

# THE EXPLORER

## OPERATIONS MANUAL

*Airtime Products*

acn 088448088

3 Stormvogel Drive, Airlie Beach Qld 4802, Australia  
Ph (07) 49466305, Fax (07) 49480974, Mobile 0407147991  
International Ph 61 749466305, Fax 61 749480974

Web Page: [www.ffa.com.au/airtime](http://www.ffa.com.au/airtime)

Email: [bauerengineering@bigpond.com.au](mailto:bauerengineering@bigpond.com.au)



## Features

- ★ Mouth throttle adapts to hand throttle
- ★ Retractable undercarriage
- ★ Centrifugal clutch
- ★ 50 kg thrust
- ★ 300ft/min climb rate
- ★ 24kg total weight plus fuel
- ★ Longer propeller shaft available for floaters or tandem (as in photos)



## Airtime Products

3 Stormvogel Drive  
Airlie Beach Qld 4802, Australia.

Phone: (07) 4946 6305

Fax: (07) 4948 0974

Mobile: 0407 147 991

International Phone: 61 7 4946 6305

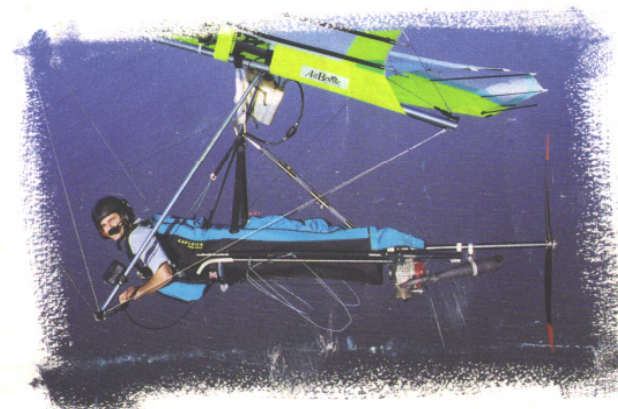
International Fax: 61 7 4948 0974

Email: [bauerengineering@bigpond.com.au](mailto:bauerengineering@bigpond.com.au)

Website: [www.ffa.com.au/airtime](http://www.ffa.com.au/airtime)

## Airtime Products

# THE EXPLORER



Made in Australia The Explorer is a foot launched powered hang glider harness enabling the pilot freedom never experienced before

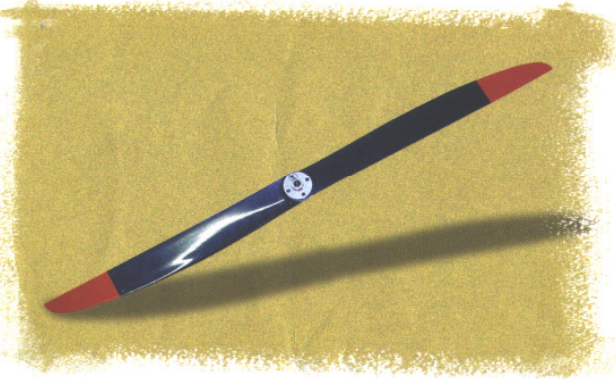


- ★ **Lightweight**
- ★ **Quick & Easy Set-up**
- ★ **Front Entry**
- ★ **Comfortable**



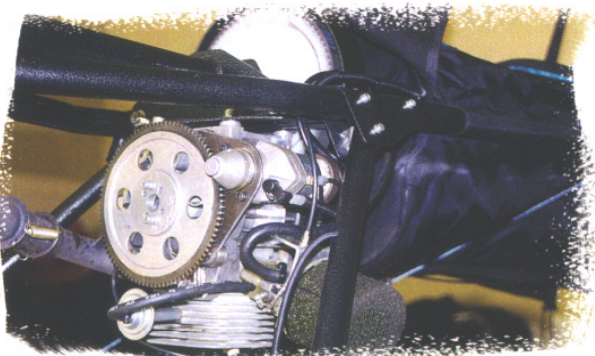
## Propeller

The 2 blade propeller is 1350mm diameter, made of carbon fibre and weighs only 700g. Shaped to run quietly and provide maximum thrust. Brake can be applied to reduce drag when gliding.



