

# Satellite Digital Signal Analyzer

DSA 1481



The DSA 1481 Satellite Signal Analyzer provides a comprehensive, low-cost solution to the needs of installers and technicians in today's complex satellite communications systems. Capable of testing and analyzing digital satellite transponder signal quality with in-depth analysis including Noise Margin, MER, BER, EVM, constellation, and spectral analysis. A simple pass, margin or fail indication simplifies interpretation. Additionally, the FEC value, encryption type, network/program names, video/audio packet IDs are indicated providing advanced verification and troubleshooting information to resolve the toughest challenges.

The DSA1481 provides innovative satellite dish installation and alignment features to speed dish orientation and improve aiming resulting in a more robust dish fade margin. The "Sat Finder" feature references one to three preselected transponders providing positive satellite identification. Once satellite ID is confirmed, an audible beeper guides you to the best alignment position. The Sat Pointer and Max Hold feature combine for a dynamic visual spectrum analyzer guided precision dish alignment.

Advanced features, such as DiSEqC switch/motor control commands, dual LNB simultaneous monitoring, and SCR (single cable commands) provide further utility in controlling satellite systems for ease in alignment and testing. The DSA1481 provides the durability needed for continuous field use and the bright LCD display provides ease of viewing in any environment.

## KEY FEATURES

- Satellite tuner 930-2250 MHz with satellite & transponder selections available for all worldwide satellites
- Unique satellite dish pointing and aligning features including Sat Pointer, Sat Finder, Max Hold, and Dual LNB insure dish installation ease and accuracy
- Satellite Digital Measurements including Constellation, MER, PER, aBER, bBER, EVM, Noise Margin, Level/Power measurements & Spectrum Analyzer
- Detects and measures MPEG 2/4 HD signals and programs, shows program list, A/V PIDs and encryption
- Automatic quality analysis: FAIL-MARGINAL-PASS
- Data Logger for automatic transponder testing and measurement captures
- All DiSEqC commands - SCR with automatic search, USALS motor protocol
- Light weight moisture resistant shock sturdy case – ultra-bright LCD display
- > 4 hour battery time - power management features including auto shutoff timer and display brightness adjustments to extend battery time
- Battery conditioning feature to regenerate/measure battery levels and calibrate the battery indicator
- Supplied with carry case, power adapter, automotive power/charging cable, and USB cable
- SMART software pc interface for firmware upgrades, satellite transponder plans and log file management

## APPLICATIONS

- Satellite dish installation and precision alignment for Pay TV services, satellite links to retail or business locations, video transport for broadcast, etc.
- Maintenance of satellite dish and distribution systems in schools, corporate campuses, correctional institutions, and hospitality networks.
- Testing satellite distribution systems, equipment and modulators.

# SPECIFICATIONS

## Satellite Digital Signal Analyzer DSA 1481

### MEASUREMENT

Frequency Range:	SAT: 930 - 2.250 MHz
Measure Tuning:	By satellite transponder or frequency, C/KA/KV bands
Digital Modulation types:	QPSK, 8PSK, DVB-S/S2, DSS
Digital Measurements:	Power, noise margin, Pre-Viterbi (bBER), After-Viterbi (aBER), PER,(8PSK), MER, EVM
Dynamic range:	30 to 126 dB $\mu$ V
Measurement Accuracy:	1.5 dB typical
Constellation Diagram:	DVB-S/S2, QPSK, 8PSK
Analog Measurement:	Level

### MPEG2/4 SPECIAL FUNCTIONS

Network/Program (Bouquet) ID:	Names listed
Modulation Parameters ID:	Modulation type shown
Service Encryption Detection:	yes/no
Encryption/CA System ID:	Type listed
Bouquet/Network Service List:	Transponder bouquet or services name list
VPID/APID:	Video & audio packet ID# by service

### SPECTRUM ANALYZER FUNCTIONS

Spectrum Tuning:	By transponder or frequency
Span Selection:	500, 200, 100, 50, MHz or Full SPAN
Max Hold Function:	Shows peak level reference line

### SATELLITE SPECIAL FUNCTION

LNB S.C.R.:	Single cable router test – 8 user/freq. auto test
DiSEqC:	Digital sat. equip. control, 1.2, (a-b-c-d, USALS)
DUAL LNB Dish Alignment:	Simultaneous 2 transponder monitoring - DiSEqC switch
SAT FINDER:	Test 1 to 3 transponders - confirm lock, SR & Freq./BW
L BAND Attenuation Test:	Atten. of 3 L-band Freq. from measured reference
LNB Volts:	Selectable 12, 18, V
LNB Tests:	Current mA

### OTHER SPECIFICATIONS

Memory Plans:	99 with 199 transponders per plan
Logger Plans:	50 logger plans
Display:	Hi brightness LCD (64 x 128)
Firmware Upgrades:	USB via SMART software
USB Port:	USB 2.0 type B PC
Built-in battery operation:	> 4 Hours (no LNB powering)
Power Save:	LCD backlight auto-off timer, brightness adj.
Battery Reconditioning:	Built-in battery test/recovery algorithm
Dimensions:	3.3 x 8.6 x 6.5 inches (HWD)
Weight:	2.4 lbs
Case:	ABS plastic
Standard Accessories Includes:	Soft padded case AC power adaptor & battery charger 12V lighter adaptor & battery charger USB 2.0 cable DiSEqC switch – 2 way Replacement F, push-on adapter CD disc with manual, startup guide, SMART