



# GCA-11R

## Solid State Directional Antenna

### Reduced size

#### > Applications

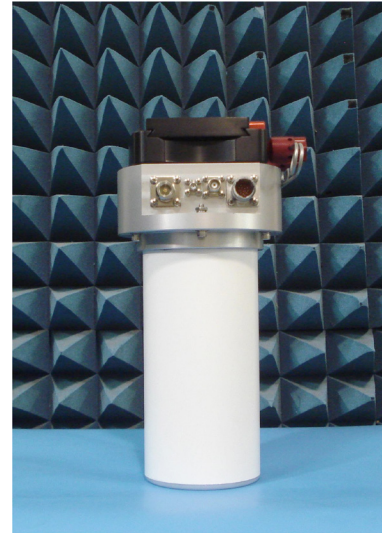
- Air to Air Relay Reception
- Airborne News Gathering
- ISR Surveillance
- Law Enforcement
- Fixed or Mobile Ground Vehicle Operations
- Airborne Applications

#### > Features

- 11dBi Gain
- Two Models Available from 4.4 to 7.1 GHz
- No Moving Parts
- New Reduced Size/Weight
- Adapts Directly to Meeker Dovetail® Mount
- Integral GPS Receiver and INS
- Low Maintenance
- Fully Automatic Search and Tracking
- 28V for Use in Aircraft
- Data Input for Receive Tracking
- Automatic, Manual, and Omni Modes
- Conckpit Control Panel Required (included with sales kit)

#### > Options

- GPS Antenna (required)
- Meeker Dovetail Mount (STC available for many aircraft models)
- Aircraft or Vehicle wiring harness
- Complete Microwave Transmit or Receive System



Shown with Meeker Dovetail® Mount

#### > Performance

Reduced size and weight in two models between 4.4-7.1 GHz. The microwave antenna is fully automatic, making the new GCA-11R the perfect choice for airborne microwave use. Requires no operator intervention during normal operation, has no moving parts for low maintenance costs, and incorporates a solid state eight panel switched antenna array.

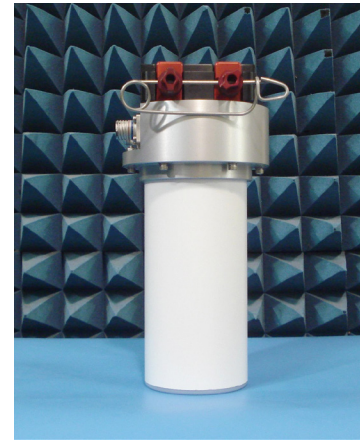
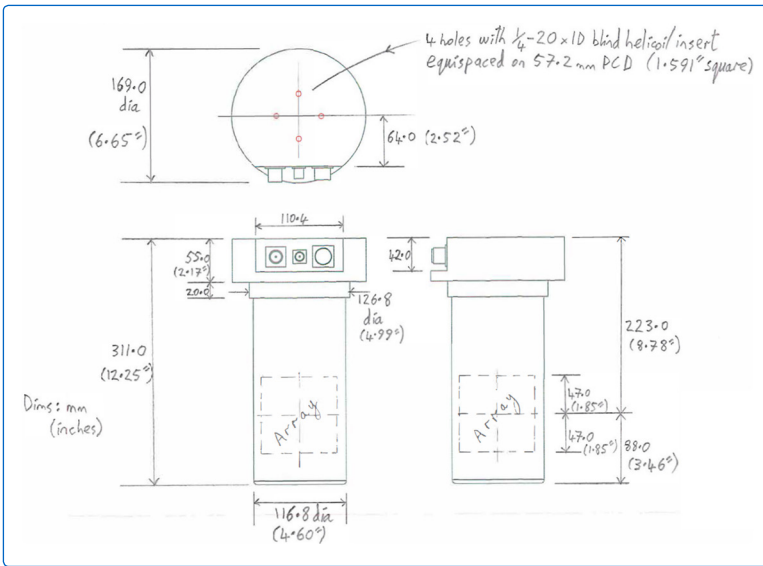
The pod is self-contained with integral electronics employing a high performance embedded processor which handles all control, supervision, and high speed streaming communication protocols, together with GPS aided inertial navigation sensor (INS) . An integral GPS receiver is included. Use of an INS means no compass calibration is needed.

The GPS receiver/controller may be pre-configured with up to 20 receive site waypoints. Directing the antenna is a simple matter of selecting the correct waypoint. The antenna automatically switches antenna sectors to continuously illuminate the selected receive site. When operating close to the receive site, or when transmitting to multiple dismounted ground units, an omni-directional mode is selected.

When used as a receive antenna, the auto-tracking feature allows automatic acquisition of the distant signal. Once the transmitter is located and valid GPS data is received, the antenna will continuously track the microwave signal.

The GCA-11R may be used on rotary or fixed wing aircraft (up to 300 kts airspeed), ground vehicles, or fixed tower mounted. Both transmit and receive modes are supported.

## > GCA-11 Airborne Antenna



GCA-11R  
Side View

### > Connectors

RF In or Out	N(f), 50 ohm
GPS Input (DC 10VDC output)	TNC(F)
Power and Control	ITT-Cannon KPT07A14-19P Mating connector KPSE06F14-19S

### > Controller

Auto-Track Antenna Control with Dual Encoder Knobs	GCA-11-CP-9821-AAC-ENC
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### > Optional Accessories

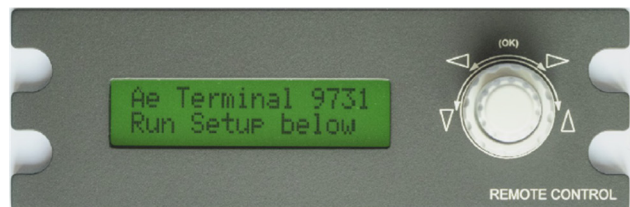
Dovetail Mount	Varies by aircraft Consult factory for options
Wiring Harness	Varies by aircraft and equipment list Consult factory for options
Microwave transmit, receive, or relay system	Consult factory for details

### > Ordering Information

MODEL	FREQUENCY	PART NUMBER
GCA-11R-470-V-9731	4.4-5.0 GHz	8712060402 (with CP)
GCA-11R-675-V-9731	6.4-6.55 GHz	8712060602 (with CP)
GCA-11R-470-V	Antenna Only	120602022 (no CP)
GCA-11R-675-V	Antenna Only	120602023 (no CP)
GCA-11R-CP-9821-AAC-ENC	Control Panel Only	810900422 (no antenna)
NVIS Filter for Control Panel	N/A	810900421

### > Technical Characteristics

Frequency	4.4-5.0 GHz or 6.4-7.1 GHz
Number of panels	8
Gain	11 dBi nominal in directional mode 2dBi in omni mode
Antenna Polarity	Vertical/Linear,
Azimuth Beamwidth	45 degrees in directional mode 360 degrees in omni mode
Elevation Beamwidth	35 degrees
Return Loss	>14dB
Maximum RF Input	30W CW
Operating Temperature	-20 to +55 degrees C
Humidity	0-95% RH, Non-Condensing
Dimensions	Radome 4.6" diameter x 5.82" high (11.69 x 14.79 cm) See outline drawing for more detail
Weight	4.4 lbs. (2kg)
Power Input	8-30 VDC, 30 VA
Windspeed	Survive and operate up to 300 kts.



GCA-11-CP-9821-AAC-ENC

Auto-Track Antenna Control with Dual Encoder Knobs