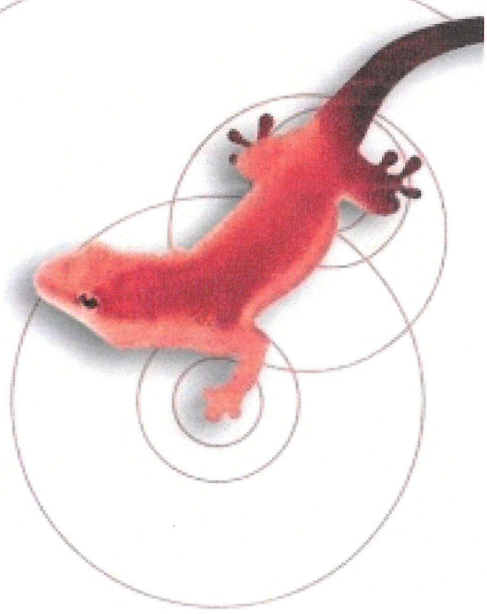
will'tek

9100 Handheld Spectrum Analyzer

Maximum performance, minimum package ...



boosting wireless efficiency

Frequencies are increasing ... and the right model needn't break the budget

RF signals analyzed at your fingertips

Faulty components can be identified with the 9100 together with an RF probe, tracing the signal paths and verifying test pin performance.

You can check the transmitter performance, look for spurious signals and check sideband levels using the 4 Markers with their flexibility and clear on-screen colour display.

The I/Q modulator can aligned and carrier breakthrough minimised with wanted and unwanted signals clearly shown on the high resolution bright colour display. Delta Marker lets you check against the specifications and the 9100 fast refresh time provides a new update as you make adjustments.

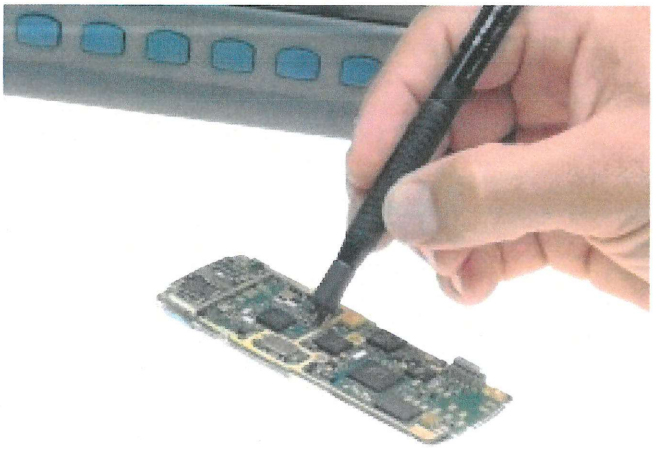
Checking harmonics is quick and easy. Just enter Start and Stop frequencies and select Full Span, you can enter harmonic frequencies as Markers and select List for a tabular display.

By pressing Delta Marker you can check the suppression and add to the list for saving or print outs. And the higher 4 GHz frequency range lets you check 2nd and 3rd harmonic levels when lower analyzers run out of bandwidth.

You would expect Willtek with over 40 years of RF servicing heritage to come up with a spectrum analyzer that meets the technical need and meets the budget.

Radio test sets normally only offer bandwidths up to 1 or 2 GHz. This is well short of the frequencies used in today's mobile phones. The 9100 with its' frequency range 1 MHz to 4 GHz, lets you check all the signals on the board including local oscillators (often in the 3.4 to 3.9 GHz band in modern direct down conversion designs). This frequency coverage also captures the higher harmonics from amplifier or oscillator modules, plus any spurious signals that can mix and breakthrough into the pass band.

With complete coverage of carrier, IF stages and audio frequencies, you can now have the performance you need, for half the price of a high end unit.



... Ease the pressures of RF equipment servicing

Electronic equipment servicing especially repair of RF equipment has all the pressures of high tech businesses: customers demanding short turnaround times, margins squeezed by competition and finding trained staff ... and now in addition, new environmental pressures increasing the economic options for repair over disposal costs.

Willtek can help. Our new 9100 Handheld Spectrum Analyzer provides the signal analyzis needed to fix those tricky problems fast.

Now with a frequency range up to 4 GHz, you can cover all the frequencies found in modern mobile phones, even high frequency first local oscillators in the range 3.4 to 3.9 GHz.

The full colour VGA 6.5 inch display gives outstanding clarity with easily readable screens and the adjustable handle position provides comfortable viewing angles.

The small footprint reduces precious bench space to a minimum and the compact form factor will fit anywhere on the bench or outside for field work.

At only 2 kg (5 lbs) weight and with AC or battery power with 2 hours operation time, units can easily be shared around the workshop or lab.

The 9100 uses modern Digital IF technology to process signals from the start, so updates in the field are easy for new capabilities, preserving your investment.

The slim design has connectors positioned to reduce bench clutter from cables, so you can run them directly to the unit under test. This frees up access to the front panel keyboard for easy operation and helps reduce repair time. The user friendly interface with logical soft keys speeds up operation.

