

An important aspect of any flight away from home base is thorough flight planning. Having a well thought-out plan before you get airborne will help you enjoy the flight, arrive refreshed and return alive.



Even if you are going somewhere familiar, having some key details worked out beforehand, and then getting the most up-to-date weather and NOTAMs, is a must.

BEFORE THE FLIGHT

Begin pre-flight planning several days in advance.

- ▶ Study the applicable charts and plan the route. Then plan for alternatives.
 - ▶ Refamiliarise yourself with the AIP and your legal requirements.
 - ▶ Check the weather forecasts.
 - ▶ Seek out some local knowledge on the routes and destination.
 - ▶ Ask yourself whether the proposed flight is within your capabilities? Update your personal minimums to reflect your currency levels.
 - ▶ Brief your passengers about the realities of flying in light aircraft.
- ▶ If you are taking the aircraft away from home base, check if there are enough hours left on it to complete your flights.
 - ▶ Know your aircraft and its systems. Are you familiar with the systems fitted to the aircraft?
 - ✦ VHF radio/s
 - ✦ GPS
 - ✦ Navigation aids (know how to use them for tracking)
 - ✦ Autopilot (if fitted)
 - ✦ Transponder (if fitted)
 - ✦ TCAS or TCAD (if fitted)

PLANNING THE ROUTE

While the shortest distance between two points is a straight line, this may not be the safest, or the wisest, route when flying. By all means draw the straight line on the chart, but then think about:

- ▶ what terrain you are flying over;
- ▶ airspace you are flying through;
- ▶ aerodromes you are in the vicinity of;
- ▶ the weather that will affect your flight – especially cloud; and
- ▶ likely traffic.

Then consider a practical route which takes into account these factors.

Think about the best way to depart the airfield and arrive at your destination. It may be that you can't go straight there – you may need to go via reporting points (VRP), for example. Plugging the VRPs straight into your GPS has advantages, but consider how many other people are doing exactly the same thing. Be particularly careful when arriving exactly overhead VRPs for this very reason.

ALTERNATIVE ROUTE

While in this preliminary flight-planning phase, you should make provision for at least one other safe alternative route – a plan 'B'. In planning this alternative route, take the same level of care as you do with your primary route. Having a well-researched plan 'B' takes a lot of pressure off if the weather deteriorates and you have to use it.

FLIGHT LOG

Prepare a flight log with as much relevant information as you can: legs, distances, tracks, airspeed, cruising altitudes, radio frequencies, fuel, and so on. You can fill in a lot of information beforehand, and then finish the calculations, once you have the up-to-date weather on the day.

- ▶ On your flight log, make a note of each enroute ATC VHF frequency and a change over position or time.
- ▶ Make a note of all CTAF & CTAF/R frequencies en route
- ▶ Make a note of the frequencies of all on-track (and off track) navigation aids.

CONSIDER THE AIRSPACE EN ROUTE

- ▶ Ensure that you apply the correct tracking tolerances to avoid controlled or restricted airspace. (AIP ENR 1-1. PARA 19.11)
- ▶ Controlled airspace – vertical and horizontal clearance
- ▶ Restricted airspace – is it active? Check ERSA & NOTAMs
- ▶ CTAF/Rs – are you overflying or passing in the vicinity of one? (CAR 166A)

FUEL

Will you need a refuelling stop on the way? If you do, allow plenty of time for this, as invariably it will take far longer than you think to refuel, let the passengers out for a toilet break, and then get them back into the aircraft.

- ▶ Check that fuel (suitable for your aircraft) is available at your planned fuel stops
- ▶ Is there a call-out fee?
- ▶ Can you use a credit card?
- ▶ Do you need a CARNO?

FUEL RESERVES

- ▶ Allow for taxi fuel
- ▶ Consider applying the recommended fixed & variable fuel reserves (CAAP 234)
- ▶ Plan for alternate and any required holding fuel (INTER or TEMPO)
- ▶ In flight, lean the fuel mixture in accordance with the flight manual.