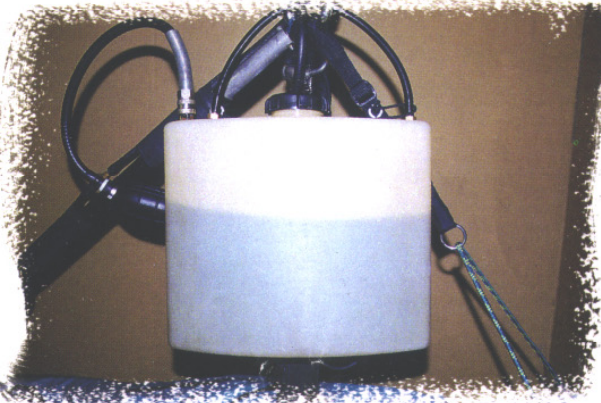
## Engine

The Radne 120cc has been specifically designed for ultralight aircraft. At 14.9hp & 6.8kg it combines high power with low weight. Engines can be restarted in flight with pull start or optional electric start.



## Fuel

The 5 litre tank with spill proof breather is aerodynamically shaped and clear to monitor fuel consumption and will provide approximately 2 hours of motoring. Optional dual tanks set up available.



## Harness

Much development has gone into the Explorer Harness to ensure ease of entry and comfort for the pilot.

The Explorer Harness is a modern front entry harness with Internal spreaders and flexible runners parachute container, 2 radio pouches and 2 large storage pockets. Carry bag and propeller bag are included. Your choice of the Custom Made or Adjustable Harness.

The Explorer is the most comfortable well equipped powered harness on the market.

## Custom Made Harness

The Explorer Harness can be tailor made to your own measurements and colour choice, providing you with the ultimate in comfort and design.

## Adjustable Harness

The fully adjustable harness is available in 2 sizes and in your colour choice.

Both sizes suit pilot height of 165cm-195cm

Medium size suits chest 94cm-110cm

Large size suits chest size 110cm-120cm

Originally developed for the export market the adjustable harness is proving very popular for those customers who are wanting to share the experience and go halves with a friend.

## Chassis

The Explorers lightweight and high strength chassis is due to the aircraft grade 6061 aluminium and 4130 chrome molly.



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# **DISCLAIMER**

**WARNING** THE OWNER AND OPERATOR MUST UNDERSTAND THAT DUE TO THE INHERENT RISK INVOLVED IN FLYING SUCH A VEHICLE NO WARRANTY IS MADE OR IMPLIED OF ANY KIND AGAINST ACCIDENTS, BODILY INJURY OR DEATH. OPERATIONS SUCH AS AEROBATICS OR ERRATIC PILOT TECHNIQUE PRODUCE EQUIPMENT FAILURE AND ARE SPECIFICALLY EXCLUDED FROM ANY WARRANTY. IT IS THE RESPONSIBILITY OF THE OPERATOR TO RECEIVE THE PROPER TRAINING FROM A QUALIFIED INSTRUCTOR. ALL PILOTS MUST HAVE AT LEAST AN INTERMEDIATE RATING.

THE EXPLORER IS A MINIMUM AIRCRAFT WITH A MINIMUM CLIMB RATE. CAREFUL CONSIDERATION MUST BE TAKEN WHEN CHOOSING A RUNWAY.

## **VG CORD**

THE VG CORD MUST NOT BE ABLE TO REACH THE PROPELLER UNDER ANY CIRCUMSTANCES. THIS CAN USUALLY BE ACHIEVED BY TYING OFF THE LOOSE END.

## **TAXYING**

ALL TAXYING MUST BE DONE WITH THE ENGINE OFF. THIS IS THE ONLY INSTANCE WHERE THE PROPELLER CAN REACH THE REAR OF THE WING IF THE WING IS TURNED.

