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hammarlund communications

OPERATING and SERVICE INSTRUCTIONS

SX-62A
&
SX-62AU
MARK 2A

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Set RECEPTION control at FM and adjust slug S-16 for maximum output. Now set Slug S-7 for the null or minimum output as indicated on the output meter. Check the discriminator by slowly tuning the signal generator through 10.7 mc and observe the two maximum audio level readings on the output meter. If the two peaks are equal the job is done: if not it may be necessary to reset Slug S-16 until a reasonable balance is obtained.

RF ALIGNMENT

After completing the alignment of the IF amplifier stages the RF amplifier stages may be aligned according to the following chart. Connect the high side of the signal generator to terminal A-1 through the dummy antenna specified and connect a jumper between antenna terminal A-2 and GND. Use just enough signal generator output to obtain a 500 milliwatt audio output level for best results.

ALIGNMENT CHART

Dummy Antenna	Signal Generator Frequency	Band Selector Range	Radio Dial Setting	Adjust	Remarks
RMA	1500 kc	550-1600 kc	1500 kc	C-47*, 6, 21, 35	Adjust for max. output
	600 kc		600 kc	S-36*	
RMA	4.0 mc	1.62-4.9 mc	4.0 mc	C-45*, 20,34	Adjust for max. output
	1.8 mc		1.8 mc	S-35*	
RMA	14.0 mc	4.9-15 mc	14.0 mc	C-43*, 4, 19, 33	Adjust for max. output
	7.0 mc		7.0 mc	S-34*, 22, 26, 30	
RMA	28 mc	15-32 mc	28 mc	C-42*, 3, 18, 32	Adjust for max. output
	18 mc		18 mc	S-33*, 21, 25, 29	
300-ohm non-inductive resistor	50 mc	27-56 mc	50 mc	C-41*, 2, 17, 31	Adjust for max. output
	30 mc		30 mc	S-32*, 20, 24, 28	
300-ohm non-inductive resistor	105 mc	54-109 mc	105 mc	C-40*, 1, 16, 30	Adjust for max. output
	60 mc		60 mc	S-31*, 19, 23, 27	

* Note - Calibration adjustment.
Note - The standard RMA dummy antenna mention in the alignment chart consists of a 200 mmf condenser in series with a 20 uh r-f choke which is shunted by a 400 mmf condenser in series with a 400 ohm carbon resistor.

