



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(Refer to FCC Rules and Regulations Part 95, Subpart C & D.)

The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

Connect either 50-ohm dummy load or the normally used antenna system.



MODEL TRC-425

MANUFACTURER'S SPECIFICATIONS

RECEIVER

Frequency Coverage	: All 40 channels 26.965 to 27.405 MHz
Sensitivity	: Better than 0.5 μ V for 10 dB S/N
Adjacent Channel Rejection(10kHz)	: 70 dB nominal
Audio Distortion at 1000 Hz	: Less than 10% at 4 watts output
Spurious Response	: 70 dB nominal
Spurious Signal Radiation	: Less than 5 μ V (FCC limitation)
I.F.	: 10.695 MHz 455 kHz
Squelch	: Adjustable from 0.25 μ V to 1 mV

TRANSMITTER

Frequency Coverage	: All 40 channels 26.965 to 27.405 MHz
Power Output	: 4 watts maximum
Modulation	: 90 — 100%
Spurious Signal Radiation	: 60 dB down or better (FCC limitation)
Emission	: 6A3
Frequency Tolerance	: 0.002%
Antenna Impedance	: 50 ohms
Power Requirements	: 12 Volts, DC, negative or positive ground; 20 watts
Current Drain	: 200-1700 mA (from no signal receive to full modulation on transmit)
Dimensions	: 2-3/16 x 6-5/8 x 8-1/2 (5.5 x 16.7 x 21.5 cm) HWD
Weight	: 3 lbs. 5 ozs. (1.5 kg)

Courtesy of the Manufacturer

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

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REALISTIC MODEL TRC-425

ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment. Maintain line voltage at 120V AC. Allow a 15-minute warm-up period.
Adjustments made with 13.8 volt DC input.
Connect low sides of test equipment to ground unless specified otherwise.
Connect 50-ohm dummy load or antenna before keying transmitter.
Connect microphone.

Suggested Alignment Tools:

L101 thru L103, L804 thru L807, L901, L903 9440
T301 thru T303, L801 thru L803 5000, 5009, 8276, 8728, 9089
L905 9300, 9302, 9304

GC ELECTRONICS:

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope to TP803 (L801 Secondary).	Ch. 19	L801	Adjust for maximum RF (.35 volts p-p typical). (See Figure 1.)
Input of frequency counter to TP803 (L801 Secondary).	Ch. 19	CT801	Adjust for 10.240MHz.
Input of DC meter to TP801 (Junction of R811 and R813).	Ch. 1	L802	Adjust for 1.60 volts. Check for approx. 3.00 volts on channel 40.
Input of oscilloscope to TP802 (L803 Secondary).	Ch. 19	L803	Adjust for maximum RF (.30 volts p-p typical). (See Figure 2.)
Input of frequency counter to TP802 (L803 Secondary).	Ch. 1		Check for 16.270MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP804 (IC802 Pin 7).	Ch. 1 XMT		Check for 16.725MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of oscilloscope to TP805 (Q803 Gate).	Ch. 19 XMT	L804	Adjust for maximum RF (.12 volts p-p typical). (See Figure 3.)
Input of frequency counter to TP805 (Q803 Gate).	Ch. 1 XMT		Check for 26.965MHz. If necessary readjust CT801 for correct frequency. Check all channels. (See Truth Chart for correct frequencies.)

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
Set generator output low enough to prevent AGC limiting. Preset controls as follows, unless otherwise noted: RF Gain Maximum, Squelch MINIMUM, Tone Fully CW, Ch. 9/Scan/Out Out, NB/ANL Off.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator to TP806 (Q302 Base). 455kHz, 1000Hz @ 30% modulation.	Ch. 19	T303, T302	Adjust for maximum audio output.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	T301, L103, L102, L101	Adjust for maximum audio output. Readjust T302 and T303 for maximum.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
Preset controls as follows, unless otherwise noted: RF Gain Maximum, Squelch MINIMUM, Tone Fully
CW Ch. 9/Scan/Out Off, NB/ANL Off.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1uV.	Ch. 19 Volume Maximum	VR7	AGC Set VR1 to midrange. Adjust for 2.00 volts RMS (.5 watt) audio output.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output .5uV.	Ch. 19	VR1	RF GAIN RANGE Adjust for best signal to noise ratio.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19 Squelch Maximum	VR5	SQUELCH RANGE Adjust so squelch just breaks.
Output of signal generator to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	VR3	RX SIGNAL METER Adjust for 9 on RX Signal scale of meter.

TRANSMITTER ALIGNMENT

Connect a 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after alignment of
transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of RF wattmeter to antenna input.	Ch. 19 XMT	L805, L806, L807, L901, L903	Adjust for maximum RF
Input of RF wattmeter to antenna input.	Ch. 19 XMT	L905	Adjust for 4.0 watts RF output maximum.

TRANSMITTER ADJUSTMENTS

Connect a 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of
transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 20mV audio signal at mic input.	Ch. 19 XMT	VR8	AMC Adjust for 100% modulation maximum. (See Figure 4.)
Input of RF wattmeter to antenna input.	Ch. 19 XMT	VR11	TX PWR METER At 4.0 watts RF output adjust for 4 on TX PWR scale of meter.
Connect a 150 ohm non-inductive, 5 watt load to antenna input.	Ch. 19 XMT SWR/CAL/S-RF CAL	VR9	SWR METER Adjust SWR CAL control to CAL mark on meter Switch to SWR and adjust VR9 for 3 on SWR scale of meter.

