

MAINTENANCE MANUAL  
FOR  
TEST ADAPTOR 4EX12A11  
(19C330227G1)



General Electric Test Adaptor, Model 4EX12A11, provides audio connections for servicing transmit and receive circuits in MPR personal radios. A cable connected to the UDC connector of the MPR radio connects the audio to audio jacks on the front panel of the Test Adaptor. The audio jacks permit using standard dual-banana plugs for making connections to external test equipment.

The Test Adaptor is also equipped with a BNC connector for connecting a wattmeter or RF generator to the antenna circuit of the MPR, a PTT switch, a SPKR-LOAD switch and a speaker.

## TRANSMIT CIRCUIT SERVICING

When checking or setting transmit deviation; the output of an audio generator is connected to TX AUDIO INPUT jacks J3101 and J3102. A wattmeter is connected to BNC connector P3102 and connector P3101 is connected to the UDC connector on the MPR. Refer to the Table of Contents in the MPR Maintenance Manual for the Transmit Circuit Alignment and Test Procedure.

PTT Switch S3101 provides keying of the transmit circuit from the Test Adaptor.

## RECEIVE CIRCUIT SERVICING

Audio from RX AUDIO OUTPUT jacks, J3103 and J3104, can be used to measure audio power output, distortion and sensitivity. BNC connector P3102 is connected to an RF signal generator. Refer to the Table of Contents in the MPR Maintenance Manual for the Receive Circuit Test Procedures.

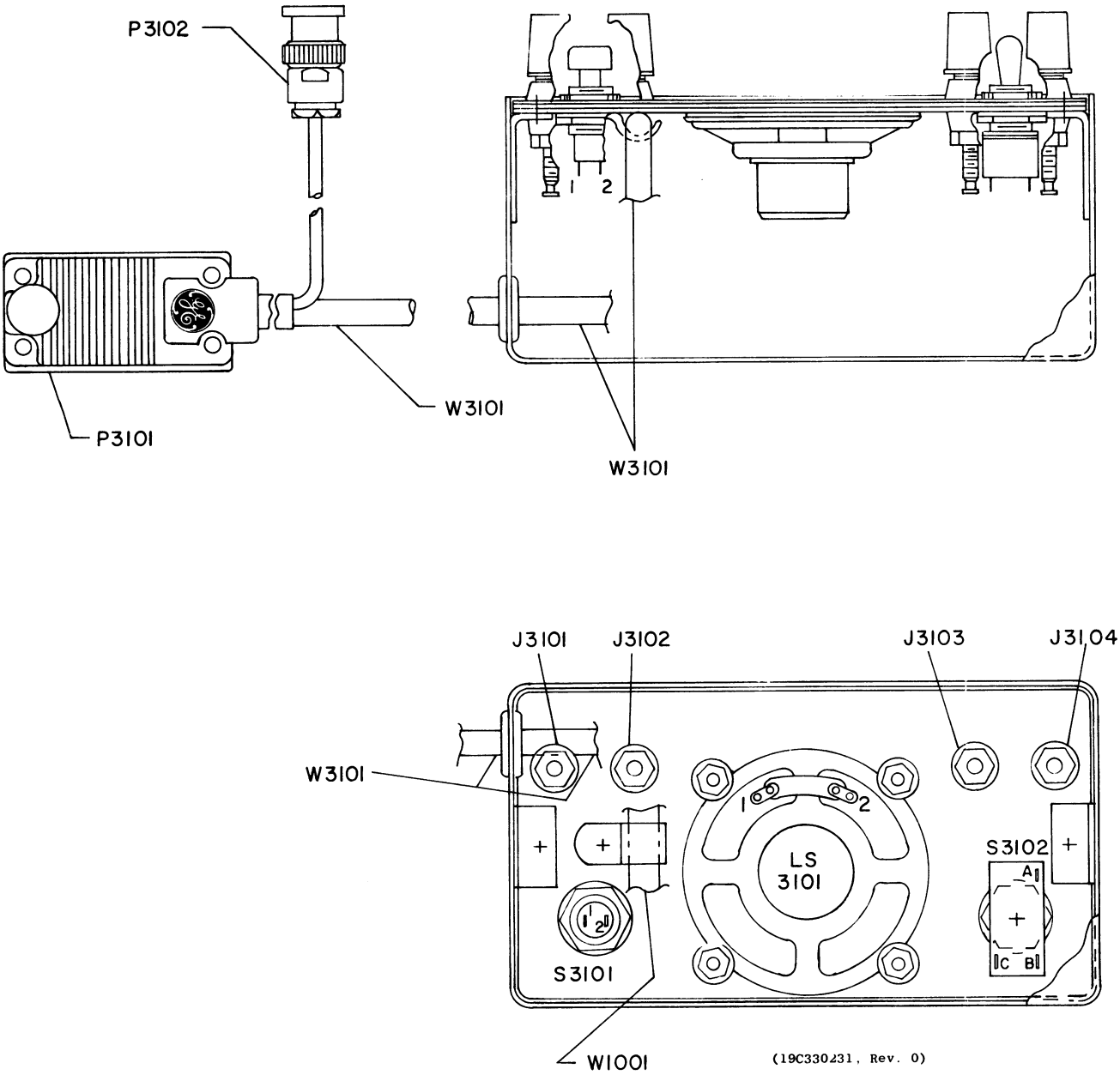
Connecting connector P3101 to the MPR UDC connector disables the radio speaker. The Test Adaptor provides speaker LS3101 or load resistor R3101 selected by SPKR-LOAD switch S3102.

