



### FMP series FM antennas applications guide

#### Bay to Bay Spacing

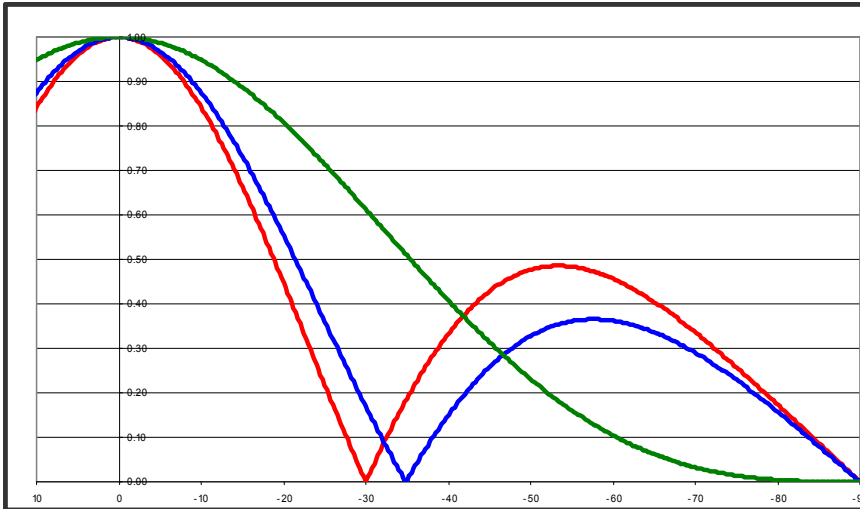
Bay Count	1 $\lambda$ Gain	7/8 $\lambda$ Gain	1/2 $\lambda$ Gain
1	0.48	-----	-----
2	1.00	0.92	0.68
3	1.50	1.46	1.00
4	2.05	1.95	1.30
5	2.70	2.60	1.60
6	3.28	3.14	1.90
7	3.87	3.65	2.20
8	4.46	4.21	2.50
10	5.65	5.28	3.12
12	6.85	6.34	3.74

These gain numbers are for antennas with no beam tilt or null fill. Contact Micronetixx for your beam tilt and null fill requirements. Adding beam tilt in end fed models will reduce the power gain slightly.

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# FMP series sample elevation patterns

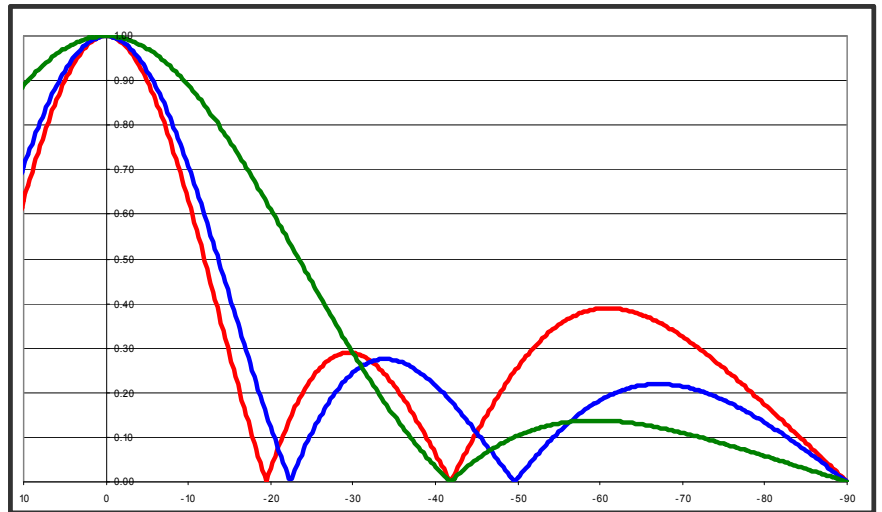
## Two Bay



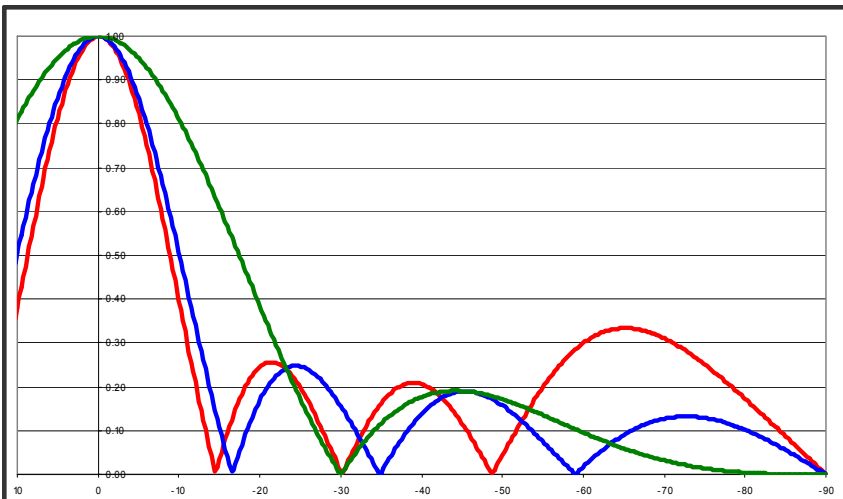
- $1 \lambda$  (gain 0.99)
- $7/8^{\text{th}} \lambda$  (gain 0.92)
- $1/2 \lambda$  (gain 0.68)

