

INSTRUCTIONS
FOR
SERVICE SPEAKER
OPTION 9510

(For MASTR® II Stations)

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DESCRIPTION

The Service Speaker Option mounts on the Radio Housing and is equipped with a volume switch (S2), speaker load resistors and a three position selector switch (S1). Audio from Receiver 1, Audio from Receiver 2 or Speaker OFF can be selected with the selector switch (S1).

ADJUSTMENT

To set the Service Speaker Volume level use the following procedure:

1. Apply a 1000 microvolt on-frequency test signal modulated by 1,000 Hertz with ± 3 kHz deviation to the receiver antenna jack J937.
2. Connect an AC VTVM across METERING jack J905 terminals 1 and 2 on the System Board.
3. Adjust R3 (on the System Board) for a reading of 6.3 Volts RMS on the meter.

CAUTION

Adjustment of VOLUME control to settings higher than instructed in the INITIAL ADJUSTMENT will result in blowing the fuse.

4. Set Volume Switch S2 on the Service Speaker to the desired listening level.

MOBILE RADIO DEPARTMENT
GENERAL ELECTRIC COMPANY • LYNCHBURG, VIRGINIA 24502

GENERAL  **ELECTRIC**

PARTS LIST

LBI4815B

SERVICE SPEAKER
19C320728G2

SYMBOL	GE PART NO.	DESCRIPTION
----- FUSES -----		
F1*	1R16P1	Quick blowing: 1/2 amp 250 v; sim to Littelfuse 312.500 or Bussmann AGC-1/2.
	1R16P14	In REV D: Quick blowing: 3/8 amp 250 v; sim to Littelfuse 312.375 or Bussmann AGC-3/8. Added by REV D.
----- JACKS AND RECEPTACLES -----		
J1	19B209288P22	Connector. Includes: Shell.
	5496809P18	Contact, electrical: male; sim to Molex 1380-T.
----- LOUDSPEAKERS -----		
LS1	19A115964P1	Permanent magnet: 3.5 inch, 18 ohms $\pm 10\%$ imp, 15 to 19 ohms $\pm 20\%$ DC res, resonant frequency 290 Hz; sim to Oaktron S-9847.
----- RESISTORS -----		
R1	5493035P53	Wirewound: 18 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR.
R2*	5493035P53	Wirewound: 18 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR. Deleted by REV D.
R3*	19B209490P1	Variable, wirewound: 35 ohms $\pm 20\%$, 2.25 w; sim to CTS Type 118. Deleted by REV D.
R4*	5493035P52	Wirewound: 8.2 ohms $\pm 10\%$, 5 w; sim to Hamilton Hall Type HR. Deleted by REV C.
R5*	5493035P53	Wirewound: 18 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR. Added by REV B.
R6*	5493035P27	Wirewound: 10 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR. Added by REV C. Deleted by REV D.
R7*	19B209022P31	Wirewound: 4.7 ohms $\pm 5\%$, 2 w; sim to IRC Type BWH. Added by REV D.
R8*	5493035P17	Wirewound: 63 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR.
	3R78P620J	In REV D: Composition: 62 ohms $\pm 5\%$, 1 w. Added by REV D.
R9*	5493035P44	Wirewound: 25 ohms, $\pm 5\%$, 10 w. sim to Hamilton Hall Type HR.
	19B209022P48	In REV D: Wirewound: 24 ohms $\pm 5\%$, 2 w; sim to IRC Type BWH. Added by REV D.
R10*	3R77P221J	Composition: 220 ohms $\pm 5\%$, 1/2 w. Added by REV D.
R11*	3R77P560J	Composition: 56 ohms $\pm 5\%$, 1/2 w. Added by REV D.
----- SWITCHES -----		
S1	19B209261P5	Slide: DPTT, 2 poles, 3 positions, .5 amp VDC or 3 amps VAC at 125 v; sim to Switchcraft 11D1033B.
S2*	19B209261P5	Slide: DPTT, 2 poles, 3 positions, .5 amp VDC or 3 amps VAC at 125 v; sim to Switchcraft 11D1033B. Added by REV D.
----- TERMINAL BOARDS -----		
TB1*	7775500P44	Phen: 2 terminals. Added by REV D.
----- SOCKETS -----		
XF1*	7141008P1	Fuseholder: 30 amps at 125 v; sim to Bussman 2863. Added by REV D.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

