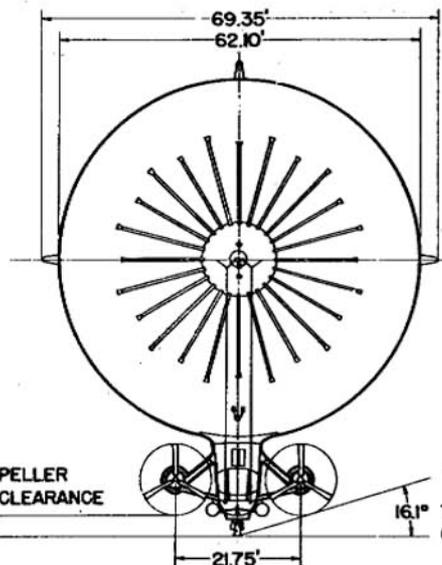


STANDARD AIRCRAFT CHARACTERISTICS
XZSG - 4

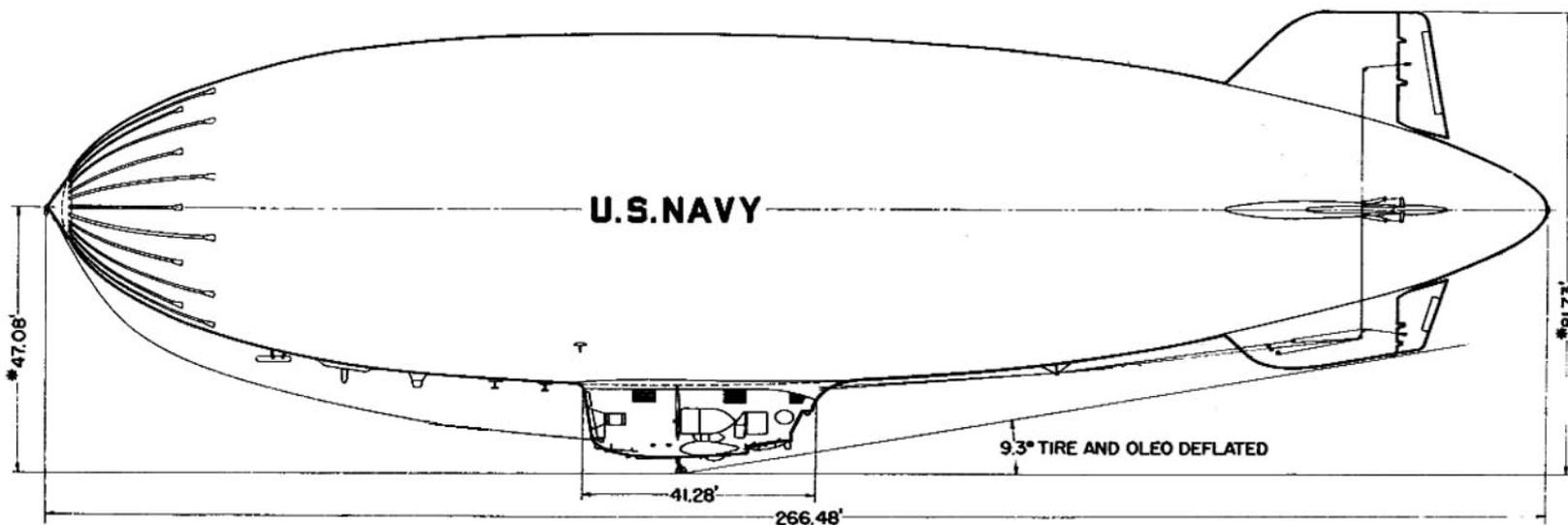
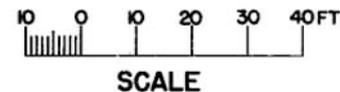
Standard Aircraft Characteristics NAVAER 1335A (REV. 1-49)

**BUREAU OF AERONAUTICS
NAVY DEPARTMENT**

*TIRE INFLATION AND
EXTENSION OF OLEO
STRUT ADDS 1.85 FT



ENVELOPE VOLUME 527,000 CU FT
FINENESS RATIO 4.24
BALLONET VOLUME 121,800 CU FT
NUMBER OF BALLONETS 2
EMPENNAGE (TOTAL 4) 1,996 SQ FT
PROPELLER CURTISS ELECTRIC 3 BLADES
BLADE DESIGN NUMBER 634-3C2 -6



DESCRIPTIVE ARRANGEMENT

Standard Aircraft Characteristics NAVAR 1333F (REV. 1-4-49)

POWER PLANT

NO. & MODEL.....(2)R-1340-AN46
 MFR.....Pratt & Whitney
 SUP CHG.....Impeller
 GEAR BOX RATIO.....0.667
 PROP. MFR.....Curtiss
 PROP. DESIGN NO.....C432S-C2
 NO. BLADES.....3
 PROP. DIA.....11 ft. 6 in.

