

TEST EQUIPMENT: Radio & Tv Engineering Co.

<u>No.</u>	<u>Item</u>	<u>s/n</u>	<u>Date Acquired</u>	<u>Cal. Date</u>	<u>Cal. No.</u>
1.0	SPECTRUM ANALYZERS				
1.1	TEK 7L14	B010104	5/81	2/99	970203
1.2	TEK 7L18	B020725	9/84	2/99	
1.3	TEK 7L5 Opt. 25	B071298	5/84	2/99	
1.4	Agilent E4407B 9 kHz to 26.5 GHz	US40241323	4/02	7/02	41323
2.0	OSCILLOSCOPES/VECTOR VOLT METERS				
2.1	TEK 7704	B204833	2/87	6/99	970612NJP
2.2	TEK 7B70	B237675	8/77	2/99	970612NJP
2.3	TEK 7A16A	B061728	8/77	2/99	970612NJP
2.4	TEK 7012	B050376	8/77	6/93	
2.5	TEK 7014	B051241	3/79	6/94	970612NJP
2.6	TEK 7M13	B061749	3/79	6/93	
2.7	TEK 7613	B343526	3/79	2/94	970204
2.8	TEK SC502	B022936	6/79	4/92	
2.9	TEK 7A26	B244663	2/94	2/97	970612NJP
2.10	HP8405A	6649	3/95		
2.11	ULTEK Trigger Mate	TVT601 0066	1/96		1/96
3.0	RF TRACKING GENERATORS				
3.1	TEK TR502	B020368	7/81	2/99	
3.2	TEK 7L50PT25	B071298	5/84		2/99
3.3	Agilent E4407B 9 kHz to 3.0 GHz	US40241323	4/02	7/02	41323
4.0	SIGNAL GENERATORS AUDIO				
4.1	2-Tone SG376A/U	858	3/79	4/92	
4.2	HP206	799	2/79	4/92	
4.3	Singer TG-IC22	Univ.	7/77	4/92	
4.4	TEK SG505	B010189	6/81	2/97	
4.5	RACAL-DANA 9083	2154	2/86	2/99	
4.6	TEK SG502	B073178	6/79	4/92	
4.7	TEK SG505	B500532	6/89	5/93	
4.8	GR1307A	2853	3/93	2/97	970202
5.0	SIGNAL GENERATORS R.F. & VIDEO				
5.1	Rhode & Swartz	SLRD	3/79	4/92	
5.2	GR1021AV	1899	1/81	4/92	
5.3	GR1001-A	3414	1/81	4/92	

5.4	HP8640B OPT.001 (1×10^{-10}) 970601WWVB	1416A01904	3/87	2/99	
5.5	TS-403-BU	GP-229	1/87	4/92	
5.6	MSG-1	347	1/87	4/92	
- 2 -					
5.7	TS-418C	AME-292	1/87	4/92	
5.8	MSG-2A	REC248	1/87	4/92	
5.9	Pollard 1207	REC69	1/87	4/92	
5.10	HP-618	88:CAQI	1/87	4/92	
5.11	HP-8656A OPT 001	2035A00479	5/81	6/99	
5.12	TEK SWEEP SW503	B010267	6/79	4/99	
5.13	HP 11721A Freq. Dubler	0395	2/81	2/99	
5.14	Std. Spectracom 8131 (1×10^{-10})	0533	2/94	2/99	T8016
5.15	TEK TV Sig. Gen. TSG90 (NTS)	B021829	3/94	2/97	
5.16	Agilent E8251 250 kHz to 20 GHz	US41140131	6/02	6/02	40131
6.0	AC GENERATORS 110v AC				
6.1	Honda ER400				
6.2	Honda EM400				
6.3	Generator 15 kW				
7.0	FIELD INTENSITY METERS/R.F. RADIATION METERS				
7.1	Stoddart NM30A	186-25	10/77	4/99	
7.2	Stoddart NM50A	143-21	5/77	4/99	
7.3	Stoddart URM42	240-23	3/79	4/92	
7.4	Empire NF-112	528	10/76	4/92	
7.5	Potomac FIM-41	882	1/80	6/93	
7.6	Potomac FIM-41	888	2/80	6/93	
7.7	Federal FIM-101C	460120	3/87	4/92	
7.8	Potomac FIM-21	1114	9/88	6/93	
7.9	Stoddart URM-6	75	2/87	4/92	
7.10	Potomac FIM-71	752	8/92	12/92	
7.11	NARDA RF Test Set 8718 wq/Probes:				
	300 kHz-40 GHz	1226	12/95	1/96	
7.12	SAR Probes & Amp.		2/97	2/98	
8.0	TEST CHAMBERS				
8.1	Delta 1060A	2165	2/87	4/92	
8.2	Conrad ACO-CB-16RAC	8358	9/77	4/92	

