F-242 BLOODHOUND

Designers:
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F-242 BLOODHOUND

UNMANNED COMBAT AIR VEHICLE (UCAV)
F-242 BLOODHOUND
Systems Diagram
BLENDED WING CONFIGURATION:

• MH 45 AIR FOIL

• VECTOR THRUST VERTICAL ASSISTANCE DURING TAKE OFF AND LANDING

• BULKHEADS, RIBS & AIR FRAME COMPRISED OF HY-BOR, (combination of Boron & Carbon Fiber composite) AS WELL AS WING STRUCTURE(SPARS AND STIFFINERS).

• 150 GALLON INTERNAL WING FUEL CELLS.
INFORMATION

LANDING GEAR CONSTITUTE A VITAL PART OF THE UCAV. THE LANDING GEAR IS A SEMI-COMPLEX RETRACTABLE SYSTEM THAT MOVES 90 DEGREES TO STABILIZE THE AIRCRAFT AND IT LANDS AND TAKE OFF. MOST OF IT’S PARTS ARE MADE OF HARDENED STAIN-LESS STEEL WITH POLISHED FINISH. THE SHOCKS AND STRUTS ARE MADE OF TITANIUM ALLOY THAT HAS THE CAPABILITIES OF WITHSTANDING LARGE AMOUNT OF PRESSURE AND STRESS.

SPECIFICATIONS:
MANUFACTURER: MESSIER-DOWTY
DESIGNATION: F242 NOSE LANDING GEAR
MILITARY POWER: 750LB
LENGTH: 49.11
AGM HELLFIRE-LONGBOW

THE LONGBOW IS A LASER GUIDED ANTI-ARMOR MISSILE WITH TWO WARHEADS. ON IMPACT IT THE FIRST DIRECTIONAL EXPLOSIVE DETONATES AT THE INITIAL MOMENT AND THE SECOND EXPLOSIVE WARHEAD PENETRATES AND DETONATES IN THE INTERIOR THE OF THE TARGET BE IT AN ARMORED VEHICLE OR BUNKER.

SPECIFICATIONS
DESIGNATION: HELLFIRE
MANUFACTURER: LOCKHEED MARTIN
WEIGHT: APPROX. 110 LBS
LENGTH: 5FT 9”
APPLICATION: AIR TO SURFACE
ACQUISITION: LASER GUIDED
THE M299 "smart" LAUNCHER CAN RECOGNIZE AND FIRE ANY COMBINATION OF HELLFIRE MISSILE VARIANTS AND ITS ALL DIGITAL DESIGN ALLOWS IT TO BE INTEGRATED WITH MULTIPLE PLATFORMS. A ROCKET LAUNCHER USED FOR THE HELLFIRE-LONGBOW MISSILE.

ROCKET REVOLVER

SPECIFICATIONS

DESIGNATION: ROCKET REVOLVER
MANUFACTURER: LOCKHEED MARTIN

APPLICATION: SIX 2.75 MISSILES;
WEIGHT: 518 – 660lbs
RANGE: 1000 meters – 2.75 miles
THE ROCKET REVOLVER WAS DESIGNED BASED OFF OF THE M260 ROCKET LAUNCHER. IT IS AN INTERNAL WEAPON SYSTEM PNEUMATICLY DEPLOYED FROM AN FROM 1 OF 3 WEAPON BAYS.

THE HYDRA MISSILES VARY IN USAGE SUCH AS SUBMUNITION FRAGMENTATION, FLECHETTE, INFRARED ILLUMINATION, SMOKE SCREEN AND SMOKE SIGNATURE.

THE REVOLVER HAS BEEN DESIGNED AS AN LRU (LINE REPLACEMENT UNIT) WHICH MEANS IT CAN BE REMOVED AND REPLACED QUICKLY AT THE FIELD LEVEL.
SPECIFICATIONS

SIZE: 9”D X 13.8” H
WEIGHT: 32LBS
GIMBAL RANGE OF MOTION: 360 DEGREES
THERMAL IMAGER:
DETECTOR TYPE: INDIUM ANTIMONOIDE FOCAL PLAN ARRAY
ZOOM RATIO: 10X CONTINUOUS, 18X OVERALL (OPTICAL)
IMAGE RESOLUTION: 640H X 480 V
CONTROL ELECTRONICS UNIT:
SIZE: 10.8” L X 10.5”Q X 5.5” H
WEIGHT: 12.8 LBS
INTERFACES: ANALOG AND DIGITAL VIDEO OUTPUT
POWER: 18-32 VDC
AN/APY-8 RADAR
SAR (Synthetic Aperture Radar)

SPECIFICATIONS

DISH SIZE: 30”
HEIGHT: 36”
FUNCTION: LOW-LEVEL EARTH RESOURCES COLLECTION.
CONTROL DESCRIPTION: RADIO REMOTE:
DIRECT OR VIA SATELLITE.
CONTROLLERS: THEATER COMMANDER:
LAUNCH OR MISSION.
CARRIER FREQUENCY:
(125 KHZ TUNING IN UCAV TERM.)
FORWARD: Rx: 10.95 → 12.75 GHZ
RETURN: TX 13.75 → 14.50 GHZ
TRANSMIT POWER: 50 WATTS
F242 BLOODHOUND UCAV

DESIGNERS:
- JOSH KOZAR: FJ44 ENGINE
- RAY WILLIAMS: BLENDED WING BODY
- GILLIAN CHARLES: RADAR DESIGN
- ROB REID: GIMBAL & WEAPONS
- TERRY MAXWELL: LANDING GEAR