The 2005-10-01 Upconverter converts a 70 MHz or 140 MHz IF signal to 2000 to 2500 MHz in 1 MHz steps with selection of high side LO (C = inverted) or low side LO (Ku = non-inverted) and 70 or 140 MHz input over the 2.0 - 2.5 GHz range for loop-back applications. The 2005-10-01 allows for an input level range of -10 to -15 dBm.

Featuring low phase noise, these units are used to loop 70 or 140 MHz modulators to 2.0 - 2.5 GHz receivers for test purposes and the output consists of the LO and both upper and lower sidebands. The 70 or 140 MHz carrier input is mixed with a synthesized local oscillator (LO) signal. The output frequency is selected and indicated by the four BCD switches which control the synthesized LO. Front panel LEDs light when DC power is applied (green) and when a PLL alarm occurs (red). The mixer output is applied to the output amplifier providing a nominal gain of -10 dB. Connectors are 50Ω BNC (female) for the IF input and for the RF output (other connector options are available). Powered by a 120 VAC wall power supply (100-240 ±10%VAC, option -P4). The 2005 can be mounted on a 1 3/4" X 19" rack mount panel (option -R).

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics**
- Impedance: 50Ω
- Return Loss: 15 dB
- Frequency: 70 or 140 MHz center, ± 20 MHz
- Level: +10 to -15 dBm
- 1dB compression: +15 dBm

**Output Characteristics**
- Impedance: 50Ω
- Return Loss: 12 dB
- Frequency Range: 2.0 to 2.5 GHz

**Channel Characteristics**
- Gain: -10 dB ± 3 dB
- Spurious Response: < -40 dBC max, < -45 dBC typ for Fc ± 20 MHz;
  - OUTPUT NOT FILTERED, LO<= RF nominal.
- Frequency Response: ± 2 dB, 2.0 - 2.5 GHz; ± 0.5 dB, any 10MHz increment

**Synthesizer Characteristics**
- Frequency Accuracy: ± 25 kHz max; Option -HT -for ±0.1ppm Int. Ref.
- Frequency Step: 1.0 MHz minimum

**Indicators**
- DC Power: Green LED
- PLL Alarm: Red LED

**Available Options**
- HT - High Stability (±0.1ppm) Internal Ref
- P4 - 100-240 ±10% VAC, 47-63 Hz wall PS
- R, R2, R3 - 1, 2, or 3 unit Rack Mount Panel
- STD - 50Ω BNC (RF), 50Ω BNC (IF)
- B - 75Ω BNC (RF), 75Ω BNC (IF)
- C - 50Ω BNC (RF), 75Ω BNC (IF)
- SS - 50Ω SMA (RF), 50Ω SMA (IF)

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