

4 - 6 FOOT ANTENNA SYSTEM

MODEL 1800



KEY FEATURES

2-Axis Elevation-Over-Azimuth
Autotracking / Program Tracking
4' and 6' Solid or Sectional Reflectors
Receive, Transmit
UHF, L, S, C, X, Ku Band
FTS Systems
Swappable Feeds
HD or SD Boresight Camera
Shipboard Compatibility
Radome
Local and Remote ACUs

GENERAL DESCRIPTION

The Model 1800, a lightweight, fixed or portable tracking antenna is engineered to maintain lock on your assets even in the most challenging conditions. Built for field reliability and flexibility, it combines a rugged pedestal with a robust solid or sectional reflector for rapid deployment.

It supports both 4-foot and 6-foot reflectors. The 4-foot option delivers a compact, lightweight solution featuring a primary feed capable of dual-band operation. The 6-foot provides a primary dual-band feed and a Cassegrain configuration, enabling tri-band capabilities. Both are configured for swappable feed assemblies to adapt to evolving requirements.

Whether you are deploying a mobile system or permanent installation, we provide mounting options to accommodate shipboard, tower, rooftop, trailer, trucks and other custom surfaces. Whenever possible we offer off-the-shelf mounting solutions; alternatively, we will design a custom mounting solution tailored to your application.

All our antenna systems are designed to work seamlessly with our wide range of ACU configurations. Whether you need a dedicated screen or a compact solution to maximize rackmount space or an embedded unit integrated into the pedestal, you will experience consistent, hassle-free integration across every setup.



RELATED PRODUCTS

ACU	Receiver	Recorder	Gateway

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DIMENSIONAL DRAWINGS

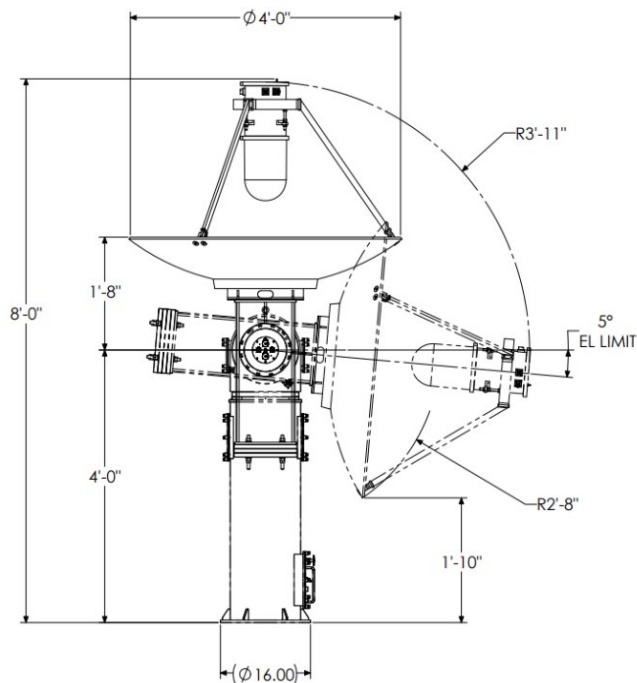


Figure 1: Model 1800-4

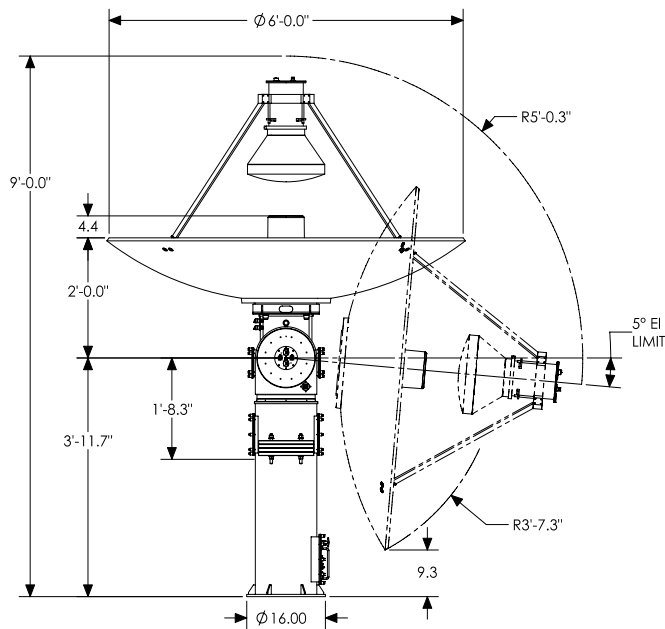


Figure 2: Model 1800-6

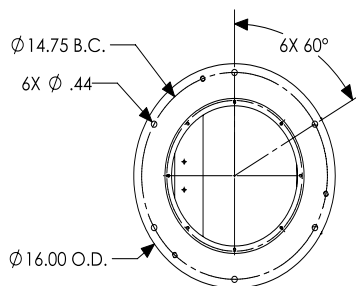


Figure 3: Standard Mounting for 1800-4 and 1800-6

Drawings shown illustrate a subset of available configurations. Upon request, TCS can supply additional drawings or customize a solution to meet your exact requirements.

