



### LEE SHAKLEE, W6BH, DOLLAR-FOR-DOLLAR MATCHING "CHALLENGE" TO NCDXF MEMBERSHIP

by Jack Troster, W6ISQ

Lee Shaklee, W6BH, one of the founders, and first president, of NCDXF has offered to match, dollar-for-dollar, all donations to NCDXF, up to a maximum of \$10,000, beginning April 19, the date of this year's Visalia International DX Convention. This grant will run for a full year, until the Visalia convention of 1997. This is a great incentive for everyone to participate, each contribution will be doubled, helping NCDXF twice as much.

Lee has also doubled his generosity by giving an additional \$10,000 to the...

### NCDXF/IARU INTERNATIONAL BEACON PROJECT...

to assure completion of the planned five-band, 18-beacon, round-the-world network.

Lee has been a major supporter and contributor to NCDXF since the beginning. He was, and is, an avid DXer and foresaw the need for an organization such as NCDXF. Long-time members will remember that Lee made his first contribution in October, 1972 which launched NCDXF as a major DXpedition sponsor. Here's a quick re-cap of Lee's participation and the history of NCDXF from its inception, from "How the NCDXF Began" which we printed a few years ago in this newsletter. Vincent Chinn, K6KQN, originated the idea for creating NCDXF, and called a meeting at his house in Chinatown, San Francisco. Vince presented the case for having a DX Foundation and everyone agreed it was a worthy project. Then Vince said, "we need some funds to get started". Without a word, Lee reached in his coat pocket, took out his checkbook, wrote a check for \$1000, and put it on the table. Don Schliesser, K6RV, (then W6MAV and later second president of NCDXF) whipped out his checkbook and wrote one for \$100 and put it on the table. W6ISQ winced, but nevertheless pulled out a ten dollar bill and put that on the table. Everyone looked at Vince. Not one to miss a beat, Vince fished out his wallet, unlocked it, and dropped a dollar bill on the table. Total starting capital for NCDXF: \$1111. Without Lee, you can see the number of "1's" might have been much less than four! Shortly thereafter, Lee delivered another major spark to this account in the form of stock. So, from the beginning, Lee was the major contributor to NCDXF, and indeed, without his munificent help, we may never become the preeminent DX institution we are today. Lee served as President of NCDXF for the first few years. Heavy business commitments indicated his resignation but not before he had implemented the organizing of NCDXF, added dedicated DXers to serve, and helped the foundation sponsor the first several DXpeditions. Beacon Donation. During Lee's presidency also, the NCDXF began work on the beacon project. After several years, in 1979, W6WX was established on 14.1 MHz as the first of a nine-beacon worldwide network. Because of his active DXing and Contesting, Lee was interested in propagation, and saw the value of using beacons to find out how it was in various parts of the world. Remember, this was long before the propagation prediction programs we now have. As of today, seven of those original beacons have been replaced with our new five-band beacons, and nine more soon will be added to the network. As we joined forces with IARU to expand and promote the five-band network, Lee volunteered the financial aid to be sure the 18-beacon network would be completed as planned. Thanks to you, Lee, it will be done. We all want you to know your offer and donation are accepted with great pride and deep gratitude.

From all of us and the far reaches of Amateur Radio, Thank You, Lee Shaklee!

# NCDXF/IARU BEACON TENTATIVE TRANSMISSION

## SCHEDULE

As of April 16, 1996  
by W6ISQ and N6EK

This table gives the minute and second within each hour of the start of the first transmission of each of the new five-band beacons on each frequency. Transmissions currently being sent are indicated in bold. Each transmission is repeated every three minutes. A transmission consists of the callsign of the beacon sent at 22 words per minute followed by four one-second dashes. The callsign and the first dash are sent at 100 watts. The remaining dashes are sent at 10 watts, 1 watt and 0.1 watts. The actual starting time of each transmission is approximately twenty milliseconds after the nominal time due to the keying delay of the transmitter. Equipment used at each beacon site includes a Kenwood TS-50 transceiver, a Cushcraft R-5 vertical antenna, a Trimble Navigation Accutime GPS receiver, and a controller built by the NCDXF. For more information, contact the Northern California DX Foundation, Post Office Box 2368, Stanford, CA 94309 USA.

Slot	Country	Call	Frequency					Operator	Status
			14.100	18.110	21.150	24.930	28.200		
1	United Nations	4UIUN	00:00	00:10	00:20	00:30	00:40	UNRC	Shipped
2	Canada	VE8...	00:10	00:20	00:30	00:40	00:50	RAC	Being built
3	USA	<b>W6WX</b>	<b>00:20</b>	<b>*00:30</b>	<b>00:40</b>	<b>*00:50</b>	<b>01:00</b>	<b>NCDXF</b>	<b>On the air</b>
4	Hawaii	KH6WO	00:30	*00:40	00:50	*01:00	01:10	UHRC	Ready to ship
5	New Zealand	ZL...	00:40	00:50	01:00	01:10	01:20	NZART	Being built
6	Australia	VK6...	00:50	01:00	01:10	01:20	01:30	WIA	Being built
7	Japan	JA2IGY	01:00	01:10	01:20	01:30	01:40	JARL	In Japan
8	China	BY...	01:10	01:20	01:30	01:40	01:50	CRSA	Locating site
9	Russia	UA...	01:20	01:30	01:40	01:50	02:00	?	Locating site
10	Sri Lanka	4S7...	01:30	01:40	01:50	02:00	02:10	RSSL	Being built
11	South Africa	<b>ZS6DN</b>	<b>01:40</b>	<b>01:50</b>	<b>02:00</b>	<b>02:10</b>	<b>02:20</b>	<b>ZS6DN</b>	<b>On the air</b>
12	Kenya	5Z4B	01:50	02:00	02:10	02:20	02:30	RSK	Being built
13	Israel	4X6TU	02:00	02:10	02:20	02:30	02:40	U Tel Aviv	On the air
14	Finland**	OH2B	02:10	02:20	02:30	02:40	02:50	U Helsinki	Being built
15	Madeira**	CT3B	02:20	02:30	02:40	02:50	00:00	ARRM	Being built
16	Argentina	LU4AA	02:30	02:40	02:50	00:00	00:10	RCA	On the air
17	Peru	OA4...	02:40	02:50	00:00	00:10	00:20	RCP	Being built
18	Venezuela	YV5B	02:50	00:00	00:10	00:20	00:30	RCV	On the air

\*The W6WX and KH6WO beacons are not yet licensed for 18.110 and 24.930 MHz operation.

\*\*The OH2B and CT3B beacons are still transmitting in the older format on 14.100 MHz.

REPUBLIC OF BOSNIA & HERZEGOVINA ZONE: 15



# T92X



\*4294

ex: YU4XA, 4N4XA, Ndx: VE2XAR

CONFIRMING QSO WITH	DATE DAY MONTH YEAR	UTC	MHz	RST	MODE 2-WAY	QSL
NCDXF						PSE THX

ALEKSANDAR "ACO" RADOSAV  
Tilova-Lamela o  
72240 Kakanj  
Bosnia-Herzegovina  
Europa

QSL MGR  
KA9WON

DXCC, WAC,  
RCC, NCDXF,  
F-DXF...



Aleksandar Radosav, T92X, ex-YU4XA is now VE2XAR. The photo was taken inside a UNPROFAR mobile communication center.

## ARRL PRESIDENT STAFFORD APPOINTS COMMITTEE TO STUDY DXCC

At the ARRL Board of Directors meeting in Savannah, "it was voted that the ARRL President assign a committee to review the entire DXCC Program and make necessary recommendations in order to encourage broader participation by more amateurs, make the program more equitable, create better understood criteria for DXCC 'Countries,' improve the process of reviewing requests for additions and deletions to the ARRL DXCC List and increase efficiency in the administration of the program.

ARRL President Rod Stafford, KB6ZV, has appointed John Kanode, N4MM to chair the committee. Other committee members appointed by President Stafford are: Larry Price, W4RA; Rick Roderick, K5UR; Jim Maxwell, W6CF; Walt Stinson, WØCP; Garth Hamilton, VE3HO; Bob Winn, W5KNE; Wayne Mills, N7NG; Bill Kennamer, K5FUV; and Chuck Hutchinson, K8CH.

The goal is to have any changes to the DXCC program in place by the year 2000. (For that reason this has been unofficially called the "DXCC 2000" committee.) It is anticipated that there will be no restart of the entire DXCC program. Applicable "country" credits from the current DXCC program will continue to count regardless of what other changes may occur.

## FAIRS RECEIVES MAJOR \$24,873 GRANT

by David Larsen KK4WW, Executive Director  
FAIRS.

