



FM Circular / Elliptical Polarized Antennas

Model 160FM

The 160FM series of antenna is designed for use in medium to high power FM broadcast transmitter systems.

Wide bandwidth and high power handling ability make it suitable for use in multicoupled transmitter systems.

Power dividers are available for 2, 3, 4 bay or greater arrays with input power ratings of 500 – 2000 watts.

All elements are DC coupled to the mast for maximum lightning protection.

De-Icers and feedpoint radomes are available for snow and ice conditions.

Construction

The 160 FM series of antenna are manufactured using Stainless steel tubing with all elements removable to minimize shipping dimensions.

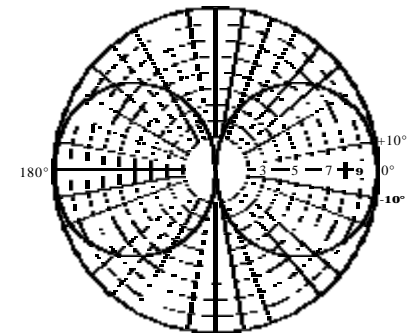
Stainless steel hardware is used throughout with a galvanized mounting bracket supplied for attachment to a Ø50mm vertical or horizontal member.



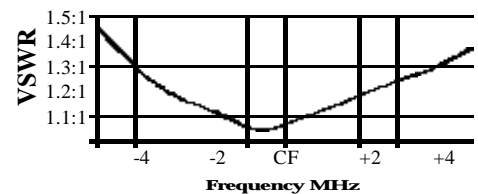
Specifications

Model	160FM	160FM-2	160FM-4
Frequency range	87.5 – 108 MHz	87.5 – 108 MHz	87.5 – 108 MHz
Impedance	50 Ohm	50 Ohm	50 Ohm
Bandwidth	7 MHz	5 MHz	5 MHz
Number of Elements	1	2	4
VSWR	< 1.3 : 1	< 1.3 : 1	< 1.3 : 1
Gain Dipole	-3.0 dBd	Unity	3.0 dBd
Gain Circular	Unity	3.0 dBc	6.0 dBc
Beamwidth vertical	98 Deg	30 Deg	15 Deg
Beamwidth Horizontal	-----	Basically Omnidirectional	-----
Power Input	500 Watts	500 Watts	500 Watts
Lightning protection	DC Ground	DC Ground	DC Ground
Termination	N female	N female	N female
Array length	N/A	4.5M	10.5M
Boom length	1.5 M	1.5 M	1.5 M
Boom size	50mm	50mm	50mm
Mounting	End	End	End
Weight	10 Kg	20 Kg	40 Kg
Projected area	0.13 M2	0.26 M2	0.39 M2
Lateral thrust @ 175 km/h	0.22 kN	0.44 kN	0.66 kN

In accordance with AS 1170 : Part 2 "SAA Loading Code – Wind Forces"



E-Plane Radiation Pattern



Typical VSWR Plot

