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ARA-243 SERIES HANDHELD SATCOM ANTENNAS



The ARA-243 series of antennas are the smallest, sturdiest, lightest, most powerful and rugged handheld UHF SATCOM antennas available to the warfighter today.

Developed at the request of Army Special Forces, ARA met with SOF communicators, listened to their needs and feedback on other Systems, and set out to build the best miniature TACSAT antenna available.

The ARA-243 incorporates a quick detachable connect system that allows operators to easily attach a variety of interchangeable folding grips, tripods, ground spikes, and magnetic mounts.

The main body is built to IP68 specifications and has a unique design that eliminates binding, reduces internal wiring and prevents the possibility of an accidental opening.

For use with the PRC-117F, PRC-117G, PSC-5D, MBITR, JEM, MBITR2, PRC-152A and any radio capable of UHF SATCOM.

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Revised February 2021

FEATURES

- Directors/Gain Extenders provide an additional 2.0 dBic of gain.
- Deployment Time: < 30 seconds
- Weight: 0.95 lbs (6.5 lbs with hard case)
- Available in Black (Default), Tan, or Green Finishes
- Available with Multiple Grip and Mounting Configurations
- Compact Size – Fits in Breast Pocket
- Submersible
- Made in the USA 

Specifications	
Gain	5 dBic (7 dBic with Optional Extenders)
Frequency	240 to 318 MHz
Polarization	Right-Hand Circular
Impedance	50 Ohms
VSWR	< 1.5:1
Operating Temperature	-40° to +71°C, MIL-STD-810G
Storage Temperature	-47° to +85°C, MIL-STD-810G
Immersion	2 hours, 2 meters
Power Handling	150 Watts CW
Antenna Connector	BNC Female
Cable	4', BNC Male to TNC Male

Configurations								
	Folding Pistol Grip	4' Coax Cable	Mag / Stake Mount	Tripod	Gorilla Pod	Nylon Pouch	Pelican Case	Reference Guide
ARA-243-Kit	x	x		x				x
ARA-243-Kit-A	x	x	x	x		x		x
ARA-243-Kit-B	x	x	x	x		x	x	x
ARA-243-Kit-C		x	x		x	x	x	x
ARA-243-Kit-D	x	x	x	x	x	x	x	x
ARA-243-Kit-P	x	x				x		x
* Optional DR-243 Directors/Gain Extenders provide an additional 2 dBic of gain and can be added to any 243 Series Antenna.								
** Hardware Color Options: Black (1/Standard), Tan (2), Green (3)								
*** Pouch Color Options: Black (A/Standard), Tan (B), Green (C), Army Multi-Cam (D), MARPAT Green (E), MARPAT Tan (F)								
Example: ARA-243-KIT-A1C = ARA-243-KIT-A with black hardware and green pouch ARA-243-KIT-3C = ARA-243-KIT with green hardware and green pouch								

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ARA-244 SERIES HANDHELD MUOS SATCOM ANTENNAS



The ARA-244 series of antennas are the smallest, sturdiest, lightest, most powerful and rugged handheld UHF and MUOS SATCOM antennas available to the warfighter today.

Developed at the request of Army Special Forces, ARA met with SOF communicators, listened to their needs and feedback on other Systems, and set out to build the best miniature TACSAT antenna available.

The ARA-244 incorporates a quick detachable connect system that allows operators to easily attach a variety of interchangeable folding grips, tripods, ground spikes, and magnetic mounts.

The main body is built to IP68 specifications and has a unique design that eliminates binding, reduces internal wiring and prevents the possibility of an accidental opening.

Primarily for use with the AN/PRC-155, AN/PRC-158, AN/PRC-117F, AN/PRC-117G radios on the MUOS constellation but can also be used with the PSC-5D, MBITR, JEM, MBITR2, PRC-152A, and any radio capable of operating on the legacy UHF satellite constellation.

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FEATURES

- Directors/Gain Extenders provide an additional 2.0 dBic of gain.
- Deployment Time: < 30 seconds
- Weight: 0.95 lbs (6.5 lbs with hard case)
- Available in Black (Default), Tan, or Green Finishes
- Available with Multiple Grip and Mounting Configurations
- Compact Size – Fits in Breast Pocket
- Submersible
- Made in the USA 

Specifications	
Gain	5 dBic (7 dBic with Optional Extenders)
Frequency	300 to 380 MHz
Polarization	Right-Hand Circular
Impedance	50 Ohms
VSWR	< 1.5:1
Operating Temperature	-40° to +71°C, MIL-STD-810G
Storage Temperature	-47° to +85°C, MIL-STD-810G
Immersion	2 hours, 2 meters
Power Handling	150 Watts CW
Antenna Connector	BNC Female
Cable	4', BNC Male to TNC Male

Configurations								
	Folding Pistol Grip	4' Coax Cable	Mag / Stake Mount	Tripod	Gorilla Pod	Nylon Pouch	Pelican Case	Reference Guide
ARA-244-Kit	x	x		x				x
ARA-244-Kit-A	x	x	x	x		x		x
ARA-244-Kit-B	x	x	x	x		x	x	x
ARA-244-Kit-C		x	x		x	x	x	x
ARA-244-Kit-D	x	x	x	x	x	x	x	x
ARA-244-Kit-P	x	x				x		x
* Optional DR-244 Directors/Gain Extenders provide an additional 2 dBic of gain and can be added to any 244 Series Antenna.								
** Hardware Color Options: Black (1/Standard), Tan (2), Green (3)								
*** Pouch Color Options: Black (A/Standard), Tan (B), Green (C), Army Multi-Cam (D), MARPAT Green (E), MARPAT Tan (F)								
Example: ARA-244-KIT-A1C = ARA-244-KIT-A with black hardware and green pouch ARA-244-KIT-3C = ARA-244-KIT with green hardware and green pouch								

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ARA-252 COMMUNICATIONS ANTENNA

The **ARA-252** antenna is a single-port, multiband, omnidirectional, vehicular-mounted antenna. The antenna has been designed for optimum gain from 225 to 450 MHz, 1350 to 1850 MHz and is perfect for UHF and WNW Software Defined Radio applications. The gain has been tuned for -10° to 10° in elevation and azimuthal variations are ± 1.5 dB. The antenna has been rated for 125 Watts CW over the complete band and does not require any tuning or ground plane for operation.

This antenna bolts to a standard Universal Antenna Mount or a NATO standard 4.5-inch bolt circle found on most military vehicles. The Type N Female connector is located in the base of the antenna in the center of the mount. This antenna is an environmentally qualified, Commercial Off the Shelf (COTS), TRL-8 (Technology Readiness Level) antenna. The rugged design has also passed the Oak Beam Test; this rigorous test involves 25 oak beam strikes to the mid point of the antenna at 25 miles per hour.

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FEATURES

- Weight: <6.75 lbs (3.0 kg)
- Height: 45 in (1092 mm)
- Diameter: 1.75 in (44.5 mm)
- Diameter (base): 5.5 in (89 mm)
- Finish: CARC Type III Green (optional Tan)
- Made in the USA 

Specifications	
Gain	+2 dBi Typical
Frequency	225 to 2000 MHz
Impedance	50 Ω
VSWR	2.0:1 Nominal
Power Handling	125 Watts CW
Port	J1
Antenna Connector	N-Type Female
Mount	NATO 4-Hole
Spring	>40,000 flexures at 60° 5,000 flexures at 90°



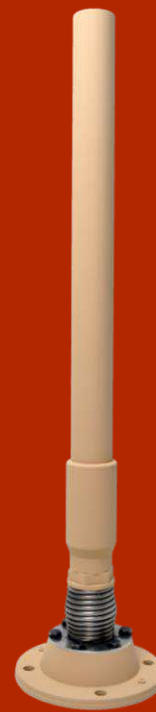
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ARA-1220 SERIES L-BAND COMMUNICATIONS ANTENNA



The ARA-1220 and ARA-1220-101 antennas are wide band, omni-directional, vehicular communications antennas. The ARA-1220 and ARA-1220-101 are designed for use in the most demanding and harsh tactical conditions. The lightweight, low-profile construction combined with a standard NATO 4-Bolt mounting pattern allows it to be easily integrated into military vehicles and most antenna mast systems.

The ARA-1220 has been tuned for performance between 1200 MHz and 2000 MHz but performs well up to 2500 MHz. The ARA-1220-101 version of this antenna includes a bandpass filter and low noise preamplifier built-in. DC power is applied and decoupled from the single RF connector at the base. The bandpass filter on the ARA-1220-101 reduces the band to operate between 941.5 MHz and 1126.5 MHz.

The maximum gain has been tuned for -10° to 10° in elevation with azimuthal variations ± 1 dB. Broadband, low SWR ensures no effective radiated power reduction in mobile or vehicular platforms.


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FEATURES

- Lightweight
- Extremely Rugged
- Low-Profile Construction
- NATO 4-Hole Vehicular Mount
- Option for bandpass filter and low-noise preamplifier.
- Available in CARC Green, Tan, or Black finish. Other colors available on request.
- Made in the USA 

Revised September 2020

Specifications		
	ARA-1220	ARA-1220-101
Gain (dBi)	3.0 to 5.5	9.0 to 15.0
Frequency (MHz)	1200 to 2000	941.5 to 1126.5
Noise Figure	N/A	1 dB typical
DC Input	N/A	12 to 15 V
Power Handling	100+ W CW	19 mW (+13 dBm)
Impedance	50 Ω	
VSWR	< 1.75:1 typical; 2.25:1 max	
Port	J1	
Connector	Type N Female	
Weight	3.5 lbs (1.6 kg)	
Height	24 in (0.61 m)	
Diameter	1.5 in (38 mm)	
Spring	>40,000 flexures at 60°; 4,000 flexures at 90°	

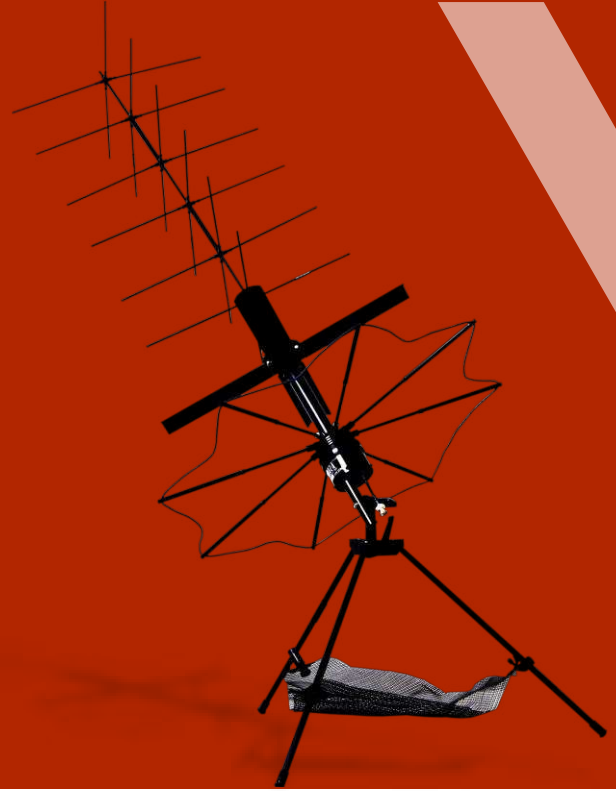
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COMPACT SATCOM ANTENNAS ARA-2576 SERIES



The **ARA-2576** series are high-gain, foldable Yagi Antennas designed and tested for military use. They fit together with a tripod and are ideal for tactical and field applications. These are extremely durable antennas that can be deployed several thousand times by military troops in harsh environments. The black anodized finish is suitable for use in environments found around the world. The complete assembly is folded and supplied in a water-resistant carrying bag.

This antenna is fully compatible with the Harris AN/PRC-117F/G, AN/PRC-152A, Thales AN/PRC-148 MBITR and Raytheon AN/PSC-5 radios.

The antenna is equipped with a net ballast for operation in high wind speeds. For use with the PRC-117F, PRC-117G, PSC-5D, MBITR, JEM, MBITR2, PRC-152A and any radio capable of UHF SATCOM.

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FEATURES

- Each Director/Gain Extender provides an additional 2.0 dBic of gain.
- Deployment Time: < 3 minutes
- Black Anodized Finish
- Tripod with AZ and EL Mount
- Water-resistant carrying bag
- Compact Size
- Made in the USA

Revised June 2020

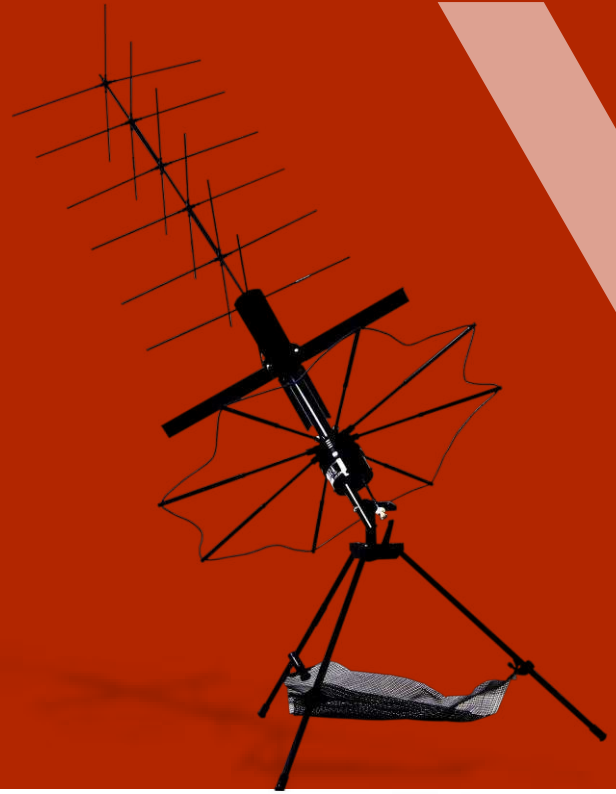
Specifications	
Gain	7.0 – 11.0 dBic
Frequency	240 to 400 MHz
Polarization	Right-Hand Circular
Impedance	50 Ohms
VSWR	< 1.5:1
Operating Temperature	-40° to +71°C
Storage Temperature	-47° to +85°C
Power Handling	200 Watts CW
Antenna Connector	Male, BNC Type
Cables	12' BNC male to BNC Female, with captive Type N and TNC adapters (2 each)

Configurations			
	ARA-2576	ARA-2576-2EX *	ARA-2576-6EX
Gain	7.0 dBic	9.0 dBic	11.0 dBic
Beam Width (Nominal)	100°	80°	65°
Directors/Gain Extenders	Not included.	1 each	2 each
* ARA-2576-2EX = NSN: 5985-01-149-2576			

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COMPACT MUOS SATCOM ANTENNAS *ARA-2577 SERIES*



The **ARA-2577** series are high-gain, foldable Yagi Antennas designed and tested for military use. They fit together with a tripod and are ideal for tactical and field applications. This antenna is designed for UHF SATCOM with uncompromising gain at MUOS frequencies. These are extremely durable antennas that can be deployed several thousand times by military troops in harsh environments. The black anodized finish is suitable for use in environments found around the world. The complete assembly is folded and supplied in a water-resistant carrying bag.

