

20 July 2003 Issue # 56

Greetings Everyone,

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## NZART Business Manager Debby ZL2TDM Says:

**All Branch Exam Supervisors -** Please pass this on to all the branch Exam Supervisors. Once an exam has been successfully completed and the candidate has been given the Official form, please forward the candidate record form to me. I need this to verify that the candidate has passed, if the MED should query it.

Please also include the ERN number on this record form in the "NZART Receipt number area". This is my record of that official form having been issued. If in doubt please contact me.

Once the candidate has passed and you have issued the ERN form, please give them a copy of the Radio Spectrum Radio 1 application form. This is then sent by the candidate to one of the offices listed, in order for them to receive their call sign. Under no circumstances is this or the ERN form sent to me.

Lastly re exams – there is no charge for the morse exam and it is discretionary in each branch, should you wish to recharge for a failed result and the candidate resits. Please remember we are here to encourage not discourage.

**Call Book 2004 on CD Rom** - As I said in the last issue of HQ Info-line, Call Book on CD Rom will be available in 2004. This will be offered in **addition** to the hard copy, not **instead** of. It will not be available for purchase nor will it be offered to non-members of NZART.

All current financial members will receive their hard copy. Take this opportunity to complete the coupon on the next Break In label and order your free CD Rom for next year.

Bye for now

# WRC 2003 - Other agenda items of concern to the IARU by J K Pulfer VE3PU:

While the majority of members of the IARU delegation focused on the important amateur issues of regulations and the realignment of 40 metres, as well as the preparation of the agenda for the next conference, I spent most of my time monitoring the many committees and drafting groups dealing with eight other agenda items which were also of concern to the IARU. Below is a brief report summarising the significant developments related to these agenda items

**Agenda Item 1.3 - Harmonized Bands for Public Protection and Disaster Relief (PPDR) -** This agenda item surfaced in the lead up to WRC-2000 when commercial interests promoting harmonized frequencies for public services realised that adding disaster relief would strengthen their arguments. They managed to convince some administrations to support them. At WRC-2000, Resolution 645 was introduced calling for Global Harmonisation of Spectrum for Public Protection and Disaster Relief, and asking that studies be carried out by the ITU-R. Working Party 8A conducted the studies in preparation for WRC-2003.

The IARU was concerned with two aspects of PPDR developments at WRC-2003 - the identification of bands or frequencies that might affect amateurs, and the CEPT concept of a "tuning range" in the band 390 to 470 MHz. CEPT wants to standardise equipment that can operate at any frequency used by any of its member countries within this range, and also wanted to impose this idea on the rest of the world. CITEL countries on the other hand are focusing on the 880 MHz band as well as some 700 MHz spectrum from the UHF TV allocation, expected to become available when digital transmission is introduced in this frequency range.

At WRC 03, the concept of a tuning range was not accepted. In the end, bands identified for PPDR do not affect amateurs. A new Resolution was approved by WRC-2003, for introducing the necessary changes to the Radio Regulations and calling for ongoing technical studies for implementing harmonised PPDR. No changes to frequency allocations were proposed. On the positive side, the Resolution contains references to the role that the amateur services play in disaster communications, and encourages removal of administrative barriers to cross border movement of disaster communications equipment.

**Agenda Item 1.5 - Allocations to Wireless LANs at 5 GHz -** Agenda item 1.5 dealt with allocations to a number of services in the 5 GHz band, of which the most difficult and controversial were related to a proposed primary allocation to the mobile service to be used by devices permitting wireless connections within computer networks (which I will refer to as WLANs). To date, most such devices operate in the 2.4 GHz band, but already at the WRC, many delegates were using dual-band cards in their laptops, because the 5 GHz network was faster and, in general, easier to access

There is the potential that emissions from very large numbers of such devices, numbering in the millions, will interfere with commercial satellite receivers, and so this issue was hotly debated. To further complicate the issue, some Region 2 countries including Canada wish to allow such cards to be connected to outside high gain antennas, so that they can extend local networks to provide communications between computers in different buildings.

The IARU's main concern was to ensure that both indoor and outdoor WLAN transmitters would not cause significant problems for the amateur and amateur satellite services in this band. (Since our allocation is secondary, we must accept such interference). WRC 03 decisions imposed new restrictions on 5 GHz WLAN power and antenna gain to protect other services and should also afford us a good deal of protection. So, although the primary mobile allocations were approved, they are not expected to cause us much harm.

**5.3 Agenda Item 1.8 - Issues Related to Unwanted Emissions -** There were two aspects of this agenda item of interest to the IARU.

The first relates to spurious emissions, that is, signals produced by a transmitter at some frequency outside the allocated band (often harmonics), which may interfere with other receivers. There are international regulations setting limits on such spurious emissions, and the levels for amateur transmitters are clearly defined. We are interested in ensuring that these limits are not tightened to the point where home constructed amateur equipment could not meet them. The very sensitive receivers used by radio astronomers and remote sensing satellites are susceptible to spurious emissions, and users of those services are continually trying to update the limits to provide additional protection. This topic was not a major issue for us at this conference.

A second problem is concerned with what amateurs call "splatter". In other words, a poorly designed or operated amateur transmitter can cause interference to other amateurs using a nearby frequency. To date, there have been no international regulations governing the level of such splatter, although the radio astronomers and passive sensor people have been trying hard to see such regulations put into effect.

The threat to amateurs occurs when one of our bands is immediately adjacent to a passive sensor band, and amateurs operating near the band edge might cause problems. With support from the Canadian delegation, we were able to ensure that none of the amateur bands were mentioned in any new regulatory constraints approved at the conference. There are however, two 2007 agenda items related to ongoing studies of such band pairs, and these should be monitored in the ITU-R

**Agenda Item 1.12 - Allocations and Regulatory Issues for the Space Science Services -** This agenda item proposed an allocation of up to 3 MHz, in the range below 1 GHz, for uplink control signals used in deep space operations. Our concern was possible new allocations in the 144, 220, and 440 MHz bands. A new allocation was proposed to the WRC, at 260 MHz, to meet the needs of Russia and a few neighbouring countries. Finland and Lithuania as well as the Arab countries opposed the allocation, but eventually their concerns were met and the allocation was approved. There are no adverse effects for amateur radio foreseen.

**Agenda Item 1.15 - Radio Navigation Satellite Service (RNSS) Issues -** The Radio Navigation Satellite Service, or RNSS, (better known to most people as GPS, or Global Positioning Systems), operates in several bands between 1100 and 1300 MHz. There are two other RNSS systems that occupy this band, the Russian GLONASS system, and a proposed new European system named GALILEO.

The GALILEO allocation between 1260 and 1300 MHz (approved at WRC 2000) overlaps our amateur and amateur satellite allocations, but to date does not pose much of a threat. However, other spectrum users such as airborne and ground based radars are more concerned.

The issue to be settled at this conference was, what limits or constraints, if any, should be placed on GPS and GALILEO satellites to protect the other services? After much heated debate, it was agreed that existing GPS systems put into operation before 2000 would not be subject to constraints, but that limits would be imposed on all new systems. From an amateur point of view, these new constraints will just provide a little extra protection for us as well, and so this decision was a positive one from our point of view.

Agenda Item 1.16 - Allocations for Feeder Links to Little LEOs below 1.4 GHz The so-called "little LEO" (Low Earth Orbit) satellite systems are commercial versions of amateur digital, store-and-forward, messaging satellites. They are still looking for worldwide spectrum allocations in which to operate. This is a serious concern for the IARU since, as we know, in preparation for the WRC 97, the little LEO proponents wanted to use the two metre amateur band and only after vigorous opposition, dropped the proposal. At this conference, the USA, backed by a few third world countries proposed spectrum allocations for "feeder links" (i.e. control signals) around 1400-1600 MHz, and "service links" (i.e. up-bound data links) around 450 MHz. They already have frequency allocations for downward data links. The feeder link proposal was strongly opposed by most countries, since the frequencies around 1400 to 1600 MHz are extremely heavily used by many services. In spite of this opposition, the US succeeded in getting allocations provisionally approved, subject to the conduct of more studies to demonstrate that there will be no interference. If these studies are successful, the allocation may be put into effect at the next conference. We must continue to monitor this item, because if they succeed with the feeder links, then the need for service links will not go away.

Agenda Item 1.20 - Allocations Below 1 GHz for Little LEO Service uplinks - At this WRC, there was also a little LEO agenda item looking for up to 7 MHz of spectrum below 1 GHz for service links. The specific US proposal was focused on a band just above 450 MHz, - uncomfortably close to our 70 cm band. Opposition to this proposal was also extremely strong, and during the pre-conference ITU-R studies, we were able to get virtually all countries to recommend "no allocation". To our surprise, the Little LEO proponents in the USA decided to give up early on this one, and the "no change" proposal was rapidly approved in committees. The fact that the proponents fought long and hard, and eventually succeeded on the feeder link question under Agenda Item 1.16 however, is a clear warning that we can expect another onslaught on the VHF bands at a future conference.

**Agenda Item 1.38 - Synthetic Aperture Radars in the 70 cm Band -** During the past seven years, ITU studies have been conducted concerning the possibility of sharing the 420-470 MHz band between a proposed new allocation, to be used by satellite borne synthetic aperture radars (SARs) to measure ground moisture, and other existing users in the range. These users include ground-based, ship and airborne radars, fixed and mobile operators, and a variety of other smaller users, such as amateur radio, wind profiler radars and rocket launch vehicle destruct systems.

The studies, in which the IARU was one of the major players, concluded in early 2003, with a technical description of the constraints on the SAR design necessary to ensure minimum interference. These constraints were contained in a revised ITU Recommendation that was approved just before the WRC. Many countries, to meet perceived environmental needs, came to the WRC with proposals for a secondary SAR allocation, subject to the approved constraints. ESA, NASA and the Canadian Space Agency were also strongly supportive. Furthermore, fixed and mobile interests in most administrations succeeded in focusing the proposals on the range 432-438 MHz, in spite of evidence that all existing services would be protected by the constraints. On the world scale, there was very little opposition to the allocation, with only the USA and a couple of South American countries openly opposing and a few countries such as India and some of the Arab bloc prepared to put up an argument. The IARU also vigorously opposed, but had no right to speak at the conference.

Because VE3PU had chaired the ITU-R drafting group working on the sharing studies for many years, he was in fact given several opportunities to voice the IARU objections, but of course they carried little weight in the final decision. The US opposition faded away early in the discussions, as did the Arab objections and the allocation was one of the firsts to reach plenary. Although the allocation will go ahead, it is unlikely that a SAR will be launched before 2010, if ever, and if it does eventually fly, we feel confident that the design constraints will ensure that most amateurs will never see any significant interference in our weak signal or satellite bands at 432 and 435-438 MHz.

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### **Contests with Stan White ZL2ST:**

The next local contest is the Waitakere SSB Sprint on 80 metres next Saturday July 26 between 1000 and 1100 UTC (ie 10-11 pm NZT). The CW event is a week later on August 2<sup>nd</sup> at the same time. Go for it and test your skill. Exchange serial numbers only. For details see the May/June Break In, the Callbook or the NZART website.

