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TDXS Field Day

The ARRL's annual Field Day extravaganza, as performed by the TDXS is set for **Friday, Saturday and Sunday June 24th through the 26th**. Again this year it will be staged at **El Rancho Roberto (the W5SJS hacienda) in Austin County**. (For the uninitiated directions are appended.)

It's rated **3A** this year after several unfortunate experiences in the 2A category during the previous several engagements. **There will be three HF, a Novice/Tech, a VHF/Satellite, and a Packet station**. The HF line-up will feature a 20/80 Meter CW station, a 15/40 Meter CW & 15 Phone station, and an all-band Phone station. Two RVs and a travel trailer will house these stations. The remaining three operating positions will be allocated space as needed.

Under the baton of maestro **L. D. (Bob), W5SJS** will be the renown team captains **Kim, K5TU** playing 20CW, **Dale, KG5U** at the 15CW keyboard, and **Dave, WB5N** on the SSB horn. The dual **Rons, K5LLL and KB5NFN** will handle the VHF and Novice rhythm sections, respectively. The digital percussion will feature soloist **Bill, K2TNO** on the Packet. (With a line-up like this we gotta get rave reviews in the final press release!)

As always, there is a catch to all this grandeur. There have to be lots of players to fiddle the fiddles and toot the horns for the entire 24 hour show. We've got to fill six chairs, two hours at a time. That's 72 roles to be played. It simply means that everyone who can possibly join in will just have to be there. Otherwise we end on another sour note again this year. (Take a look at the accompanying article to see our record.)

Those who can make the first wave need to be on site by noon Friday. **Setup begins promptly at 1800 Z**. The main antennas were refurbished and checked at last October's Work Day/BBQ. As there will be 3 trailer mounted towers on site, the grunt & groan demands should be minimal. However, there'll be lots guy ropes to tie off, antennas to be assembled and mounted, cables to be run, and plenty of odds, ends and stuff to be handled. Once

the day's work is done, it's **off to the local steak house for our traditional Friday night feast**.

Saturday morning is "tighten-it-up, nail-it-down" time along with tracking down the proverbial "whose-trash-is-that-clobbering-my-frequency" questions. **By 11 A.M. anyone expecting to operate better be on site for the drawing**. Do you really want the 0400-0600 Z 75 M phone slot?

Once the operation is underway there is time for a refreshing plunge in the fable "stock tank" under the windmill, or even a bit of angling for those lunkers that lurk in depths of the pond. There's plenty of shade up in the grove for the off-duty crowd. Maybe even a cool 807 or so after you've done your time at the rig. During the late afternoon hours there will be the aroma of "BBQ el Supremo" as only **Bob, N5RP** can prepare it. Those who have sampled this at our annual May gathering will undoubtedly be on hand for the event. If you've missed it, this is your chance. (Oh yes, it's your money that's paying for it..thanks!)

Sunday morning can be the best part of Field Day. It's usually quite pleasant outside, not too warm, a bit of breeze, a picturesque landscape off to the north and east across the fields towards the horizon, the hum of the generators, and the faint sounds of tripping VOXes and clicking antenna relays. If you ain't been there, you've missed one of the good things of life.

Take down Sunday afternoon is usually quick and clean. The more folks around the easier and faster it goes. Most times the site is clear by four and 2-Meters jammed with the homeward bound.

It's a great way to spend all, or part of, your weekend. To many it's what TDXS is all about. But it's your choice. It's "only a hobby", but you won't find a better bunch of guys to run with. Think about it.. and then **join us!**

P. S. - As always, anyone wishing to join us for the weekend is invited to join the work and enjoy the play. If you just want to visit, please "do-drop-in" and meet the gang. Plenty of racket-jawin' goes on all day long. You may even have the best lie to tell!

How To Get There - W5SJS's ranch is about **6 miles south of Brenham and 12 miles north of Bellville** off Hwy 36, near Kenney, Texas. Take Hwy 290 to Brenham or I-10 to Sealy. Follow Hwy 36 south from Brenham, or north from Sealy through Bellville. Look for the **turnoff to Kenney going west marked Business 36**. Go under the railroad bridge and immediately make a sharp right turn onto **FM 2754**. Bob's place is **two miles** further down the road. It is well marked by a 130 ft tower beside the house fronting on the road. Just to the west of the house is a road leading into the ranch, over the dam and up the hill to the actual field day site. (Try 147.360 direct as you near the site. Who knows, someone just might talk you in..ed)

DXAC Report

de Jim, N5DC

You'll be glad to know that things are moving right along on the DXAC scene. We recently took a vote on reactivating **Aldabra**. I voted for it, but I haven't heard the final results as yet.

The **Mount Athos** vote is coming up soon. I still don't feel we should delete it from the DXCC country list. It would set a poor precedent. In the future anyone who didn't like the way the League "parted-their-hair" could withhold QSL cards until their demands were met. The DXAC is looking into another possible solution to Mt. Athos... stay tuned.

