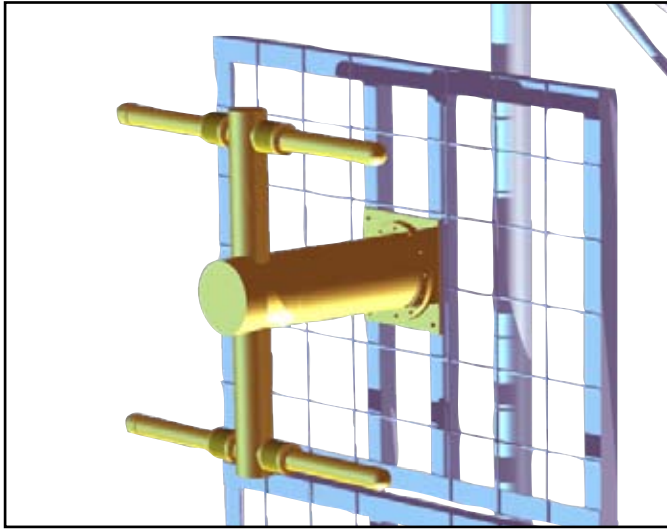




STINGRAY™ VHP Series

Broadband Horizontally Polarized VHF Panel Antenna



Features

- Rugged brass and copper corrosion resistant construction
- Internally fed, fully pressurized, welded feed connections
- Modular construction facilitates ease of installation and custom modification
- Custom designed antenna support structures

