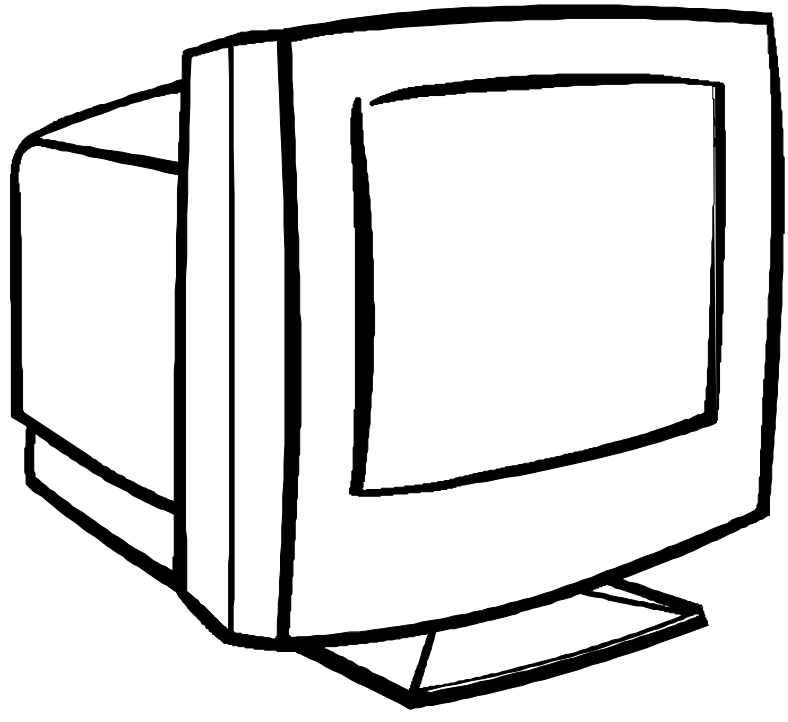
Fujitsu SERVICE MANUAL

COLOR MONITOR

MCM1514V D556Q 154V/C551



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1. SPECIFICATIONS FOR 154V/C551 COLOR MONITOR

1. CRT : 38.1CM(15V) 90 Deflection, 29mm Neck, 0.28mm Dot Pitch, Non-Glare Screen

2. Viewable image Size: 35.0CM (13.8") diagonal

3. Display Color: Unlimited Colors

4. External Controls:
   Power On/Off, UP/Down key, Function key: Contrast, Brightness, H-Size, H-center, V-Size, V-Center, Pincushion, Trapezoid.

5. Input Video Signal

	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5	Mode 6	Mode 7
	RGB Analog	RGB Analog	RGB Analog	RGB Analog	RGB Analog	RGB Analog	RGB Analog
Horiz. Sync:	TTL Level Negative	TTL Level Negative	TTL Level Negative	TTL Level Negative	TTL Level Positive	TTL Level Positive	TTL Level Negative
Vert. Sync:	TTL Level Positive	TTL Level Negative	TTL Level Negative	TTL Level Negative	TTL Level Positive	TTL Level Positive	TTL Level Negative

6. Resolution

Horizontal:	720 (H)	640 (H)	640 (H)	640 (H)	800 (H)	800 (H)	1024 (H)
Vertical :	400 (V)	480 (V)	480 (V)	480(V)	600(V)	600 (V)	768 (V)
Fh (KHz):	31.5	31.5	37.5	43.3	46.8	53.7	48.4
Fv (Hz) :	70	60	75	85	75	85	60

7. Display Size
   Horizontal: 260 mm
   Vertical: 195 mm

8. Scanning Frequencies
   Horizontal: 30KHz ~ 54KHz
   Vertical: 50 Hz ~ 120 Hz

9. Factory Preset Timings: 7
   User Timings: 12

10. Misconvergence
    Center: 0.3 mm Max.
    Corner: 0.4 mm Max.

11. Video Bandwidth: 65 MHz

12. Power Source: Switching Mode Power Supply
    AC 100 ~240V, 50/60Hz Universal Type

13. Operating Temperature: 0°C to 40°C Ambient

14. Humidity: 10% to 85% Relative, Non-Condensing

15 Weight: 12 Kgs(Net), 14Kgs(Gross)

16. Dimensions Monitor:
    Carton: 460(W) × 425(H) × 494(D) mm
    Monitor: 360(W) × 364(H) × 385(D) mm

17. External Connection:
    15 Pin D-type Connector
    AC Power Cord

2. PRECAUTIONS AND NOTICES

2-1 SAFETY PRECAUTIONS

1. Observe all caution and safety related notes located inside the display cabinet.

2. Operation of the display with the cover removed, may cause a serious shock hazard from the display power supply. Work on the display should not be attempted by anyone who is not thoroughly familiar with precautions necessary when working on high voltage equipment.

3. Do not install, remove or handle the picture tube in any manner unless shatter-proof goggles are worn. People who are not so equipped should be kept away while handling picture tube. Keep picture tube away from the body while handling.

4. The picture tube is constructed to limit X-RAY radiation to 0.5 mR/HR. For continued protection, use the designated replacement tube only, and adjust the voltages so that the designated maximum rating at the anode will not be exceeded.

5. Before returning a serviced display to the customer, a thorough safety test must be performed to verify that the display is safe to operate without danger or shock. Always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as screw heads.
   Test method for current leakage is described as follow.

   (a) Plug the AC line cord directly into rated AC outlet (do not use a line isolation transformer during this check).
   (b) Use an AC voltmeter having 5000 ohms per volt or with more sensitivity in the following manner: Connect a 1500 ohms 10 Watt resistor, paralleled by a 0.15UF, AC type capacitor between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts simultaneously. Measure the AC voltage across the combination of 1500 ohms resistor and 0.15UF capacitor.
   (c) Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part.
   (d) Voltage measured must not exceed 0.5 volts RMS. This corresponds to 0.35 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

2-2 PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety visual inspections and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Before replacing any of these components read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-RAY radiation or other hazards.

2-3 SERVICE NOTES

1. When replacing parts or circuit boards, clamp the lead wires around terminals before soldering.

2. When replacing a high wattage resistor (more than 1/2W of metal oxide film resistor) in circuit board, keep the resistor about 10mm (1/2 in) away from circuit board.

3. Keep wires away from high voltage or high temperature components.

4. Keep wires in their original position so as to reduce interference.

5. When re-assembling the monitor after service, take care to ensure that the degauss coil is not trapped and does not have its insulation damaged by screws, the metal card tray, or shielding edges.

2-4 HIGH VOLTAGE WARNING

Operation of monitor outside of cabinet or with back removed may cause a serious shock hazard. Work on this model should only be performed by those who are thoroughly familiar with precautions necessary when working on high voltage equipment.

Exercise care when servicing this chassis with power applied. Many B plus and high voltage terminals are exposed which, if carelessly contacted, can cause serious shock or result in damage to the chassis. Maintain interconnecting ground lead connections between chassis and picture tube dag when operating chassis.

Certain HV failures can increase X-ray radiation. Monitor should not be operated with HV levels exceeding the specified rating for the chassis type. The maximum operating HV specified for the chassis used in this monitor is

24.5KV ± 1KV

with a line voltage of 120/240 VAC. Higher voltage may also increase possibility of failure in HV supply.

It is important to maintain specified values of all components in the horizontal and high voltage circuits and anywhere else in the monitor that could cause a rise in high voltage or operating supply voltages. No changes should be made to the original design of the monitor. Components shown in the shaded areas on the schematic should be replaced with exact factory replacement parts. The use of unauthorized substitute parts may create a shock, fire or other hazard.

To determine the presence of high voltage, use an accurate, high impedance, HV meter connected between second anode lead and CRT dag grounding device. When servicing the High Voltage System, remove static charge from it by connecting a 10K ohm resistor in series with an insulated wire (such as a test probe) between picture tube dag and 2nd anode lead.(AC line cord disconnected from AC power outlet.)

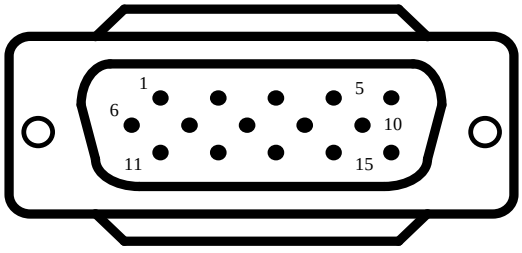
The picture tube used in this monitor employs integral implosion protection. Replace with tube of the same type number for continue safety. Do not lift picture tube by the neck. Handle the picture tube only after discharging the high voltage completely.

3. OPERATING INSTRUCTIONS

This procedure gives you instructions for installing and using the 154V/C551 Series display.

1. Position the display on the desired operation and plug the power cord into a convenient AC outlet. Three-wire power cord must be shielded and is provided as a safety precaution as it connects the chassis and cabinet to the electrical conduit ground. If the AC outlet in your location does not have provisions for the grounded type plug, the installer should attach the proper adapter to ensure a safe ground potential.

2. Connect the 15-pin color display shielded signal cable to your signal system device and lock both screws on the connector to ensure firm grounding. The connector information is as follow:



15 - Pin Color Display
Signal Cable

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	RED	9.	NC
2.	GREEN	10.	GND
3.	BLUE	11.	SYNC. GND
4.	GND	12.	SDA
5.	GND	13.	HORIZ. SYNC
6.	GND-R	14.	VERT. SYNC (* VCLK)
7.	GND-G	15.	SCL
8.	GND-B		

3. Apply power to the display by turning the power switch to the "ON" position and allow about thirty seconds for display tube warm-up. The Power-On indicator lights when the display is on.

4. With proper signals feed to the display, a pattern or data should appear on the screen, adjust the brightness and contrast to the most pleasing display.

5. This monitor has power saving function following the VESA DPMS. Be sure to connect the signal cable to the PC.

6. If your 154V/C551 Series color display requires service, it must be returned with the power cord.

4. ADJUSTMENT

4-1 ADJUSTMENT CONDITIONS AND PRECAUTIONS

1. Approximately 30 minutes should be allowed for warm up before proceeding.
2. Adjustments should be undertaken only on those necessary elements since most of them have been carefully preset at the factory.

4-2 MAIN ADJUSTMENTS

NO.	FUNCTION	LOCATION	DESIGNATION
1.	15V ADJ	PCB - MAIN	VR901
2.	B + ADJ	PCB - MAIN	VR902
3.	R.B. DRIVE	CRT - BOARD	VR801,802
4.	R.G.B. CUT-OFF	CRT - BOARD	VR803,804,805
5.	ABL ADJ	PCB - MAIN	VR701
6.	UP KEY	PCB - MAIN	SW101
7.	DOWN KEY	PCB - MAIN	SW102
8.	FUNCTION KEY	PCB - MAIN	SW103

4-3 ADJUSTMENT METHOD

1. 15V, B + & HV protection voltage adjustment:
   A. Chroma-2000 Signal generator or PC equivalent, set mode 1(VGA 640×480) pattern 1.0 .
   B. Connect a DC voltage meter between TP 901 and ground, then adjust VR901 to be 15VDC.
   C. Connect a DC voltage meter between TP 902 and ground, then adjust VR902 to be 88 VDC.

2. Factory preset timings adjustment:
   A. When you turn on the monitor, the function LEDS will light up simultaneously for a while, then extinguish.
   B. You can press the up/func two keys simultaneously, the most left four LEDS will light up for a while then extinguish.
   C. Then you can select one of the eight functions including Contrast, Brightness, H-SIZE, H-CENTER, V-SIZE, V-CENTER, Pincushion and Trapezoid Simply press the function key and the LED will be light up corresponding to the one selected, then press the up/down keys to get the factory presetting parameter value to your satisfaction.
   D. Then you will press the up/function two keys simultaneously again, the most right four LEDS will light up for a while then extinguish, the factory preset timings adjustment is finished.

3. White balance and luminance adjustment:
   A. Bias (low light) adjustment:
      (a) Set mode 5 (800×600 Fh: 46.8KHz) full white pattern.
      (b) Adjust VR801, 802, 803, 804, 805, to make VR in the center position.
      (c) Warm up more than 20 minute.
      (d) Brightness set to max. Contrast set to min. full white pattern, then adjust FBT screen VR to make Y= 1.0FL ± 0.2FL
      (e) Brightness set to raster just cutoff, contrast set to 4FL, then adjust CRT board VR805 (B-Bias) VR803 (R-Bias) to make Y= 4 ± 0.2 FL, x= 281 ± 10, y= 311 ± 10
   B. Gain (High light) adjustment:
      (a) Set mode 5 (800×600 Fh: 46.8KHz) full white pattern.
      (b) Brightness set to raster just cutoff and set the cantrast to max.
      (c) Adjust VR801, 802 to make color code x=281 ± 10, y=311 ± 10.
   C. Recheck item A&B to make sure both of them in spec.
   D. Full white luminance:
      (a) Set mode 5 (800×600 Fh: 46.8K) full white pattern.
      (b) Image size : H:260±4mm, V:195±4mm.
      (c) Brightness set to raster just cut off and set the contrast to max.
      (d) Adjust VR701 to make sure white luminance at 28 FL.

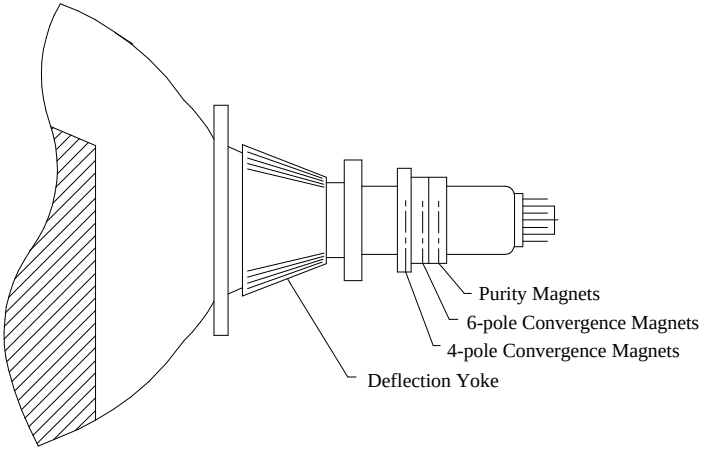
4. Focus adjustment:

   A. Set mode 2 (640×480 Fh: 31.5KHz) with character full page.
   B. Adjust external brightness to raster cutoff and external contrast to max. , then adjust focus VR to make the display be focused very well.

5. Purity adjustment

   A. Be sure that the display is not being exposed to any external magnetic fields.
   B. Ensure that the spacing between the Purity, Convergence, Magnet, (PCM), assembly and the CRT stem is 29? . (See below diagram)
   C. Produce a complete, red pattern on the display. Adjust the purity magnet rings on the PCM assembly to obtain a complete field of the color red. This is done by moving the two tabs in such a manner that they advance in an opposite direction but at the same time to obtain the same angle between the two tabs, which should be approximately 180'.
   D. Check the complete blue and complete green patterns to observe their respective color purity. make minor adjustments if needed.

RELATIVE PLACEMENT OF TYPICAL COMPONENTS



6. Convergence adjustment

   A. Produce a magenta crosshatch on the display.
   B. Adjust the focus for the best overall focus on the display.
   Also adjust the brightness to the desired condition.
   C. Vertical red and blue lines are converged by varying the angle between the two tabs of the 4 pole magnets on the PCM assembly. (See above diagrams)
   D. Horizontal red and blue lines are converged by varying the two tabs together, keeping the angle between them constant.
   E. Produce a white crosshatch pattern on the display.
   F. Vertical green and magenta lines are converged by varying the angle between the two tabs of the 6-pole magnets.
   G. Horizontal green and magenta lines are converged by varying the two tabs together, keeping the angle between them constant.

5. CIRCUIT DESCRIPTION

5-1 MICRO CIRCUIT

IC101 is CPU, This CPU has the following functions.

1. Detect timing mode by sensing the horizontal frequency, vertical frequency, the polarity of Hor. Sync and Ver. Sync.
2. Key board scan control.
3. Cs capacitor switch control.
4. Power saving control.

When CPU detects timing, it takes data from E²PROM (IC102), then output voltage to control the geometry of this monitor.
If key is pressed, the CPU will do some job according to the key function. For example, if function key is pressed, it can change different value to control screen geometry (H-SIZE, V-SIZE...etc.)

5-2 DEFLECTION CIRCUIT

Hor. sync. and ver. sync., come from PC, go into the CPU (IC101). The output goes to the Hor. oscillation and Ver. oscillation processor (IC401). The IC401 treats sync. signal and output the drive signal to horizontal and vertical output circuit. IC401 also generates some functions for geometry use, like, horizontal center, vertical size, by I²C bus control, the geometry can be controlled. IC601 is a vertical output IC to supply the vertical scan. Q404, Q405, Q406 and L405 are the horizontal size controls. Q403 is the horizontal deflection output, supply the horizontal scan of the monitor. Q707 and Q601 generate the Blanking signal output to G1 of CRT.
Q703 Q704 and Q705 are mute control, brightness control and G1 DC voltage output.

5-3 VIDEO CIRCUIT

IC801 is a video amplifier, clamping signal input from pin No. 11 to restore the DC voltage of video signal, the signal output from IC801 pass through IC802 video package amplifier stage LM2438, then go to the cut off DC restore stage, The video output signal is about 40Vpp.

