



WR-G33WSM Receiver

Overview

WiNRADiO receivers have been used in a wide range of interesting applications. Two of such applications include telemetry and sound engineering. Both applications revolve around establishing and checking available communication channels for transmitting devices, such as wireless microphones or remote data loggers.

With the WR-G33WSM model, WiNRADiO introduces a high-performance low-cost receiver and spectrum analyzer specially developed for sound engineers and performers who work with wireless microphones and other wireless audio devices and telemetry engineering applications.

The receiver contains a number of specialist features tailored to spectrum management in audio and telemetry engineering. Its wide frequency range covers all standard wireless microphone and other VHF/UHF frequencies used in stage production, including the FM broadcast band and point-to-point communications.

- Frequency range 30 to 1000 MHz (except cellular bands where required by law)
- FM demodulator suited for all types of wireless microphones
- Very high sensitivity
- Excellent dynamic range
- Real-time spectrum analyzer (both linear and logarithmic)
- Built-in audio recorder
- Spectrum sweeping, printing and user annotation
- Channel and environment memories
- Antenna and base included
- Also compatible with latest Apple Macs

Highly sensitive, easy to interface with standard laptops and PCs and optimized to work with short VHF/UHF antennas, the receiver is also simple to install and intuitive to use.

Its fast scanning facilities make it possible to map the radio spectrum environment of a particular location, quickly determine available frequencies and allocate wireless microphones or telemetry devices to the available channels. The entire spectrum environment of each location can be saved and recalled later, to save time during the next visit.

Each transmitter signal peak is clearly visible in the scanned spectrum, and can be marked with a user-defined description. All this information, too, can be saved.

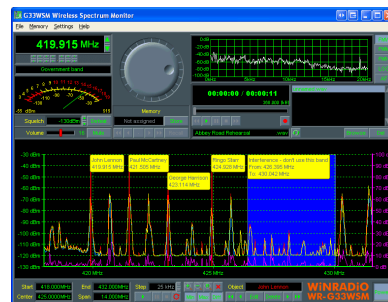
The receiver comes in a small enclosure which connects to an IBM-compatible PC (desktop or laptop) via the supplied USB cable. An external antenna connects to the receiver.

The WiNRADiO G33WSM: A ground-breaking audio engineering tool that will surely surprise you.

User interface

The WR-G33WSM user interface displays a mix of standard receiver controls such as a tuning knob, frequency display and signal strength meter, supplemented by a number of innovative facilities specially designed for wireless audio engineering.

The large "swept" spectrum analyzer shows absolute signal strength values, as well as differences from previous sweeps. A real-time audio spectrum scope shows the instantaneous audio spectrum of the selected demodulated channel. The audio recorder features a playlist for fast selection of files for playback.



Software Defined Radio

The WR-G33WSM is the first Software Defined Radio specifically designed for telemetry, audio engineering and stage production applications.

A Software Defined Radio (SDR) is one where most of the radio signal processing is performed in software, using digital signal processing methods, rather than using traditional hardware parts, resistors, capacitors, diodes, etc. The received signal is digitized early in the signal processing chain, and any further processing, demodulation and decoding of the digitized signal is then performed entirely in software.

There are many advantages to this approach, especially the flexibility of demodulation modes - new modes can be added easily by simply upgrading software.

The G33WSM also performs better than a comparable conventional receiver, thanks to advanced signal processing techniques which make it possible to implement sharper selectivity filters, and more accurate demodulators and decoders than conventional hardware. The performance of a Software Defined Radio receiver is also more consistent, stable and reliable because component tolerances and aging do not play such an important role as in a conventional receiver.

And finally, the G33WSM receiver offers far more features and facilities than a conventional receiver. For example, the real-time spectrum analyzer with both linear and logarithmic scale, variable IF (intermediate frequency) filter and audio recording are some of the many features which were previously unavailable on a conventional VHF/UHF receiver, in particular at such an affordable price level.

What's included?



The standard WR-G33WSM package includes:

- WR-G33WSM receiver
- Application software
- Telescopic antenna (AX-06B)
- Magnetic antenna base (AX-91M)
- BNC-to-SMA adapter
- USB interface cable
- AC/DC power supply
- Comprehensive user's manual

Receiver type	DDS-based dual-conversion superheterodyne with software-defined last IF stage and demodulator		
Frequency range	30 to 1000 MHz		
Tuning resolution	1 Hz		
Mode	FMN, FMM, FMW		
Spurious-free Dynamic Range	93 dB		
Image Rejection	60 dB		
RSSI accuracy	5 dB		
RSSI sensitivity	1 μ V		
Selectivity	FMN: 12 kHz (continuously variable) FMM: 30 kHz (continuously variable) FMW: 230 kHz		
Sensitivity (12dB SINAD)	Mode	30-500 MHz	500-1000 MHz
	FMN, FMM	0.7 μ V	0.8 μ V
	FMW	2.0 μ V	2.5 μ V
Intermediate frequencies	IF1: 109.65 MHz IF2: 12 kHz		
Frequency stability	10 ppm (0 to 60° C)		
Antenna input	50 ohm (SMA connector)		
Output	USB (1.0 and 2.0 compatible)		
Dimensions	Length: 164 mm (6.46")		
	Width: 96 mm (3.78")		
	Height: 41 mm (1.61")		
Weight	470 g (16.40 oz)		

Specifications are subject to change without notice due to continuous product development and improvement.



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