

Clued^{up}

SAFETY MATTERS FOR GA PILOTS • SPRING 2021



TIME TO GET GOING

It's been a long pause, but now we can return to flying again

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Tips to help you get safely back in the air

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MY FIRST FLIGHT

The joy, the pleasures - and the nerves...

LICENCE LOWDOWN

What you need to know

THE SKYWAY CODE

“As an aerobatic display pilot I really value the accessibility and helpful reminders of the SkyWay Code; it is a one-stop shop for everything you need to consider before you brief and head out to your aircraft to go flying. I encourage all pilots to take the time to read through this free online document.”

Kirsty Murphy

Blades Aerobatic Display Pilot and former Red Arrow pilot

The SkyWay Code provides practical guidance for GA pilots, students and flight instructors on operational, safety and regulatory issues relevant to their flying.

Download your copy at: www.caa.co.uk/skywaycode



A SAFE RETURN TO THE SKIES



As Spring officially started on 19th March this is also the time of year when the weather starts to become less unpredictable and taking flight is more manageable than in the winter months. However it is still important to heed unexpected weather changes at this time of year before, hopefully, the summer sunshine and warmth returns.

For some members of the UK General Aviation community it will have been many months since your last flight and with this in mind, we have pulled together what we hope to be a useful resource. Sharing safety information and highlighting specific and relevant topics to you to aid your safe return to the skies.

Not only are there aviation safety considerations but health considerations too. Although lockdown restrictions are easing the threat of coronavirus is still with us and it is important that when planning a return to flying, be that solo or with an instructor, attending a flying school, or even just being in the hangar that we are all aware of keeping a distance and wearing PPE where appropriate to do so and in line with government guidance.

Sophie O'Sullivan,
Acting Head, General Aviation Unit

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Publication content

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ARE YOU REALLY UP TO SPEED?



While straight forward flying skills will still be there after a long break, others might well have become eroded

You never forget how to ride a bike' might be a truism, but if you haven't ridden one for a while there's usually a bit of wobbling, and if you're really unlucky and take a fall you can simply dust yourself down and get back on again. It just takes a little time and practice to get back on the saddle.

You could say flying an aircraft after a long break is similar — a bit wobbly to start with while you get the knack of it again, but the difference of course is that you can't afford to be wobbly and fall over...

Of course one doesn't forget the basics; the control column/stick moves the elevator for pitch changes, the ailerons provide roll for turns and the rudder pedals make the aircraft yaw. But hang on, what about the secondary effects of aileron and rudder, how's your co-ordination? Plus, there's the throttle, trim, flaps, and many other controls. Yes practice, as with riding a bike, is required to get the accuracy back which would be relatively easy if there wasn't everything else to think about...

The thing is there are other aspects that account for most people's rustiness. While muscle memory tends to remain for a long period, with time out of the cockpit mental skills and agility get a bit jaded. Judgement, the ability to anticipate and react quickly have deteriorated. So, coping with high workloads, distractions and the unexpected can be stressful which, while concentrating hard on physically flying the aircraft, can lead to other issues.

'There's no shame in feeling a bit rusty, quite the contrary'

There's no shame in feeling a bit rusty, quite the contrary, it's a sign of good self-awareness. Personally, I flew last year on March 6, 2020, the next time following the first lockdown was May 28, almost three months later, the longest gap in my 50 years of flying. As an instructor I had

always flown regularly and it used to feel a bit strange after a rare break of three or four weeks, but after 12 weeks?

Was I nervous? Not really, but I was apprehensive and cautious. I thought through and double-checked all I could; what I was going to do on the flight, a close check of the weather, Notams, aircraft documents etc and I took twice as long doing my checks; Once airborne, I remained vigilant over lookout, the usual in-air checks and radio calls and listening-out.

So from that you'll gather that even instructors have their moments after a long lay-off. Following my return to flying I was fortunate to do a couple of maintenance trips for the flying school in June, including an away landing, and by the time I returned to instructing in late July I felt relatively current and comfortable, but I certainly wasn't complacent. Since then, we've had the November lockdown, plus a winter with poor flying weather and now a third lockdown of a further three months.

For many private pilots, and probably the



majority, this means there hasn't been a lot of flying over the last 12-plus months. If you were lucky enough to start getting back into the air last autumn, further breaks will have probably put you back to square one and possibly even deepened the layer of rust which, unless you look in the mirror and ask the following questions, you might not recognise or even realise.

