

# Results of the 2010 CQ WW VHF Contest

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**W**hat is the purpose of a VHF Contest? That is a thread that drew many comments from the Contest Quahogs of Rhode Island (CQRI) on the infamous Quahog Reflector following the 2010 CQ WW VHF Contest of July 17–18. Here's a synopsis of some major points of focus.

## Why Contest?

VHF contesting is somewhat different from that on HF in that a major purpose is to simply provide QSOs. Selecting the right band mode, one can generate a QSO on HF almost any time of day or night. Not so on VHF. In most areas there are long lapses of dead silence. The higher up in frequency you go, the more true this is. On 6 meters we tend to look for openings over longer distances. It's the natural tendency to engage in DXing. Given reasonable propagation conditions, the VHF contest enhances the possibility of making contacts, as everyone is alerted to be on the air at the same time.

The term *contest*, however, implies competition. The CQ WW VHF Contest does indeed promote competition. The true dyed-in-the-wool contestor ekes out every QSO possible utilizing all the skills that have been learned in previous contests. Maximizing your score is the objective. In that respect these folks are quite similar to their HF brethren. Their efforts are applauded and sometimes result in winning certificates. Their diligent efforts help the QSO total for everyone else.

However, especially in the CQ WW VHF Contest, there are many more casual entries from those who just want to make a few contacts. Being a 6- and 2-meter only contest emphasizes that point. Thank goodness for their activity, as they really fuel the activity engine for the more serious-minded competitors.

We should also not forget the entrants who find joy in combining VHF contesting with the outdoors. The hilltoppers and other portable stations, often located on mountaintops, find contesting and communing with nature a healthy mix. Rovers do likewise while generating mega-Qs in the process.

I'm sure we haven't covered all the motivations, but those mentioned all are good reasons why VHF contesting is such fun for so many folks.

The CQ version of VHF contesting meets all these criteria and more. First of all, it is the only real *worldwide* VHF contest. It carries a worldwide recognizable name—CQ WW. This looms large on HF and is rapidly becoming so on VHF. To live up to that name, the CQ WW VHF Contest must meet expectations of excellence in every regard. This includes timely contest announcements in several languages available online, timely accurate results reported in *CQ*, certificates from the previous year received prior to the next competition, and most important, contest rules devoid of bureaucratic hurdles to modify – which segues us to a brief discussion of the rules.

## The Rules

The present version of the CQ-sponsored VHF Contest, now in its second decade, has been marked by relative consistency in

its rules. The only changes instituted under this writer's watch have been the addition of the "hilltopper" category to fill a needed niche and this year's club competition. Both of these have proven popular. Further, rovers have retained the so-called "original" rover rules, which—this being only a two-band affair—has avoided any controversy over any perceived abuses. However, we have now come to a crossroad that demands a modification of the rules to keep the contest in harmony with present-day



JA6WFM used this big 10-element Yagi on 6 meters to again lead all scorers in Japan. Besides working JAs, Hiro also worked HS, XV9, BM, and VR2.



This is precious. Ten-year-old JF1UCV/2 operated in the Hilltopper category from the mid-point of famous Mt. Fuji utilizing available shelter. Yoshiki later rejoined his family for camping at the more temperate 3000-foot level. (Photo by 7L1FPU)

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Here's a unique squirrel's view of two KP6KQ stacked loops at W4VHF. Ted, W4VHF, and Gary, K4MQG, teamed up to multi-op at an elevation of 3200 feet in southwestern Virginia (EM96).

## TOP SCORES WORLD

All Band		
OK1DC	.....36,472	HA2VR/P .....
EA2TO/1	.....26,384	JF1UCV/2.....2,667
TA2AD	.....22,896	
DL2OM	.....19,488	QRP
UY1HY	.....17,622	YU2DX .....6,256

6 Meters		Rover
EA3AKY	.....45,619	YO4RYU/MM ..97,365
VE3MMQ	.....27,548	VE3CRU.....19,760
CT3FQ	.....18,746	US3ITU .....17,248

2 Meters		Multi-Op
DK5DQ	.....19,686	UT1I.....162,162
HA6VW/P	.....16,512	UR7D .....141,576
E22HUV	.....6,462	OK1KIM.....87,904

Hilltopper		
E22HMR/P	.....5,902	UT7E.....29,988

## USA

All Band		
K2DRH	.....163,415	WA4A .....1,664
K1TEO	.....110,664	QRP
W1XX	.....79,772	KA1LMR.....35,984
W4RX	.....58,338	K9AKS.....11,552
WA2FGK	.....57,378	WB2SIH .....6,624

6 Meters		Rover
K1TOL	.....80,106	WB8BZK .....55,993
K2PLF	.....44,577	K9JK.....27,685
W2MMD	.....43,066	K9ILT.....23,166

2 Meters		Multi-Op
W3PAW	.....4,980	K5QE.....202,224
K1ZE	.....4,128	KA2LIM .....103,016

Hilltopper		
W9SZ	.....2,240	W4MYA .....64,155

operating techniques —namely, single operator “assisted.”

