50 MHz and Up "Tune Up" & Picnic *all measurements are relative to other rigs;*
7/16/23, Ed Levin Park, 385 foot range *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 Rx (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: most sensitive (ant + Rx) to least

"Rx NF" subtracts antenna gain; poor NF may indicate antenna, feedline, relay or LNA problem

Operator	Call	Dish Size (in)	Calc Ant Gain	IF noise floor dBFS 2500	IF S+N/N dB 2500	MDS 500 at rx ant	Rx NF (incl losses)	
Pete	K6TJ	48	39.4	-91.8	42.3	-183	3.3	*pretty good (R?); barely in far field*
Oliver	KB6BA	32	35.8	-91.0	41.2	-182	0.8	*good*
Gary	K6MG	36	36.9	-68.1	38.4	-179	4.7	*T,A: dish focus?*
Goran	AD6IW	23.6	33.2	-83.5	36.1	-177	3.3	*T,A*
Oliver #2	KB6BA	18.1	30.9	-93.3	35.9	-177	1.2	*good*
Brian	WA6QDP	18.1	30.9	-74.5	34.7	-176	2.4	*pretty good (R?)*
Brian	W6BY	18.1	30.9	-76.8	33.9	-175	3.2	*pretty good (R?)*
Mike	K6ML	23.6	33.2	-90.2	33.8	-175	5.6	*R? A?*
Brian	K6OJM	23.6	33.2	-83.8	32.4	-173	7.0	*A?*
Scott	AF6RT	18.1	30.9	-99.4	31.7	-173	5.4	*A?*
Paul	AA6PZ	36	36.9	-107.9	25.8	-167	17.3	*R? A?*
David	KI6CLA	18.1	30.9	-96.4	8.1	-148	29.7	*A: dish focus; feedline loss*

10 GHz ERP (Tx Test)

expected ERP — sort by Measured ERP

Meas - Calc is negative if below expectation

Operator	Call	PA Out dBm	Dish Size (in)	Calc Ant Gain	Calc ERP	SA dBFS	dB Atten	Meas ERP	Meas - Calc	
Pete	K6TJ	39.0	48	39.4	78	-23.5	0	78	-1	*pretty good; barely in far field*
Oliver	KB6BA	40.2	32	35.8	76	-23.9	0	77	1	*good*
Goran	AD6IW	47.0	23.6	33.2	80	-27.4	0	74	-6	*T,A: PA power supply*
Brian	WA6QDP	42.0	18.1	30.9	73	-28.7	0	73	0	*good*
Mike	K6ML	40.8	23.6	33.2	74	-30.5	0	71	-3	*A?*
Oliver #2	KB6BA	39.0	18.1	30.9	70	-31.3	0	70	0	*good*
Brian	W6BY	35.0	18.1	30.9	66	-36.6	0	65	-1	*pretty good*
Paul	AA6PZ	36.0	36	36.9	73	-37.6	0	64	-9	*A?*
Brian	K6OJM	35.0	23.6	33.2	68	-38	0	63	-5	*A?*
Scott	AF6RT	35.0	18.1	30.9	66	-39.1	0	62	-4	*A?*
Gary	K6MG	23.0	36	36.9	60	-65.3	0	36	-24	*T, A: 20 dB tx problem?; dish focus?*
David	KI6CLA	35.0	18.1	30.9	66	-88.9	0	12	-53	*A, T?: dish focus; feedline loss*

24 GHz MDS (Rx Test)

sorted by MDS 500: most sensitive (ant + Rx) to least

"Rx NF" subtracts antenna gain; poor NF may indicate antenna, feedline, relay or LNA problem

Operator	Call	Dish Size (in)	Calc Ant Gain	IF noise floor dBFS 2500	IF S+N/N dB 2500	MDS 500 at rx ant	Rx NF (incl losses)	
Mike	K6ML	23.6	40.5	-108.9	22.4	-182	5.8	*good rx*
Oliver	KB6BA	32	43.2	-81.1	8.4	-167	23.1	*R?; dish not in far field*
Pete	K6TJ	48	46.7	-101.0	1.5	-156	38.2	*R? in the weeds; dish NOT in far field*
Paul	AA6PZ	24	40.7	-95.7	1.2	-154	33.3	*R? A? in the weeds*

24 GHz ERP (Tx Test)

Test Range SNR was poor; low quality measurement

Meas - Calc is negative if below expectation

Operator	Call	PA Out dBm	Dish Size (in)	Calc Ant Gain	Calc ERP	SA dBFS	dB Atten	Meas ERP	Meas - Calc	
Oliver	KB6BA	35.6	32	43.2	79	-96.5	0	1	-77	*good, even tho dish not in far field*
Paul	AA6PZ	25.0	24	40.7	66	-98.0	0	0	-66	*clerical error: lost data; was about -98, IIRC*
Pete	K6TJ	29.0	48	46.7	76	-100.8	0	-3	-79	*not bad?, considering dish NOT in far field*
Mike	K6ML	35.4	23.6	40.5	76	-105.0	0	-7	-83	*T?*