THE BULLSHEET

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Texas DX Society

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Contest Chairman:	K5LZO	Chuck Coleman	KC5CP, K5LZO
DX Chairman:	KC5CP	Mike Davidson	

ANNOUNCEMENTS

MEETING NOTICE - The Texas DX Society meets the second Friday of each month except when changed by the Board of Directors. The November TDXS meeting will be held Friday, November 8th, at the Bellaire Hospital Professional Building, 6550 Mapleridge at 7:30 p.m.

LOST AND FOUND is a former TDXS member Ricky Neal, WB5LVL (son of Sam N5AF). Sam reports that his son is currently in the U. S. Marine Corps assigned to guard the American Embassy in Algiers, North Africa. He can be contacted as follows:

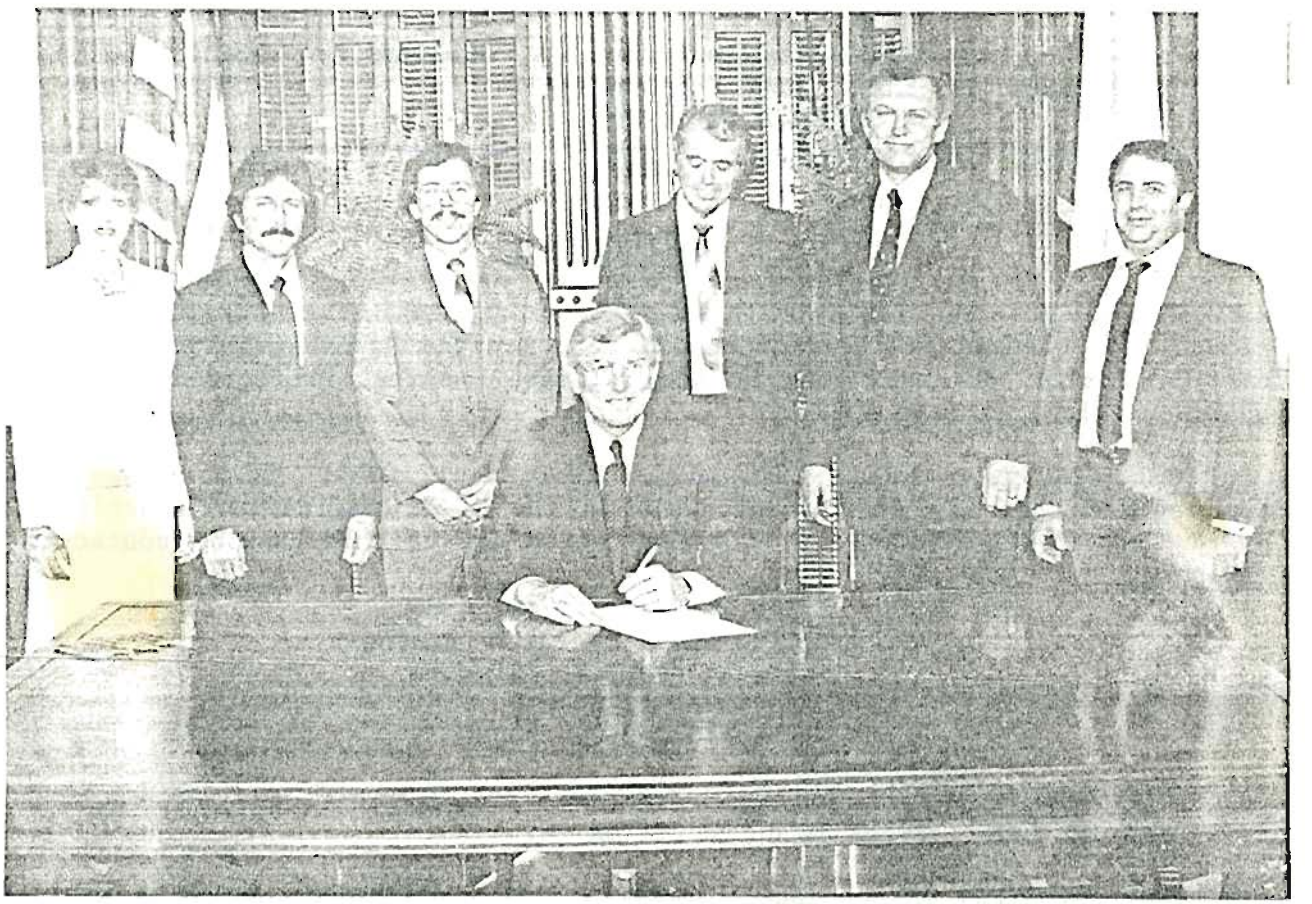
L/CPL Richard E. Neal USMC
Marine Security Guard Detachment
American Embassy - Algiers
Department of State
Washington, D.C. 20520

