

# SYSTEMS WITH RELIABILITY, LP.

Broadcast Antennas & Transmission Systems



## FMEC PLUS Specifications

Standard Model



Radome Model



SYSTEMS WITH RELIABILITY, LP.

619 Industrial Park Rd. Ebensburg, PA 15931 phone: 814-472-5436 fax: 814-472-5552 web: [www.swr-rf.com](http://www.swr-rf.com)

# Table of Contents

Tech Sheet.....	1
Dimensions.....	2
Single Bay Installation.....	3
2 Bay Installation.....	4
3 or More Odd Bays (3, 5, 7, etc.).....	5
4 or More Even Bays (4, 6, 8, etc.).....	6
Full Wave Spaced Specifications.....	7
1/2 Wave Spaced Specifications.....	8
3/4 Wave Spaced Specifications.....	9
Warranty Information.....	10



SYSTEMS WITH RELIABILITY, LP.

619 Industrial Park Rd. Ebensburg, PA 15931 phone: 814-472-5436 fax: 814-472-5552 web: [www.swr-rf.com](http://www.swr-rf.com)

# FMEC PLUS SERIES

## CIRCULAR POLARIZED FM ANTENNAS

### Product Specifications:

Frequency Range	88 – 108 MHz
Polarization	Circular
Power Rating	1000 Watts per bay
System Input	7/16" DIN Female
VSWR	1.3:1 ± 150 kHz
Bay Dimensions	H 43.50" / W 38.5" / D 19"

### Features:

•**POWER RATING.** Each bay is rated at 1000 watts with a maximum power of 5 kW for four bays.

•**RUGGED CONSTRUCTION.** Each bay is constructed from rugged, heavy wall copper and naval brass. All joints are tig-welded.

•**PRESSURIZATION NOT REQUIRED.**

•**CUSTOM DIRECTIONAL PATTERNS.** FM directional antennas designed to the customer's specified mounting structure and FCC filing documentation are available.

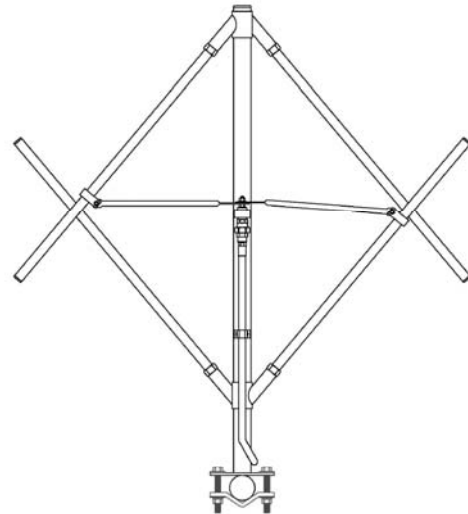
•**WEATHERIZATION (OPTIONAL).** Radomes or electrical deicers available for areas that experience periods of heavy icing and/or snow conditions.

•**STANDARD MOUNTING BRACKETS.** Fits up to 4" tower leg or pipe. Supplied with antenna.

•**WARRANTY.** 2-year limited warranty on defects and workmanship to the original purchaser.

### Notes:

1. Power rating is based on 40 degrees C ambient. Degeneration occurs above 2000 ft.
2. Antenna weight, windload, aperture and dimensions are based on mid-band operation (98.1 MHz).
3. Antennas with 3 or more bays come with input power divider.
4. SWR, Inc. maintains a continuous program of product improvement and therefore reserves the right to change specifications without notice.



**Full Wave Spaced  
Electrical and Mechanical Specifications**

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	1000	0.441	-3.556	15	35
2	2000	0.959	-0.182	35	85
3	3000	1.495	1.746	50	120
4	4000	2.044	3.105	65	155
5	5000	2.590	4.133	80	190
6	5000	3.160	4.997	95	225
8	5000	4.311	6.346	110	260
10	5000	5.456	7.369	130	295