5-4 POWER SUPPLY

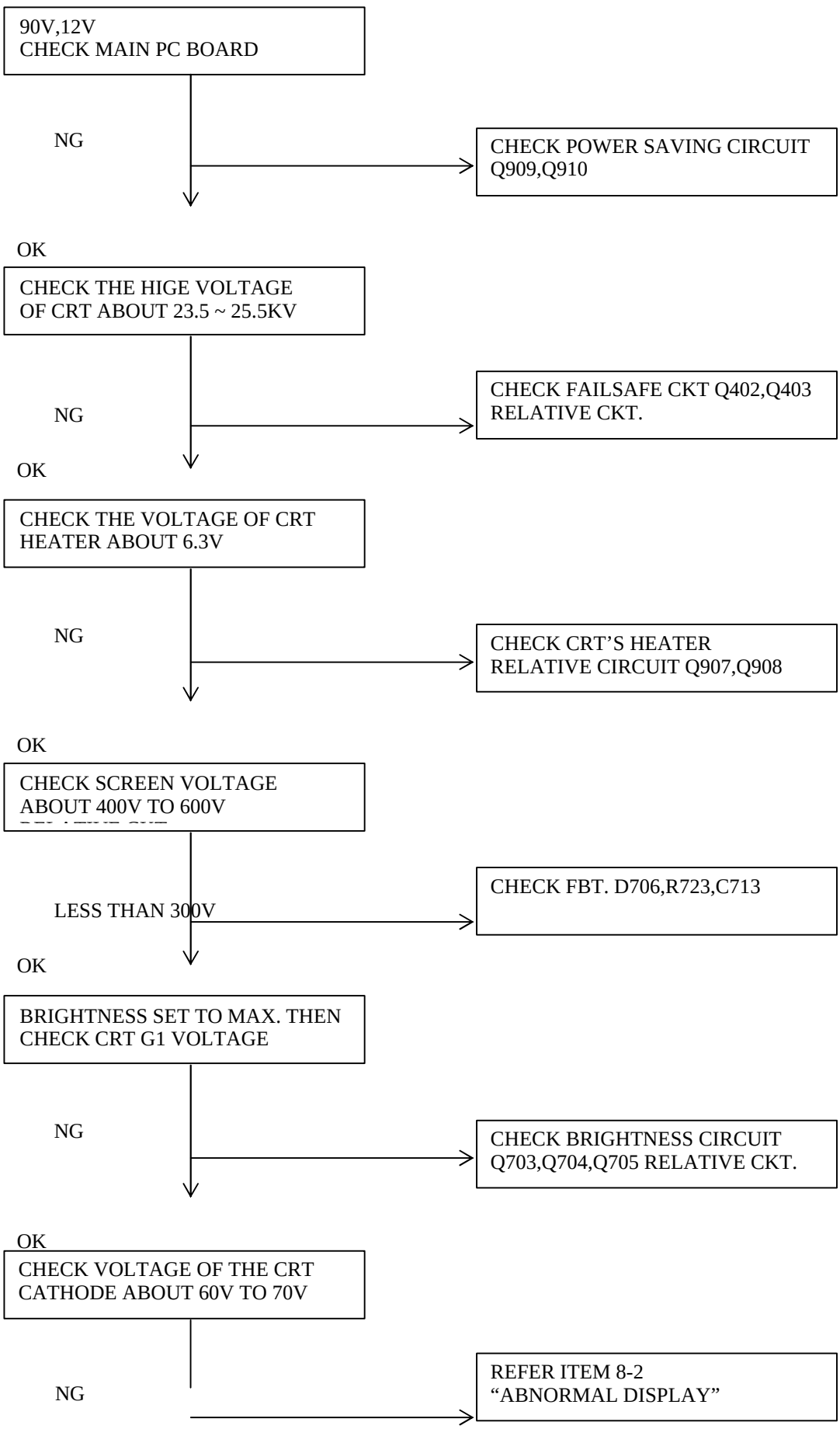
The design uses a discontinuous flyback topology operating in current-mode resulting in a multiple output switcher with stack well. Faster diodes are used. The fast transient response of the control loop maintains picture integrity. Very fast current limiting protects the switcher agains short circuits.
UC3842AM (IC901) is the current mode controller selected. It offers feed forward compensation, feedback error amplifier, and low voltage lock out features. The 3842 draws very little current is start up mode. There is enough power from the line bleeder to slowly charge a capacitor to the 16 volts needed to start the switcher.
The FET starts a cycle by allowing current to flow into the primary of the power transformer. As current ramps up with time, the voltage across the current sense resistor (R929) also ramps to a point where the 3842 determines that enough power is stored and turns off the FET. As the voltage on the transformer reverses, power is dumped from the main power transformer through diodes into the different supplies. To keep RFI to a minimum and reduce transistor heating, a turn-off snubber network is placed across the FET. Current from the secondary windings are rectified and filtered to freate the desired voltages. Small high current capacitors quickly return charging current to the source. Filter inductors remove high frequency noise.

5-5 TRANSISTOR & DIODE CIRCUIT

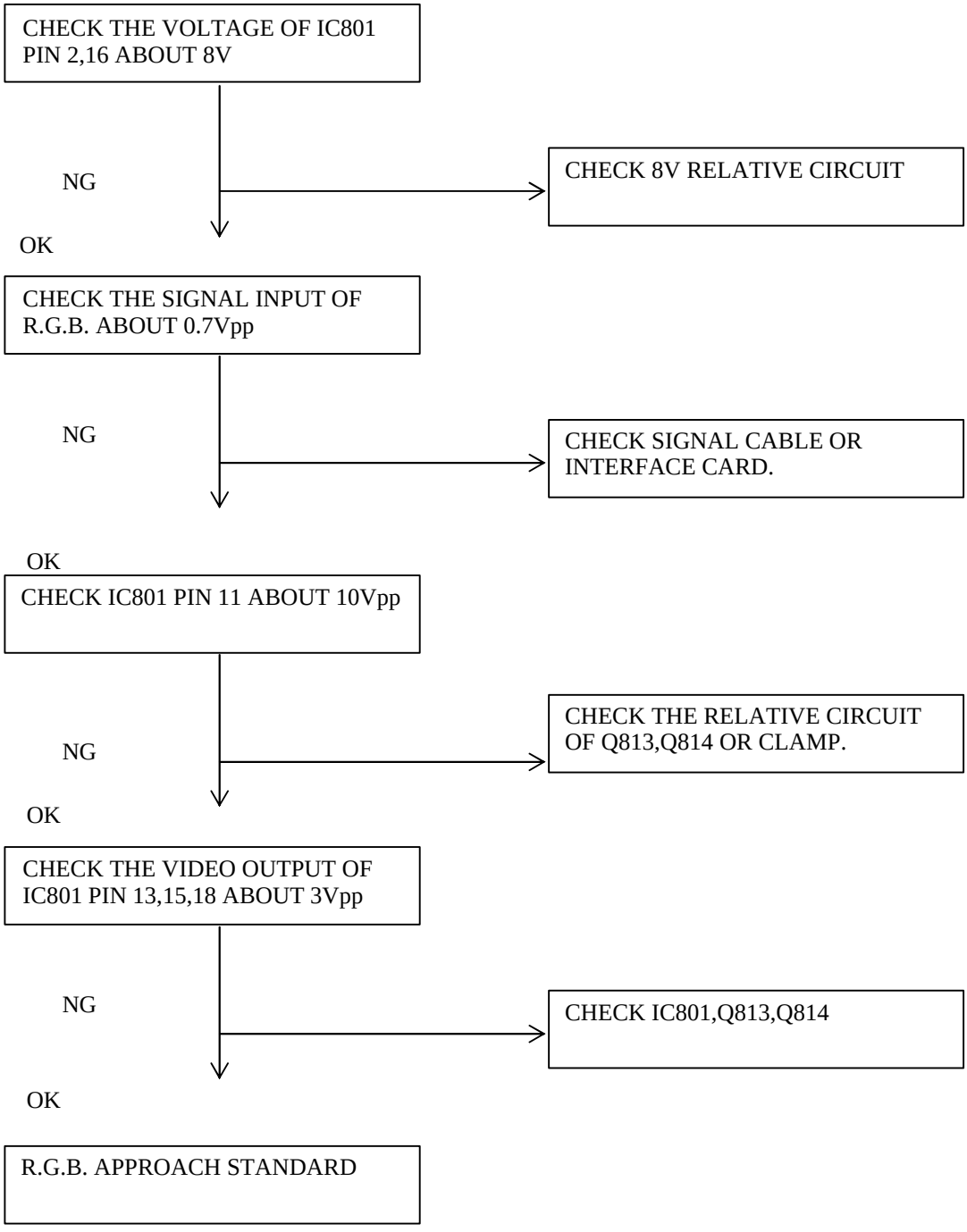
LOCATION	CIRCUIT FUNCTION DESCRIPTION
D901 ~ D904	Bridge Rectifier for AC Source
D909	Half-Wave Rectifier for Start CKT
D910	Clamp Diode for Snubber CKT
D919	Rectifier for Output Voltage
D922	Rectifier for Output Voltage
D923	Rectifier for Output Voltage
D925	Rectifier for Output Voltage
D927	Forward Bias when Q403 Turn-off to Protect B+ Block CKT
D929	B+ Feed Back Rectifier from F.B.T Pulse
Q904	Start CKT Amplifier Transistor
Q907, Q908	Use for Off-Mode to Cut-off 6.3V Supply Voltage
Q909, Q910	Use for Standy-By or Suspend Mode to Cut-off 14.5V Supply Voltage
Q912, Q920	Push-Pull Topology to Drive Q911
Q401	Turn-on at Power ON/OFF and Change Mode to Protect Hor.Block
Q402	HOR. Driver Transistor
Q407, Q408	As a Switcher for H-Size Correction CKT
Q410, Q426	H-Size Corection Mosfet (Q426 15" only)
Q404, Q405	As Differential Amp. to Drive Q406
Q406	Darlington Transistor for H-Size Control
Q703	As a Switcher to Mute Screen when Abnormal Qccurring
Q704, Q705	Unit Brightness Control CKT
Q601, Q707	Develop Blanking Signal
Q813, Q814	A Amplifier to Corection and Support Clamp Signal

6.TROUBLE SHOOTING CHART
6-1 NO RASTER, CRT RELATIVE CIRCUIT PROBLEMS

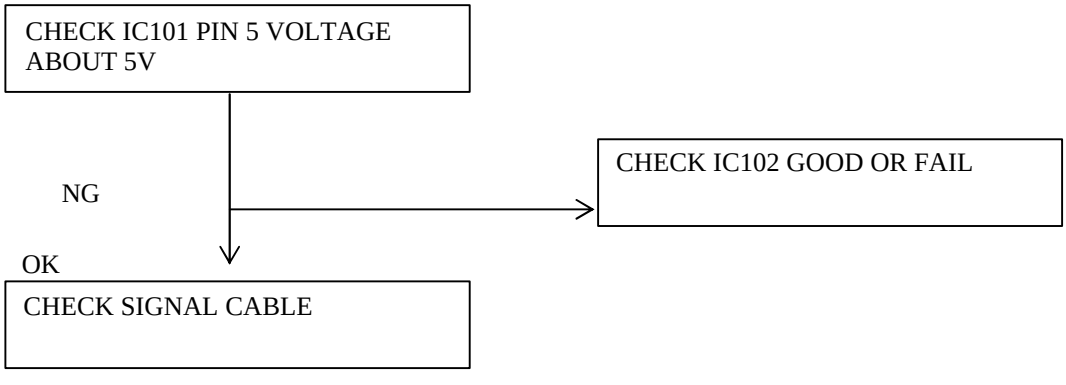
1.ABNORMAL POWER SUPPLY



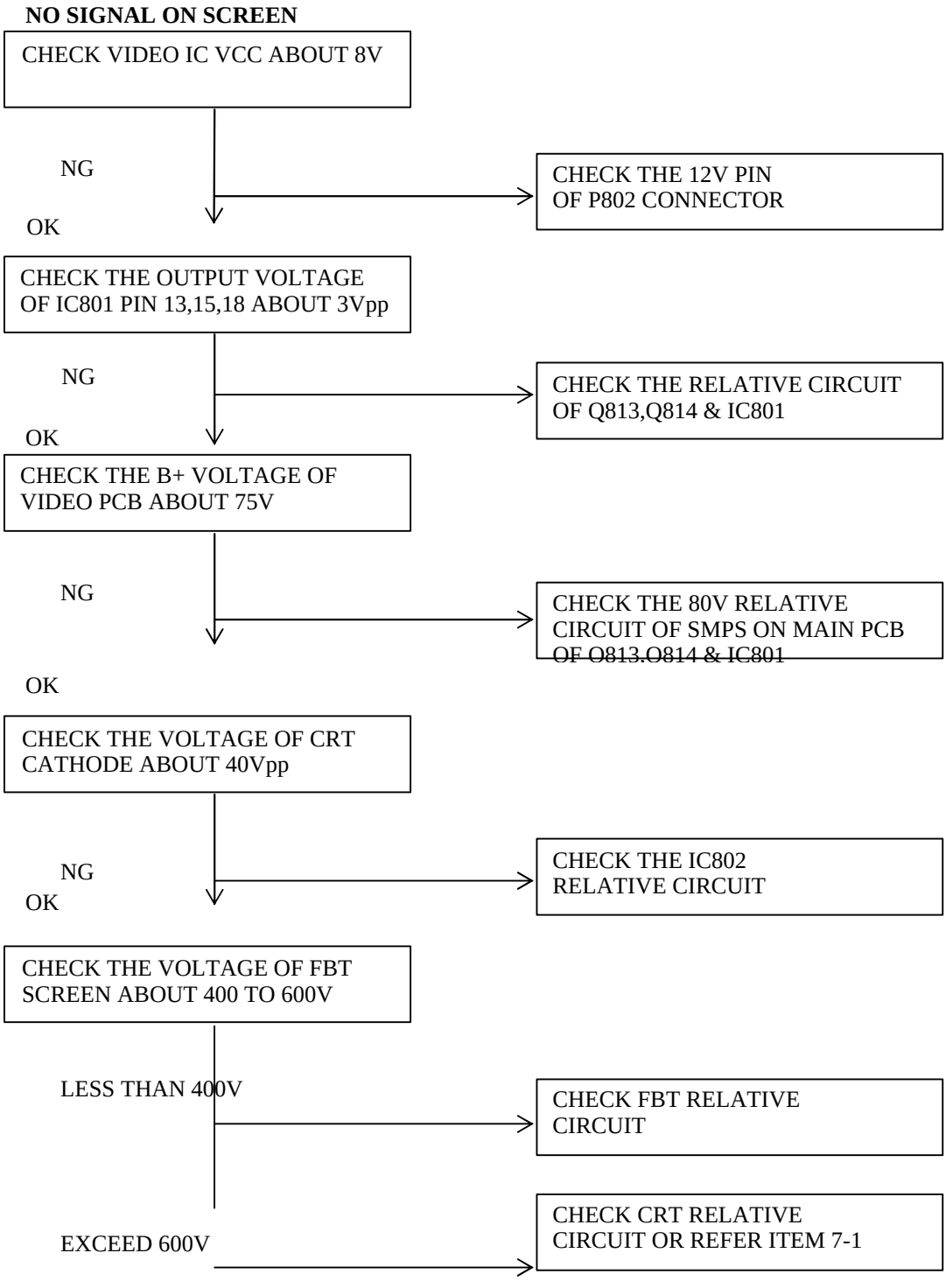
2.ABNORMAL VIDEO LEVEL ON SCREEN



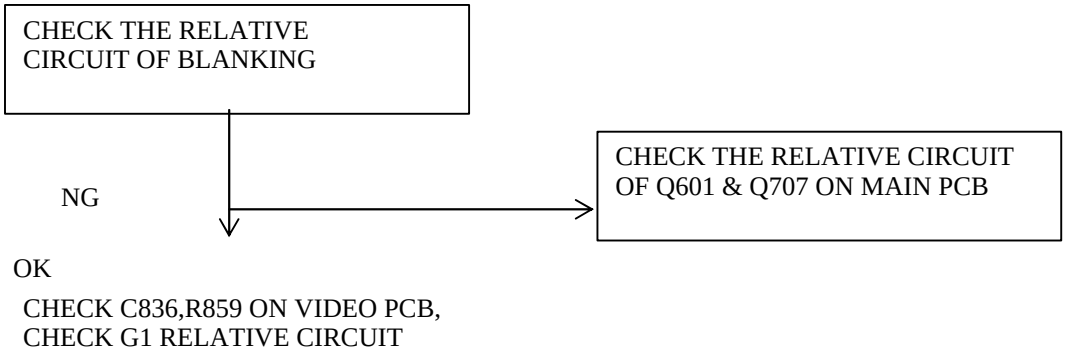
3. ABNORMAL DDC (PLUG & PLAY)



6-2 ABNORMAL DISPLAY



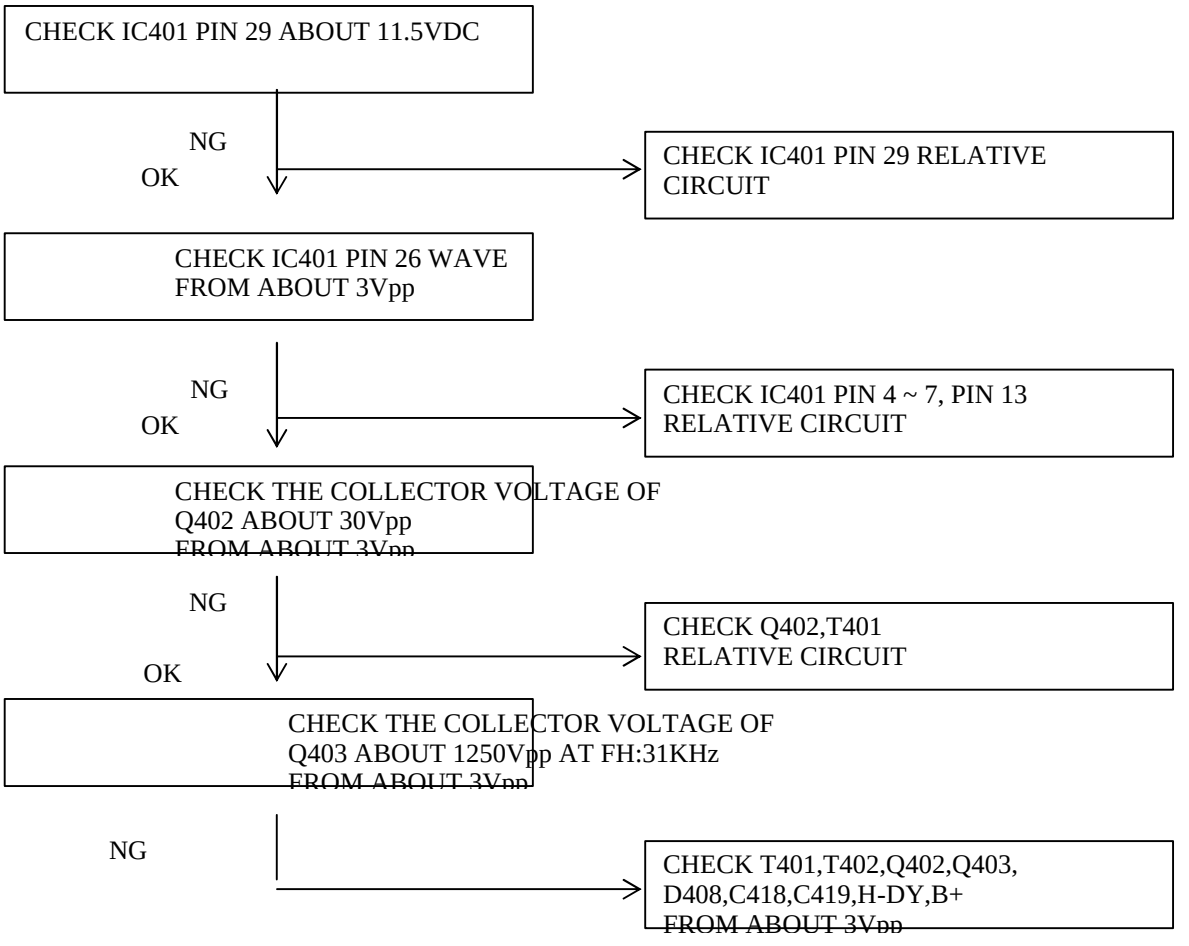
6-3 NO BLANKING



FBT PIN 5 ON MAIN PCB

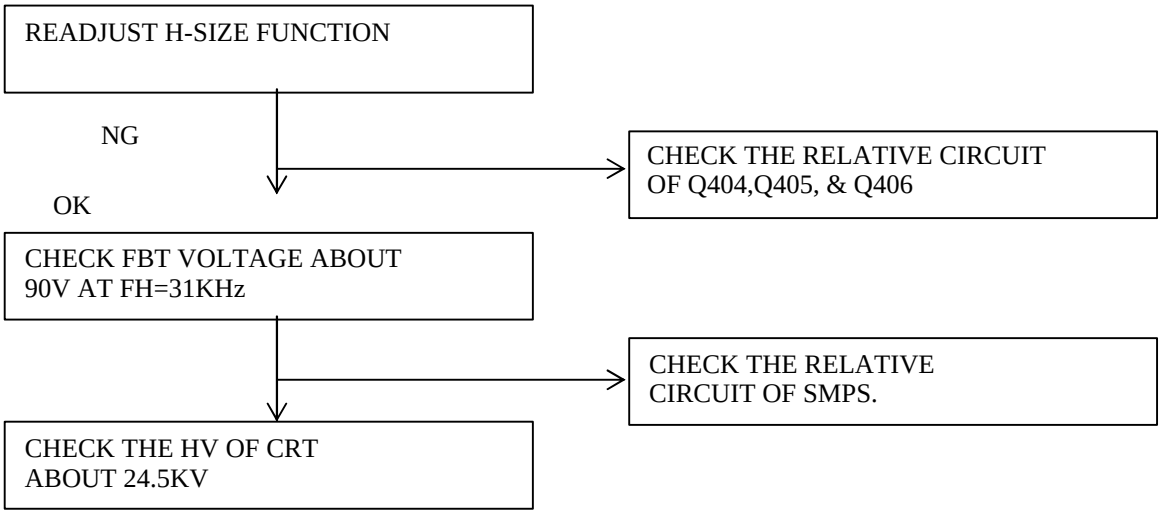
6-4 HOR./OSC/DEF/HV CIRCUIT FAULT

NO RASTER (DISCONNECT WITH SIGNAL CABLE)