CONGRATULATIONS to K5DX and KC5M for new DXCC endorsements. Sharp has 357 mixed and 352 fone; Frank is up to 211 on CW.

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 to all amateurs in the area with an interest in DXing and/or contesting. If you would like to receive our newsletter, simply send your name, call, and mailing address to the 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.

THE PRESIDENT'S CORNER (de K2TNO)



L to R: Unidentified Female, NA5R, KZ5M, The Guv, N5DC, K2TNO, K5RC

It's about time to wrap up the story on the Armadillo County request. Seven of us went to Austin on October 25th for the signing ceremony (photo on page 2), which was mercifully brief. They herded our group in as the 13th of 19 groups that day. We were part of a wild assemblage. Sandwiched between serious matters like Diabetes Week came stuff like Dogcatcher's Appreciation Week, anti-pronography proclamations and a bunch of egg-decorators. We felt right in place.

The funniest moment occurred as the Guv was greeting us; he congratulated us on our "fine job down in Mexico." That prompted all of us to wonder how Mark White had heard of XE2FU and the DX contest two years ago. Seems he had in mind the Mexico City disaster...

Now, we have the proclamation and we can plan ahead. I would like to see some sort of club effort from each official locale on its anniversary day. (The Alamo, San Jacinto Monument, etc.) Now that we're an official Sesquicentennial event, I'm confident we can pull that off. Ideas are welcome - but if you suggest something be sure you're willing to run it!

Once again, the club made good use of the repeater swapping multipliers during CQWW SSB. We hope that some of you non-contest types were able to use the info.

Finally, I'm assuming everyone will be on for SS fone in the middle of November. We will need all the scores we can get, so please try to make some operating time available.

73 Bill K2TNO

CONTEST CORRAL (de K5LZO)

CONTEST RESULTS

FIELD DAY

Well gang we got it strapped on us. K2NJ, the Cherry Hill Radio Association, took top spot in 4A. TDXS came in second. We must remember that we did not go out to win but rather to have our CW vs. phone competition. Still a good effort by all. I will remember the help we had this year from the whole club.

Below is a comparision of the top two scores in 4A. You will note that the Cherry Hill gang took greater advantage of the 2 for 1 point count on CW and bested us at our own game. It is obvious that the next year we will have to choose between winning and "doing our own thing."

	TDXS	CHERRY HILL
CW	1795	2622(172 Novice)
Phone	2582	1528
Total	4377	4150

CW BAND BY BAND

	TDXS	CHERRY HILL
80	267	572
40	548	933
20	635	861
15	251	235
10	94	21
	1795	2622

Thanks to W5ASP for getting the above info from ARRL HQ.

CQ WW PHONE

The Battle of the Multis: NR5M v. N5AU

George and crew put in a great effort for a first time out, although they fell shy of N5AU's totals. Time will show an improvement. Conditions turned out to be excellent. The following is a band by band recap of the damage:

CQ WW PHONE

	NR5M	v.	N5AU
160 (KG5U)	92/11/26		105/20/44
80 (NR5M)	302/21/64		278/26/75
40 (N5JJ)	263/31/76		364/31/101
20 (K5GN)	1294/37/127		1550/36/142
15 (NM5M)	1336/35/125		1353/33/131
10 (KZ5M)	320/21/63		216/20/63

KE5FI at NR5M South

Approximately 1000 qso's and 122 countries. May be the top single band 15 score in the country. Congratulations Chuck!

K5RVK - Multi- Multi with 900 Qs.

K5DX - Single-op All Band. 750 Qs and 350 mults. Great job Sharp!

1984 CRRL CAN-AM CONTEST

Congratulations to Joe W5ASP for his 7th place national finish in last year's CW Can-Am contest. The official results show that Joe racked up 59,752 points on his way to a very respectable finish.

