OSCOR™ Blue

Spectrum Analyzer

Two models available: 24 GHz and 8 GHz

U.S. PATENTS: 6,397,154; 7,058,530
Additional Patents Pending

REI®

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Spectrum Analyzer

Two models available: 24 GHz and 8 GHz
Specifications shown are for 24 GHz model

Complete integrated spectrum analyzer with built-in antennas and analysis software

The OSCOR Blue is a portable spectrum analyzer with a rapid sweep speed and functionality suited for detecting unknown, illegal, disruptive, and anomalous rogue transmissions across a wide frequency range. This capability makes the OSCOR Blue an ideal product for:

- Site Surveys for communications systems (cell towers, microwave links, etc.)
- RF emissions analysis
- Wireless service providers and installers
- Evaluating communication channel utilization
- Investigating misuse of the crowded RF spectrum
- Security surveys for unauthorized or illicit transmissions

Sweep & Operational Speed

The OSCOR Blue sweeps a 24 GHz span in 1 second in 12.2 kHz steps utilizing multiple built-in antennas. Fast sweep time and on-board software make the OSCOR Blue easy to deploy, optimizing total operational speed.

Built-in Auto-Switching Multi-Antenna System

1 **SEAMLESS REAL TIME SPECTRUM VISIBILITY** from 10 kHz to 24 GHz or 10 kHz to 8 GHz (depending on the model) using the integrated Auto Switching Multi-Antenna System.

2 **BUILT-IN 10 dB PRE-AMP** improves receiver sensitivity.

3 **CAPTURES COMPREHENSIVE SIGNAL ACTIVITY** without missing signals due to limited antenna range or from having to switch external antennas.

Portability

The OSCOR Blue is lightweight (9.6 lbs./4.4 kg), small, and hand-held for easy mobility through target areas while collecting trace data. The built-in antennas and analysis software make it easy to deploy, and quickly capture and compare spectrum data from multiple locations.

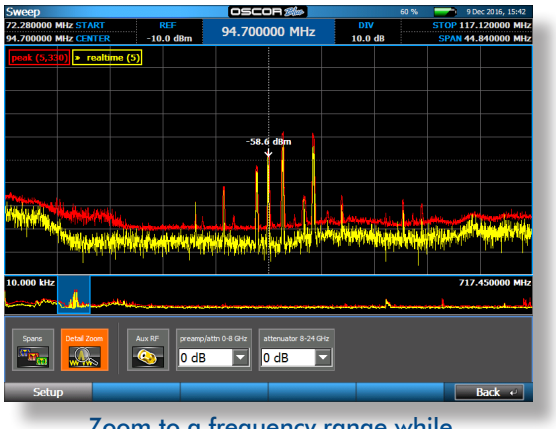
Remote Operation Using VNC

The ethernet port allows remote access to the OSCOR Blue. This functionality offers the flexibility to remotely monitor a sweep in-progress.

Patented Trace Analysis for Rapid Signal Detection

The size, speed, and portability of OSCOR Blue are important, but REI's trace analysis functionality adds dimension by providing full analysis of trace data on-board. Perform trace analysis on-screen without the need for a laptop. Functional features of the Trace Analysis software and easy navigation contribute to OSCOR Blue's efficient sweep performance.

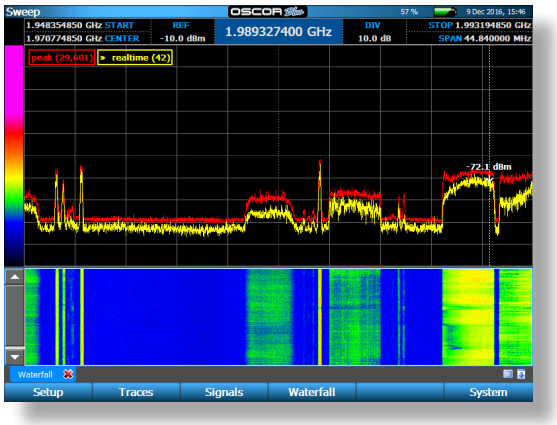
1. **DISPLAYS 24 GHz OF LIVE TRACE DATA PER SECOND** at 12.2 kHz resolution.
2. **QUICKLY DETECTS LOCALIZED RF ENERGY TRANSMISSIONS OF ALL TYPES OF MODULATION**
3. **DETAIL ZOOM MODE INVESTIGATES AND ZOOMS** in on signals in the spectrum without interrupting full spectrum peak trace capture.
4. **PATENTED TRACE ANALYSIS** is built into functionality. Reference and target traces are quickly captured, stored, and compared for complete RF Mapping solution.



