

ITEM 2 Corr. 17170

CISCO CONFIDENTIAL

Mercury processing gain

J. Friedmann

data rates	modulation used	symbol rates	chip rate	chip per bit	10 log (chip per bit)	add 3dB if unique codes for I & Q (minus 1 dB for implementation)	theoretical processing gain dB (add last two columns)	measured processing gain
1 mb/s	BPSK	1 mbps	11 mbps	11 (same code for I & Q)	10.7 dB		10.7 dB	10.8 dB
2 mb/s	QPSK	1 mbps	11 mbps	11 (same code for I & Q)	10.7 dB		10.7 dB	10.8 dB
5.5 mb/s	CCK	1.375 mbps	8 mbps	8 (8 for I & 8 for Q)	9 dB	2 dB	11 dB	10.7 dB
11 mb/s	CCK	1.375 mbps	8 mbps	8 (8 for I & 8 for Q)	9 dB	2 dB	11 dB	10.6 dB

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Jamming margin at 5.5mb (part1)

11/30/00

processing gain by method of jamming margin															
Comet Radio USB 34X															
radio conditions : supply voltage 5v, at room temp, s/n =25															
tester name :Tom Lutman															
test date : 8-15-00		radio center freq= 2442													
Gp = S/N + Mj + Lsys; where S/N = 13.6 dB as per Harris CCK modulation; Lsys = 2dB															
input signal level = -20 dBm, jammer level = - 25.6 dBm, then Mj= - 5.6 dB															
Gp = 13.6 dB + (-5.6) dB + 2 dB = 10 dB															
	jammer freq	Gp	pass (error rate under 8%)	jammer freq	Gp	pass (error rate under 8%)	jammer freq	Gp	pass (error rate under 8%)	jammer freq	Gp	pass (error rate under 8%)	jammer freq	Gp	pass (error rate under 8%)
	MHz	dB	pass / FAILURE	MHz	dB	pass / FAILURE	MHz	dB	pass / FAILURE	MHz	dB	pass / FAILURE	MHz	dB	pass / FAILURE
1	2433.50	10	pass	41	2435.50	10	pass	81	2437.50	10	pass	121	2439.50	10	pass
2	2433.55	10	pass	42	2435.55	10	pass	82	2437.55	10	pass	122	2439.55	10	pass
3	2433.60	10	pass	43	2435.60	10	pass	83	2437.60	10	pass	123	2439.60	10	pass
4	2433.65	10	pass	44	2435.65	10	pass	84	2437.65	10	pass	124	2439.65	10	pass
5	2433.70	10	pass	45	2435.70	10	pass	85	2437.70	10	pass	125	2439.70	10	pass
6	2433.75	10	pass	46	2435.75	10	pass	86	2437.75	10	pass	126	2439.75	10	pass
7	2433.80	10	pass	47	2435.80	10	pass	87	2437.80	10	pass	127	2439.80	10	pass
8	2433.85	10	pass	48	2435.85	10	pass	88	2437.85	10	pass	128	2439.85	10	pass
9	2433.90	10	pass	49	2435.90	10	pass	89	2437.90	10	pass	129	2439.90	10	pass
10	2433.95	10	pass	50	2435.95	10	pass	90	2437.95	10	pass	130	2439.95	10	pass
