

SAMS PHOTOFACT®

CB RADIO SERIES



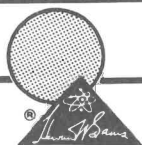
CB-43
43
DECEMBER 1972



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



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES AND REGULATIONS PART 95, SUBPARTS 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-101 (21-137)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

T10, T11, T12, L1, L3GC ELECTRONICS #9440
T3, T4, T5, T6, T7GC ELECTRONICS #5000, 8728, 9089
MFGC ELECTRONICS #8728, 9089

RECEIVER

Connect an AC VTVM across speaker voice coil. Adjust Volume control to obtain suitable reading. Set Squelch control fully counterclockwise.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to base of Q3 (2nd Rec. Mixer), low side to ground. Set to 455KC (Mod.)	Any	T7, T6, T5, MF	Adjust for maximum.
High side thru .01mfd to antenna connector, low side to ground. Set to 27.085MC (Mod.) (Ch. 11)	Ch 11	T4, T3, T2, T1	Adjust for maximum.

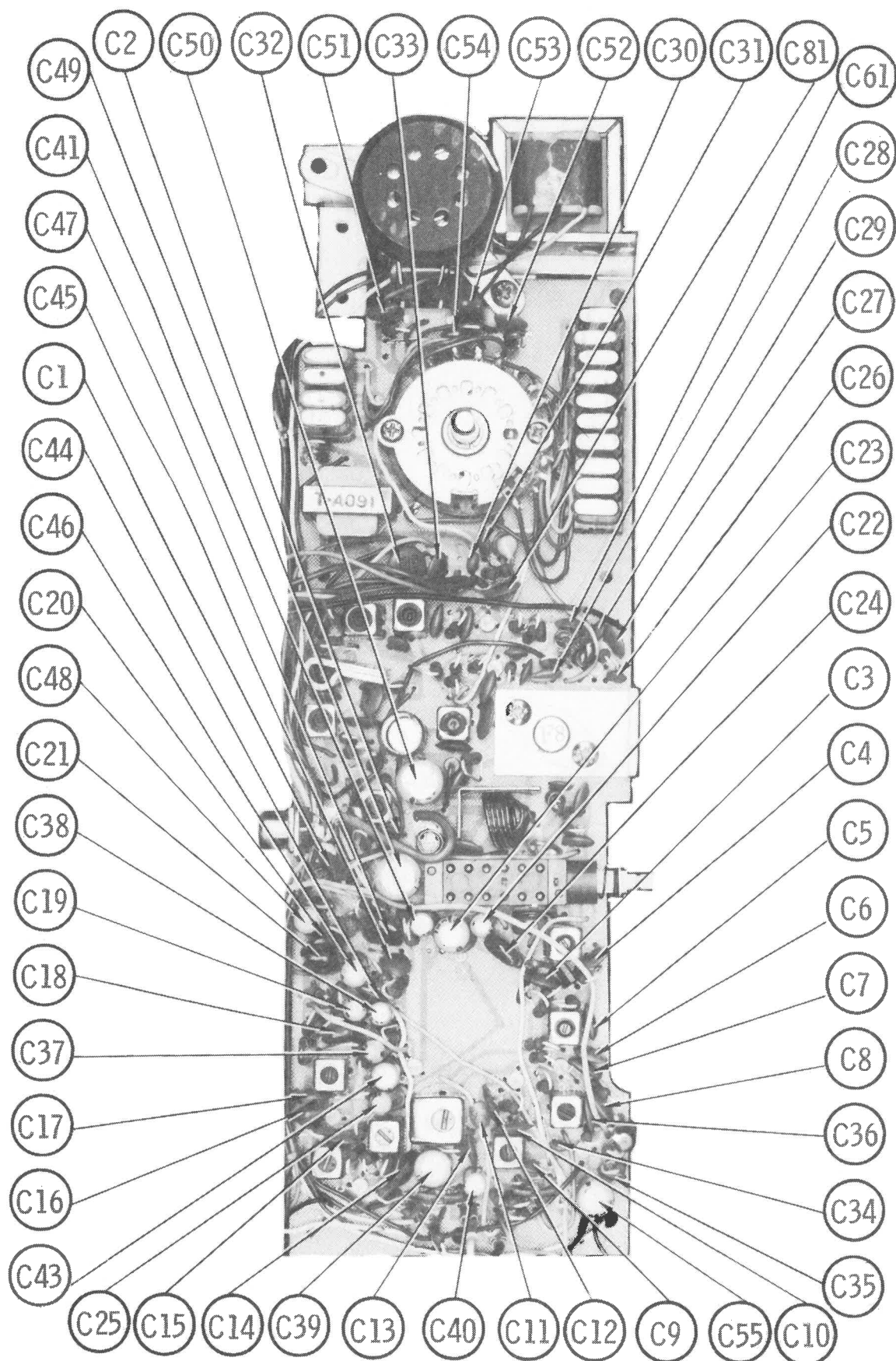
TRANSMITTER

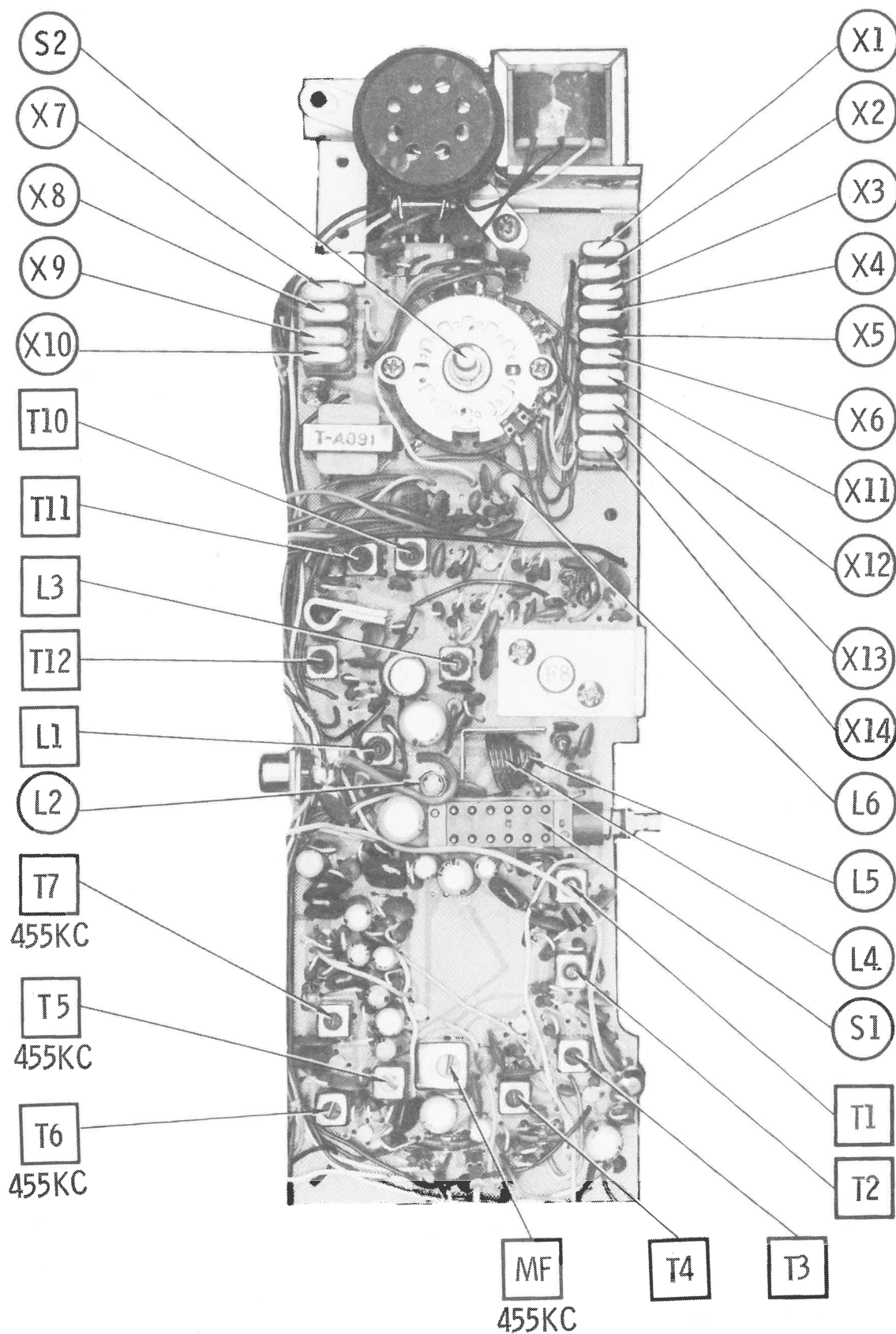
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength meter.	T10, T11, T12, L3	Adjust for maximum
0-500ma DC Ammeter	L3	Insert meter in collector circuit of Q17 and readjust L3 for 5 watts DC input.
Television (Ch. 2)	L1	Adjust for MINIMUM interference.

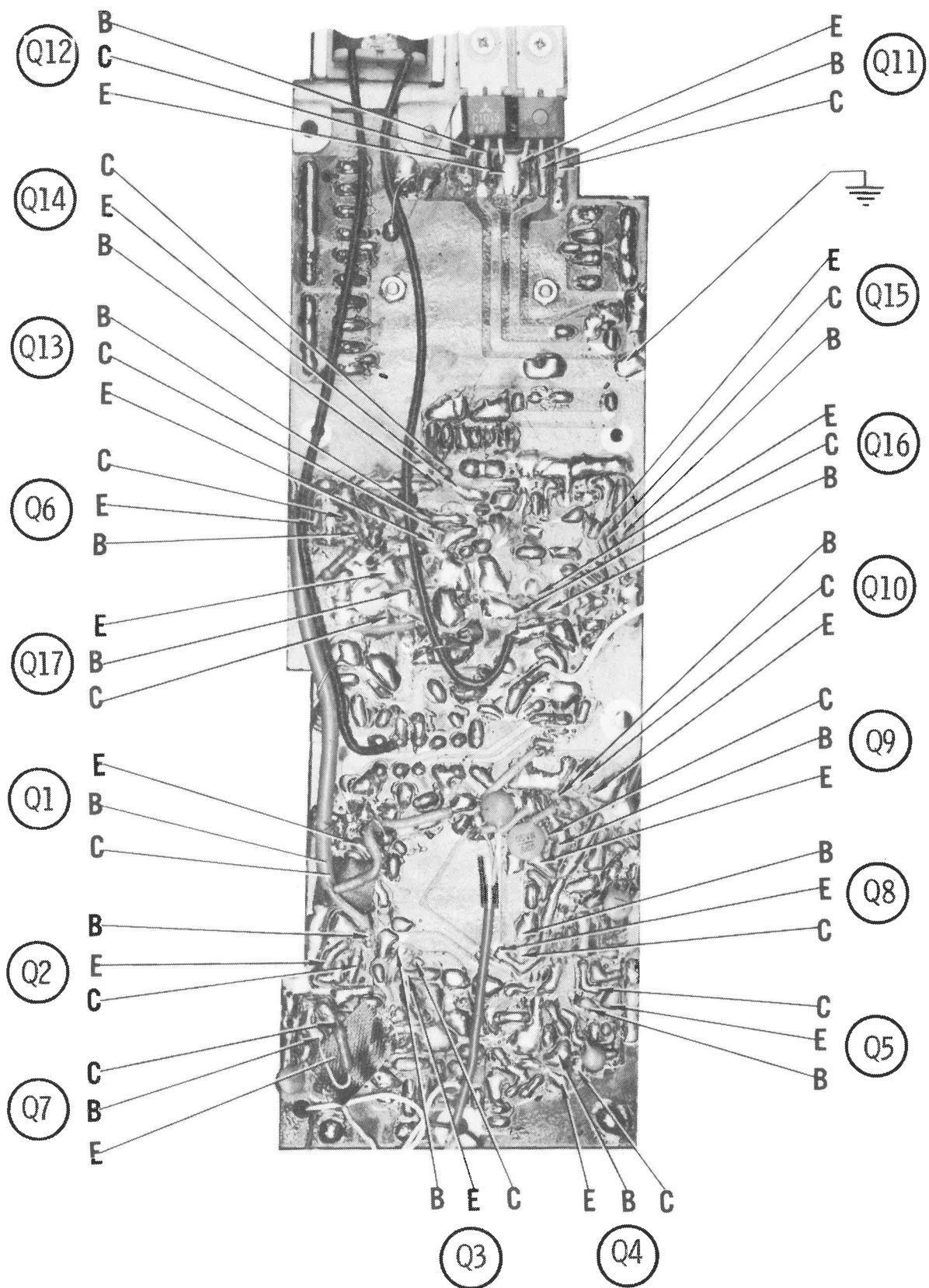
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

