

AirRobot AR-100 Control Station

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The AR-100 control station is a custom designed unit provided by the manufacturer as an integrated element of the AirRobot AR-100 Unmanned Aerial System (UAS). The control station consists of an embedded computing system, an integrated multi-function controller and display, a battery power system, and independent uplink and downlink antennas. Figure 1 below shows the complete control station. The battery is visible on the left, the tan computer enclosure in the middle, the controller and display unit on the left, and the two antennas can be seen externally mounted to the yellow carrying case. All vehicle controls and commands to the AR-100 are computed on the ground station by proprietary software and relayed directly to the vehicle via the uplink antenna.

Figure 2 shows just the controller with all functionality and controls labeled. The controls have been grouped according to their functionality, with the primary groupings being vehicle attitude, payload, GPS functionality, and system controls.

Finally, Figure 3 shows the video interface presented on the integrated controller/display unit. In addition to the payload video display, the primary elements of this operator display are the navigational indicators (compass, altitude, and range), power status (vehicle and control station batteries), and the state indicators for the GPS and positional control systems.



Figure 1: The AirRobot control station

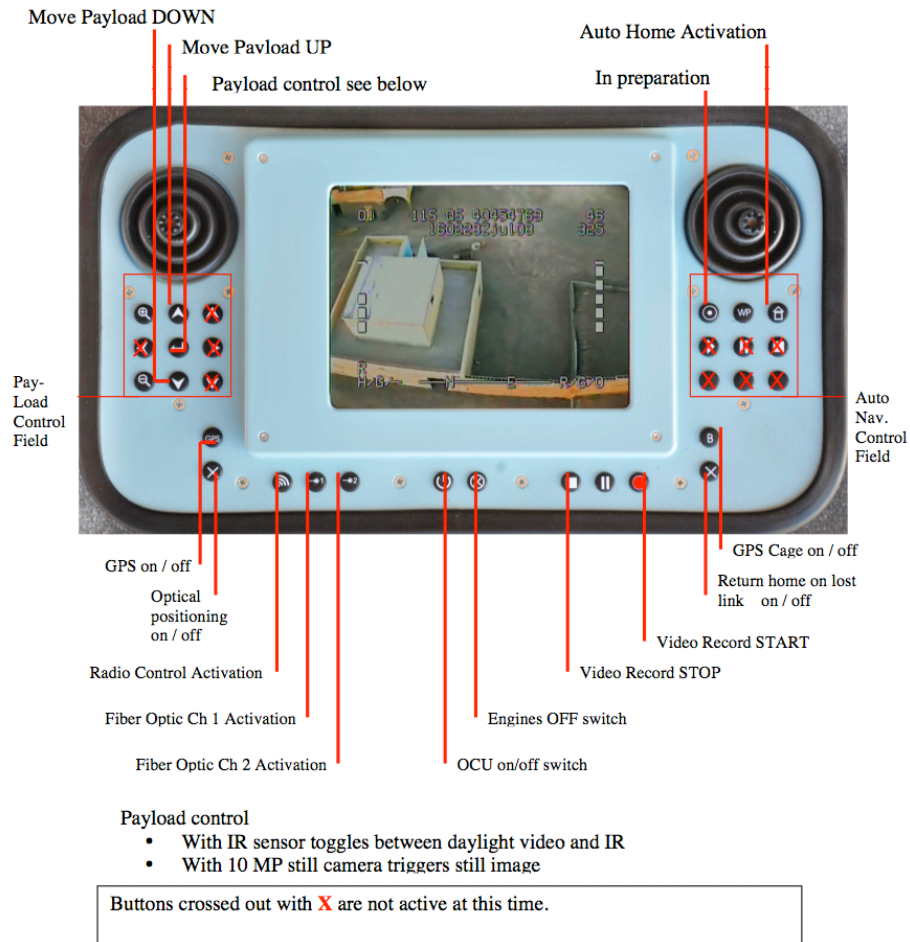


Figure 2: AirRobot controller

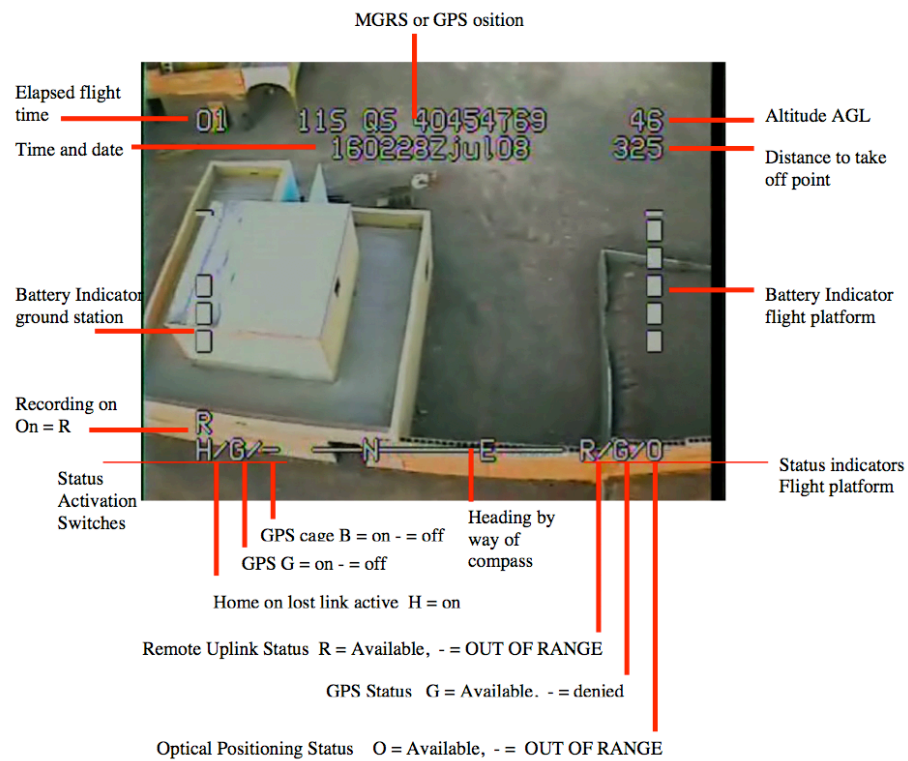


Figure 3: AirRobot video display.