

**AIRPLANE CHARACTERISTICS & PERFORMANCE**

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	
LOADING CONDITION		PATROL 4-325# D.B.	PATROL	BOMBER 4-1000#	
GROSS WEIGHT	LBS.	59842	60300	59926	
EMPTY WEIGHT (ACTUAL)	LBS.	36974			
FUEL/OIL	GALS.	2515/140	2781/150	2112/120	
FIXED GUNS/AMMUNITION		None			
FLEXIBLE GUNS/AMMUNITION		8-50 Cal./2700 rds.			
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	
WING LOADING	LBS./SQ.FT.	42.6	42.9	42.6	
POWER LOADING ①	LBS./BHP.	19.9	20.1	20.0	
V-MAX. SEA LEVEL	KN.	168	168	168	
V-MAX./CRITICAL ALT.	KN./FT.	183/19100	183/19100	183/19100	
V-STALL GROSS WEIGHT ②	KN.	68.2	68.5	68.2	
V-STALL WITHOUT FUEL ②	KN.	59.0	58.2	60.6	
TIME-TO-CLIMB -10000FT.-	MIN.	18.1	18.4	18.1	
TIME-TO-CLIMB -20000FT.-	MIN.	53.7	55.4	54.0	
SERVICE CEILING	FT.	20800	20600	20700	
TAKE-OFF DISTANCE -CALM-	FT.	2513	2575	2530	
TAKE-OFF DISTANCE -15 KN-	FT.	1739	1785	1752	
TAKE-OFF DISTANCE -25 KN-	FT.	1291	1327	1301	
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS	60	60	60	
RATE OF CLIMB -SL-	FT./MIN.	610	600	610	
MAX. RANGE / V-AV. ③	N MI./KN.	2025/117	2250/117	1670/118	
RANGE / V-AV. -60%NSP-③-	N MI./KN.				
SEARCH RADIUS / V-AV. -20%R-	N MI./KN.	630/118	700/118	525/119	
A.S.W. RADIUS / V-AV. -20%R-	N MI./KN.	525/118			
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.				
ENGINE / PROP GEAR RATIO		2-R-2800-34 / .45:1			
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL		TAKE-OFF	
	2100/2800/SL-3300	1700/2600/SL-8,500		2100/2800/S.L.	
	1700/2800/9400-16700	1500/2600/11,600-18,500			
TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED		2112	Wing	
	UNPROTECTED	150		Bomb Bays: (Alternate with drop tanks)	
	TOTAL - FIXED INTERNAL			Bombs: 8-1000#, 8-500#, 8-250# or 12-100#	
	DROPPABLE Bomb Bays 2@393		786	Depth Bombs: 8-650# or 8-325#	
	DROPPABLE			Mines: 8-1000#	
TOTAL	150	2898	Note: Provisions are available for 4800 rds. of 50 cal. ammunition.		
NOTE	① BHP AT MAX. CRIT. ALT.				
	② STALL - WITH POWER				
	③ AT 1500' ALTITUDE				

DATE 1 MAY 1947

PAGE 2

MODEL XPBM-5A

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Performance is based on flight test of the PBM-5 airplane. Range and radius are based on PBM-5 airplane (R-2800-22 engines) fuel consumption data increased by 5 per cent to conform with past experience.

## Notes:

- (1) Max. allowable gross weight is 60,300 pounds.
- (2) Max. allowable gross weight for rough water take-off is 48,000 pounds.
- (3) Use of military power for Condition (1) increases  $V_{max}$  S.L. to 181 kn. and  $V_{max}/ACA$  to 189 kn./18000 ft.
- (4) Engine ratings given on page 1 are AEL ratings. These ratings do not conform with engine data obtained from PBM-5 flight tests. The flight test data were used in the performance calculations.
- (5) Rammed engine ratings from flight test (no external stores)

Military	Normal
2100/2800/S.L.-5000	1700/2600/S.L.-9500
1700/2800/11,000-18,000	1500/2600/12,800-19,200

