


SERVICE REPAIR PARTS LIST

Schematic Symbol	Description	Hallicrafters Part Number	Schematic Symbol	Description	Hallicrafters Part Number	Schematic Symbol	Description	Hallicrafters Part Number	
* RESISTORS (cont.)									
C1,2,3,4	2-25, 4-40, 2-25, 7-100 mmf., Var. Quad Trimmer, Assy; Inc. mtg. bracket	044-000533	R6	1.5K ohm, 30%, 1/4 watt, Variable, BFO control; Inc. Switch S3	025-002024	CR1	Rectifier, Selenium	019-003373	
C5A,B	MAIN TUNING; Var. Cap.	048-000479	R7	270 ohm	451-252271	LM1,2	Lamp, Dial type #47	039-100004	
C6A,B	BANDSPREAD; Var. Cap.	048-000477	R10,18,25,26	470K ohm	451-252474	V1	12 BE6; Converter	090-900040	
C7	220 mmf., 500V, 20%; Cer. Tub.	483-021221	R11	2 megohm, 30%, 1/8 watt, Variable, VOLUME Control; Inc. Switch S4	025-002025	V2	12 BA6; IF Amplifier	090-900039	
C8	82 mmf., 500V, 10%, N750; Cer. Tub.	491-126820-95	R12,13,14	Part of Audio Couplate	-----	V3	12 AV6; AVC and 1st Audio Amplifier	090-901187	
C9	.01 mfd., 500V, GMV; Cer. Disc	047-100224	R15	150 ohm	451-252151	V4	50C5; Power Output Amplifier	090-900541	
C10	.047 mfd., 200V, 20%; Molded Paper	499-014473	R16	10 megohm	451-252106	MISCELLANEOUS			
C11	.01 mfd., 500V, +80 -20%; Cer. Disc	047-100217	R17	330 ohm	451-252331	Antenna, Telescoping	057-000421		
C12,29	.047 mfd., 600V, 20%; Molded Paper	499-034473	R19	500 ohm, 5W, Wire wound	024-001328-06	Bracket, Antenna	067-009150		
C13,28	.005 mfd., 500V, 20%; Cer. Disc	047-100442	R20	880-100 ohm, Globar	023-000327	Bracket, Dial Plate	067-008766		
C14,17,18	Part of Audio Couplate	-----	R21	Resistor, Fuse, 33 ohm, 5W	024-001398	Cabinet (Inc. Trim Strip)	150-000981		
C15	.001 mfd., 600V, 20%; Molded Paper	499-034102	R22	Resistor, Fuse, 220 ohm, 2W	024-001399	Clip, IF mtg.	076-100385		
C16	0.1 mfd., 20%, 100V; Molded Paper	046-001259-05	R23	1K ohm	451-252102	Clip, fuse (antenna mtg.)	076-102724		
C19	.01 mfd., 600V, 20%; Molded Paper	499-034103	R24	680K ohm	451-252684	Couplate, Audio	049-000225		
C20	.003 mfd., 600V, 20%; Molded Paper	499-034302	*All RESISTORS are 10%, 1/2 watt, carbon type, unless otherwise specified.			Dial Scale, Calibrated	083-000982		
C21	560 mmf., 5%, 125V; Plastic	505-102561	COILS AND TRANSFORMERS			Dial Cord	038-000049		
C22	1800 mmf., 5%, 125V; Plastic	505-102182	T1	Antenna Loop Stick Assembly	150-001606	Escutcheon, trim plate	007-000793		
