

NCDXC

THE DXer

NORTHERN CALIFORNIA DX CLUB, INC., P O BOX 608, MENLO PARK, CA 94025

DECEMBER 1977 VOL. XXXI, NR. 5 REPEATER WR6ACZ 147.96 IN, 147.36 OUT

MEETING NOTICE

PLACE: CABANA HOTEL, Los Altos, across from Dinah's on the El Camino

DATE: FRIDAY, 9 DEC 77

TIME: 6:30PM Cocktails, 7:30PM SHARP is Chow Time

MENU: Entree is Breast of Chicken with all trimmings. Price: \$8.00

AGENDA: Our Traditional Christmas Dinner. Please bring a small gift (\$2 or less), OM for OM, YL for YL. W6 Santa Claus will be on hand with his usual wit and a ho-ho-ho! Also, election of 2 Board of Directors.

K6DC and W6OAT terms expire, but are eligible for re-election.

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ANNOUNCEMENTS

- 1) Here's wishing each of you a very Merry Christmas! If we pause for a moment to count our blessings and our countries bagged, and not worry about the ones we missed 'cause there'll be more, we DO have a lot to be thankful for. Just think - 1978 and SUNSPOTS!
- 2) Last call for DUES. Our Treasurer Maury, W6KJG says we have a handfull of unpaid-up members left and this is the last reminder. Those not paid by DEC 31st will be sadly dropped from the Club roster. Plunk. Just think - this will be your very last DXer. RIP
- 3) NCDXC Japan Trip. Bob, K6SSJ and Roy, W6FOJ are diligently working on a new wrinkle for this trip to Japan for November of 1978. It's too early to talk about yet, but if successful it will -- well, you'll see! Start saving those YEN!
- 4) CQ WW DX CONTEST. We had a big turn-out and, at the last moment we turned it into a NCDXCC effort to include the enthusiastic gang from the NCCC. So please submit your score crediting the Northern California DX and Contest Cooperative, and send a copy of your summary sheet to either N6GG or Tom Schiller, N6BT (Pres. NCCC) Box 696, Los Altos, Ca 94022. We need to tabulate a list and summary to submit to CQ Magazine for NCDXCC credit for your score to count. Phone logs must be postmarked no later than DEC 1, and CW JAN 15 to count. TNX a Meg for your effort!

P.S. If you used the 2M Repeater - and I hope you did, 'cause it really helps your score and helps find new countries for you - don't forget to say so in your summary sheet, 'cause it counts as a multi-op score this year. We owe a great big thanks to those who gave of their time for Net Control of the 2 Meter Machine. The following handled the Net on the phone weekend: N6AN, W6BJH, W6JZU, N6NP, W6RGG, K6UD, and K6WC.

ANNOUNCEMENTS (Continued)

- 5) A BIG welcome to our newest Members; WA6JUD, WB6NHF, WA6OEY, and W6RQ.
- 6) MARATHON CONTEST RESULTS. This is our 3 month Contest vigil (June 15 thru Sept 15). Numbers indicate different countries worked.

<u>PHONE</u>	<u>CW</u>	<u>MIXED</u>
K6SSJ . . 128	K6DC . . 105	K6UFT . . 106
WA6AHF . . 93	N6AN . . 102	K6SMH . . 89
WB6EXW . . 51	K6IXS . . 70	K6RK . . 77
	W6OL . . 40	K6YK . . 69
		W6SC . . 61
		K6WD . . 38

There was some confusion in determining the winners because the contestants had no written rules. As a result, K6UFT submitted his score without naming the category of his entry. Since he did indeed have a MIXED entry, he is rightfully declared the MIXED winner. We will try to locate the rules, therefore, and publish them in a forthcoming issue of the DXer that will clear the air for the future Marathon Contests. Our sincere thanks to everyone who participated. And to the winners, K6SSJ, K6DC, and K6UFT, each gets a plaque to be awarded at the International DX Convention in Visalia, April 22. CONGRATS!



This is a contributor's column intended for the Little Guns, to help them (us!) climb that DX Ladder. Please send your ideas - 200 words or less- to N6GG. If you have a topic you'd like to have dissected, send it along and we'll butcher it up for you.

