

SYSTEMS WITH RELIABILITY, LP.

Broadcast Antennas & Transmission Systems



FMEC 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

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 |



FMEC SERIES

CIRCULAR POLARIZED LOW POWER FM ANTENNAS

Product Specifications:

| | |
|-----------------|----------------------------|
| Frequency Range | 88 – 108 MHz |
| Polarization | Circular |
| Power Rating | 500 Watts per bay |
| System Input | Type N Male |
| VSWR | 1.3:1 ± 150 kHz |
| Bay Dimensions | H 43.50" / W 38.5" / D 19" |

Features:

•**BUILT WITH LOW POWER BROADCASTERS IN MIND.** Stations or translators that require circular, horizontal, or vertical polarizations.

•**POWER RATING.** Each bay is rated at 500 watts with a maximum power of 2 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.

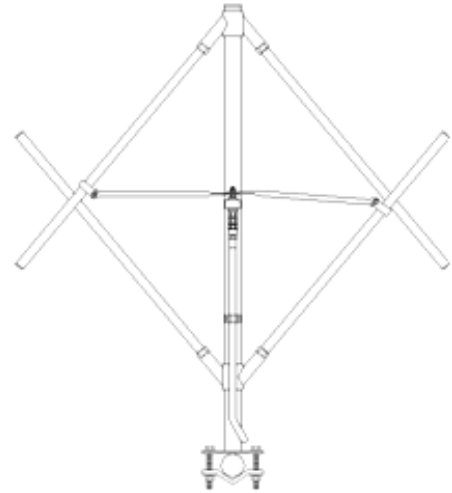
•**WEATHERIZATION (OPTIONAL).** Radomes or electrical deicers available for areas that experience periods of heavy icing and/or snow conditions.

•**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 | 500 | 0.441 | -3.556 | 15 | 35 |
| 2 | 1000 | 0.959 | -0.182 | 35 | 85 |
| 3 | 1500 | 1.495 | 1.746 | 50 | 120 |
| 4 | 2000 | 2.044 | 3.105 | 65 | 155 |
| 5 | 2000 | 2.590 | 4.133 | 80 | 190 |
| 6 | 2000 | 3.160 | 4.997 | 95 | 225 |
| 8 | 2000 | 4.311 | 6.346 | 110 | 260 |
| 10 | 2000 | 5.456 | 7.369 | 130 | 295 |

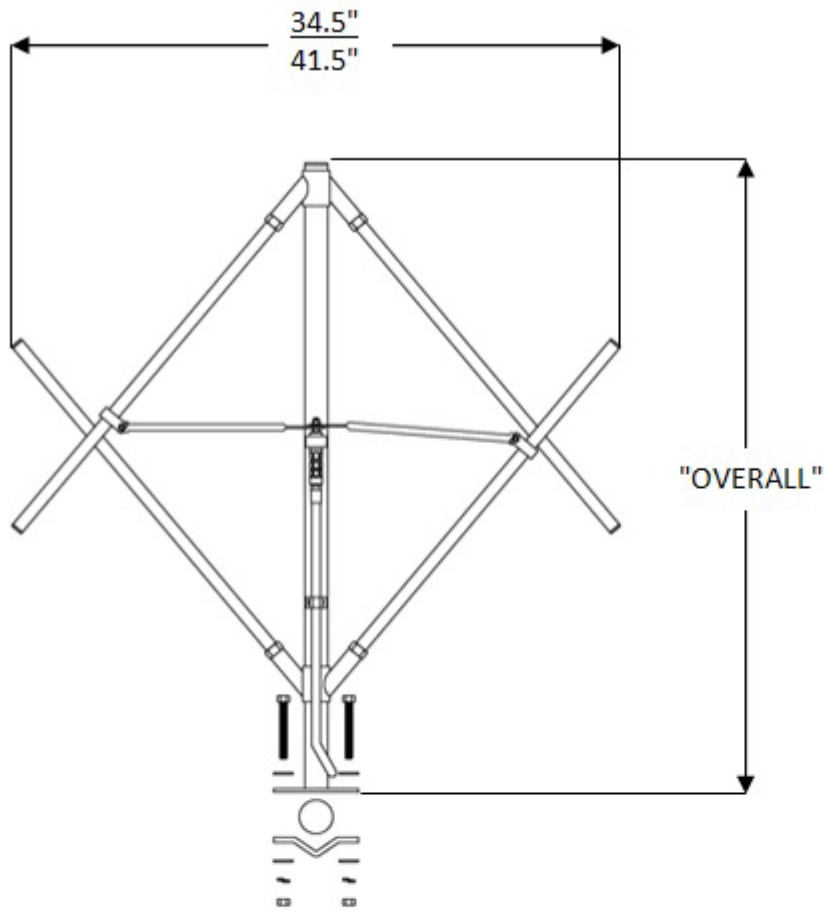
**Half Wave Spaced
Electrical and Mechanical Specifications**

