

XR-3

Modular Test Instrument

XR-3

- Rugged
- Adaptable
- Economically Efficient

Configurable to test:

DVB-S **QAM**
SATELLITE

DVB-S2 **8VSB**

and more...



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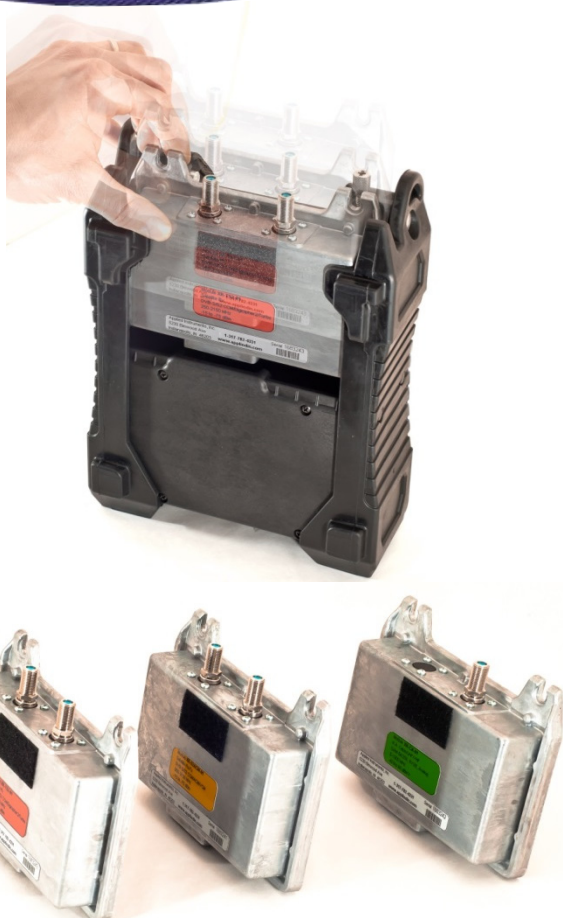
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XR-3

Modular Test Instrument



GENERAL FEATURES

- Durable case with rubber shock guards
- Color graphic LCD screen, sunlight readable display
- Glow-in-the-dark numeric keypad with arrow key controls
- Rechargeable / Easily Replaceable Li-Ion battery
- USB computer interface for firmware updates
- Operates while charging via AC
- Quick charge battery with universal AC or vehicle 12 VDC
- Modular design for longer life and more flexibility
- Accepts various easily-swappable modules (sold separately)

SPECIFICATIONS

Battery.....rechargeable Li-Ion, 4400mAh 12.6V Max
 Run time/charge.....4 hours for a single LNA
 (depends on LNA current draw)
 Universal AC charger.....100 to 240 VAC, 50/60 Hz
 fast charge and then trickle
 Vehicle charger.....12VDC
 Computer Interface.....USB (Ethernet optional)
 Size/Weight.....9"W x 7"H x 2.5"D / 3.2 lbs.
 (without rubber guards) 22.9cm x 17.8cm x 6.4cm / 1452 g
 Operating Temperature Range.....-20°F to 120°F (-29°C to 49°C)
 Battery Charge Temperature Range..41°F to 100°F (5°C to 38°C)
 Warranty.....12 month limited
Specifications subject to change without notice.

STANDARD ACCESSORIES

- Shoulder strap
- Cordura protective flap
- Universal AC switching power supply with line cord
 (100 VAC to 240 VAC Transformer)
- Automobile cigarette-lighter adapter battery charge cord (12V DC)
- PC data transfer cable (USB)
- Quick Start Guide
- Desktop kickstand

OPTIONAL ACCESSORIES

- Hard shell protective carrying case

Modules Available

Module Part Number	Description	Application
XR-TS2-01	Satellite Meter North American DBS / Broadcast TVRO 250-2150 MHz	DISH, DIRECTV, Bell TV, Shaw Direct, and more
XR-S2ACM-01	Satellite Meter VSAT, Broadcast TVRO, International DTH 900-2150 MHz	iDirect, Hughes Ku, and more
XR-CA-01	Signal Meter - Cable & Off-Air (J.83B) / VHF / UHF 5-1000 MHz	UHF Off-Air, CATV, SMATV (i.e. DISH Smartbox, Blonder Tongue headends)

