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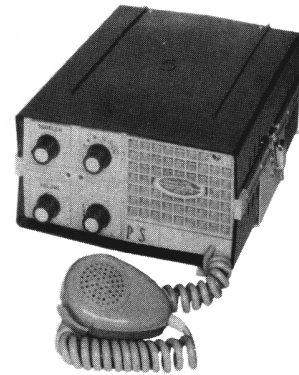
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# PHOTOFACT®

TRADE NAME : Pearce-Simpson Model Companion  
 SUPPLIER : Pearce-Simpson, Inc., Sales & Service Div.  
 1385 N. W. 27th Ave., Miami 35, Florida  
 TYPE SET : 7 Tube, 3 Transistor Transceiver  
 POWER SUPPLY : 110-120 Volts AC, 60 Cycles (or)  
 12 Volt Storage Battery  
 RATING : 65 Watts, .60 Amp. @ 117VAC (Transmit)  
 55 Watts, .52 Amp. @ 117VAC (Receive)  
 4.7 Amp. @ 12.6VDC (Transmit)  
 3.6 Amp. @ 12.6VDC (Receive)  
 TUNING RANGE : Any 5 CB Channels 1 thru 22  
 Receiver may be continuously tuned.



## ALIGNMENT INSTRUCTIONS

### ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

#### Suggested Alignment Tools:

A1 thru A6, A8 thru A12, A14, thru A18. . . . GENERAL CEMENT #5097, 8727 . . . . WALSCO #2515  
 A7. . . . . GENERAL CEMENT #8272, 8276, 9298. . . . WALSCO #2515, 2516, 2518, 2519, 2525, 2541  
 A13. . . . . GENERAL CEMENT #8282, 8606, 9295. . . . WALSCO #2526, 2543, 2544, 2545

#### RECEIVER ALIGNMENT

Connect DC probe of VTVM to point  $\triangle A$ , common to ground.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .05mfd to pin 2 of V2, common to ground. (455KC Unmod.)		A1, A2, A3, A4, A5, A6	Adjust for maximum deflection.
High side to antenna terminal common to ground. Tune to channel frequency.	1 (26.965MC)	A7	Rotate channel selector switch to the "External" position. Adjust for maximum deflection.
"	12 (27.105MC)	A8, A9, A10, A11	Adjust for maximum deflection.
"	20 (27.205MC)	A12	"

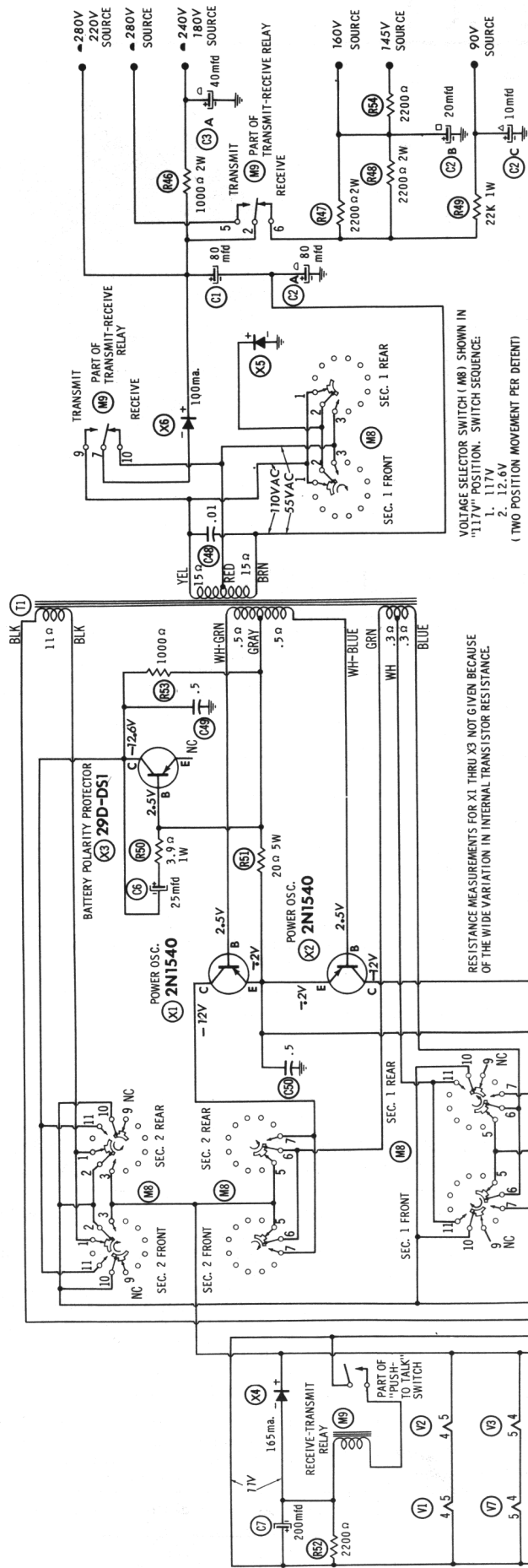
#### TRANSMITTER ALIGNMENT

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71)

SPECIAL INSTRUCTIONS	INDICATOR	ADJUST	REMARKS
Place channel selector switch on or near the centermost channel as covered by the unit.	Connect dummy load and RF watt-meter to antenna terminal. Common to ground.	A13	Connect DC probe of VTVM to point $\triangle B$ , common to ground. Key transmitter. Adjust A13 for maximum VTVM indication. Rock A13 to each side of peak, noting rate of dropoff. Set A13 just below peak on side of gradual dropoff.
"	"	A14, A15, A16	Adjust for maximum output.
"	Indicator lamp on front panel.	A17	Connect antenna. Adjust for maximum lamp brilliance. Slight readjustment of A16 may be necessary.
"	"	A18	Adjust for desired lamp brilliance.