REALISTIC MODEL TRC-425

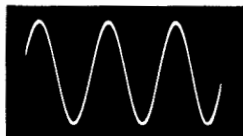


FIGURE 1

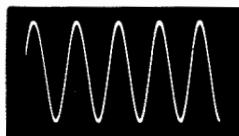


FIGURE 2

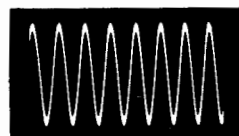


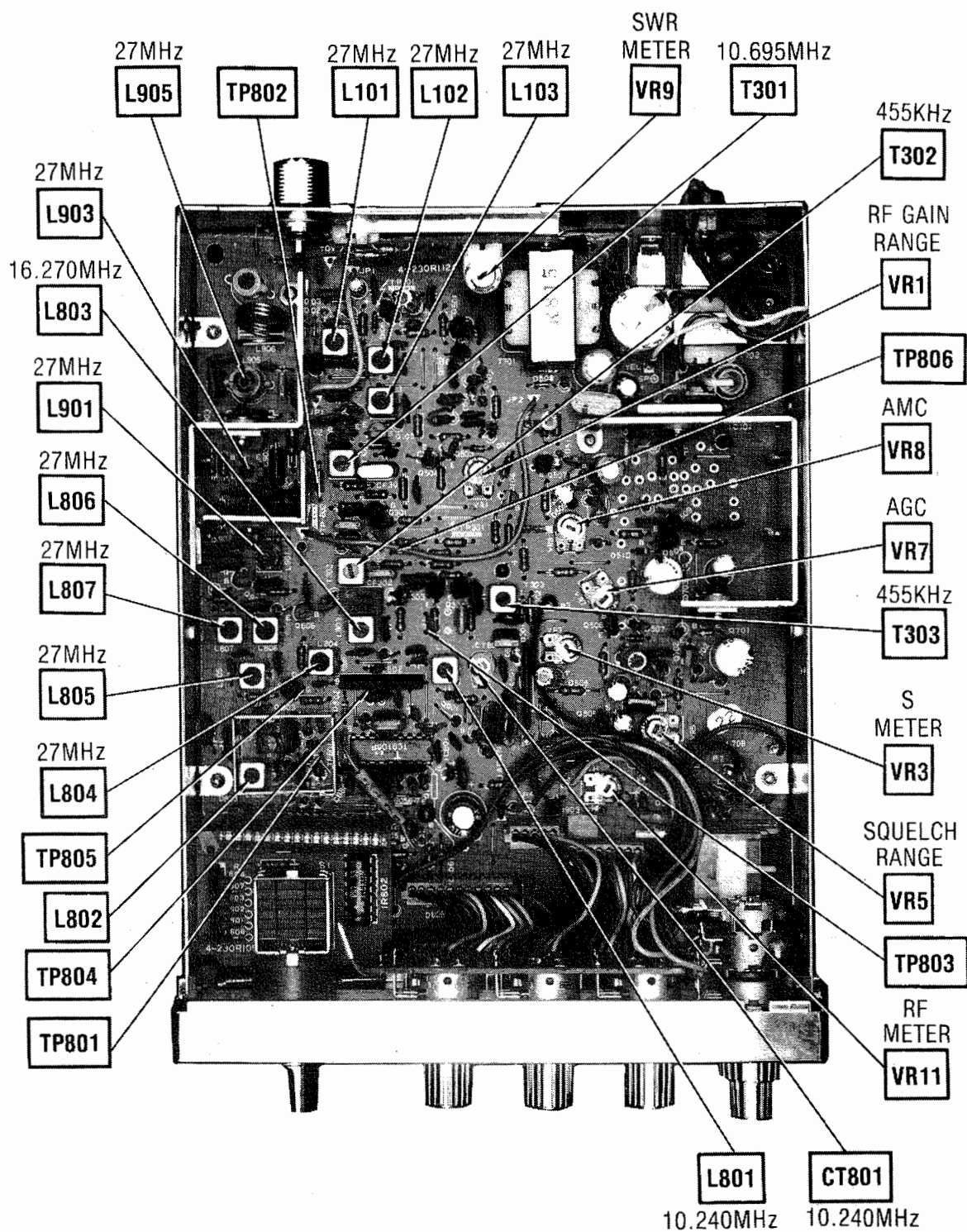
FIGURE 3



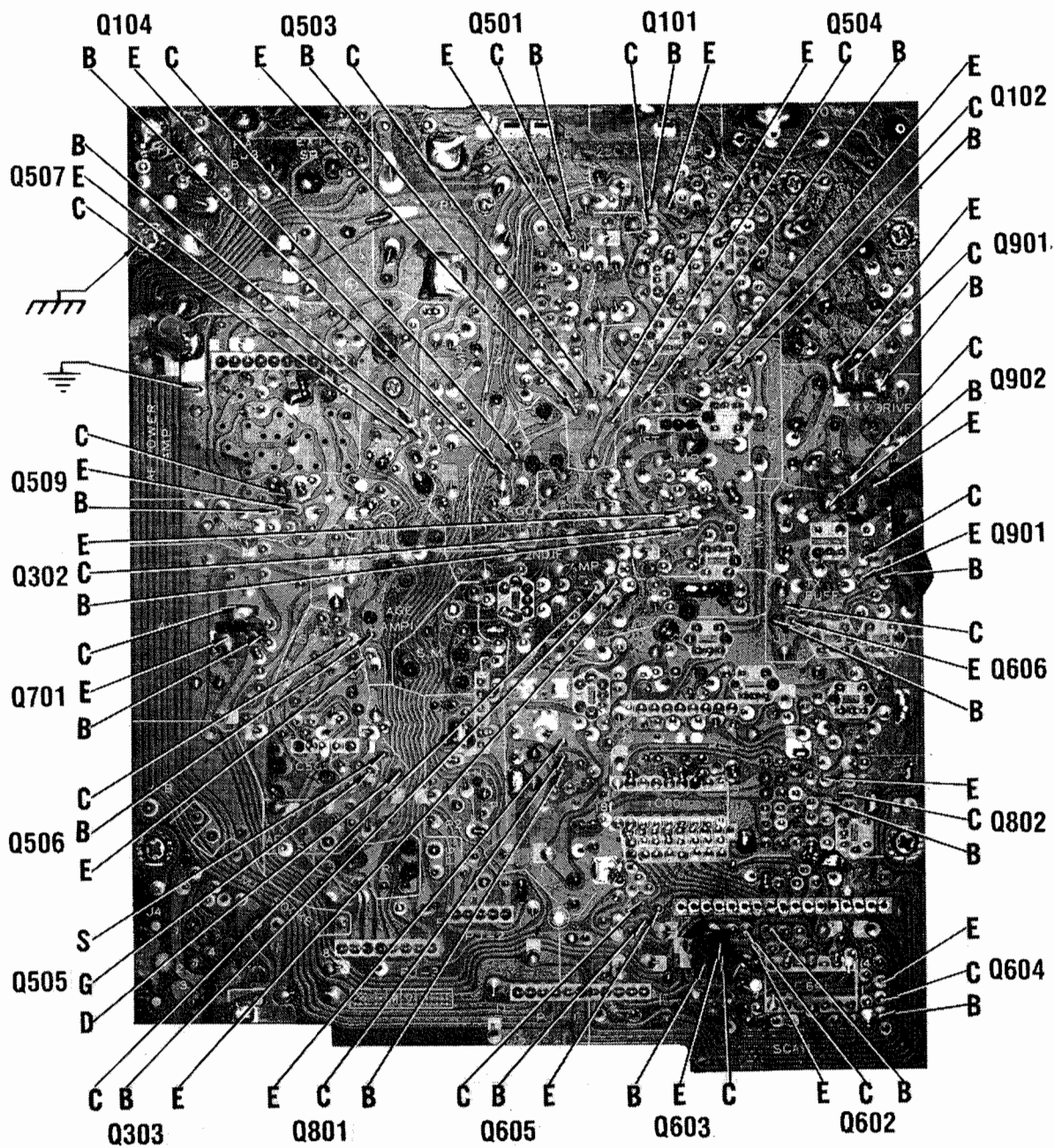
FIGURE 4

TRUTH CHART

C H A N N E L	1 = 7.30 Volts 0 = 0 1.20 Volts								RECEIVE VCO OUTPUT IN MHz AT TP802	TRANSMIT VCO OUTPUT IN MHz AT Q802 Emitter	TRANSMIT SYNTH. IN MHz AT IC802 Pin 9
	PINS										
	17	16	15	14	13	12	11	10			
1	1	1	1	1	1	1	1	1	16.270	16.725	26.965
2	1	1	1	0	0	0	0	1	16.280	16.735	26.975
3	1	1	1	0	1	0	0	1	16.290	16.745	26.985
4	1	1	1	1	1	0	1	0	16.310	16.765	27.005
5	1	1	1	0	1	0	0	0	16.320	16.775	27.015
6	1	1	1	0	0	0	1	0	16.330	16.785	27.025
7	1	1	1	1	1	1	0	1	16.340	16.795	27.035
8	1	1	1	0	0	0	0	0	16.360	16.815	27.055
9	1	1	1	1	1	0	0	0	16.370	16.825	27.065
10	1	1	0	0	0	1	0	0	16.380	16.835	27.085
11	1	1	0	1	1	1	1	1	16.390	16.845	27.095
12	1	1	0	0	0	0	0	1	16.410	16.865	27.105
13	1	1	0	0	1	0	0	1	16.420	16.875	27.115
14	1	1	0	1	1	0	1	0	16.430	16.885	27.125
15	1	1	0	0	1	0	0	0	16.440	16.895	27.135
16	1	1	0	0	0	0	1	0	16.460	16.915	27.155
17	1	1	0	1	1	1	0	1	16.470	16.925	27.165
18	1	1	0	0	0	0	0	0	16.480	16.935	27.175
19	1	1	0	1	1	0	0	0	16.490	16.945	27.185
20	1	0	1	0	0	1	0	0	16.510	16.965	27.205
21	1	0	1	1	1	1	1	1	16.520	16.975	27.215
22	1	0	1	0	0	0	0	1	16.530	16.985	27.225
23	1	0	1	0	1	0	0	1	16.560	17.015	27.255
24	1	0	1	1	1	0	1	0	16.540	16.995	27.235
25	1	0	1	0	1	0	0	0	16.550	17.005	27.245
26	1	0	1	0	0	0	1	0	16.570	17.025	27.265
27	1	0	1	1	1	1	0	1	16.580	17.035	27.275
28	1	0	1	0	0	0	0	0	16.590	17.045	27.285
29	1	0	1	1	1	0	0	0	16.600	17.055	27.295
30	1	0	0	0	0	1	0	0	16.610	17.065	27.305
31	1	0	0	1	1	1	1	1	16.620	17.075	27.315
32	1	0	0	0	0	0	0	1	16.630	17.085	27.325
33	1	0	0	0	1	0	0	1	16.640	17.095	27.335
34	1	0	0	1	1	0	1	0	16.650	17.105	27.345
35	1	0	0	0	1	0	0	0	16.660	17.115	27.355
36	1	0	0	0	0	0	1	0	16.670	17.125	27.365
37	1	0	0	1	1	1	0	1	16.680	17.135	27.375
38	1	0	0	0	0	0	0	0	16.690	17.145	27.385
39	1	0	0	1	1	0	0	0	16.700	17.155	27.395
40	0	1	0	0	0	1	0	0	16.710	17.165	27.405

