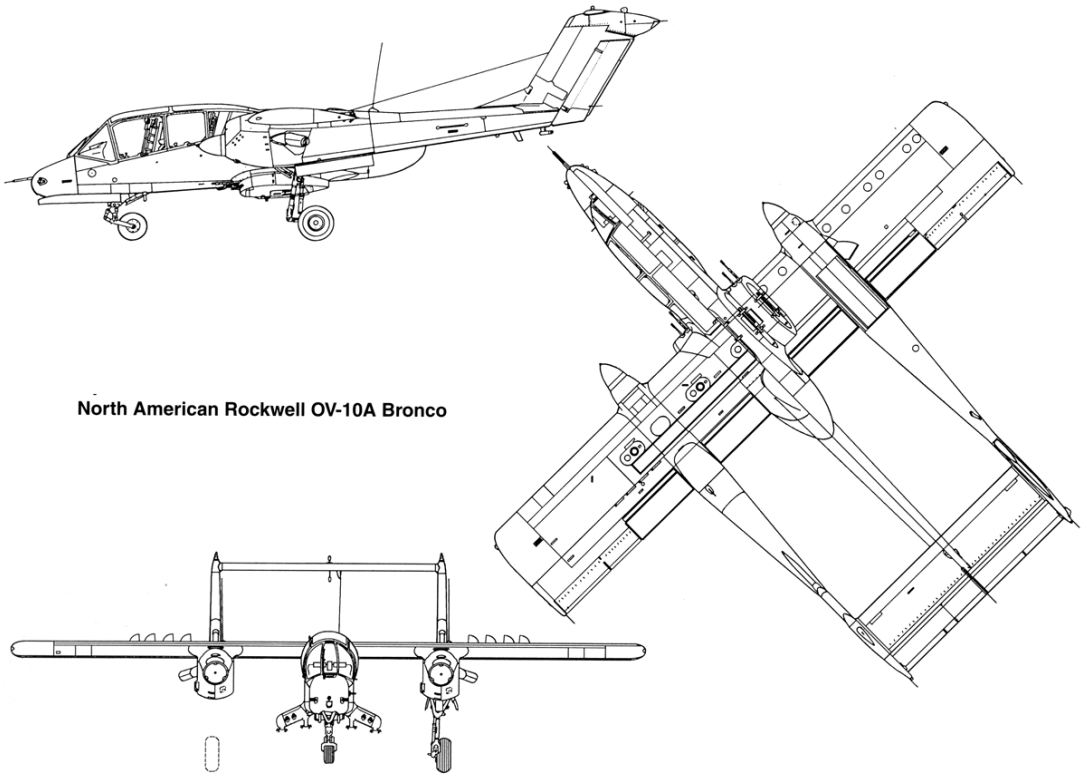
North American Rockwell OV-10 Bronco

ICAO: V10

This **aircraft guide** is for the North American Rockwell OV-10 Bronco. The document is composed from a number of resources and data collected from Microsoft Flight Simulator. The checklist and some specs were taken from a POH for the OV-10D.

The North American Rockwell OV-10 Bronco is an American twin-turboprop light attack and observation aircraft. It was developed in the 1960s as a special aircraft for counter-insurgency (COIN) combat, and one of its primary missions was as a forward air control (FAC) aircraft. It can carry up to 3,200 lb of external munitions and internal loads such as paratroopers or stretchers, and can loiter for three or more hours.



Missions

The aircraft may be configured for Night Observation Surveillance (NOS), strike-reconnaissance, forward air control, or cargo transport missions. The AN/AAS-37 Infrared Laser Detecting-Ranging Set provides the OV-10D aircraft with a night and day battlefield surveillance, a primary mission of target acquisition and a secondary mission of target designation for high performance attack aircraft carrying laser-guided weapons.

STRIKE-RECONNAISSANCE OR TAC(A)

For a strike, strike-recon, or tactical air control (air-borne) mission, external armament, integral guns, and communications equipment provide the capabilities required.

Checklist

PREFLIGHT CHECKS

Interior Inspection, Pilot's	
Battery	OFF
Landing Gear Handle	DOWN AND LATCHED
Master Arm Switch	OFF
Laser Enable	OFF
Gust Lock	REMOVED
Battery	ON
	Check voltage, power lever gates retracted and gear indication.
INST PWR Switch	INV NO. 1
Fuel Quantity	CHECK
INST PWR Switch	OFF
Battery	OFF

Interior Inspection, Observer's	
No 3 INV CB	OUT (IN-Solo)
FLIR Mode Switch	OFF
VIDEO Power Switch	ON
Radar Altimeter	OFF
LASER ARM Switch	OFF

Exterior Inspection

Chocks	AS REQUIRED
Right Propeller and Hub	CHECK
Right Engine Intake	CLEAR
Right Engine and Cowling	CHECK
Right Engine Oil Cap	SECURED
Right Engine Exhaust Stack	CHECK
Right Wing and Control Surfaces	CHECK
Stall Warning Sensor	CHECK
Right Main Landing Gear Down and Brake/Wheel Assembly	CHECK
Right Battery Cover	SECURED
Right Avionics Bay Cover	SECURED
Right wing pylon/drop tank	CHECK
Right sponson access doors	SECURED
External stores	CHECK
Cargo bay for loose equipment	SECURED
Automatic video tracker boresight and reticle position thumbwheel settings	PROPER SETTINGS
BIT fault indicator panel (4 indicators reset)	CHECK
Cargo bay door mounted equipment circuit breakers	ON
Cargo bay door	CLOSED AND LOCKED
Right boom for structural integrity	CHECK
Visual inspection of tail and horizontal stabilizer	CHECK

Ejection Seat Inspection (P, O)

Ejection “D” ring safety pin	INSTALLED
Emergency radio beacon lanyard	SECURED
Seat quick-disconnects	SECURE
Speed sensor lines	SECURE
Speed/altitude sensor	CHECK
Seat/man separator latch	SECURE
Thruster safety pin	REMOVE

WARNING. Ensure that streamer is not routed through or entangled in the “D” ring handle.