RATINGS

BHP @ RPM @ ALT

T.O. 600 @ 2250 0-3500 ft

NOEM. 550 @ 2200 0-5000 ft

SPEC. NO. AN-1051 Rev. (1) App. (b)

ELECTRONICS

HF Receiver.....AN/ARR-15A
 HF Transmitter.....AN/ART-13
 UHF Trans/Rec.....AN/ARC-27
 ECM Direction Finder..AN/APA-69
 IFF Transponder.....AN/APX-6
 Radio Compass.....AN/ARN-6
 Radio Altimeter.....AN/APH-1
 Loran.....AN/APN-9
 Marker Beacon Rec....AN/ARL-12
 Towing Sonar.....AN/AQS-2
 Search Radar.....AN/APS-33F
 Sonobuoy Rec.....AN/ARR-26
 MAD.....AN/ASQ-8
 Intercommunication...AN/AIC-7A
 IFF Interrogator.....AN/APX-17
 ECM Pulse Analyser...AN/APA-74

MISSION AND DESCRIPTION

The basic mission of the model XZSG-4 airship is anti-submarine warfare patrol in collaboration with other ASW air and surface craft.

A conventional empennage configuration is incorporated in the airship's design. The rudders and elevators are controlled by a conventional wheel and control column system. The two engines are mounted in the outriggers and provisions have been made for servicing in flight. Equipment installed for in-flight refueling from surface vessels allows for extended patrols of a week's duration or longer.

Electronic installations include sonar, radar MAD gear and sonobuoy for detecting and tracking enemy submarines. Armament installations include hedgehogs, torpedoes and depth bombs for destroying enemy submarines.

DEVELOPMENT

Mock up - - - - - September 1951

First Flight - - - - - November 1953

DIMENSIONS

GAS VOLUME.....527,000 cu ft
 BALLONETS (2) ..121,800 cu ft
 LENGTH.....266' - 5"
 HEIGHT*.....81' - 9"
 WIDTH.....69' - 4"
 MAX DIA.....62' - 1"
 PROP GROUND
 CLEARANCE*.....3' - 4"

* Tire and oleo strut fully deflated.

WEIGHTS

LOADINGS	LBS.
Empty.....	24,885 C
Static Lift*.....	31,694 C
Static & Maximum Dynamic Lift*..	35,194 C

* 97 percent inflated at 0.062 lb. per cu. ft.

FUEL AND OIL

GAL.	NO. TANKS	LOCATION
655	2	CAR-fixed
100	1	CAR-step
300	2	OUTRIGGERS
188	1	BOMB BAY

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

OIL

46	2	CAR-fixed
----	---	-----------

OIL GRADE.....1120
 OIL SPEC..MIL-L-6082A

ORDNANCE

NO.	TYPE
16	Hedgehogs
2	Torpedoes MK41-0
4	Depth Charges



PERFORMANCE SUMMARY

LOADING CONDITION		(1) SONAR PATROL	(2) SONAR PATROL	(3) FERRY	(4) ALTITUDE
TAKE-OFF WEIGHT	lbs.	31,700	35,200	35,200	33,400
Oil	lbs.	200	400	500	300
Fuel	lbs.	2,700	5,700	7,400	5,200
Useful Load	lbs.	6,900	10,400	10,400	8,600
Static Heaviness	lbs.	0	3,500	3,500	3,500
Max. Speed/Alt.	kn./ft.	67/S.L.	66/S.L.	66/S.L.	68/3,000
Pressure Height	ft.	1,000	1,000	1,000	3,000
Time to Pressure Height	min.	.4	.4	.4	1.2
Take-Off Run, Calm	ft.	390	1,840	1,840	1,840
Patrol Range/Var	n.mi./kn.	875/40	1,530/40	2,390/40	1700/40
Patrol Radius/Var	n.mi./kn.	350/40	610/40	955/40	680/40
Endurance/Var	hr./kn.	22/40	38/40	60/40	43/40

NOTES

Performance is based on calculations.

Maximum speed restricted to 67 knots at S.L. This coincides with an engine power of 490 Bhp/engine at 2100 RPM.

Pressure height is defined as the maximum altitude to which the airship can rise in the standard atmosphere in any given loading condition without valving helium.