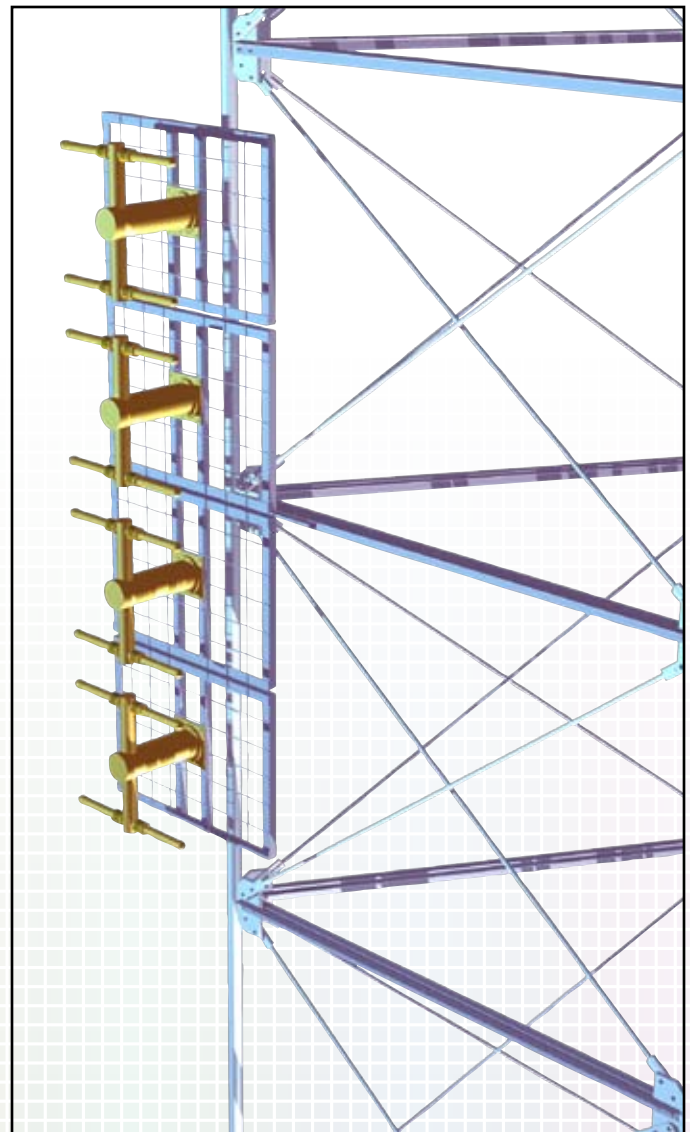
ERI Introduces the STINGRAY™

ESR-VHP Series Horizontally Polarized Broadband VHF Panel Antenna Systems

Electronics Research, Inc. introduces the STINGRAY™ Horizontally Polarized Broadband VHF (Band III) Panel Antenna. Based on ERI's industry renowned FM antenna design principles, the ERI STINGRAY ESR-VHP Series features large diameter radiating elements and a completely enclosed, pressurized, internal feed system. The unique arm geometry of the ESR-VHP Series provides superior VSWR performance across the band. Like all ERI broadcast antennas, the STINGRAY VHF Panel Antenna combines exceptional engineering with superior fabrication and materials:

These panel antenna systems can be designed to mount on existing customer owned towers or supplied with integrated mounting spines.

STINGRAY™ Broadband Panel Antenna Systems are also available in UHP (Horizontally Polarized UHF) and UDP (Dual Polarized UHF) Series.



Characteristics

Product Line	STINGRAY™
Product Series	VHPI Series
Band	High Band, Mid Band, and Low Band VHF
Polarization	Horizontally Polarized



STINGRAY™ VHP Series

Broadband Horizontally Polarized VHF Panel Antenna

ESR-HHP Series: High Band VHF H-Pol Panel

Electrical Specifications

Channels	Bays	Array Length		Beam Tilt, Degrees
		ft	m	
7-13	2	16.60	5.06	2.00
	4	25.81	7.87	1.75
	6	35.02	10.67	1.75
	8	44.23	13.48	1.75
	10	53.44	16.29	0.75
	12	62.65	19.09	0.75

Mechanical Characteristics

Reflecting Panel Size (Height X Width): 48" x 35-1/2"

Deicing/radome: NONE

Calculated Weight:

No Ice: 175 lbs

With 1/2" Ice: 285 lbs

Calculated Effective Wind Area (CaAc):

Normal Exposure:

No Ice: 10.0 sq.ft.

With 1/2" Ice: 16.5 sq.ft.

Transverse Exposure:

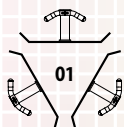
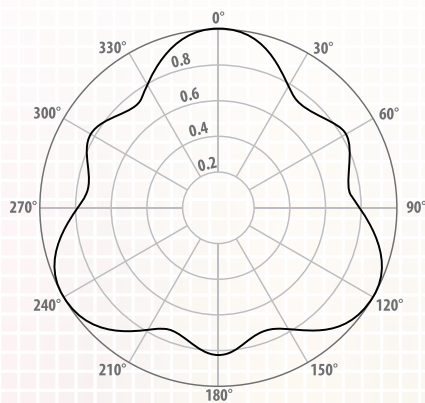
No Ice: 6.0 sq.ft.

With 1/2" Ice: 9.0 sq.ft.

NOTES:

1. Please note, the listed weights and effective wind areas are based upon the PRELIMINARY design of the antenna.
2. All loads calculated in accordance with the ANSI/TIA/EIA-222-F and ANSI/TIA-222-G standards.
4. Loading includes radiating element and reflecting panel ONLY. Custom mount brackets and feed harnessing is NOT included.
3. No wind shielding and/or wake interference taken into account for supporting structure.

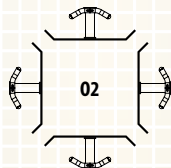
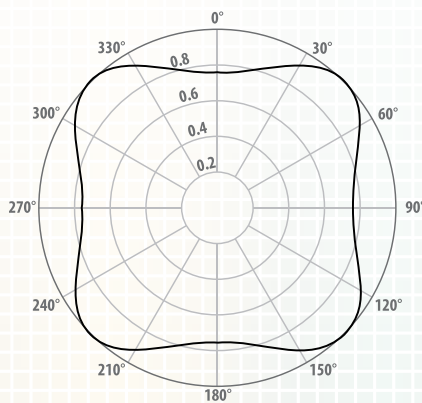
Azimuth Patterns



