

SYSTEMS WITH RELIABILITY, LP.

Broadcast Antennas & Transmission Systems



FM1 Specifications

Standard Model



Radome Model



SYSTEMS WITH RELIABILITY, LP.

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FM1 SERIES

LOW POWER FM ANTENNAS

Product Specifications:

Frequency Range	88 – 108 MHz
Polarization	Circular
Power Rating	500 Watts per bay
System Input	Type N Male or 7/8" EIA
VSWR	1.3:1 ± 150 kHz
Dimensions	H 29" / W 16" / D 21"

Features:

•**BUILT WITH LOW POWER BROADCASTERS IN MIND.** Rated at 500 watts per bay with a maximum of 3 kW for six bays. Power divider required for three or more bays.

•**CENTER OF TUNING.** Ranges under 1.1:1 VSWR.

•**RUGGED CONSTRUCTION.** Each bay is constructed of high grade stainless steel which provides excellent corrosion resistance and optimal mechanical properties.

•**PRESSURIZATION IS NOT REQUIRED.**

•**OMNI DIRECTIONAL OR DIRECTIONAL PATTERNS.** Many standard patterns available. SWR, Inc. can also provide patterns for specific coverage areas and FCC filing documentation.

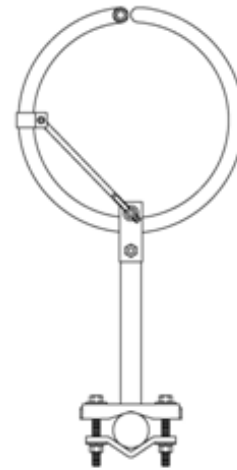
•**WEATHERIZATION (OPTIONAL).** Radomes or electrical deicers available for areas that experience periods of heavy icing and/or snow conditions.

•**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 and windload 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 Models Electrical and Mechanical Specifications

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	500	0.441	-3.556	9	25
2	1000	.959	-0.182	18	50
3	1500	1.495	1.746	27	75
4	2000	2.044	3.105	36	100
5	2000	2.590	4.133	45	125
6	2000	3.160	4.997	54	150
8	2000	4.311	6.346	63	175
10	2000	5.456	7.369	72	200

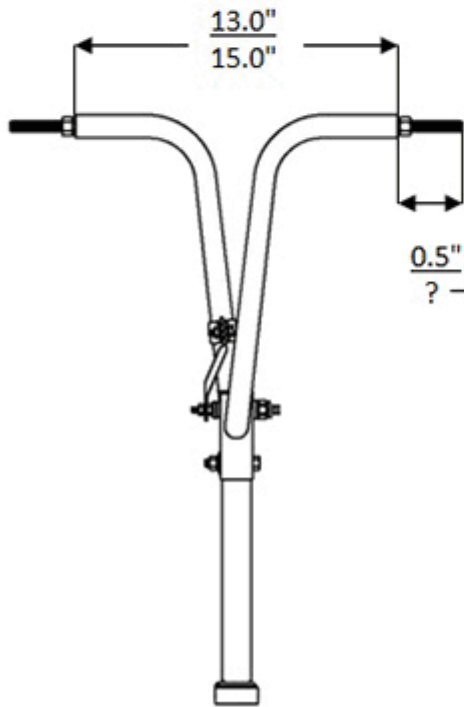
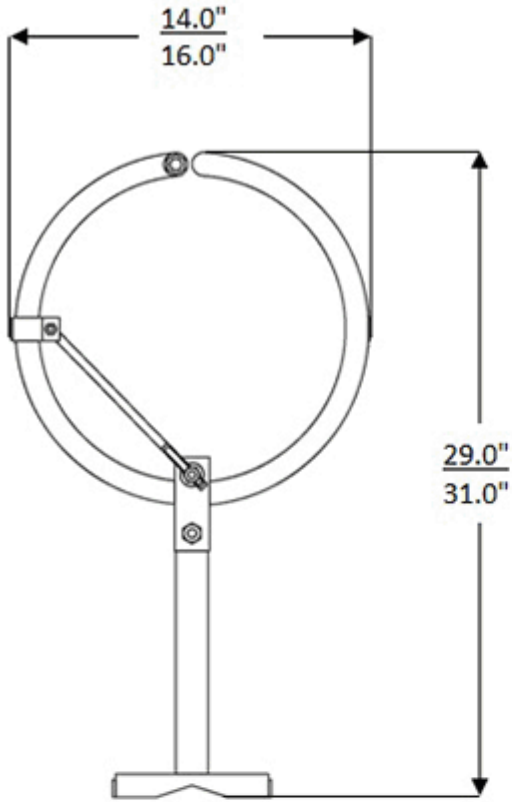
Half Wave Spaced Models Electrical and Mechanical Specifications

