

BRITTEN-NORMAN BN2 MKIII TRISLANDER



The 18-seat, three-engine Britten-Norman Trislander is a natural and straightforward development from the 10-seat, twin-engine Britten-Norman Islander, an aircraft already in service in over 70 countries worldwide and produced by BLACKBOX SIMULATION in an earlier Microsoft Flight Simulator 2020 (MSFS) product. It has been introduced to meet a requirement for a larger aircraft amongst operators on higher-density routes or whose traffic has outgrown the capacity of the Islander, and of course, for those simmers who want a few more seats and something a little quirky. The Trislander retains all the essential Islander features of economy, versatility, and reliability. As a result of careful design, it incorporates more than 75 percent of original Islander parts and closely follows the techniques and practices so successfully developed and so thoroughly proven on that aircraft.

We are sure that your BLACKBOX SIMULATION Britten-Norman Trislander will give you every satisfaction, but should you require any assistance from the developer on the operation of your BLACKBOX product we are always at your service via the MSFS Forum and email.



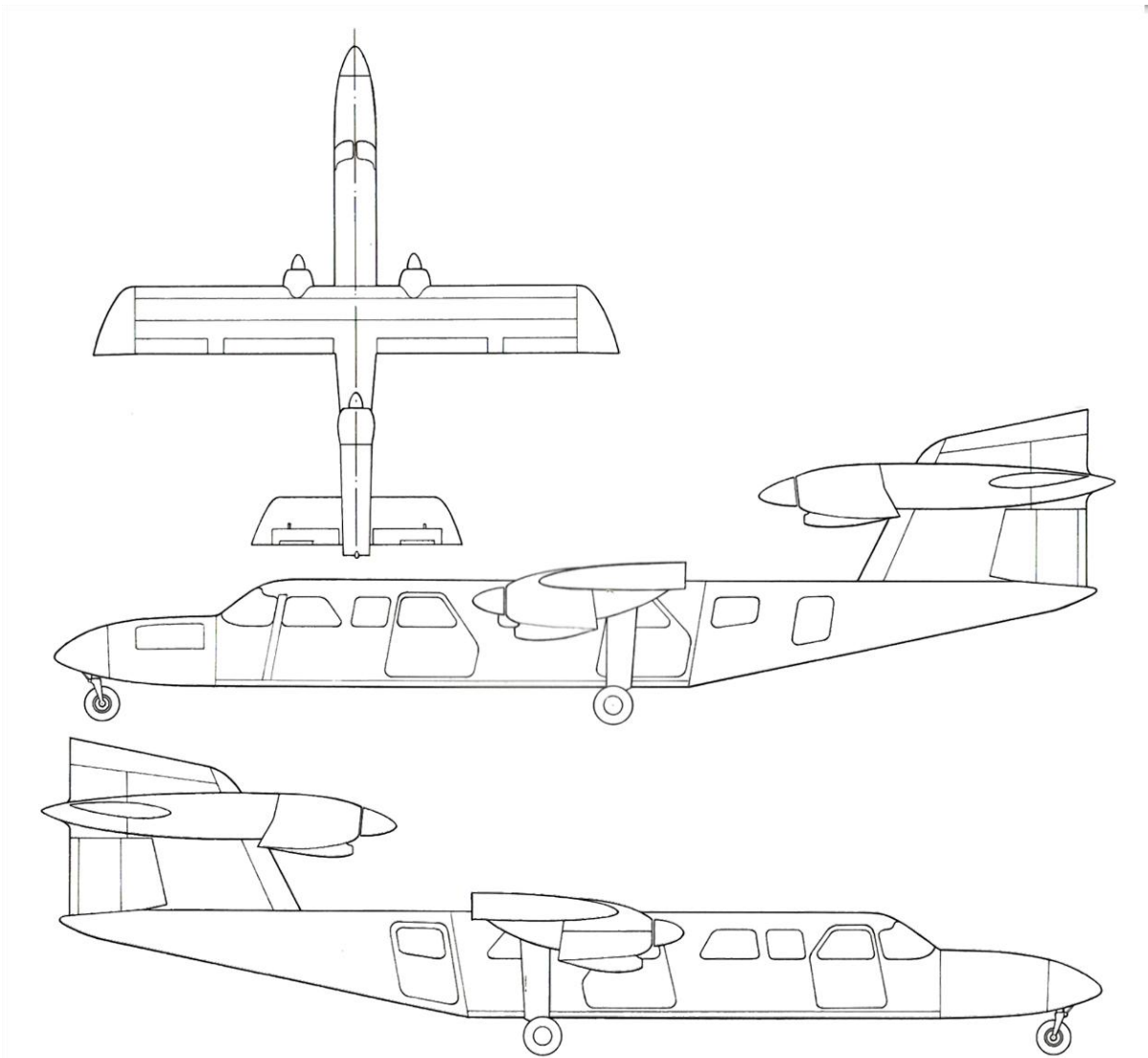
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INTRODUCTION

In this tutorial, we will show you how to get the absolute best out of your Britten-Norman Trislander aircraft. Yes, of course, you can jump in, hit the power, and fly around the islands but with this study level aircraft, we hope we can show you how to manage things in a proper and professional manner and enjoy your Trislander to the maximum degree possible within the MSFS Environment.

In this document, we will walk you through the preparations and actual checklists used by professional pilots of the Trislander: start-up procedures, pre-flight checks, and the various issues you may face.

So, sit back, relax, and learn the basic information required for your first flight in the Britten-Norman Trislander. You can find similar information but in a much deeper technical format in the Britten Norman Trislander Pilots Operating Handbook. Here though, we start with the basic things you need to enjoy your Trislander flying experience.



