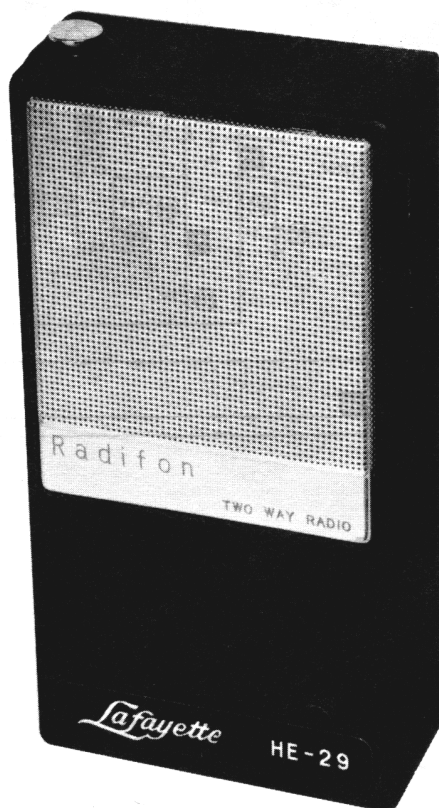
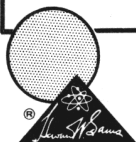


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with CIRCUITRACE®

LAFAYETTE MODEL HE-29



NOTICE

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).

LAFAYETTE
MODEL HE-29

TRADE NAME	Lafayette Model HE-29
SUPPLIER	Lafayette Radio, 165-08 Liberty Ave., Jamaica 33, N. Y.
TYPE SET	Battery Operated Transistorized Portable Citizens Band Transmitter-Receiver
POWER SUPPLY	12 Volts DC
TUNING RANGE	Citizens Band Channel 10
	RATING 10MA @ 12 Volts DC (Receive, No Signal)
	15MA @ 12 Volts DC (Transmit, No Signal)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1, A2, A3... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989
WALSCO #2515, 2531, 2532
A4, thru A8.. GENERAL CEMENT #9440

RECEIVER ALIGNMENT

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455KC (400% Mod.)		Across voice coil.	A1, A2, A3	Adjust for maximum output.
2.	"	Transmitter Crystal Freq.		"	A4, A5	Adjust A4 for proper oscillation. Adjust A5 for maximum output.

