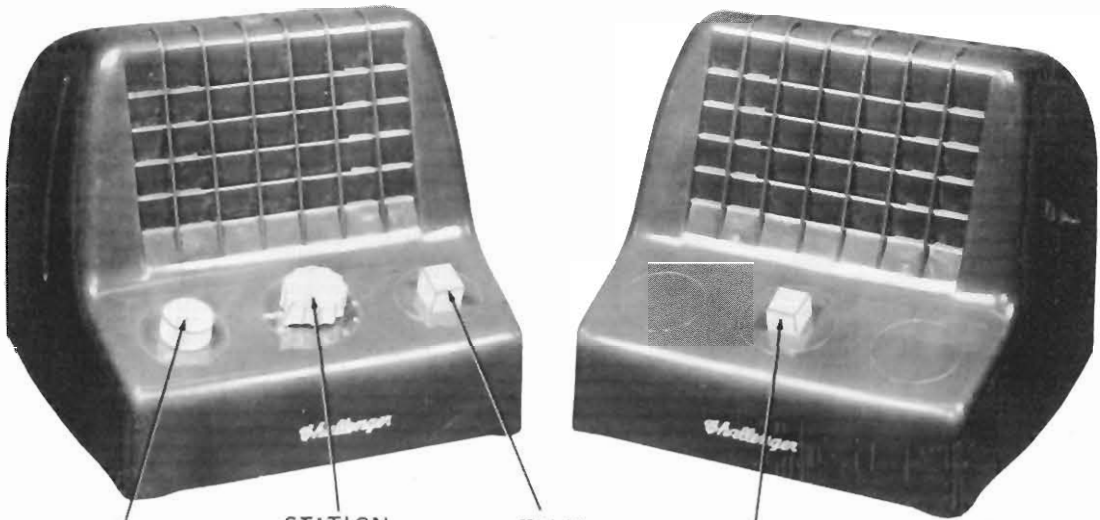


CHALLENGER MODELS
60R, 600



VOLUME CONTROL
ON-OFF SWITCH

STATION
SELECTOR
SWITCH

TALK
LISTEN
SWITCH

BREAK-IN
SWITCH

TRADE NAME Challenger, Models 60R (Remote), 600 (Master)
MANUFACTURER Challenger Amplifier Co., 663 Broadway, New York 12, New York
TYPE SET AC-DC Operated Inter Communication System
TUBES (THREE) Types 14F7 AF Amp., 50L6GT Power Output, 35Z5GT Rectifier

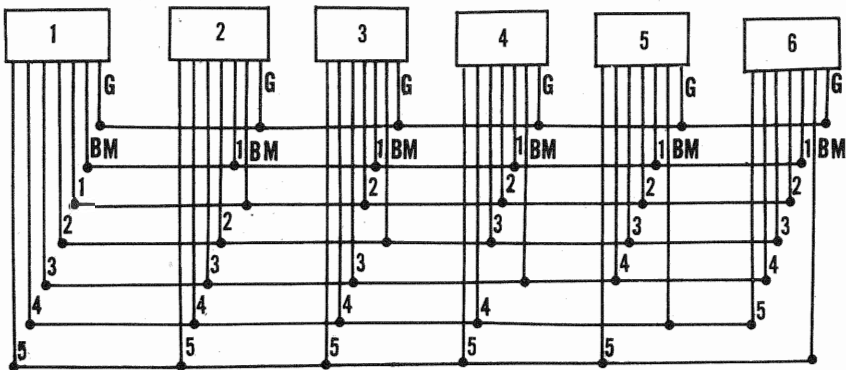
POWER SUPPLY 110-120 Volts AC-DC RATING .25 Amp. @ 117 Volts AC

SINGLE MASTER SYSTEM

CONNECTIONS:
Using a three wire cable connect all the remote 60R units so that their "G" leads connect to "G" on the master unit and their "BR" leads connect to "BR" on the master unit. Then the remaining wire from each remote unit connects to its own selective lead numbered 1, 2, 3, etc. on the master unit. (See Schematic).