A proposal, written by David Larsen KK4WW and Victor Goncharsky US5WE, has been approved for \$24,873 by the United States Agency for International Development through the Eurasia Foundation. The installation of the "Ukrainian Digital Radio Network" by FAIRS Ukraine and USA will increase the communications capability internally and internationally for thousands of Ukrainian Ham radio operators. The equipment needed for such a network is almost impossible to build at home and Ukrainian hams are mainly using ancient tube type equipment.

This communications capability will benefit not only the hams but the citizens of the Ukraine by allowing rapid response to emergencies or disasters for individuals, official and unofficial groups, and government emer-

FAIRS story finishes on page 5

## Northern California DX Foundation

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 Bob Vallio, W6RGG  
 Bud Bane, W6WB  
 Howard Brainen, WZ6Z  
 Bob Fabry, N6EK  
 Bob Ferrero, W6RJ  
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Beacon Project Manager: Jack Troster, W6ISQ  
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## FOREIGN PRESS

by Steve Thomas, N6ST

The April 1996 issue of Radio Revista, a publication of the ARI contains a nice article written by Rusty, W6OAT, on the Northern California DX Foundation. Thanks to Paolo Cortese, I2UIY, for translating. Paolo is now working on a future article on the upcoming World Radiosport Team Championship, which is being partially supported by the NCDXF.

## VANITY CALLSIGNS

Some of your old friends may begin sporting even older callsigns. Starting on May 31, 1996 a U.S. ham may request the reissuance of a callsign previously held or the callsign of a deceased close relative. For example Ron, NG6X, could request K6OP since he previously held that call. This is known as "gate 1" and is the most restrictive of the "gates". The process will ultimately will allow any U.S. licensed ham to request any available callsign for which he or she is qualified.



## NCDXF/IARU INTERNATIONAL BEACON PROJECT UPDATE

by Jack Troster, W6ISQ

As detailed elsewhere in the Newsletter, Lee Shaklee, W6BH, has recently donated \$10,000 to the NCDXF/IARU Beacon Project, assuring by this generous donation that sufficient funds are available to complete the program. We are most grateful, Lee. Thank you!

Here is the present status of the network: Seven of the proposed 18 five-band beacons have been delivered to their NCDXF/IARU operators. These seven beacons in present order of transmission are:

4U1UN, United Nations, NY

W6WX, NCDXF Mt. Umunum, west of San Jose, CA

JA2IGY, JARL, located 150 miles west of Tokyo

ZS6DN, Dave Larsen, ZS6DN, near Pretoria

4X6TU, Tel Aviv University

LU4AA, Radio Club Argentino, Buenos Aires.

YV5B, Radio Club Venezulano, Caracas

4U1UN and JA2IGY, are not yet on the air, but probably will be in operation by the time of this publication.

Each beacon transmits for 10 seconds per band, in sequence, on 14.100-18.110-21.150-24.930-28.200 kHz. Thus, for example, YV5B transmits, "YV5B dah dah dah dah" in 10 seconds. Then flips to 18.100 and sends the same message, and so on through 28.100. As YV5B vacates 14.1, you will immediately copy "4U1UN dah dah dah dah". And so on. The call is sent at a 100 watt level. The first dah is also at the 100 watt level, the second dah is at 10 watts, then 1 watt, and finally the 0.1 watt level for the last dah. Those four "dahs" each last about a second. It is interesting how often the one watt and 0.1 watt level can be copied from distant beacons, even during this sunspot minimum.

You will find a 10 or 20 second interval between the beacons now operating. These spaces are reserved for beacons not yet on the air. For example, you will copy this sequence: ZS6DN - LU4AA - 10 second space reserved for OA beacon - YV5B - 4U1UN - 10 second space reserved for VE8 beacon - W6WX and so on. There is some overlap by 14.1 MHz beacons OH2B and CT3B until their original one minute formats are changed to the new 10 second five-band system.

When the network is completed, sometime this summer we hope, each of the 18 beacons will transmit a 10 second

message, in sequence, around the world every three minutes. Or, if you prefer, listen to a particular beacon then flip every 10 seconds to the next highest frequency so as to track that individual beacon to determine the MUF to that area. Our beacon designer/builder is Bob Fabry, N6EK, prominent DXer and DXpedition operator. Bob is just back from Wake Island (see his article in this Newsletter) and you can look for him on the crew of the forthcoming Heard Island DXpedition next January. About the time you read this Bob will be back at his assembly line bench creating the remaining beacons for (east to west):

VE8AT Far north, sponsored by North. Alberta Radio Club

KH6WO Honolulu Radio Club/University of Hawaii

ZL(?) NZART

VK6(?) WIA affiliate, Western Australia

4S7(?) Radio Club of Sri Lanka

BY(?) Chinese

UA(?) Central Russia

5Z4(?) Radio Club of Kenya

OH2BSRAL. Will replace present 14.1 system

CS3BARRM. Will replace present 14.1 system

Once again we gratefully acknowledge the generous gift from Kenwood, USA, of the TS-50 transceivers. Also the steep price reductions for the GPS units granted us by Trimble Navigation. Cushcraft also was a generous donor giving us the R-5 antennas. Kantronics was one of our "angels" too, with a price break for the control unit boxes. We want all to know that we are acutely aware of the packet QRM problem on 14.1 which obliterates the beacons for many listeners. Usually there is not a problem copying the beacons on the West Coast, unlike condition on the east coast and Europe. When the network began in 1979 there was no QRM, because it was at the junction of the SSB and CW bands and there was little or no packet. A few years ago IARU adopted a band plan which set aside one kHz at 14.1 MHz as a "beacon frequency". However, this is not always honored. If you are a packet operator kindly avoid 14.1 and ask your friends to do likewise. It takes time to switch net frequencies, but we hope to accomplish this in the future. Note that W6WX and KH6WO do not yet have permission to operate on 18 and 24 MHz. Meanwhile, snap in your CW filter and listen. Can you hear the beacons on 24 or 28? Keep monitoring because it won't be long until all the bands begin to open up. Who'll be first to copy all 18 beacons in order on 24,930 and 28.200?

Let us know when you do!

## THANKS FOR THE HELP JIM PEPPER, W6QIF

de Jack Troster, W6ISQ

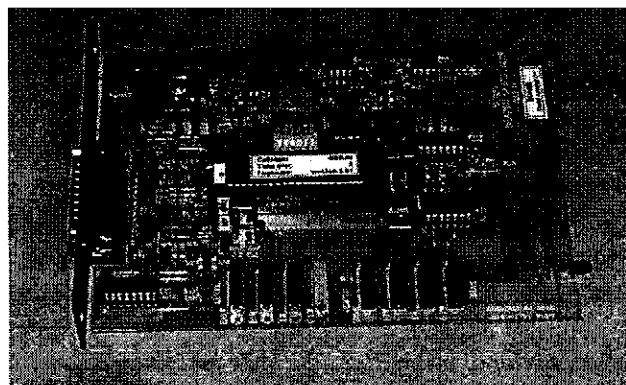
A year or so ago, Bob Fabry, N6EK, designer/builder of the new generation of five band beacons for the NCDXF/IARU International Beacon Project (IBP) had completed his prototype beacon. What he needed next was to get a suitable circuit board prepared and etched for mass production of the beacons. We called several places and found they would be happy to supply us with a minimum of 17,000 boards at a reasonable price, plus a dandy set up charge. This was a few more boards than we needed, and dollars that we had, at the time, so we asked around—and around—and around. Finally got a lead, at the Visalia DX Convention. Old friend Bob Warmke, W6CYX, was there, happily showing off his newly built 5 watt, six band QRP rig. He had the cover off, and we saw the board. "Did you make that board, Bob? We need someone to design and prepare a board for a neat International Beacon Project."

"No", replied Bob, "but why don't you talk to the fellow who designed this great six-bander, Wayne Burdick, N6KR".

So, I called Wayne and presented our problem. Wayne was cordial and supportive, but said he was into designing the circuits and didn't have time to work into board design. He suggested we call Jim Pepper, W6QIF, who knew a lot about boards and could probably help. We took his suggestion, and, sure enough, Jim was our man. He and Bob met to discuss the matter. Turned out Jim was an old time ham, being licensed in 1938 in Berkeley, CA. His hobby was home brewing equipment, especially low power transceivers, and when he retired in 1988, he began designing and building low power rigs in earnest. He published an article in the winter 1994 edition of Communications Quarterly, "Deluxe QRP station", a 4 watt transceiver, and has also published widely in various other journals on QRP matters. Jim had never run over 100 watts to any rig and in the past 15 years has never exceeded 15 watts. Actually he has owned only two commercial rigs in his almost 58 years on the air. In 1952 he bought a 75A2 and lately a FT-840. With this QRP design experience Jim became our board designer. Bob and Jim put their heads together. Bob gave specific board locations for various parts, and between them they fitted in the other parts and located proper holes in the front and back panels. Jim did the design work and sent the plan to FAR Circuits for etching who made a prototype and returned it for trial.

