CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM 77 ISSUE: 2

TYPE: **QUIKR**

(1)	MANUFACTURER:	P&M Aviation Ltd, Unit B, Crawford St, Rochdale, Lancs OL16 5NU
(2)	UK IMPORTER:	N/A
(3)	CERTIFICATION:	BCAR section S issue 4
(4)	DEFINITION OF BASIC STANDARD:	Airworthiness Submission QUIKR, GA drawing YQE-000 issue A

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a)	MTOW	450 kg
(b)	No. Seats	2
(c)	Maximum Wing Loading	39kg/m²
(d)	Vso	40mph CAS
(e)	Permitted range of pilot weights	55-110 kg front seat.
		0-110 kg rear seat.
	Total Maximum crew weight	220kg
(f)	Typical Empty Weight (ZFW)	220Kg
(g)	ZFW + 172 kg crew + 1 hr fuel (18litres /13 kg)	405Kg
(h)	ZFW + 86 kg pilot + full fuel (65litres /47 kg)	353Kg
(i)	Max ZFW at initial permit issue	265Kg

INVESTOR IN PEOPLE

(6) POWER PLANTS

Designation	Rotax 912 ULS	Rotax 912 ULS	Rotax 912 UL	Rotax 912 UL
Engine Type	4 cylinder 4 stroke	4 cylinder 4 stroke	4 cylinder 4 stroke	4 cylinder 4 stroke
Reduction Gear	2.43:1 gearbox	2.43:1 gearbox	2.27:1 gearbox	2.27:1 gearbox
Exhaust System	CKT Twin Exhaust	Rotax Side Mounted	CKT Twin Exhaust	Rotax side mounted
Intake System	K&N intake filter With Skydrive carb body heater	K&N intake filter With Skydrive carb body heater	K&N intake filter With Skydrive carb body heater	K&N intake filter With Skydrive carb body heater
Propeller Type	Warp Drive	Warp Drive	Warp Drive	Warp Drive
Propeller Dia x Pitch	172cm Dia 16° at tip	172cm Dia 16° at tip	172cm, 11° at tip	172cm, 11° at tip
Noise Type Cert No.	192M issue 1	192M issue 2	192M issue 3	192M issue 3
AAN approving configuration	AAN BMAA-1027 Issue 1	AAN BMAA-1027 Issue 1	AAN BMAA-1036 Issue 1	AAN BMAA-1036 Issue 1

(7) MANDATORY LIMITATIONS:

(A) Max Take-Off Weight		450kg		
(B) CG Limits		N/A not critical. Flexwing with defined hang point position on keel.		
(C) CG datum		Nosewheel axle.		
(D) Cockpit Loadings (solo front seat only)		Front	Rear	Total
	Min	55kg	0	55kg
	Max	110kg	110kg	220kg
(E) Never Exceed Speed		120mph IAS		
(F) Manoeuvring Speed		90mph IAS		
(G) Permitted Manoeuvres		45° Nose up / 45° nose down Non Aerobatic, max bank 60° Normal acceleration limits, +4 / -0g		
(H) Fuel Contents (Max Useable)		65L		

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(I) Power Plant See Table

Engine	Rotax 912 ULS	Rotax 912 UL		
Max RPM	5800max 5min. 5500 contin.	5800max 5min. 5500 contin.		
MAX CHT	135°C **	150°C**		
MAX EGT	880°C	880°C		
Fuel Spec	95 RON minimum unleaded to BS(EN)228 or AVGAS 100LL.*			
Engine Oil Spec	API - SG semi synthetic 4 stroke motorcycle engine oil.	API SF or SG semi synthetic 4 stroke motorcycle engine oil.		
Gearbox oil spec	Common supply with engine	Common supply with engine		
Fuel/Oil Mix	N/A	N/A		
Coolant Temperature	135°C**	150°C**		
Oil Pressure	2-5 bar above 3500 rpm	2-5 bar above 3500 rpm		
Oil Temperature	50-130°C	50-140°C		
Fuel Pressure	0.4-0.15 bar	0.4-0.15 bar		