| Bays | Power Rating (watts) | Power Gain | dB Gain | Net. Weight (lbs) | Windload (lbs) |
|------|----------------------|------------|---------|-------------------|----------------|
| 1 | 500 | 0.441 | -3.556 | 15 | 35 |
| 2 | 1000 | 0.695 | -1.580 | 35 | 85 |
| 3 | 1500 | 1.012 | 0.052 | 50 | 120 |
| 4 | 2000 | 1.313 | 1.183 | 65 | 155 |
| 5 | 2000 | 1.623 | 2.103 | 80 | 190 |
| 6 | 2000 | 1.924 | 2.842 | 95 | 225 |
| 8 | 2000 | 2.528 | 4.028 | 110 | 260 |
| 10 | 2000 | 3.129 | 4.954 | 125 | 295 |

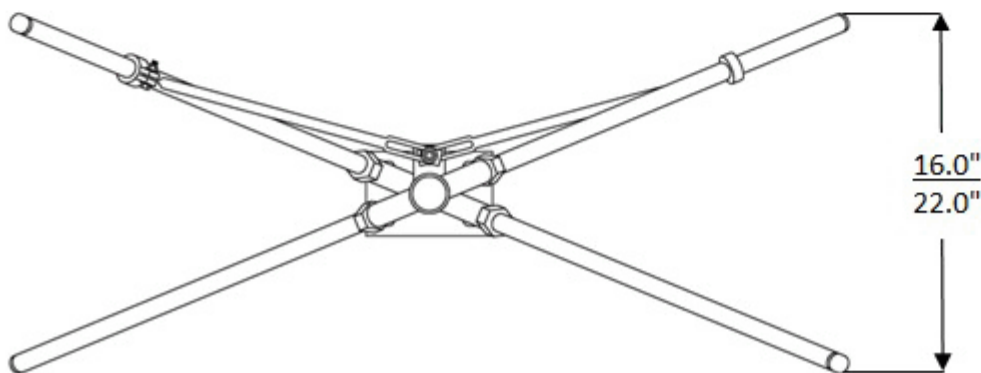
**3/4 Wave Spaced
Electrical and Mechanical Specifications**

| Bays | Power Rating (watts) | Power Gain | dB Gain | Net. Weight (lbs) | Windload (lbs) |
|------|----------------------|------------|---------|-------------------|----------------|
| 1 | 500 | 0.441 | -3.556 | 15 | 35 |
| 2 | 1000 | .935 | -0.292 | 35 | 85 |
| 3 | 1500 | 1.396 | 1.449 | 50 | 120 |
| 4 | 2000 | 1.845 | 2.660 | 65 | 155 |
| 5 | 2000 | 2.301 | 3.619 | 80 | 190 |
| 6 | 2000 | 2.756 | 4.403 | 95 | 225 |
| 8 | 2000 | 3.664 | 5.640 | 110 | 260 |
| 10 | 2000 | 4.590 | 6.618 | 125 | 295 |

