

CIVIL AVIATION AUTHORITY - SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-49 ISSUE: 4

TYPE:	Mignet HM-1000 Balerit
(1) MANUFACTURER	Société D'Exploitation des Aéroefs Henri Mignet
(2) UK IMPORTER	Fleaplanes UK Ltd (no longer trading) BMAA is responsible for continued airworthiness.
(3) CERTIFICATION BASIS	At MTOW 390kg: BCAR Section S working draft At MTOW 406 kg: BCAR Section S issue 2
(4) DEFINITION OF BASIC DESIGN STANDARD	Fleaplanes UK HM-1000 Balerit Build Standard document reference BSS.BAL/01, Issue 6 dated 19 April 1995
(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION	
(a) MTOW	390 kg, or 406 kg with Mod.1 incorporated
(b) No. Seats	2
(c) Maximum Wing Loading	23.1 kg/m ² at 406 kg.
(d) V _{so}	39 kn CAS at 406 kg.
(e) Permitted range of pilot weights	55 – 90 kg per seat
(f) Typical Empty Weight	215 kg
(g) ZFW + 172kg + 1 hrs fuel (14kg)	402 kg.
(h) ZFW + 86 kg + full fuel	333 kg with largest permitted tank.
(i) Max permitted ZFW (Mod.1 incorporated)	220 kg with Mod.1 incorporated 204 kg without Mod.1 incorporated

CIVIL AVIATION AUTHORITY - SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-49 ISSUE: 4

(6) POWERPLANTS

Designation	HM-1000 Balerit			
Engine Type	Rotax 582/48-2V			
Reduction Gear	Multi-belt 3.5:1			
Exhaust System	Rotax side-mount with after-muffler			
Intake System	Twin K&N Filters			
Propeller Type	Cadeillan 8D06 Wooden Fixed Pitch			
Propeller Dia x Pitch	61" x 55"			
Noise Type Cert No.	154M issue 1			
AAN approving configuration	24275			

(7) MANDATORY LIMITATIONS

- (A) Max. Take-Off Weight 390 kg, or
406 kg with Mod.1 incorporated
- (B) CG Limits *Aft Limit:* 1420mm AoD
Fwd Limit: 1140mm AoD
- (C) CG Datum Forward edge of fuselage front cross-tube
- (D) Cockpit Loadings
- | | Port | Starboard | Total |
|------------|-------------|------------------|--------------|
| Min | 55 kg | 0 | 55 kg |
| Max | - | - | 180 kg |
- (E) Never Exceed Speed 95 mph IAS [77 kn CAS]
- (F) Manoeuvre Speed 74 mph IAS [60 kn CAS]
- (G) Permitted Manoeuvres Non aerobatic, 60° bank, +4/-2g.
- (H) Fuel contents (max. useable) 20 litres
44 litres with Mod.2 incorporated

CIVIL AVIATION AUTHORITY - SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-49 ISSUE: 4

- (I) Powerplant (Rotax 582/48-2V)
- | | |
|-------------------|---|
| Max RPM | 6,800 |
| Max. Cont. RPM | 5,600 |
| Max. CHT | 150 °C |
| Max EGT | 650 °C |
| Fuel | min. 83 RON or 90 MON unleaded to BS(EN) 228, or AVGAS 100LL. |
| Engine oil spec. | See engine manual |
| Fuel oil mix | 50 : 1 (unless direct injection) |
| Max coolant temp. | 80°C |

(8) INSTRUMENTS REQUIRED

ASI	Altimeter	RPM	CHT	Compass	EGT	Coolant Temp
<i>Required</i>	<i>Required</i>	<i>Required</i>	Optional	Optional	Optional	<i>Required</i>

CIVIL AVIATION AUTHORITY - SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-49 ISSUE: 4

(9) CONTROL DEFLECTIONS

Pitch control UP	11° ± 2°	Rudder LEFT	40° ± 5°
Pitch control DOWN	8° ± 2°	Rudder RIGHT	40° ± 5°
Nosewheel steering LEFT	20° ± 3°		
Nosewheel steering RIGHT	20° ± 3°		

(10) PILOTS NOTES, MAINTENANCE MANUALS, REFERENCES

10.1 Manuals approved for use with this aircraft

- (a) Fleaplanes UK HM-1000 Balerit microlight aircraft owners handbook
Iss.1 07/10/1994
- (b) Rotax 582 engine operators manual.
- (c) If Mod.1 incorporated, Balerit Owners Manual Supplement Reference
MAAN 1562 issue 1 Annex A.

