

SAMS PHOTOFACT[®] CB RADIO SERIES



CB-14
14
JUNE 1967



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HOWARD W. SAMS & CO., INC.

Indianapolis, Indiana



PHOTOFACT®

TRADE NAME : Lafayette Model Comstat 19 (99-3067WX)
 SUPPLIER : For Current Address, See Annual Index
 TYPE SET : 7-Tube Transceiver
 POWER SUPPLY : 110 - 120 Volts AC, 60 Cycles (or)
 12-Volt Storage Battery
 RATING : 58 Watts, .61 Amp. @ 117VAC (Receive)
 63 Watts, .64 Amp. @ 117VAC (Transmit)
 TUNING RANGE: Any 9 CB Channels 1 thru 23
 Receiver may be continuously tuned.



ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A5, A8, A9..... GENERAL CEMENT #8606, 8606L, 8869.....WALSCO #2543, 2544, 2588
 A6, A7, A10, A11.....GENERAL CEMENT #8868, 8987, 9089.....WALSCO #2531-X, 2541, 2587

RECEIVER ALIGNMENT

Connect an AC VTVM across Speaker Voice Coil Terminals. Turn Volume Control fully clockwise; turn Squelch Control fully counterclockwise.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Pin 2 (Grid) of V2 (Rec. Mixer), low side to chassis. Tune to 455KC (Mod.).	Any	A1 thru A4	Adjust for maximum.
High side thru .01mfd to Antenna Receptacle, low side to chassis. Tune to 27.085MC (Channel 11) (Mod.).	11	A7, A8	Place Xtal-Tune Switch (S2) in "Xtal" position. Adjust for max.
High side thru .01mfd to Antenna Receptacle, low side to chassis. Tune to 26.965MC (Channel 1) (Mod.).	1	A5	Place "Xtal-Tune" Switch (S2) in "Tune" position. Rotate Tuning Dial to Channel 1. Rotate core counterclockwise until almost flush with top of coil form; then, rotate core clockwise until second peak is observed. Increase generator output and repeat above step.
High side thru .01mfd to Antenna Receptacle, low side to chassis. Tune to 27.255MC (Channel 23) (Mod.).	23	A6	Place "Xtal-Tune" Switch (S2) in "Tune" position. Rotate Tuning Dial to Channel "23". Adjust for maximum. Repeat A5 and A6 alignment procedures until optimum tracking is accomplished on Channel 1 and Channel 23.

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 95, SUBPART D, SECTION 95.95).

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.

