

NAVAIR 00-110AA1-4

Standard Aircraft Characteristics

NAVY MODEL

EA-1E

AIRCRAFT

(AD-5W)

THIS PUBLICATION SUPERSEDES NAVAIR 00-110A-1 DATED
1 MAY 1955 IN PART AND ALL ADDENDA THERETO

PUBLISHED BY DIRECTION OF THE
COMMANDER OF THE NAVAL AIR SYSTEMS COMMAND

1 JULY 1967

NAVAIR 00-110AA1-4

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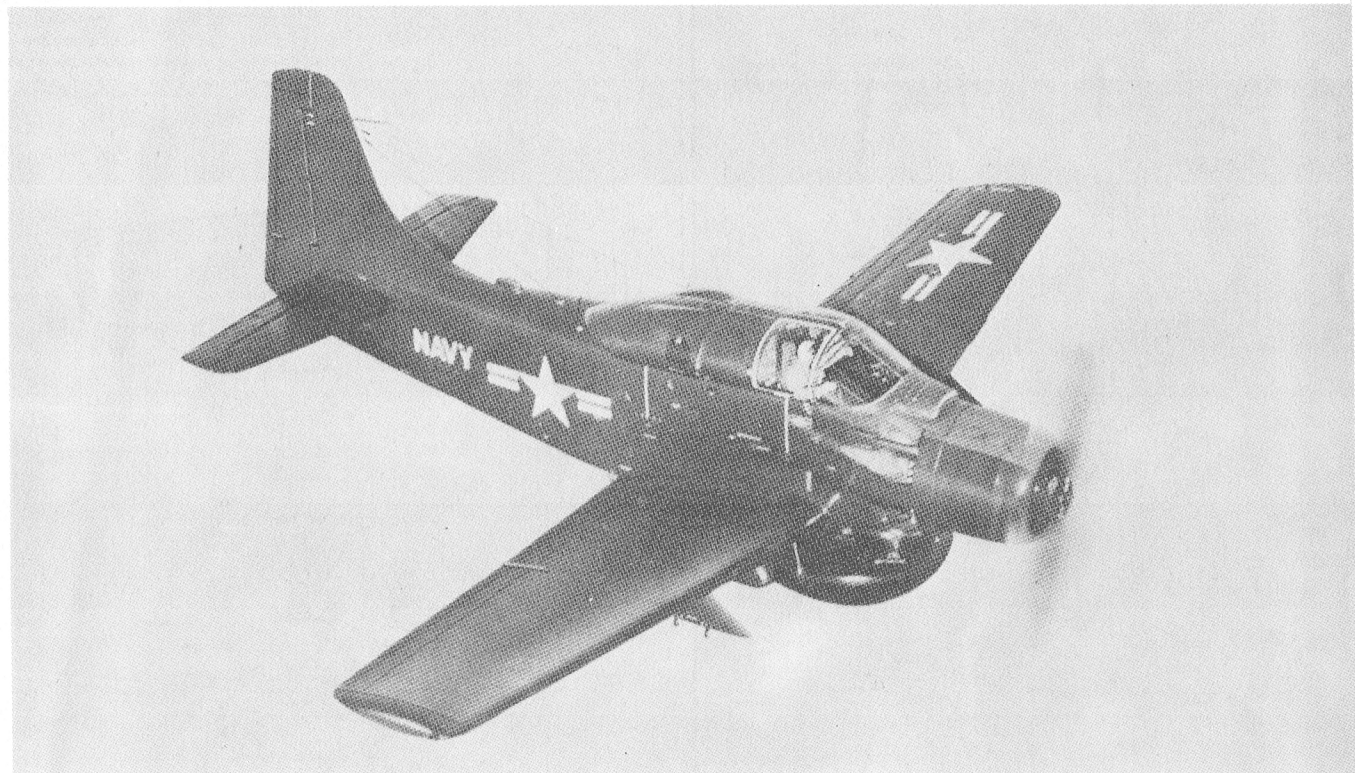