After much, much work and deliberation, and three round trips to FAR circuits, Jim developed a circuit board that was quite satisfactory. He ordered 30 and Bob was off and running to build the first seven beacons that are now on the air, (see beacon operations elsewhere in this Newsletter).

The NCDXF/IARU International Beacon Project is much indebted to Jim Pepper, W6QIF, for his unstinting time and effort, even after confessing, "I didn't realize it was such a big project!" Thanks and thanks again, Jim.



The NCDXF/IARU multi-band beacon P.C. board.  
See additional picture on page 10.

### FAIRS (CONTINUED FROM PAGE 3)

agency teams. The goal of this project is to set up a nationwide network of digital mailbox amateur radio stations operated by volunteer hams.

Specifically the funds will allow extending the present Packet Amateur Radio Network in the western Ukraine to Kiev with connections to Polish, Hungarian and Czech networks allowing international links on packet radio. An interconnection Gateway from the Amateur Packet Network into the Information Super Highway "Internet" will be installed. A two meter repeater is included to facilitate wide area VHF FM communications for the first time in the Iviv area. An APLINK gateway is also included.

Ukrainian FAIRS members will be contributing thousands of hours to have this network fully operational in nine months.

FAIRS USA will provide the administrative support, purchasing, shipping and some technical assistance for the project. Most of the equipment will be purchased in the USA and shipped to Ukrainian.

For more information call David Larsen 1-703-763-2321 or 382-2935.

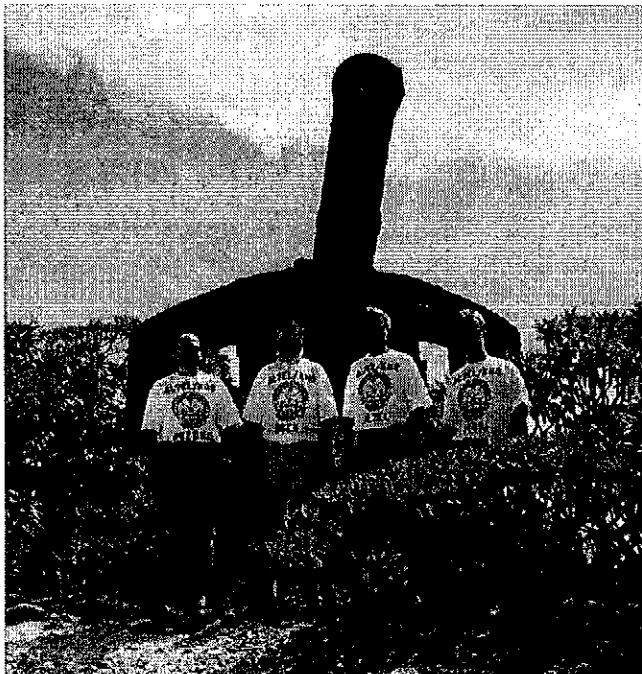
## WAKE ISLAND-AL7EL/KH9 FEBRUARY 1996

by Don Greenbaum, WB2DND

written with contributions by AL7EL, N6EK and  
K4HQI

Wake, a tiny island formed several million years ago by a volcano is big in history. Unlike most ham island destinations, this one is known to many people outside our hobby. Located 19° 17' N. 166° 39' E., it is the first American possession in time zone #1, approximately 2300 miles West of Hawaii.

In May, 1995 Tom, AL7EL, went to Wake on business. Hoping to find time to operate, he took along a long wire and an IC736. Tom was not expecting big pileups, but he was very surprised. In his limited operating time he worked over 2,100 stations and found that there was a great demand for KH9, especially from Europe and the East Coast US. Prior to his departure he left a request to return with a few associates to operate for a week at



The Big Guns of Wake Island. L to R Don, WB2DND; Bob, N6EK; Tom, AL7EL; Lloyd, K4HQI. In front of a gun captured by the Japanese in Singapore and moved to Wake Island during WW2.

some future date.

In the fall of 1995 he received approval to return and called me to see if I were interested in joining him. My response was an emphatic yes and we started assembling our "team". Wake is the first American possession on

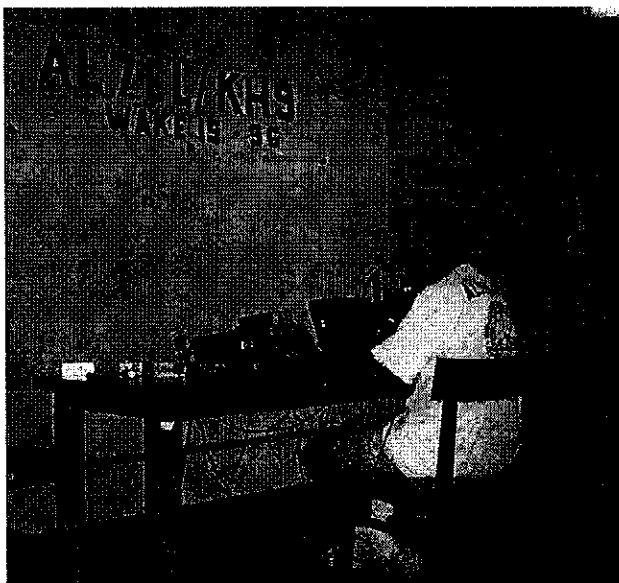
the other side of the international date line so we called our group the Dateline DX Association. I met Tom 10 years ago when I wrote a logging program for several African DXers. Tom was the QSL manager for some of them and we worked closely on the programming. We often talked of going to an island somewhere and this seemed to be perfect in terms of accessibility and the time we had available to travel. Tom had met Lloyd, K4HQI, at Dayton 6 years ago and knew Lloyd to be a fine low band operator. I knew Bob, N6EK, through my association with the Heard Island team where I was providing computer assistance. Bob has been on many DXpeditions and is an avid contester. Putting together the team was one of the easiest parts of the operation.

All four members agreed from the beginning that the goal of the operation was not to work as many people as possible, but to use the limited projected openings to Europe as best we could and stick to the lower bands where the demand was keen even though the QSO rates might not be as high. As a result, the operators had to be proficient in low band, RTTY and satellite operations. We wanted to take the minimum number of operators but yet retain the ability to stay on all the open bands at the same time. It was decided that 3 stations would be required to cover propagation and keep activity on the desired bands to a maximum. We drew up our equipment list with those objectives in mind. Our operation was a fine example of how a few people with a little organization and lots of effort can quickly organize some very tough logistics. Tom contacted Ham Radio Outlet both Hygain and ICOM (with the help of HRO). I searched for satellite equipment and also contacted Heil Sound, WØCD and the Battle Creek Special gang, AEA, and Antennaco. Bob contacted the major US foundations for financial assistance and he also volunteered to be in charge of our computer networking and software needs. Lloyd concentrated on operation logistics, European foundation support and PR (our resident photographer). He also volunteered along with his XYL Ruby to do the QSL chores. In addition to those tasks we all made substantial equipment purchases of radios, amplifiers and laptop computers.

Requests for funding were sent to the Northern California DX Foundation, INDEXA, the Chiltern DX Club and the RSGB HF DXpedition Fund. The responses were almost immediate and very generous. In only a month we had 25% of the projected budget covered. Local DX clubs also made contributions including the Southern New England DX Assn., Salt City (NY) DX Club, and the Western NY DX Assn. Financial assistance was also received from the 59(9) report and ZJ

### Electronics.

Ham Radio Outlet arranged with ICOM for a loan of a 736 and Hygain for 4 antennas, a TH3, an Explorer 14, a 6 meter beam and a DX 77 vertical. JA8CDG, JA2RW and JAMSAT loaned us 2 meter and 70CM equipment (more on this later). The Battle Creek crew put one of their 3 units on a bus to Boston so we could hand carry it as baggage. Antennaco of New Hampshire loaned us a 70cm antenna for our satellite station; Heil Sound sent three headsets and foot switches; Both AEA and NI6T loaned us PK232s; The Radio Works gave us all our coax requirements (not a small order) and several individuals donated equipment right out of their stations.



Tom Harrell, AL7EL operating. Tom was the leader of the DXpedition.

Going to Wake is not a trivial task. Nor is it cheap. Commercial airfare to Hawaii was expensive and we had to pay the U S Air Force for the ride to Wake. There is no shopping around for a better fare, they have a nice monopoly. We had over 550 pounds of shippable antennas, amplifiers, cable, TNCs, etc. We hand carried all the transceivers and computers. Our freight bills quickly approached \$1,000.00. Our airfare to Wake Island would cost us another \$6,500.00. Food and lodging on Hawaii and Wake came to \$1,600.00. Certain equipment had to be bought because we needed two additional transceivers, amps, various miscellaneous gear. QSLs would have to be printed (another \$500.00). Even after the above mentioned donations, each member was committed to cover his share of the remaining \$6,500 plus the equipment purchases that averaged another \$1,500.00 per person. DXpeditions are not

cheap vacations, but they can be fun.

