

For SAFETY use only equivalent replacement part.

--- Circuitry not used in some versions

--- Circuitry used in some versions

⊕ See parts list

⊕ Ground

⚡ Flame retardant resistor

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.

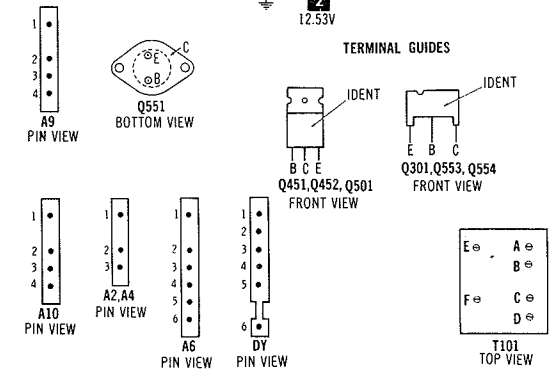
Terminal identification may not be found on unit.

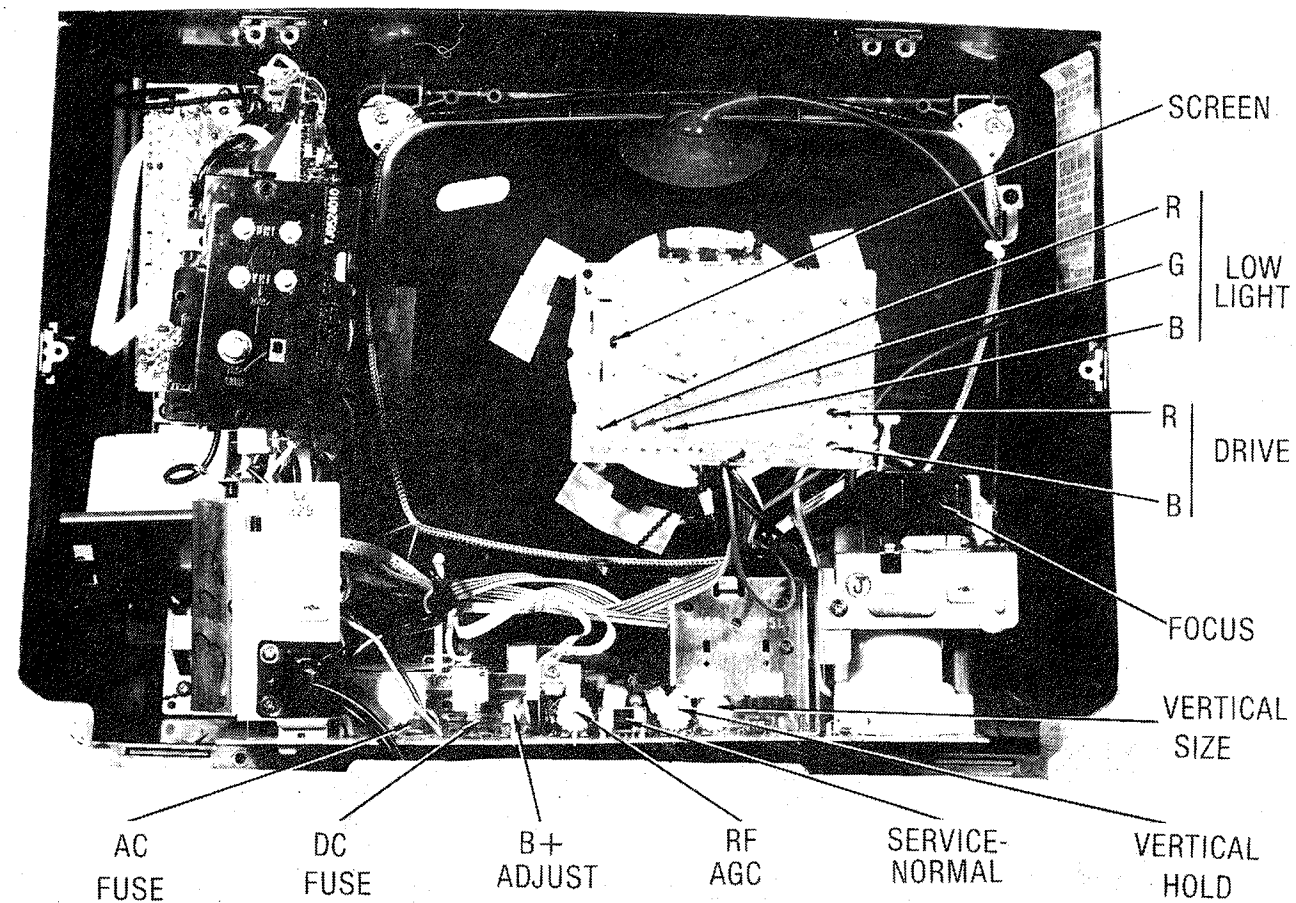
Resistors are 1/2W or less, 5% unless noted.

Value in () used in some versions.

A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH CIRCUITRACE

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CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

Remove ten screws holding cabinet back and remove back. Disconnect HV anode, CRT socket, deflection yoke connector, degaussing coil connector, speaker connector and ground leads. Remove four screws holding tuner and control assembly to cabinet front and remove assembly and main board from cabinet. Lamps are now accessible for servicing.

ible for servicing.

CRT REMOVAL

Follow "Chassis Removal" procedure and lay set facedown on a soft protective surface. Loosen and remove CRT neck assembly, remove four screws holding CRT to cabinet front and lift CRT out of cabinet. Do not lift CRT by the neck.

SERVICING IN THE FIELD

CRT IMPLSION PROTECTION AND CLEANING

Implosion protection is an integral part of the picture tube, cleaning accomplished without CRT removal.

FUSE DEVICES

A 1.5-amp fuse is used for low-voltage power-supply protection. (See photo, Cabinet-Rear View.)

A 4-amp fuse is used for AC line protection. (See photo, Cabinet-Rear View.)

LAMP ACCESSIBILITY

Tuner assembly must be removed. See Disassembly Instructions.

VHF/UHF TUNER

See Miscellaneous Adjustments.

HORIZONTAL OSCILLATOR

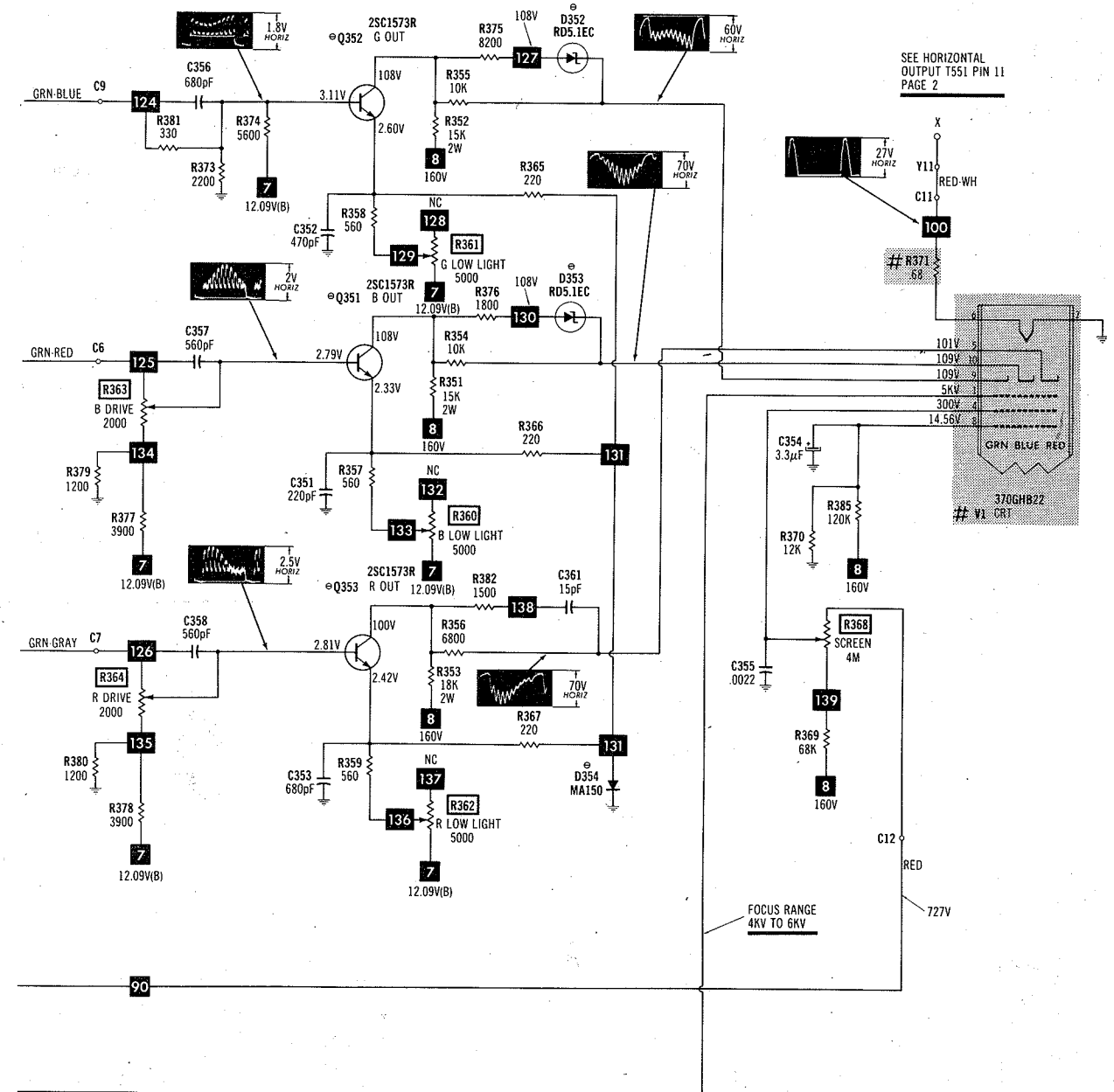
Adjustment of the horizontal hold is accomplished by the proper setting of the Horiz Hold Control. (See Placement Chart.)

FOCUS

The focus may be varied by a focus control. (See photo, Cabinet-Rear View.)

AGC

The AGC may be varied by an RF AGC control. (See Placement Chart.)



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--- Circuitry used in some versions

See parts list

⊖ Nominal value

⊕ Ground

◆ Flame retardant resistor

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.

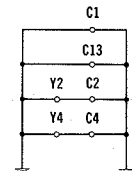
Resistors are 1/2W or less, 5% unless noted.

Value in () used in some versions.

A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE**

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TERMINAL GUIDE

E C B

Q351 THRU Q353

BOTTOM VIEW

SAFETY PRECAUTIONS

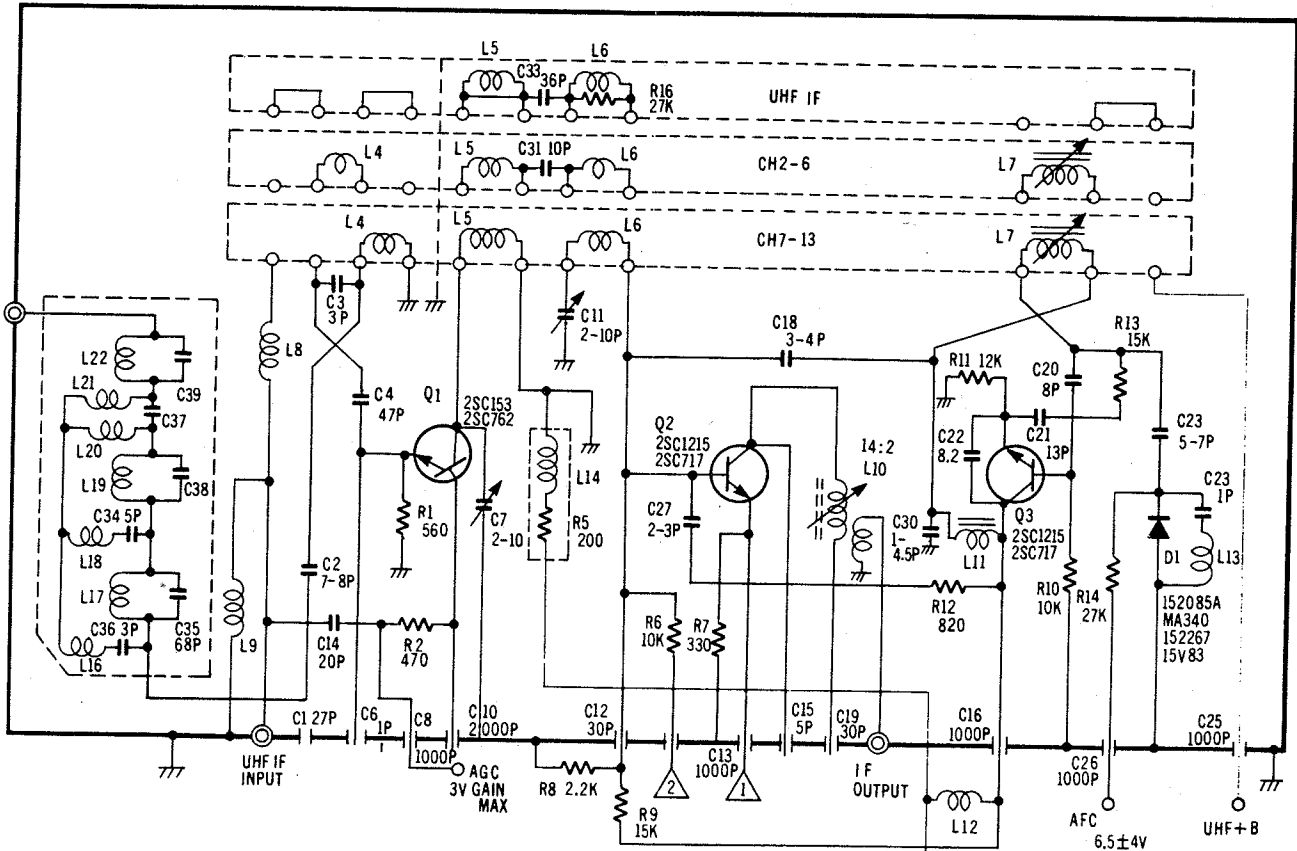
GENERAL GUIDELINES

- 1. It is advisable to insert an isolation transformer in the power line and AC supply before servicing a hot chassis.
- 2. When servicing, observe the original lead dress; especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
- 3. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations, are properly installed.
- 4. Before turning the receiver on, measure the resistance between B+ line and chassis ground. Connect ⊖ side of an ohmmeter to the B+ lines, and ⊕ side to chassis ground. Each line should have more resistance than specified, as follows:

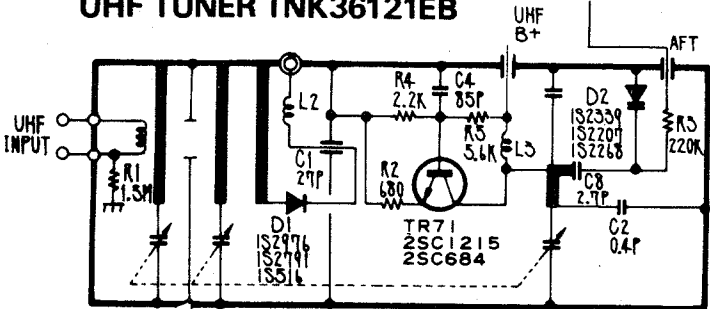
B+Line	Minimum Resistance
130V	1.5kΩ
20V	200Ω
12V	200Ω

- 5. When the TV set is not to be used for a long period of time, unplug the power cord from the AC outlet.
- 6. Potentials, as high as 24.5kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high-voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube.
- 7. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

VHF TUNER TNT6675FEB



UHF TUNER TNK36121EB



Courtesy of the Manufacturer

UHF/VHF TUNERS (MODEL CT-309)

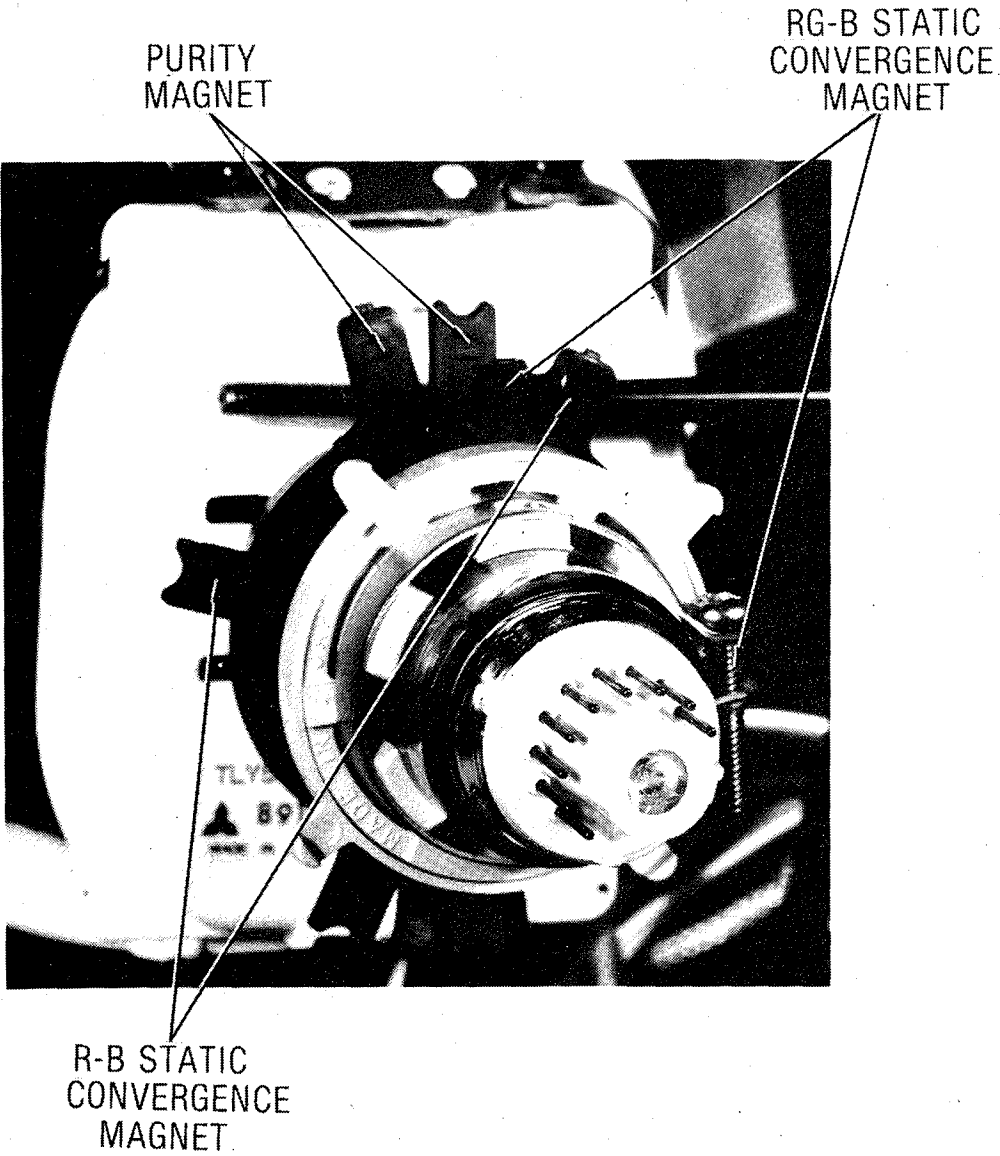
CONVERGENCE ADJUSTMENTS

Miscellaneous Adjustments should be made before proceeding to Convergence Adjustments. Connect dot/crosshatch generator to antenna terminals. Use dot pattern for center dot convergence. Use crosshatch pattern for all other adjustments. View pattern as displayed on TV screen. NOTE: Maintain center convergence throughout setup procedure.

