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LOPs to Think About

Come aboard for a great surplus find.

Navy CW started out with its own operating style and furniture. Quite a while ago, I was looking for an old U.S. Navy shipboard CW operating table to possibly add to my ham shack. Having been a Navy radioman for 20 years, I'd stacked lots of stuff on top of these old tables. I thought it would be practical for stacking equipment while still allowing me the freedom to operate below the equipment.

Where to start? My first order of business was to research where one of these tables could be located. Since there are several Navy salvage yards around the world, it would not be easy to check the catalogs of each one every month until such a table appeared. The Internet provided no leads at all. The local library was no better.

Next choice was *QST*. Yep, I sent in a Stray looking for information from anyone about such a table. The day before I received my *QST* in Nevada, my phone rang with the first touch of information. A ham in Maine called me to tell me he might be able to get a copy of the U.S. Navy blueprints for me so I could have one built. Wow, what a break! It seems he had been a shipyard worker there in Maine and knew exactly what I was talking about. Within a week, a copy of the plans arrived. The official Radio Operating Desk Plans are now in my ham shack.

Within a week of *QST* hitting the western states, my E-mail was flooded with all kinds of offers of information about this desk. Sailors or former sailors all over the country were sending me E-mail, cards, and letters. Some told me about their experiences during various wars. Some sent pictures of Navy and Coast Guard operators either sending or copying code. It was like a floodgate had opened for about a month. The E-mail that topped it off came from San Diego, California. "I've got one of those LOPs (Local Operating Positions, as the Navy called them) that's been in my garage for 30 years. If you want it, come get it." Paydirt!

After a few E-mail exchanges, it was determined that this was exactly what I was looking for. In March 2000, I combined a business trip with a pickup of this great little desk.

The story, as I have it, goes like this. The desk was LOP #1 on the USS *Bunker Hill* CV-17, decommissioned in 1947. Apparently it had been acquired and moved to this garage to serve in his ham shack. Others I've

Photo A. *This is the condition the table was in upon arrival at its new home.*

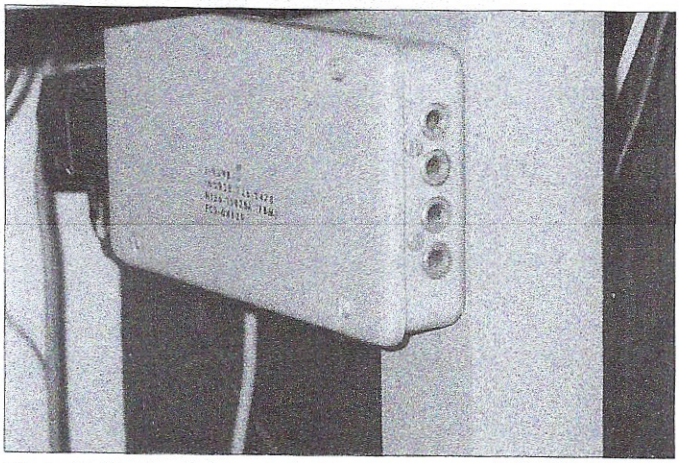

Photo B. *The headphone jack box is located on the right table leg.*

talked with tell me that this ship, although decommissioned, had been used as a test bed for various projects in San Diego for many years.

Nonetheless, the table ends up in my trailer and heads up interstate 15 to Las Vegas, Nevada, and its new home.

First stop is in the garage for clean-up and possibly to be refurbished. Seeing how it had been in a seaside community garage for 30 years, it had obvious green stuff growing on the drawer handles, and the paint on top would need to be replaced. The green linoleum, used for the desktop, needed to be cleaned or replaced, as it had tape residue and was covered with years of use. The wiring had to be checked and tested.

First I had to match the paint as closely to the original as possible. The Nevada desert obviously doesn't have a Navy supply store anywhere handy and I wanted to make sure the paint was exactly the same color. The solution was a simple trip to the local hardware store with one of the small shelves from the desk for them to match. They put the shelf under the spectrograph and within minutes we had a match.

Let's see, we have the desk, paint, electric drill with wire brush, spray painter, multimeter, paint remover, roll of plastic dropcloth, screwdriver, wrench, Pine Sol®, brown paper with masking tape, and a garage to hold it all during the project.

