

## **OMB - EM 5000**



EM 5000 is a 5000 W FM transmitter made up of the EM 100DIG exciter and a control unit which combines the power of two AM 2500 FM amplifiers.

The 100W FM exciter/modulator, **EM 100 DIG**, is controlled by microprocessor, that allow a lot of applications like power level control at night to save energy, and the whole monitoring and adjusting of several parameters of the equipment, like input level and deviation.

Each AM 2500 includes eight 350W high-efficiency MOSFET technology amplifying modules, fed by 2 independent switching power supplies, which are made to withstand the working conditions. The amplifying modules works independently thanks to a power combining structure that provides high isolation between them.

The equipment includes a low-pass filter at the antenna output, EMI filters at the utility connection and an internal transient suppressor. The LCD display shows the amplifier main parameters: supply voltages, 8 module currents, direct, reflected and input power, power loss in the internal unbalance load and three temperature sensors. The amplifier control system stores in their memory all events and alarms detected, showing time and date of occurrence.

Smart temperature protection: if temperature rises up to a level dangerous for the modules, the output power is reduced until the temperature goes back to a "normal" state. If, even with the power reduction, the temperature keeps on rising, then the amplifier is stopped until the temperature goes down.

Reflected power protection (load mismatch): when the control system detects that the V.S.W.R. is dangerous for the modules, it reduces automatically their output power so as not to exceed the internal security level. Besides, there is a fast protection system that instantaneously turns off the modules polarization when it detects a peak on the reflected power sensor.

Automatic gain control: it reduces the gain in the case of excessive driving power, keeping the adjusted output power despite temperature changes. The control allows manual power adjustment by means of the front keyboard.

Telemetry systems: analogue telemetry (direct and reflected power measure), digital RS-232 telemetry and remote control, remote control through open-close contacts and a multi-device bus connection for internal use.

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