Launch/Recovery:

Manual, External Pilot, Rolling, Runway Launch:
The EP has full control of the AV. The AV is taxied into takeoff position on the runway by ground a handler. The EP applies full power and the ground handler releases the AV. The AV accelerates and the EP rotates at 60 KIAS. At an altitude of 1000 AGL the EP will relinquish AV control to the Air Vehicle Operator (AVO). This entire sequence is performed under EP visual observation.

Manual, External Pilot, Runway Recovery:
The AVO returns the AV to the traffic pattern and will relinquish control to the EP. The EP has full control of the AV. The EP will fly a standard traffic pattern with an approach speed between 60 KIAS and 70 KIAS. The EP continues to steer the AV after touchdown. The AV uses a tricycle landing gear. An arresting hook mounted to the main landing gear, provides full stop landing by engaging an Arresting Gear (AG) Pendant. The AG Pendant is a wire running across the landing area, which the arresting hook engages upon contact.

Automatic Launch:
The Shadow 200 TUAS System Launcher (LAU) accomplishes AV launch by using stored energy from a nitrogen accumulator powering a hydraulic launch cylinder. Forward motion sends the AV airborne at an initial 70-knot airspeed. The External Pilot and Air Vehicle Operator can override control at anytime during the launch sequence.

Automatic Recovery:
The Shadow 200 TUAS Automatic Landing System (TALS) accomplishes recovery by using a microwave Ka-band radar-based UAV position measurement track system. The TALS provides automatic landing guidance and control for the AV by measuring the AV position relative to the Touch Down Point. The AV is stopped using the AG pendants described above (Manual, External Pilot, Recovery). The Air Vehicle Operator can wave off the approach at anytime up to 50 feet AGL. The External Pilot can override control at anytime during the landing sequence.