



Newsletter

our 25th year

Spring 1998

Steve Thomas, N6ST, Editor

Northern California DX Foundation

9MØC - SPRATLY ISLANDS 1998

by Don Field, G3XTT

The Spratly Islands in the South China Sea hold a unique fascination for radio amateurs. Ownership is disputed, with several adjacent countries laying claim to some or all the islands of the archipelago, and two ham radio DXpeditions to the Spratlys have come under gunfire, one with fatal consequences.

In recent years the political situation has clarified a little. To drive out modern-day pirates, who used some of the islands as bases for their nefarious activities, and to establish the legitimacy of their claims, the various surrounding countries have themselves occupied the islands closest to their territory. So although ownership continues to be disputed, a *de facto* resolution is emerging. The DXCC program now only recognises ham radio operations from the Spratlys which have used a callsign issued by one of the occupying powers, rather than the "self-issued" 1S callsigns which

were used in years gone by.



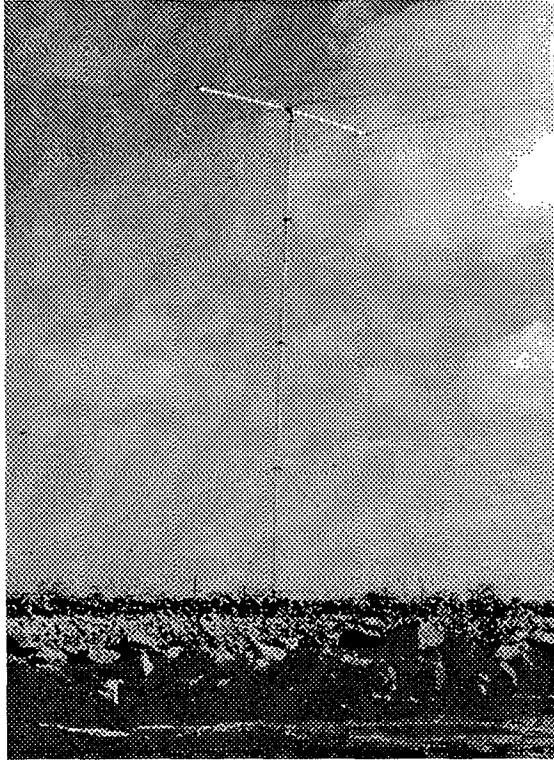
9MØC - Pulau Layang Layang

While most of the islands remain uninhabited except for the various occupying military, Malaysia has developed Layang-Layang (formerly known as Swallow Reef) off the coast of Sabah as a dive resort and bird sanctuary. Layang-Layang is a coral atoll, of which only a handful of rocks and two sandbanks used to be above water. The two sandbanks have now been linked to form the resort, and a runway

constructed. A small naval detachment also occupies one end of the island. There is excellent accommodation, and a regular air service to the island from Kota Kinabalu on the mainland. Since the resort was built there have been several amateur radio operations from there. The first and biggest was 9MØS in 1993 which made over 36,000 contacts, despite a limitation then in force that they could not use linear amplifiers. Subsequent operations have been lower-key, often by hams who were there mainly for the diving (Layang-Layang is recognised as having some of the best scuba diving in the world).

Nevertheless the Spratlys remained high on "Most Wanted Country" surveys, especially with amateurs on the East Coast of the US, who have a difficult polar path to that part of the world. In

1995 Steve G4JVG became fired with the idea of mounting a large-scale DXpedition to Layang-Layang which would take enough equipment and antennas to be able to lay down good signals on all bands and into all areas. Others were quickly co-opted into the team; Tony G0OPB, Neville G3NUG, Don G3OZF, John G3WGV and myself. Donald 9M6SU, was also an early recruit, to be our link-man on the ground in Sabah. Later we brought in Vince K5VT, Ray G3NOM, Mike



Cushcraft 20 meter beam 40 feet high and just 10 feet from the sea.

G3SED, John G4DQW, Jeff 9H1EL, and Kazuo JAIRJU.

We quickly decided that, to make a major impact in the specialist areas (low bands, WARC bands, RTTY, 6m) as well as satisfying basic demand for Spratly, we would need to run at least four stations round the clock, limited only by band openings. We would also need substantial amounts of aluminium, to achieve strong signals across the globe.

We could not rely on 10 or 12 metres being open, so our choice of high-band antennas was based on being able to operate on any of the bands, with 20m being a basic run-band on which we would try to have a signal whenever the band was open, but with the flexibility to run two signals (one on CW or RTTY, one on SSB) on

20, 15 or 10 during significant band openings, especially to the US.

We set a QSO target of 40,000, which we thought would get us beyond contacts with the bigger stations (those with beams and linears) and really start to make inroads into the demand from less well-equipped HF operators worldwide. With this QSO target, computer logging would be essential, and would also ease the job of the DXpedition's QSL manager, a task for which Phil Whitchurch G3SWH proved to be a willing volunteer, with Bob Treacher BRS32525 agreeing to take on QSLing listener cards.

Having set ourselves these targets and agreed an expedition motto "to reach those parts that other Spratly DXpeditions have not reached", it was clear we had a major exercise in logistics on our hands. It was time to divide up the work, and to start looking for some external help.

Yaesu agreed to make available four high-power HF stations, each consisting of an FT-1000MP and the newly-released VL-1000 linear amplifier, as well as two FT-920s, one of which would primarily be for 6m use, and the second as a general-purpose back-up.

Cushcraft, through their UK importer Nevada, provided a 3-element 20m Yagi, two A3SHF tribanders, one with an extended driven element for use on 40 metres, an A3WS tribander for 30, 17 and 12 metres and a 6-element Yagi for 6m. On 40 and 80 metres we would use four-square arrays based on vertical radiators from Gladiator of the US. We had also been offered the loan of a "Battle Creek Special" (BCS). This is basically a trapped inverted-L which is built very substantially and for idiot-proof assembly, specifically for loan to DXpeditions. The BCS programme is run and financed by a group of low-band enthusiasts from Battle Creek, Michigan, who do so in order to encourage expeditions to focus on 160, 80 and 40m operation.

Yaesu also provided UHF handhelds and Timewave AEA provided TNCs in order that we could link the stations by packet radio, to be able to back-up the logs to a central server in real time and to provide communications between the stations. Along with computer interface to the radio, this meant, for example, that at any operating position there would always be information about who the operator was at other stations and on which frequency he was operating.

Martin Lynch & Son (one of the UK's leading amateur radio dealers) helped us with a vast quantity of

ancillary equipment including, for example, a lot of the co-axial cable (We ended up taking 2km of coaxial cable, all but 100m of which ended up being used! Tony GØOPB had to solder over 150 connectors!) Dunestar of the US kindly agreed to loan us three complete sets of filters to minimise inter-station interference. Other corporate sponsors included CQ Ham Radio Magazine (Japan), Radio Active Publications (UK), 59(9) Report of the US, Camel (who loaned us a satellite phone to permit links to the Internet while on the island), Malaysian Tourism Promotion Board (QSL cards), Layang-Layang Resort, and the Sabah Tourism Promotion Corporation. We also received many donations from DX Associations, Clubs and Foundations, as well as from a number of generous individuals, all of which we acknowledge with thanks.

The crates of heavy equipment (1.5 tons in all) were sent by sea, and trans-shipped to Layang-Layang (which is about 150 miles off the Sabah coast) by trawler, accompanied by four intrepid 9M6 amateurs, all of whom fell victim to the heavy seas. However, they did achieve one notable "first" by working back to Sabah on 2 metres through the repeater high on Mount Kinabalu.

We intended to be on the air for two full weekends, to give as many people as possible the opportunity to work us. G3NOM and G3OZF flew out to Layang-Layang a day before the rest of the team, and surveyed the site for best location of antennas, etc. We were able to speak with them from the mainland, thanks to Phil 9M6CT (ex-VS6CT), before attending a welcome dinner hosted by the Sabah and Borneo radio clubs.

