Subject: **Base Station Antenna List**

Date: 11 Jun 2007 Document ref: 6RT118 01

1 Summary

The antennas listed below have been identified as being suitable for use as the radiating antenna structure for the AMPY base station radio system. As part of FCC authorisation, the antenna (or antennas) and the base station need to be authorised together (FCC Part 15.204). The antenna data sheets are appended to this document.

Antenna Type	Manufacturer	Model	Antenna Gain (dBi)
Vertical Collinear	Andrew Corporation	DB586-Y	8.1
Vertical Collinear	Kathrein-Scala	OGB6-915	8.1
Vertical Collinear	Jaybeam	7586 900	8.1
Vertical Collinear	Jaybeam	7556 915	7.5

2 FCC EIRP Limit

The antennas are vertical collinear antennas having an omni-directional radiation pattern and a nominal gain less than +9 dBi. The base station radio transmitter output power is less than +27 dBm. When used together, the FCC EIRP limit of +36 dBm under Part 15.247 is not exceeded.

Appendix A Andrew Corporation DB586-Y

ANDREW®

DB586-Y

Omni Antenna

Decibel®
Base Station Antennas

- Light weight, low profile omni, ideal for low to moderate gain applications
- Integral dual purpose mount allows top or side mounting
- Lightning resistant, with large diameter conductor extending top to bottom
- Invert mountable

ELECTRICAL

Frequency (MHz) :	890 - 960
Polarization :	Vertical
Gain (dBd/dBi) :	6/8.1
Azimuth BW (Deg.):	360
Elevation BW (Deg.):	18
Beam Tilt (Deg.):	0
VSWR :	<1.5:1
Max. Input Power (Watts) :	300
Impedance (Ohms) :	50
Lightning Protection :	DC Ground

MECHANICAL

Weight :	3.7 kg (8.2 lb)
Dimensions (LxOD) :	1,499 x 51 mm (59 x 2 in)
Max. Wind Area :	0.03 m² (0.3 ft²)
Max. Wind Load (@ 100 mph) :	89.4 N (20.1 lbf)
Max. Wind Speed :	201 km/h (125 mph)
Hardware Material :	Stainless Steel
Connector Type :	N - Type Female (1, Bottom)
Color :	Horizon Blue
Standard Mounting Hardware :	V-Bolts

Andrew Corporation
2601 Telecom Parkway
Richardson, Texas U.S.A 75082-3521
Tel: 214.631.0310

Fax: 214.631.4706
Toll Free Tel: 1.800.676.5342
Fax: 1.800.229.4706
www.andrew.com

* - Indicates Typical

3/7/2006

dbtech@andrew.com

Information correct at date of issue but may be subject to change without notice.

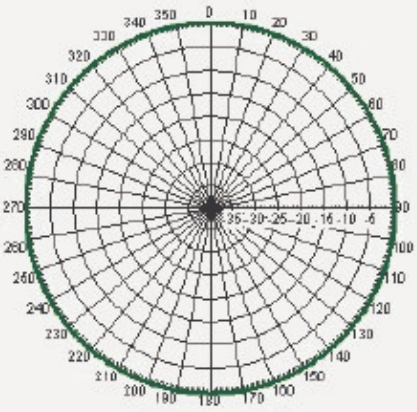
ANDREW

DB586-Y

Omni Antenna

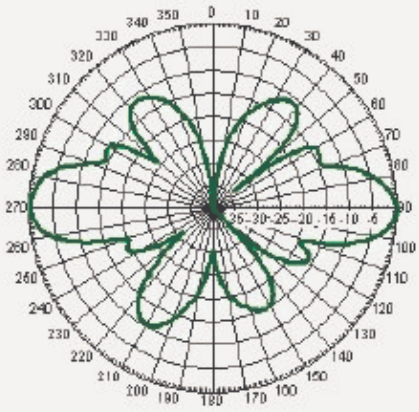
Decibel®
Base Station Antennas

AZIMUTH PATTERN



Freq: 903 MHz, Tilt: 0

ELEVATION PATTERN



Freq: 903 MHz, Tilt: 0

Andrew Corporation
2601 Telecom Parkway
Richardson, Texas U.S.A 75082-3521
Tel: 214.631.0310

Fax: 214.631.4706
Toll Free Tel: 1.800.676.5342
Fax: 1.800.229.4706
www.andrew.com

* - Indicates Typical

3/7/2006

dbtech@andrew.com

Information correct at date of issue but may be subject to change without notice.

Appendix B Kathrein-Scala OGB6-915

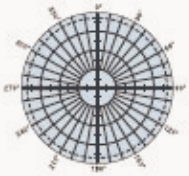
KATHREIN
SCALA DIVISION

OGB6-915

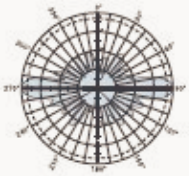
Omnidirectional Antenna

Kathrein Scala's omnidirectional antennas for wireless, paging, SMR and mobile applications are extremely robust, using the finest fiberglass, brass, and aluminum. Applicable mounting hardware is fabricated from stainless steel. Many models may be mounted inverted. Higher gain antennas can be provided with downtilt, as well.

- Wireless
- Paging
- SMR
- Land Mobile
- ISM



H-plane
Horizontal pattern
V-polarization



E-plane
Vertical pattern
V-polarization

Specifications:

Frequency range	870–960 MHz
Gain	6 dBd
Impedance	50 ohms
VSWR	< 1.5:1
Intermodulation (2x20w)	IM3: -150dBc
Polarization	Vertical
Maximum input power	500 watts (at 50°C)
H-plane beamwidth	Omni
E-plane beamwidth	13 degrees (half-power)
Connector	N or 7/16 DIN female
Weight	12 lb (5.4 kg)
Height	60.6 inches (1540 mm)
Radome diameter	2 inches (51 mm)
Wind survival rating	120 mph (200 kph)
Equivalent flat plate area	0.81 ft² (0.076 m²)
Shipping dimensions	70 x 6 x 5 inches (1778 x 153 x 127 mm)
Shipping weight	14 lb (6.4 kg)
Mounting	For masts of 2 to 3.75 inch (50 to 94 mm) OD.
See reverse for order information.	

*Mechanical design is based on environmental conditions as stipulated in EIA-222-F (June 1996) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.

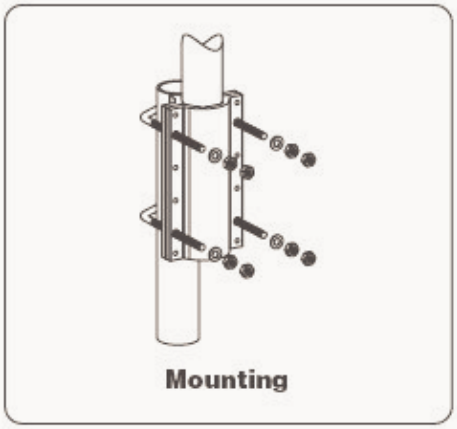
10535-B

Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com

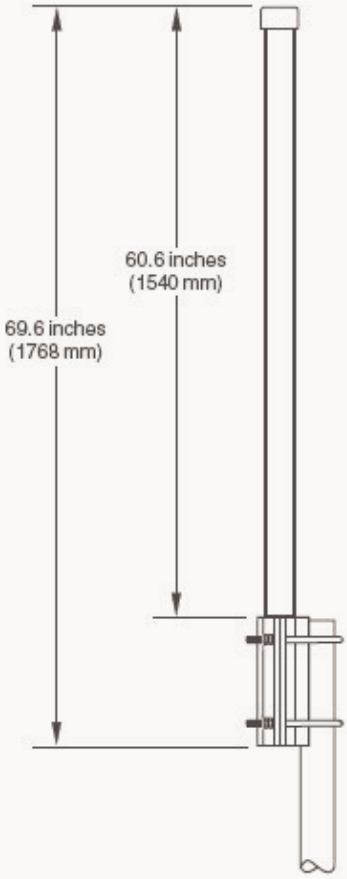
KATHREIN
SCALA DIVISION

OGB6-915

Omnidirectional Antenna



Mounting



Order Information:

Model	Description
OGB6-915N	Antenna with N connector 0° electrical downtilt
OGB6-915D	Antenna with 7/16 DIN connector 0° electrical downtilt

All specifications are subject to change without notice

Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com

Appendix C Jaybeam 7586 900

Type 7586
Base Station Antenna
Omnidirectional Colinear, GSM900 Band
Lightning Proof, Beam Tilt option.

