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# THE BULLSHEET

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Texas DX Society  
An ARRL Affiliated Club

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The Texas DX Society, P.O. Box 540291, Houston, Tx. 77254-0291

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## ANNOUNCEMENTS

MEETING NOTICE - The Texas DX Society meets the second Friday of each month except when changed by the Board of Directors. The April TDXS meeting will be held Friday, April 12th, at the Bellaire Hospital Professional Building, 6550 Mapleridge at 7:30 p.m.

WEEKLY DX & CONTEST NET - Just a reminder that each Tuesday night at 9:00 P.M. the Club sponsors a net on 147.96/.36. Participation by non-members as well as members is welcomed. The purpose of the net is to facilitate the exchange of DX, contest, and Club information within the amateur community. Your active support of this activity is encouraged.

BULLSHEET MAILING LIST - It is the club's desire to provide the Bullsheet free for all amateurs in the area within an interest in DXing and/or contesting. If you would like to receive our newsletter, simply send your name, call, and mailing address to Texas DX Society, P.O. Box 540291, Houston, Texas, 77254-0291. Visitors at the regular club meeting can request the monthly newsletter by providing their mailing address on the sign-in sheet. Articles or other newsworthy items from club members and other interested amateurs are hereby solicited by your editor.

SCOUT RADIO OPERATORS NEEDED - If you know any scouts who are also hams, there are two positions remaining for amateur radio operators at the 1985 Philmont expedition near Cimarron, New Mexico June 29th through July 15th. Responsibilities will include traffic handling, inter-crew communications, and emergency communications. Contact Bob Schaer, N5DIB at 713-343-0640 or 713-527-5170 for details.

LICENSING EXAMINATIONS - A Volunteer Examining Team consisting of three of the following ARRL Volunteer Examiners-N5AF, N5IF, KB5NX, K12IT, and WA5KOK-will give examinations for all classes of Amateur Radio licenses on Thursday, April 11, 1985 at the Tarkington Prairie Volunteer Fire Station. The station is located approximately 6 miles Southeast of Cleveland on Texas 321 near Texas 105. Novice exams will be given at 5:00 P.M. All others will be given starting at 7:00 P.M. A talk-in station, N5AF, will be operating on the Cleveland Repeater, KB5NX/R on 146.31/.91. A limited number of walk-ins will be accepted. Call Sam Neal, N5AF, at 713-592-2257 or 222-3274 if you plan to attend.

UPCOMING PROGRAM SCHEDULE - Word from Don, K5AAD, is that he has lined up several interesting programs for the upcoming months. A representative from Belden will attend the April meeting to talk and/or answer questions about RF cables. Future topics/speakers include: Rohn Tower representative, FOC, W5UN on EME systems, and a psychologist's analysis of the "the Ham Radio Contester." Your suggestions are invited.

MADISON MAY MOVE MENTIONED - Madison Electronics is scheduled to move on or about May 1st to 3621 Fannin. Don is requesting club help during the move. In exchange for the help, Don is planning a big garage sale from which the club will receive 10% of the proceeds. (I am told that the people helping in the move will receive first shot at the real "goodies" - Ed.)

THE PRESIDENT'S CORNER (de K2TNO)

The winter contest season is now behind us, but recently the bands have improved for DX in general. Russians have shown up again on 20cw over the pole, 00Z to 02Z; good JA openings 21Z to 00Z short path and strong Europeans short path in the mornings 13Z to 16Z. Also, both 10 and 15 occasionally pop through with solid openings to JA and VK/ZL in the late afternoons. Our runs at K5LZO on both bands during the CQ WPX SSB contest were brief but signals were 20 over at times. The lesson? Keep listening and calling CQ. If you get some QSO's, please put the info out on the repeater AT ONCE! It won't last long, so if you wait an hour the rest of us will miss the opening.

Sad to say, the hugh arrays in the stratosphere certainly help. But just for kicks I disconnected the coax between the 15M exciter and amp and copied KH6XX about S-7 during WPX. Not bad for a 3-foot shielded antenna!

Speaking of the repeater, I hope you will each take the time thank Kim K5TU for his work on the repeater. Besides the time actually spent at the test bench, Kim had to wrestle with interfacing his repairs with skeds - N5WW (access to the repeater site), K5VWW (test equipment) and his job (not getting fired). The machine sounds great; lets keep our fingers crossed.