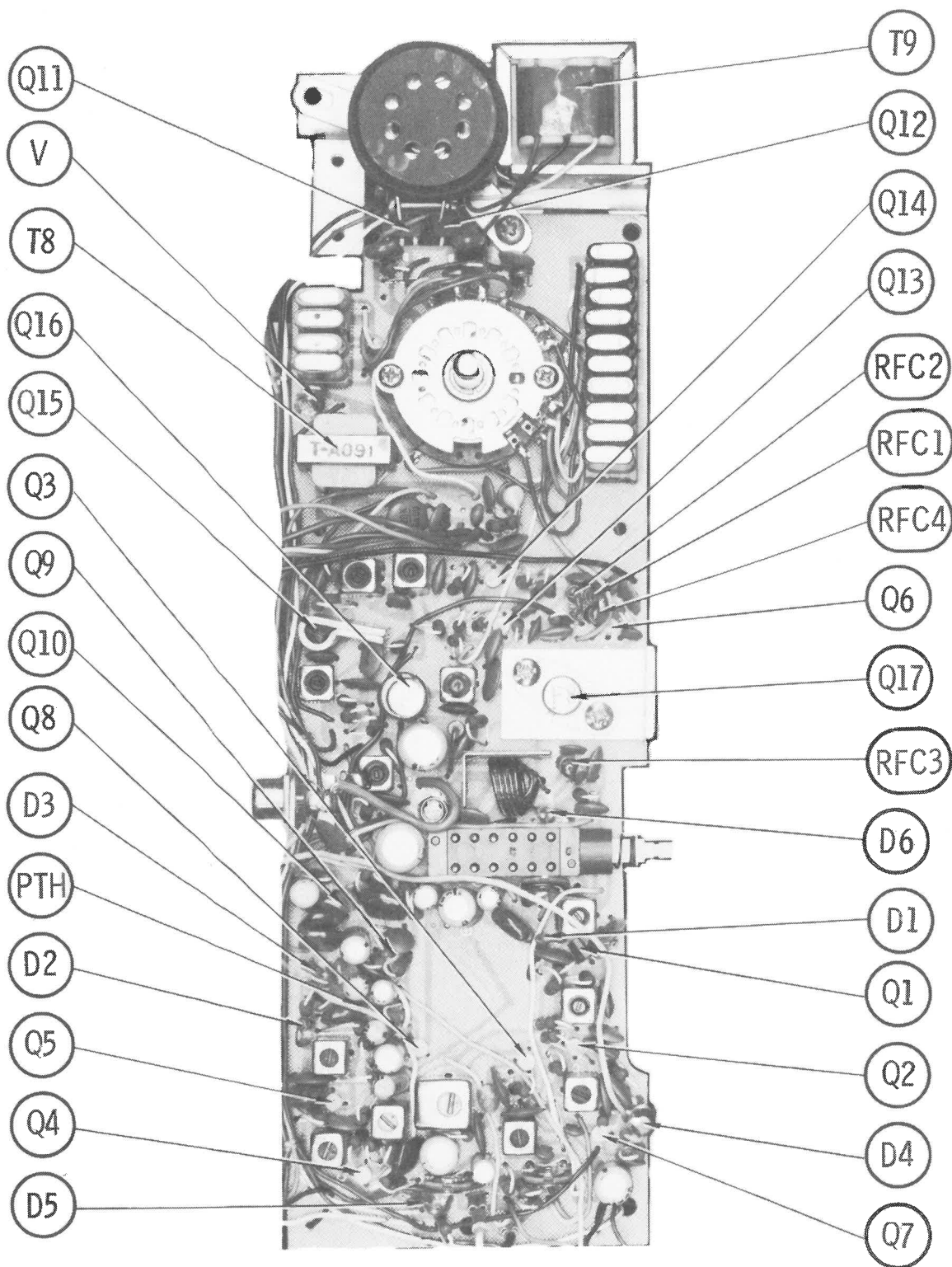
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