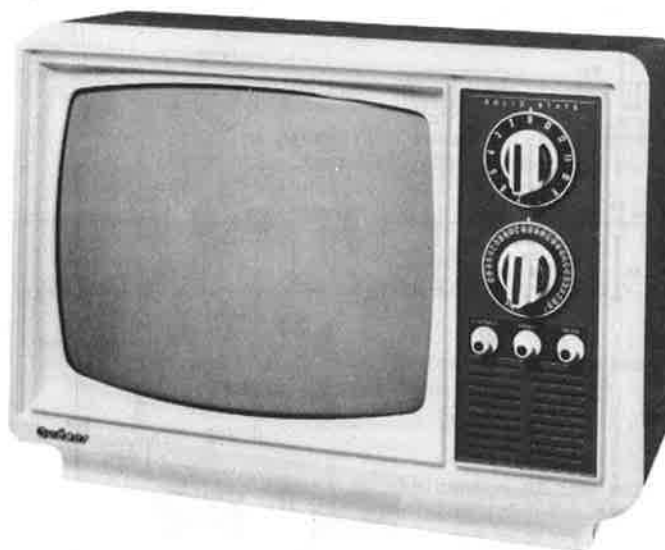


For Supplier Address See PHOTOFACT Index

QUASAR CHASSIS  
12TS-/Y12TS-481

MODEL	CHASSIS
XP3162MN	12TS-481
XP3163MG	12TS-481
XP3163ML	12TS-481
XP3163MR	12TS-481
XP3163MY	12TS-481
XP3164MW	12TS-481
YXP3164MW	Y12TS-481



MODEL XP3162MN

## SAFETY PRECAUTIONS

See Page 9.

QUASAR CHASSIS  
12TS-/Y12TS-481

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TV .....	10 thru 14	VHF Tuner .....	15
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Main Board .....	5 thru 8, 16 thru 21		

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

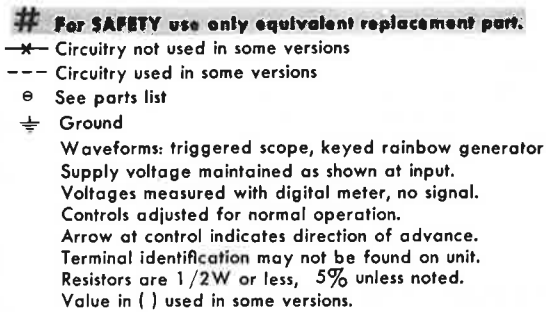
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. 6PC1536  
10 9 8 7 6 5 4 3 2 1 0



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DATE 3-76

SET 1550 FOLDER 1





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	NC	340K	FIL	FIL	0	150K	0							
IC21	INF	INF	0	INF	900	6500	6800	10K	6000	6000	INF	10K	6300	80K
ITEM	E	B	C		ITEM	E	B	C		ITEM	E	B	C	
TR11	470	7500	1300		TR18	160	6300	INF(2)		TR42	122	18K	22K (1)	
TR12	470	2100	600		TR19	520	780	12K		TR43	2.2	100	22K (1)	
TR13	220	1500	650		TR31	8	90K	6500		TR44	4	4.4	19K (1)	
TR14	680	5500	500		TR32	INF(2)	4000	33K		TR53	135	10K	20K (1)	
TR15	390	730	27K (1)		TR33	10	33K	1400		TR71	35K (1)	16K	22K	
TR16	550	27K	5600		TR34	INF(2)	1250	620		TR73	510	10K	0	
TR17	1000	10K	1200		TR35	INF(2)	1400	0						

(1) This reading will vary depending upon the condition of the electrolytic in the circuit.  
(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/Amp/Out,HV Rect, CRT  
No vert deflection: Vert Osc/Bias/Amp/Out  
Poor vert lin or foldover: Vert Osc/Bias/Amp/Out  
Poor horiz lin or foldover: Horiz Out  
Narrow picture: LV Rect,Horiz Osc/Amp/Out

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 Rect  
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 Out,CRT  
No pic, has sound, has raster:Video Amp/Out  
Has pic, no sound:Sound IF,Audio Det/Amp/Driver/Out  
Overloaded picture: AGC,Video Det

MISCELLANEOUS ADJUSTMENTS

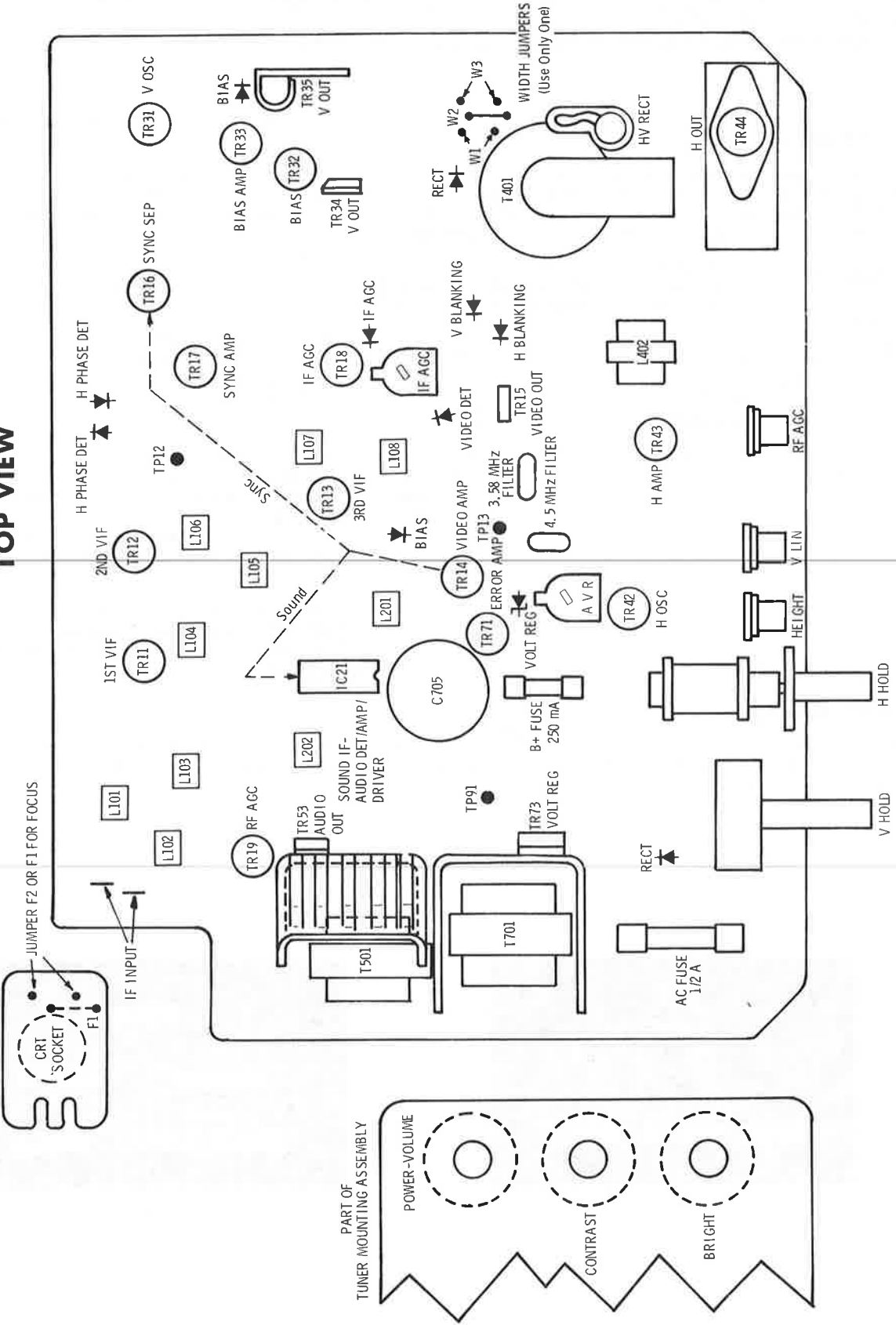
AGC ADJUSTMENT

Tune in a strong station and adjust the IF AGC Control (VR18) for a sharp picture. Tune in a weak TV station and adjust the RF AGC Control (VR19) for MINIMUM snow, maximum contrast.

B+ ADJUSTMENT

Connect VTVM to TP91, low side to ground. Adjust VR71 for +105V at 120V AC line.

TOP VIEW



PLACEMENT CHART



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, VHF IF Output ..... 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 +1.8 volt bias 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-C18  on VHF tuner, low side to ground.	44MHz (10MHz Sweep)	39.75MHz 41.25MHz 47.25MHz	Adjust L105 for MINIMUM. Adjust L102 for MINIMUM. Adjust L103 for MINIMUM. See Figure 1.
"	"	"	39.75MHz 41.25MHz 42.17MHz 44.25MHz 45.75MHz 47.25MHz	Adjust L101, L104, L106, L107 and L108 for maximum gain and symmetry of response. See Figure 2. Adjust L106 for maximum at 44.25MHz. L101 affects 42.17MHz and 45.75MHz markers.  L106 affects 42.17MHz marker. L108 affects tilt at 44.25MHz. L107 and VHF IF Output affects overall response.

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.

