

Marconidata U1110 Series

The Marconidata U 1110 series modem has been developed to comply with the C.C.I.T.T Recommendations and the British General Post Office specification for Data Modulators and Demodulators for use on Public and Leased telephone circuits.

The equipment enables the transmission of data over public or private telephone circuits at up to 1200 bauds by converting the serial binary digital data output from a data transmission terminal, e.g. Marconi-data H 6010, into signals in the telephone speech band by frequency modulation of a V.F. carrier. For data reception the equipment demodulates the line signal reconverting it into serial binary digital data.

Five versions of the Modem are available in identical cabinets:

Type U 1111—600/1200 Baud Modulator.

Type U 1112—600/1200 Baud Demodulator.

Type U 1113—600/1200 Baud Modulator and 75 Baud Demodulator.

Type U 1114—600/1200 Baud Demodulator and 75 Baud Modulator.

Type U 1115—600/1200 Baud Modulator and 600/1200 Baud Demodulator.

Types U 1113 and U 1114 provide a reverse 75 Baud channel which may be used simultaneously with the forward high speed channel. This is frequently referred to as the supervisory channel and used for the transmission of control signals. Type U 1115 provides or simultaneous two way transmission of up to 1200 baud over a 4 wire or two 2 wire lines.

The telephone circuit may be switched to phone or data mode either by a control

on the data transmission terminal or by a switch in the telephone handset.

The equipment may be operated in one of two signalling modes. Mode (a) is for signalling rates up to and including 600 bauds and Mode (b) for signalling rates from 600 to 1200 Bauds. The appropriate mode may be selected remotely at the associated data transmission terminal.

Indicator lamps show the modulation rate, data/phone mode and carrier fail (also indicated by an audible alarm). A test mode is provided; also facilities for 'Line' and 'Back to Back' testing.

A modular form of construction has been employed. Plug-in modules in the form of cards are arranged in shelves resulting in a very flexible compact equipment, which is easy to service.

FEATURES

Solid state modular construction.

Inbuilt and remote test and monitoring facilities.

Conforms to C.C.I.T.T and British G.P.O Specifications.

Only one type of silicon transistor used.

DATA SUMMARY

General

Compliance: The modem complies fully with the C.C.I.T.T recommendations V 23 and V 24 (Geneva 1964) and is therefore

compatible with the modems which comply with these recommendations including the British G.P.O Datel Modem No. 1A. It is also approved for use on G.P.O leased lines.

Power requirements: 200–250 and 105–125 $\pm 10\%$, 50 or 60 Hz.

Power consumption: 13 VA.

Power supply facility: 5 Volt d.c for local telephone.

Temperature range: 0 to $+40^{\circ}\text{C}$.

Dimensions:

Height	9 in.	(23 cm)
Width	16 in.	(30.5 cm)
Depth	9.75 in.	(25 cm)
Weight	34.5 lb	(50.7 kg)

Data Channel

Signalling rates: Mode (a) Up to 600 bauds. Mode (b) 600 to 1200 bauds.

Error rate: Less than 1 in 10^5 with S/N ratios of 12 dB at 1200 bauds and 11 dB at 600 bauds.

Input and output signal levels: In accordance with the C.C.I.T.T and British G.P.O specifications.

Supervisory Channel

Signalling rates: Up to 75 bauds.

Impedance and signal levels: In accordance with the C.C.I.T.T and British G.P.O specifications.

Line Characteristics

Impedance (input and output): 600 Ω balanced 2 or 4 wire.

Signal frequencies data channel: 600 baud, 1300 Hz and 1700 Hz 1200 baud, 1300 Hz and 2100 Hz.

Supervisory channel: Carrier frequency 420 Hz Frequency shift ± 30 Hz.

Maximum group delay: 1 millisecond.

Maximum attenuation: 48 dB.



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