Our membership committee consists of KD5SP, N5EA and KESFI. We will try to hatch a more defined manifesto about the qualities we are looking for in a new member candidate. I think there ought to be some concern for a number of aspects:

1. Longevity - a person should have been licensed for a few years and be active on the bands (no credit for 2M FM!).
2. Enthusiasm - a prospective candidate ought to attend our club meetings routinely, not just once in a while.
3. Participation - the prospect ought to make the effort to show up at antenna work parties, or Field Day, or multi - op contest stations. Furthermore, he/she should be active in putting out DX on the repeater. That's not only a help to all, but is a clear indication of an active operation.



4. Expertise - the prospect should be knowledgeable in some aspect of ham radio which would be a plus for the club. That could be such things as antennas, computers, contests, CW proficiency, no fear of heights, electronics theory, construction of home brew gear or what-have-you.
5. Compatibility - probably the most important, I would hope a prospect would be someone who would fit in with the rest of the gang. Criteria? Well, a good HF operator with a minimum of CB traits for starters. We're pretty high in visibility with all the DX and contest activity going on. I don't like to have to apologize for a clubber's sounding like a lid on the air. Other than that, I'm not planning to marry the prospect, just to talk on the radio. It's wise to keep in mind that right now there are diverse personalities in the club. People sort themselves out according to their mutual vibes as social creatures. Conformity shouldn't necessarily be required for membership.
6. Educability - We can't expect every prospect an Honor Roller, nor to be a proficient tester. Look for them to exhibit a desire to improve their proficiency.

These are only my thoughts on the subject. You might review your own feelings. The manifesto will be presented to the club at the April meeting. You should attend if you want to comment one way or the other. Since such a topic could be hashed over interminably, we will have to have a spirit of compromise as well.

Finally, I'm pleased that Bob Burns, W5SJS has agreed to serve as the club delegate to the Houston Ham Convention this year. See you all at the April meeting.

73, Bill K2TNO

P.S.: Note that I signed "73" not "73's." Please, gang, 73 means "best regards." "73's" is out of place and wrong - I guess it would translate as "best regardses." (mea culpa - Ed.)

DX REPORT (de KC5CP)

- FOOXX Clipperton Island April 3-11. All bands and modes. They were worked by several TDXS members while/mm, and say they are on schedule. May stop at XF4 on return route.
- KP1 Navassa Island April 3-9. All bands and modes by several Jamaican and other stations.
- 9U Burundi April 5-15 by ON5NT. All bands and modes operating somewhere in between FOOXX and the KP1! Low bands at 0400Z on 3502 or 3750.

TYOABD Dahomey/Benin by DJ6QT who was also in Togo as 5V8WS.  
KH4 Midway Island by KD7P and AH2U thru April 4.  
VK9X Christmas Island by VK6IR as VK9XB and VK6DU as VK9XG thru April 9.  
XT Burkina-Faso/Upper Volta by VE3CRD on CW & SSB 20 thru 80M.  
ZC4 Soverign Base Areas by G4SDJ on May 1-15, and possibly April 5 & 6.  
BY China BY5RA on 14226 from 2330-0230Z.  
3B7 Agalega & St. Brandon by SMOAGD & LA7XB rumored to be active April 3-7.  
3D2 Fiji Island by JH1RNZ April 15-23.

Propagation - Expected High Normal Days for April 5 - 10; 12-16; 22-26.

CONTEST CORRAL (de K5LZO)

CLAIMED SCORES AND RUMORS

ARRL DX PHONE

M/M W3LPL	1929/391
M/M KN6M/5	1275/332
M/M K5LZO	1100/318
M/M K5RVK	650/245
M/2 K2TR	1650/363
M/2 N2RM	1665/343
M/2 N5AU	1448/358
M/2 NR5M	1410/313
M/1 K4VX/0	1135/316
M/1 K3KG	1067/315
S/AB K1AR	1409/303
S/AB NA5R (K5GN)	890/303
S/AB W9RE	950/273
S/AB ZF2FL	6300/276
M/1 HH2CQ	7700/260

CQ WW WPX

M/M NM5L/K5LZO	3094/789
M/M NF5I/W5WMU	3200/???
M/S KN6M/5	2880/820
20 WB5VZL	1550/???

CONTEST RESULTS

Congrats to Dave N5JJ for this 7th place S/O finish in the ARRL 160 contest last December. This was in spite of the same bothersome power line noise that concealed the weak European signals that weekend.

