

GROUND CONTROL STATION FUNCTIONAL DESCRIPTION

The GCS serves as the Shadow 200 UAV System operator interface. It is the central point from which the Air Vehicle Operator (AVO) and Mission Payload Operator (MPO) coordinate all mission and communication functions. The GCS provides near real-time control, near real-time mission progress, video display, and system function monitoring. The GCS provides operator interface through graphical on-screen displays (including point and click buttons and sliders), footswitches, knobs, and joysticks. AV control modes optimize Payload control while the AV maintains a loiter point of interest (stare point). Video is displayed with the ability to mark and record position and target characteristics of interest. Video can be displayed in near real time, or recorded for detailed analysis later. All information can be transferred to outside sources through the Tactical Local Area Network (TACLAN) interface.

GCS COMMUNICATIONS SYSTEM

SINGARS Radios (Long and Short Range) – Two units provided; one unit is shelter mounted. The second unit is mounted in the HMMWV cab.

UHF/VHF Radio – Primary radio for voice communications with commercial or military air traffic controllers in secure and non-secure formats.

EPLRS – Provides secure, jam-resistant, near real-time data network communications support.

Hand Held AN/PRC-148 FM Radio – Short range hand held radio capable of communicating with SINGARS and Air traffic controllers.

SINGARS Data Transmission/Reception. Capabilities to transmit and receive MIL-STD-188-220C data formats from the AVO and MPO stations over the SINGARS radios.

INTERCOM/EXTERNAL COMMUNICATIONS – Voice communication over wire for internal and external GCS personnel. Capabilities also exist to transmit intercom communications over

SINGARS and UHF/VHF equipment.

Digital Secure Voice Terminal (DSVT) Voice communications over secure telephone line.

Wire Line Communication – Data transmission and reception at a slow baud rate for unique communications system



Shadow 200 System Baseline

System

Air Vehicles with
Payloads x 3



TALS



Air Vehicle Transport
& Launcher Trailer

Ground Control
Stations x 2

Ground Data
Terminal x 2



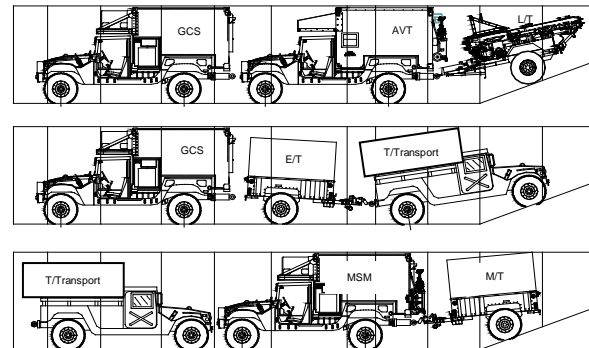
Remote Video
Terminal & Antenna x 4



Portable Ground
Control Station & Data
Terminal



Deployability / Transportability C130 Transportable



Arresting
Net



Equipment
Trailer



Personnel/
Equipment
Transport



Maintenance Section



Air Vehicle



Personnel/
Equipment Transport



Equipment
Trailer



Maintenance
Section
Multifunctional



Personnel
4 x 33W (EW System Repairer)
3 x 52D (Engine Mechanic)

Personnel
1 x 35D (Platoon Leader)
1 x 350U (UAV Warrant Officer)
1 x 96U (Platoon Sergeant)
12 x 96 U (Air Vehicle Operators)