

### CABINET-REAR VIEW DISASSEMBLY INSTRUCTIONS

#### CABINET REMOVAL

Remove all knobs. Remove nine screws holding top half of cabinet. Remove cabinet top by sliding top to the rear of the set. Disconnect speaker plug while removing top.

#### CRT REMOVAL

Follow "Cabinet Removal" procedure. Disconnect CRT socket and HV anode lead. Remove deflection yoke from CRT neck. While holding CRT, remove three screws holding CRT and lift CRT from set. Do not lift CRT by the neck.

#### PRINTED CIRCUIT BOARD REMOVAL

Follow "Cabinet Removal" procedure. Disconnect CRT socket, HV anode lead and ground wires. Remove one screw holding AC interlock, one screw holding antenna block, two screws holding battery contacts, two screws holding power transformer, one screw holding earphone jack, three screws holding tuner assembly, and one screw holding printed circuit board. Loosen and remove deflection yoke from CRT neck. Slide printed circuit board from set along with associated assemblies from cabinet.

### SERVICING IN THE FIELD

#### CRT IMPLOSION PROTECTION AND CLEANING

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

#### FUSE DEVICES

A 1 -amp fuse is used for low-voltage power-supply protection. (See photo, Cabinet - Rear View.)

A .25-amp fuse is used for AC line protection. (See photo, Cabinet - Rear View.)

#### VHF TUNER

Set fine tuning at the center of its range and adjust oscillator slug (one for each channel) for best sound and picture.

#### UHF TUNER

The UHF tuner employs a detent mechanism for channel selection. Fine tuning is adjusted by rotating the fine tuning knob.

#### HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is accomplished by the proper setting of the Horiz. Hold Coil. (See photo, Cabinet - Rear View.)

#### FOCUS

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

#### AGC

The AGC may be varied by RF and IF AGC controls. (See Transistor Placement Chart.)

#### CENTERING

Centering is accomplished by proper adjustment of two magnetic rings located on the yoke rear cover. (See photo, Cabinet - Rear View.)

## PHOTOFACT® Folder

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For Supplier Address See PHOTOFACT Index

PANASONIC  
MODEL TR-525 (CH. T505A)



### SAFETY PRECAUTIONS

Make sure line voltage does not exceed rating of set. Check high-voltage regulation and adjust to correct value. Be sure shields and rear cover are in place and secure.

Beware of shock from high voltage or AC line. Discharge high voltage to HV cage only. Use extreme care when handling picture tube. Do not bump, scratch, or exert undue strain.

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### HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

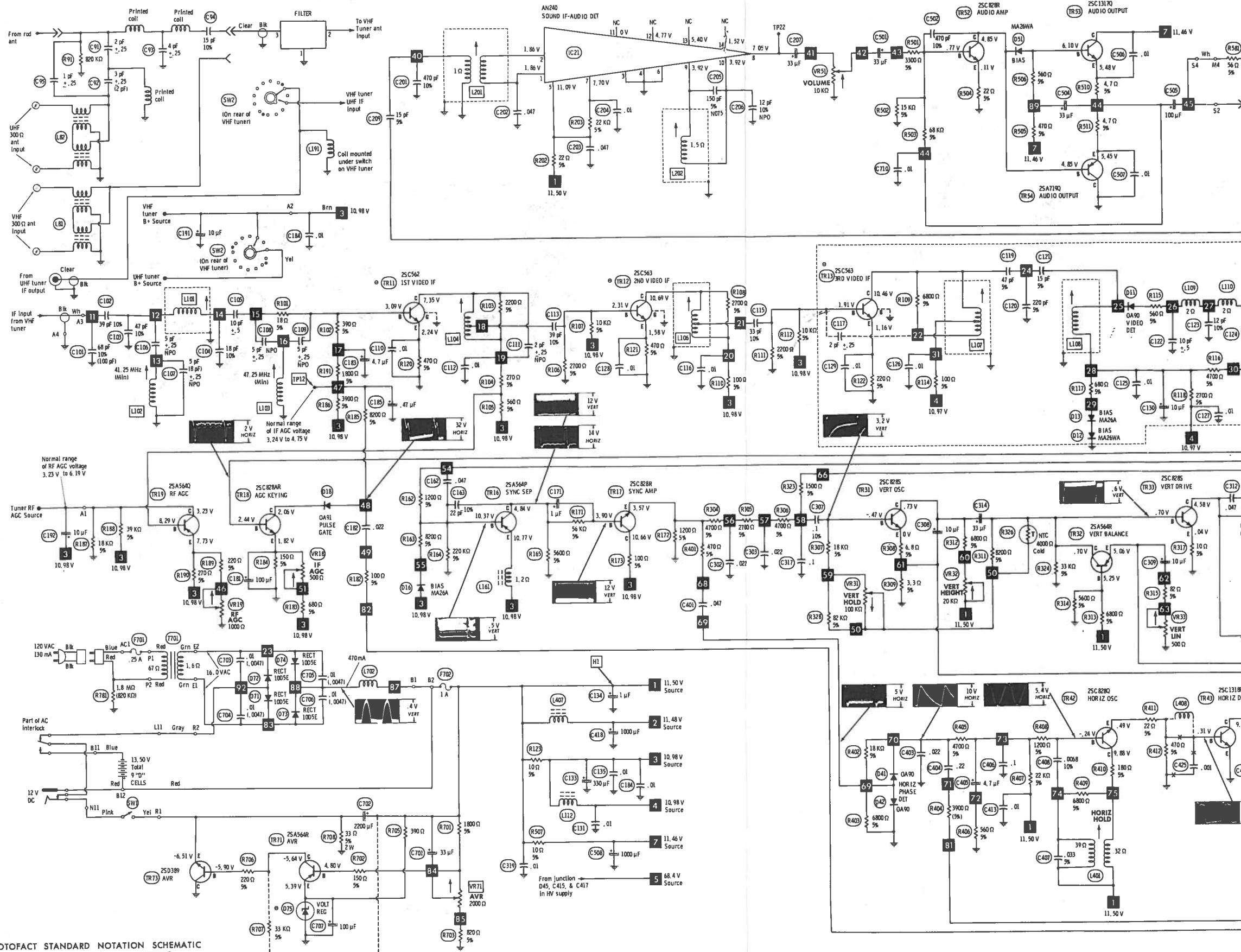
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed.

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DATE 1-76

SET 1539 FOLDER 1

10 9 8 7 6 5 4 3



A PHOTOFAC STANDARD NOTATION SCHEMATIC  
WITH CIRCUITRACE

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✕ Circuitry not used in some versions

--- Circuitry used in some versions

⊙ See parts list

\* Nominal value

⊥ Ground

Chassis

Common tie point

Waveforms: triggered scope, keyed rainbow generator

Supply voltage maintained as shown at input.

Voltages measured with digital meter, no signal.