9.0 MULTI-METERS/TEMP./HUMIDITY/VELOCITY

9.1	TEK DM502	B032117	9/78	2/99
9.2	TEK DM501A	B024746	6/81	2/99
9.3	TEK TM503	B119131	9/84	4/92
9.4	TEK M3	B020237	2/84	4/92
9.5	TEK M1	B020237	2/84	4/92
9.6	Micronta 22-185A	REC10B	2/89	4/92
9.7	Beckman AC-30	70903252	2/89	6/99
9.8	Simpson 206		2/77	4/92
9.9	University VoltMeter	603310	2/77	4/92

- 3 -

9.10	Phastron Volt/Freq.Mtr.	420-04898	11/71	4/92
9.11	HP E2377A	3149J11888	3/92	3/92
9.12	TEK 503S (current)	B022359	2/94	2/97
9.13	TEK Probe 6302	B05638	2/94	2/94
9.14	TEK TM502A	B024068	2/94	2/94
9.15	TEK Current Amp.	B024290	2/94	2/97
9.16	TEK DMM254	TW11540	2/94	2/94
9.17	Temp/Humidity, Velocity Mtr. Omega HHF-710 w/probes	3498	4/94	2/97
9.18	TEK Current trans- Former CT-5	7845	5/95	2/97

10.0 FREQUENCY COUNTERS

10.1	TEK DC508	B010242	7/78	2/99	970201
10.2	GR 1192B	00433	3/87	6/99	
10.3	DIGITEC 8540A	518	7/84	2/99	
10.4	TEK 7D14	B051241	3/79	6/93	
10.5	HP8640B Opt.001 (1×10^{-10})	1416A01904	4/81	6/99	
	970601WWVB				
10.6	HF Eng. Prescaler	PS250 270	6/80	4/92	
10.7	Agilent 53150A	US40501324	4/02	4/02	01324
	10 Hz-20 GHz				

11.0 DIRECTIONAL COUPLERS

11.1	Sierra Z-110		3/79	4/92	
11.2	BIRD 4275-020		3/79	4/99	
11.3	BIRD 4274-025		3/79	4/99	
11.4	Narda 2978 (4-8 GHz)	028	4/77	4/92	
11.5	Narda3000-10 (.225-.460 mHz)	06022	4/77	4/92	

12.0 R. F. LOADS

12.1	Bird 80-M	10302	3/79	4/92
12.2	Bird 6154	339	3/79	4/92
12.3	Bird 82A	4801	3/79	4/92
12.4	Bird 8891	177	4/80	4/92
12.5	Weinschel 535MN	10074	6/79	4/92
12.6	Sierra 160-20FN	2942	6/79	4/92
12.7	GR874 W-200	271	6/77	4/92
12.8	GR874 W-50	19797	6/77	4/92
12.9	TEK 017-0088-00	--	7/87	4/92
12.10	Microlab TA-019	--	7/87	4/92

