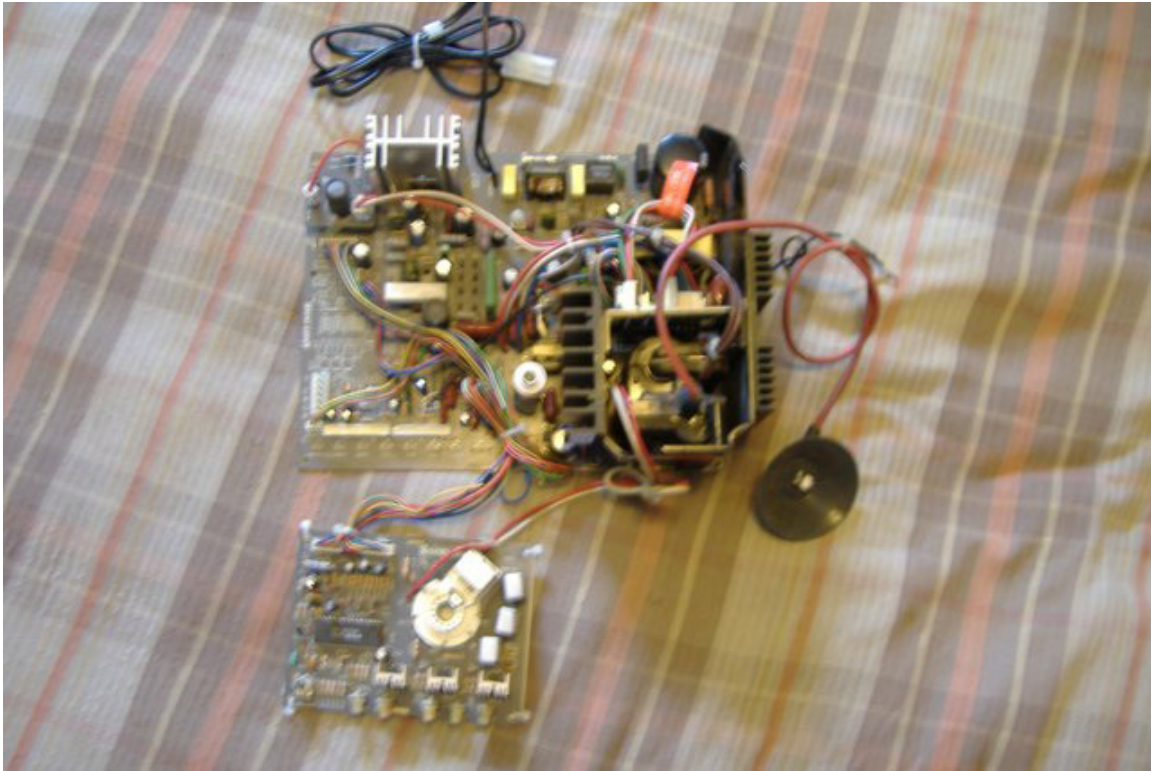


SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE

GENERAL INFORMATION

This model is dual resolution: Standard (CGA) and Medium (EGA). Resolution is selected by moving a jumper plug (with the power to the monitor off of course) on the resolution selector board. The most commonly used picture adjustment pots are located on a remote adjustment board. This chassis can be used to directly replace the troublesome Wells-Gardner model U-5000 chassis.



SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE



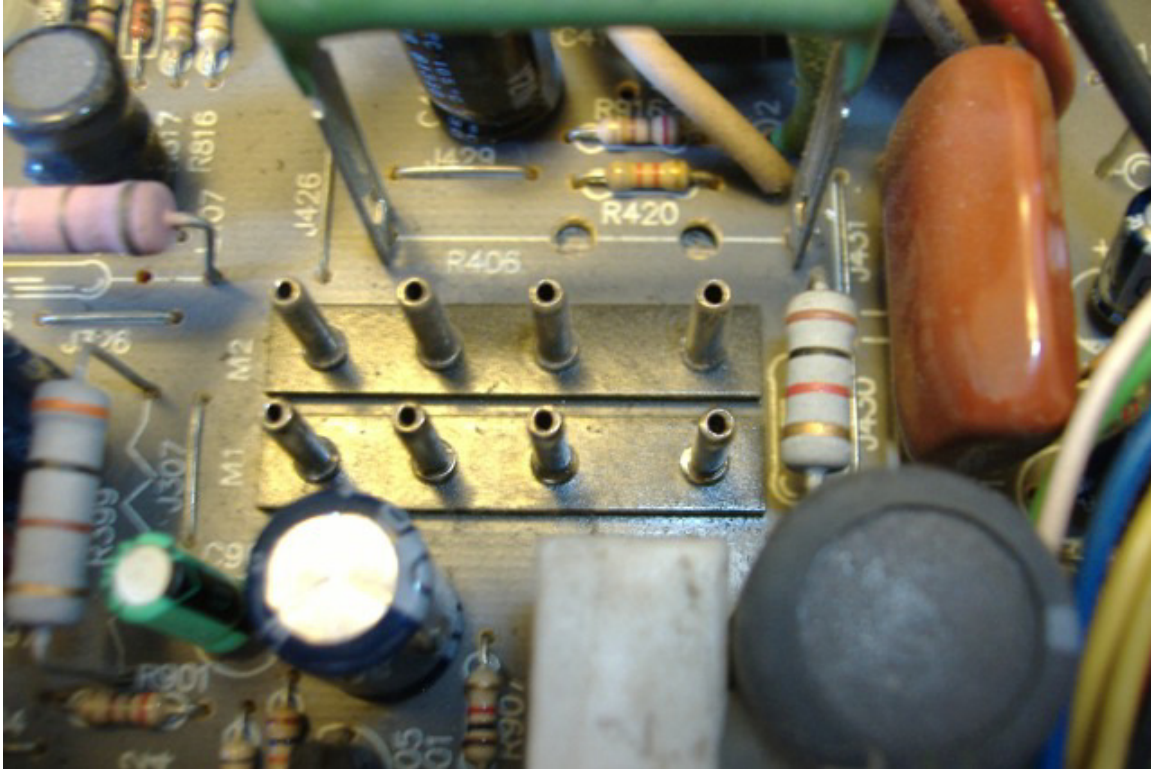
CRT INFORMATION

The picture tube is a 25" RCA # A63ADT15X09 (110 degree deflection angle). It operates on 6.3 volts. Use B & K rejuvenator adapter # CR-23 to test/rejuvenate this tube.

SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE

YOKE INFORMATION

The red and blue wires are the horizontal winding and the dc resistance is 1.6 ohms. The yellow and brown wires are the vertical winding and the dc resistance is 3.5 ohms. Part numbers shown on the yoke are: 63T1DVZ/00 and TCE604-1-278-96488. The monitor main board has two connectors (M1 and M2) in which you can plug in the yoke for the desired picture orientation: normal or mirror image.



FLYBACK INFORMATION

The fly back (T402) is made by Chun Peng and has these part numbers printed on it: 2E04, CT-9158, CP-808, and E204699. The CT-9158 number crosses to an H.R. Diemen # HR46265 which is also used in Sharp Image models SI-639-DS-R and S1134DS.

SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE



CAPKIT INFORMATION

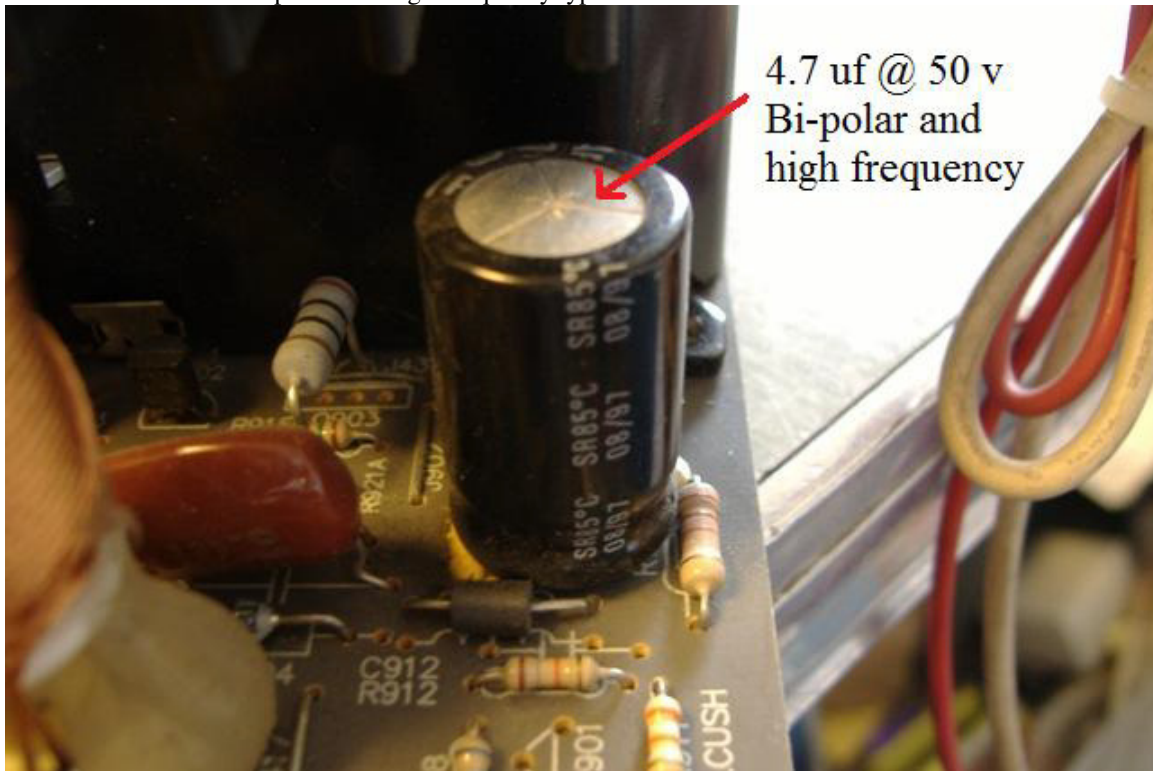
Bob Roberts sells a capkit for this model on his website. However, it does NOT include the special non-polar high frequency electrolytic capacitor which is located next to the fly back.

C306 1 uf @ 50 volts (main board)
C406 1 uf @ 50 volts (main board)
C409 1 uf @ 50 volts (main board)
C410 1 uf @ 50 volts (main board)
C825 1 uf @ 250 volts (main board, not in Bob's kit)
C108 10 uf @ 50 volts (main board)
C726 10 uf @ 50 volts (neck board)
C412 10 uf @ 160 volts (main board near flyback)
C421 10 uf @ 250 volts (main board)
C109 22 uf @ 35 volts (main board)
C107 22 uf @ 50 volts (main board)
C424 33 uf @ 35 volts (main board)
C401 47 uf @ 25 volts (main board)
C708 47 uf @ 25 volts (neck board)
C709 47 uf @ 25 volts (neck board)
C710 47 uf @ 25 volts (neck board)
C809 47 uf @ 35 volts (main board)
C906 47 uf @ 35 volts (main board)
C302 100 uf @ 25 volts (main board)
C305 100 uf @ 25 volts (main board)
C721 100 uf @ 25 volts (neck board)
C395 100 uf @ 35 volts (main board)
C93 100 uf @ 100 volts (may not be present on all versions and not in Bob's kit)
C817 100 uf @ 160 volts (main board near flyback)

SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE

C818 100 uf @ 160 volts (main board near flyback)
C908 100 uf @ 250 volts (main board near flyback)
C104 220 uf @ 25 volts (main board)
C810 220 uf @ 25 volts (main board)
C720 220 uf @ 25 volts (neck board)
C815 330 uf @ 400 volts (main filter cap not normally part of capkits)
C394 470 uf @ 25 volts (main board)
C423 1000 uf @ 16 volts (main board)
C905 1000 uf @ 16 volts (main board)
C106 1000 uf @ 25 volts (main board)
C398 1000 uf @ 25 volts (main board)
C420 1000 uf @ 25 volts (main board)
C326 1000 uf @ 35 volts (main board)
C901 1000 uf @ 35 volts (main board)

There is a special electrolytic capacitor located near the fly back which is not labeled on the circuit board. It is a 4.7 uf @ 50 volts Bi-polar and High Frequency type.