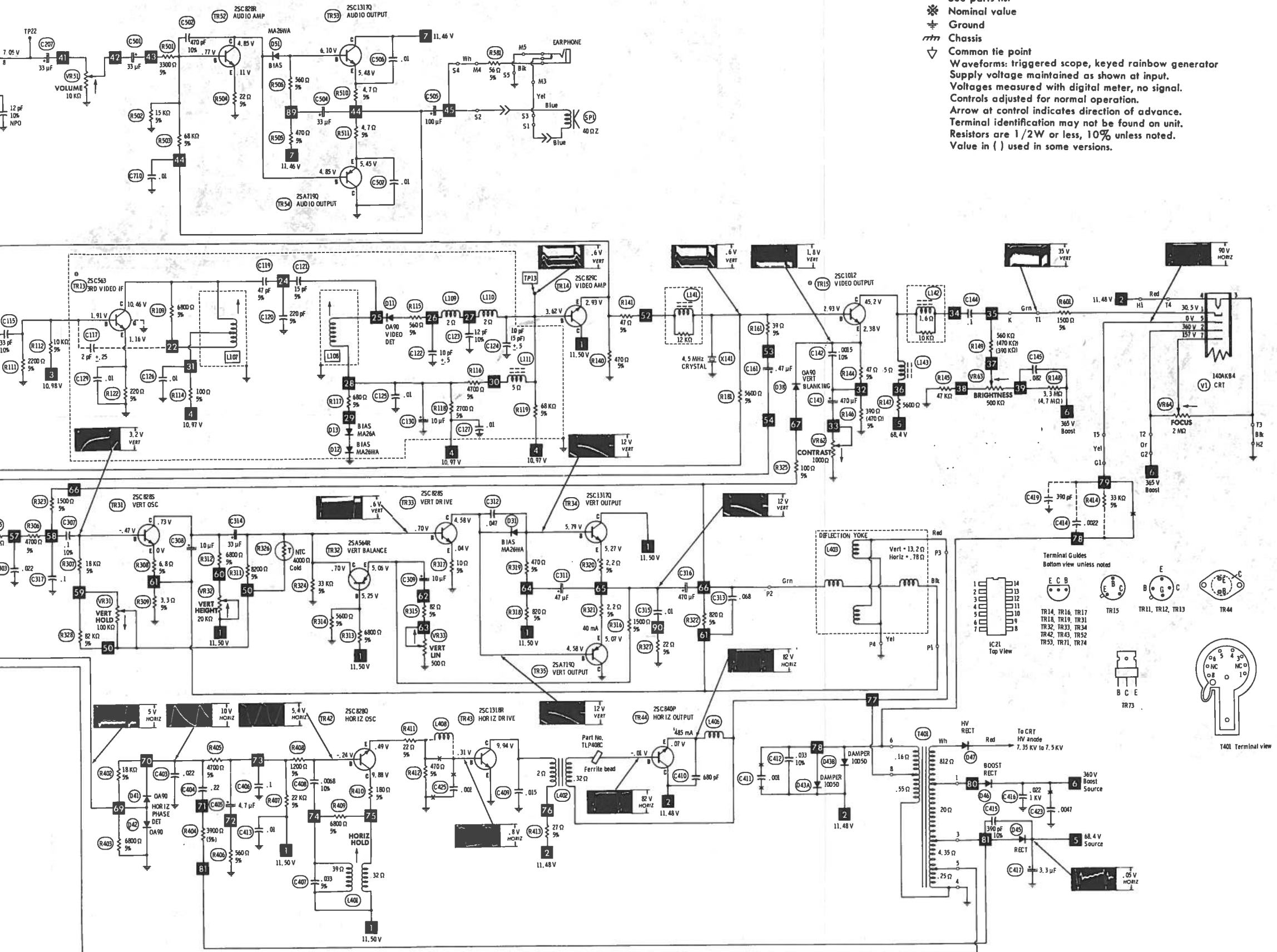
Controls adjusted for normal operation.

Arrow at control indicates direction of advance.

Terminal identification may not be found on unit.

Resistors are 1/2W or less, 10% unless noted.

Value in ( ) used in some versions.



**PANASONIC**  
**MODEL TR-525 (CH. T505A)**

## 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	600K	1.2M	FIL	FIL	0	NC	750K							
IC21	INF	INF	0	0	60	0	5600	9000	5300	5300	INF	9000	4800	65K
ITEM	E	B	C		ITEM	E	B	C		ITEM	E	B	C	
TR11	470	6200	850		TR19	220	620	12K		TR43	0	470	65	
TR12	470	2100	150		TR31	10	62K	13K		TR44	.55	.87	40	
TR13	220	1800	150		TR32	INF (2)	3000	33K		TR52	22	15K	INF (2)	
TR14	470	6000	40		TR33	10	33K	INF (2)		TR53	83K	1050	50	
TR15	440	520	INF(2)		TR34	INF (2)	1300	40		TR54	83K	INF (2)	0	
TR16	50	220K	5600		TR35	INF (2)	INF (2)	0		TR71	430	900	INF (2)	
TR17	1200	62K	150		TR42	492	12K	250		TR73	33	INF (2)	0	
TR18	140	6200	45K (2)											

(2) Reading depends upon polarity of meter connections.

## TROUBLESHOOTING CHECK CHART

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

### SWEEP

No raster, has sound: Horiz Osc/Drive/Output, Damper, HV Rect, CRT  
 No vert deflection: Vert Osc/Bal/Drive/Output  
 Poor vert lin or foldover: Vert Osc/Bal/Drive/Output  
 Poor horiz lin or foldover: Horiz Output, Damper  
 Narrow picture: LV Rects, Horiz Osc/Drive/Output, Damper  
 Vert off freq: Vert Osc  
 Horiz off freq: Horiz Phase Det/Osc