#### Other contests are:

July 26/27 0000-2400 UTC (Sat/Sun) Russian Worldwide RTTY Contest July 26/27 1200-1200 UTC (Sat/Sun) RSGB IOTA HF SSB Contest August 9/10 0000-2400 UTC (Sat/Sun) WAE (Europe) DX CW Contest

#### **Contest results:**

The results of the Oceania, Sangster and VK/Tasman contests are now available on the NZART and VK/Tasman websites and are attached to this Info Line as files (2 for the VK Trans Tasman). In the Oceania events VKs dominated the Oceania continent top positions but ZL6QH top scored in the phone and CW multi-multi section and ZL2AMA top scored on 80 metres phone. Congratulations to these and the other top scorers. In the phone event ZL1TM was the top ZL operator with over 1 million points, while in the CW event ZL1GO, ZL2BR and ZL2AZ scored over 1 million. Participation in the VK trans Tasman events was up from 41 last year to 74 this year (45 SSB, 29 CW) - well done ZL. VKs were static at 152. In the overall results ZL4DX was second in the SSB event and ZL2RX top scored in the CW event. ZL2TW/qrp was third in the overall CW and first QRP. Congratulations.

## Branch Spot - Otago Branch 30 News from Lindsey Ross ZL4KS:

To celebrate a significant milestone of Amateur Radio in New Zealand, the Otago Branch of the NZART, will celebrate its 75 years this August.

The occasion will be marked by a special callsign ZM4A that will operate on all bands during August with a commemorative QSL card being sent to all confirmed contacts.

The anniversary celebrations will also include a display of early home brew through to present day equipment at the Dunedin Community Art Gallery in the centre of the Dunedin on the anniversary date, Saturday, August 9, 2003. It will provide a base for present and former members to meet and discuss their experiences over the years.

The display will also be open to the public from 10am, with formalities taking place at around 3:30pm. Registration is not necessary, but those out of Dunedin may wish to indicate their intentions.

Everyone is welcome.

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## **Dates To Remember:**

- Next NZART Official Broadcast 8pm & 9pm on Sunday 27<sup>th</sup> July
- Next HQ-Info-Line e-mailed on Sunday 3<sup>rd</sup> August

73

Jim Meachen 2L2BHF

**Editor** 

#### VK/ trans-Tasman Contest - 2003

Provisional post Contest Analysis:

#### 1. Participation:

226 stations participated (compared to 222 in 2001, and 188 last year). This comprises all Categories.

```
(1 last year)
0 X VK1
                                  25 X ZL1
                                               (16 last year)
36 X VK2
             (41 "
                                  25 X ZL2
                                               (14 " ")
                                               (4"
            (55 "
                                                        " )- poor
40 X VK3
                                   6 X ZL3
            (11 "
                                                (7"
                                                       " )- good
31 X VK4
                                  18 X ZL4
                       )- good
            (13 "
16 X VK5
                     " )
             (13 "
8 X VK6
                            * ZL's increased from 41 last year, to 74.
             (11 "
19 X VK7
                            * VK's static at147 (same as last year).
                       )
            (2"
2 X VK8
                             * 152 VK's and 74 ZL's took part.
```

#### 2. "Participation Factor:

Why? There are 4 ZL call areas, and 4 VK/East call areas (the same distance apart). However, all is not equal, -

There were 45 ZL participants compared to 96 VK/East. - also, ZL's can score "over-seas call-area" bonus points, by grouping VK5's,

VK8's, and VK6's -

So it is easier for ZL's to form "groups" of VK's, than it is for VK's to form groups of ZL's.

The fairest way to correct this imbalance is to create a compensating factor - "ZL stations divided by VK's".

- a). PHONE: 45 ZL's divided by 117 VK's = 0.38. All ZL "over-seas call-area" group bonus points were multiplied by 0.38.
- b). CW: 29 ZL's divided by 35 VK's = 0.83.

All ZL "over-seas call-area" group bonus points were multiplied by 0.83.

Note: This factor was not applied to ZL bonus points scored by working groups of ZL's.

The results seem to indicate that the scoring system is now a "fairly level playing field" - eg: the first 8 Phone scores show the following statistics:

VK4SN	score: 2639	contacts: 229	av pts per contact: 11.52
ZL4DX	2586	220	11.75
VK2CZ	2563	230	11.14
ZL3RE	2530	228	11.10
VK3IO	2398	201	11.93
VK2AKB	2117	187	11.32
VK2NMO	2101	203	10.35
ZL4AD	2064	199	10.37

- 2 X ZL's and 2 X VK's in first four places, and only 109 pts, and 10 contacts between them.

#### 3. Logs received:

a). In 2001, Contest promotion was limited to Amateur news broadcasts and radio mags. 38 logs were received. (17% of participants).

In 2002, additional promotion by email to about 500 Amateurs/Clubs.

59 logs were received (despite participation drop). (31% of participants - many reminded by Contest Manager).

In 2003, additional promotion by email to about 1500 Amateurs/Clubs, + avoided NZ Queen's Birthday/NZART Conference weekend, + Phone and CW on separate nights.

60 logs were received (26% of participants).

50 VK/ZL Clubs were emailed. Only one responded, and none participated (despite rule change making "multi-operator" entries eligible for the trophy.

Only 1"multi-operator" entry was received).

Allowing that about 25% of participants are not really competing (just giving out a few numbers), the return of logs this year was more realistically about 35% of competitors.

This suggests that the other 65% have little regard for the future of the Contest, or the time, effort and expense provided by the Contest Manager. - Or they just forget, or can't be bothered going to the trouble after they have had their fun, and the night is over. Some probably don't bother if they are not in line for a prize. Stations that have nearly 240 contacts (more than the Winner), and don't submit a log, make the task of running the Contest, exasperating.

A slight drop in participation since the first 2001 Contest, and a percentage drop in log returns since last year, - despite the increased promotion and initiatives to improve the Contest, is disappointing, to say the least. - It is probably indicative of the decline in the hobby, that this trend cannot be arrested. The result this year is "marginal", and unless the trend improves next year, 2004 may well be the last VK/ trans-Tasman Contest.

b). Of the 60 logs received, 16 worked the full 6 hours (15 in 2002).

, 16 worked 5 "

- \* 53% worked at least 5 hours (ie: 32, -11 of whom sent logs last year.) \* The other 194 participants weren't trying. \* Is it worth having the Contest, if only 32 are trying to win?
- \* 25 of the 60 logs were from stations that submitted logs last year. (meaning 42% who logged in, are "regulars", who submit their logs).

## 4. Changes for 2004:

#### a). Scoring:

Only about 10% of logs received showed a full understanding of the "Scoring Rule". While this suggests that the Rule is too complicated, checking logs suggested that more often it could be put down to either -

- \* not observing the "helpful hint" at the start of the Rules
- \* not reading the Rule thoroughly.
- \* inability to comprehend what is written.
- \* poor basic arithmetical skills.

This is despite re-wording of the "call-area bonus points" explanation, and the inclusion of a basic example.

However, while it is not easy to simplify the Rule, without diminishing one of the more interesting aspects of the Contest, the following initiatives will be included next year:

- \* Improve the basic example (shown under the scoring rule ).
- \* Publish a sample, scored log sheet on the Contest web-site.

#### b). Logging:

If a suitable computer logging program can be found/adapted to the scoring system, it will be published on the Contest web-site.

If anyone can assist with this, please contact the Contest Manager on email: vktasman@hotmail.com

## 2003 VK/ trans-Tasman Contest

## **Complete Final Results:**

### "Participation factor":

**PHONE:** 45 ZL;s, and 117 VK's participated.45/117 = 0.38. All ZL "overseas call-area" group bonus points were reduced by multiplying by 0.38.

**CW:** 29 ZL's and 35 VK's participated. 29/35 = 0.83. All ZL "overseas call-area" group bonus points were reduced by multiplying by 0.83.

ONE) 2639 2586	(QRP Phone) VK7NDO		(SWL) VK3XRX		(CW)	
2586		1686	WESTDY			
			VNOAKA	1984	ZL2RX	1155
2563				(only entry)	VK2UQ	826
	VK7HL	548			ZL2TW/Q	622
	VK2AVQ	344				
2519	VK2JDD	223			VK3MV	599
2398	VK2QQ	172			VK3BBT	523
2121					ZL2TX	491
2064					ZL1AIH	486
1945					VK4BCM	456
1846					ZL1ALZ	341check log
1797					VK6AFW	305
					VK5BLS/O	290
1730					,	229
1707					ZL2AJB	214check log
					VK8AV	189
					VK2MQX	154
						74
1443						64
1312					ZL4IM	46
1116						25
1017					VK7VH	3
899						
763						
700						
					ZL2TW	622
	2398 2121 2064 1945 1846 1797 1752 1730 1707 1693 1686 1496 1443 1312 1116 1017 899 763	2519 VK2JDD  2398 VK2QQ  2121  2064  1945  1846  1797  1752  1730  1707  1693  1686  1496  1443  1312  1116  1017  899  763  726  654  614	2519 VK2JDD 223 2398 VK2QQ 172 2121 2064 1945 1846 1797 1752 1730 1707 1693 1686 1496 1443 1312 1116 1017 899 763  726 654 614	2519 VK2JDD 223 2398 VK2QQ 172 2121 2064 1945 1846 1797 1752 1730 1707 1693 1686 1496 1443 1312 1116 1017 899 763  726 654 614	2519 VK2JDD 223 2398 VK2QQ 172 2121 2064 1945 1846 1797 1752 1730 1707 1693 1686 1496 1443 1312 1116 1017 899 763  726 654 614	2519 VK2JDD   223

VK2LEE	538			VK5BLS	290
VK6ADI	536			VK2AVQ	229
ZL3DW	483				
VK5AIM	347				
VK3BSE	311				
ZL1VJ	302				
VK3KDT	274				
VK2JHN	260				
VK5ATQ	207				
ZL2DJC	195				
VK2BEL	98				

#### Introduction

Congratulations to all the winners in the 2002 Oceania DX Contest. Activity has again increased in 2002 compared to 2001 however there was a decrease in SSB logs of some 3 % and an increase in CW logs by 22%. Whilst the conditions seemed to be poorer than the previous year, as may well be expected as we head down the declining slope of cycle 23, scores were quite high with some strong activity and competition from Europe.

The complete results for the contest are contained in the attached tables. For the first time we have included the top ten score for each continent and also a top ten box for non-Oceania participants. A summary of the best scores for each Mode, Band and Continent is detailed below.

2002 SSB Continent Leaders										
Contest Category	ASIA	EUROPE	NORTH AMERICA	OCEANIA	SOUTH AMERICA	NON - OCEANIA				
SWL	UA0-107-181	UA3-155-75				UA0-107-181				
Single-Op All	JH4UYB	ER4DX	K3ZO	VK4EMM	PY2NA	JH4UYB				
Single-Op 80m	JG1IGX			ZL2AMA		JG1IGX				
Single-Op 40m		PA3EPN	K3TW	VK1MJ		PA3EPN				
Single-Op 20m	JA7DOT	DL7CX		VK2APK	LU9JX	JA7DOT				
Single-Op 15m	JR9NVB	UA3DEE		VK8DK	L44DX	JR9NVB				
Single-Op 10m	JA6EFT	UA6ADC	NA2X	VK4NEF		JA6EFT				
Multi-One	RW9C	RW2F		VK8DA	R1ANC	RW9C				
Multi-Multi				ZL6QH						

The rural station of VK4EMM took out the phone contest with a sterling effort. Plenty of skill as well as dedication is required to rack up a score like John's. As well as the top scores we were graced with a little more activity from other than the usual VKs and ZLs with activity from 4W, 3D2, YB, DU, 9M6, KH2 and others.

