

### 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 “LEFT”, “EXIT” and then press “SOFTPOWER”).
2. Check the settings to following values:

Contrast = 50

Brightness = 90

Volume = 30

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 “LEFT”, “EXIT” and then press “SOFTPOWER”).
2. Setup input timing UVGA7, 4-Grays pattern.
3. Press “AUTO”, waiting for press <right> message.
4. Press “RIGHT” to Calibrate ADC.
5. Setup input timing ICL-605, 32 -Gray pattern.
6. Checking if the picture is no good, reject this monitor.

#### D. Color adjustment:

1. Setup input timing ICL-605, white pattern.
2. Measure color temperature by Minolta CA-110 (or equivalent equipment).
3. Alignment 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

4. Turns off the monitor power.

### **E. Writing EDID file:**

1. Setup a PC with DDC card.
2. Connect PC to monitor with a D-sub signal cable.
3. Please refer to the C212 for the correct EDID file.
4. Runs the writing program to write the EDID file into EEPROM for analog input, ie. 15-pin D-sub.
5. Read both EEPROM data and confirm it to match with the C212 document definition.

### F. Command definition:

MCU COMMAND LIST					
FUNCTION	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 C1 (Bluish) R-Gain Data to NVRAM	AA	3C	Data	checksum	
Write C1 (Bluish) G-Gain Data to NVRAM	AA	3D	Data	checksum	
Write C1 (Bluish) B-Gain Data to NVRAM	AA	3E	Data	checksum	
Write C2 (Reddish) R-Gain Data to NVRAM	AA	4C	Data	checksum	
Write C2 (Reddish) G-Gain Data to NVRAM	AA	4D	Data	checksum	
Write C2 (Reddish) B-Gain Data to NVRAM	AA	4E	Data	checksum	
Write C3 (sRGB) R-Gain Data to NVRAM	AA	5C	Data	checksum	
Write C3 (sRGB) G-Gain Data to NVRAM	AA	5D	Data	checksum	
Write C3 (sRGB) 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 C1 (Bluish) R-Gain data from NVRAM	A3	3C	XX	checksum	
Read C1 (Bluish) G-Gain data from NVRAM	A3	3D	XX	checksum	
Read C1 (Bluish) B-Gain data from NVRAM	A3	3E	XX	checksum	
Read C2 (Reddish) R-Gain data from NVRAM	A3	4C	XX	checksum	
Read C2 (Reddish) G-Gain data from NVRAM	A3	4D	XX	checksum	
Read C2 (Reddish) B-Gain data from NVRAM	A3	4E	XX	checksum	
Read C3 (sRGB) R-Gain data from NVRAM	A3	5C	XX	checksum	
Read C3 (sRGB) G-Gain data from NVRAM	A3	5D	XX	checksum	
Read C3 (sRGB) 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 C1	CC	1	XX	checksum	
Change Color Temperature to C2	CC	2	XX	checksum	
Change Color Temperature to C3	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	
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	

**Table 1**

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

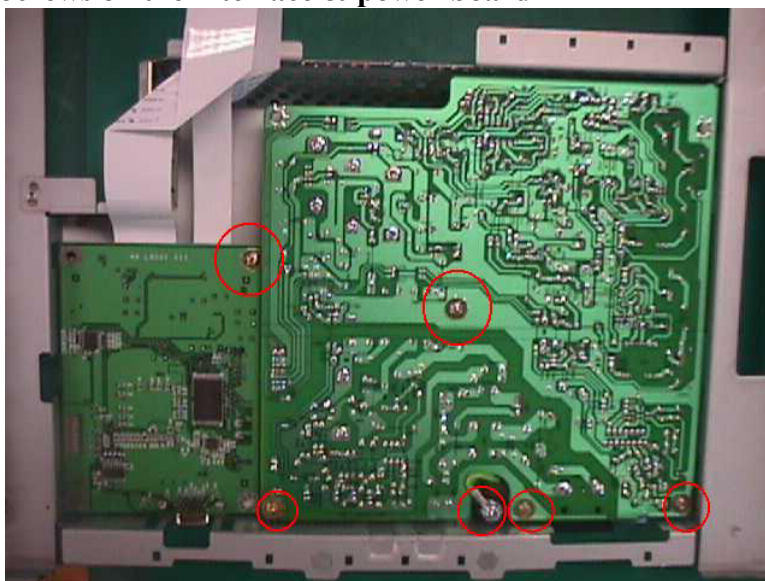
Return Code	R-Byte1	R-Byte2
Checksum error code	FC	AA
Normal return code	the above Byte3 (/data)	FC
If normal return code is exact FCh	FC	CF