After a 70 minute flight the following day by Twin Otter, we received a warm welcome on Layang-Layang by resort managers Steve and Coralee Stewart, two outgoing Australians who did everything they could to make our operation a success. First priorities were the four-square antennas for 40 and 80, as we knew these would take the most time to set up and adjust. All in all, station assembly took two days, and we had agreed at an early stage that we wanted to get as much done as possible before actually taking to the bands. As well as the antennas described above, we had added a Titanex vertical for 160, 80 and 40, a pair of phased verticals for 30m (made from modified CB whips), and a 2m Yagi (to work back to the mainland via the Mt. Kinabalu repeater). The Titanex is a formidable beast. 26m high, it is made of light titanium alloy, and can be erected by two people. 9M6SU had also brought along several bamboo poles, up to 13m long, which he had cut from

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NCDXF Web Site

by Steve Thomas, N6ST

If you haven't visited the Northern California DX Foundation web site lately, you may want to drop by again. Dick Dievendorff, K6KR, our webmaster is doing a terrific job keeping the site up-to-date.

I find it to be an excellent source of information in its own right and the links to sites related to the use of the NCDXF/IARU Beacon Network are very interesting. You will also find selected articles from the Newsletter available there. Articles from the last issue are on-line and articles from this issue are or will be on line. As I get time, I will send Dick articles from back issues. Point your browser to <http://www.ncdxf.org> for the latest NCDXF info.

the jungle and which we pressed into service for supporting wire antennas such as a low 160m dipole for receiving purposes. We left these poles on the island after our departure for possible future use by visiting hams.

Our antenna farm was quite a sight when complete, with the main antennas lined up along the shoreline just feet from the sea. The 80m four-square, which took up the most space, was at the far side of the aircraft apron, some 300 metres from the "shack" (actually a large conference room in which we set up all six stations).

After dinner on the Wednesday evening we sat down for a final conference to agree operating schedules for Day 1. Finally, around 11:30 pm local time (1530 GMT) all the preparatory work came to fruition when G4JVG made the first "official" QSO - K5DV on 20m (the advance party had already made a few QSOs under the 9MØC call). The world must have been waiting, because in the first 24 hours we made 8,000 QSOs! It didn't take long to realise that when 6m was closed its operating position and the backup station could also be pressed into use on the HF bands, albeit at low power, and we frequently found ourselves operating on six bands simultaneously. We could only imagine what impact this was having in our target areas - at one time during the first evening, for example, we were working into Europe on 160, 80, 40 and 30 metres, while working the US on 20 metres. The PacketClusters must have been buzzing with activity.

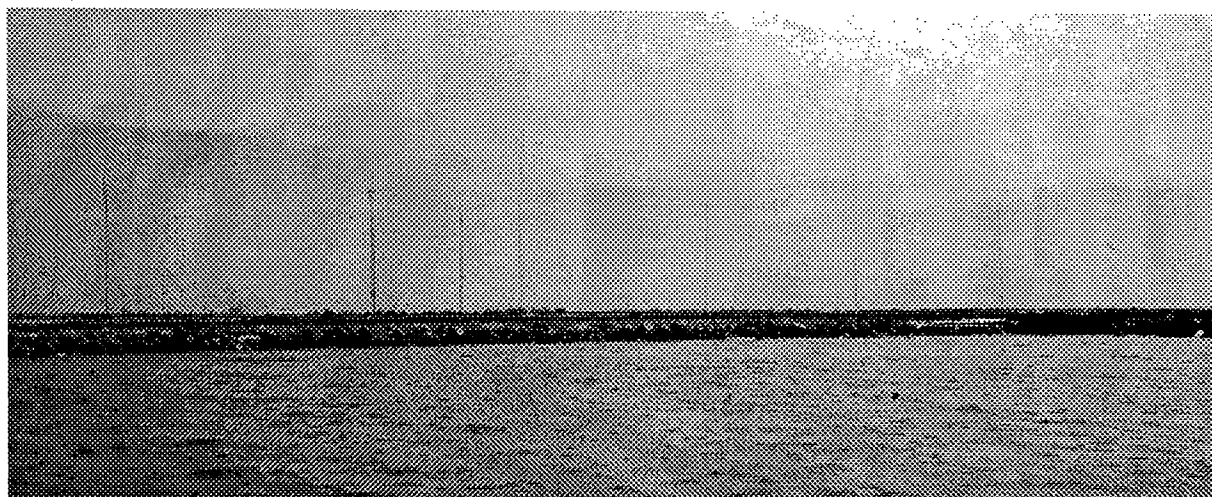
By Sunday evening, after just four days of operation, we had 29,000 QSOs in the log. There were always two or three bands open, and around dawn and dusk we

often found all nine HF bands open simultaneously and had to decide on priorities.

The big disappointment early on was the high noise level on 160m. This wasn't just a matter of static crashes, but continuous static above S9, which made it difficult to copy all but the loudest signals. This was especially frustrating because early reports indicated that we were being heard very well indeed, both in Europe and across the US.

One of the lessons we had taken to heart from previous big DXpeditions was the need for interaction with the amateur population at large. This helps hams around the world to feel a part of what is happening, and permits the DXpedition team to be aware of what they are doing right and what they are doing wrong (for example, by missing important band openings). Accordingly, we appointed "pilots" to perform the liaison role. Yoichi JP1NWZ took on the job for Asia, Don N1DG for the Americas, and Martin G3ZAY for Europe and Africa, as well as being "chief pilot" with responsibility for updating our Web pages as the expedition progressed. The role of the pilots was extremely valuable. We quickly fell into a routine of holding a short team meeting once a day, where we reviewed their feedback and adjusted our operating schedule accordingly. We were also able to use the pilots to disseminate information, for example about when we proposed to operate RTTY.

We used the satellite link to upload logs and photographs to the Internet on a daily basis, with Don N1DG and Richard G4ZFE operating log servers. John G4PDQ provided a similar service for



Antenna farm, Titanex 85 foot vertical one from right

PacketCluster users. This enabled hams to check within 24 hours or so of a contact that they were indeed in the log, and by the time we closed down the servers had recorded well over 20,000 "hits".

Life quickly started to revolve around eating, sleeping, antenna and station work, and operating. Many hundreds of stations made it on 9 bands (or even 10 in the case of some of the Japanese), and many on all three modes. As expected, the toughest areas to work were the East Coast and mid-west of the US, though we were able to give many hams in those areas the last one they needed for 5BWAZ. To our surprise, 40 quickly became the preferred band for working into the East Coast, the four-square putting excellent signals into that area.

In the event, although there will inevitably be those who were disappointed, we can reasonably claim to have met our expedition goals. Our 160m tally was over 1100 contacts in 58 countries. This was largely thanks to a drop in the static levels on the last couple of nights, when it became apparent that, static excepted, Layang-Layang was a very quiet location, with natural background noise not even registering on the S meter.

Our WARC-band totals were equally imposing, and we were particularly surprised to find the pile-ups on 30m never-ending, with almost six thousand QSOs. Our overall QSO tally of 65,558 puts 9MØC at fourth all-time, after VKØIR, 4J1FS and ZA1A. Naturally, at the 50k and 60k mark we paused briefly for a celebratory bottle of bubbly and photo-call.

It is worth saying that throughout 12 days of continuous operation, making more contacts than many amateurs would make in a lifetime, all our equipment performed flawlessly, and we were particularly impressed with the Yaesu VL-1000 amplifiers which are so well integrated with the FT-1000MP as to be practically "invisible" to the operator. Our only mishaps of any note were the demise of a couple of filters when tired operators changed bands without remembering to change the filters. As for the antennas, the Cushcraft beams were easy to assemble, well made and performed flawlessly. In the mornings all the Yagis would be beaming at Japan and North America. This was an awesome sight indeed, particularly as they were all in line and within 10 feet of the sea. There must have been a huge amount of RF going in that direction! In the evenings we turned

them all towards Europe, another wonderful sight as the tropical sunset highlighted the mass of aluminium. Equally, the LF antennas were a dream, with the all-round sea-water take-off obviously helping those low angles.

