

1 Introduction

1.1 The Hang Gliding Federation of Australia Incorporated (HGFA)

The HGFA is a body constituted to administer the sports of hang gliding, paragliding and weightshift microlighting, including all derivations of these disciplines. HGFA members fly under exemption provisions contained in Civil Aviation Orders (CAO's) 95.8, 95.10, and 95.32.

The Civil Aviation Regulations and subsequent exemptions in Australia require that persons acting as pilots in command of hang gliders, paragliders or weightshift microlights must be the holder of a pilot certificate issued by the HGFA (www.hgfa.asn.au), or as an alternative in the case of weightshift microlights a pilot certificate issued by the Recreational Aviation Australia Incorporated (RA-Aus) who maintain their own operations manual (see www.raa.asn.au for details).

1.1.1 HGFA Operations Manual

This manual is agreed and approved by CASA and governs and limits our operations under the exemptions of the CAO's.

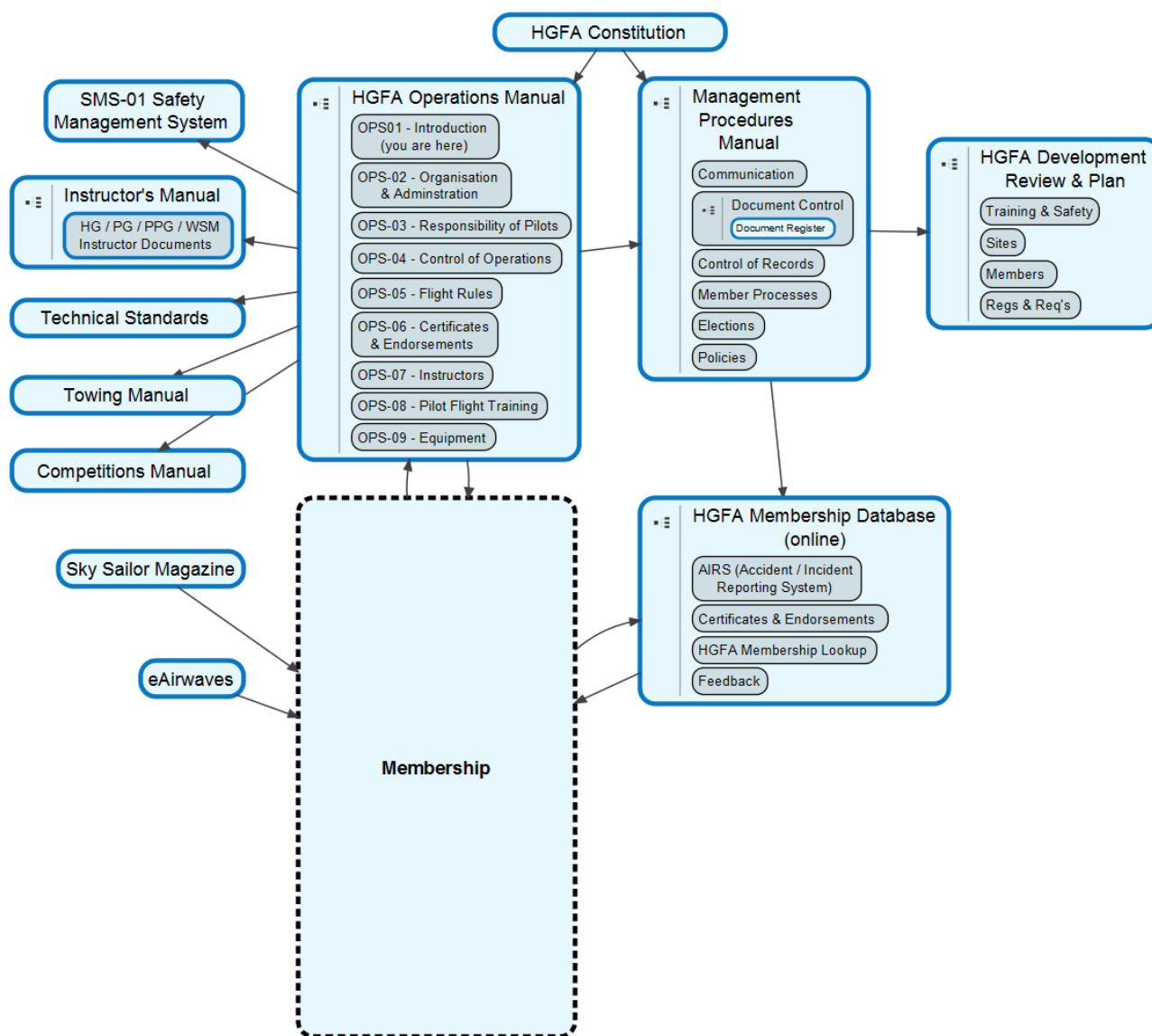
The Civil Aviation Regulations and Orders require that a pilot undergo training and is subject to the privileges and limitations specified within the HGFA Operations Manual. This manual is empowered by the CAO's, therefore non compliance with the Operations manual, means the pilot is not covered by the CAO exemptions and full aviation regulations apply.

