

AirRobot AR-100 Emergency Procedures

Brittany A. Duncan Dr. Robin R. Murphy
Computer Science and Engineering
Texas A&M University
College Station, TX 77843
{bduncan,murphy}@cse.tamu.edu

December 10, 2012

With the AirRobot AR-100 there are two potential cases which would require the employment of emergency operations procedures: an uncommanded deviation from the flight path, and a crash or otherwise accidental loss of the vehicle. The procedures for each case are described below:

Flight Path Deviation

- The PIC will disable autonomous or semi-autonomous control functionality
- The PIC will then assume control of the aircraft and return it to the home site and land
- If the cause of the deviation can be identified and corrected and the PIC and Flight Director concur that the flight can otherwise safely be resumed flight operations may be recommenced.
- If the cause can not be identified flight operations will cease until the cause is identified or a suitable mediation technique is identified.

Accident/Incident Procedure

- If the vehicle is lost the flight team will attempt to locate the vehicle.
- After locating the vehicle the flight team will identify any team members or other personnel requiring medical attention
- The Flight Director will then contact Fire and Medical Emergency Services (as required), Disaster City site management personnel, the PI for the research being conducted, and appropriate University authorities.
- The PIC will contact ATC to inform them of the accident or incident.
- The flight team will then recover the vehicle and archive the available log or payload data.
- The flight team will then write a report detailing the events that occurred and submit the report to the PI, representatives from TEES and TEEX as the responsible university agencies, the manufacturer, and the FAA.
- The airframe involved in the incident will not be returned to flight until this report has been submitted, the cause identified, any damage repaired, and the airframe evaluated by a trained individual and deemed in accordance with the original airworthiness statement.