

CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL Remove six screws holding cabinet back and remove back. Disconnect HV anode, CRT socket, deflection yoke connector, degaussing coil connector, speaker connector, ground leads, and all required cabling. Remove two screws holding Main board assembly to front of cabinet. Slide Main board assembly out of cabinet frame and cabinet.	CRT REMOVAL (Caution: Some sets employ a CRT with neck assemblies permanently bonded to CRT. Do Not attempt to remove these assemblies.) Follow "Chassis Removal" procedure and lay set face down on a soft protective surface. Loosen and remove CRT neck assemblies. Remove four screws holding CRT to cabinet front and lift CRT out cabinet. DO NOT lift CRT by the neck.
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SERVICING IN THE FIELD

CRT IMPLOSION PROTECTION AND CLEANING Implosion protection is an integral part of the picture tube, cleaning accomplished without CRT removal.	HIGH VOLTAGE For High Voltage procedure, refer to Miscellaneous Adjustments.
FUSE DEVICES A 1-amp fuse is used for low-voltage power supply protection. (See photo, Cabinet - Rear View.) A 2.5-amp fuse is used for AC line protection. (See photo, Cabinet - Rear View.)	FOCUS The focus may be varied by a Focus control. (See photo, Cabinet-Rear View.)
CHANNEL TUNING Channel Up and Down buttons are provided for channel scanning with ten numbered buttons (on remote transmitter) provided for one or two digit entry direct access channel selection. Fine tuning is automatic.	AGC The AGC may be varied by an RF AGC Control (SFR102). (See photo, IF Module.)



SAFETY PRECAUTIONS
See Page 1

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SAMS **Howard W. Sams & Company**
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SET 2765 FOLDER 1

SAFETY PRECAUTIONS**SERVICE WARNING**

Service work should be performed only by qualified service technicians who are familiar with safety checks and guide lines.

1. For continued safety, no modification of any circuit should be attempted unless recommended by manufacturer.
2. Disconnect power source before replacing parts as some parts may be electrostatic sensitive.
3. Use an isolation transformer between the line cord and power receptacle, when servicing chassis.

SERVICING HIGH VOLTAGE AND PICTURE TUBE

When servicing the High Voltage circuits, extreme caution should be used.

1. Discharge static High Voltage by connecting a 10 kohms resistor in series with a test lead between chassis and anode lead of picture tube.
2. Wear shatter-proof eye protection (goggles) when handling the picture tube in case of implosion.
3. DO NOT lift picture tube by the neck.

X-RAY RADIATION AND HIGH VOLTAGE LIMITS

Service personnel should be aware of the procedures and instructions covering x-ray radiation. The only potential source of x-ray in present day solid state receivers and monitors is the picture tube.

1. It is only when High Voltage is excessive that x-ray radiation is capable of being emitted from shell of picture tube. Be sure the High Voltage is set at specified level.
2. An accurate High Voltage meter should be available at all times. Meter calibration should be checked periodically.
3. High Voltage should be kept at rated value - NO HIGHER. Higher voltages may cause x-ray radiation or failure of other associated components. DO NOT depend on protection circuit to keep voltages at rated value.
4. Every time a chassis is serviced, High Voltage should be checked at various brightness levels to be sure it is regulating properly.
5. While troubleshooting a set with excessive High Voltage, avoid being close to picture tube. DO NOT operate longer than it is necessary to locate the cause of excessive High Voltage. Use a variable AC transformer to regulate voltage.
6. Many components, electrical and mechanical, in present chassis have safety related characteristics which are not evident with visual inspection. When these components are known, they are identified with a # on the schematic and in the parts list. When replacing these components, for SAFETY, use only an equivalent replacement part.

SAFETY CHECKS-FIRE AND SHOCK HAZARD**Cold Leakage Checks** (Sets with isolated ground.)

1. Unplug the AC cord and connect a jumper across the two prongs on the plug.
2. Turn on power switch.
3. Measure the resistance, with an Ohm meter, between the jumpered AC plug and any exposed metal cabinet parts on the set such as: antenna screw heads, control shafts, handle brackets. Exposed metal parts that have a return path should measure between 200 kohms and 5 megohm. Parts without a return path must measure infinity.

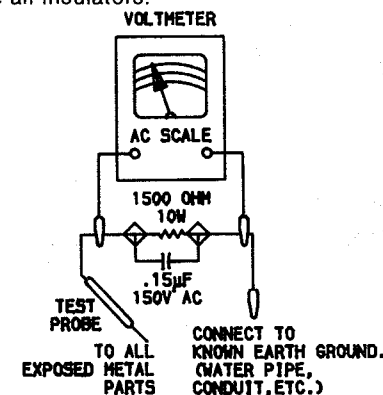
Leakage Current Hot Check

1. Plug the AC cord directly into AC outlet. DO NOT use an isolation transformer.
2. Connect a 1500 Ohm 10 watt resistor, in parallel with a .15 μ F 150V AC capacitor, between any exposed metal parts on the set and a good earth ground such as a water pipe. (See Figure below.)
3. Using an AC volt meter, with 1000 Ohms per volt or more sensitivity, measure the voltage across the resistor. Check each exposed part and measure voltage at each point.
4. Reverse the AC plug and repeat voltage measurement at each point.
5. The voltage at any point should not exceed .75 volts RMS. This corresponds to .5 milliamps AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected.

GENERAL GUIDE LINES

A final SAFETY check before returning the set to customer.

1. Check area repaired for poorly soldered or de-soldered connections. Check entire circuit board surface for solder splashes.
2. Check interboard wiring for pinched wires or wires contacting any high-wattage resistors.
3. Check that all control knobs, shields, covers, grounds and mounting hardware have been replaced. Be sure to replace all insulators.

**TROUBLESHOOTING AID**

Note: Waveforms taken with triggered scope, Keyed-Rainbow generator. Schematic voltages measured with digital meter, no signal. Controls adjusted for normal operation.

PICTURE OR SOUND

NO PIC, NO SOUND, NO RASTER: Check AC power supply and sources generated from Horizontal Output Transformer (T702). Refer to "Troubleshooting" Power Supply and Horizontal circuits.

NO PIC, NO SOUND, HAS RASTER: Check IF-AGC and source voltages from Horizontal Output Transformer (T702). Refer to "Troubleshooting" IF-AGC and Horizontal circuits.

NO PIC, HAS SOUND, NO RASTER: Check Horizontal Output Transformer (T702) sources and Video circuit. Refer to "Troubleshooting" Horizontal and Video circuits.

NO PIC, HAS SOUND, HAS RASTER: Refer to "Troubleshooting" Video circuit.

HAS PIC, NO SOUND: Refer to "Troubleshooting" Audio circuit.

OVERLOADED PICTURE: Refer to "Troubleshooting" IF-AGC circuit.

LOW OR EXCESSIVE BRIGHTNESS: Check Video and Luminance circuits. Refer to "Troubleshooting" Video circuit.

SWEEP

NO RASTER, HAS SOUND: Check HV rectifier, Part of Horizontal Output Transformer (T4401). Refer to "Troubleshooting" Horizontal circuit.

NO RASTER, NO SOUND: Refer to "Troubleshooting" Horizontal circuit.

NO VERT DEFLECTION: Refer to "Troubleshooting" Vertical circuit.

POOR VERT LIN OR FOLDOVER: Refer to "Troubleshooting" Vertical circuit.

POOR HORIZ LIN OR FOLDOVER: Refer to "Troubleshooting" Horizontal circuit.

NARROW PICTURE: Refer to "Troubleshooting" Horizontal circuit.

VERT OFF FREQUENCY: Refer to "Troubleshooting" Vertical circuit.

HORIZ OFF FREQUENCY: Refer to "Troubleshooting" Horizontal circuit.

SYNC

NO VERT/HORIZ SYNC: Refer to "Troubleshooting" Sync circuit.

RASTER

YELLOW (NO BLUE): Check Chroma and Blue Output circuits. Refer to "Troubleshooting" Raster circuit.

CYAN (NO RED): Check Chroma and Red Output circuits. Refer to "Troubleshooting" Raster circuit.

MAGENTA (NO GREEN): Check Chroma and Green Output circuits. Refer to "Troubleshooting" Raster circuit.

COLOR (B/W operating normally)

NO COLOR: Refer to "Troubleshooting" Chroma circuit.

WEAK COLOR: Refer to "Troubleshooting" Chroma circuit.

NO COLOR SYNC: Refer to "Troubleshooting" Chroma circuit.

NO GREEN: Check Chroma and Green Output circuits. Refer to "Troubleshooting" Raster circuit.

NO BLUE: Check Chroma and Blue Output circuits. Refer to "Troubleshooting" Raster circuit.

NO RED: Check Chroma and Red Output circuits. Refer to "Troubleshooting" Raster circuit.

INCORRECT HUE (TINT): Refer to "Troubleshooting" Chroma circuit.

TROUBLESHOOTING

POWER SUPPLY

Check AC Fuse (F901) and DC Fuse (F902). If Fuse F901 is open, check Rectifier Diode D901, Capacitors C901, C902 and Electrolytic C906. If Fuse F902 is open, check Regulator IC (IC901) and Horizontal Output Transistor (Q702). Apply 120V AC and check for 160V at the cathode of Diode D901. If this voltage is missing, check Line Filter (L901) and Relay (RL951). If 160V is present, check for 135V at TPB+. If 135 is missing, check the voltages and components associated with IC901 and Q702. If the voltage is present at TPB+, refer to the "Horizontal" section of this Troubleshooting guide. If the voltage at TPB+ is 164V the voltage at pin 12 of the Sync/Video/Chroma/Horiz/Vert/Defl IC (IC501) is .6V or more, the set may be in shutdown. Refer to the "High Voltage Shutdown" section of this Troubleshooting guide.

HORIZONTAL

Determine if the TV is in shutdown, refer to the "High Voltage Shutdown" section of this Troubleshooting guide. If the TV is not in shutdown, inject a horizontal signal at the base of the Horizontal Output Transistor (Q702). If horizontal deflection is now present, check the voltages, waveforms and components associated with the Horizontal Drive Transistor (Q701) and pins 12, 23, 24, 25 and 28 of the Sync/Video/Chroma/Horiz /Vert/Defl IC (IC501). If there is still no horizontal deflection, check the voltages,waveforms and components associated with Q702 and the Horizontal Output Transformer (T702). Check Rectifier Diodes D706, D707 and D712. The high voltage rectifier is part of Transformer T702 and if defective will affect the performance of the horizontal circuits. If the Horizontal Oscillator is off frequency, check the voltages, waveforms and components associated with pins 24 and 25 of IC501. Horizontal linearity or foldover problems may be caused by Capacitors C717, C718 being defective.

HIGH VOLTAGE SHUTDOWN

The high voltage is monitored by Diode (D713), rectifying pulses from the Horizontal Output Transformer (T702). Should the high voltage increase, the rectified voltage at the cathode of Zener Diode (ZD704) will also increase and trigger the set into shutdown. To troubleshoot, short pin 12 of the Sync/Video/Chroma /Horiz/Vert/Defl IC (IC501) to ground. Use a variac, starting at 100VAC and increase as necessary to locate and repair the defect. Remove the short from pin 12 of IC501.

NOTE: Care should be taken in defeating the high voltage shutdown circuit, as this may cause excessive X-radiation and damage to the CRT, Transformer T702 and associated components. Monitor the high voltage and troubleshoot.

Voltages Taken in Shutdown

IC501	
Pin 12	0.7V
TPB+	164V

HIGH VOLTAGE SHUTDOWN TEST

Apply 120VAC, turn set on, set all customer controls for normal operation and apply a 25V bias thru a diode to eh cathode of ZD704. The set should lose raster and sound. If the set does not lose raster and sound, the shutdown circuit should be repaired. To resume normal operation, remove AC power and wait 30 seconds then turn set on.

IF-AGC

Inject a video signal at the IF input and check for video on the CRT. If video is present, check the tuner, tuner control and the tuner AFC circuits. If there is no video on the CRT, check for a video waveform at TP12. If video is present at TP12, refer to the "Video" section of this Troubleshooting guide. If there is no video at TP12, apply AGC bias to pin 13 of the Pif/Sif IC (IC201). If video is now present at TP12, check the voltages, waveforms and components associated with pins 10 thru 13 of IC201. If there is still no video at TP12, check the voltages, waveforms and components associated with pins 8, 9, 14 thru 22 of IC201 and the Video Amp Transistor (Q201). A defective AGC circuit can cause an overloaded picture, excessive snow or loss of audio and video. See the AGC Voltage Chart for AGC voltages with signal.

AGC VOLTAGE CHART

IC1	
Pin 10	4.1V
Pin 11	4.0V
Pin 13	9.9V

AUDIO

Select an active TV channel and check for an audio waveform at pin 5 of the Pif/Sif IC (IC201). If there is no audio, check the voltages, waveforms and components associated with pins 1 thru 5 of IC201. If waveforms are present, check for audio at the speaker. If audio is missing, check the voltages, waveforms and components associated with the Audio Amp Transistors (Q401 and Q402). Check the voltage at pin 2 of IC201, it should measure 0.5V at mute and 6.6V at maximum volume.

VIDEO

Inject a video signal at TP12 and check for video on the CRT. If video is present, refer to the "IF-AGC" section of

VIDEO

Inject a video signal at TP12 and check for video on the CRT. If video is present, refer to the "IF-AGC" section of this Troubleshooting guide. If there is no video on the CRT, check for a video waveform at pin 38 of the Sync/Video/Chroma/Horiz/Vert/Defl IC (IC501). If video is missing, check the voltages, waveforms and components associated with pin 38 of IC501. If video is present at pin 38 of IC501, check for video at pin 9 of IC501. If there is no video at pin 9 of IC501, check the voltages, waveforms and components associated with pins 1 and 37 thru 42 of IC501. If video is present at pin 9 of IC501, check the voltages, waveforms and components associated with the Video Amp Transistor (Q313), Video Out Transistor (Q312) and the Red, Green, Blue Output Transistors (Q851, Q852, Q853). If the brightness is inadequate or cannot be controlled, check the voltages, waveforms and components associated with pins 1 and 40 of IC501.

