

# THE BULLSHEET

# Official News Bulletin of the



# **Texas DX Society**

An ARRL Affiliated Club

founded 1970

April 1992 Volume XVI Number 4

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

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DX Chairman	Steve Smothers, WA9VLI
Field Day Chairman	Mike Davidson, KC5CP
Legal Chairman	Sid Leach, K5XI
Repeater Chairman	Jim Lane, N5DC

# Announcements

Meeting Notice - The Texas DX Society meets on the second Friday of each month except when the date is changed by the Board of Directors. The April TDXS meeting will be held on Friday, April 10, 1992 at St. Johns School at the corner of Claremont and Westheimer Roads. Claremont is the name of Buffalo Speedway after it crosses to the north of Westheimer. There is a parking lot entrance to the right just north of Westheimer. Park in the lot and follow the walkway to enter the school building. The meeting will get underway around 7:15 P.M. Visitors are welcome to attend the meeting and may obtain help in finding the location by checking in on 147.96/36 MHz. Program - The April program will feature video tapes from the 1983 ARRL National Convention held in Houston. During the convention the TDXS presented a series of round table discussions on varied topics each involving a number of well know amateurs. Among the invited guests were Don Wallace, W6AM, Lloyd, W6KG and Iris, W6QL, Herb, KV4FZ and Gene, W3GG. Also appearing in cameo roles will be certain members of the TDXS exhibiting somewhat younger and fresher images than is now their fate.

Bullsheet Mailing List - TDXS wishes to provide the Bullsheet to those amateurs in the Houston area with an active interest in DXing and contesting. Donations to help defray publication and mailing costs are appreciated. Visitors to our club meetings will receive the Bullsheet for three months free of charge simply by signing the Attendance List and including their mailing address. Articles or other newsworthy items are hereby solicited by your editor. Articles should be submitted in the form of either ASCII files or as MS Word or WordPerfect word processor files. Files may be uploaded to the TDXS area on K2TNO's Bulletin Board at 713-798-4955, or sent to the Editor on either 5 1/4" or 3 1/2" diskette, either DS/DD or DS/HD. If necessary, text may be sent to via FAX to the editor at the number listed below. Files or other messages may be sent via E-Mail to: Schrader BCM.TMC.EDU. For those with VHF Packet and having access to any of the local Digipeaters, or able connect directly. ASCII text can be sent directly to the Editor. Contact W5ASP at 713-974-3455 to arrange for either fax or packet transfers. Publication deadline is the first friday of the month.

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, and related topics. Stations checking-in are urged to report DX heard or worked locally, band openings, contest claimed scores, and any other information that might be of interest. Participation is not limited to members of TDXS, but is open to all and everyone is free to join in.

Wanted - Tri -Band Beam. A three to five element tribander in good condition is needed for use at the station of ZF8AA. Beam should be complete with all hardware and manual. Contact Joe, W5ASP at 713-974-3455 with details.

### The Prez Sez - de Bill, K5GA

Good day to all. It's raining hard today, and there is nothing to work on the bands, so I guess it's time to write my monthly

Congratsulations to Rick, XE2KB, and his gang in Nuevo Laredo. They operated XA5T during the CQ WPX Phone Contest this past weekend...and beat XE2FU. What a terrific accomplishment!!! The XE2FU operation was supervised by K5LZO who is out of practice, out of shape, and over the hill, but nevertheless, their station was a good one. FELICIDADES RICARDO!!!

Everyone please remember that the TEXAS QSO PARTY is coming up on Saturday, May 2nd thru Sunday May 3rd. The TDXS, our club, is the sponsor, and the board has made the decision to make this an annual event. The board is asking all members to participate so that in 2 or 3 years, the TEXAS QSO PARTY will rival the ever so popular CALIFORNIA QSO PARTY. It cannot be done without the support of the sponsoring club. Mailouts have been done to other clubs in Texas for their participation. Also, mailouts have been done to contesters throughout the nation asking for their participation. Let's go

gang, get the Armadillo outfits on, and go to work.
The SPECTRUM repeater is now back in operation successfully, and N5DC now has the ball in his court to finish the overhaul. Thanks to JOHN at V-J ASSEMBLIES for his help in the SPECTRUM repair which, without him, NOTHING would have

been done! 73 de BILL

# **DX Report**

de Mike, AA5NK

I am sure that by the time you receive this newsletter, you will have worked VP8SSI, South Sandwich on as many bands and modes as you desired. That is unless you needed them on 80 or 160 M. I only know of hearing them operating on 80 M one time, and then very few made their log. Other than on these two low bands, they have been most regular in appearing on 40 M thru 10 M, including some WARC band activity.

