



**Jagy1 Series**  
**FOLDED DIPOLE** VHF UHF  
**YAGI 6-Element**  
**143-148 MHz**



**Electromagnetics**  
*"Quality is everything."*

**JAGY-146-6-EM**



**FedEx**  
**Shippable**

- Ham Radio
- Telemetry
- Land mobile networks
- Public security and safety
- Transportation networks



JAGY-146-6-EM Product Specification Sheet.

Electrical Specifications		Mechanical Specifications		Environmental	
Model	JAGY-146-6-EM	Model	JAGY-146-6-EM	Model	JAGY-146-6-EM
Frequency Range (MHz)	143 – 148	Length	inches (mm) 114 (2,896)	Survival Wind Velocity With no Ice	mph (km/h) 120 (192.9)
Bandwidth @ 1.7:1 VSWR or Better (MHz)	5.0	Width	inches (mm) 6.5 (165.1)	Survival Wind Velocity With Ice	mph (km/h) 80 (128.6)
Bandwidth @ 2.0:1 VSWR or Better (MHz)	5.84	Height	inches (mm) 42 (1,067)	Maximum Allowable Radial Ice Buildup	inches (mm) 0.5 (12.7)
Polarization	Vertical or Horizontal	Weight	lb (kg) 15 (6.816)	Equivalent Flat Plate Area	ft <sup>2</sup> (m <sup>2</sup> ) 1.95 (0.183)
Radiation Pattern	Directional	Yagi Support Boom Outside Diameter Inches (mm)	1.5 (38.1) – 1.9 (48.3)	Lateral thrust (85mph) 0 Radial Ice Buildup	lbs (N) 75 (333.6)
Nominal Gain (dBd)	9 – 9.5	Yagi Support Boom Allowable Clamping Space Inches (mm)	15 (381)* <small>*See JAGY1 Series application notes for additional details</small>	Torsional moment (85mph) 0 Radial Ice Buildup	ft-lbs (Nm) 355 (479.3)
Nominal Horizontal 3dB Beamwidth (Deg)	51 – 61	Mounting Information	No clamp supplied*	Bending moment (85mph) 0 Radial Ice Buildup	ft-lbs (Nm) 335 (452.3)
Nominal Vertical 3dB Beamwidth (Deg)	44 – 48	<small>*See JAG clamps page for suitable clamps</small>			
Front to Back Ratio (dB)	16 – 18	Pigtail (ft) & RF Connector	2 – 2.5 & 'N' male		
Maximum Average Power (Watts)	200				
Lightning Protection	DC Ground				

Specifications are subject to change without notice. As a result, all information contained in the present datasheet is subject to confirmation at time of ordering.

Dated: March-05-2011

Issue: 1

Made in Canada

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**Features**

- 5-year factory warranty (See page 3)
- Broadband (up to 5.84 MHz)
- Suitable for multi-frequency systems
- Soldered internal joints
- Segmented for easy transport and installation
- DC Grounded
- Stainless steel hardware
- Easy storage (when disassembled)
- Operation in harsh environments
- Optional mounting accessories available\*
- Natural rubber plugs
- Side or tower top mountable
- Optional coatings such as black powder coat or anodized
- Horizontal or vertical polarization (horizontal polarization requires HPM kit from JAG)

**Description**

The JAGY-146-6-EM yagi antenna has been developed to meet the need for a high gain, broadband, premium quality directional antenna providing 9 dBd gain with a low VSWR across the entire 143-148 MHz frequency band.

In order to keep the JAGY-146-6-EM's radiation pattern as distortion free as possible, the JAGY-146-6-EM uses an end-of-the-boom mounting design. Please see Jagy1 Series application notes for mounting suggestions. For situations that do not allow for end mount yagis, JAG makes the JAGY-146-6-CM, which is the center of boom mount version of the JAGY-146-6-EM.

The JAGY-146-6-EM antenna consists of a six-element yagi of exceptional durability and performance. All elements including the driven folded dipole element are maintained at DC Ground potential for lightning protection.

The JAGY-146-6-EM antenna is suitable for mounting on the top or side of a tower or pole. No mounting hardware is supplied with this antenna as site specific mounting hardware is necessary with the JAGY-146-6-EM to assure optimum performance. This Yagi can be installed in either a vertically or horizontally polarized orientation. A special JAG HPM kit is required when mounting for horizontal polarization.

**JAGY-146-6-EM at a glance**



Antenna arrives



Unpacked and ready for assembly



Slide elements onto boom and tighten U-bolts.



VHF YAGI fully assembled and installed

\*Site-specific mounting masts and clamps are recommended for this antenna. Please consult JAG to determine suitable accessories for your application.