STUDY

Now turn your attention to studying the *AIP*. It is important that you check the *AIP* and the applicable sections of the *AIP* supplements to determine if there is any information that might affect your flight. Don't just rely on getting the area NOTAMs on the day, as they are not the sole source of all temporary aerodrome and airspace information.

LEGAL REQUIREMENTS

AIP ENR 1-10 paragraph 1.1 essentially says that, before a flight, the pilot-in-command must obtain and become familiar with, all

information concerning that flight, including:

- ▶ current meteorological information;
- ▶ fuel requirements;
- ▶ alternatives available;
- ▶ NOTAMS and supplements;
- ▶ aerodrome conditions;
- ▶ aircraft performance data;
- ▶ and in the case of twin-engine aircraft –
- ▶ engine inoperative procedures; and
- ▶ one engine inoperative performance data.
- ▶ Brief yourself on your other requirements, for example: fuel reserves, cruising altitudes and VFR met minima.

CHECK THE WEATHER

Take a look at the long-range forecast to get an idea of whether the flight is feasible.

TALK TO A LOCAL

It can be worth getting some local knowledge on the area or your route (including aerodrome information) well before the trip. Most local operators are very happy to provide information and will probably offer you plenty of other advice and tips.

PERSONAL MINIMUMS

Think about visibility restrictions, terrain, possible turbulence, and the effects of these on your workload, and handling of the aircraft – and you will realise why it is important to set personal minimums.

Personal minimums take into account a wide range of criteria, particularly pilot, aircraft, environment and external pressures. They are an invaluable tool in assisting you to decide if a particular situation (route, weather, aircraft type, etc), is within your personal limits.

When you are working out how long it will take you to get ready and airborne on this flight, allow some time to go through the 'I'M SAFE' checklist.

BRIEF YOUR PASSENGERS

Discuss the vagaries of light aircraft trips with your passengers, in particular:

- ▶ Departure and arrival times cannot be guaranteed – the weather may have other plans.
- ▶ The weight of baggage they can bring is limited – anything over their limit will be left behind.
- ▶ Turning back, taking an alternative route, or diverting, is always a possibility.
- ▶ What your contingency plans will be if you are delayed, diverted, or have to cancel.

ON THE DAY

Allow plenty of time on the day to be sure that final pre-flight preparation is not rushed, and be realistic about the time you need to plan, get your passengers ready, and any intermediate stops en route.

- ▶ Obtain the most recent weather and NOTAMS and check them carefully. If in doubt, discuss the conditions with a more experienced pilot.
- ▶ File a flight plan.
- ▶ Make sure the aircraft has all the equipment you will need for the whole time you are away:
 - ✦ Tie-downs;
 - ✦ Fuel card;
 - ✦ Control locks;
 - ✦ Spare oil;
 - ✦ Lifejackets and survival equipment;
 - ✦ Something to clean the screen with.

There is a real danger in focusing on the *gain* of reaching your destination compared with the *losses* associated with not going, or turning back. For example, extra costs, missed appointments, disappointed passengers, etc. Don't fall into this trap – look for the *gains* from the alternative action – being alive and safe with an intact aircraft (with probably very relieved passengers), having avoided the potential major *loss* (and cost) of bent metal, injuries, or worse.

WEATHER

You must obtain the most up-to-date weather before your flight. Weather issued on the morning of an afternoon flight is good for assessing the trends, but should be updated. It is equally important to devote a generous amount of time to weather interpretation – especially when conditions are borderline – so that you can consider how the conditions might affect your flight. Using a highlighter pen to mark the key points as you read the forecast is useful.

There are two distinct steps you need to follow when looking at the weather and deciding if it is good enough for your flight.

Firstly de-code the weather briefings, making sure you look up any codes you don't recognise (the GEN section of the AIP, the Bureau of Meteorology and Airservices Australia

websites, and the weather interpretation card, all have information to help de-code aviation weather forecasts).

Secondly, build a mental picture of what the weather forecasts and reports are saying, and how this will affect your flight. Be honest with yourself when trying to form a picture of what is happening. If you're not sure, ask someone who has more experience to help you.