Especially in HF DX contests, with thousands of entrants, the “assisted” categories exist for single ops using the web-based “cluster” or similar packet-based systems that spot potential contacts. With far fewer entrants on VHF, we have avoided such category proliferation. To date, any such assistance in the CQ WW VHF Contest placed the log in the multi-operator category. These 2010 results, however, reveal a startling figure: The number of such entries exploded with fully one-third of all multi entries really being what could be called single-op assisted. This is a significant break from previous years when only a handful of stations made use of cluster spots.

Many casual operators in this contest have no doubt ventured into making assisted contacts not knowing initially that this placed them in the multi category. After all, this may be their normal modus operandi. Why punish them by placing them in competition with stations that are truly multi-operator? Further, VHF usually demands antennas with narrow beamwidths which must be pointed directly at each other to make the contact. This capability is enhanced by utilizing information posted on the cluster with logging programs that simply allow a mouse click to find the contact. So how do we remedy this situation?

Allowing passive assistance for single ops would keep the contest current with today's common operating practices. This is not breaking new ground in the CQ WW universe of contests. The CQ World-Wide WPX RTTY Contest Rule IV (d) reads in part: “QSO alerting assistance is permitted in ALL categories.” The 2011 CQ WW VHF Contest rules will reflect this change, allowing passive assistance with specifics detailed in the contest announcement in the June issue of *CQ*. Unlike HF contests, its impact on VHF contesting probably will be relatively minor.

We think this will not only keep the CQ WW VHF Contest up-to-date with present technology, but also put more QSOs in your log. This has to be a good thing. We hope you approve.

## 2010 Contest Analysis

Keeping with past tradition, comments on the Quahog Reflector tend to focus on the outstanding scoring achievements that might otherwise be overlooked. Thanks to contest historian and longtime QRP advocate Curt Roseman, K9AKS, for posting these telling observations:

As usual, QRP operations were popular in a number of different countries around the world, but regional and national record scores generally were not attained this time. However, two scores do stand out in the QRP Hilltopper category:

HA2VR/P and K1ZE, each over 4K points, posting the 6th and 7th all-time highest scores ever in that time-limited category.

The 2-meter-only category continued to be very popular in Ukraine, European Russia, and Thailand. UT5JCW (6K) posted the highest score ever from Ukraine, while RU3GX (1.8K) did the same from Russia. DK2DQ again dominated the 2-meter EU scores with 29K points. Across the Atlantic in North America, in contrast, activity in the 2-meter category was at a bare minimum. Throughout the history of this contest, few Americans and Canadians have been able to suppress the temptation to operate 6 meters.

This is illustrated by the remarkable consistency of K1TOL's winning scores

## QSO LEADERS BY BAND WORLD

Single-Op 50 MHz	Multi-Op 50 MHz
EA3AKY .....	343
VE3MMQ .....	284
CT3FQ .....	182
144 MHz	144 MHz
E22HUV .....	359
HS4DDQ .....	298
HS8LUR .....	283

## USA

Single-Op 50 MHz	Multi-Op 50 MHz
K1TOL .....	507
K2DRH.....463	K5QE .....
K1TEO .....	N3MK .....
144 MHz	144 MHz
K2DRH.....171	K5QE .....
K1TEO .....	W4MW .....
K3CB .....	KA2LIM .....

## GRID MULTIPLIER LEADERS BY BAND WORLD

Single-Op 50 MHz	Multi-Op 50 MHz
EA3AKY .....	133
CT3FQ .....	103
VE3MMQ .....	97
144 MHz	144 MHz
DK5DQ .....	51
HA6VW/P .....	43
UT5JCW .....	43

## USA

Single-Op 50 MHz	Multi-Op 50 MHz
K1TOL .....	158
K2DRH .....	155
K2PLF .....	127
144 MHz	144 MHz
K2DRH .....	48
WA2FGK .....	41
K1TEO .....	35

over the past six years, ranging from 62K to 91K, except for the block-buster year of 2006 when Lefty scored 358K. This year's 80K was in the middle of that range. Also this time the second and third best scores ever from Africa were posted on 6 meters: CT3FQ with 19K from Madeira and EA8AQV at 11K from the Canary Islands —both great QTHs for fabulous 6-meter propagation.

In general, worldwide, scores in the all-band category were not at record-breaking levels. However, K7ULS broke the 7-band record from Utah with 34K points. OK1DC posted the 4th highest score in contest history from Europe with 36K.

