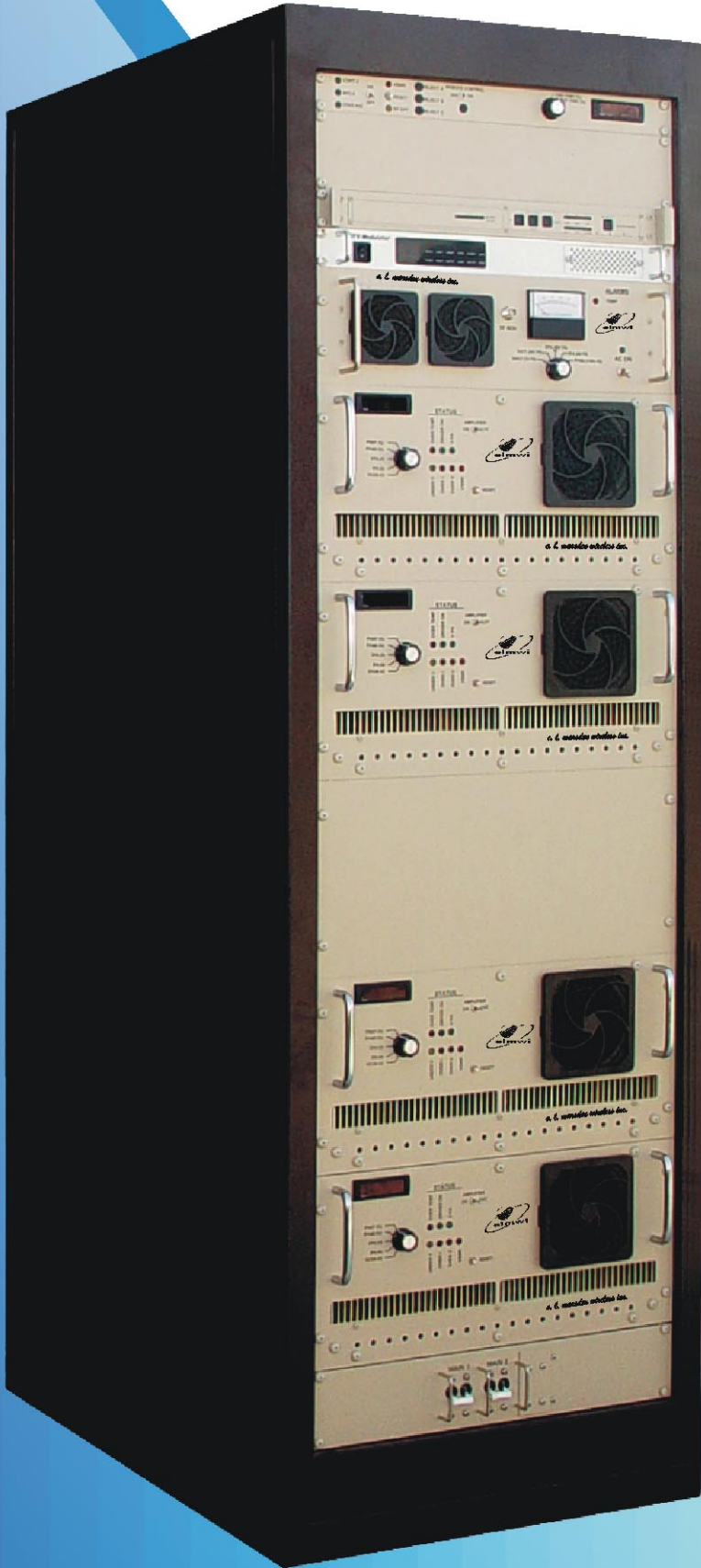




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Model A1KST8U

1 KW Digital UHF Television Transmitter

Description of the Equipment

The A1KST8U is a 1KW Digital UHF Television Transmitter designed for the 8VSB Format.

The digital SMPTE-310M signal is fed to an 8VSB IF modulator, which contains both linear and non-linear pre-correction. The output of the modulator is a 44 Mhz IF. This IF signal is then fed to the upconverter, where it is converted to the output channel.

The output of the upconverter is fed to the driver amplifier, where it is amplified and is then split to the power amplifiers. These amplifiers raise the output power to more than 1KW, thus compensating for the mask filter, at the transmitter output.

The mask filter assembly guarantees FCC spectral compliance for the digital signal.

The A1KST8U has many control and protection features seldom found in comparably priced equipment:

- Active components are located on printed circuit boards for fast, easy field service.
- All of the metering and control circuitry is built with high precision components.
- Light emitting diodes (LEDs) give a quick, visual indication of the condition of the transmitter.
- The digital panel meters give highly accurate readings of the important voltages, currents, and powers associated with the final amplifier.
- High power components insure that the transmitter can survive adverse conditions.
- All of the major components, such as transformers, capacitors, and power resistors are easily field replaceable and are readily available from either the original manufacturer or from e. l. marsden wireless, inc.

Technical Specifications

1KW UHF Transmitter For ATSC Digital Service

Power Output	1KW (average)
Frequency Range including	Any TV channel within the 470-806 MHz band standard offsets
Output Impedance	50 Ohms
Output Connector	1-5/8" EIA
Out of Band Emission	Meets or Exceeds FCC Requirements
Digital SNR	27 dB Minimum

General Specifications

Driver	LDMOS Amplifier
Output Stage	LDMOS Amplifier
Maximum Altitude	2500 Meters (8200 Feet)
Ambient Temperature Range	-30° C to +50° C
Relative Humidity	0 to 95%, Non-Condensing
Primary Power	220 VAC, 50/60 Hz Nominal
Cooling	Forced Air
Dimensions (W x H x D):	55.9 x 176.5 x 81.3 cm (Mask filter is external.)
Weight	~236 kg (520 lbs.)

Power Consumption	<5 Kw Maximum (Channel Dependent)
Heat Load @ Full Output (Typical)	14,500 BTU/Hr
Air Conditioning Requirements	Based on local environment; consult factory

Additional Options:

- AC Surge Protector
- Spare Parts Kit
- Remote Control
- Dual Exciter Assembly

