CSI Antenna Products

CSI Beacon Antennas

PRODUCTS

- **E-field Beacon Whip Antenna**
- **H-field Beacon Loop Antenna**
- **Combined GPS/Beacon Loop Antenna**
- **H-field Beacon Aircraft Antenna**
- **Antenna Signal Splitter**
- **Antenna Signal Combiner**
- **Various Mounts**

CSI augments its wide array of receiver products with a variety of antenna solutions, to support virtually any application. Our antenna lineup includes an E-field Whip antenna and a variety of H-field Loop antennas. Optional accessories include an Antenna Signal Splitter, Antenna Signal Combiner, and various mounts.

MBL-3 Beacon Loop Antenna

With excellent performance and smaller form factor, we are confident that the MBL-3 will receive the same enthusiasm as our previous antenna products. The MBL-3 accepts an input voltage between 4.9 and 13 VDC, supplied by a beacon receiver, to power a built-in low noise amplifier. It is tuned to receive DGPS beacon transmissions within the 283.5 to 325 kHz band.

The MBL-3 does not require a ground connection, as does a Whip antenna, simplifying installation where an adequate ground may be difficult to establish. Other advantages over a Whip antenna include more immunity to noise generated by Precipitation Static, and other forms of predominate E-field noise.

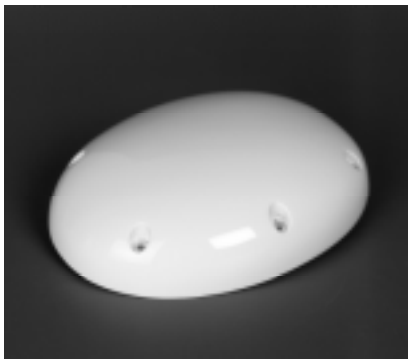
The MBL-3 enclosure is rugged and environmentally sealed, providing protection from the elements for years of trouble-free operation. It is easilymounted using 1-14-UNS threaded mount.

MGL-3 GPS/Beacon Loop Antenna

CSI also offers its new Loop antenna in combination with an L1 GPS patch antenna, encased within the same, environmentally sealed enclosure used by the MBL-3.

Similar to the MBL-3, this antenna is powered by an input voltage between 4.9 and 13 VDC, supplied by a combination GPS/beacon receiver. The MGL-3 antenna is available with a variety of GPS antenna gains.

An Antenna Signal Splitter is available to separate beacon and GPS signals for use with separate GPS and beacon receivers.



ABL-1 Beacon Aircraft Antenna

An aircraft beacon Loop antenna is also available that makes use of CSI's Loop antenna technology. The Loop is enclosed in a low profile, aerodynamic GRP Raydome that permits mounting on either the top or bottom of an aircraft's fuselage. It accepts an input voltage of 12 VDC from a beacon receiver to power its 34 dB gain low noise amplifier.

As the ABL-1 is a beacon Loop antenna, it does not require a ground connection, as does a Whip antenna. It has more immunity, than a Whip, to noise generated by Precipitation Static, and other predominate forms of E-field noise.

MBA-3 Beacon Whip Antenna

The CSI MBA-3 E-field Whip antenna is a low cost, active antenna used predominantly in the marine industry. It accepts 12 VDC from a beacon receiver to power its 20 dB gain low noise amplifier. The MBA-3 is band-pass filtered to receiver signals within the 283.5 to 325 kHz band common to DGPS beacon transmissions.

The MBA-3 is housed in a compact, one-piece, environmentally sealed enclosure with a standard 1-14-UNS marine mount. At approximately 14" in length, the MBA-3 is maller than many similar products. The MBA-3 antenna is complete with an antenna pigtail and ground wire, and does not require purchasing of additional parts. The MBA-3 requires a counterpoise ground connection for optimum reception.

An Antenna Signal Combiner is available that combines beacon and GPS signals into one input, for use with our combination GPS/beacon receiver products.

Antenna Signal Splitter

The Antenna Signal Splitter is used with the MGL-3 GPS/Beacon antenna and separate beacon and GPS receivers. It separates the common GPS and beacon signals from the MGL-3 into two outputs: one to the beacon receiver, and the other to the GPS receiver.