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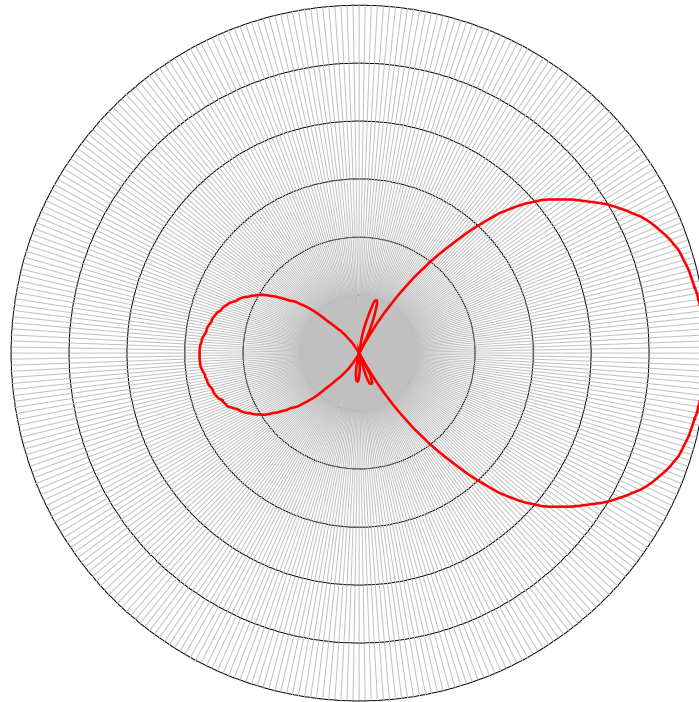
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**JAGY-146-6-EM**

**Vertical Radiation Pattern For Vertical Polarization**



**Elevation**

\* This is a general representation of the Jagy1 Series JAGY-146-6-EM antenna radiation pattern. For the latest detailed pattern contact JAG Applications Engineering.

**WARRANTY**

JAG Electromagnetics warrants all its products against defects in material or workmanship and is only applicable if failure results from these factors within five years from the purchase date by the user. Jag Electromagnetics will be responsible for the supply, at no charge, of new or rebuilt replacements in exchange for defective parts for the duration of the warranty. This warranty does not extend to any JAG products that have been subject to misuse, neglect, accident, improper installation or application. In addition, this warranty does not extend to products that have been repaired or substantially altered outside our manufacturing plant.

JAG Electromagnetics will not be liable for any incidental or consequential damages due to failure of a JAG product under this warranty or any implied warranty. JAG is in no event liable for consequential damages or other costs of any kind as a result of the use of the products manufactured by JAG. No envoy is sanctioned to presume for JAG any other legal responsibility in connection with JAG products. JAG Electromagnetics is not accountable for replacement of any product damaged by lightning.

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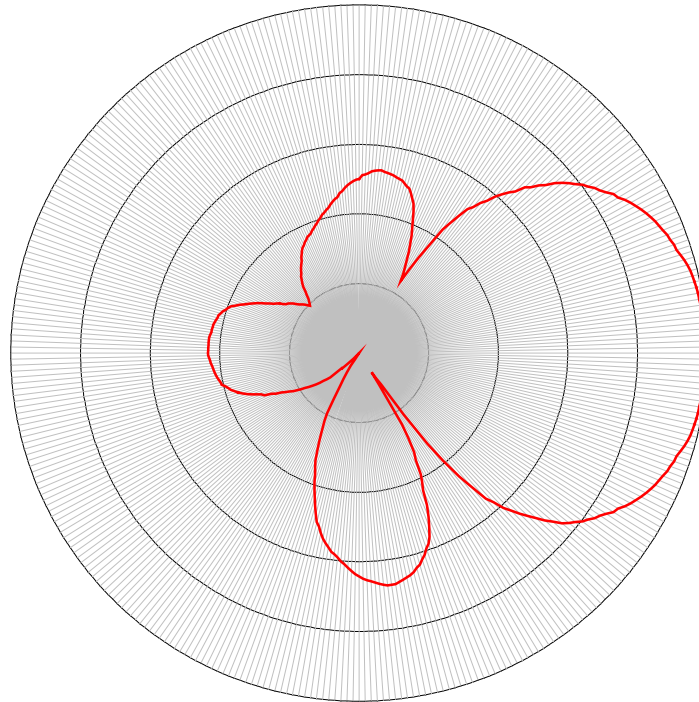
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**JAGY-146-6-EM**

**Horizontal Radiation Pattern For Vertical Polarization**



**Azimuth**

\* This is a general representation of the Jagy1 Series JAGY-146-6-EM antenna radiation pattern. For the latest detailed pattern contact JAG Applications Engineering.

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