10.2 Mandatory Placards are listed at Annex D.

10.3 Optional Calibration Placard If fitted, the following is to be fitted close to the ASI.

mph IAS	38	40	45	50	59	74	87	95
	V _{so}		TO, Climb	App.		V _a		V _{ne}
Kn CAS	39	40	43	45	50	60	70	77

(11) MANDATORY MODIFICATIONS / SERVICE BULLETINS / ETC

See Annex A for required modifications.

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

	390 kg	406 kg
Climb Rate, ISA Sea-level conditions	405 fpm @ 45 mph IAS	370 fpm @ 50 mph IAS
Stall or minimum flying speed	37 mph IAS [38 kn CAS]	38 mph IAS [39 kn CAS]

CIVIL AVIATION AUTHORITY - SAFETY REGULATION GROUP

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NO: BM-49 ISSUE: 4

Issue History

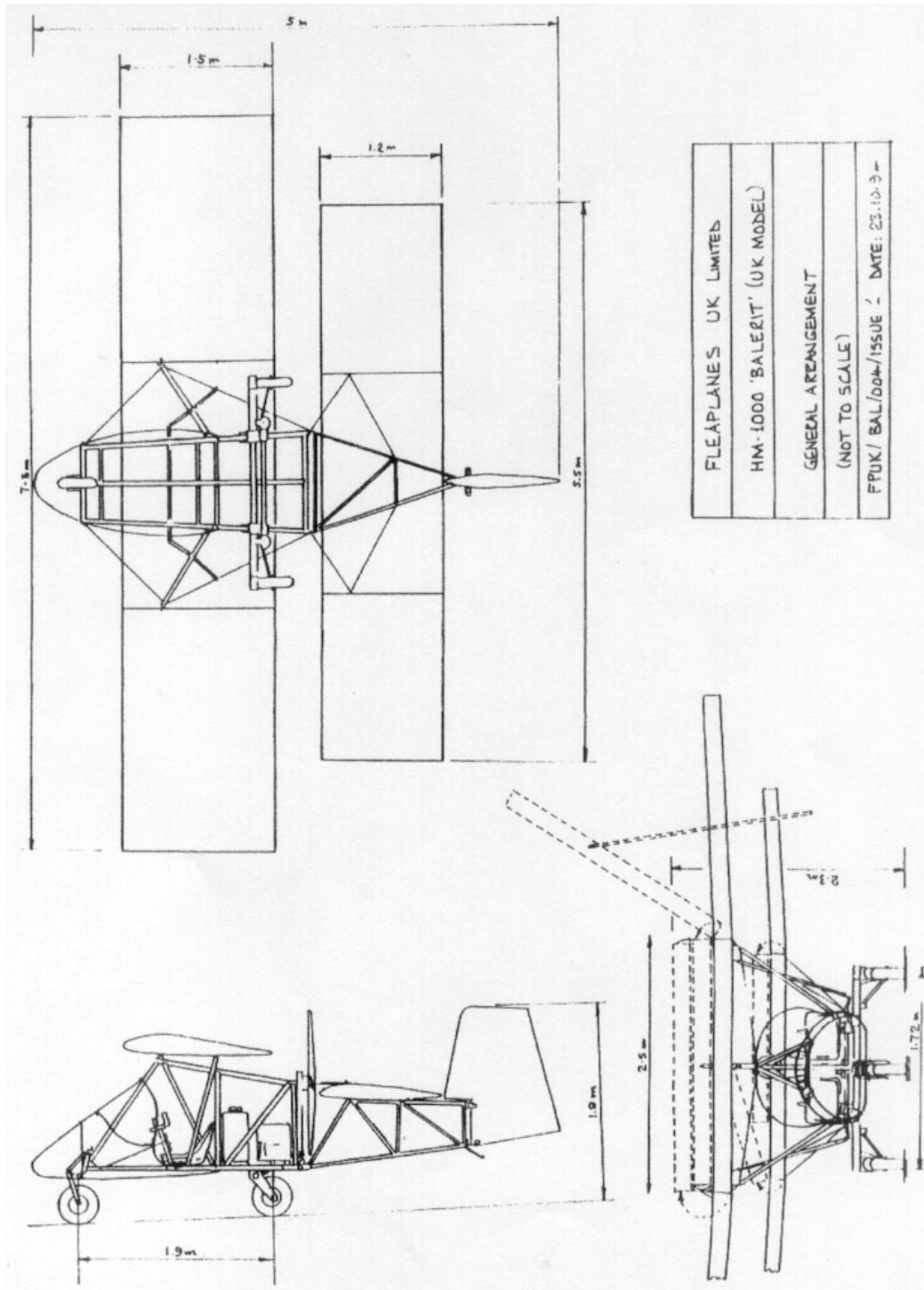
<u>Issue No.</u>	<u>Reason and signatory</u>
1	25/10/94 Initial issue for G-MYDZ only K D RUSSELL
2	26/04/95 Revised to reflect Type Approval of series aeroplanes K D RUSSELL
3	08/07/02 Additions of Mod.1 and Mod.2. Update to new format. J BARRATT
4	07/02/03 Correction of typographic errors