VERTICAL

Inject a vertical drive signal at pin 29 of the Sync/Video/Chroma/Horiz/Vert/Defl IC (IC501). If vertical deflection is now present, check the voltages, waveforms and components associated with pins 28 thru 31 of IC501. If there is still no vertical sweep, check the voltages, waveforms and components associated with the Vertical Out IC (IC601) and the Deflection Yoke (E6001). Vertical linearity or foldover problems may be caused by vertical feedback and bias circuits, check Electrolytics C601, C605, C608 and C610 for defects.

SYNC

If there is no vertical or horizontal sync, check the voltages, waveforms and components associated with pins 28, 31 and 32 of the Sync/Video/Chroma/Horiz/Vert/Defl IC (IC501). If there is no vertical sync, check the voltages, waveforms and components associated with pin 29 of IC501. If there is no horizontal sync, check the voltages waveforms and components associated with pin 23 of IC501.

RASTER

Check the CRT and CRT voltages. If there is no Red, check the voltages, waveforms and components associated with pin 6 of the Sync/Video/Chroma/Horiz/Vert/Defl IC (IC501) and the Red Output Transistor (Q851). If there is no Green, check the voltages, waveforms and components associated with pin 7 of IC501 and the Green Output Transistor (Q852). If there is no Blue, check the voltages, waveforms and components associated with pin 8 of IC501 and the Blue Output Transistor (Q853). If the raster has a keystone shape, check the Deflection Yoke (E6001). If the raster has height or width problems, refer to the "Vertical", "Horizontal" and "Power" sections of this troubleshooting guide.

CHROMA

Check for a chroma waveform at pin 36 of the Sync/Video/Chroma/Horiz/Vert/Defl IC (IC501). If the waveform is missing, check the voltages, waveforms and components associated with pin 36 of IC501. If a chroma waveform is present at pin 36, check for the proper waveforms at pins 6, 7 and 8 of IC501. If this waveforms are missing, check the voltages, waveforms and components associated with pin 3, 4 and 6 thru 21 of IC501. Check the 3.58 MHz Oscillator at pin17 of IC501. Check the voltages and components associated with the Color Control and pin 16 of IC501. If there is inadequate tint range, check the voltages, waveforms and components associated with the Tint Control and pin 18 of IC501. If the proper chroma waveforms are present at pins 6, 7 and 8 of IC501, refer to the "Raster" section of this Troubleshooting guide.

TEST EQUIPMENT

Test Equipment listed by Manufacturer illustrates typical or equivalent equipment used by SAMS' Engineers to obtain measurements and is compatible with most types used by field service technicians.

Equipment	B&K Precision Equipment No.	Sencore Equipment No.	Notes
OSCILLOSCOPE	1541A, 2120, 2125, 2160	SC61	
GENERATORS			
RGB	1249, 1260	RG67	
MULTIBURST SIGNAL	1251, 1260	VA62A	
COLOR BAR	1211A, 1249, 1251, 1260	VA62A, CG25, NT64	
ANALOG VOM	114, 117, 177, 214		
DIGITAL VOM	388HD, 2900 SERIES	DVM 77, DVM56A, SC61	
FREQUENCY METER	1803, 1804, 1805	FC71, SC61	
HI-VOLTAGE PROBE	HV-44	HP200	
VOM/DMM		TP212	
Accessory probes	PR-28(HV)		
ISOLATION TRANSFORMER	T 10, 1604, 1653, 1655	PR57	
CAPACITANCE ANALYZER	820, 810, 830	LC76, LC101, LC102	
CRT ANALYZER	467, 470, 480, 490	CR70	
TEMPERATURE PROBE	TP-28, TP-30		
AC LEAKAGE TESTER	1655	PR57	
LOGIC PROBE	DP51, DP21		
LOGIC PULSER	DP101, DP31		
INDUCTANCE ANALYZER	875A	LC76, LC101, LC102	
FLYBACK YOKE TESTER	875A	VA62A, LC76, LC101, LC102	
TV STEREO GENERATOR	2009	ST65, ST66	
TV STEREO POWER MONITOR		SR68	
FIELD STRENGTH METER		FS73, FS74	
TRANSISTOR TESTER		TF46	
VIDEO ANALYZER		VA62A	

TV ALIGNMENT INSTRUCTIONS

Use an isolation transformer, or observe polarity, and maintain line voltage at 120VAC.
Allow a 20 minute warm-up period for receiver and test equipment.
Suggested Alignment tools: **GC-THORSEN**

Alignment COILS:
T201, L201, L202, Tuner IF Coils

RECOMMENDED TOOLS:
9440

PRELIMINARY INSTRUCTIONS

Select highest unused channel. Set scope sweep to external or vector mode. Connect scope vertical input to scope vertical input on sweep/marker generator. Connect scope external horizontal input to scope horizontal input on sweep/marker generator. Ground test equipment to tv chassis unless specified otherwise. Use only enough generator output to provide a useable indication. Sweep Generator frequency is 44MHz with 10MHz Sweep.
NOTE: Response may vary from that shown.
Connect a 9.5 volt bias to TP201 (pin 13 IC201 (IC1))

VIDEO IF ALIGNMENT (SWEEP MARKER GENERATOR)

DIRECT PROBE FROM SWEEP GENERATOR	SWEEP GENERATOR OUTPUT	MARKER GENERATOR FREQUENCY	REMARKS
TP12	TPIF	41.25MHz 42.17MHz 44.00MHz 45.75MHz	Adjust Tuner IF coils and T201 (T1) for best symmetry and response of waveform. Adjust L202 (T2) to overlap beat frequency over the 45.75MHz marker. See Figure 1

TV ALIGNMENT INSTRUCTIONS (Cont.)

VIDEO IF ALIGNMENT (BAR SWEEP GENERATOR)

BAR SWEEP GENERATOR	SCOPE INPUT	REMARKS
Antenna Terminal	TP12	Perform adjustments in same manner as Sweep/Marker instructions. See Figure 2

AUTOMATIC FINE TUNING ALIGNMENT

Connect as explained in preliminary instructions unless specified otherwise.

DIRECT PROBE FROM SWEEP GENERATOR	SWEEP GENERATOR OUTPUT	MARKER GENERATOR FREQUENCY	REMARKS
TP216 (Pin 16 IC201)	TPIF	45.75MHz	Adjust L201 (T4) for maximum 45.75MHz marker. See Figure 3

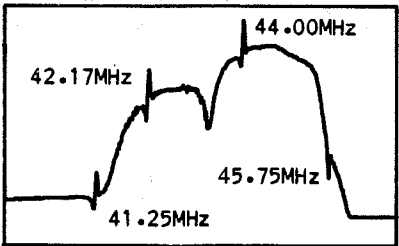


Figure 1

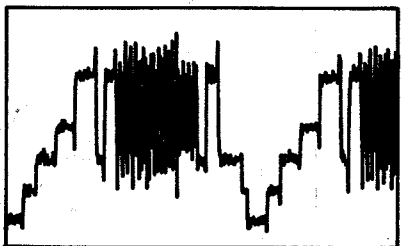


Figure 2

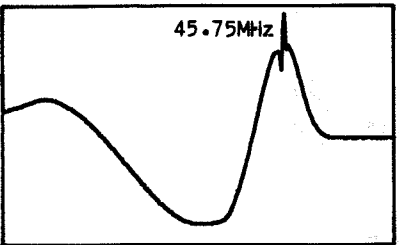
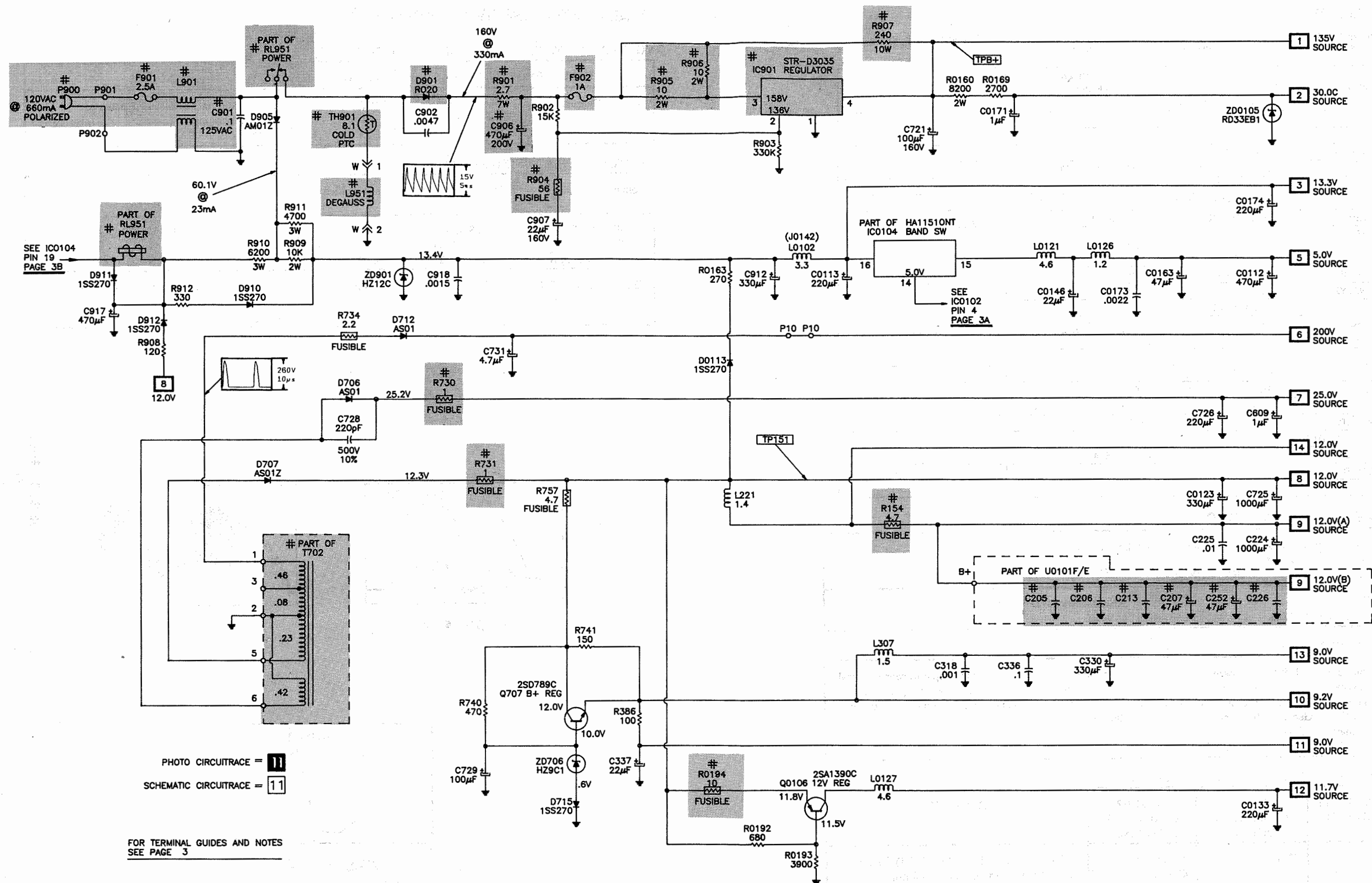


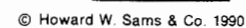
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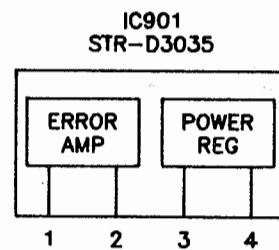
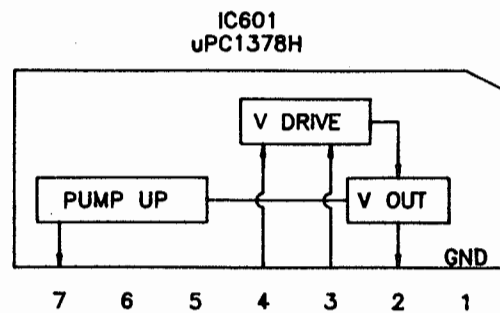
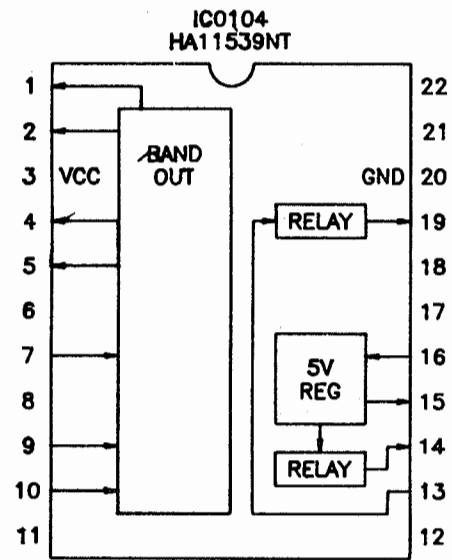
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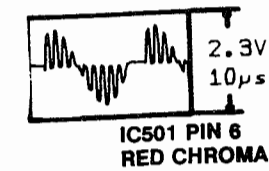
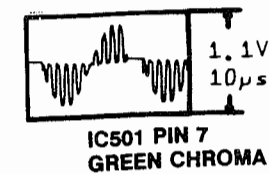
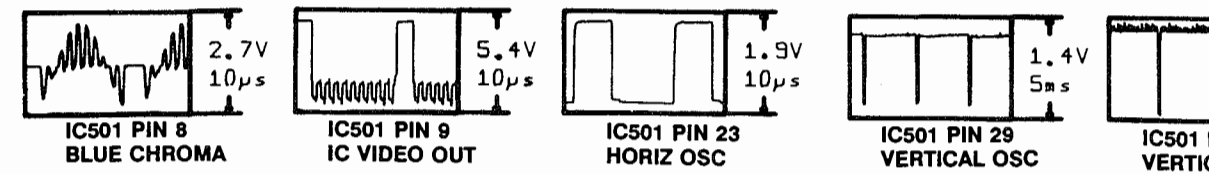
A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE**
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POWER SUPPLY