PEARCE-SIMPSON MODEL COMPANION

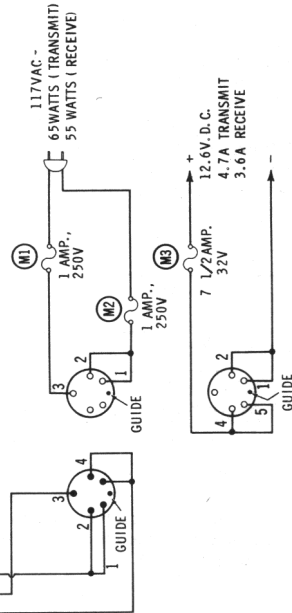
**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana



VOLTAGE SELECTOR SWITCH (M8) SHOWN IN "17V" POSITION. SWITCH SEQUENCE:  
 1. 117V  
 2. 12.6V  
 (TWO POSITION MOVEMENT PER DETENT)

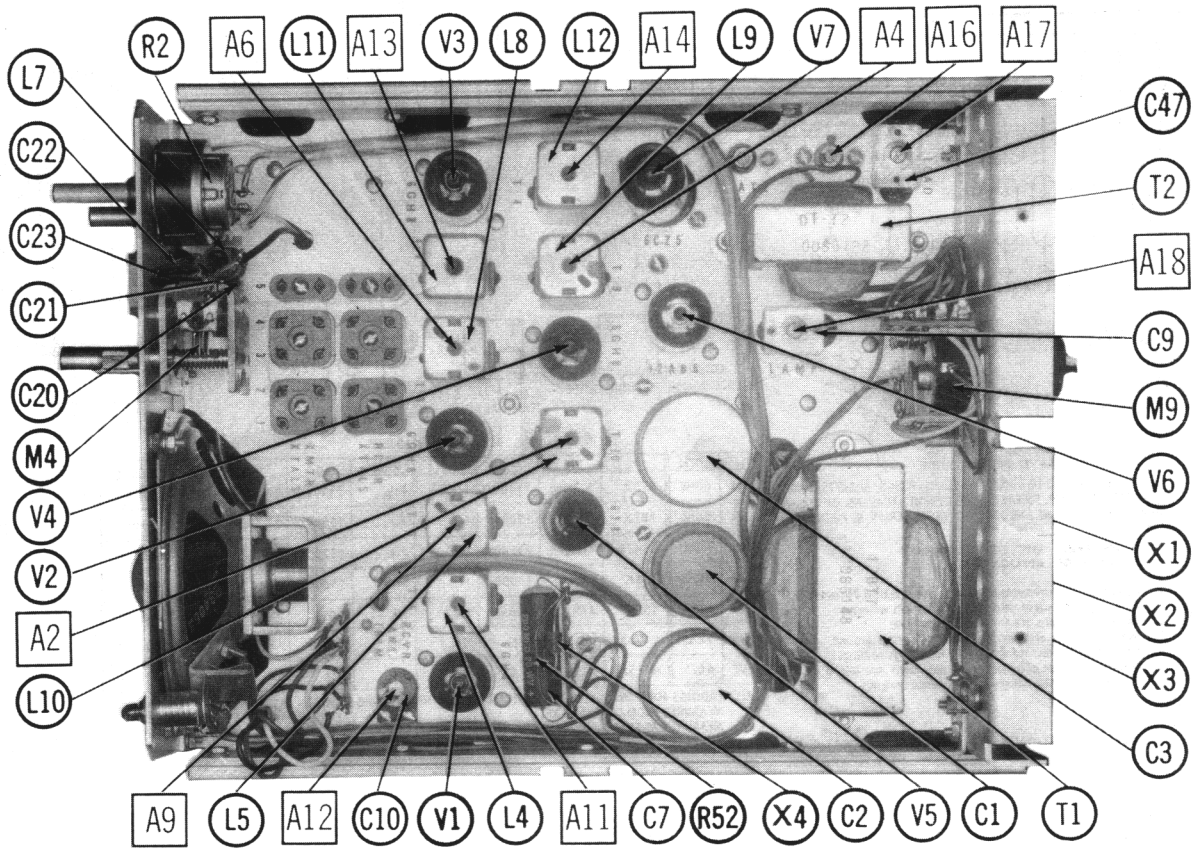
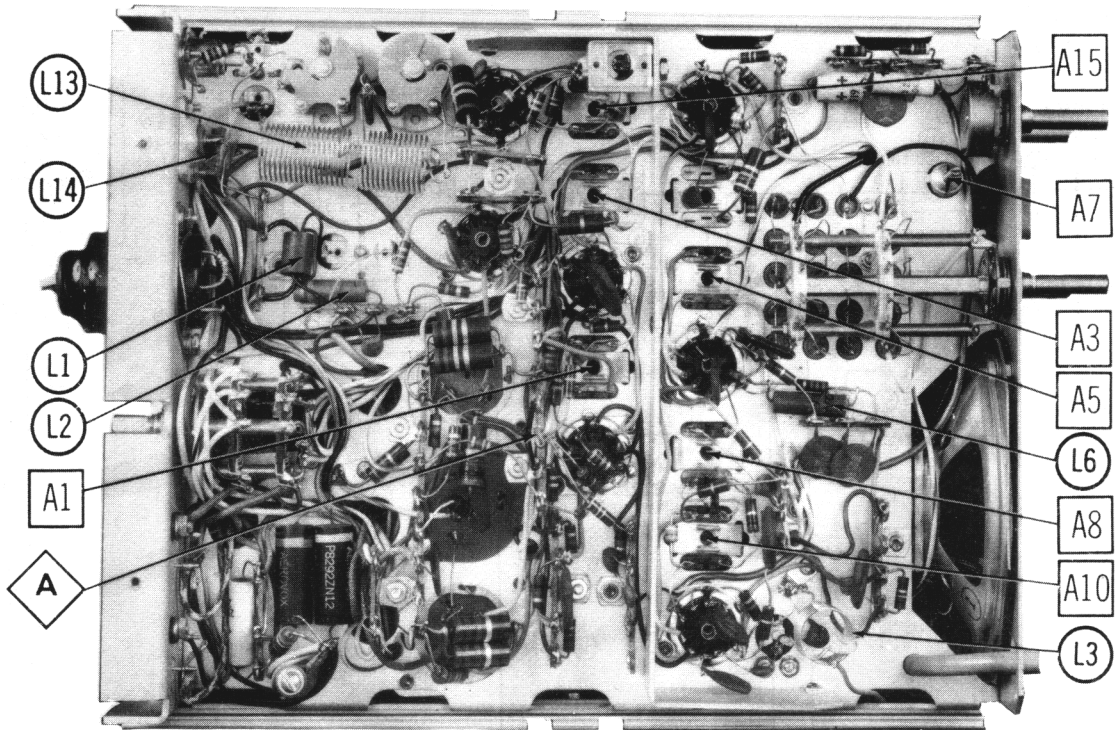
RESISTANCE MEASUREMENTS FOR X1 THRU X3 NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