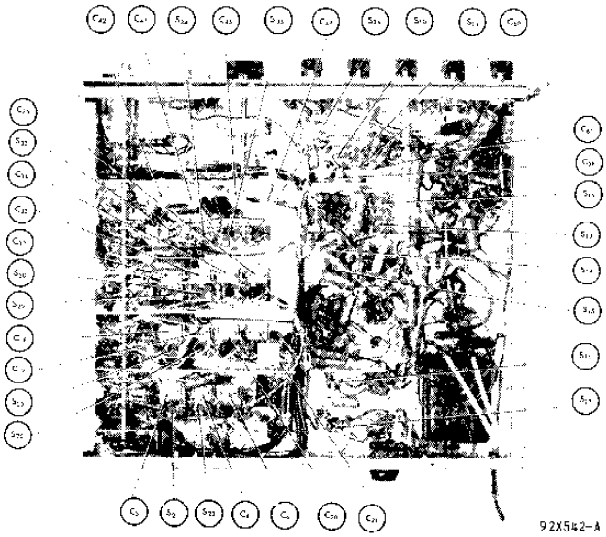

Fig. 8. Alignment adjustments, bottom view

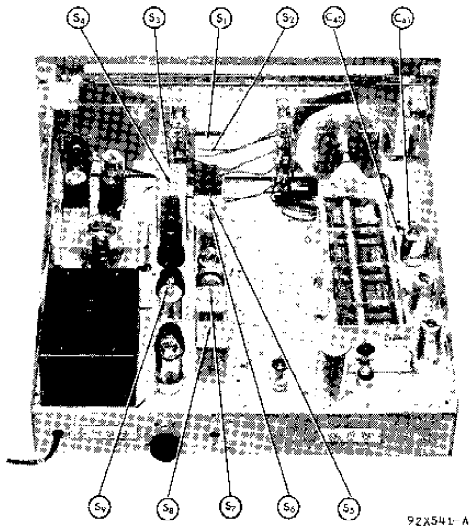

Fig. 9. Alignment adjustments, top view

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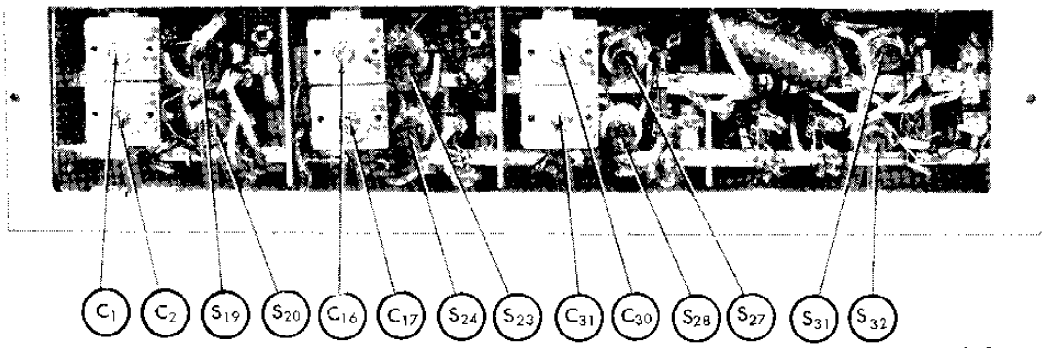

Fig. 10 Alignment adjustments, left side view

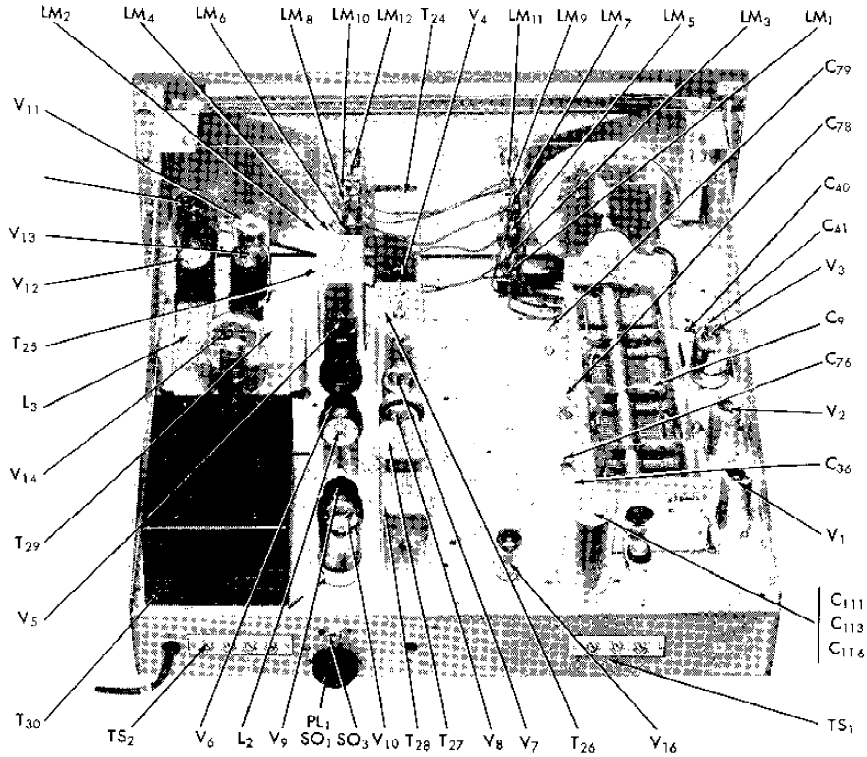

Fig. 11 Component locations, top view

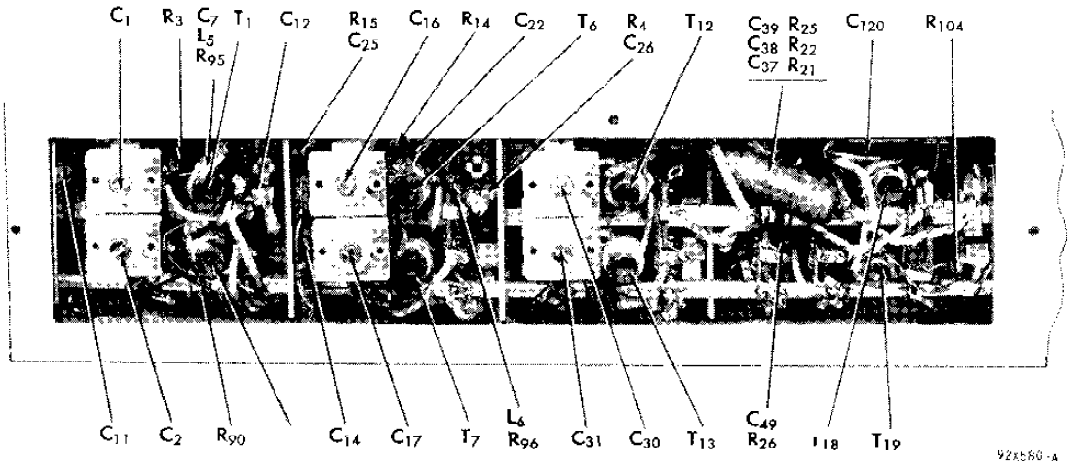

Fig. 12 Component locations, left side view.