*Unleaded preferred. See flight manual for limitations on AVGAS.
**With 100% Ethylene glycol or Evans NPG coolant. See SB121

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	Compass	RPM	CHT	EGT	Coolant Temperature	Oil Temperature	Oil Pressure
Required 0-150mph	Required 0-20,000ft	Optional	Required 0-6000	Required 50-150°C	Optional 375-925°C	Measured by CHT sensor	Required 50-150°C	Required 0-8 bar

(9) CONTROL DEFLECTIONS:
N/A weight shift control limits defined by structure geometry.

Control bar move right	=	roll left
Control bar push out	=	pitch up
Trim switch up	=	slow trim (tight trim cord)
Push left pedal	=	taxi steering right
Push left toe	=	brakes on
Push right toe	=	throttle open
Hand throttle forward	=	throttle open
Ignition switches up	=	switch on
Choke forward	=	choke on
Tap aligned with body	=	fuel on

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

10.1 Manuals approved for use with this aircraft**.**

(a) QuikR Operator's manual issue 1.3
(b) Rotax 912S & 912 Operator's manual
(c) Rotax 912S & 912 Maintenance Manual.

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)
N/A limitations are programmed into electronic Rotax FLYDAT instrument or marked as red lines on the instrument faces

(c) Fuel Limitations Placard (to be located near to filler cap)
See Annex D.

(d) Switches
See Annex D.

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

None.
Annual Bettsometer test with a 1.2mm diameter needle, with wing sails fitted and tensioned to flight is to be carried out to:
Upper surface: 400 grammes must not rip the fine fabric within each ripstop square.
Lower surface: 1360 grammes.
Stitches: 1360 grammes using a 1mm diameter hook, pull upwards.

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb: 1150fpm at 60mph IAS (912S engine)

Rate of Climb: 850fpm at 60mph IAS (912 engine)

Stall or Minimum Flying Speed: 40mph CAS at MTOW / idle.

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Issue History

Issue No.		Reason and signatory
01	01/10/08	Initial Issue
02	30/04/12	Introduction of Rotax 912 engine

