Test Report… FCC ID: O78SCV99L

Assembled from Manufacture Measurements performed to EIA/TIA-603
and
Measurements made at ADRad Communications, Inc.

29 April 2001

Contents:

1.0 Specification Information

Model Numbers:	SCV99L, SCV32L, or SCV08 (Same RF and controller)
Number of Channels:	99, 32, or 8 channels dependent on model number.
Frequency Range:	148 to 174 MHz
Channel Spacing:	12.5 or 25 kHz
Transmitter Power Output	1 or 5 watt, user or programmer selectable. (± 1 dB)
Battery Voltage:	7.5 volts
Current Drain:	Tx… 1800 mA @ 5 watts 800 mA @ 1 watt Rx… 160 mA @ 2 50 mW of Rx audio 50 mA @ standby
Antenna Impedance:	50 Ohms
Frequency Stability:	± 2.5 ppm
Temperature Range:	-30°C to +60°C
Nominal Battery Voltage:	7.5 VDC (6 cells NiCad or NMHy)
Emission Designations:	12.5 kHz Channel (2x2.5kHz deviation)+(2x3kHz) 11k0F3E 25.0 kHz Channel (2x5.0kHz deviation)+(2x3kHz) 16k0F3E for 3 kHz maximum modulation frequency

All measurements made to TIA/EIA-603 procedures

2.0 RF Power Output

At 5 watt Output Level

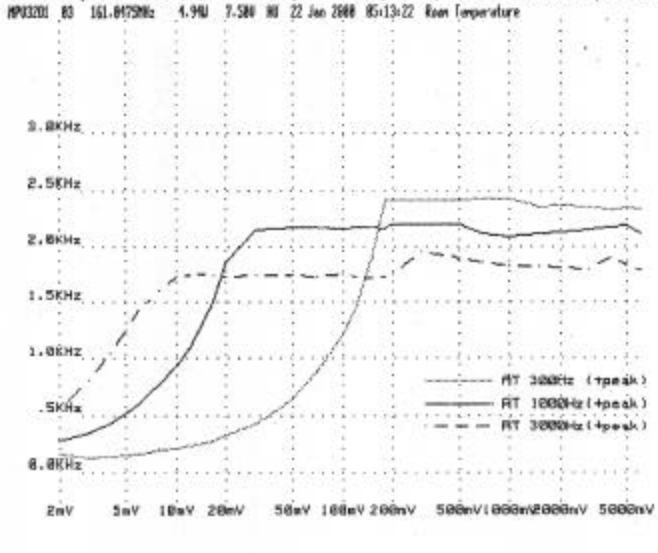
DC Voltage @ -15%	*DC Voltage @ Nominal 7.5 VDC*	*DC Voltage @+15%*
4.5 Watts	5.5 Watts	6.5 Watts

At 1 watt Output Level

DC Voltage @ -15%	*DC Voltage @ Nominal 7.5 VDC*	*DC Voltage @+15%*
0.95 Watts	1.00 Watts	1.05 Watts

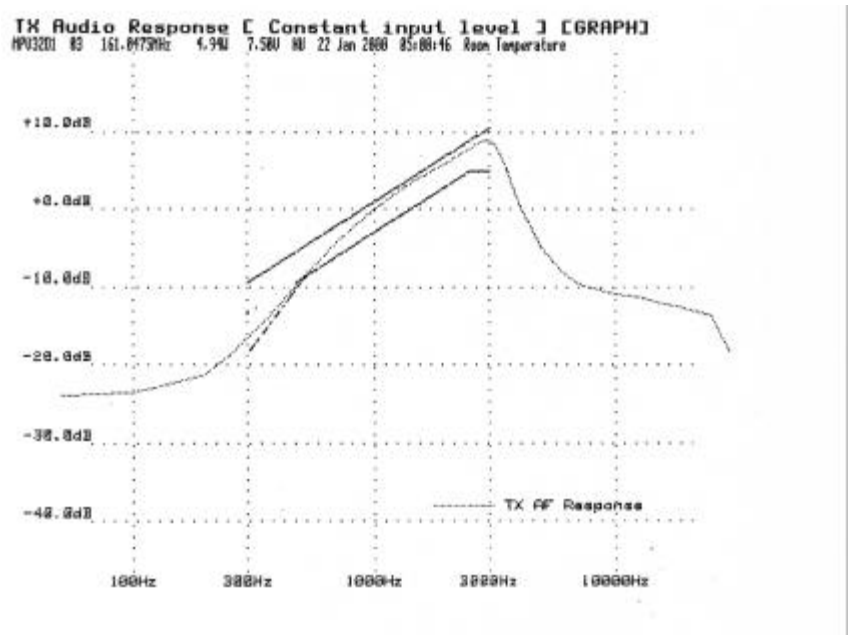
3.0 Modulation Characteristics

Mic input level , Mic input Frequency VS Deviation [GRAPH]



