CL289

DRONE RECOVERY SYSTEMS

Irvin has the capability to design, develop, and manufacture recovery systems for various drones. One of the systems that is currently in production is the CL289. Currently in service with the French and German militaries, it has flown over 1200 operational missions in various countries. Both French and German systems are being updated (starting in 2003) to the AOLOS-289 version which employs the latest flight software for the onboard UAV computer.

The CL289 is the latest generation of unmanned, airborne surveillance systems. Capable of fast, deep penetration behind enemy lines, the CL289 acquires detailed, high-resolution

intelligence and relays it in real time to core level commanders. Its onboard program commands the air vehicle to ascend, descend, and turn to accomplish the required mission profile. The drone carries both photographic and infrared line-scan sensors and can transmit real time imagery to a ground station.

When the intelligence-gathering portion of the mission is completed, the drone returns to the recovery area which is located near the interpretation and support facilities. The air vehicle hones to a twin lobe guidance signal from the ground beacon. Recovery is accomplished using a 2-stage PARACHUTE system, and LANDING BAGS filled with

compressed air to cushion the impact. The easily transported air vehicle is quickly refurbished and recycled in preparation for its next flight. Meanwhile, the acquired intelligence is interpreted and transmitted to the requesting agency for action.

LANDING BAGS

CAIRBORNE SYSTEMS

The dual bag, soft-landing system is inflated from a single air reservoir stored at 3000 psi. The bags are fully inflated within 8 seconds to an overall pressure of 1.1 psig and upon contact with the ground, dissipates the landing impact forces by the release of the air through two cloth sleeves (or socks) made from a stretch fabric which expands to control the out-flow of air thus optimizing the bag

force attenuation performance. The bags themselves are manufactured from low bulk urethane coated Kevlar fabric incorporating two chambers. The upper chamber of each bag maintains its pressure to protect the drone from damage during roll over, whilst the lower chamber releases its pressure to "cushion" the drone. The bags may be reused and packed by the user.

IRVIN AEROSPACE CANADA LTD.

P.O. Box 1510, Belleville, ON K8N 5J1 Canada Tel: (1) (613) 967-8069 E-Mail: Fax: (1) (613) 967-0469 Website:

E-Mail: Marketing@Irvincanada.com Website: www.airbornesystems-na.com









PARACHUTE SYSTEM

AIRBORNE SYSTEMS

A two-stage parachute system is used together with two air-filled landing bags which absorb the landing shock and prevent damage to the drone on impact. The recovery sequence is initiated automatically by a homing beacon.

Coincident with engine cutoff, the parachute door is jettisoned and the drag of the door deploys the first stage (drogue) parachute. The drone commences a ballistic type descent, and after a programmed delay time, the drogue extracts the main parachute. The drone turns over to its inverted landing attitude, and the drone lands horizontally and inverted to protect the sensor payload and to permit quick removal of the film cassettes. The parachute may be packaged and reused by the user.



IRVIN products have been developed and tested for over 75 years to demanding specifications. They are in use worldwide and are endorsed by many nations as products of reliability and quality.



IRVIN AEROSPACE CANADA LTD.