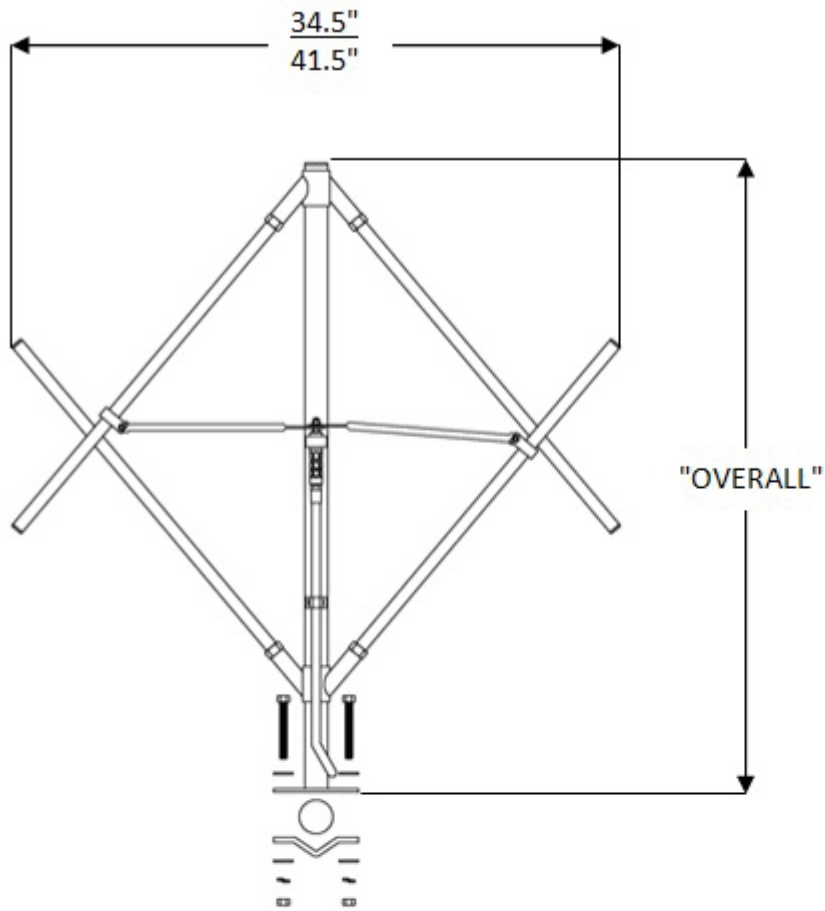
**Half Wave Spaced  
Electrical and Mechanical Specifications**

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	1000	0.441	-3.556	15	35
2	2000	0.695	-1.580	35	85
3	3000	1.012	0.052	50	120
4	4000	1.313	1.183	65	155
5	5000	1.623	2.103	80	190
6	5000	1.924	2.842	95	225
8	5000	2.528	4.028	110	260
10	5000	3.129	4.954	125	295

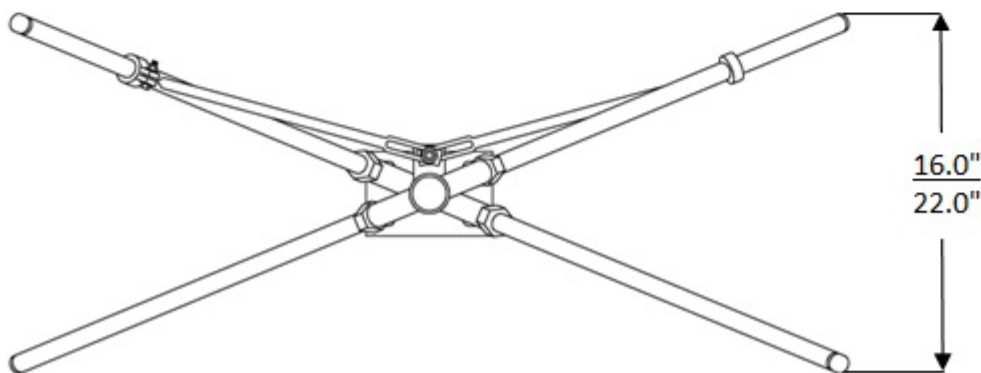
**3/4 Wave Spaced  
Electrical and Mechanical Specifications**

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	1000	0.441	-3.556	15	35
2	2000	0.935	-0.292	35	85
3	3000	1.396	1.449	50	120
4	4000	1.845	2.660	65	155
5	5000	2.301	3.619	80	190
6	5000	2.756	4.403	95	225
8	5000	3.664	5.640	110	260
10	5000	4.590	6.618	125	295

