

# The Elmer Project Part VI

Sponsored By The Oklahoma DX Association  
The Low-Down On Low-Band DX!

Edited by Nelson Derks, AC5UP

This will likely be the last installment of the series, and what better way to close than with one of the more popular pursuits of Radio Amateurs... DX'ing. We'll also cover a few operating tips and offer some advice on Elmering that could become the next good project for your local club. I've talked with plenty of Hams and wanna-be Hams, and found it's not unusual to hear their interest began as a teenager late one night when they stumbled across an AM broadcast station... far... far... away.

With this in mind, and the long dark nights of winter not far off, let's tune in to Clif, N5UW for his thoughts on low-band DX:

The Low Bands. Like CW, you either hate them or love them. When I joined the OKDXA I had a fresh DXCC certificate in hand and was full of spit and vinegar. I found out rather quickly that I was the low man on the totem pole as DXCC is a little easier to reach on the high bands than it is down low. But, guess what? I was still welcomed, and the members answered ALL of my dumb questions with help on everything from QSL routes to operating tips. During that time Mark Byard, N5OG and OKDXA Club Secretary earned his Five Band DXCC. I was impressed! I had a few countries confirmed on 40 Meters, but you could count the number on 75 Meters with one hand. The low bands on low power are a tough nut to crack!

The folks on the club net gave some great hints on how to work the low bands, but I had to learn a lot of it the hard way. Mark was always talking about getting up early to chase 80 Meter DX. To me, early in the morning is 7AM, but he was talking about 4 and 5 in the morning! No way, say I, this little fat boy needs his sleep! After a little study on propagation, I learned that the low bands are open to different parts of the world at different times than the high bands. If you want to work Asia and the Pacific you get up early. Real Early. A whole new world of DX was always open to me, but I had been sleeping through it.

Do you get up that early every day to chase DX? Heck no! And neither do I. But whenever I do, the surprises are endless and it's rare that I regret the effort. You'll also find the time around sunset can be very productive into Europe and Africa. It takes time, dedication, and a pretty hard head to hang in there for the long haul DX on the lower frequencies!

Lets look at modes again: You can work DX countries on 40M SSB, but they will all be running the big wild splits. I dearly hope that the next WARC convention will see the 40 Meter band aligned in all ITU Regions so we're on the same frequencies. Most people on the low bands are running wire or vertical antennas so we're pretty much equal on that front. But, to make up for their compromised antennas, there are plenty of low band ops running high power. You can work plenty of countries running barefoot in the major contests, but getting 100 confirmed on 100 watts will be a long and lonely grind. What is a low power guy to do? Go back to the dreaded CW key! 100 Watts CW will put more QSO's in your log than SSB on 40 and 80. You won't always work them on the first call, but this is a game where persistence comes in mighty handy. Hang in there, and be sure to experiment with the timing of your calls... You can learn to work Q's in the cracks between the KW signals more easily than you might think is possible.

The same goes for 80 Meters. This one, however, takes some extra desire and lots of dedication. You can work some of the countries to the South with 100 watts on a dipole running SSB, but confirming 100 countries will be an exercise in frustration. Since most folks have low wire antennas or verticals, output power plays a major part. You have to be very lucky to squeeze in a DX Q between the rag chews and East Coasters running 1500 Watts. *(Only 1500? When did they drop power? – Ed)* So, here we go, back to CW again. 99% of the 80 Meter DX is in the bottom 25 kHz of the



band, and that's another incentive to upgrade! Many operators run at a slower pace on this band to allow for the QRM and QRN, and that presents an excellent opportunity to build both your speed and country totals. 80 Meters is a noisy band, so be prepared to hear plenty of static or learn how to use the RF Gain control on your rig. Play with the preamp settings and experiment with the attenuator to decrease your noise level. On low band receive, the signal to noise ratio is far more important than a little extra kick in the S-Meter.

*(Editors Note: Like many of you, I didn't believe this until I bought an IC-756 with the band scope display. I always ran with the RF Gain full up and attenuator off so I could hear the weak ones. Bad Move. On the low bands the limiting factor is usually noise, not the signal strength. A scope will show that reduced sensitivity affects the noise level more than the desired signal, and your ears know that every dB of noise reduction helps reduce your fatigue factor. For those of you with a Kenwood TS-4xx rig, the AIP switch turns the pre-amp off. Experiment with it on the lower bands and you'll be glad it's there! — AC5UP)*

Another skill that's not obvious at first is the art of effective listening. The most successful DX'ers spend far more time listening than transmitting. Get into this habit and, as a general rule, you will know who the DX is, where he is listening, how he works a pileup and (most importantly) how the last OM got into his log. If you're not hearing both sides of the pileup on the same frequency, the DX station is working split TX / RX. Tune around and figure out where the DX station is listening! It took me three years of staying up way too late and getting up way too early to learn this, but I finally got 102 countries worked at the 100 Watt level on 80 meters. You can do it too! Set a goal, dedicate yourself to your goal, then give it your best shot. Keep in mind, however, that you are supposed to

be having fun. This is a hobby and there's a line between dedication and obsession. Your family and obligations come first... Then you can play radio.

I should also mention the joys of working Gray Line propagation. Some of the biggest surprises on 80 Meters have been working an African Country around sunset from right here in Okie land. Give a listen for at least 30 minutes before and after sunset. You'll also hear some rare stations to the West and out into the Pacific for a few minutes (or more) around sunrise.

If you've avoided trying DX on the low bands because you're limited on space and think you can't put up an effective antenna, try a vertical with as many radials as you can manage. The radials don't have to be textbook straight or equally spaced, but get as close as you can. And, don't believe all the advertising hype of the 'no radials needed' commercial designs. Read the antenna books and make the best of what you have available. A 1/4 wave vertical radiator is just one half of a dipole antenna and the other half must be in the ground image. Put at least eight radials, but 16 is better, under your vertical. Every time you double the number of radials your efficiency goes up by leaps and bounds. If I could have only one antenna, it would be a Butternut HF-6V. A full sized quarter wave vertical would be better, but we're talking about your normal Joe Ham on a city lot who wants to work some low band DX. A mediocre antenna is always better than no antenna, but even the worst example of a home-brew horror can be improved with a little experimentation. Who gains from the experience? You Do!

—NSUW

One last note on 75 Meter SSB: It's a great band for rag chews on long winter nights, but does have some unique quirks among the regulars. One of my favorites is when an OM makes a change to their station then asks the group "how they're coming in". The replies range from 10 to 40 over. As a test, they turn off their amplifier and ask again. Now the reports are from a solid 9 to 30 over. Thanks, they'll say, then turn the amp back on... As if they needed it.

For those of you who surf the web, a new section has been added to eHam at <http://www.eham.net/newham/>. It's a very complete set of articles by Don Cassel, VE3BUC for both new and prospective

Hams. Despite the wealth of information available on the web, there's still no substitute for your local ARC offering a well-advertised license class. For some thoughts on this, let's turn to a condensed version of an article from the *QCWA Journal* by Larry Shima, WØPAN:

As we start counting our Ham Radio experience in decades rather than years, many of us have given some thought to those who are attracted to the hobby but haven't quite taken the first step toward getting a license. With the success of the Volunteer Examiner program in making testing sessions readily available, and the license restructure of 2000 simplifying the process, there has never been a better time to enter the hobby. Many prospects may not be aware of your club and are simply waiting for someone to invite them to a meeting. I've seen it proven many times that local amateur radio activity generates interest and that interest generates activity. I hope you talk up the hobby among your friends and associates, as that's one of the best ways to get the word out.

One of the most difficult parts of any club project is in getting the ball rolling and your Elmer Program will be no exception. The club President and officers are usually in the best position to "volunteer" about five members into a committee chaired by one of the more reliable go-getters within the club. Each of the committee members becomes a mini-chair for one step of the program as follows:

- A public demonstration of Ham Radio at a club meeting or Special Event station.
- A second meeting detailing exactly what's involved in the license process.
- Classes and study sessions.
- Volunteer Examiners conduct testing.
- On-the-air session with the new licenses to celebrate and work off any mic fright.

Let's take a closer look at each step: The demonstration can be at a regular club meeting and feature an ARRL video along with a demonstration of 2 Meter Repeater operations. Talk up the popular activities like weather spotting nets and give the prospective Hams time for questions and answers from the club members. A special event station is also a great introduction to the hobby that would be less formal in its structure. Make sure all the newcomers are given a chance to get involved, eyeball the hardware, and ask plenty of questions.

The second meeting should be oriented toward the nuts & bolts of the hobby and cover as many modes as you can manage. Some newcomers are thinking HT with a speaker mic while others lust for a tri-band Yagi and DXCC. This is an opportunity to acquaint everyone with the possibilities of the hobby. Positive reinforcement at this step is good preparation for the study that follows as each newcomer sets their goal.

Make good use of license study materials from the ARRL, W5YI and others during the study sessions. Remember the goal is to pass the Technician exam and get that first ticket, not impressing the group with the genius of the instructor. Work in small steps with good repetition of key concepts so the students will understand the study materials they take home with them. Be sure to include a little Q&A taken from the question pools relating to each study topic so they'll look familiar when they show up on the test. The first license is a start, not an end. Try to create a positive foundation for your students to build on!

Once the study materials are complete, the next step includes Volunteer Examiners. Allow enough time for a quick refresher before the test and some tutoring afterward for those who almost make it. Some folks haven't been students for decades and will let their nerves get the best of them. A little positive coaching at this time can go a long way toward their success next time. No one really fails until they stop trying!

The final step is often overlooked, and this involves getting those new licenses on the air for the first time. We've all heard the stories about the new Ham who's first Q was their last thanks to an OB on the local repeater. You may also have a new Ham with a physical limitation. An hour or two on a Saturday afternoon spent setting up their first station is an excellent project.

A well-organized Elmer Program makes a significant contribution to the hobby and will build both the image and membership of your club. We've all been Elmered in one way or another, this is your chance to share the joys of the hobby! —WØPAN

This article may be freely reprinted in its entirety with permission from and credit to **The Oklahoma DX Association**. Visit <http://www.qsl.net/okdxa> for contact info.

— 73 and Good DX!