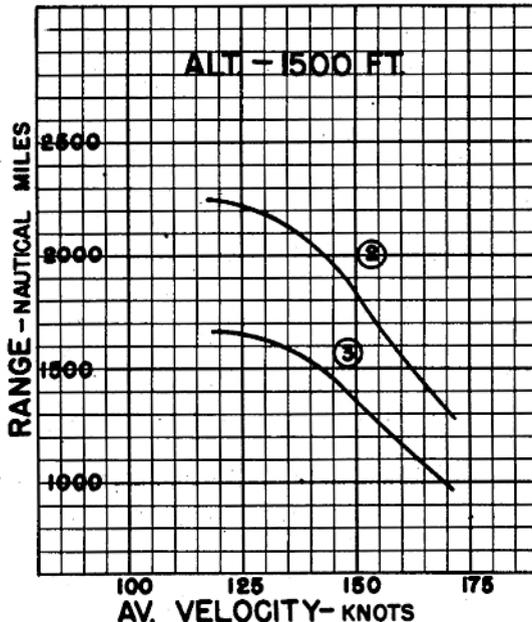
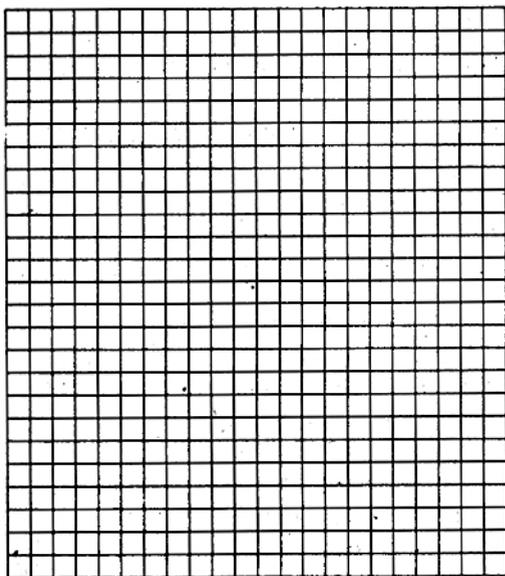
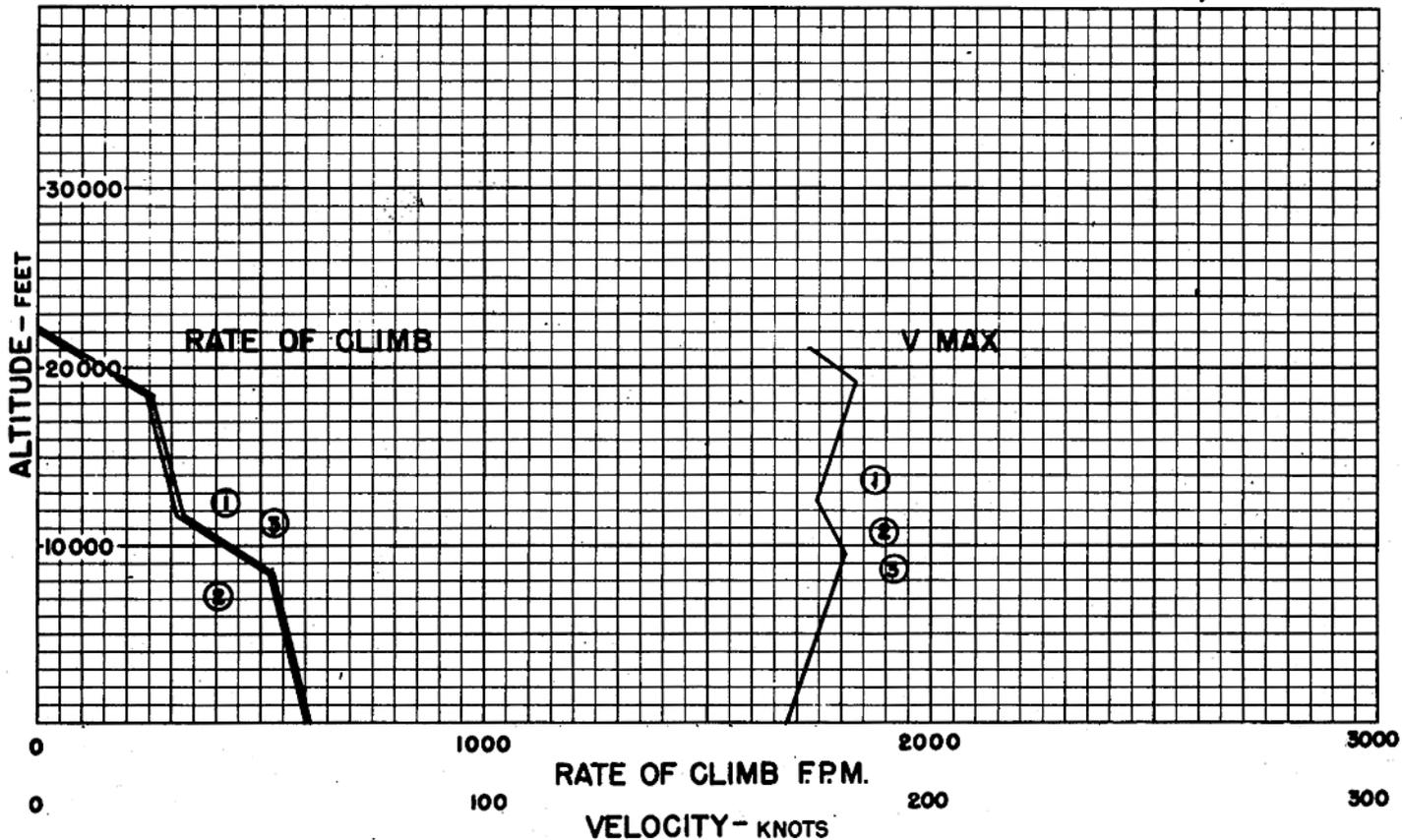
Search Radius Formula No. P-1, Conditions Nos. 1, 2, 3.