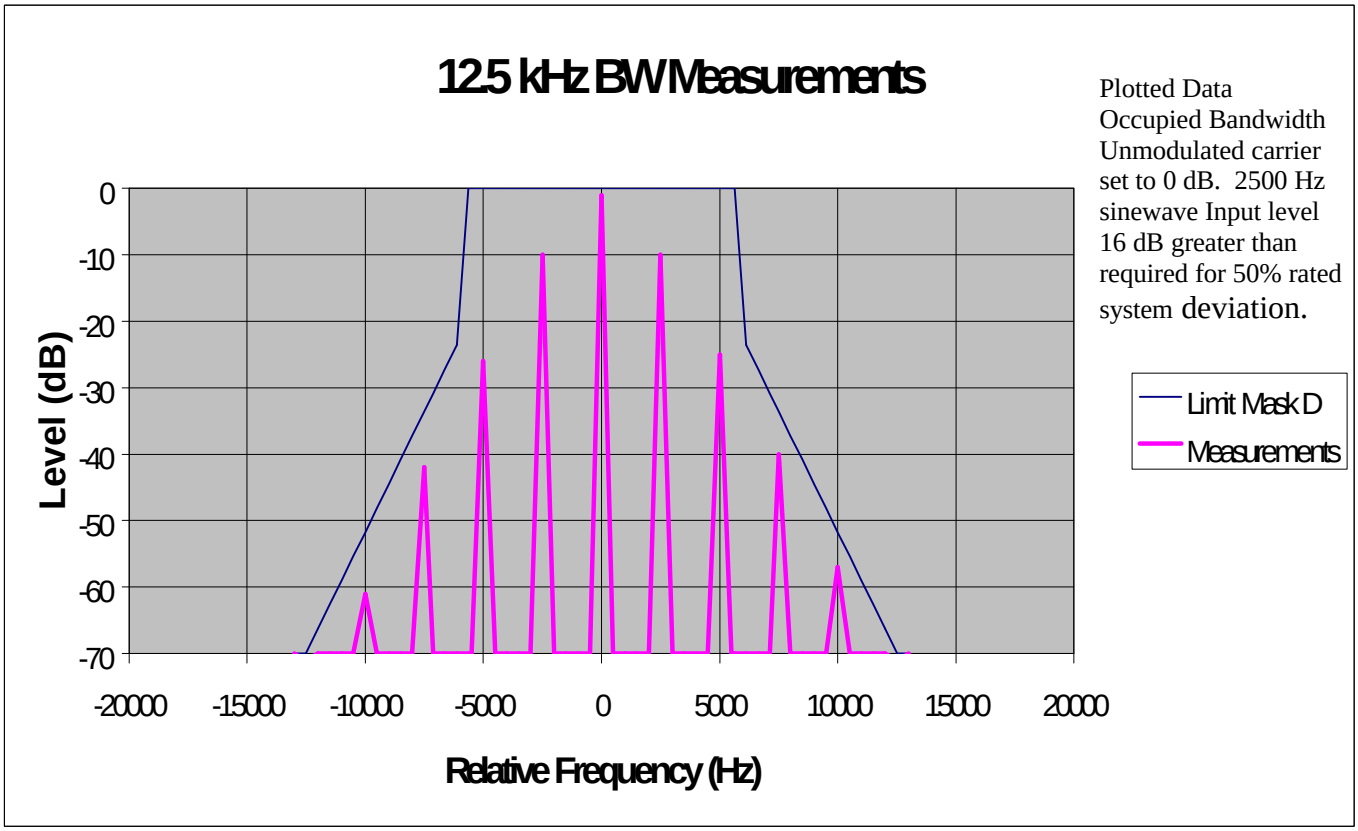
Mic input level , Mic input Frequency VS Deviation [DATA]