C23	3900 mmf., 5%, 125V; Plastic	505-102392	T2	Coil, RF (band 2)	051-003473	Foot, Front	016-201072		
C24,25,26,27	7-100, 4-40, 4-40, 7-100 mmf., Var. Quad Trimmer, Inc. mtg. bracket	044-000534	T3	Coil, RF (band 3)	051-003474	Foot, Rear	016-201073		
C30	.022 mfd., 600V, 20%; Molded Paper	499-034223	T4	Coil, RF (band 4)	051-003475	Grammet, nylon plastic (foot and rear panel mtg.)	002-202441		
C31A,B,C,D	60 40-40 mfd., 150V; 20 mfd., 25V, Electrolytic	045-000711	T5	Transformer, 1st IF	050-300531	Grammet, nylon plastic (escutcheon mtg.)	002-102453		
C32	.01 mfd., 1400V, Spark Gap type; Cer. Disc	047-001309	T6	Transformer, 2nd IF	050-300532	Grammet (speaker and tuning capacitor mtg.)	016-100718		
* RESISTORS			T7	Transformer, Audio Output; Part of LS1	-----	Grammet (capacitor stabilizer plate)	016-100661		
R1	100 ohm	451-252101	L1	Coil, Oscillator (band 1)	051-003476	Iron Core	003-004564		
R2,9	47K ohm	451-252473	L2	Coil, Oscillator (band 2)	051-003477	Knob, MAIN TUNING and BANDSPREAD	015-001680		
R3,8	2.2 megohm	451-252225	L3	Coil, Oscillator (band 3)	051-003478	Knob, VOLUME and BFO	015-001678		
R4	3.9K ohm	451-252392	L4	Coil, Oscillator (band 4)	051-003479	Knob, BAND SELECTOR	015-001679		
R5	470 ohm	451-252471	L5	540 UH, RF Choke	053-100107	Lock, Line Cord	076-200397		
* RESISTORS (cont.)			SWITCHES			LS1	Speaker, 8 ohm Voice Coil, Inc. T7	085-000210	
S1A,B	BAND SELECTOR	060-002526	S2	STANDBY-RECEIVE	060-002548	Plate, Dial	063-004908		
S3	BFO-OFF, Part of R6	-----	S3	BFO-OFF, Part of R6	-----	Pointer, BANDSPREAD	082-000471		
S4	VOLUME-OFF, Part of R11	-----	S4	VOLUME-OFF, Part of R11	-----	Pointer, MAIN TUNING	082-000472		
SOCKETS AND CONNECTORS			SOCKETS AND CONNECTORS			Rear Panel	068-001250		
J1	PHONFS, jack	036-000339	J1	PHONFS, jack	036-000339	Ring, Electrolytic mtg.	076-003384		
TS1	Terminal Board, Antenna	088-100020	TS1	Terminal Board, Antenna	088-100020	Ring, Retaining	076-100883		
P1	Line Cord	087-100078	P1	Line Cord	087-100078	Spacer, Insulation (escutcheon)	073-003679		
	Socket, Dial light assembly	086-000578		Socket, Dial light assembly	086-000578	Spring, dial cord	075-100012		
						Shield, Tube (V1)	069-100237		
						Shield, Base (V1)	076-100402		
						Shaft, BANDSPREAD	074-002606		
						Shaft, MAIN TUNING	074-002607		