This antenna is fully compatible with the Harris AN/PRC-117F/G, AN/PRC-152A, Thales AN/PRC-148 MBITR and Raytheon AN/PSC-5 radios.

The antenna is equipped with a net ballast for operation in high wind speeds. A hard case, HC-2577 is available. For use with the PRC-117F, PRC-117G, PSC-5D, MBITR, JEM, MBITR2, PRC-152A and any radio capable of UHF SATCOM.


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FEATURES

- Each Director/Gain Extender provides an additional 2.0 dBic of gain.
- Deployment Time: < 3 minutes
- Black Anodized Finish
- Tripod with AZ and EL Mount
- Water-resistant carrying bag
- Compact Size
- Made in the USA 

Revised June 2020

Specifications	
Gain	7.0 – 11.0 dBic
Frequency	240 to 380 MHz
Polarization	Right-Hand Circular
Impedance	50 Ohms
VSWR	< 1.5:1
Operating Temperature	-40° to +71°C
Storage Temperature	-47° to +85°C
Power Handling	200 Watts CW
Antenna Connector	Male, BNC Type
Cables	12' BNC male to BNC Female, with captive Type N and TNC adapters (2 each)

Configurations			
	ARA-2577	ARA-2577-2EX	ARA-2577-6EX
Gain	7.0 dBic	9.0 dBic	11.0 dBic
Beam Width (Nominal)	100°	80°	65°
Directors/Gain Extenders	Not included.	1 each	2 each

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ARA-3240 SERIES HIGH GAIN SATCOM ANTENNAS



The ARA-3240 Series hosts extremely rugged and portable high-gain UHF SATCOM antennas that are available in full and compact sizes. These antennas are ideal for tactical command posts and temporary fixed site applications. The compact version is ideal for operation in high winds. The right-hand circular polarized (RHCP) antenna is designed to operate from 240 to 318 MHz at 200 Watts CW. These antennas are designed with exceptionally high gain, low VSWR, and rapid deployment. The antenna complies with MIL-STD-810G environmental standards for vibration, shock, temperature, loose cargo, and immersion.

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Revised October 2020

FEATURES

- Deployment Time: < 3 minutes
- Black Anodized Finish
- Folding Tripod with Azimuth and Elevation Adjustment
- Two 12.5ft RF cables
- Soft or Hard Case
- Standard or Compact Size
- Made in the USA

Specifications

Specifications	
Gain	9.7 to 15.0 dBic
Frequency	240 to 318 MHz
Polarization	Right-Hand Circular
Impedance	50 Ω
VSWR	< 1.5:1
Axial Ratio	2 to 3 dB
Power Handling	200 Watts CW
Cables	Includes two RF RG-213 12.5' cables with Type-N Male to Type-N Female

Configurations

	ARA-3240	ARA-3240-HC*	ARA-3240C	ARA-3240C-HC
Gain	9.7 to 15.0 dBic	9.7 to 15.0 dBic	+11 dBic	+11 dBic
Axial Ratio	3 dB	3 dB	2 dB	2 dB
Input Connector Type	N-Type Male	N-Type Male	N-Type Female**	N-Type Female**
Weight	35 lbs	35 lbs	21 lbs	21 lbs
Storage	Storage Bag	Hard Case***	Storage Bag	Hard Case***
Wind Speed	Up to 80 MPH	Up to 80 MPH	Up to 160 MPH	Up to 160 MPH
Director Sets (2 each)	Included	Included	N/A	N/A
Dimensions	72" Height, 78" Length when Deployed	72" Height, 78" Length when Deployed	70" Height, 34" Length when Deployed	70" Height, 34" Length when Deployed

*NSN 5895-01-449-3240

**Adapter provided for cables.

***Hard Case: 13.5" x 12" x 37", 4.9 lbs

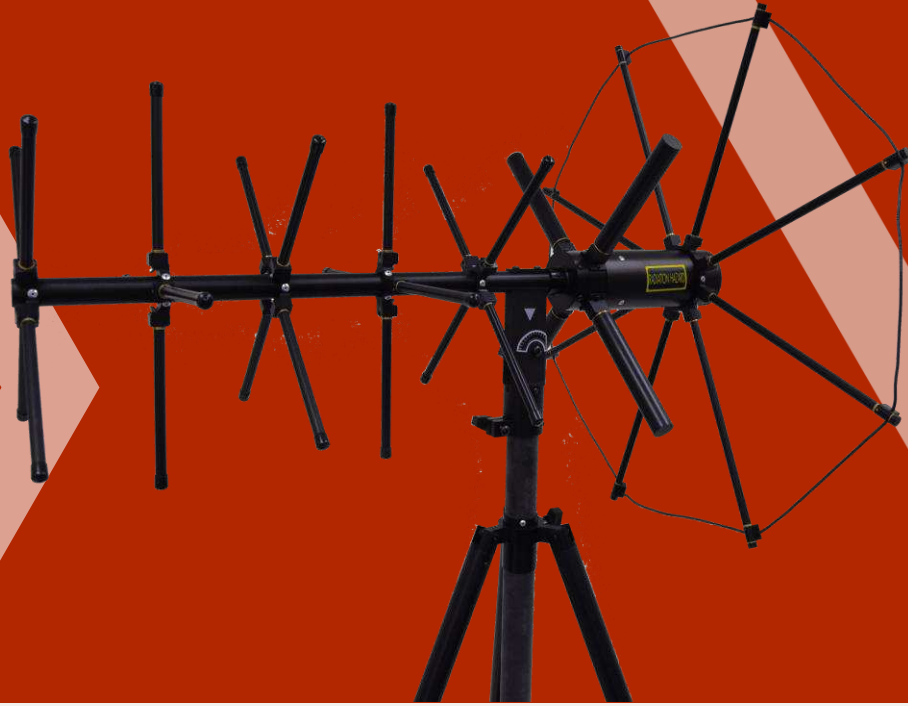
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ARA-3241 SERIES HIGH GAIN MUOS SATCOM ANTENNAS



The ARA-3241 Series hosts extremely rugged and portable high-gain UHF SATCOM antennas that are available in full and compact sizes. These antennas are ideal for tactical command posts and temporary fixed site applications. The compact version is ideal for operation in high winds. The right-hand circular polarized (RHCP) antenna is designed to operate from 300 to 380 MHz at 200 Watts CW. These antennas are designed with exceptionally high gain, low VSWR, and rapid deployment. The antenna complies with MIL-STD-810G environmental standards for vibration, shock, temperature, loose cargo, and immersion.

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FEATURES

- Deployment Time: < 3 minutes
- Black Anodized Finish
- Folding Tripod with Azimuth and Elevation Adjustment
- Two 12.5ft RF cables
- Soft or Hard Case
- Standard or Compact Size
- Made in the USA 

Specifications

Specifications	
Gain	9.7 to 15.0 dBic
Frequency	300 to 380 MHz
Polarization	Right-Hand Circular
Impedance	50 Ω
VSWR	< 1.5:1
Axial Ratio	< 3 dB
Power Handling	200 Watts CW
Cables	Includes 2 RF RG-213 12.5' cables with Type-N Male to Type-N Female

Configurations

	ARA-3241	ARA-3241-HC	ARA-3241C*	ARA-3241C-HC*
Gain	9.7 to 15.0 dBic	9.7 to 15.0 dBic	+11 dBic	+11 dBic
Axial Ratio	3 dB	3 dB	2 dB	2 dB
Input Connector Type	N-Type Male	N-Type Male	N-Type Female	N-Type Female
Weight	34 lbs	34 lbs	20 lbs	20 lbs
Storage	Storage Bag	Hard Case**	Storage Bag	Hard Case**
Wind Speed	Up to 80 MPH	Up to 80 MPH	Up to 160 MPH	Up to 160 MPH
Director Sets (2 each)	Included	Included	N/A	N/A
Dimensions	72" Height, 78" Length when Deployed	72" Height, 78" Length when Deployed	70" Height, 34" Length when Deployed	70" Height, 34" Length when Deployed
*Coming Soon				
**Hard Case: 13.5" x 12" x 37", 4.9 lbs				

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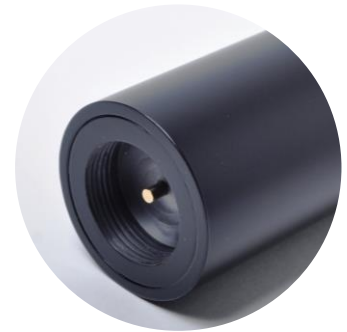
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CMP SERIES COMMUNICATION ANTENNAS



The ARA **CMP (Conical Monopole) Series** of antennas are suited for low-profile spectrum-surveillance applications. These antennas have the frequency range to cover both the specific full cellular band applications in various configurations and extremely wideband units for general spectrum surveillance applications. Vehicular or fixed-site mounting allows instantaneous signal coverage of the entire band of interest. These are used in harsh environments for long term installations and can be configured with various mounting options.

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Revised November 2020

FEATURES

- Tactical Communication Antenna
- Low Profile Form Factor
- Superior RF Performance
- Broad Band Frequency Coverage
- Rugged Design
- Multiple Installation Options
- Made in the USA 

Configurations and Specifications

	CMP-727-NMO	CMP-118-A
Frequency	690 to 3000 MHz, Specification Compliant 600 to 6000 MHz, Operational	1 to 18 GHz
Gain	1 dBi Nominal	0 to 3 dBi
Polarization	Linear Vertical	Linear Vertical
Impedance	50 Ω	50 Ω Nominal
VSWR	2.0 : 1 Nominal	2.0 : 1 Typical
Pattern	Omni Azimuth: 25° Beamwidth in Elevation	Omni Azimuth: >10° Beamwidth in Elevation
Operating Temperature	-30° C to +70° C	-55° C to 125° C
Storage Temperature	-50° C to +85° C	-55° C to 125° C
Power Handling	85 W CW, 250 W Peak	50 W CW Average
Antenna and Cable Connectors	NMO and TNC Male	SMA Female
Antenna Dimensions	1.75" Diameter x 4.0" Height	8" x 2.6" Tall w/ Ground Plate
Mounting	Magnetic Base, 3.2" Diameter	6.0" Bolt Circle of Four #10 Clearance Holes On Mounting Plate

Additional Models and Configurations

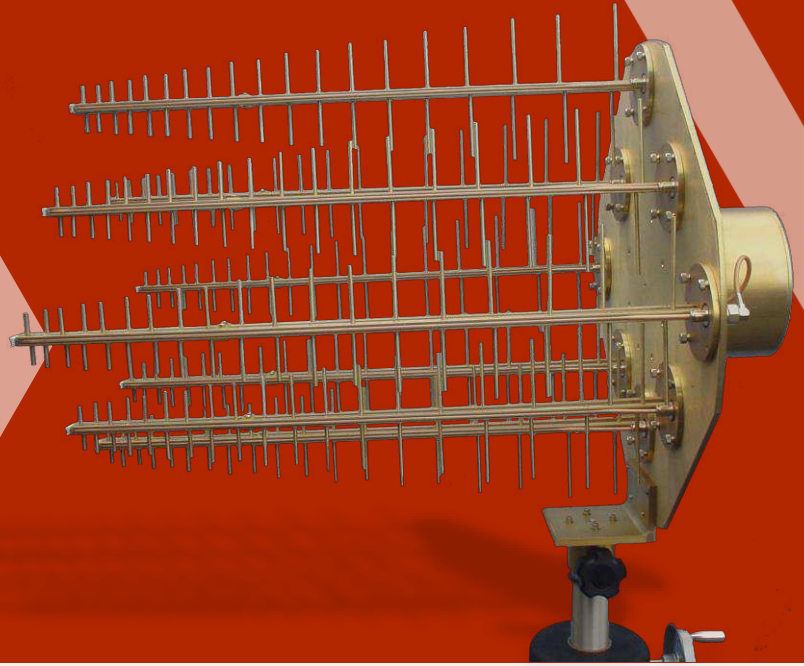
CMP-727-NMO	Antenna Only
CMP-727-NMO-2	Antenna with Mag Mount and 12' TNC to TNC Cable
CMP-727-NMO-201	Type N Connector on Magnetic Base, No Cable Included
CMP-727-NMO-2UF	Comes with 12' Ultraflex Cable
CMP-727-NMO-3UF	Comes with 10' Ultraflex Cable
CMP-727-NMO-4UF	Comes with 15' Ultraflex Cable
ARA-NMO-3	Through Roof Mounting, TNC connector
ARA-NMO-3-20	Through Roof Mounting with 20' Ultraflex Cable
ARA-NMO-3-20-1	Through Roof Mounting with 20' Ultraflex Cable with TNC and N Connector

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LPA SERIES LOG-PERIODIC ACTIVE ARRAYS



ARA's series of log-periodic antenna arrays supports a wide variety of applications requiring high-power transmission. These arrays are designed to meet strict beamwidth, gain, and power handling requirements. The log periodic design produces very broadband characteristics and a unidirectional radiation pattern. These antennas can be used to make accurate electric field strength measurements and individually calibrated antenna factor curve can be provided.