By November, we started receiving the equipment. I got a call in the early part of the month from Ken, JA8CDG. Ken would fly from Tokyo with the equipment to make sure I was experienced before reaching Wake with the satellite gear (6800 miles from home is no place to open a radio for the first time). Ken reached Boston on a typical New England day-blinding snow and wind. United had other plans for his baggage and radios. They were sunning themselves in warmer climes. We had a very pleasant visit for a few days but alas, no radio. Ken and I went over the methods of doing satellite but his baggage arrived only hours before I had to drive him to the airport. After he left I finally got the antennas built, everything hooked up and the following day, my first contact on AO13 was with AH6NM in Hawaii! I proceeded to work AO10 and 13 from home for a week then packed up the gear and shipped out the equipment.

Tom received the 736 from ICOM and we prepared all the interfaces etc. Both Tom and Lloyd bought IC706's and we also tested these with interfaces, etc. NI6T and AEA sent PK232s (never go away without a backup!) and Tom and Bob bought AL80 linears.

Via the Internet I contacted AH6NB, Jim on Kauai, about finding a source of push up masts in Honolulu. He called the Radio Shacks in Hawaii and found two masts at one about a mile from our hotel. He paid for them and sent me e-mail that we could pick these up on our way to the airport and return them on our way back. As it was we just had to drop them off with a freight forwarder for shipment to Jim after we were back and he picked up the shipping costs. We found out later that Jim never even tried to work us as he didn't need us anywhere. Now that is real ham spirit!

It was now late December and we had a month to go. Tom was busy with the permission forms for entrance to the island. I was writing the home page (still available at <http://www.aurumtel.com/wake/>) and Bob was testing out the radio interfaces. Plans and preparations were proceeding unusually smooth. Then it happened. One afternoon while Tom was at work he received the bad news that due to a scheduling conflict we would not be allowed on the island the week we had planned for and we were told to reschedule our trip one week. After our panic subsided we all agreed to march on. All of us had to incur extra expense in busted airline confirmations but we had no choice. We were committed to going. Equipment was being received on Wake and nothing was lost or appeared to be damaged.

We decided to reconnoiter in Honolulu a day early

(Monday January 29) to get over some of the jet lag, meet to test the computer network, do a little sight-seeing and have some extra time just in case of plane mishaps etc. We also needed to pick up the masts for the antennas and get some snack foods to supplement the mess hall which very strict eating hours (that coincided with gray line openings).

As it happened, planning to allow for delays paid off. Tom, Lloyd and Bob were to meet in San Francisco (I had to go through Los Angeles) but all four of us were to arrive in Honolulu at the same time. I arrived on time but the United flight from SFO was delayed 7 hours. Tom and Lloyd were entertained by Bob at his home in Berkeley. By the time the weary 3 touched down at 10 P.M. I had rented the van, been to the hotel and even had a nap.

On Tuesday we woke early and started our errands. Bob was doing what he likes second best (operating being number 1), playing with the computers and networking. I had the keys to the van so I got to play cabby in Honolulu, not a bad spot to drive coming from snowy Boston, and off we went. We did our shopping, picked up the masts and even found time to go over to Pearl Harbor and the Submarine Museum. We had a wonder-



ful dinner at a restaurant where you cook your own steak and fish on a huge grill and turned in early. A very productive and yet relaxing day before our great adventure.

Our departure was from the military terminal at Hickham Air Force Base Wednesday morning. As we were going up the plane steps Tom looked back at me and said something about the weight of the radios we were carrying. The person behind me said, "Are you guys going on a DXpedition?" All of us stopped dead in our tracks. Turned out his name was Mark and he was a N6NZO going on business from Hawaii. You never know where hams will turn up. Out of 20 people

boarding a flight to a small speck in the middle of the Pacific five of the passengers were now hams! Mark was a welcome addition to the crew and he often came by helping out wherever he could.

The next six hours were spent in a cargo hold of a C141 facing backwards. The plane was pressurized but the noise from the engines required the use of earplugs. Most of us spent the time dozing or typing messages to our loved ones on my portable PC for sending on the Internet once we arrived on Wake.

We arrived on Wake at about 2 PM local time Thursday (it is 2 hours and a day later than Hawaii, being over the dateline). Our first order of business was an orientation by the base commander. We then toured the island with our local contact, Mr. Sam Kaapuni the Fire Chief, looking for an appropriate operating site. We found and were given permission to use a building away from the main center. It was an old barracks with adequate power, sleeping quarters and near the water. By 4 PM we had gathered all our equipment, taken a quick picture of the gear and set about the task of setting up the radios. Since it was now approaching sundown Tom started building the DX77 vertical while others started unpacking the radios and other equipment. Bob was busy with the computer network, Lloyd and I had started the Tribander and Mark was working on the WARC beam. Given that it had become dark by the time both Yagis were finished they were not put up until the following morning. We did get the DX77 up before it was too dark.

The only damage we found was a broken 572B. We had taken six extra finals for the two AL80s so we were prepared. By late in the evening the first station was ready and we put out a CQ on 40. AL7EL/KH9 was ON THE AIR. At 10:13pm JA3BSX made it into the log for our first QSO. It was slow the first night as we were starting late, missed both the European sunrise and the East Coast gray line and our Battle Creek special was still in the case. But, we kept taking turns at the one station while we unpacked the other equipment. During the night we finished setting up the other two HF operating positions, satellite station, RTTY station, put out the first Internet message about our arrival and assembled the WARC A3WS and satellite antennas. It was a very long day but we were all excited about making it to Wake.

The following morning we were up by dawn and off to breakfast at the mess hall. It would be the last meal we all ate together at the same time. After breakfast on Friday we hoisted the two Yagis and had two stations on the air, 20 meters into the US East Coast and 17 meters



into the Southern and Midwest USA. While Tom and Bob operated, Lloyd and I built the Battle Creek Special. This is a wonderful antenna. If commercial antenna's were this strong and as well documented antenna work would be a pleasure. It only took 2 hours to get it up. That included running out 36 70 foot radials!. But putting it up was only half the fun. Any of you who heard us on 40, 80 or 160 know that this performed fantastically. Our signals were loud everywhere and fully 52%



K4HQI, WB2DND, N6EK and AL7EL in front of a World War II bunker.

of our QSOs on 40, 80 and 160 meters. Later in the week we ran a 500 foot beverage to the North which greatly enhanced our hearing. On 3 of the 6 days there was rain in the area and signals were often at the QRN levels.

In the early afternoon the bands would completely die for a few hours. We took advantage of this time to do maintenance on the stations, beach comb, nap or look around the island. Wake Island fell to the Japanese in the first days of W.W.II and was heavily fortified. So fortified in fact, that it was heavily bombed during the war but never invaded. There are pillboxes, gun emplacements, tunnels, underground bunkers everywhere. Also, the Pan Am "Clipper" terminal and facilities remain partially standing. One of our first QSOs was with Bill Ewing, W1EYT, whose father piloted the second clipper to land there. The Lagoon is beautiful, with green blue water and lots of fish swimming near the shore. A complete history of the island and pictures we

took there are on our Internet web site.

By day two we had our routine down. At sunrise, the place to be was on 40 and 80. The 160 openings to Europe just did not materialize as it was not sunset there yet. Each mid morning we were on 20 and 30 working the US East Coast. Late mornings the MUF would rise to 17 meters while 20 remained open to the West Coast. We could work Asia all afternoon, get some sleep, eat

lunch and relax. By 6:00 PM 20 meters would open for 30 min. short path to Europe. On the third day of the operation we received e-mail from DF6JC saying that he was hearing the Pacific long path at 8 UTC (8pm our time), well after we had QSY'd to 30. Well, that night after the 20 meter opening died I turned the antenna long path and, what do you know? We stretched the 20 meter European opening each night by another hour and DF6JC made it into the log (his only QSO for an all time new one). The majority of our European phone QSOs were made during this opening as we were mostly unsuccessful in working Europe on the low bands. The feedback daily on the Internet

was wonderful. In addition to being alerted to band openings, this gave people a chance to vent frustration (usually followed a day later with hearty congratulations for a job well done now that they were in the log). We also received daily updates from AA1V on solar flux, snow back home, etc.

The weekend was "Prime Time at Wake". Everyone was home and the low bands were exceptional. Our run rates from the three stations on 30, 40 and 80 at times hit over 500 per hour. At one point we had all three bands open into Europe. Only having one 80/160 antenna was a disadvantage as when 30 closed and we wanted to work top band we had to close down the 80 meter station. But, all in all the mail we have received clearly shows we made lots of guys happy on 160 (see the QSO recap box).