the new ideas in electronics
are born at ...  Hallicrafters



Precision Amateur Radio ♦ One of the few remaining avenues of uncensored personal communication among the peoples of the world is amateur radio. Hundreds of thousands of individuals from all walks of life, in 92 nations of the world (over half in the United States alone!) devote much of their spare time to this fascinating and useful activity. Far more than a hobby, "ham" radio is America's front line of defense in communication in times of national emergency or disaster. Hallicrafters manufactures more precision communications equipment for the amateur than any other company in the world. Its technological leadership has been acknowledged for 30 years.



Personal Communication ♦ In this age of exotic communications, space probes and satellites, has come a simple but tremendously important opportunity for private citizens to communicate. It is called Citizens Band Radio.

Any adult with a need for personal two-way radio communication can own and operate a citizens band radio. No operator's license is required, only an easily-obtained station license, making it ideal for business and professional men who must be away from their phones frequently.

Nearly a million sets are now in use in homes, offices, cars, tractors, boats, and in industry. From its earliest stages, Hallicrafters has been

a pioneer in Citizens Band Radio. Many of the major technical developments have come from Hallicrafters' electronic research laboratories. Today's Hallicrafters Citizens Band Radios are setting industry standards for compactness, for versatility, and outstanding performance.

Here, once again, is a working demonstration of new ideas in electronics, born at Hallicrafters... for you.



Aerospace Electronics ♦ For a quarter-century Hallicrafters has played a significant and special role in America's military defense. In addition to its widely used military communications equipment, Hallicrafters pioneered with the United States Air Force in the development of special research and development techniques known as "QRC," or Quick Reaction Capability, which have kept America ahead in the critical race for supremacy in electronic counter measures, reconnaissance, and other electronics warfare equipment. Today, advanced devices designed and manufactured by Hallicrafters aerospace division are at work in every phase of missile development from tracking system to nose cone.

094-903681B

Printed in U.S.A.

 Hallicrafters

14th AND POSTNER AVENUES • CHICAGO 24 • ILL. U.S.A.

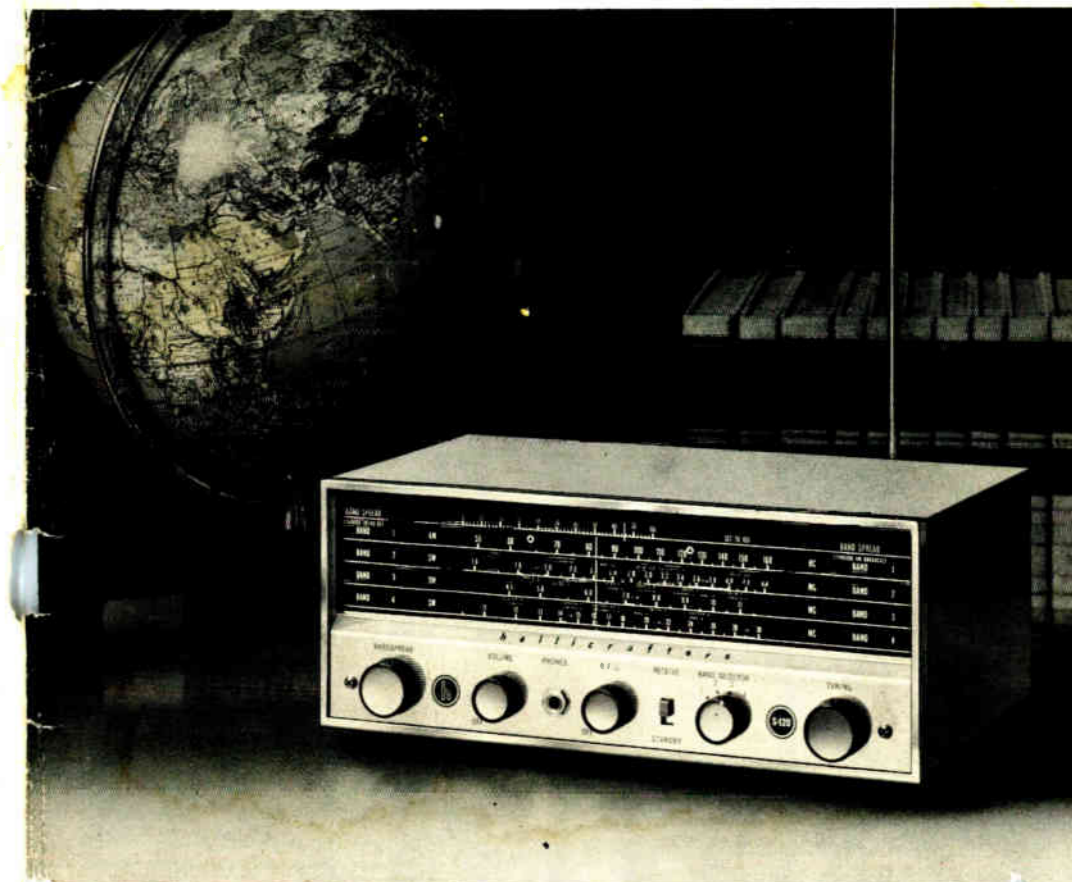
 Hallicrafters

OWNERS GUIDE

MODEL S-120

FOUR-BAND

COMMUNICATIONS RECEIVER



WARRANTY

The Hallicrafters Company warrants its products 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 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 extended 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 product.

the hallicrafters

156-001623

NOTE: Fill out and return immediately the enclosed WARRANTY CARD.

