



THE BULLSHEET

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Texas DX Society

An ARRL Affiliated Club

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Announcements

The May Meeting will be **May 13th** at **Ryan's Steak House** on 34th street. To get there, take the second exit off of 290 outbound (34th street, Antoine) from the 610 Loop. Turn left under the freeway on 34th street. The restaurant is 1/2 a block on the left. Dinner is at 6:30. Meeting to follow. **Last meeting B-4 Field Day. Important!**

How to Reach Us

On the World Wide Web: <http://www.tdxx.org>

On 2 Meters: 147.96/36 MHz

On 70 Cm: 447.00/442.00 (103.5 Hz)

On Packet: Connect to **TDXS71** on 144.71, or connect to NARS BPQ on 145.71 then connect to K5LV

Reflector: Send to: majordomo@n5uh.tech.uh.edu

In the body of your message only put: subscribe tdxs-list do *not* include your email address, as the reflector will pick it up automatically. Put nothing in the subject line.

The Prez Sez- de Earl, N5TU

Hope the turnout for the TQP was high. I missed it since I was vacationing up north. Maybe next year I'll get a chance to operate in it again.

Talking to Madison it sounds as if the fundraiser is going well and the club coffers should be full again. Which brings us to one of the agenda items for the June meeting. What are we going to spend it on? Do we want to improve the VHF repeater and get the UHF repeater on the air? Maybe get Igor straightened out so that we can hear him but he can't overpower us. A new packet cluster system is a possibility as the current software and TNCs are outdated. As a matter of fact the software is no longer supported. What ever you would like to do come to the meeting and be prepared to discuss it.

Congratulations to K5NA for making the cover of CQ this month, even if they did bust his call and had to use an old file photo of his NY QTH for the cover pic. Anybody know how many TDXSers have graced the covers of the ham rags? It was always a source of pride for the SMC to frame the issues when the guys from Black Hole made a cover. These were always displayed at their hospitality suite in Dayton. Bet the TDXS could dig up quite a few. I know K5NA, K5WA SK, and N5RP have had

Prez Sez Continued

their mugs on a cover. Guess beauty isn't a requirement.

Field Day is just around the corner and we need to finish up the plans so Dave, WB5N, will be running that show and will be looking for volunteers to head up some of the teams needed to pull off the event. I believe he already has a CW and SSB site captain and needs help with Saturday dinner, bonus points, setup and takedown, etc. Anybody know a novice or two they can bring out to operate the Novice station. Those QSOs mad the difference between 1st and 2nd place last year.

Congratulations to OJ, K1OJ. His ballots have been counted and he is the newest TDXS member. See you at the meeting.

N5TU

DX Report by Buzz, N5UR

Summer Doldrums

No biggies planned for June, but condx on 15 17 20 should keep you interested. 15 has been open to Asia as late as noon local time, with JT1s begging for callers. This past weekend I worked six new Chinese prefixes on 15 including one in Zone 23, BA0AA. Summer has kept ten from being of much use except for southern paths, and until I win that Ft-100, I cannot comment on 6 meters. ZS8D is on the island, but has not been active yet. FT5YG, the French Antarctic Base, on Petrel Island An-017 has been active on both 20 and 17 SSB. 8J1RL, the Japanese Antarctic Base on Ongul Island, AN-15, has been active on both 15 SSB and CW in the mornings. The path for both these stations is often North! Finally, FT5ZJ has been active on several bands and also RTTY. He will be there 'til year end as will FT5WH on Crozet.

It is possible we will get some more new ones this summer. Indonesia is going to let the province of East Timor, formerly CR8 & CR10 and a separate DXCC country until Indonesia occupied the province in 1976, vote on independence in August.