11	2434.00	10	pass	51	2436.00	10	pass	91	2438.00	10	pass	131	2440.00	10	pass
12	2434.05	10	pass	52	2436.05	10	pass	92	2438.05	10	pass	132	2440.05	10	pass
13	2434.10	10	pass	53	2436.10	10	pass	93	2438.10	10	pass	133	2440.10	10	pass
14	2434.15	10	pass	54	2436.15	10	pass	94	2438.15	10	pass	134	2440.15	10	pass
15	2434.20	10	pass	55	2436.20	10	pass	95	2438.20	10	pass	135	2440.20	10	pass
16	2434.25	10	pass	56	2436.25	10	fail	96	2438.25	10	pass	136	2440.25	10	pass
17	2434.30	10	pass	57	2436.30	10	fail	97	2438.30	10	pass	137	2440.30	10	pass
18	2434.35	10	pass	58	2436.35	10	pass	98	2438.35	10	pass	138	2440.35	10	pass
19	2434.40	10	pass	59	2436.40	10	pass	99	2438.40	10	pass	139	2440.40	10	pass
20	2434.45	10	pass	60	2436.45	10	pass	100	2438.45	10	pass	140	2440.45	10	pass
21	2434.50	10	pass	61	2436.50	10	pass	101	2438.50	10	pass	141	2440.50	10	pass
22	2434.55	10	pass	62	2436.55	10	pass	102	2438.55	10	pass	142	2440.55	10	pass
23	2434.60	10	pass	63	2436.60	10	pass	103	2438.60	10	pass	143	2440.60	10	pass
24	2434.65	10	pass	64	2436.65	10	pass	104	2438.65	10	pass	144	2440.65	10	pass
25	2434.70	10	pass	65	2436.70	10	pass	105	2438.70	10	pass	145	2440.70	10	pass
26	2434.75	10	pass	66	2436.75	10	pass	106	2438.75	10	pass	146	2440.75	10	pass
27	2434.80	10	pass	67	2436.80	10	pass	107	2438.80	10	pass	147	2440.80	10	pass
28	2434.85	10	pass	68	2436.85	10	pass	108	2438.85	10	pass	148	2440.85	10	pass
29	2434.90	10	pass	69	2436.90	10	pass	109	2438.90	10	pass	149	2440.90	10	pass
30	2434.95	10	pass	70	2436.95	10	pass	110	2438.95	10	pass	150	2440.95	10	pass
31	2435.00	10	pass	71	2437.00	10	pass	111	2439.00	10	pass	151	2441.00	10	pass
32	2435.05	10	pass	72	2437.05	10	pass	112	2439.05	10	pass	152	2441.05	10	pass
33	2435.10	10	pass	73	2437.10	10	pass	113	2439.10	10	pass	153	2441.10	10	pass
34	2435.15	10	pass	74	2437.15	10	pass	114	2439.15	10	pass	154	2441.15	10	pass
35	2435.20	10	pass	75	2437.20	10	pass	115	2439.20	10	pass	155	2441.20	10	pass
36	2435.25	10	pass	76	2437.25	10	pass	116	2439.25	10	pass	156	2441.25	10	pass
37	2435.30	10	pass	77	2437.30	10	pass	117	2439.30	10	pass	157	2441.30	10	pass
38	2435.35	10	pass	78	2437.35	10	pass	118	2439.35	10	pass	158	2441.35	10	pass
39	2435.40	10	pass	79	2437.40	10	pass	119	2439.40	10	pass	159	2441.40	10	pass
40	2435.45	10	pass	80	2437.45	10	pass	120	2439.45	10	pass	160	2441.45	10	pass