TRANSMITTER ALIGNMENT

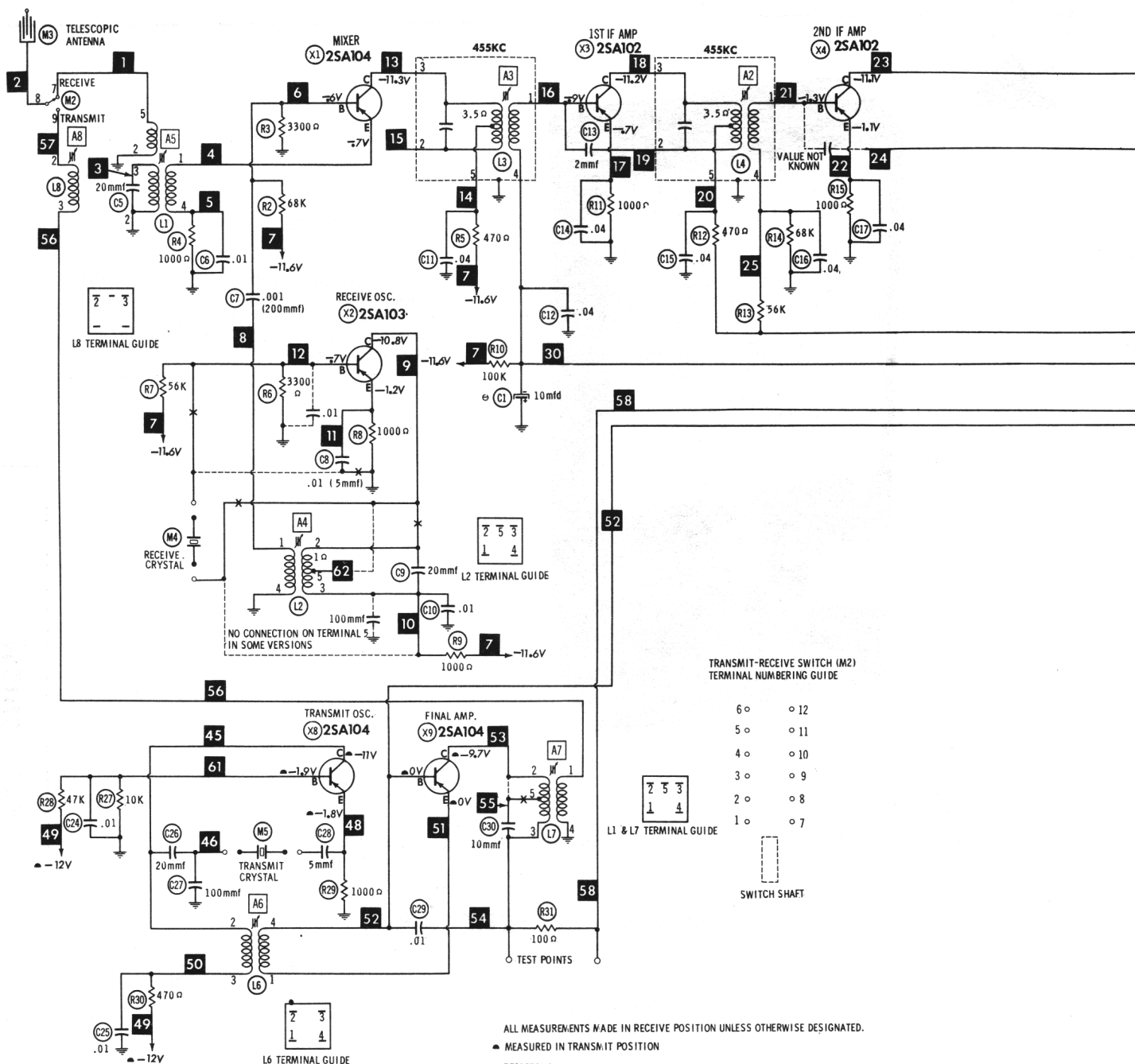
- Adjust A6 for Transmitter Crystal Freq. as checked with a frequency meter.
- Adjust A7 and A8 for maximum transmitted output as measured with a field strength meter or similar device.
- Recheck frequency.

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



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of L2052

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1962 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
5. Volume control at maximum; no signal applied for voltage measurements.

ALL MEASUREMENTS MADE IN RECEIVE POSITION UNLESS OTHERWISE DESIGNATED.

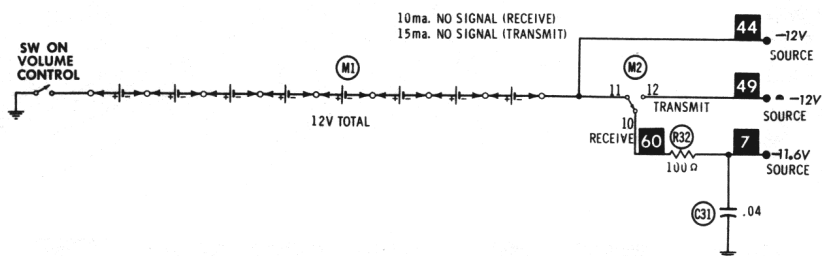
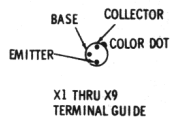
MEASURED IN TRANSMIT POSITION

RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

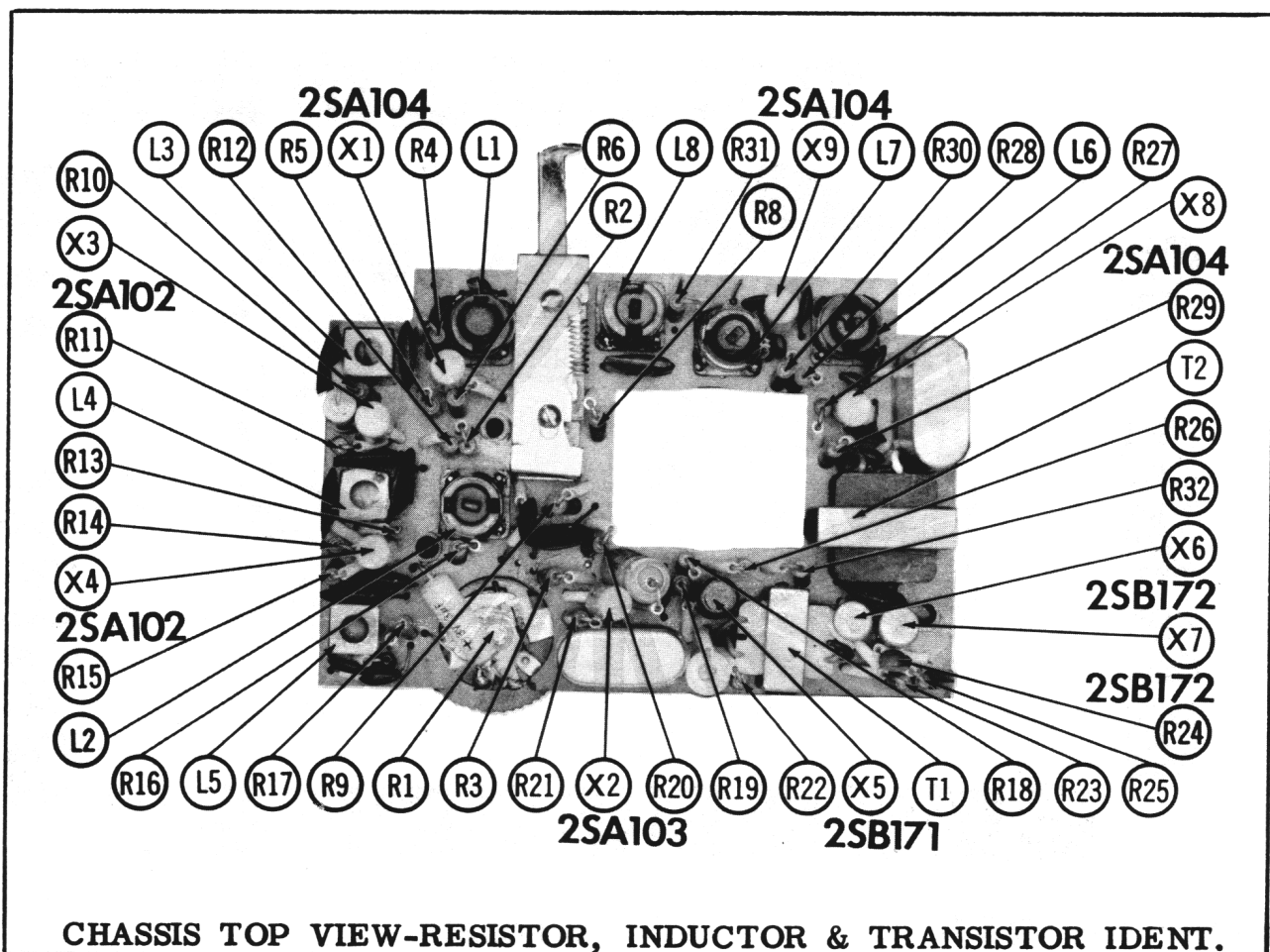
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

