

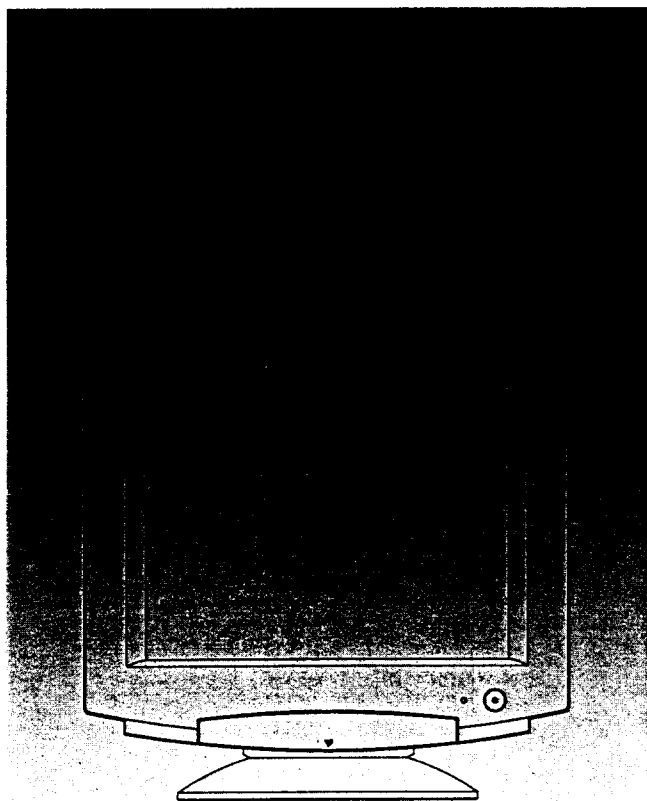
SAMTRON

COLOR MONITOR

SC-728FXL

SERVICE *Manual*

COLOR MONITOR



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1 Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock and X-rays.

1-1 Safety Precautions

1-1-1 Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power before servicing.
3. When the chassis is operating, semiconductor heat sinks are potential shock hazards.

1-1-2 Servicing the High Voltage System and Picture Tube

1. When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the chassis and the anode lead. (Disconnect the AC line cord from the AC outlet.)
2. Do not lift the picture tube by the neck.
3. Handle the picture tube only when wearing shatterproof goggles and after completely discharging the high voltage anode.

1-1-3 X-Rays and High Voltage Limits

1. Keep the high voltage below the specified maximum level. Be sure all service personnel are aware of the procedures and instructions covering X-rays.
The only potential source of X-ray in current solid state display monitors is the tube. However, the picture tube does not emit measurable X-ray radiation if the high voltage is as specified in the fire and shock hazard instruction. Only when high voltage is excessive are X-rays capable of penetrating the shell of the picture tube, including the lead in glass material.
2. It is essential that service technicians have an accurate high voltage meter available at all times. Check the calibration of this meter periodically.

3. High voltage should always be kept at the rated value, no higher. Operation at high voltages may cause failure of the picture tube or high voltage circuitry and, also under certain conditions, may produce X-rays in excess of acceptable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-ray problem. Test the brightness and use a meter to monitor the high voltage each time a color monitor comes in for service. Make sure the high voltage does not exceed its specified value and that it is regulating correctly.
5. The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same or equivalent type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.
6. When troubleshooting a monitor with excessively high voltage, avoid being unnecessarily close to the monitor. Do not operate the monitor longer than is necessary to locate the cause of excessive voltage.

1-1-4 Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment cover or shields, isolation resistor-capacitor networks, mechanical insulators, etc.

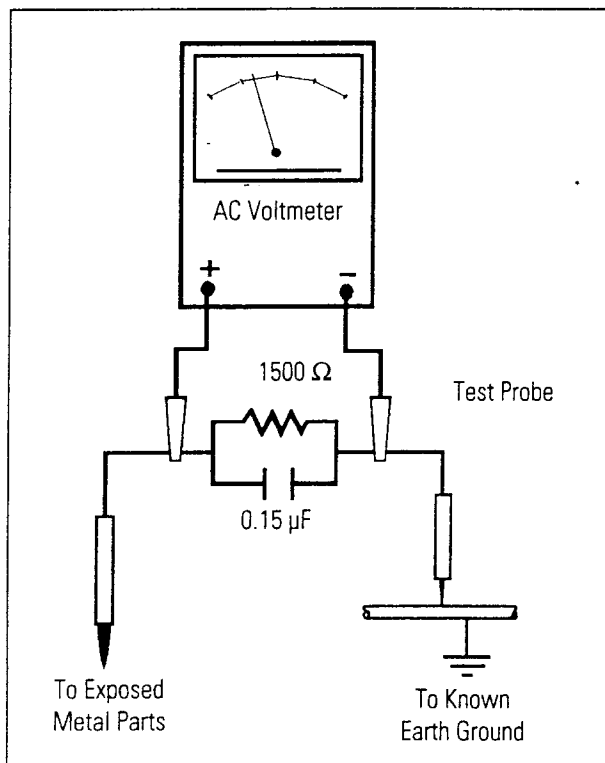


Figure1-1. Leakage Current Test Circuit

1-1-5 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and / or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

3. To be sure that no shock hazard exists, check for leakage current in the following manner:
 - a. Plug the AC line cord directly into a 120 Volt AC outlet. (Do not use an isolation transformer for this test)
 - b. Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with an exposed metal cabinet part and a known earth ground, such as an electrical conduit or electrical ground connected to an earth ground.
 - c. Use a SSVM or VOM with 1000 ohms per-volt or higher sensitivity to measure the AC voltage drop across the resistor (see Figure 1-1).
 - d. Connect the resistor to an exposed metal part having a return path to the chassis (metal cabinet, screw heads, knobs, shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.
 - e. Any reading of 5.25 Volt RMS (this corresponds to 3.5 milliampere AC) or more is excessive and indicates a potential shock hazard. Correct the shock hazard before returning the monitor to the user.

1-2 Servicing Precautions

Warning: An electrolytic capacitor installed with the wrong polarity might explode.

Caution: Before servicing instruments covered by this service manual and its supplements, read and follow the Safety Precautions section of this manual.

Note: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.


1-2-1 General Servicing Precautions

1. Servicing precautions are printed on the cabinet. Follow them.
2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) remove or reinstall any component or assembly, (b) disconnect an electrical plug or connector, (c) connect a test component in parallel with an electrolytic capacitor.
3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.

The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

1-3 Electrostatically Sensitive Devices (ESD) Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components commonly are called Electrostatically Sensitive Devices (ESD). Examples of typical ESD devices are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.
9.  marks parts for ESDs on schematic diagrams and electrical parts list.

Caution : Be sure no power is applied to the chassis or circuit and observe all other safety precautions.

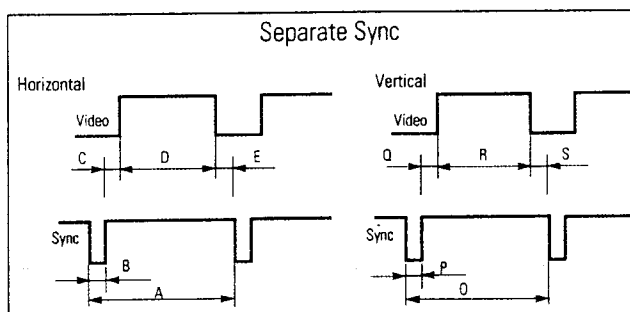
2 Reference Information

2-1 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

Table 2-1. Timing Chart

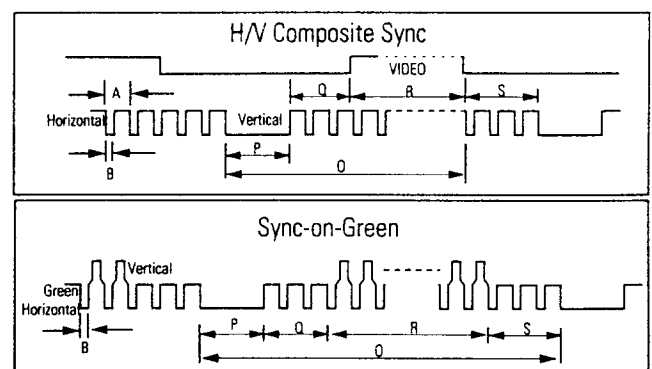
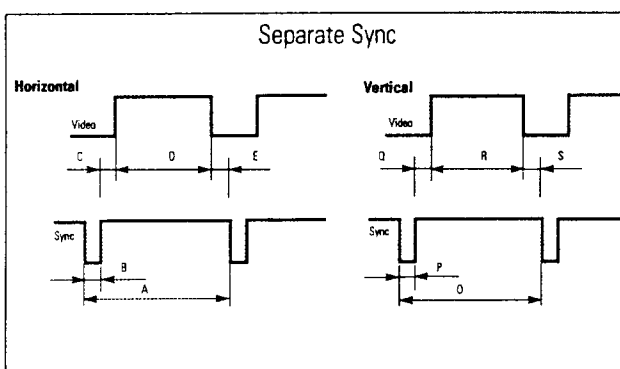
Mode Timing	IBM			IBM		
	VGA1/70 Hz 640x350	VGA2/70 Hz 720x400	VGA3/60 Hz 640x480	640/72 Hz 640x480	640/75 Hz 640x480	800/75 Hz 800x600
fH (kHz)	31.469	31.469	31.469	37.861	37.500	46.875
A μ sec	31.778	31.777	31.778	26.413	26.667	21.333
B μ sec	3.813	3.813	3.813	1.270	2.032	1.616
C μ sec	1.907	1.907	1.907	4.064	3.810	3.232
D μ sec	25.422	25.422	25.422	20.317	20.317	16.162
E μ sec	0.636	0.636	0.636	0.762	0.508	0.323
fV (Hz)	70.086	70.087	59.940	72.809	75.000	75.000
O msec	14.268	14.268	16.683	13.735	13.333	13.333
P msec	0.064	0.064	0.064	0.079	0.080	0.064
Q msec	1.907	1.080	1.048	0.739	0.427	0.448
R msec	11.122	12.711	15.253	12.678	12.800	12.800
S msec	1.176	0.413	0.318	0.237	0.027	0.021
Clock Frequency (MHz)	25.175	28.322	25.175	31.500	31.500	49.500
Polarity H.Sync	Positive	Negative	Negative	Negative	Negative	Positive
V.Sync	Negative	Positive	Negative	Negative	Negative	Positive
Remark	Separate	Separate	Separate	Separate	Separate	Separate



A : Line time total	O : Frame time total
B : Sync width	P : Sync width
C : Back porch	Q : Back porch
D : Active time	R : Active time
E : Front porch	S : Front porch

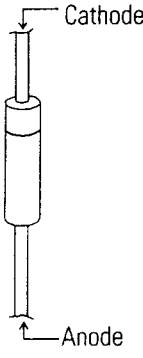


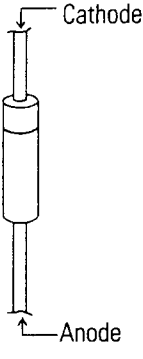



Table 2-1. Timing Chart Continued


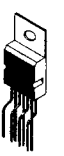
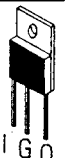
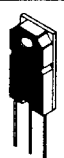
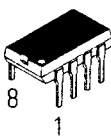
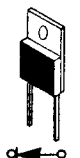
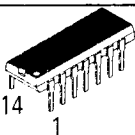

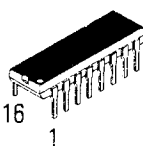

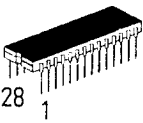
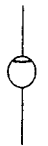
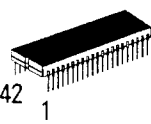

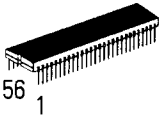

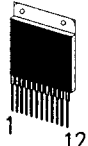
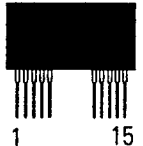
Mode Timing	VESA		SIGMA	ATI	APPLE Mac.
	1024/60 Hz 1024x768	1024/75 Hz 1024x768	640/120 Hz 640x480	1280/60 Hz 1280x1024	832/75 Hz 832x624
fH (kHz)	48.363	60.023	61.275	63.953	49.726
A μ sec	20.677	16.660	16.320	15.636	20.110
B μ sec	2.092	1.219	0.800	1.018	1.117
C μ sec	2.462	2.235	2.400	2.255	3.910
D μ sec	15.754	13.003	12.800	11.636	14.524
E μ sec	0.369	0.203	0.320	0.727	0.559
fV (Hz)	60.004	75.029	120.619	59.938	74.551
O msec	16.666	13.328	8.291	16.684	13.414
P msec	0.124	0.050	0.131	0.078	0.060
Q msec	0.600	0.466	0.310	0.579	0.784
R msec	15.880	12.795	7.834	16.012	12.549
S msec	0.062	0.017	0.016	0.016	0.020
Clock Frequency (MHz)	65.000	78.750	50.000	110.000	57.284
Polarity					
H.Sync	Negative	Positive	Negative	Negative	Negative
V.Sync	Negative	Positive	Negative	Negative	Negative
Remark	Separate	Separate	Separate	Separate	Composite (Sync-on-green+Composite)



A : Line time total	B : Sync width	C : Back porch	D : Active time
E : Front porch	O : Frame time total	P : Sync width	Q : Back porch
R : Active time	S : Front porch		

2-2 Semiconductor Lead Identification

PARTS	TYPE NO.	REF. NO.	PARTS	TYPE NO.	REF. NO.
	1N4148	D101,DB101,DB102,DB103, DB106,DG101,DGG102,DG103, DG106,DR101,DR102,DR103, DR106,D412,D302,D498,D409, D410,D411,D414,D416,D418, D499,D505,D506,D507,D514, D541,D553,D555,D556,D605, D607,D621,D513		KSC945-Y	Q301,Q302,Q402,Q409,Q419, Q505,Q512,1Q604,Q605,Q651, Q652
	BAV21	DB104,DB105,DG104,DG105, DR104,DR105,D415,D540		KSA733-Y	Q403,Q509,Q510,Q511
	2.7 V ZENER	D554		MPS3646	Q102
	5.1 V ZENER	ZD101,D102,D103		KSC1008	Q420,Q601
	6.2 V ZENER	D201,D202,D203,D204		2N3904	Q103,Q104,Q413,Q591,Q592
	8.2 V ZENER	D102		2N3906	Q101,Q516
	12 V ZENER	D301,D606		MPS2222	Q515
	16 V ZENER	D610			
	24 V ZENER	D607		KC3503	Q410,Q602
	RGP02-12	D610,D696		KSC3953	QR101,QG101,QB101
	1N4002	D402,D501,D510,D511		KSB772	Q471
	1N4007	D151,D152		KSD882	Q472
	1N4937	D303,D407,D408,D509,D512		KSA614	Q653
	1R5GU41	D618		TIP29	Q602
	UF4001	D651		C3675	Q504
	1R5NU41	D609		IRF610	Q415, Q501
	UF5404	D417,D612,D613,D615,D616, D617,D619,D620,D641		IRF640	Q411, Q412, Q414
	1N5399GP	D662,D663,D664,D665		IRF640	Q408, Q503
	1N4001GP	D581,D582			
	UF4004	D504			
	UF4007	D406,D515			

PARTS	TYPE NO.	REF. NO.	PARTS	TYPE NO.	REF. NO.
	KIA7045P	IC205		TDA8172	IC301
	MC7805 MC7905	IC604 IC107		2SK1358	D603
	KA3882 KA4558	IC601 IC471		5THZ52	Q405
	74HC125 LM319 MC14066	IC104 IC106 IC208		2SC5129	Q416, Q502
	DLAB494 LXC4320	IC501 IC103		KA78R12	IC605
	LM1207	IC101		CGJ-1	D509
	TDA9103	IC401		HYBRID-IC (CUTOFF-CONTROL)	IC102
	ST7271A	IC201		SIZE-CONTROL	IC302
	LM2427	IC102		SMPS	IC601

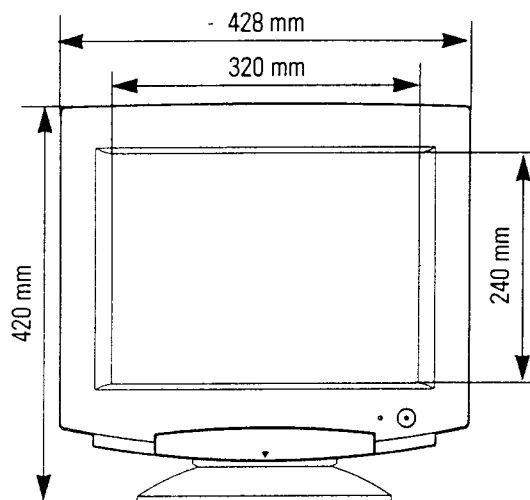
3 Product Specifications

3-1 Specifications

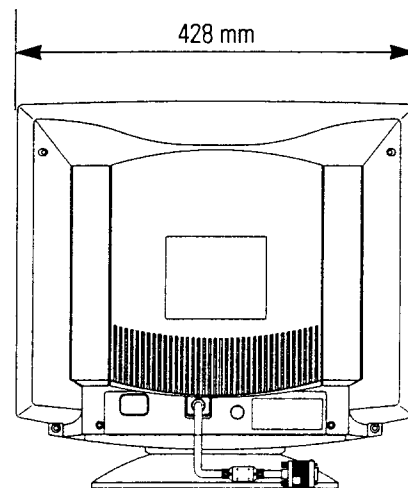
Item \ Model	SC-728FXL
Picture Tube:	17-Inch (43 cm): 16-Inch (40 cm) Visual, Full square/Flat face tube, 90° Deflection, 0.28 mm Dot pitch, Semi-tint, Non-glare, Antistatic silica coating, Invar shadow mask
Scanning Frequency	Horizontal : 30 kHz to 65 kHz (Automatic) Vertical : 50 Hz to 120 Hz (Automatic)
Display Colors Analog Input	Unlimited Colors
Maximum Resolution	Horizontal : 1280 Dots Vertical : 1024 Lines
Input Video Signal	Analog 0.714 Vp-p Positive at 75 Ω Terminated
Input Sync Signal	Separate Sync : TTL level Positive/Negative Sync-on-Green : Composite Sync 0.286 Vp-p \pm 5 %/Negative (Video on Vp-p positive) Composite Sync : TTL level Positive/Negative
Maximum Pixel Clock	110 MHz
Active Display	Horizontal : 306 mm \pm 3 mm (4:3 ratio) / 287.5 mm \pm 3 mm (5:4 Ratio) Vertical : 230 mm \pm 3 mm
Input Voltage	AC 90-264 Volt, 60 Hz/50 Hz \pm 3 Hz
Power Consumption	100 Watt (Max)
Dimensions Unit (HxWxD) Carton (HxWxD)	16.5 x 16.9 x 17.3 Inches (420 x 428 x 439 mm) 21.2 x 21.5 x 21.9 Inches (538 x 545 x 554 mm)
Weight	Net/Gross: 39.7 Lbs (18 kg) / 46.3 Lbs (21 kg)
Environmental Considerations	Operating Temperature : 32° F to 104° F (0° C to 40° C) Humidity : 10 % to 80 % Storage Temperature : -4° F to 113° F (-20° C to 45° C) Humidity : 5 % to 95 %
CRT Code No.	BH03-10001A (Samsung SDD) : ESF Coating BH03-10003A (Hitachi) : ASC Coating
<ul style="list-style-type: none"> • The SC-728FXL models comply with SWEDAC (MPRII) recommendations for reduced electric and magnetic fields. • Designs and specifications are subject to change without prior notice. 	

3-2 Dimensions

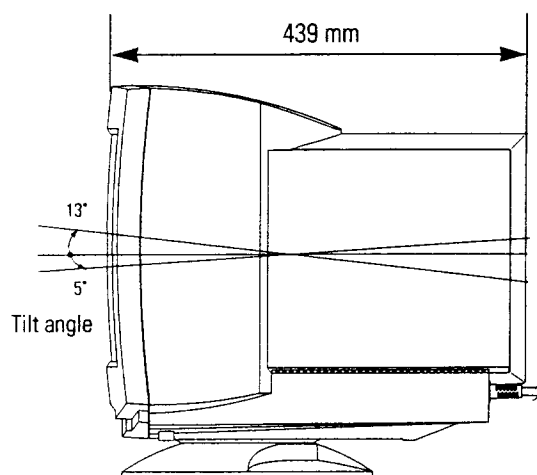
3-2-1 Front View



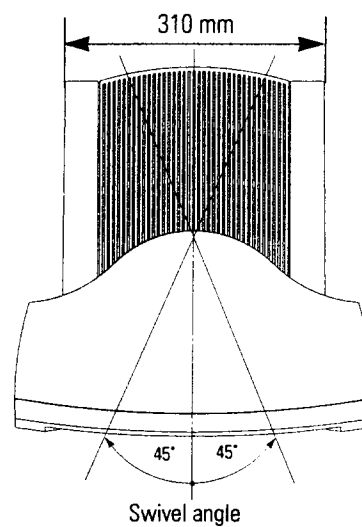
3-2-3 Rear View



3-2-2 Side View



3-2-4 Top View



3-3 Pin Assignments

Pin No.	Sync Type	15-Pin Signal Cable Connector (Figure 3-1)			Cable Adapter (Figure 3-2)
		Separate	Composite	Sync On Green	Macintosh
1		Red	Red	Red	GND-R
2		Green	Green	Green+H/V Sync	Red
3		Blue	Blue	Blue	H/V Sync
4		GND	GND	GND	Sense 0
5		DDC Return	DDC Return	DDC Return	Green
6		GND-R	GND-R	GND-R	GND-G
7		GND-G	GND-G	GND-G	Sense 1
8		GND-B	GND-B	GND-B	Reserved
9		Reserved	Reserved	Reserved	Blue
10		GND-Sync/Self-Raster	GND-Sync/Self-Raster	GND-Sync/Self-Raster	Sense 2
11		GND	GND	GND	GND
12		DDC Data	DDC Data	DDC Data	V-Sync
13		H-Sync	H/V-Sync	Not Used	GND-B
14		V-Sync	Not Used	Not Used	GND
15		DDC Clock	DDC Clock	DDC Clock	H-Sync

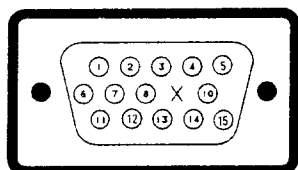


Figure 3-1. Male Type

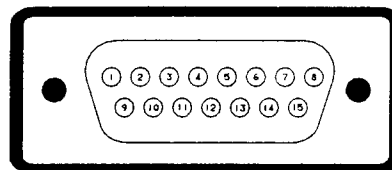


Figure 3-2. Male Type

Memo

4 User Controls

4-1 Front View and Controls

4-1-1 Front View

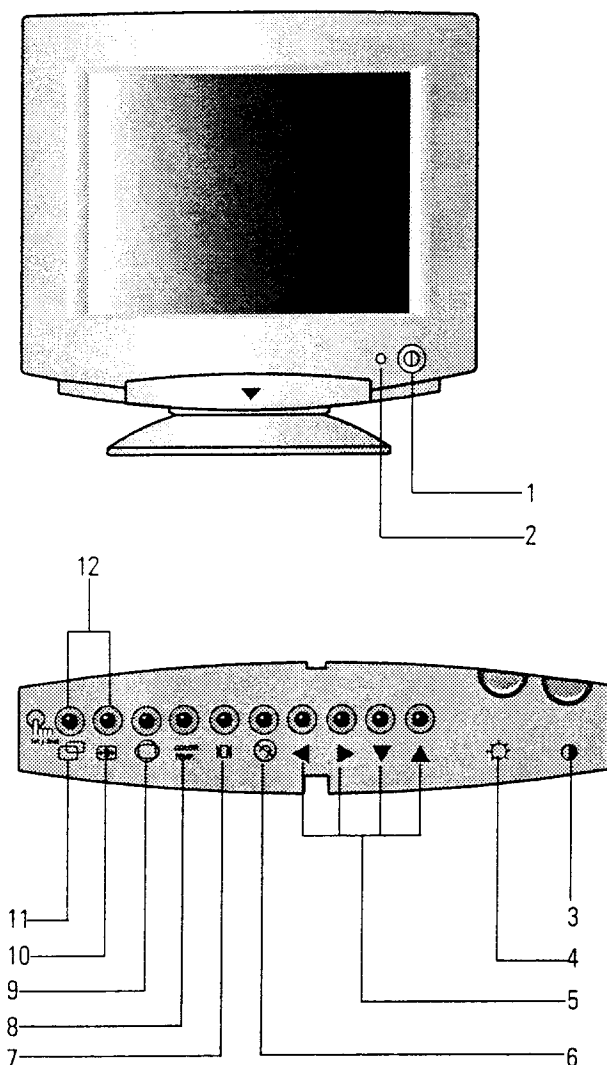


Figure 4-1. Front Control Panel

4-1-2 Front Control Panel

Location	Symbol	Description
1		Power Button (Push)
2		Power Indicator LED (Dual Color)
3		Contrast Control
4		Brightness Control
5		Adjustment Buttons
6		Degauss Button
7		Recall Button
8	COLOR TEMP	Color Temperature Control
9		G/D (Geometric Distortion) Push once: Pincushion / Trapezoid Push twice: Parallelogram / Tilt
10		Size and Information Push once: Size (Horizontal / Vertical) Push twice: Information
11		Position and Modes Push once: Position (Horizontal / Vertical) Push twice: User and Preset Modes
12		Pinbalance and Vertical Linearity

On Screen Display

The monitor features an On Screen Display (OSD) that shows information about the display settings. The OSD appears on the screen when you select a function button. The OSD shows the name, range and current setting of the control function. In addition, the OSD shows the current input signal frequency and the list of user and factory preset timings. The OSD remains active for approximately 10 seconds after completion of any adjustment.

Note 1: This monitor requires a cable adapter for use with a Macintosh computer. The MacMaster Cable Adapter supports all monitors and all Macintosh, Centris, Quadra, Duo Dock, and Power Macintosh computers. If you do not already have a cable adapter, check with your computer dealer.

Note 2: This monitor is EPA Energy Star compliant and NUTEK compliant when used with a computer equipped with VESA DPMS functions.

Table 4-1. Display Power Management Signaling (DPMS) Standard

State Items	Normal Operation	Power saving function EPA/NUTEK		
		Standby Mode	Suspend Mode Position A	Power Off Mode Position B
Horizontal Sync	Active	Inactive	Active	Inactive
Vertical Sync	Active	Active	Inactive	Inactive
Video	Active	Blanked	Blanked	Blanked
Power Indicator LED	Green	Orange	Alternating Orange/Green Blinking	Orange Blinking
Power Consumption/hr	100W (max.) 80.8W (nominal)	75W (max.) 66.5 W	Less than 15W	Less than 5W

5 Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for SC-728FXL monitor.

WARNING: This monitor contains electrostatically sensitive devices. Use caution when handling any components.

5-1 Disassembly

Caution: Disconnect the monitor from the power source before disassembling the monitor.

5-1-1 Cabinet Disassembly

1. With a pad underneath it, stand the monitor on its front with the screen facing downward and the base closest to you. Make sure nothing will damage the screen.
2. Working from the back of the monitor, remove the six screws.
3. Tilt the Rear Cover away to release the two tabs and pull it up and away from the monitor.
4. Lift the Signal Cable up to release it from the Bottom Cover.
5. Remove the two screws from the Bottom Cover. Lift the Bottom Cover off and away from the monitor.
6. Disconnect all accessible connectors from the Main PCB:

- Horizontal DY
- Vertical DY
- Degaussing Coil
- Tilt
- Control Box grounding wire clip
- CRT ground wires (2)
- Ground wires (3)

7. Using pinch-nose pliers or long-nose pliers, carefully disconnect the Anode cap from the CRT.

Caution: Do not touch the anode on the CRT.

8. Turn the monitor 90° to the right and remove the screw securing the CRT Holder to the CRT neck, then lift off the Video PCB.
9. Remove the two screws from the Main PCB Bracket, lift the Bracket up and tilt it towards you.
10. Disconnect the connectors from the VR PCB and the Control Box Assembly.
11. Pull the Main PCB Bracket away from the monitor.
12. Lift the Degaussing Coil Assembly up and away from the CRT.

13. Remove the two screws at the bottom of the Front Cover (near the center area of the CRT Support Assembly).
14. Remove the two corner screws at the bottom of the CRT (at either end of the CRT Support Ass'y). Lift the CRT Support Ass'y up and away from the CRT.
15. Remove the two other corner screws and lift the 17" Color CRT up and away from the Front Cover Assembly. Do Not lift the CRT by the Neck.

Caution: If you will be returning this CRT to the monitor, be sure to place the CRT face down on a protective pad.

16. Remove the CRT Ground Ass'y starting with the corner having the spring.

5-1-1 (a) Removing the Stand Assembly

1. Remove the screw securing the Stand Assembly to the Bottom Cover.
2. With a large flat-head screwdriver, press the tab in and slide the Top Stand towards the back of the Bottom Cover.
3. When the two tabs are free, left the Top Stand up and away from the Bottom Cover.
4. Slide the Top Stand so that the Bottom Stand tab is at the front end of the slot.
5. Rotate the Top Stand so that the stopper snap is fully exposed.
6. From the underside of the Bottom Stand, use your thumb to pull the stopper snap down and rotate the Top Stand until the Bottom Stand tab is free in the slot. Pull the Top Stand and Bottom Stand apart.

5-1-2 Removing the Video PCB

1. Follow steps 1 through 8 in "5-1-1 Cabinet Disassembly" above.
2. Remove all remaining connectors:
 - Signal input
 - Power interface
 - Video interface
 - Screen (1-pin)
 - Use long-nosed pliers to gently release two of the wires from the FBT
 - Grounding wires (2)
3. Release the six snaps around the sides of the Video PCB Shield and lift the top off.
4. Remove the three screws securing the CRT Holder. Slide the CRT Holder back to release the tabs and lift it off the Video Shield Case.
5. Pop the Video PCB out of the Video Shield Case and place it on a flat, level surface that is protected from static electricity.

5-1-3 Removing the Main PCB

1. Follow steps 1 through 11 in "5-1-1 Cabinet Disassembly," above.
2. If you have not already done so, disconnect the Video PCB Assembly from the Main PCB.
3. Remove the Power Shaft by releasing the two tabs, and pulling the Shaft forward until both tabs are free. Then, pull it to the right and out of the Main PCB Bracket.
4. Remove the screw from the Signal Ground at the FBT Heat Sink.
5. Remove the four additional screws from around the Main PCB.
6. Remove the two small black screws at the AC input.
7. Lift the Main PCB away from the Main PCB Bracket.
8. Set the Main PCB on a smooth, level surface that is protected from static electricity.

5-1-4 Removing the Control PCB

1. Follow steps 1 through 5 in "5-1-1 Cabinet Disassembly" above.
2. With the Front Cover Assembly facing downward and the bottom edge closest to you, remove the screw at the right side of the Control Box Assembly.
3. Pull the right side of the Control Box Ass'y up gently to release the snap along the left side of the box. Pull the Control Box Ass'y up and out of the Front Cover Ass'y.
4. Lower the Control Box Housing door and unplug the connector.
5. Release the two snaps on the upper side, left and right ends and pull the Control Box Housing away from the Control Box Case.
6. With the Front Cover Assembly facing downward and the bottom edge closest to you, locate the Control PCB.
7. Release the connector.
8. Carefully release the six snaps and lift the Control PCB up and away from the monitor. Place the Control PCB on a flat, level surface that is protected from static electricity.

5-1-5 Removing the VR PCB

1. Follow steps 1 through 11 in "5-1-1 Cabinet Disassembly," above.
2. With the Front Cover Assembly facing downward and the bottom edge closest to you, locate the VR PCB. Pull the VR PCB up and out of the monitor.

5-2 Reassembly

With the CRT facing downward on a protective pad, use the steps that follow to reassemble the monitor.

5-2-1 Replacing the VR PCB

1. With the Front Cover Assembly facing downward and the bottom edge closest to you, align the VR PCB in the slots to the left of the Control PCB. Push the VR PCB down into the slots.