drop 20% = 340 x 20% = 68 ; therefore can drop 68 failures

processing gain by method of jamming margin															
Comet Radio USB 34X															
radio conditions : supply voltage 5v, at room temp, s/n =25															
tester name : Tom Lutman															
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161	2441.50	10	pass	206	2443.75	10	pass	251	2446.00	10	pass	296	2448.25	10	pass
162	2441.55	10	pass	207	2443.80	10	pass	252	2446.05	10	pass	297	2448.30	10	pass
163	2441.60	10	pass	208	2443.85	10	pass	253	2446.10	10	pass	298	2448.35	10	pass
164	2441.65	10	pass	209	2443.90	10	pass	254	2446.15	10	pass	299	2448.40	10	pass
165	2441.70	10	pass	210	2443.95	10	pass	255	2446.20	10	pass	300	2448.45	10	pass
166	2441.75	10	pass	211	2444.00	10	pass	256	2446.25	10	pass	301	2448.50	10	pass
167	2441.80	10	pass	212	2444.05	10	pass	257	2446.30	10	pass	302	2448.55	10	pass
168	2441.85	10	pass	213	2444.10	10	pass	258	2446.35	10	pass	303	2448.60	10	pass
169	2441.90	10	pass	214	2444.15	10	pass	259	2446.40	10	pass	304	2448.65	10	pass
170	2441.95	10	pass	215	2444.20	10	pass	260	2446.45	10	pass	305	2448.70	10	pass
171	2442.00	10	pass	216	2444.25	10	pass	261	2446.50	10	pass	306	2448.75	10	pass
172	2442.05	10	pass	217	2444.30	10	pass	262	2446.55	10	pass	307	2448.80	10	pass
173	2442.10	10	pass	218	2444.35	10	pass	263	2446.60	10	pass	308	2448.85	10	pass
174	2442.15	10	pass	219	2444.40	10	pass	264	2446.65	10	pass	309	2448.90	10	pass
175	2442.20	10	pass	220	2444.45	10	pass	265	2446.70	10	pass	310	2448.95	10	pass
176	2442.25	10	pass	221	2444.50	10	pass	266	2446.75	10	pass	311	2449.00	10	pass
177	2442.30	10	pass	222	2444.55	10	pass	267	2446.80	10	pass	312	2449.05	10	pass
178	2442.35	10	pass	223	2444.60	10	pass	268	2446.85	10	pass	313	2449.10	10	pass
179	2442.40	10	pass	224	2444.65	10	pass	269	2446.90	10	pass	314	2449.15	10	pass
180	2442.45	10	pass	225	2444.70	10	pass	270	2446.95	10	pass	315	2449.20	10	pass
181	2442.50	10	pass	226	2444.75	10	pass	271	2447.00	10	pass	316	2449.25	10	pass
182	2442.55	10	pass	227	2444.80	10	pass	272	2447.05	10	pass	317	2449.30	10	pass
183	2442.60	10	pass	228	2444.85	10	pass	273	2447.10	10	pass	318	2449.35	10	pass
184	2442.65	10	pass	229	2444.90	10	pass	274	2447.15	10	pass	319	2449.40	10	pass
185	2442.70	10	pass	230	2444.95	10	pass	275	2447.20	10	pass	320	2449.45	10	pass
186	2442.75	10	pass	231	2445.00	10	pass	276	2447.25	10	pass	321	2449.50	10	pass
187	2442.80	10	pass	232	2445.05	10	pass	277	2447.30	10	pass	322	2449.55	10	pass
188	2442.85	10	pass	233	2445.10	10	pass	278	2447.35	10	pass	323	2449.60	10	pass
189	2442.90	10	pass	234	2445.15	10	pass	279	2447.40	10	pass	324	2449.65	10	pass
190	2442.95	10	pass	235	2445.20	10	pass	280	2447.45	10	pass	325	2449.70	10	pass
191	2443.00	10	pass	236	2445.25	10	pass	281	2447.50	10	fail	326	2449.75	10	pass
192	2443.05	10	pass	237	2445.30	10	pass	282	2447.55	10	fail	327	2449.80	10	pass
193	2443.10	10	pass	238	2445.35	10	pass	283	2447.60	10	fail	328	2449.85	10	pass
194	2443.15	10	pass	239	2445.40	10	pass	284	2447.65	10	pass	329	2449.90	10	pass
195	2443.20	10	pass	240	2445.45	10	pass	285	2447.70	10	pass	330	2449.95	10	pass
196	2443.25	10	pass	241	2445.50	10	pass	286	2447.75	10	pass	331	2450.00	10	pass
197	2443.30	10	pass	242	2445.55	10	pass	287	2447.80	10	pass	332	2450.05	10	pass
198	2443.35	10	pass	243	2445.60	10	pass	288	2447.85	10	pass	333	2450.10	10	pass
199	2443.40	10	pass	244	2445.65	10	pass	289	2447.90	10	pass	334	2450.15	10	pass
200	2443.45	10	pass	245	2445.70	10	pass	290	2447.95	10	pass	335	2450.20	10	pass
201	2443.50	10	pass	246	2445.75	10	pass	291	2448.00	10	pass	336	2450.25	10	pass
202	2443.55	10	pass	247	2445.80	10	pass	292	2448.05	10	pass	337	2450.30	10	pass
203	2443.60	10	pass	248	2445.85	10	pass	293	2448.10	10	pass	338	2450.35	10	pass
204	2443.65	10	pass	249	2445.90	10	pass	294	2448.15	10	pass	339	2450.40	10	pass
205	2443.70	10	pass	250	2445.95	10	pass	295	2448.20	10	pass	340	2450.45	10	pass
drop 20% = 340 x 20% = 68 ; therefore can drop 68 failures, no. of failures = 05, therefore unit passes proc gain test															