Record equipment information for future reference

RECEIVER:

Model number _____

Serial number _____

Date purchased _____

Purchased from _____

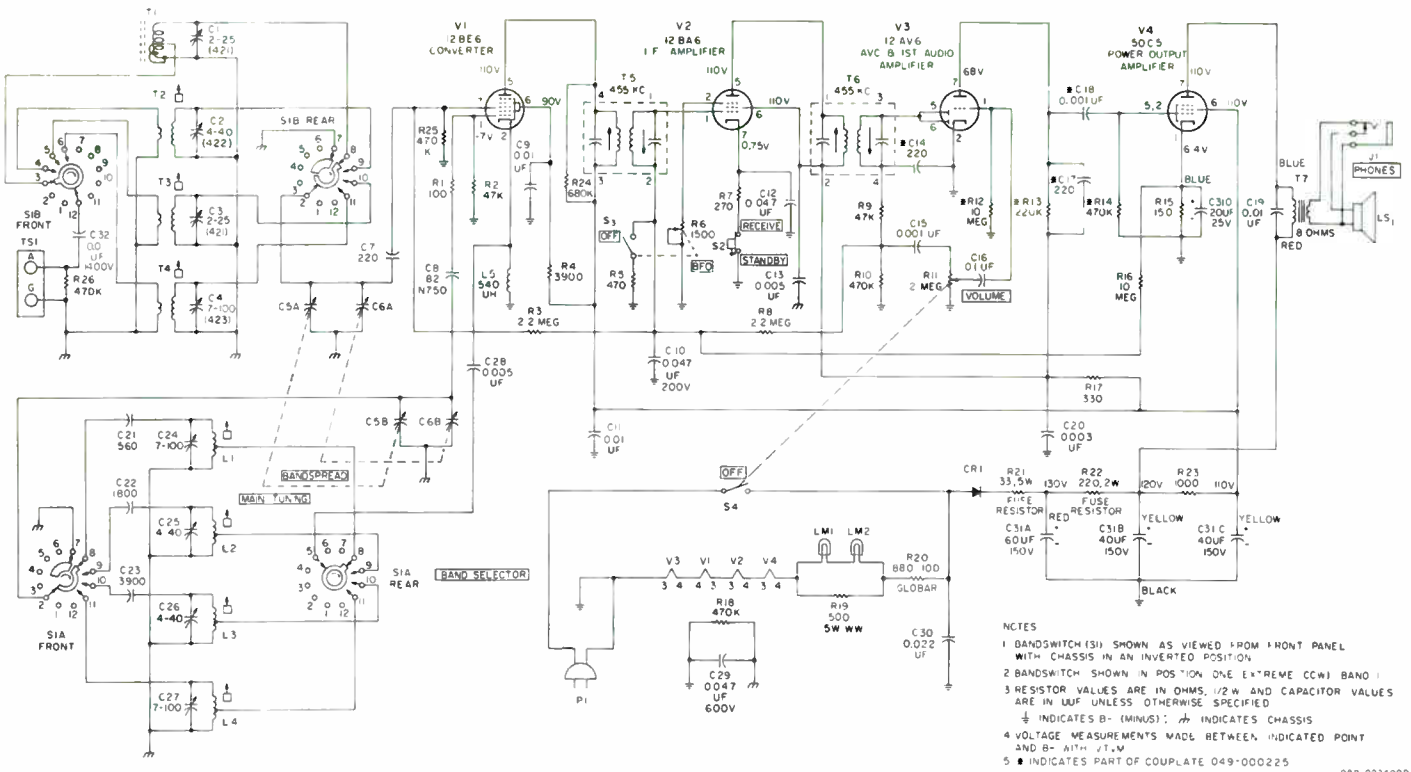
ACCESSORIES:

_____ # _____

_____ # _____

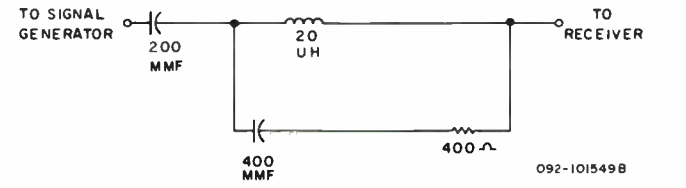
_____ # _____

For maximum enjoyment from your equipment . . . read your Owner's Guide before you start operating your receiver.



