AK-40G
Antenna Kit
Operation Manual

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INTRODUCTION

Included equipment:

Model Number	Description	Frequency Range	Correction Factor
TSC-542	Transit Storage Case		
SAS-510-2	Log Periodic Antenna	290 MHz – 2000 MHz	14 to 32
SAS-542	Biconical Antenna	20 MHz – 330 MHz	9 to 23
SAS-550-1B	Active Monopole Antenna	9 KHz – 60 MHz	-1 to 3
SAS-560	Passive Loop Antenna	20 Hz – 2 MHz	18 to 15
SAS-571	Double Ridge Guide Horn Antenna	700 MHz – 18 GHz	22 to 45
SAS-574	Double Ridge Guide Horn Antenna	18 GHz – 40 GHz	40 to 41.5
BCP-610	Current Probe	20 Hz – 20 MHz	-65 to –28
BCP-611	Current Probe	10 KHz – 150 MHz	-25 to 5
SAC-18G-3	3 Meter N/N Cable, Low Loss	Up to 18 GHz	3.5 dB @ 18 GHz
SAC-40G-1.5	1.5 Meter 2.9mm/2.9mm Cable, Low loss	Up to 40 GHz	10.5 dB @ 40 GHz
ADP-202	N(f) to BNC(m) Adapter		
ADP-203	N(f) to SMA(m) Adapter		
ATU-510	Wood Tripod		
AEH-510	Azimuth and Elevation Head		
TCC-510	Tripod Carrying Case		
OPTIONAL EQUIPMENT			
PAM-0118P	Preamplifier	20 MHz – 18 GHz	37 dB Gain
SAC-18G-0.5	0.5 Meter N/N Cable, Low Loss	Up to 18 GHz	1.5 dB @ 18 GHz
PAM-1840	Preamplifier	18 GHz – 40 GHz	20 dB Gain
SAC-40G-0.5	0.5 Meter 2.9mm/2.9mm Cable, Low loss	Up to 40 GHz	4.5 dB @ 40 GHz

SAFETY PRECAUTIONS

This equipment is intended for general laboratory use in a wide variety of industrial and scientific applications and designed to be used in the process of generating, controlling and measuring high levels of electromagnetic Radio Frequency (RF) energy. It is the responsibility of the user to assure that the device is operated in a location which will control the radiated energy such that it will not cause injury and will not violate regulatory levels of electromagnetic interference. To reduce the risk of fire, electric shock and/or injury to persons, basic safety precautions should always be followed when using electrical devices, including the following:

1. **READ ALL INSTRUCTIONS BEFORE OPERATING THE ACTIVE MONOPOLE ANTENNA.**

2. Use the antenna only as specified.

3. Please dispose of batteries responsibly and in accordance with all applicable laws and regulations.

4. To protect against electric shock, do not immerse the power cord, power plug or Antenna in water or in any other liquid.

5. Do not operate the product with a damaged charger cord or charger plug or after the antenna malfunctions or has been damaged in any manner.

6. This is not intended for permanent outdoor use.

7. Do not allow the cord or the antenna to rest on or near hot surfaces such as a hot gas or electric burner or a heated oven.

8. Disconnect the charger from the active monopole when not in use and before user servicing and cleaning.

9. Do not use this product for anything other than its intended use.

RANGE OF ENVIRONMENTAL CONDITIONS

This equipment is designed to be safe under the following environmental conditions:

Indoor use

Altitude: up to 2 km

Temperature: 5° C to 40° C

Maximum relative humidity: 80% for temperatures up to 31° C. Decreasing linearly to 50% at 40° C

Pollution degree 2: Normally non-conductive with occasional condensation.

While the equipment will not cause hazardous condition over this environmental range, performance may vary.

SPECIFICATIONS

GENERAL DESCRIPTION

The A.H. Systems AK-40G antenna kit series consist of five E-field antennas, one magnetic loop antenna, and two current probes. Each of the antennas and probes are provided with calibrations when connected to a 50-ohm input receiver or spectrum analyzer.

Each of the E-field antennas mount directly to the tripod azimuth and elevation head. The azimuth and elevation head allows the operator to vary the antenna azimuth (direction) and to change the antenna polarity (vertical or horizontal).

Cables and an adapter are provided to connect each antenna and probe to either a BNC or N type connector on the receiver. Cable calibrations are supplied.

To obtain the field strength of the signal being measured, the operator must add the receiver reading in dBuV, the antenna factor in dB, and the cable attenuation in dB. This yields the field strength in dBuV/m. Calibrations for the E-field antennas are supplied at appropriate spacings (1, 3, and 10 meter) to comply with various specification requirements.

ANTENNA SPECIFICATIONS

SAS-510-2 Log Periodic Antenna specifications:

Frequency Range	290 MHz – 2 GHz
Antenna Factor	14 to 32 dB/m
Antenna Gain	6.5 dBi
Maximum Continuous Power	1000 Watts
Average Beamwidth	45°
Average Beamwidth (H-Field)	100°
Impedance (nominal)	50Ω
Average VSWR	1.45:1 typ. 2.2:1 max
Maximum Radiated Field	200 V/m
Connector	N-Type (female)
Mounting	1/4-20 (female)
Weight	1.4 lbs. *(0.64 kg)*
Size (L x W x H)	22.5" x 20.1" x 2.5” (*57.2 cm x 51cm x 6.3cm)*

SAS-542 Biconical Antenna specifications:

Frequency Range	20 MHz – 330 MHz
Antenna Factor	8.5 to 21 dB/m
Antenna Gain	-22 to 2.8 dBi
Impedance (nominal)	50Ω
Average VSWR	2.0:1 typ.
Maximum Continuous Power	1 Watts
Connector	N-Type (female)
Mounting	1/4-20 (female)
Weight	4.3 lbs. *(1.95 kg)*
Size (W x H)	52.75" x 29" *(134cm x 73.7cm)*

SAS-550-1B Active Monopole Antenna specifications:

Frequency Range ..... 9 kHz – 60 MHz
Antenna Factor ..... 0 dB/m
Flatness ..... +/- 0.5 dB from 20 kHz– 30 MHz
..... +/- 5 dB whole range
Sensitivity ..... 5 dBμV/m @ 10 kHz
.....-20 dBμV/m @ 1 MHz
Dynamic Range .....96 dB @ 10 kHz
..... 122 dB @ 1 MHz
Saturation..... 87 dBuV/m
Output Connector Type..... BNC(f)
Input Power..... 12 Vdc Battery
Weight..... 4.7 lbs. / 2.1 kg
Size (W x H x D) .....18" x 18" x 41" (46 cm x 46 cm x 104 cm)

SAS-560 Passive Loop Antenna specifications:

Frequency Range ..... 20 Hz – 2 MHz
Turns .....36 (7-41 Litz)
Resistance ..... 10 Ω, nominal
Inductance ..... 410 μH
Shielding ..... Electrostatic
Connector Type ..... BNC(f)
Weight .....0.2 lbs. (90 grams)
Loop Diameter .....5.25" *(13.3cm)*

SAS-571 Double Ridge Guide Horn Antenna specifications:

Frequency Range .....700 MHz - 18 GHz
Antenna Factor ..... 22 to 44 dB/m
Average Gain .....12 dBi
Maximum Continuos Power.....300 Watts
Peak Power.....500 Watts
Average Beamwidth (E-Field)..... 48°
Average Beamwidth (H-Field) ..... 30°
Impedance (nominal) ..... 50 Ω
Average VSWR.....1.5:1
Maximum Radiated Field: ..... 200 V/m
Connector: .....N-type (female)
Mounting ..... 1/4-20 (female)
Weight .....3.5 lbs. *(1.59 Kg)*
Size (W x H x D) ..... 11" x 5.6" x 9.6" *(28cm x 14.cm x 24.4cm)*

SAS-574 Double Ridge Guide Horn Antenna specifications:

Frequency Range ..... 18 - 40 GHz
Antenna Factor ..... 40 to 41 dB/m
Average Gain .....15 to 21 dBi
Maximum Continuos Power.....10 Watts
Maximum Radiated Field: ..... 150 V/m
Impedance (nominal) ..... 50 Ω
Average VSWR.....1.2:1
Connector: .....2.9mm (female)
Mounting ..... 1/4-20 (female)
Weight .....0.2 lbs. *(90 grams)*
Size (W x H x D) ..... 1.2" x 1.6" x 3.5" *(3cm x 4.1cm x 9.8cm)*

BCP-610 RF Current Probe specifications:

Frequency Range ..... 20 Hz – 20 MHz

Transfer Impedance	-63 to -28 dB ohms
Max Primary Current (DC – 60 Hz)	800 Amps
Max Primary Current (400 Hz)	400 Amps
Max Primary Current (CW)	220 Amps
Max Primary Current (Peak)	5,000 Amps
Output Connector Type	N-Type(f)
Weight	1.4 lbs. (0.65 kg)
Aperture	1.25" (3.2cm)

BCP-611 RF Current Probe specifications:

Frequency Range	10 kHz – 150 MHz
Transfer Impedance	-20 to +5 dB ohms
Max Primary Current (DC – 60 Hz)	800 Amps
Max Primary Current (400 Hz)	450 Amps
Max Primary Current (CW)	4 Amps
Max Primary Current (Peak)	100 Amps
Output Connector Type	BNC(f)
Weight	1.4 lbs. (0.65 kg)
Aperture	1.25" (3.2cm)

SAC-18G-3 Low-Loss 3 Meter N/N Cable specifications:

Frequency Range	DC – 18 GHz
Impedance	50 ohms
Capacitance	24 pF / ft.
Time Delay	1.2 nS / ft.
Velocity	84%
RF Leakage	> 100dB
Typical VSWR	1.4:1
Connector Type	Precision N(m)
Cable Size (O.D.)	0.310” *(7.87 mm)*
Weight	12.5 lbs. / 100 ft *(5.6 Kg / 30m)*
Minimum Bend Radius	2" *(5 cm)*

SAC-40G-1.5 Low-Loss 1.5 Meter N/N Cable specifications:

Frequency Range	DC – 43 GHz
Impedance	50 ohms
Capacitance	24 pF / ft.
Time Delay	1.2 nS / ft.
Velocity	84%
RF Leakage	> 100dB up to 18 GHz
	> 80dB to 40 GHz
Typical VSWR	< 1.4:1 to 18 GHz
	< 1.5:1 to 40 GHz
Connector Type	2.9mm (m)
Cable Size (O.D.)	0.145” *(3.68 mm)*
Weight	3 lbs. / 100 ft *(1.3 Kg / 30m)*
Minimum Bend Radius	0.5" *(1.27 cm)*

ATU-510 Wooden Tripod specifications:

Max Height	64” *(163 cm)*
Min Height	12” *(30.5 cm)*
Max Load	60 lbs. *(27.2 Kg)*
Folded Dimensions	40” x 6” x 6” *(101 x 15 x 15 cm)*
Weight	11.3 lbs. *(5.1 Kg)*

ASSEMBLY AND MOUNTING INSTRUCTIONS

E-FIELD ANTENNAS

SAS-510-2 Log Periodic Antenna 290 MHz - 2000 MHz

The log periodic antenna comes assembled and ready to use.

Mounting: Attach the antenna to the tripod azimuth and elevation head through the screw hole in the antenna base. Connect a cable between the antenna connector and the receiver. The log periodic beamwidth is 65 degrees and it should be pointed or aimed in the direction that the received signal is coming from.

SAS-542 Biconical Antenna 20 MHz - 330 MHz

The biconical antenna consists of the SAS-542 balun assembly, two folding biconical elements and a balun clamp.

Mounting: Attach the antenna balun clamp (ABC-B) to the top of the tripod with the ¼-20 thread. Insert the antenna balun into the clamp and secure. Screw the two biconical elements into the 'tee' end of the balun assembly. Open the antenna elements completely and secure in open position by tightening the knurled knobs in the element caps. Connect a cable between the antenna connector and the receiver. The biconical beam pattern is similar to a dipole response.

SAS-550-1B Active Monopole Antenna 10kHz - 60 MHz

The active monopole antenna consists of a ground plane upon which are mounted a preamplifier with internal rechargeable battery pack for battery operation, and a telescoping rod antenna.

Mounting: Mount the antenna on the tripod. Connect an external ground to the ground plane if called out in test specification. Attach the telescoping rod to the connector on the amplifier top and extend to desired length (typically 41” or 1 meter depending on test specification). Connect the output on amplifier side to the receiver using a cable. Apply power to the antenna by switching activating the power switch. If the Red LED does not illuminate then the antenna will require charging. The active monopole antenna is omni-directional.

SAS-571 Double Ridge Guide Horn Antenna 700MHz - 18 GHz
SAS-574 Double Ridge Guide Horn Antennas 18 GHz – 40 GHz

The SAS-574 horn antenna comes assembled and ready to use. The SAS-571 antenna mounting bracket is attached to the antenna backwards to protect the RF connector and fit in the carrying case. The bracket must be removed from the antenna, turned over (so that the bracket leg faces away from the antenna), and re-attached to the antenna. (The bracket is not needed for mounting if the tripod being used has an Azimuth/Elevation Head.)

Mounting: Attach the antenna to the tripod azimuth and elevation head through the hole on the antenna bottom or the hole in the mounting bracket. The ridge guides determine the antenna polarity: for horizontal polarity they should be parallel to the ground, for vertical polarity they should be

perpendicular to the ground. Connect a cable between the antenna connector and the receiver. NOTE: BE SURE TO USE A CABLE RATED FOR HIGH FREQUENCY WHEN OPERATING ABOVE 5 GHz (for example, the SAC-18G-3 or SAC-40G-1.5).

MAGNETIC LOOP ANTENNA

SAS-560 Magnetic Loop Antenna 20 Hz - 2 MHz

The loop antenna does not require any assembly.

Operation: The loop antenna is designed to be held by hand and moved around each surface if the EUT to measure magnetic radiation. Connect the antenna via a cable to a receiver with either a 50-ohm input or high impedance (10 K ohm or greater) input. Calibrations for both inputs are provided.

