



CROSSTALK

A Publication of the TRW Amateur Radio Club



JANUARY 1994

CALENDAR

Every Monday: DCS Net on 145.32 Repeater at 7:30 PM

Every Wednesday: Emergency Communications Team Net on 145.32 Repeater at Noon

Every Friday: Club Breakfast in Bldg S cafeteria, 7-8 AM

Jan 1: ARRL Straight Key Night

Jan 4: Eyeball QSO Meeting, Upper Crust Pizza, corner Manhattan Beach Blvd & Inglewood Ave, 5:30 PM

Jan 11: Executive Board Meeting, E2/1200, 5:30 PM

Jan 21: Technical Chairman's Meeting, Bldg 65 Shack, Noon

Jan 22-23: ARRL VHF Sweepstakes

Jan 25: Club Meeting, E2/1200, Noon

Jan 29: Swap Meet, Parking lot, NW corner of Aviation & Marine, 7-11 AM

EDITORS NOTES: The deadline for submissions to Crosstalk is the Eyeball QSO meeting held the first Tuesday evening of each month. I have a new word processor and plan to change the Crosstalk format over the next few months. There will be more room for club news and articles.

Several members have mentioned the need for beginners articles. I need your help in identifying topics of interest as well as some volunteers to help write these articles. If you can provide me with an outline of your ideas I'll be happy to help you organize them into an article.

Articles of general interest are always welcome. I know many of you have new equipment, new books and ham radio experiences you could write about. Please send me your typed copy or call and arrange to give me a disk (PC Word or Wordperfect).

I'm looking forward to another year as your editor, please let me know if there's anything I can do to improve Crosstalk. 73 de KJ6GR.

Happy New Year!

CLUB NEWS:

1993 was a great year for the TRW ARC. The highlights of the year include:

- 9th place overall on Field Day
- Very successful swap meet
- Emergency Communications team participation is increasing
- Revamped BBS includes CD ROMs
- VHF/UHF contest participation was very good
- The eyeball QSO meeting started this year is a big success
- The technical chairman's meetings were fun for those who want to expand their horizons

A big *Thanks* to all who helped make 1993 so successful.

Rich Sauer did his usual outstanding job putting on this year's club banquet. Charlie Brown's did their part with a great dinner. Eric Christensen, KA6IHT from Ham Radio Outlet in Anaheim brought us all up to date on the latest goodies from the candy store. A few awards were added this year to recognize contributions to the club. Ray Enriquez walked away with top honors winning both the President's Award and Field Day Chairman's Award in recognition of his hard work over the past year.

1994 is already looking good. The club shack will be moving to the penthouse on Bldg R9 sometime early this year. John Shepherd is working on a new field day goal. Now is the time to think about the activities planned for the year and how each of us can get involved. The activities chairmen and the board can always use help, please volunteer a little of your time to help with club activities so 1994 can be the best year yet.

73 de KJ6GR

Membership Renewal

Please remember to send in the enclosed membership application along with your dues this month. Please do not send cash, the envelopes are often opened before we get them. If your membership is not renewed on time your subscription to Crosstalk may be stopped so please renew early. For those of you who are associate members (non-TRW), company rules limit outside memberships, your applications will be processed as soon as possible.

EMERGENCY AND DISASTER RADIO OPERATING PROCEDURES

by Bill Ozment, WA6LSW, CA State Auxiliary Radio Service.

The secret to working quickly and efficiently in an emergency net is to use standard procedures. The techniques presented herein are the most common. It doesn't take much analysis to see that standards and guidelines must be established and then utilized.

CALLING AND COMMUNICATING TECHNIQUES

Before you key your mike, gather your thoughts about what you are going to say. Many hams have a tendency to talk and/or repeat too much. Say what you need to say without unnecessary repeats. Keep in mind that you must strive to get your message through the first time.

In general, there are five parts to Calling/Communications. The more serious or complex the situation, the more important these procedures become. The information printed herein **MUST** be practiced until it is second nature.

FIRST, you **MUST** give the tactical call of the station you are calling. This alerts that station that they are being called and that they should listen to determine who is calling.

SECOND, say "THIS IS". The called station knows your tactical call follows. This is extremely important in cases where there is a lot of confusion or poor signal conditions.

THIRD, give your tactical callsign. Note that we say tactical calls and not ham radio calls. Tactical callsigns are important and ham calls are not, egos notwithstanding.

FOURTH, give your message. Speak clearly. Don't speak too fast especially if the message needs to be written down. Pause after logical phrases. Do not use the word "break" when you pause. It is confusing, wastes time and has another connotation in formal message handling. Merely unkey and pause. If the other station has questions, they should key up and make their request known. This also permits other stations to break in if they have emergency traffic.

FIFTH, end your message with **OVER** or **OUT**.

EXCEPTIONS OR VARIATIONS

1. It is sometimes permissible to omit the call designator of the station you are calling BUT only after communications have been established and no confusion will occur. Don't waste time, by using superfluous callsigns.
2. The term "THIS IS" is used to separate the FROM and TO callsigns. If, and only if, confusion will not result, omitting the "THIS IS" phrase is permissible.
3. If you are the calling station and you omit your own tactical callsign, you can create confusion. In certain situations, such as quick replies between operators, it can be accomplished without confusion. You must NOT use this simplification where messages can be interpreted incorrectly.
4. Elimination of the words "OVER" and "OUT" is possible where it doesn't introduce problems. Unkeying after your message implies "OVER". To comply with FCC regulations, you must give your FCC assigned call every ten minutes OR at the end of a series of exchange communications, whichever comes first. Giving your callsign can imply an "OUT" ending. Should giving your call cause any confusion, do not hesitate to add the word "OUT". In HF single-sideband radio, it is necessary to say the word "OVER".

