



PHOTOFACT®

TRADE NAME : Realistic Model TRC-27A
 SUPPLIER : Radio Shack Corp.
 730 Commonwealth Ave., Boston 17, Mass.
 TYPE SET : 10 Tube-2 Transistor Transceiver
 POWER SUPPLY : 105-125 Volts AC, 60 Cycles (or)
 12 Volt Storage Battery
 RATING : 45 Watts, .48 Amp. @ 117 VAC (Rec.)
 55 Watts, .58 Amp. @ 117 VAC (Trans.)
 TUNING RANGE : Any 3 CB Channels 1 thru 23



ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A10, A12..... GENERAL CEMENT #8276, 8277, 8290
 WALSCO #2515, 2516, 2518
 A11..... GENERAL CEMENT #8276, 8290, 8868
 WALSCO #2525, 2528, 2587

RECEIVER ALIGNMENT

Volume Control should be at maximum. Output of signal generator should be no higher than necessary to obtain an output reading. Set squelch control to maximum clockwise position. Connect output meter across voice coil.

	SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
1.	High side thru .01mfd to pin 2 (grid) of V2 (Mixer), low side to chassis. Tune to 455KC (400v Mod.).	Any	A1 thru A6	Adjust for maximum.
2.	Across antenna jack. Tune to Channel 11 (27.085MC).	11 (27.085MC)	A7, A8	"

