DELTA TELEMETRY SYSTEMS

DATA ACQUISITION

Flight Termination System

KEY FEATURES

- 2-Axis Elevation-Over-Azimuth
- Autotracking / Program Tracking
- Single and Quad Helix
- Transmit
- FTS Systems
- Shipboard Compatibility
- Radome
- Local and Remote ACUs
- Mobile and Fixed Solutions
- Quick Setup
- 1-2 Person Installation
- Modular Configurations

GENERAL DESCRIPTION

Flight Termination Systems (FTS) are essential for ensuring safety when a vehicle unexpectedly goes off course or needs to be terminated. Our team has extensive experience in designing and manufacturing these systems, having built hundreds of over the years to ensure reliability and effectiveness in critical situations.

Our antennas are versatile, mountable on either 1800 or 2400 pedestals. This flexibility allows us to meet varying power requirements and provides options tailored to your application needs. With both single and quad helix configurations, we offer customized solutions to suit specific mission requirements.

FTS systems are often slaved to telemetry antennas, but we also accommodate requests for dedicated antenna control units. Whether used with a standalone console, rackmount or embedded systems, they ensure unified control and dependable performance across any setup.

RELATED PRODUCTS

ACU	Receiver	Recorder	Gateway
			

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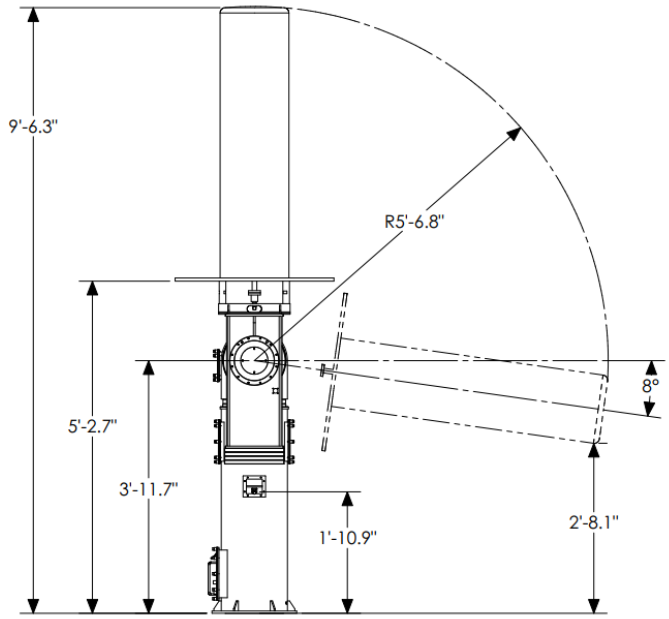
Flight Termination System

DIMENSIONAL DRAWINGS



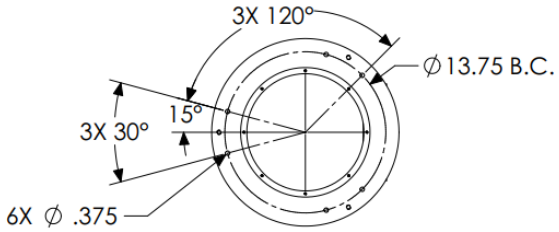
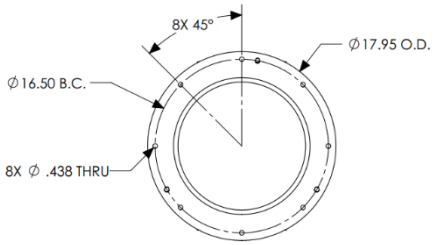


Figure 1: Model 1800-FTS Single Helix Dimensional Drawing



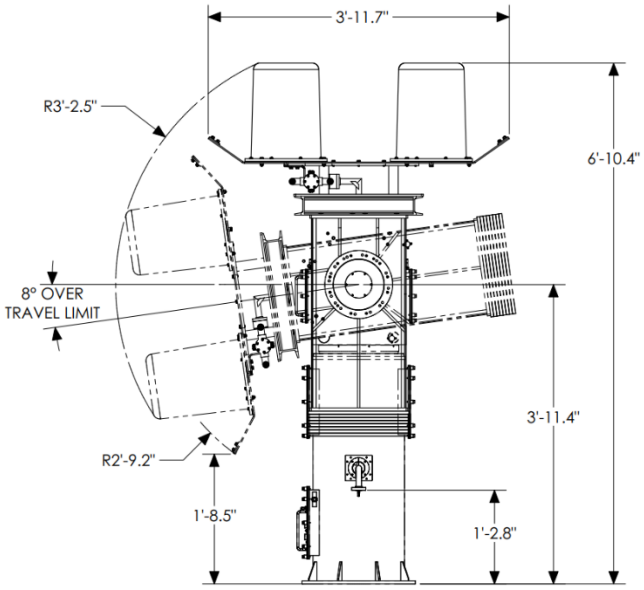


Figure 2: Model 2400-FTS Quad Helix Dimensional Drawings

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

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FEATURES		1800-FTS	2400-FTS
Tracking		Autotracking or Program Tracking	
Pedestal Type		Single Drive	Single Drive / Dual Drive
		Elevation-Over-Azimuth	
Antenna Type		Single or Quad Helix	
Velocity & Acceleration (Up To)		≤ 25°/sec & ≤40°/sec²	≤ 18°/sec & ≤40°/sec²
Power Requirements		Standard: 115V± 10% @ 60Hz or 220V± 10% @ 50Hz Custom Options Available	
Torque (Continuous & Peak)		140 / 300 ft-lbs	600 / 750 ft-lbs
System Weight		320 lbs	600 lbs
Data Transfer		Transmit	
Frequency Bands		UHF-EW	
Polarization Options		LHCP or 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: ±540° Cable Wrap Continuous: Slip Ring & 2 Ch or 3 Ch RJ	
Elevation Travel	Electrical	-5° to +185°	
	Mechanical	-11° to +191°	-8° to 188°
Standard System Options		ACU Local and/or Remote Boresight Camera GPS & IMU Radome Remote Stow RF over Fiber Riser Extension	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 and 3-Axis Systems are available upon request.

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ANTENNA CONTROL UNITS

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ACU-M1	Dimensions	7U (10.25” x 19” x 13”)		
	Weight	< 30lbs		
	Power	90VAC to 220VAC, < 200W (Typical)		
	Purpose	User-friendly 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-M1	Dimensions	2 U (17” x 19” x 3.5”)		
	Weight	< 30lbs		
	Power	90VAC to 220vac , < 200W (Typical)		
	Purpose	Useful in unmanned, remote-control 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, remote-control 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	

Flight Termination System

ANTENNA CONTROL UNIT DISPLAY OPTION

The ACU-M4LR is designed to be compatible with any ACU unit and is engineered to manage multiple antenna systems concurrently. In standard configurations, it controls a local antenna via the internal fiber optic interface and connects to a remote antenna over ethernet. It also provides the ability to control a pan-and-tilt camera system through ethernet.

All designs are modular, with customizable displays to support a broad set of applications. Customizations include:

- Multiple Remote-Control Options
- Control Receivers and Support Equipment
- Time Code Readers and GPS
- Single Console for Mission Operations
- Acquisition Data Hardware

DATA ACQUISITION

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.