Thruster line slug	SECURE
Chute thruster static line	SECURE
Catapult retention bolt	SECURE

COCKPIT CHECK

Canopy brace	INSTALLED
Survival kit	FASTEN (P, O)
Lap belt	FASTEN (P, O)
Riser straps	FASTEN (P, O)
Landing gear and drop tank safety pins	REMOVED AND STOWED IN STARBOARD MAP CASE
HF selector switch	OFF
ICS	SET, as desired (P, O)
FM selector switch	OFF
FLAP handle	UP
TRIM SELECT	NORM
YAW DAMPER switch	OFF
EXT LTS MASTER switch	EXT LTS
Power levers	GROUND IDLE
Condition levers	FUEL SHUT OFF

CAUTION. If the condition levers are found forward of the FUEL SHUT-OFF position, any attempt to start the engine may result in an engine fire.

BATTERY switch	OFF
Generators switches	NORM
INST PWR switch	OFF
AIR START switches	AUTO
UHF selector switch	OFF
MASTER ARM switch	OFF
FLIR COMD switch	OPERATOR
LASER ENABLE switch	OFF
Countermeasures POWER/FLARE SALVO switch	OFF
Clock	SET (P, O)
Radar altimeter	OFF
ALT/TCN PWR switch	NORM
TACAN selector switch	OFF
Fuel GAGE SEL switch	INT
EXT FUEL TRANS switches	OFF
FUEL EMERG SHUT OFF switches	NORM
PITOT HEAT switch	OFF
Windshield WIPER switch	OFF
ANTI COLLISION switch	ON
EX LIGHTS switch	AS DESIRED

Oxygen regulator	CHECK (P, O)
Diluter switch	100% OXYGEN (P, O)
IFF MASTER switch	OFF
FM NO. 2 SELECTOR switch	OFF
COMPASS	SLAVED
BLEED AIR switches	NORM
Interior lights	AS DESIRED (P, O)
Circuit breakers	IN
Cargo bay light	OFF
IFF ANT SEL	BOTH
Utility light	AS DESIRED
NO. 3 INV CB	OUT (IN, if Solo)

BEFORE START

Parking brake	SET
Access steps	CLOSED
Chocks	REMOVE
Propeller	CLEAR (P, O)

CAUTION. If propellers are feathered to any degree, unfeathering procedure shall be followed prior to starting engines.

BATTERY switch	ON; check voltage
ICS	CHECK OPERATION (P, O)
ICS TALK foot switch	CHECK OPERATION (O)
FIRE DET/WARN LTS	TEST

Hold TEST switch in FIRE DET for d-c check, then hold in WARN LTS to test all warning lights, caution lights, the audio level of the over temperature warning tone, and rudder pedal shaker operation. The amber and green hydraulic lights must be separately pressed to test.

WARN LTS TEST	TEST (O)
External power	APPLIED, as required

UNFEATHERING (IF REQUIRED)

Condition lever	FUEL SHUT-OFF
Power lever	FULL REVERSE
AIR START switch	CRANK

Hold in CRANK until blades reach full reverse, then release to AUTO.

Power lever	GROUND IDLE

Repeat for other engine

STARTING ENGINES

Engine starts may be made, either engine first, using aircraft battery power or external electrical power. For engine limits, including starter limits, refer to Section 1, Part 4.

Propeller	CLEAR (P, O)
START switch	START
	Hold desired START switch momentarily in START and check the START IGN ON light illuminated at approximately 10% RPM.
Condition lever	NORMAL FLIGHT ON PROPELLER ROTATION
	Observe EGT rise at 10% to 12% rpm.

CAUTION. If external power unit fails during start, over-temperature could occur. Proceed as outlined in Section V.

Monitor rpm, oil pressure, EGT, and observe START IGN ON light and BOOST PUMP light out at approximately 52% rpm.

WARNING. If external electrical power unit fails when initiating start, the engine will be motored by the starter if the external power cable is unplugged. To prevent undesired engine rotation, execute ABORTED/HUNG START procedure.

CAUTION. Abort start if light-off is not indicated within 15-seconds or if rpm hangup occurs after initiating start. Four consecutive 15-second maximum duration start attempts, each to engine light-off, may be made with a 1-minute cooling period prior to a second attempt, a 2-minute cooling period prior to a third attempt, and a 10-minute cooling period prior to a fourth attempt. A 60-minute cooling period shall be observed prior to a repeat of the starter-generator duty cycle.

Power lever	minimum RPM (65% rpm)
INST PWR switch	INV NO. 1
	Check GEN, BOOST PUMP lights out (battery start only)

NOTE. For external power starts GEN and BOOST PUMP lights remain on until external power plug is removed.

Radios	ON
External power	DISCONNECT, if applicable.
	Check GEN and BOOST PUMP lights out.

NOTE. Pull external power control circuit breaker. Then turn off the ground power cart prior to disconnecting the ground power plug. Reset the external power control circuit breaker after ground power plug has been disconnected from aircraft.

Compute temperature and torque limits.
Repeat procedures for second engine.

NOTE. If battery start, wait until generator has recharged battery and ammeter shows less than 100 amperes. If rpm of running engine decays more than 4% abort start of second engine.

FLIR system	ON (Ensure NO. 3 INV CB-IN) Rotate to forward azimuth position.

NOTE. On SOLO flights, place FLIR COMD switch to WIDE position. The FLIR turret will drive to approximately zero degrees azimuth and elevation. Placing FLIR COMD switch to OPERATOR will turn FLIR system off with turret locked in forward pointing position.

