



YOUR RADIO CONNECTED  
AROUND THE **WORLD**



# BT2500D MW 2,5KW TRANSMITTER



## **BT** Broadcast Transmitters

24 years developing and producing radio transmitters  
integrating technology and innovation.



# BT2500D MW 2,5KW TRANSMITTER

## GET TO KNOW OUR **TRANSMITTERS EQUIPMENTS**

Fully programmable and flexible, our AM transmitters have a CPU that allows the user to program the air input and output, the power reduction schedule, and the desired output power. In addition, programming can be done locally on the multifunction display on the transmitter's panel, or remotely.

Generating power savings of up to 60% over valved transmitters and operating at a typical high efficiency of over 80%, all models of AM transmitters have protections on the primary power grid, incorporating a phase loss detector, mains high and transient suppressors.

In addition to the RF output protection, it also has a power gradient input device for the return to the air and in variable conditions as to lightning discharges, thus optimizing the best output power and stabilizing the transmission in an intelligent control in the transmitter's CPU.

- Excellent finish throughout the equipment;
- In the RF output it has deflagrators and an ultra-fast disarming system against lightning strikes.;
- Structure in stainless steel and aluminum perfectly fitted and screwed;



## **CONNECTIVITY** Telemetry and Remote Control

The BT Transmitter may have all its parameters configured and monitored remotely without the need of an operator close to the device.



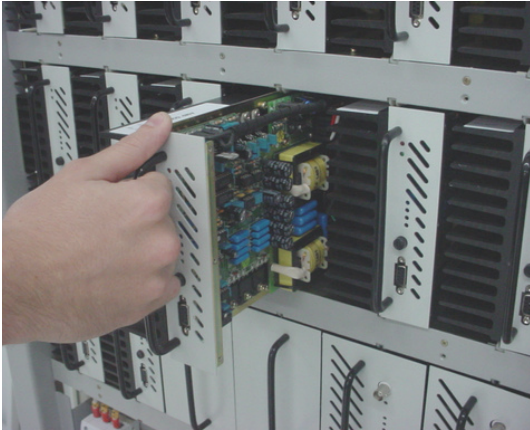
Simply connect an RS232 or RS485 interface to your notebook or desktop, set the value and reduced power, display alarm history and all other configurable parameters. The transmitter can be on your side wherever you are.



# BT2500D

## MW 2,5KW TRANSMITTER

### CHARACTERISTICS



#### SIGMA - DELTA MODULATION

One of the biggest and main differences is in the architecture, since there is a modulator within each power module. Each modulator operates in a negative feedback loop that significantly improves audio parameters of the equipment.

This results in lower distortion, better frequency response beyond the lowest power dissipation when operating in situations of high density audio.

This modulation process also allows the transmitter to operate at very low power levels without significant loss of quality.

#### UPGRADEABLE

This transmitter series runs analog AM modulation and is ready for DRM or any other digital application.

#### EASY MAINTENANCE

All details on the construction of transmitter from the position of the transistors in the plates to the placement of modules are designed to facilitate any necessary technical assistance.

#### ABSENCE OF ELECTROMECHANICAL CONTACTORS

All primary BT Transmitter switching is made electronically.

This process ensures the total absence of transients during turn on and off the equipment without contact wear and mechanical vibrations.

### OPERATION DIFFERENCES

#### LOW POWER CONSUMPTION

Our transmitters equipments are fully solid state, causing a significant reduction in power consumption and has as average efficiency better than 85%.

#### ADJUSTABLE POWER

Programmable power value within its range, without significant loss of audio quality or efficiency, thus avoiding the need for another transmitter to operate at night power.

This difference is often greater than the actual amount of funding to purchase a new transmitter. All this in addition to the high cost of maintenance of tube transmitters

#### SCHEDULED POWER REDUCTION

The power reduction at nighttime can occur in a fully automated fashion, from the timetable for reducing configurable power, both the transmitter screen or remotely from the included remote control software



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### TECHNICAL SPECIFICATIONS

#### AC LINE PARAMETERS

AC input voltage: 3 phase - 220V/380V  $\pm$  10% (50 or 60Hz)  
1 phase - 127V/220V  $\pm$  10% (50 or 60Hz) programmed  
Power supply range:  $\pm$  10% voltage, 47Hz to 63Hz  
AC power consumption: 2,9 kW  
Overall efficiency: 85%  
Power factor: 0,97 RF output power 2,5kW (3 phases)

#### RF PARAMETERS

RF output power: 200W to 2750W  
Output power stability: Less than 1%, under  $\pm$  10% AC input variation  
RF carrier frequency range: 530kHz to 1730kHz  
Channel spacing (per order): 9kHz or 10kHz  
Carrier frequency stability:  $\pm$  3ppm environment temperature 0°C-45°C (32°F-113°F)  
Carrier shift: Less than 1% at 95% negative modulation and 1kHz  
RF output impedance: 50 ohms (unbalanced)  
Harmonic and spurious suppression: better than - 65dB  
Modulation range: Up to 140% @2,5kW output carrier  
Modulation meter: negative 0 to 100% and positive 0 to 140%  
There is a modulation monitor display at the front panel. Its shows the positive and the negative modulation simultaneously, with a visual alarm when the negative modulation is over 100%.  
VSWR on load: 1.4:1 at full power

#### AUDIO PARAMETERS

Input level: 0dB to  $\pm$  10dBm (adjustable)  
Input impedance: 600 ohms (balanced)  
Frequency response:  $\pm$  0,5dB (90% modulation, BW 30Hz to 10kHz)  
Harmonic distortion:  $\leq$ 1% (85% modulation, BW 30Hz to 10kHz)  
Noise: -68dB (Ref. to 1kW, 90% modulation, BW 30Hz to 10kHz)  
Group delay: 8 $\mu$ s (@1kHz), 8,4 $\mu$ s (@21kHz)

#### ACCESS CONNECTORS

Output antenna connector RF: EIA 3 1/8 flange  
Audio input connector: Multipole wire-to-wire connector  
Communication interface connectors: RS232 or RS485, others upon request  
Monitor Frequency connector: BNC female  
Modulation monitor connector: BNC female  
Sync input/output connector: BNC female  
AC energy connector: Direct wire

#### PHYSICAL DIMENSIONS

Height: 1300 mm  
Width: 670 mm  
Depth: 725 mm  
Weight (kg): 175 kg



## TRADITIONAL LINE

# A GREAT SUCCESS IN BRAZIL AND AROUND THE WORLD



### ALL-IN-ONE DISPLAY

Alarms, measurements, and all of your transmitter's programming at your fingertips. Ease and accessibility.



### SWAM4 TELEMETRY

RS232 interface. Both locally and remotely, you can configure and monitor your transmitter via GPRS modem or the Internet.



### PROGRAMMING AND ADJUSTMENT

It allows the programming of any transmitter output power levels, from 200W to 10% of full power.



### AUDIO PEAK LIMITER

Simultaneously showing the positive and negative modulation rate with alarms for negative peaks that exceed 100%. Audio response from 30Hz to 20kHz + 0.8dB for all power levels

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