5-2-2 Replacing the Control PCB

1. Align the Control PCB with the six snaps along the back of the bottom side of the Front Cover Ass'y and gently push the board down to engage the snaps.
2. Re-install the connector.

5-2-3 Replacing the CRT

1. Loop the CRT Ground Ass'y around the back of the CRT and under the four corner metal tabs. Position the corner with the spring last.
2. With the Front Cover Assembly lying face down on a protective pad, position the CRT so that the corner metal tabs fit properly in the Front Cover Assembly.
3. Secure the CRT Ground Ass'y and CRT at the top two corners with the CRT screws.
4. Position the CRT Support Ass'y along the bottom of the CRT. Place the PVC coated metal ties on each of the two remaining CRT screws and secure the CRT and Support.
5. Replace the Degaussing Coil Assembly and wrap the Coil with the PVC coated metal ties to hold the Coil in place.

5-2-4 Replacing the Video PCB

1. Place the Video PCB in the Video Shield Case and pop it in place so that it is secured by the six tabs.
2. Position the CRT PCB Shield on the Video Shield Case and press down to engage the six snaps.
3. Position the CRT Holder on the Video Shield Case making sure that the two tabs are properly engaged.
4. Replace the three screws securing the CRT Holder.

5. Plug the Video PCB Ass'y onto the neck of the CRT.
6. Tighten the screw on the CRT Holder which fits on the end of the CRT Neck.
7. Reconnect the connectors:
 - Signal input
 - Power interface
 - Video interface
 - Screen (1-pin)
 - The red and the white wires from the FBT.

Caution: Make sure to put the wires into their correct connectors:

Holding the Video Shield Case so the wire connectors are lowest, connect the red wire to the connector on the right and the white wire to the left connector.

- Grounding wire connected by clip to the PCB Bracket.
- Grounding wires (2)

5-2-5 Replacing the Main PCB

1. Set the main PCB in the PCB bracket and secure it with five screws.
2. Replace the two black screws at the AC input.
3. Replace the Power Shaft, making sure the two tabs are fully engaged with the PCB Bracket.
4. Hold the main PCB Ass'y close to the CRT and reconnect the following connectors:
 - Horizontal DY
 - Vertical DY
 - Degaussing Coil
 - Tilt
 - Ground wires (3)
 - CRT ground wires (2)
 - Anode Cap
 - VR PCB
 - Control Box Ass'y and Grounding
5. Replace the Video PCB.
6. Position the Main PCB Ass'y on the Front Cover and hold it secure with two screws.

5-2-6 Cabinet Reassembly

1. If you have not already done so, re-install the Control PCB following the directions given in "5-2-2 Replacing the Control PCB."
2. If you have not already done so, re-install the CRT following the directions given in "5-2-3 Replacing the CRT."
3. If you have not already done so, re-install the Video PCB following the directions given in "5-2-4 Replacing the Video PCB."
4. If you have not already done so, re-install the Main PCB following the directions given in "5-2-5 Replacing the Main PCB."
5. Position the Cover Bottom and replace the two screws.
6. Slide the Signal Cable so that it fits snugly in the slot on the back of the Bottom Cover.
7. Position the Cover Top making sure the two tabs along the upper front edge are properly snapped in place. Replace the six screws.
8. If removed, re-install the Stand Assembly by sliding the two tabs into their slots on the bottom of the cabinet and snapping them in place. Replace the screw which secures the Stand Ass'y to the Bottom Cover.
9. Set the monitor on its Base and make sure that the CRT Screen was not scratched or otherwise damaged.

6 Alignments and Adjustments

This section of the service manual explains how to control the linearity, raster, size, position, pincushion, parallelogram, trapezoid, and pinbalance. Additionally, this section describes how to use the micom control jig to make the adjustments.

6-1 Adjustment Conditions

Caution: Changes made without the micom jig are saved only to the user mode settings. As such, the settings are not permanently stored and may be inadvertently deleted by the user.

Direction

When servicing, always face the monitor toward the East and, whenever possible, use magnetic field isolation such as a helmholtz field around the monitor.

Caution: Other electrical equipment may cause external magnetic fields.

During servicing, use an external degaussing coil to limit magnetic build up. If an external degaussing coil is not available, use the internal degaussing circuit, but not more than once per minute.

After finishing all adjustments, test the monitor in all directions. If, for example, the monitor does not meet adjustment specifications when facing in a northerly direction, face the monitor eastward again and readjust the monitor to the smallest error possible within a reasonable time limit. Test the unit again in all directions. If the monitor again fails to meet specifications in a non-easterly direction, contact your region's main service center for possible CRT replacement.

Testing and Burn-in Mode

For testing and burn-in, remove the signal cable from the monitor. Power on the monitor and warm it up. Use the burn-in mode to age the monitor.

High Voltage Control

Adjust VR501 to $26\text{ kV} \pm 0.2\text{ kV}$.

Warm-Up Time

The display must be on for 30 minutes before starting alignment. Warm-up time is especially critical in color temperature and white balance adjustments.

Signal

Video analog 0.714 Vp-p positive at 75 ohm terminated.

Sync: Separate/composite
(TTL level negative/positive).

Sync-on-Green:
Composite sync 0.286 Vp-p negative,
Video 0.714 Vp-p positive.

Scanning Frequency

Horizontal : 30 kHz - 65 kHz (Automatic).
Vertical : 50 Hz - 120 Hz (Automatic).

Unless otherwise specified, adjust to 1024×768 mode (H : 60 kHz , V : 75 Hz) signals. Refer to table 2-1 on pages 2-1 and 2-2.

6-2 Prepare Main PCB for Adjustment

+B 195V Line Adjustment

No beam, Contrast: Minimum,
Brightness: Minimum.

Adjust VR601 to DC $195\text{ V} \pm 1\text{ V}$ at TP601 and GND.

High Voltage Adjustment

No beam, Contrast: Minimum,
Brightness: Minimum
Adjust VR501 to $26\text{ kV} \pm 0.2\text{ kV}$.

Center Raster

Adjust SW401 so that the back raster comes to the center when you apply a signal of $60\text{ kHz}/75\text{ Hz}$.

6-3 Using the Microcomputer Control Jig

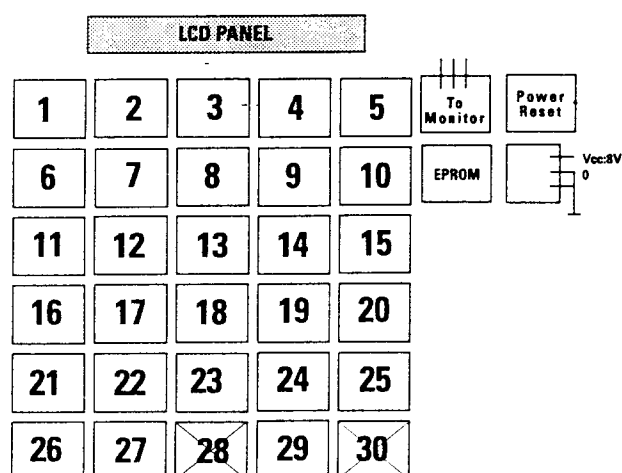


Figure 6-1. Micom Control Jig Keypad

Notes:

Changes made without the micom jig are saved only to the user mode settings. As such, these settings are not permanently stored and may be inadvertently deleted by the user.

Selecting the monitor series and type:

1. Simultaneously press buttons **29** and **24** to select "M-Project" as the monitor series.
2. Press button **25** to select the monitor type. Hold down button **25** until you see "M17L" plus the OEM name for the monitor under test. For example, hold down button **25** until you see "M17L" if you are working on a "Dell 17."

Table 6-1. Micom Control Jig Function Keys

Key No.	General Control Key Function	Color Control Key Function
1	Horizontal Position Right	R-Gain Increase
2	Horizontal Position Left	R-Gain Decrease
3	Parallelogram Right	ACL Increase
4	Parallelogram Left	ACL Decrease
5	Mode Save	Color Save
6	Horizontal Size Increase	G-Gain Increase
7	Horizontal Size Decrease	G-Gain Decrease
8	Vertical Linearity Up	Color CH-1 Standard Save
9	Vertical Linearity Down	Color CH-2 Standard Save
10	Standard Save	ACL Save
11	Vertical Position Up	B-Gain Increase
12	Vertical Position Down	B-Gain Decrease
13	Pinbalance Left	No Function (Don't Use)
14	Pinbalance Right	No Function (Don't Use)
15	All Mode Save	No Function (Don't Use)
16	Vertical Size Increase	R-Bias Increase
17	Vertical Size Decrease	R-Bias Decrease
18	Tilt Up	No Function (Don't Use)
19	Tilt Down	No Function (Don't Use)
20	User Mode Delete	No Function (Don't Use)
21	Barrel	G-Bias Increase
22	Pincushion	G-Bias Decrease
29+23	Color/General Control toggle	Color/General Control toggle
29+24	F-Project/M-Project toggle	F-Project/M-Project toggle
25	Model Selection	No Function (Don't use)
26	Trapezoid Up	B-Bias Increase
27	Trapezoid Down	B-Bias Decrease
28	No Function (Don't Use)	No Function (Don't Use)
29	Shift	Shift
30	No Function (Don't Use)	Manual/Auto Color Control

6-3-1 General Control

Use general control to test and adjust the shape and size of the display.

1. Simultaneously press buttons **29** and **23** to toggle between General Control and Color Control. Select "General Control."
2. Standard Save: Press button **10** to do a memory data dump and load the standard picture data from the EPROM on the micom control jig.

Note: This step is necessary only if the EPROM on the control jig has more recent data than the EPROM on the monitor PCB. Check for a Service Bulletin or Service Manual Supplement.
3. Optimize the standard timing mode (60 kHz /75 Hz) using the micom control jig as described on pages 6-3 through 6-5 of this manual.
4. After completing all standard timing mode adjustments, press button **15** to save the data for all modes. The monitor's microprocessor adjusts the other modes according to a predefined formula.
5. Using a signal generator, scan the other timing modes and make adjustments as needed. Each time you make a change, press button number **5** to save the data.

6-3-2 Color Control

Use color control to test and adjust the color coordinates the monitor displays.

1. Simultaneously press buttons **29** and **23** to toggle between General Control and Color Control. Select "Color Control."
2. Press button **8** (for 9300K setting) or **9** (for 6500K settings) to do a memory data dump and to load the standard picture color data from the micom control jig.

Note: This step is necessary only if the EPROM on the control jig has more recent data than the EPROM on the monitor PCB. Check for a Service Bulletin or Service Manual Supplement.
3. Optimize the standard timing mode using the micom control jig as described on pages 6-6 and 6-7 of this manual.
4. Press button **5** to save the picture color data.
5. Press button **10** to save ACL data.
6. When you are through, disconnect the micom control jig and proceed with other tests and adjustments.

6-4 Display Control Adjustments

Unless otherwise specified, adjust the EXT-VR:

Contrast : Max. (Fully clockwise)
Brightness : Max. (Fully clockwise)

6-4-1 Centering

Centering means to position the center point of the display in the middle of the display area.
Horizontal size and position and vertical size and position control the centering of the display.

Adjust the horizontal size and vertical size to their optimal settings: 306 mm (H) x 230 mm (V)

Adjust the horizontal position and vertical position to ≤ 4.0 mm of the center point of the screen.

$|A - B| \leq 4.0$ mm.
 $|C - D| \leq 4.0$ mm.

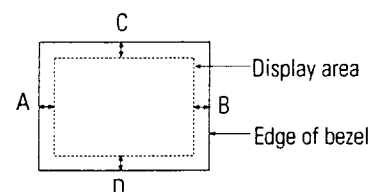


Figure 6-2. Centering

6-4-2 Horizontal Size Adjustment

With microcomputer control jig:

Press the horizontal size increase button (**6**) or horizontal size decrease button (**7**) to adjust the horizontal size of the display pattern to 306 mm. (Tolerance: ± 3 mm.)

Without microcomputer control jig:

After pushing the size button, push the (**►**) button or (**◄**) button to adjust the horizontal size of the display pattern to 306 mm. (Tolerance ± 3 mm.)

6-4-3 Vertical Size Adjustment

With microcomputer control jig:

Press the vertical size increase button (16) or the vertical size decrease button (17) to adjust the vertical image or pattern to 230 mm. (Tolerance: ± 3 mm.)

Without microcomputer control jig:

After pushing the size button, push the (▲) button or (▼) button to adjust the vertical size of the display pattern to 230 mm. (Tolerance: ± 3 mm.)

6-4-4 Horizontal Position Adjustment

With microcomputer control jig:

Press the horizontal position right button (1) or the horizontal position left button (2) to center the image or test pattern on the raster.

Without microcomputer control jig:

After pushing the position button, push the (►) button (move right) or (◄) button (move left) to center the image or test pattern on the raster.

6-4-5 Vertical Position Adjustment

With microcomputer control jig:

Press the vertical position up button (11) or vertical position down button (12) to center the vertical image or pattern on the raster.

Without microcomputer control jig:

After pushing the position button, push the (▲) button (move up) or (▼) button (move down) to center the image or the test pattern on the raster.

6-4-6 Vertical Linearity Adjustment

Linearity affects the symmetry of images on the screen. Unless each row or column of blocks in a crosshatch pattern is of equal size, or within the tolerances shown in Tables 6-2 and 6-3, an image appears distorted, elongated or squashed.

The SC-728FXL monitor offers only Vertical Linearity adjustments. Horizontal Linearity is fixed on the chassis and is not adjustable.

To adjust the Vertical Linearity, refer to Tables 6-2 and 6-3 for the tolerance range.

Table 6-2. Standard Mode Linearity: 37.5 kHz/75 Hz, 46.875 kHz/75 Hz, 60.023 kHz/75 Hz

	Factory Preset Timing Modes	
	Each block (5%)	Difference between adjacent blocks (4%)
640x480/75 Hz 800x600/75 Hz 1024x768/75 Hz	Horizontal: 18.2 ~ 20.1 Vertical: 18.2 ~ 20.1	Horizontal: Less than 0.8 mm Vertical: Less than 0.8 mm

Table 6-3. Other Modes Linearity: VGA, 8514/A, XGA, MAC, etc.

	Supported Timing Modes	
	Each block (7%)	Difference between adjacent blocks (5%)
4:3	Horizontal: 17.8 ~ 20.5 Vertical: 17.8 ~ 20.5	Horizontal: less than 1.0 mm Vertical: less than 1.0 mm
5:4	Horizontal: 16.7 ~ 19.2 Vertical: 17.8 ~ 20.5	Horizontal: less than 0.9 mm Vertical: less than 1.0 mm

With microcomputer control jig:

Press the vertical linearity up button (8) or vertical linearity down button (9) to optimize the image or the test pattern.

Without microcomputer control jig:

To activate the vertical linearity adjustment function, push and hold in both the position and the size buttons for longer than three seconds, or until the power indicator LED changes from orange to green and back to orange. Use the right (►) and left (◄) buttons to correct the vertical linearity.

6-4-7 Trapezoid Adjustment

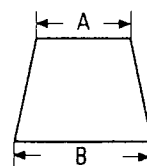
With microcomputer control jig:

Press the trapezoid up button (26) or trapezoid down button (27) to make the image or the test pattern rectangular.

Without microcomputer control jig:

After pushing G/D button once, push the (▼) button or (▲) button to make the image or the test pattern rectangular.

$$|A - B| < 2 \text{ mm}$$



$$|C - D| < 2 \text{ mm}$$

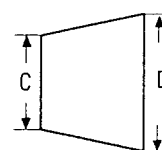


Figure 6-3. Trapezoid

6-4-8 Pinbalance Adjustment

With microcomputer control jig:

Press the pinbalance left button (13) or pinbalance right button (14) to optimize the image or test pattern.

Without microcomputer control jig:

To activate the pinbalance adjustment function, push and hold in both the position and the size buttons for longer than three seconds, or until the power indicator LED changes from orange to green and back to orange.

Use the up (▲) and down (▼) buttons to correct the pinbalance distortion of one or both sides.

6-4-9 Parallelogram Adjustment

With microcomputer control jig:

Press the parallelogram right button (3) or the parallelogram left button (4) to make the image or test pattern rectangular.

Without microcomputer control jig:

After pushing G/D button twice, push (►) button or (◄) button to make the image or test pattern rectangular.

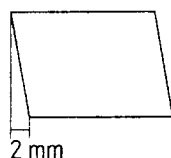


Figure 6-4. Parallelogram

6-4-10 Side Pincushion Adjustment

With microcomputer control jig:

Press the barrel button (21) or the pincushion button (22) to straighten the sides of the test pattern or image.

Without microcomputer control jig:

After pushing G/D button once, push (►) button or (◄) button to straighten the sides of the test pattern or the image.

$$|C1|, |C2| \leq 2.0 \text{ mm}, |D1|, |D2| \leq 2.0 \text{ mm}.$$

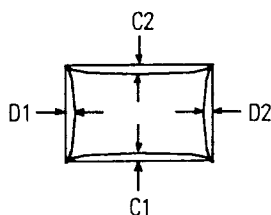


Figure 6-5. Pincushion

6-4-11 Tilt Adjustment

With microcomputer control jig:

Press the tilt up button (18) or the tilt down button (19) to correct the tilt of the display.

Without microcomputer control jig:

Push the G/D button twice to display the tilt OSD. Push either the tilt up (▲) or down (▼) button to display the tilt OSD.

Use the up (▲) and down (▼) buttons again to correct the tilt of the display.

CRT Tilt Adjustment

Mechanical Adjustment:

Reassemble the CRT with fastening screws so that the dimensions A, B and C, D are separately equal.

If you are unable to correct the tilt, contact the regional service center for possible CRT replacement.

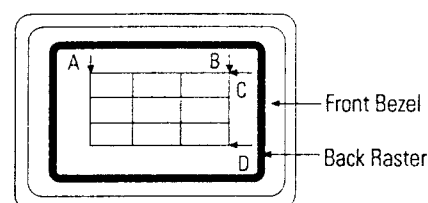


Figure 6-6. CRT Tilt Adjustment

Degauss

No adjustments available for degaussing circuit. The degaussing circuit can effectively function only once per minute. If available, use an external degaussing coil during servicing.

Warning: Don't hold the degauss button down for longer than 3 seconds. If you do, it resets all of the data in the user memory area. If this occurs, you must remake the user adjustments.

6-4-12 To Delete the User Mode Data

With microcomputer control jig:

To delete the picture data from user's modes, push user's mode delete button (20).

Without microcomputer control jig:

To delete the picture data from user's modes, press the degaussing button for 5 or more seconds.

6-4-13 Save the Data

With microcomputer control jig:

To save the picture data for a mode, push the mode save button (5).

6-5 Color Adjustments

Note: To make color adjustments you must have one of the following configurations:

1. Micom Control Jig and Signal Generator
or
2. Micom Control Jig and Computer with Samsung DM 200 software or DisplayMate for Windows software from Sonera Technologies

Before making adjustments check that the video signals are as follows:

Video: Analog 0.714 Vp-p (at 75 Ω terminated).

Sync : Separate TTL level.

Unless otherwise specified, use 1024x768 signal (60 kHz/75 Hz) for the adjustments.

6-5-1 Color Coordinates (Temperature)

Color temperature is a measure of the radiant energy transmitted by a color. For computer monitors, the color temperature refers to the radiant energy transmitted by white. Color coordinates are the X and Y coordinates on the chromaticity diagram of wavelengths for the visible spectrum.

Table 6-4. Color Coordinates

Value	9300° K : $x = 0.283 \pm 0.02$, $y = 0.298 \pm 0.02$. 6500° K : $x = 0.313 \pm 0.02$, $y = 0.329 \pm 0.02$.
Conditions	Display Image : White flat field at the center of display area. Luminance : Min : 5 ft-L, Max : 24 ft-L.

6-5-2 Luminance Uniformity

Luminance uniformity means that the luminance at the position of the lowest brightness must be more than 75% of the luminance at the area with the highest brightness. Luminance is considered uniform only if the ratio of lowest to highest brightness is not less than 7.5:10.

Table 6-5. Computing Luminance Uniformity

Value	75 % (Min) Variation = $\frac{C}{A} \times 100$
Conditions	Display Image : White flat field. Luminance : Brightness cut off, Contrast Max. A : Luminance at position of highest brightness. C : Luminance at position of lowest brightness.

6-5-3 Color Adjustments for 9300°K

6-5-3 (a) Adjustment of the Back Raster Color (60 kHz/75 Hz, Back raster pattern)

1. Turn the contrast and the brightness controls fully clockwise (maximum condition).
2. Adjust the screen VR of the FBT so that the brightness of back raster is 0.5 to 0.7 ft-L (typically 0.6 ft-L).

3. Press button **8** to download the standard color data (channel 1) from the micom jig.

For 9300° K color adjustment:

$$x = 0.283 \pm 0.02, y = 0.298 \pm 0.02.$$

For 6500° K color adjustments see section 6-5-4 "Color Adjustments for 6500° K."

4. Use buttons **26** and **27** to set the "y" coordinate to 0.298 ± 0.02 .

5. Use buttons **16** and **17** to set the "x" coordinate to 0.283 ± 0.02 .

Note: If the above adjustments cannot be done to each coordinate, press button **21** to increase the green bias, or button **22** to decrease the green bias and repeat procedures 4 and 5.

6. After completing the adjustments, press button **5** to save the data.

6-5-3 (b) Video Gain Adjustment

(60 kHz/75 Hz, Green box pattern)

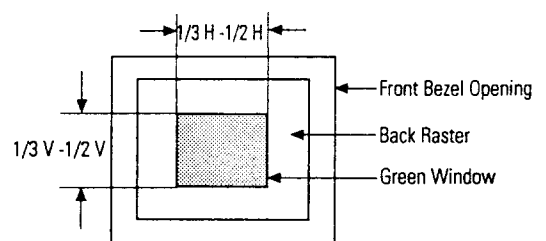


Figure 6-7. Green Box Pattern

1. Display the green window pattern using a range for which the ACL Circuit is not active (within ranges $1/3$ to $1/2H$ and $1/3$ to $1/2V$).

2. Turn the contrast and the brightness controls fully clockwise.
3. Press buttons **6** and **7** (G-Gain control) to adjust the brightness of the green gain to 40 ± 1 ft-L.

Note: If you can't increase the green gain to the appropriate value, press button **3** to increase the ACL point and try adjusting the G-Gain again.

6-5-3 (c) White Balance Adjustment (60 kHz/75 Hz, Full white Pattern)

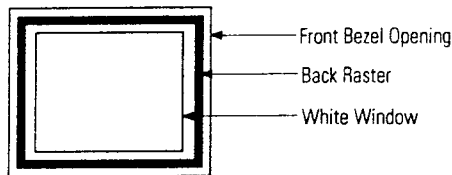


Figure 6-8. Full White Pattern

1. Turn the contrast and the brightness controls fully clockwise.
2. Use the R-Gain buttons **1** and **2** and B-Gain buttons **11** and **12** to make the video white.
(For 9300° K color adjustment:
 $x = 0.283 \pm 0.02$, $y = 0.298 \pm 0.02$.)
Note: Do not touch buttons **6** and **7**.
3. Press button **5** to save the data.

6-5-3 (d) White Balance Fine Adjustment ($x = 0.283 \pm 0.02$, $y = 0.298 \pm 0.02$, Full White pattern)

Note: Do not touch buttons **6** and **7** (G-Gain).

1. Adjust the contrast control so that the brightness of the video is about 5 ft-L.
2. Check whether the white coordinates of the video meets the above coordinate spec.
3. Adjust the contrast control so that the brightness of the video is about 20 ft-L.
4. Check whether the white coordinates of the video satisfies the above spec.
5. If the white balance differs from the above spec, readjust it to within specifications.
When correct, press buttons **5** to save.

6-5-3 (e) ACL point Adjustment

1. Display the full white pattern.
2. Turn the contrast and the brightness controls fully clockwise.
3. Press buttons **3** and **4** (ACL) so that the brightness is 30 ± 1 ft-L.
4. Press button **10** to save the ACL setting value.

6-5-4 Color Adjustments for 6500°K

6-5-4 (a) Back Raster Color Adjustment

1. Display the back raster pattern.
2. Turn the contrast and the brightness controls fully clockwise.
3. Press button **9** to load the standard color data (channel 2) for 6500°K from micom control jig.
4. Adjust the brightness of the back raster to 0.5 to 1.0 ft-L using buttons **21** or **22** (G-Bias control). If you don't need to adjust the brightness, skip this step.

Note: For 6500° K adjustments you must not control the screen VR of the FBT. If you do so, the 9300°K setting values are changed.
5. Using buttons **16**, **17**, **26** and **27**, adjust the R-Bias to $x = 0.313 \pm 0.02$ and B-Bias to $y = 0.329 \pm 0.02$.
6. Press button **5** to save the bias data for 6500°K.

6-5-4 (b) Video Gain Adjustment

1. This procedure is the same as that of 9300°K.
2. Refer to the procedure for 9300°K on page 6-6.

6-5-4 (c) White Balance Adjustment

1. Display a full white pattern.
2. Turn the contrast and the brightness controls fully clockwise.
3. Using buttons **1**, **2**, **11** and **12** set the R/B gain data to $x = 0.313 \pm 0.02$, $y = 0.329 \pm 0.02$.

6-5-4 (d) White Balance Fine Adjustment

Refer to the procedure for 9300°K on page 6-7.

6-5-4 (e) ACL Point Adjustment

Refer to the procedure for 9300°K on page 6-7.

6-6 Focus Adjustment

1. Display the H character pattern so that the focus adjustment can be done. (Apply 1280x1024/60 Hz mode to the monitor.)
2. Turn the contrast and the brightness controls fully clockwise.
3. Adjust the focus control of the FBT to display the sharpest image possible.
4. Use locktite to seal the focus control in position.

6-7 Color Purity Adjustment

Color purity is the absence of undesired color. Conspicuous mislanding (unexpected color in a uniform field) within the display area shall not be visible at a distance of 50 cm from CRT surface.

Conditions

Direction : Monitor facing east.

Display image: White flat field.

Luminance : Cutoff point at the center of display area.

Note: Color purity adjustments should only be attempted by qualified personnel.

For trained and experienced service technicians only.

Use the following procedure to correct minor color purity problems:

1. Make sure the display is not affected by external magnetic fields. Use an external degaussing coil to neutralize magnetic fields which may be affecting color purity.
2. Very carefully break the glue seal between the two-pole purity convergence magnets (PCM), band and the spacer (see Figure 6-10).
Caution: The convergence bow magnets are not user or service technician adjustable. Do not allow these magnets to move.
3. Make sure the spacing between the PCM assembly and the CRT stem is 29 mm±1 mm.

4. Display a red pattern over the entire display area.
5. Adjust the purity magnet rings on the PCM assembly to display a pure red pattern. (Optimum setting: $X=0.625\pm0.015$, $Y=0.340\pm0.015$)
6. Adjust each corner and the center to meet the red color tolerances listed below.
7. Repeat steps 4 through 6 using a green pattern and again, using a blue pattern.

Table 6-6. Color Purity Tolerances

Red:	$X=0.625\pm0.015$	$Y=0.340\pm0.015$
Green:	$X=0.275\pm0.015$	$Y=0.605\pm0.015$
Blue:	$X=0.150\pm0.015$	$Y=0.065\pm0.015$

(For 9300°K color adjustment: $X=0.283\pm0.02$, $Y=0.298\pm0.02$)

8. When you have the PCMs properly adjusted, carefully glue them together to prevent their movement during shipping.

6-8 Convergence Adjustments

Misconvergence occurs when one or more of the electron beams in a multi beam CRT fail to meet the other beams at a specified point.

Table 6-7. Misconvergence Tolerances

Position	Error in mm	CRT Dot Pitch	Remark
Center	0.25	0.28	—
Edge	0.30	0.28	$\geq 800 \times 600$ resolution
	0.40	0.28	$\leq 800 \times 600$ resolution

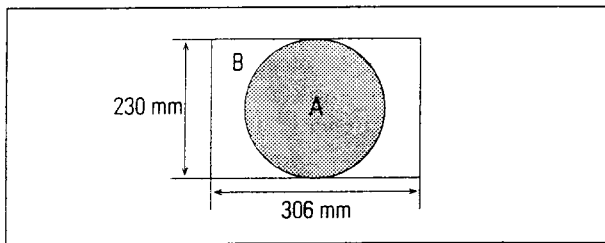
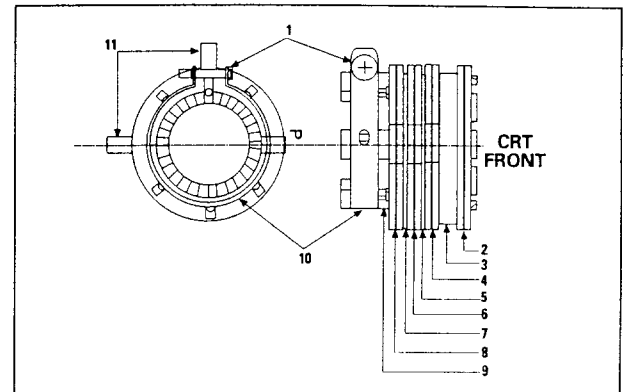


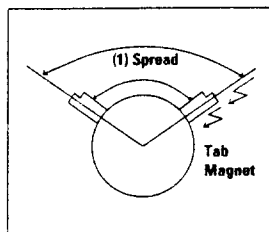
Figure 6-9 Convergence Measurement Areas



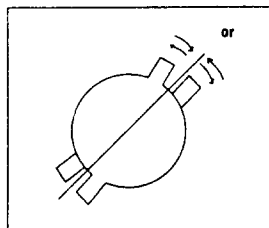
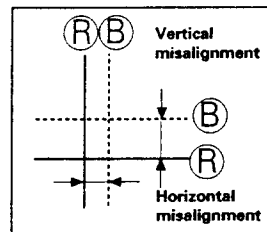
Samsung, Hitachi and Matsushita CRT			
1 Setup Bolt	2 Bow Magnet	3 Band	4 2-Pole Magnet
5 Spacer	6 4-Pole Magnet	7 Spacer	8 6-Pole Magnet
9 Holder	10 Band	11 Tabs	

Figure 6-10. Magnet Configuration

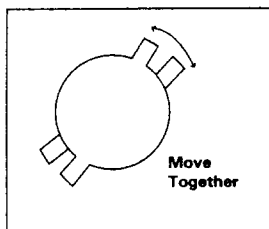
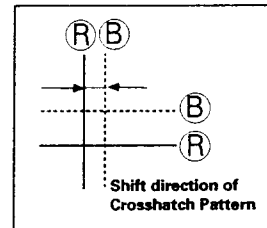
Red and Blue Alignment (4-pole magnet movement)



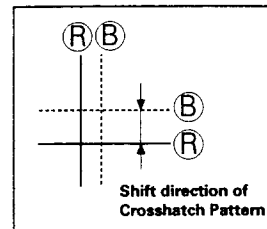
0-Magnetic Field



Motion (1)



Motion (2)



Red, Blue and Green Alignment (6-pole magnet movement)

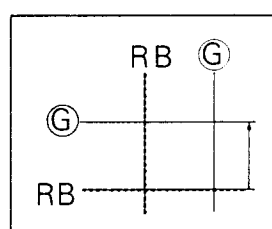
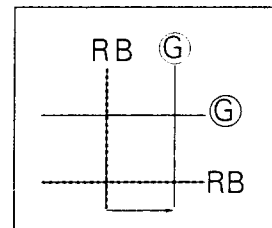
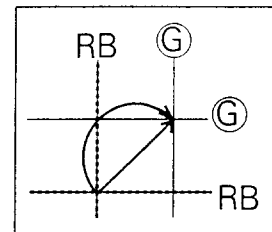


Figure 6-11. Magnet Movements

6-8-1 Static (Center) Convergence

Static convergence involves the alignment of the red, blue and green lines in the center area of the display.

See "Dynamic Convergence" for alignment of the color fields around the edges of the display.

Conditions

Direction : Monitor facing east
 Warm-up : 30 minutes
 Display image: Crosshatch pattern
 Tolerances : See Table 6-7

As shown in Figures 6-10, CRTs used in these monitors all have the same magnet configuration as shown in Table 6-8 below.