XR-TS2-01 Satellite Signal

Level Meter Module For North American DBS & Broadcast TVRO

FEATURES

- Compatible with XR-3 Modular Test Instrument
- Friendly user interface
- Satellite ID by "align-to-lock" or "automatic scan"
- ID multi-lock algorithm eliminates false positives
- Powers LNBs and multi-switches
- Use for L, C, X, Ku, or Ka band applications
- High sensitivity assures alignment optimization
- Geo-sensitive "Field Guide" software database stores all compatible satellites and transponders per global region
- Program and store up to 256 custom transponders
- Controls multi-LNBs/switches with 22kHz DiSEqC tone
- Manually tune to custom transponders using front panel keypad
- Audible tone for signal lock or peak
- Store measurements for Proof-of-performance reporting
- "Limit Scan" Pass/Fail for key transponders
- Displays antenna settings (AZ / EL / Skew) based on user's postal code or latitude and longitude coordinates
- Field replaceable type F barrel connectors
- Fast system boot-up time in less than 5 seconds

MEASUREMENTS

- Demodulates DVB-S, DSS / DIRECTV Legacy, Digicipher 2, Turbo FEC, & DVB-S2 (QPSK & 8PSK, CCM) signals
- Signal Level (dBm, dBmV, or dBμV) with present and peak bar graph
- Signal Quality (IRD, C/N, Eb/No, or Es/No)
- BER (Pre FEC / Viterbi & Post FEC / Reed Solomon) for DVB-S, DSS / DIRECTV Legacy, and Digicipher 2 signals
- Bad blocks, corrected blocks, and frame errors for DVB-S2 and Turbo FEC signals
- Voltage output of IRD / IDU (29V max)
- Current draw of LNB
- LNB frequency deviation (LNB LO drift estimate)
- Symbol Rate error
- Spectrum Screen (frequency on x-axis, amplitude on y-axis)
- Constellation Screen (I and Q demodulator values)

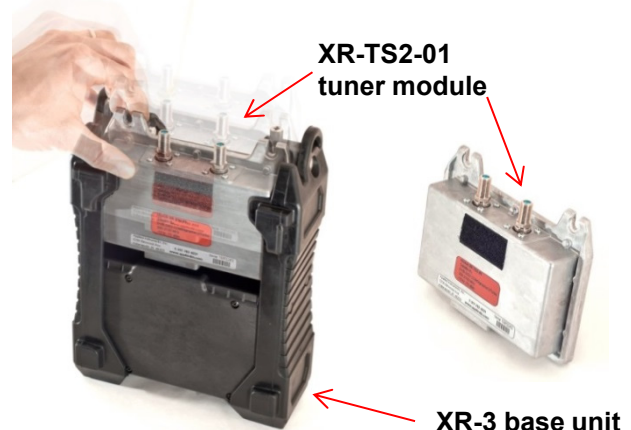
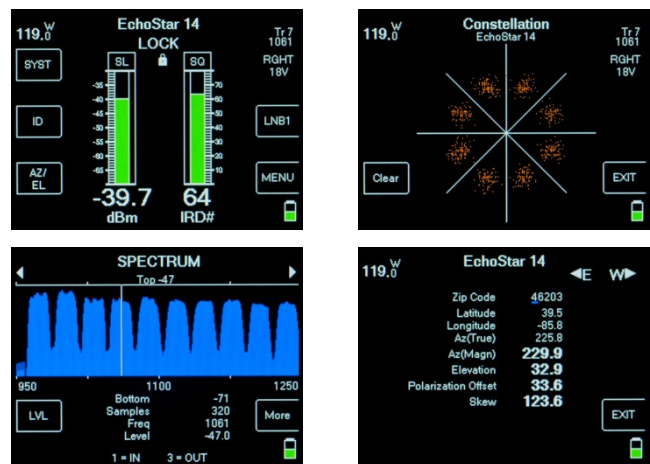
STANDARD ACCESSORIES

- Quick Start Guide

SPECIFICATIONS

Frequency Range.....250-2150 MHz
 Tuning Resolution.....4 kHz
 Signal Level Range... -75 to -15 dBm (+34 to +94 dBμV)
 RF Level Accuracy.....+/- 2 dB typical, 3 dB max
 Signal Lock Formats..... DVB-S (QPSK), Digicipher 2 (QPSK & OQPSK),
 DVB-S2 (QPSK & 8PSK, CCM),
 DSS / DIRECTV Legacy (QPSK), Turbo (QPSK & 8PSK)
 Impedance.....75 Ohm
 LNB Power.....13VDC for V/R, 18VDC for H/L
 21VDC for DIRECTV SWiM, 29VDC
 Switch Control22 kHz, DiSEqC
 RF ConnectorType F barrel, field replaceable
 Warranty.....12 month limited

Specifications are subject to change without notice.