TRANSMITTER ALIGNMENT

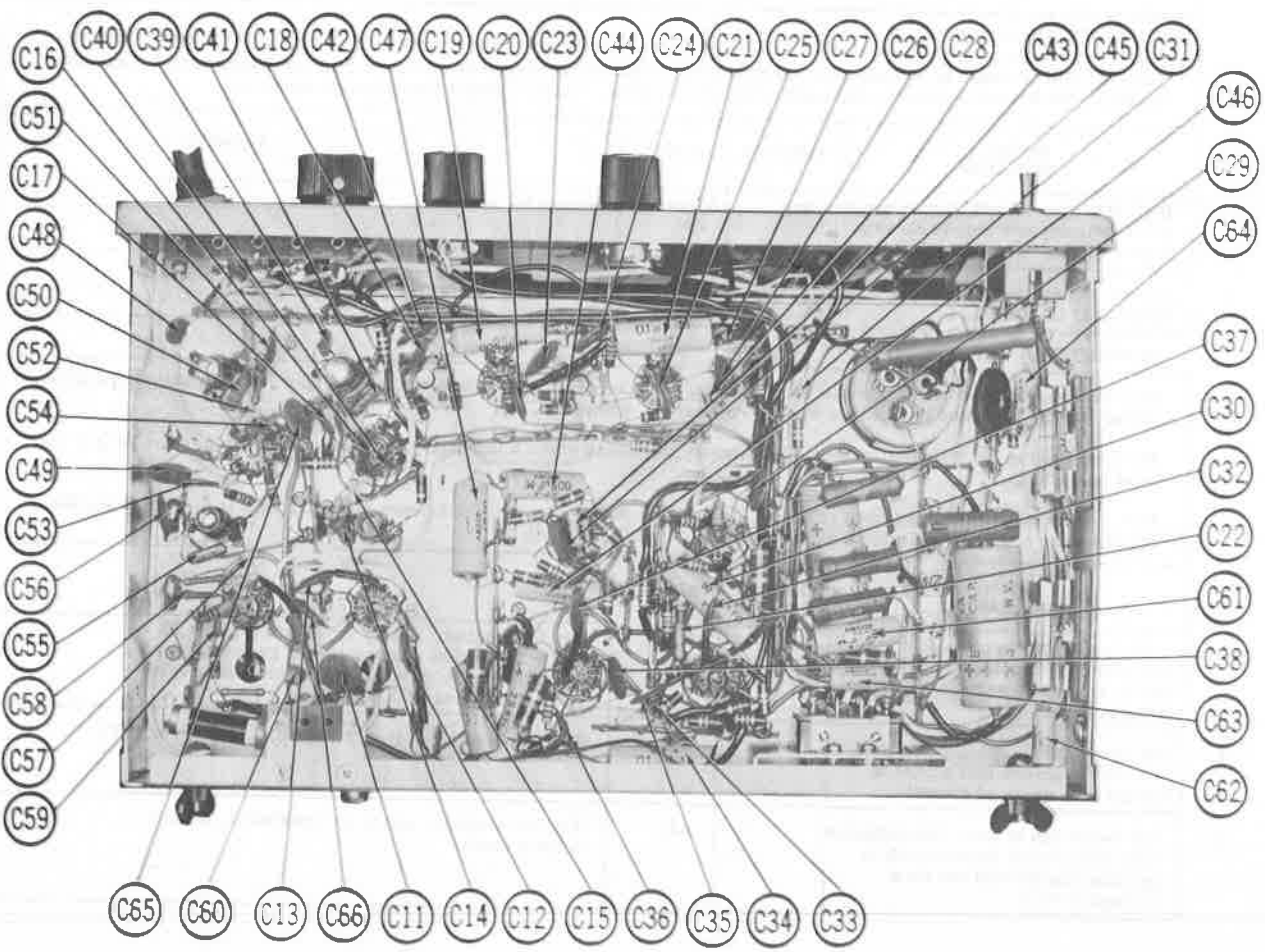
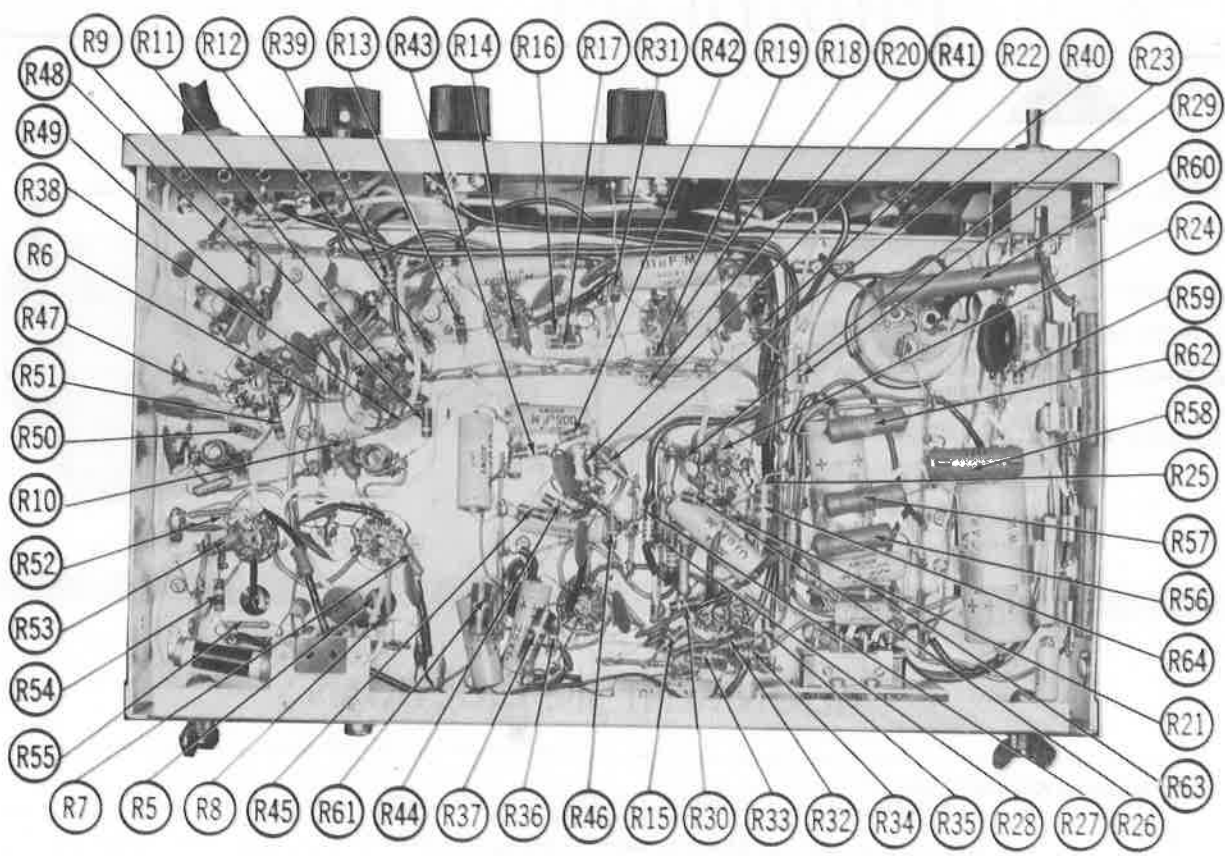
Only those persons properly licensed are permitted to make repairs or adjustments which may result in illegal operation. (Refer to FCC rules and regulations Part 19, Subpart D, Section 19.71).