The satellite station was up by day two but as luck would have it AO10 was totally turned off to recharge it's batteries and AO13 had it's antenna turned away from the earth. Signals were extremely weak. Lloyd's keyer did not key the 440 rig and I stayed on phone. After the

first two days of struggling with the weak signals and many hours of CQing with no response I took a spare paddle into the room and used it on its side like a straight key. It worked to a fashion (it's only been 30 years since I used a straight key) and we finished with 60 satellite QSOs to 5 continents under very poor conditions. JA8CDG finally made it into the log on the last day. Ken's efforts to procure the gear, fly to Boston in a blizzard, and send me e-mail daily on the bird openings made that a well deserved contact!

By Monday afternoon things started to get a little quiet, and we were clearly exhausted. In a very quiet period I figured we needed a little levity. While no one was calling I answered a fictitious stateside call and screamed into the mike, "N4XXX this is the third QSO on this band. That makes 12 contacts. How many !@#%\$^ times do you need to work us!" Of course, I never hit the footswitch but the others didn't know that. I wish I had a videotape of the look of horror on Bob's face. I am still watching my back as he is going to get me someday for that.

The week went by extremely fast. Before we knew it, day six was here and it was time to start packing the equipment. First we took down the RTTY and satellite stations, WARC beam and tribander. We disassembled them during the evening after sundown while keeping two stations on the low bands during the night. That was a very tight schedule as we needed to have the carry on luggage ready at the airport at 10 AM. As soon as sunlight came Lloyd and I packed the "special" while Tom and Bob packed the other gear. We soon learned that our pickup flight had been delayed several hours due to equipment problems and it was a good thing. We did not get everything fully packed until about 2 hours after we were scheduled to be at the airport! The plane did finally show up about 6 hours late so all was well in the end, but if that had not happened it would have been mayhem.

It was now exactly a week after we arrived on Wake. We all sat around waiting for the flight and seemed totally out of it. Each of us has a different highlight of the week. Bob enjoyed that grave yard shift on top band night after night. On Saturday I logged N1QMM, my son Micah, on 17 CW followed by a phone QSO the next day. Lloyd contacted his wife on 20 phone. All of us had a chance to chat with old friends on the radio while Tom enjoyed visiting with his friends he met while on Wake last year. There were no disasters, just minor problems that were dealt with when they occurred and overcome by team-work.

This operation would not have happened without the assistance of a great many people. Foundations and clubs provided financing while manufacturers loaned us equipment supplemented by individuals who loaned us parts of their stations right out of their shacks. Most importantly, our families understood our need to go out and get the rush of a pileup. All the planning is over, the trip is but a blur in our minds I have lots of fond memories of this little patch of coral reef in the middle of nowhere and of sharing an adventure with three other great operators.

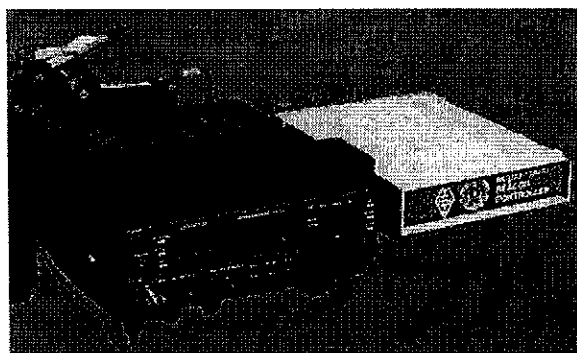
### AL7EL/KH9 1996 STATISTICS

CW	5722
SSB	2811
RTTY	140
Satellite	60
Total	8733

Band	CW	SSB	RTTY	Total
160	455	5		460
80	1434	426		1890
40	1901	226		2126
30	508			508
20	646	1206	67	1929
17	529	590	14	1063
15	213	270	59	116
12	31	31		62
10	30			30
SAT	5	57		62

CW - 66%    SSB - 32%    Other - 2%  
52% - 40, 80, 160 meters

North America	44%
Asia	40%
Europe	14%
Pacific	2%
South America	-



An example of the NCDXF/IARU multi-band beacon system.

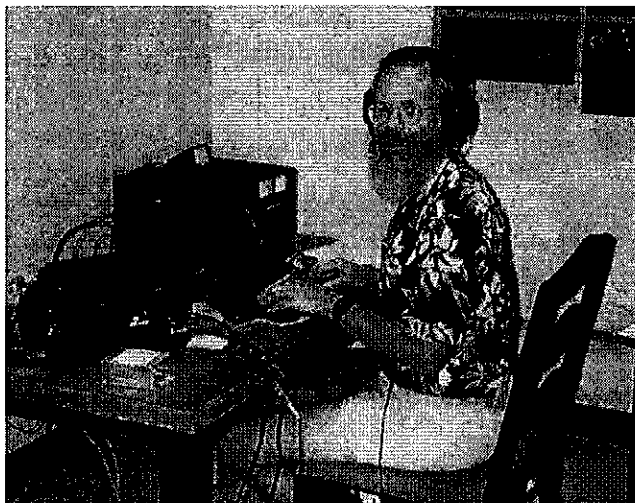
## WAKE ISLAND 160 METER REPORT

by Bob Fabry, N6EK, fabry@surf.com

### PART 1 - WHO IS IN THE LOG?

The following is a list of the 455 calls that are in the log for AL7EL/KH9 on 160 CW. In addition to these, we made five QSOs on 160 SSB.

I am hoping for no more than two percent busted calls on 160 CW. We are not providing the time and date information publicly so that we can in good conscience correct busted calls. In other words, if we made public the date and time for each QSO, someone who didn't work us could find someone with a similar call to his own and send us a card for the time and date of their QSO, hoping we would think we



Bob Fabry, N6EK, operating 160 meters.

busted the call. If we were to have made the time and date information public, we would not have been willing to QSL any busted calls.

People who made insurance QSOs appear in the list more than once. The insurance QSOs were made mostly toward the end of the operation and for the most part seemed appropriately made.

Send QSLs to Lloyd Westbrook, K4HQI. Be patient. We are using color photo cards and it will be a while before they are back from the printer. We hope Lloyd can start putting cards in the mail around the first of May.

AAØRS AAØRS AA4MMAA5MHAA6TTABØX  
AB4RU AB5K AB6LJ AB6ZV AB6ZV AB6ZV  
AC4NJ ADØØ AJ6T JAØCIU JAØDAI JAØDET

JAØDWY JAØHXV JAØMVW JAØROQ  
JAØYUD/QRP JAØZED JA1AUD JA1DM  
JA1EOD JA1GVJ JA1HQT JA1IFP JA1JPK  
JA1JRK JA1QXF JA1SNF JA1SYY JA1SYY  
JA1UQP JA2AO JA2CG JA2DHG JA2FJP  
JA2IVY JA2MOG JA2OLJ JA2OLJ JA2PJC  
JA2PJC JA2VPO JA2XW JA3AAW JA3BVD  
JA3CSZ JA3DY JA3FYC JA3MHV JA3ONB  
JA3REK JA4DEN JA4DND JA4DSC JA4EPE  
JA4LKB JA4LXY JA4RTX JA5DQH JA5HQH  
JA5IU JA5JUG JA5MHD JA6GCE JA7BXS JA7JI  
JA7JWF JA7LMZ JA8EAT JA8EVL JA8RJE  
JA9AIG JA9FPI JA9HCG JA9JFO JA9NLE  
JA9NLE JA9OHZ JEØMUV JE1CTM JE1OMO  
JE1POK JE1SPY JE2EHP JE2OVG JE4WKR  
JE6IGP JE6IGP JE7RJS JE8BKW JF1VJW  
JF2MBF JF2MNO JF2RZJ JF3MKC JF4VZT  
JF4VZT JF6OJX JG1TPT JG2YFS JG3FMA  
JG3QCW JHØBBE JHØBBE JHØBQX JHØINP  
JHØKHR JH1AJT JH1HGC JH1ORA JH1ORA  
JH1RES JH2ABL JH2AHZ JH2BFY JH2FXK  
JH2KAG JH2QMT JH2VVH JH2VYC JH3GAH  
JH4EZI JH4IFF JH4PMV JH4UYB JH6ALF  
JH6CFX JH7CFX JH8ASO JH8CFZ JH9UYZ  
JIØSFQ JI1NJC JI1BMB JI1LIB JI2MST JI1AGY  
JL1OYU/4 JL2PQV JL2WNA JL3JTD JM1SMY  
JN1EVG JN1ZLR JO6WVE JP1CXN JP2MYJ  
JQ1CEG JR2CQS JR3QHJ JR3VXR JR4EGB  
JR6HJD JR6PGB JR7TEQ KØCS KØEU KØFF  
KØFF KØGU KØIJL KØIR KØJUH KØKE  
KØQC KØRC K1KI K1NA K1ZM K2BU K2KIR  
K3ANS K4CAD K4IUV K4JG K4KG K4ODL  
K4ODL K4PB K4VT K5NA K5NA K5PC K5VT  
K6AAW K6ANP K6FG K6JAJ K6KM K6NA  
K6RK K6SSS K6SSS K6TQ K6VI K6VX K6VX  
K6XX K7CA K7DZ K7LFY K7OX K8EJ K8IP  
K9AJ K9FD K9JF K9KU K9RJ K9RJ K9RS  
K9UWA KA6W KA9LTR KA9LTR KB4DMI  
KB5UL KC2KU KC7V KC8M KDØZR KD6WW  
KD8VKD9SV KE7AJ KE7X KE9A KFØHKF4IX  
KF6HIKF7E/5 KGØEKG4W KG4W KG6IKG6I  
KG6I KI3V/7 KI5PY KJ9I KK2I KL7H/W6  
KM6SN KNØZ KO4WE KR9U KR9U KS1G/5  
KU2Q KVØQ KX4R KX4X KYØA NØBG  
NØDH/7 NØEJ NØJOW NØXA N2LT N3SL/Ø  
N4AR N4CC N4CC N4CC N4CFL N4JJ N4KG  
N4RJ N4VZ N4WW N5FG N5FY N5UR N5WA  
N6BT N6CMF N6CMF N6DX N6HL N6LU  
N6MMN6MYVN6ND N6RVZN6SSN6TRN7EIJ  
N7MLN7NGN7SCN8ATR NAØYNAØYNA5Q  
NCØW NC9P ND6G NE9Z NH2G NIØF NI5M  
NI5M NI5M NI6T NI6T NN7X NRØX NRØX

