

**TARC Bulletin**  
**Electronic Edition**  
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**November Elections: Nominating Committee Reports**

The nominations committee appointed by Vernon Starnes, W5WDW, TARC president, has presented the following slate of candidates for club offices in 1996:

For president,, the candidates are Steve Snyder, N5TSZ; Frank Couillard, N2HNU; and Mike LeFan, WA5EQQ.

For vice president, the candidates are Richard Pratz, N5XKU, and Bob Chaison, N5MCF.  
For secretary, Steve Bosshard, NU5D.

For treasurer, the candidates are Kay Schlieper, KB5DC, and Julie Couillard, KB5SXQ.

For director, the candidates are Steve Bosshard, NU5D, and Randy Friesenhahn, KA5IIA.

Nominations will be accepted from the floor prior to voting.

The election will be by written ballot.

This year's nominating committee's chairman was Laban Pierce, N5OCX; John Gallure, KC5IJL; and Gerald Richmond, N5ZXJ.

**Ham Expo Was Big Hit for TARC**

Ham Expo '95 is now a successful page in TARC's history. Eric Laird, N5WFU, did another outstanding job as general manager. Thanks go also to the dozens of you who worked to pull it off.

Kay Schlieper, KB5DC, handled the cash register, Myron Mesecke, N5TFK, bossed the tailgate arena and did PA work. And many of you can be pleased with your work in security, selling tickets, parking vehicles, helping vendors, and dozens of other chores.

Chuck Button, N5FFY, made sack lunches for each of our commercial exhibitors. John Gallure, KC5IJL, brought cold drinks and donuts. Margie, N5WUO, and Vern Starnes, W5WDW, brewed the coffee.

Praise for a job well done goes to all who helped with talk-in on Friday and Saturday:

Mike, WA5EQQ; Bob, W5TNZ; Frank, N2HNU; Terry, KC5EGC; Bob, W7KPW; Gordon, N5MRZ; Ron, W5WRE; Randy, KA5IIA; Winston, KC5LIK; Bill, N5TYM; and Gerald, N5ZXJ.

Thanks also to KA5IIA for conducting the transmitter hunt. And many thanks to everyone--to you--for making this Expo another one to remember!

**HAPPY THANKSGIVING, Y'ALL!**

**FCC will be sending renewal notices**

If your license is due to expire in December 1995, you'll be in the first group to get a renewal notice from the FCC. They'll send the new short form 610-R via first class mail. All you will do is sign, date and return the form to the Commission, assuming that no substantial changes are

needed.

Simple misspellings and corrections may be made on the 610-R. But changes of name, address, or other items must be done on a regular form 610. There is no fee for filing either the 610-R renewal form or the regular form 610.

### **Brazing rod: cheap, yet useful stuff**

by Howard Lewis, KB6VGF

Don't overlook bronze brazing rod; it has many uses in and above the Ham shack. Brazing rod comes in 1/16, 3/32, 1/8, 5/32, 3/16, and 1/4-inch diameters-and in 3-foot lengths. ...I keep a small stock on hand, in a variety of sizes.

Bronze is nearly impervious to damage by water; it stands up well to weather and even submersion. In many ways, it beats steel or aluminum for a range of antenna uses. Remember: rust never sleeps. (Just avoid unprotected contact between dissimilar metals, such as bronze and aluminum, to prevent electrolytic corrosion-AF6S). You can bend brazing rod, and you can cross-drill it. It also solders easily.

You can...thread certain sizes directly. Use 1/8-inch rod for 5-40 threads, and 5/32 rod for 8-32. For 10-24 or 10-32 threads, use 3/16-inch rod. ...You can thread 1/4-inch rod for any 1/4-inch thread.... Just clamp the rod in a vise and use a button die in a die stock. Brazing rod is available at hardware and auto parts stores, and it's cheap. So stock up. You'll be glad you did.

--from the ARC of El Cajon (Calif.) "Counterpoise," Dave Manescu, W6CCM, editor. Via ARNS.

### **Heard At the Coffee Shop**

...The Texas Department of Public Safety has a statewide emergency telephone number that could be helpful to Hams. It operates 24-hours-a-day, 7-day-a-week and may be call from anywhere in Texas. The number connects you with DPS dispatch in Austin, who can contact the DPS, sheriff, or other agency nearest your location. Carry the number in your mobile. The DPS hotline number is 1-800-525-5555.

...Gerald N5ZXJ has his new repeater on the air on 145.230 MHz.

... John KC5IJL says Bell County REACT is looking for Amateur Radio operators willing to train as monitors and to invest time in Bell County. For info, visit any REACT meeting on the third Thursday of each month at Jody's Family Restaurant at S. First St. and Ave. M in Temple. Meetings begin at 7:30 p.m. Come early to eat.

...See you at the TARC meeting on Nov. 2, at 7 p.m. It's Election Time, so this is an important one. See you!