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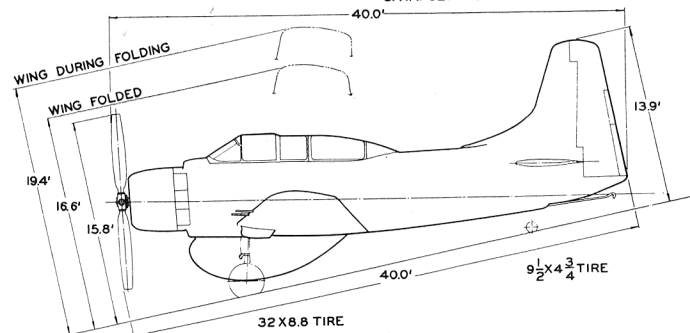
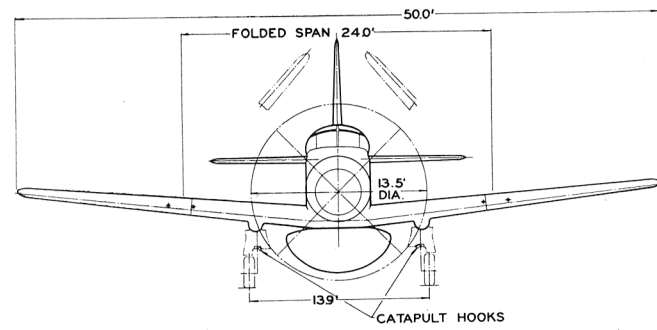
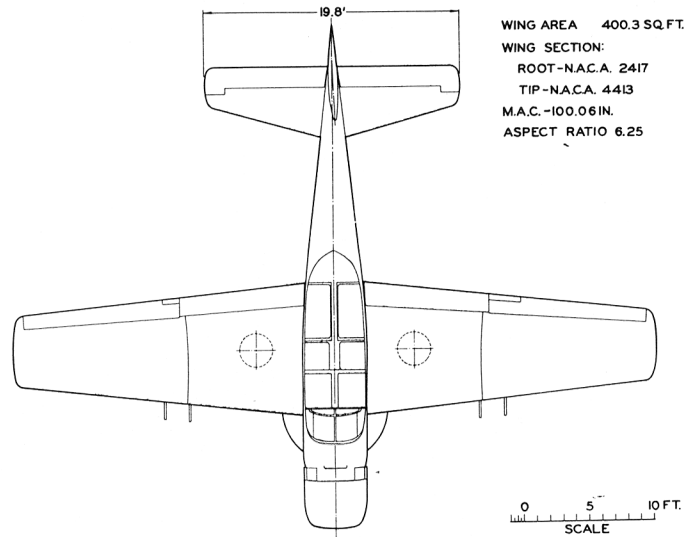
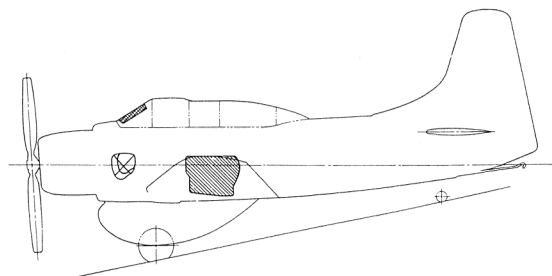
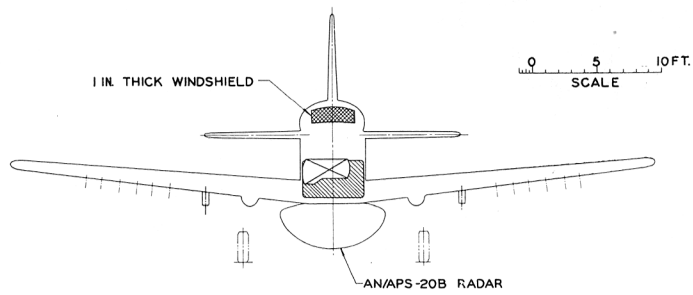
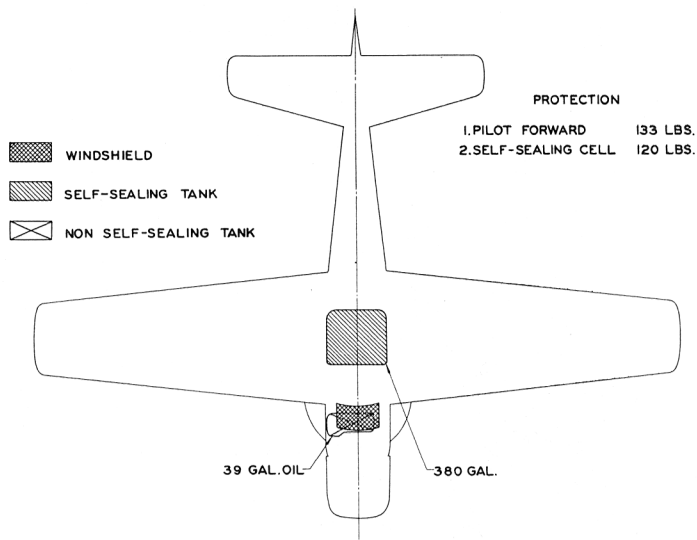
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**STANDARD AIRCRAFT CHARACTERISTICS
EA-1B SKYRAIDER**