Perform center dot convergence using convergence magnets.

Adjust convergence magnets to converge red and blue at the center of the screen. Then adjust convergence magnets to converge red and blue with green at the center of the screen.

For overall convergence move yoke vertically, horizontally, or diagonally. Insert the three wedges to hold the yoke firmly in position. Apply adhesive to wedge or place tape over the tab to hold the wedge securely to the CRT.



PANASONIC MODELS
CT-309, CT-329

FOLDER 1

CRT NECK ASSEMBLY

MISCELLANEOUS ADJUSTMENTS

B+ ADJUSTMENT

Connect a voltmeter to TPD91, low side to ground. Adjust B+ Adjust Control (R812) for +130 volts ± 2.0 volts.

HIGH VOLTAGE ADJUSTMENT

Place Service Switch (SW301) to Service position and connect a high voltage meter to the picture tube anode. The high voltage should read 24.5KV \pm 1.5KV. If high voltage is out of tolerance, adjust B+ Adjust Control (R812) for proper high voltage range.

RF AGC ADJUSTMENT

Tune in a weak local station. Slowly turn RF AGC Control (R107) clockwise (from full counterclockwise) to a point where noise in the picture is at MINIMUM.

CHANNEL SELECTION

One button is provided for automatic electronic channel selection, fourteen band switches and fourteen tuning knobs are provided for channel pre-tuning.

CHANNEL PRE-TUNING/FINE TUNING

Move AFT switch to Off. Depress selector button (left end of button to select lower channel, right end to select higher channel) to select desired channel indicator position, set appropriate band switch to proper band, adjust tuning for best picture. Repeat procedure for each channel to be pre-tuned, move AFT switch to On.

HORIZONTAL HOLD ADJUSTMENT

Tune in a TV station and set all controls for normal operation. Adjust Horizontal Hold (R505) to a point where it is virtually impossible to lose horizontal sync while switching from channel to channel.

SUB COLOR AND SUB CONTRAST ADJUSTMENTS

Tune in a color program. Set Color Pilot Switch to Off. Place Tint and Color Controls to center of rotation. Adjust Sub-Color (R616) and Sub-Contrast (R310) until proper color saturation is obtained.

AUTOMATIC BEAM LIMITER (ABL) ADJUSTMENT

Factory adjusted and usually requires no further adjustment.

Connect an ammeter between TPD1 and TPD2 (+ terminal of ammeter to TPD1).

Tune in a color bar pattern. Set Color Pilot Switch to Off, Contrast Control to Maximum, Brightness Control and Color Control to MINIMUM.

Adjust Sub-Brightness Control (R326) for 500 microamps.

APC ADJUSTMENT

Connect a color bar generator to the antenna terminals and tune in a color bar pattern. Set Color Pilot Switch to Off, Color, Tint and Sub-Color (R616) Controls to midrange.

Connect a 470K ohm resistor from TPB4 to TPB5, a 100K ohm resistor from TPB1 to TPB7, a .01mfd capacitor from TPB43 to TPB5. Adjust trimmer capacitor (C618) until color bars stop or slowly drift across the screen. Remove capacitor and resistors. Change channel, confirm color sync is kept.

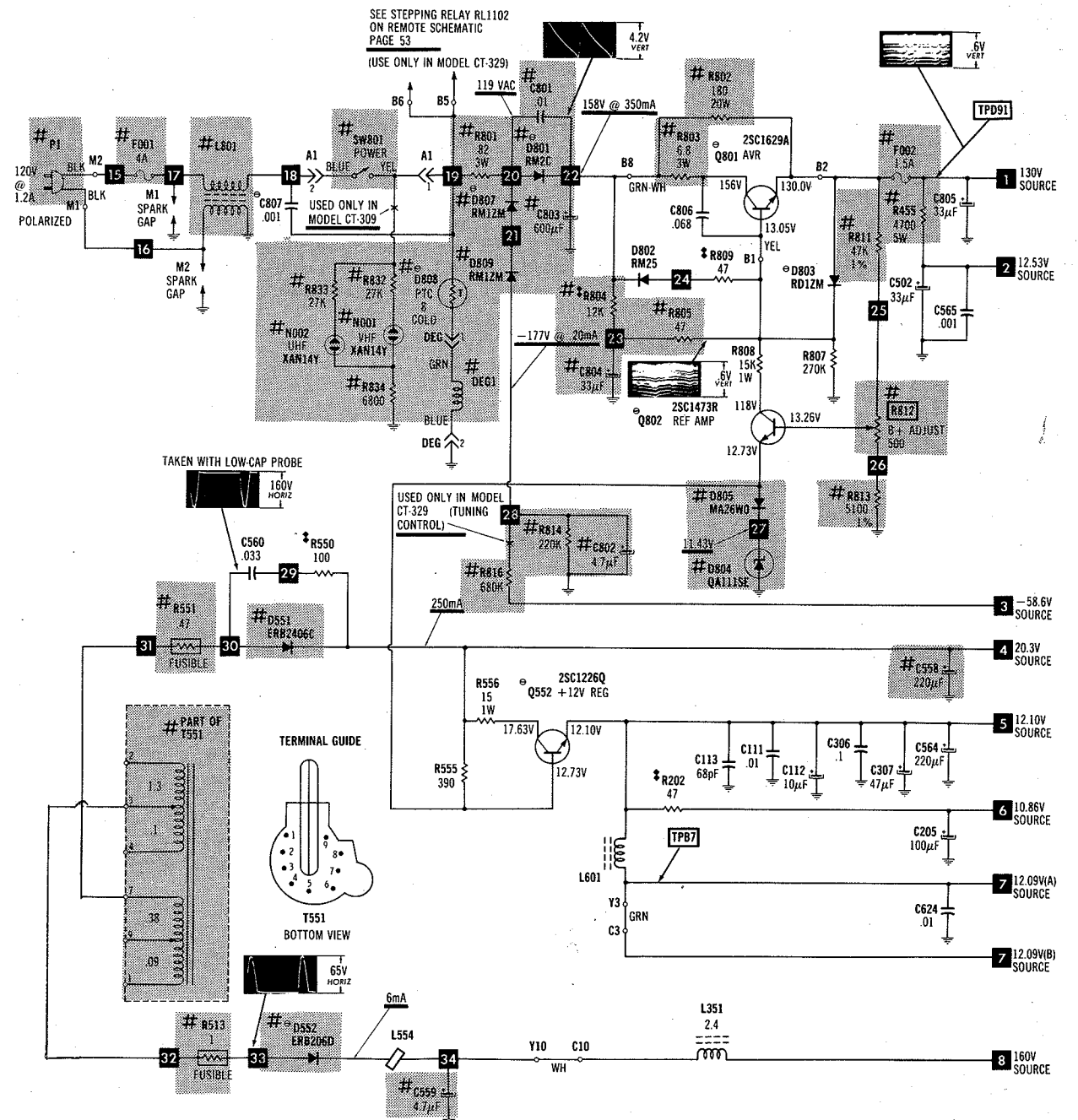
COLOR PURITY ADJUSTMENT

Tune in a TV station and turn Brightness Control to Maximum. Turn R (R362) and B (R360) Low Light Controls to MINIMUM. Adjust G (R361) Low Light Control to obtain a green screen. Unlock lock nut to release purity rings, loosen the deflection yoke and move it back against the convergence assembly. Use a degaussing coil to demagnetize picture tube and mounting brackets.

Adjust the purity tabs to place the green bar in the center of the screen. Move the deflection yoke forward until a uniform green raster is obtained. Adjust purity correction magnets if necessary.

COLOR TEMPERATURE ADJUSTMENTS

Turn in a TV station and turn Color Control to MINIMUM. Set Color Pilot Switch to Off position. Turn R, B and G Low Light Controls (R362, R360, R361) 45 degrees counterclockwise from full clockwise position. Set Service Switch (SW301) to Service. Turn Screen Control (R368) to MINIMUM, then advance control slowly until a faint horizontal line is visible. Adjust Low Light Controls for a low level white line. Set Service Switch (SW301) at Normal and adjust Red (R364) and Blue (R363) Drive Controls for best black and white picture at high brightness.



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- X- Circuitry not used in some versions
 --- Circuitry used in some versions
 ⊖ See parts list
 ⏏ Ground

Flame retardant resistor

Waveforms: triggered scope, keyed rainbow generator

Item numbers in rectangles appear in the alignment/adjustment instructions.

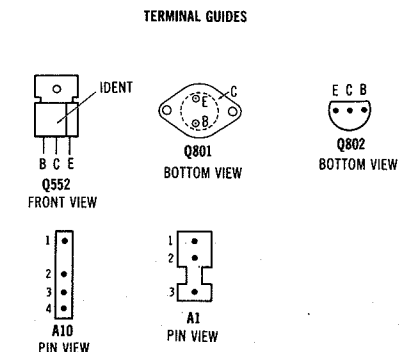
Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.

Terminal identification may not be found on unit.
Resistors are 1/2W or less, 5% unless noted.
Value in () used in some versions.

A PHOTOFAC T STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE[™]**

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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 ELECTRONICS
VHF Tuner IF Output Coil..... 9296,9297,9300
L101,L151,T101,T201,T202,T301..... 9440

PRELIMINARY INSTRUCTIONS

Set the channel selector to the highest unused channel. Set scope sweep to external. 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 usable indication.
Note: Response may vary slightly from that shown.
Connect a +4 volts Bias to TPA14.
Connect a 100 ohm resistor from TPA3 to TPA4.
Set AFT and Color Pilot Switches to Off.

VIDEO IF ALIGNMENT

DIRECT PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To TPA12	To TP on VHF tuner.	44MHz (10MHz Sweep)	41.25MHz 47.25MHz	Adjust T101(F) for MINIMUM. Adjust T101(E) for MINIMUM. See Figure 1.
To TPA12	To TP on VHF tuner.	44MHz (10MHz Sweep)	41.25MHz 42.17MHz 44.00MHz 45.75MHz 47.25MHz	Adjust VHF Tuner IF Output Coil and T101 (A,B,C,D) for maximum gain and symmetry of response. T101 (A and D) affects 44.00MHz. T101 (B) affects 42.17MHz and 45.75MHz. T101 (C) affects 45.75MHz. VHF Tuner IF Output Coil affects overall response. See Figure 2.
To TPA12	To TPA2	44MHz (10MHz Sweep)	45.00MHz 45.75MHz 47.25MHz	Remove 100 ohm resistor from TPA3 and TPA4. Adjust L101 for maximum gain and symmetry of response with markers as shown. Adjust L151 for notch at peak as shown. See Figure 3.

4.5MHz TRAP ALIGNMENT

Tune in a strong TV signal and set the contrast at maximum. Adjust the fine tuning until a beat pattern is visible on the screen. Adjust T301 for MINIMUM beat interference.

SOUND IF ALIGNMENT

Tune in a station and adjust T201 and T202 for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce the signal while aligning for undistorted output by adjusting T202.

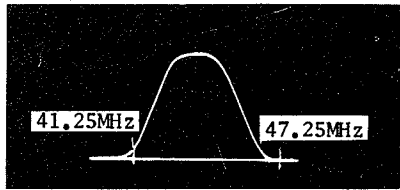


Figure 1

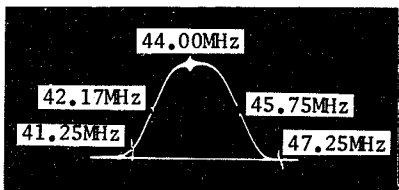


Figure 2

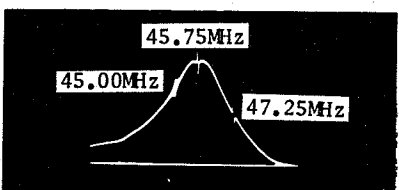
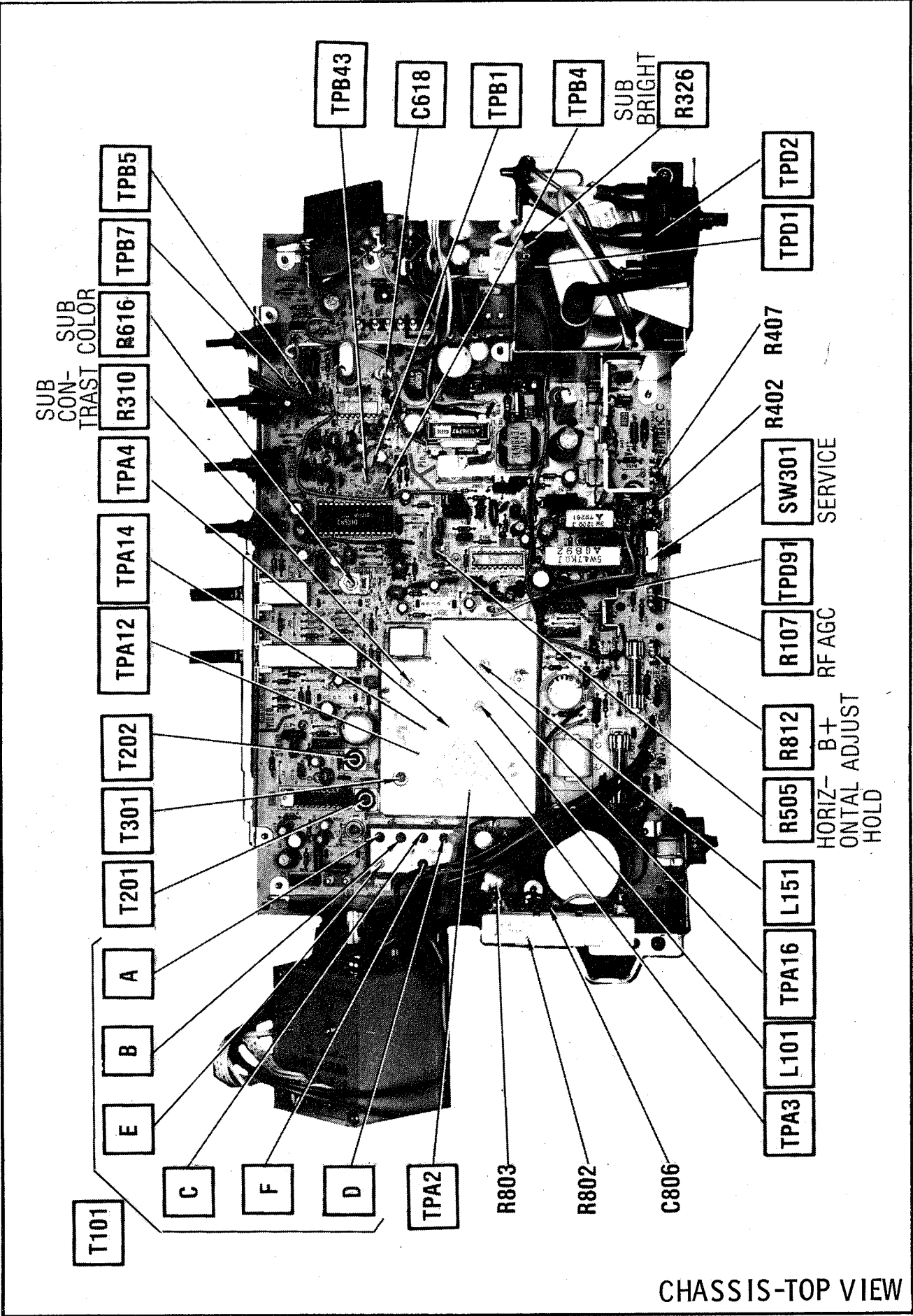
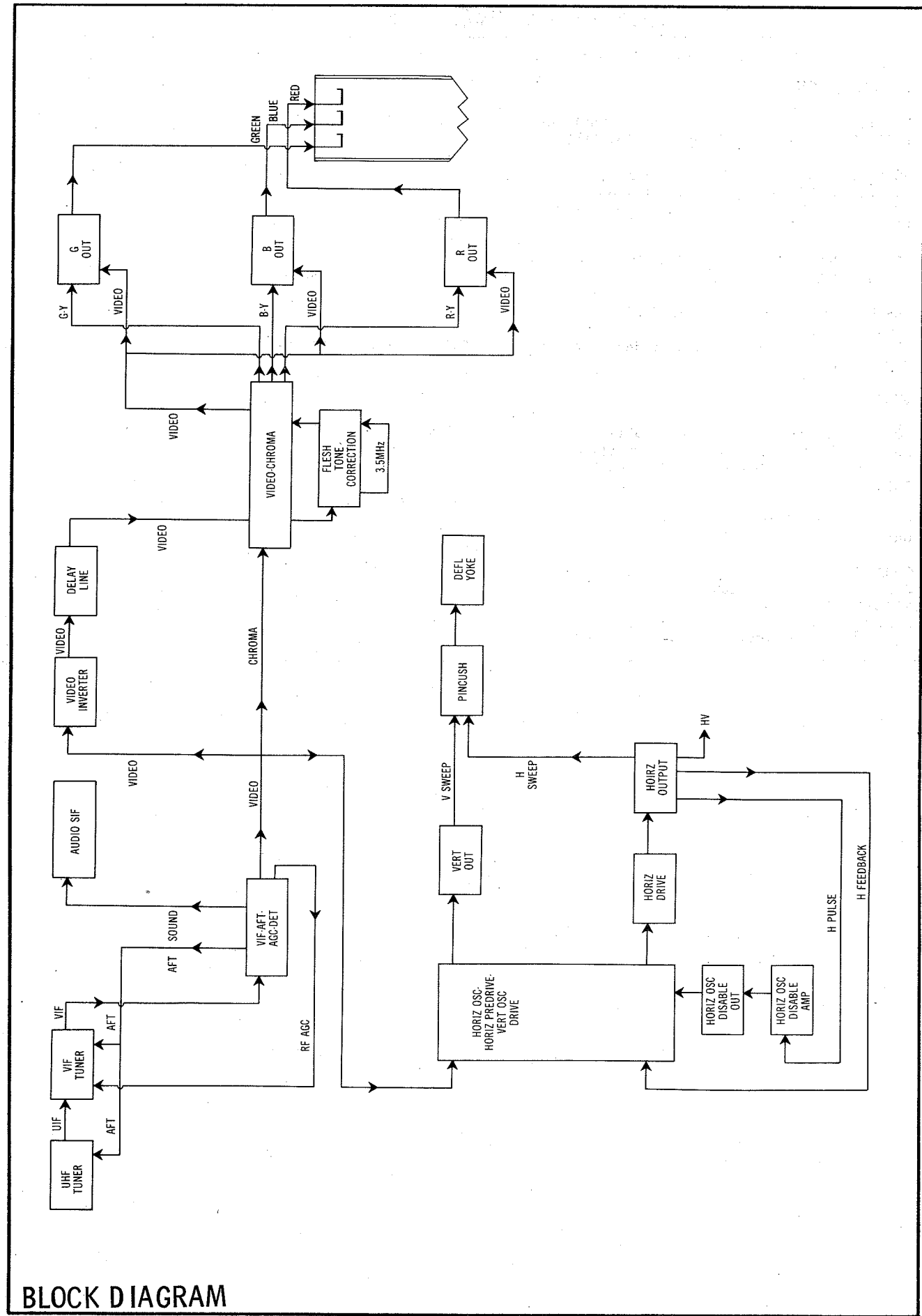


