

TACTICAL FIELD TELEPHONE TA-1088/PT V 9.2 MIL SPEC 011026 DTMF DIALLING

TECHNICAL DATA



PRODUCT DESCRIPTION:

The TA-1088/PT Telephone is a neatly styled, lightweight, battery operated instrument which is suitable for connection to manual or automatic 2 – wire field telephone system or central battery signalling exchanges. This highly flexible field telephone is extremely rugged and provides excellent battery life from easily replaceable standard “C” size cells. The TA-1088/PT telephone provides facilities for magneto ringing, dc loop calling and two-way duplex speech communications.

It can also provide connection facilities via built-in keypad to automatic magneto or central battery exchanges, using either DTMF or loop disconnect signalling.

The body of the TA-1088/PT moulded in tough self-coloured ABS, is waterproof and is extremely resistant to rough handling. The body contains the electronic circuits of the telephone, and the 3 “C” Alkaline batteries are housed in a separately-sealed compartment underneath. The controls of the telephone are located on a protected panel at the front of the unit, together with the two-wire terminals.

June 18, 2002

OPERATING FACILITIES:

Standard facilities include:

Magneto signalling by momentary switch operation (RING) ; Audible / visual call indication; handset PTT switch, which enables the microphone. Warning Led for "Low Battery", Led for holding ring for 20 sec., and outgoing warning ring, Led for Ring Back.

Facilities include: Push button dial pad for loop disconnection or DTMF signalling. Two second timer for magneto ringer (battery saver). Last number re-dial, and two extra signalling Buttons (Flash) – (OPTIONAL).

COMPATIBLE EQUIPMENT:

The TA-1088/PT Tactical Field Telephone is compatible with all common types of magneto and central/battery switchboards including:

- RA2135 Auto Field switchboard
- SB130/GY Auto Field Switchboard
- SB3614 (V) TT Auto Field Switchboard
- 22A100 Series Eleven-Line Switchboard
- RA525 System Matel
- RA2100 Magneto Field Switchboard
- SB22 Series Magneto Field Switchboard.

CONSTRUCTION:

The TA-1088/PT comprises, main body, housing the electronics and batteries, and H-189 telephone handset. A two-position clip enables secure or free storage of the handset. A connector can be provided for connection of the handset, data terminal or PC.

TECHNICAL SPECIFICATIONS:

<p><u>Battery type:</u> 4.5V from three standard “C” cells Battery life (Minimum): Up to 250 days using Alkaline cells. Optional external power connector (3 minute call every hour plus 2 seconds ringing).</p> <p><u>Current Consumption (nominal)</u> Signalling: 650 Ma ±20% at 4.5V Speech: 20 mA Dialling (Loop); 35 mA Dialling (DTMF); 20 mA</p> <p><u>Line Impedance “ CB “</u> 600 OHM ±20%</p> <p><u>Magneto Ringing Output</u> 60V rms into 10k O; 50V rms into 3k OHM ±10% <u>Ringing Frequency</u> 20 Hz ± 10%</p>	<p><u>Transmission</u> Two telephones will operate satisfactorily over a line up to 36dB attenuation.</p> <p><u>DTMF Dial</u> Standard CCITT dual tones, levels – 8dBm ± 2dBm, 6dBm ± 2dBm</p> <p><u>Dimensions</u> H – 120mm. W – 110mm. L – 240mm. ±10%</p> <p><u>Weight</u> not more than 1.7 Kg. ±10% Without Batteries.</p>
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ENVIRONMENTAL:

<p><u>Operating temperature:</u> -30C +60C <u>Storage Temperature:</u> -51C +71C <u>Immersion:</u> 1m. for 2 hours</p> <p><u>Vibration:</u> 5 to 500Hz at 1.5g for 10 hours <u>Drop:</u> 0.45 m. to concrete</p>	<p><u>General</u> The TA-1088/PT Combat Field Telephone will also pass the relevant MIL-STD-810E test for resistance to salt, fog, solar radiation, humidity, icing/freezing rain, pressure and shock.</p>
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TEST COMPLIANCE

