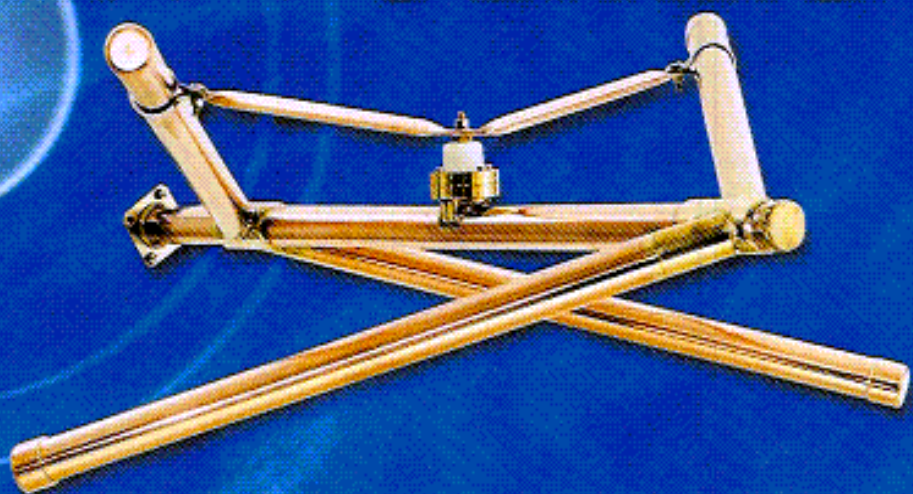


FM BROADCAST ANTENNAS

FM SERIES



- Circularly Polarized
- Low VSWR <1.1:1
- Arrays to 12-Bays
- Rugged Marine Quality Brass and Copper Construction
- Standard Mounting Brackets Included
- Available with Vertically or Horizontally Polarized Elements
- 1 Year Limited Warranty
- Omni Directional
- Input Powers to 12 kW
- Deicers Available

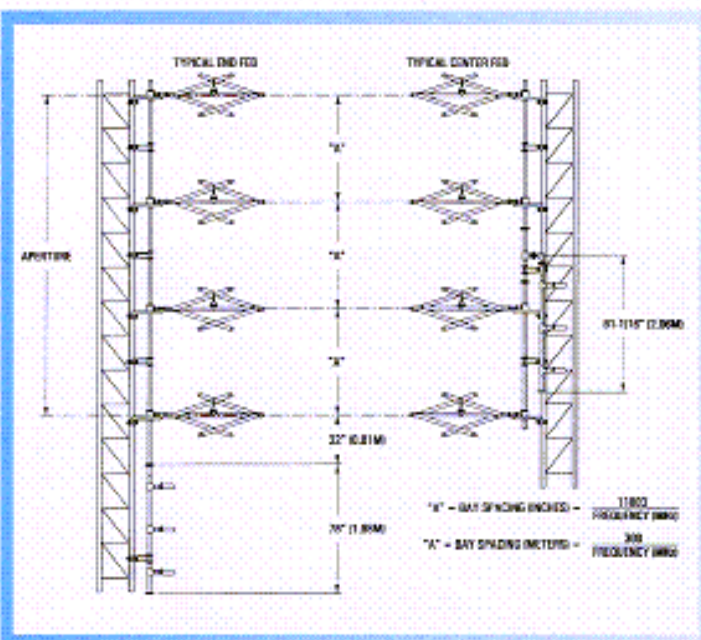
The FM Series antenna consists of two shunt fed dipole elements in a slanted V configuration forming a circularly polarized radiator. The elements are stacked vertically in arrays of up to 12-bays for increased gain. For arrays requiring beam tilt and/or null fill, a center feed system is required. This antenna is available with "breakdown" elements to allow the dipole elements to be disassembled from the support boom. This reduces crating and shipping costs.

The FM Series antenna uses 1-5/8" inter-bay transmission lines to connect each element. The entire antenna system is pressurized through the rigid inter-bay line to the feed point of each radiator. For areas where icing conditions are frequent or severe, electrical deicers are available. Standard brackets for mounting to a round member of up to 4.0" are included with every antenna. Custom brackets for non uniform towers are available at an additional cost.

PSI ψ

PROPAGATION SYSTEMS, INC.

FM SERIES



General Specifications

Frequency Range	88-108 MHz
Polarization	Circular
Circularity	+/- 2 dB
Input	1-5/8" EIA, 50 ohm
VSWR	1.10:1 +/- 200 kHz
Lightning Protection	DC Grounded

Mechanical Specifications

1-5/8" Inter-bay lines

Bays	Aperture		Weight		Windload		Deicer Windload	
	ft	m	lbs	kg	lbs	kg	lbs	kg
1	3	0.9	38	17	80	36	95	43
2	10	3.0	105	48	210	95	250	113
3	20	6.1	150	68	320	145	385	175
4	30	9.1	200	91	430	195	520	236
5	40	12.2	240	109	540	245	650	295
6	50	15.2	290	132	640	290	772	350
8	70	21.3	400	181	850	386	1025	465
10	90	27.4	490	222	1070	485	1290	585
12	110	33.5	500	227	1280	581	1545	701

• Aperture, weight and windload are calculated at 98 MHz.

• Windload at 50/33 lb/sq ft (244/163 kg/sq.m).

• As the result of an ongoing program of product improvement, PSI reserves the right to modify the indicated technical characteristics at any time without notice.

Electrical Specifications

1-5/8" Inter-bay lines

Bays	Gain		Rating		Input	
	Power	dBd	kW	Style		
1	0.46	-3.37	3	End fed		
2	1.0	0.0	6	End fed		
3	1.5	1.76	9	End fed		
4	2.1	3.22	12	End fed		
5	2.7	4.31	12	End fed		
6	3.2	5.05	12	End fed		
8	4.3	6.34	12	Center fed		
10	5.6	7.48	12	Center fed		
12	6.7	8.26	12	Center fed		

• Power gain is for each polarization.

• Power rating based on 40°C ambient.

• Antennas ordered with beam tilt and/or null fill are supplied with center feed and require an even number of bays.

Options

The FM Series antennas may be ordered with pattern optimization or directionalization. These versions are custom built and require complete drawings of the mounting structure for accurate results. Other options include half-wave spaced elements for reduced downward radiation, vertical or horizontal only polarized elements and radome enclosed elements.



PSI builds high quality broadcast antennas at competitive prices. With over 100 years of collective experience in broadcast manufacturing, PSI offers the expertise of larger manufacturers — and the personal attention you'll only find at a smaller company.

We bring together people with expertise in mechanical, electrical, electronic and civil engineering to do one thing: build the very best antenna products.

We're fully equipped for design, development, manufacture and testing of all our broadcast antennas. We use only the highest quality welding equipment and

employ only the latest in testing methods.

So whether you need a simple FM antenna or a complex DTV array, PSI should be your first choice. Our uncompromising commitment to quality and service will ensure that your PSI antenna will work today, tomorrow — and for years to come.

- FM, VHF & UHF Antennas
- Diplexers/Combiners
- Filters
- Transmission Line
- Transmission Line Accessories

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