

**MAINTENANCE MANUAL
FOR
MPI SPEAKER/MICROPHONE 19437483G2 & G4
19D437483G2 - OPTION AE12
19D437483G4 - OPTION AE11**

— TABLE OF CONTENTS —

	<u>Page</u>
SPECIFICATIONS	1
DESCRIPTION	1
CIRCUIT ANALYSIS	1
OUTLINE DIAGRAM	3
SCHEMATIC DIAGRAM	4
PARTS LIST	5

SPECIFICATIONS*

Speaker Impedance	8 ohms
Speaker Rating	500 milliwatts
Accoustical Output (EIA)	85 dB @1000 Hz
Microphone Output	-76 dB @1000 Hz (0.16 millivolts)
HI/LO Audio Switch Attenuation	15 dB
Temperature Range	-30°C to +60°C

DESCRIPTION

General Electric MPI Speaker/Microphones consist of a molded plastic case comprised of a front and rear cover held together by three thread cutting screws. The front cover provides a grill opening for the speaker and microphone.

The rear cover provides mounting for an earphone jack, HI-LO switch, cable clamps and cable bend relief. Also, the recess on the rear cover provides a place to cement a Velcro® patch or rivet mounting plates for a hang-up button or belt clip. The belt clip can be swiveled 360° in 30° increments.

The case has a two chamber cavity especially designed for high accoustical performance, for mounting the speaker.