# Dimensions



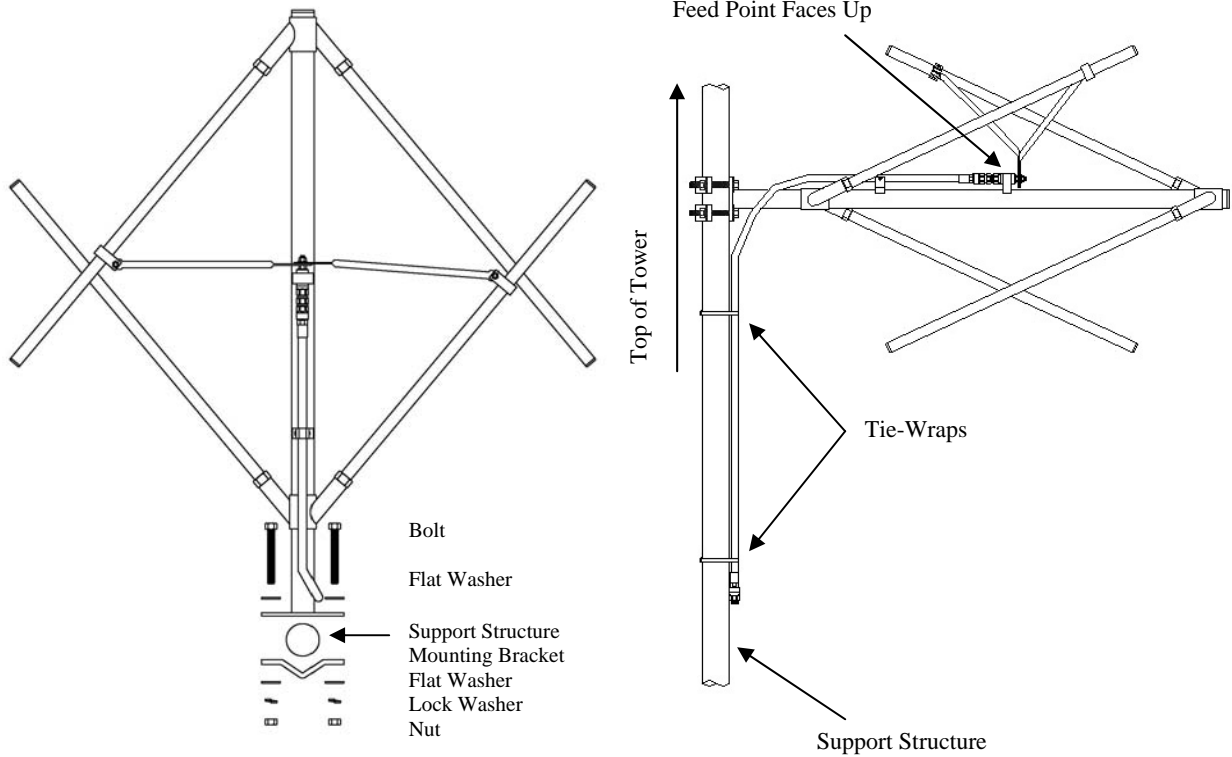
"OVERALL"	
88.1-91.9	47.00"
92.1-94.7	45.50"
94.9-97.7	44.50"
97.9-100.9	43.50"
101.1-104.3	42.50"
104.5-107.9	41.25"



# Single Bay Installation

## Considerations:

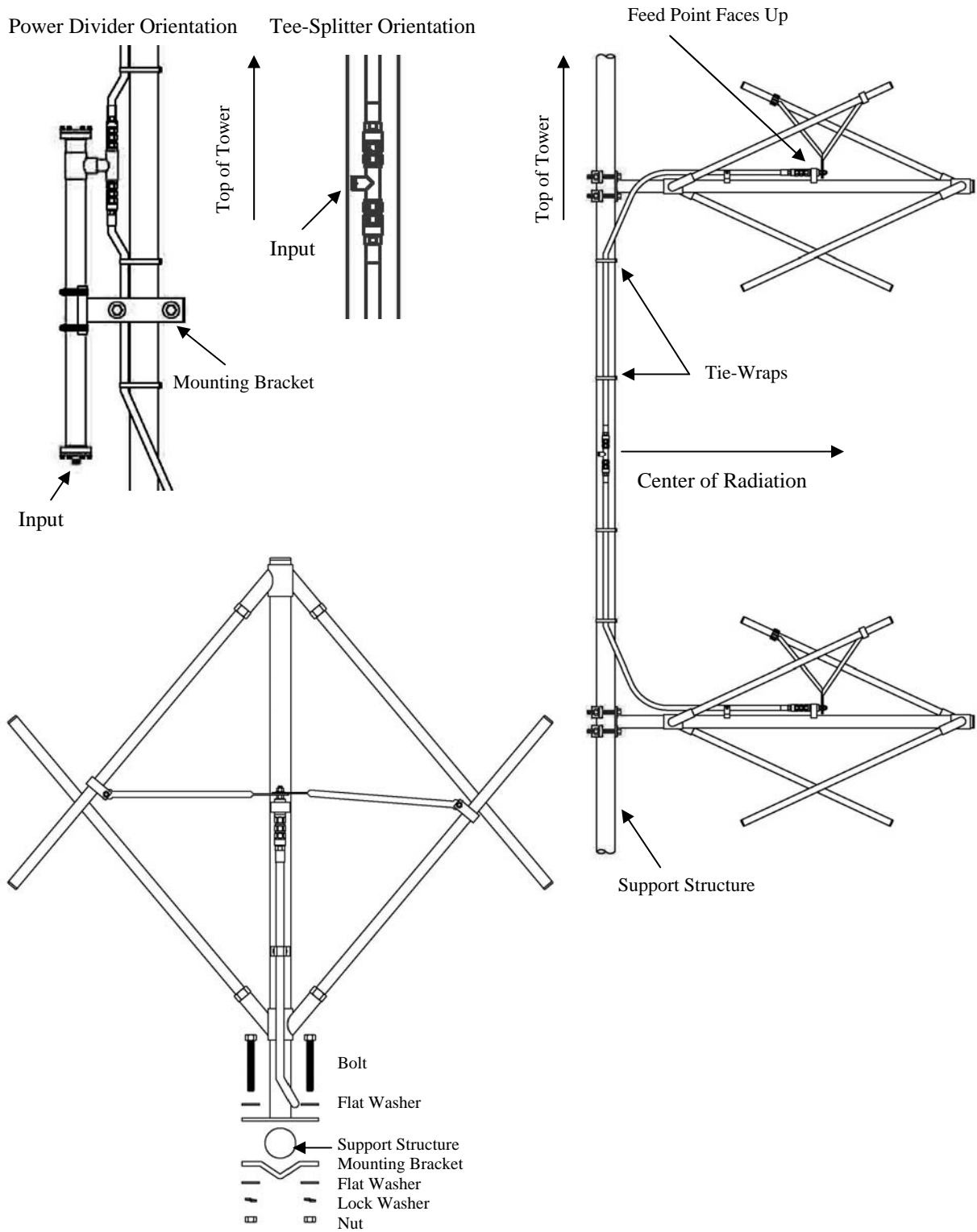
1. Your single bay FMEC PLUS antenna includes a jumpers, tie-wraps, and weatherproofing kit.
2. Note the direction and orientation of feed point, feed arms, hardware, and jumper.
3. Standard mounting bracket fits from 1" to 4" tower leg or pole.
4. SWR, LP. reserves the right to change product specifications at any time.



