

ILTB 01

Intermediate Level Test Bench

For TRC5100 radios



1. PURPOSE

Intermediate Level Maintenance (ILM) operations consist of preventive and corrective maintenance. In corrective maintenance, the repair of failed equipment is done by replacing failed interchangeable sub-assemblies, modules or PCBs according to the procedure defined for each equipment. Complete re-calibration and check-up of equipments are done after any intermediate level operations. The failed sub-assemblies or modules or PCB are sent to depot level.

ILTB01 (Intermediate Level maintenance Test Bench) is a test bench to perform ILM of TRC5100 radios and its accessories such as battery, battery charger, antenna, handset and headset at IL workshop.

2. IL TEST BENCH FUNCTIONS

Maintenance of radio:

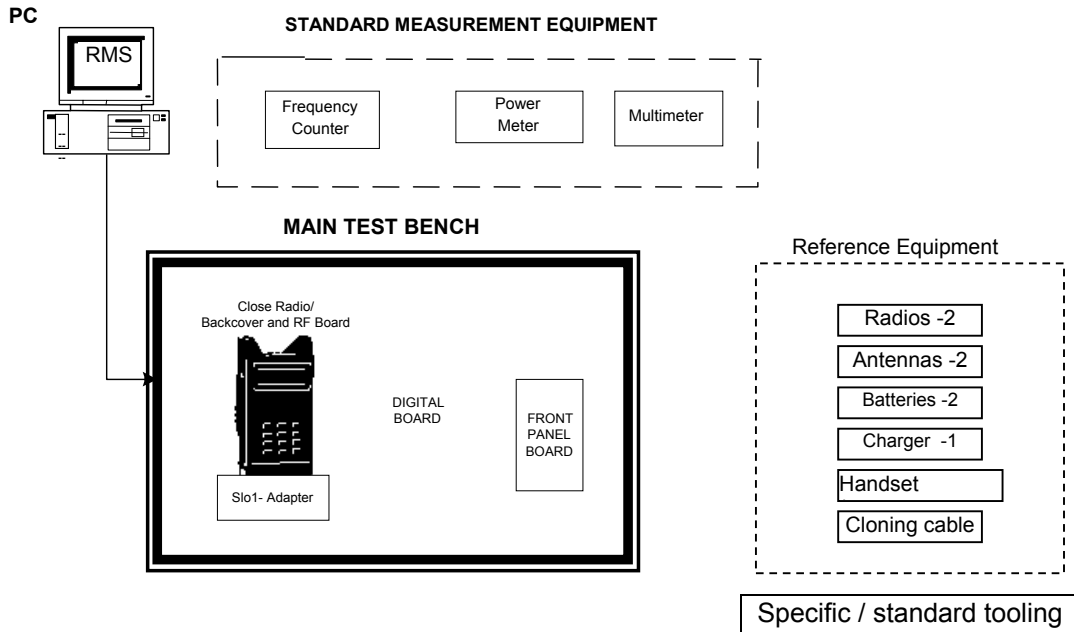
- To perform preventive maintenance of TRC5100 radio (oscillator tuning)
- To perform corrective maintenance of TRC5100 radio
 - To test complete TRC5100 radio (close configuration)
 - To detect faulty modules
 - To test and troubleshoot modules (open configuration)
 - To perform power measurement of TRC5100
 - To load embedded software

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Control of accessories:

- To test and troubleshoot antenna
- To check functionality of handset/headset
- To check functionality of battery charger
- To perform battery performance parameters (option BPTB)
- To test and troubleshoot radio watertightness (option WTB)

3. ILTB01 COMPOSITION



ILTB01 consists of:

3.1. Specific test equipment

- Main Test Bench (MTB) composed of an enclosure grouping all electronics and mechanics interface for radio and modules, as far as all necessary cables.
- Radio Maintenance Software (RMS)
- A set of specific tooling for assembly and disassembly

3.2. Standard equipment

- A PC running WINDOWS English OS (WINDOWS 2000, XP, NT).
- Standard Measurement Equipment
 - Frequency meter (100 MHz range, accuracy 10-7, 50 Ω input)
 - Digital Multi-meter
 - SWR Power Meter (< 225 MHz, 200W power max)
- A set of standard tools.

3.3. Reference equipment

- 2 TRC5102 radios, 2 antennas, 2 batteries, 1 battery charger, Handset and/or headsets, 1 Cloning cable.

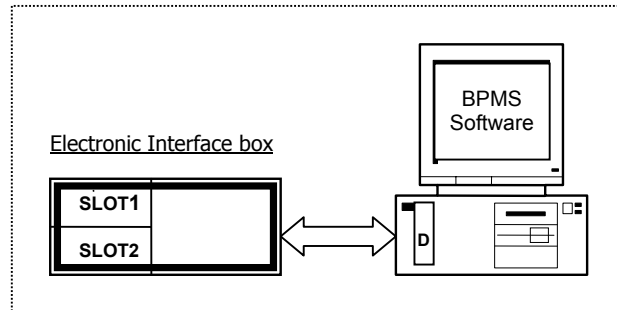
Nota : Item 3.2 and 3.3 can be either delivered by STE with the bench or procured directly by customer

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4. OPTIONS

ILT B may include in option:

4.1. Battery Performance Test Bench (BPTB)



- This bench allows automatic test to measure battery capacity and other electrical performances. This bench is recommended to control the status of batteries all along their cycle life.
- This test bench consist of an electronic interface box for 2 batteries, a Data Acquisition Card for PC and a Battery Performance Measurement Software (BPMS).
- BPTB01 is for Nickel Cadmium batteries (AL1124 or AL1124B)
- BPTB02 is for Polymer Lithium-Ion batteries (PLI01)

4.2. Watertightness Test Bench (WTB)

- Military radios are designed to be watertight (MIL STD 810E) to ensured reliability under environmental constraints and usage (immersion, water splash, fungus, salt atmosphere,...). Opening and closing radios for purpose of maintenance will required to keep this radio in good watertightness condition. Ignoring this process may cause long term failure of the radio.



- WTB is a bench to measure air leakage enabling user to control watertightness due to improper assembly or due to gasket worn out.
- This test bench consists of a Leakage Tester (programmed), a compressor, a mechanical adapter with radios.