The multi-operator category produced some notable performances. UT1I's winning score of 162K was the third highest ever from Europe. UR7D worked 204 grids, the second highest total ever from Europe, and KA2LIM, with 103K points, broke their own record for the U.S. 2nd call area. K5QE's 264 total grids worked was their highest, except for 2006, and the second highest number any station has ever worked, again except for 2006. Isn't it time for another 2006-type year propagation-wise?

In the on-going worldwide effort for more countries to be QRV on 6 meters, the contest prize was the log from HS0AC, club station for the Radio Society of Thailand. Receiving special one-time authorization to operate the contest, this was the first 6-meter operation from Thailand, resulting in 173 Qs in 34 grids throughout Southeast Asia. FB! A first-time-ever log was received from Vietnam (XV9DT). A harbinger of things to come was the 10 log entries from Japan, following a contest announcement in JA-CQ Magazine. CQ WW VHF surges on worldwide. Check the leader boxes and the scores for *all* the contest highlights.

### Expanded CQ WW VHF Contest Results

For a listing of the ops and grids activated by the rover stations in the 2010 contest, plus the operators of the multi stations, and "Scatter" comments, go to the contest website at <[www.cqww-vhf.com](http://www.cqww-vhf.com)>, select "Latest published results," and then "Expanded Results" for the year 2010. You can also go to the CQ website at <[www.cq-amateur-radio.com](http://www.cq-amateur-radio.com)> and look in the "Contests" section.

### Mega-thanks

In just slightly above-average conditions, the 700 log entries were up a record high 18% over the previous year. Clearly the CQ WW VHF Contest is well accepted by the VHF contesting community. Thanks to these amateurs and others unnamed who helped to publicize the contest overseas in advance and/or assist in Cabrillo log submissions: 7L1FPU, DL8EBW, E21EIC, EA3ALV, JA7QVI, LU2UF, PY2ZX, RW6CT, SM3CER, and UT1IC. The log-checking program was run by N8BJQ. K9JK entered all the paper logs using the WA7BNM on-line CabForms, as did many contest entrants. K9JK also prepared all the 2009 certificates for mailing for receipt before the 2010 contest. The log entry robot ran flawlessly thanks to N5KO. The contest website ([www.cqww-vhf.com](http://www.cqww-vhf.com)) updates are done by W1PN. Contest records are maintained by K9AKS. Thank you all!

Statistically speaking, the total number of stations reported active was 11,484; total of 55,663 QSOs claimed; total number of grids activated 954. This represents an amazing overall activity increase of 20% over previous highs. CQ WW VHF continues to get better and better.

### 2011 Contest

Mark your calendar for the 2011 CQ WW VHF Contest, July 16–17. The full announcement will appear in the June issue of CQ, on the CQ website ([www.cq-amateur-radio.com](http://www.cq-amateur-radio.com)), and on the CQ WW VHF Contest website ([www.cqww-vhf.com](http://www.cqww-vhf.com)). A summary of the rules will also appear in various languages on many DX contesting websites. CU all then!

73, John, W1XX

### CLUB COMPETITION

(Minimum of three entries required for listing)

#### UNITED STATES

Club Name	# Entries	Score
Potomac Valley Radio Club .....	22	486,341
Society of Midwest Contesters .....	20	304,286
Pacific Northwest VHF Society .....	18	249,938
North East Weak Signal Group.....	4	134,824
Carolina DX Association .....	7	109,258
Badger Contesters.....	9	96,619
Yankee Clipper Contest Club .....	9	89,964
CTRI Contest Group .....	4	82,491
Grand Mesa Contesters of Colorado .....	4	78,779
Florida Contest Group .....	8	76,404
Eastern Connecticut Amateur Radio Assn. ....	3	55,238
Frankford Radio Club.....	4	27,375
South East Contest Club .....	6	26,750
Alabama Contest Group .....	6	20,410
Mad River Radio Club.....	3	13,230
Western New York DX Assn. ....	3	8,519
Northern California Contest Club.....	5	7,937
Tennessee Contest Group.....	7	7,528
Portage County Amateur Radio Service.....	6	5,314
Stoned Monkey VHF ARC .....	3	4,533
Raritan Bay Radio Amateurs .....	3	2,446

#### WORLD

Ukrainian VHF International Contest Club .....	31	185,799
Contest Club Ontario .....	13	59,521
Black Sea Contest Club .....	6	52,841
Rhein Ruhr DX Assnn.....	1	40,768
Maritime Contest Club .....	4	24,279
Latvian Contest Club .....	5	16,409
Gyalogradio Club .....	3	4,890
Ukrainian Contest Club .....	4	3,375
LU Contest Group .....	9	985
Siam DX Group.....	5	880

Number/letter groups after call letters denote the following:  
 Class (A = all band, 6 = 6 meters, 2 = 2 meters, Q = QRP, Q\* = QRP portable hilltopper, R = rover, M = multi-operator),  
 Final Score, Number of QSOs, Number of grid locators,  
 State/Province (USA/Canada only), Grid Locator or Number  
 of grids activated (rover only). Rover scores for USA are listed  
 separately. Certificate winners are listed in **boldface**.