### **Digital Signal Processing (DSP): What does it mean . . . ?**

Digital Signal Processing is a term you will be hearing a lot about in the future. This fascinating new technology allows you to tailor both your transmitted and received signals in ways that were only dreamed of just a few years ago.

Fundamentals

The normal transmitted (and received) signals that you hear on the bands are analog signals.

These signals usually have some level of distortion and noise riding on the signal. In the past, it was not practical to do much about removing this distortion and noise since most noise is amplitude modulated, just like the human voice.

The recording industry discontinued using analog techniques and started digitizing their signals. The analog signals were applied to sampling circuits that generate a staircase type waveform similar to that shown in Figure 1. By using this sampling method of signal conversion they were able to remove much of the noise that was present on the audio signal. Any noise that might be present on the signal between the sampling periods is ignored.

Advanced Features Digital Signal Processing techniques do not end with converting the signal into a digital waveform. The signal is also applied to programmable filter circuits that let you select the desired audio passband.

Why DSP?

One of the most frequently asked questions is why bother with DSP at all when changing crystal filters will allow adjustment of the audio passband?

Just adding analog filters to a circuit will not remove as much noise as converting the signal from analog to digital. Nor will analog filters allow you to tailor the audio passband as easily.

Analog filters are also unable to provide the improvement in the transmitted carrier and sideband suppression that are realized with DSP circuits.

The bottom line is that any device that will help you to break through a pile-up, or help you pick a signal up out of the noise is a definite advantage. Digital Signal Processing provides just such an advantage and is something you should seriously consider when purchasing your next rig.

The digital signal is rounded off to the closest step voltage each time the analog signal is sampled. This process is called Quantization.

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### **Good operating habits**

-submitted by Floyd Bumpus, N5EL.  
and Dave Bumpus, WB5YTH

Use lowest power consistent with good communications. Learn how to use a repeater. Listen a lot before you transmit. Your call, transmitted one time only, is all you need to access a repeater: "WA5WYY N5EL" is sufficient when calling someone. Do not call CQ on a repeater nor in simplex vhf/uhf operating. Kerchunking a repeater without ID is illegal. Key up once only with ID to see if you are making the repeater. Better to listen first or call the desired station. Your callsign alone is identification. Saying, "This is N5XYZ for ID" is unnecessary. You don't legally have to make another transmission if the station you called does not answer. Transmitting "Nothing heard" and your callsign is unnecessary. The "pause that refreshes" allows other stations to participate in ongoing conversations. Count to 3 after you hear the courtesy beep before you key up, to allow others to access the repeater. Be sure to turn transmission over to a specific station when in group communications. ...This keeps doubling and confusion to a minimum. Keep transmissions short.... You must identify with your full callsign [each 10

minutes] during the course of a contact. You'll want to ID when entering a conversation in progress. Never use just your callsign suffix to enter a repeater or other net. The FCC requires the use of your full callsign at all times. After you have made contact on a repeater, move to a simplex frequency if possible. Don't monopolize the repeater. Don't be branded as "inconsiderate." Courtesy breeds courtesy. Don't use Q- signals or other brevity codes that aren't recognized in Amateur Radio. Q- sigs are to be used on CW circuits only. Use voice and keep it plain! Say, "My location is..." instead of "My QTH is....," etc. "N5EL, Nan Five Easy Love." What is wrong with that? Simply the old wartime phonetic alphabet. N5EL, November Five Echo Lima is now correct. Memorize the new International Civil Aeronautical Organization (ICAO) phonetic alphabet. It is recognized in worldwide communications. There is nothing more confusing than trying to decode "made up" or outdated phonetic alphabets. When you want a repetition of a word or group of words, use "Say again, callsign, word after..." (word before, or whatever).... Nan Five Easy Love, Foxtrot Love Oboe Yoke Dog, Roger Over Out, We're clear off, going down and out. Ever hear that before? Do you like that ending? Outdated phonetics, no brevity, huh! Or do you like the ending message below, which is courteous, short, simple, and to the point? It is a commonsense, habit forming, legal ending, goodbye ID!

N5EL Clear.

### **ARES vs RACES: What's the score?**

When it comes to emergency communications, what's the difference between the Amateur Radio Emergency Service (ARES) and the Radio Amateur Civil Emergency Service (RACES)? ARES consists of Amateurs who have registered with the ARRL (ARES is the emergency communications arm of the League). Any Ham may join ARES. The task of ARES is to handle emergency messages, including those between government emergency management officials. RACES is similar to ARES in some respects, but it is managed by the U.S. government under the Federal Emergency Management Agency (FEMA). RACES is made up of volunteer Hams. Its mission is more restricted, however, to providing government-to-government communications for state and local civil defense organizations and emergency preparedness agencies. Any Ham can join RACES, but must be officially enrolled in a Civil Defense organization. To register with ARES, complete ARRL Form FSD-98 and get it to Warren Hart, AA5YI, Bell County EC. To register with RACES, contact Charlie Schlieper, N5TD, local liason.