## **PROPELLER**

SPECTATORS MUST BE WELL CLEAR WHEN STARTING MOTOR. PROPELLER BRAKE MUST BE ON BEFORE LANDING.

## **PARACHUTE**

IT IS RECOMMENDED THAT A RESCUE PARACHUTE IS USED WITH ALL FLIGHTS.

## **WHEELS**

IT IS RECOMMENDED WHEELS BE FITTED TO BASE BAR.

## **SPECIFICATIONS**

### **ENGINE**

Type of Engine	:single cylinder, two stroke with piston control inlet
Capacity	:118,5cc
Stroke	:42mm
Bore	:60mm
Piston Rings	:2 pcs 1,5 mm
Cooling	:forced air, flywheel 120mm
Ignition	:FHP transistor
Power	:11 kw at 9000 rpm (14.9 hp)
Max rpm	:15000 rpm
Weight	:6.8 kg
Carburettor	:Walbro
Clutch	:Centrifugal, iron type
Starter	:Magnapul rope start

**REDUCTION** :Cogbelt 3.55:1

### **PROPELLER**

Diameter	:1360mm
Weight	:690g
Material	:Carbon Fibre

### **FUEL**

Capacity	:5 Litres single tank or optional dual tanks
Consumption	:3 litres per hour
Mixture	:25:1 Super fuel & Castrol TTS Oil

**WEIGHT** :24kg plus fuel

**THRUST** :50kg

**CLIMB RATE** :300ft per minute

### **FEATURES**

:Inflight restart  
 Retractable Undercarriage  
 Mouth throttle that adapts to hand throttle  
 Propeller brake

## **WEIGHT**

The Explorer, Reserve Parachute, Fuel and Pilot must not exceed Hanglider Manufacturers clip in weight.

## **GLIDER MODIFICATIONS**

The only modifications necessary to the hanglider are that the keel must be shortened. Measure back 1200mm or less from the main suspension point to find the position to cut.

A sleeve should be made to enable the keel to be removed or refitted as necessary.

## **CONTROLS**

Throttle	:The engine revs are controlled by a mouth throttle which after a safe height is reached can be clipped onto base bar and used as a thumb throttle. Smooth operation is recommended. The grooves for teeth should be individually shaped to suit the owners teeth to prevent the throttle from slipping out. This is easily achieved by filing.
Decompressor	: Is operated by pulling the Blue Tag and releasing.
Choke & Kill Switch	:Is operated by pulling the Red Tag and hooking over clip.
Propeller Brake	:Is operated by pulling Yellow Tag gently and hooking over clip, and must be on prior to landing.
Starter	:Can be operated on the ground and inflight. Pull Zip Starter slowly until mechanism has engaged, then pull with a powerful stroke making sure not to pull to the end of rope.
Motor	:The motor does not require running in, however we do not recommend running at full revs for more than 5 minutes at a time for the first 1/2 hour of operation. Never run motor without the propeller connected.

## **HARNESS**

The angle of The Explorer Harness whilst in prone position can be altered to suit pilots preference by adjusting the length of the cord connecting the carabina to the rear of the Harness, through cleat below fuel filter.

The front of the harness can be adjusted by the buckle under the carabina. The foot pad can be adjusted depending on your height by removing pad from harness and adjusting thickness. The shoulder straps can also be adjusted.

The Leg Loops must also be adjusted to suit each pilot. If the Leg Loops are too loose you will find it hard to get into the Harness under full thrust. If, too tight you will find them uncomfortable in flight.

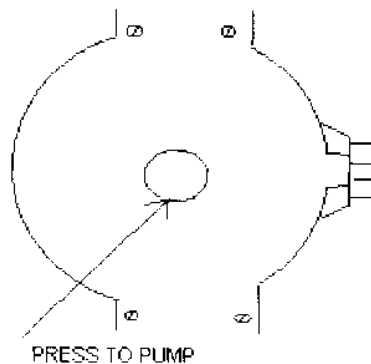
The harnesses are also fully washable, preferably using only warm water, soap and a moderately soft brush. Avoid solvents, but a diluted bleach may be used so long as it is thoroughly washed out shortly after.