Pratus is still on hold. I haven't seen anything yet that says "We own the place." I lean toward voting against it at this writing.

Scaroboro Reef is one that I'm dead set against. It looks like another 7J1RL to me. How about a rule that, along with the already published rules for a spot to qualify for a new one, contains wording to the effect "*IN ADDITION, THE AREA MUST BE A MINIMUM OF 1000 SQUARE METERS TO QUALIFY FOR A NEW COUNTRY.*" Anyone have any comments?

See you in the pileups! (That's if the lousy numbers will get high enough for a pileup to get going!)

ARRL DX Bulletin

The items in this week's bulletin are courtesy of Bob, W5KNE, QRZ DX, Chod, VP2ML, The DX Bulletin, The DX NewsLetter, the Ohio/Penn DX Bulletin, Randy, N0TG and Contest Corral in QST.

BURUNDI. Jean-Pierre, 9U/F5FHI, continues to be active on 21295 kHz between 1430 and 1630z. QSL via: Jean-Pierre Maidon, La Hee, F - Vertou, 44120, France.

CHAD. Another new station has been heard on 20 meter CW between 2000 and 2200z signing F5LGL/TT8.

ANGOLA. It was reported that Antonio, D2EGH, will be signing D3X for the next three weeks. There was no reason given for the special call sign, but his daily activity has been on 14195 kHz between 2000 and 0130z. QSL via CT1EGH.

SAINT PAUL ISLAND. Be looking for Paul, WC9E/CY9, Bob AA9GZ/CY9, Scott, N9JCL/CY9, Ken, WB9OBX/CY9 and Tom, K0SN/CY9, starting June 10 for a 4 or 5 day operation. Activity will be on CW, SSB and RTTY, on all HF bands. QSL via K0SN. Meanwhile, Randy, N0TG, reports that their upcoming CY9 DXpedition has been moved from July 1 to September 19 through 25. This early fall propagation should offer better conditions than a summer date. The boat charter has been reserved, Coast Guard landing permission has been received and the travel arrangements have been made. Operators will be Randy, N0TG, Bob, KW2P, Murray, WA4DAN and Ron, AA4VK.

SVALBARD. Tom, LA4LN, and Magne, LB3RC, will sign JW4LN and LB3RC/JW, respectively, from the western coast of Vest-Spitsbergen from August 1 to 20. This is a scientific expedition and NOT a DXpedition, but they will be operating all bands 160 through 10 meters with special attention to the WARC bands. Activity will be on CW, SSB and the digital modes in the mornings, evenings and when the weather is bad. QSL direct only with SAE and return postage. Note that the LA4LN Callbook address is not correct. The correct address is: JW4LN via LA4LN, Tom Victor Segalstad, P.O. Box 15 Kjelsas, N-0411 Oslo, Norway. QSL LB3RC/JW via LB3RC, Magne Nicolaysen, Ostgaardsgt 23 B, N-0474 Oslo 4, Norway.

ITU HEADQUARTERS, GENEVA. Len KB2R, will be active during the IARU HF Championship Contest and two days before. This will be a single operator effort with 4U1TU counting as an HQ multiplier for the contest. Activity will be on 80 through 10 meters and possibly 160. Two days before the contest, Len will be active as time permits on 80 through 10 meters CW and SSB and the WARC bands if antennas are available. QSL the entire expedition via WA2CJT, the bureau or direct to his 1994 CBA.

MARIANA ISLANDS. Jun, WH0AAV, on Saipan, was heard on 3795 kHz at 1240z. Also check the 14226 DX net around 0330z.

SOLOMON ISLANDS. JA1OEM/H44 will be active beginning June 10. Activity will be on all HF bands, but especially on 160 meters. QSL via JA1OEM.

CORSICA. Seven members of the Milan ARI will operate as TK/TK2QIN/p from June 15 to 20. They will be active on 80 through 10 meters, SSB, CW and RTTY with two stations on the air. QSL via Magni Renato, IK2QIN, Via Natta 15-D, 20151 Milano, Italy.

GIBRALTAR. ZB2BU will be active June 12 and 13 from Europa Point on the southern tip of The Rock.

MICRONESIA. The DX NewsLetter reports V63PA will stay on the island longer than expected. He prefers 14150 kHz around 2100z during the weekend. QSL via G6MDM. A group from the Oklahoma DX Association, OKDXA, and a few operators from the Pacific will have four stations up and running through June 17. Activity is on all bands with CW and RTTY. Look for V63AD, V63BC, V63FC, V63KW, V63SB and V63VA. QSL all calls via OKDXA, PO Box 88, Wellston, OK 74881.

One Less Multiplier

(The following was taken from the from the DXNL 897 - 5.6.1994, Rolf, DL7VEE, Editor..ed)

Karelia, UA1N has been deleted from the WAE-Country List. This concerns European awards and contests. eg. WAE, WAG, including also the CQ-WW-DX Contest. The complete WAE-Country List can be found in the German magazine CQ-DL May 1994 on page 345.