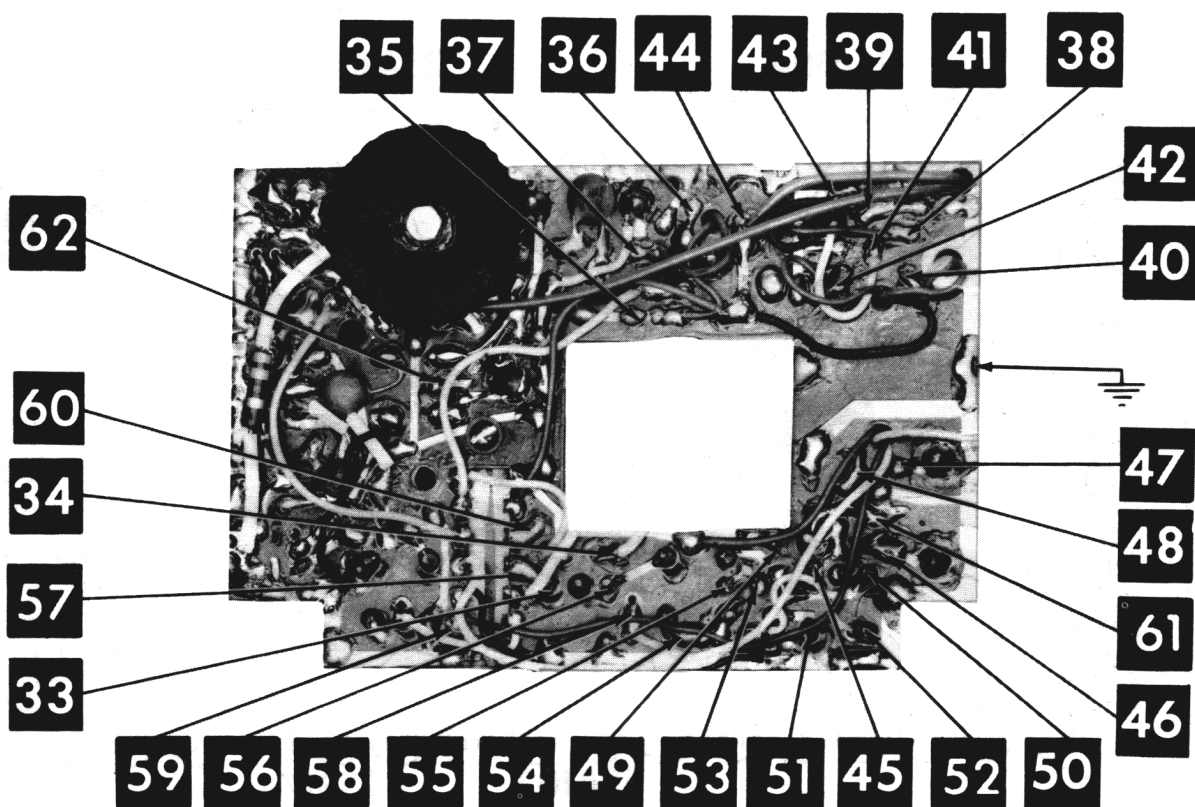
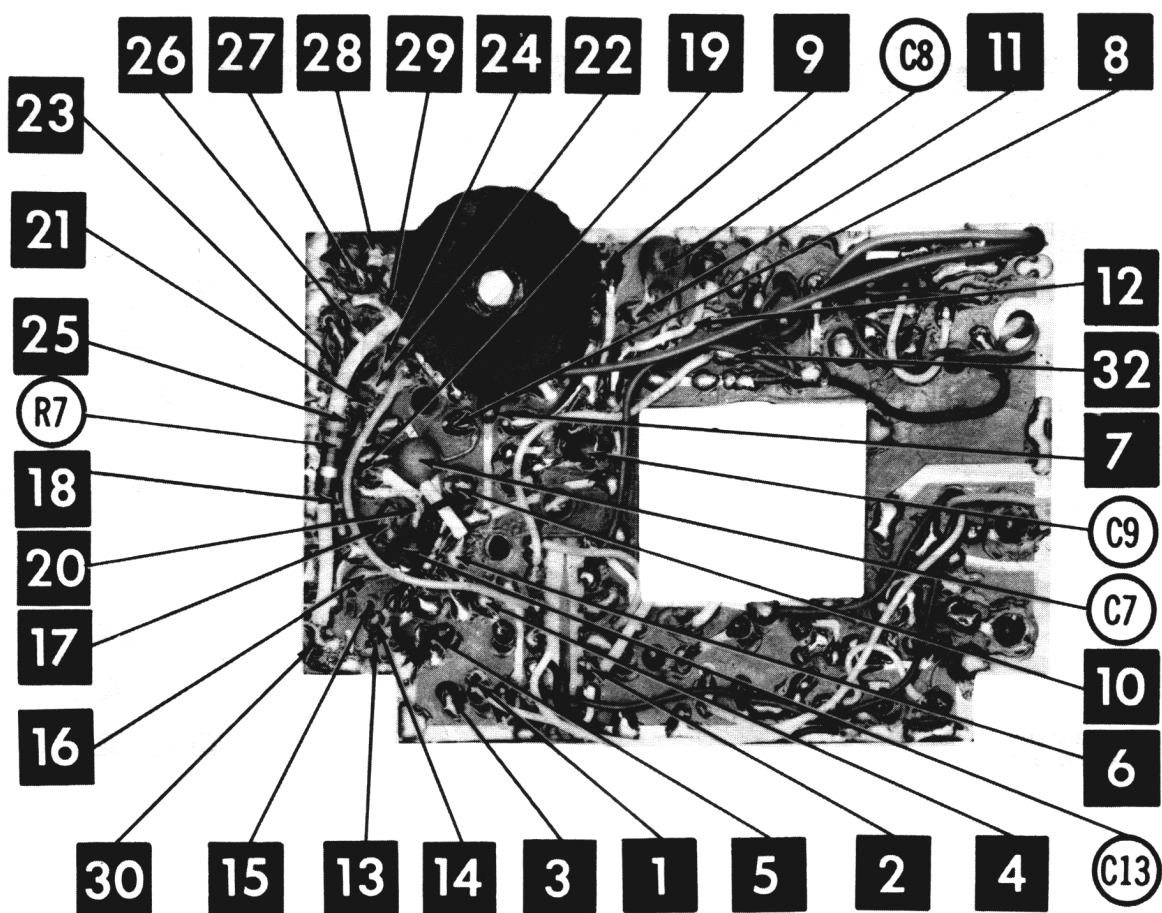
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM



**LAFAYETTE
MODEL HE-29**





PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	2SA104	Mixer	2N1179	PNP	
X2	2SA103	Receive Osc.	2N1178	PNP	
X3	2SA102	1st IF Amplifier	2N1525	PNP	
X4	2SA102	2nd IF Amplifier	2N1525	PNP	
X5	2SB171	Driver-Speech Amp.	2N406	PNP	
X6	2SB172	Output-Modulator	2N408	PNP	
X7	2SB172	Output-Modulator	2N408	PNP	
X8	2SA104	Trans. Osc.	2N1178	PNP	
X9	2SA104	Final Amplifier	2N1177	PNP	

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		NOTES
			RCA PART No.	RAYTHEON PART No.	
X10		29-505		IN295	Detector

ELECTROLYTIC CAPACITORS

ITEM No.	CAP.	VOLT.	REPLACEMENT DATA				
			LAFAYETTE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	SPRAGUE PART No.
C1	10	3	29-523 ①	PTT8	NLW10-4	MTI-5	TE-1053
C2	3	3	29-523 ②	PTT3	NLW3-25	MTI-3	TE-1052
C3	30	3	29-523 ③	PTT10	NLW30-4	MTI-13	TE-1092
C4	10	15		PTT66	NLW10-15	MTI-5	TE-1155

① Some versions may use 10mfd@10V in this application (Part #29-525).

② Some versions may use 30mfd@10V in this application (Part #29-526).

③ Some versions may use 30mfd@12V in this application (Part #29-527).

