

1. Alignment procedure (for function adjustment)

A. Preparation:

1. Setup input timing ICL-605, 32-Grays pattern.
2. Setup unit and keep it warm up at least 30 minutes.

B. Timing adjustment:

1. Enter factory setting area (press “ENTER”, “EXIT” and then press “SOFTPOWER”).
2. Check the settings to following values:

Contrast = 50

Brightness = 90

OSD time = 20

Color = sRGB

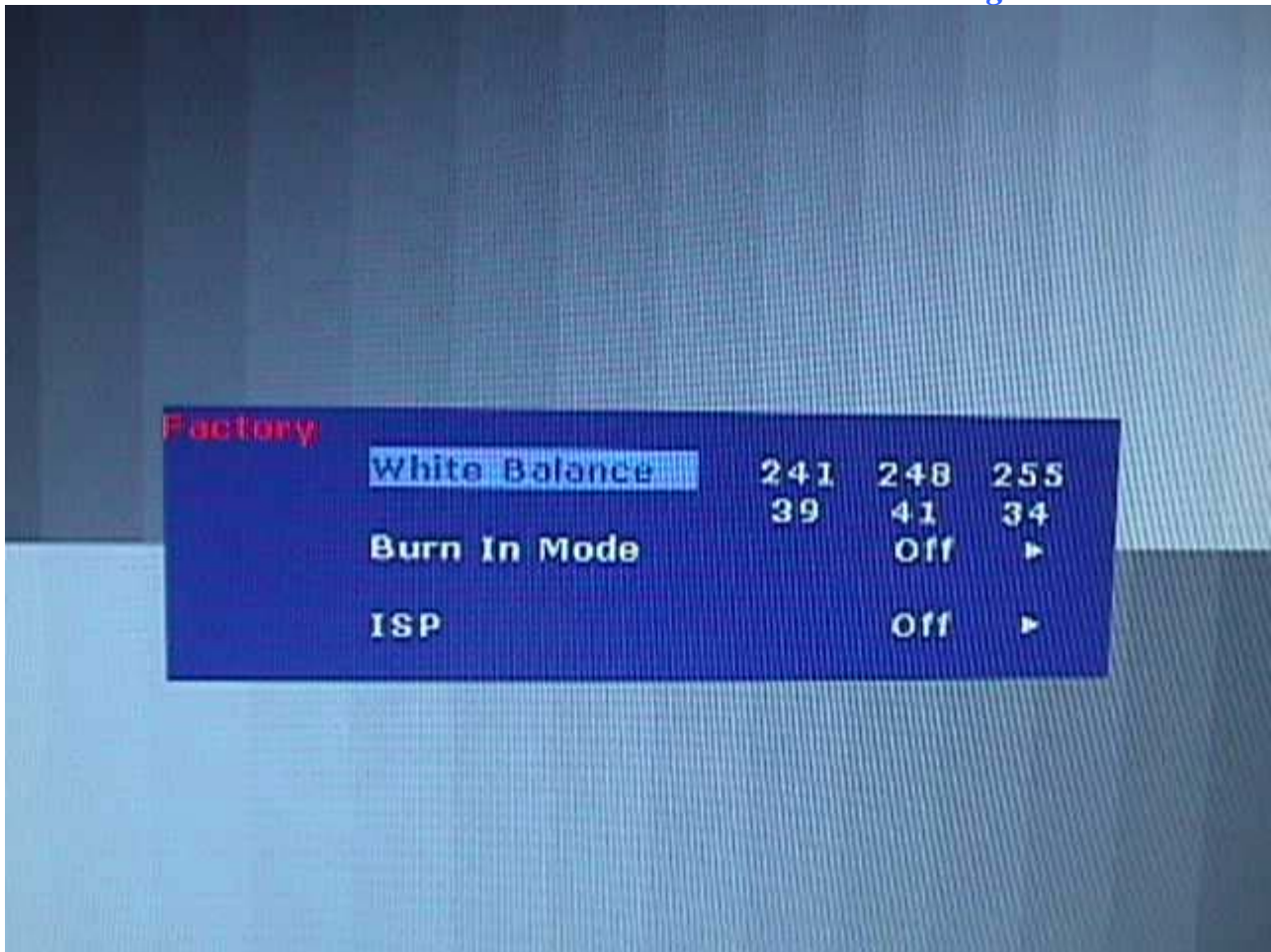
Language = English

Then, turn off the monitor power.

3. Turn on power enter user area.

C. Color balance adjustment:

1. Enter factory setting area (press “ENTER”, “I-Key” and then press “SOFTPOWER”).
2. Setup input timing VGA480(640x480@60Hz), 32-Gray pattern (pattern 48) .
3. Press “I-KEY”, and than OSD will show “White Balance” item and than press “ENTER” button to do auto color.



D. Color adjustment:

1. Setup input timing ICL-605, white pattern .
2. Confirm auto color adjustment had already done.
3. Measure color temperature by Minolta CA-110 (or equivalent equipment).
4. Check the color temperature Bluish, Reddish & sRGB. The color temperature specification as follows:

White Balance (Bluish, 9300K set on OSD)	X+-	0.283+(-) 0.03
	Y+-	0.297+(-) 0.03
White Balance (Reddish, 5800K set on OSD)	X+-	0. 326+(-) 0.03
	Y+-	0. 342+(-) 0.03
White Balance (sRGB, 6500K set on OSD)	X+-	0.313+(-) 0.03
	Y+-	0. 329 +(-) 0.03

5. Setup input timing , 32 -Gray pattern.

To check if there are any abnormal display problems of preset timing modes (both analog and digital mode).