While operating from the comfort of our secure and well appointed shacks, we should be careful about being too critical of this particular operation. Sure, they did not have the best signals for such a major undertaking. But at least, their signals were better towards the second half of the operation. But it was only then that we started hearing the "rest of the story". That the winds were gale force and beyond, and it was colder than you know what! That their tents and antennas kept blowing down. Everyone realizes that it is difficult, to say the least, to put on a top notch operation under those conditions. No wonder there are not more operations from South Sandwich Island! Settle for the QSO you got!

XT2BW, Burkino Fasso, (That is the country not his name!) has been quite active, and was particularly so during the recent WPX Phone contest. He was heard on 10 and 15 meters. Not so rare maybe, but ask yourself when was the last

time you heard one? QSL to WB2YQH.

Sometime in May a new one may appear for the "Deserving". The International Amateur Radio Union (IARU) states that they are working with the North Korean government to establish amateur radio in that country. Much like was done in Albania. There are organizations other than the IARU also involved in this effort. With a little good luck, another "New One" P5 will be showing up very soon. (Unfortunately, I will have to catch it another day, as I will be off to SU land for a several month project. It isn't the first time that this has happened!)

Once again Laccadive Islands, VU7 appears to be scheduled to become active. There has been talk for several months that a group of VUs will put VU7 on the air. The word is now that they will be there starting the second week of

April. Let us hope that it will finally happen.

Things look good for Walvis Bay, ZS9, starting April 13-19 on 80 thru 10 meters. DH8EAF, DL3ECK and DF2ZQ will be there for the those still in need of this recent DXCC addition. QSL to Ralf, DH8EAF. They state that QSLing via the bureau will also be satisfactory.

Hopefully YU3PR will be able to operate from YI1BGD, Iraq during the next three months. QSL via YU2AJ. His address is not in the Calibook, so use: Tomo Polak, B. Donany

6/19, 41000 Zagreb, Croatia.

HI8A, Aki has now returned to Japan. He was quite active, mostly on the low bands, and one good operator. A problem did exist for some of the Deserving in receiving their QSLs, but only because of problems with the mail service in Haiti. We cannot blame Aki. He says now to send your QSL to his home call, JA5DQH.

There may well be a better way to send your "Rooskie" QSL cards. Use the following bureau addresses for "CIS" stations:

UA1A/C - 37 Lieutenant Schmidt Embankment, 199034 St., Petersburg, Russia

UA3A/C - 9/10 Prospekt Vernadskogo, 117311 Moscow, Russia

UA - P.O. Box 88, Moscow, Russia

UB - 27 Industrial St., 252056 Kiev, Ukraine

UC - 48 Kazimts St., 220034 Minsk, Byelorus

UD - P.O. Box 165, 37000 Baku, Azerbaijan

UF - 12 Borchorm St., 380044 Tbilisi, Georgia

UG -87 Prospekt Ordzhonikidze, 375007 Yerevan, Armenia

UH - P.O. Box 555, 744020 Ashkhabad, Turkmen

UI - 86-A Khurshid Prospekt, 700017 Tashkent, Uzbek

UJ - 10 Sport St.,734026 Dushanbe, Tadzhik

UL - 105-A Rozybakiyev St., 380033 Alma-Ata, Kazakh

UM - 1 Botanicheskiy Pereulok, 720052 Frunze, Kirghiz

UO - 59 Bernadratstsi St., 277014 Kishinev, Moldavia

UP - 15 Basanavichaus St., 232009 Vilnius, Lithuania

UQ - P.O. Box 164, 226098 Riga-Center, Latvia

UR - P.O. Box 125, 200125, Tallinn, Estonia

Nothing guaranteed, but if nothing else use it as a guide to

sort your bureau cards! Tnx to QRZ-DX and N6VR.

While in Trinidad and Tobago this last month, I was able to spend a lot of time with a well known contester/DXer, 9Y4VU, Frank Brooker. He has visited the States many times and is well known in contest circles. Frank is also quite active on 6 meters and is planning on attending a VHF Conference being held at Kerrville, Texas this summer.