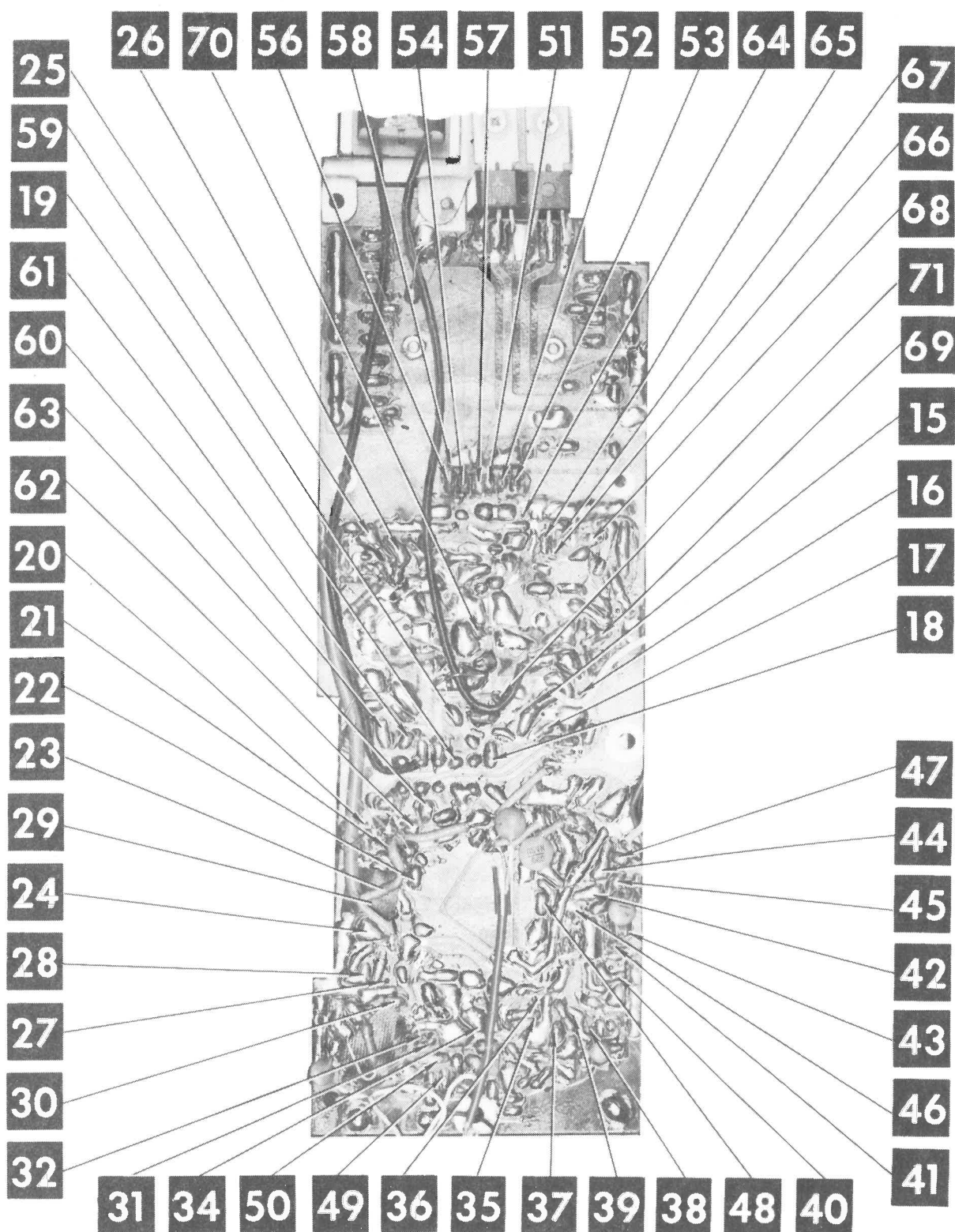
REALISTIC MODEL TRC-101

