
VHF/UHF – An Expanding World

David Smith VK3HZ

Weak Signal

David Smith - VK3HZ

A short tropo opening from the east coast to ZL was probably the highlight of the month. During the morning Meteor Scatter session, Bob ZL3TY observed that the Ch 5A TV vision carrier from Newcastle was up to S2. By 2230Z, it had reached S3. Steve ZL1TPH/P portable at Moirs Hill in the north was also hearing the TV at S2. At 2240, Bob worked Steve VK2ZT first on CW (519) and then SSB (5x2). Colin VK2BCC also worked Bob on SSB (5x2). Norm VK3DUT then appeared and worked Bob at 5x2. By 2330Z, signals had risen and Colin had a CW contact with Bob (559). Steve ZL1TPH/P was reporting the Newcastle TV as having rolling QSB from S1 to S5. Finally, at 0300Z with the TV having risen to S9, Steve ZL1TPH/P worked Steve VK2ZT (5x1) and Colin VK2BCC (5x1). By 0315Z, signals had dropped off and the opening disappeared.

It will be a big loss to those monitoring the ZL-VK path when Newcastle Ch 5A shuts down in November. With an EIRP of 70 kW, it's equivalent to someone running our legal limit of 120 W into a 27 dBi antenna. That makes it an ideal early-warning indicator for propagation on 2 m. We may have to look for alternatives for monitoring the path, like a digital-mode beacon running into a directional antenna.

2.4 GHZ QSO Party

Another microwave activity day was organised recently in VK3. Rob VK3MQ reports:

"The third annual "VK3 2.4 GHz QSO Party" was held on Easter Monday, April 9, 2012. The success or failure of any event like this rests with the enthusiasm and commitment of the participants and this year severely tested both elements.

Despite good weather leading up to the day (and following for that matter) the heavens opened up, releasing hail and rain in good measure. My own experience started on John's Hill, QF22rc, at 8.00 am setting up the two metre antenna. Having just completed this task the rain front, that had been approaching from the south, hit and a scramble for the car was called for. A brief lull in the storm allowed the 2.4GHz antenna to be installed before the rain resumed.

At this point Gavin VK3HY arrived and we discussed the advisability of continuing the setup, as we both had 10GHz stations to deploy. Some activity on the 2 metre calling frequency did encourage us to at least attempt 2.4 GHz and we were soon in contact with VK3PY, VK3QM and VK3AKK.

I noted home stations in the suburbs, that were otherwise dry, battling Wi-Fi interference but nevertheless completing QSO's over difficult terrain.

Special congratulations must go to Andy VK3ES for his contact with Ted VK1BL, establishing a new VK1 2.4 GHz record of 424.9 km.

Despite all that nature could throw at us I think a good time was had by all and the continuance of the event is assured."

New Records

Several new VHF/UHF records have been added to the list:

03/01/2012 - VK5 2 metre record - VK5BC to ZL2OK - 3493.9 km

13/02/2012 - 24 GHz Digital Modes record - VK3HZ to VK7MO - 255.1 km

23/02/2012 - VK7 24 GHz record - VK7MO to VK3QM/7 and VK3AKK/7 - 167.4 km

25/02/2012 - VK7 2.4 GHz and 5.7 GHz records - VK3QM/7 and VK3AKK/7 to VK3NX and VK3PY - 469.1 km

09/04/2012 - VK1 2.4 GHz record - VK1BL/1 to VK3ES - 424.9 km

Please send any Weak Signal reports to David VK3HZ.

Digital DX Modes

Rex Moncur – VK7MO

VK7JG Qualifies for Worked All Call Areas on 2 Metres

The VHF Worked All Call Areas award requires 3 contacts each with VK2, 3, 4, 5 and 6 and one each with VK0, 1, 7 and 8. Joe VK7JG had achieved the more difficult VK0 by working VK0MT on Macquarie Island, VK7MO portable VK8 and VK9LS at Lord Howe Island (operator VK7MO) all on meteor scatter but still required one more VK6 for the award. When Michael VK6WS became operational on EME, Joe saw this as his opportunity. Joe has only a single 18-element yagi and Michael had two 9-element yagis. While there was evidence of signals both ways, a QSO could not be completed. Michael then put up a set of 4 seven-element LFA antennas and while decodes were achieved over many attempts, a QSO still eluded them. Michael then moved to 4 nine-element yagis and by choosing a time when the degradation was low, a QSO was finally achieved to complete Joe's qualification for the award. Congratulations Joe and Michael.