Radius is 40% range at vel. for max. range at 1500 ft. Allowance of 20% of initial fuel load for warm-up, take-off, climb and reserve is carried the entire distance. Bombs, radar, tanks, also carried entire distance.

A.S.W. Radius Formula No. PA-1, Condition No. 1.

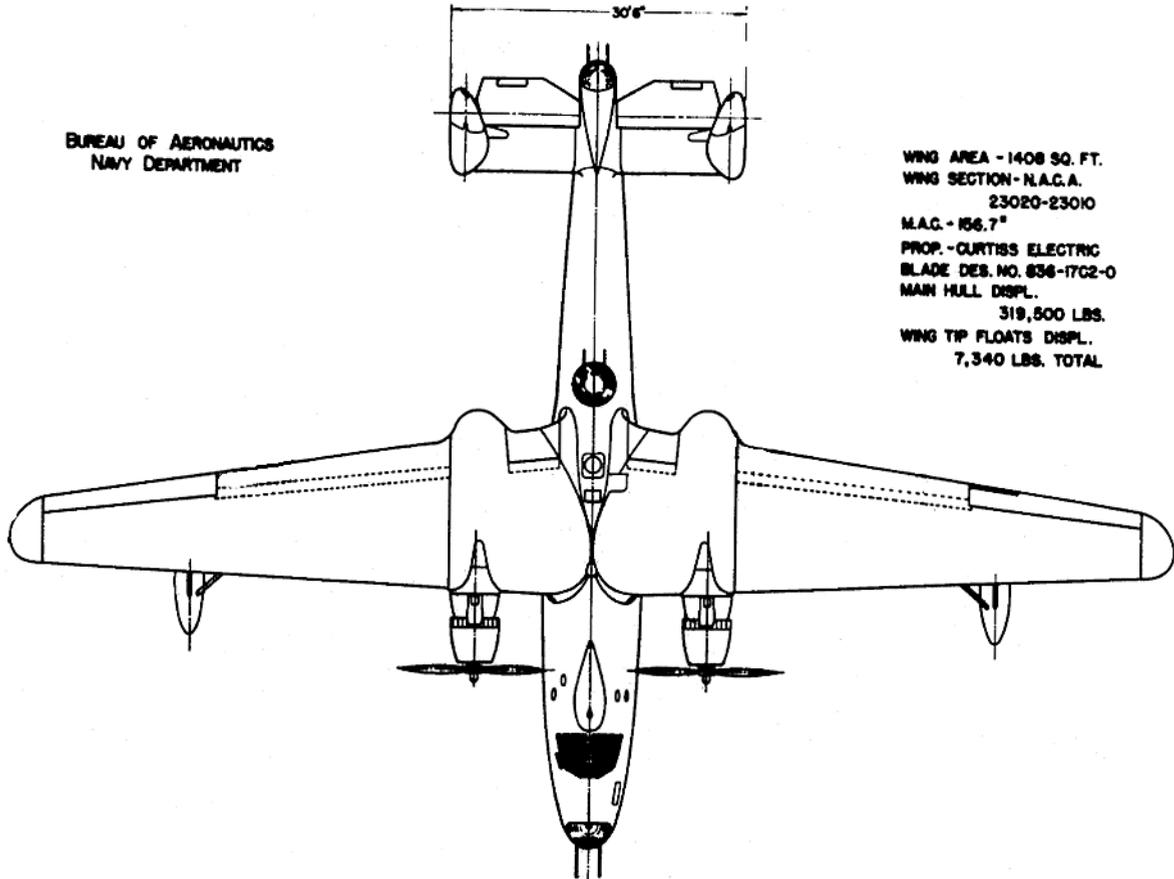
Radius is 1/3 range at vel. for max. range at 1500 ft. allowance of 20% of initial fuel load for warm-up, take-off, climb and reserve is carried entire distance. Bombs, radar, tanks also carried entire distance.