## Three Bay

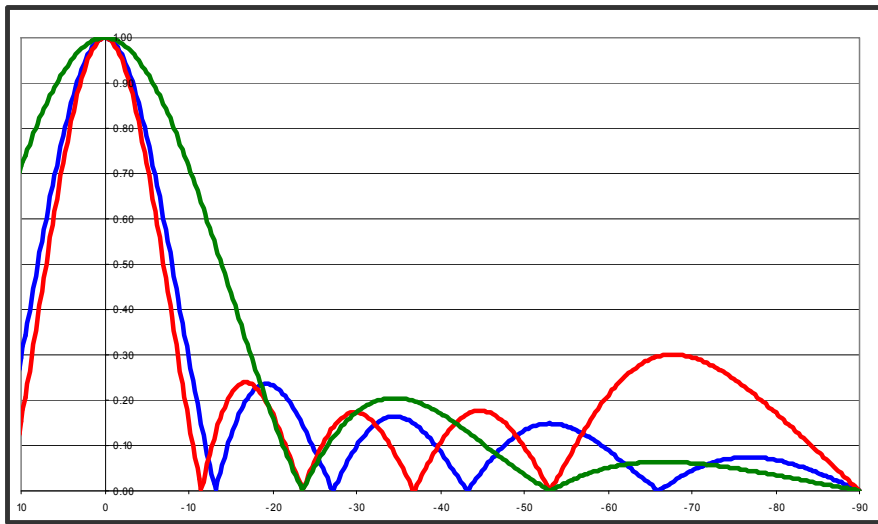
- $1 \lambda$  (gain 1.50)
- $7/8^{\text{th}} \lambda$  (gain 1.46)
- $1/2 \lambda$  (gain 1.00)



## Four Bay



- $1 \lambda$  (gain 2.05)
- $7/8^{\text{th}} \lambda$  (gain 1.95)
- $1/2 \lambda$  (gain 1.30)

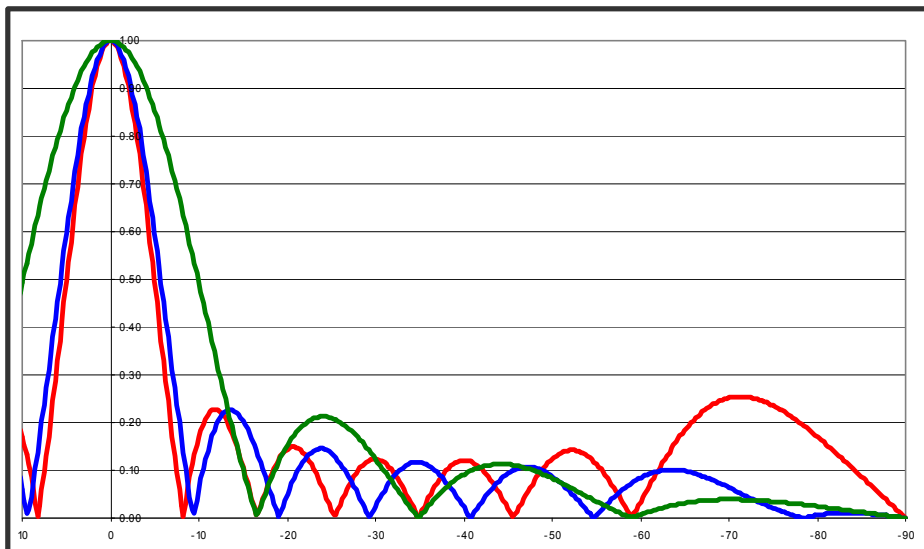
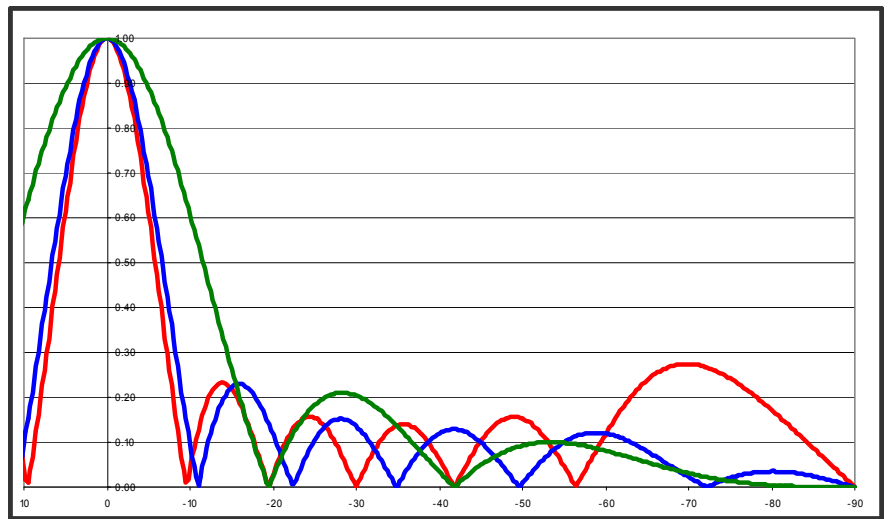


