

Marconi S.H.F Vision and Sound Link

Type TM 112 and TM 113 Designed and produced by C.S.F, Paris, France*

These transistorized radio-link equipments are suitable for use over distances up to 60 miles (95 kilometres) given favourable propagation conditions. They may be used for temporary installation or for permanent links. The equipments are suitable for use with colour television and the quality is such that several equipments may be used in cascade.

FEATURES

Unattended operation once the link is set up, adequate a.g.c and a.f.c being provided to obviate any resetting.

Talk back circuits can be coupled into a telephone system.

Alignment simplified by built-in features and sound test signals.

Switched metering includes monitoring and power output.

Two sizes of aerial reflector available.

The standard one-metre (44 in.) reflector

with tripod can be replaced by two-metre (87 in.) reflectors on a special base, for long-range links.

Equipment

The equipment can be supplied in two different visions. Type TM 112A and TM 113A are suitable for transmitting a video signal without the sound channel. In the type TM 112B and TM 113B a transistorized sound modulator and demodulator are added to enable a composite vision and sound channel to be transmitted.

The transmitter and receiver each consist of a complete head unit with paraboloid aerial mounted above it, supported on a robust tripod (or frame in the case of two-metre reflector). The transmitter and receiver each have an auxiliary unit which includes the power supply and is mounted in a mobile case.

Optional extras include the video test signal generators used for control and linearity measurement purposes, a blanking-level clamping device to incorporate in the receiver, the talkback equipment to provide telephone communication between the head and the auxiliary unit, drums for the standard 50-metre (167 ft) multicore cables and the two-metre (87 in.) reflectors with mounting frame.

DATA SUMMARY

General	TM 112	TM 113
Frequency range:	6.2 to 7.6 GHz	10.5 to 12.2 GHz
Transmitter power:	1 W nominal	250 mW nominal
Aerial gain at mid-band:		
1 m dia.	34.6 dB	37 dB
2 m dia.	40.5 dB	42 dB
Receiver noise figure:	14 dB	15 dB
I.F.:		115 or 70 MHz
I.F. bandwidth (3 dB):		32 MHz
Power supply:	110, 115, 121, 127, 134 or 220 V ($\pm 10\%$), 50 or 60 Hz, single-phase a.c.	

Power consumption: Transmitter, 240 W. Receiver, 250 W.

Dimensions:

Head units

Height	14 in.	(35 cm)
Width	12 in.	(30 cm)
Depth	24 in.	(60 cm)
Weight	55 lb	(24 kg)

Supply units

Height	10 in.	(25 cm)
Width	6 in.	(15 cm)
Depth	24 in.	(60 cm)
Weight	35 lb	(16 kg)

Aerials

44 in. (112.5 cm) dia.	Weight 30 lb (13.5 kg)
87 in. (220 cm) dia.	Weight 220 lb (100 kg)

Vision Channel

Video bandwidth: 30 Hz to 12 MHz.

Deviation: ± 1.2 MHz at 10 kHz. ± 4 MHz at 1.5 MHz. ± 5.7 MHz at 10 MHz.

Pre-emphasis: To C.C.I.R 625-lines, switch-controlled.

Input and output impedance: 75 Ω .

Input voltage: 0.5 V min. p-p.

Output voltage (p-p max.): 0.5 V remodulation output. 1.2 V direct output. 2 V distributor output.

Crosstalk: Luminance/sound ratio 65 dB. Luminance/sub-carrier ratio 55 dB.

Sound Channel

Sound bandwidth: ± 1 dB, 40 to 12000 Hz (625-lines).

Sub-carrier frequency: 11.15 MHz (819 lines) or 7.5 MHz (625 lines).

Sub-carrier s.h.f deviation: ± 0.425 MHz nominal (0.65 MHz max.).

Sub-carrier a.f deviation (at 1000 Hz): ± 200 kHz.

Input and output impedance: 200 or 600 Ω balanced.

Output level: +12 dBm max.

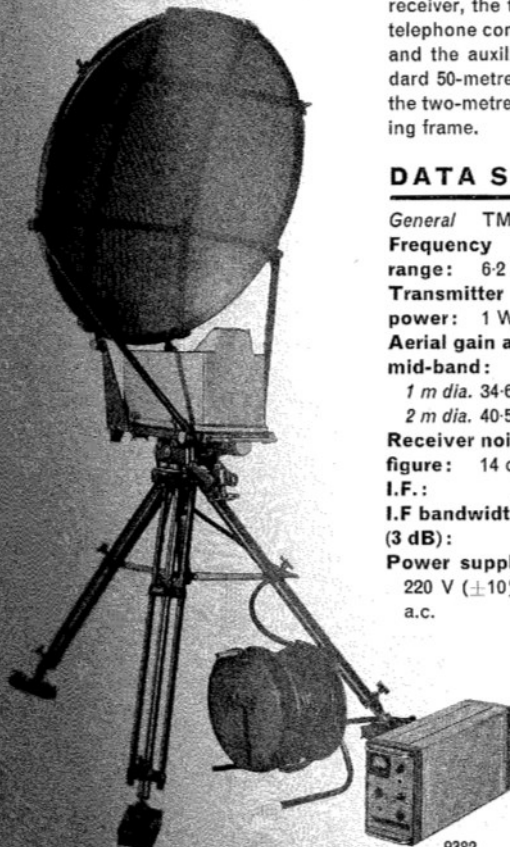
Picture intermodulation: 65 dB.

Total harmonic distortion: From 40 Hz to 10 kHz r.m.s signal/r.m.s spurious modulation ratio, 75 dB.

* Marketed by Marconi's under licence from Compagnie Générale de Télégraphie Sans Fil, Paris.

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