PILE-UP II

The guys with the biggest signals, shortest calls and quickest reflexes are the ones who get thru the pile-ups first, right? Not always! A good signal is always an advantage, but not call letters or reflexes. Having been on the receiving end of some rather horrendous JA pile-ups from W6 and HL9, I have some knowledge of who gets thru and who doesn't. First, QSB will take even the biggest signal out of the picture. Send your call slowly and clearly. If the other station can't understand you, what good is it if you're loudest? The FCC requires full callsigns, but you can begin your call as the DX station is turning it back since he doesn't really need your prefix. Don't bother with phonetics for your prefix on phone, unless requested, and try waiting a second or two after the pile begins. While the quick ones are catching their breath for a second call, you can often pop in unmolested. Most operators will jump right in and then pause to see if the DX station has come back, leaving a moment of relative silence when we California QRPers can jump in. One or two calls is quite enough tho. After that the QRM builds to a constant level as everyone begins calling at random. By that point a good DX operator will either have several calls picked out or will QRT because nobody is listening. Don't be an alligator - all mouth and no ears!

de WB6RIU

REMOTE VFO - OR - REMOTE RECEIVER FOR CW DXING - WHICH?

Let's assume you have a good transceiver and your primary interest is CW DXing. Which would be most beneficial to add to your operating convenience - a remote VFO or a separate receiver? Since I have both combined into one, (I use a Kenwood R-599 as either a remote VFO or a separate receiver) perhaps I can shed some light on the pros and cons of this choice by stating both sides of the coin.

The versatility of the transceiver is somewhat limited as a stand-alone device because it requires some skill (lotsa practice!) in fiddling around with the RIT when trying to zero in on the station working the DX, as discussed in last month's DXer. However, the convenience of one-knob tuning is great and I hit a normal pile-up (what's normal?) in a transceive mode first, before resorting to splitting around, being careful to stay off zero-beat with the DX station. It doesn't win you any friends by QRMing the DX at zero-beat! This was also discussed in last month's DXer and briefly, the idea is to listen to the DX at a pitch that is well off of the critical sidetone pitch, thus assuring yourself that you won't transmit right on top of him.

The case for using a remote VFO is probably most popular, so let's see how it's used for CW DXing. In a pile-up situation you set the remote VFO on the DX station's frequency to listen to him because you know he's going to stay put. Since that old Axiom of zero-beating the station working the DX is still a good place to start, then the CW filter should be switched off so that you can hear more of the pile-up in order to find the guy working the DX station. You are now free to scoot around the pile-up with your transceiver as you switch back-and-forth checking the DX station's frequency. When you find the guy working the DX you can zero him or go higher or lower as you wish. The CW filter can be switched in as needed, but should be used sparingly as it puts "blindness" on your ability to hear all of what's going on. The biggest disadvantage of the remote VFO is that it is necessary to switch back-and-forth between the remote VFO and transceiver. Also, most of the time the volume control of the transceiver has to be adjusted each time you switch.

An alternative used by some DXers is to leave the transceiver on the DX station and use the remote VFO to spot (zero-beat) the guy working the DX. That was the method used in the old days, before transceivers. I find this is more cumbersome now in as much as you must find the station to zero-beat while not tuning away from the DX station. Sometimes the guy working the DX can be quite a bit lower in frequency than the DX station. Since most of us are using the USB filter, ~~or the CW filter which is also on the high side of resonance,~~ you would have to tune away from the DX station's frequency quite away to find the guy to zero-beat him, and you might lose track of where you are and where the DX station is.

Using a remote receiver is much simpler to operate than a remote VFO. Having located the DX station initially with the transceiver, the remote receiver is turned on and set to the DX station, using either split phones or combined audio to enable listening to both sets. The remote receiver can now be left alone, with the sharp CW filter in place. You are then free to use the transceiver to scoot around, finding the best place to transmit, using the sidetone pitch to zero-in on your competition. There's an additional bonus for the remote receiver when operating on 160 Meters. Some of the DX is up at 1995KHz (where you can't transmit) and they are listening around 1815. If you were using a remote VFO you would have to re-adjust your preselector dial (which is also your drive tuning control) each time you switched over because the spread is so great it can't be set to cover both ends of the band at the same time. A remote receiver does away with that problem.