ARA can also supply the pedestal, positioner and controller when a full antenna system is required. These systems can support high accuracy positioning. Power requirements and overall durability are our prime concerns to provide a long-term solution.

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FEATURES

- Broadband
- High Gain
- High Accuracy Positioning
- Pedestal, Positioner, and Controller Available when a full antenna system is required.
- Aluminum is Gold Iridite and can be supplied with an epoxy paint finish or anodized.
- Made in the USA 

Specifications and Configurations

	LPA-1522-101	LPA-2201-A1	LPA-4048-101	LPA-820-8
Frequency	150 to 225 MHz	220 MHz to 1.0 GHz	400 to 480 MHz	750 MHz to 2.0 GHz
Gain	14 to 17 dBi	11.5 dBi	16 dBi Nominal	16 to 19 dBi Typical 18 dBi Average
Polarization	Horizontal	Linear H or V	Horizontal	Linear H or V
VSWR	2.0:1	1.3:1 Typical 2.0:1 Maximum	2.0:1 Nominal	3.0:1
Beamwidth (Nominal)	Azimuth: 18° Elevation: 30°	H Pol: 60° El x 30° Az V Pol: 30° El x 60° Az	Azimuth: 16° Elevation: 36°	H Pol: 30° El x 20° Az V Pol: 20° El x 30° Az
Power Handling	80 kW Peak 20 kW Avg	500 W CW	12 kW Peak 2.4 kW Avg	500 W CW
Antenna Connectors	3 1/8 EIA	N-Type Female	1 5/8 EIA	N-Type Female
Extended Dimensions	164.5" x 100" x 66.3"	8.0' x 2.7' x 6.3'	80" x 30" x 36"	34.5" x 28" x 26.5"
Weight	750 lbs (340 kg)	46 lbs (21 kg)	100 lbs (45 kg)	30 lbs (14 kg)

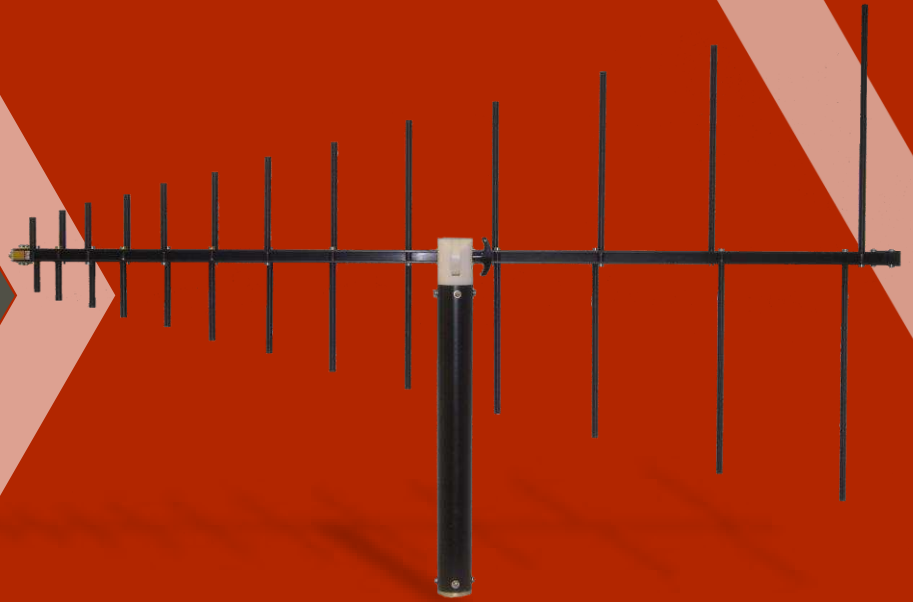
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LPD FIXED SITE ANTENNA SERIES



The ARA series of linearly-polarized log-periodic antennas are suited for fixed site testing or monitoring applications. These antennas are designed for high efficiency, broad bandwidth, and rugged construction for outdoor use. The antennas are primarily manufactured of aircraft grade aluminum and supplied with a gold iridite finish for environmental protection. Additional protection in the form of epoxy paint or an anodized finish are available per request.

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Revised November 2020

FEATURES

- Broadband Frequency Coverage
- Superior RF Performance
- High Efficiency Antennas
- Rugged Design
- Made in the USA 

Configurations and Specifications

	Gain	Frequency	VSWR	Beamwidth (Nominal)	Power Handling	Antenna Connectors	Storage	Dimensions	Weight
LPD-2100-C	6 dBi	20 to 1000 MHz	2.0:1 Typical	75° E-Plane 120° H-Plane	300 W CW	N-Type Female	2 Nylon Bags: 12" Diameter x 7' Long and 12 " Diameter x 11' Long	27' x 27'	Antenna Only: 160 lbs Mast: 100 lbs
LPD-310/A	6 dBi	30 to 100 MHz	2.0:1 Nominal	75° E-Plane 120° H-Plane	2400 W CW	7/16 DIN or N-Type Female	Center Mast Mount for 3" Diameter Pipe	145" Long x 200" Wide	45.5 lbs (20.6 kg)
LPD-350-101	6 dBi	30 to 500 MHz	2.0:1 Nominal	75° E-Plane 120° H-Plane	500 W CW	N-Type Female	Center Mount for Optional 3" Diameter Mast	204" Long x 198" Wide	85 lbs (39 kg)
LPD-3100-101	6 dBi	30 to 1000 MHz	2.0:1 Nominal	75° E-Plane 120° H-Plane	300 W CW	N-Type Female	Center Mount for Optional 3" Diameter Mast	204" Long x 198" Wide	85 lbs (39 kg)
LPD-8130-A1	6.5 dBi	80 to 1300 MHz	2.5:1 Nominal	75° E-Plane 120° H-Plane	1500 W CW	N-Type Female	Center Mount Mast with Adjustable Polarization	64" Long x 77" Wide	15 lbs (6.8 kg)
LPD-2020/A	6 dBi	200 to 2000 MHz	2.0:1 Nominal	75° E-Plane 120° H-Plane	250 W CW	N-Type Female	Center Mount Mast with Adjustable Polarization	46" Long x 30" Wide	5 lbs (2.4 kg)
LPD-2050	7 dBi	225 to 450 MHz	2.0:1 Nominal	75° E-Plane 120° H-Plane	100 W CW	N-Type Female	Rear Mount with U-Bolts to 2" Pipe	28" x 38"	5 lbs
LPD-3500	5 dBi	300 to 5000 MHz	2.5:1 Maximum	75° E-Plane 140° H-Plane	50 W CW	SMA Female	Center Mount Mast with Adjustable Polarization	19" Long x 20" Wide	1.5 lbs (0.7 kg)
LPD-820-101	7 dBi	800 to 2000 MHz	2.5:1 Maximum	70° E-Plane 110° H-Plane	100 W CW at 24,000 feet altitude	N-Type Female	Rear Mount Bolt Pattern	10.6" Long x 7.5" Wide	1.5 lbs (0.7 kg)
LPD-118*	7 dBi Nominal	1 to 18 GHz	2.0:1 Nominal	75° E-Plane 110° H-Plane	18 GHz: 5 W CW 12 GHz: 20 W CW	SMA-Type Female	N/A	8" x 9.5"	1 lb

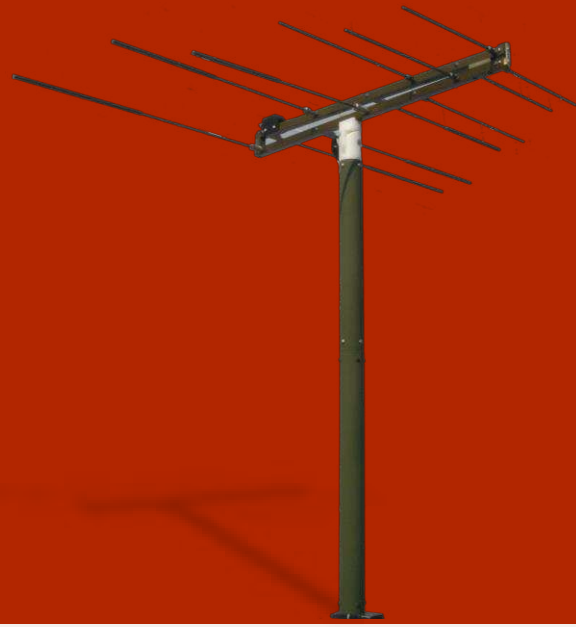
*LPD-118-AN configuration has an N-Type Female connector.

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LPD TACTICAL ANTENNA SERIES



ARA's Log-Periodic Tactical antenna series covers a variety of frequency ranges to support many communication and electronic warfare applications. These antennas have been developed through working with military groups and government offices to offer superior solutions. The **LPD Tactical Series** antennas have high efficiency design, reliable RF performance, and innovative storage/collapsing capabilities. These antennas are meant to be used repeatedly in harsh environments and have an anodized finish for durability.

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Revised October 2020

FEATURES

- Rugged Design with Anodized Finish
- Extremely Durable
- High Power
- Elements that collapse and fold.
- Black, OD Green, Tan, and Clear finishes available.
- Made in the USA 

Configurations and Specifications

	LPD-3100/C2756	LPD-140-106	LPD-1010-110	LPD-1011-107	LPD-1225/108*	LPD-410-105	LPD-830-105
Gain	6 dBi	6 dBi	6 dBi	6 dBi	7 dBi	7 dBi	5 dBi Typical
Frequency	30 to 1000 MHz	100 to 400 MHz	100 to 1000 MHz	100 to 1100 MHz	120 to 2500 MHz	400 to 1000 MHz	690 to 3000 MHz
VSWR	2.0:1 Typical	2.0:1 Nominal	1.8:1 Nominal	2.0:1 Nominal	2.0:1 Nominal	2.0:1 Nominal	2.0:1 Nominal
Beamwidth (Nominal)	75° E-Plane 120° H-Plane	75° E-Plane 120° H-Plane	75° E-Plane 100° H-Plane	75° E-Plane 120° H-Plane	75° E-Plane 100° H-Plane	75° E-Plane 100° H-Plane	75° E-Plane 120° H-Plane
Power Handling	300 W CW	100 W CW	450 W CW	100 W CW	400 W CW	100 W CW	100 W CW
Antenna Connectors	Type N Female	Type N Female	Type N Female	Type N Female	Type N Female	Type N Female	TNC Female
Storage	Two Ballistic Nylon bags.	Square fiberglass tube that doubles as a mount.	Black Nylon Stow Roll.	Round fiberglass tube that doubles as a mount. Elements are spring loaded and fold up into boom sections.	Round fiberglass tube that doubles as a mount. Elements are spring loaded and fold up into boom sections.	3" round fiberglass tube that doubles as a mount.	Detachable Pistol Grip or ¼-20 thread.
Extended Dimensions	17ft x 16.5 ft	35" x 59"	61.6" x 60.3"	63" x 61"	64" x 50"	20" x 19"	13.8" x 11.3" x 1.1" with Pistol Grip
Collapsed Dimensions	2 bags; 12" Diameter x 96"	4" x 4" x 24"	6" Diameter x 24"	5.5" Diameter x 36"	6" Diameter x 35"	3" Diameter x 22"	9.5" x 9.5" x 0.85" without Pistol Grip
Weight	85 lbs (39 kg)	8.4 lbs (3.8 kg) with Mast & Storage Tube, 5.8 lbs (2.6 kg) Antenna Only	4.5 lbs (Antenna), 1.2 lbs (Mast), 0.9 lbs (Stow Roll)	16.4 lbs (7.5 kg) with Storage Tube, 10.7 lbs (4.9kg) Antenna Only	17.8 lbs (8.1 kg) with Storage Tube, 11.0 lbs (5.0 kg) Antenna Only	4.1 lbs (1.9 kg) with Storage Tube, 2.1 lbs (1.0 kg) Antenna Only	1 lb (0.45 kg)
Anodized Finish**	OD Green	OD Green = Standard, Black Available	Black	Tan	OD Green	OD Green	Black / ABS

*LPD-1225-108-1 configuration is supplied with additional Delrin at top to secure antenna for long term installations.

**All aluminum parts are gold iridite.

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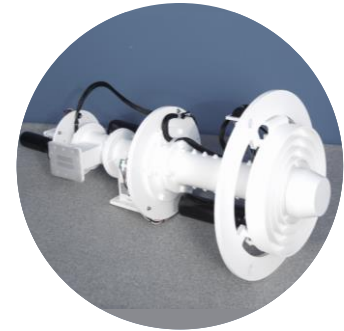
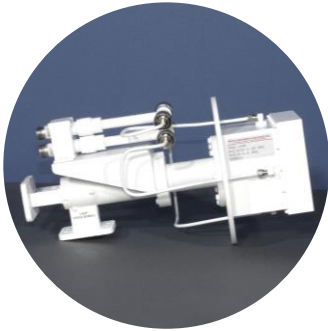
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MULTIBAND FEED AND ANTENNA SATCOM SERIES



ARA has a wide variety of Prime-Focus, Offset, Gregorian, and Cassegrain feeds and antennas for multiband applications. These multiband feeds are designed to minimize phase center movement. This helps to better focus the feed within the reflector for optimal gain, providing the highest possible EIRP and G/T.

ARA designs, simulates, manufactures, and tests all feed solutions in-house which can support FCC, ARSTRAT, and other applicable standards. ARA utilizes its fully staffed, Middleborough, MA outdoor test range to go beyond bench tests to ensure all specifications are met.

ARA also offers reflectors, positioners, and controllers to support antenna subsystems. This product family supports customer SATCOM Terminals and Ground Stations to enable connectivity to multiple constellations and networks without changing hardware.

