



**Model 33-1A  
33 cm, 42 dB, 6 Watt  
RF LINEAR  
AMPLIFIER**

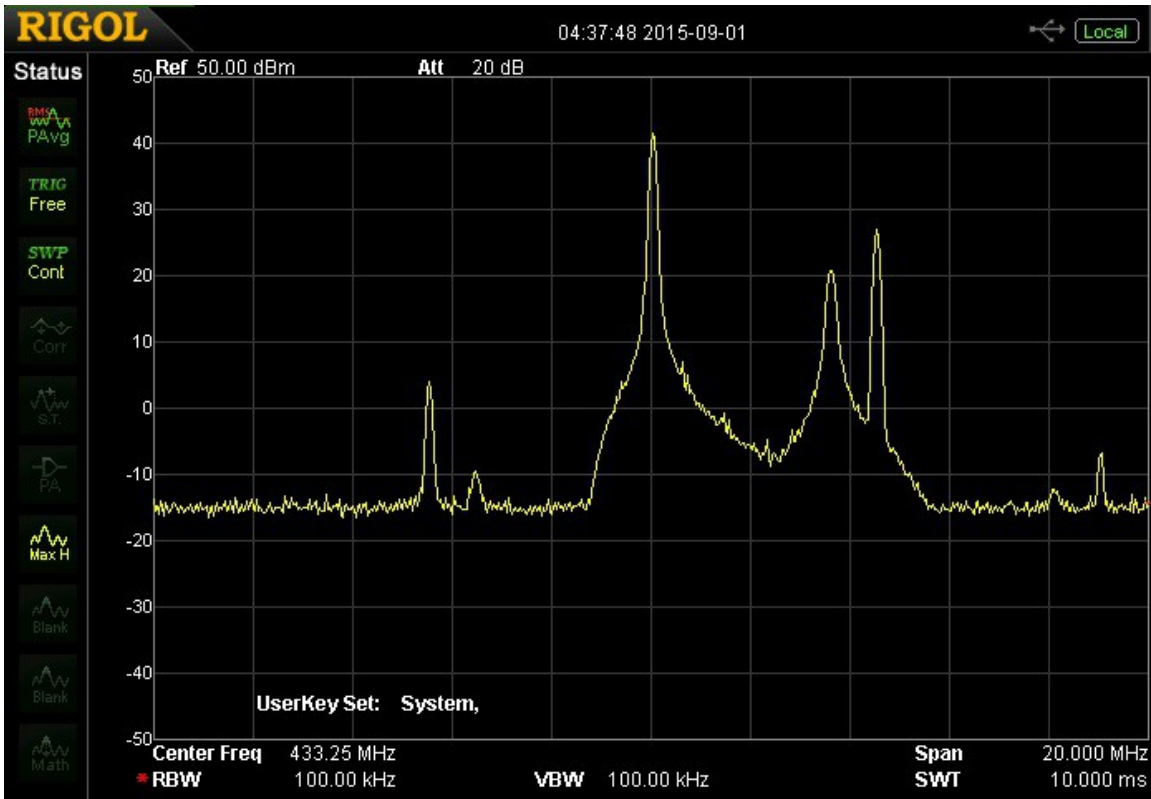


The KH6HTV-VIDEO Model 33-1A, RF Linear Amplifier is for use in the amateur radio 33cm band. It can be used to produce a 20 Watt FM signal or 6 Watt (pep), analog, TV signal. It can also produce a 2 Watt (avg), high-definition (1080p), digital TV signal. The rf power output can be lowered -5dB or -10dB for reduced DC current draw with the front panel rotary switch. The 33-1A can also be used on the 70cm band with a bit lower output power of 2W (analog TV) and 800mW (DTV).

