

TYPE OF ANTENNA	L λ	GAIN (dBd)	E (M)	H (M)	Ga (dBd)	Tlos (K)	Ta (K)	< F/R (dB)	H Plane 1st SL (dB)	> 2nd SL (dB)	Z (ohms)	VSWR Bandwidth	G/T (dB)	Feed System	KF2YN Convergence Correction req.
+KF2YN Boxkite4	0.43	11.10	3.50	2.00	16.80	3.9	225.7	23.4	22.0	none	50.4	1.12:1	-4.59	Dipole	Yes
G4CQM 6	1.00	9.46	2.60	2.17	15.44	7.9	249.7	18.9	17.1	none	56.7	1.83:1	-6.38	Dipole	No
+KF2YN Boxkite6	1.04	12.47	3.90	3.00	18.25	4.6	263.1	26.5	22.9	24.8	49.9	1.20:1	-3.80	Dipole	Yes
Vine 6 FD	1.10	9.69	2.64	2.21	15.67	8.2	238.4	24.1	18.4	none	48.3	1.18:1	-5.95	Folded Dipole	Yes
GOKSC 6LFA	1.13	9.69	2.60	2.19	15.64	4.0	236.9	24.5	19.8	none	49.3	1.04:1	-5.96	LFA Loop	Yes
DDOVF 6	1.16	9.73	2.63	2.22	15.71	5.5	240.1	23.7	16.4	none	27.2	1.07:1	-5.94	Dipole	No
*DDOVF 6	1.16	9.73	2.30	2.30	15.58	5.5	245.1	23.7	16.4	none	27.2	1.07:1	-6.16	Dipole	No
M2 2M7	1.28	9.94	2.65	2.26	15.76	3.7	245.0	18.4	16.1	none	204.9	1.14:1	-5.98	T Match	Yes
*M2 2M7	1.28	9.94	2.21	2.03	15.17	3.7	239.9	18.4	16.1	none	204.9	1.14:1	-6.48	T Match	Yes
+KF2YN Boxkite7	1.32	13.34	4.17	3.40	19.30	5.2	245.5	26.8	23.6	24.5	52.7	1.06:1	-2.40	Dipole	Yes
+YU7XL 8 Hybrid	1.34	10.50	2.79	2.50	16.40	3.2	251.6	19.8	17.1	none	199.9	1.13:1	-5.46	Horiz Dipole	Yes
*YU7XL 8 Hybrid	1.34	10.50	3.00	2.43	16.43	3.5	247.7	19.8	17.1	none	199.9	1.13:1	-5.36	Horiz Dipole	Yes
+GOKSC 7LFA	1.39	10.62	2.84	2.49	16.53	1.8	248.9	20.4	16.1	none	48.0	1.19:1	-5.28	LFA Loop	No
*GOKSC 7 LFA	1.39	10.62	2.60	2.20	16.20	1.8	233.6	20.4	16.1	none	48.0	1.19:1	-5.34	LFA Loop	No
+DG7YBN 7	1.44	10.59	2.88	2.47	16.55	4.5	242.7	23.2	17.4	none	47.2	1.70:1	-5.15	Bent Dipole	No
Vine 7 FD	1.45	10.56	2.83	2.46	16.47	8.2	238.6	22.8	17.9	none	47.9	1.14:1	-5.16	Folded Dipole	No
G4CQM 7	1.50	10.76	2.89	2.53	16.69	7.9	239.9	23.5	17.9	none	50.7	2.31:1	-4.96	Dipole	No
+CT1FFU 7	1.54	10.82	2.87	2.50	16.70	2.8	237.7	20.3	18.4	20.4	28.0	1.02:1	-4.96	Dipole	No
DK7ZB 7	1.57	11.11	3.16	2.84	17.13	5.8	272.6	16.9	11.9	16.9	28.4	1.64:1	-5.07	Dipole	No
IKOBZY 6	1.63	11.11	3.10	2.77	17.04	4.8	266.5	17.8	11.9	17.7	19.5	2.27:1	-5.07	Dipole	No
G4CQM 10 UZ2	1.67	10.74	2.89	2.51	16.68	5.7	235.9	25.3	19.5	25.3	45.1	1.26:1	-4.90	Dipole	No
+DG7YBN 8	1.68	10.94	2.91	2.56	16.84	3.5	238.8	19.7	15.5	20.2	47.5	1.16:1	-4.79	Dipole	No
I4GBZ 7	1.69	11.41	3.18	2.86	17.26	5.7	278.9	12.7	13.9	19.7	48.4	2.27:1	-5.04	Dipole	No
GOKSC 8LFA	1.79	11.06	2.94	2.60	17.01	3.6	231.9	24.8	19.3	25.1	50.0	1.24:1	-4.49	LFA Loop	No
*GOKSC 8LFA	1.79	11.06	3.15	2.40	16.95	3.6	222.2	24.8	19.3	25.1	50.0	1.24:1	-4.37	LFA Loop	No
W1JR 8 MOD	1.80	11.14	3.07	2.75	16.99	5.3	256.7	17.3	12.8	17.3	50.0	1.14:1	-4.95	Dipole	No
DJ9BV 1.8	1.80	11.34	3.16	2.80	17.28	5.5	261.2	17.6	13.4	17.5	77.5	1.34:1	-4.74	Dipole	No
K1FO 10	1.84	11.34	3.10	2.78	17.27	4.3	257.7	16.5	14.5	18.5	29.4	1.44:1	-4.69	Dipole	No
Vine 8 FD	1.85	11.18	3.00	2.63	17.06	8.5	232.3	24.2	20.5	22.3	51.4	1.12:1	-4.45	Folded Dipole	No
YU7EF 8	1.87	11.31	3.04	2.71	17.23	3.8	242.1	20.0	15.1	20.1	48.5	1.21:1	-4.46	Dipole	No
BQH8B	1.88	11.60	3.28	2.97	17.62	7.2	259.3	18.0	12.6	16.5	50.0	1.29:1	-4.37	Dipole	No
+UR5EAZ 9	1.89	11.32	3.07	2.75	17.26	3.6	249.7	18.5	13.7	17.8	49.2	1.01:1	-4.56	Dipole	No
G4CQM 8	1.91	11.52	3.15	2.83	17.45	5.1	248.5	19.5	13.9	18.5	49.5	1.11:1	-4.35	Dipole	No
+KF2YN Boxkite9	1.92	13.98	4.45	3.70	19.95	5.6	228.6	24.4	21.5	26.3	49.2	1.28:2	-1.48	Dipole	Yes
+CT1FFU 8	1.94	11.28	2.96	2.62	17.10	2.9	232.3	23.6	21.2	21.6	27.1	1.05:1	-4.41	Dipole	No
GOKSC 8OWL	1.95	11.63	3.13	2.82	17.55	4.6	235.7	25.5	17.1	22.1	48.9	1.26:1	-4.02	Folded Dipole	No
IOJXX 8	2.04	12.11	3.46	3.17	18.10	9.3	257.3	19.6	13.2	17.5	200.1	3.00:1	-3.86	T Match	No