**2. Dressing**

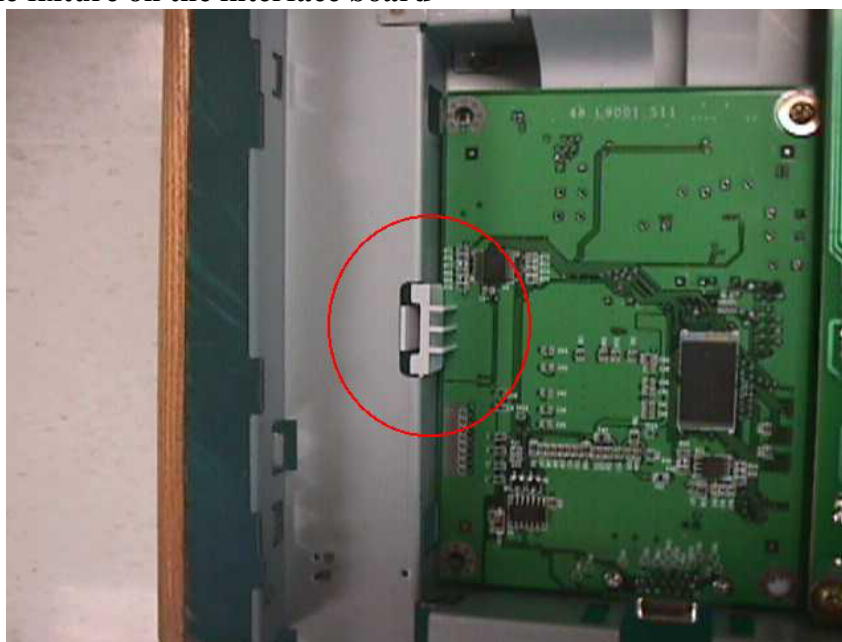
**A. Check the two spring on the BKT**



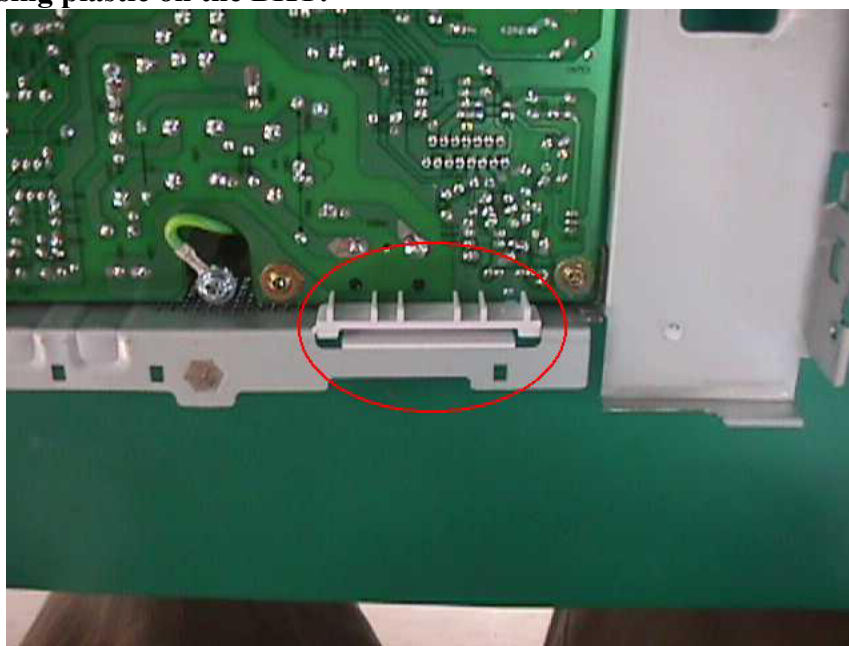
**B. Screws on the interface & power board**