ABORTED/HUNG START

Condition lever	FUEL SHUT-OFF
START switch	ABORT

WARNING. If the start switch is energized and the engine fails to crank, move the start switch to ABORT to de-energize the automatic ignition circuit prior to attempting any further corrective action. Failure to do so may cause inadvertent engine start if the circuit is later completed.

BEFORE TAXI

INST PWR INV NO. 2	CHECK Reset to INV NO. 1
Radar altimeter	ON
AM SEL switch	CHECK NO. 1 GEN AND NO. 2 GEN
Compass PUSH TO SET knob	SET
Trim	CHECK

	Set for take-off
ATTITUDE GRYO ERECT switch	NORM
Attitude indicator	CAGED (O)
TACAN	SET, as required
Cargo bay door caution light	CHECK
FUEL GAGE switch	TEST
Fuel quantity	CHECK
IFF switch	STBY
Radar altimeter	TEST AND SET
Flight controls	CHECK FULL TRAVEL
Flaps	CHECK OPERATION
	Note operation of hydraulic pump indicating light.
Ejection seat “D” ring pin	REMOVED (P, O)
Power levers	REVERSE MOMENTARILY
	Observe slight RPM increase after propellers unlock.
Altimeter	SET (P, O)

TAXI CHECKS

Brakes	CHECK

CAUTION. To prolong life of brake assemblies, maximum use of reverse thrust and differential power should be used, and condition levers should be maintained at NORMAL FLIGHT for taxiing.

Nose wheel steering	CHECK
YAW DAMPER switch	TEST/OFF
	Hold YAW DAMPER switch in TEST while taxiing.
	Check for normal rudder pedal movement opposing turns.
L, CTR, R EXT FUEL TRANS switches	ON
	Check applicable AUX FUEL caution lights on, then out, indicating transfer flow. Turn switches OFF after check.

BEFORE TAKE-OFF

Seats	ARMED (P, O)
Fuel quantity	CHECK
Center tank	240 TO 280 POUNDS
L, CTR, R AUX FUEL TRANS switches	OFF
PITOT HEAT switch	AS DESIRED
Cockpit heat	AS DESIRED

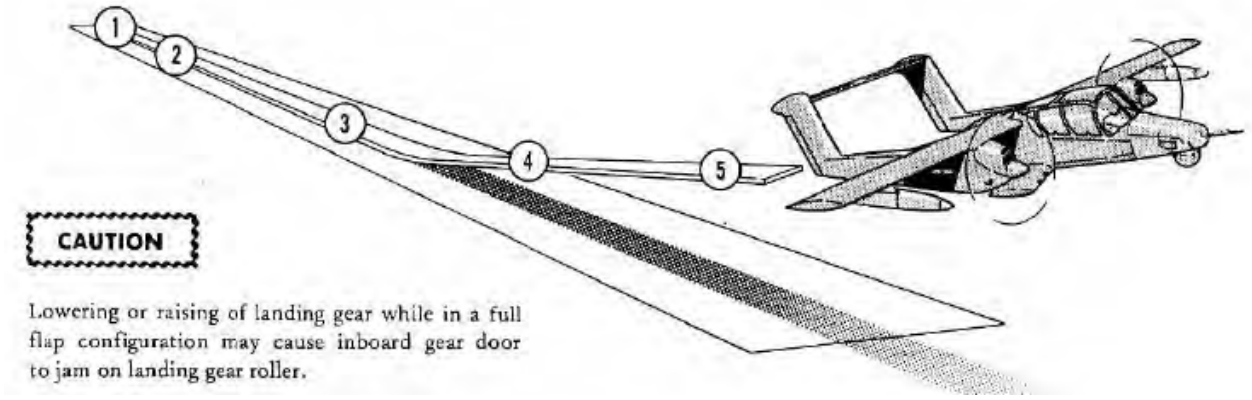
FLAPS	AS DESIRED
Trim	SET FOR TAKE-OFF
	Rudder/Aileron – NEUTRAL
	Elevator (NORMAL) – ½ UNIT DOWN
Canopy	LOCKED (P, O)
Harness	LOCKED (P, O)
Condition levers	T.O./LAND (94% – 96%)
IFF switch	NORM
Controls	CHECK

CAUTION. To preclude foreign object damage, the FLIR turret should be pointed forward on take-off.

Power levers	MILITARY (101%)
	Maximum available torque is attained at 115-degree detent position (99.8% – 100.2%) which is slightly aft of the MILITARY position.
	The maximum available thrust is attained at the MILITARY (101%) position.
	Do not exceed TIT and torque limits.

TAKE-OFF

Normal take-offs at gross weights below 12,000 pounds near Standard Day conditions result in short take-off runs. Take-off airspeed and distance should be computed from the performance data charts in Section XI, Part 2.



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.

Normal Take-off

Crosswind Take-off

AFTER TAKE-OFF

Landing gear	UP When safely airborne, retract the gear. Ensure the gear is fully retracted before exceeding 158 KIAS.
FLAP handle	UP Above 110 KIAS, retract flaps. Ensure flaps are fully retracted before exceeding 158 KIAS.
Oxygen diluter lever	NORMAL OXYGEN, as required (P, O)
YAW DAMPER switch	ON, as desired.
L AUX, CTR, R AUX EXT FUEL TRANS switches	ON, as required. Check AUX FUEL caution lights go out.
Condition levers	NORMAL FLIGHT, individually as desired above 1000 feet AGL.

NOTE. When retarding to NORMAL FLIGHT, take care not to inadvertently select FUEL SHUT-OFF.

CLIMB

For climb speed schedules and climb performance data, refer to Section XI, Part 3.

