

THE BULLSHEET



Official News Bulletin of the Texas DX Society An ARRL Affiliated Club

August 1986 Volume X Number 8

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ANNOUNCEMENTS

MEETING NOTICE- The Texas DX Society meets the second Friday of each month except when changed by the Board of Directors. The next regular meeting will be on Friday, August 8, at the Bellaire Hospital Professional Building, 6550 Maple Ridge at 7:30 p.m. The board meeting will begin at 6:30 P.M. This month's speaker has not been announced.

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.

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.

THE OTHER FELLOW'S SHACK (de K2TNO)

Tidbits from other rags are presented below.

The DX Bulletin, issue 339, June 6, 1986:

An article courtesy of KH6BZF plots the sunspot decline over the past five years. Feeling bad about DX? Here's why, based upon a single week in May:

SOLAR FLUX						
<u>Date</u>	*81	'82	*83	'84	'85	<u>'86*</u>
5/19	189	152	143	129	88	77
5/20	176	155	149	134	85	78
5/21	176	165	146	135	83	77
5/22	166	155	148	140	82	77
5/23	156	155	140	127	78	77
5/24	166	147	137	127	76	78
5/25	173	142	135	124	75	79

*And that was a high week! - ed.

ARRL Letter, July 7, 1986:
Make my day:

An 11 meter CB transceiver in La Habra, California, has been shot to death by an armed intruder. According to the Orange County Register, Dennis Carrico was talking on his CB set after midnight when he sensed that he was no longer alone. Carrico turned and saw a stranger with a gun standing over him. The gunman ordered him to turn off the CB and move away from it. Carrico obeyed, after which the visitor shot it three times and quietly left. Carrico was not harmed, but his \$500 transceiver was destroyed. Police theorize that the attack was in retaliation for TVI. The gunman was described as white male, 45 years old, blonde hair, 5'8" tall and weighing about 155 pounds. Anyone with information onthe identity of the CB assassin is asked to contact Captain Herb Johnson of the La Habra Police Department. Thx KOOV and Westlink.

ARRL Letter, May 23, 1986: What Time Is It?

There are lots of interesting stations to listen for: WWV from Fort Collins, CO, on 2.5, 5, 10, 15, and 20 MHz; WWVH from Hawaii on 2.5, 5, 10 and 15 MHz; JJY from Tokyo on 2.5, 5, 8, 10, and 15 MHz, CHU from Ottawa on 3.33, 7.335 and 14.67 MHz; VNG from Lyndhurst, Australia on 5.425, 7.515 and 12.005 MHz; OLB5 from Czechoslovakia on 3.17 MHz; VWC from Calcutta on 12.744 MHz; or DOA from the Federal Republic of Germany on 2.775 and 12.763 MHz.

WIAW Bulletin #45, July 15

Amsat Oscar 10 has been restored to service after being severely damaged by radiation in orbit on May 17. Limited Mode B transponder use was begun early on July 15. Work to restore service has been underway since then with the culmination now attained. Monitor Amsat nets and WIAW bullentins for futher details.

WIAW Bulletin #48, July 28

Recent ARRL Board decisions:

The board approved the Golden Jubilee DXCC award, a special award to celebrate the 50th anniversary of DXCC, to be issued during 1987.

The board voted that the DX Advisory Committee consider the advisibility of restructuring the DXCC award. The board directed that the DXAC consider all possibilities, up to and including a new award replacing the present DXCC. The board made it clear that it is not committed to such a restructuring of DXCC, but is interested in whether a new award is desired, and if so, what form it should take.

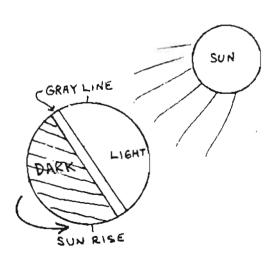
(Why not call it the Pribilof Award? - ed.)

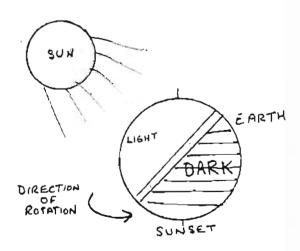
Authors of QST and QEX articles will be paid for their contributions beginning with the January 1987 issues.