Figure 3



CHASSIS-TOP VIEW



BLOCK DIAGRAM

AUTOMATIC FINE TUNING ALIGNMENT

Connect as explained in preliminary instructions unless specified otherwise.

DIRECT PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To TPA16	To TP on VHF Tuner.	44.00MHz (10MHz Sweep)	45.75MHz	Adjust L151 for maximum gain and symmetry of response as shown. (See Figure 4.)

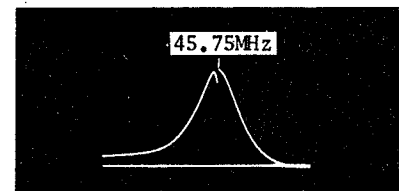


Figure 4

REMOTE CONTROL RECEIVER ALIGNMENT

Operate Remote Control Transmitter at approximately 10 feet from receiver. Set sensitivity control (R1177) maximum. Connect a 120K ohm resistor from TPR9 to ground.

DEPRESS	CONNECT SCOPE	ADJUST	REMARKS
Off-On Volume Button	To TPR4	T1103	Adjust for max.
Left-side Channel Button.	To TPR3	T1102	Adjust for max.
Right-side Channel Button.	To TPR2	T1101	Adjust for max. Connect a 68 ohm resistor from TPR1 to ground.
Off-On Volume Button	To TPR8	R1141	Adjust clockwise to a point just before noise appear on scope.
Left-side Channel Button.	To TPR7	R1140	"
Right-side Channel Button.	To TPR6	R1142	"

REMOTE CONTROL TRANSMITTER ALIGNMENT

Turn remote sensitivity control fully counterclockwise.

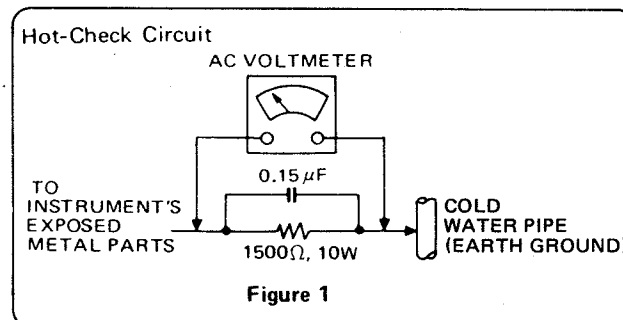
CONNECT VTVM (ON RECEIVER)	TRANSMITTER BUTTON	ADJUST	REMARKS
To TPR2	Right-side channel button	L4001	Adjust for maximum.
To TPR3	Left-side channel button.	C4007	Adjust for maximum.
To TPR2	On-Off volume button	C4005	Adjust for maximum.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screwheads, antennas, control shafts, handle bracket, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 240 k Ω and 5.2M Ω . When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

LEAKAGE CURRENT HOT CHECK (See figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5 k Ω , 10watts resistor, paralleled by 0.15 μ F capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

**X-RADIATION**

WARNING: 1. The potential source of X-Radiation in TV sets is the High Voltage section and the picture tube.

2. When using a picture tube test jig for service, ensure that jig is capable of handling 24.5kV without causing X-Radiation.

NOTE: It is important to use an accurate periodically calibrated high voltage meter.

1. Turn the Brightness control fully counterclockwise.
2. Set the SERVICE switch to SERVICE.
3. Measure the High Voltage. The meter reading should indicate 24kV, +0.5kV, -2.0kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
4. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

HORIZONTAL OSC. DISABLE CIRCUIT TEST

This test must be made as a final check before the set is returned to the customer.

1. With the rear cover removed, supply a nominal 120V AC to the set, turn on the power switch.
2. Set the customer controls to normal operating positions.
3. Short R802 with a jumper wire. Confirm that the picture falls out of horizontal sync.
4. If this does not occur, the Horizontal Osc. Disable Circuit is not operating. Follow the Horizontal Oscillator Disable Circuit Repair Procedures before the set is returned to customer.

REPAIR PROCEDURES OF HORIZONTAL OSCILLATOR DISABLE CIRCUIT

1. Connect a DC voltmeter between capacitor C531 ⊕ on the main circuit board and chassis ground. If nearly +19V is not present on that point, find the cause. Check R531, R532, R537, C531 and D513.
2. Connect a DC voltmeter between the emitter of Q554 on the main board and chassis ground. Emitter potential varies from nearly +12.7V to nearly +12.2V when shorting R802. If this does not occur, find the cause. Check R535, R536, R538, R539, D512, Q553 and Q554.
3. Carefully check above specified parts and related circuits and parts. When the circuits is repaired, try the Horizontal Oscillator Disable Circuit Test again.

TROUBLESHOOTING CHECK CHART

The following chart lists component failures most likely to produce the indicated symptom.

PICTURE or SOUND

NO PIC, NO SOUND, NO RASTER: Fuses, D801 thru D805, D807, D809, AVR, Ref Amp, +12V Reg, D551, D552.

NO PIC, NO SOUND, HAS RASTER: Tuner, VIF(IC101).
NO PIC, NO SOUND, HAS SNOW: Tuner, AGC(IC101).
NO PIC, HAS SOUND, NO RASTER: Video Inverter, Video(IC301), CRT.

NO PIC, HAS SOUND, HAS RASTER: Video Inverter, Video(IC301).

HAS PIC, NO SOUND: Audio-SIF(IC201).
OVERLOADED PICTURE: AGC(IC101).
LOW OR EXCESSIVE BRIGHTNESS: Video Inverter, Video(IC301).

SWEEP

NO RASTER, HAS SOUND: HV Rect(T551), CRT.
NO RASTER, NO SOUND: H Osc/PreDrive(IC401), H Drive/Out, D554, Disable Amp/Out, D511, D512, D513.

NO VERT DEFLECTION: V Osc/Drive(IC401), V Outs, D451, D452.

POOR VERT LIN OR FOLDOVER: V Outs, D451, D452.
POOR HORIZ LIN OR FOLDOVER: H Drive/Out, D554.
NARROW PICTURE: H Drive/Out, D554.
VERT OFF FREQUENCY: V Osc/Drive(IC401).
HORIZ OFF FREQUENCY: H Osc/PreDrive(IC401).

SYNC

NO VERT SYNC: V Osc/Drive(IC401).
NO HORIZ SYNC: H PreDrive(IC401).
NO VERT/HORIZ SYNC: Sync(IC401).

RASTER

YELLOW (NO BLUE): Video-Chroma(IC301), B Out, CRT.

CYAN (NO RED): Video-Chroma(IC301), R Out, CRT.
MAGENTA (NO GREEN): Video-Chroma(IC301), G Out, CRT.

COLOR (B/W operating normally)

NO COLOR: Video-Chroma(IC301), Flesh Tone Correction(IC601).

WEAK COLOR: Video-Chroma(IC301), Flesh Tone Correction(IC601).

NO COLOR SYNC: Video-Chroma(IC301), Flesh Tone Correction(IC601).

NO GREEN: Video-Chroma(IC301), G Out.
NO BLUE: Video-Chroma(IC301), B Out.
NO RED: Video-Chroma(IC301), R Out.
INCORRECT HUE (TINT): Video-Chroma(IC301), Flesh Tone Correction(IC601).

RESISTANCE MEASUREMENTS

MEASUREMENTS BELOW TAKEN WITH METER HAVING .08V MAX BETWEEN PROBE TIPS														
ITEM	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	PIN 13	PIN 14
V1	40M	NC	NC	1.2M	157K	FIL	FIL	12K	157K	157K	NC	NC	NC	
IC101	67K	2160	7380	0	7340	21K	21K	7280	35K	36K	5030	10K	0	42K
							PIN 15 17K	PIN 16 INF	PIN 17 INF	PIN 18 17K	PIN 19 457	PIN 20 1876	PIN 21 1442	PIN 22 32K
IC201	5380	5380	499	10K	22K	122	3200(1)	50K	0	35K	17K	24K	5850	INF
													PIN 15 INF	PIN 16 0
IC301	457	8760	2060	2410	13K	INF	27K	457	12K	457	5800	INF	5120	0
	PIN 15 215K	PIN 16 INF	PIN 17 INF	PIN 18 INF	PIN 19 INF	PIN 20 INF	PIN 21 INF	PIN 22 INF	PIN 23 INF	PIN 24 INF	PIN 25 INF	PIN 26 1322	PIN 27 1121	PIN 28 1337
IC401	11K	5100	2840	2170	8260	INF	5800	39K	3970	0	4420	1207	5600	18K(1)
											PIN 15 680K	PIN 16 85K	PIN 17 36K	PIN 18 2890
IC601	12K	INF	3930	0	5750	INF	INF	INF	INF	INF	216K	457	INF	4960
ITEM	E	B	C		ITEM	E	B	C		ITEM	E	B	C	
Q301	1418	37K	1017		Q551	0	.35	9000(1)						
Q351	1387	1439	147K		Q552	457	3500	3000						
Q352	1338	1031	147K		Q553	1570	13.3K	23K(1)						
Q353	1365	1396	147K		Q554	17K(1)	23K(1)	18K(1)						
Q451	28K	12K(1)	9000(1)		Q801	9000(1)	21K(1)	9000(1)						
Q452	2.7	3540	28K		Q802	3500	5000	36K(1)						
Q501	0	218	11K(1)											

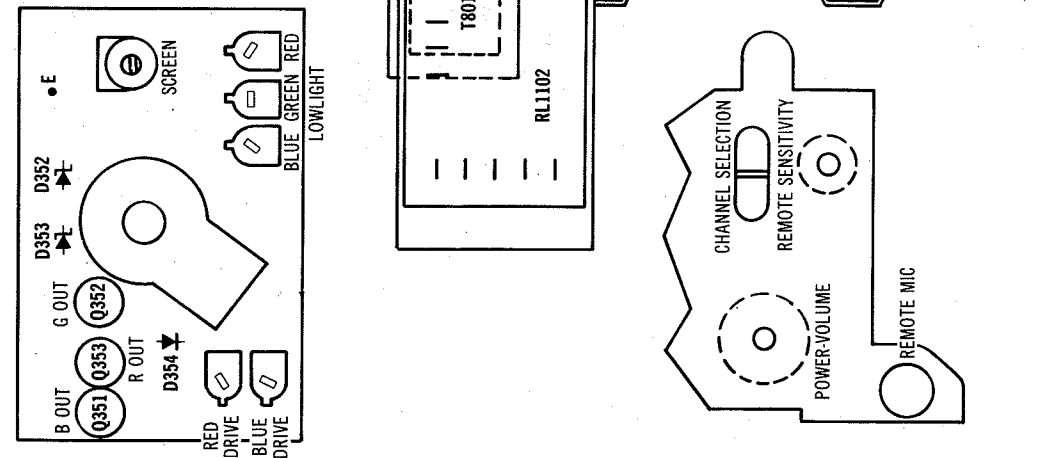
(1) This reading will vary depending upon the condition of the electrolytic in the circuit.

REMOTE CONTROL RESISTANCE MEASUREMENTS

MEASUREMENTS BELOW TAKEN WITH METER HAVING .08V MAX BETWEEN PROBE TIPS														
ITEM	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	PIN 13	PIN 14
RECEIVER IC1101	3450	3560	3560	3450	3560	INF	0	INF	3560	3450	3560	INF	3560	1000
ITEM	E	B	C		ITEM	E	B	C		ITEM	E	B	C	
Q1101	3900	14K	11K		Q1109	0	24K	3560		Q115	56	INF	8840	
Q1102	10K	26K	16K		Q1110	0	24K	3560		Q116	56	INF	8840	
Q1103	18K(3)	30K	9300		Q1111	0	INF(2)	2630		Q117	56	8840	3570	
Q1104	412	18K	1000		Q1113	INF(2)	8940	1547		Q1118	56	8840	3570	
Q1105	3450	10K	0		Q1114	1022	6600	555		TRANSMITTER TR4001	INF(4)	12K(4)	1(4)	
Q1106	3450	10K	0											
Q1107	3450	10K	0											
Q1108	0	76K	3560											

- (2) Reading depends upon polarity of meter connections.
(3) R1177 set maximum clockwise.
(4) Measured from positive side of battery with On/Off switch depressed.