J BARRATT

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NO: BM-49 ISSUE: 4

Illustration of Aircraft (3-view)



CIVIL AVIATION AUTHORITY - SAFETY REGULATION GROUP

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NO: BM-49 ISSUE: 4
Annex A – Mandatory Modifications

None

Annex B – Approved Optional Modifications

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

No. Brief Description

- Mod.1 Increase in MTOW from 390kg to 406 kg, subject to inclusion of operators manual supplement. Approved by BMAA MAAN 1562 issue 1.
- Mod.2 Replacement of 20 litre fuel tank with 44 litre fuel tank. Approved by BMAA MAAN 1562 issue 1.

ANNEX C – WEIGHING INFORMATION

1. CG Datum: Forward edge of fuselage front cross-tube.
2. Weighing Attitude: All three wheels on a level surface.
3. Mainwheel Moment Arm: 1840 mm AOD
4. Nosewheel Moment Arm: 60 mm FoD
5. Fuel Moment Arm: 1440 mm AoD
6. Crew Moment Arm: 905mm AoD
7. Crew Weights: Max 180 kg total, min. 55 kg
(90kg per seat for W&CG purposes if calculated separately)
(Maximum reducible, not below 86kg per seat, if required)
8. Aft CG Limit: 1420 mm AoD
9. Fwd CG Limit: 1140 mm AoD

CIVIL AVIATION AUTHORITY - SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-49 ISSUE: 4

ANNEX D – MANDATORY PLACARDS

(a) Head of Control Column Placard

MAX CONT. RPM 5600	
V_{NE}	95 mph
Max. RPM	6000
Max Temp	80°C
Max. Wt	390 kg / 406 kg¹
Max. Cockpit Load	180 kg
Aerobatic manoeuvres and deliberate spinning prohibited.	

(b) Placard alongside control column stem (for trim): NOSE UP / NOSE DOWN

(c) Placard adjacent to ignition switches: ON / OFF

(d) Placard along incidence rods: DO NOT TURN

(e) Placards alongside fuel filler

(e1) Original Fuel Placard, to be fitted if ZFW+180kg+Full Fuel is less than MTOW.

TWO STROKE FUEL ONLY
FUEL RON 90 MINIMUM
FUEL / OIL RATIO 50:1
MAX FUEL QUANTITY 20 LITRES
DO NOT OVERFILL

(e2) Replacement Fuel Placard, to be fitted if ZFW + 180kg + Full Fuel exceeds MTOW. For instruction on calculating loading values in this placard, refer to BMAA TIL 026.

<u>Fuel</u> Capacity ___ litres 50:1 2-stroke oil	
<u>Cockpit Weight</u> (kg)	<u>Fuel Load</u> (litres)
83 MON or 90 RON Unleaded Fuel to BS(EN) 228 or AVGAS 100LL	

¹ As required by modification state.
TADS BM49 issue 4

CIVIL AVIATION AUTHORITY - SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-49 ISSUE: 4

(f) Placard along fuselage vertical tube, adjacent to propeller: **BEWARE PROP**

(g) Front Wing Centre Section Tabs: **DO NOT BEND**

(h) On LH Inside Cockpit Fairing

**This aeroplane has not been shown to
comply with any internationally recognised
code of airworthiness requirements.**

(i) Metal tags on directional cables adjacent to rudder: **L.OUTER / L.INNER
R.OUTER / R.INNER**

(j) Placard adjacent to remote fuel tap control: **FUEL ON / OFF** (Paraplegic
modified aircraft only i.a.w. AAN 26122)

(k) Placard to outside fairing release catches:
TO RELEASE PRESS PIN AND LIFT LEVER.

(Paraplegic modified aircraft only i.a.w. AAN 26122)