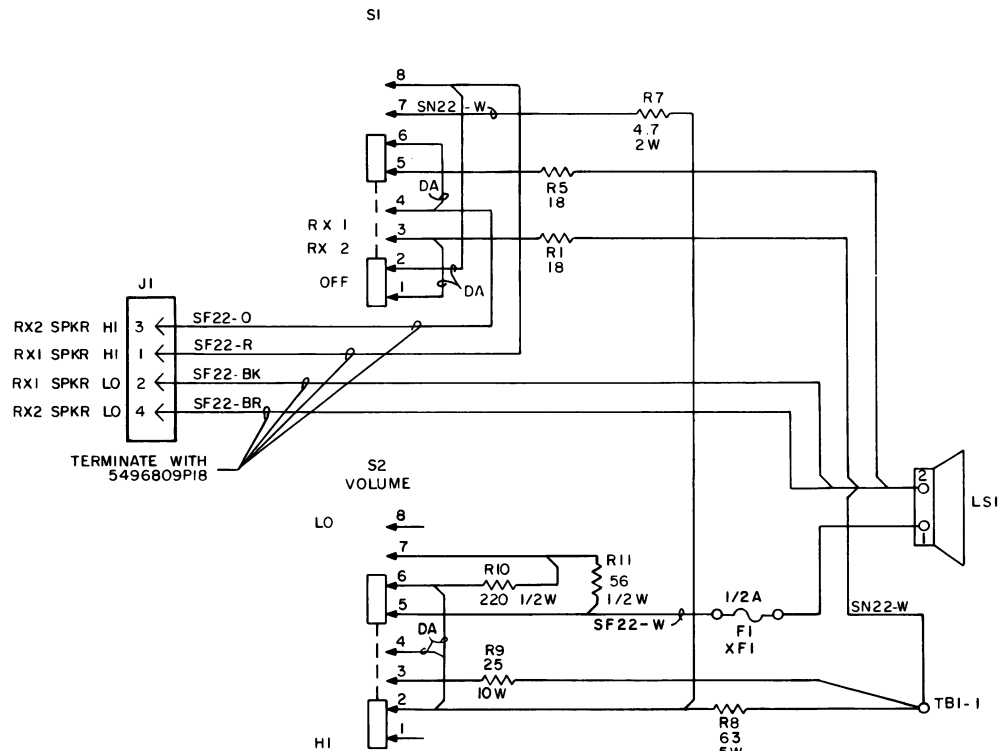
SYMBOL	GE PART NO.	DESCRIPTION
----- MISCELLANEOUS -----		
	4031543P2	Knob. (Used with R3).
	7115130P9	Lockwasher; sim to Shakeproof 1220-2. (Used with R3).
	7165075P2	Hex nut, brass: No. 3/8-32. (Used with R3).
	4032480P1	Nut, sheet spring: sim to Vector Electronic Co. No. 440. (Secures S1, S2).
	N80P9004C6	Machine, screw: No. 4-40 x 1/4. (Secures S1, S2).
	N80P13005C6	Machine, screw: No. 6-32 x 5/16. (Secures Service speaker).
	7141225P3	Hex nut: No. 6-32. (Secures Service Speaker).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Secures Service Speaker).

PRODUCTION CHANGES

Changes in the equipment to improve performance or to simplify circuits are identified by a "Revision Letter", which is stamped after the model number of the unit. The revision stamped on the unit includes all previous revisions. Refer to the Parts List for descriptions of parts affected by these revisions.