- Is the level of my airmanship and awareness up to a safe standard?
- When did I actually last fly, when did this aircraft last fly?
- Have I thought through the whole flight properly?
- What are the gotchas? (airspace changes, weather, Notam, nav warnings)?
- What am I going to say over the radio, what is the correct phraseology?
- Have you considered all the possible threats and how you are going to manage them, in other words are you properly prepared to get back in the air again or are you just going to 'kick the tyres and jump in and go' and potentially end up a statistic? It's

not just you you're putting at risk but others as well.

Like me, you can help yourself get over the hurdle of returning to flying after a long break – How? By being properly prepared — and don't be embarrassed about seeking a word or two of advice from an instructor or, even better, arrange to have one or more flights with him/her first.

Ever wondered what others get wrong even without the complications of lockdowns? As instructors we've seen a whole range of errors while carrying out currency check flights to get pilots safely back up to speed, whether pre- or post-COVID-19 and believe me, we've seen it all.

Rushing checks even when using a checklist items get missed, resulting in taxiing out with the flaps still down for example; not checking the airfield map first to see where to go so taxiing the wrong way and almost entering an active runway if the instructor hadn't intervened.

At the holding point pilots have missed power checks and gone straight to the vital actions; on take-off we've seen incorrect use of controls; yes keep it straight with the rudder, but what about using the ailerons to account for the crosswind?; not checking engine instruments during the take-off roll (what is the minimum RPM required?); are you mentally prepared to abandon the take-off?

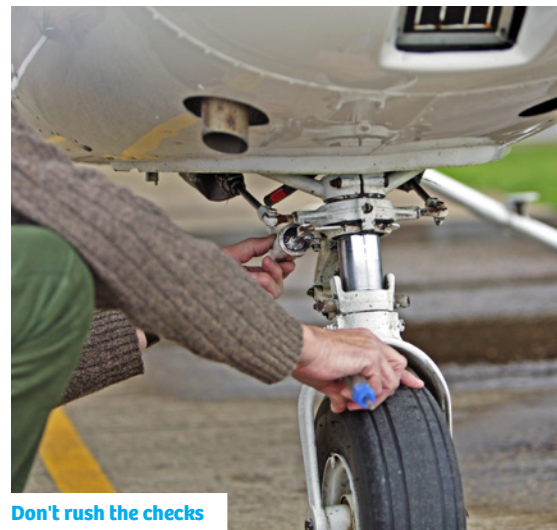
After take-off head down chasing the airspeed on climb-out by watching the instruments instead of adopting the correct attitude and making small attitude corrections as necessary. This, of course, leads to poor lookout; on one occasion by the time the pilot eventually looked out, we were almost at 1000ft and the after take-off checks had been missed out completely.

Missing ATC radio calls because pilots were too busy concentrating on flying the aircraft, leading to the pilot having to be prompted to ask ATC to 'say again'.

Lookout is almost always a weakness of those returning to flying, particularly forgetting to look before turning and not keeping track of where they are; not seeing other aircraft, especially in the circuit resulting in cutting inside them, getting too close on final so having to go-around (do you remember how to do one?).



If you feel the need, take a flight with an instructor



Don't rush the checks

Forgetting to use carburettor heat (I charge a Vodka & Tonic for every time someone forgets – it works, they stop forgetting!).

Speed control is a common issue, particularly in the circuit on base leg, final approach and, especially, not allowing for the wind drift in the turn from base leg onto final, tightening the turn because you are turning too late and not lowering the nose to keep the speed. Quite wrongly there's a tendency to want to apply back pressure during the turn leading to the potentially dangerous situation of low airspeed at a low height that could have fatal consequences, all because of poor attitude control.

So before taking to the air again take some time to reacquaint yourself with all the things you need to remember to go through.

Firstly, plan your flight, decide what you



want to achieve and how you are going to do it — fly it through mentally. Go through all the checks, including the preflight inspection thoroughly in your own mind. If you're simply going to head straight off on your own, wait for a nice day with good visibility and calm conditions. A gentle general handling session would be a good start rather than a trip somewhere or throwing yourself straight into a busy circuit fraught with all the pressures and hassles that entails.

