

# SERVICE BULLETIN

**PRODUCT:** Computer Monitor  
**BULLETIN:** MON 97-003  
**MODEL:** CQB4147

## **SUBJECT: Improve the Horizontal Output Transistor Quality**

**BACKGROUND:** The horizontal output for the CQB4147 has been changed as of May 1, 1997. The BU2508DF, which had been used prior to this date, has been failing intermittently due to a current surge from the 166 volt B+ line. The current surge is caused mainly from the DPMS off mode recovery.

**SOLUTION:** The circuit has been improved by using a 2SC5149, which has a higher hfe than the originally used BU2508DF.

### **PARTS LIST:**

| <b>ORIGINAL</b>     |                 |                    | <b>NEW</b>      |                    |
|---------------------|-----------------|--------------------|-----------------|--------------------|
| <b>Location No.</b> | <b>Part No.</b> | <b>Description</b> | <b>Part No.</b> | <b>Description</b> |
| Q403                | 0502-000007     | BU2508DF           | 0502-000005     | 2SC5149            |

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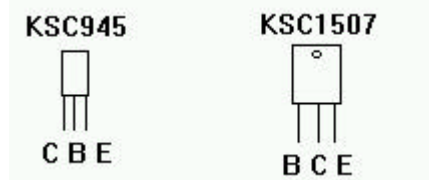
# SERVICE BULLETIN

**PRODUCT:** Computer Monitor  
**BULLETIN:** MON 97-004  
**MODEL:** CFX1577L

**SUBJECT:** Vertical Positioning Shifted Off Center

**BACKGROUND:** Q302 and R327 fail in the vertical positioning circuit. The failure is caused by a current surge during power up and from the monitor recovering from an extended period in the DPMS Suspend mode.

**SOLUTION:** Replace Q302, Q303, and R327 with different ratings. Production went under these changes as of February 1, 1997. Observe the pin configuration when replacing Q302.



## PARTS LIST:

| ORIGINAL     |             |                 | NEW         |                |
|--------------|-------------|-----------------|-------------|----------------|
| Location No. | Part No.    | Description     | Part No.    | Description    |
| Q302         | 0501-000586 | KSC945, 150mA   | 0502-000006 | KSC1507, 200mA |
| Q303         | 0501-000008 | KSC733C, 150mA  | 0501-000294 | KSA708, 700mA  |
| R327         | 2001-000526 | R-CARBON, 1/6 W | 2003-000590 | MO, 2W, 22 ohm |

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# SERVICE BULLETIN

**PRODUCT:** Computer Monitor

**BULLETIN:** MON 97-005

**MODEL:** CMH7379L

**SUBJECT:** Q407 Failure Causing No Raster or Small Horizontal Size

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**BACKGROUND:** Q407 fails due to a transient pulse and current when mode switching from DOS to Windows. This occurs with a Matrox video card installed in the computer.

**SOLUTION:** Add a sub-PCB assembly as in figures 1 and 2 and a snubbing circuit for the horizontal output as in figure 3.