As might be expected most of the Non-Oceania top scores were from Asia. With propagation declining the North/South path is likely to yield the best overall conditions. Congratulations to PA3EPN a keen contester, present in many of the big ones, who managed to achieve a top score from Europe on the very tough 40m band.

	2002 CW Continent Leaders									
Contest Category	ASIA	EUROPE	NORTH AMERICA	OCEANIA	SOUTH AMERICA	NON – OCEANIA				
SWL	UA0-107-181	YZ1KVA-SWL								
Single-Op All	UA0LCZ	UT7QF	N6RO	KH6ND	LU1EWL	N6RO				
Single-Op 80m				VK3TZ						

Single-Op 40m	JA3HBF	OK2BVG	K3TW			JA3HBF
Single-Op 20m	JA7DOT	SP5CJQ	W7KPL	VK2APK		SP5CJQ
Single-Op 15m	JA1BBA	DJ5GG	K9ALP	VK2KM	PY7OJ	JA1BBA
Single-Op 10m	JA1PS	UA6ADC	W1END	VK4TT		JA1PS
Multi-One	RW9C	UT7L				UT7L
Multi-Multi				ZL6QH	R1ANC	R1ANC

KH6ND took out the top score this year, just edging out John, VK4EMM who nearly took out the double! Only, the points awarded for band contacts really separated the two fine CW ops, with John having more mults and more QSOs but less points. The competition in the CW contest was hot! With around 287 logs submitted, and over half from Europe, CW is certainly alive and well.

In the CW section again, the Non-Oceania scores were mainly by Asian stations with the JAs well in front on 10 and 15m. Special mention to Dick, N6RO another one of those die-hard contesters who managed to top out the rest with the top all-band Non-Oceania score. A tough ask with not too many beams pointed his way.

## **Awards and Plaque Winners**

The Awards for the 2002 contest are unchanged and the worthy recipients are listed in the following table. John, VK4EMM takes out both the SSB and CW trophies with some very high scores. It would however be remiss not to mention that the top CW score from Oceania was by KH6ND, and the crew at ZL6QH once again produced some amazing results as the only Multi-Multi from Oceania. Is there a gang out there in VK who are willing to give those Kiwis a "spot of competition"?

2002 TROPHY AND PLAQUE WINNERS								
AWARD	DESCRIPTION	RECIPIENT						
ZL2TT Trophy	Top entrant from Oceania in Single Operator All Band Phone category - in memory of Ron Wills ZL2TT, sponsored by ZL2GI, ZL2AL, Wellington Amateur Radio Club and NZART	VK4EMM						
VK5/VK8 SOAB Phone Plaque	Top entrant from VK5 or VK8 Call areas in Single Operator All Band Phone category, sponsored by WIA South Australian Division	VK5GN						
VK7 SOAB Phone Plaque	Top entrant from VK7 Call area in Single Operator All Band Phone category, sponsored by WIA Tasmania	Not Awarded						

	Division	
VK2QL Trophy	Top entrant from Australia in Single Operator All Band CW category - in memory of Frank Hine VK2QL, sponsored by WIA Federal.	VK4EMM
VK5/VK8 SOAB CW Plaque	Top entrant from VK5 or VK8 Call areas in Single Operator All Band CW category, sponsored by WIA South Australian Division	VK5GN
N6RO Plaque	Top entrant from North America in Single Operator All Band Phone category, sponsored by N6RO	K3ZO
ASIA SOAB Phone Plaque	Top entrant from Asia in Single Operator All Band Phone category, sponsored by the Eastern and Mountain Districts Radio Club, VK3.	JH4UYB
ASIA SOAB CW Plaque	Top entrant from Asia in Single Operator All Band CW category, sponsored by the Eastern and Mountain Districts Radio Club, VK3.	UA0LCZ

## **Participation**

The following table shows the number of logs received from each continent in 200, 2001 and 2002. The committee is pleased, if not a little surprised to see that the CW contest has moved ahead in participation rate than the SSB contest. The number of log entries in the SSB Contest has declined a few percent, but the CW contest shows a growth of 22 %, with the overall participation for the combined contests up 9.3%. Hopefully the decline in the Sunspot activity will not deter competitors from submitting entries in 2003.

	Call	Band	Power	Score	QSOs	Points	Mults
SSB	RESULTS						
Single O							
OCEA							
Australia		D I	D	C	000	D : 4	16.1
	Call	Band	Power	Score	QSOs	Points	Mults
	VK4EMM	ALL	HIGH	2,813,776	1461	3626	776
	VK5GN	ALL	HIGH	2,551,020	1599	3111	820
	VK2FHN	ALL	HIGH	985,566	990	1779	554
	VK2CZ	ALL	HIGH	711,018	666	1701	418
	VK4UC	ALL	HIGH	471,472	583	1264	373
	VK4DX	ALL	LOW	419,482	677	1162	361
	VK8DK	15M	LOW	393,790	743	1486	265
	VK3TZ	ALL	HIGH	267,220	431	862	310
	VK6NU	ALL	LOW	263,937	408	<b>90</b> 7	291
	VK4NEF	10M	LOW	205,590	385	1155	178
	VK2XT	15M	HIGH	198,268	511	1022	194
	VK2APK	20M	HIGH	101,680	410	410	248
	VK2VZQ	15M	LOW	96,570	333	666	145
	VK4ADC	20M	HIGH	93,252	409	409	228
	VK4BAY	ALL	HIGH	84,108	221	516	163
	VK3VP	ALL	LOW	67,932	164	999	68
	VK3BGH	ALL	LOW	54,932	188	443	124
	VK2AYD	20M	LOW	41,912	248	248	169
	VK5KCX	ALL	HIGH	8,370	68	155	54
	VK1MJ	40M	HIGH	5,950	35	175	34
	VKK3PRA	15M	HIGH	5,166	63	126	41
	VK4FJ	ALL	LOW	3,780	45	90	42
East Tin	ıor						
	<i>4W6MM</i>	ALL	HIGH	2,407,860	1607	3510	686
Guam							
	NH2PW	20M	HIGH	418	22	22	19
Indonesi	ia						
	YB2OBL	15M	LOW	158,240	368	736	215
	YC7SKM	15M	HIGH	116,424	308	616	189
	YC4FIJ	15M	HIGH	20,470	115	230	89
	YB2MTA	15M	LOW	9,052	73	146	62
	YC2ECG	15M	HIGH	3,500	50	100	35
Vew Zea	aland						
	ZL1TM	ALL	LOW	1,233,674	1042	2063	598
	ZL1ALZ	ALL	HIGH	351,880	683	926	380
	ZL3GA	ALL	LOW	117,586	326	518	227
	ZL4AS	ALL	HIGH	103,246	290	494	209
	ZL1ANH	ALL	LOW	58,032	246	372	156

38,041

ZL1BYZ

ALL

HIGH

349

152

109

	Call	Band	Power	Score	QSOs	Points	Mults
	ZL2CD	ALL	HIGH	21,894	125	267	82
	ZL2LF	ALL	HIGH	20,394	159	198	103
	ZL1IM	ALL	HIGH	7,239	70	127	57
	ZL3DW	ALL	HIGH	1,728	40	48	36
	ZL2AMA	80M	HIGH	1,680	24	240	7
Philipp							
**	4D70SAN	20M	LOW	1,218	42	42	29
ASIA							
Asiatic	Russia						
	UAOLCZ	ALL	HIGH	5,371	70	131	41
	RN9HM	ALL	HIGH	2,916	54	108	27
	<b>UA0FBS</b>	ALL	HIGH	2,700	50	100	27
	UA9LP	ALL	HIGH	2,697	49	93	29
	RA9AU	ALL	LOW	1,220	29	61	20
	UA9HR	ALL	HIGH	480	19	40	12
	<i>UA0IV</i>	ALL	LOW	468	29	36	13
	RZ9ZR	ALL	HIGH	320	13	32	10
	UA9LGL	15M	LOW	128	8	16	8
	RZ9IB	ALL	LOW	84	7	14	6
	RA9ST	15M	HIGH	60	6	12	5
	RA0CL	20M	HIGH	36	6	6	6
	UA9XF	ALL	LOW	32	4	8	4
	UA9QFF	10M	LOW	3	1	3	1
Hong K	e e						
	VR2BG	ALL	HIGH	1,040	26	65	16
India							
	VU3DJQ	20M	LOW	35	7	7	5
Japan	****				•••		
	JH4UYB	ALL	HIGH	44,772	208	533	84
	JK10LT	ALL	HIGH	34,602	175	438	79 54
	JA3AOP	ALL	HIGH	12,420	96 70	230	54
	JH1KLN JA7ODY	ALL ALL	HIGH	5,400 5,282	70 63	135 139	40 38
	JA1BBA	ALL ALL	HIGH LOW	5,262 5,092	66	139 134	38
	JM1XCW	ALL	HIGH	3,092 4,896	70	134 144	3 <i>6</i> 3 <i>4</i>
	JM1GHT	ALL	LOW	3,380	49	130	26
	JA0VHI	ALL	HIGH	2,688	37	112	24
	JA2GHP	ALL	LOW	2,304	40	96	24
	JJ300Z	ALL	HIGH	2,112	43	88	24
	JR9NVB	15M	HIGH	2,024	44	88	23
	JA1HFY	ALL	HIGH	1,872	38	<i>78</i>	24
	JE1PJR	ALL	HIGH	1,480	30	74	20
	JA1GYO	ALL	LOW	1,386	37	66	21
	JA6QDU	ALL	HIGH	1,292	30	76	17
	JA1IZ	ALL	HIGH	1,254	32	66	19
	JA1KK	ALL	HIGH	1,240	31	62	20
	JG2REJ	ALL	HIGH	846	22	47	18