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	500	0.441	-3.556	9	25
2	1000	0.695	-1.580	18	50
3	1500	1.012	0.052	27	75
4	2000	1.313	1.183	36	100
5	2000	1.623	2.103	45	125
6	2000	1.924	2.842	54	150
8	2000	2.528	4.028	63	175
10	2000	3.129	4.954	72	200

3/4-Wave Spaced Models Electrical and Mechanical Specifications

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	500	0.441	-3.556	9	25
2	1000	0.935	-0.292	18	50
3	1500	1.396	1.449	27	75
4	2000	1.845	2.660	36	100
5	2000	2.301	3.619	45	125
6	2000	2.756	4.403	54	150
8	2000	3.664	5.64	63	175
10	2000	4.590	6.618	72	200

Dimensions

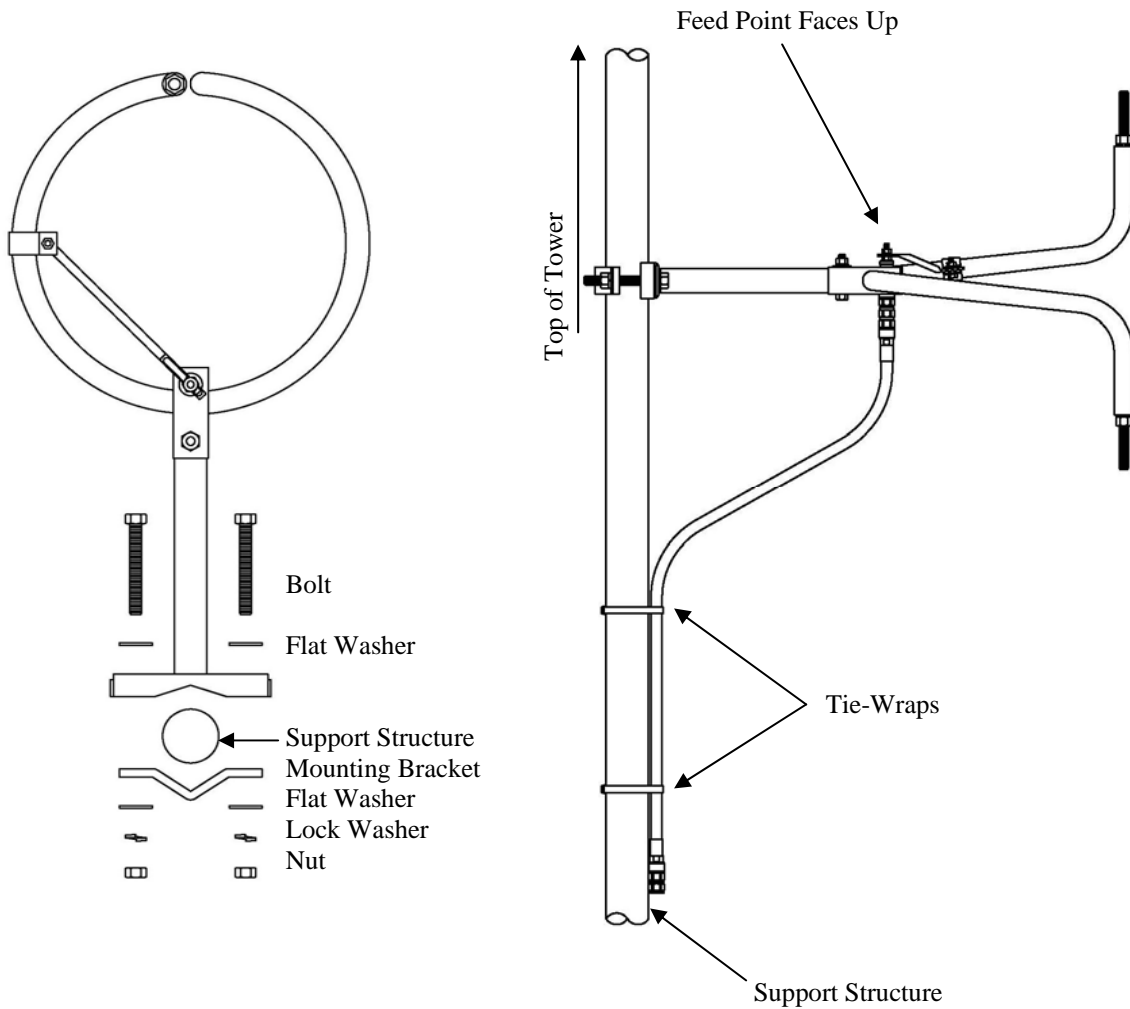


NOTE:
Minimum: 0.5" to accommodate clamping nut and probe.
Maximum: (?) Varies according to frequency. "Should not" exceed 6"