## SET UP PROCEDURE

Always store and transport The Explorer with zip facing up and empty Fuel Tank.

1. Unzip, fold out legs and clip elastics in.
2. Turn over with bag in place and then remove.
3. Fit Propeller and secure clip.
4. Remove Keel Tube from Glider.
5. Fill Tank 25:1 open Breather and fit to Glider upright.
6. Clip Harness on.
7. Check Fuel Fitting are clean and connected.
8. Prime Carburettor thoroughly to ensure no air locks in Fuel Line. Squeeze the Priming Bulb while pressing lightly with finger tip on the Diaphragm located on the underside of the Carburettor until fuel drips from the Airfilter. (see diagram below).
9. **FOLLOW PREFLIGHT CHECK LIST ON PAGE 6.**
10. Step into Harness and follow normal Hang Check Procedure.



### **PREFLIGHT CHECKLIST**

1. Propeller for Damage.
2. Free movement of Propeller Shaft.
3. Exhaust Springs, Tie Wire and Rubber Mounts.
4. Engine for Oil Leaks.
5. Engine Mounts for deterioration.
6. All Bolts are secure.
7. Fuel Filter is clear.
8. Harness and all fittings including ropes and elastics for wear.
9. Full and free movement and return of all Cables.
10. Fuel Level.
11. Follow normal Hanglider Pre Flight Check.

## **START UP AND TAKE OFF PROCEDURE**

***WHEN CHOOSING A RUNWAY IT IS PREFERABLE TO USE A GRASS COVERED AREA TO ACHIEVE THE MAXIMUM LIFE FROM SKIDS AND PROPELLER.***

***ALWAYS CHECK PROP AREA IS CLEAR AND CALL "CLEAR PROP" BEFORE ATTEMPTING TO START.***

***IT IS THE RESPONSIBILITY OF THE PILOT THAT NO SPECTATOR IS STANDING CLOSE TO THE PROPELLER WHEN THE ENGINE IS STARTED.***

1. Pull Choke Kill Tag on.
2. Pull Decompressor Tag.  
***WHENEVER ENGINE FIRES BUT DOESN'T START YOU MUST PULL DECOMPRESSOR TAG AGAIN.***
3. Pull Starter until engine fires.  
***WHENEVER ENGINE FIRES BUT DOESN'T START YOU MUST PULL DECOMPRESSOR TAG AGAIN.***
4. Release Choke Kill Tag.
5. Pull Decompressor Tag.
6. Start engine with slight throttle.  
Warm up 30 seconds at half throttle then no more than 30 seconds at full throttle or engine may overheat.
7. Point Glider into wind.
8. When ready to launch bring engine revs to maximum with Mouth Throttle and hold back launch until full thrust is obtained.
9. Hold Glider at Low Angle of Attack.
10. Walk into a steady run.
11. Whilst running maintain Low Angle of Attack until Glider lifts you of the ground.  
***DO NOT LET GLIDER GO TO TRIM.***

12. Continue running after launch in case you encounter sink and are forced back onto the ground.
13. Then go to Base Bar immediately after launch. Do not go to Base Bar while running.

### **WARNING**

***LAUNCHING THE EXPLORER IS NOT LIKE LAUNCHING FROM A HILL. YOU MUST NOT LET THE BAR GO TO TRIM MAKE SURE YOU HOLD IN AND MAINTAIN GOOD AIR SPEED OR GLIDER WILL CLIMB OUT TOO STEEP AND STALL. WHEN FLYING THE EXPLORER WITH ENGINE AT IDLE OR OFF, TRIM IS NORMAL***

14. Upon reaching a safe height, Harness can be zipped up and the legs clipped in.

### **LANDING**

1. Unclip legs then unzip harness and check that legs are down, engage propeller brake and proceed to land as you would normally.
2. When landing kill engine at safe height.