CRUISE

For cruise performance data, refer to Section XI, Part 4. To initially set up cruise power, move the condition levers to NORMAL FLIGHT and adjust the power levers to maintain the desired airspeed.

DESCENT

For optimum descent, set condition levers to NORMAL FLIGHT and power levers to FLIGHT IDLE. For airspeed distance, time, and fuel usage, refer to Section XI, Part 7. Prior to descent, proceed as follows:

CPT AIR/DEFR knob	AS REQUIRED
Altimeter	SET
Radar altimeter minimum altitude	SET
Oxygen	100%

BEFORE LANDING

Condition lever	T.O./LAND
Landing gear	DOWN
Flaps	AS DESIRED
Brakes	CHECK
Harness	LOCKED (P, O)
Message drop door	CLOSED
Landing light	AS REQUIRED
EXT FUEL TRANS switches	OFF
MASTER ARM switch	OFF
Countermeasures POWER/FLARE SALVO switches	OFF
LASER ENABLED switch	OFF
FLIR	ON (O)
	FLIR turret pointing forward.

LANDING

Touch-and-Go Pattern

Crosswind Landing

Slippery Runways

WAVE-OFF

Power levers	MILITARY
Rotate nose up to arrest sink rate.	
FLAP handle	T/O
Landing gear handle	UP
FLAP handle	UP, as desired (minimum 110 KIAS)

AFTER LANDING (WHEN CLEAR OF RUNWAY)

FLAP handle	UP
Condition levers	NORMAL FLIGHT
Nonessential COMM/NAV	OFF
Landing light	AS REQUIRED
LASER ARM switch	OFF (O)
Radar altimeter	OFF
FLIR mode switch	STBY (O)
FLIR mode switch	OFF (O)
NO. 3 INV CB	OUT (O)

SHUTDOWN

For operational convenience, shut down the engines with the propellers in flat pitch. Proceed as follows:

“D” ring safety pin	INSERT (P, O)
PARK BRAKE	SET
Condition levers	FUEL SHUT-OFF
Power levers	FULL REVERSE (monitor TIT)
For shutdown with propellers feathered, pull condition levers full aft to FEATHER & FUEL SHUT-OFF	
All radios/navigation equipment	OFF (P, O)
INST PWR switch	OFF
BATTERY switch	OFF
External/interior lights	OFF

BEFORE LEAVING AIRCRAFT

Wheel chocks	IN PLACE
PARK BRAKE	SET, as desired
Oxygen diluter lever – 100%	OFF (P, O)
Control gust lock	INSTALL
Parachute thruster safety pin	INSTALLED (P, O)
Landing gear and drop tank safety pins	INSTALL
Engine oil quantity	CHECK
LASER safety plug removed	CHECK

STOL OPERATIONS

Performance

This section covers how the airplane operates during certain phases of flight: climb, cruise, and descent.

Time = Distance / Ground Speed
Fuel Used = (Time) (Fuel Flow)

CLIMB

Fuel Burn	GPH
Rate of Climb	FT/MIN

CRUISE

Fuel Burn	
Maximum Cruising Speed	244 KTAS
Normal Cruising Speed	KTAS
Economy Cruising Speed	KTAS

DESCENT

Fuel Burn	GPH
Rate of Descent	FT/MIN

Technical Specifications

Occupancy	2 CREW
Range	500 NM
Service Ceiling	24,000 FT

AIRSPEED LIMITATIONS

V_{A} MANEUVERING SPEED	139 KIAS
V_{FE} MAXIMUM FLAP EXTENSION SPEED	123 KIAS
V_{G} BEST GLIDE SPEED	110 KIAS
V_{LE} MAXIMUM LANDING GEAR EXTENSION SPEED	158 KIAS
V_{NE} DO NOT EXCEED SPEED	350 KIAS
V_{NO} MAXIMUM STRUCTURAL CRUISE SPEED	165 KIAS

V_{R} ROTATION SPEED	71 KIAS
V_{Y} BEST RATE OF CLIMB SPEED	96 KIAS
V_{S} CLEAN STALLING SPEED	64 KIAS
V_{SO} DIRTY STALLING SPEED	52 KIAS
V_{X} BEST ANGLE OF CLIMB SPEED	77 KIAS

POWER PLANT

Engine Manufacturer	GARRETT-AIIRESEARCH
Engine Model No.	T76-G-410/412 TURBOPROP
Maximum Horsepower	715
Maximum Rotation Speed (RPM)	2,000
Maximum Manifold Pressure (In. Mercury)	
Maximum Oil Temperature	
Maximum Oil Pressure	
Maximum Fuel Pressure	
Fuel Grade	JET
Propeller Manufacturer	
Propeller Hub and Blade Model	

DISTANCE

OPERATING WEIGHTS

Maximum Weight	LBS
Maximum cargo load	3,200 LBS

FUEL

Fuel type	JET
	JP-4 (6.5 LBS/GAL)
	JP-5 (6.8 LBS/GAL)
Total capacity	77 US GAL
Unusable fuel	5 US GAL
Usable fuel	72 US GAL

PERFORMANCE

Raw Data

This is my attempt to capture data from Little Navmap in order to estimate what my climb, cruise, and descent performances might be.

CLIMB

True Airspeed	Vertical Speed	Fuel Flow, LBS	Altitude	Distance, NM	Time
175	246	682			

Climb Profile

While keeping the indicated airspeed above **90 kts** I get the following FPM settings at various altitudes.

Above Altitude	FPM
3,000	
14,000	
17,000	

CRUISE

True Airspeed	Fuel Flow
213	822

Calibrated Airspeed

Weight	Altitude	Temp, °C	IAS	CAS

25644	18500	-8	109	108

DESCENT

True Airspeed	Vertical Speed, FPM	Fuel Flow, LLB
149	-1766	501

Add-on Observations

This add-on I'm flying was originally developed by ariebaba on Flightsim.to. While flying the plane here are some things I've noticed.