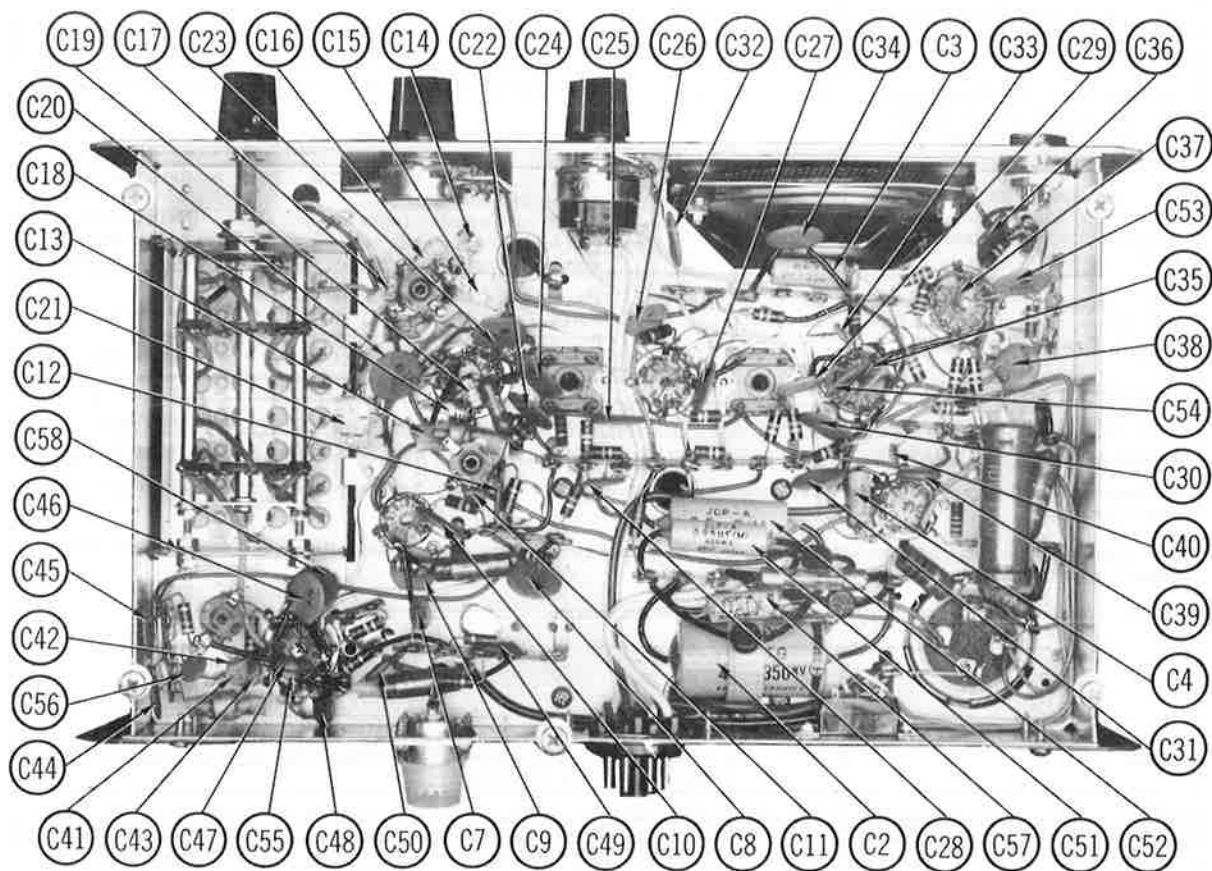
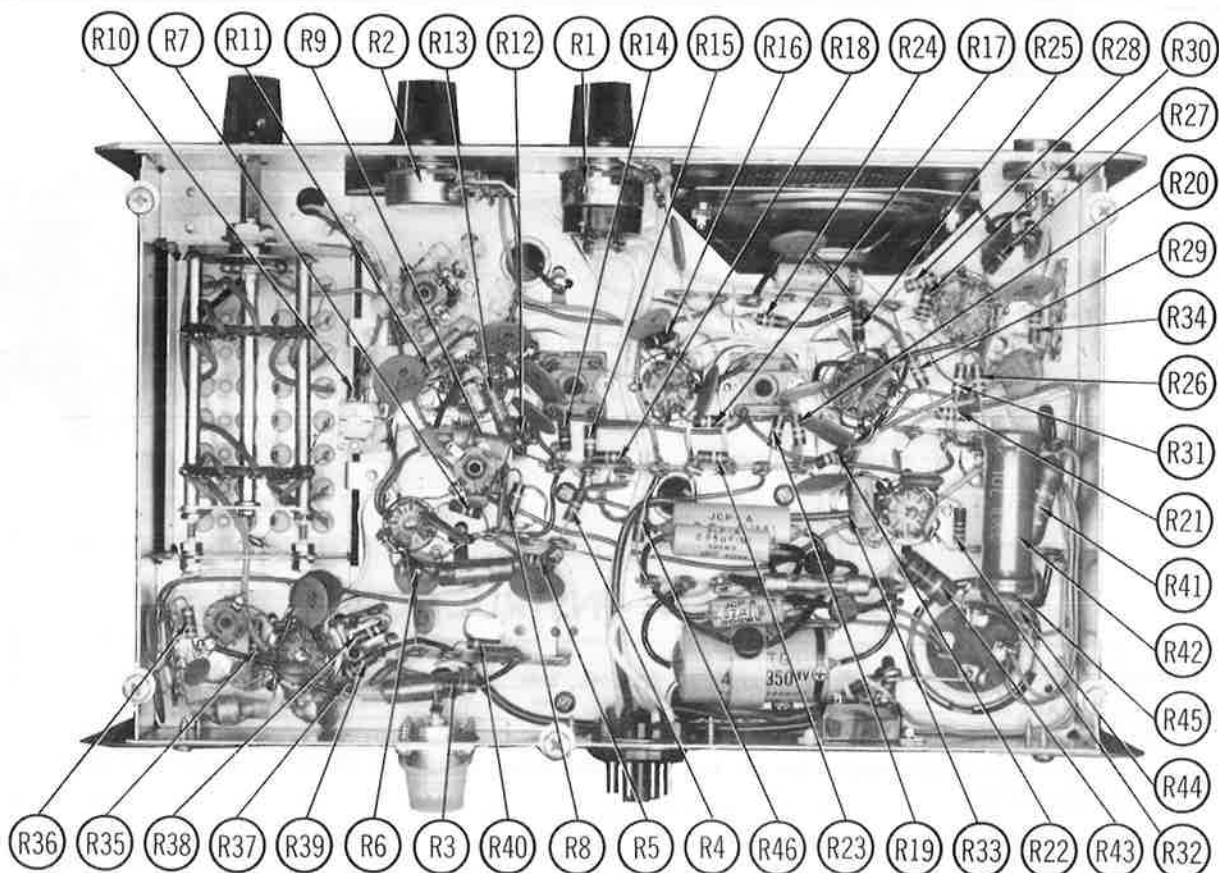
Connect either 50Ω dummy load or the normally used antenna system.

