

# Auto Test Measurements with the AT2000 Spectrum Analyzer



AP-AT10-013-A

The Auto Test measurement can be used to make level measurements for the 24-hour variation tests and make frequency measurements at the same time. Just as with most test equipment, the channel plan needs to be set up in order for this measurement to function properly. This is because the instrument uses the channel plan to look up the frequency of the channels when the measurement is invoked.

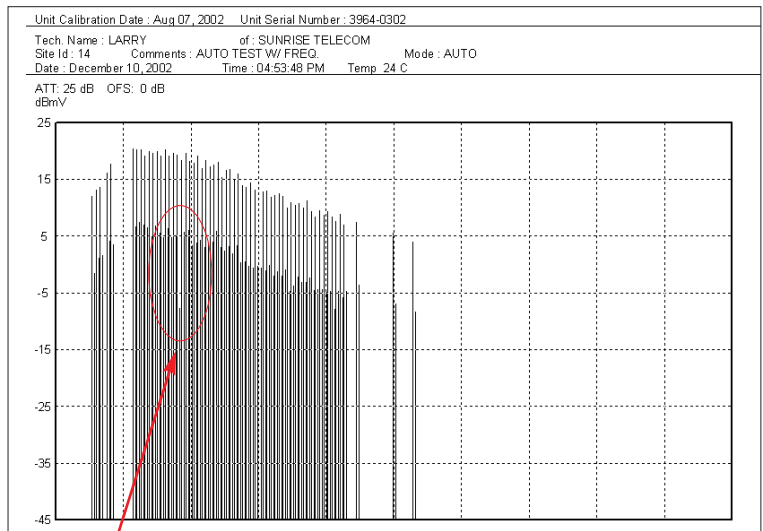
The AT2000 allows the user to skip channels not required for measurement by the FCC such as digital carriers. This is also accomplished by properly editing the channel plan. Please refer to the user's manual for channel plan editing before using this measurement.

1. Connect the RF input of the analyzer to the test point to be measured.
2. Press the MENU hard key, highlight Auto Test and press ENTER.
3. Select either the Levels Only or the Levels and Frequencies soft key.
4. The analyzer then measures every active carrier that is tagged for an Auto Test in the channel plan.

A sample of the results is shown here. This measurement was performed on a 550 MHz system and

at the end of a long drop. The blank spaces are where the digital carriers fall. They have been deleted from this measurement.

The analyzer gives both a graphic display of the measured channels and a list of all the measurements. Notice the carrier showing the low audio carrier in the graphic display. This corresponds to the low audio carrier on channel 8 circled in red on the list of measurements.



**Low Audio Carrier**

Slot	Label	Type	Video (Mhz)	Audio(Mhz)	Delta(Mhz)	V(dBmV)	A(dBmV)	D(dB)
2	2	TV	55.25251	59.75230	4.49979	12.1	-1.5	-13.5
3	3	TV	61.24921	65.74930	4.50009	13.2	1.2	-12.0
4	4	TV	67.24937	71.74932	4.49995	13.7	1.8	-12.0
5	5	TV	77.24123	81.74127	4.50004	16.3	4.3	-12.0
6	6	TV	83.25085	87.75081	4.49986	17.9	3.7	-14.2
7	7	TV	175.24696	179.74725	4.50029	19.8	5.0	-14.8
8	8	TV	181.25024	185.75027	4.50003	19.4	-7.6	-12.0
9	9	TV	187.25187	191.75192	4.50005	18.4	5.8	-12.6
10	10	TV	193.24032	197.74036	4.50004	19.7	6.2	-13.5
11	11	TV	199.26270	203.76273	4.50003	18.3	3.4	-14.9
12	12	TV	205.24877	209.74866	4.49989	18.0	3.9	-14.1
13	13	TV	211.24876	215.74858	4.49982	19.3	4.4	-14.9
14	A	TV	121.26388	125.76385	4.49997	20.4	7.6	-12.8
15	B	TV	127.26161	131.76161	4.50000	20.4	7.0	-13.4
16	C	TV	133.26204	137.76236	4.50032	19.3	6.7	-12.6
17	D	TV	139.24903	143.74907	4.50004	20.1	5.2	-14.9
18	E	TV	145.24992	149.74984	4.49992	19.7	7.0	-12.8
19	F	TV	151.24907	155.74915	4.50008	20.1	5.7	-14.4
20	G	TV	157.24951	161.74965	4.50014	19.2	4.9	-14.3
21	H	TV	163.24503	167.74511	4.50008	20.4	6.5	-13.8
22	I	TV	169.25130	173.75120	4.49990	19.3	4.8	-14.5
23	J	TV	217.24906	221.74888	4.49982	17.0	3.1	-13.9
24	K	TV	223.25189	227.75179	4.49990	18.4	3.8	-14.6
25	L	TV	229.26146	233.76148	4.50002	17.3	4.1	-13.3
26	M	TV	235.26109	239.76086	4.49977	17.7	5.9	-11.8
27	N	TV	241.26167	245.76167	4.50000	18.1	3.2	-14.9
28	O	TV	247.26313	251.76325	4.50012	15.5	2.6	-12.9
29	P	TV	253.26225	257.76207	4.49982	16.8	3.3	-13.5
30	Q	TV	259.26328	263.76325	4.49997	16.9	2.1	-14.8
31	R	TV	265.26368	269.76342	4.49974	15.1	3.5	-11.6
32	S	TV	271.26367	275.76385	4.50018	16.0	0.5	-15.6
33	T	TV	277.26615	281.76613	4.49998	14.0	0.7	-13.3
34	U	TV	283.25871	287.75888	4.50017	13.8	-0.2	-14.0