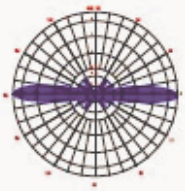
Jaybeam

Type Number: 7586 900

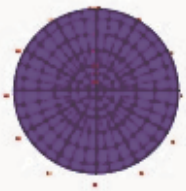
A high quality , robust antenna that offers **lightning protection**.
It offers wide bandwidths and due to its centre-fed dipole construction, carefully controlled radiation patterns, with the **option of beamtilt.**
Lightning proof design makes this antenna particularly suitable for exposed sites.
The high efficiency and generous power rating of the **7586** can offer many solutions for modern systems such as **GSM**

Electrical Characteristics	7586 900
Frequency	870-960 MHz
Gain (max)	8.15 dBi
Power	300 W CW
VSWR	< 1.5:1 typical
Polarisation	Linear , vertical
Horizontal Beamwidth	360°
Elevation Beamwidth	16° , -3 dB point
Lightning Protection	Will withstand pulse of 2.5 x 10^6 A^2s. All metal parts DC grounded
Impedance	50Ω
RF Termination	N female or 7/16 DIN female located in the antenna base.
Mechanical Characteristics	
Material	GRP shroud Colour Pale Grey RAL 7035 Aluminium mounting section and cap
Dimensions	1590 x 52Ø mm
Weight	3.7 kg
Maximum Rated windspeed	280 km/hr
Wind Loading	110 N maximum @ 160 km/hour

Typical Radiation Pattern (E Plane)

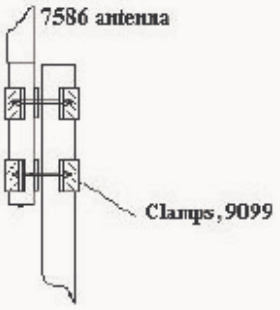


Typical Radiation Pattern (H Plane)



General Antenna Information

Normal mounting.



ASCII format radiation patterns are available upon request.

MATCH JAYBEAM reserve the right to modify or amend any antenna or specification without prior notice

Appendix D Jaybeam 7556 915

Type 7556 *
800-960MHz Band
6 dBd Gain Colinear
GSM, AMPS, CDMA, TETRA.

JAYBEAMWireless

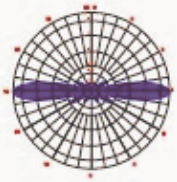
Type Number: 7556

This antenna is long established and is useful for Cellular repeaters and marine applications. It is also suitable for TETRA operators.
Highly efficient, it is easily mounted using the integrated clamp, onto vertical poles or horizontal rails.
It offers wide bandwidths and due to its centre-fed dipole construction, carefully controlled radiation pattern

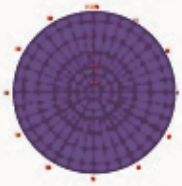
Electrical Characteristics	7556 ***
Frequency Versions	Bands within 806-960MHz (approx. 40MHz)
Gain (max)	7.5 dBi
Power	150 W
VSWR	< 1.5:1 typical
Polarisation	Linear , vertical
Horizontal Beamwidth	360°
Elevation Beamwidth	17° , -3 dB point
Lightning Protection	All metal parts DC grounded
Impedance	50Ω
RF Termination	N female fitted to 0.3m RG213 Coaxial Cable Downlead. (7/16 DIN Optional).

All antennas are DC Grounded

Typical Radiation Pattern (E Plane)



Typical Radiation Pattern (H Plane)



Mechanical Characteristics	
Material	GRP shroud Colour White Alochromed Aluminium mounting section with Stainless Steel Fixings
Length	1500mm
Weight	1.1 kg
Wind Surface area	0.0255m²
Wind Loading	35 N maximum @ 160 km/hour

General Antenna Information

Mounting: Integral mounting clamp allows fixing to 50mm diameter pipes or horizontal rail.

ASCII format radiation patterns are available upon request.

Jaybeam Wireless reserve the right to modify or amend any antenna or specification without prior notice

Jaybeam Wireless
Rutherford Drive, Park Farm South, Wellingborough,
Northamptonshire, NN8 6AX, England
Tel: +44 (0) 1933 408408 Fax: +44 (0) 1933 408404
WWW.jaybeamwireless.com