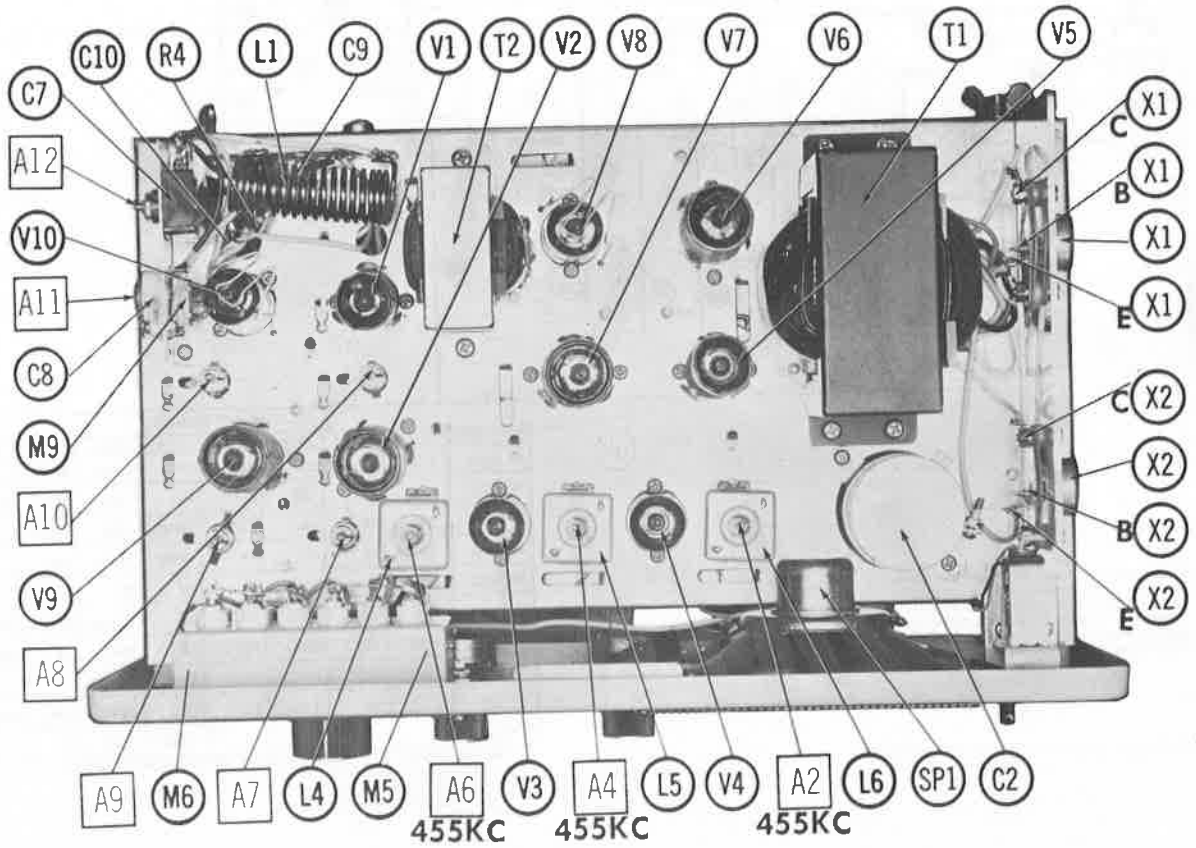
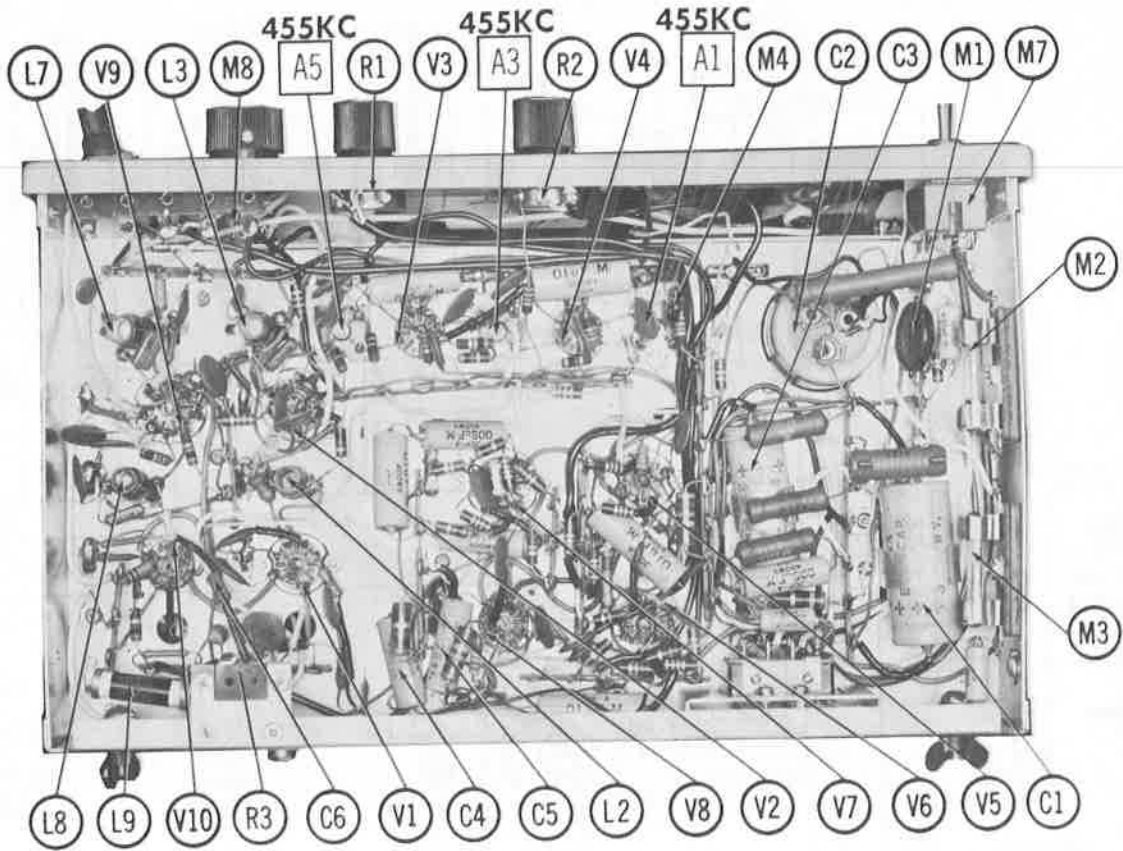
The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