*DG00PK 9	2.07	11.45	2.95	2.70	17.30	5.7	230.8	24.6	16.4	23.4	28.4	1.11:1	-4.18	Dipole	No
DG00PK 9	2.07	11.45	3.04	2.72	17.34	5.7	231.9	24.6	16.4	23.4	28.4	1.11:1	-4.16	Dipole	No
DK7ZB 8	2.09	12.01	3.40	3.10	18.02	4.8	253.6	21.6	13.0	17.6	28.0	1.26:1	-3.87	Dipole	No
GOKSC 9OWA	2.09	11.99	3.33	3.04	17.96	4.9	247.0	21.3	15.0	17.1	49.1	1.30:1	-3.82	Dipole	No
+RA3AQ 9S	2.12	12.04	3.35	3.06	18.02	4.7	246.5	20.7	14.5	17.4	47.1	1.08:1	-3.75	Dipole	No
*RA3AQ 9S	2.12	12.04	3.00	3.00	17.85	4.6	242.8	20.7	14.5	17.4	47.1	1.08:1	-3.85	Dipole	No
M2 9SSB	2.12	11.96	3.33	3.04	17.92	10.8	245.9	20.2	14.7	17.1	200.6	1.26:1	-3.84	T Match	No
#WiMo WX220 XPOL	2.13	11.23	2.94	2.94	17.17	8.3	293.0	14.0	13.1	17.3	202.0	1.08:1	-5.35	Folded Dipole	No
*WiMo WX220 XPOL	2.13	11.23	2.94	2.94	17.44	8.4	300.8	14.0	13.1	17.3	202.0	1.08:1	-5.19	Folded Dipole	No
Gulf Alpha 9	2.13	11.62	3.26	2.97	17.64	4.6	266.2	18.9	14.9	12.8	203.3	1.15:1	-4.46	T Match	Yes
Gulf Alpha 9 XPOL	2.13	11.60	3.12	3.12	17.62	5.0	267.6	19.9	16.7	15.3	203.9	1.15:1	-4.50	T Match	Yes
DJ9BV 2.1	2.13	11.89	3.33	3.04	17.87	5.8	255.2	20.2	13.2	17.4	44.9	1.30:1	-4.05	Dipole	No
GOKSC 9LFA	2.14	11.97	3.26	2.94	17.88	5.2	235.1	23.5	16.2	20.9	50.5	1.08:1	-3.68	LFA Loop	No
*GOKSC 9LFA	2.14	11.97	3.10	3.00	17.86	5.2	235.7	23.5	16.2	20.9	50.5	1.08:1	-3.75	LFA Loop	No
*OZ5HF 9	2.16	11.52	2.70	2.50	16.65	2.9	275.1	18.2	11.9	16.0	38.0	1.15:1	-5.60	Dipole	No
OZ5HF 9	2.16	11.52	3.21	2.92	17.47	3.0	272.6	18.2	11.9	16.0	38.0	1.15:1	-4.74	Dipole	No
YU7EF 9	2.16	11.84	3.20	2.89	17.74	5.3	236.6	22.0	16.7	19.8	49.8	1.17:1	-3.84	Dipole	No
F9FT 11	2.17	11.78	3.26	2.97	17.75	5.3	251.0	22.7	13.4	18.9	21.5	1.25:1	-4.10	Dipole	No
*CC 13B2	2.17	11.79	2.90	2.79	17.47	5.8	249.1	19.6	13.2	19.0	21.1	1.37:1	-4.34	Dipole	No
CC 13B2	2.17	11.79	3.33	3.01	17.78	5.9	257.9	19.6	13.2	19.0	21.1	1.37:1	-4.18	Dipole	No
K1FO 11	2.18	11.97	3.30	3.00	17.90	4.3	248.0	17.9	14.6	19.2	44.0	1.29:1	-3.89	Dipole	No
*CC 215WB	2.19	11.78	3.05	3.05	17.66	6.6	262.5	19.1	12.7	17.7	17.4	1.47:1	-4.38	Dipole	No
CC 215WB	2.19	11.78	3.36	3.07	17.78	6.6	266.6	19.1	12.7	17.7	17.4	1.47:1	-4.33	Dipole	No
Vine 9 FD	2.22	11.93	3.21	2.91	17.80	9.4	230.0	23.9	18.7	21.5	50.0	1.07:1	-3.67	Folded Dipole	No
+GOKSC 9OWL	2.28	12.15	3.28	2.97	18.00	6.4	229.5	24.3	18.8	22.3	49.0	1.20:1	-3.46	Folded Dipole	No
+KF2YN Boxkite 10	2.29	14.29	4.49	3.89	20.25	5.6	225.9	29.2	21.2	27.0	49.0	1.14:1	-1.13	Dipole	Yes
G4CQM CQM12UX	2.32	11.94	3.20	2.89	17.82	4.0	231.6	23.3	15.8	20.9	50.2	1.06:1	-3.68	Dipole	No
*Flexa 224	2.34	11.52	3.50	3.30	17.66	30.1	259.2	17.7	12.7	17.3	60.4	1.09:1	-4.33	Dipole	No
Flexa 224	2.34	11.52	3.30	3.00	17.47	29.5	254.6	17.7	12.7	17.3	60.4	1.09:1	-4.44	Dipole	No
+RA3AQ 9	2.35	12.38	3.40	3.13	18.31	5.6	234.3	22.1	15.1	18.8	49.2	1.10:1	-3.24	Folded Dipole	No
#RA3AQ 9	2.35	12.38	3.27	3.27	18.32	5.6	235.7	22.1	15.1	18.8	49.2	1.10:1	-3.25	Folded Dipole	No
+CT1FFU 9	2.38	12.23	3.26	2.97	18.08	3.6	226.8	22.7	20.2	21.2	28.1	1.15:1	-3.33	Dipole	No
ZL1RS 9	2.38	12.24	3.30	3.01	18.13	5.6	227.2	25.2	18.7	23.4	48.7	2.19:1	-3.28	Dipole	No
Eagle 10	2.38	12.28	3.44	3.16	18.27	6.0	243.0	22.0	15.0	19.2	23.6	1.33:1	-3.43	Dipole	No
G4CQM CQM12UC	2.39	12.15	3.30	3.01	18.05	5.2	235.6	21.4	14.5	19.8	49.4	1.03:1	-3.54	Dipole	No
DK7ZB 9	2.39	12.41	3.56	3.30	18.45	6.2	250.5	20.4	12.2	16.0	27.5	1.23:1	-3.39	Dipole	No
Vine 10 FD	2.45	12.27	3.35	3.04	18.17	9.5	226.7	25.0	18.0	22.6	47.6	1.08:1	-3.23	Folded Dipole	No
DDOVF 9	2.46	12.47	3.48	3.18	18.44	4.4	235.8	20.3	15.8	17.5	25.0	1.16:1	-3.14	Dipole	No
+YU7EF 10LT	2.49	11.84	3.13	2.82	17.69	5.3	224.3	29.4	22.8	25.3	45.7	1.13:1	-3.67	Dipole	No
