DECIBEL Gain CHART

	GAIN IN (DB)	EFFICTIVE Power GAIN FACTOR
	0.5	1.25
*	1.0	1.26
	1.5	1.29
	2.0	1.58
	2.5	1.78
	3.0	1.99
	3.5	2.24
	4.0	2.51
	4.5	2.82
	5.0	3.16
	5.5	3.55
	6.0	3.98
	6.5	4.47
	7.0	5.01
	7.5	5.62
	8.0	6.31
	8.5	7.08
	9.0	7.94
	9.5	8.91
*	10	10.0
*	20	100.0
*	30	1000.0
*	40	10.000.0
*	50	100.000.0
*	60	1.000.000.0

HOW TO USE THIS CHART:

For a specified (Db Gain) listed above.

Say we had a Transmitter supplying 50-watts RF to an antenna with a manufactures specified gain of 6.5 db, with reference to dbd. Looking at the chart above you will see that 6.5db has an effective power gain of 4.47. Now using a little maths we can determine that the Effective Radiated Power (ERP). Is equivant to a transmitter? Transmitting 223.5 watts, into an antenna with no DB-Gain.

MATHS EXAMPLE:

RADIO'S RF-OUTPUT	*	BY THE (EFFICTIVE GAIN FACTOR)	= ERP
50 Watts	*	4.47 (See chart above)	= 223.5

For (Db GAIN) NOT LISTED ABOVE

To work out an ERP, For an Antennas Gain That is not on the chart above (EXAMPLE 24 DB-GAIN) First Take the Transmitters RF-OUTPUT Power and multiply this by the nearest whole number; in this case, 20 for 24 DB, you will see from the chart above the Gain Factor is 100. Then Multiply this by the 4 DB GAIN FACTOR, which is 2.51. This will give you the Effective Radiated Power (ERP) Output

(**Two Examples: FOR 24 DB-GAIN**)

RF POWER	X GAIN FACTOR FOR 20db	X Gain factor for 4db	= ERP
1 Watts	X 100	X 2.51	= 251w (ERP)
25 Watts	X 100	X 2.51	= 627w (ERP)

** Note: Dbw Mean's DB-Gain With Reference To 1 Watt **

RF Power Table

dBm	Volts	Watts
75 dBm	1257.43 V	31.62 kW
74 dBm	1120.69 V	25.12 kW
73 dBm	998.81 V	19.95 kW
72 dBm	890.19 V	15.85 kW
71 dBm	793.39 V	12.59 kW
70 dBm	707.11 V	10.00 kW
69 dBm	630.21 V	7.94 kW
68 dBm	561.67 V	6.31 kW
67 dBm	500.59 V	5.01 kW
66 dBm	446.15 V	3.98 kW
65 dBm	397.64 V	3.16 kW
64 dBm	354.39 V	2.51 kW
63 dBm	315.85 V	2.00 kW
62 dBm	281.50 V	1.58 kW
61 dBm	250.89 V	1.26 kW
60 dBm	223.61 V	1.00 kW
59 dBm	199.29 V	794.33 W
58 dBm	177.62 V	630.96 W
57 dBm	158.30 V	501.19 W
56 dBm	141.09 V	398.11 W
55 dBm	125.74 V	316.23 W
54 dBm	112.07 V	251.19 W
53 dBm	99.88 V	199.53 W
52 dBm	89.02 V	158.49 W
51 dBm	79.34 V	125.89 W
50 dBm	70.71 V	100.00 W
49 dBm	63.02 V	79.43 W
48 dBm	56.17 V	63.10 W
47 dBm	50.06 V	50.12 W
46 dBm	44.62 V	39.81 W
45 dBm	39.76 V	31.62 W
44 dBm	35.44 V	25.12 W
43 dBm	31.59 V	19.95 W