Dimensions



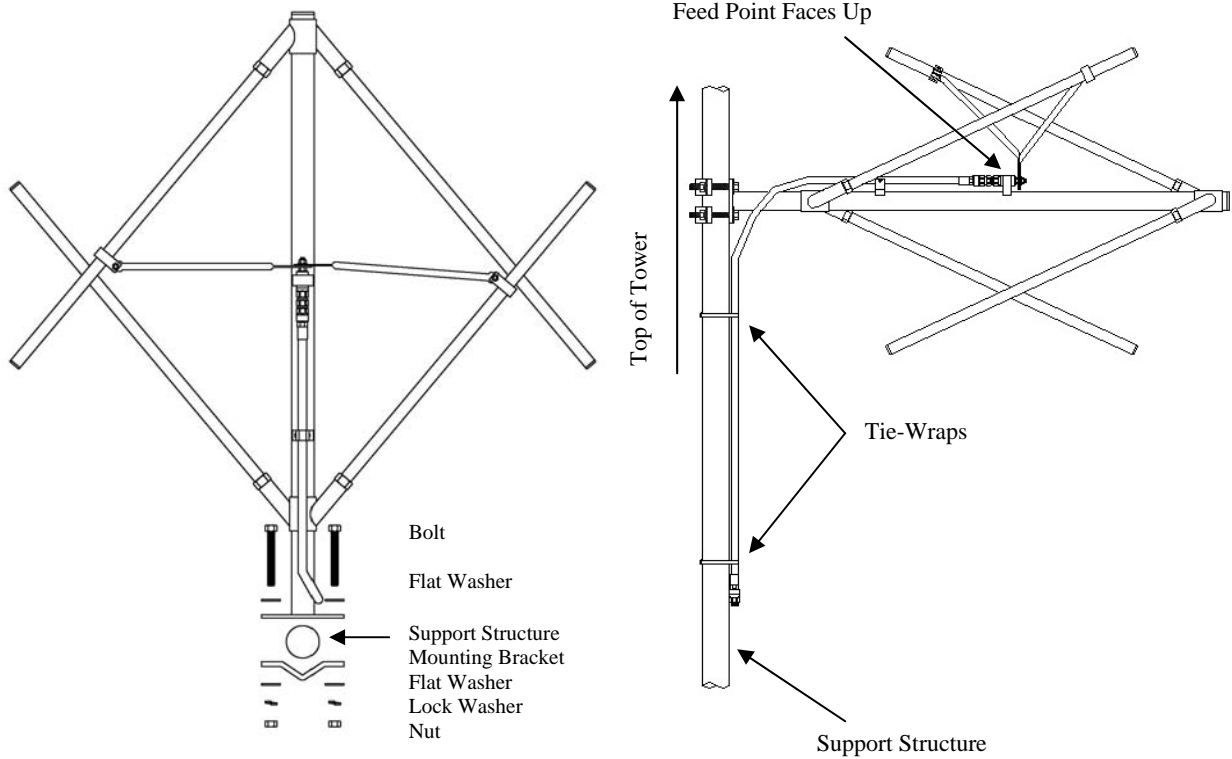
| "OVERALL" | |
|-------------|--------|
| 88.1-91.9 | 47.00" |
| 92.1-94.7 | 45.50" |
| 94.9-97.7 | 44.50" |
| 97.9-100.9 | 43.50" |
| 101.1-104.3 | 42.50" |
| 104.5-107.9 | 41.25" |



Single Bay Installation

Considerations:

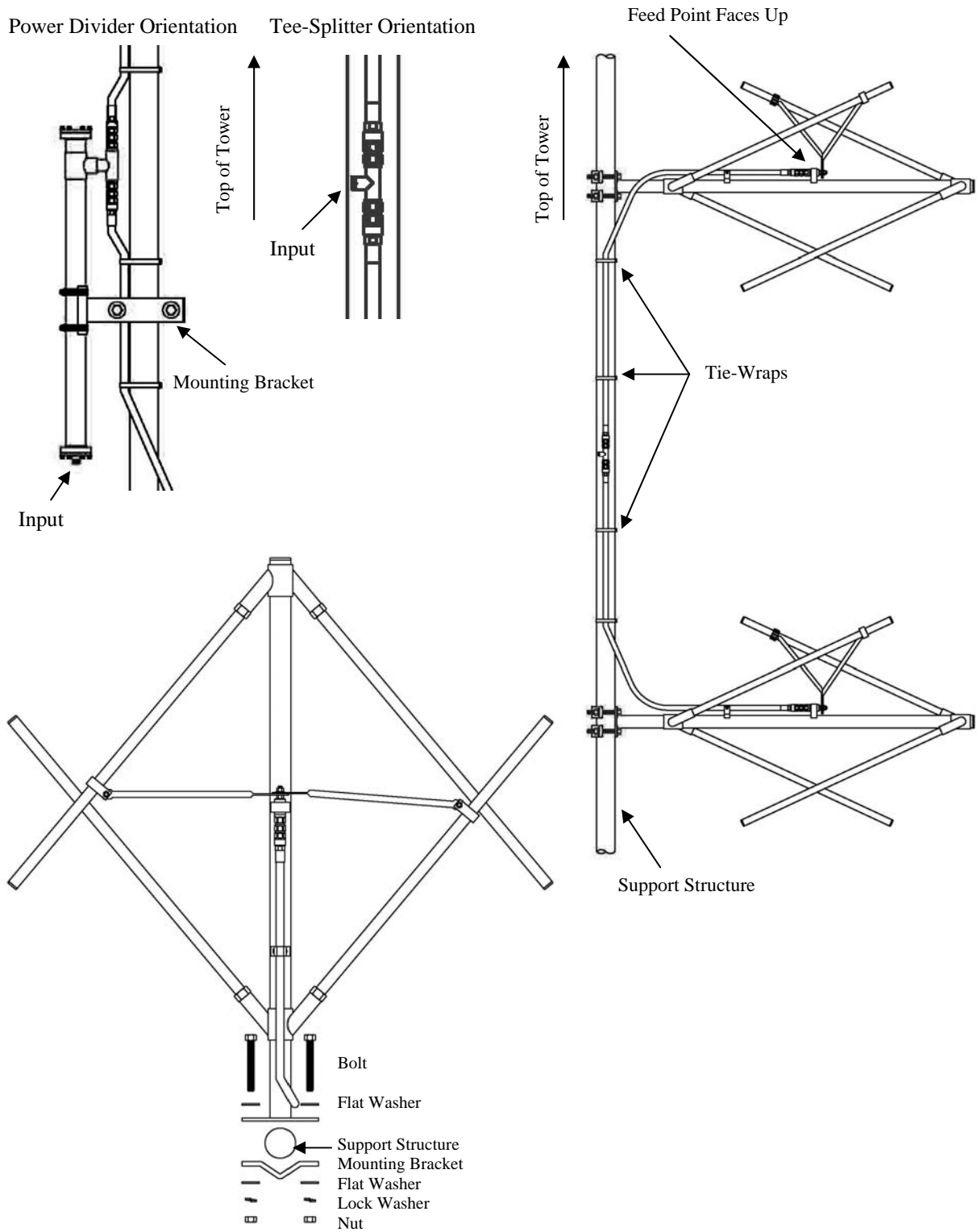
1. Your single bay FMEC antenna includes a jumpers, tie-wraps, and weatherproofing kit.
2. Note the direction and orientation of feed point, feed arms, hardware, and jumper.
3. Standard mounting bracket fits from 1" to 4" tower leg or pole.
4. SWR, LP. reserves the right to change product specifications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



