

MICROLIGHT TYPE ACCEPTANCE DATA SHEET (TADS)

NO: BMO-58 ISSUE:1

TYPE: "SCOUT" MK1,MK2,MK3.

- (1) MANUFACTURER: Ron Wheeler Aircraft Sales Pty, Australia. (no longer trading).
- (2) UK IMPORTER: None, Type Specialist BMAA member G. Wickington.
- (3) CERTIFICATION BASIS: BCAR Section S requirements, listed in CAA document dated 19th June 1985, Ref 9/30/UL18
- (4) DEFINITION OF BASIC STANDARDS: This TADS and MAAN 1088.
- (5) DIMENSIONS/WEIGHT OF COMPLIANCE WITH MICROLIGHT DEFINITION
 - (a) Wing Area: 11.15m² (120ft²)
 - (b) Span: 8.68m (28.5ft)
 - (c) Standard Mean Chord: 1.28m (4.21ft)
 - (d) Dry Empty Weight: 84kg (185lb)
 - (e) Max Take-off Weight: 165kg (363lb)
 - (f) Wing Loading
(Weight Empty/ Wing Area): 7.53kg/m² (1.77lb/ft²)
 - (g) Wing Loading
(Max Take-Off Weight/Wing Area):14.7kg/m² (3.03lb/ft²)
 - (h) Number of Seats: One
 - (i) Established Maximum Power: 25bhp

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(6) POWER PLANTS

Designation	SCOUT	SCOUT	SCOUT		
Engine Type	FUJI ROBIN EC25PS	FUJI ROBIN EC25PS	FUJI ROBIN EC25PS		
Reduction Gear	VEE-BELT 2.2:1	VEE-BELT 2.2:1	VEE-BELT 2.2:1		
Exhaust System	Yamaha	Nicklow	Wheeler		
Intake System	-	-	-		
Propeller Type	laminated wood 2 blade	laminated wood 2 blade	laminated wood 2 blade		
Propeller Dia x Pitch	48" X 28"	48" x 28"	48" x 28"		
Noise Type Cert No.					

NOISE REQUIREMENT

	1 Seat	2 Seat	BCAR Ref
Registered Pre	1/4/8680 dBA84	dBAN3-6,3	Iss 4
Registered Post	1/4/8676 dBA80	dBAN3-6,5	Iss 4

(7) MANDATORY LIMITATIONS: (*indicates when placarded)

- * (A) Max Take-off Weight: 165kg (363lb)
- * (B) Dry Empty Weight: 84kg (185lb)
- (C) C G Limits (3-Axis Aircraft) See Paragraphs I-J
- (D) C G Datum: Wing spar attach dowl on fuselage boom.
- * (E) Cockpit Loadings: (Seat position fixed)
 Pilot and Baggage Maximum: Calculated from:
 165kg -(empty wt + full fuel)
 Pilot and Baggage Minimum: 55kg (121lb)
- (F) Permanent Ballast, Weight and Position: Nil
- (G) Empty C G: 14.5" aft of datum.
- (H) Optimum C G Location: 17.5" aft of datum.
- (I) Maximum Aft C G Location: 19" aft of datum.

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- (J) Maximum Fwd C G Location: 14" aft of datum.
- * (K) Never-Exceed Speed: 55mph (48kt)
- * (L) Manoeuvring Speed: 45mph (37kt)
- (M) Permitted Manoeuvres: Aerobatics Prohibited
- (N) Fuel Content (Max Usable): 11 litres
- (O) Power Plant: See Table Below

Power Plant

Engine	FUJI ROBIN EC25PS				
Max RPM	6800				
MAX CHT	250 C				
Fuel Spec	PETROL				
Oil Spec	2-STROKE OIL, PREMIUM GRADE				
Fuel/Oil Mix	40:1				
Max EGT	N/K				
Oil Press	N/A				
Oil Temp	N/A				

(8) INSTRUMENTS REQUIRED FOR TYPE ACCEPTANCE:

ASI	Altimeter	RPM	CHT	Compass
0-60MPH	Wrist Mounted	Not Req	Not Req	Not Req

(9) CONTROL DEFLECTIONS (3-Axis Systems):

Pitch Control:	Up:- 55°, plus 3°, minus 3° Down:- 45°, plus or minus 3°
Tailplane Trim:	None
Wing Warp:	Up 8° Down 8° +- 2° from neutral position.
Rudder:	To maintain 1- 1.5" clearance from elevators at maximum travel.
Steering:	N/A
Spoilers:	N/A

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(10) RIGGING DETAILS:

Dihedral: 4° from the horizontal, per panel.

(2 axis control A/C 9°)

(11) PILOT'S NOTES, MAINTENANCE MANUALS, REFERENCES:

Fuji Robin EC25PS engine manual.
BMAA maintenance schedule MMS-1.
BMAA MAAN 1088.