CW DXING WITH THE TRANSCEIVER AND THE CW FILTER

Last month's DXer mentioned the need of a CW filter in a pile-up. The TS-820 CW filter's bandwidth is 500 cycles, which is only 20% of the USB filter. While it is mandatory to be able to hear the DX station in the pile, the CW filter places severe restrictions on your flexibility in also being able to hear your competition off the frequency. (See Fig. 1)

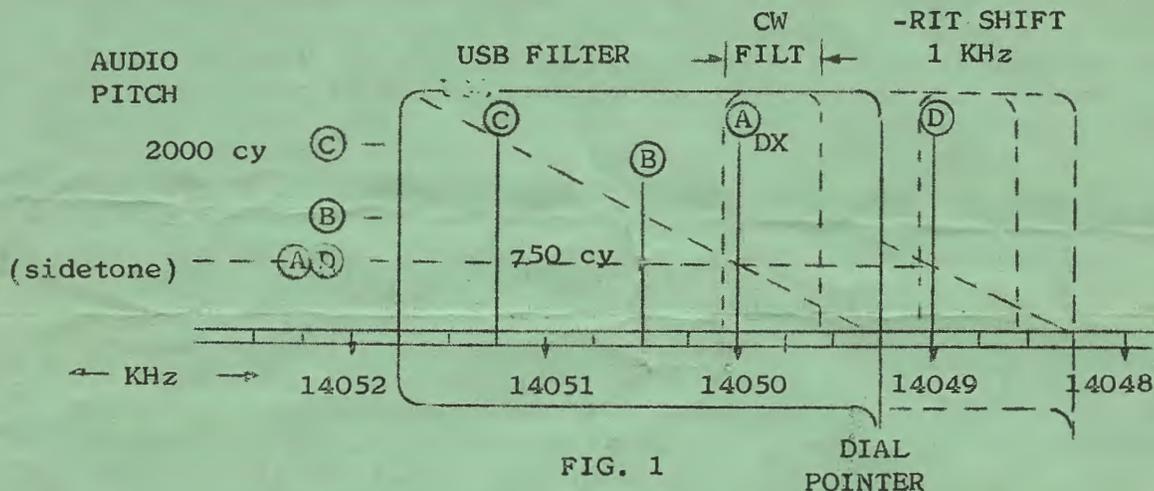


FIG. 1

Notice that the CW filter's high pitched edge is about 800 cycles and the low edge is 300 cycles. The approach to a pile-up with the 500 cycle window is analogous to having blinders on, in comparison to looking at the broader window of the USB filter. However, when QRM is severe, as huge pile-ups are, the narrow CW filter could be used in conjunction with the RIT control, in order to find the station working the DX, without tuning off the DX station's frequency. (Simply engage the RIT and tune it to find the station working the DX) This method is handy in a big pile-up when the station working the DX is lower in frequency than the DX, such as D in Fig. 1 because the USB window mostly sees the stations higher frequency than the DX.

OK - you've located D as the station working the DX A. You know that A is receiving D so that's where you want to transmit - right on D where the DX is listening. Since your dials are reversed for doing this you must move the Main Tuning Dial down 1 KHz, and move the RIT up 1 KHz. (Check with the sidetone pitch) Now you are all set to transmit on D and receive on A since the RIT gets disabled on transmit.

Notice how the CW filter is so restrictive - it's all you can do, short of moving the Main Tuning Dial back and forth. On the other hand, if you're good at picking calls out of the pile, using the USB filter would not require any of the above. By moving the Main Tuning Dial down 1 KHz you will be able to transmit right on D frequency but you'll now receive A at a pitch of 1750 cycles. (The CW filter won't pass signals with a pitch above 800 cycles) However, most transceivers with a CW filter cannot transmit CW in the Sideband position of the Mode switch. The way around this is to leave the Mode switch in the CW position and switch the filters by an additional switch.