CURRENT PROBES

BCP-610 LF Current Probe 20 Hz - 20 MHz

BCP-611 HF/VHF Current Probe 10 kHz - 150 MHz

The current probes come ready for use.

Operation: The two current probes measure conducted emissions when clamped around a single conductor, cable or a bundle of conductors. Disconnect the probe latch Position the probe around the conductor and close the probe. Reconnect the probe latch to ensure that the probe is tightly closed. Connect the probe connector to the receiver with a cable. The probe calibrations supplied are into a 50-ohm receiver.

TRIPOD AND MOUNTING ADPTERS

ATU-510 Tripod

AEH-510 Azimuth and Elevation Head

The azimuth and elevation head (AEH-510) mounts to the tripod (ATU-510) top and allows the antennas to be rotated 360 degrees and tilted between horizontal and vertical polarization. The tripod and azimuth and elevation head come in their own carrying case. Each tripod leg is independently adjustable in angle and length to facilitate antenna height setting. The tripod legs have a rubber tip on one end for indoor or hard surface use, and a metal spike on the other end for outdoor soft surface (such as dirt) use.

TRANSIT STORAGE CASES

TCC-510 Tripod Carrying Case

TSC-542 Transit Storage Case

The antenna carrying case (TSC-542) prevents damage and loss of antennas when storing or transporting the antenna kit. The case is constructed of lightweight and durable polyethylene. Two case keys are provided with the case.

OPTIONAL EQUIPMENT

The AK-40G case comes with three additional cutouts for optional preamplifiers. In order to improve overall system sensitivity, the following equipment will be required:

- PAM-0118P with an SAC-18G-0.5
- PAM-1840 with an SAC-40G-0.5

PAM-0118P Preamplifier 20 MHz – 18 GHz

The preamplifier will increase the system sensitivity 37 dB and is recommend for the SAS-510-2, SAS-530,542 and SAS-571. An optional short length cable (SAC-18G-0.5), is required to connect the preamplifier to any 50-ohm receiver or spectrum analyzer.

SAC-18G-0.5 Low-Loss Cable up to 18 GHz

The Low-Loss, High Frequency cable is recommended for connecting the optional preamplifier to any 50-ohm receiver or spectrum analyzer. Our Low-Loss High-Frequency flexible cables are the preferred choice over standard cable types. With improved power handling, low VSWR, and high frequency capabilities, the Low-Loss cables can be made to your specified length and delivered in two days. The 0.5-meter SAC-18G-0.5 has a typical attenuation of 1.0 dB at 18GHz.

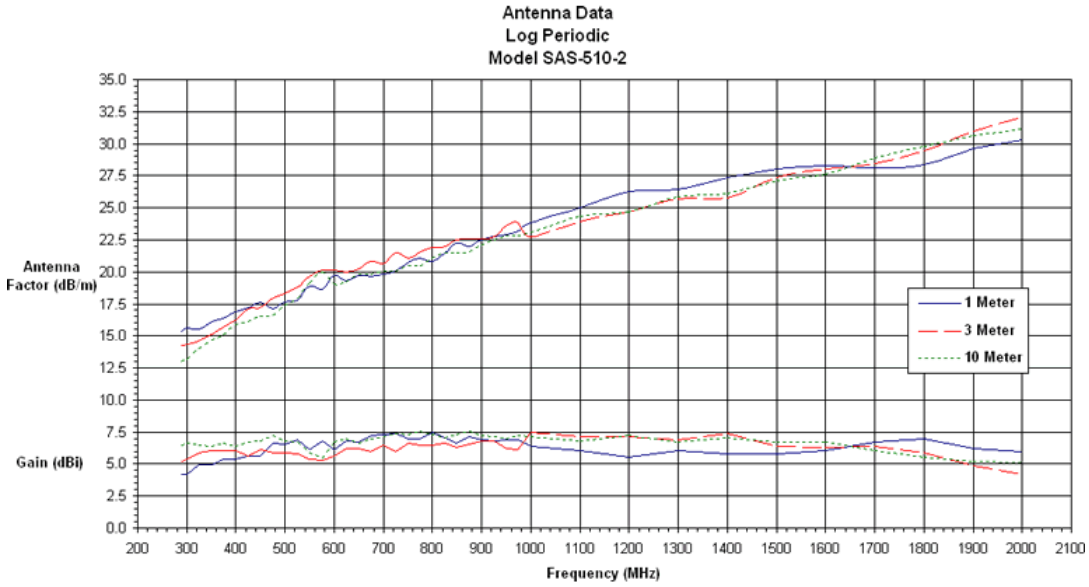
PAM-1840 Preamplifier 18 GHz – 40 GHz

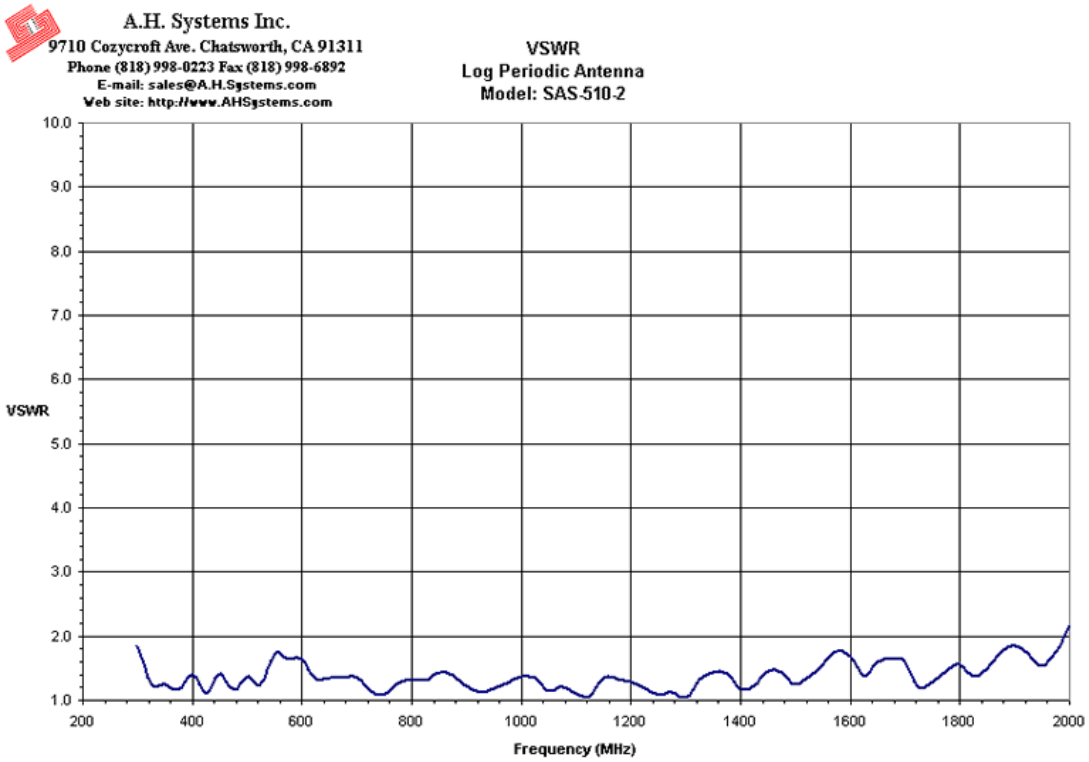
The preamplifier will increase the system sensitivity 20 dB and is recommend for the SAS-574. An optional short length cable (SAC-40G-0.5), is required to interconnect the preamplifier to any 50-ohm receiver or spectrum analyzer.