2010 VHF RESULTS

**NORTH AMERICA**

**UNITED STATES**

K1TEO	A	110,664	539	159	CT	FN31	WA2EMF	A	90	10	6	SC	EM94	W7RV	M	3,132	71	36	AZ	DM43	VE3KZ	A	8,512	115	64	ON	FN03	
W1WX	A	79,772	452	148	RI	FN41	K4KAY	A	63	8	6	NC	EM95	W7RN	M	1,809	55	27	NW	DN09	VE3VCF	A	200	18	10	ON	FN12	
W3EP	A	44,888	343	124	CT	FN31	WA4NT	A	54	7	6	NC	FM05	K7TJ	M	1,053	37	27	WA	DN18	VE3MMQ	B	27,548	284	97	ON	FN14	
N8RA	A	37,022	285	107	CT	FN31	KG4QEN	A	12	4	2	NC	EM95						VE3EJ	D	2,244	66	34	ON	FN03			
W2DAN	A	18,834	219	73	RI	FN41	W4SO	G	13,275	177	75	FL	EL96	K8WFN	A	13,578	147	73	OH	EN90	VE3RCN	A	6	1040	40	26	ON	FN03
W1RZF	A	12,104	143	68	MA	FN42	K4SN	G	10,824	164	66	FL	EL96	K8CC	A	7,672	117	56	MI	EN82	VE3GFN	G	667	29	23	ON	FN03	
A0ADX	A	8,640	138	54	MA	FN41	N4LR	G	10,065	165	61	GA	EM73	N8LJO	A	5,529	79	57	MI	EN56	VE3UJT	D	187	17	22	ON	FN04	
K1AR	A	8,568	131	63	MA	FN42	N4PN	G	7,137	117	61	GA	EM82	W8KEN	A	3,605	82	35	OH	EN91	VE30BU	G	100	10	10	ON	FN03	
N10RK	A	6,250	100	50	CT	FN31	K9IL	G	6,897	121	57	TN	EM56	K8B8U	A	2,924	75	34	MI	EN71	VA3PC	G	6	80	10	8	ON	FN06
K1VUT	A	5,831	107	49	MA	FN41	N4NX	G	5,886	109	54	GA	EM84	K8TX8	A	1,953	51	31	MI	EN82	VE33TLT	G	286	22	13	ON	FN03	
K1BJDX	A	4,280	90	40	CT	FN41	N4BP	G	4,704	98	48	FL	EL96	K8DXR	A	1,344	42	28	OH	EN90	VE3CWQ	G	132	12	11	ON	FN02	
W1DYJ	A	3,003	64	39	MA	FN42	K4OMG	G	4,144	112	37	TN	EM66	K8AB	A	1,260	47	21	OH	EN91	VA3RKM	Q	3	3	1	ON	FN25	
K3IU	A	1,972	67	29	RI	FN41	WX4MM	G	3,744	96	39	AL	EM72	W8KNO	A	936	33	24	OH	EN91	VE3MSA	M	15,876	158	84	ON	FN05	
N1VV	A	1,944	48	36	ME	FN43	KUJE	G	3,192	76	42	GA	EM72	W82DFC	A	592	34	16	OH	EN91	VE3SH	M	1,829	44	31	ON	EN92	
K1CM1	A	1,914	50	33	MA	FN51	NU4Y	G	2,849	77	37	FL	EM90	W8IDM	A	496	26	14	OH	EN91	VE3CRU	R	19,760	135	104	7		
KK1X	A	1,560	53	26	MA	FN42	W4PV	G	2,016	63	32	TN	EM84	NX8G	A	248	20	8	OH	EN90								
K1BMA1	A	870	38	15	RI	FN41	W6UB	G	1,995	57	35	TN	EM75	K8WW	G	4,752	99	48	OH	EN81	VE4EAR	G	2,552	58	44	MB	EN19	
W1PN	A	595	32	17	RI	FN41	N4ZQ	G	1,914	58	33	FL	EL88	K8B8UJZ	G	2,812	74	38	OH	EN91	VE4KX	G	1,715	49	35	MB	E000	
K1AC1	A	480	23	20	ME	FN54	K3KO	G	1,770	59	30	NC	FM06	N8II	G	1,682	58	29	WV	FM19								
K1BT0B	A	275	20	11	NH	FN42	K4RF	G	1,656	69	24	AL	EM64	N8BQJ	G	957	33	29	OH	EN80	VE6CPP	G	42	7	6	AB	DN39	
W1WIU	A	208	20	8	RI	FN41	N2WN	G	1,219	53	23	TN	EM86	W8LCD	G	656	41	16	OH	EN91								
K1NP7	A	125	15	5	RI	FN41	AB4SF	G	1,176	42	28	VA	FM17	WT8E	G	546	26	21	OH	EN89	VE7DXG	A	16,077	176	69	BC	CN88	
K1T0L	G	80,168	507	158	ME	FN44	KM4H	G	1,080	45	24	TN	EM75	K9YTO	G	509	25	20	MI	EN82	VE7DAY	A	1,764	54	28	BC	COT0	
K1IM1	G	6,355	105	51	ME	FN53	N4NM	G	947	47	21	AL	EM64	N8PPF	G	192	16	12	OH	EN80	VE7WW	A	18	6	2	BC	C090	
(Op: NACW)																												
K1MVM	G	1,856	58	32	CT	FN31	W4HRC	G	888	37	24	TN	EM75	K8WW	G	4,752	99	48	OH	EN81	VE4EAR	G	2,552	58	44	MB	EN19	
K1DM	G	152	19	8	CT	FN31	W4F	G	840	24	20	VA	FM16	N8OF5/P	G	6	10	10	MI	EN82	VE4KX	G	1,715	49	35	MB	E000	
K1D1AT	G	6	80	10	8	MA	FN41	K4BAI	G	294	21	14	GA	EM72	N8OE	Q	70	14	5	OH	EN81	VE7JRX	2	12	3	BC	CN89	