Single Bay Installation

Considerations:

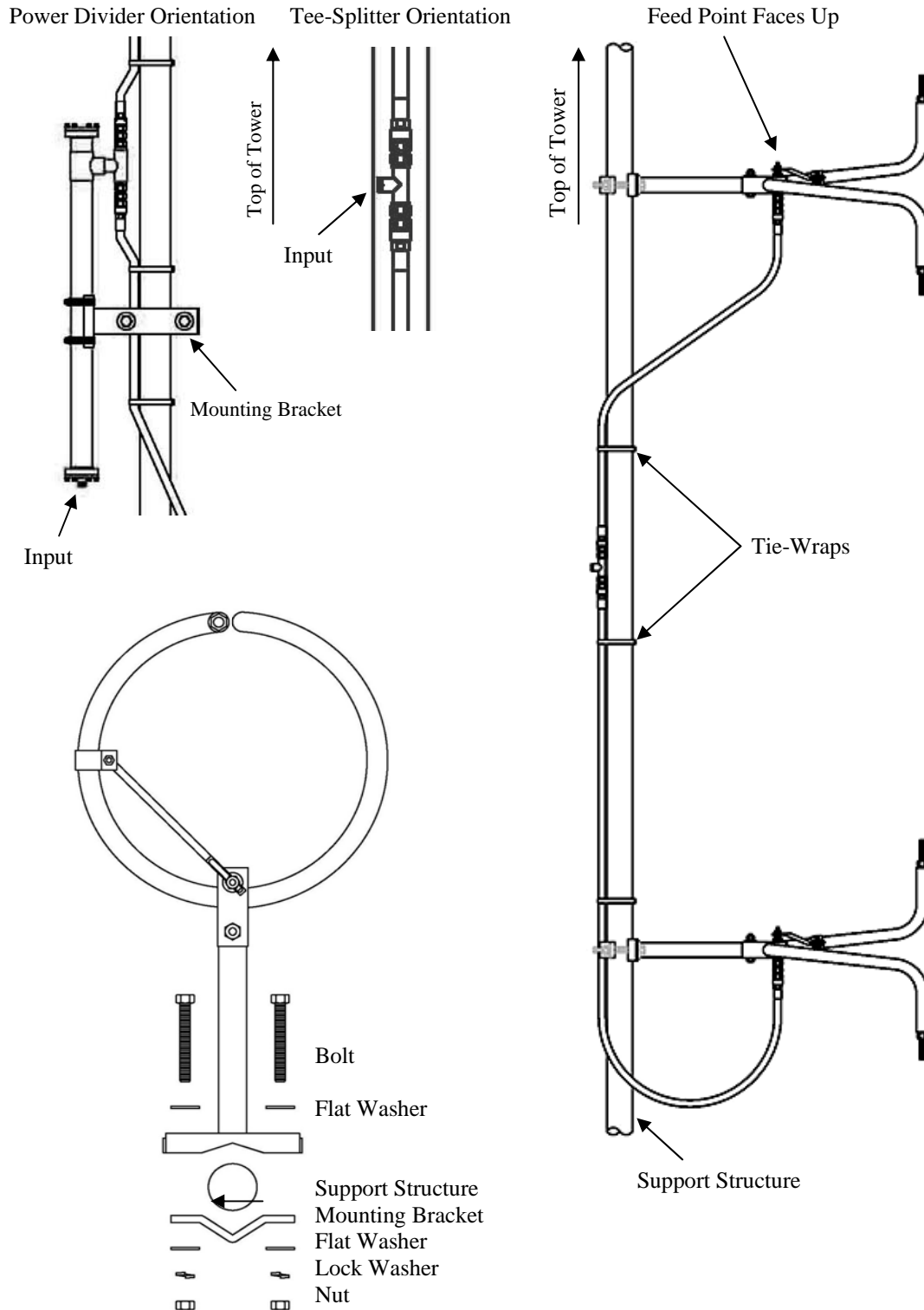
1. Your FM1 antenna may include optional jumper, tie-wraps, hardware, and weatherproofing kit.
2. Your FM1 antenna may or may not be equipped with corona spheres.
3. Note the direction, and orientation of feed points, feed arms, hardware, and optional jumper.
4. Standard mounting bracket fits from 1" to 4" tower leg or pole.
5. SWR, LP. reserves the right to change product specifications at any time.