FROM THE TRENCHES (AND UNDER) (de K5LZO)

Just a little comparison of contest stations I've had or operated from since 1957. My first station was my dad's. It was not exactly roughing it when I competed in SS in 1957 as a novice (KN5LZO). I had a tri-bander at 54 feet, a 40 meter vertical, a 75A-4 receiver, and a Band Master Senior transmitter. The key was a 25 year old bug with a clothes pin on the end to weight it down.

The early 60's (still at home) had me changing strategy a little cause I had moved to New Jersey. Now signing WA2WBH, I used a Collins S-Line with a 4 el Telrex 20 and a 2 el 40. 40 meter beams were at a premium then so I was competitive with most of the big stations.

In the late 60's Tom K5RC and I teamed up first from his apartment across from Max Busick's old school and then from the third floor of the school. The first year we did fairly well using a tri-bander and 2 el 40 fed with about 200 feet of RG-58. The following year we were able to cut 190 feet off our coax run by operating from the school.

The next couple of years we operated from my new station at my new used house in Houston. I don't have enough room to tell you all the different equipment that was used back then. Our antenna farm included a 3 bay Sturba-Curtain on 10 meters and a crank-up in the front yard with a 2 el quad. We also used a beer bottle vertical on 40 meters placed strategically on top of a Michelob bottle. Michelob was the only brand of beer that worked.

One year Tom and I built a V-Beam measuring 1/2 mile on each leg. This was measured on property that is now the intersection of Loop 610 and I-10. We put this monster up at the old Blimp Base in Hitchcock on one of the four old standards. The apex was 225 feet above ground.

The year after Tom and I quit competing together Dennis KZ5M came over and managed to get me disqualified from the Multi-op catagory of SS. (That category didn't even exist at the time!) I helped a little by not duping the logs but I was hung over for a month after Dennis and I drank our way to victory. Too bad we started 5 hours late.

The rest most of you all know. I was off the air until 1979 at which time I got back into VHF and eventually into contesting again. You cannot compete anymore with a mixed breed station and thrown together antennas. Now it takes TS930s and 2 mono band beams each on 15, 20, and 40. Quite a difference from 1957. The operators are also much better. I used to send at about 20 WPM back then, now its 35 WPM at the start of SS.

Well, see you all in SS.

73 Chuck K5LZO

DX REPORT (de KC5CP)

KERGUELEN ISL. -	FT8XA on 40 cw on 7003-6 at 0100-0300Z and 1300Z. FT8XB on 14204-195 at 0500-0545Z worked in Houston.
HEARD ISL. -	VK0CC - Colin is on the air from Heard Island as reported by P29JS.
KERMADEC ISL. -	ZM8OY - Chris has been on 3795-778 at 0500-0530Z. Also 3503 at 0900Z.
MALI -	TZ6WC has been on 14187 at 1630Z moving to 40 & 80 later.
CHAD -	N7DF/TT8 was on 40cw at 7004-6 at 0100Z. Check 3505 and 3528 at 0200Z.
GUINEA BISSAU -	J5WAD - worked on 14020 at 1500Z and 7045 at 0100Z listening up. He was active during CQWW.
TAIWAN -	BV2DA - Feng, one of the new ops, has been on 40cw at 7011 at 1430-1500Z and 7002 at 1400Z. BV2FA possibly on 15cw.
ST. HELENA ISL. -	ZD7XY-Patsy on daily at 14215 at 2100Z and ZD7CW on 14200-5 at 2100Z.
REUNION ISL. -	FR4DX and FR4DN active during CQWW, etc. Check 1825-30 for DN at 1800 on weekends.
LORD HOWE ISL. -	VK9NW/LH daily at 7005 at 0900Z. He will be there until the end of the year.
MALDIVE ISL. -	8Q7ITU has been reported on 14185 about 1215Z.