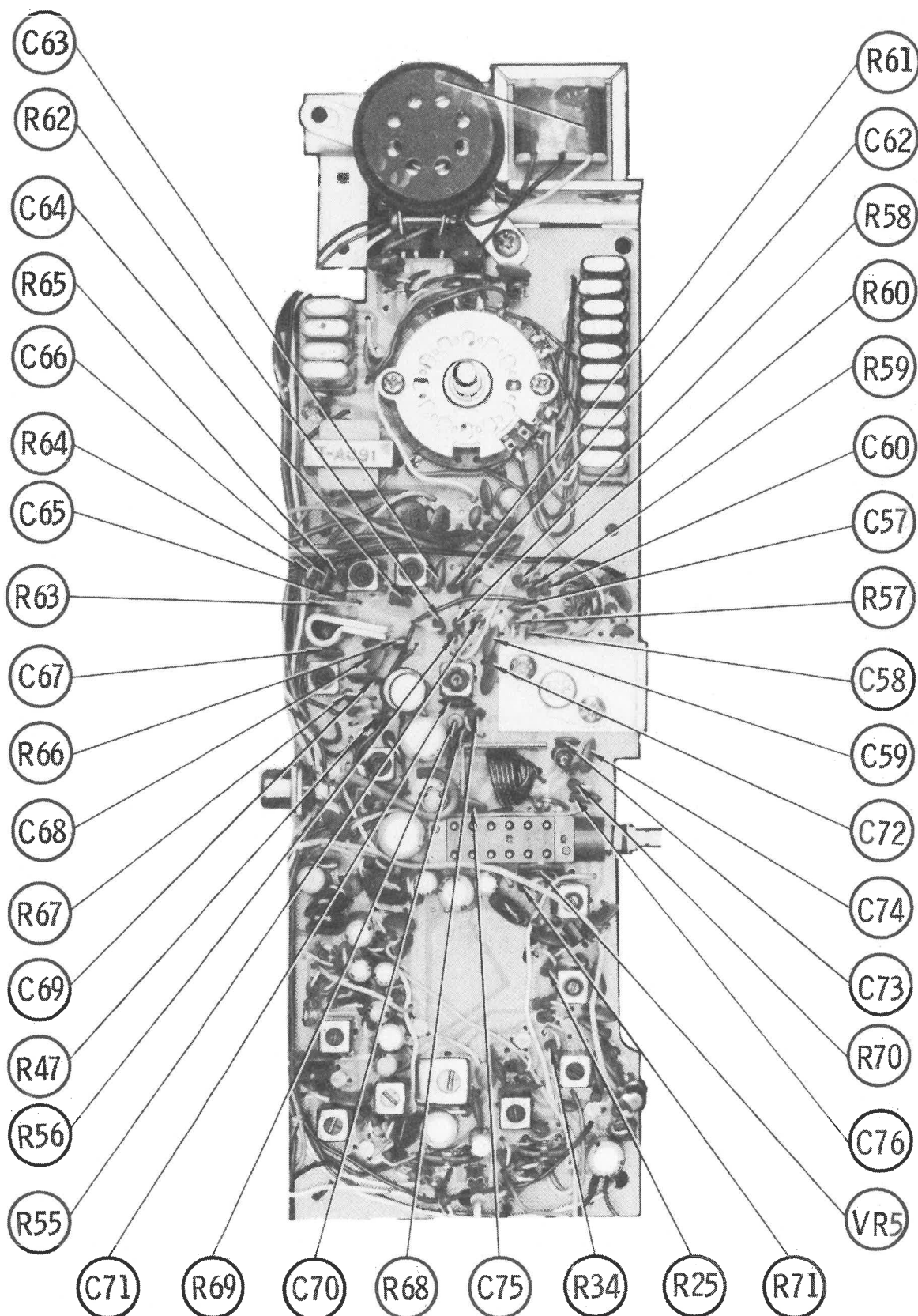


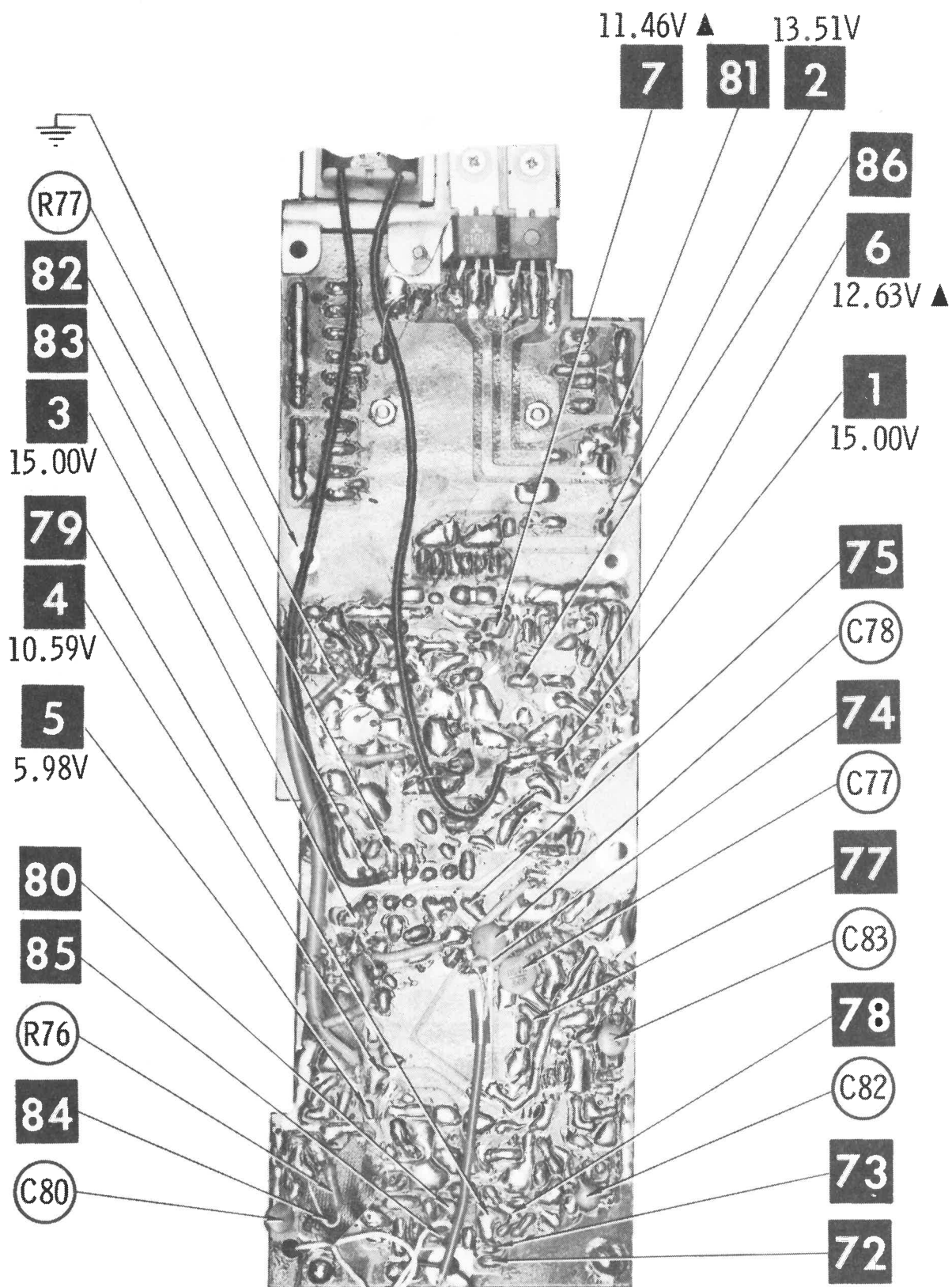


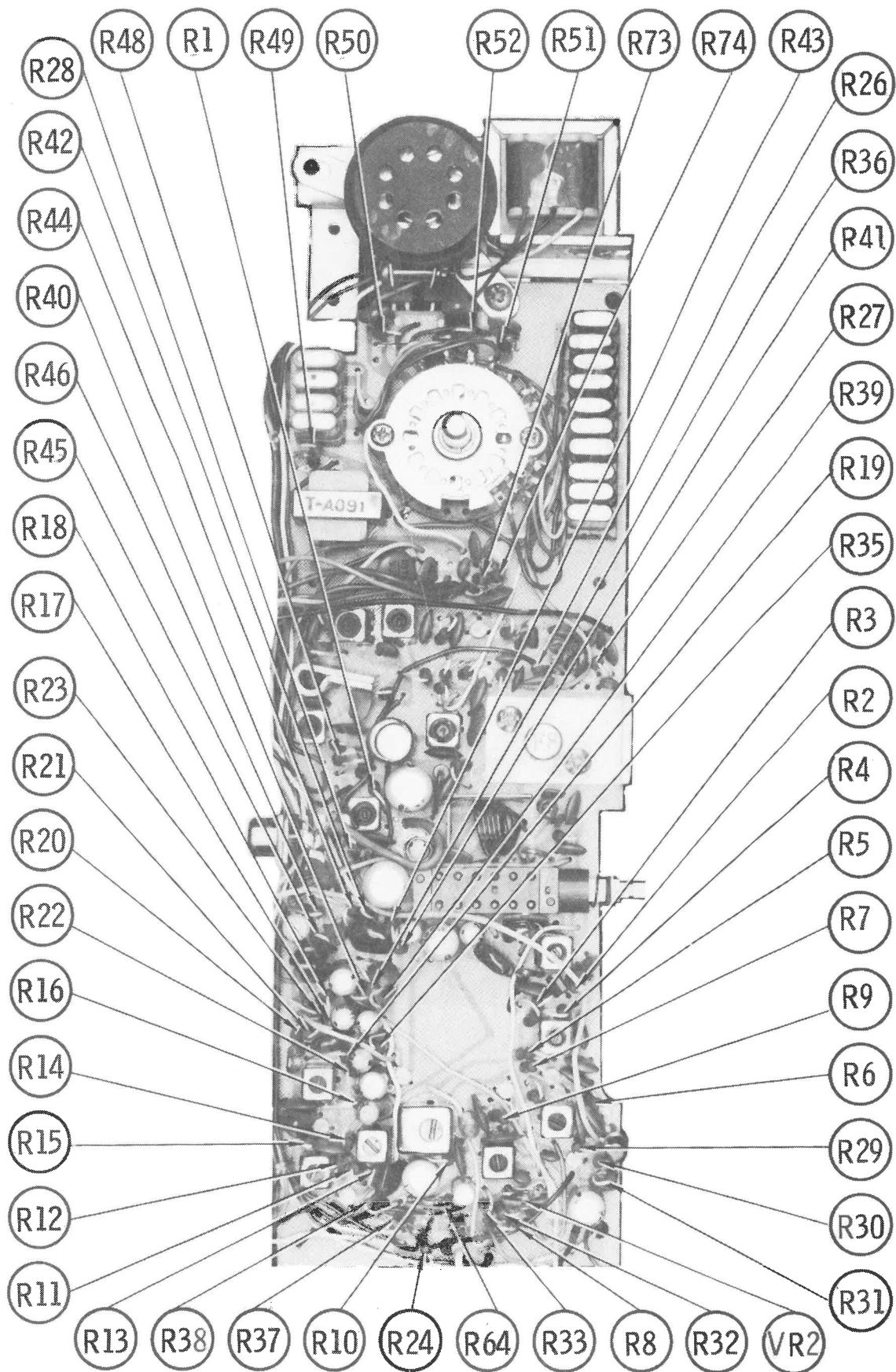


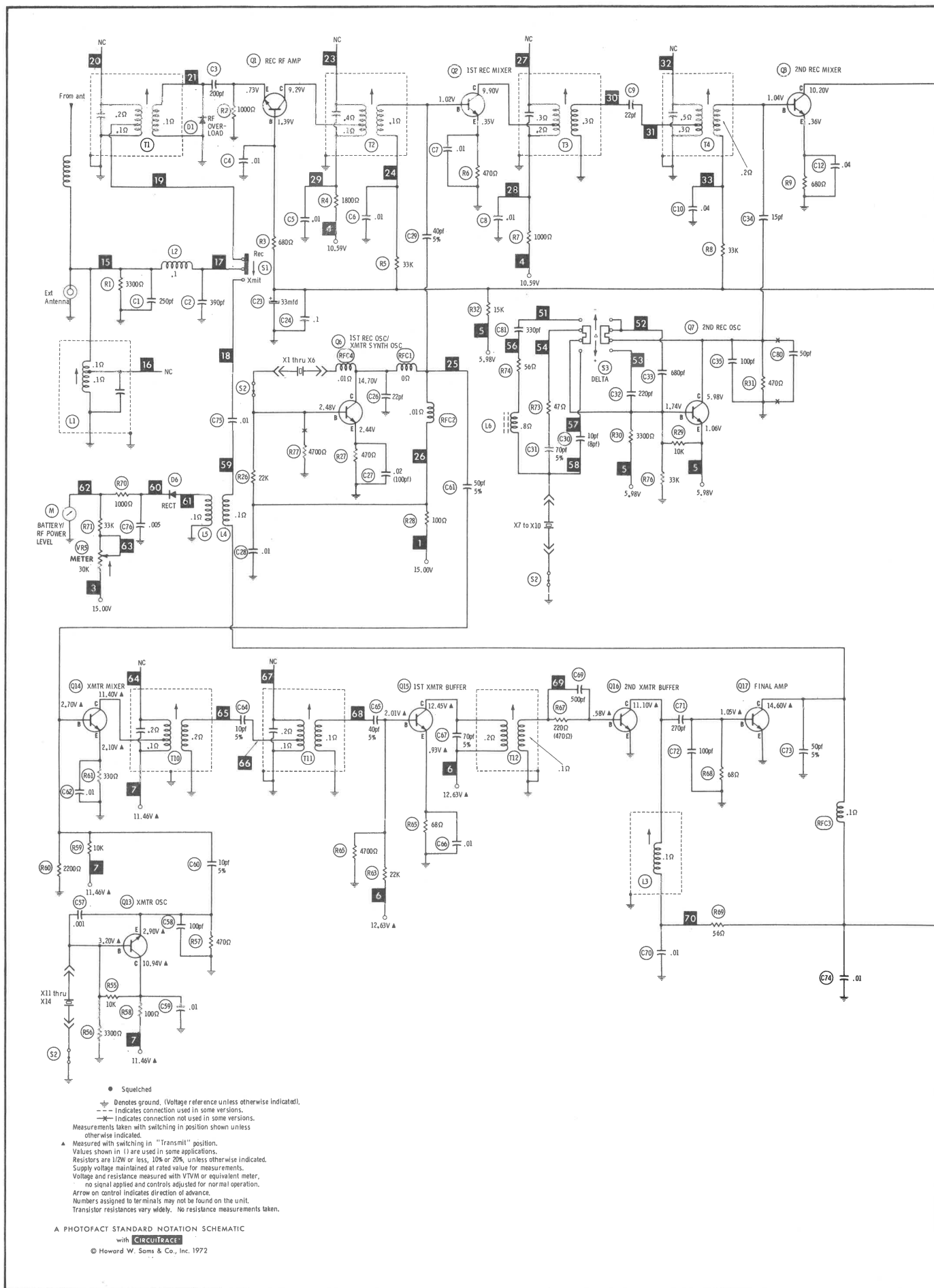












PARTS LIST AND DESCRIPTION

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

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No. 8214 Lowest-loss (RG-8/U Type) 8237 Low-loss (RG-8/U) 8240 (Solid) Miniature (RG-58/U) 8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No. 8499 Single-Conductor Shielded (Neoprene) 8498 Single-Conductor Shielded (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 In.)

SEMICONDUCTORS

ITEM No.	TYPE / MFR. No. / PART No.	REPLACEMENT DATA						
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	MOTOROLA PART No.
D1	FV-23	GE-300	D200	PTC214	SK3100	RT218	ECG 177	
D2	1S446	1N34AS	1N34A	PTC207	SK3087		ECG 109	
D3	1S446	1N34AS	1N34A	PTC207	SK3087		ECG 109	
D4	FV-24 (1)	GEZD-9.1	Z1208	PTC505	SK3060		ECG 139	
D5	1S446	1N34AS	1N34A	PTC207	SK3087		ECG 109	
D6	1S446	1N34AS	1N34A	PTC207	SK3087		ECG 109	
Q1	2SC460(A)	GE-20	TR-21	PTC115	SK3018	RT107	ECG 107	HEP53