YOUR NEW TRISLANDER SIMULATION



ANALOGUE CONTROL PANEL

1	Door warning lamps
2	Gyro fail lamp
3	Cabin heater fail lamp
4	Airspeed Indicator (ASI) gauge
5	Artificial Horizon gauge
6	Rear engine fail lamp
7	Altimeter gauge
8	Propeller RPM indicator gauge cluster
9	Backup Altimeter gauge
10	Vertical Speed Indicator (VSI) gauge
11	Directional Gyro (DG) indicator gauge
12	VHF Omnidirectional Range (VOR) #1
13	Engine Exhaust Gas Temperature (EGT) & Carburettor Temperature selector switch
14	VOR #2
15	Marker beacon lamps
16	Vacuum gauge and warning lamps
17	Radio Magnetic Indicator (RMI) gauge
18	EGT Indicator gauge (selectable via item #13)

19	Carburettor temperature gauge (selectable via item #13)
20	Manifold Pressure gauge cluster
21	Engine #1 gauges: Cylinder Head temp, Oil temp, Oil pressure, and Fuel pressure
22	Engine #2 gauges: Cylinder Head temp, Oil temp, Oil pressure, and Fuel pressure
23	Engine #3 gauges: Cylinder Head temp, Oil temp, Oil pressure, and Fuel pressure
24	Air Conditioning control (INOP)
25	Anti-Ice Services switches (BLUE)
26	Lighting switches (WHITE)
27	Electrics switches (RED)
28	Elevator Trim indicator gauge
29	Throttle levers (left to right, #1, #2, #3)
30	Flap Up / Down switch
31	Propeller RPM levers (left to right, #1, #2, #3)
32	Engine mixture knobs (left to right, #1, #2, #3)
33	Elevator trim wheel
34	Door control switches (nonstandard in the real world)
35	Hobbs gauge
36	Parking brake lever
37	Carburettor heat levers (left to right, #1, #2, #3)
38	Audio control panel
39	Automatic Direction Finding (ADF) radio
40	Transponder
41	Bendix/King KX155 TSO VHF 2 Radio
42	Garmin GNS-530 GPS
43	Avionics master switch
44	Audio source switches
45	Bendix/King KAP 140 autopilot
46	Backup Attitude Indicator gauge
47	Circuit breaker panel
48	Navigation / Communications (NAV/COM1) master switch
49	Stall warning lamp
50	Distance Measuring Equipment (DME) gauge
51	Turn coordinator

In addition to the main controls listed, there are also some special areas of note: The boss where the yokes are attached to the panel are clickable so you can hide or show the controls, and the right seat yoke visibility also shows / hides the rudder pedals and footplates to emulate a true single pilot cockpit.

The Lighting switches (26) contain navigation, port & starboard landing lights, beacons, and cabin lights. The instrument lights knob is connected across two circuits so that if one circuit fails or a breaker is pulled, you will still have half instrument lights.

The Electrics switches for battery and the 2 (port and starboard) generators, an external power / starter isolation switch, and an ammeter selector knob.

The circuit breaker panel is almost fully functional and has the correct circuitry.

OVERHEAD CONTROL PANEL



1	Cabin heater switches (INOP)
2	Port engine (#1): two magnetos and port starter button
3	Map light
4	Rear engine (#2): two magnetos and rear starter button
5	Starboard engine (#3): two magnetos and starboard starter button
6	Liquid compass
7	Flap indicator gauge
8	Outside Air Temperature (OAT) gauge
9	Port Tip Tank transfer pump switch
10	Port main fuel quantity gauge
11	Port auxiliary fuel pump
12	Rear auxiliary fuel pump
13	Starboard auxiliary fuel pump
14	Rear engine failure warning switch
15	Port and starboard Tip Tank fuel transfer test switch and warning lamps
16	Engine fuel petcocks: Port (RED), Rear (YELLOW), Starboard (GREEN)
17	Rudder trim wheel
18	Starboard main fuel quantity gauge
19	Starboard Tip Tank transfer pump switch
20	Main Ammeter gauge (selectable via Ammeter Selector knob below Electrics)
21	Main Voltmeter gauge (selectable via Ammeter Selector knob below Electrics)
22	De-Icing system ammeter gauge
23	Tip Tank fuel quantity gauges: port and starboard

In the centre of the overhead, you will find the Tip Tanks test switch (15) and warning lamps. These lamps have two functions: If you select either port or starboard, they will indicate if the tanks have available fuel and if the transfer pumps are serviceable. If you drain the Tip Tank, the lamp will flash as a reminder to switch off the transfer pump.

The port and starboard fuel cocks have three positions (four for the rear selector)

