

1553 NETWORK TESTER - MODEL DBT100A

The DBT100A is an easy-to-use battery-powered, handheld tester able to quickly troubleshoot or test out a MIL-STD-1553B data bus network. By means of several press-to-test switches, an LCD display and nine pass/fail LEDs, the DBT100A can detect shorts, opens, crossovers and shorts-to-shield on the bus and stubs. These checks are to be performed from the LRU ends of the stub cables only. One of the test modes, DC Resistance, can be used as a general purpose ohm meter with a range of 0 to 199.9 ohms (see Fig.1.).

A remote unit is provided for the phase/crossover test (see Fig. 2.). The tester operates with a common 9V alkaline or rechargeable nicad battery (the kind used in radios and smoke detectors) that is readily available. A battery charger is provided to charge the batteries. Longer battery life is made possible by the press-to-test feature of the tester. To conserve battery life the circuit in the remote unit is in an idle, or "keep alive" mode, when not actually being interrogated. There is a master on/off switch on the remote unit.

*North Hills Application Note 255 - "North Hills Model DBT100A Network Tester User's Guide" provides further information on the operation of the tester.

The display consists of LED go/no-go indicators and a 0.4 inch, 3 1/2 digit LCD readout for the ohm-meter mode (0 to 199.9 Ohms).



North Hills 1553 Network Tester, Model DBT 100A in storage case.

Features:

- Go/No-go indicators
- Operating instructions on tester
- Battery operation - standard batteries

Benefits:

- Fast, easy testing
- One-man operation
- Detects all common problems: shorts, opens, shorts-to-shield, crossovers/phasing

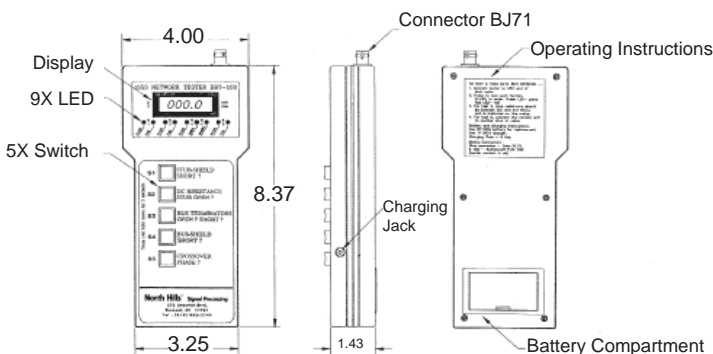


Fig 1. Main Unit.

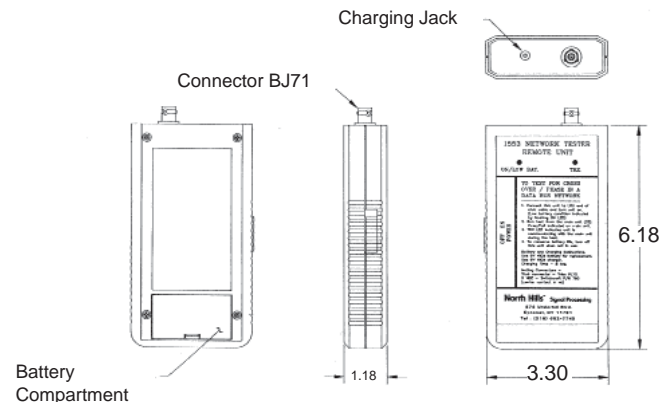


Fig 2. Remote Unit.



1553 NETWORK TESTER - MODEL DBT100A

The DBT100A is an easy-to-use battery powered, handheld tester able to quickly troubleshoot or test out a MIL-STD-1553B data bus network.

Specifications:

Main unit:		
Displays	DC Resistance	0.4 inch, 3 1/2 digit LCD 0 to 199.9 Ohms
	Shorts and opens	LED: Green = Pass, Red = Fail
	Common Mode	LED: Green = Pass, Red = Fail
	Shorts-to-shield	LED: Green = Pass, Red = Fail
	Crossover/phase	LED: Green = Pass, Red = Fail
	Battery Low	Indicated by flashing LED
	Test Method	Press-to-Test

Remote unit:		
Displays	Power on	Red LED
	XMT	Green LED
	Battery low	Indicated by flashing LED
Batteries		Standard 9V DC (supplied)
Battery life		10 hours (assuming 20% duty cycle)*
Battery charger		115VAC, 60 Hz
Charging Time		6-8 hours
Bus connector		3-lug 70 series. Mating connector is 571-10-6302 (Trompeter PL75 type)
Temperature (Storage)		-40 to +50 degrees centigrade
Temperature (Operating)		-10 to +50 degrees centigrade
*Assuming continuous use with 20% duty cycle. Under normal usage a battery set should last for several 8-hour days.		

Cable Sets:

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:

Model DBT100A consists of the following:

NH14017MA	Main Unit
NH14017R	Remote Unit
NH14017BC	Battery Charger (2)
N14017-060	Cable Assembly
PL73	3 ft. (2)

9V Alkaline or Nicad Batteries

Order DBT100A for all items. For 220V power applications specify DBT100A-220

DBT300 1553 DATABUS NETWORK TESTER

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.

***North Hills Application Note 261** - "North Hills Model DBT300 Network Tester User's Guide" provides more details regarding operation of the tester.

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 Model DBT300 1553 Network Test Set

Key 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

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.



1553 NETWORK TESTER - MODEL DBT300

Technical Specifications

Main Unit:		
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/Cross-over	LED	Green = Pass, Red = Fail
Return Loss	LCD	>-60dB
Insertion Loss	LCD	>-60dB
Battery Low	LED	Red
Test Method		Press-to-Test
Bus Connector		BJ76

Other Specifications:		
Weight:	Main Unit	550 grams
	Remote Unit	360 grams
Dimensions: (inches)	Main unit	9.56 x 4.81 x 2.05
	Remote Unit	8.40 x 3.94 x 2.00
Temperature (Storage)		-40 to +50 degrees Celsius

Accessories:

The tester ships with two 3-foot MIL-STD-17/176-00002 cables that have PL73 push-on type connectors on each end.

Other cables and adapters are available and are listed in the Table below. All cable types are three feet long. Contact the factory for other custom cable configurations or adapters.

Remote Unit:		
Power On		Green LED
Transmit	Crossover	Green LED
Transmit	Insertion Loss	Green LED
Battery Low		Flashing Power On LED
Bus Connector		BJ76

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
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N14017-065	PL73/20 AWG pins	Mates with 20 AWG sockets
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571-10-8327	BJ70/BJ70 Adapter	70-series jack barrel adapter
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571-10-8329	BJ70/PL375	BJ70-to-PL375 adapter
571-10-8330	BJ70/PL3155	BJ70-to-PL3155 adapter

Power Requirements:	
Batteries	Rechargeable 9VDC (supplied)
Battery life	8 hours
Battery charger	115Vac, 60 Hz
Charging time	6-8 hours