Next step is to clean it up to see what we are working with. Pine Sol the entire desk. Second, remove the top section from the desktop. With the two pieces separated, it will be easier to work with.

Working with the top section only, it was a matter of cleaning and scraping loose paint off. From the picture, **Photo A**, you can see the top has already lost some of its paint over the years. Having removed all the easy stuff, it was time for the paint remover for the very top shelf only. All the paint on the sides and supporting walls was left alone. Taking the top down to bare metal, prepping it, and then repainting it only took a couple of days. I painted the top section except for the back, which was in perfect condition (so I left it alone).

The lower desk portion looked like it was going to be a real job. The right side linoleum had some of the old cellulose tape remains imbedded into it. What to use? Well, when in doubt start with full strength Pine Sol and elbow

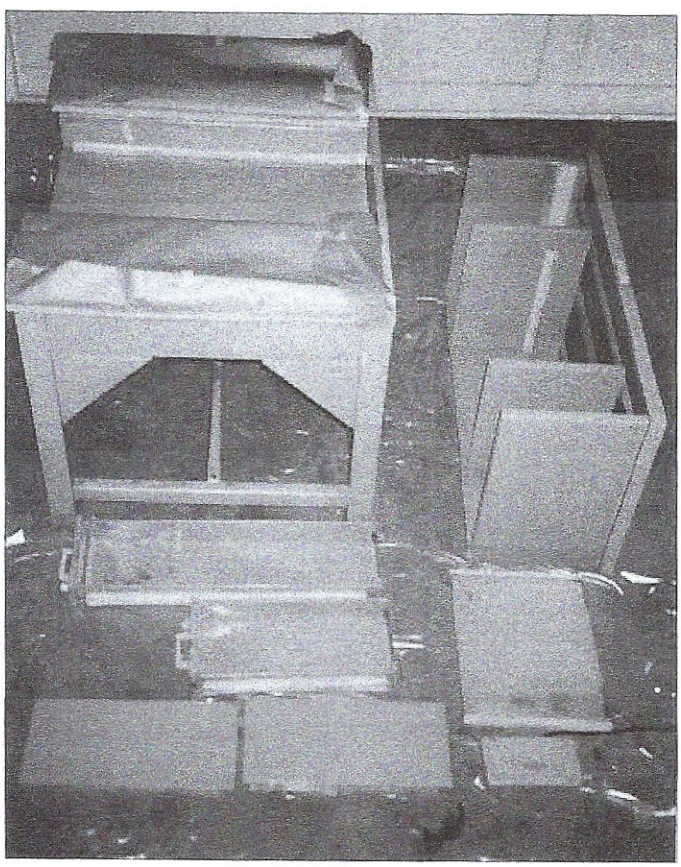

Photo C. *Table unassembled, taped, papered, and ready for painting.*

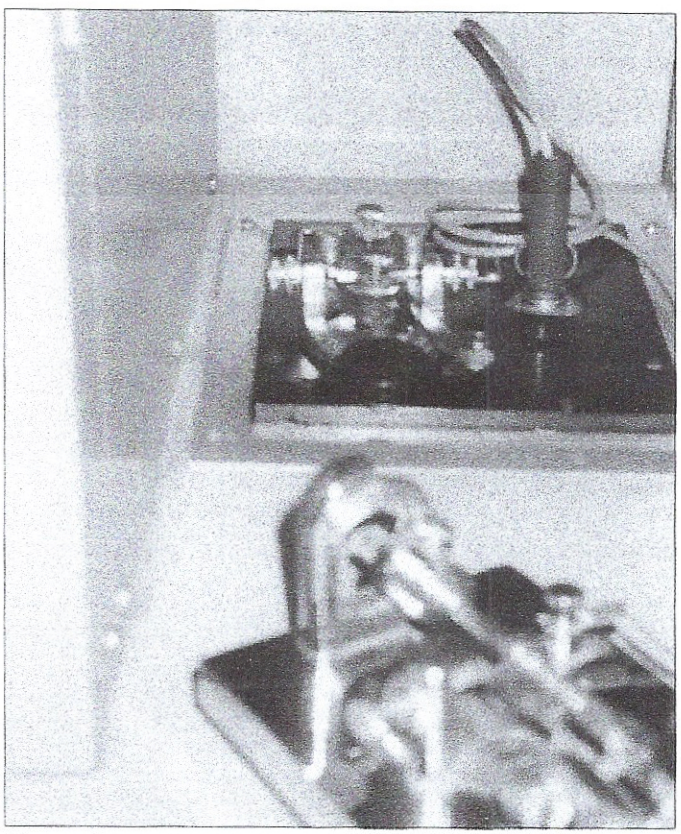

Photo D. *Reinstalled Bakelite control panel with USS* Mississinewa *straight key and bug plugged in.*

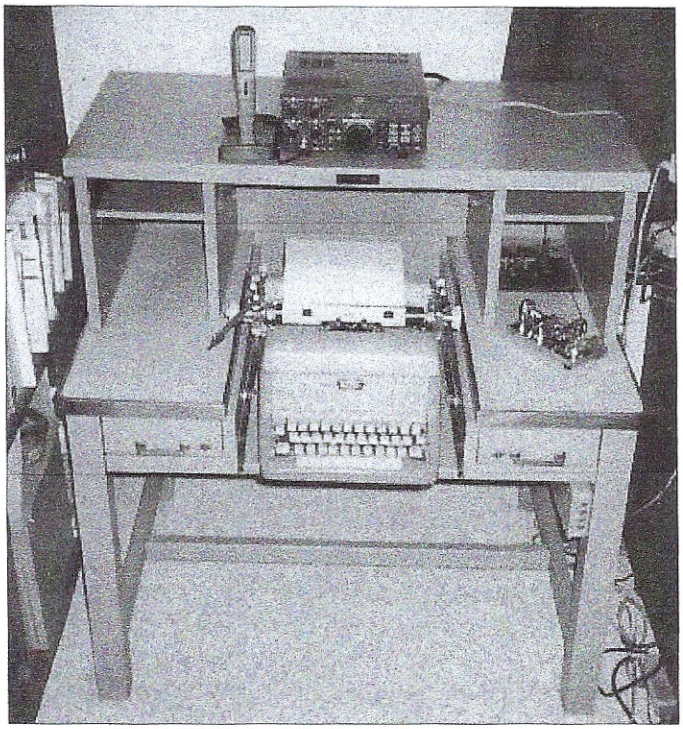

Photo E. *Finished table with equipment installed in the radio shack.*

grease. Hey, what do you know? It worked. Both sides were cleaned the same way. Sometimes the tougher stains had to have the Pine Sol on them for 30 minutes or so, but it worked.

The handles of the drawers, being a nice moldy green color, were simply wire brushed using the electric drill with an adapter. The green flew off the handles. Inside the drawers was just a matter of scraping paint to smooth out previous scratches. Original models had an ashtray built into the left drawer. This drawer did not have one. I believe it was there originally. This desk, being from