K5GW 10	2.49	12.45	3.44	3.16	18.38	7.4	234.6	23.1	16.4	21.4	37.4	1.41:1	-3.17	Dipole	No
#K5GW 10	2.49	12.45	3.30	3.30	18.38	7.3	235.9	37.4	16.4	21.4	23.1	1.41:1	-3.20	Dipole	No
G4CQM 9	2.52	12.63	3.62	3.35	18.68	7.3	244.4	22.2	13.1	17.6	46.4	2.02:1	-3.05	Dipole	No
+GOKSC 10 LFA	2.53	12.61	3.48	3.18	18.54	2.6	229.8	24.3	16.0	22.8	48.5	1.05:1	-2.92	LFA Loop	No
*GOKSC 10 LFA	2.53	12.61	3.40	3.10	18.48	2.5	228.3	24.3	16.0	22.8	48.5	1.05:1	-2.95	LFA Loop	No
K1FO 12	2.53	12.49	3.46	3.18	18.42	4.3	240.7	21.6</							

WB9UWA 12	2.87	12.73	3.48	3.20	18.61	7.0	223.0	25.2	20.0	22.7	23.9	1.47:1	-2.72			
DK7ZB 10	2.87	13.00	3.87	3.60	19.17	6.8	247.5	21.7	12.7	16.6	25.8	1.61:1	-2.62	Dipole	No	
Vine 11 FD	2.87	12.78	3.60	3.21	18.67	10.0	220.0	27.9	19.7	24.0	48.4	1.09:1	-2.60	Folded Dipole		
+YU7EF 11B	2.87	12.92	3.58	3.30	18.85	4.7	225.6	25.6	16.7	20.1	50.2	1.35:1	-2.53	Dipole	No	
I5MZY 13	2.88	13.21	3.82	3.56	19.21	7.8	238.1	22.8	15.1	17.8	57.2	2.45:1	-2.41	Dipole	No	
+YU7XL 11 Hybrid	2.88	13.10	3.64	3.42	19.04	4.6	224.4	26.2	17.3	20.7	195.6	1.18:1	-2.32	Horiz Dipole	Yes	
*YU7XL 11 Hybrid	2.88	13.10	3.77	3.56	19.08	4.8	226.7	26.2	17.3	20.7	195.6	1.18:1	-2.33	Horiz Dipole	Yes	
K1FO 13	2.89	12.94	3.64	3.39	18.88	4.6	239.2	19.7	14.5	19.4	24.7	1.38:1	-2.76			
#M2 20 XPOL	2.97	13.11	3.64	3.64	19.09	6.3	241.7	21.4	13.5	16.1	200.1	1.20:1	-2.59	T Match		
+GOKSC 11 LFA	2.98	13.11	3.61	3.35	19.01	3.0	221.5	27.7	16.5	24.6	48.3	1.06:1	-2.33	LFA Loop		
*GOKSC 11 LFA	2.98	13.11	3.78	3.65	19.14	3.0	224.9	27.7	16.5	24.6	48.3	1.06:1	-2.23	LFA Loop		
+UA9TC 11RS	2.98	13.09	3.66	3.37	19.01	5.0	223.0	23.3	17.9	21.5	50.9	1.10:1	-2.34	Dipole	No	
+GOKSC 11OWL	3.00	13.16	3.69	3.44	19.09	7.7	224.6	23.0	16.4	22.3	49.8	1.42:1	-2.27	Folded Dipole		
*BVO-3WL	3.01	13.43	3.90	3.70	19.38	8.6	253.1	20.5	12.9	17.7	52.7	3.08:1	-2.50	Dipole	No	
BVO-3WL	3.01	13.43	4.03	3.78	19.42	8.6	256.1	20.5	12.9	17.7	52.7	3.08:1	-2.51	Dipole	No	
#BVO-3WL	3.01	13.41	3.90	3.90	19.41	8.6	256.6	20.5	12.9	17.7	52.7	3.08:1	-2.53	Dipole	No	
+GOKSC 11LFA3R	3.01	13.00	3.60	3.33	18.92	4.0	223.0	25.7	18.2	24.0	50.1	1.08:1	-2.41	LFA Loop		
+YU7EF 11	3.04	13.07	3.56	3.30	18.87	4.7	222.6	22.2	17.8	22.5	49.0	1.62:1	-2.46	Dipole	No	
F9FT 16	3.06	12.64	3.54	3.26	18.67	6.0	241.3	21.1	13.8	16.4	20.8	1.37:1	-3.05			
#SM2CEW 14 XPOL	3.08	13.04	3.50	3.50	18.96	6.9	226.4	25.8	22.5	25.9	19.2	1.40:1	-2.44	Dipole	No	
CD15LQDver2	3.09	12.90	3.58	3.33	18.85	4.4	231.6	26.1	14.0	17.0	50.0	1.25:1	-2.65	Gamma Match		
*CD15LQDver2	3.09	12.90	4.00	3.80	19.02	4.4	238.8	26.1	14.0	17.0	50.0	1.25:1	-2.61	Gamma Match		
CD15LQDver1	3.10	12.83	3.60	3.35	18.76	4.1	247.8	20.7	14.5	17.5	50.0	1.23:1	-3.03	Gamma Match		
*CD15LQDver1	3.10	12.83	4.00	3.80	18.97	4.2	249.9	20.7	14.5	17.5	50.0	1.23:1	-2.86	Gamma Match		
I5MZY 13	3.10	12.97	3.56	3.30	18.83	6.0	225.9	20.3	15.1	17.8	49.3	1.50:1	-2.56	Dipole	No	
MBI ModFT17	3.12	13.29	3.85	3.60	19.27	8.2	239.5	24.3	12.9	19.7	50.1	1.41:1	-2.37	Dipole	No	
*F9FT 17	3.14	12.87	3.68	3.50	18.90	5.8	236.4	23.0	14.7	18.6	25.8	1.32:1	-2.69			
F9FT 17	3.14	12.87	3.59	3.31	18.81	5.7	234.3	23.0	14.7	18.6	25.8	1.32:1	-2.74			
*CC3219	3.17	12.77	4.27	3.66	18.80	5.7	307.8	14.9	15.1	18.0	18.3	1.49:1	-3.93			
CC3219	3.17	12.77	4.07	3.82	18.79	5.7	308.6	14.9	15.1	18.0	18.3	1.49:1	-3.95			
CC3219 MOD	3.17	13.25	3.87	3.62	19.27	5.1	245.6	24.1	13.0	16.0	29.0	1.06:1	-2.48	Dipole	No	
BQH 13	3.19	13.30	3.85	3.60	19.28	4.3	244.9	20.8	13.7	17.5	50.0	1.11:1	-2.46	Dipole	No	
#BQH 13	3.19	13.30	3.72	3.72	19.27	4.3	246.3	20.8	13.7	17.5	50.0	1.11:1	-2.49	Dipole	No	
DJ9BV 3.2	3.22	13.30	3.85	3.58	19.29	6.5	239.5	21.1	13.7	18.1	71.8	1.36:1	-2.35	Dipole	No	
