Spectrum Analyzer

The Spectrum Analyzer software is intended for the analysis of RF signals with a frequency of up to 10 GHz in automated testing programs, research in the frequency domain of periodic signals of the RF and microwave ranges, as well as for the analysis of signal parameters with analog modulation (AM, FM, FM).

Main functions:

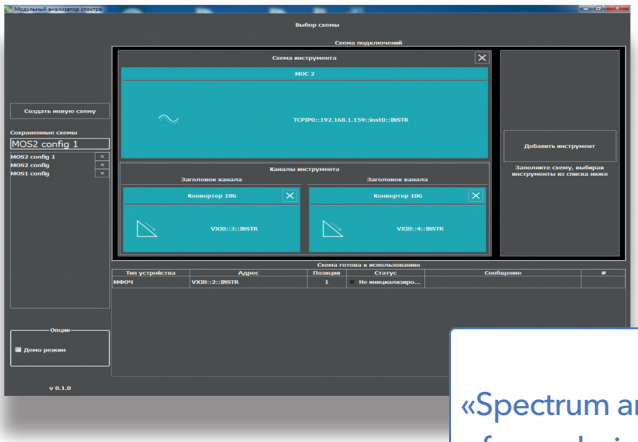
- Overview of the frequency band from 10 MHz to 10 GHz;
- Peak search;
- Measurement of peak frequency and amplitude, power in the frequency band;
- Demodulation of AM, FM, PM signals;
- Measurement of modulation depth, frequency and phase deviation;
- Estimation of phase noise, calculation of its characteristics.

The scope of the complex is radio engineering measurements, research and testing in laboratory and production conditions, testing of communication equipment and other telecommunication equipment.

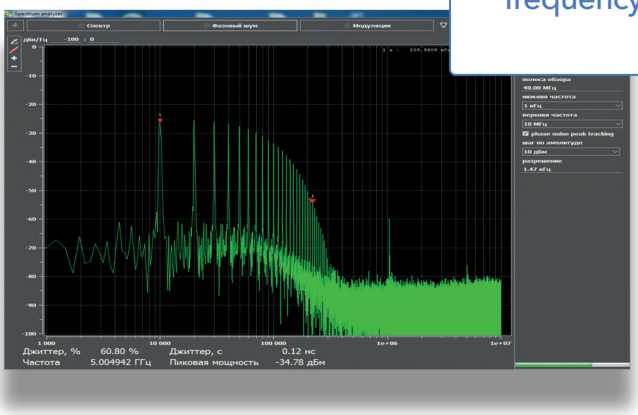
The principle of operation of the analyzers is based on the superheterodyne transfer of the input signal to an intermediate frequency and its subsequent processing using an ADC with a digital processing unit.

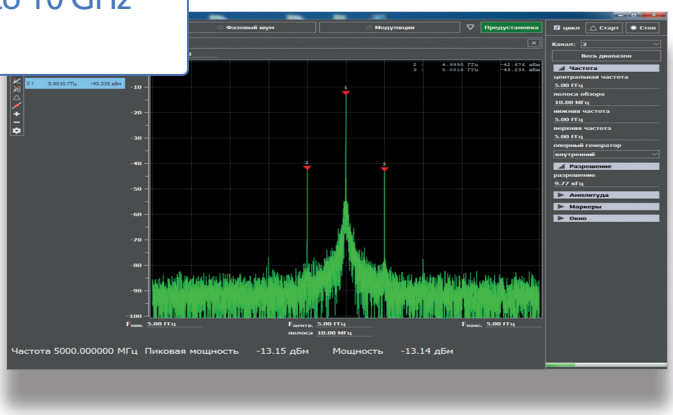
To control the tool, a function library (API) and a program panel are used.

The library is intended for use in automated testing programs, as well as for inclusion of the tool in the composition of user programs with a graphical interface. The library is written in C ++. The library interface provides access to all the instrument control functions, and also provides the ability to work without equipment in simulation mode. The library is provided with detailed documentation with many examples.



«Spectrum analyzer» is designed for analyzing RF signals with a frequency of up to 10 GHz





The library is supplied in source code and can be compiled under the required version of the compiler and under the required operating system. For testing library functions, test modules are included in the installation kit.

The software panel of the modular spectrum analyzer is designed for interactive control of the device, viewing in graphical and tabular forms of measurement results. The panel has a highly customizable and intuitive interface. The toolbar uses the function library API to control the tool.

The software panel includes the following modules:

- Panel for setting and editing circuits of hardware configurations of tools
- Spectral review panel;
- Panel for measuring phase noise;
- Panel for measuring parameters of modulated signals;
- Calibration and instrument verification panel.

The software panel can simultaneously display up to 4 graphs. Chart location settings are selected by the user and saved between sessions. Graphs provide axial scaling using software controls and / or mouse buttons. All graphs support work with markers - setting the quantity, type of markers, searching for peaks, interactive moving markers. A tabular display of measured values with markers is possible.

The panel provides the ability to calibrate the instrument taking into account loss compensation on external cable connections.

The Spectrum Analyzer software can be installed on a laptop, desktop or embedded computer connected to the equipment via an Ethernet connection. The program runs on computers with the installed operating system Windows 32/64 bit versions 7,8,10