

The BMA-9001 is a rugged, azimuth only tracking system that comes with different antenna options, and can transmit command and receive aircraft data. It provides continuous 360° azimuth coverage for tracking an aircraft transmitting live video and data via a microwave downlink and is easily transported within a truck. A potentiometer or synchro resolver provides azimuth position feedback to the controller. The pedestal is rated for 100% duty cycle.

Applications:

- ▶ Tripod/Portable Operations
- ▶ Fixed/Permanent Operations
- ▶ Mast or Vehicle Mounts
- ▶ Military & Civilian Frequencies Available
- ▶ Ideal for UAV Work

Key Features

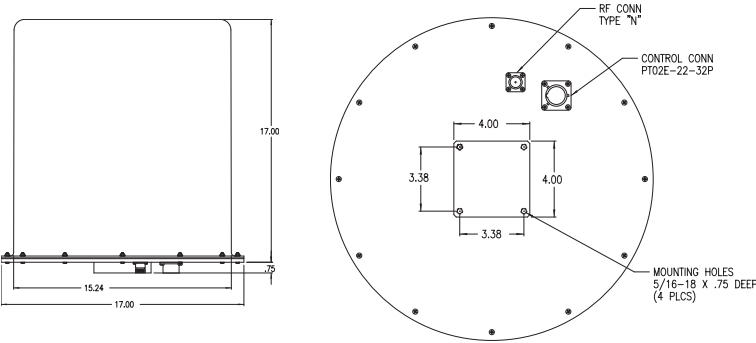
- ▶ Rugged
- ▶ 360° Azimuth Coverage
- ▶ Easily Transported
- ▶ Weather Proof Controller
- ▶ Removable Pedestal
- ▶ Optional Up-Link Transmitter
- ▶ 1.4-8.5 GHz in Bands

Power is provided by a controller which can be either a 19" rack mounted BPC-500 controller or a GCU-500 weather proof receiver/controller enclosure assembly. Each controller provides front panel control and monitoring of the system and can manually point the antenna with a joystick or can automatically follow the RF signal using monopulse tracking. (Remote Control serial port and 400 meter fiber optic link are optional). A BMR120 series receiver is used to receive and demodulate the received RF signal.

The BMA-9001 was developed to be transported in a HMMWV shelter. The pedestal can be tripod mounted or mounted on a vehicle mast. It can be provided with a command transmitter to transmit command data, as well as receive aircraft data. Appropriate diplexer filtering is added to the antenna RF electronics.

Specifications	
Antenna	Dual, Quad Helical
Frequency	1.4-8.5 GHz
Gain	20.5 dBi @ 4.5 GHz
AZ Beamwidth	8° @ 4.5 GHz
EL Beamwidth	17° @ 4.5 GHz
RX RF Input	

Pedestal	
Azimuth Travel	360° Continuous Rotation
Tracking Rate	Up to 20°/sec.



Physical	
Operating Temperature	-20° to +60° C
Operating Wind Load	Up to 50 MPH
Power	Provided Through Controller (Typical 100W Peak)
Size	17" Diameter x 17" High (43.18 x 43.18 cm)
Weight	25 lbs (11.34 kg) Includes Uplink Transmitter

- | Options |
|---|
| <ul style="list-style-type: none"> • Uplink Transmitter • Rack Mounted BPC-5000 or Weatherproof GCU-500 Controller • Paint Color • BMA-9001 Transportation Case • BTA-100 Tripod and Mounting Adapter • Tripod Transportation Case • Up Looking Antenna to Allow Overhead Operation • Upper/Lower Sub Band Switch for Airborne Relay Operation • Built-in Electronic Compass |

