

Integrated Digital Data Services (DDS) Test Set

Highlights

- Rugged, Lightweight & Hand-Held Integrated DDS Test Set
- Emulates CSU/DSU
- 4-Wire Local-Loop Interface
- DS0 & Bipolar Interfaces
- All rates from 2.4Kbps through 38Kbps, 56K, SW 56K & 64K
- Transmit & Receive: DDS Control Codes; QRW 2047, 511 & All-1s; DDS Stress Patterns & Byte Encoded Patterns
- Comprehensive Loopback Tests: Alternating & Latching; DS0, OCU, CSU, DSU, NI, LSI, MJU and V.54
- Comprehensive Error Analysis
- Compatible with Centralized Test Equipment (CTE)
- Load Coil Testing

Unique Features

- Tests all DS0 logical network elements, burst mode BERT for intermittent faults and 4-Wire DDS interface
- Functions as full-service DDS test sets with DDS as primary purpose for the testing and qualification of facilities for DDS
- Built-in CSU/DSU
- Provides sealing current for 4-Wire loops
- Option-H3/-H5 add optional RS-232, V.35, RS-449 & RS-530 interfaces

Additional Features

- TX/RX Nyquist tones and local detection from 4-Wire DDS interface
- MJU Testing - All required BERT/Loopback features, including bursty data test mode

The **Halcyon 756A™ Integrated Digital Data Services (DDS) Test Set** is a hand-held integrated test set optimized for installation and maintenance of DDS, Switched 56K, 2-Wire Datapath, ISDN, T1 and Fractional T1. Designed with state-of-the-art technology and engineered for user-friendly operation, the 756A provides users with an intuitive interface allowing quick circuit diagnosis and repair without extensive training. The

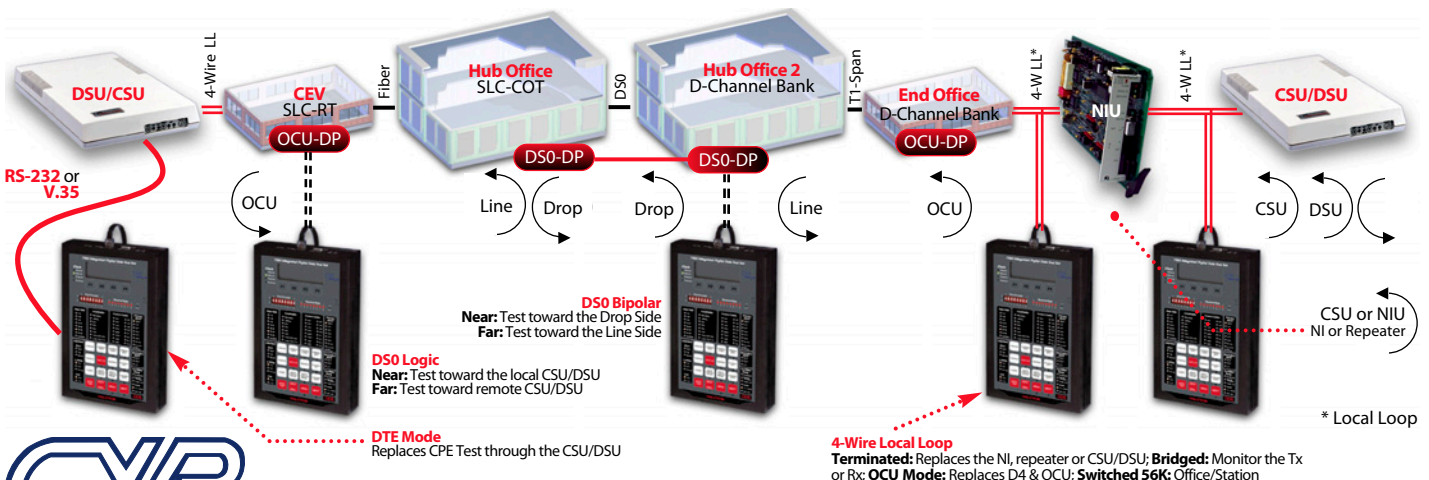


internal NiMH battery pack provides up to 4-hours of continuous operation. The 756A can be configured to meet customer specific requirements. The 756A DDS test set provides real signal emulation, digital loop qualification features, including 4-Wire and DS0 DDS interface (includes built-in CSU/DSU) and Switched 56 testing. The **756A-01** includes full DDS testing capability at any point in circuit such as OCU-DP, DS0-DP, 4-Wire cable pairs and NID. Users for the **756A-00** and 756A-01 consists of DS0/DS1, Central Office (CO), Digital Operations Group (DOG), Special Services and CO/OSP Construction Technicians.

Applications

Services Tested

All models perform the following tests: DDS (2.4kb to 56/64kb) and can be used at cross-box or customer sites. The units can emulate CPE and have built-in CSU/DSU and test Switch 56 services. The **756A-01** performs Services Tested at OCU-DP, DS0-DP and MDF, in addition it emulates the office OCU, providing sealing current for dry loop testing. The **756A-02** and **756A-07** add T1/FT1 test functions.