SERVICE

NAVAIR OO-110AA1-4



2

POWER PLANT

NO. & MODEL.....(1) R-3350-26-WA
 MFR.....Wright Aero
 SUPERCHG.....Single Stage Two Speed
 REDUCT.GEAR RATIO......4375:1
 PROP. MFR.....Aero Products
 BLADE DES. NO.....M20A2-162-0
 NO. BLD./DIA.....4/13'6"

RATINGS

	BHP	@ RPM	@ ALT.
T.O.	2,700	2,900	S.L.
MIL.	2,700	2,900	3,700
	2,100	2,600	14,500
NORM.	2,300	2,600	6,200
	1,900	2,600	17,000

Spec. No.....N836-D

ELECTRONICS

UHF Trans.-Rec.....AN/ARC-27A
 MHF Trans.-Rec.....AN/ARC-2
 Radio Altimeter.....AN/APN-22
 Marker Beacon.....AN/ARN-12
 IFF.....AN/APX-6
 IFF Coder.....AN/APA-89
 LF ADF.....AN/ARN-6
 UHF ADF.....AN/ARA-25
 Interphone.....AN/AIC-4
 Radar Search.....AN/APS-31C
 LAB Radar Bombsight.....AN/APA-16
 LAB R-R Adapter.....MX-476/APA-16
 Sonobuoy Rec.....AN/ARR-26
 Searchlight.....AN/AVQ-2A
 ECM Rec.....AN/APR-9B
 ECM DF.....AN/APA-69A
 ECM Rec.....AN/APR-13

Provisions

VHF Trans.-Rec.....AN/ARC-1
 Bomb Director.....MK-3 MOD-5

MISSION AND DESCRIPTION

The principal mission of the AD-5W is that of airborne early warning and anti-submarine search from carrier or land bases. The AD-5W is a development of the AD series and incorporates improvements in equipment, arrangement, and performance and stability. Installation provisions for all armor and armament carried on other AD-5 models are retained.

The crew consists of pilot, assistant pilot-navigator and radar operator. The main distinction between this airplane and other AD-5 series aircraft is the incorporation of the AN/APS-20B radar.

DEVELOPMENT

First Flight.....April 1954
 Service Use.....November 1954

DIMENSIONS

WING
 AREA.....1400.3 sq.ft.
 SPAN.....50 ft.
 MAC.....8.4 ft.
 LENGTH.....40.0 ft.
 HEIGHT.....15.8 ft.
 TREAD.....13.9 ft.
 PROP. GRD. CLEARANCE.....6 in.

WEIGHTS

LOADINGS	LBS.	L.F.
EMPTY.....	12,092.....	
BASIC.....	14,802.....	
DESIGN.....	17,000.....	6.4
COMBAT.....	17,125.....	6.4
MAX.T.O.(FIELD).....	25,000.....	
(CAT).....	25,000.....	
MAX.LDG.(FIELD).....	21,000.....	
(ARREST).....	17,500.....	

ALL WEIGHTS ARE CALCULATED

FUEL AND OIL

GALS.	NO.TANKS	LOCATION
380*.....	1.....	Fuselage
150 or 300.....	2.....	Wing Drop

Fuel Grade.....115/145
 Fuel Spec.....MIL-F-5572

*Self Sealing Tank
 Max. Useable Fuel 980 gal. (limited by oil cap.)

OIL

CAPACITY.....39 gals.
 SPEC.....AN-O-8
 GRADE.....1120

ORDNANCE

Equipped with inner wing bomb racks as on other AD-5 models and can carry the same stores.

Provisions for 12 Aero 14 racks in outer wings and 4-20mm guns in wing fold with 200 rds. of ammunition per gun.

