

**BRITISH MICROLIGHT AIRCRAFT ASSOCIATION
HOMEBUILT AIRCRAFT DATA SHEET (HADS)**

NO: HM18 ISSUE: 5

EuroFOX

- (1) MANUFACTURER Individual aircraft are amateur constructed from kits manufactured by Aeropro s.r.o. in Slovakia. BMAA is responsible for continued airworthiness
- (2) UK IMPORTER EuroFOX Aviation, The Hanger, Wanshurstgreen Farm, Battle Lane, Marden, Kent, TN12 9DF.
- (3) CERTIFICATION BCAR Section S Issue 5
BCAR Section S Issue 6 (Rotax 912ULS & Rotax 912iS Sport)
- (4) DEFINITION OF BASIC STANDARD MAAN 2307 and MAAN 2381
- (5) COMPLIANCE WITH THE MICROLIGHT DEFINITION
- | | | |
|-----|-----------------------|--|
| (a) | MAUW | 450kg / 472.5kg with AMTRPS ¹ |
| (b) | Number of seats | 2 |
| (c) | Stall speed, V_{S0} | 34kt CAS |
| (d) | Max ZFW | Rotax 912UL 270kg / 292.5kg with AMTRPS |
| | | Rotax 912ULS 269kg / 291.5kg with AMTRPS |
| | | Rotax 912iS 270kg / 292.5kg with AMTRPS |
- (6) MANDATORY LIMITATIONS
- | | | |
|-----|---|--|
| (a) | CG datum | 50mm fwd of wing LE at root |
| (b) | CG limits | Aft limit (912UL) 410mm AoD
(912ULS) 385mm AoD ²
Forward limit 260mm AoD |
| (c) | Cockpit loadings | 55-100kg (pilot)
0-100kg (passenger) |
| (d) | Seat load limit ³ | 83kg |
| (e) | Never exceed speed, V_{NE} | 108kt CAS |
| (f) | Manoeuvring speed, V_A | 76kt CAS |
| (g) | Flap Limiting speed, V_F | 63kt CAS |
| (h) | Door open speed, V_{DOOR_OPEN} | 58kt CAS |
| (i) | Permitted manoeuvres | Maximum bank angle 60°
Normal acceleration limits, +4g / -2g ⁴
Aerobatics and Spinning prohibited |
| (j) | Power Plants | |
| | Use engine manufacturers' limitations except for the following: | |
| | Engine | Rotax 912UL, 912ULS & 912iS Sport |
| | Max continuous speed | 4200rpm |

¹ Airframe Mounted Total Recovery Parachute System (i.e. aircraft parachute recovery system).

² The Rotax 912ULS aft limit is restricted due to not having flight tested further aft.

³ The actual seat load limit is 83kg. The remaining 17kg of each occupant is assumed to be distributed on the cabin floor and rudder pedals.

⁴ Reducing to -1.5g at V_{NE} .

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(7) VARIANTS

Designation	EuroFOX 912(1)	EuroFOX 912S(1)	EuroFOX 912S(2)	EuroFOX 912iS(1)
Engine Type	Rotax 912UL	Rotax 912ULS	Rotax 912ULS	Rotax 912iS Sport
Reduction Gear	2.27:1	2.43:1	2.43:1	2.43:1
Propeller Type	Duc Swirl 3 blade	Duc Swirl 3 blade	Woodcomp Propuls AE174 3 blade	Duc Swirl 3 Blade
Propeller Dia x Pitch	166cm x 21° @ 20cm from tip	173cm x 23.5° @ 20cm from tip	174cm x 27° @ 37cm from tip	173cm x 23.5° @ 20cm from tip
Max Static RPM	5000	5000	5000	5000
Noise Type Cert No.	195M issue 1	195M issue 1	195M	195M
MAAN approving configuration	2307	2480	2646	2628

(8) INSTRUMENTS REQUIRED

ASI, Altimeter, Slip ball, RPM, CHT/Coolant temp, Oil T and P, Fuel contents.
For the Rotax 912iS Sport the above instruments plus EGTs, Fuel Pressure and Voltage.