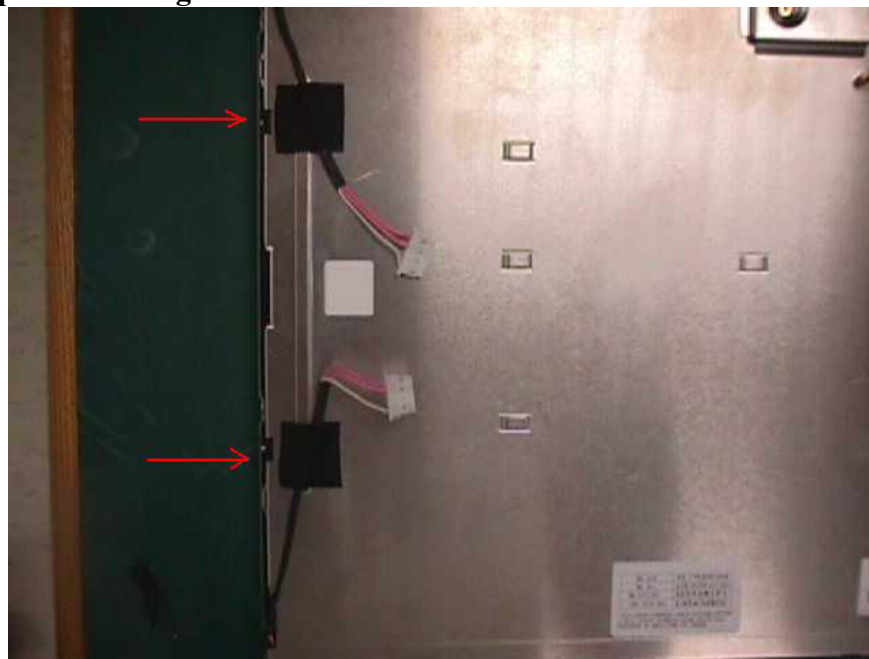
**C. Plastic fixture on the interface board**



