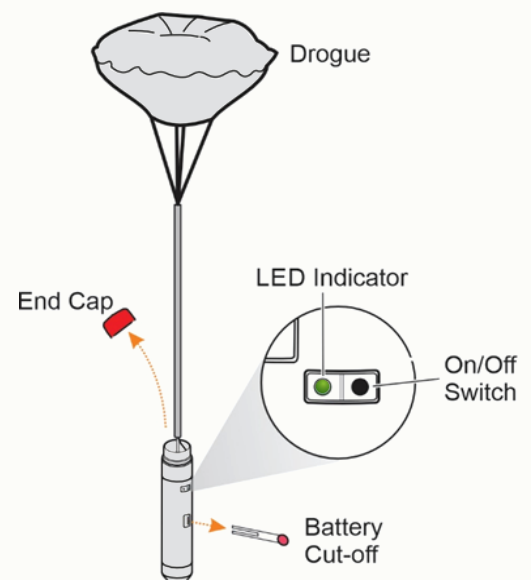




# Drop Sonde

Drop Sondes are consumable instruments deployed from an aircraft to measure wind (speed & direction), barometric pressure, and temperature between flight level and the ground.

- As the Sonde falls (at roughly 25 m/s or 5000 ft/min), it interprets GPS satellite information to determine its location while moving with the horizontal winds.
- The sonde's GPS coordinates are transmitted to a sonde receiver on the airplane or on the ground.
- The data received by the sonde receiver is used to calculate the wind speed and direction.
- The wind speed and direction data provided by the MMIST Drop Sonde System improves the accuracy of the LaunchPADS Multi-Mission Manager's calculated aerial release point (CARP) for a planned airdrop or parachutist jump.

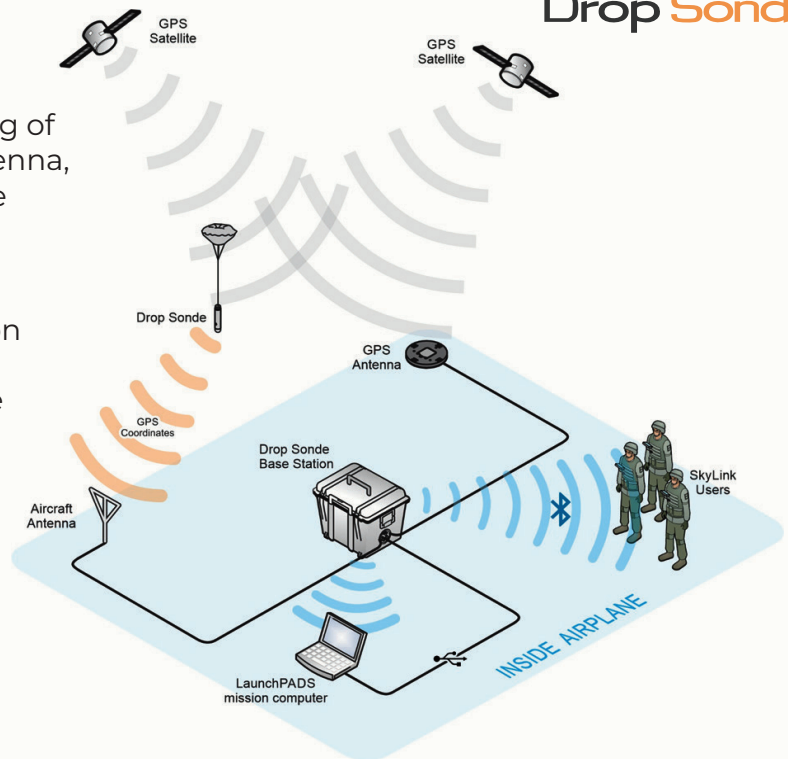




The Drop Sonde System is a roll-on, roll-off atmospheric data collection system consisting of a Sonde, an external GPS antenna, an RF antenna, and a Base Station/Receiver connected to the LaunchPADS mission manager computer.

The Sonde calculates geographical position information from GPS signals, and information is transmitted to the Base Station which is usually located on the aircraft from which the Sonde was deployed.

The LaunchPADS computer displays active sondes and manages the wind data from the falling sondes. Optionally, the Base Station can be located on the ground in the vicinity of the airdrop.



## Drop Sonde Components

### DROP SONDE

A cylindrical sensor (deployed from an airplane) used to obtain wind (speed & direction), barometric pressure, and temperature from received GPS signals. A small stabilizing drogue parachute is attached to the top of the unit.

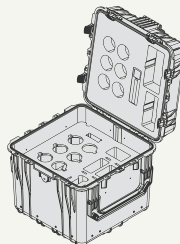


### AIRCRAFT ANTENNA

Drop Sonde system works with either an exterior, aircraft mounted "Shark fin" antenna, or a temporary, handheld (or mounted) Yagi antenna.

### BASE STATION

Transport/deployment kit that holds up to six (6) Sondes and enables Sonde pre-flight charging and pre-deployment testing. The kit also enhances GPS signal lock and retention for Sondes inside the aircraft with the use of the included, external active GPS receiving antenna.

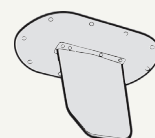


### Internal Yagi

A temporary antenna either hand-held or mounted within aircraft.

### FULLY RUGGED COMPUTER

A fully rugged laptop, with touchscreen interface, capable of operating in unpressurized aircraft at high altitudes.



### External 'Shark' Fin

An option to use an antenna fixed to the exterior of the aircraft.