Check the following preset timings with General pattern:

No.	Mode	H	V
1	720×400 @ 70Hz	31.468	70.8
2	640×480 @ 60Hz	31.469	59.940
3	640×480 @ 75Hz	37.500	75.000
4	800×600 @ 60Hz	37.879	60.317
5	800×600 @ 75Hz	46.875	75.000
6	1024×768 @ 60Hz	48.363	60.004
7	1024×768 @ 75Hz	60.023	75.029
8	1152×864 @ 75Hz	67.500	75.000
9	1280×1024 @ 60Hz	63.981	60.020
10	1280×1024 @ 75Hz	79.976	75.025

6. Checking if the picture is no good, reject this monitor.
7. To check the power consumption by disabling “burn-in mode” setting
8. To check if 12V audio output is OK or not
9. To check if 3 downstream ports of USB is working correctly .
10. To clear user data and program complete DDC data to monitor by IIC bus communication.

E. Writing EDID file:

1. Setup a PC with DDC card.
2. Connect PC to monitor with a D-sub signal cable and a DVI signal cable.
3. Please refer to the C212 for the correct EDID file (Analog and DVI).
4. Runs the writing program to write the EDID file into EEPROM for analog and DVI .
5. Read both EEPROM data and confirm it to match with the C212 document definition.

F. Command definition :

PC Host will send 0x7C IIC slave address and then following 4 bytes command

I2C Send Command	Byte1	Byte2	Byte3	Byte4
Write Contrast	CA	55	Data	checksum
Write Brightness	CA	56	Data	checksum
Write Red Gain	CA	57	Data	checksum
Write Green Gain	CA	58	Data	checksum
Write Blue Gain	CA	59	Data	checksum
Read Contrast	C3	55	XX	checksum
Read Brightness	C3	56	XX	checksum
Read Red Gain	C3	57	XX	checksum
Read Green Gain	C3	58	XX	checksum
Read Blue Gain	C3	59	XX	checksum

Write Bluish(9300K) R-Gain Data to NVRAM	AA	3C	Data	checksum
Write Bluish(9300K) G-Gain Data to NVRAM	AA	3D	Data	checksum
Write Bluish(9300K) B-Gain Data to NVRAM	AA	3E	Data	checksum
Write sRGB(6500K) R-Gain Data to NVRAM	AA	4C	Data	checksum
Write sRGB(6500K) G-Gain Data to NVRAM	AA	4D	Data	checksum
Write sRGB(6500K) B-Gain Data to NVRAM	AA	4E	Data	checksum
Write Reddish(5800K) R-Gain Data to NVRAM	AA	5C	Data	checksum
Write Reddish(5800K) G-Gain Data to NVRAM	AA	5D	Data	checksum
Write Reddish(5800K) B-Gain Data to NVRAM	AA	5E	Data	checksum
Write User R-Gain Data to NVRAM	AA	6C	Data	checksum
Write User G-Gain Data to NVRAM	AA	6D	Data	checksum
Write User B-Gain Data to NVRAM	AA	6E	Data	checksum
Read Bluish(9300K) R-Gain data from NVRAM	A3	3C	XX	checksum
Read Bluish(9300K) G-Gain data from NVRAM	A3	3D	XX	checksum
Read Bluish(9300K) B-Gain data from NVRAM	A3	3E	XX	checksum
Read sRGB(6500K) R-Gain data from NVRAM	A3	4C	XX	checksum
Read sRGB(6500K) G-Gain data from NVRAM	A3	4D	XX	checksum
Read sRGB(6500K) B-Gain data from NVRAM	A3	4E	XX	checksum
Read Reddish(5800K) R-Gain data from NVRAM	A3	5C	XX	checksum
Read Reddish(5800K) G-Gain data from NVRAM	A3	5D	XX	checksum
Read Reddish(5800K) B-Gain data from NVRAM	A3	5E	XX	checksum
Read User R-Gain data from NVRAM	A3	6C	XX	checksum
Read User G-Gain data from NVRAM	A3	6D	XX	checksum
Read User B-Gain data from NVRAM	A3	6E	XX	checksum
Change Color Temperature to Bluish	CC	1	XX	checksum
Change Color Temperature to sRGB	CC	2	XX	checksum
Change Color Temperature to Reddish	CC	3	XX	checksum
Change C/T to User	CC	4	XX	checksum
User mode to factory mode	1A	5A	XX	checksum

Auto Color (Offset1, Offset2, Gain)	1B	5A	XX	checksum
Factory mode to User mode	1E	5A	XX	checksum
Clear user area data	1F	5A	XX	checksum
Off burn in mode	CE	2	XX	checksum
Change Language Setting	66	0~7	XX	checksum

Note A: $\text{Byte4}(\text{Checksum}) = \text{Byte1} + \text{Byte2} + \text{Byte3}$

Note B: Data = The value write to MCU

Note C: XX = don't care, any value($\leq 0xFF$).