IC FUNCTIONS

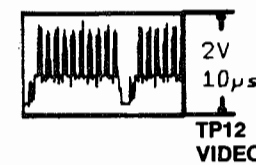


IC501 PIN 28
8.5V

IC501 PIN 10
9.0V

IC0104 PIN 15
5.0V

IC0104 PIN 16
13.3V SOURCE



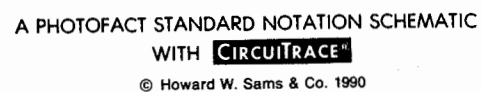
TP15
RF AGC
4.0V-7.8V

Q0106 COLLECTOR
11.7V

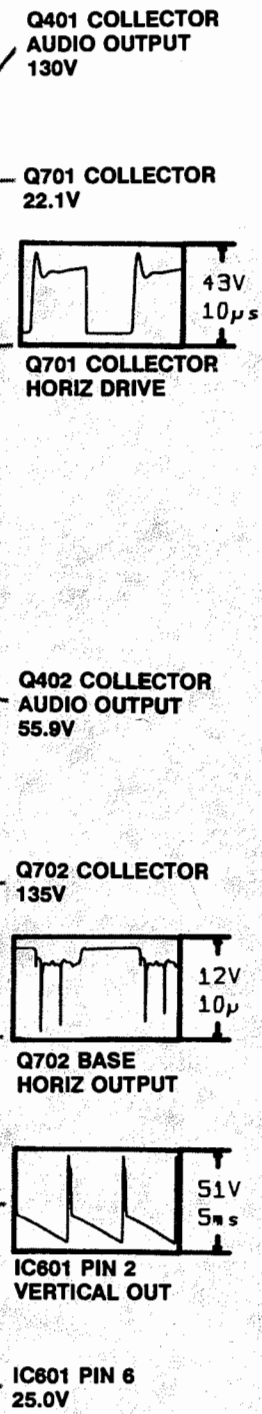
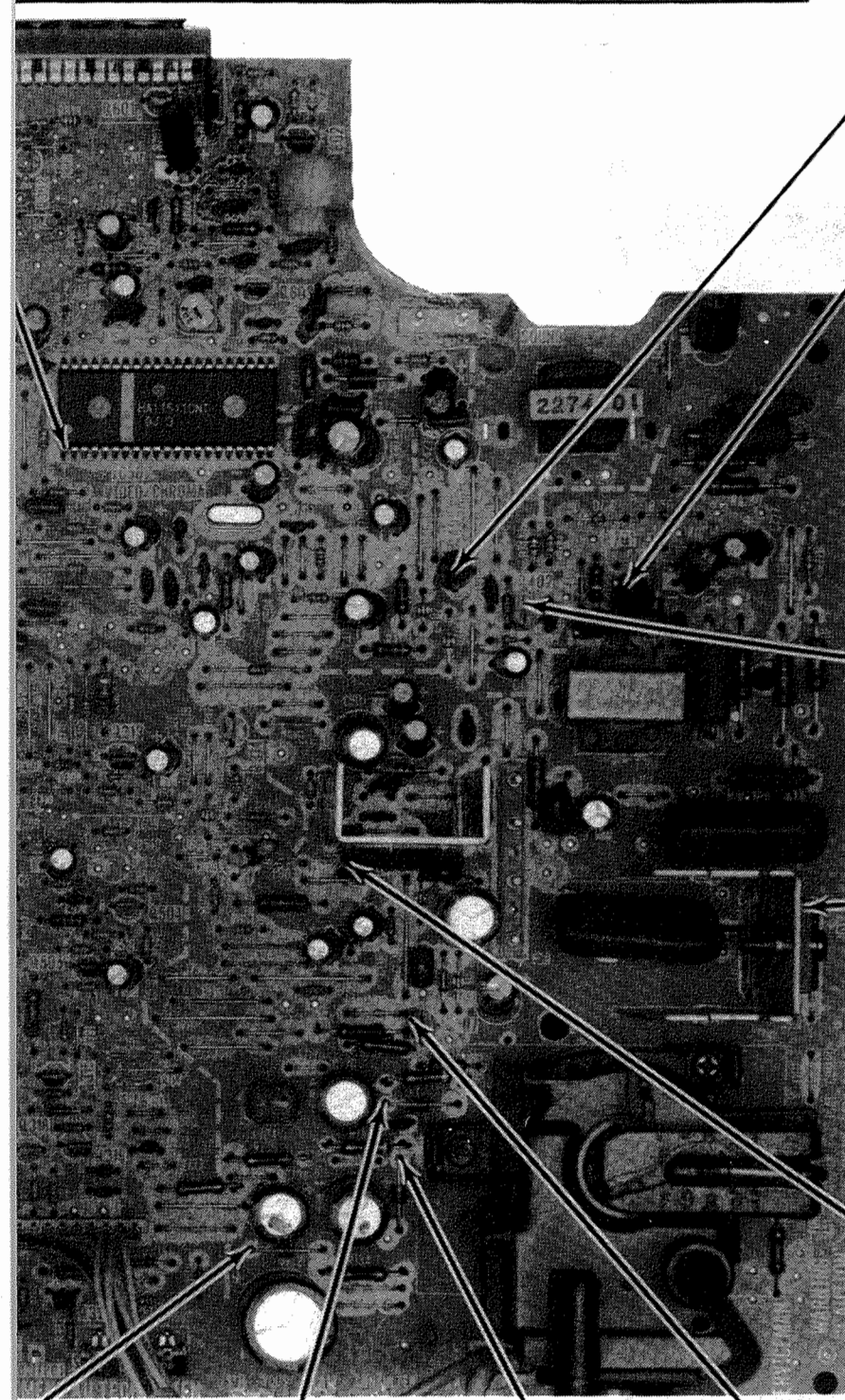
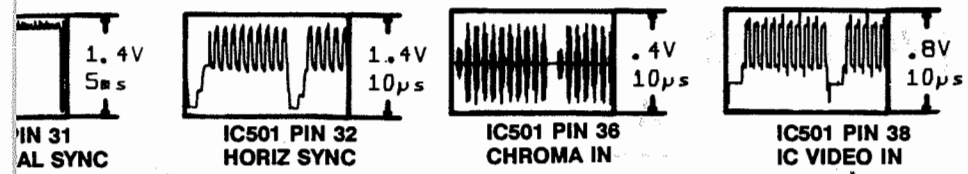
D901 CATHODE
160V

IC901 PIN 4
135V SOURCE

D712 CATHODE
200V SOURCE

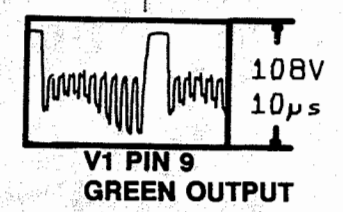
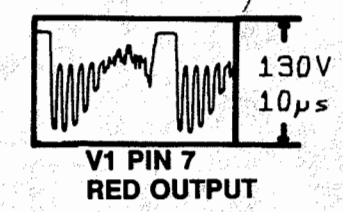
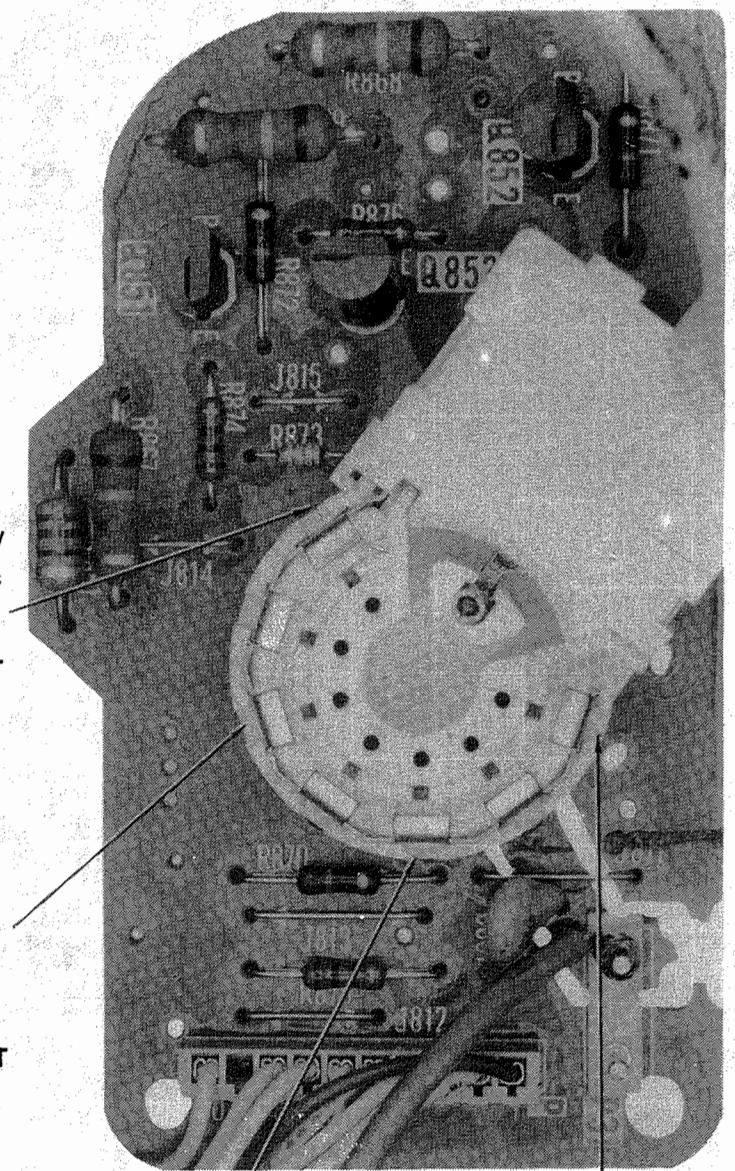
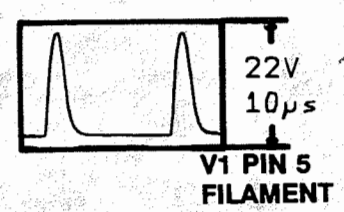
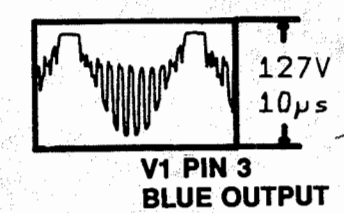


TUNER CONTROL

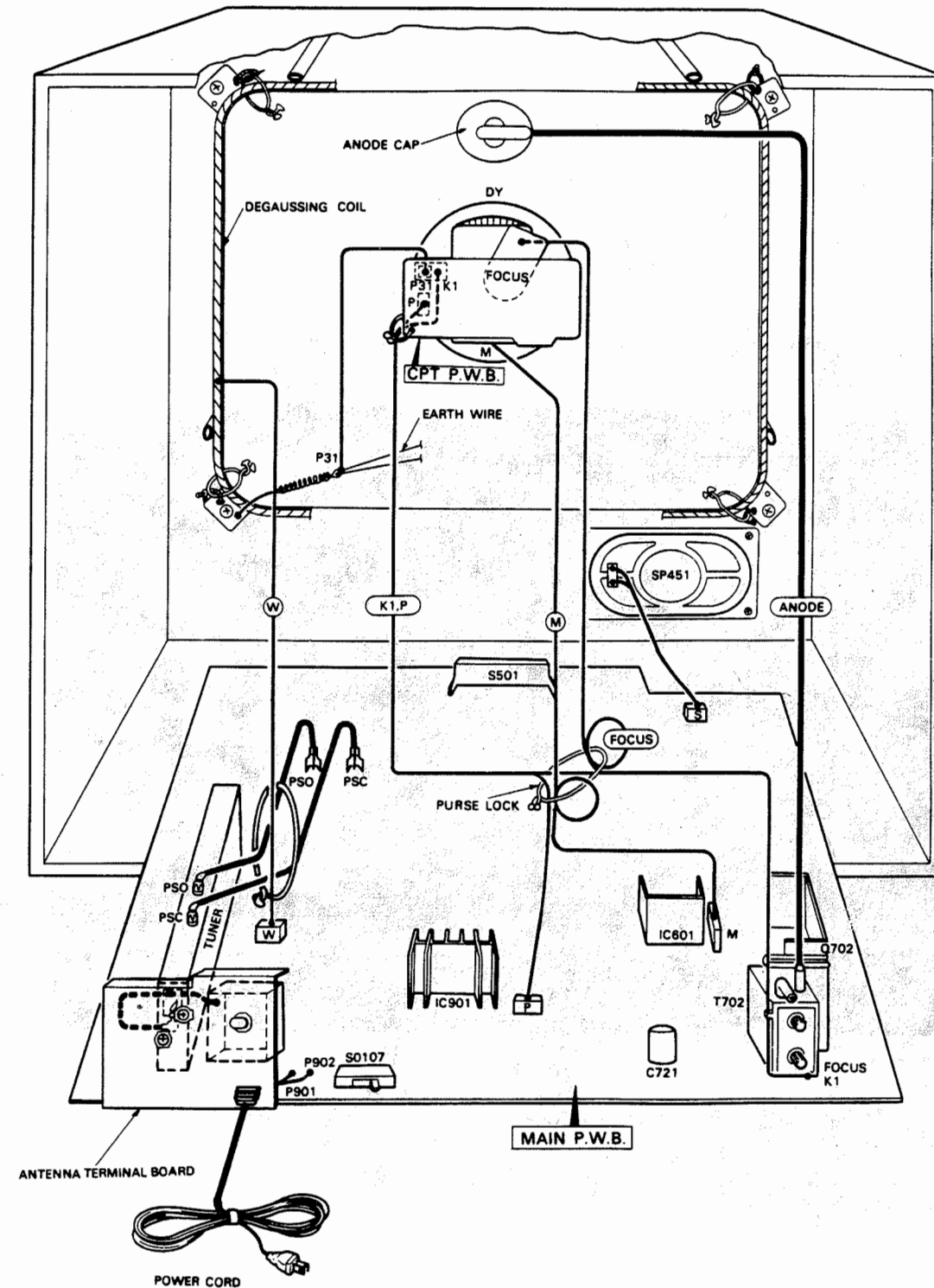


MODE
IRCE

BOARD

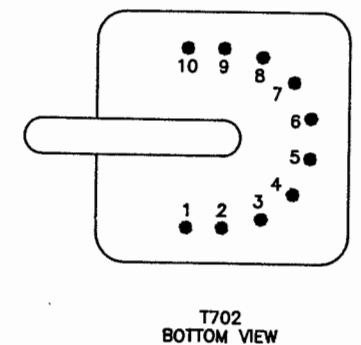
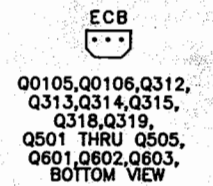
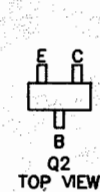
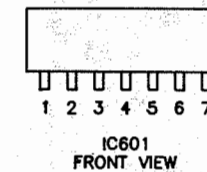
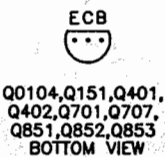
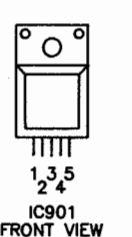
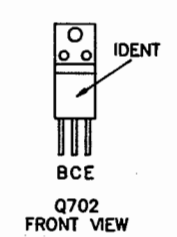
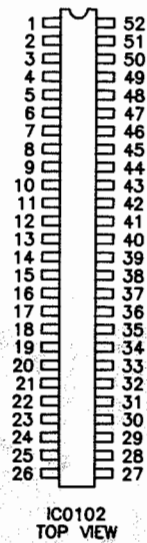
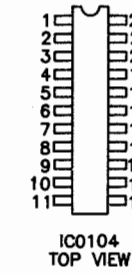


