

Furniture Tips & PRO-96 Comments

This column describes the shelving arrangements for my basement radio monitoring post and test bench and shows how to construct a simple portable scanner stand from wood scraps.

Reader Greg Guise uses scanners professionally and tells how his Radio Shack PRO-96 performs in the RF dense Washington, DC, area.

Organizing the Radios at Home

I spent several hours while in graduate school cutting rectangular holes in rack panels for the university club radio station. The club already owned blank rack panels so cost wasn't a consideration. It took a lot of labor and a few skinned knuckles, but the radios and accessories looked great mounted in the panels.

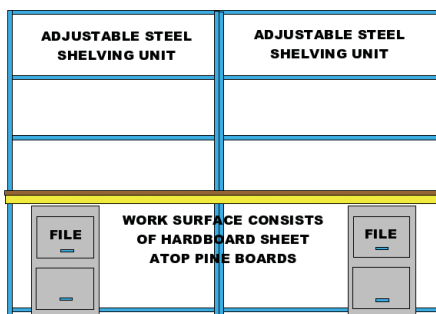
While a rack panel facade is attractive, it is not a good choice for my home radio station. Equipment at the school club station changed infrequently so new panels were rarely needed. Blank rack panels are expensive and cutting the holes for each piece of equipment is time consuming, especially if using hand tools.

My radio gear changes every so often. I enjoy rearranging the equipment frequently, especially when testing new models. I prefer the flexibility and simplicity afforded by keeping the equipment on metal shelves without the encumbrance of a metal rack panel facade.

The radios and accessories sit in adjustable steel shelving units which are open on all four sides. I bought the shelving surplus and it is industrial grade – strong enough to support lots of gear. A depth of 18 or more inches accommodates larger radios and provides space behind them to route cables.

The shelving units assemble akin to the old Gilbert Erector sets popular in the 1950s and 1960s. Bolting adjacent shelving units to each other aligns them and makes them sturdier.

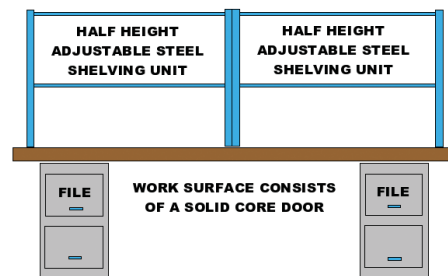
As shown in the accompanying figure, my



home made radio desk consists of two shallow 2-drawer file cabinets supporting a pair of 2 by 10 planks fastened side by side. A layer of 1/4 inch hard board nailed to the top provides a hard work surface for writing. Two coats of Krylon clear lacquer spray seal the hard board against moisture. Strips of 3/4 inch molding (not shown) guard the edges on 3 sides of the desk top, although the molding isn't essential.

The desk top is heavy enough to rest firmly atop the file cabinets without permanent attachment.

The other figure shows the home made test bench I use for equipment evaluation and repair. The shelves hold signal generators, audio analyzers, SINAD meters, CTCSS and DCS encoders, multimeters, etc.



I cut the rails from a full height shelving unit in half to yield two half height shelving units. They rest atop a solid core door, again supported by a pair of filing cabinets.

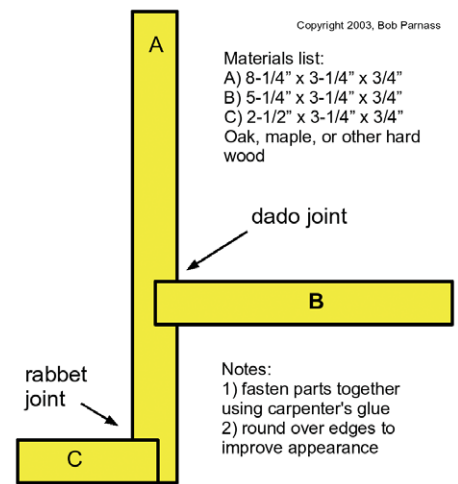
The radio monitor and test benches represent two different designs, but both are constructed of readily obtainable components. The radio monitor station arrangement is better suited to larger installations because you can employ several shelving units and are not constrained by the length of the door used for a desktop.

You can save money by shopping carefully. I bought all the steel shelving at an industrial surplus store. Two of the file cabinets were from a store fixture sale held when a large department store closed. I purchased the other two file cabinets from a used office furniture store.

Portable Radio Stand

Did you ever notice how unstable a hand held scanner is when stood up on end? They are especially wobbly when fitted with a larger antenna.

I use several home made scanner stands for my portable scanners at home. The stands tilt the scanner at an angle for easy viewing.



