



## H.F Transmitters H 1100 series (7½ kW)

THE H 1100 series of 7½ kW p.e.p linear-amplifier transmitters comprises two self-tuned versions, types H 1101 and H 1103, and two manually tuned versions, types H 1100 and H 1102. All the transmitters in the series use an untuned wide-band distributed amplifier to drive the final stage. They are extremely compact, all power supply components being included in the cabinet, and may be mounted side-by-side against a wall. No under-floor air or cable ducts are required.

The self-tuned versions use frequency following servo-tuning of the final stage. When the drive frequency is changed, the self-tuning system operates to provide the correct tuning and loading of the final stage within about 20 seconds, and the input drive level is automatically adjusted. In service, the tuning and loading servos compensate for changes in aerial feeder impedance due to variations in weather conditions.

The manually tuned versions have only three tuning controls and two range switches. For small installations, these versions can incorporate a Type H 1505 Drive Unit providing four crystal-controlled spot frequencies and c.w, f.s.k, d.s.b or i.s.b modulation.

In all versions the power supplies incorporate the latest techniques in silicon rectifier and air-cooled transformer design, enabling all power equipment to be incorporated within the transmitters and avoiding the necessity for special accommodation.

### Features

- Self-contained, no back or side access required.
- Minimum i.s.b distortion is ensured by simple fixed r.f feedback network.
- All supplies use compact silicon rectifier assemblies.
- Full feeder protection and output monitoring, with built-in directional coupler.
- Full extended control facilities available.

### Data Summary

**Frequency range:** H 1100 and H 1101, 4-27.5 Mc/s. H 1102 and H 1103, 2-27.5 Mc/s.

**Services:** i.s.b, s.s.b, f.s.k, f.s duplex, low-power d.s.b dependent on drive used.

**Output power:** 7.5 kW p.e.p ( $\pm 0.5$  dB) on i.s.b, 6 kW c.w on/off and f.s telegraphy.

**Harmonic radiation:** No harmonic emission exceeds 50 mW. A low-pass filter fitted in the output feeder reduces the harmonics above 30 Mc/s.

**Output impedance:** 50  $\Omega$  unbalanced v.s.w.r 2:1.

**Noise level:** (a) More than 30 dB below carrier level (carrier normally -26 dB to -16 dB relative to p.e.p) for components up to 200 c/s either side of carrier.

(b) More than 50 dB below p.e.p for all components of a single tone up to -6 dB relative to p.e.p.

**Non-linear distortion:** All i.p.'s better than -36 dB relative to either of two equal tones up to p.e.p.

**Pilot carrier compression:** Less than 1 dB for any level of single frequency signal up to -6 dB relative p.e.p.

**Input from drive:** 0.5 W minimum, 5 W maximum, in 75  $\Omega$  at radiated frequency.

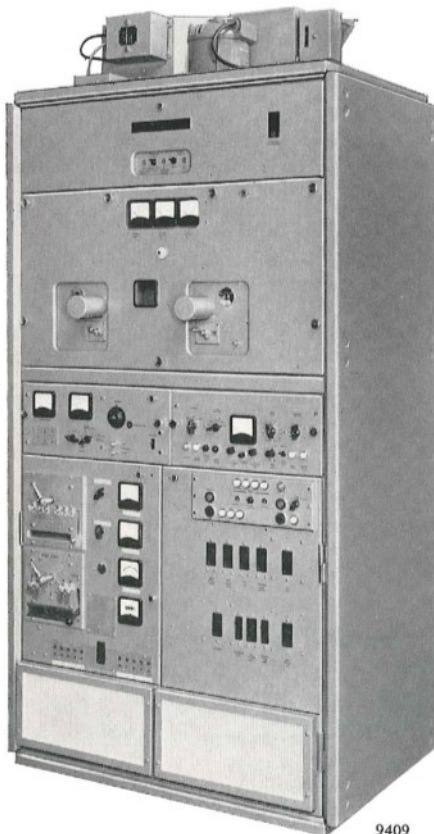
**Power supply:** 380-440 W ( $\pm 6\%$ ), 3-phase, 4-wire a.c, 50 or 60 c/s ( $\pm 2\frac{1}{2}\%$ ) to order.

**Power supply variation:** H 1100 and H 1120  $\pm 6\%$ . Except where station supplies are regulated to within  $\pm 1\%$  the H 1101 and H 1103 are supplied with automatic voltage regulators which are normally set to accept mains voltage variations of +6 to -14%.

**Power consumption:** Mark 16 kW, space 5 kW, i.s.b 14 kW.

### Dimensions:

- Height 7 ft (213 cm)
- Width 3 ft 9 in. (115 cm)
- Depth 2 ft 6 in. (76 cm)
- Weight 14 cwt (710 kg) approx.



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