13.0 R. F. ATTENUATORS

13.1	Bird 4314		2/87	4/92
13.2	Bird 4329		2/87	4/92
13.3	Bird 8322		2/87	4/92
13.4	Weinschel 10-1	G1780	2/87	4/92
- 4 -				

13.5	Weinschel 10-4	50779	2/87	4/99
13.6	Weinschel 10-6	40791	2/87	4/99
13.7	Weinschel 10-20	16950	2/87	4/99
13.8	HP355A&B	REC566/564	3/87	4/92
13.9	Bird 8340-100	484	6/81	4/92
13.10	Bird 8340-200	2348	6/81	4/92
13.11	Narda 768-10	7512	3/81	2/99
13.12	Narda 766-20		3/81	2/99
13.13	Narda 766-3	04101	3/81	2/97
13.14	Bird 8322	531	3/77	4/92
13.15	Bird 8340-100	925	2/87	4/92
13.16	Narda 766-3	94101	5/81	4/99
13.17	HP8498A DC-18			
	GHz (30 dB)	00742	4/82	2/99
13.18	HP8494B DC-18			
	GHz (1/11 dB)	117161	4/82	2/99
13.19	HP8495B DC-18			
	GHz (10/70 dB)	11716	4/82	2/99
13.20	HP 8494B	11716	4/82	2/99
13.21	HP (Set) 8491A			
	019806, 34273, 31245 20323		9/81	2/99
13.22	TEK 2701	B020214	6/79	6/93
13.23	Bird 83433			
	3, 6, 10 dB	396,550,441	1/82	4/92
13.24	Bird 8332	531	3/77	4/92
13.25	WEINSCHTEL 3300	7724-	2/87	4/99
	(Set) .1-20 dB	E6671	10/87	10/99
13.26	GR874 GAL	REC-353	3/87	4/92
13.27	WEINSCHTEL 48-30-43			
	30 dB DC-18 GHz	AN7909	6/87	2/99
13.28	Weinschel 49-30-43			

	30 dB dc-8 GHz	NU408	6/87	2/97
13.29	Narda 757-10	377	1/96	1/96
13.30	Weinschel CN86A/U	86	1/96	1/96
13.31	Weinschel CN84U	65	1/96	1/96
13.32	Weinschel 211	1919	1/96	1/96

14.0 POWER SUPPLIES

14.1	LAMDA 200-03AM		3/79	4/99
14.2	STD SRC 12-120-5		3/79	4/92
14.3	Invar TPA36-18		3/79	4/92
14.4	Sorensen QSB12-8	REC683	4/80	4/92
14.5	Perkins 636-30		2/87	4/92
14.6	TEK PS501-2	B041751	6/79	4/92
14.7	TEK PS502-1	B052376	6/79	4/92
14.8	TEK TM503	B134740	2/94	2/94
14.9	TEK TM506	B014967	2/94	2/94
14.10	TEK TM502	B023359	2/94	2/94
14.11	TEK TM503	B119131	5/84	2/99
14.12	TEK TM504 Opt.7	B021120	5/84	2/94
14.13	TEK TM504	B031607	5/84	2/94
14.14	TEK TM501	B084758	5/84	2/94
14.15	HP 6269B 3-ea.			8/99

- 5 -

15.0 CAMERAS

15.1	TEK C5A	B020822	6/99	
15.2	Minolta 110		4/92	
15.3	TEK C5C	B017008	6/99	
15.4	Minolta 110 35mm		4/92	
15.5	Bolex 16mm		4/92	
15.6	Auricon 16mm			4/92
15.7	Video VHS GE			5/93
15.8	Polaroid SUN660			
15.9	Nikon Digital			