**D. Closing plastic on the BKT:**



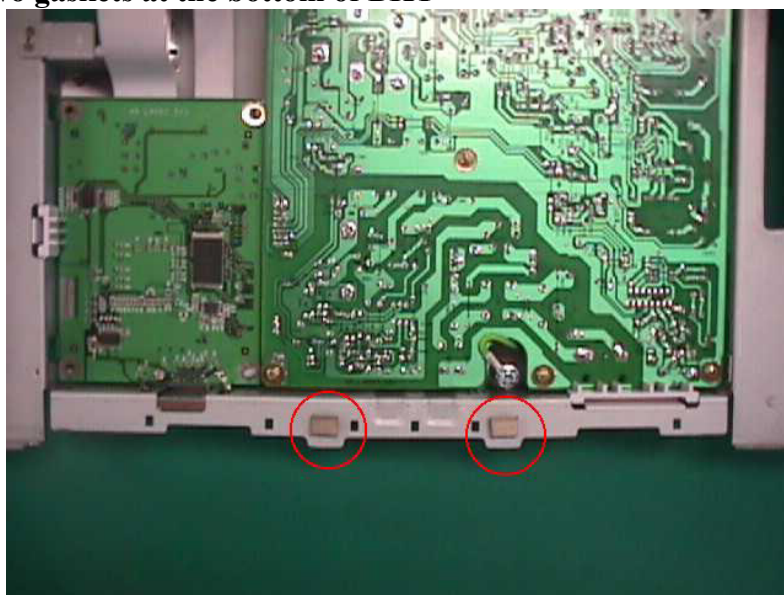
**E. Tapes on backlight wire**



**F. Spring at the top of BKT:**



**G. Two gaskets at the bottom of BKT**



**H. Place D-sub cover and its screw**

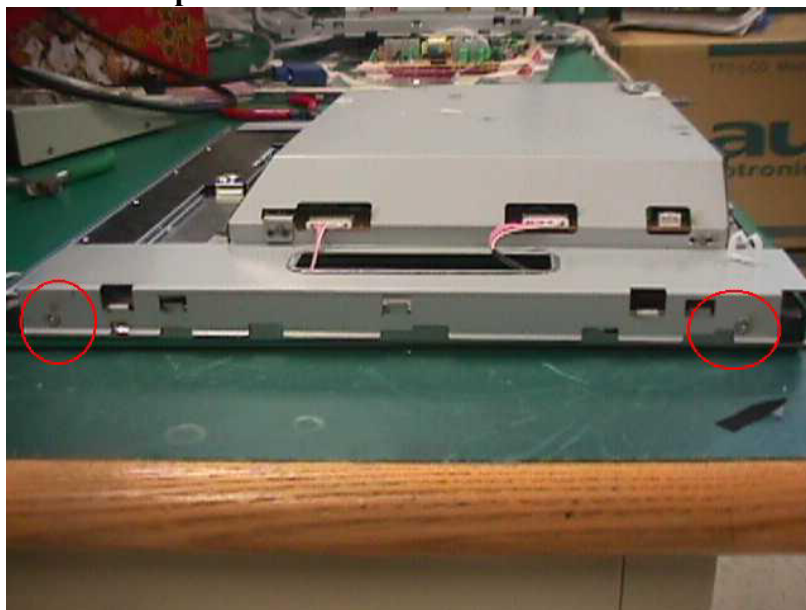