Note D: The Byte-2 definition of “Change Language Setting” is as below,

0=DE, 1=EN, 2=ES, 3=FR, 4=IT, 5=JA, 6=繁中, 7=簡中

When PC Host sends 0x7D command to MCU, MCU must return as following (2 bytes)

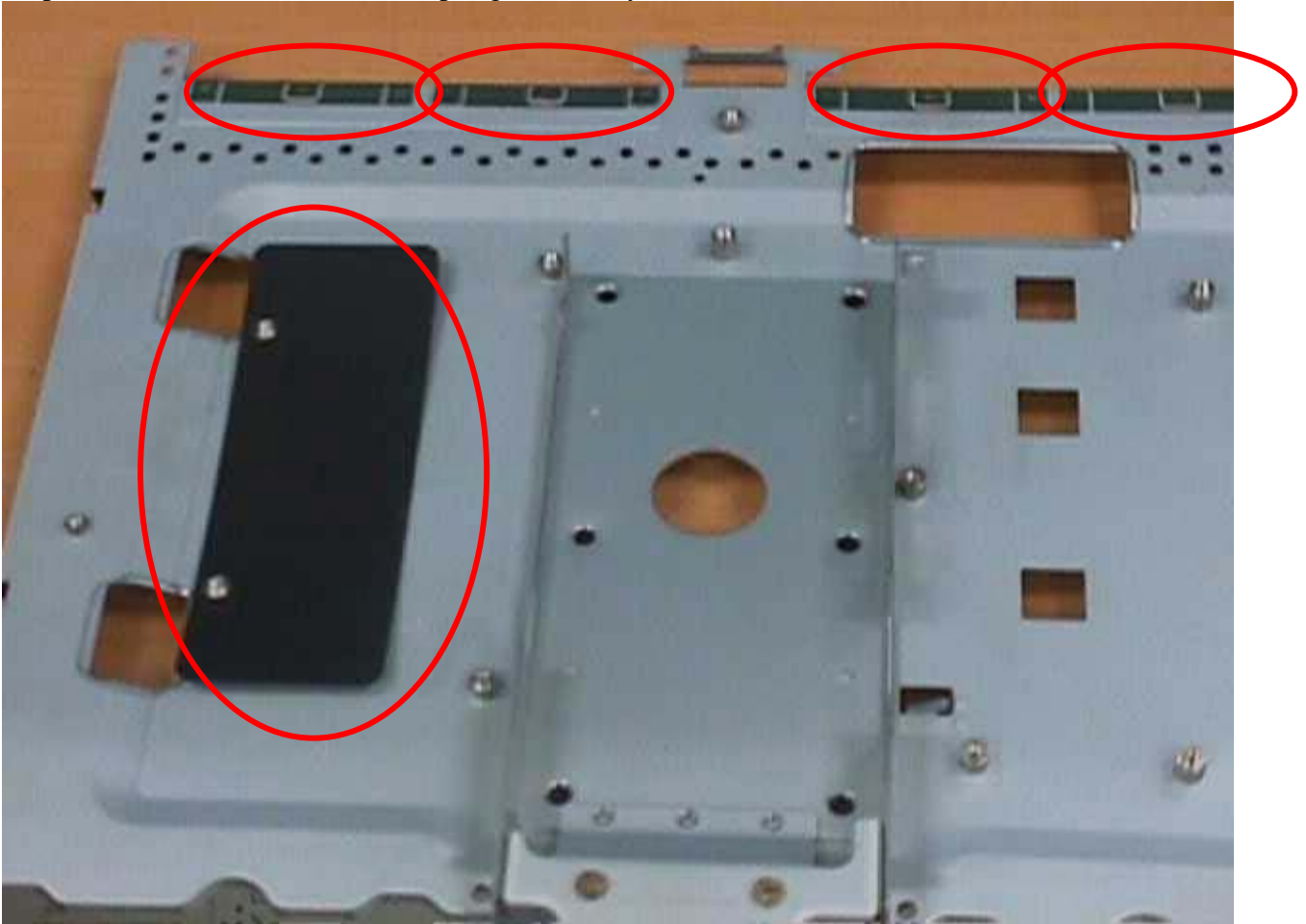
Return Code	R-Byte1	R-Byte2
Checksum error code	FC	AA
Normal return code	the above Byte3 (/data)	FC
If normal return code is exact FCh	FC	CF

The Table is for alignment machine to read data from EEPROM to check if the alignment process and write data are correct.

