



How to...

How to Be a Pilot



CIVIL AVIATION AUTHORITY
OF NEW ZEALAND

Te Mana Rerangi Tūmatanui o Aotearoa



How to Be a Pilot

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Glossary

PPL – Private Pilot Licence

CPL – Commercial Pilot Licence

ATPL – Airline Transport Pilot Licence

CAA Web Site

The CAA web site has a great deal of information you will find useful.

www.caa.govt.nz



Every effort is made to ensure that the information in this booklet is accurate and up-to-date at the time of printing, but numerous changes can occur with time, especially in regard to legislation. Readers are reminded to obtain appropriate up-to-date information. Current Civil Aviation Rules are on the CAA web site.

Introduction

Flying is fun. Flying is a challenge.

To fly an aircraft capably and safely is a huge achievement, and it can be a fast, safe, and cost-effective way to travel.

Whether you want to fly a small aircraft during the weekends, or a Boeing 737 for an airline, you will follow much the same process initially. You will learn about yourself, the aircraft, the weather, the flying environment, and the rules pilots use to keep their flying safe. What kind of pilot you want to be will determine how much you need to learn.

With a Pilot Certificate you can fly a microlight, glider, paraglider or hang glider. With a Parachutist Certificate you can operate a parachute. With a Private Pilot Licence (PPL) you can fly throughout New Zealand and carry passengers, but you are not able to charge for your services. With a Commercial Pilot Licence (CPL) you can work as a pilot. With an Airline Transport Pilot Licence (ATPL) you can fly as a captain on large aircraft.

These licences are like steps on a ladder and must be worked through in the correct order. First you become a private pilot, then a commercial pilot, and finally an airline transport pilot.

There are also ratings to add to your certificate or licence. These involve learning additional skills, for example instrument flying. When you demonstrate competence on those skills you get a rating added to your flying qualifications.



The Civil Aviation Authority (CAA) regulates civil aviation in New Zealand. We establish and maintain the rules that all pilots, engineers, aircraft operators, airlines, air traffic controllers, and aerodrome operators follow to keep flying safe. We check these rules are being complied with and have the power to take action if we find that they are not. We monitor safety performance throughout the aviation community so that we can direct our safety efforts where they are needed most. We also produce safety publications and run safety training courses and seminars.

There are other organisations you will encounter as you learn to fly. Air Traffic Control and flight planning is run by Airways New Zealand. Weather information is supplied by MetService. Aviation examinations are conducted by Aviation Services Limited. The Aviation Security Service (AvSec) carries out aviation security requirements, and issues Airport Identity Cards. There are links to these organisations on the CAA web site.

A Typical Avia



**Start Learning
to Fly**

Private Pilot Licence (PPL)

Aeroplane or Helicopter

With a PPL you can:



Fly for recreation



Take non fare-
paying passengers



Learn to fly different
types of aircraft



**Airline Transport
Pilot Licence (ATPL)
Airline Captain**



Airline First Officer

tion Career Path

Pilot Certificate and Parachutist Certificate



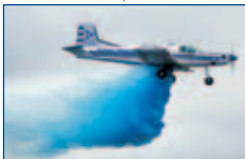
*Microlight, Glider, Parachute,
Paraglider, or Hang Glider*

Fly for recreation

Commercial Pilot Licence (CPL)

Aeroplane or Helicopter

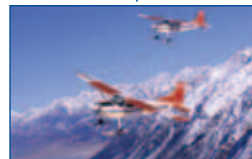
With a CPL you can fly under Visual Flight Rules and become a:



Agricultural Pilot



Flying Instructor



Scenic or
Charter Pilot

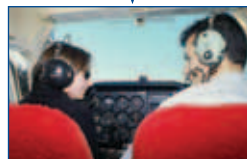
Ratings for Instrument Flying and Turbine Powered Aircraft

Aeroplane or Helicopter

With these you can become a:



Rescue or Air
Ambulance Pilot



Instrument Rating
Instructor



Charter, Scheduled,
or Freight Pilot

Getting Started

You can fly right now. Most people's first taste of flying is a trial flight at their local aero club or flying school.

