



GEOPHYSICAL SURVEY AIRCRAFT

BRITTEN-NORMAN BN2B-21 ISLANDER

Registration	C-GSGX	C-GSGR
Serial #	596	2107

The BN2B Islander is an all metal, high wing, twin-engine, short take-off and landing aircraft powered by two fuel injected engines which drive constant speed, fully feathering propellers. The aircraft has fixed tricycle landing gear, extendable flaps and manually adjustable trim tabs on the rudder and elevator. The aircraft is equipped with de-icing equipment and sufficient avionics for instrument flying. Because of its low take-off speed, high wing, ample propeller clearance, and sturdy fixed landing gear, the Islander is capable of operating from relatively short and rough airstrips. Its excellent low speed capabilities enable it to safely contour much steeper terrain than most other fixed-wing aircraft. Supplementary fuel can be added for transoceanic flight.



■ GEOPHYSICAL SURVEYING

The aircraft has an aluminium and composite 2.5 m tail stinger designed to accommodate the magnetometer sensor and wiring. The stinger can be easily removed and the aircraft returned to its original configuration. There is a camera hole in the belly and provisions for numerous other survey and navigation systems. The electrical system has been modified to reduce the magnetic field variations around the aircraft.

BRITTEN-NORMAN BN2B-21 ISLANDER SPECIFICATIONS

Crew Capacity:

- 2 pilots, 1 operator (optional)

Fuselage:

- semi-monocoque

Wings:

- cantilever, high wing
- outboard ailerons
- single-slotted inboard flaps

Tail:

- conventional stabilizers
- elevator and rudder with trim tabs

Power Plant:

- 2 Lycoming IO-540, 300 hp, six cylinder, horizontally-opposed air-cooled, fuel-injected, reciprocating engines, overhaul 2,000 hours
- Hartzell two-blade, fully-feathering, constant-speed propellers, overhaul 2,400 hours or 10 years

Systems:

- dual flight controls, IFR instruments and avionics
- full airframe and propeller de-icing
- 2-axis autopilot

Dimensions:

Wing span	53 ft	16.15 m
Exterior length (plus stinger)	35 ft 8 in	10.90 m
Exterior height	13 ft 9 in	4.18 m
Interior usable length	15 ft 2 in	4.62 m
Interior usable width	3 ft 7 in	1.09 m
Interior height	4 ft 2 in	1.26 m

Weights:

Empty	4,190 lb	1,901 kg
Maximum take-off	6,600 lb	2,994 kg

Performance (sea level, standard day, maximum take-off weight):

Range at 60% power (plus reserve)	760 nm	1,408 km
Cruise airspeed at 60% power	121 kt	224 km/h
Fuel flow at 60% power	25.5 US gal/h	97 l/h
Stall airspeed, landing configuration	40 kt	74 km/h
Service ceiling	17,200 ft	5,242 m
Minimum required runway length	2,000 ft	610 m
Two engine rate of climb	1,130 ft/min	344 m/min
Maximum sustained climb gradient	700 ft/nm	115 m/km
Single engine rate of climb	223 ft/min	69 m/min
Usable fuel capacity	189 US gal	715 l

Type of Aviation Fuel: 100LL Avgas

Maximum Endurance: 6 hours, 40 minutes plus 45 minutes reserve at 60% power

GEOPHYSICAL CAPABILITIES

AIRGrav, SGL airborne gravimeter

Magnetic total field

Gamma-ray spectrometer, up to 42 litres (2560 in³) of detector crystals

SGMethane, methane gas sensing

Additional Features:

- Tail stinger, 2.5 m long, 21 cm in diameter, capable of housing a 5.5 kg sensor
- HF radio
- Video camera mount with glass covered opening in the aircraft belly
- Two instrument racks, standard 48 cm (19 in) width
- Radar altimeter, 0–3,000 m
- Electrical power capacity, 28 VDC at 140 amp
- GPS receiver and antenna plus data link for real-time corrections