To effectively control the safety of the sport, the HGFA has established standards for operations, pilot certification and pilot training. Operations that are not in accordance with these standards and procedures may result in breaches of the Civil Aviation Act or Regulations. The standards and any amendments are prepared by the Hang Gliding Federation of Australia and submitted for approval by the Civil Aviation Safety Authority.

HGFA members operating in breach of these standards may be disciplined in accordance with the HGFA Constitution and this Manual. Persons who breach the requirements of the CAO's or the HGFA Operations Manual may face prosecution by the Civil Aviation Safety Authority.

1.1.2 HGFA Publications

This operations manual is part of a series of Manuals and other documentation prepared by the HGFA. Other manuals, including those under preparation, are shown in the accompanying diagram.



1.2 Civil Aviation Safety Authority (CASA)

CASA is the government body established to control and regulate all aviation within Australia in accordance with the Civil Aviation Act, the Civil Aviation Regulations (CAR), and the Civil Aviation Safety Regulations (CASR). In regard to sport aviation, CASA makes the rules and the organisations apply the rules to their members. See www.casa.gov.au for more information.

The HGFA is a self-administered Recreational Aviation Administration Organisation (RAAO) approved by CASA and operates under CAO 95.8, 95.10, and 95.32. The HGFA has the responsibility of setting and applying safety and operating standards applicable to hang gliders, paragliders and weightshift microlights. The HGFA also has the responsibility to ensure that all HGFA aircraft are operated in accordance with the HGFA Operations Manual and all applicable Aviation Regulations and Orders.

1.2.1 The Civil Aviation Orders (CAO's)

HGFA aircraft are required to operate in accordance with the applicable CAR and CASR, but 3 Civil Aviation Orders exempt them from certain requirements of the CAR.

Specifically, CAO 95.8 relates to hang gliders, paragliders and powered versions of these up to an empty weight of 70kg;

CAO 95.10 relates to home-built or uncertified single-place weightshift microlights up to 300kg take-off weight.

CAO 95.32 relates to weightshift microlights, including powered paragliders & powered parachutes greater than 70kg.

The HGFA Operations Manual details the operational limits under these CAO exemptions. It also contains technical information and the procedures and instructions necessary to ensure an acceptable level of pilot training and proficiency for the safe conduct of HGFA operations.

1.2.2 Abbreviations

AIP	Aeronautical Information publication
AIRS	Accident Incident Reporting System
AFI	Apprentice Flight Instructor
ATSB	Australian Transport Safety Bureau
BAI	Biennial Airworthiness Inspection
BFR	Biennial Flight Review
CAAP	Civil Aviation Advisory Publication.
CAO	Civil Aviation Order;
CAR	Civil Aviation Regulation
CASA	Civil Aviation Safety Authority;
CASR	Civil Aviation Safety Regulations http://www.comlaw.gov.au/Details/F2012C00133
CFI	Chief Flight Instructor
CIVL	Commission Internationale de Vol Libre: the Hang Gliding and Paragliding representatives to the Federation Aeronautique Internationale (FAI).
CTA	Control Area
ERC	Enroute Chart, available at Airservice Australia
ERSA	Enroute Supplement Australia, available at Airservice Australia
FAI	Federation Aeronautique Internationale: The international body which administers sport aviation throughout the world.
FEI	Flight Experience Instructor
FI	Flight Instructor
FTF	Flight Training Facility
HG	Hang Glider
HGFA	Hang Gliding Federation of Australia
ICAO	International Civil Aviation Organisation.
IE	Instructor Examiner
IFR	Instrument Flight Rules.
IRIS	Integrated Risk Information System
LSA	Light Sport Aircraft
MoU	Memorandum of Understanding
OCTA	Outside Controlled Airspace.
OPS-n	HGFA's Operations Manual series.
PG	Paraglider
PHG	Powered Hang Glider
POH	Pilot's Operating Handbook
PPG	Powered Paraglider