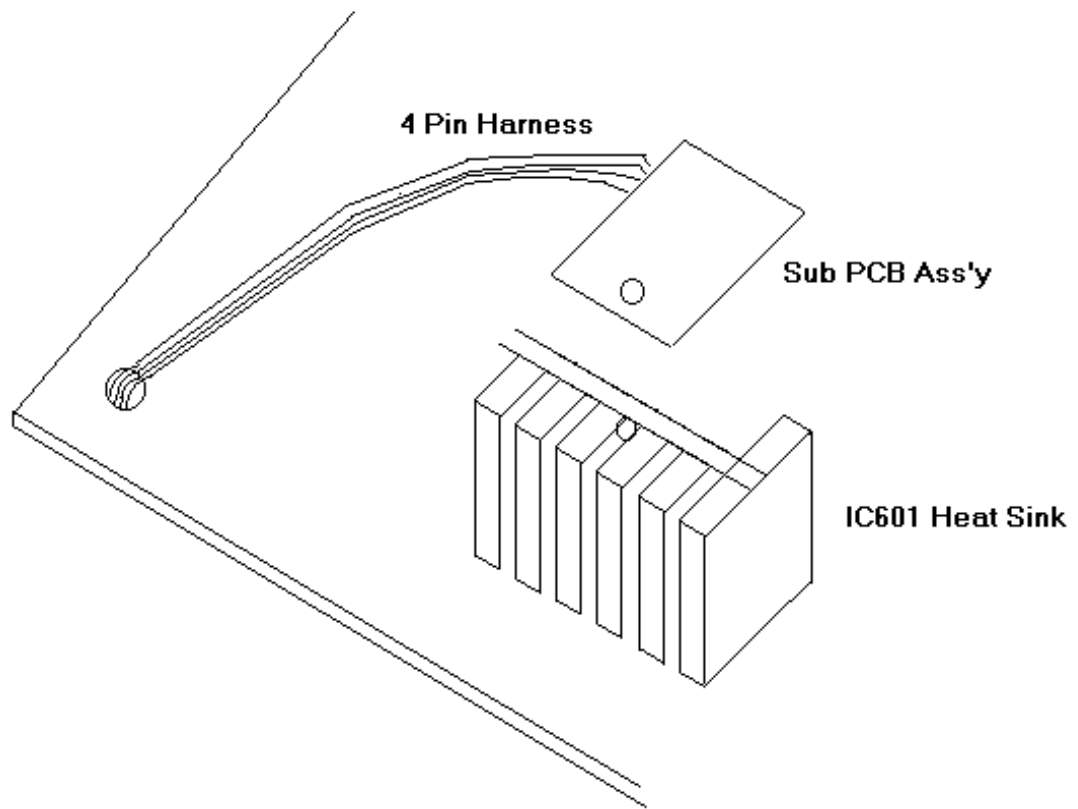
## PARTS LIST:

| ORIGINAL     |          |             | NEW         |                   |
|--------------|----------|-------------|-------------|-------------------|
| Location No. | Part No. | Description | Part No.    | Description       |
| NA           | NA       | NA          | BH92-50106J | SUB-PCB ASSEMBLY  |
| NA           | NA       | NA          | BH39-40355S | 4 PIN CBF-HARNESS |
| NA           | NA       | NA          | 6003-000129 | TAPTITE SCREW     |
| NA           | NA       | NA          | 0401-000005 | 1N4148 DIODE      |
| NA           | NA       | NA          | 0402-000012 | UF4007 DIODE      |
| NA           | NA       | NA          | 2003-000009 | 220 OMHS, 1 WATT  |

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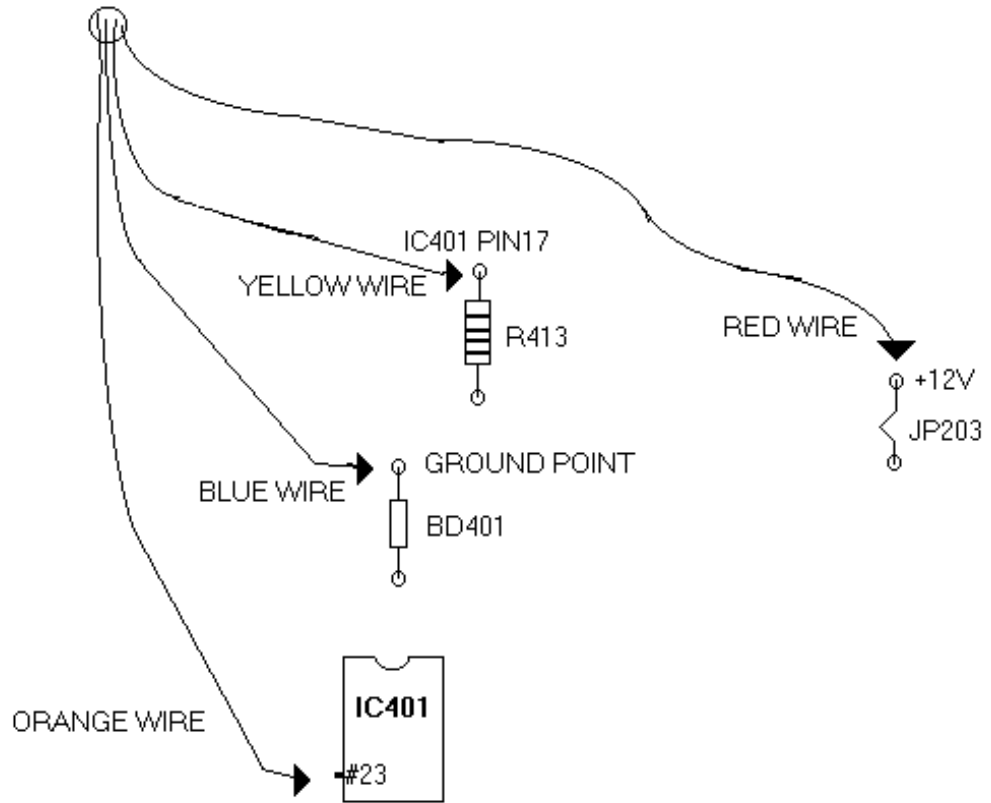
**Figure 1**