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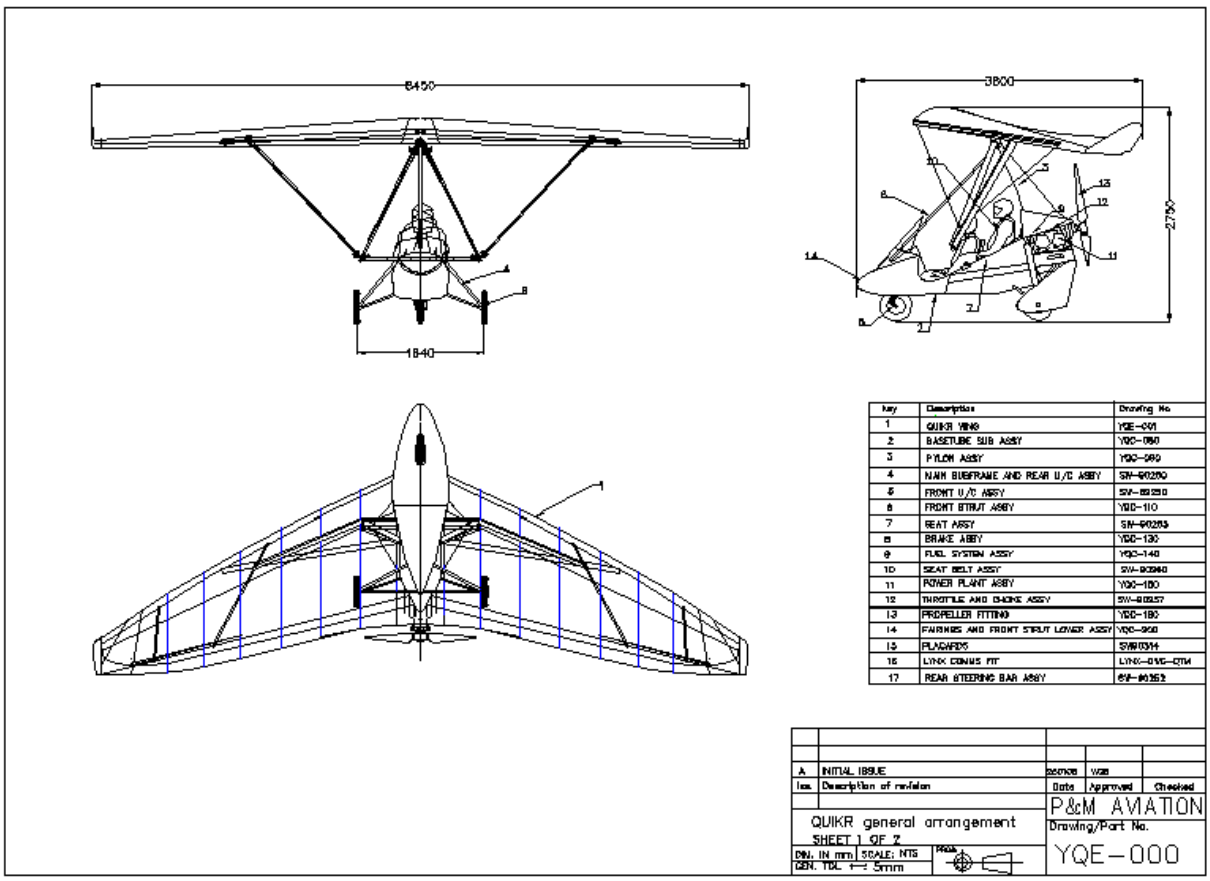
Illustration of Aircraft - 3 View



ANNEX A

MANDATORY MODIFICATIONS/SERVICE BULLETINS

Service Bulletins:

Nil

CAA Mandatory modifications:

Nil

P&M Aviation compulsory modifications:

Nil

ANNEX B

APPROVED OPTIONAL MODIFICATIONS

Mod Ref	Description	Issued
PG371	Instructor bars	03/10/02
M135	BRS Softpack Parachute	04/02/05
M137	Low drag panniers	06/04/05
M153	Landing light	31/08/05
M157	Standard GPS & Power socket	12/01/06
M218	Enigma instrument fit	21/08/08
M224	Avio LED position & strobe lights	15/10/08
M226	Rotax 912 80hp engine	07/05/09

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.

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ANNEX C

WEIGHING INFORMATION

The table below is a guide only. Empty weights include unusable fuel, full oil, electrolyte and prepared ready for flight.

ITEM	WEIGHT kg
QuikR 912S Trike	168
QuikR 912 Trike	166
QuikR wing only	52
OPTIONAL ITEMS	
POD BAG	0.76
DELUXE SEAT (1.150), ADD	0.46
50mm FRONT SEAT BOOSTER PAD	0.27
50mm FRONT S/BACK BOOSTER PAD ET	0.25
50mm REAR BOOSTER PAD	0.27
100mm REAR BOOSTER PAD	0.42
CONTROL BAR PROTECTION (2)	0.05
FRONT STRUT PROTECTION	0.04
LYNX ANTENNA	0.19
LYNX FILTER, POWER INT, PTT	0.81
INSTRUCTOR BARS	2.4
ICOM HAND HELD RADIO	0.3