Definitions

RA-Aus	Recreational Aviation of Australia
RAAF	Royal Australian Air Force
RAAO	Recreational Aviation Administering Organisation that is recognised by CASA also referred to as an Approved Self-administering Aviation Organisation (ASAO)
SAAA	Sports Aircraft Association of Australia
SASAO	Self Administering Sport Aviation Organisations Section
SDA	Specific Delegated Authority
SMS	Safety Management System
SO	Safety Officer
SSO	Senior Safety Officer
SRA	State or Regional Association
TSI Act	Transport Safety Investigation Act 2003
VFG	Visual Flight Guide
VFR	Visual Flight Rules.
VHF	Very High Frequency (Aviation)
VMC	Visual Meteorological Conditions.
VTC	Visual Terminal Chart
WM	Weightshift Microlight

1.2.3 Definitions

Accident: (in relation to all HGFA Pilots and Aircraft) An occurrence associated with the operation of an aircraft whereby;

- (a) *any person suffers DEATH or serious injury as a result of being in or upon the aircraft or anything attached to the aircraft, except when the injuries are from natural causes, are self-inflicted, or inflicted by other persons; or*
- (b) *the aircraft incurs in-flight damage or structural failure that adversely affects the structure strength, performance or flight characteristics of the aircraft and would normally require major repair or replacement of the affected component; or*
- (c) *the aircraft is missing or inaccessible*

Acrobatic Flight: manoeuvres intentionally performed by a pilot involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

Aeroplane: any power driven heavier than air aircraft.

Aircraft: any machine that can derive support in the atmosphere from the reactions of the air. The use of this term in this manual is to be read to include hang gliders, paragliders, weightshift microlights and, if applicable, other aircraft

Aircraft Log Book: either the manufacturer's log book for the aircraft, or failing that, the HGFA Aircraft Log Book, used for recording maintenance and to include separate logbooks for the engine and wing.

Altimeter Setting: a pressure datum which when set on the sub-scale of a sensitive altimeter causes the altimeter to indicate vertical displacement from that datum.

AIRS Manager: AIRS Manager Appointments are recommended by a Club or SRA, affiliated with the HGFA, to assist in the investigation of Accidents and Incidents and management of operations at sites controlled by a club or SRA.

Closely-settled area: in relation to an aircraft, means an area in which, because of:

- (a) man-made obstructions such as buildings and vehicles; and
- (b) the capabilities of the aircraft;

the aircraft could not be landed without endangering the safety of persons unconnected with the aircraft or damaging property in the area.

Commercial Manufacturer: A manufacturer of products, distributed for industry use, in large quantities.

Common Traffic Advisory Frequency (CTAF): an airband radio frequency for aircraft pilots to exchange traffic information while operating to, or from, an aerodrome without an operating control tower or within a designated area. Where established a CTAF will be included within the Enroute Supplement Australia (ERSA).

Control Area (CTA): a control area or control zone as depicted on a Visual Terminal Chart (VTC) or Enroute Chart (ERC) where control services are provided by Air Services Australia. Controlled airspace is designated as Class A, B, C, D or E.

Daily Maintenance: the replacement of component parts which require only assembly and no sewing other than hand tacking.

Direct Supervision: the detailed, on site, personal supervision and direction of pilot operations.

Duty Pilot: An experienced pilot, nominated to administer control of operations, when necessary, for and on behalf of the local club.

Engineer: refers to any qualified mechanical, structural and or aeronautical engineer appropriate to the task or assessment being performed.

Empty weight: means the actual weight of aircraft to which this Order applies in its airborne configuration including all fittings and equipment but excluding fuel and recovery or personal parachutes.

Endorsement: is an additional flight privilege issued to a certificate holder after additional training

Federation: the Hang Gliding Federation of Australia.

Free Flight: is any flight undertaken by a hang glider or paraglider which does not use an integrated motor to assist launch or maintain flight.

Flight Level: a surface of constant atmospheric pressure which is related to a specific datum, 1013.2 hPa and is separated from other such surfaces by specific pressure intervals.