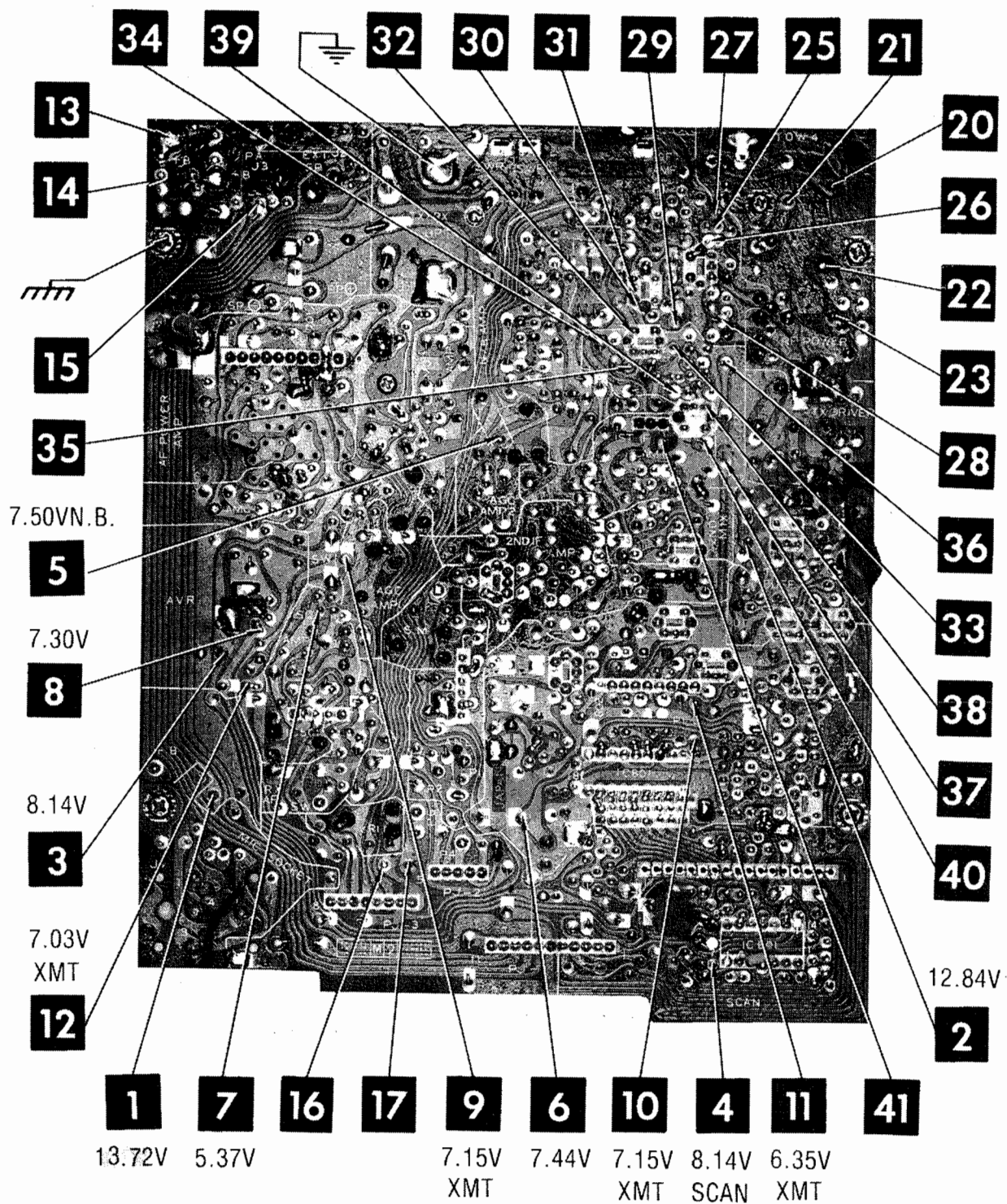


CHASSIS-BOTTOM



MAIN BOARD



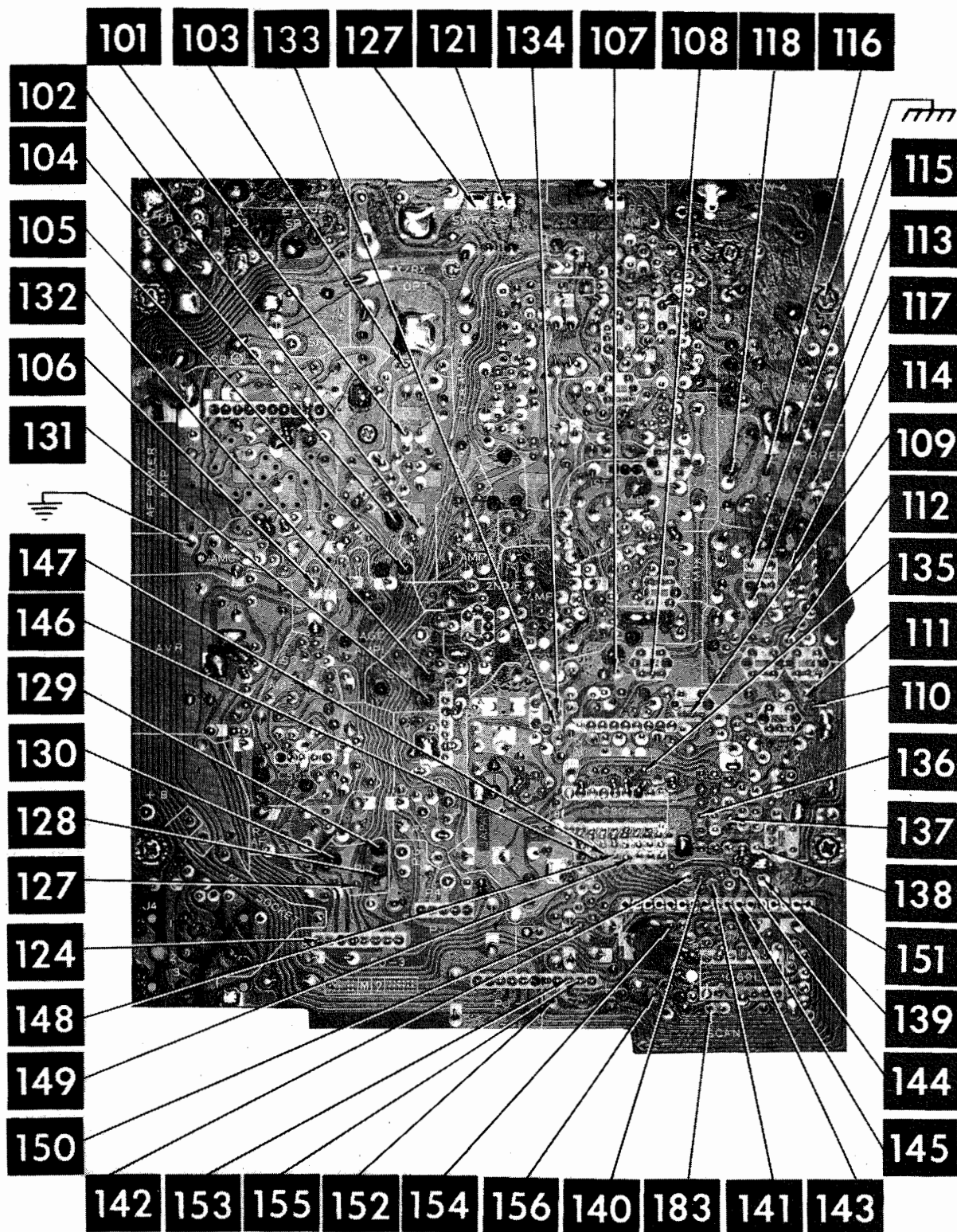


MAIN BOARD

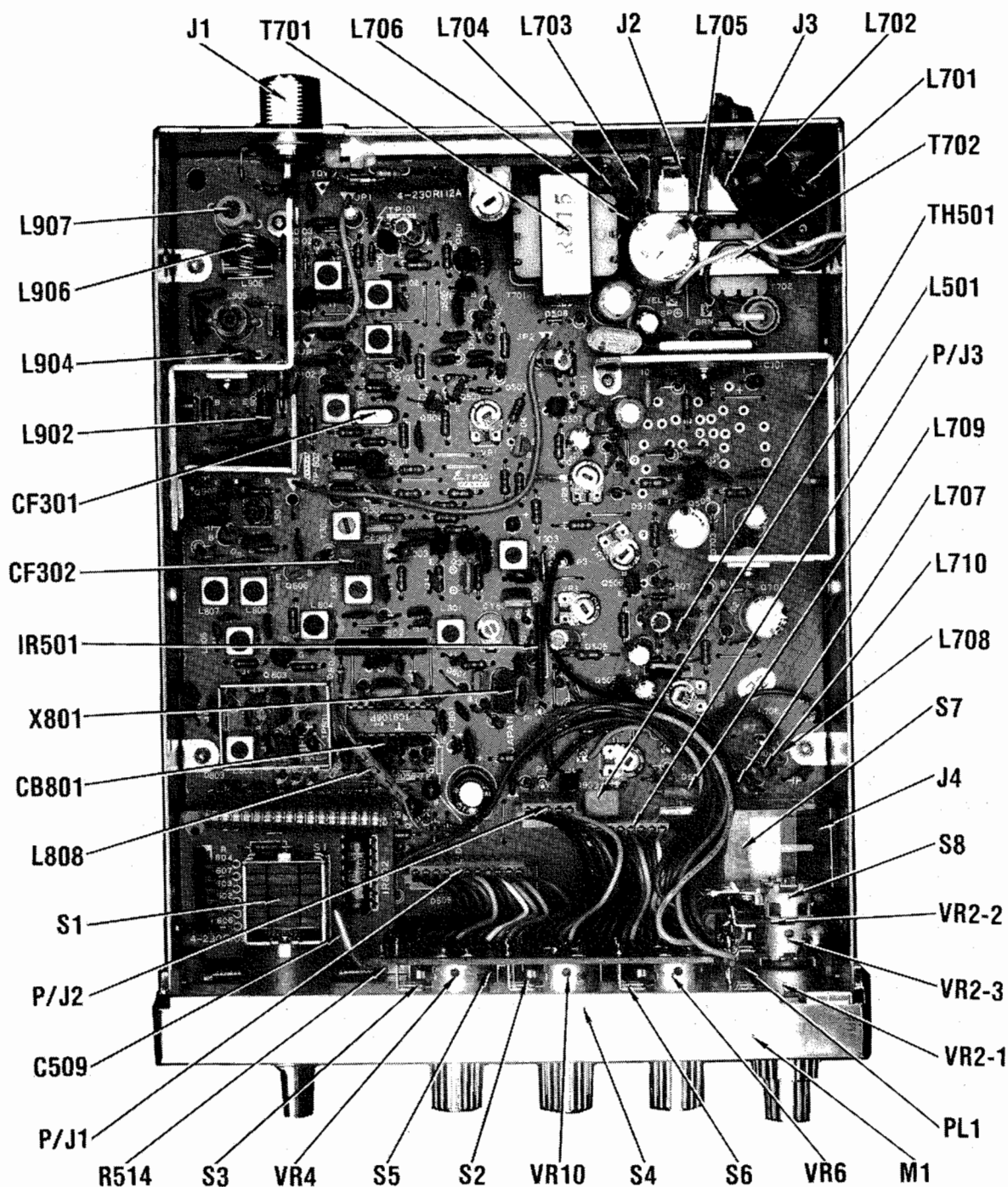


REALISTIC MODEL TRC-425

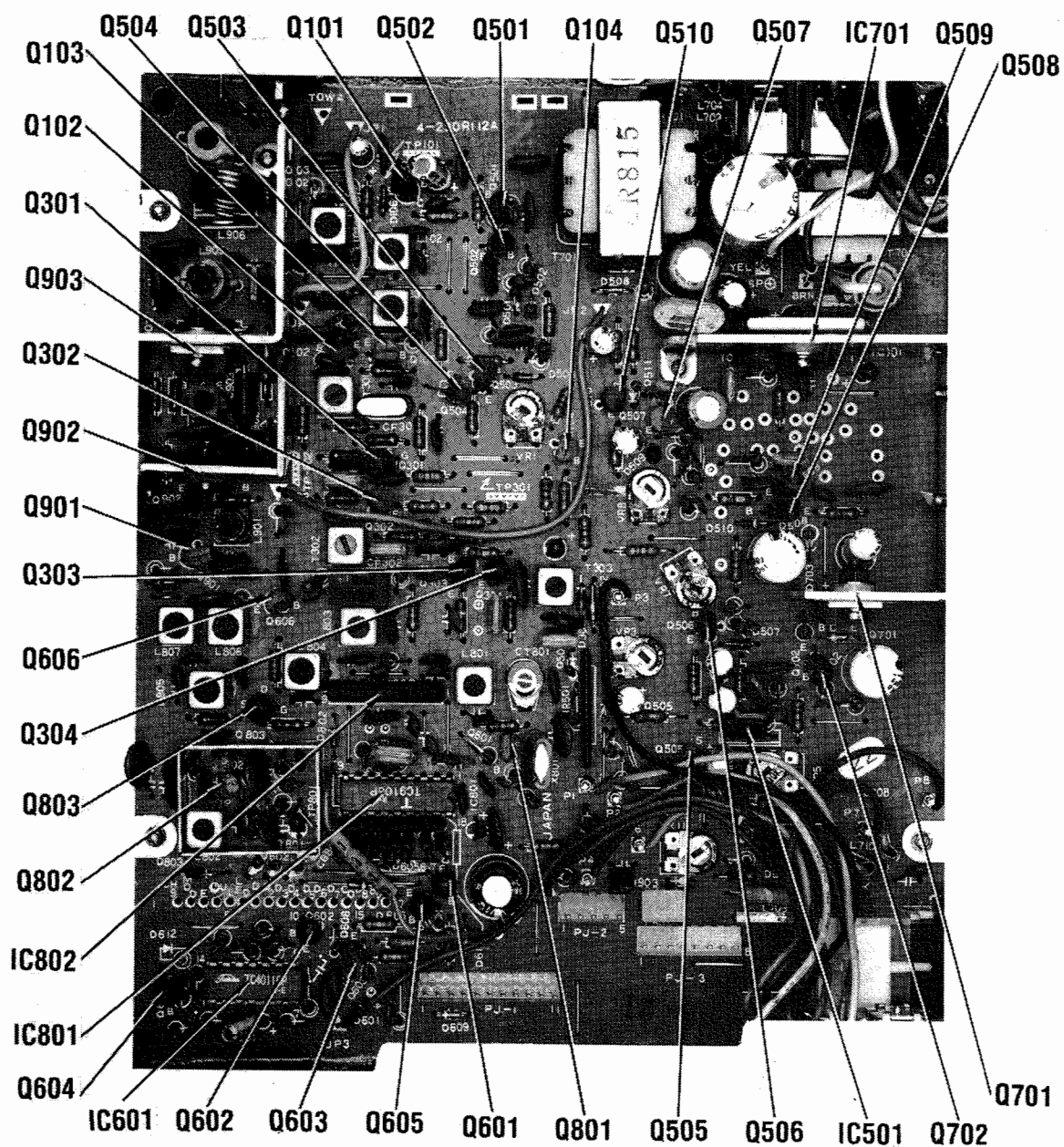
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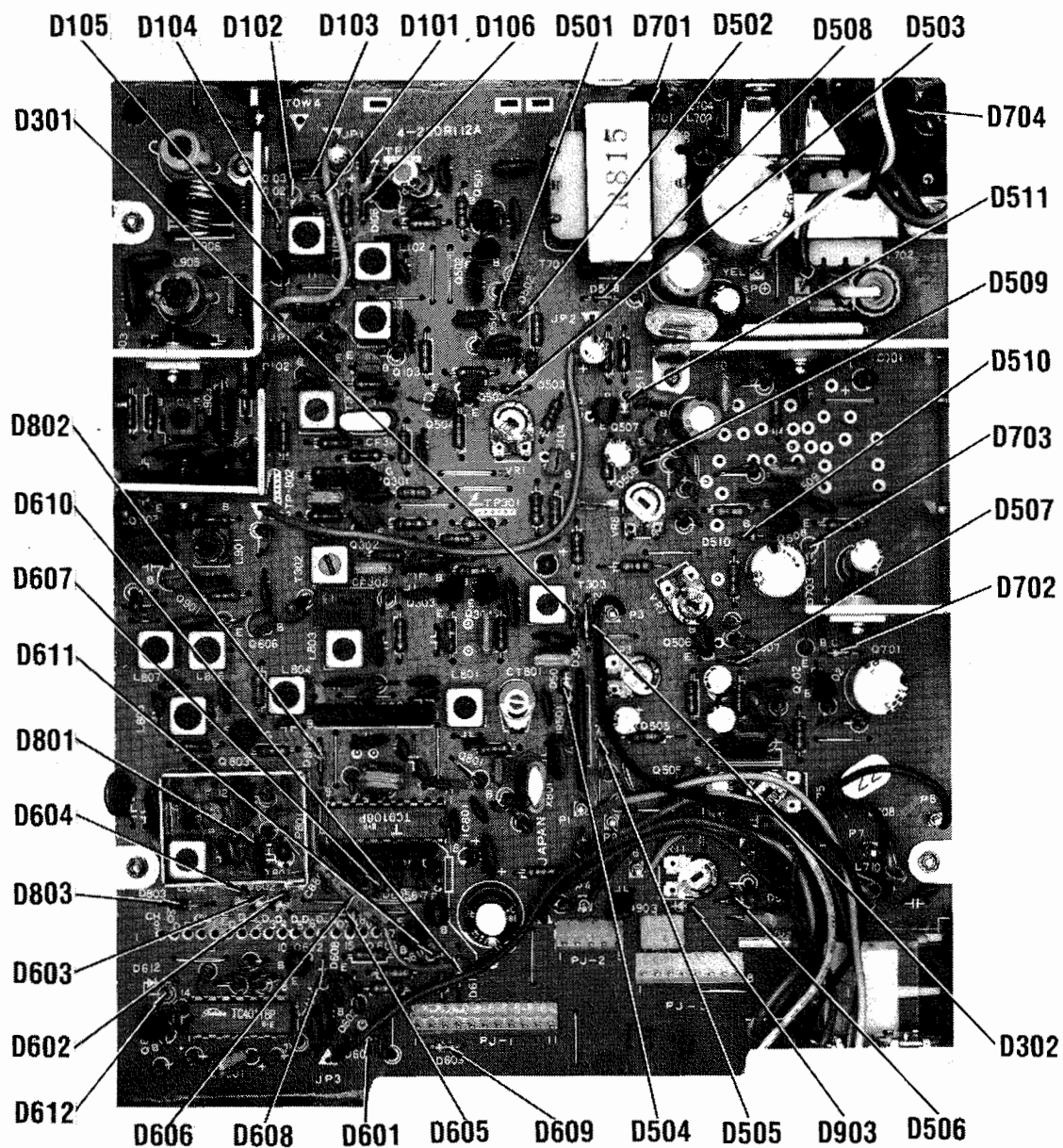
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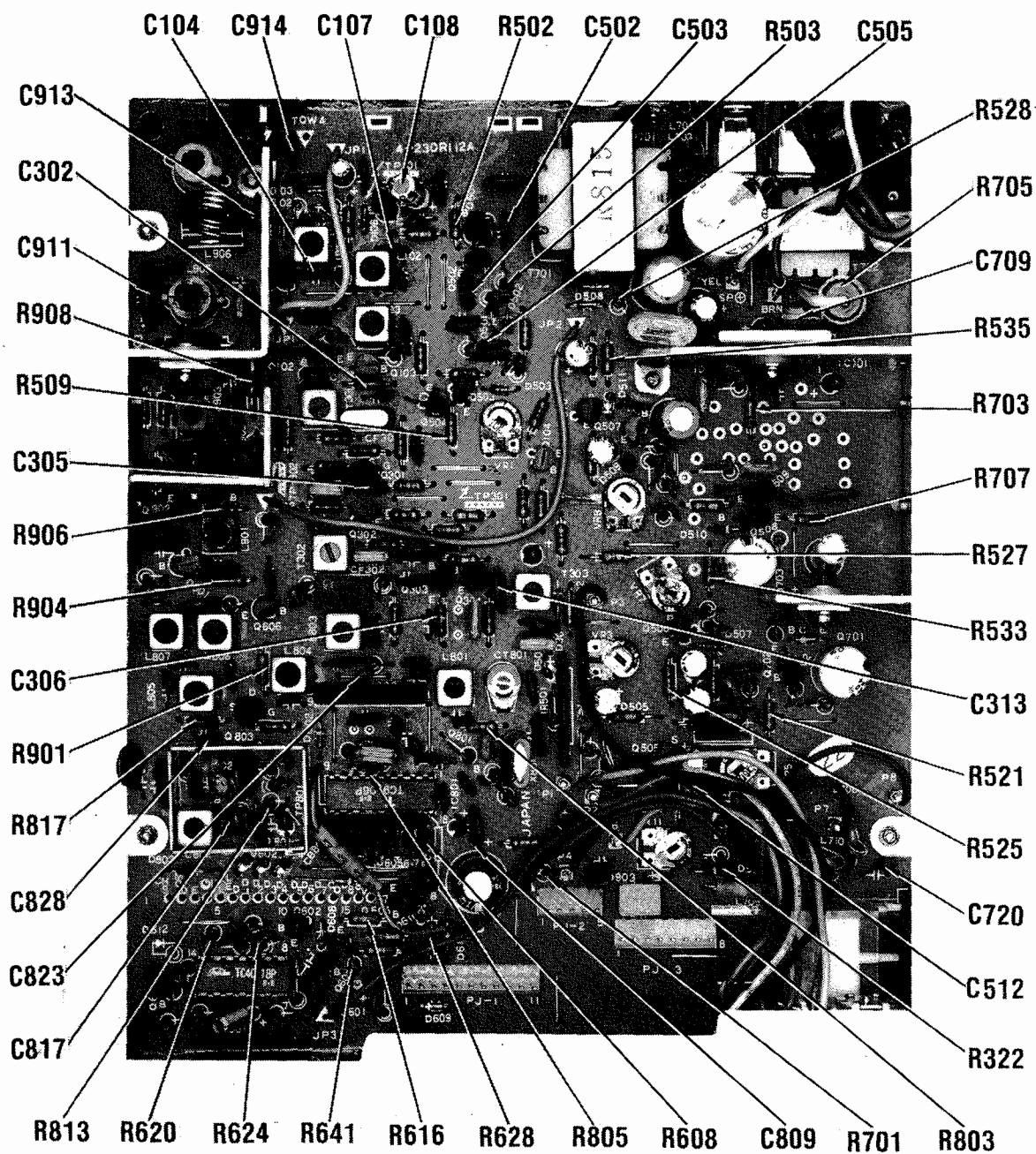
CHASSIS-BOTTOM