Several times Frank and I had lunch together in San Fernando. Of course, the conversation would be about DX.. and only DX. I would have our local company representative, Andre, with me on these occasions. Andre remarked, "Do you guys use a foreign language when your talking about radios. I can-

not understand a word you are saying!"

Frank put me onto the licensing authorities in Port of Spain, where I was able to (almost) get a license on the spot. Should you try, make it early in the day as the Tax and Excise Office closes their cash drawer at 2:30 P.M. For a small city lot Frank has a nice antennae setup: TH6 at about 60 feet and a 2 element 40 at about 70 feet. Down the tower are rotatable 6m yagis. I was able to operate from their as /9Y4. Frank is sure a super fellow.

I don't know if I will be able to operate from Egypt. I have heard that it is not that easy for a "short-timer" like myself. Anyway, my drilling rig is 3-4 hours away from Cairo, out in the boonies. But then in a city of 14 million, 3-4 hours could be "just across town". We will see. I have put out some inquiries and will find a way to keep you posted. Till next time,

73 es gud DX.

# **Upcoming Events**

April 10	TDXS Monthly Meeting
April 10	Int'l DX Convention, Visalia, CA
April 11	MARAC County Hunters SSB Contest
April 24	Dayton HamVention
April 25	Swiss Helvetia Contest
May 02	Texas QSO Party
May 02	MARAC County Hunters CW Contest
May 08	TDXS Monthly Meeting
	CQ-M Contest

### **Due Dates**

(Contest Logs must either be postmarked (\*) or received (!) by the dates listed...Get Your Logs In!)

April 30 (*)	Japan Int'l DX CW
May 10 (*)	

# Contest Corner

de Bob, N5DU

Dateline April 1, 1992

### \*\*\* CONTESTING HISTORY NEWSFLASH \*\*\*

Igor O'Murphy, control operator of packet bulletin station K5XI, has just set the world record for dupes in a one day contest. Igor, magnificently coached by Jim "more watts the better" Lane, managed to achieve a dupe rate of 100% over the entire contest period. In fact, Igor duped one station he never worked at all. This unofficially qualifies him for a claimed dupe rate of 102% pending verification of all contacts not in log. Contact N5DC for complete details on this never to be equaled feat. (This is one of those times you had to be on the TDXS repeater to get the full impact of this singular event. Apologies to those of you who are "out-of-towners".)

Actually, this column is even lighter than usual. May 2nd is rolling around pretty soon and nobody has taken me up on my offer to match operator and mobile stations for the Texas QSO Party. I must assume everybody is arranging their own rides. I still have to get a little more engine noise out of my mobile installation before it is up to contest snuff. I'm also still trying to figure out how to tell Joyce that I'd like to take her on a drive to see the Bluebonnets, and that you really can see them glow at night when you drive real slow at county lines calling CQ. I'm afraid she's not from that far out in the country.

One last thing. Field Day is coming the last weekend in June, so get your bug spray and beer coolers dusted off for a great campout contest weekend. If any of you DX'ers can stand to work Ws all weekend, now is the time to bust a move.

Wish I had more to share with you on the contest news front but business demands and Joyce's decorating chores have hindered my repeater time. Maybe my co-chairman K5LZO will come up with some jewels for next month's column based on his trips to Mexico and Visalia.

### **Contest Results**

#### Results

# 1991 ARRL 160-Meter

K5MA/1......605 Q x 81 C - 105K #1 EMA K5NA/2....1003 Q x 98 C - 214K #2 SO/QRO K5DX.....327 Q x 75 C - 58K # 3 STX AA5NK....185 Q x 62 C - 16K K13L....100 Q x 31 C - 6K K5WA......50 Q x 31 C - 3K

### Claimed

### 1992 ARRL DX SSB

GM0ECO.....650 Q x 50 M - 98.5K SO/40M W9AGH......325 Q x 170 M

#### 1992 WPX SSB

 $XE2FU(K5LZO,NT5D,WB5N)..3900Q \times 799 P = 7.2M M/S$ ZF2NE/ZF8 (W5ASP)...3624 Q x 788 P = 6.5M SO

 $KE5FI.....1373 Q \times 570 P = 1.3M SO/10M LOW PWR$ N5RP......480 Q x 310 P = 215K SO LOW PWR

SO/10M WB5RUS..421 Q x 290 P  $K5GA.....238 \hat{Q} \times 238 P = 109K SO$ 

 $KB5NFN....70 \ Q^{T} x 69 \ P = 8K SO/10M$ 

## **TDXS Member Contest**

During the 1992 Texas QSO Party scheduled for the weekend of May 2-3 TDXS members will engage in an intraclub contest to seek out and work other TDXS members. Here are the rules.

