



QST

DEVOTED ENTIRELY TO AMATEUR RADIO

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HINTS & KINKS

QSL WIZARD AND GLOBAL QSL

◇ My previous *QST* article discussed the free *QSL Maker* software to print excellent QSL cards at home.¹ This is still a great program but I have continued my search for the perfect way to QSL and I want to share two new methods.

There is an outstanding new shareware program to print QSL cards at home called *QSL Wizard* available from Alpine software. *QSL Wizard* lets you create fully customizable QSL cards with ease. This program utilizes point and click techniques and has a much different feel to the user than *QSL Maker*. Both programs import *ADIF* electronic logbook data to print your contact information directly on your cards. Anyone who wants to print their own QSL cards should evaluate both the *QSL Maker* and *QSL Wizard* software to see which program you prefer. Both will allow you to print cards at home that can rival a commercial QSL card. The *QSL Maker* program is available at the ARRL Web site www.arrl.org/files/qst-binaries and at <http://qslmaker.mi-nts.org>. *QSL Wizard* can be found at www.alpinesoft.com/asqslwizard.html.

Global QSL is a new way to send QSL cards via the DX bureau. Global QSL uses electronic submission of contact data such as eQSL and Logbook of The World (LoTW). Instead of an electronic QSL confirmation, Global QSL will print a beautiful custom double-sided full-color glossy QSL card with your specific contact information. This is done on heavy cardstock that is nicer than I can print at home. Global QSL not only prints your card but they also send it directly to the foreign DX bureau so you don't have to mail anything to your outgoing DX bureau.

To use Global QSL, download their free *QSL Graphic Editor* software to develop your custom QSL card. Their software includes a variety of images such as the ARRL logo and pictures of many radios that you can incorporate. You can also use your own images. You can update your card whenever there is a change in your station. There are online

tutorials that teach you how to use the software. If you don't want to design your own QSL card then they will be happy to design the card for you. The Global QSL Web site is www.globalqsl.com.

Sending your cards from Global QSL could not be easier. You upload your *ADIF* logbook file (or you can manually add contact data like eQSL) to their Web site after logging in and they will print your cards. Your QSL card design is kept on their computer and your contact data is inserted when they print the cards. They print the cards when they get 500 cards for a specific DX bureau but they will not wait more than 2 months to print your cards. An active DX bureau may get cards printed and mailed every week. I think the cards go out as fast or faster than via the outgoing bureau. You can send the cards to specific people such as a QSL manager by using the "QSL via field" in the *ADIF* data.

Global QSL is used for DX cards since the cards are sent to a DX bureau. Global QSL should not be used by US hams to send cards to other US hams since the ARRL incoming bureau is not designed to handle QSL cards from US hams. Global QSL will not print a card from a ham in the continental USA to another ham in the continental USA unless a foreign call sign is involved such as a foreign QSL manager or a DXpedition. They will print cards that do not involve the continental 48 states, that is, Hawaii, Alaska, Puerto Rico, Guam, etc.

Global QSL costs \$12.50 for 100 QSL cards, which includes printing and mailing. I can't buy the cardstock, print the cards using color ink and mail them for this price. A thousand cards cost \$99 for printing and mailing. The 100 card offer is a great way to try the service.

I think you will find that the *QSL Wizard* software, the *QSL Maker* software and the Global QSL service all make it easy to send out beautiful QSL cards that are likely to cause the recipient to return the courtesy. These techniques can create a beautiful card that anyone would be proud to display. — 73, David Rabin, W9PH, 1330 Nyoda Pl, Highland Park, IL 60035, w9ph@arrl.net

HELP FOR THE LOW VISION HAM

◇ I am writing this article to help and encourage my fellow hams with vision problems. I was first licensed in 1956 as KN8DIN in Gladwin, Michigan. I currently live in Minnesota with the call W0PSH.

I was diagnosed with macular degeneration in 1997. The doctor informed me that I was now legally blind and I started feeling a little down. As working DX was a big part of my ham life, (only three more countries to work). What will I do now?

First I tried hand magnifiers for reading but that took one hand to hold the magnifier and the other hand to hold what I wanted to read. I wanted a better way to read anywhere I happened to be.

I searched around and found a jeweler's loupe that you clip onto your glasses (see Figure 1). The loupe I selected has two lenses — one is 3x power and the other is 6x power. With the 3x lens I can see my computer screen (I'm using it to type this article) and I use it to take pictures with my digital camera. With both lenses I can read the newspaper and *QST*.

Now how do I see my transceiver? After doing some research, I contacted an optometrist and purchased a pair of glasses with a telescope mounted in the lens for my best eye (see Figure 2). Now I can see my radio to

LARRY LENNON, W0PSH



Figure 1 — An eyeglass loupe made by Bausch & Lomb. It's called a jeweler's double eyeglass loupe p/n 81-41-78. There are many types of loupes available.

LARRY LENNON, W0PSH



Figure 2 — The telescope is an accessory affixed to the eyeglass lens by an optometrist who will be able to recommend the best one to meet your needs.