## CAUTIONS

1. Do Not key the transmit circuit using either PTT switch S3101 or the local PTT Bar when the BNC connector is connected to a signal generator. The transmit RF output power may cause failure of the signal generator attenuator.
2. During transmit circuit audio measurements, key the radio using only PTT S3101. Keying the unit with the local PTT Bar disconnects the external audio input circuit from the UDC.

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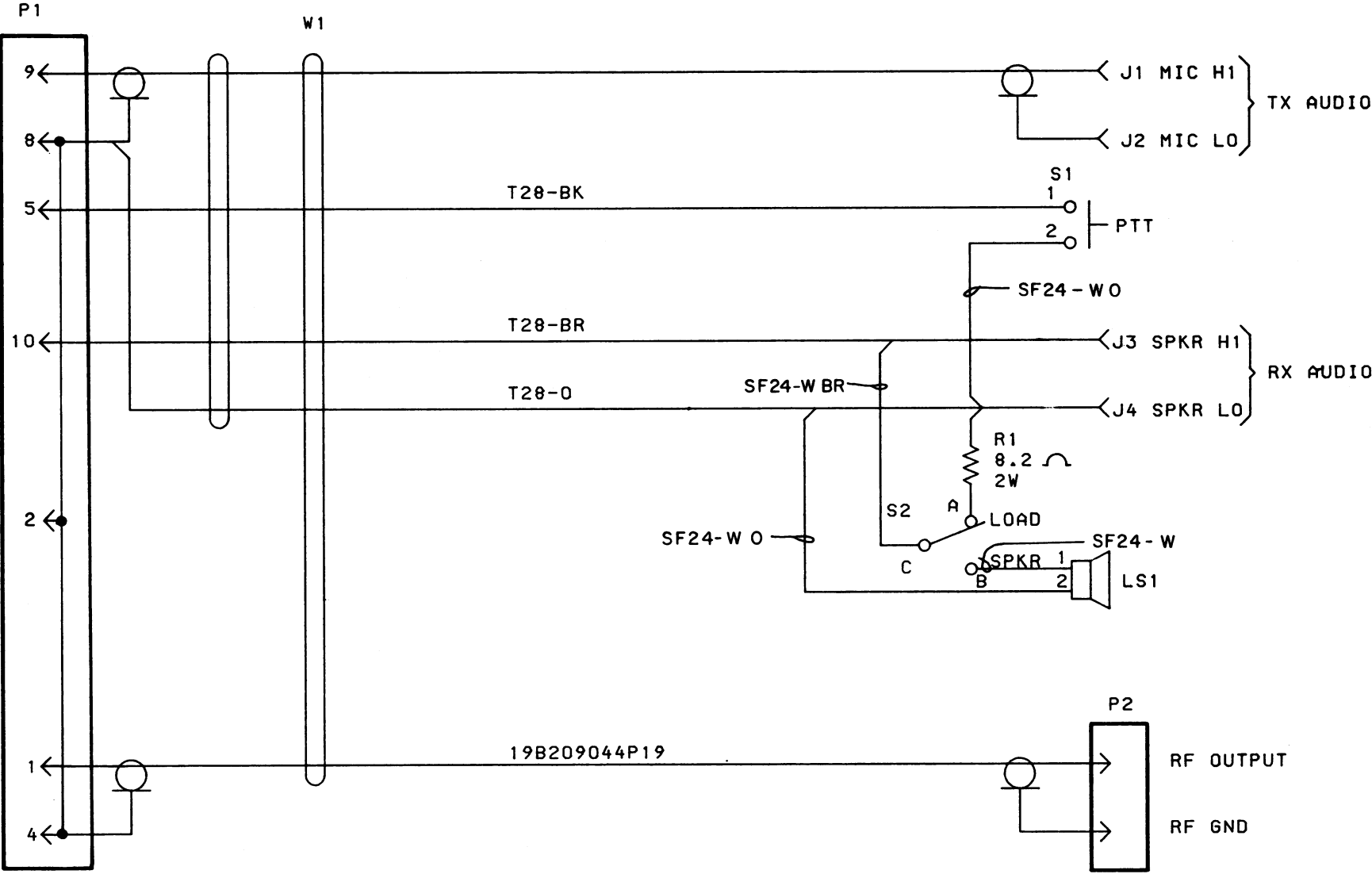