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AZIMUTH-OVER-ELEVATION TECHNICAL SPECIFICATIONS

FEATURES		18004	18006
Tracking		Autotracking or Program Tracking	
Pedestal Type		Single Drive, ElevationOverAzimuth	
Reflector Size		4-Foot	6-Foot
Reflector Type		Solid or Sectional	
Velocity & Acceleration (Up To)		$\geq 30^\circ/\text{sec}$ & $\geq 45^\circ/\text{sec}^2$	
Power Requirements		Standard: 115V $\pm$ 10% @ 60Hz or 220V $\pm$ 10% @ 50Hz Custom Options Available	
Torque (Continuous & Peak)		140 / 300 ftlbs	
System Weight		270lbs	340lbs
Feed Type		Conical Scan	
Data Transfer		Receive / Transmit	
Frequency Bands		*UHF, L, S, C, X, Ku	
Polarization Options		Linear, LHCP, RHCP	
G/T		Provided Upon Request	
Control Options		Local/Remote: Serial or Fiber Optic	
ACU Operating System	Local	Red Hat Enterprise Linux v8, v9, (v10 coming soon)	
	Remote	Red Hat Enterprise Linux v8, v9, (v10 coming soon) or Windows 11	
ACU Operation Temperature		0°C to +35°C	
Operating Temperature		-25°C to +55°C	
Storage Temperature		-50°C to 70°C	
Wind Speed	Operating	55 mph	
	Stowed	120 mph	
Azimuth Travel (Options)		Standard: $\pm 540^\circ$ Cable Wrap Continuous: Slip Ring & 2 Ch or 3 Ch RJ	
Elevation Travel	Electrical	-5° to +185°	
	Mechanical	-11° to +191°	
Standard System Options		ACU Local and/or Remote Boresight Camera GPS & IMU Radome RF over Fiber Riser Extension Test Inject	Test Inject Tilt Base Transit Cases Transmit Trailer Tripod Video over Fiber
* Available frequency bands vary by application, and not all can be included in a single antenna. TCS can modify existing antennas or develop custom designs to meet your specific needs. Alternative XY, KA, and 3-Axis Systems may be available upon request.			

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ANTENNA CONTROL UNITS

ACU-M1	Dimensions	7U (10.25" x 19" x 13")		
	Weight	< 30lbs		
	Power	90VAC to 220VAC, < 200W (Typical)		
	Purpose	Userfriendly interface for operator control. Maximum hardware expansion possibilities.		
	Display	15" Color Touchscreen		
	Supported Interfaces	Up to 8 Receiver AM & AGC Inputs Optional: GPS/IRIG Interface	Ethernet Synchronous Serial	Asynchronous Serial
ACU-M2	Dimensions	2 U (17" x 19" x 3.5")		
	Weight	< 30lbs		
	Power	90VAC to 220vac , < 200W (Typical)		
	Purpose	Useful in unmanned, remotecontrol applications as part of a constellation with many systems. Minimal hardware expansion is possible.		
	Display	No Display, External VGA Connection (Optional Display)		
	Supported Interfaces	Asynchronous Serial Synchronous Serial Ethernet	Up to 2 Receiver AM & AGC Inputs Optional: GPS/IRIG Interface	
ACU-M3	Dimensions	6" x 6" x 4.5"		
	Weight	3.25lbs		
	Power	28VDC - Less than 40W (Typical)		
	Purpose	Remote interface only Program Tracking Antenna system is a "node on the network" Designed to be embedded inside pedestal and rugged for outside use.		
	Display	No display, External VGA Connection for Troubleshooting		
	Temperature	Operational/Storage: 40°C to +85°C		
	Supported Interfaces	Ethernet Asynchronous Serial	GPS Timing Networking Timing	
ACU-M4	Dimensions	4U (20" x 19" x 7")		
	Weight	< 30lbs		
	Power	90VAC to 220VAC - Less than 200W (Typical)		
	Purpose	Useful in unmanned, remotecontrol applications Classified operations where data storage is not feasible Full Autotracking Capability		
	Display	No Display, External VGA/HDMI connection (Optional Display)		
	Supported Interfaces	Asynchronous Serial Synchronous Serial Ethernet	Embedded Receiver Capable Up to 8 Receiver AM & AGC Inputs Optional: GPS/IRIG Interface	



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ANTENNA CONTROL UNIT DISPLAY OPTION



The ACU-M4LR is a centralized operator interface designed to work in conjunction with existing ACU systems. The ACU-M4LR does not replace the antenna control unit; rather, it provides a single display and control environment that allows operators to monitor and manage multiple ACU-controlled antenna systems from one workstation. In a standard configuration, the ACU-M4LR interfaces with a local ACU through an integrated fiber-optic connection and communicates with remote ACU-controlled antenna systems over Ethernet. The system can also provide Ethernet-based control of pan-and-tilt camera systems, enabling antenna and site monitoring from the same user interface.

The primary advantage of the ACU-M4LR is the consolidation of multiple control functions into a single operator display. By integrating local and remote ACUs into one interface, operators can control and monitor multiple antenna systems without the need for separate consoles, reducing complexity and improving operational efficiency. The ACU-M4LR features a modular design with customizable displays to support a broad range of operational requirements, including:

- Multiple remote-control options
- Receiver and support equipment monitoring and control
- Time code reader and GPS integration
- Single-console operations
- Acquisition and data hardware integration

This approach allows organizations to leverage their existing ACU infrastructure while providing operators with a unified interface for managing multiple antenna systems from a single location

Recognizing that no standard product fits every mission, Delta Telemetry Systems is ready to deliver tailored solutions for your unique application requirements.

Specifications subject to change without notice.