Call   Band   Power   Score   QSOs   Points   Mults	
JAIAAT       ALL       HIGH       795       21       53       15         JA4BAA       ALL       HIGH       792       23       44       18         JL7AIA       ALL       HIGH       768       20       48       16         JJ2PUG       15M       HIGH       768       20       48       16         JJ2PUG       15M       HIGH       700       25       50       14         JA7DOT       20M       HIGH       688       43       43       16         JA4AQR       ALL       HIGH       666       26       37       18         JA6EFT       10M       HIGH       627       19       57       11         JRTLVK       15M       HIGH       600       20       40       15         JRIMRG       ALL       HIGH       533       18       41       13         7K2PBB       10M       HIGH       324       12       36       9         7N2UQC       10M       LOW       315       15       45       7         JF3EBO       ALL       HIGH       264       15       24       11         JA9SCB       15M <th>15</th>	15
JA4BAA       ALL       HIGH       792       23       44       18         JL7AIA       ALL       HIGH       768       20       48       16         JJ2PUG       15M       HIGH       700       25       50       14         JA7DOT       20M       HIGH       688       43       43       16         JA4AQR       ALL       HIGH       666       26       37       18         JA6EFT       10M       HIGH       627       19       57       11         JR7LVK       15M       HIGH       600       20       40       15         JRIMRG       ALL       HIGH       533       18       41       13         7K2PBB       10M       HIGH       324       12       36       9         7N2UQC       10M       LOW       315       15       45       7         JF3EBO       ALL       HIGH       264       15       24       11         JA9SCB       15M       HIGH       240       12       24       10         JA1XPU       15M       LOW       234       13       26       9         JW2EAN       15M	1.5
JL7AIA         ALL         HIGH         768         20         48         16           JJ2PUG         15M         HIGH         700         25         50         14           JA7DOT         20M         HIGH         688         43         43         16           JA4AQR         ALL         HIGH         666         26         37         18           JA6EFT         10M         HIGH         627         19         57         11           JRIVK         15M         HIGH         600         20         40         15           JRIMRG         ALL         HIGH         533         18         41         13           7K2PBB         10M         HIGH         324         12         36         9           7N2UQC         10M         LOW         315         15         45         7           JF3EBO         ALL         HIGH         264         15         24         11           JA9SCB         15M         HIGH         240         12         24         10           JAIXPU         15M         LOW         234         13         26         9           JR2RCC         1	
JJ2PUG         15M         HIGH         700         25         50         14           JA7DOT         20M         HIGH         688         43         43         16           JA4AQR         ALL         HIGH         666         26         37         18           JA6EFT         10M         HIGH         627         19         57         11           JR7LVK         15M         HIGH         600         20         40         15           JR1MRG         ALL         HIGH         533         18         41         13           7K2PBB         10M         HIGH         324         12         36         9           7N2UQC         10M         LOW         315         15         45         7           JF3EBO         ALL         HIGH         264         15         24         11           JA9SCB         15M         HIGH         240         12         24         10           JA1XPU         15M         LOW         234         13         26         9           JW2EAN         15M         HIGH         216         12         24         9           JW2RUV         1	
JA7DOT       20M       HIGH       688       43       43       16         JA4AQR       ALL       HIGH       666       26       37       18         JA6EFT       10M       HIGH       627       19       57       11         JR7LVK       15M       HIGH       600       20       40       15         JR1MRG       ALL       HIGH       533       18       41       13         7K2PBB       10M       HIGH       324       12       36       9         7N2UQC       10M       LOW       315       15       45       7         JF3EBO       ALL       HIGH       264       15       24       11         JA9SCB       15M       HIGH       240       12       24       10         JA1XPU       15M       LOW       234       13       26       9         JR2TRC       10M       HIGH       231       11       33       7         JQ2EAN       15M       HIGH       216       12       24       9         JM2RUV       15M       HIGH       190       19       19       10         JA7EPG       20M	
JA4AQR       ALL       HIGH       666       26       37       18         JA6EFT       10M       HIGH       627       19       57       11         JRTLVK       15M       HIGH       600       20       40       15         JRIMRG       ALL       HIGH       533       18       41       13         7K2PBB       10M       HIGH       324       12       36       9         7N2UQC       10M       LOW       315       15       45       7         JF3EBO       ALL       HIGH       264       15       24       11         JA9SCB       15M       HIGH       240       12       24       10         JA1XPU       15M       LOW       234       13       26       9         JR2TRC       10M       HIGH       231       11       33       7         JQ2EAN       15M       HIGH       216       12       24       9         JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL	
JA6EFT       10M       HIGH       627       19       57       11         JR7LVK       15M       HIGH       600       20       40       15         JRIMRG       ALL       HIGH       533       18       41       13         7K2PBB       10M       HIGH       324       12       36       9         7N2UQC       10M       LOW       315       15       45       7         JF3EBO       ALL       HIGH       264       15       24       11         JA9SCB       15M       HIGH       240       12       24       10         JAIXPU       15M       LOW       234       13       26       9         JR2TRC       10M       HIGH       231       11       33       7         JQ2EAN       15M       HIGH       216       12       24       9         JM2RUV       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JGIGCO       ALL	
JR7LVK       15M       HIGH       600       20       40       15         JRIMRG       ALL       HIGH       533       18       41       13         7K2PBB       10M       HIGH       324       12       36       9         7N2UQC       10M       LOW       315       15       45       7         JF3EBO       ALL       HIGH       264       15       24       11         JA9SCB       15M       HIGH       240       12       24       10         JA1XPU       15M       LOW       234       13       26       9         JR2TRC       10M       HIGH       231       11       33       7         JQ2EAN       15M       HIGH       216       12       24       9         JM2RUV       15M       HIGH       216       12       24       9         JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JG1GCO       ALL	
JRIMRG       ALL       HIGH       533       18       41       13         7K2PBB       10M       HIGH       324       12       36       9         7N2UQC       10M       LOW       315       15       45       7         JF3EBO       ALL       HIGH       264       15       24       11         JA9SCB       15M       HIGH       240       12       24       10         JA1XPU       15M       LOW       234       13       26       9         JR2TRC       10M       HIGH       231       11       33       7         JQ2EAN       15M       HIGH       216       12       24       9         JM2RUV       15M       HIGH       216       12       24       9         JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JGIGGO       ALL       HIGH       133       8       19       7         JE2SOY       10M	
7K2PBB         10M         HIGH         324         12         36         9           7N2UQC         10M         LOW         315         15         45         7           JF3EBO         ALL         HIGH         264         15         24         11           JA9SCB         15M         HIGH         240         12         24         10           JA1XPU         15M         LOW         234         13         26         9           JR2TRC         10M         HIGH         231         11         33         7           JQ2EAN         15M         HIGH         216         12         24         9           JM2RUV         15M         HIGH         192         12         24         8           JM7EPG         20M         HIGH         190         19         19         10           JL3RDC         ALL         LOW         182         10         26         7           JGIIGX         80M         HIGH         133         8         19         7           JESOY         10M         HIGH         90         6         18         5           JRJKHI         15M	
7N2UQC         10M         LOW         315         15         45         7           JF3EBO         ALL         HIGH         264         15         24         11           JA9SCB         15M         HIGH         240         12         24         10           JA1XPU         15M         LOW         234         13         26         9           JR2TRC         10M         HIGH         231         11         33         7           JQ2EAN         15M         HIGH         216         12         24         9           JM2RUV         15M         HIGH         216         12         24         9           JQ1AHZ/2         15M         HIGH         192         12         24         8           JM7EPG         20M         HIGH         190         19         19         10           JL3RDC         ALL         LOW         182         10         26         7           JGIGGO         ALL         HIGH         133         8         19         7           JE2SOY         10M         HIGH         90         6         18         5           JR3KAH         15M	
JF3EBO       ALL       HIGH       264       15       24       11         JA9SCB       15M       HIGH       240       12       24       10         JA1XPU       15M       LOW       234       13       26       9         JR2TRC       10M       HIGH       231       11       33       7         JQ2EAN       15M       HIGH       216       12       24       9         JM2RUV       15M       HIGH       216       12       24       9         JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JG1IGX       80M       HIGH       160       4       40       4         JG1GCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       6         JK1BII       15M       H	
JA9SCB       15M       HIGH       240       12       24       10         JA1XPU       15M       LOW       234       13       26       9         JR2TRC       10M       HIGH       231       11       33       7         JQ2EAN       15M       HIGH       216       12       24       9         JM2RUV       15M       HIGH       216       12       24       9         JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JG1IGX       80M       HIGH       160       4       40       4         JG1GCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       5         JK1BII       15M       LOW       60       6       12       5         JH5OXF       15M       HIGH<	
JAIXPU       15M       LOW       234       13       26       9         JR2TRC       10M       HIGH       231       11       33       7         JQ2EAN       15M       HIGH       216       12       24       9         JM2RUV       15M       HIGH       216       12       24       9         JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JG1IGX       80M       HIGH       160       4       40       4         JG1GCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       6         JK1BII       15M       LOW       60       6       12       5         JH5OXF       15M       HIGH       32       4       8       4         JG4OHX       20M       HIGH	
JR2TRC       10M       HIGH       231       11       33       7         JQ2EAN       15M       HIGH       216       12       24       9         JM2RUV       15M       HIGH       216       12       24       9         JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JG1IGX       80M       HIGH       160       4       40       4         JG1GCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       6         JK1BII       15M       LOW       60       6       12       5         JH5OXF       15M       HIGH       32       4       8       4         JG4OHX       20M       HIGH       24       6       6       6       4	
JQ2EAN       15M       HIGH       216       12       24       9         JM2RUV       15M       HIGH       216       12       24       9         JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JGIIGX       80M       HIGH       160       4       40       4         JGIGCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       6         JK1BII       15M       LOW       60       6       12       5         JH5OXF       15M       HIGH       32       4       8       4         JG4OHX       20M       HIGH       24       6       6       6       4	
JM2RUV       15M       HIGH       216       12       24       9         JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JG1IGX       80M       HIGH       160       4       40       4         JG1GCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       6         JK1BII       15M       LOW       60       6       12       5         JH5OXF       15M       HIGH       32       4       8       4         JG4OHX       20M       HIGH       24       6       6       6       4	
JQ1AHZ/2       15M       HIGH       192       12       24       8         JM7EPG       20M       HIGH       190       19       19       10         JL3RDC       ALL       LOW       182       10       26       7         JG1IGX       80M       HIGH       160       4       40       4         JG1GCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       6         JK1BII       15M       LOW       60       6       12       5         JH5OXF       15M       HIGH       32       4       8       4         JG4OHX       20M       HIGH       24       6       6       4	
JM7EPG         20M         HIGH         190         19         19         10           JL3RDC         ALL         LOW         182         10         26         7           JG1IGX         80M         HIGH         160         4         40         4           JG1GCO         ALL         HIGH         133         8         19         7           JE2SOY         10M         HIGH         90         6         18         5           JR3KAH         15M         HIGH         72         6         12         6           JK1BII         15M         LOW         60         6         12         5           JH5OXF         15M         HIGH         32         4         8         4           JG4OHX         20M         HIGH         24         6         6         4	
JL3RDC       ALL       LOW       182       10       26       7         JG1IGX       80M       HIGH       160       4       40       4         JG1GCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       6         JK1BII       15M       LOW       60       6       12       5         JH5OXF       15M       HIGH       32       4       8       4         JG4OHX       20M       HIGH       24       6       6       4	
JG1IGX       80M       HIGH       160       4       40       4         JG1GCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       6         JK1BII       15M       LOW       60       6       12       5         JH5OXF       15M       HIGH       32       4       8       4         JG4OHX       20M       HIGH       24       6       6       4	
JG1GCO       ALL       HIGH       133       8       19       7         JE2SOY       10M       HIGH       90       6       18       5         JR3KAH       15M       HIGH       72       6       12       6         JK1BII       15M       LOW       60       6       12       5         JH5OXF       15M       HIGH       32       4       8       4         JG4OHX       20M       HIGH       24       6       6       4	
JE2SOY     10M     HIGH     90     6     18     5       JR3KAH     15M     HIGH     72     6     12     6       JK1BII     15M     LOW     60     6     12     5       JH5OXF     15M     HIGH     32     4     8     4       JG4OHX     20M     HIGH     24     6     6     4	
JR3KAH     15M     HIGH     72     6     12     6       JK1BII     15M     LOW     60     6     12     5       JH5OXF     15M     HIGH     32     4     8     4       JG4OHX     20M     HIGH     24     6     6     4	
JK1BII     15M     LOW     60     6     12     5       JH5OXF     15M     HIGH     32     4     8     4       JG4OHX     20M     HIGH     24     6     6     4	5
JH50XF         15M         HIGH         32         4         8         4           JG40HX         20M         HIGH         24         6         6         4	
JG40HX 20M HIGH 24 6 6 4	
	4
JA2MVW 10M HIGH 24 4 12 2	2
Kazakhstan	
UN5PR ALL HIGH 3,696 57 112 33	
UN9GC ALL HIGH 784 25 49 16	
UN9LN 15M HIGH 270 15 30 9	9
Kyrgyzstan	
EX2T ALL HIGH 260 15 26 10	10
Mongolia	
JT1CO ALL HIGH 70 6 14 5	5
Singapore	
9V1UV ALL HIGH 5,662 65 149 38	38
EUROPE	
Austria	
OE1TKW 20M HIGH 20 5 5 4	4
Belarus	
EW6AF ALL HIGH 640 27 40 16	
EW2AA ALL HIGH 319 16 29 11	
EW6DX 20M LOW 112 14 14 8	8
Belgium	