A trial flight usually lasts about 20 minutes. You will sit in the pilot's seat and be given your first lesson by a flight instructor. You don't need to know anything about flying to take a trial flight, and there is normally no obligation to continue with lessons.

Throughout your training you will not be asked to attempt anything you are not ready for. There is no need to own an aircraft. There are about 100 aero clubs and flying schools around New Zealand that operate aircraft and employ flight instructors. You can hire these aircraft with an instructor at an hourly rate while you are learning, and hire them to fly solo when you have reached that stage. You usually pay only for the time the aircraft is taxiing and flying.

Some flying schools focus on professional training, while others have a recreational

focus in a 'club' atmosphere. It is a good idea to shop around and choose the training organisation that best meets your needs. If possible, ask other pilots from a variety of training organisations about their flying experiences.

What Does it Cost?

The cost of learning to fly varies between training organisations. It can vary with a number of factors, including the type of aircraft and location. The cost of flying also changes in response to fuel prices and inflation.

It is best to contact a range of flight training organisations to find out the latest costs and compare their prices to the services and facilities they provide.

It is important not to judge your choice of training organisation solely on cost. You should also look at how each organisation can help you achieve your ultimate goals. An aspiring airline pilot has different training needs from an aspiring agricultural pilot, or an aspiring tourist sightseeing pilot who will be flying in mountainous terrain.



As well as the cost of flight training, there are costs for the medical examination, theory examinations, and flight tests. All of these need to be taken into account in planning your flight training programme. Your flight training organisation should help you with this.

Recreational Flying

There are numerous options for recreational flying, such as microlighting, gliding, parachuting, hang gliding, and paragliding. These aviation activities are governed by the Civil Aviation Act and Rules, but the day-to-day administration is carried out by organisations certificated for that purpose by the CAA.

To fly one of these aircraft you will need to gain a Pilot Certificate or Parachutist Certificate issued by one of the organisations holding a Part 149 certificate relating to the aircraft type.

To be issued with a Pilot Certificate you must:

- Be at least 16 years of age to hold a full certificate
- Hold a medical declaration issued by your General Practitioner
- Pass written examinations
- Pass a practical flight test.

It can typically take around 40 hours flying to become competent and gain your Pilot Certificate. This allows you to fly privately, under Visual Flight Rules (VFR), by day. If you want to carry passengers you require a passenger rating.

All the requirements are included in the Operations Manuals of the various organisations. You can see these on their web sites, as well as information about the location of branches or clubs.

To find aviation recreation organisations, see “To Learn More” on page 15.

Becoming a Private Pilot

Most pilots in New Zealand hold a PPL. There are about 4000 private pilots who fly many different types of aircraft.

A Private Pilot may not be paid or rewarded to fly, and may not fly an aircraft that is being operated for hire or reward.

You can start learning to fly an aircraft at any age, but you may not fly solo until you are 16 years old. You can hold a Private Pilot Licence when you are 17 years old.

You can hold a Private Pilot Licence when you are 17 years old.

To gain a PPL, you must complete several steps, including practical flying and written examinations. The first step is a medical examination.

Medical

Private Pilots must pass a Class 2 medical examination. This examination can only be carried out by designated Medical Examiners. Your aero club or flying school will provide you with a list of these doctors in your area, and they are listed on the CAA web site. During the Class 2 medical, your past medical history and current medical status will be assessed. Additional investigations may be requested. It is a good idea to talk to a designated medical examiner prior to your appointment, as they will be able to explain this in greater detail.

If you are unable to pass your medical examination, you can continue to fly with

an instructor, but you cannot hold a PPL. So to avoid possible disappointment, it is a good idea to make sure that you obtain your medical certificate before beginning flight training.

If you are aged under 40, you must renew your medical every five years. If you are over 40 your medical lasts for two years.

Fit and Proper Person

The Civil Aviation Act 1990 requires the holder of a PPL (and other aviation documents) to be assessed as a “fit and proper person”. To be considered a fit and proper person to hold an aviation licence you must, among other things, have demonstrated an acceptable respect for the law, such that the Director may have confidence in your ability to fly within the Civil Aviation Rules.