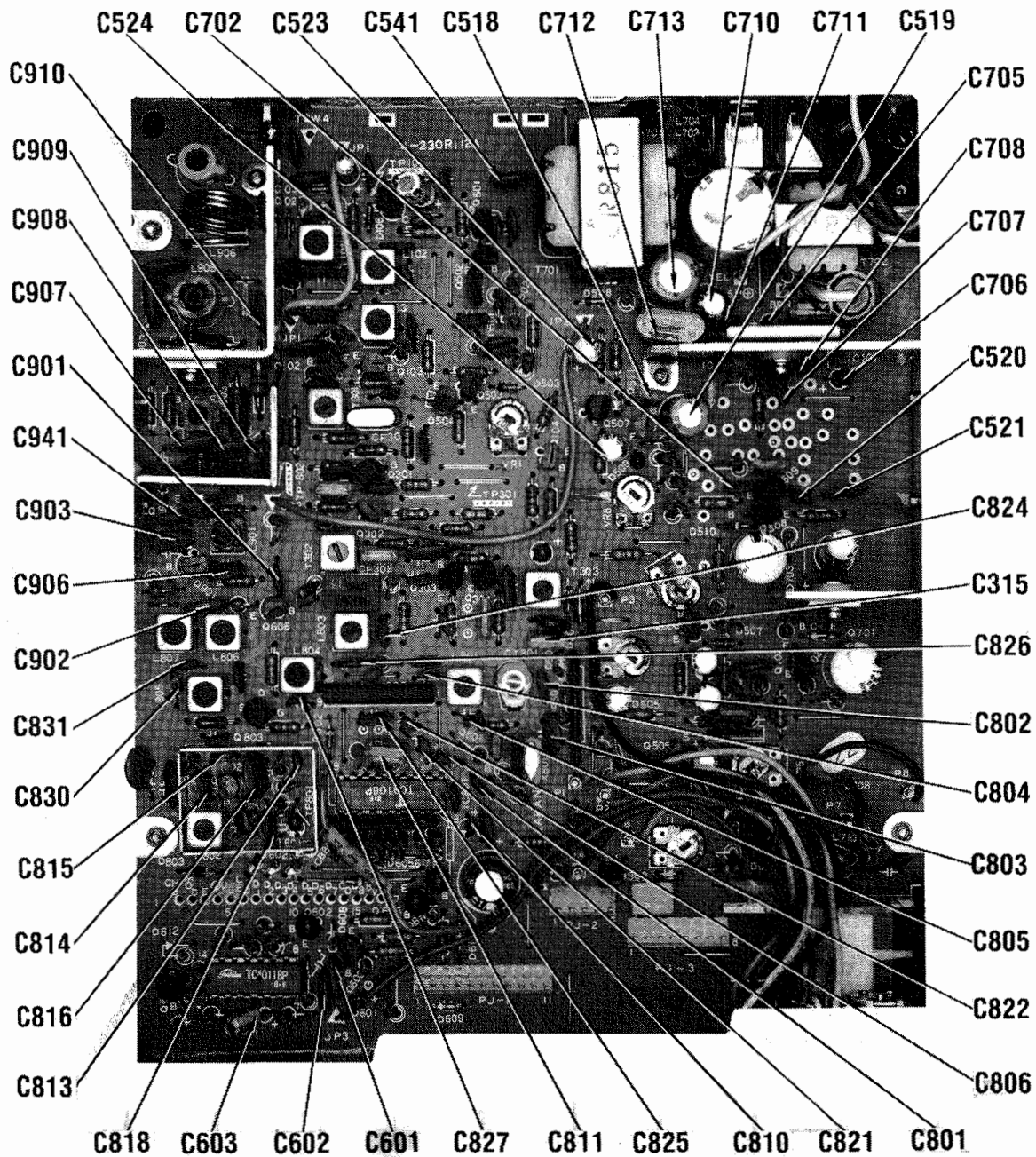
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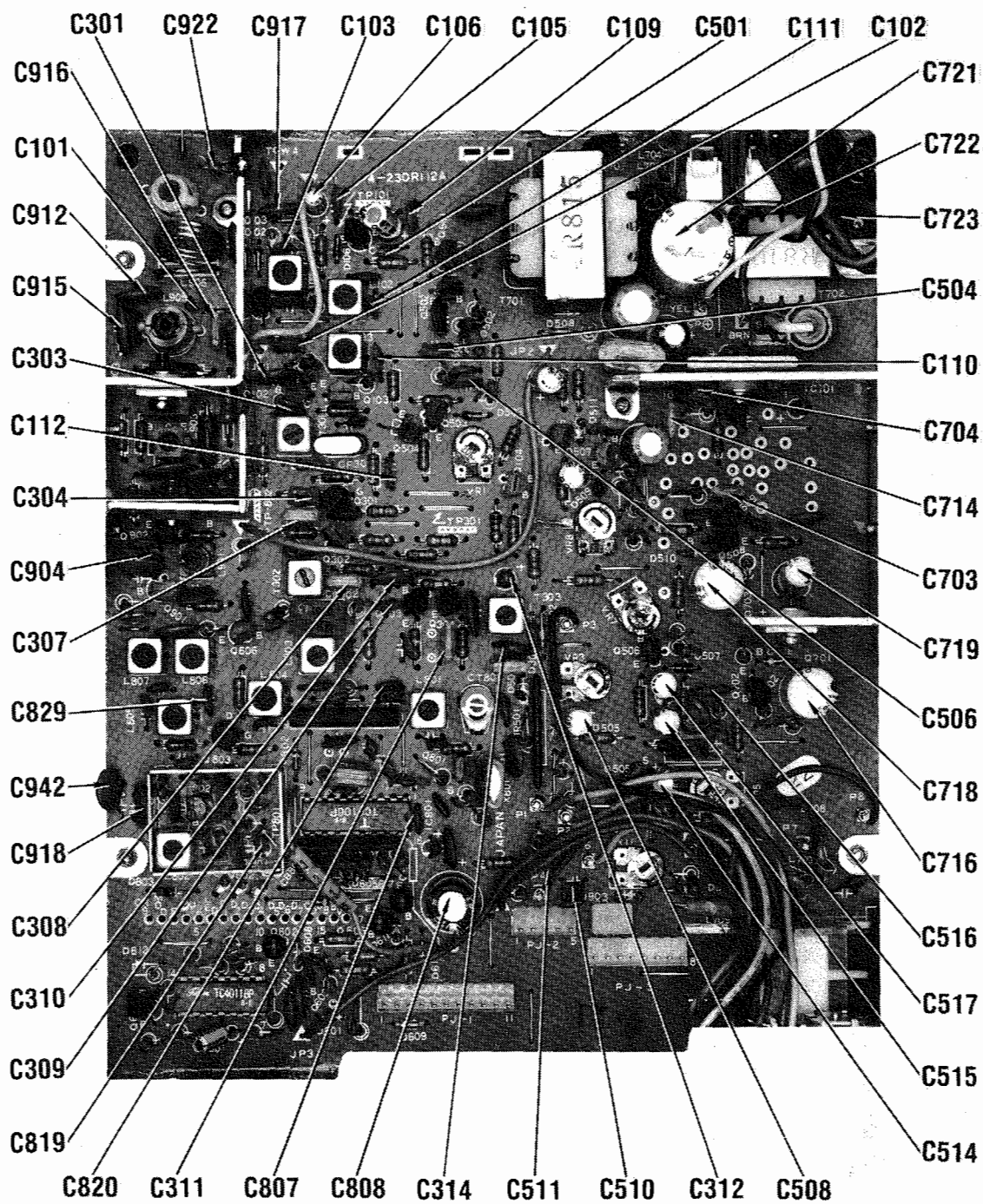
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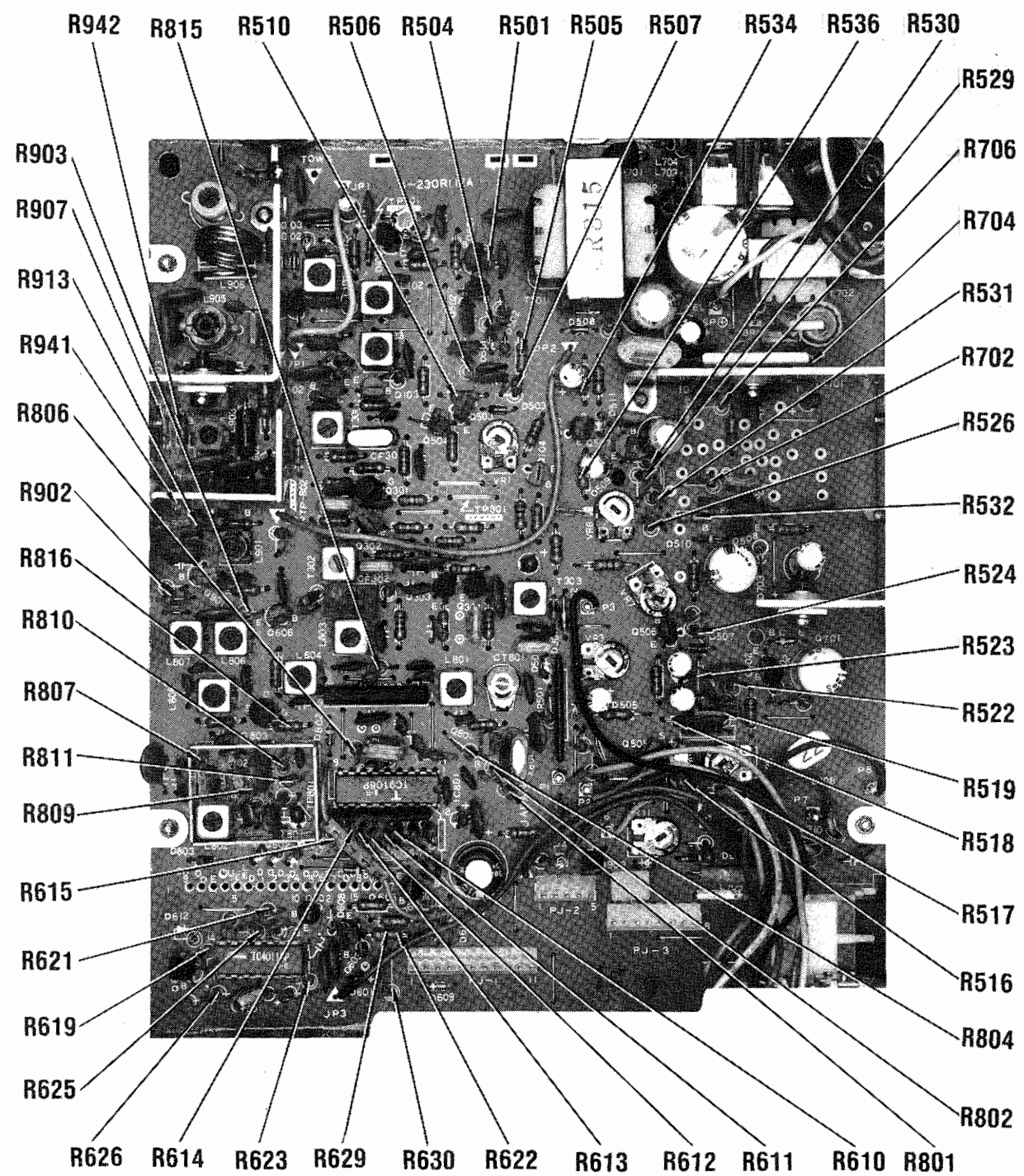
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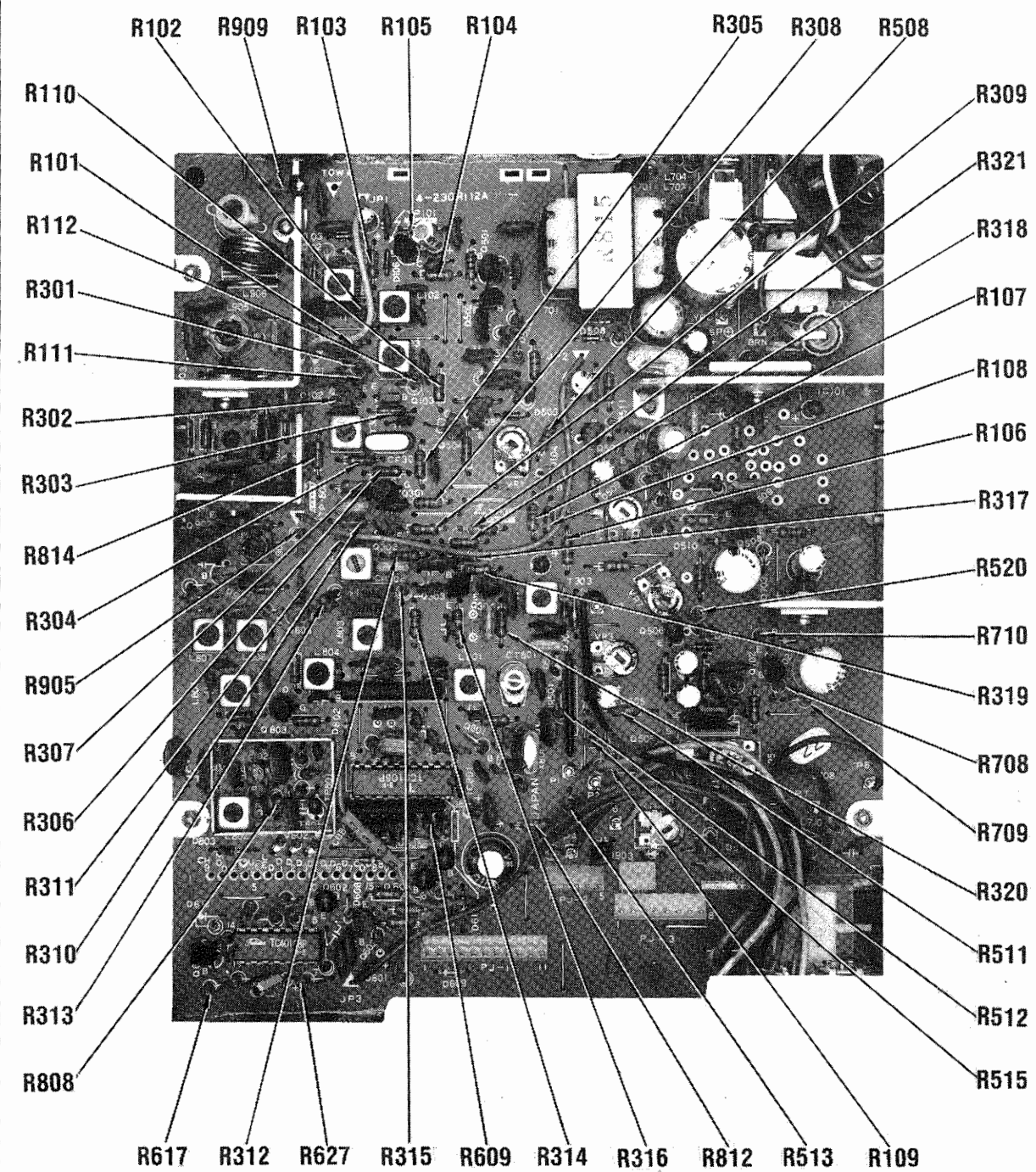
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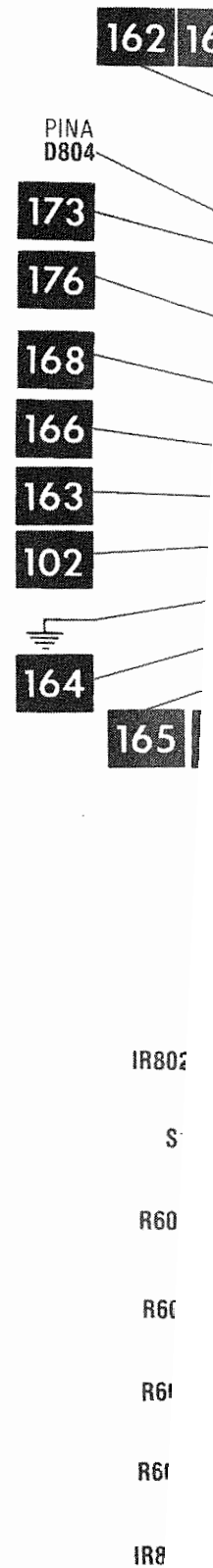
MAIN BOARD