Zoom to a frequency range while continuing full peak capture

Trace Data Recorder

The Trace Data Recorder collects trace data for long periods and saves it in a waterfall file that the OSCOR Blue can recall and review on-screen. Intermediate peak traces are stored at a minimum of 5 second intervals with a spectrum resolution of 12.2 kHz. The intermediate peak hold trace is saved while sweeping at 24 GHz per second.



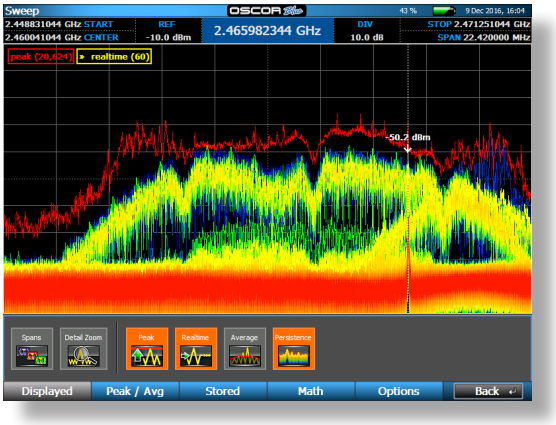
Trace Data Recorder

Real Time Raster Display

Provides short term waterfall view from real time receiver traces for quick analysis.

Persistence Display

Persistence view displays a trace graphic with varying color brightness based on the persistence of signals. This provides the ability to determine if multiple signals occupy the same frequency bands.



Persistence display

Signal List Generation

The OSCOR Blue collects peak trace data and then generates a signal list from the peak trace data. Moreover, the OSCOR Blue can subtract a reference trace from a target sweep trace, and then creates a signal list unique to the target area.

1. **SIGNAL LIST GENERATED FROM TRACE DATA**
2. **MULTIPLE PASS SIGNAL LIST CREATED IN SECONDS**
3. **LOGS INTERMITTENT SIGNALS** (burst/packet & frequency hopping)

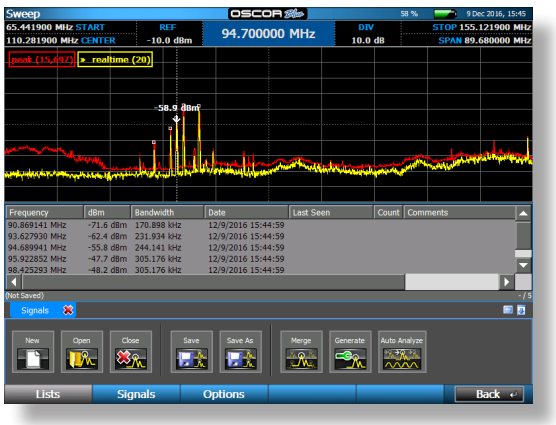
Signal Analysis and Location

SIGNALS are easily located based on RSSI level change

CORRELATION & RANGING to locate and identify analog threats

MASKING compares Realtime traces to Peak traces to log newly detected signals over time