2 Bay Installation

Considerations:

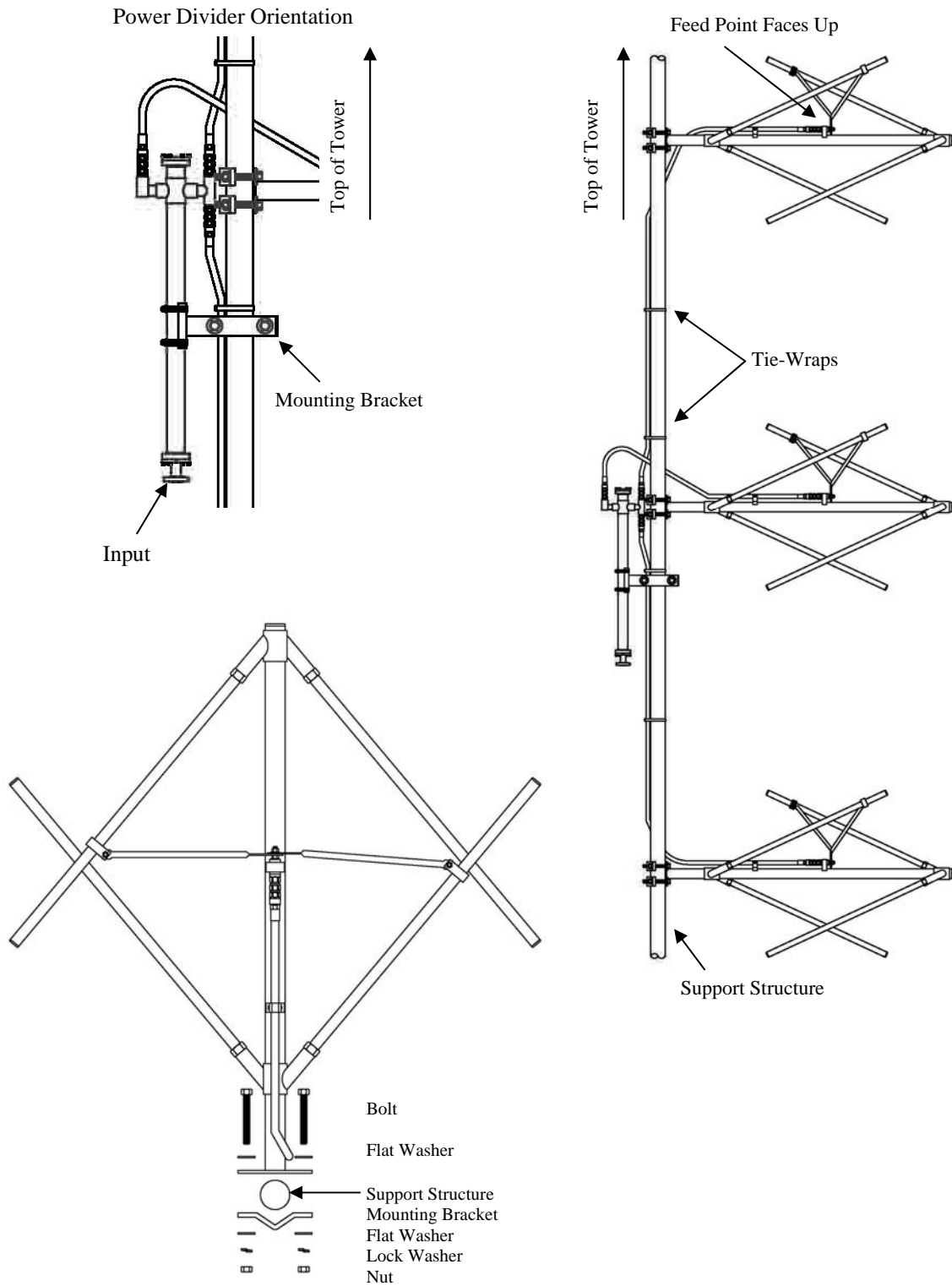
1. Your FMEC two bay antenna includes jumpers, tie-wraps, and weatherproofing kit.
2. Your FMEC two bay antenna may be fed with either a Tee-Splitter or Power Divider.
3. Note the direction and orientation of feed points, feed arms, power divider, hardware, and jumpers.
4. Standard mounting bracket fits 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:

