

DBT300 MIL-STD-1553 Network Tester



Data Sheet

The DBT300 Databus tester allows users to easily troubleshoot, characterize or test MIL-STD-1553B databus networks. Using press-to-test switches, a Liquid Crystal Display (LCD) and nine pass/fail Light Emitting Diodes (LED), the DBT300 detects shorts, opens, crossovers and shorts-to-shield on the bus and stubs. The tests are conducted from the LRU ends of the stub cables. When set to DC Resistance mode, the tester can be used as a general purpose ohmmeter with a range of 0 to 199.9 ohms.

Newly incorporated features provide the capability to measure return loss (RL) and insertion loss (IL) in a data bus network. These new functions are an easy way to benchmark network characteristics. The test frequency for both RL and IL is 1 MHz. The LCD reading is in dB for RL and IL with a resolution of 0.1 dB. The characteristic impedance of the internal RL bridge is 77.0 ohms. IL can be measured between any two stubs using a remote transmitter unit which is included.

The DBT300 remote unit is used to check cabling for the Phase/Crossover test and to measure Insertion Loss. A master rotary switch on the unit turns it on or off and sets the output of the unit to either the Phase/Crossover or Insertion Loss mode.

The display consists of LED go/no-go indicators and a 0.4 inch, 3-1/2 digit LCD readout when in ohmmeter, RL or IL mode.

The tester uses a standard supplied 9V rechargeable battery or in an emergency a standard 9V battery can be used.

A battery charger is included. Longer battery life is made possible by the press-to-test feature of the tester so the main unit only draws current when a button is pushed. To conserve battery life when in Phase/Crossover mode, the remote unit switches to an idle, or "keep alive" state, when not being interrogated.



North Hills 1553 Network Tester, Model DBT300 in storage case.

***North Hills Application Note 261 - "North Hills Model DBT300 Network Tester User's Guide"** provides further information on the operation of the tester.

Features:

- One-man operation for quick, easy testing
- Lightweight and portable
- Detects shorts, opens, shorts-to-shield, crossovers, phasing errors
- Measures resistance, insertion and return loss
- Digital read out for resistance, insertion and return loss
- Separate remote transmitter unit
- Pass/Fail indicators
- Uses 9V batteries

For more information: www.BTTC-Beta.com/DBT300



Specifications

Main unit	
Parameter	Description
Displays	
DC Resistance	LCD 0 to 199.9 Ohms
Bus, Stub short or open	LED: Green = Pass, Red = Fail
Bus, Stub short to shield	LED: Green = Pass, Red = Fail
Phase/crossover	LED: Green = Pass, Red = Fail
Return Loss	LCD: > -60dB
Insertion Loss	LCD: > -60dB
Battery Low	LED: Red
Test Method	Press-to-Test
Stub Connector	3-lug 70 Series Jack
Mating Connector	571-10-6302 (Trompeter PL75 type)
Weight	550 grams
Dimensions (in)	9.5 x 4.0 x 2.0

Remote unit:	
Parameter	Description
Power on	Green LED
Transmit	
Crossover	Green LED
Insertion Loss	Green LED
Stub Connector	3-lug 70 Series Jack
Mating Connector	571-10-6302 (Trompeter PL75 type)
Weight	360 grams
Dimensions (in)	8.4 x 4.0 x 2.0

Power Requirements	
Parameter	Description
Batteries	Rechargeable 9V Lithium-ion
Battery life	10 hours Minimum*
Battery charger	Input 100-240VAC 50/60 Hz
Charging Time	1 hour

*Assuming continuous use with 20% duty cycle. Under normal usage a battery set should last for several 8-hour days.



The information in this Brochure is believed to be accurate; however, no responsibility is assumed by Beta Transformer Technology Corporation for its use, and no license or rights are granted by implication or otherwise in connection therewith. Specifications are subject to change without notice.

Temperature Requirements	
Parameter	Description
Storage	-40 to +50 degrees centigrade
(Operating)	-10 to +50 degrees centigrade

Accessories

The tester is provided with two 3-foot MIL-STD-17/176-00002 cables with a PL73 push-on type connector on each end. Other cables and adapters are available as listed below. All cables listed are three feet long. Consult the factory for custom cables or adapters.

P/N	Connectors	Descriptions
N14017-060	PL73/PL73	Mates with any 70-series jack
N14017-061	PL73/PL153	Mates with any 150-series jack
N14017-062	PL73/Pig Tails	For mounting your connector
N14017-063	PL73/M39029/91	Mates with M39029/90 contact
N14017-064	PL73/M39029/90	Mates with M39029/91 contact
N14017-065	PL73/20 AWG pins	Mates with 20 AWG sockets
N14017-066	PL73/20 AWG sockets	Mates with 20 AWG pins
571-10-8327	BJ70/BJ70 Adapter	70-series jack barrel adapter
571-12-8301	BJ150/BJ150 Adapter	150-series jack barrel adapter
571-10-8328	BJ70/PL155	BJ70-to-PL155 adapter
571-10-8329	BJ70/PL375	BJ70-to-PL375 adapter
571-10-8330	BJ70/PL3155	BJ70-to-PL3155 adapter

Ordering Information

The DBT300 is shipped in its own carrying case and consists of an NH16746MA main unit, an NH16746R remote unit, NH14017BC battery chargers for the main and remote units and two 3 foot cable assemblies with PL73 connectors attached. It also includes 9V batteries.

Order part number DBT300 for the complete kit or part number DBT300-220 for 220V power requirements.

For ordering assistance and technical support,

E-Mail: service@BTTC-Beta.com

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