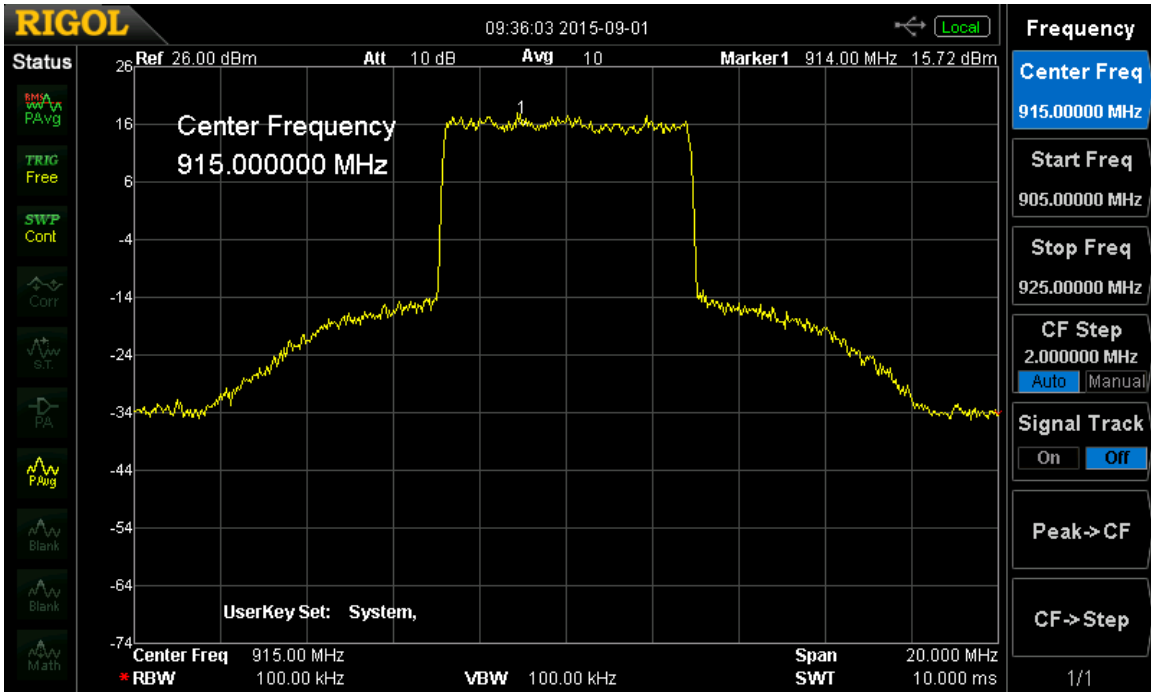
PARAMETER	Typical Performance	Notes
Output Power (analog TV)	6 Watts PEP (+38 dBm) also 2 Watt or 0.6 Watt 2.3 Watts PEP (70cm)	peak power on sync tips adjustable in 5dB steps
Output Power (Digital TV)	+33dBm, +28dBm or +23dBm +29dBm, +24dBm or +19dBm	33cm avg. power 70cm
Output Power (FM, CW)	20 Watts, typical	saturated output
Output Power vs. Supply Voltage	+33 dBm @ 12 - 13.8 Vdc +32 dBm @ 10 Vdc	DTV service
RF Power Amplifier Gain	42 dB, nominal	33cm & 70cm
Amplifier Gain Flatness	± 2 dB	902 - 928 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 +33dBm avg	see photo
Duty Cycle	100 %	heat sink & cooling fan included
DC Supply Voltage	13.8 Vdc	10 to 15 Vdc
DC Current @ 13.8 Vdc	2.3, 0.9 or 0.6 Amps	2 W / 0.6 W / 0.2 W (DTV)
Control - Rotary Switch	OFF - HI - MED - LOW	rf power adjustable in 5 dB steps
RF Connectors	SMA input & N output	
Dimensions & Weight	4.2" x 3.5" x 7.4"	1.5 lbs
Accessories Included	instruction manual & test report	

**KH6HTV-VIDEO Maui, HI & Boulder, CO USA [www.kh6htv.com](http://www.kh6htv.com) [kh6htv@arrl.net](mailto:kh6htv@arrl.net)**

**NOTICE:** *This linear amplifier is not FCC type accepted. Therefore, the use of this amplifier is only legal in the USA, amateur radio, 70 & 33 cm bands. Owners and operators of this amplifier must be licensed amateur radio operators.*



**+38 dBm (6 Wpep) VUSB-TV Spectrum, 10dB/div & 2 MHz/div**



**+33dBm ( 2 Watt avg), DVB-T Spectrum, 10dB/div & 2 MHz/div**  
Measured with Rigol DSA-815 Spectrum Analyzer