

50 MHz and Up "Tune Up" & Picnic

7/13/2024 Ed Levin Park

385 foot range (estim)

all measurements are relative to other rigs;

range not calibrated

Comments Legend:

A = Common path; check antenna (aiming, height above ground, focus, feed, feedline, T/R switch)

T = Tx Path; Tx perf worse than Rx (check PA, other Tx components)

R = Rx Path; Rx perf worse than Tx (check LNA, other Rx components)

N = Near field; Antenna too large for test range to be far field (reduced antenna gain due to short test range)

10 GHz MDS (Rx Test)		sorted by MDS 500 at r: -144 3 expected MDS500 for excellent LNA									
Operator	Call	Dish (in)	Calc Ant Gain	Source dBm	noise floor dBFS 2500	IF S+N/N dB 2500	MDS 500 at rx ant	MDS500 at rx input	Sys NF (Ta+Tr)	Comments:	
Paul	AA6PZ	36	36.9	-10	-88.9	35.3	-181	-144	3	VG	
Gary	K6MG	47.2	39.2	-10	-101.6	33.1	-179	-140	7	N A -4: ant too large for test range?	
Brian	K6OJM	23.6	33.2	-10	-84.2	30.2	-176	-143	4	VG	
Jim	N9JIM	18.1	30.9	-10	-86.3	29.1	-175	-144	3	VG	
Jim #2	N9JIM	24	33.3	-10	-94.5	27.5	-173	-140	7	A -4	
Steve	WF6R	24	33.3	-10	-999.0	27.0	-173	-139	8	SWAG: used 'can you hear this' method	
Mike	K6ML	23.6	33.2	-10	-92.9	25.9	-172	-138	9	A -6	
Brian	W6BY	24	33.3	-10	-75.6	24.6	-170	-137	10	A -7	
Matt	KC7OOY	30	35.3	-10	-97.1	20.9	-167	-131	16	A -10	
Jeff	AA6XA	18	30.8	-10	-89.5	20.5	-166	-135	12	R -8	
Gary#2	K6MG	14.0	14.0	-10	-96.6	12.4	-158	-144	3	calibrated horn antenna	

10 GHz ERP (Tx Test)		sort by Measured ERP Meas - Calc is negative if below expectatio									
Operator	Call	PA Out dBm	Dish (in)	Calc Ant Gain	Calc ERP	SA dBFS	dB Atten	Meas ERP	Meas - Calc	SNR s/b >10	Comments:
Gary	K6MG	40.0	47.2	39.2	79	-32	0	74	-5	64	A -4: ant too large for test range?
Jim	N9JIM	41.5	18.1	30.9	72	-35.6	0	71	-2	60	OK
Paul	AA6PZ	36.0	36	36.9	73	-37.6	0	69	-4	58	T -4
Brian	K6OJM	34.5	23.6	33.2	68	-38	0	68	1	58	VG
Mike	K6ML	40.8	23.6	33.2	74	-39.8	0	67	-7	56	A -6
Brian	W6BY	40.0	24	33.3	73	-41.4	0	65	-8	55	OK
Matt	KC7OOY	38.0	30	35.3	73	-42	0	64	-9	54	A -10
Jeff	AA6XA	35.0	18	30.8	66	-42.2	0	64	-2	54	OK
Jim #2	N9JIM	34.0	24	33.3	67	-43.5	0	63	-5	52	A -4
Steve	WF6R	27.0	24	33.3	60	-46.34	0	60	0	50	VG
Gary#2	K6MG	21.0	14.0	14.0	35	-71.5	0	35	0	24	calibrated horn antenna

24 GHz MDS (Rx Test)		sorted by MDS 500 at r: -143 4 expected MDS500 for excellent LNA									
Operator	Call	Dish (in)	Calc Ant Gain	Source dBm	noise floor dBFS 2500	IF S+N/N dB 2500	MDS 500 at rx ant	MDS500 at rx input	Sys NF (Ta+Tr)	Comments: poor quality measurements	
Mike	K6ML	23.6	40.5	10	-79.8	28.8	-183	-143	4	VG	
Jim	N9JIM	18.1	38.2	10	-80.2	24.9	-179	-141	6	OK	
Brian	W6BY	24	40.7	10	-94.3	21.6	-176	-135	12	A?	
Goran	AD6IW	24	40.7	10	-96.1	14.8	-169	-128	19	R?	
Goran #2	AD6IW	lens	22.0	10	-96.1	5.7	-159	-137	10	substituted lensed horn for dish	
Gary	K6MG		12.7	10	-67.6	2.3	-153	-140	7	OK	
Paul	AA6PZ	24	40.7	10	-96.3	2.1	-152	-112	35	R? A?	

24 GHz ERP (Tx Test)		sort by Measured ERP Meas - Calc is negative if below expectatio									
Operator	Call	PA Out dBm	Dish (in)	Calc Ant Gain	Calc ERP	SA dBFS	dB Atten	Meas ERP	Meas - Calc	SNR s/b >10	Comments: poor quality measurements
Goran	AD6IW	33.0	24	40.7	74	-57.8	0	74	0	52	too good to be true? :)
Brian	W6BY	32.0	24	40.7	73	-70.2	0	62	-11	39	A?
Jim	N9JIM	35.4	18.1	38.2	74	-71.5	0	60	-13	38	T?
Mike	K6ML	35.4	23.6	40.5	76	-76.4	0	56	-20	33	T?
Paul	AA6PZ	25.0	24	40.7	66	-83.4	0	48	-17	26	A?
Gary	K6MG	30.0		12.7	43	-97.9	0	34	-9	11	