Flight Operations: any flight, or intended flight in which a passenger in addition to the pilot in command is carried (or intended to be carried) in an aircraft.

Flight Time: the total time from the moment at which an aircraft first commences movement for the purpose of take off until the moment at which it comes to rest at the end of a flight.

Hang Glider: is defined in CAO 95.8 means a glider that has a maximum empty weight of less than 70 kilograms and some rigid structure.

Hard Landing: a landing made while the aircraft is experiencing an excessive rate of descent or excessive ground speed or exceeding the crosswind landing limits specified in the manufacturer's operating manual.

HGFA Operations Manual: means a manual approved by CASA that is issued by the HGFA and contains the procedures and instructions necessary to ensure an acceptable level of pilot training and proficiency and the safe conduct of HGFA operations

Incident: in relation to an aircraft, means an occurrence, other than an accident, associated with the operation of the aircraft that affects or could affect the safety of the operation of the aircraft.

Injury: means: injury not requiring medical assistance and excludes fatal or *serious injuries*.

Serious injury: is defined as any injury, other than *fatal* which –

- (a) requires hospitalisation for more than 48 hours commencing within 7 days from the date the injuries were received; or
- (b) results in the fracture of any bone (except simple fractures of fingers, toes or nose); or
- (c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- (d) Involves injury to any internal organ; or
- (e) involves second or third degree burns, or any burns affecting more than five percent of the body surface.

Instructor: a person who holds an Instructor Certificate issued by the Federation.

Integral Part: any part which would affect the safe operation of the aircraft.

Definitions

Just Culture: An atmosphere of trust in which people are encouraged to provide essential safety-related information - but in which it is also clear about where the line is drawn between acceptable and unacceptable behaviour. Sanctions applied only when there is evidence of a conscious violation or intentional reckless or negligent behaviour.

Maintenance: means any work carried out on the aircraft, and is to include:

- (a) Scheduled Servicing – hourly or calendar based
- (b) Rectification/Repairs
- (c) Modifications, and
- (d) Any Airworthiness Directives, Service Bulletins/Instructions etc.

Major Modification: any modification to a structural component or an integral part of an aircraft or control system.

Major Repair: any repair to a structural component or an integral part of an aircraft or control system.

Major Repair - Engines: in regard to a weightshift microlight means any repair in which it is necessary to split the crank case or as defined by the engine manufacturer.

Mixed Operations: where Hang Gliders, Paragliders, Weightshift Microlights or any other aircraft are operating at the same site or airstrip.

Movement area: is that part of an aerodrome to be used for the take off, landing and taxiing of aircraft, consisting of the manoeuvring areas and aprons.

Night: that period between the end of evening civil twilight and the beginning of morning civil twilight. Graphs that allow the beginning or end of daylight to be determined for a given latitude at a particular time of year are contained in the Operations Section of the Aeronautical Information Publication.

On-Site Supervision: The provision of site and conditions assessment information. This may also include, but is not limited to, the *periodic* surveillance, assessment and *advisory* correction and guidance of a pilots operations.

Paraglider: as is defined in CAO 95.8, “means a glider that has an empty weight less than 70 kilograms and has a wing that is inflated and maintains its profile in flight due to the ram-air pressure of the air through which it moves”.

Pilot Certificate: is a pilot or instructor certificate issued by the HGFA.

Pilot in Command: means: the pilot responsible for the operation and safety of the aircraft during flight time.

Student Pilot in Command under Direct Supervision: means as a student in actual control of the aircraft, under the direct supervision of an instructor either; in the aircraft or observing from the ground.

Powered Hang glider: means a framed hang-glider, if it did not have an engine attached.

Powered Paraglider: (PPG or PPC) means an aircraft with a ram air wing of any type, with an engine attached.

QNH Altimeter Setting: that pressure setting which, when placed on the pressure setting sub-scale of a sensitive altimeter located at a reference point, will cause the altimeter to indicate the vertical displacement of the reference point above mean sea level.

A pressure type altimeter, calibrated in accordance with the standard atmosphere may be used to determine altitude or flight levels when set to QNH or Area QNH.

Regular Public Transport Air Service: a service for the purpose of transporting persons or cargo for hire or reward in accordance with fixed schedules to and from fixed terminals over specified routes.

