

## **Briefing notes for Twin Astir 'JW**

In most respects JW can be considered a "normal" modern glider. These notes document the few aspects of JW's performance which need considering when learning to fly her.

JW is a high performance 2-seat glider suitable for advanced crosscountry flying. Within our club we use JW primarily for ab initio training, i.e. from pre-solo onwards. For this purpose JW is perhaps not the ideal choice but still we do continue to train new glider pilots to a very high standard.

JW has many of the characteristics of a modern single-seater. For this reason we can truly say that any pilot competent in JW should easily convert to a modern single seat glider.

### **Daily Inspection**

The captive bayonet fittings for the wings can work loose. Although quite safe it is a good idea to keep these tight and evenly centred.

### **Care**

Be especially careful with the large canopies. These need to be held open if windy to avoid strain on the hinges or the risk of slamming shut.

### **Takeoff**

Pretty normal here, perhaps a small tendency to drop a wing but no more so than many single seaters of that age.

The heavy tail sits on the ground for a long while. When it rises prompt action is needed to prevent a too nose down attitude. Pilots should be taught to balance on the main as the glider accelerates to flying speed. This reduces stress on the undercarriage.

### **Performance**

Streamlined and efficient JW responds quickly to small changes in attitude. Lowering the nose just a little results in a prompt increase in airspeed. Inside the cockpit is very quiet with little indication of speed. It is important to learn to keep nose attitude on the horizon constant to maintain constant airspeed.

### **Control effectiveness**

Rate of roll is quite poor and rudder is underpowered. Get used to applying full rudder when initiating even a moderate turn.

### **Undercarriage**

The main wheel is in front of the C of G. This means JW is prone to bouncing unless a nice landing is made. For the same reason ground loops are difficult to stop once started.

The retractable main wheel is weak. More care is needed than other training gliders. The wheel brake is ineffective and should not be relied on. Normal landings should be well held off.

### **Airbrakes**

These are very effective. At full brake JW will stall at 50Kts. Do not attempt to round out with full brake (chances are it won't!).

### **Approach speed**

For the reason above (and past history) we set a minimum nil wind approach speed of 60 Kts. This may sound fast to experienced pilots but this is what we need to preserve JW for all to use. Sure if you are really experienced, are using less than half brake you can approach more slowly in a Twin Astir...but not in ours thank you!

### **Landing**

After round out and flying inches off the ground it is possible to carefully nibble open more airbrake to reduce float. At touchdown (if gentle) then full brake prevents inadvertent bounces. At the extreme end of the airbrake the wheel brake is engaged.

### **Spin Training**

Unless the front seat is at minimum (70 Kg) then JW is difficult to spin (and hence difficult to teach the all important spin recovery). Any intentional spin will quickly revert to a spiral dive. Acceleration is rapid. Beware!

### **Limitations**

VNE has been reduced to 124 Kts

### **Solo flight**

JW flies real nice one-up, quite a different glider and it climbs well. When flying solo make sure you remove all cushions and the parachute from the back seat. Do the straps up tight. You won't want anything to foul the stick. Remember to double-check the rear canopy is closed correctly and the side vent is shut (some tape helps to hold the vent closed).

JR, Mar 2005