24-Channel Multiplex Equipment Type MX166 and MX169

Produced by Marconi Italiana, Genoa, Italy

The MX166 and MX169 are designed for transmitting 24-speech circuits over a radio bearer circuit. Two separate 24-channel systems, complete with common carrier generating equipment, duplicated with automatic changeover, may be accommodated in one standard rackside.

Features

Fully transistorized.

Mains or battery operation.

Printed circuit, modular construction.

Built-in test facilities.

Data summary

Effective channel bandwidth: 300–3400Hz.

Send and receive frequencies: 6–108kHz (for MX166) 60–180kHz (for MX169).

Send level: −35dBm.

Receive level: −15dBm.

Line transmit and receive impedance: 75Ω unbalanced.

Carrier leak: −26dBm0.

Audio input (4-wire transmit): 0 to −15dBm.

Audio output (4-wire receive): +8 to −7dBr.

Frequency attenuation distortion: Within CCITT limits.

Harmonic distortion: Not greater than 4% at level of 3·5dBm0.

Total noise: 0·7mV in a zero level point.

Intelligible crosstalk: Better than −65dB.

Signalling supply: 3825Hz.

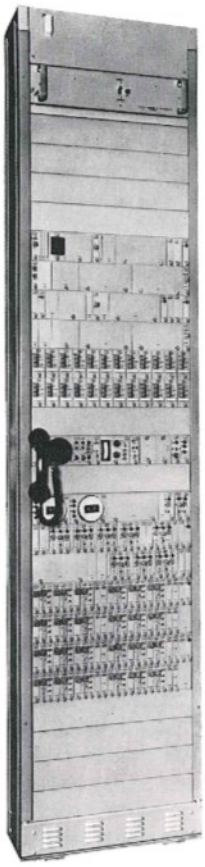
Signalling level: −6 or −18dBm0.

Power supplies (from battery): −48, −60V± 10% or 24V± 2%.

Power supplies (from mains): 110–220V a.c ±2% 50–60Hz.

Dimensions:

Height	260cm	(8ft 6$\frac{1}{2}$in.)
Width	60cm	(1ft 11$\frac{1}{2}$in.)
Depth	22·5cm	(8$\frac{3}{4}$in.)



MX166 and 169

120-Channel Multiplex Equipment Type MX120

Designed and produced by Marconi Italiana, Genoa, Italy

The MXT120 multiplex equipment is a 120-telephone channel FDM multiplex for radio links specifically designed to be easily transportable by air. It is therefore the ideal system for mobile and semi-mobile systems requiring a telephone capacity of up to 120 channels.

Features

High system flexibility to enable it to cope with the requirements for initial limited capacity and to increase it gradually as traffic expands.

Resistance to severe environmental conditions which can be met during transport, storage, and operation.

Full compliance with CCITT recommendations and to most of the national specifications.

Lower power consumption.

Compactness and full transistorization.

Data summary

The equipment is made up of two different types of racks MXT120A which contains carrier generation units and group translating equipment and MXT120B which contain up to 36-channel units.

Channel capacity: Up to 120 channels.

Modulation: Single side band, suppressed carrier.

Multiplexing: Frequency division, 4kHz spacing.

Effective channel bandwidth: 300–3400Hz.

4-W channel input level: 0 to −15dBr.

4-W channel output level: +8 to −7dBr.

Impedance (a.f side): 600Ω balanced.

Output frequency (to radio link): 60–552kHz or 12–552kHz.

Level (to radio link): −33 to −45dBm.

Level (from radio link): −15 to −44dBm.

Impedance (radio link side): 75Ω unbalanced or 150Ω balanced.