+DG7YBN 12	3.23	13.45	3.87	3.62	19.41	5.5	229.1	26.2	15.0	20.1	46.2	1.40:1	-2.04	Bent Dipole		
*DG7YBN 12	3.23	13.45	3.99	3.83	19.47	5.6	231.0	26.2	15.0	20.1	46.2	1.40:1	-2.02	Bent Dipole		
K1FO 14	3.26	13.36	3.80	3.56	19.29	4.7	237.8	18.1	14.4	19.3	29.6	1.42:1	-2.32			
+KF2YN Boxkite 13	3.26	15.11	4.83	4.32	21.00	5.9	226.2	28.8	20.4	28.9	52.5	1.07:1	-0.38	Dipole	Yes	
UR5EAZ 12	3.27	13.31	3.71	3.44	19.22	3.8	223.4	24.0	15.3	18.3	50.2	1.04:1	-2.13	Dipole		
+GOKSC 12LFA	3.32	13.44	3.78	3.52	19.36	4.0	220.5	24.4	18.1	23.1	49.9	1.07:1	-1.92	LFA Loop		
+GOKSC 12OWA	3.33	13.33	3.85	3.50	19.28	5.7	224.3	25.3	16.3	23.4	49.3	1.05:1	-2.08	LFA Loop		
G4CQM 11	3.36	13.55	3.92	3.66	19.50	8.3	232.0	30.1	13.3	17.9	46.2	1.94:1	-2.01	Dipole	No	
DK7ZB 11	3.40	13.68	3.94	3.71	19.61	5.0	234.3	22.3	14.2	17.4	27.9	1.27:1	-1.94	Dipole	No	
+UA9TC 12RS	3.40	13.55	3.80	3.56	19.46	5.1	218.2	32.1	18.6	21.2	51.7	1.09:1	-1.78	Dipole	No	
+GOKSC 12 LFA	3.41	13.64	4.59	3.60	19.62	4.3	224.1	26.1	18.1	23.1	50.1	1.18:1	-1.73	LFA Loop		
*GOKSC 12LFA	3.41	13.64	3.90	3.70	19.58	4.3	221.2	26.1	18.1	23.1	50.1	1.18:1	-1.72	LFA Loop		
MBI 3.4	3.42	13.58	3.87	3.62	19.49	9.2	227.7	23.0	16.0	19.9	37.7	1.62:1	-1.93			
+GOKSC 12LFA 2R	3.43	13.46	3.79	3.52	19.38	3.3	221.2	25.0	19.3	23.6	50.3	1.06:1	-2.11	LFA Loop		
*GOKSC 12LFA 2R	3.43	13.46	3.95	3.75	19.48	4.9	220.5	25.0	19.3	21.6	50.3	1.06:1	-1.80	LFA Loop		
InnoV 12 LFA	3.43	13.56	3.80	3.60	19.47	5.4	218.9	25.8	17.4	23.7	49.3	1.07:1	-1.78	LFA Loop		
Gulf Alpha 14	3.44	13.24	3.71	3.44	19.14	5.5	229.6	19.9	15.3	21.9	198.0	1.21:1	-2.32	T Match	Yes	
Gulf Alpha 114 XPOL	3.44	13.25	3.57	3.57	19.14	5.5	231.8	22.0	16.7	24.1	200.5	1.21:1	-2.37	T Match	Yes	
YU7EF 12	3.49	13.67	3.85	3.60	19.55	6.1	221.1	23.6	16.8	21.9	45.4	1.77:1	-1.75	Dipole	No	
*SM5BSZ 11	3.51	13.95	3.50	3.50	19.48	6.4	231.8	19.5	18.1	19.7	54.4	3.06:1	-2.02	Dipole	No	
+SM5BSZ 11	3.51	13.95	4.05	3.80	19.81	6.3	238.8	19.5	18.1	19.7	54.4	3.06:1	-1.82	Dipole	No	
*SM5BSZ 11A	3.53	14.01	4.00	4.00	19.92	6.1	245.8	16.7	16.6	16.8	52.3	3.03:1	-1.84	Dipole	No	
+SM5BSZ 11A	3.53	14.01	4.13	3.92	19.93	6.1	245.4	16.7	16.6	16.8	52.3	3.03:1	-1.82	Dipole	No	
17LQD EKM#1	3.59	13.30	3.75	3.52	19.21	4.2	242.1	20.8	15.1	18.1	50.0	1.23:1	-2.48	Gamma Match		
17LQD EKM#2	3.59	13.39	3.75	3.50	19.32	4.5	227.5	25.6	15.3	19.6	50.0	1.25:1	-2.10	Gamma Match		
+DL6WU 14	3.61	13.63	3.94	3.70	19.53	2.6	246.9	21.2	14.3	17.4	51.4	1.28:1	-2.24	Dipole	No	
DJ9BV 3.6	3.61	13.67	4.00	3.78	19.57	5.4	249.7	21.3	13.9	18.0	53.5	1.30:1	-2.25	Dipole	No	
K1FO 15	3.64	13.76	3.94	3.71	19.67	4.8	233.0	20.0	14.5	19.4	39.1	1.30:1	-1.85			
DK7ZB 12	3.83	14.17	4.21	4.00	20.11	6.9	237.4	25.6	13.6	17.9	26.8	1.46:1	-1.49	Dipole	No	
+UA9TC 13RS	3.83	13.95	3.94	3.70	19.84	5.2	215.6	24.3	18.7	20.9	49.7	1.07:1	-1.35	Dipole	No	
+GOKSC 13 LFA	3.84	14.10	4.07	3.85	20.02	4.4	221.1	27.4	16.5	23.7	48.5	1.14:1	-1.28	LFA Loop		
+GOKSC 13 LFA	3.85	13.97	4.00	3.75	19.91	6.4	220.1	28.2	16.5	23.7	48.8	1.20:1	-1.37	LFA Loop		
*GOKSC 13 LFA	3.85	13.97	4.06	3.90	19.93	6.4	220.5	28.2	16.5	23.7	48.8	1.20:1	-1.35	LFA Loop		
InnoV 13 LFA	3.86	13.98	4.02	3.77	19.89	7.0	219.5	28.2	17.4	25.5	48.7	1.20:1	-1.37	LFA Loop		
YU7EF 13M	3.86	13.85	3.92	3.66	19.73	7.0	218.8	25.7	18.6	21.1	49.9	1.05:1	-1.52	Dipole	No	
+YU7EF 13	3.92	14.12	4.05	3.82	20.00	6.0	220.1	22.5	17.0	23.2	47.9	2.55:1	-1.28	Dipole	No	
IKOBZY 12	3.95	14.06	4.02	3.78	19.93	6.9	222.5	24.6	18.6	20.7	99.2	1.44:1	-1.39	Folded Dipole		
+DG7YBN 14	3.98	14.09	4.05	3.82	20.00	5.8	218.8	28.3	17.4	20.4	50.4	1.07:1	-1.25	Bent Dipole		
*DG7YBN 14	3.98	14.09	4.20	4.00	20.08	5.8	220.4	28.3	17.4	20.4	50.4	1.07:1	-1.20	Bent Dipole		
