TVX-560/2
PROFESSIONAL UHF TV TRANSMITTER

TVX-560/E video modulator-exciter is a professional vestigial sideband dual conversion design with synthesized RF output and a High level adjustable power output from 5 mW- 2000 mW RF Power for driving high power stages 5 W and 35 W. It is fully synthesized and we have several versions available. The TVX-560/E is designed to accept video and audio baseband signals from a satellite receiver, TV camera, or any compatible input.

- Synthesized operation provides complete frequency agility, allowing front panel selection of any standard CATV channel or UHF TV channel from 54 MHz to 550 MHz.
- FCC required channel frequency offsets for aeronautical channels are set by front panel switches. Offset of 0, +12.5 kHz or +25 kHz are programmable.
- Accepts standard (sync. Negative) polarity video at 0.7 to 1.5 Vp-p level.
- High quality IF SAW filter eliminates adjacent channel interference.
- IF loop-through capability provides an IF loop prior to channel conversion which provides the capability to replace the standard internally generated IF output with an alternate source composite IF or allows insertion of IF scrambling equipment.

Technical Specifications

Frequency Range:
UHF broadcast channels 14 through 27.
FCC Frequency Offsets:
Programmable by front panel switches for 0, +12.5 kHz or +25 kHz for aeronautical channels. See programming chart.
Output Level:
2.2 W maximum, (adjustable)
Output Impedance:
50 Ohms; return loss of 12 dB.
A/V Ratio:
Audio Carrier -20 to -10 dB referenced to video carrier, adjustable.
Frequency Stability, Visual:
Within ± 5 kHz of assigned channel frequency.
Aural Intercarrier Frequency:
4.5 MHz, ± 5 kHz.
Spurious Outputs:
-60 dBc typical, -56 dBc worst case, measured at -15 dB A/V ratio and with modulator output level of + 55 dBmV.
In-Channel C/N:
60 dB typical.
Broadband Noise:
-72 dBc @ ± 12 MHz offset, -80 dBc @ ± 30 MHz or greater spacing. (Specified levels are referenced to the video carrier and measured in a 4 MHz bandwidth.)

Video

Input level for 87.5%:
1 Vp-p ± 3 dB, manual gain adjust with front panel control.
Input Impedance:
75 Ohms, return loss of 18 dB minimum.
Frequency Response:
Flat ± 2 dB from 30 Hz to 4.2 MHz.
Video S/N:

60 dB minimum, luminance weighted.
L/C Delay:
Within 50 nanoseconds of 0 nanoseconds L/C delay (complies with FCC rule 76.605).
Differential Gain:
Less than ± 5% (10 to 90% APL).
Differential Phase:
Less than ± 5 degrees (10 to 90% APL).

Audio

Input Level for 25 kHz Peak Deviation:
140 mV minimum. Manual gain adjustment with front panel control.
Input Impedance:
10K Ohms, unbalanced.
Pre-emphasis:
75 m Sec.
Frequency Response:
20 Hz to 15 kHz, +1, -3 dB, referenced to 75 m Sec. Pre-emphasis curve.
4.5 MHz Intercarrier Stability:
± 5 kHz, 0° to + 50° Celsius (32° to 122° Fahrenheit).
Total Harmonic Distortion:
1.5% maximum.
Hum and Noise:
-60 dB minimum, referenced to 25 kHz peak deviation.

Composite IF Loop

IF Frequency:
45.75 MHz visual carrier, 41.25 MHz aural carrier. Loop output is after SAW filtering.
Loop Level:
+28 dBmV (visual carrier).
Loop Impedance:
75 Ohms, return loss of 12 dB minimum.

General

AC Power Input:
115 VAC ± 10%, 60 Hz, 20 watts.
Operating Temperature Range:
0° to 50° Celsius (32° to 122° Fahrenheit), ambient.
Size:
1.75 inches (44 mm) Height x 19 inches (481 mm) Width x 10.2 inches (256 mm) Depth
Weight:
5.8 lbs. (2.6 kg.).
Connectors:
Video input, IF loop, and RF output are all type F. Audio input is RCA phono. Phono to F adapter is provided to allow for RCA phono video input.