



OV-10A BRONCO



Special thanks for:

TATOR (screen/video/test), Asta(test/debug), Cubeboy(interview,test), Lebibs(stream/test), Tom, Elvisse, Feauxe, Matzer, Faukio, Axel, Félix, Chacha, Badjok, Scrub.



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1. Mod and Installation

1.1. The OV-10A Bronco Mod

The OV-10A Bronco is a mod made by the SPLIT-AIR member Dikennek. The goal is to make the best turboprop airplane experience in DCS. The mod includes EFM flight model, Collision and damage model, Internal and external weapons.

The actual OV-10A Mod is the "V1". It includes all the primary functions of the Bronco, that are needed to do a mission.

A "V2" Version will be available later with a lot of other features. Contact Dikennek if you have ideas to share.

1.2. Download

To download the OV-10A you must download the zip via the links in the **#Annonce or #ov-10a_bronco** channel of the Split-Air Discord server. The Link direct you to a Gumroad website with a little description of the mod. You can choose if you want to financially support the Split-Air or not. The Bronco will stay a free mod, you are not forced to pay anything. After that the Gumroad request your mail address, but you don't need any account. Finally you have access at the Zipped file of the OV-10A BRONCO.



Change this as you want!

BRONCO OV-10A

€0+ | split-air | 0 notes

Hello everyone ! You are here on the "Gumroad" page of the OV-10A Bronco DCS mod made by Split Air !

The OV-10A Bronco mod is shared with an entirely "EFM" flight model, which makes the immersion even stronger. Collision and damage model are also included, with realistic weapons. The cockpit has highly realistic and immersive textures and is partly clickable which will make you experiment the Vietnam crisis from the inside ! This is only the "V1", and more version will be available later, with some improvements and additions for the future.

We made this Gumroad page because without you we are nothing ! Indeed, the Split Air want to bring the best modding quality for the community, but to improve it, it have a cost. All mod deliver by the Split Air would stay free, don't worry 😊

This page do not force you to make a donation to the Split Air /!\, It only helps us to make new mods and to support our modders !

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BRONCO OV-10A
URL: https://mega.nz/file/fXRXSCTB#4yB1RFShhPmS_G2QbweKYiWphK2gFU83XpSO8oEq9zE [Open](#)

BRONCO PaintKit Template
URL: https://mega.nz/file/LHJx2DAb#mhel6xifofOT8d_H0XEUISi6figzsljbbg81KW1wQ [Open](#)

Click here

Those links redirect you to a mega link an after that you can download the mod easily 😊

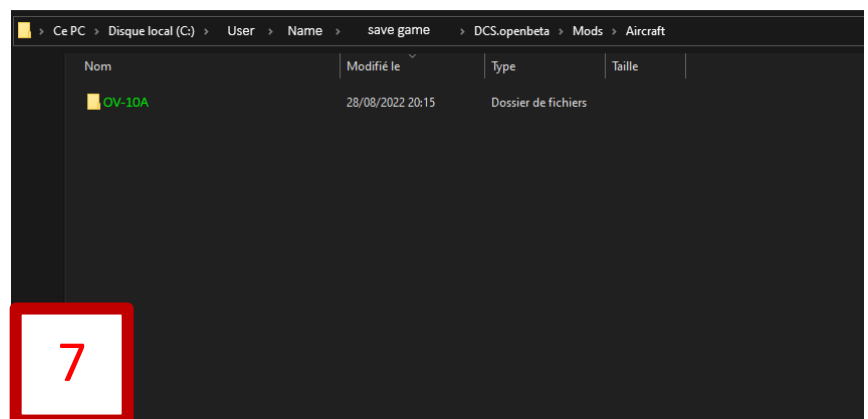
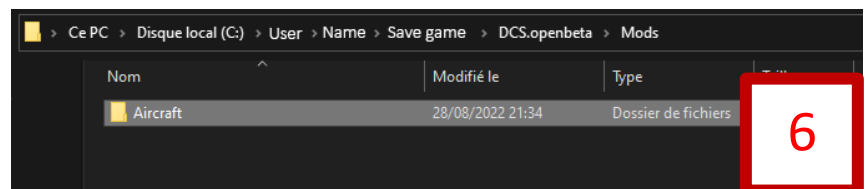
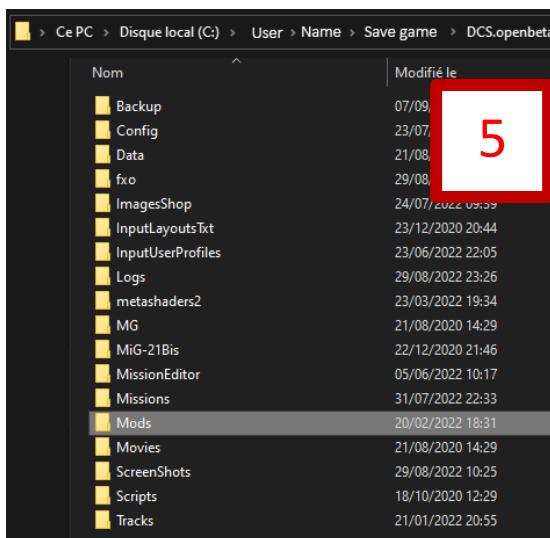
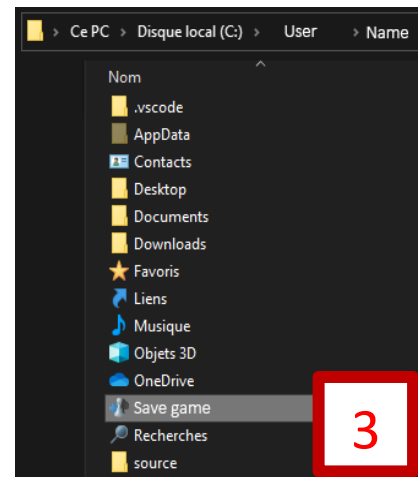
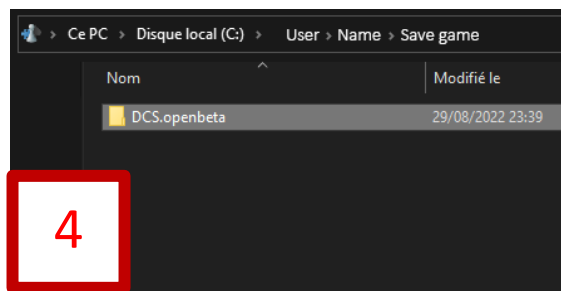
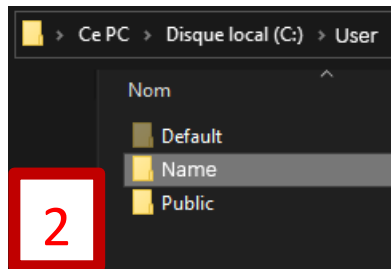
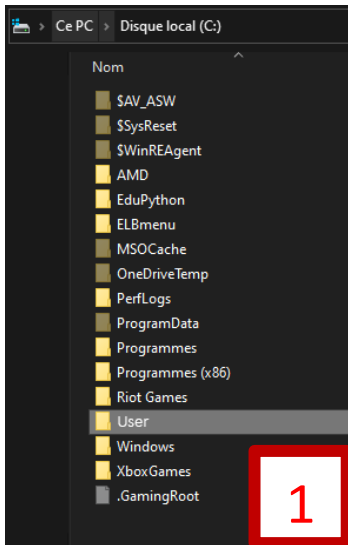


1.3. Installation

You unzip the file then copy the mod OV-10A in the mods/aircraft file in the save game.

