



MAINTENANCE MANUAL

CONTROL UNIT
19A705384P3

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DESCRIPTION

The control unit consists of a 5 watt audio amplifier and a 3-inch speaker housed in a Lexan case. The unit contains several controls and switches including a POWER switch to control power to the amplifier and the radio, a CHANNEL switch to select up to 4 channels, and a MONITOR switch to emit a tone to adjust the volume. A red TX LED will light to indicate the microphone PTT is keyed.

The control unit is interconnected to the radio by a system cable with a 9-pin plug (P1). The power cable has two connectors: J2 connects to the power cable from the battery and/or ignition switch, and P2 connects to the power cable on the radio. An 8-pin microphone connector (J1) is located at the back of the control unit.

CIRCUIT ANALYSIS

A + enters the control unit through J2-2 and is applied to the POWER switch. The switch supplies SWA + to the 5 watt PA, the TX LED, and to the radio through P2-2.

Speaker audio from the radio is routed through system connector P1 to transformer XF1. The audio passes from XF1 through volume control VR101 to the input of 5 watt amplifier IC101. The amplified audio is applied to the speaker through coupling capacitor C105.

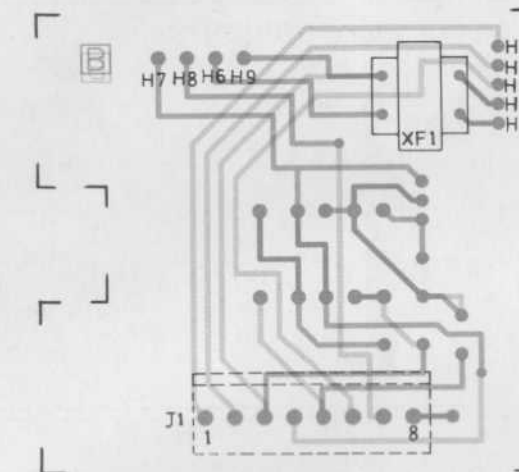
The 4 logic lines (CH SEL0, CH SEL1, MONITOR, and PTT) are routed from the radio to the control unit through P1. These lines are normally pulled high (+ 5 V) by 50 K pull-up resistors internal to the Logic Board microprocessor in the radio. The channel select switch along with diodes D3, D5 and D6 are used to pull these lines low, converting the four positions of the switch to two binary lines.

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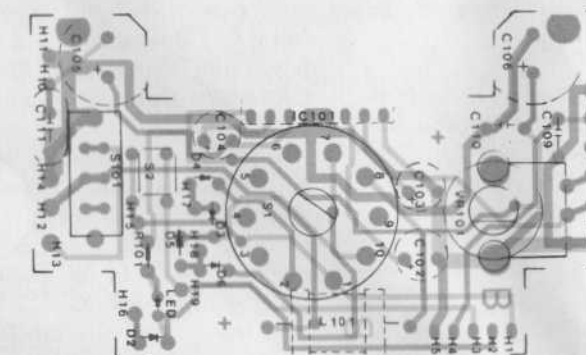
**GE Mobile Communications**General Electric Company
Lynchburg, Virginia 24502

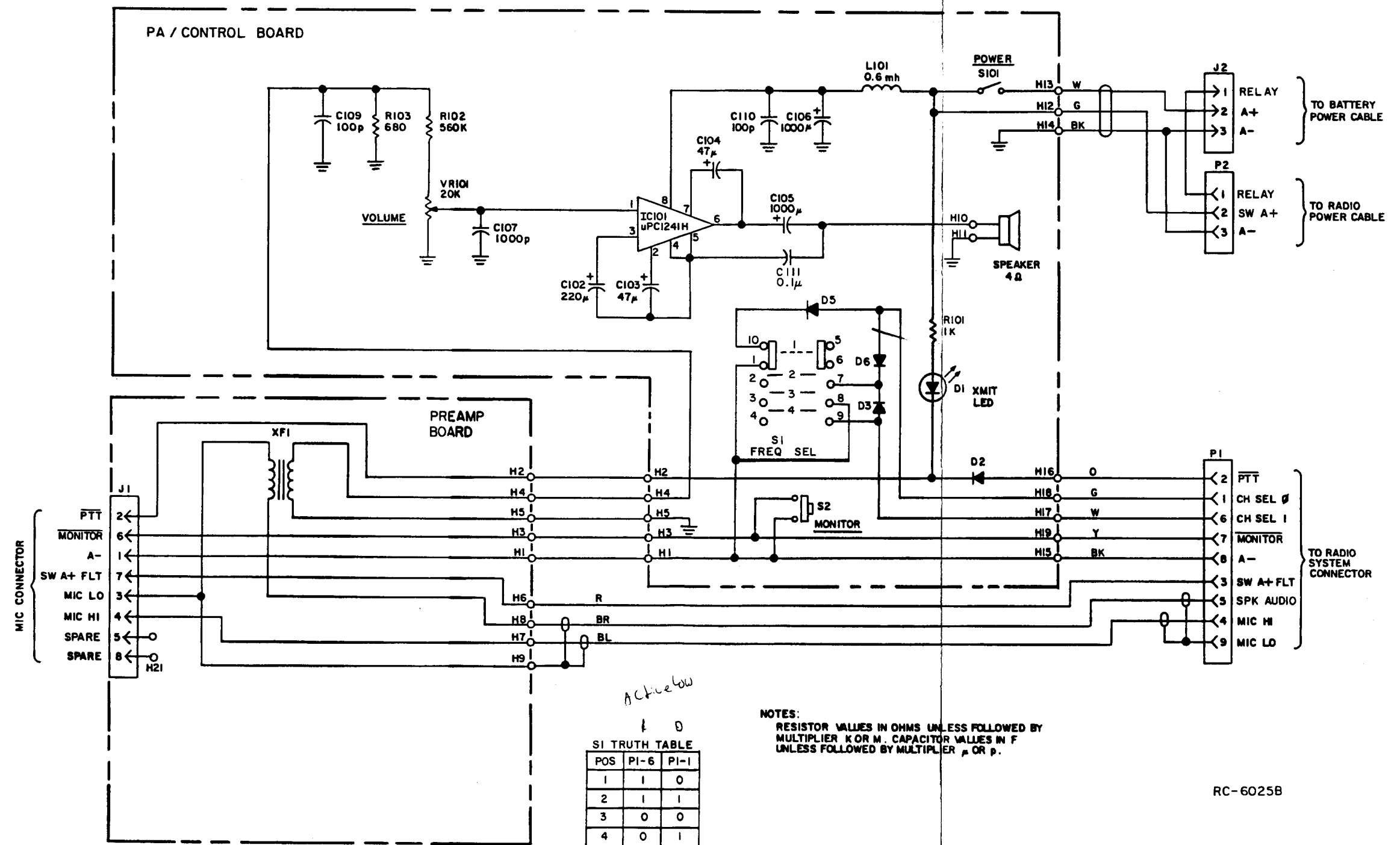
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PREAMP BOARD