PORT (RED) = OFF, LEFT, XFEED

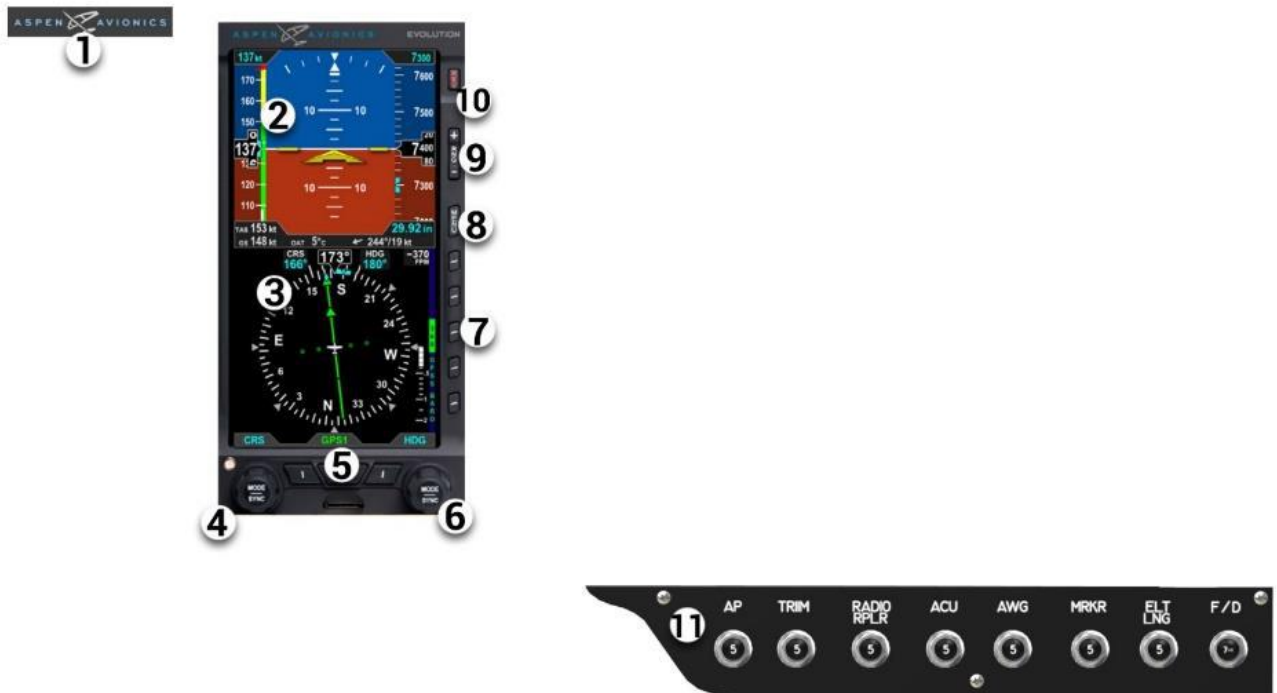
REAR (YELLOW) = OFF, LEFT, BOTH, RIGHT

STARBOARD (GREEN) = XFEED, RIGHT, OFF

For normal operation, these will be in the correct positions for flight when all fuel cocks pointing forwards towards the nose of the aircraft.

OPTIONAL ELECTRONIC FLIGHT INSTRUMENT SYSTEM CONTROL PANEL

As an option on your Trislander, we have added the Basic ASPEN Evolution E5 EFIS to your panel to reflect the instrument fitted in some Aurigny Aircraft. You can, however, add this option to any aircraft in the package by simply clicking the ASPEN sticker.



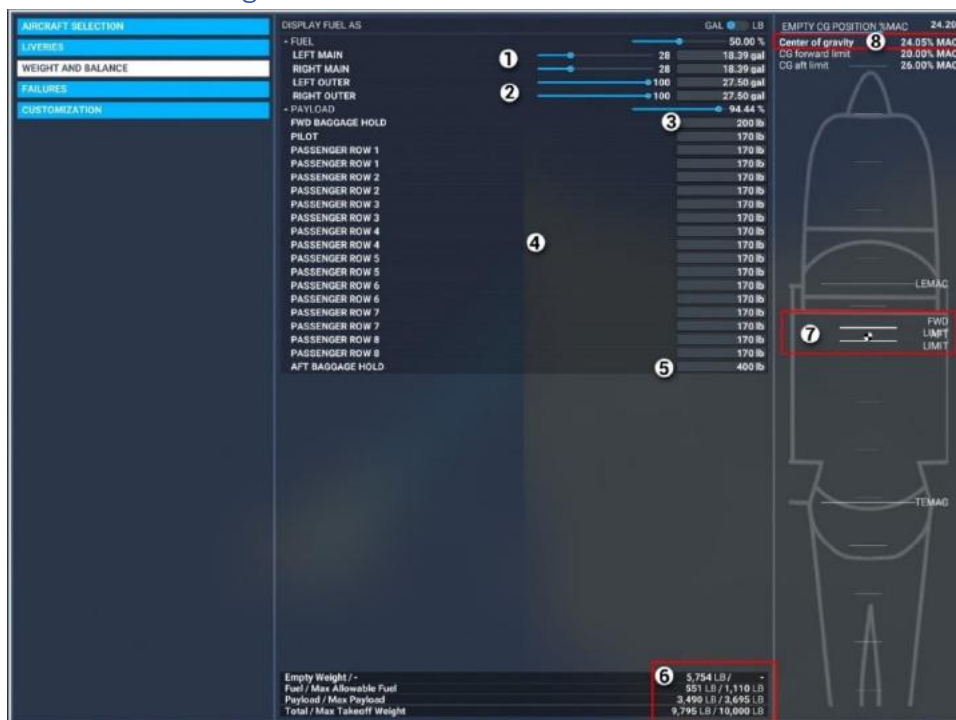
1	ASPEN AVIONICS Sticker (above Airspeed Indicator) - toggles EFIS On/Off
2	EFIS Primary Flight Display (PFD)
3	EFIS Horizontal Situation Indicator (HSI) gauge
4	Left multi-mode adjustment knob (press and right-click to cycle modes)
5	Mode button (GPS, NAV1, NAV2)
6	Right multi-mode adjustment knob (press and right-click to cycle modes)
7	Function buttons (ARC/360, GPSS, BARO)
8	Menu button (INOP on Basic ASPEN E5 EFIS)
9	Range button (INOP on Basic ASPEN E5 EFIS)
10	REV button (INOP on Basic ASPEN E5 EFIS)
1	EFIS circuit breaker panel (below main circuit breaker panel)

PREPARING FOR FLIGHT

In MSFS, you can start a flight from anywhere, but for this tutorial, we will take a short hop across the Mediterranean Sea with a start on the ramp at LIEO (Olbia Costa Smeralda), Olbia, Sardinia. Your FLT file will contain all the parameters for your first flight.