an aircraft carrier, also did not have the eyebolts for the strap on the legs. The strap was used to hold the operator's chair in place. It went from one leg, behind the chair and back to the leg on the other side. During high seas this kept the operator in front of the desk. The strap was a required item on destroyers and other ships accustomed to rocking and rolling at sea. The only other option was for the operators to wrap their legs around the legs of the desk to keep from moving.

After all the prep work was done, it was time to paint. As shown in **Photo C**, you can see paper and masking tape in place, dropcloth under every piece of equipment, spray gun in hand. Paint on the first coat was finished in 30 minutes. Then, next day, another 30 minutes of painting and it was nearly completed.

The Bakelite electrical panel/key mount (**Photo D**), which was removed prior to painting, was verified to be in working order, with the exception of the On/Off switch. This was not required, so it was not rewired. It was used to remove high voltages from the key when not in use. Clean the Bakelite with good ol' Pine Sol. Use contact cleaner to shine up the electrical working parts and the speed key jack. Headphone jacks mounted on the leg of the desk (**Photo B**), worked perfectly. Interesting to note: Upon opening the headphone jack box the insides looked brand-new. The only addition to the wiring was a plug to fit into the back of the radio speaker jack. It was necessary to replace the straight key that was not the original, with a key from the USS *Mississinewa,* AO-144. In 1970, while I served on the USS *Mississinewa,* the CW desks in radio two, the transmitter room, were being removed and thrown over the side into the Mediterranean. The First Class Radioman in charge of the project asked me if I wanted the key. Of course I did. I was going to get my ham license someday. Now the key has a good home.