XR-S2ACM-01 Satellite Signal

Level Meter Module For VSAT, Broadcast TVRO & International DTH

FEATURES

- Compatible with XR-3 Modular Test Instrument
- Friendly user interface
- Satellite ID by "align-to-lock" or "automatic scan"
- ID multi-lock algorithm eliminates false positives
- Powers LNBS and multi-switches
- Use for L, C, X, Ku, or Ka band applications
- High sensitivity assures alignment optimization
- Geo-sensitive "Field Guide" software database stores all compatible satellites and transponders per global region
- Program and store up to 256 custom transponders
- Controls multi-LNBs/switches with 22kHz DiSEqC tone
- Manually tune to custom transponders using front panel keypad
- Audible tone for signal lock or peak
- Store measurements for Proof-of-performance reporting
- "Limit Scan" Pass/Fail for key transponders
- Displays antenna settings (AZ / EL / Skew) based on user's postal code or latitude and longitude coordinates
- Field replaceable type F barrel connectors
- Fast system boot-up time in less than 5 seconds

MEASUREMENTS

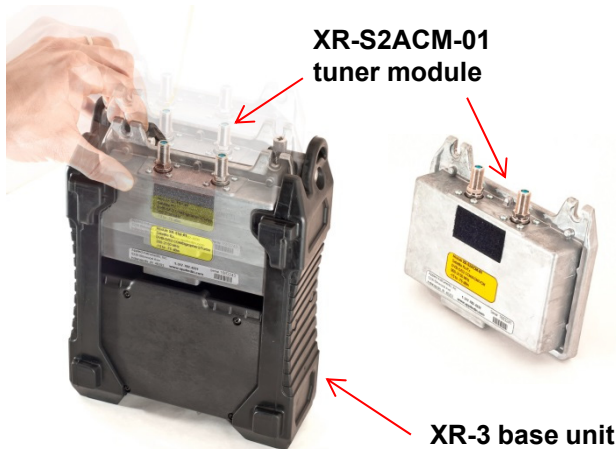
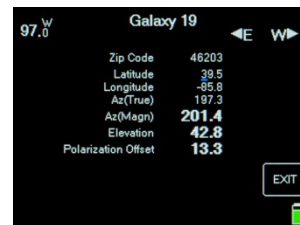
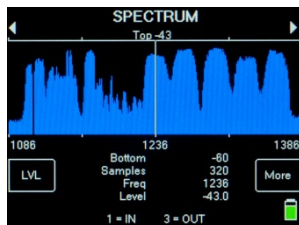
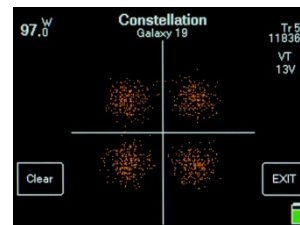
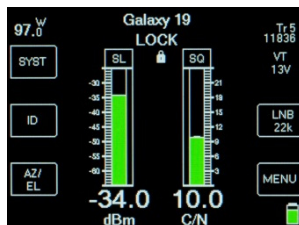
- Demodulates DVB-S, DSS / DIRECTV Legacy, & DVB-S2 (CCM, ACM, & VCM) signals
- Signal Level (dBm, dBmV, or dBμV) with present and peak bar graph
- Signal Quality (IRD, C/N, Eb/No, or Es/No)
- Pre-FEC & Post-FEC BER (Bit Error Rate)
- PER (Packet Error Rate)
- Voltage output of IRD / IDU (29V max)
- Current draw of LNB
- LNB frequency deviation (LNB LO drift estimate)
- Symbol Rate error
- Spectrum Screen (frequency on x-axis, amplitude on y-axis)
- Constellation Screen (I and Q demodulator values)

STANDARD ACCESSORIES

- Quick Start Guide

SPECIFICATIONS

- Frequency Range.....900-2150 MHz
 Tuning Resolution.....4 kHz
 Signal Level Range... -75 to -15 dBm (+34 to +94 dBμV)
 RF Level Accuracy.....+/- 2 dB typical, 3 dB max
 Signal Lock Formats....DVB-S (QPSK), DVB-S2 (QPSK, 8PSK, 16APSK, 32APSK, CCM, VCM, ACM), DSS / DIRECTV Legacy (QPSK)
 Impedance.....75 Ohm
 LNB Power.....13VDC for V/R, 18VDC for H/L
 21VDC for DIRECTV SWIM LNBS, 29VDC
 Switch Control.....22 kHz, DiSEqC
 RF ConnectorF barrel, field replaceable
 Warranty.....12 month limited
Specifications are subject to change without notice.