One particular highlight on the first Sunday was the arrival of the Sunday edition of the Sabah Daily Express. The colour supplement featured a cover photograph of the team erecting one of the antennas, and inside there was a full page regarding our operation. This level of local interest continued, with the Minister for Tourism attending a press conference after our return to the

mainland. We were also welcomed back with a dinner hosted by the Sabah Tourist Development Corporation. Of course, taking down all the antennas and closing the station was a source of regret, but our timing



Celebrations at 60,000 Qs. Left to right John G3WGV, Jeff 9H1EL, Don G3XTT, John G4DQW/N2QW, Tony GØOPB, Steve G4JVG, Don G30ZF, Ray 9M20M/G3NOM, Neville G3NUG, Mike G3SED, Donald 9M6SU, Kazu JAIRJU (Vince K5VT had to leave early)

On RTTY we ended with 2075 QSOs, putting us ahead of any previous similar DXpedition, so far as we can tell. On 6m we exploited every opening, and ended with 389 QSOs, exclusively in Japan and Hong Kong.



9MØC - Excess baggage!

was impeccable as the resort was down to its last few cans of beer!

Several of us wanted to air our individual 9M6 callsigns from Sabah before returning home, so we headed for Hillview Gardens Resort at Keningau, owned and run by Doris and Alfons Udans, 9M6DU and 9M6MU. A station and antennas are available for use by visiting hams and we spent a couple of pleasant days recuperating and playing radio before returning home.

CDXC

The 9MØC DXpedition was organised by CDXC (Chiltern DX Club), The UK DX Foundation. For a CDXC prospectus please contact Alan Jubb G3PMR, Secretary CDXC, 30 West Street, Great Gransden, Sandy, Beds SG19 3AU, England or email Alan at SHACKLOG@aol.com

9MØC: LIST OF SPONSORS AND CONTRIBUTORS

Corporate Amateur sponsors were AEA Timewave, CQ Ham Radio Magazine, Cushcraft Antennas, Dunestar, Gladiator Verticals, Martin Lynch and Son, Nevada Communications, Radio Active Publications. The 59(9) DX Report and Yaesu.

Corporate Non-Amateur sponsors included Camel, Layang Layang Resort, Malaysian Tourism Promotion Board, NCT Forwarding & Shipping Sdn. Bhd., Sabah Boys' Brigade, and Sabah Tourism Promotion Corporation.

Twenty-three DX Associations, Clubs & Foundations provided support, including Arkansas DX Associa-

tion, Battle Creek DX Group, CDXC, The UK DX Foundation, Central Arizona DX Association, Clipperton DX Club, Danish DX Group, Dateline DX Association, Eastern Arizona DX Club, Eastern Iowa DX Association, EuDXF, German DX Foundation, GACW Argentina, GM DX Group, INDEXA,

LA-DX-Group, Northern California DX Foundation, Northern Ohio DX Association, OK DX Foundation (Czech Republic), Oklahoma DX Association, RSGB Expedition Fund, SE Michigan DX Association, Stockport Radio Society, UK and the Virginia DX Century Club.

There were 15 Individuals who contributed to this Dxpediton.

GØWAZ, G2FNK, G3JNB, G3OFW, G3PEM, G3PMR, G4JMB, G4VJM/M, GW4VEQ, JH1AJT, JH1UUT, K4QD, NI6T, VK5WO and XE1CI.

The Team Members on Pulau Layang Layang were 9H1EL, Jeff; 9M6SU, Donald; GØOPB, Tony; G3NOM, Ray; G3NUG, Neville; G3OZF, Don; G3SED, Mike; G3WGV, John; G3XTT, Don; G4DQW, John; G4JVG, Steve; JA1RJU, Kazu and K5VT, Vince.

Team Members off site included BRS32525, Bob - SWL QSL Manager; G3SWH Phil - QSL Manager; G3ZAY, Martin - Chief Pilot, EU Pilot and Web Master; G4PDQ John - EU PacketCluster Server; G4ZFE Richard - EU QSO Server; JP1NWZ Yoichi - JA Pilot and N1DG Don - NA Pilot and NA QSO Server.



9MØC QSO statistics

	1.8	3.5	7.0	10.1	14.0	18.0	21.0	24.9	28.0	50	Total
CW	1149	2830	6554	5710	4635	3563	4529	3018	2048	262	34298
SSB	0	1420	4312	0	7511	2996	7282	2576	2632	127	28856
RTTY	0	0	0	0	1315	56	635	0	69	0	2075
FM	0	0	0	0	0	0	1	0	294	0	295
Total	1149	4250	10866	5710	13461	6615	12447	5594	5043	389	65524

Table 1 – QSOs by mode/band

	CW	SSB	RTTY	FM	Total
Africa	115	195	4	0	314
Asia	11309	12438	823	290	24860
Europe	16844	9086	764	1	26695
North America	5345	5695	442	1	11483
Oceania	442	1120	33	3	1598
South America	243	322	9	0	574
Britain	1182	646	22	1	1851

Table 2 – QSOs by continent/mode

	1.8	3.5	7.0	10.1	14.0	18.0	21.0	24.9	28.0	50
Africa	2	17	51	28	116	25	27	32	16	0
Asia	398	1497	3090	1268	4541	3038	5313	2442	2884	389
Europe	567	1718	5501	3617	5100	2038	4283	2306	1565	0
North America	150	879	1927	695	2991	1320	2406	698	417	0
Oceania	32	123	186	68	536	167	296	90	100	0
South America	0	16	111	34	177	27	122	26	61	0
Britain	47	141	382	323	396	159	260	116	27	0

Table 3 – QSOs by continent/band

G3WGV, 17Mar-98

Willis DXpedition

September, 1997

By Bill Snider, K6KM (and VK4AWS)

One of the many DXpeditions supported by the Northern California DX Foundation was the Willis operation by Bill Horner, VK4FW, and nine others from around the world. The primary objective of this operation was to make VK9W available to Europe and the Eastern U. S. That objective was achieved.

WHAT'S A WILLIS?

I'll bet that a lot of the hams who worked us as VK9WM or VK9WY have no idea where we were other than "probably somewhere near Australia." Few have any idea of the size of "Willis Island," or what is to be found there. If you'd like to know read on.

VK9W consists of three small islets in the Coral Sea, about 300 nautical miles east of Cairns, Queensland, Australia. The geographical coordinates are approximately 16 degrees south, 150 degrees east. All three islets are coral. They all have some vegetation and a lot of birds. South Willis actually has a few trees, while the vegetation on the other islets consists of salt-tolerant grass and very low brush.

Four Australian meteorologists who have signed up for six-month stays inhabit South Willis. They have all the comforts of home, including indoor plumbing, air conditioning and Internet access. North Willis Islet, where we originally intended to operate, is about twenty miles north. Halfway in between is where we actually ended up, Mid Willis Islet.

THE GOOD SHIP FLOREAT

Bill Horner and Bob Dixon, VK4MR, had chartered the 63-foot vessel Floreat for our expedition. When we got our first glimpse of Floreat, the crew had already loaded drums of fuel and water on the deck. We added six generators, all of our antennas and masts, several tents and miscellaneous hardware to the deck cargo. Radio equipment and personal belongings were stashed below in the two cabins. Food plus miscellaneous supplies went into a very cramped and hot aft cargo compartment. The Floreat, its crew of three and ten ham operators from around the world set forth at 1700 hours local on 9 September for a 30 hour trip to North Willis Islet via Holmes Reef and South Willis islet.