K1Z4	G	4,128	84	43	CT	FN31	KH4Y	G	272	17	16	FL	EM70	W9PGW	M	2,349	60	29	MI	EN82	VE7JN1	2	12	3	BC	C090		
A1AH	G	4,020	24	13	ME	FN32	WB4K	G	220	22	10	TN	EM66	K9GZ	M	247	19	13	OH	EN80	VE6ZX	G	6,322	109	58	NB	FN65	
N1P1W	G	312	26	8	MA	FN42	KO4M0Y	G	180	15	12	AL	EM62	K8DNZG	M	96	12	8	OH	EN90	VE5M9Y	M	6,4641	91	51	NB	FN75	
W1W0H	G	306	17	9	CT	FN31	WA4JQS	G	176	16	11	GA	EM82	A8A8L	M	4	2	2	OH	EN79	VE2PJU/VE9	M	108	12	9	BC	FN72	
(Op: KB1STT)																												
K1A1MR	Q	35,984	302	104	NH	FN43	N4DTF	G	110	11	10	TN	EM55	K9PQA	A	31,185	230	105	WI	EM63						MEXICO		
N2ZG	A	40	10	4	CT	FN31	K5VZG	G	80	10	8	TN	EM56	W9GKA	A	13,725	162	75	IL	EM58						DL95		
K1B1DF	M	46,830	340	105	CT	FN41	N4IJ5	G	15	5	3	KY	EM79	N9LB	A	6,780	98	60	WI	EM61	XE2NS	A	5,252	100	52	DL95		
N1JEF	M	20,737	206	89	VT	FN44	K4PG	G	8	4	2	FL	EL96	K9UVY	A	3,696	69	48	IL	EM58	XE2MVS	A	234	17	13			
NE1B	M	13,104	177	63	NH	FN42	WA4A	Q*	1,664	45	26	VA	EM96	N1T9E	A	3,240	70	36	IL	EM52	XE2WWB	M	14,141	179	79	BC	EL06	
WA1Z	M	2,065	59	35	NH	FN42	N9T2L	Q*	294	18	14	KY	EM78	W96A	A	3,120	73	30	WI	EM53	XE1GZU	M	209	19	11	BC	DL80	
N1TAPI	M	1,485	48	27	CT	FN31	KC8KSQ	Q*	90	10	6	NC	EM96	W9THD	M	2,394	60	38	IN	EN71	XE1FZE	M	66	11	6	DL80		
(Op: K1STT)																												
W2UDT	A	11,280	147	60	NJ	FN20	WB2ZL	G	110	11	10	TN	EM55	K9W7X	A	163,415	634	203	IL	EN41	VY2SS	A	4,450	88	50	PE	FN76	
W2EV	A	16,020	149	57	NJ	FN20	WA4MYA	M	64,155	387	141	VA	EM70	K9E6U	A	861	29	21	IN	EM79								
N2NF	A	9,472	121	64	NY	FN03	WA4MW	M	55,440	373	105	NC	EM96	K9RSL	A	299	14	13	IN	EN71	VP50V	G	7,102	134	53	FL51	(Op: W5CW)	
K2CJN	A	9,135	113	63	NJ	FM29	WA4VF	M	49,362	339	114	VA	EM96	N9FB	A	276	18	12	WI	EM53								
K20Q	A	8,316	101	66	NY	FN03	WA4NH	M	46,332	334	117	GA	EM84	K9B9WD	A	273	17	13	IL	EM53								
K2NS2	A	8,039	85	34	CT	FN21	WA5KFT	G	4,399	80	53	TX	EM21	N9TFC	A	2,688	61	32	IL	EM52								
K2ZER	A	774	43	18	NY	FN30	WA5UK	G	3,840	77	48	TX	EM11	K9O9A	A	1,909	59	23	IL	EM52								
K2C2K	A	180	15	12	NY	FN34	W8FR	G	1,421	43	29	MS	EM54	N9YH	A	336	20	12	IL	EM52	RZ9CJ	2	6	3	1	MO06		
W2DXE	A	140	14	10	NY	FN02	AF5Q	G	1,780	29	20	OK	EM04	W9RVG	M	22,134	224	93	IL	EM57	RV9CQ/P	Q*	4	2	1	MO06		
K2L2M	M	103,016	487	163	NY	FN12	K3TD	G	1,160	40	29	TX	EM10	K9AWU	A	12,600	137	84	MN	EN37	BA4TB	G	175	25	7	PM01		
N2LJ0	M	9,932	160	52	NY	FN12	KD5J	G	1,098	61	18	AR	EM45	N9GZ	A	11,935	141	77	IA	EN31	BG7NFM	G	30	6	5	PM02		
N1RBM	M	9,300	117	62	NJ	FN29	AC50	G	1,050	42	25	LA	EM49	K1V1	A	7,564	111	62	IA	EN41								
W2YR	M	2,343	57	33	NJ	FN20	K5GM6	G	936	36	26	LA	EM32	W9WHD	G	5,044	91	52	CO	DM79								
(Op: K2LNS)																												
WA2FGK	A	57,378	345	131	PA	FN21	WA5TRX	A	571	11	3	AR	EM36	K9NR	A	32,944	270	116	CO	DM78	TA2AD	A	22,896	181	106	KN51		
(Op: K2LNS)																												
K3Z0	A	55,176	371	132	MD	FM18	AD50W	G	255	17	15	MS	EM52	K9AKS	Q	11,552	131	76	IL	EN41	ZC4LI	M	1,908	53	36	KM64		
K3CB	A	50,760	323	120	MD	FM18	N15F	G	1,296	54	24	TX	EM00	K9B8H	A	30,250	221	121	KS	EM06								
K3SH</																												