¹D. Rabin, W9PH, "QSL Maker," *QST*, Jul 2008, p 68.

enjoy chasing DX and can fill out my log.

I still have some problems, as my ICOM IC-775DSP could use more contrast between the color of the case and the lettering for the buttons. Once in a while I forget to press the SPLIT button when chasing DX and I apologize for the problems this causes.

These are only a few of the things that visually impaired hams may do to enjoy life a little more. There are many places to find help for visual problems. The Internet is a good place to find low vision equipment. If you are a veteran, contact your local Department of Veterans Affairs and talk to the Visual Impairment Service Team (VIST) Coordinator. The VIST Program is designed to help veterans who are severely visually impaired and legally blind. Your vision problem does not have to be service connected. This is a great place to get help and talk to others with similar problems.

Don't let visual problems stop you from enjoying your life. I look forward to hearing you in the pileups. — 73, Larry Lennon, W0PSH, 10725 Dahlia St NW, Coon Rapids, MN 55433, w0psh@arrl.net

DETERMINING BEARING FROM LONGITUDE AND LATITUDE

◇ Strong winds this winter turned my beams and mast in the rotator. I discovered that my reference direction (a low Yagi pointing on a 135° bearing into the Caribbean) had also moved. I missed the spring equinox (where the sun rises at 90° and sets at 270°, or at least close enough for HF Yagi headings) and the North Star is too hard to see due to haze and city lights in my urban environment.

Fortunately, the Internet provided latitude and longitude data for my tower base and a nearby water tower; an *Excel* spreadsheet then computed the bearing.

To determine the bearing to a distant landmark: First, identify a landmark about 1-2 miles away that you can see from your tower. Searching Google for "lat-long finder" turned up www.satsig.net/maps/satellite-photo-image-viewer.htm and www.sirzman.com/gc/llf.cfm. There are others, but I used those two. It takes some playing, but you can find your neighborhood with the street maps, then switch to satellite imagery and put the cursor (or "pin") on the center of your tower base. That gives you the starting point latitude and longitude (LAT1/LONG1). Then find the water tower or other landmark by the same process. That is the end point latitude and longitude (LAT2/LONG2).

With a calculator or spreadsheet program like *Microsoft Excel*, compute intermediate values and the bearing to the end point using the following formulas. West longitude (what we have in North and South America) must be entered as *less* than zero. North latitude (USA, Europe) is greater than zero. Dallas TX is roughly 33° (north) latitude and -97°

Table 1

	Degrees	Radians	Degrees	Radians
LONG 1	-96.64161	-1.686714335	LAT 1	33.05321
LONG 2	-96.620947	-1.686353698	LAT 2	33.05397
Intermediate Calculations				
DLONG	0.020663	0.000360637		
COS(D)		0.999999954		
SIN(C1)		0.999034228		
COS(C1)		0.043938717		
Final Calculation				
Bearing (radians)		1.526843459		
Bearing (degrees)	87.48168617			

(west) longitude. Be aware that spreadsheets usually expect angles to be in radians, not degrees, so you have to multiply degrees by $\pi/180 = 0.017453293$ to get radians.

Enter the following into the spreadsheet:

LAT1/LONG1; LAT2/LONG2 [Enter the degree values first, then calculate the radian value; you need both.]

DLONG = LONG2 - LONG1 [Calculate in degrees. Convert to radians.]

COS(D) = [SIN(LAT1) × SIN(LAT2)] + [COS(LAT1) × COS(LAT2) × COS(DLONG)] [Calculate in radians.]

SIN(C1) = COS(LAT2) * SIN(DLONG) / SQRT(1-COS(D) * COS(D)) [Calculate in radians.]

COS(C1) = (SIN(LAT2) - SIN(LAT1) × COS(D)) / (COS(LAT1) × SQRT(1-COS(D) × COS(D))) [Calculate in radians.]

Bearing_R = ATAN(SIN(C1) / COS(C1)) [Calculate in radians.]

Bearing_D = Bearing_R × 57.2957795 [Convert radians to degrees.]

Example using the *Excel* spreadsheet calculator that can be found on the ARRL Web site is shown in Table 1.

If you are using a calculator, this may be in degrees. If using a spreadsheet, you will have to multiply by $180/\pi = 57.2957795$ to get back to degrees from radians. It may be necessary to add or subtract the result from 180 or 360°. Lay out the points on graph paper to get an idea of what the bearing should be. — 73, Timothy L. Bratton, K5RA, 4001 Trails End, Parker, TX 75002-6543, k5ra@verizon.net

TWEEZERS TOOL FOR TESTING SMDS

◇ In looking for tools to work on Surface Mount Devices (SMD), I found several LCR (Inductance, Capacitance, Resistance meter) tweezers units on the market, costing \$60 to hundreds of dollars, to hold and test SMD components. This got me

thinking about making a tweezers adaptor for my meters. At first I thought of cutting some circuit board and fashioning a tweezers, but then I realized that three pieces of heat shrink, a steel tweezers and two pieces of solid hookup wire or embroidery needles could be fashioned into a simple tester.