(9) CONTROL DEFLECTIONS

Ailerons	UP:	18° ±2°	Rudder:	±27° ±3°	
Ailerons	DOWN:	8.5° ±1°	Elevator	UP:	30° ±2°
Flaperons	UP:	0° ±2°	Elevator	DOWN:	27° ±2°
Flaperons	DOWN:	20° ±2°	Elevator trim tab		±30° ±3°

Ailerons neutral / flaperons up when flap trailing edge 46mm vertically below continuation of wing root under surface. Refer to EuroFOX Build Manual for details.

(10) PILOT'S NOTES, MAINTENANCE MANUALS, PLACARDS

(10.1) Manuals approved for use with this aircraft:

EuroFOX Build Manual issue 1.
EuroFOX Build Manual – Appendix 1 – Rotax 912iS issue 3.
Aeropro and EuroFox UK Pilot Operating Handbook issue 2.
BMAA generic maintenance schedule MMS-1.

(10.2) Placards

See Annex D for details of the placards that are to be fitted.

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(11) SERVICE BULLETINS, MPDs

EuroFox SB 01/2014	Rudder Centering Assembly
EuroFox SB 02/2015	Undercarriage Guide Bracket Bolt
EuroFox SB 03/2016	Replacement of Undercarriage Guide Bracket Bolts
EuroFox SB 04/2016	Checking Of Elevator Trim Cable Assembly

(12) MINIMUM PERFORMANCE AT MAUW

Engine:	Rotax 912UL	Rotax 912ULS & 912iS Sport
Rate of Climb:	960 fpm at 60kt CAS	1100 fpm at 65kt CAS