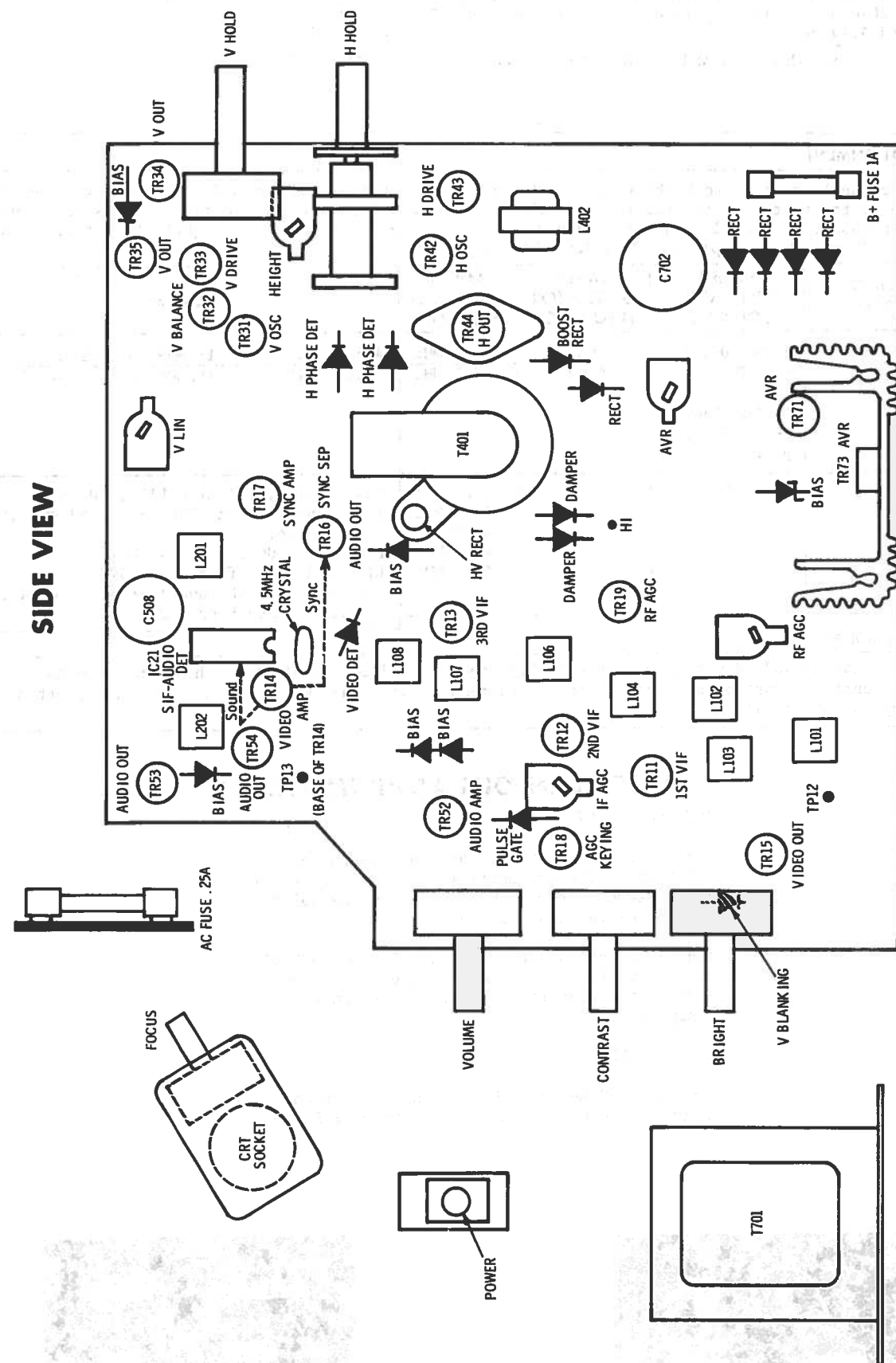
### SYNC

No vert sync: Vert Osc  
 No horiz sync: Horiz Phase Det/Osc  
 No vert/horiz sync: Sync Sep/Amp

### PICTURE or SOUND

No pic, no sound, no raster: Fuses, LV Rects  
 No pic, no sound, has raster: Video IFs, Tuner Mixer  
 No pic, no sound, has snow: Tuner RF/Mixer/Osc  
 No pic, has sound, no raster: Video Output, CRT  
 No pic, has sound, has raster: Video Amp/Output  
 Has pic, no sound: Sound IF, Audio Det/Amp/Output  
 Overloaded picture: AGC, Video Det

## SIDE VIEW



## PLACEMENT CHART

PANASONIC  
MODEL TR-525 (CH. 1505A)

FOLDER 1



## TV ALIGNMENT INSTRUCTIONS

Use an isolation transformer, or observe polarity, and maintain voltage at 120VAC.  
Allow a 20-minute warm-up period for the receiver and test equipment.  
Suggested Alignment Tools: GC ELECTRONICS  
L101 thru L108, L201, L202 and L7 VHF Tuner.....9296, 9297, 9300

### VIDEO IF ALIGNMENT

Set the channel selector to highest unused channel. Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from that shown. Connect a 3 volt Bias supply to TP12, low side to ground.

CONNECT SCOPE	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
Vertical input to TP13, low side to ground.	Thru .001uF to TP-2 on VHF tuner, low side to ground.	44MHz (10MHz Sweep)	41.25MHz 47.25MHz	Adjust L102 for MINIMUM. See Figure 1. Adjust L103 for MINIMUM. See Figure 1
"	"	"	41.25MHz 42.17MHz 44.00MHz 45.75MHz 47.25MHz	Adjust L101, L104, L106, L107, L108, L7 (VHF Tuner) for maximum gain and symmetry of response. L104 and L106 affects 44.00MHz. L107 and L108 affects 45.75MHz. L101 and L7 (VHF Tuner) affects overall response. See Figure 2.

### SOUND IF ALIGNMENT

Tune in a station and adjust L201 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 L202.

## MISCELLANEOUS ADJUSTMENTS

### AGC ADJUSTMENT

Tune in a strong TV station and advance the IF AGC Control (VR18), until instability appears in the picture. Reduce the control to the point just below the instability.

Tune in a weak station and turn RF AGC Control (VR19), until snow appears in the picture and then in the opposite direction until snow just disappears.

### B+ ADJUSTMENT

Connect a DC meter to H1, low side to ground. Adjust AVR Control (VR71), to obtain 11.50 volts DC.

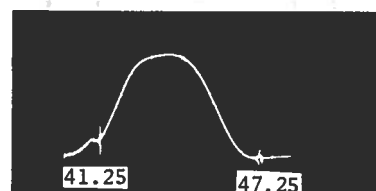


Figure 1

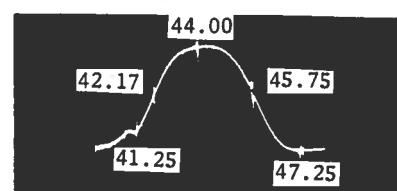
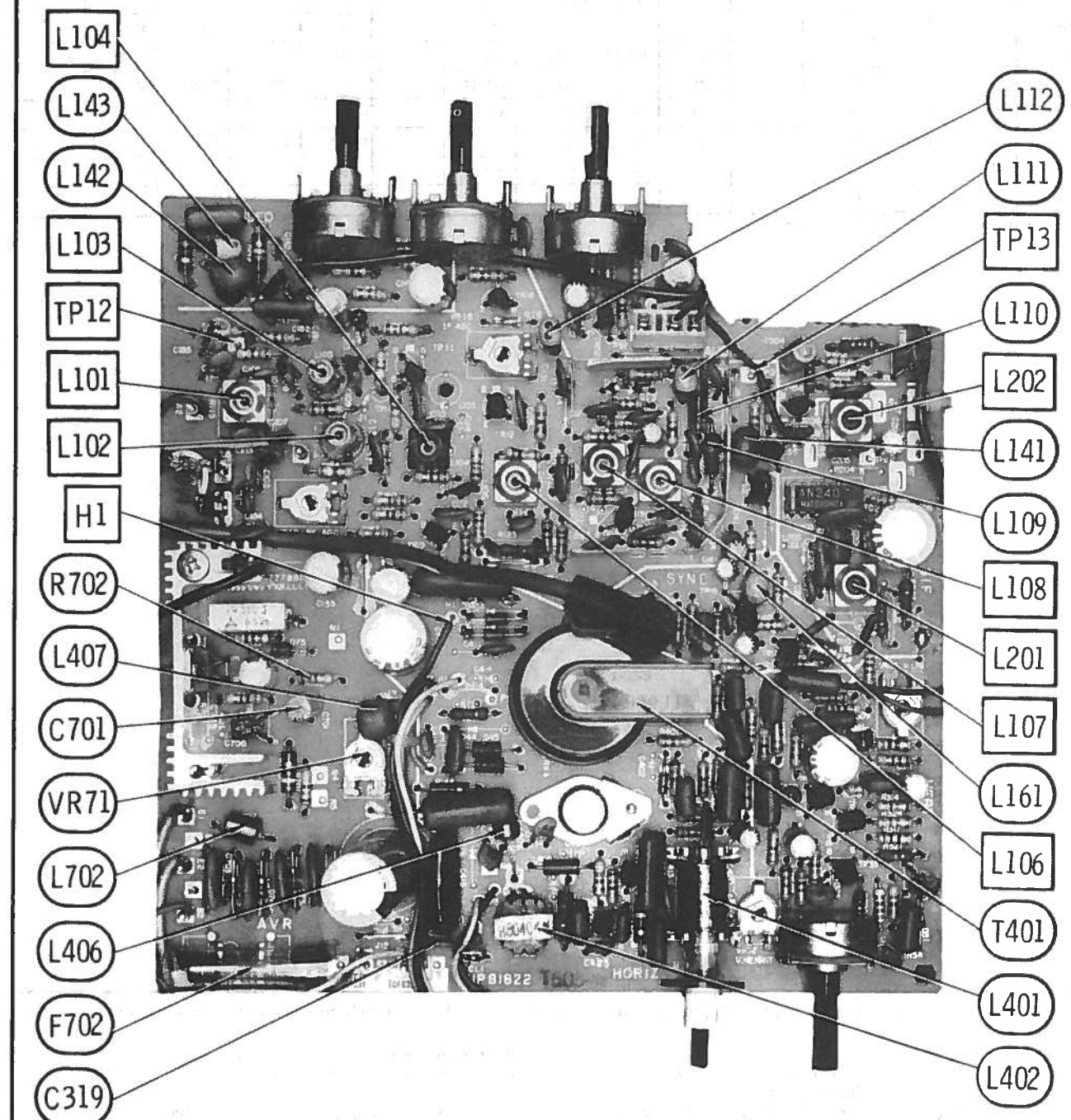


