

# MODEL TWO

## Distribution Signal Level Meter



- **5–870 MHz Standard Frequency Coverage**
- **Full Scan, Single Channel And Spectrum Modes**
- **Data Logging**
- **Large, High-Resolution Display**
- **Rugged, Simple To Use, Cost-Effective**

*Trilithic's Model Two Signal Level Meter. This instrument is designed to provide you with optimal features for reduced cost.*

*Amplitude measurements are fast and efficient. Carrier amplitudes are displayed individually, as a group (up to 12 "favorites"), or as a full-span display. This product also features a single-channel Spectrum Mode, which displays the presence of interfering beats in addition to the carrier amplitudes. The unit lets you take the direct power measurement of QAM signals, carrier-to-noise measurements, data logging, and also supports a volt-meter function.*

*5 user-defined channel plans may be stored, and the Model Two can perform a complete test of all channels in the selected User Channel Plan to specified limits at the press of a single key. It can also be set to automatically perform Level, Spectrum, Tilt (Favorite), and Limit tests at programmed intervals unattended.*

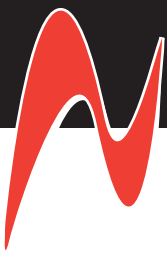
*The Model Two can save files for Level, Tilt, Spectrum, Scan, Limit Test, and Auto Test measurements. These files can be recalled to display the recorded data, or Scan, Spectrum, and Limit files can be viewed graphically. The Model Two also makes it easy to obtain a hard copy of installation data or documentation of a problem via its printer function.*



*The unit is the ideal signal level meter for HFC installations. It is durable, has many features, and is simple to use in a wide range of conditions. Its tough, plastic shell and protective jacket make the Model Two highly resistant to damage from shock and impact. When not in use, the unit and its accessories are contained in a carrying case.*

*The Model Two is rugged and convenient to use. It weighs only 1.5 pounds and can be carried and operated with one hand. All measurement functions are accessible via a single keystroke, and, with the Fast Setup function, settings for each measurement mode can be accessed at the press of a single key without going through nested menus. Other functions are simplified through the combination of dedicated function keys and "softkeys."*





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Building on the success of the Model One, the new Model Two Distribution Signal Level Meter introduces many new features and enhancements. These include expanded FCC level testing, one-button programmable test sequences, a 50% increase in battery life (with fast charging), enlarged LCD screen and many others.

### Performance Enhancements

#### More Learned Channel Plans

The Model Two can retain up to five user-defined channel plans. This is a convenience for contractors who work in several systems with differing channel lineups. Plans can be automatically learned (from 8 base plans) at a cable drop or downloaded from PC files using Trilithic ToolBox Software.

The operator can select key channels in each User Plan to be included in a Tilt\Favorite Channel Plan. A separate Tilt\User Plan can be configured for each User Plan.

#### Automated FCC Proof of Performance Test, with Data Evaluation

At the press of a key, the Model Two performs all Part 76 level-related tests including:

- Visual Carrier levels
- Relative Visual / Aural Carrier levels
- Difference between Maximum and Minimum Visual Carrier Levels
- Difference between adjacent Video Carrier levels

Measurements can be executed immediately or programmed to occur at timed intervals, unattended, as an FCC 24 Hour Variation Test. The Model Two can be programmed to score test results against FCC limits, or limits set by the user.

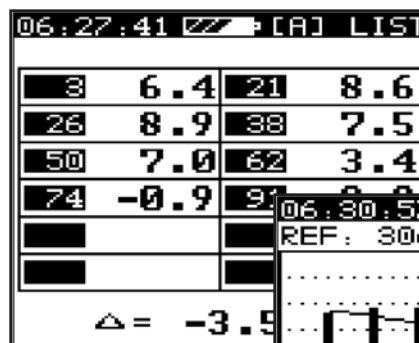
#### Expanded, Flexible Data Storage

Level, Tilt, Spectrum, Scan, and Limit Test measurement Files may be saved. Auto Test files are saved automatically. Any combination of up to 35 Level, Tilt, Spectrum or Scans, or up to 25 Limit Test measurement Files may be saved.



