



Tropospheric Scatter Equipment

In conjunction with Radio Engineering Laboratories of New York, the Marconi Company can supply and install complete tropospheric scatter systems engineered to meet any operational requirements in any part of the world. A wide range of equipment is available, suitable for medium and long distance links of various channel capacities and the highest standards of performance.

2600 Series

Features

- Solid state.
- Modular construction.
- Six r.f bands.
- 300 channel capacity.
- Highest performance standards.
- High reliability.
- Built-in test facilities.
- Suitable for fixed stations, transportable stations, military tactical application and shipborne use.

General Description

Receivers

The 2600 Series receivers are used in communication systems employing up to 300 channels. Multiplexed voice, data and telegraph information, received on a frequency modulated carrier, is selected, amplified and demodulated in these units. Frequency division, pulse code or time division multiplex systems can be accommodated. The use of combiners provides diversity operation. Tunnel diode or parametric amplifiers may be specified to precede the receivers. The i.f bandwidth of the

receiver is established by plug-in modules and is determined by the channel capacity being used.

Exciters

The exciter units receive the composite signal containing multiplexed voice, data and/or telegraph information and convert it to an f.m signal of 70MHz. This is modulated to produce an f.m signal at the required carrier frequency.

Power amplifiers

Power amplifiers are available with ratings ranging from 100W to 100kW.

High reliability results from the advanced techniques employed in these power amplifiers. They will accept most line voltages and frequencies used in military and commercial installations throughout the world.

Data summary

Radio frequency: 350-450, 755-985, 1700-2400, 2400-2700, 4400-5000, 7700-8500MHz.

Transmitter power output: 100W, 1kW, 10kW, 100kW depending on r.f range and application.

Receiver noise figure: 8dB or 4dB or 2dB.

Modulation: F.M.

Deviation capability: ± 3.5 MHz peak.

Baseband:

Traffic: 12-1300kHz maximum for 300 channels.

Order wire: 0.25-12kHz.

Intermediate frequency: 70MHz.

I.F bandwidth: Variable by plug-in units.



Dual receiver rack

Intermodulation: 55dB NPR with CCIR loading.

Diversity: Post detection, dual and quadruple.

Typical specifications, for the 2600 Series Tropospheric scatter radio terminal

	Operating frequency range (MHz)	Power amplifier options (kW)	Receiver noise figure (dB)	Traffic baseband (kHz)	I.F bandwidth options (MHz)	Intermodulation distortion (NPR) (dB)
2600 Series	350-450 755-985 1700-2400 2400-2700 4400-5000 7700-8500	1, 10, 100 1, 10, 75 0.1, 1, 10 1, 10 1, 10 1, 10	2.0, 4.0 or 8 2.0, 4.0 or 8 2.5, 4.0 or 8 2.5, 4.5 or 9 3, 4.5 or 9 3, 4.5 or 9	12 to 1300	0.1 to 15	55 to 60