- **Recognition lights (0,1,2)** do not work well with LVAR:LIGHTING_RECOGNITION_1.
- **Active Nav Frequency:1** doesn't work with hardware. Swapping works fine with Standby.
- **Reverse Throttle.** When I set GENERAL ENG THROTTLE LEVER POSITION:1,2 then TURB ENG THROTTLE COMMANDED N1:1,2 shoots to 1503238616 even though I'm setting it to 62.

Microsoft Flight Simulator 2020 Development

CHECKLIST MATRIX

While learning how to develop a checklist I saw a matrix of sorts in the MSFS Docs. So; I created one to help make things easier in my project.

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
Pre-flight Checks	Battery	On	Battery must be On	Check voltage, power lever	

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
				gates retracted and gear indication.	
Pre-flight Checks	INST PWR Switch	INV NO. 1	Set Instrument Power Switch to “INV NO. 1”		
Pre-flight Checks	Fuel Quantity	Check	Verify fuel quantity		
Pre-flight Checks	INST PWR Switch	Off	Set Instrument Power Switch to “OFF”		
Pre-flight Checks	Battery	Off	Battery must be Off		
Cockpit Check	FLAP handle	UP	Flap handle must be UP		
Cockpit Check	TRIM SELECT	NORM	Set Trim Select Switch to “NORM”		Not functional in-game
Cockpit Check	YAW DAMPER switch	OFF	Set Yaw Damper Switch “Off”		Not function in-game
Cockpit Check	EXT LTS MASER switch	EXT LTS	Set Exterior Lights Master Switch to “EXT LTS”		
Cockpit Check	Power levers	GROUND IDLE	Set Power Levers to “GROUND IDLE”		
Cockpit Check	Condition levers	FUEL SHUT-OFF	Set Condition Levers to		

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
			“FEATHER & FUEL SHUT-OFF”		
Cockpit Check	BATTERY switch	OFF	Battery must be Off		
Cockpit Check	Generator switches	OFF	Set L GEN and R GEN Switches to “OFF”		
Cockpit Check	INST PWR switch	OFF	Set Instrument Power Switch to “OFF”		
Cockpit Check	AIR START switches	AUTO	Set Air Start Switches to “AUTO”		
Cockpit Check	Clock	SET	Adjust clock to desired setting		
Cockpit Check	Radar Altimeter	Off	Radar Altimeter must be Off		
Cockpit Check	Fuel GAGE SEL switch	INT	Set Fuel Gage Select switch to “INT”		
Cockpit Check	EXT FUEL TRANS switches	OFF	Set External Fuel Transfer switch to “OFF”		
Cockpit Check	FUEL EMERG SHUT OFF switches	NORM	Set Fuel Emergency Shut Off switches to “NORM”		

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
Cockpit Check	PITOT HEAT switch	OFF	Set Pitot Heat Switch to “OFF”		
Cockpit Check	Windshield WIPER switch	OFF	Set Windshield Wiper Switch to “OFF”		
Cockpit Check	ANTI COLLISION switch	ON	Set Anti Collision switch to “ON”		
Cockpit Check	EX LIGHTS switch	AS DESIRED	Set Strobe, Form, or Wing & Tail switches as desired		
Cockpit Check	COMPASS	SLAVED	Set Compass Switch to “SYNC”		
Cockpit Check	Interior lights	AS DESIRED	Set Consoles, Instruments dials, Flood and High Intensity switches as desired		
Before Start	Parking brake	SET	Parking brake must be set		
Before Start	Propeller	Clear	Make sure the area surrounding the Propellers is clear		
Before Start	BATTERY switch	ON	Battery must be On; check voltage		

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
Before Start	FIRE DET/WARN LTS	TEST	Hold the FIRE DET/WARN LTS switch to test Warning and Caution lights		
Unfeathering (If Required)	Condition lever	FUEL SHUT-OFF	Set Condition Lever to “FUEL SHUT-OFF”		
Unfeathering (If Required)	Power lever	FULL REVERSE	Set Power Lever to “FULL REVERSE”		
Unfeathering (If Required)	AIR START switch	CRANK	Hold in CRANK until blades reach full reverse, then release to AUTO		
Unfeathering (If Required)	Power lever	GROUND IDLE	Set Power Lever to “GROUND IDLE”		
Repeat for other engine					
Starting Engines	Propeller	CLEAR	Make sure the area surrounding the Propellers is clear		
Starting Engines	START switch	START	Hold desired START switch momentarily in START and check the START IGN ON light		

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
Starting Engines	Condition lever	NORMAL FLIGHT ON PROP ROTATION	Observe EGT rise at 10% to 12% RPM		
Starting Engines	Monitor instruments		Monitor rpm, oil pressure, EGT, and observe START IGN ON light and BOOST PUMP light out at approximately 52% rpm		
Starting Engines	Power lever	Minimum RPM (65%)	Set Power Lever to minimum specs		
Starting Engines	INST PWR switch	INV NO. 1	Check GEN, BOOST PUMP lights out (battery start only)		
Starting Engines	Radios	On	Radios must be On		
Starting Engines	External power	DISCONNECT, if applicable	Check GEN and BOOST PUMP lights out		
Starting Engines	Temperature and Torque limits	Compute	Compute temperature and torque limits		