After finishing the painting and wiring, I moved the two pieces of the desk to an upstairs ham shack. The desk was too large to fit through the door in one piece. We had to turn the bottom section on its side to fit through the door. Once inside the shack, it was reassembled using all necessary hardware (**Photo E**). The miracle came

when every nut, bolt, and screw was back in place, with no extras and no holes left unfilled.

You'll note only one radio in the picture at this time. That is because it was the only gray radio in the shack. The bug in the picture is from 1979 and has not seen naval service. I also use a 1964 Champion the Navy gave me, complete with Navy stock number imprinted on the base.

The typewriter is a communication mill, all capital letters. It was acquired using the same research method. A Stray in *QST* produced another flood of E-mail, letters, and cards. I had mills offered to me for fair amounts of money all the way down to this one — free, just pay the shipping from Florida. To my surprise, this Royal is the same model I used on active duty in the '60s aboard ship. It is sitting on a sliding shelf. This sliding shelf allows the operator to pull it to him for ease of use, or push it all the way to the back. With the mill pushed all the way to the back, the operator could pull down a folded cover to make a small, flat desktop in the front. I do not have this cover, yet. The slots that hold the shelf needed to be cleaned out and sprayed with a light lubricant. To keep the mill shelf from coming completely out of the table, there are two lever locks located 6-1/2 inches in from the front edge on either side that contact the stops mounted on the rear of the shelf.

Although this desk is over 50 years old, it came back to life very easily. There is one other type of CW table used by the Navy that allows the mill to disappear into a well area, giving the operator a flat desktop working surface all the way to the back of table. Other changes to today's table are that the top section is not installed and the key is a covered, explosion-proof design. This type was still in use in the Navy as of 1988, when I left the service. Either table would make a nice addition to the ham shack.

This unit is of aluminum, but you could construct one of wood also. Aluminum was used to keep the weight down and because it is a nonburnable substance.

The idea of mounting the headphone jacks on the leg of the table is more convenient than having a cable running across the top of the desk you are using to copy code. Yes, it works well for listening to SSB nets, and copying traffic as well. Using multiple jacks allows for friends to listen in without disturbing the rest of the nonhams in the house. A multijack box is a good idea for Field Day when using another person for logging.

The key being mounted in the cubbyhole allows the operator to have the entire forearm on the desktop to reduce fatigue. It proved to be useful on SKN 2000. There is enough room to slide the bug into the cubbyhole but the forearm is not complete up on the desktop. Bug operators are not as concerned with the glass arm complex.

This has been one of those projects

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Can't remember, huh?! Guess a copy of the order would be a good thing to put in the folder should you need parts later on. It saves a lot of time not having to do the research all over again.

As the project progresses, you'll find that changes to the parts are sometimes necessary, either to accommodate a different frequency range, to include another added circuit, etc. Include a page in the binder for "as built" notes. The changes entered, along with any needed formula data, can prove invaluable for future reference. Difficulties encountered and the remedy are useful.

On one page I always describe the finish used on the cabinet and/or chassis. Sounds somewhat trite, but I have found it to be one of the most beneficial items in the folder. The reasons for this are because of the variations between manufacturers and types of primer and paint used, and their names and colors. There can also be a huge difference, depending on which manufacturer you use, between the types of clear spray used to protectively coat the finished panel and its lettering. Not all paints from one manufacturer will accept the clear protective coating of another. The products can interact, making a perfect front panel into a metal plate covered with a soggy, sticky mess. Then you not only get to clean the mess, but you get to repaint and letter the panel again. By logging the primer and color, I can match the color scheme *exactly* when I decide to build the matching power supply and speaker at some later date. Black from the XYZ company isn't exactly like black from the ABC company.

Now your project is complete! You can add any information you desire to Your Own Owner's Manual.