- REV. A - To eliminate factory wiring errors caused by duplication of wire colors. Changed wire colors of J1-1 from orange to Red and J1-2 from Brown to Black.
- REV. B - To provide load for receiver when service speaker switch is in "OFF" position. Added R5 and DA Jumper between S1-1 and S1-3.
- REV. C - To prevent oscillation and to protect R3 from overload. Deleted R4 and added R6.
- REV. D - To prevent component damage due to excessive voltage. Deleted R2, R3 and R6. Added F1, XF1, R7-11, S2 and TB1.
- REV. E - To protect speaker from excessive drive. Changed F1, R8 and R9.

SCHEMATIC DIAGRAM

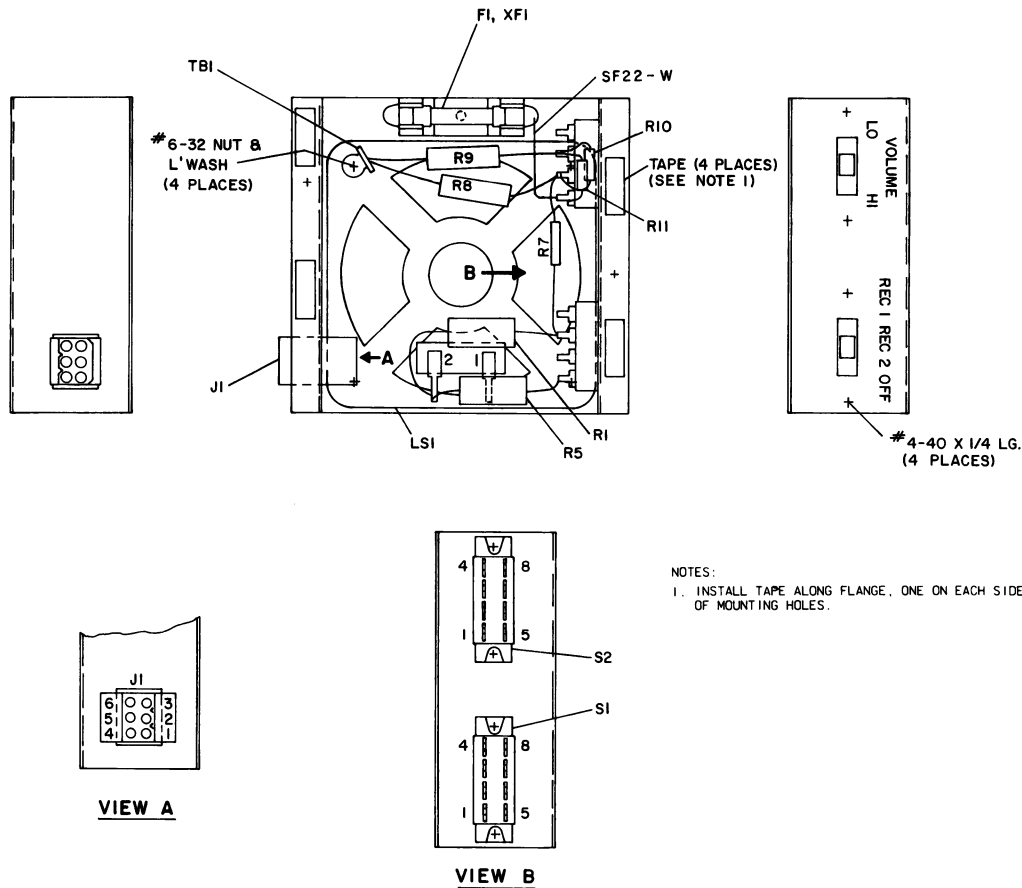


SEE APPLICABLE PRODUCTION CHANGE SHEETS IN INSTRUCTION BOOK SECTION DEALING WITH THIS UNIT, FOR DESCRIPTION OF CHANGES UNDER EACH REVISION LETTER.	
THIS ELEM DIAG APPLIES TO	
MODEL NO	REV LETTER
PL19C320728G2	E

ALL RESISTORS ARE 5 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG=1,000,000 OHMS. CAPACITOR VALUES IN PICO FARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF= MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH= MILLIHENRYS OR H=HENRYS.