Search and A.S.W. radius are reduced 3.5 nautical miles for each minute of military power operation at 1500 ft.

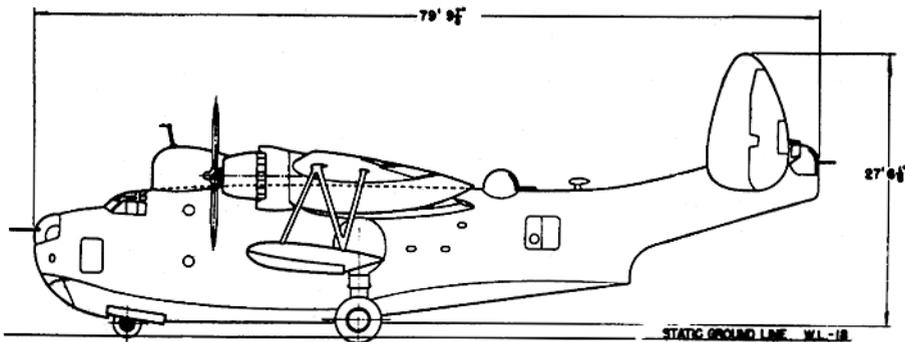
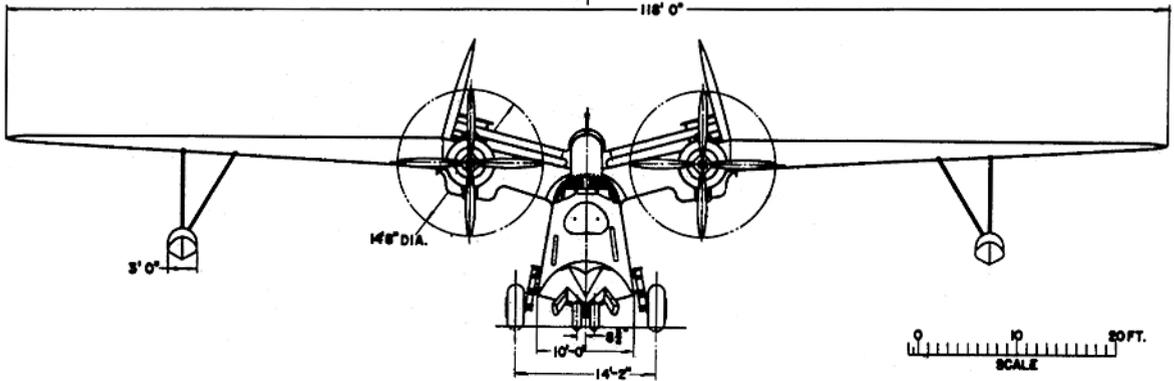


○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT



WING AREA - 1408 SQ. FT.  
WING SECTION - N.A.C.A.  
23020-23010  
M.A.C. - 156.7"  
PROP. - CURTISS ELECTRIC  
BLADE DES. NO. 836-17C2-0  
MAIN HULL DISPL.  
319,500 LBS.  
WING TIP FLOATS DISPL.  
7,340 LBS. TOTAL



MODEL XPBM-5A

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

PROTECTION

- ARMOR PLATE
- ▨ SELF-SEALING TANKS
- ⊠ NON SELF-SEALING TANKS

1. BOW TURRET	142.55 LBS.
2. PILOT & CO-PILOT	183.00 LBS.
3. FLIGHT ENGINEER	226.1 LBS.
4. FUEL TRUNKS	43.3 LBS.
5. TURRET	106.96 LBS.
6. SIDE WAIST	166.4 LBS.
7. TAIL TURRET	105.61 LBS.
8. SELF-SEALING CELLS	1068.00 LBS.

