

## 10kW FM Transmitter

### Special Features

- Compact Amplifier and PSU Modules are replaceable On Air
- Uses Eddystone's patented N way combiner system
- Fully compliant with ETS 300 384 specification for FM transmitters
- Easily configured into a wide range of system architectures
- Uses highly efficient SMPS power supplies with PF correction
- Comprehensive remote control and monitoring facilities
- LCD display ensures easy local monitoring

### Introduction

The S7610 FM transmitter is an evolution of the highly modular architecture for which Eddystone Broadcast transmitters are legendary. The use of 300W hot-pluggable 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 PA and SMPSU modules are common to the entire 7600 range from 500W to 20kW, resulting in greatly reduced spares holding costs for networks and groups. The high power 7600 series Eddystone Broadcast transmitters feature the patented N way RF power combining system.

### System Overview

The drive input is fed to dual 18 way splitters which provide the PA module input drive. Each E2021 Power amplifier uses dual packaged MOSFET's mounted on a substantial heatsink assembly with minimum airflow over RF components. DC power is fed to the RF modules from the 18 switched mode power supplies. Internal control and self protection in case of reverse power, excess current or over temperature is handled within each individual E2021 power amplifier module with all monitoring being microprocessor derived. Each module transmits its internal parameters to the central transmitter controller/monitor (E2023) and parameters are displayed on an easy to read backlit LCD screen.

Outputs from the 36 power modules are combined via the 36 way N way combiner. The combined RF output is then fed to the output coupler and harmonic filter.



### Specifications

<b>Power Output</b>	10kW (Adjustable to -6dB)
<b>Operating Frequency</b>	87.5 to 108 MHz
<b>RF Output Load Impedance</b>	50 ohm unbalanced
<b>RF Output Connector</b>	1-5/8" EIA
<b>Maximum VSWR</b>	Able to maintain full power at 1.9:1 before protection cuts in
<b>Mains Power Supply</b>	Three phase & neutral 380-440V. Other supply voltages available on request.
<b>RF Harmonic Output</b>	Better than or equal to -86dBc
<b>Ambient Temperature Range</b>	0°C to +55°C at an altitude up to 3000M
<b>Overall Efficiency</b>	Typically 60%

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