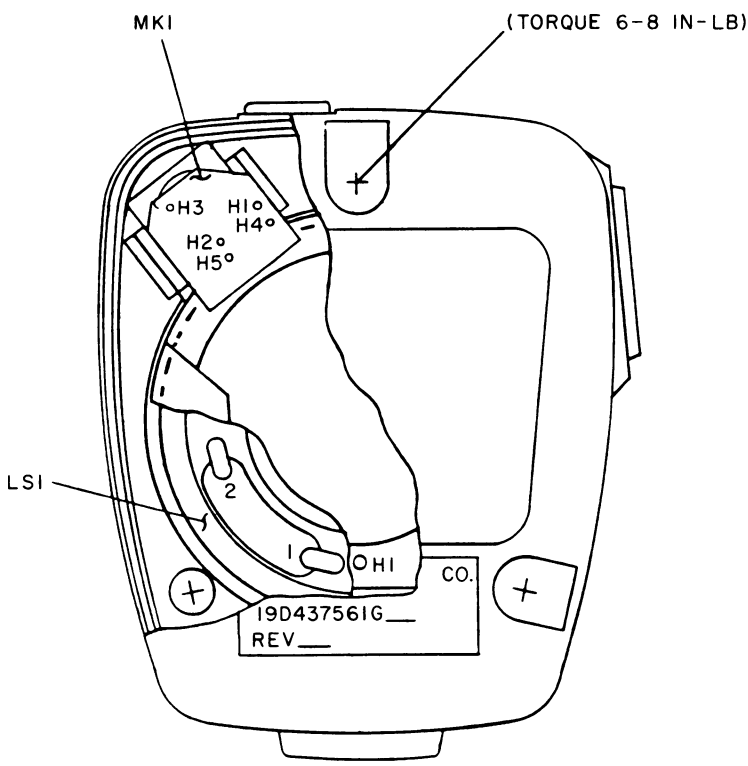
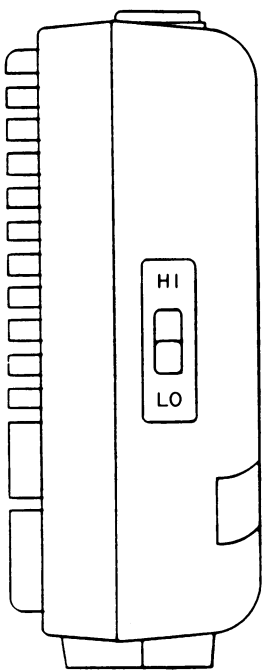
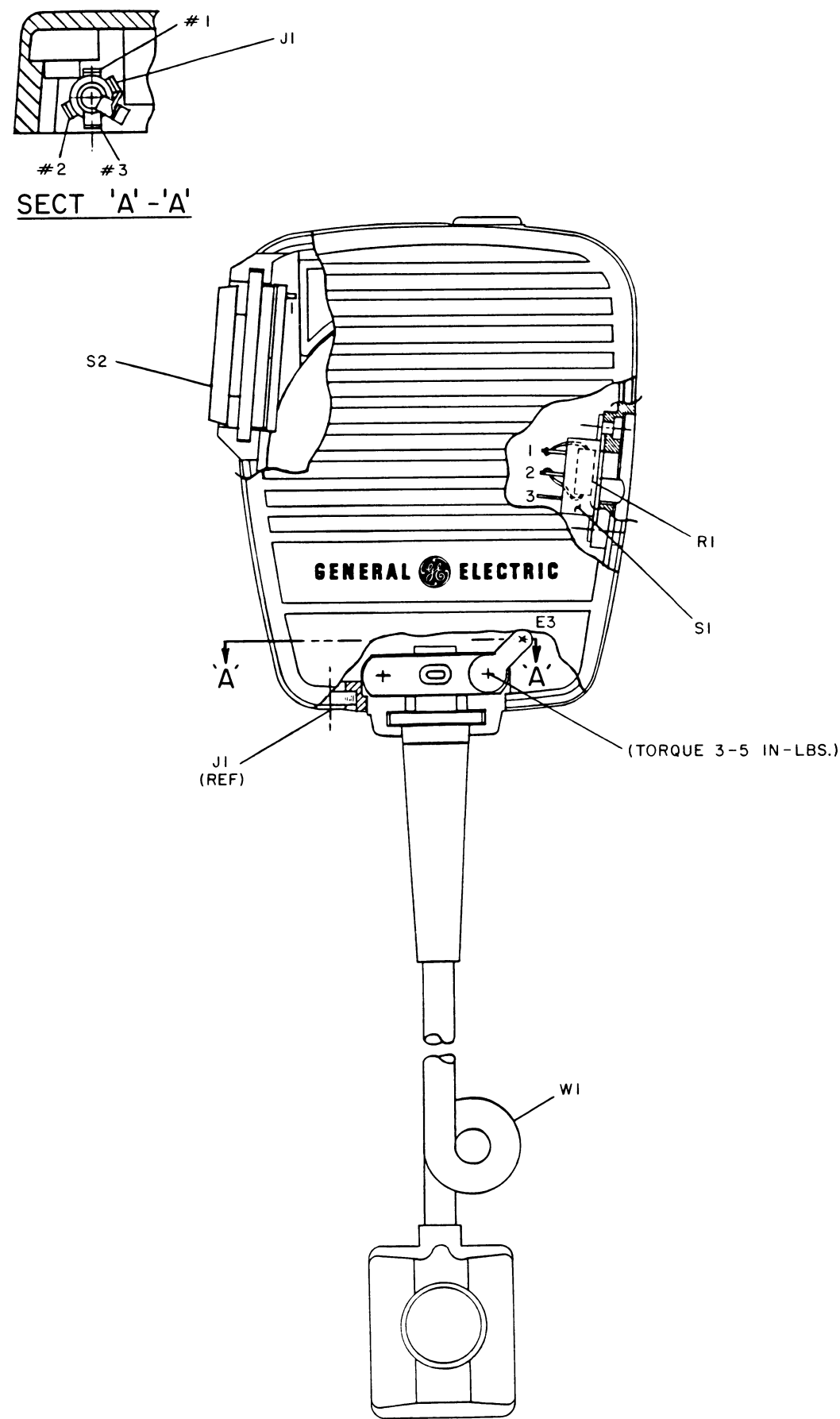
CIRCUIT ANALYSIS

The TX AUDIO HI output from the microphone cartridge MK1 is on Pin 1 of plug P1. System ground is on Pin 4.

The RX AUDIO HI input is on Pin 2 of P1 and is connected directly to an ear-piece through J1 or to Speaker LS1 through HI-LO switch S1. S1 in the LO position places resistor R1 in series with the speaker attenuating the audio level by 15 dB.