**Top View of the Main Board**



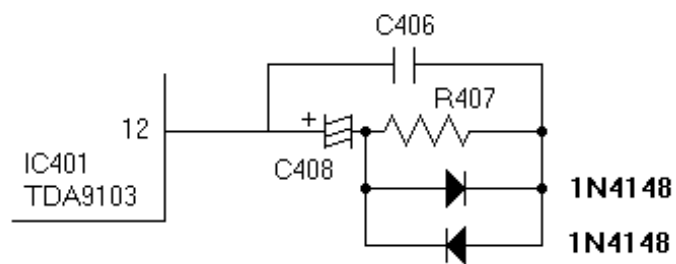
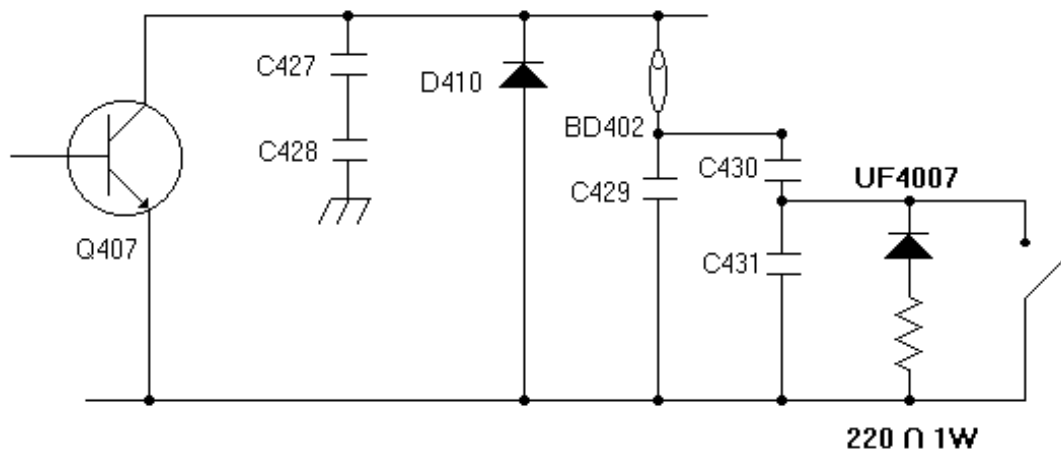
**Figure 2**

**Bottom View of the Main Board**



**Figure 3**

**Snubbing Circuits**



# SERVICE BULLETIN

**PRODUCT:** Computer Monitor  
**BULLETIN:** MON 97-007  
**MODEL:** CMB5477L

**SUBJECT:** Flyback Transformer Revisions

**BACKGROUND:** Samsung instituted new revision flyback transformers as of October 24, 1996. The new flyback transformer will prevent intermittent no raster conditions. The revised flyback transformers that have been applied to the latest production runs will have resistance values changed in the x-ray protection and the high voltage adjustment circuits.

**SOLUTION:** When replacing a flyback transformer refer to the parts list below. The resistance values should be changed accordingly. If the resistance values are different from the flyback transformers listed below, intermittent no raster or shutdown conditions will exist. Refer back to the original parts list and schematic located in the service manual for any flyback transformer without a revision number or label on it.