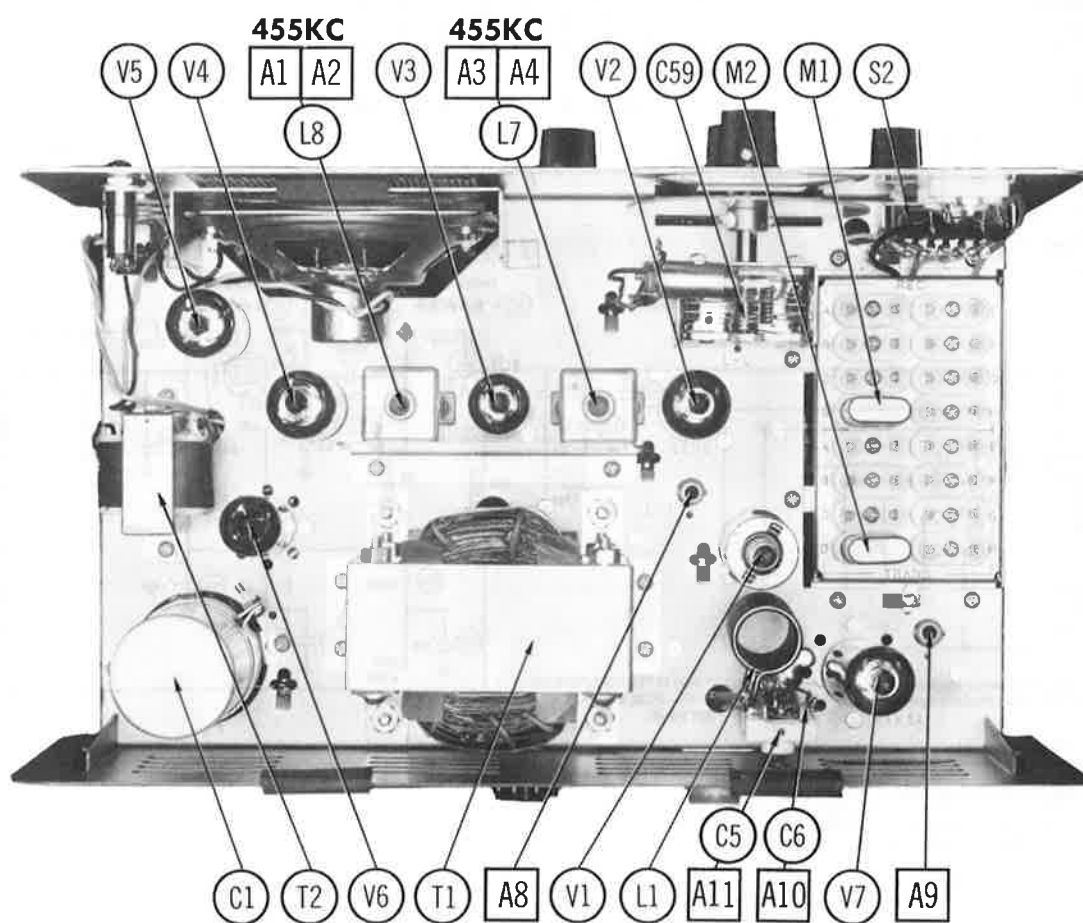
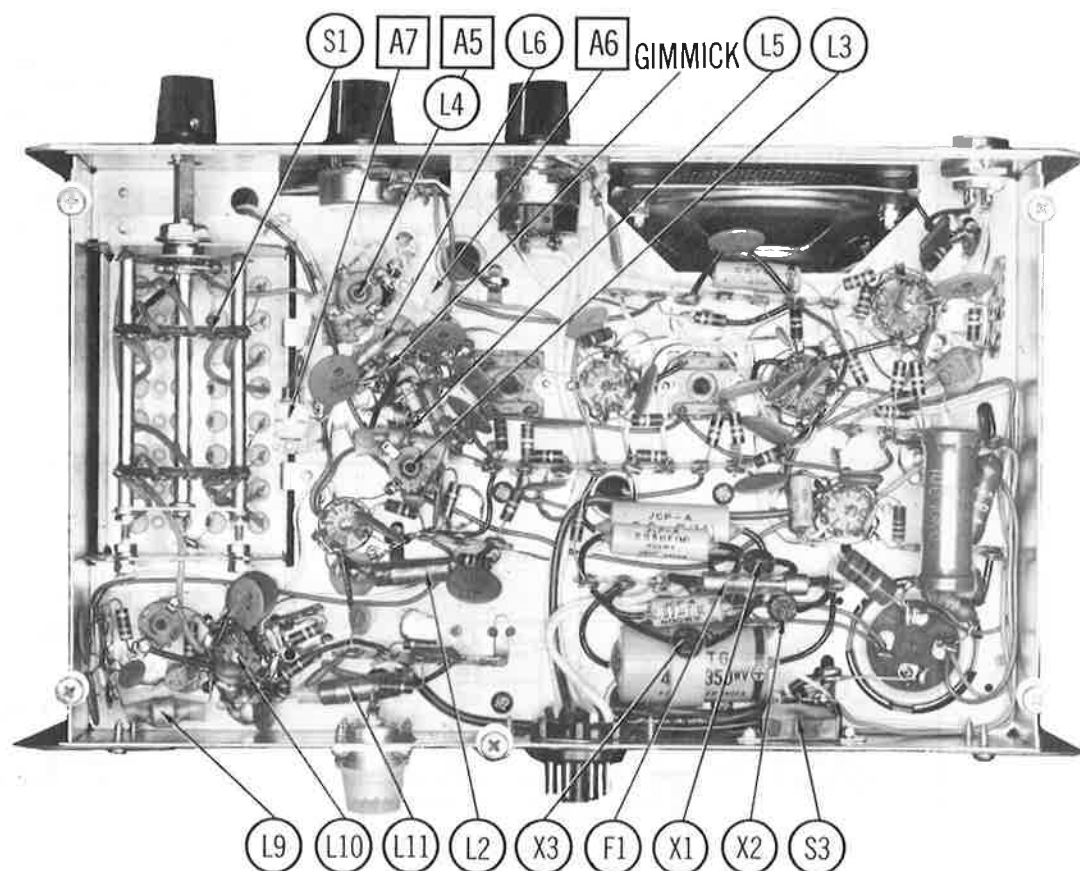
INDICATOR	ADJUST	REMARKS
Accurate Frequency Meter with Scope.	A9	Place "Xtal-Tune" Switch (S2) in "Xtal" position. Key Transmitter. Adjust for correct frequency. Key Transmitter several times to ensure Oscillator starts properly.
RF Wattmeter or Field Strength Meter and a 0-500ma DC Current Meter.	A10, A11	Place RF Power Selector Switch (S3) in 5-Watt Position. Place "Xtal-Tune" Switch (S2) in "Xtal" position. Insert DC Current Meter in Series with Pin 9 (Plate) V7B (Final Amp.). Key Transmitter. Adjust for maximum power output and MINIMUM current.