Figure 2

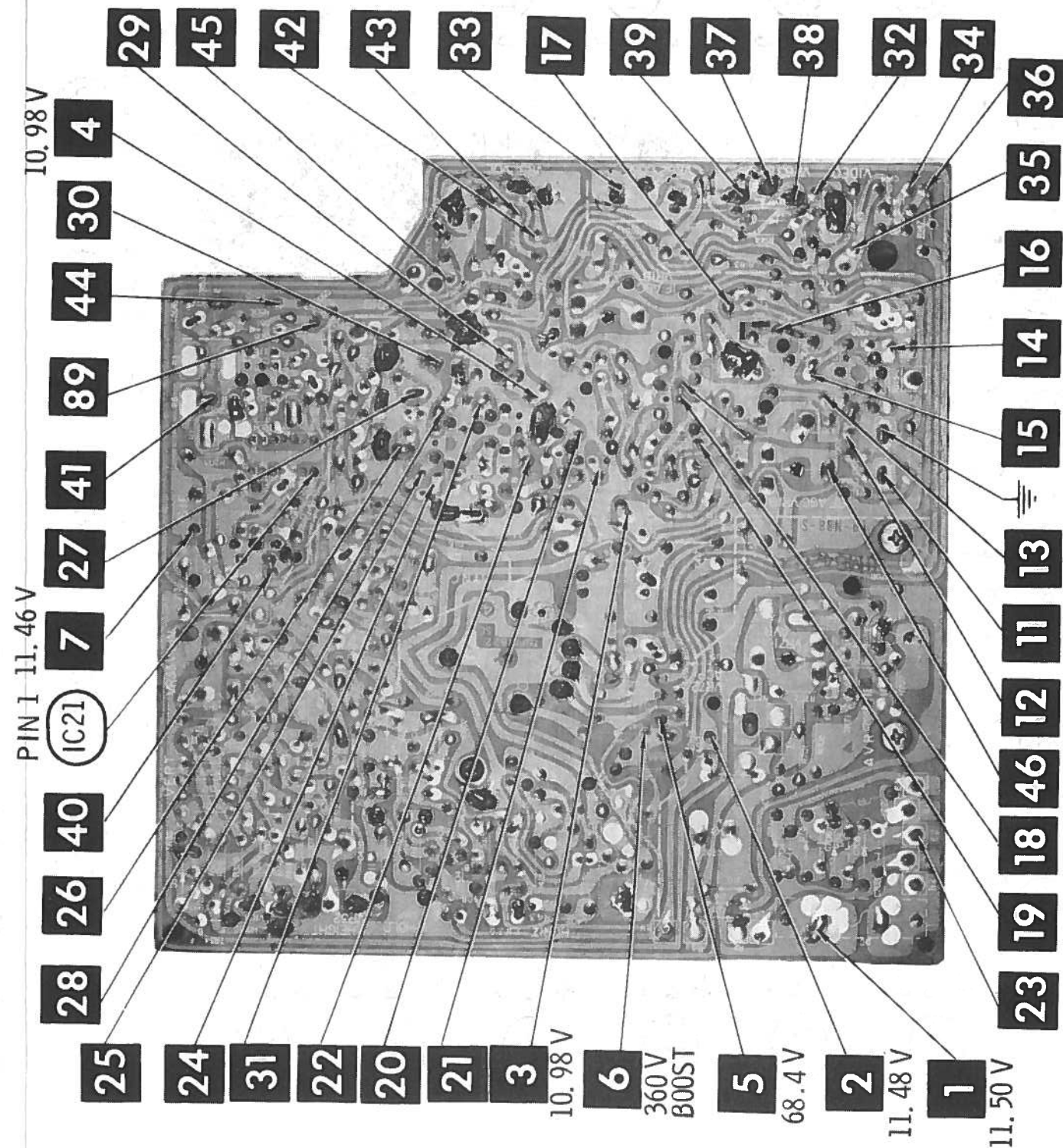
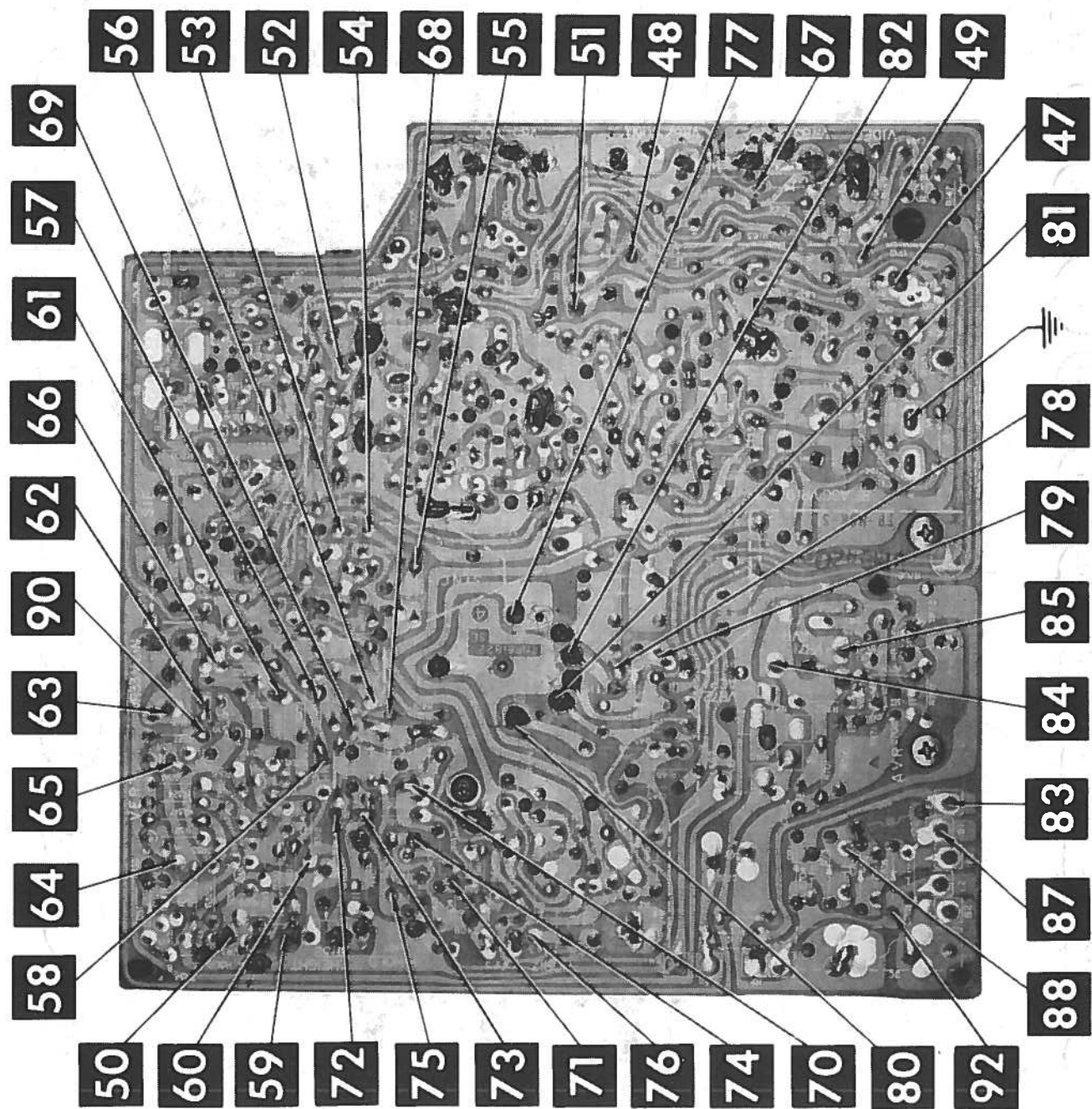


