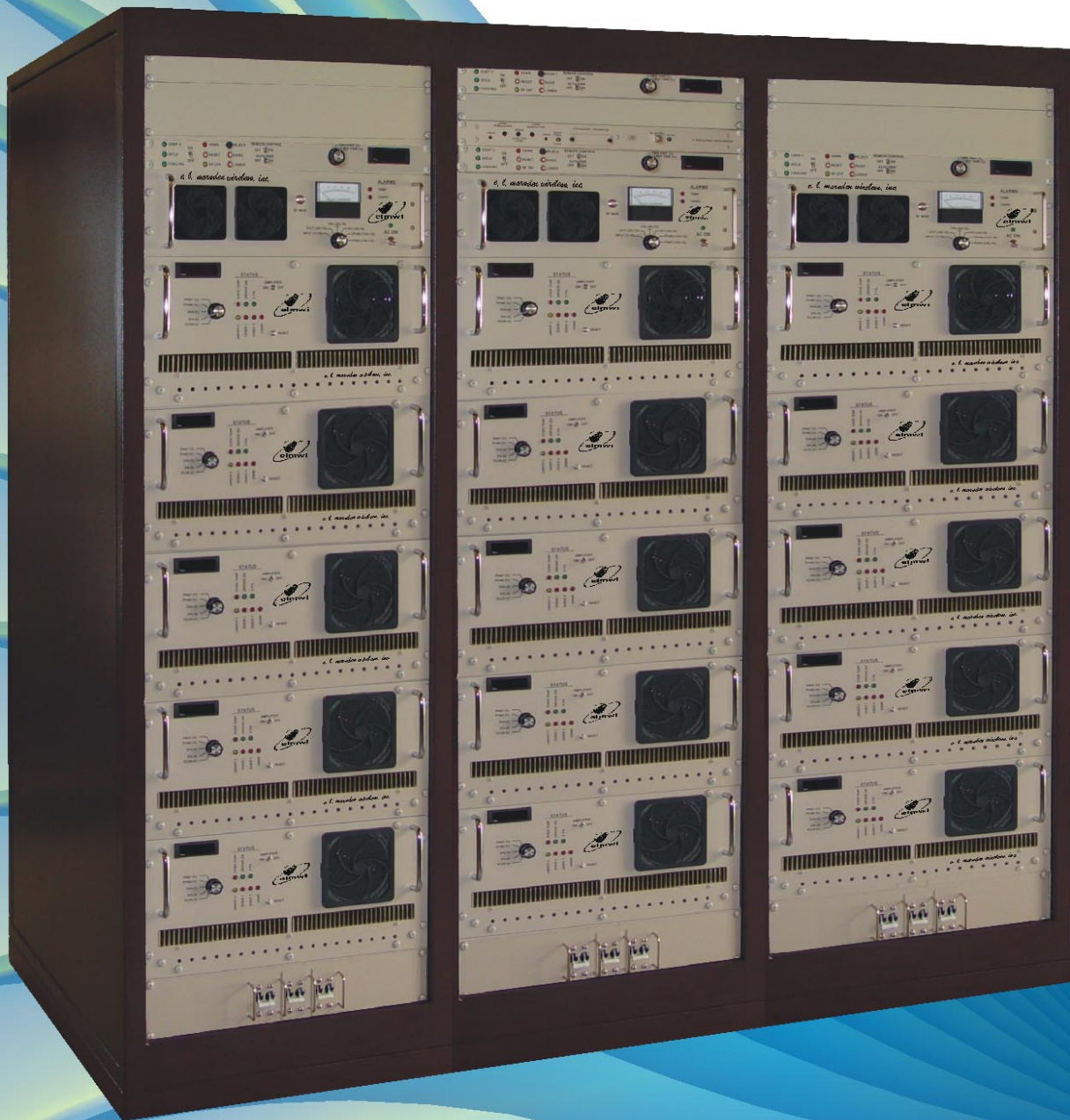


10,000 WATT SOLID STATE ANALOG TELEVISION TRANSMITTER



15731 Nike Dr • Terrell, TX 75160
Tel: 972-524-6412 • FAX: 972 563-0859
Tech: 972-563-2861
www.elmwi.com



Description of the Equipment

The e. I. marsden wireless, inc. A10K is a solid state analog 10 kilowatt UHF Television Transmitter. This Transmitter is designed for NTSC, PAL or SECAM Formats, but is easily converted to digital.