SERVICE

PERFORMANCE SUMMARY					
TAKE-OFF LOADING CONDITION	(1) SEARCH	(3) SEARCH 2-300 gal. Aero 1A Fuel Tanks	(4) SEARCH 2-150 gal. Aero 1A Fuel Tanks		
TAKE-OFF WEIGHT	lb.	18,037	22,047	20,041	
Fuel	lb.	2,280	5,880	4,080	
Fayload	lb.				
Wing loading	lb./sq.ft.	45.1	55.1	50.1	
Stall speed - power-off	kn.	87.9	97.2	92.7	
Take-off run at S.L. - calm	ft.	1,025	1,730	1,330	
Take-off run at S.L. 25 kn. wind	ft.	540	970	720	
Take-off to clear 50 ft. - calm	ft.	1,830	3,150	2,385	
Max. speed/altitude	(A) kn./ft.	264/17,300	250/17,200	257/17,300	
Rate of climb at S.L.	(A) fpm.	2,070	1,320	1,640	
Time: S.L. to 10,000 ft.	(A) min.	5.2	8.3	6.5	
Time: S.L. to 20,000 ft.	(A) min.	12.8	24.2	17.1	
Service ceiling (100 fpm)	(A) ft.	26,500	21,200	23,800	
Combat range	n.mi.	685	1,810	1,295	
Average cruising speed	kn.	160	160	160	
Cruising altitude(s)	ft.	1,500	1,500	1,500	
Combat radius	n.mi.	275	720	520	
Average cruising speed	kn.	160	160	160	
Mission time	hrs.	4.4	11.1	8.1	
COMBAT LOADING CONDITION					
	(2) 60% Fuel				
COMBAT WEIGHT	lb.	17,125			
Engine power		Military			
Fuel	lb.	1,368			
Combat speed/combat altitude	kn./ft.	253/1,500			
Rate of climb/combat altitude	fpm/ft.	2,700/1,500			
Combat ceiling (500 fpm)	ft.	24,400			
Rate of climb at S.L.	fpm.	2,740			
Max. speed at S.L.	kn.	250			
Max. speed/altitude	kn./ft.	267/15,000			
LANDING WEIGHT					
Fuel	lb.	232			
Stall speed - power-off	kn.	82.8			
Stall speed - with approach power	kn.	77.1			

