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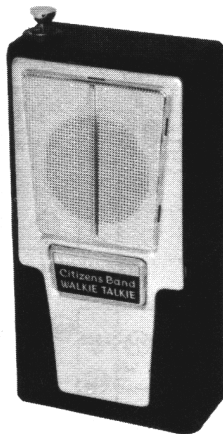
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with CIRCUITRACE™

LAFAYETTE
MODEL HE-29A



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.)

TRADE NAME Lafayette Model HE-29A
 SUPPLIER Lafayette Radio, 165-08 Liberty Ave., Jamaica 33, N. Y.
 TYPE SET Battery Operated 9 Transistor Portable Citizens Band Transmitter-Receiver
 POWER SUPPLY 12 Volts DC RATING Receive: 9MA @12 Volts DC (No Signal, Min. Volume)
 14MA @12 Volts DC (Signal, Normal Volume)
 Transmit: 17MA @12 Volts DC
 TUNING RANGE Any One of Citizens Band Channels 1 thru 22

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Best results will be obtained when adjusting A5, A7 and A8 if the antenna normally used is connected and the unit is as nearly in the cabinet as possible.

Suggested Alignment Tools: A1, A2, A3... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089
 WALSCO #2512, 2525, 2528
 A4 thru A8... GENERAL CEMENT #8282, 8606, 8606-L, 9091
 WALSCO #2526, 2541, 2542, 2543, 2544

RECEIVER ALIGNMENT

Connect DC VTVM across volume control.

	SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
1.	Fashion loop of several turns of wire and radiate signal into loop of receiver. Tune to 455KC (Unmod.)	Any	A1, A2, A3	Adjust for maximum deflection.
2.	Fashion loop of several turns of wire and radiate signal into loop of receiver. Tune to channel frequency.	Highest Channel Used	A4	Adjust for maximum deflection. Rock A4 to each side of peak noting rate of dropoff. Set A4 just below peak on side of gradual dropoff.
3.	"	"	A5	Adjust for maximum deflection.

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
1.	Connect dummy load or antenna to antenna receptacle.	Connect DC VTVM across R30.	A6	Key transmitter. Adjust A6 for maximum deflection. Rock A6 to each side of peak, noting rate of dropoff. Set A6 just below peak on side of gradual dropoff.
2.	"	"	A7	Key transmitter. Adjust A7 for MINIMUM deflection on VTVM and maximum indication of RF Wattmeter.
3.	"	RF Wattmeter or Field Strength Meter.	A8	Adjust for maximum indication.