When you apply for your licence, you must provide the Director of Civil Aviation with information to make this assessment. There is information on the applicable CAA forms to guide you through the process. It can take some time to get the information required

to accompany your application, and your flight training organisation should advise you when to start this process. As with the medical certificate, it is a good idea to make sure you qualify as a Fit and Proper Person before beginning flight training, to avoid possible disappointment.

You are required to remain a “fit and proper person” person throughout the operating life of your licence.

Flying Lessons

You will learn to fly progressively. Early lessons cover the basics, like controlling the aircraft in straight and level flight. The structure and sequence of lessons creates a building block process, where previous learning is reinforced and developed in succeeding lessons. Eventually you will cover everything you need to be a capable and safe pilot.

Learning about the flying environment, and your aircraft, is part of being a safe and competent pilot.



Most students will fly solo for the first time after about 10 to 15 hours of flying lessons. A PPL requires a minimum of 50 hours of flying, but many students have about 60 to 70 hours before they are ready to sit the flight test.

It is possible to exclude the cross-country training and obtain your PPL with a restriction that limits you to flying near the aerodrome

at which you trained. This restriction can be removed later by completing the cross-country training. Your aero club or flying school will discuss these options with you.

Each flying lesson typically lasts about 40 minutes. Your instructor will usually give you a briefing before the flight so you will know what to expect and what is required of you. A debriefing after the flight helps to consolidate what you have learned.

You must log every flight. Your aero club or flying school will sell you a pilot logbook to record the date of each flight, the aircraft type and registration, the name of your instructor, the length of your flight, where you went and what you did. You can take your flying lessons as frequently as time and finances allow, but it is advisable to plan for regular sessions. One lesson every week or 10 days will ensure cost effective training.

Private Pilot Licence Examinations

The six PPL examinations are set at about the same level as Secondary School examinations. Learning about the flying environment, and your aircraft, is part of being a safe and competent pilot. Your aero club or flying school will help you prepare for these examinations.

You do not have to pass these examinations before you begin your flying lessons, but it is advisable to plan for



them with your instructor, as the exam credits are valid for a fixed period. All the examination passes are required before you can fly a solo cross-country flight.

From March 2008 there will be an English language proficiency test.

Air Navigation and Flight Planning

You will learn to calculate the distance of your planned flight, what compass headings you will need to fly, how long it will take you, and how much fuel you need to get there. You will also learn to use maps that are specifically designed for aviation.

Aircraft Technical Knowledge

Understanding how your aircraft flies, and its systems, enables you to make safe flying decisions. As a trainee pilot, you will learn about aerodynamics, engines, electrical systems, flight instruments, and loading your aircraft. Helicopter pilots and aeroplane pilots sit different Aircraft Technical Knowledge exams.

Meteorology

The weather has a major bearing on your flying. Often flights will be cancelled or delayed because of the weather. You will learn about New Zealand's weather patterns, about cloud formations, and about how different weather conditions affect the performance of the aircraft. With this knowledge, you will be able to develop decision-making skills essential to safe flying.

Human Factors

Human error is one of the most common causes of air accidents worldwide. It is important, therefore, to understand the human element in aviation. Areas of study include: aviation medicine and health, stress management, and decision-making.



Flight Radiotelephony

Pilots keep in contact with air traffic controllers, and with each other, by radio. As a trainee pilot, you will learn the terms and phrases pilots use to make these communications clear and free from misunderstanding. You will also learn how to operate your aircraft's transponder and emergency locator beacon.

Air Law

Everyone in aviation follows the same set of standards when they are flying. These standards are set out in the Civil Aviation Rules. As a trainee pilot, you will develop a working knowledge of many of these rules.

Licence Issue

When you have gained your medical certificate, passed all the exams, have the required flying experience and can demonstrate the competency standards, you will be ready to sit a flight test. Once you have passed the flight test, you can apply to the CAA for the issue of a PPL.

