

“WIZARD”

The modular, multi-mission ground station

Key features

- ▶ **MULTIPLE TARGET OPERATION**
 Can control up to 4 targets and track a further 4 when they are equipped with a remote GPS unit.
- ▶ **AUTOMATIC STATION KEEPING**
- ▶ **AUTONOMOUS WAYPOINT NAVIGATION**
- ▶ **REAL TIME TELEMETRY/STATUS DISPLAY**
- ▶ **MAP AND/OR IMAGERY DISPLAY**
- ▶ **EMBEDDED TRAINER/SIMULATOR**

Description

The Meggitt Defence Systems (MDS) WIZARD ground station has been operationally proven during more than ten years of world wide operation. It is currently used with the Banshee, Snipe and Voodoo aerial targets, MDS Unmanned air and surface vehicles. The latest WIZARD ground station enables multiple targets to be operated autonomously, and up to 4 additional vehicle/target units to tracked.

The WIZARD ground station is typically supplied in modular form, mounted in 19 inch rack units. This makes it suitable for installation into a suitable vehicle, or shelter, a range or ships control room or similar

The WIZARD ground station includes a ruggedised PC, TFT monitor, command transmitter(s), telemetry receiver(s) back-up controller and power supplies. The GPS information, which is sent from the target via the telemetry link, is displayed on the monitor in a format similar to a radar display. The target is depicted as a cursor, with a history trace extending behind the target to give the The ground station allows reliable operation. The ground station allows reliable operation to over 120 Km (67 Nautical miles) range. The system converts GPS data to



provide the target operator with a visual indication of the target's position and heading. The GPS display includes two geographical map "windows" to allow dual targets to be operated in different areas without the need to zoom-out to a range scale where accurate flight tracks are difficult to perform. positional data (Telemetered from a GPS receiver on board the vehicle being controlled) to a digital moving map display.

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CONFIGURATION

A typical multiple vehicle/target Meggitt Defence Systems Wizard ground station includes the following items:

Computer Processor Unit, including Monitor, Keyboard & Mouse

This is an industrial specification Personal Computer that is housed in a rugged 19", 4U enclosure. A 17" LCD monitor is housed in a rugged 19", 8U enclosure. The typical standard unit can simultaneously display target telemetry data for 2 vehicles/targets. The computer can record all ground station, command and target telemetry data.

The target telemetry displays can include the following data for each vehicle/target:

Height, Track, Engine RPM, GPS Location, Battery Voltages, Airspeed, Ground Speed, Autopilot Status, GPS Status.

The computer also accepts operator inputs for control of the targets via the keyboard & mouse.

Optional software for the computer can provide a digital map background to the target position display. This map can be selected to be static with the target position moving across it, or the target can be static with the map moving underneath it.

Multiple Target Interface

The Multiple Target Interface (MTI) is the centralised hub of the system, distributing data between the Computer, the Remote Interface Unit, and the Back Up Controllers. The MTI is housed in a rugged 19", 3U enclosure. The MTI also provides DC electrical power for the Remote Interface Unit, the Back Up Controllers, and the GPS Receiver Module. The MTI is powered from 110/220V AC, and includes a 12V back up battery to provide protection against mains power supply failure.

Remote Interface Unit

The Remote Interface Unit (RIU) interfaces between the Multiple Target Interface, the GPS Receiver Module, and the Telecommand Transmitter Units. The RIU is housed in a rugged 19", 3U enclosure. The Remote Interface Unit also contains two Telemetry Receiver Modules, one for each target frequency.

Back Up Controller (2 off)

The Back Up Controller (BUC) provides an alternative method of accepting operator inputs to take control of the vehicle. Each BUC is housed in a rugged 19" 2U enclosure.

Controls include:

Height Demand, Turn Demand, Throttle Demand, Heading Demand, Airspeed Demand, Parachute Deploy, Engine Kill.

The Back Up Controller also provides an interface to allow the operator to control the target using a Hand Held Controller.

Uninterruptible Power Supply

The Uninterruptible Power Supply (UPS) provides 220V AC power to the Ground Station. The UPS is housed in a rugged 19" 5U enclosure. In the event of a mains supply failure, the UPS can maintain the AC power to the complete Ground Station for up to 20 minutes.

Enclosures

Each of the above units is housed in a standard 19" format rack enclosure. Units are then further protected by installation into 19" 5U or 9U rugged transit cases.

This data may be changed without notice and is not binding.