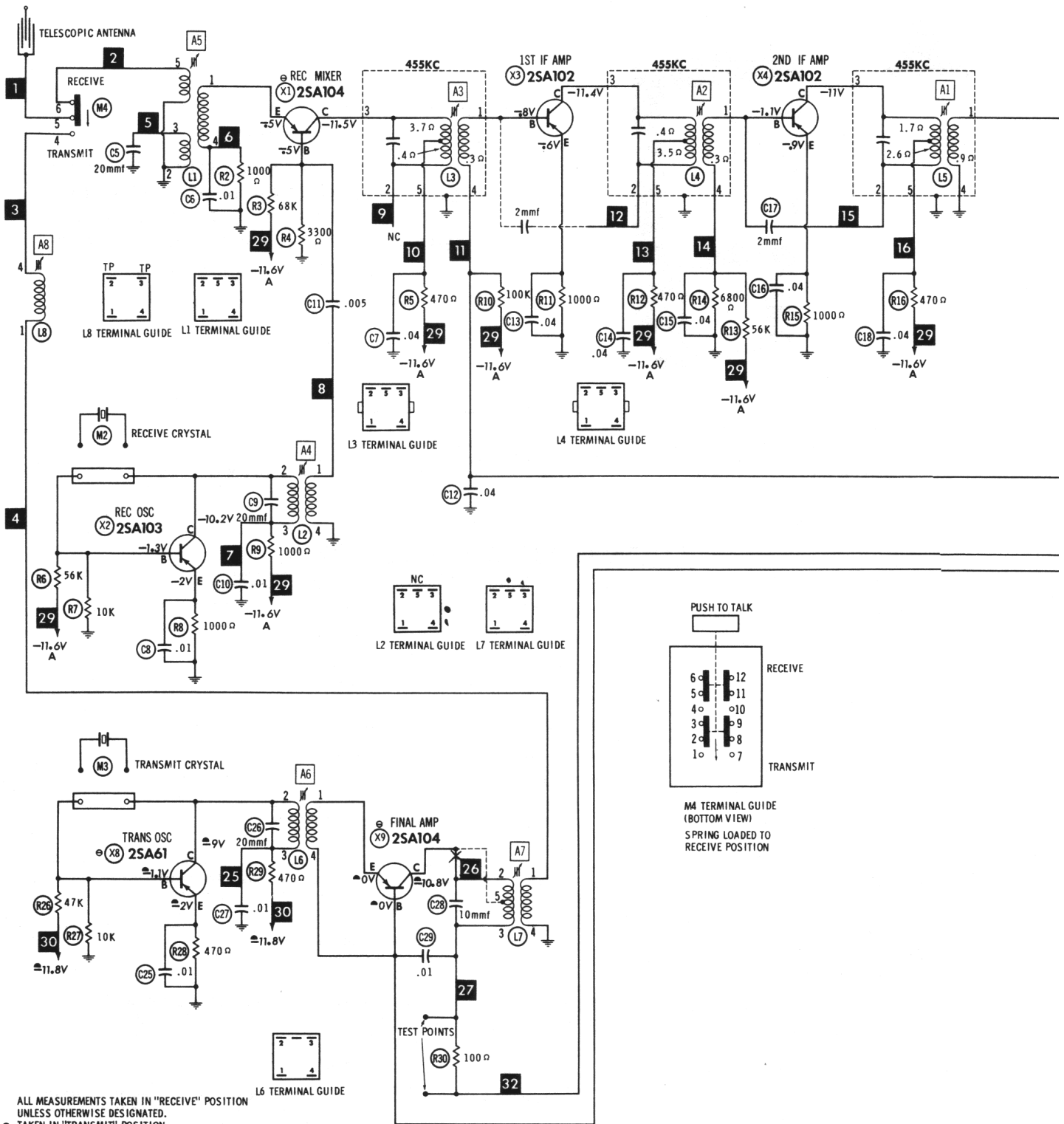
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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 L/F644

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LAFAYETTE
MODEL HE-29A



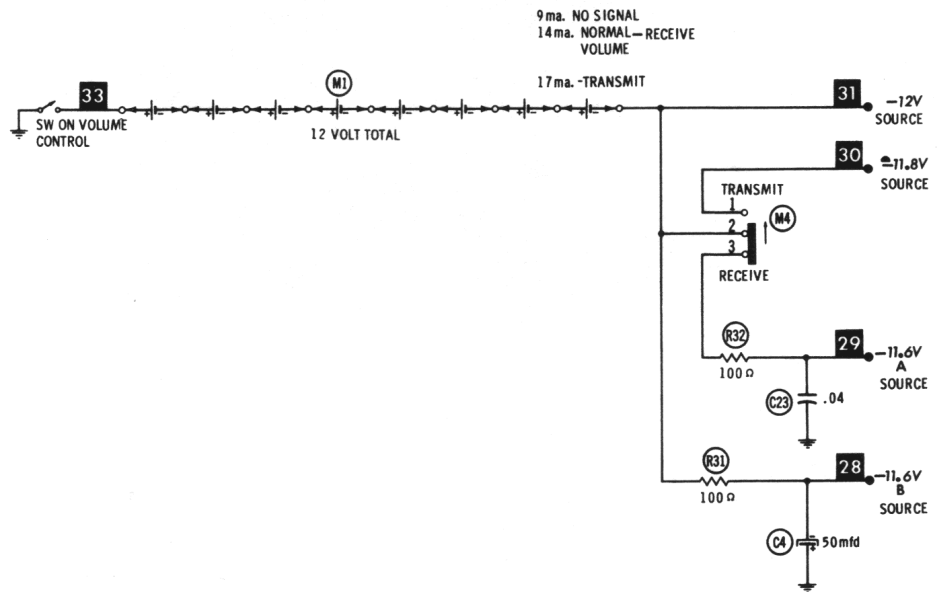
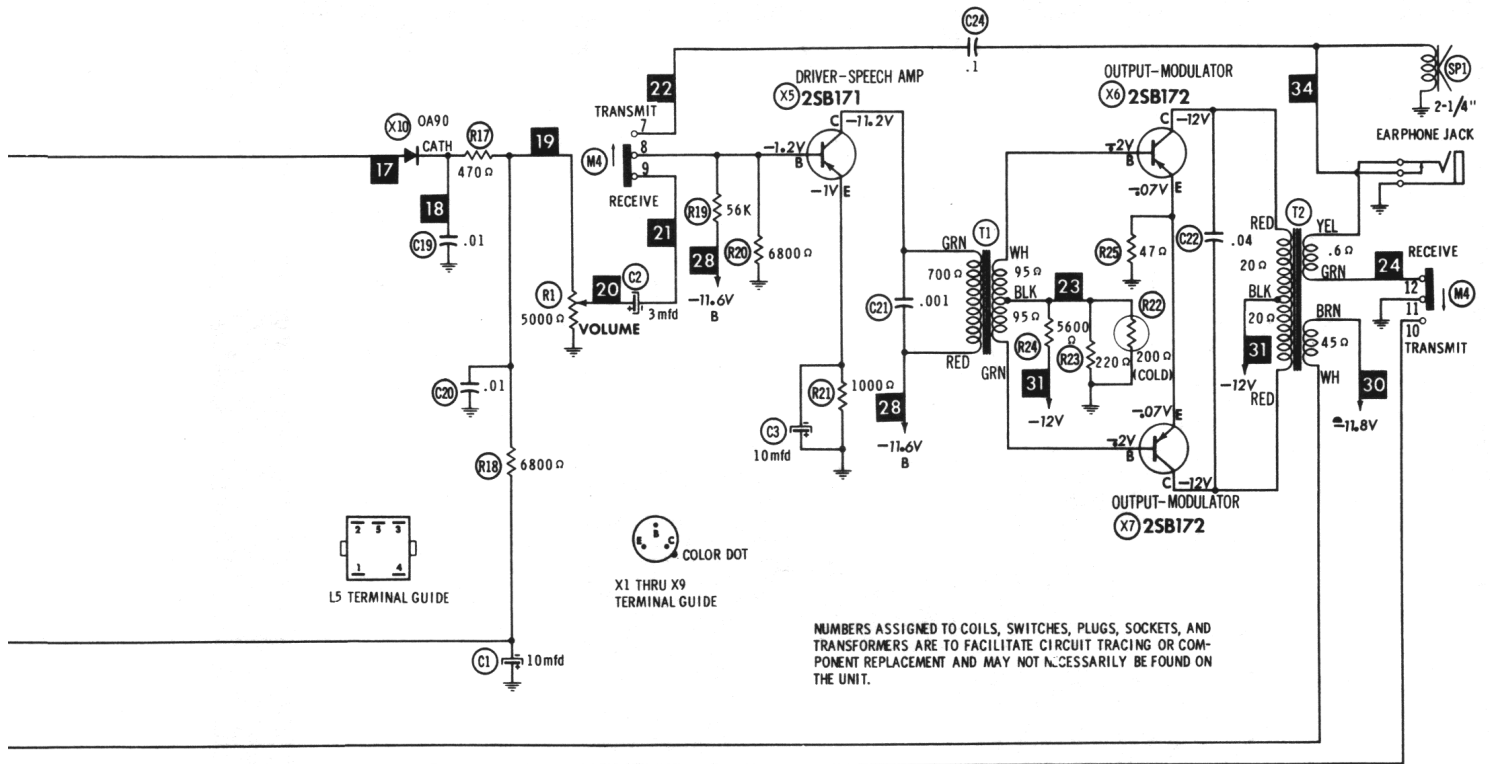
ALL MEASUREMENTS TAKEN IN "RECEIVE" POSITION UNLESS OTHERWISE DESIGNATED.
 * TAKEN IN "TRANSMIT" POSITION.

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

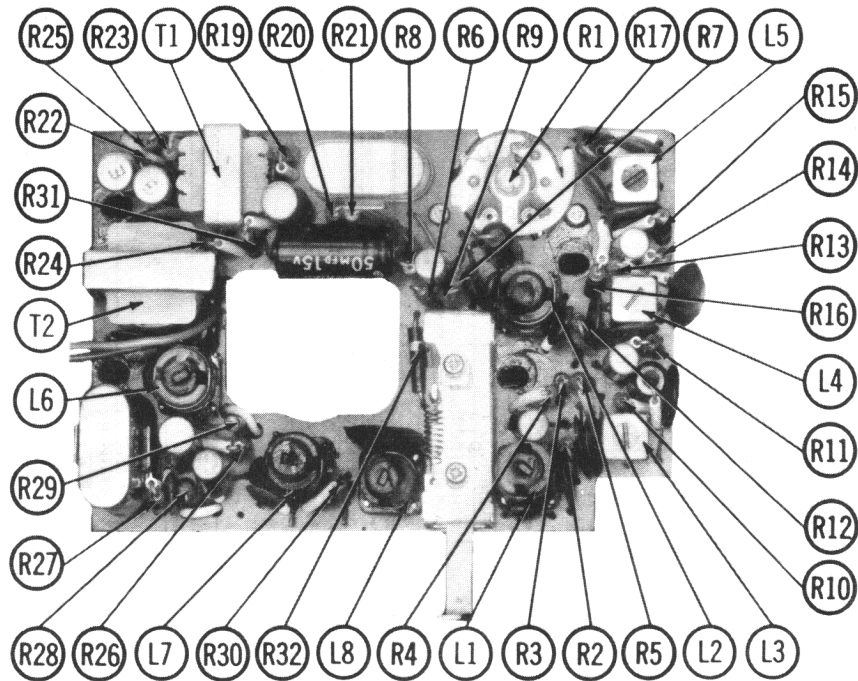
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

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.

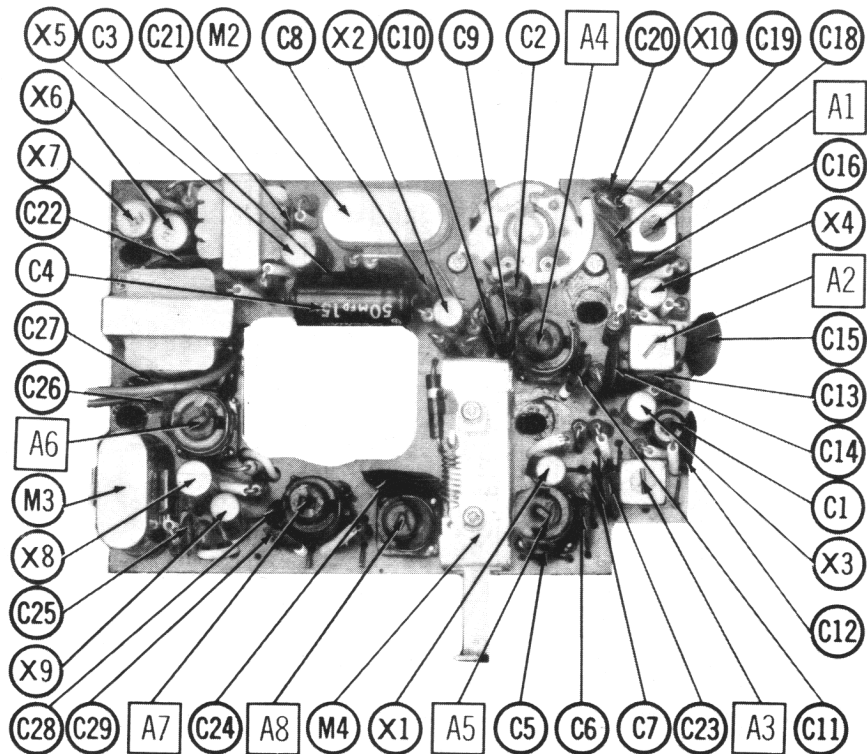
A PHOTOFACIT STANDARD NOTATION SCHEMATIC with CIRCUITRACE



**LAFAYETTE
 MODEL HE-29A**



**CHASSIS-TOP VIEW
RESISTOR & INDUCTOR IDENT.**



**CHASSIS-TOP VIEW
ALIGNMENT, CAPACITOR & MISC. IDENT.**

WIRING DATA

PARTS LIST AND DESCRIPTIONS

CONTROLS

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

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			GENERAL ELECTRIC PART No.	RCA PART No.	
X1	28A104	Receive Mixer	GE-1		PNP
X2	28A101	Receive Oscillator	GE-1		PNP
X3	28A102	1st IF Amplifier	GE-1		PNP
X4	28B171	2nd IF Amplifier	2N408		PNP
X5	28B172	Driver-Speech Amp.	2N408		PNP
X6	28B172	Output-Modulator	2N408		PNP
X7	28A61	Transmit-Modulator	GE-1		PNP
X8	28A104	Transmit-Oscillator	GE-1		PNP
X9	28A104	Final Amplifier	GE-1		PNP
X10	28A61	Final Amplifier	GE-1		PNP

