10,550-10,680 MHz, 1.25 MHz bandwidth channels

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
1	10550.625	10615.625
2	10551.875	10616.875
3	10553.125	10618.125
4	10554.375	10619.375
5	10555.625	10620.625
6	10556.875	10621.875
7	10558.125	10623.125
8	10559.375	10624.375
9	10560.625	10625.625
10	10561.875	10626.875
11	10563.125	10628.125
12	10564.375	10629.375
13	10565.625	10630.625
14	10566.875	10631.875
15	10568.125	10633.125
16	10569.375	10634.375
17	10570.625	10635.625
18	10571.875	10636.875
19	10573.125	10638.125
20	10574.375	10639.375
21	10575.625	10640.625
22	10576.875	10641.875
23	10578.125	10643.125
24	10579.375	10644.375
25	10580.625	10645.625
26	10581.875	10646.875
27	10583.125	10648.125
28	10584.375	10649.375
29	10585.625	10650.625
30	10586.875	10651.875
31	10588.125	10653.125
32	10589.375	10654.375
33	10590.625	10655.625
34	10591.875	10656.875
35	10593.125	10658.125
36	10594.375	10659.375
37	10595.625	10660.625

10,550-10,680 MHz, 1.25 MHz bandwidth channels

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
38	10596.875	10661.875
39	10598.125	10663.125
40	10599.375	10664.375
41	10600.625	10665.625
42	10601.875	10666.875
43	10603.125	10668.125
44	10604.375	10669.375
45	10605.625	10670.625
46	10606.875	10671.875
47	10608.125	10673.125
48	10609.375	10674.375
49	10610.625	10675.625
50	10611.875	10676.875
51	10613.125	10678.125
52	10614.375	10679.375

10,550 - 10,680 MHz, 2.5 MHz bandwidth channels

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
1	10551.25	10616.25
2	10553.75	10618.75
3	10556.25	10621.25
4	10558.75	10623.75
5	10561.25	10626.25
6	10563.75	10628.75
7	10566.25	10631.25
8	10568.75	10633.75
9	10571.25	10636.25
10	10573.75	10638.75
11	10576.25	10641.25
12	10578.75	10643.75
13	10581.25	10646.25
14	10583.75	10648.75
15	10586.25	10651.25
16	10588.75	10653.75
17	10591.25	10656.25
18	10593.75	10658.75
19	10596.25	10661.25
20	10598.75	10663.75
21	10601.25	10666.25
22	10603.75	10668.75
23	10606.25	10671.25
24	10608.75	10673.75
25	10611.25	10676.25
26	10613.75	10678.75

10,550 - 10,680 MHz, 3.75 MHz bandwidth channels

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
1	10551.875	10616.875
2	10555.625	10620.625
3	10559.375	10624.375
4	10563.125	10628.125
5	10566.875	10631.875
6	10570.625	10635.625
7	10574.375	10639.375
8	10578.125	10643.125
9	10581.875	10646.875
10	10585.625	10650.625
11	10589.375	10654.375
12	10593.125	10658.125
13	10596.875	10661.875
14	10600.625	10665.625
15	10604.375	10669.375
16	10608.125	10673.125
17	10611.875	10676.875

10,550 - 10,680 MHz, 5.0 MHz bandwidth channels

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
1	10552.5	10617.5
2	10557.5	10622.5
3	10562.5	10627.5
4	10567.5	10632.5
5	10572.5	10637.5
6	10577.5	10642.5
7	10582.5	10647.5
8	10587.5	10652.5
9	10592.5	10657.5
10	10597.5	10662.5
11	10602.5	10667.5
12	10607.5	10672.5
13	10612.5	10677.5

10,700 - 11,700 MHz, 1.25 MHz bandwidth channels 1

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
1	11075.625	11605.625
2	11076.875	11606.875
3	11078.125	11608.125
4	11079.375	11609.375
5	11080.625	11610.625
6	11081.875	11611.875
7	11083.125	11613.125
8	11084.375	11614.375
9	11085.625	11615.625
10	11086.875	11616.875
11	11088.125	11618.125
12	11089.375	11619.375
13	11090.625	11620.625
14	11091.875	11621.875
15	11093.125	11623.125
16	11094.375	11624.375
17	11095.625	11625.625
18	11096.875	11626.875
19	11098.125	11628.125
20	11099.375	11629.375
21	11100.625	11630.625
22	11101.875	11631.875
23	11103.125	11633.125
24	11104.375	11634.375
25	11105.625	11635.625
26	11106.875	11636.875
27	11108.125	11638.125
28	11109.375	11639.375
29	11110.625	11640.625
30	11111.875	11641.875
31	11113.125	11643.125
32	11114.375	11644.375
33	11115.625	11645.625
34	11116.875	11646.875
35	11118.125	11648.125
36	11119.375	11649.375
37	11120.625	11650.625
38	11121.875	11651.875
39	11123.125	11653.125
40	11124.375	11654.375

10,700 - 11,700 MHz, 1.25 MHz bandwidth channels 1

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
41	11125.625	11655.625
42	11126.875	11656.875
43	11128.125	11658.125
44	11129.375	11659.375
45	11130.625	11660.625
46	11131.875	11661.875
47	11133.125	11663.125
48	11134.375	11664.375
49	11135.625	11665.625
50	11136.875	11666.875
51	11138.125	11668.125
52	11139.375	11669.375
53	11140.625	11670.625
54	11141.875	11671.875
55	11143.125	11673.125
56	11144.375	11674.375
57	11145.625	11675.625
58	11146.875	11676.875
59	11148.125	11678.125
60	11149.375	11679.375
61	11150.625	11680.625
62	11151.875	11681.875
63	11153.125	11683.125
64	11154.375	11684.375
65	11155.625	11685.625
66	11156.875	11686.875
67	11158.125	11688.125
68	11159.375	11689.375
69	11160.625	11690.625
70	11161.875	11691.875
71	11163.125	11693.125
72	11164.375	11694.375
73	11165.625	11695.625
74	11166.875	11696.875
75	11168.125	11698.125
76	11169.375	11699.375

1 Alternate channels. These channels should be used only if all other channels at 10,550-10,680 MHz are blocked.

10,700 - 11,700 MHz, 2.5 MHz bandwidth channels 1

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
1	11076.25	11606.25
2	11078.75	11608.75
3	11081.25	11611.25
4	11083.75	11613.75
5	11086.25	11616.25
6	11088.75	11618.75
7	11091.25	11621.25
8	11093.75	11623.75
9	11096.25	11626.25
10	11098.75	11628.75
11	11101.25	11631.25
12	11103.75	11633.75
13	11106.25	11636.25
14	11108.75	11638.75
15	11111.25	11641.25
16	11113.75	11643.75
17	11116.25	11646.25
18	11118.75	11648.75
19	11121.25	11651.25
20	11123.75	11653.75
21	11126.25	11656.25
22	11128.75	11658.75
23	11131.25	11661.25
24	11133.75	11663.75
25	11136.25	11666.25
26	11138.75	11668.75
27	11141.25	11671.25
28	11143.75	11673.75
29	11146.25	11676.25
30	11148.75	11678.75
31	11151.25	11681.25
32	11153.75	11683.75
33	11156.25	11686.25
34	11158.75	11688.75
35	11161.25	11691.25
36	11163.75	11693.75
37	11166.25	11696.25
38	11168.75	11698.75

1 Alternate channels. These channels should be used only if all other channels at 10,550-10,680 MHz are blocked.

10,700 - 11,700 MHz, 3.75 MHz bandwidth channels 1

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
1	11076.875	11606.875
2	11080.625	11610.625
3	11084.375	11614.375
4	11088.125	11618.125
5	11091.875	11621.875
6	11095.625	11625.625
7	11099.375	11629.375
8	11103.125	11633.125
9	11106.875	11636.875
10	11110.625	11640.625
11	11114.375	11644.375
12	11118.125	11648.125
13	11121.875	11651.875
14	11125.625	11655.625
15	11129.375	11659.375
16	11133.125	11663.125
17	11136.875	11666.875
18	11140.625	11670.625
19	11144.375	11674.375
20	11148.125	11678.125
21	11151.875	11681.875
22	11155.625	11685.625
23	11159.375	11689.375
24	11163.125	11693.125

1 Alternate channels. These channels should be used only if all other channels at 10,550-10,680 MHz are blocked.

10,700 - 11,700 MHz, 5.0 MHz bandwidth channels 1

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
1	11077.5	11607.5
2	11082.5	11612.5
3	11087.5	11617.5
4	11092.5	11622.5
5	11097.5	11627.5
6	11102.5	11632.5
7	11107.5	11637.5
8	11112.5	11642.5
9	11117.5	11647.5
10	11122.5	11652.5
11	11127.5	11657.5
12	11132.5	11662.5
13	11137.5	11667.5
14	11142.5	11672.5
15	11147.5	11677.5
16	11152.5	11682.5
17	11157.5	11687.5
18	11162.5	11692.5
19	11167.5	11697.5

1 Alternate channels. These channels should be used only if all other channels at 10,550-10,680 MHz are blocked.

10,700 - 11,700 MHz, 10.0 MHz bandwidth channels

	Transmit (receive) (MHz)	Receive (transmit) (MHz)
1	10705	11235
2	10715	11245
3	10725	11255
4	10735	11265
5	10745	11275
6	10755	11285
7	10765	11295
8	10775	11305
9	10785	11315
10	10795	11325
11	10805	11335
12	10815	11345
13	10825	11355
14	10835	11365
15	10845	11375
16	10855	11385
17	10865	11395
18	10875	11405
19	10885	11415
20	10895	11425
21	10905	11435
22	10915	11445
23	10925	11455
24	10935	11465
25	10945	11475
26	10955	11485
27	10965	11495
28	10975	11505
29	10985	11515
30	10995	11525
31	11005	11535
32	11015	11545
33	11025	11555
34	11035	11565
35	11045	11575

10,700 - 11,700 MHz, 10.0 MHz bandwidth channels

	Transmit (receive) (MHz)		Receive (transmit) (MHz)	
36	11055	. . . . .	11585	
37	11065	. . . . .	11595	
38	11075	1	11605	1
39	11085	1	11615	1
40	11095	1	11625	1
41	11105	1	11635	1
42	11115	1	11645	1
43	11125	1	11655	1
44	11135	1	11665	1
45	11145	1	11675	1
46	11155	1	11685	1
47	11165	1	11695	1

1 Alternate channels. These channels are set aside for narrow bandwidth systems and should be used only if all other channels are blocked.

10,700 - 11,700 MHz, 20.0 MHz bandwidth channels

	Transmit (receive) (MHz)		Receive (transmit) (MHz)	
1	10725	. . . . .	11255	
2	10745	. . . . .	11275	
3	10765	. . . . .	11295	
4	10785	. . . . .	11315	
5	10805	. . . . .	11335	
6	10825	. . . . .	11355	
7	10845	. . . . .	11375	
8	10865	. . . . .	11395	
9	10885	. . . . .	11415	
10	10905	. . . . .	11435	
11	10925	. . . . .	11455	
12	10945	. . . . .	11475	
13	10965	. . . . .	11495	
14	10985	. . . . .	11515	
15	11005	. . . . .	11535	
16	11025	. . . . .	11555	
17	11045	. . . . .	11575	
18	11065	. . . . .	11595	
19	11085	1	11615	1
20	11105	1	11635	1
21	11125	1	11655	1
22	11145	1	11675	1

1 Alternate channels. These channels are set aside for narrow bandwidth systems and should be used only if all other channels are blocked.

10,700 - 11,700 MHz, 30.0 MHz bandwidth channels

	Transmit (receive) (MHz)		Receive (transmit) (MHz)	
1	10715	. . . . .	11245	
2	10755	. . . . .	11285	
3	10795	. . . . .	11325	
4	10835	. . . . .	11365	
5	10875	. . . . .	11405	
6	10915	. . . . .	11445	
7	10955	. . . . .	11485	
8	10995	. . . . .	11525	
9	11035	. . . . .	11565	
10	11075	1	11605	1
11	11115	1	11645	1
12	11155	1	11685	1

1 Alternate channels. These channels are set aside for narrow bandwidth systems and should be used only if all other channels are blocked.

10,700 - 11,700 MHz, 40.0 MHz bandwidth channels

	Transmit (receive) (MHz)		Receive (transmit) (MHz)	
1	10735	. . . . .	11265	
2	10775	. . . . .	11305	
3	10815	. . . . .	11345	
4	10855	. . . . .	11385	
5	10895	. . . . .	11425	
6	10935	. . . . .	11465	
7	10975	. . . . .	11505	
8	11015	. . . . .	11545	
9	11055	. . . . .	11585	
10	11095	1	11625	1
11	11135	1	11665	1

1 Alternate channels. These channels are set aside for narrow bandwidth systems and should be used only if all other channels are blocked.

APPENDIX B

Recommended Rules for Parts 21 and 94 for Automatic Transmitter Power Control

A. Part 21 of the Commission's Rules is amended as follows:

1. Section 21.42(c) is amended by adding a new Paragraph (9) to read:

Section 21.42

(c) . . . .

(9) Automatic increase in authorized power not exceeding 10 dB for brief periods (i.e., not longer than 5 minutes per incident and not more than one tenth of one percent (0.1%) per year of the license term where the increased power is necessary to overcome fading in stations employing digital equipment with automatic control and the transmitter is authorized to operate at nominal power.

2. Subparagraph (ii) of Paragraph (2) of Section 21.100(d) is amended by adding the following as a new listing at the end thereof to read:

Section 21.100

(d) . . . .

(ii) . . . .
A statement of whether the applicant will employ microwave equipment with automatic transmitter power control and the degree in dB that the power may be automatically increased.

3. Section 21.107(c) is amended to read:

Section 21.107(c)

(c) The power of each transmitter shall be maintained as near as practicable to the power input or output specified in the station authorization. Provided, however, the power output of transmitter equipment with automatic power control may be increased up to 10 dB for brief (i.e., not more than 5 minutes per incident nor an aggregate of one tenth of one percent (0.1%) per transmissions necessary to overcome unacceptable fading or interference.

B. Part 94 of the Commission's Rules is amended as follows:

1. Paragraph (a)(10) of Section 94.45 is amended to read:

(a) .....

(10) Any change in authorized effective radiated power in excess of 3 dB (a 2-to-1) ratio, except for brief (i.e., not longer than 5 minutes per incident and not more than one tenth of one percent (0.1%) per year) power increases up to 10 dB where such power increase becomes necessary to overcome temporary unacceptable fading in systems employing equipment with automatic transmitter power control.

2. The last sentence in Paragraph (b)(3) of Section 94.15 is amended to read:

(b) .....

(3) .....

Engineering analyses prepared pursuant to this section shall include the FCC ID number of the transmitter and the make and model numbers for all antennas the applicant proposes to use and shall state whether the proposed system plans to use equipment with automatic transmitter power control.

3. A new Paragraph (c) is added in Section 94.63 and Paragraphs (c), (d), (e), (f) are re-designated as (d), (e), (f) and (g), respectively, with the new Paragraph (c) to read:

(c) The interference protection criteria specified in Paragraph (b) of the Section may be exceeded for brief periods of time where a power increase becomes necessary to overcome unacceptable fading in systems employing equipment with automatic transmitter power control. Such power increases shall not exceed 10 dB and shall be as brief as possible but in no event shall they exceed five (5) minutes in each incident or a total of one tenth of one percent (0.1%) per year.