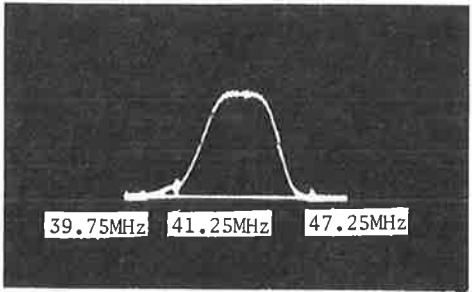


FIG. 1

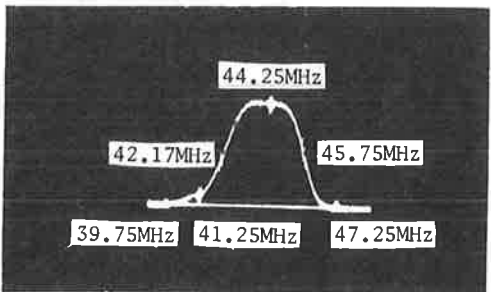
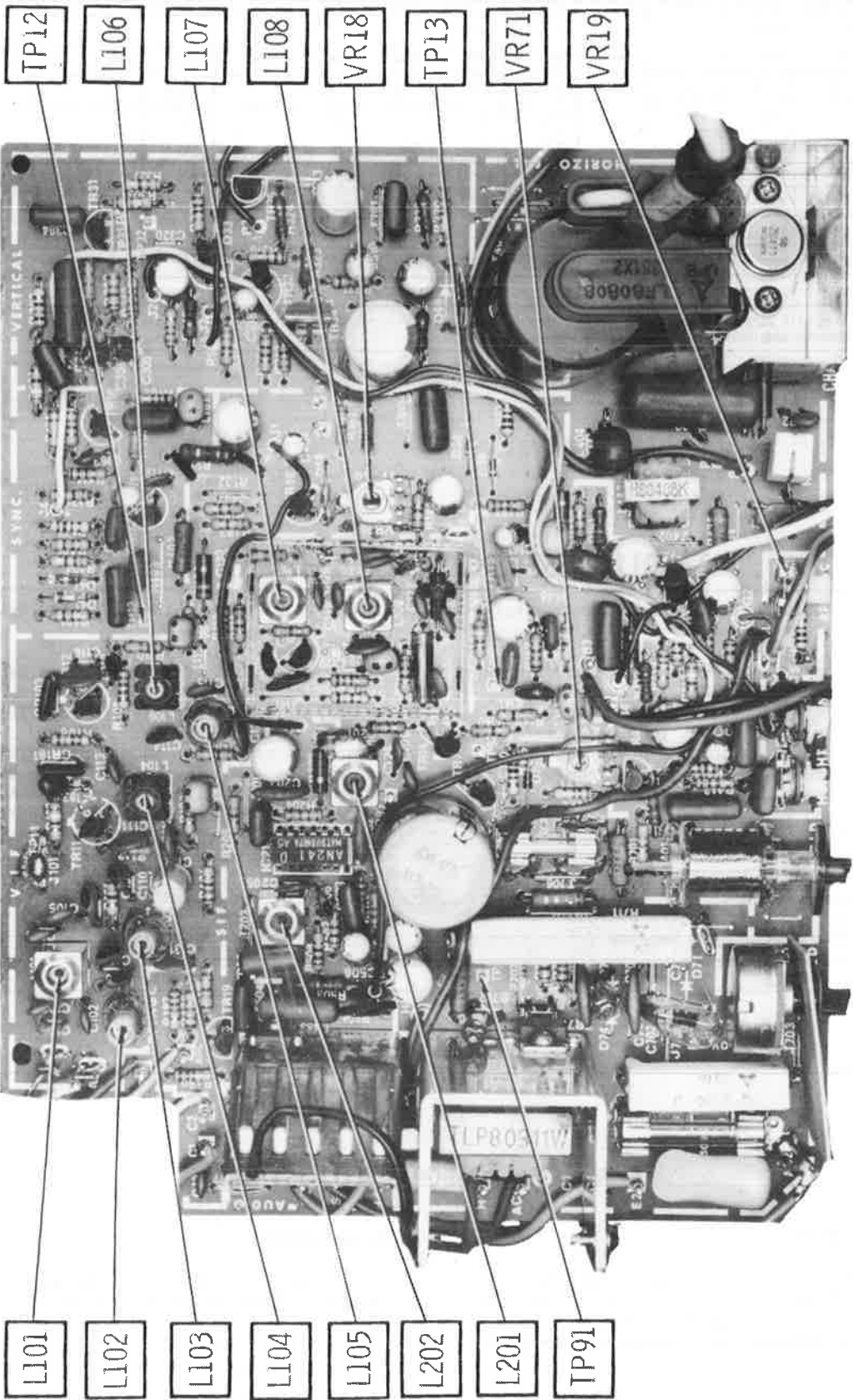
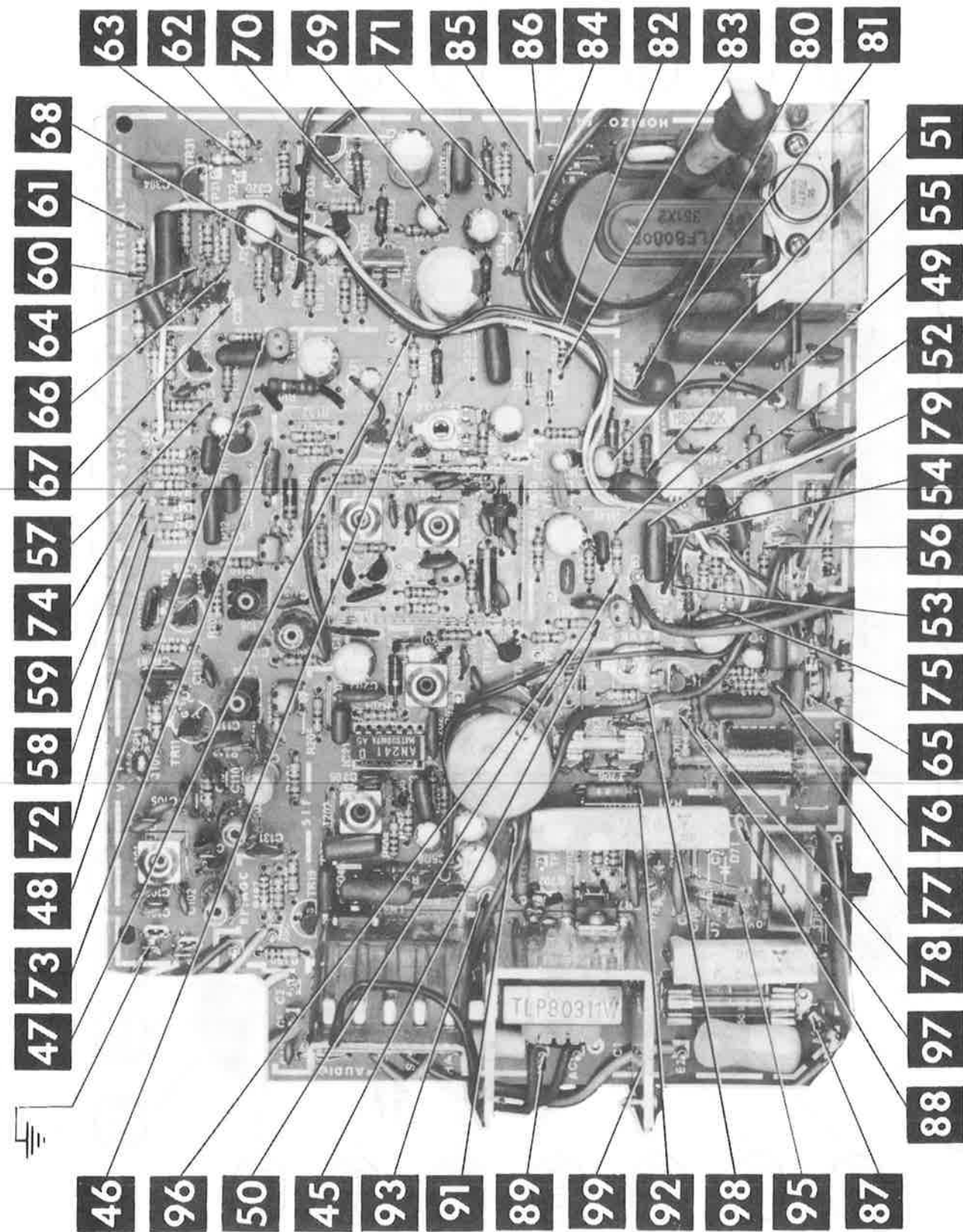
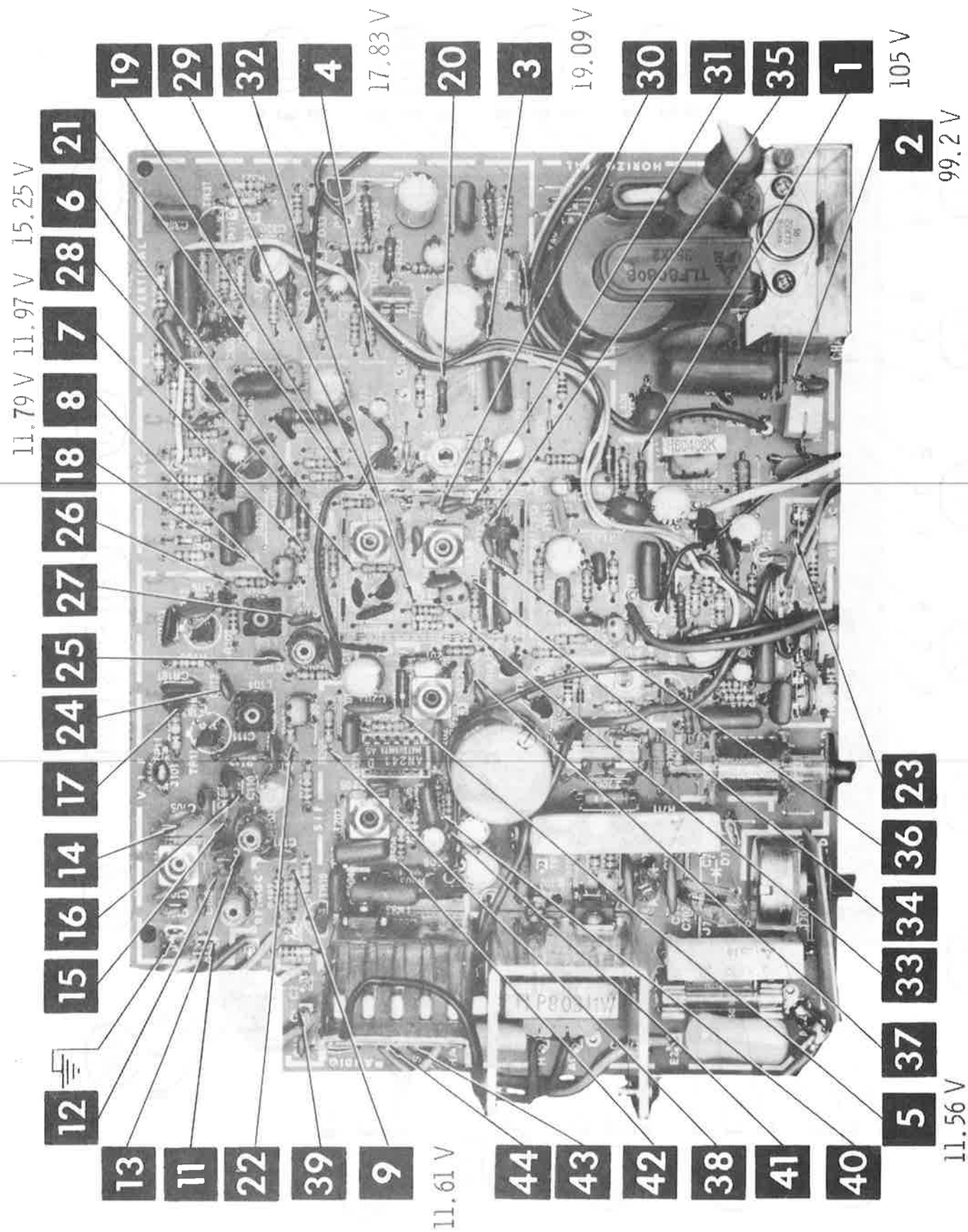