The file path:

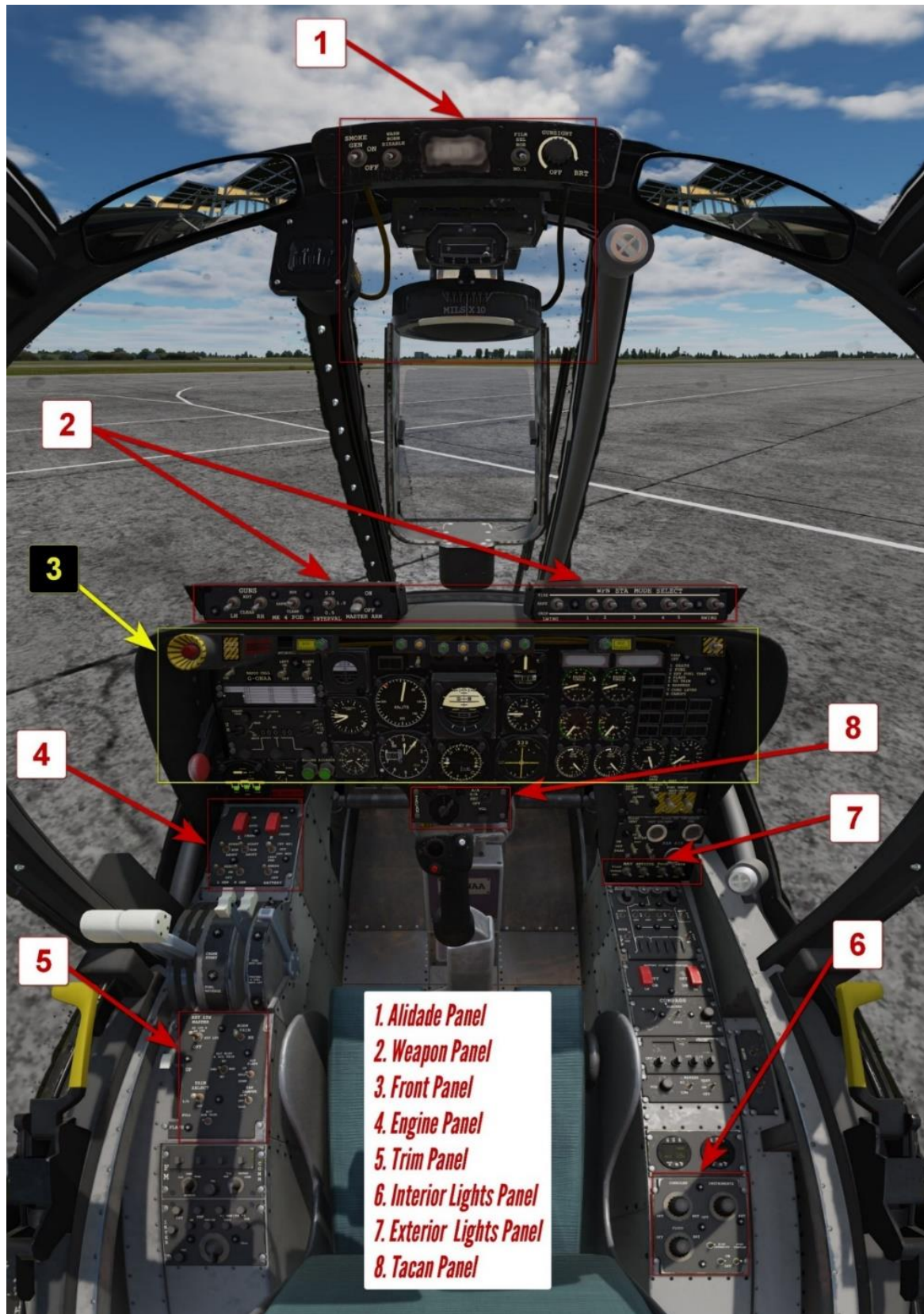
C:\Users\NAME\Saved Games\DCS (.openbeta)\Mods\Aircraft\The mod Unzipped



In the 7 screen there is the direct Unzipped file.

! If you do not have the Mods folder you must create it and add the Aircraft folder inside. !

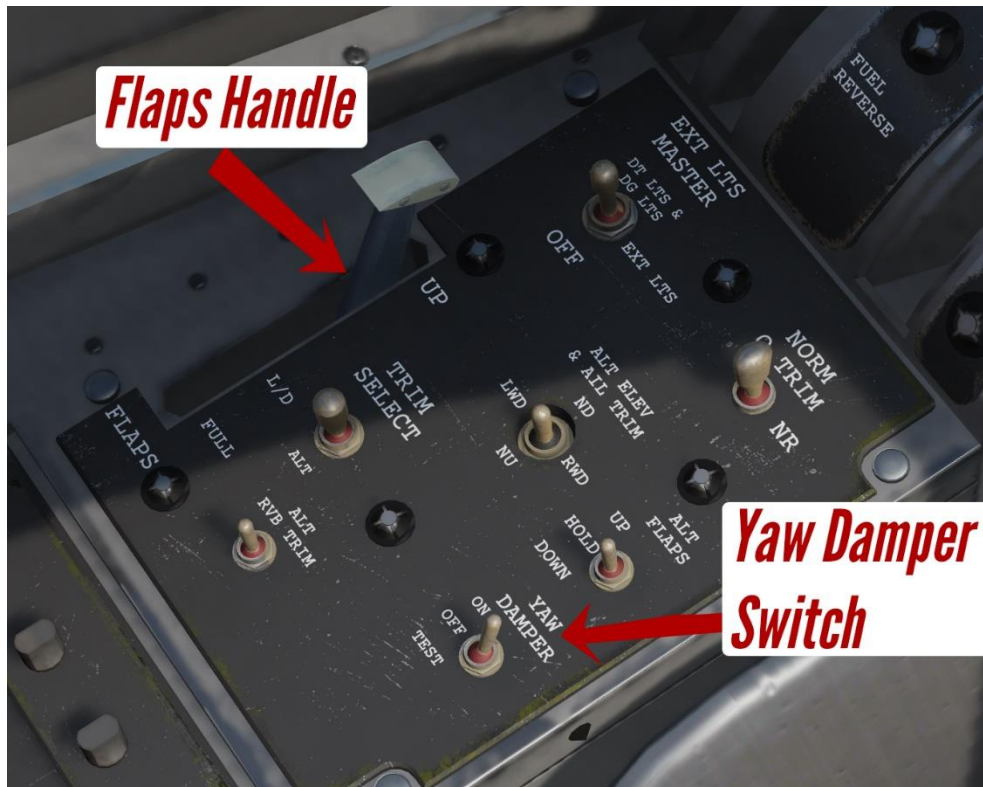
2. Cockpit Tour





2.1. Left Side Panel

2.1.1. Flaps Panel



Flaps:

The Flaps handle have 3 Positions by binding:

- RETRACTED
- TAKEOFF
- FULL

And only 2 Positions by clicking:

- RETRACTED
- FULL

The Bronco has 4 Flaps, Retracted = 0°, TakeOff = 20°, Full = 40°. Flaps are very efficient when set on Full, it indice a lot of more drag.

Yam Damper :

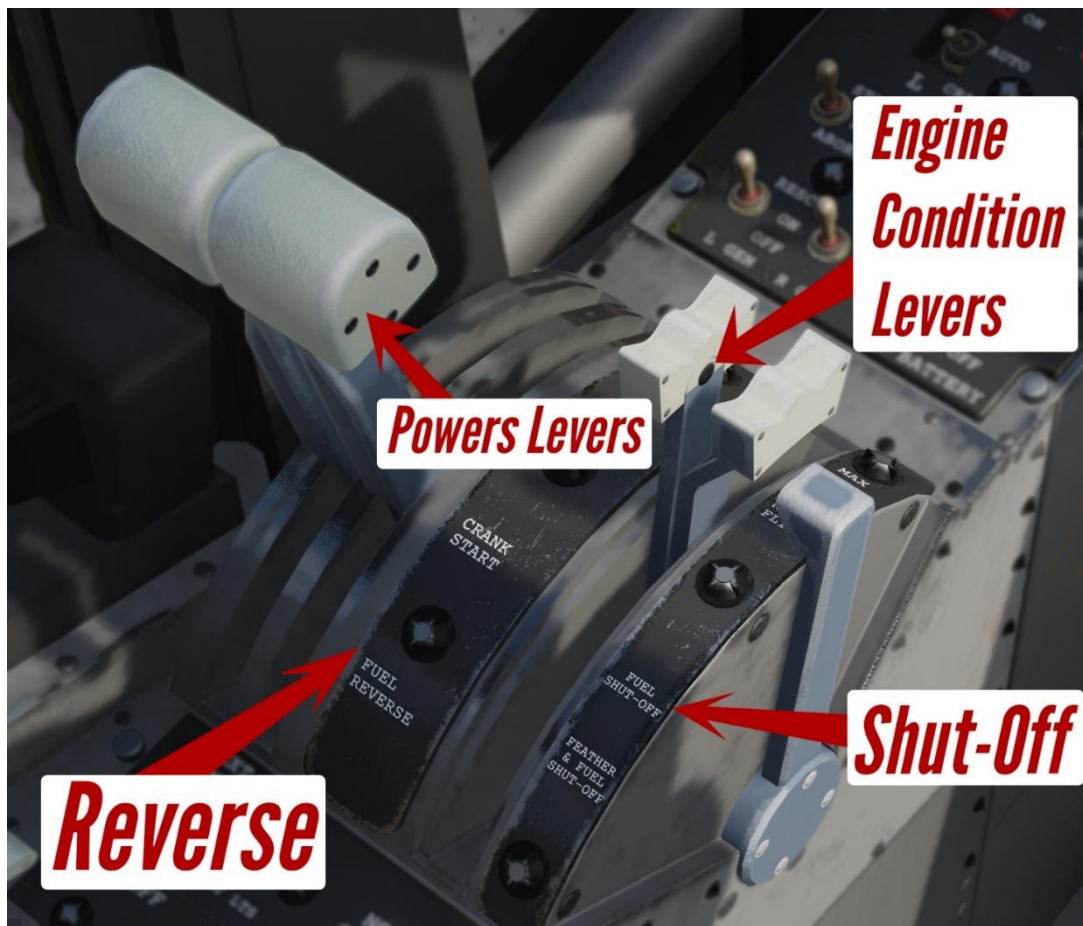
The Yaw Damper switch have 3 Positions by binding:

- ON
- OFF
- TEST

Yaw Damper is a rudder control against the rotation along the yaw axis. It really stabilizes the aircraft in the air and help the pilot for gun pass. Active the TEST mod only on ground without any speed.



2.1.2. Throttle Panel



Powers Levers (Throttle):

Powers levers deliver the thrust of the engines from Crank Start to Full

Reverse:

The Bronco has a reverse system, in this mod it's modeled with the binding REVERSE in system. When the Reverse is on you can control the reverse thrust with the Powers Levers.

Engine Condition Levers:

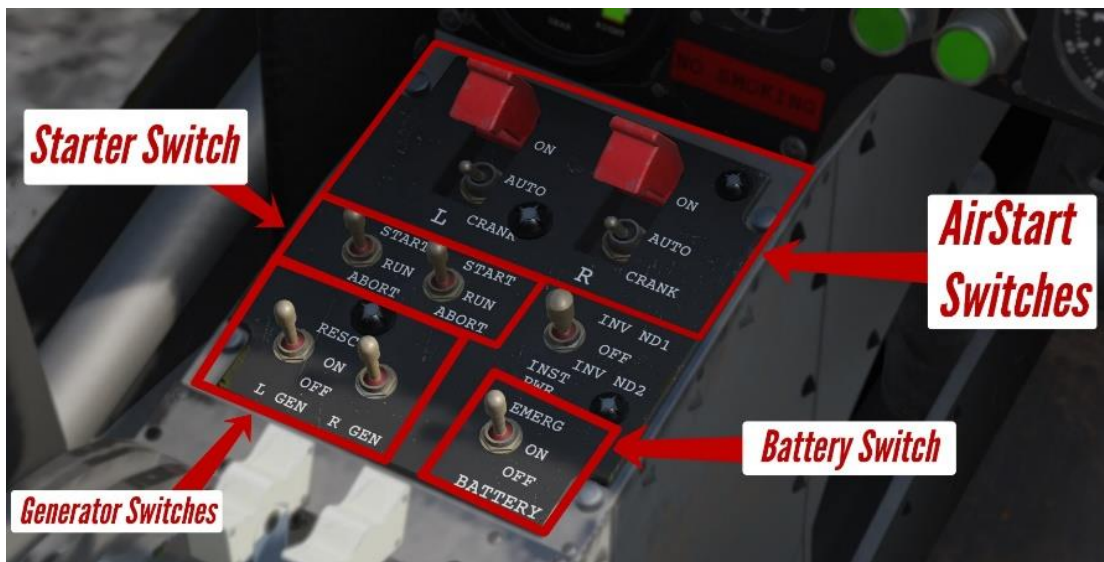
With the Engine Condition Levers, you can control the Rotation per minutes of the Propeller, between 1800 RPM and 2300 RPM.

Fuel Shut Off:

The Shut Off is needed for start-up sequency and shut-down sequency.



2.1.3. Engines Panel



BATTERY SWITCH:

If the battery is set on the ON position, you can use all the systems (light, starter, Gen, etc...). The capacity of the battery is limited so you need to optimize the battery use. Battery set at OFF you don't use the capacity of the battery, but you can't reload it either. If the engines are running and you lose the battery both engines will continue to work as normal.

STARTER SWITCHES:

When starter switch is set on start the starter leads the Turbine at 350RPM (15%rpm) at the maximum. At this number of RPM, you could start the engine. But the starter uses a lot of energy from the battery if you take too much time the battery would be empty, and the starter will stop leading the engine. If you set both starter on start position, you request too much power from the battery and the voltage would decrease significantly. In this configuration both starter leads the turbine at 250RPM (10%rpm) and you can't start the engine.

GENERATOR SWITCHES:

The turbine is coupled with an electric motor, the turbine leads the generator which charges the battery of your Bronco OV-10. You must turn the generator of your right/left turbine ON. Your RPM will define the speed of recharging the battery, if the RPM is high the battery will recharge faster if the RPM is low the battery will recharge slower. The turbines must be running and have the battery switch on for recharge the battery.



2.2. Front Panel



TACAN :

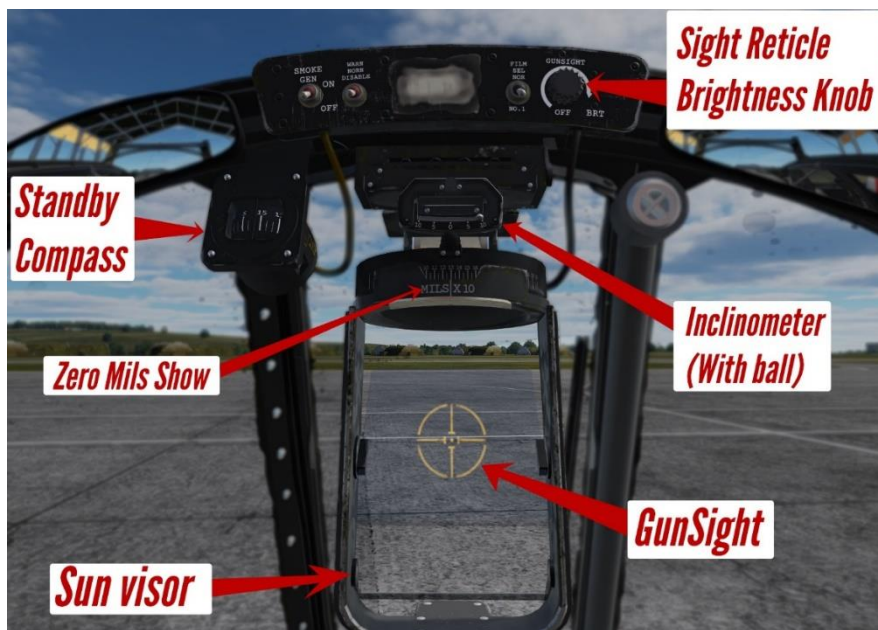


3 knobs to use the TACAN Panel:

- Channel Knob: Select the channel of the TACAN (15, 50, 115, 235)
All channels are X only (15X, 50X, 115X), Y band unavailable
- Function Knob:
 - OFF
 - REC → Receive only, only Bearing
 - T/R → Transmit and Receive, Bearing and Range
 - A/A → Air To Air, unavailable
- Volume Knob: Change the receiving Morse Code volume of the beacon



2.3. Gunsight



Zero Mils knob: Setup for the Gunsight Depression
Useful for bombs and Guns Runs

Sight Reticle Brightness Knob: changing the brightness of the GunSight
Sun Visor: [Click Here](#) to place a tinted glass on the GunSight.

