



TYPE: Whittaker MW5 (k) Sorcerer

- (1) MANUFACTURER: Aerotech International Limited (No longer trading)
BMAA has responsibility for continued airworthiness
- (2) UK IMPORTER: N/A
- (3) CERTIFICATION: BCAR Section S, Advance Issue - March 1983, amended by MTWA amendment dated 11.10.1998

(4) DEFINITION OF BASIC STANDARD: AI Master General Assembly (K1000 / Issue 2)

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a) MTOW	275 kg
(b) No. Seats	1
(c) Maximum Wing Loading	22.19 kg/m ²
(d) V _{so}	29 kn IAS
(e) Permitted range of pilot weights	55 – 100 kg
(f) Typical Empty Weight (ZFW)	147 kg
(g) ZFW + 86 kg pilot + 1 hr fuel (15 litres / 11 kg)	246 kg
(h) ZFW + 86 kg pilot + full fuel (30 litres / 22 kg)	257 Kg
(i) Max ZFW at initial permit issue	178 kg

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-30 ISSUE: 4

(6) POWER PLANTS

Designation	<i>MW5(k) Sorcerer</i>	
Engine Type	<i>Rotax 447</i>	
Reduction Gear	<i>Rotax A or B-type 2.58:1</i>	
Exhaust System	<i>Rotax side-mounted</i>	
Intake System	<i>Sponge Silencer</i>	
Propeller Type	<i>Aerotech K04-201 laminated wood</i>	<i>GSC Tech 2-blade (Ground adjustable)</i>
Propeller Dia x Pitch	<i>62" x 32"</i>	<i>64" x 43.4"</i>
Noise Type Cert No.	<i>103</i>	<i>37M Issue 4</i>
AAN approving configuration	19505 Addendum 1	

(7) MANDATORY LIMITATIONS:

(A) Max Take-Off Weight	275 kg		
(B) CG Limits	<i>Aft limit</i>	549mm aft of datum	
	<i>FWD Limit</i>	402 mm aft of datum	
(C) CG datum	Wing leading edge (see annex C).		
(D) Cockpit Loadings	Front	Rear	Total
	Min 55 kg	N/A	55 kg
	Max 100 kg	N/A	100 kg
(E) Never Exceed Speed	82 kn IAS		
(F) Manoeuvring Speed	58 kn IAS		
(G) Permitted Manoeuvres	Non Aerobatic, +4 / -2g		
(H) Fuel Contents (Max Useable)	30 litres		

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-30 ISSUE: 4

(I) Power Plant See Table

Engine	Rotax 447		
Max RPM	7000		
MAX CHT	250°C / 450°F		
MAX EGT	No limit available		
Fuel Spec	83 MON or 90 RON minimum unleaded to BS(EN)228 or 97+ octane 4-star /MOGAS leaded fuel to BS 4040, or AVGAS 100LL.		
Engine Oil Spec	Non-Detergent 2-stroke self mix		
Gearbox oil spec	EP90 Hypoid or equivalent		
Fuel/Oil Mix	50:1		
Coolant Temperature	N/A		
Oil Pressure	N/A		
Oil Temperature	N/A		

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	RPM	CHT	Compass	VSI	Slip ball
Required	Required	Required	Required	Required	Optional	Optional

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-30 ISSUE: 4

(9) CONTROL DEFLECTIONS:

Elevator UP:	60mm	Tailplane trim UP:	45mm
Elevator DOWN:	45mm	Tailplane trim DOWN:	70mm
Elevator NEUTRAL:	15mm up	Tailplane trim NEUTRAL:	As required
Ailerons UP:	115mm	Rudder LEFT:	80mm
Ailerons DOWN:	115mm	Rudder RIGHT:	80mm
Ailerons NEUTRAL:	15mm down	Rudder NEUTRAL:	0
Nosewheel Steering L:	25°		
Nosewheel Steering R:	25°		
Nosewheel Steering Neutral:	0°		

The aircraft should not be rigged without reference to the Pilots Operating Handbook.

