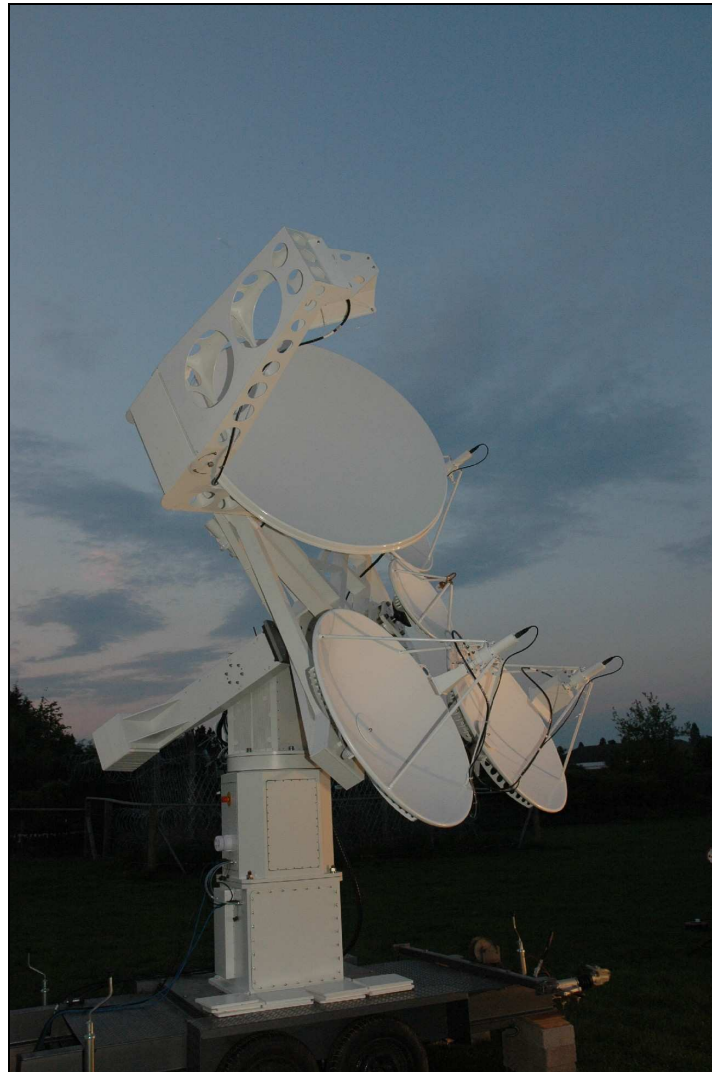


IDEAS ENGINEERED

Q-par Angus Ltd



All Weather Multi-Antenna Positioner



Designed and Manufactured in England to the highest standards.

Q-par Angus Ltd
Barons Cross Laboratories
Leominster
Herefordshire
HR6 8RS
UK



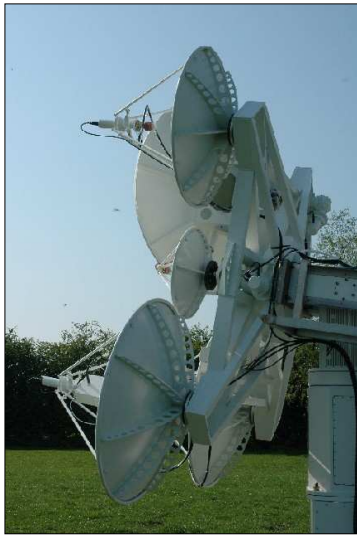
tel +44 (0) 1568 612138
fax +44 (0) 1568 616373
web www.q-par.com
e-mail sales@q-par.com

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Q-Par Angus Ltd offer a broad range of all weather positioners. Each system is designed and manufactured to the highest standards. The multi-antenna positioner affords a choice of antenna configurations through the use of bespoke reflector yokes, COTS modular gearboxes, encoders and motors.

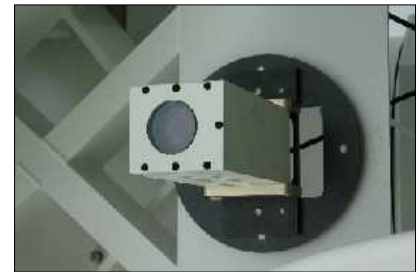


The system is manufactured from a combination of hard anodised H30 aluminium and SS316 stainless steel, providing excellent corrosion resistance in even the most demanding of environments. A Q-Par Angus positioner system has operated faultlessly with the US Security Forces, in Iraq, since 2002.

The azimuth and elevation drive speed may be set according to customer's demand. The configuration system shown, is capable of tracking, at a range of 1 NM, aircraft at speeds in excess of Mach 1.2.

The system is designed to be controlled by our Graphic User Interface (GUI), although it can also be controlled manually, using a joystick, or remotely using a hand held palm top.

The Positioner incorporates an automatic guidance facility that utilises a high-resolution, IR capable, camera to both locate and track targets.



The Positioner provides:

- **Precise angular accuracy.**
- **Full sky coverage.**
- **High output torque.**
- **Interchangeable Antennas.**
- **Environmentally hardened construction.**
- **Modular COTS components for easy servicing.**
- **Full safety features.**
- **Fully compliant with UK safety requirements, CE marked.**
- **Fully compliant with UK EMC regulations.**

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Typical Specification

| | | |
|--------------------------------|---------------|--|
| Interface | | RS232 or RS485 |
| Azimuth Movement | (degrees) | 380 degrees with pre-set limits |
| Azimuth / Elevation Accuracy | (degrees) | +/- 0.025 |
| Azimuth / Elevation Resolution | (degrees) | 0.044 (13 bit) |
| Elevation Movement | (degrees) | -15degrees below horizon to +90 degrees (zenith) |
| Output Drive Torque | Nm | 4,500 |
| Load Capability | kg | 250 (counterbalanced) |
| Velocity (Azimuth) | (degrees/sec) | 12 |
| Velocity (Elevation) | (degrees/sec) | 12 |
| Temperature range | | -20 to 120 F -30 to 50°C |

Antennas

Q-Par Angus Ltd offer a full design and manufacture service. The positioner may be fitted with a range of antennas to meet the customer's exact needs. The example pictured, covers 0.5 GHz to 35 GHz with power output ranging from 400 Watts CW to 18 kW Peak Pulsed. Reflectors are manufactured from aluminium and are braced to withstand extreme wind loading, thus preventing deformation and any reduction in performance.

The antennas are designed to use wideband prime focus and/or off-set feeds, having ridged wave guide horns with integral waveguide to coaxial adapters. In addition, feeds can be single or dual polar. Antennas requiring high power can be provided with waveguide feeds.

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Company Profile

Q-par Angus Ltd has been at the forefront of microwave design and manufacture for over 33 years. The Company excels in the research, design, development and manufacture of microwave components and antenna systems across the radio frequency spectrum.



The Q-par Angus range of products includes antenna positioners, a wide range of wideband antennas, duplexers, filters, mixers and many bespoke components. Q-par is one of the largest suppliers of EW and ELINT antenna systems in the UK and is, amongst other projects, presently developing a microwave surveillance antenna system for a European UAV.



Q-par Angus Ltd regularly undertakes research based activities including development studies, prototyping and technical concept studies. Technical consultancy and in-service support form part of their regular portfolio of activities.

Over 1500 Global customers, including Lockheed Martin, NASA, EADS, MoD, Home Office, Boeing, QuinetiQ, British Aerospace, US Armed Forces, BBC...



Q-par Angus Ltd is approved to BS EN ISO 9001:2000, is an accredited Investor in People and is a List-X SME.

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