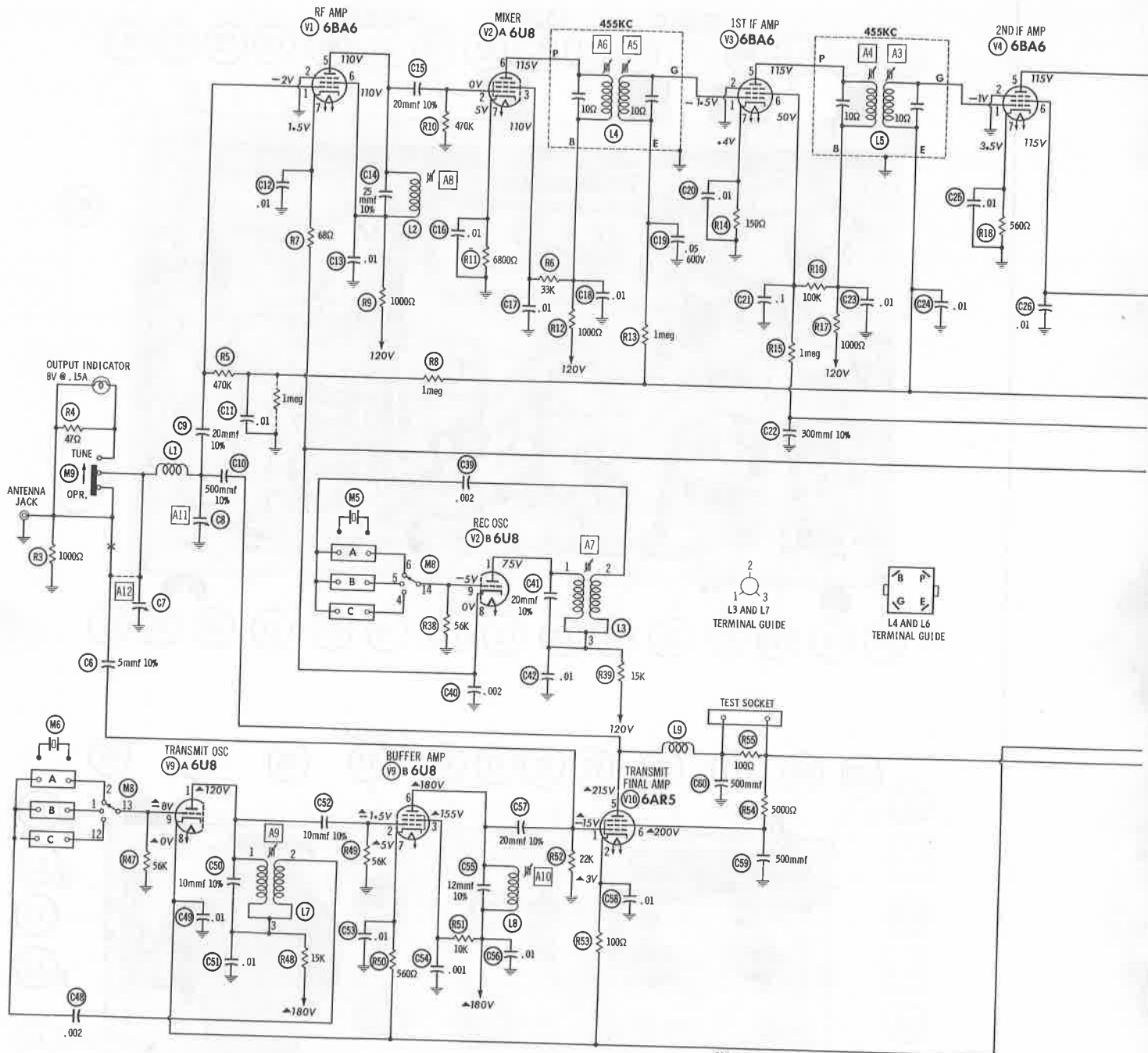
Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

	SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
3.	Set switch M9 to tune. Use indicator bulb provided or leave switch in operate and use field strength meter.	11 (27.085MC)	A9, A10	Key transmitter. Adjust for maximum. Set A9 SLIGHTLY below peak on side of gradual dropoff. Key transmitter on all channels used to be sure oscillator starts each time.
4.	Set switch M9 to operate. Connect DC VTVM across test socket on bottom rear apron of chassis.	"	A11	Key transmitter. Adjust for MINIMUM (Approx. 2V).
5.	Set switch M9 to tune. Use indicator bulb provided or leave switch in operate position and use field strength meter.	"	A12	Key transmitter. Adjust for maximum. Repeat steps 4 and 5.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana





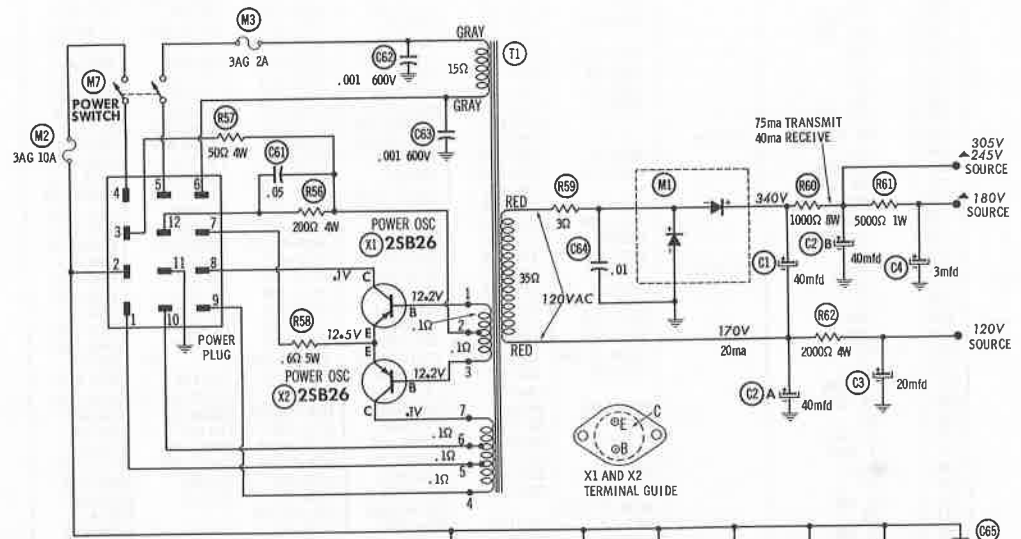
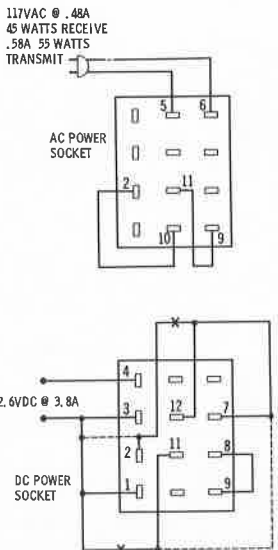
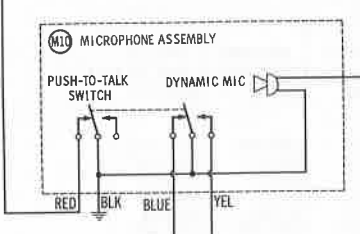
