

# Type Conversions

A first flight on type is a common cause of accidents, so take time to study the glider and find out what are the important differences from the types with which you are familiar. Below are some tips and advice to help you enjoy your type conversion.

## On The Ground

- Take time and do not be rushed to take a launch.
- Read the briefing notes for the glider and the flight manual if it is available.
- Walk around the glider and take note of the general design and any features that are different to gliders you have flown before. Retractable gear? Flaps? Construction? Wing section? Tailskid/wheel? etc
- Sit in the glider with the parachute on, strap in, close the canopy and familiarise yourself with the cockpit:
  - ASI position? Altimeter position? Cable release? Wheel brake position? Which lever where? Landing attitude? Canopy jettison? Can you reach all the controls?
- Get a briefing from an instructor who is familiar with the type.
- Launch. If you are current on aerotow, take a high aerotow. This will allow you more time to sort out any problems following a failed launch, and if it's not soarable more time in the air.
- Have a good flight!

## In Flight

- When off tow or released from the winch, relax and try a few turns at different bank angles, and with varying roll rates at different speeds to assess the co-ordination and feel.
- Stall the glider straight ahead and in a gently banked turn (HASSLL). Any tendency to drop a wing? Buffet?
- Fly at the approach speed and configuration (flaps, wheel) and open the airbrakes. Does the nose pitch up or down? Do they buffet? Do they suck out? Etc. Now try them again at a higher speed.
- Fly a circuit to give a final turn that will allow at least a half brake approach and landing. This will give a more stable approach.
- Take another launch if possible.

# BNH K6cr

## Performance figures

Best L/D	28 @ 45kts
Min sink speed	40kts

## Placard speeds & weights

Winch max	59kts
Aerotow max	83kts
VNE	107kts
Va	83kts
Blue weak link	

## General overview

K6s are easy and forgiving gliders.

## Externally

Aircraft sits tail down at all times. It has no nose skid so a fully held off landing is vital to prevent damage to the nose. There is no spring suspension on the main wheel.

## Cockpit

Narrow with relatively poor visibility. The nose attitude will look quite high.

*Canopy:* BNH has rather an agricultural lock, which will allow the canopy to lift about 1cm in a sideslip or when giving a winch too fast signal. Make sure the catch really is latched.

*Trim:* An effective aerodynamic trimmer. The lever is on BNH is on the right side of cockpit, but use your left hand to trim.

*Airbrakes:* Very effective, but has a weak over-centre lock.

*Rudder pedals:* Make sure they are set the same length both sides.

## Winch launching

The high wing relative to the hook gives it a tendency to pitch up at the beginning of the launch, Trim slightly forward of centre. The high C of G will prevent you picking a wing up on the ground run if the wing starts to go down.

## Aerotow

Nose hook. Trim well forward to allow for the faster aerotow speed and stick central at start of ground run. You will soon be off the ground. Do not get left behind by the tug when it starts to climb.

## In the air

Glider is well co-ordinated with light rudder & aileron. Stalls in the low 30knts with no surprises but will spin if provoked. Again, spin recovery is straightforward. Climbs best in thermals at 40 – 45kts.

## Approach and landing

No wind approach at 50kts. Airbrakes are effective. Remember to hold off fully for the landing as there is no nose skid and the glider will bounce if not landed main and tail wheels together. Stick right back for the ground run to keep the tail down.

# JKW & LPM Astir

## Performance figures

Best L/D	35 @ 53kts
Min sink speed	43kts

## Placard speeds & weights (at 1/10/2013)

Winch max	64kts
Aerotow max	92kts
VNE	135kts
Va	92kts
Blue weak link	

## General overview

This is a much heavier glider than the K6, both on the ground and in the air. It is capable on a good day of long cross-country flights. Although quite different to the K6cr, the Astir is docile to fly and present no major worries, but like all gliders will spin if provoked. It will bounce on landing very easily unless you do a fully held off landing - much more so than a K6.

## Externally

Fibreglass construction with T tail. Note the low wing position, which gives less wing tip clearance compared to the other club single seaters. This can cause the wing to be very close to the ground when winch launching on a slope from the SE corner. Rigging is totally different to all other gliders as the wings are held on by four catches, as opposed to the more usual wing pins. When rigging an Astir ensure all controls are connected with the locking pins in place and that a duplicate inspection is performed. It has a relatively thick wing section and large wing area, which is optimised for climbing. The wheel on JKW is retractable.

## Cockpit

Large enough for most pilots, but headroom is limited – make sure you are clear of the canopy.

*Canopy:* Lock is on the left, jettison on the right. To jettison it, pull back on both knobs and push it up and away.

*Trim:* A powerful spring trimmer. It needs to be just forward of centre for winch and aerotow. Check that it does not shift when full forward or back elevator is applied on the ground. If so the friction needs adjustment.

*Airbrakes:* Effective. Top surface only and the nose will pitch down when they are opened.

*Rudder pedals:* Make sure pedals are locked in the correct position before launching as they could slide away from you if not secure. Adjustment is possible in flight via the top right hand knob on the panel.

*Vent Knob:* Very similar to rudder pedal adjuster!

*Wheel brake:* On the stick.

*Undercarriage:* JKW's is retractable with the lever on right side of cockpit. Ensure the handle is moved to the locked position after the gear is lowered. This means moving the lever towards the right-hand side of the cockpit. LPM's wheel is fixed.

### **Winch launching**

The best climbing speed is between 55 and 60kts, with a minimum of 50kts. No strong tendency to pitch up at the start of the climb. Needs some back stick pressure when established in the climb to maintain a suitable climb angle.

### **Aerotow**

Nose hook. Stick central to start the ground run. Lift the glider off at around 45kts - there is less tendency for it to come off the ground by itself compared to a wooden glider.

### **In the air**

It will feel a lot heavier in all axes than a K6. The best thermal speed is around 45kts. The stall is very docile at about 32-35kts. It will spin but is reluctant to do so. Recovery may need more forward stick movement than a K6 and it tends to pitch well forward on recovery.

### **Approach and landing**

The no wind minimum full brake approach is 50kts. The nose will pitch down slightly when the brakes are opened and speed will build quickly if you need to reduce the brakes on approach, so make sure the speed does not become excessive. The brakes are powerful so check the speed before you round out. A full brake landing though is perfectly acceptable with the correct speed but it will have a high rate of descent. Astirs, unlike Puchacz, will bounce unless you fully hold off and get the main and tail wheels to touch the ground together. With JKW this means a higher nose position than LPM.

You could tip the glider forward and damage the nose if you brake too hard on the ground run.