JSC Special Event Station

de Dale, KG5U

The Johnson Space Center Amateur Radio Club, in conjunction with other NASA amateur radio clubs around the U.S., will be operating as a "Special Event Station" during the period 1700Z, July 19 thru 0500Z, July 22, to celebrate and commemorate the 25th anniversary of man's first steps on the moon. The operating period represents the time Apollo 11 went into orbit around the moon and the time it left lunar orbit for return to earth. Operations will be on all bands and all modes. CW and SSB operations will be 11+ kHz above the bottom of the general class portion of the amateur radio bands (on 10m, 28.411 MHz). QSL with a 9"x12" SASE for a commemorative certificate to the CBA of the station worked.

Upcoming Events

- June 18.....All Asian DX Contest - CW
- June 25.....ARRL Field Day
- July 01.....RAC Canada Day Contest
- July 08.....Texas DX Society Monthly Meeting
- July 09.....IARU HF World Championship
- August 05.....Austin Summerfest
- October 01.....W5 DX Bash, Lake Buchanan

Texas DX Society Field Day Records

de Joe, W5ASP

If you've been around a while, or took the time to read the series of articles some time back on the history of the TDXS, you'll know that it all started out as a field day effort. For many years we kept close records of performance. But as things will, our concern has passed and they are probably lost forever now.

However, we do have the recorded history of our overall performance on Field Day. Here are the results over the past twenty-three years.

1971.....	Class 3A.....	7th Place
1972.....	Class 3A.....	6th Place
1973.....	Class 3A.....	4th Place
1974.....	Class 3A.....	2nd Place
1975.....	Class 3A.....	1st Place
1976.....	Class 3A.....	9th Place
1977.....	Class 3A.....	1st Place
1978.....	Class 4A.....	2nd Place
1979.....	Class 3A.....	1st Place
1980.....	Class 3A.....	2nd Place
1981.....	Class 3A.....	1st Place
1982.....	Class 3A.....	1st Place
1983.....	Class 5E.....	1st Place..... RECORD
1984.....	Class 3A.....	1st Place..... RECORD
1985.....	Class 4A.....	2nd Place
1986.....	Class 3A.....	1st Place
1987.....	Class 4A.....	1st Place..... RECORD
1988.....	Class 5A.....	1st Place..... RECORD
1989.....	Class 23Abat.....	1st Place..... RECORD
1990.....	Class 2A.....	1st Place.....Record ?
1991.....	Class 2A.....	2nd Place
1992.....	Class 2A.....	Disaster!
1993.....	Class 2A.....	6th Place

For the 15 year period starting in 1977 our record was quite impressive. For the past couple of years there hasn't been much to brag about. Perhaps it's time to turn things around.

On the Enjoyment of Field Day

de Dave, K5GN

(Dave wrote this article before the 1990 ARRL Field Day. That was the last time TDXS turned in a winning effort. Maybe this reprint will inspire a similar result..ed)

The phrase "Field Day" connotes good things to the average guy but even better things come to mind if you're a ham. There's the sense of adventure that comes from braving both Murphy and the weather. There's the smell of hot dogs and hamburgers over a charcoal fire, the excitement of the contest, and especially the feeling of accomplishment when it all comes together in a good score. The key to FD fun, to making it all come together, is the preparations made by the team leaders and the individual hams participating in the effort. When they all get prepared ahead of time and come prepared to the FD site, they become prepared also for other club activities such as DXpeditions (and, by the way, emergency communications too!). And they have a blast doing it.

Get prepared! The best FD efforts in which this author has participated were the TDXS (K5DX) 4A win in 1987 and the Wireless Institute of the Northeast (W2RQ) 15A effort in 1981. Both were well organized. Both set records. Our current Field

Day Chairman, N5RP, and others are working toward another well organized effort. This is essential because success is in seeing to the details. Things don't just fall into place automatically. What organization can not provide is the commitment of the other people in the team. Stand up and be a part of the solution, and do your best to fulfill your commitments to the effort, whether they be of your time, your equipment, or both.

Know what to expect when you arrive at the site. Start with a reading of the FD rules in the May issue of QST for they are the starting point for our plans. Keep in touch by listening to the repeater and joining in during the weekly net to get the details on what we hope to do and how we expect to do it. Discuss it with the other guys whenever possible. The you'll have an idea of the layout of the stations and what tasks are involved in setting up. You'll get a picture of how the operating will go. Most importantly, you will know who the station captains are. They are the leaders on-site.

Come prepared! Pack your bag with the essentials. See the accompanying list for the "musts." Make your arrangements ahead of time with the station captains and/or other participants for things like cooking and sleeping. It is, after all, a camping trip! Pack your radio gear. Whatever it is, bring it if it is expected. Bring a spare if you can. Experienced hams bring the unexpected treasures that fit the unplanned emergencies. Most importantly pack your hope chest with a positive attitude and reasonable expectations.