(12) MANDATORY MODIFICATIONS, SERVICE BULLETINS, AIRWORTHINESS DIRECTIVES ETC:

See MAAN 1088 and appendix 1 of this TADS.

The wing profiles must be checked to conform with appendix 2.

(13) MINIMUM PERFORMANCE AT MAXIMUM TAKE-OFF WEIGHT:

Rate of Climb: 350 ft/minute

Stalling Speed: 25mph (22kt)

NOTES:

- 1) GA Drawings and/or colour photographs illustrating the principal features of the aircraft submitted for type acceptance, shall be attached to, and form part of, this Data Sheet.
- 2) Appendices 1 (modifications) and 2 (wing rib profiles) MUST be attached to this TAD document.

BMAA APPROVAL:

ISSUE:

DATE:



1 initial

6/7/95

W.G. Brooks
Chief Technical Officer

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SKYCRAFT SCOUT, APPENDIX 1 (REQUIRED MODIFICATIONS AND INSPECTIONS)

The following modifications and inspections must be carried out on each Skycraft Scout in order for it to qualify for the issue of a Permit to Fly:

S171) (Flight)

The aeroplane must be made or modified to Scout Mk III standard, i.e. provided with a Skycraft type wing warping system, as fitted to the flight tested example aircraft G-MBOU and also MJAL.

S605

The addition of a back up steel stranded cable tie of 3-4mm diameter to the lower flying wire attachment points, to provide a back up load path in the event of eye bolt failure. The cable tie must be routed through the axle tube.

The sails must be inspected to pass a Betts test of 1000g with a 1.5mm needle. The stitching must also be inspected for degradation.

The cords maintaining the wing tension across the centre section must be checked for condition.

S607

Any marine type shackles using screwed pins must be prevented from unscrewing by lightly peening the thread ends over.

The elevator control turnbuckle on the joystick must be wire locked.

Any other connections in rotation must be positively locked by clips or pins. Stationary airframe bolts to be locked by nyloc or stiffnuts. Engine crankcase bolts to be secured by anti-vibration washers or by wire locking.

S612

Where an over centre rigging catch is used, a positive lock must be provided. The positive lock to be capable of resisting the ultimate cable loads in the event of failure of the primary catch.

S625

Rivets are to be replaced with 5mm M8.8 or 3/16 dia. AN bolts and nyloc nuts at the location of the inner flying cables to the leading edges.

S627

The drag cables running from the leading edges to the nose are essential for structural integrity. The cable is mounted very close to the engine at the nose and so may be subject to vibration. Such cables are known to have frayed and eventually broken on 2 machines in Australia. The cables must be at least 1/8" diameter to 4mm diameter 1 x 19 construction galvanised steel or stainless steel with appropriate nicopress sleeves and thimbles. They and the end fittings must be inspected every 25 hours. The cable in the region of the end fittings must be closely inspected for strand breakage by gently bending the cable when removed from the aeroplane. Any sign of damage requires replacement before flight.

All control cables must be checked for security and fraying damage every 25 hours at all pulleys and fairleads.

The bottom rear fuselage bolt must be checked for security and deformation every 25 hours and after any heavy landing.

S655

Control stops must be provided for the rudder to maintain a minimum

clearance of 25mm from the elevators under maximum yaw pedal force, in the most adverse combination of rudder and elevator control.

A stop must be provided to limit maximum elevator movement on the control stick, and set to prevent the elevator cable swage entering the elevator pulley at the sternpost.

S967 (d) Fuel leakage onto occupants:

The normal location of the fuel tank is on the fuselage boom directly in front of the wing leading edge. Whilst no leakage problems have been reported in service, either a drip tray must be provided to prevent leakage from contacting the pilot, or the fuel tank location must be moved to behind the pilots seat as in the case of MJAL, MBUZ and MBOU. In the case of a low mounted tank, a fuel flow rate check (to be 125% of the engine's maximum requirement) must be performed.

S689

Keepers must be provided to prevent cable derailment at all control pulleys, and in particular, at the inboard end of the roll control system.

S993

Fire resistant fuel line must be fitted and routed the opposite side of the engine to the exhaust.

S1141

The ignition switch wiring must be fire resistant in the region of the engine and fuel system.

A keeper must be provided to retain the spark plug cap on the engine.

S1303

An airspeed indicator of between 0-55 and 0-80 mph or equivalent must be fitted. The airspeed sensor must be outside the propeller arc.

Where an altimeter is not installed, a cockpit placard must be provided stating that a wrist altimeter must be worn.

PLACARDS:

Placards must be installed in full view of the pilot indicating the following:

The cockpit loading range calculated according to :

Minimum Loading = 55kg.

Maximum Loading = 165kg -(empty weight + full fuel load).

The limiting airspeeds $V_a = 45\text{mph}$ and $V_{NE} = 55\text{mph}$, or the equivalent in units corresponding with the ASI fitted.

The flight limitations: Non Aerobatic. Maximum Pitch angle 30 degrees, bank 45 degrees. Maximum cross wind component 5 mph.