King Island 10 and 24 GHz DXpedition

From 12 to 14 April Rex VK7MO and Eric VK7NFI visited King Island to activate three rare grid squares QF10, QF20 and QE19 which are only accessible from the Island. Eric was the pilot and provided his light two-seater aircraft to access the Island. There is only a small amount of room behind the seats so the 10 GHz system had to be specifically designed to fit the aircraft and used a small 47 cm plastic offset dish. When the idea of taking 24 GHz came up, and more room was required, it was necessary to push the seats hard forward such that it became a contortion exercise to fit into the aircraft as shown in Fig 1.



Fig 1: Rex VK7MO after squeezing into aircraft with equipment behind the seats

Paths of Propagation

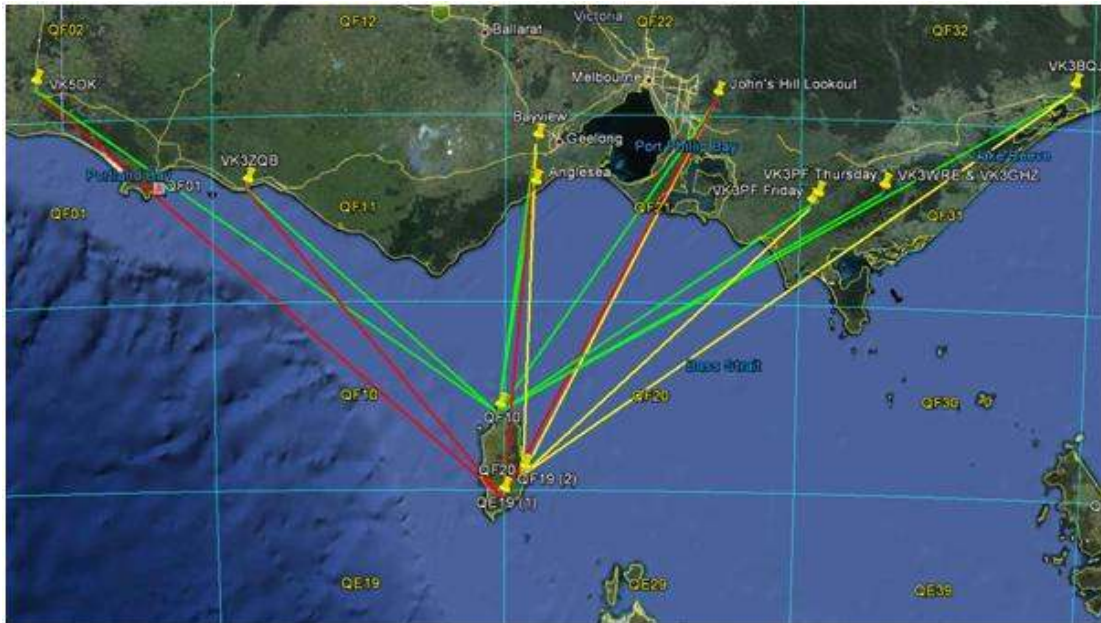


Fig 2: Paths from King Island to Stations worked

Fig 2 shows the paths of propagation to the stations. The list of stations worked from each grid square was as follows: (* for stations at John's Hill lookout and # for stations at either Anglesea or Bayview).

QF10 10 GHz: VK3HZ*, VK3PY#, VK3AKK#, VK5DK, VK3ZQB, VK3HY*, VK3MQ*, VK3PF, VK3NX#, VK3BQJ, VK3TPR*, VK3WRE, VK3QM# and VK3ALB#. Best distance VK3BQJ at 393 km -13/-15 dB JT65c.