16.0 R. F. AMPLIFIERS & PRE-AMPLIFIERS

16.1	WBE A82A	A8208146	8/76	4/92
16.2	WBE A52B	01001	3/85	4/92
16.3	HP 10855A	n/a	2/87	2/97
16.4	TEK CATV AM511	B010103	10/79	4/92
16.5	Optimax AL:-4004	08340	1/96	1/96
16.6	REC02 (dc-1.5 GHz)	001	1/96	1/96
Broad Band Amplifiers:				
16.7	EN1603L 800 kHz to 1.0 GHz (Po = Less than 3 Watts)			
16.8	IF ±5301 .1-500 mHz			

- (Po = 10 Watts)
- 16.9 EN1406L .150-250 mHz
(Po=50 Watts)
- 16.10 EN13100-LA .250-150 mHz
(Po=50 Watts)
- 16.11 Pre-Amp Interior w/AG SA E4407A 4/02 7/02
9 kHz-3 GHz
- 16.12 3 ea. RF Pre-Amps 10 dB in line 10 to 1000 mHz

17.0 AUDIO POWER METERS

- 17.1 GR 783-A 454 1/87 4/92
- 17.2 Daven OP 961 A3301 1/87 4/92
- 17.3 GR Sound Survey 1555A 2631 1/87 4/92

18.0 R. F. WATT METERS

- 18.1 HP 434A 345-02890 10/72 2/99
- 18.2 HP 435B 7679 7/87 2/99
- 18.3 HP SENSOR 8481A
(.01-18 GHz) 0699 7/87 2/99
- 18.4 Bird 43 48584 1/76 4/92
- 18.5 Bird 4314 0606 2/80 4/92
- 18.6 Bird 4314 0634 2/80 4/92
- 18.7 BIRD 4381 0255 2/86 5/99
- 18.8 Wattmeter USM-68
500mHz-11GHz
.1-5 min. 267 2/77 4/92
- 18.9 Bird 6154 339 7/77 4/92
- 6 -
- 18.10 HP Sensor 8484A
(.01-18 GHz) 6537 3/92 2/99
- 18.11 Agilent 83150A

19.0 AUDIO DISTORTION METERS

- 19.1 TEK AA501 B020641 3/85 2/97
- 19.2 Sinadder S101 7662 1/87 4/92
- 19.3 HP 335

20.0 CHART RECORDERS

- 20.1 Easterline AW
Line/117 vac 152119 1/87 4/92
- 20.2 Stoddard 90097-2
0-1 ma 189-10 1/87 4/92
- 20.3 Stoddard 90097-2
0-1 ma 189-3 1/87 4/92

21.0 ANTENNAS CALIBRATED

21.1	Ailtech Horn 001-0112				
	94627-1 (26.5-40 GHz)	4/84		4/99	
21.2	Ailtech Horn 002-0112				
	94626-1 (18-26.5 GHz)	4/84		4/99	
21.3	AEL APN 101B		4/83		4/92
21.4	Ailtech DM 105a-ti	2/87		4/99	
21.5	AH SYSTEMS (Roberts)128,130, Tunable Dipoles 131,134 TDS-200/535 30 mHz-1 GHz				
		6/86		4/92	
21.6	STODDART (Tunable 90789-1 Dipoles) 218-91143	2/77		4/99	
21.7	Picetron Electronics 218-91143 Tunable dipoles 25-1000 mHz	2/77		4/92	
21.8	Discone Stoddard AT522 (.3-3.0 GHz)	2/77		4/99	
21.9	Discone Stoddard AT570 (1.0-10.0 GHz)	2/77		4/99	
21.10	Dipole Stoddard AT—255 (.370-1.0 GHz) 620	7/77		4/99	
21.11	DB Products dB437C	1045	9/87		4/92
21.12	Stoddard 908337-2 616	7/77		4/92	
21.13	Stoddard 90832-2 645	7/77		4/92	
21.14	GR Test Loop 1000-P10				
21.15	EM3109 Biconical 1 kW (20-300 mHz)				
21.16	Ailtech 93490-1 Log Spiral (.2-1 GHz)				
21.17	Log Spiral				
21.18	AG Double Ridge Waveguide Horn 1 to 18 GHz				