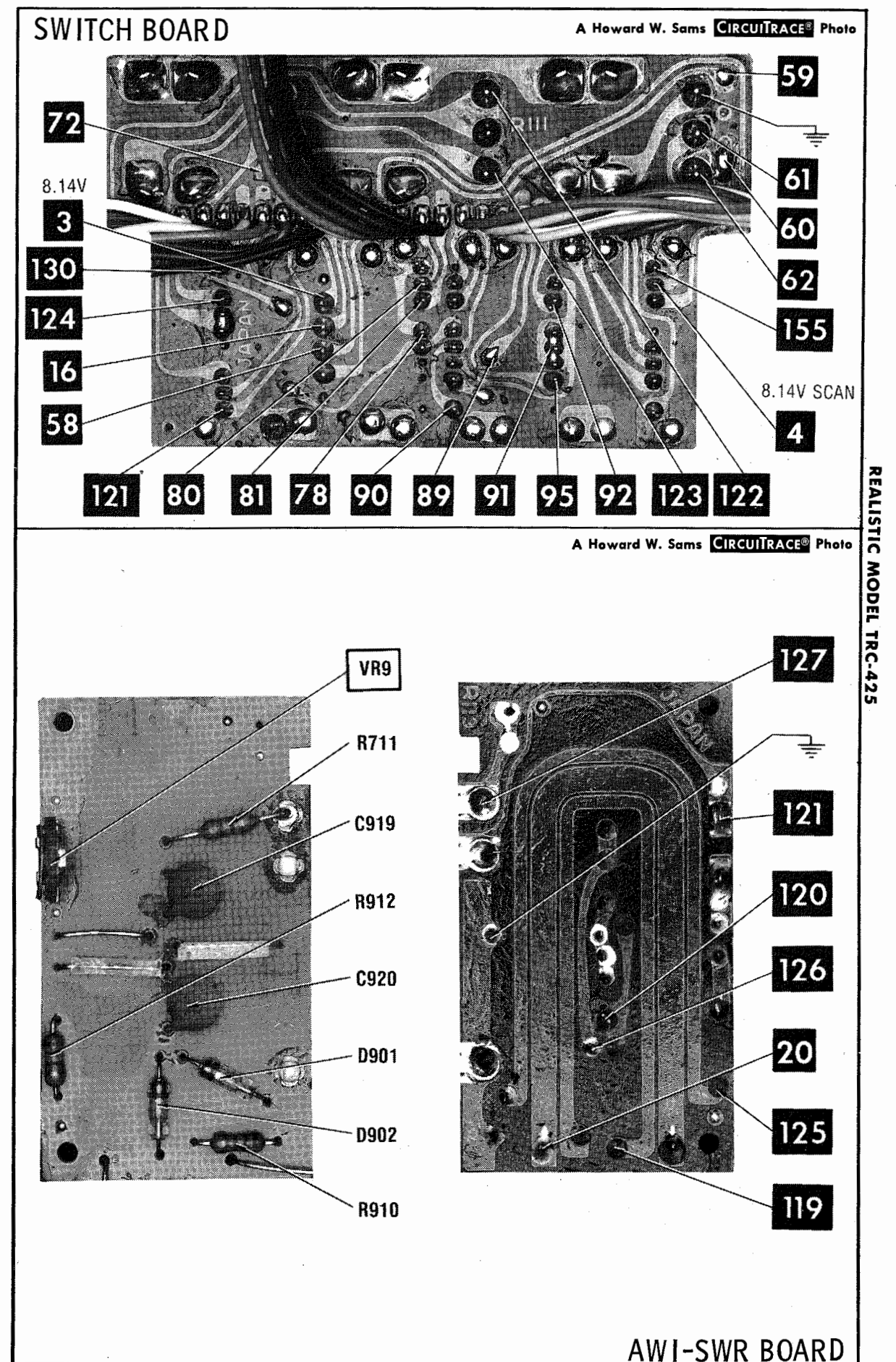
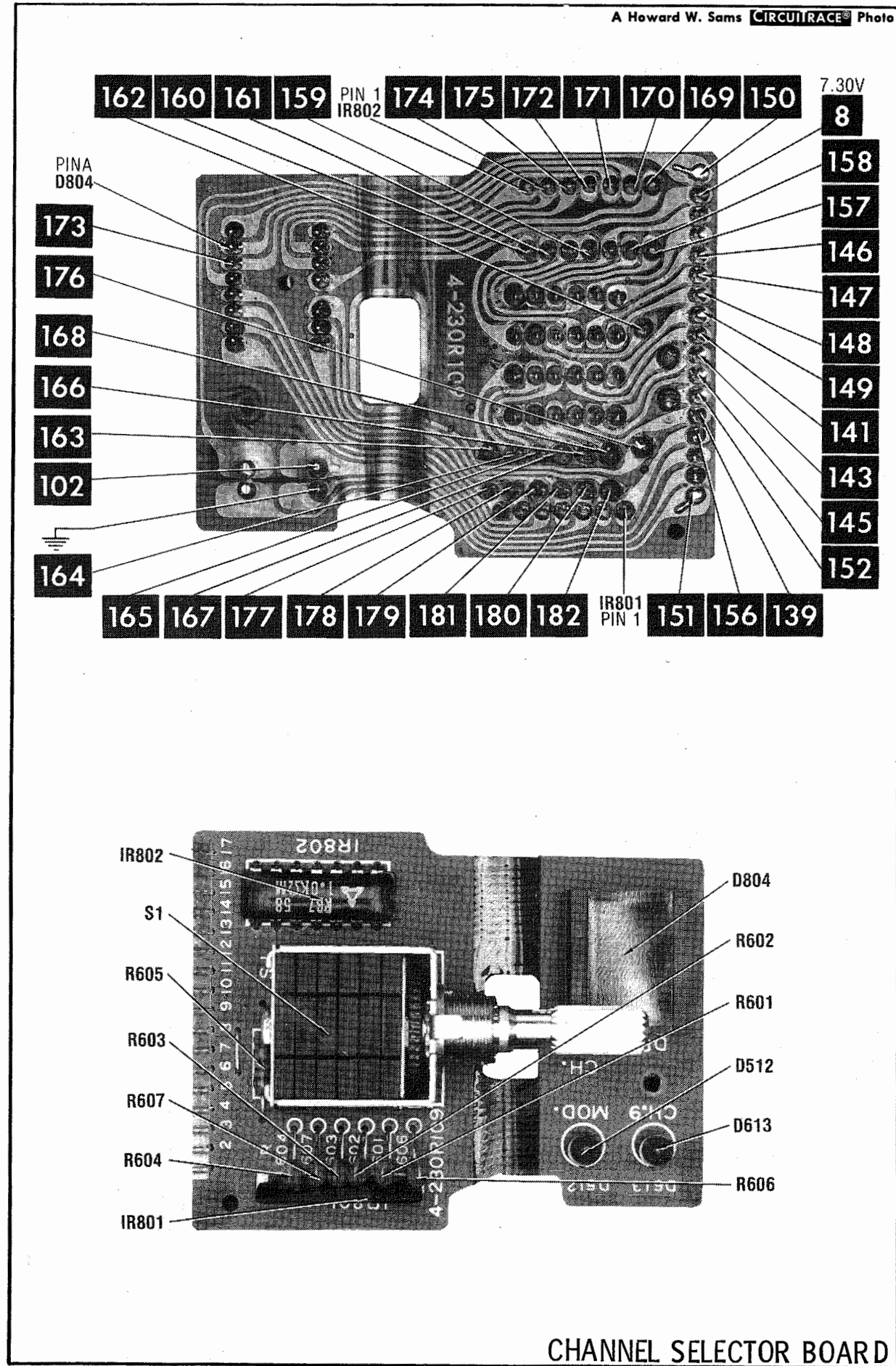
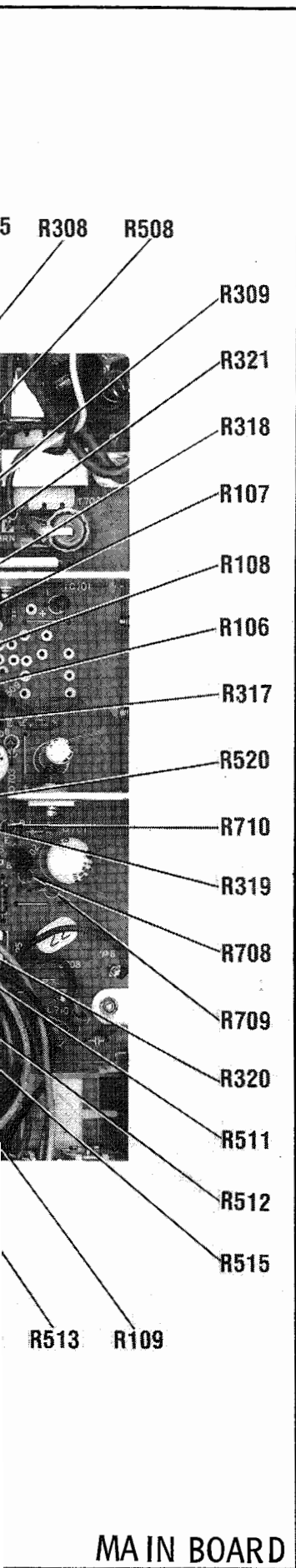


