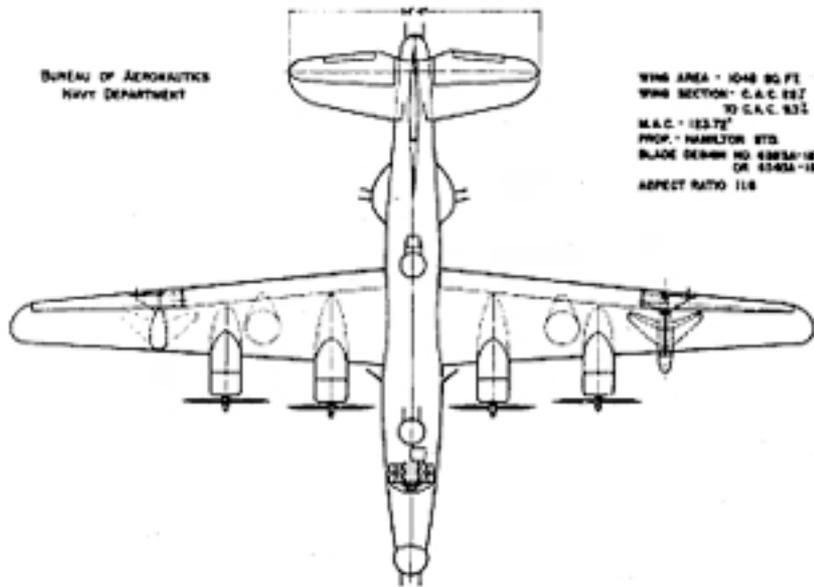
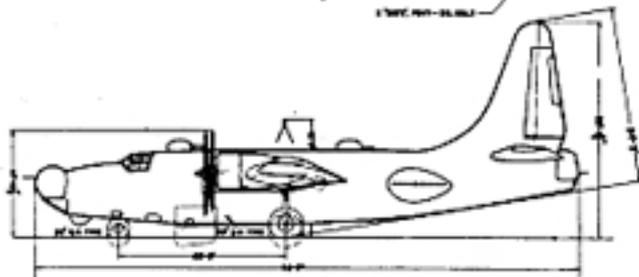
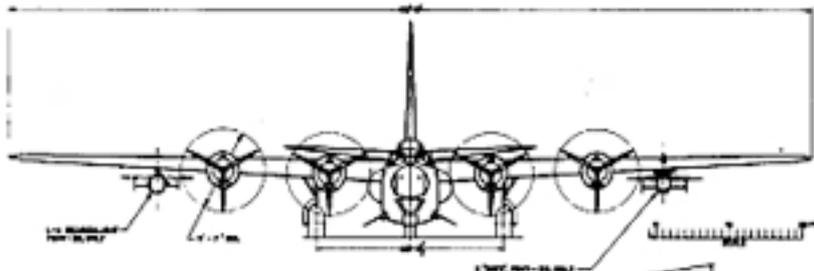


STANDARD AIRCRAFT CHARACTERISTICS  
PB4Y-2S "PRIVATEER"

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT



WING AREA - 1048 SQ FT  
WING SECTION - C.A.C. 127  
TO C.A.C. 931  
M.A.C. - 123.72'  
PROP. - HAMILTON STD  
BLADE DESIGN NO. 4385A-12  
OR 4345A-12  
ASPECT RATIO 11.8