If you would like to plan your own flight, select the Trislander of your choice. Make sure you have adequate fuel for your flight. Make sure your CoG (Centre of gravity) is within the limits by adjusting passenger seating positions, baggage weight, and location (front and rear). The fuel load has a very minor effect on CoG as the tanks are set close to the balance point. One point of note is that the (wingtip) Tip Tanks tanks (port and starboard) are usually filled to 100 % and transferred to the main tanks during flight.

Your weight and balance screen should look like this.



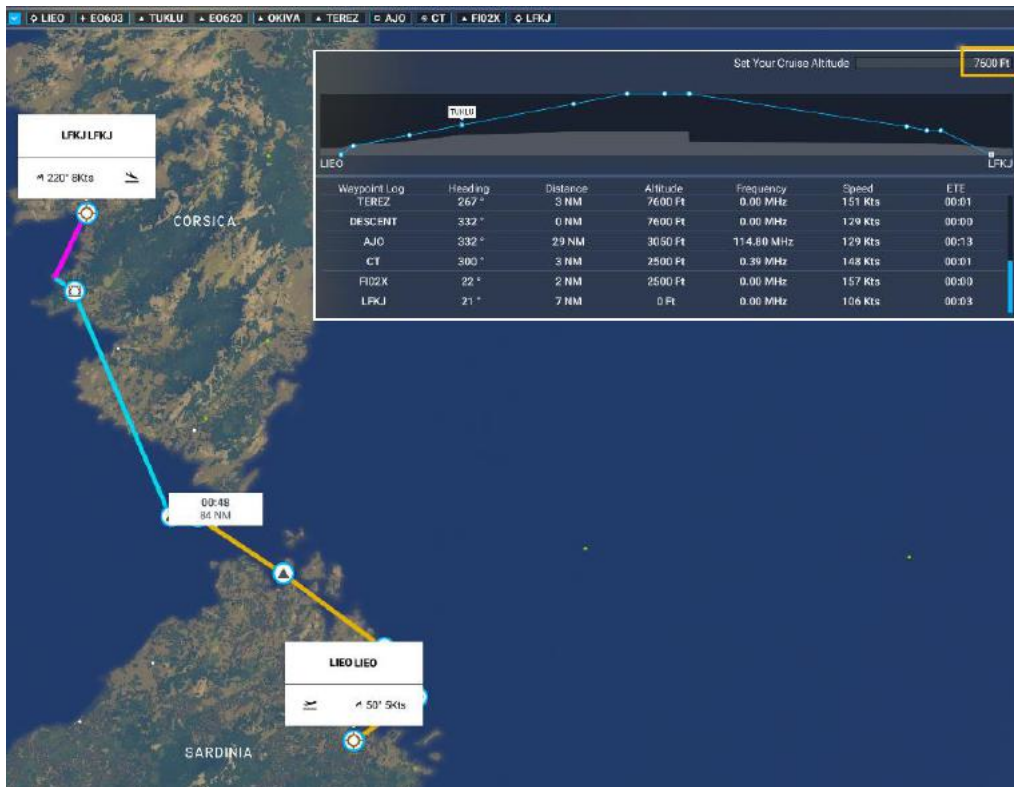
1	Main fuel tanks quantity
2	Tip Tanks fuel quantity
3	Forward baggage hold
4	Passenger weights and positions
5	Aft baggage hold
6	Weights (ensure you stay equal to or under Maximum Takeoff Weight (MTOW of 10,000 lbs))
7	Black & white disc - CoG Indicator - percentage of Mean Aerodynamic Chord (MAC)
8	CoG percentage (Must be within 20% and 26% MAC)

PREPARING FOR FLIGHT

From the MSFS map screen, hit the spacebar twice and select the option “LOAD FROM THIS PC” then use the arrow to go UP one level. Browse to `\LocalCache\Packages\Community\blackboxsimulation-bn3-trislander\Documents\` and load the supplied tutorial “Blackbox Trislander Tutorial LIEO to LFKJ.FLT”

(Only load the .FLT file as it contains required properties other than just the flight plan)

This will show the track on a map of the area. You can see Sardinia to the south, Corsica above, and the various waypoints along your route.



If you open the Nav Log you will also see the vertical flight profile. The target altitude is set here at 7,500' by default as it is a fairly short hop, but ATC may give you different altitudes. You can cruise up to 13,300' in your Trislander over longer distances, for now though, leave this at 7,500 ft. When you are ready, you can press the yellow “FLY” button to initialise the flight. You will start at the parking area to the southwest of the airport, and the airplane will be on the ramp in “cold and dark” state.

In the next section, we will show you how to get the systems live, go through your pre-start checks, and then start the engines ready for the short hop up to Corsica.

MSFS/BBS SPECIFIC PRE-START CHECKS

Your Blackbox Trislander has a few options for displaying the various ground equipment when on the ramp. You can choose to display the Tail stand (1) chocks (2) Gust locks (3) Pitot tube cover (4) Engine covers (5) and the Boarding steps (6)



The ground equipment may be removed via the clipboard near the right main door. Checked means the item is in use. Unchecked means the item is stowed.