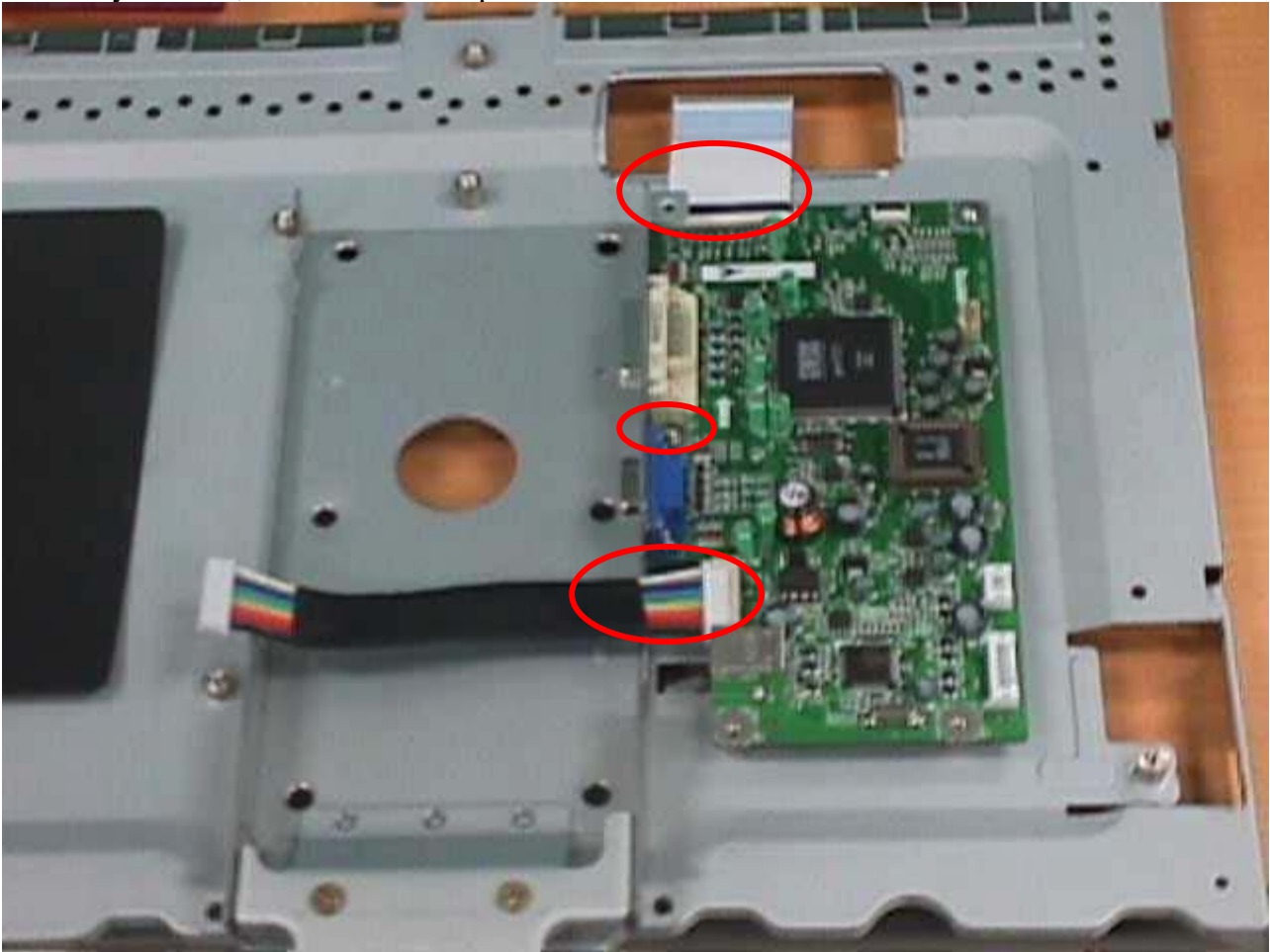
Read EEPROM Contrast	A3	92	XX	checksum
Read EEPROM Brightness	A3	93	XX	checksum
Read EEPROM C/T Point	A3	94	XX	checksum
Read EEPROM OSD-Hpos	A3	95	XX	checksum
Read EEPROM OSD-Vpos	A3	96	XX	checksum
Read EEPROM Language	A3	97	XX	checksum
Read EEPROM OSD Timer	A3	98	XX	checksum
Read EEPROM Volume	A3	99	XX	checksum

Wire Dressing and assembling concern

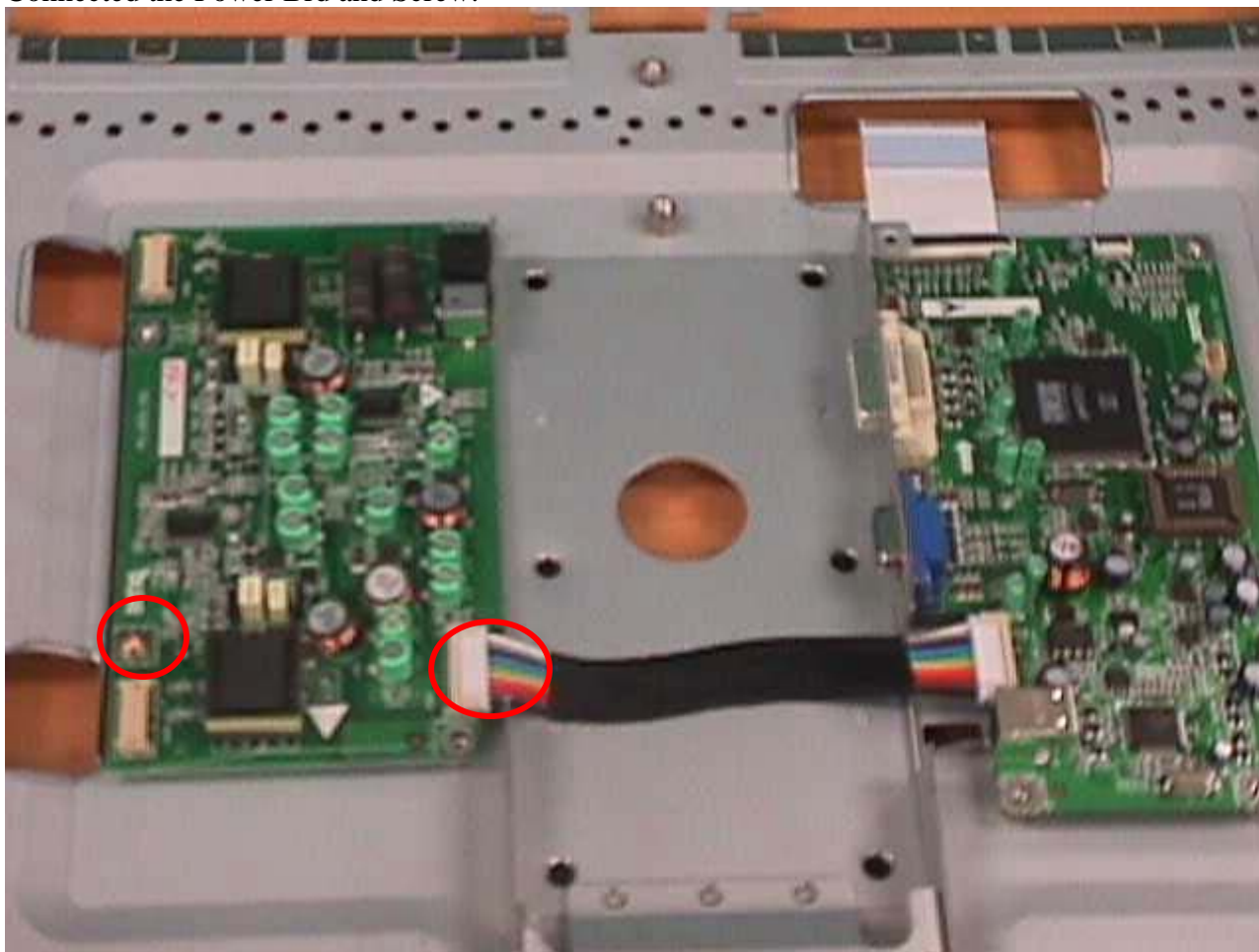
Prepare 1 main BKT. Check the 4 springs and 1 Mylar