BVO2-4WL	3.99	14.17	4.24	4.02	20.14	6.8	241.8	24.0	13.3	17.5	45.0	1.25:1	-1.54	Dipole	No	
#BVO2-4WL	3.99	14.17	4.13	4.13	20.11	6.8	241.2	24.0	13.3	17.5	45.0	1.25:1	-1.56	Dipole	No	
DJ9BV 4.0	4.01	14.04	4.16	3.92	19.91	6.5	249.4	22.4	14.3	18.3	41.5	1.35:1	-1.91	Dipole	No	
K1FO 16	4.01	14.13	4.16	3.87	20.05	4.7	229.9	23.9	14.7	19.8	35.0	1.15:1	-1.42			
+SV 2SA13	4.01	14.45	4.38	4.16	20.42	7.0	239.0	20.0	14.2	17.3	52.2	1.41:1	-1.21	Dipole	No	
#SV 2SA13	4.01	14.45	4.27	4.27	20.42	7.0	238.8	20.0	14.2	17.3	52.2	1.41:1	-1.21	Dipole	No	
HG VB-215DX	4.03	14.10	4.21	3.97	20.00	5.8	250.8	19.6	14.6	18.6	38.6	1.41:1	-1.84			
CC3219 MOD	4.04	14.13	4.27	4.07	20.09	5.1	248.2	24.0	12.2	17.6	32.1	1.02:1	-1.71	Dipole	No	
KLM 16LXB	4.09	14.16	4.26	4.02	20.08	6.3	242.0	20.5	14.9	18.7	198.1	1.29:1	-1.61	Dual Driven	No	
*CC4218XL	4.19	14.28	4.08	3.85	20.09	8.6	240.9	21.5	14.1	17.5						

RA3AQ-14	4.61	14.71	4.27	4.07	20.55	5.0	219.1	28.4	15.8	20.5	50.0	1.19:1	-0.71	Folded Dipole	
G4COM 16	4.64	14.55	4.39	4.18	20.47	8.8	234.6	34.0	12.8	17.0	50.9	1.78:1	-1.08	Dipole	No
YU7EF 15M	4.68	14.59	4.21	4.00	20.40	7.0	221.7	25.7	18.1	20.8	48.6	1.03:1	-0.89	Dipole	No
DK7ZB 14	4.73	14.92	4.59	4.39	20.87	6.8	233.0	26.2	13.0	18.2	26.9	1.50:1	-0.65	Dipole	No
+DG7YBN 16	4.74	14.79	4.39	4.21	20.70	6.1	221.4	28.9	15.8	20.6	46.6	1.18:1	-0.60	Bent Dipole	
*DG7YBN 16	4.74	14.79	4.45	4.60	20.79	6.1	222.4	28.9	15.8	20.6	46.6	1.18:1	-0.53	Bent Dipole	
GOKSC 15LFA	4.75	14.72	4.27	4.07	20.59	5.9	213.2	30.3	19.6	24.5	49.9	1.17:1	-0.55	LFA Loop	
*GOKSC 15LFA	4.75	14.72	4.60	4.45	20.72	5.9	215.0	30.3	19.6	24.5	49.9	1.17:1	-0.45	LFA Loop	
InnoV 15 LFA	4.76	14.73	4.30	4.10	20.62	6.6	213.9	29.8	17.1	26.3	49.0	1.17:1	-0.53	LFA Loop	
*InnoV 15 LFA	4.76	14.73	4.60	4.45	20.74	6.6	215.4	29.8	17.1	26.3	49.0	1.17:1	-0.44	LFA Loop	
K1FO 18	4.78	14.37	4.36	4.16	20.62	2.8	228.6	20.5	14.8	19.1	199.9	1.32:1	-0.82	T Match	
InnoV 15 OWL	4.78	14.79	4.36	4.15	20.66	7.6	217.9	23.8	15.9	23.1	52.2	1.32:1	-0.57	Folded Dipole	Yes
*M2 28 XPOL	4.81	15.18	4.50	4.50	20.98	13.9	244.8	20.2	13.4	18.9	200.1	5.19:1	-0.76	T Match	
#M2 28 XPOL	4.81	15.18	4.83	4.83	21.14	13.9	243.1	20.2	13.4	18.9	200.1	5.19:1	-0.57	T Match	
DJ9BV 4.8	4.82	14.63	4.40	4.19	20.48	6.6	242.8	21.0	14.7	18.0	49.7	1.29:1	-1.22	Dipole	No
*M2 5WL	4.83	14.64	4.15	3.84	20.49	7.2	246.3	20.0	14.3	17.6	200.9	1.42:1	-1.44	T Match	Yes
M2 5WL	4.83	14.64	4.56	4.36	20.58	3.7	248.1	20.0	14.3	17.6	200.9	1.42:1	-1.22	T Match	Yes
YU7EF 15	4.84	14.89	4.46	4.24	20.78	10.3	218.1	25.6	17.9	22.8	41.8	3.18:1	-0.46	Dipole	No
+RU1AA_2	4.89	15.06	4.62	4.42	20.98	6.6	232.5	24.3	15.0	17.0	50.0	1.25:1	-0.53	Dipole	No
*SM5BSZ 14A	4.89	15.13	4.00	4.00	20.65	7.8	231.5	20.7	18.6	20.3	55.3	5.63:1	-0.85	Dipole	No
+RA3AQ 15	4.92	15.16	4.67	4.49	21.11	6.8	232.4	24.4	14.2	17.6	51.7	1.12:1	-0.40	Dipole	No
#RA3AQ 15	4.92	15.16	4.59	4.59	21.11	6.8	231.9	24.4	14.2	17.6	51.7	1.12:1	-0.39	Dipole	No
*SM5BSZ 14	4.95	15.27	5.20	5.20	21.36	5.7	239.7	18.8	14.9	19.1	49.3	4.37:1	-0.29	Dipole	No
+SM5BSZ 14	4.95	15.27	4.73	4.52	21.14	5.7	241.5	18.8	14.9	19.1	49.3	4.37:1	-0.54	Dipole	No
K5GW 17	4.98	14.83	4.43	4.21	20.73	9.8	220.8	25.7	15.9	20.5	48.5	1.73:1	-0.56	Dipole	No
SM2CEW 19	4.99	14.92	4.49	4.27	20.83	9.0	223.4	22.1	15.3	20.2	78.4	1.62:1	-0.51	Folded Dipole	
#SM2CEW 19	4.99	14.92	4.38	4.38	20.83	9.0	223.1	22.1	15.3	20.2	78.4	1.62:1	-0.50	Folded Dipole	
+GOKSC 16 OWL FD	4.99	14.75	4.25	4.25	20.63	9.0	218.8	28.4	19.2	25.5	51.7	1.10:1	-0.62	Folded Dipole	
*BVO-5WL	5.02	15.00	4.58	4.40	20.92	6.9	237.2	26.3	13.3	17.1	47.4	1.26:1	-0.68	Dipole	No
#BVO-5WL	5.02	15.00	4.58	4.58	20.97	6.9	236.2	26.3	13.3	17.1	47.4	1.26:1	-0.61	Dipole	No