## 2 Bay Installation

### Considerations:

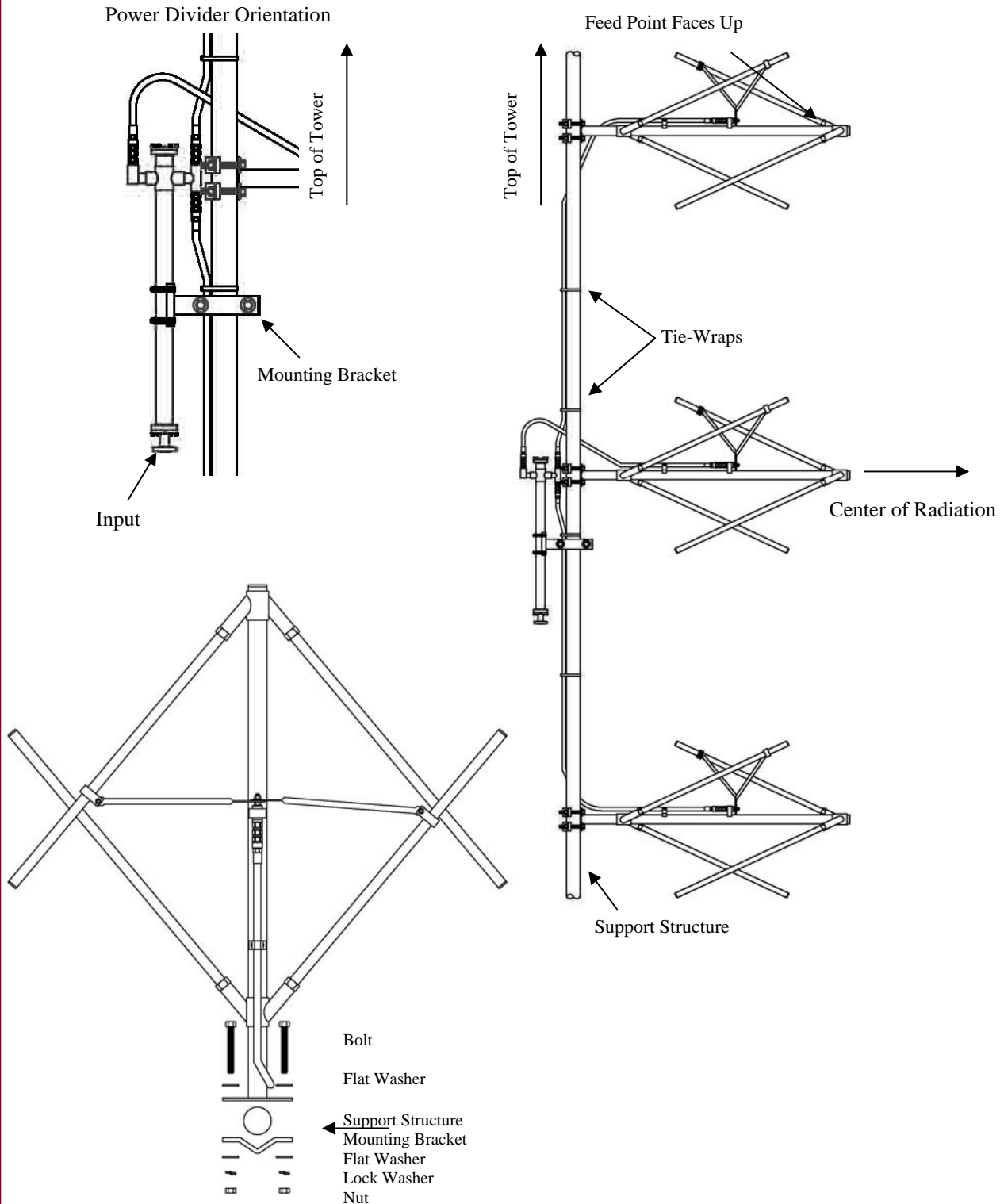
1. Your FMEC PLUS two bay antenna includes jumpers, tie-wraps, and weatherproofing kit.
2. Your FMEC PLUS two bay antenna may be fed with either a Tee-Splitter or Power Divider.
3. Note the direction and orientation of feed points, feed arms, power divider, hardware, and jumpers.
4. Standard mounting bracket fits from 1" to 4" tower leg or pole.
5. SWR, LP. reserves the right to change product specifications at any time.