NW6N NXØINZ4K OH1MA OH1NOR OH1OX  
 OH3ES OK1DX/MM OK2HPY/MM RAØFA  
 RAØFA RA9CMOR K9XWH RZ4HO RZ4WWB  
 RZ9CO UAØACG UAØFDX UAØFZ UA4HAU  
 UA4WEI UA4WGU UA9FQY/9 UA9XFY  
 VE1ZZ VE3IY/7 VE5RA VE5RA VE6LB VE7BA  
 VE7BS VE7BS VE7FPT VE7RPT VE7SBO VE7ZZ  
 VK4YB WØAH WØBYH WØCM WØCP WØMS  
 WØOY WØVV W1ZE W2GVX W2MPK W2UE  
 W2VJN W2VO W3AS W3BGN W3LPL W3RCQ  
 W3UM W4DR W4FOA W4HBK W4HBK  
 W4MPY W4MYA W4NL W4NT W4PSJ W4VZB  
 W5DD W5DM W5FIX W5OZI W5PLN W5UN  
 W5VSZ W6AJJ W6AJJ W6FSJ W6GO W6ISA  
 W6JRY W6KUT W6OSP W6QUV W6QUV W6US  
 W6YA W7HR W7IUV W7LGG W7LR W7LZP  
 W7OM W7RV W7TSQ W7XU W7ZRC W8CAR  
 W8JGU W8UVZ W9CH W9EVI W9FRS W9MAF  
 W9NGA W9XT W9YRZ W9YSX W9YSX W9ZR  
 WAØGFS WAØPUJ WAØTSH WA2AGO  
 WA2UUK WA3EUL WA4CBF WA4CTA  
 WA4SVO WA6HHQ WA6ZJC WA7HSD  
 WA8SWM WA9YTQ WB2P WB2ULI WB4DBB  
 WB6EQX WB6WWW WB8QFB WB9GYU  
 WC7N WDØAEK WJ6O WN5IJZ WN6W WQ5Y  
 WS9V WS9V WT3Q WU6T WV5S WYØJ WZ6Z.

## PART 2 - NIGHT BY NIGHT

All parts of this Wake Island 160 Meter Report are written by Bob Fabry, N6EK. I believe I made all the CW QSOs on 160 except for the first dozen or so which were made by Don Greenbaum, WB2DND. The low bands were our second priority on this trip. Since Wake Island is very high on the European most-wanted list, our first priority was to give an all-time new one to as many Europeans as possible. We had openings to Europe on twenty and forty every day at our sunset, which is why we were not on 160 at that time.

The Battle Creek Special antenna was phenomenal. As most of you know, a Battle Creek Special antenna is not a commercial antenna. Each one is hand made. I believe three have been made. We had the "lightweight" one which fits in a ski bag and a suitcase and must weigh around seventy pounds. I had not seen a Battle Creek Special before. I loved the engineering and it played like gangbusters. Everyone who worked us on 160 meters should thank the Battle Creek crew. Not only is it a great antenna, but it served to psych us up about 160 meters and draw our energy to that band.

We used the Battle Creek Special for receiving as well as for transmitting. We also had a 600 foot Beverage for receiving, but it didn't work well for me. I tried a bunch of A/B tests between the Battle Creek Special and the Beverage and the Beverage was no better. And it was a pain to use because we didn't have an antenna relay so we had to switch antennas using a front panel switch on the rig. The Beverage was oriented at about 30 degrees. (Chicago is about 46 degrees from Wake.) We had a commercial toroid impedance transformer between the near end of the Beverage and the coax. At the near end, we used the station ground which was probably dominated by the Battle Creek Special ground wires. The far end was connected to a ground rod through a resistor. I suspect the ground rod didn't do much. I suggest that either the Battle Creek group or some other group might want to think through what we should have had and put together a loaner kit for one or more Beverage antennas to go along with the Battle Creek Special. (Note: I am in the middle of a bunch of other stuff right now, and am not ready to be educated about receiving antennas. Please don't send me a bunch of e-mail about this problem. If you know what we should have had, consider putting together a "Beverages for Dummies" loaner package for the next guy!) I know I could have worked another whole layer of stations with a better receiving setup.

The nights of February 2nd, 3rd and 4th were super. Lots of action. I started each night listening on 1837 and working everybody until a crowd gathered, worked by districts until things quieted down, and then took everyone again. When there was no one left to work on 1837, I would listen for JAs. People were able to send us e-mail while we were on Wake and about half of the e-mail we received was about the 160 operation. The topic that generated the most e-mail related to 160 was from several hams in Louisiana who felt that my going by districts in the order 1-2-3-4-8-9-0-5-6-7 did not work for them and that I should have put the fives before the zeros.

I concluded that the real problem was not a change in the order of the districts, but my initial assumption that I should work North Americans at their sunrise which got me on 160 later than I think I should have gotten there. As the week went on, I went to 160 earlier and earlier. I would be interested to know if East Coast stations noticed a distinct peak in my

signals at a certain time around their sunrise or if my signal was fairly constant until it died due to daylight.

On the 4th we got an offer we could not refuse. We received a message from John, ON4UN, to be on 160 at a certain time around his sunset to try to work him. We were there, but did not hear John. I assume he didn't hear us. We did manage to work four OH's and a couple of UA4's, however. One of my real regrets was that I was not able to put more time into trying to work Europe on 160. I would have loved to have spent a couple of nights calling CQ on 160 through the European evening and into our sunrise, but our first priority was to give as many people as possible in Europe an all-time new one and that meant using other bands.

The night of the 5th the rate dropped way down. The signals seemed a lot weaker. We had a lot of QRN and the spacing of the static bursts made copying code at 20 WPM really tough. I asked people to QRS, because at around 12 WPM it was much less likely for a dit to be covered up by QRN. Unfortunately, about half the people kept their speed the same and merely increased the space between letters; that didn't help at all! (I had a similar problem to Europe on forty. For almost an hour each night I was copying both long and short path simultaneously at about equal strength. I asked people to QRS because that made it possible to separate out the echo, but many people merely increased the spacing between letters which again didn't help at all.)

Anyway, I couldn't tell whether the signals were weaker because I had pretty much worked everyone I could hear or whether the propagation had deteriorated. A third theory is that the weekend was over and fewer people could be on the air at the appropriate time. It was true that almost every time there was a good clear signal it was someone making an insurance contact. I would be interested in any impressions from east coast stations in this regard.

The night of the 6th was the only one we did not focus on 160 CW during the North American early morning. We used the Battle Creek Special on seventy-five and eighty that night. It was our only eighty meter antenna and it worked very well on eighty.

The night of the 7th was our last night. We had taken down many of the antennas but left the Battle Creek Special and the vertical we used on forty meters up until dawn. (This was actually pretty daring of us and if our plane out hadn't been delayed we might

not have been able to finish our packing before we left!) I spent all night going back and forth between 160 CW and 80 CW, but, as on the 5th, there wasn't much action.

### PART 3 - GENERAL COMMENTS

Although I got to have most of the fun on 160 meters, the other three members of the DXpedition, Tom Harrell, AL7EL; Don Greenbaum, WB2DND; and Lloyd Westbrook, K4HQI, each contributed greatly to our success on 160 meters. They arranged for and put up and took down the Battle Creek Special and the Beverage and they set the priority for operating on 160 meters. Give them lots of credit for the AL7EL/KH9 160 meter operation.