Expect to work. There will be quite a number of antennas to assemble and six crank-up towers to raise and lower. Expect to get hot. It is June in Texas, you know! Expect to see people lose their cool. There is always the possibility that someone who isn't quite as well prepared as you will drop the ball and pop a cork. Don't let it be you! And don't let it spoil your weekend. Expect to have fun. Plan to enjoy the work and the play.

Field Day is supposed to be an exercise in emergency preparedness. Of course we think of it as a contest, but that part is only about 2/5 of the story. FD really boils down to a test of your "can-do" abilities. Can you help put together a complete multi-op station in one day from a pile of rope, aluminum, and coax? Can you cope with the lids on the air? Can you spend the weekend with the rest of the hard-boiled gang without losing your head or causing nervous breakdowns? Can you help get all that gear back into Bob's barn by sundown on Sunday? Every one of us can, provided we each put in the effort it requires.

The TDXS has shown continuous improvement as a team over the years. Throwing your full weight into such an undertaking leads to your own improvement, as well. Do some new tasks. Find ways to help. You'll be learning with the best! Don't miss the fun! The TDXS has a happy history of Field Day "can-do." (Just check the record books.) That history has been made by can-do individuals who came to play. They got organized, they prepared themselves, and they put their full effort into each aspect of the activity. In the process, they enjoyed themselves hugely and now look back with satisfaction on their part in a shared effort. They didn't miss the fun. How about you?

Packing Your Bag - Essentials for Field Day

- Sizzle - Hat, sunglasses, sunscreen cream, gloves (steel gets hot!)
- Buzz - Insect repellent (some skin softeners work well)
- Stumble - Flashlight; spare flashlight batteries

- Snore - Sleeping bag, tent, cot, whatever arrangements you care to make
- Drip - Rain gear, boots, dry clothes
- Chomp - Bring your own food supplies and make your cooking plans ahead of time.
- Slurp - At least 1 gallon of water each day
- CQ FD - Bring the gear your promised to bring and a little more

TDXS - Things to Think About

de Kenny, NZ5I

Reflecting on the number of local TDXS members who are currently active, I've come to the conclusion that we are bucking some amateur radio growth trends, and it disturbs me. The active TDXS local membership has steadily declined since 1990 while licensed radio amateurs and ARRL membership have grown substantially during the period.

According to the ARRL annual report, there are now over 632,000 licensed amateur radio operators in the US. That number is up from about 480,000 in 1990 which represents a 32 percent rise. Virtually all of the growth has been in the Technician Class of license. Growth has been virtually non-existent in all other license classes. For a club that focuses on DX and contesting this presents a challenge since Technician class ops aren't typically into these facets of the hobby. Interestingly, the Novice, General, Advanced and Extra class licensees has held steady for the past four years, replacing SK, expired licenses, etc.. The bad news is that our group's membership has not held steady.

So, what do we do about this membership decline? Well here are some thoughts:

1. Everyone in the TDXS should be making it a point to recruit and sponsor a member for the coming year. This may involve being an "Elmer" and growing a person into ham radio as practiced by the TDXS. Recruiting really needs some club emphasis and recognition. For added incentive perhaps we can waive annual membership dues for those who sponsor a new member who is accepted. For example: If member K5DX recruits and sponsors a candidate who eventually is voted into the club, K5DX's dues would be waived for the following calendar year.

The TDXS should track and recognize members who consistently recruit for our club too. Perhaps we can assemble a chart that shows activity in this area since the club began and post it in the Bullsheets periodically. I have already found my prospect for the coming year...have you?

2. Initiate the TDXS Road Show. This is how I became aware and interested in the TDXS. I'll never forget Tom, KD5SP and Frank, KC5M decked out in their impressive vests, and awards, doing a slide show at a BVARC meeting. This activity secured my interest in contesting and DXing. It's time that we crank up this effort once again and hit the pavement with slide projectors in hand. This group needs some positive PR! When I poll hams outside the TDXS I find that we as a group have a reputation that makes us rather intimidating and unapproachable. Our road shows could help change this perception.

3. Scan the DXCC and contest results for prospects and do targeted mailing to candidates with obvious interest in DXing and contesting. Get 'em to the club meeting and send some newsletters for a few months.

4. Activate a community service oriented activity that leverages our superior operating talents. How about a special Mothers Day Traffic Handler Day at a local Shopping Mall.

We could really put on a show and get some real good PR at the same time. I bet the local news media would cover this. Kind of a miniature field day to promote TDXS and Ham radio.

5. Establish a stable meeting venue and schedule that permits socializing. I get the feeling our attempt to be geographically accommodating has done more harm than good. When we met in Bellaire our meetings were well attended and they were consistent. Perhaps a survey is in order to secure the most accommodating vicinity of town, and then we launch an all out assault to find a suitable place. Personally, I don't care where we meet as long as it is consistent. It would also be nice to serve refreshments.

