Digital Instruments

FMD-V01

Digital FM Receiver

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Overview

FMD-V01 is a digital FM receiver for professional applications. The high performance is achieved through implementation of the most advanced digital technologies that allow the demodulation of frequency without the traditional analog approach.

The chain of the radio frequency signal is in fact directly processed by a digital system that allows a whole series of parametrization typical of an FM signal. It is a digital FM receiver mainly used in situations where it is needed the reconstruction of signals used for synchronization or measurement applications.

Deviation of instantaneous frequency of the carrier signal stability, symmetry modulation effect of the modulation on the carrier, signal level stereo pilot and many other parameters are easily assessable by fully numerical approach.

FMD-V01 allows the broadcaster to assess the quality of distribution system by creating daily reports. It was used in the extraction of signals synchronism needed to isofrequential networks. Provides measurements performed both on the front panel display or through an application package on Windows PC.

Features

· Analog audio L & R balanced on XLR connectors,

· Digital audio AES-EBU,

· MPX output,

· Taking front headphone listening,

· RDS Analyzer,

· RF Level Meter,

· Deviation of instantaneous frequency,

· Deviation of the total peak area,

· Density modulation,

· Level of the stereo subcarrier,

· Level RDS subcarrier,

· Error carrier frequency,

· The effect of the modulation on the carrier frequency,

· Serial port in RS232 or RS485,

· Remote management software developed in Windows environment,

· Power system AC, DC. AC: 110Vac to 240 Vac 50/60 Hz, DC: 12 Vdc to 50 Vdc,

· System in format 19'' Rack 1U.

Tech. Spec.

Receiver section
- Frequency range: 87.00 MHz - 108.00 MHz
- Wheelbase: 25 Khz
- Sensitivity 30dB S + N / N: 2.5 microvolts
- Squelch threshold: 15 dB microvolts
- Selectivity: + / - 200 kHz: 30 dB

Audio section (L+R)
- Bandwidth: 20 Hz - 16,000 Hz + / - 0.1 dB (See attached chart)
- Output Level: 0 dBm into 600 ohms for 400 Hz tone with deviation + / - 75 KHz
- Gain: 0 dB to 9 dB 1.0 dB steps (see table Ch Charts and Tables)
- THD: <0.05%
- S / N: <66 dB
- De-emphasis: 50 µs
- Impedance: 600 Ω transformer balanced

MPX section
- Bandwidth: 20 Hz - 56,000 Hz + / - 0.1 dB
- Output level: -8 dBm 600 Ω
- Gain: 0 dB to 12 dB 1.5 dB steps (see table Ch Charts and Tables)
- Impedance: 600 Ω unbalanced.

Signaling
- Serial connection: RS-232 Connector DB9 Male ± 15 kV (ESD).
- Signaling: 2 dry contacts over DB24 connector

Supply
- Network: 95 Vac - 240 Vac Plug IEC320 integrated EMI / RFI filter
- Battery: 20 Vdc - 60 Vdc EMI / RFI filter integrated

Size
- Width: 1 Unity 19".
- Depth: 300 mm connectors excluded.
- Weight: 1.5 Kg.