2 Bay Installation

Considerations:

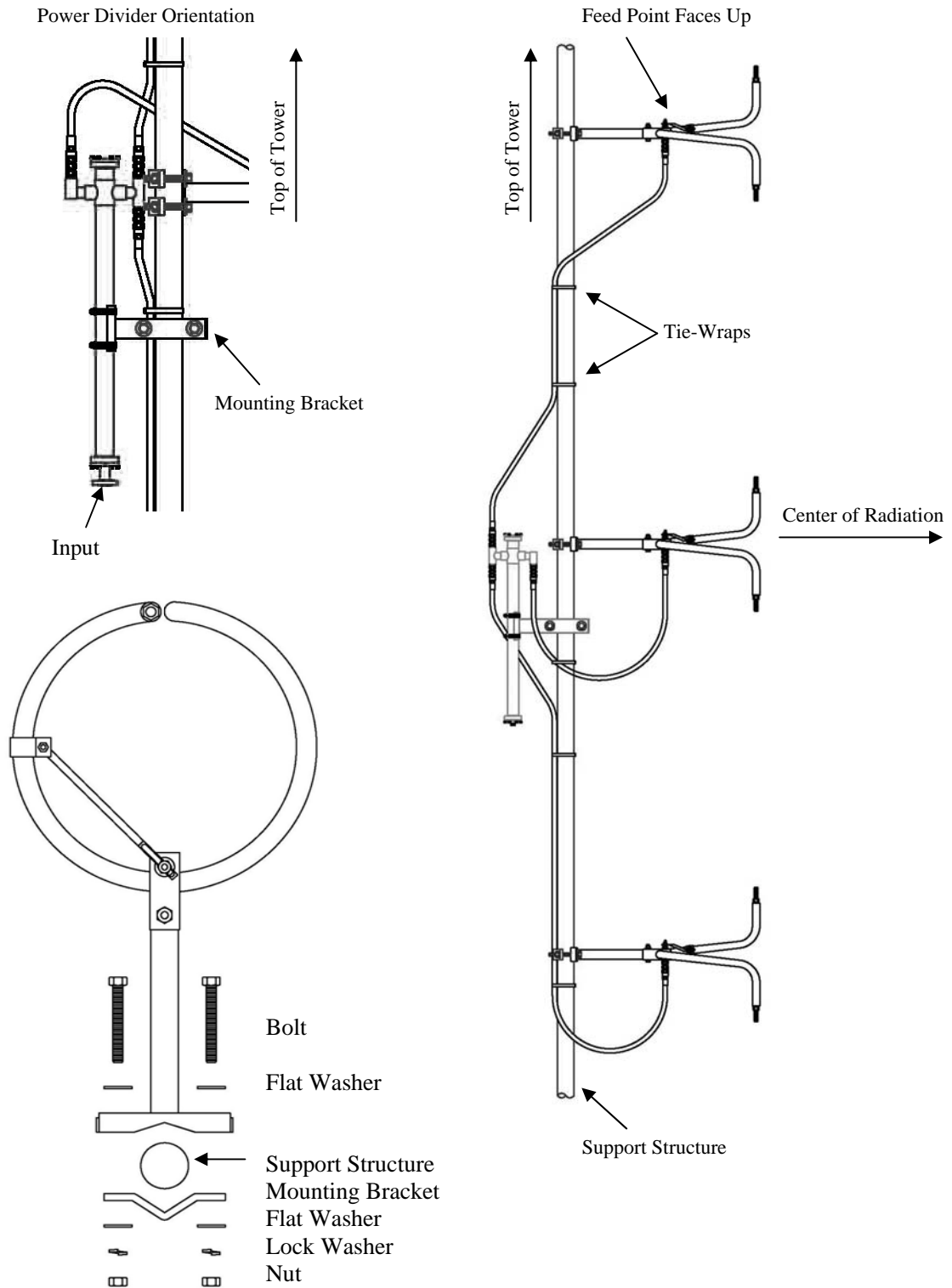
1. Your FM1 two bay antenna includes jumpers, tie-wraps, hardware, and weatherproofing kit.
2. Your FM1 two bay antenna may or may not be equipped with corona spheres.
3. Your FM1 two bay antenna may be fed with either a Tee-Splitter or Power Divider.
4. Note the direction, and orientation of feed points, feed arms, power divider, hardware, and jumpers.
5. Standard mounting bracket fits from 1" to 4" tower leg or pole.
6. SWR, LP. reserves the right to change product specifications at any time.