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
Starting Engines	Repeat procedures for second engine				
Aborted/ Hung Start	Condition lever	FUEL SHUT-OFF	Set Condition Lever to “FUEL SHUT-OFF”		
Aborted/ Hung Start	START switch	ABORT	Set Start Switch to “ABORT”		
Before Taxi	INST PWR INV NO. 2	CHECK	Reset to INV NO. 1		
Before Taxi	Radar altimeter	ON	Check that radar altimeter is On		
Before Taxi	AM SEL switch	CHECK NO. 1 AND NO. 2 GEN			
Before Taxi	Trim	CHECK			
Before Taxi	ATTITUDE GRYO ERECT switch	NORM			
Before Taxi	Attitude indicator	CAGED (O)			
Before Taxi	TACAN	SET, as required			
Before Taxi	Cargo bay door caution light	CHECK			
Before Taxi	FUEL GAGE	TEST			

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
	switch				
Before Taxi	Fuel quantity	CHECK			
Before Taxi	IFF switch	STBY			
Before Taxi	Radar altimeter	TEST AND SET			
Before Taxi	Flight controls	CHECK FULL TRAVEL			
Before Taxi	Flaps	CHECK OPERATION	Note operation of hydraulic pump indicating light.		
Before Taxi	Ejection seat “D” ring pin	REMOVED (P, O)			
Before Taxi	Power levers	REVERSED MOMENTARILY	Observe slight RPM increase after propellers unlock.		
Before Taxi	Altimeter	SET (P, O)			
Taxi Checks	Brakes	CHECK			
Taxi Checks	Nose wheel steering	CHECK			
Taxi Checks	YAW DAMPER	TEST/OFF	Hold YAW DAMPER		Not function

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
	switch		switch in TEST while taxiing.		in-game
Taxi Checks	L, CTR, R EXT FUEL TRANS switches	ON	Check applicable AUX FUEL caution lights on, then out, indicating transfer flow. Turn switches OFF after check.		
Before Take-off	Seats	ARMED (P, O)			Not applicable
Before Take-off	Fuel quantity	CHECK			
Before Take-off	Center tank	240 TO 280 POUNDS			
Before Take-off	L, CTR, R AUX FUEL TRANS switches	OFF			
Before Take-off	PITOT HEAT switch	AS DESIRED			
Before Take-off	Cockpit heat	AS DESIRED			Not applicable
Before Take-off	FLAPS	AS DESIRED			
Before Take-off	Trim	SET FOR TAKE-OFF	Rudder/Aileron – NEUTRAL, Elevator		

	ITEM				
Page	**Subject**	**Expectation**	**Clue**	**Feedback**	**Status**
			(NORMAL) – 1/2 UNIT DOWN		
Before Take-off	Canopy	LOCKED (P, O)			Not applicable
Before Take-off	Harness	LOCKED (P, O)			Not applicable
Before Take-off	Condition levers	T.O./LAND (94% – 96%)			
Before Take-off	IFF switch	NORM			
Before Take-off	Controls	CHECK			
Before Take-off	Power levers	MILITARY (101%)	Maximum available torque is attained at 115-degree detent position (99.8% – 100.2%) which is slightly aft of the MILITARY position.		

CAMERA DEFINITIONS

The views or “definitions” for each camera view can be found in “./SimObjects/Airplanes/ariebab-bronco/cameras.cfg” file under “Title”. Here’s a list of all the views defined in this project.

1. ClosePilot
2. CoPilot
3. FixedOnPlane_Ailerons
4. FixedOnPlane_Belly
5. FixedOnPlane_Deice
6. FixedOnPlane_Elevator

7. FixedOnPlane_Flaps
8. FixedOnPlane_LandingGear
9. FixedOnPlane_Rudder
10. FixedOnPlane_Tail
11. FixedOnPlane_WingLeft
12. FixedOnPlane_WingRight
13. Instruments01
14. Instruments02
15. Instruments03
16. Instruments04
17. Instruments05
18. Instruments06
19. Instruments07
20. Instruments08
21. Instruments09
22. LandingPilot
23. Pilot
24. QuickView1_Up
25. QuickView2_Rear
26. QuickView3_R2
27. QuickView4_L2
28. QuickView5_L3
29. QuickView6_L1
30. QuickView7_R1
31. QuickView8_R3