MERGE combines 2 peak traces into 1



Generate signal lists automatically

Built-In Suite of Demodulators

AUDIO DEMODULATORS

1 FM wideband
2 FM narrowband
3 AM wideband
4 AM narrowband
5 Sub-carrier
6 Single Sideband

VIDEO FORMATS

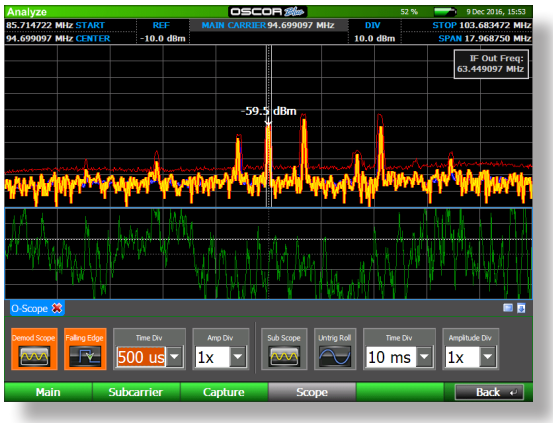
1 NTSC, PAL, SECAM
2 Wideband AM or wideband FM demodulation
3 Video demodulation displayed within screen

DEMODULATION BANDWIDTHS

1 Audio: 200 kHz, 12.5 kHz, 6.25 kHz, 2 kHz
2 Video: 12.75 MHz, 6.375 MHz

CONTINUOUS SPECTRUM UPDATE AND DISPLAY WHILE DEMODULATING.

Video demodulation

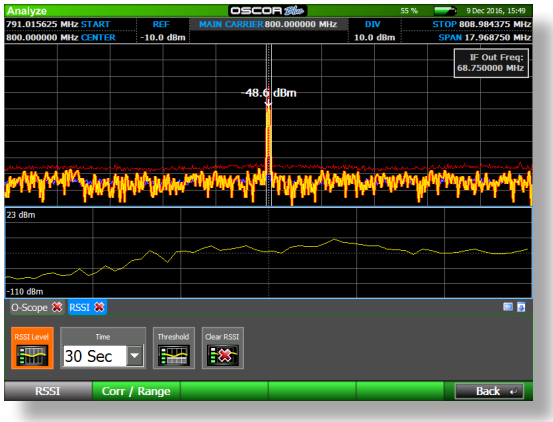


Audio demodulation

Multi-Purpose Probe

The Multi-Purpose Probe plugs into the Auxiliary port for capturing:

1 Carrier Current signals between 50 kHz - 150 MHz
2 Coax (F Connector) for single ended and general purpose measurements (75 ohm cable terminator included) with frequency range from 5 MHz to 2 GHz, CATV for in-line measurements of cable TV systems
3 VLF Magnetic Loop for analyzing low frequency spectrum activity from 20 kHz - 20 MHz
4 IR (700-1100 nm) for detecting line of sight infrared signals from 50 kHz to 1.2 GHz
5 VL (450 - 1100 nm) for detecting visible light transmissions from 50 kHz to 1.2 GHz



RSSI

Directional Antenna

Directional response makes locating transmitters easier. The directional antenna is handheld or can be clipped to the antenna panel.

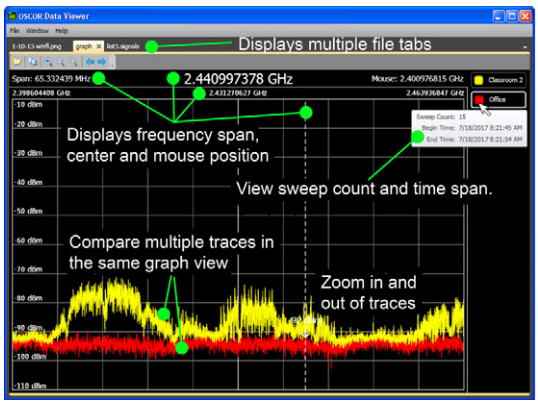
Range: 1.5 GHz to 8 GHz

Gain: Approximately 5 dB

OSCOR Data Viewer Software

Data Viewer software is a free downloadable PC application that allows users to open, view, analyze, export, print, and save OSCOR files including trace, signal, audio, and screen capture files (i.e. waterfall)

Download the Data Viewer software at www.reiusa.net.