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

Considerations:

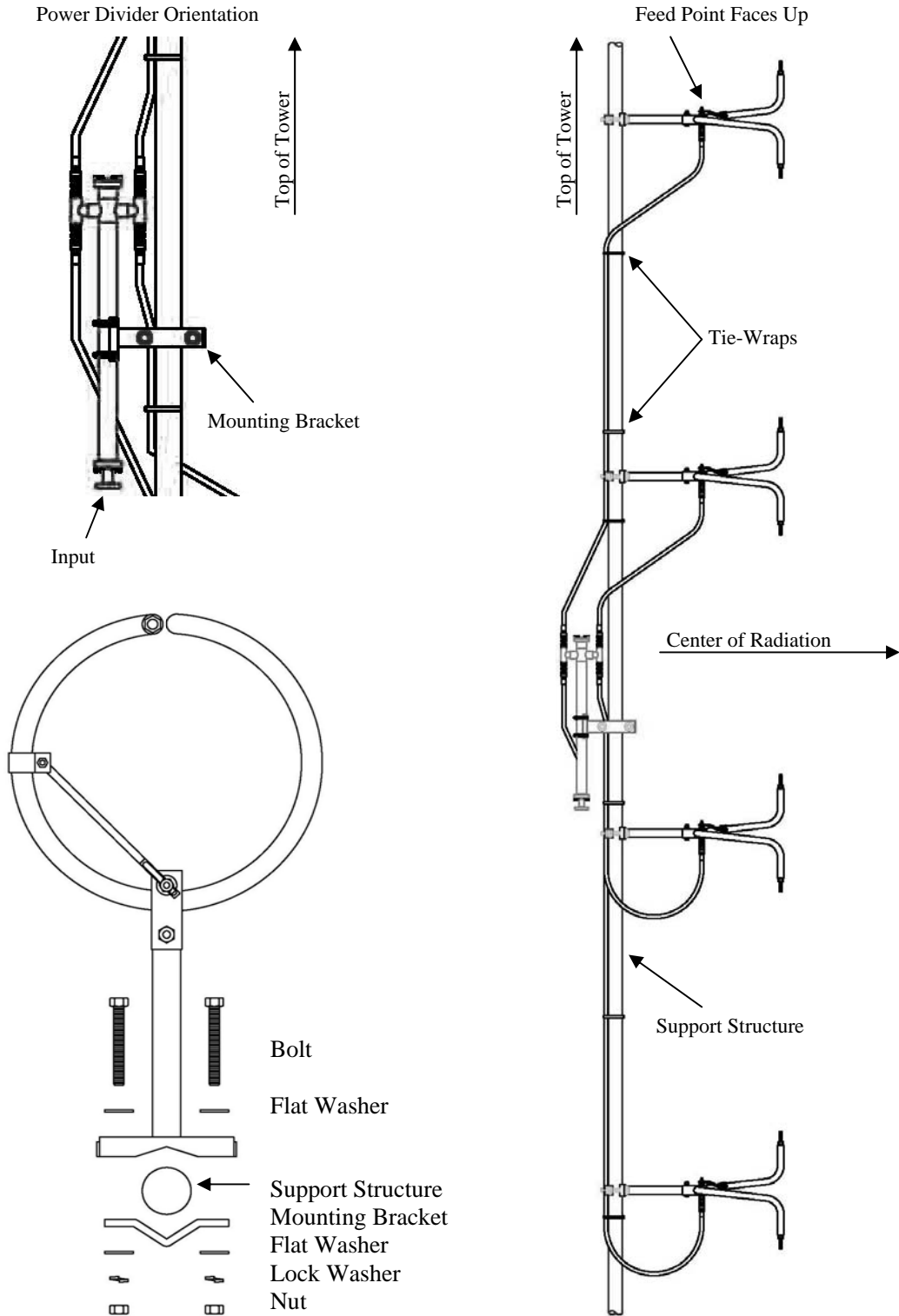
1. Your FM1 three bay antenna includes jumpers, tie-wraps, hardware, and weatherproofing kit.
2. Your FM1 three bay antenna may or may not be equipped with corona spheres.
3. Your FM1 three bay antenna will be fed with a three-way Power Divider.
4. Note the direction, and orientation of feed points, feed arms, power divider, hardware, and jumpers.
5. Standard mounting bracket fits from 1" to 4" tower leg or pole.
6. SWR, LP. reserves the right to change product specifications at any time.



