

50 MHz and Up

2022 TuneUp Results

K6ML, Test Tech
AF6RT assisted, thanks!

350' Test Range

Sandy Wool area of Ed Levin Park, 7/30/22

Hang
Glider
QSB



Geese Range Techs

Remote Test Head
10 and 24 GHz Transceivers
450' RG-58 back to test line (144 IF)

Test Line: 12 Members' Rigs and Control Station

MDS Results

Operator	Call	Power	Dish Size (in)	Calc Ant Gain	calc dBm at rig ant	IF noise floor dBFS 2500	IF S+N/N dB 2500	IF SNR dB 2500	MDS 500 at rx ant	Rx NF
Gary	K6MG	57.4	70.9	42.7	-145.9	-72.5	31.9	31.9	-185	5.0
Jim	N9JIM	41.8	18.1	30.9	-145.0	-86.8	24.6	24.6	-177	1.3
Brian	WA6QDP	42.0	18.1	30.9	-145.0	-76.2	24.2	24.2	-176	1.7
Oliver	KB6BA	40.0	18	30.8	-145.0	-95.6	23.3	23.2	-175	2.6
Oliver	KB6BA	40.0	12" panel	25.0	-145.0	-96.6	22.3	22.3	-174	-2.2
Brian	W6BY	30.0	12" panel	25.0	-145.0	-83.5	15.0	14.8	-167	5.2
Mike	K6ML	40.8	23.6	33.2	-145.0	-88.5	4.4	2.4	-154	25.8
Paul	AA6PZ	36.0	36	36.9	-145.0	-87.1	3.0	0.0	-152	31.9

10 GHz Results

K6MG 6' Dish EME setup had best MDS and ERP, *but numbers are low compared to expected, probably because range was short for 6' Dish (near field) & trees*

MDS

N9JIM, WA6QDP & KB6BA dish look OK
W6BY MDS slightly lower

K6ML and AA6PZ seem to be deaf.
KB6BA panel measurement was probably in error

ERP Results

Call	PA Out dBm	Dish Size (in)	Calc Ant Gain	Calc ERP	SA dBFS	dB Atten	Meas ERP	Meas - Calc
K6MG	57.4	70.9	42.7	100	-29.9	10	93	-7
K6ML	40.8	23.6	33.2	74	-30.8	0	82	8
WA6QDP	42.0	18.1	30.9	73	-36.2	0	76	3
N9JIM	41.8	18.1	30.9	73	-39.7	0	73	0
KB6BA	40.0	18	30.8	71	-40.6	0	72	1
AA6PZ	36.0	36	36.9	73	-43.5	0	69	-4
KB6BA	40.0	12" panel	25.0	65	-47.1	0	65	0
W6BY	30.0	12" panel	25.0	55	-59.7	0	53	-2

ERP *K6MG probably due to near field & trees; K6ML ERP probably in error;*
Others not too far from expected,
PZ slight underperformance

Both sets of measurements normalized to best rig tested; reasonable sample size, the estimated numbers are close, and the relative numbers are definitely meaningful (with the exceptions noted above)

MDS Results

Operator	Call	Power	Dish Size (in)	Calc Ant Gain	calc dBm at rig ant	IF noise floor dBFS 2500	IF S+N/N dB 2500	IF SNR dB 2500	MDS 500 at rx ant	Rx NF
Mike	K6ML	35.4	23.6	40.5	-146.6	-84.5	31.4	31.4	-185	2.6
Jim	N9JIM	34.8	18.1	38.2	-146.6	-81.7	27.6	27.6	-181	4.1
Brian	WA6QDP	28.8	18.1	38.2	-146.6	-94.0	15.0	14.9	-168	16.8
Paul	AA6PZ	30.0	23.6	40.5	-146.6	-95.5	1.8	-2.9	-151	36.9

ERP Results *(Forgot to add test head preamp, so minimum detectable ERP was higher than last year)*

Call	PA Out dBm	Dish Size (in)	Calc Ant Gain	Calc ERP	SA dBFS	dB Atten	Meas ERP	Meas - Calc
N9JIM	34.8	18.1	38.2	73	-77.7	0	72	-1
WA6QDP	28.8	18.1	38.2	67	-91.9	0	58	-9
AA6PZ	30.0	23.6	40.5	71	-92.9	0	57	-13

Mike's Waveguide switch was stuck, so no ERP measurement

24 GHz Results

MDS

K6ML and N9JIM in the zone;

WA6QDP low, AA6PZ even lower

ERP

N9JIM OK

WA6QDP and AA6PZ down in the test system's noise floor...
QDP might be OK, can't say;
PZ is underperforming
(maybe his PA isn't what he thought)

Both sets of measurements normalized to best rig tested; due to small sample size, the estimated numbers could be wrong, But the relative numbers are meaningful