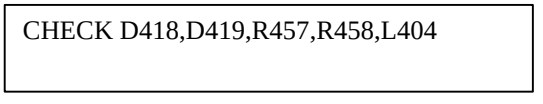


6-5 ABNORMAL HORIZONTAL DEFLECTION

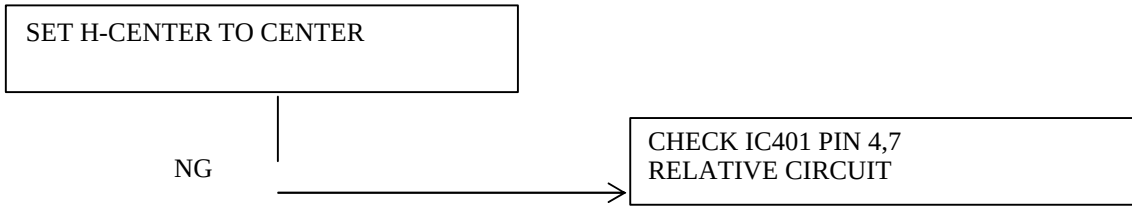
1. ABNORMAL HORIZONTAL SIZE



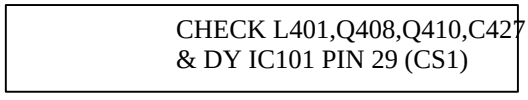
2. ABNORMAL HORIZONTAL RASTER CENTER



3. ABNORMAL HORIZONTAL VIDEO CENTER

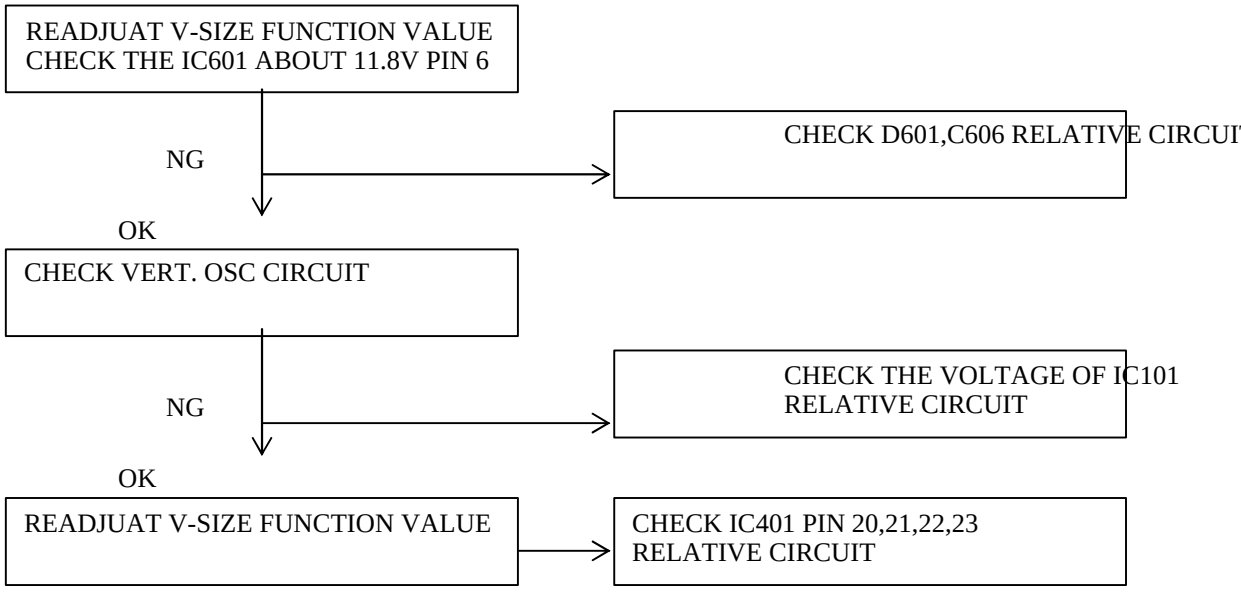


4. ABNORMAL HORIZONTAL LINEARITY

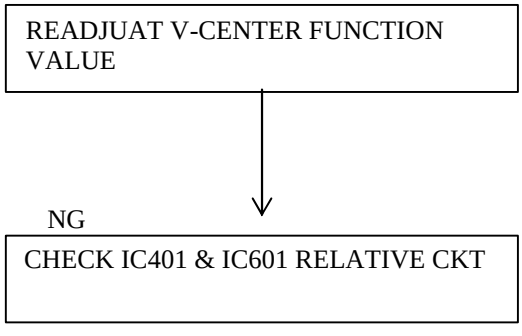


6-6 ABNORMAL VERTICAL SCANNING

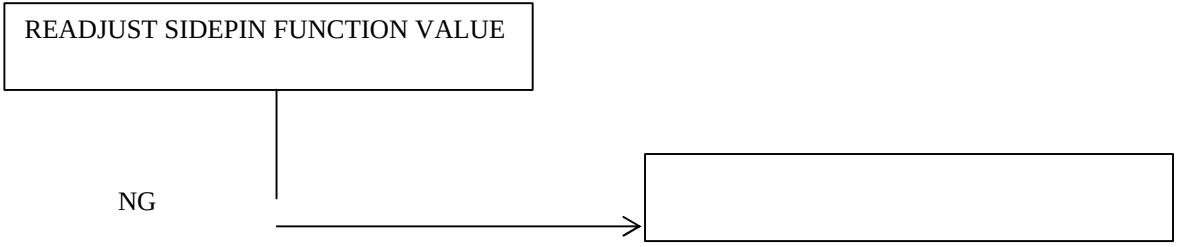
1. ABNORMAL VERTICAL SIZE



2. VERTICAL CENTER



6-7 SIDE-PIN CUSHION DISTORTION



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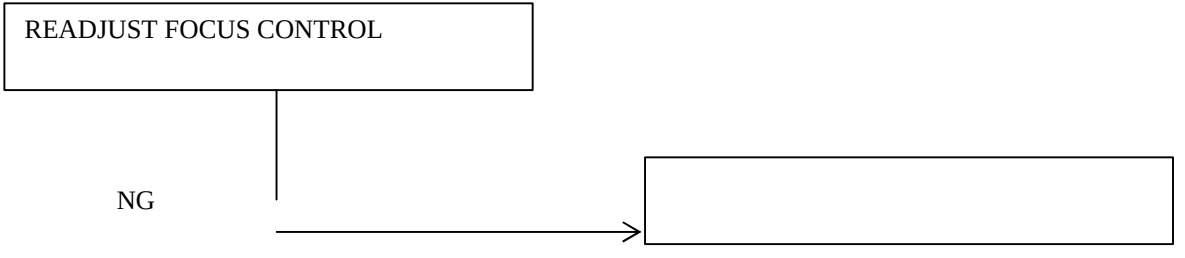
6-8 POOR FOCUS



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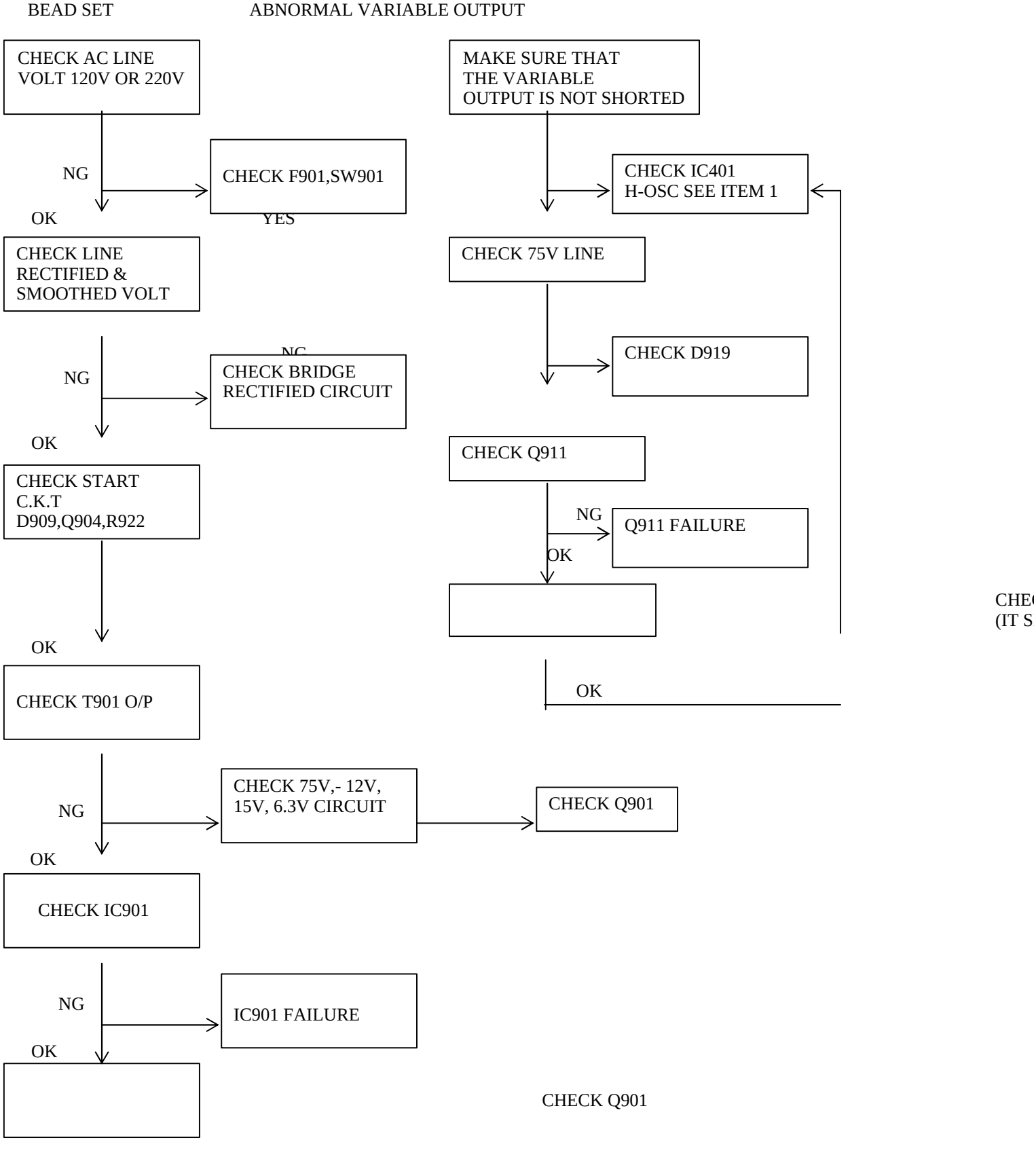
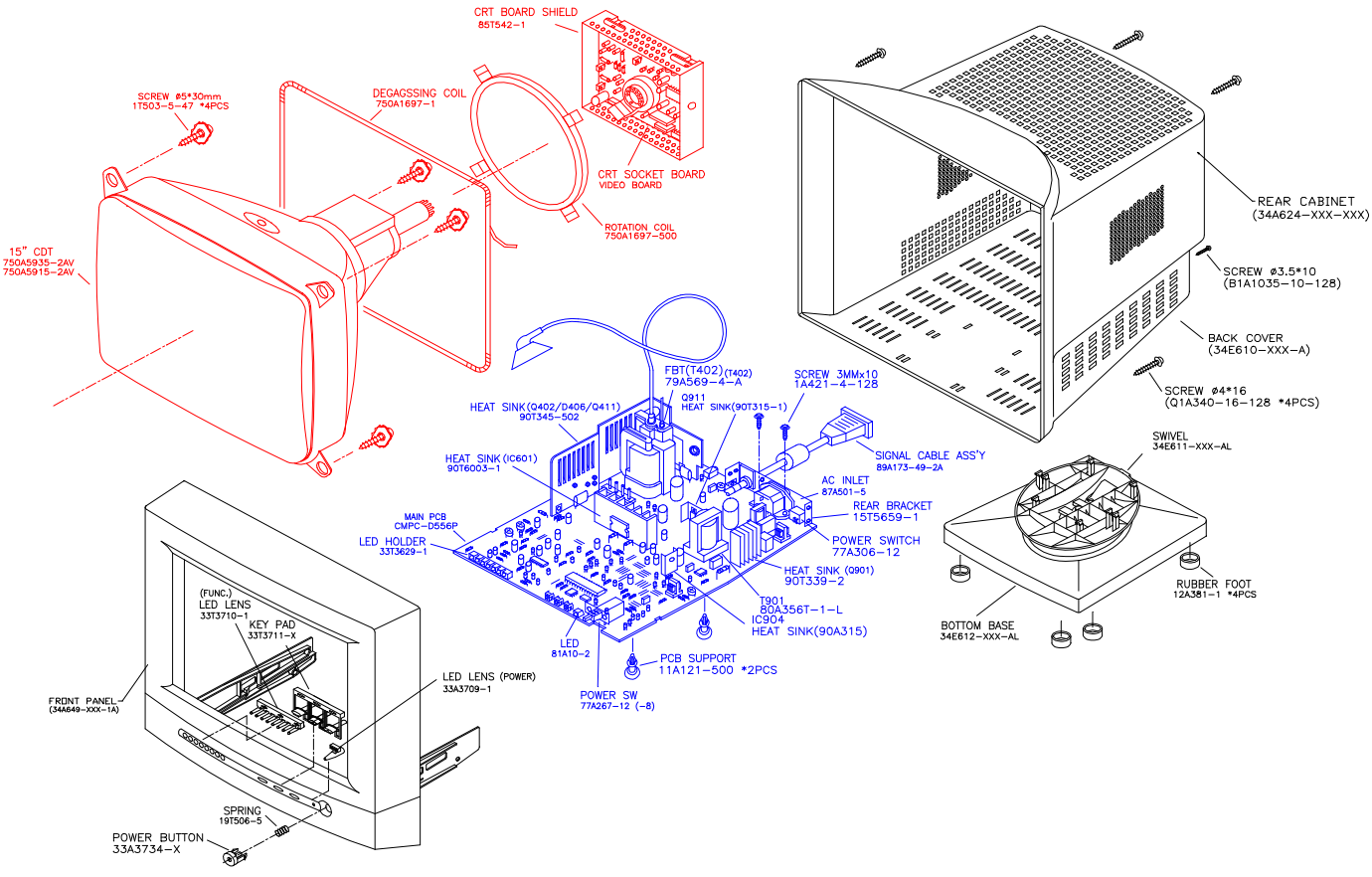
6-9 POWER SUPPLY TROUBLE SHOOTING CHART

BEFORE CHECK SW.REG. PLEASE REFER TO THE POWER SUPPLY BLOCK DIAGRAM
POWER SUPPLY OUTPUT: (A) VARIABLE OUTPUT : 90V - 160V
(DEPENDING UPON H.SYNC FREQUENCY)
(B) CONSTANT OUTPUT : 6.3V, 15V, -12V, 75V




CRT BOARD SHIELD
85T542-1
SCREW ø5*30mm
17503-5-47 *4PCS
DEGAGSSING COIL
750A1697-1
CRT SOCKET BOARD
VIDEO BOARD
ROTATION COIL
750A1697-500
15" CDT
750A5935-2AV
750A5915-2AV
REAR CABINET
(34A624-XXX-XXX)
SCREW ø3.5*10
(B1A1035-10-128)
BACK COVER
(34E610-XXX-A)
SCREW ø4*16
(Q1A340-16-128 *4PCS)
FBT(T402)
79A569-4-A
(T402)
SCREW 3MMx10
1A421-4-128
HEAT SINK(Q402/D406/Q411)
90T345-502
Q911
HEAT SINK(90T315-1)
HEAT SINK(IC601)
90T6003-1
SIGNAL CABLE ASS'Y
89A173-49-2A
AC INLET
87A501-5
REAR BRACKET
15T5659-1
MAIN PCB
CMPC-D556P
LED HOLDER
33T3629-1
POWER SWITCH
77A306-12
HEAT SINK (Q901)
90T339-2
T901
80A356T-1-L
IC904
HEAT SINK(90A315)
LED
81A10-2
PCB SUPPORT
11A121-500 *2PCS
POWER SW
77A267-12 (-8)
SWIVEL
34E611-XXX-AL
RUBBER FOOT
12A381-1 *4PCS
BOTTOM BASE
34E612-XXX-AL
(FUNC.)
LED LENS
33T3710-1
KEY PAD
33T3711-X
FRONT PANEL
(34A649-XXX-1A)
LED LENS (POWER)
33A3709-1
SPRING
19T506-5
POWER BUTTON
33A3734-X

PARTS LIST OF CABINET

LOCATION	154V/C551 (LOW RADIATION 220V) CMC556DQJ2				SPECIFICATION CHAS ASS'Y
	1A	503-	1 -	47	SCREW
	5A	38-	8		RUBBER WASHER
	9A	84-	23		TERMINAL LUG
	11A	112-	1		WIRE MOUNTS
	11A	112-	500		WIRE MOUNT
	11A	115-	1		FBT CLIP
	11A	6015	1		CRT SUPPORT
	19A	403-	5		BUMPER STEEL SPRING
	33A	3598-	1		ABS PLASTIC
	33A	3710-	1		FUNC LED LENS
	33A	3735-	1		KEY PAD
	34A	643-	2 -	AT	FRONT PANEL
	40A	152-	502		REVISION/SERIAL
	40A	153-	64		CRT WARNING
	40A	154-	14 -	1	CABINET LABEL
	40A	154-	501 -	1	HI-POT GROUNDING LABEL
	40A	581-	26 -	668	SLZ LABEL
⚠					
	40A	581-	26 -	704	SHIPPING LABEL
	40A	2008-	622 -	2A	ID LABEL
	41A	68-	508 -	A	CARD
	41A	541-	622 -	1A	MANUAL
	41A	3121-	510		PU FOAM
	44A	6533-	622 -	2A	CARTON
	41A	6543-	1		EPS FOAM
	41A	6543-	2		EPS FOAM
	45A	76-	28 -	RN	PE BAG
	45A	77-	3		TRANSPARENT SHEET
	45A	77-	500		BARCODE RIBBON
	45A	77-	501		BARCODE RIBBON
	45A	88-	7 -	RN	PE BAG
	71A	303-	9 -	C	DISKETTES ECOLOGY
⚠					
	85A	542-	1		CRPC SHIELD
	89A	498-	8 -	S	POWER CORD UL/CSA
	95A	91-	205 -	24	WIRE
	95A	205R-	30 -	132	15” WIRE
	95A	8013-	2		WIRE
	B1A	1035-	10 -	128	SCREW
	Q1A	340-	16 -	128	SCREW
	705A	556Q-	F34 -	01S	CAB'T ASS'Y
⚠					
	750A	1697-	1G -	E	DEG. COIL UL/CSA
	750A	5910-	3PS		15” CHUNGHWA CRT

