



Model 70-12 70 cm, 53 dB, 15 Watt RF LINEAR POWER AMPLIFIER

The KH6HTV-VIDEO Model 70-12, RF Linear Power Amplifier is for use in the amateur radio 70cm band (420-450 MHz). It can be used to produce a 15 Watt (pep) (+44 dBm), analog, TV signal. It can also produce a 6 Watt (avg), high-definition (1080p), digital TV signal. The rf power output can be lowered -5dB or -10dB for reduced DC current draw with the front panel rotary switch.

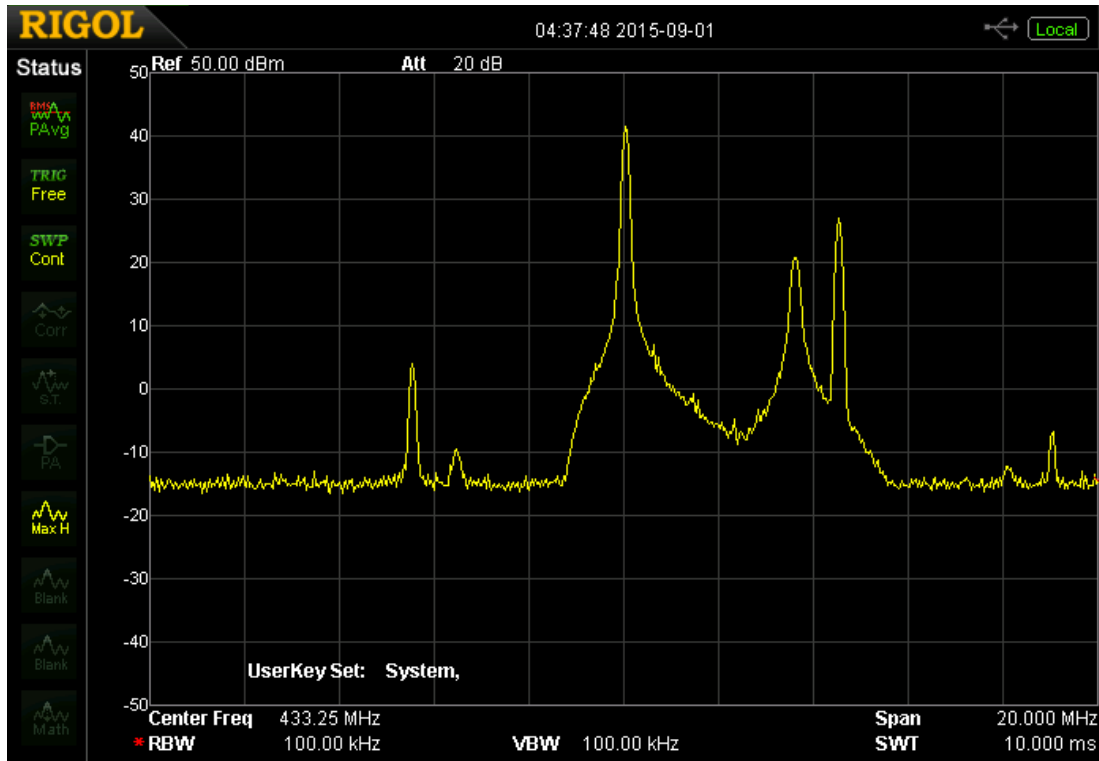


The 70-12 is offered in two different package configurations. The "B" version is in the smaller 70-7B package, while the "C" version is in the larger 70-9B package. The "C" version has a much larger heat sink and cooling fan and runs much cooler than the "B" version. It is recommended for use in repeater applications. The "C" version also includes an external PTT capability.