Capacitors C412, C817, C818, and C908 can only be accessed for replacement by temporarily removing the Resolution Selector Board.

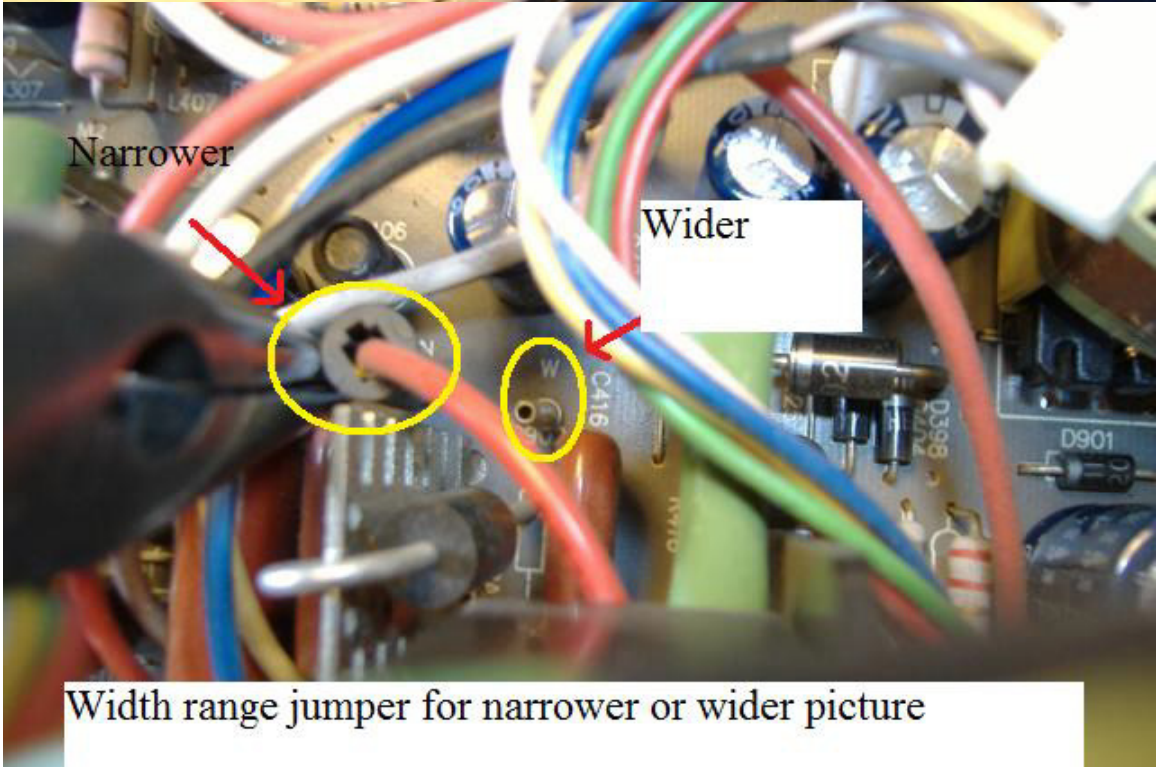
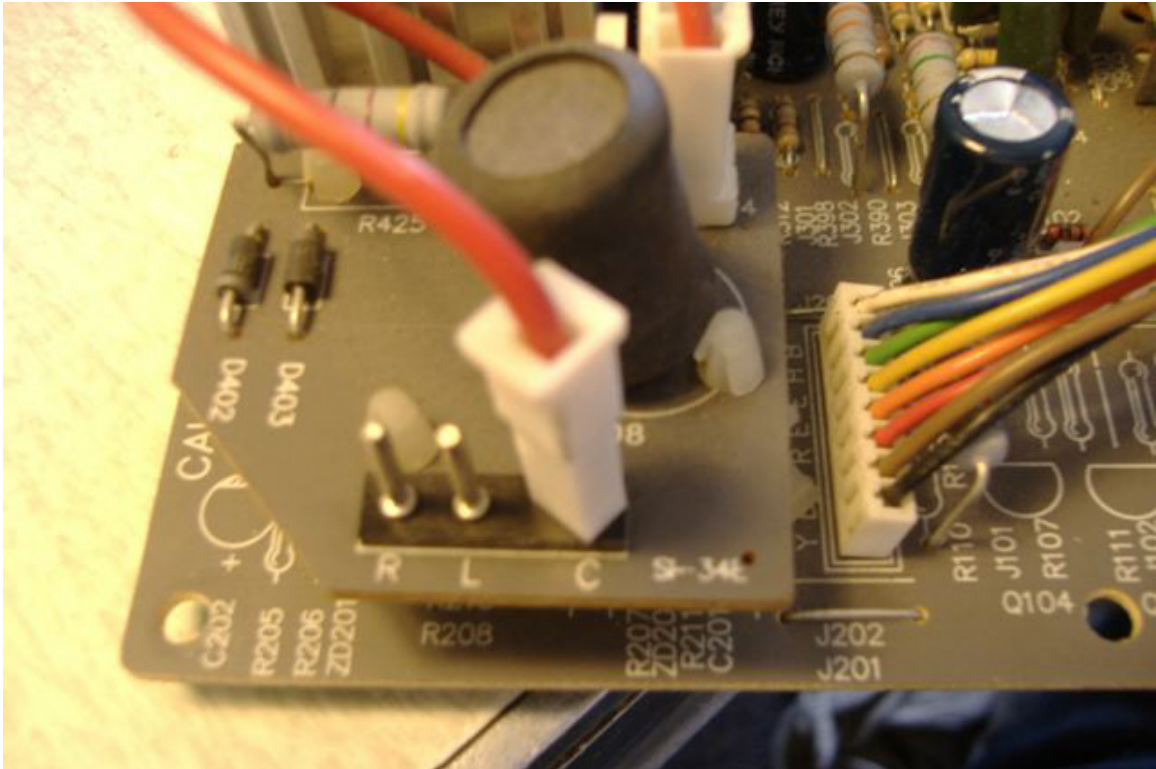
SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE



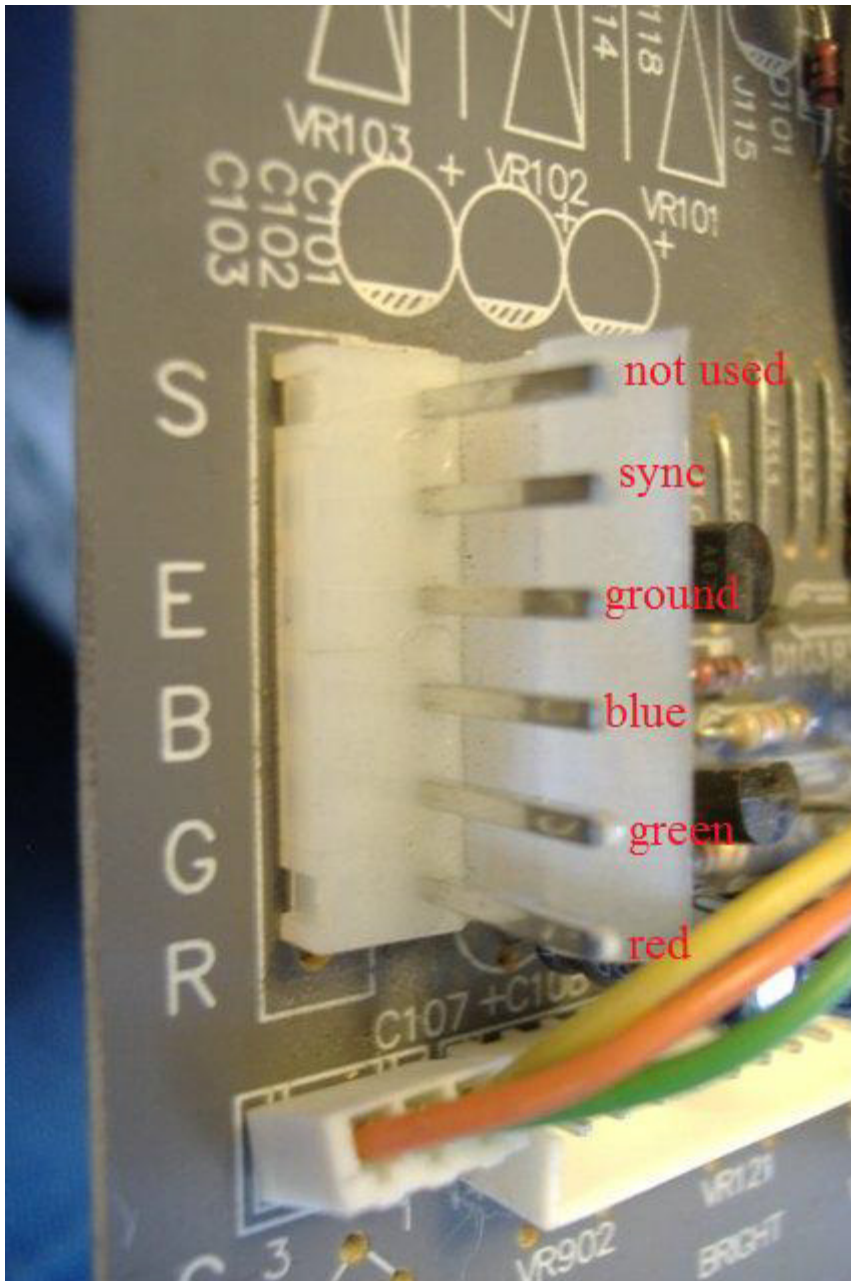
MAIN BOARD PARTS INFORMATION

The main board has a main power fuse F801 which is a 4 amp GMA size. Trimpot VR801 is the B+ adjustment and it's a 5k, horizontal mount, and with a 9mm knob. Trimpot VR403 is the x-ray shutdown adjustment and it's a 5k, horizontal mount, and with a 6mm knob. The Resolution Selector Board and Centering Board are both located on the main board. The horizontal width range jumper which selects narrower or wider images is located on the main board. The video/sync signal input connector is wired slightly different than other monitors so be sure to see the picture and note the very end pin is not used here. Monitor accepts composite negative sync only. IC301 (type LA7833 or NTE 1773) is the vertical output chip.

SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE



SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE



NECK BOARD PARTS INFORMATION

The neck board is marked "Si-34BB" on the front by the tube socket and "ES-00049B" on the foil side of the board. If resistors R702 (330 ohm @ ¼ watt) and R705 (47 ohm @ ¼ watt) are found burnt or show signs of burning/discoloration then IC 701 (type LM1203N or NTE 7081) is internally damaged and must also be replaced. IC701 is the RGB color amplifier chip.

TRIMPOTS:

VR705 Blue Bias Adjustment, 2k, vertical mounting, center terminal out rear, 9mm knob
VR706 Green Bias Adjustment, 2k, vertical mounting, center terminal out rear, 9mm knob
VR707 Red Bias Adjustment, 2k, vertical mounting, center terminal out rear, 9mm knob
VR704 Red Drive Adjustment, 100 ohms, vertical mounting, center terminal out rear, 9mm knob
VR703 Blue Drive Adjustment, 100 ohms, vertical mounting, center terminal out rear, 9mm knob

SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE

VR702 Sub-Brightness, 10k, horizontal mounting, 9mm knob

VERTICAL MOUNT RESISTORS (stand up style):

R740 5.6k @ 5 watts

R739 5.6k @ 5 watts

R738 5.6k @ 5 watts

TRANSISTORS:

Q703 Blue color driver, type 2SC2611

Q704 Green color driver, type 2SC2611

Q705 Red color driver, type 2SC2611

REMOTE ADJUSTMENTS BOARD PARTS INFORMATION

There are a total of ten trimpots and one momentary rocker switch on the remote board. All of the trimpots are horizontal mounting style and have 9mm knobs.