Copyright 2003, Bob Parnass

Materials list:

- A) 8-1/4" x 3-1/4" x 3/4"
 - B) 5-1/4" x 3-1/4" x 3/4"
 - C) 2-1/2" x 3-1/4" x 3/4"
- Oak, maple, or other hard wood

Notes:

- 1) fasten parts together using carpenter's glue
- 2) round over edges to improve appearance

PORTABLE SCANNER STAND

side view

Woodworking is one of my other hobbies so I built the stands from oak, maple, and walnut scraps instead of bending up a simple metal bookend to serve as a stand. I recycled some of the wood from the rails of an old discarded bed.

The stands are generally built by cutting 3-1/4" by 3/4" piece of wood into three pieces: 8-1/4", 5-1/4", and 2-1/2". I design stands large enough to hold my bigger radios, but you can change the sizes to suit your radios.

I cut the dado and rabbet slots in the wood by making repeated passes with a radial arm saw fitted with a common combination blade. You can make them using a dado blade or a router instead.

You don't need any screws or nails. Carpenter's glue holds the three pieces of wood together securely. Be



sure to clamp the pieces together firmly while the glue dries.

To give each stand a finished appearance, I rounded the edges using a router fitted with a round over bit.

◆ Radio Shack PRO-96

The following comments about the PRO-96 are from Greg Guise, an *MT* reader who uses a PRO-96, BC250d, and other radios professionally as a photojournalist for WUSA-TV. Thanks, Greg, for sharing your evaluation with other readers.

"Just read your fine review of the Radio Shack (GRE) Pro 96.

"... for some, like me, it is more than a hobby. The use of scanner and fixed channel radios allow me to at least be an ear-witness to the news. Few of us, unless embedded in Iraq or in the eye of Isabel (I was 40 miles East of the eye at landfall) have the luck of being an EYE witness to news.

"In the competitive world of big market and network news in Washington DC., good radios are a powerful tool for coverage.

"All this leads to this: The real world performance of these radios vary greatly from conditions in the lab and on the bench.

"Specifically, in side by side tests, using both the 'rubber duck' antenna as well as an 800 MHz 3 dB trunked mounted antenna, the Radio Shack unit outperforms the Uniden BC250d and BC785d most of the time.

"After a month of trial, the PRO-96 hears about 90 percent of transmissions. The Uniden pair about 70 percent. The Radio Shack [PRO-96], as best as I can tell (driving 3,000 miles/month) is somewhat more immune to Nextel and 850 MHz desense. This is true in both the analog and digital modes.

"The PRO-96 is substantially improved over the PRO-95 in the UHF T-band. (Prince Georges County).

"But the best feature is the digital AGC. This is especially noticeable on the new MP-DC 460 MHz digital system. This system has greatly varying audio levels. The PRO-96 outperforms the XTS 300 and 5000 issued to MPD staff (by their own ears).

"In banks with mixed mode operation: i.e. Montgomery, Md. Astro digital system mixed with analog PG fire, the Uniden radios often 'hang up' on the trunked control channel and do not scan the analog channels. The Radio Shack acquires the control channel faster than the Uniden.

"In the extremely high noise floor sections of the District of Columbia such as upper Wisconsin Avenue, the Uniden [models] seem to have better VHF High Band rejection. The Radio Shack [models are] a bit better on UHF 460 and 490 MHz.

"Neither have the RF rejection of my Spectra W-7; however, the Radio Shack comes close *unless* the desense is from a nearby A side cellular 868 - 880 MHz or one of the many Nextel sites."



◆ QSLing Pirates

Reception reports to pirate stations require three first class stamps for USA maildrops or \$2 US to foreign locations. 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 28413, Providence, RI 02908; PO Box 69, Elkhorn, NE 68022; PO Box 109, Blue Ridge Summit, PA 17214; and Box 159, Santiago 14, Chile. Some pirates prefer e-mail, bulletin logs or internet web site reports instead of snail mail correspondence. The best bulletins for sending pirate loggings with a hope that pirates might QSL them 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> on the internet.

◆ 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: John T. Arthur, Belfast, NY; Dave Balint, Wooster, OH; Scott R. Barbour Jr., Intervale, NH; Artie Bigley, Columbus, OH; Cachito, Santiago, Chile; Jerry Coatsworth, Merlin, Ontario; Ross Comeau, Andover, MA; Rich D'Angelo, Wyomissing, PA; Bill Finn, Philadelphia, PA; Harold Frodge, Midland, MI; William T. Hassig, Mount Prospect, IL; Harry Helms, Las Vegas, NV; Fred Kohlbrenner, Philadelphia, PA; Terry Kreuger, Clearwater, FL; Kraig Krist, Annandale, VA; Chris Lobdell, Stoneham, MA; Greg Majewski, Oakdale, CT; Larry Magne, Penn's Park, PA; Bill Matthews, Columbus, OH; Bill McClintock, Wellington, OH; Bill Montney, Lachine, MI; Mark Morgan, Cincinnati, OH; Adrian Peterson, Indianapolis, IN; Mike Prindle, New Suffolk, NY; Lee Reynolds, Lempster, NH; Don Ruokonen, Annapolis, MD; Robert Ross, London, Ontario; Martin Schoech, Merseburg, Germany; John Sedlacek, Omaha, NE; Doug Smith, Pleasant View, TN; Ronnie Stroup, Wooster, OH; Ed Walsh, AL; and Niel Wolfish, Toronto, Ontario.

