OSCOR™ Green

Spectrum Analyzer

Two models available: OGR-24 (24 GHz) and OGR-8 (8 GHz)

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

REI®

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

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 (OGR-24 only)

Antenna Panel Control

10 kHz - 8 GHz

(shown with protective port covers removed)

Auxiliary Antenna Ports

Baseband Out

IF Out ports

Aux Control Port

Aux RF In 10 kHz - 8 GHz

OSCOR Green™

SPECTRUM ANALYZER

Two models available: 24 GHz (OGR-24) and 8 GHz (OGR-8)
Specifications shown are for OGR-24 model

- **Sweeps 10 kHz to 24 GHz in less than a second**

- **Detects pulsed, frequency hopping, and spread spectrum signals**

- **Weighs 9.6 lbs/4.4 kg, slightly more than a 1 gallon/2.5 liters of water**

- **Demodulates analog AM/ FM audio/video signals**

- **Complete, easy to use, integrated spectrum analyzer system with built-in antennas and analysis software**

The OSCOR Green is a hand-held spectrum analyzer with a rapid sweep speed and easy to use functionality suited for detecting unknown, illegal, disruptive, and anomalous rogue transmissions across a wide frequency range.

- RF emissions analysis
- Investigating misuse of the crowded RF spectrum
- Site Surveys for communications systems (cell towers, microwave links, etc…)
- Wireless service providers and installers
- Security surveys for eavesdropping detection

World communications systems are rapidly expanding, especially in mobile land and satellite based broadband communication systems. The OSCOR Green provides important tools to evaluate these systems and integrate them into ambient RF environments.

Managing the RF spectrum is critical to many organizations such as hospitals, airports, laboratories, businesses, construction sites, mining operations, shipping ports, and large cities.

With world economies competing for business, high level corporate security requires eavesdropping detection for the protection of trade secrets, new product developments, marketing strategies, company sensitive information, financial information, legal counsel and new business strategies including mergers and acquisitions.

Eavesdropping detection is an important aspect of VIP protection. Business executives, movie stars, royalty, sports figures, politicians, and other celebrities rely on VIP security services to protect them from individuals wishing to stalk, spy, harass, or threaten.

Sweep & Operational Speed

The OSCOR Green 24 GHz model sweeps 24 GHz in 1 second in 12.2 kHz steps (OSCOR Green 8 GHz model sweeps 8 GHz in less than .5 seconds in 12.2 kHz steps). Fast sweep time, built-in antennas, and on-board software make the OSCOR Green easy to use and quick to deploy, optimizing total operational speed.

Built-in Auto-Switching Multi-Antenna System

1 **SEAMLESS SPECTRUM VISIBILITY** from10 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 Green is lightweight (9.6 lbs./4.4 kg), small and hand-held for easy mobility through target areas while collecting trace data and performing signal analysis. The built-in antennas and analysis software make it easy to deploy, and quickly capture and compare spectrum data from multiple locations.

Patented Trace Analysis for Rapid Signal Detection

REI's trace analysis functionality provides full analysis of trace and signal 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 the OSCOR Green'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

Signal List Generation

The OSCOR Green collects peak trace data and then generates a signal list from the peak trace data. Moreover, the OSCOR Green can subtract a reference trace from a target sweep trace, and then create a signal list from the difference trace, very quickly showing a list of signals unique to the target area.

1 **SIGNAL LIST GENERATED FROM TRACE DATA** using proprietary algorithm

2 **MULTIPLE PASS SIGNAL LIST CREATED IN SECONDS**

3 **LOGS INTERMITTENT SIGNALS** (burst/packet & frequency hopping)

Generate signal lists automatically

Spectrogram (Waterfall) Display

Raster Waterfall view generates spectrogram of receiver traces over time.

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

Spectrogram waterfall

Built-In Suite of Demodulators

AUDIO

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.**

Demodulated video signal in Analyze mode

Multi-Purpose Probe

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

1 Carrier Current signals between 10 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
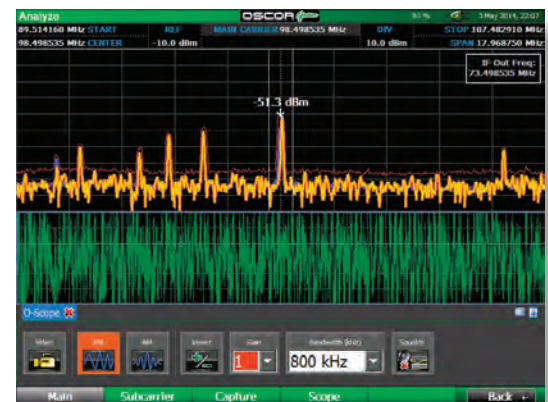
Demodulated audio signal in Analyze mode

Directional Antenna

Directional response makes locating transmitters easier. The directional antenna is handheld or can be clipped to the antenna panel.
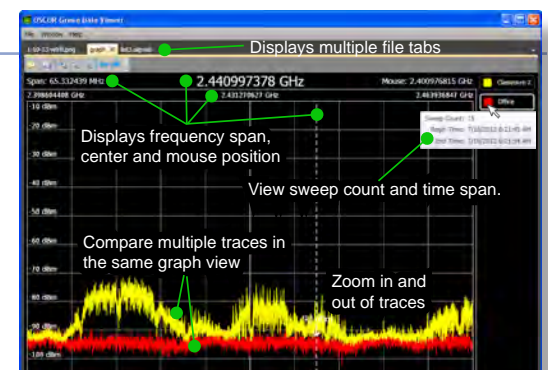
Range: 1.5 GHz to 8 GHz

Gain: Approximately 5 dB

OSCOR Green Data Viewer Software

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

Displays multiple file tabs

Displays frequency span, center and mouse position

View sweep count and time span.

Compare multiple traces in the same graph view

Zoom in and out of traces

OSCOR *Green* ™

SPECTRUM ANALYZER

OSCOR *Green* ADVANTAGES

FAST SWEEP TIME
24 GHz IN LESS THAN 1 SECOND (depending on model)

COMPLETE PACKAGE

INTEGRATED AUTO-SWITCHING ANTENNA SYSTEM
10 kHz to 8 GHz OR 24 GHz (depending on model)

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

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

EASY TO USE SOFTWARE FUNCTIONS

TRAINING BY REI INSTRUCTORS

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

Course dates and registration online at www.reiusa.net or email sales@reiusa.net

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MARKETING CHARACTERISTICS

RF SYSTEM
Frequency Range:
8 GHz Model (OGR-8): 10 kHz - 8 GHz
24 GHz Model (OGR-24): 10 kHz - 24 GHz
Sensitivity/Displayed Average Noise Level (DANL) (25 kHz Resolution Band Width)
　　　Without Preamp = -100 dBm
　　　With Preamp = -110 dBm
Sweep Speed: 24 GHz/second
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 (OGR-8) = 10 kHz (useable) to 8 GHz
　　　24 GHz Model (OGR-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

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

POWER SUPPLY
Universal Power Supply included: 100-240 VAC, 50-60 Hz
Removable Battery: Rechargeable Lithium ion, 2-3 hour runtime

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

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