Table 6-8. Magnet Configurations

CRT Manufacturer	Magnet Order from Front of CRT
Samsung	Convergence bow,
Hitachi	two-pole,
Matsushita	four-pole,
(Panasonic)	six-pole

Use the following steps to correct any static misconvergence:

1. Locate the pair of four-pole magnet rings.
2. Unlock the rings and rotate the individual rings (change the spacing between tabs) to converge the vertical red and blue lines.
3. Rotate the pair of rings (maintaining the spacing between tabs) to converge the horizontal red and blue lines.
4. After completing the red and blue center convergence adjustment, locate the pair of 6-pole magnet rings.
5. Rotate the individual rings (change the spacing between tabs) to converge the vertical red and blue (magenta) and green lines.
6. Rotate the pair of rings (maintaining the spacing between tabs) to converge the horizontal red and blue (magenta) and green lines. Don't rotate the 2-pole magnets, as they adjust for color purity.
7. Mark the correct position for the magnets and apply a small line of glue to hold the magnets in place. Lock the rings in place.

6-8-2 Dynamic (Edge) Convergence

Use the following procedure to correct minor dynamic (edge) misconvergence. If, after using this procedure, dynamic misconvergence is still greater than the tolerance around the periphery of the display area, contact the Regional Service Center for possible CRT replacement.

1. Make sure the display is not affected by external magnetic fields.
2. Make sure the static convergence is properly adjusted.
3. Strategically place small magnetic strips on the back of the CRT to correct the misconvergence. Be careful not to remove the paper protecting the adhesive on the magnetic strip until you are satisfied with their placement and the dynamic convergence.
4. When you are satisfied with the convergence around the edge of the CRT, permanently glue the magnets to the back of the CRT.

Table 6-9. Magnetic Strips

Description	Size	Code Number
Magnet Sheet	5 mm x 80 mm	937 319004CA
Magnet Sheet	10 mm x 80 mm	937 319004AA

Warning



Do not remove or change the position of the factory installed wedges. These wedges were installed by the CRT manufacturer and are properly placed for this CRT. Removal may result in damage to the CRT.

6-8-3 Bow Convergence Adjustments

Conditions

Direction: Monitor facing East.

Display Image: Crosshatch pattern mixed with RGB colors.

Bow convergence adjustments are not available for any of the CRTs used in the SC-728FXL monitor. While all the CRTs have bow convergence magnets, they are sealed in the CRT factory and are not user or service technician adjustable. Do not touch these magnets (see Figure 6-10). If color convergence bow adjustment is out of alignment, replace the CRT. Bow misconvergence should not exceed the values listed in Table 6-7: Misconvergence tolerances.

6-8-4 Balance Convergence Adjustments

Balance Convergence involves the alignment of the red and blue lines when they are misaligned at one end more so than at the other (X). The deflection yoke holds the balance coils which can correct balance misconvergences.

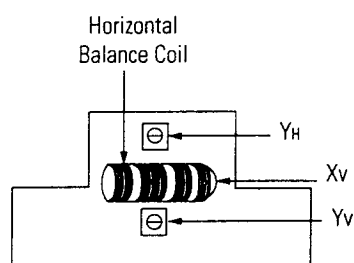


Figure 6-12. SDD and Hitachi Deflection Yoke

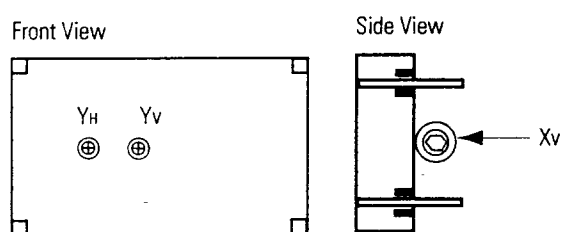


Figure 6-13. Matsushita (Panasonic) Deflection Yoke

6-8-4 (a) Horizontal Line Red and Blue Balance Convergence

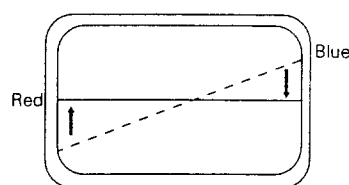


Figure 6-14. Horizontal Line Balance Misconvergence

Use a #0 hexdriver at the Horizontal Balance Coil (Xv). Turning the VR to the right raises the right end of the blue line and lowers the left end. Turning the VR to the left lowers the right end of the blue line and raises the left end.

6-8-4 (b) Vertical Red and Blue Balance Convergence

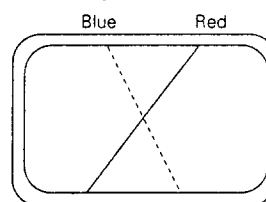


Figure 6-15. Vertical Line Balance Misconvergence

Use a #0 screwdriver (flat-head [—] for Samsung and Hitachi DYs and phillips type [+] for Matsushita [Panasonic] DYs) at the YH variable register. Turning the VR to the left tilts the blue line to the right. Turning it to the right tilts the blue line to the left.

6-8-4 (c) Upper and Lower Horizontal Line Convergence

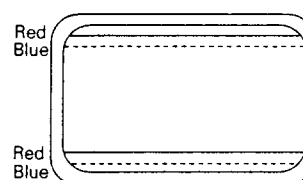


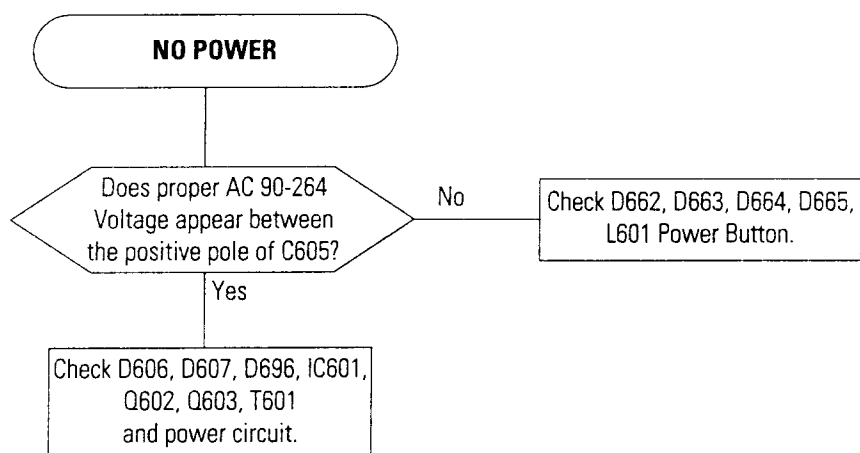
Figure 6-16. Upper and Lower Balance Misconvergence

Use a #0 screwdriver (flat-head [—] for Samsung and Hitachi DYs and phillips type [+] for Matsushita [Panasonic] DYs) at the Yv variable register. Turning the VR to the left moves the blue line at the top upward and at the bottom the line moves downward. Turning it to the right moves the blue line at the top downward and at the bottom the line moves upward.

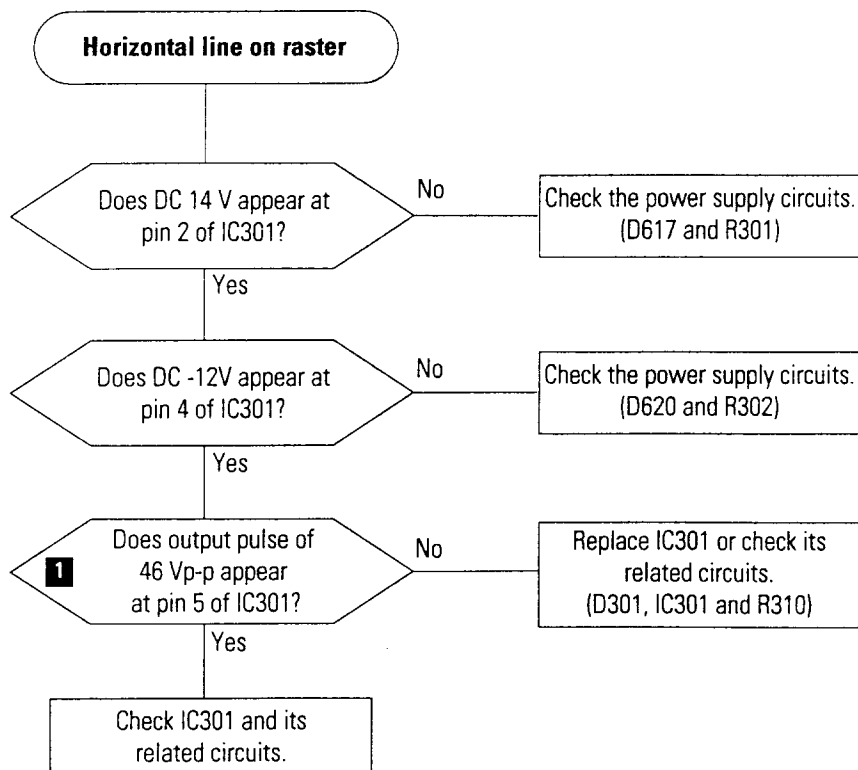
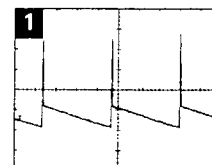
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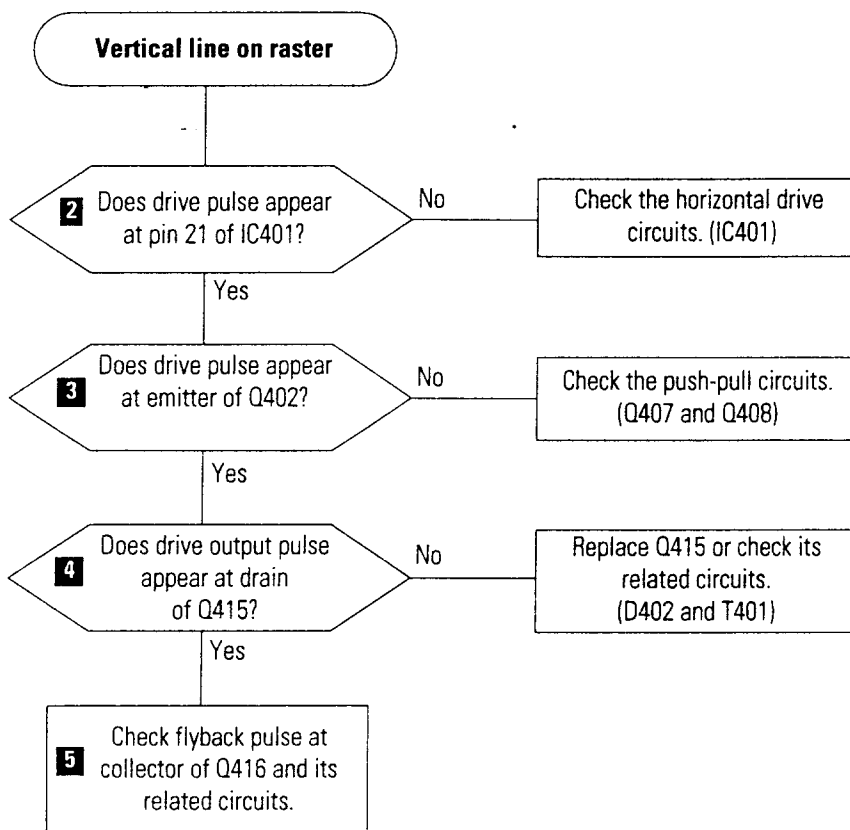
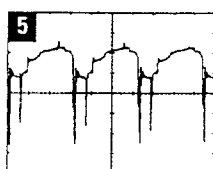
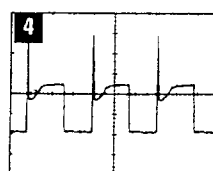
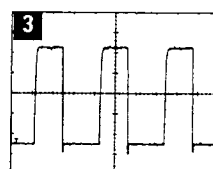
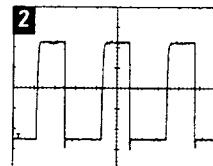
7 Troubleshooting

- Notes:** 1. If picture does not appear, fully rotate the brightness and contrast controls clockwise before inspection.
2. Check the following circuits:
- No raster appears: Power circuit, horizontal output circuit, H/V control circuit and H/V output circuit.
 - High voltage develops but no raster appears: Video output circuits.
 - High voltage does not develop: Horizontal output circuits.

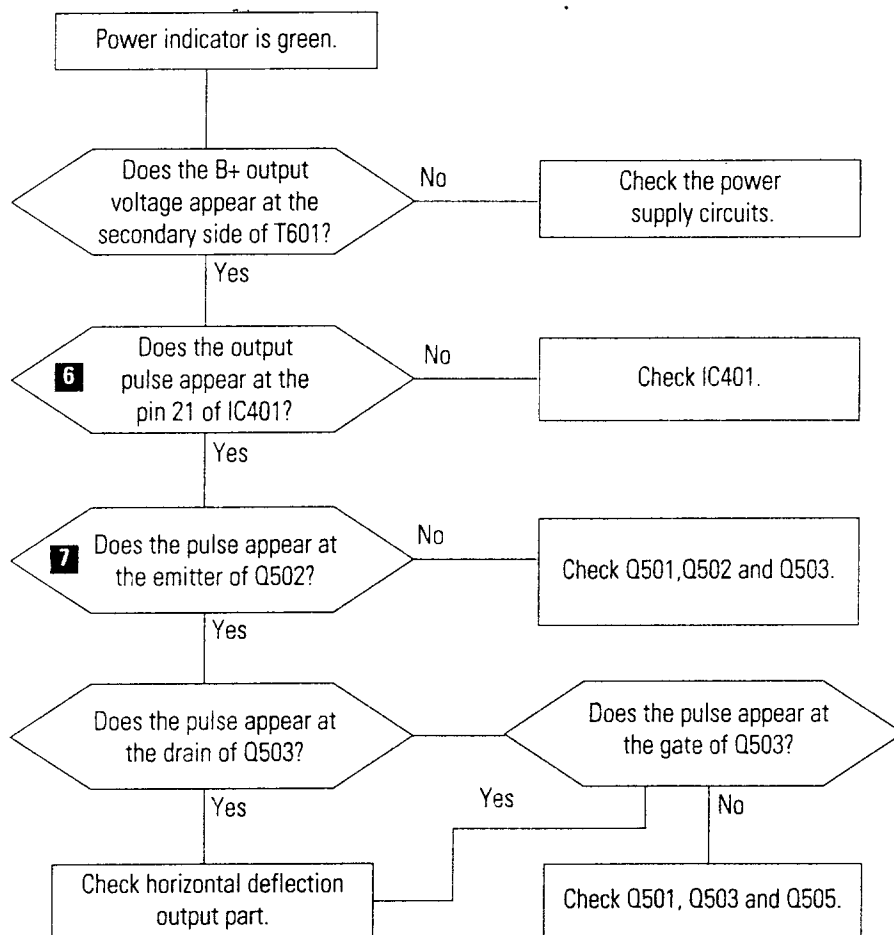


WAVE FORMS

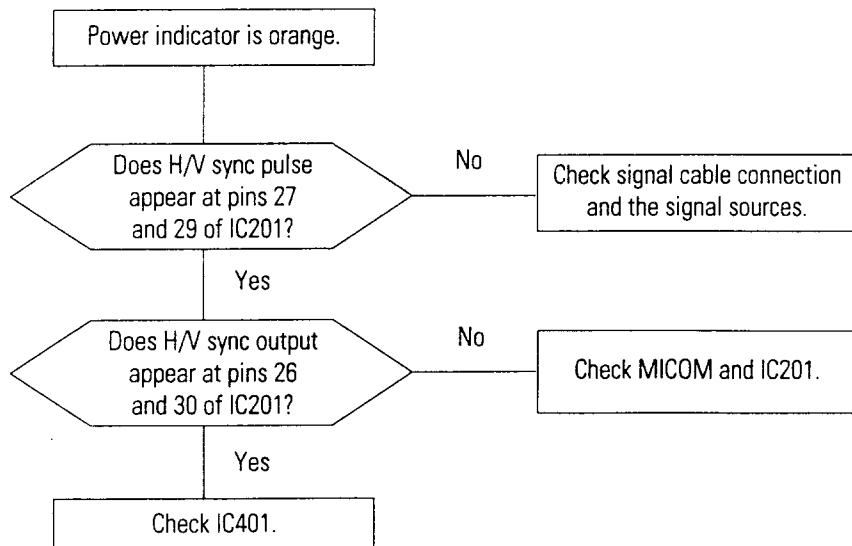
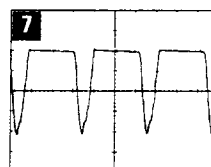
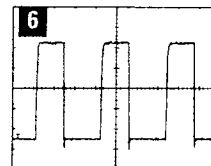


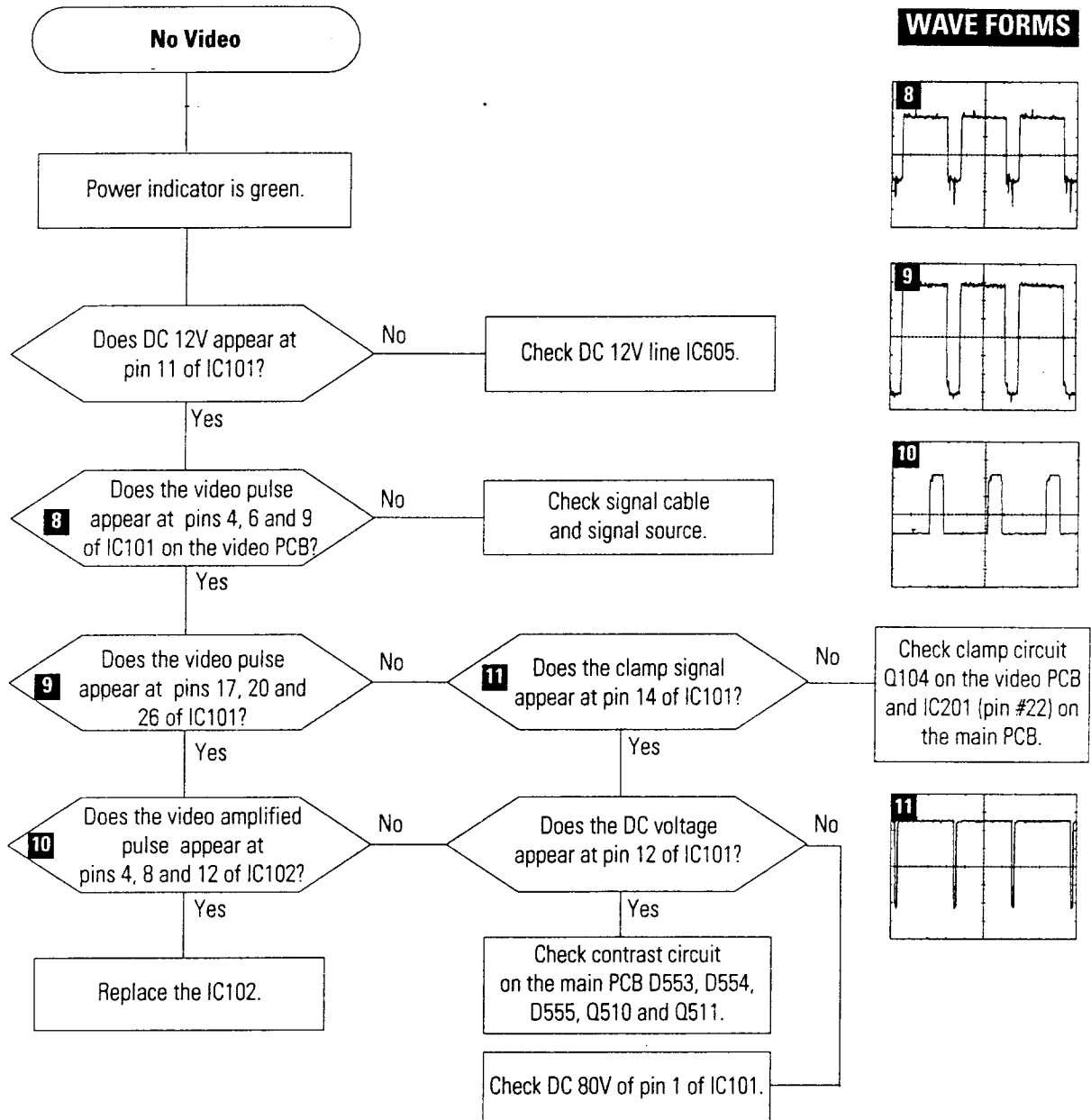
**WAVE FORMS**

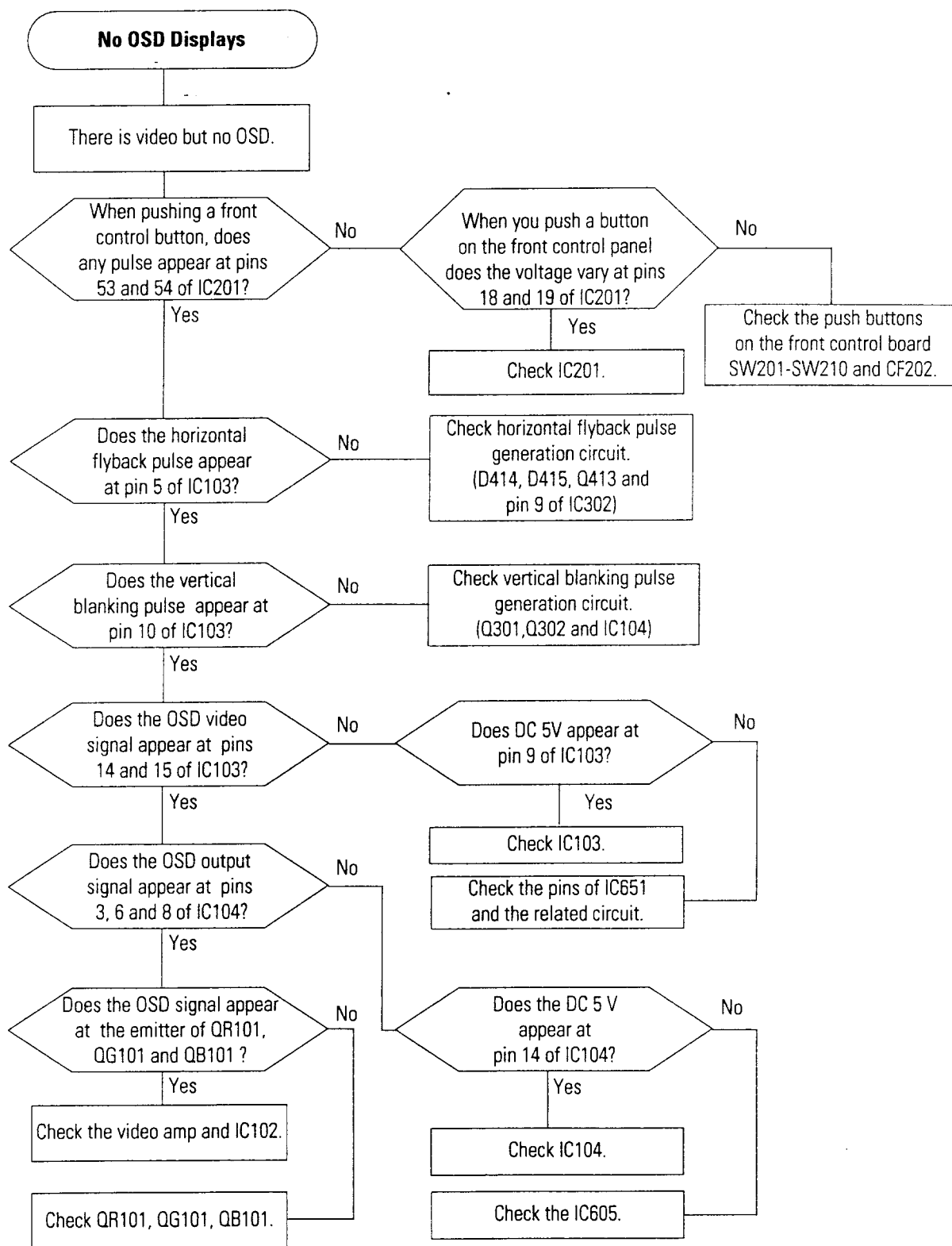
No raster

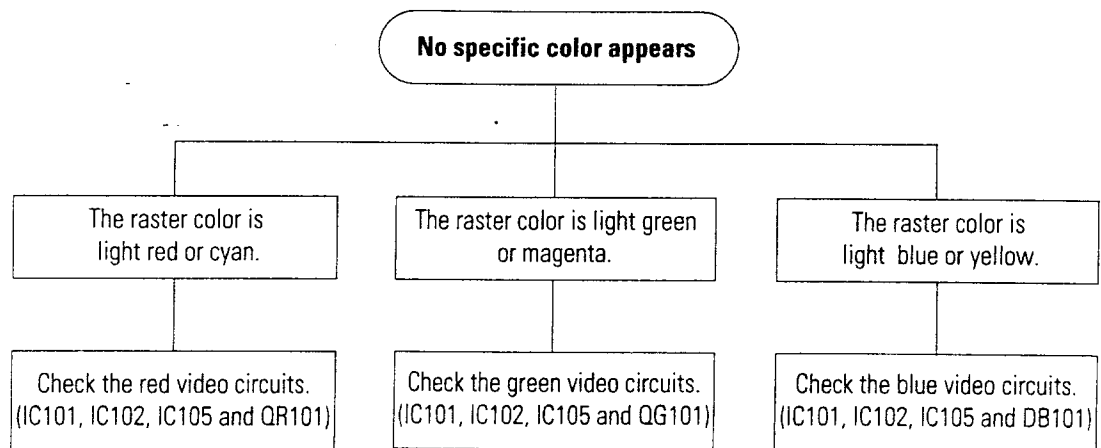


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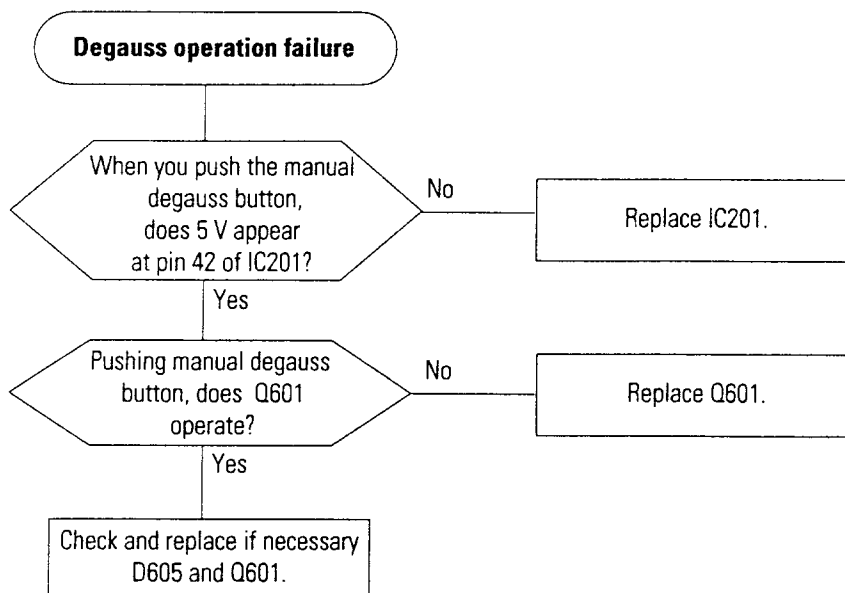








Note: Removing the signal cable displays a self raster screen. This screen displays the message "check signal cable" along with red, green and blue boxes. Use these boxes to check whether each individual color (R, G, B) is operating or not.



Power save management system failure

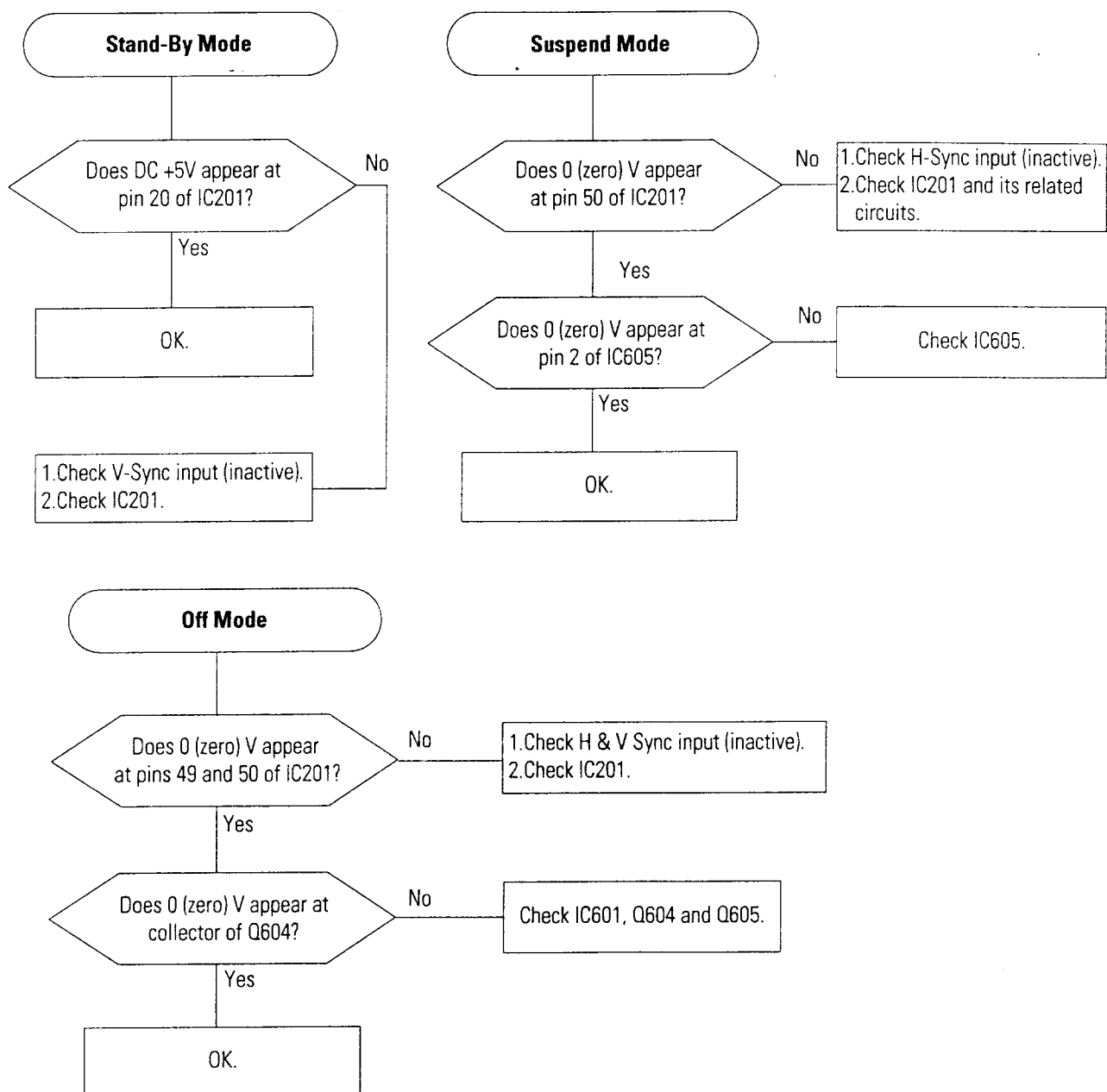


Table 9-2. DPMS Logic Table

Mode	SYNC		Video	LED Color
	H	V		
Normal	Active	Active	Active	Green
Stand-By	Inactive	Active	Blank	Orange
Suspend	Active	Inactive	Blank	Orange/Green blinking
Off	Inactive	Inactive	Blank	Orange blinking

Note: If signal cable is removed, DPMS function does not operate and a self raster displays.