FIG. 2



MAIN BOARD

MAIN BOARD



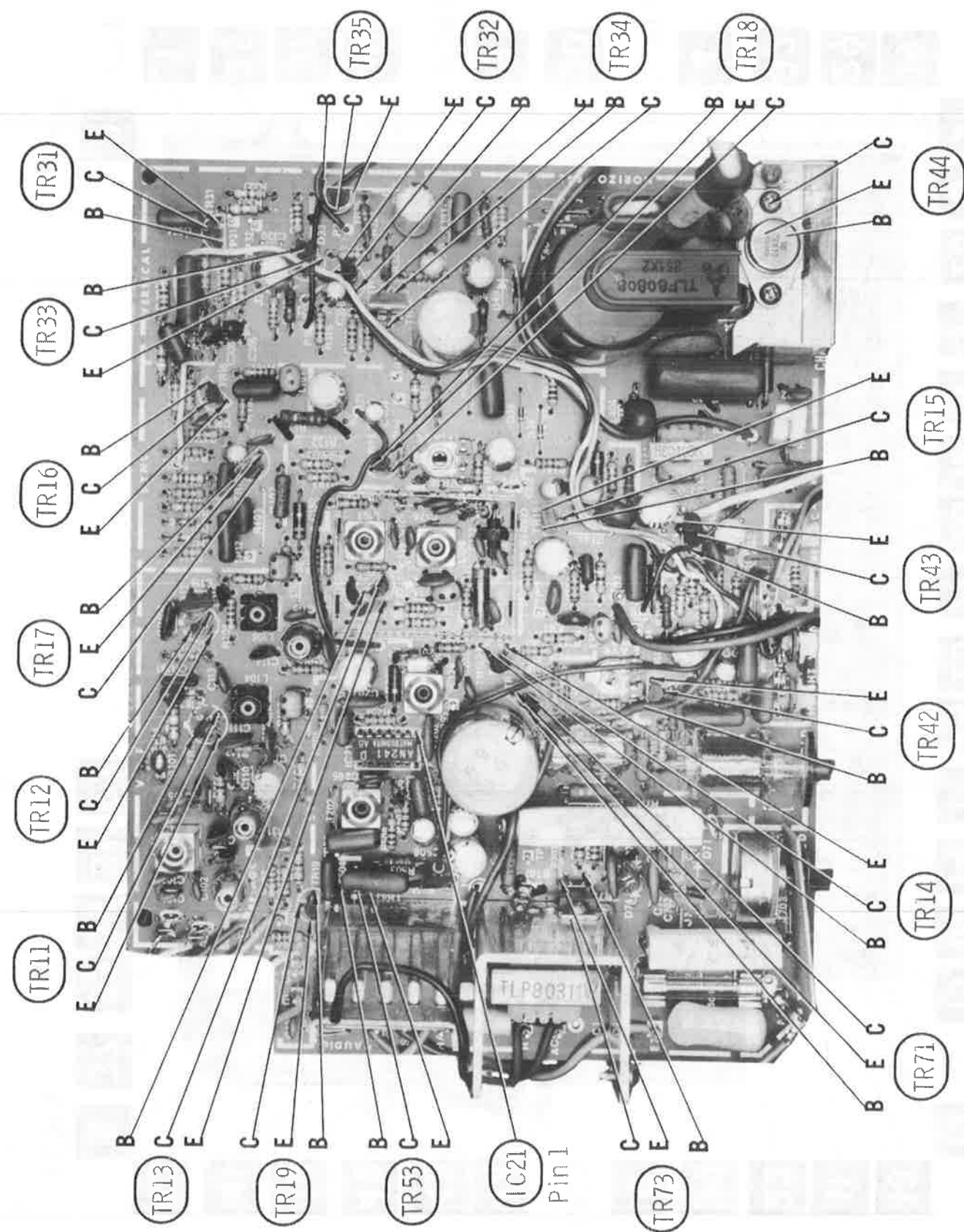
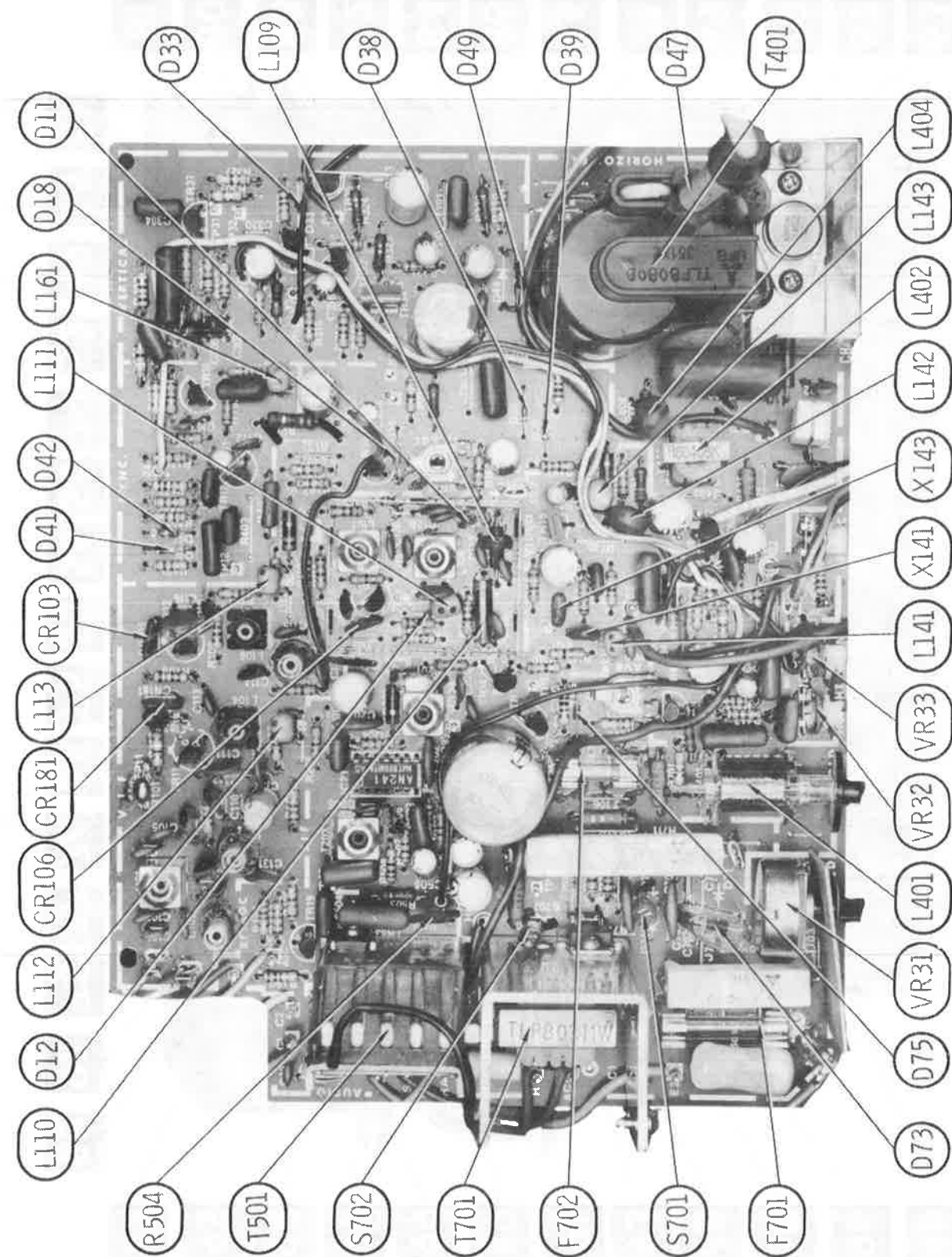
A Howard W. Sams CIRCUITRACE<sup>®</sup> Photo