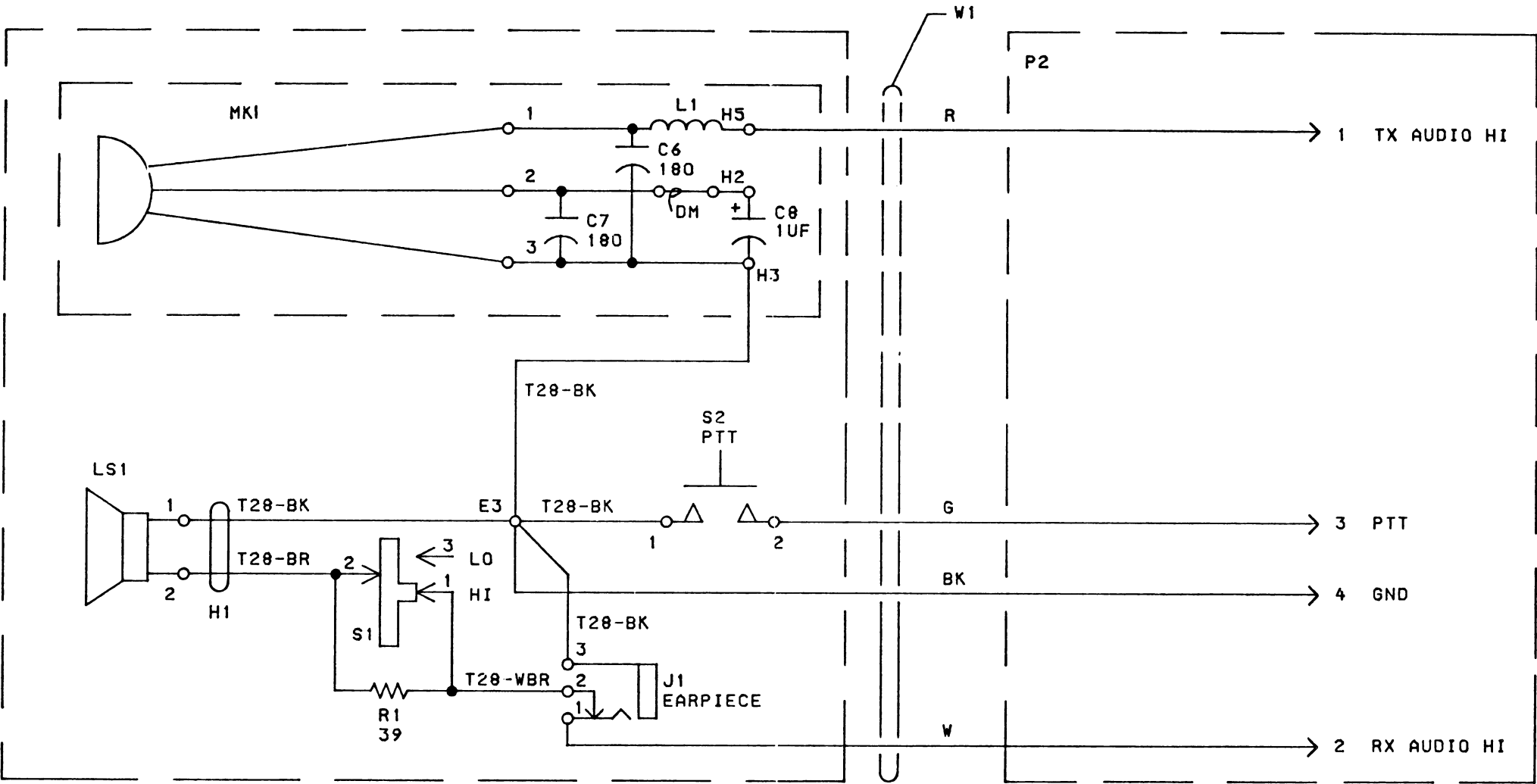
Pin 3 of P1 is grounded by depressing PTT switch S2, which keys the transmitter.