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		NOTES
			RCA PART No.	SARKES TARZIAN PART No.	
X10		28-505			Detector (OA80)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP. VOLT.	Lafayette PART No.	REPLACEMENT DATA			
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLOY PART No.
C1	6 *	29-525	PTT23	NLW10-6	MTI-5	TT8X10
C2	3 *	29-523	PTT3	NLW3-25	MTI-3	TT8X3
C3	10 *	29-526	PTT23	NLW10-6	MTI-5	TT8X10
C4	50 *	29-527	PTT23	NLW50-15	MTI-16	TT15X50

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELMIENCO PART No.	MALLOY PART No.	SPRAGUE PART No.
C5	20	#29-522	TTD-01	DD-200	CCD-200	GP420	5GA-Q20
C6	01			DM-103		TA-110	TG-S10
C7	04			DM-103		TA-110	TG-S10
C8	01			DM-103		TA-110	TG-S10
C9	20	#29-522	TTD-01	DD-200	CCD-200	GP420	5GA-Q20
C10	01			DM-103		TA-110	TG-S10
C11	005			DM-103		TA-110	TG-S10
C12	04			DM-502		TA-250	TG-D50
C13	04	#29-522	TTD-01	DD-200	CCD-200	GP420	5GA-Q20
C14	04			DM-103		TA-110	TG-S10
C15	04			DM-103		TA-110	TG-S10
C16	04			DM-103		TA-110	TG-S10
C17	2	#29-522	TTD-01	DD-200	CCD-200	GP420	5GA-Q20
C18	04			DM-103		TA-110	TG-S10
C19	01			DM-103		TA-110	TG-S10
C20	01			DM-103		TA-110	TG-S10
C21	001	#29-522	TTD-01	DD-200	CCD-200	GP420	5GA-Q20
C22	04			DM-103		TA-110	TG-S10
C23	04			DM-103		TA-110	TG-S10
C24	1			DM-103		TA-110	TG-S10
C25	01	#29-522	TTD-01	DD-200	CCD-200	GP420	5GA-Q20
C26	20			DM-103		TA-110	TG-S10
C27	01			DM-103		TA-110	TG-S10
C28	10			DM-103		TA-110	TG-S10
C29	01		DM-103		TA-110	TG-S10	

* Lafayette Part Number.

RESISTORS (IRC, WORKMAN OR EQUIVALENT)

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

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

ITEM No.	RATING	ITEM No.	RATING	ITEM No.	RATING	ITEM No.	RATING	ITEM No.	RATING
R3	69K	R8	1000Ω	R13	56K	R18	6800Ω	R22	200Ω Cold
R4	3500Ω	R9	1000Ω	R14	56K	R19	56K	R23	2200Ω
R5	4700Ω	R10	100K	R15	1000Ω	R20	6800Ω	R24	5600Ω
R6	50K	R11	1000Ω	R16	4700Ω				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		Lafayette PART No.	Meritt PART No.	Miller PART No.	Stancor PART No.	Workman PART No.	NOTES
L1	Antenna	HP-66					
L2	Receive Osc.	HP-68					
L3	1st IF	MS-776					
L4	2nd IF	MS-777					
L5	3rd IF	MS-778					
L6	Trans. Osc.	HP-69					
L7	Final	HP-70					
L8	Ant. Load	HP-67					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA			NOTES
		Lafayette PART No.	MERIT PART No.	STANCOR THORDARSON PART No.	
T1	1.6 1	TR-118			

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA			NOTES
		Lafayette PART No.	Meritt PART No.	Stancor Thordarson PART No.	
T2	5000Ω CT	TR-119			
		SEC. 1	6-8Ω		
		SEC. 2	200Ω		

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		Lafayette PART No.	QUAM PART No.	
SPI	2 1/4" PM	6-8Ω	29-539	22A06Z8

BATTERIES

ITEM No.	VOLTAGE	REPLACEMENT DATA				NOTES
		Lafayette PART No.	BURGESS	EVEREADY	MALLORY	
M1	1 1/2V	BA-155	950	1015	M-15R	8 Required

MISCELLANEOUS

ITEM No.	PART NAME	Lafayette PART No.	NOTES
M3	Crystal Switch	SW-102	Receive-Transmit (Spring Loaded, Slide Type, Normally in Receive Position)
M4	Antenna	F-703	Telescoping