OUTLINE DIAGRAM

TEST ADAPTER

MODEL NO 4EXI2A11	REV LETTER A
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NOTES:  
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN.FOR COMPLETE DESIGNATION PREFIX WITH 3100 SERIES.  
EXAMPLE R1-R3101,P1-P3101, ETC.



(19C330228, Rev. 3)

PARTS LIST

TEST ADAPTOR  
4EA12A11  
19C330227G1  
ISSUE 2

SYMBOL	GE PART NO.	DESCRIPTION
J3101	19B209238P1	----- JACKS AND RECEPTACLES ----- Binding post: red, 15 amp; sim to H H Smith 1517.
J3102	19B209238P2	Binding post: black, 15 amp; sim to H H Smith 1517.
J3103	19B209238P1	Binding post: red, 15 amp; sim to H H Smith 1517.
J3104	19B209238P2	Binding post: black, 15 amp; sim to H H Smith 1517.
LS3101	19A116151P2	----- LOUDSPEAKERS ----- Permanent magnet: 2-1/4 inch, 8 ohms $\pm 10\%$ imp, 600Hz $\pm 100$ Hz resonant; sim to Oaktron T1877.
P3101 and P3102		----- PLUGS ----- (Part of W3101).
R3101	19B209022P37	----- RESISTORS ----- Wirewound: 8.2 ohms $\pm 5\%$ , 2 w; sim to IRC Type BWH.
S3101	19B209165P1	----- SWITCHES ----- Push: nomally open, 1 amp at 15 VDC or 115 VAC; sim to Grayhill 30YY2120.
S3102	5491899P1	Toggle: SPDT, 1 amp at 250 VDC, 3 amps at 125 VAC; Cutler-Hammer 8282K13.
W3101		----- CABLES ----- CABLE ASSEMBLY 19C330221G1
P3101 and P3102	19C328398G2 and 4036990P1	----- PLUGS ----- Connector. Connector, plug: sim to Kings Electronics KC59-89 (male contact).
		----- MISCELLANEOUS ----- Cover. (P3101). Contact. (Located at P3101-2, 5, 8, 9). Shield. (Located in P3101). Strain relief. (Secures cable to P3101). Machine screw, Metric: 3-0.5 x 6MM. (Secures strain relief to P3101). Tap screw: No 4-24 x 1/2. (Secures cover to P3101 - cable end). Tap screw: No 4-24 x 5/16. (Secures cover to P3101 - connector retaining screw end). Thumbscrew. (Secures P3101 connector). Retaining ring. (Used with P3101 connector securing screw). Front plate, Test Adaptor. Grille. Faceplate, aluminum. Grommet, rubber. (Used with W3101).

SYMBOL	GE PART NO.	DESCRIPTION
	7763541P3	Retaining strap. (Used with W1001).
	7165075P3	Hex nut, brass: thd. size No. 15/32. (Secures S3102).
	7115130P11	Lockwasher, internal tooth: sim to Shakeproof 1222-1. (Secures S3101 & S3102).
	4033394P1	Knurled nut. (Secures S3101, S3102).
	19B201074P305	Tap screw, Phillips POZIDRIV®: No. 6-32 x 5/16. (Secures plate & grille).
	N402P65C13	Flatwasher: No. 4. (Secures LS3101).
	7141225P2	Hex nut: No. 4-40. (Secures LS3101).
	N404P11C6	Lockwasher, internal tooth: No. 4. (Secures LS3101).
	7141225P3	Hex nut: No. 6-32. (Secures W1001 retaining strap).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Secures W1001 retaining strap).

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 improve repectability of RF Power output readings.  
Added shield.