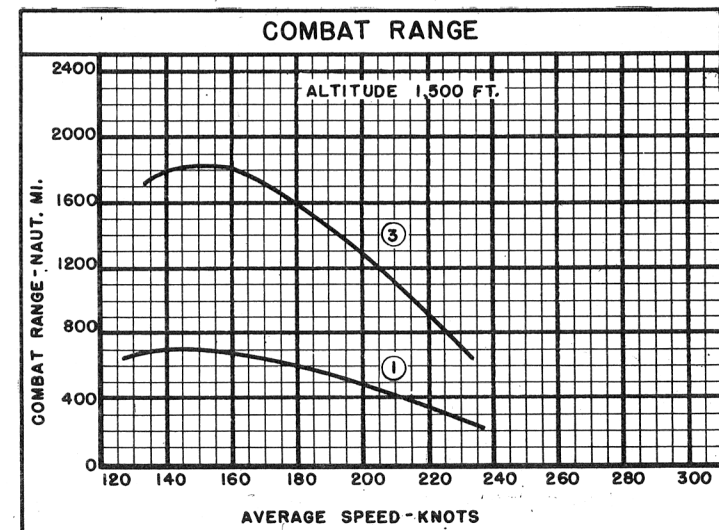
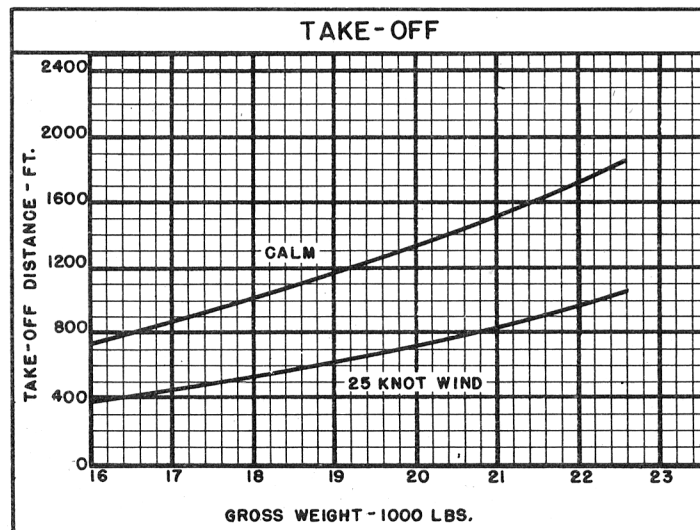
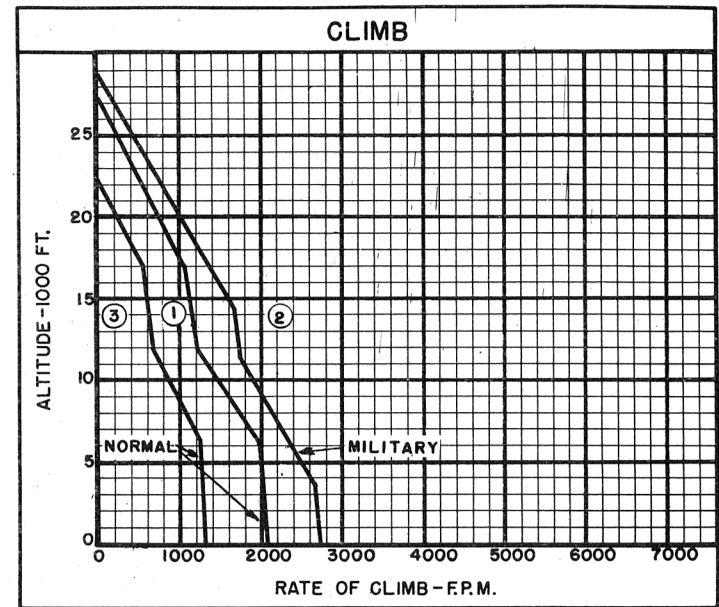
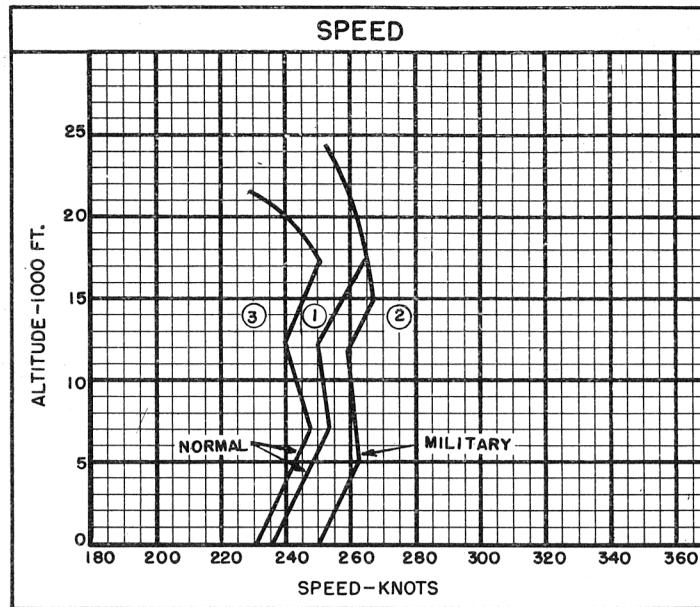
NOTES

(A) Normal rated power.

PERFORMANCE BASIS: Performance is calculated and based on contractor's flight tests of the AD-5W.

COMBAT RANGE AND RADIUS are based on fuel consumption data from AD-4B, AD-5 and AD-6 flight tests and are increased 5%.

All loadings include inner wing MK-51 bomb racks.



○ LOADING CONDITION COLUMN NUMBER

NOTES

SPOTTING: A total of 83 airplanes can be accommodated in a landing spot on the flight and hangar decks of a CVA-19 class angled deck carrier.

ASW RANGE AND RADIUS PROBLEM

WARM-UP, TAXI, TAKE-OFF: 10 minutes at normal power.

CLIMB: On course to 1,500 feet at normal power.

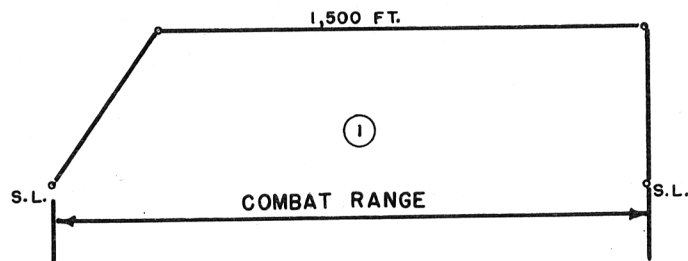
CRUISE: At velocity for long range at 1,500 feet. External fuel tanks dropped when empty.

RESERVE: 20 minutes at velocity for long range at sea level plus 5% of initial fuel load.

COMBAT RANGE = CLIMB / CRUISE

MISSION TIME = TIME REQUIRED FOR CLIMB / CRUISE

COMBAT RADIUS = 40% COMBAT RANGE



○ LOADING CONDITION COLUMN NUMBER