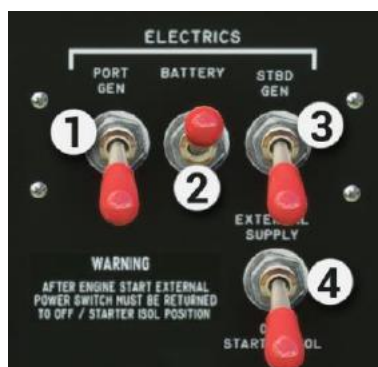
All doors can also be opened / closed via the switches on the lower left of the main panel (34 on Main Panel Diagram)

NOTE: ALL of these items must be removed, and all doors closed before flight, some will actually prevent engine start-up

PRE-START CHECKLIST

Aircraft	Headed into the wind where possible
Magnetos	All off (x6)
Parking Brake	On
Battery Master Switch	On (2)
Generators	Off (1 & 3) Undervolt lamps Illuminated
Doors	All closed (warning lamps off)
Circuit Breakers	All engaged
Warning Lamps (all)	Individual Push to test
Radios (COM and NAV)	Tuned accordingly
Marker Lamps	Push to test
Engine Controls	Full and free movement
Carburettor heaters	All off (x3)
Throttle levers	Closed (fully aft x3)
Propellor Pitch levers	MAX RPM (fully forward x3)
Mixture controls	Full rich (pushed in x3)
Elevator and Rudder Trim	Full and free movement (then set for TO)
Fuel	Check quantity and selectors facing forward
Flaps	Operate through entire range, then set for TO
Rear-view Mirror	Check adjustment (Not adjustable in SIM)

The Electrics Switches



NOTE: During ALL engine starts, the Starter Isolation switch (4) must be ON at all times. If starting from external batteries, then the external power connection must be made Before switching the Isolating switch on to protect the aircraft circuits from a surge. After starting, the switch must be returned to the OFF/DOWN Position.

It is recommended that the generators are not selected to ON Position until any external supply has been disconnected as this may cause damage to the external supply or the generators themselves.

WARNING: Avoid heavy or persistent use of the starters. If an engine is reluctant to start after about 6 revolutions, rest the system for 5 minutes to avoid overheating.

STARTING THE ENGINES

General precautions

The Lycoming O-540-E4C5 engine is air-cooled and depends on the forward movement of the aircraft to maintain proper cooling. To prevent overheating on the ground the following precautions are strongly advised

1. Avoid unnecessary ground running.
2. Ensure the aircraft is pointing into the wind where possible.
3. Confine prop pitch to full fine (MAX RPM, full forward).
4. Maintain at least 1,200 RPM as this will help to avoid fouled spark plugs.
5. Keep the mixture knobs at full rich (full forward).

STARTING PROCEDURE

It is normal to start the starboard engine (#3) first

1. Remove Engine covers !
2. Set fuel tank selectors (Overhead)
3. Port selector (RED) To LEFT TANK (pointing forward).
4. Rear selector (YELLOW) to BOTH (pointing forward).
5. Starboard selector (GREEN) to RIGHT TANK (pointing forward).
6. Set the corresponding engine auxiliary fuel pump to on and check that the fuel pressure is in the green band.
7. Operate the corresponding throttle through the entire range 2 or 3 times to prime the engine (only if cold start).
8. Open the corresponding throttle to approximately 10%
9. Select the left magneto switch for the corresponding engine to ON.
10. Check "clear prop" and push the starter button. The engine should start almost immediately, whereupon the right magneto switch for the engine is selected ON and the engine adjusted for approximately 1,000 – 1200 RPM.
11. Look for engine oil pressure and if not present quickly, shut down the engine.
12. Repeat the process with port #1 engine and then rear #2 engine.
13. When all engines are running, select the rear engine power failure switch to ON, and check for the flashing lamp above Artificial Horizon while the engine is below 2,500 RPM.

AFTER START CHECKS

Auxiliary fuel pumps	All OFF
Rear Engine fail switch	OFF (After test)
Generators	Undervolt lamps illuminated / switch GEN on in turn to extinguish
Vacuum Gauge	3 - 5 Hg. Ensure fail lamps extinguished
Ammeter Selector Switch	check indication within the green operating band for each Generator
Ammeter Selector Switch	Switch to BATT and confirm charge (Needle in green band)
Oil Pressure x 3	30 lb/in ² minimum
Fuel pressure x 3	Normal – indication within the green band
Flight Instruments	Normal Indications and erect gyros
Radios	Select required frequencies
Cabin Heater	As required (INOP in Sim)
Ice Protection	Cycle all and set as required

Ground Checks and Warm-up

The engines are warm enough for take-off when they respond normally to throttle openings. When satisfied that this is the case the following tests should be made:

1. Test each magneto in turn for a dead cut at 1,200 RPM.
2. Increase power on each engine to 17 “Hg manifold pressure (approximately 2,100 RPM). Switch from both magnetos to one magneto and note RPM drop-off. Reselect both, wait for the RPM to recover, then switch the other magneto off. Note RPM drop-off and return to both. Normal drop-off is 100 RPM and should never exceed 175 RPM max drop-off. There should be no more than a 50 RPM difference between magnetos.
3. Set the throttle for each engine in turn for 2,100 RPM and exercise the corresponding prop lever from maximum to minimum to check the correct operation of the governors. Note engine speeds (RPM) decrease and increase accordingly.
4. Set throttles for 1,500 RPM and perform feathering check as follows:
Move each prop lever down (aft) through the gate and into the feathered position. Note the drop in RPM and return the prop lever to normal position before the engine drops below 1,000 RPM.