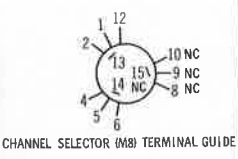
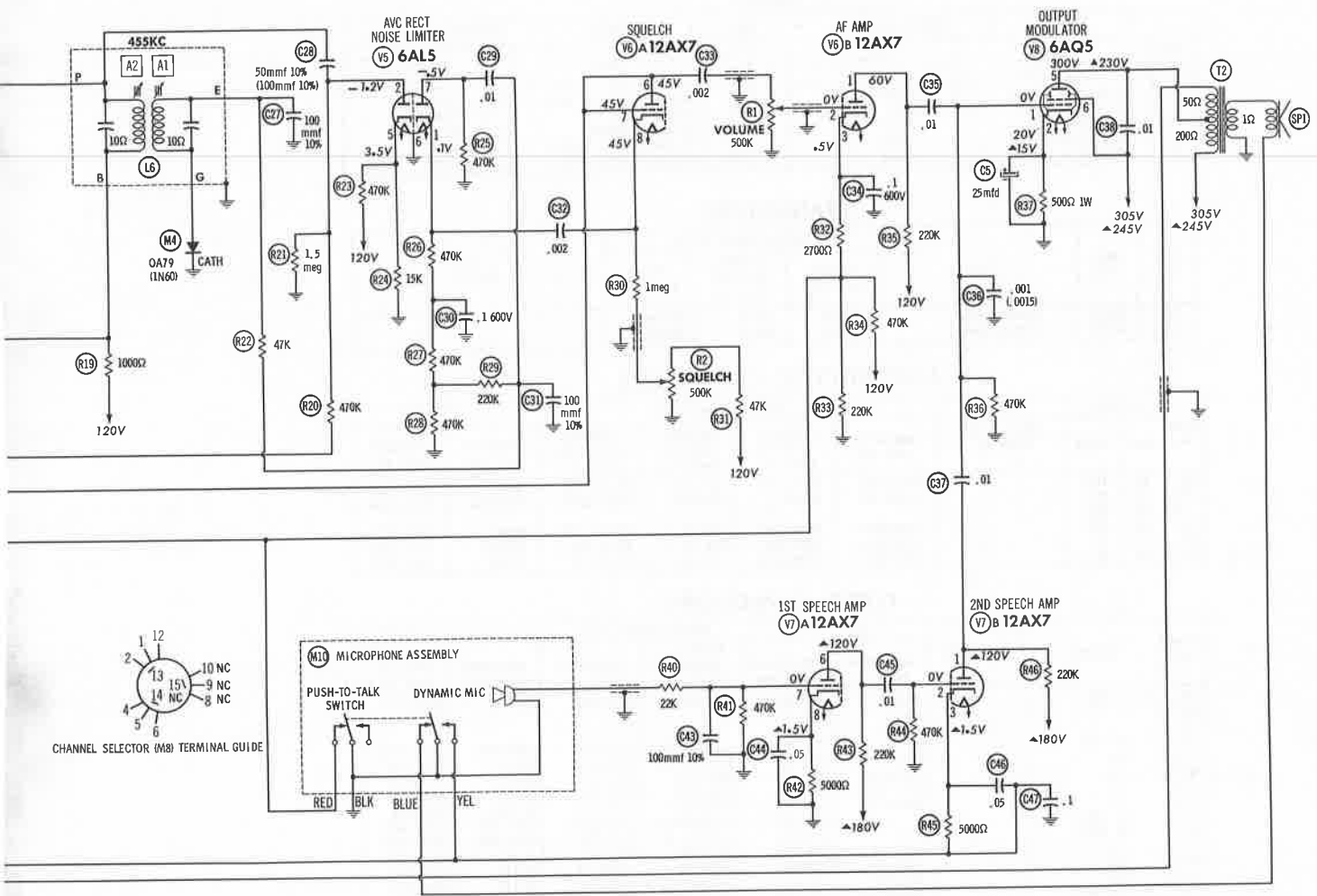


1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.

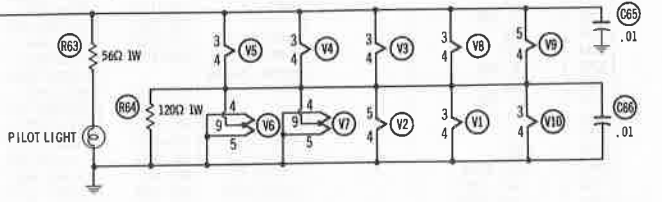
A PHOTOFAC STANDARD NOTATION SCHEMATIC
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RESISTANCE READINGS										
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BA6	3.4meg	0Ω	FIL	FIL	†3000Ω	†3000Ω	68Ω		
V2	6U8	†117K	470K	†35K	FIL	FIL	†3000Ω	6800Ω	0Ω	56K
V3	6BA6	2.9meg	0Ω	FIL	FIL	†3000Ω	†103K	150Ω		
V4	6BA6	1.9meg	0Ω	FIL	FIL	†3000Ω	†3000Ω	560Ω		
V5	6AL5	1.1meg	1.5meg	FIL	FIL	14K	0Ω	470K		
V6	12AX7	†222K	100K	2700Ω	FIL	FIL	†1.1meg	†1.1meg	1meg	FIL
V7	12AX7	†226K	470K	‡5000Ω	FIL	FIL	†226K	21K	5000Ω	FIL
V8	6AQ5	470K	500Ω	FIL	FIL	†1250Ω	†1000Ω	TP		
V9	6U8	†21K	56K	†16K	FIL	FIL	†6000Ω	‡560Ω	‡0Ω	56K
V10	6AR5	22K	‡100Ω	FIL	FIL	†1350Ω	†6200Ω	TP		

