

SYSTEM GENERAL

The MQ-1B systems are manufactured by General Atomics Aeronautical Systems, Inc. in San Diego, California. A system consists of four aircraft, a Ground Control Station (GCS), a Ku-band Satellite Communications (SATCOM) terminal, and support equipment.

The aircraft is a Remotely Piloted Aircraft (RPA) controlled by a pilot who is located in the GCS. Control commands are transmitted from the GCS to the aircraft by a ground-based datalink terminal.

The GCS incorporates workstations that allow operators to plan missions, control and monitor the aircraft, reconnaissance sensors and weapons, and exploit received images.

The Ku-band SATCOM system provides over-the-horizon control of the aircraft via Ku-band datalink.

AIRCRAFT GENERAL

The MQ-1B aircraft are designed to perform reconnaissance missions at medium altitudes with long endurance. The MQ-1B aircraft can also be equipped with AGM-114 Hellfire missiles, which it can deliver against a variety of targets to include armor, point targets, and communications equipment. The aircraft is controlled by datalink commands in real time, or can be programmed to execute missions autonomously.

AIRBORNE DATALINK EQUIPMENT

Datalink equipment in the aircraft maintains the Radio Frequency (RF) datalink with Ground Data Terminals (GDT) associated with the GCS. The aircraft always carries the Cband Line of Sight (LOS) equipment and is capable of carrying Ku-band datalink equipment.

AIRCRAFT

RECONNAISSANCE SENSORS

Reconnaissance sensors provide surveillance capability on the aircraft. The MQ-1 aircraft is capable of carrying an AN/AAS-52 Infrared Detecting Set and Synthetic Aperture Radar (SAR) sensor. The AN/AAS-52 is a video imaging system with lasers. It incorporates two daylight video cameras, an infrared camera,

and two lasers, one for range finding and target designation,
and the other for target illumination.