

Wavecom W51LAN

Lee Reynolds

This month's review item is a high-end standalone digital signal decoder called the W51LAN from the good people at Wavecom Nachrichtentechnik (*that means Communications Technology, folks!*) in Bulach, Switzerland. It's good, it's expensive (*by the average hobbyist's standards*) but my, oh my, ya gotta love toys like this! Curious? Let's take a closer look...

Who makes it?

The makers of this device, Wavecom (<http://www.wavecom.ch>) are quite well known in the digital communications and decoding world for their wide range of DSP-based digital communications decoders. They produce devices aimed at the high-end hobbyist market all the way upward to the alphabet agencies and other kinds of government bodies around the world. They're doing something right because they're continuing to produce high quality hardware and excellent software for their user base and expand/update their range of offerings.

What is it?

The W51LAN is a standalone version of Wavecom's W51PC decoder card. No PC necessary, it comes with its own very small form factor PC wrapped around it, fully configured and ready to be dropped into a LAN, MAN or WAN (Local, Medium or Wide area networks) by the user *or* to be taken out and about for use in the field. Judging by the configuration of the device and the options that are available for it, this decoder is aimed squarely at the NGO/governmental level user.

What do you get?

The W51LAN arrives very well packaged; you get the W51LAN itself, a small, unassuming blue box measuring approximately 2"H x 7"W x 9"D, small 24vdc power supply, the decoder software on CD-ROM, a thick user's manual for the decoder, a thinner manual for the PC the decoder card is installed in, straight and crossover CAT 5 LAN cables for connecting the device into the network and miscellaneous OS software and connecting cables for the PC.

The PC host is a DSM 96M1542 Nano Server M-R (<http://www.dsm-computer.de>). It uses a 799MHz VIA Nehemiah CPU,



has 248 MB of RAM, a 30GB hard drive and built-in Ethernet, video, USB and serial ports. Windows XP Professional is provided as the operating system.

How to install it –

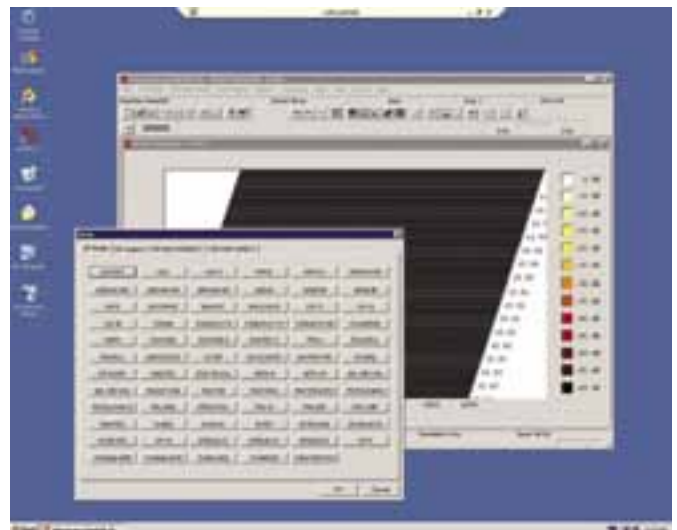
If you're already running Windows XP and a local network, all you have to do is plug in the W51LAN power supply, connect the W51LAN itself to a hub or switch using the supplied Ethernet cable, fire up Remote Desktop Connection on your main computer, point it at the W51LAN and you're away! The W51LAN will provide a desktop to the controlling system that is identical to a normal Windows XP desktop with a W51PC card installed. Use of the W51LAN from this point on is exactly the same as if the card was installed in your local computer and requires that no additional software be installed on your main computer. This

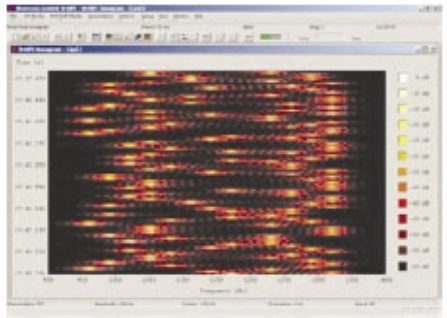
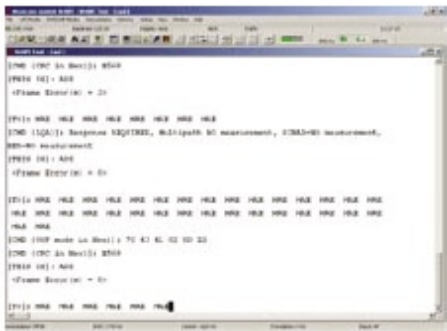
is the access method I most utilized – it made everything else seem cumbersome by comparison.

The second way of using the W51LAN is by using the built-in network capabilities of the W51LAN software and Microsoft's DCOM (Distributed Component Object Module – a way for programs to manipulate objects on different computers across a network) on your system to talk to the W51LAN. This is a somewhat trickier mode to implement than using Remote Desktop and requires the installation of the DCOM package from Microsoft if you don't already have it on your system. Using DCOM, you run the front-end software (GUI) for the W51LAN decoder card on your local system while it talks to server-like code running on the remote system.

The third way of using the W51LAN is to plug keyboard, mouse and monitor into the device and simply use it as you would a normal computer with a W51PC card installed in it. This is an acceptable way of using the decoder, but you'd be missing out on the remote operability of the W51LAN as a result.

I can imagine a number of very intriguing scenarios for remote receiving and decoding of signals using this package along with something analogous to the software used by, say, the DX Tuners network (<http://www.javoradio.com>). I can also visualize some nonexistent (or so they say) government agency with a lot





of these boxes scattered all over the world and all of them talking to some location not too far outside the Washington Beltway. Your tax dollars at work, folks!

How well does it work?

As is usual with Wavecom products, the W51LAN does a very professional and smooth job – the hardware and software installation is (in this case) almost nonexistent – and once you've chosen your flavor of access to the W51LAN it's a simple case of fire 'er up and let 'er rip! I've reviewed other Wavecom products in these pages before so I won't repeat myself unnecessarily – the Wavecom software interface is remarkably consistent across the various current models, well thought out, stable and reasonably customizable.

If you want to get a good idea of what the interface looks like and how the decoders operate, go to <http://www.wavecom.ch/download.htm#W51PC%20Software> and download the 3.1MB user manual in PDF format; that'll give you a close look at how the software looks and feels. Also available at that same web address are the brochures for various decoders and a specification sheet that does a nice job of detailing the differences between the decoder models.

On air testing of the W51LAN revealed performance that was, as is to be expected, identical to my own W51PC card. The software was stable (no lockups, no strange behavior), the auto classification components did a decent job of divining the characteristics of various signals and, as ever, I had a dang good time playing with the box. Good ranges of analysis tools are available (FFT, sonagram, waterfall, oscilloscope, PSK code rate/symbol check, FSK analysis, autocorrelation, bit length analysis, bit correlation) and they work well. Nothing beats turning what was previously annoying noise (like DGPS signals down on LF) into readable, loggable catches!

Wavecom is continuing to expand the

range of modes their cards handle, and data types such as AIS (a shipboard VHF position/course reporting system) and STANAG 4529 are now available to the hobbyist user. Additional, somewhat intriguing, modes are available in the Professional Version software, but this version of the software isn't usually available to us mere non-governmental mortals. Again, you can see what the difference is by download the specification brochure for Wavecom's web site.

Summing up the W51LAN

This is a nice device with excellent capabilities that is aimed squarely at the commercial/governmental market. It's an easy all-in-one solution for the user that wants a decoding system that's easily portable or remotable and who doesn't want to get involved in setting up and integrating the decoder/software and the computer.

When I'm rich I'll have one or two of these knocking around my radio room, I'm sure...

Wavecom's W51 series is available to qualified buyers from Grove Enterprises for \$7795 (1-800-438-8155; <http://www.grove-ent.com>). A pager-blocked version is available for legal import into the U.S. For more information contact Wavecom Elektronik, Hammerstr. 8, CH-8180 Bülach, Switzerland; info@wavecom.ch

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Outer Limits continued from page 59

- WHGW-** Normally relays of radio drama programs produced by others, mostly for licensed radio stations. (whgw6925@myway.com)
- WHYP-** The James Brownard memorial pirate station claims to broadcast from North East, PA, just like Brownard did on his licensed version of the station. Rock, comedy, and pirate advocacy. (Providence)
- WKRP-** Another classic pirate that has returned with a rock music format. (none known)
- WMPR-** Techno rock music sometimes supplemented by seasonal fare. (None)
- WSPY-** Their spy numbers transmissions were supplemented by Christmas music around the holidays. Who says that spies don't observe holidays? (None)
- XB37-** A new one with an unusual call sign, sometimes given in Morse code. Their shows so far have been a mix of old radio, TV, and movie audio, mixed with parody ads. (xb37@netscape.net)

❖ QSLing Pirates

Reception reports to pirate stations require three first class stamps for USA maildrops or \$2 US to foreign locations, especially in Europe where the value of the US dollar is plunging rapidly. The cash defrays postage for mail forwarding and a souvenir QSL to your mailbox. Letters go to these addresses, identified above in parentheses: PO Box 1, Belfast, NY 14895; PO Box 69, Elkhorn, NE 68022; PO Box 28413, Providence, RI 02908; Casilla 259, Santiago 14, Chile; and PO Box 293, Merlin, Ontario N0P 1W0.

Some pirates prefer e-mail, bulletin logs or internet web site reports instead of snail mail correspondence. The best bulletins for submitting pirate loggings with a hope that pirates might QSL the logs remain *The ACE* (\$2 US for sample copies via the Belfast address above) and the e-mailed *Free Radio Weekly newsletter*, still free to contributors via niel@ican.net. The *Free Radio Network* web site, another outstanding source of content about pirate radio, is found at <http://www.frn.net>, and a few pirates will occasionally QSL a report left on the FRN.

❖ Thanks

Your loggings and news about unlicensed broadcasting stations are always welcome via 7540 Highway 64 W, Brasstown, NC 28902, or via the e-mail address atop the column. We thank this month's valuable contributors: Lee Banner, Fishkill, NY; Peter Beck, Germany; Artie Bigley, Columbus, OH; Ross Comeau, Andover, MA; Ed Cummings; John Figliozzi, Halfmoon, NY; Harold Frogde, Midland, MI; David Guertzki, Caronport, Saskatchewan; William T. Hassig, Mt. Prospect, IL; Harry Helms, Wimberly, TX; Ed Kusalik, Edmonton, Alberta; Chris Lobdell, Stoneham, MA; Ben Loveless, Bloomfield, MI; Greg Majewski, Oakdale, CT; Larry Magne, Penn's Park, PA; Bill McClintock, Wellington, OH; Mark Morgan, Cincinnati, OH; Pancho Villa, Upstate NY; Adrian Peterson, Indianapolis, IN; Lee Reynolds, Lempster, NH; Martin Schoech, Eisenach, Germany; John Sedlacek, Omaha, NE; Larry Van Horn, Brasstown, NC; Richard Weil, St. Paul, MN; Niel Wolfish, Toronto, Ontario; Mike Wolfson, Ashland, OH; and Joe Wood, Greenback, TN.