THE GRAY LINE (de Chuck, KE5FI)

From some of the discussions heard on the repeater, it seems there is some misunderstanding about the "Gray Line." It is not, as some have suggested, a tour bus company at NASA.

The Gray Line is actually the line around the Earth which is the boundary between the dark side of the Earth and the sunlit side. At every point along the Gray Line the Sun is either "rising" or "falling" at the same time. Since the Earth is a slightly different "tilt" with respect to the Sun each day of the year, this line changes a bit daily. An examination of the globe will show that this line passed through different points at sunrise and sunset.





As you may have found in contests, propagation, especially on 160 through 40, tends to be quite good when beaming along the Gray Line at sunrise and sunset. This is because absorption is at a minimum in the "D" layer of the atmosphere at those times.

At sunset the D layer, being the lowest layer, is the first to lose the direct light of the Sun. Its ionization quickly fades away leaving signals to travel to the higher layers free from its absorbing effects. Since absorption is greater at lower frequencies, the effect is more profound on the lower bands.

At sunrise the opposite procedure takes place. The D layer, being the lowest, is the last to receive the ionizing rays from the Sun. Therefore, its signal absorbing effects trail the ionization of the higher layers.

Remember that you may be able to work either long or short path at both sunrise and sunset. Experience will dictate the most likely path. Sometimes a signal will peak up long path during the Gray Line period and then seem to "switch" to short path when its effects fade. Check the Gray Line path beginning 10 or 20 minutes before sunrise or sunset until 10 or 20 minutes after. Elsewhere, in the propagation forecast, I have given the sunrise and sunset times and some prefixes along the path to help you orient your antenna. Good luck!

DX REPORT (de Steve, WA9VLI)

Mount Athos	N4NJH/SV/A - Apparently Amil's efforts to operate from the mount were unsuccessful. Amil was quite active from SV8 the week of July 14th. QSL to POB 2002, TEL AVIV.
Saltee Island	EJ5EP, 14176 at 0025 UTC. QSL to ON5KL.
French Guiana	FY5CG, 14208 at 0030 UTC.
Golan Heights (Syria)	VE2PAB/4U, has been very active. Look for Bill about 14174 at 0000 UTC. QSL VIA: CFPO 5002, Bellville, Ont KOK3RO, Canada.
Knights of Malta	For those lucky enough to work this rare one July 19-20, should QSL to IOMGM.
Mongolia	JTIBG, shows up regularly Saturday and Sunday (his time), around 14227 at 1000-1200 Z and 1500-1600Z.
Chagos	VQ9GB, OP Greg, was worked on July 19 at 1628 UTC on 14226. QSL to NA7P.
Mayotte Island	FH8CB is active on 20M SSB around 14197 at 2000 UTC.

Johnston Island------K8CRM/KH3. John tries to work stateside every day for

0300-0330 UTC.

15-30 minutes before his dinner time. Try 14233 at

Frans	Joseph LandUV100	still very	active 201	M CW and SSB.	Rubber-lippers try
	14206	at 0300 UT	C. OSL VI	A UA9LBR.	

Jordan-----JY5CH, at 14183 from 2355 UTC.

Galapagos Islands------HCIMD/HC8 will be operating from August 11-16 SSB/CW/RTTY.

Possible Oscar 10-Mode B. QSL to K8LJG or NE8Z.

Oman------A4XOS - Special event station for the scouts will be on from August 8-31. Bands 10-40M. Modes: CW/SSB/RTTY/AMTOR.

Wake Island-----NH6FU/KH9 almost nightly between 14075-14100 starting 0600 UTC. QSL to POB 86, Wake Island Zip 96898, USA.

Marshall Islands------KX6RN or KX6ND scheduled for August 20-26, 10-160M, CW/SSB.
Will be in all Asian CW. QSL to JALELY.

Togo-----5VIRG, has been reported working Europeans on 14200 about 1530 UTC.

AUGUST PROPAGATION FORECAST (de Chuck, KE5FI)

The CW Armadillo Run came during a two-day magnetic storm of moderate levels (July 26-27). The Fredricksburg, Va. "A" index rose to 20 on Saturday and was 18 on Sunday. That, coupled with a solar flux of only 69 made for poor DX conditions, but seemed to help on short-skip and VHF.