## 3 Or More Odd Bays (3, 5, 7, etc.)

### Considerations:

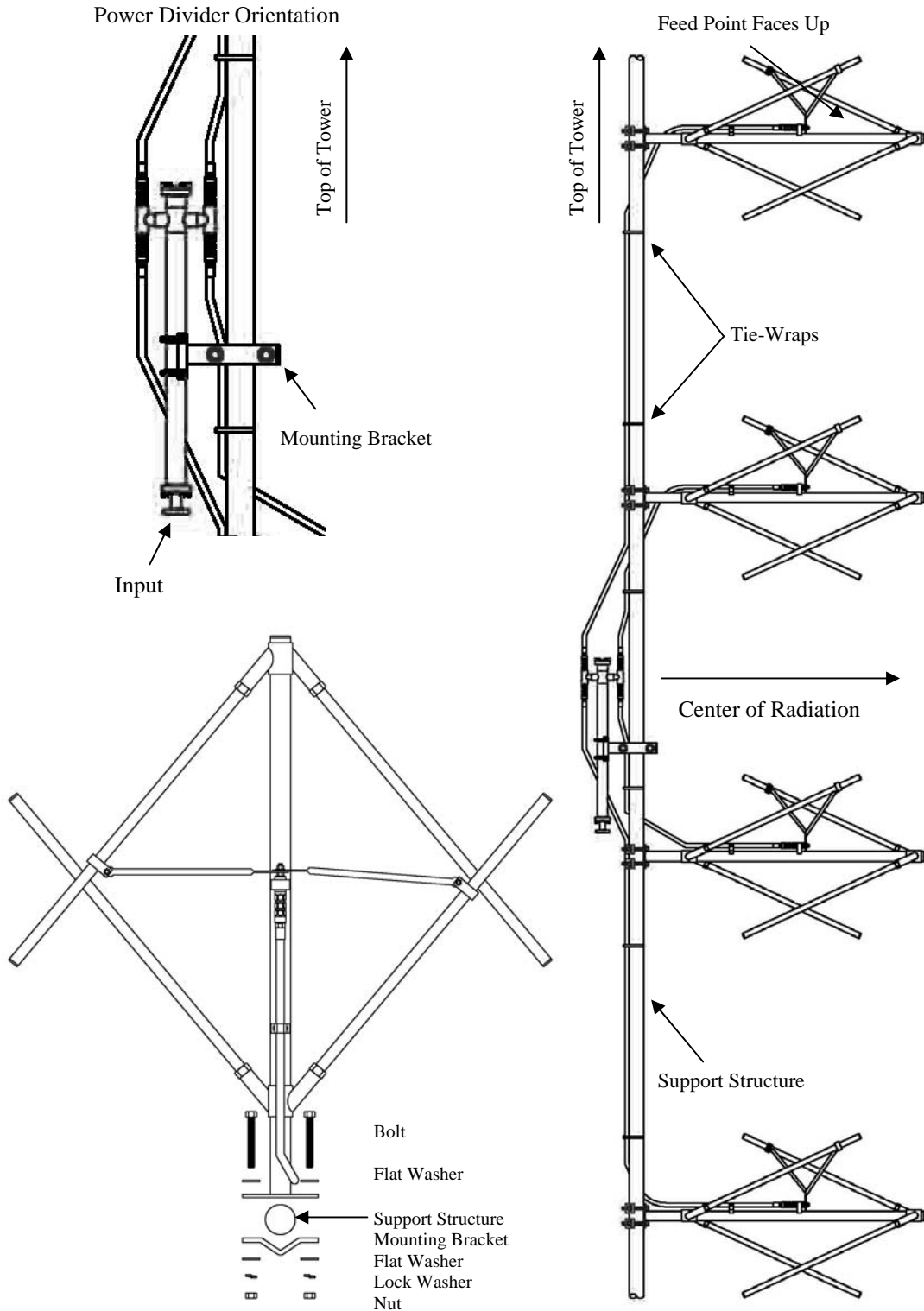
1. Your FMEC PLUS three bay antenna includes jumpers, tie-wraps, and weatherproofing kit.
2. Your FMEC PLUS three bay antenna will be fed with a three-way power divider.
3. Note the direction and orientation of feed points, feed arms, power divider, hardware, and jumpers.
4. Standard mounting bracket fits from 1" to 4" tower leg or pole.
5. SWR, LP. reserves the right to change product specifications at any time.