MAIN BOARD

PANASONIC  
MODEL TR-525 (CH. 1505A)

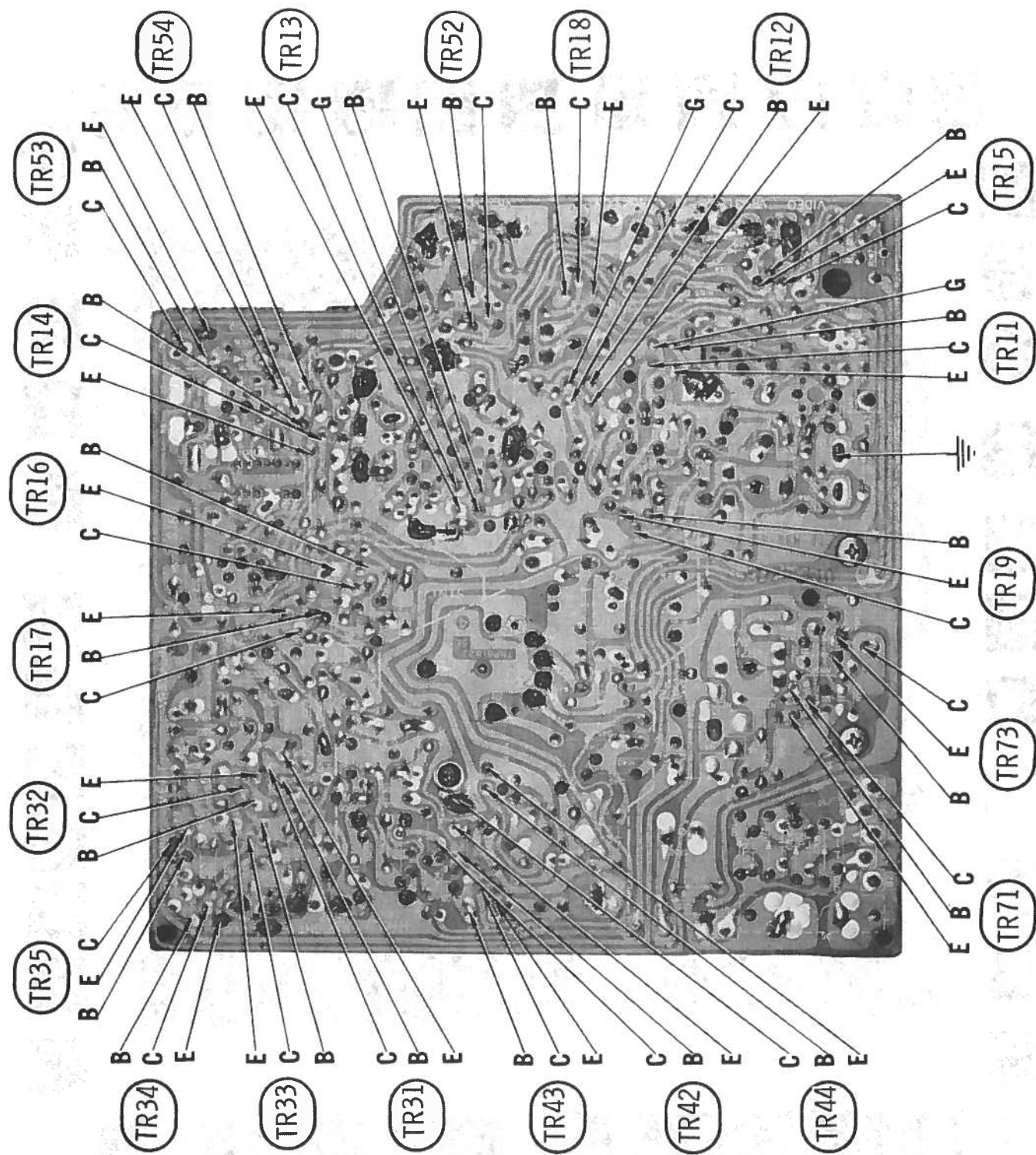
FOLDER 1

# MAIN BOARD

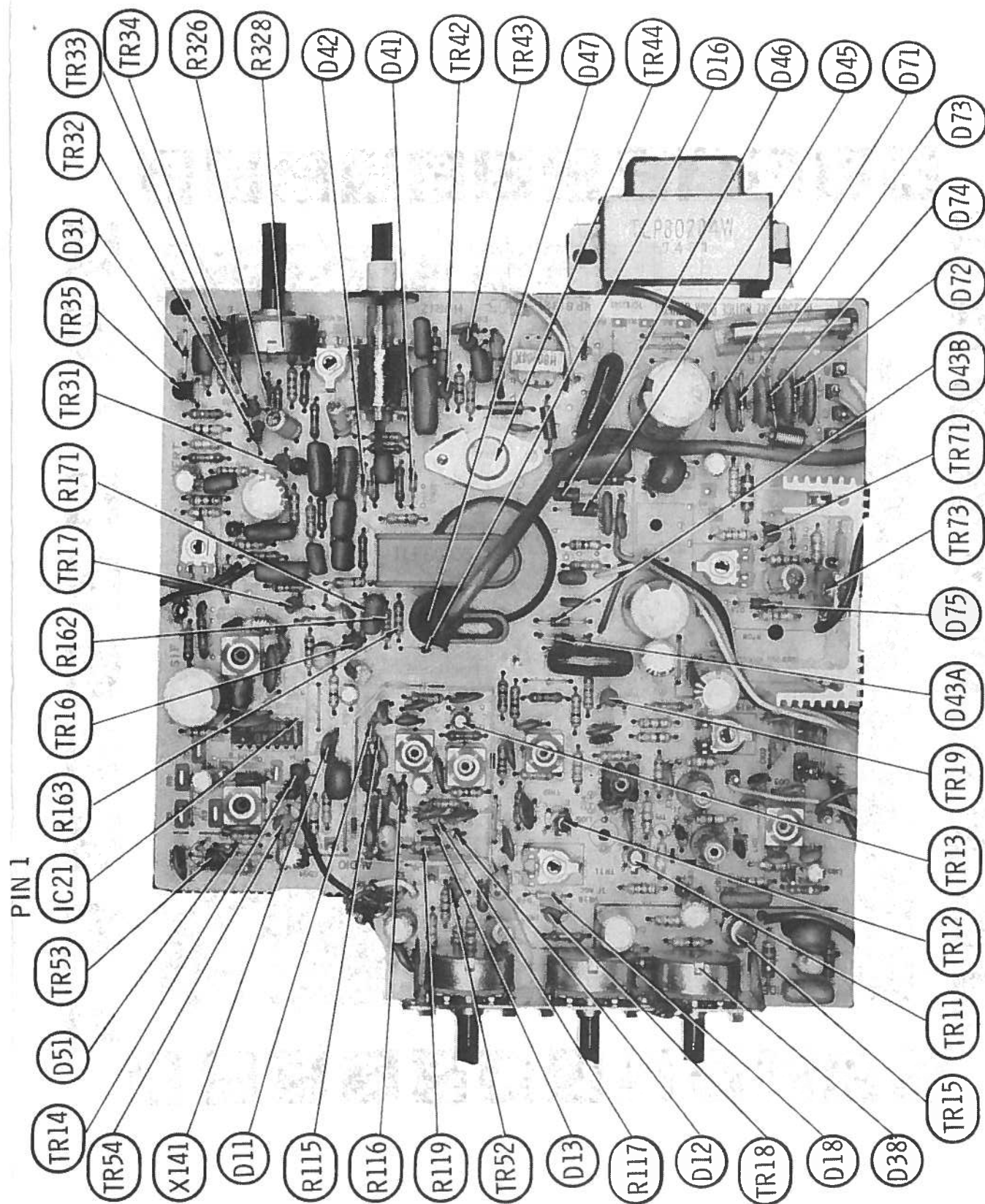




MAIN BOARD



MAIN BOARD











## 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 &amp; TRANSFORMERS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA				NOTES
		MFGR. PART No.	OTHER IDENTIFICATION	THORDARSON PART No.	TRIAD PART No.	
L401	Horiz. Hold	TLH3112-4	3112-4			
L402	Horiz. Driver	TLH80404K	H80404K			
L403	Yoke 55° Horiz 280uH	TLY80104T				
T401	Vert 17.8mH Horizontal Output	TLF80805	TLF80805-1			

## TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T701	120V AC @ .122A AC	16V AC @ .47A DC	TLP80284W			

## SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	3 1/2" PM 40 Ohms	EAS85P02AA	3A05Z40	

## FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F701	.25A @ 250V Quick-acting Pigtail	XBA2F03HU100		AGC 1/4		312.250		
F702	1A @ 250V Quick-acting Pigtail	TSF35102		GJV 1		318001		

## MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	AC Power Cord	TSZ8317-2	(Cigar Lighter) UHF/VHF Rod
SW1	DC Power Cord	TSAB102	
SW2	Antenna	TNK36906KE	
X141	UHF Tuner	THT4695-2ZE	
	VHF Tuner		
	Battery Pack	TSE80701-3	Power On-Off Tuner B+
	Switch	EFC44R5M2	4.5MHz
	Switch	TNPB1822-22	Main
	Crystal	TNPB1939-3H	U/V Signal Separator
	Printed Circuit Board		
	Printed Circuit Board		

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

ITEM	PART No.	ITEM	PART No.
Cabinet	TKE805202	Knob-VHF Channel Selector	TBX80120
Battery Cover Assembly	TKK02525T	Knob-VHF Fine Tuning	TBX80413
Rear Cover	TKU826702	Knob-UHF Channel Selector	TBX80762
Control Panel	TKP8011491	Knob-UHF Fine Tuning	TBX80923
Front Glass	TKG809638	Knob-Horiz., Vertical Hold	TBX80576
Handle	TKK800225-2	Knob-Volume, Contrast, Brightness	TBX80581
Handle Cover	TKK800940-2		

## ACCESSORIES

ITEM	MFGR. PART No.	REMARKS
Earphone	EAE3YDAA	

## WIRING DATA

High Voltage Lead .....	Use BELDEN No. 8869 (17 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 12 Colors 8522 (Stranded) Available in 12 Colors
300-Ohm Tuner Input Lead .....	Use BELDEN No. 8225
300-Ohm Antenna Lead-in .....	Use BELDEN No. 8230 or 8275
Antenna Rotor Cable .....	Use BELDEN No. 8464 (Flat) or 8484 (Round) 4-Conductor 8485 (Round) 5-Conductor 8488 (Round) 8-Conductor

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## PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	MFGR. PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V1	140AKB4				

## SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
D11	0A90		1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D12	MA26WA		GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D13	MA26A		GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D16	MA26A		GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D18	0A91		1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D31	MA26WA		GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D38	0A90		1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D41	0A90		1N34AS(7)	1N34A(7)	PTC207(1)(6)	HEPR9134(7)	RE 86(6)	SK3087(7)	RT-200(7)	ECG110(6)
D42	0A90									
D43A	10D50	TVS10D2 (1)	GE-511	D172	PTC216	HEPR3012	RE 55	SK3130	RT-203	ECG506
			GE-511	D172	PTC216	HEPR3012	RE 55	SK3130	RT-203	ECG506