QE19 10 GHz: VK3HZ*, VK3MQ*, VK3TPR*, VK3HY*, VK3PY#, VK3AKK#, VK3QM#, VK3NX#, VK3ZQB and VK5DK. Best distance VK5DK at 372 km -12/-20 JT65c.

QF20 10 GHz: VK3HZ*, VK3NX#, VK3PY#, VK3AKK#, VK3QM#, VK3MQ*,

VK3HY *, VK3PF and VK3BQJ. Best distance VK3BQJ 400 km -15/-17 dB JT65c.

Attempts were made on 24 GHz on 12th and 13th of April from QF10 and QF20 but nothing was heard or seen. On 14 April we returned to QF10 and started on 10 GHz to pick up stations not worked earlier. The Geelong group had moved a little closer to Anglesea (132 km) and were giving reports of 5/9+60 dB which augured well for 24 GHz. As soon as VK7MO started TXing on 24 GHz, the Geelong group received the signal and reports were exchanged at 5/8 and 5/9 on VK3NX's system and 5/2 and 5/9 on VK3QM's system running 60 mW. The Geelong group then moved back to Bayview to extend the distance while we focused on VK3HZ at John's Hill lookout who was worked at -20/-18 dB on JT65c. At Bayview VK3NX was worked at 5/4 and 5/7 over 161 km. Stations worked on 24 GHz were:

QF10 24 GHz: VK3NX#, VK3QM#, VK3AKK#, VK3ALB# and VK3HZ*. Best distance VK3HZ 226 km

Overall the results were beyond expectations and Rex was ecstatic with the 24 GHz results as may be seen in the photo at Fig 3.



Fig 3: An ecstatic Rex VK7MO after the 24 GHz QSOs with 24 GHz dish and system

King Island 10 and 24 GHz Dxpediton – The Other Side

Peter VK3PF reports on his efforts on 12/4 from QF31 in working Rex in QF10:

That morning I finished off the PC/FT-817 sound card interface and thought that I had everything OK ... Well, not quite it turned out.

I went across to the Mardan area - QF31bn, on the side of the hill "Mardan" at about 260 m ASL. The site had a reasonably clear take off in the correct direction, with convenient visible landmarks for aiming.

From about 0530Z, I was successfully hearing Rex at about -21/-22. However, Rex was not hearing me. We gave up after a bit to allow Rex to work others.

At about 0630Z, Rex gave me a 'phone call and we tried again. This time I did another gentle sweep with the dish and found that I needed to drop elevation to get a peak - Rex was now -12! Much better. But I had DF issues, plus Rex was not hearing me. We agreed to try later as Charlie was now ready. I had a quick check of the

system and found that the audio level was too low via the interface. After adjusting the level, I called Rex via the mobile and he was hearing me. So we resumed attempting a contact. For reasons unknown (apart from my operator brain fade and more than 2 years since I last operated WSJT) I could not get DF into the reliable decode region.

I gave up and called Rex on USB. Shortly after we completed a USB contact - Rex was 55 and I received 52.

Thanks again Rex - a new square on 10 GHz on SSB.

Lesson for me - more preparation, including lots more time using WSJT again!

Gear was a homebrew interface to the FT-817 via the Data port, to a MaCom Whitebox with VK3XDK LO locked to a Thunderbolt. The 817 is not locked. Antenna - a typical Austar PayTV dish fed with about 1.5 m of FSJ4-50.

Charlie VK3NX reports on his contacts on 10 GHz and 24 GHz:

This morning (Sat 14th April) VK3ALB (Lou), VK3NW (Ken), VK3QM (David) and myself went to the Anglesea Lookout to work Rex.

Rex was worked on 10 GHz with excellent signals and then upon QSY'ng to 24 GHz we proceeded to work Rex on 24 GHz. Signals were "enormous" on SSB and 59++ reports exchanged both ways with no QSB. We even had an FM contact with "full quietening"! This was following our disappointment a few days earlier on 24 GHz

The distance to Rex was ~ 132km and this was purely over water and "over the horizon". We were ~53m above Sea level with an estimated optical horizon of ~ 30km

Following this success (loudest signals I've worked so far on 24GHz) we decided to try an obstructed path from our field day site. A quick drive and 30 min later we were working Rex with 57/54 reports exchanged. QSB was strong and soon after signals started to "disappear". Our field day site is ~ 29 km further to Rex than the initial contacts with the extra part of the path over "Terra-Firma". Distance is 160.6 km (~6.8km shy of the VK7 record set earlier this year). At this time a very visible duct layer was evident on the horizon and I assume this was part of the reason for the very large signal attenuation.