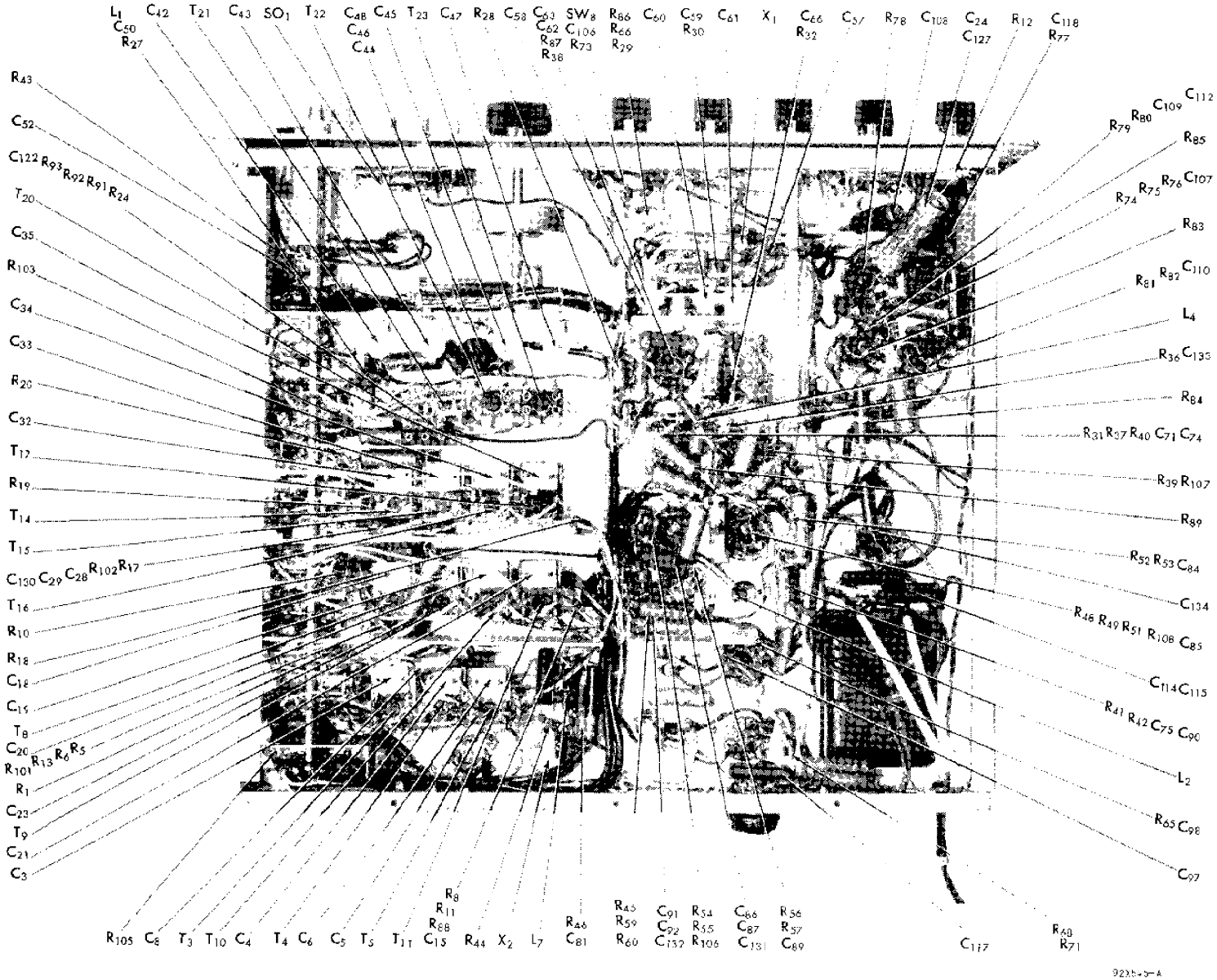

Fig. 16. Component locations, bottom view

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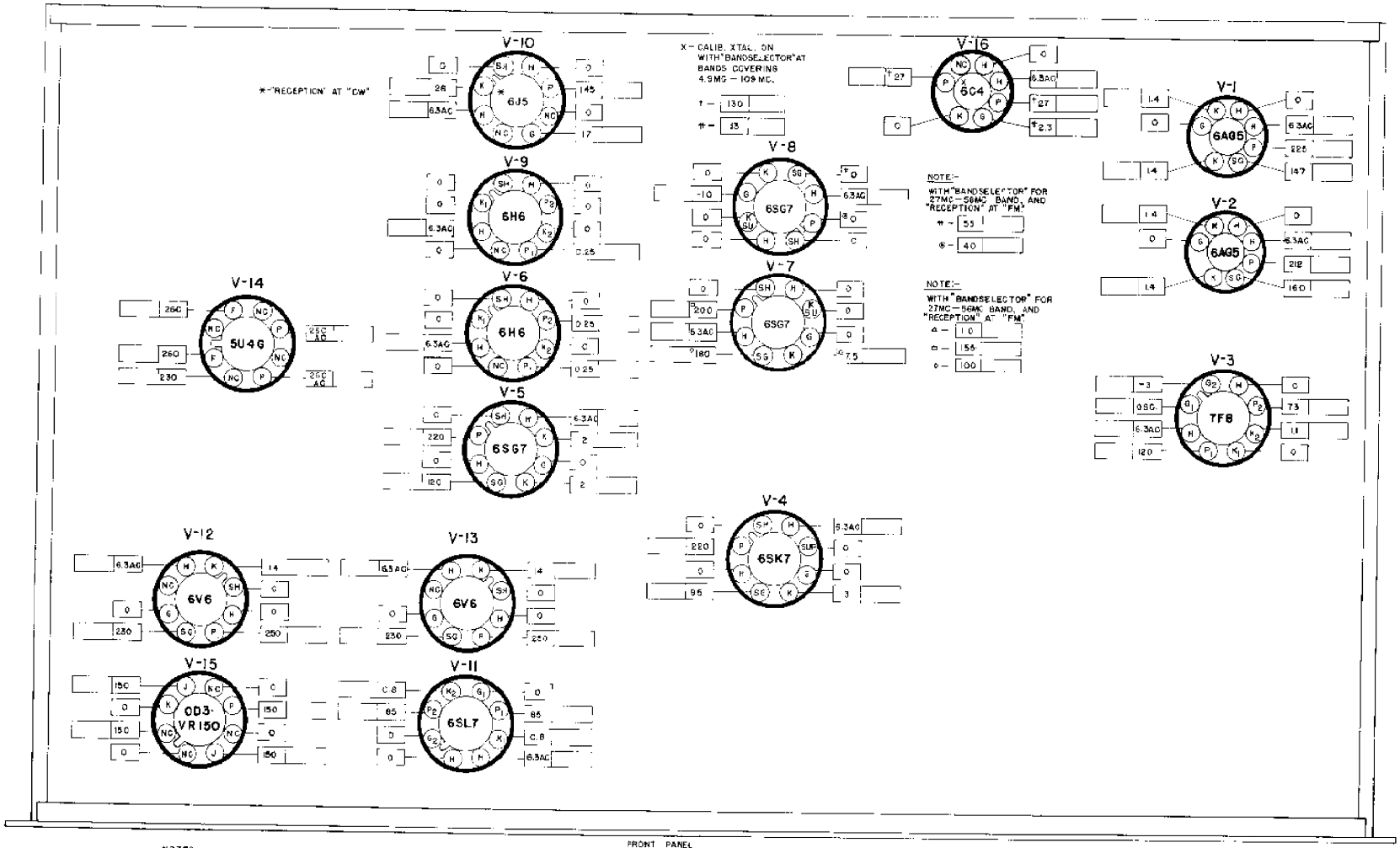

NOTES

1. SOCKET VIEWS ARE BOTTOM VIEWS.
2. ALL VOLTAGES MEASURED BETWEEN TUBE SOCKET TERMINALS AND GROUND.
3. LINE VOLTAGE — 117 V. AC.
4. ALL VOLTAGES SHOWN ARE DC UNLESS OTHERWISE SPECIFIED.
5. VOLTAGES SHOWN WERE MEASURED WITH A 20,000 OHM/VOLT METER.
6. "N.C." — NO CONNECTION.
7. [ ] THE BLANK SPACES ARE PROVIDED FOR THE SERVICEMAN. FILL IN THE ACTUAL READING AS TAKEN WITH YOUR OWN EQUIPMENT. A NORMAL OPERATING RADIO SHOULD BE USED FOR THESE MEASUREMENTS.

FRONT PANEL

NOTES (CONT.)

8. CONTROL SETTING—UNLESS SPECIFIED.
"BAND SELECTOR" AT BAND 1
"RECEPTION" AT "AM"
"CALIB. XTAL" AT "OFF"
"NOISE LIMITER" AT "OFF"
"RECEIVE—STANDBY" AT "RECEIVE"
"SENSITIVITY" AT MAXIMUM GAIN.
"SELECTIVITY" AT "NORMAL / BOARD".

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Fig. 14 Tube socket voltage chart