Call	Band	Power	Score	QSOs	Points	Mults
ON4CAS	ALL	HIGH	392	19	28	14
ON4XG	ALL	HIGH	230	16	23	10
Bulgaria		111 011				
LZ1UO	ALL	HIGH	1,197	39	57	21
LZ1LZ	ALL	HIGH	240	16	24	10
LZ4UU	20M	HIGH	66	11	11	6
LZ1DM	20M	HIGH	6	3	3	2
Czech Republic						
OK1DVK	20M	HIGH	66	11	11	6
OK2EQ	ALL	HIGH	60	8	10	6
England						
G3VAO	ALL	LOW	1,392	40	58	24
G3JKY	20M	HIGH	9	3	3	3
Estonia						
ES1QD	ALL	HIGH	1,408	42	64	22
European Italy						
IZ4DJZ	ALL	LOW	702	27	39	18
I2WIJ	20M	LOW	112	14	14	8
IK5WGK	20M	HIGH	24	6	6	4
European Russia						
RW1ZA	ALL	HIGH	5,680	78	142	40
RX6LG	ALL	HIGH	2,436	49	84	29
RK3SWB	ALL	HIGH	2,080	44	80	26
RA6AFB	ALL	HIGH	1,496	26	68	22
RX3AAJ	ALL	HIGH	1,386	40	63	22
RN3DN	ALL	LOW	1,083	39	57	19
RN1AO	ALL	HIGH	690	28	46	15
<i>UA3DEE</i>	15M	HIGH	468	18	36	13
UA4LCH	20M	HIGH	378	27	27	14
<i>UA6HON</i>	ALL	LOW	300	19	25	12
RZ3DH	ALL	HIGH	154	12	22	7
RZ3BY	ALL	HIGH	104	9	13	8
UA6ADC	10M	LOW	72	6	18	4
UA1WBV	ALL	LOW	28	5	7	4
RX3AEX	ALL	LOW	9	3	3	3
UA4AVN	20M	HIGH	4	2	2	2
Fed. Rep. of Germany						
DM5JBN	ALL	LOW	714	23	42	17
DL7CX	20M	HIGH	456	38	38	12
<b>DL1TC</b>	ALL	HIGH	288	19	24	12
DL1DQY	20M	HIGH	126	14	14	9
DH5WB	15M	LOW	60	6	12	5
DL3ZAI	ALL	HIGH	18	5	6	3
Finland						
ОН6ІИ	ALL	HIGH	969	35	51	19
ОН2МО	15M	HIGH	408	17	34	12

	Call	Band	Power	Score	QSOs	Points	Mults
Hungar							
	HG8W	15M	HIGH	64	8	16	4
Lithuan							
	LY1DR	ALL	HIGH	2,494	58	86	29
	LY2OX	ALL	HIGH	1,872	45	72	26
Moldov							
	ER4DX	ALL	HIGH	14,960	119	272	55
	ER1QQ	ALL	HIGH	3,906	80	126	31
Netherla							
	PA3EPN	40M	HIGH	1,260	28	140	9
	PA0MIR	15M	LOW	220	11	22	10
	PAOVST	ALL	LOW	28	4	7	4
Vorway							
	LA1VKA	15M	HIGH	176	11	22	8
	LA6PIA	ALL	HIGH	144	13	18	8
Poland							
	SP6IHE	ALL	LOW	2,550	47	85	30
	SP6IEQ	ALL	LOW	774	30	43	18
	SP6LUV	ALL	LOW	570	20	38	15
	SP6DVP	ALL	HIGH	546	26	39	14
	SP9TCC	ALL	LOW	480	23	32	15
	SP9ADV	ALL	LOW	96	8	16	6
	SP3DIG	20M	HIGH	88	11	11	8
	SP4AAZ	20M	HIGH	10	5	5	2
	SP1MVG	40M	HIGH	5	1	5	1
Romani		70112	111011			3	1
Comani	YO50EF	ALL	HIGH	448	21	32	14
	YO3FLQ	20M	HIGH	32	8	8	4
	YO6AJI	20M	HIGH	15	5	5	3
Slovakio		20111	mon	13	3	3	3
novani	OM4JD	ALL	HIGH	960	35	48	20
	OM4DN	15M	LOW	60	6	12	5
	OM7YC	15M	LOW	32	4	8	4
Spain	OM/IC	13111	Low	32	7	0	7
эрит	EA3FHP	20M	HIGH	28	7	7	4
Sweden	LAJIII	2011	mon	20	,	,	7
sweach	7S2E	ALL	HIGH	4,681	84	151	31
	SM5CSS	ALL	HIGH	1,850	45	74	25
	SM3TLG	ALL 15M	HIGH	280	43 14	28	23 10
	SM7AIL	15M	HIGH	216	12	26 24	9
	SM6FUD	15M	HIGH	70	7	24 14	5
Ukraine		1 3 1 1 1	HUH	/0	/	14	3
∪кгате		47.7	шеп	10 207	117	224	16
	UR6QA	ALL	HIGH	10,396	117	226	46
	UR3IFD	ALL	HIGH	7,098	96 12	169	42
	UW5U	20M	LOW	72	12	12	6
	UX0IB	15M	HIGH	64	8	16	4
	UU2JA	15M	LOW	2	1	2	1

	Call	Band	Power	Score	QSOs	Point	S	Mults
Yugoslavia								
YU11	RE	ALL	HIGH	1,725	42	69		25
YU71		15M	HIGH	280	14	28		10
YU71		20M	HIGH	42	7	7		6
NORTH A	MERICA							
Canada								
VE7A	4VV	ALL	LOW	612	21	51	12	
VE12	ZJ	ALL	HIGH	470	14	47	10	
VE31	OZ	ALL	LOW	16	3	8	2	
United States								
K3Z(	)	ALL	HIGH	5,346	76	162	33	
W6R	LL	ALL	HIGH	2,075	35	83	25	
KU10	CW	ALL	HIGH	1,596	35	<b>76</b>	21	
K4JR	?B	ALL	HIGH	1,584	39	66	24	
NY47	Γ	ALL	LOW	1,155	31	55	21	
NA2X		10M	HIGH	96	8	24	4	
K3TV		40M	HIGH	75	5	25	3	
WA5.		10M	HIGH	12	4	12	1	
SOUTH A	MERICA							
Argentina								
L44D		15M	LOW	320	16	32	10	
LU9J	1X	20M	HIGH	126	14	14	9	
Brazil	7.4	47.7	LOW	25				
PY2N		ALL	LOW	35	6	7	5	
viuiii-operaio VK81	r, One Transm	ALL	HIGH	1 215 204	974	2276	534	
V Kol VK2(		ALL ALL	HIGH	1,215,384 324,120	509	1095	334 296	
r K2 Ç RW9	_	ALL	HIGH	10,580	30 <i>9</i> 86	230	46	
RKOA		ALL	HIGH	1,870	23	110	17	
RW2		ALL	HIGH	986	36	58	17	
RZ4/		ALL	HIGH	180	11	20	9	
R1A		ALL	HIGH	160	16	20	8	
RK31		ALL	HIGH	72	6	12	6	
UR41		ALL	HIGH	12	6	6	2	
Multi-operato	r, Multi-Trans	smitter						
ZL6Q	QH	ALL	HIGH	3,510,936	1687	4092	858	
Short Wave L	isteners							
UA0-	107-181	ALL	N/a	5	,376	70	128	42
UA3-	155-75	ALL	N/a		938	16	<b>6</b> 7	14
JA5	3278	ALL	N/a		918	22	51	18
UA3-	170-847	ALL	N/a		338	21	26	13
ONL.	383	ALL	N/a		72	6	12	6
JA2-	9329	ALL	N/a		25	5	5	5
UU-J	<b>I-1</b>	ALL	N/a		8	3	4	2
Check Logs								
DL2SDQ	RN6FK	<b>DL1DTC</b>	SP1EOM	SP6CES	YO5CRQ			

	Call	Band	Power	Score	QSOs	Points	Mults
Multi-Op St	ation Operators						
UR4PWC	UR4PWC						
RK3RWL	RN3RC, RU3RQ						
R1ANC	RW1AI, UA1PAC						
RZ4AYT	UA4AVN, RA4A-3	356, RA4AI					
RW2F	UA2FB, UA2FF						
RK0AXX	CONTEST TEAM	SCDXC					
RW9C	RW9CF, RA9DK						
VK2QF	VK2ANZ						
VK8DA	VK8NSB, VK8AN,	VK8DP, VK	8KG, VK8XC, V	K8HRE, VK8PT,	VK8NAI, VK8P	C, $SWL = RON$	& PETER
ZL6OH	ZL2AMI, ZL2AOV	Z.ZL1AXG.	ZL2BBJ, ZL2CA	I. ZL2UDF, ZL2U	O. ZL2DZ, ZL1	AZE	

E	urope	<b>Top 10</b>		Asia Top 10					
ER4DX	ALL	HIGH	14,960	JH4UYB	ALL	HIGH	44,772		
UR6QA	ALL	HIGH	10,396	JK10LT	ALL	HIGH	34,602		
UR3IFD	ALL	HIGH	7,098	JA3AOP	ALL	HIGH	12,420		
RW1ZA	ALL	HIGH	5,680	9V1UV	ALL	HIGH	5,662		
7S2E	ALL	HIGH	4,681	JH1KLN	ALL	HIGH	5,400		
ER1QQ	ALL	HIGH	3,906	UAOLCZ	ALL	HIGH	5,371		
SP6IHE	ALL	LOW	2,550	JA70DY	ALL	HIGH	5,282		
LY1DR	ALL	HIGH	2,494	JA1BBA	ALL	LOW	5,092		
RX6LG	ALL	HIGH	2,436	JM1XCW	ALL	HIGH	4,896		
RK3SWB	ALL	HIGH	2,080	UN5PR	ALL	HIGH	3,696		
North Ame	rica T	op 10		South America Top	10				
K3ZO	ALL	HIGH	5,346	L44DX	15M	LOW	320		
W6RLL	ALL	HIGH	2,075	LU9JX	20M	HIGH	126		
KU1CW	ALL	HIGH	1,596	PY2NA	ALL	LOW	35		
K4JRB	ALL	HIGH	1,584						
NY4T	ALL	LOW	1,155	Africa To	p 10				
VE7AVV	ALL	LOW	612	No Entra	nts				
VE1ZJ	ALL	HIGH	470						
NA2X	10M	HIGH	96						
K3TW	40M	HIGH	75						
VE3DZ	ALL	LOW	16						
Oceania	а Тор	10		Non-Oceania Top 10	)				
VK4EMM	ALL	HIGH	2,813,776	JH4UYB	ALL	HIGH	44,772		
VK5GN	ALL	HIGH	2,551,020	JK10LT	ALL	HIGH	34,602		
4W6MM	ALL	HIGH	2,407,860	ER4DX	ALL	HIGH	14,960		
ZL1TM	ALL	LOW	1,233,674	JA3AOP	ALL	HIGH	12,420		
VK2FHN	ALL	HIGH	985,566	UR6QA	ALL	HIGH	10,396		
VK2CZ	ALL	HIGH	711,018	UR3IFD	ALL	HIGH	7,098		
VK4UC	ALL	HIGH	471,472	RW1ZA	ALL	HIGH	5,680		
VK4DX	ALL	LOW	419,482	9V1UV	ALL	HIGH	5,662		
VK8DK	15M	LOW	393,790	JH1KLN	ALL	HIGH	5,400		
ZL1ALZ	ALL	HIGH	351,880	UAOLCZ	ALL	HIGH	5,371		