PARTS LIST OF CHAS

LOCATION	154V/C551				SPECIFICATION
	CMP556DQJAI				MAIN PC BOARD ASS'Y
	CRPC556DQJ2				CRT BOARD ASS'Y
	1A	421-	4 -	128	SCREW
	3A	1	4 -	106	LOCK WASHER
	11A	121-	500		PC SUPPORT
	15A	5640-	1 -	A	AL GND LUG
	15A	5643-	501		REAR BRACKET
	33A	3662-	1		LED HOLDER
	40A	581-	26 -	2A	CHASSIS LABEL
	50A	500-	1		CABLE TIE
	71A	55-	2		FERRITE BEAD
⚠					
	71A	100-	7 -	H	FERRITE CORE
	84A	33-	10		FUSE CLIP
	89A	173-	50A -	3SI	SINGAL CABLE
	96A	25-	10		PLASTIC TUBE
	96A	29-	4		PLASTIC TUBEL
	96A	29-	6 -	190	H.S. TUBING
	B1A	1040-	8 -	128	SCREW
	B1A	1140-	8 -	128	SCREW
	M1A	1140-	6 -	128	SCREW
	Q1A	1135-	10 -	128	SCREW
	705A	356N-	C57 -	03	Q911 ASS'Y
	705A	356P-	C56 -	01	IC601 ASS'Y
	705A	356P-	C56 -	03	IC904 ASS'Y
	705A	356P-	C57 -	01	Q403/Q406/D408 ASS'Y
	705A	356P-	C87 -	01	AC LINET INALWAYS CN901
	705A	356Q-	C57 -	03	Q901 ASS'Y
(GND2)	95A	205-	30 -	082	WIRE
(LED1)	81A	10-	2 -	SA	POWER LED
(SW101)	77A	602-	1 -	HJ	TACT SWITCH
(SW102)	77A	602-	1 -	HJ	TACT SWITCH
(SW103)	77A	602-	1 -	HJ	TACT SWITCH
AS1	95A	205B-	30 -	052	WIRE
B-B	95A	201-	69 -	022	WIRE
C414	67A	305-	470 -	9	47uF +-20% 100V
C419	63A	210J-	472 -	8FC	0.0047uF +-5% 2000V
C422	63A	100J-	225 -	59	2.2uF +-5% 100V
C427	63A	210J-	394 -	3CC	0.39Uf +-5% 400V
C428	63A	210J-	104 -	2BC	0.1uF +-5% 250V
C431	63A	210J-	104 -	2BC	0.1uF +-5% 250V
C432	67A	215-	470 -	11J	47uF 200V JAMICON
C440	65A	2K-	470 -	6B	47Pf 2KV +-10% Y5U
C606	67A	309-	102 -	3	1000uF +-20% 16V
C713	67A	309-	220 -	10	22uF +-20% 160V
C714	67A	305-	331 -	3	330uF +-20% 16V
C900	65A	305M-	472 -	2B	4700PF +-20% 400VAC/250VAC
C901	63A	107-	224 -	5S	0.22uF +-20% 250V
C902	63A	107-	104 -	5	0.1uF +-20% 250V
⚠					
C907	67A	30-	151 -	14L	150uF +-20% 400V
C915	65A	2M-	103 -	3B	0.01uF +-20% 2KV Z5U
C931	67A	305-	101 -	11J	100uF +-20% 200V
C936	67A	305-	102 -	4	1000uF +-20% 25V

C939	67A	305-	102 -	3	1000uF +-20% 16V
C942	67A	309-	102 -	4	1000uF +-20% 25V
C951	67A	305-	470 -	11J	47uF +-20% 200V
C963	65A	305M-	472 -	2B2	4700PF +-20% 400VAC
					
C964	65A	305M-	472 -	2B2	4700PF +-20% 400VAC
F901	84A	41-	2		FUSE
CN902	33A	3074-	1		2P PLUG

LOCATION					
D901	93A	52-	55P -	52T	DIODE IN5408 PEC
D902	93A	52-	55P -	52T	DIODE IN5408 PEC
D903	93A	52-	55P -	52T	DIODE IN5408 PEC
D904	93A	52-	55P -	52T	DIODE IN5408 PEC
D919	93A	60-	503		DIODE GUF30G
D922	93A	3020-	6 -	52T	STPR320
D923	93A	3020-	8		RG-4Z-LF-L1
H802	95A	8013-	9 -	7	HARNESS 9P-9P
H803	95A	8013-	6 -	507	WIRE HARNESS
HS1	95A	205B-	30 -	042	WIRE
IC101	56A	1125-	33		NT6861B-08062/I
IC102	56A	1133-	8		AT24C04 10P
IC104	56A	74LS-	14 -	H	14 PIN IC 74LS14
					
IC401	56A	573-	1		TDA9111
IC901	56A	379-	12		UC3842AM
JJ2	95A-	201-	69 -	022	WIRE
L401	73A	147-	48D -	L	LINEARITY COIL
L404	73A	253-	70		1.5MH +-5% 0.3A
L405	73A	253-	68 -	L	180UH +-10%
L901	73A	174-	2 -	LA	15MH LINE FILTER
L903	73A	259-	4		200UH +-5%
L906	73A	253-	90 -	L	CHOKE COIL
LED2	81A	2-	3 -	2B	LED GREEN BL-B2441J
LED3	81A	2-	3 -	2B	LED GREEN BL-B2441J
LED4	81A	2-	3 -	2B	LED GREEN BL-B2441J
LED5	81A	2-	3 -	2B	LED GREEN BL-B2441J
LED6	81A	2-	3 -	2B	LED GREEN BL-B2441J
LED7	81A	2-	3 -	2B	LED GREEN BL-B2441J
LED8	81A	2-	3 -	2B	LED GREEN BL-B2441J
LED9	81A	2-	3 -	2B	LED GREEN BL-B2441J
NR901	61A	58-	8		NTCR 15 OHM
P402	33A	3192-	4		4 P PLUG
P403	33A	8009-	3		3 P PLUG
PR901	61A	52-	22 -	3	220VAC 14 OHM PTCR
Q402	57A	706-	8 -	T	2N7000/GENERAL
Q410	57A	600-	14		CEPF630
Q426	57A	600-	14		CEPF630
Q705	57A	690-	1		POWER AMP. 2SB649A/HITACH
Q907	57A	690-	2		PNP TR. BD140
Q909	57A	728-	3		HSB772P/HSB772E
R127	61A	152M-	910 -	64	91 OHM +-5% 2W
R426	61A	153M-	220 -	59	22 OHM +-5% 3W
R428	61A	153M-	478 -	59	0.47 OHM +-5% 3W
R608	61A	152M-	100 -	64	10 OHM +-5% 2W
R723	61A	152M-	101 -	64	100 OHM +-5% 2W
R923	61A	175L-	474 -	52T	470K OHM +-5% 1/2W
R924	61A	175L-	474 -	52T	470K OHM +-5% 1/2W
R927	61A	153M-	333 -	59	33K OHM +-5% 3W
R929	61A	20K-	338 -	GB1	0.33 OHM +-10% 2W
R955	61A	303-	228 -	64	0.22 OHM +-5% 1W
R989	61A	152M-	471 -	64	470 OHM +-5% 2W
SS1	95A	205B-	30 -	052	WIRE
SW901	77A	267-	12 -	HJ	PUSH-PUSH SWITCH
					
T401	79A	167-	71A		DRIVER X'FMR

T402	79A	355	4 -	A	FBT
T901	80A	356T	1 -	L	X'FMR
TP901	9A	211-	2		PIN
TP902	9A	211-	2		PIN
VR701	75A	335-	473		47K OHM +-30%
VR702	75A	335M-	204		200K OHM METAL VR
VR901	75A	335-	101		100 OHM +-30%
VR902	75A	335-	223		22K OHM +-30%
X101	93A	22-	22		8.0000 MHZ

PARTS LIST OF MAIN PC BOARD

LOCATION	154V/C551				SPECIFICATION
	6A	31-	4		BRASS
	715A	684-	3A		MAIN BOARD
C103	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C104	67A	309-	101 -	4T	100uF +-20% 25V
C105	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C106	67A	309-	330 -	7T	33uF +-20% 50V
C109	67A	60-	229 -	7T	2.2uF +-20% 50V
C110	67A	309-	109 -	7T	1.0uF +-20% 50V
C130	65A	442-	470 -	13T	47PF +-5% 50V NPO
C160	65A	444-	101 -	5T	100 PF 10% 50V Y5P
C162	65A	444-	102 -	13T	1000 PF 10% 50V Z5P
C163	65A	444-	101 -	5T	100 PF 10% 50V Y5P
C164	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C403	64A	44J-	223 -	1AT	22NF 100V
C405	67A	309-	470 -	3T	47uF +-20% 16V
C406	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C407	65A	444-	101 -	5T	100 PF 10% 50V Z5P
C408	65A	444-	101 -	5T	100 PF 10% 50V Z5P
C410	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C411	67A	309-	470 -	3T	47uF +-20% 16V
C412	65A	442-	221 -	13T	220PF +-5% 50V NPO
C413	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C415	64A	176J-	102 -	1T	0.001UF +-5% 100V
C417	64A	176J-	154 -	0T	0.15uF +-5% 63V/50V
C421	65A	1K-	102 -	1T	INF/IKV Z5F +-10%
C423	65A	444-	332 -	5T	3300 PF 10% 50V Y5P
C429	65A	444-	332 -	5T	3300 PF 10% 50V Y5P
C433	67A	309-	100 -	7T	10uF +-20% 50V
C434	67A	309-	220 -	7T	22uF +-20% 50V
C435	64A	44J-	103 -	1AT	0.01UF 100V
C436	67A	305-	101 -	7T	100uF +-20% 50V
C437	67A	309-	220 -	7T	22uF +-20% 50V
C438	67A	309-	109 -	7T	1.0uF +-20% 50V
C439	67A	309-	109 -	7T	1.0uF +-20% 50V
C441	64A	176J-	224 -	1T	0.22UF +-5% 100V
C442	64A	176J-	272 -	1T	2700PF +-5% 100V
C443	67A	309-	470 -	3T	47uF +-20% 16V
C444	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C445	95A	90-	23		TIN COATED
C446	65A	444-	101 -	5T	100 PF 10% 50V Z5P
C447	64A	45G-	102 -	1AT	0.001UF 100V +-2%
C448	64A	176J-	823 -	1T	0.082uF +-5% 100V
C449	64A	44J-	473 -	1AT	0.047uF +-5% 100V
C460	65A	450-	333 -	7T	0.033uF +-5% 50V
C463	64A	44J-	103 -	1AT	0.01uF +-20% 100V
C476	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C480	95A	90-	23		TIN COATED
C601	64A	176J-	104 -	1T	0.1UF +-5% 100V
C602	65A	444-	331 -	5T	330 PF 10% 50V Y5P
C603	67A	309-	471 -	3T	470uF +-20% 16V
C604	64A	176J-	224 -	0T	0.22uF +-5% 63V
C605	67A	309-	470 -	7T	47uF +-20% 50V
C607	65A	444-	681 -	5T	680 PF 10% 50V Z5P
C608	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C609	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C610	64A	176J-	474 -	0T	0.47uF +-5% 50/63V

C611	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C612	67A	309-	470 -	3T	47uF +-20% 16V
C613	64A	176J-	104 -	0T	0.1UF +-5% 63V
C614	65A	444-	101 -	5T	100 PF 10% 50V Z5P
C615	64A	44J-	103 -	1AT	0.01UF 100V
C623	64A	176J-	104 -	0T	0.1UF +-5% 63V

LOCATION	154V/C551				SPECIFICATION
C705	67A	309-	220 -	7T	22uF +-20% 50V
C707	64A	176J-	223 -	2T	0.022uF +-5% 250V
C709	65A	1K-	561 -	5T	560PF +-10% Y5P 1KV
C710	64A	176J-	224 -	1T	0.22uF +-5% 100V
C712	67A	60-	229 -	7T	2.2uF 50V
C914	67A	305-	479 -	7T	4.7uF +-20% 50V
C916	67A	305-	101 -	4T	100uF +-20% 25V
C917	67A	305-	229 -	7T	2.2uF +-20% 50V
C918	64A	44J-	332 -	1AT	3300PF +-5% 100V
C920	64A	44J-	102 -	1AT	1000PF +-5% 100V
C921	64A	176J-	104 -	1T	0.1uF +-5% 100V
C922	64A	176J-	104 -	1T	0.1uF +-5% 100V
C923	65A	1K-	331 -	5T	330PF +-10% Y5P 1KV
C924	64A	44J-	332 -	1AT	3300PF +-5% 100V
C925	67A	309-	100 -	7T	10uF +-20% 50V
C937	67A	305-	471 -	3T	470uF +-20% 16V
C938	67A	305-	471 -	3T	470uF +-20% 16V
C941	64A	176J-	104 -	0T	0.1uF +-5% 63V
C943	64A	44J-	222 -	1AT	2200PF +-5% 100V
C944	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C945	65A	450-	104 -	7T	0.1uF +80-20% Y5V 50V
C946	64A	176J-	104 -	2T	0.1uF +-5% 250V MPE
C947	67A	309-	479 -	7T	4.7uF +-20% 50V
C950	65A	1K-	221 -	5T	220PF +-10% Y5P 1KV
C955	65A	1K-	221 -	5T	220PF +-10% Y5P 1KV
C961	64A	44J-	103 -	1AT	0.01UF 100V
C965	64A	44J-	103 -	1AT	0.01uF +-5% 100V
C995	64A	44J-	472 -	1AT	4700PF +-5% 100V
D101	93A	64-	11F -	52T	DIODE IN4148
D102	93A	64-	11F -	52T	DIODE IN4148
D103	93A	64-	11F -	52T	DIODE IN4148
D104	93A	64-	11F -	52T	DIODE IN4148
D125	93A	64-	11F -	52T	DIODE IN4148
D126	93A	64-	11F -	52T	DIODE IN4148
D127	95A	90-	23		TIN COATED
D160	93A	64-	11F -	52T	DIODE IN4148
D402	93A	64-	11F -	52T	DIODE IN4148
D403	93A	1002-	1P -	52T	1N5817
D404	93A	64-	11F -	52T	DIODE IN4148
D405	93A	1002-	1P -	52T	1N5817
D406	93A	60-	21P -	52T	PS156R
D407	93A	60-	21P -	52T	PS156R
D409	93A	39-	515 -	52T	TZX3VOC
D411	93A	64-	19G -	52T	FAST RECOVERY DIODE
D412	93A	64-	11F -	52T	DIODE IN4148
D414	93A	60-	38T -	52T	FR103
D415	93A	60-	26T -	52T	FR107
D417	95A	90-	23		TIN COATED
D418	93A	60-	21P -	52T	PS156R
D419	93A	60-	21P -	52T	PS156R
D420	93A	64-	11F -	52T	DIODE IN4148
D450	93A	64-	11F -	52T	DIODE IN4148
D460	93A	64-	11F -	52T	DIODE IN4148
D463	93A	60-	26T -	52T	FR107
D601	93A	52-	47P -	52T	1N4004
D602	93A	64-	11F -	52T	DIODE IN4148
D603	93A	64-	11F -	52T	DIODE IN4148

D701	93A	64-	11F -	52T	DIODE IN4148
D702	93A	64-	11F -	52T	DIODE IN4148
D704	93A	52-	47P -	52T	IN4004
D706	93A	60-	21P -	52T	PS156R
D710	95A	90-	23		TIN COATED

LOCATION	154V/C551				SPECIFICATION
D721	95A	90-	23		TIN COATED
D909	93A	52-	1T -	52T	1A 600V IN4005
D910	93A	60-	21P -	52T	PS156R
D911	93A	64-	31T -	52T	S.W DIODE BAV20
D912	93A	64-	31T -	52T	S.W DIODE BAV20
D913	93A	64-	11F -	52T	DIODE IN4148
D914	93A	64-	11F -	52T	DIODE IN4148
D925	93A	3020-	6 -	52T	STPR320
D926	93A	64-	11F -	52T	DIODE IN4148
D927	93A	64-	11F -	52T	DIODE IN4148
D928	93A	64-	11F -	52T	DIODE IN4148
D929	93A	52-	47P -	52T	1N4004
					
D930	93A	1040-	2 -	52T	UF4004
D995	93A	64-	11F -	52T	DIODE IN4148
FB401	71A	55-	9 -	T	SHIELD BEAD
FB402	71A	55-	7 -	S	BEAD
FB403	71A	55-	7 -	S	BEAD
FB901	95A	90-	23		TIN COATED
FB902	95A	90-	23		TIN COATED
FB903	95A	90-	23		TIN COATED
FB904	71A	55-	9 -	T	SHIELD BEAD
FB905	71A	55-	19 -	T	SHIELD BEAD
FB907	71A	55-	9 -	T	SHIELD BEAD
J001	95A	90-	23		TIN COATED
J003	95A	90-	23		TIN COATED
J005	95A	90-	23		TIN COATED
J006	95A	90-	23		TIN COATED
J007	95A	90-	23		TIN COATED
J008	95A	90-	23		TIN COATED
J009	95A	90-	23		TIN COATED
J013	95A	90-	23		TIN COATED
J014	95A	90-	23		TIN COATED
J015	95A	90-	23		TIN COATED
J016	95A	90-	23		TIN COATED
J017	95A	90-	23		TIN COATED
J019	95A	90-	23		TIN COATED
J020	95A	90-	23		TIN COATED
J021	95A	90-	23		TIN COATED
J022	95A	90-	23		TIN COATED
J023	95A	90-	23		TIN COATED
J024	95A	90-	23		TIN COATED
J025	95A	90-	23		TIN COATED
J026	95A	90-	23		TIN COATED
J027	95A	90-	23		TIN COATED
J028	95A	90-	23		TIN COATED
J029	95A	90-	23		TIN COATED
J030	95A	90-	23		TIN COATED
J032	95A	90-	23		TIN COATED
J033	95A	90-	23		TIN COATED
J034	95A	90-	23		TIN COATED
J036	95A	90-	23		TIN COATED
J037	95A	90-	23		TIN COATED
J038	95A	90-	23		TIN COATED
J039	95A	90-	23		TIN COATED
J040	95A	90-	23		TIN COATED

J041	95A	90-	23	TIN COATED
J042	95A	90-	23	TIN COATED
J043	95A	90-	23	TIN COATED
J044	95A	90-	23	TIN COATED
J045	95A	90-	23	TIN COATED
J046	95A	90-	23	TIN COATED