August will probably be a repeat of the conditions in July where the solar flux "soared" to 73 on two days, hardly high enough for a good 15 meter opening. It was better than June though, when the flux taxed itself in rising only to 70 on one day. June is a candidate for the low month at the end of the solar cycle with its average sunspot number of less than one! The average flux for June was only 67.5. Those low solar flux levels cause a low MUF and strong signals on 20 meters during the day and 40/80 at night.

Worst days: 5-6, 14-15, 20 and 23-25. Best days: 4, 9, 13, 17-19 and 22.

Gray Line: 1-10 Aug. Sunrise 1147 UTC VP8, HS, XW

Sunset: 0108 UTC AP, UA4, 8Q, VU7 (Lac)

10-20 Aug. Sunrise: 1153 UTC VP8, X2, VU7 (An-Nic), JT

Sunset: 0059 UTC YA, VU, UI8

20-30 Aug. Sunrise:1159 UTC XZ, VU7 (An-Nic)

Sunset: 0048 UTC JW, VU, UJ8, 4S

CONTEST CORRAL (de Steve, KN5H)

The Armadillos are back from their scurrying about the countryside. Nothing but good reports have filtered back so far. Congrats to all for an excellent weekend. (See article elsewhere in the 'Sheet).

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Some results: 1986 SSB County Hunters

<u>Call</u>	Class	<u>Score</u>	
KB5FU/M	Single Op	1,623,993	#1 USA
KE5IV/M	Multi Op	2,384,666	#1 USA
K5DX		1,902,626	#2 USA
K5LZO	Fixed	16,737,329 .	#2
K5ZD	Fixed	18,089,115	#1
K5RC	Fixed	1,794,015	#11

Coming attractions:

August 2 - 3	ARRL UHF Contest
August 2 - 3	YO-DX Contest
August 9 - 10	EU DX Contest
August 16 - 17	N.J. QSO Party
August 16 - 17	N. Mexico QSO Party
August 23 - 24	ALL ASIAN CW

A preliminary check shows the CW weekend's County Hunters/Armadillo Run contest was a smashing success. Dave, N5JJ, found 51 different mobile or portable stations in his log. Notable among them were TDXS mobiles with estimated results as follows:

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K5LZO (+N51VF, KD5SP) - 2349 Q/58 counties
K5GN (+K2TNO) - 2244 - 67 counties
KB5FU (+KG5U) - 1827 Q/64 counties
*K5RVK (+W5VAH, K5GB, WA5ZVE) - 1400 Q/47 counties.
AA5Y (+ N5WW) - 300 QSO's
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*These crazies drove over 4,300 miles to put on N. Dakota, S. Dakota and Montana!

Also active were K5MA/ml; K5NA/m VE2; AK5B/m; WA9VLI; K5VWW; K5DX; N5JJ; NZ5I; KE5FI; W5DOZ; N5EA; and KN5H. It was another fine turnout by TDXS in this, our much-publicized RUN of 86.

We have no tally yet on how many additional counties of the US were activated, but the TDXS mobiles (aided by friends from the North N5RZ, KROY and N5TR) put all the remaining Texas counties on the bands.

Now, please, send your logs to BOTH Galen, KB5FU (for the Armadillo Run) and also to the County Hunters Contest itself.

Tom, K5RC, is due to give a talk at the ARRL National Convention in San Diego in early September. Please get your photos to him, along with a road map of your route. If you made prints (as I did), be sure to send him the negatives as well.

I am preparing a huge Texas map with all of our routes on it. Please send or give me a road map with your route so I can add it. May SSB Runners take note: this means you, too!

We all had a ball; fortunately there were again no accidents or bad car problems. By the way, our biggest seller was clearly Armadillo County. There is now real enthusiasm out there for QSO's with our beloved county. If you get a chance, go mobiling on the Texas Independence Trail and have some fun.

ARRL NATIONAL CONVENTION

This year, the National is in San Diego over the weekend of September 6-7. Tom, K5RC, will give a special talk on the Armadillo Run. This convention should be a great time; how many of you are planning to go? Perhaps with cheap air fares we can get up a contingent. If 4 or 5 people go, they could get a suite and throw a hospitality party. Time is growing short, so make your intentions known.