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Halcyon 756A

Facilities Tested/Qualified

All models perform Facilities Tested/Qualified. The categories include the following tests: Cable Pairs, DS0 Crossconnects, Smartjack testing, customer wiring and CSU testing, cross-office and inter-office testing. The 756A-01 includes Office Channel Unit (OCU) testing. The unit can test all active circuit elements (even into other Telco CO) from the OCU.

Specifications

IMPEDANCE

135 Ohms, Monitor

PHYSICAL

- Dimensions (L x W x H): 9.5-in x 6.33-in x 1.7-in
- Weight: 2.2 lbs.
- Operating Environment: 32° to 122°F (0° to 50°C), 0 to 95% R.H
- Power Requirements: 4 Watts at 115 VAC, 60Hz nominal for 9 external DC power supply
- CLEI Codes: TETMAAG7AA, DDETEAFFJAA
- Battery: 4 Hours continuous operation from the internal 7.2 VDC NiMH pack

INTERFACES

- OCU Emulation: 4-Wire Loop 8-pin modular RJ-48S
- Sealing Current Supply: -24 VDC, limited to 20mA_{max}
- 4-Wire Interface: DDS standard 8-pin modular RJ-48S
- RS-232 Interface: Compatible with EIA RS232D
- V.35 Interface: Compatible with CCITT V.35
- Operating Modes: CSU/DSU emulation, SW56K, 64K Clear, Primary and Secondary channels (fully independent)
- Primary Channel: DDS standard 8-pin modular RJ-48S
- Secondary Channel: Bellcore TR-NPL-000157
- Loop Rates: 2.4, 3.2, 4.8, 6.4, 9.6, 12.8, 19.2, 25.6, 56.0 and 72 (64)Kbps
- Termination: 135 Ohms impedance (AT&T Publication 62310)
- Cable Gauge: 19 to 26 AWG

DS0/DTE INTERFACE

- DS0 & Bipolar Interface: Dual 'Bantam'
- DS0 & Bipolar Clock Intf.: 15-pin HD D-sub
- DS0 Rates: 2.4, 4.8, 9.6, 19.2, 38.4, 56.0, 64Kbps
- DS0 Transmit Signal: '0': 0.7 V_{max}, '1': 3.5V_{min}
- DS0 Receive Signal: '0': 0.9 V_{max}, '1': 1.6V_{min}
- Bipolar Rate: 64Kbps
- Bipolar RCv & XMT Signals: '0': 0.9 V_{max}, '1': ±3.5 to ±5.5V
- DTE Interface: OPT-H3 provides RS-232, RS-530 and CCITT V.35 Interface
OPT-H5 provides RS-449, adapter, in addition to RS-232, RS-530 and CCITT V.35 Interface
- Receiver Sensitivity: Subrates: -34, -40dB, 56 and 72 (64)Kbps: -48dB
- Signal amplitude: 9.6 and 12.8Kbps: 1.66 V_{max}; All other rates: 3.32 V_{max}
- Band Rejection: C-Message filter (AT&T Publication 62310)

FREQUENCY

- Frequency Generator: 10 to 90kHz +0.5%
- Frequency Measurement: 0 to 90kHz +0.25%
- Frequency Jitter Tolerance: +5%

MISCELLANEOUS

- Cable Lengths: 0 to 1500 feet
- Pulse Width: 15.6ms nominal
- Pulse Amplitude & Wide Ratios: ±5%
- Clock Modes: Network (slave), Internal (master) and External (DTE)
- Metallic Test Aids: Short, R-R1 and T-T1, R1-T1 and 135 Ohm quite termination
- Load Coil Detect: Auto Detect up to 3 Load Coils, Range: Facility Loss < 45dB



756A DDS Front Panel

Ordering Configurations

Model	Description
756A-00	Basic DDS Test Set for 4-Wire DEMARC and DS0/DDS test functions. Includes Load Coil Detection, Bridged Test Mode and Frame Relay Test Package.
756A-01	Enhanced DDS Test Set. Includes all functions of 756A-00 plus the OCU Emulation Package for Dry Loop Testing.
756A-02	Adds T1/FT1 Test Functions to 756A-00.
756A-07	Adds T1/FT1 Test Functions to 756A-01.

Option	Description
756A-OPT-C	Factory Retrofit. Adds T1/FT1 Test Interface to 756A-00/01 models.
756A-OPT-H1	Adds 4-Wire SW/56K CO Switch Emulation.
756A-OPT-H2	Adds 2-Wire Northern Telcom SW/56K.
756A-OPT-H3	Adds DTE/DCE Test Suite with RS-232, RS-530 and CCITT V.35 Test Interfaces.
756A-OPT-H4	Adds Remote Control Test Port.
756A-OPT-H5	Adds DTE/DCE Test Suite with RS-449 Interface Adapter, in addition to RS-232, RS-530 and CCITT V.35 Test Interfaces.

For Integrated TIMS, Signaling, DDS, ISDN and DS1/T1 Test functions order one of the test sets from the 704A Packages.