Data Viewer sample

Whip antenna extension connector

Auto Switching Antenna Panel (utilizes 5 independent antennas)

Headphone Jack

8.4 inch (21.3 cm) High Resolution Touch Screen Display with "drag" & "move" controls

Hand Straps

Soft Function Menu Keys

Power Button

Built-In Speakers

Rotary Tuning Dial

Menu Control Keys

Numeric Keypad

Remote Control Ethernet Port

USB Port (type-B)

Rubber Grips

DC Power Input (charges battery)

USB Port (type-A) for Memory/Keyboard/Mouse

Compact Flash Memory Port

Antenna Panel Inputs

8 GHz - 24 GHz (OBL-24 only)

Antenna Panel Control

10 kHz - 8 GHz

(shown with protective port covers removed)

Auxiliary Antenna Inputs

Baseband Out

IF Out ports

Aux Control Port

Aux RF In 10 kHz - 8 GHz

OSCOR Blue Spectrum Analyzer

OSCOR Blue ADVANTAGES

FULL 24 GHz COVERAGE
SWEEPS FROM 10 kHz TO 24 GHz AT 12.2 kHz STEPS IN LESS THAN 1 SECOND WITH INTEGRATED AUTO-SWITCHING ANTENNA SYSTEM

TRACE ANALYSIS
COMPARE PEAK TRACES TO IDENTIFY RF ENERGY UNIQUE TO SPECIFIC ENVIRONMENTS

COMPLETE PACKAGE

EASILY LOCATES RF SIGNALS
PORTABLE DESIGN MINIMIZES SET UP TIME WHEN MOVING FROM SITE TO SITE

TRAINING BY REI INSTRUCTORS

REI operates the largest commercially available TSCM training facility in the world. On-site training also available.

MARKETING CHARACTERISTICS

RF SYSTEM
Frequency: 8 GHz Model (OBL-8) = 10 kHz to 8 GHz
24 GHz Model (OBL-24) = 10 kHz to 24 GHz
Displayed Average Noise Level (DANL) (25 kHz Resolution Band Width)
Without Preamp = -100 dBm
With Preamp = -110 dBm
Sweep Speed: 24 GHz/second at 12.2 kHz steps
Preamp: DC-8 GHz = 10 dB
Attenuation: DC-24 GHz = 0 dB, -10 dB, -20 dB, -30 dB
Dynamic Range:
Min/Max Range: 90 dB
SFDR: 80 dB

AUDIO SYSTEM
Demodulation Types: AM, FM
Filter Sizes: 800 khz, 200 kHz, 12.5 kHz, 6.25 kHz, 2 kHz
Subcarrier Filters: 6.25 kHz, 12.5 kHz, 200 kHz
Headphone Output (low leakage headphones included)
Built-in Speakers

VIDEO SYSTEM
Formats: NTSC, PAL, SECAM
Demodulation: AM, FM
Filter Sizes: 12.75 MHz, 6.375 MHz
Subcarrier Filters: 6.25 kHz, 12.5 kHz, 200 kHz

ANTENNA SYSTEM
Built-in Auto Switching Antenna System:
Frequency: 8 GHz Model (OBL-8) = 10 kHz (useable) to 8 GHz
24 GHz Model (OBL-24) = 10 kHz (useable) to 24 GHz

INPUTS/OUTPUTS
Aux RF In: 10 kHz to 8 GHz
IF Out: 25 MHz wide centered at 75 MHz
Baseband Out: DC – 6 MHz
Expansion: Aux Control Port for MPP

REMOTE CAPABILITY
Ethernet Port for VNC remote access

USER INTERFACE
Integrated Touch Screen with 8.4" Display
Soft Keys and Rotary Optical Encoder
USB Ports (A type): for peripherals (keyboard, mouse)

POWER SUPPLY
Universal Power Supply included: 100-240 VAC, 50-60 Hz
Removable Battery: Rechargeable Lithium ion, 4-hour runtime (typical)

EXTERNAL STORAGE CAPABILITY
Compact Flash (CF) Slot
USB-A Port

MECHANICAL
Dimensions: 11.5 in x 13.2 in x 3.0 in (29.2 cm x 33.5 cm x 7.6 cm)
Weight with Battery: 9.6 lbs (4.4 kg)
Case Dimensions: 5.5 in x 14.9 in x 19.5 in (14 cm x 37.8 cm x 49.5 cm)
Loaded Case Weight: 21.0 lbs (9.5 kg)
Operating Temperature: 0° C to +50° C