LOCATION	154V/C551				SPECIFICATION
J049	95A	90-	23		TIN COATED
J050	95A	90-	23		TIN COATED
J051	95A	90-	23		TIN COATED
J052	95A	90-	23		TIN COATED
J053	95A	90-	23		TIN COATED
J054	95A	90-	23		TIN COATED
J057	95A	90-	23		TIN COATED
J058	95A	90-	23		TIN COATED
J061	95A	90-	23		TIN COATED
J063	95A	90-	23		TIN COATED
J064	95A	90-	23		TIN COATED
J065	95A	90-	23		TIN COATED
J066	95A	90-	23		TIN COATED
J067	95A	90-	23		TIN COATED
J068	95A	90-	23		TIN COATED
J069	95A	90-	23		TIN COATED
J070	95A	90-	23		TIN COATED
J071	95A	90-	23		TIN COATED
J072	95A	90-	23		TIN COATED
J073	95A	90-	23		TIN COATED
J074	95A	90-	23		TIN COATED
J075	95A	90-	23		TIN COATED
J077	95A	90-	23		TIN COATED
J078	95A	90-	23		TIN COATED
J079	95A	90-	23		TIN COATED
J080	95A	90-	23		TIN COATED
J081	95A	90-	23		TIN COATED
J082	95A	90-	23		TIN COATED
J083	95A	90-	23		TIN COATED
J084	95A	90-	23		TIN COATED
J085	95A	90-	23		TIN COATED
J086	95A	90-	23		TIN COATED
J087	95A	90-	23		TIN COATED
J088	95A	90-	23		TIN COATED
J089	95A	90-	23		TIN COATED
J090	95A	90-	23		TIN COATED
J091	95A	90-	23		TIN COATED
J092	95A	90-	23		TIN COATED
J093	95A	90-	23		TIN COATED
J094	95A	90-	23		TIN COATED
J095	95A	90-	23		TIN COATED
J096	61A	175L-	159 -	52T	1.5 OHM 5% 1/2W
J097	95A	90-	23		TIN COATED
J098	95A	90-	23		TIN COATED
J099	95A	90-	23		TIN COATED
J100	95A	90-	23		TIN COATED
J101	95A	90-	23		TIN COATED
J103	95A	90-	23		TIN COATED
J104	95A	90-	23		TIN COATED
J107	95A	90-	23		TIN COATED
J108	95A	90-	23		TIN COATED
J110	95A	90-	23		TIN COATED
J111	95A	90-	23		TIN COATED
J113	95A	90-	23		TIN COATED
J116	95A	90-	23		TIN COATED
J117	95A	90-	23		TIN COATED
J118	95A	90-	23		TIN COATED

J120	95A	90-	23	TIN COATED
J121	95A	90-	23	TIN COATED
J123	95A	90-	23	TIN COATED
J125	95A	90-	23	TIN COATED

LOCATION	154V/C551				SPECIFICATION
J130	95A	90-	23		TIN COATED
J132	95A	90-	23		TIN COATED
J133	95A	90-	23		TIN COATED
J134	95A	90-	23		TIN COATED
J914	95A	90-	23		TIN COATED
L101	73A	53-	339 -	10T	3.3UH +-10%
L402	95A	90-	23		TIN COATED
L403	95A	90-	23		TIN COATED
L406	95A	90-	23		TIN COATED
L907	95A	90-	23		TIN COATED
Q101	57A	446-	1 -	T	2SC1213AC
Q401	57A	419-	P -	T	2SC945P
Q404	57A	420-	SG -	T	KSA733GC SAMSUNG
Q405	57A	420-	SG -	T	KSA733GC SAMSUNG
Q407	57A	419-	SG -	T	KSC945GC
Q408	57A	419-	P -	T	2SC945P
Q601	57A	419-	Y -	T	TR. 2SC1815Y TOSHIBA
Q703	57A	419-	P -	T	2SC945P
Q704	57A	420-	SG -	T	KSA733GC SAMSUNG
Q707	57A	419-	Y -	T	TR. 2SC1815Y TOSHIBA
Q904	57A	594-	501 -	T	TR. 2N6517
Q908	57A	419-	P -	T	2SC945P
Q910	57A	419-	P -	T	2SC945P
Q912	57A	446-	1 -	T	2SC1213AC
Q920	57A	727-	2 -	T	2SA673C
R100	61A	602-	472 -	52T	4.7K OHM +-5% 1/6W
R101	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R102	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R103	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R104	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R105	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R106	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R107	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R108	61A	602-	512 -	52T	5.1K OHM +-5% 1/6W
R109	61A	602-	512 -	52T	5.1K OHM +-5% 1/6W
R110	61A	602-	221 -	52T	220 OHM +-5% 1/6W
R111	61A	602-	221 -	52T	220 OHM +-5% 1/6W
R112	61A	602-	622 -	52T	6.2K OHM +-5% 1/6W
R113	61A	602-	103 -	52T	10K OHM +-5% 1/6W
R114	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R116	61A	602-	472 -	52T	4.7K OHM +-5% 1/6W
R117	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R118	61A	602-	103 -	52T	10K OHM +-5% 1/6W
R119	61A	602-	103 -	52T	10K OHM +-5% 1/6W
R122	61A	172-	221 -	52T	220 OHM +-5% 1/4W
R126	61A	172-	202 -	52T	2K OHM +-5% 1/4W
R132	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R135	61A	602-	152 -	52T	1.5K OHM +-5% 1/6W
R136	61A	602-	222 -	52T	2.2K OHM +-5% 1/6W
R140	61A	602-	472 -	52T	4.7K OHM +-5% 1/6W
R143	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R149	61A	602-	152 -	52T	1.5K OHM +-5% 1/6W
R156	61A	602-	103 -	52T	10K OHM +-5% 1/6W
R157	61A	602-	103 -	52T	10K OHM +-5% 1/6W
R160	61A	602-	221 -	52T	220 OHM +-5% 1/6W
R161	61A	602-	222 -	52T	2.2K OHM +-5% 1/6W
R162	61A	602-	102 -	52T	1K OHM +-5% 1/6W

R165	61A	602-	222 -	52T	2.2K OHM +-5% 1/6W
R166	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R170	95A	90-	23		TIN COATED
R172	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R180	61A	602-	362 -	52T	3.6K OHM +-5% 1/6W

LOCATION	154V/C551				SPECIFICATION
R185	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R402	61A	172-	222 -	52T	2.2K OHM +-5% 1/4W
R403	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R404	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R405	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R406	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R408	61A	172-	304 -	52T	300K OHM +-5% 1/4W
R410	61A	210-	472 -	52T	4.7K OHM +-1% 1/6W
R411	61A	602-	182 -	52T	1.8K OHM +-5% 1/6W
R412	61A	602-	183 -	52T	18K OHM +-5% 1/6W
R414	61A	172-	332 -	52T	3.3K OHM +-5% 1/4W
R415	61A	172-	623 -	52T	62K OHM +-5% 1/4W
R416	61A	210-	223 -	52T	22K OHM +-1% 1/6W
R417	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R418	61A	210-	472 -	52T	4.7K OHM +-1% 1/6W
R420	61A	172-	472 -	52T	4.7K OHM +-5% 1/4W
R421	61A	172-	222 -	52T	2.2K OHM +-5% 1/4W
R422	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R423	61A	602-	203 -	52T	20K OHM +-5% 1/6W
R425	61A	172-	221 -	52T	220 OHM +-5% 1/4W
R427	61A	175L-	220 -	52T	22 OHM +-5% 1/2W
R429	61A	204-	100 -	52T	10 OHM +-5% 1/2W
R430	61A	172-	154 -	52T	150K OHM +-5% 1/4W
R431	95A	90-	23		TIN COATED
R433	61A	602-	222 -	52T	2.2K OHM +-5% 1/6W
R434	61A	602-	392 -	52T	3.9K OHM +-5% 1/6W
R435	61A	172-	471 -	52T	470 OHM +-5% 1/4W
R436	61A	602-	681 -	52T	680OHM +-5% 1/6W
R440	61A	602-	562 -	52T	5.6KOHM +-5% 1/6W
R441	61A	175L-	823 -	52T	82K OHM +-5% 1/2W
R442	61A	172-	202 -	52T	2K OHM +-5% 1/4W
R443	61A	172-	473 -	52T	47K OHM +-5% 1/4W
R447	61A	172-	473 -	52T	47K OHM +-5% 1/4W
R448	61A	172-	202 -	52T	2K OHM +-5% 1/4W
R449	61A	172-	472 -	52T	4.7K OHM +-5% 1/4W
R450	61A	602-	563 -	52T	56K OHM +-5% 1/6W
R460	61A	172-	472 -	52T	4.7K OHM +-5% 1/4W
R462	61A	602-	243 -	52T	24K OHM +-5% 1/6W
R470	61A	602-	153 -	52T	15K OHM +-5% 1/6W
R471	61A	602-	563 -	52T	56K OHM +-5% 1/6W
R490	61A	210-	563 -	52T	56K OHM +-1% 1/6W
R497	61A	210-	242 -	52T	2.4K OHM +-1% 1/6W
R601	61A	172-	243 -	52T	24K OHM +-5% 1/4W
R602	61A	172-	392 -	52T	3.9K OHM +-5% 1/4W
R603	61A	172-	123 -	52T	12K OHM +-5% 1/4W
R604	61A	172-	562 -	52T	5.6K OHM +-5% 1/4W
R605	61A	175L-	159 -	52T	1.5 OHM +-5% 1/2W
R606	61A	175L-	181 -	52T	180 OHM +-5% 1/2W
R609	61A	172-	564 -	52T	560K OHM +-5% 1/4W
R610	61A	172-	124 -	52T	120K OHM +-5% 1/4W
R611	61A	172-	563 -	52T	56K OHM +-5% 1/4W
R612	61A	172-	222 -	52T	2.2K OHM +-5% 1/4W
R613	61A	172-	102 -	52T	1K OHM +-5% 1/4W
R614	61A	172-	243 -	52T	24K OHM +-5% 1/4W
R623	61A	602-	101 -	52T	100 OHM +-5% 1/6W
R707	61A	602-	472 -	52T	4.7K OHM +-5% 1/6W
R708	61A	602-	103 -	52T	10K OHM +-5% 1/6W

R709	61A	602-	103 -	52T	10K OHM +-5% 1/6W
R710	61A	602-	103 -	52T	10K OHM +-5% 1/6W
R711	61A	602-	103 -	52T	10K OHM +-5% 1/6W
R712	61A	602-	273 -	52T	27K OHM +-5% 1/6W

LOCATION	154V/C551				SPECIFICATION
R713	61A	602-	562 -	52T	5.6K OHM +-5% 1/6W
R715	61A	602-	103 -	52T	1K OHM +-5% 1/6W
R720	61A	172-	104 -	52T	100K OHM +-5% 1/4W
R721	61A	175L-	102 -	52T	1K OHM +-5% 1/2W
R722	61A	602-	332 -	52T	3.3K OHM +-5% 1/6W
R724	61A	172-	105 -	52T	1MEG OHM +-5% 1/4W
R725	61A	204-	154 -	52T	150K OHM 1/2W
R726	61A	602-	102 -	52T	1K OHM +-5% 1/6W
R727	61A	175L-	823 -	52T	82K OHM +-5% 1/2W
R728	61A	172-	561 -	52T	560 OHM +-5% 1/4W
R729	61A	602-	470 -	52T	47 OHM +-5% 1/6W
R730	95A	90-	23		TIN COATED
					
R750	61A	204-	124 -	52T	120K OHM +-5% 1/2W
R901	61A	175L-	474 -	52T	470K OHM +-5% 1/2W
R917	61A	175L-	474 -	52T	470K OHM +-5% 1/2W
R918	61A	175L-	474 -	52T	470K OHM +-5% 1/2W
R922	61A	172-	273 -	52T	27K OHM +-5% 1/4W
R925	61A	172-	243 -	52T	24K OHM +-5% 1/4W
R926	61A	172-	183 -	52T	18K OHM +-5% 1/4W
R930	61A	172-	202 -	52T	2K OHM +-5% 1/4W
R931	61A	200-	109 -	52T	1 OHM +-1% 1/4W
R932	61A	172-	222 -	52T	2.2K OHM +-5% 1/4W
R933	61A	172-	361 -	52T	360 OHM +-5% 1/4W
R934	61A	172-	102 -	52T	1K OHM +-5% 1/4W
R935	61A	172-	334 -	52T	330K OHM +-5% 1/4W
R937	61A	172-	151 -	52T	150 OHM +-5% 1/4W
R938	61A	172-	220 -	52T	22 OHM +-5% 1/4W
R939	61A	172-	203 -	52T	20K OHM +-5% 1/4W
R940	61A	171-	393 -	52T	39K OHM +-2% 1/4W
R941	61A	172-	152 -	52T	1.5K OHM +-5% 1/4W
R942	61A	172-	680 -	52T	68 OHM +-5% 1/4W
R951	61A	172-	100 -	52T	10 OHM +-5% 1/4W
R952	61A	172-	473 -	52T	47K OHM +-5% 1/4W
R953	61A	172-	303 -	52T	30K OHM +-5% 1/4W
R956	61A	172-	122 -	52T	1.2K OHM +-5% 1/4W
R957	61A	172-	473 -	52T	47K OHM +-5% 1/4W
R958	61A	172-	102 -	52T	1K OHM +-5% 1/4W
R959	61A	172-	333 -	52T	33K OHM +-5% 1/4W
R960	61A	172-	473 -	52T	47K OHM +-5% 1/4W
R962	61A	172-	220 -	52T	22 OHM +-5% 1/4W
R963	61A	175L	201 -	52T	200 OHM +-5% 1/2W
R966	61A	172-	302 -	52T	3K OHM +-5% 1/4W
R967	61A	172-	132 -	52T	1.3K OHM +-5% 1/4W
R968	61A	172-	244 -	52T	240K OHM +-5% 1/4W
R969	61A	172-	753 -	52T	75K OHM +-5% 1/4W
R972	61A	172-	183 -	52T	18K OHM +-5% 1/4W
R977	61A	175L-	154 -	52T	150K OHM +-5% 1/2W
R980	61A	172-	221 -	52T	220 OHM +-5% 1/4W
R988	61A	172-	223 -	52T	22K OHM +-5% 1/4W
R995	61A	602-	393 -	52T	39K OHM +-5% 1/6W
R996	61A	602-	103 -	52T	10K OHM +-5% 1/6W
ZD108	93A	90-	23		TIN COATED
ZD110	93A	39-	73 -	52T	ZENER 5.6V 2.5% HZ6B1
ZD403	93A	39-	54 -	52T	12.7V +-5% 1/2W
ZD404	95A	90-	23		TIN COATED

ZD420	93A	39-	522 -	52T	TZX20B
ZD701	93A	39-	518 -	52T	TZX8V2A
ZD902	93A	39-	55T -	52T	0.5W ZD BZX55C30
ZD903	93A	39-	124 -	52T	ZD 18-2
ZD702	93A	39-	515 -	52T	TZX3V0C

PARTS LIST OF CRT PC BOARD

LOCATION	CRPC556DQJ2				SPECIFICATION
	40A	581-	26 -	605	LABEL
	87A	3503-	501		CRT SOCKET
	705A	556P	R56 -	01	IC802 ASS'Y
C812	67A	305-	102 -	3	1000UF +-20% 16V
C835	65A	2Z-	103 -	4B	0.01UF +80% -20% 2K Z5V
C837	67A	305-	470 -	10	47UF 160V
IC801	56A	539-	2		LM1279N
P801	33A	3278-	11A		11P PLUG
P802	33A	3278-	9		9P PLUG
P803	33A	3278-	6		6P PLUG
R807	61A	208-	390 -	64	39 OHM +-5% 1W
R859	61A	152M-	101 -	64	100 OHM 5% 2W
VR801	75A	334-	222		2.2K OHM 30%
VR802	75A	334-	222		2.2K OHM 30%
VR803	75A	334-	303		30K OHM 30%
VR804	75A	334-	303		30K OHM 30%
VR805	75A	334-	303		30K OHM 30%

PARTS LIST OF CRT AUTO INS. PC BOARD

LOCATION	CRP556DQJAI				SPECIFICATION
	715A	694	1		CRT BOARD
C801	67A	305-	100 -	7T	10uF +-20% 50V
C802	67A	305-	100 -	7T	10uF +-20% 50V
C803	67A	305-	100 -	7T	10uF +-20% 50V
C804	65A	450-	104 -	7T	0.1uF +80% -20% Y5V 50V
C805	65A	450-	104 -	7T	0.1uF +80% -20% Y5V 50V
C806	65A	450-	104 -	7T	0.1uF +80% -20% Y5V 50V
C807	67A	309-	100 -	7T	10uF +-20% 50V
C808	67A	309-	470 -	3T	47uF +-20% 16V
C809	65A	450-	104 -	7T	0.1uF +80% -20% Y5V 50V
C810	67A	305-	470 -	7T	47uF +-20% 50V
C811	65A	450-	104 -	7T	0.1uF +80% -20% Y5V 50V
C813	65A	176J-	224 -	0T	0.22uF +-5% Y5V 63V
C814	65A	450-	104 -	7T	0.1uF +80% -20% Y5V 50V
C815	65A	450-	104 -	7T	0.1uF +80% -20% Y5V 50V
C816	65A	450-	104 -	7T	0.1uF +80% -20% Y5V 50V
C818	67A	305-	470 -	7T	47uF +-20% 50V
C819	65A	450-	104 -	7T	0.1uF +80-20% Y5P 50V
C820	65A	176J-	104 -	1T	0.1UF +-5% 100V
C828	67A	70-	478 -	9T	0.47uF 100V NP
C829	67A	70-	478 -	9T	0.47uF 100V NP
C830	67A	70-	478 -	9T	0.47uF 100V NP
C831	64A	176J-	104 -	1T	0.1uF +-5% 100V
C832	64A	176J-	104 -	1T	0.1uF +-5% 100V
C833	64A	176J-	104 -	1T	0.1uF +-5% 100V
C834	65A	176J-	104 -	1T	0.1uF +-5% 100V
C836	65A	1K-	221 -	5T	220PF/1KV +-10% Y5P
C838	65A	444-	102 -	13T	1000PF +-10% Z5P 50V
C840	65A	517K-	102 -	3T	1000PF +-10% Z5U 500V
C841	65A	517K-	102 -	3T	1000PF +-10% Z5U 500V
C842	65A	517K-	102 -	3T	1000PF +-10% Z5U 500V
C861	65A	517M-	103 -	3T	10NF +-20% Z5U 500V
D801	93A	64-	11F -	52T	DIODE IN4148

D802	93A	64-	11F -	52T	DIODE IN4148
D803	93A	64-	11F -	52T	DIODE IN4148
D804	93A	64-	11F -	52T	DIODE IN4148
D805	93A	64-	11F -	52T	DIODE IN4148