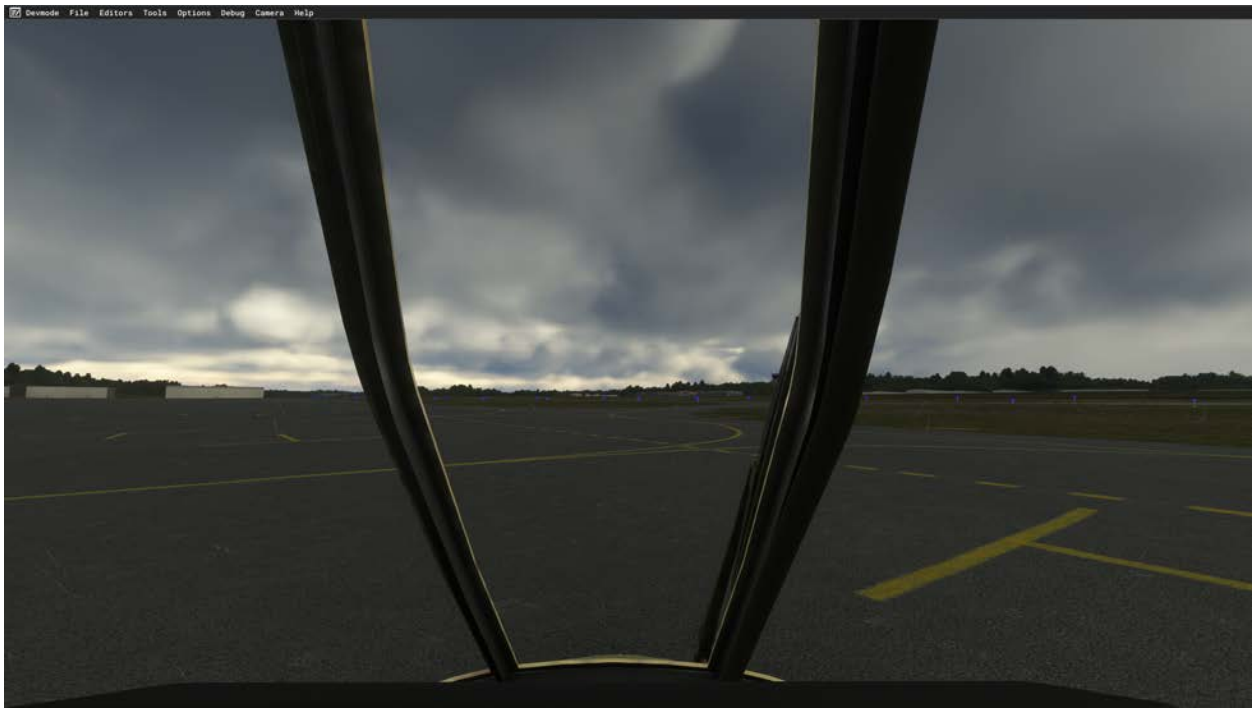
Pilot Views

ClosePilot

CoPilot

Aircraft Guide for OV10 Bronco v0.1.0

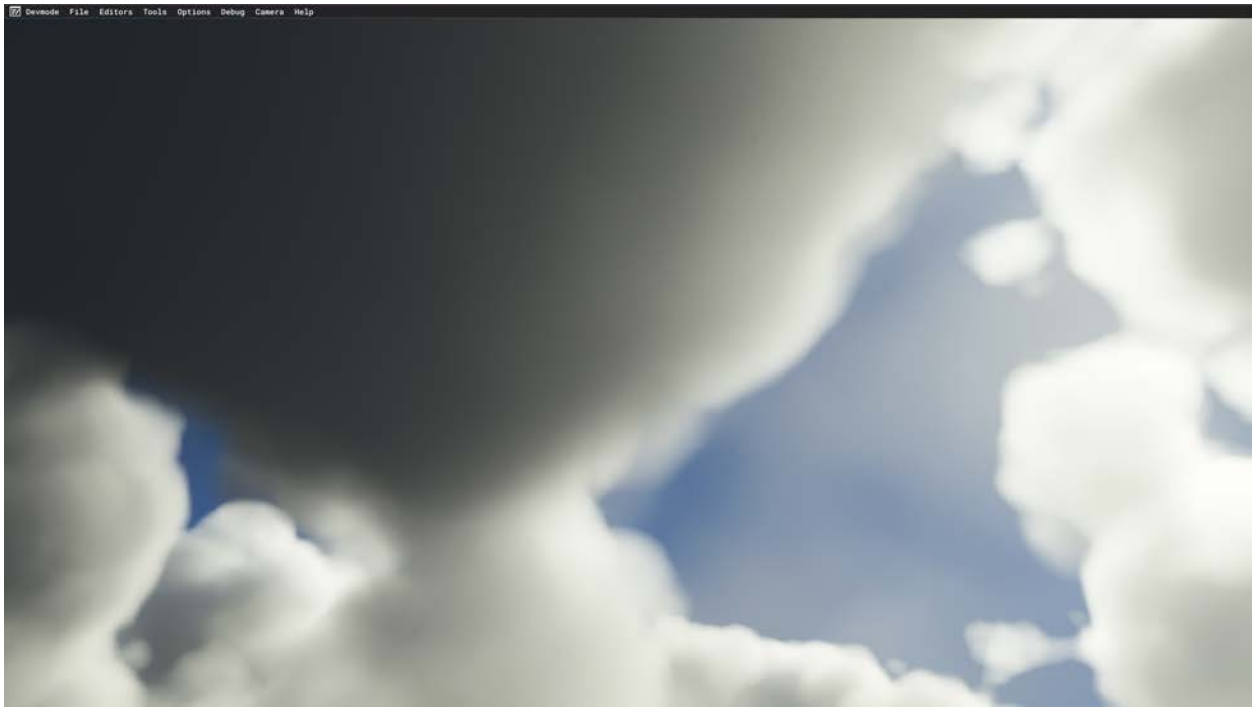
LandingPilot



Pilot

Quick Views

QuickView1_Up



QuickView2_Rear

QuickView3_R2

QuickView4_L2

QuickView5_L3

QuickView6_L1

QuickView7_R1

QuickView8_R3

Instrument Views

Instruments01

Instruments02

Instruments03

Instruments04

Instruments05

Instruments06

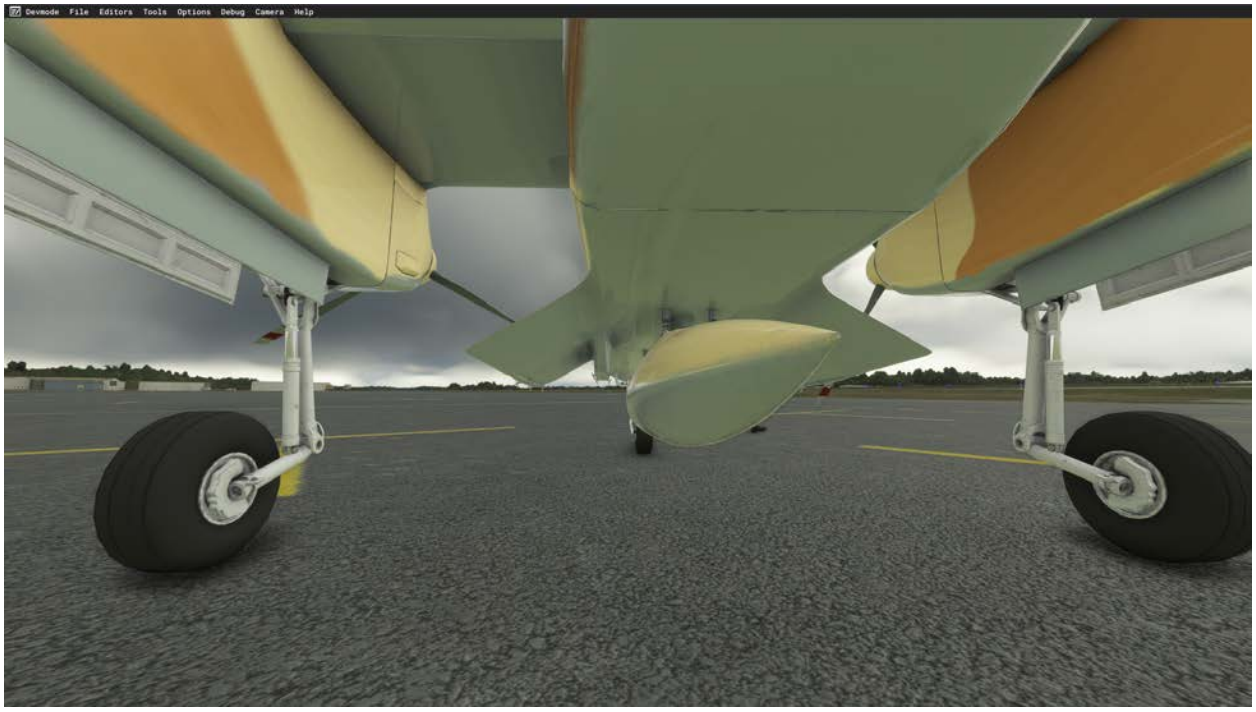
Instruments07

Instruments08

Instruments09

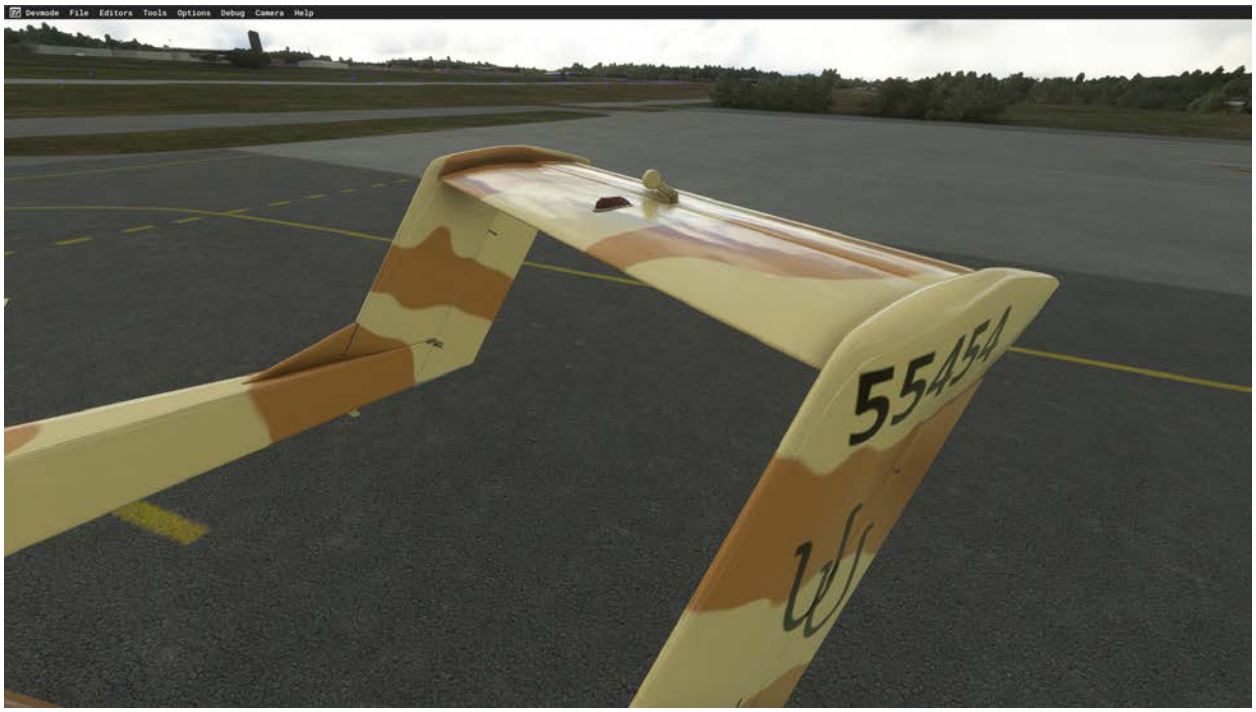
FixedOnPlane_Ailerons

FixedOnPlane_Belly



FixedOnPlane_Deice

FixedOnPlane_Elevator



FixedOnPlane_Flaps

FixedOnPlane_LandingGear

FixedOnPlane_Rudder

FixedOnPlane_Tail

FixedOnPlane_WingLeft

FixedOnPlane_WingRight

References

1. https://en.wikipedia.org/wiki/North_American_Rockwell_OV-10_Bronco

2. https://flightsim.to/file/61093/north-american-rockwell-ov-10-bronco
3. https://airwingmedia.com/downloads/north-american-rockwell-ov-10-bronco-pdf-ebook-manuals/
4. https://www.ov10squadron.com/aircraft/
5. https://www.avialogs.com/aircraft-r/rockwell/itemlist/category/742-ov-10bronco
6. https://www.usaf-sig.org/index.php/references/downloads/4-technical-orders/38-type-specific/79-ov-10-bronco-north-american-rockwell
7. https://docs.flightsimulator.com/html/mergedProjects/How_To_Make_An_Aircraft/Contents/Files/Checklists/Checklist_Best_Practices.htm?agt=index
8. https://github.com/fergatron/ov10-bronco-checklist