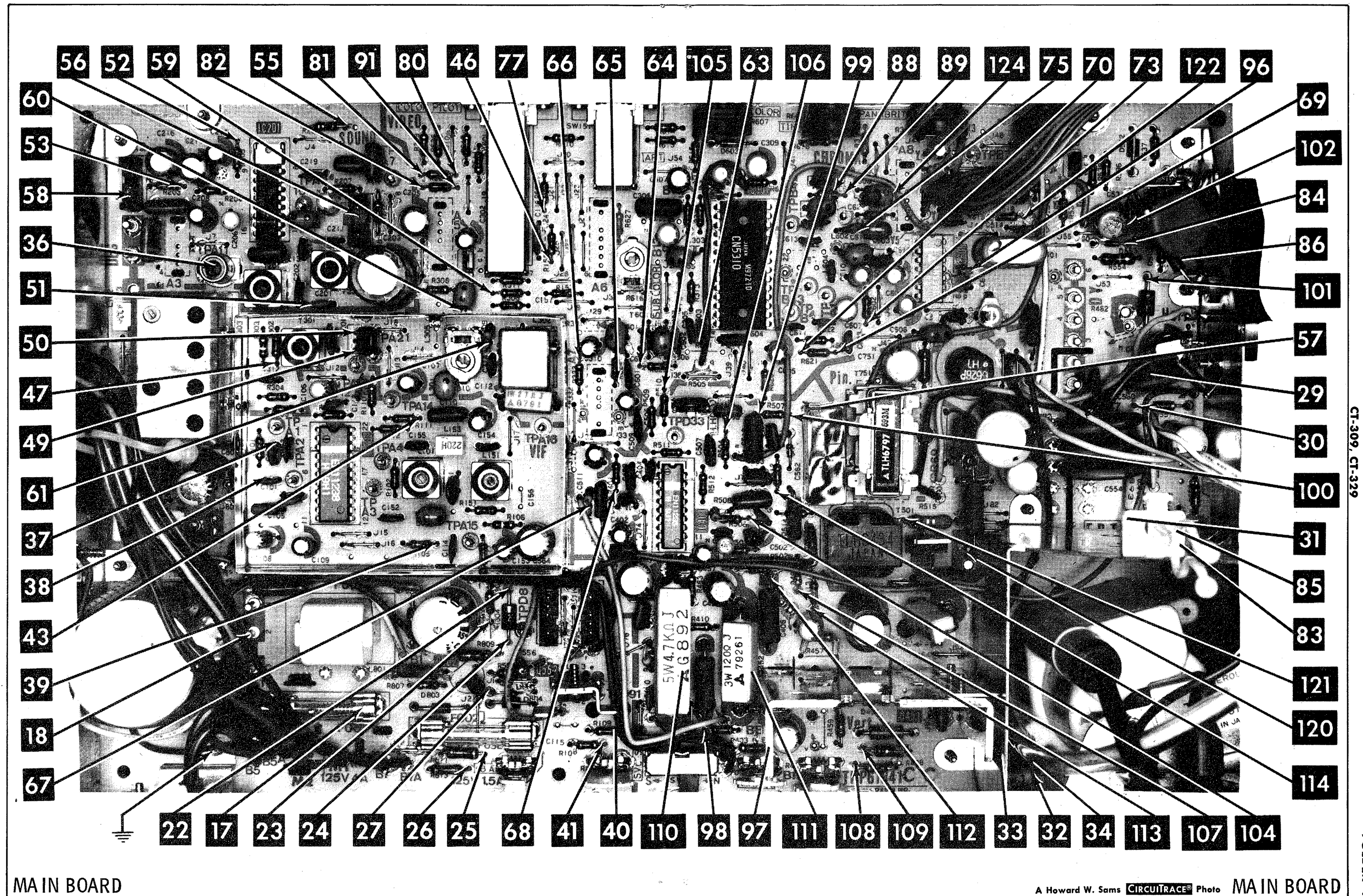
TOP VIEW



PLACEMENT CHART

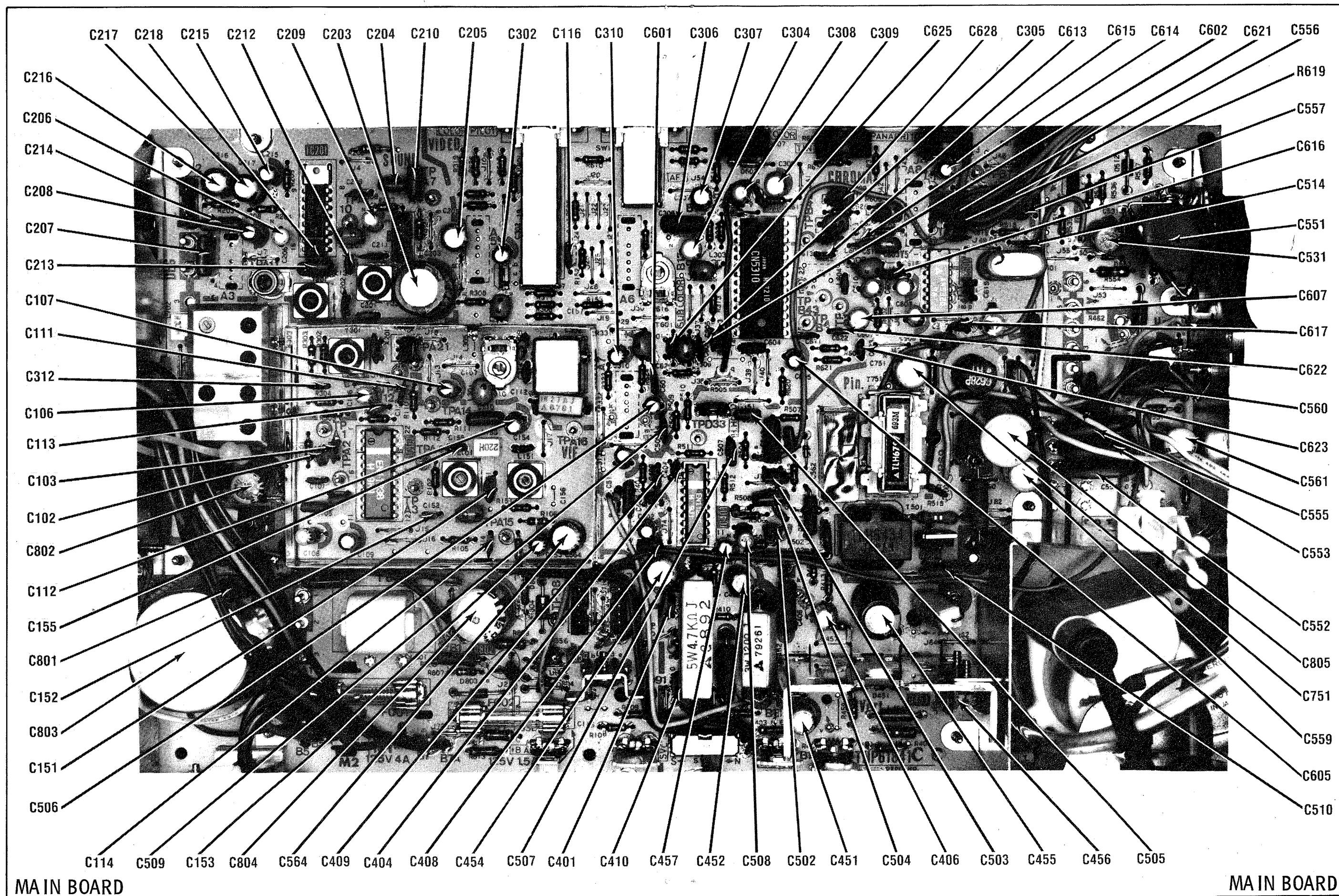
PANASONIC MODELS
CT-309, CT-329

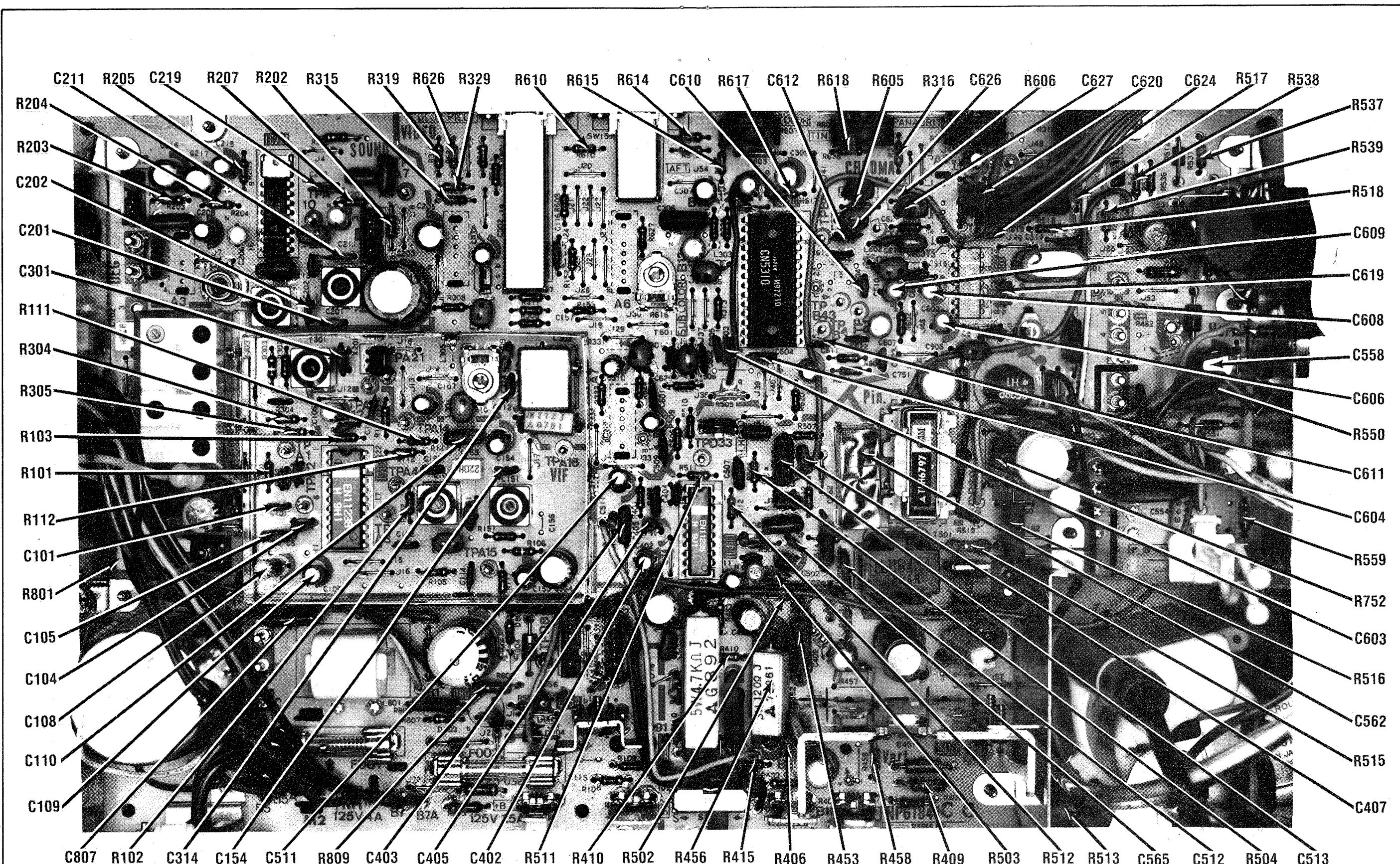
FOLDER 1



MAIN BOARD

A Howard W. Sams CIRCUITRACE® Photo MAIN BOARD



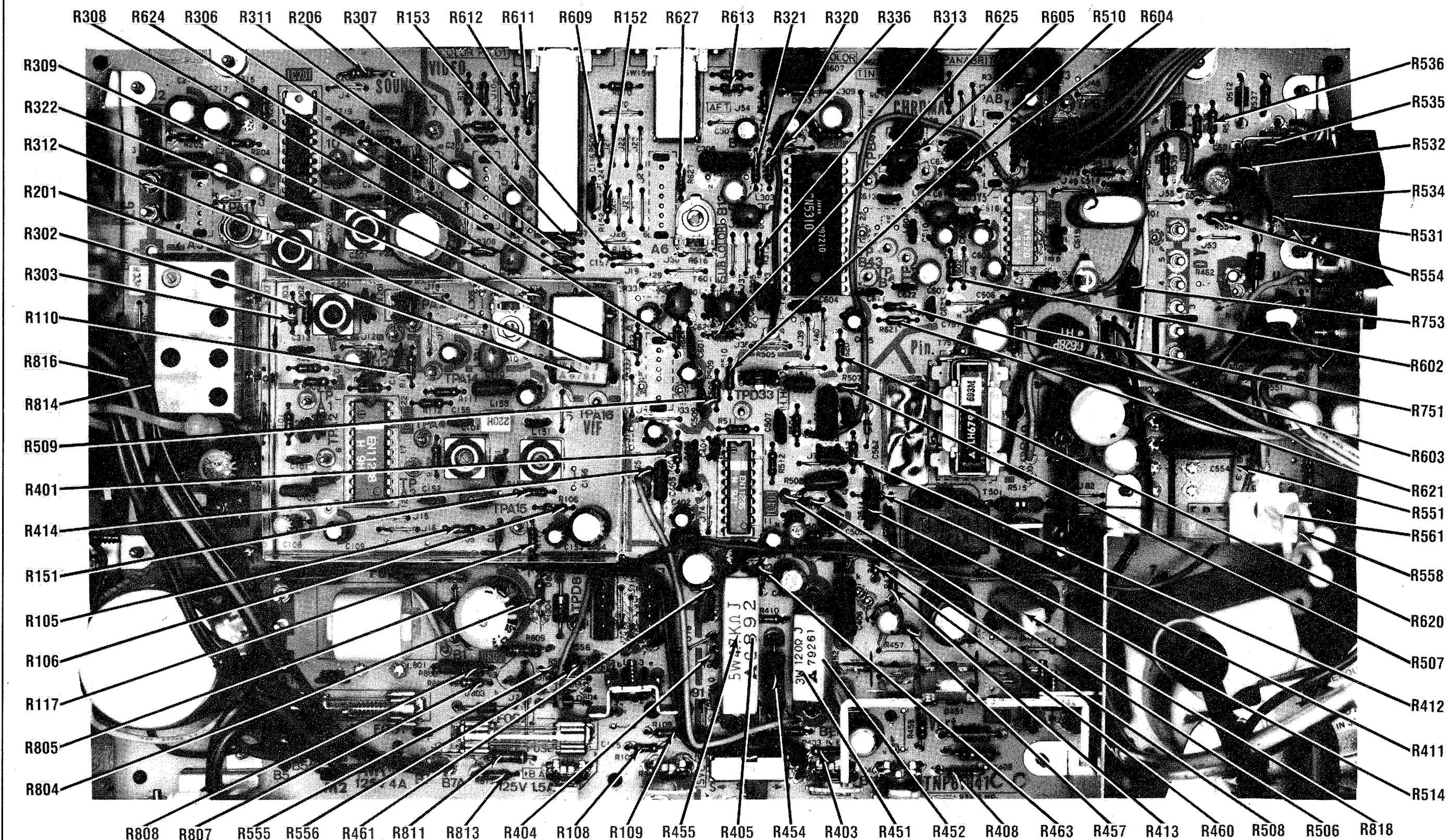


MAIN BOARD