2.4. Right Side Panel





2.5. Important Bindings

Axis :

- Pitch
- Roll
- Ruder
- Throttle
- Prop RPM control
- Left/Right brakes
- Wheel Brake Right
- Wheel Brake Left

Buttons :

Flight :

- Landing Gear Up/Down
- Landing Gear Up
- Landing Gear Down
- Flaps Landing Position
- Flaps Up
- Flaps Up/Down
- Flaps - Step Up
- Flaps - Step Down
- Throttle Reverse
- Trim Nose Down
- Trim Nose Up
- Trim: Reset
- Prop rpm – Both – Step Up
- Prop rpm – Both – Step Down
- Prop rpm – Right – Step Up
- Prop rpm – Right – Step Down
- Prop rpm – Left – Step Up
- Prop rpm – Left – Step Down
- Wheel brake R
- Wheel brake L

Weapons :

- Weapon Fire
- Weapon Release Button

System :

- Smoke
- Windshield Wiper

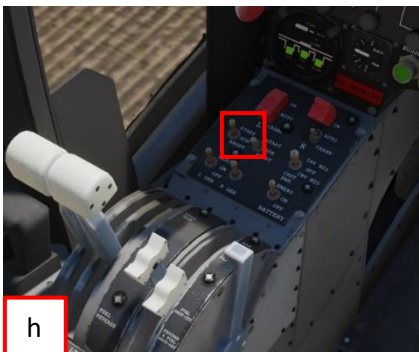
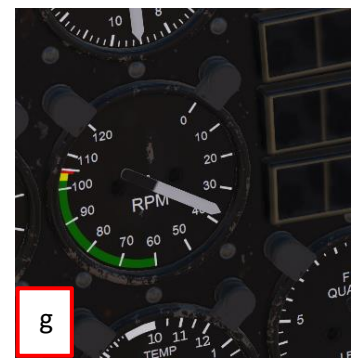
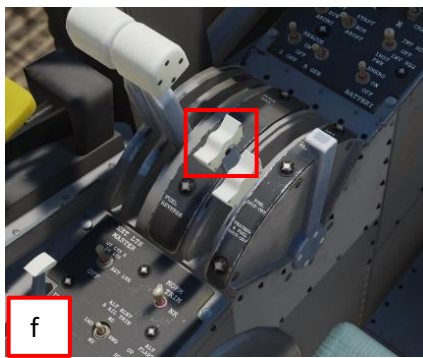
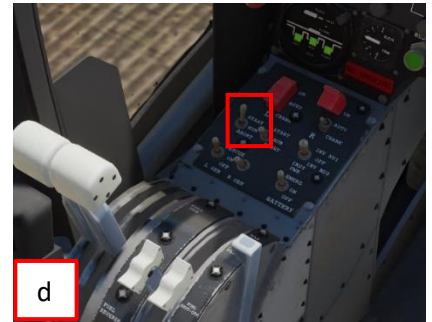
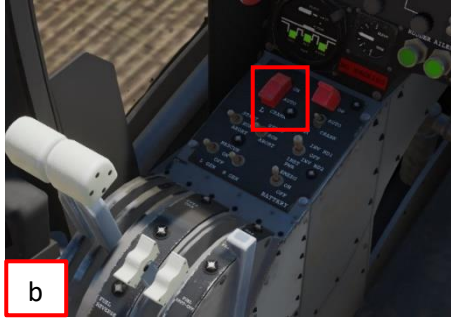
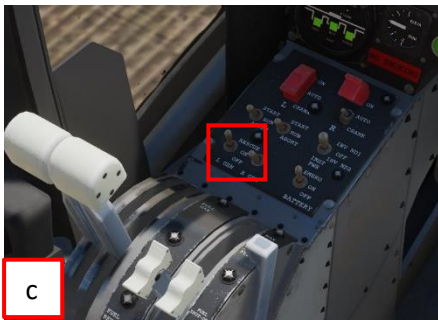
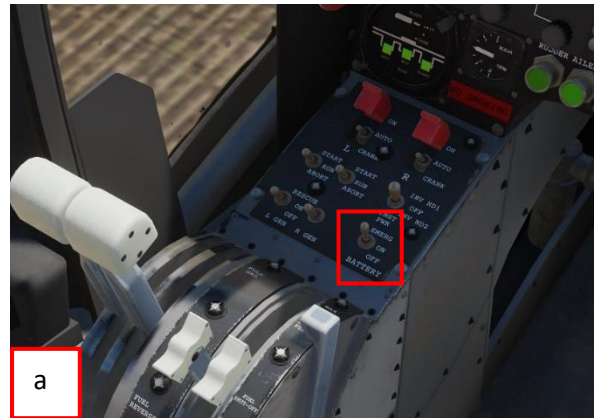


3. Procedures and Systems Utilisation

3.1. Procedures

3.1.1. Start-up

- a) Batterie switch : OFF -> ON
- b) Générateur : OFF -> ON
- c) AirStart : OFF -> ON
- d) Starter : ABORT -> START
- e) Rpm : RPM > 12%
- f) Engine condition levers : FUEL CUT OFF -> IDLE
- g) Rpm : RPM > 20%
- h) Starter : START -> RUN
- i) Temperature : TEMP < 900°C
- j) Do the same with the other engine





3.1.2. Taxis and Take-off

TAXIS :

- 1) Set the Engine Condition levers on the Full forward position.
- 2) With the throttle set the Engine torque at 1600 Lb.Ft.



At this state the Bronco will start taxing.

The bronco hasn't a nosewheel steering, the ground control as done by differential braking. Operate the right brake for turning right and the left brake for turning left. You can use axes or Binding button for operate the Bronco on ground.

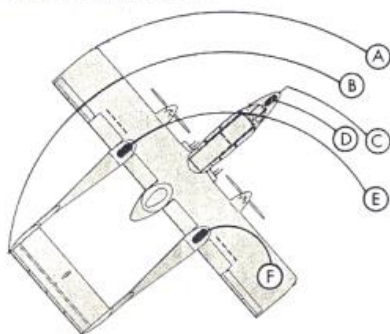
TAKE OFF:

- 1) Set the Flaps on the MID position.
- 2) Feet on Brake.
- 3) Set the Engine Condition levers on the Full forward position.
- 4) With the throttle on the Full forward position.
- 5) Start rolling.
- 6) At 100 Knots you can start the rotation and fly.
- 7) At 120 Knots retract the flaps and stay at 120 knots for the climb.





GROUND OPERATION



TURN RADIUS

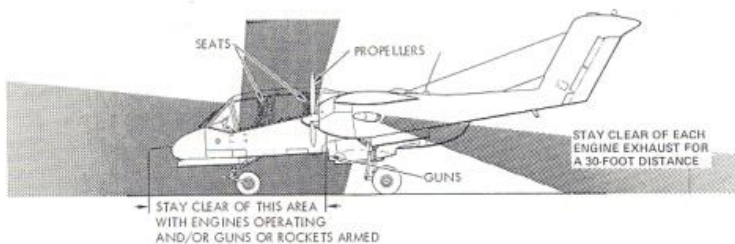
- (A) WING TIP - 33.2 FEET
- (B) VERTICAL - 28.6 FEET
- (C) PITOT BOOM - 25.8 FEET
- (D) NOSE WHEEL - 22.7 FEET
- (E) LEFT MAIN WHEEL - 20.6 FEET
- (F) RIGHT MAIN WHEEL - 5.6 FEET

GROUND CLEARANCE

- (G) PITOT BOOM - 47 INCHES
- (H) NOSE WHEEL DOORS - 28 INCHES
- (J) PROPELLERS - 23.5 INCHES
- (K) DROP TANK - 18 INCHES
- (L) CARGO DOOR - 52 INCHES
- (M) RUDDERS - 94 INCHES



DANGER AREAS



COMPONENTS CONTINUED

CAUTION

Check engine torque and temperature indications during take-off, retarding the power levers as necessary to avoid exceeding limits as speed increases.

AFTER TAKE-OFF

1. Landing gear—UP.

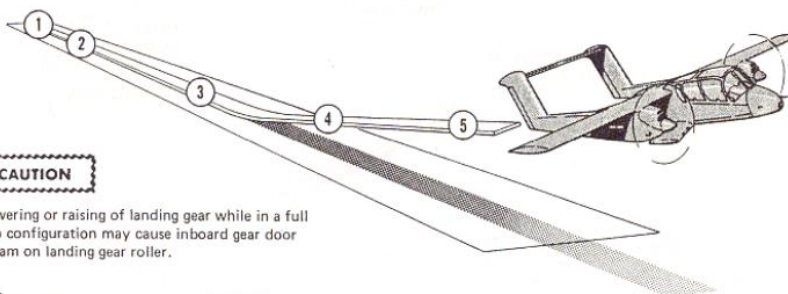
When safely airborne, retract the gear. Ensure the gear is fully retracted before exceeding 158 KIAS.