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SERVICE PARTS LIST

Schematic Symbol	Description	Hallicrafters Part Number
	***RESISTORS**	
R1,10,51	100K ohms 20%	451-253104
R2	12 ohms	451-252120
R3,15	150 ohms	451-252151
R4,54	47K ohms, 1 watt	451-353473
R5,9,14,19,90,103,104	15 ohms 20%	451-252150
R6,13,17,20	2.2K ohms 20%	451-253222
R7,18,40,67,74,78	1.2K ohms	451-252122
R8,43,109	470K ohms 20%	451-253474
R12	Variable; Sensitivity Control	025-100548
R16,22,32,45,86,106,110	1K ohm 20%	451-253102
R21,107	2.2 megohms	451-252225
R23	47 ohms 20%	451-253470
R24	33 ohms 20%	451-253330
R25,75	10K ohms	451-252103
R26	5.6K ohms, 1 watt	451-352562
R27	470 ohms 20%	451-253471
R28	68K ohms, 1 watt	451-352683
R29	120 ohms	451-252121
R30,42,52	1 megohm 20%	451-253105
R31,60	330 ohms	451-252331
R36	1.2 megohms	451-252125
R37	100K ohms, 1 watt	451-352104
R38	270 ohms	451-252271
R39,59,87	56K ohms	451-252563
R41,49,58,79,80,81,83	220K ohms	451-252224
R44	4.7 megohms	451-252475
R46,47	27K ohms, 2 watts	451-352273
R50	680 ohms	451-252681
R53	820K ohms	451-252824
R55	10K ohms, 1 watt	451-352103
R56,57,71,94	47K ohms	451-252473
R65	150K ohms	451-252154
R66	1.5 megohms	451-252155
R68	3.1K ohms, 5%	451-251512
R73	Variable; Volume Control	025-100549
R76,92	56 ohms	451-252560
R77	1K ohm, 2 watts	451-352102
R82	8.2K ohms	451-252822
R84	220 ohms, 2 watts	451-352221
R85	2K ohms, 5%, 10 watts; WW	453-061202
R88	3.3 megohms 20%	451-253225
R89	68K ohms	451-252683
R91,93	4.7K ohms	451-252472
R101,102	330 ohms 20%	451-253331
R105	100 ohms	451-252101
R108	6.8 ohms, 1 watt	451-352068

*All Resistors are 10%, 1/2 watt, carbon type unless otherwise noted.

Schematic Symbol	Description	Hallicrafters Part Number
	TUBES AND LAMPS	
V1,2	Type 6AG5, 1st and 2nd RF amplifiers	090-900791
V3	Type 7F8, oscillator/mixer	090-901145
V4	Type 6SK7, 1st IF amplifier	090-901233
V5	Type 6SG7, 2nd IF amplifier	090-901181
V6,9	Type 6H6, noise limiter & discriminator	090-900847
V7,8	Type 6SG7, 3rd IF amplifier & AM detector	090-901181
V10	Type 6J5, BFO	090-901141
V11	Type 6SL7GT, phase inverter	090-901219
V12,13	Type 6V6GT, AF power amplifier	090-901221
V14	Type 5U4G, rectifier	090-900719
V15	Type OD3/VR150, voltage regulator	090-901234
V16	Type 6C4, calibration oscillator	090-900830
LM1,2,3,4,5,6,7,8,9,10,11,12	Lamp, pilot; 6-8V., Mazda #44 (blue bead)	039-100003

Schematic Symbol	Description	Hallicrafters Part Number
	TRANSFORMERS AND COILS	
T1	Transformer, antenna stage; band 6	051-200829
T2	Transformer, antenna stage; band 5	051-200828
T3	Transformer, antenna stage; band 4	051-200990
T4	Transformer, antenna stage; band 3	051-200826
T5	Transformer, antenna stage; band 1	051-200823
T6	Transformer, RF stage; band 6	051-200833
T7	Transformer, RF stage; band 5	051-200832
T8	Transformer, RF stage; band 4	051-200989
T9	Transformer, RF stage; band 3	051-200987
T10	Transformer, antenna stage; band 2	051-200825
T11	Transformer, RF stage; band 1	051-200824
T12	Transformer, mixer stage; band 6	051-200843
T13	Transformer, mixer stage; band 5	051-200844
T14	Transformer, mixer stage; band 4	051-200989
T15	Transformer, mixer stage; band 3	051-200988
T16	Transformer, mixer stage; band 2	051-200986
T17	Transformer, mixer stage; band 1	051-200985
T18	Transformer, oscillator stage; band 6	051-200839
T19	Transformer, oscillator stage; band 5	051-200838
T20	Transformer, oscillator stage; band 4	051-200991
T21	Transformer, oscillator stage; band 3	051-200836
T22	Transformer, oscillator stage; band 2	051-200835
T23	Transformer, oscillator stage; band 1	051-200834
T24	Transformer, 1st IF amp. stage	050-300198
T25	Transformer, 2nd IF amp. stage	050-300190
T26	Transformer, 3rd IF amp. stage	050-300373
T27	Transformer, FM detector	050-300191
T28	Transformer, BFO	050-300655
T29	Transformer, audio output	056-300213
T30	Transformer, power: 115V, 50/60 cycles (Model SX-62A)	052-300141
T30	Transformer, power: 115/230 V. 25/60 cycles (Model SX-62AU)	052-300131
L1	RF choke (coded red)	053-200008
L2	IF coupling coil	053-200104
L3	Choke, filter	056-200067
L4	RF choke; filament	053-100009
L5,6	RF choke; screen (wound on R95 & R96)	053-100117
L7	RF choke; plate	053-100139
	MISCELLANEOUS	
	Clip, dial scale & window mtg.	076-100403
X1	Crystal, 455 KC	019-100123
X2	Crystal, calibration; 500KC	019-101211
	Dial cord (specify length)	083-100026
	Dial pointer	082-300301
	Dial scale (calibrated)	022-400215
	Escutcheon	007-400078
	Flywheel, dial drive	071-100178
F1	Fuse, 2 amp. 250V; type 3AG	039-100428
	Fuse holder	006-100451
	Knob, BAND SELECTOR OR TUNING	015-001593
	Knob, POINTER RESET	015-001609
	Knob, RECEPTION, SELECTIVITY, TONE, VOLUME & SENSITIVITY control	015-001601
	Lock, line cord; male section	076-000397-01
	Lock, line cord; female section	076-000397-02
	Mounting foot; rubber	016-100029
	Pulley, Assembly	028-300111
	Shaft, general coverage dial	074-100252
	Shaft, index control	074-002650
	Spring, dial drive	075-100232
	Spring, pointer index	075-100232
TS1	Terminal strip, antenna	088-200976
TS2	Terminal strip, speaker	088-200936
	Ring, Retaining; index control shaft	076-100551 per W-12947
	Window, dial	022-300214