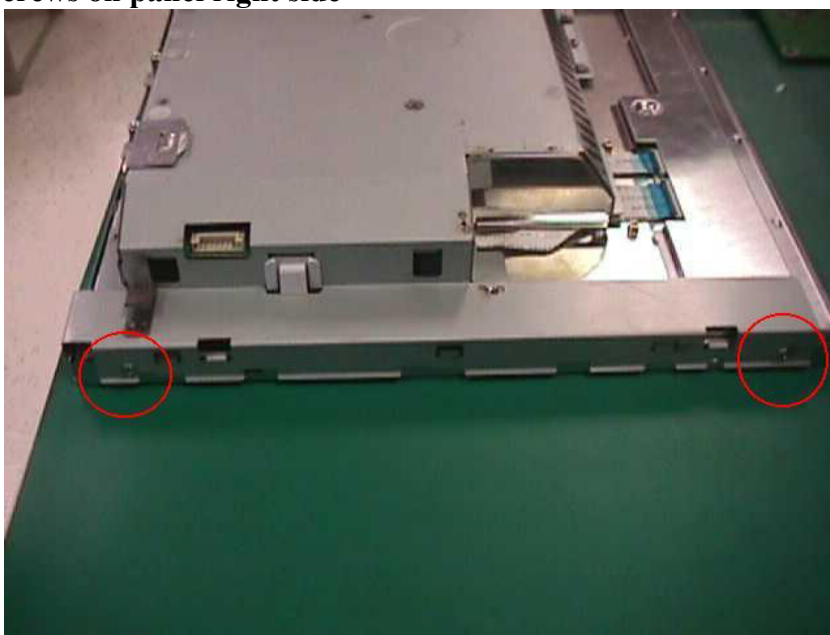
**I. Backlight wire**



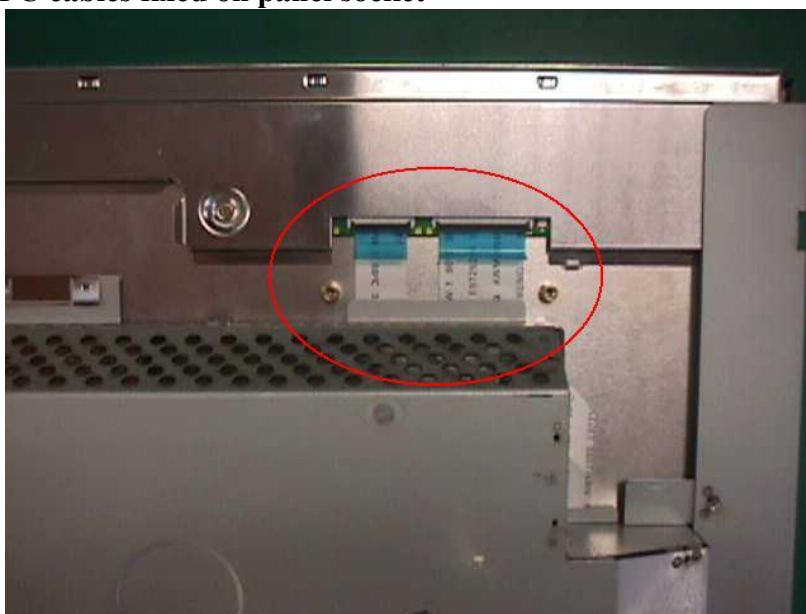
**J. Two screws on panel left side**



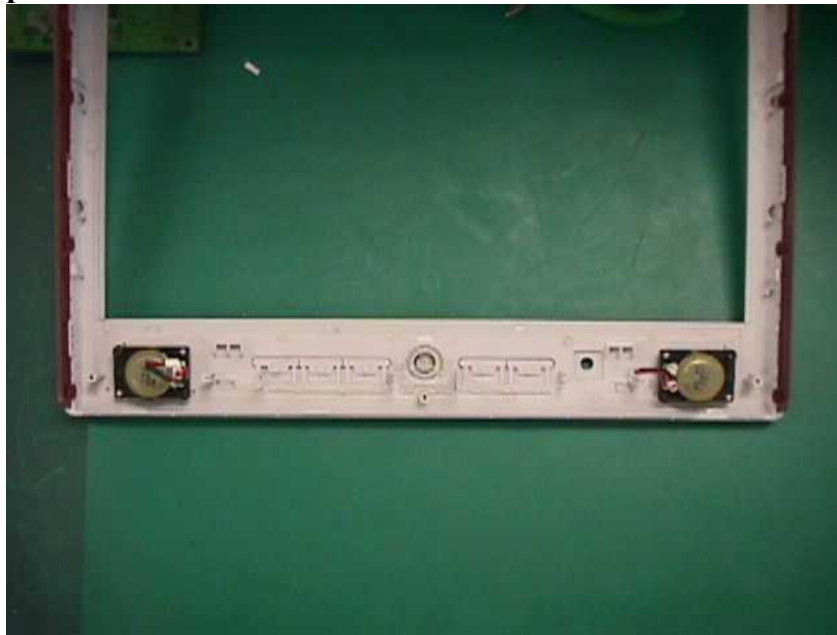
**K. Two screws on panel right side**



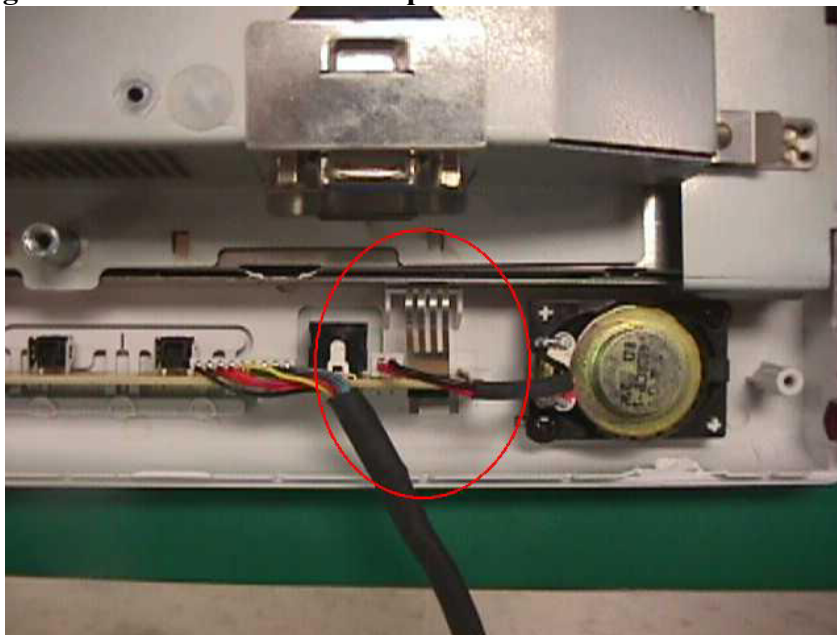
**L. Two FFC cables fixed on panel socket**