Performance is based on inflation with helium lifting .062 lb/cu ft at sea level. Gas fullness at sea level is 97.1% for 1,000 ft pressure height, and 91.5% for 3,000 ft.

Take-off run is based on sod runway, and includes distance required to clear a 50 ft. obstacle.

Range, radius, and endurance are based on engine specification fuel consumption for single engine operation increased by five percent.

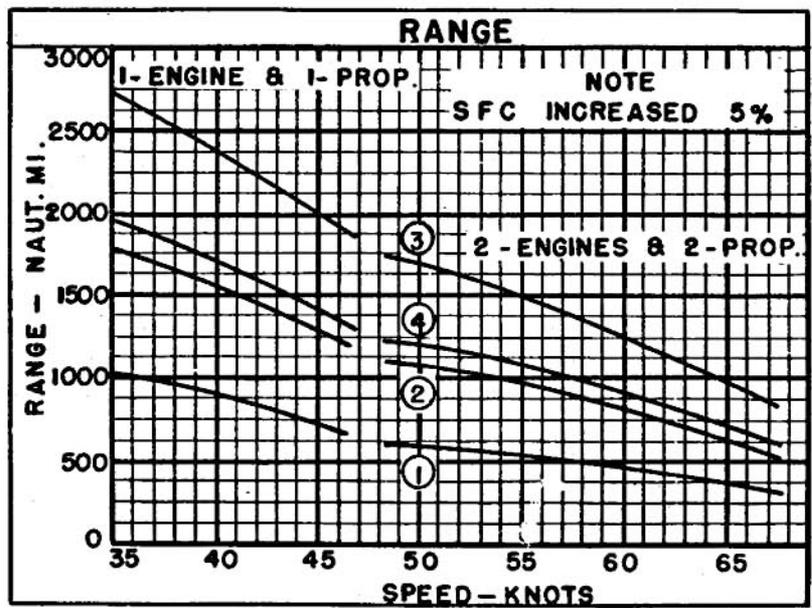
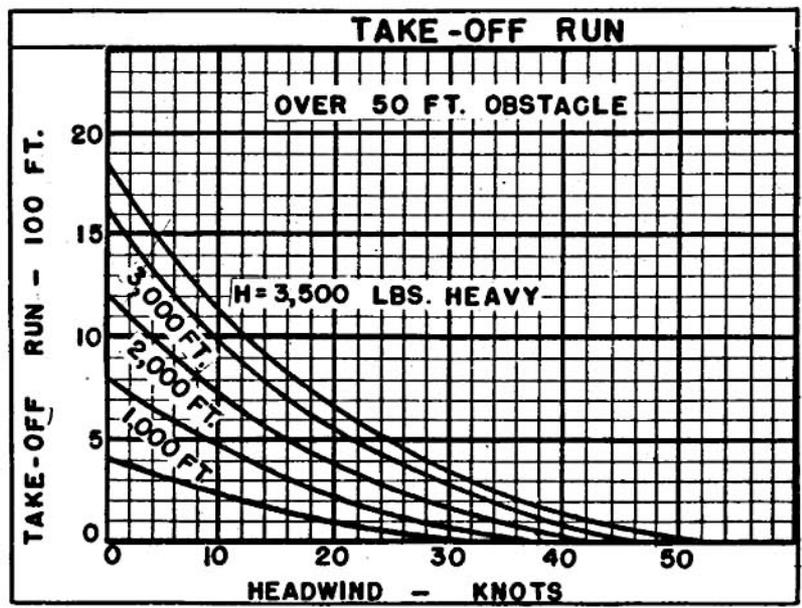
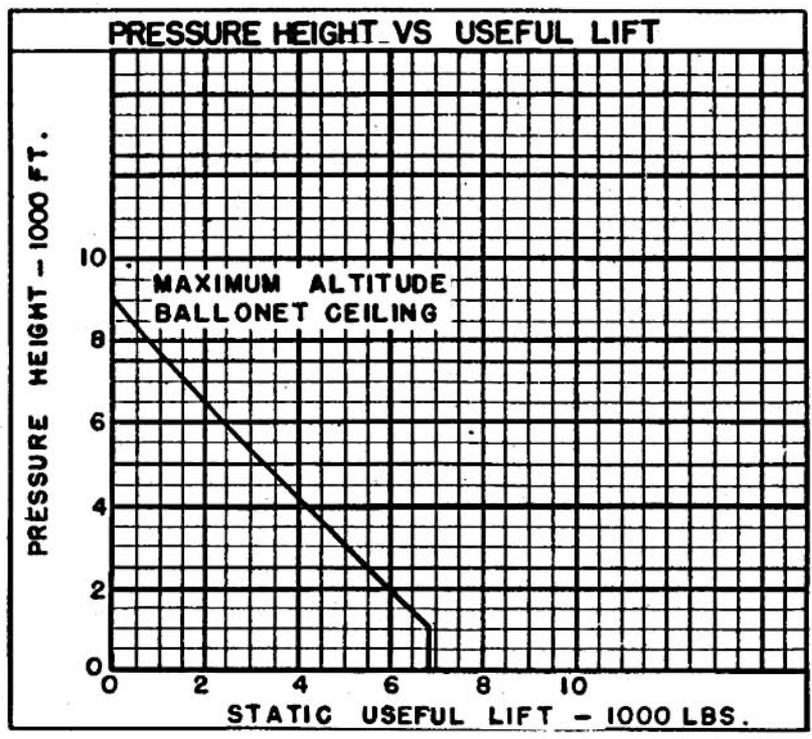
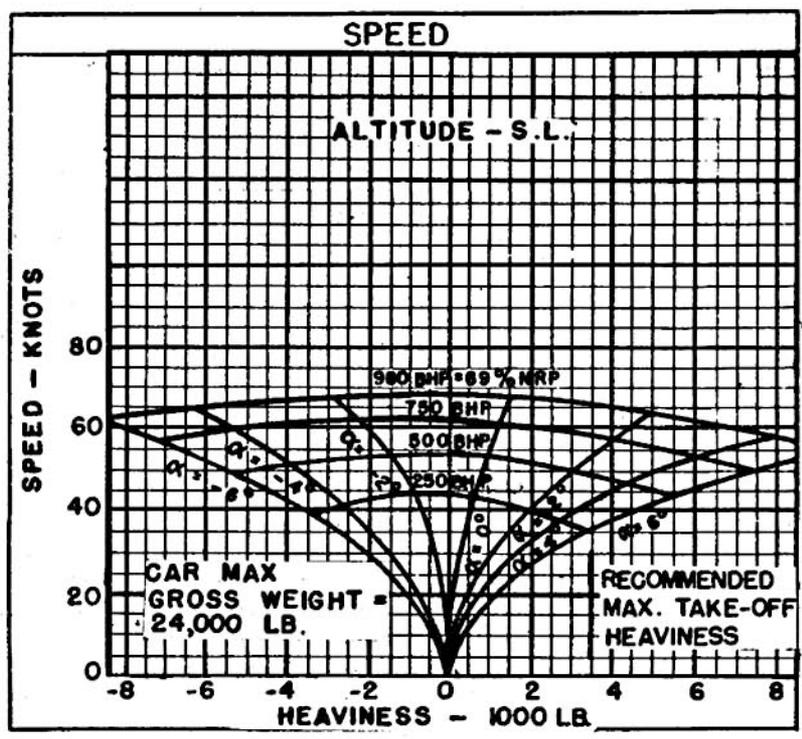
Radius is 40% of range.