MAIN BOARD

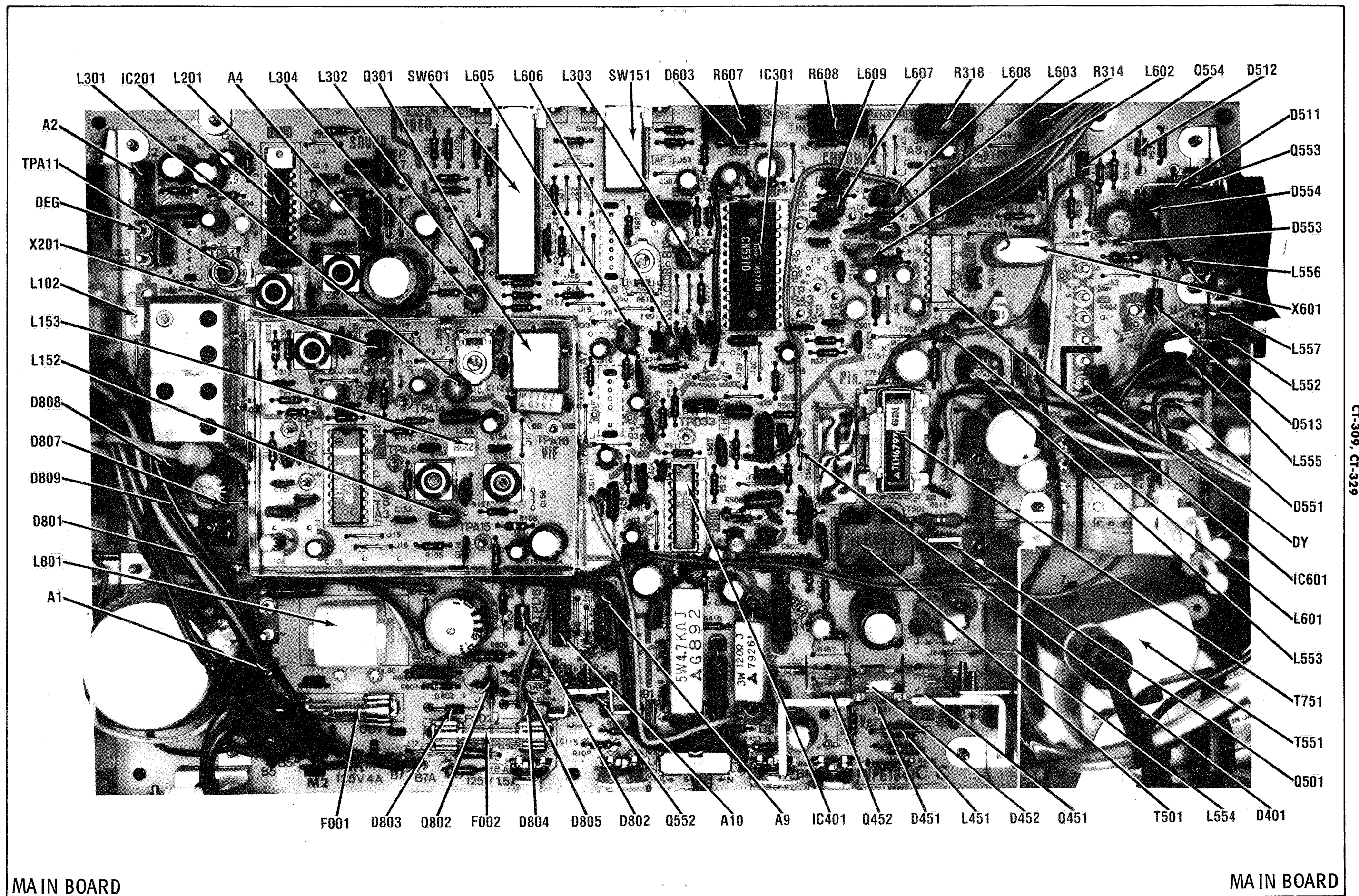
PANASONIC MODELS
CT-309, CT-329

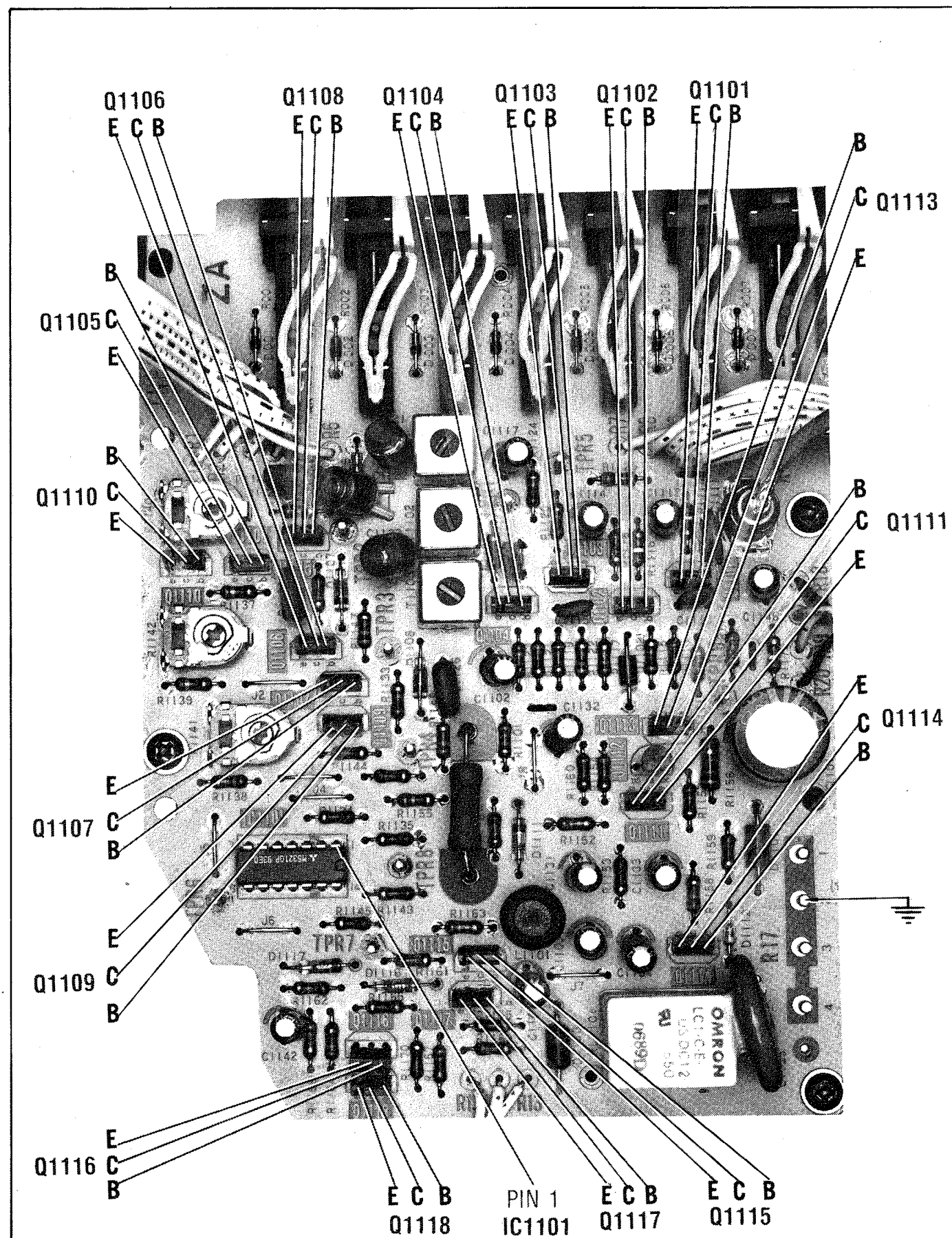
FOLDER 1



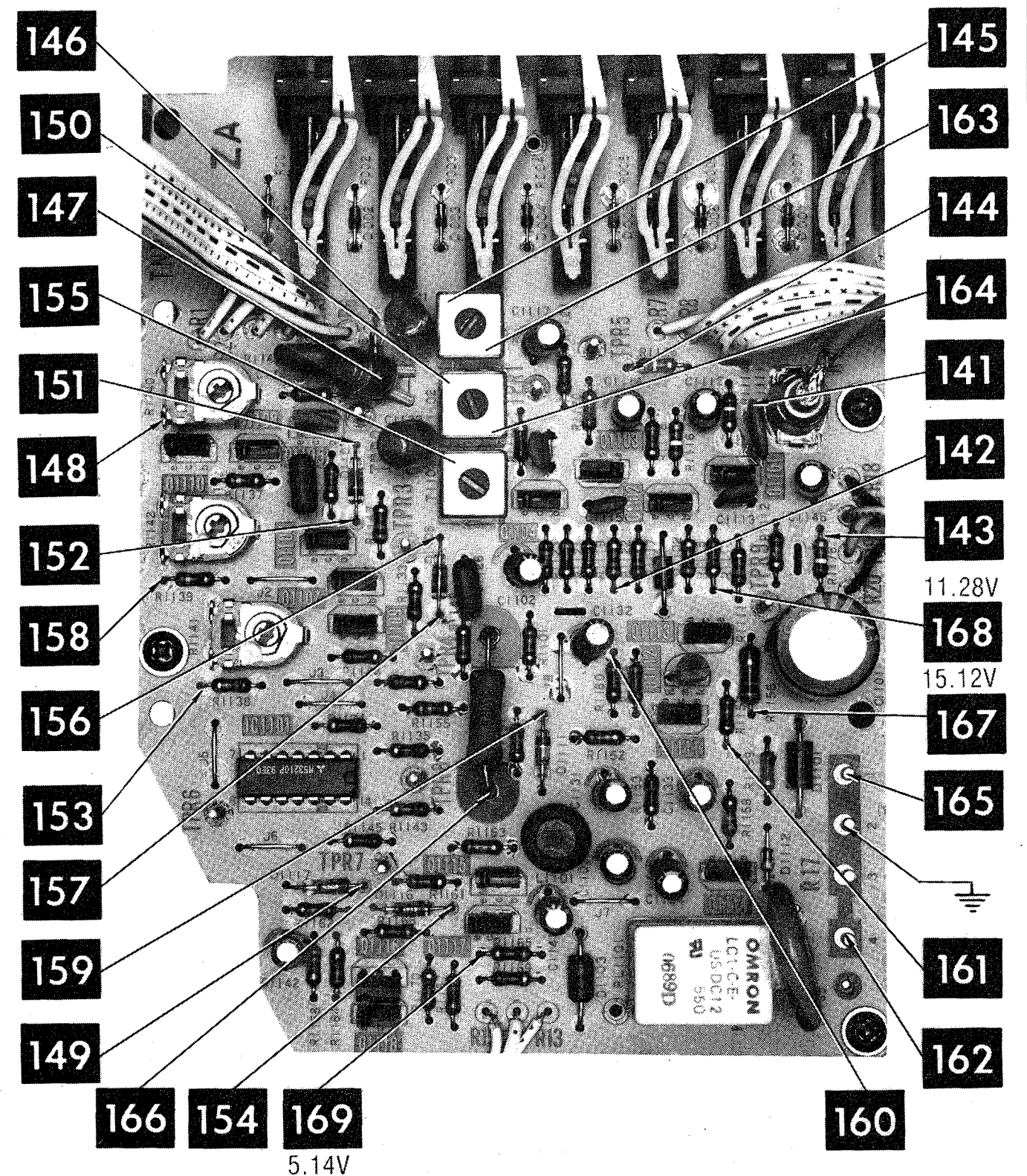
MAIN BOARD

MAIN BOARD





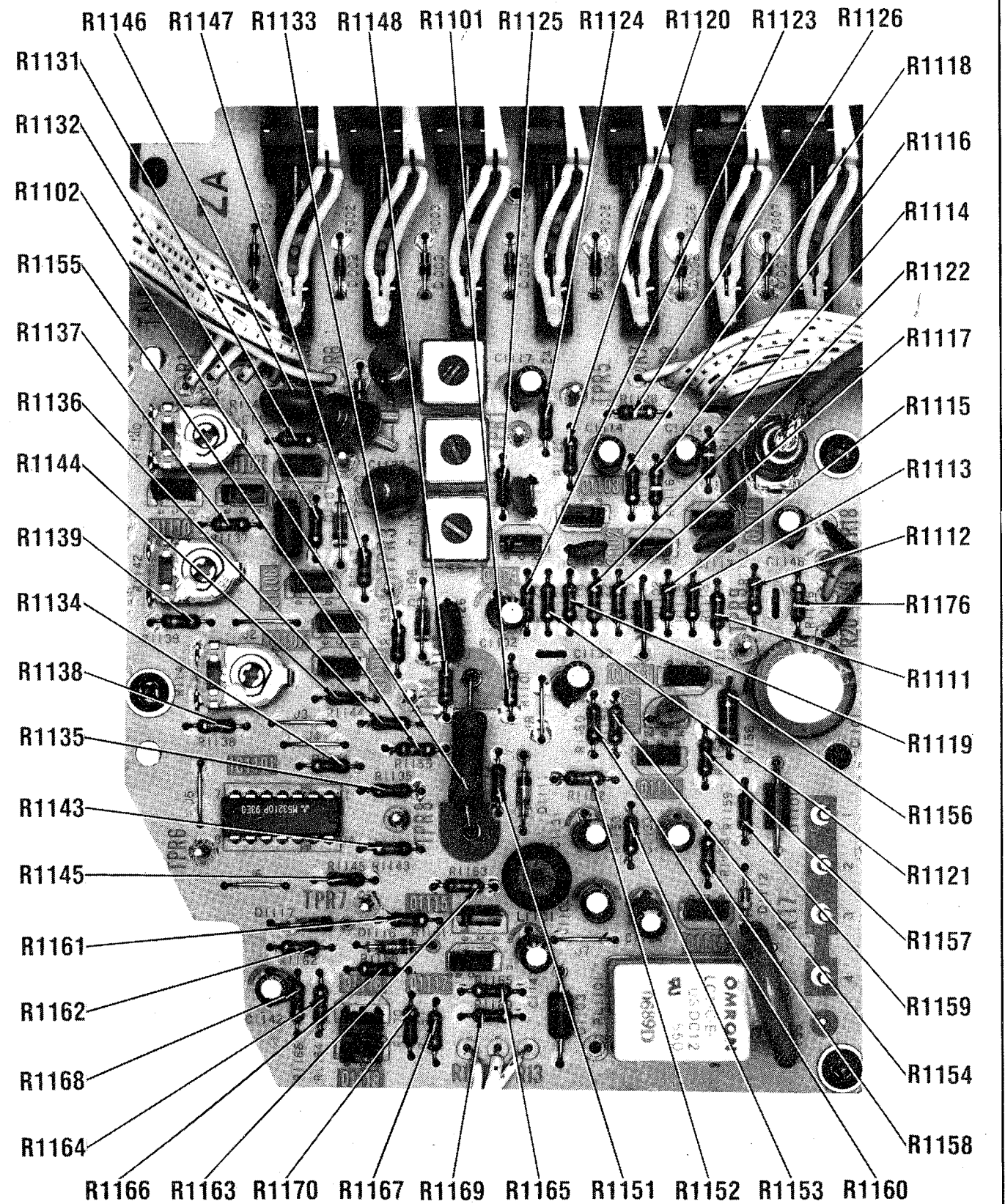
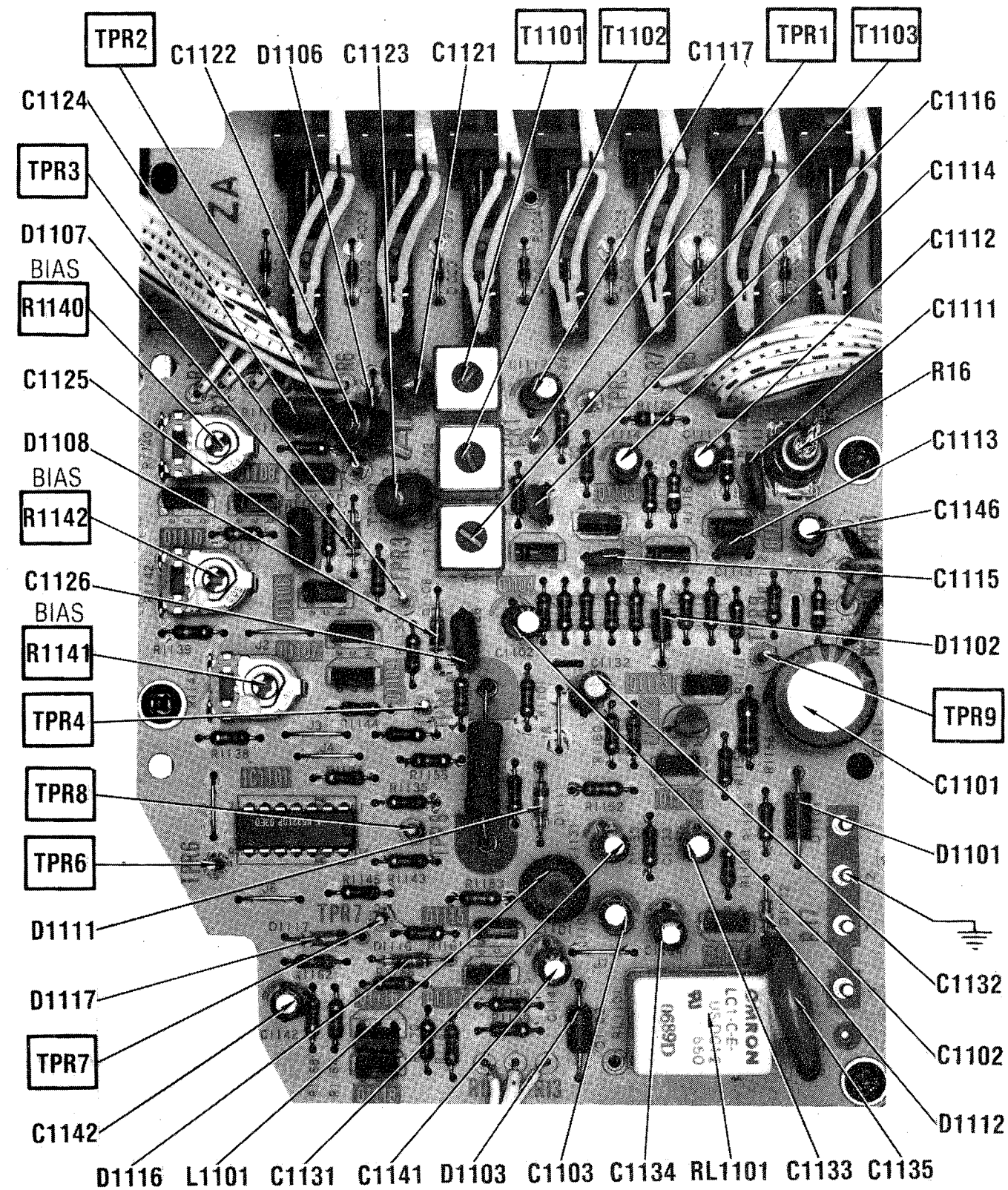
REMOTE CONTROL RECEIVER