Omnidirectional (O1)

3 Around Configuration

120° Orientation



Omnidirectional (O2)

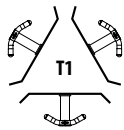
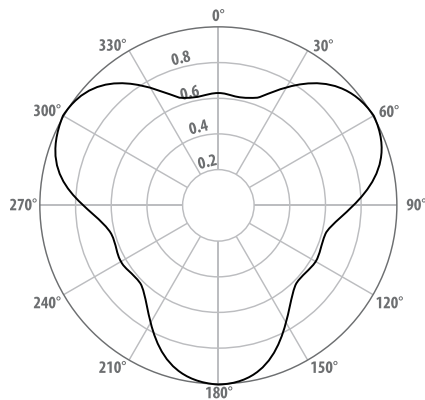
4 Around Configuration

90° Orientation



STINGRAY™ VHP Series

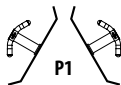
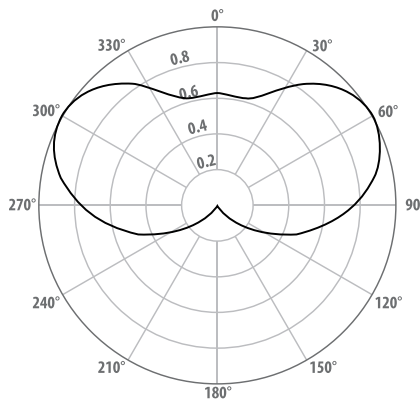
Broadband Horizontally Polarized VHF Panel Antenna



Trilobe (T1)

3 Around Configuration

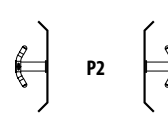
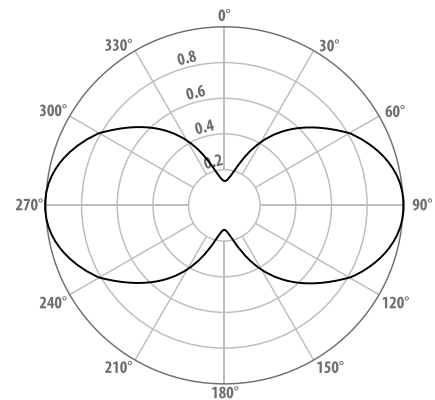
120° Orientation



Peanut (P1)

2 Around Configuration

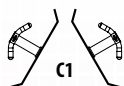
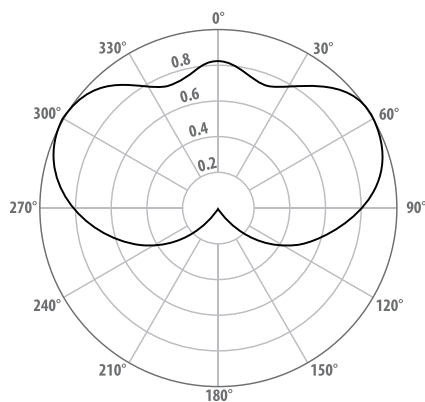
120° Orientation



Peanut (P2)

2 Around Configuration

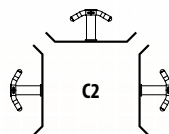
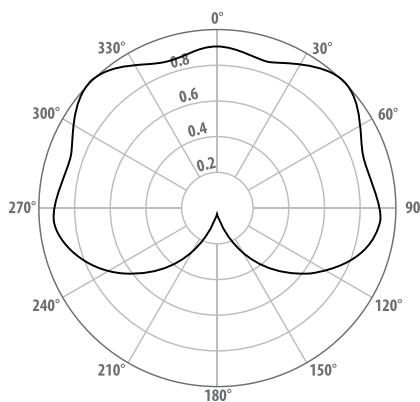
180° Orientation



Cardioid (C1)

2 Around Configuration

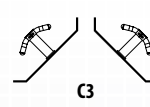
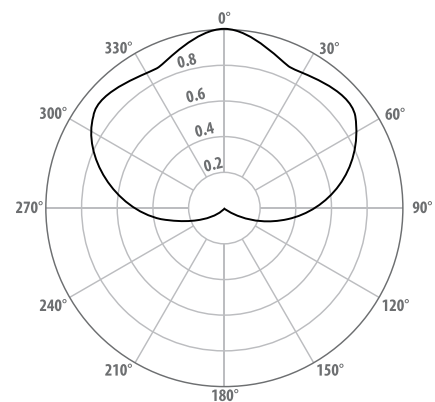
120° Orientation



Cardioid (C2)

3 Around Configuration

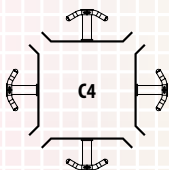
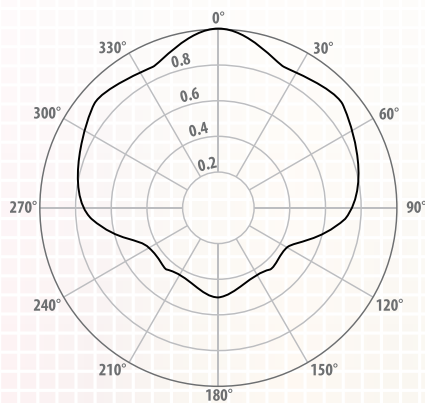
90° Orientation



Cardioid (C3)

2 Around Configuration

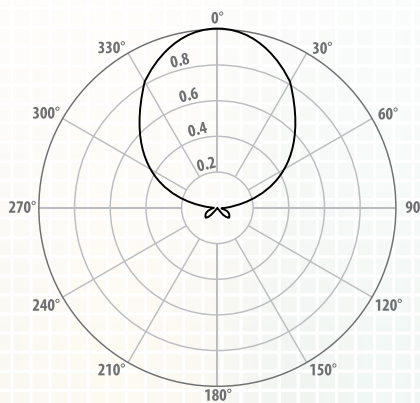
90° Orientation



Cardioid (C41)

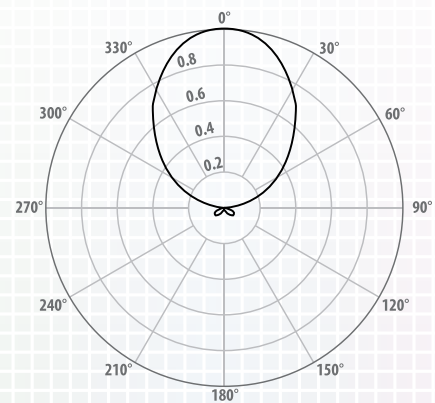
4 Around Configuration

90° Orientation



Cardioid (C5)

1 Around Configuration



Cardioid (C6)