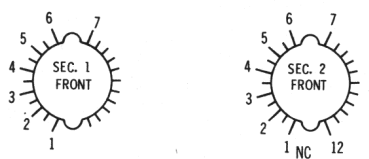
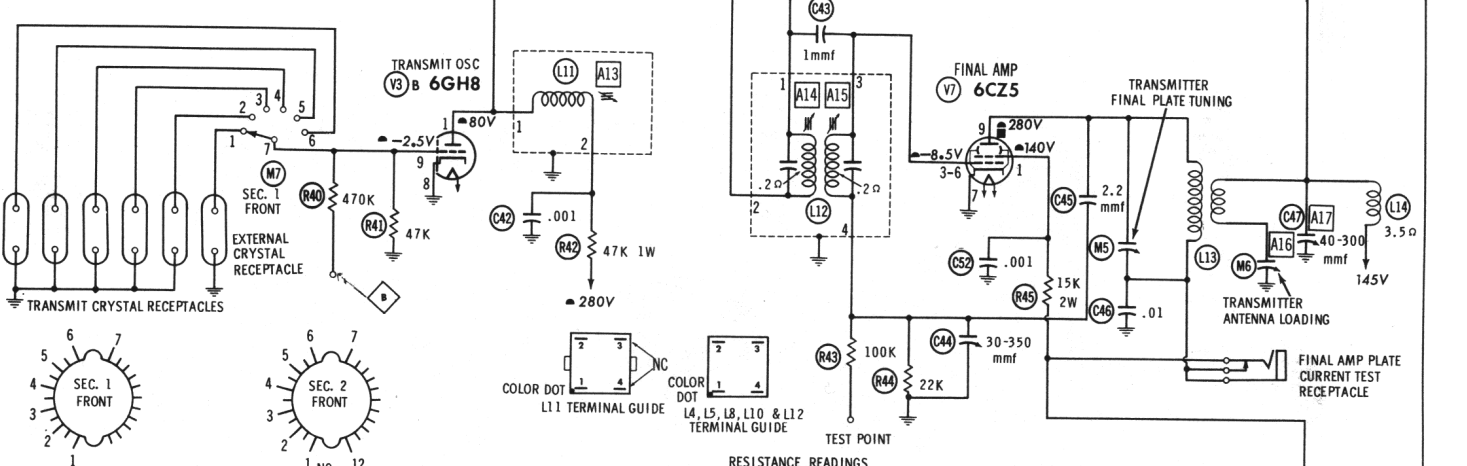
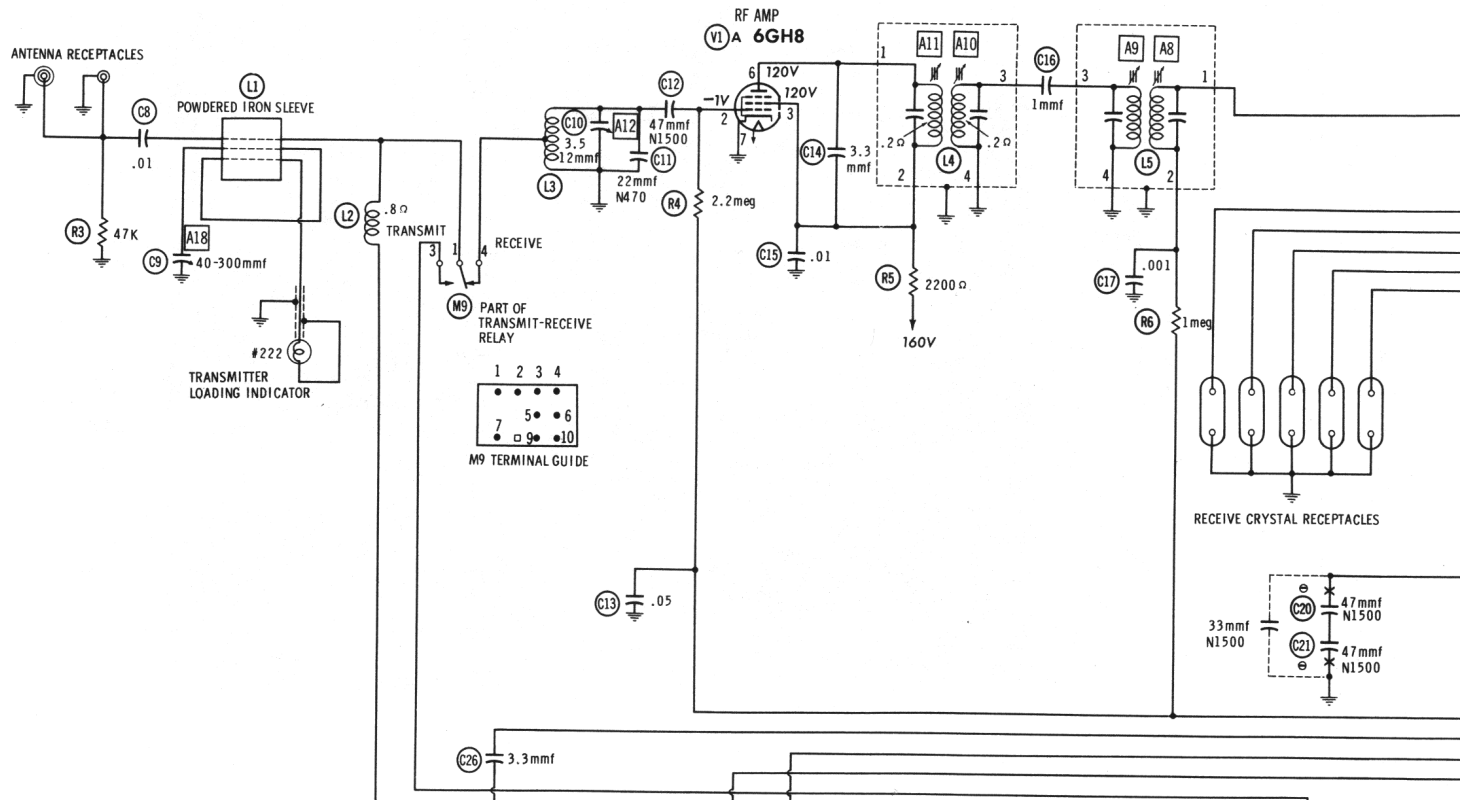
SW ON SQUELCH CONTROL