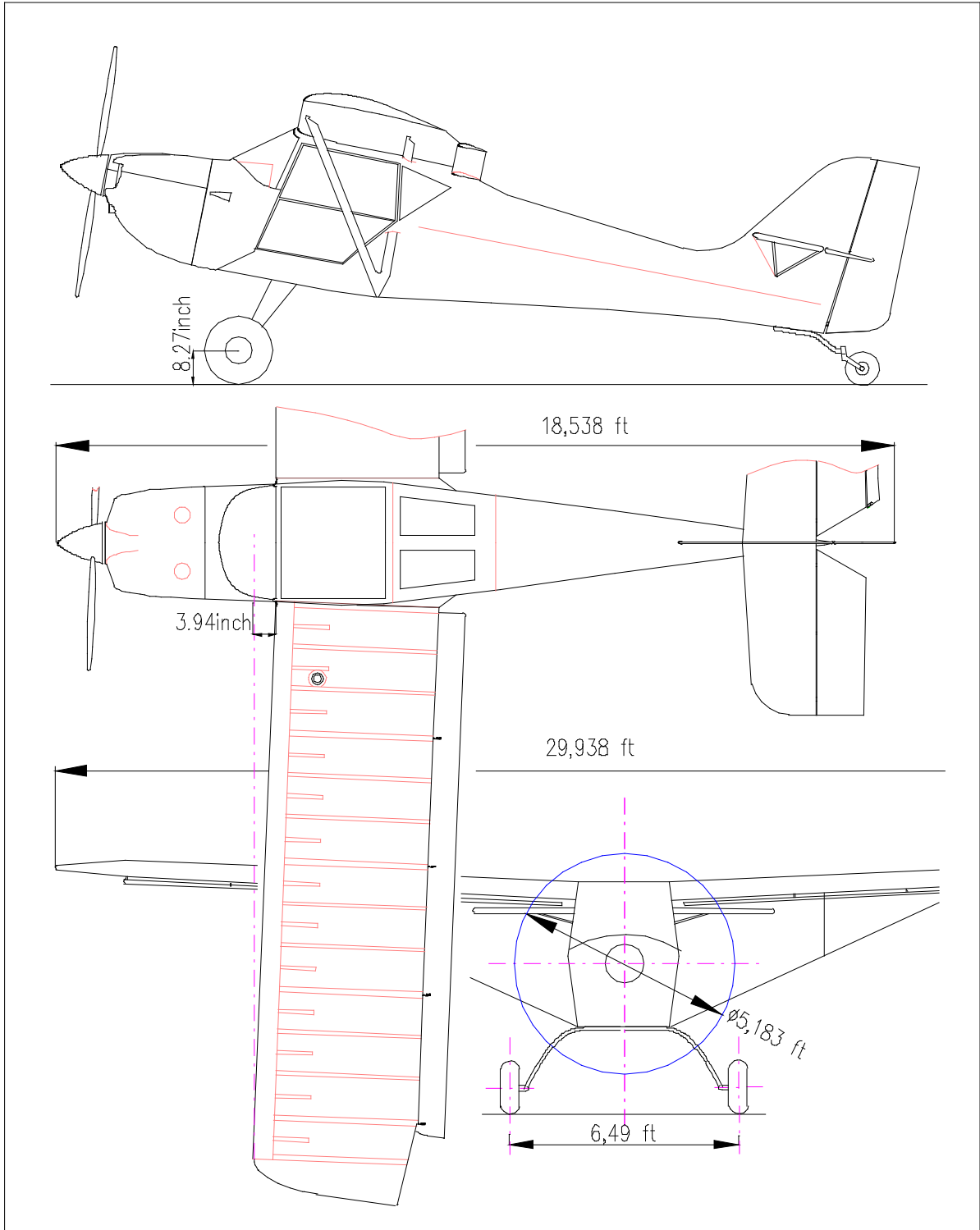
ISSUE HISTORY

<u>Issue No.</u>	<u>Reason and Signatory</u>
1	30/4/2012 Initial issue
2	10/09/2014 Addition of 912S(1) variant approved by MAAN 2480. Change of 912UL gearbox ratio (2.273 to 2.27). Correction of ailerons neutral / flaperons up position (see correspondence in MAAN 2480 file).
3	04/04/2016 Change of address. Additional optional modifications, Power Socket, EarthX LiFePO4 Battery and single radiator/modified cowling/engine mount. Approved by MAAN 2592. Service Bulletins added. B J Syson
4	29/11/2016 Addition of 912iS(1) variant approved by MAAN 2628. Addition of SB03 and SB04. Correction of optional modifications. R Patrick
5	17/02/2017 Addition of 912S(2) variant approved by MAAN2646. Woodcomp Propuls Propeller.  R Patrick

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ILLUSTRATION OF AIRCRAFT – 3 VIEW



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**ANNEX A
MANDATORY MODIFICATIONS**

Mod No.	Subject
1	Increase in wall thickness of forward lift strut from 1.0mm to 1.2mm for operation at 472.5kg. Recommended, but not mandatory, for operation at 450kg.
2	Sleeving of pitch-control, torque tube (control-column interconnect) to reinforce elevator pushrod horn, attachment point.
3	Coating of engine cowlings with intumescent paint.
4	Protecting nylon grommets in firewall with aluminium, adhesive tape (or other approved method).

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**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). Involvement of the BMAA Technical Office is not required. Note that other approved modifications may exist which are not mentioned here. Contact the BMAA for details.

Mod No.	Subject
1	Undercarriage configuration <ul style="list-style-type: none">a. Tricycle gearb. Conventional gear (tail-dragger)
2	Aeropro Stratos Magnum AMTRPS (parachute system) installation
3	Fuel system configuration <ul style="list-style-type: none">a. One Aeropro 40 litre tank (46 litres system capacity)b. Two Aeropro 40 litre tanks (86 litres system capacity)
4	Brake system configuration <ul style="list-style-type: none">a. Aeropro hand operated brakeb. Aeropro toe brakes (with or without floor mounted parking brake)
5	Aeropro adjustable oil radiator covering flap
6	Aeropro cabin heater
7	Aeropro carburettor hot air system
8	Aeropro upper crankcase GRP cooling shroud
9	Aeropro door vents
10	Aeropro dual landing lights
11	Aeropro wing tip strobes
12	Aeropro oil inspection hatch
13	Aeropro electric back-up fuel pump
14	Aeropro fuel-line fireproof sleeving (firewall forward)
15	Aeropro nose-wheel shimmy damper
16	Aeropro radio aerial and base plate
17	Aeropro transponder aerial and base plate
18	Aeropro tundra tyres
18a	Aeropro power socket
19	EarthX ETX18B LifePO4 starting battery (inc. Voltmeter and Charge Isolator)
20	Aeropro Single Radiator, modified cowlings and engine mount

