

# SERVICE BULLETIN

**PRODUCT: COMPUTER MONITOR**  
**BULLETIN: MONITOR 95-008**  
**MODEL: SAMTRON SC-428PT/L**

**SUBJECT:** No Raster

**BACKGROUND:** There is a delay in the 12V/DC operation. Due to the delay the 166V/DC line operates first when power is first applied to the monitor. This will affect the horizontal circuit and cause a surge, which in turn will cause Q403 and Q408 to short.

**SOLUTION:** Insert a IN4937 diode into location D300 and substitute R401 (33 ohm, 1/2W) with a 220 uH coil.

## PARTS LIST:

	Original Parts		New Parts	
Location	Parts Code	Description	Parts Code	Description
R401	911-123307FF	R-Carbon, 33, 1/2w	925-001001AN	Coil, 220 uH
D300	None	None	893-314937AC	Diode, IN4937

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# SERVICE BULLETIN

**PRODUCT:** Computer Monitor  
**BULLETIN:** MON 97-001  
**MODEL:** CQB4147

## **SUBJECT: Reduce Q404 Failure Rate Causing No Raster**

**BACKGROUND:** Q404 fails when the monitor changes from the DPMS Suspend mode back to Normal operation. Q415 is designed, in the circuit, to cut off horizontal drive to the base of Q404. This is achieved by turning Q415 on in the Suspend mode. In normal operation, Q415 is turned off. There is a delay in turning Q415 off by approximately 15 ms. This will cause an abnormal pulse at the base of Q404, causing damage to the transistor.

**SOLUTION:** The base current limiting resistance to Q415 has been changed by decreasing the values of R200 and R461.

### **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>
R200	2001-000056	R-CF 4.7K, 1/6W	2001-000043	R-CF 1K, 1/6W
R461	2001-000056	R-CF 4.7K, 1/6W	2001-000029	R-CF 100 OHM, 1/6W

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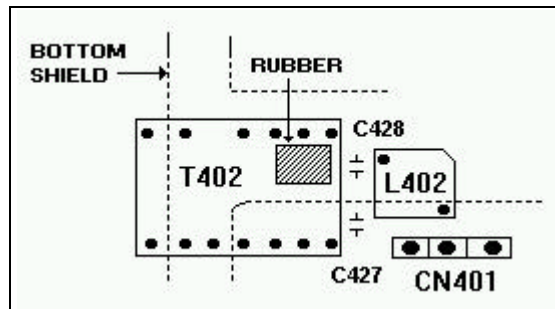
# SERVICE BULLETIN

**PRODUCT:** Computer Monitor  
**BULLETIN:** MON 97-002  
**MODEL:** CMH7379L

**SUBJECT:** To prevent whistling sound from occurring.

**BACKGROUND:** A whistling sound is created from harmonic noise generated between T402, L402, and the main PCB near the Flyback Transformer.

**SOLUTION:** Add a piece of rubber to insulate the main PCB solder side from the bottom metal shield. See Illustration below showing the section of the PCB where the rubber will be located.



## PARTS LIST:

Part No.	Description
BH61-30303A	RUBBER

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# 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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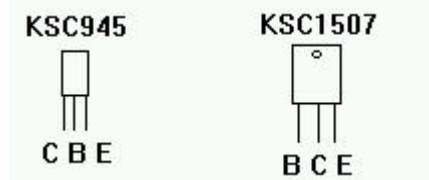
# SERVICE BULLETIN

**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.

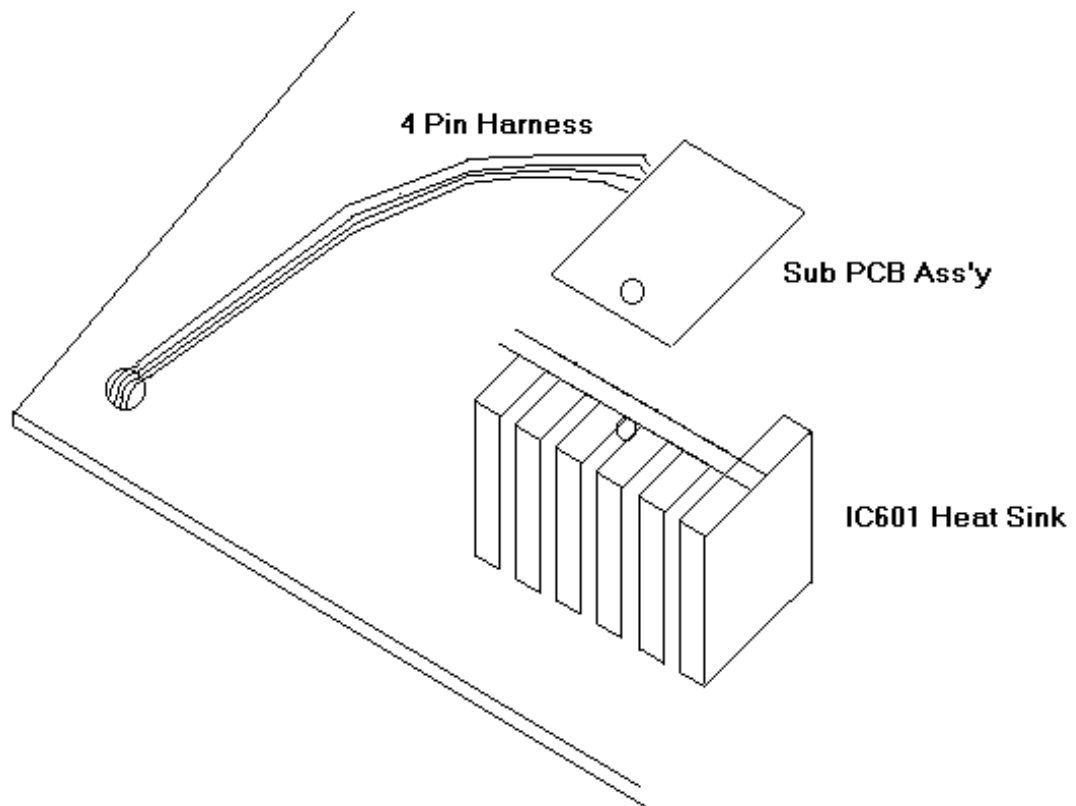
## PARTS LIST:

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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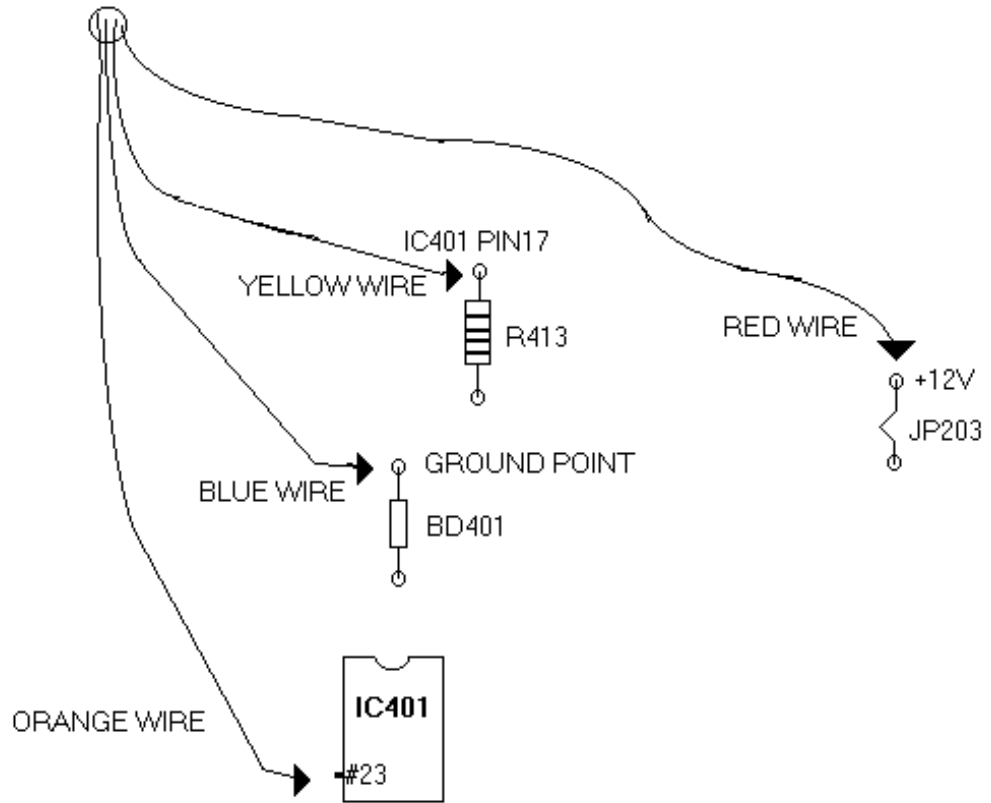
**Figure 1**

**Top View of the Main Board**



**Figure 2**

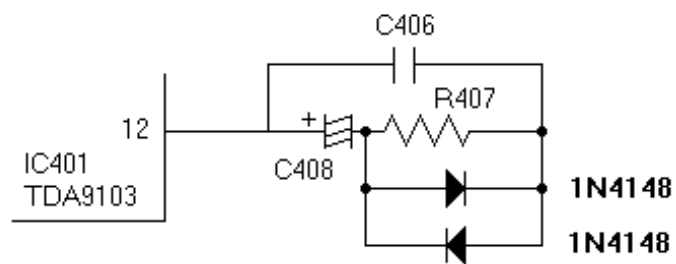
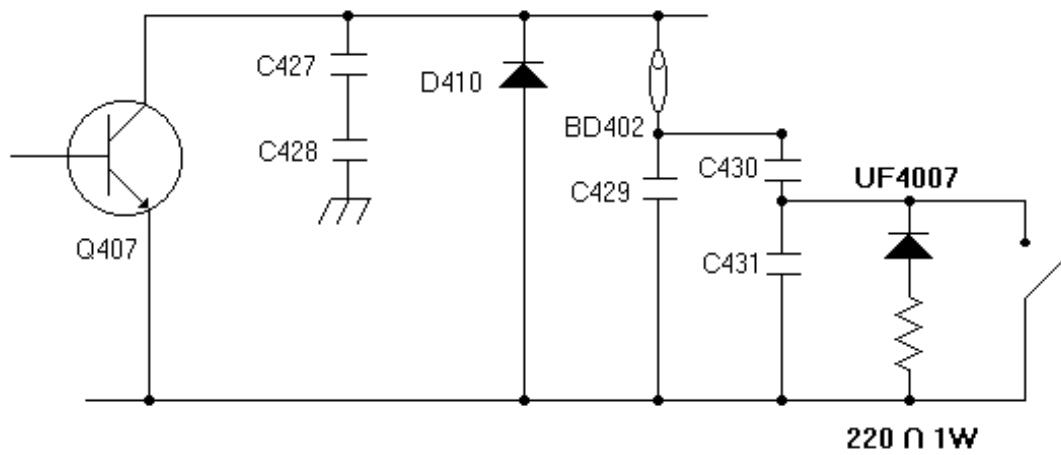
**Bottom View of the Main Board**





**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 SAMSUNG	BH26-10303V	REV.05 & REV.06 FSA-15A003 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, 10%, 1KV

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