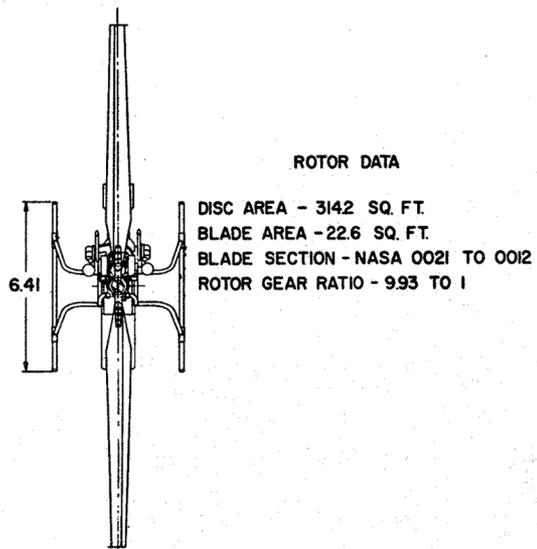


# STANDARD AIRCRAFT CHARACTERISTICS

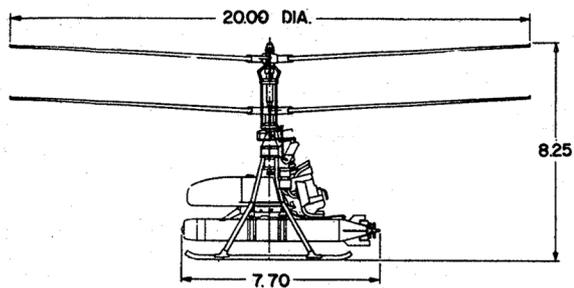
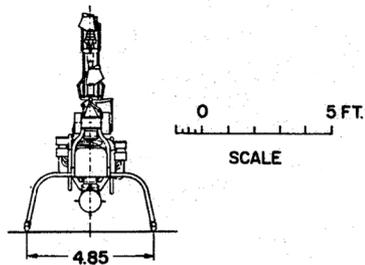
## QH-50A

**GYRODYNE**



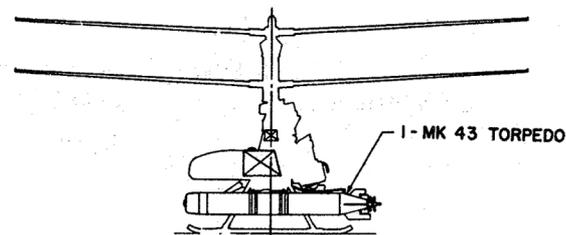
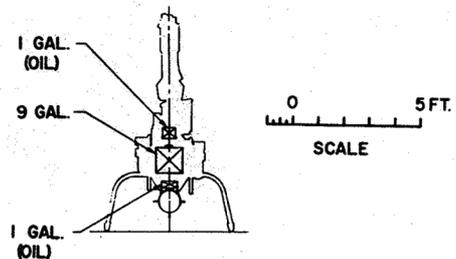
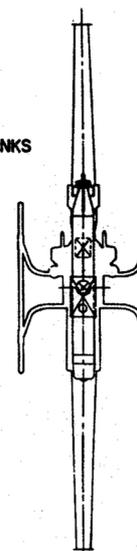
ROTOR DATA

DISC AREA - 3142 SQ. FT.  
 BLADE AREA - 22.6 SQ. FT.  
 BLADE SECTION - NASA 0021 TO 0012  
 ROTOR GEAR RATIO - 9.93 TO 1



DESCRIPTIVE ARRANGEMENT

NON SELF-SEALING TANKS



ARMAMENT & TANKAGE

**POWER PLANT**

ENGINE.....(1) YO-95-8  
 MFR.....Gyrodyne-Porsche  
 TYPE.....4 cyl., 4 cycle

**RATINGS**

	<u>BHP</u>	<u>RPM</u>	<u>ALT</u>
T.O.	72	4500	SSL
NORM.	72	4500	SSL

Model Spec. No.2 of 28 Jan 1959.  
 revised 5 Aug 1959

**ORDNANCE**

1 - MK 43 Torpedo

**MISSION AND DESCRIPTION**

The Model DSN-1 Drone is a remotely controlled ASW helicopter designed to carry one MK 43 Torpedo or equivalent and be capable of launching this weapon by remote control.

The drone incorporates two two-bladed coaxial rotors of the semi-rigid (see-saw) type. The blades are of laminated wood construction incorporating taper in planform and thickness and 12° negative twist. The machine is completely controllable through the rotors. Control in pitch and roll is obtained through conventional cyclic pitch control. Control in yaw is achieved by means of rotor blade tip air (drag) brakes, which provide positive directional control in all flight regimes.

The powerplant is a Gyrodyne-Porsche YO-95-8 four cylinder, four cycle reciprocating engine rated at 72 hp (after cooling) at 4500 rpm at sea level. Engine cooling is provided by a fan.

**DEVELOPMENT**

First Flight ..... December 1959

**DIMENSIONS**

DISC AREA.....314.2 sq. ft.  
 BLADE AREA.....22.6 sq. ft.  
 ROTOR DIAMETER.....20' - 0"  
 LENGTH.....20' - 0"  
 HEIGHT.....8' - 3"  
 TREAD.....4' -10"

**WEIGHTS**

<u>LOADINGS</u>	<u>LBS.</u>
EMPTY.....	560
NORMAL.....	885

All weights are estimated

**FUEL AND OIL**

<u>NO. TANKS</u>	<u>GALS</u>	<u>LOCATION</u>
1	9	Beneath Transmission

GRADE.....91/96  
 SPEC.....MIL-F-5572B

**OIL**

CAPACITY..... 2.0 gals.  
 GRADE.....Symbol 9110/9250  
 SPEC.....MIL-L-9000D

**ELECTRONICS**

Gyrodyne-Lear automatic  
 stabilization and remote  
 control equipment

(Nomenclature not  
 yet available)

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		NORMAL			
TAKE-OFF WEIGHT	lb.	885			
Fuel	lb.	48			
Payload	lb.	265			
Disc loading	lb./sq.ft.	2.82			
Vertical rate of climb at S.L. (A)	fpm.	510			
Absolute hovering ceiling (A)	ft.	3200			
Max. rate of climb at S.L. (A)	fpm.	956			
Service ceiling (100 fpm) (A)	ft.	10,180			
Speed at S.L. (A)	kn.	68.0			
Max. speed/altitude (A)	kn./ft.	68.0/S.L.			
Combat range	n.mi.	73.0			
Average cruising speed	kn.	53.0			
Cruising altitude	ft.	S.L.			
Combat radius	n.mi.	29.0			
Average cruising speed	kn.	68.6			

## NOTES

(A) Normal Rated Power (= Take-off Power)

PERFORMANCE is based on calculations modified by contractor flight test data of the 17 ft. dia. rotor Model XRON-1 Rotorcycle.

COMBAT RANGE AND RADIUS are based upon manufacturers' fuel consumption data increased 5%  
All performance is out of ground effect.

COMBAT RADIUS MISSION

WARM-UP AND TAKE-OFF: 1 Minute at Normal Rated Power.

RESERVE: 10 percent of initial fuel load.

CRUISE: Out and back at sea level at  $V_{max}$ .

HOVER: At sea level for 12 minutes at end of cruise out.