Schematic Symbol	Description	Hallicrafters Part Number
	CAPACITORS	
C1,2,16,17,30,31	Trimmers, adjustable; 2 section; antenna, RF amp, and mixer stages	044-200165
C3,4,6,18,19,20,21,32,33,34,35	Part of transformers T3,4,5,8, 9,10,11,14,15,16 and 17 respectively	----------
C5,129,130	2.2 mmf. 500V., bakelite	047-100160-04
C7,79	5 mmf. 500V., ceramic	491-002050-95
C8,11,25	.047 mfd. 200V., molded tubular	499-014473
C9	Capacitor, main tuning	040-300204
C13,15,27,29,50,59,63,74,86,87,91, 109,112,132	.022 mfd. 600V., molded tubular	499-031223
C14,28	5600 mmf. 500V., mica	470-514562
C22,123	15 mmf. 500V., ceramic	491-000150-95
C23,62,70,84	.047 mfd. 200V., molded tubular	499-011473
C24	.22 mfd. 200V., molded tubular	499-011224
C36,76,78,120	7 mmf. 500V., ceramic	491-006070-95
C37,97	47 mmf. 500V., mica	470-213470
C12,26,38,75,81,92,106,114,115,117, 121,122,131,133,134,135	.01 mfd. 600V., molded tubular	499-031103
C39,49	110 mmf. 500V., ceramic	491-025111-95
C40,41,57	Trimmer, adjustable; oscillator section bands 5 and 6; crystal phasing	044-100078
C42	Trimmer, adjustable; oscillator section, band 4	044-100347
C43,45	Trimmer, adjustable; oscillator section, bands 2 and 3	044-100077
C44	4700 mmf. 2%, 500V., silver mica	470-521472
C46	1500 mmf. 2%, 500V., silver mica	470-421152
C47	Trimmer, adjustable; oscillator section band 1	044-100076
C48	470 mmf. 2%, 500V., silver mica	470-231471
C31	220 mmf. 2%, 500V., silver mica	470-341221
C52,66,71,99,108,118,137	.047 mfd. 600V., molded tubular	499-031473
C58,60,61	Trimmer, adjustable; crystal phasing	044-200164
C89,90	180 mmf. 500V., mica	470-213181
C98	560 mmf. 500V., mica	470-313561
C107	10 mfd. 25V., electrolytic	045-100121
C110	680 mmf. 500V., mica	470-313681
C111,113,116	20 mfd. 25V., 30-20 mfd. 450V., electrolytic	045-100041
C127	100 mfd. 25V., electrolytic	045-100116
	SWITCHES	
SW1	Switch, BAND SELECTOR	060-400329
SW2	Switch, SELECTIVITY	060-100234
SW3	Switch, RECEPTION	060-200330
SW4	Switch, TONE	060-300236
SW5,6,7	Switch, toggle; SPST	060-100138
SW8	Switch, power (part of volume control R73)	----------
	PLUGS AND SOCKETS	
PL1	Plug, JUMPER (for AC operation)	035-100003-01
PL2	Plug and cord, power	087-100076
SO1	Socket, octal; BATTERY POWER	005-100250
SO2	Jack, PHONE	036-200004
SO3	Jack, PHONO	036-100041
	Socket, dial lamp	086-200073-01
	Socket, octal; black molded	006-200296
	Socket, octal; mica	006-100223
	Socket, miniature 7 pin; mica	006-100368
	Socket, miniature 7 pin; molded bakelite	006-100292
	Socket, octal	006-100250