Outer Limits continued from page 69

ern accent. (None, but some replies have resulted via the grasscutterrado@yahoo.com e-mail address)

Sycko Radio- By now this one is a veteran pirate station. But, the miscellaneous format on their shows remains difficult to characterize. The station name is pronounced Psycho. (None)

Take it Easy Radio- This veteran pirate took its name from an Eagles rock tune, but they play a variety of rock music, as well as seasonal tunes around holidays. (Uses takeiteasyradio@yahoo.com e-mail)

Undercover Radio- Dr. Benway, still "broadcasting from the middle of nowhere," now features poetry mixed with his rock tunes. (Merlin and undercoverradio@mail.com e-mail)

Voice of the Abnormal- The programming matches the station name on this one; it is liberally steamed in beer. (Elkhorn)

Voodoo Radio- Although this one is not a new pirate, its rock music is back on the pirate bands despite its very sporadic schedule. (Elkhorn)

Voice of Captain Ron Shortwave- Captain Ron's rock and comedy has become a staple on the North American pirate bands. (Uses Captainron6955@hotmail.com e-mail)

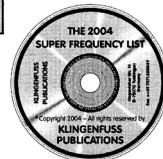
WHYP- The James Brownard's memorial station has been playing original airchecks of its licensed North East, PA inspiration. (Providence)

WMPR- Their techno rock "dance party" music was supplemented with holiday music at Christmas, but the techno rock remains their primary format. (None)

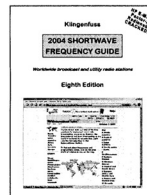
New books and CDs for worldwide radio! HF E-mail radionets and digital data decoding

2004 SUPER FREQUENCY LIST CD-ROM all broadcast and utility radio stations worldwide!

10,100 entries with latest schedules of all clandestine, domestic and international broadcasters on shortwave. 10,200 frequencies from our *2004 Utility Radio Guide*. 19,600 formerly active frequencies. All on one CD-ROM for PCs with Windows™. You can search for specific frequencies, countries, stations, languages, call signs, and times, and browse through all that data within milliseconds. It can't get faster and easier than this! • \$ 28 (worldwide seamail included)



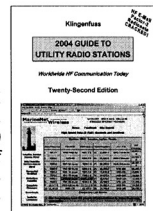
2004 SHORTWAVE FREQUENCY GUIDE



Simply the most up-to-date worldwide radio handbook available today. Really user-friendly and clearly arranged! Contains more than 20,000 entries with all broadcast and utility radio stations worldwide from our *2004 Super Frequency List on CD-ROM*, and a unique alphabetical list of broadcast stations. Two handbooks in one - at a sensational low price! 532 pages • \$ 40 (worldwide seamail included)

2004 GUIDE TO UTILITY RADIO STATIONS

Includes many HF E-mail digital data radionets that we have cracked! Here are the really fascinating radio services on SW: aero, diplo, maritime, meteo, military, police, press, telecom, and terrorists. 10,200 up-to-date frequencies from 0 to 30 MHz are listed, plus hundreds of new decoding screenshots, abbreviations, call signs, codes, explanations, meteo/NAVTEX/press schedules, modulation types, all Q and Z codes, and much more! 600 pages • \$ 50 (worldwide seamail included)



Special package price: CD-ROM + Shortwave Frequency Guide = \$ 57. For more package deals and a full list of our products see our website and catalogue: books, CDs, professional frequency databases. WAVECOM Digital Data Decoders = the # 1 worldwide: ask for details. Cracks Pactor-2 and its variants, plus 100+ other modes! Sample pages and colour screenshots can be viewed on www.klingenfuss.org. Payment can be made by AmEx, Eurocard, Mastercard. No cheques! Please ask for our free catalogue with recommendations from all over the world. We've been leading in this business for 35 years! ©

Klingenfuss Publications • Hagenloher Str. 14 • D-72070 Tuebingen • Germany
Fax +49 7071 600849 • Phone 62830 • info@klingenfuss.org • www.klingenfuss.org