406MHz ELT Tester

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Quality Management System
REGISTERED TO ISO 9001:2008

Test Equipment
406MHz ELT Tester

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General description

406 MHz / 243 MHz / 121.5 MHz ELT TESTER (TEST SET) is designed to check the avionics emergency locator transmitters (ELT) operating via COSPAS-SARSAT system.

The 406MHz ELT TESTER is specified service equipment and reliable test solution for aircraft registry , aircraft surveyors, ELT suppliers, classification societies and administrative authorities.

ELT Test Set provides accurate, independent testing in volume of annual test requirements or in volume of maintenance requirements or for fast check after ELT's encoding or installation in accordance with **USA (FAA Part 91.207), Canada (CAR 571 Appendix G), Europe (CAA/ EuroCAE) requirements.**

ELT Test set is represented on US market under Icarus Instruments Inc trademark and ELTT-124 name.

ELT Test Set can receive messages from any 406 MHz COSPAS-SARSAT beacons transmitting either in test mode or in real alert emergency mode.

The signal can be received through the broadcast by means of antenna or the tester can be connected directly by means of cable through a suitable attenuator included in standard deliver set.

Radiated tests in real alert emergency mode should be carried out using screened room (or enclosure) only.

Since it is crucial for the beacon ID to be registered with the national authorities, the 406 MHz EL T Tester provides an easy means to verify the ID after installation or reprogramming.

The tester provides demodulation and decoding of the emergency information and displays on your choice the HEX-code (15 Hex ID or the message 1-112 bit) as well as all decoded information in text view with all measured parameters. Tester displays position data (if available) in degree's, minutes, seconds. Besides, the BCH code is calculated and compared with received one, and the result is displayed.

The tester provides measurement of received signal level on frequencies of 121,5 MHz, 243 MHz, 406 MHz.

The tester provides measurement of frequency meaning on 121.5 MHz, 243 MHz and 406 MHz channels.

The tester allows to perform measurement of beacon parameters by means of standard external antenna (on distance from 3 to 15 meters), as well as via high-frequency cable and attenuator connection.

The tester can be used for Galileo Search and Rescue equipment serivce.

Operation / Features

406MHz ELT Tester (Test set) allows to perform easy testing of distress beacons, such as EL T. The ELT Testing procedure is very simple.

Turn on the tester and switch the distress beacon to TEST position. Make sure that there is at least 3 meters (15 meters max) distance between the tester and the beacon, and make simple actions to carry out the test procedures.

The tester will receive the signal, measure the frequency meanings, power levels in all channels, signal duration and finally decode all emergency information automatically including position data if available.

The tester provides demodulation and decoding of the emergency information and displays on your choice the HEX-code (15 Hex ID or the message 1-112 bit) as well as all decoded information in text view with all measured parameters

All data will be saved in memory for further processing, 10 memory blocks are available.

All emergency data can be viewed on the tester's LCD or can be transmitted to PC for procession.

The tester is lightweight, hand-held and user-friendly in usage, has keyboard and LCD with backlight.

The tester power supply is performed by 4 AA batteries 1,5V, as well as by external DC source with voltage 4,5…7V and load current no less than 300 mA.

The tester can be used for testing of any COSPAS-SARSAT distress beacons such as ELT, PLB or marine EPIRBs.

Features of 406MHz ELT Tester

- All 406 MHz aircraft protocols will be decoded
- Meets FAA, CAR and EuroCAE EL T inspections requirements
- Internal database of received messages with possibility to save upto 10 results
- Easy connection to PC, laptop, notebook to process the stored data
- Windows user friendly desktop application for database storage and review, process and test reports preparation
- Long life batteries, easy raplace
- External RF attenuator in standard delivery set
- Easy recalibration without returning back to factory
- 1 year warranty

Connection to PC or laptop

After all tests are done usually it is required to process the measured data, prepare and print the test reports.

Thus the ETL Tester (Test set) can be easily connected to any PC or laptop. The connection is carried out by means of standard USB A-USB A cable and special software available on this website. The minimal requirements are Microsoft OS, such as Windows XP , Windows V ista or Windows 7 and at least 1 USB port. No special hardware configuration is required.

Also the special FTDI driver should be installed for proper connection. It can be downloaded at our web-site as well.

So, it is very simple to connect the tester to PC. Connect one side of the cable to tester and other to PC. Then install the drivers following the standard Windows wizard. After the driver is installed run the software. No installation is required. Just run the executive file and press DOWNLOAD MESSAGE button. All measured data will be transferred to PC.

Technical description

- The 406MHz ELT Tester allows to perform:
- reception, demodulation and decoding of the emergency information transmitted on channel 406 MHz;
- position data encoding(if available) in degree's, minutes, seconds;
- frequency measurement of 406MHz signal with accuracy ± 500Hz;
- frequency measurement of 121,5 MHz signal with accuracy ± 300Hz;
- frequency measurement of 243 MHz signal with accuracy ± 300Hz;
- level measurement on 406 MHz channel in range 19…43dBm with accuracy ±0.5dB (-34…-10dBm ±2dB by means of antenna);
- level measurement on 121.5 MHz channel in range 13…20dBm with accuracy ±0.5dB (-40…-34dBm ±2dB by means of antenna);
- level measurement on 243 MHz channel in range 13…20dBm with accuracy ±0.5dB (-40…-34dBm ±2dB by means of antenna);;
- estimation of the positive/negative phase deviation of modulated signal with accuracy to ± 2,8o;
- measurement of total transmission time of 406 MHz signal with accuracy ± 0,2%;
- measurement of unmodulated carrier duration of 406 MHz signal with accuracy ± 0,2%;;
- estimation of the equivalent radiated power of 406 MHz signal through broadcast.

The tester power supply is performed by 4 AA batteries 1,5V, as well as by external DC source with voltage 4,5…7 V and load current no less than 300 mA. The tester is power supplied by USB cable when connected to computer or net USB adapter.

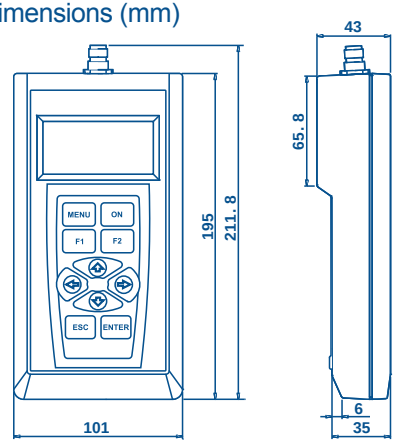
Approximate continuous operation time of the tester from the internal power supply elements is about 6 hours.

406MHz ELT Tester is comlpetely compatible with Galileo Search and Rescue System.

Complete set of the 406MHz SARSA T ELT Tester (Test Set)

- ELT Tester
- Antenna
- PC cable (USB A – USB A 1.5m)
- HF – attenuator
- HF cable TNC/TNC 0.5 m RG58
- HF cable BNC/TNC 1 m RG58
- 4 AA batteries
- Technical description and operation manual (English)
- Device packing
- Software and software user's manual (available at our website)
- * ELT Test set is represented on US market under Icarus Instruments Inc trademark and EL TT-124 name. The US market complete set may differs.

Dimensions (mm)



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