ARA

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SEAVEY DIVISION



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Revised March 2021

FEATURES

- Multiple Frequencies in a Single Feed
- Dual Polarization for Both Transmit and Receive
- Motorized or Non-motorized
- Optional Reflectors
- Optional Positioners and Controllers
- Made in the USA

Multiband SATCOM Frequencies (GHz)

Model	P-Band	L-Band	S-Band	C-Band	X-Band	Ku-Band	K-Band	Ka-Band
9409-800	230 - 280 MHz	1.1 - 1.2						
9385-800		1.95 - 1.98	2.2 - 2.3					
C1328-800C		1.15 - 1.35			9.4 - 9.8			
C2007-810		1.5 - 1.7	2.2 - 2.4	3.4 - 4.2		10.7 - 12.75		
0028-800D		1.698 - 1.707			8.0 - 8.5 GHz			
9317-820B			2.398 - 2.482	5.718 - 5.842				
9861-850D			1.65 - 2.4		7.1 - 8.5			
9861-870A			2.025 - 2.3		8.025 - 8.4			
C1916-800X			2.0 - 2.4				18.75 - 22.1	
9632-800				Rx: 4.0 - 4.2 Tx: 6.25 - 6.45				
0364-800F				3.4 - 4.2		10.70 - 12.75		
0408-800E				3.4 - 4.2		10.70 - 12.75		
C0717-800C				3.45 - 4.2		10.70 - 12.75		
C1203-800E				3.45 - 4.2		10.70 - 12.75		
0229-800E					7.1 - 7.7	10.95 - 12.75		
0229-825					7.1 - 7.7	10.95 - 12.75		
C1430-830X15						12.75 - 14.5		18.7 - 21.2 29.5 - 31.0

This is not a comprehensive list. Please contact us to learn about additional offerings and customizations.

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FEATURES

- Multiple Frequencies in a Single Feed
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- Made in the USA

Multiband SATCOM								
Model	Gain	Polarization	Power Handling	Isolation Port to Port	VSWR Nominal	Return Loss	Axial Ratio	Dimensions
9409-800								41" x 60"
9385-800	>44 dBi	RHCP						57.375" x 32"
C1328-800C		RHCP/LHCP			1.2:1		0.75 dB	8.75" x 13.75"
C2007-810		L-Band Dual CP S-Band Dual CP C-Band Dual Linear/ Dual Circular Selectable Ku-Band Dual Linear		Ku = 25 dB Min All Other Bands = 20 dB	1.9:1			27" x 13"
0028-800D		RHCP			1.33:1		2.0 dB Max	7.5" x 10.20"
9317-820B	S-Band: 19 dBi C-Band: 23.4 dBi				1.5:1			16.75" x 16.75"
9861-850D		Dual Circular			1.5:1		2.0 dB	6.75" x 13.66"
9861-870A		Dual Circular	200 W Max 100 W CW		1.5:1		2.0 dB	6.75" x 14.54"
C1916-800X		Dual Circular S, K	20 W		1.5:1		2.0 dB	12.2" x 6.75"
9632-800	14.0 dBi	Rx: RHCP Tx: LHCP			1.5:1		4.0 dB	9.25" x 6"
0364-800F	C-Band: 15.4dBi	C-Band: Dual Circular/ Linear Ku-Band: Dual Linear		C-Band: 17 dB Ku-Band: 27 dB	C-Band: 1.8:1 Ku-Band: 1.9:1		3.0 dB	51.02" x 28.2"
0408-800E			1 W Max	14 dB Circular 30 dB Linear	1.8:1		2.98 dB C-Band Circular 2 dB Ku-Band Circular	26.04" x 13"
C0717-800C		Ku Dual Linear C-Band Dual Linear, Dual Circular Switchable	1 W Max	20 dB Linear C-Band 30 dB Linear Ku-Band 12 dB Circular C-Band		9 - 10 dB	4.0 dB C-Band	13" x 27.59"
C1203-800E		Ku Dual Linear C-Band Dual Linear, Dual Circular Switchable	1 W Max	20 dB Linear C-Band 30 dB Linear Ku-Band 12 dB Circular C-Band		9 - 10 dB	4.0 dB C-Band	13" x 27.79"
0229-800E		X Dual Circular/ Ku Dual Linear		Ku = 35 dB		X = 1.5:1 Ku = 1.7:1	1.5 dB	6.8" x 6.0"
0229-825		X Dual Circular/ Ku Dual Linear		Ku = 35 dB		X = 1.5:1 Ku = 1.7:1	1.5 dB	8.25" x 10.5"
C1430-830X15		Ku Dual Linear/ Ka Dual Circular		Ku = 32 dB Min	Ku = 1.8:1 Max		Ka = 1.0 dB Typical	5.56" x 9.35" x 7.64"

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MULTIBAND FEED AND ANTENNA THREAT SERIES

ARA has a wide variety of Prime-Focus, Offset, Gregorian, and Cassegrain feeds and antennas for multi-band applications. These multi-band feeds are designed to minimize phase center movement. This helps to better focus the feed within the reflector for optimal gain, providing the highest possible EIRP and G/T.

ARA designs, simulates, manufacturers, and tests all feed solutions in-house. The product family can support the most demanding threat emitter requirements to include high power handling. ARA utilizes its fully staffed, Middleborough, MA outdoor test range to go beyond bench tests to ensure all specifications are met.

ARA also offers reflectors, positioners, and controllers to support antenna subsystems. These subsystems support high power radar and threat emitter systems.

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FEATURES

- Multiple Frequencies in a Single Feed
- Dual Polarization for Both Transmit and Receive
- Motorized or Non-motorized
- Optional Reflectors
- Optional Positioners and Controllers
- Made in the USA

Revised March 2021

Multiband Threat Frequencies (GHz)

Model	P-Band	L-Band	S-Band	C-Band	X-Band	Ku-Band	K-Band	Ka-Band
0239-800K	670 - 850 MHz			4.9 - 5.1				
0240-800H		1.0 - 1.1			6.9 - 10.02			
C0730-520			2 - 3.6			6 - 18		
0051-800			Rx: 2.0 - 3.5		Tx: 6.0 - 9.9			
9244-800C			2 - 4		8 - 12	14 - 18		
C0730-800P			2 - 3.6		6.5 - 10	6 - 18		
C0911-860B			1.5 - 2.5		7.7 - 8.5			
C1835-800C			2 - 4		8.2 - 12.4			
9170-800			2 - 4		8 - 12.4	12 - 18		
C0731-800R				3.6 - 6.5		10 - 18		
C1238-800				4.0 - 8.0		12.4 - 18		
C1836-800D				4 - 8.2		12.4 - 18		
C0730-509					6.5 - 10			
0452-810F					9.3 - 10.0			34 - 36
0051-820						6 - 18		

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FEATURES

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- Dual Polarization for Both Transmit and Receive
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Revised March 2021

Multiband Threat			
Model	Power	Polarization	VSWR Nominal
0239-800K	0.67 - 0.85 RHCP, 50KW Peak, 140W Avg 4.9 - 5.1 GHz Slant 45°, 1 MW Peak, 1 kW Avg	RHCP/ Slant 45°	2.0:1
0240-800H	1.0 - 1.1: 2 kW Peak, 120 W Avg 6.9 - 7.1: 800 W CW 7.6 - 9.6: 250 kW Peak, 250 W Avg 9.99 - 10.02: 500 W CW	Slant 135°/ Slant 45°	2.0:1
C0730-520	S-Band: 2 kW Peak, 120 W Avg Ku-Band: 300 W CW	Linear	2.0:1
0051-800	4 kW Peak, 250 W Avg	Rotatable Vertical/Horizontal/±45°	2.0:1
9244-800C		Dual Linear	S-Band (Quad Ridge): 2.0:1 X and Ku-Band: 1.5:1
C0730-800P	1/ Prime Focus: 2 kW Peak, 120 W Avg 2/ Cassegrain: 2 kW Peak, 120 W Avg 3/ Prime Focus: 300 W CW	1/ Prime Focus: V/± Slant 45°/H Selectable 2/ Cassegrain: Orthogonal to Port 1 3/ Prime Focus: V/± Slant 45°/H Selectable	2.0:1
C0911-860B	S-Band: 40W CW X-Band: 500W CW	Dual CP X and S Bands	
C1835-800C	2 kW Peak 500 W CW	Port 1: V/± Slant 45°/H Selectable Port 2: Orthogonal to Port 1	
9170-800	Dual Polarized Horns: 2 kW Peak, 1μS Pulsewidth; 80W Avg Monopulse Feed: 1 W Avg	2 - 4 GHz Dual Linear X-Band Monopulse 5 Horn, Linear X-Band 8-12 GHz Dual Linear Ku-Band 12-18 GHz Dual Linear	2 - 4 GHz = 2.0:1 Max X-Band Monopulse = 2.0:1 Max X-Band 8-12 GHz = 2.0:1 Max Ku Band 12-18 GHz = 2.0:1 Max
C0731-800R	Port 1: 2 kW Peak, 120 W Avg Port 2: 2 kW Peak 120 W Avg	Port 1: V/± Slant 45°/H Selectable Port 2: Orthogonal to Port 1	2.0:1
C1238-800	5 kW @ 6% Duty Cycle 500 W CW Min		2.0:1
C1836-800D	2 kW Peak 500 W CW	Port 1: V/± Slant 45°/H Selectable Port 2: Orthogonal to Port 1	
C0730-509	2 kW Peak 120 W Avg	Linear	2.0:1
0452-810F	X-Band: 5 kW Peak, 350 W CW Ka-Band: 2 kW Peak, 15% Duty		
0051-820	250 W CW	Linear Adjustable Vertical/Horizontal	2.0:1

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SEAVEY DIVISION



Positioner Systems

ARA offers a wide variety of positioner systems to support SATCOM and RADAR applications. These positioner systems include an antenna positioner, Antenna Control Unit (ACU), and the required cables which allow the positioner to be controlled and monitored indoors. The positioners operate with third-party antennas. In addition, ARA offers integrated solutions to include the feed, reflector, and positioner for complete turn-key requirements.

The positioners can operate in Azimuth or Azimuth and Elevation axis. These utilize an advanced digital motion control system to provide accurate, smooth, and simultaneous motion on both axes using brushless servomotors with resolvers, optional encoders, high-quality gearing, and precision mechanical components. The azimuth structure of the positioner accommodates slip rings, rotary joints, and waveguides. These positioners have high load capacity and withstand extreme terrain and weather conditions.

The ACU accurately controls the positioner using a combination of custom and Commercial Off the Shelf (COTS) motion control components. It is designed based on a digital servo control system and separate absolute feedback devices for faster and precise positioning. The ACU has many functions and diagnostics available at the front panel interface and the optional remote interface through serial ports (RS-232 or RS-422) or Ethernet (TCP/IPv4). The front panel interface provides a simple, intuitive method for commanding the positioner. The serial ports facilitate integration with other end-user systems. Versions of these controllers have been integrated into several military systems and have been qualified to MIL-STD-810E/F, MIL-STD-461C/E for shipboard, airborne and ground-based applications.



Positioner



Integrated System

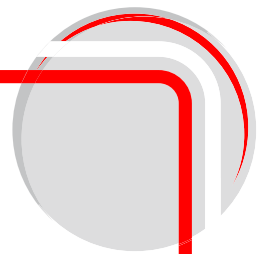
FEATURES

- High-accuracy position control
- Reliable performance in any environment
- High-quality finish for protection from the environment
- Optional remote-control
- Customization available

Revised November 02, 2021



Positioner Systems



1-Axis Positioners

	ARP-90L	ARP-90	ARP-30-200R	ARP-250	ARP-50	ARP-600	
Positioner	Range of Motion	±100°	0 to 90°	Continuous	Continuous	Continuous or ±200°	Continuous
		±0.09°	±0.09°	±0.09°	±0.011°	0.09°	±0.011°
	Positioning Accuracy	±0.5°	±0.2°	±0.3°	±0.1°	±0.5°	±0.1°
		12 ft.lb (16 Nm)	15 ft.lb (21 Nm)	33 ft.lb (45 Nm)	240 ft.lb (325 Nm)	850 ft.lb (1150 Nm)	2000 ft.lb (2711 Nm)
	Continuous Torque	10 ft.lb (14 Nm)	12 ft.lb (16 Nm)	30 ft.lb (40 Nm)	200 ft.lb (271 Nm)	200 ft.lb (271 Nm)	1650 ft.lb (2238 Nm)
		11 lb (4.5 kg)	10 lb (4.5 kg)	30 lb (14 kg)	1000 lb (453 kg)	500 lb (227 kg)	3000 lb (1360 kg)
	Velocity	1 to 20°/s (0.1 to 3.3 rpm)	1 to 10°/s (0.1 to 1.6 rpm)	132 to 1200°/s (22 to 200 rpm)	1 to 120°/s (0.1 to 20 rpm)	0.2 to 10°/s @ 24 VDC (0.03 to 1.6 rpm) ; 0.2 to 20°/s @ 48 VDC (0.03 to 3.3 rpm)	1 to 60°/s (0.1 to 10 rpm)
		1 to 10°/s²	1 to 10°/s²	30 to 270°/s²	1 to 30°/s²	5°/s² (Max)	1 to 30°/s²
	Positioner Input Voltage	DC from controller	DC from controller	DC from controller	DC from controller	DC from controller	DC from controller
		15 lb (6.8 kg)	10 lb (4.5 kg)	170 lb (78 kg)	250 lb (114 kg)	65 lb (30 kg)	400 lb (181 kg)
Positioner Dimensions	6" x 8" x 10" Tall	6" x 8" x 10" Tall	24" x 24" x 14" Tall	24" dia x 35" Tall	15" dia x 13" Tall	36" dia x 38" Tall	
	-67 to 131° F (-55 to +55° C)	14 to 122° F (-10 to +50° C)	21 to 131° F (-6 to 55° C)	-40 to 131° F (-40 to 55° C)	0 to 131° F (-18 to 55° C)	-40 to 131° F (-40 to 55° C)	
Relative Humidity	0 to 100%	0 to 100%	0 to 100%	0 to 100%	0 to 100%	0 to 100%	
	-	Resolver with 12-bit converter	-	15-bit or 20-bit Absolute Encoder	-	20-bit Absolute Encoder	
Model No.	ACU-3F-12-AV	ACU-3F-12	ACU-3F-14-30	ACU-3F-14-CPR	ACU-3F-12R	ACU-3F-14-CPR-3PH-1	
	2 U	2 U	2 U	4 U	2 U	4 U	
Controller	Weight	12 lb (5.5kg)	12 lb (5.5 kg)	25 lb (12 kg)	40 lb (18 kg)	20 lb (9 kg)	40 lb (18 kg)
		24 to 28 VDC	120-240V, 50/60 Hz	120-240V, 50/60 Hz	120-240V, 50/60 Hz	24 to 48 VDC	208V, 3 Phase-Wye at 13 Amps max
	Compliance	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461
	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity Battery backup*	
Cable	Model No.	Cableset A-90L	Cableset A-90	Cableset A-30R	Cableset-A-250	Cableset A-50	Cableset-A-600
		100 ft (30 m)	100 ft (30 m)	100 ft (30 m)	100 ft (30 m)	100 ft (30 m)	100 ft (30 m)

*Battery backup on ARP-600 allows spin down on power loss.