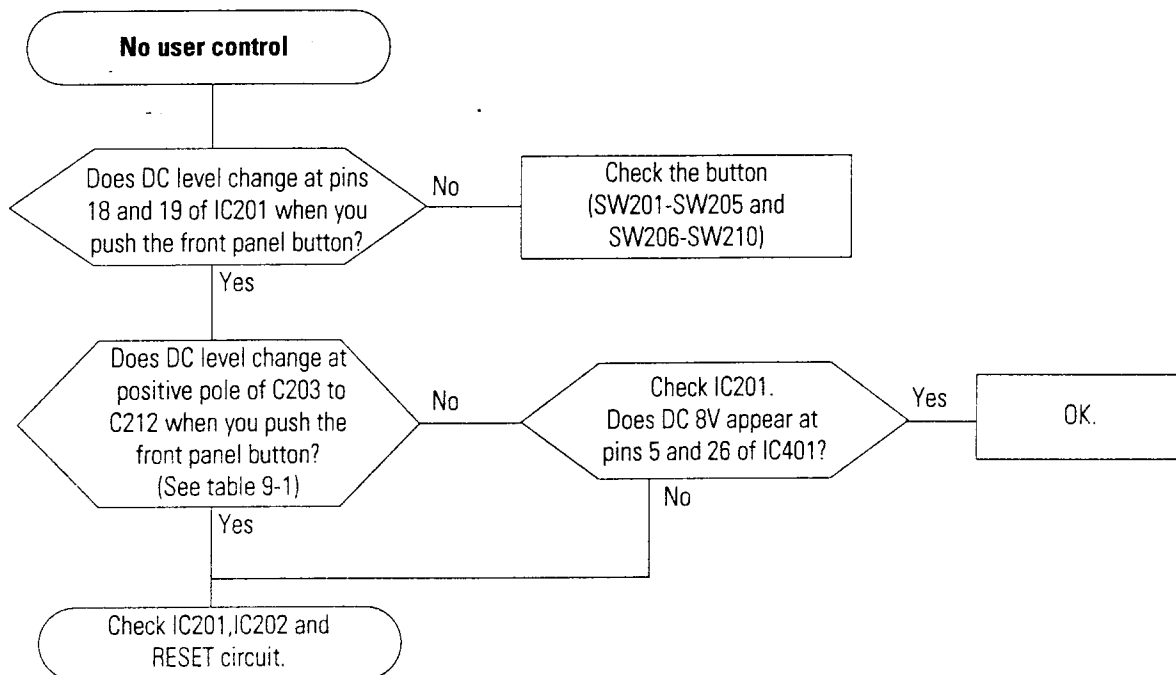
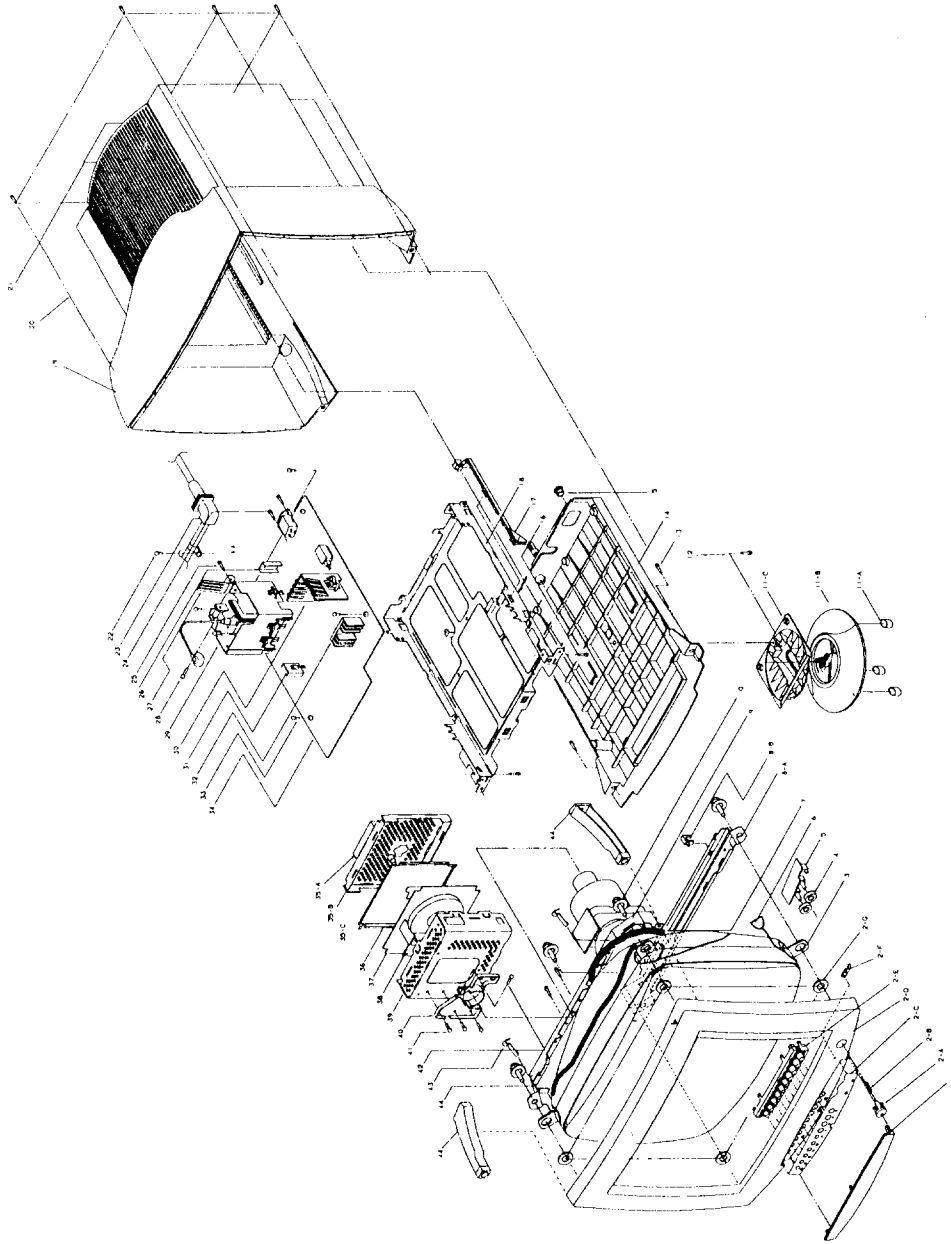


Table 9-1. Front Panel Button

Location	Function
C203	Pinbalance
C205	Vertical Linearity
C206	Horizontal Size
C207	Vertical Size
C208	Horizontal Position
C209	Vertical Position
C210	Side Pincushion
C211	Trapezoid
C212	Parallelogram

8 Exploded View and Parts List



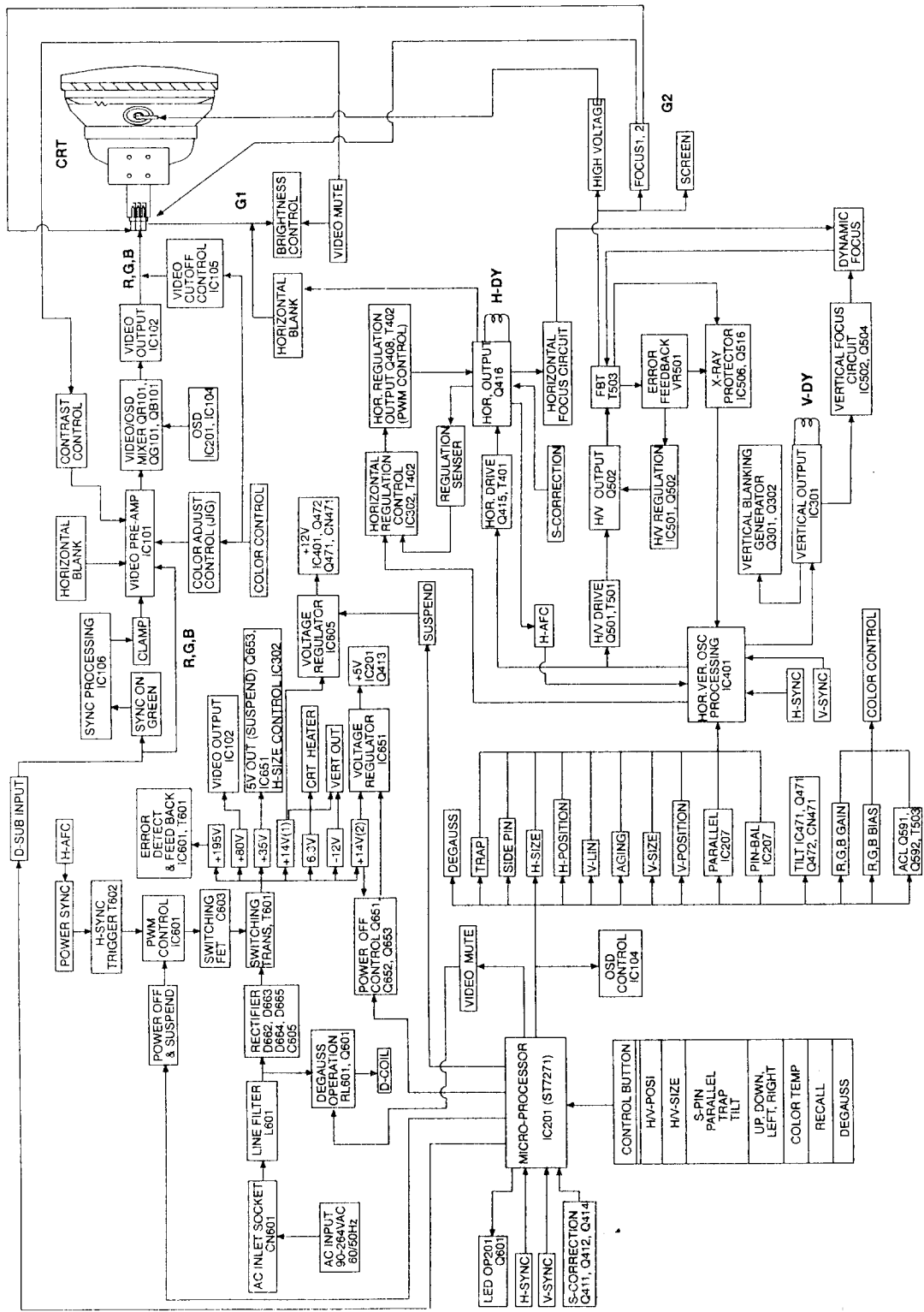
(▲) : Caution, ● : Specialty part for this monitor only, ▲ : ESD Caution

No.	Description	Code No.	Specification	QTY	Remarks
1	PLT. DOOR-CONTROL	821 467040AA	ABS C726Z	1	▲
2	ASSY COVER FRONT	BH75-10010A	SC-728FXL	1	●
2-A	PLT. KNOB-POWER	BH64-10013A	ABS C726Z	1	●
2-B	PLT. KNOB-POWER	831 522033AA	SPS2 0.0 05	1	●
2-C	LABEL-INPUT	BH68-40001C	PC T0.254 C726Z	1	●
2-D	PLT. COVER-FRONT	BH72-60020A	ABS C726Z	1	●
2-E	PLT. KNOB-FUNCTION	BH64-10014A	ABS C726Z	1	●
2-F	PLT. LENS-LED	821 468252AA	ACRYL	1	●
2-G	CRT-RUBBER	5031-000010	NEOPRENE YELLOW	4	▲
3	17" COLOR CRT	—	SC-728FXL	1	▲
4	COM. KNOB-VH	BH64-10015A	ABS C726Z	2	▲
5	ASSY-VH PCB	—	SC-728FXL	1	▲
6	ASSY CRT-GROUND	955 460435AAAA	TBC WIRE 3X16X0.16	1	▲
7	ASSY D-COIL	925 460193AA	SC-728FXL	1	▲
8	ASSY SUPPORT-CRT	811 460044AA	SC-728FXL	1	▲
8-A	IMP. SUPPORT-CRT	813 460287AA	SECC 1 T1.0	1	▲
8-B	COM. MISCEL CLAMP	857 170024EA	DAWS-IN-1	3	▲
9	IMP BRKT-CRT	—	SECC T1.0	1	▲
10	TAPITE, SCREW-CRT	847 502004BC	M6 L20 ZPC3 SWCH18	4	▲
11	SUA. STAND ASSY	811 460056AA	SC-728FXL	1	▲
11-A	RUBBER-FOOT	831 313024AB	NEOPRENE V1 8GE	4	▲
11-B	PLT. STAND BASE	821 463106AA	ABS C726Z	1	▲
11-C	PLT. STAND-TOP	821 463097AB	ABS C726Z	1	▲
12	TAPITE, BH 4X12	847 501007FB	M4 L12 ZPC3 SWCH18A	1	▲
13	TAPITE, BH 4X16	847 501007FC	M4 L16 ZPC3 SWCH18A	2	▲
14	PLT. COVER-BOTTOM	BH72-60022A	ABS C726Z	1	▲
15	PLT. CAP-MICOMI	821 468294AA	ABS C726Z	1	▲
16	TAPITE, W/WX3X10	847 502005AA	M3 L10 ZPC3 SWCH18A	2	▲
17	PLT. SHAFT-POWER	821 468028AA	PC-ABS 75064	1	▲
18	IMP. BRACKET-PCB	813 460281AA	SECC T1.0	1	▲
19	PLT. C-REAR	BH72-60021A	ABS C726Z	1	▲
20	TAPITE, BH 4X16	847 501007FC	M4 L16 ZPC3 SWCH18A	6	▲
21	INC. LABEL-RATING	825 139500AE	PE T0.075	1	▲
22	TAPITE, W/WX3X10	847 502005AA	M3 L10 ZPC3 SWCH18A	1	▲
23	SIGNAL CABLE	955 460569AAAA	CBF-S/CABLE, 1830MM, 19P	1	▲
24	TAPITE, FH 3X10 BLK	842 243013AC	M3 L8 ZPC3	2	▲
25	TAPITE, W/WX3X10	847 502005AA	M3 L10 ZPC3 SWCH18A	1	▲
26	COM. H/S-TR	831 513021AA	SPCC T1.0 SN FT-2	1	▲
27	NMP. EARTH-PLATE	815 462007BB	PE63, SP-H T0.3	1	▲
28	TAPITE, BH 4X12	847 501007FB	M4 L12 ZPC3 SWCH18A	1	▲
29	COM. H/S-FBT	831 516034AA	A105AS T1.6	1	▲
30	COM. H/S-POWER	831 515030AA	A105AS T3.0	1	▲
31	COM. H/S-TR	831 513021AA	SPCC T1.0 SN FT-2	1	▲
32	COM. H/S-IC	831 512001AB	A6063 EXTR WHIT	1	▲
33	TAPITE, W/WX3X10	847 502005AA	M3 L10 ZPC3 SWCH18A	5	▲
34	MAIN-PCB	947 460464AA	SC-728FXL	1	▲
35	SUA. ASSY-S/CRT PCB	811 468043AA	SC-728FXL	1	▲
35-A	PLT. RUBBER-SPONGE	831 312009AA	NEOPRENE BLK	1	▲
35-B	NMP. SHIELD-CRT PCB	815 464110AA	SPT T0.3	4	▲
35-C	COM. SUPPORT-HOLDER	857 170022AB	DAWS-9N	1	▲
36	IMP. SUPPORT-S/VIDEO	815 464126AA	SPT T0.3	1	▲
37	VIDEO-PCB	947 460468AA	SC-728FXL	1	▲
38	COM. H/S-PACK	831 516030BA	A105AS T2.0	1	▲
39	NMP. S/CASE-VIDEO	815 464111AA	A105AS T1.0	1	▲
40	PLT. HOLDER-CRT	821 468263AA	PC(BLK), CMG7377	1	▲
41	TAPITE, W/WX3X10	847 502005AA	M3 L10 ZPC3 SWCH18A	3	▲
42	TAPITE PH 4X15	842 344028BF	PH, -2, M4, L15 SUS	1	▲
43	COM. CLAMP D.G COIL	—	—	1	▲
44	PLT. SUPPORT-CONNECTOR	BH61-30002A	PC-ABS C726Z	2	▲

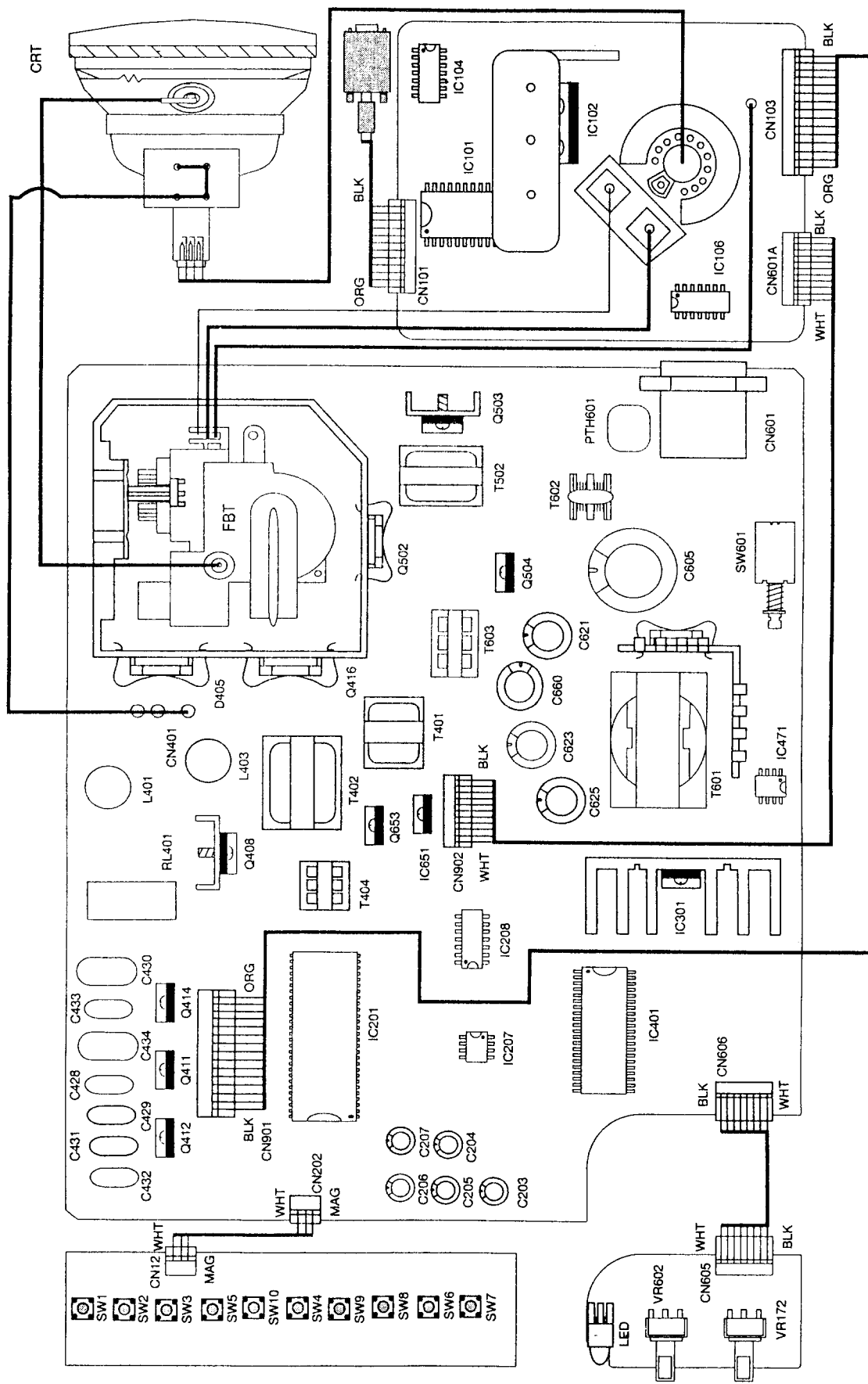
Memo

9 Servicing Diagrams

9-1 Block Diagram



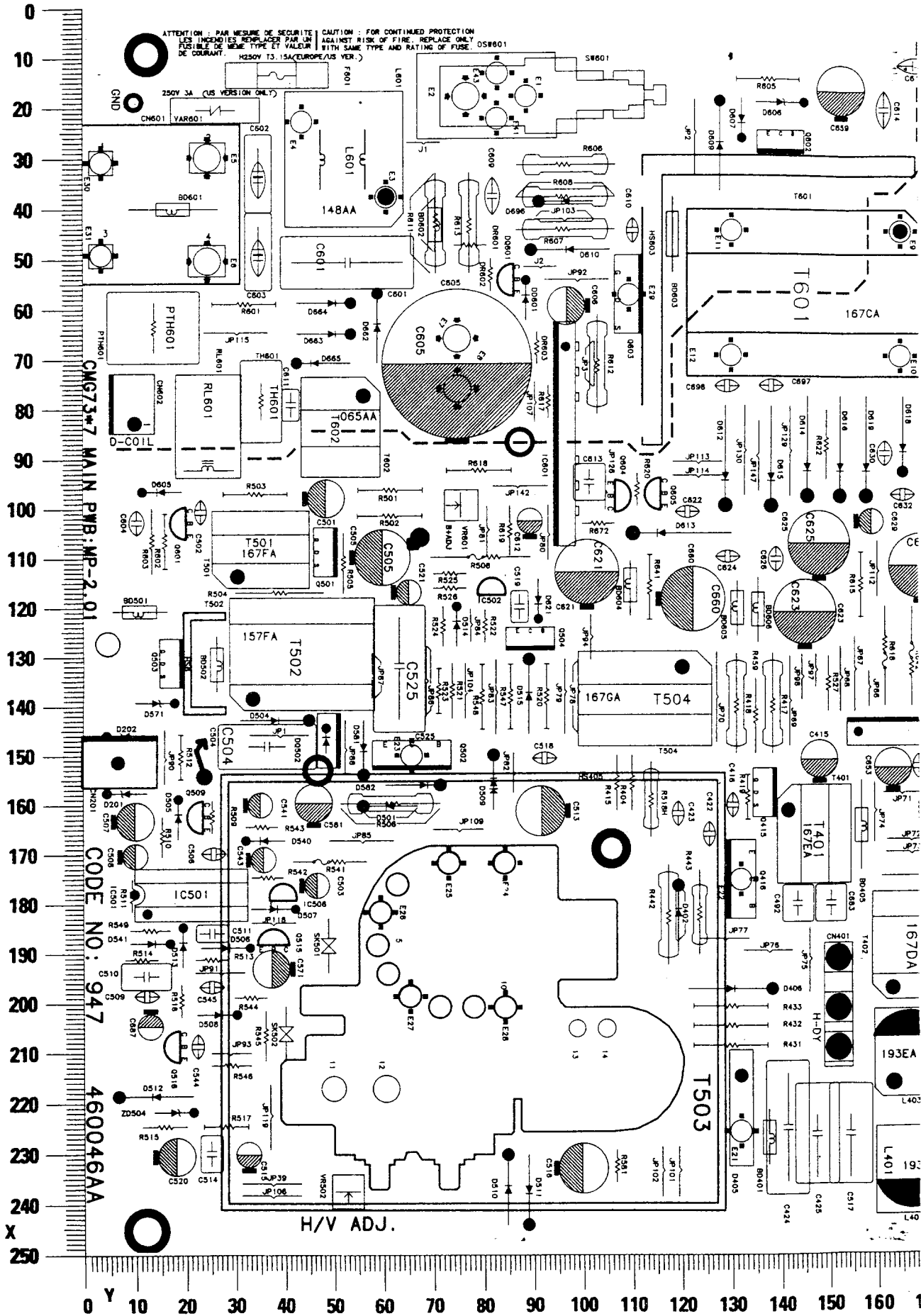
9-2 Wiring Diagram

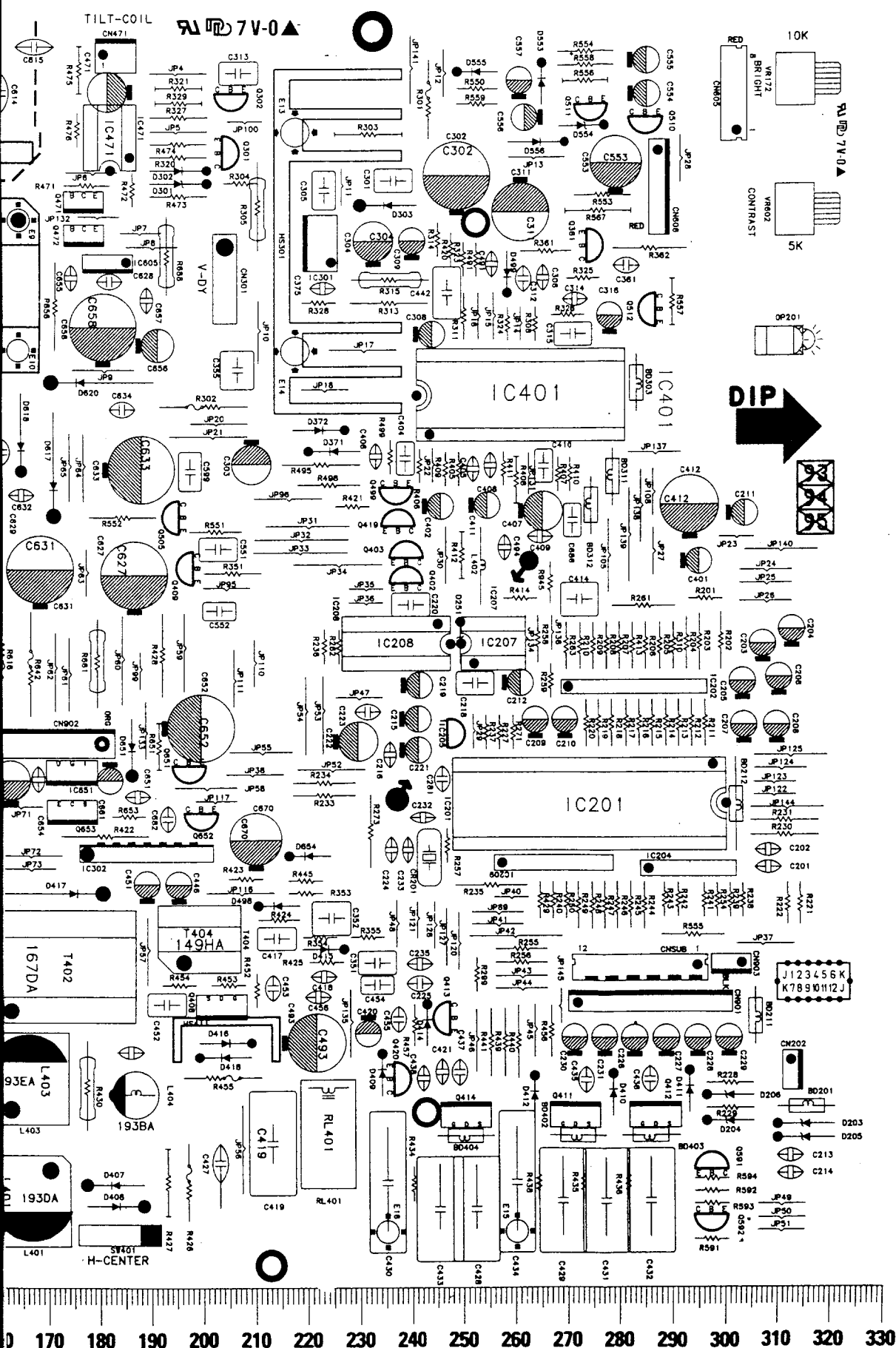


9-3 PCB Layout and Electrical Parts List (Updated PCB Layout)

9-3-1 PCB Layout

Main Top View

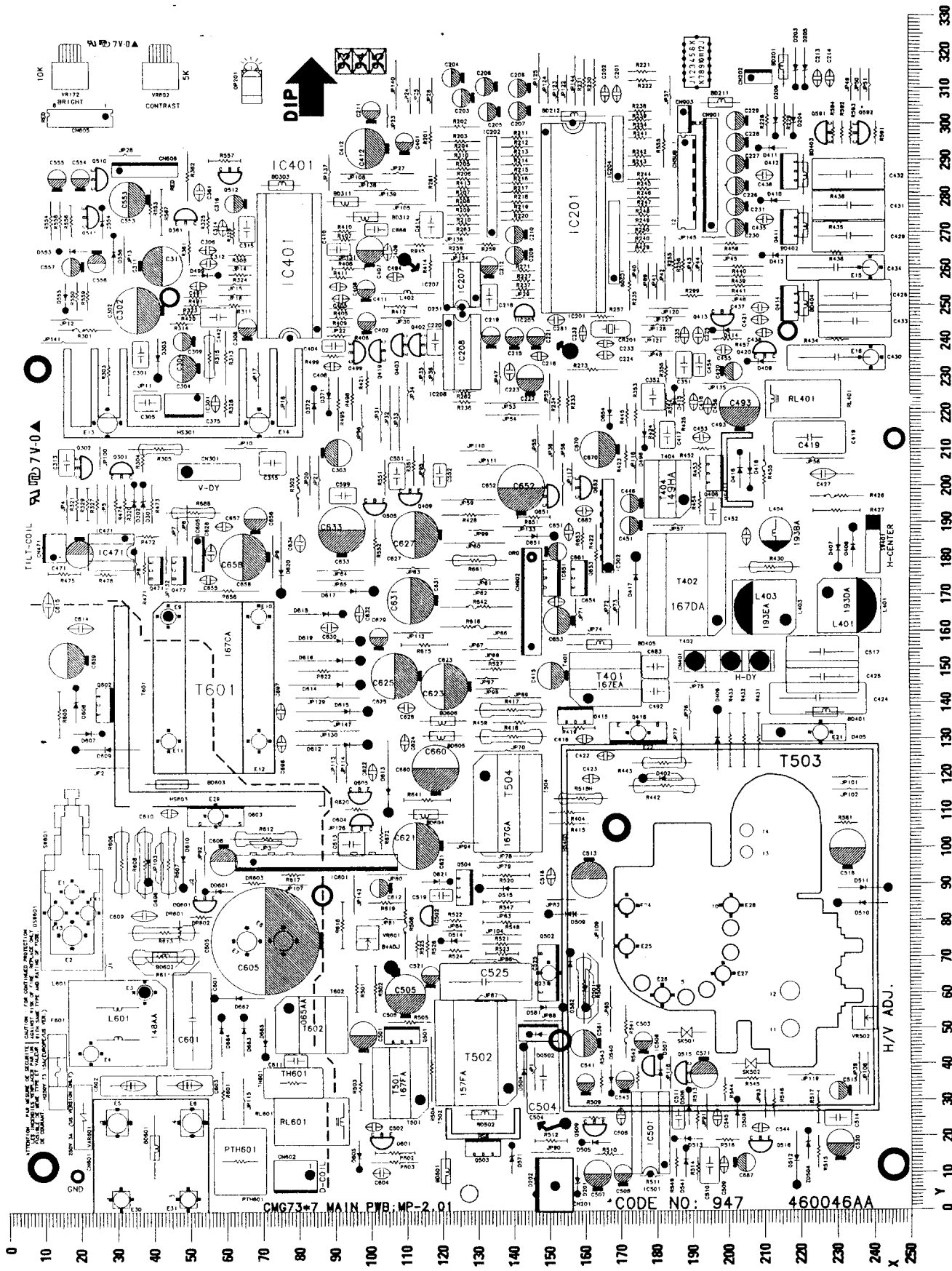




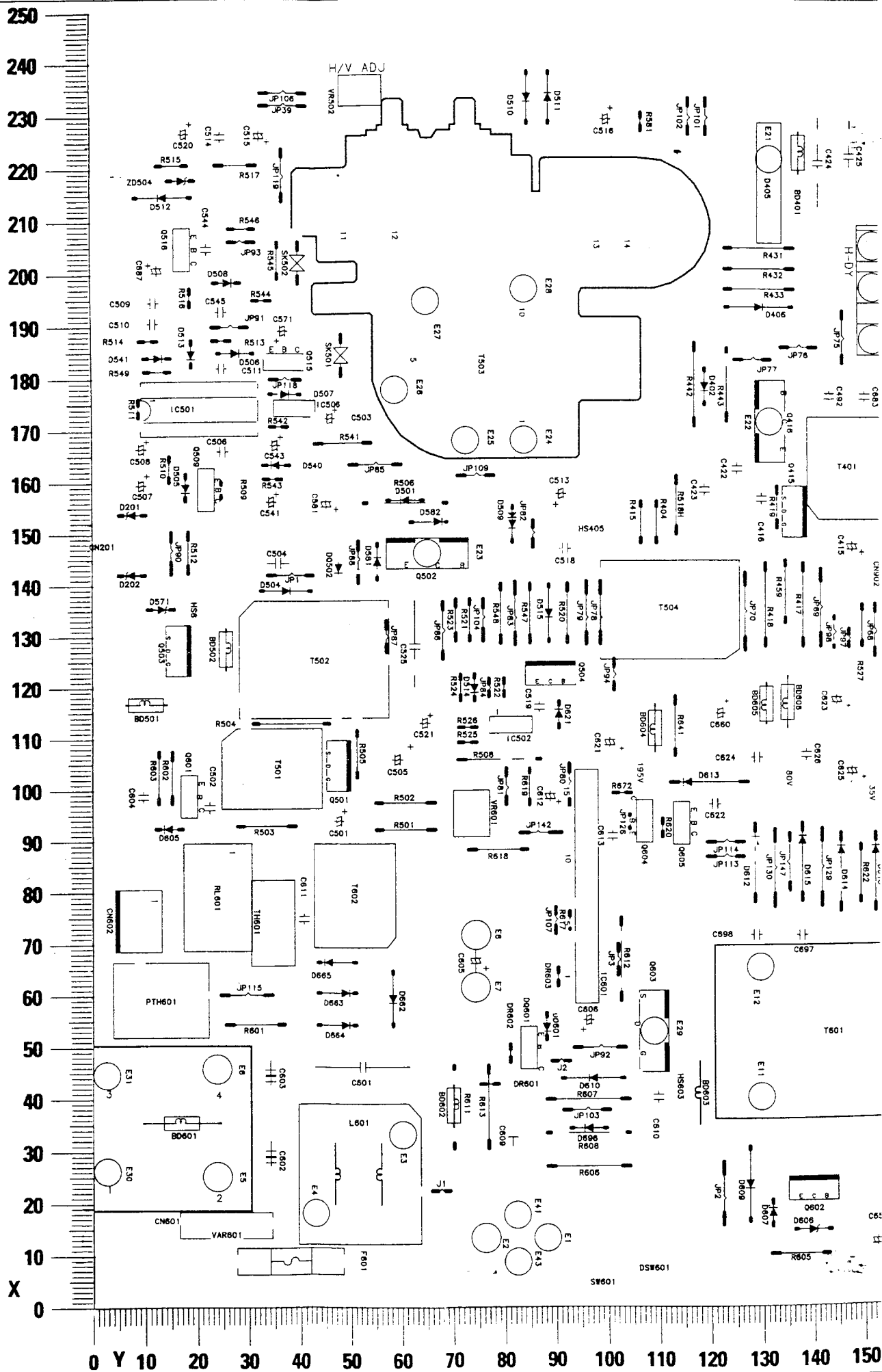
9-3 PCB Layout and Electrical Parts List (Updated PCB Layout)

