

## Ground Control Station

The CIRPAS Ground Control Station (GCS) is a standard General Atomics Predator GCS. Features of the GCS include:

1. Aircraft Command and Control : Line of Site Uplink and Downlink with the Predator Aircraft through the Ground Data Terminal (GDT). The C-Band Air Data Terminal (ADT) utilizes two transmitters (TX#1 & TX#2) and two receivers (RX#1 & RX#2). The transmitters and receivers operate between (b) (3) and (b) (3) and allow frequency selection in (b) (3) steps. Transmitters are configurable to high and low power outputs. High power provides about (b) (3) of output, and low power provides about (b) (3) of output (intended for maintenance only). The transmitters send a combined data stream of analog video with digital telemetry data modulated onto a sub-carrier. The transmitter and receiver frequency selection is software limited so that the transmit and receive functions do not interfere with each other. Normal operation is to utilize only one uplink data stream and both downlink data streams. One downlink data stream would normally include aircraft telemetry data plus video from the nose camera. The other downlink would normally include redundant telemetry data plus video from a reconnaissance payload. Downlink frequencies should be separated by a minimum of (b) (3) and uplink by (b) (3). The air vehicle C&C frequencies default to- Downlink: (b) (3) and Uplink: (b) (3). The authorized Predator frequencies ranges are:
  - a. Downlink: (b) (3)
  - b. Uplink: (b) (3)
2. The NPS/CIRPAS GCS Pilot/Payload Operating workstations incorporate two control consoles that allow a pilot and a payload operator to control/monitor the aircraft and its subsystems.
3. Two standalone power sources during flight operations (shore and generator or two generators) exist as well as a battery pack for a third power source. This third source is integral to the GCS Un-interruptible Power Supply (UPS).