MAIN BOARD

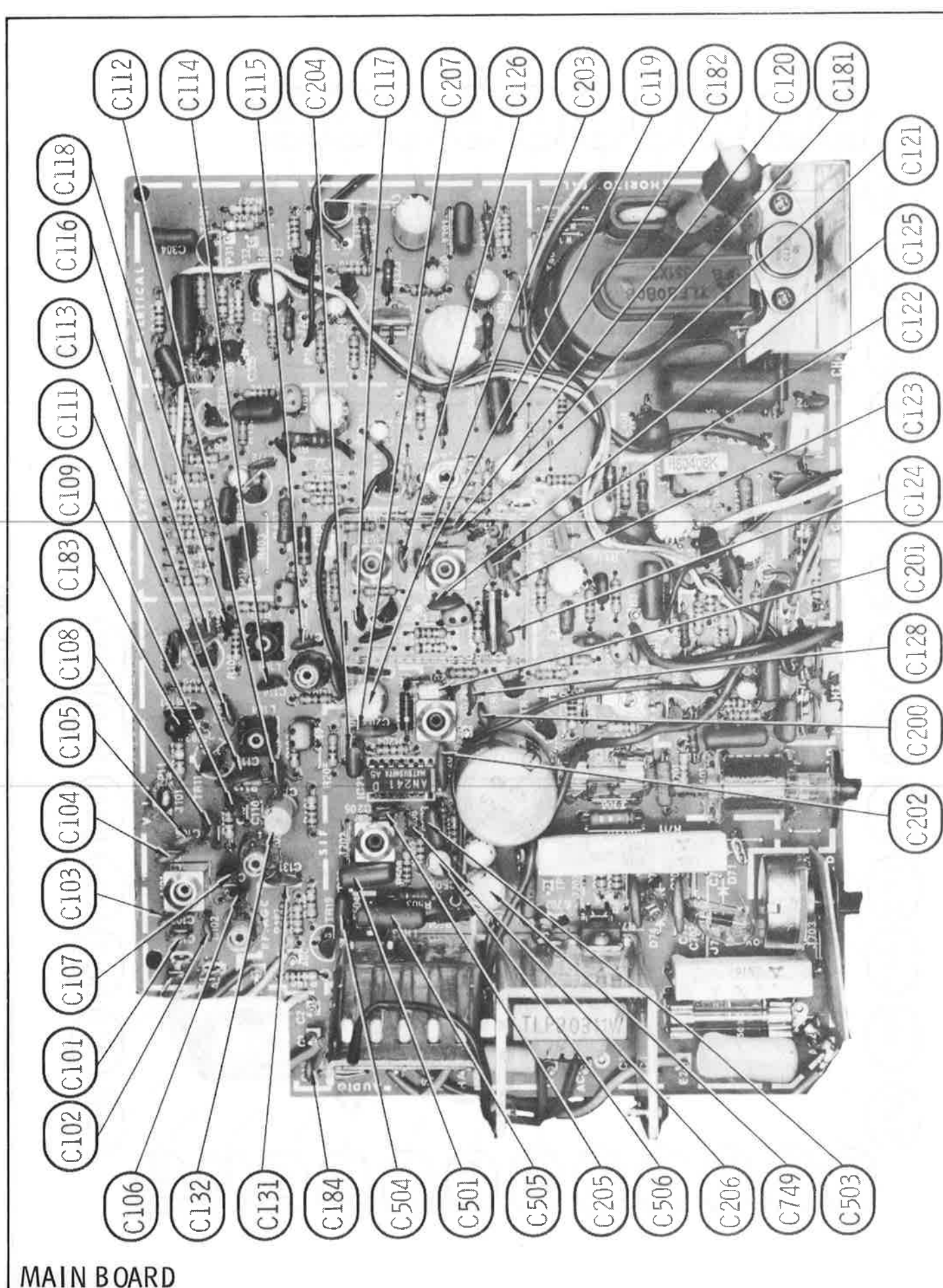
QUASAR CHASSIS  
12TS-/Y12TS-481

FOLDER 1

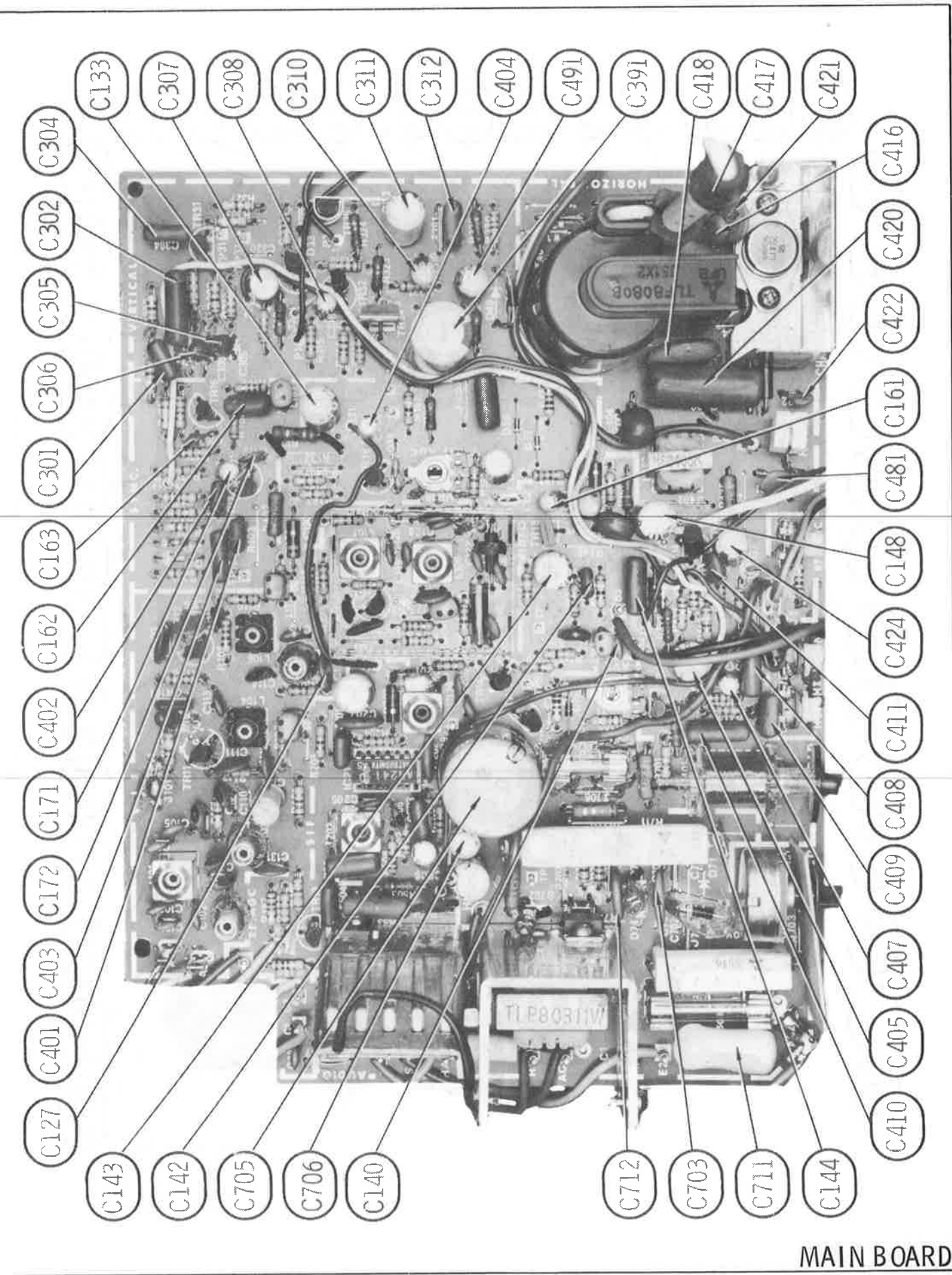








MAIN BOARD

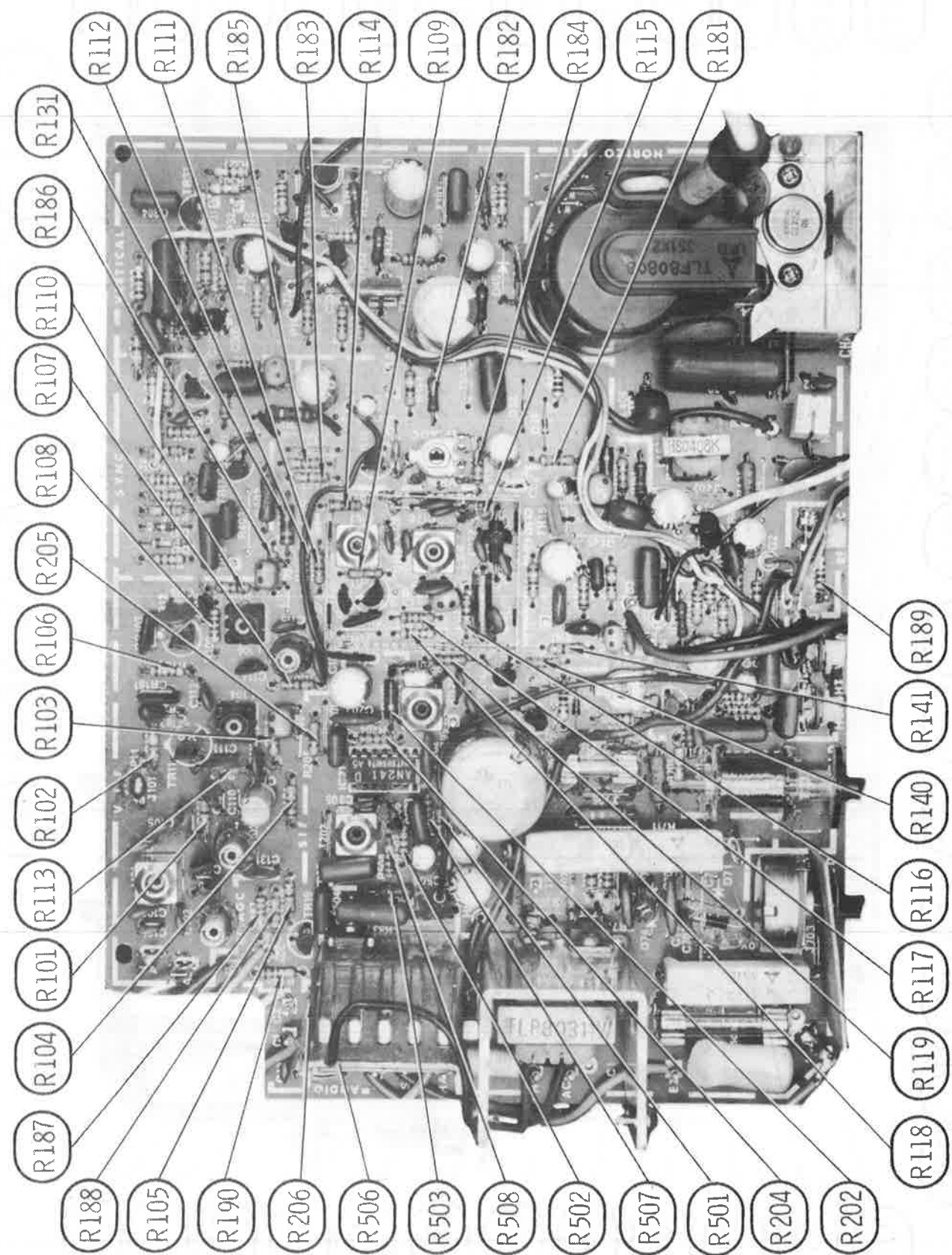
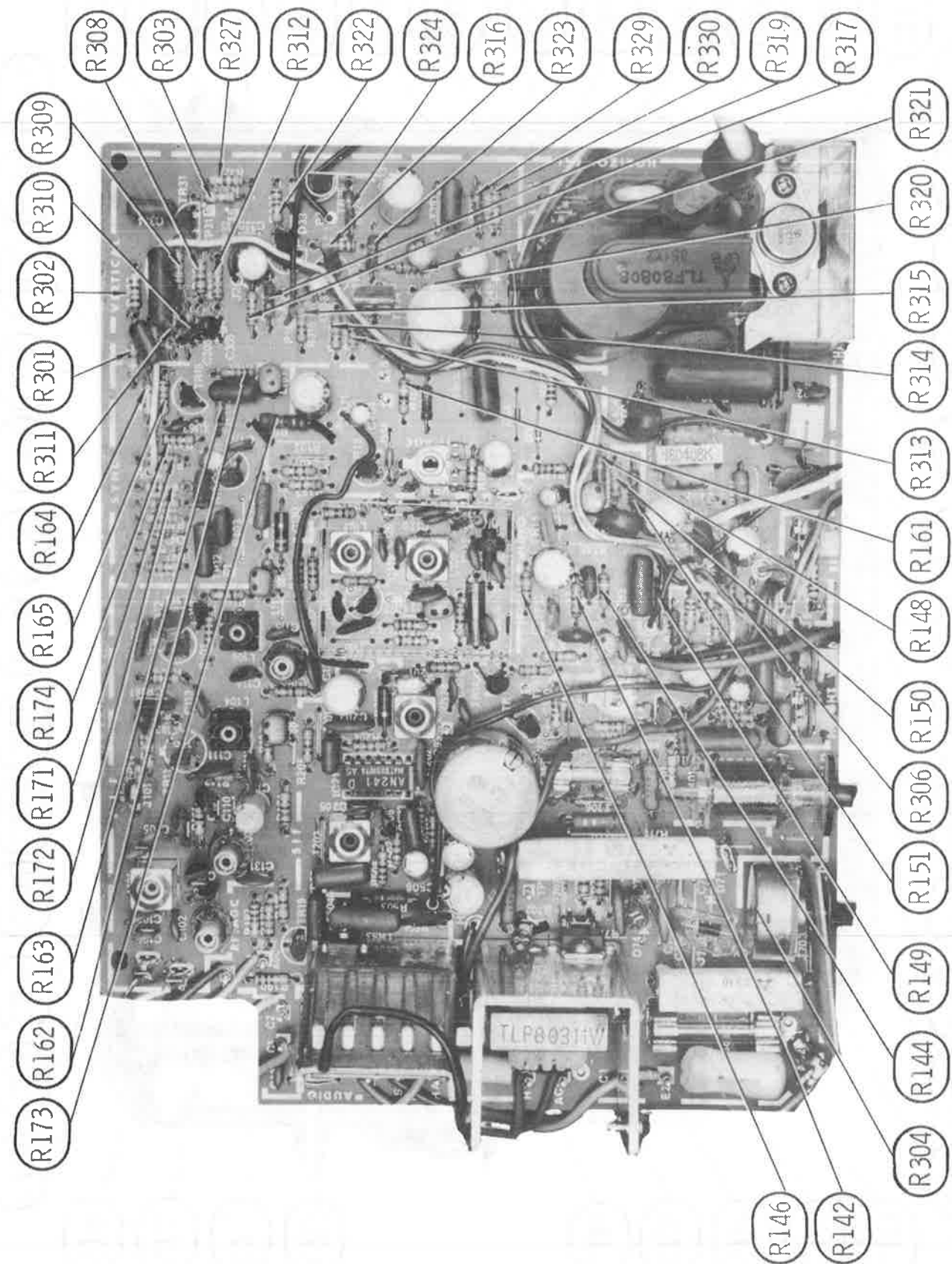