Remote Areas: means: an area designated as such by the HGFA Operations Manager. Areas that may be considered remote include those where:

- (a) no HGFA affiliated club exists; or
- (b) where the current hang gliding . or paragliding populations are sparse; and
- (c) attendance at the nearest approved HGFA Training Facility involves more than 5 hours driving in each direction.

NOTE: Remote Areas for general aviation aircraft include a large area of central Australia, south east alpine regions and western Tasmania.

Root Cause: The primary cause of an accident or incident which, when identified and eliminated, will assist in preventing or significantly reducing the likelihood of a similar reoccurrence.

Specific Delegated Authority (SDA): Authorisation given by the HGFA Operation Manager, to a member, allowing them to carry out training for and the issuance of a specific endorsement or certificate.

Standard Pressure: the pressure of 1013.2 hectopascals which, if set upon the pressure sub-scale of a sensitive altimeter, will cause the altimeter to read zero when at mean sea level in a standard atmosphere.

State or Region: the HGFA membership of each state or region.

Supervision: the periodic surveillance, assessment and correction of pilot training operations and of persons engaged in those operations.

Student Day: means one student for one day. -- A class of 4 students for 1 day equals 4 student days.

Speed Wing: PG operations that involve operating at a wing with a loading over 5KG per square meter (flat area). This loading applies to all wings including freestyle, mini wings, speed wings and acrobatic wings.

Time in Service: the cumulative times from when the aircraft leaves the ground on take-off until when it touches down on landing.

Trike: see weightshift microlight.

Trike Base: the undercarriage, seat, motor and associated components which are suspended beneath the wing of a weightshift microlight or wheel base PPG.

Visual Meteorological Conditions (V.M.C.): denotes the meteorological conditions in which the flight visibility and distances from cloud during a flight are equal to, or greater than, the applicable distances determined by the Authority under CAR1988 and published in the AIP or by NOTAM.

Weightshift microlight (or Trike): any lightweight aeroplane controlled by weight shift as defined in CAO 95.32 or meeting the requirements of CAO 95.10.

Note: Further definitions are contained in the Civil Aviation Regulations Part 1 Regulation 2.

A list of abbreviations (and definitions) used in Aviation and Meteorological publications and charts can also be found in the Aeronautical Information Publication (AIP) - General Section.

1.3 Operational Documents Register.

Current versions of these documents are available on line at www.hgfa.asn.au or by request from the HGFA office.

Manuals	
MOU-01	Memorandum of Understanding between the HGFA & RAA
OTM-01	HGFA Competition Manual
OTM-04	HGFA Technical Manual
OTM-05	HGFA Towing Procedures Manual
HGFA Safety System	
SMS-01	Accident & Incident Form
SMS-02	Student Accident Form
SMS-03	Defect report
SMS-05	Safety Management System & Management Procedures Manual
HGFA Membership Documents	
MEM-01	HGFA Membership Application
MEM-02	HGFA Visiting Pilot membership Application
MEM-03	HGFA Trainee Pilot Membership Application (green form)

MEM-04	HGFA Introductory Trial Instruction Flight Membership (pink form)
MEM-07	HGFA Release, Assumption of Risk & Warning
MEM-08	Sports Tandem Waiver
Certification	
CER-01	Student Pilot Certificate (HG/PG/PPG/WSM)
CER-02	Supervised Pilot (HG) Certificate Application
CER-03	PG2 Pilot Certificate Application
CER-04	Intermediate Pilot (HG) Certificate application
CER-05	PG4 Pilot Certificate Application
CER-06	Advanced Pilot (HG) Certificate Application
CER-07	PG5 Pilot Certificate Application
CER-08	Pilot Certificate (WM) Cross country & Formation Endorsement Application
CER-09	Flight Training progress report
CER-10	Check Flight Verification Form (Renewal HG/PG)
CER-11	Biennial Weightshift Microlight Guidelines
CER-12	WM Biennial Flight Review
CER-13	Certification Qualification Checklist
CER-14	PPG Pilot Certificate & Radio Op's Endorsement Application
CER-15	Check Flight Verification Form (VPM and Re-Joining Member
CER-16	PG3 Pilot Certificate Application
Endorsement	
EN-01	Aerotow Endorsement Application
EN-02	Ground Tow Endorsement Application
EN-03	Passenger Carrying Endorsement Application (HG/PG)
EN-04	Passenger Carrying Endorsement Application (WM)
EN-10	PPG Tandem Endorsement
EN-11	PPG Cross Country Endorsement
EN-05	Tug master Endorsement Application
EN-06	VHF Radio Operator Endorsement Application
EN-07	Motorised Endorsement Application HG
EN-08	Motorised Endorsement Application PG
EN-09	Oxygen Endorsement Application
EN-10	PPG Tandem Endorsement (Sports) Application
EN-11	PPG – XC & FF Endorsement Application
EN-12	PPG – Wheelbase Endorsement Application
EN-13	PPG – Foot Launched Endorsement Application
Appointment/Awards	
APP-01	Safety Officer Appointment Application