The beacon receiver provides the input power to the MGL-3, through the splitter. The Splitter DC-blocks the voltage from being applied to its GPS port, providing protection from an incompatible, externally applied voltage. The input voltage range of the Splitter matches that of the MGL-3.

Required antenna cables are included.

Antenna Signal Combiner

This product adds versatility to a combined GPS/beacon receiver that has one combined GPS/beacon antenna port, by allowing the GPS and beacon antenna to be installed in different locations. The Combiner accepts the two separate input signals, and combines them into a single output.

The Antenna Signal Combiner may be used with standard 5 VDC active GPS antennas and a beacon Whip or Loop antenna that can accept 12 VDC input.

Required antenna cables are included.

Warranty

CSI is committed to supporting its products and offers a one-year warranty on parts and labor on all purchases.

Contact CSI to discover how our antenna products can improve your application.

CSI Antenna Products

MBL-3 Beacon Loop Antenna

Operational Specifications

Frequency Range:	283.5 kHz to 325 kHz
LNA Gain:	34 dB

Power Input Specifications

Input Voltage:	4.9 - 13 VDC supplied by receiver
Input Current:	25 - 35 mA

Mechanical Specifications

Enclosure:	PVC plastic
Dimensions:	128 mm L x 128 mm W x 84 mm H (5.06” L x 5.06” W x 3.33” H)
Weight:	450 g (1.0 lb)
Mounting Thread:	1-14-UNS-2B
Connector:	TNC-S
Extension Cable:	RG-58

Environmental Specifications

Storage Temperature:	-40°C to 80°C
Operating Temperature:	-30°C to 70°C
Relative Humidity:	100% condensing

ABL-1 Beacon Aircraft Antenna

Operational Specifications

Frequency Range:	283.5 kHz to 325 kHz
LNA Gain:	34 dB

Power Input Specifications

Input Voltage:	12 VDC supplied by receiver
Input Current:	30 mA @ 12 VDC

Mechanical Specifications

Enclosure:	GRP raydome
Dimensions:	255 mm L x 171 mm W x 57 mm H (8.88” L x 6.75” W x 2.25” H)
Weight:	0.96 kg (2.16 lb)
Mounting Base:	6 threaded inserts through aluminum plate
Mounting Thread:	8-32 ½”
Connector:	TNC-S
Extension Cable:	RG-58

Environmental Specifications

Storage Temperature:	-40°C to 80°C
Operating Temperature:	-30°C to 70°C
Relative Humidity:	100% condensing

MGL-3 GPS/Beacon Loop Antenna

Operational Specifications

Frequency Range, Beacon:	283.5 kHz to 325 kHz
LNA Gain, Beacon:	34 dB
Frequency Range, GPS:	1.575 GHz (L1)
LNA Gain, GPS:	Various available

Power Input Specifications

Input Voltage:	4.9 - 13 VDC supplied by receiver
Input Current:	50 - 60 mA

Mechanical Specifications

Enclosure:	PVC plastic
Dimensions:	128 mm L x 128 mm W x 84 mm H (5.06” L x 5.06” W x 3.33” H)
Weight:	450 g (1.0 lb)
Mounting Thread:	1-14-UNS-2B
Connector:	TNC-S
Extension Cable:	RG-58

Environmental Specifications

Storage Temperature:	-40°C to 80°C
Operating Temperature:	-30°C to 70°C
Relative Humidity:	100% condensing

MBA-3 Beacon Whip Antenna

Operational Specifications

Frequency Range:	283.5 kHz to 325 kHz
LNA Gain:	20 dB

Power Input Specifications

Input Voltage:	12 VDC supplied by receiver
Input Current:	10 mA

Mechanical Specifications

Enclosure:	Fiberglass and threaded nylon
Dimensions:	39 mm D x 371 mm L (1.54” D x 14.6” L)
Weight:	176 g (0.39 lb)
Mounting Thread:	1-14-UNS-2B
Ground Wire Length:	1.3 m (51.0”)
Connector:	BNC-S
Pigtail Cable:	297 mm (11”), or 3.0 m (10’) pigtail with BNC-P connector
Extension Cable:	RG-58

Environmental Specifications

Storage Temperature:	-40°C to 80°C
Operating Temperature:	-30°C to 70°C
Relative Humidity:	100% condensing

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Antenna Signal Splitter

Insertion Loss

J2-J1, GPS Frequency:	35 dB nominal, >25 dB min.
J2-J1, Beacon Frequency:	0.2 dB nominal, 0.4 dB max.
J2-J3, GPS Frequency:	3.5 dB nominal, <5 dB max.
J2-J3, Beacon Frequency:	70 dB typical, 58 dB min.