E21YDP	2	186	31	3	OK03	ESTONIA				KO29	YL3DR	A	3,243	56	47	KO26	SAT1A	6	1,160	40	29	SWEDEN	J097		
HS0XNO	2	88	22	2	OK03	ES2BH	6	952	34	28	KO38	YL2NS	A	1,750	28	25	KO26	SAT1B	6	320	20	16	(Op: SM11DE)	J099	
HS1JNB	2	76	19	2	OK03	ES5NH	2	2	1	1	KO29	YL2FZ	6	7,208	106	68	KO37	SM5QU	6	156	13	12	J089		
E21OER	2	60	15	2	OK03	ES1WST	Q	169	13	13	KO29	YL2TQ	6	2,880	60	48	KO37	SM5QD	6	156	13	12	J089		
HS0HFH	2	40	10	2	OK03	ES5EC	M	8,777	112	67	KO38	YL2CP	6	1,968	48	41	KO27	SM0FM	6	49	7	7	J099		
E22HMR/P	Q	5,902	227	13	OK04	RU3GX	2	1,880	47	20	KO92	YL2PZ	6	1,110	37	30	KO36	SM5CSS	6	36	6	6	J089		
E20XMP	P	12	6	1	NK94	RA6A	2	1,406	37	19	KN96	YL2EC	6	154	14	11	KO06	SK6HD	6	1	1	1	(Op: SM6PKF)	J068	
HS5WW	M	12,888	358	18	OK04	RW7A	2	918	27	17	KN95	LITHUANIA				SM7I	2	4	2	1	1	J065			
HS1EFA	M	11,472	478	12	OK03	RA6A	2	1,406	37	19	LY3M	6	891	33	27	KO25	SM6WET	M	357	21	17	J068			
HS3AB	M	10,526	277	19	OK14	RV6BK	2	726	33	11	LY2SA	6	672	28	24	KO14	SPAIN				(Op: SM6PKF)	J068			
HS8KFW	M	8,604	478	9	NJ99	RL3DO	2	726	33	11	LY2FN	Q	520	26	20	KO14	EA2TO/1	A	26,384	180	97	IN83			
E22FVA	M	6,754	307	11	OK04	RA4FER	2	504	21	12	Y04RYU/MM	R	79,365	387	195	6	EA3AKY	6	45,619	343	133	JN11			
HS3VCQ	M	5,588	254	11	OK16	UA4API	2	504	18	14	ER1LW	6	5,782	98	59	KN46	EA5CF	6	12,768	168	76	IM98			
HS4AK	M	4,928	224	11	OK16	RX6DM	2	462	21	11	ER1DA	6	1,107	41	27	KN47	EA2ARD	6	10,395	135	77	IN93			
HS4RWY	M	4,848	202	12	OK16	RX6DX	2	360	18	10	LY3M	6	891	33	27	KN47	EA5YU	6	9,230	130	71	IM97			
HS1IWX	M	4,796	218	11	OK03	RN6CG	2	132	11	6	LY2SA	6	672	28	24	KO14	EA5DT	6	3,763	71	53	IM99			
HS7AT	M	4,224	264	8	OK03	UA4AQL	2	98	7	7	Y04RYU/MM	R	79,365	387	195	6	AM3TC	6	168	14	12	JN01			
HS3TOT	M	4,108	158	13	OK06	RX6CW	2	64	8	4	ER1LW	6	5,782	98	59	KN46	EA1WE	6	81	9	9	IN53			
HS8SGG	M	3,828	319	6	NJ98	RN3ORY	2	40	5	4	ER1DA	6	1,107	41	27	KN47	EA3FP	6	25	5	5	JN11			
E20YXF	M	3,094	221	7	OK03	RA4FER	2	36	6	3	LY2FN	Q	520	26	20	KO14	EA4CWN	6	1	1	1	IM89			
HS3GB	M	2,672	334	4	OK03	RJ3XK	2	12	6	1	Y04RYU/MM	R	79,365	387	195	6	EB2RA	6	1	1	1	IN92			