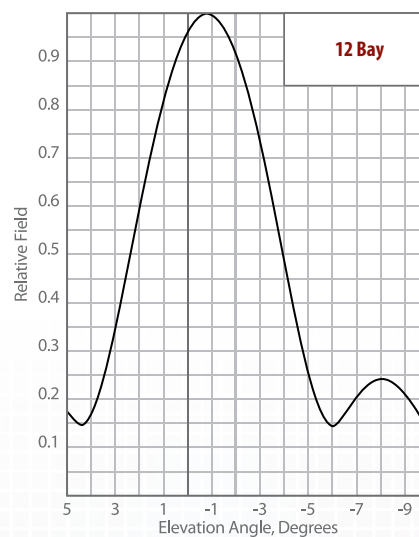
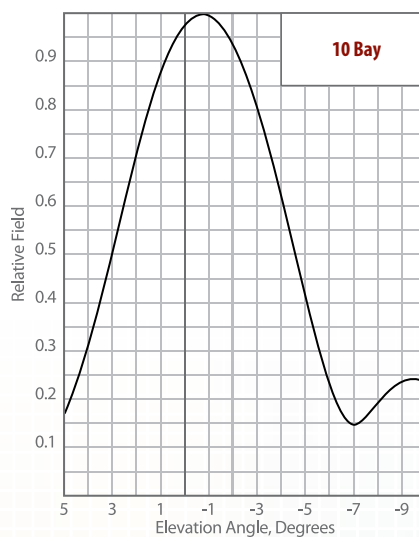
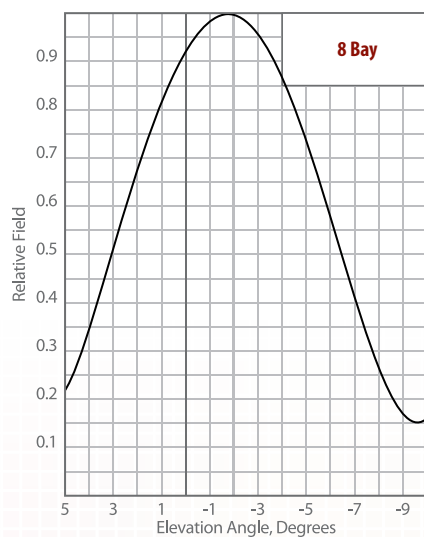
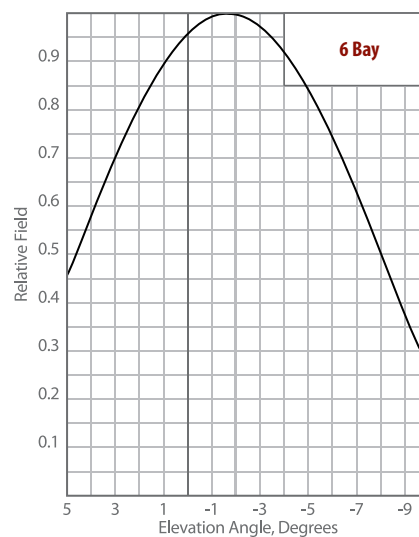
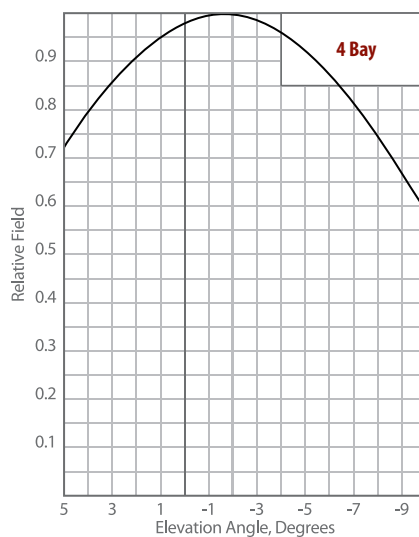
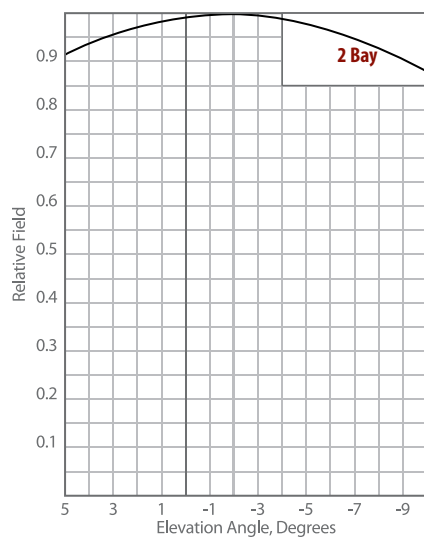
1 Around Configuration



STINGRAY™ VHP Series

Broadband Horizontally Polarized VHF Panel Antenna

Elevation Patterns





STINGRAY™ VHP Series

Broadband Horizontally Polarized VHF Panel Antenna

Complete System Capabilities

ERI's ability to design and fabricate structural components and the company's manufactured transmission line products and RF components gives the company unique abilities to provide panel antenna systems as turnkey packages. The company services can also include delivery, off-loading, antenna and transmission line installation, and system acceptance testing. ERI also has a staff of structural engineers that can provide complete tower analysis services and design and manufacture any required tower reinforcement material and the associated installation services.

