

DS2460T ISDB-T_B Analysis Meter

Key Benefits

- 5 ~ 1220 MHz high-speed spectrum analysis
- 5 ~ 1052 MHz (Analog TV), 44 ~ 1052 MHz (ISDB-T_B)
- ISDB-T_B functions include Average Power, MER, CBER, VBER, & Constellation
- Analog TV functions include Level, V/A, HUM, & C/N
- Supports up to 20 auto-generated user channel plans
- Auto Test with pass/fail limits speeds up testing and simplifies results interpretation
- Client-based Toolbox management software for quick unit configuration
- Ethernet/microUSB ports for PC compatibility & Ping

Overview

The DS2460T-ISDB-T_B is a multi-functional instrument that supports analog signals in CATV networks. It is the ideal tool for initial network installations, service, and troubleshooting tasks. The ruggedized design includes an outer chassis protector, while the icon-based GUI features programmable preset pass/fail limits. The easy-flowing menus are designed for increased efficiency and productivity for all levels of technicians.

Other features - including return path & forward spectrum scan, 12 favorite tilt frequencies, AC line voltage test, HUM and DC voltage measurements, combined with complete data logging and management software - make this unit a versatile tool for cable installations.

MER, Pre & Post BER measurements, and statistics features allow quick verification of loose connections, generally related to pixelated pictures or slow DS internet data flow. The digital measurement functions also help identify mismatches caused by open coaxial lines or impedance mismatch.

Main Features

- 5 MHz - 1052 MHz range (analog signals)
- 44 MHz - 1052 MHz range (ISDB-T_B signals)
- Multiple channel plans with auto-learning mode
- QAM MER constellation display
- Pre and Post BER analysis
- BER, ES, SES, Corrected/Uncorrected bit error
- Return Path & Forward spectrum scan
- Pass/Fail limit test functions AUTO storage
- Tilt measurements display (12 channels)
- AC/DC voltage measurements, including HUM
- Measurement data storage
- Ethernet and micro USB ports
- Color display 2.8" (320x240 TFT LCD)
- Management Toolbox PC software





Features

Up to 20x Stored Channel Plans

For technicians & contractors who work in multiple HFC networks, having a choice of different channel plans is a must. The DS2460T-ISDB can learn a selection of up to 20 different channel plans. When connected to an RF drop, the DS2460T-ISDB learns analog/digital channels and custom frequencies through the built-in automated channel plan learning tool - or downloads them via Deviser's Toolbox PC software. The user can select up to 12 channels in each of the 20 user-defined plans and assign them to a favorite/tilt channel plan.

Full Spectrum Scans with Marker Feature

The DS2460T-ISDB can scan 160 channels, allowing users to quickly and efficiently measure flatness and amplitude of the HFC network. Using markers, technicians can quickly identify mismatch-related anomalies caused by poor grounding or damaged transmission lines.

Auto Diagnostic User-Defined Limit Test

The auto test simplifies the technician's work by displaying pass/fail results. Limits can be set by the end user for Power Level, MER, CBER, VBER, Spectrum Analysis, Tilt, and HUM measurements. With the simple Save function, the technician is no longer required to manually record results, allowing more installations or service calls to be performed in a day. In addition, measurements are saved instantly to ensure performance accountability for each location - and reduce the need to return to tested sites.

Spectrum Analysis and Measurements

The DS2460T-ISDB offers three spectrum analysis modes: normal, fast, and return-path. Fast spectrum analysis enables technicians to view up to 1220 MHz, while the normal mode optimizes amplitude accuracy. For troubleshooting cable TV reverse-path challenges, the unit can be set to display frequency spans up to 65 MHz - providing an additional feature for technicians dealing with upstream data signals. The marker and max hold features make capturing transient anomalies easy.

File Management - Test Data Storage

Multiple test data files can be saved and stored as analog carriers or frequencies, QAM carriers or digital frequencies, channel scan, tilt, frequency spectrum measurement and/or HUM. Results are saved to the File Directory with unique names and timestamps. Records can be uploaded to a PC via the Toolbox software for report generation, printing, and analysis.

User-Defined Auto Tests

With 20 programmable channel plans and the ability to conduct multiple tests with the touch of a button, the DS2460T-ISDB significantly boosts technicians' efficiency and productivity. Tests include Level, Tilt, Spectrum Analysis, HUM, & Performance-related Test Limits for both analog and digital carriers. Once stored in the instrument, test data can easily be recalled for full analysis.

Voltage Measurement

The DS2460T-ISDB measures battery voltage, trunk, & distribution line voltage of the cable system, accurately identifying AC or DC anomalies. The smart power management system enables approximately 5 hours' continuous operation from battery when fully charged.

HUM Measurement

The HUM measurement helps technicians identify and troubleshoot anomalies that may result from defective capacitors, faulty line splitters, or overloaded couplers (caused by weather conditions or excessive current). Both 60 & 120 Hz tests are performed @400Hz LPF measurements.

