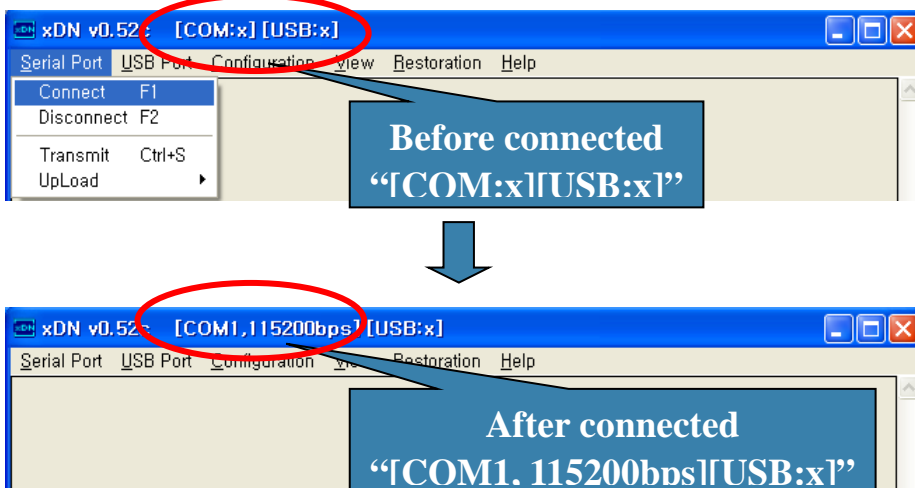
****Please Use 'xDN 0.52d, 37000000 version'.**

- After USB driver of PLM-6100(PD) is installed completely, conduct xDN program. Subsequently, set the speed of communication and the port.



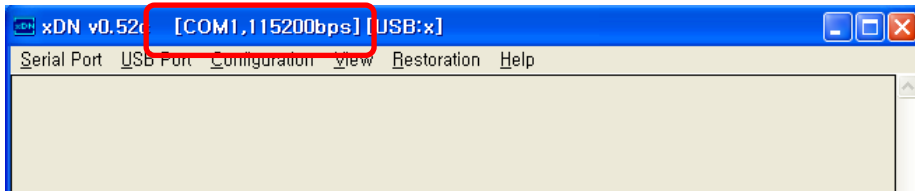


2. Select 'COM1' in 'COM Port' list. Subsequently, click 'Serial Port' and 'Connect' in turn. Check if it is well-connected.(See the blue box)

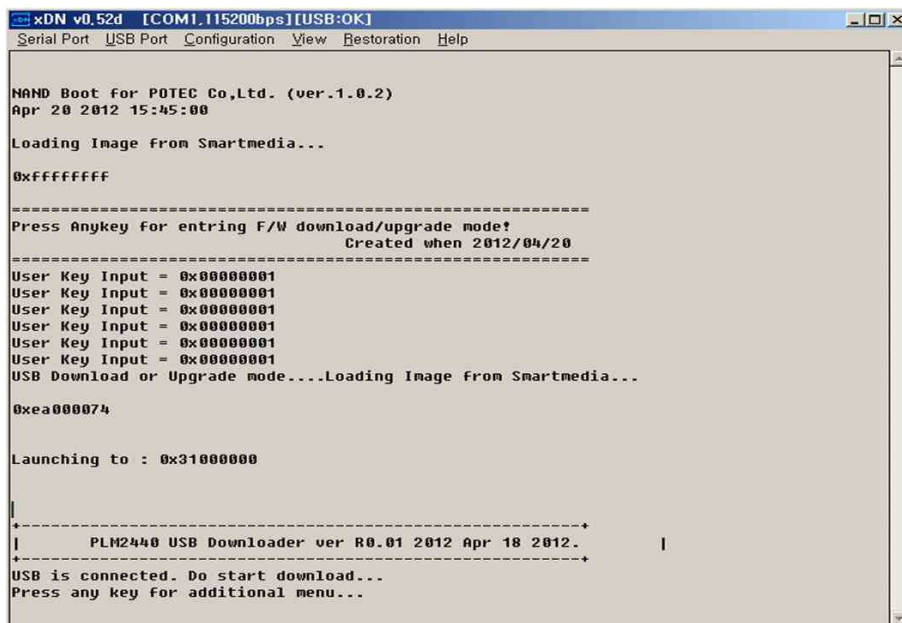


⚠ Caution : Complete software upgrade within 2 min. If it overruns 2 min, the printer might not work by electronic shock.