HITACHI
MODEL CT1395W



Courtesy of Manufacturer

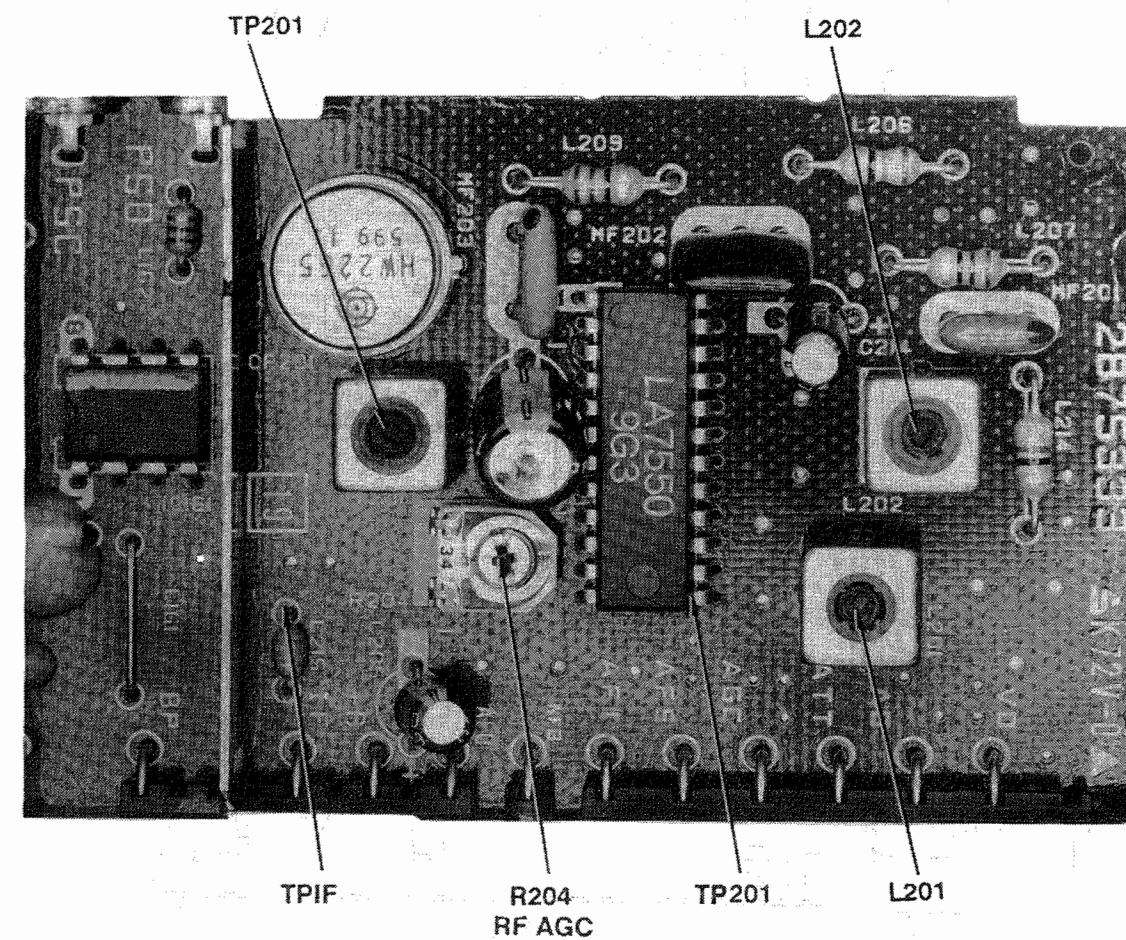
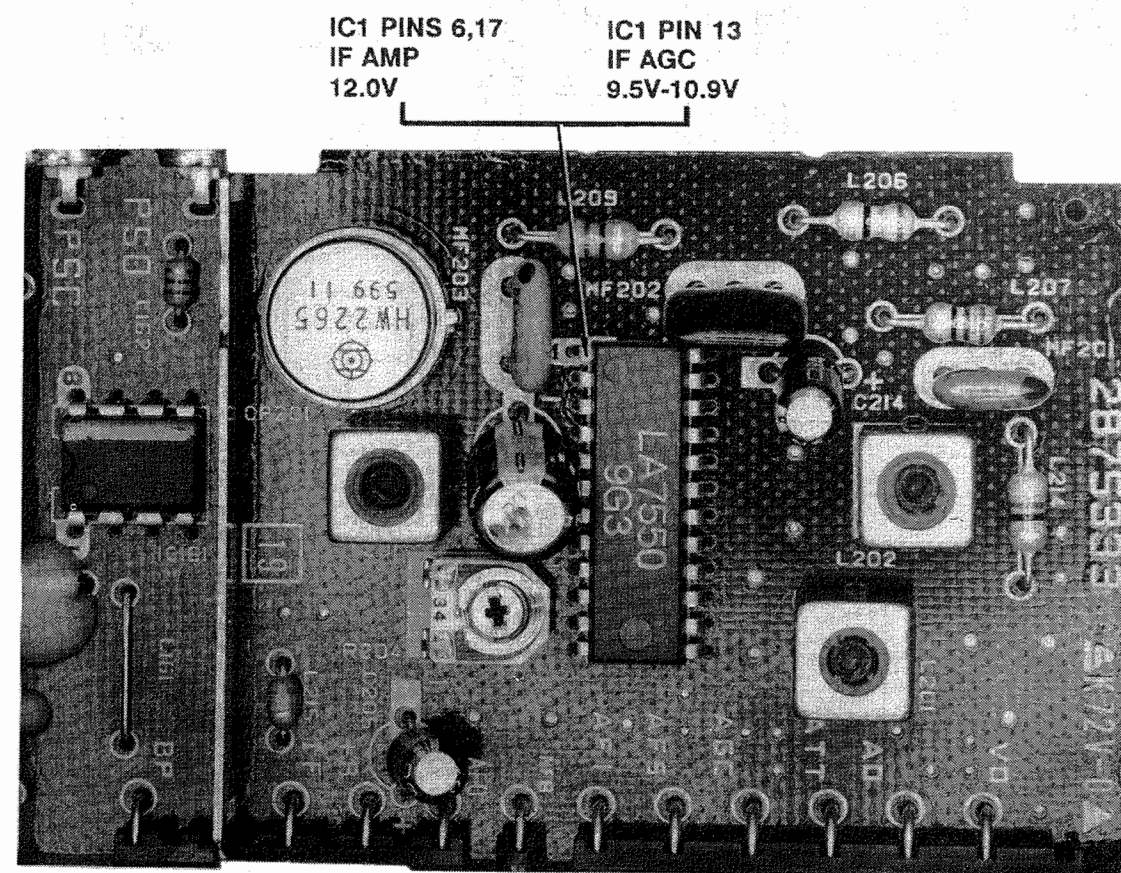
WIRING DIAGRAM

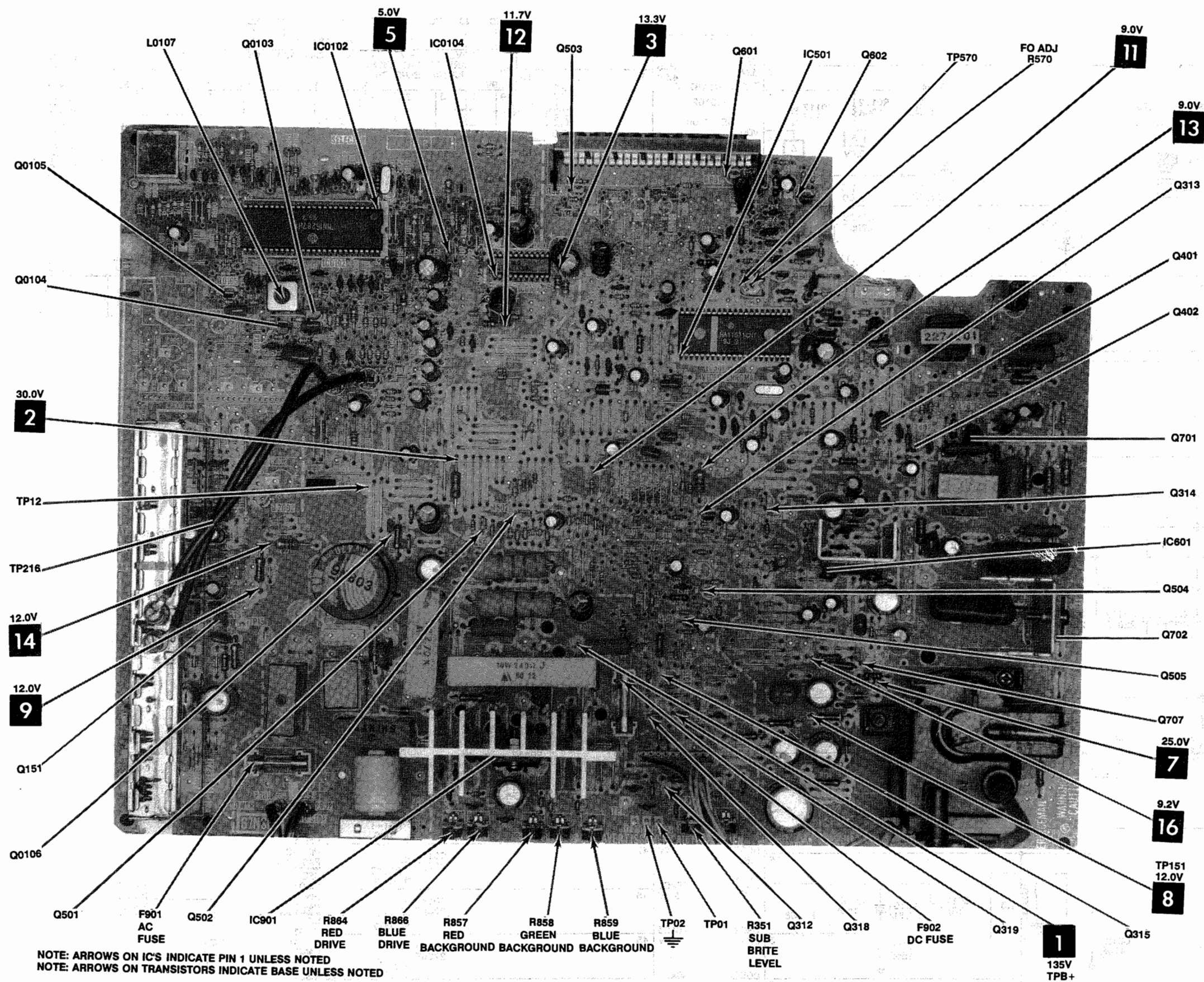


For SAFETY use only equivalent replacement part, see parts list.

- Circuitry not used in some versions
 - - - Circuitry used in some versions
 - ⊕ See Parts List
 - ⊗ Nominal value
 - ⊥ Ground
 - ⊞ Chassis
 - ▽ Common tie point
- Waveforms and voltages are taken from ground, unless noted otherwise.
- Waveforms: triggered scope, keyed rainbow generator.
- Item numbers in rectangles appear in the alignment/adjustment instructions.
- Supply voltage maintained as shown at input.
- Voltages measured with digital meter, no signal.
- Controls adjusted for normal operation.
- Terminal identification may not be found on unit.
- Capacitors are 50 volts or less.
- 5% or greater unless noted.
- Electrolytic capacitors are 50 volts or less.
- 20% or greater unless noted.
- Resistors are 1/2W or less.
- 5% or greater unless noted.
- Value in () used in some versions.
- Measurements with switching as shown, unless noted.