All in all, a very interesting exercise in propagation along a "non line of site path". I am looking forward to trying over much greater line of sight paths...

My homebrew 24 GHz equipment :

System 1... 600mW 1 ft dish Kuhne transverter

System 2.. 1 W 2 ft dish Thales unit with 1296 – 144 double down conversion

Thanks Rex for the "dx-pedition" to King Island and the great contacts over the last few days on 10GHz and 24GHz.

David VK3HZ reports on the efforts from John's Hill over the three days:

On Thursday, Friday and Saturday, a group of keen Microwavers gathered at Johns Hill Reserve carpark on the east side of the Dandenongs to work Rex VK7MO as he travelled around King Island.

Present with gear primed for 10 GHz were:

- Gavin VK3HY - Mitec transverter and 1W Kuhne PA to 650mm offset-fed dish
- Rob VK3MQ - VK3XDK transverter and 1W Qualcomm PA (low drive producing 0.4W) to 650mm offset-fed dish

- Peter VK3TPR - Mitec transverter, GPS-locked and 3W DEMI PA to 600mm prime-focus dish

- David VK3HZ - Qualcomm transverter, GPS-locked and 8W DEMI PA to 600mm prime-focus dish

For 24 GHz, I also had a Thales transverter (~1.5W), GPS-locked to 380mm prime-focus dish.



Fig 4: (L-R) VK3TPR (2 dishes), VK3HY, VK3HZ dish and VK3MQ

I have operated from Johns Hill on many occasions as it has a clear takeoff to Tasmania. For heading reference, a shed in the distance falls conveniently due south of my favourite location in the southeastern corner of the carpark. However, on Thursday morning, I happened to look at a photo of the outlook in the direction of King Island and saw two large gum trees rising well above the horizon. Fortunately, there is a gap between the trees, so a move of about 20 metres to the west was needed, and a re-survey of the "reference shed" showed it was now about 1 degree east of south - important when the beamwidth of the antenna on 24 GHz is less than that.

When I arrived at the carpark (slightly late), Gavin and Rob were already there and set up in the southwestern corner under the shade of some large trees - and in line with the gum trees, blocking their path to King Island. When I suggested a possible move, the reaction was "it won't make THAT much difference, will it?" and they thought they'd have a go from the comfort of the shade.

Finally Rex's JT65 signal appeared and we exchanged -12/-8 reports. Gavin was seeing about -23, while Rob wasn't seeing much at all. So, a hasty relocation of their systems was carried out while Rex turned away to work the queue of stations lined

up across the state (and VK5DK). Finally, Gavin got to try again and signals were now 10 dB stronger, out from behind the trees. Rob was still having challenges until we bodily leaned his offset dish forwards about 15 degrees, whereupon Rex's signal rose substantially. Rex re-aligned his system a little, and we now had SSB contacts up to 5x7.

On Friday, Peter VK3TPR joined us for the morning (work getting in the way of any afternoon operation). We re-aligned the elevation on both Gavin and Rob's offset dishes on the VK3RGI beacon coming through trees on the eastern side. Rex, now in a more difficult spot on the southwestern side of the island in QE19, was worked easily on JT65 with reports of -6 each way. We also all worked him on SSB with reports up to 5x8.

Peter then departed for work, while Gavin, Rob and I - waiting for Rex to relocate across the island - exchanged tall tales and true of ever more difficult QSO's we had (possibly) had - and the only beverages consumed were coffee and a strange sugar-free liquid that Gavin had brought.

Finally Rex was available again, this time in QF20, and we exchanged reference levels of -5/-1 on JT65 and 5x9+ SSB reports - the proverbial rock-crushing signals.