Eligibility - All members of TDXS past and present as defined on the official TDXS Member Entry Sequence list. (A copy is included in this issue..ed)

- 1. All rules and guidelines of the 1992 Texas OSO Party as stated in the official announcement (March 1992 Bullsheet, page 4) will apply.
- 2. TDXS members must include TDXS member number in all exchanges.
- 3. TDXS entrants must include a separate list of other TDXS members worked by band, along with the TDXS member number of the station worked. Totals by band must be listed. Total score will be the number of TDXS contacts times the number of individual members worked.

Awards - The top three individual scores will receive appropriate awards.

# Repeater Report

de Jim, N5DC

As I write this, two rather significant milestones are being established in the evolution of the TDXS repeater. The first is the appearance of "Igor" on our 147.36/.96 MHz voice machine. Igor, reportedly a direct decendent of the infamous "O'Murphy" clan, is busily putting out voice announcements of DX spots picked from the PacketCluster.

We have Igor with us thanks to the willingness of Sid, K5XI to make the necessary investment and then allow it to be used by TDXS. You will note that the ID uses Sid's call resulting in a K5XI announcement of DX taken from the KE5IV cluster and put out over the K5DX repeater. Who says we're

not on the cutting (bleeding) edge of technology

Also, thanks to the skill and perseverance of our esteemed Prez, Bill, K5GA we are now "burning-in" the Spectrum which has been (at long last) retrofitted with the first of his newly designed power supplies. This is expected to be the "final solution" that will once and for all cure the good old Spectrum of its nagging succession of power supply problems. (K5TU and K5LLL were the first to accomplish this feat some years

If all goes according to plan, by the time of the April meeting we will have the Spectrum running on 2 meters, and Brent, NT5D's ICOM active on 442.00 MHz from the Summit Tower West building. Having accomplished this we'll remove the G.E. from its present home at One Houston Center and have it repaired, rehabilitated, or whatever. Once it's ready to go again, it will replace the Spectrum at Summit Tower West and the Spectrum will take up residence at One Houston Center as the "backup" machine.

Once the smoke clears and all systems are smoothly humming along, we'll need to look further into the future to see what our needs will be. We have already acquired a second duplexer. I believe that as a next step we should plan to retire the Spectrum, and replace it with a new "state-of-the-art"

machine. Though there is no urgency, we should start planning for this.

Now back to our new friend "Igor". To use Igor, hit a # on your tone pad, followed by a number from I to 5. Depending on the number selected, Igor will read back that number of DX spots most recently put out over the PacketCluster.

If you hear a "beep", it indicates that Igor wants either to identify or to put out a DX spot. If you standby, "Igor" will put out the spot. If you continue to talk, Igor will continue to "beep" until there has been no repeater activity for approximately 3 seconds. Then he will have his say. The ID will occur every ten minutes as long as successive DX spots are being put out. If no spots appear on the PacketCluster, Igor will not identify. Furthermore, Igor does not passs on any of the comments that may have appeared on packet, such as "listening up", "QSL via", etc.

Two things to keep in mind about Igor. (1) We are in a "learning phase" with this feature. Changes can and will take place. Your comments are welcome. (2) The primary purpose of the TDXS voice repeater has been and still is to pass and promote DX. As was our custom in the past, casual conversation should defer to the DX announcements, even from Igor!

I know I speak not only for myself, but for the entire TDXS gang when I say, "THANKS SID!"

# **DX Packet Clusters**

The TDXS Contest and DX PacketCluster, operating on 14.930 MHz with the call K5DX, is now up and running. The new node is currently being operated by Rich, K5WA from his home in southwest Houston. It is linked to KC5SC and thence into the existing network. This is a "no-frills" packet node intended primarily for DX spotting. It lacks the powerful features of the KE5IV node, but does provide many local Houston stations with a more direct path into the system. Relocation of the site and a change in frequency will probably occur in the coming months. (Check the system for announcements regarding these changes.)

The Waller County Contest and DX PacketCluster Bulletin Board is located in Hempstead, Texas and operates on 144.990 MHz with the call **KE5IV**. A digipeater node operating on 144.990 MHz with the alias **MAG99** is located near Magnolia and gives access to those users in the northern part of Houston. The preferred procedure is to first connect with the digipeater node and then connect to the PacketCluster. Please leave the cluster with the command BYE. There is a another port operating on 144.910 MHz, also under KE5IV's call. This affords local stations with higher ERP, generally those on the west side of Houston, the option of connecting directly with Hempstead and getting somewhat better response.