Superb display with great portability

Bench work can be hard on the eyes, so we've provided the Willtek 9100 Handheld Spectrum Analyzer with a super large 6.5 inch TFT colour display. This has a superb 140° viewing angle and also provides fast updates. The sharp graphics from the VGA (640 x 480 pixels) screen are great for finding sneaky spurs or aligning modulators. Colour provides that "third" dimension for showing complex signals.

With the fully adjustable tilting handle, the screen can be placed anywhere convenient for comfortable viewing. So slim you can mount it on the work bench right next to the test board or at eye height on a convenient shelf.

The connectors are mounted on the unit top avoiding annoying cables getting in the way of your work and increasing access to the front panel keyboard.

Space saving and Ergonomic design

Maximising bench space is a must in busy workshops and at only 0.5 square foot, the 9100 is as small as it gets whilst providing a great readable display.

Test Kit is often shared around the workshop so with only 2.5 kg (5 lbs) weight, the new 9100 Willtek Handheld Spectrum Analyzer really is portable. And there is no need for an awkward trolley, when field service engineers arrive at the repair site from their 4 x 4 service vehicle or helicopter!
The built-in battery life is 2 hours, ideal for quick checks on a suspect unit, without finding an available power socket. This freedom for travel gives great flexibility to the 9100. A bigger battery option is also available for up to 8 hours use when away from the bench for extended periods.

Measurements all to hand

Tracing intermittent faults can be tricky and time-consuming. The Willtek 9100 Handheld Spectrum Analyzer makes life easier.

To find how a signal behaves over time, use the Markers to select the signal and then press Marker to Center. With Zero Span selected, time is now the x axis and settings can be adjusted with Sweep Time.

Finding those sporadic signals is also easier using Max Hold and also to capture those hard to find intermittent faults whilst you tap and apply the freezer spray or the hot air gun! Using Hold/Run gives flexibility for new searches.

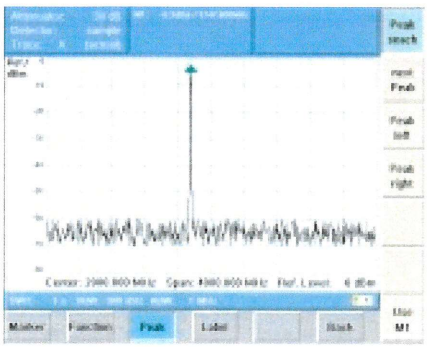
Colour makes the difference in finding signals

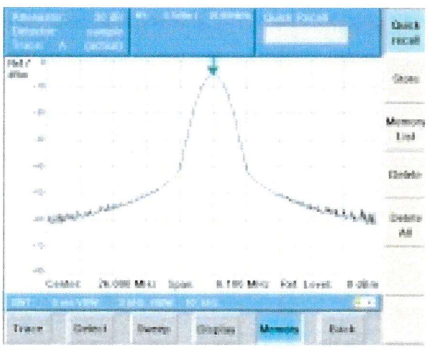
On the Receiver path, measure signal breakthrough at the RF switch, or at the diplexer by checking the signal shape and level both sides of the module. Tracing the signal with an RF probe makes troubleshooting a faulty preamplifier or IF filters faster.

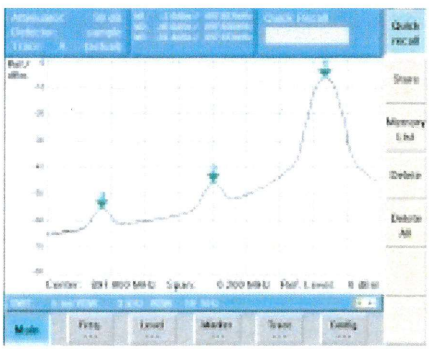
You can check for audio signals by demodulation of AM or FM signals using Zero Span mode and listening on the built-in loudspeaker.

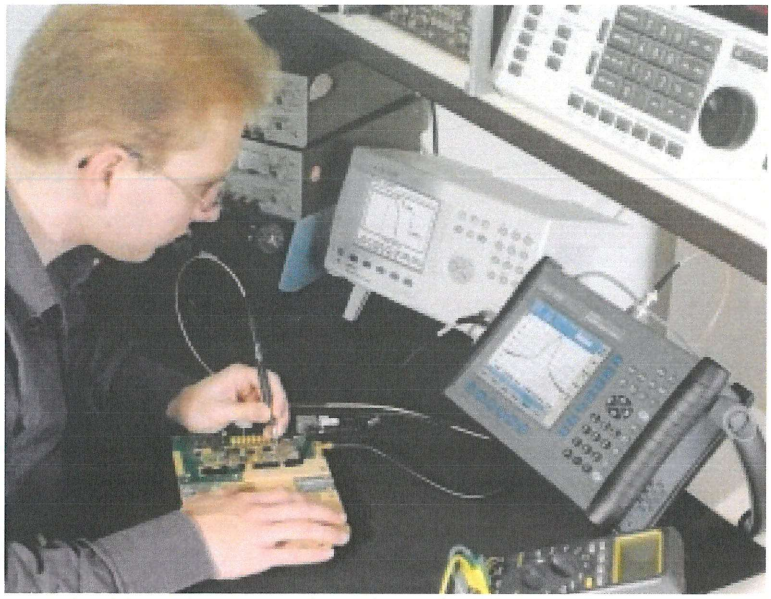
The Resolution Bandwidth down to 10 kHz, gives optimised sweep speeds for finding low level signals and can be set up to 1 MHz for wider frequency sweeps. 9100's resolution adjust automatic to the viewed span but can be overruled by given value.