Q2	2SC184	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q3	2SC184	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q4	2SC183	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q5	2SC183	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q6	2SC183	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q7	2SC183	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q8	2SC183	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q9	2SC183	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q10	2SC815	GE-17	TR-21	PTC123	SK3047	RT107	ECG 123A	HEP736
Q11	2SC1013	GE-28	IRTR-55				ECG 186	
Q12	2SC1013	GE-28	IRTR-55				ECG 186	
Q13	2SC183	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q14	2SC183	GE-20	TR-21	PTC115	SK3018	RT107	ECG 108	HEP56
Q15	2SC881	GE-63	TR-25		SK3024		ECG 192	HEP75
Q16	2SC775		IRTR-65		SK3047		ECG 128	HEPS3001
Q17	2SCF8		IRTR-65		SK3048		ECG 195	HEPS3001
V	1S1209						ECG 116	

(1) Transistor used as 9 Volt Zener.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		MFR. PART No.	ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C19	10 10V		RME-A-D-010	EP15-10	WBR10-25	MT1-5	MTV10CB50	EV-1222
C22	.47 50V						TAS474K035POA	SD50-R479
C23	33 16V		ME-3-E-035	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	EV-1325
C25	4.7 25V		RME-A-G-005	EP30-5	WBR5-50	MT1-3	MTV5CB50	EV-1319
C37	10 10V		RME-A-D-010	EP15-10	WBR10-25	MT1-5	MTV10CB50	EV-1222
C38	4.7 25V		RME-A-G-005	EP30-5	WBR5-50	MT1-3	MTV5CB50	EV-1319
C39	33 16V		ME-3-E-035	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	EV-1325
C40	1 50V		RME-A-J-001	EP50-2	WBR1-50	MT1-1	MTV1CB50	EV-1615
C41	10 10V		RME-A-D-010	EP15-10	WBR10-25	MT1-5	MTV10CB50	EV-1222
C43	10 25V		RME-B-G-010	EP30-10	WBR10-25	MT1-5	MTV10CB50	EV-1322
C46	33 6.3V		ME-3-E-035	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	EV-1325
C48	33 6.3V		ME-3-E-035	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	EV-1325
C49	100 16V		RME-E-E-100	EP15-100	WBR100-16	MT1-19	MTV100CD15	EV-1230
C50	100 16V		RME-E-E-100	EP15-100	WBR100-16	MT1-19	MTV100CD15	EV-1230
C55	33 16V		ME-3-E-035	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	EV-1325

