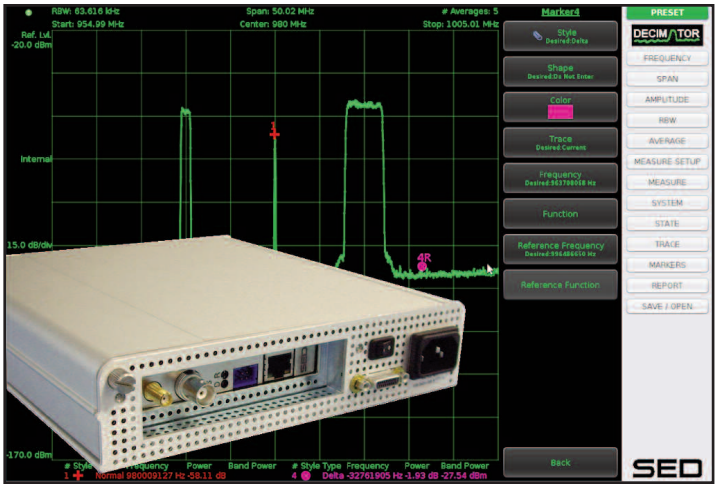
SED Portable Decimator D3

SED's Portable Decimator D3 is a third generation spectrum measurement and analysis product providing high-end performance at a low price. It is conveniently packaged for use by field technologists or it can be installed anywhere in a satellite, cable or terrestrial wireless network. It is a small hand-held enclosure easily transported in a typical laptop case. It can be connected to any AC power source worldwide. The powerful GUI is available using any standard web browser.



The Portable Decimator D3 uses state of the art digital technology and Fast Fourier Transformations to make lightning fast and accurate measurements. With a very low noise floor and large dynamic range, it is well-suited to measure any type of satellite, cable or terrestrial wireless carrier, including very small carriers, beacon signals and for carrier monitoring applications. Portable Decimator D3 accepts all signals from 5 MHz to 3 GHz and input power levels ranging from –110 to +5 dBm. RBW varies from 1 Hz to 1.5 MHz. The Portable Decimator D3 can be connected to an external 10 MHz reference for improved frequency accuracy and stability. All data communications with the Portable Decimator D3 occurs via its built-in Ethernet port.

It can be easily transported anywhere, providing an instant 5 MHz to 3 GHz spectrum analyzer, in conjunction with a laptop and any web browser. It can also be installed in any facility equipment rack, using the optional rack-mount bracket.

The powerful Graphical User Interface (GUI) is available using any standard web browser. No additional software is required. The GUI is very easy to use and operates like most traditional spectrum analyzers. It provides user-selectable colors for markers and traces, allows storage of multiple traces and provides measurement reporting. It also includes a powerful built-in **Carrier Monitoring** function, which provides notification via email or SNMP of carrier measurements that exceed user-defined limits, offering you peace of mind that up to 100 of your carriers are operating as expected.

When installed in a facility, the Portable Decimator D3 provides network access to all staff connected to the facility network or a corporate wide area network. This allows all technical staff the ability to monitor feeds and carriers at any time and from any location in the world using only a web browser.

Features

Overview

- covers full satellite L-band plus cable and wireless bands from 5 MHz to 3 GHz
- external 10 MHz or internal reference
- built-in Carrier Monitoring function
- web browser control
- small hand-held enclosure
- connects to AC power worldwide

Physical Interfaces:

RF Inputs:	SMA, 50 ohms
Control:	RJ-45
Reference:	BNC, 50 ohms
AC Power:	IEC 60320
Mechanical:	1.7”H x 7.7”W x 8”D

Certifications:

EMC/EMI:	EN 61000-6-2, EN 61000-6-4
Safety:	EN 61010-1

Measurement Speed[3]

500 MHz span, 1 MHz RBW, 200 ms
200 MHz span, 30 kHz RBW, 630 ms
80 MHz span, 100 kHz RBW, 170 ms
3.5 MHz span, 8 kHz RBW, 90 ms

Custom designed versions supporting other frequency bands or form factors are available. Contact SED for more information.

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Specifications

RF Input:

Input Frequency Range:	5 MHz to 3,000 MHz
Useable Dynamic Range:	-110 to +5 dBm (aggregate)
Noise Floor:	-160 dBm/Hz typical at min atten -160 dBm/Hz typical at max atten
Phase Noise:	-80 dBc/Hz at 1 kHz offset -95 dBc/Hz at 100 kHz offset -125 dBc/Hz at 1 MHz offset
Maximum Safe Input:	+15 dBm

Measurements:

Amplitude Accuracy:	± 0.5 dB (at 25°C)[1] ± 1.0 dB (0 to 50°C)
Frequency Accuracy:	± 2.6 ppm (internal) or as per external reference
Frequency Resolution:	1 Hz
Resolution Bandwidth:	1 Hz to 15 MHz
Analysis Bandwidth:	up to 220 MHz
Spurious:	
Images:	< -55 dBc (typical)
Aliasing:	< -55 dBc (typical)
DC Offset (time domain):	< -30 dBc (typical)
Averaging:	up to 255 averages

Other Specifications:

Reference Input:	10 MHz, -5 dBm to +13. dBm
Control Interface:	TCP/IP API, SNMP, HTTP
Power Requirements:	90-264 VAC, 47-63 Hz, 25W
Operational Temperature Range:	0 to 50°C

Notes:

1. Measurement conditions: 10 averages, input level between -8 dBm and -68 dBm, 3 sigma.
2. Resolution bandwidths auto or manual adjustable.
3. Expected rates with 10 averages, speed optimization.
4. All specification at 25°C unless otherwise noted and are subject to change with out notice.

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