BVO-5WL	5.02	15.00	4.66	4.49	20.96	6.9	236.9	26.3	13.3	17.1	47.4	1.26:1	-0.64	Dipole	No
YU7EF 16M	5.12	14.90	4.36	4.16	20.70	7.0	221.9	25.1	17.9	21.3	49.9	1.03:1	-0.61	Dipole	No
+GOKSC 16LFA3R	5.14	15.12	4.46	4.24	20.94	4.6	213.7	25.3	17.5	23.7	49.9	1.10:1	-0.21	LFA Loop	
+GOKSC 16LFA3R	5.14	15.12	5.10	5.10	21.16	4.8	212.0	25.3	17.5	23.7	49.9	1.10:1	0.05	LFA Loop	
K1FO 19	5.16	15.10	4.49	4.27	20.98	3.4	225.4	21.0	18.8	18.8	204.9	1.25:1	-0.40	T Match	
+GOKSC 16LFA	5.21	15.40	4.56	4.33	21.29	11.0	212.7	28.5	17.5	24.4	49.2	1.13:1	0.16	LFA Loop	
*GOKSC 16LFA	5.21	15.40	4.60	4.40	21.31	11.0	212.8	28.5	17.5	24.4	49.2	1.13:1	0.18	LFA Loop	
InnoV 16 LFA	5.23	15.12	4.52	4.23	20.99	7.0	213.7	29.9	17.7	25.5	47.3	1.13:1	-0.16	LFA Loop	
#RU1AA 15	5.27	15.44	4.78	4.78	21.38	9.2	230.9	25.2	13.9	18.6	54.6	3.70:1	-0.10	Dipole	No
RU1AA 15	5.27	15.44	4.87	4.70	21.37	9.2	231.7	25.2	13.9	18.6	54.6	3.70:1	-0.13	Dipole	No
*M2 18XXX	5.30	15.00	4.27	3.96	20.54	7.2	232.8	23.1	16.4	19.6	199.7	1.07:1	-0.98	T Match	
M2 18XXX	5.30	15.00	4.56	4.36	20.90	7.4	231.9	23.1	16.4	19.6	199.7	1.07:1	-0.60	T Match	
YU7EF 16	5.42	15.15	4.46	4.27	20.95	7.3	218.9	22.1	18.4	24.3	43.9	2.50:1	-0.30	Dipole	No
GOKSC 17 LFA	5.67	15.43	4.63	4.43	21.30	4.9	212.0	30.8	17.6	26.1	48.3	1.23:1	0.19	LFA Loop	
*GOKSC 17 LFA	5.67	15.43	4.70	4.47	21.32	4.9	212.1	30.8	17.6	26.1	48.3	1.23:1	0.20	LFA Loop	
InnoV 17 LFA	5.69	15.36	4.59	4.39	21.22	7.2	211.8	32.0	17.6	28.6	50.0	1.26:1	0.11	LFA Loop	
*M2 19XXX	5.71	15.28	4.27	4.04	20.82	7.5	235.8	24.5	15.9	16.2	201.1	1.42:1	-0.75	T match	
M2 19XXX	5.71	15.28	4.70	4.52	21.20	7.7	231.3	24.5	15.9	16.2	201.1	1.42:1	-0.29	T match	
#M2 32 XPOL	5.74	15.81	5.08	5.08	21.77	12.8	232.4	23.2	13.4	18.3	205.4	3.80:1	0.26	T Match	
*M2 32 XPOL	5.74	15.81	5.00	5.00	21.74	12.8	232.8	22.2	13.4	18.3	205.4	3.80:1	0.22	T Match	
YU7EF 17X	5.74	15.36	4.59	4.39	21.19	8.5	216.0	29.2	20.0	22.0	50.0	1.08:1	-0.02	Dipole	No
YU7EF 17X	5.74	15.36	4.50	4.35	21.15	8.5	215.8	29.2	20.0	22.0	50.0	1.08:1	-0.04	Dipole	No
RU1AA 17	5.75	15.64	4.81	5.00	21.55	8.1	229.6	25.9	14.7	16.7	50.0	1.08:1	0.09	Dipole	No
+GOKSC 17OWL-FD	5.77	15.62	5.15	5.00	21.63	7.3	221.1	22.9	18.1	20.9	112.0	1.10:1	0.33	Folded Dipole	
DK7ZB 17	5.82	15.61	5.01	4.85	21.59	8.6	227.8	24.8	12.7	17.7	26.8	1.19:1	0.16	Dipole	No
YU7EF 17	5.88	15.70	4.85	4.63	21.53	9.6	223.8	24.0	18.7	21.3	41.2	2.92:1	0.18	Dipole	No
#YU7EF 17	5.88	15.70	4.74	4.74	21.53	9.6	223.6	24.0	18.7	21.3	41.2	2.92:1	0.19	Dipole	No
BVO-6WL	6.00	15.65	4.93	4.77	21.55	7.0	227.3	24.9	14.3	18.2	44.9	1.14:1	0.13	Dipole	No
#BVO-6WL	6.00	15.65	4.85	4.85	21.59	7.1	226.7	24.9	14.3	18.2	44.9	1.14:1	0.19	Dipole	No
+GOKSC 18 LFA	6.12	15.69	4.77	4.56	21.55	5.3	210.5	30.8	17.7	25.4	47.9	1.33:1	0.47	LFA Loop	
*GOKSC 18 LFA	6.12	15.69	4.77	4.60	21.56	5.3	210.5	30.8	17.7	25.4	47.9	1.33:1	0.48	LFA Loop	
InnoV 18 LFA	6.14	15.66	4.73	4.56	21.52	7.7	211.0	32.7	17.6	25.3	48.7	1.35:1	0.43	LFA Loop	
AF9Y 22	6.14	15.73	5.01	4.85	21.66	13.1	221.4	24.9	12.2	18.0	49.9	2.65:1	0.36	Folded Dipole	
+RA3AQ 18	6.28	16.09	5.13	4.97	22.01	8.0	223.4	26.9	15.2	19.6	54.9	1.13:1	0.67	Dipole	No
*RA3AQ 18	6.28	16.09	5.30	5.30	22.12	8.1	222.3	26.9	15.2	19.6	54.9	1.13:1	0.80	Dipole	No
#RA3AQ 18	6.28	16.09	5.05	5.05	22.01	8.0	222.9	26.9	15.2	19.6	54.9	1.13:1	0.68	Dipole	No
MBI 6.6	6.58	16.15	5.50	5.31	22.17	11.5	228.3	26.9	12.4	18.9	49.1	1.77:1	0.73	Folded Dipole	
*MBI 6.6	6.58	16.15	5.41	5.41	22.17	11.5	228.2	26.9	12.4	18.0	49.1	1.77:1	0.74	Folded Dipole	
DK7ZB 19	6.59	16.15	5.41	5.22	22.15	8.2	230.2	24.0	13.4	17.9	27.7	1.97:1	0.68	Dipole	No