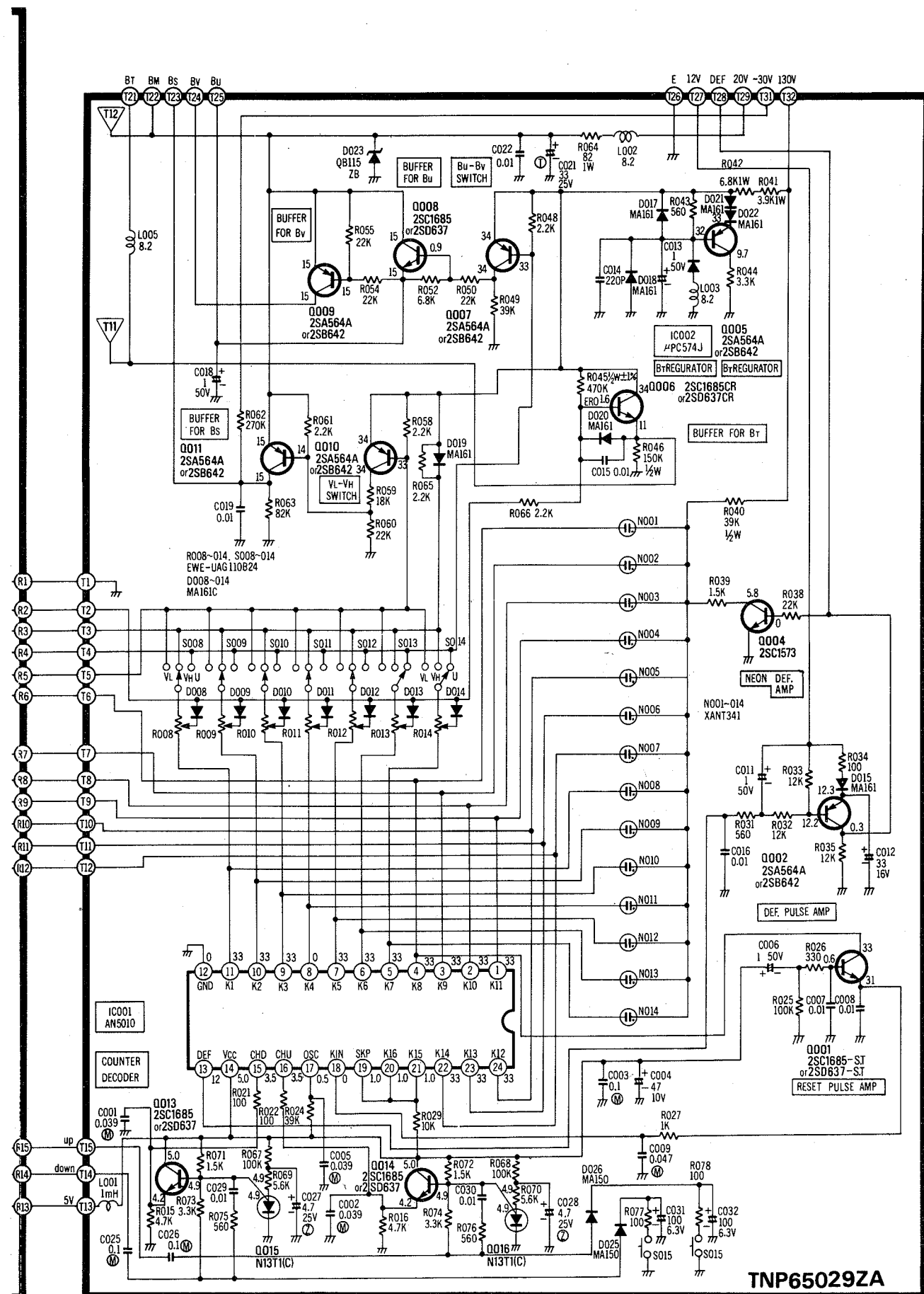
A Howard W. Sams CIRCUITRACE® Photo

REMOTE CONTROL RECEIVER

REMOTE CONTROL RECEIVER



REMOTE CONTROL RECEIVER

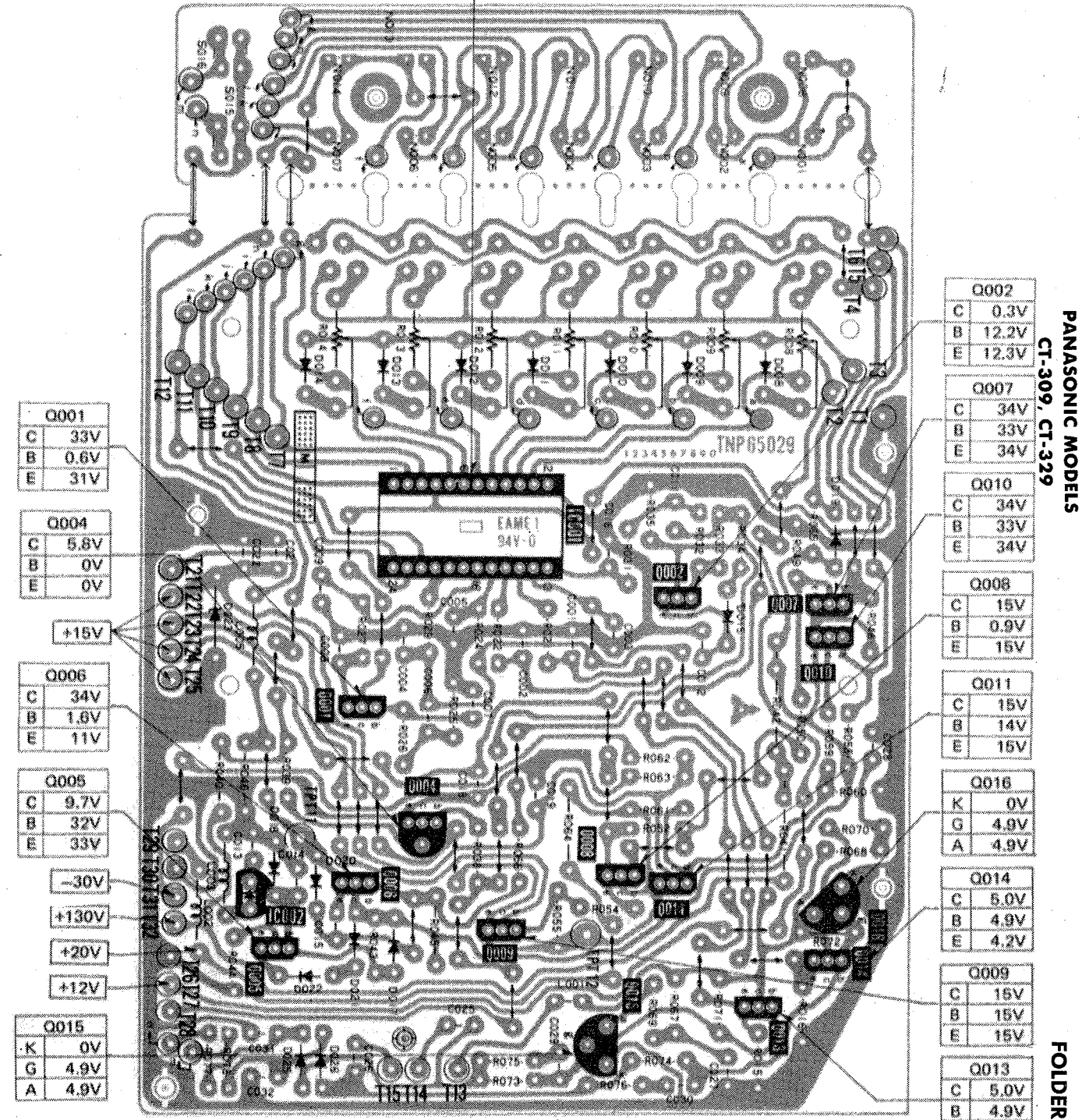


TUNER CONTROL(MODEL CT-329)

Courtesy of the Manufacturer

T-BOARD TNP65029ZA

IC001			
1	33V	13	12V
2	33V	14	5.0V
3	33V	15	3.5V
4	33V	16	3.5V
5	33V	17	0.5V
6	33V	18	0V
7	33V	19	1.0V
8	0V	20	1.0V
9	33V	21	1.0V
10	33V	22	33V
11	33V	23	33V
12	0V	24	33V



Q001			
C	33V		
B	0.6V		
E	31V		

Q004			
C	5.8V		
B	0V		
E	0V		

Q006			
C	34V		
B	1.0V		
E	11V		

Q005			
C	9.7V		
B	32V		
E	33V		

Q015			
K	0V		
G	4.9V		
A	4.9V		

Q002			
C	0.3V		
B	12.2V		
E	12.3V		

Q007			
C	34V		
B	33V		
E	34V		

Q010			
C	34V		
B	33V		
E	34V		

Q008			
C	15V		
B	0.9V		
E	15V		

Q011			
C	15V		
B	14V		
E	15V		

Q016			
K	0V		
G	4.9V		
A	4.9V		

Q014			
C	5.0V		
B	4.9V		
E	4.2V		

Q009			
C	15V		
B	15V		
E	15V		

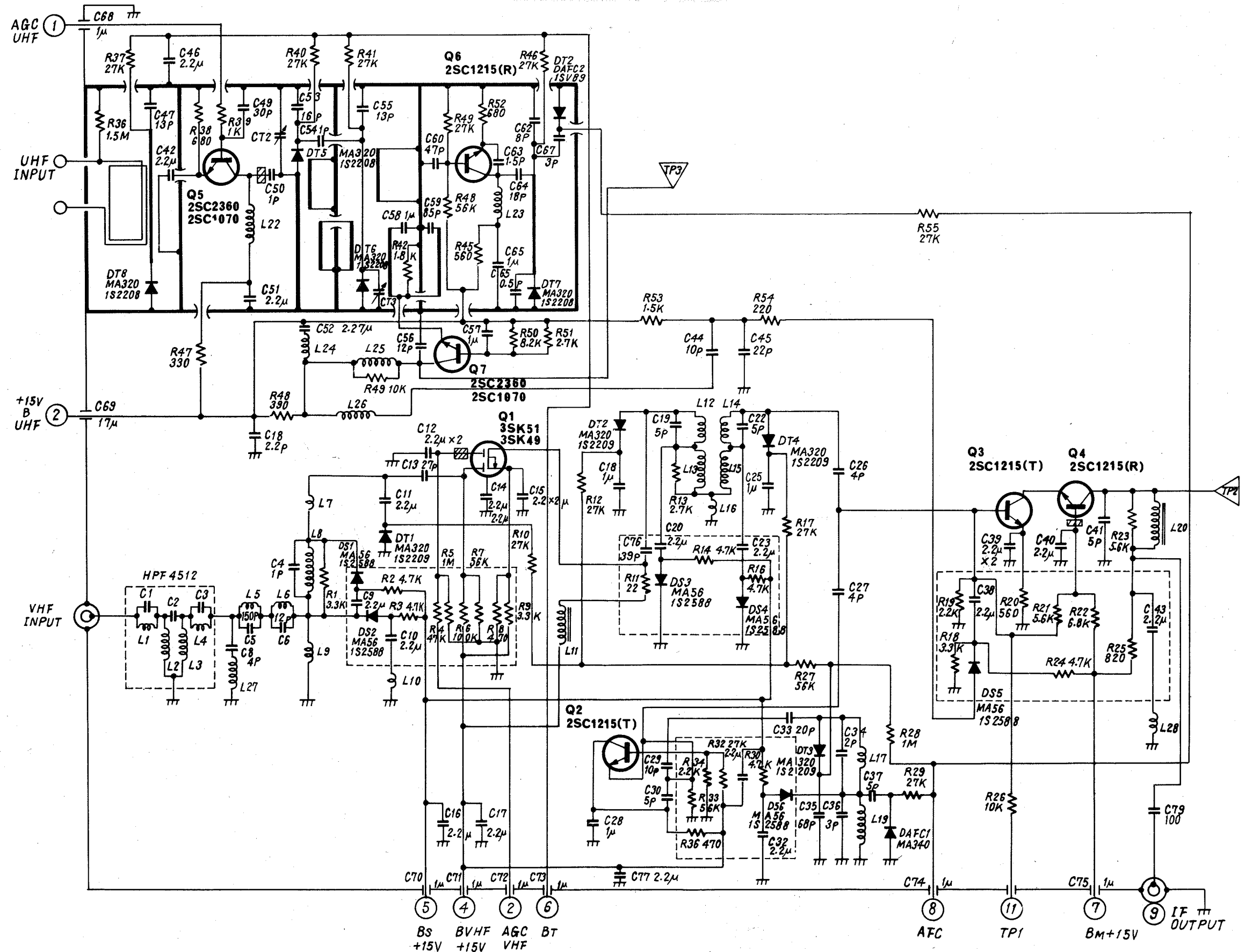
Q013			
C	5.0V		
B	4.9V		
E	4.2V		

TUNER CONTROL(MODEL CT-329)

PANASONIC MODELS
CT-309, CT-329

FOLDER 1

U/V TUNER TNV76404F2



UHF/VHF TUNER (MODEL CT-329)

Courtesy of the Manufacturer

UHF/VHF TUNER (MODEL CT-329)

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

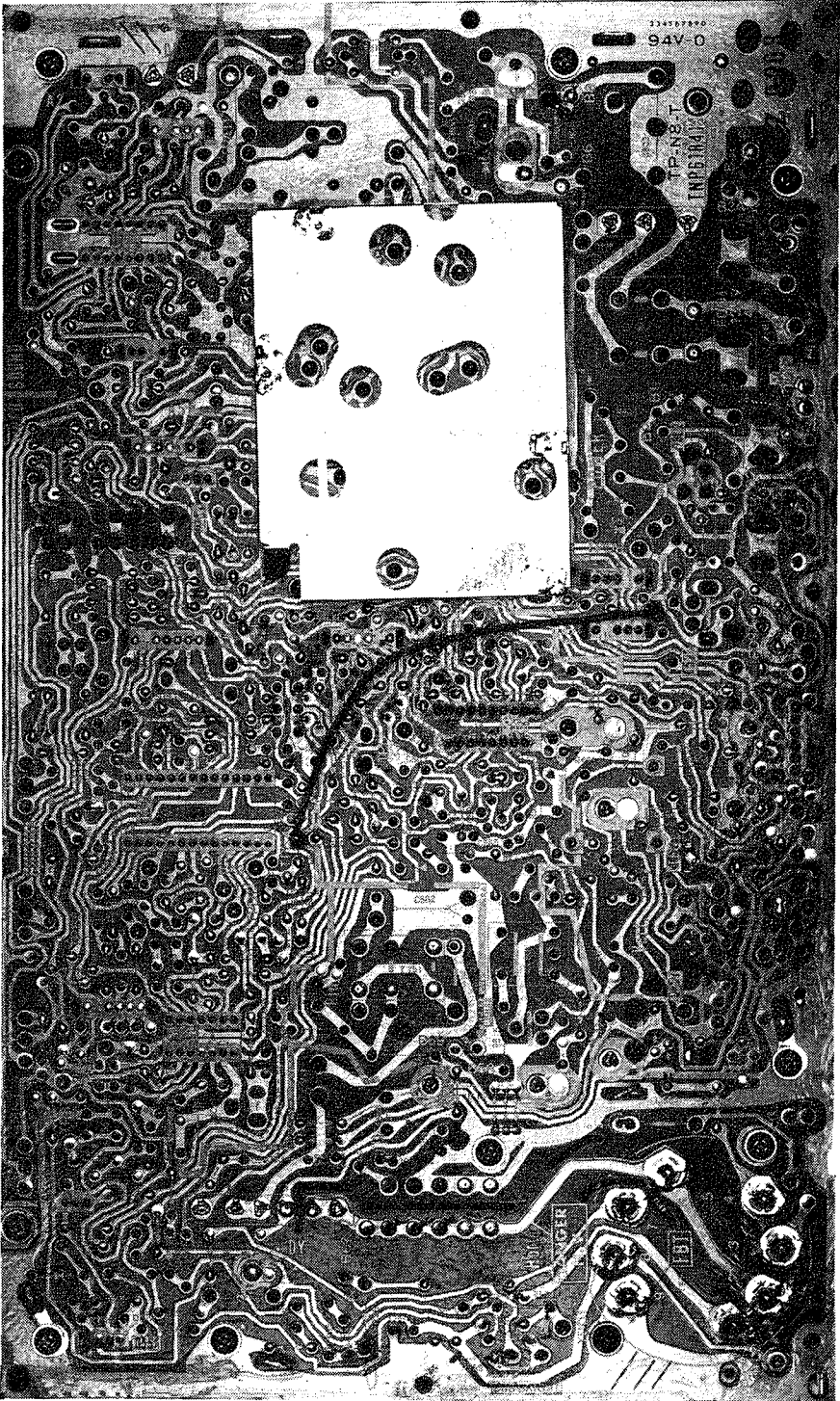
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

WIRING DATA

High Voltage Lead	Use BELDEN No. 9867 (30 KV)
Shielded Hook-up Wire	Use BELDEN No. 8401 or 8421 (Single-Conductor) 8208 (Two-Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8528 (Solid) Available in 13 Colors 8522 (Stranded) Available in 13 Colors
300-Ohm Tuner Input Lead	Use BELDEN No. 8225
75-Ohm Tuner Input Lead	Use BELDEN No. 8241
300-Ohm Antenna Lead-in	Use BELDEN No. 8275 (Foam Core) or 8285 (Foam Jacketed)
Antenna Rotor Cable	Use BELDEN No. 8464 (Flat) or 8484 (Round) 4-Conductor 8485 (Round) 5-Conductor 8488 (Round) 8-Conductor

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFG. PART No.	REPLACEMENT DATA						
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D352	RD5, 1EC		GEZD-5.6	ZM5.6B	SK3777/5011A	ECG5011A	TM5011A	WEP1412/5011	103-29007
D353	MA1051		GEZD-5.1	ZM5.1B	SK3776/5010A	ECG5010A	TM5010A	WEP1411/5010	103-279-10
	RD5, 1EC		GEZD-5.6	ZM5.6B	SK3777/5011A	ECG5011A	TM5011A	WEP1412/5011	103-29007
D354	RD5, 1ES		GEZD-5.6	ZM5.6B	SK3777/5011A	ECG5011A	TM5011A	WEP1412/5011	103-29007
	MA1051		GEZD-5.1	ZM5.1B	SK3776/5010A	ECG5010A	TM5010A	WEP1411/5010	103-279-10
D401	MA150		GE-514	PTC214	SK3100/519	ECG519	TM519	WEP925/519	103-131
	1S954		GE-514	PTC214	SK3100/519	ECG519	TM519	WEP925/519	103-131
D451	MA162		GE-300	PTC214	SK3175/177	ECG177	TM177	WEP1062/177	103-131
	1S954		GE-514	PTC214	SK3100/519	ECG519	TM519	WEP925/519	103-131
D452	MA150		GE-514	PTC214	SK3100/519	ECG519	TM519	WEP925/519	103-131
	1S954		GE-514	PTC214	SK3100/519	ECG519	TM519	WEP925/519	103-131
# D511	MA150		GE-514	PTC214	SK3100/519	ECG519	TM519	WEP925/519	103-131
	1S954		GE-514	PTC214	SK3100/519	ECG519	TM519	WEP925/519	103-131
# D512	QA107RF	TVSQA107RE	GEZD-6.8	ZB6.8B	SK3334/5071A	ECG5071A	TM5071A	WEP1106/5071A	103-Z9020
# D513	RF-1A	TVSRF1A	GE-511	PTC216	SK3318	ECG552	TM552	WEP172/506	103-287
	1S555		GE-511	PTC216	SK3318	ECG552	TM552	WEP172/506	103-287
# D551	ERB24-06C	TVSB2406C	GE-511	PTC216	SK3318	ECG552	TM552	WEP172/506	103-287
	RF1A		GE-511	PTC216	SK3318	ECG552	TM552	WEP172/506	103-287
# D552	ERB24-06D	TVSB2406D	GE-511	PTC216	SK3318	ECG552	TM552	WEP172/506	103-287
	RH1M		GE-511	PTC216	SK3318	ECG552	TM552	WEP172/506	103-287
D553	MA162		GE-300	PTC214	SK3175/177	ECG552	TM552	WEP1062/177	103-131
	1S555		GE-511	PTC216	SK3318	ECG552	TM552	WEP172/506	103-287
D554	MB1F	TVSMB1F							
	QA90G		1N60	PTC206	SK3088	ECG109	TM109	WEP134/109	103-Z9001
# D603	RM2C		GE-509	PTC203	SK3080	ECG125	TM125	WEP170/125	212-Z9000
	ERC04-10	TVSC0410	GE-509	PTC203	SK3080	ECG125	TM125	WEP170/125	212-Z9000
D802	RM25	TVSRM25	GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
	RM12M	TVSRM12M	GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
# D804	BO102		GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
	QA111SE	TVSQA111SE	GEZD-11	ZB11B	SK3139/5074A	ECG5074A	TM5074A	WEP1156/5074A	212-76-02
# D805	MA26W0			PTC302	SK3864/605	ECG605			
	RM12M	TVSRM12M	GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
# D807	BO102		GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
	RM12M	TVSRM12M	GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
# D809	BO102		GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
	BO102		GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
IC101	EN11238	TVSENI1238							
	AN5250								
IC201	CN5310	TVSCN5310							
	EN11235	TVSENI1235							
IC401	AN5320								
	AN5320								
Q301	2SD637Q,R,S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685Q,R,S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q351	2SC1685		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC945A		GE-212	PTC121*	SK3124/289	ECG123AP*	TM123AP*	WEP1945	121-972*
Q352	2SC1573R		GE-222*	PTC170*	SK3433/287*	ECG287*	TM287*	WEP68/287*	121-29045*
	2SC1573NC		GE-222*	PTC170*	SK3433/287*	ECG287*	TM287*	WEP68/287*	121-29045*
Q353	2SC2258		GE-232	PTC907	SK3747/157	ECG376	TM376	WEP61/157	121-29016
	2SC1520		GE-251	PTC907	SK3220/198	ECG198	TM198	WEP779/198	121-Z9028
Q451	2SC1573R		GE-222*	PTC170*	SK3433/287*	ECG287*	TM287*	WEP68/287*	121-29045*
	2SC1573NC		GE-222*	PTC170*	SK3433/287*	ECG287*	TM287*	WEP68/287*	121-29045*
Q452	2SC2258		GE-232	PTC907	SK3747/157	ECG157	TM157	WEP61/157	121-29016
	2SC1520		GE-251	PTC907	SK3220/198	ECG198	TM198	WEP779/198	121-Z9028
Q451	2SC1683P		GE-219	PTC117	SK3765/195A	ECG195	TM195A	WEP755/195A	121-Z9027
	2SC1683Q		GE-219	PTC117	SK3765/195A	ECG195	TM195A	WEP755/195A	121-Z9027
Q452	2SC1683LB		GE-219	PTC117	SK3765/195A	ECG195	TM195A	WEP755/195A	121-Z9027
	2SC1683P		GE-219	PTC117	SK3765/195A	ECG195	TM195A	WEP755/195A	121-Z9027
Q452	2SC1683Q		GE-219	PTC117	SK3765/195A	ECG195	TM195A	WEP755/195A	121-Z9027
	2SC1683LB		GE-219	PTC117	SK3765/195A	ECG195	TM195A	WEP755/195A	121-Z9027



MAIN BOARD-SHIELD LOCATION

REMOTE CONTROL TRANSMITTER PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements. Have your local distributor check Sams COUNTER FACTS* for the most up-to-date replacement.