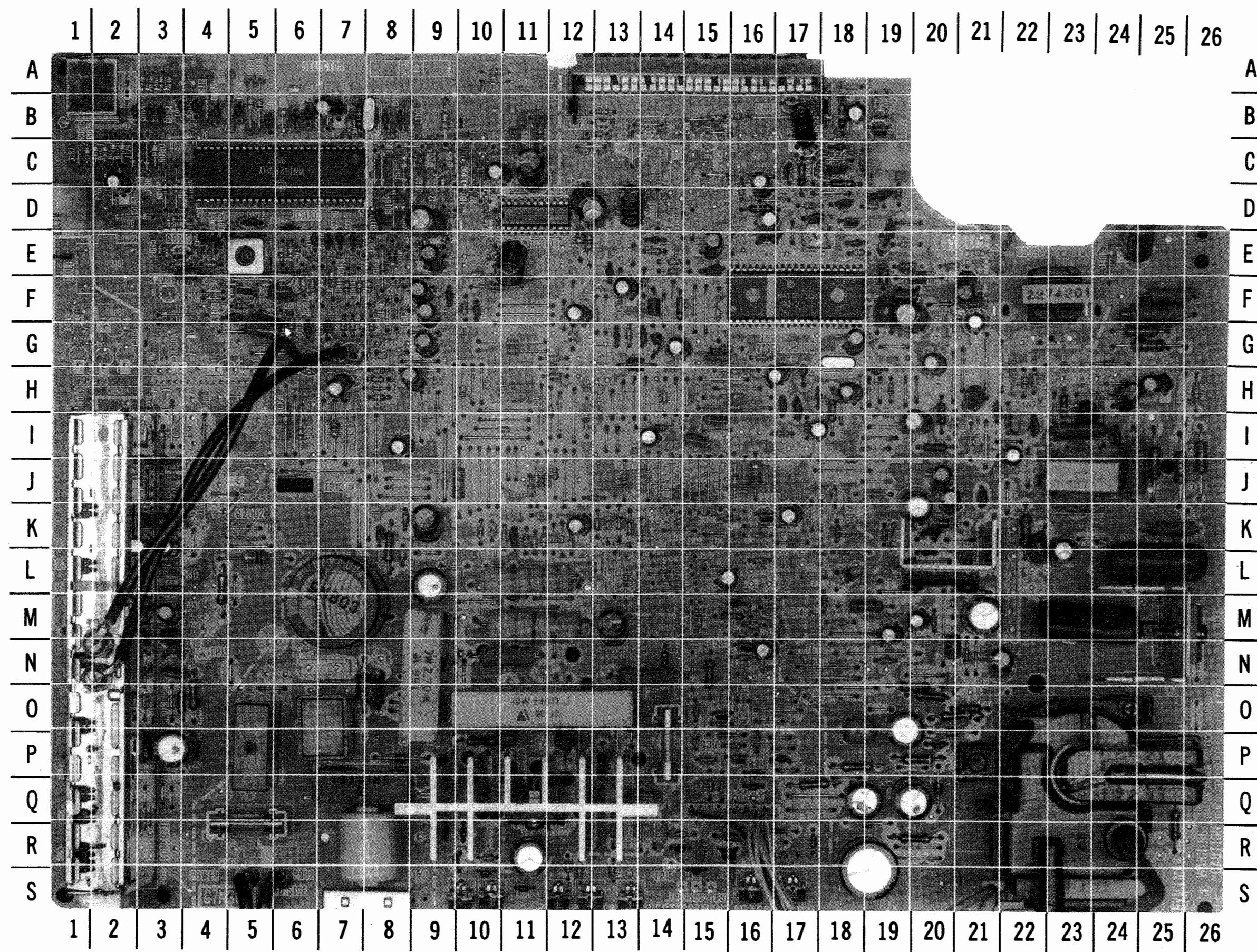
TERMINAL GUIDES & NOTES





MAIN BOARD-GridTrace LOCATION GUIDE

C0110	H-7	C327	C704	D505	D505	Q0106	K-8	R0155	R0156	R0156	M-3	M-3	F-5	R389	I-11	R570	E-17	R854	S-12
C0112	D-9	C328	C705	D506	D601	D602	L-15	Q312	R0157	R0157	R-15	R-15	R-15	R388	P-16	R565	J-12	R760	E-14
C0116	G-5	C336	C708	C708	C706	C707	B-17	C331	R601	R601	H-19	H-19	S-13	R387	B-13	R564	B-13	R759	E-14
C0117	B-7	C337	C709	D706	D706	D707	P-20	Q318	R0161	R0161	C-11	C-11	S-13	R386	K-11	R562	K-11	R758	K-25
C0119	B-8	C339	C710	D707	D707	D708	Q-20	Q319	R0162	R0162	P-16	P-16	R-14	R383	D-16	R561	H-18	R757	O-20
C0120	B-8	C353	C711	D712	D712	D713	G-12	Q401	R0163	R0163	H-21	H-21	R-10	R373	O-16	R560	F-13	R756	G-24
C0122	D-5	C404	C713	D713	D713	D715	H-24	Q501	R0166	R0166	K-10	K-10	S-10	R372	P-15	R555	G-13	R751A	J-26
C0123	K-9	C405	C714	D715	D715	D716	N-21	Q592	R0167	R0167	K-11	K-11	S-10	R371	Q-15	R544	L-14	R744	H-22
C0125	E-4	C406	C715	D716	D716	D717	G-23	Q504	R0169	R0169	B-13	B-13	N-9	R369	E-3	R543	N-16	R743	H-22
C0126	K-3	C408	C716	D717	D717	D901	F-14	Q505	R0170	R0170	M-16	M-16	O-13	R367	E-8	R541	M-17	R742	H-24
C0133	E-11	C410	C718	D905	D905	D910	P-8	Q601	R0172	R0172	B-17	B-17	P-10	R366	F-7	R539	M-17	R741	O-20
C0136	G-7	C411	C721	D910	D911	D912	L-10	Q603	R0184	R0184	B-19	B-19	O-11	R365	F-7	R538	M-16	R740	O-21
C0145	F-10	C412	C725	D912	D911	D912	L-9	Q603	R0185	R0185	D-18	D-18	P-5	R362	F-8	R537	M-16	R739	I-14
C0146	C-10	C415	C726	D912	D912	D912	N-15	Q701	R0186	R0186	H-23	H-23	L-11	R361	D-3	R536	M-16	R738	Q-17
C0147	D-6	C421	C727	F901	F901	F902	R-4	Q702	R0187	R0187	B-7	B-7	N-15	R360	F-6	R535	L-16	R737	H-16
C0148	E-6	C501	C728	F902	F902	F902	O-14	Q707	R0188	R0188	N-20	N-20	E-6	R359	I-6	R534	L-15	R736	P-25
C0149	E-7	C502	C729	FB501	FB502	FB502	G-13	R0110	R0189	R0189	B-5	B-5	N-11	R358	H-8	R533	L-13	R735	P-18
C0150	E-7	C503	C731	FB502	FB701	FB701	F-14	R0111	R0190	R0190	G-11	G-11	M-11	R357	H-8	R531	L-13	R734	R-20
C0151	E-7	C504	C736	FB702	FB702	FB702	F-20	R0112	R0192	R0192	B-4	B-4	L-11	R355	H-8	R529	L-14	R731	P-20
C0152	F-5	C505	C741	FB703	FB703	FB703	E-19	R0113	R0193	R0193	B-4	B-4	L-11	R354	E-6	R528	L-14	R730	O-21
C0153	E-4	C506	C742	FB704	FB704	FB705	M-26	R0115	R0194	R0194	B-3	B-3	L-11	R352	I-12	R527	J-13	R726	H-26
C0155	E-4	C512	C746	C854	C854	IC0102	C-7	R0117	R0223	R0223	A-3	A-3	L-11	R351	H-12	R526	B-13	R718	F-15
C0160	B-6	C513	C747	C855	IC0104	IC0104	D-11	R0118	R0223	R0223	A-3	A-3	L-11	R350	F-10	R524	B-13	R717	J-25
C0161	J-21	C515	C748	C856	IC501	IC501	F-16	R0120	R0223	R0223	C-3	C-3	O-4	R349	C-1	R523	K-11	R716	J-25
C0164	B-3	C517	C857	C858	IC601	IC601	L-20	R0121	R0223	R0223	C-2	C-2	O-4	R348	C-2	R522	K-11	R715	J-16
C0165	B-3	C519	C858	C859	IC901	IC901	Q-11	R0122	R0223	R0223	C-2	C-2	O-4	R343	C-2	R521	K-12	R709	H-23
C0166	B-2	C520	C859	C901	L0102	L0102	E-12	R0123	R0223	R0223	C-2	C-2	O-4	R340	C-2	R520	J-11	R708	C-17
C0167	D-9	C522	C902	C901	L0105	L0105	F-7	R0124	R0223	R0223	C-2	C-2	O-4	R339	C-2	R519	K-11	R707	B-17
C0168	B-6	C523	C906	C907	D0105	D0105	E-12	R0125	R0223	R0223	C-1	C-1	O-4	R338	C-1	R518	K-10	R706	D-17
C0171	I-8	C524	C906	C907	D0105	D0105	E-12	R0128	R0223	R0223	F-10	F-10	O-3	R337	C-1	R516	J-11	R705	F-25
C0172	G-6	C525	C907	C912	D0105	D0105	E-8	R0129	R0223	R0223	H-12	H-12	O-3	R336	C-1	R515	G-7	R704	E-18
C0173	D-8	C526	C917	C918	D0105	D0105	B-11	R0130	R0223	R0223	I-12	I-12	O-3	R335	C-1	R514	G-7	R703	E-19
C0174	D-12	C527	C917	C918	D0105	D0105	B-9	R0131	R0223	R0223	B-9	B-9	O-3	R334	C-1	R513	F-9	R702	E-20
C0175	B-3	C528	C918	C918	D0105	D0105	C-9	R0132	R0223	R0223	C-9	C-9	O-3	R333	C-1	R512	K-21	R701	K-21
C0176	B-4	C601	CP001	CP001	D0102	D0102	F-10	R0133	R0223	R0223	F-10	F-10	O-3	R332	C-1	R511	H-16	R627	D-19
C0177	B-4	C602	D0102	D0102	D0102	D0102	L-5	R0134	R0223	R0223	L-5	L-5	O-3	R331	C-1	R510	P-16	R626	C-18
C0178	B-5	C603	D0105	D0105	D0105	D0105	E-9	R0135	R0223	R0223	E-9	E-9	O-3	R330	C-1	R509	F-15	R625	D-19
C0179	B-5	C604	D0113	D0113	D0113	D0113	K-16	R0136	R0223	R0223	K-16	K-16	O-3	R329	C-1	R508	F-15	R624	A-18
C1003	C-11	C330	C706	D601	D601	D602	K-20	Q313	R0158	R0158	K-16	K-16	R-15	R328	C-11	R393	E-10	R581	G-16
C0112	D-9	C328	C705	D506	D601	D602	L-15	Q312	R0157	R0157	R-15	R-15	R-15	R327	C-11	R392	E-9	R580	H-16
C0116	G-5	C336	C708	C708	C706	C707	B-17	C331	R601	R601	H-19	H-19	S-13	R326	C-11	R394	E-11	R601	H-19
C0117	B-7	C337	C709	D706	D706	D707	P-20	Q318	R0161	R0161	C-11	C-11	S-13	R325	C-11	R397	O-15	R606	M-20
C0119	B-8	C339	C710	D707	D707	D708	Q-20	Q319	R0162	R0162	P-16	P-16	R-14	R324	C-11	R408	I-22	R607	M-20
C0120	B-8	C353	C711	D712	D712	D713	G-12	Q401	R0163	R0163	H-21	H-21	R-10	R323	C-11	R409	I-20	R608	M-18
C0122	D-5	C404	C713	D713	D713	D715	H-24	Q501	R0166	R0166	K-10	K-10	S-10	R322	C-11	R412	I-21	R610	M-18
C0123	K-9	C405	C714	D715	D715	D716	N-21	Q592	R0167	R0167	K-11	K-11	S-10	R321	C-11	R415	I-3	R611	M-19
C0125	E-4	C406	C715	D716	D716	D717	G-23	Q504	R0169	R0169	B-13	B-13	N-9	R320	C-11	R417	L-3	R612	K-22
C0126	K-3	C408	C716	D717	D717	D901	F-14	Q505	R0170	R0170	M-16	M-16	O-13	R319	C-11	R421	G-25	R618	B-16
C0133	E-11	C410	C718	D905	D905	D910	P-8	Q601	R0172	R0172	B-17	B-17	P-10	R318	C-11	R422	F-25	R619	B-18
C0136	G-7	C411	C721	D910	D911	D912	L-10	Q603	R0184	R0184	B-19	B-19	O-11	R317	C-11	R431	M-3	R621	B-19
C0145	F-10	C412	C725	D912	D911	D912	L-9	Q603	R0185	R0185	D-18	D-18	P-5	R316	C-11	R431	F-25	R621	B-19
C0146	C-10	C415	C726	D912	D912	D912	N-15	Q701	R0186	R0186	H-23	H-23	L-11	R315	C-11	R431	G-25	R621	B-19
C0147	D-6	C421	C727	F901	F901	F902	R-4	Q702	R0187	R0187	B-7	B-7	N-15	R314	C-11	R431	G-25	R621	B-19
C0148	E-6	C501	C728	F902	F902	F902	O-14	Q707	R0188	R0188	N-20	N-20	E-6	R313	C-11	R431	G-25	R621	B-19
C0149	E-7	C502	C729	FB501	FB502	FB502	G-13	R0110	R0189	R0189	B-5	B-5	N-11	R312	C-11	R431	G-25	R621	B-19
C0150	E-7	C503	C731	FB502	FB701	FB701	F-14	R0111	R0190	R0190	G-11	G-11	M-11	R311	C-11	R431	G-25	R621	B-19
C0151	E-7	C504	C736	FB702	FB702	FB702	F-20	R0112	R0192	R0192	B-4	B-4	L-11	R310	C-11	R431	G-25	R621	B-19
C0152	F-5	C505	C741	FB703	FB703	FB703	E-19	R0113	R0193	R0193	B-4	B-4	L-11	R309	C-11	R431	G-25	R621	B-19
C0153	E-4	C506	C742	FB704	FB704	FB705	M-26	R0115	R0194	R0194	B-3	B-3	L-11	R308	C-11	R431	G-25	R621	B-19
C0155	E-4	C512	C746	C854	C854	IC0102	C-7	R0117	R0223	R0223	A-3	A-3	L-11	R307	C-11	R431	G-25	R621	B-19
C0160	B-6	C513	C747	C855	IC0104	IC0104	D-11	R0118	R0223	R0223	A-3	A-3	L-11	R306	C-11	R431	G-25	R621	B-19
C0161	J-21	C515	C748	C856	IC501	IC501	F-16	R0120	R0223	R0223	C-3	C-3	O-4	R305	C-11	R431	G-25	R621	B-19
C0164	B-3	C517	C857	C858	IC601	IC601	L-20	R0121	R0223	R0223	C-2	C-2	O-4	R304	C-11	R431	G-25	R621	B-19
C0165	B-3	C519	C858	C859	IC901	IC901	Q-11	R0122	R0223	R0223	C-2	C-2	O-4	R303	C-11	R431	G-25	R621	B-19
C0166	B-2	C520	C901	C901	L0102	L0102	E-12	R0123	R0223	R0223	C-2	C-2	O-4	R302	C-11	R431	G-25	R621	B-19
C0167	D-9	C522	C906	C907	D0105	D0105	E-12	R0124	R0223	R0223	C-1	C-1	O-4	R301	C-11	R431	G-25	R621	B-19
C0168	B-6	C523	C906	C907	D0105	D0105	E-8	R0125	R0223	R0223	H-12	H-12	O-3	R300	C-11	R431	G-25	R621	B-19
C0171	I-8	C524	C906	C907	D0105	D0105	E-8	R0128	R0223	R0223	F-10	F-10	O-3	R299	C-11	R431	G-25	R621	B-19
C0172	G-6	C525	C907	C912	D0105	D0105	E-8	R0129	R0223	R0223	I-12	I-12	O-3	R298	C-11	R431	G-25	R621	B-19
C0173	D-8	C526	C917	C918	D0105	D0105	B-11	R0130	R0223	R0223	I-12	I-12	O-3	R297	C-11	R431	G-25	R621	B-19
C0174	D-12	C527	C917	C918	D0105	D0105	B-9	R0131	R0223	R0223	I-12	I-12	O-3	R296	C-11	R431	G-25	R621	B-19
C0175	B-3	C528	C918	C918	D0105	D0105	C-9	R0132	R0223	R0223	I-12	I-12	O-3	R295	C-11	R431	G-25	R621	B-19
C0176	B-4	C601	CP001	CP001	D0102	D0102	F-10	R0133	R0223	R0223	I-12	I-12	O-3	R294	C-11	R431	G-25	R621	B-19
C0177	B-4	C602	D0102	D0102	D0102	D0102	L-5	R0134	R0223	R0223	I-12	I-12	O-3	R293	C-11	R431	G-25	R621	B-19
C0178	B-5	C603	D0105	D0105	D0105														