ALL MEASUREMENT TAKEN IN RECEIVE POSITION UNLESS OTHERWISE SPECIFIED.
 † MEASURED FROM OUTPUT OF A1
 ‡ MEASURED IN TRANSMIT POSITION
 † MEASURED FROM JUNCTION C2A & R62
 TP TIE POINT



DOTTED CIRCUITRY INDICATES CONNECTIONS FOR POSITIVE GROUND



PARTS LIST AND DESCRIPTION

TUBES

ITEM No.	USE	TYPE	MANUFACTURER				
			AMPEREX	GENERAL ELECTRIC	RCA	RAYTHEON	SYLVANIA
V1	RF Amp.	6BA6					
V2	Mixer-Rec. Osc.	6U8					
V3	1st IF Amp.	6BA6					
V4	2nd IF Amp.	6BA6					
V5	AVC-Noise Limiter	6AL5					
V6	Squelch Amp. -AF Amp.						12AX7
V7	Speech Amp.						12AX7
V8	Output-Modulator						6AQ5
V9	Transmit Osc. -Buffer						6U8
V10	Transmit Final Amp.						6AR5

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SB26	Power Osc.	DS503	GE-3	2N2147	
X2	2SB26	Power Osc.	DS503	GE-3	2N2147	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REALISTIC PART No.	REPLACEMENT DATA					
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	40	350							
C2A	40	450		PRS1670	BR40-350	QT1-14	TD-40-350	TC67	TVA-1611
C2B	40	450		AFH2-57	B0450	XC2-25	TMD-2650	FP238A	TVL-2764
C3	20	350		PRS1735	BR20-350	QT1-9	TD-20-350	TC65	TVA-1608
C4	3	350		PRS1600	BR4-350	QT1-2.1	TD-4-450	TC595	TVA-1601
C5	25	25		PRS1280	BBR25-25	QT1-11	TD-25-25	TC26	TVA-1205

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C6	5 10%		SI 5	D6-050	LA10V5-SL	CCD-050	GP550	10TS-V50
C7								
C8								
C9	20 10%							
C10	500		BPD-0005	D6-200	LA10Q2-SL	CCD-200	CNO-422	10TS-Q20
C11	.01		BPD-01	DD-501	LA10T5-C4	CCD-501	GP350	10TS-T50
C12	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C13	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C14	25 10%							
C15	20 10%							
C16	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C17	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C18	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C19	.05 600V		P688N-05	DD-503	DPMS-6S5	6DP-3-503	GEM-615	6PS-S50
C20	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C21	.1 400V		P688N-1	DF-104	PM6P1	8DP-4-104	GEM-601	6TM-P10
C22	300 10%							
C23	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C24	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C25	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C26	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C27	100 10%							
C28	50 10%							
C29	.01	(100) †	BPD-01	D6-500	LA10Q5-S3	CCD-500	CNO-310	10TS-T10
C30	.1 600V		P688N-1	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C31	100 10%							
C32	.002		BPD-002	D6-101	LA10T1-S3	CCD-101	CNO-310	10TS-T10
C33	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C34	.1 600V		P688N-1	DF-104	PM6P1	8DP-4-104	GEM-601	6TM-P10
C35	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C36	.001	(.0015) †	BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C37	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C38	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C39	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C40	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C41	20 10%		ADM-15-200	CPR-20J	CD10C200J	DM-10-200		MS-42
C42	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C43	100 10%							
C44	.05 400V		P488N-05	D6-101	LA10T1-S3	CCD-101	CNO-310	10TS-T10
C45	.01		BPD-01	DD-503	DPMS-4S5	4DP-3-503	GEM-415	4PS-S50
C46	.05 400V		P488N-05	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C47	.1 400V		P688N-1	DF-104	PM6P1	8DP-4-104	GEM-601	6TM-P10
C48	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C49	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C50	10 10%		ADM-15-100	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C51	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C52	10 10%							
C53	.01		BPD-01	D6-100	LA10Q1-SL	CCD-100	CNO-410	10TS-Q10
C54	.001		BPD-001	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C55	12 10%		ADM-15-120	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C56	.01		BPD-01	DD-103	CD10C120J	DM-10-120		MS-412
C57	20 10%		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C58	.01		CPR-20J	LA10Q2-SL	CCD-200	CCD-200	CNO-422	10TS-Q20
C59	500		BPD-001	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C60	500		BPD-0005	DD-501	LA10T5-C4	CCD-501	GP350	10TS-T50
C61	.05 400V		P488N-05	DD-501	LA10T5-C4	CCD-501	GP350	10TS-T50
C62	.001 600V		P688N-001	DD-102	DPMS-6D1	6DP-1-102	GEM-621	6PS-D10
C63	.001 600V		P688N-001	DD-102	DPMS-6D1	6DP-1-102	GEM-621	6PS-D10
C64	.01 400V		P488N-01	DD-103	DPMS-4S1	4DP-1-103	GEM-411	4PS-S10
C65	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C66	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10