ERI approaches the opportunity to provide television panel antenna systems as custom applications of its standard manufactured product. Every customer requirement is reviewed individually and a suitable combination of components is assembled and proposed in order to best meet individual needs and application requirements. Contact ERI to have a system configured for your unique and special requirements.

Ordering Information

Prior to shipment to the site, each antenna is factory assembled, tuned, and tested. Experienced ERI technicians are available to supervise field assembly and installation.

Type Number Definition

ESR- a H b -HP c d

ESR	ERI STINGRAY™
<i>a</i>	Number of Bays
H	High Band VHF
<i>b</i>	Beam Tilt: increments of 0.25 degrees e.g. 0=0.00, 1=0.25, 2=0.50
HP	H-pol Panel
<i>c</i>	Number of Panels Around
<i>d</i>	Azimuth Pattern
Example:	ESR-4H3-HP2P2
Description:	ERI STINGRAY™ High Band VHF Television Broadband Panel Antenna, 4 bay with 0.75 degree beam tilt and Peanut (P2) Azimuth Pattern



Around the World, Across the Spectrum, Your Single Source For Broadcast Solutions



Antennas



Transmission Line



Towers



Filters/Combiners



Broadcast Services

About Electronics Research, Inc.

Founded in 1943, Electronics Research, Inc. delivers high quality, innovative, integrated solutions to broadcasters across the U.S. and around the world. Our dedicated staff of engineers, designers, fabricators, and project managers take pride in contributing to your success by providing AM, FM, VHF, UHF, BRS-EBS, and Mobile Media broadcast systems including the industry's best antenna, transmission line, filter/combiner, and tower and structural support systems. In addition to manufacturing the full range of broadcast system components and installation accessories, ERI offers a suite of engineering and field services needed to plan, install, optimize, and maintain your broadcast facility. We are your single source for broadcast solutions.

Broadcast Antenna Systems

- ROTOTILLER® FM Antenna
- LYNX™ Dual Input Antenna for FM-IBOC
- 1105 Circularly Polarized FM Antenna
- 100A Series Low Power Circularly Polarized FM Antenna
- FM Low Power Horizontally Polarized Educational FM Antenna
- P300/P350 Series Vertically Polarized FM Antenna
- 1180 and 1090 Series Broadband Panel FM Radio Antenna
- SLIMWING™ Batwing VHF Television Antenna
- CRUCIS™ Crossed Dipole VHF Television Antenna
- STINGRAY™ Broadband Television Panel Antenna
- TRASAR® High Power Traveling Wave Television Antenna
- AGW Quick-Deploy Emergency UHF Television Antenna
- ALP Low and Medium Power UHF Television Antenna
- AL PLUS Low and Medium Power UHF Television Antenna
- AL Series Low Power UHF Television Antenna
- HMD BRS-EBS Antenna
- SHADOWMASTER® Shadow-Filling BRS-EBS Antenna

Transmission Line Systems

- MACXLine® Rigid Transmission Line with Bellows
- HELIAX® Air- and Foam-dielectric Coaxial Cable
- HELIAX® Standard Elliptical Waveguide
- GUIDELINE® Circular Waveguide
- Standard Rectangular Waveguide
- Dehydrators and Pressurization Equipment

Filter and Combining Systems

- FM Radio Filter and Combining Systems
- UHF and VHF Television Filter and Combining Systems
- DAB Filter and Combining Systems
- Mobile Media Filter and Combining Systems
- RF Components
- System Monitoring and Protection Components

Structural Support Systems

- Guyed Towers
- Self-Supporting Towers
- Roof-top Antenna Support Structures
- Specialty Structures and Custom Antenna Supports

RF and Structural System Services

- RF Field and Engineering Services
- Installation and Structural Engineering Services

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