EDDYSTONE
BROADCAST

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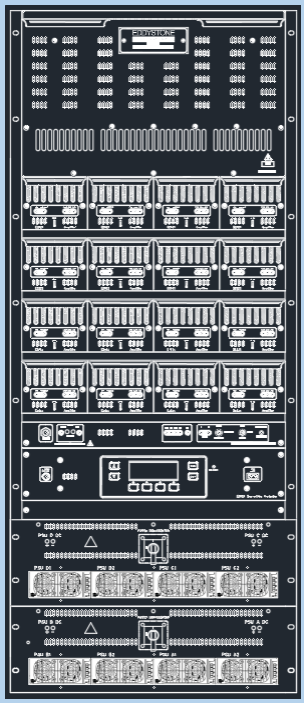
S7705C
5kW FM Transmitter

Introduction

The S7705C FM transmitter is an evolution of the highly modular architecture for which Eddystone Broadcast transmitters are legendary. The use of hot-pluggable LDMOS Power Amplifier Modules means that removal of amplifiers can be carried out with minimal reduction in output power. The design also features highly efficient hot-pluggable switched mode power supplies which also provide ease of servicing. Both Power Amplifier and power supply modules are common to the entire S7700 range from 1000W to 20kW, resulting in greatly reduced spares holding costs for networks and groups.

System Overview

The drive input is fed to an 16 way splitter arrangement which provides the Power Amplifier Module input drive. Each Power Amplifier Module uses dual packaged LDMOS FETs mounted on a substantial heat sink assembly with minimum airflow over RF components. DC power is fed to the RF modules from the 8 switched mode power supplies. Internal control and self protection in case of reverse power, excess current or over temperature is handled within each individual Power Amplifier Module with all monitoring being microprocessor derived. Each module communicates its internal parameters to the central transmitter controller/monitor and parameters are displayed on an easy to read backlit LCD screen.



Features

Compact and lightweight modules
Amplifier Modules, power supplies, fans and monitor/control units are all hot-swappable
Complete duplication of all active circuitry
Very high on-air availability
Highly efficient LDMOS amplifiers, efficiency typically 70% (AC to RF)
Fully compliant with ETS 300 384 specification for FM transmitters
Easily configured into a wide range of system architectures
Uses highly efficient power supplies with PF correction (PF typically 98%)
Comprehensive remote control and monitoring facilities
LCD display ensures easy local monitoring

Specifications

Power Output	5kW (Adjustable to –4dB)
Operating Frequency	87.5 to 108 MHz
RF Output Load Impedance	50 ohm unbalanced
RF Output Connector	1-5/8" EIA
Maximum VSWR	Able to maintain full power at 1.5:1 before protection cuts in
Mains Power Supply	Three phase or quad single phase 200-265V AC inputs
RF Harmonic Output	Better than or equal to –79dBc
Ambient Temperature Range	0ºC to +55ºC at an altitude up to 3000M
Overall Efficiency (AC to RF)	Typically 70%

In line with our policy of continual development, we reserve the right to alter specifications without notice.

Legendary in the world of broadcasting