PEARCE-SIMPSON MODEL COMPANION

POWER SUPPLY





**M7 TERMINAL NUMBERING GUIDE**  
 NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

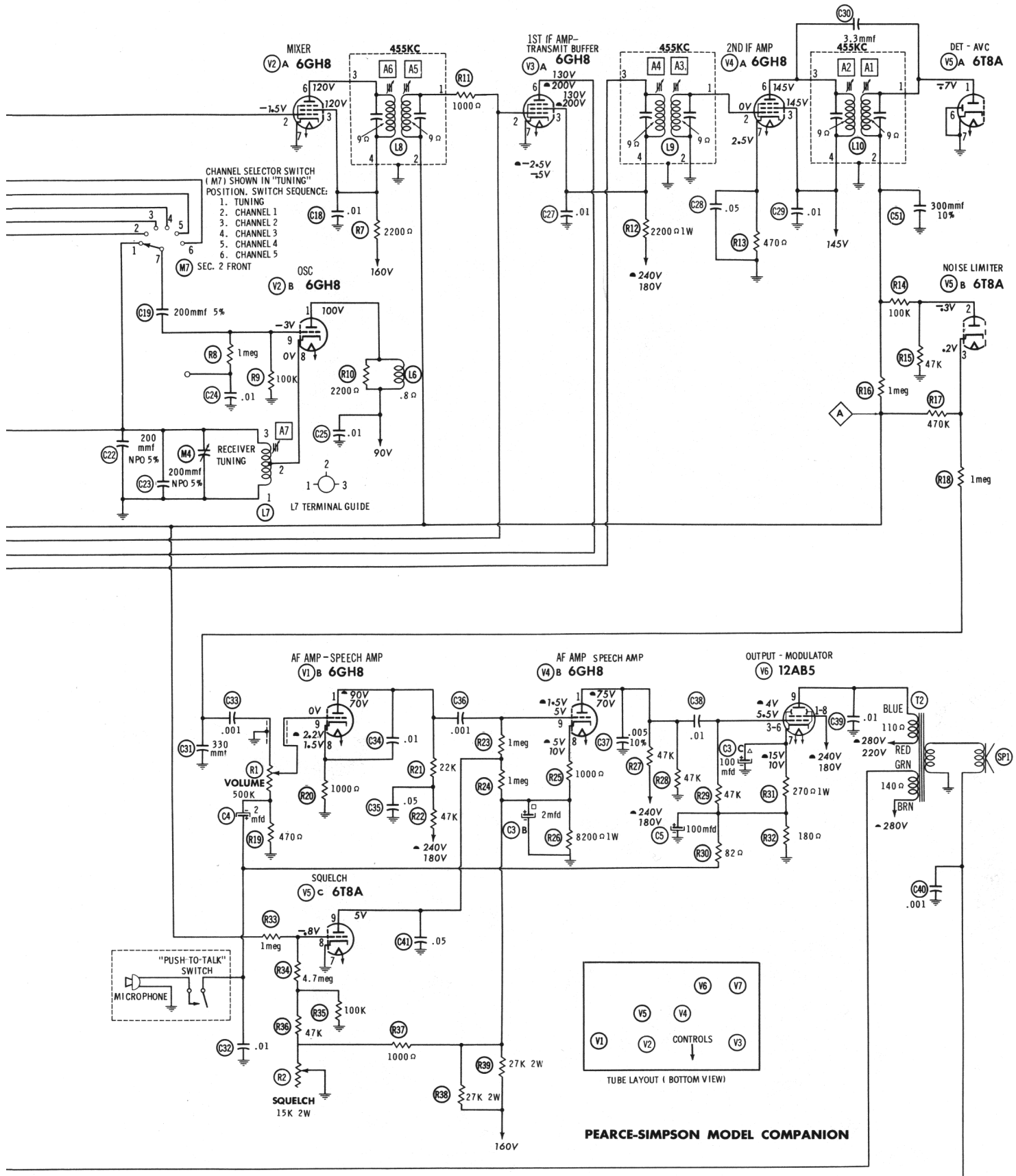
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

- DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common ground.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.