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Jamming margin at 1 mb (part1)

11/30/00

processing gain by method of jamming margin															
Comet Radio USB 34X															
radio conditions : supply voltage 5v, at room temp, s/n = 25															
tester name : Tom Lutman															
test date : 8-15-00				radio center freq= 2442											
Gp = S/N + Mj + Lsys; where S/N = 13 dB as per Wireless Information Networks by Pahlavan & Levesque; Lsys = 2dB															
input signal level = -20 dBm, jammer level = -25 dBm, then Mj= -5 dB															
Gp = 13 dB + (-5) dB + 2 dB = 10 dB															
	jammer freq	Gp	pass (error rate under 8%)	jammer freq	Gp	pass (error rate under 8%)	jammer freq	Gp	pass (error rate under 8%)	jammer freq	Gp	pass (error rate under 8%)	jammer freq	Gp	pass (error rate under 8%)
	MHz	dB	pass / FAILURE	MHz	dB	pass / FAILURE	MHz	dB	pass / FAILURE	MHz	dB	pass / FAILURE	MHz	dB	pass / FAILURE
1	2433.50	10	pass	41	2435.50	10	pass	81	2437.50	10	pass	121	2439.50	10	pass
2	2433.55	10	pass	42	2435.55	10	pass	82	2437.55	10	pass	122	2439.55	10	pass
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9	2433.90	10	pass	49	2435.90	10	pass	89	2437.90	10	pass	129	2439.90	10	pass
10	2433.95	10	pass	50	2435.95	10	pass	90	2437.95	10	pass	130	2439.95	10	pass
11	2434.00	10	pass	51	2436.00	10	pass	91	2438.00	10	pass	131	2440.00	10	pass
12	2434.05	10	pass	52	2436.05	10	pass	92	2438.05	10	pass	132	2440.05	10	pass
13	2434.10	10	pass	53	2436.10	10	pass	93	2438.10	10	pass	133	2440.10	10	pass
14	2434.15	10	pass	54	2436.15	10	pass	94	2438.15	10	pass	134	2440.15	10	pass
15	2434.20	10	pass	55	2436.20	10	pass	95	2438.20	10	pass	135	2440.20	10	pass
16	2434.25	10	pass	56	2436.25	10	pass	96	2438.25	10	pass	136	2440.25	10	pass
17	2434.30	10	pass	57	2436.30	10	fail	97	2438.30	10	pass	137	2440.30	10	pass
18	2434.35	10	pass	58	2436.35	10	fail	98	2438.35	10	pass	138	2440.35	10	pass
19	2434.40	10	pass	59	2436.40	10	pass	99	2438.40	10	pass	139	2440.40	10	pass
20	2434.45	10	pass	60	2436.45	10	fail	100	2438.45	10	pass	140	2440.45	10	pass
21	2434.50	10	pass	61	2436.50	10	fail	101	2438.50	10	pass	141	2440.50	10	pass
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39	2435.40	10	pass	79	2437.40	10	pass	119	2439.40	10	pass	159	2441.40	10	pass
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processing gain by method of jamming margin															
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182	2442.55	10	pass	227	2444.80	10	pass	272	2447.05	10	pass	317	2449.30	10	pass
183	2442.60	10	pass	228	2444.85	10	pass	273	2447.10	10	pass	318	2449.35	10	pass
184	2442.65	10	pass	229	2444.90	10	pass	274	2447.15	10	pass	319	2449.40	10	pass
185	2442.70	10	pass	230	2444.95	10	pass	275	2447.20	10	pass	320	2449.45	10	pass
186	2442.75	10	pass	231	2445.00	10	pass	276	2447.25	10	pass	321	2449.50	10	pass
187	2442.80	10	pass	232	2445.05	10	pass	277	2447.30	10	fail	322	2449.55	10	pass
188	2442.85	10	pass	233	2445.10	10	pass	278	2447.35	10	fail	323	2449.60	10	pass
189	2442.90	10	pass	234	2445.15	10	pass	279	2447.40	10	pass	324	2449.65	10	pass
190	2442.95	10	pass	235	2445.20	10	pass	280	2447.45	10	pass	325	2449.70	10	pass
191	2443.00	10	pass	236	2445.25	10	pass	281	2447.50	10	pass	326	2449.75	10	pass
192	2443.05	10	pass	237	2445.30	10	pass	282	2447.55	10	fail	327	2449.80	10	pass
193	2443.10	10	pass	238	2445.35	10	pass	283	2447.60	10	fail	328	2449.85	10	pass
194	2443.15	10	pass	239	2445.40	10	pass	284	2447.65	10	pass	329	2449.90	10	pass
195	2443.20	10	pass	240	2445.45	10	pass	285	2447.70	10	fail	330	2449.95	10	pass
196	2443.25	10	pass	241	2445.50	10	pass	286	2447.75	10	pass	331	2450.00	10	pass
197	2443.30	10	pass	242	2445.55	10	pass	287	2447.80	10	pass	332	2450.05	10	pass
198	2443.35	10	pass	243	2445.60	10	pass	288	2447.85	10	pass	333	2450.10	10	pass
199	2443.40	10	pass	244	2445.65	10	pass	289	2447.90	10	pass	334	2450.15	10	pass
200	2443.45	10	pass	245	2445.70	10	pass	290	2447.95	10	pass	335	2450.20	10	pass
201	2443.50	10	pass	246	2445.75	10	pass	291	2448.00	10	pass	336	2450.25	10	pass
202	2443.55	10	pass	247	2445.80	10	pass	292	2448.05	10	pass	337	2450.30	10	pass
203	2443.60	10	pass	248	2445.85	10	pass	293	2448.10	10	pass	338	2450.35	10	pass
204	2443.65	10	pass	249	2445.90	10	pass	294	2448.15	10	pass	339	2450.40	10	pass
205	2443.70	10	pass	250	2445.95	10	pass	295	2448.20	10	pass	340	2450.45	10	pass
drop 20% = 340 x 20% = 68 ; therefore can drop 68 failures, no. of failures = 10, therefore unit passes proc gain test															

Item 2. FCC Corr. 17170

CISCO CONFIDENTIAL

Jamming margin at 2 mb (part1)

11/30/00

processing gain by method of jamming margin															
Comet Radio USB 34X															
radio conditions : supply voltage 5v, at room temp, s/n =25															
tester name : Tom Lutman															
test date : 8-15-00		radio center freq=2442													
Gp = S/N + Mj + Lsys; where S/N = 13 dB as per Wireless Information Networks by Pahlavan & Levesque; Lsys = 2dB															
input signal level = -20 dBm, jammer level = - 25 dBm, then Mj= -5 dB															
Gp = 13 dB + (-5) dB + 2 dB = 10 dB															
	jammer freq	Gp	pass (error rate under 8%)		jammer freq	Gp	pass (error rate under 8%)		jammer freq	Gp	pass (error rate under 8%)		jammer freq	Gp	pass (error rate under 8%)
	MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE
1	2433.50	10	pass	41	2435.50	10	pass	81	2437.50	10	pass	121	2439.50	10	pass
2	2433.55	10	pass	42	2435.55	10	pass	82	2437.55	10	pass	122	2439.55	10	pass
3	2433.60	10	pass	43	2435.60	10	pass	83	2437.60	10	pass	123	2439.60	10	pass
4	2433.65	10	pass	44	2435.65	10	pass	84	2437.65	10	pass	124	2439.65	10	pass
5	2433.70	10	pass	45	2435.70	10	pass	85	2437.70	10	pass	125	2439.70	10	pass
6	2433.75	10	pass	46	2435.75	10	pass	86	2437.75	10	pass	126	2439.75	10	pass
7	2433.80	10	pass	47	2435.80	10	pass	87	2437.80	10	pass	127	2439.80	10	pass
8	2433.85	10	pass	48	2435.85	10	pass	88	2437.85	10	pass	128	2439.85	10	pass
9	2433.90	10	pass	49	2435.90	10	pass	89	2437.90	10	pass	129	2439.90	10	pass
10	2433.95	10	pass	50	2435.95	10	pass	90	2437.95	10	pass	130	2439.95	10	pass
11	2434.00	10	pass	51	2436.00	10	pass	91	2438.00	10	pass	131	2440.00	10	pass
12	2434.05	10	pass	52	2436.05	10	pass	92	2438.05	10	pass	132	2440.05	10	pass
13	2434.10	10	pass	53	2436.10	10	pass	93	2438.10	10	pass	133	2440.10	10	pass
14	2434.15	10	pass	54	2436.15	10	pass	94	2438.15	10	pass	134	2440.15	10	pass
15	2434.20	10	pass	55	2436.20	10	pass	95	2438.20	10	pass	135	2440.20	10	pass
16	2434.25	10	pass	56	2436.25	10	fail	96	2438.25	10	pass	136	2440.25	10	pass
17	2434.30	10	pass	57	2436.30	10	fail	97	2438.30	10	pass	137	2440.30	10	pass
18	2434.35	10	pass	58	2436.35	10	fail	98	2438.35	10	pass	138	2440.35	10	pass
19	2434.40	10	pass	59	2436.40	10	pass	99	2438.40	10	pass	139	2440.40	10	pass
20	2434.45	10	pass	60	2436.45	10	pass	100	2438.45	10	pass	140	2440.45	10	pass
21	2434.50	10	pass	61	2436.50	10	pass	101	2438.50	10	pass	141	2440.50	10	pass
22	2434.55	10	pass	62	2436.55	10	fail	102	2438.55	10	pass	142	2440.55	10	pass
23	2434.60	10	pass	63	2436.60	10	pass	103	2438.60	10	pass	143	2440.60	10	pass
24	2434.65	10	pass	64	2436.65	10	pass	104	2438.65	10	pass	144	2440.65	10	pass
25	2434.70	10	pass	65	2436.70	10	pass	105	2438.70	10	pass	145	2440.70	10	pass
26	2434.75	10	pass	66	2436.75	10	pass	106	2438.75	10	pass	146	2440.75	10	pass
27	2434.80	10	pass	67	2436.80	10	pass	107	2438.80	10	pass	147	2440.80	10	pass
28	2434.85	10	pass	68	2436.85	10	pass	108	2438.85	10	pass	148	2440.85	10	pass
29	2434.90	10	pass	69	2436.90	10	pass	109	2438.90	10	pass	149	2440.90	10	pass
30	2434.95	10	pass	70	2436.95	10	pass	110	2438.95	10	pass	150	2440.95	10	pass
31	2435.00	10	pass	71	2437.00	10	pass	111	2439.00	10	pass	151	2441.00	10	pass
32	2435.05	10	pass	72	2437.05	10	pass	112	2439.05	10	pass	152	2441.05	10	pass
33	2435.10	10	pass	73	2437.10	10	pass	113	2439.10	10	pass	153	2441.10	10	pass
34	2435.15	10	pass	74	2437.15	10	pass	114	2439.15	10	pass	154	2441.15	10	pass
35	2435.20	10	pass	75	2437.20	10	pass	115	2439.20	10	pass	155	2441.20	10	pass
36	2435.25	10	pass	76	2437.25	10	pass	116	2439.25	10	pass	156	2441.25	10	pass
37	2435.30	10	pass	77	2437.30	10	pass	117	2439.30	10	pass	157	2441.30	10	pass
38	2435.35	10	pass	78	2437.35	10	pass	118	2439.35	10	pass	158	2441.35	10	pass
39	2435.40	10	pass	79	2437.40	10	pass	119	2439.40	10	pass	159	2441.40	10	pass
40	2435.45	10	pass	80	2437.45	10	pass	120	2439.45	10	pass	160	2441.45	10	pass
drop 20% = 340 x 20% = 68 ; therefore can drop 68 failures															

