



easily removed for maintenance. The adjustment for varying channel capacities in the case of the unit handling 24–132 channels is easily accomplished.

Data summary

Modulator-Typical specification

Output frequency: 70MHz \pm 70kHz.

Deviation per channel: 0.25 to 0.63 MHz r.m.s.

Normal television deviation:
525 line 9.4MHz peak-peak.
625 line 7.9MHz peak-peak.

Threshold Extension Demodulator

Input frequency: 70MHz nominal.

Highest baseband frequency:
552kHz.

Output level per channel: -15dBm.

Gain stability: 0.5dB per month.

Output impedance: 75 Ω .

C/T Values for 8400pW phosometrically weighted

132 channels deviation: 0.63MHz r.m.s -148.5dBw/ $^{\circ}$ K (typical).

60 channels deviation: 0.410MHz r.m.s -151.3dBw/ $^{\circ}$ K (typical).

24 channels deviation: 0.25MHz r.m.s -154.8dBw/ $^{\circ}$ K (typical).

Conventional Demodulator

Input frequency: 70MHz.

Max. input deviation: 32MHz peak to peak.

Output bandwidth: 30MHz to 5.5MHz.

Output impedance: 75 Ω .

Output return loss: 26dB.

Nominal output level: 1V peak to peak.

132-Channel Multiplex Equipment for Satellite Communication

Type MX 214

Designed and produced by Marconi Italiana, Genoa, Italy

The MX214 is designed for assembling 132 speech circuits for transmission over a satellite communications network.

Transmit and receive circuits are packaged on separate functional racks to meet operational requirements specific to space communication. In designing the equipment special attention has been paid to the latest CCITT and COMSAT specifications.

Circuit

The assembly of 120 channels into the line frequency band 60–552kHz is in accordance with CCITT standards, namely:

- Twelve channels are first assembled into a basic group.
- Five basic groups are then assembled into a basic super-group.
- A final stage of modulation translates two basic super-groups into the line band.

An additional basic group is allocated in the band 12–60kHz bringing the capacity of the system up to 132 channels.

Data summary

4-Wire Audio Points

Frequency band: 300 to 3400Hz.

Input level: 0 to -15dB.

Output level: +8 to -7dB.

Impedance: 600 Ω balanced.

Basic Group

Frequency band: 60 to 108kHz.

Sending side level (from channel modem to group modem): -37 to -47dB.

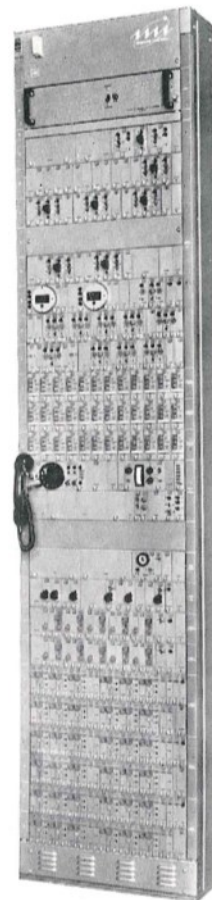
Receiving side level (from group modem to channel modem): -5 to -30dB.

Impedance: 150/130 Ω balanced.

Basic Supergroup

Frequency band: 312 to 552kHz.

Sending side level (group to super-group): -35dB.



Receiving side level (supergroup to group): -30dB.

Impedance: -75 Ω unbalanced.

Multiplex Baseband of Satellite Link

Frequency band: 12 to 552kHz.

Sending side level (to radio): -10 to -45dB.

Receiving side level (from radio): -15 to -45dB.

Impedance: 75 Ω unbalanced to 130 Ω balanced or 150 Ω balanced.

Multiplex Baseband of Terrestrial Link (960 ch.)

Frequency band: 60 to 4028kHz.

Sending side level: -20 to -45dB.

Receiving side level: -20 to -45dB.

Impedance: 75 Ω unbalanced.