Mic input Level [mV]	Mic input frequency Deviation of 300Hz [KHz]		Mic input frequency Deviation of 1000Hz [KHz]		Mic input frequency Deviation of 3000Hz [KHz]	
	+ Peak	- Peak	+ Peak	- Peak	+ Peak	- Peak
2.0	.16	.15	.27	.24	.57	.54
3.0	.13	.11	.35	.31	.81	.78
4.0	.14	.11	.43	.40	1.05	.99
5.0	.15	.12	.52	.49	1.26	1.22
6.0	.16	.14	.60	.58	1.43	1.48
7.0	.17	.15	.70	.65	1.52	1.56
8.0	.19	.15	.77	.74	1.61	1.57
10.0	.21	.18	.93	.90	1.73	1.65
12.0	.23	.20	1.10	1.06	1.74	1.55
15.0	.25	.24	1.35	1.32	1.75	1.58
17.0	.28	.24	1.52	1.50	1.74	1.61
20.0	.32	.28	1.86	1.75	1.73	1.60
30.0	.43	.39	2.15	1.94	1.74	1.60
40.0	.54	.52	2.16	2.02	1.74	1.61
50.0	.65	.62	2.17	2.07	1.74	1.61
70.0	.89	.85	2.17	2.08	1.73	1.61
100.0	1.22	1.19	2.16	2.10	1.75	1.61
120.0	1.46	1.43	2.17	2.09	1.73	1.60
150.0	1.91	1.80	2.17	2.08	1.72	1.62
180.0	2.42	2.13	2.16	2.08	1.73	1.62
200.0	2.41	2.21	2.19	2.08	1.75	1.64
300.0	2.41	2.34	2.19	2.07	1.95	1.69
500.0	2.42	2.40	2.19	2.05	1.89	1.71
700.0	2.43	2.43	2.11	2.14	1.86	1.74
1000.0	2.43	2.43	2.09	2.11	1.83	1.71
1500.0	2.36	2.48	2.11	2.11	1.82	1.71
2000.0	2.37	2.49	2.13	2.11	1.81	1.70
3000.0	2.36	2.46	2.15	2.11	1.80	1.70
4000.0	2.32	2.33	2.17	2.08	1.89	1.73
5000.0	2.25	2.26	2.18	2.08	1.84	1.75
6000.0	2.33	2.23	2.12	2.13	1.79	1.68