MULTIPLE MASTER SYSTEM

CONNECTIONS:
In order to operate this system it will be necessary to modify each master unit slightly. To modify the unit remove the chassis from the cabinet and cut the two wires coming thru the chassis near the TALK-LISTEN switch. These wires are marked with an "X" on the schematic. Tape the ends of the leads cut and replace the chassis in the cabinet.
All stations are connected to form a single system with a multi-wire cable. The number of wires in the cable must be one more than the number of master stations used. Up to six master stations may be connected in one system. See diagram below for connections from master stations to cable.



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DATE 5/49 4910-7 SET #62 FOLDER 7

CHALLENGER MODELS
60R, 600

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	14F7	140	330	* 100KΩ	470KΩ	120KΩ	* 220KΩ	330	0Ω
V 2	50L6GT	110	600	* 250Ω	3.0KΩ	220KΩ	220KΩ	140	100Ω
V 3	35Z5GT	110	250Ω	250Ω	110	250Ω	110	200Ω	0Ω

* Measured from pin 8 of V3

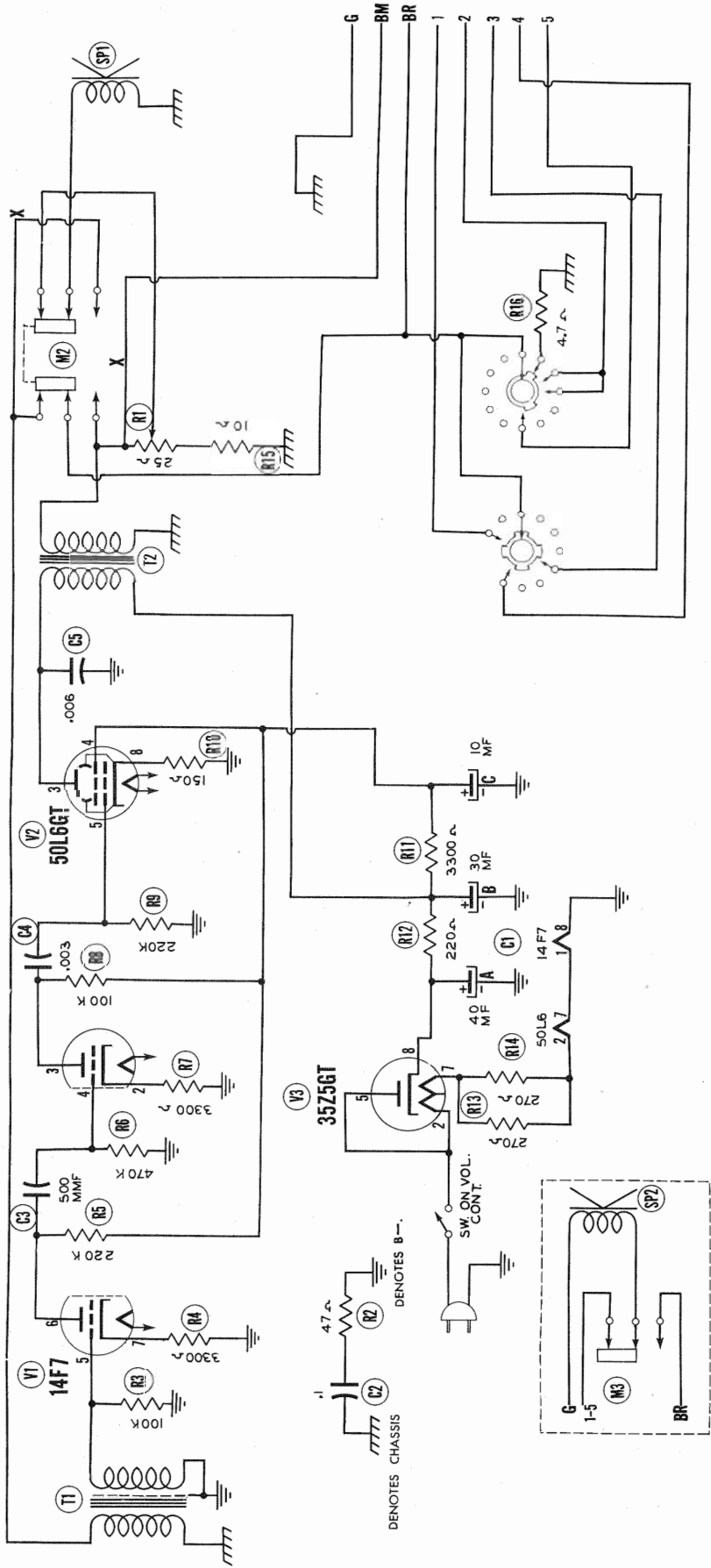
VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	14F7	12VAC	1VDC	75VDC	0V	0V	50VDC	0V	0V
V 2	50L6GT	0V	60VAC	125VDC	11.2VDC	0V	12VAC	7.0VDC	0V
V 3	35Z5GT	0V	117VAC	100VAC	0V	117VAC	0V	120VDC	0V