I'd like to comment on a couple of other issues raised by the e-mail to the expedition. Several people attributed their inability to work us to heavy pileup QRM: Stations that would not stop calling or that intentionally replied when I came back to someone else. I have to say, I did not notice any of that. The poor operators must also have had poor stations; their RF did not make it as far as Wake Island! My perception was that the operators calling me were extremely courteous and professional. I am tenacious to a fault about completing a QSO once I get part of a call. It was NEVER the case that I failed to complete a QSO because of QRM. There were a number of times I could not finish a QSO, but that was due to QSB.

For your information, the pile-ups on 160 seemed tame at my end; I did not have to go on to the next call district while I could still hear people in the current call district calling on my listening frequency. Typically I picked up only a few stations in each call district in each cycle, although early on I picked up as many as ten a couple of times. Of course, I didn't waste time tuning around before moving on. In fact, I never had to tune around as a way to spread out the pile-up. Many people figured this out, but a substantial number never did. Once the pile-up was gone, I tuned around and picked up stations who were not calling where I requested. It was surprising how many stations didn't try to call where I said I was listening and didn't zero beat the last station I had worked. Why was this?

One person sent me e-mail based on the model that there was a very short opening moving rapidly across the country and suggested that instead of working by

the numbers, I should have spread out the pile-up over a portion of the band and picked off the strongest stations as they had their openings. This is an interesting theory. Any comments? My reason for not doing it was that I could work people faster if I didn't have to tune around. Also, the first three days, it didn't feel like QSB was much of an issue. On February 5th and 7th, however, there were a number of times when I would get a few letters of a call and have the station disappear in QSB before we could complete the QSO. A few frustrating times, I was sure I had eked out (get it? -N6EK) the correct call but couldn't hear even a hint of a reply coming back; I am sorry to say that those are not QSOs in my log.

A couple of people suggested I should have made a faster rotation. One suggested working two stations per district per cycle, and working only districts one, two, three and four as long as the east coast opening was there. I like this in principle, but I am a little afraid that the pile-up wouldn't have stood for it; it is hard to convey the fairness of subtle rotations in the heat of the moment. The reason I like this idea is because my arrangement of coming on the air and soon starting the rotation with the first district didn't give the stations in the first district much time to find me. Any station in the first district who missed this first shot had probably lost his only shot for the day. I certainly didn't get as many east coast stations in the log as I would have liked.

I expect to be part of the Heard Island team in January. I hope I will do some of the operating on 160 meters from Heard Island!

One last thing. Our DXpedition bought an ICOM CT-17 computer interface just for this trip and we don't need it any more. We are looking for a buyer for it; anything we get for it will help support the Wake Island DXpedition.

### WORLD RADIOSPORT TEAM CHAMPIONSHIP

This event, slated to be held in the San Francisco bay area in July 1996 brings together 52 two-person teams from around the world to compete during the Radiosport contest. The U.S. Federal Communications Commission has granted permission to use special 1x1 callsigns during the Championship. The calls will be W6A through W6Z and K6A through K6Z. There will be special awards for working various numbers of these stations. The WRTC, was first held in Seattle, Washington in

1990 and pits two-person teams consisting of some of the world's top operators in head-to-head competition. To emphasize operator ability, each team runs the same amount of power and operates from stations having similar antenna systems and located in the same geographical area.

For further information contact Rusty Epps, W6OAT at 651 Handley Trail, Redwood City, CA 94062 or via e-mail.



## NEW SHOWS

by Ron Steiner, K6KEO

The slide and video library has received six new additions, which now gives us 50 slide shows and 94 videos.

In the slide show department we have: 3D2CT - 3D2CU, Conway Reef by Garry Shapiro, N16T. There is an accompanying audio tape which Garry has done a terrific job of narrating.

The new video's are as follows: 3CØGD - Annobon and LA8PV, both are on the same tape. 1AØKM and HV4NAC, both are on the same tape. 3V8BB, the November 1994 operation. H44IO-South Pacific DXpedition and The Congo - TN4U & TN2M.

The H44IO and the Congo videos by Holger Hannemann, DL7IO (ex-DL7VTM) are exceptionally well done and I give them both a "thumbs up."

On behalf of the Northern California DX Foundation, I want to thank all persons who have donated new material.

When you request slides or video's, please return them in a timely fashion so they will be available to other groups. Lately some clubs have been very slow in returning material. This is very unfair to the groups who are waiting for the material. One other reminder; although there is no charge to use the NCDXF material, you are responsible for the postage in both directions.

## SLIDE SHOWS AND VIDEOS

The Northern California DX Foundation has a number of slide shows and videos available for loan to organizations wishing to show them at meetings. Clubs borrowing materials are responsible for postage in both directions. The amount involved can be learned from the postage on the package when it comes to you and is usually about \$2.90. Please give the name of your club, the day of the month you meet and more than one choice of program in case there is a great demand for the item. Correspondence should be addressed to Ron Steiner, K6KEO, 3154 Dominic Dr, Castro Valley, CA 94546.

### AVAILABLE SLIDE SHOWS:

1. Kingman Reef and Palmyra Island expedition of 1974 (148 slides)
2. K5YY on Africa of 1978 (62 slides)
3. The Colvins on Easter, Galapagos, San Andreas, etc 1984 (140 slides)
4. W6REC & ZL1AMO, Kermadec 1984 (58 slides)
5. AHØC (Saipan) CQWW Contest Operation of 1983 (82 slides)
6. 1985 Clipperton expedition (191 slides)
7. Ponape Island by N6HR, travelogue (81 slides)
8. Pribilof Island operation of 1982 (48 slides)
9. Midway by NA6T & KD7P (120 slides)
10. Antarctica, Arctowski, Palmer, Peter, Macquarie stations (101 slides)
11. VR6, Pitcairn, Mar/Apr 1979 by ZL1AMO & ZL1ADI (51 slides)
12. SMØAGD 1982 Pacific DXpedition (150 slides)
13. 9U5NT, Burundi by ON5NT (57 slides)
14. TYA11, Benin by ON5NT (61 slides)
15. VK3DXU/2, Lord Howe Island by K2UO (52 slides)
16. 3A, Monaco, by F6EYS & F6HX of 1984 (43 slides)
17. 5X5, Uganda by DJ6SI of 1985 (115 slides)
18. Market Reef, July 1983 by PAØGAM/OHØ/OJØ
19. KX6DS, Marshall Island (34 slides)
20. Andorra, by DL1HBT, DL3HAH, DL5BAD, DL4BBO, DL4BAH (50 slides)
21. 1986 Clipperton Expedition by W6SZN, W6DAT, A16V, N7NG, W6RGG (176 slides)
22. Peter I Island, 3Y, of 1987 (127 slides)
23. KP2N, 1986, CQWW DX CW contest (55 slides)
24. OFØMA, Market Reef, 1987 (28 slides)
25. Abu Ail, A15AA, by DJ6SI, 1988 (65 slides)
26. XX9CW by DK7PE, 1986 (16 slides)
27. 1988 Palmyra by K9AJ, KP2A, WAZMOE, WØRLX, F6EXV, JA5DQH (93 slides)
28. 1988 Kingman by the above operators (96 slides)
29. 1988 4U, KC4, VK9Y, VK9X and 9V1 by W7SW (73 slides)
30. Banaba Isl, T33J+T30 & T27 by KN6J & VK9NS (80 slides, 80 minutes)
31. XF4L by XE1L, XE1OH, XE1XA, OH2BH, OH2U, JH4RAF, W6RGG & N7NG
32. Publishing the DX Bulletin by Chod Harris 24 min
33. Rotuma 1988 by W6SZN, 73 minutes
34. 4J1FS, MV Isl, 1989 with Finnish, Soviet & American DXers by K7JA 16 min
35. ZS8MI, Marion Island by Peter Sykora, ZS6PT 1 hour
36. Y63-KC6-P29, Micronesia/Melanesia by KQ1F & K1XM 20 min
37. YL DXpedition to Wallis Isl June 1989 by NM7N, N7HAT, N4DDK, KAØMX 20 min
38. A51JS, Bhutan by VK9NS, Jim Smith 1 hour
39. HC8X, Galapagos by KQ1F 34 min
40. Faroe Island May 1991 by N6HR 28 min
41. Palmyra Island, KP6AZ, 1963 by W6FAY
42. VK9WW-VK9NLW Willis Isl Oct 1992 by VK9NS 36 min
43. S2-Bangladesh 1992 by VK9NS 26 min
44. Christmas Isl 1992 VK9NX- VK9XM by W5KNE 50 minutes
45. Jarvis, KH5 1992 by WA6AUE 45 min
46. Kingman Reef 1993 by N9NS, VE5RA, NØAFW, OZ1LGF, PA3DZN, PA3ERA 90 min
47. Palmyra 1993 by GØLMX, HB9AHL, NH6UY HB9AEE, W7KNT, G3KHZ 32 min
48. Mellish Reef 1993 by VK4CRR, G3WGV, K5VT, V73C, WA4DAN, VK2BBJL, VK2BEX & P29DX 25 min
49. Dominica 1993 by N6EK & KB6VVX
50. 3D2CU - 3D2CT Conway Reef, 1995 by NI6T

