Supports Parachute Ballistics and Aircraft Data
Dynamic Guidance to the Air Release Point

Airdrop Module
For Multi-Mission Management System (MMMS)

Supports:
- Low Altitude Computed Air Release Point (CARP)
- High Altitude Computed Air Release Point (HARP)
- Very Low Altitude (VLA) Package Delivery

Unmatched Support For Special Mission Operations

Airdrop is an optional module available for Universal Avionics Multi-Mission Management System (MMMS) that calculates an Air Release Point (ARP), and provides guidance and steering to a position offset where the delivery should exit the aircraft for a landing at the desired drop zone.

The MMMS with Airdrop provides dynamic guidance to the ARP updated continuously until 15 seconds prior to the release. Discrete output signals can be used to indicate approach to the ARP within one minute, arrival at the ARP and reaching the end of release to provide delivery within the specified target zone. Airdrop also includes an automatic "holding pattern" reversal and repeat for more than one pass over the drop zone. Wind and release parameters can be adjusted during the return for subsequent releases.

Specific parachute ballistic and aircraft data can be conveniently created offline via a Universal-supplied PC tool, and loaded into the MMMS using the Solid-State Data Transfer Unit (SSDTU).

Airdrop delivery profiles can be created directly through the MMMS Control Display Unit, or ahead of time with the offline PC tool. Once loaded, the profile can be changed or edited by the flight crew prior to commencing the airdrop release.

With unmatched support for special mission operations, the Universal Avionics MMMS offers precision Airdrop for mission success.

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Airdrop MMMS Pages

Note that page titles and content will vary depending on what drop type, wind type, and other parameters are selected.

```
        AD DATA 1/5
                   DZ LENGTH
←DB INFO            3000M
PI LAT LON           SPEED
N 32 14.370       PROFILE→
W109 54.100        PI ELEV
                    4182FT
DROP TYPE          DROP HT
HARP                5000FT
DZ AXIS
034.2°             RETURN→
```

On Data Page 1, the operator can enter Point of Impact location, aircraft speed profiles related to the Air Release Point, and edit other drop profile parameters.

```
       HARP DATA 2/5
CATEGORY          LOAD STAT
HALO-PER             280.2
CHUTE TYPE        WIND TYPE
MC-3                   ALT
PAX/LOAD WT       WIND FAC
 250LBS               75%
# CHUTES
1
ACTN HGT
  500FT            RETURN→
```

Airdrop Data Page 2 displays information for the selected type of airdrop including chute data, load parameters, and wind considerations.

```
       HARP DATA 3/5
ET /DQ                 FTT
2.3/2.6SEC         4.9SEC
DPLY RF                FTD
17.5 FT/SEC         355FT
HV RF             DCEL DIST
156.6 FT/SEC        380FT
  VD  /TFC        DCEL TIME
1618FT/10.0SEC     3.4SEC

                   RETURN→
```

Data Page 3 shows informational type data pertaining to the deployed item fall rates, times, decelerations, and travel distances.

```
       HARP DATA 4/5
INBD    REPEAT         TTD
034.2°               04:19


TURN
LEFT                IP DIST
REPEAT DROP          2.3NM
YES                RETURN→
```

Airdrop Data Page 4 displays navigation information relating to the loaded airdrop profile including repeat pattern flight path data.

```
       AD SOLN 5/5
HV WIND  ACTIVE        TTD
185T/ 5(M)          06:07
DPLY WIND          TGT IAS
185T/ 1            180KTS
ALTK OFFSET        IP DIST
 374M BEFORE        2.8NM
XTK OFFSET      REPEAT DROP
 12M RIGHT            YES
←STANDBY           RETURN→
```

Airdrop Data Page 5 displays airdrop status information in relation to the loaded profile.

UNIVERSAL™ AVIONICS
an Elbit Systems Company

3260 E. Universal Way, Tucson, AZ 85756 USA

+1 520 295 2300 / 800 321 5253

info@uasc.com

uasc.com

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