- 7-

22.0 R. F. MIXERS, HIGH PERFORMANCE, FOR TEK7L18 S/A

22.1	PN016-0631-03 18-26.5GHz 1397	4/84		4/92	
	PNO16-0632-01 26.5-40GHz 312	4/84		4/92	
	PNO16-0634-01 40-60 GHz 1020	4/84			4/92

23.0 R. F. BRIDGES

23.1	Delta 01B-2	083	5/84	6/93	
23.2	GR 1602B	981	2/87	4/92	
23.3	GR 1606B	3066	6/81	2/97	
23.4	Delta 01B-3	197	9/79	4/92	

23.5	Misc. 874 Adapters				
23.6	GR 1601A	564	4/77	4/92	
23.7	HP 803A	1393	4/77	4/92	
23.8	HP 417A Detector	02430	4/77	4/92	
23.9	Potomac SD-31/RX31	441/42.8	5/80	4/92	
23.10	Delta CPB-1	826	1/96	2/97	
23.11	Agilent 86205 (50Ω)		8/02	8/02	
24.0	DEVIATION METER & CALIBRATORS				
24.1	RACAL-DANA 8008	2154	2/86	2/99	
24.2	Advance 400	463	3/79	4/92	
24.3	DEV. CALIBRATOR 400	464	3/79	4/99	
24.4	Wavetek 40101	331596	6/92	6/92	
25.0	NOISE FIGURE METER & NOISE SOURCE				
25.1	HP 342A	01163	10/83	4/92	
25.2	HP 349A	01489	10/83	4/92	
25.3	Eaton 7618E (.01-18 GHz)	202	7/83	4/92	
26.0	RECEIVERS				
26.1	Yaesu FRG900 (50-905 mHz)	71-320280	2/88	4/92	
26.2	HRO 500 .050-30mHz	88-6704	4/80	4/92	
	LF-10 Pre-Selector	92-0480	4/80	4/92	
26.3	HRO 50T w/coils (.480-30.0mHz)	SA C566	6/80	4/92	
26.4	WWV Freq. Cal. RX Specific Products	304	7/77	2/99	
26.5	WWVB Spectracom	8163 0799	2/94	2/99	
26.6	GPS/RX/Sony IPS-760				
26.7	Denon TU680-NAB	985	1/96	1/99	
26.8	TV Magnavox RX & VCR				
27.0	FILTERS				
27.1	Cavity Tuneable		3/87	4/92	
	F-194U/F-197U		2/87	4/92	
27.2	Spencer Lab Tuneable Electr.	302	3/87	4/92	
	- 8 -				
27.3	GR Reject Filer				
	874-FR-1	298	7/77	4/99	
27.4	TEK AF501 Bandpass	B022341	10/81	4/92	
27.5	Low Pass Freq. Cut-Off:				
	250mHz Bird 5314	310	4/77	4/92	
27.6	DEM75.REC 75 μsec				
	De-emphasis filter	REF1	11/93	11/93 931108	