ALIGNMENT PROCEDURE

- Use an amplitude modulated generator covering 455 KC to 30 MC.
- Connect the output meter across the speaker voice coil.
- Use a non-metallic alignment tool.
- Use a standard EIA dummy antenna as shown at the right.
- Set BFO control to OFF, VOLUME control maximum clockwise, RECEIVE/STANDBY control to RECEIVE, and the BANDSPREAD control to 100.
- Refer to the top and bottom views for location of adjustments.



Step	Signal Generator Connections	Generator Frequency	Band Selector Setting	Receiver Dial Setting	Adjust
1	High side through a .01 mfd capacitor to stator plates of rear section of TUNING capacitor.	455 KC (30% mod.)	1	1.0 MC	A, B, C and D for maximum output. Keep reducing the generator output to keep the output meter below 50 milliwatts.
2	High side through EIA antenna to terminal ANT on rear of chassis. Low side to chassis.	1400 KC (30% mod.)	1	1400 KC	C1 and C24 for maximum output as in step 1.
3	Same as step 2.	600 KC (30% mod.)	1	600 KC	L1 for maximum output as in step 1.
4	Same as step 2.	-	1	-	Repeat steps 2 and 3 until no increase in output can be obtained on either adjustment.
5	Same as step 2.	4.3 MC (30% mod.)	2	4.3 MC	C2 and C25 for maximum output as in step 1.
6	Same as step 2.	1.9 MC (30% mod.)	2	1.9 MC	T2 and L2 for maximum output as in step 1.
7	Same as step 2.	-	2	-	Repeat steps 5 and 6 until no increase in output can be obtained.
8	Same as step 2.	11 MC (30% mod.)	3	11 MC	C3 and C26 for maximum output as in step 1.
9	Same as step 2.	5 MC (30% mod.)	3	5 MC	T3 and L3 for maximum output as in step 1.
10	Same as step 2.	-	3	-	Repeat steps 8 and 9 until no increase in output can be obtained.
11	Same as step 2.	30 MC (30% mod.)	4	30 MC	C4 and C27 for maximum output as in step 1.
12	Same as step 2.	14 MC (30% mod.)	4	14 MC	T4 and L4 for maximum output as in step 1.
13	Same as step 2.	-	4	-	Repeat steps 11 and 12 until no increase in output can be obtained.

TUBE AND DIAL LAMP REPLACEMENT

For access to the tubes, remove the cabinet rear panel which is held in place by two screws. Care should be exercised so as not to damage the leads to the loopstick antenna mounted on the inside of the rear panel. For dial lamp replacement, remove the chassis from the cabinet (see CHASSIS REMOVAL).

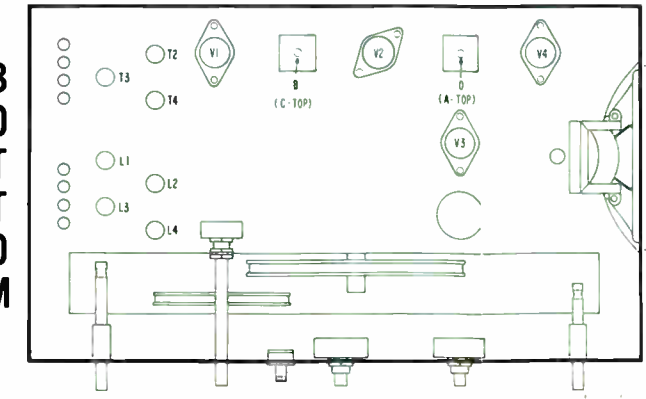
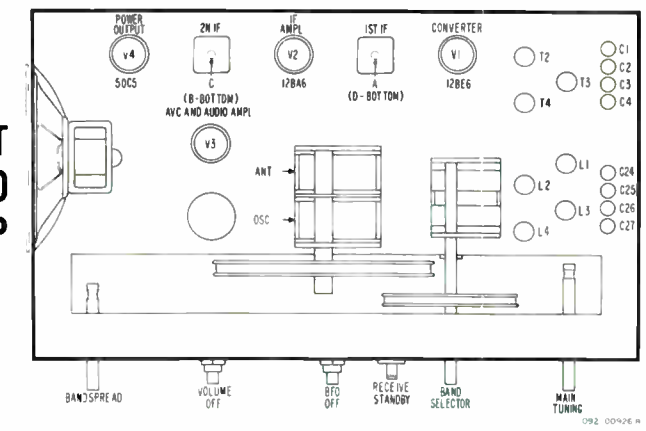
CHASSIS REMOVAL