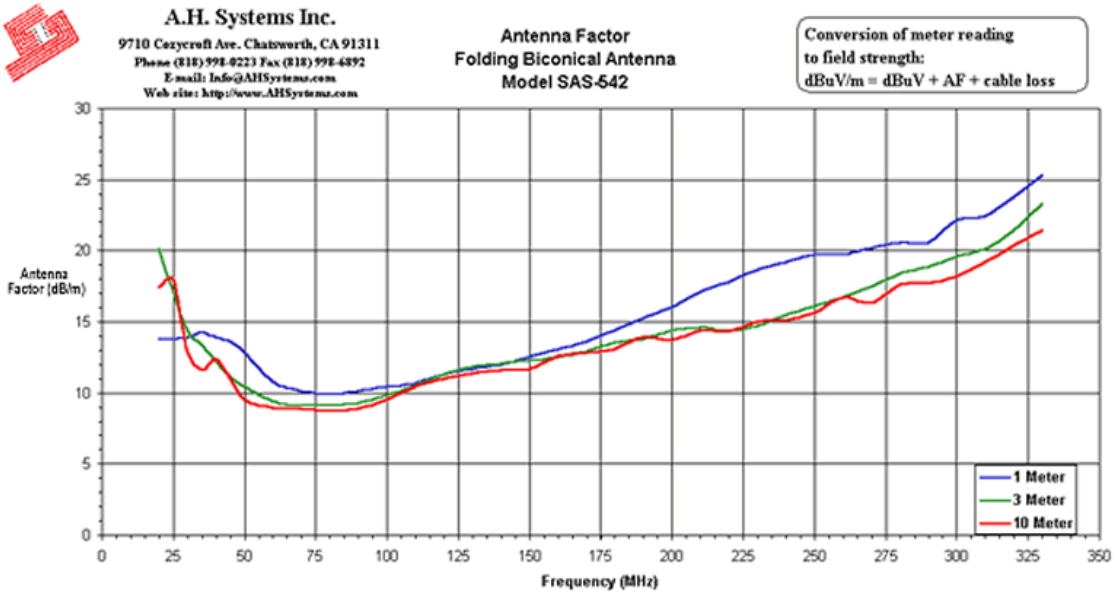
SAC-40G-0.5 Low-Loss Cable up to 40 GHz

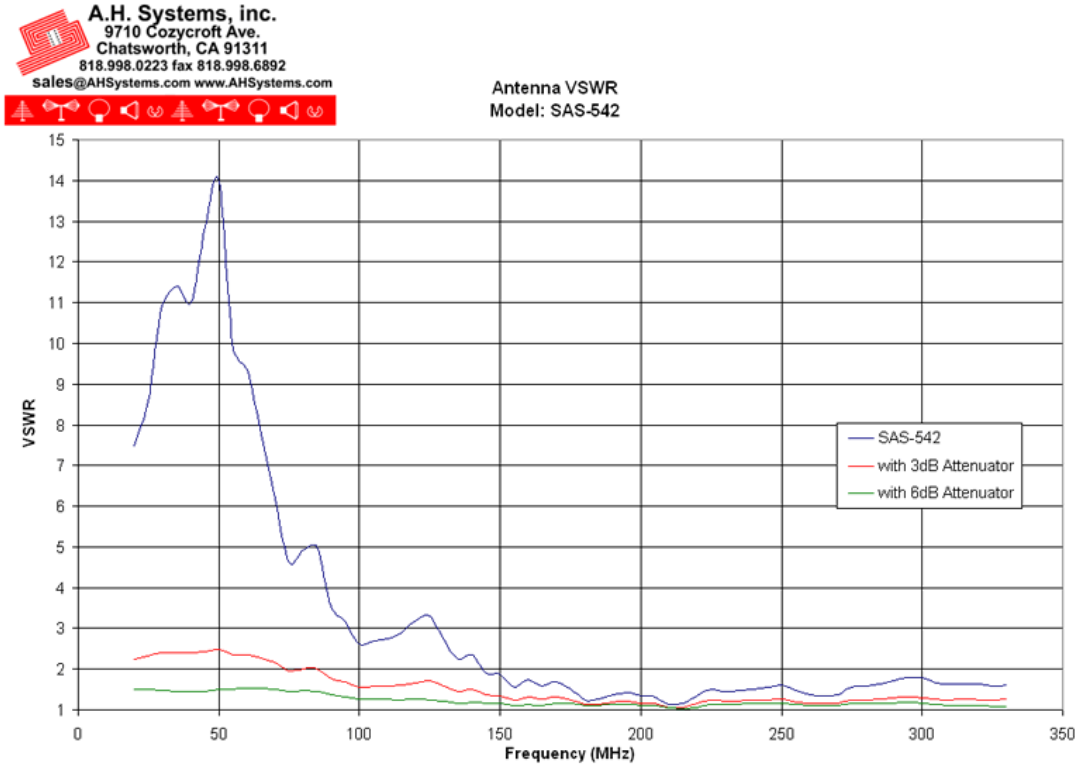
The Low-Loss, High Frequency cable is recommended for connecting the optional preamplifier to any 50-ohm receiver or spectrum analyzer. Our Low-Loss High-Frequency flexible cables are the preferred choice over standard cable types. With improved power handling, low VSWR, and high frequency capabilities, the Low-Loss cables can be made to your specified length and delivered in two days. The 0.5-meter SAC-40G-0.5 has a typical attenuation of 4.5 dB at 40GHz.

TYPICAL DATA






A.H. Systems Inc.
9710 Cozycroft Ave. Chatsworth, CA 91311
Phone (818) 998-0223 Fax (818) 998-6892
E-mail: Info@AHSystems.com
Web site: http://www.AHSystems.com
Antenna Factor
Folding Biconical Antenna
Model SAS-542
Conversion of meter reading
to field strength:
dBuV/m = dBuV + AF + cable loss
Antenna Factor (dB/m)
Frequency (MHz)
1 Meter
3 Meter
10 Meter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9710 Cozycroft Ave.
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818.998.0223 fax 818.998.6892
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Antenna VSWR
Model: SAS-542
VSWR
Frequency (MHz)
SAS-542
with 3dB Attenuator
with 6dB Attenuator