2. FLAP handle—UP.

Above 110 KIAS, retract flaps. Ensure flaps are fully retracted before exceeding 158 KIAS.

TAKE-OFF

NORMAL PERFORMANCE



CAUTION

Lowering or raising of landing gear while in a full flap configuration may cause inboard gear door to jam on landing gear roller.

- 1 Advance power to maximum available within limits, check engine instruments, and release brakes.
- 2 Use rudder and/or nose wheel steering as required.
- 3 When speed approaches 5 Kias below recommended take-off speed, use positive back stick pressure to rotate to lift-off attitude.

- 4 When safely airborne, retract landing gear.
- 5 Above 110 KIAS, retract flaps, if used.



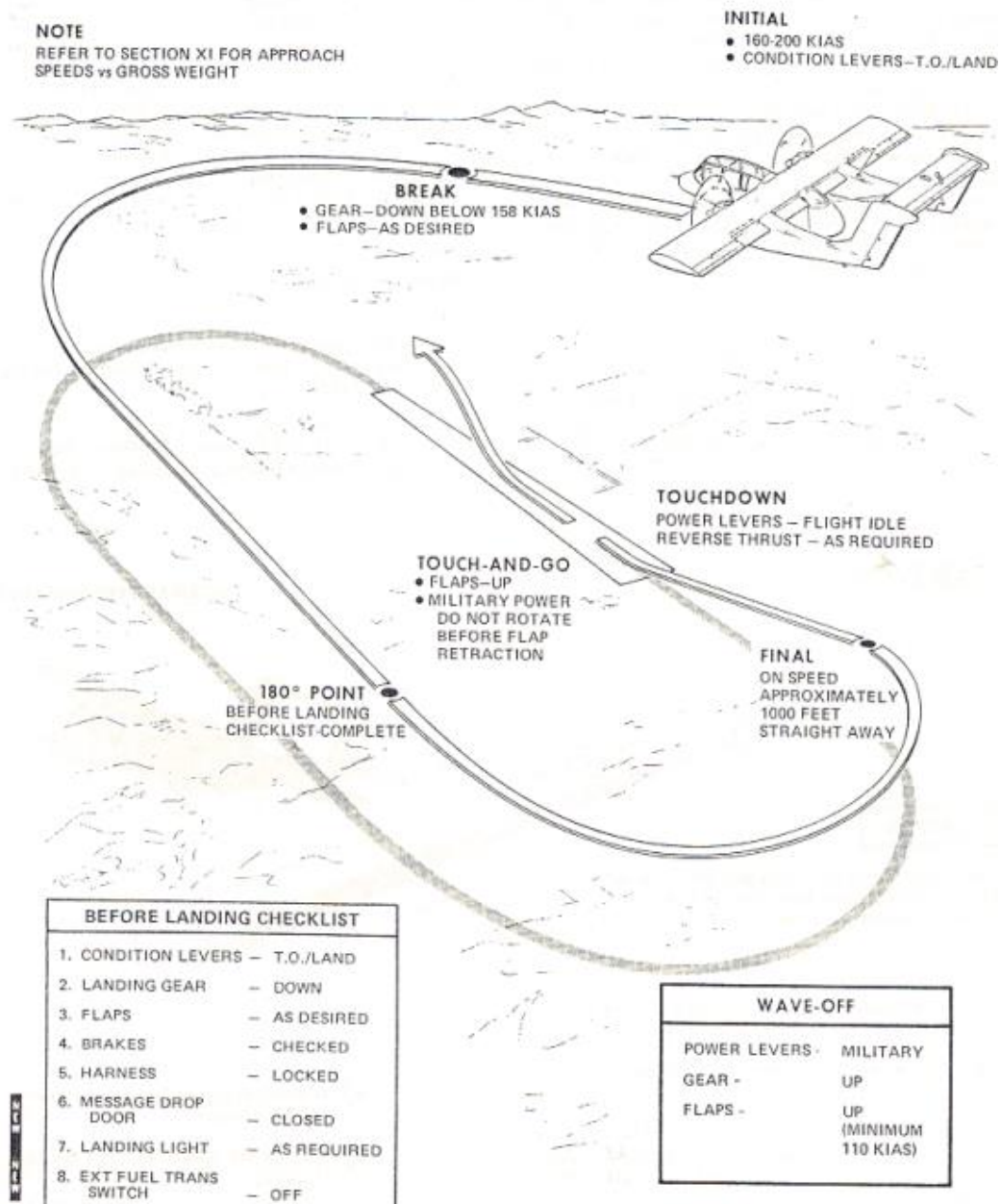
3.1.3. Landing

Some people say that the landing is the most dangerous part of the flight, but with the Bronco it's different. With a such low-speed maneuverable aircraft you will find the landing very pleasant. With its short terrain landing capability thanks to its reverse, it is up to you now to find the shortest and narrowest green field. Watch out for the wing tips!

In this section we will see how to perform a break procedure.

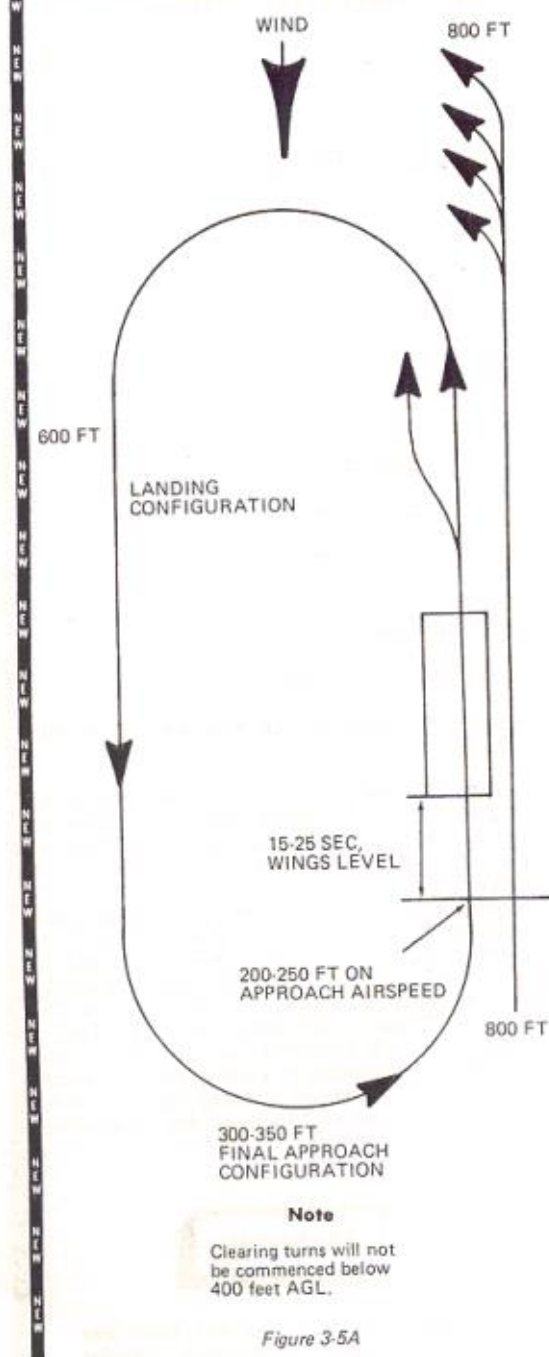
CIRCUIT PATTERN:

TYPICAL LANDING AND TOUCH-AND-GO PATTERN





STANDARD FCLP PATTERN



CONDUCT OF CARRIER OPERATIONS

PRE-CARRIER BRIEFING

The following subjects shall be covered by the LSO in briefings for pilots prior to and during carrier operations.

1. Carrier configuration.
2. Recovery systems.
3. Communications.
4. General carrier operating procedures.
5. Specific carrier operating procedures.
6. Emergencies.
7. Operations and air department briefings.
8. Landing pattern and recovery procedures.
9. Post-flight briefings.