9-3-1 PCB Layout

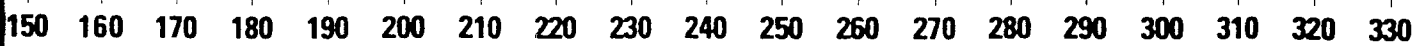
Main Top View

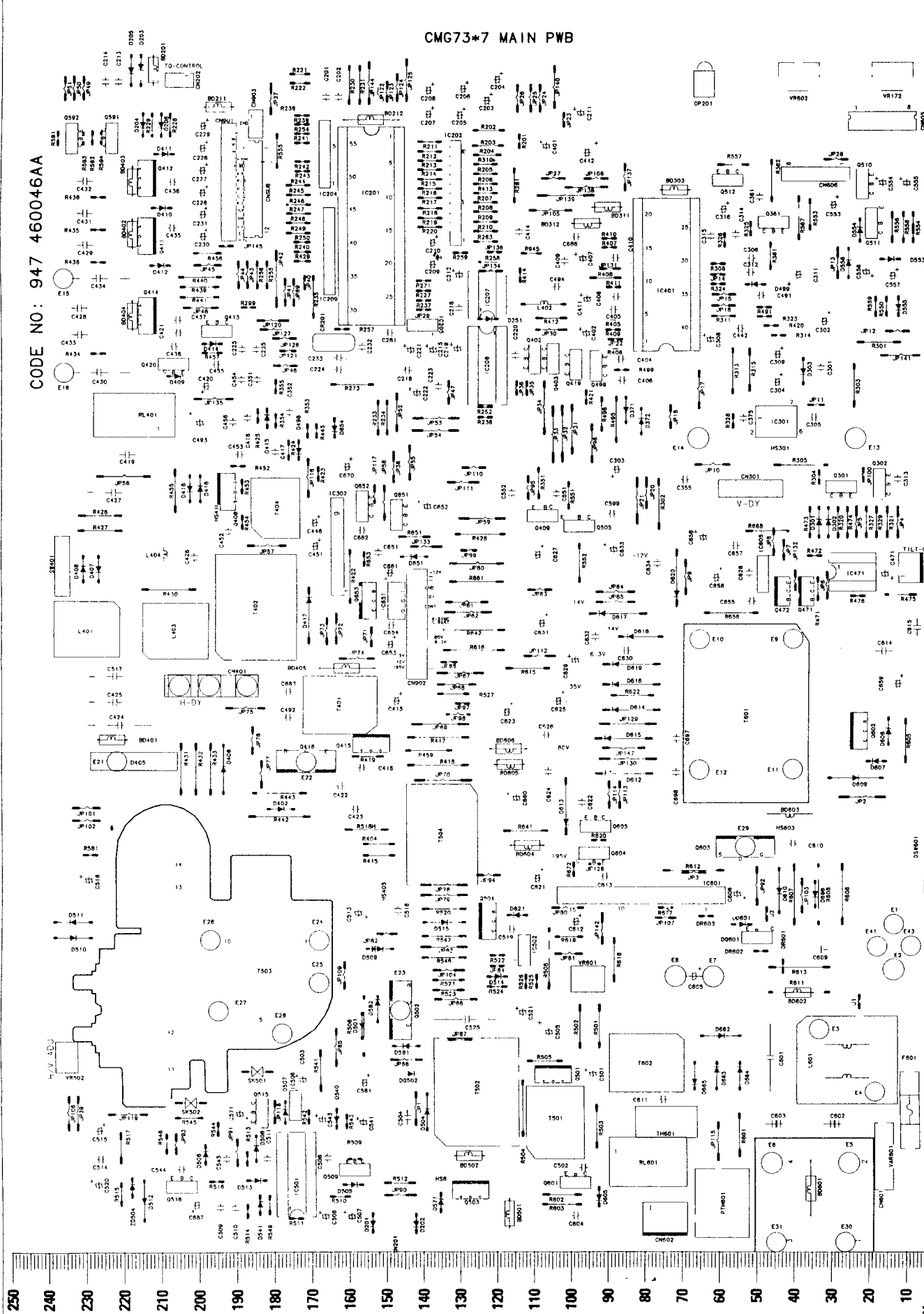
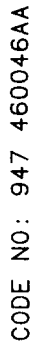