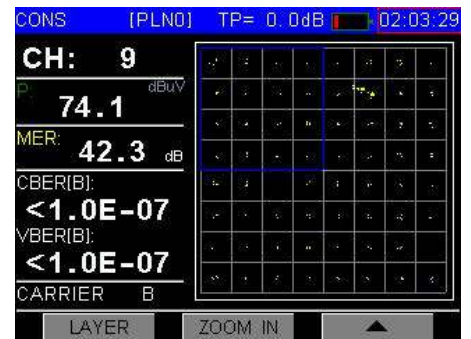


Figure-1: MER, Pre-BER, Post-BER & Constellation

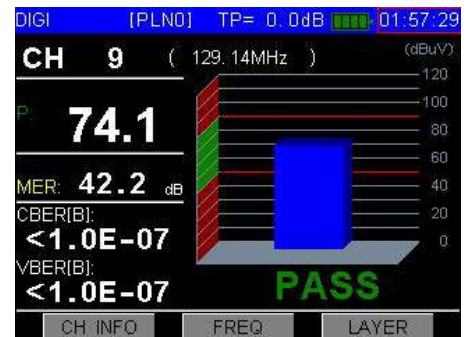


Figure-2: Power Level Measurement

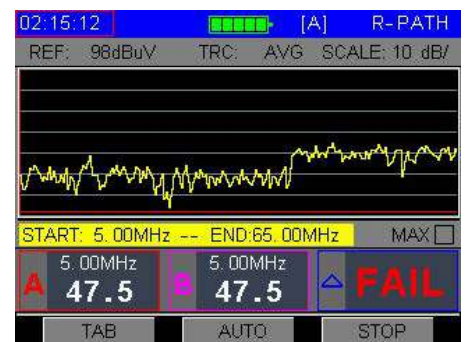


Figure-3: Return Path Spectrum (5~65MHz)

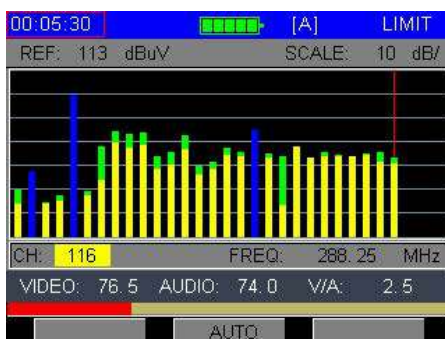


Figure-4: Channel Scan

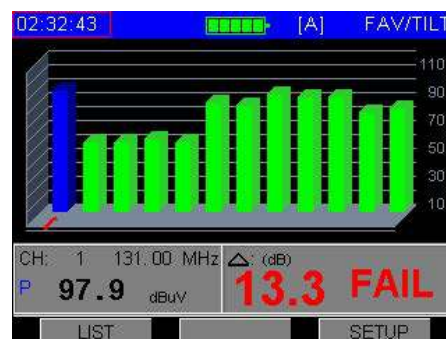


Figure-5: Tilt (Max 12 Channels)

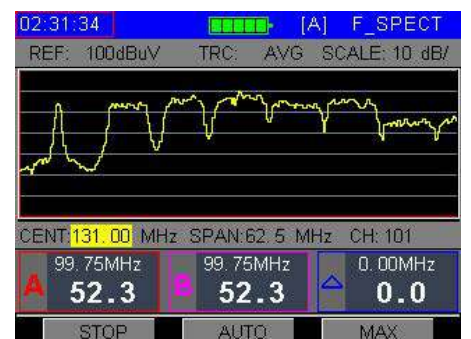


Figure-6: Forward Spectrum

Specifications

Normal Spectrum Analysis	
Frequency Range	45 MHz ~ 1052 MHz
Span	2.5 MHz; 6.25 MHz; 12.5 MHz; 25 MHz; 62.5 MHz; Full Span
Fast Spectrum Analysis	
Frequency Range	5MHz ~ 1220MHz
Span	12.5MHz, 25MHz, 62.5MHz, Full Span
Upstream Spectrum Analysis	
Frequency Ronger	5~210MHz
Channel Scan	
Number of Channels	160 channels max
Scale	1,2,5,10dB/div
Zoom	Five levels: 1X, 2X, 3X, 4X, 5X
Analog TV Measurement	
Supported Standards	PAL, NTSC, FM Radio (Single Frequency)
Level Measurement	Range: -30dBmV to +60dBmV; Accuracy: ±2dB; Resolution: 0.1dB
Frequency	Range: 5M-1052M ; Accuracy: ±50ppm; Resolution: 10KHz
Resolution Bandwidth	280KHz
C/N	>50dB
HUM Measurement Range	2% to 15%
ISDB-T _B Measurement	
Modulation Type	QPSK, 16 QAM, 64 QAM
Modulation Bandwidth	6MHz
Power Level Range	-35dBmV ~ 50dBmV
Power Resolution	0.1dB
Power Level Accuracy	±2.0dB (C/N>20dB)
MER Measurement	> 40dB
MER Accuracy	±2.0dB
CBER	1E-1 ~ 1E-5
VBER	1E-1 ~ 1E-7
Constellation	√
Line Voltage Measurement	
Range	0V to 100V (AC/DC) with accuracy ±2V
Others	
RF Input	75Ω
USB	USB Micro B 2.0
Ethernet	10/100M
Display	2.8" 320x240 TFT LCD
AC/DC Adapter	AC 100V to 240V 50-60Hz ,DC 15V/0.9A
Battery	7.4V 2.5Ah Lithium Battery
Charge Time/ Working Time	5 hours / >5hours
Dimension (W×H×L)	200mm × 106mm × 54mm (7.9" x 4.2" x 2.1")
Weight	~600g (1.3 lbs)
Work / Storage Temperature	-10 ~ +40°C / -20 ~ +70°C

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