HS9MMM	M	2,508	209	6	J07	UA4BI	2	8	2	2	Y04RYU/MM	R	79,365	387	195	6	A01GHE	Q*	608	32	19	IN62			
HS9UH	M	2,292	191	6	J07	UA6LP	Q	456	19	12	Y04RYU/MM	R	79,365	387	195	6	EA3MM	M	7,638	114	67	JN11			
HS8YRY	M	1,708	122	7	OK03	RA3RUF	Q	952	34	14	Y04RYU/MM	R	79,365	387	195	6	THE NETHERLANDS				(Op: EB3TC)	J021			
HS3AS	M	1,692	94	9	OK14	RA6HHT	Q	864	27	16	Y04RYU/MM	R	79,365	387	195	6	PA5WT	6	2,976	62	48	J022			
HS9OYG	M	1,630	163	5	NJ99	RV6GAH	Q	360	18	10	Y04RYU/MM	R	79,365	387	195	6	PA1W	6	36	6	6	J021			
HS3TWH	M	1,442	103	7	OK14	UA7C	Q	324	18	9	Y04RYU/MM	R	79,365	387	195	6	UKRAINE				(Op: EB3TC)	J021			
HS4UXB	M	708	118	3	OK03	RC6LA	Q	48	6	4	Y04RYU/MM	R	79,365	387	195	6	UY1HY	A	17,622	153	99	KO60			
HS8VZW	M	498	83	3	NJ98	RK6ARD	M	520	20	13	Y04RYU/MM	R	79,365	387	195	6	UY500	A	2,176	46	34	KN77			
WEST MALAYSIA					OK06	RK9CZQ	M	6	3	1	Y04RYU/MM	R	79,365	387	195	6	UT8IM	A	1,838	44	36	KN87			
9M2CQC	2	12	6	1	Y04RYU/MM	OH3DP	6	1,140	38	30	Y04RYU/MM	R	79,365	387	195	6	UT2UO	A	396	20	11	KO50			
EUROPE					Y04RYU/MM	GERMANY	A	19,488	158	84	Y04RYU/MM	R	79,365	387	195	6	UT2UO	6	12,668	149	85	KO50			
OE4VIE	A	6,612	88	58	NJ87	DL2OM	A	19,488	158	84	Y04RYU/MM	R	79,365	387	195	6	UT2UO	6	2,795	65	43	KN58			
OE15OW	2	640	20	16	NJ88	DK5DQ	2	19,686	193	51	Y04RYU/MM	R	79,365	387	195	6	UT2UO	6	2,106	54	39	KN77			
OE1CWA	Q*	528	24	11	NJ78	DL1DBR	2	728	26	14	Y04RYU/MM	R	79,365	387	195	6	UT2UO	6	744	31	24	KO30			
BELGIUM					Y04RYU/MM	DH5MM	Q	270	16	15	Y04RYU/MM	R	79,365	387	195	6	UY6JJ	6	504	24	21	KN75			
ON6NL	M	5,336	75	58	J021	DL1ET	Q	208	14	13	Y04RYU/MM	R	79,365	387	195	6	UY6JJ	6	399	21	19	KN87			
BULGARIA						Y04RYU/MM	YR5T	M	408	24	17	Y04RYU/MM	R	79,365	387	195	6	UY500	2	6,450	75	43	KN64		
LN2SC	6	672	28	24	KN33	SV2FLQ	6	9	3	3	Y04RYU/MM	R	79,365	387	195	6	UY500	2	4,450	65	35	KN66			
CROATIA						Y04RYU/MM	HA1ZH	A	6,784	91	53	Y04RYU/MM	R	79,365	387	195	6	UY500	2	2,700	54	25	KN18		
9A3QB	A	3,219	57	37	NJ95	HA3DX	6	14,880	160	93	Y04RYU/MM	R	79,365	387	195	6	UY500	2	2,688	48	28	KN88			
9A6AIB	A	162	15	6	NJ85	HA7LW	6	1,813	49	37	Y04RYU/MM	R	79,365	387	195	6	UY500	2	1,302	31	21	KN59			