## 4 Or More Even Bays (4, 6, 8, etc.)

### Considerations:

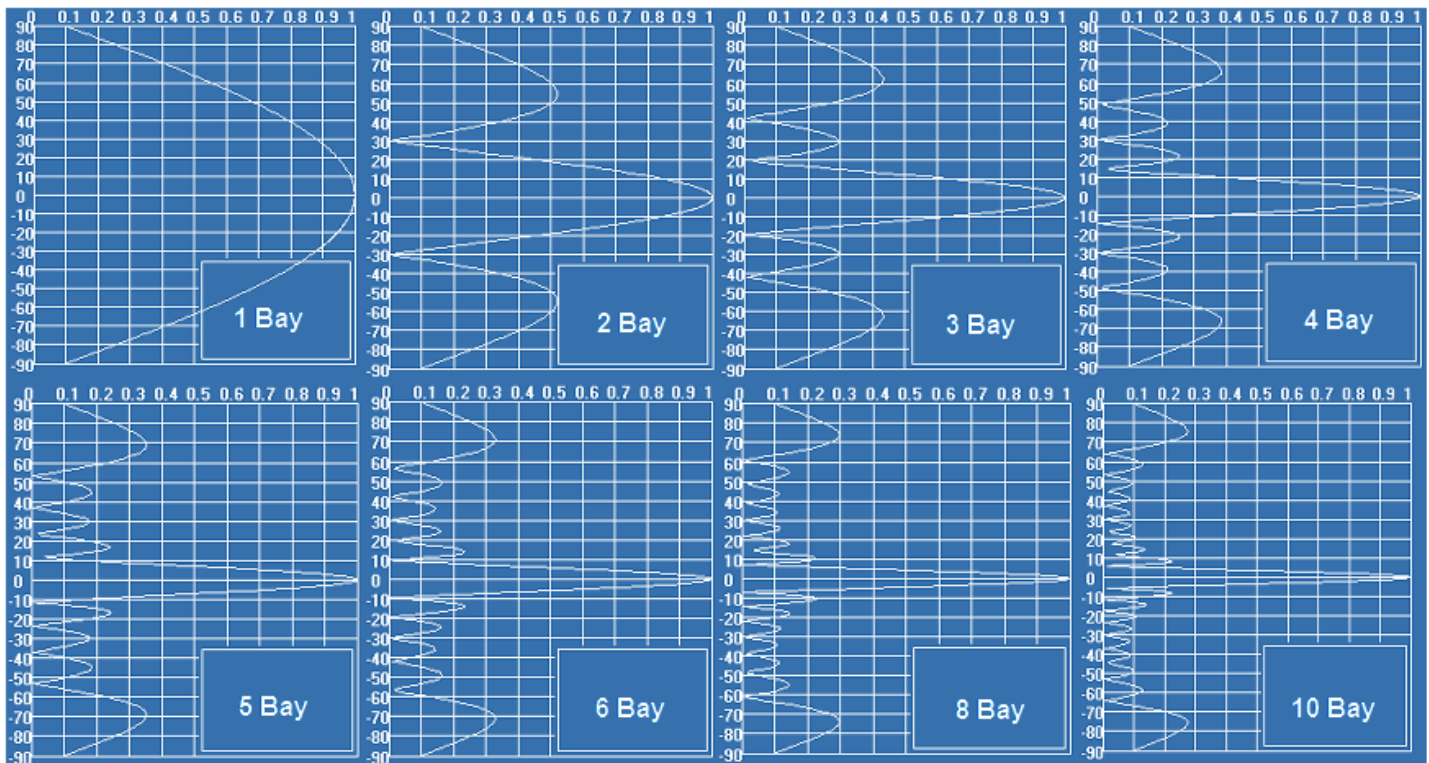
1. Your FMEC four bay antenna includes jumpers, tie-wraps, and weatherproofing kit.
2. Your FMEC four bay antenna will be fed with a four-way Power Divider.
3. Note the direction and orientation of feed points, feed arms, power divider, hardware, and jumpers.
4. Standard mounting bracket fits from 1" to 4" tower leg or pole.
5. SWR, LP. reserves the right to change product specifications at any time.