No.	TEST-ELECTRONIC	CONDITION	LIMITS	VALUE
1	RING SOUND OUTPUT LB AND CB	45 VRMS; 20 Hz	86 – 110 DB	90 DB
2	SIGNALLING LEVEL OUTPUT AND CURRENT CONSUMPTION LB	SHORT LINE (0 – OHM) LOUD IMPEDANCE 1.5K OHM V BAT – 4.5V	60 – 90 VRMS < 0.8	70 VRMS/0.65 Amp.
3	SIGNALLING LEVEL OUTPUT AND CURRENT CONSUMPTION LB	LONG LINE (10 KOHM LOUD IMPEDANCE 1.5KOHM; V BAT= 4.5V	45VRMS <0.8A	45 VRMS/0.65 Amp.
4	SIGNALLING FREQUENCY OUTPUT LB	4.5V VDC	20 Hz ± 20%	20 Hz
5	SIGNALLING LEVEL OUTPUT INTERVAL LB	4.5V VDC	2 SEC ± 30% ON 2 SEC ± 30% OFF	2 SEC/2 SEC
6	INCOMING CALL LED ON LB	4.5 VDC	20 SEC± 30%	20 SEC
7	LOW BATTERY INDIC. LED ON LB		< 3V	3.3V
8	RESISTANCE TEST ISOLATION CB	48 VDC	>5 MOHM	>5 MOHM
9	RESISTANCE TEST DC CB	48 VDC 22 MA	100 – 470 OHM	390 OHM
10	RECEIVE TEST CB	48 VDC 22 MA	-12 - -6DB	9 DB
11	RECEIVE TEST LB	48 VDC 22 MA	-12 - -6DB	8 DB
12	SEND TEST CB	48 VDC 22 MA	0.0 - +6DB	2 DB
13	SEND TEST LB	48 VDC 22 MA	0.0 - 6DB	3DB
14	SEND DTMF CB	22 MA	>0.55VRMS	0.65VRMS
15***	PULSE DIAL SPEED CB	40 MA	10 P.P.S.	10 P.P.S.
16	INPUT IMPEDANCE CB		600 OHM ± 10%	600 OHM
17	INPUT IMPEDANCE LB		900 OHM ± 10%	900 OHM
18	CB NOMINAL LOOP CURRENT		<20 mA	19 mA
19	LB SPEECH NETWORK CURRENT CONSUMPTION	V BAT=4.5V.	<40 mA	10 mA