It is interesting to note that the new Drake TR-4CW transceiver has the front panel choice of transceive CW with either the 2.1 KHz or 500 cycle filter. As mentioned last month, the Kenwood TS-820 is easily modified to do this, using the Digital Hold (DH) push button for switching filters.

de N6GG

REMOTE RECEIVER = CONTINUED

However, the remote receiver has 3 other problems. It is necessary to parallel, or somehow combine the antenna inputs to both the transceiver and the remote receiver. Since the transceiver antenna terminal is also used for transmit, you can't use it because you end up pumping 100 watts of RF right into the receiver - with disastrous results! Of course you could install another antenna change-over relay on the receiver. On the TS-820 I use the transverter input for the remote receiver, which gets switched off during transmit. The second problem is dead spots (suck-out points) at different places and different bands. It's created by paralleling the 2 receiver input tank circuits without some form of isolation. Perhaps some enterprising soul can come up with a circuit for an isolation stage such as a broad-band emitter follower or source follower that can be used in the antenna lead. I found out (the hard way!) that the R-599 was completely outperforming the TS-820 on 10 Meters, until I manually switched the antenna coax!

The third problem is muting the receiver during transmit, and this requires a relay that gets picked during transmit. Some transceivers have a spare contact available for this, and most communications receivers have provisions for muting but it has to be hooked up to prevent your ears from being blasted by your own transceiver's transmissions.

de N6GG

T vs PI MATCHING

Sometimes dealing with very low impedances such as with transistors, the T matching network is more convenient than the Pi. The T may be found from the Pi using the transformations in Fig. 1, where the signs of the reactances are implicit in the reactances shown.

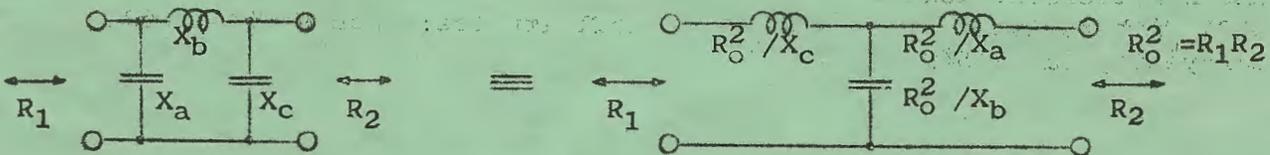


Fig. 1

For a typical case of matching 5 ohms in a high-powered transistor collector circuit to 50 ohms, the Pi required for a Q of 12 at the input vs. the T which is equivalent, are shown in Fig. 2. Component values are for 14 MHz, indicated in parenthesis in uh and pf.

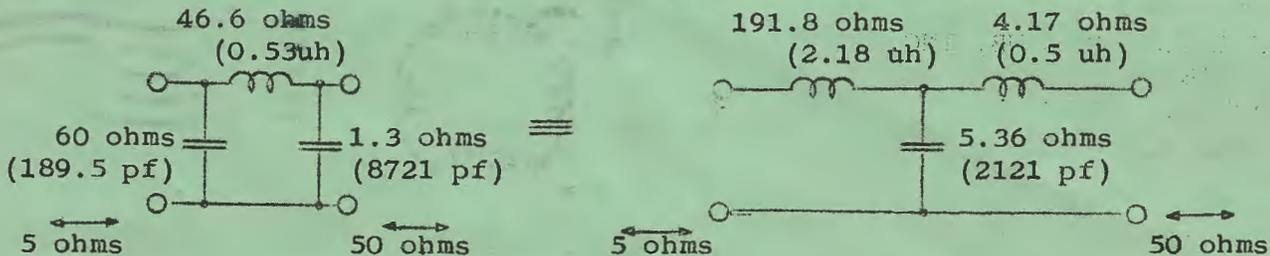


Fig. 2

de W6MUR

GOOD GRIEF!

He who calls twice as long as anyone else should be shot twice at sunrise -
- before the band opens.

de N6GG

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A non-profit amateur radio organization for the DX man. Founded in 1946.

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NCDXC REPEATER: WR6ACZ

Trustee: Charlie Kump, W6ZYC

Input freq = 147.96 MHz
Output freq = 147.36 MHz

Suggested Simplex = 147.54 MHz

NCDXC THURSDAY NITE NET:

On WR6ACZ each Thursday at 8:00 PM

NCDXC DX BULLETIN BROADCASTS:

W6TI, the NCDXC Memorial station, broadcasts DX bulletins each Sunday at 1800Z, or Monday at 0200Z on 14002 KHz.

W6TI Trustee: Bob Vallio, W6RGG

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