The 2015-27 Upconverter converts 70 ± 18 MHz to 2500 to 2700 MHz in 1 MHz steps with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection. Multi-function push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow) or the TX carrier is muted (yellow). Variable attenuators for the IF input and output provide a gain range of -10 to +30 dB as adjusted by the front panel multi-function push-button switches. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for RF, IF and the optional external reference input and output. The 10 MHz option includes a 10 MHz output connector which contains either the internal or external 10 MHz reference signal. A high stability (±0.01ppm) option is also available. The unit is powered by a 100-240 ±10% VAC power supply, and housed in a 1 3/4” X 19 “ X 16” rack mount chassis.

### Equipment Specifications*

**Input Characteristics (IF)**
- Impedance/Return Loss: 75Ω / 18 dB
- Frequency: 70 ± 18 MHz
- Input Level: -40 to -10 dBm

**Output Characteristics (RF)**
- Impedance/Return Loss: 50Ω / 12 dB
- Frequency: 2.5 to 2.7 GHz
- Output Level: -20 to 0 dBm
- Output 1 dB compression: +5 dBm

**Channel Characteristics**
- Gain range (adjustable): -10 to +30 dB
- Spurious Response: < -50 dBc, in band
- Frequency Delay: ±1.5 dB, 2.5-2.7 GHz ; ± 0.5 dB, 36 MHz BW
- Group Delay, max: 0.01 ns/MHz² parabolic; 0.03 ns/MHz linear, 1 ns ripple
- Frequency Sense: Non-inverting

**Synthesizer Characteristics**
- Frequency Accuracy: ± 1.0 ppm internal reference; external reference input
- Frequency Step: 1.0 MHz minimum
- 10 MHz In/Out Level: 3 dBm ± 3 dB
- Phase Noise: @ Freq | 100Hz | 1kHz | 10kHz | 100kHz | 1MHz
  - dBc/Hz | < -70 | < -70 | < -80 | < -95 | < -110

**Controls, Indicators**
- Pwr; Alarm; Rem; Mute: Green LED; Red LED; Yellow LED; Yellow LED
- Remote: RS232C, 9600 baud
- Freq/Gain Selection: direct readout LCD; pushbutton switches or remote selection

**Other**
- RF Connector: BNC (female)
- IF Connector: BNC (female)
- 10 MHz Connectors: BNC (female), 50Ω/75Ω
- Alarm/Remote Connector: DB9 - NO or NC contact closure on Alarm
- Size: 19 inch, 1RU standard chassis 1.75”high X 16.0” deep
- Power: 100-240 ±10% VAC, 47-63 Hz, 45 watts max

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*10°C to 40°C; Specifications subject to change without notice