COMOROS -	D68WB on 14205-210 at 1830Z. D68BM has been worked on 14193-5 at 2100-2130Z.
KNIGHTS MALTA -	1A0KM op by IOMGM on 14195 at 1700Z. Watch for him during November weekends on 15-80.
SIERRA LEONE -	9L3MW - Bill, a new op, has showed up on 14183 on Fridays at 2100Z.
SABLE ISL. -	VE1RM is expected to operate November 18-25 to study the low bands, 80 & 160. On CW, up 3KHZ from bottom. On SSB just outside phone band. On RTTY plus 95 up.
JORDAN -	November 7-21 all JY stations will use the prefix JY50 for two weeks in celebration of the 50th birthday of JY1(who will sign JY50). All bands and modes, etc. Special certificate is available.
TOGO -	5V7HL has been on daily at 14220 from 2100Z.
SRI LANKA -	DF2RG/4S7 expected to be on now thru November 20.
WILLIS ISL. -	VK9ZB on 7187 at 0700Z or 7230 sometimes. On 75 check 3795 at 1000Z.
YAMSME DX-PED -	Lloyd and Iris active from ZS6 for CQWW. Next ZS3.
PROPAGATION -	High Normal expected on November 5&6, 8, 11, 15, 21-23.

SQUELCH TALE (de N5JJ)

IN AND ABOUT THE CLUB

IT is rumored that... speaking of always twisting things, K5LZO's 40 was twisted by the wind just in time for SS... K5RC, N5DC, NA5R, K2TNO, KZ5M, K5RVK and others recently met with the governor of Texas to witness the signing of the Armadillo County Proclamation. I understand the group was shuffled through so quickly the gov now has the TDXS QSO rate record... Thanks are once again extended to K5TU for his repair of the repeater. It was the same power supply pass transitor... KC5M has new fox tango filters in his FT757GX. We are awaiting his review of this mod... KE5TF and WA9VLI have new alpha 76 boxes to punch through with... Why is KD5SP called B. K.?... If you go the University of Houston Football game you'll notice that credit is given on the score board to Houston's outstanding car dealers who contribute to the athletic department. Well, there was NR5M up there just below TNT Liquors. Gee George, how many cars do they move each month?... N5RP and KF4VS have both recently changed jobs. Seems like these new members can't hold steady work... AA5Y has his FT980 back from YAE5U again. We'll be able to evaluate their work during

the SS CW... Why was KG5U the only operator not in charge of rotor control at NR5M during CQ phone?... KY5A must be alive and well. He was worked /DL during CQ... N5AF's son, WB5LVL has been assigned Embassy duty in 7X2... N5DC has been breaking his 2M radios faster than they can be fixed. Jim is two for two now... N5DU's blood blister is healing well, thank you... NM5L is apparantly winning more awards C&W dancing than operating nowadays... Is W5JQ really the "Vern" doing channel two news commercials?... Thanks once again to WA5UHT for doing the last set of TDXS badges...

73 Dave, N5JJ

MUTING FOR THE TS-930
By Bill Schrader, K2NTO

I have developed an easy way to mute Kenwood TS-930s so that two of them can be operated on the same frequency, either using one of them as an outboard receiver or as an independent station. The circuirty involves only a handful of components, and minor changes inside the TS-930 box are easy to do and reversible.

Strategy: The front end of the receiver section of a TS-930 obtains signals through a small relay located on a PC board directly behind the UHF coax connection on the rear of the rig. This relay is engergized on receive, closing the contacts. On transmit the relay is not energized, and hence the receiver is disconnected from the antenna. My approach is to use an outboard transistor to control the ground on the relay coil. A voltage obtained from the other rig (when it transmits) is used to switch this transistor to a non-conducting state, thereby opening the relay. The TS-930 provides a +12 volt signal at the trasveter jack which is present only during transmit; the voltage is 0 during receive. (See figure 1)

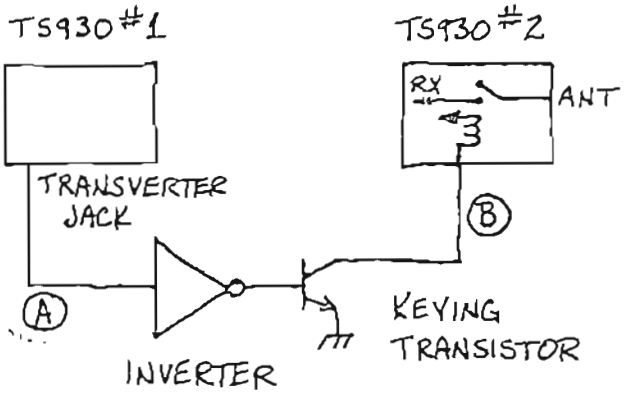


FIGURE 1- STRATEGY of Muting System

Line "A" is +12V on Rig 1 transmit, 0 volts on Rig 1 receive.