Once Rex had finished with the dogpile on 10 GHz, he assembled his 24 GHz system and attempted to work the Geelong crowd, without success. He also turned it our way, but there was absolutely no trace of a signal either way on JT65. We confirmed that 10 GHz was still as strong, but nothing on 24 GHz ... So, we agreed to re-convene on Saturday morning and have another go at 24 GHz, this time from the closest point on King Island in QF10.

Saturday, Peter was again present and had set up as he hadn't worked Rex in QF10. Gavin and Rob were there but only observing. Rex's signal was down a little on the previous evening, but still 5x7. Peter easily worked Rex who also worked a number of others.

Then Rex assembled the 24 GHz system and easily worked the Geelong group who were now located somewhat closer to him at Angelsea. He turned his dish our way, and immediately there was an audible tone on 24,048.325 MHz. We quickly switched to JT65c and had a contact exchanging -18/-20 reports. Then we switched back to tones and attempted to improve our signals by tweaking our dish alignment (Az and El). I found that I was already pointing correctly which I was pleased to see - confirming my calculations and "reference shed" position. Rex also was unable to improve on his initial pointing. Signals were fading, so we tried a CW contact using the WSJT CW mode (neither of us had a key, although Gavin did offer the use of his ...). We copied Rex's 419 report, but he was unable to copy ours so we gave it away as signals were dying off - a pity as at 226 km, it would have been a new VK7 record, and only 4km off the National record.

So, all in all, a very successful few days, and I was very pleased to get through on 24 GHz. I'm rapidly concluding that 24 GHz is a completely different beast to 10 GHz. The level of moisture in the air along the path makes a dramatic difference to the signal levels.

Thanks to Rex VK7MO for all his efforts.

Initial 10 GHz EME tests with small 64 cm portable station.

Alan VK3XPD has been using his 50 watt 3 metre dish 10 GHz station to test if it is possible to work Rex VK7MO on EME on his 8 watt 64 cm dish portable 10 GHz station using JT65c. The technique used was to automatically tune Rex's IC-910-H

IF transceiver to compensate for Doppler on both TX and RX so Alan did not have to tune for Doppler (The program for automatic Doppler correction was written by Glen VK1XX for the IC-910H and picks up the Doppler value from WSJT – it can be made available to others who may wish to use it with an IC-910-H by contacting Rex VK7MO at rmoncur@bigpond.net.au). Also both stations were GPS locked or intended to be. The tests were also run at a time of low Libration spreading as predicted with GM4JJJ's Moonsked program. The following are examples of the signals received by Rex (there was a problem with Alan's GPS locking which explains the DF of around 720 Hz and some drift in the tests as below). The Bold figure in the last column show the predicted Libration Spreading. It is noted that the reported signal level on WSJT increased from about -22 dB when spreading was low at around 4 Hz to around -26 dB when spreading increased to around 40 Hz.

070300	4	-22	2.2	725	5	*	VK7MO	VK3XPD	QF22	0	10	4
070500	2	-22	2.3	723	6	*	VK7MO	VK3XPD	QF22	0	10	4
070700	2	-22	2.3	723	5	*	VK7MO	VK3XPD	QF22	0	10	5
070900	1	-25	2.4	725	6	*	VK7MO	VK3XPD	QF22	0	10	6
071100	3	-21	2.3	731	6	*	VK7MO	VK3XPD	QF22	0	10	7
071300	4	-24	2.3	731	7	*	VK7MO	VK3XPD	QF22	0	10	8
071500	6	-23	2.3	734	7	*	VK7MO	VK3XPD	QF22	1	10	10
071700	2	-24	2.3	736	8	*	VK7MO	VK3XPD	QF22	0	10	12
071900	6	-22	2.3	739	7	*	VK7MO	VK3XPD	QF22	0	10	14
072100	2	-25	2.3	739	7	*	VK7MO	VK3XPD	QF22	0	10	15
072300	4	-22	2.3	742	9	*	VK7MO	VK3XPD	QF22	0	10	16
072500	5	-23	2.2	744	9	*	VK7MO	VK3XPD	QF22	0	10	19
072700	4	-23	2.3	752	8	*	VK7MO	VK3XPD	QF22	0	10	21
072900	4	-24	2.3	752	11	*	VK7MO	VK3XPD	QF22	0	10	23
073100	3	-24	2.2	752	9	*	VK7MO	VK3XPD	QF22	0	10	24
073300	3	-25	2.3	752	12	*	VK7MO	VK3XPD	QF22	0	10	26
073500	3	-24	2.3	752	11	*	VK7MO	VK3XPD	QF22	0	10	28
073700	2	-25	2.3	747	7	*	VK7MO	VK3XPD	QF22	0	10	29
073900	3	-26	2.3	750	15	*	VK7MO	VK3XPD	QF22	0	10	31
074100	4	-24	2.3	755	12	*	VK7MO	VK3XPD	QF22	0	10	33
074300	3	-24	2.3	752	12	*	VK7MO	VK3XPD	QF22	0	10	35
074500	3	-25	2.3	750	9	*	VK7MO	VK3XPD	QF22	0	10	36
074700	4	-25	2.3	747	11	*	VK7MO	VK3XPD	QF22	0	10	38
074900	2	-26	2.3	739	10	*	VK7MO	VK3XPD	QF22	0	10	40