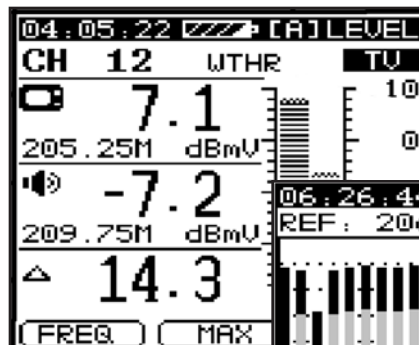
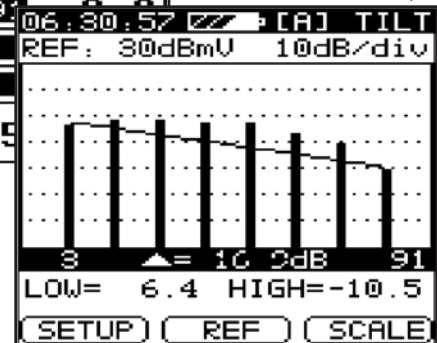
Learn and Edit up to 5 Channel plans

Choose from 8 base Channel Plans



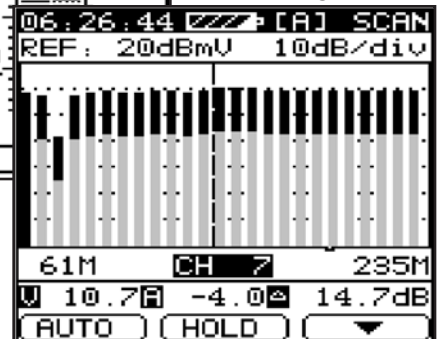
Display favorite channels and tilt as a graph

Display favorite channels and tilt in tabular form



Scan all channels, and zoom in with 5 levels of magnification

Single channel display, with V/A Delta



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## Distribution Signal Level Meter

Up to 7 user programs can be stored for recall when needed.

15:56:51 [A] SAVE

NAME	DATE	TIME
LEV-1	12/07/02	00:41
TILT1	12/07/02	00:42
SPEC1	12/07/02	00:42
CCON1	12/07/02	00:43
	2/07/02	00:43
	2/07/02	00:45
	2/07/02	00:50
	2/07/02	01:49

08:09:03 [A] AUTO  
<AUTO TEST>

NAME	DATE	TIME
TEST1	12/07/02	00:48
TEST2	12/07/02	07:52

DEL LOAD

START DEL INFO

Log amplitude data to files, user selectable. Upload to a PC using Trilithic ToolBox software.

### User Defined Testing Programs

A great convenience for the operator, the Model Two's program capability allows groups of tests to be assembled into automatic procedures that can be executed with one keystroke. Several programs can be stored in the Model Two and called up when needed. These may include Level, Tilt, Spectrum, and Limit Tests. Limit Test data may be automatically scored against specified limits and assembled into reports.

### Extended Battery Life, Fast Charging

The Model Two battery provides 6 hours or more of continuous use between charges. One hour of fast-charging from AC or vehicle power provides nearly 3 hours of extended operation.

### Larger LCD Display

The Model Two display has been enlarged and new screen graphics enhance readability and simplify operation.

### Wider Channel Scans

The Model Two can display up to 126 channels in a single view. A total of 150 Channels can be displayed in two overlapping views.

The settings for the currently-active measurement mode can be accessed at the press of a single key without going through nested menus. This allows the operator to quickly make changes in the settings and return to measurement mode with no wasted time.

### New LEVEL Measurement Features

As an aid to troubleshooting, the operator can now choose LIVE, MAX or  $\Delta$ P-P (variation) signal level displays. LEVEL Mode now measures both aural carriers on channels equipped for Dual Audio Programming.

### New SPECTRUM Measurement Features

A  $\Delta$  MARKER function is now included in Spectrum and Single-Channel Spectrum modes. MAX HOLD captures transient events.

