

BZ5MX1000UX  
Application for FCC Certification  
Demodulator Input  
1000 Watt UHF Translator

## OPERATIONAL DESCRIPTION

This application requests authorization for video/audio input to our 1000W UHF Translator, BZ5MX1000UX. The Translator will be driven directly by a color television demodulator.

The intended use of the MX1000UX is to rebroadcast a television translator relay station of other legal source of video and audio.

The MX1000UX is a solid-state Translator designed to operate at 1kW peak sync visual RF power and 100W average aural single carrier RF power. The MX1000UX Translator accepts an on-channel internally diplexed composition driving signal of 10mW peak visual RF, as input to its RF chain.

The MX1000UX Translator is self-contained within a single 19" cabinet with an integral cooling fan and filtered rear door air intake. The simplicity of design, the employment of modular subassemblies, and the use of standard, readily available, components also enhance serviceability.

The unit tested specifically for this application was operated on Channel 38. This channel was chosen to provide protection to and from existing radio services, and to facilitate the measurement of possible spurious products conducted or radiated from the 1000W UHF Translator.

The input signals used in the equipment application tests were generated by a color bar generator driving a General Instruments Demodulator and General Instruments Modulator which are typically the units used. However, due to varying customer requirements, other demodulators are available upon customer request. The published specifications on any demodulator used in this equipment will meet or exceed FCC specifications.

The General Instruments Demodulator of this translator will accept video and audio from the television relay station. The Demodulator splits the video and audio signals and provides the General Instruments Modulator with video and audio or a composite signal. The Modulator then generates both video and audio or composite signal to the customer's required frequency. Frequency spacing, deviation, and other characteristics including distortion are therefore determined solely by the originating television station. It is anticipated that the translator will be driven directly by the demodulator output of an FM microwave repeater. No provision is made for tampering with or adjusting the composite video or audio signal except for depth of video modulation. Therefore, all aspects of the input video signal are determined solely by the originating television station.

The MX1000UX meets all the requirements for unattended operation. A description of the automatic control circuitry can be found in the user's manual.

Station identification requirements will be supplied by the originating station.

Wiring, shielding and construction are in accordance with accepted principles of good engineering practice. The translator's construction is such that all hazardous components are enclosed or protected against accidental contact by operating personnel. Door interlocks and grounding switches are not required as the highest DC voltage, which is accessible under normal use, is 12V.