If you decide to proceed with the flight – with the intention of seeing what the conditions are like – do it only on the basis that you will divert or turn back when they surpass a specified value (e.g., 'I will divert or turn back if the visibility and cloud base deteriorates below X').

If you do not feel comfortable with the conditions, it's time to tell your passengers the flight is off. Making such a decision requires a fair amount of personal discipline, but this can be made considerably easier by having a robust set of personal minimums to guide you.

NOTAMS

Having the latest NOTAMS is very important.

Read the NOTAMS carefully – highlighting the ones that will affect your flight.

TALK TO A LOCAL

If the weather conditions on the day are approaching your personal minimums, call the local operator(s) again, to gauge their assessment of the conditions en route and at the destination.

FILE A FLIGHT PLAN

We highly recommend you file a flight plan, or at a minimum organise your own flight following service. Tell someone where you are going and when you are planning to get there. Provide written instructions on what, specifically, to do if you don't check in with them by a certain time. If you are asking a family member to complete this task, be aware that the stress of you not checking-in could make this very difficult for them.

Filing a flight plan will ensure that someone will miss you if you don't arrive, so that search and rescue operations can start immediately. Equally, when you have filed a flight plan, remember to amend the SARTIME, or terminate the flight plan when you do arrive safely.

DON'T FORGET TO CANCEL SARTIME

Contact CENSAR on 1800 814 931

SARTIME is the time nominated by a pilot for the initiation of a search and rescue action if a report has not been received from the pilot by the nominated Airservices Australia unit. Although you don't have to submit a SARTIME, it makes sense to let someone know where you're going, and when you're planning on getting there.

Your SARTIME is logged with the centralised Airservices database – CENSAR. If a flight is over the designated SARTIME, the first step is for



ATC to put out calls to aircraft in the area, to keep a lookout for the missing plane. Fifteen minutes after the SARTIME has elapsed, the information goes to AUSSAR, and a formal search is initiated.

Why should I cancel it?

The majority of searches happen because of failure to cancel SARTIME, leading to a massive waste of time and resources. It's easy to lodge SARTIME, and then at the end of a flight, become distracted with all the necessary checks and procedures, and forget to cancel SARTIME.

So, to cancel your SAR, contact CENSAR on 1800 814 931.

IN THE AIRCRAFT

Gather your kneeboard with the completed flight log, your pre-folded charts, any aerodrome pages you could need, and any other useful information. Arrange them so that you have them nearby, and in the order you will need them.

An important part of in-flight management is to review the situation continually, and update alternatives during the flight. For example, reviewing the cloud base in relation to enroute terrain, or reviewing surface wind conditions at the destination, are important points to consider. Even if the weather ahead seems fine, you must always maintain an awareness of what the weather is doing behind you, and

be able to recognise when the conditions are about to fall below the limits you've set.

GOOD TIPS

- ▶ Draw 10 nm rings around airfields you will pass nearby, so you will know whether your track takes you into their area, and you need to speak to them on the radio.
- ▶ Use a highlighter pen to mark relevant weather and NOTAMs.
- ▶ Put 10 nm distance markers along the track line to help you keep track of time and distance travelled, distance from/to features, and drift.
- ▶ Draw wind vectors on your chart to remind yourself of the general flow.
- ▶ Prepare groundspeed checks along your track. By choosing easily identifiable features there is more chance you will remember to do them, and they will be more accurate.
- ▶ Mentally note a reciprocal compass heading just in case you need to turn back.
- ▶ Always have an alternate aerodrome in mind – and sufficient fuel to get there.
- ▶ Avoid flying close to aerodromes unless you need to, as they tend to be the busier airspace.

FOR MORE INFORMATION

NOTAMs & meteorological information

NAIPS (Airservices Australia) www.airservicesaustralia.com/brief
AvFax (ERSA: En Route Supplement Australia)

Met only

Bureau of Meteorology website (www.bom.gov.au) and go to 'Aviation Services' DECTALK (ERSA)

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