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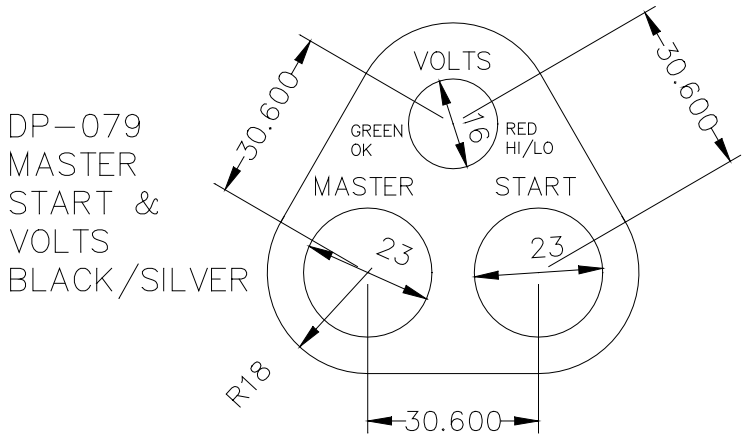
ANNEX D

EXAMPLE PLACARDS

Title	**Location**
Flight Limitations:	On basetube and wing upright
Engine Limitations:	On panel
Aircraft Weights:	On basetube
Baggage Limitations:	On baggage container
Fuel Type, Capacity and Mix Ratio:	On rear suspension leg
Fuel Cock On/Off Positions:	On seat
Ignition Switch On/Off Positions:	On ignition switch bracket
Propeller Pitch Setting:	On airbox or radiator
Hand Throttle:	On throttle unit
Wiring Loom Disconnection Warning:	On airbox or carb covers
Trimmer Setting:	On trim switch (electric trim) On trim display (electric trim)
Tip Turn Adjusters:	On leading edge tube tips
Latch Locking:	On seat next to latch
Oil Type and Quantity:	On oil cap
Propeller Pitch:	On oil cooler
Fuel Load Limitations:	In the cockpit



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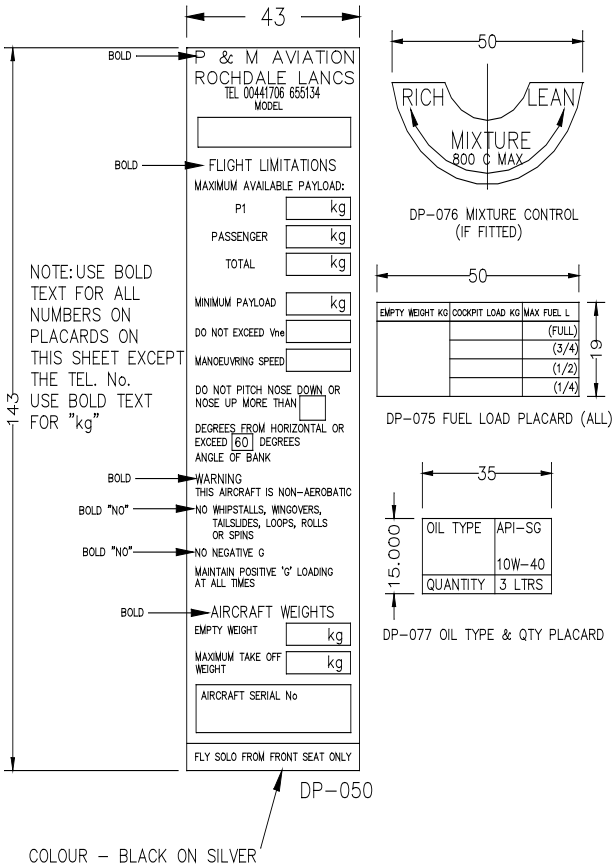
MAIN, MIXTURE, FUEL LOAD AND OIL PLACARDS