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

10.1 Manuals approved for use with this aircraft.

(a) Pilots Operating Handbook - 5K/0020/MJM, issue 3a

10.2 The following placards are to be fitted:-

(a) Flight Limitations Placard (to be visible to pilot)

See Annex D.

(b) Engine Limitations Placard (to be located near to engine instruments)

See Annex D.

(c) Fuel Limitations Placard (to be located near to filler cap)

A placard is to be fitted showing fuel capacity 30 litres), fuel type(s), fuel:oil ratio (if relevant) and if MTOW can be exceeded with full fuel and maximum cockpit weight, the fuel loads at MTOW for cockpit weights of 100 kg / 95 kg etc. at 10kg intervals down to the maximum fuel load. An example is shown at Annex D.

(d) Switches

See Annex D.

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-30 ISSUE: 4

- (11) MANDATORY MODIFICATIONS / SERVICE BULLETINS / AIRWORTHINESS DIRECTIVES ETC:

See Annex A for required modifications.

- (12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb: 540 fpm at 45 kn IAS.

Stall or Minimum Flying Speed: 29 IAS at MTOW / idle.

Issue History

<u>Issue No.</u>	<u>Reason and signatory</u>
1	13/06/89 Initial Issue WA BEVAN
2	15/08/1990 Introduction of modification ATI/009/MJM, GSC propeller W A BEVAN
3	03/11/1999 Increase in MTOW from 260 to 275kg C J WHITTAKER
4	03/05/2005 Revised to new TADS format.