$\overline{CWR}$	ESULTS						
Single Op	erator						
OCEA	NIA						
Australia							
	Call	Band	Power	Score	QSOs	Points	Mults
	VK4EMM	ALL	HIGH	4,205,320	1740	4571	920
	VK2AYD	ALL	LOW	2,168,947		2959	733
	VK4DX	ALL	LOW	1,469,320	1197	2180	674
	VK5GN	ALL	HIGH	1,250,044	839	2372	527
	VK4UC	ALL	LOW	416,480	432	1370	304
	VK4TT	10M	LOW	413,991	513	1539	269
	VK2QF	ALL	HIGH	352,625	494	1085	325
	VK2KM	15M	HIGH	331,676	566	1132	293
	VK2APK	20M	HIGH	273,504	777	777	352
	VK8AV	ALL	LOW	264,702	436	843	314
	VK3JS	ALL	QRP	171,550	237	1175	146
	VK4XY	ALL	LOW	159,222	291	714	223
	VK2PS	ALL	HIGH	79,304	236	431	184
	VK3TZ	80M	HIGH	10,800	36	360	30
East Mala	ysia						
	9M6A	ALL	HIGH	99,414	240	526	189
East Timo	r						
	4W6MM	ALL	HIGH	147,852	310	666	222
Fiji							
	3D2/W7DRA	ALL	LOW	582,015	532	1687	345
Hawaii							
	KH6ND	ALL	HIGH	4,449,375	1735	5085	875
Indonesia							
	YB0ECT	ALL	LOW	379,008		1008	376
	YD2DQV	15M	LOW	15,708	102	204	77
New Zeald							
	ZL1GO	ALL	HIGH	2,431,968			
	ZL2BR	ALL	LOW	2,127,066		2942	
	ZL2AZ	ALL	HIGH	1,134,980		2345	
	ZL2CD	ALL	HIGH	617,391		1629	
	ZL1AIH	ALL	HIGH	513,279			
	ZL2AGY	ALL	HIGH	324,352			
	ZL2LF	ALL	HIGH	145,754			
	ZL3GA	ALL	LOW	9,614			
	ZL1ALZ	ALL	LOW	4,900		98	
	ZL3CED	ALL	HIGH	3,404			
DI III	ZL/G4EDG	20M	LOW	1,320	40	40	33
Philippine			****			=	
ACTA	DU3NXE	ALL	HIGH	221,147	423	787	281
ASIA							

Call

Band

Power

Score

QSOs

Points

Mults

Call	Band	Power	Score	QSOs Points	Mu	elts
Asiatic Russia						
UA0LCZ	ALL	HIGH	11,220	78	220	51
RA9MA	ALL	HIGH	6,794	67	158	43
UA9JKA	ALL	HIGH	5,080	59	127	40
UAOSAD	ALL	LOW	4,000	47	125	32
<i>UA0ANW</i>	ALL	LOW	1,102	2 23	58	19
RA0AY	ALL	HIGH	1,020	5 23	54	19
RA0CL	ALL	HIGH	540	15	36	1.
RW0LIA	15M	LOW	450	5 19	38	1.
UA9XF	ALL	LOW	170	) 11	17	10
UA9FGJ	20M	LOW	42	? 7	7	
<i>UA0SBQ</i>	ALL	HIGH	12	2	6	
RA9ST	20M	HIGH	9	3	3	
UA9QFF	15M	LOW	2	? 1	2	
RW9QA	15M	LOW	2		2	
India						
VU2UR	ALL	LOW	1,794	34	69	20
Japan						
JI3BFC	ALL	HIGH	7,098	8 62	169	4.
JA7ARW	ALL	LOW	2,100	39	81	2
JA3YPL	ALL	LOW	1,970	35	76	2
JA4AQR	ALL	HIGH	1,968	37	82	2
JE1REU	ALL	LOW	1,869	30	89	2
JA1PS	10M	HIGH	1,824	32	96	1
JA1HFY	ALL	HIGH	1,575	5 28	63	2.
JR1NKN	ALL	QRP	850	21	50	1
7J1ABD	ALL	HIGH	816	5 19	48	1
JA3HBF	40M	LOW	770	14	70	1
JA1BBA	15M	LOW	750	25	50	1.
JE2SOY	10M	LOW	663	3 17	51	1.
JA4ETH	10M	LOW	480		48	1
JA2KCY	ALL	LOW	374		34	1
JH5OXF	ALL	LOW	360		30	1.
7K2PBB	10M	HIGH	297		33	
JA4CES	10M	HIGH	264		33	
JA1AAT	10M	HIGH	264		33	
JG3NKP/1	10M	HIGH	252		36	
JI2KVW	ALL	HIGH	210		24	
JR2TRC	10M	HIGH	180		30	
JA7DOT	20M	HIGH	168		14	1
JF7GDF	15M	HIGH	120		18	1.
JO7BBS	10M	HIGH	84		21	
JH2OMM	20M	HIGH	72		9	
JH2OMM JE1KDM	20M 40M	HIGH HIGH	60		20	,
JH1NXU	40M ALL		52			•
JH TNXU JN7OJA		HIGH			13	4
JIVI OJA	10M 15M	HIGH	45	5 5	15	

	Call	Band	Power	Score	QSOs 1	Points	Mults
	JO1WIZ	15M	HIGH	32	4	8	4
	JK1LUY	20M	HIGH	20	5	5	4
	JH7IMX	20M	LOW	9	3	3	3
	JH9WHX	40M	HIGH	5	1	5	1
Kazakhstan							
	UN5J	ALL	HIGH	3,432	48	104	33
	UN6P	ALL	HIGH	2,184	31	84	26
	UN9LN	ALL	HIGH	217	7	31	7
	UN7EX	ALL	HIGH	112	10	14	8
Kyrgyzstan							
	EX2X	15M	HIGH	280	14	28	10
	EX2A	ALL	HIGH	32	4	8	4
South Kored	а						
	HL5UOG	ALL	HIGH	6,280	61	157	40
EUROP				3,233			
	_						
Austria	0527/	47.7	шси	1.022	42	(0)	20
D. I.	OE3ZK	ALL	HIGH	1,932	43	69	28
Belarus	E14/04/44			7.04			
	EW6MM	ALL	HIGH	1,944	34	72	27
	EW6AF	ALL	HIGH	1,232	25	56	22
	EW2AA	ALL	HIGH	270	13	27	10
	EU1MM	15M	LOW	154	11	22	7
Belgium							
	ON4XG	ALL	HIGH	1,140	32	57	20
Bosnia-Her	zegovina						
	T95A	15M	LOW	60	6	12	5
Bulgaria							
	LZ1LZ	ALL	HIGH	1,725	47	69	25
	LZ1XL	10M	HIGH	408	17	51	8
	LZ2L	15M	HIGH	180	10	20	9
	LZ4UU	20M	HIGH	150	15	15	10
	LZ1IA	20M	HIGH	135	15	15	9
	LZ3DP	10M	HIGH	126	7	21	6
	LZ2UZ	ALL	LOW	48	8	8	6
Croatia							
	9A9AU	ALL	HIGH	104	11	13	8
Czech Repu	blic						
_	OK2EQ	ALL	HIGH	1,968	34	82	24
	OK1OX	ALL	HIGH	1,782	34	66	27
	OK2BCJ	ALL	HIGH	1,495	36	65	23
	OK1DVK	ALL	HIGH	1,100	31	50	22
	OK2BVG	40M	HIGH	390	13	65	6
	OK1AOU	ALL	HIGH	300	13	25	12
	OK2BNC	ALL	HIGH	216	15	23	9
	OK2BNC OK1ANN	ALL 15M		98	7		7
	OK1ANN OK1DSU		HIGH			14	
Dou 1	UNIDSU	ALL	HIGH	36	3	12	3
Denmark							

England	Call OZ5DX OZ7BQ G3GLL G3UFY G5MY G3JKY	ALL ALL ALL ALL ALL ALL	HIGH HIGH HIGH HIGH	5,250 920 2,688 1,875	24	150 46 96	35 20 28
England	G3GLL G3UFY G5MY G3JKY	ALL ALL ALL	HIGH HIGH HIGH	2,688	47		
England	G3UFY G5MY G3JKY	ALL ALL	HIGH HIGH			96	2.0
	G3UFY G5MY G3JKY	ALL ALL	HIGH HIGH			96	2.0
	G5MY G3JKY	ALL	HIGH	1,875	27		40
	G3JKY				3/	75	25
		ALL		180	11	20	9
	ES2JL		HIGH	91	9	13	7
Estonia	ES2JL						
		20M	HIGH	126	14	14	9
European Russ	sia						
	RN6BN	ALL	HIGH	6,437	67	157	41
	RA6LW	ALL	LOW	2,880	48	90	32
	RN1AO	ALL	HIGH	1,890	36	70	27
	RA4HW	ALL	LOW	629	22	37	17
	<i>UA3DEE</i>	15M	HIGH	432	18	36	12
	UA6ADC	10M	LOW	420	14	42	10
	UA6HON	ALL	LOW	312	18	26	12
	RZ4AG	ALL	LOW	299	15	23	13
	RX3DTN	ALL	HIGH	297	11	27	11
	UA4QK	ALL	HIGH	204	12	17	12
i	RA3WDK	40M	LOW	150	6	30	5
	UA3AVR	15M	HIGH	140	10	20	7
	RA4AI	ALL	LOW	12	3	4	3
	RV3DAK	20M	LOW	9	3	3	3
	RW3VZ	20M	HIGH	9	3	3	3
	RZ4AA	ALL	HIGH	6	2	3	2
	UA3RF	40M	HIGH	0	0	0	0
Fed. Rep. of G	Germany						
	DL6KVA	ALL	HIGH	2,573	38	83	31
	DK3KD	ALL	HIGH	1,958	34	89	22
DL8	eQS	ALL	HIGH	1,869	36	89	21
	DK3GI	ALL	LOW	1,725	31	75	23
	DL6YK	ALL	HIGH	1,672	37	76	22
	DL2TG	ALL	HIGH	1,140	25	57	20
	DL7AXM	ALL	HIGH	780	24	39	20
	DJ5GG	15M	LOW	494	19	38	13
	DL3NSM	20M	HIGH	338	26	26	13
	DL3ZAI	ALL	HIGH	198	12	18	11
	DL1DQY	20M	HIGH	130	13	13	10
	DL8UAT	20M	LOW	56	8	8	7
	DK3RA	40M	LOW	45	3	15	3
Finland							
	OH1BOI	ALL	HIGH	128	9	16	8
(	ОН2НМВ	ALL	LOW	60	6	10	6
France							
	F6IRF	ALL	LOW	2,025	40	75	27
Hungary							

