



## Military Wiring

## MIL-STD-1553 Harness Tester

### EMC Compliance

BCF Designs Ltd specialises in the design and supply of Ground Support Equipment for use at operational level. Innovative solutions for testing Aerospace Military Wiring, Fuel Systems, EMC Compliance and Digital Avionics are currently available as commercial off the shelf test equipment.

### Fuel Systems

With the proliferation of databus systems on military aircraft platforms, it has become of paramount importance that faults can be readily differentiated between the LRU or the MIL-STD-1553 wiring.

### Digital Avionics

By accessing the stub when disconnecting the LRU, it is a simple task to check the wiring, prior to the expense/inconvenience of returning the avionics unit to the manufacturer/workshops. The S2476N Databus Network Tester is capable of detecting and isolating all common wiring faults, such as short circuits, shorts to shield, open circuits and cross overs, on both the main bus and stubs.

### Customer Applications

Insertion loss measurements are made simultaneously, thereby reducing the time taken to check out a complete transmission system.

The lightweight and ruggedised construction makes it ideal for one man operation at 'O' level. The removable transmitter allows remote operation of the receiver around the platform.

As well as a diagnostic tool, the tester can be used for preventative maintenance by producing a footprint of the aircraft harnessing system by insertion loss measurements prior to delivery into the field.

### Benefits:

- Simplicity of use
- Lightweight and portable
- Battery powered with integral battery charger
- Simple daily calibration
- No disconnection of main bus required
- Fault detection and isolation
- Battery low indication
- Removable transmitter for remote testing
- Insertion loss between any two stubs given in dBs
- One man operation

## Technical data MIL-STD-1553 Databus Harness Tester



### Functions measured:

- Short circuits between the twisted pairs of bus or stub
- Open circuits on bus or stubs
- Cross-overs of the twisted pairs, on bus or stubs
- Short circuits between either of the wires of the stub twisted pair to shield/screen system
- Short circuits between either of the wires of the bus twisted pair to shield/screen system
- Detection of open circuit or short circuit bus
- Insertion loss between any two stubs in decibels in the range 0dB to -36dB ( $\pm 0.1$ dB)

### Displays:

- GREEN/RED LED giving a pass/fail indication for open circuits, short circuits, cross-overs and short circuits to the shield/screen system
- Liquid Crystal Display giving insertion loss information in dBs between any two stubs

### Specifications:

#### Transmitter

- Measurement of insertion loss via 200KHz signal
- Measurement of wiring faults via 25KHz signal
- Battery powered with up to 24 hours continuous use
- Self contained and sealed unit

#### Receiver

- PASS/FAIL indication of wiring faults
- Measurement of insertion loss between any two stubs in the range 0dB to -36dBs
- Battery powered with up to 24 hours continuous use
- Self contained and sealed unit

**National Item Identification Number:** 6R-D-6625-99-977-4774

### Calibration:

- Prior to daily use via 12.0dB calibration pad supplied
- Annually via optional calibration kit, DE2463/A

### Qualification:

- MIL-STD-810 Environmental
- MIL-STD-461 EMC

**Dimensions:** 220 x 220 x 375mm  
(9 x 9 x 15 inches)

**Weight:** 8.5Kg ( 19 lbs)

**Temperature Range:** -20C to +50C  
(-4F to +122F)

### Charging:

- Battery charger operates from 85 to 265 Volts, 40 to 400Hz

### Accessories supplied:

- Calibration Pad S2476NC
- Power charge connector

### Optional accessories:

- Interconnect leads
- Calibration Kit DE2463/A
- Module for direct coupled buses S2476NG

**Nato Stock Number:**  
6625-99-977-4774

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