Power Input Specifications

Port J1 Input Voltage:	+12 VDC from beacon Rx.
Port J2 Output Voltage:	+12 VDC to GPS/beacon Ant.
Port J3 Output Voltage:	N/A, DC blocked to GPS Rx.

Mechanical Specifications

Enclosure:	Cast aluminum
Dimensions:	56 mm W x 92 mm L x 30 mm H (2.2" W x 3.62" L x 1.18" H)
Weight:	204 g (0.45 lb)
Port J1:	BNC-S to beacon Rx
Port J2:	BNC-S to GPS/beacon Ant.
Port J3:	TNC-S to GPS Rx.
Extension Cable:	RG-58

Environmental Specifications

Storage Temperature:	-40°C to 80°C
Operating Temperature:	-30°C to 70°C
Relative Humidity:	95% non-condensing

Antenna Signal Combiner

Insertion Loss

J2-J3 Beacon Antenna Port:	5 dB nominal, 7 dB max.
J2-J1 GPS Antenna Port:	0.1 dB nominal, 0.2 dB max.

Power Input Specifications

Port J1 Output Voltage:	+12 VDC to beacon Ant.
Port J2 Input Voltage:	+12 VDC from GPS/beacon Rx.
Port J3 Output Voltage:	+5 VDC ± 5% / +12 VDC option

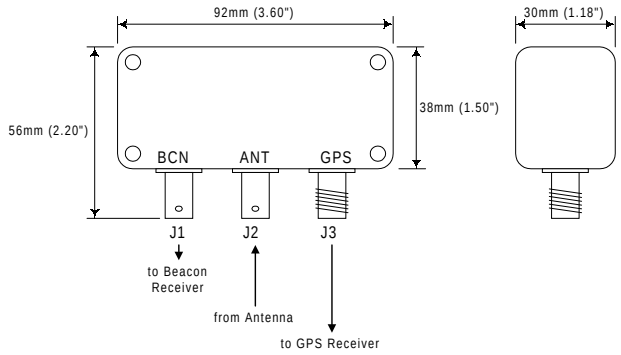
Mechanical Specifications

Enclosure:	Cast aluminum
Dimensions:	56 mm W x 92 mm L x 30 mm H (2.2" W x 3.62" L x 1.18" H)
Weight:	204 g (0.45 lb)
Port J1:	BNC-S to beacon Ant.
Port J2:	TNC-S to GPS/beacon Rx.
Port J3:	TNC-S to GPS Ant.
Extension Cable:	RG-58

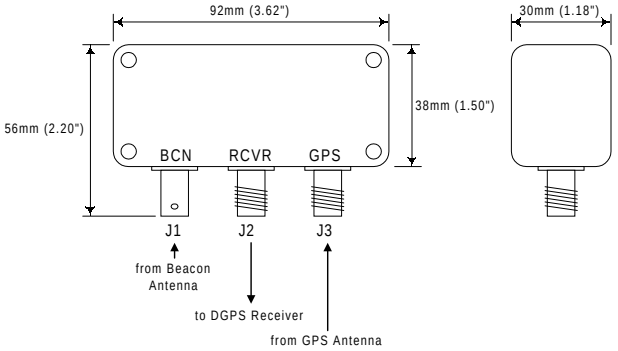
Environmental Specifications

Storage Temperature:	-40°C to 80°C
Operating Temperature:	-30°C to 70°C
Relative Humidity:	95% non-condensing

Antenna Signal Splitter



Antenna Signal Combiner



CSI Authorized Dealer

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