Main Bottom View



CMG73*7 MAIN PWB





9-3-2 Main PCB Parts

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
BD201	211.8	312.9	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD211	188.7	308.7	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD212	144.5	305.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD303	66.8	286.4	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD311	96	281.8	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD312	101.5	277.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD401	217.3	139	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD402	217.2	280.1	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD403	217.2	294.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD404	217.3	258.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD405	151.3	158.3	937 120213AA	AM MAG-CORE FERRITE BEAD	ST 02429-048-017	
BD501	117	17.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD502	122.1	27.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD601	36.3	27.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD602	33.9	71.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD603	49.2	119.4	937 120213AA	AM MAG-CORE FERRITE BEAD	ST 02429-048-017	
BD604	118.1	110.9	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD605	122.2	132.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD606	123.5	136.8	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
C201	165.6	313.8	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,--,Y5P,DISC-RADI	
C202	162.3	313.8	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,--,Y5P,DISC-RADI	
C203	120.1	310.5	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C204	117.3	316.1	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C205	127.3	306.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C206	126.5	313.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C207	135.7	306.8	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C208	135.7	313.1	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C209	134.7	266.5	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C210	134.7	272.3	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C211	97.5	309.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C212	130.1	266.2	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C213	221.1	312.8	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C214	224.5	312.8	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C215	137.1	246.2	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C216	146.5	238.2	915 324100HZVH	CAP-CERAMIC,102Z,1H,Y5V	1NF,50V,-20TO80%,-80TO30%,Y5V	
C218	130.2	257.3	916 566220JJAH	CAP-MPETP,224J,1J,5P	(T)63V 224J	
C219	130.6	246.5	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C220	115.1	239.8	916 566220JJAH	CAP-MPETP,224J,1J,5P	(T)63V 224J	
C221	143.1	246.2	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C222	141.4	234.6	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C223	135.7	236.4	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C224	164.8	238.4	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,--,Y5P,DISC-RADI	
C225	188.1	246.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C226	196	285.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C227	196	291.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C228	196	297.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C229	195.9	303.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C230	195.9	273.9	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C231	195.9	279.8	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C232	156.1	247	915 312390HJHH	CAP-CERAMIC,390J,1H,SL	39PF,50V,5%,P350TON1000PPM,SL	
C233	164.8	241.6	915 312390HJHH	CAP-CERAMIC,390J,1H,SL	39PF,50V,5%,P350TON1000PPM,SL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C235	184.3	246.3	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,--,Y5P,DISC-RADI	
C281	146.2	248.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C301	33.5	236.4	916 566100JJAHA	CAP-MPETP,104J,1J,5P	(T)63V 104J	
C302	30	251.2	917 864220EMAH	CAP-AL.ELEC,228M,1E,85C	(T)2200UF,25V,20%,R-RADIAL	
C303	90.5	211.6	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C304	42.6	235	917 863220FMAH	CAP-AL.ELEC,227M,1V,8X11.5	(T)220UF,25V,20%,R-RADIAL	
C305	37.8	225.6	916 566220JJAHA	CAP-MPETP,224J,1J,5P	(T)63V 224J	
C306	54.5	268.1	915 323470HKPH	CAP-CERAMIC,471K,1H,Y5P	470PF,50V,10%,10%,Y5P,DISC-RADI	
C308	63	248.9	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C309	43.3	242.6	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C311	41.9	263.7	917 863470EMAH	CAP-AL.ELEC,477M,1E,10x12.5	(T)470UF,25V,20%,R-RADIAL	
C312	54.7	264.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C313	12.9	206.6	916 165330LKAH	CAP-MYLAR,333K,2A,5P	(T)100V 333K	
C314	56.2	271.9	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C315	62.9	276.5	916 566270JKAHA	CAP-MPETP,274K,1J,5P	270NF,63V 10%,RE-RADIAL	
C316	56.9	281.2	917 120470HM	CAP-AL.ELEC,474M,1H	(T)50V 0.47M	
C351	184.1	233.1	916 565100LKAH	CAP-MPETP,103K,2A,5P	(T)100V 103K	
C352	175.4	229.3	916 567100JKAHA	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C355	72.3	208.9	916 567100JKAHA	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C361	49.8	282	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C375	54.1	227.8	915 324470HKPH	CAP-CERAMIC,472K,1H,Y5P	4.7NF,50V,10%,10%,Y5P,DISC-RADI	
C401	106.7	300.8	917 122470EM	CAP-AL.ELEC,476M,1E	(T)25V 47M	
C402	96.1	250.6	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C404	84.4	241.2	916 165220LJAHA	CAP-MYLAR,223J,2A,5P	(T)100V 223J	
C405	91.4	254.4	915 163470LJXH	CAP-CERAMIC,471J,2A,MONO	470PF,100V,5%,NPO,RE-RADIAL,DIP	
C406	89	235.5	915 163100HKXH	CAP-CERAMIC,101K,1H,DISC	100PF,50V,10%,COG,RE-RADIAL,DIP	
C407	97	270.6	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C408	85.7	257.8	915 163680HJXH	CAP-CERAMIC,681J,1H,MONO	680pf,50V,5%,COG,RE-RADIAL	
C409	101.9	270	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C410	85.8	268.2	916 165220LJAHA	CAP-MYLAR,223J,2A,5P	(T)100V 223J	
C411	95.9	259.7	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C412	93.3	296.5	917 863470EMAH	CAP-AL.ELEC,477M,1E,10x12.5	(T)470UF,25V,20%,R-RADIAL	
C414	114	277.7	916 567100JKAHA	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C415	144.5	149.5	917 812470HM	CAP-AL.ELE,476M,1H,5X11,105C	(T)50V 47M	
C416	158.7	131.7	915 164100LJXH	CAP-CERAMIC,102J,2A,MONO	1NF,100V,5%,NPO,RE-RADIAL,DIPPE	
C417	179.3	213.7	916 165270LJAHA	CAP-MYLAR,273J,2A,5P	(T)100V 273J	
C418	186.7	222.8	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,--,Y5P,DISC-RADI	
C419	222.9	206.5	916 355180TJAL	CAP-PPF,183J,2G(20X13.5	18NF,400V 5%,RE-RADIAL	
C420	200.2	233.8	917 122470EM	CAP-AL.ELEC,476M,1E	(T)25V 47M	
C421	207.6	248.1	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C422	164.5	126.9	915 323220YKPH	CAP-CERAMIC,221K,3D,Y5P	220PF,2KV,10%,10%,Y5P,DISC-RADI	
C423	160.4	120.6	915 324100XKPH	CAP-CERAMIC,102K,3A,DISC	1KV,10%,Y5P,DISC-RADIAL	
C424	231.7	142.9	916 944300YJAHA	CAP-MPE/PPF,302J,3C,20P	2NF,1.6KV,5%,RE-RADIAL	
C425	226	149	916 944220YJAL	CAP-MPE/PPF,222J,3C,7.5P	2.2NF,1.6KV,5%,RE-RADIAL	
C427	218.7	213.9	915 324470VKPH	CAP-CERAMIC,472K,2H,Y5P	4.7NF,500V,10%,10%,Y5P,DISC-RAD	
C428	235.1	254.7	916 656150QJAL	CAP-MPPF,154J,2E,7.5P	150NF,250V 5%,RE-RADIAL	
C429	233.5	271.5	916 656150QJAL	CAP-MPPF,154J,2E,7.5P	150NF,250V 5%,RE-RADIAL	
C430	235.6	237.5	916 656680QJAHA	CAP-MPPF,684J,2E,20P	680NF,250V,5%,--,RE-RADIAL	
C431	233.5	280	916 656100QJAL	CAP-MPPF,104J,2G,12.5P	250V 104J	
C432	233.5	288.6	916 656150QJAL	CAP-MPPF,154J,2E,7.5P	150NF,250V 5%,RE-RADIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C433	235.1	247.6	916 656150QJAL	CAP-MPPF,154J,2E,7.5P	150NF,250V 5%,RE-RADIAL	
C434	235.6	262.6	916 656680QJAH	CAP-MPPF,684J,2E,20P	680NF,250V,5%,RE-RADIAL	
C435	209.1	276.2	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C436	209	288.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C437	207.7	251.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C438	208.8	244.5	915 324100HZVH	CAP-CERAMIC,102Z,1H,Y5V	1NF,50V,-20TO80%,-80TO30%,Y5V	
C442	57.5	249.3	916 165680LJAH	CAP-MYLAR,683J,2A,5P	(T)100V 683J	
C446	166.3	197.4	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C451	166.2	191.2	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C452	191.9	192.5	916 165470LJAH	CAP-MYLAR,473J,2A,5P	(T)100V 473J	
C453	191.3	215.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C454	188.3	238.1	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C455	192.5	239.7	915 31330HJHH	CAP-CERAMIC,331J,1H,SL	330PF,50V,5%,SL,RADIAL	
C456	190.6	226.7	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,Y5P,DISC-RADI	
C471	16.4	181.2	917 221330HMAH	CAP-AL.NP-ELEC,335M,1H,6X11	(T)50V 3.3M	
C491	51.9	258.1	915 324100HKPH	CAP-CERAMIC,102K,1H,Y5P	1NF,50V,10%,10%,Y5P,DISC-RADIAL	
C492	173.5	145	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C493	199.4	226.4	917 862220QMAH	CAP-AL.ELEC,226M,2E,10X20	(T)22UF,250V,20%,R-RADIAL	
C494	101.5	260.6	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C501	94.4	52	917 122470HM	CAP-AL.ELEC,476M,1H	(T)50V 47M	
C502	94.6	24	915 163470LJXH	CAP-CERAMIC,471J,2A,MONO	470PF,100V,5%,NPO,RE-RADIAL,DIP	
C503	172.1	50.2	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C504	144.2	33.7	916 354100ZKAL	CAP-PPF,102K,3D,17.5P	2KV 102K	
C505	106.2	63.4	917 862220QMAH	CAP-AL.ELEC,226M,2E,10X20	(T)22UF,250V,20%,R-RADIAL	
C506	165.7	24.1	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C507	159.2	13.3	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C508	166.2	13.3	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C509	194.3	15.6	915 323680HKPH	CAP-CERAMIC,681K,1H,Y5P	680PF,50V,10%,10%,Y5P,DISC-RADIA	
C510	190.3	15.5	916 166100LJAH	CAP-MYLAR,104J,2A,5P	(T)100V 104J	
C511	181.7	23.8	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C513	157.3	90.2	917 742100QM	CAP-AL.ELE,106M,2E,10X20	(T)250V 10M	
C514	223.5	26.1	916 566100JJAH	CAP-MPETP,104J,1J,5P	(T)63V 104J	
C515	223.7	33.7	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C516	229	103.9	917 123100FM	CAP-AL.ELEC,107M,1V	(T)35V 100M	
C517	218.5	156	916 655470TJAL	CAP-MPPF,473J,2G,7.5P	47NF,400V 5%,RE-RADIAL	
C518	146.7	96	915 324100VKPH	CAP-CERAMIC,102K,2H,Y5P	1NF,500V,20%,10%,Y5P,DISC-RADIA	
C519	113.7	88.4	916 164470LJAH	CAP-MYLAR,472J,2A,5P	(T)100V 472J	
C520	226.6	21.6	917 122470HM	CAP-AL.ELEC,476M,1H	(T)50V 47M	
C521	113.2	68.7	917 122330EM	CAP-AL.ELEC,336M,1E	(T)25V 33M	
C525	118.2	66.4	916 656330TJAH	CAP-MPPF,334J,2G	330NF,400V 334J,5%,RE-RADIAL	
C541	156	38.6	917 122330EM	CAP-AL.ELEC,336M,1E	(T)25V 33M	
C543	166.9	39.3	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C544	202	23.4	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C545	192.5	23.7	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C551	104.2	207.7	916 566100JJAH	CAP-MPETP,104J,1J,5P	(T)63V 104J	
C552	116.1	207.9	916 164100LJAH	CAP-MYLAR,102J,2A,5P	(T)100V 102J	
C553	27.5	282.4	917 123100FM	CAP-AL.ELEC,107M,1V	(T)35V 100M	
C554	16.9	290.9	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C555	10.5	290.8	917 122100HM	CAP-AL.ELEC,106M,1H	(T)50V 10M	
C556	21.3	261.9	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C557	11.7	263.4	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C571	188.9	35.8	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C581	154.9	47.5	917 312330DK	CAP-TANTAL,336K,1D	(T)33UF,20V,10%,DIP-RADIAL,5MM	
C599	91.8	199.8	916 165270LJAH	CAP-MYLAR,273J,2A,5P	(T)100V 273J	
C601	47	65	918 146470QK	CAP-MPAPER,474K,250VAC	470NF,250VAC,10%,X2,RE-RAD,25.4	
C604	101.7	11.1	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C605	62.4	75.9	917 793330TMAX	CAP-AL.ELEC,337M,2G,30X40	(B)330UF,400V,20%,R-RADIAL	
C606	55.9	95.4	917 743100EM	AM CAP-AL.ELEC,107M,1E,105C	ST 01607-936-101	
C609	30.1	83	915 325100YPUX	CAP-CERAMIC,103P,3D,Y5U	10NF,2KV,-20 TO 80%,-55TO20%,Y5	
C610	43.4	111.3	915 323220YKPH	CAP-CERAMIC,221K,3D,Y5P	220PF,2KV,10%,10%,Y5P,DISC-RADI	
C611	78.1	42.4	916 164150LJAH	CAP-MYLAR,152J,2A,3P	(T)100V 152J	
C612	96.5	90.5	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C613	88.8	102.6	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C614	12.9	163	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
C615	7.8	173.2	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
C621	106.8	102.1	917 862330QMAH	CAP-AL.ELEC,336M,2E,12.5x20	(T)33UF,250V,20%,R-RADIAL	
C622	97.3	120	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C623	114.9	146.5	917 863220LMAH	CAP-AL.ELEC,227M,2A,12.5x22	(T)220UF,160V,20%,R-RADIAL	
C624	106.3	133.2	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C625	101.1	149.5	917 863220LMAH	CAP-AL.ELEC,227M,2A,12.5x22	(T)220UF,160V,20%,R-RADIAL	
C626	104.3	140.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C627	106.7	188.9	917 864220EMAH	CAP-AL.ELEC,228M,1E,85C	(T)2200UF,25V,20%,R-RADIAL	
C628	52.7	186.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C629	99.2	163	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C630	88	163.2	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C631	105.6	170.6	917 864100EMAH	CAP-AL.ELEC,108M,1E,12.5x20	(T)1000UF,35V,20%,R-RADIAL	
C632	93.8	164.4	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C633	88.9	192.8	917 864100EMAH	CAP-AL.ELEC,108M,1E,12.5x20	(T)1000UF,35V,20%,R-RADIAL	
C634	77.3	189.1	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C651	151.9	192	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C652	138.7	204.3	917 864100FMAH	CAP-AL.ELEC,108M,1V,85C	(T)1000UF,35V,20%,R-RADIAL	
C653	146.2	164.8	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C654	146	170.1	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C655	49.5	176.5	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C656	65	196	917 873100EMAH	CAP-AL.ELEC,107M,1E,105C	(T)100UF,25V,20%,R-RADIAL	
C657	53.8	191.3	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C658	59	182.8	917 864100EMAH	CAP-AL.ELEC,108M,1E,12.5x20	(T)1000UF,35V,20%,R-RADIAL	
C659	10.3	154.1	917 122220LM	CAP-AL.ELEC,226M,2A	(T)100V 22M	
C660	114.8	126.1	917 862330QMAH	CAP-AL.ELEC,336M,2E,12.5x20	(T)33UF,250V,20%,R-RADIAL	
C661	151.3	184.1	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C670	157.6	212.3	917 123220EM	AM CAP-AL.ELEC,227M,1E	ST 21609-401-690	
C682	153.7	195.4	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C683	173.5	151.9	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C686	101.3	273.9	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C687	203	13.8	917 122220EM	CAP-AL.ELEC,226M,1E	(T)25V 22M	
C697	72	142	915 312150VJXH	CAP-CERAMIC,150J,2H,DISC	15PF,500V,5%,NPO,DISC-RADIAL	
C698	72.1	128	915 312150VJXH	CAP-CERAMIC,150J,2H,DISC	15PF,500V,5%,NPO,DISC-RADIAL	
CC602	34.2	35.7	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
CC603	49.8	35.7	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
CF1	0	0	955 460555AAAB	CBF-CONN ASSY,100MM,8P	671,5102,5395-08	
CN1	0	0	935 220103BLNA	CON-NOWALL HEADER,3P,1R	STRAIGHT,AU15U,2.54MM,8MM	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
CN201	147.4	7.3	935 720084BA	CON-MINIATURE JACK,3P	.6DIA,7.6X13X6.5MM	
CN202	202.8	315.5	935 240103JA	CON-BOX HEADER,3P,2MM	1R,STRAIGHT,SN	
CN301	46.1	206.5	935 220103TE	CON-NOWALL HEADER,3P,1R	STRAIGHT,SN,-,9.15MM	
CN401	205	153.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN471	9.2	182.9	935 240903DW	CON-WALL HEADER,3P,2.5MM	STRAIGHT,1WALL,SN	
CN601	27	4	943 150034BA	FIL-LPF,EMI,250V,3A	250V,3A,-,2MHZ(30DB)	
CN602	79.3	10.7	935 240903DLSA	CON-WALL HEADER,3P,3.96	STRAIGHT,1WALL,-	
CN605	24	305.5	935 241308KB	CON-WALL HEADER,8P,2MM	ANGLE,3WALL,SN	●
CN606	27.7	290.5	935 240108JA	CON-BOX HEADER,8P,2MM	1R,STRAIGHT,SN	●
CN901	191.8	274.6	935 240515JA	CON-BOX HEADER,15P,2MM	1R,ANGLE,SN	●
CN902	141.6	157.7	935 240111DA	CON-BOX HEADER,11P,2.5MM	1R,STRAIGHT,SN	●
CN903	184	306.1	935 240103JA	CON-BOX HEADER,3P,2MM	1R,STRAIGHT,SN	●
CNSUB	184.5	297.6	935 241312KB	CON-WALL HEADER,12P,2MM	ANGLE,3WALL,SN	●
CR201	166.2	245.7	941 130073AA	OSC-CLOCK,8M,100	-.5V,40MA,10NS,1 TO 10 TTL	
D201	153.6	13.1	893 299004AF	DIODE-ZEN,BZX79C6V2,D035	0.5W,-,5MA,-,-,-	
D202	142	13	893 299004AF	DIODE-ZEN,BZX79C6V2,D035	0.5W,-,5MA,-,-,-	
D203	215.1	323.9	893 299004AF	DIODE-ZEN,BZX79C6V2,D035	0.5W,-,5MA,-,-,-	
D204	214.4	308.3	893 299004AF	DIODE-ZEN,BZX79C6V2,D035	0.5W,-,5MA,-,-,-	
D205	217.7	323.9	893 299004AF	DIODE-ZEN,BZX79C6V2,D035	0.5W,-,5MA,-,-,-	
D206	209.6	308.3	893 299004AF	DIODE-ZEN,BZX79C6V2,D035	0.5W,-,5MA,-,-,-	
D251	126.4	251.9	893 290031FB	DIODE-ZEN,UZ-5.1B,D0-35	0.5W,-,10MA,-,-,-	
D301	34	192	893 290031BB	DIODE-ZEN,UZ-12BM,D0-35	0.5W,-,5MA,-,-,-	
D302	31.5	192	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D303	38.2	243.4	893 314937AC	DIODE-REC,1N4937,D0-41	420V,1A,1.2V,1A,200NS,1A	
D371	85.5	232.5	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D372	81.4	219.5	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D402	183.3	120.6	893 314002AB	DIODE-REC,1N4002,D0-41	70V,1A,1.1V,1A,2000NS,0.5A	
D405	210.6	133.3	893 399073AA	DIODE-REC,5THZ52,	1500V,5A,1.5V,5A,1.5US	
D406	193.1	122.7	893 394007AA	AM DIODE-REC,UF4007,D0-41	ST 02169-218-100	
D407	226.5	190.5	893 314937AC	DIODE-REC,1N4937,D0-41	420V,1A,1.2V,1A,200NS,1A	
D408	230.6	179.5	893 314937AC	DIODE-REC,1N4937,D0-41	420V,1A,1.2V,1A,200NS,1A	
D409	209.6	236.5	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D410	213.4	281.5	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D411	212.8	296	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D412	213.9	266.1	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D414	200.1	245.2	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D415	181.4	221.2	893 190021AANA	DIODE-SIG,BAV21,D0-35	250V,250MA,1V,100MA	
D416	199.4	201.4	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D417	170.5	162.6	893 399044AA	DIODE-REC,UF5404,D0201AD	-,1V,3A,50NS	
D418	202.1	211.4	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D498	173	220.7	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D499	46.9	261.1	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D501	159.7	67.9	893 314002AB	DIODE-REC,1N4002,D0-41	70V,1A,1.1V,1A,2000NS,0.5A	
D504	138.9	32	893 394004AA	DIODE-REC,UF4004,D0-41	400V,1A,1V,1A,50NS,0.5A	
D505	162.8	19.4	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D506	184.6	24	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D507	176.8	34.2	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D508	198.1	23.3	893 114148AANM	DIODE-SIG,1N4148,D0-35	75V,150MA,1V,10MA	
D509	157	83.2	893 314937AC	DIODE-REC,1N4937,D0-41	420V,1A,1.2V,1A,200NS,1A	
D510	240.2	86.1	893 314002AB	DIODE-REC,1N4002,D0-41	70V,1A,1.1V,1A,2000NS,0.5A	
D511	226.2	90.2	893 314002AB	DIODE-REC,1N4002,D0-41	70V,1A,1.1V,1A,2000NS,0.5A	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
D512	214.5	22.5	893 314937AC	DIODE-REC,1N4937,DO-41	420V,1A,1.2V,1A,200NS,1A	
D513	188.5	20.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D514	124.1	75.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D515	141.8	90.3	893 394007AA	AM DIODE-REC,UF4007,DO-41	ST 02169-218-100	
D540	163.1	41.1	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
D541	183.7	9.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D553	18.9	267.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D554	23	271.1	893 290002AC	DIODE-ZEN,ZPD2,7,DO-35	0.5W,-,5MA,-,-,-	
D555	12.7	259.2	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D556	26	261.3	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D571	135.4	10.6	893 290031HB	DIODE-ZEN,UZ-16BM,DO-35	0.5W,-,5MA,-,-,-	
D581	122.9	60.9	893 314001AC	DIODE-REC,1N4001GP,DO-41	50V,1A,1.1V,1A,-,-	
D582	139.3	57	893 314001AC	DIODE-REC,1N4001GP,DO-41	50V,1A,1.1V,1A,-,-	
D605	93	20.2	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D606	15.3	136.4	893 290031BB	DIODE-ZEN,UZ-12BM,DO-35	0.5W,-,5MA,-,-,-	
D607	14.5	133.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D609	33.1	129	893 399032AA	DIODE-REC,1R5NU41	-,1.5A,3V,2A,100USNS,1A	
D610	44.7	106.7	893 399006AA	AM DIODE-REC,RGP02-12E	ST 02169-206-297	
D612	76	130.2	893 390031AA	DIODE-REC,31DF6,DO201AD	600V,3A,1.25V,10uA400nS	●
D613	101.6	131.4	893 390031AA	DIODE-REC,31DF6,DO201AD	600V,3A,1.25V,10uA400nS	●
D614	74.1	147.1	893 399044AA	DIODE-REC,UF5404,DO201AD	-,1V,3A,50NS	
D615	76.1	139.5	893 399044AA	DIODE-REC,UF5404,DO201AD	-,1V,3A,50NS	
D616	74.1	153.9	893 399044AA	DIODE-REC,UF5404,DO201AD	-,1V,3A,50NS	
D617	77.8	173.2	893 399044AA	DIODE-REC,UF5404,DO201AD	-,1V,3A,50NS	
D618	74.2	166.9	893 399030AA	DIODE-REC,1R5GU41,	-1.5A,1.2V,1.5A,100NS,1A	
D619	74.1	159.4	893 399044AA	DIODE-REC,UF5404,DO201AD	-,1V,3A,50NS	
D620	72.1	192.7	893 399044AA	DIODE-REC,UF5404,DO201AD	-,1V,3A,50NS	
D621	110.7	92.2	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D651	136.8	188.4	893 394001AA	DIODE-REC,UF4001,DO-41	50V,1A,1V,1A,50NS,0.5A	
D654	163.4	226.7	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D662	67.2	59.9	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D663	61.3	43.5	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D664	55.1	43.5	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D665	67.2	54.5	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D696	35	103.3	893 399006AA	AM DIODE-REC,RGP02-12E,DO-41	ST 02169-206-297	
E1	14	89.8	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E2	14	77.7	857 120032AB	EYELET	ET 2.2 HOLE 3.0 PAD 5.0	
E3	33.9	61.7	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E4	18.9	44.6	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E5	26	25.3	857 120032AB	EYELET	ET 2.2 HOLE 3.0 PAD 5.0	
E6	46.7	25.3	857 120032AB	EYELET	ET 2.2 HOLE 3.0 PAD 5.0	
E7	62.3	75.9	857 120032AB	EYELET	ET 2.2 HOLE 3.0 PAD 5.0	
E8	72.4	76	857 120032AB	EYELET	ET 2.2 HOLE 3.0 PAD 5.0	
E9	40.9	166.4	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E10	65.9	166.3	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E11	40.9	131.4	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E12	65.9	131.3	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E13	24.2	220	857 120032AB	EYELET	ET 2.2 HOLE 3.0 PAD 5.0	
E14	66.2	220	857 120032AB	EYELET	ET 2.2 HOLE 3.0 PAD 5.0	
E15	235.6	262.6	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
E16	235.6	237.5	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E21	221.6	133.3	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E22	171.1	133.3	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E23	146	66.8	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E24	167.7	85.5	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E25	167.7	74.2	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E26	177.5	60.5	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E27	194.5	66.5	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E28	196.7	85.5	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E29	53.7	110.6	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E30	27	4	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E31	45.5	4	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E41	18.4	83.9	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E43	9.4	84	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E45	213.2	50.8	857 120032AB	EYELET	ET 2.2 HOLE 3.0 PAD 5.0	
E46	213.2	61	857 120032AB	EYELET	ET 2.2 HOLE 3.0 PAD 5.0	
E47	200.9	100.2	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
E48	200.9	106.2	857 120032AA	EYELET	ET 1.5 HOLE 2.2 PAD 4.0	
F601	9.7	29.1	953 260023BC	FUSE-CLIP,5.2X20,30MOHM	800GF,400-800GF	⚠
FG1	9.7	9.1	949 115105THNA	FUSE-CERA TUB,3.15A,250V	TIME-LAG,5X20MM,NON,CERAMIC TUB	
HS6	127.4	21.7	831 513021AA	H/SINK-TR	H/SINK-TR	
HS301	78.2	240.5	831 512001AA	H/SINK-TR	H/SINK-TR	
HS405	150	28.3		TMP HEATSINK_100	H/SINK-FBT	
HS411	195.6	206.5	831 513021AA	H/SINK-TR	H/SINK-TR	
HS603	26.4	113.8	831 515030AA	H/SINK-TR	H/SINK-TR	
IC201	145.9	300.8	877 307271AA	IC-CUS,ST7271A,CONTROLLER	56,8MHz,8Bit	⚠ ⚡
IC202	130.9	273	887 135104SJ	IC-HYB,R-NETWORK,11P	SIP,11,10,100KOHM,5%	●
IC204	165.9	288.4	887 135472SE	IC-HYB,R-NETWORK,7P	SIP,7,6,4.7KOHM,5%	
IC205	137.4	250.3	881 307045TA	IC-LIN,7045,REGULATOR	2,3,-,+4.5V	⚠
IC208	118.8	247.5	873 404066AANG	IC-MOS,4066,SWITCH	DIP,14,300MIL,QUAD	⚠ ⚡
IC209	164.8	259.9	887 135472SG	IC-HYB,R-NETWORK,9P	SIP,9,8,4.7KOHM,5%	⚠ ⚡
IC301	49.1	226.9	881 708172SA	IC-LIN,8172,VERTICAL	-	●
IC302	162.9	182.1	887 490046AA	IC-HYB,HS17H,9P	YB,CMH7379,SIZE, CONT	⚠ ⚡
IC401	82.3	245.9	881 709103AA	IC-LIN,9103,H/V CONTROLLER	SIZE,PARA,XRAY,H/V REG. CON	⚠ ⚡
IC471	28.9	188.1	881 104558AA	IC-LIN,4558,OP AMP	DIP,8,DUAL	⚠ ⚡
IC501	177.7	13.2	881 600494AA	IC-LIN,DL494,PWM	DIP,16,-	⚠ ⚡
IC502	112.8	80.3	881 300431TANB	IC-LIN,431,REGULATOR	TO-92,3,-,36V(T)-SIMPLE	⚠ ⚡
IC506	174.1	38.2	881 300431TANB	IC-LIN,431,REGULATOR	TO-92,3,-,36V(T)-SIMPLE	
IC601	64.1	97.8	887 490048AB	IC-HYB,SMPS,VIDEO-AMP	SMPS	⚠ ⚡
IC605	49	187.3	881 307812KE	IC-LIN,KA78R12,REGULATOR	TO-220,4,-,5V	⚠
IC651	147.1	179.2	881 307805KANE	IC-LIN,7805,REGULATOR	TO-220,3,-,5V	
IC652	184.5	297.6	873 760125AA	IC-MOS,74HC125,QUAD	DIP,4,300MIL,QUAD	
J1	23.1	72.3	955 005001AAAB	JUMPER	JUMPER	
J2	48	95.7	955 005001AAAB	JUMPER	JUMPER	
JP1	141.9	45.9	955 005001AAAB	JUMPER	JUMPER	
JP2	14.8	123.9	955 005001AAAB	JUMPER	JUMPER	
JP3	63	103.6	955 005001AAAB	JUMPER	JUMPER	
JP4	12.9	203	955 005001AAAB	JUMPER	JUMPER	
JP5	24	203.1	955 005001AAAB	JUMPER	JUMPER	
JP6	31.8	185.7	955 005001AAAB	JUMPER	JUMPER	
JP7	43.4	194.2	955 005001AAAB	JUMPER	JUMPER	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
JP8	46.1	197.3	955 005001AAAB	JUMPER	JUMPER	
JP9	69.7	188.9	955 005001AAAB	JUMPER	JUMPER	
JP10	56.5	212.9	955 005001AAAB	JUMPER	JUMPER	
JP11	31.2	228.9	955 005001AAAB	JUMPER	JUMPER	
JP12	8.5	248.6	955 005001AAAB	JUMPER	JUMPER	
JP13	28.9	272.3	955 005001AAAB	JUMPER	JUMPER	
JP14	57.8	263.7	955 005001AAAB	JUMPER	JUMPER	
JP15	54.9	258.4	955 005001AAAB	JUMPER	JUMPER	
JP16	55	255.4	955 005001AAAB	JUMPER	JUMPER	
JP17	66	239.5	955 005001AAAB	JUMPER	JUMPER	
JP18	73.6	230.2	955 005001AAAB	JUMPER	JUMPER	
JP20	80.1	210.8	955 005001AAAB	JUMPER	JUMPER	
JP21	82.6	210.8	955 005001AAAB	JUMPER	JUMPER	
JP22	85.1	246.5	955 005001AAAB	JUMPER	JUMPER	
JP23	102	308.6	955 005001AAAB	JUMPER	JUMPER	
JP24	108.4	316.1	955 005001AAAB	JUMPER	JUMPER	
JP25	110.9	316.1	955 005001AAAB	JUMPER	JUMPER	
JP26	114.4	316.1	955 005001AAAB	JUMPER	JUMPER	
JP27	100.3	289.6	955 005001AAAB	JUMPER	JUMPER	
JP28	24.8	294.7	955 005001AAAB	JUMPER	JUMPER	
JP29	136.4	254.4	955 005001AAAB	JUMPER	JUMPER	
JP30	100	249.1	955 005001AAAB	JUMPER	JUMPER	
JP31	99.9	230.4	955 005001AAAB	JUMPER	JUMPER	
JP32	102.5	230.2	955 005001AAAB	JUMPER	JUMPER	
JP33	105	230	955 005001AAAB	JUMPER	JUMPER	
JP34	107.3	236.7	955 005001AAAB	JUMPER	JUMPER	
JP35	112	236.7	955 005001AAAB	JUMPER	JUMPER	
JP36	114.7	236.7	955 005001AAAB	JUMPER	JUMPER	
JP37	180.3	316.2	955 005001AAAB	JUMPER	JUMPER	
JP38	147.7	217.7	955 005001AAAB	JUMPER	JUMPER	
JP39	232	44.4	955 005001AAAB	JUMPER	JUMPER	
JP40	171.4	264.8	955 005001AAAB	JUMPER	JUMPER	
JP41	176.6	264	955 005001AAAB	JUMPER	JUMPER	
JP42	178.9	271.5	955 005001AAAB	JUMPER	JUMPER	
JP43	186.6	268.6	955 005001AAAB	JUMPER	JUMPER	
JP44	189	268.6	955 005001AAAB	JUMPER	JUMPER	
JP45	192.2	266.2	955 005001AAAB	JUMPER	JUMPER	
JP46	193.1	254.8	955 005001AAAB	JUMPER	JUMPER	
JP47	132.9	236.8	955 005001AAAB	JUMPER	JUMPER	
JP48	172	239.4	955 005001AAAB	JUMPER	JUMPER	
JP49	230.3	318.1	955 005001AAAB	JUMPER	JUMPER	
JP50	232.9	318.1	955 005001AAAB	JUMPER	JUMPER	
JP51	235.3	318	955 005001AAAB	JUMPER	JUMPER	
JP52	146.8	233.4	955 005001AAAB	JUMPER	JUMPER	
JP53	128.8	225.3	955 005001AAAB	JUMPER	JUMPER	
JP54	128.9	222	955 005001AAAB	JUMPER	JUMPER	
JP55	143.4	219.4	955 005001AAAB	JUMPER	JUMPER	
JP57	175.2	191.3	955 005001AAAB	JUMPER	JUMPER	
JP58	150.2	208.7	955 005001AAAB	JUMPER	JUMPER	
JP59	116.6	198.6	955 005001AAAB	JUMPER	JUMPER	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
JP60	117.1	186.6	955 005001AAAB	JUMPER	JUMPER	
JP61	121.3	176.3	955 005001AAAB	JUMPER	JUMPER	
JP62	120.4	173.6	955 005001AAAB	JUMPER	JUMPER	
JP63	104.2	179.6	955 005001AAAB	JUMPER	JUMPER	
JP64	82	179	955 005001AAAB	JUMPER	JUMPER	
JP65	82	176.3	955 005001AAAB	JUMPER	JUMPER	
JP66	129.4	160	955 005001AAAB	JUMPER	JUMPER	
JP67	122.4	157	955 005001AAAB	JUMPER	JUMPER	
JP68	124.4	153.9	955 005001AAAB	JUMPER	JUMPER	
JP69	126.3	143.3	955 005001AAAB	JUMPER	JUMPER	
JP70	125.5	128.4	955 005001AAAB	JUMPER	JUMPER	
JP71	153.8	170.9	955 005001AAAB	JUMPER	JUMPER	
JP72	163.2	174.6	955 005001AAAB	JUMPER	JUMPER	
JP73	165.7	173.4	955 005001AAAB	JUMPER	JUMPER	
JP74	151.7	161	955 005001AAAB	JUMPER	JUMPER	
JP75	180.9	147.5	955 005001AAAB	JUMPER	JUMPER	
JP76	185.4	143.9	955 005001AAAB	JUMPER	JUMPER	
JP77	183	134.9	955 005001AAAB	JUMPER	JUMPER	
JP78	126.8	100.3	955 005001AAAB	JUMPER	JUMPER	
JP79	126.8	97.6	955 005001AAAB	JUMPER	JUMPER	
JP80	95.8	94.2	955 005001AAAB	JUMPER	JUMPER	
JP81	96	81.9	955 005001AAAB	JUMPER	JUMPER	
JP82	145.6	87.2	955 005001AAAB	JUMPER	JUMPER	
JP83	126.8	83.7	955 005001AAAB	JUMPER	JUMPER	
JP84	116.8	78.6	955 005001AAAB	JUMPER	JUMPER	
JP86	124.1	69.7	955 005001AAAB	JUMPER	JUMPER	
JP87	133.9	57.5	955 005001AAAB	JUMPER	JUMPER	
JP88	139.3	53.4	955 005001AAAB	JUMPER	JUMPER	
JP89	174.3	264	955 005001AAAB	JUMPER	JUMPER	
JP90	140.7	16.6	955 005001AAAB	JUMPER	JUMPER	
JP91	189.6	32.9	955 005001AAAB	JUMPER	JUMPER	
JP92	50.6	106.5	955 005001AAAB	JUMPER	JUMPER	
JP93	205.9	34.2	955 005001AAAB	JUMPER	JUMPER	
JP94	117.9	102.9	955 005001AAAB	JUMPER	JUMPER	
JP95	111.7	211.3	955 005001AAAB	JUMPER	JUMPER	
JP96	94.6	225.1	955 005001AAAB	JUMPER	JUMPER	
JP97	126.1	148.8	955 005001AAAB	JUMPER	JUMPER	
JP98	126	145.9	955 005001AAAB	JUMPER	JUMPER	
JP99	124.1	190.1	955 005001AAAB	JUMPER	JUMPER	
JP100	22.1	213.4	955 005001AAAB	JUMPER	JUMPER	
JP101	224.7	120.8	955 005001AAAB	JUMPER	JUMPER	
JP102	224.7	117.4	955 005001AAAB	JUMPER	JUMPER	
JP103	38.5	103.4	955 005001AAAB	JUMPER	JUMPER	
JP104	127.6	77.5	955 005001AAAB	JUMPER	JUMPER	
JP105	98.6	281	955 005001AAAB	JUMPER	JUMPER	
JP106	234.4	44.4	955 005001AAAB	JUMPER	JUMPER	
JP107	71.1	91.5	955 005001AAAB	JUMPER	JUMPER	
JP108	88.9	289.5	955 005001AAAB	JUMPER	JUMPER	
JP110	121.7	212.1	955 005001AAAB	JUMPER	JUMPER	
JP111	123.6	208.2	955 005001AAAB	JUMPER	JUMPER	
JP112	103.2	161.7	955 005001AAAB	JUMPER	JUMPER	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
JP113	87.2	129.5	955 005001AAAB	JUMPER	JUMPER	
JP114	90	129.5	955 005001AAAB	JUMPER	JUMPER	
JP115	61	37.6	955 005001AAAB	JUMPER	JUMPER	
JP116	170.5	215.8	955 005001AAAB	JUMPER	JUMPER	
JP117	152.8	208.7	955 005001AAAB	JUMPER	JUMPER	
JP118	179.6	43.3	955 005001AAAB	JUMPER	JUMPER	
JP119	212.2	38.1	955 005001AAAB	JUMPER	JUMPER	
JP120	174.4	251.4	955 005001AAAB	JUMPER	JUMPER	
JP121	172.3	243.4	955 005001AAAB	JUMPER	JUMPER	
JP122	151.7	316.7	955 005001AAAB	JUMPER	JUMPER	
JP123	149.3	316.7	955 005001AAAB	JUMPER	JUMPER	
JP124	146.6	318.8	955 005001AAAB	JUMPER	JUMPER	
JP125	144.1	322.8	955 005001AAAB	JUMPER	JUMPER	
JP126	90.4	105.9	955 005001AAAB	JUMPER	JUMPER	
JP127	173.6	249	955 005001AAAB	JUMPER	JUMPER	
JP128	172.3	246.7	955 005001AAAB	JUMPER	JUMPER	
JP129	76.1	143.4	955 005001AAAB	JUMPER	JUMPER	
JP130	76	134.1	955 005001AAAB	JUMPER	JUMPER	
JP131	85.8	265.3	955 005001AAAB	JUMPER	JUMPER	
JP132	40.3	186	955 005001AAAB	JUMPER	JUMPER	
JP133	133.6	191.1	955 005001AAAB	JUMPER	JUMPER	
JP134	117.2	264.7	955 005001AAAB	JUMPER	JUMPER	
JP135	189.2	230.4	955 005001AAAB	JUMPER	JUMPER	
JP136	117.4	269.8	955 005001AAAB	JUMPER	JUMPER	
JP137	85.7	294.8	955 005001AAAB	JUMPER	JUMPER	
JP138	89	287.2	955 005001AAAB	JUMPER	JUMPER	
JP139	92.6	285	955 005001AAAB	JUMPER	JUMPER	
JP140	104.5	321.1	955 005001AAAB	JUMPER	JUMPER	
JP141	5.8	242.2	955 005001AAAB	JUMPER	JUMPER	
JP142	92	94.1	955 005001AAAB	JUMPER	JUMPER	
JP144	154.1	322	955 005001AAAB	JUMPER	JUMPER	
JP145	195.5	271.3	955 005001AAAB	JUMPER	JUMPER	
JP147	93.1	137	955 005001AAAB	JUMPER	JUMPER	
JP148	224.7	218.3	955 005001AAAB	JUMPER	JUMPER	
L401	223.7	172.4	925 460193DA	COIL-CHOKE,7.5mH	DR14X20MM,370,5T,6 Ohm	●
L402	100.1	255.9	925 001001AH	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,65,-,4X10.5MM	●
L403	212	164.9	925 460193EA	COIL-H,LINEARITY,4.0uH	DR14X15,21,5T,0.050hm	●
L404	209.2	185.2	925 460193BA	COIL-CHOKE,53uH	R8X11MM,41.5T,0.080hm	
L601	33.9	61.5	925 460148AA	COIL-LINE FILTER	39UH(25X32)	
OP201	65.7	314.8	895 110048DB	LED,G/Y,ROUND,4.8MM	M,N,2-LOW,5V	
PTH601	65	14.5	897 110541AA	POSISTOR,14,SQUARE,13.5X17.7	-,15~20%/C	
Q301	25.5	207	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q302	17.8	210.2	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q361	43.5	277.7	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q402	109.9	238.9	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q403	105	238.9	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q408	192.1	208.6	891 890740AA	AM FET-N,IRF740,TO-220	ST 02149-601-441	
Q409	110.4	199.3	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q411	213.6	271.5	891 890021ABNA	FET-N,IRF640,TO-220AB,GDS	125W,200V,18A	
Q412	213.6	287	891 890021ABNA	FET-N,IRF640,TO-220AB,GDS	125W,200V,18A	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
Q413	197.3	248.6	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	⚠
Q414	213.6	250.2	891 890021ABNA	FET-N,IRF640,TO-220AB,GDS	125W,200V,18A	
Q415	151.2	137.9	891 890610AA	FET-N,IRF610,TO-220AB,GDS	43W,200V,3.3A	
Q416	176.6	133.3	891 465129AA	TR-NPN,2SC5129,TO-3P	50W,1500V,600V,5V,10A	
Q419	98.9	237.3	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q420	203.9	239.8	891 391008XA	TR-NPN,KSC1008,TO-92,ECB	0.8W,80V,60V,8V,0.7A	
Q471	37.6	181.4	891 290772AA	TR-PNP,KSB772,TO-126,ECB	1W,-40V,-30V,-5V,-3A	
Q472	44	181.4	891 490882AB	TR-NPN,KSD882,TO-126,ECB	1W,40V,30V,5V,3A	
Q499	93.5	241.9	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q501	102.6	49.1	891 890610AA	FET-N,IRF610,TO-220AB,GDS	43W,200V,3.3A	
Q502	146	72.3	891 465129AA	TR-NPN,2SC5129,TO-3P	50W,1500V,600V,5V,10A	
Q503	124.9	17.7	891 890740AA	AM FET-N,IRF740,TO-220	ST 02149-601-441	
Q504	122.7	93.1	891 463675AA	TR-NPN,2SC3675,TO-220,BCE	10W,1500V,900V,5V,0.1A	
Q505	100.6	196.6	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q509	160.9	23.4	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q510	22.3	290.6	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q511	19.9	280	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q512	60.8	289	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q515	183	36.2	891 392222XA	TR-NPN,MPS2222A,TO-92,EBC	0.625W,75V,40V,6V,0.6A	
Q516	207	18.7	891 123906XANC	TR-PNP,2N3906,TO-92,EBC	0.625W,40V,40V,5V,0.2A	
Q591	222.7	297.7	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q592	233.4	302.6	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q601	101.8	20	891 391008XA	TR-NPN,KSC1008,TO-92,ECB	0.8W,80V,60V,8V,0.7A	⚠
Q602	23.2	144	891 490029AA	TR-NPN,TIP29,TO-220,BCE	2W,100V,100V,5V,1A	
Q603	48.2	110.6	891 881358AA	FET-N,2SK1358,TO-3P,GDS	150W,900V,9A	
Q604	91.6	108.8	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q605	96.2	116	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q651	147	202	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q652	156.1	204.3	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q653	154.8	179.2	891 290614AB	TR-PNP,KSA614,TO-220,BCE	25W,-80V,-55V,-5V,-3A	
R201	113.9	302.8	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R202	116.6	302.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R203	116.8	298.4	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R204	117.5	295.9	911 152407YA	REF-CF,24K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R205	118.5	290.8	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R206	118.5	288.1	911 153307YA	REF-CF,33K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R207	118.5	283.1	911 152707YA	REF-CF,27K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R208	118.5	280.6	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R209	118.5	277.9	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R210	118.5	275.4	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R211	133.4	299.4	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R212	133.4	296.8	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R213	133.4	294.3	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R214	133.4	291.9	911 151507YA	REF-CF,15K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R215	133.4	289.3	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R216	133.4	286.8	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R217	133.4	284.3	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R218	133.4	281.5	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R219	133.4	278.9	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R220	133.4	276.5	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R221	176.6	317.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R222	176.6	315	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R227	136.4	259.5	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R228	207.2	299.3	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R229	212	299.3	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R230	159.4	308	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R231	156.6	308	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R233	151.8	219.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R234	149.4	219.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R235	169.1	264.8	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R236	119.9	225.6	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R237	142.9	256.9	911 132207YA	REF-CF,220,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R238	168.7	306.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R239	168.7	304	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R240	168.5	269.8	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R241	175.2	299	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R242	168.6	294	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R243	175.1	291.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R244	177.5	287.6	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R245	177.4	285	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R246	177.4	282.4	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R247	177.4	280	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R248	168.5	277.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R249	168.5	274.8	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R250	168.5	272.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R254	175.2	301.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R255	181.4	268.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R256	184	268.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R257	164.7	249.2	911 174707YA	REF-CF,4.7M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R258	117.2	267.1	911 152407YA	REF-CF,24K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R259	126.5	269.6	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R261	115.3	281.7	911 156807YA	REF-CF,68K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R262	126.4	228.4	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R263	118.5	272.6	911 158207YA	REF-CF,82K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R271	136.4	262.2	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R273	165.7	234.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R299	183.1	254.9	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R301	25.5	245.7	911 811207GA	REF-FUSIBLE,1.2,5%,1W	-, -350 TO +350PPM/C,R-AXIAL	
R302	76.8	210.9	911 811207GA	REF-FUSIBLE,1.2,5%,1W	-, -350 TO +350PPM/C,R-AXIAL	
R303	24.6	226.6	911 111507FA	REF-CF,1.5,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R304	33.9	212.8	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R305	28.8	212.8	911 336807JF	REF-MO,680,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R308	57.7	266.6	911 151507YA	REF-CF,15K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R310	127.5	293.4	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R311	64	252.6	911 161507YA	REF-CF,150K,5%,1/6W	150V,-1300 TO + 350PPM/C,R-AXIA	
R313	57	230.5	911 451005DA	REF-MF,10K,1%,1/4W	150V,-1300 TO +350PPM/C,R-AXIAL	
R314	41.2	239	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R315	52.5	230.8	911 309007JF	REF-MO,0.9,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R320	28.9	203	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R321	15.7	192.1	911 141007FF	REF-CF,1K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R323	51.8	252.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R324	57.7	261.2	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R325	52.2	272.7	911 152407YA	REF-CF,24K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R326	59.2	269.7	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R327	21.3	203.1	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R328	56.9	221.3	911 146807YA	REF-CF,6.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R329	18.6	192.1	911 141007FF	REF-CF,1K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R351	108.9	213.5	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R353	170.6	218.6	911 162407CA	REF-CF,240K,5%,1/8W	,-1000 PPM/C,R-AXIAL	
R354	179.1	227.8	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R355	179.1	230.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R361	46.9	263.7	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R362	46.5	295.9	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R404	146.2	111.2	911 152707YA	REF-CF,27K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R405	85.7	251.6	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R406	85.1	244	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R407	93.2	271	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R408	96.5	262.9	911 446805DA	REF-MF,6.8K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R409	85.7	249	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R410	93.2	273.4	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R411	85.6	260.4	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R412	100	252.2	911 144707FF	REF-CF,4.7K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R413	118.5	285.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R414	113.8	266.9	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R415	146.2	108.2	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R417	125.8	139.8	911 332207LF	REF-MQ,220,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R418	125.8	132.4	911 332207LF	REF-MQ,220,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R419	149.1	134.7	911 141007DA	REF-CF,1K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R420	50	250.1	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R421	96.1	227.8	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R422	159.5	191.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R423	167.8	213.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R424	175.7	220.7	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R425	183.9	222.6	911 136807YA	REF-CF,680,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R426	233.5	199.2	911 814707FA	REF-FUSIBLE,4.7,5%,1/2W	250V,-500 TO +500PPM/C,R-AXIAL	
R427	218.5	195.2	911 341007GF	REF-MQ,1K,5%,1W	350V,-350 TO +350PPM/C,R-AXIAL	
R428	116.6	194.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R429	168.5	267.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R430	197.9	179.6	911 331507JF	REF-MQ,150,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R431	204.4	139.8	911 113307FA	REF-CF,3.3,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R432	200.4	139.8	911 113307FA	REF-CF,3.3,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R433	196.6	139.8	911 113307FA	REF-CF,3.3,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R434	223.2	242.6	911 171007YA	REF-CF,1M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R435	223	275.6	911 171007YA	REF-CF,1M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R436	223	284.3	911 171007YA	REF-CF,1M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R438	223	266.9	911 171007YA	REF-CF,1M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R439	192.9	260.4	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R440	192.3	263	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R441	192.9	257.6	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R442	168.2	118.6	911 312207LF	REF-MQ,2.2,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R443	168.2	124.9	911 311807JF	REF-MQ,1.8,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R445	168.2	225.1	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	

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Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R452	192.5	212.4	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R453	188.2	203.7	911 122207YA	REF-CF,22.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R454	188.2	200.7	911 146807YA	REF-CF,6.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R455	206	198.3	911 812207FA	REF-FUSIBLE,2.2.5%,1/2W	-, -350 TO +350PPM/C,R-AXIAL	
R456	202.3	269.4	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,C,R-AXIAL	
R457	192.1	242.8	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R459	145.8	136.3	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R471	34.3	184.2	911 153607YA	REF-CF,36K,5%,1/6W	150V,-1300 TO +350PPM/C,1.9X3.2	
R472	31.9	188.6	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R473	36.4	192	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R474	26.4	203	911 149107YA	REF-CF,9.1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R475	17.7	178.2	911 123307FF	REF-CF,33.5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R476	26.9	177.9	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,C,R-AXIAL	
R491	51.8	255	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R495	88.1	232.5	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R498	92	220.4	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R499	83.4	238.3	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R501	92.7	70	911 342707GF	REF-MO,2.7K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R502	97.9	69.9	911 342707GF	REF-MO,2.7K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R503	93.5	42.6	911 132207FA	REF-CF,220,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R504	113.2	49	911 136807YA	REF-CF,680,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R505	113.3	53	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R506	159.7	52.6	911 313907LF	REF-MO,3.9,5%,3W	500V,-500 TO +500PPM/C,R-AXIAL	
R508	106.2	90.6	911 811807JA	REF-FUSIBLE,1.8,5%,2W	-, -350 TO +350PPM/C,R-AXIAL	
R509	161.6	26.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,C,R-AXIAL	
R508S	106.2	90.6	911 813307FA	REF-FUSIBLE,3.3,5%,1/2W	-, -350 TO +350PPM/C,R-AXIAL	
R510	158.3	16.2	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,C,R-AXIAL	
R511	170.8	10.2	911 145107YA	REF-CF,5.1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R512	140.8	19.9	911 112207DA	REF-CF,2.2.5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R513	187	23	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R514	187	8.8	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R515	220.6	12.2	911 145107YA	REF-CF,5.1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R516	198.5	20.1	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R517	220.6	23.6	911 159105DA	REF-MF,91K,5%,1/4W	250V,-600 TO -150PPM/C,R-AXIAL	
R518H	162.5	115.1	911 328207JF	REF-MO,82,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R520	141.8	93.9	911 163307FA	REF-CF,330K,5%,1/2W	350V,-600 TO -150PPM/C,R-AXIAL	
R521	127.6	74.9	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R522	123.3	81.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R523	138.6	72.2	911 141007FF	REF-CF,1K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R524	124.1	73.1	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R525	109.5	77.7	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R526	112.4	77.7	911 162207YA	REF-CF,220K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R527	126.3	151.4	911 161807YA	REF-CF,180K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R541	167.3	57.8	911 811207FA	REF-FUSIBLE,1.2.5%,1/2W	-, -350 TO +350PPM/C,R-AXIAL	
R542	170.5	40.8	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R543	160.4	39.6	911 152707YA	REF-CF,27K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R544	194.7	30.9	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,C,R-AXIAL	
R545	207.4	37.2	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R546	208.4	34.2	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R547	126.8	86.6	911 162207FA	REF-CF,220K,5%,1/2W	350V,-600 TO -150PPM/C,R-AXIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

