

OS-PT-25

GPS Automatic Tracking Pedestal

The OS-PT-25 Automatic tracking system has been designed to provide GPS based positioning of high-gain antenna systems to support realtime airborne video and telemetry transmission requirements.



- Application Include:
 - Unmanned Aerial Vehicles
 - Manned Helicopter
 - Aerial Surveillance
- Weatherproof and Rugged
- High Gain Dish Antenna
- Single or Dual Yagi configuration
- 45 lb-ft Maximum Torque
- Up to 100 lbs of payload
- Fully integrated with Piccolo and FlighTek Autopilots

The OS-PT-25 system is based on a heavy duty rugged Pan and Tilt pedestal from Remote Ocean Systems . The pedestal provides 45 lb-ft (61 N-m) of output torque on each axis. Heavy-duty ball bearings supporting the output shaft allow it to accommodate heavy payloads up to 100 lbs (45 kg).

The system utilizes a RS-485 communications protocol which provides several advantages over RS-232. RS-485 allows communication over longer lengths of cable (1000 feet) and enables the ability for networking multiple nodes.

One cable assembly with a total of four wires (two for power; two for communication) is required to operate the RS-485 / RS-232 tracking system. The system is delivered complete with cable assembly, power supply, Hercules heavy duty tripod, and RS-232 to RS-485 to USB converter.

The OS-PT-25 may be fitted with a variety of antennas from Pacific Microwave Research depending on the frequency of operation, polarity, and gain requirements of the system. Large RHCP dishes, high-gain omni for diversity receive, and up two Yagi antennas for data comms, can easily be mounted.

The OS-PT-25 pan and tilt pedestal are air-filled and have been designed for under water operations. The units are excellent for above water applications where rain, humidity and dust are issues.

The Automatic tracking system has been fully integrated with the Piccolo family of flight control system from Cloud Cap Technology (CCT) and FlighTEK from L3 Communication Geneva Aerospace. The tracking system operate directly from Piccolo Command Center and MissionTEK.

O P T I M U M S O L U T I O N S

ENGINEERING CONSULTING FIRM

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PERFORMANCE

Power:

- Operating Range: 24 - 28 VDC, 1.7 amps (max) per axis @ 24 VDC
- Braking Mode: 24 VDC, adjustable, 0 mA to 1.2 amps per axis
- At Rest (not braking): < 100 mA per axis
- Rotation Speed (160:1 gears): Variable, 0.5 to 10 degrees/second
- Scan Range (Azimuth): 15 to 345 degrees
- Scan Range (Elevation): 0 to 120 degrees
- Resolution: +/- 0.5 degrees (30 arc minutes)
- Control protocol: RS-485, 2-wire half duplex, 8 bit data, 1 stop bit, no parity, no hardware flow control
- Networkability: Up to 32 RS-485 nodes sharing the same cable for power and communication

MECHANICAL

Housing:

- Material: Anodized 6061-T6 Aluminum
- Height: 286 mm (11.25 in)
- Width: 199 mm (7.85 in)
- Main Body Diameter: 107 mm (4.20 in)
- Output Shaft Diameter: 38.1 mm (1.50 in)

Weight :

- Air-filled: 8.7 kg (19.2 lbs)
- Standard Connectors: LPMBH-4-MP
- Housing Mounting: Four 3/8-16 threaded holes in output pan shaft
- Antenna Mounting: Mounting plate, yoke and optional YAGI brackets

Tripod:

- QuickSet Hercules model 4-53021-8 QHT-1 with elevator

ENVIRONMENTAL

- Operating Temperature: up to +50oC (122oF)
- Storage Temperature: -20oC to +60oC (-4oF to 140oF)



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