The Galveston County DX PacketCluster, located in La Marque, is active under the call KC5SC and operates on 144.930 MHz and 144.970 MHz. It is usually connected with KE5IV via the 446.100 MHz backbone link. Stations in the southeastern parts of Houston may find it easier to connect with this cluster.

AB5A located in Dickinson about 10 miles northwest of KC5SC operates the Texas Gulf Coast DX PacketCluster. This node is regularly connected to the KC5SC PacketCluster via 446.100 MHz. This cluster features a 40 Meter HF Gateway on 7.089 MHz which runs 600 watts into a 2 element yagi at 80 feet. Local users may also access the node via ports on 145.01/.03 MHz.

In addition to listing current DX spots, the system provides access to a wide variety of DX related information such as the W6GO QSL Manager list, Russian oblasts, WWV propagation,

US Amateur Call Book listings, etc. Users are requested to limit their use of these "databases" to off-peak hours so as to minimize the side effects on others. A quick check of the status shown in the opening message which appears upon connection will indicate the number of nodes/users active at the time. Otherwise all users are encouraged to query the various data banks and make full use of their many features.

# **ARRL DX Bulletin**

Thanks to Steve, W9NUF, and the Northern Illinois DX Association, and Paul, KB1BE, and the Connecticut DX Association for the following DX information.

tion for the following DX information.

BANGLADESH. The Hungarian operation signing S2/HA5BUS has been active on 15 meter CW. QSL to the Globex Foundation, Box 49, 1311 Budapest, Hungary.

SOUTH SANDWICH. The VP8SSI DXpedition is slated to leave the island shortly. They may try to operate briefly at South Georgia on their way back to the Falklands. SSB QSLs go to AA6BB. Send CW and RTTY cards to KA6V.

SAO TOME. S9AGD by Eric, SM0AGD, is active until April 8 on all bands/modes, with special attention to and the WARC bands. OSL to his home call

WARC bands. QSL to his home call.

ALBANIA. ZAITAJ was worked recently on 7005 and 14024 kHz at around 0230z. Other Albanian nationals have been active, notably ZAITAA on 20 meters and ZAITAC on 30 meters.

COCOS KEELING. VK9CL has been very active on CW, usually 4 or 5 kHz up from the band edge. He was worked on 7005 kHz at 0055z. This operation will be QRV until April 6. QSLs go via F6IMS.

HONG KONG. VS6WV is now active on 7 MHz CW around 1230z. QSL to KOTLM.

BOTSWANA. Dave, 9L1US, will begin a new assignment in early April. He will sign A22US. QSL via WA8OJC.

FROM THE ARRL QSL BUREAU. The QSL bureau in Seychelles, S7, and the bureau in Rwanda, 9X5, are no longer in operation. Amateurs wishing to verify contacts with Seychelles or Rwanda should either QSL direct or via QSL managers.

HOW TO QSL DX FROM SPACE. QSL cards for the STS-45/SAREX mission should be sent to the Sterling Park Amateur Radio Club, P.O. Box 599, Sterling Park, VA 22170. Include a large, business-size SASE. Mark on the envelope "STS-45 SWL" if you are looking report. For two-way QSO confirmation, mark the envelope with "STS-45 QSL 2-WAY." Remember to include the date, time and signal report with each card.

# PacketCluster Results - ARRL DX SSB

de Ken, KE5IV

The following is a summary of the DX spots put out on the KE5IV PacketCluster during the ARRL DX SSB contest held the weekend of March 7-8, 1992. The total number of spots before cleaning up the file to run under K1EA's CT program for duping and scoring was 1304. After clean-up, but before removing duplicate spots, the number was 1261. The log after dupes showed a total of 688 stations reported with a total of 379 countries. Here is the breakdown by band.

Band-Spots-Mults: 160M-18-14; 75M-60-35; 40M-128-61; 20M-104-71; 15M-170-93; 10M-208-105 for a total of 688 spots and 379 countries. (This compares to 665/379 during the CW weekend..ed) The final score for the KE51V PacketCluster was 778,845 points. Maybe there ought to be a "Cluster" class in the contest! As always, thanks to all who helped out.