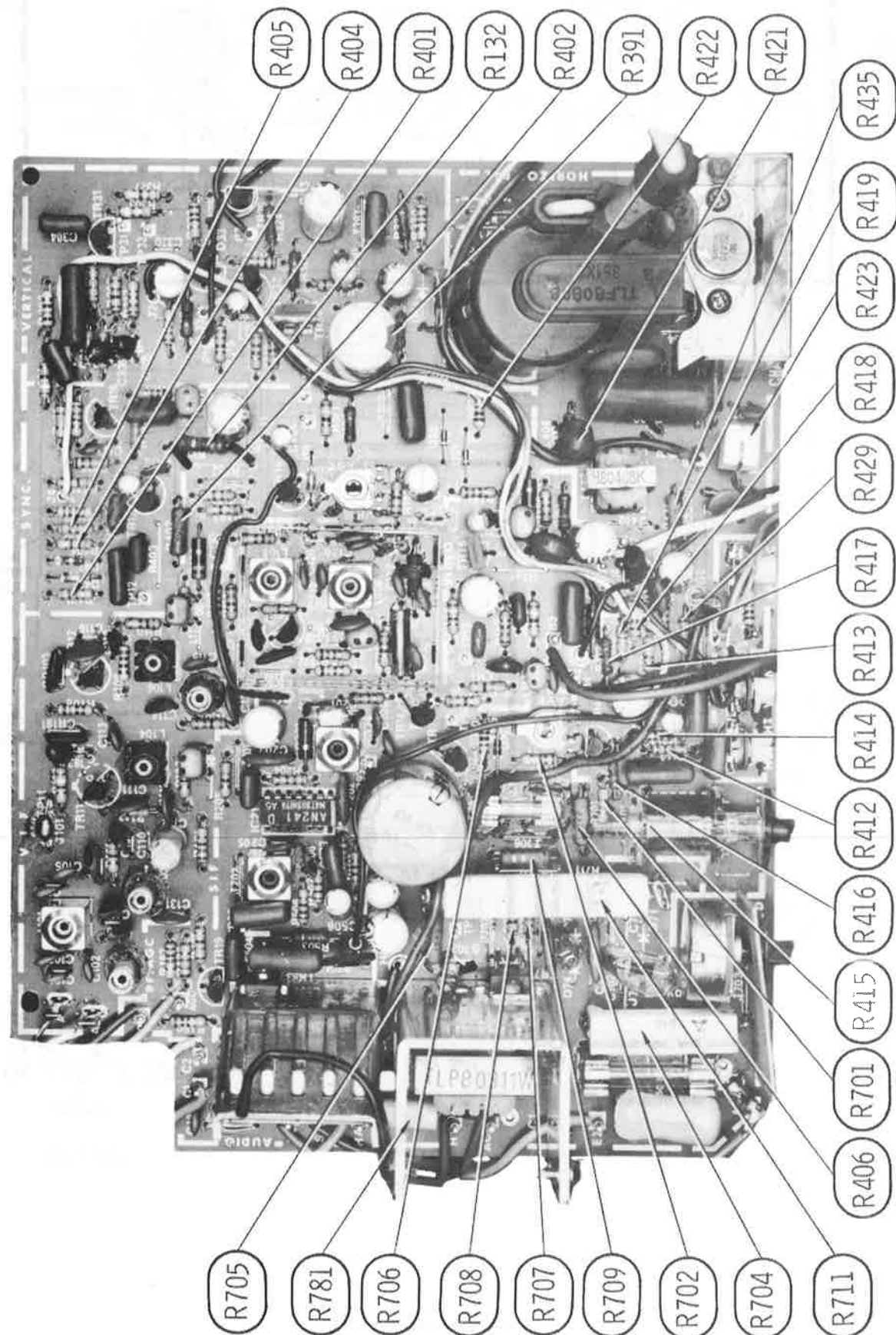
MAIN BOARD

QUASAR CHASSIS  
12TS-/Y12TS-481

FOLDER 1







## SAFETY WARNING

CAUTION: NO WORK SHOULD BE ATTEMPTED ON AN EXPOSED TELEVISION CHASSIS BY ANYONE NOT FAMILIAR WITH SERVICING PROCEDURES AND PRECAUTIONS.

1. SAFETY PROCEDURES should be developed by habit so that when the technician is rushed with repair work, he automatically takes precautions.

2. A GOOD PRACTICE, when working on a receiver, is to use only one hand when testing circuitry. This will avoid the possibility of carelessly putting one hand on chassis or ground and the other on an electrical connection which could cause a severe electrical shock.

3. Extreme care should be used in HANDLING THE PICTURE TUBE. Rough handling may cause it to implode due to atmospheric pressure (14.7 lbs. per sq. in.). Do not nick or scratch glass or subject it to any undue pressure in removal or installation. When handling, use safety goggles and heavy gloves for protection. Discharge picture tube by shorting the anode connection to chassis ground (not cabinet or other mounting parts). When discharging ... go from ground to anode with a well insulated piece of wire.

Avoid prolonged exposure at close range to unshielded areas of the cathode ray tube. Possible danger of personal injury from unnecessary exposure to X-ray radiation may result.

4. The TEST PICTURE TUBE used for servicing the chassis at the bench should incorporate a safety glass and magnetic shield. The safety glass affords shielding from the tube viewing area against X-ray radiation as well as implosion protection. The magnetic shield limits X-ray radiation around the bell of the picture tube in addition to restricting magnetic effects.

5. If the HIGH VOLTAGE is adjustable, it should always be ADJUSTED to the level recommended by the manufacturer. If the voltage is increased above the normal setting, exposure to unnecessary X-ray radiation could result. High voltage can be measured with an accurate high voltage meter connected from the anode connection to chassis.

6. An ISOLATION TRANSFORMER should always be used during the servicing of a receiver whose chassis is common to the AC power line. Use a transformer of adequate power rating as this protects the serviceman from accidents resulting in personal injury from electrical shocks. It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

7. Always REPLACE PROTECTIVE DEVICES, such as fishpaper, isolation resistors and

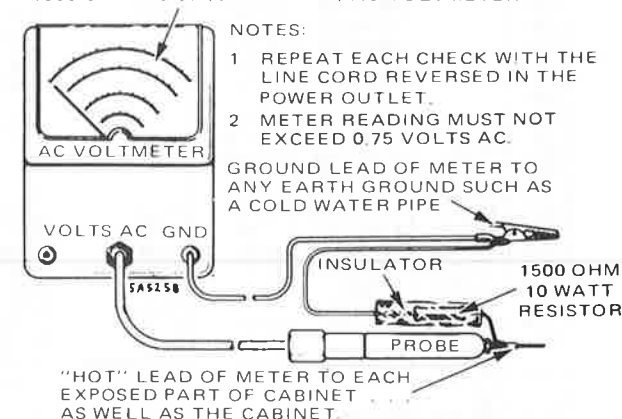
capacitors and shields after working on the receiver. Use only manufacturers recommended rating for fuses, circuit breakers, etc.