THE COOPERATION OF THE MANUFACTURER OF THIS
EQUIPMENT MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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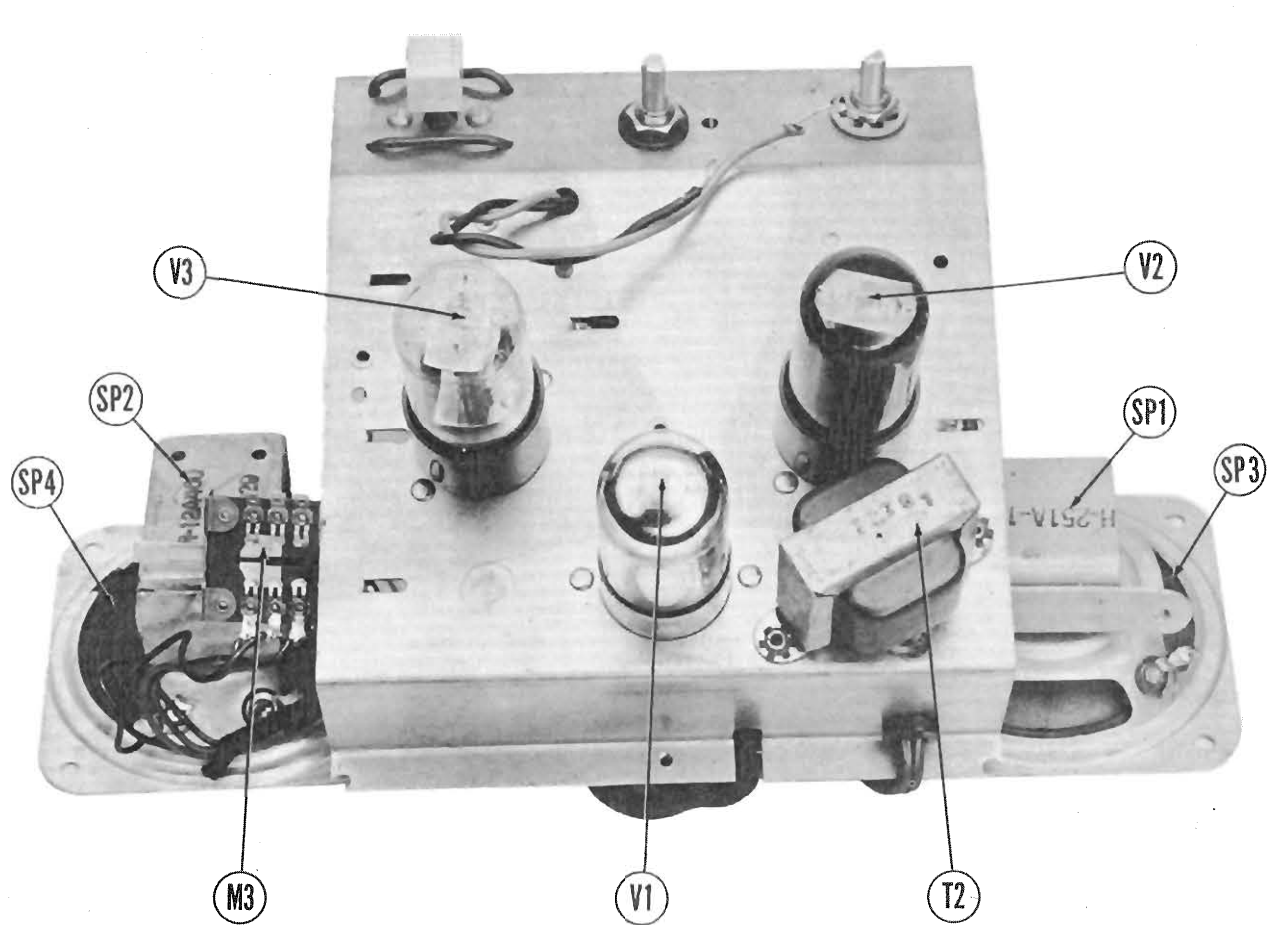


PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		CHALLENGER PART No.	STANDARD REPLACEMENT		
V1	AF Amp.	14F7	14F7	9AC	
V2	Power Output	50L6GT	50L6GT	7AC	
V3	Rectifier	35Z5GT	35Z5GT	6AD	

CHASSIS—TOP VIEW



CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REPLACEMENT DATA				IDENTIFICATION CODES AND INSTALLATION NOTES
		CHALLENGER PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	SPRAGUE PART No.	
C1A	40 150		APB440	27M3215	EL-224	Filter
B30	150				-150	Filter
C2	10 150					Line Isolation
C3	10 400					Audio Coupling
C4	500 500					Output Plate Bypass
C5	.003 600					

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA			INSTALLATION NOTES
		CHALLENGER PART No.	IRC PART No.	CLAROSTAT PART No.	
R1A	250 B Switch		W-25	43S-25	Volume control
			51	Not Req.	Attach to R1A Per Instructions

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		CHALLENGER PART No.	IRC PART No.	
R2	47K		BM-1-47	Line Isolation
R3	100K		BTS-100K	Br.-Blk.-Yl. AF Grid
R4	330K		BTS-330K	Or.-Or.-Red AF Cathode
R5	220K		BTS-220K	Red-Red-Yl. AF Plate
R6	470K		BTS-470K	Yl.-Yl.-Yl. 2nd AF Grid
R7	330K		BTS-330K	Or.-Or.-Red 2nd AF Cathode
R8	100K		BTS-100K	Br.-Blk.-Yl. Output Grid
R9	220K		BTS-220K	Red-Red-Yl. Output Cathode
R10	150K		BA-1-150	Or.-Or.-Red Filter
R11	550K		BA-1-550	Red-Red-Br. Line Dropping
R12	220K		BA-1-220	Red-Yl.-Br. Series Voltage Control
R13	270K		BA-1-270	Br.-Blk.-Blk. Output Trans. Shunt
R15	10K		BA-1-10	
R16	4.7K		BA-1-4.7	

TRANSFORMER (INPUT)

ITEM No.	RATING	REPLACEMENT DATA				INSTALLATION NOTES
		CHALLENGER PART No.	STANCOR PART No.	CHICAGO PART No.	MERIT PART No.	
		TURNS RATIO PRI. TO SEC.	DC RES. PRI. SEC.			
T1	1 TO 55	.950	13502	T-102-2	A-47/44	

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (OUTPUT)

ITEM No.	RATING	REPLACEMENT DATA				INSTALLATION NOTES
		CHALLENGER PART No.	STANCOR PART No.	CHICAGO PART No.	MERIT PART No.	
		IMPEDANCE PRI. SEC.	DC RES. PRI. SEC.			
T2	2000 3.30	350	.42	T-270-1	A-5975	
					R0-2	A-2928

SPEAKER

ITEM No.	RATINGS	REPLACEMENT DATA			INSTALLATION NOTES
		CHALLENGER PART No.	JENSEN PART No.	QUAM PART No.	
SP1	FIELD PH 3.30		SP-113	MOD. F4-X	Master unit.
SP2	PM 3.30		SP-113	MOD. F4-X	Remote unit.
SP3	CON. D.L. 3.30				
SP4	3.30 9/16"				

MISCELLANEOUS

ITEM No.	PART NAME	CHALLENGER PART No.	NOTES
M1	Switch		Station Selector
M2	Switch		Talk-Listen
M3	Switch		Break In (Remote)

CHASSIS—BOTTOM VIEW

