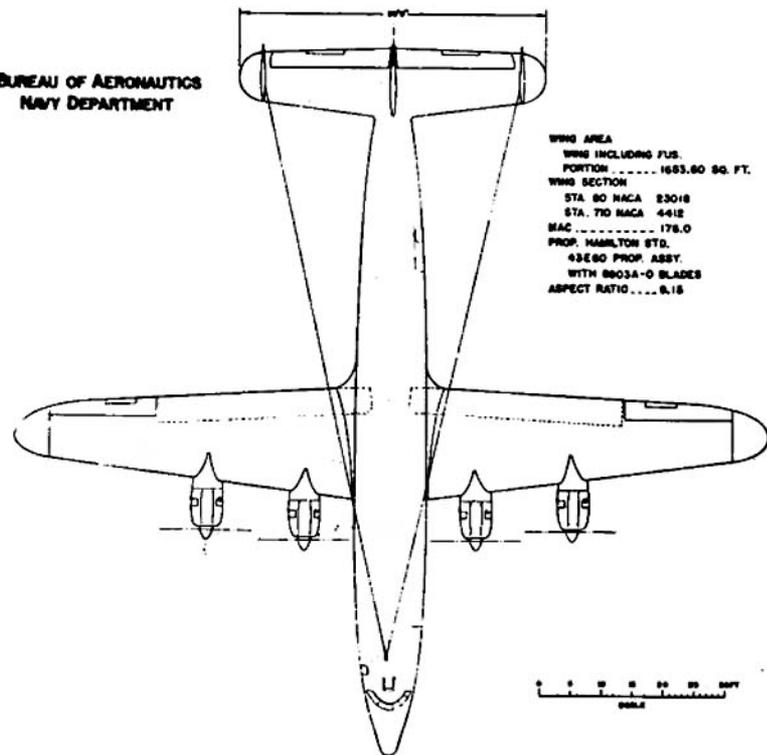
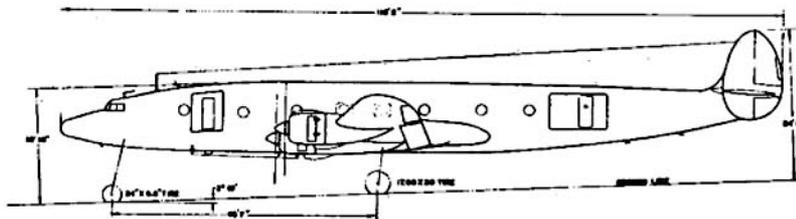
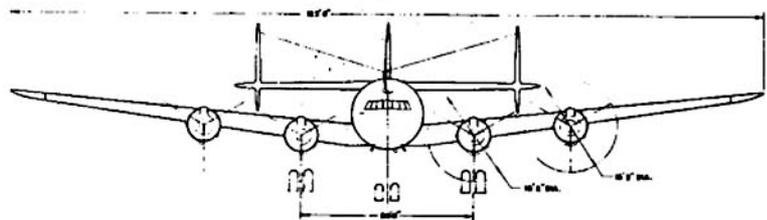


STANDARD AIRCRAFT CHARACTERISTICS
C-121J CONSTELLATION

BUREAU OF AERONAUTICS
NAVY DEPARTMENT



WING AREA
WING INCLUDING FUS.
PORTION 1653.80 SQ. FT.
WING SECTION
STA. 80 NACA 23018
STA. 710 NACA 4412
MAC 178.0
PROP. HAMILTON STD.
43E80 PROP. ASBY.
WITH 8003A-0 BLADES
ASPECT RATIO 6.18



DESCRIPTIVE ARRANGEMENT

POWER PLANT

NO. & MODEL.....(4) R-3350-34
 MFR.....W.A.C.
 SUPERCH.....1 Stage, 2 Speed
 RED. GEAR RATIO.....0.4375
 PRCP. MFR.....Ham. Std.
 PRCP. DES. NO.....6903A-0
 NO. BL./DIA.....3/15" - 2"

RATINGS

	Rpm	Rpm	Alt.
F.O.	3,250	2,900	S.L.
NORMAL	2,600	2,600	S.L.
	2,650	2,600	6,500
	2,450	2,600	17,900

SPEC. NO. N-872

MISSION AND DESCRIPTION

The R7V-1 is a high-speed long-range cargo/personnel/litter transport aircraft adapted for Navy use from Lockheed commercial "Super Constellation" transport. Complete installations will be made for an operating crew of 5 (pilot, co-pilot, flight engineer, radio operator and navigator) with forward bunks and food and liquid storage to provide for a long-range crew of 8. Seats, a rear galley, and 2 aft lavatories will be provided for approximately one-half of the aircraft under procurement. An integral floor-installed mechanical (two-speed) cargo conveyor will be provided for movement of cargo within all aircraft.

