

The antenna kitting options for model F10G-CPAL-AB-C signal booster were done for 20 Outside Antenna kit options and 25 Inside Antenna kit options. The order of the attached calculations is as follows:

Outside Antenna kit Options	
1	Kit 11-7550
2	Kit 11-10050
3	Kit 10-75400
4	Kit 10-100400
5	Kit 10-7550
6	Kit 10-10050
7	Kit 9-50400
8	Kit 9-5050
9	Kit 9-75400
10	Kit 9-100400
11	Kit 9-7550
12	Kit 9-10050
13	Kit 5-30400
14	Kit 5-3050
15	Kit 5-50400
16	Kit 5-5050
17	Kit 5-75400
18	Kit 5-100400
19	Kit 5-7550
20	Kit 5-10050

Inside Antenna kit Options	
1	Kit 5-0
2	Kit 100-1550
3	Kit 100-30400
4	Kit 100-5050
5	Kit 100-7550
6	Kit 102-7550-50
7	Kit 103-7550-75
8	Kit 114-7550-50
9	Kit 100-10050
10	Kit 100-30400
11	Kit 100-50400
12	Kit 100-75400
13	Kit 3-0350
14	Kit 3-1550
15	Kit 3-30400
16	Kit 3-5050
17	Kit 3-7550
18	Kit 3-10050
19	Kit 3-30400
20	Kit 3-50400
21	Kit 3-75400
22	Kit 3-100400
23	Kit 32-50400-50
24	Kit 33-50400-75
25	Kit 34-50400-50

## Outside Antenna kit Options

Final Output Power Limited to 30 dBm EIRP in all Frequency Bands

Uplink Frequency(MHz)	704-716	776-787	824-849	1710-1755	1850-1910
Uplink Output Power(dBm)	22.82	22.95	20.5	19.45	20.92

1. Yagi 11dbi Antenna with 75' 5D N male Kit numbers: 11-7550

Antenna Gain (dBi)	11	11	11	11	11
Coax Cable Loss (dB)	4.2	4.2	4.2	5.7	5.7
Final Gain Less Loss (dB)	6.8	6.8	6.8	5.3	5.3
Final Output Power (dBm EIRP)	29.62	29.75	27.3	24.75	26.22

2. Yagi 11dbi Antenna with 100' 5D N male Kit numbers: 11-10050

Antenna Gain (dBi)	11	11	11	11	11
Coax Cable Loss (dB)	5	5	5	8	8
Final Gain Less Loss (dB)	6	6	6	3	3
Final Output Power (dBm EIRP)	28.82	28.95	26.5	22.45	23.92

3. Panel 10dbi Antenna with 75' 400 N male Kit numbers:11-75400

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	3	3	3	5	5
Final Gain Less Loss (dB)	7	7	7	5	5
Final Output Power (dBm EIRP)	29.82	29.95	27.5	24.45	25.92

4. Panel 10dbi Antenna with 100' 400 N male Kit numbers:11-100400

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	3.9	3.9	3.9	6.2	6.2
Final Gain Less Loss (dB)	6.1	6.1	6.1	3.8	3.8
Final Output Power (dBm EIRP)	28.92	29.05	26.6	23.25	24.72

5. Panel 10dbi Antenna with 75' 5D N male Kit numbers:11-7550

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	4.2	4.2	4.2	5.7	5.7
Final Gain Less Loss (dB)	5.8	5.8	5.8	4.3	4.3
Final Output Power (dBm EIRP)	28.62	28.75	26.3	23.75	25.22

6. Panel 10dbi Antenna with 100' 5D N male Kit numbers:11-10050

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	5	5	5	8	8
Final Gain Less Loss (dB)	5	5	5	2	2

Final Output Power (dBm EIRP)	27.82	27.95	25.5	21.45	22.92
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7. Yagi 9dbi Antenna with 50' 400 N male

Kit numbers:9-50400

Antenna Gain (dBi)	9	9	9	9	9
Coax Cable Loss (dB)	2	2	2	3	3
Final Gain Less Loss (dB)	7	7	7	6	6
Final Output Power (dBm EIRP)	29.82	29.95	27.5	25.45	26.92

8. Yagi 9dbi Antenna with 50' 5D N male

Kit numbers:9-5050

Antenna Gain (dBi)	9	9	9	9	9
Coax Cable Loss (dB)	2.8	2.8	2.8	3.8	3.8
Final Gain Less Loss (dB)	6.2	6.2	6.2	5.2	5.2
Final Output Power (dBm EIRP)	29.02	29.15	26.7	24.65	26.12