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

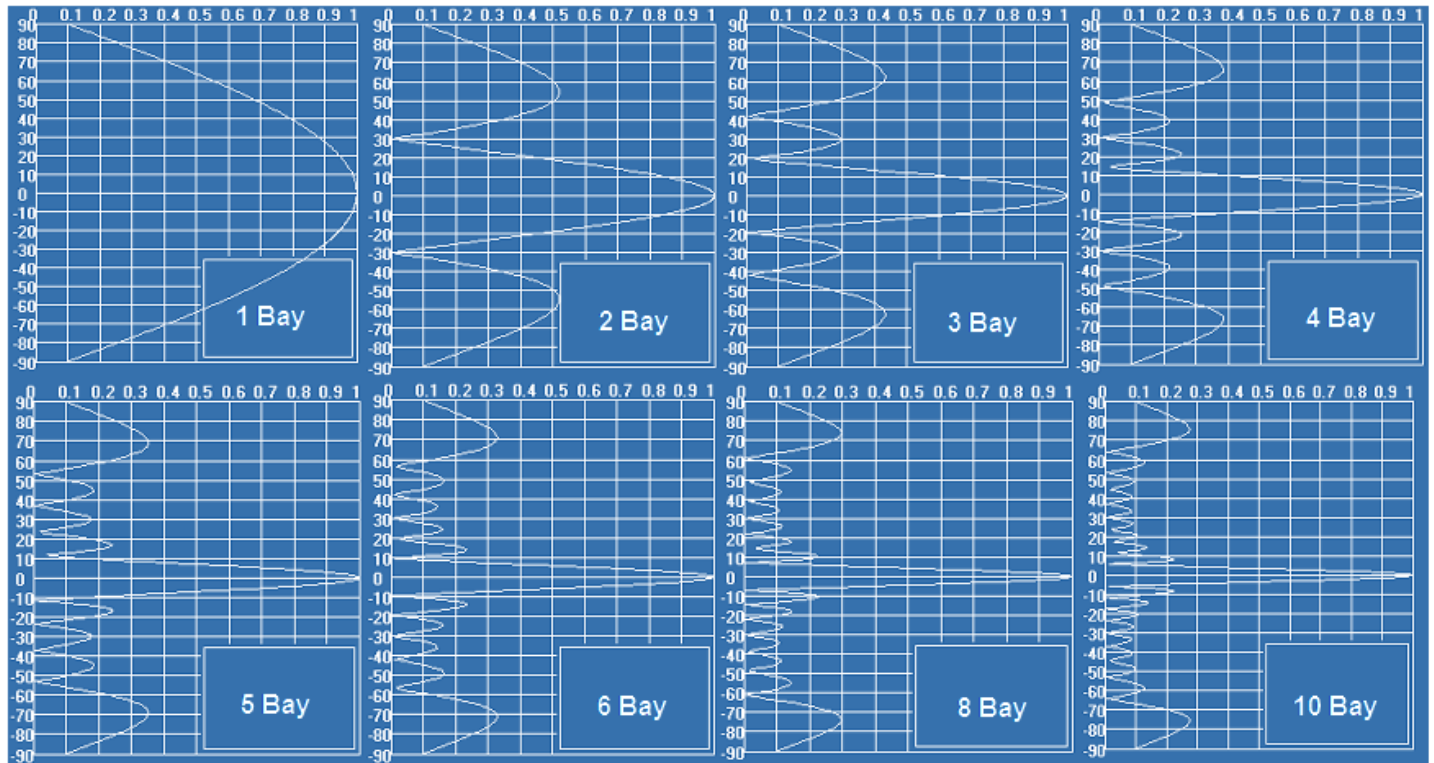
Considerations:

1. Your FM1 four bay antenna includes jumpers, tie-wraps, hardware, and weatherproofing kit.
2. Your FM1 four bay antenna may or may not be equipped with corona spheres.
3. Your FM1 four bay antenna will be fed with a four-way Power Divider.
4. Note the direction, and orientation of feed points, feed arms, power divider, hardware, and jumpers.
5. Standard mounting bracket fits from 1" to 4" tower leg or pole.
6. SWR, LP. reserves the right to change product specifications at any time.