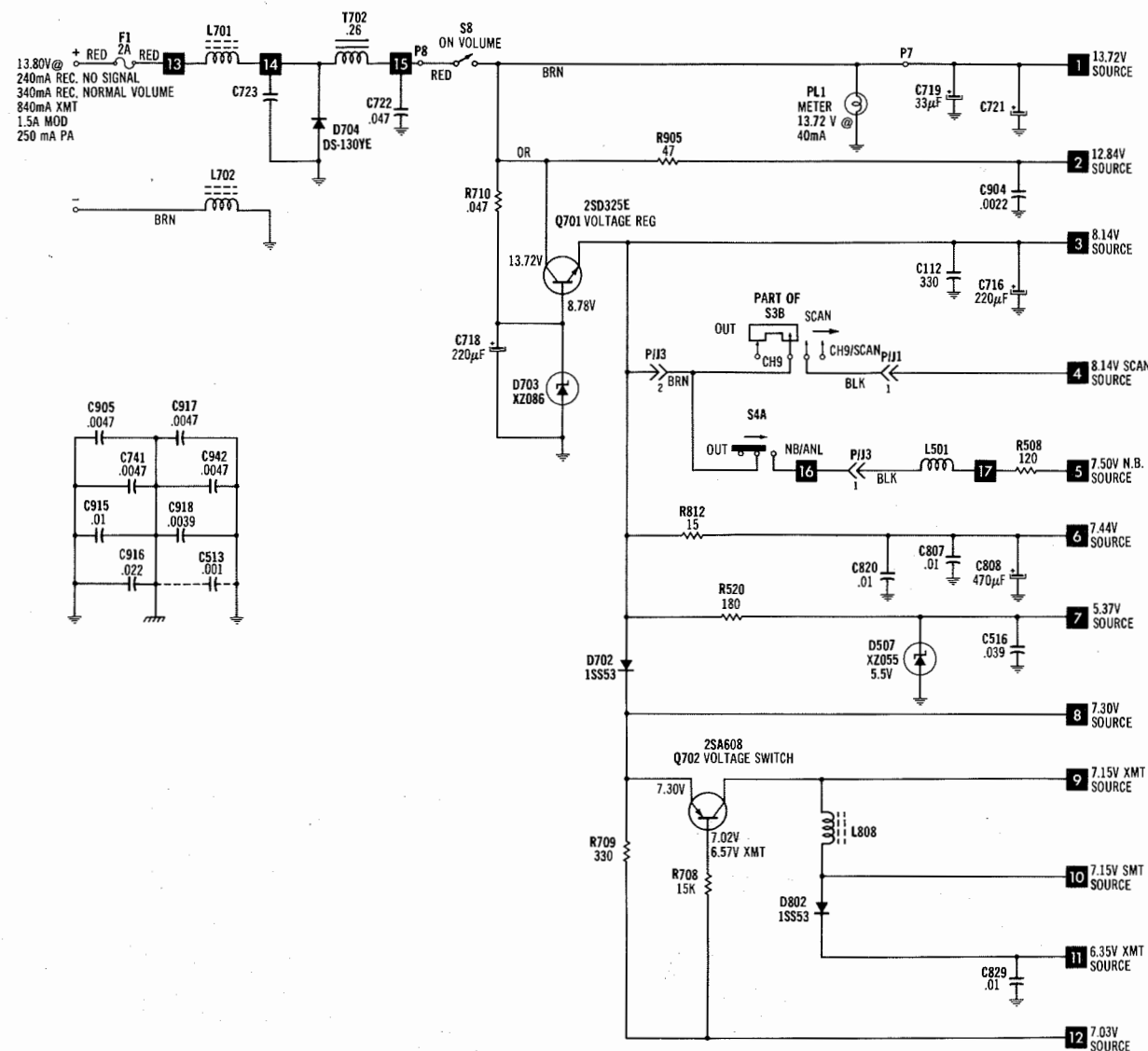
MAIN BOARD



MAIN BOARD

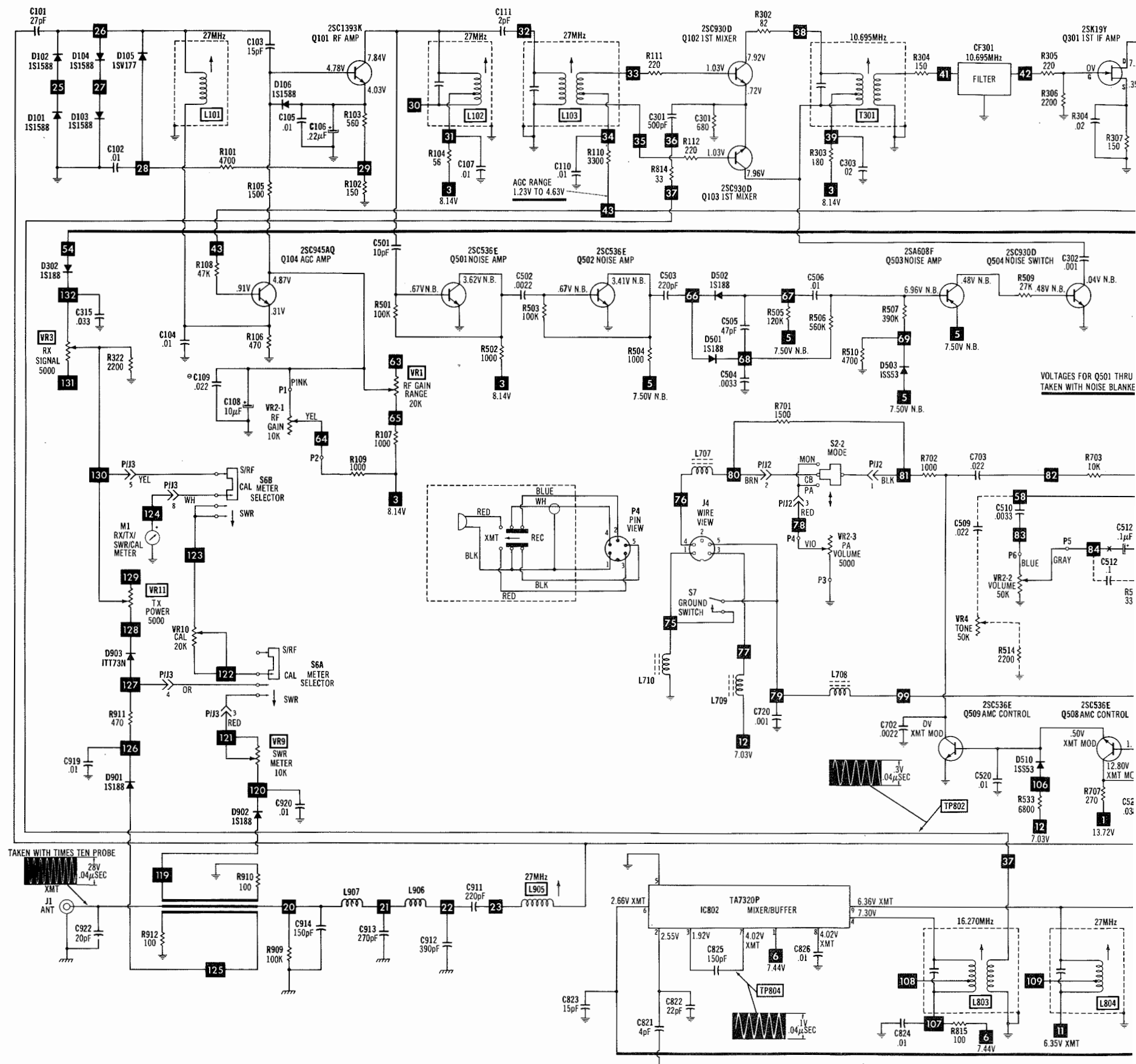




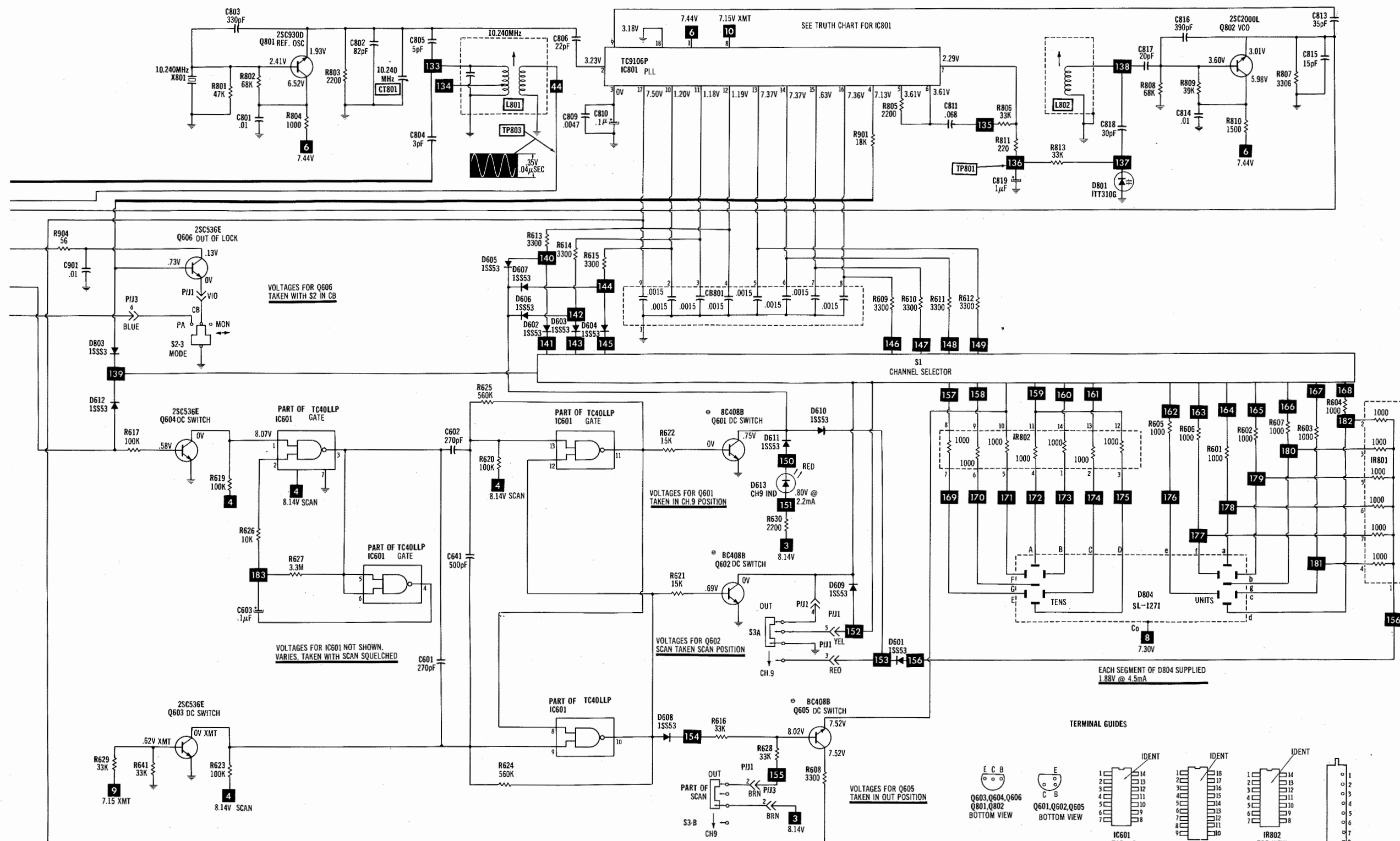


* Circuitry not used in some versions.
 --- Circuitry used in some versions.
 * Nominal value ▽ Common tie point
 ⊥ Ground
 --- Chassis
 e See parts list
 Waveforms and Voltages taken in Channel 19 with switching in receive unless noted. Item numbers in rectangles appear in the alignment/adjustment instructions. 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. Arrow head(s) at coils and transformers indicates accessibility of tuning slug(s).

A PHOTOFAC STANDARD NOTATION SCHEMATIC
 WITH CIRCUITRACE™
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MAIN SCHEMATIC



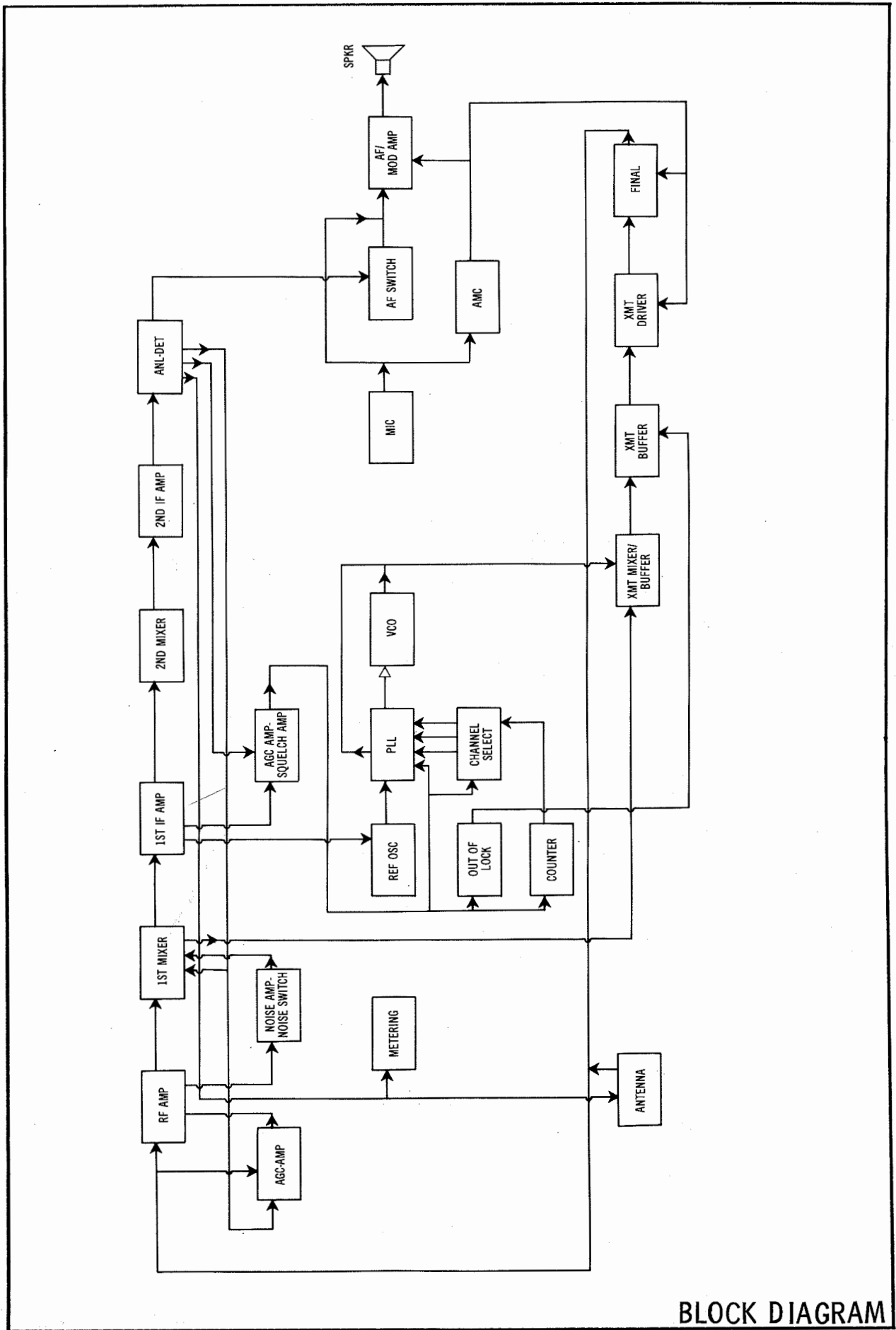
- Circuitry not used in some versions.
- - - Circuitry used in some versions.
- * Nominal value
- ▽ Common tie point
- ⊥ Ground
- ⏏ Chassis
- ⦿ See parts list

