West Mountain Radio RIGblaster Advantage

By Larry Van Horn N5FPW

As an active ham for many years now, I have observed that one segment of our radio hobby is growing faster than any other – digital modes operation. Interest in amateur radio digital communications has been a rapid rise since the first sound card digital mode software was released back in 2000.

Today, thanks to digital modes, even hams who live in homes that have restrictions on outdoor antennas can use low power and compromised antennas to get on the air.

If you want to get in on the action and add digital capability in your ham shack you will need five items to get on the air – antenna, transceiver, computer, digital mode software and a sound card hardware interface.

If you are like most hams, you already own most of the items mentioned above. The two that usually aren't in an active ham shack is software and a sound card interface. Since this is a review of a hardware interface I won't discuss the dozens of software packages available for the various digital modes. You can learn more about many of the various software packages in current use on the West Mountain Radio website at **http://www.westmountainradio.com/content.php?page=links**. That leaves the hardware interface. It is the one item that brings all the other station components together to get you on the air using sound card digital modes.

At a minimum, a hardware interface has only one job to do – let the computer toggle the radio between transmit and receive. Many amateurs build their own simple interfaces that provide the aforementioned switching capability and add in audio isolation. This is fine for some, but there are a lot more features available to the amateur from commercially produced sound card interfaces.

The leader in this field is West Mountain Radio. West Mountain Radio has been making their famous RIGblaster interfaces almost since the day hams began using sound cards to create new digital modes. But it's only been in the last couple of years that they introduced an interface with a built-in sound device – the RIGblaster Advantage.

❖ What's in the Box?

In addition to the interface box, the RIGblaster Advantage kit includes all the items you need to get up and running including: one 6-foot, 1/8-inch audio cable; one 3-foot, 8-pin screw-on custom microphone cable; four instant setup connectors (ISC); USB cable; DVD with drivers and sound card software, printed owner's manual; and an accessory kit that consists of eight white jumpers and five blue shunt jumpers.

❖ RIGblaster Advantage Capabilities

The RIGblaster Advantage features a simplified PC interface and expanded rig control radio compatibility, accomplished without compromising the functionality and flexibility that the RIGblaster products are known for. This new addition to the West Mountain Radio product line incorporates several user requested enhancements not seen in previous interface units.

- Internal sound card generates audio completely independently from PC's sound card
- Single plug-and-play USB cable connection to PC for audio, rig control and power – no separate audio/rig control cables or power supply needed
- Automatically mutes microphone audio while transmitting digital modes
- Rig control interface for CAT/CI-V as well as RS232 through a DB9 port
- Front panel mounted transmit power level, receive audio level and VOX delay adjustment knobs
- Includes Instant Setup Connectors and cables for microphone configuration
- High speed (50 wpm) CW keying output for keyboard CW and RTTY software

The Advantage is capable of running the following software modes/operations: PSK31, WinMOR HF-Email (WL2K), MFSK16, ALE, MT63, Hellschreiber , SSTV, digital SSTV, RTTY AFSK, RTTY FSK, PACKET 300 and 1200 baud AX25, APRS with packet sound card software, MCW/CW transmit and receive, contest voice keying, WSJT FSK441 high speed FSK meteor scatter, WSJT JT65 extreme weak signal tropo and EME, FM repeater announcements, automatic and unattended, EchoLink® Internet radio linking with the EchoLink system, simplex or duplex repeater control with EchoStation, digital voice over SSB bandwidth on HF, transmit speech processing: EQ and compression, computer RIG control, and DX beacon monitoring.

One of the big reasons the Advantage was an important addition in my shack was the built-in sound card. This feature eliminates the need to reconfigure your computer's sound card audio levels for digital mode operation. When using the Microsoft Windows® operating system you manually change the volume to the levels that are comfortable for you when watching videos, playing music, etc. If you are using the same computer for ham operations you will have to flip these audio levels back to the proper settings for the various digital modes and bands you want to use. This can be very frustrating and all this reconfiguring can cause errors and accidental emissions over the air. You surely do not want "You have mail!" being broadcast in the digital bands every time new email arrives on your computer.

With the Advantage sound card interface you set it and forget it! It frees the computer's existing sound card to generate system sounds, music etc. without danger of unintentional transmission. The front panel controls for transmit level and receive level are much better solutions than hunting for the computer's sound card sliders in the Windows audio mixer interface. With the volume levels located on the front of the interface I can quickly change the microphone gain or headphone volume without calling up the Windows mixer control.

Phone and digital operations with this interface are a snap. With the RIGblaster Advantage, you simply plug your microphone into the interface and connect the interface to the radio microphone jack. The interface switches between the microphone and the internal sound device automatically.

❖ Computer Interface

Interfacing that unit with the computer and the rig was a snap using the supplied plug-and-play USB cable which provides positive PTT, CW/FSK keying, CAT/CI-V rig control and sound card. Gone are the days of a bunch of cables behind the rigs to connect everything up. The Advantage uses Microsoft certified USB drivers and they are automatically installed from the Windows update function. Another benefit of this type of installation is that the unit is powered through USB cable, no wall supply needed

❖ Compatible with All Manufacturers' Radios

The Advantage uses pre-wired microphone jumper blocks known as Instant Setup Connectors (ISC) that enable users to match microphone connector wiring schemes without having to refer to wiring diagrams. Six ISCs are provided (three "Round Metal") and three "RJ45 Modular") to cover the most popular radios – Icom, Yaesu, Kenwood, JRC, SGC and Elecraft.

The supplied cables and ISCs allow me to use the unit on any of my rigs. It's a matter of moving one cable and plugging in a different ISC, if needed.

If you own an older ham transceiver, jumpers are provided so that they can be used as well. This interface works with any radio that has an eight pin, round, screw-on microphone connector or RJ45 modular connector. If you have a radio with an RJ25, six-wire microphone connector you'll need an optional FT100 style six-wire modular microphone cable. The unit will also interface with any radio with a four-pin round microphone connector with the optional four-pin microphone cable.

❖ Built-in Rig Control

If you want to control your rig through your digital mode software (i.e. Fldigit, Ham Radio Deluxe, etc.), the Advantage has CAT/CI-V and DB9 rig control interface functions built in. West Mountain has custom CAT/CI-V cables available as accessories if the cable package included with the interface doesn't do the trick.

❖ True Keyed CW/FSK

If you are interested in true CW/FSK keying, the Advantage can do this too using relay switching via a dedicated jack on the back of the Advantage. There is a caveat in this regard that not all transceivers are capable of FSK RTTY. An undocumented feature, that ought to be in the manual, allows full break-in (QSK) CW from the keyboard as effectively as from the paddles.

❖ Advantage Microphone / Keying/Audio Flexibility

Some more interesting features that the Advantage has include:

• RTS, Footswitch or VOX PTT keying circuit
• Front panel mounted transmit and receive audio level knobs make it easy to adjust transmit/receive levels on the fly without having to make changes in software sound levels.
• No extra manual switches needed, includes DPDT relay for true automatic operation unlike other sound card interfaces.
• Simpler operation than the other brands, you never have to remember to push un-needed switches to make your station work.
• Rear panel RCA PTT-switch/foot-switch jack enables the PTT override and interrupt.
• Properly matched and RF suppressed audio for your radio.
• Fully isolated transmit audio and PTT keying, unlike other interfaces that have little or no isolation.
• Positive and fully automatic PTT control supports for almost 100 ham software programs.

❖ Bottom Line

I have been a long time West Mountain Radio RIGblaster user. My first digital interface was the original RIGblaster released back in 2000. Recently when I decided I wanted an interface for my Icom IC-728 secondary rig I purchased the Advantage.

I found the Advantage easy to set up, install and operate. This is my fourth RIGblaster and seventh digital interface and the setup installation of this unit was the easiest of any I have ever

used. When I put the Advantage on the air, I was operating on JT-65 using the JT65-HF software package within minutes of un-boxing the unit.

I didn't even have to put the installation DVD in the computer during this installation. West Mountain paid Microsoft for the registered drivers the unit requires which are available via the Windows update. The longest part of the install was the wait for the driver download via the Internet. This unit represents plug and play at its best.

I have no extraneous RF in shack and all my digital mode contacts have noticed no quality issues. The audio in and out is impeccable and cleaner than the audio coming from my computer sound card.

The manual is excellent and well written, emphasizing a straight-forward set up and install. The manual is very detailed and does a very good job explaining setup for several of the more popular digital software packages that that available for ham radio use. A PDF version of the manual is also available for download from the company website.

The Advantage is superbly constructed, has silky smooth transmit/receive/VOX controls on the front of the unit and a small footprint. It is easy to swap around with other rigs (i.e. such you might do during Field Day operations).

The best part of owning a West Mountain Radio product is the superior customer service you receive from the company's technical staff if you hit a brick wall. I had a couple of minor questions regarding this unit and within a couple of minutes of contacting tech support, Sholto Fisher

K7TMG, I was able to receive service that was nothing short of excellent. Their support staff is as good as any I have ever dealt with.

Bottom line, if you want to get in on the ham radio digital revolution and want a quality product to interface your computer to the rig, there is nothing better in today's marketplace than the RIGblaster Advantage.

Manufacturer: West Mountain Radio, 1020 Spring City Drive, Waukesha, Wisconsin 53186. Telephone: 262-522-6503, Website for more information and to order: **www.westmountain-radio.com/mtadv**. RIGblaster Advantage retails for $200 and when you contact West Mountain be sure to tell them *MT* sent you.

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