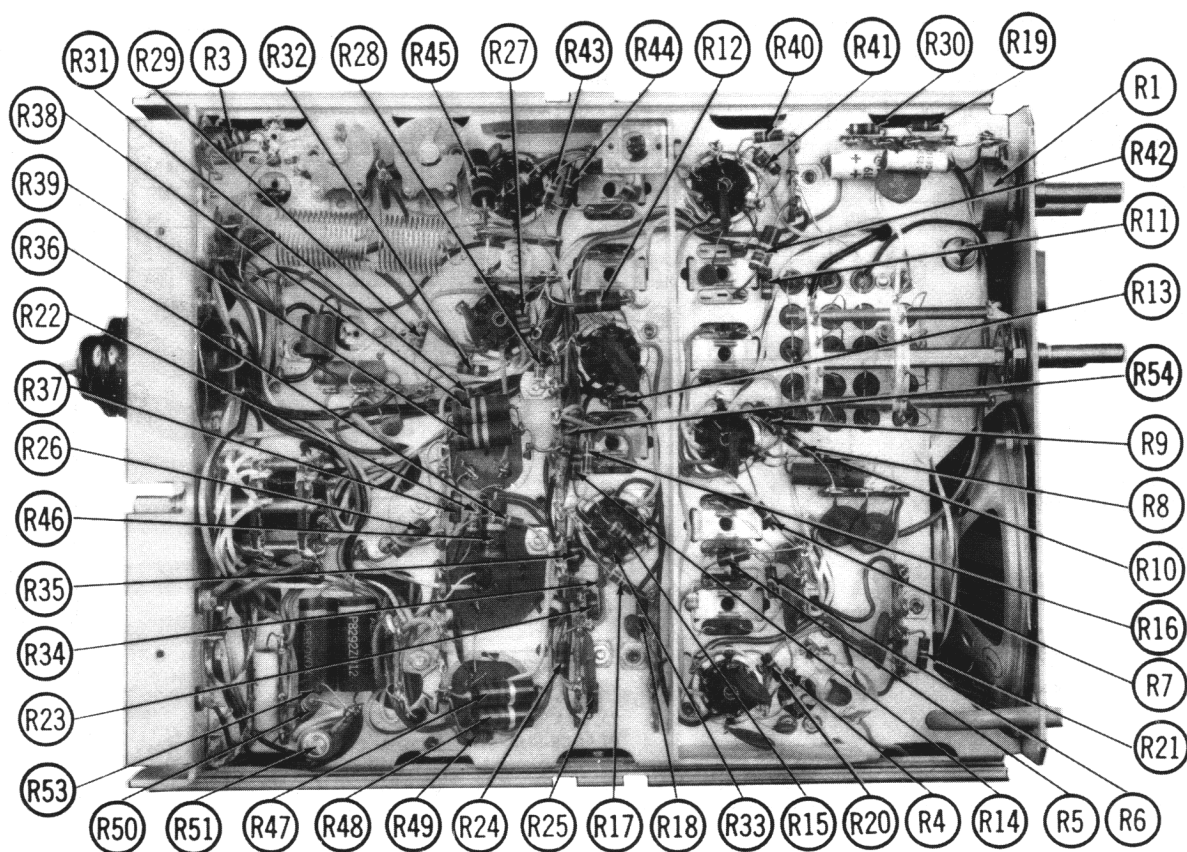
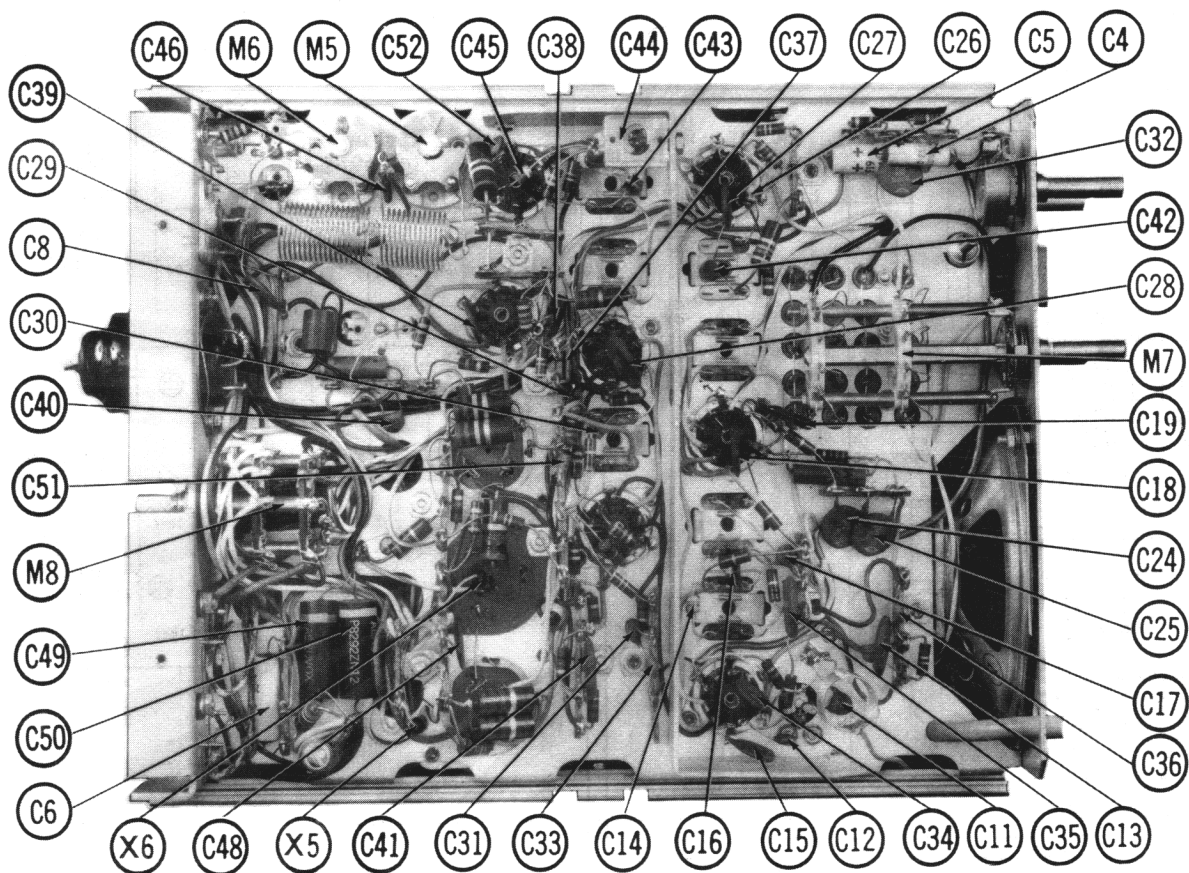
**RESISTANCE READINGS**

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6GH8	†70K	3.3meg	†3000Ω	FIL	FIL	†3000Ω	0Ω	1000Ω	250K
V2	6GH8	†22K	2meg	†3000Ω	FIL	FIL	†3000Ω	0Ω	0Ω	100K
V3	6GH8	†47K	1meg	†3200Ω	FIL	FIL	†3200Ω	0Ω	0Ω	47K
V4	6GH8	†48K	9Ω	†3000Ω	FIL	FIL	†3000Ω	470Ω	9000Ω	2meg
V5	6T8A	150K	47K	1.6meg	FIL	FIL	0Ω	0Ω	1.7meg	1meg
V6	12AB5	†1000Ω	NC	47K	FIL	FIL	47K	450Ω	†1000Ω	†110Ω
V7	6CZ5	†15K	NC	22K	FIL	FIL	22K	0Ω	NC	†140Ω

ALL READINGS MADE IN "RECEIVE" POSITION UNLESS OTHERWISE DESIGNATED.  
 † MEASURED FROM OUTPUT OF X6. ■ TAKEN IN "TRANSMIT" POSITION.  
 ■ MEASURED AT FINAL AMP PLATE CURRENT TEST RECEPTACLE. NC NO CONNECTION







# PARTS LIST AND DESCRIPTION

## WIRING DATA

General-use Book-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-58/U)  
 Coiled Microphone Cable ..... Use BELDEN No. 8497 3 Conductor- 1 Shielded for Press-to-Talk (Neoprene)  
 8496 3 Conductor- 1 Shielded for Press-to-Talk (Vinyl)  
 Ignition Noise Suppression ..... Use BELDEN No. 7300-Series Spark-Plug Sets  
 Bonding Strap ..... Use BELDEN No. 8661 (3/8 In.)