### **PROPELLER MAINTENANCE**

Keep a thin coat of grease on propeller shaft to avoid rust forming on Hub and Shaft.

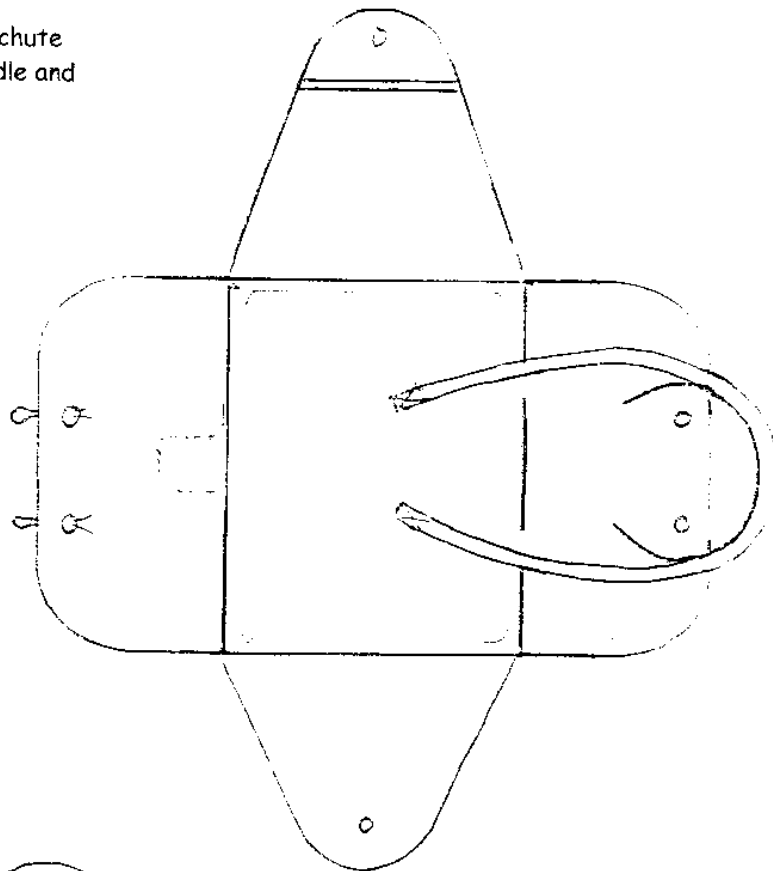
When not in use keep propeller out of direct sunlight in propeller cover. Occasionally, depending on conditions have propeller balance checked.

Propeller bolts should be tightened firmly, but not so tightly that the hub is compressed to the point of crushing.