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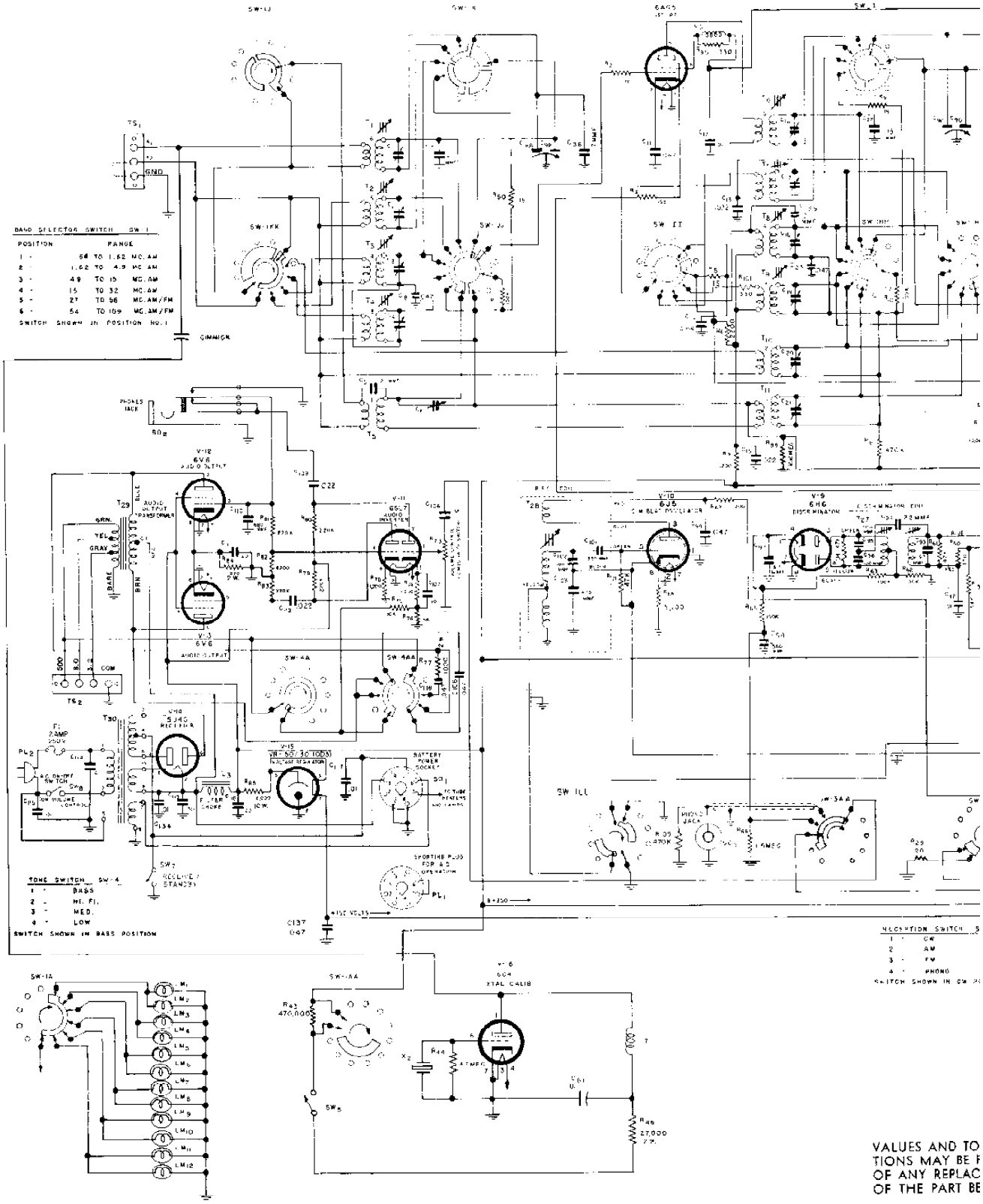