9. Yagi 9dbi Antenna with 75' 400 N male

Kit numbers:9-75400

Antenna Gain (dBi)	9	9	9	9	9
Coax Cable Loss (dB)	3	3	3	5	5
Final Gain Less Loss (dB)	6	6	6	4	4
Final Output Power (dBm EIRP)	28.82	28.95	26.5	23.45	24.92

10. Yagi 9dbi Antenna with 100' 400 N male

Kit numbers:9-100400

Antenna Gain (dBi)	9	9	9	9	9
Coax Cable Loss (dB)	3.9	3.9	3.9	6.2	6.2
Final Gain Less Loss (dB)	5.1	5.1	5.1	2.8	2.8
Final Output Power (dBm EIRP)	27.92	28.05	25.6	22.25	23.72

11. Yagi 9dbi Antenna with 75' 5D N male

Kit numbers:9-7550

Antenna Gain (dBi)	9	9	9	9	9
Coax Cable Loss (dB)	4.2	4.2	4.2	5.7	5.7
Final Gain Less Loss (dB)	4.8	4.8	4.8	3.3	3.3
Final Output Power (dBm EIRP)	27.62	27.75	25.3	22.75	24.22

12. Yagi 9dbi Antenna with 100' 5D N male

Kit numbers:9-10050

Antenna Gain (dBi)	9	9	9	9	9
Coax Cable Loss (dB)	5	5	5	8	8
Final Gain Less Loss (dB)	4	4	4	1	1
Final Output Power (dBm EIRP)	26.82	26.95	24.5	20.45	21.92

13. Omni 5dbi Antenna with 30' 400 N male

Kit numbers:5-30400

Antenna Gain (dBi)	5	5	5	5	5
Coax Cable Loss (dB)	1.1	1.1	1.1	1.8	1.8
Final Gain Less Loss (dB)	3.9	3.9	3.9	3.2	3.2
Final Output Power (dBm EIRP)	26.72	26.85	24.4	22.65	24.12

14. Omni 5dbi Antenna with 30' 5D N male Kit numbers:5-3050

Antenna Gain (dBi)	5	5	5	5	5
Coax Cable Loss (dB)	1.8	1.8	1.8	2.7	2.7
Final Gain Less Loss (dB)	3.2	3.2	3.2	2.3	2.3
Final Output Power (dBm EIRP)	26.02	26.15	23.7	21.75	23.22

15. Omni 5dbi Antenna with 50' 400 N male Kit numbers:5-50400

Antenna Gain (dBi)	5	5	5	5	5
Coax Cable Loss (dB)	2	2	2	3	3
Final Gain Less Loss (dB)	3	3	3	2	2
Final Output Power (dBm EIRP)	25.82	25.95	23.5	21.45	22.92

16. Omni 5dbi Antenna with 50' 5D N male Kit numbers:5-5050

Antenna Gain (dBi)	5	5	5	5	5
Coax Cable Loss (dB)	2.8	2.8	2.8	3.8	3.8
Final Gain Less Loss (dB)	2.2	2.2	2.2	1.2	1.2
Final Output Power (dBm EIRP)	25.02	25.15	22.7	20.65	22.12

17. Omni 5dbi Antenna with 75' 400 N male Kit numbers:5-75400

Antenna Gain (dBi)	5	5	5	5	5
Coax Cable Loss (dB)	3	3	3	5	5
Final Gain Less Loss (dB)	2	2	2	0	0
Final Output Power (dBm EIRP)	24.82	24.95	22.5	19.45	20.92

18. Omni 5dbi Antenna with 100' 400 N male Kit numbers:5-10400

Antenna Gain (dBi)	5	5	5	5	5
Coax Cable Loss (dB)	3.9	3.9	3.9	6.2	6.2
Final Gain Less Loss (dB)	1.1	1.1	1.1	-1.2	-1.2
Final Output Power (dBm EIRP)	23.92	24.05	21.6	18.25	19.72

19. Omni 5dbi Antenna with 75' 5D N male Kit numbers:5-7550

Antenna Gain (dBi)	5	5	5	5	5
Coax Cable Loss (dB)	4.2	4.2	4.2	5.7	5.7
Final Gain Less Loss (dB)	0.8	0.8	0.8	-0.7	-0.7
Final Output Power (dBm EIRP)	23.62	23.75	21.3	18.75	20.22

20. Omni 5dbi Antenna with 100' 5D N male Kit numbers:5-10050

Antenna Gain (dBi)	5	5	5	5	5
Coax Cable Loss (dB)	5	5	5	8	8
Final Gain Less Loss (dB)	0	0	0	-3	-3
Final Output Power (dBm EIRP)	22.82	22.95	20.5	16.45	17.92