MISCELLANEOUS ADJUSTMENTS

PRETUNE

NOTE: All procedures require an antenna connected and power applied to the set.

Off Timer

1. Press the Off-Timer Button on Remote Transmitter .
The Off Timer can be set for 30, 60 or 90 minute intervals by pressing the Off-Timer Button.

NOTE: This set employs Digital Customer Control (Part of S501 Control Pack) located on the receiver front panel. Unless otherwise indicated all adjustments were performed with the following settings: Sharpness to Midrange, Signal Tracker to ON, CATV Switch (S0107) to Normal and Picture to Maximum. All others set to RESET on Remote Transmitter.

B+ POWER SUPPLY CHECK

Tune in a picture. With ON-SCREEN display set Picture, Color, and Black Level to MINIMUM. Connect a digital DC voltmeter to TPB+, negative lead to ground. B+ should measure 135V \pm 1V.

AGC ADJUSTMENT

Tune in a picture. Adjust RF AGC Control (R204) Counterclockwise until snow appears in picture, then Clockwise until snow disappears.

HIGH VOLTAGE CHECK

Tune in an inactive channel. With ON-SCREEN display set Color, Picture, and Black Level to MINIMUM. Connect a high voltage probe to CRT Anode. High Voltage should read 22.6KV to 23.8KV. High Voltage should never exceed 25.0KV.

SUB BRIGHTNESS LEVEL ADJUSTMENT

Tune in a picture. With ON-SCREEN display set Color, Picture, and Black Level to MINIMUM. Adjust Sub Brite Level Control (R351) for just visible highlights.

DISPLAY POSITION ADJUSTMENT

Tune in a picture. Press P Mode button until Picture indicator bar is displayed. Adjust Display Position Coil (L0107) to Center the displayed Bar.

FO ADJUSTMENT

Tune in a Color Bar pattern. Connect a Digital DC Voltmeter to TP570 (wiper of R570). Adjust FO Adjust Control (R570) for 1.7VDC.

VERTICAL HOLD ADJUSTMENT

Tune in a picture. Adjust Vertical Hold Control (Part of S501) to obtain a stable picture.

GRAY SCALE ADJUSTMENT

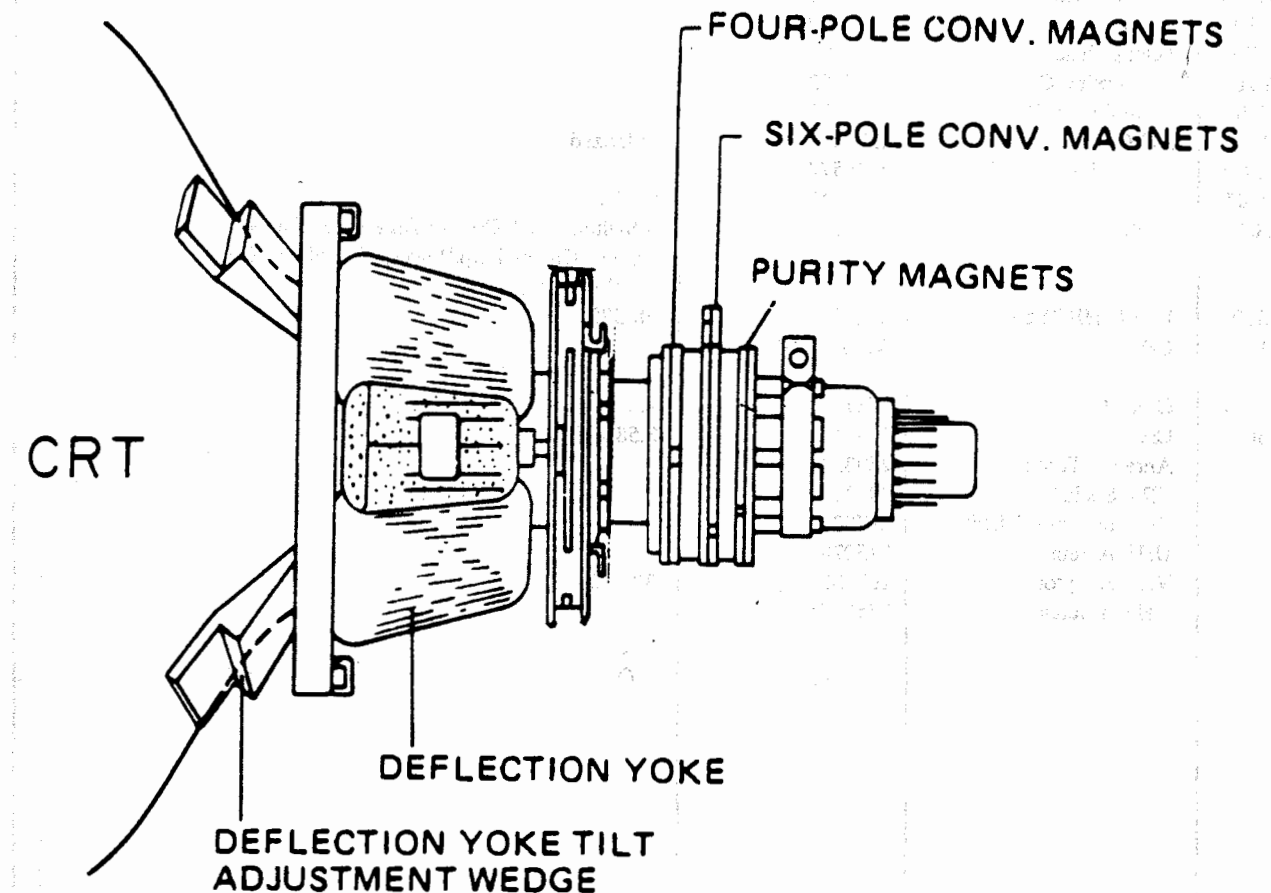
Tune in an unused channel. With ON-SCREEN display set Color, Picture, and Black Level to MINIMUM. Set Red (R864) and Blue (R866) Drive Controls to Midrange. Set Blue (R859), Green (R858) and Red (R857) Background Controls to MINIMUM. Set Screen Control (R799B) to MINIMUM. Connect a jumper between TP01 and ground (TP02). Advance Blue Background Control 1/4 turn. Advance Screen Control (R799B) until a blue line is just visible. Advance 2 remaining Background Controls until they produce a white line. Remove jumper. Tune in a picture. Set Picture and Black Level to Maximum. Alternately adjust Red and Blue Drive Controls to produce a normal black and white picture in highlight areas.

PURITY ADJUSTMENT

Operate the receiver for 20 minutes. Use a Degaussing Coil to demagnetize the CRT. Connect a Jumper to TP12, and TP151 to remove video. Turn Red (R857) and Blue (R859) Background controls fully counterclockwise. Turn Green Background Control (R858) clockwise to produce a green raster. Advance Screen Control (R799B) if necessary. Loosen Deflection Yoke and move it back as far as possible. Loosen locking ring and move the purity tabs to center the vertical green band. Slowly slide the Deflection Yoke forward until a uniform green screen is obtained.

CONVERGENCE ADJUSTMENT

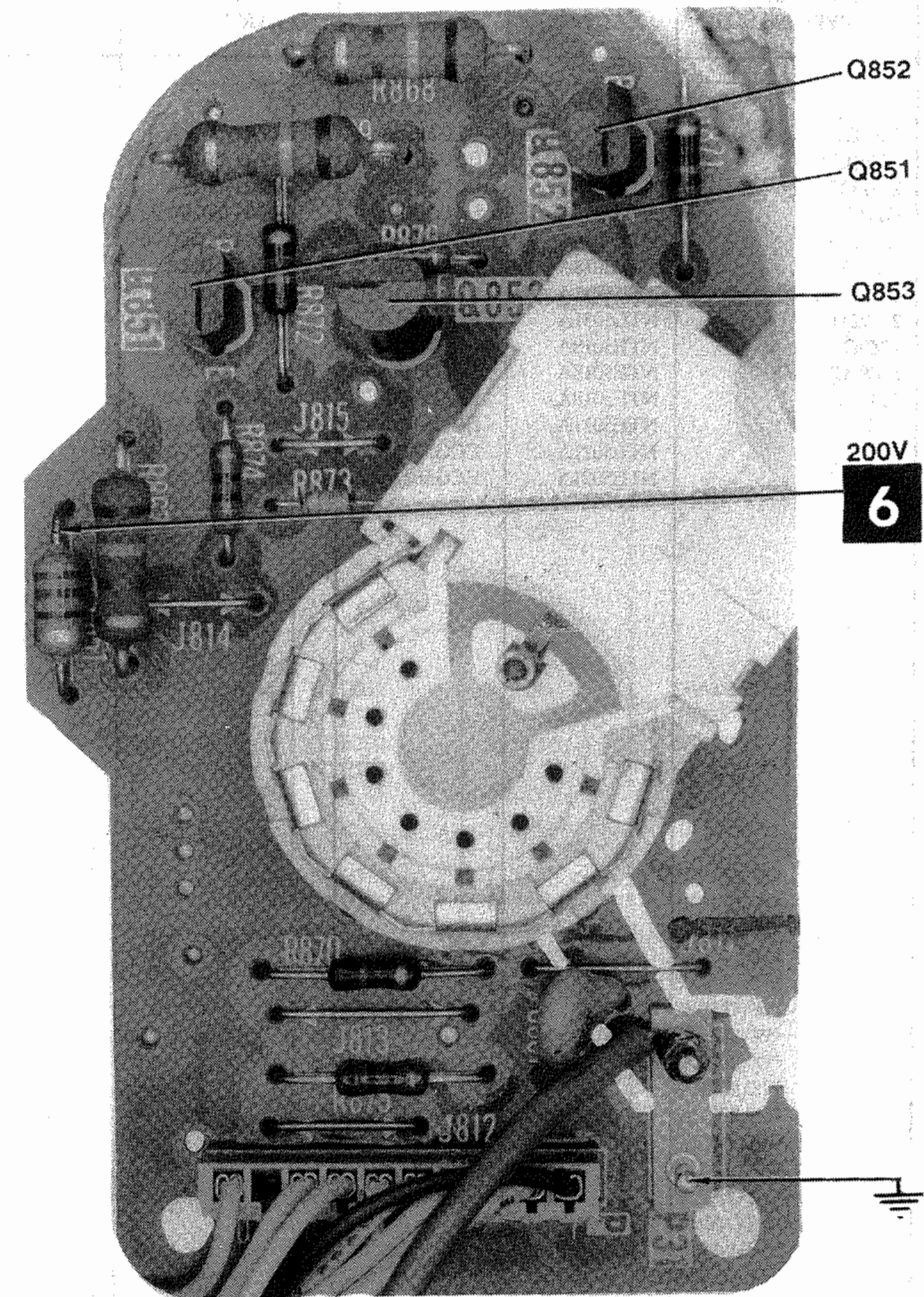
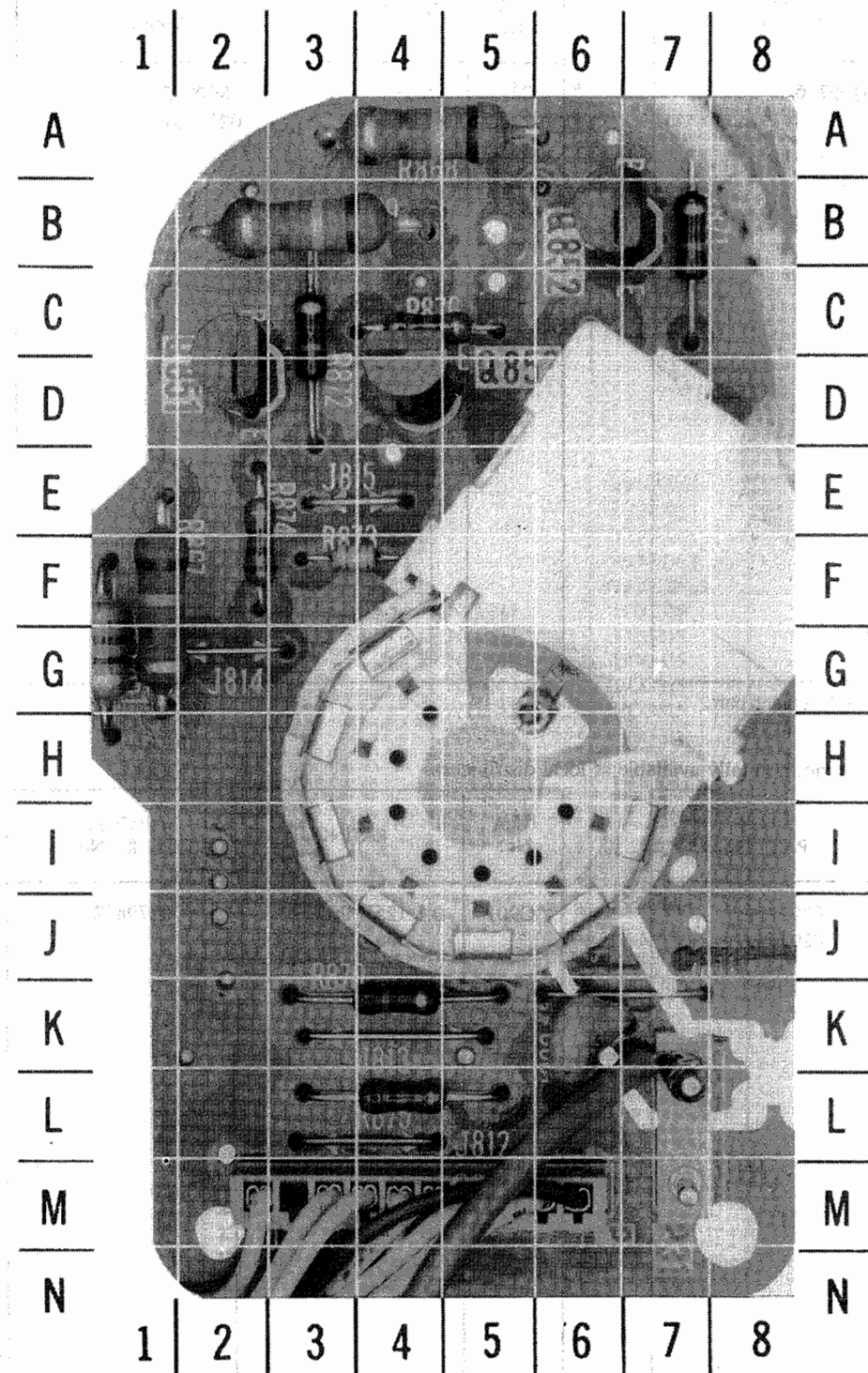
Operate the receiver for 20 minutes. Connect a Color Bar Generator to antenna terminals and tune in a dot pattern. Loosen locking ring. Adjust four pole magnets to converge the red and blue dots at the center of the screen. Adjust the six pole magnets to converge the red/blue dots over the green dots at the center of the screen. NOTE: Rotate the two tabs of each set of magnets equally and opposite to converge vertically and rotate both tabs in the same direction to converge horizontally. Four and six pole magnets interact, repeat adjustment until center convergence is correct. Tighten locking ring. Tune in a crosshatch pattern. Remove rubber wedges between the Deflection Yoke (E6001) and the CRT. Tilt deflection yoke up or down to converge the vertical lines at the top and bottom of the screen and the vertical lines at the left and right sides of the screen. Repeat convergence procedure if necessary to obtain the best overall convergence. Replace the rubber wedges. Tighten yoke clampscrew.