Definitions

APP-02	Senior Safety Officer Appointment Application
APP-03	HG & PG Proficiency Badge Application
APP-04	WM & PPG Colibri Badge Application
APP-05	FAI Observer Application
APP-06	FAI Initial Record Claim Form
APP-07	FAI Sporting Licence Application
Instructors	
INS-01	Flight Experience Instructor Certificate Application
INS-02	Apprentice & Flight Instructor Certificate Application (HG/PG)
INS-03	Instructor certificate Application (WM)
INS-04	Chief Flight instructor Certificate Application (HG/PG)
INS-05	Instructor Certificate Renewal Application (WM)
INS-06	Instructor Certificate & Passenger Endorsement Renewal (HG/PG)
INS-07	HGFA Instructor & Commercial Operators Code of Conduct
INS-09	Instructor declaration
INS-10	Microlight Apprentice Applicant Skills Appraisal Checklist
INS-11	Paragliding Apprentice Applicant Skills Appraisal Checklist
INS-12	HGFA Instructor Medical Examination Report
INS-13	Training Aircraft Maintenance Log (HG/PG)
INS-14	HGFA Instructor Manual
INS-15	HGFA Weightshift Microlight Instructor Manual
INS-16	CFI Wheelbased PPG Training Check Flight & Authorisation Application
Training Facilities	
FAC-01	Flight Training Facility Inspection Approval Application
FAC-02	Site Appraisal Check List
FAC-03	Flight Training Facility Audit Report (HG/PG/PPG)
FAC-04	Satellite Training Facility Application (HG/PG/PPG)
FAC-05	Training Aircraft Maintenance Log (pro-forma)
FAC-06	Training Facility Inspection Checklist (HG/PG/PPG)
FAC-07	Training Facility Inspection Checklist (WM)
FAC-08	Flight Training Facility & CFI Update
FAC-09	Site Appraisal
FAC-10	Flight Training Facility Audit Report (WM)
Registration	
REG-01	CAO 95.10 - Aircraft Registration Application
REG-02	CAO 95.32 – E-LSA Aircraft Registration Application
REG-03	CAO 95.32 – Type Certified Aircraft Registration Application
REG-04	CAO 95.32 - LSA Aircraft Registration Application
REG-05	Change of Registration Details
REG-06	Aircraft Inspection Guidelines 2 yearly
REG-07	Aircraft Inspection Report
REG-08	Navigation Flight Plan
REG-09	Airframe Log Book

Definitions

REG-10	Engine Log Book
REG-11	Wing Log Book
Syllabi	
SYL-01	Basic Aeronautical Knowledge
SYL-02	Flight instructors Work Book HG & PG
SYL-03	HG & PG CFI Workbook
SYL-04	Pilot Training Syllabus (HG/PG)
SYL-05 (Sup)	Supervised Pilot Training Workbook Hang Gliding
SYL-05 (Int)	Intermediate Pilot Training Workbook Hang Gliding
SYL-05 (Adv)	Advanced Pilot Training Workbook Hang Gliding
SYL-06	Pilot Training Workbook Paragliding
SYL-08	Pilot Training Workbook Weightshift Microlight
SYL-09	PPG Foot launched Training Syllabus
SYL-10	PPG Wheel based Training Syllabus
SYL-16	PPG Training Workbook – Foot & Wheel
SYL-17	PPG Cross Country Endorsement Syllabus
SYL-18	PPG Tandem Endorsement Syllabus
SYL-11	Theory Examinations - Answer Sheet
SYL-12	Theory Examinations Student- Answer Sheet
SYL-13	WM Flight Instructors Training Workbook
SYL-15	WM Pilot Training Syllabus