



Remote Control Systems Type HG 10 Series

FOR COMMUNICATIONS TRANSMITTERS

Four-Wire DC Remote Control System Type HG12



THE REMOTE CONTROL SYSTEM Type HG 12 is designed to provide two-pair control and operation of a remotely situated radio transmitter from the receiving or operating centre. It is primarily intended for use with the Type TGS 541A transmitter (see page 215).

With normal line characteristics operation can be effected up to a distance of approximately 20 km (12 miles). A dialling system is employed, using DC line impulses with a uniselector and relay group at the distant end. A revertive check is given by aural monitoring of the transmitted signal. In addition, a check lamp gives visible warning of any delay in bringing on power, due to interlocks, etc.

The control equipment consists of the following:

- (a) Impulse generating (control) unit, with AC supply circuits.



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The generating and translating units of the Type HG 12 system.

- (b) Telegraph key, microphone and head telephones or telephone handset, associated with (a).
- (c) Impulse translating unit at the transmitter, with AC supply gear.

The whole equipment is of robust design and is fully suitable for tropical use.

CHECKING AND MONITORING

The lamp indicator on the generating unit gives warning of HT failure and lights on the following occasions:

- (i) If 'HT ON' has been dialled before the transmitter filaments are fully heated.
- (ii) If 'HT ON' is dialled whilst the frequency changeover switching is still taking place.
- (iii) Should the transmitter circuit breaker be tripped.

- (iv) Whilst dialling is in progress or while the unselector is hunting for its 'home' position.

A small diode valve rectifies part of the transmitter output and feeds the resultant signal back to the operator at the remote point who is thereby provided with aural monitoring facilities. For CW operation, an audio oscillator is keyed to provide the required sidetone.

Two-Wire DC Remote Control System *Type HG 11*

The Type HG 11 system is primarily intended for operation with the Types TGS 571, TGM 571, and TGM 651 transmitters, to allow economical

operation over long distances by means of a two-wire circuit. It is similar to the Type HG 12 in principle but has no means of providing a reverberative check.

The apparatus consists of three units:

- (a) Impulse generating (control) unit with handset and key.
- (b) Supply unit.
- (c) Impulse translating unit.

The impulse control unit is a small desk unit carrying switches and a telephone-type dial and similar in appearance to that of the HG 12. The power supply unit is suitable for wall or floor mounting and is connected to the desk unit by a few feet of flexible cable. The impulse translating unit is installed at the transmitter and is connected to it by means of ten wires.

DATA SUMMARY

TYPE HG 12

Control lines: Two metallic pairs having a DC loop resistance not exceeding 1000 Ω approximately, or, for voice frequency, an impedance of 600 Ω with a loss not greater than 15 db. This corresponds to 20 km (say 12 miles) of 20 lb cable or the equivalent.

Power supply: 200–250 V, 50–60 c/s single-phase AC mains.

Power consumption: Generating unit—less than 10 W. Translating unit—normally 10 W rising to 50 W during operation of the unselector.

Dimensions:

Height	Width	Depth	Weight
<i>Generating Unit</i>			
9 in. (22.8 cm)	14½ in. (36.8 cm)	7½ in. (19 cm)	19 lb (8.6 kg)
<i>Translating Unit</i>			
12½ in. (31.8 cm)	20½ in. (52.1 cm)	10¼ in. (26 cm)	44 lb (20 kg)

TYPE HG 11

Control lines: DC loop resistance less than 1000 Ω . Characteristic impedance 100–1000 Ω .

Power supplies: 100–110 or 200–250 V 50–60 c/s single-phase AC mains.

Power consumption:

Generating unit 25 W.
Translating unit 60 W.

Dimensions:

Height	Width	Depth	Weight
<i>Generating Unit</i>			
9 in. (23 cm)	15 in. (38 cm)	7 in. (18 cm)	17 lb (7.7 kg)
<i>Supply Unit</i>			
9 in. (23 cm)	10 in. (25 cm)	8 in. (20 cm)	22 lb (10 kg)
<i>Translating Unit</i>			
13 in. (33 cm)	24 in. (61 cm)	12 in. (30.5 cm)	92 lb (42 kg)

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