# DisplayMax® Jr Model 3000

**Signal Level, Leakage & Ingress Meter**


- **Leakage Detector**
  Detect signal leakage from the drop & home wiring
- **Ingress Detector**
  Detect ingress signals in the drop & home wiring
- **Analog, QAM, QPSK & 8VSB**
  Power measurements of analog and digital formats
- **Auto-Calibration**
  Eliminate the cost and downtime of annual calibration

## Product Description

The DisplayMax Jr 3000 is a rugged, easy to use signal level meter capable of measuring analog and digital channels at any point in the CATV system from the headend to the subscriber drop. In addition to signal level, the Jr 3000 detects both leakage and ingress at the subscriber drop and home wiring. Finding and fixing leakage and ingress is essential to maintaining VoIP and High-Speed Data services. The first step is to test for ingress coming from the customer's premise. If ingress is detected, use the leakage mode to quickly find the source. Routine testing for leakage and ingress, in addition to verifying analog and digital channel level, will insure the most demanding services run smoothly.

## Ingress Detection

Ingress is caused by loose connections or poorly shielded coax. These conditions allow outside signals into the cable and can slow down or abruptly stop digital services. Having a meter that detects the presense of ingress is essential to maintaining digital services such as VoIP and High-Speed Data. To measure ingress, the installer disconnects the drop cable from the ground block, connects the meter to the home cabling, then presses the Ingress Check key. If ingress is present, the meter's LCD will show the frequency with the highest ingress level along with a pass/fail message. Once detected, use the leakage mode to find the source.

## Leakage Detection

Leakage is caused by loose connections or poorly shielded coax. These conditions allow forward channels to escape from the cable. They also allow outside signals to enter the return path (ingress). Therefore, finding and fixing leakage also fixes ingress. To measure leakage, the installer attaches a rubber duck antenna to the meter's input, then press the leakage key. Special signal processing eliminates false leakage readings caused by electrical noise, aircraft communications or other non-cable signals. The meter displays the leakage reading numerically and also emits a variable tone that increases in pitch as the leakage reading increases. Testing for leakage is a crucial part of maintaining VoIP and High-Speed Data services.

## Field Rugged and Accurate

The DisplayMax Jr 3000 has a rugged aluminum housing, weather proof keypad, protected LCD display, virtually unbreakable F-connector bushing and comes in a padded nylon case. In addition to the rugged mechanical design, the meter has a built-in white noise source that acts as a calibration reference. Before each reading, the meter adjusts its calibration, making the DisplayMax Jr 3000 not only rugged, but also extremely accurate. The auto-calibration feature maintains the meter's accuracy and eliminates the need for annual calibration.

**Sadelco®** 800-569-6299 sales@sadelco.com
75 West Forest Ave. • Englewood, NJ 07631 • USA • 201-569-3323 • fax 201-569-6285 • www.sadelco.com
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## Specifications

**SIGNAL LEVEL METER**
Frequency Range: 5 to 872 MHz.
Tuning Resolution: 125 KHz.
IF Bandwidth: 280 KHz.
Analog Power Range: -30 to +60 dBmV.
Digital Power Range: -23 to +67 dBmV.
Level Resolution: 0.1 dB
**Typical Accuracy: +/- 0.5 dB**
Max Additional Error at 70° F: +/- 0.5 dB
Typical Accuracy from 0 to 120° F: +/- 1.0 dB
Max Additional Error from 0 to 120° F: +/- 1.0 dB
Digital Error: additional +/- 0.5 dB

**LEAKAGE DETECTOR**
Frequency Range: 110 to 140 MHz. (default 133.250 MHz.)
**Sensitivity: 2 uV/m,** with duck antenna 3ft from leak
Tuning Resolution: 125 KHz.
IF Bandwidth: 280 KHz.
Detector Type: Peak
Video Filter: Responds only to video signals (rejects non-cable signals)
Audio: Outputs tone; frequency varies with level.
Accuracy: Same as analog channels in signal level meter mode

**INGRESS DETECTOR**
Frequency Range: 5 to 872 MHz. (default 5 to 40 MHz.)
**Return Sensitivity: -40 dBmV.** (5 to 40 MHz.)
Forward Sensitivity: -30 dBmV. (40 to 872 MHz)
Tuning Resolution: 250 KHz.
IF Bandwidth: 280 KHz.
Detector Type: Peak
Accuracy: Same as digital channels in signal level meter mode

**GENERAL**
Battery life: 4 hours
Fast Charge: 2 hours 80%, 4 hours 100%
Audio: Water sealed speaker with volume control
Weight and Dimensions: 2.2 lbs, L 7.5” x W 3.5” x D 2.2”
Supplied Accessories: Nylon case (CASE006), 110V wall charger (T70), duck antenna (ANT01), Ni-MH battery (BAT08), manual
Optional Accessories: Car charger (CH04), 220V wall charger, (T70E), dipole antenna (ANT02), monopole antenna (ANT03)

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