Controller Options		

All Data Subject to Change Without Notice

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	BPC-500L / BPC-750A	GCU-500																				
Controller Options	<p>BPC-500L (Local Controller): Provides the user with a keyboard, joystick (for manual control of clockwise, counter clockwise, and up down slewing), and front panel control (of azimuth and elevation position, mode of operation, and signal strength) on an LCD display for easy interface to steer a pedestal or to store/recall system setups. The BPC-500M (Master Controller) can remotely control and monitor all the functions of the BPC-500L from an identical front panel</p> <p>BPC-750A (Airborne Controller): Designed for aircraft use, this compact, rugged controller operates on standard aircraft power of 28 VDC and typically directs an on-board "look back" directional antenna.</p>	<p>Encased in a weatherproof enclosure, the GCU-500 consists of a pedestal controller and a BMS BMR120 receiver which slides into an opening in the control panel. A backlit LCD display shows antenna position and mode of operation. Power is supplied by the controller and the BMR120 receiver can be controlled through its own front panel controls or receive commands from the controller via the remote serial port. If the system is routed with a command uplink transmitter at the antenna, transmitter uplink commands are routed through the second serial port. A joystick allows manual control.</p>																				
Modes of Operation	<table border="1"> <tr> <td>Manual</td> <td>The azimuth and elevation position of the pedestal are controlled by the joystick.</td> </tr> <tr> <td>Goto</td> <td>Commands the pedestal to a specific azimuth and elevation position.</td> </tr> <tr> <td>Store</td> <td>Can store up to 16 preset memory locations for specific users defined</td> </tr> <tr> <td>Recall</td> <td>Recalls a previously stored configuration from memory. "Goto" must also be used to implement change.</td> </tr> <tr> <td>Aerotrac™</td> <td>Uses external GPS or other data from aircraft position to calculate pointing of angles for pedestal.</td> </tr> <tr> <td>Autotrac™</td> <td>Allows the pedestal to follow an RF signal using monopulse tracking.</td> </tr> </table>	Manual	The azimuth and elevation position of the pedestal are controlled by the joystick.	Goto	Commands the pedestal to a specific azimuth and elevation position.	Store	Can store up to 16 preset memory locations for specific users defined	Recall	Recalls a previously stored configuration from memory. "Goto" must also be used to implement change.	Aerotrac™	Uses external GPS or other data from aircraft position to calculate pointing of angles for pedestal.	Autotrac™	Allows the pedestal to follow an RF signal using monopulse tracking.	<table border="1"> <tr> <td>Manual</td> <td>Front panel controls enable manual slewing using a joystick</td> </tr> <tr> <td>Goto</td> <td>Commands the pedestal to a specific azimuth and/or elevation position commanded through the remote control serial port</td> </tr> <tr> <td>Autotrac™</td> <td>Allows the pedestal to follow an RF signal using monopulse tracking.</td> </tr> <tr> <td>Remote</td> <td>Complete control of the system is switched to a serial port, which can have a fiber optic interface for control over long distances</td> </tr> </table>	Manual	Front panel controls enable manual slewing using a joystick	Goto	Commands the pedestal to a specific azimuth and/or elevation position commanded through the remote control serial port	Autotrac™	Allows the pedestal to follow an RF signal using monopulse tracking.	Remote	Complete control of the system is switched to a serial port, which can have a fiber optic interface for control over long distances
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Pedestal Resolution	Typically 1.4° for Potentiometer Sensor 0.1° for Synchro Resolver.	1° Shown on LCD Display 0.1° Reported on Serial Link																				
Power	Standard 85-250 VAC, 50-60 Hz <30W Typical Not Including Pedestal Power. Optional DC Available	85-260 VAC, 50-60 Hz, 300W Peak, Including Pedestal																				
Size	5.25" x 19" x 17.5" (back plate to front plate 3 RU high 19" mount)	20.6"x 14.5" x 16.25" (52.3 x 36.8 x 41.3 cm)																				
Weight		46 lbs (21 kg)																				
Operating Temperature	-10° to +50° C Operating Range (Extended Range Available)	-20° to +50° C (-30° with Optional Display Heater)																				
Humidity	Up to 95 % Non-Condensing	Up to 95 % Non-Condensing																				
Options	<ul style="list-style-type: none"> • DC Power • 400m Tactical Fiber Optic Cable on Cable Reels (40 lbs) • Command Uplink Transmitter (Installed in Pedestal) • Range Tone Board (Requires Uplink Transmitter) • Multiple Frequency Band Operation within 1.4-8.5 GHz • Aerotrac™ GPS Track 	<ul style="list-style-type: none"> • 400m Tactical Fiber Optic Cable on Cable Reels (40 lbs) • Command Uplink Transmitter (Installed in Pedestal) • Range Tone Board (Requires Uplink Transmitter) • Multiple Frequency Band Operation within 1.4-8.5 GHz 																				