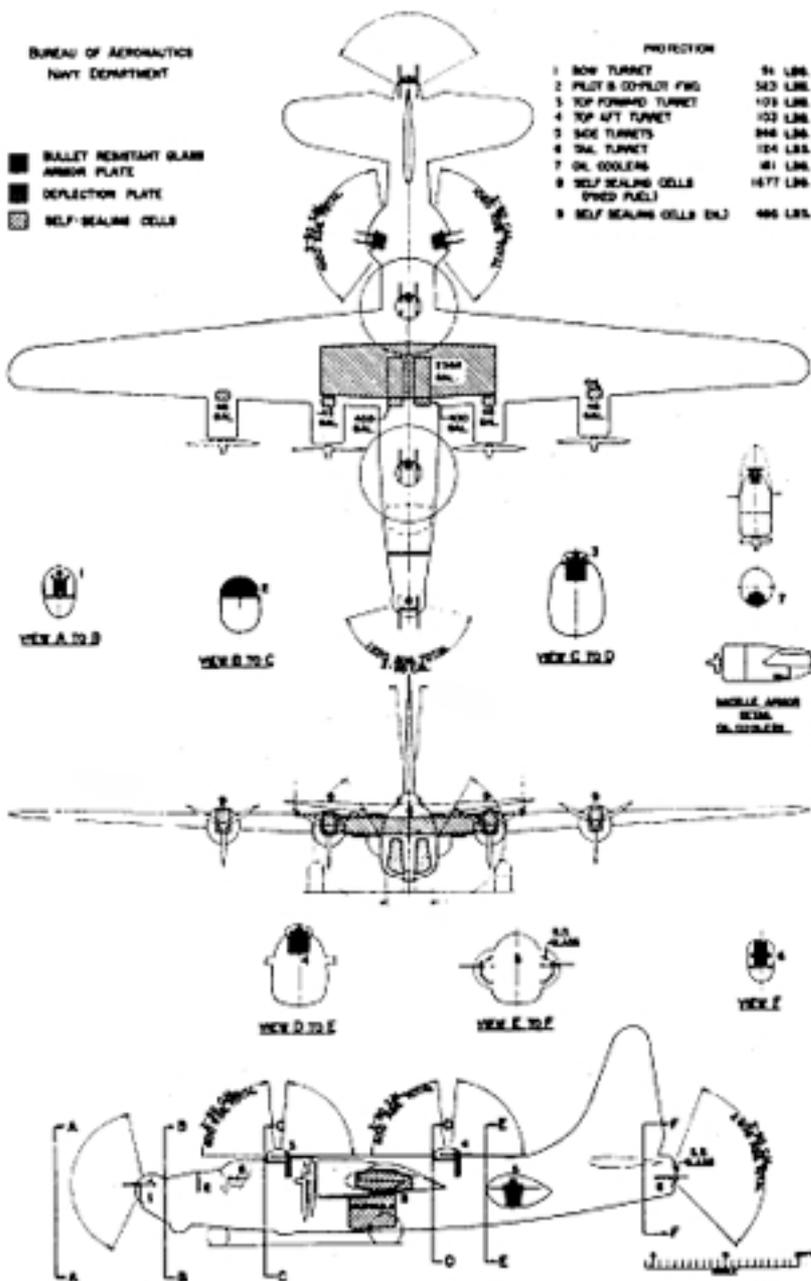
DESCRIPTIVE ARRANGEMENT

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

- BULLET RESISTANT GLASS
- ARMOR PLATE
- DEFLECTION PLATE
- ▨ SELF-SEALING CELLS

PROTECTION

- |   |                                 |           |
|---|---------------------------------|-----------|
| 1 | NOSE TURRET                     | 51 LBS.   |
| 2 | PILOT & CO-PILOT FWD            | 543 LBS.  |
| 3 | TOP FORWARD TURRET              | 103 LBS.  |
| 4 | TOP AFT TURRET                  | 103 LBS.  |
| 5 | SIDE TURRETS                    | 248 LBS.  |
| 6 | TAIL TURRET                     | 124 LBS.  |
| 7 | OIL COOLERS                     | 41 LBS.   |
| 8 | SELF SEALING CELLS (FRESH FUEL) | 1477 LBS. |
| 9 | SELF SEALING CELLS (OIL)        | 466 LBS.  |



**MISSION AND DESCRIPTION**

The PB4Y-2S is a version of the PB4Y-2 airplane, as modified for anti-submarine warfare. It is a long range medium altitude patrol landplane. It features the Davis wing and tricycle landing gear. It carries a crew of eleven men.

Structure is conventional, using a two-spar wing carrying a hydraulically actuated Fowler flap, and containing means for thermal de-icing.

**WEIGHTS**

Loadings	Lbs.	L.F.
EMPTY.....	39400.....	
BASIC.....	41500.....	
DESIGN.....	56000.....	2.6
COMBAT.....	56230.....	2.6
MAX.T.O.....	64000.....	2.2
MAX.LAND....	56000.....	