processing gain by method of jamming margin															
<b>Comet Radio USB 34X</b>															
radio conditions : supply voltage 5v, at room temp, s/n = 25															
tester name : Tom Lutman															
test date :8-15-00					radio center freq= 2442										
Gp = S/N + Mj + Lsys; where S/N = 13 dB as per Wireless Information Networks by Pahlavan & Levesque; Lsys = 2dB															
input signal level = -20 dBm, jammer level = - 25 dBm, then Mj= -5 dB															
Gp = 13 dB + (-5) dB + 2 dB = 10 dB															
	MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE
161	2441.50	10	pass	206	2443.75	10	pass	251	2446.00	10	pass	296	2448.25	10	pass
162	2441.55	10	pass	207	2443.80	10	pass	252	2446.05	10	pass	297	2448.30	10	pass
163	2441.60	10	pass	208	2443.85	10	pass	253	2446.10	10	pass	298	2448.35	10	pass
164	2441.65	10	pass	209	2443.90	10	pass	254	2446.15	10	pass	299	2448.40	10	pass
165	2441.70	10	pass	210	2443.95	10	pass	255	2446.20	10	pass	300	2448.45	10	pass
166	2441.75	10	pass	211	2444.00	10	pass	256	2446.25	10	pass	301	2448.50	10	pass
167	2441.80	10	pass	212	2444.05	10	pass	257	2446.30	10	pass	302	2448.55	10	pass
168	2441.85	10	pass	213	2444.10	10	pass	258	2446.35	10	pass	303	2448.60	10	pass
169	2441.90	10	pass	214	2444.15	10	pass	259	2446.40	10	pass	304	2448.65	10	pass
170	2441.95	10	pass	215	2444.20	10	pass	260	2446.45	10	pass	305	2448.70	10	pass
171	2442.00	10	pass	216	2444.25	10	pass	261	2446.50	10	pass	306	2448.75	10	pass
172	2442.05	10	pass	217	2444.30	10	pass	262	2446.55	10	pass	307	2448.80	10	pass
173	2442.10	10	pass	218	2444.35	10	pass	263	2446.60	10	pass	308	2448.85	10	pass
174	2442.15	10	pass	219	2444.40	10	pass	264	2446.65	10	pass	309	2448.90	10	pass
175	2442.20	10	pass	220	2444.45	10	pass	265	2446.70	10	pass	310	2448.95	10	pass
176	2442.25	10	pass	221	2444.50	10	pass	266	2446.75	10	pass	311	2449.00	10	pass
177	2442.30	10	pass	222	2444.55	10	pass	267	2446.80	10	pass	312	2449.05	10	pass
178	2442.35	10	pass	223	2444.60	10	pass	268	2446.85	10	pass	313	2449.10	10	pass
179	2442.40	10	pass	224	2444.65	10	pass	269	2446.90	10	pass	314	2449.15	10	pass
180	2442.45	10	pass	225	2444.70	10	pass	270	2446.95	10	pass	315	2449.20	10	pass
181	2442.50	10	pass	226	2444.75	10	pass	271	2447.00	10	pass	316	2449.25	10	pass
182	2442.55	10	pass	227	2444.80	10	pass	272	2447.05	10	pass	317	2449.30	10	pass
183	2442.60	10	pass	228	2444.85	10	pass	273	2447.10	10	pass	318	2449.35	10	pass
184	2442.65	10	pass	229	2444.90	10	pass	274	2447.15	10	pass	319	2449.40	10	pass
185	2442.70	10	pass	230	2444.95	10	pass	275	2447.20	10	pass	320	2449.45	10	pass
186	2442.75	10	pass	231	2445.00	10	pass	276	2447.25	10	pass	321	2449.50	10	pass
187	2442.80	10	pass	232	2445.05	10	pass	277	2447.30	10	pass	322	2449.55	10	pass
188	2442.85	10	pass	233	2445.10	10	pass	278	2447.35	10	fail	323	2449.60	10	pass
189	2442.90	10	pass	234	2445.15	10	pass	279	2447.40	10	pass	324	2449.65	10	pass
190	2442.95	10	pass	235	2445.20	10	pass	280	2447.45	10	pass	325	2449.70	10	pass
191	2443.00	10	pass	236	2445.25	10	pass	281	2447.50	10	fail	326	2449.75	10	pass
192	2443.05	10	pass	237	2445.30	10	pass	282	2447.55	10	pass	327	2449.80	10	pass
193	2443.10	10	pass	238	2445.35	10	pass	283	2447.60	10	fail	328	2449.85	10	pass
194	2443.15	10	pass	239	2445.40	10	pass	284	2447.65	10	fail	329	2449.90	10	pass
195	2443.20	10	pass	240	2445.45	10	pass	285	2447.70	10	fail	330	2449.95	10	pass
196	2443.25	10	pass	241	2445.50	10	pass	286	2447.75	10	pass	331	2450.00	10	pass
197	2443.30	10	pass	242	2445.55	10	pass	287	2447.80	10	pass	332	2450.05	10	pass
198	2443.35	10	pass	243	2445.60	10	pass	288	2447.85	10	pass	333	2450.10	10	pass
199	2443.40	10	pass	244	2445.65	10	pass	289	2447.90	10	pass	334	2450.15	10	pass
200	2443.45	10	pass	245	2445.70	10	pass	290	2447.95	10	pass	335	2450.20	10	pass
201	2443.50	10	pass	246	2445.75	10	pass	291	2448.00	10	pass	336	2450.25	10	pass
202	2443.55	10	pass	247	2445.80	10	pass	292	2448.05	10	pass	337	2450.30	10	pass
203	2443.60	10	pass	248	2445.85	10	pass	293	2448.10	10	pass	338	2450.35	10	pass
204	2443.65	10	pass	249	2445.90	10	pass	294	2448.15	10	pass	339	2450.40	10	pass
205	2443.70	10	pass	250	2445.95	10	pass	295	2448.20	10	pass	340	2450.45	10	pass
drop 20% = 340 x 20% = 68 ; therefore can drop 68 failures, no. of failures = 09, therefore unit passes proc gain test															

Item 2. FCC Corr. 17170

CISCO CONFIDENTIAL

Jamming margin at 11 mb (part1)

11/30/00

processing gain by method of jamming margin															
<b>Comet Radio</b>															
radio conditions : supply voltage 5v, at room temp															
tester name : Tom Lutman															
test date 8-15-00		radio center freq= 2442													
Gp = S/N + Mj + Lsys; where S/N = 16.6 dB as per Harris CCK modulation; Lsys = 2dB															
input signal level = -20 dBm, jammer level = - 28.6 dBm, then Mj= - 8.6 dB															
Gp = 16.6 dB + (-8.6) dB + 2 dB = 10 dB															
	jammer freq	Gp	pass (error rate under 8%)		jammer freq	Gp	pass (error rate under 8%)		jammer freq	Gp	pass (error rate under 8%)		jammer freq	Gp	pass (error rate under 8%)
	MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE
1	2433.50	10	pass	41	2435.50	10	pass	81	2437.50	10	pass	121	2439.50	10	pass
2	2433.55	10	pass	42	2435.55	10	pass	82	2437.55	10	pass	122	2439.55	10	pass
3	2433.60	10	pass	43	2435.60	10	pass	83	2437.60	10	pass	123	2439.60	10	pass
4	2433.65	10	pass	44	2435.65	10	pass	84	2437.65	10	pass	124	2439.65	10	pass
5	2433.70	10	pass	45	2435.70	10	pass	85	2437.70	10	pass	125	2439.70	10	pass
6	2433.75	10	pass	46	2435.75	10	pass	86	2437.75	10	pass	126	2439.75	10	pass
7	2433.80	10	pass	47	2435.80	10	pass	87	2437.80	10	pass	127	2439.80	10	pass
8	2433.85	10	pass	48	2435.85	10	pass	88	2437.85	10	pass	128	2439.85	10	pass
9	2433.90	10	pass	49	2435.90	10	pass	89	2437.90	10	pass	129	2439.90	10	pass
10	2433.95	10	pass	50	2435.95	10	pass	90	2437.95	10	pass	130	2439.95	10	pass
11	2434.00	10	pass	51	2436.00	10	pass	91	2438.00	10	pass	131	2440.00	10	pass
12	2434.05	10	pass	52	2436.05	10	pass	92	2438.05	10	pass	132	2440.05	10	pass
13	2434.10	10	pass	53	2436.10	10	pass	93	2438.10	10	pass	133	2440.10	10	pass
14	2434.15	10	pass	54	2436.15	10	pass	94	2438.15	10	pass	134	2440.15	10	pass
15	2434.20	10	pass	55	2436.20	10	pass	95	2438.20	10	pass	135	2440.20	10	pass
16	2434.25	10	pass	56	2436.25	10	pass	96	2438.25	10	pass	136	2440.25	10	pass
17	2434.30	10	pass	57	2436.30	10	pass	97	2438.30	10	pass	137	2440.30	10	pass
18	2434.35	10	pass	58	2436.35	10	fail	98	2438.35	10	pass	138	2440.35	10	pass
19	2434.40	10	pass	59	2436.40	10	fail	99	2438.40	10	pass	139	2440.40	10	pass
20	2434.45	10	pass	60	2436.45	10	fail	100	2438.45	10	pass	140	2440.45	10	pass
21	2434.50	10	pass	61	2436.50	10	fail	101	2438.50	10	pass	141	2440.50	10	pass
22	2434.55	10	pass	62	2436.55	10	pass	102	2438.55	10	pass	142	2440.55	10	pass
23	2434.60	10	pass	63	2436.60	10	pass	103	2438.60	10	pass	143	2440.60	10	pass
24	2434.65	10	pass	64	2436.65	10	pass	104	2438.65	10	pass	144	2440.65	10	pass
25	2434.70	10	pass	65	2436.70	10	pass	105	2438.70	10	pass	145	2440.70	10	pass
26	2434.75	10	pass	66	2436.75	10	pass	106	2438.75	10	pass	146	2440.75	10	pass
27	2434.80	10	pass	67	2436.80	10	pass	107	2438.80	10	pass	147	2440.80	10	pass
28	2434.85	10	pass	68	2436.85	10	pass	108	2438.85	10	pass	148	2440.85	10	pass
29	2434.90	10	pass	69	2436.90	10	pass	109	2438.90	10	pass	149	2440.90	10	pass
30	2434.95	10	pass	70	2436.95	10	pass	110	2438.95	10	pass	150	2440.95	10	pass
31	2435.00	10	pass	71	2437.00	10	pass	111	2439.00	10	pass	151	2441.00	10	pass
32	2435.05	10	pass	72	2437.05	10	pass	112	2439.05	10	pass	152	2441.05	10	pass
33	2435.10	10	pass	73	2437.10	10	pass	113	2439.10	10	pass	153	2441.10	10	pass
34	2435.15	10	pass	74	2437.15	10	pass	114	2439.15	10	pass	154	2441.15	10	pass
35	2435.20	10	pass	75	2437.20	10	pass	115	2439.20	10	pass	155	2441.20	10	pass
36	2435.25	10	pass	76	2437.25	10	pass	116	2439.25	10	pass	156	2441.25	10	pass
37	2435.30	10	pass	77	2437.30	10	pass	117	2439.30	10	pass	157	2441.30	10	pass
38	2435.35	10	pass	78	2437.35	10	pass	118	2439.35	10	pass	158	2441.35	10	pass
39	2435.40	10	pass	79	2437.40	10	pass	119	2439.40	10	pass	159	2441.40	10	pass
40	2435.45	10	pass	80	2437.45	10	pass	120	2439.45	10	pass	160	2441.45	10	pass
drop 20% = 340 x 20% = 68 ; therefore can drop 68 failures															



processing gain by method of jamming margin															
Comet Radio USB 34X															
radio conditions : supply voltage 5v, at room temp, s/n= 25															
tester name : Tom Lutman															
Gp = S/N + Mj + Lsys; where S/N = 16.6 dB as per Harris CCK modulation; Lsys = 2dB															
input signal level = -20 dBm, jammer level = - 28.6 dBm, then Mj= - 8.6 dB															
Gp = 16.6 dB + (-8.6) dB + 2 dB = 10 dB															
	jammer freq	Gp	pass (error rate under 8%)		jammer freq	Gp	pass (error rate under 8%)		jammer freq	Gp	pass (error rate under 8%)		jammer freq	Gp	pass (error rate under 8%)
	MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE		MHz	dB	pass / FAILURE
161	2441.50	10	pass	206	2443.75	10	pass	251	2446.00	10	pass	296	2448.25	10	pass
162	2441.55	10	pass	207	2443.80	10	pass	252	2446.05	10	pass	297	2448.30	10	pass
163	2441.60	10	pass	208	2443.85	10	pass	253	2446.10	10	pass	298	2448.35	10	pass
164	2441.65	10	pass	209	2443.90	10	pass	254	2446.15	10	pass	299	2448.40	10	pass
165	2441.70	10	pass	210	2443.95	10	pass	255	2446.20	10	pass	300	2448.45	10	pass
166	2441.75	10	pass	211	2444.00	10	pass	256	2446.25	10	pass	301	2448.50	10	pass
167	2441.80	10	pass	212	2444.05	10	pass	257	2446.30	10	pass	302	2448.55	10	pass
168	2441.85	10	pass	213	2444.10	10	pass	258	2446.35	10	pass	303	2448.60	10	pass
169	2441.90	10	pass	214	2444.15	10	pass	259	2446.40	10	pass	304	2448.65	10	pass
170	2441.95	10	pass	215	2444.20	10	pass	260	2446.45	10	pass	305	2448.70	10	pass
171	2442.00	10	pass	216	2444.25	10	pass	261	2446.50	10	pass	306	2448.75	10	pass
172	2442.05	10	pass	217	2444.30	10	pass	262	2446.55	10	pass	307	2448.80	10	pass
173	2442.10	10	pass	218	2444.35	10	pass	263	2446.60	10	pass	308	2448.85	10	pass
174	2442.15	10	pass	219	2444.40	10	pass	264	2446.65	10	pass	309	2448.90	10	pass
175	2442.20	10	pass	220	2444.45	10	pass	265	2446.70	10	pass	310	2448.95	10	pass
176	2442.25	10	pass	221	2444.50	10	pass	266	2446.75	10	pass	311	2449.00	10	pass
177	2442.30	10	pass	222	2444.55	10	pass	267	2446.80	10	pass	312	2449.05	10	pass
178	2442.35	10	pass	223	2444.60	10	pass	268	2446.85	10	pass	313	2449.10	10	pass
179	2442.40	10	pass	224	2444.65	10	pass	269	2446.90	10	pass	314	2449.15	10	pass
180	2442.45	10	pass	225	2444.70	10	pass	270	2446.95	10	pass	315	2449.20	10	pass
181	2442.50	10	pass	226	2444.75	10	pass	271	2447.00	10	pass	316	2449.25	10	pass
182	2442.55	10	pass	227	2444.80	10	pass	272	2447.05	10	pass	317	2449.30	10	pass
183	2442.60	10	pass	228	2444.85	10	pass	273	2447.10	10	pass	318	2449.35	10	pass
184	2442.65	10	pass	229	2444.90	10	pass	274	2447.15	10	pass	319	2449.40	10	pass
185	2442.70	10	pass	230	2444.95	10	pass	275	2447.20	10	pass	320	2449.45	10	pass
186	2442.75	10	pass	231	2445.00	10	pass	276	2447.25	10	pass	321	2449.50	10	pass
187	2442.80	10	pass	232	2445.05	10	pass	277	2447.30	10	pass	322	2449.55	10	pass
188	2442.85	10	pass	233	2445.10	10	pass	278	2447.35	10	pass	323	2449.60	10	pass
189	2442.90	10	pass	234	2445.15	10	pass	279	2447.40	10	pass	324	2449.65	10	pass
190	2442.95	10	pass	235	2445.20	10	pass	280	2447.45	10	pass	325	2449.70	10	pass
191	2443.00	10	pass	236	2445.25	10	pass	281	2447.50	10	pass	326	2449.75	10	pass
192	2443.05	10	pass	237	2445.30	10	pass	282	2447.55	10	pass	327	2449.80	10	pass
193	2443.10	10	pass	238	2445.35	10	pass	283	2447.60	10	pass	328	2449.85	10	pass
194	2443.15	10	pass	239	2445.40	10	pass	284	2447.65	10	pass	329	2449.90	10	pass
195	2443.20	10	pass	240	2445.45	10	pass	285	2447.70	10	pass	330	2449.95	10	pass
196	2443.25	10	pass	241	2445.50	10	pass	286	2447.75	10	pass	331	2450.00	10	pass
197	2443.30	10	pass	242	2445.55	10	pass	287	2447.80	10	pass	332	2450.05	10	pass
198	2443.35	10	pass	243	2445.60	10	pass	288	2447.85	10	pass	333	2450.10	10	pass
199	2443.40	10	pass	244	2445.65	10	pass	289	2447.90	10	pass	334	2450.15	10	pass
200	2443.45	10	pass	245	2445.70	10	pass	290	2447.95	10	pass	335	2450.20	10	pass
201	2443.50	10	pass	246	2445.75	10	pass	291	2448.00	10	pass	336	2450.25	10	pass
202	2443.55	10	pass	247	2445.80	10	pass	292	2448.05	10	pass	337	2450.30	10	pass
203	2443.60	10	pass	248	2445.85	10	pass	293	2448.10	10	pass	338	2450.35	10	pass
204	2443.65	10	pass	249	2445.90	10	pass	294	2448.15	10	pass	339	2450.40	10	pass
205	2443.70	10	pass	250	2445.95	10	pass	295	2448.20	10	pass	340	2450.45	10	pass

drop 20% = 340 x 20% = 68 ; therefore can drop 68 failures, no. of failures = 04, therefore unit passes proc gain test