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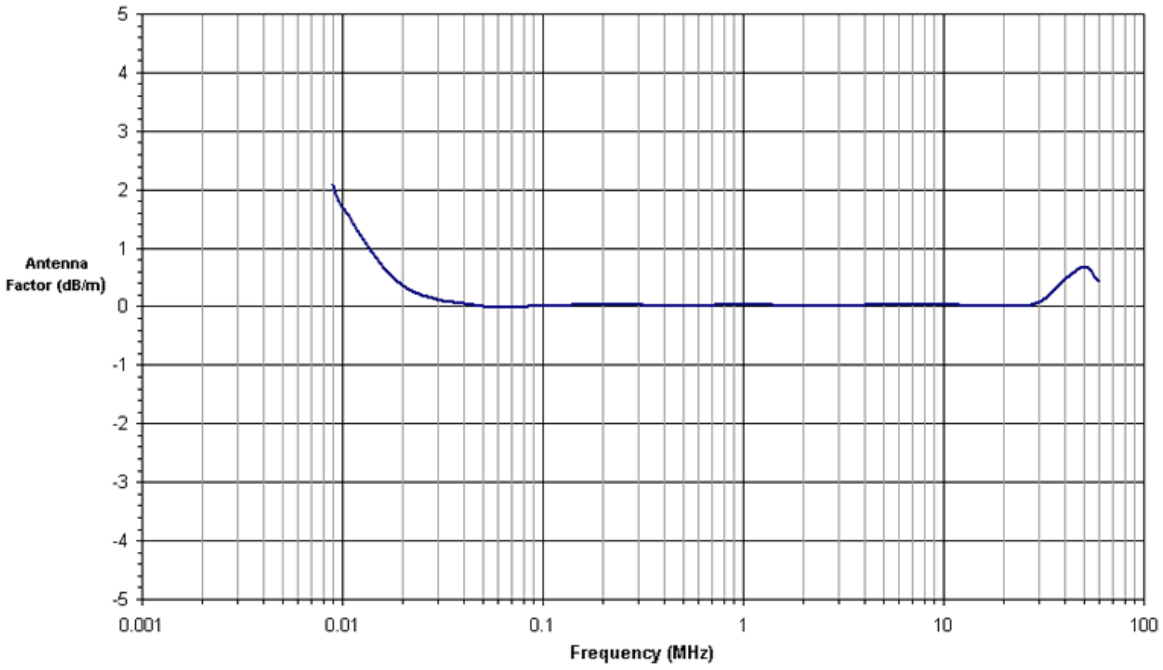
Active Monopole Antenna
Antenna Factor
Model SAS-550-1B

Active Monopole Conversion Formula:

dBµV/m = dBµV + AF(dB/m) + cable loss



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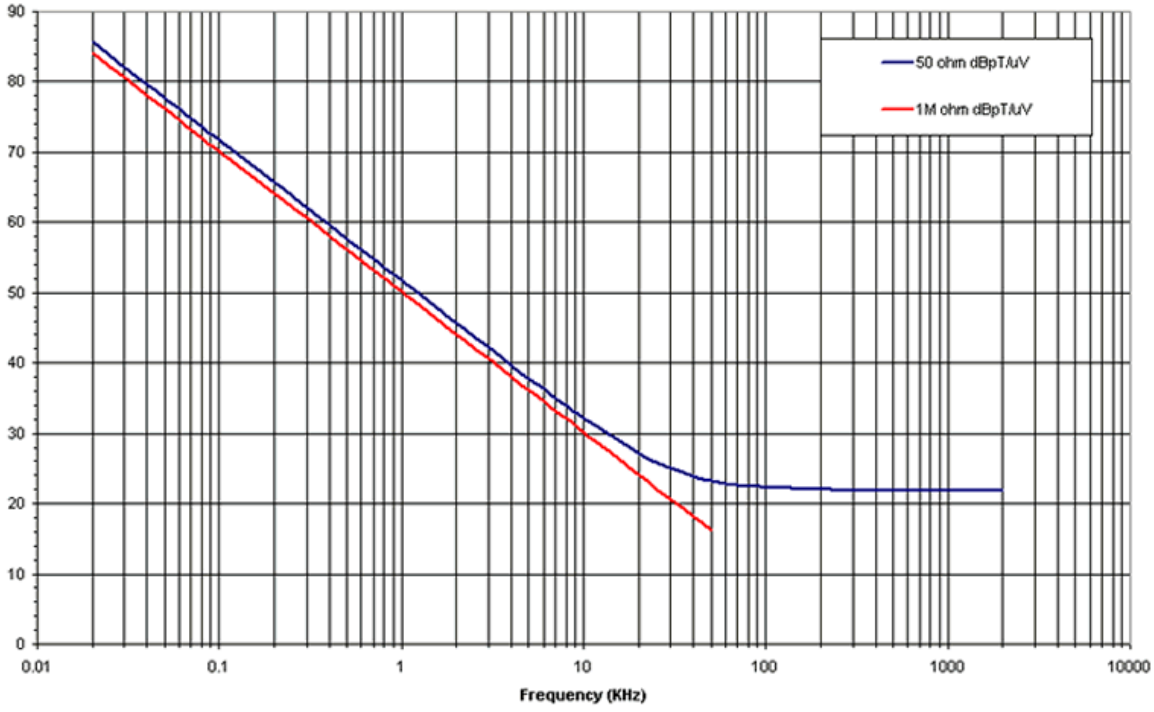
Correction Factor
Model: SAS-560
Loop Sensor



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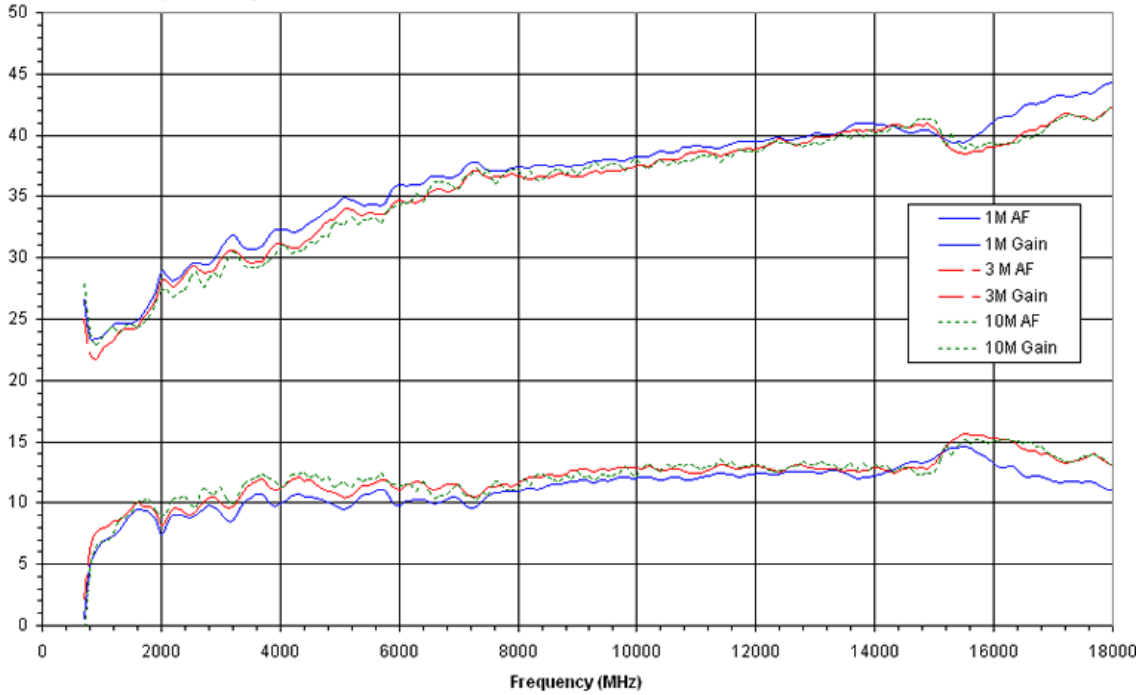
Double Ridge Guide
Horn Antenna
Model: SAS-571