QAM Power available in numeric (shown) or graphic displays

10:04:22 [A] MAX  
REF: 25dBmV 10dB/div

06:02:29 [A] LEVEL  
CH 102 64QAM DIGI

P 7.0 dBmV

CENT 663.00M  
BW 6.00M

25M SP25.00M  
25M 8.9dBmV  
MKR

FREQ MAX

Display RF Spectra from 2.5 to 62.5 MHz spans or full span

04:31:57 [A] VOLT

BATTERY VOLTAGE:  
47% 3.64V

COAX VOLT: 0 30 60  
AC/DC AUTO

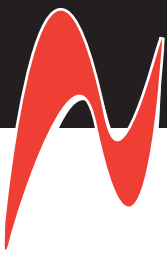
04:07:41 [A] SETUP  
INFORMATION  
GENERAL  
MEASUREMENT  
CHANNEL PLAN

ENTER

Simple, intuitive set-up screens

Measure up to 120 volts, AC/DC





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## Specifications

### Frequency:

Range: 5MHz—870MHz  
Accuracy: +/- 50ppm (20°C +/- 5 °C)  
Resolution: 10kHz

### Channel Type:

Analog TV: TV  
Digital TV: QAM, QPSK  
FM channel: Single Frequency  
Dual Audio Channels

### Level Measurement:

Range: 30dBmV—120dBmV  
(-30dBmV to 60 dBmV)  
Accuracy:  
LEVEL (> 35dBmV or -25dBmV)  
+/-1.5dB (10°C to 30°C)  
+/-3dB (-10°C to 40°C)  
SCAN +/-2dB (10°C to 30°C)  
Resolution: 0.1dB  
Input Impedance: 75W (unbalanced, BNC  
or F type connector)

### Channel Scan:

Number of Channels: 150 channels max.  
Scanning speed: 2.75 channels / sec  
Scale: 1,2,5,10 dB/div  
Zoom: 1X, 2X, 3X, 4X, 5X five levels of  
magnification or full Channel Plan scan.

### Frequency spectrum:

Bandwidth: 2.5MHz, 6.25MHz, 12.5MHz,  
25MHz, 62.5MHz, and full span  
Scale: 1,2,5,10 dB/div

### Carrier-noise ratio (C/N):

Input range: Over 85dBmV (25dBmV)  
Range: 20—50dB max.(depending on  
input level)  
Accuracy: +/-2dB  
Resolution: 0.1dB

### Digital Channel (Average) Power:

Bandwidth: 0.28~9.99MHz  
Center Frequency: 5MHz (plus ½ Channel  
bandwidth) to 870MHz (minus ½ Channel  
bandwidth)  
Digital modulation: QAM, QPSK

### Tilt measurement:

Number of channels: 4—12  
Resolution: 0.1dB

### Limit Test Parameters:

Any of the following may be enabled:  
Min video: 40-119dBuV (-20 to 59dBmV)  
Max video: 41-120dBuV (-19 to 60dBmV)  
Max Δ video: 2-30dB  
Min Δ V/A: 0-15dB  
Max Δ V/A: 5-30dB  
Max Δ ADJ: 0-20dB  
24HR Video Dev.: 0-20dB

### Auto Test:

Number Of Programs: 7 (Max)  
Tests: Level, Tilt, Spectrum, Limit, and  
24HR Video Dev. (any or all tests may be  
used in an Auto Test program)  
Time Intervals: 1 to 23 Hours  
Test Times: 1 to 10 times

### Trunk Voltage measurement:

Input range: 1.2—100VAC, 1.0—100VDC  
Accuracy: +/- 1V  
Resolution 0.1V

### Others:

Storage: 32K bytes memory  
Up to 35 complete Scan files (150  
Channels max.) or 25 complete Limit Test  
files (150 Channels max.). Less if other  
files (Level, Tilt, Spectrum) are saved.  
Communication Port: RS 232C  
Printer: Canon, Epson, and HP  
Audio Output: Built-in speaker  
Dimensions: 218mm X 95mm X 49mm  
(excluding belt clip and RF connector)  
Weight: 1.45 lbs. (658gm)  
Display: 128 X 128 LCD with backlight

### Power Supply:

Battery: 3.6V 3.5AH Ni-MH battery, Charger:  
\* AC 100-240V, 50/60Hz, 1.8A 7VDC(max)  
Work Time: Average 6-8 hours (full charged  
battery). Charge Time: Less than 3 hrs.