Line "B" is floating during Rig 1 transmit, 0.6 volts during Rig 1 receive.

Circuitry:

An outboard box houses the inverters and transistors. A 79¢ Radio Shack quad NAND gate IC is used. This CMOS device uses negligible power, so an internal 9 volt transistor battery powers the unit. There are two independent muting circuits provided, so that rig 1 can mute rig 2 and vice-versa.

The two inputs on each NAND gate are tied together; in this way the gate functions as a simple inverter.

The muting circuit is built on a small PC board and mounted in a metal minibox along with the 9V battery for RF shielding. Parts placement is not critical. The circuit diagram is shown in Figure 2. RCA phono jacks are used for the input/output connections.

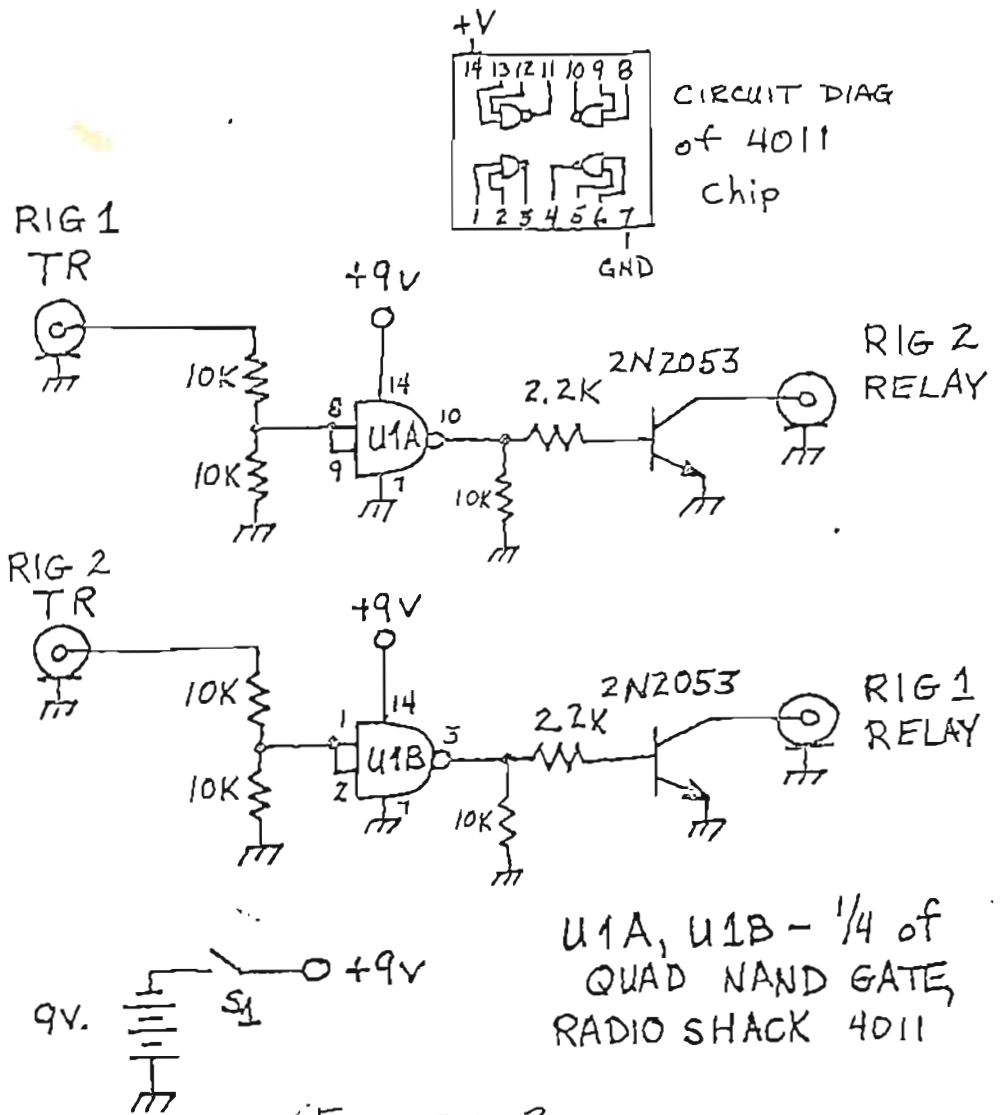


FIGURE 2 -
SCHEMATIC DIAGRAM OF MUTING BOX

Modifications to the TS-930

1. Transmit +12 volt signal out:

This voltage appears on pin 2 of the transverter jack. Connect a short length of miniature coax (RG-174) to pin 2 and the shield to ground (pin 8) on the 8-pin DIN plug that fits this jack (Warning! The TS-930 uses a strange DIN plug. Be sure to get one that fits). The coax sticks out of the plug only a few inches, and has a female RCA phone jack attached.

2. Wiring the receive relay ground lead for keying externally.

a.) The relay is located on a small PC board that contains the rig's UHF coax connector. Remove the bottom cover of the rig and unscrew the hex nut on the rig's ground post. Remove the external nut on the UHF coax fitting (Caution: the nut is very thin and will be bent if excessive force is used.)

b.) Remove the two cables on this board that connect to the two white 2-pin cable connectors. The PC board can now be removed from the rig, attached only by a short length of gray coax which can stay connected.

c.) Turn the board upside down, and locate the pins of the small relay in the metal can. Along the edge of the board two printed copper leads are visible. The second one in from the edge extends to a broad copper surface, which is ground. Use a razor blade to carefully cut through this copper foil right where the lead broadens into the ground surface. Scrape away this foil lead for a distance of about ½ inch, and be certain you have completely removed the copper.

d.) Scrape away the green lacquer on both sides of the gap you have created. Tin the bare areas with solder, and then connect a short length of RG-174 coax. The center lead goes to the relay side of the gap, the braid to the ground foil. Check to see nothing has been shorted out.