Call	Band	Power	Score	QSOs	Points	Mults
HA8VK	ALL	HIGH	6,825	66	175	39
HG8W	ALL	HIGH	378	17	27	14
Kaliningradsk						
UA2CZ	ALL	HIGH	190	11	19	10
Latvia						
YL2LY	ALL	HIGH	5,846	63	158	37
Lithuania						
LY1DR	ALL	HIGH	4,320	55	120	36
LY2OX	ALL	HIGH	1,344	30	64	21
LY2BNL	20M	LOW	25	5	5	5
Netherlands						
PAOMIR	ALL	LOW	680	26	40	17
PA3BFH	ALL	LOW	629	24	37	17
PA3FDO	ALL	HIGH	88	6	22	4
Northern Ireland						
GI4KSH	ALL	HIGH	28	4	7	4

Poland							
1 Oluna	SP5ATO	ALL	LOW	2,880	49	96	30
	SP6BAA	ALL	HIGH	1,134	25	54	21
	SP5GH	ALL	HIGH	1,026	25	54	19
	SP6IHE	ALL	LOW	527	18	31	17
	SP7BCA	ALL	HIGH	495	21	33	15
	SP9QJ	ALL	HIGH	406	19	29	14
	SP5CJQ	20M	HIGH	345	23	23	15
	SP9BRP	ALL	HIGH	312	14	26	12
	SP8BAB	20M	LOW	253	23	23	11
	SQ4NR	ALL	LOW	144	8	18	8
	SQ9FMU	15M	LOW	128	8	16	8
	SP4AVG	15M	HIGH	84	7	14	6
	SP3AOT	20M	HIGH	80	10	10	8
	SP3BGD	20M	LOW	70	10	10	7
	SP9EMI	ALL	LOW	24	3	8	3
	SP5AKG	15M	HIGH	18	3	6	3
	SP4AAZ	20M	HIGH	1	1	1	1
	SP9ADV	20M	LOW	1	1	1	1
Romania							
	YO6BHN	ALL	LOW	2,132	36	82	26
	YO8WW	ALL	HIGH	54	8	9	6
	YO8BGD	40M	HIGH	20	2	10	2
Slovakia	YO2BEH	15M	HIGH	18	3	6	3
Slovakia	OM0WR	ALL	HIGH	4,725	46	135	35
	OM8ON	ALL ALL	LOW	2,158	33	83	26
	OM4JD	ALL	HIGH	2,050	42	82	25
	OM4DN	ALL	LOW	1,232	28	56	22
	OM7RC	ALL	LOW	663	22	39	17
	OM7YC	15M	LOW	280	14	28	10
	OM7PY	20M	QRP	36	6	6	6
	OM7AT	20M	HIGH	25	5	5	5
Slovenia							
	S53AU	ALL	LOW	462	21	33	14
	S59ZZ	15M	HIGH	98	7	14	7
	S58MU	20M	HIGH	63	9	9	7
Spain							
	EA7GSU	15M	HIGH	330	15	30	11
	EA2AHZ	ALL	HIGH	286	14	22	13
	EA7CA	20M	LOW	4	2	2	2
Sweden							
	7S2E	ALL	HIGH	4,032	45	126	32
	SM6CRM	ALL	HIGH	1,323	32	63	21
	8S0W	ALL	HIGH	765	21	45	17
	SM3TLG	15M	HIGH	240	15	30	8
	SK0TM	ALL	HIGH	160	10	20	8

	SM0KV	15M	HIGH	50	5	10	5
	SM5CSS	15M	LOW	2	1	2	1
Switzerland							
	HB9IK	ALL	HIGH	2,160	39	80	27
	HB9CZF	ALL	HIGH	900	28	50	18
Ukraine							
	UT7QF	ALL	HIGH	15,872	105	256	62
	UR3IFD	ALL	LOW	4,588	58	124	37
	UR8LA	ALL	HIGH	3,672	48	108	34
	UT2UB	ALL	HIGH	2,820	40	94	30
	UW5U	ALL	LOW	2,635	43	85	31
	UU5JIB	ALL	HIGH	1,392	32	58	24
	US9QA	ALL	HIGH	1,260	33	63	20
	UY0ZG	ALL	HIGH	1,045	26	55	19
	UX1IL	ALL	LOW	520	14	40	13
	UT5UIA	ALL	HIGH	344	11	43	8
	UX0IB	15M	HIGH	198	11	22	9
	US3QW	15M	LOW	50	5	10	5
	UU2JA	20M	HIGH	48	8	8	6
Yugoslavia							
	YU7LS	15M	HIGH	456	19	38	12
	4N1JA	ALL	LOW	336	17	28	12
	YU7KM	20M	HIGH	220	20	20	11
	YT1VM	15M	HIGH	198	11	22	9
	YU1RE	40M	HIGH	140	7	35	4
NODTH							
NOKIH	<b>AMERICA</b>						
Canada	AMERICA						
	VE3DZ	ALL	LOW	9,024	73	192	47
		ALL ALL	LOW HIGH	9,024 7,942	73 57	192 209	47 38
	VE3DZ						
	VE3DZ VE1ZJ	ALL	HIGH	7,942	57	209	38
	VE3DZ VE1ZJ VE4IM	ALL ALL	HIGH HIGH	7,942 6,734	57 57	209 182	38 37
	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX	ALL ALL ALL	HIGH HIGH LOW	7,942 6,734 3,475	57 57 37	209 182 139	38 37 25
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX	ALL ALL ALL	HIGH HIGH LOW	7,942 6,734 3,475	57 57 37	209 182 139	38 37 25
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX	ALL ALL ALL ALL	HIGH HIGH LOW HIGH	7,942 6,734 3,475 196	57 57 37 8	209 182 139 28	38 37 25 7
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX	ALL ALL ALL ALL	HIGH HIGH LOW HIGH	7,942 6,734 3,475 196	57 57 37 8	209 182 139 28	38 37 25 7
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX SS N6RO KU1CW	ALL ALL ALL ALL ALL ALL	HIGH HIGH LOW HIGH HIGH	7,942 6,734 3,475 196 32,472 12,740	57 57 37 8 133 91	209 182 139 28 451 245	38 37 25 7 7 72 52
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX SS N6RO KU1CW K3ZO	ALL ALL ALL ALL ALL ALL ALL	HIGH HIGH LOW HIGH HIGH HIGH	7,942 6,734 3,475 196 32,472 12,740 12,005	57 57 37 8 133 91 88	209 182 139 28 451 245 245	38 37 25 7 72 52 49
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX S N6RO KU1CW K3ZO W6RLL	ALL ALL ALL ALL ALL ALL ALL ALL ALL	HIGH HIGH LOW HIGH HIGH HIGH HIGH	7,942 6,734 3,475 196 32,472 12,740 12,005 5,530	57 57 37 8 133 91 88 53	209 182 139 28 451 245 245 158	38 37 25 7 72 52 49 35
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX SS N6RO KU1CW K3ZO W6RLL N6ZZ	ALL	HIGH HIGH LOW HIGH HIGH HIGH HIGH HIGH	7,942 6,734 3,475 196 32,472 12,740 12,005 5,530 4,726	57 57 37 8 133 91 88 53 54	209 182 139 28 451 245 245 158 139	38 37 25 7 7 52 49 35 34
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX SS N6RO KU1CW K3ZO W6RLL N6ZZ K3NK	ALL	HIGH HIGH LOW HIGH HIGH HIGH HIGH HIGH LOW	7,942 6,734 3,475 196 32,472 12,740 12,005 5,530 4,726 4,046	57 57 37 8 133 91 88 53 54 57	209 182 139 28 451 245 245 158 139 119	38 37 25 7 72 52 49 35 34 34
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX  S N6RO KU1CW K3ZO W6RLL N6ZZ K3NK W3BP W2OO N4PSE	ALL	HIGH HIGH LOW HIGH HIGH HIGH HIGH HIGH LOW HIGH	7,942 6,734 3,475 196 32,472 12,740 12,005 5,530 4,726 4,046 3,266	57 57 37 8 133 91 88 53 54 57 38 37 26	209 182 139 28 451 245 245 158 139 119 142 113 70	38 37 25 7 72 52 49 35 34 34 23 25 15
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX  S N6RO KU1CW K3ZO W6RLL N6ZZ K3NK W3BP W2OO	ALL	HIGH HIGH LOW HIGH HIGH HIGH HIGH LOW HIGH HIGH	7,942 6,734 3,475 196 32,472 12,740 12,005 5,530 4,726 4,046 3,266 2,825	57 57 37 8 133 91 88 53 54 57 38 37	209 182 139 28 451 245 245 158 139 119 142 113	38 37 25 7 72 52 49 35 34 34 23
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX  S N6RO KU1CW K3ZO W6RLL N6ZZ K3NK W3BP W2OO N4PSE	ALL	HIGH HIGH LOW HIGH HIGH HIGH HIGH LOW HIGH HIGH	7,942 6,734 3,475 196 32,472 12,740 12,005 5,530 4,726 4,046 3,266 2,825 1,050	57 57 37 8 133 91 88 53 54 57 38 37 26	209 182 139 28 451 245 245 158 139 119 142 113 70	38 37 25 7 72 52 49 35 34 34 23 25 15
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX  S N6RO KU1CW K3ZO W6RLL N6ZZ K3NK W3BP W2OO N4PSE K9ALP W1END KC8LTL	ALL	HIGH HIGH LOW HIGH HIGH HIGH HIGH HIGH LOW HIGH LOW HIGH	7,942 6,734 3,475 196 32,472 12,740 12,005 5,530 4,726 4,046 3,266 2,825 1,050 432	57 57 37 8 133 91 88 53 54 57 38 37 26 18	209 182 139 28 451 245 245 158 139 119 142 113 70 36	38 37 25 7 72 52 49 35 34 34 23 25 15 12
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX  S N6RO KU1CW K3ZO W6RLL N6ZZ K3NK W3BP W2OO N4PSE K9ALP W1END KC8LTL KOUK	ALL	HIGH HIGH LOW HIGH HIGH HIGH HIGH LOW HIGH LOW HIGH LOW HIGH	7,942 6,734 3,475 196 32,472 12,740 12,005 5,530 4,726 4,046 3,266 2,825 1,050 432 273	57 57 37 8 133 91 88 53 54 57 38 37 26 18	209 182 139 28 451 245 245 158 139 119 142 113 70 36 39	38 37 25 7 72 52 49 35 34 23 25 15 12
Canada	VE3DZ VE1ZJ VE4IM VE7ASK VA3IX  S N6RO KU1CW K3ZO W6RLL N6ZZ K3NK W3BP W2OO N4PSE K9ALP W1END KC8LTL	ALL	HIGH HIGH LOW HIGH HIGH HIGH HIGH LOW HIGH LOW HIGH LOW HIGH LOW ORP	7,942 6,734 3,475 196 32,472 12,740 12,005 5,530 4,726 4,046 3,266 2,825 1,050 432 273 264	57 57 37 8 133 91 88 53 54 57 38 37 26 18 13	209 182 139 28 451 245 245 158 139 119 142 113 70 36 39 33	38 37 25 7 72 52 49 35 34 34 23 25 15 12 7 8