## Inside Antenna kit Options

Uplink Frequency(MHz)	704-716	776-787	824-849	1710-1755	1850-1910
Measured Uplink Gain(dB)	57.62	57.55	54.90	56.15	60.52
MSCL Minimum (dB)	28.0	29.0	30.0	34.0	34.0
6' Separation Distance Path Loss (dB)	34.7	35.6	36.2	42.5	43.2
Polarity Loss (dB)	3.0	3.0	3.0	3.0	3.0
Max Antenna Gain with Coax Loss (dB)	9.7	9.6	9.2	11.5	12.2

1. Whip 5dbi Antenna

Kit numbers: 5-0

Antenna Gain (dBi)	5.0	5.0	5.0	5.0	5.0
Coax Cable Loss (dB)	0.0	0.0	0.0	0.0	0.0
Final Gain Less Loss (dB)	5.0	5.0	5.0	5.0	5.0
Margin (dB)	-4.7	-4.6	-4.2	-6.5	-7.2

2. Panel 10dbi Antenna with 15' 5D N male

Kit numbers:100-1550

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	1.1	1.1	1.1	1.6	1.6
Final Gain Less Loss (dB)	8.9	8.9	8.9	8.4	8.4
Margin (dB)	-0.80	-0.67	-0.26	-3.08	-3.79

3. Panel 10dbi Antenna with 30' 400 N male

Kit numbers:100-30400

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	1.1	1.1	1.1	1.8	1.8
Final Gain Less Loss (dB)	8.9	8.9	8.9	8.2	8.2
Margin (dB)	-0.80	-0.67	-0.26	-3.28	-3.99

4. Panel 10dbi Antenna with 50' 5D N male

Kit numbers:100-5050

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	1.7	1.7	1.7	2.7	2.7
Final Gain Less Loss (dB)	8.3	8.3	8.3	7.3	7.3
Margin (dB)	-1.40	-1.27	-0.86	-4.18	-4.89

5. Panel 10dbi Antenna with 75' 5D N male

Kit numbers:100-7550

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	2	2	2	3	3
Final Gain Less Loss (dB)	8	8	8	7	7
Margin (dB)	-1.70	-1.57	-1.16	-4.48	-5.19

6. 2 Panel 10dbi Antenna with 75' 5D N male & a 50 Ohm 2-Way Splitter Kit numbers:102-7550-50

Antenna Gain (dBi)	10	10	10	10	10
Splitter/Coax Loss (dB)	5.2	5.2	5.2	6.2	6.2
Final Gain Less Splitter/Coax Loss (dB)	4.8	4.8	4.8	3.8	3.8
Margin (dB)	-4.90	-4.77	-4.36	-7.68	-8.39

7. 3 Panel 10dbi Antenna with 75' 5D N male & a 75 Ohm 3-Way Splitter Kit numbers:103-7550-75

Antenna Gain (dBi)	10	10	10	10	10
Splitter/Coax Loss (dB)	5.2	5.2	5.2	6.2	6.2
Final Gain Less Splitter/Coax Loss (dB)	4.8	4.8	4.8	3.8	3.8
Margin (dB)	-4.90	-4.77	-4.36	-7.68	-8.39

8. 4 Panel 10dbi Antenna with 75' 5D N male & three 50 Ohm 2-Way Splitter kit numbers:114-7550-50

Antenna Gain (dBi)	10	10	10	10	10
Splitter/Coax Loss (dB)	5.2	5.2	5.2	6.2	6.2
Final Gain Less Splitter/Coax Loss (dB)	4.8	4.8	4.8	3.8	3.8
Margin (dB)	-4.90	-4.77	-4.36	-7.68	-8.39

9. Panel 10dbi Antenna with 100' 5D N male Kit numbers:100-10050

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	2.8	2.8	2.8	3.8	3.8
Final Gain Less Loss (dB)	7.2	7.2	7.2	6.2	6.2
Margin (dB)	-2.50	-2.37	-1.96	-5.28	-5.99

10. Panel 10dbi Antenna with 30' 400 N male Kit numbers:100-30400

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	3	3	3	5	5
Final Gain Less Loss (dB)	7	7	7	5	5
Margin (dB)	-2.6987348	-2.5689262	-2.1596655	-6.4838114	-7.1935035

11. Panel 10dbi Antenna with 50' 400 N male Kit numbers:100-50400

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	3.9	3.9	3.9	6.2	6.2
Final Gain Less Loss (dB)	6.1	6.1	6.1	3.8	3.8
Margin (dB)	-3.60	-3.47	-3.06	-7.68	-8.39

12. Panel 10dbi Antenna with 75' 400 N male Kit numbers:100-75400

Antenna Gain (dBi)	10	10	10	10	10
Coax Cable Loss (dB)	4.2	4.2	4.2	5.7	5.7

Final Gain Less Loss (dB)	5.8	5.8	5.8	4.3	4.3
Margin (dB)	-3.90	-3.77	-3.36	-7.18	-7.89