XR-CA-01

Digital/Analog CATV/VHF/UHF Off-Air Signal Level Meter Module

GENERAL FEATURES

- Works with the XR-3 Modular Test Instrument base unit
- Friendly user interface
- Tune by frequency or tune by channel number
- Field replaceable type F-female barrel connector
- Fast system boot-up time in less than 5 seconds
- Compatible with digital and analog signals
- Store measurements for Proof-of-Performance
- Programmable Pass/Fail limit scan for all channels
- Quick scan of all channels
- Easily create new custom channel plans or use standard base plans
- Spectrum Screen (frequency on x-axis, amplitude on y-axis)
- Constellation Screen (I and Q demodulator values)

VHF / UHF OFF-AIR FEATURES

- Supplies Pre-Amp / LNA power
- Simultaneously displays signal level and quality of multiple channels
- Displays measurements for analog and digital signals
- High signal sensitivity assures Off-Air antenna alignment optimization
- Manually tunes to custom channels
- Audible tone for signal lock and peak

CATV FEATURES

- Compatible with analog and digital CATV signals
- Frequency range from 5 MHz to 1 GHz
- Tilt measurement

MMDS FEATURES

- Powers frequency block down-converters

MEASUREMENTS

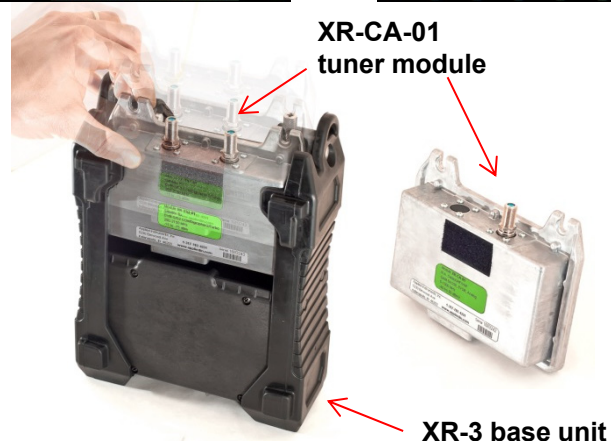
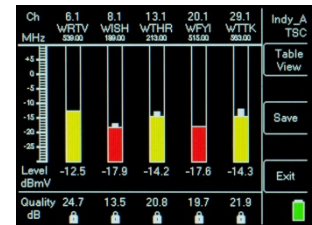
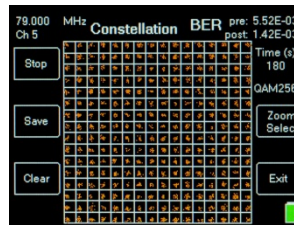
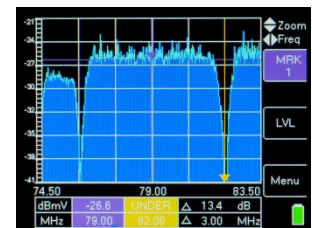
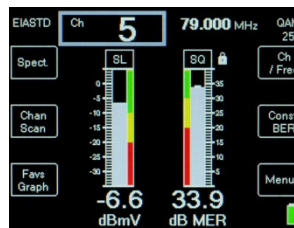
- Digital and Analog Signal Level (dBm, dBmV, or dBμV) with present and peak bar graph
- Analog Signal Quality (C/N)
- Digital Signal Quality (MER & BER)
- Locks on 8VSB (ATSC A/53) UHF digital Off-Air signals
- Locks on 64QAM and 256QAM (ITU-T J.83, Annex B) CATV signals
- Tilt
- Analog Video and Audio Carrier Measurements (NTSC, PAL, SECAM)
- Current draw of off-air antenna pre-amp / LNA

SPECIFICATIONS

Frequency Range.....5-1000 MHz
 Tuning Resolution.....Standard channel spacing or 125 kHz increments
 Signal Level Range.....-40 to +60 dBmV
 RF Level Accuracy.....+/- 1.5 dB typical
 Compatible Analog Signal Formats.....NTSC, PAL, SECAM
 Compatible Digital Signal Lock Formats.....8VSB (ATSC A/53)
 64QAM, 256QAM (ITU-T J.83, Annex B)
 Nominal Impedance.....75 Ohm
 LNA/Pre-Amp Power.....5,13,18 VDC
 RF ConnectorType F-female barrel, field replaceable
 Warranty.....12 month limited
Specifications subject to change without notice.

STANDARD ACCESSORIES

- Quick Start Guide



Specifications Subject To Change Without Notice

Rev 01 -11

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