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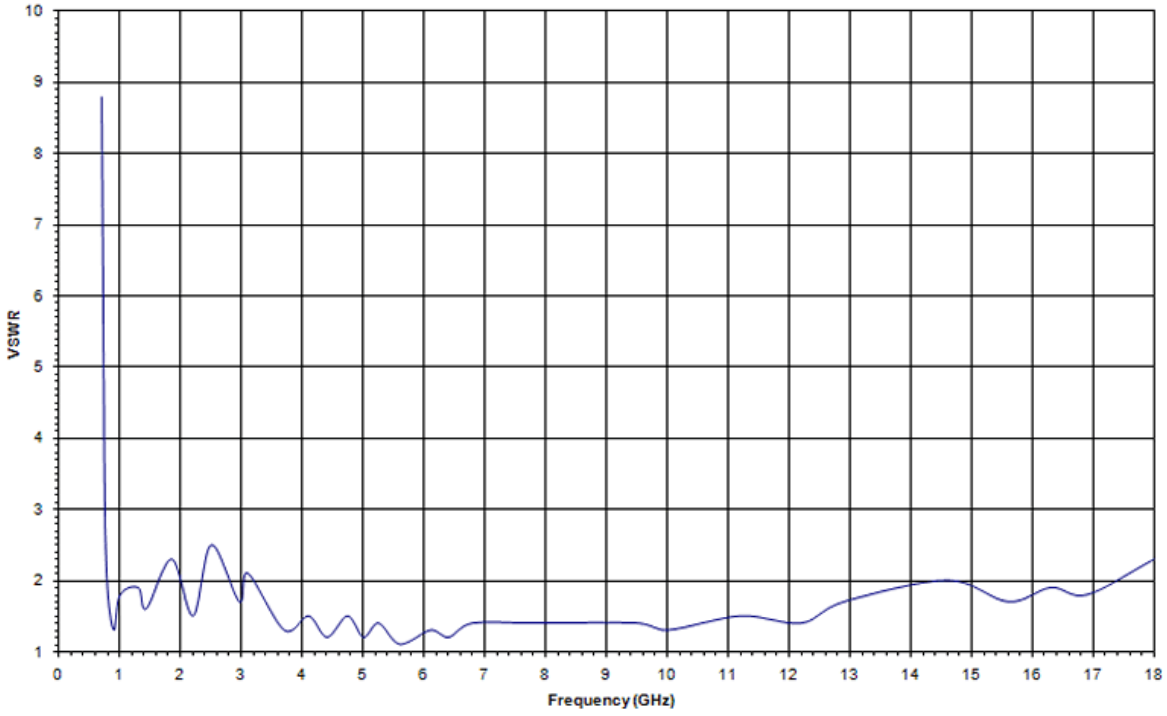
VSWR
Double Ridge Guide Horn Antenna
Model SAS-571



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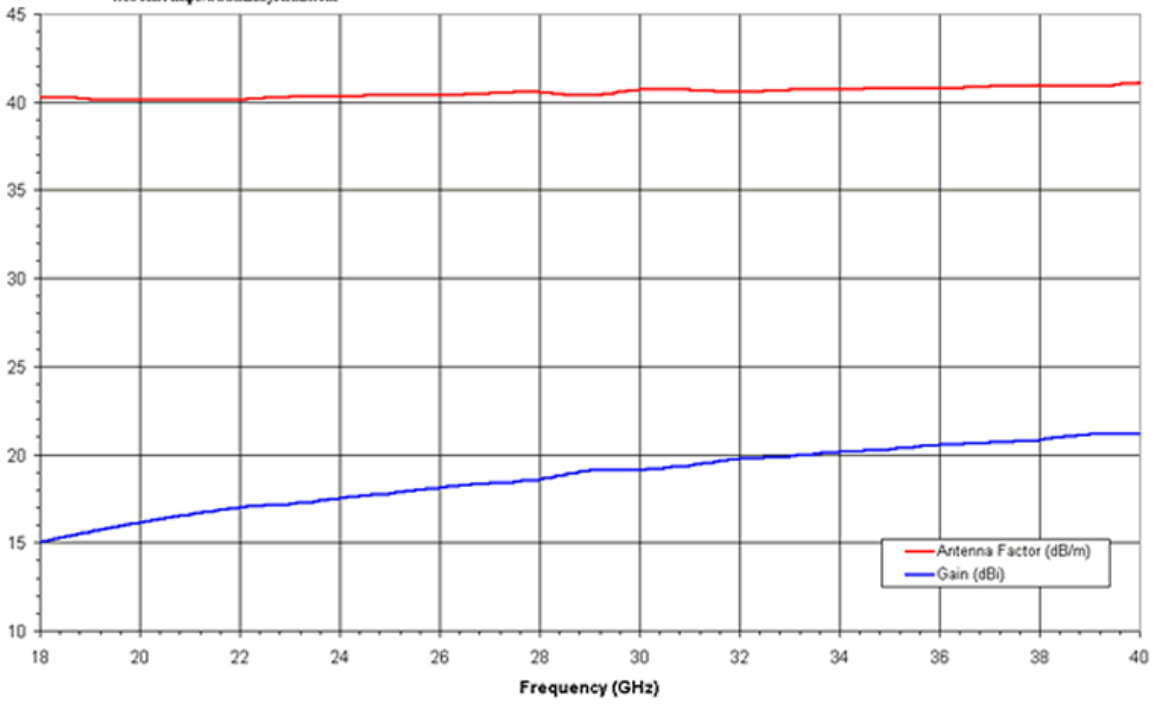
Model: SAS-574
Double Ridge Guide Horn Antenna



