

BUSTER Communication System

The BUSTER UAV is programmed before launch with a complete flight plan. Immediately after launch it will proceed (GPS and INS navigation) to a required “mission initial” (MI) waypoint at a programmed airspeed and altitude and then on to programmed subsequent waypoints. The operator can monitor the progress of the mission through the control radio link or can change any of the pre-programmed parameters in flight. The control link operates within a frequency band of 230 – 380 MHz with a “frequency-hopping” technique for security. The operator can also monitor the on-board sensor imagery through an L-band (1018 MHz) radio link. If the control link fails at any point during the mission, the UAV will automatically fly to a required “communications Failure” (CF) waypoint. The BUSTER flight control system will not accept a flight plan and launch without designated MI and CF waypoints.

For training, demonstration and system test missions a point overhead the launch area, or just upwind of the launch area, is normally designated as both the MI and CF waypoints. This allows the operator to visually check the BUSTER immediately after launch and “listen” to engine performance as well as having the BUSTER return to the optimum recovery position in the event of control link Failure.

Communication Failure

Every BUSTER mission must have a Mission Initial waypoint (MI) and a designated Communication Failure (CF) waypoint. The operator can set the locations of these waypoints, but no mission can launch unless both are present. After launch the AV automatically goes to the MI waypoint, which is the first waypoint in a flight plan.

In the event of a communication failure resulting in a lost radio link between the GCS and the AV during flight, internal programming in the AV’s Flight Management System causes the AV to automatically return to the CF waypoint where the flight terminates and the recovery parachute is deployed. The CF waypoint will normally be the same as, or near, the launch point.

If the lost link is restored prior to automatic chute deployment the mission will be resumed.