Finding low level signals is great with the -100 dBm sensitivity at 10 kHz bandwidth and with more than 65 dB dynamic range. Soft keys allow you to easily set the Level. The Attenuation settings are automatic and can be adjusted manually if required.









Designed for technicians ... by those who know RF

We've designed the 9100 for easy operation and fast learning saving time in the workshop. The design follows industry practice so you will be familiar with the main controls.

Common functions such as Frequency, Span, Level and Markers are located on hard keys for fast access. The soft keys display the range of options available, speeding up selection of the desired function.

Using colour of course increases easy viewing of the display, and also helps in operating the equipment through clearly labelled functions. The bright VGA display with 640 x 480 pixels and the large 6.5 inch display ensure even small spectrum details are clearly seen.

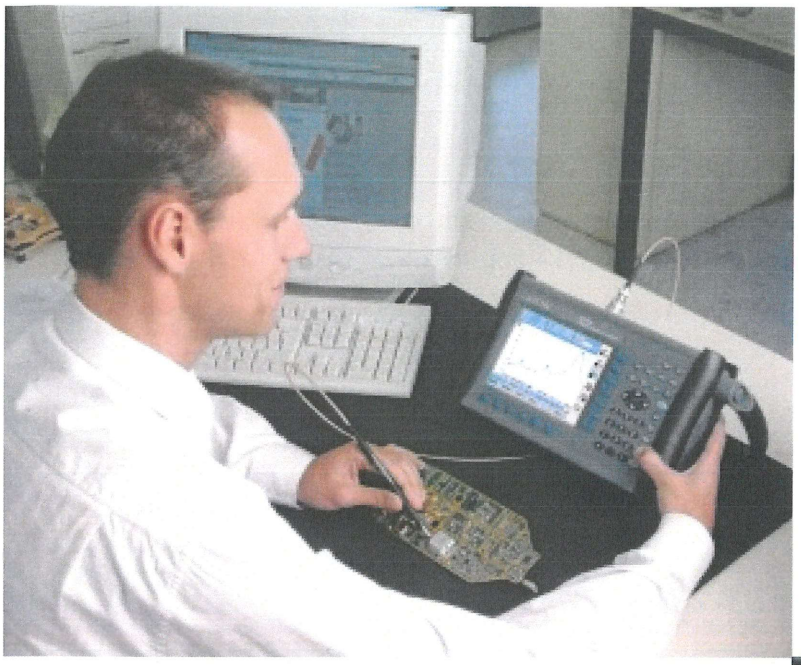
Settings may be Stored [Number] and then Recalled [Number] in a series of steps for guided use of common measurements.

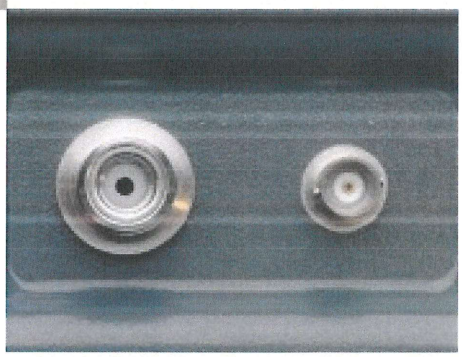
Manual or Automatic Control made simple

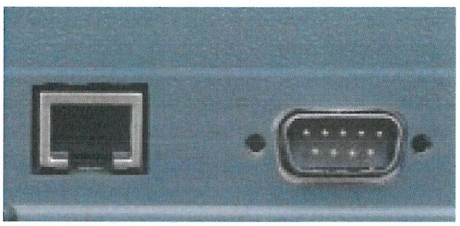
Controlling the Willtek 9100 Handheld Spectrum Analyzer from your PC is also easy and convenient. We provide an RS-232 port, plus an LAN port.

This means its quick and easy to connect up in the service centre for automated or guided programs. And it leaves the PC RS-232 ports available for control of the radio, adaptor cradle and power supply.

Willtek will be providing software measurement programs as well as updates and new features from the web site.







Great for all wireless applications

The Willtek 9100 works its' magic with the whole RF community:

- From R&D labs looking for economical solutions for harmonic and spurious spectrum measurements
- From Wireless LAN installers at 2.4 GHz looking for a clean sweep of the area
- From Wireless Local Loop technicians looking at 3.5 GHz radio performance
- From TV engineers looking for intermodulation products where they shouldn't be
- From students looking at how AM differs from Gaussian Mean Shift Keyed signals
- To all the two way radio technical staff finding that intermittent fault.

Designed by the experts in wireless servicing it uses the latest digital IF technology, with double heterodyne oscillators and an operating system based on Power PC chip. With the digital line up, adding features is straightforward

The 9100 more than meet the technical specs ... and the future upgrade path protects your investment.