Also congrats to NR5M (pretend I'm not writing this - Ed.) for his first place finish in the W5 call district in last year's all Asian CW contest (single band 20M).

CONTESTING FROM THE TRENCHES (de K5LZ0)

What happens during a DX contest when the bands start to close and you're unable to CQ for any more contracts?

I believe this is a problem we have all encountered from time to time. Our possible solution depends on whether you are single or multi-op. If you're mutli-op by now the fun is over so obviously you try to get someone else to sit down and operate. This is accomplished by showing the last hour's run.

But what if you're all by yourself. Then what? If you're on 10, 15, or 20 I have had some luck going high in the band around 14305, 21400, or 28700. It seems to get the weak G stations and other far western Europeans. If this doesn't work it's time to really dig in. Go up and down the band listening to only the weakest stations you can still read. If you hear any loud DX you've most likely worked it already. After a few times with no results, try moving the beam from Europe to JA or South America or the Pacific. This works sometimes if the band is not already completely closed.

The moral is don't be proud to answer the other guy. If we all CQ'ed all the time nobody would ever work anything!!!!

73 Chuck K5LZ0

SQUELCH TALE (de NR5M)

Desecheo '85 is history. Accountants are once again accounting, salesmen selling, servicemen servicing, administrators administrating, and students studying. The equipment is nestled all snug in the shack and everyone agrees that you shouldn't take ALPHAs on a dxpedition.

I for one was amazed at the ease with which the expedition came off. For every unexpected challenge there was some one/group to meet that challenge. We arrived to the news that two of the four generators were not to be. After a late, late night on the town, 7 A.M. found LZ0 and SP combining San Juan for replacements. Six hours and \$1500.00 later we were the proud owners of the requisite member of watts.

Two cars and two trucks hauled men and equipment from the East tip to the West end of Puerto Rico. A quick stop for munchies (food for 10 for 6 days) taught me a lesson I won't soon forget: Don't let LZ0 author your menu. I've never seen a bigger convention of vienna sauages and saltines. (I now know why he is so skinny!)

Tuesday night was spent on the deck of the good ship "My Dream." We left at first light-our biggest mistake. Four hours later, we arrived at our planned landing site only to find the seas too rough to put ashore there. The extra hour of sleep probably cost us 1½ days of total exhaustion. One-half mile down shore we found a suitable landing area.

Two hours and twenty-odd dingy trips later we were ashore. The 55 gallon drums of gas were towed from the boat to shore behind the dingy. (Bet you didn't realize that they float - Thank heavens!) Now our task was simple (at least in theory); all we needed to do was transport 2+ tons of equipment and supplies one-half mile over jagged rock and up a 50' cliff to the helipad. Six hours and 100,000 Kcals later 15 was playing (we opened just as the band closed). Seventy five was up around midnight and the rest is history.

17,000+ Qs is not a record. Desecheo is not THAT rare. And we didn't even win the contest. What we did do was turn what would have been just another week in the lives of 7 TDXSers into an adventure, an experience, an education. We also put a little joy in the lives of those for whom we were a new country (/band, /mode). It was the ultimate ham radio high -- to be wanted by so many and have so much fun in the bargain. Thanks gang for the memories.

73 George NR5M

Use of a second receiver with the  
Kenwood TS-930

Bill Schrader, K2TNO

### Concept

Sometimes it is helpful to be able to use a second receiver in conjunction with the main rig for spotting multipliers or working a pile up. This can be done using the TS-930/830/430 through the TRANSVERTER jack. On receive, the exciter's antenna line is brought to pin 8, and the receiver front end is brought to pin 5. This circuit is disabled on transmit. (This set up is provided so that a VHF converter can be installed between pines 5 and 8. Also, separate receive antennas such as Beverages connect to pin 5).

In order to use a second receiver from his antenna output on pin 8, a combiner circuit is required so that both receiver inputs will "see" a 50-ohm antenna. If the second receiver were simply connected in parallel here, both receivers would be desensed due to the impedance mismatch. Furthermore, various oscillations and counter hash would be heard on both receivers. To allow interconnection, I have used a circuit from the ARRL Handbook called a "hybrid combiner." This circuit is a signal splitter that provides a 50-ohm impedance at all three ports, and also provides about 50 db of isolation between the two receiver inputs. Thus, the two rigs do not "talk" to each other. The combiner was designed for use with the signal generators in receiver testing, but is ideal for the purpose described here. The circuit diagram is shown in Figure 1A, and the interconnection diagram is shown in Figure 1B. Wiring is shown for the Kenwood radios, but most other rigs also have similar inputs.