I would like to ask you for your comments and suggestions. If you are interested in participating in a special membership committee please let me know. K1TU and KG5U have already volunteered to help. If we come to you for some help please try to find the time, chances are you'll have a blast in the process.

CMOS Super Keyer II

by Dale, KG5U

Despite the fact that this is the age of computer-assisted CW and contesting operations, I have bought a new keyer. For 48 bucks I received a chip, a pc board, and all the small parts. I only had to provide the paddle and key-out jacks, message push-buttons, speed pot, battery holder, and batteries (about an additional 6 bucks).

I had read about the CMOS Super Keyer in the original article in QST Magazine (October 1981), then read about the CMOS Super Keyer II in the 1993 ARRL Handbook for Radio Amateurs. Since my old, reliable Microprocessor Contest Keyer was holding up well, I was not looking for something new.. until this year. My keyer is acting up. The memories are not being played out completely, leaving me feeling insecure about its use in contests, or even doing repetitive CQing. The CMOS Super Keyer II came to mind as I found I could not determine or remedy the cause of the problems in the old keyer.

This new keyer seems to fill the bill. It is a single-chip, battery operated keyer. The author claimed better than a year's use out of the batteries (3 AAs) before replacement (there is no on-off switch on this keyer). Further reading about the keyer convinced me I needed to build this keyer. That was two weeks ago.

I just finished putting the finishing touches on the keyer and have been playing with it, getting familiar with the controls. Commands are made through the use of combinations of the four message buttons and the paddles. It is really neat. If I want to load a message into memory, I can just press the desired memory button until it beeps, release it, key in the message, then press the memory button again. It's that simple. If I want to set the speed to 35 wpm, I press memory 3 and 4, release, hear the keyer send "?", then using the paddles send S35. If I want to vary the speed, the speed pot also works. There are too many commands to describe here. Suffice it to say, I think I have found a nice, compact, full-function keyer for everyday and contest use that should be on my desk for some time to come.

The keyer will be at the next TDXS meeting for those interested in seeing it operate. I think you will be amazed by its simplicity, yet impressed by its features. Even if you are using a computer for logging and CW operations, every shack needs a keyer like this one. It is also a great mobile keyer.

Propagation

de Roy, AD5Q

(The following article is taken from the *Northwest ARS Newsletter* for June 1994..ed)

During the WPX CW contest in 1992, the solar flux dipped below 100 for the first time during this cycle decline. This year, during the same contest, it dipped below 70. It doesn't get any lower, but we are not really at the bottom of the cycle yet. At the true bottom of the cycle, the flux stays in this bottom area nearly all the time.

In May, we had days when the flux was in the 90's. This opened 15 (marginally) to many parts of the world. Even so, it is apparent that we will see the last of these openings during the remainder of '94. Even in the best of times, June is a month of deterioration for 15 Meters. May is the peak of it's season and July is the worst. June is the month where summer absorption gradually takes over the band. This year, we don't have enough solar activity to open the band anyway, so things are looking dismal. We can probably write 15 off until the end of August, then hope for marginal openings in the fall.

With QRN static crashes taking over the low bands and absorption taking out the high bands, DX activity is always focused on the mid-range of frequencies during the summer. This is primarily 20 Meters. Many night paths are open, but others are closed. At the top of the cycle, most night paths are open all the time for most of the year.

This is still the peak of the season for 20 Meter night path work. During the WPX (I spent the whole contest on 20), conditions weren't bad until the geo-storm hit Saturday afternoon. Europe opened in late afternoon for us, and was also open for most of the morning (until noon). The polar openings were in the early evening and early morning. Japan opened for their sunrise, but the best opening was after midnight across the evening path (i.e. over time zones where it is evening). Mid morning is the best time for S.E. Asia. There was also some east/west long path at the usual times. All this was with very low solar fluxes. This pattern will set the DX agenda through this summer, and for the late-spring/summer season through the bottom of the cycle.

Propagation is excellent on 30 Meter night paths, though there is also more QRN. 17 should continue to open to many parts of the world, though often marginally.

The disturbed solar conditions that shut down DX paths for much of March and April were back during May, but not as severe. DX was workable for most of the month. They will also be a factor during the first half of June, but the bands should be worth checking out. The Sporadic-E season is opening up 10 & 6 nearly every evening for stateside SSB fun.

Antennas for 160 and 80 Meters

de Tony, VE3QF

(This article by Tony Fegan, VE3QF/G3TTF first appeared in the *Scarborough ARC Newsletter*..ed)

The Big Back Yard- These two bands pose a problem for the average amateur because of the physical size of a resonant antenna and also because the antenna is going to be electrically close to the ground. A dipole for 160 metres at 50 feet is still only 0.1 wavelengths above ground and as such presents an impedance at the centre feedpoint of anywhere between 20 and 50 ohms depending on the ground and nearby objects. This antenna would also be up to 260 feet long. A dipole for 80

metres is still around 125 feet long which still requires a large back yard.