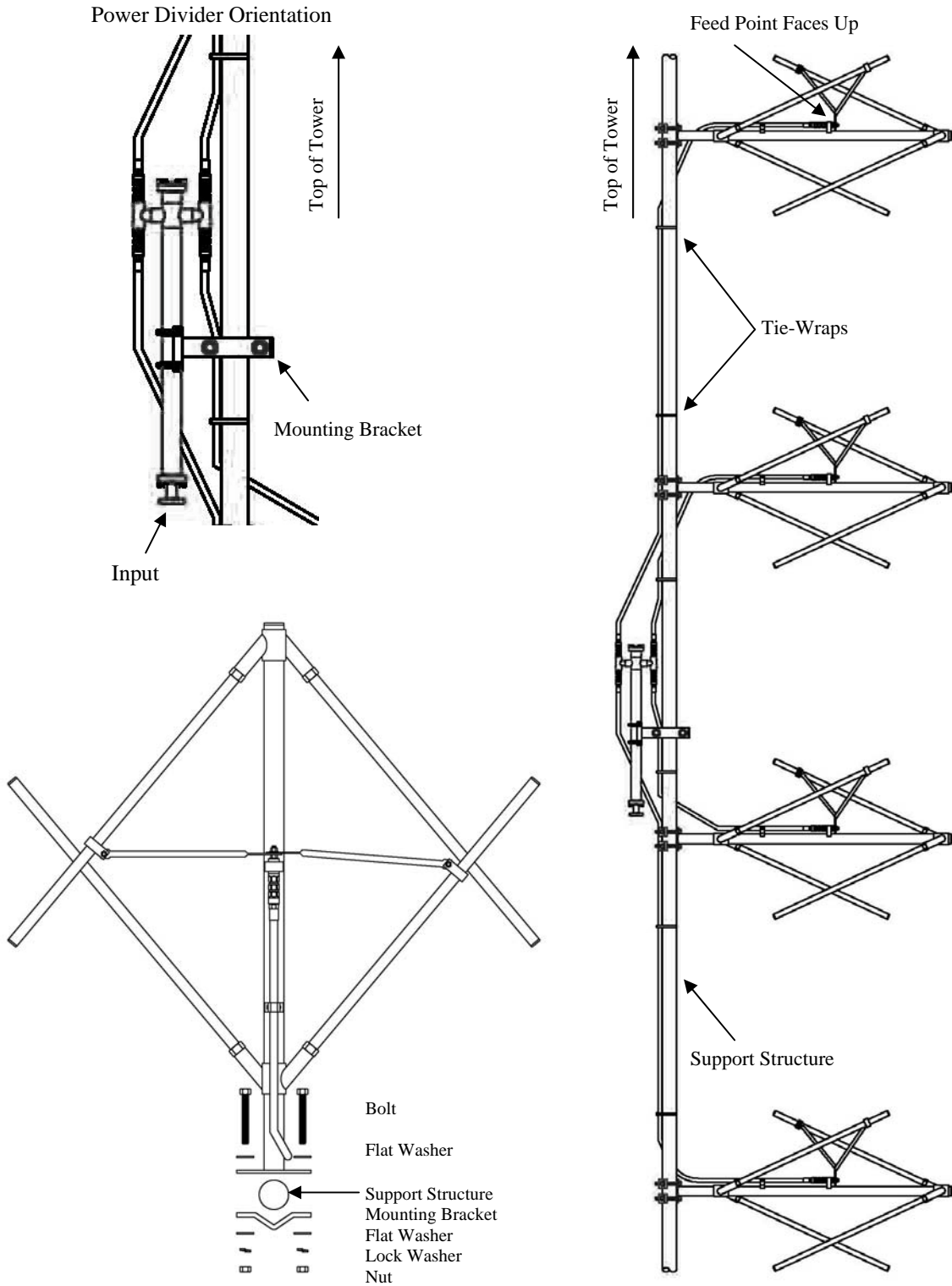
1. Your FMEC three bay antenna includes jumpers, tie-wraps, and weatherproofing kit.
2. Your FMEC three bay antenna will be fed with a three-way power divider.
3. Note the direction and orientation of feed points, feed arms, power divider, hardware, and jumpers.
4. Standard mounting bracket fits from 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.)