Notes

All controllers mount on a standard 19 inch wide rack.

ARA's line of single axis positioner units are used to move both small, lightweight items like feeds and very heavy items such as large antenna arrays.

Precision changes in movements or polarization angle, around a vertical axis, are possible in a continuous rotation format or specific angle command.

All-weather sealed construction allows placement in harsh environment.

Dual axis configurations typically add an Elevation component to the capability. EL/AZ models are available for tracking and surveillance applications. Positioners that are designed for dish antennas ranging from 3 ft to 20 ft have been built and used in rugged locations. Continuous rotation models for applications like weather RADAR, are also available with optional slip rings and rotary joints for the specific applications.

All one-axis positioners come with D38999 Series III military connectors, M85049 military backshells, and 100ft(30m) cable rated for outdoor use.



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Positioner Systems

2-Axis Positioners

	AEC-60D	EAR-125	AEP-300*	EAR-250-SYS**
Positioner	Vertical Load Capacity	50 lb (23kg)	200 lb (90 kg)	300 lb (136 kg)
		±200° -20° to +90°	Continuous -5° to 185°	Continuous -95 to +95°
	Position Data Resolution			
	Azimuth Axis	0.011°	±0.011°	±0.011°
	Elevation Axis	0.011°	±0.011°	±0.011°
		±0.1° ±0.1°	±0.1° ±0.1°	±0.2° ±0.2°
	Continuous Torque			
	Azimuth Axis	125 ft.lb	200 ft.lb	350 ft.lb
	Elevation Axis	125 ft.lb	350 ft.lb	1200 ft.lb
		0.5 to 40°/s 0.5 to 40°/s	1 to 360°/s 1 to 60°/s	1 to 20°/s 1 to 10°/s
	Acceleration			
	Azimuth Axis	25°/s²	60°/s²	20°/s²
Elevation Axis	25°/s²	60°/s²	10°/s²	
	DC from Controller	DC from Controller	DC from Controller	
Weight	125 lb (57 kg)	420 lb (191 kg)	220 lb (99 kg)	
	24" x 16" x 26"	30.34" x 22.75" x 52.50"	36" x 20" x 20"	
Operational Temperature	0 to 122° F (-18 to 50°C)	-20 to 131° F (-28 to 55° C)	-20 to 131° F (-28 to 55° C)	
	0 to 100%	0 to 100%	0 to 100%	
Encoders	15-bit Absolute	15-bit Absolute	15-bit Absolute	
	ACU-3F-24-CCPR	ACU-3F-24-CCPR	ACU-3F-24-CCPR	
Weight	25 lb (11.5 kg)	45 lb (21 kg)	30 lb (13 kg)	
	19" W x 24" D	19" W x 24" D	19" W x 24" D	
Rack Height	4 U	4 U	4 U	
	120-240V ac, 50/60 Hz	120-240V ac, 50/60 Hz	120-240V ac, 50/60 Hz	
Compliance	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461	
	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity	
			Manual key pad access only. No remote access.	
Model No.	Cableset-60D	Cableset-125	Cableset-300	
	100 ft (30 m)	100 ft (30 m)	100 ft (30 m)	

*This AZ over EL configuration is typically used on Antenna Test Ranges.

**This configuration includes optional audio and visual motion warning devices and high power coaxial rotary joints.

Notes

- All two-axis positioners come with D38999 Series III military connectors and M85049 military backshells rated for outdoor use.
- All controllers mount on a standard 19 in (48 cm) wide rack.
- All controllers except EAR-250-SYS have Ethernet connectivity and a programmable positions movement.
- All cable set comes with AC power cable, control cable, and feedback cable.
- Standard cable set length is 30 m. Custom lengths are available.



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Positioner Systems

2-Axis Positioners (Heavy Duty)

	EAR-600C	EAR-1200	EAR-1010	EAP-1600	
Positioner	Vertical Load Capacity	1100 lb (498 kg)	2300 lb (1043 kg)	5000 lb (2268 kg)	1600 lb (725 kg)
		Continuous -5° to +185°	Continuous -5° to +185°	Continuous -5° to +185°	-200° to +200° -10° to 190°
	Position Data Resolution				
	Azimuth Axis	±0.011°	±0.011°	±0.011°	±0.0003°
	Elevation Axis	±0.011°	±0.011°	±0.011°	±0.0003°
		±0.1° ±0.1°	±0.07° ±0.07°	±0.1° ±0.1°	±0.05° ±0.05°
	Continuous Torque				
	Azimuth Axis	1600 ft.lb	2300 ft.lb	4500 ft.lb	15000 ft.lb
	Elevation Axis	1600 ft.lb	2300 ft.lb	3600 ft.lb	15000 ft.lb
		1 to 60°/s 1 to 60°/s	1 to 36°/s 1 to 15°/s	1 to 27°/s 1 to 21°/s	.02 to 30°/s .02 to 30°/s
	Acceleration				
	Azimuth Axis	30°/s²	6°/s²	6°/s²	6°/s²
Elevation Axis	30°/s²	6°/s²	6°/s²	6°/s²	
	DC from Controller	DC from Controller	DC from Controller	208 V AC/3PH/60A	
Weight	1300 lb (589kg)	4000 lb (1814 kg)	1250 lb (567 kg)	12000 lb (5443 kg)	
	48" x 34" x 111.88"	48" x 34" x 111.88"	34" x 48" x 111.88"	60" x 80" x 160"	
Operational Temperature	-40 to 131° F (-40 to 55° C)	-40 to 131° F (-40 to 55° C)	0 to 131° F (-18 to 55° C)	0 to 108° F (-18 to 42° C)	
	0 to 100%	0 to 100%	0 to 100%	0 to 100%	
Encoders	15-bit Absolute	15-bit Absolute	15-bit Absolute	20-bit Absolute	
	ACU-3F-24-CCPR	ACU-3F-24-CCPR	ACU-3F-24-CC	ACU-3F-E	
Weight	45 lb(21 kg)	40 lb (18 kg)	45 lb (21 kg)	25 lb (11 kg)	
	19" W x 24" D	19" W x 24" D	19" W x 24" D	19" W x 24" D	
Rack Height	4 U	4 U	4 U	4 U	
	208-240V ac, single phase	208-240V ac, single phase	208-240V ac, single phase	120-240V ac, 50/60 Hz	
Compliance	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461	MIL-STD-810 MIL-STD-461	
	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity	Front panel input keys LCD screen Joystick Ethernet connectivity	
Cable	Model No.	Cablesset-600	Cablesset-1200	Cablesset-1010	Cablesset-1600
		100 ft (30 m)	100 ft (30 m)	100 ft (30 m)	100 ft (30 m)

Notes

- All two-axis positioners come with D38999 Series III military connectors and M85049 military backshells rated for outdoor use.
- All controllers mount on a standard 19 in (48 cm) wide rack.
- All controllers except EAR-250-SYS have Ethernet connectivity and a programmable positions movement.
- All cable set comes with AC power cable, control cable, and feedback cable.
- Standard cable set length is 30 m. Custom lengths are available.

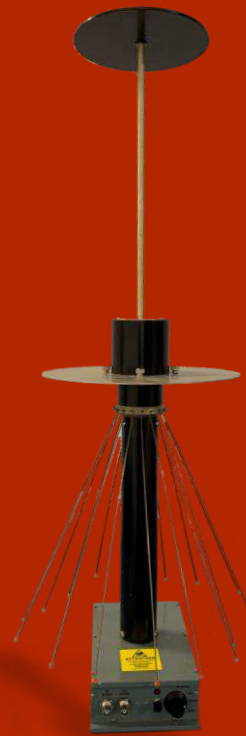


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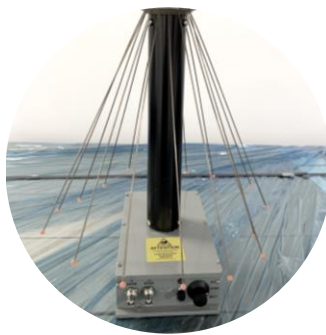
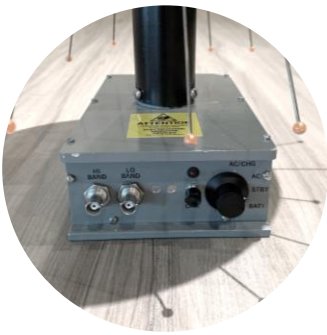
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SAS-2/AB SERIES EMC ANTENNA



The **SAS-2/AB** series features extremely broadband omni antennas. These are typically used for lab related testing such as EMC, TEMPEST, etc. Features include Low Noise Amplifiers, a removable monopole, and flexible radials for compact transport and storage. With built in rechargeable batteries, a travel case, and a calibration, these antennas are ready to work in the lab or on the road.

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Revised October 2020

FEATURES

- Lightweight
- Extremely Broadband
- Compact
- Option for additional RF input connectors and limiters
- Available in Gray finish
- Made in the USA 

Configurations and Specifications		
	SAS-2/A*	SAS-2/B
Frequency	100 Hz to 1 GHz	100 Hz to 2 GHz
Polarization	Vertical	
Antenna Factor	Supplied with Individual Calibration	
Impedance	50 Ω	
Overload	1 V/M	
Pattern	Omni-Directional in Azimuth	
Operating Temperature	20° to 130° F	
Storage Temperature	-55° to 130° F	
Antenna Connectors	BNC Female	
Extended Dimensions	14" Diameter x 34.5" Tall	
Weight	10 lbs	
*SAS-2/A(M) configuration has an additional RF injection port to validate if the system is operating correctly before and/or after testing occurs.		
*SAS-2/AL configuration includes a limiter for the high-band preamplifier.		

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SAS-200 SERIES



The **SAS-200 Series** are dual band omni antennas with a discone low-band construction and either a conical monopole for the 3 GHz configuration or vertical biconical for the 6GHz and 18GHz configurations. These antennas are available with a diplexed output option or a high and low band output.

Additional high vibration (HV) and high power (HP) options are available for off-road vehicular-mounted applications and high-power requirements. The SAS-200 series is available as passive units or with preamplifier options and RF bypass capability. When active, the AC powered PFS-SAS is suggested to power and control the SAS-230 and SAS-260 configurations (see page 3).

This series can be used for either spectrum monitoring/surveillance or military and security jamming.

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FEATURES

- 18" Diameter x 18" Tall
- 14 to 21 lbs
- ABS Radome
- Available in Desert Tan, OD Green, White
- Made in the USA 

Specifications

Gain	Low Band: -5 to +3 dBi, 125 to 1000 MHz High Band: -1 to +3 dBi
Polarization	Vertical
Impedance	50 Ω
Pattern	Omni-Directional in Azimuth
Operating Temperature	-32° to 55° C
Storage Temperature	-47° to 85° C
Power Handling	Low Band: 150 to 300+ W CW High Band: 35 to 270 W CW
Antenna Connectors	N-type Female

Configurations

	SAS-230	SAS-260	SAS-218
Frequency	Low Band: 20 to 1000 MHz High Band: 800 to 3000 MHz	Low Band: 20 to 1000 MHz High Band: 1000 to 6000 MHz	Low Band: 20 to 1000 MHz High Band: 1 to 18 GHz
VSWR*	Low Band 7.0:1 Max, 2.0:1 Typical High Band: 3.0:1 Max, 1.5:1 Typical	Low Band 7.0:1 Max, 2.0:1 Typical High Band: 3.0:1 Max, 2.0:1 Typical	Low Band 7.0:1 Max, 2.0:1 Typical High Band: 3.0:1 Max, 2.0:1 Typical
Power Handling	Low Band: 300+ W CW High Band: 270W CW	Low Band: 150 W CW High Band: 35W CW	Low Band: 150 W CW High Band: 15 W CW
Shock Handling**	20 G	20 G	20 G

*VSWR figures shown are approximate and can change based on antenna mounting.

**Shock handling up to 40 G configurations are available.

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FEATURES

- 18" Diameter x 18" Tall
- 14 to 21 lbs
- ABS Radome
- Available in Desert Tan, OD Green, White
- Made in the USA

PFS-SAS DC Power Supply:

This unit is a linear DC Power Supply that can be configured for either 120VAC or 240VAC, single phase, 50-60 Hz input power. The output from this supply is 18 VDC. This unit has been designed to provide the required input power for the bypass switches and low noise amplifiers used in the SAS-230 and SAS-260 active surveillance antennas. There are separate switches to control the Low and High bands of the antennas separately.