LANDING PATTERN AND RECOVERY PROCEDURES

Day VFR Pattern.

Figure 3-5C illustrates the day VFR carrier landing pattern.

INITIAL PATTERN ENTRY FROM THE BREAK. Pattern entry will be made from a position parallel to the base recovery course (BRC), close aboard the starboard side of the carrier. Entry to the break position shall be made from astern at an altitude of 800 feet. The break will be level, with letdown to pattern altitude to commence when established downwind, and be completed prior to the 180 degree position. The break distance ahead of the ship depends on the time required on downwind to establish approach configuration, airspeed and altitude. Break interval will be determined by the type recovery and ramp interval time.

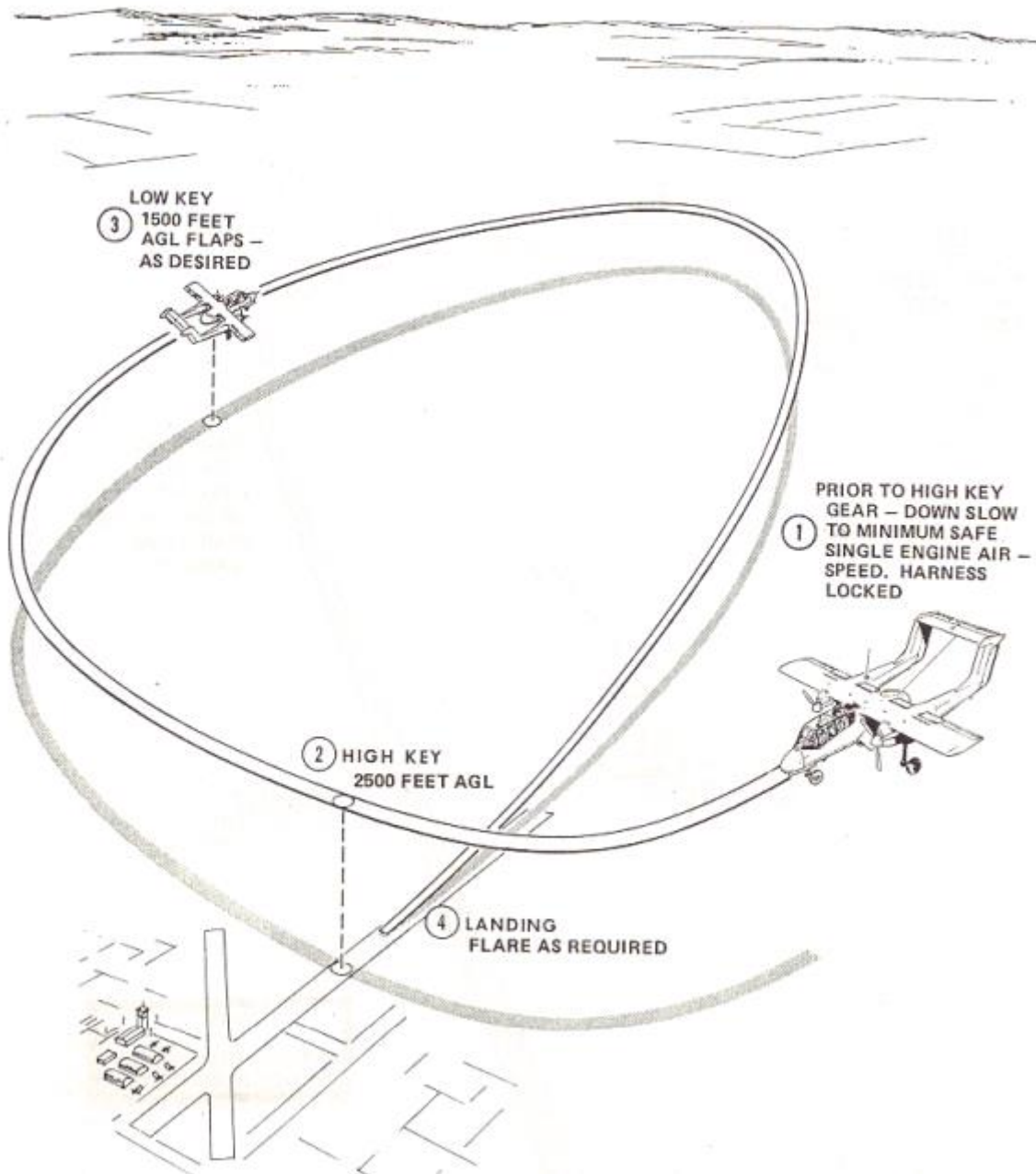
PATTERN ENTRY FROM A LAUNCH, BOLTER, WAVEOFF OR TOUCH-AND-GO. Corrections toward the BRC shall not be attempted until the aircraft has established a positive rate of climb. The aircraft should climb to pattern altitude prior to turning downwind. Normal interval shall be taken on other aircraft in the pattern.

PATTERN ENTRY FROM A STRAIGHT-IN. A straight-in approach shall be initiated far enough astern to be established positively on glideslope and airspeed, at a minimum of 1½ miles and 350 feet of altitude.