Now for the bad news. The combiner has about 6 db of insertion loss between the antenna port and either receiver port. Thus, there is some attenuation of received signals. However, 6 db is less than one S-unit; most rigs can easily compensate for this loss by nominal increase in the gain controls. If this loss is unacceptable on weak signals, a coax switch can be installed to remove the combiner for those occasions. The only other caution is to stress that the combiner can not be installed on the transceiver output; any RF signal more than a few milliwatts will fry the combiner, to say nothing of the damage to receiver 2!

#### Muting of Receiver #2

To be useful in contests, the second receiver should be muted whenever the main rig is in the transmit mode. This function can be accomplished in various ways, but depends upon the method required to mute receiver #2. The Kenwood rigs provide several options such as: (1) a pin in the TRANSVERTER jack which is 0 volts on receive, +12 on transmit. This voltage can be used directly to mute receiver 2 (done by me on my ASTRO-103) or to key a 12 volt miniature relay for muting the second receiver with the relay contracts. (2) A pin in the AUX jack which is floating on receive, grounded through a transistor on transmit; or (3) the line used to key the amplifier T-R relay may be suitable.

#### Audio Output Selection:

Normally, a second operator would use receiver #2. For split-frequency work or pile ups it is sometimes desirable for the operator of the main rig to be able to switch his head phones to listen to the second receiver. I have provided this feature at my station using a multi-circuit lever switch from Radio Shack. All audio lines run to a small minibox containing the switch; besides providing the switching function, this setup also gets all of the head phone cords away from the front panel of the main rig so they don't get in the way of the logs and dupe sheets. I use right-angle phone plugs, which don't stick out from the front panels. The circuit is shown in Figure 2.

Use of the Two receivers

The circuitry described allows the second receiver to be used independently anywhere in the band of operation, including directly on the transmit frequency. This feature allows a second operator to spot multipliers, open frequencies, or help the main operator to dig calls out of a pile up. Also, since rigs like the TS-930 already are equipped with dual VFO's, it might be interesting to try using the second rig to monitor a third frequency, such as the US portion of 75 meters while working split elsewhere. Since the major expense involved in purchasing the connectors, this set up is easily added to any shack.

The set up was tried at K5LZO/NM5L multi-multi during SSB WPX weekend. We used the second receiver on 20M during the day, and on 40M at night. It proved itself as a means of finding additional multipliers and DX, particularly when the main rig was not CQing. Since the outboard receiver had different filter characteristics we sometimes found signals copyable only on it and not on the main receiver. Also, on 40M we could tune in a signal on the auxiliary receiver down in the DX band and then switch the audio to the main operator. That way he did not even have to take the time to find the DX on the main receiver at all, but merely tuned its transmit VFO to the appropriate transmit frequency.

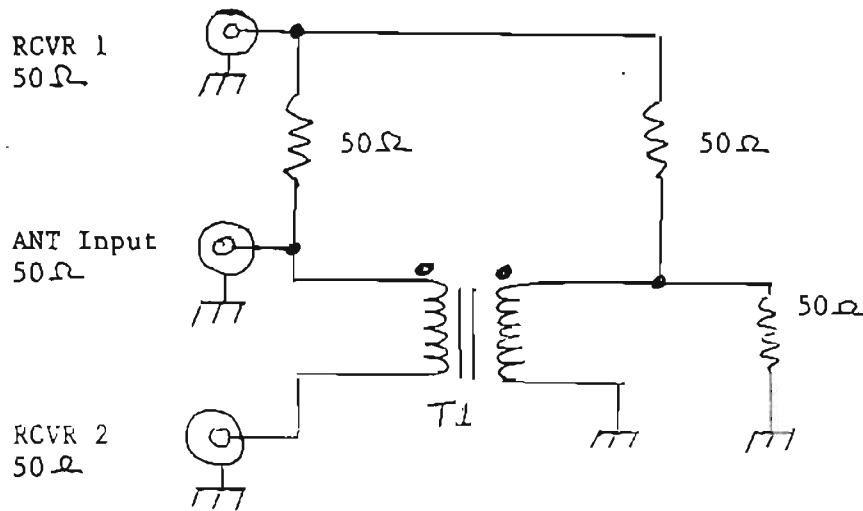
The slight loss of signal due to the combiner was not a problem. Weak Euro's on either band stayed weak whether the combiner was in the circuit or not! This set up ought to be useful on all bands. A spare 75A4 or R4C that has been retired to the shelf ought to find renewed useful life in this scheme. For CW WPX, we certainly will have outboard receivers set up in this way on practically every band.