Specifications	
Size	7.4" x 7.4" x 2.6" 188 mm x 188 mm x 67 mm
Weight	3.5 lbs 1.6 kgs
Power Input	85 VAC to 264 VAC 50 Hz to 60 Hz
Output Power	+18 VDC at Power Supply (+15 VDC minimum required at antenna input)
Output Control	TTL for Low Band TTL for High Band
Output Connector	MS3116F12-10P



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FEATURES

- 18" Diameter x 18" Tall
- 14 to 21 lbs
- ABS Radome
- Available in Desert Tan, OD Green, White
- Made in the USA 

Key: SAS-2XX-ABC

"A": Describes Output Type	"1" = Single N-Type Outputs "2" = Dual N-Type Outputs
"B": Describes Completely Passive vs. Range of Active Units	"0" = Completely Passive "1" = Single Amplifier Low Band "2" = Dual Amplifier "S" = Latching Switch for Pre-amplifier Bypass Capability "2FS" = Two Failsafe Switches and Two Pre-amplifiers for Bypass Capability "2R" = Receive Only Capability
"C": Represents Addition of Limiters	"L2" = Two Limiters
*HP denotes High Power **HV denotes High Vibration	

Examples

SAS-230HV-22FSL2	SAS-230HV-12FSL2
20 MHz to 3 GHz omnidirectional antenna with dual band output and a high and low band pre-amplifier section, bypassable using two failsafe switches.	20 MHz to 3 GHz omnidirectional antenna with single diplexed output and a high and low band pre-amplifier section, bypassable using two failsafe switches.

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FEATURES

- 18" Diameter x 18" Tall
- 14 to 21 lbs
- ABS Radome
- Available in Desert Tan, OD Green, White
- Made in the USA

Available Configurations

SAS-218-20	SAS-230-22FSL2	SAS-260-10L2
SAS-218HP-20	SAS-230-22R	SAS-260-12
SAS-218HV-20	SAS-230-22SL2F	SAS-260-12FSL2
SAS-218HV-201	SAS-230-C2934-3	SAS-260-20
SAS-230-10	SAS-230-C2934-4	SAS-260-22FSL2
SAS-230-104	SAS-230HV-10	SAS-260HV-10
SAS-230-12	SAS-230HV-12	SAS-260HV-10L2
SAS-230-105	SAS-230HV-12FS	SAS-260HV-12FS
SAS-230-12	SAS-230HV-12L2	SAS-260HV-12RL2
SAS-230-12FS	SAS-230HV-20	SAS-260HV-20
SAS-230-12FSL2	SAS-230HV-201	SAS-260HV-201
SAS-230-12L2	SAS-230HV-22	SAS-260HV12FSL2
SAS-230-12RL2	SAS-230HV12FSL2	SAS-260HV22FSL2
SAS-230-20	SAS-230HV22FSL2	
SAS-230-22	SAS-260-10	

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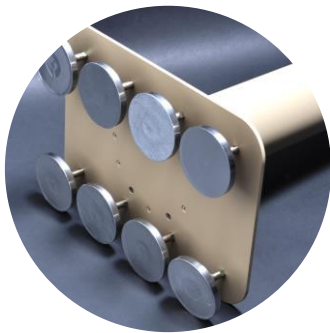
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SAS-500 SERIES JAMMING ANTENNA



The **SAS-500** series features broadband monopole antennas designed for Jamming. These antennas exhibit exceptional gain in an omni-directional pattern. They are designed with compliance to the strictest military specifications. They are mounted in a sealed dielectric radome to offer mechanical stability and isolation from environmental hazards. This antenna also offers low VSWR. The SAS-500 comes with magnetic mount for rapid installation on a variety of vehicles. The antenna is also available with a spring base with the NATO bolt pattern.

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Revised October 2020

FEATURES

- Lightweight
- Broadband
- Available in Desert Tan, OD Green, and White
- Made in the USA 

Specifications

Polarization	Linear Vertical
Impedance	50 Ω
Pattern	Omni-Directional in Azimuth
Operating Temperature	-20° to 70° C
Storage Temperature	-30° to 85° C
Shock Handling	20 G

Configurations

	SAS-500	SAS-5006	SAS-524
Antenna Gain	50 to 500 MHz: -2 dBi Nominal	50 to 500 MHz: -2 dBi Nominal 2.5 to 6 GHz: 1 dBi Nominal	50 to 500 MHz: -2 dBi Nominal 800 to 2500 MHz: 2 dBi Nominal
Frequency	20 to 800 MHz	20 to 800 MHz 2.5 to 6 GHz	20 to 800 MHz 800 to 2500 MHz
VSWR	3:1 Nominal	20 to 500 MHz: 3.0:1 Nominal 2.5 to 6 GHz: 2.0:1 Nominal	50 to 500 MHz: 3.0:1 Nominal 800 to 2500 MHz: 2.0:1 Nominal
Power Handling	100 W CW; 250 W Peak	20 to 800 MHz: 100 W CW 2.5 to 6 GHz: 50 W CW	20 to 800 MHz: 100 W CW 800 to 2500 MHz: 50 W CW SAS-524H option: 400 W CW
Antenna Connectors	N Female	Two N-Type Female	Two N-Type Female
Extended Dimensions	4" Diameter x 39" Tall	4" Diameter x 58" Height	4" Diameter x 62" Height
Weight	16 lbs with Magnetic Mount	16 lbs with Dual Spring Mount	18 lbs with Dual Spring Mount
Mounting	Magnetic mount standard spring; Spring base/NATO mount optional	ARA Dual Spring base with NATO bolt pattern.	ARA Dual Spring base with NATO bolt pattern.

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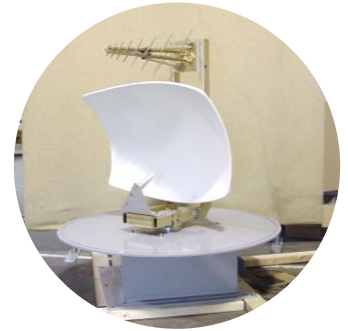
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SAS-0518 SERIES



The **SAS-0518** Series features broadband Direction-Finding systems designed for military and security signal surveillance applications on shipboard platforms.

The system has a low band log-periodic antenna and a high band shaped fan beam reflector antenna. An azimuth positioner rotates at 200 RPM to provide fast signal updates. The ACU-3 series Controller and cable set make a complete unit that will send the received RF signals to your box for analysis.

An optional SAS-0518-C3275 configuration has a 0.5 to 18GHz slant omni antenna integral to the top of the radome. All RF signals are routed through to the fixed base plate.

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Revised October 2020

FEATURES

- Positioner Unit Tested for Shipboard Above-Deck Applications
- Optional LNAs, Bypass Switches, Limiters, and Filters are available.
- Available in Ship Gray, Desert Tan, OD Green, White
- Weight 290 to 315 lbs
- Made in the USA

Specifications		
	SAS-0518	SAS-0518-C3275
Antenna Gain	Low Band: 6 to 9 dBi High Band: 9 to 20 dBi	Low Band: 6 to 9 dBi High Band: 9 to 20 dBi Omni: 0 dBi Nominal
Polarization	Slant 45° Linear	Slant 45° Linear (Omni and Directional)
Extended Dimensions	38" Diameter x 55" Tall	38" Diameter x 73" Tall
Weight	290 lbs	315 lbs
Amplifier Gain, NF	29 dB Min Gain; 3.5 dB N.F.	
Frequency	Low Band: 500 to 2000 MHz High Band: 2 to 18 GHz	
VSWR	2.5:1 Max	
Impedance	50 Ω	
Az Beamwidth (3 dB)	Low Band: < 70° High Band: < 20°	
Operating Temperature	-10° to 50° C	
Storage Temperature	-40° to 85° C	
Range of Motion/Speed	Continuous Azimuth up to 200 RPM	
Antenna Connectors	Two N-Type Female	

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Spiral Antenna Series

ARA's Spiral series antennas are large bandwidth, circularly polarized antennas with peak radiation patterns perpendicular to the plane of the spiral. The larger half-power bandwidth of these antennas makes them a good choice for airborne Electronic Warfare (EW) applications such as Radar Warning Receivers, Direction Finding, and Interferometry Systems. In addition, these antennas are used for sensing applications, where very wideband antennas with smaller footprints are ideal. Other applications of spiral antennas include GPS applications, where it is advantageous to have Right Hand Circularly Polarized (RHCP) antennas.

The antennas are available in right-hand circular polarization (RHCP) or left-hand circular polarization (LHCP). ARA also offers these antennas in multi-channel configurations to support amplitude and phase matched requirements for Interferometry sub-systems and applications. For more details on configurations and applications, please contact us.

Antenna Type	Spiral
Application	Direction Finding, Spectrum Management, Spectrum Operations
Frequency Band	Broadband, UHF (0.3 - 6 GHz), SHF (6 - 18 GHz), mmW (18 - 40 GHz)
Polarization	Left Hand Circular, Right Hand Circular



CSA-1840

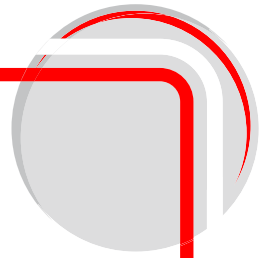
FEATURES

- Wideband Antenna
- Suitable for a variety of applications
- Consistent half-power beamwidth for broader quadrant coverage
- Low axial ratio
- Compact, Rugged, and Lightweight design for airborne applications
- Available in amplitude and phase matched sets
- RHCP or LHCP antennas are available
- White epoxy paint finish

Revised November 23, 2021



Spiral Antenna Series



Gain*	1 to 6.5 GHz: -2 to +2 dBic	1 to 2 GHz: -6 to 0 dBil 2 to 18 GHz: 0 to 2 dBil	2 to 4 GHz: -3 to 0 dBil typical 4 to 18 GHz: 0 to 1 dBil typical	2 dBic nominal	+2 to -2 dBic over the band
Frequency	500 MHz to 6.5 GHz	1 to 18 GHz	2 to 18 GHz	6 to 18 GHz	18 to 40 GHz
VSWR* (Typical)	2.5:1	2.5:1	2.0:1	2.5:1	3.0:1
Axial Ratio*	< 3 dB at boresight < 7 dB over $\pm 60^\circ$ for 1 to 6.5 GHz	1 to 2 GHz: < 4 dB 2 to 12 GHz: < 2 dB 12 to 18 GHz: < 3 dB	45° from Major Lobe 3 dB Maximum	< 3 dB at boresight < 6 dB over $\pm 60^\circ$	< 3 dB at boresight < 6 dB over $\pm 60^\circ$
Polarization	LHCP or RHCP	LHCP or RHCP	LHCP or RHCP	LHCP or RHCP	LHCP or RHCP
Impedence	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Patterns	Directional Beam	Directional Beam	Directional Beam	Directional Beam	Directional Beam
3 dB Beamwidth (Nominal)	60° to 90°	60° to 90°	60° to 90°	60° to 90°	60° to 90°
Power Handling	1 W CW	1 W CW	1 W CW	1 W CW	1 W CW
Antenna Connectors	SMA Female	SMA Female	SMA Female	SMA Female	2.92 mm Female Adapter
Dimensions (with Connectors)	4.5" x 4.5" x 2.4" (11.43 cm x 11.43 cm x 6.1 cm)	3.5" dia x 2.1" (8.9 cm dia x 5.3 cm)	2.6" dia x 2.0" (6.6 cm dia x 5.1 cm)	1" dia x 1.7" (2.5 cm dia x 4.32 cm)	0.64" dia x 1.55" (1.6 cm dia x 3.9 cm)
Weight	9.6 oz (273 g)	11 oz (300 g)	6 oz (170 g)	1.6 oz (45 g)	1.6 oz (45 g)
Operational Altitude	0 to 55,000 ft	NA	NA	0 to 55,000 ft	0 to 55,000 ft
Operational Temperature	-55° C to 85° C (-67° F to 185° F)	-55° C to 85° C (-67° F to 185° F)	-55° C to 85° C (-67° F to 185° F)	-55° C to 85° C (-67° F to 185° F)	-55° C to 85° C (-67° F to 185° F)
Storage Temperature	-55° C to 85° C (-67° F to 185° F)	-55° C to 85° C (-67° F to 185° F)	-55° C to 85° C (-67° F to 185° F)	-55° C to 85° C (-67° F to 185° F)	-55° C to 85° C (-67° F to 185° F)
Humidity Tolerance	MIL-STD-810-G	90% or less	90% or less	MIL-STD-810-G	MIL-STD-810-G
Durability Compliance	MIL-STD-810-G	N/A	N/A	MIL-STD-810-G	MIL-STD-810-G
Airborne Equipment Compliance	RTCA DO-160G	N/A	N/A	RTCA DO-160G	RTCA DO-160G

*The values given here are typical values. These can be customized for customer requirements.



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Telemetry Antenna Series

The telemetry antennas help ground engineers and control room personnel acquire airborne and ground telemetry data. With over 55 years of antenna design and manufacturing experience, the suite of telemetry antennas developed by ARA can operate across a wide range of frequencies and environmental conditions. The wide range of bandwidth, sizes, and mounting options make these antennas suitable for air platforms and ground stations. These antenna designs function efficiently to monitor system telemetry over long distances for drones and Unmanned Aerial Vehicle (UAV) systems.

