With the Wideband Global SATCOM (WGS) becoming operational, L-3 Narda Satellite Networks has expanded its Satellite Simulator product line beyond Tri-band, now including both Quad-band and Ka-band capabilities.

Designed for use as a training test-bed, L-3 Narda Satellite Networks satellite simulators can be used by operations personnel to setup and operate satellite earth terminals in the field under realistic operating conditions without the need for an actual satellite.

Use of the L-3 Narda Satellite Networks simulators in lieu of a satellite permits signal acquisition by the earth terminal, antenna pointing, uplink power adjustment, signal reception, link closure and communications systems adjustment to establish acceptable bit error rates with very low satellite terminal transmit power.

**Key Features**

- Simulates C-, X-, Ku-, Ka-Bands simultaneously
- Permits earth station set-up without actual satellite available
- Ruggedized/weatherproof enclosures for outdoor deployment
- Typical operation range is 50-1000 ft (actual range is determined by antenna size and power
- Low-phase noise for digital data
- Wireless remote control (available with Quad-Band Simulator)
- Lightweight
- Easy to operate
### KA-BAND

**INPUT CONTROL AND POWER**
- **Power Requirements**: 12 VDC or Battery Pack Option

**RF INPUT SIGNALS**
- **Ka-Band**:
  - Power Levels are dependent on dish size, distance to simulator, and transmitter power

**TRANSFER CHARACTERISTICS – ALL BANDS**
- **Phase Noise**: 10 dB (typical) better than IESS 308/309
- **Midband Gain**: -20 dB loss - attenuation setting including antenna gain
- **Gain Ripple Full Band**: ±1.5 dB max
- **Gain Ripple per 80 MHz**: ±0.75 dB max
- **Phase Linearity per 5 MHz**: ±10 deg max
- **Frequency Translation Accuracy**: ±1 ppm
- **In-band Signal Related Spurious**: -45 dBc
- **Image Rejection**: >30 dB
- **1 dB Compression Point**: 0 dBm at 0 dB attenuation
- **Input and Output Antennas**: Linear polarized (nominal 5 dBi gain)
- **Input IP3**: >+20 dBm min

**PHYSICAL SPECIFICATIONS**
- **Mechanical Dimensions**: Approx. size 6” x 3.5” x 1.5” w/o battery option, or C-, X-, and Ku-Bands, call factory for Ka-Band
- **Weight**: < 5 lbs
- **Operating Temperature**: 0° to 50° C

### TRI-BAND

**RF SIGNALS**
- **C-BAND**
  - RF Input Frequencies (GHz): 5.850 to 6.425
  - RF Output Frequencies (GHz): 3.625 to 4.200

**TRANSFER CHARACTERISTICS – ALL BANDS**
- **Type**: Non-Inverting
- **Gain**: -10 dB
- **Attenuation Control**: 30 dB (60 dB optional)
- **Gain Ripple**: ±0.25 dB/40 MHz, ±1.0 dB/600 MHz
- **1dB Compression Point (Output)**: -10 dBm at 0 dB attenuation
- **Gain Stability**: 0.25 dB/day (25°C)
- **Impedance**: 50 ohms
- **VSWR In/Out**: 2.0:1 max
- **Spurious and Harmonic Rejection**: 50 dB min in-band
- **Phase Noise**: 10 dB (typical) better than IESS 308/309
- **Frequency Stability**: ±5 x 10-8/day (±3 x 10-9/day optional)
- **Group Delay**: ±0.5 ns/40 MHz
- **Input/Output Antennas**: Waveguide horns with nominal gains of 10 dB

**PHYSICAL SPECIFICATIONS**
- **Dimensions**: 19” H x 32” D x 27” W
- **Weight**: 78 lb

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**L-3.** Headquartered in New York City, L-3 Communications is a prime contractor in aircraft modernization and maintenance, C4ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance) systems and government services. L-3 is also a leading provider of high technology products, subsystems and systems.

Cleared for public release by DoD/OSR under 09-S-0217 on November 20, 2008. Specifications subject to change without notice. Call for latest revision.

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