LOCATION	CRP556DQJAI				SPECIFICATION
D806	93A	64-	11F -	52T	DIODE IN4148
D807	93A	64-	11F -	52T	DIODE IN4148
D808	93A	64-	19G -	52T	FAST RECOVERY DIODE
D809	93A	64-	19G -	52T	FAST RECOVERY DIODE
D810	93A	64-	19G -	52T	FAST RECOVERY DIODE
D811	93A	64-	19G -	52T	FAST RECOVERY DIODE
D812	93A	64-	19G -	52T	FAST RECOVERY DIODE
D813	93A	64-	19G -	52T	FAST RECOVERY DIODE
D814	93A	64-	19G -	52T	FAST RECOVERY DIODE
D815	93A	64-	19G -	52T	FAST RECOVERY DIODE
D816	93A	64-	19G -	52T	FAST RECOVERY DIODE
D817	93A	52-	1T -	52T	1A 600V 1N4005
J801	95A	90-	23		TIN COATED
J802	95A	90-	23		TIN COATED
J803	95A	90-	23		TIN COATED
J804	95A	90-	23		TIN COATED
J805	95A	90-	23		TIN COATED
J806	95A	90-	23		TIN COATED
J807	95A	90-	23		TIN COATED
J808	95A	90-	23		TIN COATED
J809	95A	90-	23		TIN COATED
J810	95A	90-	23		TIN COATED
J818	95A	90-	23		TIN COATED
J819	95A	90-	23		TIN COATED
J820	95A	90-	23		TIN COATED
L801	73A	54-	479 -	5T	4.7UH
L805	73A	54-	478 -	10T	0.47UH
L806	73A	54-	478 -	10T	0.47UH
L807	73A	54-	478 -	10T	0.47UH
L808	73A	54-	479 -	5T	4.7UH
Q813	57A	419-	SG -	T	TR. KSC945GC
Q814	57A	742-	1 -	T	TR. KSC1730-0
R801	61A	602-	750 -	26T	75 OHM +-5% 1/6W
R802	61A	602-	750 -	26T	75 OHM +-5% 1/6W
R803	61A	602-	750 -	26T	75 OHM +-5% 1/6W
R804	61A	602-	300 -	26T	30 OHM +-5% 1/6W
R805	61A	602-	300 -	26T	30 OHM +-5% 1/6W
R806	61A	602-	300 -	26T	30 OHM +-5% 1/6W
R808	61A	602-	103 -	26T	10K OHM +-5% 1/6W
R809	61A	172-	225 -	26T	2.2MEG OHM +-5% 1/4W
R810	61A	602-	101 -	26T	100 OHM +-5% 1/6W
R811	61A	602-	332 -	26T	3.3K OHM +-5% 1/6W
R812	61A	602-	132 -	26T	1.3K OHM +-5% 1/6W
R813	61A	602-	332 -	26T	3.3K OHM +-5% 1/6W
R814	61A	602-	332 -	26T	3.3K OHM +-5% 1/6W
R815	61A	602-	391 -	26T	390 OHM +-5% 1/6W
R816	61A	602-	391 -	26T	390 OHM +-5% 1/6W
R817	61A	602-	391 -	26T	390 OHM +-5% 1/6W
R818	61A	602-	100 -	26T	10 OHM +-5% 1/6W
R819	61A	602-	100 -	26T	10 OHM +-5% 1/6W
R820	61A	602-	100 -	26T	10 OHM +-5% 1/6W
R821	95A	90-	23		TIN COATED
R823	61A	602-	910 -	26T	91 OHM +-5% 1/6W
R824	61A	602-	910 -	26T	91 OHM +-5% 1/6W
R825	61A	602-	910 -	26T	91 OHM +-5% 1/6W
R826	95A	90-	23		TIN COATED
R840	61A	172-	102 -	26T	1K OHM +-5% 1/4W

R841	61A	172-	102 -	26T	1K OHM +-5% 1/4W
R842	61A	172-	102 -	26T	1K OHM +-5% 1/4W
R846	61A	602-	393 -	26T	39K OHM +-5% 1/6W
R847	61A	602-	393 -	26T	39K OHM +-5% 1/6W
R848	61A	602-	393 -	26T	39K OHM +-5% 1/6W
R849	61A	172-	105 -	26T	1MEG OHM +-5% 1/4W

LOCATION	CRP556DQJAI				SPECIFICATION
R850	61A	172-	105 -	26T	1MEG OHM +-5% 1/4W
R851	61A	172-	105 -	26T	1MEG OHM +-5% 1/4W
R855	61A	175L-	560 -	52T	56 OHM +-5% 1/2W
R856	61A	175L-	560 -	52T	56 OHM +-5% 1/2W
R857	61A	175L-	560 -	52T	56 OHM +-5% 1/2W
R858	95A	90-	23		TIN COATED
R860	61A	172-	104 -	26T	100K OHM +-5% 1/4W
R861	61A	602-	822 -	26T	8.2K OHM +-5% 1/6W
R862	61A	602-	222 -	26T	2.2K OHM +-5% 1/6W
R863	95A	90-	23		TIN COATED
R864	61A	175L-	471 -	52T	470 OHM +-5% 1/2W
ZD801	93A	39-	519 -	52T	TZX8V2B

PARTS LIST OF IC802 ASS'Y

LOCATION	PARTS No.				SPECIFICATION
	90A	355-	2		HEAT SINK
	M1A	1730-	8 -	128	SCREW
IC802	56A	551-	3		LM2438T
L809	73A	54-	109 -	5T	1UH
L810	73A	54-	109 -	5T	1UH
L811	73A	54-	109 -	5T	1UH

PARTS LIST OF Q911 ASS'Y

LOCATION	PARTS No.				SPECIFICATION
	5A	42-	501		NYLON WASHER
	12A	372-	1		SILICONE RUBBER
	90A	315-	1		HEAT SINK
	M1A	1730-	8 -	128	SCREW
Q911	57A	600-	504		MOS FET IRF634A

PARTS LIST OF IC601 ASS'Y

LOCATION	PARTS No.				SPECIFICATION
	5A	42-	501		NYLON WASHER
	12A	372-	1		SILICONE RUBBER
	90A	348-	501		HEAT SINK
	M1A	1730-	10 -	128	SCREW
IC601	56A	574-	1		TDA9302H

PARTS LIST OF IC904 ASS'Y

LOCATION	PARTS No.				SPECIFICATION
	90A	315-	1		HEAT SINK
	M1A	1730-	6 -	128	SCREW
IC904	56A	133-	12 -	ST	3 PIN 12V REG. L7812CV

PARTS LIST OF Q403/Q406/D408 ASS'Y

LOCATION	PARTS No.				SPECIFICATION
	5A	42-	501		NYLON WASHER
	32A	3028-	8		MICA
	90A	354-	509		HEAT SINK
	M1A	1730-	8 -	128	SCREW
	M1A	1730-	10 -	128	SCREW
⚠					
D408	93A	220-	12		FMP-2FUR 1500/600V 5A
Q403	57A	689-	6		2SC5297
Q406	57A	415-	1		TIP122

PARTS LIST OF AC LINET ASS'Y

LOCATION	PARTS No.				SPECIFICATION
CN901	95A	205S-	354 -	023	WIRE ASS'Y
⚠					
	96A	29-	6 -	190	H.S. TUBING
	87A	501-	5		RECEPTACLES 0714

PARTS LIST OF Q901 ASS'Y

LOCATION	PARTS No.				SPECIFICATION
	5A	42-	501		NYLON WASHER
	12A	372-	1		SILICONE RUBBER
	90A	339-	2 -	A	HEAT SINK
⚠					
	M1A	1730-	10 -	128	SCREW
Q901	57A	667-	7		IRFBC40 I.R. MOSFET

PARTS LIST OF CAB'T ASS'Y

LOCATION	PARTS No.				SPECIFICATION
	12A	381-	500		RUBBER FOOT
	19A	506-	5		SPRING
	33A	3709-	1		POWER LED LENS
	33A	3734-	1		POWER BUTTON
	34A	611-	311 -	AL	SWIVEL
	34A	612-	311 -	AL	BASE
	34A	624-	312 -	2AT	BACK COVER
	45A	76-	31 -	RN	PE BAG

PARTS LIST OF CRT ALTERNATION

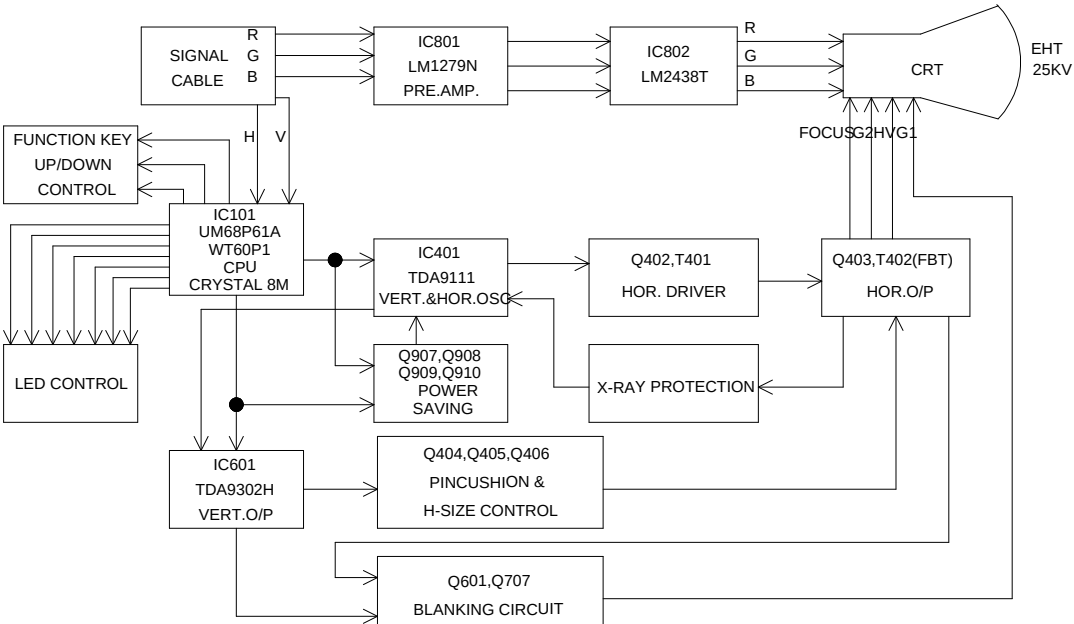
LOCATION	PARTS No.				SPECIFICATION
	750A	5910-	7PS		15“ CHUNGHWA CRT
C418	63A	210J-	432 -	8FC	0.0043uF +-5% 2000V
C425	63A	210J-	334 -	3CC	0.33 uF +-5% 400V
C430	93A	60-	21 -	52T	FRD 1.5A 500V FR155
P404	33A	8009-	3		3P PLUG
R409	61A	172-	204 -	52T	200K OHM 5% 1/4W
R456	61A	153M-	271 -	59	270 OHM 5% 3W
R457	61A	153M-	560 -	59	56 OHM 5% 3W
R458	61A	153M-	560 -	59	56 OHM 5% 3W
R461	61A	153M-	151 -	59	150 OHM 5% 3W
R607	61A	208-	918 -	52T	0.91 OHM 5% 1W

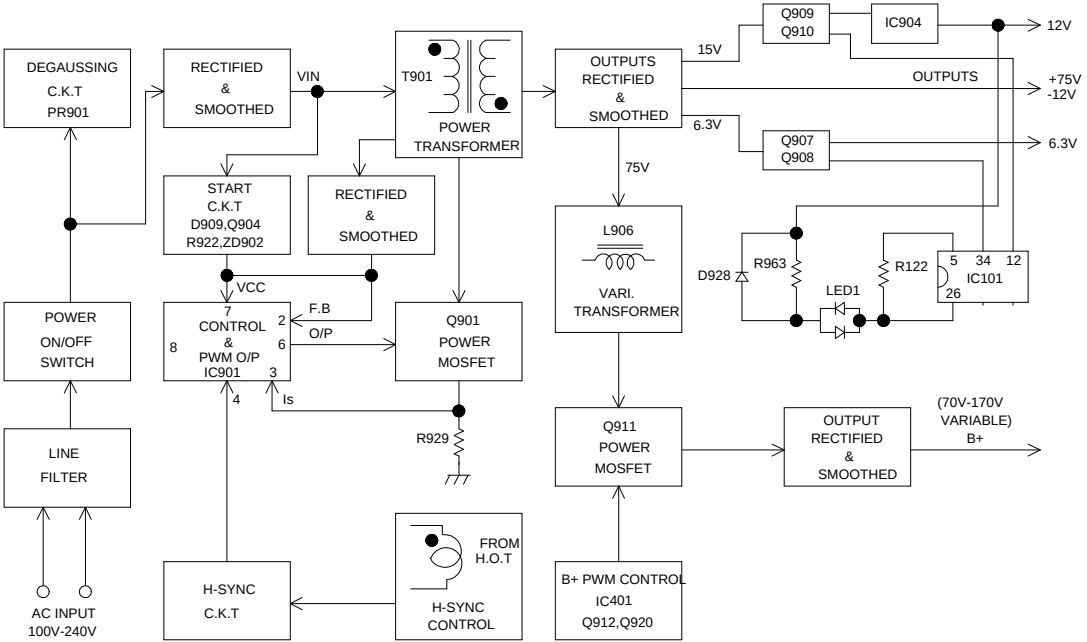
LOCATION	PARTS No.				SPECIFICATION
	750A	5910-	3PS -	TQ	15“ CHUNGHWA .28 CRT
C418	63A	210J-	472 -	8FC	0.0047uF +-5% 2000V
C425	63A	210J-	274 -	3CC	0.27uF +-5% 400V
C430	93A	60-	21 -	52T	FRD 1.5A 500V FR155
P404	33A	8009-	3		3P PLUG
R409	61A	172-	364 -	52T	360K OHM 5% 1/4W
R456	61A	153M-	271 -	59	270 OHM 5% 3W
R457	61A	153M-	560 -	59	56 OHM 5% 3W
R458	61A	153M-	560 -	59	56 OHM 5% 3W
R461	61A	153M-	151 -	59	150 OHM 5% 3W
R607	61A	208-	918 -	52T	0.91 OHM 5% 1W

LOCATION	PARTS No.				SPECIFICATION
	750A	5910-	3PS		15“ CHUNGHWA CRT
C418	63A	210J-	472 -	8FC	0.0047uF +-5% 2000V
C425	63A	210J-	274 -	3CC	0.27uF +-5% 400V
C430	93A	60-	21 -	52T	FRD 1.5A 500V FR155
P404	33A	8009-	3		3P PLUG
R409	61A	172-	364 -	52T	360K OHM 5% 1/4W
R456	61A	153M-	271 -	59	270 OHM 5% 3W
R457	61A	153M-	560 -	59	56 OHM 5% 3W
R458	61A	153M-	560 -	59	56 OHM 5% 3W
R461	61A	153M-	151 -	59	150 OHM 5% 3W
R607	61A	208-	918 -	52T	0.91 OHM 5% 1W

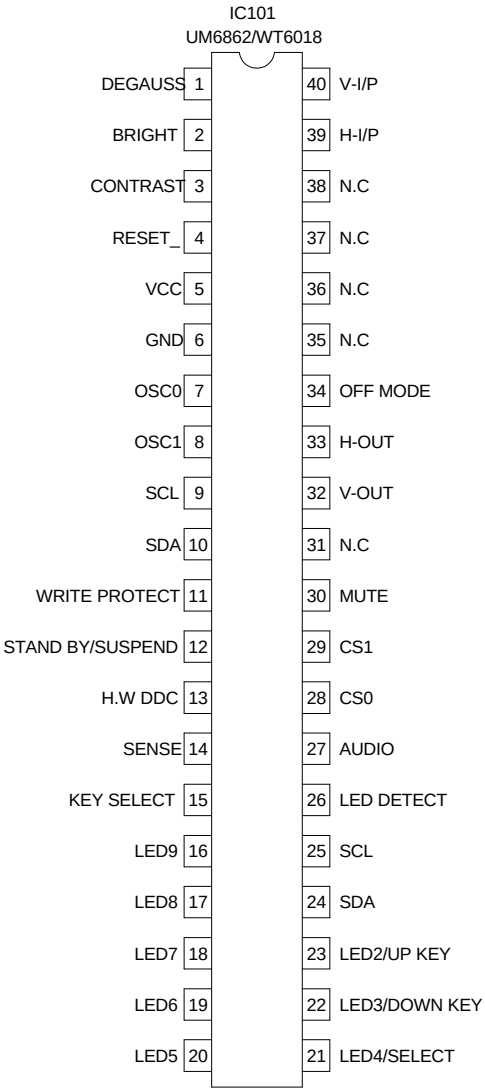
LOCATION	PARTS No.				SPECIFICATION
	750A	5910-	5PS		15“ CHUNGHWA CRT
C418	63A	210J-	432 -	8FC	0.0043uF +-5% 2000V
C425	63A	210J-	274 -	3CC	0.27uF +-5% 400V
C430	93A	60-	21 -	52T	FRD 1.5A 500V FR155
P404	33A	8009-	3		3P PLUG
R409	61A	172-	364 -	52T	360K OHM 5% 1/4W
R456	61A	153M-	271 -	59	270 OHM 5% 3W
R457	61A	153M-	560 -	59	56 OHM 5% 3W
R458	61A	153M-	560 -	59	56 OHM 5% 3W
R461	61A	153M-	151 -	59	150 OHM 5% 3W
R607	61A	208-	918 -	52T	0.91 OHM 5% 1W

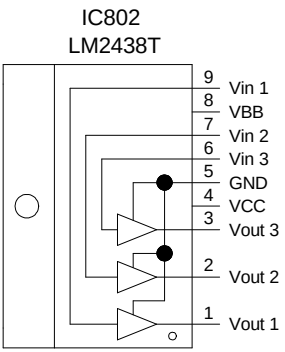
LOCATION	PARTS No.				SPECIFICATION
	750A	5910-	3PS -	D	CHUNGHWA CRT
C418	63A	210J-	472 -	8FC	0.0047uF +-5% 2000V
C425	63A	210J-	334 -	3CC	0.33uF +-5% 400V
C430	93A	60-	21 -	52T	FRD 1.5A 500V FR155
P404	33A	8009-	3		3P PLUG
R409	61A	172-	204 -	52T	200K OHM 5% 1/4W
R456	61A	153M-	271 -	59	270 OHM 5% 3W
R457	61A	153M-	560 -	59	56 OHM 5% 3W
R458	61A	153M-	560 -	59	56 OHM 5% 3W
R461	61A	153M-	151 -	59	150 OHM 5% 3W
R607	61A	208-	918 -	52T	0.91 OHM 5% 1W


SIGNAL CABLE
R
G
B
IC801
LM1279N
PRE.AMP.
IC802
LM2438T
R
G
B
CRT
EHT
25KV
FOCUSG2HVG1
FUNCTION KEY
UP/DOWN
CONTROL
H
V
IC101
UM68P61A
WT60P1
CPU
CRYSTAL 8M
IC401
TDA9111
VERT.&HOR.OSC
Q402,T401
HOR. DRIVER
Q403,T402(FBT)
HOR.O/P
LED CONTROL
Q907,Q908
Q909,Q910
POWER
SAVING
X-RAY PROTECTION
IC601
TDA9302H
VERT.O/P
Q404,Q405,Q406
PINCUSHION &
H-SIZE CONTROL
Q601,Q707
BLANKING CIRCUIT