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	CENTRALAB PART No.	ELMENDO PART No.	SPRAGUE PART No.
C5	20		NPO-DI 20	DTZ-20	DM-103	CCTO-200	10TCC-Q20
C6	.01		C80V103AM	DM-103	DM-103	CCD-102	TG-S10
C7	.001	(200) †	C80V102AM	DM-102	DM-102	CCD-102	TG-D10
C8	.01	(5) †	C80V103AM	DM-103	DM-103	CCTO-200	TG-S10
C9	20		NPO-DI 20	DTZ-20	DM-103	CCTO-200	10TCC-Q20
C10	.01		C80V103AM	DM-103	DM-103	CCTO-200	TG-S10
C11	.04	#29-522					
C12	.04	#29-522					
C13	2		NPO-DI 2.0	DTZ-2R2	C10V2C	CCTO-2R2	10TCC-V22

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	CENTRALAB PART No.	ELMENDO PART No.	SPRAGUE PART No.
C14	.04	#29-522					
C15	.04	#29-522					
C16	.04	#29-522					
C17	.04	#29-522					
C18	.04	#29-522					
C19	.01		C80V103AM	DM-103	DM-103	CCD-502	TG-S10
C20	.01		C80V104AM	DM-104	DM-104	CCD-502	TG-S10
C21	.1		C80V502AM	DM-502	DM-502	CCD-502	TG-D80
C22	.005	(.01) †					
C23	.04	#29-522					
C24	.01		C80V103AM	DM-103	DM-103	CCTO-200	TG-S10
C25	.01		NPO-DI 20	DTZ-20	DTZ-20	CCTO-200	10TCC-Q20
C26	20		DM-100	DD-101	DD-101	CCD-101	10TCC-T10
C27	100		NPO-DI 5.0	DTZ-4R7	DTZ-4R7	CCTO-050	10TCC-V80
C28	5		C80V103AM	DM-103	DM-103	CCTO-100	TG-S10
C29	.01						
C30	10		NPO-DI 10	DTZ-10	DTZ-10	CCTO-100	10TCC-Q10
C31	.04	#29-522					

† Lafayette Part Number.

† Alternate Value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA		
			LAFAYETTE PART No.	CENTRALAB PART No.	CTS-IRC PART No.
R1	Volume & Switch	5000Ω	29-512		

RESISTORS

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

ITEM No.	RATING	REMARKS	REPLACEMENT DATA		
			IRC PART No.	WORKMAN PART No.	REMARKS
R2	68K				
R3	3300Ω				
R4	1000Ω				
R5	470Ω				
R6	3300Ω				
R7	56K				
R8	1000Ω				
R9	100K				
R10	100Ω				
R11	1000Ω				
R12	470Ω				
R13	56K				

(MT-25)

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		IRC PART No.	WORKMAN PART No.			IRC PART No.	WORKMAN PART No.
R26	100Ω			R30	470Ω		
R27	10K			R31	100Ω		
R28	47K			R32	100Ω		
R29	1000Ω						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			NOTES
		LAFAYETTE PART No.	Merit PART No.	Stancor PART No.	
L1	Ant.	29-537			
L2	Osc.	29-533			
L3	1st IF	29-532			
L4	2nd IF	29-532			
L5	3rd IF	29-532			
L6	Osc.	29-538			
L7	Output	29-538			
L8	Ant. Load	29-536			

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA			NOTES
		LAFAYETTE PART No.	Merit PART No.	Stancor PART No.	
T1	1.5 1	29-534			

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA			NOTES
		LAFAYETTE PART No.	Merit PART No.	Stancor PART No.	
T2	800Ω CT	29-535			
	SEC. 1				
	SEC. 2				
	250Ω				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		LAFAYETTE PART No.	QUAM PART No.	
SP1	2 1/4" PM	29-539	22A0828	

BATTERIES

ITEM No.	VOLTAGE	LAFAYETTE PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M1	1 1/2V	BA-155	930	1015	M-15R	8 Required

MISCELLANEOUS

ITEM No.	PART NAME	LAFAYETTE PART No.	NOTES
M2	Switch	29-540	
M3	Antenna	29-543	Push-to-talk (Spring Loaded, Slide Type)
M4	Crystal		Receive
M5	Crystal		Transmit

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid 22AWG) Available in 12 Colors			
8524 (Stranded 22AWG)			
8570 (Stranded 26AWG)			

CHASSIS—TOP VIEW

