C.A.C. AH11934 - P.N.

PILOT'S NOTES

FOR

COMMONWEALTH AIRCRAFT CORPORATION

CA-13

"BOOMERANG"

PROMULGATED BY ORDER OF THE A.H. AIR COUNCIL

FLIGHT MANUAL

and

OPERATIONS HANDBOOK

for

COMMONWEALTH AIRCRAFT CORPORATION

CA-13
"BOOMERANG"

Version: Combat Flight Simulator 2
Combat Flight Simulator 3
Flight Simulator 2002
Flight Simulator 2004
Model: Aeroplane Heaven.Com

N.B. Screenshots for illustration purposes only. Models will vary with simulator.

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Specifications.

Commonwealth Aircraft Corporation
CA-13 "Boomerang" Fighter

Single seat fighter / army cooperation aircraft

ENGINE: One Pratt & Whitney R-1830-S3C4 Twin Wasp piston engine developing 1,200 hp.

DIMENSIONS:

WINGSPAN: 36 ft 0 in / 10.97 m.
LENGTH: 25 ft 6 in / 7.77 m.
HEIGHT: 10 ft 6 in / 3.20 m.

PERFORMANCE:

MAX. SPEED; 265 kts / 491 kph
CRUISING SPEED: 165 kts / 305 kph
INITIAL CLIMB: 2,150 ft / 655 m. per min.
NORMAL RANGE: 808 nm / 1,496 km.
MAX. RANGE (with drop tank): 1,390 NM / 2,575 km
SERVICE CEILING: 34,000 ft / 10,363 m.

ARMAMENT: 2x 20mm Hispano cannons and 4x Browning .303 in. machine guns in wings; provision for 318L drop tank under centre section & up to 500lb bomb load.

WEIGHTS:

EMPTY WEIGHT: 5,373 lb / 2,437 kg
NORMAL LOADED: 7,699 lb / 3,492 kg
MAX. OVERLOAD: 8,249 lb / 3,742 kg

CREW: 1
RAAF SERVICE: 1941-1946
with 2 OTU, and 4, 5, 83, 84 and 85 Squadrons.

Chapter 1.

A Brief History.

In 1942, with major supply lines blocked by the Japanese, Australia was in desperate need of fighter aircraft for the home defense and for defense of strategic bases throughout the South Pacific region.
The Commonwealth Aircraft Corporation answered the call with the hastily designed CAC 'Boomerang'. The first CA-12 Boomerang flew in May 1942, just fourteen weeks after design approval. Based on the centre section of the Wirraway trainer (a derivative of the NA Harvard design) the Boomerang had an all-wood rear fuselage mated to a Baufort powerplant. The stubby little fighter first served with with 2 Operational Training Unit. The Boomerang was flown by two squadrons in Australia Home Defense (83 and 85) and 4, 5 and 84 Sqns. for offensive operations against the Japanese. As a fighter it was woefully inadequate against the superior Zero but did excel in the

army co-operation role, as a fighter bomber in New Guinea and Bougainville. The last variant , with a turbocharged engine appeared in 1943.
The gallant little fighter held off the Japanese onslaught long enough for supplies of the more able Spitfires and P40s to finally arrive.
One aeroplane depicted in this model is a survivor that is in itself an extraordinary tale of devotion and dogged enthusiasm. SuzyQ is now the property of Australian, Matthew Denning. Given the broken and decaying airframe by his father as a 'project', when 17 years old, Matthew has spent the past 27 years building the aircraft back to flying condition. Today SuzyQ flies the display circuit and is a tribute to the craftsmanship that has returned her to former glory.

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Chapter 2.

Walkaround.

Before commencing your walkaround, select canopy open (CFS2 and CFS3 -Default shift/ C) (FS2002 and FS2004 Default shift/E)

Approaching the aircraft from the left side, close in to inspect the cockpit area.

Walking around the airframe check controls for correct operation, paying particular attention to rudder control.

Start the engine and allow to warm up. Whilst warming the engine, Check the flaps and correct operation of cowl flaps**.**

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Chapter 3.

The Cockpit.

Cockpit controls are as marked in the accompanying illustration.Positions may vary depending on simulator flown.
Try the various controls for correct operation.

1. Turn/Bank Indicator
2. Airspeed
3. Altimeter
4. Air Temp
5. Tachometer
6. Fuel Contents
7. DirectioIndicator
8. Artificial Horizon
9. Climb/Dive Rate Indicator
10. Temp/Pressure gauges
11. Manifold Pressure
12. Oil Pressure
13. Magnetos
14. Starter

2D instrument panel (CFS2, FS2002, FS2004)

Start-up procedure.

1. Parkbrake on
2. Cowl flaps to open
3. Main Switch on
4. Prop Pitch to low
5. Mixture full rich
6. Throttle cracked (1")
7. Magnetos to Both
8. Pull starter

On firing, throttle to idle, prop pitch to full.

Warm to temperature.
Check controls. (now is a good time to engage auto-rudder if you are not an experienced pilot CFS2 and FS2004 only)

3D virtual cockpit (all simulators)

Chapter 4.

Take-Off.

With engine running, ensure tailwheel lock is engaged (CFS3), ease the throttle a little forward and release the brakes. As you begin to roll forward, increase the throttle smoothly to full. Feed in left rudder to counteract torque and keep her straight. At about 75-85 MPH ease the stick back gently. When safely airborne, raise the gear and allow the aircraft to accelerate beyond 100mph. Close the canopy and climb at a gentle angle reducing power slightly to conserve fuel.

Chapter 5.

Flying.

The CA-13 is a robust airframe. However, ensure your airspeed/energy is always up before attempting any demanding manoeuvres. Throttle back in shallow or steep dives and watch your airspeed on diving manoeuvres - the airframe can be overstressed quite easily. Fully aerobatic, the Boomerang is a barrel of fun in controlled spins, loops and rolls. This little fighter has an enviable rate of climb and is a joy to fly in most conditions.

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Chapter 6.

Landing.

Approach the airfield in a shallow angle and at about 120 mph. Use a long curving approach for a clear view of the airfield past that big radial nose. Reduce throttle and slow the aeroplane to around 110mph. Drop flaps by half and wash off more speed. The flap area is quite large so watch how much you feed in - speed will drop quickly.

Open the canopy. Lower the landing gear and be prepared to 'catch' the aeroplane with throttle to keep the airspeed at around 95 - 100mph. The gear drag on this machine is quite marked. Feed in full flaps. As you reach the runway threshold, Cut the throttle and hold her at about 75mph just a few feet off the ground. As she settles, pull back a little on the stick to wash off the last of your speed. As you touch down, allow the aircraft to roll a little before nudging the stick back to plant the tailwheel. Because the Boomerang is very close coupled (short distance between main and tailwheels) she can be a handful on the ground. Holding the stick back, apply gentle braking. When ground speed is around 15mph, release the brakes and roll/steer with rudder to the flight line. When stopped, apply the park brake and cut the engine.

Chapter 7.

Combat.
(CFS2 and CFS3 only)

The CAC-13 Boomerang was out performed by the Japanese Zero. However, for such a 'stop-gap' design, the 'Boomer' was no slouch and had an excellent rate of climb to get out of trouble. Much more effective as a ground attack weapon, the CAC CA-13 is an agile and deadly straffing and bombing platform.

You have four Browing machine guns and two 20mm cannon for firepower and she'll carry a couple of small bombs, rockets and long range tank for distance work.

DON'T MIX IT WITH THE ZEROS!