## PARTS LIST:

| ORIGINAL     |             |                             | NEW         |  |
|--------------|-------------|-----------------------------|-------------|--|
| Location No. | Part No.    | Description                 | Part No.    | Description                              |
| T402         | BH26-10303V | REV.04 FSA15A003<br>SAMSUNG | BH26-10303V | REV.05 & REV.06<br>FSA-15A003<br>SAMSUNG |
| R516         | 2004-001319 | 1/4W, 86k ohm               | 2004-001349 | 1/4W, 91k ohm                            |
| R411         | 2001-000054 | 1/4W, 3.9k ohm              | 2004-000899 | 1/4W, 4.7k ohm                           |
| R412         | 2001-000722 | 1/4W, 4.3k ohm              | 2004-000698 | 1/4W, 3.3k ohm                           |

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# SERVICE BULLETIN

**PRODUCT:** Computer Monitor  
**BULLETIN:** MON 97-008  
**MODEL:** CFG9637

**SUBJECT:** Video Pre-amp (LM1205) Failure Causing No OSD

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**BACKGROUND:** The OSD blanking input stage of IC101 (LM1205) shorts to the Vcc input stage due to CRT discharging and surge current.

**SOLUTION:** Add a 7.5V zenor diode between pin 13 of IC101 and ground (cathode to pin 13 and anode to ground). Replace jumper wire JP104 with a 100 ohm ½ watt resistor. The resistor will act as a delay and improve the R,G,B surge absorbers discharge effect. Replace the 300V spark gaps at each of the Red, Green, and Blue cathodes of the CRT with 200V surge absorbers.

## PARTS LIST:

| ORIGINAL     |             |                      | NEW         |                        |
|--------------|-------------|----------------------|-------------|------------------------|
| Location No. | Part No.    | Description          | Part No.    | Description            |
| NA           | NA          | NA                   | 0403-000366 | ZD 7.5V                |
| JP104        | NA          | JP104                | 2001-000028 | R-CF(S), 100 ohm, 1/2W |
| SGR1         | 4715-000106 | 300V, Surge Absorber | 4715-000102 | 200V, Surge Absorber   |
| SGB1         | 4715-000106 | 300V, Surge Absorber | 4715-000102 | 200V, Surge Absorber   |
| SGG1         | 4715-000106 | 300V, Surge Absorber | 4715-000102 | 200V, Surge Absorber   |

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# SERVICE BULLETIN

**PRODUCT:** Computer Monitor

**BULLETIN:** MON 97-009

**MODEL:** CMB5477L

**SUBJECT:** Video Pre-amp IC101 (LM1207) Failure

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**BACKGROUND:** IC101 becomes damaged from arcing within the CRT during electronic discharge.

**SOLUTION:** Add a 300V spark gap in between the G1 grid of the CRT and ground. This will aid in reducing the discharge effect from the CRT.

## PARTS LIST:

| ORIGINAL     |          |             | NEW         |                      |
|--------------|----------|-------------|-------------|----------------------|
| Location No. | Part No. | Description | Part No.    | Description          |
| NA           | NA       | NA          | 4715-000106 | 300V, Surge Absorber |

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# SERVICE BULLETIN

**PRODUCT:** Computer Monitor  
**BULLETIN:** MON 97-010  
**MODEL:** CQA4147, CQB4147

**SUBJECT:** No Raster

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**BACKGROUND:** D618, which is the rectifier diode for the 166V line, burns due to a reverse peak voltage that occurs when power is turned off.

**SOLUTION:** A snubbing capacitor must be added in parallel with D618 in order to prevent this from occurring. This capacitor should be added to all CQB and CQA chassis as a preventative maintenance.

## PARTS LIST:

| ORIGINAL     |          |             | NEW         |                                    |
|--------------|----------|-------------|-------------|------------------------------------|
| Location No. | Part No. | Description | Part No.    | Description                        |
| C643         | NA       | NA          | 2201-000012 | C-CERAMIC DISK, 220pf,<br>10%, 1KV |

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