(19C320731, Rev. 7)

OUTLINE DIAGRAM

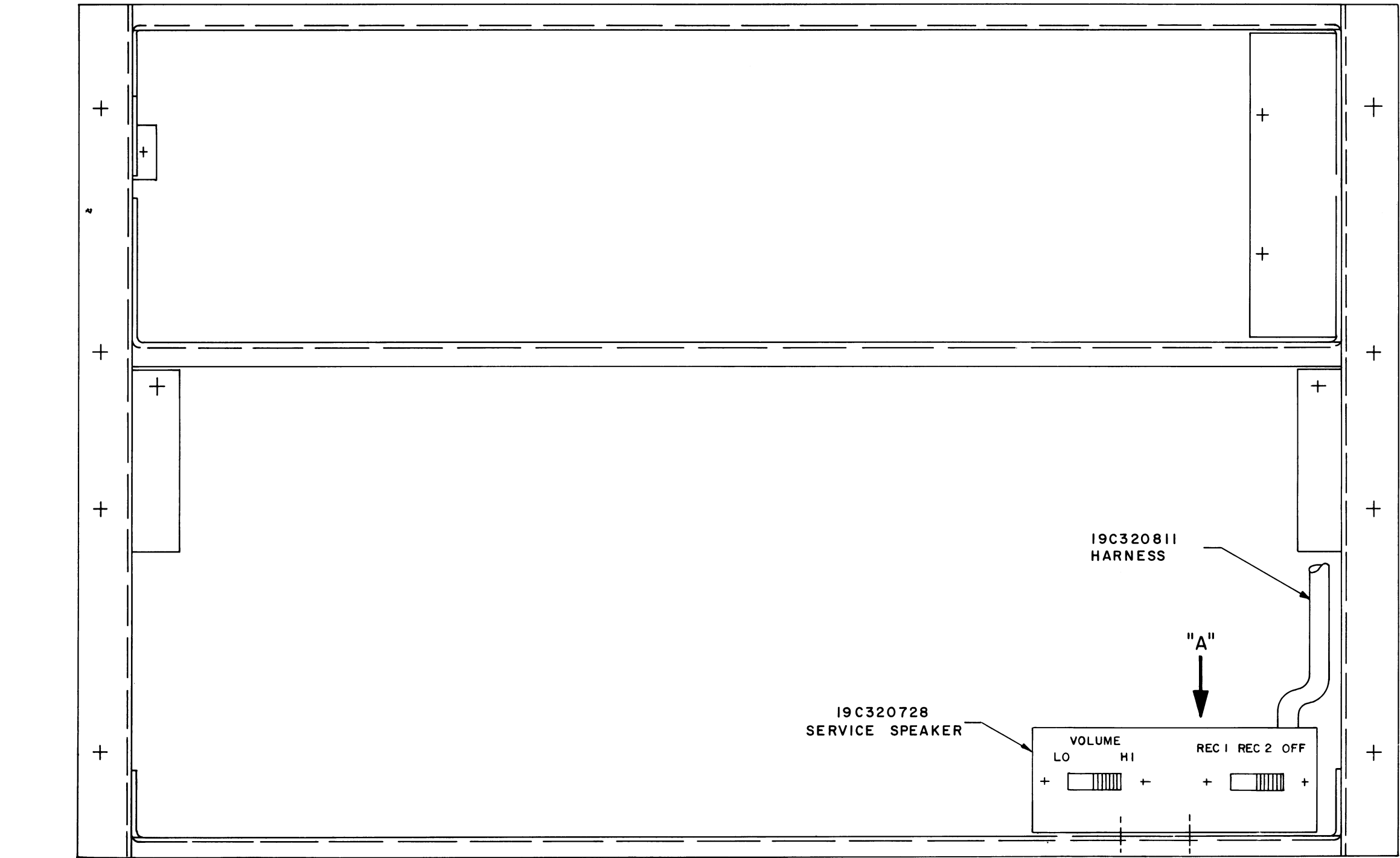


NOTES:
1. INSTALL TAPE ALONG FLANGE, ONE ON EACH SIDE OF MOUNTING HOLES.