† Alternate Value.

PARTS LIST AND DESCRIPTION (CONTINUED)

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			REALISTIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume	500K	35.12A	F2-500K (1), S0204 or (B-60 (1))	A47-500K-Z (1) KSS-3	B13-133, SK3 (1), or (BU1 (1), CF25, SS3, DC1), (U48 (1))	UA55A (1), SK1000 or (R U55A, SL36, SL3250) or (U48 (1))
R2	Squelch	500K	37.0TT	F1-500K (1), S0204, or (B-59 (1))	A47-500K-S (1) KSS-3	B11-133, SK3 (1), or (BU1 (1), CF16, SS3, DC1)*	UA55L (1), SK1000, or (R U55L, SL36, SL3280) or (U50 (1)).

* "SNAPTROL" (1) Enlarge Mounting Hole.

RESISTORS (Power and Special)

ITEM No.	RATING	ITEM No.	RATING	REPLACEMENT DATA		REMARKS	REMARKS
				IRC PART No.	WORKMAN PART No.		
R56	2000 4W	R60	10000 8W				
R57	5000 4W	R82	20000 4W				
R58	.60 3W	MR1	WT08				4G2000

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		REALISTIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	
L1	Ant. Loading					
L2	Rec. RF					
L3	Rec. Osc.					
L4	1st IF	BC-356*	13-PC1*		T614*	* Solder to Chassis
L5	2nd IF	BC-356*	13-PC1*		T614*	
L6	3rd IF	BC-357*	13-PC2*		T615*	
L7	Trans. Osc.					
L8	Trans. Intersage					
L9	Rf Choke (6. 8uh)	BC-566	4611	RTC-8521	T980	

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA				NOTES
		REALISTIC PART No.	MERIT PART No.	STANCOR PART No.	THORPARSON PART No.	
T1	117V AC (3) .58A SEC. 2 12.6V AC (3) 1.8A In AC operation only.	T01-59				

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		REALISTIC PART No.	MERIT PART No.	STANCOR PART No.	THORPARSON PART No.	
T2	7000Ω Tap (3) 5000Ω	T02-26				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		REALISTIC PART No.	QUAM PART No.	
SP1	4" PM 6-8Ω		4A05Z8	

POWER RECTIFIERS

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS	
			MALLORY PART No.	RCA PART No.
M1	.095A	610C	VB400	1N2861 (1)

(1) Use Two Units.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			
			REALISTIC PART No.	LITTELFUSE PART No.	FUSE HOLDER	BUSS PART No.
M2	3AG	10A				
M3	3AG	2A				

MISCELLANEOUS

ITEM No.	PART NAME	REALISTIC PART No.	NOTES
M4	Diode	44D776X	AM Detector, OA79 (1N60)
M5	Crystal	44D776X	When ordering specify channel and function.
M6	Crystal		When ordering specify channel and function.
M7	Switch		Power (DPDT Toggle Type)
M8	Switch		Channel Selector (3 Position Wafer Type)
M9	Switch		Tune-Operate (2 Position Slide Type)
M10	Microphone		Includes Push-to-talk Switch

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No. 8214 (Lowest Loss (RG-8/U Type))
Coiled Microphone Cable	Use BELDEN No. 8240 (Solid) Miniature (RG-58/U)
Ignition Noise Suppression	Use BELDEN No. 8497 3 Conductor - 1 Shielded for Press-to-Talk (Neoprene)
Bonding Strap	Use BELDEN No. 7300-Series Spark-Plug Sets
	Use BELDEN No. 8661 (3/8 In.)