GENERAL ELECTRIC COMPANY • MOBILE COMMUNICATIONS DIVISION
WORLD HEADQUARTERS • LYNCHBURG, VIRGINIA 24502 U.S.A.



OUTLINE DIAGRAM

DELUXE SPEAKER/MICROPHONE
19D437483G2,G4



ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K-1000 OHMS OR MEG-1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF-MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH-MILLIHENRYS OR H-HENRYS.

MODEL NO	REV LETTER
PL19D437483G2	
PL19D437483G4	

SCHEMATIC DIAGRAM

(19C336277, Rev. 0)

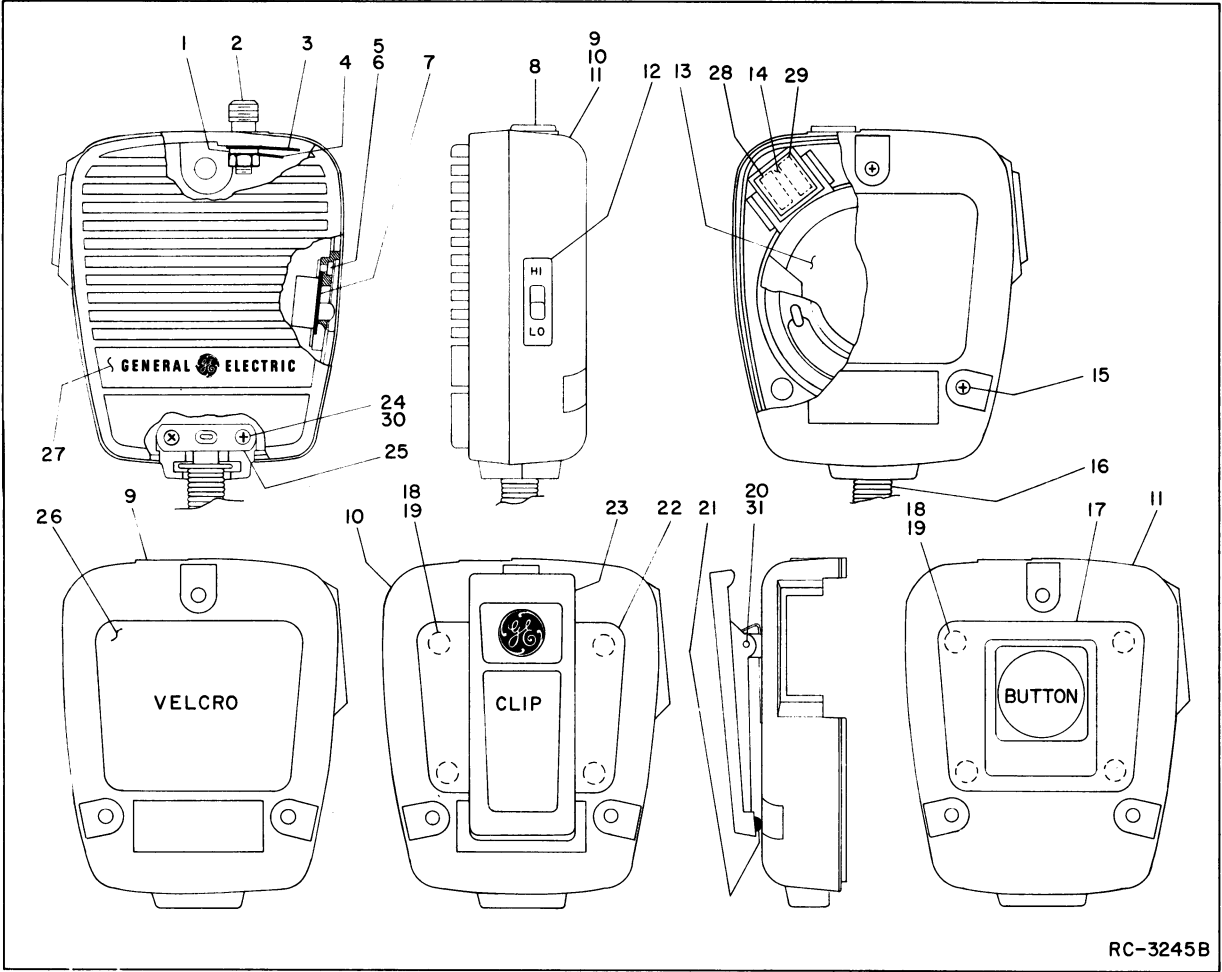
DELUXE SPEAKER/MICROPHONE
19D437483G2, G4