If you are lucky enough to have the room then a dipole supported as high as possible is probably the best choice. The length of a half wave dipole is derived from the formula - length (feet) = 468 divided by the frequency (MHz). Some experimentation may be required to get a good match to the transmitter. At these frequencies feedline loss is very small and may be ignored for all lines under 100 feet. Thus an antenna tuner at the transmitter will usually function satisfactorily for matching purposes.

The Small Back Yard - Now we come to the average amateur on a 100 feet deep lot. Obviously there is no room for a full size dipole in a straight line. Most of the radiation from an antenna comes from the high current portion. In a dipole antenna this is the centre portion. If the centre of the antenna is located as high as possible for as long as possible the remaining ends of the antenna may be bent down or sideways (preferably at an angle of greater than 90 degrees). Providing about 2 thirds of the antenna is straight, the bent ends will not noticeably degrade the antenna. This will usually take care of the 80 metre band but not the 160 metre band.

For 160 metres I have had success with a quarter wave bent antenna known as the Twin Lead Marconi. This antenna is made out of 300 ohm TV twin lead. Being a quarter wave antenna a good ground is essential. I laid 3 or 4 wire radials of about 50 feet under the lawn and also connected them to the house water supply before the water meter (the city's largest ground system is free). The total length of the antenna is derived from the formula - length (feet) = 234 divided by the frequency (MHz). A short is made at a distance of a quarter wave from the feed point taking into account the velocity factor of the twin lead (about 80 %). From this short the remainder of the antenna may be made of bare wire or more twin lead.

The twin lead is run from the ground to some high support (tower or tree) and the remaining portion bent and stretched out to another support or failing that back towards ground at a distant point. At the ground end one side of the twin lead is connected to the ground system and the shield of the 50 ohm coax feedline. The other lead is connected to the coax inner conductor.

Another antenna which can be used on both 80 and 160 metres is known as the multee. The multee acts as a dipole on 80 metres and as a top loaded vertical on 160 metres. Operation on 160 metres also requires a good ground system. Some details of this and other antennas can be found in the ARRL Antenna Handbook.

The Apartment Situation - It is a real challenge to get an efficient radiator for the lower bands within the confines of an apartment balcony. Usually permanent antennas are not allowed so whatever antenna is used must be fairly unobtrusive. The simple approach is to use a mobile inductively loaded whip at an angle or horizontal to the window or balcony. With this arrangement a good ground is essential. A balcony or window used for the support and ground may be improved by connecting it electrically to the water supply pipes and the heating pipes with short lengths of 12 gauge copper wire. An antenna tuner either internal or external will usually allow this antenna to be used over the entire 80 metre band. An external antenna tuner is usually required for 160 metres.

Another approach to use is the small loop antenna consisting of 2 or 3 turns of 5/8 inch copper tubing (4 or 5 feet in diameter) tuned by a split stator high voltage (over 6000 volts) capacitor of about 500 pf. The antenna is coupled to the feedline using a smaller loop. The capacitor is motor tuned as the

useful bandwidth of the antenna is very small. An antenna tuner should not normally be used with a small loop antenna and must be capable of being switched out of line while tuning the antenna. If the antenna tuner is first tuned into a 50 ohm dummy load then it may be left in line while tuning the antenna.

Product Review: Radio Shack DSP-40

de Randall, KG0HW

(The following article by Randall Rhea, KG0HW was taken from the May 1994 issue of the *Harris Amateur Radio Club Newsletter*.ed)

Radio Shack now sells the DSP-40, a Digital Signal Processor with a 5-watt audio amplifier and built-in speaker. The price is \$79.95 in the US. The catalog number is 21-543; you will need that number when you call and ask if it's in stock, because most Radio Shack personnel probably won't know what it is. (none of the ones I called knew about it) The product is not in the 1994 catalog. Some newer Radio Shack CBs will have DSP built-in to the units.

The unit is small (about the size of a paperback novel) and runs off 12 VDC through a jack in the back (fused cord included). It has an audio input jack and audio output jack, both of the standard 1/8" mono phone type. (cord included) The input jack is designed to take input from an earphone jack or external speaker output of a radio. The DSP-40 is simple to install: just connect to power, and run the included cord from your rig's external speaker output to the unit.

There are four controls on the front: a volume/on-off knob, a button that turns DSP on or off, a bandwidth knob (three positions, WIDE, MEDIUM, NARROW), and a mode knob. (three positions: CW, SSB, NR/Noise Reduction)

For the CW operator, the unit works pretty well as an audio filter. If you already have an audio narrow bandwidth filter on your rig, this unit may not provide any more functionality. You need to tune the rig very carefully if you use this unit, especially if the unit is in the NARROW bandwidth setting.