Assembly I/F Brd , LVDS Cable and power wire. Screw.



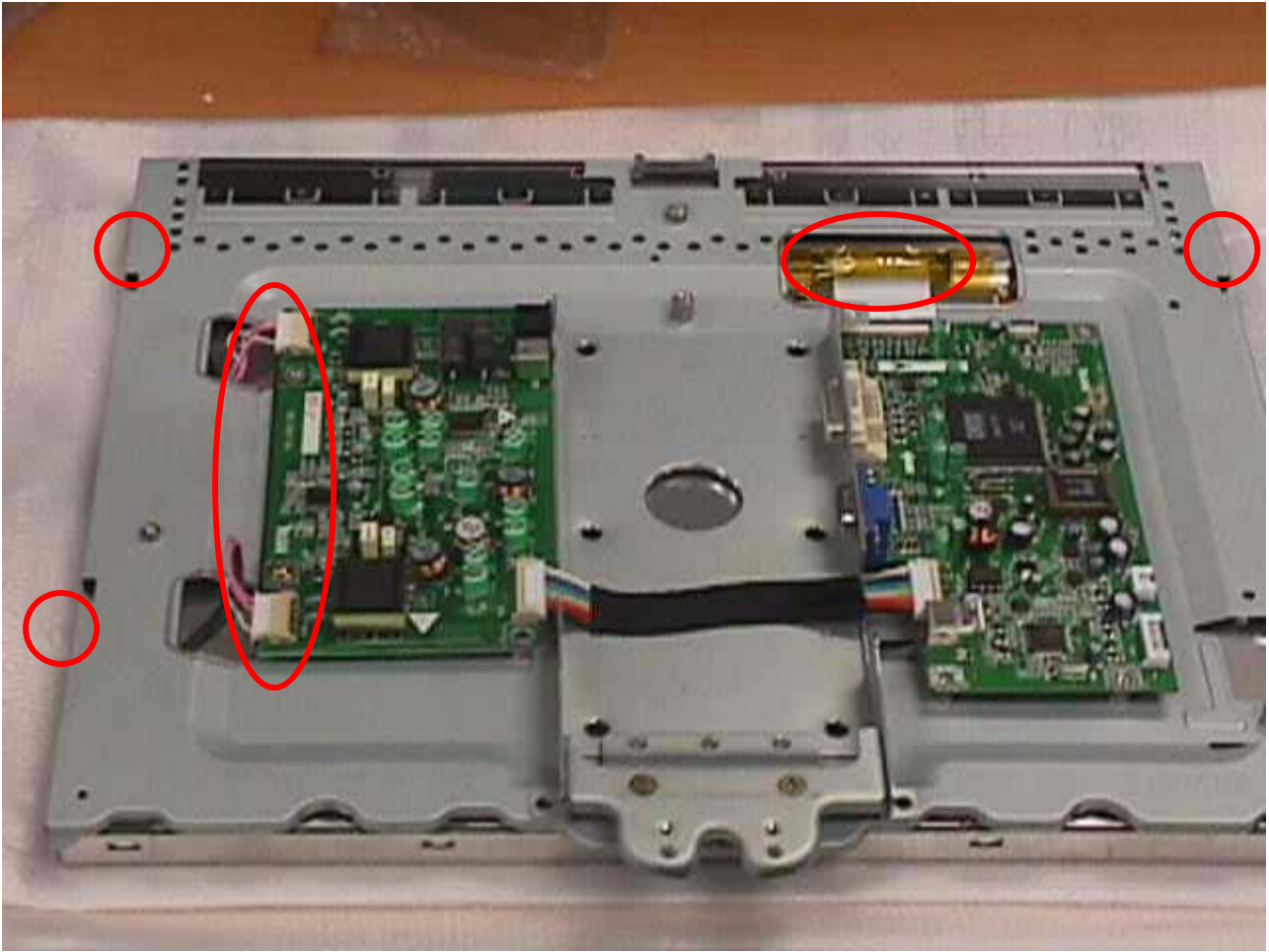
Connected the Power Brd and Screw.



