

## Summary of Robin HR200/100S differences from PA28 Warrior

This short note highlights most of the main differences that PA28 pilots should be aware of when transitioning to use the Robin 200 aircraft.

The Robin is a 2 seater aircraft ideal for VFR flight. Fitted with stick rather than yoke controls it has good visibility and a sliding canopy makes for easy entry from both wings. Its cruising speed of 95-100 knots allows a range of over 500 miles. On the ground, it turns on a sixpence. In the air, being somewhat lighter and with a 108hp engine (compared to 160hp in the Warriors), its climb rate isn't enthusiastic but once in the cruise it can be very comfortable. It is not equipped for IFR and would be less suitable for poor weather conditions. The back shelf is convenient and easily accessed for stowing flight gear.

Fuel: A single tank filled from just above the port wing with AVGAS 100LL. A dipstick (on the back shelf) is used to measure the tank level and a conversion chart (also on the back shelf) is used to determine how many litres are in the tank. Consuming around 22 litres/hour, the range is said to be greater than 500 miles. Fuel consumption is considerably better in the cruise if leaned properly.

Oil: An access hatch in the forward starboard side, easily opened with a coin, is used to check the oil. During the initial run-in period, use the "straight" oil provided (also kept on the back shelf).

Controls: There are dual sticks for aileron and elevator, both with a press-to-talk radio button. The seats don't adjust/move. Rudder pedals include toe-brakes. The throttle is of the "plunger" variety, like an old choke control – pull to reduce power, push in to increase. There are dual controls intended for left hand use, but if you are more used to holding the throttle in your right hand, you may find yourself doing so here too. The centre console has switches for fuel pump, a bright yellow knob to pull for Carb Heat (pull out for carb heat on) and red knob for mixture (pull out to lean or kill the engine).

Checklist: You've guessed it – it's on the back shelf too. A large laminated card also that remains in the aircraft. Has all the usual checks, but beware none of the Lyneham radio frequencies or calls.

Starting: Switch to left mag only for starting – it's the one with the impulse coupling, one click away from both on the rotary mag switch, then switch to both when engine running (this is done automatically for you in the Warrior, but you may not realise it). There's no separate fuel primer pump, just push/pull the throttle a few times instead.

Parking Brake: Takes a bit of getting used to! Press hard on both toe-brakes, then pull the parking brake knob (on the centre console) out fully. It will then retract to about 25% out. To disengage, press hard on the toe-brakes again and push the knob back in fully. There is a slightly discernable "click" when you engage/disengage it – a bit like parking brakes on American cars.

Flaps: Electrically powered, 2 stages. The flip switch on the left of the centre console needs to be held when putting flaps down, but will completely retract by flipping the switch up. Use one stage of flaps for takeoff, one on base leg, and two stages on final.

Trim: A large trim wheel is conveniently located in the centre console – no more scraped knuckles compared with trimming on the Warriors.

Radio: There is a single radio unit with digital LED frequency display and flip/flop between active/standby. Sometimes the flip/flop button doesn't work, so check that the frequencies have indeed swapped. Audio quality is very good.

Nav aids: There is a VOR, frequency selected on the right hand side of the radio unit, with flip/flop between active/standby. There is no DME, ILS or ADF fitted. An Aware 5 GPS is due to be installed in June 2011.

Transponder: Originally Mode A only, but due to be upgraded to Mode C in June 2011

Stall warner: A bit quieter than on the warriors, but set to go off more enthusiastically – you may find this is active at different times.

Warning lights: Several lights on the console in front of the pilot. There's no lamp test button

Instruments: The usual main six instruments are clearly laid out in front of the pilot, with T&P gauges in front of the passenger seat. The compass, radio, GPS (once fitted) are located in between.

Airspeed Indicator: One of those twin dials – knots are shown on the inside scale.

Attitude Indicator: Will topple when spun down/powered off – this is perfectly normal.

Gauges: The fuel level is pretty accurate – with only one tank, you don't have to worry about switching or balancing between two wing tanks. Oil temperature gauge under-reads a little – you don't need to wait for it to show fully in the green sector before departure. Fuel pressure gauge incorrectly over-reads.

General handling: The aircraft is very benign and forgiving – it's really quite difficult to develop into a full stall. It's responsive to control inputs, has good glide performance and can be landed into quite short strips. It's takeoff roll will be longer when 2up and with more fuel, but should be adequate for most fields of 500m or more.

For the techy reader, you can find the [full type certificate and details](#) on the EASA website.

The club website also has a weight and balance spreadsheet and other information.

Name	Description	Knots
Vne	Never Exceed	160
Vno	Normal Operating	131
Vc	Cruise	131
Va	Maneuvering	131
Vfe	Flaps Extended	96
Vs1	Stall Clean	58
Vs0	Stall w Flaps	53
Fuel	Max usable fuel	118 litres

Other minor points:

- Stall warner sounds 5-10 knots above stall speed
- Aim to leave with ½ tank fuel showing on the fuel gauge
- Folder with regulatory paperwork for going foreign yet to be prepared.