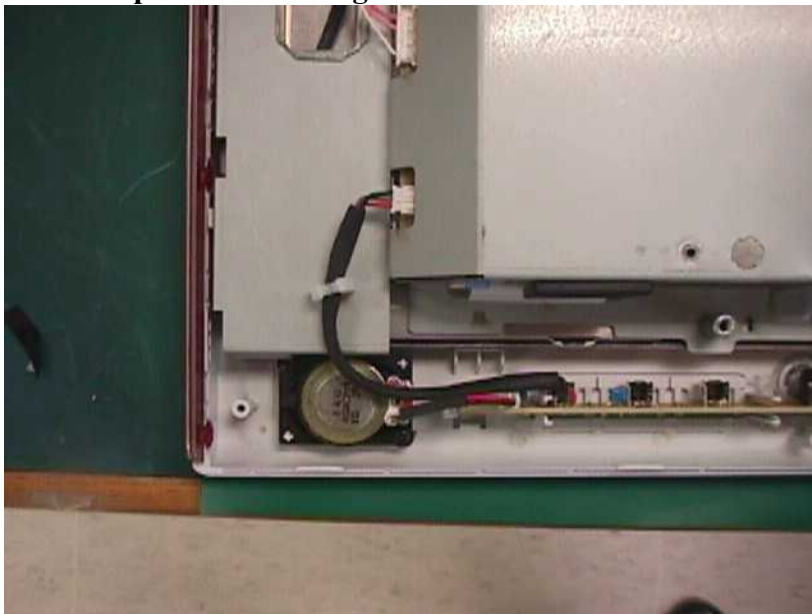
**M. Two speakers fixed on BZL**



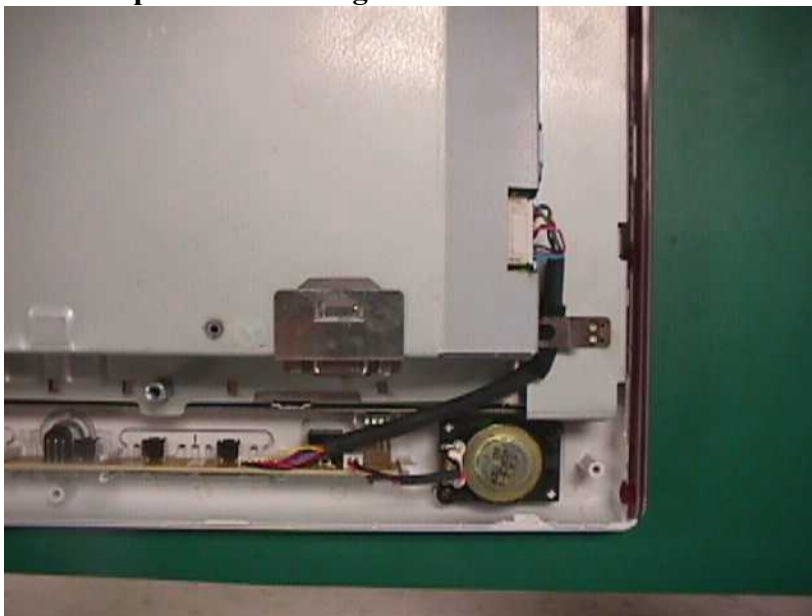
**N. Spring on control board to contact panel**



**O. Control board 3pin wire dressing**



**P. Control board 9pin wire dressing**



**Q. Paste aluminum tape on the backlight wire hole**