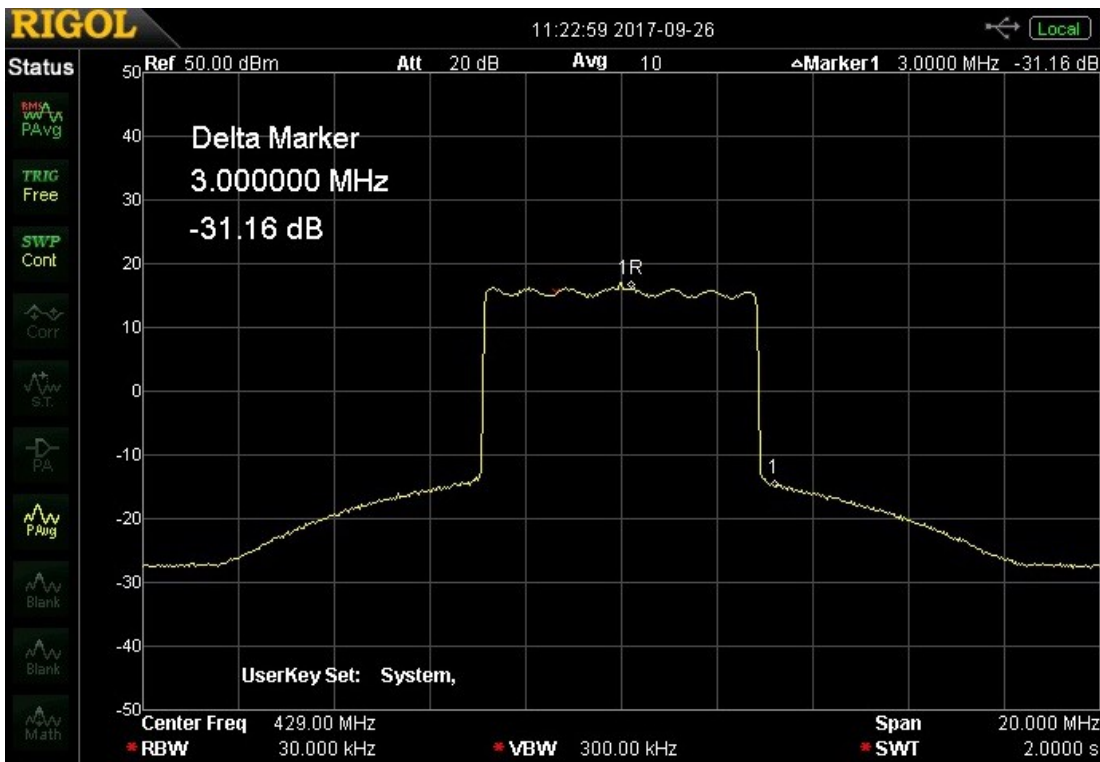
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NOTICE: *This linear amplifier is not FCC type accepted. Therefore, the use of this amplifier is only legal in the USA, amateur radio, 70 cm band (420 - 450 MHz). Owners and operators of this amplifier must be licensed amateur radio operators.*

PARAMETER	Typical Performance	Notes
Output Power (analog TV) (VUSB-TV, NTSC)	15 Watts PEP (+42 dBm) also 5 or 1.5 Watts	peak power on sync tips adjustable in 5dB steps
Output Power (Digital TV)	6 Watts, (+38dBm) also 2 or 0.6 Watts	rms, avg. power, DVB-T service adjustable in 5dB steps
Output Power (FM, CW)	40 Watts, (+46dBm), typical	saturated output
Output Power (-1dB)	25 Watts (+44dBm)	-1dB gain compression
Output Power vs. Supply Voltage	+42 dBm @ 12 - 13.8 Vdc +41 dBm @ 10 Vdc	analog VUSB-TV
RF Power Amplifier Gain, S21	53 dB, nominal	
Amplifier Gain Flatness	± 1 dB	420 - 450 MHz
Amplifier Max Input Power	50 mW, +17 dBm	
LSB Rejection (analog VUSB)	better than -20dB	LSB/USB ratio - see photo
Spectrum Regrowth (Digital TV)	-30 dB at +38dBm avg	shoulder break-point, see photo
Harmonics	> -60 dBc typical	
Duty Cycle	100 %	heat sink & cooling fan included
DC Supply Voltage	13.8 Vdc	10 to 15 Vdc
DC Current @ 13.8 Vdc	4.8, 1.3 or 0.75 Amps	6 W / 2 W / 600mW (DTV service)
Control - Rotary Switch	OFF - HI - MED - LOW	rf power adjustable in 5 dB steps
Control - Mini Toggle Switch	Xmit ON - Stand-By - Ext PTT	on "C" version only
RF Connectors	SMA input & N output	
Rear Panel Terminal Strip	GND,+12Vdc,PTT IN,PTT OUT	on "C" version only
Dimensions & Weight	4.2" x 3.5" x 7.4"	1.5 lbs - for "B" version
Dimensions & Weight	5.5" x 4.5" x 5.0"	2 lbs - for "C" version
Accessories Included	instruction manual & test report	



+42 dBm (15Wpep) VUSB-TV Spectrum, 10dB/div & 2 MHz/div



+38 dBm (6Wavg) DVB-T Spectrum, 10dB/div & 2 MHz/div
Measured with Rigol DSA-815 Spectrum Analyzer