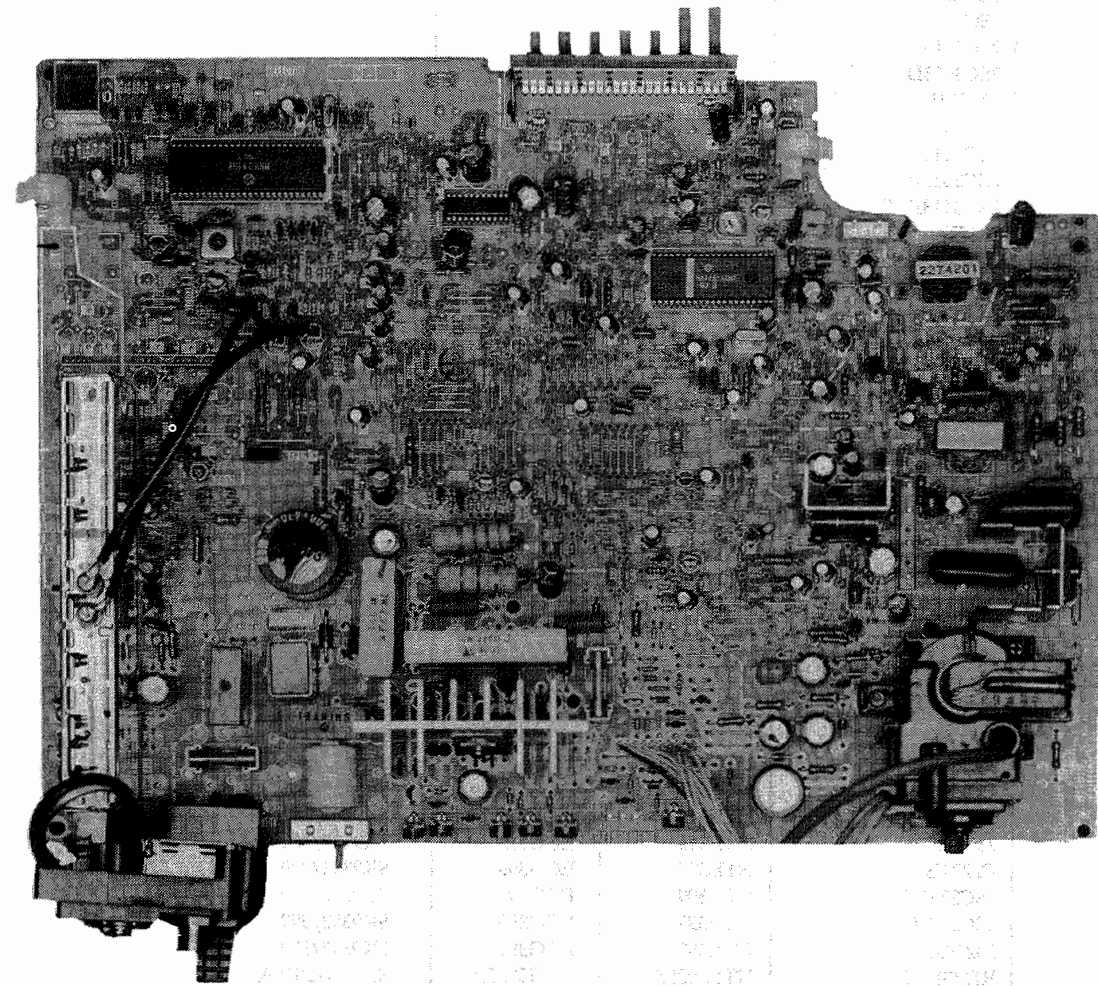


CRT NECK ASSEMBLY

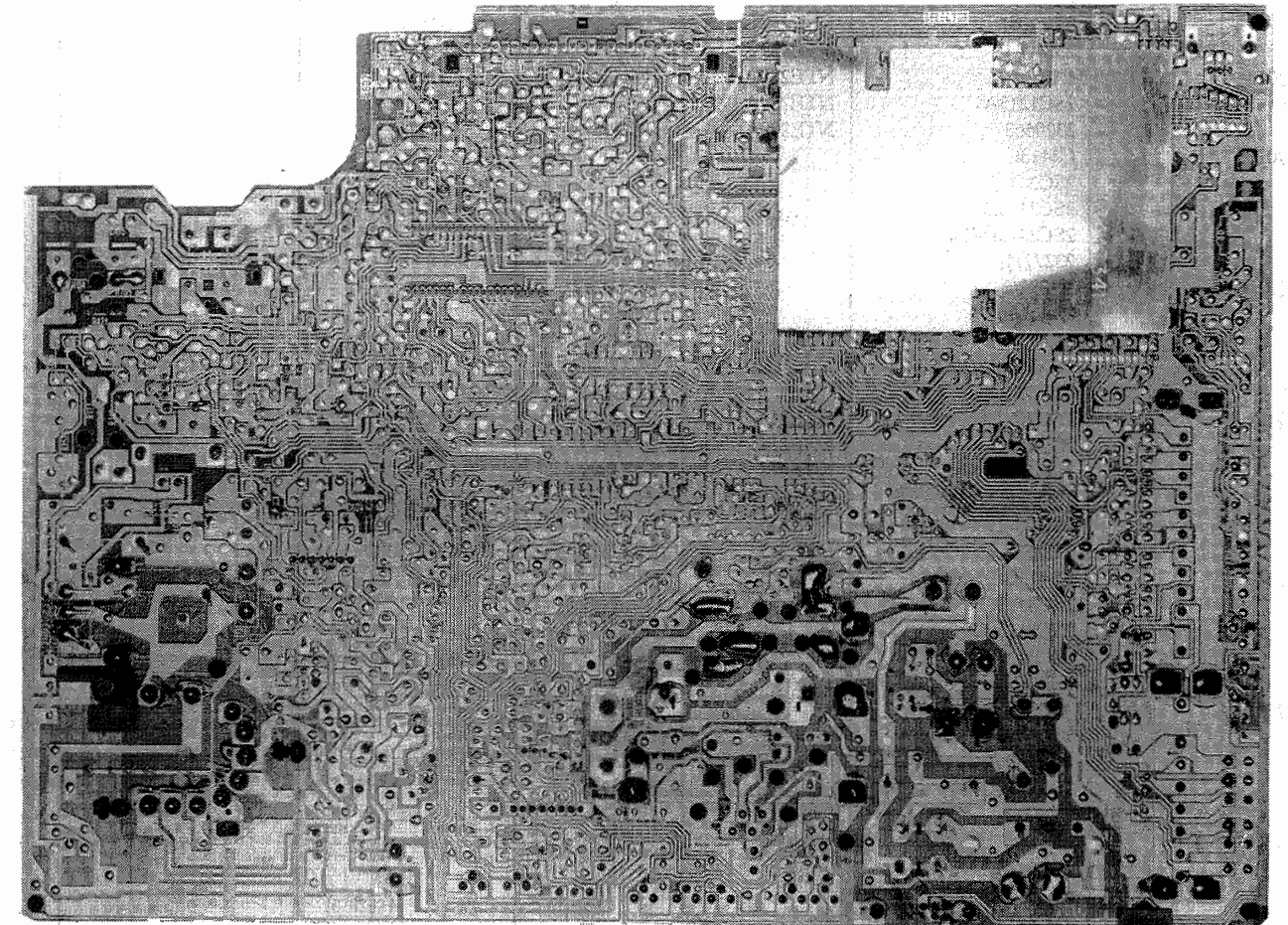
CRT BOARD- GridTrace LOCATION GUIDE

C861	K-3
L851	G-1
P31	M-8
Q851	C-2
Q852	B-6
Q853	C-4
R865	F-1
R868	A-4
R869	B-3
R870	K-4
R871	B-7
R872	C-3
R873	F-3
R874	F-2
R875	L-4
R876	C-4





MAIN CHASSIS-OVERALL



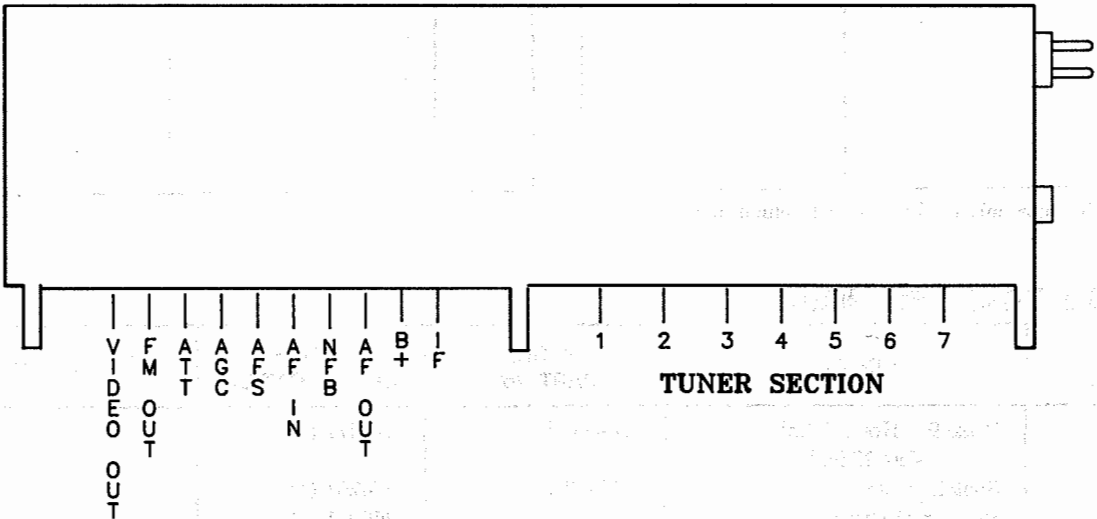
MAIN BOARD-SHIELD LOCATION (BOTTOM VIEW)

TUNER VOLTAGE CHART

	IF	B+	AGC	VH	TU		
	1	2	3	4	5	6	7
VHF Low Band	0V	12.0V	11.9V	7.8V	0V	1.4V	0V
VHF High Band	0V	12.0V	0V	7.8V	11.7V	3.5V	0V
UHF Band	0V	12.0V	11.9V	7.8V	0V	13.5V	0V

NOTE: VHF Low Band voltages taken on channel 2.
VHF High Band voltages taken on channel 7.
UHF Band voltages taken on channel 14.