Range in heavy or light flight includes allowance for variation of heaviness or lightness during flight.

The ferry loading condition is for maximum take-off heaviness with full crew and provisions, but without armament, sonar, or sonobuoys.

The altitude loading condition is for maximum take-off heaviness with full crew, armament, and sonobuoys, but without sonar.

Standard Aircraft Characteristics NAVAR 1335H



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics NAVAER 1335E (REV. 2-50)

NOTES

All figures for lift of the airship are based upon inflation with helium lifting .062 lb./cu. ft. at sea level in the standard N.A.C.A. atmosphere.

The static lift in flight is independent of altitude and temperature so long as helium is not valved and there is no superheat (i.e., the air and gas are at equal temperatures).

The gross and useful lifts of the fully inflated airship diminish with altitude in the standard atmosphere at the rate of approximately 3 percent of the gross lift per 1,000 ft.

In the absence of superheat the lift of the fully inflated airship at a given altitude varies inversely as the air temperature at the rate of approximately 1 percent of the gross lift per 50F.

In all conditions of inflation, so long as gas is not valved, the lift varies directly with the superheat at approximately 1 percent per 50F. The lift of the fully inflated airship is not, however, increased by rising gas temperature unless the altitude is reduced as necessary to avoid loss of gas by valving.

RANGE, RADIUS, OR ENDURANCE

WARM-UP, TAKE-OFF, AND CLIMB: 10 minutes fuel allowance at normal rated power at S.L.

CRUISE: At constant altitude for best range or maximum endurance.

RESERVE: 10% of initial fuel load.