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			ARCO/ELMENCOPART No.	CENTRALABPART No.	CORNELL-DUBILIERPART No.	MALLORYPART No.	SPRAGUEPART No.
C1	250		CCD-270	DD-271	GP270	GP327	10TS-T27
C2	390	10%	CCD-391	DD-391	GP390	GP339	10TS-T39
C3	200	10%	CCD-201	DD-201	GP200	GP320	10TS-T20
C4	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C5	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C6	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C7	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C8	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C9	22	5%	CCD-103	CK-103	MGP01	TA110	TG-S10
C10	.04			DTZ-25		CN0425	10TCC-Q25
C11	510	10%		DD-403		GP140	
C12	.04		DM-16-471J	CPR-470J	CD15F471J500	SX347	MS-347
C13	.04			DD-403		GP140	
C14	.047		CCD-503	CK-503	MGP05	TA150	TG-S50
C15	.04		CCD-503	DD-403	MGP05	GP140	TG-S50
C16	.047		CCD-503	CK-503	MGP05	TA150	TG-S50
C17	.04		CCD-503	DD-403	MGP05	GP140	TG-S50
C18	.047		CCD-503	CK-503	MGP05	TA150	TG-S50
C20	.047		CCD-503	CK-503	MGP05	TA150	TG-S50
C21	.047		CCD-503	CK-503	MGP05	TA150	TG-S50
C24	.1			CK-104		TA010	TG-P10
C26	22	5%		DTZ-25		CN0425	10TCC-Q25
C27	.02		CCD-203	CK-203	MGP02	TA120	TG-S20
C28	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C29	40	5%				CN0439	10TCC-Q39
C30	10		CCTO-100	DTZ-10	NP010	CN0410	10TCC-Q10
C31	70	5%		DTZ-68		CN0468	10TCC-Q68
C32	220	10%	CCD-221	DD-221	GP220	GP322	10TS-T22
C33	680	10%	CCD-681	DD-681	GP680	GP368	10TS-T68
C34	15		CCTO-150	DTZ-15	NP015	CN0415	10TCC-Q15
C35	100	10%	CCD-101	DD-101	GP100	GP310	10TS-T10
C36	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C42							
C44	.04			DD-403		GP140	
C45	.02		CCD-203	CK-203	MGP02	TA120	TG-S20
C47	.1			CK-104		TA010	TG-P10
C51	.033		CCD-203	CK-303		GP130	TG-S30
C52	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C53	.033		CCD-203	CK-303		GP130	TG-S30
C54	.047		CCD-503	CK-503	MGP05	TA150	TG-S50
C56							
C57	.001		CCD-102	DM-102	GP1000	SM210	2SS-D10
C58	100	10%	CCD-101	DD-101	GP100	GP310	10TS-T10
C59	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C60	10	5%	CCTO-100	DTZ-10	NP010	CN0410	10TCC-Q10
C61	50	5%	CCTO-510	DTZ-50	NP050	CN0450	10TCC-Q50
C62	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C63	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C64	10	5%	CCTO-100	DTZ-10	NP010	CN0410	10TCC-Q10
C65	40	5%				CN0439	10TCC-Q39
C66	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C67	70	5%		DTZ-68		CN0468	10TCC-Q68
C68	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C69	500	10%	CCD-501	DM-501	GP500	GP350	10TS-T50
C70	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C71	270	10%	CCD-270	DD-271	GP270	GP327	10TS-T27
C72	100	10%	CCD-101	DD-101	GP100	GP310	10TS-T10
C73	50	5%	CCTO-510	DTZ-50	NP050	CN0450	10TCC-Q50
C74	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C75	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C76	.005		CCD-502	CK-502	MGP005	TA250	TG-D50
C77	.01		CCD-103	CK-103	MGP01	TA110	TG-S10
C78	.02		CCD-203	CK-203	MGP02	TA120	TG-S20
C79							
C80	50	5%	CCTO-510	DTZ-50	NP050	CN0450	10TCC-Q50
C81	330		CCD-331	DD-331	GP330	GP333	10TS-T33
C82	2			DTZ-2R2	NP02P2	CN0522	10TCC-V22
C83	100	10%	CCD-101	DD-101	GP100	GP310	10TS-T10

REALISTIC MODEL TRC-101

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA			
			MFR. PART No.	CENTRALABPART No.	CLAROSTATPART No.	CTS-IRCPART No.
VR1	Volume/Switch	10K				
VR2	Squelch Range	10K		TSV-10K (1) or T-10K (1)		X201R103B (1)
VR3	Squelch	10K				
VR4	Modulation Adjust	10K		TSV-10K (1) or T-10K (1)		X201R103B (1)
VR5	Meter Adjust	30K		TSV-50K (1) or T-50K (1)		X201R503B (1)

(1) Cut off one of the end terminals and bend to fit "PC" board.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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.
R51	1			PTH	120K (CoId)		(PTH81T104M)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	TVI	(D102F54MA0N2P)			
L2	Pi Filter				
L3	2nd Xmtr. Buffer				
L4	Meter Take Off (Pri) (5 turns)				
L5	Meter Take Off (Sec) (3 turns)				
L6	RF Choke (28uh)	(MFH71T)		74F275AI	T972
MF	Input IF				
RFC1	RF Choke (.1uh)		19-2001	4580	T956
RFC2	RF Choke (.33uh)		19-2004	4586	TA811
RFC3	RF Choke (2.2uh)			74F226AP	T812
RFC4	RF Choke (.25uh)		19-2003	4584	T957
T1	Rec. Antenna Match	(DL09F27MOD2P)			
T2	RF	(DL05F27MOD2P)			
T3	Interstage IF	(TM047093H)			
T4	Interstage IF	(TM0480D2Y)			
T5	Interstage IF	(TT0330N3P)	16-9033	8515	
T6	Interstage IF	(DL06455K093P)	16-9033	8515	
T7	Output IF	(D107455K0N3P)	16-9035	8812	
T10	Xmtr. Mixer Input	(TT0360N2P)			
T11	Xmtr. Mixer Output	(TT0370N2P)			
T12	1st Xmtr. Buffer	(TT038093P)			

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	
T8	2	1CT		T-A091			

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T9	2250	100	(T-D032)				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	2-3/4" PM, 100 ohms			

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M2	Meter		RF-Battery
S1	Switch		Rec. - Xmit.
S2	Switch		Selector
S3	Switch		Delta Tuning
X1	Crystal		33.000MC
X2	Crystal		33.050MC
X3	Crystal		33.100MC
X4	Crystal		33.150MC
X5	Crystal		33.200MC
X6	Crystal		33.250MC
X7	Crystal		6.490MC
X8	Crystal		6.480MC
X9	Crystal		6.470MC
X10	Crystal		6.450MC
X11	Crystal		6.035MC
X12	Crystal		6.025MC
X13	Crystal		6.015MC
X14	Crystal		5.995MC