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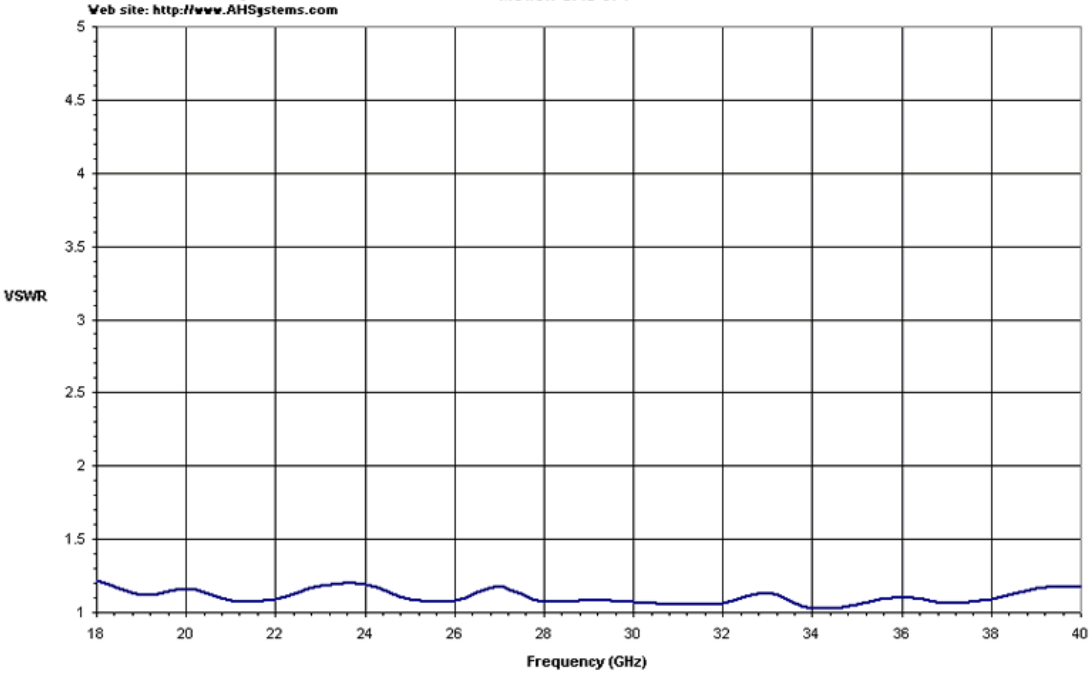
Antenna VSWR
Model: SAS-574



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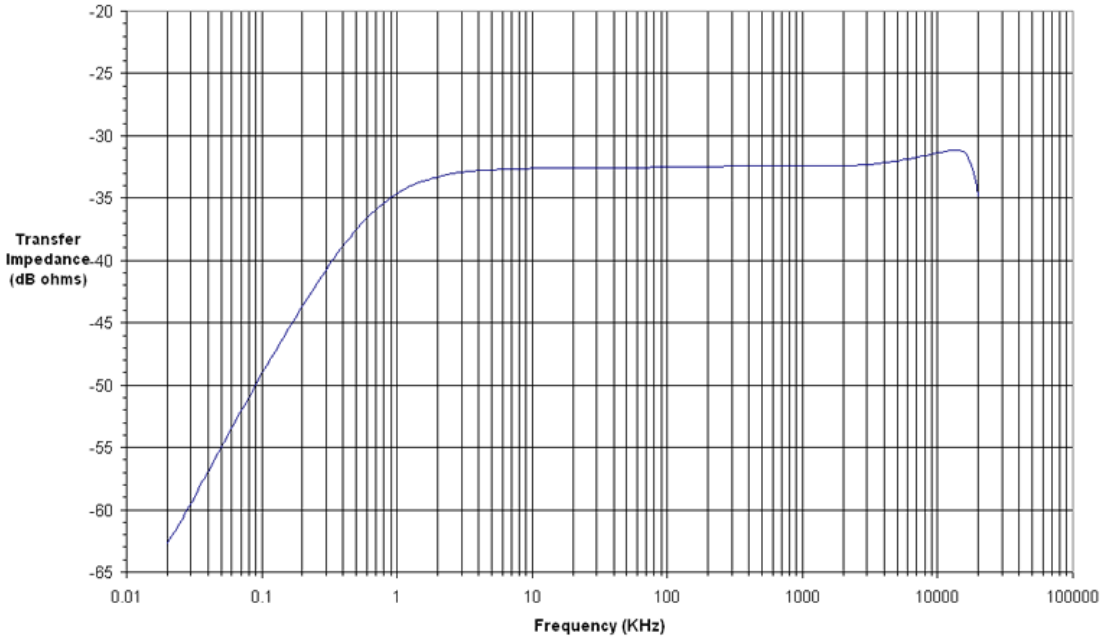
Transfer Impedance Conversion Formula:
dBμA = dBμV - dBΩ + cable loss

Calibration, Broadband Current Probe
Model Number: BCP-610



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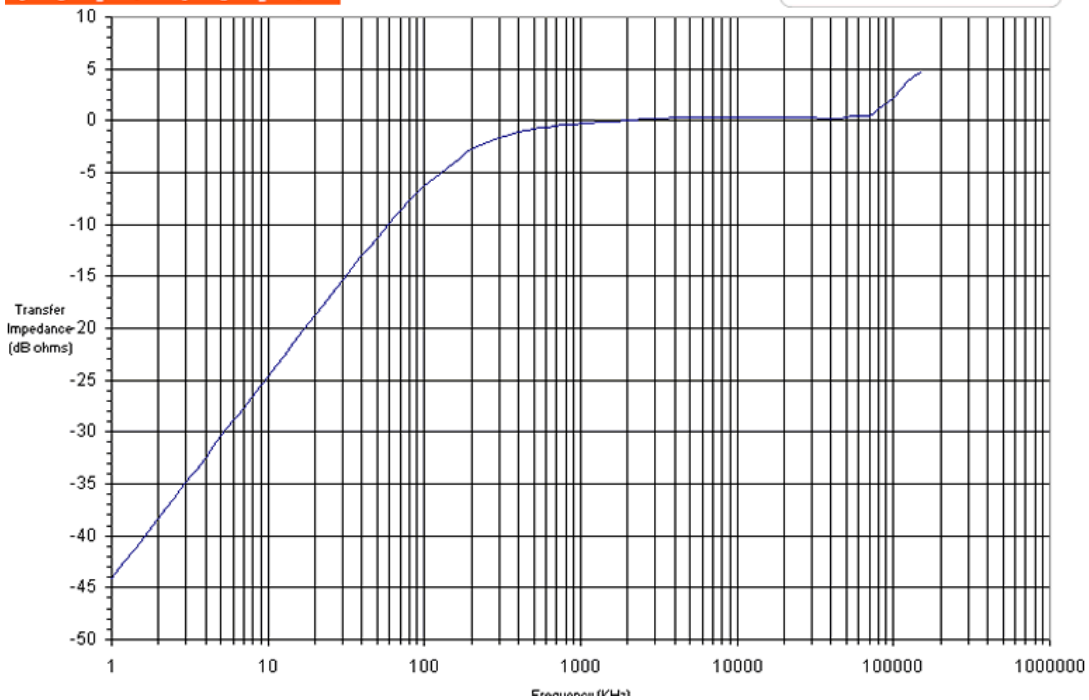
Broadband
Current Probe
Calibration
Model: BCP-611

Transfer Impedance Conversion Formula:
dBμA = dBμV - dBΩ + cable loss



ANTENNA FORMULAS AND CALCULATIONS

E-FIELD ANTENNAS

Add antenna factor plus cable loss to receiver reading in dBuV to convert to field strength in dBuV/meter.