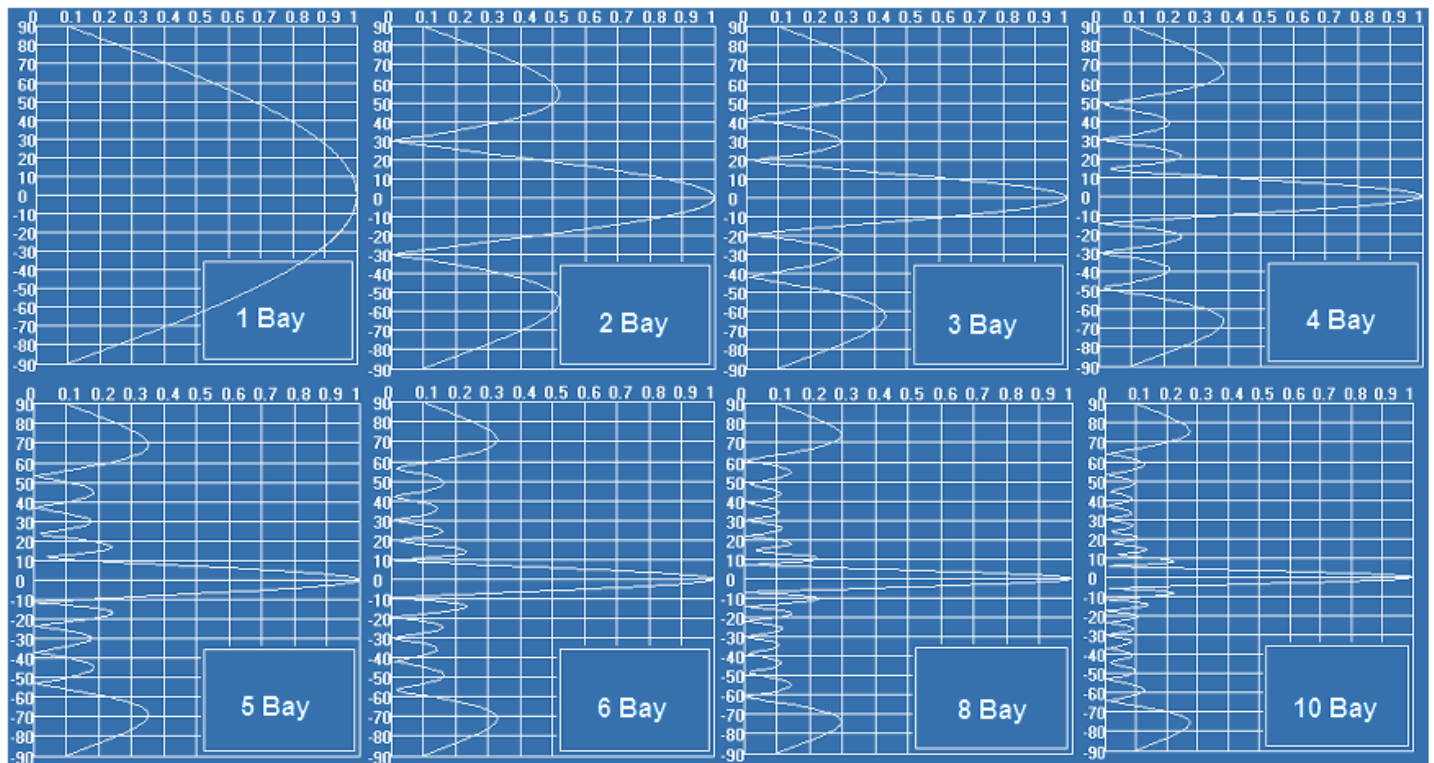
Considerations:

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.