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**ANNEX C
WEIGHING INFORMATION**

CG Datum:	50mm forward of wing leading edge at root	
Weighing attitude:	Door sill horizontal (measured with spirit level)	
Aft CG Limit:	410mm AoD	(912UL)
	385mm AoD	(912ULS)
Forward CG Limit:	260mm AoD	
Occupant weight limit	100kg per side (83kg seat load limit)	
Baggage weight limit	18kg	
Fuel tank capacity (mains)	40 / 80 litres	
Fuel tank capacity (collector)	6 litres (5 litres + 1 litre unusable)	
Occupant position	440mm AoD	
Fuel tank position	440mm AoD	
Collector tank position	870mm AoD	
Baggage	1200mm AoD	

Wheel offsets from datum must be measured on a per aircraft basis (and checked at each subsequent weighing as they are very critical on exact weighing attitude).

**ANNEX D
EXAMPLE PLACARDS**

(a) FLIGHT LIMITATIONS PLACARD

<u>EuroFOX [Engine] [Registration]</u>	
MAUW	450kg / 472.5kg *
Empty Weight:	___kg *
Minimum Cockpit Weight:	55kg
Maximum Occupant Weight:	100kg each occupant (83kg seat load limit)
Maximum Baggage Weight	18kg*
Bank angle limits:	+/- 60°
Normal Acceleration Limits:	+4/-2g (reducing to -1.5g at V _{NE})
Aerobatics and deliberate spinning prohibited.	

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

(b) ASI CORRECTION PLACARD

To be displayed next to the ASI. The placard is shown in the approval MAAN for each individual aircraft.

The ASI must be marked with the main IAS limiting speeds in accordance with BCAR Section S. For a conventional ASI this is a white arc from V_{S0} to V_{FE} and a red arc in excess of V_{NE}.

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(c) ENGINE LIMITATIONS PLACARDS AND MARKINGS

A placard showing the limitations for all indicated engine parameters is to be mounted close to the engine instruments, and/or the main limitations are to be shown as coloured markers (red for danger, amber for caution) on the instrument displays. Note that the maximum continuous engine speed differs from the engine manufacturer's limitation.

(d) FUEL LIMITATIONS PLACARD

This must be based on the most recent weight report for the aircraft and displayed near to the filler cap. The placard is shown in the approval MAAN for each individual aircraft.

(e) SWITCHES

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

(f) MISCELLANEOUS

Fireproof metal plate showing the aircraft registration to be mounted in a prominent position.

If fitted with an AMTRPS, the release control and exterior of the aircraft (adjacent to the rocket/parachute exit point) must be placarded as per the aircraft manual.

The additional limitations, warnings, and secondary controls and switches are to be placarded as per normal practice.

**ANNEX E
POINTS FOR SPECIAL ATTENTION**

The following are points for special attention:

- Main-gear leg top support following a heavy, one-wheel landing (tricycle gear only).
- Main-gear leg outboard support following a heavy landing (conventional gear only).
- Nose-leg to fuselage attachment (tricycle gear only).
- Nose-leg shock absorber check wire (tricycle gear only).

If not carefully set-up the aerodynamic control circuits can contain a lot of friction. It is possible to reduce this to an acceptable level by easing and lubrication. The friction in the pitch (elevator) control circuit must be reduced to a level so that the trim speed band is no greater than $\pm 5\%$.

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**ANNEX F
SCHEDULED PERFORMANCE**

All performance values are at ISA S/L conditions, MTOW, fwd CG unless stated otherwise. Take-off and landing distances are given for short dry grass fields, clearing 15m obstacle height. Take-off distances include 1.3 safety factor.

Variants	TODR	LDR	Climb rate	V_Y	Glide ratio
912UL	415m 319m unfactored	349m	960fpm	60kt CAS	9:1
912ULS & 912iS Sport	325m 250m unfactored	349m	1100fpm	65kt CAS	9:1