P.S. One other useful feature: the spotting receiver operator sometimes comes across an open space in the band and can suggest this spot for CQing.



FIGURE 1

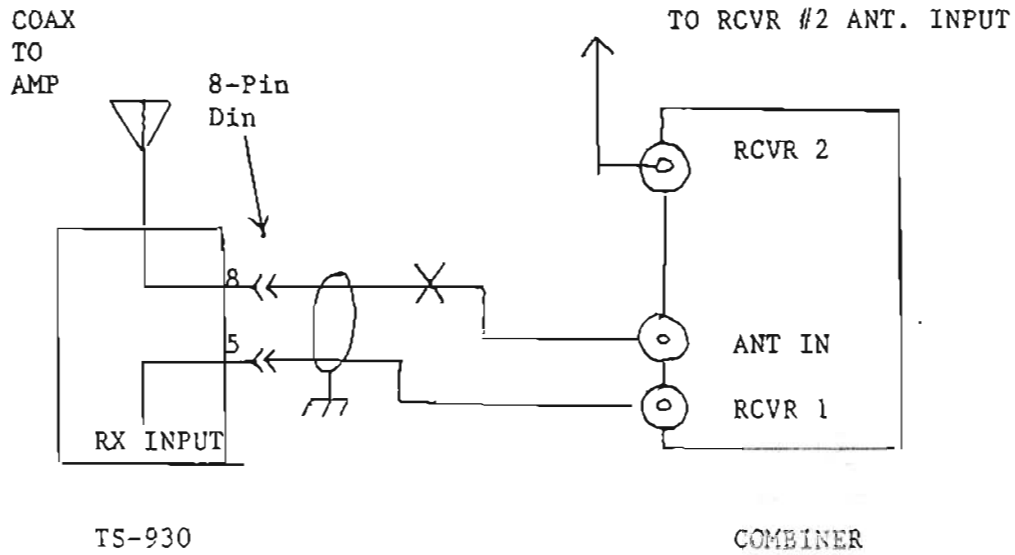
A. Hybrid Combiner Circuit -  
from ARRL Handbook



Keep all  
leads short

T1 - 10 turns bifilar wound on  
FT-23-72 core

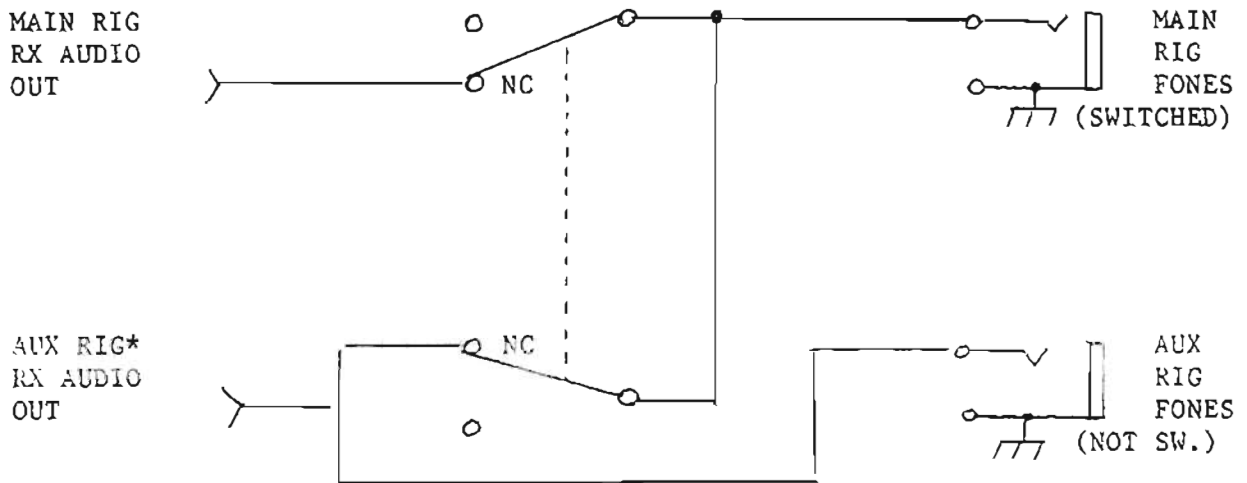
B. Installation on Kenwood TS930/830/430 through transverter DIN jack



Use RG-174 or RG-58 for all leads.