(19C328482, Rev. 1)

SERVICE SHEET

SERVICE SPEAKER



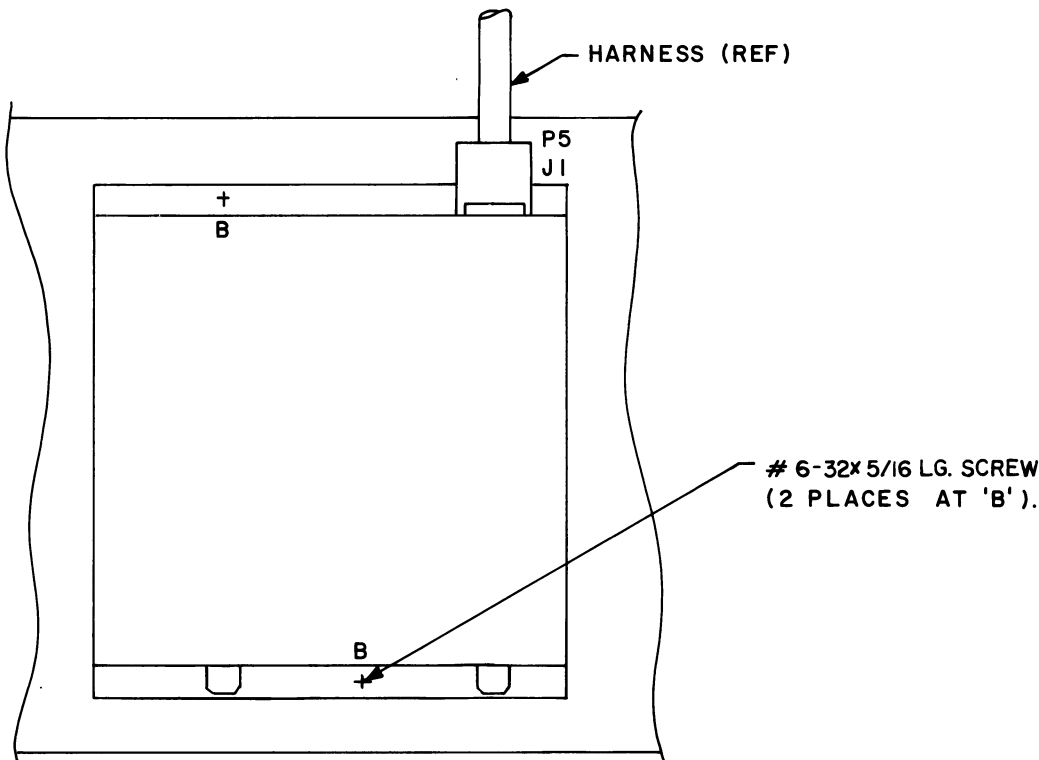
FRONT VIEW OF RADIO HOUSING
WITH RECEIVER-EXCITER DOOR REMOVED

(19D429499, Rev. 0)

THESE INSTRUCTIONS COVER THE INSTALLATION OF THE
19C320728 SERVICE SPEAKER TO THE 19C320703 RADIO
HOUSING.

INSTRUCTIONS:

1. MOUNT 19C320728 (SERVICE SPEAKER) TO 19C320703
(RADIO HOUSING) AS SHOWN. USE #6-32 x 5/16 LG
SCREW, L' WASHERS & NUTS SUPPLIED.
2. CONNECT P5 OF 19C320811 (HARNESS) WITH J1 OF
19C320728 (SERVICE SPEAKER).



VIEW AT "A"
(PARTIAL)

INSTALLATION INSTRUCTIONS

SERVICE SPEAKER