27.7	GR874(F100, F4000, F500, F5000)		1/96	1/99
27.8	SAGE LPF 1.6GHz T14CA 0.3 70		1/96	1/96
28.0	FUNCTION GENERATOR/PULSE			
28.1	TEK FG502	B035719	6/79	4/92
28.2	TEK Ramp RG501	B042250	6/79	4/92
28.3	TEK FG504	B031134	6/79	4/92
28.4	HP Pulse Gen. 8013B		9/97	9/97
29.0	PROBES			
29.1	TEK P6201 10-900 mHz	B020639	6/80	4/99
29.2	TEK P6420		6/80	4/99
29.3	TEK P6058	488	7/77	4/99
29.4	TEK P6108	301	7/80	4/99
29.5	TEK P6062B	483	7/80	4/92
29.6	TEK P6149	395	7/80	4/99
29.7	TEK P6057	491	7/80	4/92
29.8	HP 10038	399	7/80	4/92
29.9	TEK P6055	398	7/80	4/92
29.10	TEK P6058 (7012)	484	7/80	4/92
29.11	HP E2302A (Temp)		3/92	4/99
29.12	HP E2302A (Temp)		3/92	4/99
30.0	PHOTO METER & PROBES			
30.1	TEK J17 Photometer	B010801	2/94	2/94
30.2	TEK J1812 Irradiance Head	B020186	2/94	2/94
30.3	TEK J1811 Illuminance Head	B020304	2/94	2/94
30.4	TEK J1803 Illuminance Head	B020495	2/94	2/94
31.0	OSCILLOSCOPE & SPECTRUM ANALYZER CALIBRATION SYSTEM			
31.1	TEK PG506 Cal.Gen.	B058239	2/94	2/99
31.2	TEK TG502 Time Mark Gen.	B031640	2/94	2/99
31.3	TEK SG503 Level Sine Wave Gen.	B091258	2/94	2/99
31.4	TEK Main Frame TM503		2/94	1/99
32.0	MISCELLANEOUS			
32.1	DC Bridge Resistance Zm-4E/U	86	3/87	4/92
32.2	RF Sample Transformer Delta TCT-3 (.5-5mHz)	341	2/88	4/92
		- 9 -		
32.3	AC VARIAC GR116U			

	115-/0-135 VAC				
	1 KVA + 3 KVA		3/87		4/99
32.4	Automatic Keyer				
	AEA-MK-1	0460	3/87		4/92
32.5	LSIN REC-1 Ohm 5				
	+ 50 μ H	001/002	9/81		4/92
32.6	TDR TEK 1502	B030601		12/85	4/92
32.7	Z Adapter HP 50/75 ohm	11687A			
32.8	Pulse Modulator REC PM-1		3/79		4/92
32.9	Frequency Doubler				
	HP11721A	0395	2/81		4/92
32.10	Antenna Phase Monitor (.5-1.7 mHz)				
	Gohrman CMR-SN-3-242				
32.11	Transit, David 7 White 5" w/accessories				
32.12	Capacitance Meter				
	Dage CM-6	532	2/81		4/92
32.13	GPS RECEIVER SONY IPS-760		5/94		5/99
32.14	Z Bridge GR1656	2665	2/95		2/99
32.15	FM Stereo Generator			1/94	1/94
32.16	Electrostatic Discharge				
	Test System Keytek KTK2001				
32.17	LISN REC2 (3 phase				
	75 amp. 50 μ hy_		10/97		10/99
32.18	RF Couplers CISPR16-1				
	Type A, M, SW & SJ				
32.19	Calibrated Test Site (3-meters)				
32.20	Calibrated Test Site (30-meters)				
32.21	GPS Receivers:				
	2 ea. Trimble Beacon on Belt				
	2 ea. Trimble Receiver Geo Explorer3				

NOMENCLATURE FOR TEST EQUIPMENT

REC	Radio & Tv Engineering Co.
TEK	Tektronics
TUK	Tucker Electronics
BIRD	Bird Electronics
HP	Hewlett Packard
EAT	Eaton Mfg. Co.
AIL	Ailtech
WBE	Wideband Engineering Co.
POT	Potomac
DEL	Delta
RAC	Racal Dana
VAFB	Vandenberg Airforce Base
WWV	WWV National Bureau of Standards
DIG	Digitek
NYNS	New York Naval Station
WEN	Weinshel
IFI	Instruments for Industry, Inc.

NOTE:

Calibration is maintained on all equipment semi-annually, or more often as

needed. The calibration is traceable to the National Bureau of Standards as

appropriate, and verified in house prior to each measurement session.

Updated 08/22/02

END OF REPORT