

QRL?



December 2003

There are no strangers in Ham Radio

Volume 11, Issue 12

New Editor takes over QRL?

There is a new name in the staff box of QRL?

I'm Stan Russell, KD5RWX, a new arrival to New Mexico, coming to Glenwood from Waco, Texas, a couple of months ago. I have edited several club



newsletters in Central Texas, including the Texas State Guard ARC newsletter, W5TSG and have been active in ARRL, Skywarn and ARES/RACES. I'm involved with NTS, SSTV and ATV.

I hope to increase participation in Amateur Radio activities in Southwestern New Mexico and lend a hand where and when I can.

Contact me at e-mail at KD5RWX@arrrl.net or call 505/539-2028 or write to Stan Russell POB 216 Glenwood, NM 88039

Suggestions welcome!

Meeting to feature slow-scan television

Ever turned your 2-meter rig to a local repeater and heard what sounded like Sputnik broadcasting Martian music?

Well, what you might have heard is a couple of Hams sending pictures back and forth using Slow-Scan Television.

Slow-scan has found a new home on 2-meters as more Ham are taking advantage of underused repeaters to take part in this growing segment of Amateur Radio. Slow-Scan clubs have formed and



nightly slow-scan nets have attracted upwards of 20 members taking turns transmitting their favorite shots.

And emergency groups have found slow-scan a good way to send disaster photos to a central point, giving the mode new

uses.

All an Amateur needs is a radio, a computer and an interface between the two (cheaply made or purchased) and the software is free!

Learn about this mode in December at the GARS meeting.

A setup will be demonstrated and copies of the software will be given to those who want to give it a try.

Slow-scan is a good way to put to use that new digital camera you're getting for Christmas!

Next meeting — Dec. 12, 7 PM - Room 119, Harlen Hall

Corner of 12th & Alabama, WNMU Campus

Secretary's report of November meeting

Friday, November 14, 2003 Those in attendance were: KD5TKU; KG5QJ; KD5RWX; WB2JHF; KC5SLP and Stephanie Pliier.

Due to low attendance and only one attending officer, no official business was conducted, which would have included the nomination of the 2004 GARS Officers.

However, the following announcements were made: Item #1 :

EFFECTIVE IMMEDIATELY, the new QRL? Newsletter Editor is our newest GARS member, Stan Russell, KD5RWX. Stan is our newest member, who comes to us from Waco, Texas.

He is active in APRS, ARES and was active in the North Texas Section of ARRL activities. We welcome, Stan, who will be printing out the November issue of QRL? We would like to thank Tom

Parker, KG5QJ, our outgoing newsletter editor, for his 1 1/2 years of service. Item #2: Effective Jan. 1, 2004, Denise Parker, KD5TKU, will be stepping down from her duties as GARS' Secretary/Treasurer. Meeting was adjourned.

Respectfully submitted, Denise Parker, KD5TKU outgoing GARS Secretary/Treasurer

Best Emergency Radio?

By Ed Harris, KE4SKY

© 2002 Virginia RACES, Inc.

The most common question among amateurs newly interested in emergency and public service is "what radio should I get?" I am hesitant to recommend specific rigs, but offer some thoughts based upon experience. It's very tempting to look for "one" rig, which has "everything all in one box," such as the IC706MkII G or FT100D. They are neither the best 2-meter rigs nor the best HF rigs, but they do work. I don't favor this concept, but some do.

Rigs for EmCom should have been on the market long enough to have established a deserved reputation for reliability. For those who favor the "one rig does-all" approach, I'd lean towards the IC706 simply because it has been in production long enough to for them to get most of the "bugs" out of it. You see few used IC706s listed for sale considering that over a million of them have been sold worldwide. Many FT100s and FT817s are listed, which suggests that impulse buyers were less than satisfied. Don't change equipment very time a new rig comes out. Keep equipment that works and sell that which doesn't. Encourage other members of your unit to quasi-standardize on proven equipment.