3. Remove the print paper before software upgrade.
4. Check if the connection is okay on xDN program.(See the red box)



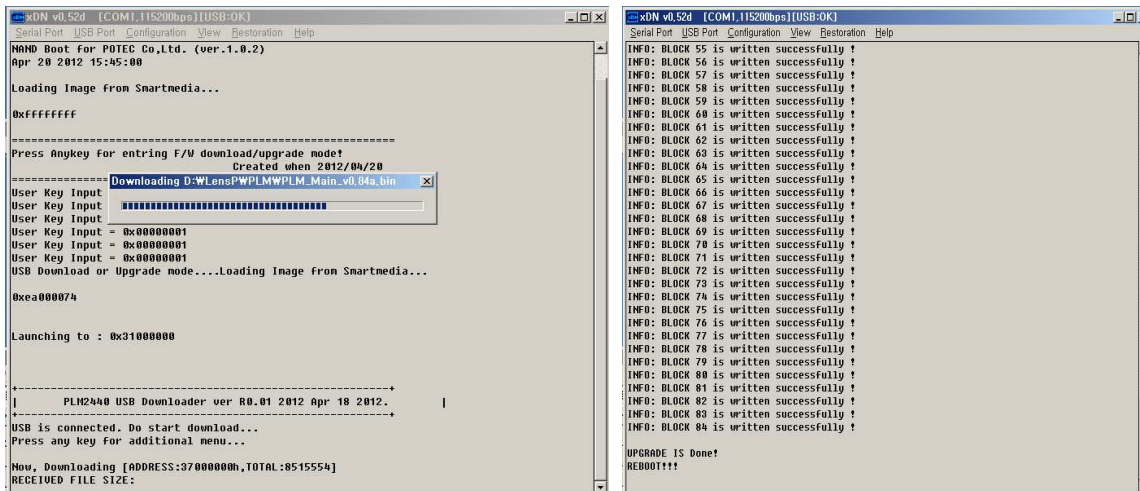
5. Turn PLM-6100(PD) on, keeping pressing the measurement button. Check if the message is indicated on xDN program as below.



6. Select 'USB Port' and 'Transmit' in turn. Subsequently, select the software(PLM_Main_v1.00x.bin) provided by Potec.

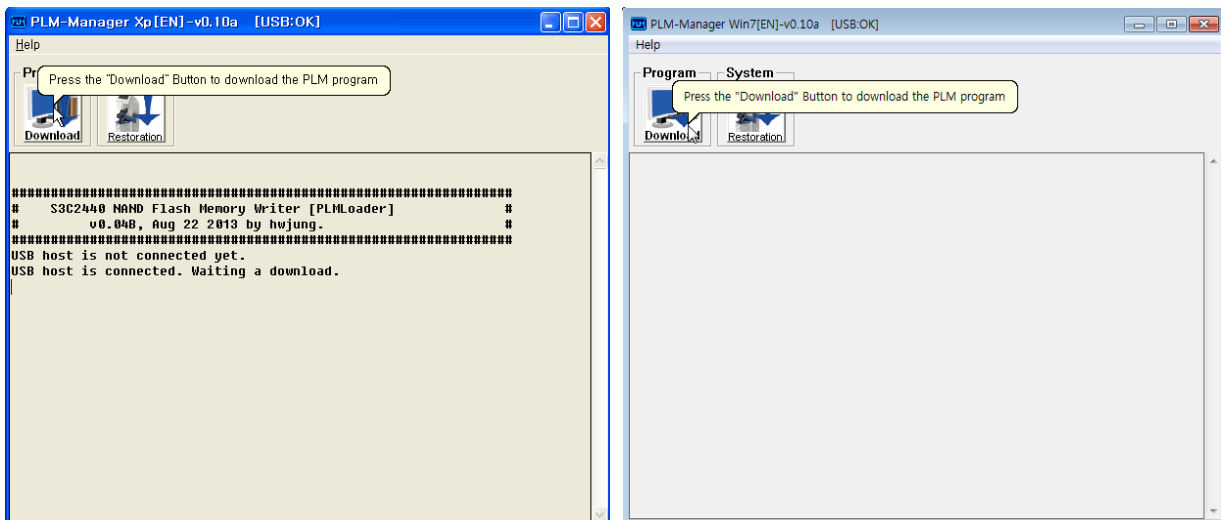


- If the following message is on, software upgrade was completed. Check if software upgrade is well-completed by turning the device off and on. Subsequently, install the print paper removed before again.



- Software upgrade for PLM-6100(PD) by using PLM-Manager.(Connect 'USB Cable' only)**

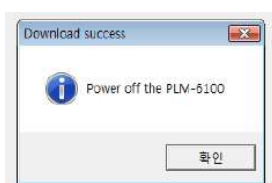
- After USB driver of PLM-6100(PD) is installed completely, conduct PLM-Manager. Subsequently, turn PLM-6100(PD) on, keeping pressing the measurement button. Click 'Download' button and select the software(PLM_Main_v1.00x.bin) provided by Potec.



[Windows XP]

[Windows 7]

- If the following message is on, software upgrade was completed. Check if software upgrade is well-completed by turning the device off and on. Subsequently, install the print paper removed before again.



POTEC QUALITY CONTROL TEAM