42 dBm	28.15 V	15.85 W
41 dBm	25.09 V	12.59 W
40 dBm	22.36 V	10.00 W
39 dBm	19.93 V	7.94 W
38 dBm	17.76 V	6.31 W
37 dBm	15.83 V	5.01 W
36 dBm	14.11 V	3.98 W
35 dBm	12.57 V	3.16 W
34 dBm	11.21 V	2.51 W
33 dBm	9.99 V	2.00 W
32 dBm	8.90 V	1.58 W
31 dBm	7.93 V	1.26 W
30 dBm	7.07 V	1.00 W
29 dBm	6.30 V	794.33 mW
28 dBm	5.62 V	630.96 mW
27 dBm	5.01 V	501.19 mW
26 dBm	4.46 V	398.11 mW
25 dBm	3.98 V	316.23 mW
24 dBm	3.54 V	251.19 mW
23 dBm	3.16 V	199.53 mW
22 dBm	2.82 V	158.49 mW
21 dBm	2.51 V	125.89 mW
20 dBm	2.24 V	100.00 mW
19 dBm	1.99 V	79.43 mW
18 dBm	1.78 V	63.10 mW
17 dBm	1.58 V	50.12 mW
16 dBm	1.41 V	39.81 mW
15 dBm	1.26 V	31.62 mW
14 dBm	1.12 V	25.12 mW
13 dBm	1.00 V	19.95 mW
12 dBm	890.19 mV	15.85 mW
11 dBm	793.39 mV	12.59 mW
10 dBm	707.11 mV	10.00 mW
9 dBm	630.21 mV	7.94 mW
8 dBm	561.67 mV	6.31 mW
7 dBm	500.59 mV	5.01 mW
6 dBm	446.15 mV	3.98 mW
5 dBm	397.64 mV	3.16 mW

4 dBm	354.39 mV	2.51 mW
3 dBm	315.85 mV	2.00 mW
2 dBm	281.50 mV	1.58 mW
1 dBm	250.89 mV	1.26 mW
0 dBm	223.61 mV	1.00 mW
-1 dBm	199.29 mV	794.33 uW
-2 dBm	177.62 mV	630.96 uW
-3 dBm	158.30 mV	501.19 uW
-4 dBm	141.09 mV	398.11 uW
-5 dBm	125.74 mV	316.23 uW
-6 dBm	112.07 mV	251.19 uW
-7 dBm	99.88 mV	199.53 uW
-8 dBm	89.02 mV	158.49 uW
-9 dBm	79.34 mV	125.89 uW
-10 dBm	70.71 mV	100.00 uW
-11 dBm	63.02 mV	79.43 uW
-12 dBm	56.17 mV	63.10 uW
-13 dBm	50.06 mV	50.12 uW
-14 dBm	44.62 mV	39.81 uW
-15 dBm	39.76 mV	31.62 uW
-16 dBm	35.44 mV	25.12 uW
-17 dBm	31.59 mV	19.95 uW
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-28 dBm	8.90 mV	1.58 uW
-29 dBm	7.93 mV	1.26 uW
-30 dBm	7.07 mV	1.00 uW
-31 dBm	6.30 mV	794.33 nW
-32 dBm	5.62 mV	630.96 nW
-33 dBm	5.01 mV	501.19 nW

-34 dBm	4.46 mV	398.11 nW
-35 dBm	3.98 mV	316.23 nW
-36 dBm	3.54 mV	251.19 nW
-37 dBm	3.16 mV	199.53 nW
-38 dBm	2.82 mV	158.49 nW
-39 dBm	2.51 mV	125.89 nW
-40 dBm	2.24 mV	100.00 nW
-41 dBm	1.99 mV	79.43 nW
-42 dBm	1.78 mV	63.10 nW
-43 dBm	1.58 mV	50.12 nW
-44 dBm	1.41 mV	39.81 nW
-45 dBm	1.26 mV	31.62 nW
-46 dBm	1.12 mV	25.12 nW
-47 dBm	1.00 mV	19.95 nW
-48 dBm	890.19 uV	15.85 nW
-49 dBm	793.39 uV	12.59 nW
-50 dBm	707.11 uV	10.00 nW
-51 dBm	630.21 uV	7.94 nW
-52 dBm	561.67 uV	6.31 nW
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-59 dBm	250.89 uV	1.26 nW
-60 dBm	223.61 uV	1.00 nW
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-65 dBm	125.74 uV	316.23 pW
-66 dBm	112.07 uV	251.19 pW
-67 dBm	99.88 uV	199.53 pW
-68 dBm	89.02 uV	158.49 pW
-69 dBm	79.34 uV	125.89 pW
-70 dBm	70.71 uV	100.00 pW