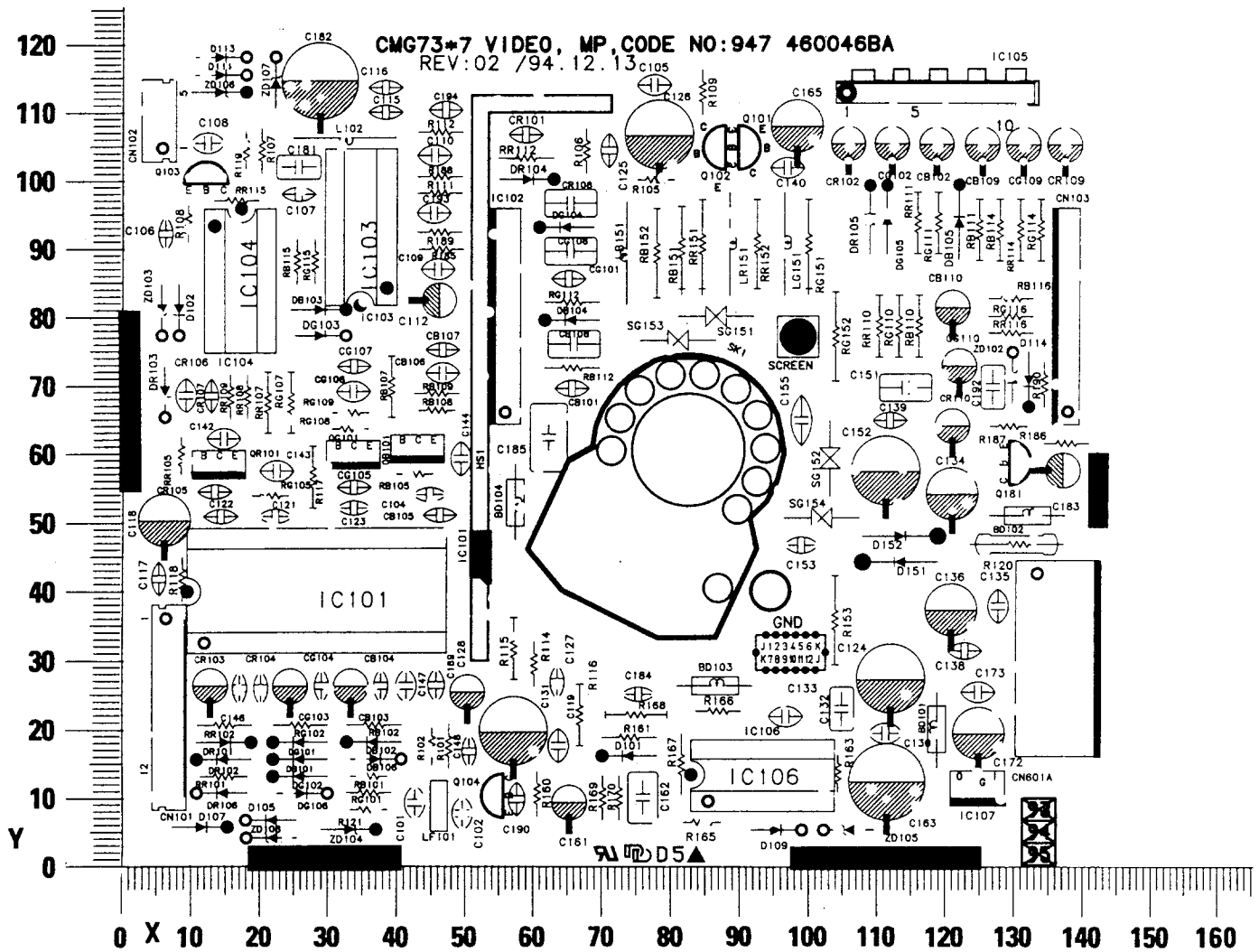
Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R548	126.8	80.9	911 161807FA	REF-CF,180K,5%,1/2W	350V,-600 TO -150PPM/C,R-AXIAL	
R549	181.1	9.8	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R550	15.9	251.2	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R551	100.9	199.7	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R552	98.1	193.2	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R553	36.3	285.3	911 156807YA	REF-CF,68K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R554	8.8	270.9	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R555	178.6	290.8	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R556	14.4	281.9	911 141007DA	REF-CF,1K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R557	62.3	293.2	911 131007DA	REF-CF,100,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R558	11.4	270.9	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R559	18.8	259.1	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R567	39.3	271.4	911 331507GF	REF-MO,150,5%,1W	350V,-350 TO +350PPM/C,R-AXIAL	
R581	231.8	108.2	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R591	237.1	296.9	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R592	227.9	303.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R593	230.3	303.5	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R594	225.5	297	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R601	55.3	25.3	911 163307FA	REF-CF,330K,5%,1/2W	350V,-600 TO -150PPM/C,R-AXIAL	
R602	96.4	16.7	911 124707FF	REF-CF,47,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R603	96.4	14.1	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R605	10.7	131.4	911 344707GF	REF-MO,4.7K,5%,1W	350V,-350 TO +350PPM/C,R-AXIAL	
R606	27.7	107.8	911 356807LF	REF-MO,68K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R607	40.6	107.7	911 348207LF	REF-MO,8.2K,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R608	34.1	107.7	911 348207LF	REF-MO,8.2K,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R611	49.2	71.6	911 355007LF	REF-MO,50K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R612	57.6	104.2	911 602205JV	REF-WW,0.22,1%,2W	-, -250 TO +250PPM/C,R-AXIAL	●
R613	29.2	78.3	911 355007LF	REF-MO,50K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R615	119.4	158.3	911 361007GF	REF-MO,100K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R616	116.3	163.3	911 811807LA	REF-FUSIBLE,1.8,5%,3W	-, -350 TO +350PPM/C,R-AXIAL	
R617	71.8	94.2	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R618	88.8	72.8	911 342707GF	REF-MO,2.7K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R619	95.9	86.4	911 133007YA	REF-CF,300,5%,1/6W	-, -600 PPM/C,1.6X3.8MM	
R620	89.6	112.3	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R622	90.8	151	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R641	119.9	114.8	911 361007GF	REF-MO,100K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R642	136.3	168.8	911 811807JA	REF-FUSIBLE,1.8,5%,2W	-, -350 TO +350PPM/C,R-AXIAL	
R651	136.7	193.7	911 141007FF	REF-CF,1K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R653	155.7	184.5	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R656	66	173.4	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R661	135.7	181.8	911 323307JF	REF-MO,33,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R672	99.6	101.2	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R688	55.3	195.2	911 333907GA	REF-MO,390,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R945	114.8	269.5	911 164707YA	REF-CF,470K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RL401	208	222.3	927 300019BB	RELAY-MINIATURE,12VDC	MA,5A,150MW,10MS,10MS	
RL601	88.7	30.7	927 300052BC	RELAY-MINIATURE,DC5V	MA,40MA,200MW,10MS,10MS	
SK501	176.9	50	04569-002-210	DSP-301N	K-GAP	
SK502	210	41.2	04569-002-210	DSP-301N	K-GAP	
SW401	235.9	191.8	933 110034TC	SWITCH-TOGGLE,SP3T	-, -, ON-ON-ON,STRAIGHT,-	
SW601	14	77.6	933 210085AB	SWITCH-KEY,SPST	250V,5A,SPST,Y,ANGLE	
T401	157.3	143	923 460167EA	TRANS-H/D	19X16MM	●

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

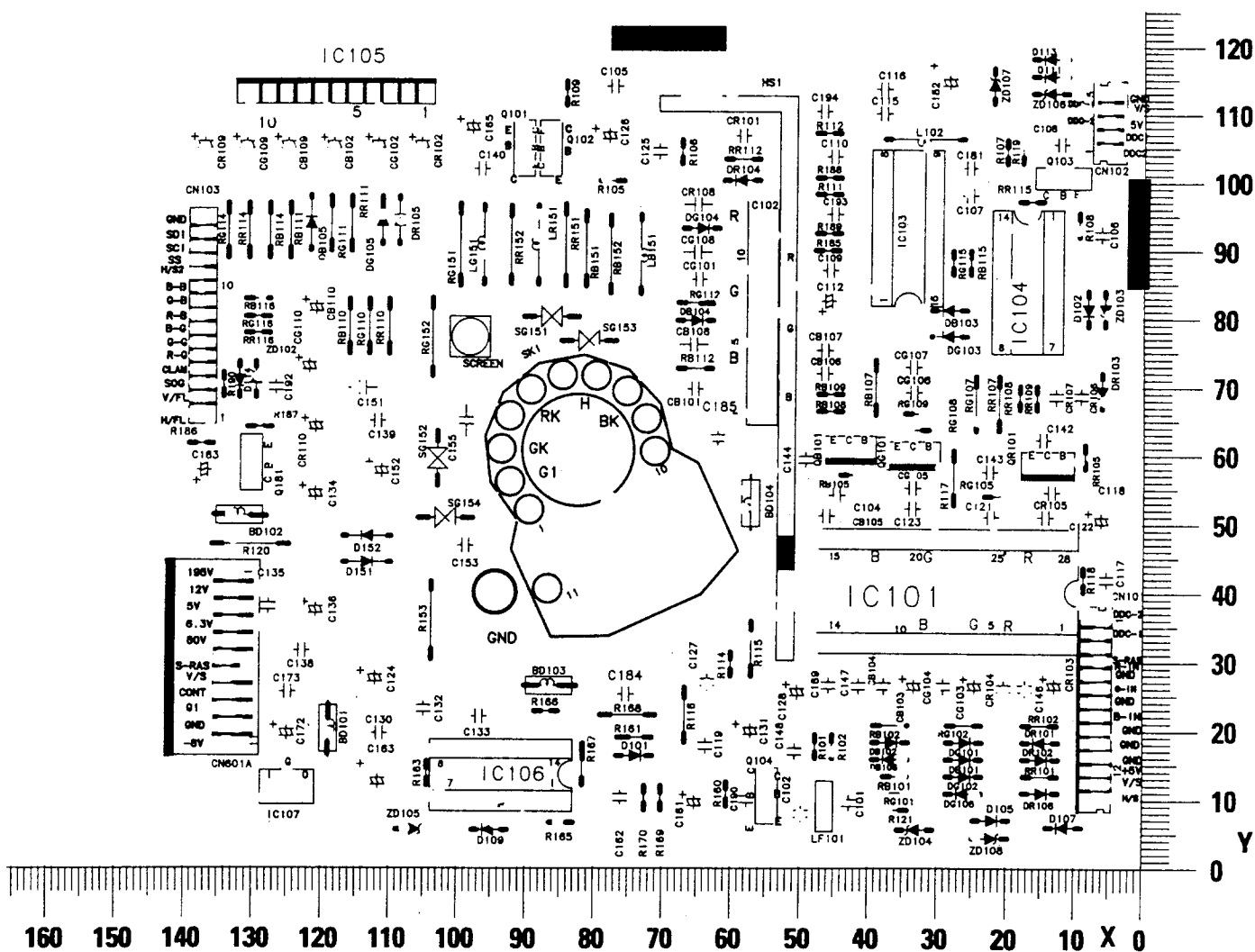
Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
T402	193.1	164.8	923 460167DA	TRANS-H PULSE	0X26MM	●
T404	183.8	198.3	923 460149HA	TRANS-H-SIZE DRIVE	CORE/BOBBIN;EI16,CSG9511	●
T501	110	31.4	923 460167FA	TRANS-H/D	19X16MM	●
T502	134.6	34.5	923 460157FA	TRANS-H/V REG.CFA7679	8X20MM,CFA7679(PIN TYPE)	●
T503	182.2	74.2	923 460167BA	TRANS-FLYBACK,780uH	17A002	⚠
T504	128.6	121.5	923 460167GA	TRANS-FOCUS	5X19MM,2UEW 0.18MM(PIN TYPE)	●
T601	40.9	166.3	923 460167CA	TRANS-POWER S/W	44_45MM	● ⚡
T602	73.8	52.1	923 460065AA	TRANS-SYNC	3MH (11X16MM)	
TC0	200.4	188.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
TH601	78.6	36.3	897 110521AA	THER,8 OHM,DISK,13MM	,-,-	
CN301	205	153.5	935 220103TD	CON-NOWALL HEADER,3P,1R	STRAIGHT,SN,8.0MM,9.1MM	
VR172	16.9	318.1	913 151007YANA	RES-VAR,ROTARY,10K	0.08W,SIDE,280	
VR502	233.6	56.4	913 4550088F	RES-VAR,SF-ROUND,50KOHM	30%,0.1W,SIDE	
VR601	98.3	76.6	913 435008BH	RES-VAR,SF-ROUND,500OHM	30%,0.1W,TOP,220 ,,-	
VR602	41.8	318	913 145007YA	RES-VAR,ROTARY,5K	20%,0.05W.SIDE,300,-	
ZD504	217.7	14.5	893 290002BC	DIODE-ZEN,ZPD9.1,DO-41	0.5W,8.1V,5MA,-,-,-	

9-3-1 PCB Layout

Video Top View



Video Bottom View



9-3-2 Video PCB Parts List

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
BD101	120.0	15.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD102	127.6	51.8	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD103	81.9	27.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD104	58.2	59.4	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
C101	43.5	12.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C102	50.5	5.9	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C104	48.1	55.0	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C105	81.0	114.7	915 313150HJXH	CAP-CERAMIC,151J,1H,NPO	150PF,50V,5%,NPOPPM,NPO	
C106	5.9	100.7	915 312300HJXH	CAP-CERAMIC,300J,1H,NPO	30PF,50V,5%,NPOPPM,NPO	
C107	23.9	98.9	915 313100HJHH	CAP-CERAMIC,101J,1H,SL	100PF,50V,5%,P350TON1000PPM	
C108	10.6	106.4	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C109	44.3	87.9	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C110	43.8	104.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C112	49.5	83.4	917 742470CM	CAP-AL.ELEC,476M,1C,105C	(T)16V 47M	
C115	36.6	110.8	915 312220HJXH	CAP-CERAMIC,220J,1H,NPO	22PF,50V,5%,NPOPPM,NPO	
C116	36.6	114.4	915 312220HJXH	CAP-CERAMIC,220J,1H,NPO	22PF,50V,5%,NPOPPM,NPO	
C117	6.0	45.0	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C118	6.8	53.9	917 743100EM	AM CAP-AL.ELEC,107M,1E,105C	ST 01607-936-101	
C119	64.6	20.8	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C121	25.5	51.9	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C122	12.5	51.9	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C123	37.0	53.1	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C124	113.2	30.5	917 742100NM	CAP-AL.ELE,106M,2C,10X20	(T)160V 10M	
C125	71.9	107.7	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C126	79.2	110.0	917 742470LM	CAP-AL.ELEC,476M,2A,105C	(T)100V,473J	
C127	64.4	30.1	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
C128	51.2	29.7	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C130	110.0	20.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C131	58.0	23.0	917 743470CM	CAP-AL.ELEC,477M,1C,105C	(T)16V 470M	
C132	106.0	26.1	916 164220LJAH	CAP-MYLAR,222J,2A,5P	(T)100V 222J	
C133	100.3	22.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C134	122.1	57.5	917 743100EM	AM CAP-AL.ELEC,107M,1E,105C	ST 01607-936-101	
C135	128.9	36.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C136	122.0	40.5	917 743100EM	AM CAP-AL.ELEC,107M,1E,105C	ST 01607-936-101	
C138	126.5	32.0	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C139	110.5	65.7	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C140	95.4	102.6	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C142	12.9	63.2	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C143	20.7	58.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C144	50.2	57.7	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C146	17.8	29.3	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C147	42.2	29.6	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C148	51.5	20.0	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C151	111.5	70.5	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
C152	112.4	60.9	917 872100QM	CAP-AL.ELEC,106M,2E,105C	(T)250V 10M	
C153	102.5	47.5	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C155	100.0	69.5	915 325100YPVX	CAP-CERAMIC,103P,3D,DISC	10NF,2KV,+80 -20%,Y5V,RE-RADIAL	
C161	66.2	12.5	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C162	77.0	13.2	916 165330LKAH	CAP-MYLAR,333K,2A,5P	T)100V 333K	
C163	112.7	15.4	917 874100CMAH	CAP-AL.ELEC,108M,1C,105C,	(T)1000UF,16V,20%,R-RADIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C165	99.3	111.2	917 743100EM	AM CAP-AL.ELEC,107M,1E	ST 01607-936-101	
C172	126.1	22.5	917 743100EM	AM CAP-AL.ELEC,107M,1E	ST 01607-936-101	
C173	123.5	26.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82T022%	
C181	28.9	102.9	916 165100LJAH	CAP-MYLAR,103J,2A,5	(T)100V 103J	
C182	29.5	117.9	917 874100CMAH	CAP-AL.ELEC,108M,1C,105C	(T)1000UF,16V,20%,R-RADIAL	
C183	140.9	58.4	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C184	78.8	25.8	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
C185	63.1	65.8	916 166100LJAH	CAP-MYLAR,104J,2A,5P	(T)100V 104J	
C189	46.6	29.7	915 323330HKPH	CAP-CERAMIC,331K,1H,Y5P	330PF,50V,10%,10%,Y5P	
C190	58.5	8.0	915 323220HKPH	CAP-CERAMIC,221K,1H,Y5P	220PF,50V,10%,10%,Y5P	
C192	128.0	73.1	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C193	49.6	96.1	915 312330HJXH	CAP-CERAMIC,330J,1H,NPO	33PF,50V,5%,NPOPPM,NPO	
C194	45.4	111.1	916 165470LJAH	CAP-MYLAR,473J,2A,5P	(T)100V,473J	
CB101	69.0	70.5	915 323100VKPH	CAP-CERAMIC,101K,2H,Y5P	100PF,500V,10%,--,Y5P	
CB102	119.7	108.5	917 741100QM	CAP-AL.ELEC,105M,2E,105 C	(T)250V 1M	
CB103	34.1	29.6	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
CB104	38.5	29.6	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CB105	49.6	52.0	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CB106	45.0	72.8	915 312390HJXH	CAP-CERAMIC,390J,1H,NPO	39PF,50V,5%,NPO,DISC-RADIAL,-	
CB107	45.0	76.2	915 311500HDXH	CAP-CERAMIC,050D,1H,NPO	5.0PF,50V,0.5PF%,NPOPPM,NPO	
CB108	63.0	77.0	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
CB109	126.4	108.5	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CB110	122.1	84.7	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CG101	68.5	86.5	915 323100VKPH	CAP-CERAMIC,101K,2H,Y5P	100PF,500V,10%,--,Y5P	
CG102	113.2	108.6	917 741100QM	CAP-AL.ELEC,105M,2E,105 C	(T)250V 1M	
CG103	25.2	29.6	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
CG104	29.8	24.6	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
CG105	37.0	56.1	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CG106	31.9	70.1	915 312330HJXH	CAP-CERAMIC,330J,1H,NPO	33PF,50V,5%,NPOPPM,NPO	
CG107	32.0	73.8	915 311500HDXH	CAP-CERAMIC,050D,1H,NPO	5.0PF,50V,0.5PF%,NPOPPM,NPO	
CG108	62.5	90.5	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
CG109	132.4	108.5	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CG110	123.1	76.2	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CN101	7.0	35.0	935 241312KB	CON-WALL HEADER,12P,2MM	ANGLE,3WALL,SN	
CN102	6.3	109.7	935 240503JA	CON-BOX HEADER,3P,2MM	1R,ANGLE,SN,	
CN103	139.0	67.0	935 240515JA	CON-FLAT CABLE,15P,1.25	STRAIGHT,SN	
CN104	153.2	6.4	935 220705LA	CON-NO WALL,HEADER,5P,1R	ANGLE,SN,2MM,4MM	
CN601A	134.6	43.3	935 240511KA	CON-BOX HEADER,11P,2.5MM	1R,ANGLE,SN,	
CR101	62.2	107.5	915 323100VKPH	CAP-CERAMIC,101K,2H,Y5P	100PF,500V,10%,--,Y5P	
CR102	106.8	108.6	917 741100QM	CAP-AL.ELEC,105M,2E,105 C	(T)250V 1M	
CR103	13.5	29.7	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
CR104	20.9	29.3	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CR105	11.6	55.5	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CR106	9.9	67.1	915 312390HJXH	CAP-CERAMIC,390J,1H,NPO	39PF,50V,5%,NPO,DISC-RADIAL,-	
CR107	13.6	67.0	915 311500HDXH	CAP-CERAMIC,050D,1H,NPO	5.0PF,50V,0.5PF%,NPOPPM,NPO	
CR108	62.5	97.5	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
CR109	138.5	108.5	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CR110	122.1	67.4	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
D101	79.0	16.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D102	8.6	87.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D105	26.7	7.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D107	8.0	6.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D109	92.2	5.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D111	10.7	116.3	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D113	10.7	118.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D114	133.3	75.7	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D151	120.0	45.0	893 314007BA	DIODE-REC,1N4007GP,DO-41	1000V,1A,1.1V,1A,2uS	
D152	109.0	48.8	893 314007BA	DIODE-REC,1N4007GP,DO-41	1000V,1A,1.1V,1A,2uS	
DB101	30.7	16.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB102	41.5	18.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB103	25.3	82.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB104	70.5	80.5	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DB105	123.0	92.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DB106	33.5	16.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG101	30.7	18.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG102	30.7	13.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG103	25.3	78.3	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG104	69.7	94.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DG105	112.5	90.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DG106	22.7	11.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR101	11.5	18.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR102	19.5	16.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR103	6.8	74.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR104	55.8	101.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DR105	110.0	90.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DR106	19.5	11.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
HS1	54.2	31.0	831 516030BA	H/SINK-TR	HEAT-SINK(TR)	
IC101	12.6	33.4	881 101207AA	IC-LIN,LM1207,VIDEO AMP	DIP,28,TRIPLE	⚠ ● ⚠
IC102	56.7	67.0	881 102427SA	IC-LIN,2427,AMP	SIP, 12P, SINGLE	⚠ ● ⚠
IC103	39.3	85.2	881 904320AA	IC-LIN,4320,OSD	DIP,16,-,-	⚠ ⚠
IC104	14.1	94.3	873 760125AA	IC-MOS,74HC125,QUAD	DIP,4,300MIL,QUAD	⚠ ⚠
IC105	106.5	113.5	BH13-10001A	MV17L,10P	IC-HYB,CMH7379,VIDEO-CUT	⚠ ⚠
IC106	86.5	10.1	881 200319AA	IC-LIN,LM319,COMPARATOR	DIP,14,DUAL	⚠ ⚠
IC107	128.5	12.0	881 307905KANC	IC-LIN,7905,REGULATOR	TO-220,3,-,-5V	⚠ ⚠
IC109	157.4	49.5	883 602421AA	IC-MEM,EEPROM,24LC21	DIP,3,4000NS,5%,90MIL	⚠ ⚠
L102	40.6	107.1	925 001001AE	INDUCTOR-AXIAL,150UH	FIX,150UH,10%,50,-,4X10.5MM	⚠ ⚠
LB151	74.5	82.7	925 001001AU	INDUCTOR-AXIAL,0.47UH	FIX,0.47UH,20%,4X9.8MM	
LF101	47.0	7.0	943 150021AB	FILTER-LPF,EMI,LC	22PF,-25 TO 85	
LG151	97.5	99.0	925 001001AU	INDUCTOR-AXIAL,0.47UH	FIX,0.47UH,20%,4X9.8MM	
LR151	89.5	99.0	925 001001AU	INDUCTOR-AXIAL,0.47UH	FIX,0.47UH,20%,4X9.8MM	
Q101	91.7	108.1	891 123906XANC	TR-PNP,2N3906,TO-92,EBC	0.625W,40V,40V,5V,0.2A	
Q102	87.8	103.1	891 393646AA	TR-NPN,MPS3646,TO-92,EBC	-,40V,15V,5V,0.3A	
Q103	10.3	101.5	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q104	55.5	8.5	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q181	131.5	62.0	891 123906XANC	TR-PNP,2N3906,TO-92,EBC	0.625W,40V,40V,5V,0.2A	
QB101	46.1	61.5	891 493953AA	TR-NPN,KSC3953C,TO-126,ECB	1.3W,120V,120V,3V,0.2A	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

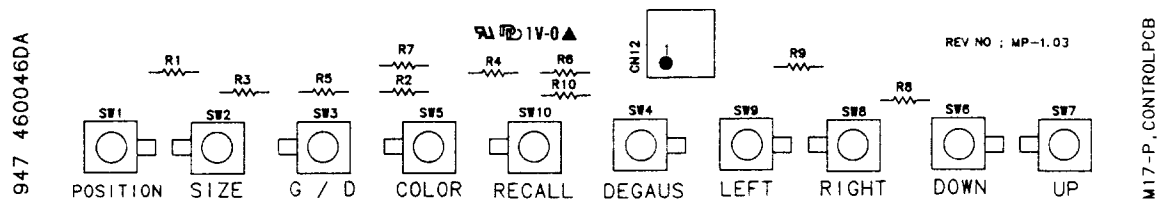
Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
QG101	36.7	60.7	891 493953AA	TR-NPN,KSC3953C,TO-126,ECB	1.3W,120V,120V,3V,0.2A	
QR101	17.0	59.3	891 493953AA	TR-NPN,KSC3953C,TO-126,ECB	1.3W,120V,120V,3V,0.2A	
R101	48.5	15.0	911 142207YA	REF-CF,2.2K,5%,1/6W	TO +350PPM/C,R-AXIAL	
R102	46.0	21.5	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R105	75.5	100.9	911 141507YA	REF-CF,1.5K,5%,1/6W	TO +350PPM/C,R-AXIAL	
R106	68.6	101.9	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R107	21.0	102.0	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R108	10.3	97.9	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R109	85.5	110.4	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R111	50.3	99.0	911 164707YA	REF-CF,470K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R112	50.4	107.9	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R114	61.0	27.0	911 121007YA	REF-CF,10.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R115	58.0	27.0	911 451205DA	REF-MF,12K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R116	67.7	28.3	911 436805DA	REF-MF,680,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R117	28.5	63.1	911 122207FF	REF-CF,22.5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R118	9.2	38.5	911 123307YA	REF-CF,33.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R119	18.7	108.6	911 137507YA	REF-CF,750,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R120	139.1	47.6	911 354707JF	REF-MO,47K,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R121	40.0	9.0	911 141807YA	REF-CF,1.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R153	105.0	29.0	911 131007FA	REF-CF,100,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R160	61.5	14.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R161	77.5	19.5	911 134707YA	REF-CF,470,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R163	105.5	17.4	911 132207YA	REF-CF,220,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R165	82.4	7.0	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R166	84.7	23.3	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R167	82.5	17.8	911 131207YA	REF-CF,120,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R168	81.5	22.8	911 132207DA	REF-CF,220,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R169	71.1	7.4	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R170	73.5	13.9	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R185	50.5	90.8	911 121007YA	REF-CF,10.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R186	142.1	62.3	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R187	126.5	64.8	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R188	50.3	101.4	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R189	50.3	93.3	2001-000001	REF-CF,2.0K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R190	135.6	74.2	911 152707YA	REF-CF,27K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R191	162.3	47.3	911 124707YA	REF-CF,47A	150V,-1300 TO +3500PPM/C,R-AXIAL	
R192	162.3	49.5	911 124707YA	REF-CF,47A	150V,-1300 TO +3500PPM/C,R-AXIAL	
R193	147.3	45.2	911 154707YA	REF-CF,100,1/6W,47K	150V,-1300 TO +3500PPM/C,R-AXIAL	
R194	161.4	37.7	911 131007YA	REF-CF,100,1/6W	150V,-1300 TO +3500PPM/C,R-AXIAL	
R195	160.0	51.5	911 154707YA	REF-CF,100,1/6W,47K	150V,-1300 TO +3500PPM/C,R-AXIAL	
RB101	40.0	13.9	911 127507YA	REF-CF,75.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB102	40.0	21.4	911 127507YA	REF-CF,75.5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB105	40.1	58.0	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB107	40.0	76.3	911 132707FF	REF-CF,270,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RB108	49.9	67.3	911 131807YA	REF-CF,180,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB109	43.4	69.8	911 134307CA	REF-CF,430,5%,1/8W	150V,-350 TO +350PPM/C,R-AXIAL	
RB110	117.2	85.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

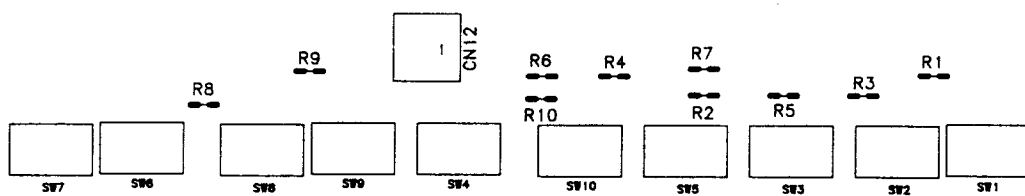
Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
RB111	126.0	88.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RB112	62.5	73.5	911 162007YA	REF-CF,200K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB114	129.0	99.0	911 144707DA	REF-CF,4.7K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
RB115	26.2	92.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
RB116	127.4	83.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB151	82.5	86.7	911 133307FF	REF-CF,330,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RB152	78.9	97.7	911 223908FA	REF-CC,39,10%,1/2W	350V,-,R-AXIAL	
RG101	33.5	11.5	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG102	29.2	21.4	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG105	25.5	54.9	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG107	25.3	74.0	911 132707FF	REF-CF,270,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RG108	37.2	64.6	911 131807YA	REF-CF,180,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG109	30.7	67.0	911 134307CA	REF-CF,430,5%,1/8W	150V,-350 TO +350PPM/C,R-AXIAL	
RG110	114.3	85.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RG111	120.0	89.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RG112	64.0	83.0	911 162007YA	REF-CF,200K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG114	135.0	99.0	911 144707DA	REF-CF,4.7K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
RG115	28.8	92.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
RG116	127.4	80.9	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG151	101.0	99.0	911 133307FF	REF-CF,330,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RG152	105.0	85.5	911 223908FA	REF-CC,39,10%,1/2W	350V,-,R-AXIAL	
RR101	11.5	13.9	911 127507YA	REF-CF,75,5%,1/6W	TO +350PPM/C,R-AXIAL	
RR102	11.5	21.4	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR105	9.2	57.5	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR107	21.9	74.0	911 132707FF	REF-CF,270,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RR108	18.9	66.1	911 131807YA	REF-CF,180,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR109	16.4	66.1	911 134307CA	REF-CF,430,5%,1/8W	150V,-350 TO +350PPM/C,R-AXIAL	
RR110	111.4	85.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RR111	117.0	89.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RR112	57.2	104.0	911 162007YA	REF-CF,200K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR114	132.0	99.0	911 144707DA	REF-CF,4.7K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
RR115	20.6	98.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
RR116	127.4	78.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR151	85.5	99.0	911 133307FF	REF-CF,330,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RR152	93.5	99.0	911 223908FA	REF-CC,39,10%,1/2W	350V,-,R-AXIAL	
SCREEN	99.5	78.0	935 810106AB	AM CON-TERMINAL PIN	03124-700-810	
SG151	93.0	81.0	04569-002-210	DSP-301N	SPARK-GAP	
SG152	104.2	65.7	04569-002-210	DSP-301N	SPARK-GAP	
SG153	76.5	77.5	04569-002-210	DSP-301N	SPARK-GAP	
SG154	108.5	51.5	04569-002-210	DSP-301N	SPARK-GAP	
SK1	83.5	61.5	935 720913AA	CON-JACK CRT SOCKET,12P	PHI29_D/F,SMALL TYPE	
ZD102	130.9	67.7	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD103	5.8	87.1	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD104	29.8	6.1	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD105	111.4	5.9	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD106	10.7	113.8	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD107	23.0	110.9	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD108	26.8	4.9	893 290002BC	DIODE-ZEN,ZPD9.1,DO-41	0.5W,8.1V,5MA,-,-,-	

9-3-1 PCB Layout




Control Top View



Control Bottom View

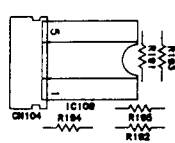


9-3-2 Control Panel PCB Parts

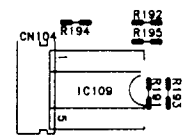
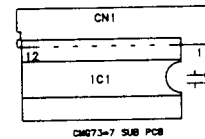
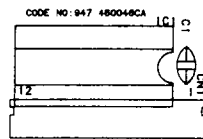
( : Caution,  : Specialty part for this monitor only,  : ESD Caution)

Loc. No.	Code No.	Description	Specification	Remarks
CN12	935 240163JA	CON-BOX HEADER,3P,2MM	1R,STRAIGHT,SN	
R1	911 133007YA	REF-CF,1.5K,5%,1/6W, 300A	150V,-1300 TO +350PPM/C	
R2	911 133007YA	REF-CF,1.5K,5%,1/6W, 300A	150V,-1300 TO +350PPM/C	
R3	911 143007YA	REF-CF,1.8K,5%,1/6W, 3K	150V,-1300 TO +350PPM/C	
R4	911 143007YA	REF-CF,1.8K,5%,1/6W, 3K	150V,-1300 TO +350PPM/C	
R5	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C	
R6	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C	
R7	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C	
R8	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C	
R9	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C	
R10	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C	
SW1	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	
SW2	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	
SW3	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	
SW4	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	
SW5	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	
SW6	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	
SW7	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	
SW8	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	
SW9	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	
SW10	933 213013AA	SWITCH-TACT,6X6X5MM,SPST	-,15V,20MA,SPST,160G,0.25	

9-3-1 PCB Layout



Sub Top View






Sub Bottom View

9-3-2 Sub PCB and Other Parts List (⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)


Loc. No.	Code No.	Description	Specification	Remarks
Sub PCB				
C1	915 323100HKPH	CAP-CERAMIC, 101K, 1H, Y5P		
CN1	935 220705LA	CON-NO WALL, HEADER, 5P, 1R		
CN104	935 220712LA	CON-NO WALL, HEADER, 12P, 14		
IC1	873 760125AA	IC-MOS, 74HC125, BUFFER		
IC109	883 602421AA	IC-MEM, EEPROM, 24LC21, 128X		
R191	911 131007YA	REF-CF, 100, 5%, 1/6W		
R192	911 124707YA	REF-CF, 47, 1/6W		
R193	911 152707YA	REF-CF, 27K, 5%, 1/6W		
R194	911 131007YA	REF-CF, 5%, 1/6W		
R195	911 152707YA	REF-CF, 27K, 5%, 1/6W		
SUB/PCB	947 460046CA	PCF-SUB, D1728D-LS, 1LAYER		
Other				
S/CABLE	955 460589AAAA	CBF-SIGNAL CABLE, 1830MM, 15P	ATT/MAL/CORE, DDC, SAMTRON	
CRT	BH03-10003A	CRT, COLOR, 17"(HITACHI SILICA)	M41KVZ680X72	⚠
CRT	BH03-10001A	CRT, COLOR, 17"(SAMSUNG SILICA)	M41KVK36X01(E)	⚠
D-COIL	925 460193CA	COIL-DEGAUSSING, 8.45mH	110T, 255X255MM, 27.60hm	
CRT GND	955 460550AAAA	CBF-CRT GROUND ASS'Y	CMG73*7	
P/CORD	955 001437AAAA	CBF-POWER CORD, 1830MM	MSP-48E, KSC3304, VCTFO.75MMX3C	KOREA
P/CORD	955 001434AAAA	CBF-POWER CORD, 1850MM, UC	KKP-30, KKS-16A, SVT#3/18, 125V, 7A	U.S.A
P/CORD	955 001439AAB	CBF-POWER CORD, 1220MM, EC	EU, LS13/14, H05W-F0.57MMX3, GFC-3	SEUK
P/CORD	955 001443AAAA	CBF-POWER CORD, 1830MM, AU	SP502B, 3ASL/100.IS-14, IVORY	SEAU
P/CORD	955 001435AAAA	CBF-POWER CORD, 1850MM, EU	KKP-4819R, KKS-16A, 220V, 6A(HP)	EUROPE
MAIN PCB ASS'Y	257 211080AA	257 211070AABP	ASS'Y-PWA, MAIN, SAMTRON	
VIDEO PCB ASS'Y	257 211070AABM	257 211080AAKD	ASS'Y VIDEO, SAMTRON	

9-5 Schematic Diagrams

Caution

1. The areas shaded or marked with  on the schematic diagram and parts list designate components which have special characteristics important for safety. Replace these parts only with parts identical to those in the original circuit or specified in the parts list. Before replacing any of these components carefully read the "Product Safety Notice."
2. When taking measurements, pay special attention to the following:
 - 1) Do not use your instrument between primary ground (symbol ) and secondary circuit.
 - 2) Do not use your instrument between secondary ground (symbol ) and primary circuit.