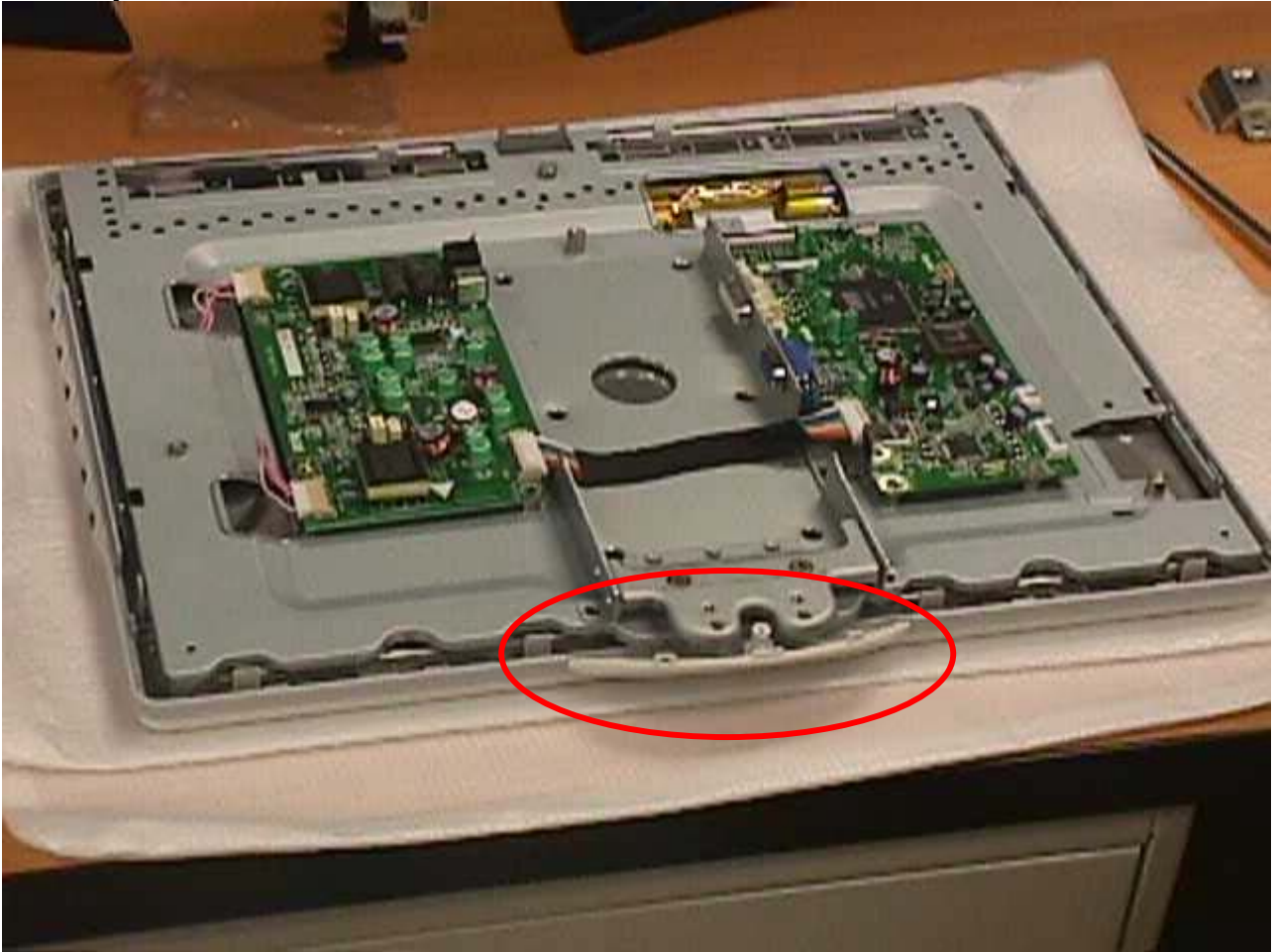
Q7B3(FP783) LCD Monitor Service Guide

Alignment Procedure

Assembly the main BKT and panel. Connected the inverter brd and backlight wire. Don't forget the panel and main bkt's four screw.