Figure 3 show the resulting adaptor — crude, but it works. It also works to test tiny LEDs and diodes with a power supply. This design is for ballpark accuracy and convenience rather than precision work. — 73, S. Premena, AJ0J, PO Box 1038, Boulder, CO 80306-1038, premzee@juno.com

NO HOLES MOUNT

◇ I'm fortunate to be provided a company vehicle every year, which is especially nice these days since a credit card for gas is included. But what's not so nice is that I'm not allowed to drill holes or otherwise mutilate the vehicle in order to mount radios, antennas, audio gear, etc. This prompted me to explore ways of mounting the control head for my FT-7800R VHF transceiver. What I've settled on is a simple and inexpensive method. My personal requirements were:

- Be able to easily see the display
- Have a quickly and easily removable setup
- Not cost an arm and a leg
- Use readily available materials
- Be within very easy reach for safety while driving

My new mount consists of a modified goose neck clamp-on light available at most discount stores. The light I bought cost less than \$9. I removed the light components and drilled the mounting bracket so the goose



Figure 3 — A detailed view of the tweezers tool showing how it is constructed. An assortment of SMD components is also shown.



Figure 4 — A cheap solution to a no holes mount installation. Note how the unit is clamped to the center console and also the position of the microphone clip.

JOHN D. MERRITT, K4KQZ



Figure 5 — A rear view of the no holes mount attached to the center console and showing the microphone clip installed on the lamp base.

neck would fit. I could have used the original cable that came with the radio mounting kit but decided to leave it intact and instead used flat 6 conductor standard phone cable. One end had to be cut off in order to snake the cable through the goose neck and I installed a new RJ-11 connector on the cable end that plugs into the radio. I also installed the microphone clip onto the clamp.

The result of my effort is shown in Figure 4. It may not work as well in other vehicles but it works great in mine. I haven't tried it in other vehicle models but I suspect there are spots to which the clamp could easily be

attached. — 73, John D. Merritt, K4KQZ, 2430 Hidden Lake Cir, Columbia, TN 38401-5832, k4kqz@arrl.net

STEERING WHEEL TABLE

◇ When parked at a campground I operate HF from the driver's seat of my motor home. Taking notes, using the control head and logging was not convenient. Since the steering wheel tilted I thought a flat surface, on the wheel, would be ideal.

The local home improvement store had a small laminated table top that was slightly larger than my steering wheel. Using PVC plugs screwed to the bottom, spaced to accommodate the openings in the wheel, and PVC pipes on the plugs, the table slides snugly on the steering wheel (see Figure 6). Using hook and loop fasteners I attach the control head and a clipboard for easy operating. — 73, Allen Wolff, KC7O, 57 W Grand View Ave, Sierra Madre, CA 91024, kc7o@arrl.net

RIG STATIC PROTECTION

◇ Paul, AA8OZ, was telling me about the problem he has had with his Elecraft K1 transceiver. Paul uses a wire antenna held aloft by a kite and he recently had a problem caused by static build-up on the antenna that zapped one of the components in his rig. After repairs were made, Paul installed a 1 kΩ resistor across the antenna terminals in the radio to drain any static.

When Paul told me about this I thought my rigs should also be protected as I also operate portable using wire antennas.

A little research told me that resistors between 1 kΩ and 10 kΩ or even higher would make a suitable drain resistor without affecting receive or transmit modes. I decided



Figure 6 — The underside of the table showing the added PVC caps and tubing "legs."

to install the resistor outside of the radio and not have to find room in the case.

I looked through my junk box and found a 2.2 kΩ resistor and a T-adaptor. I turned on the solder station and soldered the resistor from the center jack to the shell effectively bridging the antenna connections with the 2.2 kΩ resistor. For the K1 and KX-1 I needed an additional adaptor to connect the SO-239 to the rig's BNC connectors. [Note: This method should only be used with low power transmitters. — Ed.]

Now when connected to a random wire, I can be sure my rigs are protected from a static build-up from either wind or precipitation. [Note that this method is not lightning protection. If there is thunderstorm activity in your area — shut down immediately. — Ed.] — 73, Richard Arnold, AF8X, 22901 Schafer St, Clinton Twp, MI 48035, af8x@comcast.net

Hints and Kinks items have not been tested by QST or the ARRL unless otherwise stated. Although we can't guarantee that a given hint will work for your situation, we make every effort to screen out harmful information. Send technical questions directly to the hint's author.

QST invites you to share your hints with fellow hams. Send them to "Attn: Hints and Kinks" at ARRL Headquarters, 225 Main St, Newington, CT 06111, or via e-mail to h&k@arrl.org. Please include your name, call sign, complete mailing address, daytime telephone number and e-mail address on all correspondence. Whether praising or criticizing an item, please send the author(s) a copy of your comments. QST

