PTX-150™

DSP-BASED PAGING TRANSMITTER

Features

- Advanced Direct Digital DSP Design
  - Designed for POCSAG and high speed 2/4 level FLEX operation with simulcast

- Full VHF Band Coverage
  - Complete no-tune coverage of the 138-174 MHz frequency range

- Multichannel Capability
  - 16 Channels gives maximum flexibility in providing multi-network coverage

- Full 100 Watts Output
  - Conservatively rated at 100 Watts output continuous at 60° C. Adjustable 25-100 Watts

- 250 and 500 Watts Models
  - Available with add-on amplifiers to meet all your high power paging requirements

- Flexible Network Interfaces
  - Can interface with conventional digital interfaces as well as C2000 and C-Net network interface units

- Full Remote Diagnostics, Alarms and Programming
  - Advanced feature set provides ultimate in remote control and monitoring

- Compact Profile
  - Saves on valuable rack space

- “Black Noise” Dithering
  - Provides the most cost effective method for POCSAG simulcasting

- Built-in Modem Port
  - For remote diagnostics and auto-dialing of alarm notifications

The PTX-150 VHF Direct Digital Paging Transmitter is designed to meet the paging industry’s latest standards for high speed FLEX and simulcast operation. It will operate with a wide range of standard network interfaces, and is ideal for both new systems as well as upgrading of existing paging networks.

This Direct Digital Paging Transmitter is designed to generate all modern paging formats including POCSAG, FLEX and ERMES. Standard output power is 100 watts continuous (adjustable 25-100 Watts). Optional amplifiers are available with 250 and 500 Watts output. Up to sixteen channels can be preset for multi-channel operation over the 138-174 MHz frequency range.

For simulcast operation, the standard internal 1 ppm TCXO may be supplemented by an external reference oscillator. Precision control over carrier offset and delay equalization is provided. For economical POCSAG simulcast operation, the PTX-150 also incorporates “black noise” dithering, which eliminates the need for a high stability reference.

The PTX-150 incorporates a wide variety of network interface and remote diagnostic capabilities. The standard unit includes an interface for conventional POCSAG controllers and paging terminals. The unit also includes an interface for C2000 and C-Net controllers. A separate data port provides comprehensive local or remote programming, real time diagnostics, and alarms for all key operational parameters. A Windows®-based software package is available to provide a convenient and easy-to-use remote monitoring capability.

The PTX-150 is ultra efficient in operation and is equipped with a built-in universal 115/230 VAC power supply. Housed in a compact 3RU high rack mounted case, the unit includes internal front to back cooling, optimized to maintain low PA junction temperatures. The PTX-150 is rated for 100% continuous duty at up to 60° C ambient temperature.
# TECHNICAL SPECIFICATIONS

## RF
- **RF Output Power**: 100 W ±0.5 dB into 50 Ω (Adjustable to 25 W)
- **Frequency Range**: 138 to 174 MHz
- **Key Up Time**: <50 ms from TX ON signal to full power
- **Frequency Stability**: ±1 ppm
- **External Frequency Reference**: From 5 to 15 MHz at any level from -10 to 0 dBm/50 Ω; External signal can be sinusoid or square wave
- **Spurious Performance**: Conducted and radiated spurious better than 70 dBc
- **Adjacent Channel Performance**: Better than 70 dBc

## GENERAL
- **Operating Voltage**: 115/230 VAC auto select. 50/60 Hz
- **Operating Temperature**: -15 to +60° C
- **Operating Humidity**: 0 to 95% RH @ 50 ° C
- **Modulation Scheme**: DSP in conjunction with DDS
- **Modulation Modes**: POCSAG 512, 1200 or 2400 FLEX™ 2 level and 4 level at up to 6400 bps
- **Modulation Characteristics**: Rise and fall times default to standard settings as defined by FLEX™/POCSAG/ERMES recommendations
- **Modulation Rates**: External clock dependant if not in POCSAG mode; Any rate up to 6400 bps
- **Channel Switching**: Up to 16 preset channels selectable by 4 channel lines
- **Interface Connections**: 37 pin female DIN socket provided for connection to C-net, C2000, or other network interfaces; for POCSAG connection, Clock input line is not required and only TX DATA line is used
- **Diagnostics**: Auto dial up system with Windows-based central station monitoring software; analog and digital inputs are supported by the diagnostics package; standard alarms are also made available on 37-pin DIN socket for connection to network interfaces
- **Carrier Offset**: Up to ±3000 Hz in 1 Hz steps
- **Launch Time Delay**: 0 to 40 ms in 5 µs steps

## PHYSICAL
- **Dimensions (W x H x D)**: 19” x 7” x 18.3” (483 mm x 178 mm x 465 mm); rack mount and 3RU high
- **Shipping Weight**: 40 lbs (18 kg)