Warning



This equipment contains safety critical components. All parts shown with the  mark on the schematic are safety critical.

Replace safety critical parts with only manufacturer's recommended parts. See parts list for exact replacements.

Note

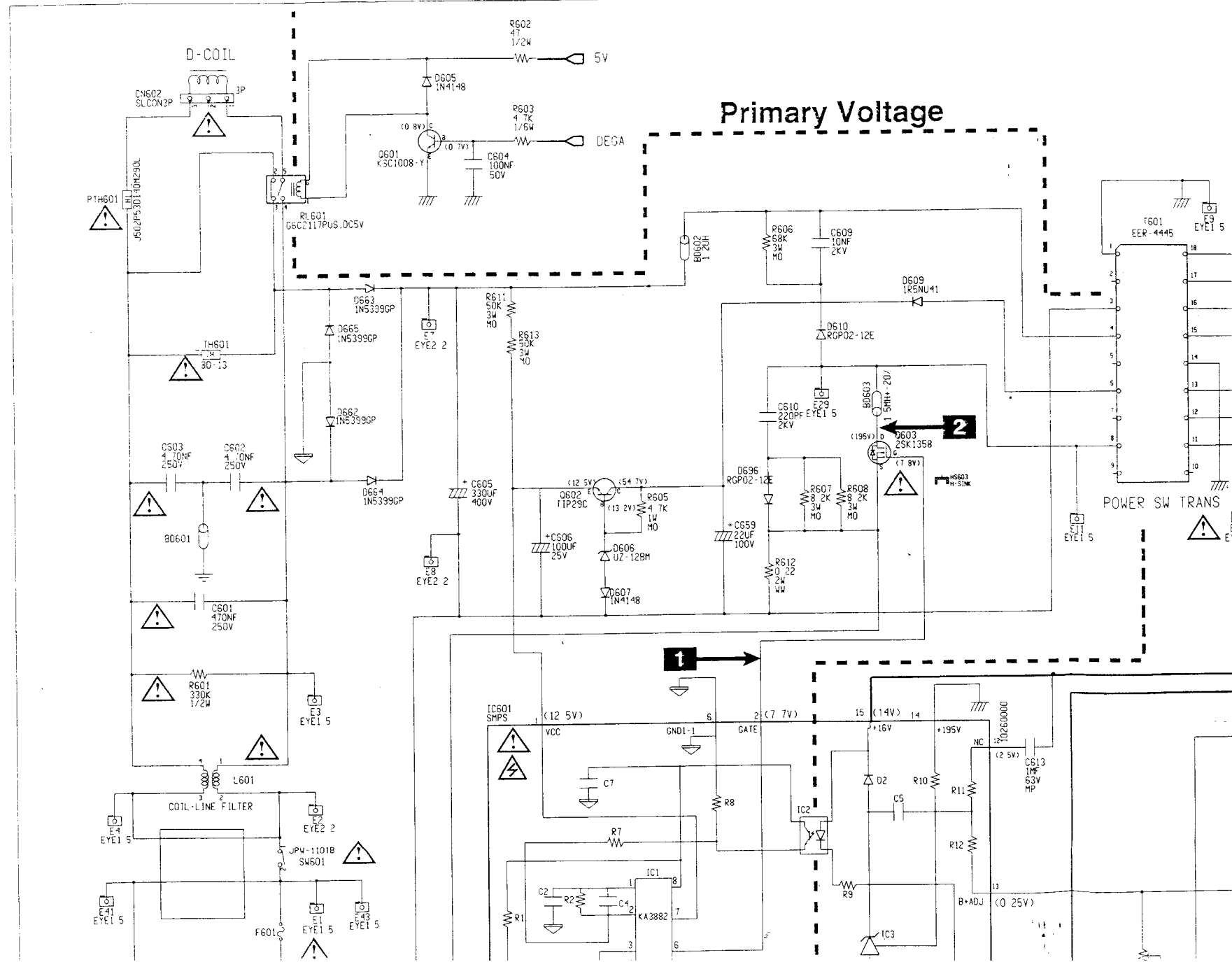
1. Resistance is shown in OHM. K = 1000 M = 1,000,000. The rated power of resistors not noted in schematic diagram is 1/4W.
2. Capacitance is shown in μF . Capacitances not otherwise noted are shown in pF ($1\mu\text{F} = 1,000,000 \text{ pF}$). Rated voltage of condensers not otherwise noted in schematic diagram is 50 V.
3. Abbreviations and Symbols

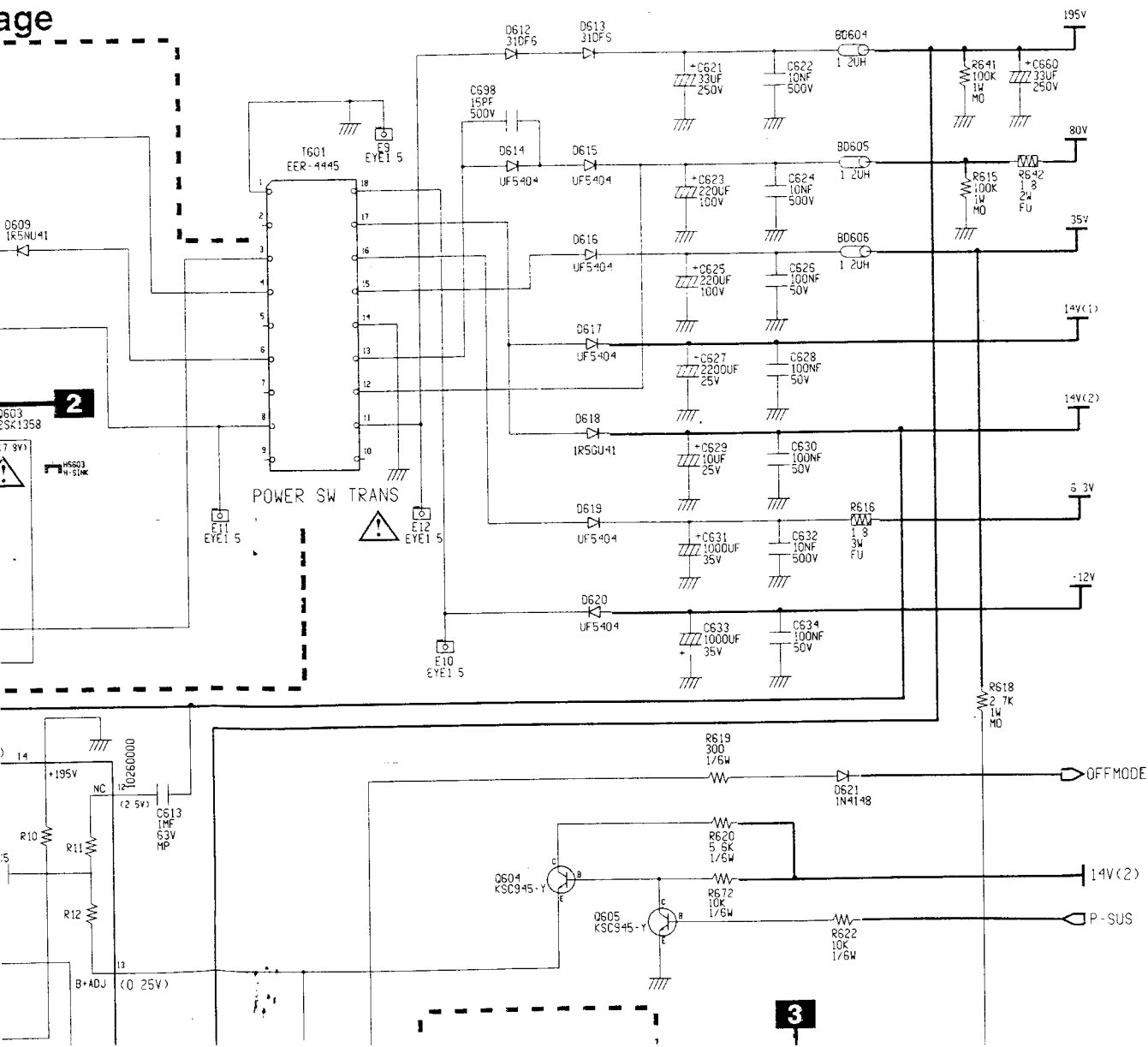
MO	R-METAL OXIDE	WW	R-WIRE WOUND
FU	FUSIBLE	C	R-COMPOSITION
CM	R-CEMENT MPP METAL POLYPROPYLENE	PP	C-POLYPROPYLENE
MP	C-METAL POLYESTOR	T	C-TANTALUM
P	C-POLYESTOR		COLD GROUND
	HOT GROUND		

4. The secondary voltage is read with an SSVM from the indicated point to cold ground ().
The primary voltage is read with an SSVM from the indicated point to hot ground ().
5. This schematic diagram is subject to change without notice.

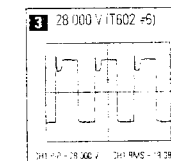
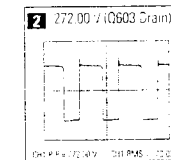
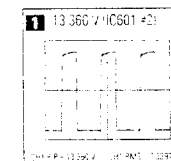
9-4 Schematic Diagram

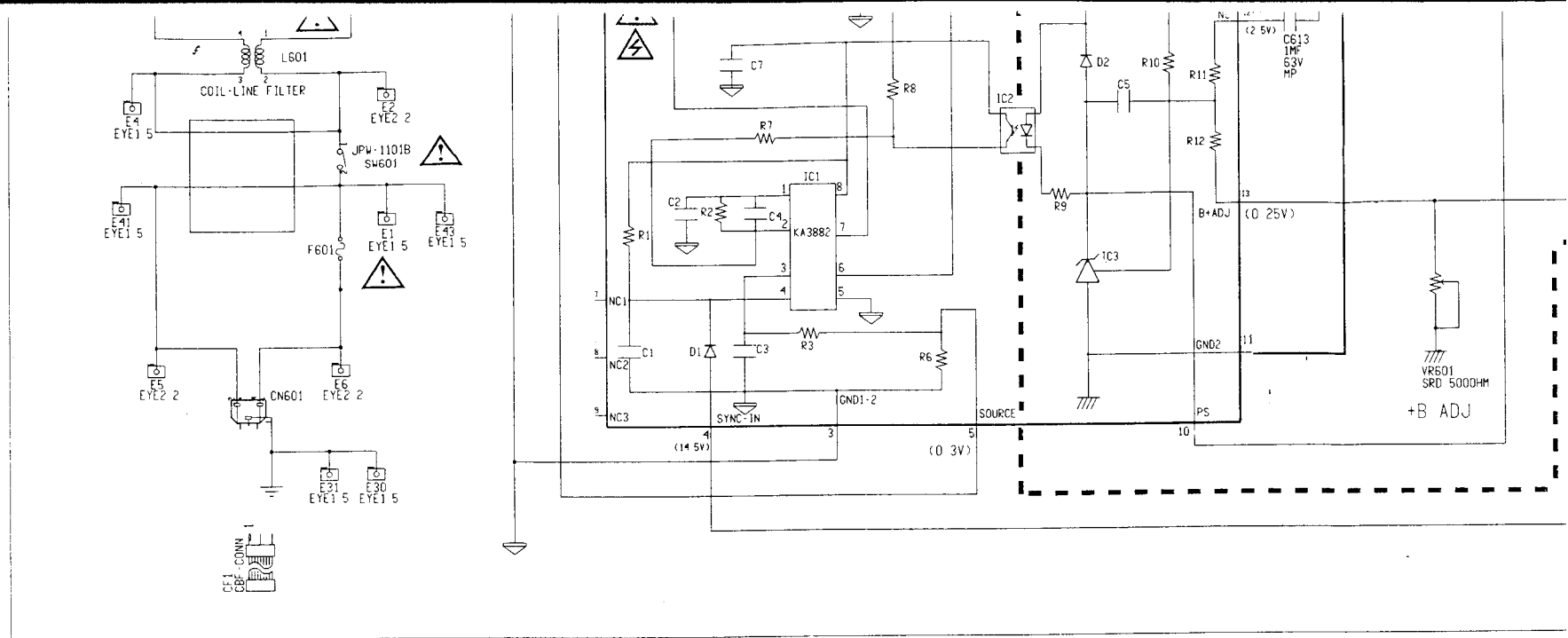
9-4-1 Power Schematic Diagram and Waveforms



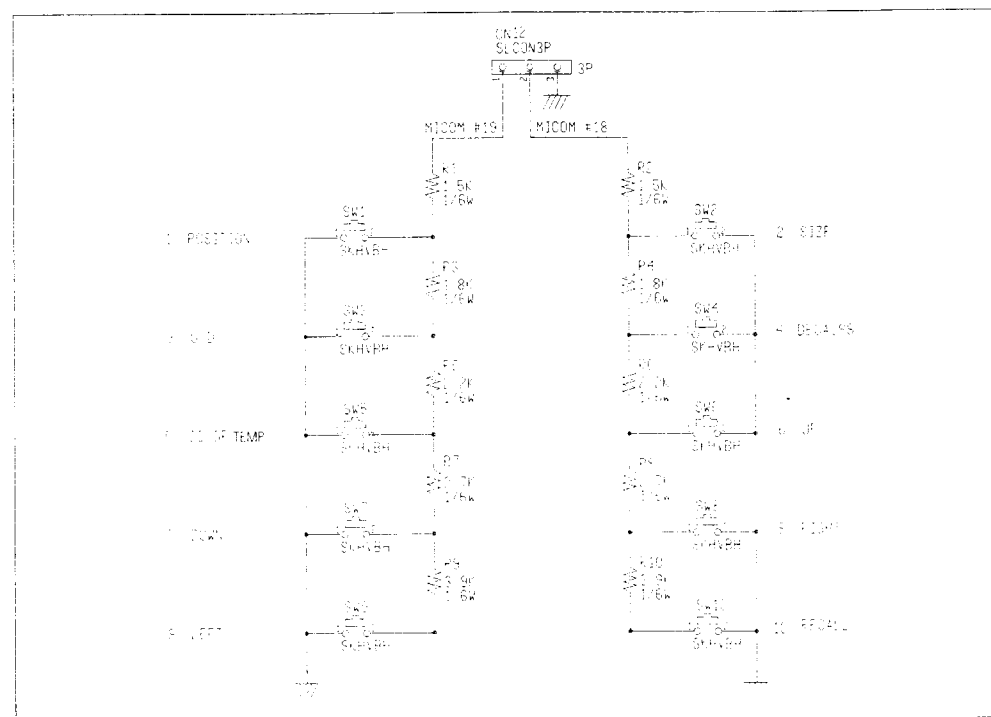


———— : Power Line
———— : Signal Line



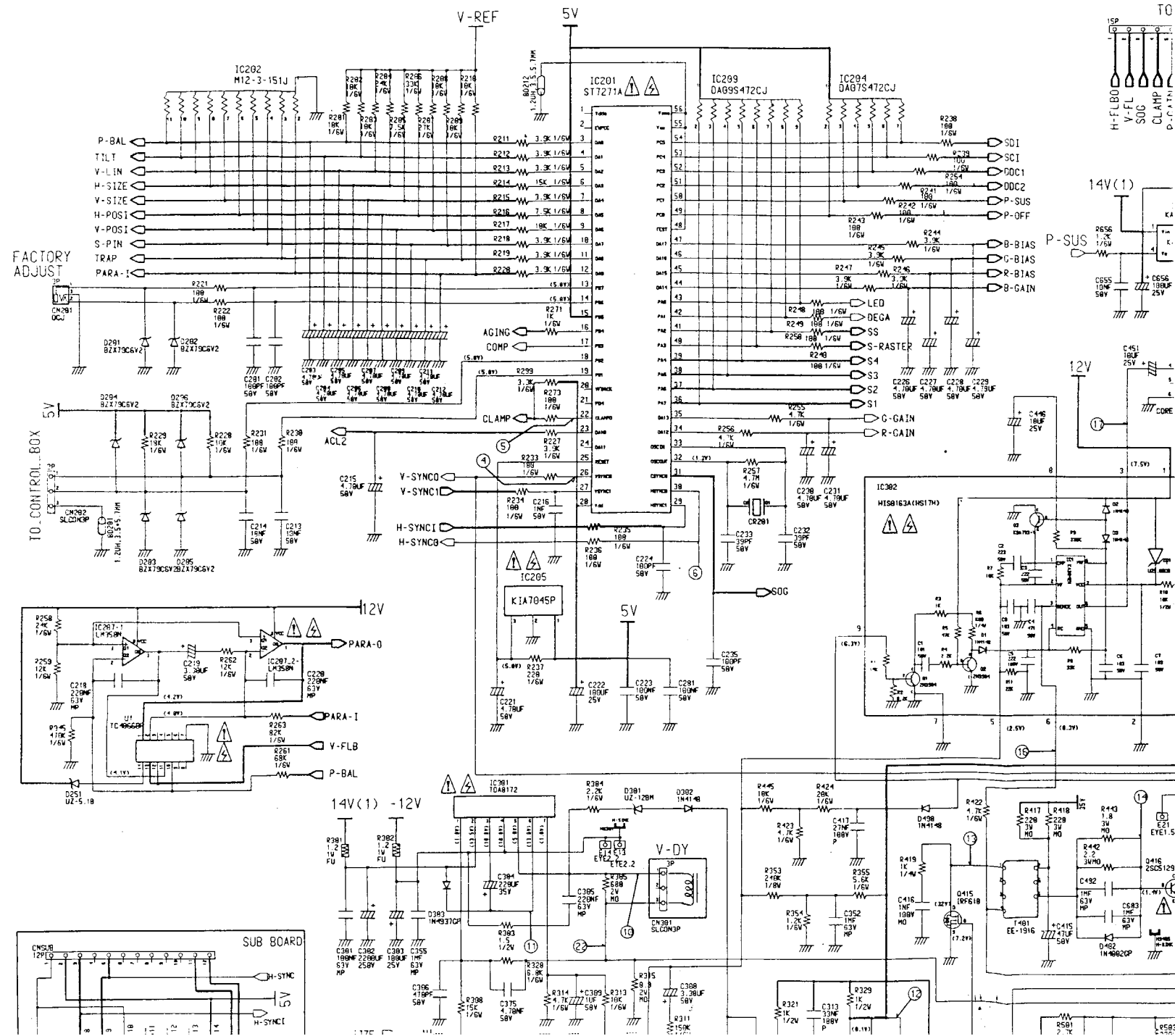


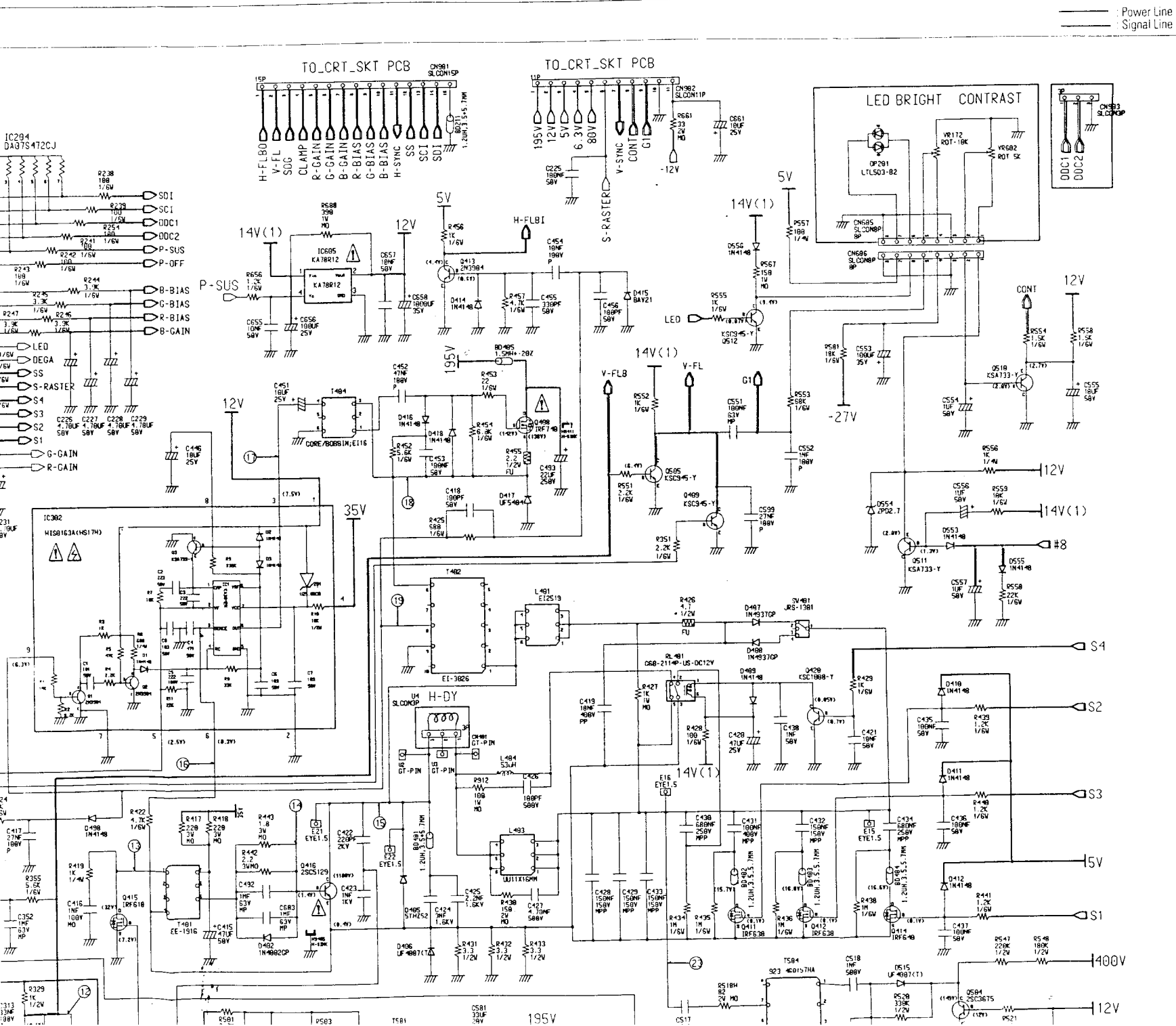
9-4-2 Control Panel Schematic Diagram

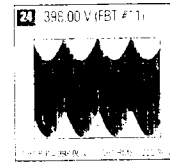
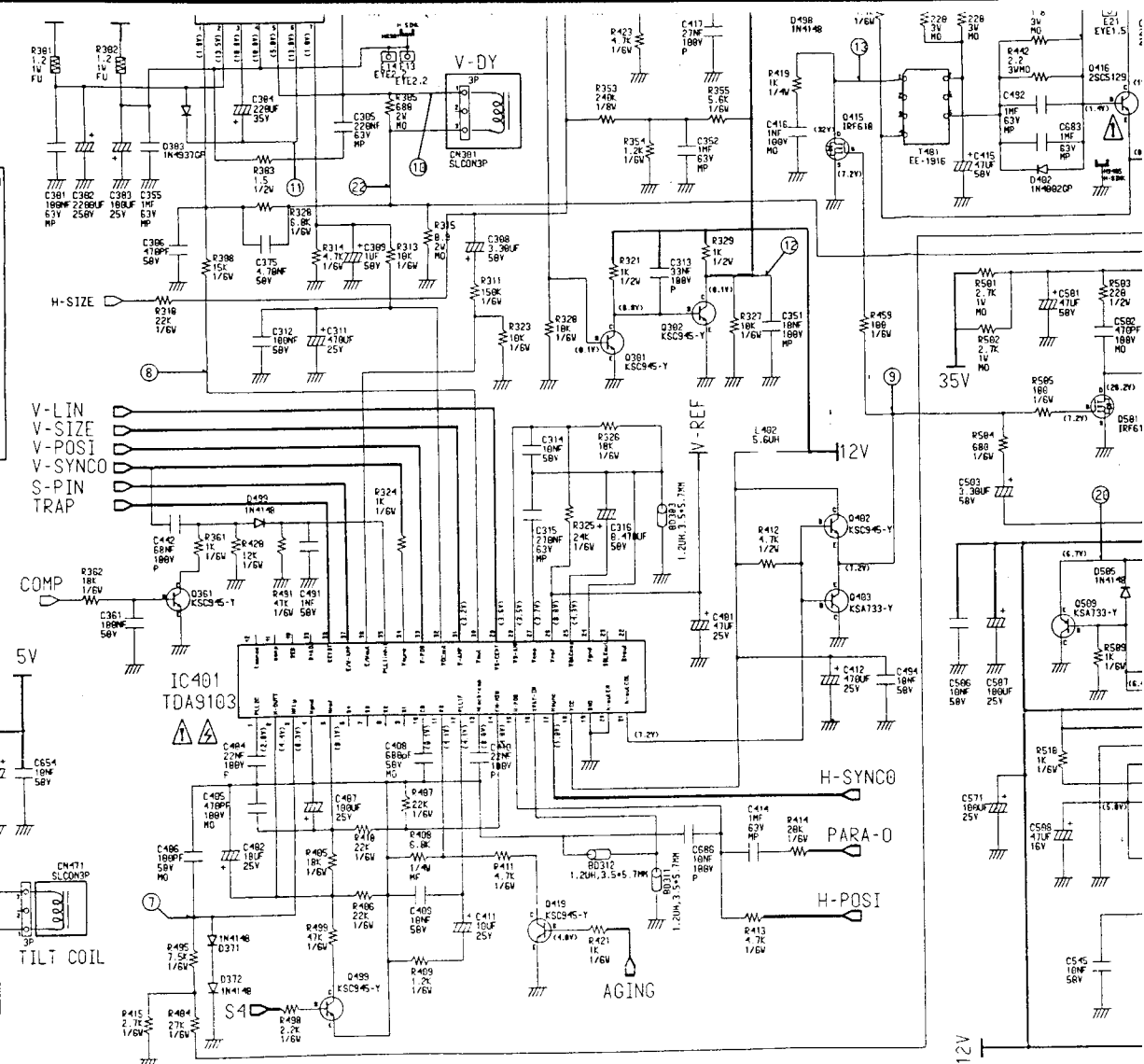


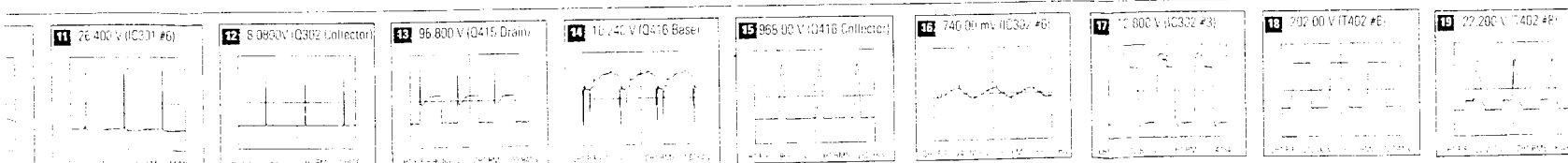
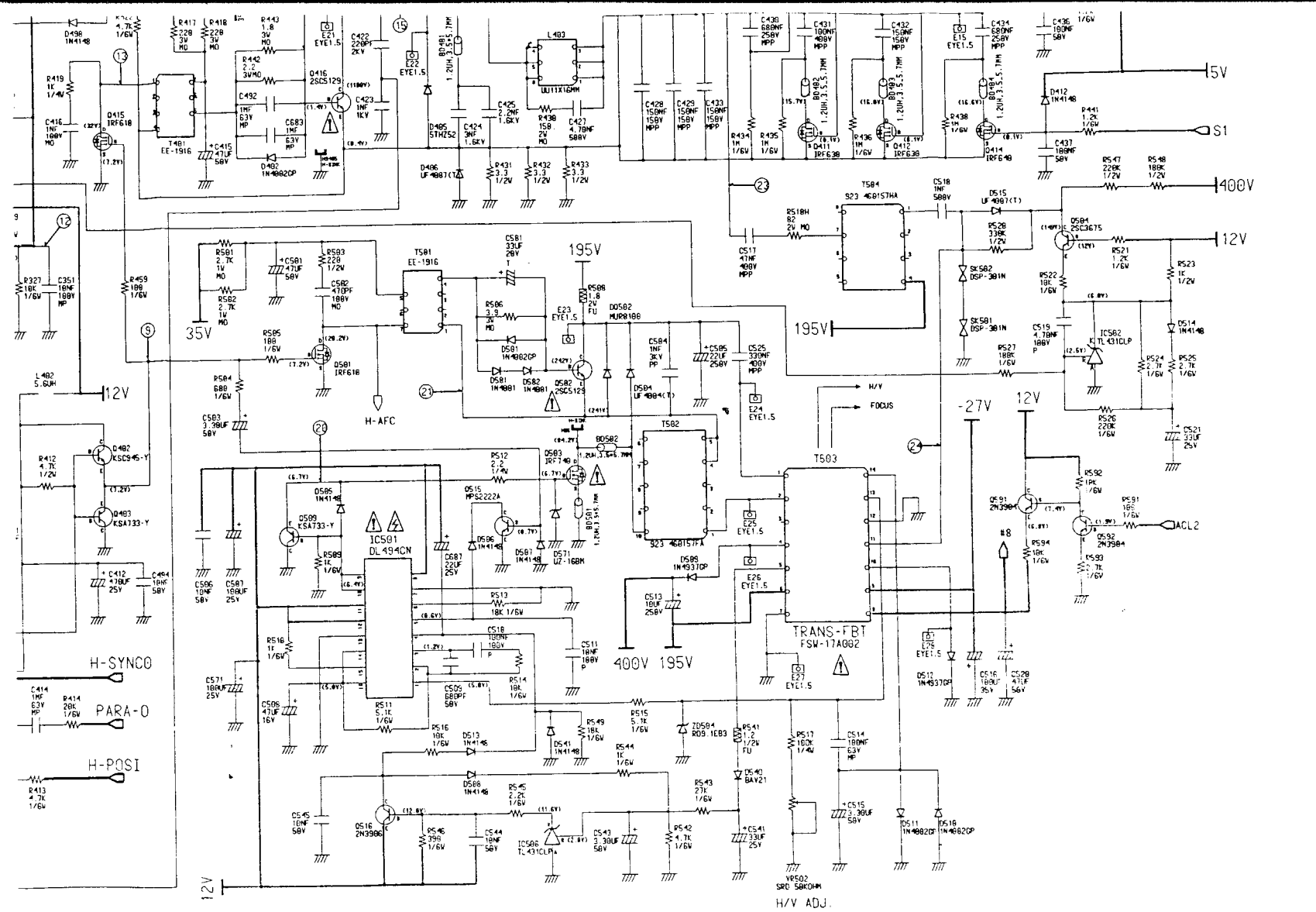


9-4-3 Main Schematic Diagram and Waveforms









9-4-4 Video Schematic Diagram & Waveforms