## TUBES

ITEM No.	AMPEREX		GENERAL ELECTRIC		RCA		RAYTHEON		SYLVANIA	
	USE	TYPE	USE	TYPE	USE	TYPE	USE	TYPE	USE	TYPE
V1	RF Amp.-AF Amp., Speech Amp.	6GH8	2nd IF Amp.-AF Amp., Mixer-Osc.	6GH8	2nd IF Amp.-AF Amp., Mixer-Osc.	6GH8	2nd IF Amp.-AF Amp., Mixer-Osc.	6GH8	2nd IF Amp.-AF Amp., Mixer-Osc.	6GH8
V2	1st IF Amp.-Trans. Buffer-Trans. Osc.	6GH8	Output-Modulator	V5	6T8A	Output-Modulator	V6	12AB5	Output-Modulator	6CZ5
V3			F final Amp.	V7	6CZ5					

## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			DELCO PART No.	RCA PART No.	
X1	2N1540	Power Oscillator	D8503	GE-3	PNP
X2	2N1540	Power Oscillator	D8503	GE-3	PNP
X3	29D-PSI	Battery Polarity Protector	D8520	GE-3	PNP

## POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Type or Part No.	RECTIFIERS		DIODES	NOTES
			RCA PART No.	SARKES TARZIAN PART No.		
X4	.165A	21B-14	IN3183	F2	Relay (IN2073)	
X5	.100A	21B-17	IN3195	F6	HV Rectifier	
X6	.100A	21B-17	IN3195	F6	HV Rectifier	

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP. VOLTS.	Pearce-Simpson PART No.	REPLACEMENT DATA					
			AEROVOX PART No.	CORNELL DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	80	250			XC2-24			TVL-2520
C2A	80	250			XC3-12			TVL-3582
C2B	80	250						TVLS-3651*
C3	10	250	AFH3-25-40	C0180				
C3A	40	400						
C3B	40	400						
C4	100	25	PTT75	NLW2-50	MTI-1	TT50X2	MLV2-50	TE-1201
C5	100	15	PTT73	NLW100-15	MTI-19	TT15X100	MLV100-15	TE-1162
C6	25	15	PTT69	NLW25-15	MTI-10	TT15X25	MLV25-15	TE-1157.1
C7	200	20	PRS280	BR250-25	QTL-27	TC-50095	TD-250-50	TVA-1208

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

## 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.
C8	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C9	40-300	#4C-15		827B				
C10	3, 5, 12		BPD-05	DD-503	CUB6S5	6DP-3-503	GP-150	10TS-V33
C11	22 N470		NFO-SI 3.3	TCZ-3R3	C10V33C	CCTO-3R3	GP-110	10TS-S10
C12	47 N1500		BPD-01	DD-103	BYA10S1	CCD-103	GP-210	10TCC-V10
C13	.05		NFO-SI 1	TCZ-1			GP-210	10TCC-V10
C14	3.3		BPD-01	DD-102	BYA10D1	CCD-102	GP-110	10TS-S10
C15	.01		NFO-SI 1	TCZ-1			GP-110	10TS-S10
C16	1 .001		BPD-01	DD-102	BYA10D1	CCD-102	GP-110	10TS-S10
C17	.01		NFO-SI 1	TCZ-1			GP-110	10TS-S10
C18	200 200 5%		BPD-01	DD-102	BYA10D1	CCD-102	GP-110	10TS-S10
C19	200 200 5%		NFO-SI 1	TCZ-1			GP-110	10TS-S10
C20	47 N1500	Note 1	ADM-15-201	DTZ-200	C10T2U	CM-20-201J	CNO-320	10TCC-T20
C21	47 N1500	Note 1	N750-DI 47	DTN-47	C10Q47U	CCTN-470	CNT-447	10TCU-Q47
C22	200 +5% NPO	Note 1	N750-DI 47	DTN-47	C10Q47U	CCTN-470	CNT-447	10TCU-Q47
C23	200 +5% NPO	Note 1	BPD-01	DD-200	BYA10S1	CCD-103	CNO-320	10TCC-T20
C24	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C25	.01		NFO-SI 3.3	TCZ-3R3	C10V33C	CCTO-3R3	GP-110	10TS-S10
C26	3.3		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C27	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C28	.05		BPD-05	DD-503	CUB6S5	6DP-3-503	GP-150	6PS-S50
C29	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C30	3.3		NFO-SI 3.3	TCZ-3R3	C10V33C	CCTO-3R3	GP-110	10TS-S10
C31	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C32	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C33	.01		BPD-01	DD-102	BYA10S1	CCD-102	GP-210	10TS-D10
C34	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C35	.05		BPD-05	DD-503	CUB6S5	6DP-3-503	GP-150	6PS-S50
C36	.001		BPD-001	DD-102	BYA10D1	CCD-102	GP-210	10TS-D10
C37	.005 10%		DI-5000	DD-102			GP-210	10TS-D10
C38	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C39	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C40	.01		BPD-01	DD-102	BYA10D1	CCD-102	GP-210	10TS-D10
C41	.05		BPD-05	DD-503	CUB6S5	6DP-3-503	GP-150	6PS-S50
C42	.001		BPD-001	DD-102	BYA10D1	CCD-102	GP-210	10TS-D10
C43	1		NFO-SI 1	TCZ-1			CNO-510	10TCC-V10
C44	30-350		NFO-SI 2.2	DTZ-2R2	C10V22C	CCTO-2R2	CNO-522	10TCC-V22
C45	2.2		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C46	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C47	40-300		BPD-01	DD-103	BYA10S1	CCD-103	GP-110	10TS-S10
C48	.01		P288N-5		CUB2P5	2DP-5-504	GEM-205	2PS-P50
C49	5 200V		P288N-5		CUB2P5	2DP-5-504	GEM-205	2PS-P50
C50	5 200V		CL-300				GP-330	10TS-Q30
C51	300 10%		BPD-001	DD-301	BYA10D1	CCD-301	GP-330	10TS-Q30
C52	.001		BPD-001	DD-102	BYA10D1	CCD-102	GP-210	10TS-D10