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA					
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	ZENITH PART No.
TR4001	25C1317S		GE-210	PTC123	SK3124/289	ECG289	TM289	WEP910/289 121-Z9065

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA		
			MALLORY PART No.	SPRAGUE PART No.	
				Q-LINE	GENERAL LINE
C4001	.01 50V 10%	ECV1ZW60X32	EW1A110	QF1-91	1P8-S10
C4002	820 125V 5%		SX382	QW1-49	MWG-821
C4003	390 125V 5%		SX339	QW1-41	MWB-391
C4004	180 125V 5%		SX318	QW1-33	MMA-181
C4005	60 Trimmer				
C4006	56 NPO 50V 5%	ECV1ZW60X32	CH0456		10TCC-Q56
C4007	60 Trimmer				

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L4001	Oscillator	TLR69703			
L4002	Peaking (33uH)	TLT330-999		T4F335A1	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	Battery		
M2	Transducer		
SW4001	Switch	EFROS840K4	3V, Two "AA"
SW4002	Switch		Hi/Low Channel
	Bottom Case	TEG37502-1	On/Off Volume
	Top Case	TEG37501-1S	
	Remote Transmitter	TNQ613	Complete

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements. Have your local distributor check Sams COUNTER FACTS* for the most up-to-date replacement.

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA						
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
Q501	25C1905H 25C1905LB 25C1505 25C1505(1) 2SD517		GE-251	PTC907	SK3219	ECG198	TM198	WEP779/198	121-Z9028
			GE-251	PTC907	SK3219	ECG198	TM198	WEP779/198	121-Z9028
			GE-251	PTC907	SK3219	ECG198	TM198	WEP779/198	121-Z9028
			GE-251	PTC907	SK3219	ECG198	TM198	WEP779/198	121-Z9028
			GE-38	PTC129A	SK3710/238	ECG165	TM165	WEP764/238	121-Z9001
Q552	25C1226Q 25C1226P 25C1226R 25C1226RL 25C1226		GE-215	PTC186	SK3357	ECG186A	TM186A	WEP751/186	121-Z9008
			GE-215	PTC186	SK3357	ECG186A	TM186A	WEP751/186	121-Z9008
			GE-215	PTC186	SK3357	ECG186A	TM186A	WEP751/186	121-Z9008
			GE-215	PTC186	SK3357	ECG186A	TM186A	WEP751/186	121-Z9008
			GE-215	PTC186	SK3357	ECG186A	TM186A	WEP751/186	121-Z9008
# Q553	2SD637Q 25C1685Q 25C1685 25C945A 25C945Q		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
			GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
			GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
			GE-212	PTC121*	SK3124/289	ECG123AP*	TM123AP*	WEP1945	121-972*
			GE-212	PTC121*	SK3124/289	ECG123AP*	TM123AP*	WEP1945	121-972*
# Q554	25B642Q 25A564A 25A564Q 25E1629A 2SD692		GE-221*	PTC103*	SK3912	ECG234+	TM234+	WEP907/234+	121-879*
			GE-65	PTC103*	SK3247/234	ECG290	TM290	WEP495	121-879*
			GE-65	PTC103*	SK3247/234	ECG290	TM290	WEP495	121-879*
			GE-75	PTC175	SK3563	ECG238	TM238	WEP222/181	121-Z9034
					SK3182/343	ECG247	TM247	WEP976/247	121-Z9077
Q802	25C1473R 25C1473NC 25C1573 25C1941		GE-222*	PTC170*	SK3244	ECG287*	TM287*	WEP68/287*	121-Z9045*
			GE-222*	PTC170*	SK3244	ECG287*	TM287*	WEP68/287*	121-Z9045*
			GE-222*	PTC170*	SK3433/287*	ECG287*	TM287*	WEP68/287*	121-Z9045*
			GE-220	PTC170*	SK3866	ECG287*	TM287*	WEP750	121-Z9045

For SAFETY use only equivalent replacement part.
* Lead configuration may vary from original.
+ Rotate 180° to conform with original lead configuration.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA		
			MALLORY PART No.	SPRAGUE PART No.	
				Q-LINE	GENERAL LINE
C001	.47 50V	ECEA1HSR47	VTT47A63	QV1-3	EV-1610
C004	10 16V	ECEA1CS100	VTT10B25	QV1-41	EV-1222
C106	.1 50V	ECEA50ZR1	TDCT04M050EL	QDT1-2	SD50-R109
C107	2.2 50V	ECEA1HS2R2	VTT2R2A50	QV1-21	EV-1617.1
C108	2.2 50V	ECEA50Z2R2	VTT2R2A50	QV1-21	EV-1617.1
C109	4.7 25V	ECEA1ES4R7	VTT4R7B50	QV1-31	EV-1619.1
C112	10 16V	ECEA1CS100	VTT10B25	QV1-41	EV-1222
C153	1 50V	ECEA1HS010	VTT1A50	QV1-11	EV-1615
C203	1000 25V	ECEA1ES202	VTT1000N25	QV1-185	EV-1360
C205	100 16V	ECEA1CS101	VTT100E16	QV1-95	EV-1231
C206	1 50V NP	ECEA50N1	TCN501A	QEN1-20	TVAN-1560
C208	3.3 25V	ECEA1ES3R3	VTT3R3A50	QV1-25	EV-1618.1
C209	1 50V NP	ECEA50N1	TCN501A	QEN1-20	TVAN-1560
C215	10 16V	ECEA1CS100	VTT10B25	QV1-41	EV-1222
C216	100 25V	ECEA1ES101	VTT100G25	QV1-97	EV-1331
C217	100 16V	ECEA1CS101	VTT100E16	QV1-95	EV-1231
C302	10 16V	ECEA1CS100	VTT10B25	QV1-41	EV-1222
C304	10 16V NP	ECEA16N10	TCN5010A	QEN1-187	TVAN-1304.1
C307	47 16V	ECEA1CS470	VTT47D16	QV1-73	EV-1226
C308	3.3 25V	ECEA25Z3R3	VTT3R3A50	QV1-25	EV-1618.1
C309	22 16V	ECEA16Z22	VTT22B16	QV1-55	EV-1224
C310	3.3 50V	ECEA1HS3R3	VTT3R3A50	QV1-25	EV-1618.1
C354	3.3 25V	ECEA1ES3R3	VTT3R3A50	QV1-25	EV-1618.1
C402	1 50V	ECEA1HS010	VTT1A50	QV1-11	EV-1615
C405	2.2 25V	ECSZ25EF2R2V	TDCT25M035FL	QDT1-37	SD35-2R29
C406	1 160V	ECEA160V1	TC56A*		TVA-1540*
C451	10 50V	ECEA50Z10	VTT10B63	QV1-45	EV-1622
C452	10 100V	ECEA2AS100	VTT10G100		TVA-1337*
C454	220 16V	ECEA1CS221	VTT220H16	QV1-117	EV-1240
C455	100 100V	ECEA2AS101	TC10101B*		TVA-1346*
C457	10 16V	ECEA1CS100	VTT10B25	QV1-41	EV-1222
C502	33 16V	ECSZ16EF33V	TDCT33M035GL		SD35-339
C506	1 50V	ECEA1HS010	VTT1A50	QV1-11	EV-1615
C508	1 50V NP	ECEA50N1	TCN501A	QEN1-20	TVAN-1560
C511	1 50V	ECEA1HS010	VTT1A50	QV1-11	EV-1615
# C531	10 50V	ECEA50Z10	VTT10B63	QV1-45	EV-1622
# C558	220 35V	ECEA1VS221	VTT220K35	QV1-121	EV-1440
# C559	4.7 250V	ECEA250V4R7U			
# C561	3.3 160V NP	ECEA160N3R3			
C564	220 16V	ECEA1CS221	VTT220H16	QV1-117	EV-1240
C605	1 50V	ECEA1HS010	VTT1A50	QV1-11	EV-1615
C606	.22 50V	ECEA50Z2R2	TDCT24M050EL	QDT1-10	SD50-R229
C607	4.7 25V NP	ECEA25N4R7	TCN505A	QEN1-113	TVAN-1303.1
C608	.22 50V	ECEA50Z2R2	TDCT24M050EL	QDT1-10	SD50-R229
C609	.1 50V	ECEA50ZR1	TDCT04M050EL	QDT1-2	SD50-R109
C615	1 50V	ECEA1HS010	VTT1A50	QV1-11	EV-1615
C751	22 25V NP	ECEA25N2ZQ			
# C802	4.7 250V	ECEA250V4R7U			
# C803	600 200V	ECE1600H200Y			
# C804	33 160V	ECEA160V33U			
# C805	33 160V	ECEA160V33W			

For SAFETY use only equivalent replacement part.
* Axial replacement for radial device.

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements. Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA		
			MALLORY PART No.	SPRAGUE PART No.	
				Q-LINE	GENERAL LINE
CA1	4pF 50V ±.25	ECCD1H040CC	CN0547		
	5pF 50V ±.25	ECCD1H050CC(1)	GP550		
CA2	3pF 50V ±.25	ECCD1H030CC	CN0533		
C101	.001 50V 10%		GP210	QCT2-41	10TS-D10
C102	.001 50V 10%		GP210	QCT2-41	10TS-D10
C103	.01 50V		MAG5011		
C104	560 50V 10%		GP327		10TS-T27
C105	.0039 50V 10%		M192P3929R8		192P3929R8
	.039 50V 10%		M192P3939R8		192P3939R8
	.022 50V 10%(1)		M192P2239R8		192P2239R8
C110	.047 50V 10%		EW1A147	QF1-171	1PB-S47
C111	.01 50V		MAG5011		
C113	68 50V 5%		CN0468		10TCC-Q68
C114	.01 50V 10%		EW1A110	QF1-91	1PB-S10
C116	.01 50V		MAG5011		
C151	56 N150 50V 5%	ECCD1H560JP2	*		10TCP-Q56
C152	.01 50V		MAG5011		
C154	4pF NPO 50V ±.25	ECCD1H040CC	CN0547		
C155	1pF NPO 50V ±.25	ECCD1H010CC	CN0510		
C201	3pF 50V ±.25	ECCD1H030CC	CN0533		
C202	82 N150 50V 5%	ECCD1H820JP2	*		10TCP-Q82
C204	.022 50V 10%		M192P2239R8		192P2239R8
C207	.068 50V 10%		EW1A168	QF1-195	1PB-S68
C210	.047 50V 10%		EW1A147	QF1-171	1PB-S47
C211	82 N150 50V 5%	ECCD1H820JP2	*		10TCP-Q82
C212	15 50V 5%		CN0415		10TCC-Q15
C213	.047 50V 10%		EW1A147	QF1-171	1PB-S47
C214	.056 50V 10%		EW1A156	QF1-185	1PB-S56
C218	.01 50V		MAG5011		
C219	.01 50V		MAG5011		
C301	82 N150 50V 5%	ECCD1H820JP2	*		10TCP-Q82
C305	180 50V 10%		EW105010		10TCC-T18
C306	.1 50V 10%		CN0547		431P1049R5
C312	4pF NPO 50V ±.25	ECCD1H040CC (1)	CN0468		10TCC-Q68
	56 50V 5%		CN0439		10TCC-Q39
C314	39 NPO 50V 5%				
C317	2 50V ±.25	ECCD1H020CU(1)			10TCC-T22
C351	220 50V 10%		GP347	QCT2-35	10TS-T47
C352	470 50V 10%		GP368		10TS-T68
C353	680 50V 10%		DPMS20D22		20PS-D22
C355	.0022 2KV 10%	ECKD3D222KB8	GP368		10TS-T68
C356	680 50V 10%		GP356		10TS-T56
C357	560 50V 10%		GP356		10TS-T56
C358	560 50V 10%		GP356		10TS-T56
C361	15 50V 10%		CN0415		10TCC-Q15
C401	.0047 50V 10%		M192P4729R8		192P4729R8
C403	.027 50V 10%		M192P2739R8		192P2739R8
C404	560 50V 10%		GP356		10TS-T56
C407	.0056 50V 10%		M192P5629R8		192P5629R8
C408	.01 50V 10%		EW1A110	QF1-91	1PB-S10
C409	.001 50V 10%		EW1A210	QF1-1	1PB-D10
C410	100 50V 10%		CN0310		10TCC-T10
C456	.0022 200V 10%		EW16222		6PS-D22
C503	.0027 50V 10%	ECQF6272JZ	M192P2729R8		192P2729R8
C504	.0027 630V 5%				192P1839R8
C505	.018 50V 10%		M192P1839R8	QF1-73	1PB-D68
C507	.0068 50V 10%		EW1A268	QCT2-44	10TS-D18
C509	.0018 50V 10%		GP218		10TS-D27
C510	.0027 500V 10%		GP227	QCT2-41	10TS-D10
C512	.001 500V 10%		GP210		431P1049R5
C513	.1 50V 10%		EW105010		10TCC-Q82
C514	82 50V 5%		CN0482		
C551	.0015 2KV 10%	ECKD3D152KB8			
C552	.0022 2KV 10%	ECKD3D222KB8			
C553	.0022 2KV 10%	ECKD3D222KB8			
C555	.0022 2KV 10%	ECKD3D222KB8			
C556	.033 100V 10%	EDQM1333KZ	PVC1133	QF1-149	1PB-S33
C557	.033 100V 10%	ECQM1333KZ	PVC1133	QF1-149	1PB-S33
C560	.0033 500V 10%		EW16233		6PS-D33
C562	.33 400V 5%	ECQE4334JCA			
C565	.001 50V 10%		GP210	QCT2-41	10TS-D10
C601	120 NPO 50V 5%		CN0312		10TCC-T12
C602	100 NPO 50V 5%		CN0310		10TCC-T10
C603	.01 50V		MAG5011		
C604	.015 50V 10%		M192P1539R8		192P1539R8
C610	390 50V 10%		GP339	QCT2-34	10TS-T39
C611	.01 50V		MAG5011		
C612	100 50V 5%		CN0310		10TCC-T10
C613	22 NPO 50V 5%		CN0422	QCT2-34	10TCC-Q22
C614	390 50V 10%		GP339		10TS-T39
C616	22 NPO 50V 5%		CN0422		10TCC-Q22
C617	22 50V 5%		CN0422		10TCC-Q22
C618	40 Trimmer				10TCC-Q56
C619	56 NPO 50V 5%	ECV1ZW40X32	CN0456	QCC2-22	10TCC-Q33
C620	33 50V 5%		CN0433	QCC2-26	10TCC-Q47
C621	47 50V 5%		CN0447		10TS-T56
C622	560 50V 10%		GP356		10TCC-T27
C623	270 50V 10%				
C624	.01 50V		MAG5011		
C625	18 NPO 50V 5%		CN0418	QCC2-15	10TCC-Q18
C626	10 50V ±15		CN0410	QCC2-15	10TCC-Q10
C627	10 50V ±.5		CN0410	QCC2-15	10TCC-Q10
C628	10 50V ±.5		CN0410	QF1-97	6PS-S10
C801	.01 500V	ECKD2H103PE7	EW16110	QF1-195	1PB-S68
C806	.068 100V 10%		EW1A168		
C807	470 125V AC	ECKDEL471MB			

For SAFETY use only equivalent replacement part.
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
(1) Used in Model CT-309.