Option: Install RX Interference filter at "X" to protect both receivers in multi-transmitter station.

FIGURE 2  
HEADPHONE SWITCHING BOX  
K2TNO



LEFT POSITION:        MAIN PHONES TO MAIN AUDIO  
MID POSITION:        MAIN PHONES TO BOTH  
RIGHT POSITION:      MAIN PHONES TO AUX AUDIO

\*AUX RIG CAN BE EITHER SECOND RECEIVER OR 2M FM RIG FOR MULTILIER INFO.

ANNOUNCEMENT OF PACIFIC DXPEDITION (de KZ5M)

This is to announce my intention of organizing a Pacific Dxpediton for memebers and friends of the Texas DX society. This is a very early announcement but there is a reason for it. I want any and all possible trip participants to have plenty of time to consider the trip so that finances and time off can be arranged.

Three types of expeditions are being considered:

- A) XF4 to be done "XE2FU" style
- B) Palmyra and Kingman Reef with teams on both islands
- C) Kingman Reef by itself (only for the hardy types

POINTS TO CONSIDER

- 1) Money - Estimated cost per individual is \$2500 to \$3500 depending on the ultimate destinations;
- 2) Time - Time away from Houston: XF4-7 days; others - 2 to 3 weeks;
- 3) Who can go - TDXS members and friends. Trips A & B obviously will allow more people to participate. Trip C probably must be limited to 6-8 participants.
- 4) Management Plan - The DXpeditions organizations will be structured much like the mangement plan used for the XE2FU trips.

The TDXS has learned a lot about what it takes to pull off a good show. We paid our dues at XE2FU and KP5. I hope to able to use the lessons learned on these two trips to put together a fun, somewhat thrilling yet safe DXpedition to an exotic Pacific spot.

Persons considering participating need to consider more than simply "Have I got the bucks?" and "Can I take off for a couple of weeks?" There is a level of danger in each of the three trips that must be considered. My #1 goal will be sound life-safety planning but I can guarantee that you will take more chances of injury than most have been exposed to in a long time. This statement is not a scare tactic - it's just a statement of fact. Slight injuries must be simply treated and worked around. The complete trip cannot be cancelled or shortened because one participant is somewhat uncomfortable. The trip objective would still hold priority. Rescue missions will be difficult to arrange from all three islands therefore only true life threatening injuries would justify starting the machine in motion to effect an emergency departure. To lessen the possibility of an injury or medical situation reaching emergency proportions, I'm going to attempt to have at least one EMT trained individual included regardless of the destination.

Another thing that will be considered, particularly in the case of

Kingman, is personality compatability and individual reliability traits. Thing about six guys on a pile of sea shells 6' x 750' that cannot get along or work reasonably well together. How about the workload if one or two let down appreciably? These trips cannot be "every man for himself." Teamwork is a must if success is to be achieved and if all participants are going to have a good time with lots of pleasant memories to take home. For most, this trip may be a once in a lifetime adventure and it would be horrible to ruin it by mixing apples and onions in the same basket.

One possible outcome of the upcoming pre-trip planning phase is a recommendation of doing the KH5K and/or KP6 trip in 1986, and XF4 in 1987. Regardless, the information gathered will be useful for future consideration.

What I would like now is to hear from people who are interested in participating in any or all of the possible trips. I need to know people count to even get through the "should we or shouldn't we" part the feasibility study. Call me and let me know your thoughts (home: 343-1060, work: 776-2500)

73 Dennis KZ5M

RESULTS OF N5WW HAM RADIO IQ TEST

Bill, K2TNO	93%	1st Place - tie
Dale, KG5U	93%	1st Place - tie
Dick, NF5Z	75%	3rd Place

Questions 3 and 21 were not counted in the scoring.

(All entering contestants win a year's free subscription to the Bullsheet. Thanks for your participation - Ed.)