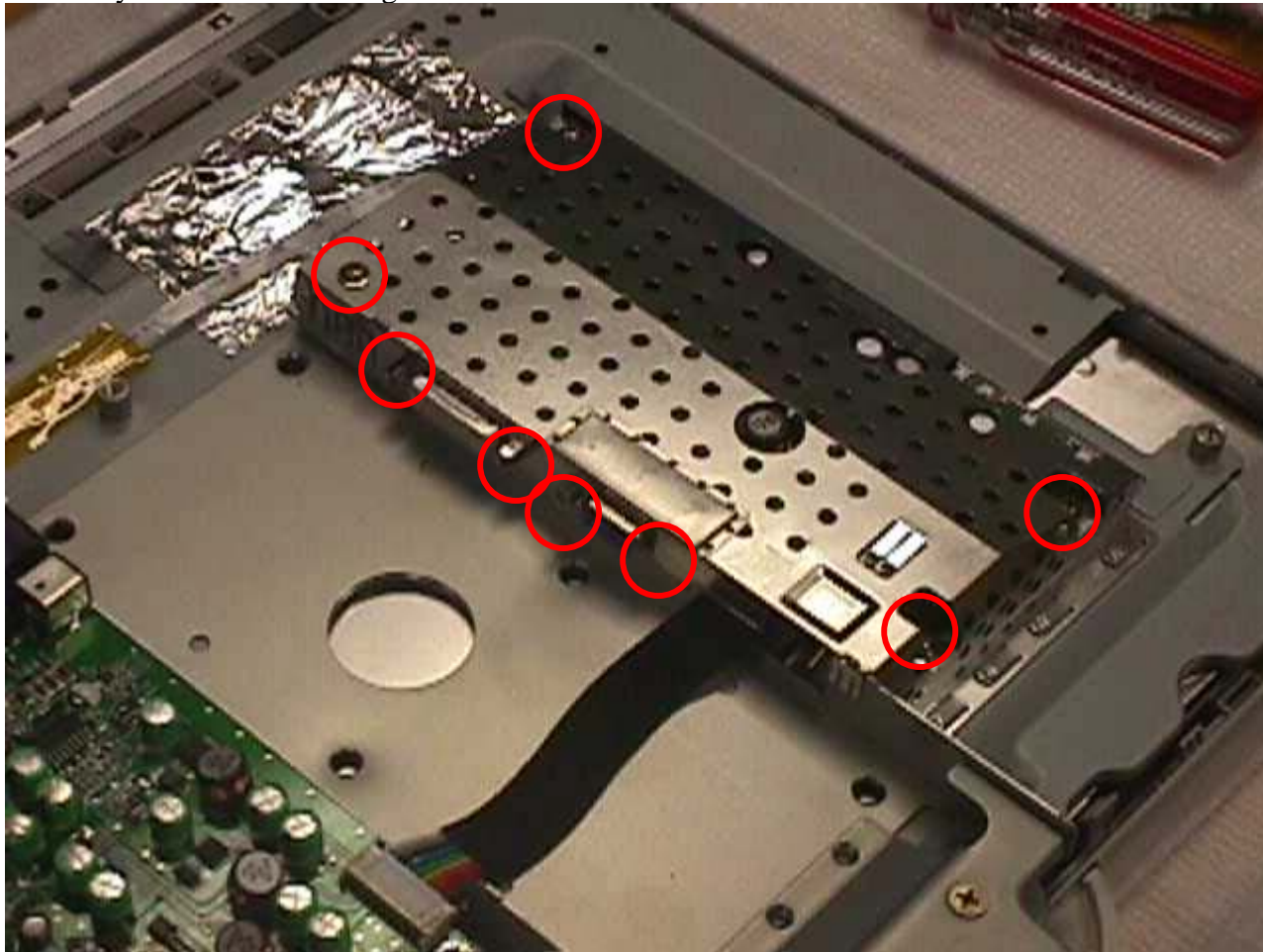
Assembly the Bezel and main bkt.



And then connected the ctrl brd wire.



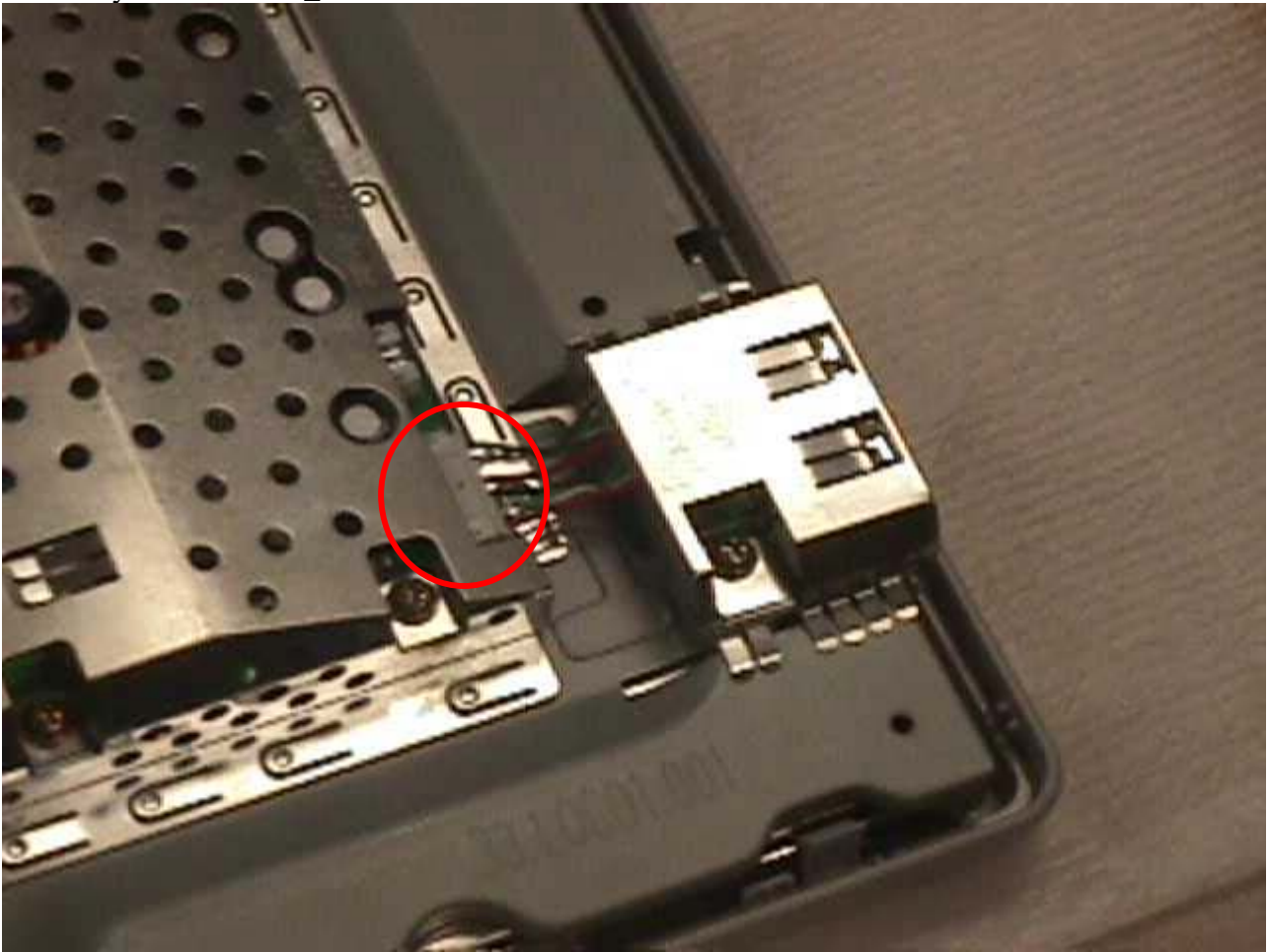
Assembly the I/F brd shielding and screw.