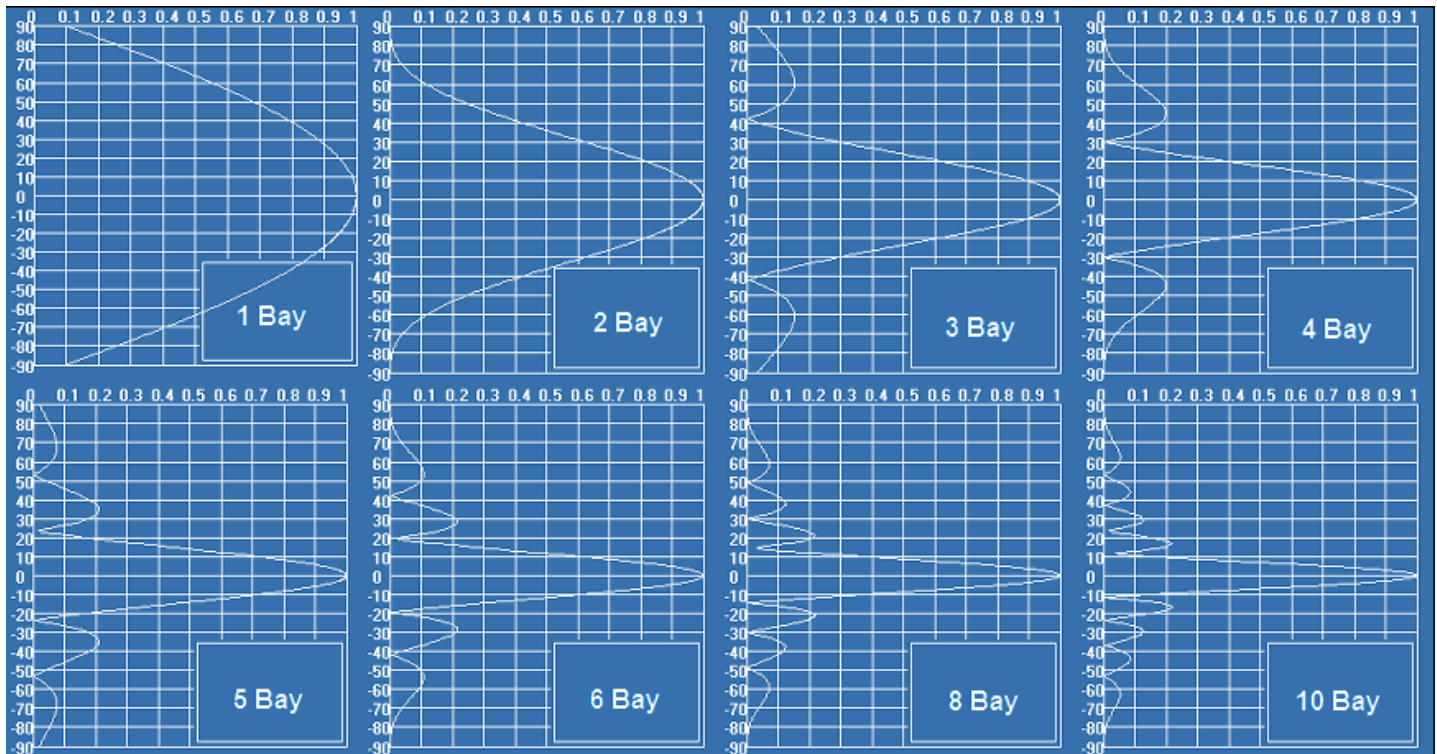
Full-Wave Spaced Specifications

| Bays | Power Rating (watts) | Power Gain | dB Gain | Net. Weight (lbs) | Windload (lbs) |
|------|----------------------|------------|---------|-------------------|----------------|
| 1 | 500 | 0.441 | -3.556 | 15 | 35 |
| 2 | 1000 | 0.959 | -0.182 | 35 | 85 |
| 3 | 1500 | 1.495 | 1.746 | 50 | 120 |
| 4 | 2000 | 2.044 | 3.105 | 65 | 155 |
| 5 | 2000 | 2.590 | 4.133 | 80 | 190 |
| 6 | 2000 | 3.160 | 4.997 | 95 | 225 |
| 8 | 2000 | 4.311 | 6.346 | 110 | 260 |
| 10 | 2000 | 5.456 | 7.369 | 130 | 295 |