THE JOURNEY

According to the Aussies, the normal state of the Coral Sea is pretty rough. We bobbed about for the first couple of hours; some of the operators started feeling queasy. Outside the Great Barrier Reef we entered unprotected waters and had waves up to a couple meters high; the crew didn't mind a bit, but we landlubbers were getting pretty uncomfortable. Our first night at sea was difficult; just getting in and out of our bunks was challenging. By morning, about half the operators were extremely quiet and a couple were very uncomfortable.

We arrived at Holmes Reef about mid morning. Our plan was to determine if we could safely put on a one day IOTA operation from Holmes on our return trip. The largest reef was maybe a meter high but very, well, reefy. No sand, nothing flat anywhere. Just coral. I wasn't feeling wonderful about the prospect of setting up a station or two on the



reef; then I learned that the tide was at its low state. We waited a few hours and watched Holmes Reef disappear beneath the ocean. So much for Holmes, much to my relief.

As soon as Holmes Reef disappeared, we began the second half of our outbound trip, to stop first at South Willis and then proceed to North Willis. The waves became higher and higher, and they seemed to come from two directions at once. The captain said that they were about 60 feet apart...same as Floreat's length. We were having trouble just standing, even while hanging on. Most of the ops became thoroughly seasick. During that second night we were all thrown out of our bunks a few times. No one was hurt but we had plenty to talk about later. None of our equipment was damaged, which speaks well of the crew's ability to secure everything safely in place.

By the time we reached South Willis, only two of the hams were at all functional. Floreat's crew seemed to be handling the seas quite well, fortunately. In the sheltered lee of South Willis, seas were calm enough that everyone more or less came back to life. The captain had some supplies for the meteorologists, and we all were invited to tour the facilities on the island. All previous Willis DXpeditions have operated from this island.

The meteorologists were extremely friendly and anxious that we not miss any detail of their island. They invited us to stay and operate from South Willis, but we had government permission only to operate from North Willis. Permission to operate from South Willis had been denied, reportedly because of some misdeeds by a previous ham visitor. Shame. After just a few days of the coral sand of Mid Willis, we longed for the luxuries of floors, roofs and sanitary facilities.



After a couple hours we headed north; it took another two hours to reach "our" islet, North Willis. The Floreat couldn't approach closer than about 1 km from the island, as the sea was shallow and filled with "bobbies." We Yanks call them coral heads; one encounter with a bobbie and the tinny would be shredded and our DXpedition would have ended before it started. The captain spent an hour in the tinny, looking for safe access to the island. He returned to proclaim that landing there would be quite risky, so we headed south to take a look at Mid

Willis.

We were able to approach within 200 meters of Mid Willis. Seas were still rough, and tinny trips were possible only at high tide because of the bobbies. But, we had permission to operate from North Willis, not from Mid Willis. We balanced safety against the risk of not receiving after-the-fact permission and opted to become temporary residents of Mid Willis Islet. Landing all of the people and all of the equipment in that small outboard-powered aluminum boat was an example of absolutely superb seamanship and crew skill. We experienced no problems except for a hand-talkie dropped into the sea. Sorry, Bob.

MID WILLIS ISLET

Mid Willis is about 600 meters in the north-south direction and 250 meters in the east-west direction. That's my guess, anyway. The islet is capped with a flat region covered with the low scrub brush and grass that I mentioned earlier. If one were to find a "high point," it might be two meters above high tide, probably less. We set up our large housekeeping tent on the north tip where the coral beach was wide and sheltered from the prevailing sea; we would not have been able to land the tinny at any other part of the islet. Vegetation was sparse and birds had apparently found this spot unsuitable for nesting.

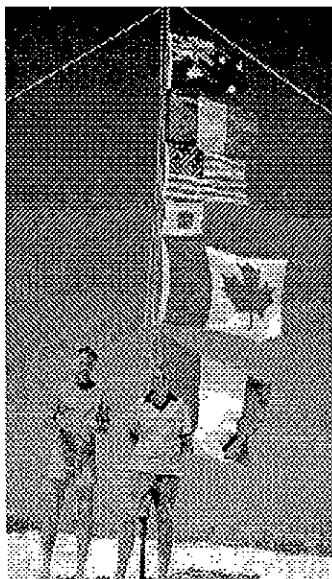
During our visit, birds were nesting almost everywhere. It seems that there were two kinds of boobies, black ones and white ones, and two kinds of terns also black ones and white ones.

We set up our first operating tent about 150 meters down the east side of the islet just below the vegetation line in the coral sand. After starting as a 40-through 10-meter tent, it became a dedicated twenty meter station. The next day a second operating tent was set up about 150 meters down the west side from the housekeeping tent. This second site was equipped with a tri-band Yagi, and it was used for 10 and 15 meters CW, SSB and RTTY, 20 meters RTTY and some 20 meters SSB. Later, another pair of tents was raised just below the housekeeping tent; one was for storage and a bit of sleeping and the other became the 80 meter, 160 meter and WARC band site. This latter was equipped with a WARC tri-band Yagi and assorted verticals.

The housekeeping tent and both operating tents had floors of coral sand. The sand created two problems; the stuff got everywhere, even inside sleeping bags.

Worse, our operating positions used folding chairs and their legs sort of bored into the sand, always unevenly. At one time I finished a four-hour stint with my chair at a very uncomfortable angle and with my keyboard and keyer paddle above eye level. It seems kind of funny here at home, but it was darned uncomfortable at the time. We used flat rocks, cardboard boxes, just about anything we could find to give us a stable platform but nothing worked.

On the second night of the VK9WM/WY operation, a significant storm hit. Not one of those cyclones that destroys islands, but still a full fledged storm with winds of about 60 knots and lots of rain. We had



three tents set up at the time, and all three were torn to shreds. The operators on duty wrapped their equipment as best they could and made for the housekeeping tent, only to find that it leaked so badly that about half of it was unusable. Fortunately the "ladies' corner" survived with little damage.

Repairs were made as best we could, and the storms returned the following night. Same drill, but accompanied by louder curses. More serious repairs the next day, lots of time repairing broken antennas and re-anchoring tents etc. That ended the seriously bad weather, fortunately.

THE STATIONS

We found early on that we could not operate more than one station in a small tent. We had two, sometimes three, stations in the multipurpose tent just below the housekeeping tent. We didn't have enough bandpass filters, thanks to shipping problems at the end of the UPS strike. That resulted in some interstation interference, but the few filters that we did have made a huge difference. I have to thank ICE of Indianapolis for building and shipping some multiband filters in record time; they arrived at my house right after I left for VK land. We'll plan further in advance next time.

All radios and amps were Yaesu. Oceania DX Group

had bought four FT-1000MPs and four FL-7000s at special expedition prices, and every one of them worked flawlessly. There were very few "learning curve" difficulties. We also had two personally owned radios, an FT-920 and an FT-990. They worked great. I don't know what the output power rating is for the FL-7000, but all four of them did exactly what was expected of them and delivered the maximum VK level of 400 watts with 100% reliability. Their automatic band change feature was appreciated by all.

OPERATORS AND SUPPORTERS

In addition to the Northern California DX Foundation, many individuals and organizations supported the Willis DXpedition with donations of money and equipment. Thanks from every one of us to every one of you. We hope that we met your expectations.

Ten hams from around the world participated in this DXpedition. The Aussies included Bill Horner VK4FW, Bob Dixon VK4MR and Vlad Huzevka VK2AEA. Nearby New Caledonia was well represented by Eric Esposito, FK8GM. Noriko Tokura 7K3EOP carried the flag for Japan. From Italy came our RTTY operator Elvira Simoncini IV3FSG. Doug Renwick VE5RA represented Canada. The USA contingent consisted of Darryl Hazelgren AF7O, Ann Santos WA1S and myself, K6KM.