Field Strength(dBuV/m) = SA(dBuV) + AF(dB/m) + cable loss (dB)

LOOP ANTENNA

dBpT = dBuV + dBpT/uV + Cable Loss
dBuV/m = dBpT + 49.5 dB

BROADBAND CURRENT PROBES

A specific Transfer Impedance Factor is associated with each frequency. This number is to be subtracted from the receiver reading in order to convert to dBuA

dBμA = dBμV (from Receiver) - Transfer Impedance (dBΩ) - cable Loss (dB)

EXAMPLE:
Assume that the frequency of interest is 80 KHz and we need to find the current at this frequency. Connect the probe per figure 1

Frequency: 80 KHz
Transfer Impedance: -2.76 dB ohms
Cable Loss: 0.1dB
Receiver Reading: -33.0dBuV

dBμA = dBμV (from Receiver) - Transfer Impedance (dBΩ) - cable Loss (dB)
dBμA = -33.0 - (-2.76) - - 0.1
dBμA = -30.14

TYPICAL CONVERSION FORMULAS

LOG -> LINEAR VOLTAGE

dBμV to Volts	$V = 10^{((dB\mu V - 120) / 20)}$
Volts to dBμV	$dB\mu V = 20 \log(V) + 120$
dBV to Volts	$V = 10^{(dBV / 20)}$
Volts to dBV	$dBV = 20\log(V)$
dBV to dBμV	$dB\mu V = dBV + 120$
dBμV to dBV	$dBV = dB\mu V - 120$

LOG -> LINEAR CURRENT

dBμA to uA	$\mu A = 10^{(dB\mu A / 20)}$
μA to dBμA	$dB\mu A = 20 \log(\mu A)$
dBA to A	$A = 10^{(dBA / 20)}$
A to dBA	$dBA = 20\log(A)$
dBA to dBμA	$dB\mu A = dBA + 120$
dBμA to dBA	$dBA = dB\mu A - 120$

LOG -> LINEAR POWER

dBm to Watts	$W = 10^{((dBm - 30)/10)}$
Watts to dBm	$dBm = 10\log(W) + 30$
dBW to Watts	$W = 10^{(dBW / 10)}$
Watts to dBW	$dBW = 10\log(W)$
dBW to dBm	$dBm = dBW + 30$
dBm to dBW	$dBW = dBm - 30$

TERM CONVERSIONS

dBm to dBμV	$dB\mu V = dBm + 107$ (50Ω) *$dB\mu V = dBm + 10\log(Z) + 90$*
dBμV to dBm	$dBm = dB\mu V - 107$ (50Ω) *$dBm = dB\mu V - 10\log(Z) - 90$*
dBm to dBμA	$dB\mu A = dBm - 73$ (50Ω) *$dB\mu A = dBm - 10\log(Z) + 90$*
dBμA to dBm	$dBm = dB\mu A + 73$ (50Ω) *$dBm = dB\mu A + 10\log(Z) - 90$*
dBμA to dBμV	$dB\mu V = dB\mu A + 34$ (50Ω) *$dB\mu V = dB\mu A + 20\log(Z)$*
dBμV to dBμA	$dB\mu A = dB\mu V - 34$ (50Ω) *$dB\mu A = dB\mu V - 20\log(Z)$*

FIELD STRENGTH & POWER DENSITY

dBμV/m to V/m	$V/m = 10^{(((dB\mu V/m) - 120) / 20)}$
V/m to dBμV/m	$dB\mu V/m = 20 \log(V/m) + 120$
dBμV/m to dBmW/m²	$dBmW/m^2 = dB\mu V/m - 115.8$
dBmW/m² to dBμV/m	$dB\mu V/m = dBmW/m^2 + 115.8$
dBμV/m to dBμA/m	$dB\mu A/m = dB\mu V/m - 51.5$
dBμA/m to dBμV/m	$dB\mu V/m = dB\mu A + 51.5$
dBμA/m to dBpT	$DBpT = dB\mu A/m + 2$
dBpT to dBμA/m	$dB\mu A/m = dBpT - 2$
W/m² to V/m	$V/m = SQRT(W/m^2 * 377)$
V/m to W/m²	$W/m^2 = (V/m)^2 / 377$
μT to A/m	$A/m = \mu T / 1.25$
A/m to μT	$\mu T = 1.25 * A/m$

E-FIELD ANTENNAS

Correction Factor	$dB\mu V/m = dB\mu V + AF$
Field Strength	$V/m = \sqrt{\frac{30 * watts * Gain_{numeric}}{meters}}$
Required Power	$Watts = \frac{(V/m * meters)^2}{30 * Gain_{numeric}}$

LOOP ANTENNAS

Correction Factors	$dB\mu A/m = dB\mu V + AF$
Assumed E-field for shielded loops	$dB\mu V/m = dB\mu A/m + 51.5$
	$dBpT = dB\mu V + dBpT/\mu V$

CURRENT PROBES

Correction Factor	$dB\mu A = dB\mu V - dB_{(ohm)}$

Power needed for injection probe given voltage(V) into 50Ω load and Probe Insertion Loss (I_L)

$$Watts = 10^{((I_L + 10\log(V^2/50))/10)}$$

MAINTENANCE

MAINTENANCE PROCEDURES

Proper antenna maintenance should include:

- Visual inspection of RF connectors
- Check for loose or missing hardware
- Check for corrosion near the joints

At least once a month it is a good idea to wipe down the antenna with a damp rag.

ANNUAL CALIBRATION

To ensure reliable and repeatable long-term performance, annual re-calibration of your antennas, preamplifiers and current probes by A.H. Systems experienced technicians is recommended. Our staff can calibrate almost any type or brand of antenna.

It is always up to the user to determine the appropriate interval for calibration certification based on the requirements of the end user's specific test/application. The calibration of EMC antennas is important for those conforming to compatibility standard. Radiated emissions testing for electromagnetic compatibility (EMC) requires the measurement of electric field (E-field) strength, which is compared with a limit level. The output voltage of an antenna is converted to E-field strength via its antenna factor, the measurement of which must include the uncertainty components related to that particular antenna, taking into consideration the environment in which the antenna is to be used for the testing. Most standards will specify the appropriate interval for re-calibration of your EMC antenna.

In some cases, these antennas are used for a manufacturer's pre-compliance testing, field monitoring, surveillance and/or other applications where the exact field intensity of the received signal is not of importance. For those customers a yearly re-calibration is not necessary, however it is recommended that an interval for maintenance be performed.

For more information about our calibration services or to place an order for antenna calibration visit our website at http://www.AHSystems.com
or call 1(818) 998-0223.

WARRANTY INFORMATION

A.H. Systems Inc., warrants that our Antennas, Sensors and Probes will be free from defects in materials and workmanship for a period of three (3) years. All other products delivered under contract will be warranted for a period of two (2) years. Damage caused by excessive signals at the product's input is not covered under the warranty. A.H. Systems' obligation under this warranty shall be limited to repairing or replacing, F.O.B. Chatsworth, California, each part of the product which is defective, provided that the buyer gives A.H. Systems notice of such defect within the warranty period commencing with the delivery of the product by A.H. Systems.

The remedy set forth herein shall be the only remedy available to the buyer, and in no event shall A.H. Systems be liable for direct, indirect, incidental or consequential damages.

This warranty shall not apply to any part of the product which, without fault of A.H. Systems has been subject to alteration, failure caused by a part not supplied by A.H. Systems, accident, fire or other casualty, negligence, misuse or normal wear of materials.

Except for the warranty set forth above, there are no other warranties, expressed or implied, with respect to the condition of the product or it's suitability for the use intended for them by the buyer.

For prompt service, please contact our service department for a Return Material Authorization Number before shipping equipment back to us.