A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH **CIRCUITTRACE**

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PLL & SCAN SCHEMATIC

REALISTIC MODEL TRC-425



PARTS LIST AND DESCRIPTION

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

WIRING DATA

Cable (Speaker) (Unshielded).....	Use BELDEN No. 8782 (AWG24) (4 colors)
Shielding Strap.....	Use BELDEN No. 8660 (3/16" width)
Hook-up Wire (General Use).....	Use BELDEN No. 8524 (AWG22) (13 colors)
Hook-up Wire (Shielded).....	Use BELDEN No. 8401 (Braided Shield) (1 conductor) (AWG25)
	Use BELDEN No. 8421 (Spiral Shield) (1 conductor) (AWG25)
	Use BELDEN No. 8737 (Spiral Shield) (2 conductor) (AWG22)
Microphone Cable (Coiled).....	Use BELDEN No. 8491 (4 conductor-2 shielded) (6 ft.) (AWG23)

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RAYTHEON PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D101	1S1588	DX-0273	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D102	1S1588	DX-0273	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D103	1S1588	DX-0273	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D104	1S1588	DX-0273	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D105	1SV77	DX-1125	GE-514	PTC311	REN 177	SK3100/519	EC6611	TM611	WEP925/519	103-146
D106	1S1588	DX-0273	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D301	1TT73N	DX-1008	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D302	1S188	DX-1124	1N34AS	PTC207	REN 109	SK3087	EC6109	TM109/**	WEP134/109	103-Z9001
	1S188FMA	DX-1124	1N34AS	PTC207	REN 109	SK3087	EC6109	TM109/**	WEP134/109	103-Z9001
D501	1S188	DX-1124	1N34AS	PTC207	REN 109	SK3087	EC6109	TM109/**	WEP134/109	103-Z9001
D502	1S188	DX-1124	1N34AS	PTC207	REN 109	SK3087	EC6109	TM109/**	WEP134/109	103-Z9001
D503	1S188FMA	DX-1124	1N34AS	PTC207	REN 109	SK3087	EC6109	TM109/**	WEP134/109	103-Z9001
	1S1555	DX-0270	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D504	1TT73N	DX-1008	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D505	1TT73C	DX-1008	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D506	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D507	XZ-055	DX-1126	GEZD-5.6	ZB5.6B	REN 136	SK3057/136A	EC6136A	TM136A/**	WEP1104/136A	103-Z9007
D508	1S1587	DX-0272	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D509	V01220	DX-0697	GE-300	PTC302	REN 177	SK3175/177	EC6605	TM605	WEP1062/177	103-131
D510	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D511	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D601	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D602	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D603	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D604	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D605	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D606	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D607	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D608	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D609	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D610	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D611	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D612	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D701	DS-130YE	DX-0585	GE-504A	PTC201	REN 116	SK3311	EC6116	TM116	WEP156	212-76-02
D702	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D703	XZ-086	DX-0986	GEZD-8.7	REN 5073	SK3749/5073A	EC65073A	TM5073A	WEP1155/5073A		
D704	DS-130YE	DX-0585	GE-504A	PTC201	REN 116	SK3311	EC6116	TM116	WEP156	212-76-02
D801	1TT310G	DX-1127	GE-90	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP200/614	103-219
D802	1SS53	DX-0322	GE-300	PTC214	REN 177	SK3175/177	EC6177	TM177	WEP1062/177	103-131
D803	1TT73N	DX-1008	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
D901	1S188	DX-1124	1N34AS	PTC207	REN 109	SK3087	EC6109	TM109/**	WEP134/109	103-Z9001
D902	1S188FMA	DX-1124	1N34AS	PTC207	REN 109	SK3087	EC6109	TM109/**	WEP134/109	103-Z9001
D903	1TT73C	DX-1008	GE-514	PTC214	REN 177	SK3100/519	EC6519	TM519	WEP925/519	103-287
IC501	M51202	MX-3059	GE-4011	PTC780	REN 1155	SK4011	EC64011B	TM4011B	WEP949/1155	221-Z9133
IC601	TC4011BP	MX-3634	GE-4011	PTC780	REN 1155	SK3231/1155	EC61155	TM1155	WEP949/1155	221-Z9051
IC701	TA7205APC	MX-3633	GEIC-179	PTC780	REN 1155	SK3231/1155	EC61155	TM1155	WEP949/1155	221-Z9051
IC801	TC9106P	MX-3631	GE-4011	PTC780	REN 1155	SK3231/1155	EC61155	TM1155	WEP949/1155	221-Z9051
IC802	TA9106	MX-3632	GE-4011	PTC780	REN 1155	SK3231/1155	EC61155	TM1155	WEP949/1155	221-Z9051
Q101	2SC1393K	MX-3632	GE-62*	PTC136*	REN 123A*	SK3246/229	EC6123A*	TM123A*	WEP736/123A*	121-Z9000A*
Q102	2SC9300	MX-3632	GE-60*	PTC132*	REN 229	SK3356	EC6229*	TM229*/**	WEP380	121-Z9021*
Q103	2SC9300	MX-3632	GE-60*	PTC132*	REN 229	SK3356	EC6229*	TM229*/**	WEP380	121-Z9021*
Q104	2SC945AQ	MX-3632	GE-212	PTC121*	REN 199	SK3124/289	EC6199	TM199/**	WEP1945	121-972
Q301	2SC945Q	MX-3632	GE-212	PTC121*	REN 199	SK3124/289	EC6199	TM199/**	WEP1945	121-972
Q302	2SC945	MX-3632	GE-212	PTC121*	REN 199	SK3124/289	EC6199	TM199/**	WEP1945	121-972
	2SK19Y	MX-3632	GE-FET-2	PTC161	REN 132*	SK3834/132	EC6312*	TM312*	WEP920/312*	121-756
	2SC9300	MX-3632	GE-60*	PTC132*	REN 229	SK3356	EC6229*	TM229*/**	WEP380	121-Z9021*
	2SC930	MX-3632	GE-60*	PTC132*	REN 229	SK3356	EC6229*	TM229*/**	WEP380	121-Z9021*

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RAYTHEON PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
Q303	2SC930D		GE-60*	PTC132*	REN 229	SK3356	ECG229*	TM229*/**	WEP380	121-29021*
	2SC930D2		GE-60*	PTC132*	REN 229	SK3356	ECG229*	TM229*/**	WEP380	121-29021*
Q304	2SC930		GE-60*	PTC132*	REN 229	SK3356	ECG229*	TM229*/**	WEP380	121-29021*
	2SC930D2		GE-60*	PTC132*	REN 229	SK3356	ECG229*	TM229*/**	WEP380	121-29021*
Q501	2SC536E		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536E1		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q502	2SC536		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536E1		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q503	2SA608F		GE-82*	PTC103*	REN 159*	SK3114/290	ECG159*	TM159*	WEP62/159	121-29003
	2SA608F2		GE-82*	PTC103*	REN 159*	SK3114/290	ECG159*	TM159*	WEP62/159	121-29003
Q504	2SA608		GE-82*	PTC103*	REN 159*	SK3114/290	ECG159*	TM159*	WEP62/159	121-29003
	2SC930D		GE-60*	PTC132*	REN 229	SK3356	ECG229*	TM229*/**	WEP380	121-29021*
Q505	2SK30AY		GE-FET-1	PTC151*	REN 132*	SK3112	ECG132*	TM132*	WEP801/133*	121-756*
	2SK30Y		GE-FET-1	PTC151*	REN 132*	SK3112	ECG132*	TM132*	WEP801/133*	121-756*
Q506	2SK30		GE-FET-1	PTC151*	REN 132*	SK3112	ECG132*	TM132*	WEP801/133*	121-756*
	2SC536E		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q507	2SC536E2		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q508	2SA608F		GE-82*	PTC103*	REN 159*	SK3114/290	ECG159*	TM159*	WEP62/159	121-29003
	2SA608F2		GE-82*	PTC103*	REN 159*	SK3114/290	ECG159*	TM159*	WEP62/159	121-29003
Q509	2SA608		GE-82*	PTC103*	REN 159*	SK3114/290	ECG159*	TM159*	WEP62/159	121-29003
	2SC536E		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q510	2SC536E2		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q601	2SC536F		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536E		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q602	2SC536		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536E		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q603	2SC536F		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536E		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q604	2SC536		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536E		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q605	2SC536F		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536E		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q606	2SC536		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
	2SC536E		GE-212	PTC121*	REN 199	SK3122	ECG199	TM199	WEP536	121-972
Q701	2SD325E		GE-28	PTC110	REN 186	SK3197/235	ECG186	TM186/**	WEP745/152	121-29008
	2SD325		GE-28	PTC110	REN 186	SK3197/235	ECG186	TM186/**	WEP745/152	121-29008
Q702	2SA608E		GE-82*	PTC103*	REN 159*	SK3114/290	ECG159*	TM159*	WEP62/159	121-29003
	2SA608		GE-82*	PTC103*	REN 159*	SK3114/290	ECG159*	TM159*	WEP62/159	121-29003
Q801	2SC930D		GE-60*	PTC132*	REN 229	SK3356	ECG229*	TM229*/**	WEP380	121-29021*
	2SC930		GE-60*	PTC132*	REN 229	SK3356	ECG229*	TM229*/**	WEP380	121-29021*
Q802	2SC2000L		GE-20*	PTC136*	REN 123A*	SK3449/297	ECG123A*	TM123A*	WEP736/123A*	121-29000A*
	2SC2000		GE-20*	PTC136*	REN 123A*	SK3449/297	ECG123A*	TM123A*	WEP736/123A*	121-29000A*
Q803	2SK19GR		GE-FET-2	PTC161	REN 132*	SK3834/132	ECG312*	TM312*	WEP920/312*	121-756
	2SK19		GE-FET-2	PTC161	REN 132*	SK3834/132	ECG312*	TM312*	WEP920/312*	121-756
Q901	2SC1175E		GE-210	PTC123*	REN 123A*	SK3122	ECG123A*	TM123A*	WEP774	121-29000A*
	2SC1175D		GE-210	PTC123*	REN 123A*	SK3122	ECG123A*	TM123A*	WEP774	121-29000A*
Q902	2SC2314D		GE-270	PTC180	REN 295	SK3253/295	ECG295	TM295	WEP913/295	121-880
	2SC2314E		GE-270	PTC180	REN 295	SK3253/295	ECG295	TM295	WEP913/295	121-880
Q903	2SC2314		GE-270	PTC180	REN 295	SK3253/295	ECG295	TM295	WEP913/295	121-880
	2SC2078D		GE-215	PTC186	REN 235	SK3197/235	ECG235	TM235	WEP785/235	121-29039
Q903	2SC2078		GE-215	PTC186	REN 235	SK3197/235	ECG235	TM235	WEP785/235	121-29039

* Lead configuration may vary from original.

/** Also available as exact type replacement.