THE RESULTS

We made just over forty thousand QSOs. We took advantage of any band openings to make as many QSOs as possible with Europe and the eastern U.S. My last stint was on 40 CW just a few hours before we pulled the plug. There were still hundreds of European stations calling when Bill, VK4FW, took over from me. He worked many but certainly not all of them. Few hams still need VK9W for a new country, but the need will build as new hams get into DXing. I hope lots do. Those who worked us need not worry about acceptance for DXCC as Bill Horner received the necessary documentation for our Mid Willis operation on 1 November. Meanwhile, let's take a good hard look at the "most needed" lists. Stay tuned folks. I had a ball and learned a lot. See ya from somewhere else...hopefully.

1997 Heavy Hitters List

compiled by Dick Dievendorff, K6KR

This past year saw some major heavy hitters step up to the plate as you can see. We deeply appreciate all those that have contributed to the success of the Northern California DX Foundation at any level.

\$30,130.00 W6EEN (\$20K of this is a scholarship fund)

\$7,500.00 J. C. Downing Foundation, directed to the Beacon Project

\$1,500.00 San Diego DX Club

\$1,300.00 Southern California DX Club

\$500 or more

Alamo DX Amigos, N6HVZ, W6JZH and WB6ZUC.

\$300 or more

W6CP and W6OSP.

\$200 or more

K6MD, K6RIM, LA7XB, N8CEO, W8UVZ, WB6UOM (now W9UOM), and WK6E.

\$100 or more

AA6IR, AA6T, AJ6V, DL2VPO, DL8CM, HB9BFG, HB9DHA, HB9DX, I41Ø11Ø (SWL from Italy), JA3APV, KØJUH, KØMP, K2MM, K4CTD, K4QD, K6ANP, K6ITL, K6JYO, K6KR, K6KS, K6MA, K6PU, K6RK, K6SQL, K6TMB, K6UM, K6XT, K7BV, K7EX, K7GQ, K8CFU, K8EJ, K8GG, K8HC, K8MFO, KF6JAO, KI6T, KI6WF, KKØU, LA DX Group, LU7XP, N1CYA, N3BB, N6EK, N6HR, N6QI, N6RO, N9BUL, NK6F, NW6P, ON4BDV, PA3DZN, Redwood Empire DX Club, South Florida DX Association, VK5WO, WØCD, WØYK, W1PCD, W1PNR, W4BAA, W4DN, W4UM, W4WJ, W5ZPA, W6AQ, W6DU, W6EUF, W6JZU, W6OAT, W6WKE, W6ZH, WA2HZR, WA6HXM, and YV5LTR.

1998 Heavy Hitters

as of March 28, 1998

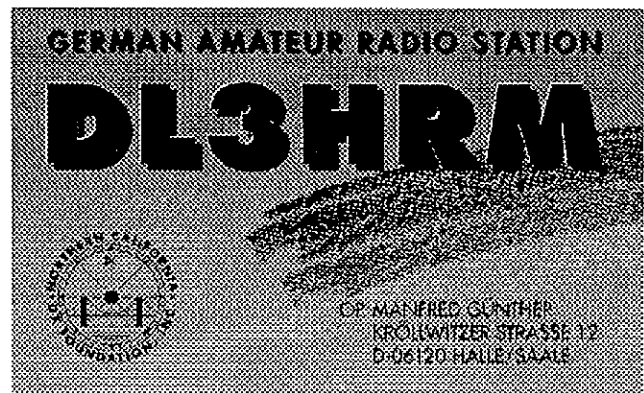
Compiled by Dick Dievendorff K6KR

\$500.00 Southern California DX Club

\$200.00 LA7XB

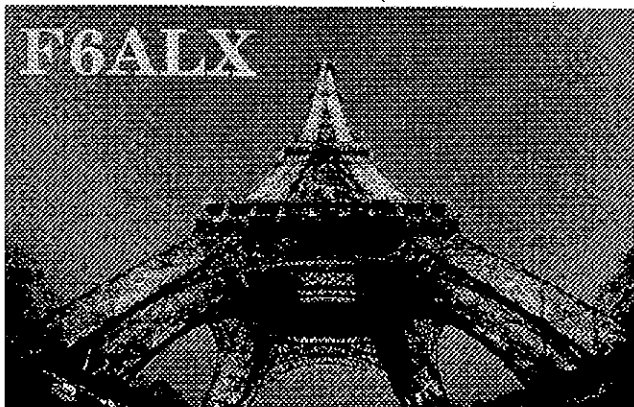
\$100 or more

DL8CM, EA8ZS, K2PLF, K6KR, K6MA, K6TMB, K8DD, K8GG, N1CYA, New Orleans International DX Convention, NK6F, UA6JR, W4AI, W4WJ, W4ZRZ, W6FAH, W6JZH, W6OTC, and WØCD.





EU6DX
 Boris BESHOSKO
 EX: UC2WAZ
 P.O. BOX 4 VITEBSK
 210013 BELARUS



F6ALX

SAITAMA
JM1CMA

CONTINUING QSO WITH		DAY	MONTH	YEAR
UTC	MHz	RST	Z-WAY MODE	

HIROSHI IMAIE
 6-8-24, KAMIFUKUOKA
 KAMIFUKUOKA-CITY,
 SAITAMA 356 JAPAN

A WIMPY QSL



PSE QSL TNX QSL

COMANDORE (SL - II BERINGA) - IOTA AS#39

EZØZ BAIBAK DX GROUP

TEAM OPERATORS: UB5LQM (VIC), UY5XE (GEO), LV9CDM/UAØZ (VLAD)

SPONSORS OF THE EXPEDITION: MOSCOW BOSTON INTERNATIONAL LTD., THE RADIO MAGAZINE (MOSCOW)
 SINCERE THANKS TO AMATEURS WHO HELPED TO MAKE THE EXPEDITION POSSIBLE:
 (MURRI (ROMEO), DARRI (ANDY), HASKARI (LEAID),
 REBEK (LEO), UB5VOM) (MAREK), UB5LVS (SACH), UB1UZA (BOB), UB5VBY and MWRD-UB5VQJ)

TO RADIO	DATE	GMT	Z-WAY	MHz	RST
WCDXP	08.1991		S6B CW		59 638
	08.1991		USB CW		59 639

QSL VIA UY5XE
 P. O. BOX 10, IVOV 200006 UKRAINE 731 *Andriy Isaev*
 Georgia Chikane

WEST VIRGINIA
 CABELL COUNTY

W8QHG

CONTINUING QSO WITH		DAY	MONTH	YEAR	UTC	MHz	RST	Z-WAY
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HAROLD R. HALL
 9 Campbell Lane
 Barboursville, WV
 25604 U.S.A.

PSE QSL TNX QSL WIMPY QSL

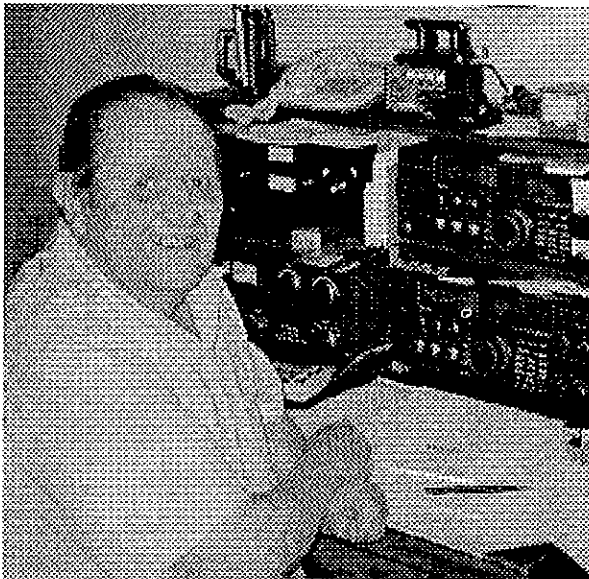
DLØDSA

Eric Edberg, W6DU, NCDXF Past President

by Jack Troster, W6ISQ

It is with deep regret that we report the passing of Eric Edberg, W6DU. Eric became a silent key on January 20, 1998.