InnoV 19 LFA	6.62	15.88	4.84	4.70	21.74	8.0	209.3	32.5	17.5	26.9	48.3	1.55:1	0.68	LFA Loop	
*InnoV 19 LFA	6.62	15.88	4.84	4.75	21.75	8.0	209.2	32.5	17.5	26.9	48.3	1.55:1	0.69	LFA Loop	
BQH 25	7.30	16.38	5.27	5.09	22.28	8.8	217.1	25.5	15.2	20.8	27.9	1.16:1	1.06	Dipole	No
#BQH 25	7.30	16.38	5.18	5.18	22.28	8.9	216.8	25.5	15.2	20.8	27.9	1.16:1	1.07	Dipole	No
InnoV 21 LFA	7.55	16.25	5.04	4.88	22.10	8.2	208.3	32.5	19.0	26.6	49.0	1.70:1	1.06	LFA Loop	
K2GAL 21	7.65	16.90	5.71	5.55	22.81	13.3	223.9	26.3	15.7	19.1	17.2	9.01:1	1.46	Dipole	No
M2 8WL(old)	7.72	16.51	5.31	5.13	22.34	9.1	221.9	21.3	16.3	19.1	201.5	2.14:1	1.03	T Match	
InnoV 22 LFA	8.01	16.39	5.09	4.88	22.19	7.7	208.0	33.5	19.6	30.3	48.6	1.38:1	1.16	LFA Loop	
M2 8WHLHD	8.05	17.02	6.05	5.87	22.99	11.8	234.6	25.4	13.2	19.4	200.0	4.53:1	1.44	T Match	
+GOKSC 22 LFA 3R	8.17	16.37	6.10	5.90	22.44	6.7	208.1	29.6	20.6	29.2	46.1	1.16:1	1.43	LFA Loop	
+GOKSC 22 LFA 3R	8.17	16.37	5.90	5.70	22.42	6.8	207.6	29.6	20.6	29.2	46.1	1.16:1	1.42	LFA Loop	

Legend:

- L = Length in Wavelengths
- Gain = Gain in dBd of a single antenna
- E = E plane (Horizontal) stacking in Meters.
- H = H plane (Vertical) stacking in Meters.
- Ga = Gain in dBd of a 4 bay array
- Tlos = The internal resistance of the antenna in degrees Kelvin.
- Ta = The total temperature of the antenna or array in degrees Kelvin. This includes all the side lobes, rear lobes and internal resistance of the antenna or array.
- F/R = Front to Rear in dB over the rear 180 degrees of an antenna using either E or H plane.
- Z ohms = The natural impedance of a single antenna in free space.

10. VSWR = VSWR Bandwidth is based a single antenna over 144.000 - 145.000 MHz with a reference at 144.100 MHz. This parameter gives an indicator of the antenna "Q" and what to expect with with stacking and wet weather.
11. G/T = Figure of merit used to determine the receive capability of the antenna or array = $(G_a + 2.15) - (10 \cdot \log T_a)$. The more positive figure the better. G/T is modelled in Tant.exe at 30 degrees elevation.

Notes:

- The programs used to calculate E/H Stacking, G, Ta, Tlos and G/T are EZNEC 5+ by Roy Lewallen W7EL, 4NEC2 by Arie Voors and Tant.exe by Sinisa, YT1NT/VE3EA. This combination of software provides excellent accuracy. Segment Density is 25 segments per half wave
- Temperatures used: Tsky=200 degrees; Tearth=1000 degrees
- Dipole Z is measured at 144.1 MHz
- F/R, 1st and 2nd Side Lobes (SL) have been calculated on a single antenna
- No stacking harness losses or H frame effects are included in the 4 bay gain figures.
- All stacking dimensions EXCEPT those marked with a "*" and "#" are calculated from the DL6WU stacking formula:
 $D = W / (2 \cdot \sin(B/2))$
 Where:
 D = stacking distance, vertical or horizontal
 W = wavelength, in the same units as D
 B = beamwidth between -3dB points.
 Use vertical beamwidth for vertical stacking (as above),
 Use horizontal beamwidth for horizontal stacking.
- Antennas marked with a "*" have stacking dimensions recommended by the manufacturer or designer.
- Antennas marked with a "#" have stacking dimensions for XPOL antennas by VE7BQH.
- Antennas marked with a "+" have some or all elements over 6mm. All others are 4MM to 6MM.
- FD = Folded Dipole
- Manufacturer/Designer Legend: Single Click on the Sites with Links.
- Convergence Correction: NEC2 and NEC 4 are incapable of handling complex feed systems accurately like Folded Dipoles, T Matches, LFAs etc. Convergence Correction using the KF2YN Excel program is required. See DUBUS 4/2010 "The Correction of Convergence Errors in Antenna Temperature Calculations by Brian Cake, KF2YN for details.