TDXS RECEIVER CLINIC (de Bill, K2TNO)

As a follow-up to my talk on receivers at the July meeting, we have scheduled a receiver clinic to test receiver noise floor and 2-tone dynamic range. The results will be tabulated and published in the 'Sheet (possibly also elsewhere).

The date will be <u>Saturday</u>, September 6, at my QTH - 2301 Dryden Road in Houston (corner of Greenbriar, two blocks south of Rice Stadium). I know that's the ARRL convention weekend; if too many people are out for it we'll have to reschedule, but I hope we'll have enough receivers show up to make a day of it.

We have a pool in the back yard; come to swim if you like, and bring your own comestibles, consumables and combustibles.

This is being done as a money-making effort for the club. The price for the test is \$10 for the first receiver and \$5 for each additional receiver you own. NO CASH; make checks payable to "Texas DX Society."

The receiver test will be done on 20 meters. You will receive a sheet showing (1) receiver noise floor in dBm; (2) receiver 2-tone dynamic range in dB; (3) receiver dial calibration error in Hz; and (4) receiver band width (6 dB points) in Hz. Receivers can be homebrew, tube, mobile, or what-have-you. The receiver must be operable off of 110 V A.C., unless the 13.8 V D.C. input will accept a pair of alligator clips. Receiver antenna input inpedance must be 50 ohms, and use either an RCA, UHF or BNC input jack.

NOTE: To make things sporting, the organizing committee (me) has decided that the receiver with the lowest noise floor and the reciever with the widest dynamic range will be tested FREE. At the close of the festivities, the owner of the winner in these two categories will get his/her check back.

We are particularly interested in testing some old beauties, so if you have a 75A4, an R4C or a 75S3, by all means bring it! Also, we are interested to see how much variation there is in one receiver line. The popular Kenwood TS93O should give us numerous samples.

Testing will be done on a first-come-first-served basis; you'll receive a number when you arrive. Owners are responsible for their gear; any rigs left overnight become the property of K2TNO!

I would like an estimate of how many rigs will arrive, so please complete the attached form and mail to me at 2301 Dryden Road, Houston, TX. 77030. It is not necessary to register by mail, but it would obviously be impossible to do more than about 30 or 40 tests in a day.

Hope to see you there - bring receivers and bring money!

73, Bill

Name	Call Call
I plan to bring	receivers of the following types:

DOWN THE ARMADILLO TRAIL WITH GUN AND CAMERA (by K2TNO and K5GN)

Another stupendous weekend on the road has passed. Dead tired, we got home at midnight Sunday and shut off the mobile rig for the last time.

What a ball we had! The contest brings out a slew of first-rate ops every year, and it's fun to watch a QSO system develop with each of them. Some were so expert at tail ending you would have thought they were reading the mind of the previous QSO station. Noticeably absent this year were stalwarts KlZX, K9BG, W2GD and a few others. But boy, K5ZD, AI9X, N7TT, WB9JKI, K8CW and a few others made up the difference. We'd enter a new county and send "new...new..." a couple of times and WHAMI - off to the races!

The rate went up to over two a minute for a while, and consistently settled at over 60 per hour. In fact, our final overall rate was about 65Q/hour. At those rates, you have to be on your toes to avoid fouling up - if you blow a call or something the pile up moves off to find someone else. Fortunately we were loud enough to hold a frequency most of the time. The rig is QSK, and enormous aid in telling as you send whether you're being trampled. It (QSK) also cut down on doubling a lot - we'd let up sending if we realized the other guy was still sending.

The key to successful mobiling in this contest is to have comfortable, efficient operating position. Operator fatigue will kill your rate long before the bands do. Our car (1977 Volvo) had an adjustable bucket seat for the operator. Periodic changes of the seat position were a big help.

We picked a route that would take us into as many counties as possible (we did 67 counties). Unfortunately our maps were woefully incomplete, and did not show all the smaller farm roads. That deficiency didn't affect our route, but made it hard to estimate our remaining time in a county. We did our best to estimate and transmit

occasionally our next county arrival time, but sometimes we were pretty far off. Once, WB9JKI came on and asked: "next cty'?" We said: "Ten min." The reply: "That's what you said 15 minutes ago." Next time we'll have at least one map that shows every damn road!

We had tried with the rest of the TX mobiles to arrange to stay separated on designated frequencies; that system seemed to work great at the start of the contest. Once Saturday's wierd skip conditions and high band occupancy started, we had to jump around more. Both 40 and 20 were very busy all weekend long.