NCDXF Past President, Eric Edberg, W6DU, presided during the years we participated in some of the great DXpeditions, Peter I and Heard Island, being two of the most notable. Consummately dedicated to the job, he



adroitly handled mountains of correspondence and kept the board firmly on track. You'd be aware of his thoroughness if you ever contacted Eric requesting information.

Eric was born in Stockholm, Sweden, and when he was 6, his family moved to Brooklyn—New York, that is. Then, about high school age, the family moved to New Jersey, first to Arlington, then to Nutley. At Nutley High Eric met others who were interested in radio via Boy Scouts. He also read *Boys' Life* and one day noticed an ad offering information about how to become a radio amateur. Just send 10 cents to ARRL. Eric did, got the book, and became president of NCDXF as noted above. Well, there were a few intermediate steps in between those events. He practiced code via a wire connecting to his buddy next door. His Dad had purchased parts to build a receiver, but never got around to it, so Eric built it. On April 22, 1933, Eric took the required trip to the FCC in NYC, passed the written exam, and got the call W2FQW. Moving onward, he built a 45 TNT oscillator, a super regenerative receiver

and strung a 133' Hertz out the window. He called CQ on 80 meters. No answer. To make a long story short, he called CQ and every station he heard for three days before he made his first contact with W2FL, two towns away. You can see he started out as this dedicated type who perseveres 'til he accomplished it! So, he was on his way and has been pounding brass ever since. Eric moved to New York City to attend City College, CCNY, which had an outstanding engineering department. He lived on Riverside Drive, high above the Hudson River, and began DXing with a pair of 808s and a NC-81X. His major was electrical engineering and he at the same time, signed up in the Naval Reserve.

In November '40, he was called to active duty by the Navy, and had to drop out of college. After Basic Training, he was sent to the West Coast and assigned to the Radar section aboard the Carrier Yorktown, arriving just in time to ride the carrier back to Norfolk, VA. WW2 was soon to begin. After further training, he served on a Seaplane Tender installing radars in destroyers. During that tour of duty, as his ship was returning in Norfolk Harbor, Eric, naturally, as any ham would, began to read the blinker lights on various ships in the harbor. One of those messages he was idly decoding suddenly got his attention—it was an order transferring him to the Carrier Hornet!

The Hornet cruised through the Canal to the West Coast, stopping at San Francisco. There Eric told his CO that a certain tube in the radar was burning out very quickly and he would need a huge supply of them to keep the radar operating. Needing to keep on schedule, the Hornet embarked without the tubes. But as they steamed toward the Farallon Islands, 25 miles west of the Golden Gate, they were intercepted by a blimp from shore delivering those tubes. Besides Eric's replacement tubes, the Hornet also had aboard Jimmy Doolittle and his B-25 bombers to be ferried to the Western Pacific to launch the Tokyo Raid.

Back to Pearl Harbor, then north to take station for what developed as the Battle of Midway. Hornet survived, but Yorktown went down. Two days after the battle, Eric plugged in the last tube remaining for that pesky radar. Then he was off to the South Pacific to support action in the area of Guadalcanal. However, on October 26, 1942, Hornet was sunk at the Battle of Santa Cruz Island by planes and torpedo bombers. Eric jumped into the water and swam, finally being rescued by a destroyer which took him to Noumea where he spent the next several months, before being transferred to Espiritu Santos in the New Hebrides to Base Maintenance and

Repair. In December '43, he returned to the US, thereby missing this writer, going the other way, by two months. Eric was next sent to a Mine Sweeper Squadron deployed to sweep mines off the coast of Okinawa. They were still there when WW2 ended, and after the usual Snafus, he finally got back to San Francisco. Eric was a Chief, and as everybody knows, the Chiefs run the Navy and seem always to be in position to take advantage of the best deals. For Eric, that great deal turned out to be Shore Patrolling the WAVE barracks in what is now the Marines Memorial in San Francisco. What do ya know? He met a WAVE named Mary, first night on duty, and after their respective discharges, they were married in California. They returned east where Eric began work in the Klystron Tube Applications Group of the Sperry Corp on Long Island NY.

Eric and Mary always had in mind to return to California some day, and in 1950, when a friend offered Eric a job with the Tube Division of Varian in Palo Alto, CA, they accepted with alacrity, moved, bought a house, and settled in to stay. Eric became W6JWD. In the early years, he was not able to put in much time at the key, although he did occasionally get on to work a little DX. He joined the Northern California DX Club in '62 and served in several offices, including President, and received DXCC Honor Roll #1 status. He joined NCDXF, first as an Advisor, later as a member of the Board, then Secretary and finally as President for six years. Although turning over the gavel, he remained on the BOD until his death. Eric and Mary have a daughter, Karin, a grade school art teacher now living in Yuma, AZ with husband, an ex-Marine helicopter pilot, and two sons, Jason and Erik. Eric retired in 1982 and sadly, Mary passed on in 1988. Eric was on the air all the time, mostly on 20 CW, prowling the FOC frequencies. But a great part of the time he is calling CQ. He says he's basically a DXer, but what he really enjoyed is a nice long rag chew with anybody and everybody, near or far. Eric runs an Icom 761 - TL 922A - KT 34A, and a WARC 3 band dipole plus wires for 40 and 80. He was also on the DX spotting net.

With his Norse heritage and his naval experiences, Eric quite naturally, had become an authority on naval history. He said that during the war, all he heard was scuttlebutt about what was going on, so he resolved to find out what really happened. Which he did—about WW2, and on back to antiquity. If you have questions about how many oars rowing a trireme, you could have asked Eric. He was on the air almost any time. We of NCDXF are much indebted to Eric for his exceptional tour of duty as President, his devotion and effectiveness in promoting the goals and usefulness of the Foundation, and just for "being there".

Eric Edberg W6DU Pacific DXpedition.

by Mac, WA4FFW

N4BQW announces the following. Six operators would like to dedicate and conduct this DXpedition in Spirit and Memory of the late Eric Edberg, W6DU. Eric was Board member of the NCDXF. He loved DX and loved to see anyone work a new one no matter where in the world they lived. Eric Passed away January 19th only hours after voting from his hospital bed to help support this operation. It is in that spirit and in his memory that we dedicate this DXpedition. This DXpedition will put forth their best effort to carry out Eric's desire for his fellow DXERS.

The DXpedition has begun with Mark, KA4IST opening up the advance operations from Palmyra as KA4IST/KH5 on February 5 1998. He is serving as a member of the crew of the ship and will operate as much as possible on CW, SSB and RTTY. QSL cards go to AC7DX. Chuck, N4BQW, will join him on February 20.

On February 25 Joe N4DAZ, Harold K4AU, Pat NH6UY, and Mac WA4FFW will join them. Around the clock operations from Palmyra will continue with several stations until Feb 26 at which time they will depart for either Baker -Howland or Kingman Reef. We have permission to operate from Kingman but we are at the mercy of the USFWS and negotiations are continuing for this leg. It may be Chuck and Mark may put Kingman on before the others arrive on the 25th.

The Team will then sail for Howland Island starting operations the U S Fish and Wildlife Service and we will be at the mercy of their work schedule and they state they have 6 days work there.

In the Eric Edberg, W6DU Spirit we will do everything possible to work as many contacts as possible throughout every part of the world. We will work all bands CW, SSB, RTTY, and we will try six meters. Propagation and weather are the only factors that will influence our operation.