PRECAUTIONARY APPROACH

REFER TO PRECAUTIONARY
APPROACH PROCEDURES

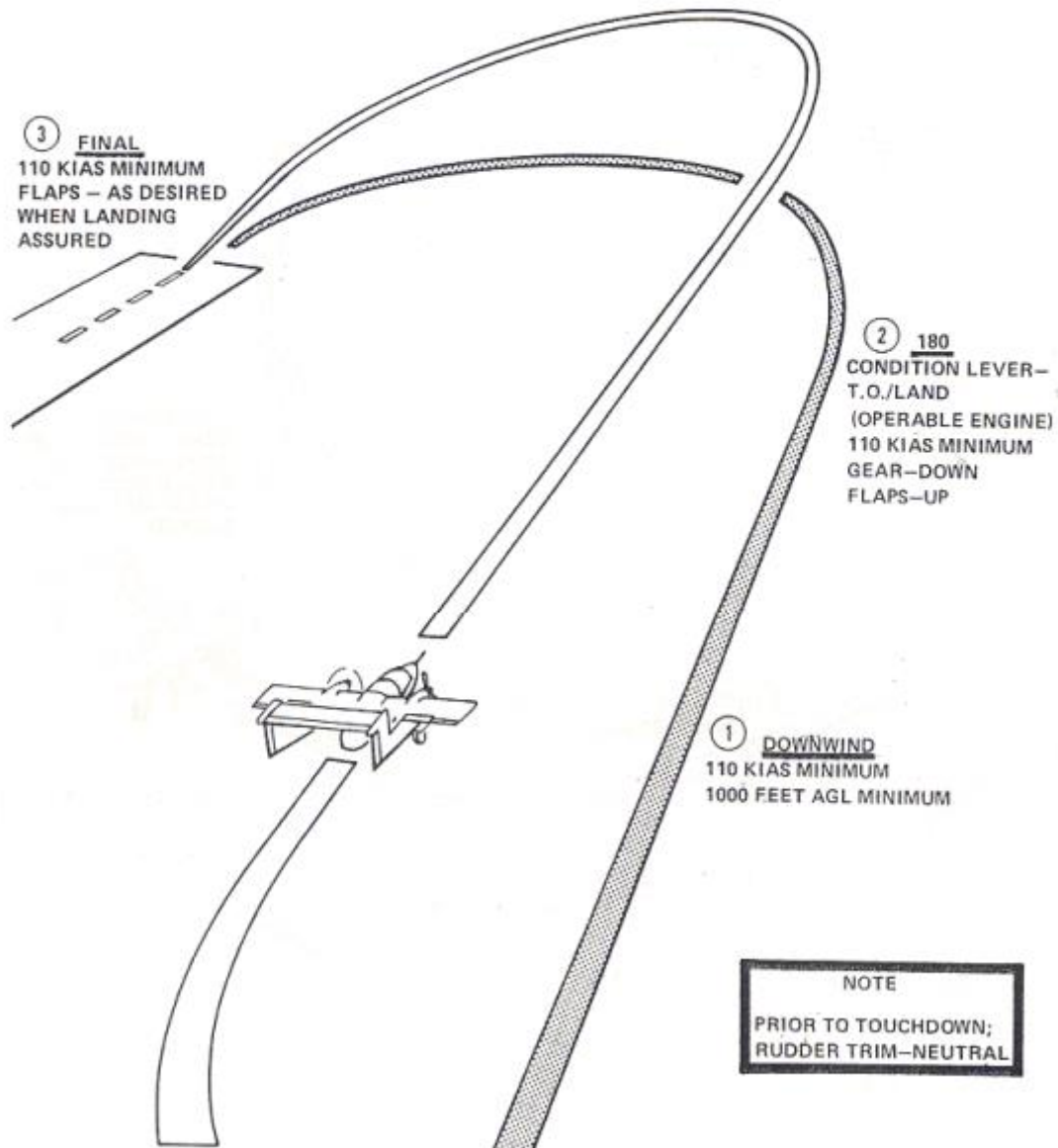




Section V
Part 4

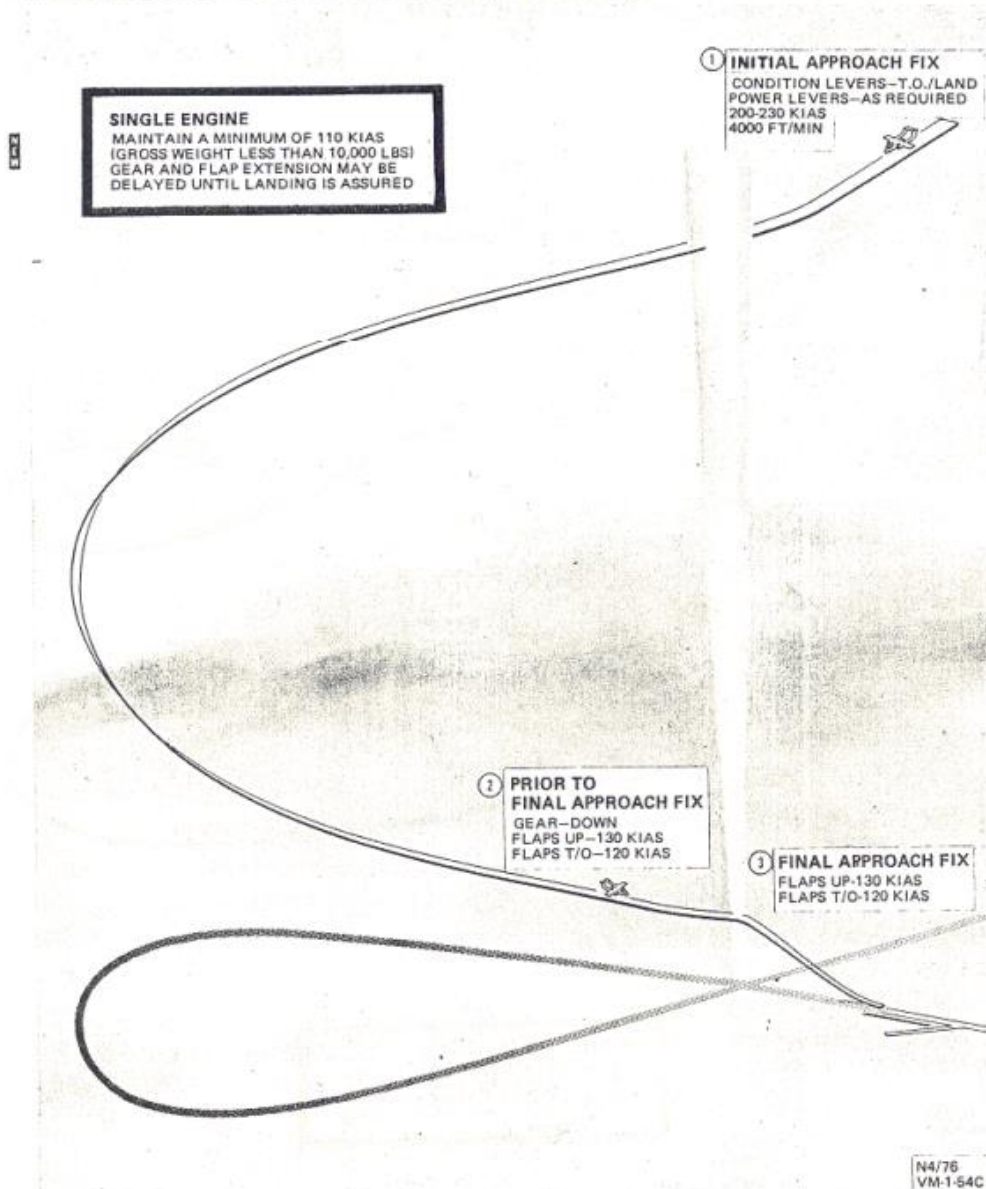
NAVAIR 01-60GCB-1

TYPICAL SINGLE ENGINE LANDING PATTERN 10,000 POUNDS GROSS WEIGHT





HIGH ALTITUDE APPROACH (TYPICAL)



PROCEDURE:

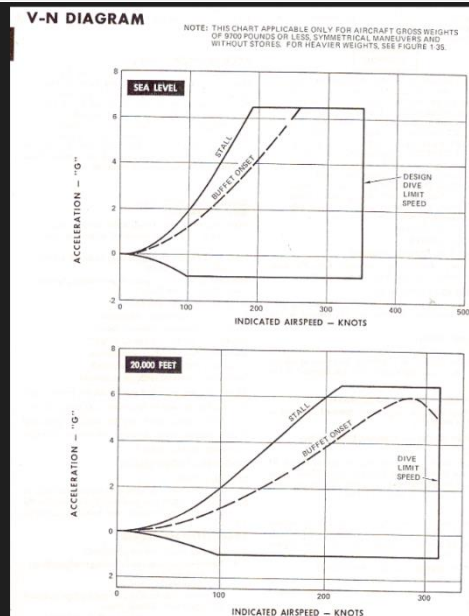
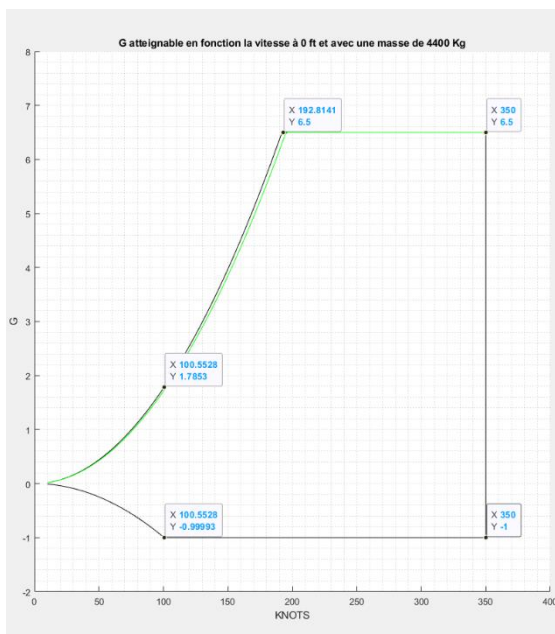
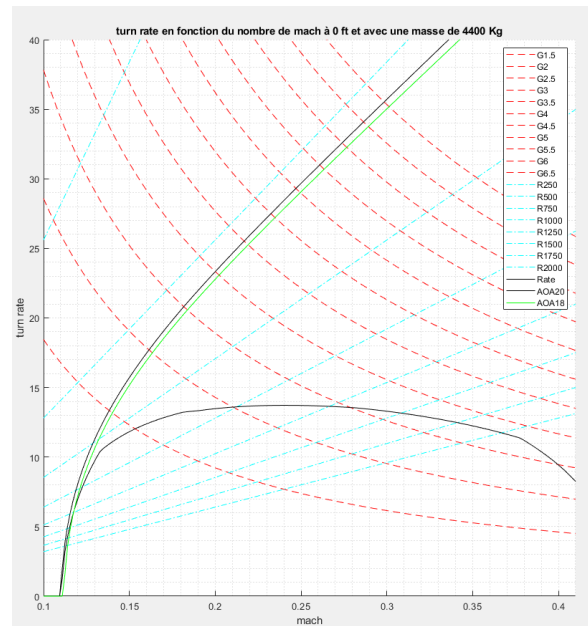
- Set full RPM with the RPM lever.
- Check and control speed and altitude (check UPWIND, Circuit Pattern above).
- Approximately at the middle of the runway, reduce throttle, Break hard right (or left, depending on the airfield configuration), And try to keep the same altitude during the turn.
- Roll out once you set on the DOWNWIND heading.
- Manage your speed to get 120 Kt.
- Set your flaps on landing.
- Set your landing down.
- When the runway is on your 8, go for the base turn, start the descend at -600ft/min.
- check your landing gear.
- In the final glide take between 100knots and 130knots depending on your load.
- At the touch down operate the brake as required and the reverse as required.