D43B	10D50	TVS10D2 (1)	GE-511	D172	PTC216	HEPR3012	RE 55	SK3130	RT-203	ECG506
			GE-511	D172	PTC216	HEPR3012	RE 55	SK3130	RT-203	ECG506
D45		TVSS1R20	GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D46		TVSS1R80	GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D47	MF12/1b	TVM567	GE-300	JJ1100	PTC210			SK3067	RT-226	ECG502
D51	MA26WA		GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D71	10D5E	TVS10D1(1)	GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
			GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D72	10D5E	TVS10D1(1)	GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
			GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D73	10D5E	TVS10D1(1)	GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
			GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D74	10D5E	TVS10D1(1)	GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
			GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D75	5.5V Zener	TVSEQA01-05T	GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
			GE-504A	804	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
IC21	AN240		GE1C-2		PTC726	HEPC6063P	RE 305-1C		TVM-11	ECG712
TR11	2SC562		GE-60	TR-70	PTC132	HEPS0017	RE 28	SK3039	RT-113	ECG161
	2SC1686		GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-102	ECG123A
	(1)									
TR12	2SC563		GE-39	TR-70	PTC126	HEPS0017	RE 28	SK3018	RT-113	ECG161
	2SC1687		GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-102	ECG123A
	(1)									
TR13	2SC563		GE-39	TR-70	PTC126	HEPS0017	RE 28	SK3018	RT-113	ECG161
	2SC1687		GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-102	ECG123A
	(1)									
TR14	2SC829C		GE-20	TR-24	PTC132	HEPS0011	RE 9	SK3018	RT-108	ECG229
TR15	2SC1012		GE-27	TR-78	PTC117	HEPS5024	RE 23	SK3045	RT-110	ECG154
	2SC1566			TR-78	PTC124	HEPS5024	RE 191	SK3045	RT-159A	ECG198
	(1)									
	2SC1556		GE-32	TR-25	PTC124	HEPS5014	RE 71	SK3024	RT-159	ECG195
	(1)									
TR16	2SA564P		GE-22	TR-20	PTC103	HEPS0019	RE 26	SK3118	RT-115	ECG234
TR17	2SC828R		GE-20	TR-24	PTC139	HEPS0015	RE 64	SK3124	RT-107A	ECG199
TR18	2SC828AR		GE-61	(1R)2SC828A	PTC132	HEPS0015	RE 64	SK3024	RT-102	ECG199
	A									
TR19	2SA564Q		GE-21	TR-52	PTC103	HEPS0032	RE 193	SK3025	RT-115	ECG234
TR31	2SC828S		GE-20	TR-24	PTC136	HEPS0016	RE 13	SK3020	RT-159A	ECG199
TR32	2SA564R		GE-21	TR-30	PTC127	HEPS0019	RE 193	SK3025	RT-115	ECG234
TR33	2SC828S		GE-20	TR-24	PTC136	HEPS0016	RE 13	SK3020	RT-159A	ECG199
TR34	2SC1317Q	(5)	GE-81	TR-87	PTC143	HEPS0027	RE 17	SK3137	RT-114	ECG128
TR35	2SA719Q	(5)	GE-82	TR-88	PTC142	HEPS0028	RE 18	SK3138	RT-115	ECG129
TR42	2SC828R		GE-20	TR-21	PTC139	HEPS0015	RE 13	SK3124	RT-107A	ECG199
TR43	2SC1318Q		GE-18	TR-25	PTC123	HEPS0015	RE 17	SK3122	RT-100	ECG128
TR44	2SC840P		GE-66	TR-23	PTC148	HEPS5012	RE 34	SK3026	RT-145	ECG175
	2SC1025MT			TR-81	PTC148		RE 34	SK3538	RT-145	ECG175
	(1)									
TR52	2SC828R		GE-20	TR-24	PTC139	HEPS0015	RE 64	SK3124	RT-107A	ECG199
TR53	2SC1317Q	(5)	GE-81	TR-87	PTC143	HEPS0027	RE 17	SK3137	RT-114	ECG128
TR54	2SA719Q	(5)	GE-82	TR-88	PTC142	HEPS0028	RE 18	SK3138	RT-115	ECG129
TR71	2SA564R		GE-21	TR-30	PTC127	HEPS0019	RE 193	SK3025	RT-115	ECG234
TR73	2SD389,LP		GE-66	TR-76	PTC154	HEPS5000	RE 21	SK3054	RT-133	ECG152