Forty meters was the big bread winner for us. Saturday night the band played great all night until we went QRT at midnight local time. We had a bug catcher modified for two-band operation with instant band change. That antenna worked great, and we switched bands frequently at dawn and dusk, (Details on the K2TNO modifications are available on request.)

This year we had no mechanical or electronic difficulties at all. Both car and rig purred along as we'd hoped they would. We did, however, have a couple of boo-boos in the direction-finding equipment (i.e., the driver!) and went the wrong way twice. We did a fast ad-lib change of the route, and actually gained a couple of new counties in the process.

Outside temperatures were over 100° both days. The only death-defying aspect of the trip was the stops for gas, when the driver had to brave the elements all the way to the cashier.

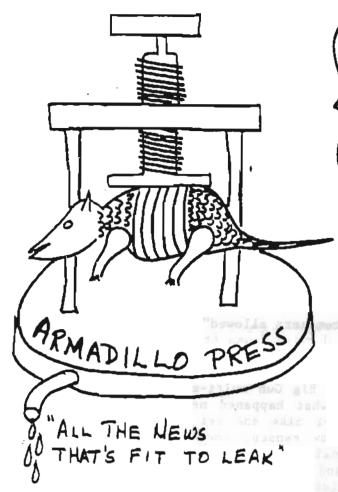
The rig was an ASTRO 103 under the dash, with an instrument panel in place of the glove box. The panel held the transmatch, keyer, audio filter, and the connectors for phones and keyer paddle. Also, we had a red light on a gooseneck for use at night. The light was great for logging, and did not affect the driver's night vision.

All told, the contest was great! Our 'thanks to the TDXS'ers and others who followed us around. See you next year! Final results:

2244 QSO's, 67 counties, 1900 miles.

73,

Bill and Dave



PUBLISHED OCCASIONALLY
IN ARMADILLO COUNTY, TEXAS
by the
TEXAS DX SOCIETY

VOLUME:

ISSUE: 3

DATE :

August 1986

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SUNSPOT FORECAST DIRECT FROM THE SOURCE

Bright earthshiny days are predicted in the Helios area for the next 24 to 48 griblanks, with moderate temperatures of 2,000,000 to 2,500,000 degrees. A steady westerly kraff will blow at about 176 X 106 brinj per zorkon, and should continue to push the spots off to our eastern limb. Bad eruptions will continue occasionally around central and southwestern Xpggfsl; local residents should be prepared to seek higher orbitals if the particle flux increases.

Another corr33am55 storm system is developing off the western limb and should move through our gorb in the next parsec or two. This storm has associted with it very high proton densities and a few coronal flares have been sighted near the brlx. Spots of this polarity are rare at this time of the karjolis, and little damage to the magnetosphere should occur.

Earthrise tomorrow will be at 0177942.87, earthset at 7794665229.0042. Yesterday's high at the Mercuryport was 2,697,402z. Patches of liquid protactinium may make klarning hazardous, particularly on your way to frn39xl. If you're on gibonz and planning to take the family to the joonx, the 2800 Megazisspt should be about 009b, so better pack along plenty of ttjk-3 if the kids are going to be out in the earthshine.

DOING HARD TIME

Fort Collins, Colorado (TDXS) - On a recent holiday trip through the flatlands of eastern Colorado, this reporter passed a road sign announcing that station WWV lay just up the road. I guess I've listened to time ticks and propagation forecasts as much as the next op, so I was of course curious to see their QTH for myself. I drove onto the grounds, and saw before me a miraculous network of towers, masts, guys, wires and huge Heliax lines. No, I wasn't at George's place, but the WWV setup sure runs a close second!