## 5 Bay

- $1 \lambda$  (gain 2.70)
- $7/8 \lambda$  (gain 2.60)
- $1/2 \lambda$  (gain 1.60)

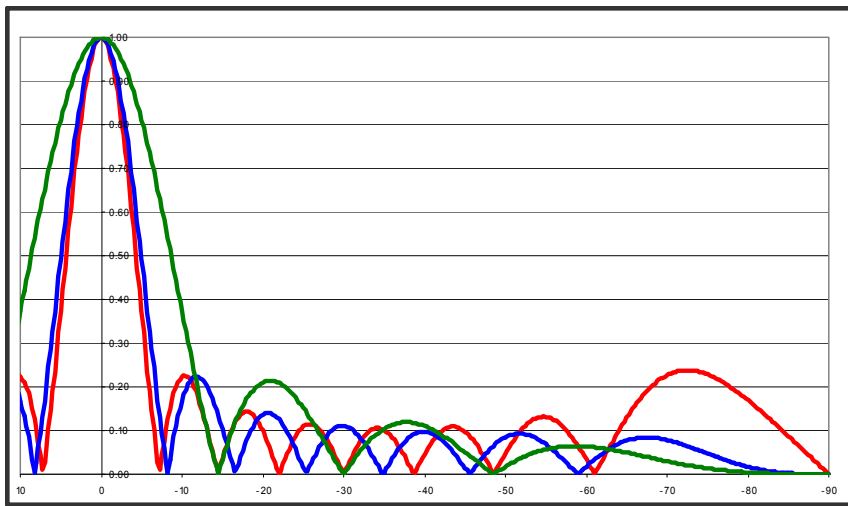
## 6 Bay

- $1 \lambda$  (gain 3.28)
- $7/8 \lambda$  (gain 3.14)
- $1/2 \lambda$  (gain 1.90)



## 7 Bay

- $1 \lambda$  (gain 3.87)
- $7/8 \lambda$  (gain 3.65)
- $1/2 \lambda$  (gain 2.20)