(1) Used in some versions.

(5) Half of complementary pair (TR34 and TR35; TR53 and TR54).

(6) Matched pair.

(7) Two required - select matched pair.

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA					
		MFGR. PART No.	ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C130	10 16V	ECEA16V10L	RME-B-G-010	EP15-10	PC10-25	VTT10A25	EV-1222
C133	330 16V	ECEA16V330L	RME-J-E-250	EP15-250	WBR350-150	VTT330H16	EV-1245
C134	1 50V	ECEA50V1L	RME-A-J-001	EP50-1	PC1-50	MTV1CB50	EV-1615
C143	470 6.3V	ECEA6V470L	RME-K-D-500	EP15-500	PC500-16	VTT470J16	EV-1150
C161	.47 25V	ECAG25ER47	RME-A-J-001	EP30-1	PC1-50	VTT47B63	EV-1310
C171	1 50V	ECEA50V1L	PME-A-J-001	EP50-1	PC1-50	MTV1CB50	EV-1615
C181	100 10V	ECEA10V100L	RME-E-E-100	EP15-100	PC100-10	VTT100E10	EV-1130
C183	4.7 16V	ECS216F4R7				TDC475M035FL	SD35-4R79
C185	.47 25V	ECAG25ER47	RME-A-J-001	EP30-1	PC1-50	VTT47B63	EV-1310



## 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.  
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## ELECTROLYTIC CAPACITORS(cont)

ITEM No.	RATING	REPLACEMENT DATA					
		MFGR. PART No.	ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C191	10 16V		RME-B-G-010	EP15-10	PC10-25	VTT10A25	EV-1222
C192	10 16V		ME-1-E-010	EA15-10	WBR10-25	TT15X10	TVA-1145
C207	33 10V		ME-3-D-035	EP15-25	PC30-25	VTT33A10	EV-1125
C308	10 10V	ECEA10V33L				TDC106M035FL	SD35-109
C309	10 10V	ECSZ10EF10				TDC106M035FL	SD35-109
C311	47 10V	ECEA10V47L	RME-E-E-050	EP15-50	PC50-16	VTT47D16	EV-1226
C314	33 16V	ECEA16V33L	ME-4-G-035	EP30-25	PC30-25	VTT33D25	EV-1325
C316	470 16V	ECEA16V470L	RME-L-E-500	EP15-500	PC500-16	VTT470J16	EV-1250
C405	4.7 25V	ECEA25V47L	RME-A-J-005	EP30-5	PC5-50	VTT4R7A50	EV-1319
C417	3.3 160V	ECEA160V33L				TC50XB	TVA-1437
C418	1000 16V	ECEA16V1000	RME-N-E-1000	EP15-1000	PC1000-16	VTT1000L16	EV-1260
C501	33 10V	ECEA10V33L	ME-3-D-035	EP15-25	PC30-25	VTT33A10	EV-1125
C504	33 10V	ECEA10V33L	ME-3-D-035	EP15-25	PC30-25	VTT33A10	EV-1125
C505	100 10V	ECEA10V100L	RME-E-E-100	EP15-100	PC100-10	VTT100E10	EV-1130
C508	1000 16V	ECEA16V1000	RME-N-E-1000	EP15-1000	PC1000-16	VTT1000L16	EV-1260
C701	33 10V	ECEA10V33L	ME-3-D-035	EP15-25	PC30-25	VTT33A10	EV-1125
C702	2200 25V	ECEA25V2200	ME-G2000		WBR2000-25	TC2520A	TVA-1213.5
C707	100 6.3V	ECEA6V100L	RME-E-E-100	EP6-100	PC100-10	MTV100CB6	EV-1030