While Alan could see Rex's signal he did not achieve a decode which is not surprising given the power difference and the Doppler spreading. He may also not have sorted things out to find Rex's signal until later in the tests when the libration spreading was wider. It is intended to run the tests again at a time of low spreading in the hope of achieving a two way QSO.

Please send any Digital DX Modes reports to Rex VK7MO

The Magic Band – 6 m DX

Brian Cleland – VK5BC

Although there were almost daily openings from VK to the northern countries of Japan, Korea, China, April was disappointing with very few openings to the Pacific, Northern or Central America areas and nothing towards Europe. There was very little activity on the Sun and at one stage during the month the Solar Flux dropped to below 100 but a little flare activity towards the end of April lifted the Solar Flux and caused some activity particularly from the northern areas of VK. VK6 seemed to be the lucky state with regularly openings to the north throughout the month from as far south as Perth which have in the main missed VK2, 3, 5 and 7.

As mentioned above VK6 experienced some good openings to the north and Andy VK6OX reports the following:

Well ... after an excellent 5 week holiday in ZL, I arrived back late March expecting that any activity on 6 m would have subsided. As things turned out, that's definitely not the case! What follows is a précis of 6 m activities as experienced from the Perth area.

On 4th April the 49.75 MHz videos from Russia/China came in weakly, around 0430Z. At 0628Z I worked Kwon DS2CYI and later on worked Hide JR6EXN at 0808Z. Next day (5th) the band opened up nicely to JA, with JA1, 2, 3, 4, 7 and 9 areas being worked from about 0520Z to 0735Z. Most signals into Perth were s9 or over.

The band opened briefly again on the 6th, and several of us (VK6KXW, JJ, RX, RO and I) managed to work Gennady UR7FM/MM on CW. He gave his locator as OJ34, which placed him (and the bulk carrier he was on!) in the South China Sea between West Malaysia and Borneo, heading towards Singapore.

The rest of the Easter period saw little activity from this QTH, but on the 10th we had another somewhat patchy opening to JA, with 3 stations worked from here. The 11th produced yet another interesting opening with somewhat shorter F2 contacts being made along with JA and HL. Several Perth "sixers" worked (variously) Willem DU7/PA0HIP, John 9M6XRO, Tan 9W6RT and several Jas and HL/DS stations from South Korea. Of particular note was the successful QSO's of Peter VK6KXW and John VK6JJ with the Spratly Is. DX Expedition 9M0L.

Not to be outdone, next day VK6RO, RZ, DU and OX (maybe others?) also worked 9M0L! Dave VK6AOM in Jurien Bay (about 250kms North of Perth) and Rick VK6XLR Geraldton were also worked from this QTH, courtesy of some tropo conditions prevailing at the time (around 0930Z).

For the next few days it was quiet on the band, but on the 16th we had propagation to JA and HL (the latter stations of which seem to be more active of late).