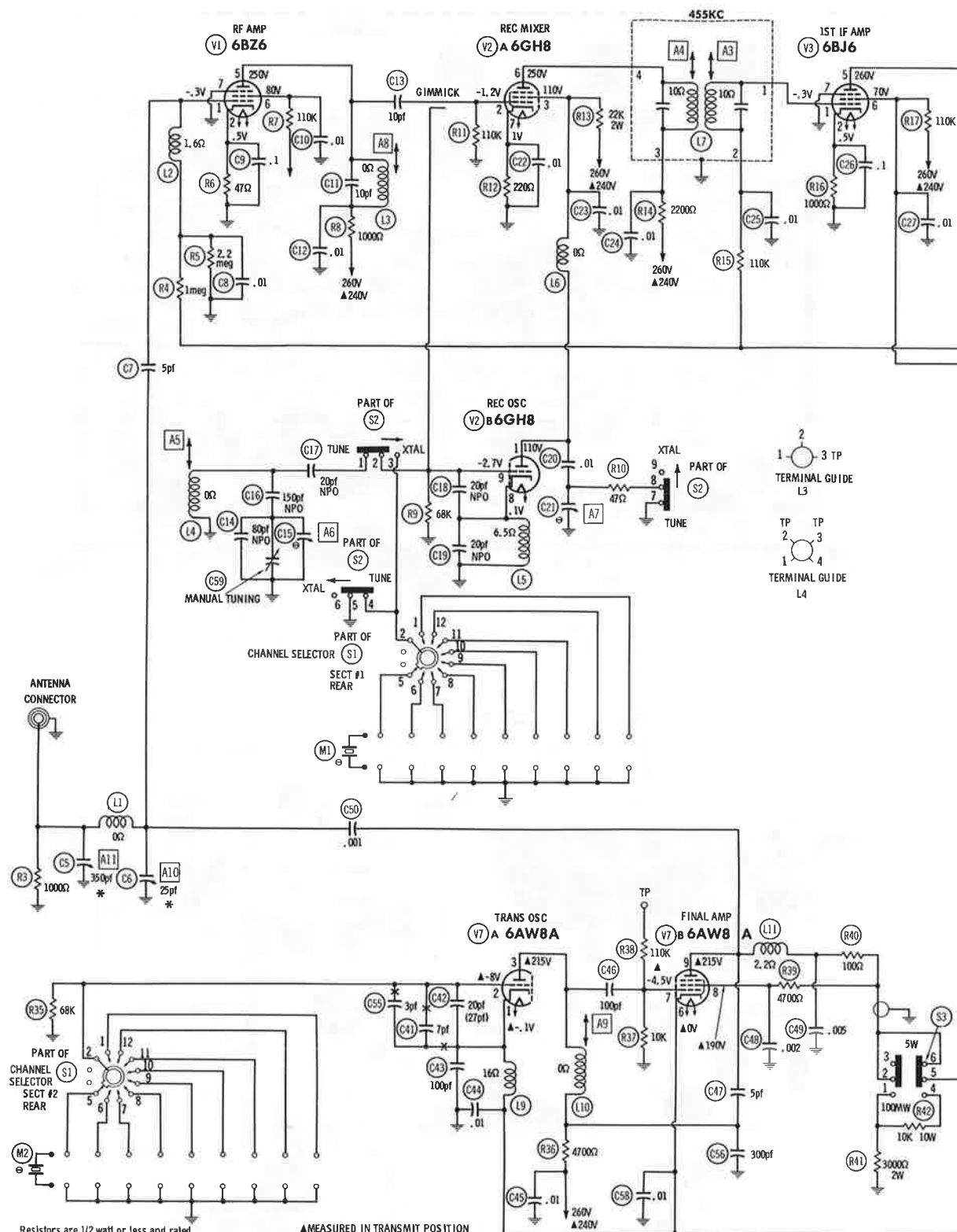
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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LAFAYETTE MODEL COMSTAT 19 (99-3067WX)