	WOTH!		••		• • •			_
	K3TW	40M	HIGH		200	8	40	5
	W7KPL	20M	HIGH		20	5	5	4
COLUMN	W1HD0	20M	HIGH		1	1	1	1
SOUTH	AMERICA							
Argentina								
	LU1EWL	ALL	HIGH		3,159	51	117	27
Brazil								
	PY2NA	ALL	LOW		40	5	8	5
	PY7OJ	15M	LOW		24	4	8	3
	PY4FQ	ALL	LOW		20	4	5	4
Multi-opera	tor, One Transi	mitter						
	UT7L	ALL	HIGH		3,638	49	<i>107</i>	34
	OM3KZA	ALL	HIGH		2,378	43	82	29
	RW9C	ALL	HIGH		1,155	28	55	21
	HA1CW	ALL	HIGH		680	24	40	17
	RK3RWL	ALL	HIGH		98	7	14	7
	SP9KRT	ALL	LOW		5	1	5	1
Multi-Opera	tor, Multi-Trai	nsmitter						
	ZL6QH	ALL	HIGH		7,106,666	2315	6223	1142
	R1ANC	ALL	LOW		1,472	29	64	23
Shortwave Lis	stener							
U	A0-107-181	ALL	N/a		9,840	79	205	48
Y	Z1KVA-SWL	ALL	N/a		1,197	31	57	21
Ų	JA3-155-28	ALL	N/a		738	26	41	18
	UA1-173-1	ALL	N/a		624	24	39	16
Ų	JA3-155-75	ALL	N/a		528	19	33	16
	JA5-3278	ALL	N/a		481	14	137	13
U	A3-170-847	ALL	N/a		160	11	16	10
	OK2-9329	ALL	N/a		77	8	11	7
Check Logs								
DF3OL	DF6LQ	<b>DL1DTC</b>	DL2HWI	DL2SDQ	DL7VMM	K9GY	LA1YE	
OH7NRW	<b>OK1DEC</b>	PA0TON	PA5TT	PY7GK	RA9AC	SP2AVE	SP9SO	$oldsymbol{U}$
UA4NF	ZL2ALJ							
Multi-Op Sto	ation Operator.	S						
UT7L	UR4LTX, UZ	X0LL						
OM3KZA	OM3CUG, O	OM3TYC, OM3TI	PN, OM6FM					
RW9C	RW9CF, RA	9DK						
HA1CW	HA1CW, HC	G5OYL						
RK3RWL	RN3RC, RU.	3RQ						
SP9KRT	SP9ADU, SF	P9-1753						
ZL6QH	ZL2BSJ, ZL	2III(DK1II), ZL1	BYZ, ZL1AZE					

RIANC RWIAI, UAIPAC

E		Asia Top 10						
UT7QF	ALL	HIGH	15,872	UAOLCZ	ALL	HIGH	11,220	
HA8VK	ALL	HIGH	6,825	JI3BFC	ALL	HIGH	7,098	
RN6BN	ALL	HIGH	6,437	RA9MA	ALL	HIGH	6,794	
YL2LY	ALL	HIGH	5,846	HL5UOG	ALL	HIGH	6,280	
OZ5DX	ALL	HIGH	5,250	UA9JKA	ALL	HIGH	5,080	
OM0WR	ALL	HIGH	4,725	UAOSAD	ALL	LOW	4,000	
UR3IFD	ALL	LOW	4,588	UN5J	ALL	HIGH	3,432	
LY1DR	ALL	HIGH	4,320	UN6P	ALL	HIGH	2,184	
7S2E	ALL	HIGH	4,032	JA7ARW	ALL	LOW	2,106	
UR8LA	ALL	HIGH	3,672	JA3YPL	ALL	LOW	1,976	
North Ame	erica T	op 10		South America Top 10				
N6RO	ALL	HIGH	32,472	LU1EWL	ALL	HIGH	3,159	
KU1CW	ALL	HIGH	12,740	PY2NA	ALL	LOW	40	
K3ZO	ALL	HIGH	12,005	PY7OJ	15M	LOW	24	
VE3DZ	ALL	LOW	9,024	PY4FQ	ALL	LOW	20	
VE1ZJ	ALL	HIGH	7,942	Africa Top 10				
VE4IM	ALL	HIGH	6,734	No Entrants				
W6RLL	ALL	HIGH	5,530					
N6ZZ	ALL	HIGH	4,726					
K3NK	ALL	LOW	4,046					
VE7ASK	ALL	LOW	3,475					
Oceani	а Тор	10		Non-Oceania Top 10				
KH6ND	ALL	HIGH	4,449,375	N6RO	ALL	HIGH	32,472	
VK4EMM	ALL	HIGH	4,205,320	UT7QF	ALL	HIGH	15,872	
ZL1G0	ALL	HIGH	2,431,968	KU1CW	ALL	HIGH	12,740	
VK2AYD	ALL	LOW	2,168,947	K3ZO	ALL	HIGH	12,005	
ZL2BR	ALL	LOW	2,127,066	UAOLCZ	ALL	HIGH	11,220	
VK4DX	ALL	LOW	1,469,320	VE3DZ	ALL	LOW	9,024	
VK5GN	ALL	HIGH	1,250,044	VE1ZJ	ALL	HIGH	7,942	
ZL2AZ	ALL	HIGH	1,134,980	JI3BFC	ALL	HIGH	7,098	
ZL2CD	ALL	HIGH	617,391	HA8VK	ALL	HIGH	6,825	
3D2/W7DRA	1 ALL	LOW	582,015	RA9MA	ALL	HIGH	6,794	

## **Sangster Shield Results 2003**

Logs were received from 23 operators, which represents over 75% of the 30 stations that were active. Although some stations were present for a very short period many were in branches that were all adequately covered by other callsigns.

The minimum activity rule 13 was applied in respect of four branches for which only one or 2 contacts were recorded during the entire contest & for which no logs have been received. I have deleted only the multipliers and not the contacts on his occasion. I would like to make it clear that this rule was not intended to discourage any operator from participating for short periods, it was just to ensure fairness in my scoring method. Although the rule states that contacts will also be deleted I believe this is harsh when there is no sign of arranged contacts or favouritism.

This action has affected the order of place winners and leaves all of the front running contestants with 17 branches.

Congratulations to Paul ZL1PC in winning the Sangster Shield - ZL1PCs 3rd win from 1999.

Jack ZL1AJ 2nd & Ron ZL1TW 3rd were both close with DX points swinging it in Jack's favour. Both are first time placegetters - congratulations.

David ZL1DMA has taken the Transistor Trophy after a couple of years without entrants. Well done David - the only downside is that you cannot defend your title next year!

The Arthur Stevens South Island Trophy passes to Roger ZL2RX branch 26 Nelson - Great score too.

Whangarei Branch 28 takes the Branch award for their top 3 logs out of a total of 6

received. - Well done. No other branch qualified with 3 logs this year, although 3

stations were worked at branch 29.

The 18 qualifying active Branches were - 3,10,12,13,17,20,26,28,29,40,42,45,47,50,

65,71,78,86.

There were more VKs about this year and it is pleasing to see the DX contacts spread

over many entries.

I did not get on myself this year but the task of checking logs is a pleasure for this

contest where all entrants play fair & even mark & deduct duplicate and uncertain

contacts from their results.

Comments received were: -

• The ZL3s & 4s must be taking power savings to extreme.

• Where was Jumbo ZL1HV?

• ZL1 reported good conditions except Sunday's last period "sky" was changeable.

ZL2 reported noise build up each night.

• A bit tuff missing the Blues rugby game!

• Peter ZL2AZ favours a single night format.

Search for the Sangster & Transistor Trophy- Once again I am repeating the

Contest team's request for the whereabouts of the Sangster Shield and the Transistor

Trophy? I have received only one communication about this from John ZL2ADN but

no leads as to location.

Glenn ZL2KZ

No Station Name 0-5w

0-5w 6w+ DX Brs Pwr Total Br Equipment

Sangster Shield - Open Section

32

1	ZL1PC	Paul Slako	223	3	3	17	5w	19516	28	Icom IC701, full wave loop
2	ZL1AJ	Jack Culloty	205	1	3	17	5w	17952	40	K'wood TS870, 1/2w dip, P&T
key	I	j								, 1,
3	ZL1TW	Ron Willcocks	210	4	0	17	5w	17918	28	Elecraft K2, 1/2w dipole
4	ZL1PZ	Ian Sexton	207	2	1	17	5w	17799		7C5 valve from TS830, Zepp
5	ZL1DD	Barry Kirkwood		3	1	17	5w	17646		Yaesu FT1000D TX, 18m
-	th dip	Dully Klikwood	203	5	1	1 /	<i>5</i> <b>w</b>	17040	00	ruesur rroods rx, rom
6		John Balsillie	206	3	0	17	5w	17561	65	Kenwood TS120v, dipole
-				2	1					
7	ZL2AZ	Peter Lake	199	2	1	17	5w	17119	42	Yaesu FT817, o/w fed 1/2w
Inv	<b>V</b>		1		_			3.5.	~	
8		<b>ZL1AIH</b>			Ken McCormack 191					
			1	0	17		5w	16252	271	Elecraft K2,
.1	14 - 1 4 -	. 1 1	_	v			0 11	10202	- / -	Electuit 112,
ae		p-load vert								
9		Terry East	179	2	1	17	5w	15419	17	Kenwood TS120V, 80m
dip	ole									
11	ZL1WI	Roy Milam	171	1	0	17	5w	14552	3	H brew solid state Xcvr, ½ w
dip	)	-								
12	<b>ZL1ANM</b>	Neil Barnett	167	2	0	17	5w	14229	29	FT-897, Atari terminal, 40'end
fed										,
	ZL2BIF	Sidney McKain	165	0	1	16	2w	13360	47	Ten Tec Argonaut 509, long
wii		2- <b>4</b>			_					
	-	Stephen Pearce	147	0	3	17	4w	13005	28	Elecraft K2, multiband dipole
		Charley Vial	149	1	1	17	4w	12852		Heathkit HW9, 80m dipole
		Bill Luscombe	156	1	0	16	5w	12496		K'wood TS120V, Ext Doub
Ze		Dill Euscomoc	130	1	U	10	<i>3</i> w	12470	чЭ .	R WOOd 15120 V, Ext Dodo
		Ralph Sutton	118	3	0	17	5w	10081	50	Kenwood TS120V, Dipole
	ZL1UD	Tony Case	70	0	0	11	5w	3850		Yaesu FT757GX, 80/40
		Tony Case	70	U	U	11	3W	3030	12	1 aesu F 1 /3/GA, 80/40
	pole	D.C		60	0	0	1.0	5 2000	20	V ETC757CVII 1/2
	ZL1VJ	B Somerville-Ry	an	60	0	0	10	5W 3000	J 28	Yaesu FTG757GXII, 1/2w
mu	ltiband									
		ens South Island					_	1.500.6	•	T. P. P. 101
		Roger Wincer	175	3	1	17	5w	15096	26	Yaesu FT101, inv L up 7m,
bu	g key									
Tr		rophy - Licensed			•					
	ZL1DMA	D McCluggage	45	0	0	13	5w	2925 2	8Elec	craft K1, Dipole
Ch	eck Logs									
	ZL1BHQ	John Powell	Check				4w			TS-440AT, invV 50ft up
	ZL1DAC	C.M.G. Moates	Check	Log	-thanl	ks	10w		28	TS50, Gap Voyager vertical
	ZL1WW	Tom Spackman	Check	Log	-thanl	ks	2w		12	
				_						

<sup>\*</sup> Arthur Stevens winner is also a valid entrant to the open section