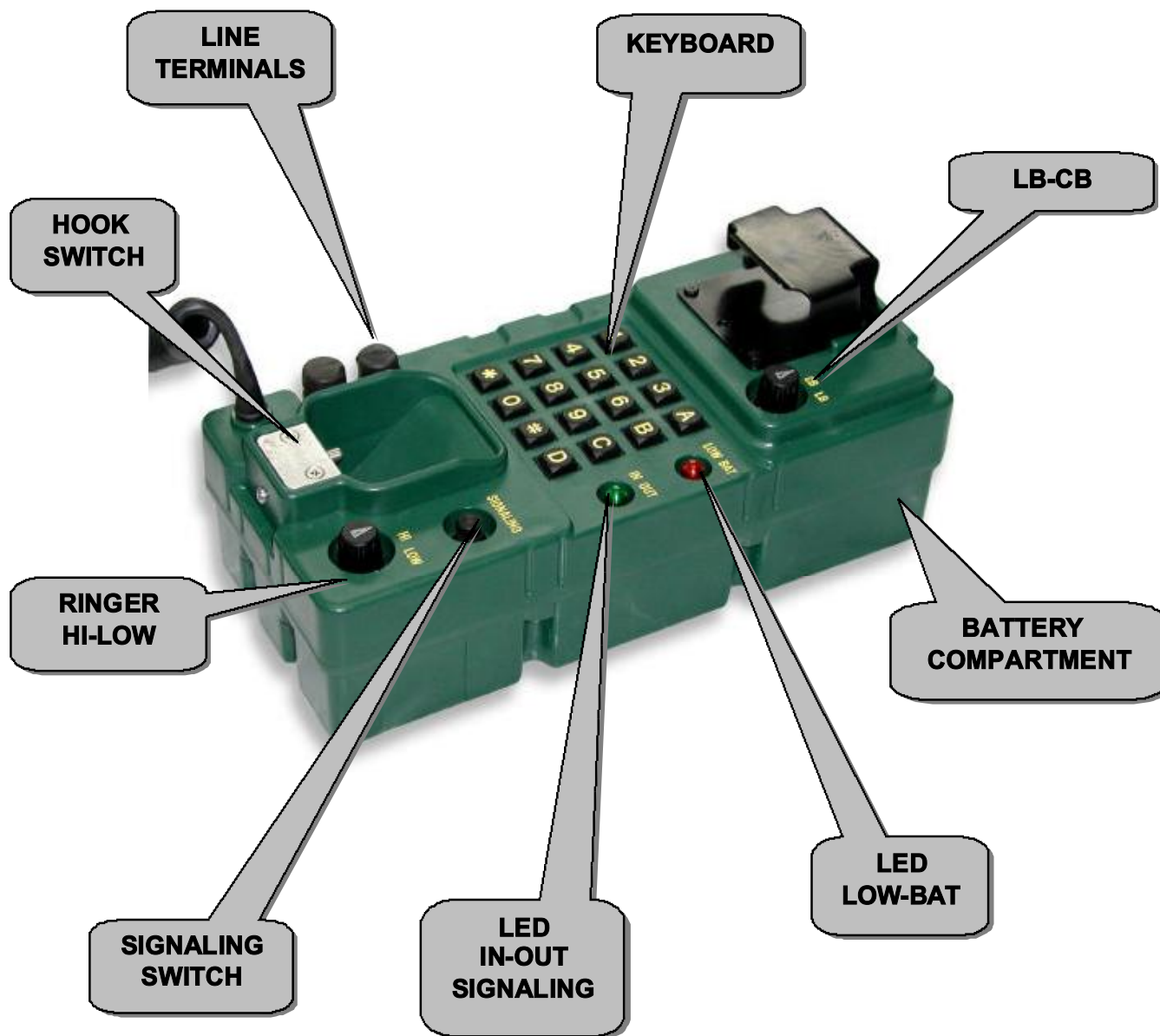
OPTIONAL

ENVIRONMENTAL TEST RESULTS			
BUZZER ACOUSTIC LEVEL	MEASURED AT 1 METER FROM TELEPHONE WITH 35 VRMS 20Hz INCOMING CALL	70 dB SPL	75 db SPL
SIDETONE	MINIMUM ATTENUATION AT 1000 Hz AND 600 OHM LOAD	13 db	18 db
RADIO FREQUENCY INTERFERENCE PROTECTION	MIL-STD-461		SATISFIED
HUMIDITY	MIL-STD-810-E		SATISFIED
ALTITUDE	MIL-STD-810-E		SATISFIED
LEAKAGE	3 FEET DEPTH FOR 60 MINUTES		SATISFIED
VIBRATION, BOUNCE AND SHOCK	MIL-STD-810-E		SATISFIED
SALT FOG	MIL-STD-810-E		SATISFIED
DUST	MIL-STD-810-E		SATISFIED