# INSTRUCTIONS FOR FITTING RESERVE CHUTE

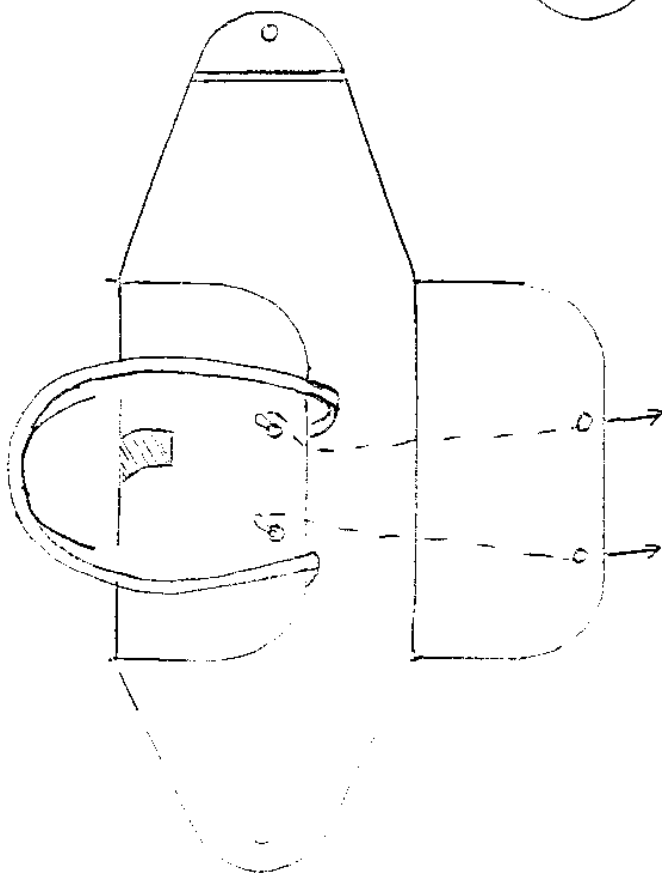
## STEP 1

Place chute in parachute container with handle and elastics as shown.



## STEP 2

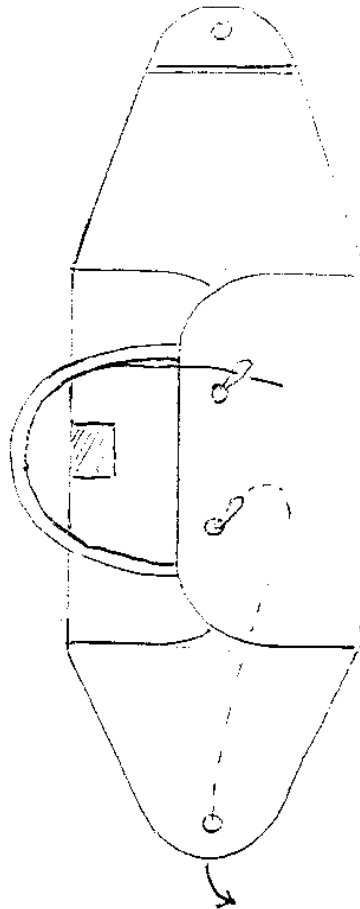
Fold handle over and lay outside the eyelets with string, pull elastics through opposite side.





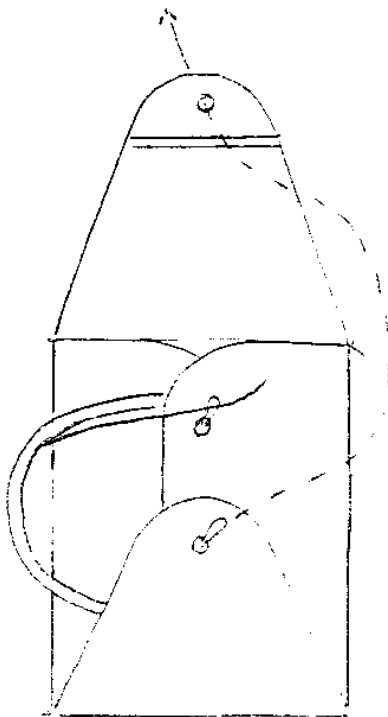
STEP 3

Secure top elastic with  
handle wire, pass lower  
elastic through adjacent  
flap...



STEP 4

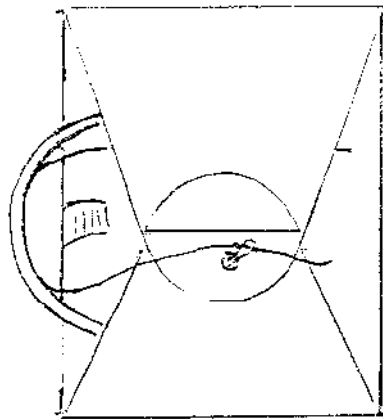
.. and continue to pull the elastic  
through the upper velcro flap.



STEP 5

Secure with other end of wire,  
close flap.

Allow wires to poke through  
enough for visual safety check  
against accidental deployments.



***IF YOU HAVE ANY DOUBTS OR PROBLEMS AT ALL  
CONTACT AIRTIME PRODUCTS  
DO NOT RISK YOUR LIFE.***