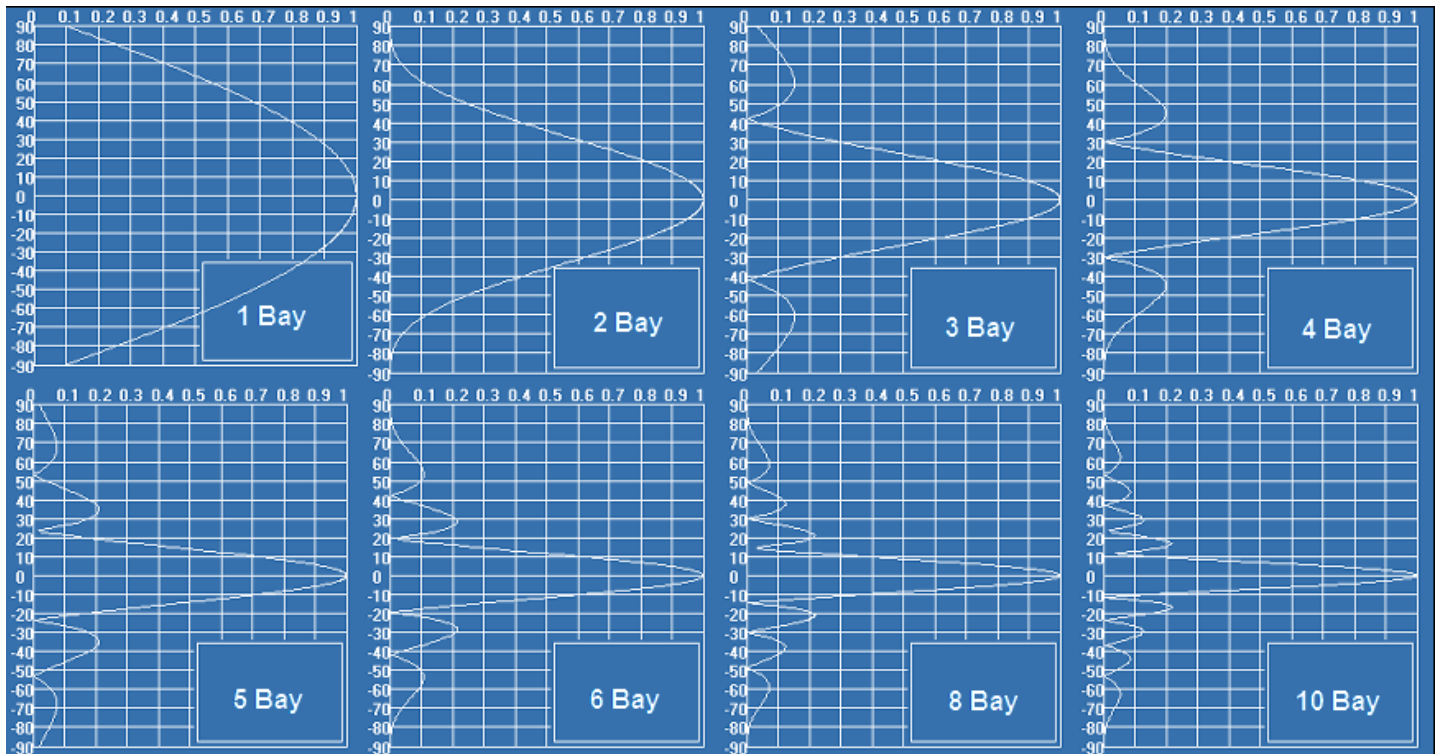
Full-Wave Spaced Specifications

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	500	0.441	-3.556	9	25
2	1000	.959	-0.182	18	50
3	1500	1.495	1.746	27	75
4	2000	2.044	3.105	36	100
5	2000	2.590	4.133	45	125
6	2000	3.160	4.997	54	150
8	2000	4.311	6.346	63	175
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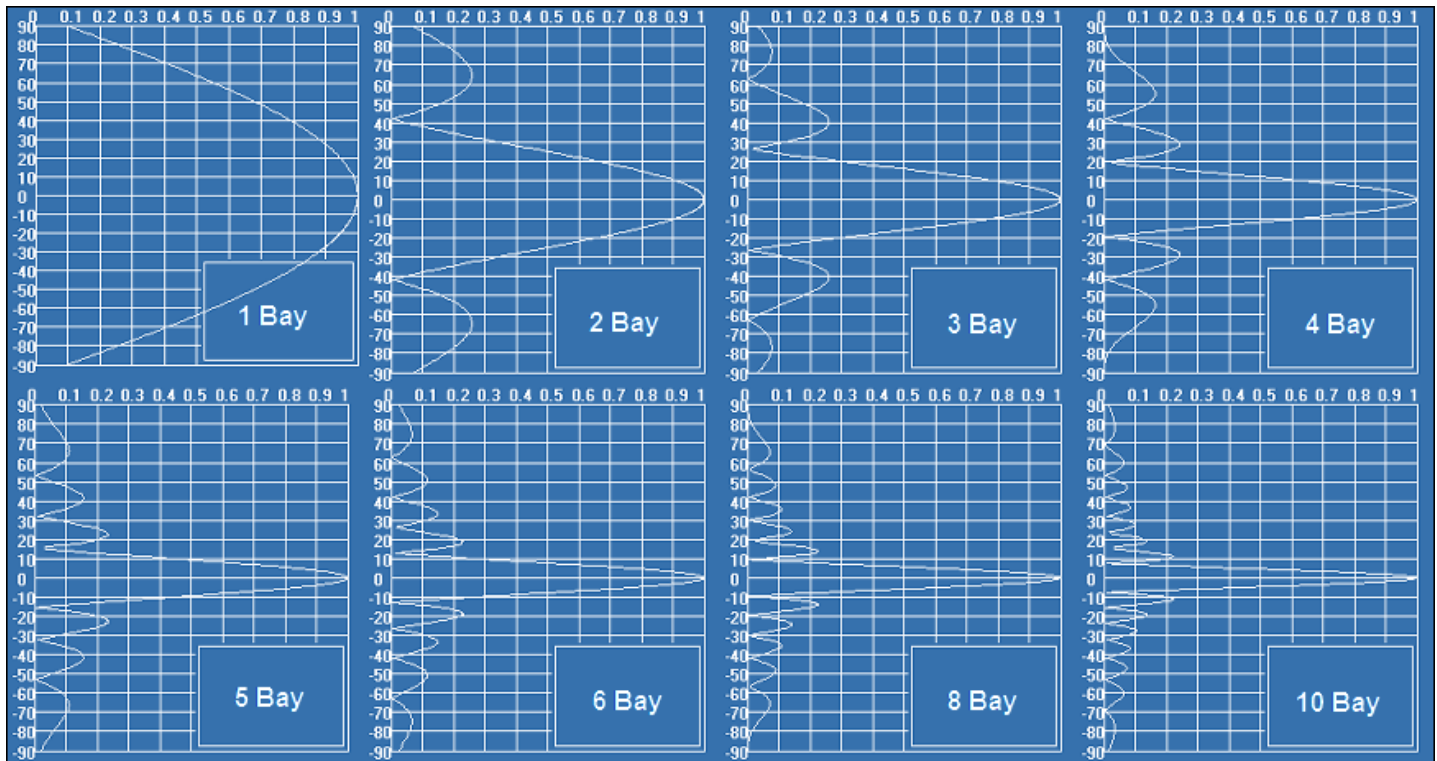
1/2 Wave Spaced Specifications

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	500	0.441	-3.556	9	25
2	1000	0.695	-1.580	18	50
3	1500	1.012	0.052	27	75
4	2000	1.313	1.183	36	100
5	2000	1.623	2.103	45	125
6	2000	1.924	2.842	54	150
8	2000	2.528	4.028	63	175
10	2000	3.129	4.954	72	200



3/4 Wave Spaced Specifications

Bays	Power Rating (watts)	Power Gain	dB Gain	Net. Weight (lbs)	Windload (lbs)
1	500	0.441	-3.556	9	25
2	1000	0.935	-0.292	18	50
3	1500	1.396	1.449	27	75
4	2000	1.845	2.660	36	100
5	2000	2.301	3.619	45	125
6	2000	2.756	4.403	54	150
8	2000	3.664	5.64	63	175
10	2000	4.590	6.618	72	200



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