# TDXS MEMBER ENTRY SEQUENCE

1	K5PFL	(K5NA)		64	W5SJS	_	
2	K5RLW	(N5WW)		65	K5EJO		
3	WA5UHT			66	K5VWW		i
4	K5SOR		1971	67	K5TP		1979
5	K5PFE		Charter	68	W5VUM		
6	K5LZJ	(N5AF)	Members	69	WB5YJX		i
7	K5DEG	(VP2VM)	· •	70	KSIY		í .
8	W5JAW	, , ,	İ	71	WD5GXI	(NM5L)	i
9	K5ZJK	(NX7S)	· }	72	W58G	(	— i
10	WB5CKM	(K5ZR)		73	WSPTJ	***	i
11	WA5YEL	(110 211)	1	74	W5URN		i
12	W5SBX	(K5MA)	1972	75	WB5PBA		i
13	WA5LES	(K5RC)	1	76	VOID		i
14	K5LWL	(K5GA)	! 	77	WB5FSF		1980
		, ,		78	WA3OVC	(KN5H)	11300
15	W5ZR	(W5NA)	l 1	79	KN5A	(KMSH)	<u> </u>
16	K5AAD	/NF + + + + +	:  1973	80	WB5WHR	(NM5M)	
17	WA5ZNY	(N5JJ)***	19/3				
18	W5RTQ	(K6SE)	1	81	N5CDO	(NA5R)	
19	W5WMU	/**F***	1	82	N5EA		<u> </u>
20	W5NMA	(K5DX)		83	KA4F KD4M	-	— <u> </u> ¦
21	WA5WQF	(N5DM)	1	84			!
22	WA5WCT	(K5TU)	1074	85	W5JQ		!
23	WB5HOD	(AC5K)	1974	86	KB5FU		1 1001
24	K5LZ0		  -	87	W5ASP		1981
25	W5JWM		!	88	N5DC	(	!
26	WB5GJD	· ·	]	89	KA5GJO	(KD5SP)	!
27		(KD5MR)	1	90	KN5T		!
28	WN5MYO	(WB5MYO)	]	91	KG5U	-	<u></u> !
29	WBSIFY	(AA5Y)	ļ	92	KU5I		ļ
30	K5KYU	(K5JS)	1	93	KC5CP		
31	W5WZQ	(W5UN)	1975	. 94	KA5FUI	(KE5TF)	1982
32	WB5IGX		Ì	95	AK5B		1
33	WB5QWX	(KZ5M)	i	96	KC5M	_	I
34	WB500W	(K5GN)	<u> </u>	97	KV5Q		1
35	W5RRX		`	98	K2TNO		1
36	WB5PTW		1	99	W5LLU		1983
37	WB5CFI		1976	100	KY5A		1
38	K5BZU		l	101	K5RVK	_	!
39	WB5QDW	(K5ZD)	l	102	WA5ZVE		1
40	WB2UFG	(K5WA)	1	103	KE5FI		<b>1984</b>
41	W50IB	(K5NU)	1	104	WA5PQK	(NR5M)_	
42	WBONFY	(KESIV)	l	105	KF4VS		I
43	K5KG		l1977	106	NT5D		<b> 1985</b>
44	N5AM		l	107	<b>WA9VLI</b>		1
45	K5GB		1	108	N5RP	_	
46	WA5NGH	(N5DU)	l	109	NZ5I		1986
47	N5RO		I	110	W9AGH	_	I
48	K5CNN		1	111	WB5N		<b>-1987</b>
49	K5FP		l	112	N5AQT	_	
50	W5ZQR		1	114	KF5MY		l
51	K5HXR	***	ļ	115	K2UA		1
52	N5RF		I	116	<b>NN5</b> 0		1
53	WB5USV		1	117	WB5BIR		1988
54	WA5TMN		1978	118	GWOECO		1
55	N5ZR		I	119	WB5RUS		1
56	AD5W		ļ	120	WN4KKN	-	
57	K5WS		<b>{</b>	121	K5VMX	_	1989
58	W5HNS		I	123	KI3L	•	i
59	W5DOZ	***	İ	124	K5LLL		1
60	K5YCP		i	125	K7WOC		i1990
61	WD5CHY		i	126	K5XI		
62	WD5CBA	(WI5P)	1979	127	AA5NK	-	— i
63	WB5LVL	(		128	KE4GY		i1991
03	4422E4E		•			-	

\*\*\* Silent Key

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