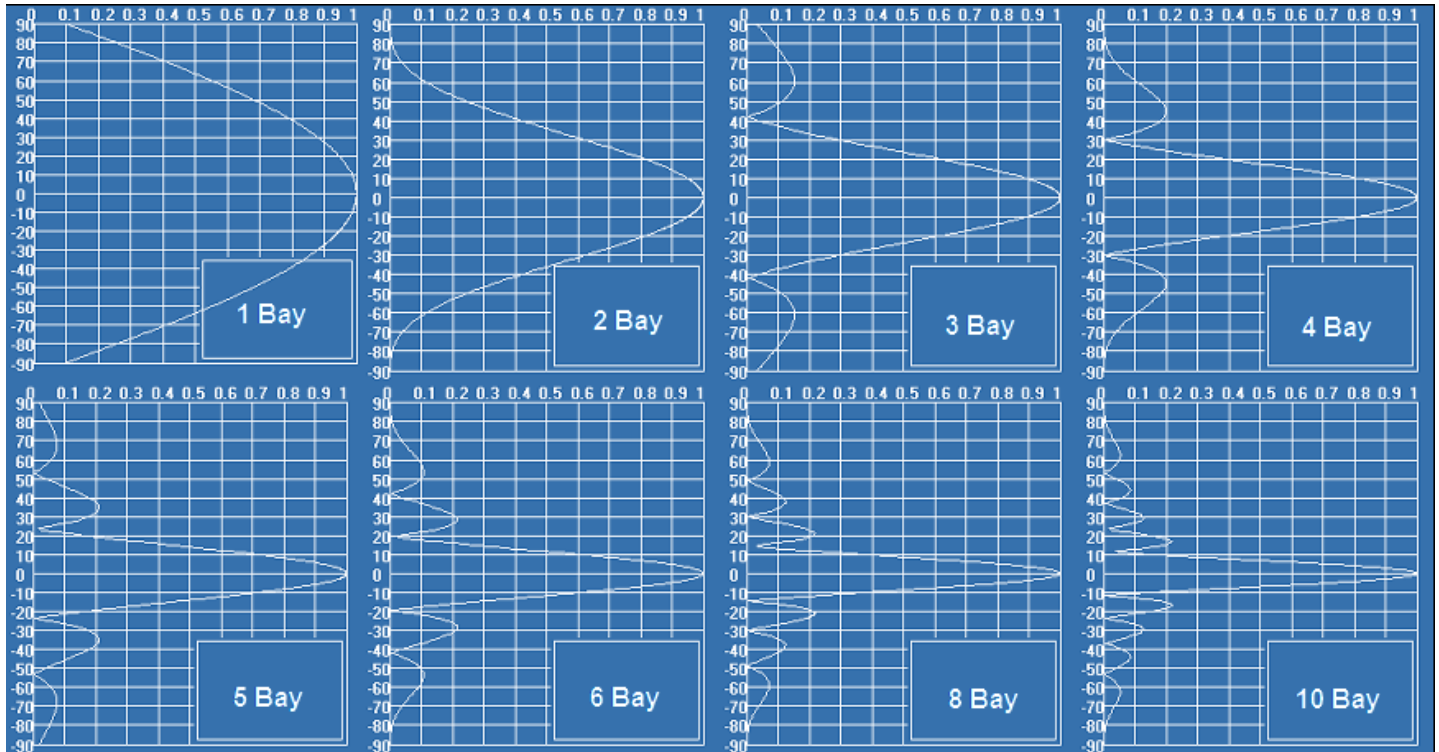
## Full-Wave Spaced Specifications

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	1000	0.441	-3.556	15	35
2	2000	0.959	-0.182	35	85
3	3000	1.495	1.746	50	120
4	5000	2.044	3.105	65	155
5	5500	2.590	4.133	80	190
6	5500	3.160	4.997	95	225
8	5500	4.311	6.346	110	260
10	5500	5.456	7.369	130	295