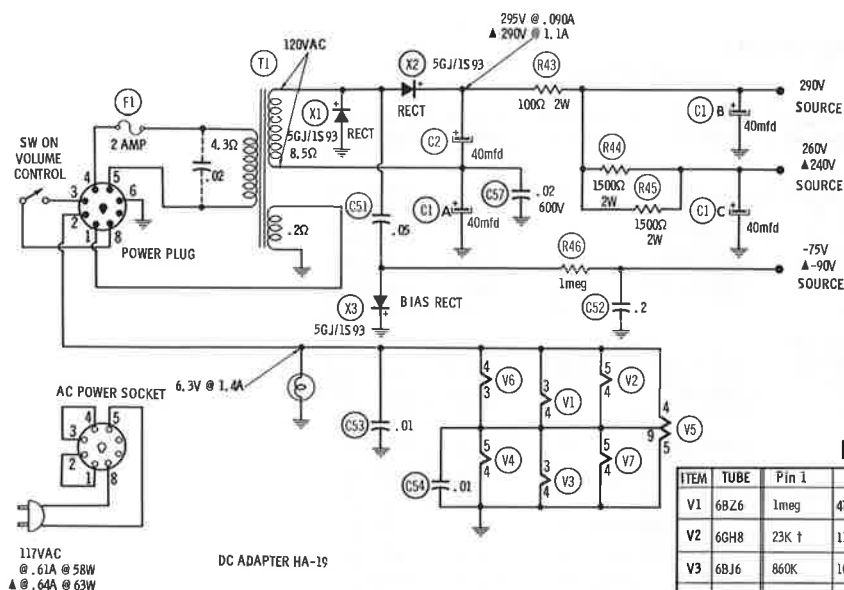
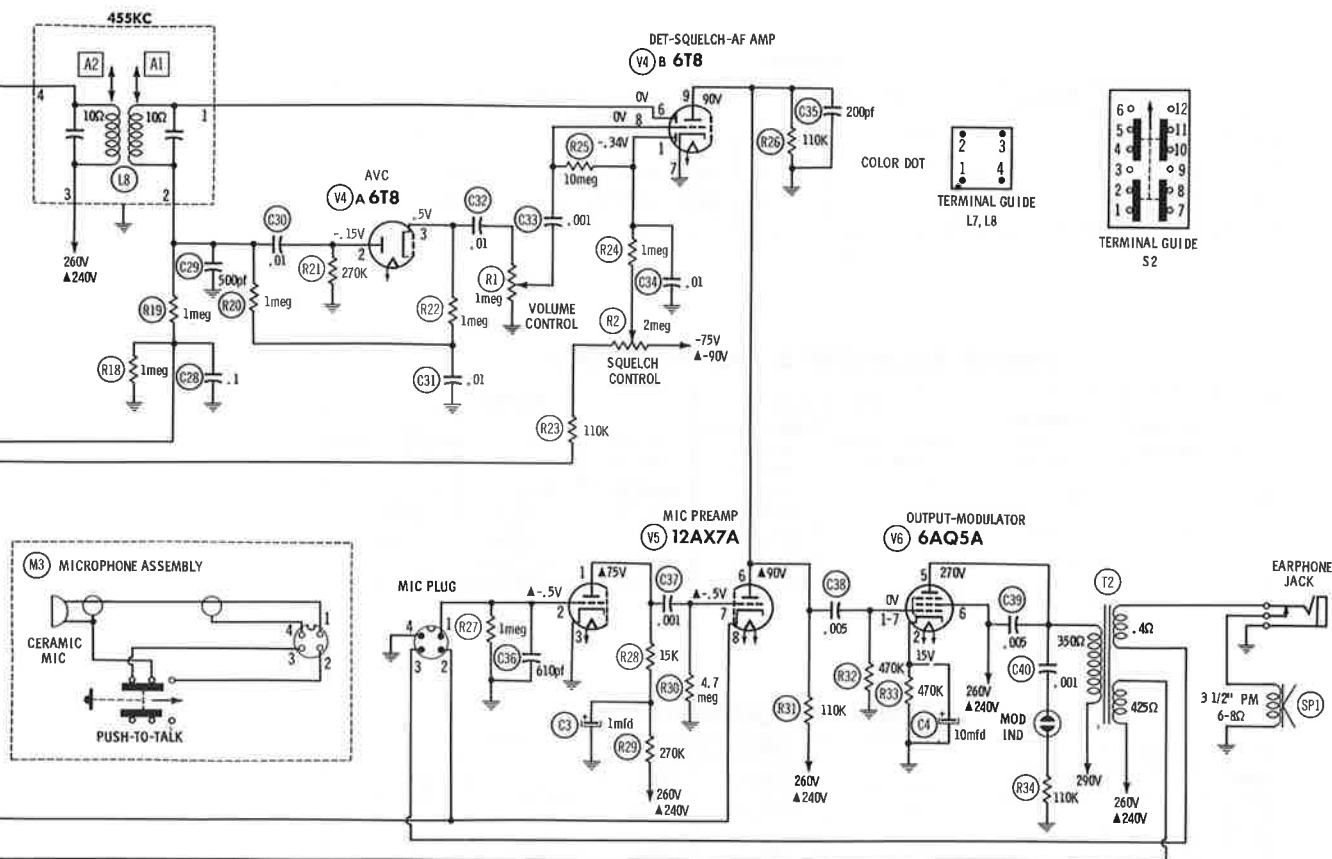


Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

▲ MEASURED IN TRANSMIT POSITION
* NOMINAL VALUE MAY VARY
TP - TEST POINT

- ① See parts list
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 MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BZ6	1meg	47Ω	FIL	FIL	1800Ω †	111K †	0Ω		
V2	6GH8	23K †	110K	23K †	FIL	FIL	3000Ω †	220Ω	6.5Ω	68K
V3	6BJ6	860K	100Ω	FIL	FIL	800Ω †	110K	0Ω		
V4	6T8A	1.1meg	270K	3.7meg	FIL	FIL	1.7meg	0Ω	11meg	65K †
V5	12AX7A	286K †	1meg	0Ω	FIL	FIL	65K †	4.7meg	0Ω ▲	FIL
V6	6AQ5A	470K	220Ω	FIL	FIL	450Ω	800Ω †	470K		
V7	6AW8A	16Ω ▲	68K	5600Ω †	FIL	FIL	0Ω ▲	10K	15K †*	11K †*
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

† MEASURED FROM OUTPUT OF X2

* THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.

▲ MEASURED IN 100W POSITION. ▲ TRANSMIT POSITION.

LAFAYETTE MODEL COMSTAT 19 (99-3067WX)

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

TUBES

♦ AMPEREX ♦			♦ GENERAL ELECTRIC ♦			♦ RCA ♦			♦ SYLVANIA ♦		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	RF Amp.	6BZ6	V5	Mic. Preamp.	12AX7A						
V2	Rec. Mixer	6GH8	V6	Output - Modulator	6AQ5A						
V3	1st IF Amp.	6BJ6	V7	Trans. Osc. - Final Amp.	6AW8A						
V4	Det. - Squelch-AF Amp.	6T8A									

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1	.11A	1S93/5GJ		5A6-D or SD-600	AA500 or VB500 ①	SK-3016 or SK-3017A	F-6 or S-5960-1 ①
X2	.11A	1S93/5GJ		5A6-D or SD-600	AA500 or VB500 ①	SK-3016 or SK-3017A	F-6 or S-5960-1 ①
X3		1S93/5GJ		5A6-D or SD-600	AA500 or VB500 ①	SK-3016 or SK-3017A	F-6 or 60C

① Single Unit Replacement for X1 and X2

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	Lafayette PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	40	350						
B	40	350						
C	40	350						
C2	40	350						
C3	1	350						
C4	10	15						