TUNER TERMINAL GUIDE



PARTS LIST AND DESCRIPTION

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFR. PART No./ TYPE No.	NTE				NOTES
		PART No.	ECG PART No.	TCE PART No.		
D0102,5	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D0113,118,119	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D0125,128	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D302,8,9	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D312	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D402,3,4	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D501 THRU D506	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D601	AM01Z 23394911	NTE116 NTE116	ECG116 ECG116	SK3313/116 SK3313/116		
D602,3	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D706	AS01 23394821	NTE552 NTE552	ECG552 ECG552	SK9000/552 SK9000/552		
D707	AS01Z 23394811	NTE552 NTE552	ECG552 ECG552	SK9000/552 SK9000/552		
D708	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D712	AS01 23394821	NTE552 NTE552	ECG552 ECG552	SK9000/552 SK9000/552		
D713	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519	#	
D715 THRU D717	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
D901	R02A 2331991	NTE125 NTE125	ECG125 ECG125	SK3081/125 SK3081/125	#	
D905	AM01Z 23394911	NTE116 NTE116	ECG116 ECG116	SK3313/116 SK3313/116		
D910 THRU D912	1SS270 23383211	NTE519 NTE519	ECG519 ECG519	SK3100/519 SK3100/519		
IC0102	MN15287HY 2380662					
IC0104	HA11539NT 2381471					
IC201	LA7550				#	
IC501	HA11511CNT 2916633				#	
IC601	UPC1378H 2368501 [uPC1378H]	NTE1676 NTE1676	ECG1676 ECG1676	SK7653/1676 SK7653/1676	#	
IC901	STRD3035 STR-D3035 2917803				#	
Q2	BR (10)				#	

HITACHI
MODEL CT1395W

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFR. PART No./ TYPE No.				
		NTE PART No.	ECG PART No.	TCE PART No.	NOTES
Q0103	K105F	NTE459	ECG459	SK9149/459	
	2SK105F	NTE459	ECG459	SK9149/459	
	2SK105E	NTE459	ECG459	SK9149/459	
	2324084	NTE459	ECG459	SK9149/459	
Q0104	C1213AC	NTE289A	ECG289A	SK3122	
	2SC1213AC	NTE289A	ECG289A	SK3122	
	2320663	NTE289A	ECG289A	SK3122	
Q0105	C3413C				
	2SC3413C				
	2SC3413B				
	2SC3413D-TZ				
	2327771				
Q0106	A1390C		ECG2362		
	2SA1390C		ECG2362		
	2SA1390B		ECG2362		
	2SA1390D-TZ		ECG2362		
	2327751		ECG2362		
Q151	D789C	NTE315	ECG315	SK9137/382	
	2SD789C	NTE315	ECG315	SK9137/382	
	2SD789B	NTE315	ECG315	SK9137/382	
	2SD789D	NTE315	ECG315	SK9137/382	
	2SD789E	NTE315	ECG315	SK9137/382	
	2323521	NTE315	ECG315	SK9137/382	
Q312	C3413C				
	2SC3413C				
	2SC3413(C)				
	2SC3413(D)				
	2327773				
Q313	A1390C		ECG2362		
	2SA1390C		ECG2362		
	2SA1390B		ECG2362		
	2SA1390D-TZ		ECG2362		
	2327751		ECG2362		
Q314,315,318	C3413C				
	2SC3413C				
	2SC3413B				
	2SC3413D-TZ				
	2327771				
Q319	A1390C		ECG2362		
	2SA1390C		ECG2362		
	2SA1390B		ECG2362		
	2SA1390D-TZ		ECG2362		
	2327751		ECG2362		
Q401,2	C2271E	NTE399	ECG399	SK9352/399	
	2SC2271E	NTE399	ECG399	SK9352/399	
	2SC2271(E)	NTE399	ECG399	SK9352/399	
	2321993	NTE399	ECG399	SK9352/399	

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFR. PART No./ TYPE No.				
		NTE PART No.	ECG PART No.	TCE PART No.	NOTES
Q501 THRU Q505	C3413C				
	2SC3413C				
	2SC3413B				
	2SC3413D-TZ				
	2327771				
Q601	C3413C				
	2SC3413C				
	2SC3413B				
	2SC3413D-TZ				
	2327771				
Q602	A1390C		ECG2362		
	2SA1390C		ECG2362		
	2SA1390B		ECG2362		
	2SA1390D-TZ		ECG2362		
	2327751		ECG2362		
Q603	C3413C				
	2SC3413C				
	2SC3413B				
	2SC3413D-TZ				
	2327771				
Q701	C2271M	NTE399	ECG399	SK9352/399	
	2SC2271M	NTE399	ECG399	SK9352/399	
	2SC2271N	NTE399	ECG399	SK9352/399	
	2321992	NTE399	ECG399	SK9352/399	
Q702	D1876		ECG2331		#
	2SD1876		ECG2331		
	2327501		ECG2331		
Q707	D789C	NTE315	ECG315	SK9137/382	
	2SD789C	NTE315	ECG315	SK9137/382	
	2SD789B	NTE315	ECG315	SK9137/382	
	2SD789D	NTE315	ECG315	SK9137/382	
	2SD789E	NTE315	ECG315	SK9137/382	
	2323521	NTE315	ECG315	SK9137/382	
Q851,2,3	C2271E	NTE399	ECG399	SK9352/399	
	2SC2271E	NTE399	ECG399	SK9352/399	
	2SC2271(E)	NTE399	ECG399	SK9352/399	
	2321993	NTE399	ECG399	SK9352/399	
ZD0105	RD33EB1	NTE5035A	ECG5035A	SK30A/5035A	
	2334312	NTE5035A	ECG5035A	SK30A/5035A	
ZD0111,112	HZ9C1	NTE5018A	ECG5018A	SK9A1/5018A	
	HZ9(C)1	NTE5018A	ECG5018A	SK9A1/5018A	
	2331827	NTE5018A	ECG5018A	SK9A1/5018A	
ZD151	HZ6C1	NTE5012A	ECG5012A	SK6A0/5012A	
	HZ6(C)1	NTE5012A	ECG5012A	SK6A0/5012A	
	2331807	NTE5012A	ECG5012A	SK6A0/5012A	
ZD302,3	HZ12C	NTE5021A	ECG5021A	SK12A/5021A	
	HZ-12(C)	NTE5021A	ECG5021A	SK12A/5021A	
	2331155	NTE5021A	ECG5021A	SK12A/5021A	

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		MFGR. PART No.	NTE PART No.	
# R0194	10 5% 1/4W Fusible	0119514		
# R153	4.7 5% 1/4W Metal Oxide	0119687	QW4D7	
# R154	4.7 5% 1/4W Metal Oxide	0119687	QW4D7	
# R730	1 5% 1/4W Fusible	01195121		
# R731	1 5% 1/4W Fusible	01195121		
# R734	2.2 5% 1/4W Fusible	01195051		
# R735	0.5 5% 1/4W Fusible	0119838		
# R737	6800 5% 1/16W Carbon Film	0700052		
# R738	0.5 5% 1/4W Fusible	0119838		
# R742	39K 5% 1/16W Carbon Film	0700062	EW339	
# R743	180 5% 1/16W Carbon Film	0700031	EW118	
# R757	4.7 5% 1/4W Metal Oxide	0119687	QW4D7	
# R901	2.7 10% 7W Wirewound	0141133		
# R904	56 5% 1/4W Fusible	0119508		
# R905	10 5% 2W Metal Oxide	0110197	2W010	
# R906	10 5% 2W Metal Oxide	0110197	2W010	
# R907	240 5% 10W Wirewound	0141130		
R910	6200 5% 3W Metal Oxide	0110364	3W262	
R911	4700 5% 3W Metal Oxide	0110361	3W247	
# TH901	8.1 PTC C04	2340521		

For SAFETY use only equivalent replacement part.

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM NO.	FUNCTION	RESISTANCE	MFGR. PART NO.	NOTES
# R204	RF AGC	30K		# For SAFETY use only equivalent replacement part.
R351	Sub Brite Level	10K	0150014	
# R570	FO Adjust	2000	0150284	
R609	Vertical Size	200	0150109	(1) Part of Horizontal Output Trans-
# R799A	Focus		(1)	former T702. Part No. 2435084.
# R799B	Screen		(1)	
R587	Red Background	5000	0150113	(2) Part of S501. Part No. 2634211.
R858	Green Background	5000	0150113	
R859	Blue Background	5000	0150113	
R864	Red Drive	500	0150110	
R866	Blue Drive	500	0150110	
S501	Vertical Hold	5000	(2)	

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

COILS (RF-IF)

ITEM No.	FUNCTION	MFGR. PART No.	ITEM No.	FUNCTION	MFGR. PART No.
L0102	RF Choke (100uH)	2122956	L1001	Peaking (100uH)	2122956
L0105	Peaking (3.9uH)	2122937	L221	RFChoke (100uH)	2122253
L0106	Peaking (33uH)	2122949	L306	Peaking (2.2uH)	2122934
L0107	Coil, Tuning	2145261	L307	RF Choke (100uH)	2122253
L0108	Peaking (100uH)	2122956	L503	Peaking (10uH)	2122943
L0118	Peaking (100uH)	2122956	L704	Radial Coil	2123725
L0121	RF Choke (100uH)	2122956	L708	Peaking (2.2uH)	2122934
L0125	Peaking (4.7uH)	2122938	L851	RF Choke (330uH)	2122259
L0126	RF Choke (4.7uH)	2122938	# L901	Line Filter	2122712
L0127	RF Choke (100uH)	2122956			

For SAFETY use only equivalent replacement part.

COILS & TRANSFORMERS

ITEM No.	FUNCTION	MFGR. PART No.	OTHER IDENTIFICATION	NOTES
# E6001	Yoke 90° Horiz 4.3mh Vert 23.9mh	2442472	2442472 (1)	
# T401	Switch Mode	2274201	2274201 (1)	
# T701	Horizontal Drive	2260021	2260021 (1)	
# T702	Horizontal Output	2435084	2435084 (1)	

For SAFETY use only equivalent replacement part.

(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
# SP451	2 1/2" x 3 1/2" PM, 25 Ohms, 1W 2 1/2" x 3 1/2" PM, 25 Ohms,	2412471A 2412571		

For SAFETY use only equivalent replacement part.

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	MFR. PART No./ TYPE No.				
		NTE PART No.	ECG PART No.	TCE PART No.	NOTES
ZD501,2,3	HZ9C1	NTE5018A	ECG5018A	SK9A1/5018A	#
	HZ9(C)1	NTE5018A	ECG5018A	SK9A1/5018A	
	2331827	NTE5018A	ECG5018A	SK9A1/5018A	
ZD701	HZ9C1	NTE5018A	ECG5018A	SK9A1/5018A	
	HZ9(C)1	NTE5018A	ECG5018A	SK9A1/5018A	
	2331827	NTE5018A	ECG5018A	SK9A1/5018A	
ZD704	HZS24-1L	NTE5031A	ECG5031A	SK24A/5031A	
	2339211	NTE5031A	ECG5031A	SK24A/5031A	
ZD706	HZ9C1	NTE5018A	ECG5018A	SK9A1/5018A	
	HZ9(C)1	NTE5018A	ECG5018A	SK9A1/5018A	
	2331827	NTE5018A	ECG5018A	SK9A1/5018A	
ZD901	HZ12C	NTE5021A	ECG5021A	SK12A/5021A	
	HZ-12(C)	NTE5021A	ECG5021A	SK12A/5021A	
	2331155	NTE5021A	ECG5021A	SK12A/5021A	

For SAFETY use only equivalent replacement part.
(10) Number on unit.

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

ELECTROLYTIC CAPACITORS

Items not listed are normally available at local distributors.

ITEM No.	RATING	MFR. PART No.	ITEM No.	RATING	MFR. PART No.
# C608	1 20V	0292716	# C727	10 25V	0800015
# C712	10 16V	080015	# C906	470 200V	0254831

For SAFETY use only equivalent replacement part.

CAPACITORS

Items not normally available at local distributors.

ITEM No.	RATING	MFR. PART No.	ITEM No.	RATING	MFR. PART No.
# C717	0.0062 1.6KV 5%	0299732	# C901	0.1 125V 20%	0279832
# C718	0.33 200V 10%	0299932			

For SAFETY use only equivalent replacement part.

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

MISCELLANEOUS

ITEM No.	PART NAME	MFGR. PART No.	NOTES
# CP0001	Remote Control Receiver	2381125	
# F901	Fuse 2.5 @ 250V	2722212	
# F902	Fuse 1A @ 250V	2722211	
FB501	Ferrite Bead		
FB502	Ferrite Bead		
FB701	Ferrite Bead	2771892	
FB702	Ferrite Bead	2771892	
FB703	Ferrite Bead	2771892	
FB704	Ferrite Bead	2771892	
FB705	Ferrite Bead	2771892	
# L951	Degaussing Coil	2163583	
MF701	Ceramic Oscillator	2786683	
# P900	AC Cord	2972241	Polarized
# RL951	Power Relay	2640572	
S0107	Switch	2622241	CATV
S501	Switch	2634211	6 Switch and 1 Control Assembly,Channel Down,Channel Up,Power,S/T,Volume Down, Volume Up, F8-3253A
# U0101	UHF/VHF Tuner	2427335	
# V1	CRT	A34JLN60X	
X0101	Crystal	2787521	4.0MHz
X501	Crystal	2790441	3.58MHz
#	Antenna Terminal	2693241	
#	CRT Socket	2953641	
#	Remote Control Unit	2970293	
#	UHF Antenna	2750781	
#	VHF Adaptor	2673311	300-75
#	VHF Antenna	2750771	

For SAFETY use only equivalent replacement part.

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Frame Assembly	3102491	Printed Circuit Board	3782719
Back Cover	3462901	Support	
Front Door	3820331		

HITACHI
MODEL CT138SW