We want to thank the NCDXF, MKDXF and SSIDXG for their support and we would like to especially thank Kimo Chun, KH7U, for the Herculean effort that he has provided. This DXpedition would not have become a reality without his co-ordination and co-operation from Honolulu.

Slide Shows and Videos

Clubs borrowing materials are responsible for postage in both directions. The amount can be learned from the postage on the package when it comes to you, and is usually about \$3.00. Please give the name of your club, the day of the month you meet, and more than one choice of programs in case there is great demand for the item you want. Please return all material promptly, so it will be available for others. Request should be mailed to: Ron Steiner, K6KEO, 3154 Dominic Dr., Castro Valley, CA 94546

We have the following slide shows

1. Kingman Reef and Palmyra Is. Expedition of 1974. (148 slides).
2. K5YY Africa of 1978. (62 slides).
3. The Colvins on Easter, Galapagos, San Andreas, etc., 1984. (140 slides).
4. W6REC & ZLIAMO on Kermadec, 1984. (58 slides).
5. AH0C (Japan), CQWW Contest Op, 1983, by WA6VEF & N6BT. (82 slides).
6. 1985, Clipperton Expedition. (191 slides).
7. Ponape Is., by N6HR, travelogue. (81 slides).
8. Pribilof Is. operation of 1982. (48 slides).
9. Midway, by NA6T & KD7P, 1985. (120 slides).
10. Antarctica, Arctowski, Palmer, Peter I, Macquarie stns.. (101 slides).
11. VR6, Pitcairn, Mar. Apr., 1979, by ZLIAMO & ZLIAD. (51 slides).
12. SM0AGD 1982 Pacific DXped, 1982. (150 slides).
13. 9U5JB, Burundi, by ON5NT, 1983. (57 slides).
14. TYA11, Benin, by ON5NT, 1981. (61 slides).
15. VK3DCU/2, Lord Howe Is., by K2UO, 1980. (52 slides).
16. 3A, Monaco, by F6EYS & F6HIX of 1984. (43 slides).
17. 5X5, Uganda, by DJ6SI of 1985. (115 slides).
18. Market Reef, July 1983, PA0GAM/OH0J/OJ0. (100 slides).
19. KX6DS, Marshall Is., 1986. (34 slides).
20. Andorra, by DL1HBT, DL3HAH, DL5BAD, DL4BBO, DL4BAH, 1986. (50 slides).
21. 1986, Clipperton, by W6SZN, W6OAT, AIGV, N7NG, W6RGG. (176 slides).
22. Peter I Is., 3Y by LA1EE & LA2GV, 1987. (127 slides).
23. KP2N, 1986, CQWW DX CW Contest. (55 slides).
24. OF0MA, Market Reef, 1987, SMSAQD, GM3YOR, OH0NA, G4EDG, G4JVG. (28 slides).
25. Abu AI, A15AA, by DJ6SI, 1988. (65 slides).
26. XX9CW, by DK7PE, 1986. (16 slides).
27. 1988, Palmyra, by K9AJ, KP2A, WA2MOE, W0RLX, F6EXV, JA5DQH. (30 mins.).
28. 1988, Kingman Reef, by the above operators. (96 slides, 28 mins.).
29. 1988, 4U, KC4, VK9Y, VK9X, and 9VI, by W7SW. (73 slides).
30. Banaba Is., T33JS, T30 & T27, by KN6/VK9NS. (80 slides, 80 mins.).
31. XF4L, by XE1L, XE1OH, XE1XA, OH2BH, OH2BU, JH4RHF, W6RGG & N7NG. (40 mins.).
32. Publishing The DX Bulletin, by Chod Harris (24 mins.).
33. Rotuma, 1988 slides, by W6SZN. (73 mins.).
34. 4J1FS, MV Is., 1989, with Finn, Soviet & American DXers, by K7JA. (16 mins.).
35. ZS8MI, Marion Is., by Peter Sykora, ZS8PT. (60 mins.).
36. V63-KC6-P29, Micronesia/Melanesia, 1989, by KQIF & K1XM. (20 mins.).
37. YL DXped to Wallis Is., June 1989, by NM7N, N7HAT, N4DDK, KA0MX. (20 mins.).
38. A51JS, Bhutan, by VK9NS, Jim Smith. (60 mins.).
39. HC8X, Galapagos, by KQIF. (34 mins.).
40. Faroe Is., May 1991, by N6HR. (28 mins.).
41. Palmyra Is., KP6AZ, 1983, by W6FAY. (c 1 hour).
42. VK9WW-VK9NLAW, Willis Is., Oct 1992, by Jim Smith, VK9NS. (36 mins.).
43. S2-Bangladesh, 1992, by Jim Smith, VK9NS. (26 mins.).
44. Christmas Is., 1992, VK9XN-VK9XM, by W5KNE. (50 mins.).
45. Jarvis, KH5, 1992, by WA6AUE. (45 mins.).
46. Kingman Reef, 1993, by N9NS, VE5RA, N0AFW, OZ1LFG, PA3DZN, PA0ERA. (90 mins.).
47. Palmyra, 1993, by G0LWX, HB9AH, N6HUY, HDB9AEE, W7KNT, G3KHJ. (32 mins.).
48. Mellish Reef, 1993, by VK4CRN, G3WVG, K5VT, V73C, WA4DAN, VK2BJL, VK2BEX & P29DX. (25 mins.).
49. Dominica, 1993 by N6EK & KB6VVX. (40 mins.).
50. 3D2CU - 3D2CT Conway Reef 1995, by N1ST (56 mins.).

We have the following VHS programs

1. XU1SS (plus BV0YL & BV0JA). (35 mins.).
2. 7J1RL, Expedition of 1976 & 1978, (includes ZK9ZR, Mellish Reef).
3. VK9ZR, Expedition of 1978, (plus Ogasawara, 1978).
4. Frankford Radio Club ARRL phone parody, (plus JH7YFL WW CW).
5. JF1IST/7J1, Expedition to Okino Torishima of 1979. (25 mins.).
6. Australian travelogue, Climbing Big Ben, Heard Island. (55 mins.).
7. Ham Radio In The South Cook Is., by ZK1CA & ZK1CT. (70 mins.).
8. VR6 by ZLIAMO & ZLIAD, copy of above slides by Jim Hurt, W Geo College & W4VWA.
9. Looking Up In Rio Linda, 1986, by W6GO/K6HHD. (45 mins.).
10. Revilla Gigedo, XF4DX, of 1987, Produced by WA8MAZ. (15 mins.).
11. North Texas Contest Club, towers and contesters, by K5TCK. (45 mins.).
12. It Started With A Broken Fence - JH3DPB's Tall Tower Tale. (15 mins.).
13. Pile-Up Busters, by W8TN, AB01 & N0FVG. (10 mins. & usually sent with #12).
14. FGAW2QM/FS, French St. Martin, DXing Senior Style - Another wrinkle to DXing.
15. 1984 Laccadive Is. DXped, VU7WCY, plus 1983 VK0HI from TV. (about 60 mins.).
16. The K6UA contest station story. (25 mins.).
17. HK0TU DXped of 1983, Malpelo. (25 mins. with audio tape translation by KB6MZC).
18. The Ship That Shouldn't Have - VK0JH Heard Is. DXpedition. (90 mins.).
19. The New World Of Amateur Radio. (28 mins.).
20. S0RASD, The Western Sahara Story, 1987, by the Lynx Group. (37 mins.).
21. Auckland Is., 1988, by ZLIAMO, ZL1BQD, N7NG. (60 mins.).
22. Dr. Owen Garriot's first talk to hams about the Space Shuttle.
23. Russian Ham Radio Tour by WA6WXD, Oct. 1986. (45 mins.).
24. 3Y DXpedition, 1987, copy of slides by Jim Hurt, West GA College & W4VWA. (40 mins.).