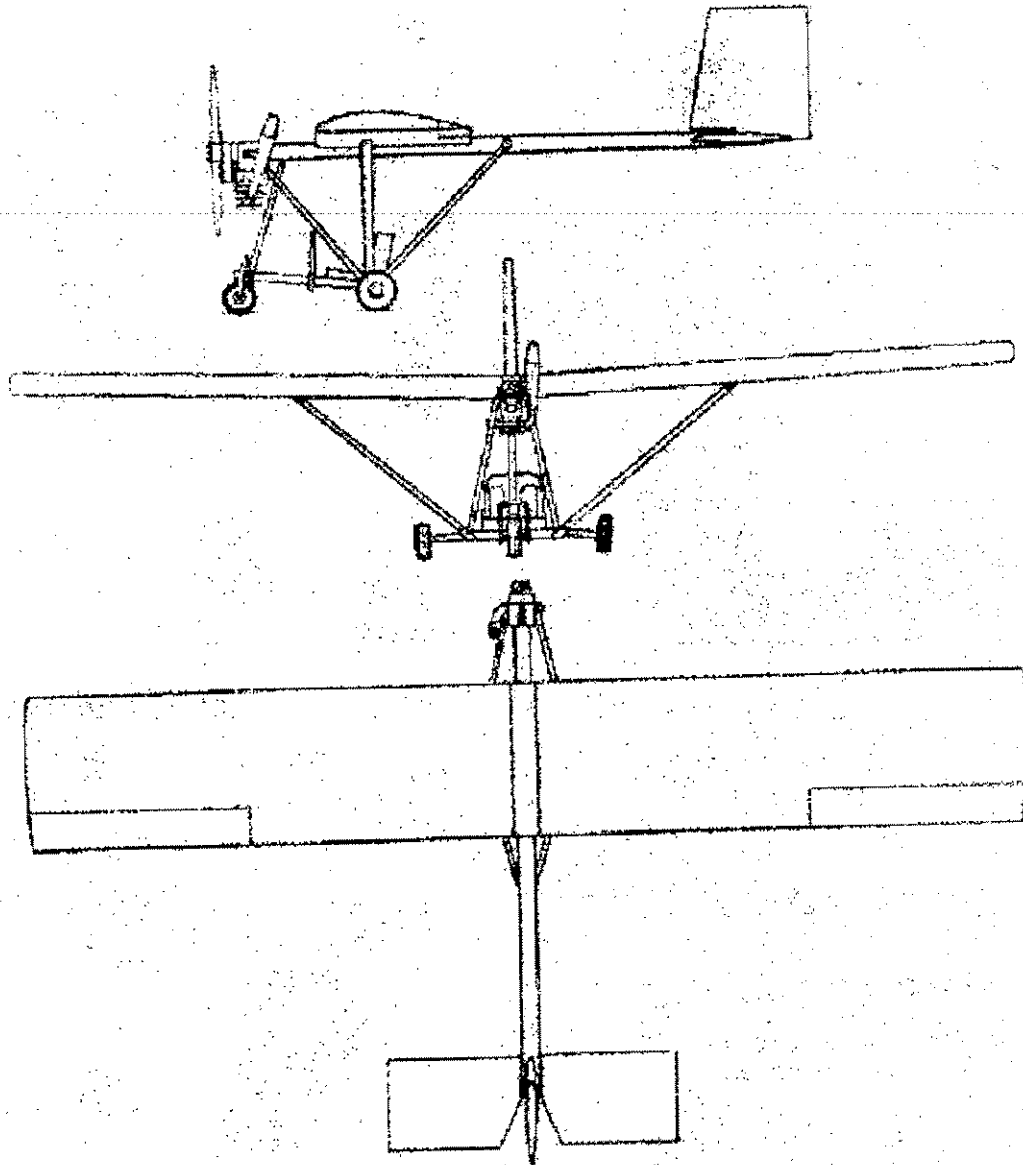
J BARRATT

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-30 ISSUE: 4

Illustration of Aircraft - 3 View



(Pod omitted from drawing for clarity.)

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-30 ISSUE: 4

ANNEX A – MANDATORY MODIFICATIONS

MPD 1995-009, Drawshaft Screw Replacement

MPD 1998-019, Flexible fuel tubing (Note: some MW5 aircraft may have been fitted with sheathed fuel hose, it should be noted the hose underneath the sheathing complies with this MPD).

ANNEX B - APPROVED OPTIONAL MODIFICATIONS

The installation of all optional modifications is to be inspected by a BMAA inspector and an entry made in the appropriate logbook(s). Note that other approved modifications may exist which are not listed here.

- No optional modifications exist on this aircraft.

ANNEX C

WEIGHING INFORMATION

1. CG Datum: Wing leading edge
2. Weighing attitude: All three wheels on a level surface
3. Mainwheel moment arm: 660mm aft of datum
4. Nosewheel moment arm: 600mm forward of datum
5. Fuel moment arm: 730mm aft of datum
6. Crew moment arm: 400mm aft of datum
7. Crew weights: Minimum 55 kg / maximum 100 kg
(maximum reducible, not below 86 kg, if required).
8. Aft CG Limit: 549mm aft of datum (41% mac)
9. Fwd CG Limit: 402mm aft of datum (30% mac)

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-30 ISSUE: 4

ANNEX DEXAMPLE PLACARDS

(a) Flight Limitations Placard (to be visible to pilot)

Never Exceed Speed:	82 kts IAS
Manoeuvring Speed :	58 kts IAS
Empty Weight:	149 kg *
Max Take-Off Weight:	275 kg
Seat occupancy Weight:	55-100 kg

* This must match the most recent W&CG report for the aircraft.

(b) Engine Limitations Placard (to be located near to engine instruments)

A placard showing the limitations for all indicated engine parameters is to be mounted close to the engine instruments. This requirement need not be complied with for limitations shown as coloured markers (red for danger, amber for caution) on the instrument displays.

(c) Fuel Limitations Placard (to be located near to filler cap)

<u>FUEL</u>	
Capacity 30 Litres (50:1 2 Stroke oil)	
<u>Cockpit Weight (kg)</u>	<u>Max. Fuel Load (litres)</u>
100	
95	
....	
.... Or below	Full fuel
83 MON or 90 RON minimum unleaded to BS(EN)228 or 97+ octane 4-star / MOGAS leaded fuel to BS 4040, or AVGAS 100LL	

(d) Switches

All switches are to be marked with function and sense (up=on, down=off).