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.
C5	350	①						
C6	25	①						
C7	5		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C8	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C9	.1mfd		TTD-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C10	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C11	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C12	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C13	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C14	80 NPO			DTZ-82		CCTO-820	CNO482	10TCC-Q82
C15								
C16	150 NPO			DTZ-150		CCTO-151	CNO315	10TCC-T15
C17	20 NPO			DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C18	20 NPO			DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C19	20 NPO			DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C20	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C21								
C22	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C23	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C 4	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C25	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C26	.1mfd		TTD-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C27	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C28	.1mfd		TTD-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C29	500		DI-500	DD-501	JBZ601YP502K	CCD-501	GP350	10TS-T50
C30	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C31	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C32	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C33	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C34	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C35	200		DI-200	DM-201		CCD-201	GP320	10TS-T20
C36	610		DI-680	DD-681	JBY601YP681K	CCD-681	GP368	10TS-T68
C37	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C38	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C39	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C40	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C41	7		NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO568	10TCC-V68
C42	20	(27pf) †	NPO-DI 22	DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C43	100		NPO-DI 100	DTZ-100	CV601CG101K	CCTO-101	CNO310	10TCC-T10
C44	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C45	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C46	100		NPO-DI 100	DTZ-100	CV601CG101K	CCTO-101	CNO310	10TCC-T10
C47	5		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C48	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CAPACITORS (cont)

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.
C49	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C50	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C51	.05 400V		DBE6S5		DPM56S5	6DP-3-503	PVC615	6PS-S50
C52	.2 400V		DBE4P22		DMF4P22	4DP-5-224	PVC4022	4PS-P22
C53	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C54	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C55	3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30
C56	300		DI-300	DM-301		CCD-301	GP330	10TS-T30
C57	.02 600V		DBE6S22		DMF6S22	6DP-2-223	PVC6122	6PS-S22
C58								

① Nominal Value

† Alternate Value

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			Lafayette PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	1meg		F2-1meg ①, SSK014, KR-1	A47-1meg-Z ①, KSS-3 (SWE-12, or (NP-1meg-Z ①, UP-C-400, NWE-12)	Q13-137 ①, 76-1 or (BU1 ①, CF28, SS1, GC)*	RU16A, SL36, SL3250, US41 or (UA16A ①, SL3500, US41) or (U53 ①, US26)
R2	Squeich	2meg		F1-2meg ①, SSK014	A47-2meg-S ①, KSS-3 or (NP-2meg-S ①, UP-C-400)	Q11-139 ① or (BU1 ①, CF19, SS1, DC1)*	RU26L, SL36, SL3250 or (UA26L ①, SL3500) or (U56 ①)

① Enlarge Mtg. Holes

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	Lafayette PART No.			IRC PART No.	WORKMAN PART No.	Lafayette PART No.
R42	10K 10W	PW10-10K	10W-SQ-10K						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		Lafayette PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L1	Pi Network (16 turns)					
L2	RF Choke (15uh)				72F155AP	
L3	RF Amp. Plate					
L4	Rec. VFO					
L5	RF Choke (115uh)		19-3125	TV-195	72F124AP	T307
L6	RF Choke (1.2uh)				74F126AP	T807
L7	1st IF					
L8	2nd IF					
L9	RF Choke (500uh)		19-3500		6174	T324
L10	Trans. Osc. Plate					
L11	RF Choke (22uh)		19-6022		72F225AP	TA311

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	Lafayette PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .64A ▲	120VAC @ 1.1A DC ▲	8.3VAC @ 1.4A						

LAFAYETTE MODEL COMSTAT 19 (99-3067WX)

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	Lafayette PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	5500Ω	8Ω						
		SEC. 2						
		425Ω DC Resistance						

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		Lafayette PART No.	JENSEN PART No.	QUAM PART No.	
SP1	3 1/2" PM 6-8Ω			3A05Z8	

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	2A			GJV 2		318002		

MISCELLANEOUS

ITEM No.	PART NAME	Lafayette PART No.	NOTES
M1	Receive Crystal		42-4702C Plus Channel(s) desired
M2	Transmit Crystal		42-4701C Plus Channel(s) desired
M3	Microphone Ass'y.		Ceramic
S1	Switch, Selector		6-Position Dual Wafer
S2	Switch, Xtal-Tune		4PDT
S3	Switch, RF Power Selector		DPDT
	DC Adapter	HA-19	12VDC

WIRING DATA

General-use Hook-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-58A/U)
Coiled Microphone Cable Use BELDEN No. 8497 3 Conductor- 1 Shielded for Press-to-Talk (Neoprene)
8498 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.)