e.) Re-install the board in the transceiver, but do not yet re-connect the two cables.

3. Wiring the realy control lead to the rear apron:

Adjacent to the PC board is an RCA phono jack on the rear apron that is labeled "EXT RCVR ANT." It is connected to a miniature slide switch by a yellow wire. I use this jack for the relay control.

a.) Snip the wire to the jack and bend the wire out of the way. Don't let it short to ground.

b.) A solder lug is on the phono jack. Bend it up from the chassis so you can solder to it.

c.) Attach the shield of the RG174 to the solder lug, and attach the center conductor to the phone jack.

d.) Re-attach the two cables to the PC board.

e.) This completes the modification; replace the bottom cover.

Using the TS-930 without the external control

If the TS-930 is turned on without the control lines, no signals will be heard because the relay is now open. To use the rig as before, simply prepare a shorted RCA phone plug (i.e. center pin wired to the shield) and plug it into the phone jack. The receiver should now operate normally.

Connecting the rigs to the muting box:

1.) Run the +12 volt transmit line from rig 1 transverter jack to the "Rig 1 TR" jack on the box. Connect the box's "Rig 2 Mute" line to the phone jack on Rig 2.

2.) Turn down the power output of rig 1, and key it. The rig 2 receiver signals should disappear and return when rig 1 is unkeyed.

3.) If the dual muting version is built, connect "rig 2 TR" to the box and "Rig 1 Mute" lines as above and check for proper muting.

Problems:

1. The muting box must be on and have a working 9 volt battery in order to actuate the relays during receive. If no signals are heard in either receiver, be sure the mute box is plugged in and turned on.

2. No muting: Check for shorted lines; if the mute lines are shorted to ground the receivers will be OK but will not mute.

3. Permanent muting: Check for an open muting line. Check internal wiring of TS-930 by plugging in the shorted phono plug. If the receiver now works OK, the problem is in the muting box itself.

Use with rigs other than TS-930:

Most transceivers use a similar scheme of removing the antenna from the receiver through a reed relay. This relay control method will work equally well with any of them. Other Kenwood radios also provide +12 volts on transmit; similar voltages can be found in other radios.

If an outboard receiver alone is used, the muting transistor can be used to interrupt any DC line up to about +35 volts for muting. Alternatively, a small reed relay could be added externally and connected to the receiver's antenna jack.

OPERATION IN A CONTEST:

The dual-muting box was used at NR5M on 40 meters in CQWW SSB to permit two separate rigs to be available on the same band. Both rigs ran amplifiers, and this circuit provided very nice muting with no pops or overloading of the receivers. The box does not in fact prevent the mute rig from transmitting, and no damage would occur if by chance both rigs transmitted simultaneously However, the problem did not arise at NR5M; each operator could wait until his receiver was alive to to began transmitting. Even when tuned to the same frequency as the other station no signal was heard. The mute box operated for 48 hours on the 9 volt internal battery without any problems. Since power consumption is negligible the battery life ought to be very long.

73 Bill K2TNO

JY8GW WORKS "ALL-ASIAN" FROM ZZ

George Wagner, JY8GW, worked an astonishing 1950 QSO's in the All-Asian CW Contest 24/25 August -- and may have scored enough points to win the competition. He operated from Club station JY6ZZ.

George, also known to hundreds of DX-ers as K5KC and a member of the HZ1AB club in Saudi Arabia, worked all bands 160-though-10 during the 48 hour contest. He worked 85 DXCC countries and had an incredible 48 contacts on 160 meters, including QSO's with stations as far away as Finland and Great Britain.

"Propagation was great," the Texan who works for an Exxon Company joint-venture in Al-Jubail, Saudi Arabia, said. "And the JY-hams couldn't be friendlier." (One took George for ice cream during a break and another delivered food!)

JY8GW came to Amman specifically to work the CW contest. But while operating before and after the contest period, he racked up another 1850 QSO's for a four-day run of 3800 contacts. "My goal was 3000 QSO's," George said, "I was very happy with my totals."

George wasn't the only JY station in the contest. JY9MG, Masa, on the air from Aqaba, made more than 500 contacts.

"JY hams have a real advantage in any Amateur Radio contest," George said. "Because the contests always begain at 0000 GMT, you get three different nights of operating and three chances to get good propagation on 160-80-and 40. Amateurs in much of the rest of Asia get only two nights because of the time difference between them and the Greenwich meridian."

The All-Asian CW Contest is sponsored by Japan and no JY station has ever finished amoung the top scores. According to JY4MB, this is the first time JY6ZZ has ever been used as a 48-hour contest station. "I think we might have shown the rest of Asia a thing or two," George said. "JY6ZZ is a station that's going to have to be reckoned with. It's in a good location, it's fairly rare because few JY's ever enter contests and it's pretty well-equipped." JY6ZZ has a Yaesu transceiver, a Drake L-4 linear amplifier, inverted V's on 160-80-40 (apex at 14 meters) and a tri-band Yagi up 16.

The only piece of equipment George brought with him was his Bencher Paddle and memory keyer. "When you're pounding the key with one hand, the hardest thing is finding time to fill out the log. That's why a keyer is essential."

JY8GW averaged more than 40 QSO's per hour during the 48-hour contest -- including the time he spent eating, sleeping and walking back and forth to his hotel.

The object of the All-Asian CW Contest is to work as many non-Asian stations and countries as possible. George seems to have done that very well indeed.

TNX to "JY Newsletter" forwarded to your editor by "KAUL" from Amman, Jordan.

SUNSPOTS - PART III - KESFI

Last month we discussed eight year solar cycles and 64 year, eight cycle trends. While these are interesting as they relate to long term generalized predictions of propagation conditions, they don't tell us what days will be good or bad next week. For day to day predictions we must look to still another cycle.

THE 27 DAY "CYCLE"

The Sun, much like the Earth, rotates on an axis. While the Earth takes one "Earth day" to make one revolution, the Sun is much larger and takes 27 1/2 "Earth days" to rotate. Thus when a sunspot appears on the Sun's surface, and lasts long enough, it will appear and disappear on a regular basis with the Sun's rotation. This recurring effect is the basis for most short term propagation prediction. Some sunspots last only a few days, but others may last for months, reappearing in various building or declining stages with each rotation of the Sun.

Sunspots appear on the Sun's surface as dark spots because they are "only" about 3000 degrees Kelvin as compared with the 6000 degree temperature of the surrounding gasses. When viewed they seem to move across the Sun's face due to the Sun's rotation. Spots from the old sunspot cycle break out close to the Sun's equator, while spots from the new cycle appear at higher solar latitudes. This "overlap" in old and new solar cycles may go on for as long as two years.