Keeping Your Pilot Licence

Getting your pilot licence is only the first step.

To keep it current you must have carried out at least three takeoffs and landings in the preceding 90 days in the aircraft types that you wish to fly.

Every two years, you will need to carry out a Biennial Flight Review (BFR). This involves demonstrating to a flight instructor that your knowledge and flying skills are still maintained at the required standard for the type of licence you hold.

A BFR will also ensure that you remain up to date with the current operating environment. As well as the BFR, many people continue to have occasional refresher flights with an instructor.

Before gaining your PPL, it is advisable to plan your flying beyond the initial issue of your licence. Budgeting for sufficient funds to allow you to fly often enough to remain both current and competent will help you retain your licence.

Ratings

Once you have your pilot licence you can develop many more skills.

You can take specialist training in mountain flying, formation flying, competition flying, or night flying. While not formalised with a rating, this training is usually recorded in your log book.

You can also train for, and gain, additional qualifications called ratings. Examples are: aerobatic rating, glider tow rating, and parachute drop rating. Remember that you cannot be paid or rewarded to fly with a PPL, so many ratings are more applicable to CPL holders.

Aircraft Type Ratings

Pilots are only permitted to fly the aircraft for which they hold type ratings. When first learning to fly, you will take lessons in the same type of aircraft.

Once you have your pilot licence, you may choose to learn to fly other types. New Zealand pilots are lucky to have access to a wide range of aircraft types that

are available for training. These include graceful old biplanes and some 'warbirds'. Gaining a rating in a new aircraft involves practical conversion flying lessons and some study of your new aircraft's systems and performance. This is usually followed by a final handling competency demonstration to an instructor.

Becoming a Commercial Pilot

Many very experienced pilots in New Zealand are content to fly simply for fun. To work as a pilot, you must hold a CPL. There are about 3600 pilots with a CPL in New Zealand.

Commercial Pilots can be paid to fly. They may fly as pilot-in-command on aircraft with only one pilot, or as a co-pilot on a multi-crew aircraft. You can hold a Commercial Pilot Licence once you are 18 years old.

The CPL includes both theoretical and practical training. The first step is your medical certificate.

Medical

Commercial pilots must pass a Class 1 medical examination. This has more requirements than the Class 2 examination for a PPL. During the Class 1 medical, your past medical history and current medical status will be assessed. Additional investigations may be requested. It is a good idea to talk to a designated medical examiner prior to your appointment.

Your aero club or flying school can provide you with a list of designated medical examiners in your area, and they are listed on the CAA web site.

It is a good idea to obtain your medical certificate before beginning flight training for a CPL in order to avoid possible disappointment.

A Class 1 medical certificate must be renewed annually if you are aged less than 40. For single pilot air operations carrying passengers, renewal is every six months if you are 40 and over.

You can hold a Commercial Pilot Licence once you are 18 years old.

Flying

To be a commercial aeroplane pilot you must have completed a minimum of 200 hours of flying training before you are eligible to sit your flight test. Many people, however, do not sit this test until they have about 215 to 230 hours.

To be a commercial helicopter pilot you must have a minimum of 150 hours of flying training, before you are eligible to sit your flight test.

New Zealand has many aero clubs and flying schools that offer different aircraft types and training environments.

Some schools teach commercial pilots in full-time courses that involve integrated flight and theory training. Others provide an 'on demand' training process where you



can train for your CPL in your own time, advancing as you can afford the lessons.

It is advisable, however, to maintain a regular training programme to progress efficiently. This needs to coordinate theory examination passes and their validity periods with relevant flight training requirements. A personalised training programme can be planned with your instructor.

You should talk to several training organisations and choose the package which best suits your needs and goals in aviation. Your commercial flight training will follow a

set syllabus and will include cross-country flying and instrument flying. You will be expected to meet a higher standard than for your PPL.

Commercial Pilots must pass examinations in Air Law, Flight Navigation General, Meteorology, Principles of Flight and Aircraft Performance, General Aircraft Technical Knowledge (Aeroplane or Helicopter), and Human Factors.