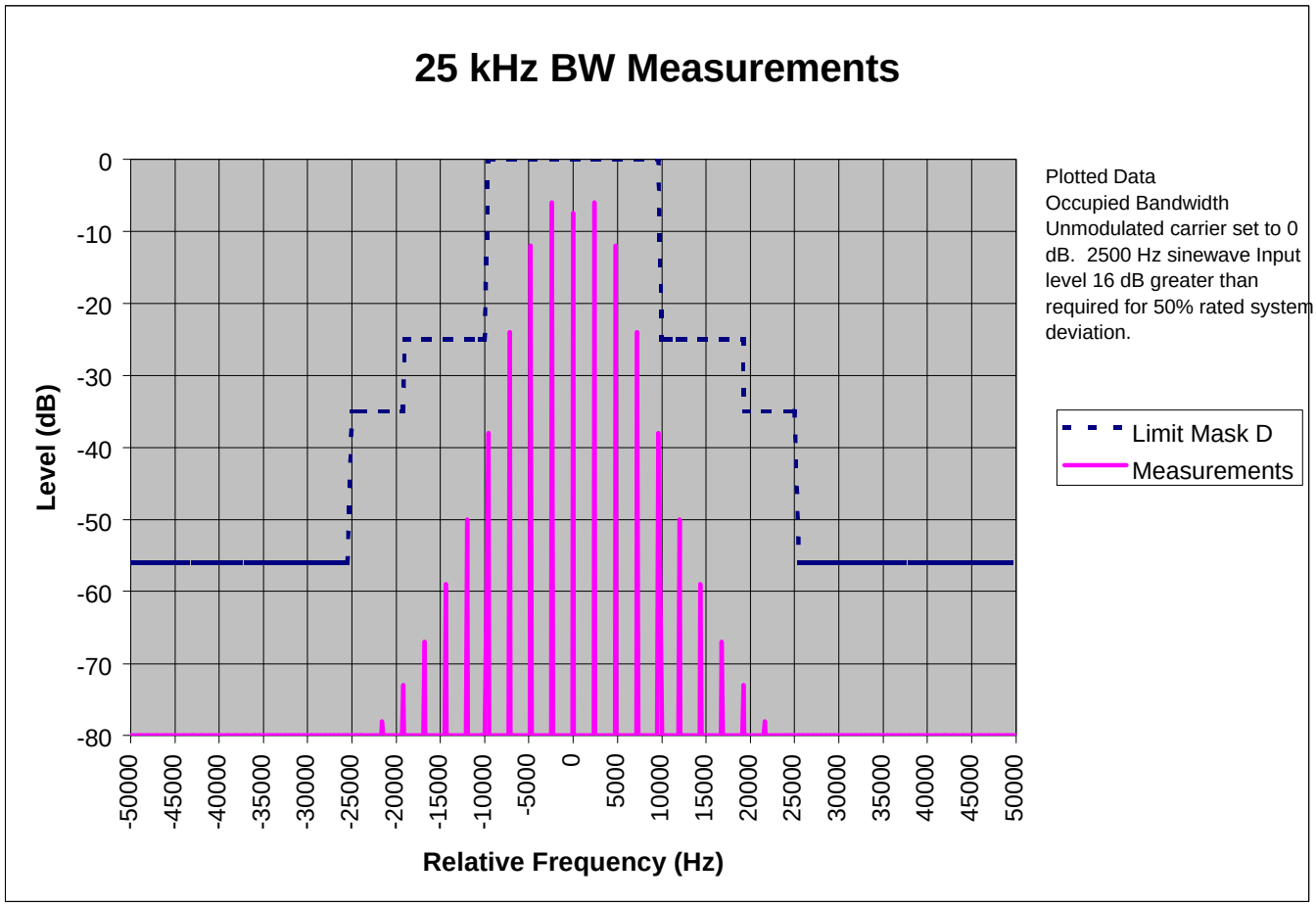
4.0 Occupied Bandwidth

Plotted from data taken.



Plotted Data
Occupied Bandwidth
Unmodulated carrier set to 0 dB. 2500 Hz sinewave Input level 16 dB greater than required for 50% rated system deviation.

Plotted from data taken.



5.0 Spurious Emissions (Conducted)

CHANNEL SPACING	:12.5 KHz		TEST METHOD	:EIA	
SYSTEM DEVIATION	: 2.5 KHz		TEST DEVIATION	: 1.5 KHz	
SUPPLY VOLTAGE	: 7.50 Volts				
RATED AUDIO POWER	: .10 Watts				
SPK IMPEDANCE	: 8.0 Ohms				
Test Operator	:HU		1st IF	-21.400MHz	
Measurment Date	:20 Jan 2000		2nd IF	-455.000KHz	
Issued Date	03:24:06 / 20 Jan 2000				
------- TX -------					
SERIAL NUMBER	02	03	03	03	
TEMPERATURE °C	+25.0	+25.0	+25.0	+25.0	
RF FREQUENCY MHz	148.0500	154.0500	161.0475	168.9500	
TEST VOLTAGE V	7.50	7.50	7.50	7.50	
CARRIER POWER W	4.61	4.82	4.95	4.98	
POWER DOWN 1min %	-1.36	-.97	-.47	-.38	
POWER DOWN 3min %	-2.87	-2.08	-1.42	-1.04	
MOD LIMIT (+) KHz	2.07	2.06	2.08	2.10	
MOD LIMIT (-) KHz	2.07	2.02	2.00	1.98	
SPURIOUS 1 dB	-70.2	-72.7	-71.3	-71.0	
at RF FREQ MHz	147.972	154.125	160.966	169.023	
SPURIOUS 2 dB	-73.3	-73.3	-73.5	-74.3	
at RF FREQ MHz	147.953	153.958	161.137	169.032	
SPURIOUS 3 dB	-81.3	-82.7	-81.7	-82.5	
at RF FREQ MHz	141.550	147.550	183.214	169.450	
SPURIOUS 4 dB	-79.8	-81.0	-80.8	-82.0	
at RF FREQ MHz	205.719	183.157	183.163	182.880	
SPURIOUS 5 dB	-69.0	-76.2	-71.8	-78.8	
at RF FREQ MHz	304.087	317.547	1910.335	1485.504	
HUM & NOISE ON dB					
HUM & NOISE OFFdB					
MIC SENSITIVITYmV	14.58	15.54	14.83	15.90	
CURRENT A	1.650	1.650	1.650	1.650	
AF DISTORTION %	1.5	1.4	1.8	2.1	
AF RESP 300Hz dB	-16.69	-16.94	-17.26	-17.51	
AF RESP 3KHz dB	+8.64	+8.74	+8.74	+8.87	
FREQ ACCURACY Hz	+70	+30	-410	+30	
POWER DOWN 0min W	4.61	4.82	4.95	4.98	
POWER DOWN 1min W	4.55	4.77	4.92	4.96	
POWER DOWN 3min W	4.48	4.72	4.88	4.93	
Hum & Noise on dB	46.7	47.9	47.4	46.7	
Hum & Noise offdB	51.9	52.9	52.2	51.7	
----- (LOW POWER) -------					
CARRIER POWER W	1.12	1.17	1.16	1.08	
FREQ ACCURACY Hz	-110	-0	-610	-150	
CURRENT A	.725	.888	.713	.713	
MOD LIMIT (+) KHz	2.07	2.08	2.10	2.12	
MOD LIMIT (-) KHz	2.08	2.04	2.02	2.00	
HUM & NOISE ON dB					
HUM & NOISE OFFdB					
SPURIOUS 1 dB	-79.8	-75.5	-73.8	-73.8	
at RF FREQ MHz	148.550	154.383	183.214	169.283	
SPURIOUS 2 dB	-75.0	-75.5	-74.8	-74.7	
at RF FREQ MHz	183.153	183.157	183.163	182.880	
SPURIOUS 3 dB	-63.2	-67.8	-71.2	-73.2	
at RF FREQ MHz	304.087	317.547	331.566	1485.504	