Personally, I find neither the IC706 nor the FT100 very user-friendly. Small displays, controls, layered menus and keystroke combinations defy anyone not familiar with it to use one effectively without the manual. Controls should be intuitive and easy to "figure out."

If your only rig fails, you have nothing. Multiple radios are better

than one. You need to have equipment which is simple to use, rugged and reliable. Get a 2 meter or dual-band FM mobile first. A good mobile costs no more than an HT, but has far better simplex capability. If you don't drive or have impaired mobility, then get an HT first. An HT is still needed as a spare and for "walk and talk" operation, but most people should get it later. If you have a General license, an IC706 makes sense for your "go kit" instead of a 2-meter or dual-band mobile, if you can only afford one rig. In rural areas, a single-band 2-meter mobile is an entirely viable choice.

In suburban areas I recommend a dual-band mobile which also has DUAL RECEIVE. This is because in high RF urban environments 2 meters is sometimes not useable at all due to intermod or simply is less effective in the urban environment due to terrain or building blockage.

Emergency nets in urban areas require you to work from inside, out of and around steel-reinforced buildings where VHF simply doesn't work very well. However, UHF and 220 are more effective here. Every urban RACES or CERT team member should seek at least an HT, which works on either 220 or 440.

Any rig used for emergency communications should be frequency agile and capable of being programmed from the keypad IN THE FIELD, with no software required. It should have at least ten programmable memories and CTCSS encode. CTCSS decode and receive outside of the amateur bands is not a necessity. You shouldn't be listening to anything except your assigned net. Don't

use a transceiver which may be needed for "comm" as a "scanner" because you may be distracted by other things going on or miss important traffic to you.

In 2-meter and dual-band mobiles, get something simple to operate and rugged with a large and easily read display. It should have at least 25w output per band, ten memories per band, and CTCSS encode. Intermod rejection is important but receiving outside the amateur bands is not. Many current amateur rigs which receive outside the amateur band fail miserably in intermod rejection, so carry a notch filter, such as the well proven one from Par Electronics.

An HT for RACES must be able to operate from three power sources: 1) its NiCd or NiMh battery pack, 2) from AA batteries using a battery case which fits the radio, and 3) from an external DC cord which can be connected to an external gel cell battery, auto cigarette lighter plug or regulated 13.8VDC power supply.

The 220 band has much to recommend it for EmCom. It enjoys a lower noise floor, much quieter signals, and fewer problems with intermod. "220" gets in, out and around buildings almost as well as UHF, but has better simplex range which is similar to 2 meters. If you must tie up a repeater or simplex frequency for an extended period you won't inconvenience many users. Another advantage of 220 is that most scanners don't receive it. The same is true of 2 meter SSB.

No amateur mode is "secure" in the national security sense. However, using amateur bands

(Continued on page 3)

(Continued from page 2)

and modes not received on common consumer scanners is more "discreet" for traffic that your served agencies would rather not have the general public and the news media listening to.

For this reason we also highly recommend use of 2-meter SSB for and RACES. With modest output power of 25w, when using a suitable horizontally polarized antenna such as a loop, 2 meter SSB is highly reliable for portable and mobile units up to 100 miles, providing a good alternative to 75 meter SSB for "short path" during high SFI or solar storms when HF is unreliable for short paths beyond FM repeater coverage. For 2 meter SSB to work reliably for your organization, enough of your operators must have it. This weighs again in favor of the IC706, although I still prefer separate 2-meter all-mode and HF rigs, because they generally have superior individual performance and provide necessary redundancy for system reliability.

My HF rig is a Yaesu FT900CAT, equipped with a headset / boom mic and hand mic, connected to an MJ-89 mic switch which permits using either the hand mic or a boom mic with headset connected to a foot switch for use in high noise environments. This is mounted in a quick-detachable mobile mount in a Pelican box. If limited to ONE HF radio it would be the FT900, because its controls are intuitive, simple and straight-forward on the front panel. It has a large display, very loud audio, built-in antenna tuner, effective noise blanker works, sensitive receiver with IF shift and notch filters and you don't need a manual to use it if unfamiliar! The only thing it lacks which newer rigs have is Digital

Signal Processing. I use the Am-Com Clear Speech DSP speaker for noise cancellation, which is very effective.

My portable field-deployable HF antenna consists of paired hamsticks on quick disconnects for 40 and 75m on quick disconnects, which can be used either on-the-go use on the vehicle ball mount, or mounted horizontally on a dipole adapter with 25 ft. of mast. I also carry extra hamsticks for 10 and 20 meters. If space is available I also carry end-fed wires, 32 ft. for 40m and 55 ft, for 75m which are readily connected to my mobile antenna mount. Crimp and solder 3/8 ring terminals on one end of the wire and bolt them onto Hamstick quick-disconnects. On the other end tie a "dogbone," 50 ft of nylon line and a 2-oz. Surf casting sinker which can be thrown up easily into the nearest tree to erect the wire as a low sloper,. This works much better than the hamstick dipole or mobile whip. I also carry a military mast kit, two BCI Group 27 deep cycle batteries (total 190ah capacity) and two Siemens SM20 solar panels for battery charging. The mobile rig in my vehicle is a Kenwood TM742A with 2m, 220 and 440 modules installed, using a triplexer to connect it to a tri-band mobile antenna. The headset with boom mic for the TM255 all-mode also works on the TM742 tri-bander, if its multi-band receive is needed for a command post or net control. This rig is also in a quick-disconnect mount so that it can be readily removed from the car for portable use at a shelter or other fixed station. An older FT5100 dual-bander is mounted in a Pelican box with 17ah gel cell battery, 25 ft. of coax, dual-band mag-mount, extension cord and power supply which can be deployed quickly at a shelter or as a tempo-

rary cross-band repeater.

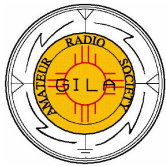
For portable auxiliary power I carry either a pair of BCI Group U1 AGM batteries in .50 cal. M2A1 ammunition cans, which together provide 64ah capacity, or a single Yuasa NP65-12 gel cell 65ah battery with retractable handles. I also carry a 20amp AC power supply, a Schumacher SE-600, 6A gel cell charger and 100 ft. heavy-duty UL-rated extension cord on a reel.

Good field deployable VHF / UHF antennas are the Diamond X50N or Cushcraft AR-270, which are compact and fit easily in a vehicle for transport. While dual-band for 2m and 440, either "works" for low power on 220, with acceptable VSWR as an expedient tri-band antenna. I carry a mobile antenna adapter with mast clamp and radial kit as an extra field antenna.

My primary dual-band HT is a Yaesu FT50R. For it I have three NiCd battery packs, a AA case, external DC power cord and 7ah gel cell battery. My "spare" HT which stays in my "go kit" is an older Standard C558A, which I actually like better for RACES applications better than the FT50R because it has dual receive.

In my go kit I keep three AA battery cases for the Standard HT, a Mirage BD35 dual-band brick amp, Comet CX722A dual-band half-wave rigid antenna with BNC, an extra CX72A flexible dual-band antenna, fused 20 ft. AWG10 gage power cord with battery clips for connecting the brick amp to a car battery, a KPC-3 TNC, laptop and a 17ah gel cell for portable operation.

**Amateur Radio:
When All Else Fails!**



Newsletter of the Gila
Amateur Radio Society —
www.zianet.com/gars

Editor

Stan Russell, KD5RWX
PO Box 216
Glenwood NM 88039
kd5rwx@arrl.net

NET NOTES

GARS Two Meter Net,
every Sunday 8 p.m. on the
GARS Repeaters 146.98 (-)
103.5 PL Tone in Silver City
(Black Peak) 147.38 (+) 103.5
PL Tone in Reserve (Frisco
Divide

The Big Bend Emergency
Net, every Sunday, 7:30 p.m. on
3.922 MHz, open to all hams in
Texas and New Mexico.