Something nice I've seen are pictures taken during the construction phase. Digital cameras are very useful for this. The pictures can be printed on regular paper and stored in the binder as a "historical document." Visitors to the shack will undoubtedly be impressed by your finished work, and the Owner's Manual allows them to appreciate your efforts during construction.

WARNING! This manual does have the capability of becoming reproductive. One project leads to another, and to another, etc., etc. Plan for future endeavors by leaving enough room in the binder for the next construction item. Dividing the binder into sections, e.g., Receivers, Transceivers, Transmitters, Power Supplies, as your building adventures continue, is a good idea. The binder becomes a history of your building efforts.

Once again, congratulations on your accomplishment! 73

Weather Sat Tracking is Awesome!

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NASA engineers settling some technical point over a cup of coffee.

On the downside however, a number of parents, for some reason, just don't seem to "get it." I believe that perhaps too many of today's activities — such as this project — are just put in a mental overload garbage pile with all the Internet, computer games, and other things of mystery, with no actual effort to try to understand. The concept that there is no "magical" Internet connection and an antenna pointing at the sky seem to be meaningless. A demo was put on at one school open day with only minor interest from the visiting parents, although the roaming kids wouldn't stay away. One parent was even worried that we wouldn't be able to see the satellite through the overcast! There must be a message there somewhere.

All in all, it has been a wonderful experience for me. I started out not knowing what would be possible with the first group of Year 6 students around 11 or 12 years old, but the last group was the youngest yet, a combined class of Year 3/4 at 8 or 9 years old. The photos are of this younger group and are from Glenorie Public School here north of Sydney.

Although this project was not directly linked to amateur radio, there were plenty of opportunities to explain the hobby. I usually have a handheld with me, and after answering the usual question, "What kind of CB is that?", the door is open to talk about why amateur radio is different. I guarantee that any amateur will find volunteer technical projects such as this a lot more satisfying than any paid job. Primary school students need ham volunteers with their practical, hands-on way of making high-tech things happen. My very first class will be of university age next year. I wonder if our earlier projects will have any impact on their future ... 73

Direct-Mount "J" Antenna for 440 MHz HTs

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rotating collar, and you probably will need to cement the two together. E-6000 clear adhesive works fine. This antenna is not difficult to build, but it does require care and neatness in construction. To duplicate the antenna, just be sure you do in fact do a duplicate and don't deviate. For example, on the coax assembly, don't substitute a different kind or type of coax or alter the specified dimensions.

In doing your final trimming, you will find that the length of the matching section has a greater effect on the resonant frequency of the system than does the length of the radiating element. Plug a small UHF SWR meter (such as Radio Shack #940-0866) directly into the transceiver antenna socket. Plug the antenna PL-259 into the SWR meter without any intervening coax, and use the fewest adapters possible. Obviously, the antenna should be inside the PVC housing while making SWR meter readings.

I have built more than a dozen of these antennas, and an SWR of 1.2:1 or less across the voice-repeater band from 442 to 450 MHz is typical. Outside the band the SWR rises rather rapidly, reaching 1.5:1 at about 439 MHz and 453 MHz. 73

LOPs to Think About

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that provided great satisfaction upon completion. After completing this project I was thinking how it might be of use to the computer hams of today.

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LOPs to Think About

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Currently I have a computer monitor sitting next to the radio with the mouse next to the CW key. With the mill removed the keyboard will fit across the opening and sit on the linoleum desktops. The slide-out shelf below the keyboard makes a good place for the log or note-taking. The naval engineers of 50 years ago didn't know about computers, but it works.

In the July 2001 *QST,* page 119, there is another call for one of these tables, and other USN equipment, by the crew restoring LST-325. I hope they get the overwhelming response that I received. I must say thank-you to all of you for offering great stories, pictures, and especially you two who donated the equipment. You all know who you are.

Does this desk get any use? You bet! Most recently it was used for Straight Key Night 2001. It sees regular service around the HF QRP frequencies, too. 73

QRP Internet Computing

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baud modem can put on the screen. Shell account access with a 33.6kbs modem is awesome.

A LINUX shell account allows you to FTP, Telnet, and — if you wish to learn a few more LINUX commands — get into the hidden byways of the Internet easier than with most popular graphical browsers at national ISPs. You can even teach yourself LINUX from the comfort of your old DOS computer.