Again there were 3 days of little or no happenings, but on the 20th I worked Jinho HL1LUA and 9M0L (again) both on CW around 0500Z. On the 22nd, the band opened to JA and HL yet again, with many stations worked over a 3 hour period from roughly 0530Z to 0830Z. The 23rd saw a repeat of the previous day, but yours truly decided to play SWL! I did work one JA on CW though!!

The 24th promised some hope with the SFI around 142, K-index 23 (!) and A-index 5 (yuk!) but unfortunately no stations were worked, just weak TV video carriers from up North and even weaker JA beacons! If I've missed any VK6 ops in Perth area who were involved in the foregoing openings, I apologise.

From a little further north Rex VK6ARW in Exmouth reports that he has not been too active of late with other tasks about the place, but on 22nd April he responded to call from a JA station at 0700Z and gave it away at 0819Z after logging 92 JA's. Prior to that pile-up Rex had worked 57 others on 6 m between January and April which included China, Hong Kong, South Korea, Philippines, JA's, East Malaysia, and a MM somewhere in the south china sea with a UR5FA/MM call.

Rex is planning to build a 6el 6m LFA which he hopes will attract some "Rare" DX. Good luck Rex.

Meanwhile from Darwin, Gary VK8AW log for April includes the following:

01/04/12	0300Z	USB	KH6RH	GARTH	HAWAII	5/2
01/04/12	0310Z	USB	KH7JJ	NED	HAWAII	5/3
02/04/12	0907Z	CW	A61Q		DUBAI	5/5

10/04/12	1300Z	CW	9M0L		SPRATLY ISL	5/5
12/04/12	1235Z	CW	A45XR	CHRIS	OMAN	5/5
12/04/12	1250Z	USB	9W6RT	RODGER	E MALAYSIA	5/9
13/04/12	0935Z	USB	A92IO	DAVE	BAHRAIN	5/9
21/04/12	2330Z	CW	FK8CP	REMI	CALEDONIA	5/9
21/04/12	2333Z	USB	FK8CP	REMI	CALEDONIA	5/9
21/04/12	2335Z	USB	TI7/N5BEK	PHILIP	COSTARICA	5/1
23/04/12	1015Z	CW	JI1CUL	PAPA	JAPAN	5/5
25/04/12	0730Z	CW	KH7Y	FRED	HAWAII	5/7
27/04/12	0320Z	CW	KH6HI		HAWAII	5/5
27/04/12	0756Z	CW	A92IO	DAVE	BAHRAIN	5/9
28/04/12	0900Z	USB	YB1MH		INDONESIA	5/9
28/04/12	0915Z	USB	YB0AN	HATKI	INDONESIA	5/9
28/04/12	1140Z	CW	JE1BJT		JAPAN	5/5
28/04/12	1148Z	CW	A92IO	DAVE	BAHRAIN	5/9
28/04/12	1205Z	CW	BD8ASG		CHINA	5/9
28/04/12	1220Z	CW	HL2CFY	KIM	KOREA	5/9

The morning of the 25th April Andrew VK3OER heard Bob ZL1RS and shortly afterwards at 0056 UTC worked N3LL 5/2 SSB in Florida over a distance of 15,445 km. During the month Andrew also work into Hawaii on the 14th & 27th completing contacts with Art KH6SX & Fred KH7Y. Same morning Norm VK3DUT was hearing the ZL2WHO beacon and heard N3LL and the TI2NA/b 419. Norm then nearly completed with XE1JP but unfortunately he missed a letter in Norm's call before fading.

Frank VK7DX also worked KH7Y 5/1 SSB on the morning of the 25th and reports hearing BA4SI, 3W2BB, AH0BT, T88WJ and many JA's during month.

A good opening to the USA from the Hervey Bay area on the morning of the 26th with Wayne VK4WTN working several stations including N6KK, K6QXY and K7JA. During this opening the band opened between VK4 & VK5 and with the aid of the E's extension Brian VK5BC heard K6QXY calling CQ on CW. Norm VK3DUT also heard the K6FV/b

Openings to JA areas occurred most days to northern areas of VK but did extend south to VK3, 3 & 5 on the 14th when BA4SI was worked with very strong signals into VK3 & 5. JA's were also worked in the southern states on 27th April.

Please send any 6 m information to Brian VK5BC