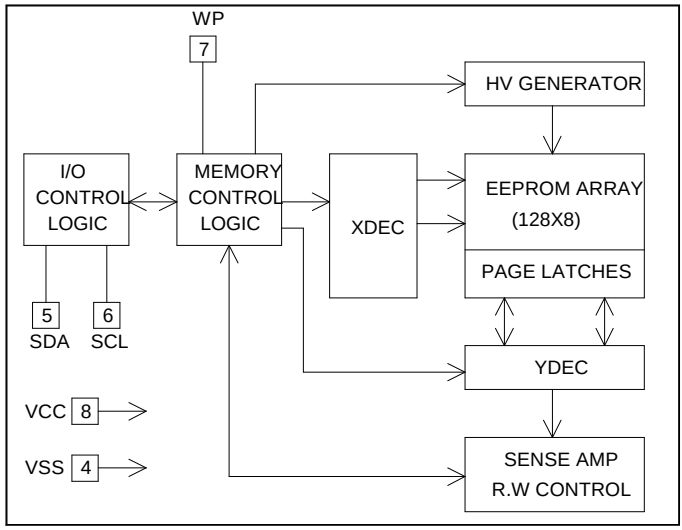

DEGAUSSING
C.K.T
PR901
RECTIFIED
&
SMOOTHED
VIN
T901
POWER
TRANSFORMER
OUTPUTS
RECTIFIED
&
SMOOTHED
15V
Q909
Q910
IC904
12V
OUTPUTS
+75V
-12V
6.3V
Q907
Q908
6.3V
START
C.K.T
D909,Q904
R922,ZD902
RECTIFIED
&
SMOOTHED
75V
L906
VARI.
TRANSFORMER
D928
R963
LED1
R122
5
34
12
IC101
26
VCC
POWER
ON/OFF
SWITCH
7
CONTROL
&
PWM O/P
IC901
8
2
6
3
4
F.B
O/P
Is
Q901
POWER
MOSFET
R929
LINE
FILTER
Q911
POWER
MOSFET
OUTPUT
RECTIFIED
&
SMOOTHED
(70V-170V
VARIABLE)
B+
AC INPUT
100V-240V
H-SYNC
C.K.T
FROM
H.O.T
H-SYNC
CONTROL
B+ PWM CONTROL
IC401
Q912,Q920

10. IC BLOCK DIAGRAMS

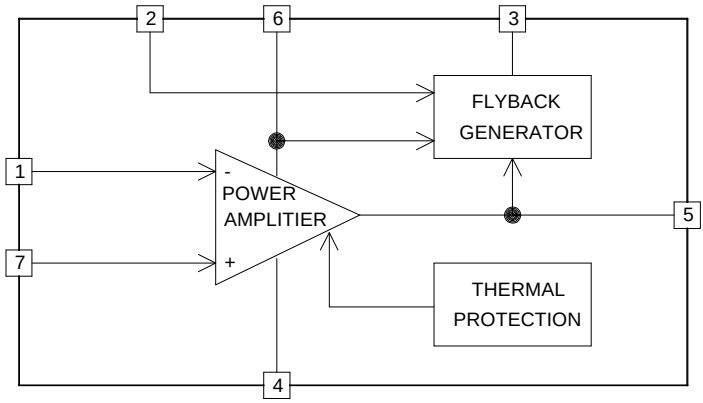




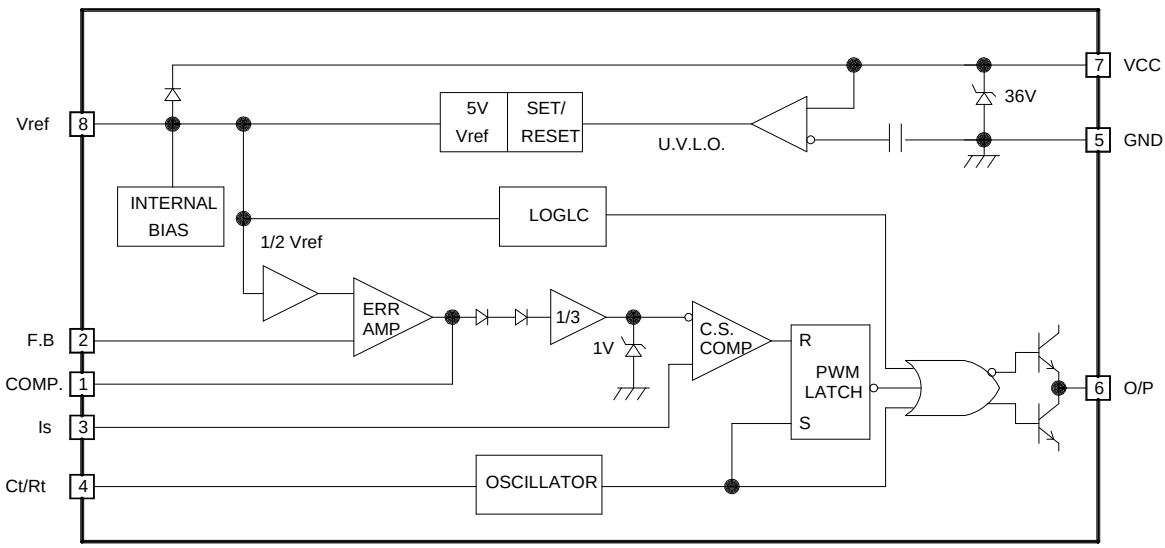
IC102 24C04

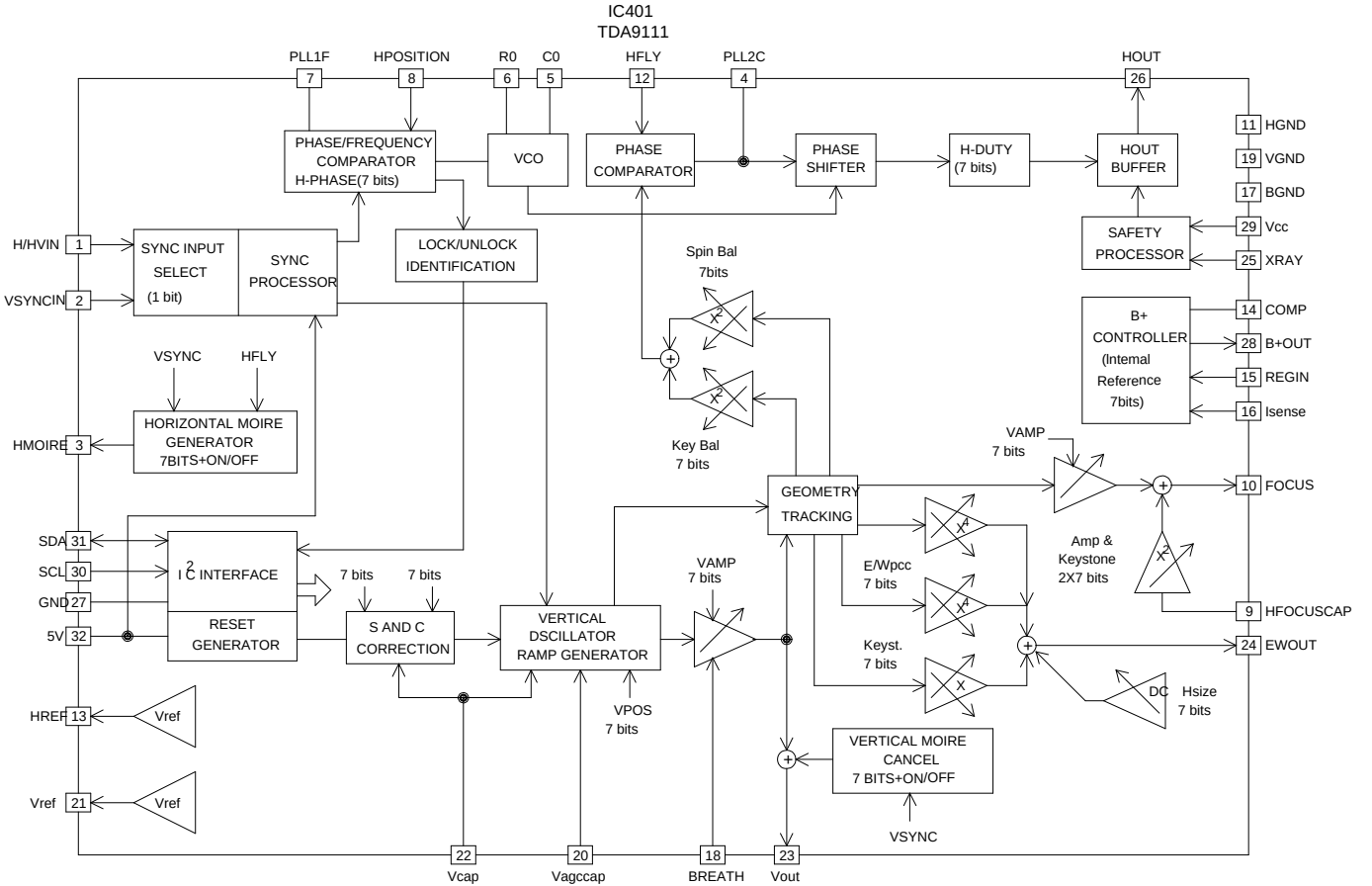


IC601 TDA9302H

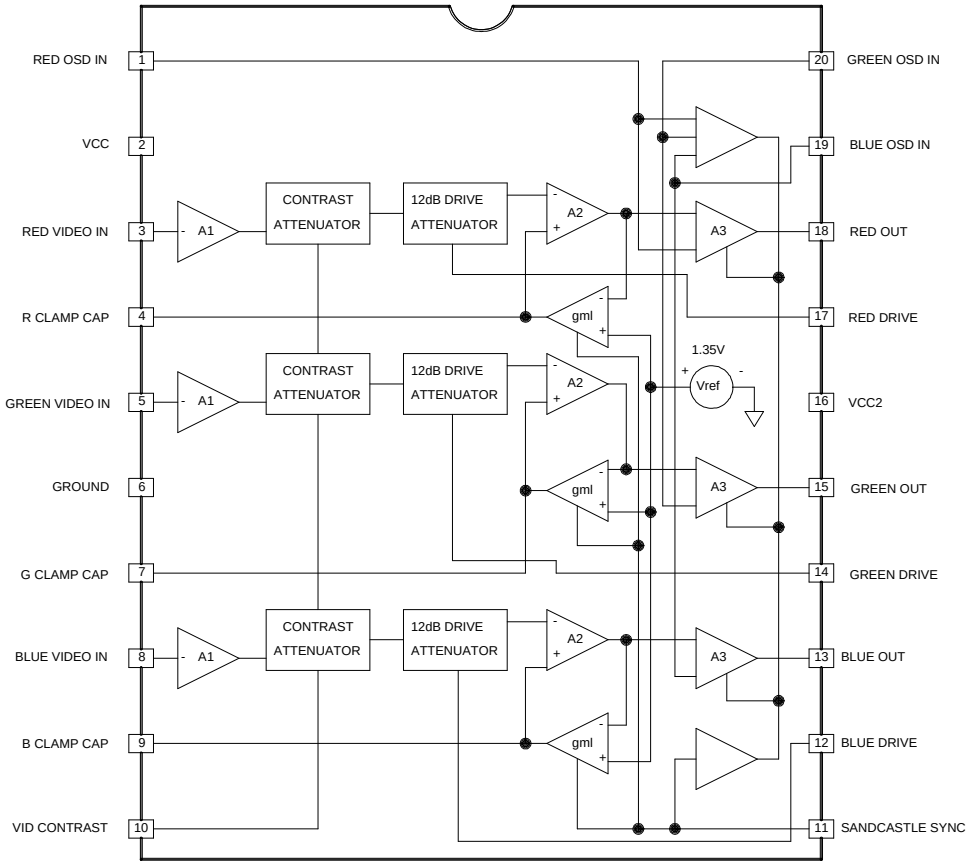


IC901 3842

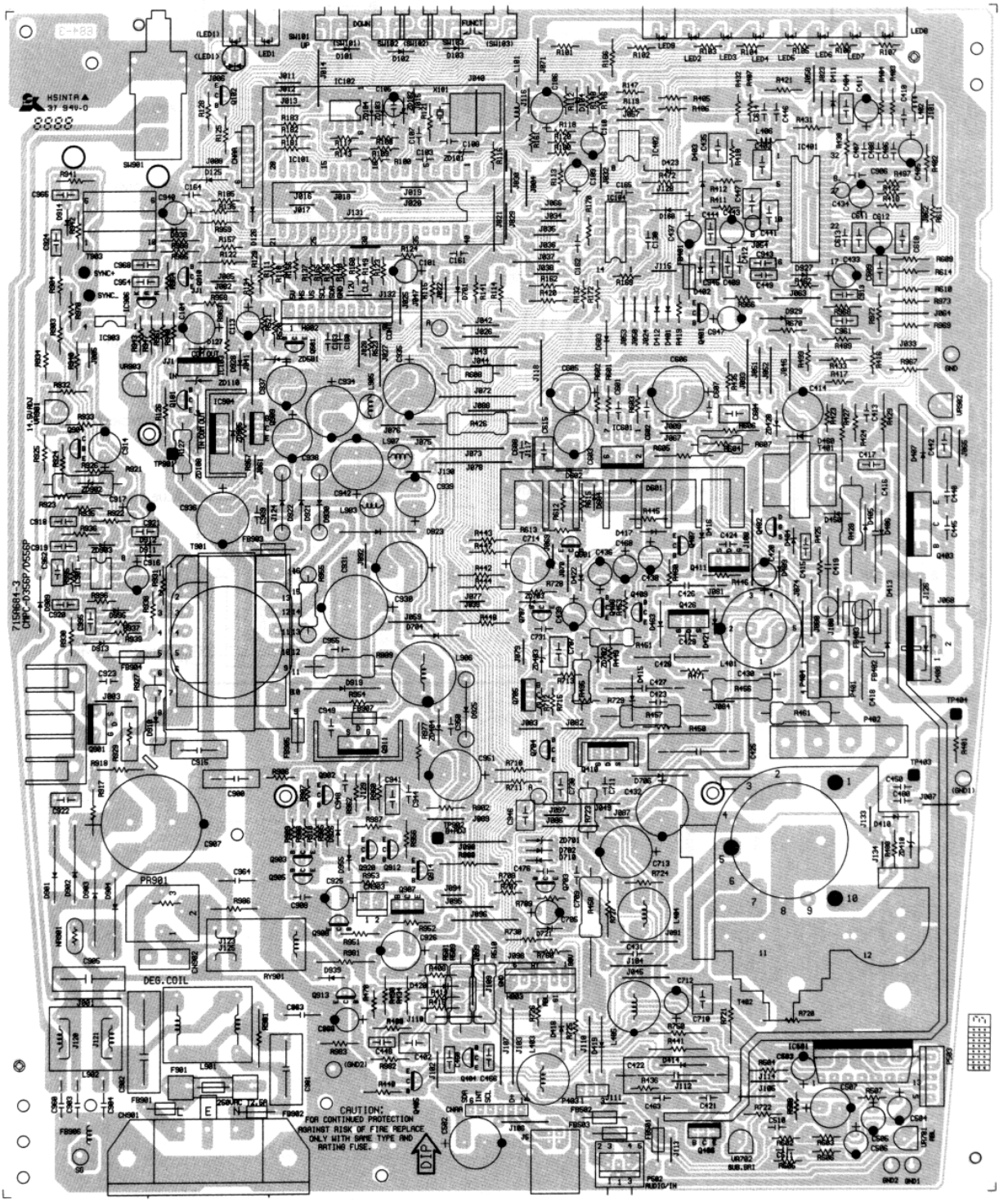



IC401
TDA9111
PLL1F
HPOSITION
R0
C0
HFLY
PLL2C
HOUT
7
8
6
5
12
4
26
PHASE/FREQUENCY COMPARATOR H-PHASE(7 bits)
VCO
PHASE COMPARATOR
PHASE SHIFTER
H-DUTY (7 bits)
HOUT BUFFER
11 HGND
19 VGND
17 BGND
29 Vcc
25 XRAY
14 COMP
28 B+OUT
15 REGIN
16 Isense
H/HVIN 1
VSYNCIN 2
SYNC INPUT SELECT (1 bit)
SYNC PROCESSOR
LOCK/UNLOCK IDENTIFICATION
SAFETY PROCESSOR
B+ CONTROLLER (Intemal Reference 7bits)
Spin Bal 7bits
Key Bal 7 bits
VSYNC
HFLY
HMOIRE 3
HORIZONTAL MOIRE GENERATOR 7BITS+ON/OFF
VAMP 7 bits
GEOMETRY TRACKING
10 FOCUS
Amp & Keystone 2X7 bits
SDA 31
SCL 30
GND 27
5V 32
I²C INTERFACE
RESET GENERATOR
7 bits
7 bits
S AND C CORRECTION
VERTICAL DSCILLATOR RAMP GENERATOR
VAMP 7 bits
E/Wpcc 7 bits
Keyst. 7 bits
9 HFOCUSCAP
24 EWOUT
DC Hsize 7 bits
HREF 13
Vref
Vref 21
Vref
VPOS 7 bits
VERTICAL MOIRE CANCEL 7 BITS+ON/OFF
VSYNC
22 Vcap
20 Vagccap
18 BREATH
23 Vout

