

# DAT TESTER

## OPERATING INSTRUCTIONS



The **DAT Tester** is a battery-operated tester to verify the correct operation of DAT CONTROLER®PLUS series ESE Lightning Air Terminals. A high voltage is applied to the Air Terminal. Two test leads are used to connect the instrument and Air Terminal to be tested. The test unit displays a green LED to indicate air terminal is operational or two red LEDs to indicate if the air terminal is faulty. The test unit contains a rechargeable battery to allow portable use in the field.

**WARNING. This device produces high voltage. Read, understand and follow all safety instructions prior to operating or performing any testing.**



### SAFETY RULES

**Electrical Safety.** Do not handle the Air Terminal or test leads during testing; the applied voltage is over 5000V. Keep the leads away from sharp edges or moving parts. Replace damaged leads immediately. Damaged leads may create a malfunction.

**Test Unit Care.** If damaged, have the DAT Tester serviced by qualified repair personnel before using.

**Storage.** When storing the DAT Tester, store it always with the lid closed.

High voltage electrical shock hazard. Keep hands and body clear of test leads and Air Terminal during the test. Failure to do so can result in serious injury.

Always use appropriate safety equipment such as gloves as appropriate to the application.

### 1 - BATTERY STATUS & CHARGER

To ensure reliable results, the DAT Tester does not allow testing to be conducted if the battery charge is low.

Use the supplied charger to recharge the battery. The battery is fully charged when the charger LED is green with intermittent yellow flashes. Approximately 1 hour and a half is required for a full charge. Charge the tester fully before first use.

When you press both test buttons at the same time the unit performs an internal battery test. If the battery is low, the "Low Battery" LED turns on and no test can be done.

To charge the battery, connect external charger without pressing any test button.

The DAT Tester is supplied with 110-240VAC (50/60Hz) battery charger (European Round Plug). This is a 5-10 cells 0,8A current charger specifically for charging NiMH rechargeable batteries. It is not a normal low voltage DC power supply and connection of incompatible charger may damage the DAT Tester and charger. For replacement purposes only 10 cells NiMH chargers should be used. A female 2.1mm DC Power Plug (inside Ø2.1mm, outside Ø5.5mm, shaft length ≥9.5mm) with positive polarity to the center terminal should be used

### 2 - CONNECTING TO THE AIR TERMINAL

Ensure there is no test button pressed before making any connections or disconnections.

Connect the test lead from the DAT Tester to:

- The lowest portion of the Air Terminal, or the mast/down conductor if connected.
- The upper tip of the Air Terminal.

The polarity of the leads does NOT affect the results, either the red or black lead can be connected to the Air Terminal tip.

### 3 - MEASUREMENT

1. Turn the unit on and charge the battery if required.
2. Connect the test leads to the Air Terminal.
3. Push the test buttons at the same time to start the testing process. Keep the test leads connected and the buttons pressed until the LEDs show the test results.
4. The end of the test is also indicated by the test progress bar. When all the LEDs are on, then the test is finished.
5. When any of the test result LEDs are on, test buttons can be released.
6. The test result LED will be on during 5 seconds.
7. Finally the DAT Tester will turn off automatically.

Test Results are displayed by LEDs:

- **OK (Green OK LED)** – Indicates that the test was successful and that the Air Terminal is functioning correctly.
- **SHORT CIRCUIT (Red SHORT CIRCUIT LED)** – Indicates the Air Terminal is faulty or the test leads are shorted.
- **OPEN CIRCUIT (Red OPEN CIRCUIT)** – Indicates the Air Terminal is faulty or the test leads are not correctly connected to the Air Terminal.