REMOTE CONTROL RECEIVER PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements. Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA		
			MALLORY PART No.	SPRAGUE PART No.	
				Q-LINE	GENERAL LINE
# C1101	1000 25V	ECEA1ES102	VTT1000N25	QV1-185	EV-1360
C1102	10 16V	ECEA1CS100	VTT10B25	QV1-41	EV-1222
C1103	47 10V	ECEA1AS470	VTT47D16	QV1-73	EV-1226
C1112	1 50V	ECEA1HS010	VTT1A50	QV1-11	EV-1615
C1114	1 50V	ECEA1HS010	VTT1A50	QV1-11	EV-1615
C1117	2.2 50V	ECEA1HS2R2	VTT2R2A50	QV1-21	EV-1617.1
C1131	4.7 25V	ECEA1ES4R7	VTT4R7B50	QV1-31	EV-1619.1
C1132	2.2 50V	ECEA1HS2R2	VTT2R2A50	QV1-21	EV-1617.1
C1133	10 25V	ECEA1ES100	VTT10B25		EV-1422
C1134	4.7 25V	ECEA1ES4R7	VTT4R7B50	QV1-31	EV-1619.1
C1141	4.7 25V	ECEA1ES4R7	VTT4R7B50	QV1-31	EV-1619.1
C1142	4.7 25V	ECEA1ES4R7	VTT4R7B50	QV1-31	EV-1619.1
C1146	1 50V	ECEA1HS010	VTT1A50	QV1-11	EV-1615

For SAFETY use only equivalent replacement part.

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA		
			MALLORY PART No.	SPRAGUE PART No.	
				Q-LINE	GENERAL LINE
C1111	.0015 50V 10%		GP215		10TS-D15
C1113	270 50V 10%				10TCC-T27
C1115	270 50V 10%				10TCC-T27
C1116	150 50V 10%		CN0315		10TCC-T15
C1121	.0027 125V 5%		SX227		MWC-272
C1122	.003 125V 5%		SX230		MWC-302
C1123	.0033 125V 5%		SX233		MWC-332
C1124	.015 50V 10%		M192P1539R8		192P1539R8
C1125	.015 50V 10%		M192P1539R8		192P1539R8
C1126	.015 50V 10%		M192P1539R8		192P1539R8
# C1135	.01 1KV	ECKDDL103ZE	GP110	QC1-149	5GA-S10

#For SAFETY use only equivalent replacement part.

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA		
			MFR. PART No.	MALLORY PART No.	TRW PART No.
R1140	Bias	50K	EVTS3MA00B54	RVA0911H503	U260R503B
R1141	Bias	50K	EVTS3MA00B54	RVA0911H503	U260R503B
R1142	Bias	50K	EVTS3MA00B54	RVA0911H503	U260R503B
R1177	Remote Sensitivity/SW.	20K	EVHY4RF30C24		

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1101	Peaking (1mH)	TLT102K119C			
T1101	Bandpass	TLR69717			
T1102	Bandpass	TLR69717			
T1103	Bandpass	TLR69717			

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	Microphone	EFRRS840K202	
RL1101	Relay	YLC1-R-C-E	Channel Stepping
RL1102	Relay	SR-53-37-1	

For SAFETY use only equivalent replacement part.

REMOTE CONTROL RECEIVER PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA						
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1101	RATZ RM1Z	TVSRM1Z	GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
D1102	QA111SE	TVSQA111SE	GE-504A	PTC201	SK3311	ECG116	TM116	WEP156	212-76-02
D1103	QB105N	TVSQB105N	GEZD-11	ZB11B	SK3139/5074A	ECG5074A	TM5074A	WEP1156/5074A	
D1106	OA90G		GEZD-5,0		SK3056/135A	ECG135A	TM135A	WEP1103/135A	103-29006
D1107	OA90G			PTC206	SK3088	ECG109	TM109	WEP134/109	103-29001
D1108	OA90G			PTC206	SK3088	ECG109	TM109	WEP134/109	103-29001
D1111	OA90G		1N60	PTC206	SK3088	ECG109	TM109	WEP134/109	103-29001
D1112	MA150		GE-514	PTC214	SK3100/519	ECG519	TM519	WEP925/519	103-131
D1116	OA90G		1N60	PTC206	SK3088	ECG109	TM109	WEP134/109	103-29001
D1117	OA90G		1N60	PTC206	SK3088	ECG109	TM109	WEP134/109	103-29001
IC1101	M53210P	TVSM53210P	GE-7410		SK7410	ECG7410			
Q1101	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1102	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1103	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1104	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1105	2SB642S		GE-221*	PTC103*	SK3912	ECG234+	TM234+	WEP907/234+	121-879*
	2SB642T		GE-221*	PTC103*	SK3912	ECG234+	TM234+	WEP907/234+	121-879*
	2SA664A		GE-65	PTC103*	SK3247/234	ECG290	TM290	WEP495	121-879*
Q1106	2SB642S		GE-221*	PTC103*	SK3912	ECG234+	TM234+	WEP907/234+	121-879*
	2SB642T		GE-221*	PTC103*	SK3912	ECG234+	TM234+	WEP907/234+	121-879*
	2SA664A		GE-65	PTC103*	SK3247/234	ECG290	TM290	WEP495	121-879*
Q1107	2SB642S		GE-221*	PTC103*	SK3912	ECG234+	TM234+	WEP907/234+	121-879*
	2SB642T		GE-221*	PTC103*	SK3912	ECG234+	TM234+	WEP907/234+	121-879*
	2SA664A		GE-65	PTC103*	SK3247/234	ECG290	TM290	WEP495	121-879*
Q1108	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1109	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1110	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1111	2SD637R		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1112	M21C		CG8*	PTC651*	SK3627/5404*	ECG5404*	TM5404*	WEP6324/5404*	185-29007*
Q1113	2SD637R		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1114	2SB643S		GE-269+	PTC103*	SK3912	ECG290+	TM290+	WEP911/290+	121-29003*
	2SB643T		GE-269+	PTC103*	SK3912	ECG290+	TM290+	WEP911/290+	121-29003*
	2SA719		GE-269	PTC103*	SK3114/290	ECG290	TM290	WEP911/290	121-29003*
Q1115	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1116	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1117	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
Q1118	2SD637T		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SD637S		GE-62+	PTC121*	SK3911	ECG289+	TM289+	WEP66/199+	121-881*
	2SC1685S		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*
	2SC1685T		GE-62	PTC121*	SK3124/289	ECG289	TM289	WEP705*	121-972*

#For SAFETY use only equivalent replacement part.

* Lead configuration may vary from original.

+ Rotate 180° to conform with original lead configuration.

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA		
			MFR. PART No.	MALLORY PART No.	TRW PART No.
R107	RF AGC	5000	EVTU000MB53	MTC53L1	X201R502B
R210	Volume/Switch	10K	EVVON6F25A14		
R310	Sub Contrast	2000	EVT33MA00B23	RVA0911H252	U260R252B
R314	Brightness	200 Detent 50%	EVHTJAF25B22		
R318	Contrast (Panabrite)	10K	EVHTAAF25B14		
R326	Sub Brightness	2000	EVTT3AA00B23	MTC23L1 (2)	X201R252B (2)
R360	Blue Low Light	5000	EVT33MA00B53	RVA0911H502	U260R502B
R361	Green Low Light	5000	EVT33MA00B53	RVA0911H502	U260R502B
R362	Red Low Light	5000	EVT33MA00B53	RVA0911H502	U260R502B
R363	Blue Drive	2000	EVT33MA00B23	RVA0911H252	U260R252B
R364	Red Drive	2000	EVT33MA00B23		U260R252B
R368	Screen	4Meg	EVME6U10KB46		U201R505B
R402	Vert Hold	5000	EVTU000MB53	MTC53L1	X201R502B
R407	Vert Height Size	100	EVTU7U00B12	MTC12L1	X201R101B
R505	Horiz Hold	5000	EVTT3AA00B53	MTC53L1 (2)	X201R502B (2)
R560	Focus	10Meg	EVMP6S28221		
R607	Color	10K	EVHTAAF25B14		
R608	Tint	10K	EVHTAAF25B14		
R616	Sub Color	100K	EVT33MA00B15	RVA0911H104	U260R104B
R812	B+ Adjust	500	EVTU000MB52		

For SAFETY use only equivalent replacement part.

(2) Cut off one of the end terminals and bend to fit P.C. board.

RESISTORS (Power and Special)

REPLACEMENT DATA				REPLACEMENT DATA			
ITEM No.	RATING	MFR. PART No.	WORKMAN PART No.	ITEM No.	RATING	MFR. PART No.	WORKMAN PART No.
# D808	8 Cold PTC	ERPF580M080F	FR605	# R534	68K 5% 1/2W	ERD50TJ683	22-2140
# RA1	100K 5% 1/2W	ERD12TJ104	22-2144	# R535	Carbon Film	ERD25TJ331	22-1084
# RA2	100K 5% 1/2W	ERD12TJ104	22-2144	# R536	Carbon Film	ERD25TJ821	22-1094
# RA3	100K 5% 1/2W	ERD12TJ104	22-2144	# R537	Carbon Film	ERD25CKF1332	
R201	27 5% 1W Fusible	ERQ1CJ270		# R538	13.3K 1% 1/4W		
R202	47 5% 1/4W	ERD25FJ470	22-1064	# R538	Metal Oxide	ERD25TJ183	22-1126
R206	4.7 5% 1/4W	ERD25FJ477	22-1040	# R539	18K 5% 1/4W	ERD25TJ123	22-1122
# R371	1.68 10% 1/2W WW	ERW12PKR68		R550	Carbon Film	ERD50FJ101	22-2072
RA405	8200 5% 1/4W	ERD25FJ822	22-1118	# R551	Carbon Film	ERQ12HKR47	
RA406	2200 5% 1/4W	ERD25FJ222	22-1104	R553	Fusible	ERD50FJ223	22-2128
RA408	82 5% 1/4W	ERD25FJ820	22-1070	# R801	Carbon Film	ERF3ATKR82	
RA409	10 5% 1/2W	ERD50FJ100	22-2048	# R802	Carbon Film	ERF208M181Y	
# R455	4700 5% 5W	ERG5CJ472		# R803	Carbon Film	ERF3ATKR68	22-1122
RA456	120 5% 3W WW	ERF3SJ121		# R804	Carbon Film	ERD25FJ123	
RA457	10 5% 1/4W	ERD25FJ100	22-1048	# R805	Carbon Film	ERD25FJ470	22-1064
RA458	2.7 5% 1/4W	ERD25FJ277	22-1034	R809	Carbon Film	ERD50FJ150	22-2052
R502	220 5% 1/4W	ERD25FJ221	22-1080	# R811	Carbon Film	ERD50CKF4702	
R503	1000 5% 1/4W	ERD25FJ102	22-1096	# R813	Carbon Film	ERD25CKF5111	
# R513	1 5% 1/2W Fusible	ERQ12HJ1R0		# R814	Carbon Film	ERD25TJ224	22-1152
R515	27 10% 1/2W WW	ERW12PKR27		# R816	Carbon Film	ERD50FJ684	22-2164
# 516	1800 5% 2W	ERG2ANJ182	22-4102	# R818	Carbon Film	ERF2ATK3R9	
# R531	Metal Oxide	ERD25TJ560	22-1066	# R832	27K 10% 1/2W(1)	ERD25CKF273	22-2130
# R532	56 5% 1/4W			# R833	Carbon Film	ERD25CKF273	22-2130
	24.6 1% 1/4W	ERD25CKF2462		# R834	Carbon Film	ERD25CKF273	22-2130
	Metal Oxide				6800 10% 1/2W(1)	ERD25CKF273	22-2130
					Carbon Film	ERD25CKF273	22-2130

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
LA1	Balun	TLR69356			
L101	Video IF	TL168751			
L102	Peaking (.33uH)	TLQR33N205C			
L151	Video IF	TL167394			
L152	Peaking (1uH)	TLT010L999G		70F106AI	
L153	Peaking (22uH)	TLQ220K205C			
L201	Peaking (1uH)	TLT010L999G		70F106AI	
L301	Peaking (4.7uH)	TLT047L999G			
L302	Delay Line	TLK871			
L303	Peaking (12uH)	TLT120J999G		70F125A1	
L304	Peaking (56uH)	TLT560K999G		74F565AI	
L351	Peaking (180uH)	TLT181K999G			
L601	Peaking (1uH)	TLT010L999G		70F106AI	
L602	Peaking (82uH)	TLT820K999G		74F335A1	
L603	Peaking (33uH)	TLT330K999G		74F225A1	
L605	Peaking (22uH)	TLT220K999G		70F125A1	
L606	Peaking (12uH)	TLT120J999G		74F335A1	
L607	Peaking (33uH)	TLT330-999		74F335A1	
L608	Peaking (33uH)	TLT330-999		74F335A1	
L609	Peaking (33uH)	TLT330-999		74F335A1	
L801	Line Filter	TLP6506P			
T101	HLB Filter	TL166653			
T201	Audio IF	TL562313			
T202	Quadrature	TL563318			
T301	4.5MHz Trap	TL163307			

For SAFETY use only equivalent replacement part.

COILS & TRANSFORMERS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA				
		MFG. PART No.	OTHER IDENTIFICATION	MILLER PART No.	THORDARSON PART No.	TRIAD PART No.
# L553	Horiz Linearity Coil	TLH6628P	6628.TH			
# L560	Yoke Horiz 2.67mH 90° Vert 202mH	TLY5371-5				
# T501	Horiz Driver	TLH6434				
# T551	Horiz Output	TLF6040F				
# T751	Pincushion	TLH6797				

For SAFETY use only equivalent replacement part.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFG. PART No.	THORDARSON PART No.	TRIAD PART No.	
# T251	21.12	16	EDT2423AY			# For SAFETY use only equivalent replacement part.

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFG. PART No.	THORDARSON PART No.	TRIAD PART No.	
# T801	120V AC @ .060A AC	14.15V AC @ .465A DC	TLP8267-2			# For SAFETY use only equivalent replacement part.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFG. PART No.	QUAM PART No.	
SP1	4" PM 16 Ohm	EAS10P85SB	4A1216	

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA				
		PART No.		BUSS PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
# F001	4A @ 125V Slow-blow	XBAIF40NU14A	TJC6319	MDX4	1A1907-02	
# F002	1.5A @ 125V Medium-blow	XBAIF15NU14A	TJC6319	MDX1 1/2	1A1907-02	

For SAFETY use equivalent replacement part.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
A1	Coupler Kit	TZS9009	3 Pin
A2	Connector	TXAJT02329	Used in model CT-329
	Connector	TXAJT02309-2	Used in model CT-309
A4	Connector	TXAJT04329	Used in model CT-329
	Connector	TXAJT04309-1	Used in model CT-309
A9	Connector	TXAJT09329	
A10	Connector	TXAJT10329	Used in model CT-329
	Connector	TXAJT10309-1	Used in model CT-309
A17	Coupler Kit	TJS9001	4 Pin
# CRA1	Component Combination	TXNU471P02M	Antenna Isolation
# CRA2	Component Combination	TXNU471P02M	Antenna Isolation
# CRA3	Component Combination	TXNU471P02M	Antenna Isolation
# CRA4	Component Combination	TXNU471P02M	Antenna Isolation
# CRA5	Component Combination	TXNU471P02M	Antenna Isolation
# CRA6	Component Combination	TXNU131P23M	Antenna Isolation
# DG-1	Degaussing Coil	TXNU131P23M	Antenna Isolation
J1	Jack	TLK59076	Earphone
L4	Connector	TJS27970	Used in model CT-329
L451	Ferrite Bead	TXAJL4329	
L551	Ferrite Bead	TLP408	
L552	Ferrite Bead	TSC911	
L554	Ferrite Bead	TLP408	
L555	Ferrite Bead	TSC909	
L556	Ferrite Bead	TSC909	
L558	Ferrite Bead	TSC909	Used in model CT-309
# N001	Neon Lamp	XAN14Y	Used in model CT-309
# N002	Neon Lamp	XAN14Y	Used in model CT-309
# P1	AC Cord	TSX1148	Used in model CT-309
S015	Switch	EVQ04R13K	Used in model CT-329
S016	Switch	EVQ04R13K	Used in model CT-329
SW151	Switch	ESB7167	AFT
SW301	Switch	ESD7022	Service
SW601	Switch	ESB7324	Color Pilot
SW801	Switch	EVV0N6F25A14	Power (Part of Volume Control R210)
V1	CRT	370GHB22	
# X201	Filter	EFCS4R5M53	4.5MHz
# X601	Crystal	TSS616-1	3.58MHz
	Antenna Terminal	TJB524010	Board, Used in model CT-329
	Antenna Terminal	TJB524015	Board, Used in model CT-309
	Antenna UHF	TSA343	RUSSELL Replacement Loop LIN-2H
	Antenna VHF	TSA8108-1	RUSSELL Replacement Rod SIM-4H
	Convergence	TLC2024-2S	RUSSELL Replacement Assembly POR-12H
	Earphone	XEH3B1	
	Magnet	XFMK0148G	
	P.C. Board	TNP66960ZA	CRT
	Plug	TJS168120	3 Pin
	Plug	TJS168130	4 Pin
	Socket	TJS35030	CRT
#	Tuner UHF/VHF	TNV76404F2	Used in model CT-329
#	Tuner UHF	TNK36121EB	Used in model CT-309.
#	Tuner VHF	TNT6675FEB	Used in model CT-309.

For SAFETY use only equivalent replacement part.

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

ITEM	PART No.	ITEM	PART No.
Button - Channel Up/Down	TBX178400 (1)	Knob - On/Off	TBX17599-1 (1)
Cabinet	TXFKY12309	Knob - On/Off	TBX17599 (2)
Control Door	TXFKP21329 (1)	Knob - Tuning	TBX17608 (1)
Control Panel	TXFKP02329 (1)	Knob - UHF Channel Select	TBX17737 (2)
Control Panel	TXFKP11309 (2)	Knob - UHF Fine Tuning	TBX17417 (2)
Dial - UHF Channel	TKK170343 (2)	Knob - UHF Channel Select	TBX17738 (2)
Dial - VHF Channel	TKK179347-1 (2)	Knob - VHF Channel Select	TBX17417 (2)
Knob - Brightness, Contrast, Tint, Color	TBX1764000	Knob - VHF Fine Tuning	TBX17417 (2)
Knob - Band Select	TBX17609 (1)	Rear Cover	TXFKU11309

(1) Used in Model CT-329 (2) Used in Model CT309