RADIO PROCEDURES DURING EMERGENCIES

1. Identify yourself at the beginning of each transmission especially where confusion may result if omitted.
2. Identification is a requirement of the FCC. Stations must give a complete station identification at least once in a 10-minute operating period, particularly when tactical calls are being used.
3. Listen before transmitting. Be sure you are not on the air with someone else.
4. Know what you are going to say before you push the mike button; in other words, engage your brain before you put your mouth in gear.
5. Hold the transmit button down for at least a second before beginning your message to insure that the first part of your message is not cut off.
6. TALK ACROSS THE FACE OF YOUR MICROPHONE. This technique makes the communications more understandable. In other words, hold the face of the microphone almost at a right angle to your face.

7. Speak slowly, distinctly, clearly, and do not let your voice trail off at the end of words or sentences. Give each and every word equal force. For some this takes a lot of practice and conscious effort but do it.
8. Never acknowledge calls or instructions unless you understand the call or instructions perfectly. If you do not understand, ask for a repeat.
9. When you have understood the message, acknowledge the receipt with the words "copy", "received" or "acknowledged." The word "copy" is preferred and NEVER the word "QSL."
10. The word "break" is never used UNLESS there is an emergency. Give you call letters to gain access to a net.
11. Always acknowledge calls and instructions. Nothing is more disruptive to the smooth flow of communications than dead silence in response to a message. If you cannot copy or respond to the call immediately, then tell the caller to say again or stand by. Otherwise, acknowledge each call immediately.
12. Under stress, many operators have a tendency to talk too fast. ACCURACY FIRST, SPEED SECOND.
13. At times, radio conditions are poor and words must be overly exaggerated to be understandable. In general, speak very slowly and distinctly to carry through static and weak signals.
14. If your are relaying a message for another person, be sure you repeat the message exactly, word for word as it is given to you. If it makes no sense to you, get an explanation before you put it on the air. If necessary, refer the message back to the originator for clarifications.
15. There is no place for "Q" signals during official and emergency communications. They are too easily misunderstood, rarely save time, and often result in errors.
16. Do not act as a relay station unless Net Control, or another radio station, asks for a relay -- and you can fulfill the requirement with your station.
17. When transmitting numbers (house numbers, street numbers, telephone numbers, etc.), always transmit number sequences as a series of individual numbers. Never say numbers in combinations. Say "One three" rather than "Thirteen."
18. If a proper name needs to be transmitted, always spell it out using the ICAO phonetic alphabet. Do not use cute or self-invented phonetics. There is no place for them in official and emergency communications. Avoid using the phrase "common spelling" to reduce confusion.

(to be cont'd)

QRP FUN

By Bill Shanney, KJ6GR

Most of us have modern solid state rigs operating around 100 watts output in the HF bands. Many of these rigs have an RF power adjustment knob on the front panel which is seldom used since 100 watts is a good all around power level. Well my FT-1000D is adjustable down to less than 2 watts out and just for fun whenever I heard a QRP station calling CQ I gave them a call back at 5 watts. I was surprised at the number of solid QSOs I was able to have.

This past summer I had the urge to build something and the thought of building a QRP transceiver crossed my mind. I decided to purchase a kit since finding RF parts at reasonable prices is often difficult. I considered designs offered by A&A Engineering (Gary Breed, K9AY design), Oak Hills Research (Spirit), and Tejas RF Technology (Backpacker II) to name a few. I chose the Spirit because it provides a full 5 watts output, both IF and audio filters, RIT and a built in keyer.

This kit took me several months to build in my limited spare time. QRP kits are not like the old Heathkits with detailed step-by-step instructions, you get a bag of parts, pc boards, chassis and adequate assembly and alignment instructions. The only problems I encountered were when I was tired and had trouble finding part locations and when I didn't read the instructions carefully.

Alignment was straightfoward but required a counter and a scope, I used my transceiver a in place of a counter and it worked fine. Several kit vendors will align your assembled unit for a nominal charge which is a lot cheaper than buying a scope.

It was very exciting getting this rig on the air. There's something real special about using a rig you built yourself that can't be described in words. The rig works great, the full QSK transmitted signal is clean and the CW characters well timed. The receiver sensitivity is comparable to my FT-1000. I did have a problem with some spurious signals caused by a local high power broadcast station but this was quickly cured using a high pass or band pass filter on the antenna input.

So far I have had QSOs all over the US and Canada with signal reports ranging from S-4 to S-9+ which proves that 5 watts is adequate for most QSOs on 30 meters. Am I ready to give up my FT-1000D ? NO WAY! The flexibility of a modern multi-mode, multi-band rig with two stable VFOs, selectable IF filters, noise blankers, notch filters, etc. is sure nice to have.

QRP does have its place in modern amateur radio for:

- Portable or mobile operation using battery power
- Clandestine operation from apartments, condos or hotel rooms
- TVI reduction
- Just plain fun

Best of all it is cheap. If you want to try CW but don't want to spend a fortune on a big rig it's a great way to go.

See you on the bands. 73 de KJ6GR.