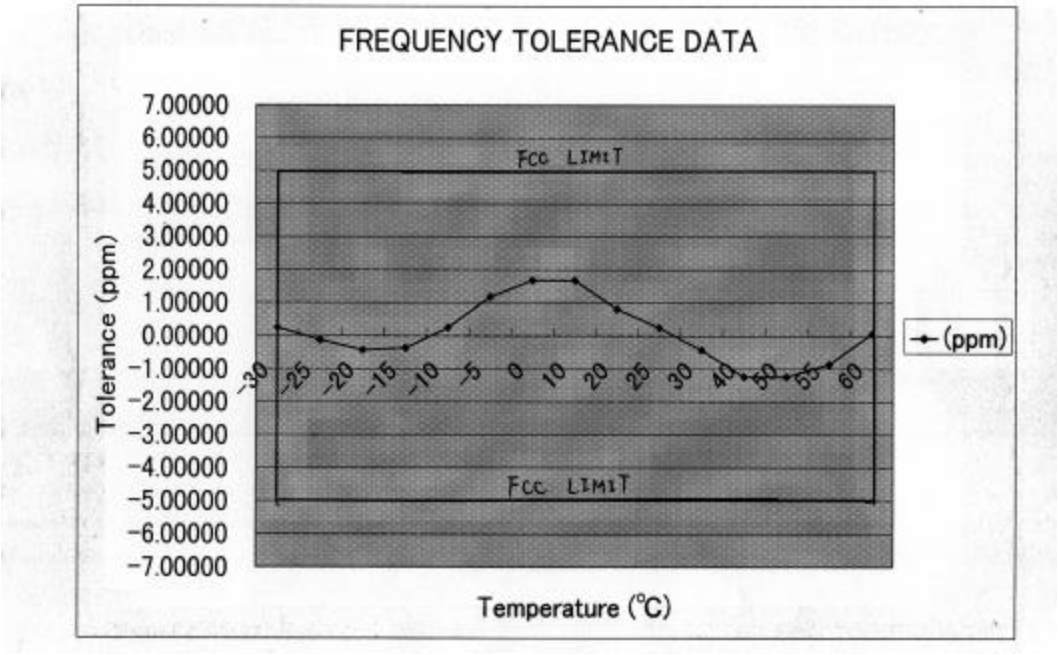
Spurious with Five watt output, dBc ref to fundamental. All others >-20 dB below requirement

Spurious with One watt output, dBc ref to fundamental

6.0 Frequency Stability

FCC Limit is +/- 2.5 ppm.

DC Voltage @ -15%	*DC Voltage @ Nominal 7.5 VDC*	*DC Voltage @+15%*
+58 Hz (+0.47 ppm)	+128 Hz (+0.8 ppm)	+138 Hz (+0.86 ppm)



7.0 Transient Frequency Characteristics