To remove the chassis from the cabinet, remove the four screws (within the plastic feet) that secure the chassis to the cabinet. Slide the chassis out the rear of the cabinet.

CAUTION: Just before removing the chassis from the cabinet rotate the MAIN TUNING and BAND SPREAD controls fully counterclockwise to prevent damage of the tuning capacitors.

DIAL CORD RESTRINGING

Remove the chassis from the cabinet to restring either dial cord (see CHASSIS REMOVAL).



To restring the BAND SPREAD dial cord remove control knobs, phone jack retaining nut, escutcheon trim plate and clip on each end of plate (2 screws), insulation spacer, dial scale (two screws), and dial plate (four hex head screws). Care should be exercised when removing the dial plate not to damage the pointers. Referring to figure A, follow the arrows and letter sequence to string the dial cord. The dial cord spring should be expanded from 1 4 inch to 1 2 inch. Place the BAND SPREAD pointer on the bottom of the dial rail and engage the dial cord with the pointer clips. Replace the dial plate, dial scale, escutcheon trim strip (replace clips on either end of plate), and control knobs. With the BAND SPREAD control fully counterclockwise, align the pointer on "0" and apply a drop of cement to the dial cord and pointer clip. Replace chassis in cabinet.

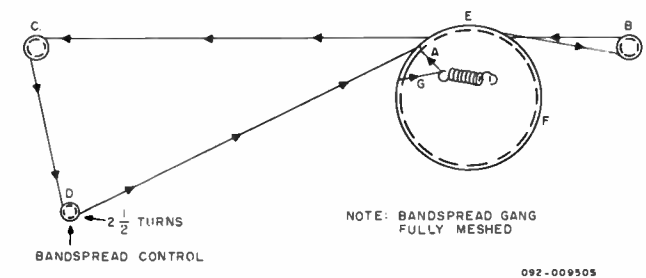


Figure A. Restringing the Bandspread Control.

To restring the MAIN TUNING dial cord with the chassis removed from the cabinet, refer to figure B and follow the arrows and letter sequence. The dial cord spring should be expanded 1 4 inch to 1 2 inch. Place the MAIN TUNING pointer on the dial rail and engage the dial cord with the pointer clips. With the MAIN TUNING control fully counterclockwise, align the pointer with "0" on the BAND SPREAD scale and apply a drop of cement to the dial cord and pointer clip. Replace the chassis in the cabinet.

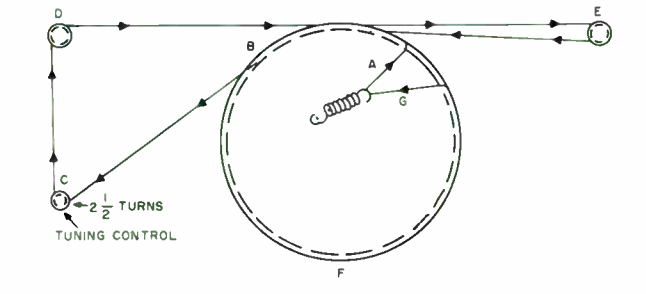


Figure B. Restringing the Tuning Dial.