EARTH'S MAGNETIC ACTIVITY

While sunspots cause ionization of the highest layers of the ionosphere giving us good DX propagation, they can also trigger magnetic storms with possible disastrous effects on long distance propagation. High levels of magnetic activity as reflected in the WWV A and K indexes, can cause high levels of absorption in the upper latitudes, high noise levels and sometimes even complete radio blackouts. Since there is a relation between magnetic activity and sunspots, there is also a 27 1/2 day recurrence effect in the magnetic index.

High magnetic activity has a more profound effect on amateur radio than solar flux levels. At this point in the solar cycle, for example, solar flux levels have been low to almost none for weeks on end. In September, 1985 the flux peaked out at only 73. (Remember: 66 corresponds to zero sunspots). Yet DXing went on with 20 meters good during daylight and 40 & 80 great during darkness. However, when the A and K indexes are high it's a different story. Signals passing through higher latitudes in their journeys are absorbed and the lower bands are filled with noise.

CHARTING THE A INDEX

Figure 1 represents the A index of magnetic activity measured in Anchorage, Alaska for July, August, September and October, 1985. Most propagation prognosticators prefer to use either the index from Virginia or the so called "planetary" index which is an average of twelve reporting stations. My theory is that the most profound effects of magnetic activity take place in the polar regions so the index closest to the pole is the best indicator.

The charts are arranged one over the other so that each point on the chart below is exactly 27 1/2 days after the point directly above. By drawing a vertical line conditions for the same point in several solar rotations can be compared. The bottom chart shows the corresponding dates in November for predictions.

Last month, for example, I said conditions would be good on October 24-30. The basis for the prediction is readily apparent on the charts. In August the A was low on the 5th-9th. dropping straight down there is a corresponding low on September 1st-5th. Dropping down again there is a low on September 28 - October 2nd. Below this falls the predicted period of October 24-30. As you can see, the A index was low on October 23-28. We should be in for a corresponding good period on November 20-24. These magnetic quiet periods are easier to predict than the high periods as can be seen from the charts.

Another small valley occurs on September 12 and 13 and then again on October 9th and 10th. This leads to a prediction of quiet conditions on November 6th and 7th. Before that the magnetic storm which occurred on October 5th could come back to haunt sweepstakes on November 2nd.

CHARTING THE SOLAR FLUX

The flux has been almost "flat" for two months until the 14th of October. Prior to that it had not been above 73 since August 9th. One has to go back to July-August to find any activity to be repetitive. Figure 2 Shows the solar flux charts arranged in the same manner as the A index charts. Each point on the chart below represents flux readings 27 1/2 days later than the point on the chart directly above. The flux "peak" in July was the result of more than one sunspot group. There was one spot which peaked with a flux reading of 82 on July 2nd. That spot repeated on July 29-30 at a flux level of 81. The high of 101 on July 9th was not repeated as a peak on the corresponding date in August, but the flux levels were generally high during the same periods.

Since sunspots "appear" and "disappear" from the side of the Sun facing the Earth on a regular basis with the Sun's rotation, it is easier to predict the beginning and end of high flux level periods rather than how high the level will go. "How high" is dependent upon the building and declining peculiarities of the individual spot. "When" is dependent on the period of rotation of the Sun. Thus drawing a vertical line down from the beginning and end of the rise of the flux levels June 27 - July 15 finds a rise on the corresponding days: July 24 -August 11.

NEXT MONTH

Next month I will discuss the various types of ionospheric disturbances and what the contester/DXer can do to counter their effects.

Figure 3 shows the flux levels (above) and the A index (below) for September 27 through October 29. The corresponding 27 1/2 day later dates in November appear at the bottom. Using the techniques discussed above it can be predicted that higher flux levels will occur between November 12-26. The quietest magnetic days should include November 6th and 20-24. This basically means a repeat of the good conditions on the phone CO WW contest weekend for the CW weekend Nov. 23-24. One might compare the results of the contests this year and last year:

		1984		1985	
		flux	A index	flux	A index
Phone	Sat:	70	14	85	07
	Sun:	70	12	80	08
CW	Sat:	83	11	80 est.	08 est.
	Sun:	85	07	78 est.	07 est.

It looks like noisy crummy conditions for CW SS Nov. 2nd-3rd on 15 if the magnetic storm on October 5th-6th repeats itself. Good luck and good DX.

FIGURE 1

ANCHORAGE A INDEX