E-mail, and reading the Internet's amateur radio USENET newsgroups, is simple because LINUX comes configured with PINE, an easy-to-use program that does both. At the LINUX prompt, type "pine" and you're on your way with the help of a clear menu.

LYNX is the LINUX text browser that provides powerful hypertext linking on the World Wide Web. Typing "lynx" starts the browser with its status bar menu. It just takes a couple of keystrokes and a few seconds to fill your screen with the Web page you were seeking. LINUX is case-sensitive and most commands use lower case.

The communications program to dial into a shell account must support "VT-100" terminal emulation, and should support Z-Modem, the preferred file transfer protocol. PINE and LYNX need VT-100 to display correctly. Vintage DOS communications programs like Hayes Smartcom, Procomm Plus, COMIT for DOS, and many others offer VT-100 screen emulation and the Z-Modem protocol.

Most Web sites are thoughtfully designed to identify on-line graphic files with the .gif, .jpg, and .bmp extensions. If you want one of them, highlight it with the LYNX cursor and press "d" to start a download to the server. From there, download it to your own computer, where you can open the file with your favorite graphic file viewer.

Once you know how to use a dial-up LINUX shell account, you are virtually independent of computer platforms to access your files, E-mail, and the Internet, whether locally or traveling. You can use any computer with a modem to dial into your ISP.

For unlimited use, the monthly cost of most LINUX shell accounts is about half that of national graphical Internet access charges. ISPs assume: (1) you must be a savvy user to ask for a shell account; (2) therefore they know they won't need to provide you much support; and (3) narrow bandwidth shell accounts demand less resources from their servers compared to a regular account.

There are even "free-nets" still around, that provide dial-in shell accounts as a public service. Colorado has one of the oldest and best, with information about it at [www.nyx.net].

It's time to rethink the notion of computer "obsolescence." It's estimated there are over 250,000,000 pre-Pentium DOS computers in the world, and the ham community surely has its share. None of them needs to be idle or discarded. Their efficient operating systems and programs can easily handle the bulk of the amateur radio community's routine Internet information tasks.

Bill Boas KCØIZI *is a writer who first went on-line in 1986.* 73

QRP

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It turned out that the coax was from Radio Shack and the RG-58 cable has a solid center conductor. Guess it took one too many bends to break the center conductor in half. I would suggest you check your jumpers and replace any of those made up of Radio Shack RG-58 cable.

Radio Shack does sell RG-8U cable and the so-called mini 8 cable. Both of these have a stranded center conductor that won't fail if it is flexed too much.

The second edition of the *HW-8 Handbook*

Still looking for mods for the HW-7, HW-8, and HW-9 QRP transceivers. They will be in the second edition of the *HW-8 Handbook.* The mods can be as simple as a value change for a part, to a complete reworking of a circuit.

I am hoping for a Dayton 2002 Hamvention release for the book. Inside you will find PC board layouts, assembly diagrams, and, of course, modifications to these radios. This time, too, the book will be full of photographs and drawings. Again, I am hoping for a Dayton 2002 release date.

QRP AM on the 10-meter band

With the solar flux being somewhat unpredictable, we have had some really strange band openings. One of those has been on the 10-meter band. Now, if you have used this band before, you know it does not take a lot of power to communicate halfway around the planet on just a few watts. This is the case on the AM phone portion of the band as well.

I've been having a ball on 10-meter AM phone using an old Heathkit MT-1 (the Cheyenne) transmitter. The place to be is 29.000 MHz, the AM calling frequency. I use the MR-1 (the Comanche) as the matching receiver. The pair looks good and performs like gangbusters!

When 10 is open, then FM is up the band a bit. My Ten-Tec Argonaut II will transmit on FM. It's really too bad that the Argonaut II won't transmit on AM! I've worked up and down the West Coast from my location in Ohio with nothing more than five watts into a Gap Titan vertical antenna. I've even been able to kerchunk some of the repeaters that populate the 10-meter band.

Ten meters is a strange band. One moment it's open worldwide, and then nothing. The key to working ten meters is to keep checking the band. With today's broadbanded radios, checking the band for activity