25. Peter I, 1987, video from JA7ARW.
26. 1979 Spratly Is. DXpedition, by K4SMX, K1MM, VK2BJL, N2OO, N4WWW & KP2A.
27. 1988 Malj Vysotskij Is., OH2BH, UZ3AU, OH5NZ, UR2AR, OH2RF, UW3AX. (23 mins.).
28. 3W8DX & 3W8CW by HA5WA, HA5PP, HA5BBC, Nov. 1988, Produced by W4BRE.
29. Aruba, P40V, CQ WW Test 1988. (12 Mins.).
30. A Message From Barry Goldwater, K7UGA. (12 mins.).
31. Navassa of 1988, by N2EDF, K2SG, KE4VU, KD2NT, N4GNR, KT2Q & W3GH. (38 mins.).
32. Rhodes, SV5, by N2OO & SV0AA, April 1989. (40 mins.).
33. N0IZ/KH1, Howland Is., 1988, by N01Z, 7J3AAB, TR8JLD, VK9NS & VK9NL. (20 mins.).
34. Boeing ARC at the Electronic Convention and Great Wall Of China. (audio tape for VHS, 30 mins.).
35. K C Club DXpedition to Tonganoxie Is., a spoof. (30 mins.).
36. Tuvalu, 1989, by K6EDV & AL1AMO. (27 mins.).
37. Visalia Convention of 1990, recorded by W6NLG. (2 hours).
38. Rotuma, 1988, copy of the slide show by Jim Hurt, WGC & Henry Owen W4VWA. (73 mins.).
39. XW8CW & XW8DX, 1989, by HA5PP & HA5WA, Produced by W4BRE. (27 mins.).
40. XU8CW & XU8DX, 1990, by HA5PP & HA5WE, Produced by W4BRE. (25 mins.).
41. All China Amateur Radio Direction Finding Competition, plus BY1PK. (32 mins.).
42. ZS8MI, by ZS8PT, partial copy of the slide show. (40 mins.).
43. Jim Smith, A51JS, visits the Bay Area, videotaped by WA6BXY. (80 mins.).
44. R9ZFNN7A, NN7D & W7YS, August 1989, Lake Teletskoye, Siberia. (30 mins.).
45. VU7, Laccadive Is., 1984. (65 mins.).
46. VU4, Andaman Is., 1987, by Combator Radio Club. (30 mins.).
47. 3Y5X Expedition, 1989, Video by JF1IST. (In Japanese, good photography, 35 mins.).
48. VR6TC speaks to the Turlock ARC, 1/8/91, VHS by K6MMN. (125 mins.).
49. 1990 World Radiosport Team Championships in Seattle. (25 mins.).
50. ICOM's More Than Radios, The Legacy We Leave To The Young. (25 mins.).
51. T33R-T33T. Banaba, Nov. 1990, SM7PKK, TF3CW & OH1RY. (22 mins.).
52. This Is ATV, by Western Washington AT Society & Seeing Is Believing, by AEA. (47 mins.).
53. New Horizon: South Pacific Adventure, by AA6LF. (55 mins.).
54. YB3ASQ: Indonesian Stations and Sightseeing, by W7TSQ. (25 mins.).
55. XF4L of 1989, by JH4RHF, XE1OH, XE1XA, OH2BH, W6RGG, XE1L, OH2BU & N7NG. (25 mins.).
56. ET2A, by W4IBB, Jack Reeves, May 1991. (12 mins.).
57. IS0XV, by UW3R, et al, July 1990. (35 mins. or a 2 hour version, your choice).
58. Jarvis 1990, from K3NA & KN3T. (35 mins.).
59. 3C0CW, Annobon, 1991, by the Garroba Club of Spain. (20 mins.).
60. Araucaria DX Group, Brazil, Contest Station and Operators. (30 mins.).
61. 9L1US, by Dave Heil, K8MN, ed. by Jim Hurt, West GA. College & W4VWA. (45 mins.).
62. Dave Heil, K8MN visits Finland, edited by Jim Hurt & Henry Owen, W4VWA. (35 mins.).
63. Penguin Is., 1990, from a slide show by N7NG, Wayne Mills, produced by MoBre. (15 mins.).
64. PJ9W, 1990, Spirit Of Victory, Radio Team Finland, produced by WA7LNW. (48 mins.).
65. Empire Of The Air: The Men Who Made Radio, recorded by K16YB. (110 mins.).
66. Contest Night Live, by the Kansas City DX Club. (30 mins.).
67. DXing Kansas City Style, by the Kansas City DX Club. (30 mins.).
68. VP8ANT/G3CWI, Adelaide Is., Antarctica. (45 mins.).
69. H44, May 1991, by G3WVG, G3IXT & G3SXW. (12 mins.).
70. VP2EOH, Anguilla Is., by Northern Ohio DXA, 1992. 29 mins.).
71. T32T, Christmas Is., WPX SSB Test, Mar. 1990, narrated by VP2ML & video by JH1LR.
72. VP8SSI, South Sandwich, 1992. (28 mins.).
73. More About Radios, Zman Productions, (How To Get Started In Amateur Radio). (28 mins.).
74. Navassa Is., Jan. 1992, by WA4DAN, AA4VK, N0TO, KW2P & AA4NC. (25 mins.).
75. Getting Started In DXing, by CQ Communications, Inc.. (52 mins.).
76. The Radio Ham, starring Tony Hancock, English comedy. (26 mins.).
77. Project Irma: The DX Truth-O-Meter, Northern Cal. DX Convention, 1993. (25 mins.).
78. ZL8DX, Auckland Is., by ZL1OK, ZL1AVC, ZL2TPY, JH4RHF & JR4DUW. (28 mins.).
79. CY0DX, Aug. 1989, Sable Island by the Breton DX Group. (18 mins.).
80. V63-KC6-P29, by KQIF & K1XM, slide copy by Jim Hurt & Harry Owen, W4VWA. (25 mins.).
81. Desecheo, KP5, 1992/3, with KW2P, N0TG, WA4DAN, W0RJU & AA4VK. (28 mins.).
82. E3SX, Eritrea, May 31 - June 10, 1993, by LA6VM, LA1EE, JF1IST, LA9DL & LA7XK. (17 mins.).
83. AH1A, Howland Is., 1993, by ON6TT, W0RLX, K9AJ, W0CP, K0EU, W9IXX, K4UEE, F6EXV & G4LJF. (45 mins.).
84. 9G1AA, Ghana, by PA3AWW, PA3FUE, PA3FUE, PA3ERA, PA3DEW & PA0TUK. (55 mins.).
85. 9M0S, Spratly Islands, 1993, N7NG, WA6AUE, OH6DO, JA5DQH, OH1NYP, 9VIYW, 9M2FK, OH2MAK and OH2BH. (30 mins.).
86. Journey to Peter I, 1994. (30 mins.).
87. ZD9SXW, Tristan da Cunha, 1994, by G3SXW. (18 mins.).
88. Last Voice From Kuwait, 9K2DZ. (25 mins.).
89. Malj Vysotskij Island, 4J1FM / 4J1FW, October 1982, by AH0W ex 4J1FM. (43 mins.).
90. 3C0GD, Annobon, 1989 by LA8PV. (20 mins.).
91. IA0KM & HV4NAC. (30 mins.).
92. H44IO, South Pacific DX-pedition, by DL7IO ex DL7VTM. (46 mins.).
93. The Congo, TN4U & TN2M, 1995, by DL7IO ex DL7VTM (40 mins.).
94. 3V8BB, 1994 (17 mins.).
95. Mission to Jordan, The Joint Israeli/Jordanian DX-pedition, JY74Z, in July of 1995. (43 mins.).
96. The Kermadecs DX Adventure, ZL8RI - DX AT ITS BEST (30 mins.).
97. World Radiosport Team Championship, 1998 (23 mins.).
98. VK0IR Heard Island 1997, by Peter Casier ON6TT (51 mins.).



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