DJ9ZB Frank and DJ6SI Baldur put on Somaliland as 6O1Z and 6O0X respectively on SSB and CW. Going back in history, Somaliland was originally two colonies, one Italian and the other British (deleted DXCC countries I5 and VQ6) that were kludged together to form the Somalia Republic, in reality a dictatorship run by Siad Barre whose death and the following civil war brought Bill Clinton into Somalia early in his career. The North (the former British area) in 1991 set up its own government and has been operating independently of the South ever since.

The South has no effective central government and is run by a number of warlords. For more details check out <http://www.somaliland.com/> There is no reason to suspect Somalia will not break up as Eritrea/Ethiopia did. Just for kicks, look what our spooks in the CIA have to say about Somalia: "Government—note: While chaos and clan fighting continue in most of Somalia, some orderly government has been established in the northern part. In May 1991, the elders of clans in former British Somaliland established the independent Republic of Somaliland, which, although not recognized by any government, maintains a stable existence, aided by the overwhelming dominance of the ruling clan and the economic infrastructure left behind by British, Russian and American military assistance programs. The economy has been growing and in February 1996 the EU agreed to finance the reconstruction of the port of Berbera; since then, other aid projects have been assumed by the EU and by a non-governmental Italian organization."

~~See Me in The Files!~~ 6O0Z in the north on 20 SSB in early 1995, while my only southern contact in recent years was T5/LA4MQ an aid worker near the Kenyan border many hundreds of miles to the south. Seems they allocated the ITU prefixes unofficially. I doubt if Frank and Baldur will count for anything, but they represent a much more real country than say Sable Island.

Of course after Kosovo is liberated by Bill, it too will become a country, with Montenegro and Volvodina still waiting to break away from mother Serbia. Z4UCK is a Kosovar with W3HMK for a manager! Likewise the Causcus is ripe for more break aways from mother Russia. Chechneya already has an uneasy truce with Russia and the hams there use the unofficial prefix 1X5. Dagestan, Ossetia, Incush, are waiting to see how Chechneya fares. Many other autonomous republics within Russia are also itching to go it alone. The millennium should offer lots for the deserving, unless peace should somehow break out! WFWL

MFGRS. CLAIMED SPECS ON CURRENT ROTATORS

MAKE	MODEL	ROT. TORQUE IN IN./LBS.	BRAKE TORQUE IN IN./LBS.	WIND LOAD CAP. IN SQ. FT.	VERT. LOAD IN LBS.	BRAKE TYPE	APPROX. RETAIL IN \$
CREATE	RC5-1	520	6075	13	880	WORM	400
	RC5-3	520	6075	13	880	WORM	550
	RC5A-2	1400	13000	22	1540	WORM	650
	RC5A-3	1400	13000	22	1540	WORM	750
	RC5B-3	1900	17350	27	1540	WORM	1200
EMOTATOR	201	170	1300	7.6	660	DISC	400
	105	440	2580	10.9	660	DISC	300
	747	600	6024	21.8	1100	DISC	500
	1105	680	8604	27.3	880	DISC	800
	1200	1716	15480	27.3	1760	DISC	850
	1300	2580	21504	32.7	1760	DISC	1500
HYGAIN OR C.D.E.	1800	3444	25800	38.2	2200	DISC	4000
	AR-40	350	450	3	200	DISC	250
	CD-45	600	800	8.5	400	DISC	325
	HAM 4	800	5000	15	800	WEDGE	425
	T2X	1000	9000	20	1000	WEDGE	525
M2	HDR-300	5000	7500	25	500	SOL.	1100
	2800	2000	17000	35	1800	WORM	1000
TIC-RING	1022	6500	6500	15	450	NONE	800
	1032	7881	7530	25	530	NONE	1100
YAESU	G-450	419	900	10	220	DISC ?	250
	G-500A	876	1728	11	440	DISC	275
	G-800SDX	948	3456	21	440	DISC\MAG	400
	G-1000SDX	948	5196	23	440	DISC\MAG	500
	G-2800SDX	2704	20832	34	880	?	1100

Data from: The Rotor Doctor 7368 State Route 105
Pemberville, OH 43450
(419) 352-4465

Contest Corner de Ben KM5OT

The biggest contest in my mind for the month of June is Field Day, (the day to Sweat with the oldies or sweat like an oldie which ever the case may be), but one of the most fun Contests for me is the Kids Day contest, here it is again on June 19th the day before Father's Day, what better way to get a young one involved? So give it an effort, I'll be on 6m - 40m with my 10yr old god daughter Gillian, from my mobile shack.