8. BEFORE RETURNING A SERVICED RECEIVER (of any type) TO THE OWNER, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock. DO NOT USE A LINE ISOLATION TRANSFORMER WHEN MAKING THIS TEST.

The following test, is related to the minimum safety requirements of the Underwriters Laboratories. It should be performed after the receiver is serviced and before it is returned to the owner.

A 1000 ohm per volt AC voltmeter is prepared by shunting it with a 1500 ohm, 10 watt resistor. The safety test is made by contacting one meter probe to any portion of the receiver exposed to the consumer or operator such as the cabinet trim, hardware, controls, knobs, etc., while the other probe is in contact with a good "earth" ground such as a cold water pipe.

1000 OHM/VOLT (OR HIGHER) AC VOLTMETER



### Voltmeter Hook-up for Safety Check

The AC voltage indicated by the meter may not exceed 0.75 volts. A reading exceeding 0.75 volts indicates that a potentially dangerous leakage path exists between the exposed portion of the receiver and "earth" ground. Such a receiver represents a potentially serious shock hazard to the operator. The fault must first be located and corrected.

Repeat the above test with the receiver power plug reversed.

NEVER RETURN A RECEIVER TO THE CUSTOMER which does not pass the manufacturers safety test.

Courtesy of the Manufacturer

QUASAR CHASSIS  
12TS-/Y12TS-481

FOLDER 1



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.

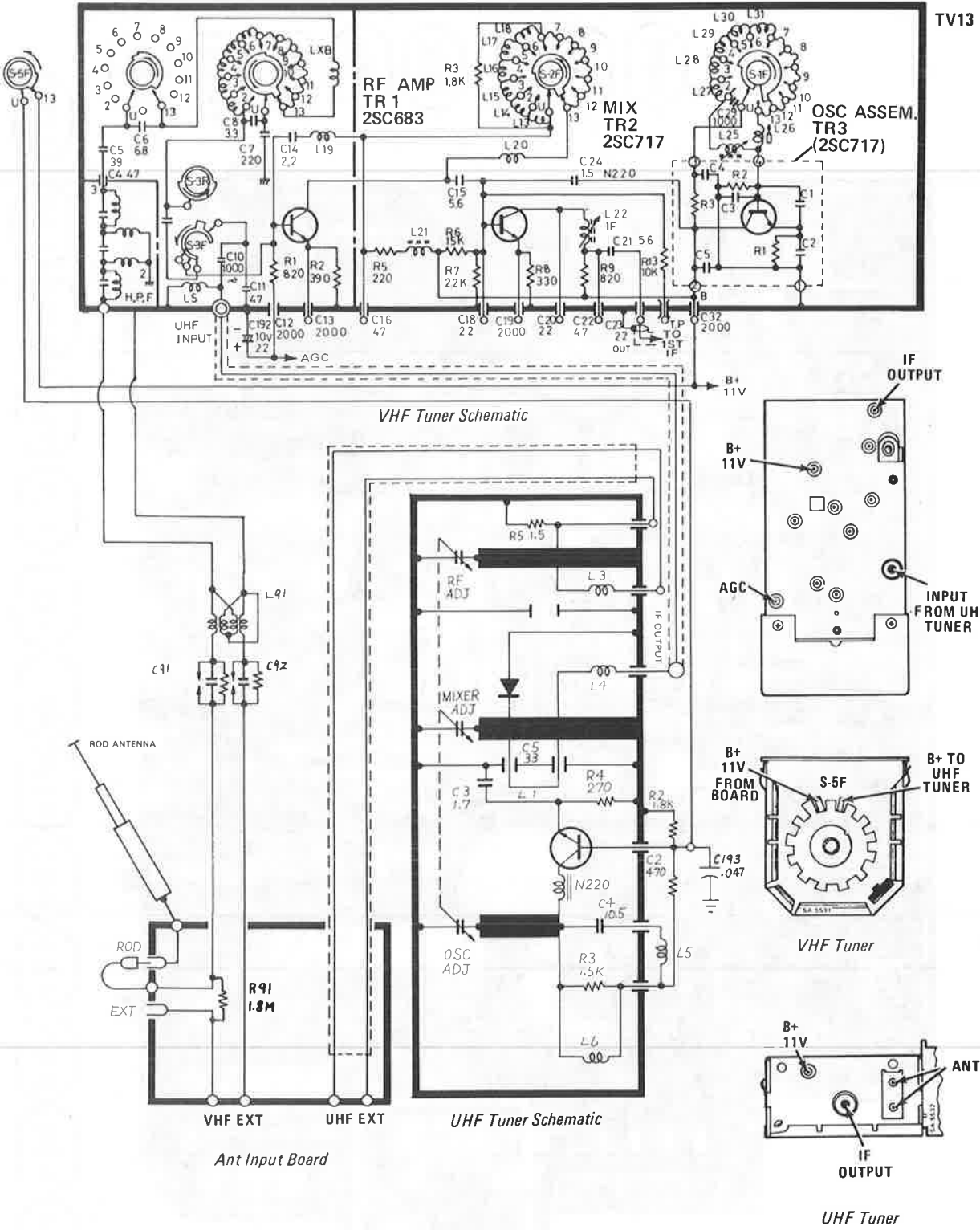
PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	MFGR. PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V1	310GUB4 #				# For SAFETY use only equivalent replacement part.

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		48M355008	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D12		48M355045	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D18		48M355009	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D33		48M355046	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D38		48M355013	GE-511	D172	PTC216	HEPR3012	RE 55	SK3130	RT-203	ECG506
D39		48M355013	GE-511	D172	PTC216	HEPR3012	RE 55	SK3130	RT-203	ECG506
D41		48M355008	1N34AS(7)	1N34A(7)	PTC207M(6)	HEPR9134(7)	RE 86(6)	SK3087(7)	RT-200(7)	ECG110(6)
D42		48M355008								
D47	HS20/1b	48M355047#	GE-504A	8D4	PTC212	HEPR0052	RE 49	SK3108	RT-204	ECG504
D49	10D5A	48M355048	GE-504A	8D6	PTC201	HEPR0054	RE 49	SK3030	RT-213	ECG116
D73	10D5B	48M355049#	GE-504A		PTC202		RE 129	SK3017A	RT-210	ECG116
D75		48M355050								ECG5082
IC21	25V Zener	51M33801A01	GE-2	IC507	PTC726	HEPC6063P	RE 305-IC	SK3072	TVCM-11	ECG712
TR11	2SC1686	48M355002	GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A
TR12	2SC1687	48M355052	GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A
TR13	2SC1687	48M355052	GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A
TR14	2SC829C	48M355053	GE-20	TR-24	PTC132	HEPS0011	RE 9	SK3018	RT-108A	ECG229
TR15	2SC1566	48M355054	GE-20	TR-75	PTC124	HEPS0015	RE 73	SK3104	RT-159A	ECG171
TR16	2SA564P,A	48M355006	GE-48	TR-31	PTC127	HEPS0019	RE 26	SK3114		ECG159
TR17	2SC828P,R		GE-20	TR-21	PTC132	HEPS0015	RE 13	SK3124	RT-107A	ECG199
TR18	2SC828A	48M355004(1)	GE-61	(IR)2SC828A	PTC132	HEPS0015	RE 13	SK3122	RT-107A	ECG199
TR19	2SC828A, R, S, T	48M355004	GE-61	(IR)2SC828A	PTC132	HEPS0015	RE 13	SK3122	RT-107A	ECG199
TR19	2SA564Q, A, R	48M355006	GE-48	TR-31	PTC127	HEPS0019	RE 26	SK3114		ECG159
TR31	2SC828R, S, T		GE-20	TR-24	PTC136	HEPS0015	RE-13	SK3124	RT-107A	ECG199
TR32	2SC828A	48M355004(1)	GE-61	(IR)2SC828A	PTC132	HEPS0015	RE 13	SK3122	RT-107A	ECG199
TR32	2SA564R,Q	48M355006(1)	GE-21	TR-30	PTC127	HEPS0019	RE 193	SK3025	RT-126A	ECG234
TR33	2SA564A	48M355006(1)	GE-48	TR-31	PTC127	HEPS0019	RE 26	SK3114		ECG159
TR33	2SC828S,K	48M355004(1)	GE-20	TR-24	PTC136	HEPS0016	RE 13	SK3124	RT-107A	ECG199
TR34	2SC828A	48M355039(5)	GE-61	(IR)2SC828A	PTC132	HEPS0015	RE 13	SK3122	RT-107A	ECG199
TR34	2SC1226Q, R		GE-28	TR-55	PTC110	HEPS3002	RE 42	SK3122	RT-114	ECG186
TR35	2SA751Q,R	48M355055(5)	GE-29	TR-56	PTC111	HEPS3003	RE 43	SK3124	RT-115	ECG187
TR42	2SC828P	48M355004(1)	GE-20	TR-21	PTC132	HEPS0015	RE 13	SK3122	RT-107A	ECG199
TR43	2SC828A	48M355004(1)	GE-61	(IR)2SC828A	PTC132	HEPS0015	RE 13	SK3122	RT-107A	ECG199
TR43	2SC1573Q, P	48M355012	GE-27	TR-78	PTC150	HEPS0027	RE 77	SK3044	RT-110	ECG287
TR44	2SD470A	48M355056	GE-32	TR-81	PTC148	HEPS5012	RE 24	SK3131	RT-145	ECG157
TR53	2SC1501, Q, R	48M355057		TR-75	PTC124	HEPS5015		SK3103	RT-159A	
TR71	2SA749	48M355058		TR-88	PTC127	HEPS0029	RE 18	SK3513	RT-115	ECG288
TR73	2SD389B, O, P	48M355059	GE-66	TR-76	PTC154	HEPS5000	RE 21	SK3054	RT-133	ECG152

# For SAFETY use only equivalent replacement part.  
(1) Used in some versions.  
(5) Half of complementary pair (TR34 and TR35).  
(6) Matched pair.  
(7) Two required - select matched pair.