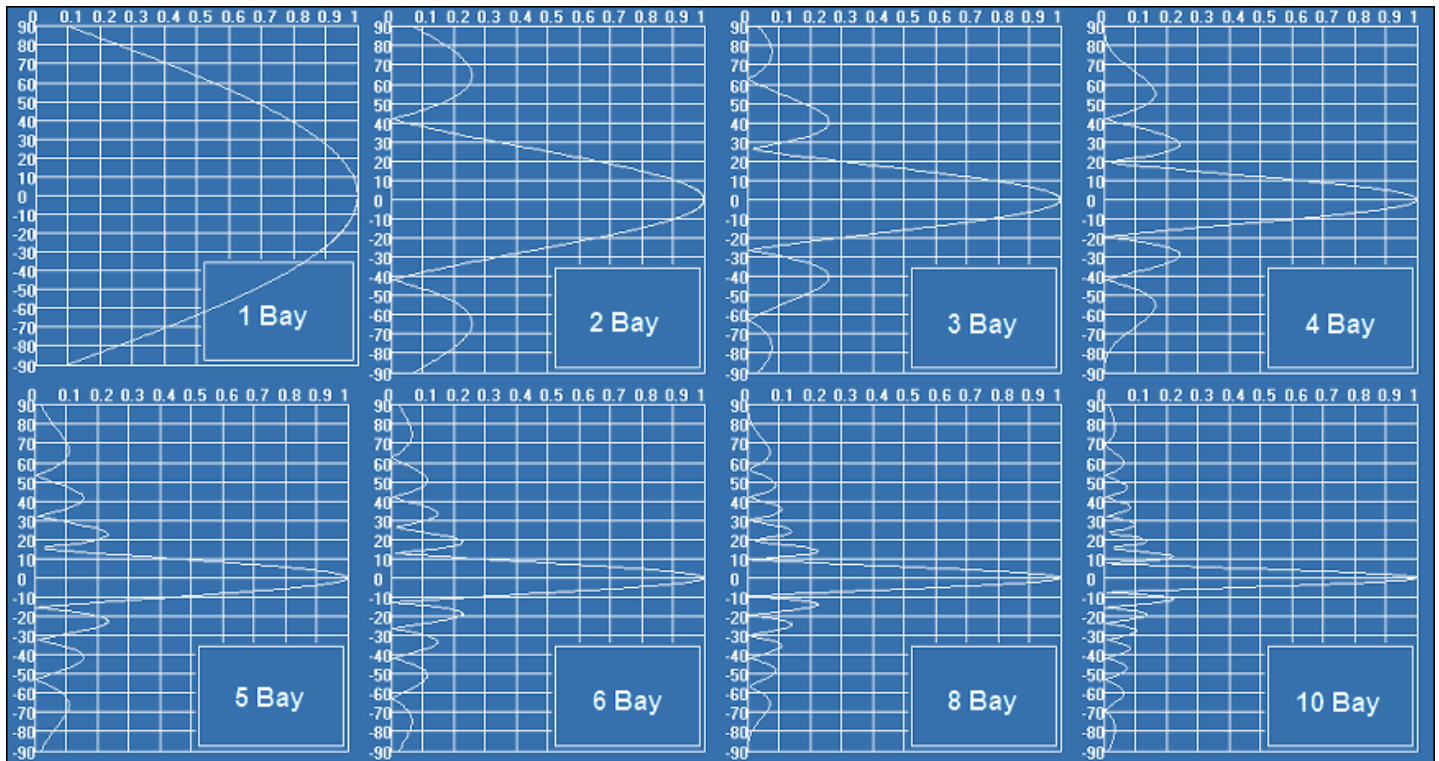
## 1/2 Wave Spaced Specifications

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	1000	0.441	-3.556	15	35
2	2000	0.695	-1.580	35	85
3	3000	1.012	0.052	50	120
4	5000	1.313	1.183	65	155
5	5500	1.623	2.103	80	190
6	5500	1.924	2.842	95	225
8	5500	2.528	4.028	110	260
10	5500	3.129	4.954	125	295



## 3/4 Wave Spaced Specifications

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	1000	0.441	-3.556	15	35
2	2000	0.935	-0.292	35	85
3	3000	1.396	1.449	50	120
4	5000	1.845	2.660	65	155
5	5500	2.301	3.619	80	190
6	5500	2.756	4.403	95	225
8	5500	3.664	5.640	110	260
10	5500	4.590	6.618	125	295



### **Limited Warranty and Limitation of Liability**

Unless otherwise specified in writing, the Seller warrants its product to be free of defects in materials and workmanship for three years from the date of shipment, and to conform to the specifications included in the Owner's Manual provided with the product. Broadcast antenna systems purchased with Site Specific Engineering and installed in accordance with the Owner's Manual instructions will also meet the terms of the customer's specifications, station license, and/or construction permit in effect at the time of delivery.

In the event of any failure within the first six months, replacement parts will be couriered to at the expense of SWR, LP. The Seller agrees to service, adjust, and/or replace (at their option) any defective equipment parts returned to its Ebensburg, Pennsylvania plant, freight pre-paid, within three years from the date of original shipment from its plant.

This warranty is subject to the following conditions: 1.) Notice of any defect must be received by the Seller in writing within 30 days of initial discovery. 2.) Notice of any defect must fall within the warranty period. 3.) Seller's inspection of the returned equipment must substantiate (to Seller's satisfaction) the claimed defect. 4.) Seller is not liable for warranty work if notice of defect is given after the warranty period, even if the buyer deems the defect to have occurred during the warranty period.

David Edmiston  
Vice-President of Sales  
Systems With Reliability, LP