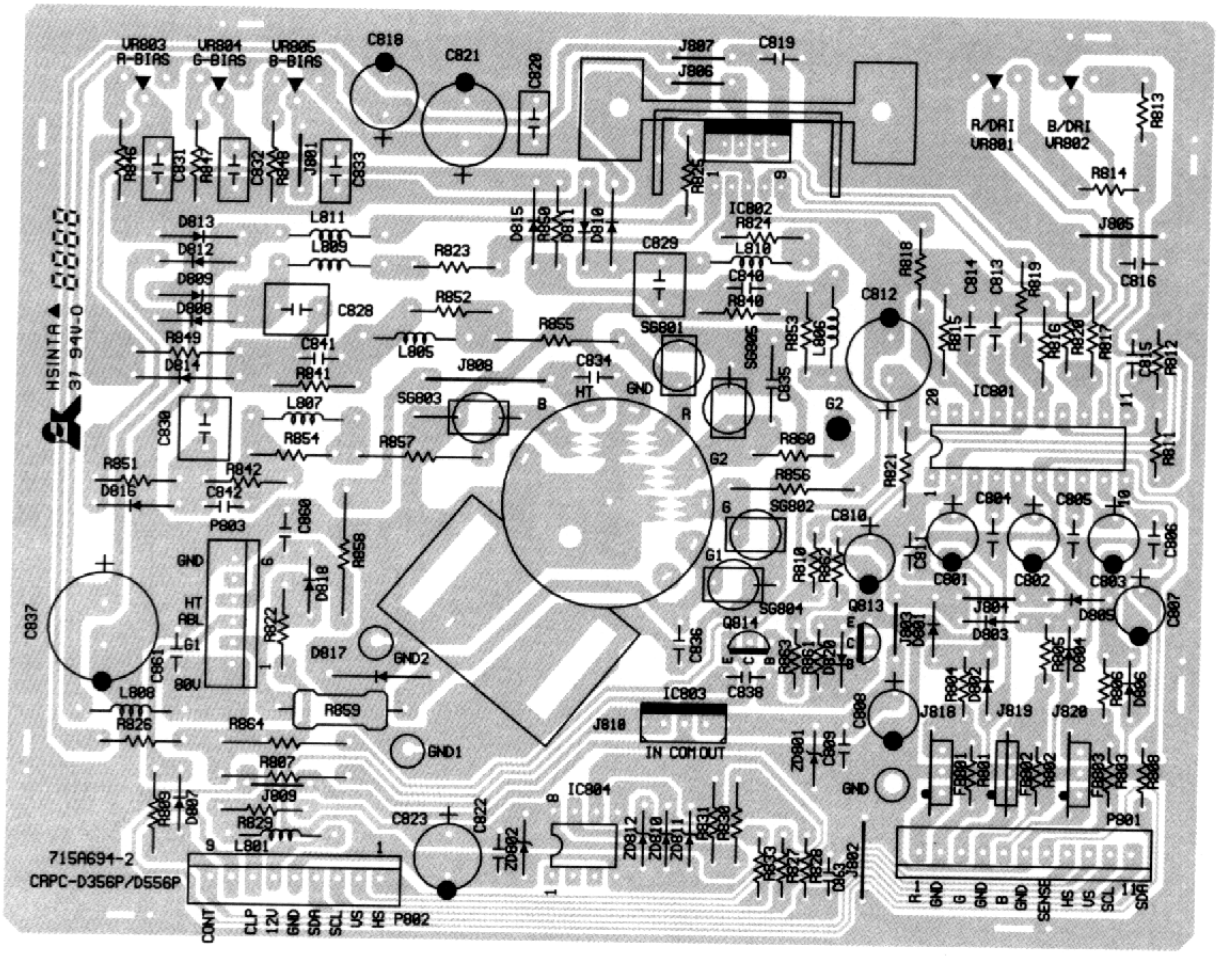
IC801 LM1279N

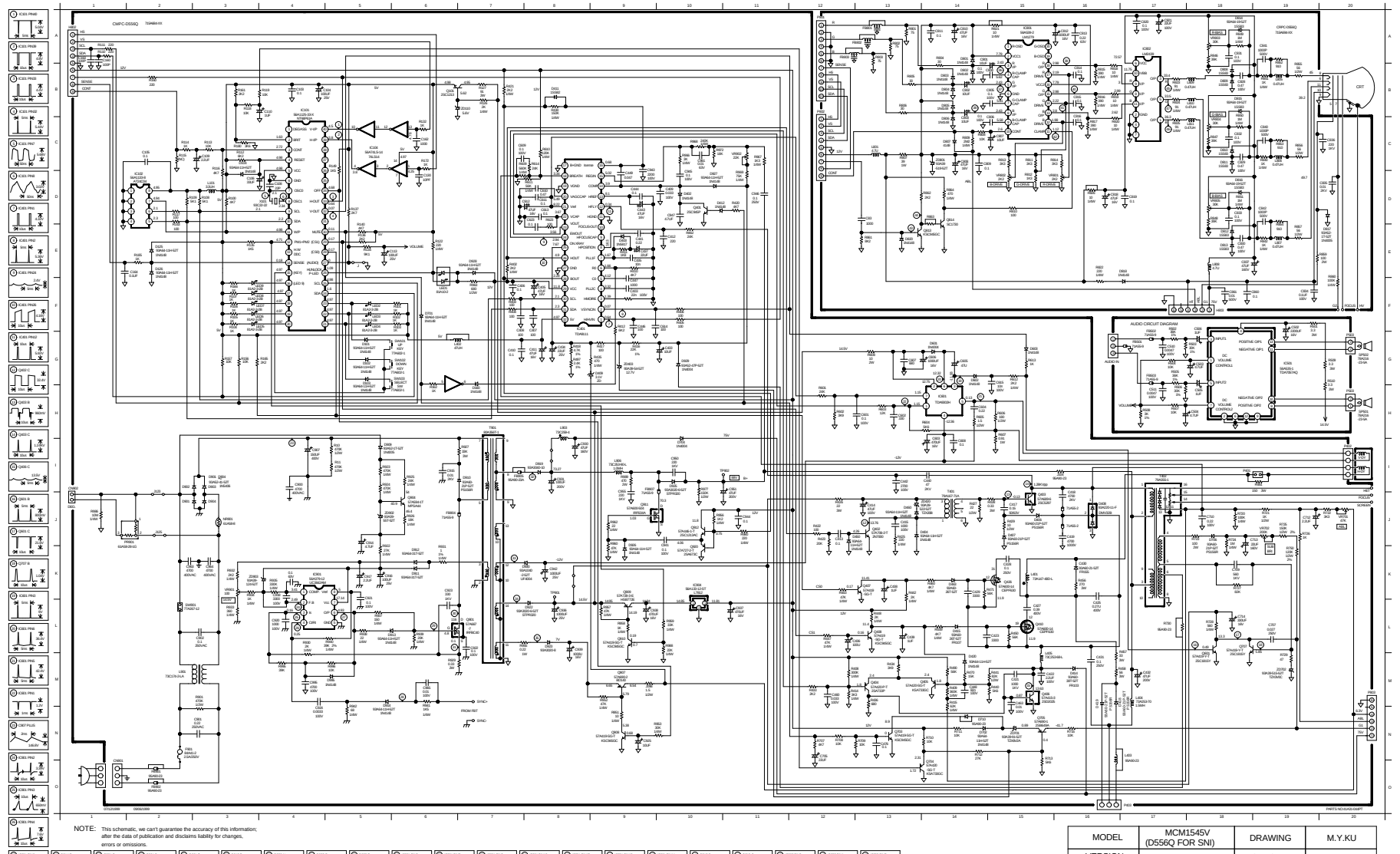


11 PCB LAYOUT
11-1 MAIN PCB LAYOUT



11-2 CRT BOARD LAYOUT





NOTE: This schematic, we can't guarantee the accuracy of this information; after the date of publication and disclaims liability for changes, errors or omissions.

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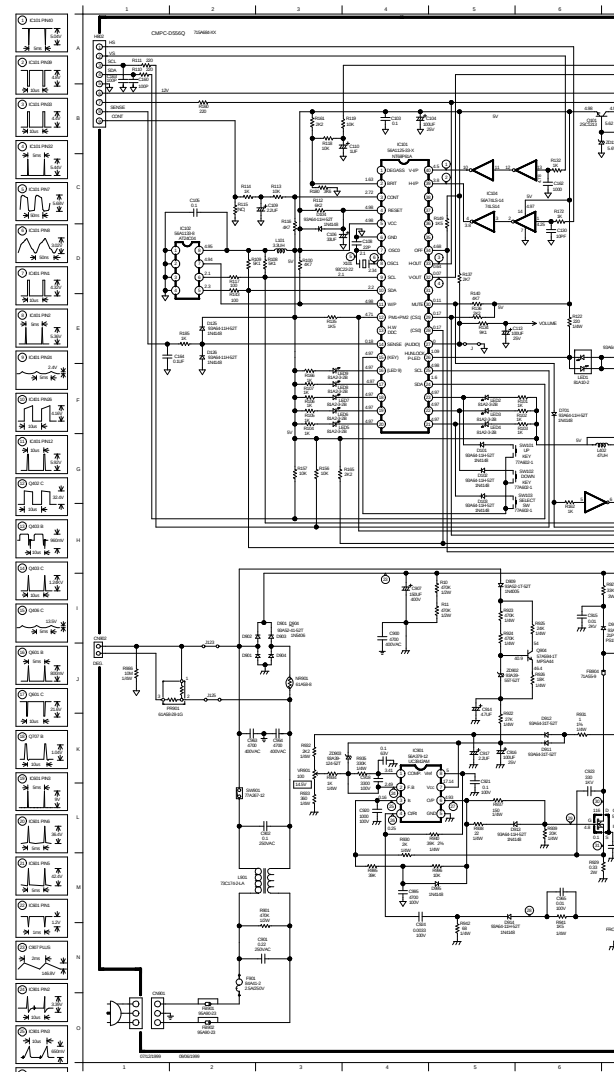
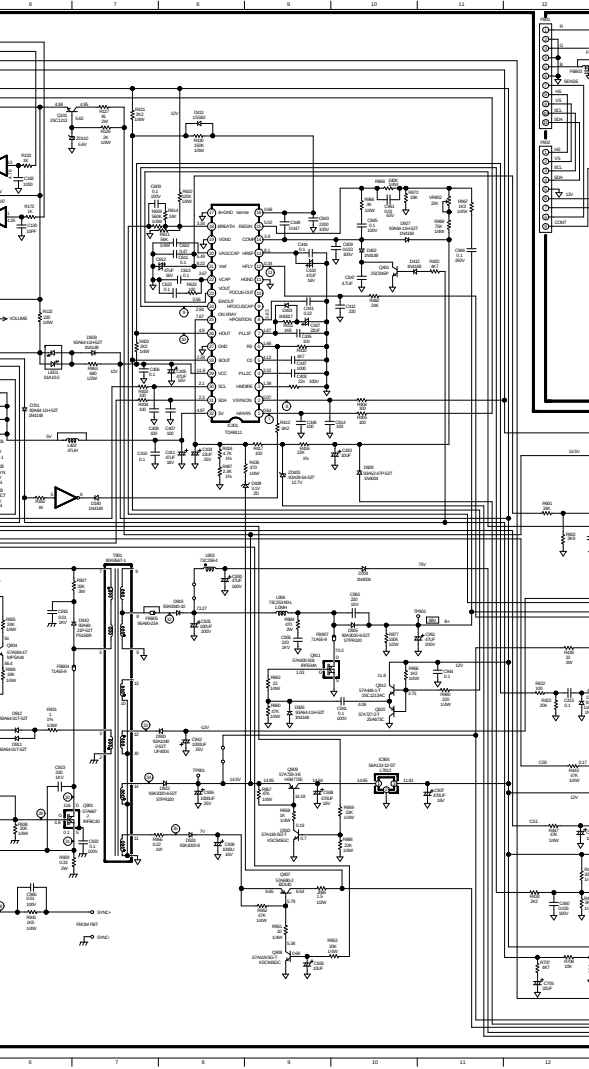
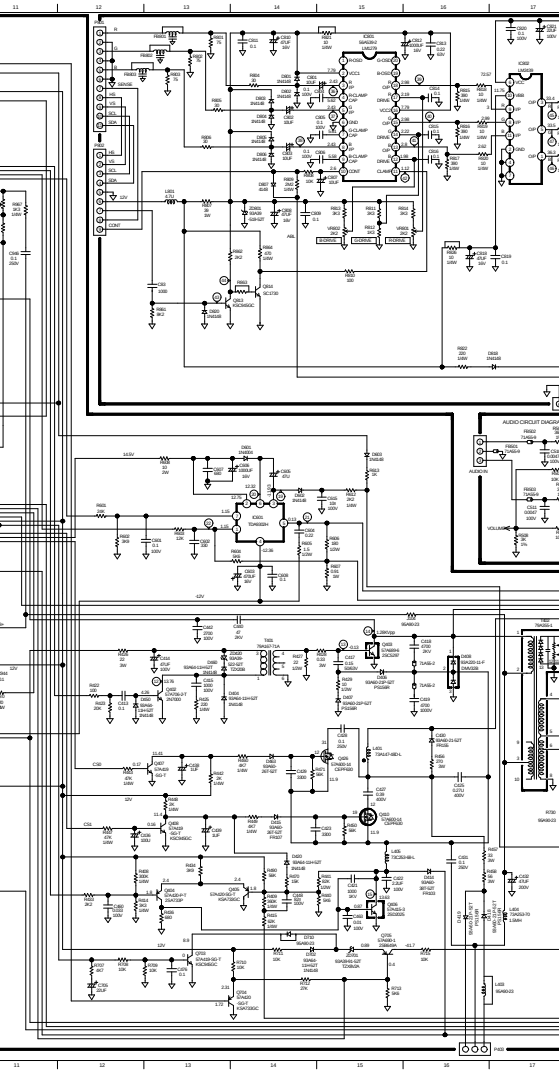
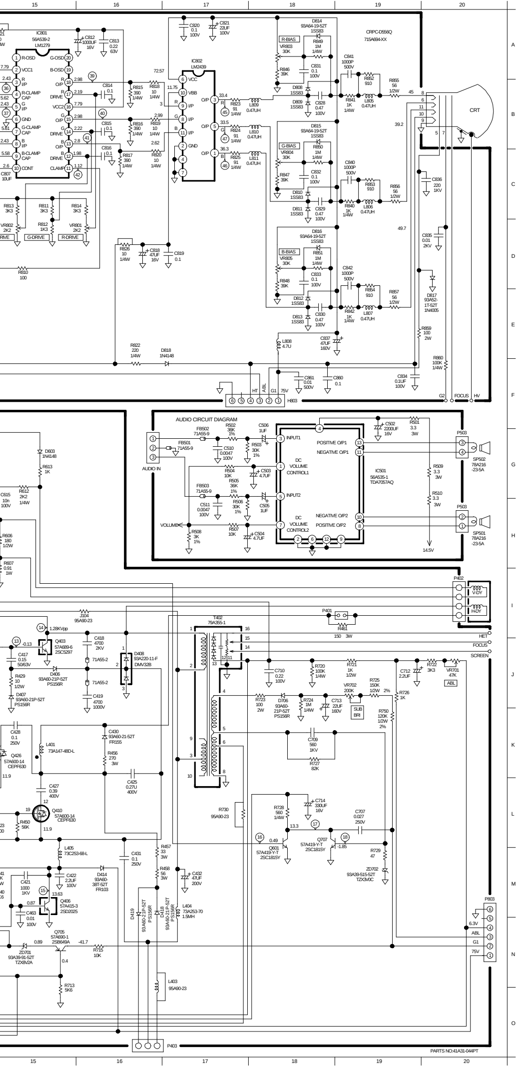
VERSION	A	CHECKED	
DATE	12-21-99	APPROVED	









15
16
17
18
19
20
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
IC801
56A539-2
LM1279
R-OSD
VCC1
R I/P
R-CLAMP CAP
G I/P
GND
G-CLAMP CAP
B I/P
B-CLAMP CAP
CONT
G-OSD
B-OSD
R O/P
R DRIVE
VCC2
G O/P
G DRIVE
B O/P
B DRIVE
CLAMP
C812 1000UF 16V
C813 0.22 63V
C807 10UF
C814 0.1
C815 0.1
C816 0.1
R815 390 1/4W
R816 390 1/4W
R817 390 1/4W
R818 10 1/4W
R819 10 1/4W
R820 10 1/4W
R813 3K3
R811 3K3
R814 3K3
R812 1K3
VR802 2K2
VR801 2K2
G-DRIVE
R-DRIVE
R810 100
R826 10 1/4W
C818 47UF 16V
C819 0.1
C820 0.1 100V
C821 22UF 100V
IC802
LM2439
VCC
VBB
I/P
GND
O/P
72.57
11.75
2.99
2.62
33.4
33.5
36.3
R823 91 1/4W
R824 91 1/4W
R825 91 1/4W
L809 0.47UH
L810 0.47UH
L811 0.47UH
D814 93A64-19-52T 1SS83
D815 93A64-19-52T 1SS83
D816 93A64-19-52T 1SS83
R-BIAS
G-BIAS
B-BIAS
VR803 30K
VR804 30K
VR805 30K
R849 1M 1/4W
R850 1M 1/4W
R851 1M 1/4W
R846 39K
R847 39K
R848 39K
C831 0.1 100V
C832 0.1 100V
C833 0.1 100V
D808 1SS83
D809 1SS83
D810 1SS83
D811 1SS83
D812 1SS83
D813 1SS83
C828 0.47 100V
C829 0.47 100V
C830 0.47 100V
C841 1000P 500V
C840 1000P 500V
C842 1000P 500V
R852 910
R853 910
R854 910
R841 1K 1/4W
R840 1K 1/4W
R842 1K 1/4W
L805 0.47UH
L806 0.47UH
L807 0.47UH
R855 56 1/2W
R856 56 1/2W
R857 56 1/2W
CRPC-D556Q
715A694-XX
CRT
45
39.2
49.7
C836 220 1KV
C835 0.01 2KV
D817 93A52-1T-52T 1N4005
R859 100 2W
R860 100K 1/4W
C834 0.1UF 100V
C837 47UF 160V
L808 4.7U
R822 220 1/4W
D818 1N4148
C861 0.01 500V
C860 0.1
HT
ABL
G1
75V
H803
G2
FOCUS
HV
AUDIO CIRCUIT DIAGRAM
AUDIO IN
FB502 71A55-9
FB501 71A55-9
FB503 71A55-9
R502 36K 1%
R503 30K 1%
R504 10K
R505 36K 1%
R506 30K 1%
R507 10K
R508 3K 1%
C506 1UF
C510 0.0047 100V
C511 0.0047 100V
C503 4.7UF
C505 1UF
C504 4.7UF
VOLUME
INPUT1
INPUT2
DC VOLUME CONTROL1
DC VOLUME CONTROL2
POSITIVE O/P1
NEGATIVE O/P1
NEGATIVE O/P2
POSITIVE O/P2
IC501
56A535-1
TDA7057AQ
C502 2200UF 16V
R501 3.3 3W
R509 3.3 3W
R510 3.3 3W
14.5V
P503
SP502 78A216 -23-5A
SP501 78A216 -23-5A
D603 1N4148
R613 1K
R612 2K2 1/4W
C615 10n 100V
R606 180 1/2W
R607 0.91 1W
P402
V-DY
H-DY
P401
R461 150 3W
J104 95A90-23
1.28KVpp
Q403 57A689-6 2SC5297
C418 4700 2KV
D408 93A220-11-F DMV32B
71A55-2
C417 0.15 50/63V
R429 10 1/2W
D406 93A60-21P-52T PS156R
D407 93A60-21P-52T PS156R
C419 4700 1000V
T402 79A355-1
HET
FOCUS
SCREEN
C710 0.22 100V
R720 100K 1/4W
R721 1K 1/2W
C712 2.2UF
R722 3K3
VR701 47K
ABL
VR702 200K
R725 150K 1/2W 2%
R726 1K
R723 100 2W
D706 93A60-21P-52T PS156R
R724 1M 1/4W
C713 22UF 160V
SUB BRI
R750 120K 1/2W 2%
C709 560 1KV
R727 82K
C428 0.1 250V
L401 73A147-48D-L
Q426 57A600-14 CEPF630
C430 93A60-21-52T FR155
R456 270 3W
C425 0.27U 400V
C427 0.39 400V
Q410 57A600-14 CEPF630
R450 56K
11.9
R730 95A90-23
R728 560 1/4W
C714 330UF 16V
C707 0.027 250V
13.3
Q707 57A419-Y-T 2SC1815Y
Q601 57A419-Y-T 2SC1815Y
0.49
-1.85
R729 47
ZD702 93A39-515-52T TZX3V0C
L405 73C253-68-L
C431 0.1 250V
R457 33 3W
R458 56 3W
C432 47UF 200V
C421 1000 1KV
C422 2.2UF 100V
D414 93A60-38T-52T FR103
Q406 57A415-3 2SD2025
13.63
0.87
C463 0.01 100V
D419 93A60-21P-52T PS156R
D418 93A60-21P-52T PS156R
L404 73A253-70 1.5MH
Q705 57A690-1 2SB649A
0.89
-41.7
ZD701 93A39-91-52T TZX8V2A
R715 10K
0.4
R713 5K6
L403 95A90-23
P403
P803
6.3V
ABL
G1
75V
PARTS NO:41A31-044PT