DEVELOPMENT

MOCK-UP (Nav. & Radio Operator's Stations) Apr 1951
 FIRST FLIGHT.....June 1952
 SERVICE USE.....August 1952

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	66,119.....	
BASIC.....	68,436.....	
DESIGN.....	130,000.....	2.5...
MAX. T.O.....	145,000.....	2.25..
DES. LAND		
(10'/sec) *110,000.....		
MAX LAND		
(7'/sec) *122,000.....		

All weights are estimated
 *Limit sinking speeds

FUEL AND OIL

Gals.	No. Tanks	Location
1,130	2	wing
3,110	2	wing
1,580	2	wing
750	1	fuselage

FUEL GRADE..115/145
 FUEL SPEC MIL-F-5572

OIL

CAPACITY (Gals.).....170
 GRADE.....1120
 SPEC.....MIL-O-6082

ACCOMMODATIONS

CREW.....5 or 8
 TROOPS.....106
 LITTERS.....73
 PASSENGERS.....106
 CARGO SPACE.....5,679 ft.³
 FLOOR LOADING....300 lbs/ft.²

Maximum Pay Load 41,964
 Lbs.

DIMENSIONS

WING
 AREA.....1,654 sq. ft.
 SPAN.....123' - 0"
 M.A.C.....14' - 3"
 LENGTH.....116' - 2"
 HEIGHT.....24' - 9"
 THREAD.....28' - 0"
 PRCP. GRD. CLEARANCE...2'

ELECTRONICS

TRANSMITTER.....AN/ART-13
 LF RECEIVER.....R23A/ARC-5
 ADF RECEIVER.....AN/ARN-6
 MARKER BEACON.....AN/ARN-12
 LOW ALT. ALTIMETER..AN/APN-1
 LOGAN.....AN/APN-4
 VOR RECEIVER.....AN/ARN-14
 NAVIGATION RADAR..AN/APS-42
 RADIO REC. EQUIP..AN/ARN-5A
 HIGH ALT. ALTIMETER...SCR-718C
 HF REC. EQUIP..AN/ARC-15,15A
 VHF.....AN/ARC-1,1A

(See Note Page)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) TRANSPORT Maximum Range	(2) TRANSPORT Maximum Cargo	(3) TRANSPORT	(4) TRANSPORT
TAKE-OFF WEIGHT	lb.	145,000	138,000	130,000	130,000
Fuel	lb.	39,420	25,000	39,420	27,420
Payload	lb.	34,312	41,964	19,312	31,544
Wing loading	lb./sq.ft.	87.7	83.5	78.6	78.6
Stall speed - power-off	kn.	100.9	98.3	95.6	95.6
Take-off run at S.L. - calm	ft.	2,860	2,430	2,082	2,082
Take-off run at S.L. kn. wind	ft.	-	-	-	-
Take-off to clear 50 ft. - calm	ft.	5,337	4,670	4,083	4,083
Max. speed/altitude (A)	kn./ft.	310/19,500	317/19,600	325/19,700	325/19,700
Rate of climb at S.L. (A)	fpm	805	895	990	990
Time: S.L. to 10,000 ft. (A)	min.	14.2	12.3	10.9	10.9
Time: S.L. to 20,000 ft. (A)	min.	37.1	31.4	26.4	26.4
Service ceiling (100 fpm)	ft.	21,100	22,000	23,100	23,100
Combat range	n.mi.	3110	1,870	3,636	2,311
Average cruising speed	kn.	216	216	214	215
Cruising altitude(s)	ft.	10,000	10,000	10,000	10,000
Combat radius	n.mi.	-	-	-	-
Average cruising speed	kn.	-	-	-	-
COMBAT LOADING CONDITION					
COMBAT WEIGHT	lb.				
Engine power					
Fuel	lb.				
Combat speed/combat altitude	kn./ft.				
Rate of climb/combat altitude	fpm/ft.				
Combat ceiling (500 fpm)	ft.				
Rate of climb at S.L.	fpm				
Max. speed at S.L.	kn.				
Max. speed/altitude	kn./ft.				
LANDING WEIGHT					
LANDING WEIGHT	lb.	108,413	115,132	93,243	104,737
Fuel	lb.	2,833	2,132	2,663	2,157
Stall speed - power-off	kn.	87.4	90.2	81.2	86
Stall speed - with approach power	kn.	82	85.2	76.6	81.2