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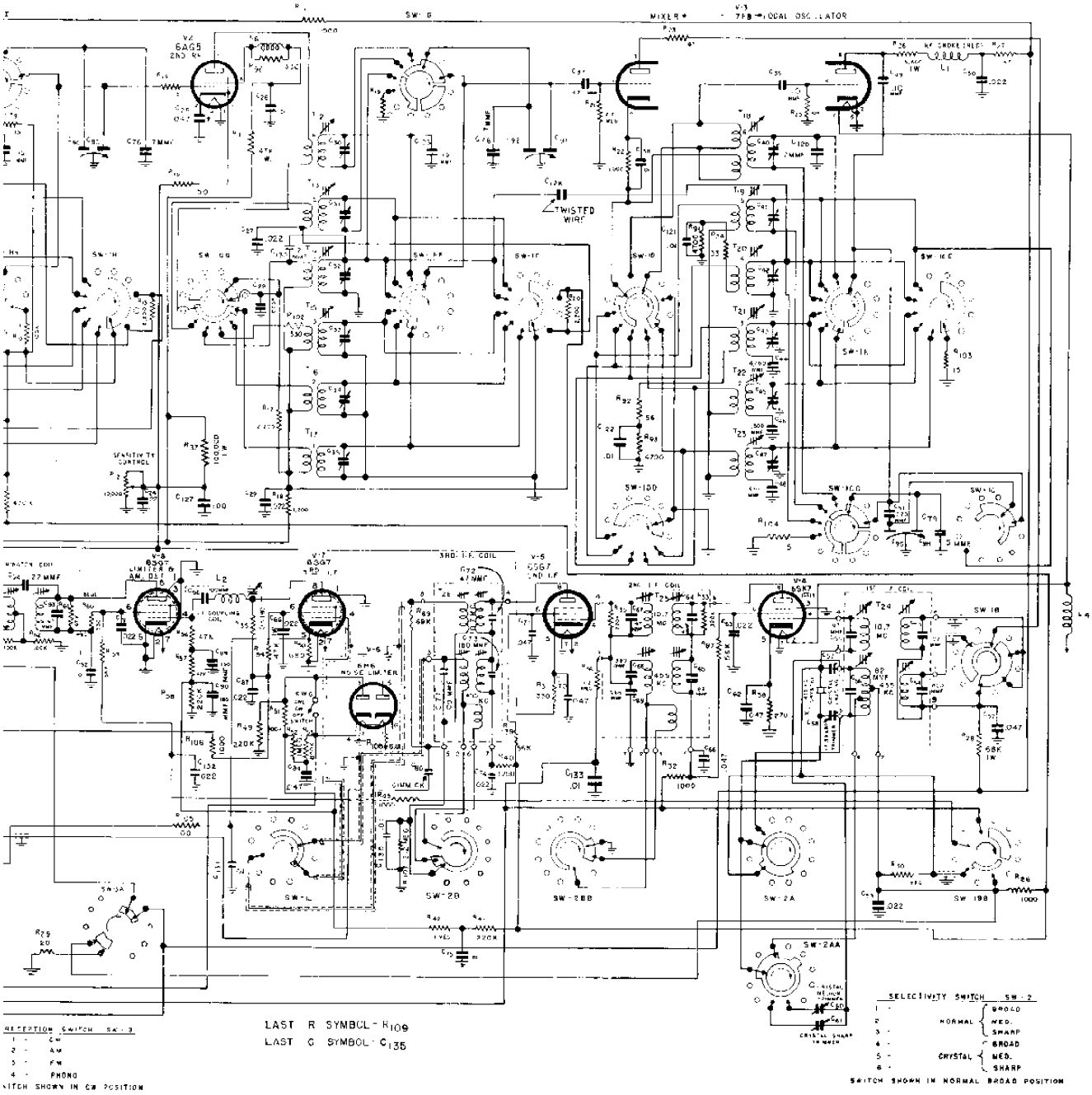
SX-62A & SX-62AU

MARK 2A



NOTE-
RESISTOR VALUES ARE IN OHMS.
ALL RESISTORS ARE 1/2 WATT, UNLESS OTHERWISE SPECIFIED.
CAPACITOR VALUES ARE IN MFD. UNLESS OTHERWISE SPECIFIED.
K=1000

890282- -F

ALUES AND TOLERANCES SHOWN ARE NOMINAL AND VARIA-
ONS MAY BE FOUND. IT IS RECOMMENDED THAT THE VALUE
F ANY REPLACEMENT CORRESPOND TO THE NOMINAL VALUE
F THE PART BEING REPLACED.

Fig. 15. Schematic diagram

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SERVICEMEN: USE THE SPACE BELOW TO MAKE SPECIAL NOTES FOR FUTURE REFERENCE IN SERVICING THIS EQUIPMENT.

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Warranty

"The Hallicrafter's Company warrants each new radio product manufactured by it to be free from defective material and workmanship and agrees to remedy any such defect or to furnish a new part in exchange for any part of any unit of its manufacture which under normal installation, use and service discloses such defect, provided the unit is delivered by the owner to our authorized radio dealer, wholesaler, from whom purchased, or, authorized service center, intact, for examination, with all transportation charges prepaid within ninety days from the date of sale to original purchaser and provided that such examination discloses in our judgment that it is thus defective.

This warranty does not extend to any of our radio products which have been subjected to misuse, neglect, accident, incorrect wiring not our own, improper installation, or to use in violation of instructions furnished by us, nor extend to units which have been repaired or altered outside of our factory or authorized service center, nor to cases where the serial number thereof has been removed, defaced or changed, nor to accessories used therewith not of our own manufacture.

Any part of a unit approved for remedy or exchange hereunder will be remedied or exchanged by the authorized radio dealer or wholesaler without charge to the owner.

This warranty is in lieu of all other warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sale of our radio products."

Form No. 94X622

the Hallicrafters co.

094-901438 C