Note 1. C20 and C21 may be replaced with one 33mmf N1500 unit in some versions.  
 # Pearce-Simpson Part Number.

## CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			Pearce-Simpson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume	500K	20H-18	B-40, or (F2-500K, SU204)	A47-500K RS-3	Q13-133, PQ, or (BU2, CF25, SSS, DC1)*	U-48 or (UA55A, SL2500)
R2	Squelch & Switch	15K 2W	20H-19			WPI5000, 76-12	

\* 'SNAP TROL'

## PEARCE-SIMPSON MODEL COMPANION



# PARTS LIST AND DESCRIPTION (CONTINUED)

## RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		IRC PART No.	WORKMAN PART No.			REMARKS	WORKMAN PART No.
R3	47K			R29	47K		
R4	2.2meg			R30	82Ω		
R5	2200Ω			R31	2700Ω 1W		
R6	1meg			R32	180Ω		
R7	2200Ω			R33	1meg		
R8	1meg			R34	4.7meg		
R9	100K			R35	100K		
R10	2200Ω			R36	47K		
R11	1000Ω			R37	1000Ω		
R12	2200Ω 1W			R38	27K 2W		
R13	470Ω			R39	27K 2W		
R14	100K			R40	470K		
R15	47K			R41	47K 1W		
R16	1meg			R42	100K		
R17	470K			R43	22K		
R18	1meg			R44	15K 2W		
R19	470Ω			R45	1000Ω 2W		
R20	1000Ω			R46	2200Ω 2W		
R21	22K			R47	2200Ω 2W		
R22	47K			R48	22K 1W		
R23	1meg			R49	3.9Ω 1W		
R24	1meg			R50	20Ω 5W		
R25	1000Ω			R51	2200Ω		
R26	8200Ω 1W			R52	1000Ω		
R27	47K			R53	2200Ω		
R28	47K			R54	2200Ω		

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		Pearce-Simpson PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	
L1	Indicator Cpl.					
L2	RF Choke(5.6uh)	12A-58				
L3	Rec. Ant. Coll	12A-75				
L4	RF (27MC)	12A-55				
L5	RF (27MC)	12A-55				
L6	RF Choke(5.6uh)	12A-58				
L7	Rec. Osc.	12A-91				
L8	1st IF	12A-26				
L9	2nd IF	12A-26				
L10	3rd IF	12A-26				
L11	Trans. Osc. Plate	12A-57				
L12	Trans. Osc. Cpl.	12A-55				
L13	Final	12A-74				
L14	RF Choke(78uh)	12A-36				

## TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA				NOTES
		Pearce-Simpson PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
T1	117VAC ①.6A or ②.6VDC ③ 4.7A	12B-77				

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		Pearce-Simpson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
T2	5000Ω	12B-47				

## SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		Pearce-Simpson PART No.	QUAM PART No.	
SP1	FIELD V. C. IMP. 4"	25A12*	4A07	* Alternate Part #25A-13

## FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			
			Pearce-Simpson PART No.	HOLDER	FUSE	LITTELFUSE PART No.
M1	3AG	LA 250V	8A-1 ①	23D-29	312001	AGC 1
M2	3AG	LA 250V	8A-1 ①	23D-29	312001	AGC1
M3	3AG	7½A 32V	31H-4 ②	31H-4	31107.5	155020

① AC ② DC

## MISCELLANEOUS

ITEM No.	PART NAME	Pearce-Simpson PART No.	NOTES	
			FUSE	HOLDER
M4	Tuning Cap	4C-21	Receiver Tuning	
M5	Variable Capacitor	4C-14	Transmitter Final Plate Tuning	
M6	Variable Capacitor	4C-14	Transmitter Antenna Loading	
M7	Switch	27A-44	Channel Selector (Rotary Wafer Type)	
M8	Switch	27A-22A	Voltage Selector (Rotary Wafer Type)	
M9	Relay	19B-16	Receive-Transmit (12 Volt, 70Ω)	
	Microphone	16A-9C	With Coil Cord	

## CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART No.	DESCRIPTION	
		Control	Molded Implex
Knobs	13A-43	Control	
Knob	13A-30	Power Selector	
Control Panel	7K-5	Molded Plastic	
Cabinet Half	3F-20	Molded Implex	