The QCWA Net every Sat-
urday 8:30 a.m. on 3.933 MHz.

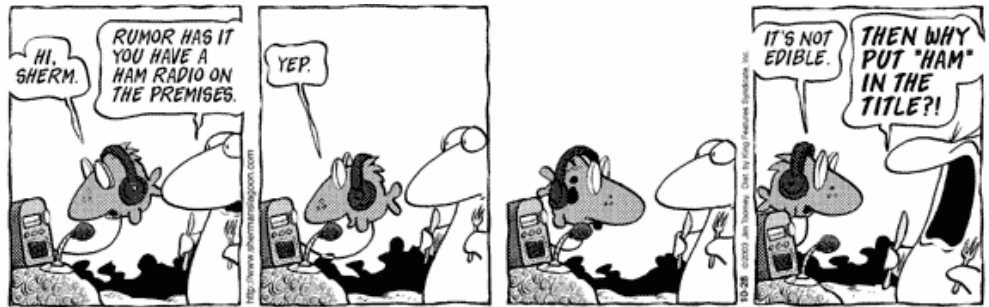
Road Runner Traffic Net
every night at 6 p.m. on 3.939
MHz.

Arizona Traffic and Emer-
gency Net, every night, 7 p.m.
3.992 MHz.

The NM Section ARES &
RACES net meets on the first
and third Sunday of each month
on 3.939 MHz at 6:30 p.m. to
discuss Amateur Radio support
of all types of emergency com-
munications.

Deming ARC, weekly net,
7:30 p.m., Thursdays, 146.82 (-)

Send information for Net
Notes to the Editor.



The GARS Video Store

There are available to anyone in the club the complete series of VHS Tapes from the ARRL Audiovisual Library. A single tape can be checked out at one meeting and returned the next.

Contact a club officer for more information.

Tapes include:
Shuttle Amateur Radio Ex-
periment (SAREX)
Disaster Preparedness/

Public Service
Operating Modes and Inter-
ests
Educational
DXpeditions
Contesting
Amateur Radio History
Club and Personal Ham Ra-
dio Applications
Amateur Radio Far Away
ARRL DSP Workshop
ARRL Antenna Design
Workshop (part 1 & 2)

**FCC's
Master
Search
Engine**

There is an obscure but very important search engine at the FCC that allows you to comb through most of the Commission's licensing systems for specific information. Member databases include Universal Licensing System ("ULS"), Experimental, Cable Operations, Mass Media, and International Bureau. Queries can be set up by frequency range, state/county, location (latitude/longitude), call sign and licensee name.

Now you can generate, for example, a list of the fixed stations within, say, 1 km of your coordinates. This is particularly useful when trying to identify interfering sources. Check it out!

<http://gullfoss2.fcc.gov/reports/index.cfm>
<http://svartifoss2.fcc.gov/reports/index.cfm>
From the "CGC Communicator" (with permission)



OFFICERS

President	Dave Kuthe, KC5AEW
Vice President	Harold Springer, KC5ZDH
Com. Officer	Danny Klement, WY5G
Secretary/Treasurer	Denise Parker, KD5TKU

GARS ANNUAL MEMBERSHIP

\$25 person; \$30 family
Due in January, 2003

ANNUAL SUBSCRIPTION

\$6.00 to receive the QRL? by mail or
FREE on the web at <http://www.zianet.com/gars>

K5GAR

P. O. BOX 1874
SILVER CITY, NM 88062

**Monthly
Breakfast:
Fourth Saturday
of the Month, 8:30
a.m. The Drifter
Pancake House,
711 Silver Heights
Blvd,
Silver City**