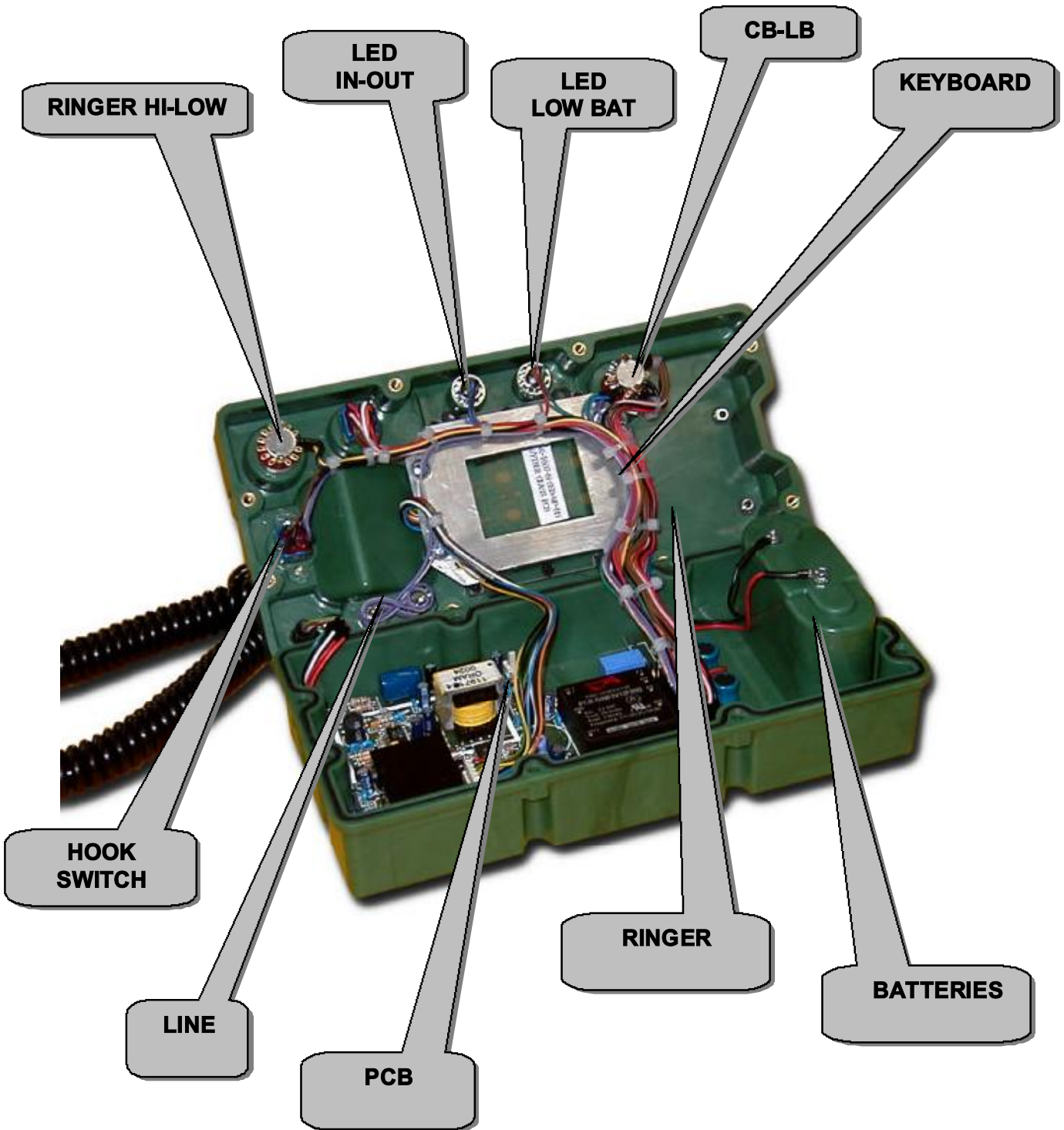
ELECTRONIC RINGER FIELD TELEPHONE				
RECEPTION AMPLIFIER (OPTIONAL)	GAIN	17 db	20 db	
	CURRENT		0.8 mA	1.2 mA
CURRENT CONSUMPTION	SPEECH RING GENERATOR OPERATED WITH 1KOHM LOAD		7 mA 500 mA	10 mA 650 mA
TEMPERATURE RANGE		- 30 C		+ 60 C
BATTERY VOLTAGE	THREE BA 30 BATTERIES	3.3 V.	4.5 V	5 V
MODES			LB, CB,	

DTMF FIELD TELEPHONE				
SIGNALLING FREQUENCIES		685Hz	694Hz	703Hz
		760Hz	770Hz	780Hz
		841Hz	852Hz	863Hz
		929Hz	941Hz	953Hz
		1193Hz	1209Hz	1225Hz
		1319Hz	1336Hz	1353Hz
		1458Hz	1477Hz	1496Hz
		1612Hz	1633Hz	1654Hz
	INPUT RESISTANCE	MEASURED WITH 30 mA LINE CURRENT		290 OHM
TEMPERATURE RANGE		- 30 C		+ 60 C