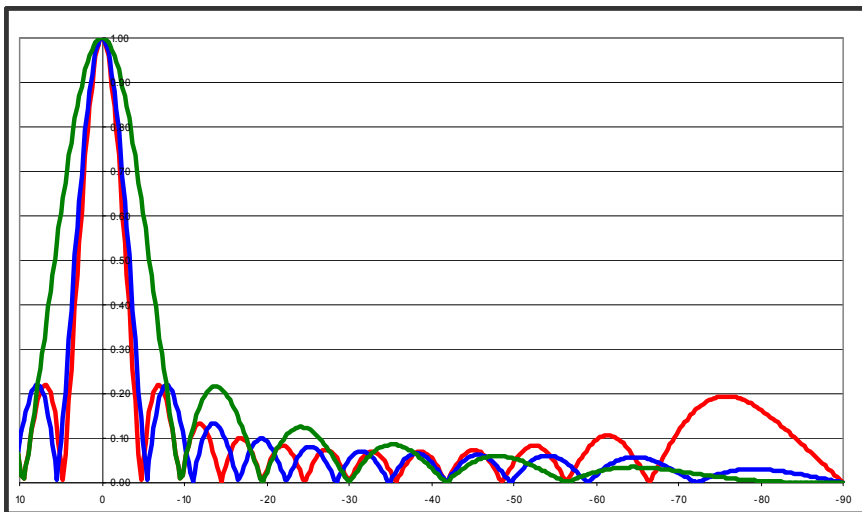
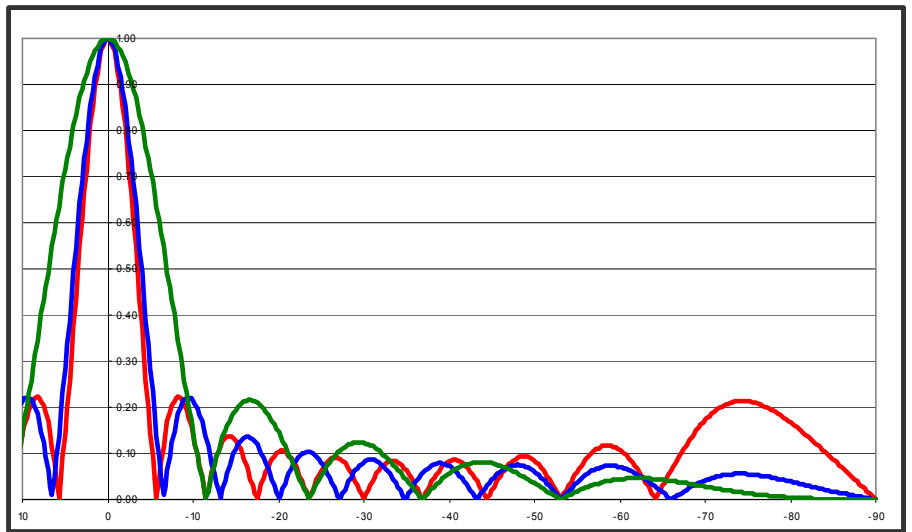


## 8 Bay

- 1  $\lambda$  (gain 4.46)
- 7/8th  $\lambda$  (gain 4.21)
- 1/2  $\lambda$  (gain 2.50)

## 10 Bay

- 1  $\lambda$  (gain 5.65)
- 7/8th  $\lambda$  (gain 5.28)
- 1/2  $\lambda$  (gain 3.12)



## 12 Bay

- 1  $\lambda$  (gain 6.85)
- 7/8th  $\lambda$  (gain 6.34)
- 1/2  $\lambda$  (gain 3.74)

# FMP series antenna mechanicals

Free space needed to mount the antenna\*

Bay count	$1\lambda$ Spacing	$0.875\lambda$ Spacing	$0.500\lambda$ spacing
1	120 in.	-----	-----
2	240 in.	225 in	180 in.
3	360 in.	330 in.	240 in.
4	480 in.	435 in.	300 in.
5	600 in	540 in.	360 in.
6	720 in	645 in.	420 in.
7	840 in	750 in.	480 in.
8	960 in.	855 in.	540 in.
10	1080 in	960 in.	600 in.
12	1200 in.	1065 in.	660 in.

\*Data is valid for antennas operating at 98 MHz. Contact Micronetixx for other frequencies

These values are the pole length needed to mount the antenna to. If possible add another 48 inches to the values shown in the table. Also ensure no metallic guy wire runs in front of the antenna. Depending on bay count and how close the guy wire is to the antenna could affect tuning and the azimuth pattern of the antenna.

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# FMP series antenna mechanicals

## Weight and Wind load areas\*

Bay count	Weight	Wind load area
1	25 lbs. (11.4 kg)	1.0 ft <sup>2</sup> (0.09m <sup>2</sup> )
2	65 lbs. (29.5 kg)	4.7 ft <sup>2</sup> (0.43m <sup>2</sup> )
3	100 lbs (45.5 kg).	8.4 ft <sup>2</sup> (0.78m <sup>2</sup> )
4	130 lbs. (59.1 kg)	12.1ft <sup>2</sup> (1.12m <sup>2</sup> ).
5	165 lbs. (75.0 kg)	15.8 ft <sup>2</sup> (1.45m <sup>2</sup> ). .
6	200 lbs. (90.9 kg)	19.5 ft <sup>2</sup> (1.80m <sup>2</sup> ) .
7	235 lbs. (106.8 kg)	23.2 ft <sup>2</sup> (2.13m <sup>2</sup> ). .
8	270 lbs. (122.7 kg)	26.9 ft <sup>2</sup> (2.48m <sup>2</sup> )
10	345 lbs (156.8 kg)	34.3 ft <sup>2</sup> (3.16m <sup>2</sup> )
12	405 lbs. (184.1 kg).	41.7 ft <sup>2</sup> (3.84m <sup>2</sup> ) .

\*Data is valid for 3-1/8" input antennas operating at 98 MHz, and using full wave spacing. Contact Micronetixx for other frequencies, spacing and optional de-icers.



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