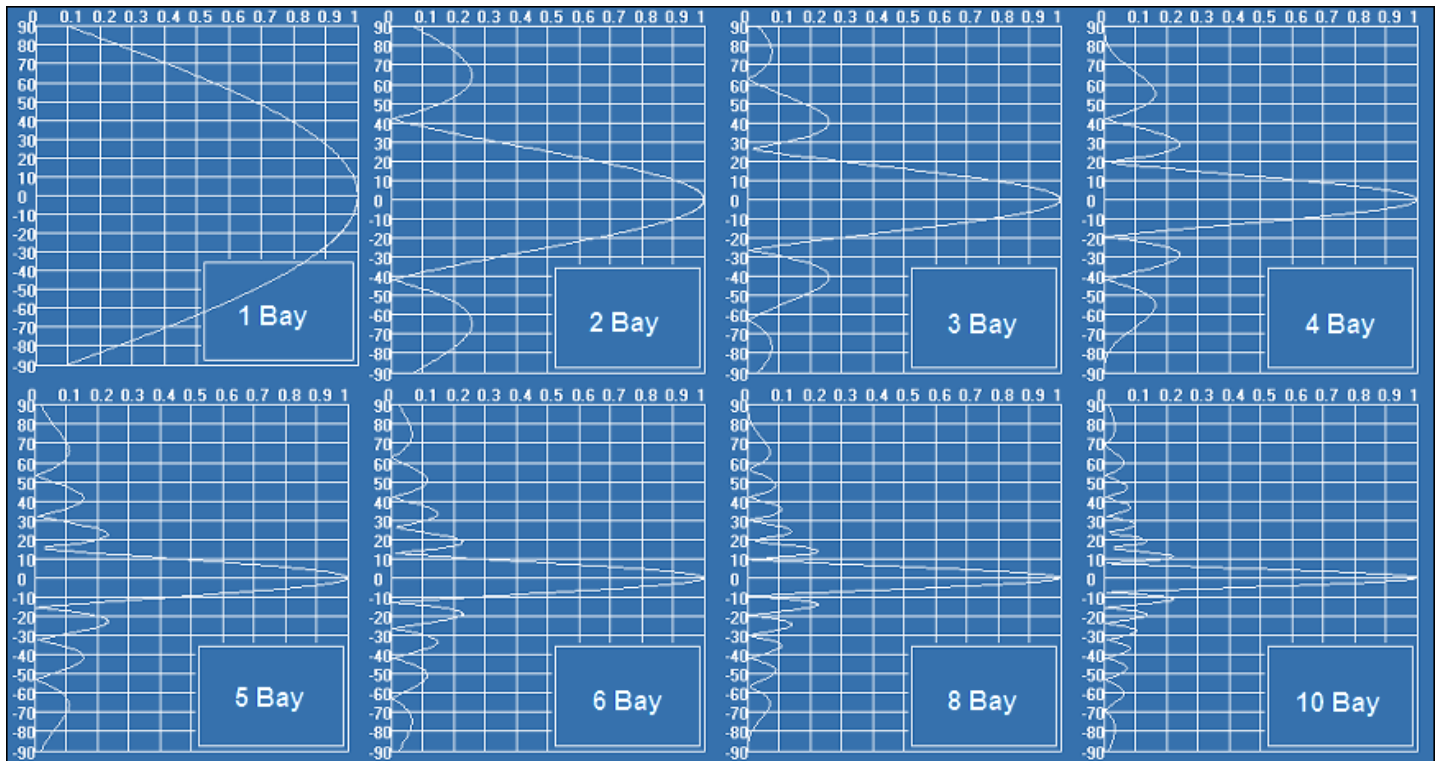
1/2 Wave Spaced Specifications

| Bays | Power Rating (watts) | Power Gain | dB Gain | Net. Weight (lbs) | Windload (lbs) |
|------|----------------------|------------|---------|-------------------|----------------|
| 1 | 500 | 0.441 | -3.556 | 15 | 35 |
| 2 | 1000 | 0.695 | -1.580 | 35 | 85 |
| 3 | 1500 | 1.012 | 0.052 | 50 | 120 |
| 4 | 2000 | 1.313 | 1.183 | 65 | 155 |
| 5 | 2000 | 1.623 | 2.103 | 80 | 190 |
| 6 | 2000 | 1.924 | 2.842 | 95 | 225 |
| 8 | 2000 | 2.528 | 4.028 | 110 | 260 |
| 10 | 2000 | 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 | 500 | 0.441 | -3.556 | 15 | 35 |
| 2 | 1000 | .935 | -0.292 | 35 | 85 |
| 3 | 1500 | 1.396 | 1.449 | 50 | 120 |
| 4 | 2000 | 1.845 | 2.660 | 65 | 155 |
| 5 | 2000 | 2.301 | 3.619 | 80 | 190 |
| 6 | 2000 | 2.756 | 4.403 | 95 | 225 |
| 8 | 2000 | 3.664 | 5.640 | 110 | 260 |
| 10 | 2000 | 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