CZECH REPUBLIC						Y04RYU/MM	HA6VW/P	2	16,512	192	43	Y04RYU/MM	R	79,365	387	195	6	UY4ZZ	2	1,224	36	17	KN77		
OK1DC	A	36,472	233	97	NJ69	HA2VR/P	Q	4,192	76	32	Y04RYU/MM	R	79,365	387	195	6	UY4ZZ	2	936	26	18	KN78			
OK1KZ	A	2,109	64	19	J070	HA507/P	2	2,160	60	18	Y04RYU/MM	R	79,365	387	195	6	UR0EQ	2	520	20	13	KN78			
OK1FRG	G	10,062	129	78	NJ79	HA5CQZ/P	Q	1,638	63	13	Y04RYU/MM	R	79,365	387	195	6	UT2H2	2	280	14	10	KN69			
OK1DXR	G	609	29	21	NJ79	HA5CQZ/P	Q	1,463	44	19	Y04RYU/MM	R	79,365	387	195	6	UT3LK	2	270	15	9	KO80			
OK1KIM	M	87,904	379	134	J060	HA5AZC/P	Q	1,092	39	14	Y04RYU/MM	R	79,365	387	195	6	UT3LK	2	250	25	5	KN88			
OK1KNG	M	9,765	126	63	NJ69	HA5T/P	Q	1,092	39	14	Y04RYU/MM	R	79,365	387	195	6	UY1PJ	2	240	12	10	KO70			
ENGLAND						Y04RYU/MM	KALININGRAD	2	98	7	7	Y04RYU/MM	R	79,365	387	195	6	UY1PJ	2	230	23	5	KN78		
G0LGS	A	231	18	11	IO81	RU2FM	2	Q	8	2	2	KO04	KO04	S53N	6	12,865	155	83	JN65	US51D/P	Q*	270	27	5	KN98
G4JSR	Q	432	28	9	IO82	UA2FL	2	Q	8	2	2	KO04	KO04	S53N	6	12,865	155	83	JN65	UY6JF	8	2	2	2	KO50
FINLAND						Y04RYU/MM	CT1HAR	A	1,012	39	23	Y04RYU/MM	R	79,365	387	195	6	UY500	2	1,428	34	21	KN28		
Y04RYU/MM	CR5M	6	234	17	13	Y04RYU/MM	CT1DZY	6	572	26	22	Y04RYU/MM	R	79,365	387	195	6	UY500	2	1,302	31	21	LN08		
Y04RYU/MM	YU7TRI	2	4,060	70	29	Y04RYU/MM	YU2DX	Q	6,256	86	46	Y04RYU/MM	R	79,365	387	195	6	UY500	2	1,224	36	17	KN74		
Y04RYU/MM	YU7TRI	2	4,060	70	29	Y04RYU/MM	IT9BLB	6	910	35	26	Y04RYU/MM	R	79,365	387	195	6	UY500	2	936	26	18	KN78		
Y04RYU/MM	IT9VQ/D	2	4,256	76	28	Y04RYU/MM	IT9VQ/D	2	4,256	76	28	Y04RYU/MM	R	79,365	387	195	6	UY500	2	520	20	13	KN78		
Y04RYU/MM	Y04RYU/MM	2	4,060	70	29	Y04RYU/MM	Y04RYU/MM	2	4,256	76	28	Y04RYU/MM	R	79,365	387	195	6	UY500	2	280	14	10	KN69		
Y04RYU/MM	Y04RYU/MM	2	4,060	70	29	Y04RYU/MM	Y04RYU/MM	2	4,256	76	28	Y04RYU/MM	R	79,365	387	195	6	UY500	2	270	15	9	KN78		
Y04RYU/MM	Y04RYU/MM	2	4,060	70	29	Y04RYU/MM	Y04RYU/MM	2	4,256	76	28	Y04RYU/MM	R	79,365	387	195	6	UY500	2	240	12	10	KN78		
Y04RYU/MM	Y04RYU/MM	2	4,060	70	29	Y04RYU/MM	Y04RY																		