I parked below a sign that said "No pacemakers allowed", and got out of the car. Suddenly, a nostalgic pang shot through me - I was standing on absolutely flat ground and under my feet were buried thousands of feet of 8-guage wire radials stretching in a grid pattern clear to the next county. I felt right at home! This place was just like some of the Big Gun multi-multi QTH's in good old Armadillo county! I couldn't control what happened next; following some irresistable impulse I grabbed the two-meter mike and let fly with a mighty "HOLA! HOLA!" As I regained control of my senses, the most amazing thing happened - the receiver came alive as a signal broke the squelch and back come a. response to my Armadillo County salute! And who do you think was monitoring, who do you thing had been sitting there listening patiently on 147.96, hoping desperately for a QSO? No, not KF4VS (but two points for a good guess. Deduct three points if you guessed K5WA.) It was somebody from inside the station! And what was his answering response to my call? Another "HOLA"! THE GUY INSIDE WAS OBVIOUSLY AN ARMADILLIAN!! Sure enough, a few quick exchanges and I'd learned he was a native of our fair county. Suddenly, after about 45 seconds, he disappeared from the air, and came back apologetically after another fifteen seconds had passed. I asked him what had happened: "Oh, I had to make a quick transmission on HF," he replied. "What HF band you on?" I asked. "Several frequencies at once," was the reply.

I decided to risk the ultimate question: "Mind showing me the shack?"
"Not at...(another 15 second silent period)...all, come on in", he shot back. I raced up the steps and barreled through the doors before he'd have a chance to reconsider. There I was in WWV's shack! And striding to greet me was a fellow Armadillian. I could tell from his clothes he was no local sodbuster. Nosiree, he was dressed in a powdered wig, a frock coat, britches and Italian buckle shoes. He looked just like the folks back home in Montrose! "I don't get much company up..." Suddenly, he looked at the wall, where a huge Heathkit Digital Grandfather Clock was shining down its seven-segment news. He raced for the operating table and sat down in front of a D-104 mike welded to the table top. He reached beside his chair and picked up a tiny music triangle in one hand and its striker in the other.

As the Heathkit turned to :45, he hit a red PTT switch on the control panel and the whole room started to hum as hundreds of transformer laminations were suddenly induced by magnetic forces beyond their control to squeeze their neighbors mercilessly. "National Bureau of Standards, W-W-V, Fort Collins, Colorado," he intoned in his best radio-announcer voice. "At the tome, nine hours, seven minutes, Coordinated Universal Time."

He stared intently at the Heathkit on the wall, poised with his triangle in front of the mike. Suddenly the orange bars rearranged themselves, like some incredibly precise drill team. "0907:00", they informed us silently. "Plinngg!" went the op on his triangle for all the world to hear. A new minute had been ushered into existence, delivered healthy and unspoiled from the womb of Heathkit. In a split-second, this maestro of the minute hand put down his striker and punched a green button labeled "INSTANT REPLAY." A Phone-Mate next to him began to run its tape-loop rendition of this tone. "Is it real, or is it Memorex?", I found myself thinking.

He rose from his chair, a confident grin on his scaly face. "There! Now we can chat for a bit," he said. "I have a lot of time on my hands." I wondered how long he'd spent thinking up that joke. "I'd better be going", I said.

"Hour eyeball QSO was great, but I'd better go before your Timex-pires again", I parried. "I really minute, this has been fun." I wasn't going to let any downstream Armadillian best me with the time wisecracks. I turned to go before another: 45 appeared.

"Wait a Seikond and I'll give you a QSL", he said. I knew from that one this turkey was not going to be beaten that day. He ran off another announcement, and then grabbed a blank QSL from a drawer. He filled it out and handed it to me. "Thanks for the chat", he said.

"I'll give you a shout on 10.0000000 next time I hear you on," I suggested. "Nah, thanks, but I'll be moving to Pisa, Italy next month." he said. "Got a job lined up as announcer at the Leaning Tower."

"Gee, I didn't even know that the tower <u>had</u> a time reference," I said while opening the car door. "It didn't until recently," he replied. "They finally decided it was a shame to have the inclination and not have the time."

I slammed the car door, pushed the accelerator down to the Internal Hemorrage level and got out of the lot before that last one sank in. But as I headed for home, that guy's QSL sat on the seat for me to ponder. And now, dear reader, I share that QSL with you. Next time you listen to WWV, maybe you'll think a bit nicer thoughts about the op on the other end. Say, I wonder what Ms. WWVH looks like?

73 K21NO NATIONAL BUREAU OF STANDARDS
FORT COLLINS, COLORADO

050 WITH DAY WONTH TEAM

K2TNO 4 7 85

UTC	MHZ	RST	WAY	
0858	147	TDFQ	~	,

73, Joe Don