REALISTIC MODEL TRC-425

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C106	.22 16V	CA16224	PC10-25	TDC224M050EL	QDT1-10	SD50-R229
C108	10 10V	CE10106	PC10-25	VTT10B25	QV1-41	EV-1222
C312	4.7 10V	CT10475	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C508	1 10V	CE10105	PC1-50	VTT1A50	QV1-11	EV-1615
C512	.1 10V	CA10104		TDC104M050EL	QDT1-2	SD50-R109
C514	10 10V	CE10106	PC10-25	VTT10B25	QV1-41	EV-1222

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS (cont)

ITEM No.	RATING	REPLACEMENT DATA				
		MFGR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C515	10 10V	CE10106	PC10-25	VTT10E25	QV1-41	EV-1222
C517	1 10V	CE10105	PC1-50	VTT1A50	QV1-11	EV-1615
C519	100 10V	CE10107	PC100-10	VTT100E10	QV1-93	EV-1131
C523	4.7 16V	CE16475	PC5-50	VTT4R7B50	QV1-31	EV-1619, 1
C524	10 10V	CE10106	PC10-25	VTT10B25	QV1-41	EV-1222
C603	.1 25V	CA25104		TDC104M050EL	QDT1-2	SD50-R109
C705	10 10V	CT10106	PC10-25	VTT10R25	QV1-41	EV-1222
C706	10 10V	CT10106	PC10-25	VTT10B25	QV1-41	EV-1222
C710	47 16V	CE16476	PC50-16	VTT47D16	QV1-73	EV-1226
C713	220 16V	CE16227	PC250-25	VTT220H16	QV1-117	EV-1240
C716	220 10V	CE10227	PC250-10	VTT220F10	QV1-115	EV-1140
C718	220 10V	CE10227	PC250-10	VTT220F10	QV1-115	EV-1140
C719	33 16V	CE16336	PC30-25	VTT33D25	QV1-63	EV-1325
C721	1000 16V	CE16108	PC1000-16	VTT1000L16	QV1-183	EV-1261
C808	470 10V	CE10477	PC500-16	VTT470K16	QV1-151	EV-1251
C810	.1 35V	CT35104		TDC104M050EL	QDT1-2	SD50-R109
C819	1 35V	CT35105		TDC105M035EL		SD35-19
C909	1 50V	CT50105		TDC105M050EL	QDT1-25	SD50-19

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA			
			CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C101	27 50V 5%	R-CKD020C	NP015	CN0427		10TCC-Q27
C102	.01 25V			MAG2511		HY-520
C103	15 50V 5%			CN0415		10TCC-Q15
C104	.01 25V			MAG2511		HY-520
C105	.01 25V			MAG2511		HY-520
C107	.01 25V			MAG2511		HY-520
C109	.022 50V			M192P2239R8		192P2239R8
	.0022 50V			GP222		10TS-D22
	.01 25V			MAG2511		HY-520
C110	.01 25V			CN0522		
C111	2 50V +.25		GP500	MAG2511		HY-520
C112	.01 25V			GP350		10TS-T50
C301	500 50V 5%			GP210		10TS-D10
C302	.001 50V			MAG5012		
C303	.02 25V			MAG5012		
C304	.02 25V			GP227	QC2-103	5GA-D27
C305	.0022 50V			CN0425		10TCC-Q25
C306	25 50V 5%		NP025	M192P3639R8	QFT2-159	1FT-S39
C307	.039 50V			M192P3939R8	QFT2-159	1FT-S39
C308	.039 50V			MAG2511		HY-520
C309	.01 25V			M192P3939R8		192P3939R8
C310	.039 25V			M192P3939R8	QFT2-159	1FT-S39
C311	.039 50V			M192P3939R8		192P3939R8
C313	.039 25V			M192P1039R8	QFT2-91	1FT-S10
C314	.01 50V			M192P3339R8	QFT2-149	1FT-S33
C315	.033 50V		WMF1S1	CN0410		10TCC-Q10
C501	10 50V 5%			GP222		10TS-D22
C502	.0022 50V			GP222		10TCC-T22
C503	220 50V 5%			GP233	QC2-107	5GA-D33
C504	.0033 50V			CN0447		10TCC-Q47
C505	47 50V 5%			MAG2511		HY-520
C506	.01 25V			MAG5012		
C509	.02 50V			M192P2239R8	QFT2-127	1FT-S22
	.022 50V			M192P3329R8	QFT2-43	1FT-D33
C510	.0033 50V			M192P3939R8		192P3939R8
C511	.039 25V		WMF1D33	MAG5001		10TS-D10
C512	.1 50V			GP210		192P3939R8
C513	.001 50V			M192P3939R8	QFT2-91	1FT-S10
C516	.039 25V			M192P1039R8		HY-520
C518	.01 50V			MAG2511		192P3939R8
C520	.01 25V			M192P3939R8		5GA-D47
C521	.039 25V			GP247		10TCC-T27
C541	.0047 50V			GP247		10TCC-T27
C601	270 50V 5%		GP500	GP350		10TS-T50
C602	270 50V 5%			GP222		10TS-D22
C641	500 50V 5%			M192P2239R8	QFT2-127	1FT-S22
C702	.0022 50V			GP247		5GA-D47
C703	.022 50V			GP222		10TS-D22
C704	.0047 50V			CN0482		10TCC-Q82
C707	.0022 50V		NP082	MAG50168		
C708	82 50V 5%			CN0315		10TCC-T15
C709	.068 50V			M192P2249R8	QFT2-253	1FT-P22
C711	130 50V 5%			M192P3339R8	QFT2-149	1FT-S33
C712	.22 50V			GP210		10TS-P10
C714	.033 50V			MAG2515		HY-735
C720	.001 50V			MAG2515		HY-735
C722	.047 25V			GP247		5GA-D47
C723	.047 25V			MAG2511		HY-520
C741	.0047 50V			CN0482		10TCC-Q82
C801	.01 25V	R-CKD030C R-CKD050C	NP082	GP333		10TS-T33
C802	82 50V 5%			CN0533		
C803	330 50V 5%			CN0568		
C804	3 50V +.25			CN0422		
C805	5 50V +.25			MAG2511		
C806	22 50V 5%			GP247		10TCC-Q22
C807	.01 25V			MAG50168		HY-520
C809	.0047 50V			CN0439		5GA-D47
C811	.068 50V			MAG2511		
C813	35 50V 5%			CN0415		10TCC-Q39
C814	.01 25V		NP015	GP339		HY-520
C815	15 50V 5%					10TCC-C15
C816	390 50V 5%					10TS-T39

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			CORNELL- DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C817	20 50V N220 5%	R-CKD200J	NP022 NP015	*		10TCR-Q20
C818	30 50V N220 5%	R-CKD300J		*		10TCR-Q30
C820	.01 25V	R-CKD040C		MAG2511		HY-520
C821	4 50V +.25			CN0547		
C822	22 50V 5%			CN0422		10TCC-Q22
C823	15 50V 5%			CN0415		10TCC-Q15
C824	.01 25V			MAG2511		HY-520
C825	150 50V 5%			CN0315		10TCC-T15
C826	.01 25V			MAG2511		HY-520
C827	35 50V 5%			CN0439		10TCC-Q39
C828	.001 50V			GP210		10TS-D10
C829	.01 25V	MAG2511	HY-520			
C830	3 50V +.25	R-CKD030C R-CKD030C	GP390 GP4700 GP4700 GP4700 GP390	CN0533	QFT2-127 QC2-111	HY-520
C831	3 50V +.25			CN0533		10TS-T39
C901	.01 25V			MAG2511		5GA-D47
C902	390 50V 5%			GP339		10TS-D22
C903	.0047 50V			GP247		5GA-D47
C904	.0022 50V			GP222		10TCR-Q47
C905	.0047 50V			GP247		10TCR-T18
C906	47 50V N220 5%			*		10TCR-Q82
C907	180 50V N220 5%			*		5GA-D47
C908	82 50V N220 5%			*		10TCC-T22
C910	.0047 50V			GP247		10TS-T39
C911	220 50V 5%	R-CKD470J R-CKD181J R-CKD820J	GP4700 GP390 DPMS2S22 GP4700 DD-392	CN0315	1FT-S22 5GA-D47 5GA-D39 HY-520 HY-520 10TCC-Q20 10TS-D22 5GA-D47 10TCC-Q47	
C912	390 50V 5%			MAG5011		
C913	270 50V 5%			M192P2239R8		
C914	150 50V 5%			GP247		
C915	.01 50V			GP239		
C916	.022 50V			MAG2511		
C917	.0047 50V			MAG2511		
C918	.0039 25V			CN0420		
C919	.01 25V			GP222		
C920	.01 25V			GP247		
C922	20 50V 5%			NP020		CN0447
C941	.0022 50V	GP4700 NP047				
C942	.0047 50V					
C943	47 50V 5%					
CT801	Trimmer	C-0930				

*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	RESISTANCE	REPLACEMENT DATA		
			MFR. PART No.	MALLORY PART No.	TRW PART No.
VR1	RF Gain Range	20K	P-1896	RVA0911H253	U260R253B
VR2-1	RF Gain	10K	P-1898(18)		
VR2-2	Volume	50K			
VR2-3	PA Volume/Power Switch	5000			
VR3	RX Signal	5000	P-6387	RVA0911R502	U260R502B
VR4	Tone	50K	P-2092		
VR5	Squelch Range	100K	4-222R-79578	RVA0911H104	U260R104B
VR6	Squelch	100K	P-0843		
VR7	AGC	100K	4-222R-79578	RVA0911H104	U260R104B
VR8	AMC	500	P-6412	RVA0911H501	U260R501B
VR9	SWR Meter	10K	P-6288	MTC14L1	X201R1038
VR10	SWR CAL	20K	P-0842		
VR11	TX PWR	5000	P-6387	RVA0911R502	U260R502B

(18) Includes VR2-1, VR2-2, VR2-3 and power switch.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		MFR. PART No.	WORKMAN PART No.			MFR. PART No.	WORKMAN PART No.
R705	12 10% 3W Metal Oxide	R-RM120KF		1R501	Network	RX-0072	
TH501	1000 Cold	T-1200		1R801	Network	RX-0073(1)	
				1R802	Network	RX-0074(2)	

- (1) Includes six 1000 ohms resistors.
(2) Includes seven 100 ohms resistors.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L101	RF Coil (27MHz)	CA-4951			
L102	RF Coil (27MHz)	CA-4952	9R90940		
L103	RF Coil (27MHz)	CA-4953	9R91040		
L501	RF Choke	CB-2406			
L701	RF Choke	CB-2307			
L702	RF Choke	CB-2307			
L703	RF Choke	CB-2407			
L704	RF Choke	CB-2407			
L705	RF Choke	CB-2407			
L706	RF Choke	CB-2407			
L707	RF Choke	CB-2407			
L708	RF Choke	CB-2407			
L709	RF Choke	CB-2407			
L710	RF Choke	CB-2407			
L801	Ref Osc. (10.240MHz)	CA-4954	9R91140		
L802	VCO	CA-4955			
L803	RF Coil (16MHz)	CA-4956	9R91340		

REALISTIC MODEL TRC-425

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF) (cont)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L804	XMT Buffer (27MHz)	CA-4952	9R90940		
L805	XMT Bandpass (27MHz)	CA-4957	9R91440		
L806	XMT Bandpass (27MHz)	CA-4957	9R91440		
L807	XMT Bandpass (27MHz)	CA-4958	9R91540		
L808	RF Choke	CB-2407			
L901	XMT Buffer (27MHz)	CA-4715			
L902	RF Choke	CB-2388			
L903	XMT Driver (27MHz)	CA-4959			
L904	RF Choke	CB-2389			
L905	Final Loading	CA-4960			
L906	Pi Filter (27MHz)	CA-3378			
L907	RF Choke	CA-4961			
T301	1st Mixer(10.695MHz)	CA-7900	6R761		
T032	IF (455kHz)	CA-7901	6R76540		
T303	IF (455kHz)	CA-7902	6R76640		

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.
T702	1.5A	.26	1.1mH	CB-2306 R810(1)	TR574	

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T701	26	1 2 8 2.5	TD-0176 4R815(1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			MFGR. PART No.	QUAM PART No.	
SP	3 1/2" PM	8 Ohms	S-4760		

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
F1	2A Quick Acting	4-234R-80900	176-2-383R-105008	AGC2	HRK	312002	150145	FG2-2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
D512	LED	L-0926	Modulation Indicator(SLP-123B, SLP-24B)(1.80V @ 2.2mA)
D613	LED	L-0926	Ch. 9 Indicator(SLP-23B, SLP-24B)(1.80V @ 2.2mA)
D804	LED	L-0770	Channel Indicator(SL-1271)(Each segment of D804 supplied 1.88V @ 4.5mA)
CF301	HF Filter	C-0928	10.695MHz
CF302	HF Filter	C-0857	455kHz, CFW-455B
J1	Jack	J-6598	Antenna Coax Connector
J2	Jack	J-0700	External Speaker Jack
J3	Jack	J-0700	PA Speaker Sack
J4	Jack	J-0978	Microphone Connector, 5-Pin Locking Type
PL1	Meter	M-0397	S/R/SWR Meter w/Lamp
S1	Switch	S-1317	Channel Selector
S2	Switch	S-2464	PA-CB-MON
S3	Switch	S-2463	Ch. 9-Scan-Out
S4	Switch	S-2465	NB/ANL-Out
S5	Switch	S-2462	Ext Sp-Scan-Out
S6	Switch	S-2462	Ext Sp-Scan-Out SWR-CAL-S/R/F
X801	Crystal	4-225R-83871	10.240MHz, HC-43/U Type
	Microphone Assembly	M-2303	
	P.C. Board	X-7813	Main
	P.C. Board	X-7814	Control
	P.C. Board	X-7815	Flexible
	Circuit P.C. Board	X-7816	SWR
	Power Cord Assembly	W-1932	

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

ITEM	PART No.	ITEM	PART No.
Cover, Bottom	Z-4174	Knob, SWR Cal	K-1989
Cover, Top	176-2-111R-14500C	Knob, Tone	K-1989
Knob, Channel Selector	K-3037	Knob, Volume	K-2640
Knob, RF Gain	K-2641	Panel, Front	Z-4176
Knob, Squelch	K-1989		