Here's the Calendar compliments of Bruce Horn (WA7BNM) and the ARRL
ANARTS WW RTTY Contest 0000Z, Jun 12 - 2400Z, Jun 13
Portugal Day Contest 0000Z - 2400Z, Jun 12
VK QRP Day 0700Z - 1200Z, Jun 12
TOEC WW Grid Contest, SSB 1200Z, Jun 12 - 1200Z, Jun 13
Asia-Pacific Sprint, SSB 1100Z - 1300Z, Jun 12
ARRL June VHF QSO Party 1800Z, Jun 12 - 0300Z, Jun 14
All Asian DX Contest, CW 0000Z, Jun 19 - 2400Z, Jun 20
SMIRK QSO Party 0000Z, Jun 19 - 2400Z, Jun 20
Kid's Day Contest 1800Z - 2400Z, Jun 19
West Virginia QSO Party 1800Z - 2400Z, Jun 20
Marconi Memorial HF Contest 1400Z, Jun 26 - 1400Z, Jun 27
ARRL Field Day 1800Z, Jun 26 - 2100Z, Jun 27 <<<<< Know anyone doing a multi multi for this one?

I hope to see you guys in Arlington (June 11,12,13 and Kenny (June 26,27)
73 Ben

7Q7 Operation by Alan Clark, N5PA/7Q7PA

Jim:

I thought maybe the folks of TDXS would want to know the following information on my trip to Malawi in July. I will probably be going back in October and once a year for the next 3-4 years.

I will be operating in Malawi as 7Q7PA from 3 July until 13 July, 1999. Most days will operate from 4:00 to 6:00 UTC and from 16:00 to 20:30 UTC. I will be operating about 12 hours of the IARU Contest on the 10th and 11th of July, 1999. QSL via home call, N5PA.

73's

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There's a New Mode on the Block, by Dale Martin, KG5U (Reprinted from the JSC ARC Newsletter)

Over the past couple of months, I have been hearing about and Reading about a new mode of communications that is becoming popular. It's PSK31. It's a very interesting mode of communications. Most of us are familiar with the usual suspects as far as keyboard modes go: RTTY, PACTOR, AMTOR, Packet, etc. This one is new. And completely different. I'm not going to try to explain it in technical detail here; there are Other available articles about it that speak about it much more succinctly And intelligently than I could ever do.

PSK stands for Phase-Shift-Keying. 31 represents the baud rate of 31.25 baud (one writer (the originator of PSK31, I think) suggested that it would not look right as PSK31.25, so he dropped the .25). Anyway, because of it's low baud rate and the phase-shift characteristic of the signal generated, the bandwidth of the signal is very, very narrow. Tuning across the signal, you wouldn't even know it was carrying intelligence. You might even think it's simply a carrier or even a spur in your radio generated by your computer. Where the other digital modes use two separate and distinct frequencies to carry their information, PSK31 uses a single frequency.

There are two forms of PSK31: BPSK and QPSK: BPSK uses 180 degree phase shift and QPSK uses two 180 degree phase shift signals phase shifted 90 degrees, all on the same frequency. As good a copy as you get with BPSK, when conditions get rough you can switch to QPSK and suddenly, you are seeing 100% copy for the most part. Some writers have reported being able to get 100% copy without being able to even hear the signal in the QRM or QRN. This is not the norm for us hams; we need to actually hear signals...not with PSK31.