13. Manufacturer/Designer Legend:
- | | |
|-----------------------------------|---------------------------------------|
| AF9Y = AF9Y | K1FO = K1FO |
| BVO = Eagle/DJ9BV | K2GAL = K2GAL |
| BQH = VE7BQH | K5GW = Texas Towers/K5GW |
| CC = Cushcraft | KF2YN = KF2YN |
| CC MOD = VE7BQH | M2 = M2 |
| CD = CUE DEE | MBI = F/G8MBI/F5VHX |
| CD MOD = VE7BQH | OZ5HF = Vargarda |
| CT1FFU = CT1FFU | RA3AQ = RA3AQ |
| DD0VF = DD0VF | RU1AA = RU1AA |
| DJ9BV = DJ9BV | SHARK = SHARK (Italian) |
| DJ9BV OPT = DJ9BV | SM2CEW = SM2CEW/VE7BQH |
| DK7ZB = DK7ZB | SV = Svenska Antennspecialisten AB |
| EKM MOD = SM2EKM | W1JR = VE7BQH (Mininec error) |
| F9FT = F9FT | WB9UWA = WB9UWA |
| Flexa = FlexaYagi | YU7EF = YU7EF |
| GOKSC LFA = GOKSC | UR5CSZ = UR5CSZ |
| G4CQM = G4CQM | UA9TC = UA9TC |
| HG = HYGAIN | Vine = GOKSC Design |
| I0JXX = I0JXX | YU7XL = YU7XL |
| IK0BZY = IK0BZY | InnoVAntennas = GOKSC |
| WiMo = WiMo | |

Using this Chart:

While Gain is important, other factors like ease of matching and wet weather performance should be considered in the your decision making. Antennas with 50 ohm feed systems and good VSWR bandwidth (Q) may be the best choice depending on your location. Low sidelobe and F/R antennas with good (G/T) may provide further significant benefit if you have local man made noise that is in directions where these kinds of antennas provide additional suppression.

Lionel H. Edwards
 VE7BQH
 Issue 93, June 10, 2013

- Issue 51: Add YU7EF Antennas
 Issue 52: Update all DK7ZB antennas to latest published data. Add DK7ZB 8
 Issue 53: Replace BQH8A with BQH8B a 50 ohm antenna
 Issue 54: Add YU7EF 8
 Issue 55: Add YU7EF 17 & YU7EF 11B
 Issue 56: Add YU7EF 16
 Issue 57: Add a revised YU7EF 10
 Issue 58: Add DK7ZB 19
 Issue 59: Add YU7EF 10LT
 Issue 60: Add columns of Z and VSWR bandwidth to give indicators of Q and wet weather performance.
 Issue 61: Add UA5EAZ 9. Add VSWR bandwidth for folded dipole to RA3AQ 9. Add RA3AQ 14
 Issue 62: Revised Note 1 to explain limitations in YA 3.54 and the change to EZNEC 5+ and Tant.exe software

Issue 63: Add new low noise wide VSWR bandwidth YU7EF 13M,14M,15M,16M series antennas
Issue 64: Add YU7EF 14LT;Add G4CQM 8,9,11,16;Add GOKSC 9LFA
Issue 65: Add GOKSC 11LFA,GOKSC 14LFA;Add DK7ZB 7;Add K1FO 10,11,16
Issue 66: Conversion to EZNEC 5+ & Tant.exe completed. Add GOKSC 8LFA, GOKSC 12LFA,GOKSC 13LFA: RA3AQ 9S
Issue 67: Data corrected for RA3AQ 9S;
Issue 68: G4CQM 8 updated to new version,Add ZL1RS 9,
Issue 69: Add GOKSC 15LFA,GOKSC 17LFA. Segment Density changed to improve impedance accuracy.
Issue 70: Add GOKSC 7LFA, Add Front to Rear column (F/R)
Issue 71: Add GOKSC 9,G4CQM 7,G4CQM 6,8 & 9 updated versions,
Issue 72: Add GOKSC 10LFA,Revised G4CQM 11,
Issue 73: Add GOKSC 9,GOKSC 11
Issue 74: Add GOKSC 6LFA,GOKSC 8OWL,Revised GOKSC 9OWL,GOKSC 10OWL,
Issue 75: Add CT1FFU 7,CT1FFU 8,CT1FFU 9,CT1FFU 10,CT1FFU 10C
Issue 76: Add GOKSC 16LFA, I5MZY 11, I5MZY 13, GOKSC 11LFA 3R, GOKSC 14LFA 3R, GOKSC 16LFA 3R,
Issue 77: Add G4CQM 16 Revised,KF2YN Boxkite6, KF2YN Boxkite9,KF2YN Boxkite12,GOKSC 12OWA,GOKSC 17OWA
Issue 78: Add DD0VF 9,GOKSC 12LFA 2R,UA9TC 11RS,UA9TC 12RS, UA9TC 14RS
Issue 79: Add Vine 6 FD,Vine 7 FD,Vine 8 FD,Vine 9 FD,Vine 10 FD,Vine 11 FD,GOKSC 12 LFA,GOKSC 22 LFA 3R,GOKSC 16 OWL FD
Issue 80: Add Revised GOKSC 15 LFA,Revised GOKSC 16 LFA,
Issue 81: Add GOKSC 10 LFA,Revised GOKSC 11 LFA,Revised GOKSC 13 LFA,Revised GOKSC 14 LFA,Revised GOKSC 17 LFA,
Add GOKSC 18 LFA,Revised GOKSC 14 LFA 3R,Revised IKOBZY 12,DG7YBN 16,
Issue 82: Add KF2YN Boxkite4,KF2YN Boxkite7, YU7EF 17X,Corrected DG7YBN 16,
Issue 83: Add Revised DK7ZB 11,Add KF2YN Boxkite 10,KF2YN Boxkite 13,KF2YN Boxkite 16
Issue 84: Add M2 2M7,DG7YBN 12
Issue 85: Add G4CQM CQM12UC,
Issue 86: Add WiMo WX220,InnoV 22 LFA,InnoV 21 LFA,InnoV 19 LFA,InnoV 18 LFA,InnoV 17 LFA,InnoV 16 LFA,InnoV 15 LFA,
Add InnoV 14 LFA,InnoV 13 LFA,InnoV 12 LFA,
Issue 87: Add SM2CEW 14 XPOL,KF2YN Boxkite 9,10,12,13,16 updated,Add DL6WU 14,Add G4CQM 12UX,Add DG7YBN 8
Issue 88: Add YU7XL 8 Hybrid,YU7XL 11 Hybrid,UA9TC 13RS,
Issue 89: Add YU7XL 17 Twin Boom,RU1AA 15_2,RU1AA 17,G4CQM 10 UZ2,
Issue 90: Add KLM 16LBX,DD0VF6,InnoV 15 OWL,
Issue 91: Add DG7YBN 7,
Issue 92: Revised the stockCC4218XL,Removed the modified CC4318XL,Revised G4CQM 8,
Issue 93: Add I4GBZ 7,UR5EAZ 12,Gulf Alpha 9,Gulf Alpha 11,Gulf Alpha 14,