



## CROSSBOW PANEL CIRCULARLY POLARIZED VHF FM ANTENNA 88-108 MHz

The JAMPRO JFCB antenna is designed to produce an omni-directional Horizontal Radiation Pattern (HRP) when four panels are mounted around a square structure with a face width of 2m, refer to the pattern below. The antenna is broadband and suited to the transmission of several high power FM channels.

The JFCB has a proven record of performance covering more than ten years as a leading high power, multi-channel FM circularly polarized panel antenna. Both the screen and the dipole assembly are very heavy duty galvanized steel construction assuring long trouble-free service under the toughest environmental conditions.

The crossbow panel with its massive crossed dipole radiating elements, was developed from the start with the demanding requirements of the high power-multichannel FM market clearly in mind. The panel is ideal for multi-channel operation over the complete FM band from 88 to 108 MHz, A system VSWR of 1.1:1 is achieved for each operating channel.

With the aim of providing excellent omni-directional radiation patterns when using four panels per tier around square or triangular towers. A combination of unequal power division and appropriate phasing between faces also provides the facility for a wide range of customized directional patterns.

A feature of the JFCB screen design is additional strength to allow installation and maintenance crews to climb on them. In order to minimize aerodynamic areas the panel has been designed utilizing round cross section members for all parts of the galvanized screen and dipole assembly. Weather protection of the dipole feed points is provided by a Balun covered radome, so that no electrical de-icing of the elements is required. This greatly increases reliability while reducing operating costs.



Typical Specifications	
<b>Frequency</b>	88-108 MHz
<b>Polarization</b>	Circular
<b>VSWR</b>	1.1:1
<b>Power Rating</b> —according to input connector	
	1 5/8" 10 kW
	7/8" 5 kW
	7-16 DIN 3.3 kW
<b>Input Impedance</b>	50 ohms
<b>Gain</b> (relative to half wave dipole)	4.9 dB per plane
<b>Lightning Protection</b>	DC Grounded
<b>Construction</b>	Hot Dipped Galvanized Steel
<b>Ice Protection</b>	GRP Pod over dipole feed



# Bays	Panels per Bay	Gain (times)	Gain (dB)	Height (ft/m)	Projected Area (sq. ft)
1	2	Contact Factory	Contact Factory	Contact Factory	Contact Factory
	3				
	4				
2	2				
	3				
	4				
4	2				
	3				
	4				
6	2				
	3				
	4				
8	2				
	3				
	4				
10	2				
	3				
	4				
12	2				
	3				
	4				

\*Values provided average/RMS gains; All other stated gains are Peak gains. Gains do not include losses for feed system beam tilt or null fill.

**NOTES:**

- 1. Weights and wind loads contact factory
- 2. All inputs EIA flange, female, 50 ohm.
- 3. Polarization is circular.
- 4. Input power capability available in many different ratings.
- 5. Optimized bandwidth over nominal 50 ohm VSWR of 1.1:1 available. Contact factory for details.
- 6. Power gain is based on half wave dipole in free space.

7. Radomes optional. Contact factory for details.

8. All specifications are subject to change.

**OPTIONS:**

Options available include FCC-Directionalization, Pattern Measurement Service, Beam tilt and Null fill, Special mounting brackets.

**Non-ionizing Radiation**

Since many factors contribute to a station's compliance with the FCC exposure guidelines for radio frequency radiation, JAMPRO ANTENNAS, INC. cannot accept any responsibility in this matter. The station must examine and determine its status based on each individual situation.

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