

## **OPERATIONAL DESCRIPTION**

The TXUP10000LD belongs to the High Power UHF products family of Television Transmitters fully in solid state technology.

The TXUP10000LD series represents the 10kW TV Transmitters operating in the IV/V Band for Common amplification process (separate amplification available) of the Vision and Sound carriers. This Transmitters family has been designed to offer to the customer high performances, high reliability and greater simplicity in their operation and maintenance procedures.

The Vision and Sound signal processing is provided for all TV Standards and all types of Audio applications (Mono & Dual sound - NICAM) together with colour systems such as PAL - NTSC - SECAM. Thanks to the amplitude and phase pre-correction circuit, it is possible to cancel the distortions in the output stage, thus cutting down the operating costs. The RF transposition in the driver is carried out by a synthesizer with various possibilities of accuracy and stability as well as precision offset locked by internal or external frequency reference.

The RF amplifier is made up by eight RF modules installed in a power rack, the modules are dedicated for the Vision and Sound carriers common amplification. The amplifiers employ solid state LDMOS technology in order to obtain wide band, reliability, and high efficiency. Each RF module has a built-in switching-mode power supply unit, self-protected against overcurrents and overvoltages, as well as overtemperature and VSWR for RF parameters. The cooling system is fully contained into the transmitter. The control unit provides full management of the transmitter without the presence of the operator, the system includes a central controller and several peripheral units installed in each RF module and rack. The control device includes a fault finding system to detect equipment malfunctions and locate the faulty subassembly which needs to be replaced. The interlock circuit is independent on the software and remains always operational whether computer control is present or not. The operator interface is made by a high resolution LCD graphic display and a simple keyboard, the menu is very friendly and easy to use.

The Control Unit can be fully controlled in REMOTE mode via link or via modem in RS232 or other interface.

The equipment design allows the soft degradation (RF power loss) for several transistors faults.