GROUND CHECKS AND WARM-UP

Ammeter check – Note that the ammeter reading is approximately 2 – 5 amps (in the green band), or gradually falling to settle within the green band.

Ammeter selection switch - Note that both left and right generator outputs are similar and within the green band. The sum of these 2 outputs should be consistent with the expected electrical demand. Normal use is to return the selector knob to the BATT position for flight.

Voltmeter check – Note that the voltmeter reads between 27 and 29 volts. It is abnormal if the needle shows 24 volts or less

TAXYING THE AIRCRAFT

If you are using automatic communications, your radio should be set for the ground. Otherwise tune ground and announce that you are ready for taxi. follow the taxi instructions. Use the taxi assistance ribbon built into MSFS if you wish.

Taxying: Before attempting to taxi, ensure that the parking brake is released. Chocks are removed and tail stand/steps are stowed. The aircraft can be effectively steered during ground manoeuvring by means of the rudder-bar-controlled nosewheel steering along with asymmetric braking and engine power if required. The brakes should be tested as soon as possible after the aircraft starts rolling.

Runway threshold checks:

Carburettor heat: Open each throttle in turn to approx. 70% and select carburettor heat to FULL. Manifold pressure and engine note should drop. Return carb heat to off. Repeat with remaining engines.

Fuel levels: Ensure fuel contents are approximately equal left and right, otherwise fuel flow to the rear engine may be adversely affected.

Rear engine fail system: Select the rear engine warning switch to the ON position and adjust the throttle on rear engine to ensure the warning lamp will extinguish at and above 2,500 RPM. Return rear throttle to ground idle, 1000 - 1,200 RPM.

PRE-TAKEOFF CHECKLIST

Seat belts	Fastened
Passenger signs	On if fitted
Doors and direct vision panel	Closed
Propeller levers	Full fine pitch (maximum RPM, fully forward x3)
Mixture	Full rich (pushed in x3)
Carburettor heat	All off (x3)
Elevator trim set	+10% (indicated line on trim indicator)
Flaps	Take-off position (mid point)
Fuel	Quantity, fuel cock selection & pressure (x3)
Auxiliary fuel pumps	All On (x3)
Rear engine fail switch	On and lamp flashing below 2,500 RPM
Engine instruments	Checked and functional
Flight instruments	Checked and set as required
Pitot heat	On as required
Ice protection	On as required
Autopilot	Off
Flight controls	Full and free movement
Ammeter selection switch	Set to Batt
Cabin Heaters	Off (INOP)
Lighting	Beacon / Nav / Landing lights (Left and Right) on



TAKE OFF AND INITIAL CLIMB

Referring to the checklists and procedures we have discussed, If you haven't already lined up it's now time to taxi onto the runway, and start "hands-on" flying.

Your radio should be pre-tuned to Olbia 118.975 so request your taxi clearance out to the active runway, follow these instructions, and contact the tower on 121.95 when holding short and ready.



Check the elevator trim is set for take-off and All auxiliary fuel pumps and rear engine power failure switches are ON. Set heading bug for the runway heading 052 (48°), and check that the flaps are in position 1 (TO position). Hold the aircraft on the toe brakes and slowly push the throttles forward to maximum, checking the gauges. If the engine gauges show no anomalies, release the brakes and accelerate down the runway, keeping the aircraft straight with the rudder pedals.

The aircraft must be rotated at the appropriate safety speed scheduled in section 6 of the Pilots Operating Handbook (POH), but for our purposes in this tutorial we will assume 65 kts rotate, and 70 kts to lift-off at the planned weight.

It's going to get quite busy now so be ready to rotate and stabilise into a gentle climb at approximately 90 kts. Continue straight out on the runway heading.

Because there would be no noticeable change of trim on a rear engine failure it is essential to monitor the rear engine tachometer and failure lamp throughout the take-off and initial climb.

After passing 200' Above Ground Level (AGL), retract the flaps, retrim to compensate for the nose-down tendency, and stabilise in the climb at approximately 90-100 kts. Switch off the auxiliary fuel pumps and rear engine power failure switch.

AFTER TAKEOFF PROCEDURE

Auxiliary fuel pumps	Off (x3)
Rear engine power failure switch	Off
Set propeller levers for climb	Reduce to 2,500 rpm (x3)
Set throttles for climb	25" Manifold Pressure (x3)
Cabin heaters	Adjust as necessary (INOP)
Cabin lights	As required
Carb heaters	Off (x3)

The best climb gradient can be held at approximately 90 kts but a more comfortable speed would be 100-110 kts. This speed should attain a 1,000 fpm climb initially, but as you climb it will take a subtle adjusting of the mixtures and the vertical speed to keep things safe and within limits.

If you wish to use autopilot for the climb this can be done easily (see below) but again you will need to monitor the airspeed and adjust mixtures and AP vertical speed very carefully.

AUTOPILOT

The Trislander we have modelled is fitted with a basic KAP 140 (45 on main panel diagram) This will give you Heading and Nav (2) hold (Including GPS) and VSI Climb mode. It will also capture a selected altitude as you would in FLC (Flight Level Change mode) but there is no auto throttle so you will still have to do some of the work.

The only setup you need initially is to preselect your target altitude of 7,500' with the knob on the right side of the AP by turning the outer knob to select 7,000' and then the inner knob for +500'. Press ALT button (2) and Arm Button (3) then adjust VSI with the Up-Down buttons until it commands 800 – 1,000 fpm. For our Trislander this has been limited to 1000 FPM +/-



Do not drop below 100 kts when using the autopilot.