Examinations

Commercial Pilots must pass examinations in Air Law, Flight Navigation General, Meteorology, Principles of Flight and Aircraft Performance, General Aircraft Technical Knowledge (Aeroplane or Helicopter), and Human Factors. These are similar to tertiary level examinations.

From March 2008 the English language proficiency test will be required if not passed beforehand.

CPL Issue

When you hold a current Class 1 medical certificate, have passed the CPL examinations, have the required flying experience, and have passed the practical flight test, you can apply to the CAA for the issue of a CPL.

You can now seek employment as a pilot, but you may only fly under Visual Flight

Rules (VFR). This means that you must be able to see the surface to navigate – you cannot fly in cloud. Possible careers include VFR charter, scenic flying, and agricultural flying.

When employed as a CPL you will have ongoing competency checks at least annually to ensure that you are flying to the required standard.

The next step for many CPL pilots is to gain a number of ratings that will give them more qualifications and opportunities to work as a pilot.

Ratings

As well as ratings such as the Flight Instructor Rating, many CPL holders will want to obtain an Instrument Rating, and a Basic Gas Turbine qualification.

Becoming a Flight Instructor

Once you are a commercial pilot, you can do further flight training and study to become a career flight instructor. Newly qualified flight instructors are called C-category instructors. As a C-category instructor you may teach trainee pilots,



although you will work under the supervision of an experienced instructor. There are several aero clubs and flying schools that offer C-category instructor training.

Agricultural Rating

To gain an agricultural rating you must complete a course of ground and flight training, and pass a flight test.

Instrument Rating

If you want to expand your employment options with a view to becoming an airline pilot, you will need an Instrument Rating. This allows you to fly in cloud, navigating with reference to the aircraft instruments. Possible careers include freight and charter operations, or you can fly for an airline.

Type Rating on Gas Turbine Powered Aircraft

Airlines, some freight or charter companies, helicopter, parachute, and agricultural companies, operate aircraft that are powered by gas turbine engines.

These are different from the piston engine aircraft you will train in. In order to fly a turbine-powered aircraft you will need to pass a Basic Turbine Knowledge examination. This is a prerequisite of a type rating in your first turbine-powered aircraft.

In order to progress to being an airline captain, you can work towards your ATPL.

Becoming an Airline Transport Pilot

To apply for an ATPL, you must be 21 years old, hold a current instrument rating, and have 1500 hours total flight time in an aeroplane, or 1000 hours in a helicopter. You must also pass seven written examinations and a flight test with a flight examiner.

When employed as an airline pilot, you will have ongoing competency checks to ensure that you are continuing to fly to the required standard.



To Learn More

To find out more, contact your local flight training organisation. To find them, check the Yellow Pages, aviation magazines, or search the world wide web. It is a good idea to talk to pilots and ask about their experiences.

You can find lists of Part 141 certificated training organisations, and Part 149 aviation recreation organisations, on the CAA web site. Click on “Index” and “Certificated Organisations”.

The requirements for becoming a pilot are contained in the Civil Aviation Rules, and the examination syllabuses are in the Advisory Circulars (ACs). Rules are divided into “Parts” and Part 61 is titled “*Pilot Licences and Ratings*”. All Rules

and ACs are available free on the CAA web site. The Part 61 Rules and ACs detail what you will be examined on, as well as the flight experience that you will need to accumulate for each pilot licence. There are also Flight Test Standard Guides detailing the assessment factors used by instructors and examiners.

The CAA produces a number of free booklets that will help you as you learn to fly. You will see these at your flight training organisation, and they are on the CAA web site. *How to Navigate the Rules* is one you might like to read quite soon, as it will give you an overview of the aviation system in New Zealand. You can also request these booklets by email from info@caa.govt.nz.

www.caa.govt.nz





How to...



PO Box 3555
Wellington 6140
Tel: +64 4 560 9400
Fax: +64 4 569 2024
Email: info@caa.govt.nz

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See our web site, www.caa.govt.nz, for details of more CAA safety publications.