

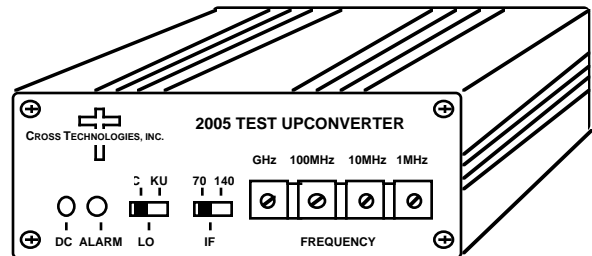
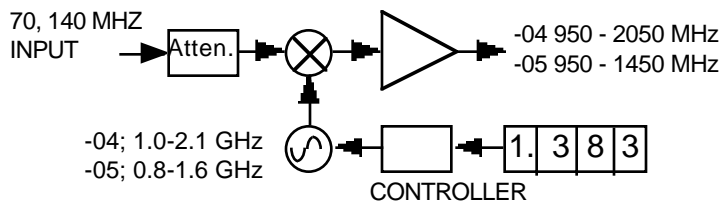
## 2005-04,-05 Satellite Upconverter

The 2005 Upconverter converts a 70 or 140 MHz IF signal to 950 to 2050 MHz (-04) or 950 to 1450 (-05) in 1 MHz steps for loop-back applications.

**2005-04, -05 UPCONVERTER** - The 2005-05 takes a 70 MHz or 140 MHz signal and converts it to 950 to 1450 MHz in 1 MHz steps with selection of high side LO (C) or low side LO (Ku) and 70 or 140 MHz input over the 0.95 - 1.45 GHz range.

The 2005-04 takes a 70 MHz signal and converts it to 950 to 2050 MHz in 1 MHz steps with a high side 1020 to 2120 MHz LO (C). Over a limited frequency range, the 2005-04 also operates with a 140 MHz input (950 - 1980 MHz out with high side LO (C); 1160 - 2050 MHz out with low side LO (Ku)) and 70 MHz in with low side LO (Ku) (1090 - 2050 MHz out).

Featuring low phase noise, these units are used to loop 70 or 140 MHz modulators to L-band receivers in uplinks. The 70 or 140 MHz carrier input is mixed with a synthesized local oscillator (LO) signal. The output frequency is selected with 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 -5 dB. Power is provided by the LNB voltage from the receiver under test and connectors are BNC female for the 70 MHz input and F, female for the RF output. Wall power supply option -P is for 115 VAC, 60Hz and option -P4 covers **100-240 ±10% VAC**, 47-63 Hz. Specify US, EUR, AUS or UK plug for the -P4 option. The 2005 can be mounted on an 1 3/4" X 19" rack mount panel (option -R).



### 2005 Block Diagram and Chassis

### EQUIPMENT SPECIFICATIONS\*

#### Input Characteristics

Input Impedance/RL	75 Ω /12 db
Frequency	70 or 140 MHz center
Input Level	-10 to -20 dBm
Input 1 dB	0 dBm

#### Output Characteristics

Impedance/RL	75 Ω/8 db
Frequency Band	950 -2050 MHz (-04); 950 -1450 MHz (-05)

#### Channel Characteristics

Gain at 1200 MHz	-5 dB ±2 dB
Spurious Response	Output not filtered; < -40 dBC inband ± 20 MHz
Frequency Response	±3 dB, 950 -2050 MHz; ±0.5 dB, any 10 MHz increment, ±1.0 dB, any 40 MHz increment

#### Synthesizer Characteristics

Frequency Accuracy	± 50 kHz max
Frequency Step	1.0 MHz minimum

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-65	-75	-80	-90	-100

#### Controls

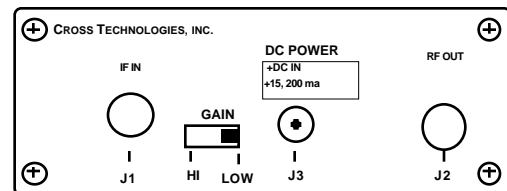
Frequency Selection	direct readout BCD switches
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#### Indicators

DC Power; Alarm	Green LED; Red LED
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#### Other

RF, IF Connectors	F, female, BNC, female
Size, Bench Top	4.7" wide X 1.75" high X 6.5" deep
Size, Rack Mount (-R)	19 inch standard chassis 1.75"high X 7.0" deep (Optional)
Power	+15 to +18 VDC, 180 ma on RF In; Optional 115VAC, 60 Hz (-P) or 100-240 ±10% VAC (-P4) wall PS



\*+10 to +40 degrees C; Specifications subject to change without notice