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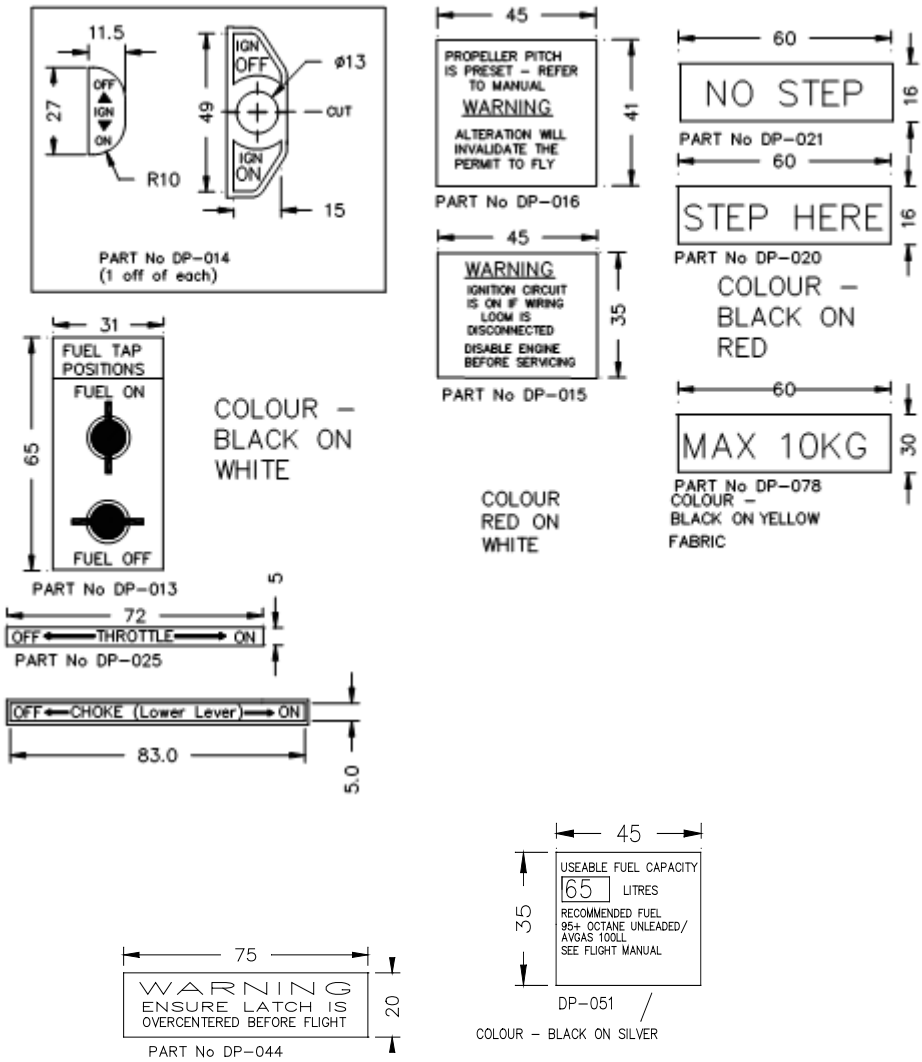
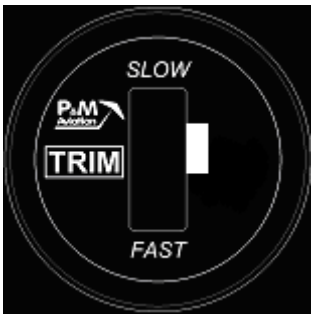
MISCELLANEOUS PLACARDS

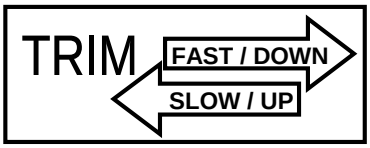
IGNITION SWITCH PLACARD IS SPLIT AND USED FOR BOTH MAG SWITCHES.



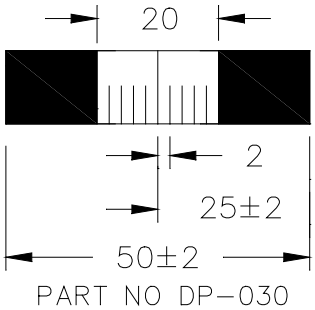


TRIM INDICATOR PLACARD

Note - Takeoff setting is slower than for GT450 or Quik aircraft



TRIM SWITCH PLACARD



WING TIPS ADJUSTERS SETTING PLACARDS