PARTS LIST

MPI SPEAKER MICROPHONE
19D437483G4 VELCRO
19D437483G2 CLIP
ISSUE 2

SYMBOL	GE PART NO.	DESCRIPTION
----- JACKS AND RECEPTACLES -----		
J1	19A134491P1	Jack, telephone: miniature; sim to Switchcraft 10J1029.
----- LOUDSPEAKERS -----		
LS1	19A137235G1	Permanent magnet: 2 inch diameter, 400-3000 Hz response, 8 ohms $\pm$ 10% voice coil imp, 500 mW power rating; sim to Pioneer Model 50-52.
----- MICROPHONES -----		
MK1		MICROPHONE ASSEMBLY 19C328978G3
----- CAPACITORS -----		
C6 and C7	19A700229P74	Ceramic: 180 pF $\pm$ 5%, 100 VDCW, temp coef -3300 PPM.
C8	19B800650P13	Tantalum: 1 uF -20+40%, 10 VDCW.
----- COILS -----		
L1	19A700024P13	Coil, RF: 1.0 uH $\pm$ 10%.
----- MICROPHONES -----		
MK4	19A134461P1	Cartridge: 200-850 ohms imp, 1.5-10 VDC; sim to PRIMO EM-60-PM12.
----- RESISTORS -----		
R1	19A700106P29	Composition: 39 ohms $\pm$ 5%, 1/4 w.
----- SWITCHES -----		
S1	19A134798P1	Slide, contacts rated 1/4 amp @ 125 VAC; sim to VID/MA-012-4-3-P-2W.
S2	19B232265G1	Pushbutton: 200 milliohms res max; sim to Bowmar KB3256-1C.
----- CABLES -----		
W1		CABLE ASSEMBLY 19C331660G2
P2	19D901121P1	UDC Plug.
----- MISCELLANEOUS -----		
	19D901120P1	Cover.
	19B801109P1	Thumbscrew.
	19A702461P1	Screw, thread forming: No. 0-40 x 1/4 w. (Secures cover).
	19A703652P1	Cable clamp.
MECHANICAL PARTS (SEE RC3245)		
1		(NOT USED).
2		(NOT USED).
3		(NOT USED).
4		(NOT USED).
5	19A134481P1	Machine screw: No. 1.6-.35 x 4mm.
6	19A134480P1	Hex nut: No. 1.6-.35mm.

SYMBOL	GE PART NO.	DESCRIPTION
7	19B216602P1	Plate.
8	19B232108P1	Plug button.
9	19D424953G4	Rear housing. (VELCRO-COIL-CORD).
10	19D433484G2	Rear housing. (CLIP-COIL CORD).
11		(NOT USED).
12	NP280373	Nameplate. (HI-LO).
13	19C327898G1	Cavity.
14		(NOT USED).
15	N136AP1310C13	Tap screw: No. 3.5-1.27 x 16mm.
16		(NOT USED).
17		(NOT USED).
18	N327P9012Y6	Tubular rivet.
19	N402P4C6	Flatwasher, steel: No. 3.
20	N505P614C6	Pin.
21		(NOT USED).
22	19B234070G1	Plate. (Clip).
23	19C327838P1	Clip.
24	19A700031P406	Machine screw, metric: 3-0.5 x 6MM.
25	19B232106P1	Strain relief.
26	19A129143P2	Fastener pad. (VELCRO).
27	19C327887G1	Front housing.
28	19B232142P2	Boot, mike.
29		(NOT USED).
30	4033714P5	Terminal: sim to Zierick 541.
31	19A144439P1	Spring.
ASSOCIATED PARTS		
	19A129791G1	Velcro patch.
	4033570G6	Earpiece Kit.



*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES