General description:
IFM receiver is intended for the instantaneous measurement of the carrier frequencies of received signals in the frequency bandwidth 4 GHz. It provides the instantaneous information about the sporadic distribution of the signals during the monitoring of the frequency spectrum from 1 GHz to 12 (20) GHz. IFM receiver is embedded into 19" rack along with control, evaluation and display circuits and it can (with connected keyboard) perform the autonomic functions of monitoring and signal analysis. It is possible (by the connection via the standard PC interface - IP, IPX protocol) to integrate IFM receiver into the reconnaissance system as well (used in the SDD station).

Working principle:
Instantaneous evaluation of phase differences of direct and delayed limited RF signal at parallel phase correlators.

Basic technical data:
Frequency range of IFM receiver:
1 up to 12 GHz (20 GHz optionally), in bands:
- 1 to 4 GHz (lower)
- 4 to 8 GHz (basic), optionally could be inserted band stop filter (notch) 1.8 to 1.9 GHz (GSM)
- 8 to 12 GHz (upper 3 cm)
- 12 to 16 GHz (upper 2 cm)
- 16 to 20 GHz (upper 1.5 cm)

Measurement resolution of the carrier frequency:
10 MHz (carrier frequency index 9 bits)

Sensitivity: - 65 dBm

Time measurement of the pulse signals time parameters:
- repetition period 1 μs to 838.86 ms
  (0.1 μs resolution, 24 bits)
- pulse width 0.1 μs to 819.2 μs
  (0.1 μs resolution, 13 bits)

CW signal measurement:
- frequency and the marker-indicator value
**Embedded imitator:**
- repetition period PRI ~ 2280 µs,
- pulse width ~ 2.2 µs
- carrier frequency index 1 - 511
  (set only odd adjustable)
- antenna rotations ~ 4.7 s
- irradiation time ~ 300 ms

**IFM receiver diagnostics:**
- control, diagnostics, calibration and checking the IFM receiver,
- measured data could be sent (net with TCP/IP protocol) for remote measurement purposes.

**Programmable data simulator:**
- independent process which hands over data to main executing process as it were data from the measurement unit of the IFM receiver,
- simulation of random data in batches (it is possible to set number of pulses in batch and the batch period)
- continuous irradiation (pulse repetition period selectable)
- simulation of up to three independent particular signal sources, whose parameters could be set and generation of more complicated situations with the irradiation overlapping.

**Dimensions:** for 19" rack embedding, 6U height

**Power supply:** AC 230V/50Hz or DC 24V

**Development and delivery:**
Introduced into armament of the Czech Army in the SDD station in 1998.