All weights are actual.

**POWER PLANT**

NO. & MODEL.....(4) R-1830-94  
 MFGR.....Pratt & Whitney  
 SUPERCH.....1 Stage, 2 Speed  
 PROP. GEAR RATIO.....0.562  
 PROP. MFGR.....Man. Std.  
 PROP. DES. NO.....6353A-18  
 NO. BL/DIA.....3/11'-7"

**RATINGS**

	Hhp	RPM	Alt.
T.O.	1350	2800	S.L.
MIL.	1350	2800	3900
	1100	2800	13500
NORM.	1100	2600	8200
	1000	2600	14500

SEE NOTE  
 SPEC. NO. N-5136

**FUEL AND OIL**

Gal.	No. Tanks	Location
2364	1	Wing (Self Seal)
1600	4	Bomb bay
FUEL GRADE....100/130		
FUEL SPEC.....AN-F-4B		

**OIL**

CAPACITY (gal.).....	180
SPEC.....	AN-O-8
GRADE.....	1100-1120

**ORDNANCE**GUNS

No.	Size	Location	Rds.
2	.50 cal.	Nose turret	1200
2	.50 cal.	Tail turret	2000
4	.50 cal.	Waist	2000
2	.50 cal.	Deck, Fwd.	800
2	.50 cal.	Deck, Aft.	800

SIGHTS

MK. 9	Nose, tail and waist
MK. 18	Deck turrets
MK. 23-7	Bomb sight

BOMBS

Type	Size	Location	No.
Bomb	2000#	Fus.	4
Bomb	1000#	Fus.	8
Bomb	500#	Fus.	12
Mines	2000#	Fus.	4
Mines	1000#	Fus.	8
Mines	700#	Fus.	4
Sonobuoys	AN/CRTIB	Fus.	36
MAX. BOMB LOAD.....8,000 LBS.			

**DIMENSIONS**

SPAN.....	110'-0"
LENGTH.....	74'-7"
HEIGHT.....	29'-2"
WING AREA.....	1048 sq. ft.
M.A.C.....	123.7"
TREAD.....	25'-8"

**ELECTRONICS**

COMMAND.....	AN/ARC-1
LIAISON.....	ATC/ARX
COMPASS.....	SCR-269
MARKER BEACON.....	AN/ARN-8
ALTIMETER.....	AN/APN-4
IFF.....	AN/APX-8
SEARCH RADAR.....	AN/APS-15B
SONOBOUY RECEIVER...	AN/ARR-15
SEARCHLIGHT.....	I-11



