

TECHNICAL DATA

Frequency range 20 to 500 MHz

Transmitter output power

- Full 1.000 W±1dB, (20-100 MHz)
500 W±1 dB, (100-500 MHz)
- Reduced 500 W±1 dB, (20-100 MHz)
250 W±1 dB, (100-500 MHz)

Modes of operation

- Frequency list scanning, programmable unrestricted
- Frequency list scanning, programmable unrestricted with automatic jamming
- Band searching, up to two bands simultaneously
- Wideband jamming, 1 to 30 MHz in 1 MHz steps
- Band searching, up to two bands with automatic jamming
- TDM (time division multiplex) jamming, up to 4 channels
- Operation at single dedicated frequency, surveillance or jamming

List of friendly frequencies (forbidden for jamming)

up to 96

Jamming modulation sources

- Jamming modulation generator GEMOS VHF/UHF
- Cassette recorder
- Telegraph key
- Microphone

Jamming signal types (from GEMOS)

- Gaussian noise
- Carrier frequency FM modulated by Gaussian noise (FM noise)
- Linear FM signal (sweep)
- Electronic music
- Tone
- Impulses, generated in pseudorandom manner or with predetermined time duration

- Multi signal (comb) for wideband jamming
- Wideband noise (barrage jamming)

All jamming signal parameters can be varied by software means

Signal classification

- Analog FM voice transmission F3E
- Digital FM voice transmission G3E
- AM voice transmission A3E
- SSB voice transmission J3E
- Morse telegraphy A1A
- Unmodulated carrier A0
- Noise
- Unknown modulation

Control

- stand alone mode: via built-in PC
- system mode: via line modem up to 56 kbit/s

Antenna subsystem

- Tx/ Rx log periodic antenna
- Tx/ Rx VHF communication antenna
- Tx/Rx omnidirectional antenna (optional)

Communication subsystem

- Telephone line using modem up to 56 kbit/s
- Option: Optical line terminal 8/155 Mbit/s
- VHF transceiver set

Ready for use

25 min

Power supply subsystem requirements

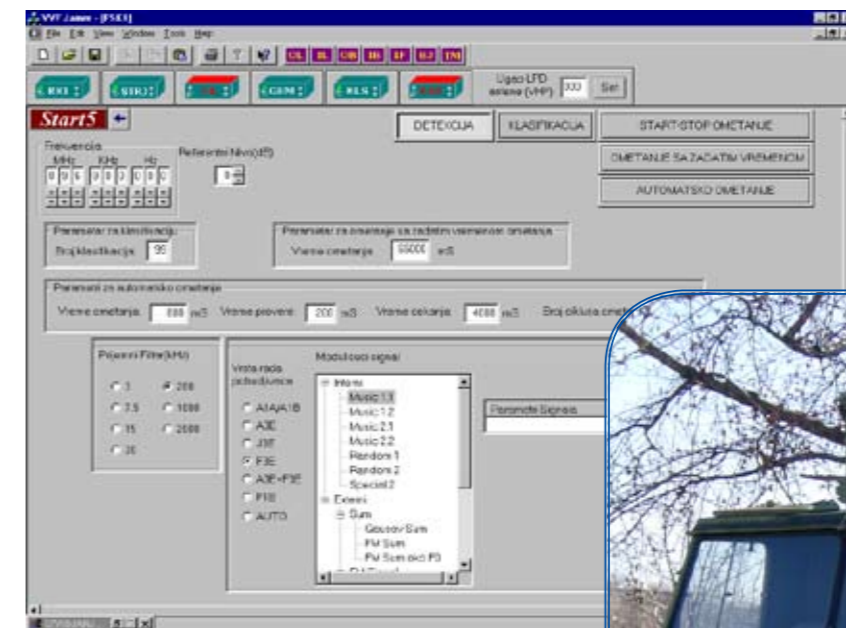
- 3-phase generator 3 x 380/220 V, 50 Hz, 15 kW
- Two battery 12 V / 135 Ah
- Maximum consumption 9 kVA, AC
24 A, DC

Environmental conditions

- Outside temperature -20 °C to +55 °C
- Temperature in the shelter +5 °C to +35 °C

VHF/UHF JAMMER 1 kW FULLY AUTOMATED RADIO SURVEILLANCE AND JAMMING SYSTEM

- VHF/UHF bands
- Frequency range 20 - 500 MHz
- Computer control
- Various automatic operating modes
- Output power 1 kW/500 W
- Complete signal analysis (including automatic real-time signal classification)



Applications

VHF/UHF JAMMER of 1 kW output power is the responsive jammer intended for jamming and deception of hostile voice and data radio communications in the frequency band from 20 MHz to 500 MHz. It can be used for jamming of standard fixed frequency mode tactical VHF/UHF radio communications as well as frequency hopping communications.

The offered equipments are mounted in racks with shock absorbers, prepared for building in shelter on truck for mobile applications.

The jammer is fully automated and can be used in standalone mode or integrated in an adequate ESM/ECM system.