CARBURETTOR ICING

Carburettor icing is an issue that will keep you busy as it can happen in many conditions: clouds, a damp atmosphere, fog, or high humidity, regardless of Outside Air Temperature (OAT).

Keep a sharp eye on the instruments and engine sound for power loss or decreased manifold pressure. If this happens, you need to act quickly by introducing maximum carburettor heat for approximately 30 seconds. Once power is restored reduce the carburettor heaters to a point where the carburettor temperature is slightly above 5°C. Do not leave the carburettor heaters on for long periods as this can lead to power loss and loss of manifold pressure. The 3-way rotary selector (13) will allow you to monitor EGT and carburettor temperature for the individual engines.

Under normal flight conditions, where no icing is apparent, the carburettor heaters should always be left in the Fully OFF (up) position.

The BBS Trislander simulates carburettor Icing and heating very accurately, so be aware of the conditions and remedies. There is nothing worse than pushing the throttles forward to the firewall at a critical time like on approach, and getting a whole heap of nothing at the props!



Make it a habit of checking for carburettor icing before any other change in flight, when moving throttle or propeller levers, and especially if entering rain, fog, or clouds.

CLIMB TO CRUISE

Climb power is achieved by first setting the propeller levers to bring the propellers to 2,500 RPM, and then reducing throttles to 25" manifold pressure. As a "rule of thumb," this is called 25/25, and an easy guide to remember. It can also be used in cruise, but we will come to that when required as manifold pressure is much lower at higher altitudes.

If you wish to have the autopilot follow the GPS course, then you will also need to switch the GPS navigation mode from VOR to GPS by pressing the CDI button on the GNS530. Note that the VOR1 gauge will now show a GPS flag indicating the mode. If you are using the optional ASPEN EFIS then you will also select GPS on the mode button (5)



Once you are in a stable climb at approximately 100-110 kts, you can switch the AP from HDG to NAV mode (1) by pressing the corresponding buttons. You will probably need to adjust the vertical speed a few times to avoid getting too slow as well as control the mixture for the best engine performance. Reduce VSI in 200 fpm steps, going from 1,000 to 800, then 600, and finally, 400 or even 200 if required but always staying above 100 kts. Be sure to watch out for the dreaded carburettor icing!

Once reaching your assigned cruising altitude you can hit the ALT Button (2) to level off, but if correctly setup the KAP 140 should level off for you. ATC may have assigned a different cruise altitude but if it is unacceptable, request a lower altitude. Try and stay below 10,000' for this flight to allow time for your descent.

FLYING IN THE CRUISE

The aircraft will slowly accelerate when you level off, so you now need to set cruise power to prevent over speed. First, set propellers to 2,200 RPM and then reduce manifold pressure to 18". This will give you approximately 135-140 kts, depending on conditions and altitude. You can reduce the throttles further to around 65% for a more economical cruise at approximately 125 kts. This will give you a good range in excess of 800 miles and a fuel burn of approximately 33 lbs/hr total (11 lbs/hr per engine).



Don't forget to lean the fuel mixture for the best power and economy by "peaking" the EGT needle (1). What this means is to pull the mixture knobs out (aft) until the engine note starts to drop, and then immediately push the knob back in a little to prevent rough running. You can also do this visually by pulling the mixture knob out until the EGT needle peaks and then reducing it slightly. If you wish to do this individually for each engine, you can select the engine via the carb temp / combustion knob placed between the manifold pressure gauges and VOR2 (13) on the main panel diagram.



Also, keep an eye on the carburetor temperature gauge (2) for icing in the carburetors. If this should happen, you will need to act fast. Please refer to the carburetor icing section on page 17 and act accordingly until manifold pressure and power are restored.

FUEL TRANSFER

Fuel transfer is not something we need to do on such a short flight, but it is a feature of the BBS BN-2A Mk III Trislander so we will quickly demonstrate the fuel transfer system and show you how to operate it while we are cruising towards Corsica.



This is the central section of the Overhead Panel showing the fuel transfer switches (2 & 3). The main tank contents (5 & 6), tip tank contents (4), and centralised transfer test panel (1). When the main tanks contain less than 30 Gallons each you may transfer fuel from the Tip Tanks to the mains. The Trislander will not use fuel directly from the Tip Tanks, no matter what the level is in the main tanks.

Use the central test switch as a test for the serviceability of the transfer pumps and available fuel in the tip tanks. Push either left or right on the switch, and the lamp will illuminate if the pump is ok, and fuel is available.

To transfer the fuel, simply turn on the transfer fuel pump port/starboard (or both together) and you will see the fuel move from the tip tank to the corresponding main tank. In the event of a Tip Tank running dry, the transfer lamp will flash as a reminder to turn off the pump(s) to prevent them from burning out and blowing the fuses.



THE DESCENT

Because of the possibility of some ATC anomalies within MSFS please ignore all ATC commands to expedite your climb or descent in this stage. They will most probably not put you where you need to be and will make your approach and subsequent landing very difficult. It is probably best to select “Cancel IFR” from the ATC window.

When you reach the TEREZ waypoint you will need to start your descent. Set the autopilot target altitude for 3,000’ and set a vertical descent speed of -500 FPM. This is the attitude we need at our next waypoint, the AJO VOR, to allow an interception of the glideslope at the CT NDB. Continue to AJO on the descent under autopilot or manual control. Reduce throttles to a high idle, approx. 15” manifold pressure (you can leave the propeller levers as they are) Carefully adjust the throttle levers to maintain an airspeed of 130 – 140 kts. If you are still using autopilot at this time, the aircraft will continue to follow the GPS and Level off at 3,000’ short of reaching AJO. At this point, you should tune NAV 1 to 110.30. This is the ILS for runway 02.