## PERFORMANCE SUMMARY

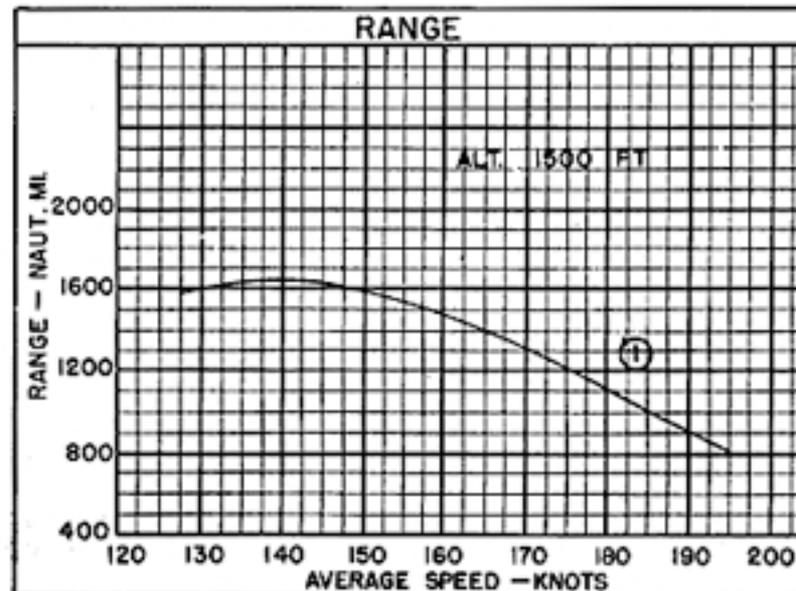
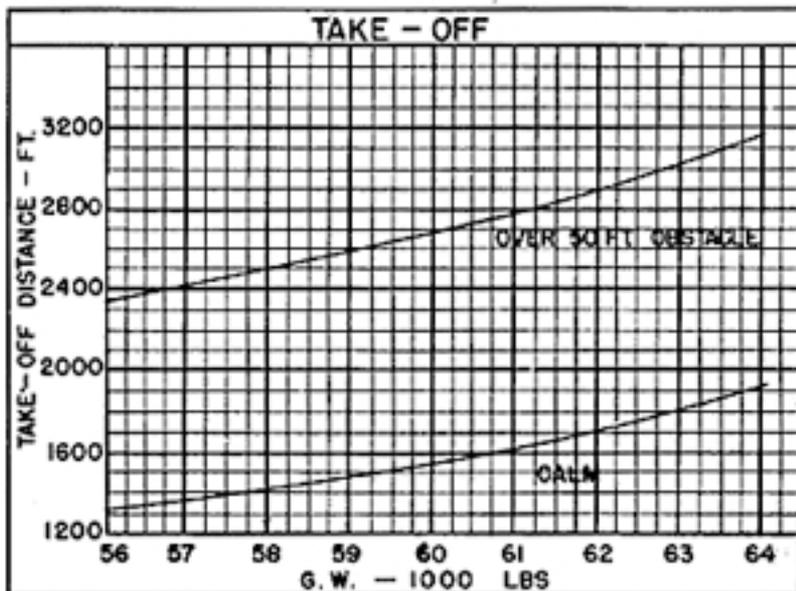
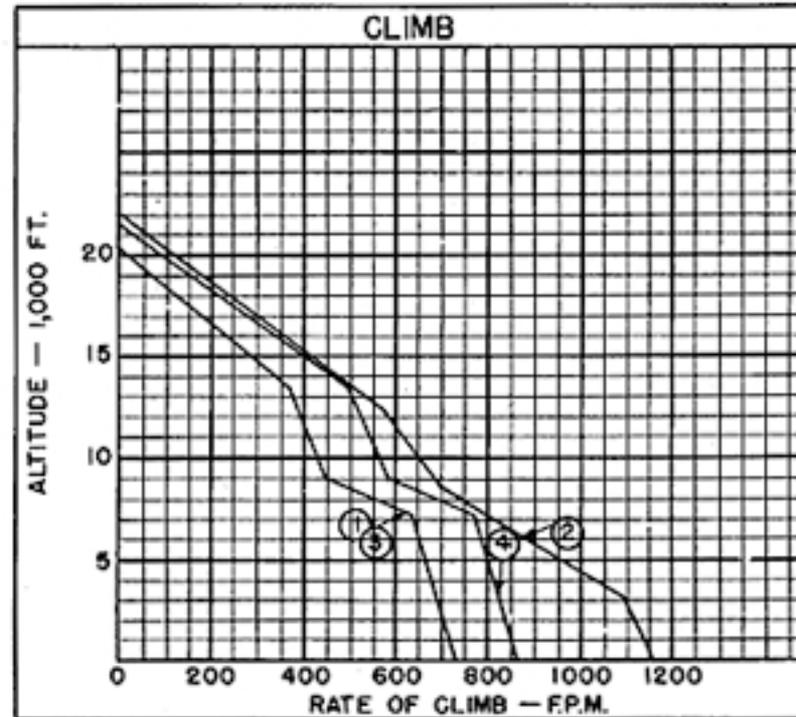
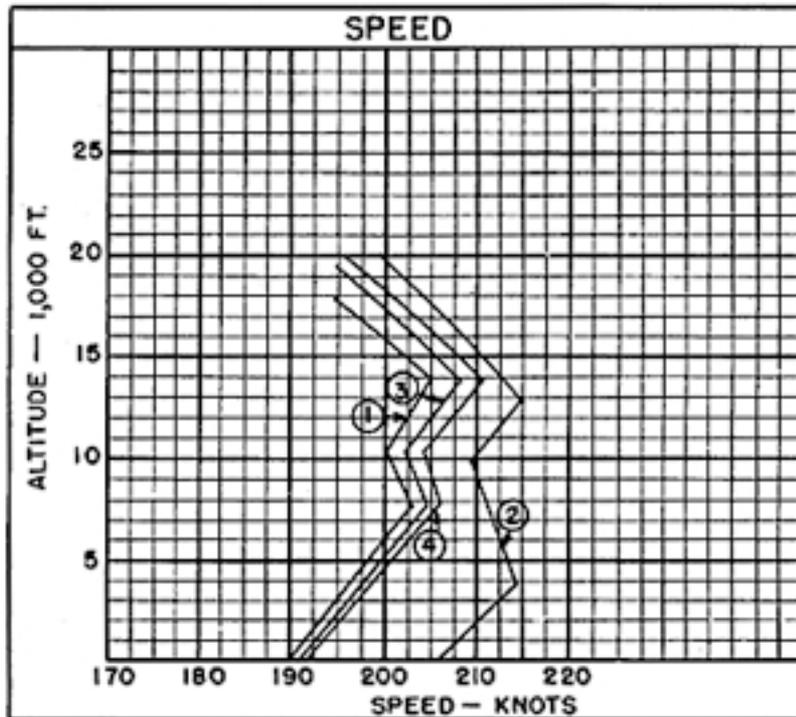
LOADING CONDITION		(1) ASW 2-Mk. 24 Mines	(3) FERRY
TAKE-OFF WEIGHT	lbs	63,300	64,000
Fuel	lbs	14,184	14,184/3,956
Bombs	lbs	1,400	
	lbs		
Wing/Power Loading (A)	lbs/so.ft. lbs/ bhp	60.4/15.8	61.0/16.0
Stall Speed--Power off	kn	91.3	91.9
Stall Speed--Power off - No Fuel	kn	80.5	78.6
Stall Speed--Power on	kn	83.1	83.5
Maximum Speed/Alt (B)	kn/ft	205/13,900	208/13,900
Take-off Distance, deck -- calm	ft	1,840	1,900
Take-off Distance, deck	kn. ft		
Take-off Distance, Airport	ft	3,070	3,180
Rate of climb -- sea level (B)	ft/min	738	730
Service Ceiling (B)	ft	18,300	18,300
Time-to-climb 10,000 ft. (B)	min	16.1	16.3
Time-to-climb	ft. (B) min		
Combat Range/V av 1,500 ft. n.mi/kn		1,640/139	2,165/138
Combat Radius/V av 1,500 ft. n.mi/kn		655/139	
LOADING CONDITION		(2) COMBAT	(4) COMBAT
GROSS WEIGHT	lbs	56,230	56,230
Engine power		MILITARY	NORMAL
Fuel	lbs	8,510	8,510
Bombs/Tanks			
Max. speed at sea level	kn	206	192
Max. speed ACA/ft.	kn	215/12,800	211/13,900
Combat speed/Alt.	kn/ft	209/1,500	195/1,500
Rate of climb SL	ft/min	1,160	870
Ceiling for 500 fpm R/C	ft	13,400	12,800
Time-to-climb/Alt.	min/ft		

## NOTES

- (A) HHP at Maximum Critical Altitude  
 (B) Normal HHP

Performance is based on flight test of PB4Y-2 airplane.

Range and radius are based on flight test fuel consumption data increased by 5%.



○ LOADING CONDITION COLUMN NUMBER

# NOTES

Combat radius is 40% of combat range.

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Combat radius is reduced 5 nautical miles for each minute of maximum rated power operation at 1500 ft.

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Engine ratings from Flight Test:

	<u>Rpm</u>	<u>Rpm</u>	<u>Alt.</u>
T.O.	1350	2800	S.L.
Nil.	1350	2800	3200'
	1100	2800	12200'
Norm.	1100	2600	7200'
	1000	2600	13400'

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Ferry conditions does not include L-11 searchlight.