PA/CONTROL BOARD





PARTS LIST		
CONTROL UNIT 19A705384P3 ISSUE 3		
SYMBOL	GE PART NO.	DESCRIPTION
D1 D2 and D3 D5 and D6	82LD205020-18	NOTE: WHEN ORDERING REPLACEMENT PARTS, ALL PART NUMBERS SHOULD BE PRECEDED BY "R19/".
	82DD100000-19	----- DIODES ----- LED, red: LT-32x59, 20mA.
	82DD100000-19	Diode: sim to 1N4148.
J1 J2 J2	82DD100000-19	Diode: sim to 1N4148.
		----- CONNECTORS -----
	67TJ080000-13	Jack, 8 pin.
F2 F2	63PW000000-12	Housing.
	79IL000000-18	Pin.
		----- PLUGS -----
S1 S2	63PW000000-25	Housing.
	79IL000000-21	Pin.
		----- SWITCHES -----
VR101 XF1	67SW100001-19	Select switch, 1-4.
	67SW100002-16	Momentary switch.
		----- VARIABLE RESISTORS -----
C102 C103 and C104 C105 and C106 C107 C109 and C110 C111	82VR3K0200-19	20K(A) 300 DEG.
		----- TRANSFORMERS -----
	67TF000000-10	Transformer: 600 ohm to 600 ohm.
IC101 L101		POWER AMPLIFIER BOARD
		----- CAPACITORS -----
	82EC100220-11	Capacitor: 220 uF, 16V.
R101 R102 R103 S101	82EC100047-16	Capacitor: 47 uF, 16V.
	82EC101000-10	Capacitor: 1000 uF, 16V.
	82MC10C001-10	Mylar: 0.001 uF, 16V.
IC101 L101	82CC100100-14	Ceramic: 100 pF.
	82MC10A001-16	Mylar: 0.1 uF.
		----- INTEGRATED CIRCUITS -----
R101 R102 R103 S101	67IC200001-18	Integrated circuit.
		----- INDUCTORS -----
	82FL20A006-16	Inductor: 0.6 mH.
R101 R102 R103 S101		----- RESISTORS -----
	82KR1K0010-15	Resistor: 1K ohm, 1/4 w.
	82KR1K5600-17	Resistor: 560K ohm, 1/4 w.
IC101 L101	82KR106800-18	Resistor: 680 ohm, 1/4 w.
		----- SWITCHES -----
	67SW100003-13	Power switch: 2-2.

SYMBOL	GE PART NO.	DESCRIPTION
		----- MISCELLANEOUS -----
	C030F29B-01	Speaker: 4 ohm, 3", 5W.
	6700000000-A5	Heatsink. (Used with Pre-Amp).
	8600000000-B9	Screw: 3x8. (Used with Heatsink).
	8600000000-F1	Nut. (Used with Heatsink).
	6700000000-B8	Heatsink. (Used with Power-amp).
	8600000000-B9	Screw: 3x8. (Used with IC101).
	8600000000-F1	Nut. (Used with IC101).
	88MW000080-17	Flat wire, 5P, 80M/M.
	88NR000120-15	Red wire: 26 AWG, 120m/m. (Speaker positive).
	88NB000150-19	Black wire: 26 AWG, 150m/m. (Speaker negative).
	63TI000000-TBD	Rear housing.
	63TI000000-51	Grill, front panel.
	63TA000000-42	Control panel.
	63RA000000-19	Knob. (Used for Volume and Select).
	63UA000000-30	Knob. (Power switch).
	63UA000000-43	Knob. (Momentary switch).
	660B000000-58	Nameplate, "TMK".
	63LG000000-15	Retainer mat.
	63RG000000-11	Breakaway device.
	63UI000000-10	Mount.
	8600000000-74	Screw. (Secures grill).
	8600000000-58	Screw. (Secures mount).
	8600000000-16	Screw bag.
	8411105053-12	Plate. (Used with housing and mount).
	8411100054-14	Plate. (Used with housing and mount).
	8600000000-C2	Screw: 3x12. (Used with grill and housing).
	88QB091100-13	Single cable: 9 pin, 1.1M.
	88QB060750-29	Power cable: 3 pin x 2, 0.75M.
	8412095080-17	Spring washer: 9.5 x 8 x 0.1. (Secures speaker).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES