West Mountain Radio RIGblaster Rig-to-Sound-Card Interface

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The back side of your transceiver can be a very scary place. Typically, it's filled with jacks of various types. Not all of these connectors will necessarily be immediately recognizable without reference to the owner's manual—and just where *did* you put that sucker anyway?

Okay, here's the thing. You have heard all about PSK31 or your buddy across town just introduced you to the wonders of slow-scan TV or you're just dying to try your hand …uh, fingers… at RTTY because you've found out that's where there's often the least competition to work the major DXpeditions. Or maybe you'd like to try out a software-based voice keyer program to save your golden throat during the next SSB contest.

So, all you need is your sound-card-equipped PC, a few quick connections for audio between your radio and the computer, and *voilá!*

Then you encountered the DIN connector on the rear apron of your rig!

To the rescue comes RIGblaster by West Mountain Radio. This is a sort of enhanced break-out box that lets you quickly and easily access the audio and push-to-talk lines of your transceiver so that you can interface your radio and PC sound card and take advantage of all those sound card-based aps without ever having to even *look* at an odd connector with nonsensical pin number-

ing—much less try to solder wires to it.

The RIGblaster goes between your radio's front-panel microphone connector and your mike, so there's no need to go over to the "dark side," Luke Skywalker—except, perhaps, to pick off transceiver audio from the external speaker jack, although on some radios, even that is right there on the front. The whole point is to simplify the interconnection process and let you get on with the business of enjoying Amateur Radio digital modes.

Another big advantage of the RIGblaster concept is that you can, in essence, move the connections from one radio to another—although this might require some reconfiguration if the transceivers are by different manufacturers.

What You Get

The RIGblaster itself is a little dark-gray box with a mike connector, a couple of switches and two LED indicators on the front panel and five connectors and a **LEVEL ADJ** control on the rear apron.

Allow me to interject here that the RIGblaster is a solid, well-made station accessory. The sturdy little shell is aluminum with a rugged finish and silk-screened labels. Inside, the PC board, connectors and components appear to be top quality. I considered this a good sign.

There are versions for different radios. The M8 is compatible with most Yaesu, ICOM, Kenwood, Kachina and Alinco transceivers. In addition, there's a RJ45 version that works with the popular ICOM IC-706, the Yaesu FT-900 and several of the FM mobile radios, and an M4 version for Ten-Tec and older Kenwood rigs.

The RIGblaster arrives with the top cover unsecured and the self-tapping screws still in their plastic bag. This is because you have to install the internal jump-

ers before you operate. More on that in a bit.

Also in the box is a 36-inch long microphone cable that goes between the RIGblaster and your transceiver. Depending on the model you ordered, the cable will have the appropriate front-panel mike plug on the end that attaches to your rig. The package also includes four adhesive pads or stick-on rubber feet—your call—for the bottom of the box. The adhesive pads come in handy if you plan to stick the box onto your radio or, perhaps, under an operating desk shelf, in which case they could go on the top of the box instead.

The RIGblaster comes with a little nine-page (counting the warranty) *Owner's Manual*. While mostly concise and to-the-point, the manual provided all of the necessary "get started" info as well as a fine troubleshooting page and great diagrams.

Finally, there's a 12-V wall cube power supply rated at 300 mA (the box does contain some active devices and a couple of relays). Personally, I can't stand "wall wart" power supplies, although they seem to be ubiquitous these days with amateur accessories. There's no reason why you shouldn't be able to power this unit from your station's power supply to keep down the clutter at the ac outlet.

Finally, West Mountain Radio supplies a CD-ROM software sampler. Most of the software on the disk appears to be of the demonstration variety, and, once installed, not all of it wanted to function on the laptop I was using. Thoughtfully, the manufacturer supplies discount coupons for $8 off *JVComm32* by DK8JV and 20% off *VoiceKey Express* to RIGblaster purchasers.

What You Need to Supply

The RIGblaster package is not complete—you'll need a few things to get started. Most important are audio cables to and from the box and your rig to the PC's sound card connectors. West Mountain Radio recommends high-quality, shielded stereo (ie, three-wire, tip, ring and sleeve) connecting cables (these are available from West Mountain as optional accessories). To go between the box and the PC, you'll need one with 3.5 mm mini phone plugs on each end. For the audio connection from your rig to the PC's sound card input—which does not pass through the RIGblaster—the connector requirements will vary. In my case, I was able to make use of the recorder output connection from the external Yaesu speaker that's connected to my Kenwood TS-850S/AT (yeah, I know, but the speaker was a gift, and it works great). It had a mono 3.5 mm plug on the other end, and the sound card on the older Dell laptop I was using seemed to have no problems with it. As the *Owner's Manual* points out, in some situa-

tions you might need a Y connector to keep your external speaker connected when using your transceiver's speaker jack to supply audio to the PC sound card. Some transceivers have line-level outputs, but this might require digging into your owner's manual and—horror of horrors—soldering to a DIN plug or some other connector. Best to play it safe and simple.

The other thing you'll need is a serial cable (also available from West Mountain Radio). The RIGblaster has a DB25 RS232 connector on the rear apron. To take advantage of serial port PTT control, you'll need a cable with a male DB25 on one end and the appropriate connector to mate with your computer's serial port on the other.

Setting It Up

Probably the most difficult part of making the RIGblaster work is setting the *&%$# jumpers. Since this is a family publication, we have to say "*&%$#" instead of the real thing, just as Sarge does in the *Beetle Bailey* comic strip, when we're speaking about tiny jumpers and, of course, DIN connectors.

Really, though, I'm exaggerating—a little. If your eyes are young and bright, these jumpers won't present an obstacle to getting your RIGblaster up and running quickly. If you're on the "dark side" of middle age like me, you might want to borrow some of those binocular magnifiers that fit on your head like a card dealer's visor. The jumper wires aren't so bad, but the connecting pins on the RIGblaster's PC board are teeny tiny and closely spaced. Then there are the jumper plugs. These are so small, I missed them altogether initially. Each one is about the size of a fat grain of rice. If you're at all ham-fisted (no pun intended here, friends), you might want to let your wife or one of the kids install these. Better yet, use a pair of tweezers from the wife's manicure or makeup kit. By the way, for maximum effect, leave the borrowed tweezers somewhere in the shack—preferably where they're not easily found—after you're done using them.

The manual has individual diagrams and a list of pin connections for each radio, so it was pretty easy to determine which jumper wire or plug went on what set of teeny tiny pins. Thanks to West Mountain Radio for the clear directions in this regard. The only possible improvement might be to render the diagrams in color so it would be easier to trace the wires, making things less error-prone. On the other hand, I managed to do it (eventually), and a color manual probably would mean West Mountain Radio would have to jack up the price of the RIGblaster accordingly.

Making the other necessary connections is a breeze. You hook up your stereo audio output cable from your sound card's output jack to the **AUDIO IN** jack on the back of the RIGblaster. (There's an **AUDIO OUT** jack in parallel with the input jack, so you can listen to this audio with a pair of earphones if you wish.) You connect the RJ45 end of the mike cable to the box and the other end to your mike jack and, if needed, plug your microphone into the jack on the front panel of the RIGblaster. Finally, you plug in the power connector from the wall wart or other 12 V dc power source and you're almost ready to rock 'n' roll.

By the way, West Mountain Radio urges you to unplug the ac power to your computer and to your radio and the RIGblaster when you're setting things up. This is wise advice to avoid damaging your serial port by connecting units while they're powered up.

RIGblasting!

Once all the jumpers are in place, connections made and everything's checked over carefully, you can power things up and check it out with some real software. But first, you'll want to take all the connections back off the RIGblaster and install the cover with the four supplied self-threading screws, because we've been watching you and we know you left that cover in the box! Seriously, before actually using the RIGblaster, you should install the cover once you've determined all the jumpers are in place. This will help provide any necessary shielding to keep RF out of where it doesn't belong. Running the unit with the cover off also can lead to some ac hum pickup on the audio lines. I know, because I tried leaving the cover off too while testing the unit.

While the manufacturer has provided some sample software, we'd advise using a program you've already got installed and configured on your PC, if possible. In this case, we had *DigiPan* on the machine for PSK31, and we knew beforehand that it was working fine. (This PSK31 program, and several others, is included on the CD.) Knowing this helps to narrow down the search for solutions if problems arise.

One front-panel switch on the RIGblaster lets you select right or left-channel audio or both from your sound card. I left the unit in the "both" setting, but some applications let you process receive signals on one channel while transmitting. The **AUTO/VOX** switch determines how the RIGblaster will control your transceiver. In the **VOX** position, the computer's audio should trip the transceiver's VOX circuit—assuming it's properly set up. In the **AUTO** position, the software controls the PTT. Pushing the microphone's PTT button in either mode will put your transceiver into transmit mode, overriding the box setting.

The **DIGITAL** LED indicator tells when sound card audio is connected in either the VOX or auto mode, and it shows PTT con-