For the SSB operator, the unit is very effective in eliminating squeals (heterodynes) caused by interference from AM stations. This is much better than the Notch filters offered on some rigs and some active filters like the MFJ filter. This is very useful for the 40m SSB operator, especially if you work mobile. You push a button, and the heterodynes go away; no need to fiddle with knobs.

For the AM operator, the unit is of limited usefulness. When the CB band is open, heterodynes (or squeals that sound like heterodynes) are a problem, and this unit can help filter them. The DSP-40 does NOT reduce engine noise for mobile operators. The unit is somewhat effective in reducing hiss. Audio quality is reduced when DSP is engaged on AM signals.

The internal speaker is pretty good for mobile operation. Its quality is about the same as the one built-in to my Icom 735. For \$79.95, this is cheaper than other DSP units. Does it provide \$80 worth of functionality? Yes, if you are a 40m SSB enthusiast. No, if you are anyone else. It is a fun new toy to play with though, and I am glad that Radio Shack is selling it.

Due Dates

(Contest Logs must be postmarked (or received *) by the dates listed...**Get Your Logs In** and marked **TDXS!**)

July 10.....CQ World Wide WPX CW Contest

Hamfests - The Thrill of Victory, the Agony of Defeat

de Carl, KR4NR

(The following article by Carl Letter, KR4NR is taken from the *Harris Amateur Radio Club Newsletter* for May 1994,.ed)

I am a festaholic! As with any addiction, festaholism usually catches up with you in the end. My wife is the director of the rehab center at our house.

As the dew on the knee-deep grass soaked into my pants legs, I stumbled into the Okeechobee hamfest with a pocket full of money and a glaze in my eyes. By the end of the day, the money was gone and my car was loaded with "deals", some genuine, but most belonged at the end of an anchor line. Being new at this, with visions of kit-building and homebrewing in my head, I had unwittingly acquired a large assortment of VTVM's, signal generators, project boxes, microphones, grab bags, components, etc.

I was very proud of all the bargains I had found and received an immense sense of satisfaction from the bargaining process itself. After haggling over a \$25 crystal Heathkit 2 meter rig for 20 minutes, we flipped a coin for the last \$5. I won and got the radio for \$20. I quickly discovered that the "buddy" system works well when making an offer (my buddy makes a low- ball offer before I approach with mine). The buddy system backfired when my buddy (N4IJ) called me on simplex to arrange a low offer on a 4-1000 vacuum tube. It was embarrassing to receive the clandestine call while standing next to the seller. He just grinned at me.

This was so much fun, I repeated the feeding frenzy at the Tampa Hamfest, this time with more money and in search of HF and VHF rigs. Well, I came home again with empty pockets, more boat anchors, an HF rig and a 2 meter mobile. It was becoming more difficult to hide all of this stuff from my wife, who was told that amateur radio was an inexpensive hobby.

I was on a roll. My next adventure was to storm the Orlando Fest with a well-planned list of things I really needed (or could at least justify). This time, my luck had run out. At every turn, I was met head on by disappointment. Other buyers were interfering with my bargaining prowess.

One particular incident involved a Kenwood 7400- series 2 meter mobile that was in good shape and would have made a perfect packet machine. Instead of paying the \$65-70 asking price, I had to let my \$50 offer ride for another 20 minutes, hoping to get it for \$55, only to return to watch someone else counting out \$65 for the rig.

An hour later, I found an Atlas 350XL for sale with matching power supply. The asking price was \$350, which is the same price I paid for one at the Tampa fest without the PS. After moping around for 30 minutes, I decided to go make an offer on it and sell the other one at the next hamfest. I arrived just in time to watch a guy hauling it away for \$330.

By now, I'm definitely getting frustrated. My desperation led me to a Kenwood TS-440/AT with Power Supply and CW filter for \$750. It was absolutely mint! I searched for my other buddy (KR4AQ) to loan me some money to buy the rig (money is no object for addicts). I found him and we arrived at the 440 just in time to witness its sale to someone else.

This festaholic is in need of a fix and I couldn't afford to go to Dayton, so I'm patiently waiting (albeit with the DT's) for the season to begin again. If anyone is aware of local hamfests coming up soon, please let me know (I'll probably be selling this time)!

DX News

de Sid, K5XI

I hope you all enjoyed the DX trivia questions from last month. Too bad no one got them. The prize was one week all expenses paid in Paris, (Paris, Texas, that is). Last month's trivia questions were: Who in the Texas DX Society has credit for the most countries confirmed among our TDXS club members? Answer: If you missed this one, you have to work as the bartender at the TDXS hospitality suite at the Houston Ham Convention. Of course, the answer is Sharp K5DX. Gus Browning was inducted into the CQ DX Hall of Fame in November 1967. What was Gus' callsign? Answer: Gus' callsign was W4BPD. Back in those days, EVERYONE who was active in DXing knew Gus' callsign. Prior to March 31, 1957, what DXCC country (now deleted) had the prefix 9S4? Answer: 9S4 was the prefix for Saar. It was in Europe, in CQ zone 14.