What does this mean? It means that you can be a big gun with an amp and big antennas or you can be the smallest peanut whistle with a wet noodle of an antenna and STILL be able to make QSO's. Case in point: Ozzie, W5RK, used to live in a house in Friendswood and had a very nice tower and antenna. Big signal and lots of DX and other QSO's on whatever mode he wanted. Then he moved to a retirement community in Friendswood where he could no longer have a big station with a big signal. He Does do some HF CW, but at a much reduced level than he used to and was accustomed to. I heard him on PSK31 the other night. So, with his indoor antenna, he's on the air making QSO's with PSK31. Another feature of PSK31 is that it allows for very comfortable round-table QSO's with other PSK31 stations; a feature that the other digital modes don't handle very well at all.

What does it take to get on the air with this mode? Not much if you have a computer with a soundcard and an HF radio. The May 1999 issue of QST carries a nice article on getting started on PSK31. I used the interface circuit between my soundcard line out port and my Omni VI's audio in port (a Radio Shack 1:1 audio transformer and 47k ohm pot) to control the audio level to the radio, and hooked the soundcard line in port and my Omni's audio out port (constant audio level in spite of the AF Gain pot setting). Another interface method was to put a 100k ohm resistor in series with the hot audio lead to the radio audio/mic in with a 1k ohm resistor in parallel with the input. I didn't try that, but I understand that works, too. I downloaded the free (Yes, I said FREE) software from the PSK31 website (see below) and ran the software. Once I filled in a blank or two in the Setup of the software, I was on the air. After a short

Tune-Up procedure to adjust power output and audio levels, I was, within 30 seconds answering someone's CQ on PSK31. The tuning process is a bit more critical than with the other digital modes, but between the rough setting of the VFO and the fine tuning adjustments you can make in the software in real time, it's a snap to tune in a station and get good, if not 100%.copy. The software is really cool. It runs in Windows 95 (and 98, I'm sure). On the screen, you have an incoming/outgoing text area, an outgoing text area (where you type your text to be transmitted), a neat two-part tuning display with a tuning 'circle' and a 'waterfall' display. The waterfall display is really a little audio spectrum analyzer where a properly tuned in signal is in the exact center of the display. It takes only a couple of minutes to figure out what to do and how to tune in the signal. There are some 'normal' communications software features that are

not present in the software, but, hey, it's FREE and it works great! A friend of mine whom I respect as an A-1 op—he's one of the top 3 contesters in the country—said in an e-mail note to the CQ Contest reflector the other night, that for general operating, PSK31 may be to the digital modes, what SSB was to AM back in the 50's/60's. He may be right. If you have an HF radio (Hey! Why not a VHF or UHF all-mode radio? That should work just fine, too!) and a computer with a soundcard, you HAVE to try this mode. It's too simple to bypass and not at least get your feet wet with. If you have questions about this mode, how to get on, etc., give me a call. If you want more information about PSK31 from the pro's, check out these spots: 1999 May QST, PSK31—Has RTTY's Replacement Arrived, by Steve Ford, WB8IMY, page 41-44.,<http://www.aintel.bi.edu.es/psk31theory.html>,<http://www.aintel.bi.edu.es/psk31.html> — software which contains a very detailed and informative help file Join the PSK31 reflector: send an e-mail message to: majordomo@aintel.bi.edu.es. In the subject field enter your full name and callsign. In the text enter "subscribe psk31" (without the quotes).

Pegasus flies to Dayton"

by Conrad Weiss — NN6CW

TEN-TEC's Gary Hendricks is the friendliest man I've ever interviewed. The rest of the friendly T-T crew — Pegasus in hand — had hopped on the morning flight to Dayton, leaving Gary back at 1185 Dolly Parton Parkway to man the 800 sales line. In a 30-minute telephone interview, Gary bared his soul and shared the details of Pegasus — the horse with wings — for those who couldn't attend the Dayton show this year. He's well-qualified to tell the story since he was a Pegasus beta-tester and has been an active ham for 30 years. He's also a ham who's very excited about this new radio — in fact, it's the most fun he's had with a radio in his ham radio career he told me. Ever !

What it's NOT: an updated Scout or a replacement for the Omni-VI+. Nor is it a mid-range transceiver, in the conventional sense.

What it IS: a computer-controlled, IF-DSP ham transceiver.

Product Overview: Pegasus is a 100kHz - 30MHz all-band, 5-100 watt ham transceiver with general coverage receive. Transmit modes include LSB, USB and CW. Receive modes include LSB, USB, CW and AM. FM may be a future option. The rig features "cutting edge IF-DSP" with 34 DSP filters from which the user can select eight at one time. For SSB, the filter widths range from 1050 - 8000 Hz. For CW, the filter widths range from 300 - 900 Hz. The rig has all of the features typically found on any modern transceiver, including: PBT, RIT, XIT, full metering, and naturally — a virtual main tuning knob. The hardware portion of the rig is housed in a "putty-colored" box — designed to blend in with computer equipment colors. It measures approximately 10.75" High, 5.15" Wide and 10.0" Deep. It weighs 8 or 9 pounds and looks like a little PC computer tower. On the front of the box there's a front-firing speaker and a headphone jack. On the rear panel, there's a DB-9 connector, antenna jack, 13.8VDC power connector and various keying jacks.

Pegasus interface: Where's the knobs? Since Pegasus is a "virtual transceiver" you can only see the front panel and main tuning knob via your computer screen using Pegasus software. The tuning knob — and other Pegasus controls — are manipulated with your mouse using "rotations, clicks, switches and sliders." The main tuning knob has 12 rates from 1 Hz to "very large." In addition, there's a "log scale" above the rotary knob allowing the user to "grab" 7.1MHz and drag the receiver to 7.4MHz, for example — in a matter of a second or two. If you prefer conventional knobs to virtual knobs, Pegasus will have an accessory remote tuning box that will feature a real knob - like an Omni knob — direct frequency entry pad and three definable function keys. The function keys will be user-assignable to allow you to "hot-key" switches and controls of your choice -- all from the comfort of your Lazy-Boy. The sound can be routed through your PC speaker system, ear phones or from the Pegasus front panel speaker.

Clever horse tricks: You can look at a graphical preview of any DSP filter and check-out its shape, skirts, slope, width and suitability for band or contest conditions. If you want the ultimate "brick wall" you can see it before you actually hear it. You can use Pegasus as a spectrum analyzer and "sweep" an entire band — looking for activity, noise, lightening storms, etc. You can store unlimited memories with your own titles, such as — 5.489Mhz — "Unidentified Strange Beacon." For those who spend lots of time on the computer, one could use Pegasus to "rejoin" ham radio. The transceiver box will stow, unseen, under your desk and the virtual interface can be left open as a minimized window on your computer desk-top. You could use an ear-bud for listening, and it would be possible to operate CW via keyboard/paddle or PSK-31 without distracting your spouse or fellow worker.

Computer requirements: minimum 486-class PC, running Window 3.1, Win95, Win98 or NT. One megabyte of HDD is required.

Power requirements: 13.8VDC @ 1A - receive, 20A - transmit.

Shipping Date: July, '99. US List Price: \$895.00, including software. Accessory remote tuning: Price TBD.

Commentary: Pegasus clearly represents exciting advances in the area of DSP transceiver design — no question. The greater debate will center around the ultimate user-interface — virtual, real or some combination of both. Some of the tricks that Pegasus can perform; the Omni VI+ simply can't. At the same time, Pegasus will have no appeal to hams who love their Omni VI+ front panel and big knobs. Time will tell. But, whether you love the "flying horse" or not... I'm just the messenger who's been up all night to bring you the story. Never polite to shoot the messenger — even in Roman times! <wink

73,

Conrad Weiss - NN6CW