4. Aircraft Performance and Limitations

4.1. Flight Model

We do a special attention at the Flight model.
There some curve editing with matlab.
Test it! (WIP documentation, too long for explain,
just test it).





4.2. Limitations

4.2.1. Load factor

As previously view, the BRONCO is limited at +7G and -3G if you exceed this limit, you will break your aircraft. More G you have less time upper the limit you have. So, pay attention when pull after the rocket pass.

4.2.2. Speeds

The maximum speed is at 350 knots, like the Glimit if you overshoot the VNE you could break your aircraft.

The maximum speed for the landing gear is 158 knots.

The maximum speed for the Mid flaps is 170 knots.

The maximum speed for the full flaps is 130 knots.

4.2.3. Damage Model

The damage model includes visual bullet impacts on the plane, Parts losing of the plane (due to Over-G, Overspeed or too much damage), and damages to the engine simulation.

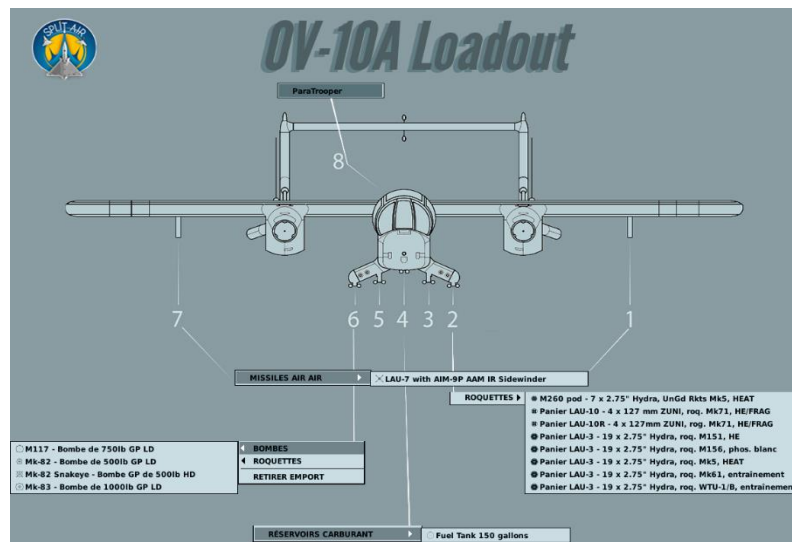




5. Armament Using

5.1. Weapons/Loadouts presentation

OV-10A Loadout:

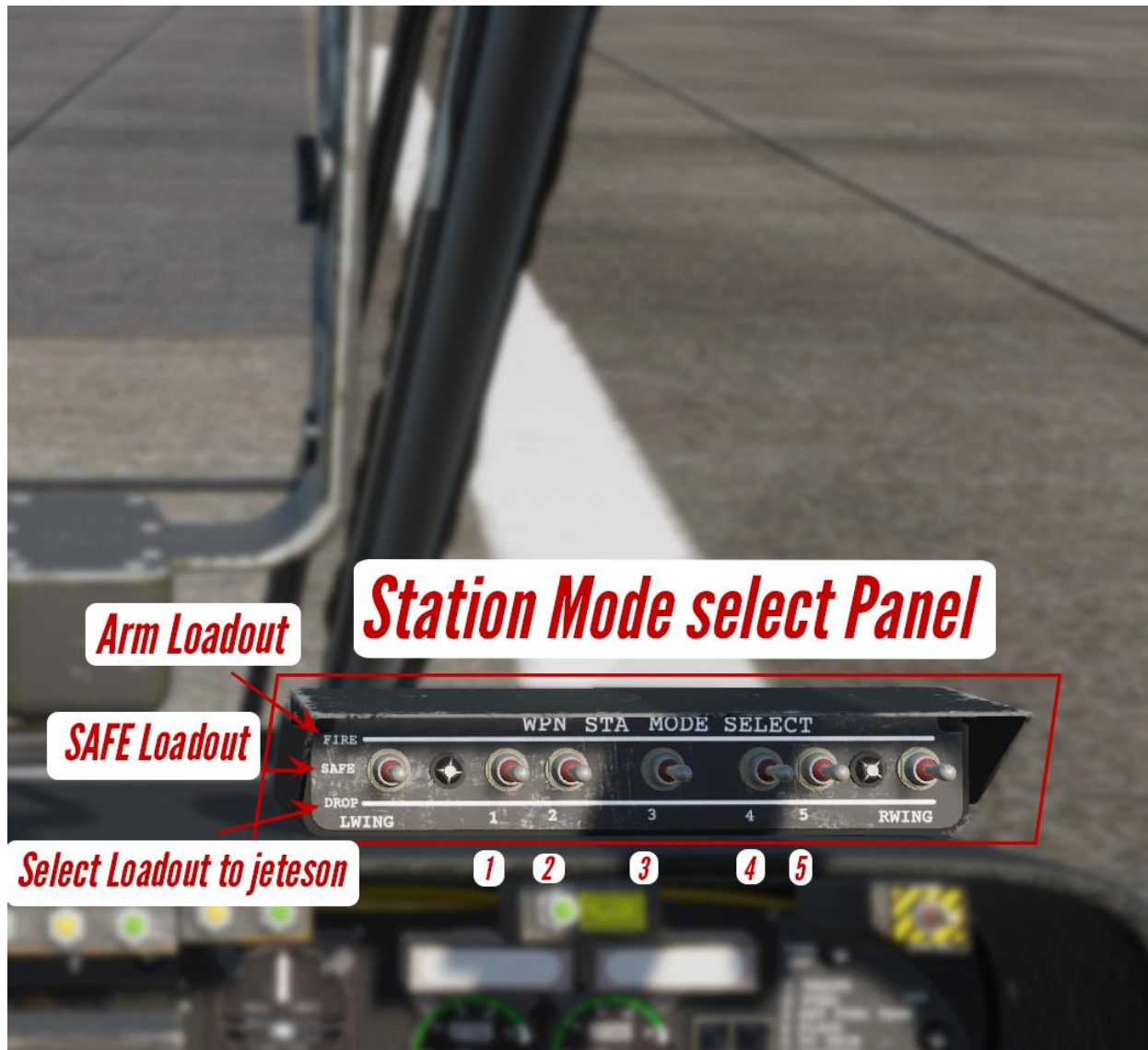


	Station (Display in cockpit)	A/A AIM 9 	MK 82/83 M117 	Rockets Hydra Zuni 	Fuel Tank 150 Gal. / 567 liters 	Paratroopers 	Smoke 	
Pylon 1	Left wing	X						
Pylon 2	1		X	X				
Pylon 3	2		X	X				
Pylon 4	3		X		X			
Pylon 5	4		X	X				
Pylon 6	5		X	X				
Pylon 7	Right Wing	X						
Pylon 8							X (static only)	
Pylon 9								X (white)



5.2. Weapons system presentation

Station Mode Select Panel :



- 1) and 5: Station bombs and rockets.
- 2) and 4: Station bombs and rockets.
- 3) Station bombs and Fuel Tank.
- 4) Lwing and Rwing: Station Missile.

DROP Selection + Weapon release → Selected Jettison



Weapon Panel Control :



- 1) Left Hand Pair Guns Switch: switch allowing the left pair guns to be used independently (not functional).
- 2) Right Hand Pair Guns Switch: switch allowing the right pair guns to be used independently (not functional).
- 3) MK 4 Pod Guns Switch: RDY (Ready) Arm mk 4 guns pod / Safe to UnArm mk4 guns pod.
- 4) Interval: Set the interval in second between each bomb drop.
- 5) Master Arm: Used to arm the Aircraft (removed security) / Disabled the arming of the Aircraft (added security).

Stores Emergency Release Button:



Press the emergency release button and the weapon will release.