Antenna Type	Blade, Helix, Horn, Panel, Patch, Quad Helix, Reflector
Application	Military Communications, UAV / Robotics
Frequency Band	L (1 - 2 GHz), S (2 - 4 GHz), C (4 - 8 GHz), Ku (12 - 18 GHz)
Polarization	Circular, Dual Circular, Dual Linear, Left Hand Circular, Linear Adjustable, Linear Vertical, Manually Switchable Circular, Right Hand Circular, Vertical



9525 Antenna Model
Frequency Range: 1.5 - 2.5 GHz

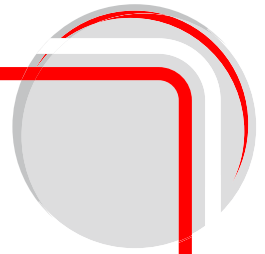
FEATURES

- Rugged Design
- Superior Performance
- Proven Endurance
- Made in the USA

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Telemetry Antenna Series



Ground Models

Model	Frequency (GHz)	Gain	VSWR Nominal	Axial Ratio	Beamwidth at Midband	Polarization	Power Handling	Dimensions	Antenna Type
0301-800	1.4 - 2.4	22.7 - 26.0 dBic	1.4:1	2.0 dB	8.4° Nominal	Dual Circular	50 W	50" x 29"	4ft Reflector
	1.5 - 2.5	18.3 dBi @ 1.7 GHz	1.9:1	-	17° Nominal	Dual Linear	50 W	24.12" x 12.46"	2ft Reflector
9525-830	1.5 - 2.5	18.3 dBic @ 1.7 GHz	1.5:1	2.0 dB	17° Nominal	Dual Circular	50 W	24.12" x 14.65"	2ft Reflector
	1.5 - 2.5	18.3 dBi @ 1.7 GHz	1.9:1	-	17° Nominal	Dual Linear	50 W	24.12" x 10.9"	2ft Reflector
9269-800	1.69 - 1.70	31.5 dBic	1.49:1	2.0 dB	4.5°	LHCP Feed RHCP System	60 W CW	96" x 32 1/4"	8ft Reflector
	2.2 - 2.3	10 dBic	1.8:1	2.5 dB	42°	RHCP	20 W	5" x 10.125"	Helix
9385-800	2.2 - 2.3	44 dBic	1.43:1	<1 dB	25°	RHCP	500 W	57 3/8" x 20"	10m Reflector
	L: 1.1 - 1.2 P: 2.3 - 2.8	L: 31.3 dBic P: 16.4 dBic	L: 1.36:1 P: 1.44:1	L: 1.5 dB P: 2.0 dB	L: 3.65° P: 19°	RHCP	100 W	41" x 41" x 60"	5m Reflector
8955-800B	2.3 - 2.5	24.1 dBic	1.5:1	2.0 dB Max	8.5°	Manually Switchable, Circular	50 W	48" x 31"	4ft Reflector
	3.2 - 7.3	28 dBi	2.0:1	-	3.5°	Linear Vertical	50 W	48.41" x 34.33"	4ft Reflector
0101-800D	5.25 - 5.85	23 dBi	1.74:1	-	9°	Linear Vertical	20 W	12.97" x 12.97"	Panel
	5.4 - 5.9	17 dBi	1.8:1	-	E Plane = 86° H Plane = 5.4°	Linear Vertical	20 W	21.5" x 5.0" x .37"	Panel

Air Models

Model	Frequency (GHz)	Gain	VSWR Nominal	Axial Ratio	Beamwidth at Midband	Polarization	Power Handling	Dimensions	Antenna Type
9632-800	4.0 - 4.2	14.0 dBi	1.5:1	4 dB	30° Nominal	Vertical	20 W	9.25" x 6.00"	Panel
	4.4 - 5.85	15.5 dBic	1.7:1	2 dB	45° Elevation 10° Azimuth	RHCP	50 W	9.5" x 10.75" x 2.92"	Quad Helix
9731-800	4.75 - 5.475	25 dBi	2.0:1	-	9°	Vertical	20 W CW	20" x 12 5/16"	20" Reflector
	5.25 - 5.85	12 dBi	1.49:1	-	45° Elevation 30° Azimuth	Vertical	50 W	5.53" x 3.97"	Horn
9778-800	5.25 - 5.85	18.2 dBi	1.67:1	-	30° Elevation 10° Azimuth	Vertical	50 W	11" x 5 7/8" x 2 1/4"	Panel
	7.25 - 7.75	6.3 dBic	1.5:1	4 dB	75°, Omni	LHCP	50 W	3 1/16" x 1/4"	Patch
0307-800	7.3 - 8.4	7 dBic	1.43:1	4 dB	30° Nominal	RHCP	20 W	1.7" x 0.34"	Patch
	10.95 - 12.75	34.5 dBi Min	1.6:1	-	2.4° Nominal	Linear Adjustable	500 W CW	7.86" x 24.13	2 ft Reflector
9516-800	11.7 - 12.2	42.8 dBi	1.64:1	-	1.4° Nominal	Linear/ Circular-Adjustable	250 W	48" x 27 1/4"	4 ft Reflector
	14.0 - 14.5	-	1.5:1	-	1.6° Nominal	Linear Adjustable	250 W	40 1/4" x 16 13/16"	40" Reflector
0043-820	14.5 - 15.35	3 dBi	2.5:1	-	24° Omni	Vertical	50 W	1.38"	Blade



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TROPOSCATTER SERIES

Troposcatter is often used for radio communications, normally for over the horizon links when satellite links are marginal or unavailable. Although Troposcatter requires high power transmitters, sensitive receivers, and high-gain antennas, it provides a very convenient data transmission system for many radio communication applications.

ARA offers a wide variety of designs for high power, high efficiency feeds for Troposcatter applications. Angle Diversity Troposcatter feeds are a specialty of ARA and are used to add another order of diversity in addition to frequency, polarization, and space. This capability enhances link fade margins and minimizes error rates.

All Troposcatter feeds are tailored for optimum use in specified parabolic reflectors. For systems using coaxial transmission lines, optional waveguides to rigid coax adaptors can be supplied separately or integrated into the feeds.

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FEATURES

- Custom Designs
- High Efficiency
- High Power
- Reflectors – 8ft, 10ft, 12ft
- Beyond Line-of-Sight Communications
- Optimum Performance
- Made in the USA 

Model	Frequency	Polarization	Isolation	VSWR Nominal	Power Handling	RF Ports	Pressure Requirements	Dimensions
8875-800C	799 - 964 MHz	Dual Linear	Cross-pol ports: 30 dB	1.35:1	1 kW CW	EIA-7/8	1 PSIG Max	12" x 16 7/8"
8839-800C	1.7 - 2.1 GHz	Dual Orthogonal Linear	35 dB Min	1.35:1	2 kW	EIA-15/8	5 PSIG Max	5 1/2" x 2 1/4" x 21"
9938-800	1902 - 1970 MHz (side) 2146 - 2214 MHz (straight)	Dual Linear	-30 dB Min	1.25:1	2 kW CW	TNC-F	1/2 PSIG	11.5" x 11.5" x 25.58"
8447-804A	2.55 - 2.70 GHz	Dual Linear	37 dB Min	1.23:1	10 kW CW	UG-437A/U	5 PSIG	14" x 9.75" x 17"
8474-805D	4.4 - 5.0 GHz	Dual Linear	36 dB Min	1.35:1	5 kW CW Min	UG-407/U	2 PSI Max	6.1" x 9.18"
C2003-800A	4.4 - 5.0 GHz	Dual Linear	35 dB Nominal	1.3:1	5 kW CW	UG-1353/U	2 PSI	7.73" x 12.34" x 14.27"
C2002-850C	7.25 - 7.75 GHz	Dual Linear	35 dB Nominal	1.3:1	5 kW CW	UG-1359/U	2 PSI	4.93" x 7.48" x 8.32"

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UAV ANTENNA SERIES



More reliable Command and Control (C2) and data links are required as the use of Unmanned Aerial Vehicles (UAVs) is expected to continue growing with the deployment of expanding communication networks. These links are critical for both Terrestrial-Based Line-of-Sight (LOS) and in satellite communication links for Beyond LOS (BLOS) conditions.

ARA has extensive experience in the design and manufacture of antennas used in airborne environments. Our proven designs have tens of thousands of flight hours. This product line of antennas includes omnidirectional, directional, linear, and circularly polarized configurations for fixed-wing or rotor-wing airframes. It also includes products designed specifically for UAV applications, antennas to support airborne-to-satellite datalinks, and line-of-sight air-to-ground links. The ARA UAV product line is designed to have a smaller footprint with superior performance and ensured communications.

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FEATURES

- Rugged
- Lightweight
- Proven Flight Endurance
- High Gains, Small Volume
- Made in the USA 

C-Band Models					
	0043-850A	C1729-800	C2001-800X2	0043-830R	9766-800E
Frequency (GHz)	4.0 to 5.8	4.4 to 4.9	4.4 to 5.85	5.25 to 5.85	5.25 to 5.85
Type	Blade Omni	Blade Omni	Horn	Blade Omni	Horn
Gain	3 dBi	2.0 dBi	>15 dBi	3.0 dBi	>15 dBi
Power	20 W	20 W	Max 100 W	20 W	Max 100 W
Elevation	43°	43°	30°	30°	30°
Azimuth	Omni	Omni	30°	Omni	30°
Beamwidth at Midband			30° Nominal		30° Nominal
Sidelobe			15 dBi		15 dBi Nominal
Polarization	Vertical	Vertical	Vertical	Vertical	Vertical
Return Loss	15 dB	15 dB	12 dB	15 dB	14 dB
VSWR Nominal	1.4:1	1.4:1	1.6:1	1.4:1	1.5:1
Size	1.5" x 2.5" x 1.56"	1.5" x 2.5" x 4.75"	5.5" Max Diameter 5.8" Length	1.5" x 2.5" x 4.75"	5.5" Max Diameter 3.75" length

X-Band Models				
	9653-801	9767-800	9653-811	9769-810
Frequency (GHz)	7.25 to 7.75	7.25 to 7.75	7.9 to 8.4	7.9 to 8.4
Type	Bifilar, Helix Omni	Patch Omni	Bifilar, Helix Omni	Patch Omni
Gain	3.5 dBic	6.3 dBic Nominal	3.5 dBic	5.4 dBic Nominal
Power	150 Watts CW (Max)	20 W	150 Watts CW (Max)	20 W
Elevation	83° from Nadir	87°	83° from Nadir	75°
Azimuth	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional
Beamwidth at Midband				
Sidelobe				
Polarization	Right-Hand Circular	Left-Hand Circular	Left-Hand Circular	Right-Hand Circular
Return Loss	17 dB	17 dB	15 dB	11 dB
VSWR Nominal	1.3:1	1.3:1	1.4:1	1.7:1
Size	1.63" Diameter, 4" Length	3 1/16" Diameter	1.63" Diameter, 4" Length	3 1/16" Diameter

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FEATURES

- Rugged
- Lightweight
- Proven Flight Endurance
- High Gains, Small Volume
- Made in the USA 

K-Band Models

	0120-800	0043-800	C0939-800	0349-820	0349-835
Frequency (GHz)	14.5 to 15.35	14.5 to 15.35	14.5 to 15.35	20.1 to 21.1	29.9 to 30.9
Type	Reflector	Horn	Bi-Cone	Horn Omni	Horn Omni
Gain	38 dBi min	18 dBi	3.1 dBic	0 dBi	0 dBi
Power	50 W	20 W	20 W	10 W	10 W
Elevation	2° Nominal	30° Min	+/- 40°	60°	60°
Azimuth	2° Nominal	10° Min	Omnidirectional	Omnidirectional	Omnidirectional
Beamwidth at Midband	3° Vertical X 2° Horizontal Nominal				
Sidelobe	-19 dB (H-Plane) -26 dB (E-Plane)	-12 dB (H-Plane) -8 dB (E-Plane)			
Polarization	Vertical		Right-Hand Circular	Right-Hand Circular	Right-Hand Circular
Return Loss	12 dB	12 dB	13 dB	12 dB	12 dB
VSWR Nominal	1.6:1	1.6:1	1.5:1	1.6:1	1.6:1
Size	34.25" x 24.25"	5" x 3" x 3"	2.6" x 3.1"	3.6" x 4.1"	3.6" x 4.1"

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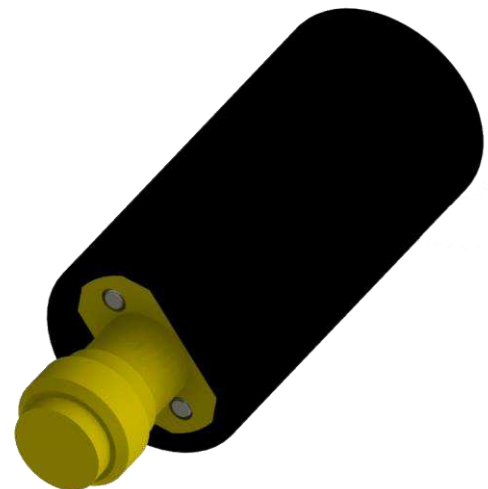


PRELIMINARY

VBC-2443-H

VERTICAL BICONE HANDHELD ANTENNA

The **VBC-2443-H** is a broadband omnidirectional antenna designed for handheld and tactical applications. The antenna supports 5G FR2 frequency bands and covers 23.25 GHz to 43.5 GHz. The small, form-factor is ideal for handheld or dismount radios as well as vehicle mounting. The ultra-compact, rugged design complies with MIL-STD-810G testing and can be equipped with any connector and comes with a 2.4mm Female, standard.



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FEATURES

- 5G FR2 frequency band
- Small size
- Rugged design
- Small form factor
- Made in the USA 

Specifications	
Gain	+0 dBi Nominal
Frequency	23.25 to 43.5 GHz
VSWR	2.5:1 Nominal
Polarization	Vertical
Power Handling	1 W CW
Patterns	Azimuth – Omni Elevation – 50° Nominal Beamwidth
Antenna Connector	2.4mm Female
Temperature	-30°C to +70°C
Weight	<5 oz
Height	1 in
Diameter Plus Connector	0.5 in



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VEHICULAR COMMUNICATION ANTENNA SERIES



The **Vehicular Communications Series** of antennas are multiband, omnidirectional, vehicular-mounted antennas. Their gain has been tuned for -10° to 10° in elevation and azimuthal variations are ± 1.5 dB. ARA can configure an antenna for specific frequency band requirements upon request.

These antennas bolt to a standard Universal Antenna Mount or a NATO standard 4.5-inch bolt circle found on most military vehicles. The N-Type Female connectors are typically located in the base of the antenna in the center of the mount.

This antenna series is typically environmentally qualified, Commercial Off the Shelf (COTS), TRL-8 (Technology Readiness Level) antenna. The rugged design is capable of passing the Oak Beam Test; this rigorous test involves 25 oak beam strikes to the midpoint of the antenna at 25 miles per hour. These antennas can be coated with a variety of materials including CARC Green/Tan or Flat Black paint.