Prepare the USB_L Brd



Assembly the USB Left_Brd



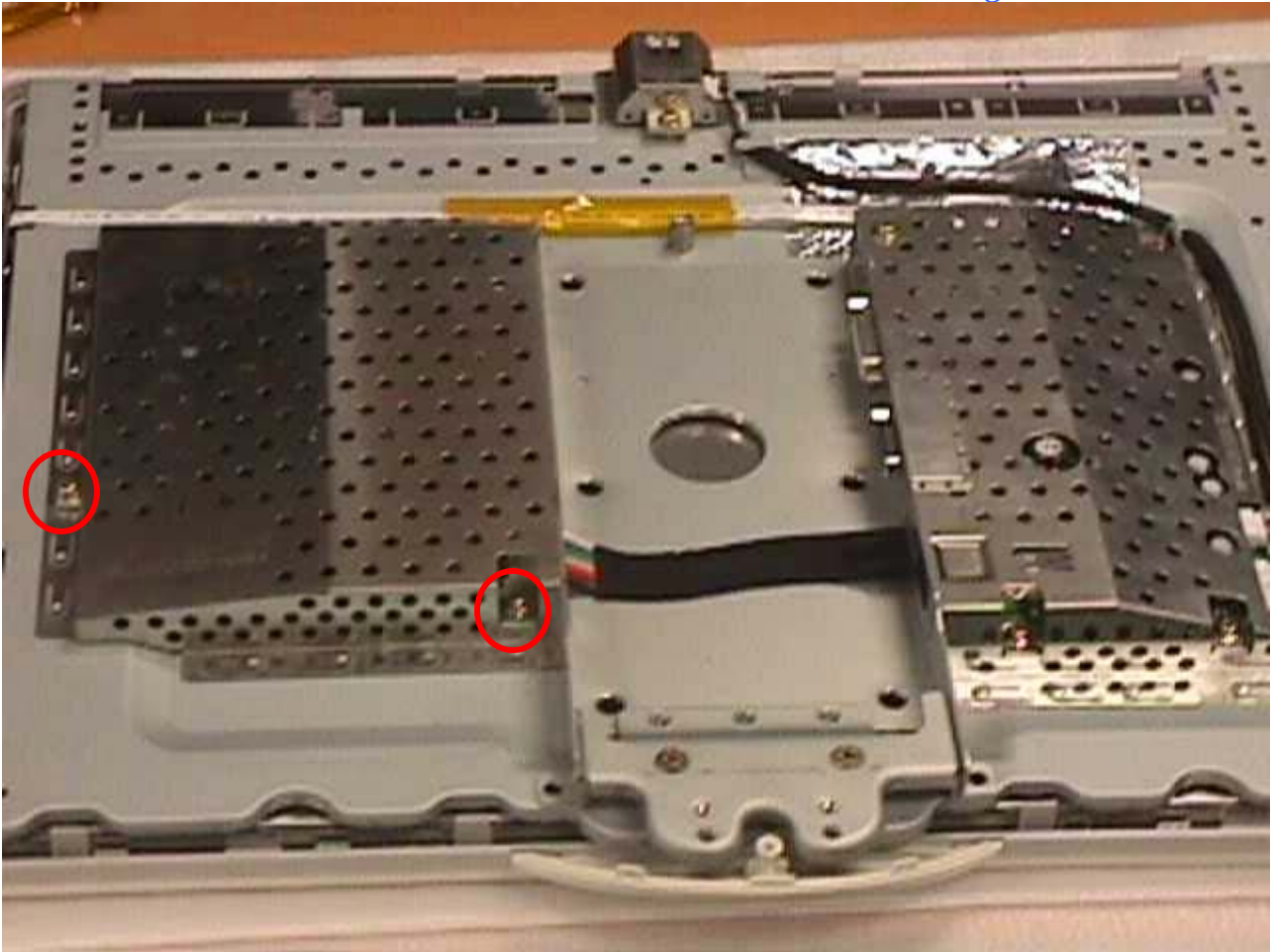
Prepare USB_Top Brd



Assembly USB_Top Brd.



Assembly the Power Brd shielding



Assembly the Rear Cabinet.



Screwed



Assembly the Base.



Screw.



Add the Cover.



Finished.

