



## 500-Watt MF Telegraph/Telephone Transmitters *Type TGM 571*

THE Type TGM 571 Transmitter, is of compact design and easy to operate and is suitable for fixed stations working a point-to-point service, or for land stations operating with ships or aircraft.

### FEATURES

Simple and rapid frequency changing to any one of six pre-selected frequencies. Changeover time is less than 18 seconds.

All controls have been reduced to a minimum and centralised on one control unit.

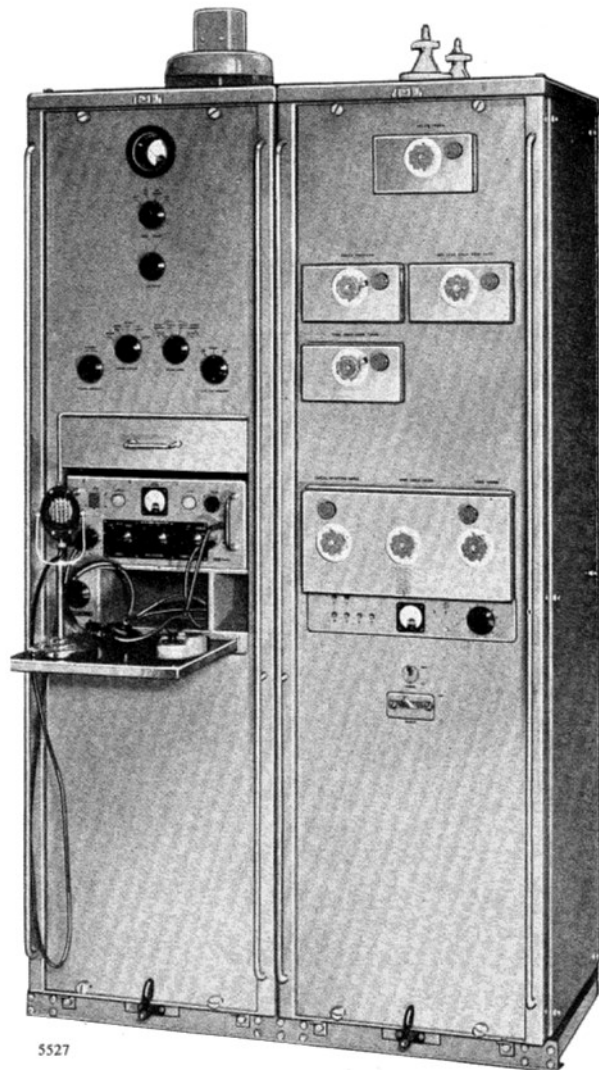
Both aural and visual monitoring is provided.

A voice-operated carrier-switching unit can be used in conjunction with the transmitter and provides listening through facilities.

Full remote control (including monitoring facilities) is possible up to a distance of 10 miles (depending on conductor).

### CONSTRUCTION

The set is housed in a two-bay cabinet. Each unit can be withdrawn on runners from the cabinet, giving complete accessibility to any part of the transmitter for servicing. In order to protect operating personnel, safety switches are fitted which ensure that no unit can be withdrawn until the power is cut off. When required, covers can be supplied which completely enclose the front of the equipment with the exception of essential meters, thus preventing unauthorised persons from having access to remotely controlled equipment.



The general construction and finish of the transmitter are of a robust nature, designed and tested to meet exacting service requirements, including extreme climatic conditions both of temperature and humidity.

### CIRCUIT

The drive is derived from the crystal oscillator working in a parallel fed Colpitts circuit, whose

output is capacity coupled to a limiter valve which maintains a constant input to an isolator stage. The signal is then multiplied up to the required radiated frequency by two harmonic generators before being finally amplified. Anode modulation of the final stage, which comprises two parallel-connected tetrodes, is employed for MCW and telephony conditions.

## DATA SUMMARY

### Power rating (to aerial circuit):

CW: 375–500 W

MCW: 300–375 W (when modulated 100%)

Telephony: 200–250 W carrier, modulated up to 100%

Facilities for  $\frac{1}{4}$  or  $\frac{1}{16}$  full ratings.

### Frequency ranges:

Type TGM 571: 275–550 kc/s

### Frequency stability:

TGM 571:  $\pm 0.02\%$ .

Conforming to Atlantic City Standards.

**Service:** CW and MCW telegraphy. Telephony.

**Modulation:** Up to 100% by anode modulation of final stage.

**Keying:** Up to 100 bauds with full absorption.

**AF response:** Within  $\pm 1$  db from 200–5000 c/s. (Note: These figures do not include sideband cutting due to the characteristics of the aerial circuit.)

**Noise level:** Better than  $-40$  db relative to 100% modulation at full-power rating.

**AF input level:** Fully modulated by a level 15 db below 1 mW.

**Audio-frequency harmonics:** Less than 6% at 80% modulation.

**Power supplies:** 340–430 V 3-phase, 4-wire, or 200–250 V single-phase 50–60 c/s, AC mains. Voltage regulation  $\pm 6\%$ , frequency tolerance  $\pm 2\frac{1}{2}\%$ .

**Power consumption:** 2 kVA at 0.85 PF on CW 'mark'.

### Dimensions:

Height	Width	Depth	Weight
6 ft 10 in.	3 ft 7 in.	2 ft 2 in.	1250 lb
(209 cm)	(110 cm)	(66 cm)	(567 kg)

**Marconi**

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