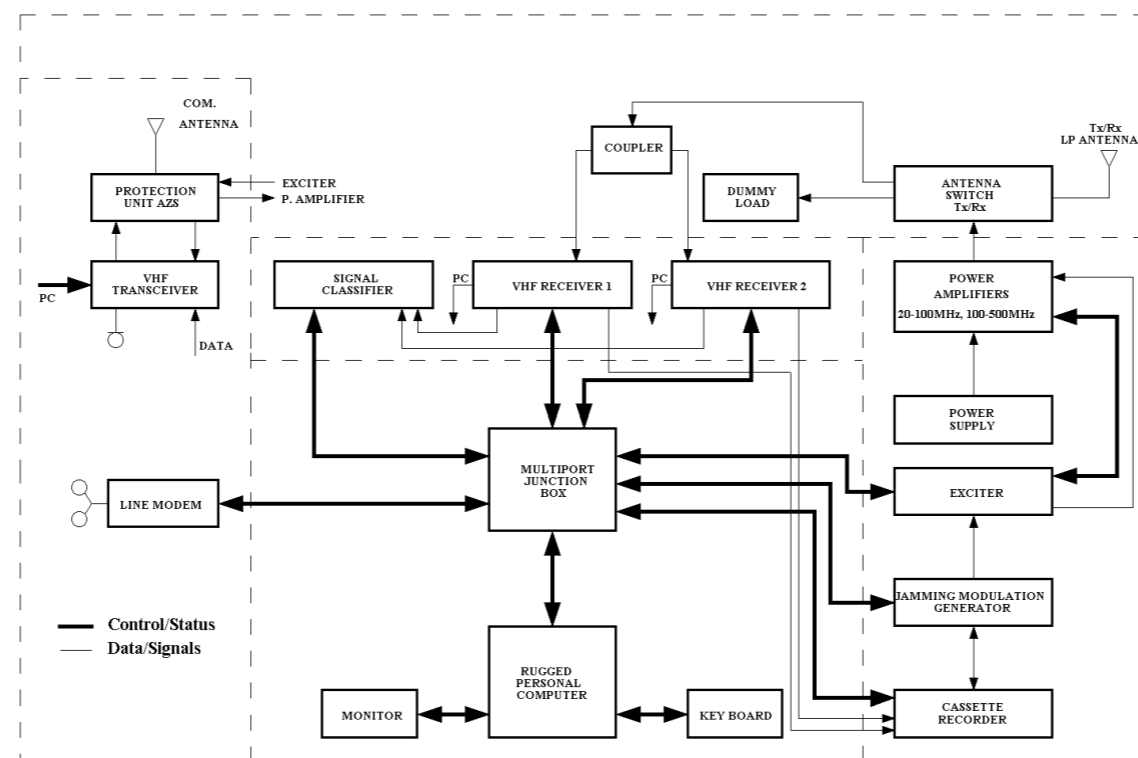
In the standalone mode operation the initial data are obtained from the PC keyboard. The operator-computer communication is simply performed through questions and offered answers using clicks and windows operating techniques.

In the system mode of operation the VHF/UHF jammer is controlled by ESM/ECM control station via line modem.

Basic configurations

VHF/UHF Jammer contains:

- VHF/UHF Exciter, 20 - 500 MHz,
- Power Amplifier 1kW, 20 - 100 MHz, including harmonic rejection filters, Tx/Rx switch, and power supply unit,
- Power Amplifier 500 W, 100 - 500 MHz, including harmonic rejection filters, Tx/Rx switch, and power supply unit,
- VHF/UHF Jamming Modulation Generator,
- VHF/UHF Receiver, 20 - 500 MHz, two units,
- VHF/UHF Signal Classifier,
- Multiport Junction Box,
- Cassette Recorder,
- Dummy Load,
- Rugged PC (Industrial version),
- Communications Transceiver set, VHF,
- Transceiver protection unit AZS,
- Line Modem, 56 kbit/s,
- Option: Optical line terminal 8/155 Mbit/s
- Tx /Rx log Periodic antenna 20 - 100 MHz,
- Tx /Rx log Periodic antenna 100 - 500 MHz,
- LP antenna telescopic mast,
- LP antenna Rotator.



VHF/UHF Jammer - block diagram



VHF/UHF Jammer - inside

Main features

VHF/UHF Jammer offers enhanced radio surveillance and signal analysis capabilities relying on the unique concept of two search receivers and signal classifier unit. The wideband solid-state amplifier and efficient software algorithms enable a very short jammer reaction time.

Jammer Control software made in Visual C++ (Windows PC operating systems) enable control of all function of VHF/UHF Jammer:

- Radio surveillance and jamming algorithms:
 - Frequency list scanning,
 - Frequency list scanning with automatic jamming,
 - Band searching,
 - Band searching with automatic jamming,
 - TDM jamming,
 - Wideband jamming against frequency hopping communication,
 - Operation at the single dedicated frequency,
 - Signal classification,
 - Spectrum monitoring.
- Control of radio receivers, exciter, signal classifier, jamming modulation generator, cassette recorder and line modem.
- Control of 1 kW power amplifier via exciter
- Remote control of VHF/UHF Jammer via line modem



VHF/UHF Radio Signal Classifier and VHF/UHF GEMOS