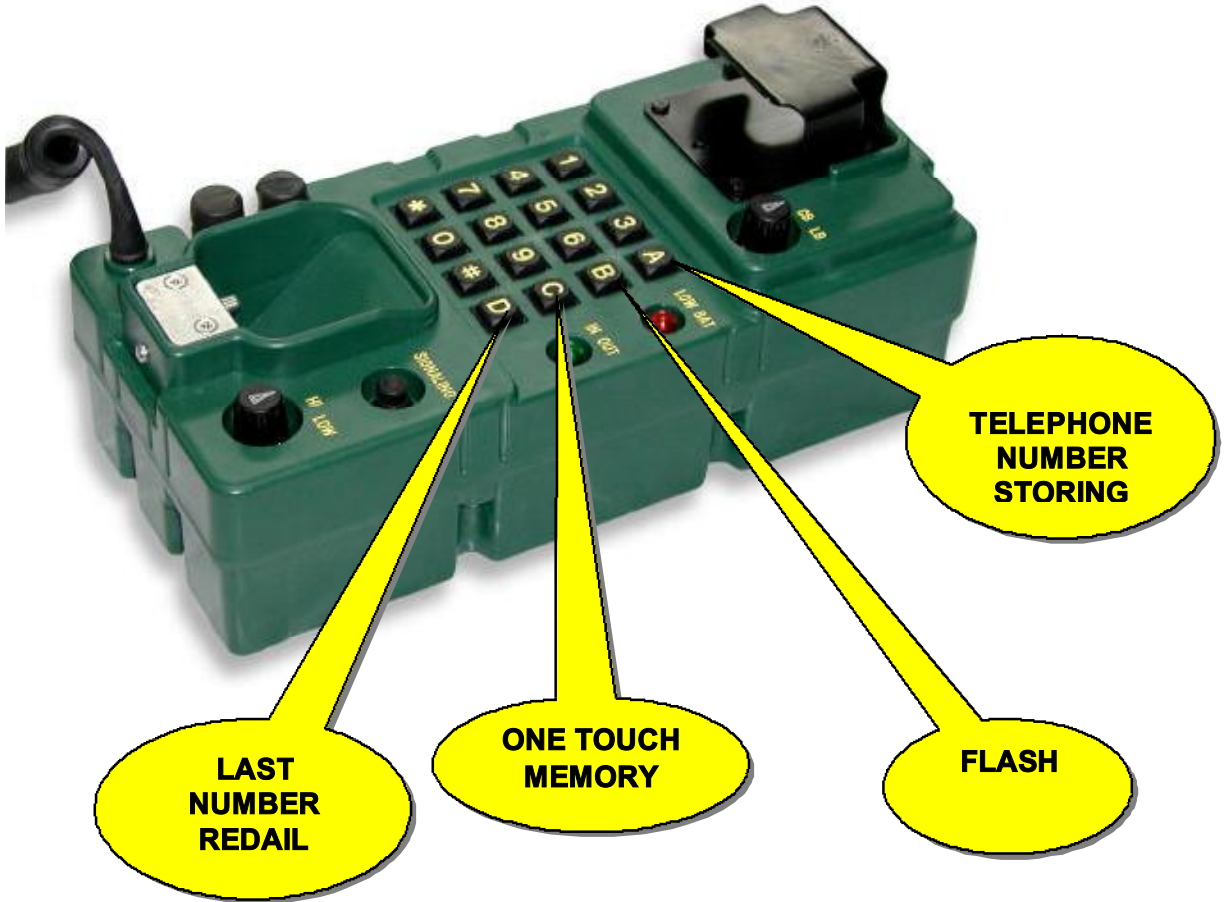
LAYOUT DRAWING:



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KEYBORD FEATURES



TEST REQUIREMENTS

Handset H-1189 / P

1. Handset H-1189/P, as defined in MIL-H-55258B (EL) except the upgrade of the Material the Handset and the cable make.
2. Applicable documents
 - 2.1 Military Specifications
 - 2.2 MIL-H-55258B (EL) for Handset H-1189/P.
 - 2.3 MIL-E-3885E Cor. assy. Electrical.
 - 2.4 MIL-C-55668 for cables and cords assembly.
 - 2.5 MIL-STD-810E Environmental Test Methods.
 - 2.6 MIL-I-45208A U.S. Government approved facility.
3. Mechanical Requirements
 - 3.1 All the Handset is manufactured from the next following MATERIALS:
GE Virgin Polycarbonate with an Acrilic Type Toughener
Tensile Strength, yield Type I 0.125" 8500 psi
Strength, yield Type I 0.125" 9200 psi
Shear Strength 8500 psi
Hardness Rockwell 110
Fatigue limit 2.5 mm. Cycle 1000 psi
 - 3.2 The Handset meets the Mechanical test requirements of MIL-H-55258B (EL) for Handset H-189/GR.
 - 3.3 The Handset meets the electrical requirements as appear in MIL-H-55258B (EL) and also after the mechanical test.
 - 3.3.1 Shock
 - 3.3.1.1 No damage or crack is found on the Handset after having been dropped 10 times from a height of 6.6 feet (2 meters) onto a concrete surface.
 - 3.3.1.2 The electrical requirements as appear in MIL-H-55258B (EL) para. 3.3.1 of the shock test.
 - 3.3.1.3 The material of the Handset stands for 150 J/m and no damage is done to the material.
 - 3.3.1.4 The electrical requirements as appear in MIL-H-55258B (EL) para. 3.3.1 of the shock test.

- 3.3.2 Crash.**
- 3.3.2.1** No damage or crack has been found on the Handset after a weight of 3 Kg have been dropped from the height of 5 feet (1.5 meter).
- 3.3.2.2** The electrical requirements as appear in MIL-H-55258B (EL) para. 3.3.1 of the shock test.

3.4 Environmental Conditions

- 3.4.1** The environmental test as required in MIL-H-55258B (EL)

4. Quality Assurance

- 4.1** The Company meets the ISO-9000 quality assurance level or MIL-I-45208A.
- 4.2** The Company will provide with the purchase C.O.C.
- 4.3 Samples.**
- 4.3.1** Five samples that have been tested and inspected mechanical and electrical according to the requirements of this specification, provide with test results of group A, B and C according to the MIL-C-55258B (EL) and the test result of the mechanical test para. 3.3.1, 3.3.2, 3.3.3 in this specification.
- 4.3.2** Five samples that have been tested and inspected mechanical and electrical according to the requirements of this spcification, provide with test results of group A, B and c according to the MIL-C-55258B (EL) and didn't test mechanical as appear in para. 3.3.1, 3.3.2, 3.3.3 in this specification.

1. Cord Assembly for Handset H-1189/P.
2. Applicable Documents
 - 2.1 Military Specifications
 - 2.2 MIL-H-55258B (EL) for handset H-1189/P
 - 2.3 MIL-C-55668 for cables and cord assembly.
 - 2.4 MIL-C-13777G Special purpose electrical cable.
 - 2.5 MIL-E-3885E Cor. Assy. Electrical
 - 2.6 MIL-C-27072 Multi-conductor and single shielded.
 - 2.7 MIL-STD-810E Environmental Test Methods.
 - 2.8 MIL-I-45208A U.S. Government approved facility.
 - 2.9 MIL-I-3930E Insulation and Jacketing compounds Electrical (for cable, cord and wire).
 - 2.11 MIL-C-27072 Multi-conductor and single shielded
3. The cord length, requirements are as specified here in accordance with this applicable specification.
 - 3.1 The rubber gromet is molded with Polyurithane material, color black per MIL-R-3065 durometer 60+ / -5.
 - 3.2 The length of the cable is 11.1/2 inches Retracted and 6 feet Extended.
 - 3.3 Mechanical Characteristics.
 - 3.3.1 The material of the jacket is of Polyurethane use Hytrel Primary Insulation jacket, color black.
 - 3.3.2 The jacket over the cable is resistant to flame and chemical solvent.
 - 3.3.3 The jacket whitstands exposure to direct solar radiation.
 - 3.3.4 The jacket requirements:
 - 3.3.4.1 Tensile strength 10N/ mm Min.
 - 3.3.4.2 Nom cable O.D. 0. 255 inch + 0.12.

3.4 Electrical Characteristics.

3.4.1 The electrical characteristics are in accordance with MIL-C-3885E.

3.4.2 Maximum conductor resistance 0.240 OHM per foot.

4. Environmental Conditions.

4.1.1 Solar Radiation.

4.1.2 The cable withstands exposure to direct solar radiation. The test is performed in accordance with MIL-STD-810E Method 505.3 Procedure I.

4.1.3 Verified visually that the cable is not damaged and there is no evidence of cracking in the bend relief or cable jacket.