The audio and video signals are fed to the exciter assembly, which consists of two stages. A **modulator/upconverter** creates on-channel visual and aural carriers at 0 dBm. This signal is then amplified by **25 Watt LDMOS driver amplifiers (IPA)** and fed to multiple **700 Watt LDMOS power amplifiers (PA)** which are combined to provide the 10 kilowatt transmitter output power. The output combiner/filter assembly can be mounted on top of the transmitter; or ceiling or wall mounted.

The A10K television transmitter has many control and protection features seldom found in comparably priced equipment:

- The driver and all PA amplifiers have circulator isolated outputs for enhanced reliability and performance.
- Active components are located on printed circuit boards for fast, easy field service.
- All of the metering and control circuitry is built with precision components.
- Light emitting diodes (LEDs) give a quick, visual indication of the condition of the transmitter.
- Digital panel meters give accurate readings of important voltages, currents, and powers associated with the driver and PA.
- Robust power components insure that the transmitter can survive adverse conditions.
- All of the major components, such as power supplies, combiners, circulators, and fans, are easily field replaceable and are readily available from either the original manufacturer or from e. I. marsden wireless, inc.

Technical Specifications

Output Specifications

Overall:

Nominal Output Power	10 kW Visual (peak sync) with 1 KW Aural (average)
Frequency Range	Any TV channel within the 470-860 MHz band including standard offsets
Output Impedance	50 Ohms
Output Connector	3 1/8" EIA Flange (other options available)
Carrier Stability	± 1 kHz standard and offset channels
Intercarrier Stability	± 500 Hz
Harmonics Products	-60 dB or better referred to sync peak
Non-Harmonic Spurious Products	As per appropriate FCC or CCIR Standard

Video:

Differential Gain	5%
Differential Phase	$\pm 3^\circ$
Group Delay	As per appropriate FCC or CCIR Standard
Frequency Response (Sideband)	As per appropriate FCC or CCIR Standard
In Band Intermodulation Products	-52 dB or better (using three tone test)

Audio:

Frequency Response (Main Channel)	± 0.5 dB (50Hz to 15 kHz with appropriate de-emphasis)
Pre-emphasis	As per appropriate FCC or CCIR Standard
FM Noise	-60 dB or better
AM Noise	-50 dB or better
Total Harmonic Distortion	0.5% or better
Frequency Deviation Capability	± 25 kHz for Monophonic Operation Stereo exciter available as option

Input Specifications:

Video Input Impedance / Level	75 Ohms, 1V(p-p)
Audio Input Impedance / Level	600 Ohms balanced, -10 dBm to +10 dBm
AC Line Voltage	208 / 240 VAC \pm 5%, single phase, 60 Hz/50 Hz (Specify 50 Hz or 60 Hz when ordering)

General Specifications:

Drivers	25 W LDMOS Amplifier
Output Stage	Multiple 700 W LDMOS Amplifiers
Cooling	Forced Air
Max Altitude	7500 ft (higher altitude operation as option)
Ambient Temperature Range	-30° C to +50° C
Ambient Humidity Range	0 - 95% relative humidity without condensation
Dimensions (W x H x D): Cabinet	66" x 69.5" x 32"
Output Filter/Coupler	Channel dependent; contact factory
Weight	~1680 lbs. + ~270 lbs. filter,
Power Consumption (Typical)	40 kVA (black picture, 10 kW visual, 1 kW aural)
Heat Load @ Full Output	162,000 BTU/Hr
Air Conditioning Requirements	Based on local environment; consult factory

Additional Options:

Automatic FSK Station Identifier	Input Video Automatic Gain Control
AC Surge Protector	Audio Processor
Spare Tube	BTSC Stereo Generator
Spare Parts Kit	Remote Control
Video Proc/Amp	Dual Exciter Assembly