Courtesy of the Manufacturer

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.		LITTELFUSE PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER
F701	500mA @ 250V Quick-acting	65M350139 #		AGC1/2		312.500	
F702	250mA @ 125V Quick-acting	65M350140 #					FG1/2-2

# For SAFETY use only equivalent replacement part.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CR103 CR106 CR181 S701 S702 X141 X143	VHF Antenna	85M30255A01	
	UHF Antenna	85M30256A01	
	UHF Tuner	TNK36908TE	77M30242A01
	VHF Tuner	TNT96190NE	77M30241A01
	Component Combination	51M33807A02	Emitter Stabilizer
	Component Combination	51M33807A03	Emitter Stabilizer
	Component Combination	51M33807A04	IF Filter
	Spark Gap	80M30270A02 #	
	Spark Gap	80M30270A02 #	
	Ceramic Filter	48M355051	4.5MHz
	Ceramic Filter		3.58MHz
	Power Cord	30M389A02 #	
	Printed Circuit Board	84M30278A01	CRT Socket

# For SAFETY use only equivalent replacement part.

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

ITEM	PART No.	PART No.	PART No.	PART No.	PART No.
	MODEL XP3162MN	MODEL XP3163MG	MODEL XP3163ML	MODEL XP3163MR	
Cabinet Front	16M30257A01	16M30257A02	16M30257A03	16M30257A04	
Cabinet Back	15M30258A01	15M30258A02	15M30258A03	15M30258A04	
Dial Scale, UHF	34M30262A01	34M30262A02	34M30262A02	34M30262A02	
Knob, UHF Channel Selector	36M30259A01	36M30259A03	36M30259A03	36M30259A03	
Knob, Brightness/Contrast/On-Off-Volume	36M30260A01	36M30260A02	36M30260A02	36M30260A02	
Knob, VHF Channel Selector	36M30259A02	36M30259A04	36M30259A04	36M30259A04	
Knob, UHF Fine Tuning	36M30261A01	36M30261A01	36M30261A01	36M30261A01	
Knob, VHF Fine Tuning	36M30261A02	36M30261A02	36M30261A02	36M30261A02	
	MODEL XP3163MY	MODEL XP3164MW	MODEL YXP3164MW		
Cabinet Front	16M30257A05	16M30257A06	16M30257A06		
Cabinet Back	15M30258A05	15M30258A06	15M30258A06		
Dial Scale, UHF	34M30262A02	34M30262A02	34M30262A02		
Knob, UHF Channel Selector	36M30259A03	36M30259A03	36M30259A03		
Knob, Brightness/Contrast/On-Off-Volume	36M30260A02	36M30260A02	36M30260A02		
Knob, VHF Channel Selector	36M30259A04	36M30259A04	36M30259A04		

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
Power Cord .....	Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 Ft.
	17109 (Plastic) or 17129 (Rubber) - 9 Ft.
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

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	REPLACEMENT DATA					
		MFGR. PART No.	ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C132	47 16V	23M33255A51	RME-E-E-050	EP15-50	PC50-16	VTT47D16	EV-1226
C133	220 16V	23M33255A29	RME-J-E-250	EP15-250	PC250-25	VTT220G16	EV-1240
C143	220 6.3V	23M33255A53	RME-G-D-250	EP15-250	PC250-10	VTT220F10	EV-1140
C148	4.7 160V	23M33255A47	CTA-1300		WBR5-450	TC50XB	TVA-1502
C161	.47 50V	23M33255A54	RME-A-J-001	EP50-1	PC1-50	VTT47B63	EV-1610
C171	3.3 25V	23M33255A55	RME-A-H-003	EP30-5	PC5-50	VTT3R3A50	EV-1318
C181	100 10V	23M33255A56	RME-E-E-100	EP15-100	PC100-10	VTT100E10	EV-1130
C183	3.3 25V	23M33218A04				TDC335M035FL	SD35-3R39
C203	220 16V	23M33255A29				VTT220G16	EV-1240
C305	22 10V	23M33218A05	RME-J-E-250	EP15-250	PC250-25	TDC226M035GL	SD35-229
C306	22 10V	23M33218A05				TDC226M035GL	SD35-229
C307	100 6.3V	23M33255A58				MTV100CB6	EV-1030
C308	10 16V	23M33255A59	RME-E-E-100	EP6-100	PC100-10	PC10-25	EV-1222
C310	33 10V	23M33255A60	RME-B-G-010	EP15-10	PC10-25	VTT10A25	EV-1125
C311	330 16V	23M33255A61	ME-3-D-035	EP15-25	PC30-25	VTT33A10	EV-1245
C391	1000 25V	23M33255A62 #	RME-J-E-250	EP15-250	WBR350-150	VTT330H16	EV-1360
C404	1 50V	23M33255A63	RME-P-G-1000	EP30-1000	WBR1000-25	VTT1000M25	EV-1615
C405	100 16V	23M33255A34	RME-A-J-001	EP50-1	PC1-50	MTV1CB50	EV-1230
C407	4.7 25V	23M33255A64	RME-E-E-100	EP15-100	PC100-16	VTT100F16	EV-1319
C424	2.2 160V	23M33255A65	RME-A-J-005	EP30-5	PC5-50	VTT4R7A50	TVA-1500.1
C491	33 25V	23M33255A66	ME-3-R-002		WBR2-450	TC595A	EV-1325
C506	33 6.3V	23M33255A67	ME-4-G-035	EP30-25	PC30-25	VTT33D25	EV-1318
C705	220 160V	23M33255A68	RME-A-H-003	EP30-5	PC5-50	VTT3R3A50	TVA-1500
C706	1 160V	23M33255A69					
C749	10 160V	23M33255A70	ME-3-R-001		WBR1-450	TC56A	
			CTA-1310		WBR12-250	TC52A	

# For SAFETY use only equivalent replacement part.

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.
C101	56 10%		CCD-560	DD-560		GP456	10TS-Q56
C102	56 10%		CCD-560	DD-560		GP456	10TS-Q56
C103	39 10%		CCT0-390			CN0439	10TCC-Q39
C104	18 10%		CCT0-180			CN0418	10TCC-Q18
C105	10 +.5					CN0410	10TCC-Q10
C106	3 NPO +.25	21M380A73		DTZ-10	NP010		
C107	10 N470 +.1	21M380A13					
C108	5 N470 +.25	21M380A04					
C109	5 N470 +.25	21M380A04					
C111	.01		CCD-103	DD-1032	GP10000	GP110	10TS-S10
C112	.01		CCD-103	DD-1032	GP10000	GP110	10TS-S10
C113	39 10%		CC10-390			CN0439	10TCC-Q39
C114	3 N470 +.25	21M380A73					
C115	33 10%		CCT0-330	DTZ-33	NP033	CN0433	10TCC-Q33
C116	.01		CCD-103	DD-1032	GP10000	GP110	10TS-S10
C117	4 NPO +.25	21M380A75					
C118	2 NPO +.25	21M380A76					
C119	47 N330 5%	21M380A77					
C120	220 5%			DTZ-220			10TCC-T22
C121	15 N330 5%	21M380A79					
C122	10 +.5			DTZ-10	NP010	CN0410	10TCC-Q10
C123	10 +.5			DTZ-10	NP010	CN0410	10TCC-Q10
C124	5 +.5						10TCC-V50
C125	.0T		CCT0-050	DD-1032	GP10000	GP110	10TS-S10
C126	.001		CCD-102	DD-102		GP210	10TS-D10
C127	.01		CCD-103	DD-1032	GP10000	GP110	10TS-S10
C128	.001		CCD-102	DD-102		GP210	10TS-D10
C131	.01		CCD-103	DD-1032	GP10000	GP110	10TS-S10
C140	330 10%		CCD-331	DD-331	GP330	GP333	10TS-T33
C142	.0033 50V 10%		1MDF-1-332	CPJ-332	DPMS6D33	EWFA233	1PB-D33
C144	.1 50V		1MDF-3-104		DPMS2P1	EWFA010	1PB-P10
C162	.047 50V		1MDF-2-473		DPMS2S47	EWFA147	1PB-S47
C163	82 10%		CCD-820	DD-820		GP482	10TS-Q82
C172	100 10%		CCD-101	DD-101	GP100	GP310	10TS-T10
C182	.1 50V		1MDF-3-104		DPMS2P1	EWFA010	1PB-P10
C184	.0022		CCD-222			GP222	10TS-D22
C200	15 5%			DTZ-15	NP015	CN0415	10TCC-Q15
C201	470 10%		DM15-471J	DC-470J	CD15FD471J03	SX347	424ME4700J501
C202	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C204	.015 50V		1MDF-1-153	CPJ-153	DPMS4S15	EWFA115	1PB-S15
C205	150 N150 5%	21M380A86	*			*	10TCP-T15
C206	12 NPO 10%		CCT0-120			CN0412	10TCC-Q12
C207	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C211	.0022		CCD-222			GP222	10TS-D22
C301	.047 50V		1MDF-2-473		DPMS2S47	EWFA147	1PB-S47
C302	.22 50V		1MDF-4-224		DPMS2P22	EWFA022	1PB-P22
C304	.033 50V 10%		6DP-3-333		DPMS6S33	EWFA133	6PS-S33



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	MFG. PART No.	REPLACEMENT DATA									
			ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.					
C312	.047 50V	8M33222A37	1MDF-2-473	CPJ-103	DPMS2S47	EWFA1A147	1PB-S47					
C401	.01 50V		1MDF-1-103		DPMS4S1	EWFA1A110	1PB-S10					
C402	.01 50V		1MDF-1-103		DPMS4S1	EWFA1A110	1PB-S10					
C403	.068 50V 10%		1MDF-2-683		DPMS4S68	EWFA1A168	1PB-S68					
C408	.1 50V		1MDF-3-104		DPMS2P1	EWFA1A010	1PB-P10					
C409	.033 50V 5%		21M380A91 # 8M33571A07	6DP-1-682	CPR-6800J	DPMS6D68	EWFA6268	6PS-D68				
C410	.0068 630V 10%			CCD-122		DD-122	GP212	10TS-D12				
C411	.0012 10%			CCD-101		DD-101	GP310	10TS-T10				
C416	100 1KV 10%			CCD-221		DD-221	GP322	10TS-T22				
C417	220 1KV 10%			21M380A38 # 21M33212A06 #		CCD-472	DD-102	PM4P18	GP210 GP222	10TS-D47 10TS-D10 10TS-D22		
C418	.0012 2KV 5%											
C420	.18 400V 10%											
C421	.0047											
C422	.001											
C481	.0022											
C501	.1 50V 10%	1MDF-3-104	CPJ-223		DPMS2P1						EWFA1A010	1PB-P10
C503	.022 50V	1MDF-1-223			DPMS2S22						EWFA1A122	1PB-S22
C504	.027 50V	6DP-3-273			DPMS6S27						PVC6127	6PS-S27
C505	.033 400V 10%	6DP-3-333		DPMS6S33	EWFA6133	6PS-S33						
C631	.0022	CCD-222				GP222	10TS-D22					
C703	.01	CCD-103				10TS-S10						
C711	.056 125VAC	CCD-472	10TS-D47									
C712	.0047											