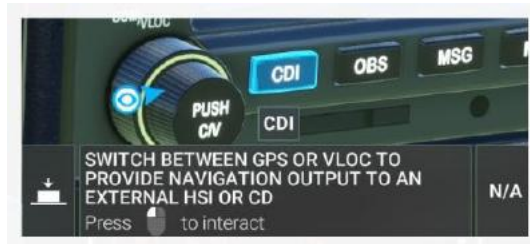
After AJO, you will be passing your final waypoint, the CT NDB, and enter the ILS for runway 02 at Campo Dell’ Oro (LFKJ) Corsica at the outer marker (This should illuminate and sound the marker beacon on the panel as you pass over it).



APPROACH AND LANDING

Because you set the NAV1 Frequency to Campo Dell 'Oro ILS, the VOR1 instrument should soon be alive as shown below Unless you are using the EFIS which will show a slightly different picture.

GPS enroute steering will still be active at this point as indicated by the green GPS and blue NAV flags so you might want to switch the GPS Course Deviation Indicator (CDI) into VLOC mode so the VOR1 gauge will also show us the glide path information.



The red “GS” flag (1) indicates that Nav1 is receiving a signal from a glideslope equipped station. The glideslope deviation bar (2) shows your cue for intercepting the glideslope. The ASPEN EFIS Will show similar ILS information. When you see the GS flag in the NAV1 gauge, or The GS Deviation diamond on the EFIS select APP mode on the autopilot (unless you choose to fly the approach manually).



When both glideslope and glide path deviation indicators are alive, APP mode on the autopilot will fly the ILS approach. The Trislander has no Autoland ability, but you can use the APP mode to stabilise your approach before taking control manually for Landing.



APPROACH AND LANDING, CONTINUED

When you are stable in the approach and on the ILS, you can start to reduce speed to approximately 100 kts. Pull back throttle levers and ensure you have set maximum (full rich) mixture and full fine props pitch now.

Approach checklist

Altimeters	Set appropriate barometric pressure for airfield
Parking brake	Off
Mixtures	Full rich (pushed in)
Carburettor heat	OFF (intermittent use may be advisable if icing conditions exist)
Propeller levers	Full fine pitch (maximum RPM, forward)
Fuel selectors	Select as appropriate
Aux fuel pumps	ON (Check pressure within green bands) (x3)
Safety belts	Secured
Cabin Heater	Off (Screen De mist allowed) (INOP)

Once you are fully established with the deviation bars, centred for glide path and glideslope, deploy the first stage of flaps and adjust the speed with throttle levers for 100 kts and gradually decelerate to 90Kts. At approximately 800', and with your speed stable at 90 kts, deploy full flaps and be prepared to increase power a little to compensate for the extra drag. Allow your airspeed to bleed off to 70 kts over the threshold. Hold a slightly nose up attitude and reduce the power to idle at around 5 feet AGL. Pull back on the yoke a little to flare. Aim for touchdown at 60 kts. Allow the nosewheel to gently return to the ground and hold the aircraft on the centreline with rudder pedals.

Post-landing checklist

Auxiliary fuel pumps	Off (x3)
Brakes	Tested and adequate
Flaps	Up
Pitot heat	Off
Unrequired services	Off
Trim	Set to neutral (or take-off)
Landing Lights	Off
Cabin Heater	Off (INOP)

TAXI TO PARKING

Allow the aircraft to roll down the runway and take the first exit to your left. Brakes will probably not be required but you can apply them if you need to slow down to make the turn-off. Tune 118.075 and request taxi to parking. You can either manually follow the taxiing instructions or use the guide arrows by selecting “Flight Assistant” from the “moustache menu” at the top of the screen and turning on “Landing and Taxi Guides”.

Taxiing the Trislander is very easy using the rudder pedals. The aircraft turns smoothly at all speeds but can pivot on one wheel with full rudder and nosewheel steering at under 5 kts. There is no need for asymmetric power, and you can taxi with just the rear engine, but this is not recommended as it has no generator for your electrical systems, so if you do ever taxi on engine #2 alone, remember to make sure battery is on and charged.

Follow the radio instructions (and/or guide arrows) to your parking spot and apply the parking brake. You can open the Clearview panel on your side window but do not open doors while engines are running!



SHUTDOWN

With propeller levers fully forward, bring the engines to idle RPM with the throttle levers. Watch for cooling of the engine temperatures and check each magneto for a dead cut on each engine.

(For clarity, a “dead cut” is simply the action of quickly switching individual magnetos to off and back to both, watching for a reduction in RPM to determine that the magnetos are not live in the off position. This is a safety check to reduce the possibility of a propeller kicking back when handled. It basically means that the magneto is “dead” when it is “cut” and safely earthed (grounded) to the airframe rather than the misunderstanding that it should cut the engine off.)

After the dead cut checks, the engines are stopped by pulling the mixture controls fully back to the cut-off position.

Checks After Stopping

Ignition switches (magnetos)	Off (x6)
Generators	Off (x2)
Battery	Off
Parking brake	On
Controls	Gust locks installed where available
Wheel chocks	In place

Now you may open the doors and allow your passengers to disembark (or cargo to be unloaded). We hope this guide helps you to enjoy the Britten-Norman Trislander to its fullest, and you get the rewarding satisfaction of flying her by the book.