Slot	Label	Type	Video (Mhz)	Audio(Mhz)	Delta(Mhz)	V(dBmV)	A(dBmV)	D(dB)
35	V	TV	289.26081	293.76084	4.50003	14.5	-0.4	-14.9
36	W	TV	295.26079	299.76067	4.49988	13.3	-0.1	-13.4
37	AA	TV	301.26097	305.76100	4.50003	13.9	-0.4	-14.3
38	BB	TV	307.26182	311.76176	4.49994	12.9	-0.9	-13.8
39	CC	TV	313.26218	317.76233	4.50015	13.1	-0.0	-13.1
40	DD	TV	319.26196	323.76201	4.50005	12.0	-1.9	-13.9
41	EE	TV	325.25953	329.75939	4.49986	12.3	-1.0	-13.3
42	FF	TV	331.27400	335.77416	4.50016	12.7	-1.9	-14.6
43	GG	TV	337.25966	341.75972	4.50006	12.1	-0.8	-12.9
44	HH	TV	343.25865	347.75869	4.50004	10.0	-4.5	-14.6
45	I	TV	349.26126	353.76116	4.49990	11.1	-3.6	-14.6
46	JJ	TV	355.26189	359.76175	4.49986	10.6	-2.0	-12.6
47	KK	TV	361.26089	365.76098	4.50009	10.8	-3.0	-13.8
48	LL	TV	367.26125	371.76123	4.49998	10.2	-3.0	-13.2
49	MM	TV	373.26049	377.76050	4.50001	11.4	-2.3	-13.7
50	NN	TV	379.25872	383.75875	4.50003	9.4	-4.5	-13.9
51	OO	TV	385.25992	389.75983	4.49991	8.6	-4.3	-12.9
52	PP	TV	391.26104	395.76092	4.49988	9.6	-4.2	-13.7
53	QQ	TV	397.26237	401.76242	4.50005	8.9	-4.7	-13.5
54	RR	TV	403.26281	407.76275	4.49994	9.5	-4.5	-14.0
55	SS	TV	409.26262	413.76276	4.50014	8.5	-7.7	-16.3
56	TT	TV	415.26252	419.76239	4.49987	7.7	-4.5	-12.2
57	UU	TV	421.26238	425.76269	4.50031	8.9	-5.7	-14.6
58	VV	TV	427.24955	431.74961	4.50006	7.0	-4.6	-11.6
61	YY	TV	445.25056	449.75044	4.49988	7.6	-3.5	-11.1
70	70	TV	499.26257	503.76261	4.50004	5.7	-6.9	-12.6
75	75	TV	529.26247	533.76251	4.50004	4.2	-8.2	-12.4
99	T7	TV	115.27416	119.77409	4.49993	20.6	6.7	-13.8