# For SAFETY use only equivalent replacement part.  
\* 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				
			MFG. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
VR18	IF AGC	500	18M30272A01	TSV-500 (3) or T-500 (3)	C-501 (3)	MTC52L1 (3)	X201R501B (3)
VR19	RF AGC	1000	18M30272A02	TSV-1K or T-1000	C-102	MTC13L1	X201R102B
VR31	Vert Hold	200K	18M30272A03	F2-250K,SNK104	A47-250K-Z,RH-3 or [NP-250K-Z, NML-A-300]	RU25A,SL37,SN2000 or [UA254A,SN2000]	BU11,CF23,SS6A
VR32	Vert Height	20K	18M30272A04	T-20K or TSV-25K	C-253	MTC24L1	X201R253B
VR33	Vert Linearity	2000	18M30272A05	TSV-2.5K or T-2500	C-252	MTC23L1	X201R252B
VR51	Volume/Switch	50K	18M30272A06	F5-50K,SN200, AK38,KR2	NP-1000-V, NML-A-300,TT-2	RU54R,SL37,SN1125, US42 or [UA54R (1), SN1125,US27]	BU11,CF98,SS6A, WF
VR62	Contrast	1000	18M30272A07	F5-1000,SH200, AK38		RU13R,SL37,SN1175 or [UA13R (1), SN1125]	BU11,CF37,SS6A
VR63	Brightness	200K	18M30272A08	F1-200K,SN200, AK38		RU25L,SL37,SN1125 or [UA25L (1), SN1125]	BU11,CF14,SS6A
VR71	AVR	5000	18M30272A09	TSV-5K (3) or T-5000 (3)		MTC53L1 (3)	X201R502B (3)

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA		
		WORKMAN PART No.	MFG. PART No.			WORKMAN PART No.	MFG. PART No.	
R310	2.2 5% 1/4W Carbon	CA-10	6M33007A91 #	R435	3900 5% 1W WW	CA-120	#	
R311	2.2 5% 1/4W Carbon		6M33007A91 #		2700 5% 1W WW		17M33130A21 (2) #	
R319	10 5% 1/2W Carbon		6S10164A77 #	R503	120 5% 1/2W Carbon		6S10164B10 #	
R323	2.2 5% 1/4W Carbon		6M33007A91 #	R504	VDR 120V 10% .8W		6M33729A05	
R324	2.2 5% 1/4W Carbon		6M33007A91 #		(1)			
R391	10 5% 1/2W Carbon		6S10164A77 #	R506	1.8M 10% 1/2W Carbon	CA-1.8Meg	6S131671 #	
R406	12K 5% 1W WW		17M33130A16 #					
R416	180 5% 1/2W Carbon		CA-180	6S10164B14 #	R704	510 5% 7W WW	CA-5.6	17M350153 #
R417	22 5% 1/4W Carbon		CD-22	6S10164A92 #	R709	5.6 5% 1/2W Carbon		6M33007A89 #
R423	47 5% 3W WW			17M350152 #	R711	27 5% 10W WW		17M350141 #

# For SAFETY use only equivalent replacement part.  
(1) Voltage dependent resistor.  
(2) Used in some versions.

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.	
L91	Balun	24M30252A01	TLI801333 TLI803502 TLI803502 TLI801330 TLI33054-3 TLI801330 TLI801331 TLI801332		
L101	Video Input IF	24M30253A01			
L102	41.25MHz Trap	24M30253A02			
L103	47.25MHz Trap	24M30253A02			
L104	1st Video IF	24M30253A03			
L105	39.75MHz Trap	24M30253A04			
L106	2nd Video IF	24M30253A03			
L107	3rd Video IF	24M30253A05			
L108	Video Detector	24M30253A06			
L109	RF Choke (8uH)	24M33738A27			
L110	Peaking (38uH)	24M33738A28			
L111	Peaking (250uH)	24M33738A29			
L112	Peaking (820uH)	24M33738A30			
L113	Peaking (820uH)	24M33738A30			
L141	RF Choke (2.8uH)	24M33738A31			
L142	Peaking (150uH)	24M33738A32 (1)			
L143	Peaking (390uH)	24M33738A33	TLS804304 TLS803201 TLH3802C	4624	
L161	Peaking (68uH)	24M33738A34			
L201	Sound Input IF	24M30266A01			
L202	Quadrature	24M30266A02			
L404	RF Choke	24M30267A03			

(1) Includes 10K resistor.

COILS & TRANSFORMERS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA				
		MFG. PART No.	OTHER IDENTIFICATION	MILLER PART No.	THORDARSON PART No.	TRIAD PART No.
L400	Yoke 90° Horiz 5.9mH Vert 12.6mH	24M30288A01 #	TLY-80311KS			
L401	Horiz Osc (Hold)	24M30267A01 #	3112-4			
L402	Horiz Driver	24M30267A02 #	H80408K			
T401	Horiz Output	24M30273A01 #	TLF80808			

# 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.	
T701	120V AC @ .013A AC	12V AC @ .065A AC	25M30274A02 TLP80311W (1)			(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFG. PART No.	THORDARSON PART No.	TRIAD PART No.	
T501	2000	8	25M30274A01 TTA-28F36AW (1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFG. PART No.	QUAM PART No.	
SP1	3" PM, 8 Ohms	50M30287A01	30A0528	

SERVICING IN THE FIELD

CRT IMPLOSION PROTECTION AND CLEANING

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

FUSE DEVICES

A .25-amp fuse is used for power-supply protection.

A .5-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.)

WIDTH

The width may be varied by connecting the lead from C418 to various voltage points (W1, W2, W3). (See Transistor Placement Chart.)

FOCUS

The focus may be varied by connecting the lead from pin 7 of CRT to various voltage points. (See photo, Cabinet-Rear View.)

AGC

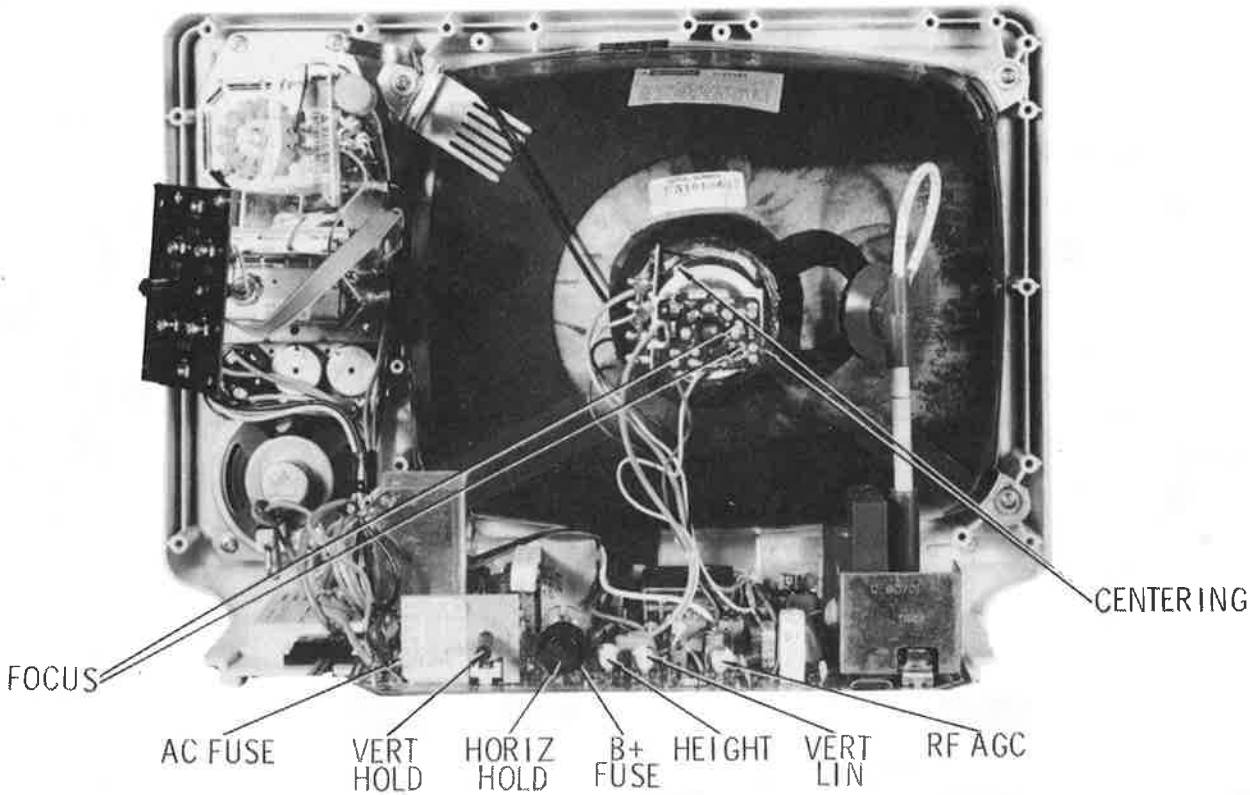
The AGC may be varied by RF and IF AGC controls. (See Transistor Placement Chart.)

CENTERING

Centering is accomplished by proper adjustment of two magnetic rings located on the yoke rear cover.

QUASAR CHASSIS  
12TS-/Y12TS-481

FOLDER 1



CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

Remove all knobs. Remove six screws holding cabinet back and remove back.

Note: Slide chassis back and most components can be serviced without further chassis removal.

Disconnect CRT socket, HV anode lead, speaker leads, and CRT ground wire. Loosen and remove deflection yoke. Remove one screw holding AC

power cord clamp and four screws holding tuner and control mounting assembly. Slide chassis and tuner assembly from cabinet.

CRT REMOVAL

Follow "Chassis Removal" procedure. Lay set face down on a soft protective surface. Remove four screws holding CRT mounting brackets.

Lift the CRT from the cabinet front. Do not lift the CRT by the neck.