### AVAILABLE VHS VIDEOS:

1. XU1SS (plus BVØYL and BVØJA) (35 minutes)
2. ZJ1RL of 1976 and 1978 (includes ZK9ZR, Mellish Reef)
3. VK9ZR DXpedition of 1978 (plus Ogasawara)
4. Frankford Radio Club ARRL phone parody + JH7YFL WWCW
5. JF1ST/7J1 DXpedition to Okino Torishima of 1979 (25 minutes)
6. Australian travelogue - Climbing Big Ben, Heard Island (55 minutes)
7. Ham Radio in the South Cook Islands by ZK1CA & ZK1CT (70 minutes)
8. VR6 by ZL1AMO & ZL1ADI (copy of slide show above)
9. Looking Up in Rio Linda, 1986 by W6GO/K6HHD (45 minutes)
10. Revillagigedo, XF4DX, of 1987 (15 minutes)
11. Northern Texas Contest Club - towers and contesters (45 minutes)
12. It Started With A Broken Fence - JH3DPB Tall Tower tale (15 min)
13. Pile Up Busters, Humorous. (10 minutes)
14. FGW2QM/FS, French St Martin, DXing Senior Style - Another Wrinkle to DXing

15. 1984 Laccadive Island DXpedition, VU7WCY, plus 1983 VKØHI from TV (60 minutes)
16. The K6UA contest station story (25 minutes)
17. HKØTU DXpedition of 1983, Malpelo (25 minutes in Spanish)
18. The Ship That Shouldn't Have - VKØJS Heard Island DXpedition (90 minutes)
19. The New World of Amateur Radio (28 minutes)
20. SØRASD 1987 by the Lynx Group, The Western Sahara Story (37 minutes)
21. Auckland Island 1988 by ZL1AMO, ZL1BQD, N7NG (60 minutes)
22. Dr. Owen Garrio's First Talk to hams about the Space Shuttle
23. Russian Ham Radio Tour by WA6WXD, Oct 1986 (45 minutes)
24. 3Y DXpedition 1987 - W4VVA copy of the slide show
25. Peter I 1987, from JA7ARW
26. 1979 Spratly Isl DXpedition by K4SMX, K1MM, VK2BJL, N2OO, N4WW & KP2A
27. 1988 Malji Vysotskij Island by OH2BH, UZ3AU, OH5NZ, UR2AR, OH2RF, UW3AX 23 min
28. 3W8DX & 3W8CW by HA5MY, HA5WA, HA5PP, HA5BBC, Nov. 1988 by W4BRE
29. Aruba, P4ØV CQWW Test (12 min)
30. A Message from Barry Goldwater, K7UGA (12 min)
31. Navassa of 1988 by N2EDF, K2SG, KE4VU, KD2NT, N4GNR, KT2Q, W3GH (38 min)
32. Rhodes, SV5, by N2OO & SVØAA, April 1989 (40 min)
33. NO1ZKH1, Howland Isl 1988 by NO1Z, 7J3AAB, TR8JLD, VK9NS & VK9NL (20 min)
34. Boeing ARC at the Electronic Convention and Great Wall of China (audio tape + VHS 30 min)
35. KC Club DXpedition to Tonganoxie Island (30 min)
36. Tuvalu 1989 by K6EDV and ZL1AMO (27 min)
37. Visalia Convention of 1990 recorded by W6NLG (2 hours)
38. Rotuma, 1988 copy of the slide show (73 min)
39. XW8CW & XW8DX 1989 by HA5PP & HA5WA (27 min), produced by W4BRE
40. XUBCW & XUBDX 1990 by HA5PP & HA5WA Produced by W4BRE (27 min)
41. All China Amateur Radio DFing Competition + BY1PK (32 min)
42. ZS8MI by ZS6PT, partial copy of the slide show (40 min)
43. Jim Smith, A51JS, VK9NS, visits the SF Bay Area by WA6BXV (80 min)
44. RØZF/NN7A, NN7D & W7YS, Aug. 1989 Lake Teletskoye, Siberia (30 min)
45. VU7, Laccadive Isl 1984 (65 min)
46. VU7, Andaman Isl 1987 by Combatore Radio Club (30 min)
47. 3Y5X Bouvet 1989. Video by JF1ST (in Japanese, good photography) 35 min
48. VR6TC speaks to the Turlock ARC. 1991 by K6IMN (125 min)
49. 1990 World Radiosport Team Championships in Seattle (25 min)
50. ICOM's "More Than Radios" The legacy we leave to the young. (25 min)
51. T33R-T33T Banaba, Nov 1990 by SM7PKK, TF3CW, OH1RY (22 min)
52. This is ATV by Western Washington AT Society (12 min)
53. New Horizon: South Pacific Adventure by AA6LF (55 min)
54. YB3ASQ: Indonesian Stations and Sightseeing by W7TSQ 25 min
55. XF4L of 1989 by JH4RHF, XE1OH, OH2BH, W6RGG, XE1L, OH2BU and N7NG 25 min
56. ET2A by W4IBB, Jack Reeves May 91 12 min
57. ISØXV by UW3R et al July 1990 35 min or 2 hours (your choice)
58. Jarvis 1990 by K3NA and KN3T 35 min
59. 3CØCW, Annobon 1991 by the Garrotxa Club of Spain
60. Araucaria DX Group of Brazil, about contest stns and ops 30 min
61. 9L1US by Dave Heil, K8MN Ed. by Jim Hurst, West Ga College & W4VVA (45 min)
62. Dave Heil, K8MN visits Finland. Edited by Jim Hurst & Henry Owen, W4VVA (35 min)
63. Penguin Isl. 1990 from a slide show by Wayne Mills, N7NG, Produced by MoBre (15 min)
64. P9JW-1990, "Spirit of Victory", Radioteam Finland, Produced by WA7LNV (48 min)
65. Empire of the Air; The Men Who Made Radio Recorded by K1GYB
66. Contest Night Live, by the Kansas City DX Club (30 min)
67. DXing Kansas City Style, by the Kansas City DX Club (30 min)
68. VP8ANT/G3CWI The story of Richard Newstead on Adelaide Isl (45 min)
69. H44 Solomon Island DXpedition (12 min)
70. VP2EOH 1992 by Northern Ohio DXA (29 min)
71. Christmas Island March 1990 by JH1LBR. English audio by WB2CHO
72. VP8SSI South Shetlands 1992. (46 min)
73. More About Radios by Zman Productions - an intro to the hobby (28 min)
74. Navassa Isl., Jan 1992 by WA4DAN, AA4VK, NØTO, KW2P & AA4NC (25 min)
75. Getting Started In DXing by CQ Communications (52 min)
76. The Radio Ham, starring Tony Hancock English Comedy (26 min)
77. Project Irma, The DX Truth-O-Meter, Northern Cal DX Convention, 1993 (25 min)
78. ZL9DX, Auckland Isl '93 by ZL1OK, ZL1AVC, ZL2TPY, HH4RHF & JR4DUW (28 min)
80. V63-KC6-P29 by KQ1F & K1XM slide copy by Jim Hurt & Harry Owen W4VVA (25 min)
81. Desecheo, KP5, 1992/3 with KW2P, NØTG, WA4DAN, WØRJU & AA4VK (28 min)
82. E35X, Eritrea, May 31-June 10, 1993 by LA6VM, LA1EE, JF1ST, LA9DL, LA7XK (17 min)
83. AH1A, Howland Isl '93 by ON6TT, WØRLX, K9AJ, WØCP, KØUE, W9IXX, KAUEE, F6EXV, G4LJF (2 hr)
84. 9G1AA, Ghana by PA3AWW, PA3FUE, PA3ERA, PA3DEW & PAØTUK (55 min)
85. 9MØS Spartly Islands 1993 by N7NG, WA6AUE, OH6DO, JA5DQH, OH1NYP, 9V1YW, 9M2FM, OH2MAK & OH2BH (30 min)
86. Journey to Peter I, 1994 (30 min)
87. ZD8SXW, Tristan da Cunha, 1994 by G3SXW (18 min)
88. Last Voice from Kuwait, 9K2DZ (25 min)
89. Malji Vystoskij Island, 1992 by AHØW ex 4J1FM (43 min)
90. 3CØGD - Annobon, 1989 by LA8PV (20 min)
91. 1AØKM (8 min) & HV4NAC (23 min)
92. H44IO - South Pacific DXpedition by DL7IO, ex-DL7VTM (46 min)
93. The Congo - TN4U & TN2M, 1995 by DL7IO, ex-DL7VTM (40 min)
94. 3V8BB - 1994 (17 min)

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