This month's trivia question is a good one. As you know, DX countries are added and deleted from the DXCC list all of the time. But what about the counties list? Can you name one county in the United States that no longer exists? Hint: there are now 3076 total counties in the U.S.

The big news this month was the DX presentations that were made in Dallas at the ARRL convention. I heard they were great. Unfortunately, I did not get to go. But I did get a chance to get on a little. The bands were in lousy condition when I first started, but 20 meters opened up world-wide in the evening. I could hear stations in Africa, Europe, South America, Australia, Pacific and Japan all at the same time. Even at the very bottom of the sun spot cycle, we will still get good conditions from time to time.

A group has been very active from **CY9 St. Paul Island**. I needed them on 40 meters CW, and managed to work them on the first call. **A35RK** has been very active. He has been noted at 7007 KHz (plus or minus) at about 1130z. He also frequents the nets.

A group from the Netherlands is supposed to put **HB0 Liechtenstein** on the air July 6-11, including entries in the IARU HF Championship contest. Also a group from Italy plans to operate from **TK Corsica** June 15-20 on 80-10 meters.

Japan has allowed Japanese amateurs additional operating frequencies on 75 meters. They may now use 3500-3575, 3747-3754, and 3791-3805 KHz. The window at 3747-3754 KHz is new.

Finally, **Wayne Mills N7NG** has written a new book on DXpeditioning Basics. It is primarily written for DXpedition organizers, but also contains information that will be of interest to DXers in general. A book on this subject has been needed. In the past, DXpedition organizers had to get information by word of mouth, or repeat the same mistakes over and over again. Thanks, Wayne, for making this contribution to the hobby. Well, that's about it for this month. See you next time!

TDXS Weekly DX and Contest Net

Each Tuesday night at 2100 CST, the Texas DX Society sponsors a **DX and Contest net** on **147.96/36 MHz**. The purpose of this net is to exchange information of interest to DXers and contesters. The agenda includes general and club announcements. DX information, contest information, QSL routings, propagation forecasts and various related topics. Participation is not limited to members of the TDXS, but is open to all and everyone is encouraged to join in.

DXers Toolbox

(The following items were taken from the June 6, 1994 issue of the Ohio/Penn DX Bulletin, Editor Tedd Mirgliotta, KB8NW as provided by BARF-80 BBS C leveland, Ohio..ed)

JA BAND AND POSTAL CHANGES

Masa, JH3VNC/WG2P (Editor of Five-Nine 80/75 meter DX band column) reports that on May 20th, Japanese Postal and Telecommunication services announced to release another 75 meters band window which is from 3747 to 3754 KHz. Total windows on 75 meters are now 3500 to 3575, 3791 to 3805, and 3747 to 3754 KHz.

A fax received from Nao, JH1HGY, reports that air mail charges were increased in January. Just sending a green stamp to Japan now will not cover return postage (for a 10 gram letter) from most place other than Asia and Guam. For North and Central America, Europe, CIS, Middle East and CIS it costs 110 yen to send a 10g letter (190 yen for a 20g), while it cost 130 yen (230 yen for a 20g) for South America and Africa. A green stamp is worth only 100 yen, but an IRC is worth 130 yen (which is sufficient).

FRENCH QSL TIP

Ted, F8RU, has passed on the following QSL tip for the OPDXB readers. The F5 + 3 letter suffix calls are a result from a new French callsign re- assignment policy. Until an updated version of the CallBook is published, look for these suffixes under the following prefixes in the 1994 and earlier CallBooks: FI, FCI, FD1 or FE1.

DX PacketClusters

NOTICE - Node K5DX is nowK5WA

The TDXS Contest and DX PacketCluster operates on 144.950 MHz with the call **K5WA** (recently changed from K5DX). This cluster node is operated by Rich, K5WA from his home in southwest Houston, and is sponsored by the Texas DX Society. It is regularly linked to the Texas PacketCluster DX network. K5WA may be accessed directly, or using the TDXS95 packet node by first connecting to the TDXS95 node, and then connecting to K5WA, i.e. **C TDXS95**, then **C K5WA**, all running on 144.950 MHz. The TDXS95 node has been upgraded and will now handle 26 users. It will not function as a digi.

73 es Gud Golf OM!

de Kenny, NZSI

After kicking the idea around for years, we finally got a group together and played a little pasture pool on Saturday April 9, 1994. The venue was Kingwood Cove Golf Club and we played a scramble format.

Boy did we scramble too! I believe we all felt that we got our money's worth both in terms of seeing all of the course as well as the number golf shots attempted! For all practical purposes it was a very close match until the very end with all participants achieving "Honor Roll" status when we finished. Special thanks to all of you who participated. If there's ample interest, perhaps we'll do it again in the fall.