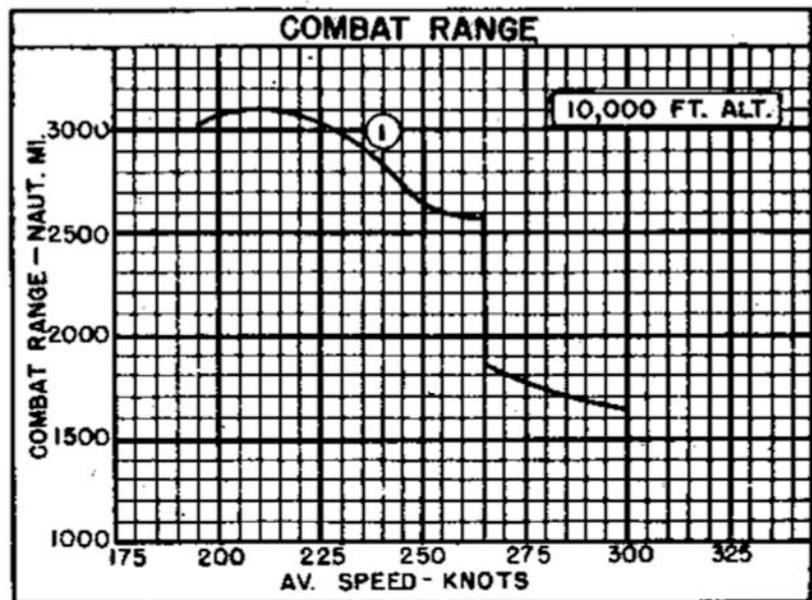
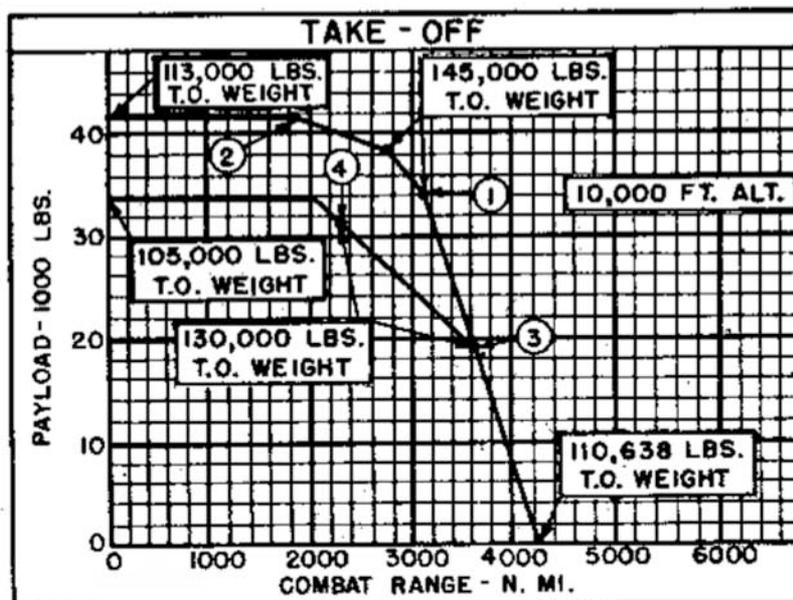
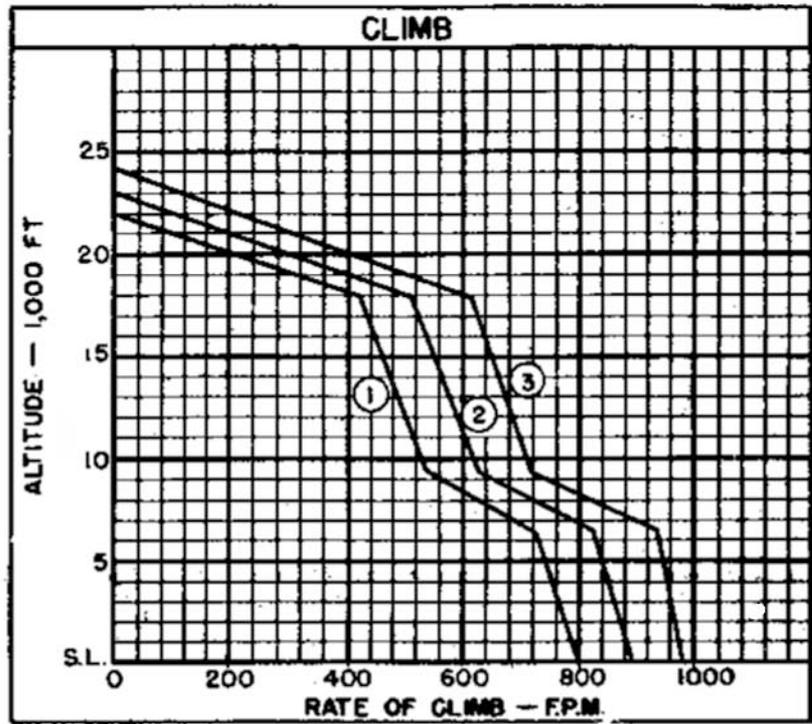
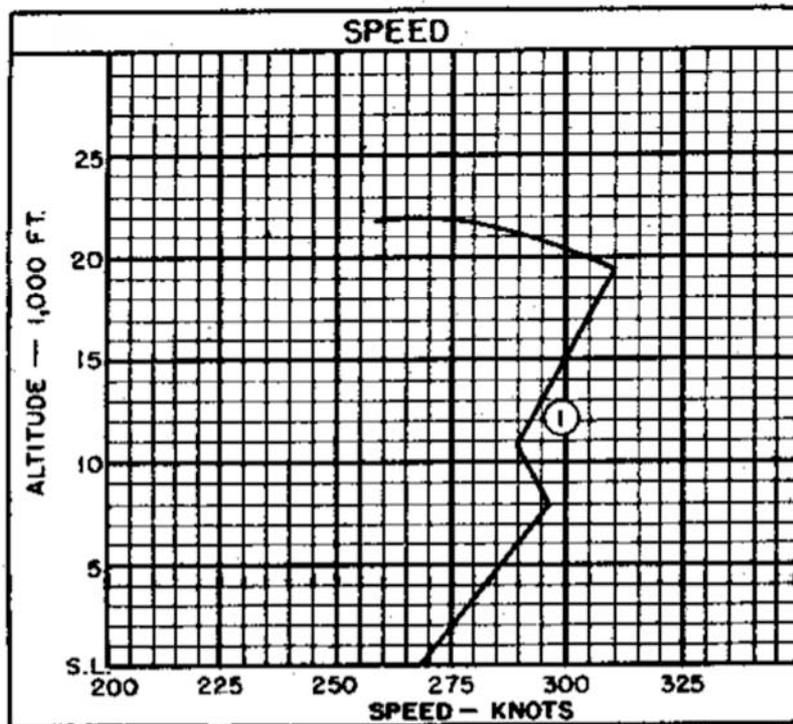
NOTES

(A) Normal Rated Power

(B) Performance is based on calculations

(C) Combat range is based on engine specification fuel consumption data increased by 5%

(D) The commercial version of the B7V-1 has been CAA certificated at 130,000 pounds weight.



○ LOADING CONDITION COLUMN NUMBER

SERVICE

NOTES

Performance with one engine inoperative, propeller feathered, flaps and landing gear retracted is estimated to be:

GROSS WEIGHT		lbs.	145,000
RATE OF CLIMB.....Sea Level.....T.O. Power		ft/min.	710
SERVICE CEILING.....Normal Power		ft.	10,800

The following ELECTRONICS equipment to be service installed:

UHF TRAN.-REC.....	AN/ARC-27
GLIDE SLOPE REC.....	AN/ARN-18
	(to replace AN/ARN-5)
IFF.....	AN/APX-6
IFF.....	AN/APX-17
CONTROL INDICATOR GROUP.....	AN/APA-85
D.M.E.....	AN/APN-34
VOR COURSE.....	AN/ARA-21