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FEATURES

- Wide Variety of Frequency Bands
- Single and Multi-Port
- Superior Power Handling
- Universal or NATO Mount
- Rugged Design
- Multiple Finishes Available
- Made in the USA 

	Frequency Range	Gain	VSWR	Ports	Power Handling	Height	Diameter	Weight	Spring
ARA-252	225 Mhz to 2000 MHz	+2 dBi Typical	2.0:1 Nominal	1	125 W CW	45 in	1.75 in	6.75 lbs	>40,000 flexures at 60° 5,000 flexures at 90°
ARA-1220	1200 MHz to 2000 MHz	3.0 to 5.5 dBi	1.75:1 Typical 2.25:1 Max	1	100+ W CW	24 in	1.5 in	3.5 lbs	>40,000 flexures at 60° 4,000 flexures at 90°
ARA-2219C	225 MHz to 450 MHz	0 to 3 dBi	2.0:1 Typical 2.5:1 Max	2	150+ W CW	85 in	1.75 in	12 lbs	>40,000 flexures at 60° 4,000 flexures at 90°
	1200 MHz to 2000 MHz	1 to 5.5 dBi	1.75:1 Typical 2.25:1 Max						
ARA-2245	225 MHz to 450 MHz	0 to 3.5dBi	2.0:1 Typical 3.0:1 Max	1	150 W CW	63 in	1.625 in	5 ilbs	>40,000 flexures at 60° 4,000 flexures at 90°
ARA-2245A	225 MHz to 450 MHz	0.1 to 1 dBi	2.0:1 Typical 3.0:1 Max	1	300 W CW	14 in	2 in	2.5 lbs	>40,000 flexures at 60° 4,000 flexures at 90°
ARA-3545	350 MHz to 450 MHz	2 dBi Min	2.0:1 Typical 3.0:1 Max	1	100+ W CW	25 in	1.75 in	3 lbs	>40,000 flexures at 60° 3,000 flexures at 90°
ARA-3925	30 MHz to 88 MHz	-2 to +1 dBi	<3.5:1	2	100 W CW	58 in	1.625 in	10 lbs	>40,000 flexures at 60° 3,000 flexures at 90°
	225 MHz to 450 MHz	0 to 3.5 dBi	<2.5:1						
ARA-4060	400 MHz to 600 MHz	2 dBi Min	2.0:1 Typical	1	100+ W CW	21 in	1.75 in	3 lbs	>40,000 flexures at 60° 3,000 flexures at 90°
WDA-488	400 MHz to 900 MHz	4.5 to 6 dBi	2.0:1 Typical	1	175+ W CW	70 in	2.5 in	10 lbs	>40,000 flexures at 60° 4,000 flexures at 90°
WDA-3018	30 MHz to 88 MHz	-10 to -5 dBmp	3.0:1 Typical	3	100+ W CW	85 in	1.5 in	12 lbs	>40,000 flexures at 60° 4,000 flexures at 90°
	225 MHz to 450 MHz	1.5 to 4.0 dBi	3.0:1 Typical						
	1200 MHz to 2000 MHz	2.5 to 5.0 dBi	2.5:1 Typical						

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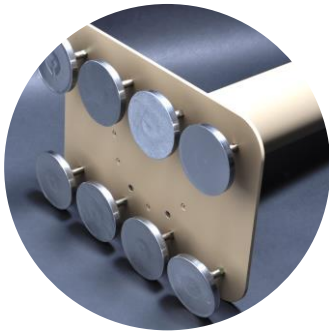
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VEHICULAR SPECTRUM OPERATIONS ANTENNA SERIES



The **Vehicular Spectrum Operations Series** of antennas are broadband monopoles designed to operate over a wide frequency range to support passive and active applications with low VSWR. These antennas exhibit exceptional gain in an omni-directional pattern. It is designed with compliance to the strictest military specifications, to include MIL-STD-801F environmental procedures.

This series of antennas are mounted in a sealed dielectric radome to offer mechanical stability and isolation from environmental hazards and offer superior power. The antennas are available with a magnetic mount for rapid installation on various vehicles or with a spring base featuring the NATO bolt pattern.

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Revised March 2021

FEATURES

- Wide Variety of Frequency Bands
- Single and Multi-Port
- Superior Power Handling
- Universal or NATO Mount
- Rugged Design
- Multiple Finishes Available
- Made in the USA 

	Frequency	Gain	VSWR	Power Handling	Ports	Height	Diameter	Weight
ARA-143	100 MHz to 500 MHz	-5 to -7 dBi	3.0:1	150 W CW	3	43 in	2.75 in	10 lbs
	400 MHz to 1000 MHz	-1 to 0 dBi	2.0:1					
	800 MHz to 3000 MHz	-2 dBi	2.5 to 3.0 :1	100 W CW				
ARA-256	20 MHz to 520 MHz	-25 dBi for 20 to 25 MHz -13 dBi for 25 to 50 MHz	4.5:1 for 20 to 25 MHz 3.5:1 for 25 to 512 MHz 2.5:1 for 500 to 1000 MHz 3.0:1 for 1 to 1.5 GHz 2.5:1 for 1.5 to 6 GHz	150 W CW;300W Peak	3	67 in	4 in	18 lbs
	500 MHz to 1000 MHz	-9.5 dBi for 50 to 120 MHz -4 dBi for 120 to 180 MHz -5 dBi for 180 to 430 MHz		150 W CW				
	1000 MHz to 6000 MHz	-4 dBi for 430 to 480 MHz -10 dBi for 480 to 512 MHz 0 dBi for 500 to 1000 MHz -2 dBi for 1 to 6 GHz		1-3 GHz: 100 W CW 3-6 GHz: 50 W CW				
ARA-276	20 MHz to 700 MHz	-2 dBi Nominal	< 500 MHz 3.0:1 > 500 MHz 2.0:1	< 700 MHz 100 W CW > 700 MHz 50 W CW	3	72 in	4 in	22 lbs
	700 MHz to 2500 MHz	2 dBi Nominal						
	2500 MHz to 6000 MHz	1 dBi Nominal						
ARA-1186	100 MHz to 560 MHz	-2 to -6 dBi	2.5 to 3.0:1	150 W CW	4	47 in	2.75 in	15 lbs
	400 MHz to 1000 MHz	-1 dBi	2.5:1	100 W CW				
	800 MHz to 3000 MHz	-2 dBi						
	2000 MHz to 6000 MHz	0 dBi		50 W CW				
ARA-2060	200 MHz to 512 MHz	1 dBi Nominal	2.5:1 Nominal	100 W CW	3	63 in	4 in	18 lbs
	500 MHz to 6000 MHz	-2 dBi Nominal	2.0:1 Nominal	50 W CW				
	500 MHz to 6000 MHz							
ARA-5800	20 MHz to 250 MHz	-12 to 0 dBi	< 3.0:1 on 95% of Band	150 W CW	3	52 in	4 in	15 lbs
	250 MHz to 1000 MHz	-4 to +2 dBi	< 2.5:1 on 80% of Band					
	1000 MHz to 3000 MHz	-2 to 2 dBi	< 2.0:1 on 80% of Band					
ARA-6060	600 MHz to 2700 MHz	0 dBi	< 2.5:1	100 W CW	2	12 in	3 in	6 lbs
	2400 MHz to 6000 MHz							
ARA-8060	800 MHz to 2600 MHz	8 to 14 dBi	3.0:1 Max	200 W CW, 400 W Peak	2	52.5" H x 17" W	N/A	18 lbs
	2400 MHz to 6000 MHz	0 dBi Nominal	2.5:1 Max	100 W CW				
SAS-326-10	30 to 2000 MHz	-22 to +1 dBi	2.0:1 Typical	1W to 10W	1	30.6 in	5.5 in	11 lbs
	2 GHz to 26 GHz	-1 to +3 dBi						
SAS-500	20 to 800 MHz	50 to 500 MHz: -2 dBi Nominal	3.0:1 Nominal	100 W CW; 250 W Peak	1	39 in	4 in	16 lbs
SAS-5006	20 to 800 MHz	50 to 500 MHz: -2 dBi Nominal	3.0:1 Nominal	100 W CW	2	58 in	4in	16 lbs
	2.5 to 6 GHz	1 dBi Nominal	2.0:1 Nominal	50 W CW				
SAS-524	20 to 800 MHz	50 to 500 MHz: -2 dBi Nominal	3.0:1 Nominal	100 W CW	2	62 in	4in	18 lbs
	800 to 2500 MHz	2 dBi Nominal	2.0:1 Nominal	50 W CW				

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WEATHER RADAR SERIES PRODUCT SPOTLIGHT



Understanding weather patterns is an important tool for public safety and agriculture to ensure that the proper steps are being taken before storms. Properly monitoring weather patterns helps with preparation to limit damage and administer the proper size of response needed during and after major weather events. This is critical for public safety.

ARA designs and manufactures a complete line of Weather RADAR antenna systems to support weather surveillance and doppler radar applications. These can locate and calculate a storm's motion and type by detecting rain droplets.

ARA antenna systems operate in S-band, C-band, X-band, Ku-band, and Ka-band and meet RADAR suppliers most stringent requirements. Antenna feeds for all bands and reflectors, measuring from 2 ft to 28 ft in diameter, provide the necessary specifications for the operation of a high-performance weather RADAR system.

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SEAVEY DIVISION



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Revised March 2021

FEATURES

- 2ft (0.6m) to 28ft (8.5m) antennas
- Dual Linear S, C, X, Ku and Ka Feeds
- Megawatt Power Handling
- Made in the USA

Model	Size	Frequency (GHz)	Polarization	Gain (dBi)	Description	Beamwidth at Midband	Band	VSWR Nominal	Side Lobe	Xpol
C0925-800C	1.2m (4ft)	13.91 ± 50 Mhz	Dual Linear Orthogonal	44	WR-75	1°	Ku	< 1.3:1	-25	>38
C0925-810C	28in	35.56 ± 50 Mhz	Dual Linear Orthogonal	44	WR-28	1°	Ka	< 1.3:1	-25	>32
C0920-830C	14ft	2.7 - 2.9	Dual Linear Orthogonal	38	WR-284	1.9°	S	1.38:1	-25	>40
C1055-800	7.3m (24ft)	2.7 - 3.0	Dual Linear	43	WR-284	< 1.2°	S	1.3:1	-27	>34
C1160-800	8.6m (28ft)	2.7 - 3.0	Dual Linear Orthogonal	44	WR-284	1°	S	1.3	-29	>32
C1438-800	6.1m (20ft)	3.5 - 3.6	Dual Linear	45	WR-229	< 1°	S	1.25:1	-27	>33
C1627-800	7m (23ft)	5.25 - 5.37	Dual Linear	47.5	WR-187	< 0.68°	C	1.25:1	-27	>35
AS-146-54	3.7m (12ft)	5.4 - 5.7	Dual Linear	44	WR-187	1.1°	C	1.5:1	-26	>32
C0920-800C	4.3m (14ft)	5.4 - 5.7	Single Linear	44	WR-187	< 1°	C	1.25:1	-26.5	>32
C1256-820	3.7m (12ft) 2pc design	5.4 - 5.8	Dual Linear	44	WR-187	< 1°	C	1.25:1	-30	>32
C1614-800	6.1m (20ft)	5.4 - 5.8	Dual Linear	47.5	WR-187	< 0.68°	C	1.25:1	-27	>32
C1605-800	2.4m (8ft)	5.42 - 5.825	Dual Linear	40	WR-187	< 1.7°	C	< 1.3:1	-27	35
C0729-810A	4.3m (14ft)	5.5 - 5.7	Dual Linear Orthogonal	44	WR-187	< 1.1°	C	1.25:1	-26.5	>35
C0861-800D	4.3m (14ft)	5.5 - 5.7	Dual Linear Orthogonal	45	WR-187	< 1°	C	1.25:1	-30	>35

This is not a comprehensive list. Please contact us to learn about additional offerings and customizations.

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C0861-810	4.3m (14ft)	5.5 - 5.7	Dual Linear	45	WR-187	< 1°	C	1.25:1	-28	>28
C0861-850	4.3m (14ft)	5.5 - 5.7	Single Linear	45	WR-187	< 1°	C	1.25:1	-30	>32
C1028-815	4.3m (14ft) Heavy Duty	5.6 - 5.8	Dual Linear Enhanced, No Radome Required	45	WR-187	< 1°	C	1.25:1	-28 (-30 @ 5.7)	45 @ 5.7
C0706-800A	2.4m (8ft)	9.2 - 9.4	Dual Linear	44	WR-90	1°	X	1.25:1	-26	>30
C0706-810C	2.4m (8ft)	9.2 - 9.4	Dual Linear	44	WR-90	1°	X	1.25:1	-27	>30
C1017-800	1m (39in)	9.3 - 9.5	Single Linear	36.5	WR-90	2°	X	1.25:1	-26	>32
C1017-820	1m (39in)	9.3 - 9.5	Dual Linear	36.5	WR-90	2°	X	1.25:1	-26	>32
C2013-800	1.5m (5ft)	9.3 - 9.5	Dual Linear	40	WR-90	1.5°	X	1.25:1	-25	35
C0824-800A	.6m (24in)	9.345	Dual Linear	32.5	WR-90	3.5°	X	1.25:1	-25	>30
C0824-810A	1.2m (4ft)	9.345	Dual Linear	38.5	WR-90	1.8°	X	1.25:1	-25	>32
C1258-810	16ft	9.4 - 9.6	Dual Linear Orthogonal	48	WR-90	0.5°	X	1.3:1	-28	>35
C0817-810A	1.8m (6ft)	9.4	Dual Linear	42	WR-90	1.4°	X	1.25:1	-25	>38
C0824-820C	1.2m (4ft)	9.55	Dual Linear	38.5	WR-90	1.8°	X	1.25:1	-25	>33
C0601-800	28in	35.55 - 35.95	Dual Linear	44	WR-28	1°	Ka	< 1.4:1	-25	>32

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