## CAPACITORS

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA				
			ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C91	3 ±.25	ECCD2H030C					
C92	15 10%	ECCD2H020C	CCTO-150	DTZ-15	NP015	CN0415	10TCC-Q15
C93	2 ±.25	ECCD2H020C					
C94	2 ±.25	ECCD2H020C					
C95	1 ±.25	ECCD2H010C					
C101	68 10%		CCD-680	DD-680	GP68	GP468	10TS-Q68
C102	39 10%		CCTO-390				10TCC-Q39
C103	47 10%		CCTO-470	DTZ-47	NP047	CN0447	10TCC-Q47
C104	18 10%		CCTO-180			CN0418	10TCC-Q18
C105	10 ±.5	ECCD1H1000					
C106	5 NPO 5%	ECCD1H050C					
C107	5 NPO 5%	ECCD1H050C					
C108	5 NPO 5%	ECCD1H050C					
C109	5 NPO 5%	ECCD1H050C					
C110	.01		CCD-103				10TS-S10
C111	2 NPO ±.25	ECCD1H020C					10TS-S10
C112	.01		CCD-103				10TCC-Q39
C113	39 10%		CCTO-390			CN0439	10TCC-Q33
C115	33 10%		CCTO-330	DTZ-33	NP033	CN0433	10TS-S10
C116	.01		CCD-103				
C117	2 ±.25	(1)					
C119	47 5%			DTZ-47	NP047	CN0447	10TCC-Q47
C120	220 5%			DTZ-220			10TCC-T22
C121	15 5%			DTZ-15	NP015	CN0415	10TCC-Q15
C122	10 ±.5	ECCD1H1000					
C123	12 10%	ECCD1H1000				CN0412	10TCC-Q12
C124	10 ±.5						
C125	.01		CCD-103				10TS-S10
C126	.01		CCD-103				10TS-S10
C127	.01		CCD-103				10TS-S10
C128	.01		CCD-103				10TS-S10
C129	.01		CCD-103				10TS-S10
C131	.01		CCD-103				10TS-S10
C135	.01		6DP-1-152				6PS-D15
C142	.0015 50V 10%		1MDF-3-104	CPR-1500J	DPMS6D15	EW6215	1PB-P10
C144	.1 50V		6DP-4-823		DPMS2P1	EW61A010	6PS-S82
C145	.082 400V		1MDF-2-473		DPMS6S82	PVC6182	1PB-S47
C162	.047 50V		CCTO-220	DTZ-22	DPMS2S47	EW61A147	10TCC-Q22
C163	22 10%		6DP-2-223		NP022	CN0422	6PS-S22
C182	.022 200V		CCD-103		DPMS6S22	EW6122	10TS-S10
C184	.01		DM15-471J	CPR-470J			424ME4700J501
C201	470 10%		6DP-3-473		CD15FD471J03	SX347	6PS-S47
C202	.047		6DP-3-473		DPMS6S47	EW6147	6PS-S47
C203	.047		1MDF-1-103	CPJ-103	DPMS6S47	EW6147	1PB-S10
C204	.01 50V				DPMS4S1	EW61A110	1PB-S10
C205	150 N075 5%						
C206	12 NPO 10%	ECCD1H151JP					
C209	15 5%		CCTO-120				10TCC-Q12
C302	.022 50V		1MDF-1-223	DTZ-15	NP015	CN0412	10TCC-Q15
C303	.022 50V		1MDF-1-223	CPJ-223	DPMS2S22	EW61A122	1PB-S22
C307	.1 50V 10%		1MDF-3-104	CPJ-223	DPMS2S22	EW61A122	1PB-S22
C312	.047 50V		1MDF-2-473		DPMS2P1	EW61A010	1PB-P10
C313	.068 50V		1MDF-2-683		DPMS2S47	EW61A147	1PB-S47
C315	.01 50V		1MDF-1-103	CPJ-103	DPMS4S68	EW61A168	1PB-S68
C317	.1 50V		1MDF-3-104		OPMS4S1	EW61A110	1PB-S10
C319	.01		CCD-103		DPMS2P1	EW61A010	1PB-P10
C401	.047 50V		1MDF-2-473				10TS-S10
C403	.022 50V		1MDF-1-223	CPJ-223	DPMS2S47	EW61A147	1PB-S47
C404	.22 50V		1MDF-4-224		DPMS2S22	EW61A122	1PB-S22
C406	.1 50V		1MDF-3-104		DPMS2P22	EW61A022	1PB-P22
C407	.033 50V 5%		6DP-3-333		DPMS2P1	EW61A010	1PB-P10
C408	.0068 50V 10%		1MDF-1-682	CPJ-682	DPMS6S33	EW6133	6PS-S33
C409	.015 50V		1MDF-1-153	CPJ-153	DPMS6D68	EW61A268	1PB-D68
C410	680		CCD-681	DD-681	DPMS4S15	EW61A115	1PB-S15
C411	.001		CCD-102	DD-102	GP368		10TS-T68
C412	.033 600V 10%		6DP-3-333		GP210		10TS-D10
C413	.01		CCD-103		DPMS6S33	EW6133	6PS-S33
C414	.0022	ECQM05222M2(1)					10TS-S10
C415	390 10%		CCD-391	DD-391		GP390	10TS-T39
C416	.022 1KV	ECQE10223M2					
C419	390	(1)					
C423	.0047		CCD-472				10TS-D47

## 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 (cont)

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA				
			ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C425	.001		CCD-102	DD-102		GP210	10TS-D10
C431	.01		CCD-103				10TS-S10
C502	.470 10%		CCD-103				10TS-S10
C506	.01		CCD-103				10TS-S10
C507	.01		CCD-103				10TS-S10
C703	.01		CCD-103				10TS-S10
C704	.01		CCD-103				10TS-S10
C705	.01		CCD-103				10TS-S10
C706	.01		CCD-103				10TS-S10
C710	.01		CCD-103				10TS-S10

(1) Used in some versions.

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
VR18	IF AGC	500	EVL S3AA00B52	TSV-500 (3) or T-500 (3)	C-501 (3)	MTS2L1 (3)	X201R501B (3)
VR19	RF AGC	1000	EVL S3AA00B13	TSV-1K (3) or T-1000 (3)	C-102 (3)	MTS13L1 (3)	X201R102B (3)
VR31	Vert. Hold	100K	EVD 66A25KA15	F2-100K (18), SNK100	A47-100K-Z (18), RN-3 or [NP-100K-Z(16), NML-A-300]	RU15A(18), SN100, [UA15A(18), SN1000]	
VR32	Vert. Height	20K	EVL S3AA00B24	T-20K (3) or TSV-25K (3)	C-253 (3)	MTS24L1 (3)	X201R253B (3)
VR33	Vert. Linearity	500	EVL S3AA00B52	TSV-500 (3) or T-500 (3)	C-501 (3)	MTS25L1 (3)	X201R501B (3)
VR51	Volume	10K	EVL COAF25U14	F2-10K, SN100	A47-10K-Z, RN-3 or [NP-10K-Z, NML-A-300]	RU14A, SL37, SN1125 or [UA14A, SN1125]	BU11, CF61, SS6A
VR62	Contrast	1000	EVV C1AF2513X	F5-1000, SN100	NP-1000-V, NML-A-300	RU13R, SL37, SN1125 or [UA13R, SN1125]	BU11, CF37, SS6A
VR63	Brightness	500K	EVV COAF25B55	F1-500K, SN100	B47-500K-S or [NP-500K-S, NML-A-300]	PTA55L or [RU55L, SL37, SN1125] or [UA55L, SN1125]	BU11, CF16, SS6A
VR64	Focus	2meg	EVD 26AS10B26	TT-75 or [F1-2Meg, SNK100]	B47-2Meg-S or [NP-2Meg-S, NML-A-300]	PTA26L or [RU26L, SL37, SN1000] or [UA26L, SN1000]	BU11, CF19, SS6A
VR71	AVR	2000	EVL S3AA00B23	TSV-2.5K (3), or T-2500 (3)	C-252 (3)	MTS23L1 (3)	X201R252B (3)

(3) For horizontal mounting, bend the two outside terminals to fit PC board. Use jumper to connect center terminal to PC Board.

(18) Use original mounting bracket.

## RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R326	4000 Cold NTC		ERT03ZHL402S				

## COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L81	VHF Balun	TLR809301			
L82	UHF Balun				
L101	Video Input IF	TL1801333			
L102	41.25MHz Trap	TL133053-3			
L103	47.25MHz Trap	TL1803502			
L104	1st Video IF	TL1801330			
L106	2nd Video IF	TL1801312			
L107	3rd Video IF	TL1801331			
L108	Video Detector	TL1801332			
L109	RF Choke (10uH)	TLQ100-999		72F105AP	
L110	RF Choke (3.8uH)	TLQ038-999		74F396AP	
L111	Peaking (390uH)	TLT391-999			
L112	RF Choke (2.8uH)	TLT028-999			
L141	RF Choke (2.8uH)	TLU028-122 (1)		74F276AP (2)	
L142	Peaking (150uH)	TLU151-103 (3)		72F154AP (4)	
L143	Peaking (390uH)	TLT391-999			
L161	Peaking (47uH)	TLT470-999		72F475AP	
L201	Sound Input IF	TL804304			
L202	Quadrature	TL803201			
L406	RF Choke	TLP412-2			
L407	RF Choke (14uH)	TLH3802C		4624	
L702	RF Choke	TLP412T			

(1) Includes 12K Resistor.

(2) Shunt with a 12K Resistor.

(3) Includes 10K Resistor.

(4) Shunt with a 10K Resistor.