13. Omni 3dBi Antenna with 3' 5D N Male

Kit numbers:3-0350

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	0.2	0.2	0.2	0.3	0.3
Final Gain Less Loss (dB)	2.8	2.8	2.8	2.7	2.7
Margin (dB)	-6.90	-6.77	-6.36	-8.78	-9.49

14. Omni 3dBi Antenna with 15' 5D N Male

Kit numbers:3-1550

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	1.1	1.1	1.1	1.6	1.6
Final Gain Less Loss (dB)	1.9	1.9	1.9	1.4	1.4
Margin (dB)	-7.80	-7.67	-7.26	-10.08	-10.79

15. Omni 3dBi Antenna with 30' 400 N Male

Kit numbers:3-30400

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	1.1	1.1	1.1	1.8	1.8
Final Gain Less Loss (dB)	1.9	1.9	1.9	1.2	1.2
Margin (dB)	-7.80	-7.67	-7.26	-10.28	-10.99

16. Omni 3dBi Antenna with 50' 5D N Male

Kit numbers:3-5050

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	1.7	1.7	1.7	2.7	2.7
Final Gain Less Loss (dB)	1.3	1.3	1.3	0.3	0.3
Margin (dB)	-8.40	-8.27	-7.86	-11.18	-11.89

17. Omni 3dBi Antenna with 75' 5D N Male

Kit numbers:3-7550

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	2	2	2	3	3
Final Gain Less Loss (dB)	1	1	1	0	0
Margin (dB)	-8.70	-8.57	-8.16	-11.48	-12.19

18. Omni 3dBi Antenna with 100' 5D N Male

Kit numbers:3-10050

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	2.8	2.8	2.8	3.8	3.8
Final Gain Less Loss (dB)	0.2	0.2	0.2	-0.8	-0.8
Margin (dB)	-9.50	-9.37	-8.96	-12.28	-12.99

19. Omni 3dBi Antenna with 30' 400 N Male

Kit numbers:3-30400

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	3	3	3	5	5

Final Gain Less Loss (dB)	0	0	0	-2	-2
Margin (dB)	-9.70	-9.57	-9.16	-13.48	-14.19

20. Omni 3dBi Antenna with 50' 400 N Male

Kit numbers:3-50400

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	3.9	3.9	3.9	6.2	6.2
Final Gain Less Loss (dB)	-0.9	-0.9	-0.9	-3.2	-3.2
Margin (dB)	-10.60	-10.47	-10.06	-14.68	-15.39

21. Omni 3dBi Antenna with 75' 400 N Male

Kit numbers:3-75400

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	4.2	4.2	4.2	5.7	5.7
Final Gain Less Loss (dB)	-1.2	-1.2	-1.2	-2.7	-2.7
Margin (dB)	-10.90	-10.77	-10.36	-14.18	-14.89

22. Omni 3dBi Antenna with 100' 400 N Male

Kit numbers:3-100400

Antenna Gain (dBi)	3	3	3	3	3
Coax Cable Loss (dB)	5	5	5	8	8
Final Gain Less Coax /Splitter Loss(dB)	-2	-2	-2	-5	-5
Margin (dB)	-11.70	-11.57	-11.16	-16.48	-17.19

23. 2 Omni 3dBi Antenna with 50' 400 N male & a 50 Ohm 2-Way Splitter

Kit numbers:32-50400-50

Antenna Gain (dBi)	3	3	3	3	3
Splitter/Coax Loss (dB)	5.2	5.2	5.2	6.2	6.2
Final Gain Less Splitter/Coax Loss (dB)	-2.2	-2.2	-2.2	-3.2	-3.2
Margin (dB)	-11.90	-11.77	-11.36	-14.68	-15.39

24. 3 Omni 3dBi Antenna with 50' 400 N male & a 75 Ohm 3-Way Splitter

Kit numbers:33-50400-75

Antenna Gain (dBi)	3	3	3	3	3
Splitter/Coax Loss (dB)	5.2	5.2	5.2	6.2	6.2
Final Gain Less Splitter/Coax Loss (dB)	-2.2	-2.2	-2.2	-3.2	-3.2
Margin (dB)	-11.90	-11.77	-11.36	-14.68	-15.39

25. 4 Omni 3dBi Antenna with 50' 400 N male & three 50 Ohm 2-Way Splitter

Kit numbers:34-50400-50

Antenna Gain (dBi)	3	3	3	3	3
Splitter/Coax Loss (dB)	5.2	5.2	5.2	6.2	6.2
Final Gain Less Splitter/Coax Loss (dB)	-2.2	-2.2	-2.2	-3.2	-3.2
Margin (dB)	-11.90	-11.77	-11.36	-14.68	-15.39