Top row from left to right:

VR121 Brightness Control, 5k (marked 502)

VR901 Pincushion Adjustment, 20k (marked 203)

VR303 Vertical Linearity, 1k, (marked 102)

VR302 Vertical Size/Height, 1k, (marked 102)

VR401 Horizontal Position, 5k (marked 502)

Bottom row from left to right:

VR701 Contrast control, 5k (marked 502)

VR902 Horizontal Width, 5k (marked 502)

VR304 Vertical Position, 5k (marked 502)

VR402 Horizontal Hold, 5k (marked 502)

VR301 Vertical Hold, 5k (marked 502)

Misc parts on the board:

R900 Jumper wire

R304 1k @ ¼ watt resistor

SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE

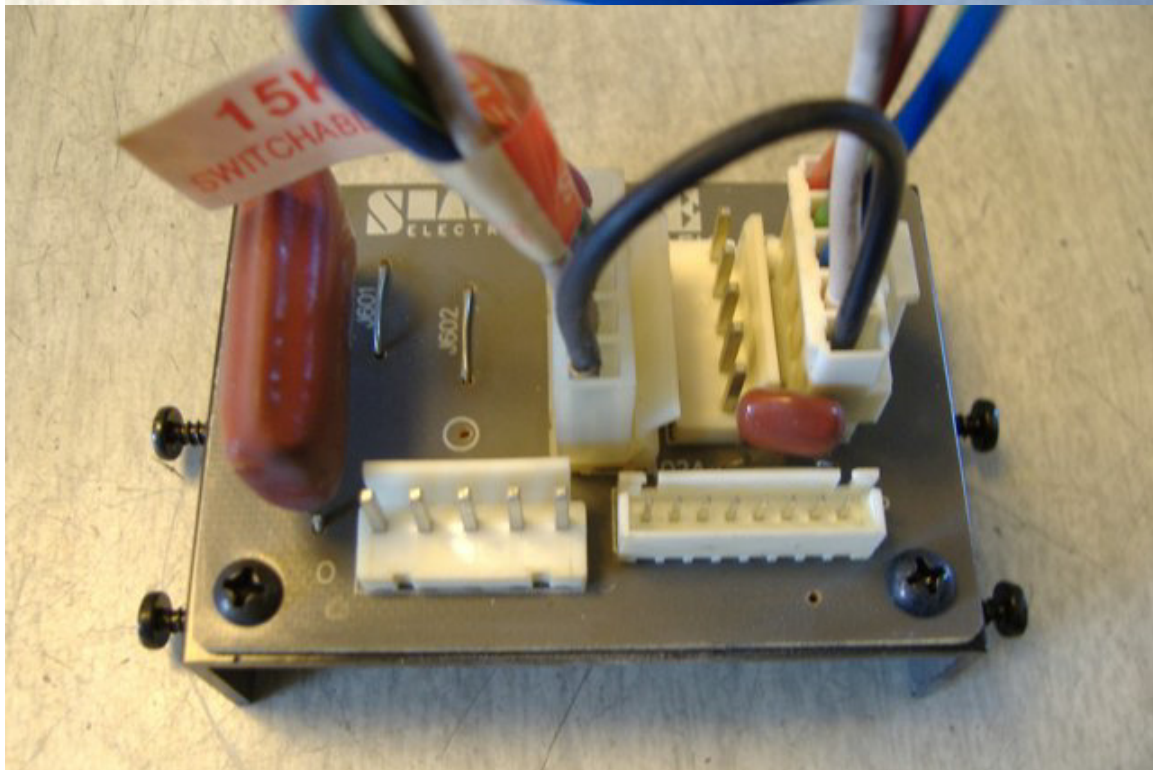
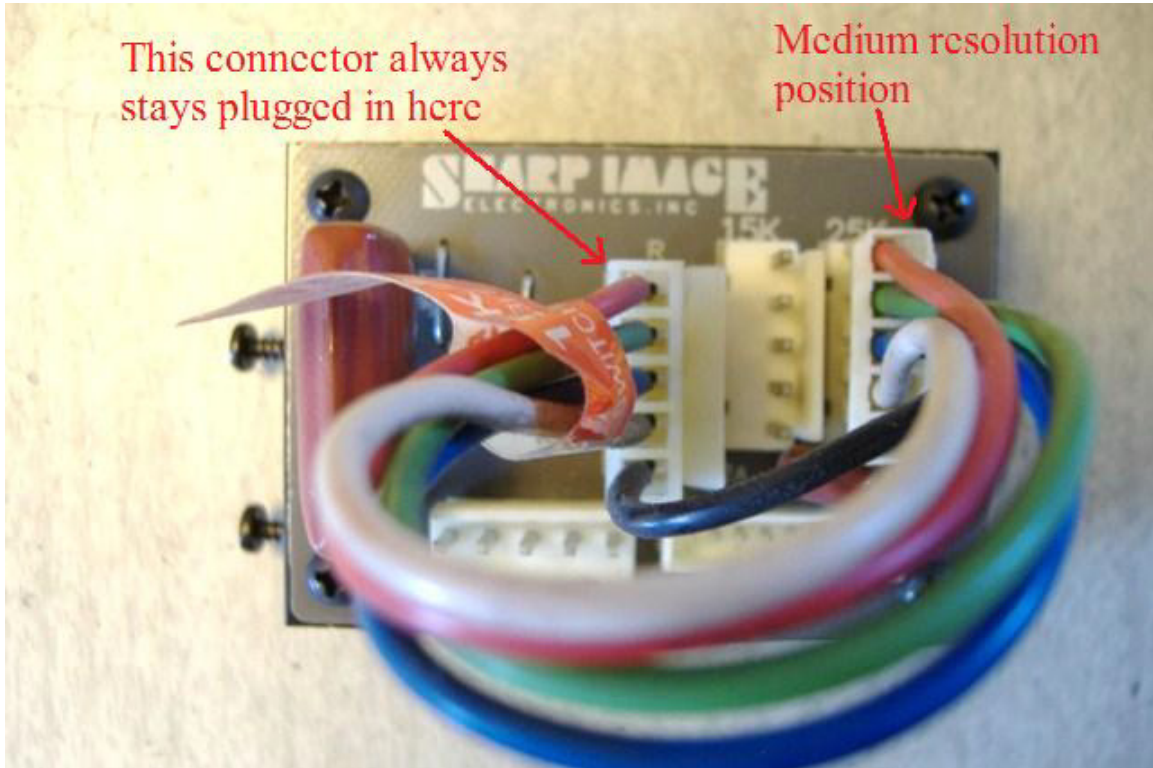


RESOLUTION SELECTOR BOARD

This board contains the jumper plug harness which allows you to select standard (CGA) or medium (EGA) resolution. Connector "R" is the end of the jumper harness which must remain connected. You unplug the

SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE

other end of the cable and then plug that end into either the 15k (standard) or 25k (medium) resolution connectors. On this board also is capacitor C418A which is a .22 uf (224) @ 250 volts Poly Propylene type. To remove the entire Resolution Selector Board from the main board for servicing or for access to electrolytic capacitors C412, C817, C818, and C908, unplug connectors "O" and "P" along with the four screws on the sides. The board will then lift out.



SHARP IMAGE SI-727R-DS MONITOR REPAIR GUIDE

HORIZONTAL OUTPUT TRANSISTOR

Transistor Q402 is the horizontal output transistor. It is an NPN type 2SC5150 which crosses to an NTE 2639 (B-C-E pinout and has isolated tab).

COPYRIGHT © 2015 by Ken Layton. All Rights Reserved.