Weather, it's all well and good to look out the window and see a nice day, but check the TAFs & METARs for both yours and the surrounding airfields. What's your alternate going to be like should you need it? Does it have a runway within your crosswind limits? What are the winds aloft; it might seem relatively calm on the ground but a 20-30kt wind at 1000ft will have a significant effect on the shape of your circuit if it isn't allowed for. Look at Met Forms 214 & 215 to get the bigger picture and see what changes are likely, if any. And with the amount of rain we've had

this spring, if you're flying out of, or into, a farm strip, check the state of the ground; some strips take a considerable time to dry out as a few pilots have found out... and when was the grass last cut? The longer the grass the longer your take-off run, as well as other things.

Notams, nav warnings, using the NATS site [here](#) you can programme your 'flight briefing' days in advance and just do an 'update' on the day to see if there are any changes. While on the NATS site, besides being able to access the IAIP, go into VFR Charts to check for updates; if you click on 'Frequency Reference Cards' you can print off a list of all the airfield radio frequencies, listening squawks, DACS, LARS & parachute drop zones onto one A4 sheet and it's updated every 28 days. Are you signed up for the 'SkyWise' app? if not, why not? It's a free subscription service that allows you to stay up-to-date with news, safety alerts, consultations, rule changes, airspace changes and more from the CAA.

Another useful website is "Airspace & Safety Initiative" ([airspaceand-safety.com](#)). It's 'Good Practice for All Pilots' aiming to help you avoid Airspace Infringements with lots of help, tips and updates plus direct access to The Skyway Code, Listening Squawks and how to use Threat & Error Management.

With many pilots using GPS systems for navigation, chances are they've all got updates since you last flew, so make sure your software is up to date with the latest versions. Here's a tip, when programming navigation devices always check there's a good satellite reception, one unfortunate person programmed his without realising he didn't have any satellite reception, resulting in him flying straight through the middle of an air display.

In a nutshell — take your time, think it through, be prepared, and don't rush.

While this article might not apply to all, if it helps a few pilots get back into the air safely so they can enjoy their flying again, then it's been worthwhile writing.

UPS AND DOWNS OF ROTARY RETURN

When it comes to rotary aircraft many of the considerations for a safe return to flight are similar to fixed wing although, because many rotary wing manoeuvres take place closer to the ground, specific factors must be taken into account.

Here are a few immediate thoughts, they aren't intended to be definitive and those which apply will depend on the complexity of your intended flight.

Low level airfield operations and circuits have the highest workloads and need greater concentration on handling, increased situational and spatial awareness, quicker reactions and decision making, and have a higher RT workload. With this in mind, consider heading for the local area first to refresh basic manoeuvres and, when more comfortable, approaches and confined areas. If with an instructor, sharpen up your autorotations, emergency and other non-routine procedures.

Autorotations must only be undertaken with an instructor. Confirm who is operating the throttle. If out of practice, let

the instructor operate the throttle until you are comfortable with other aspects of the autorotation.

Common errors include too slow or rapid entry into autorotation, allowing the nose to drop, and putting in the wrong pedal when compensating for power loss/recovery. Once into autorotation use gentle application of collective to control, and avoid chasing, RRPM. Incorrect and inaccurate inputs will simply exacerbate the situation; for example, a slow response may lead to loss of RRPM while harsh use of the throttle and collective, especially during recovery, can cause rotor overspeeding and component stress.

Revising emergency and non-routine procedures is always extremely important, especially if they haven't been practised for a while. In the heat of the moment a pilot can take the wrong action, for example unnecessarily entering autorotation for an electrical fire in the cockpit or a clutch or alternator warning light. Reaction to an occurrence needs to be instinctive and

correct, so practise emergencies regularly and revise the emergency section of the appropriate Aircraft Flight Manual(s).

The joy of helicopter flight is that we can drop in and dine out in our favourite hostelrys. When the time comes, confined area skills need to be honed; something many instructors are happy to help with as long as they're not buying the coffee! Again, start gently with somewhere relatively unobstructed and with good approaches. Undertake a site recce before making an approach. Check the wind direction so you can land and depart into wind, where possible, and maintain sufficient forward airspeed to avoid vortex ring.

While a planned downwind approach is often achievable and, in some sites necessary, if you don't appreciate you're downwind and consequently fly inappropriately, you might find your approach is too high, too fast, with a high rate of descent and insufficient power to recover. You also could get into vortex ring and loss of tail rotor effectiveness (LTE) territory and, if too focused on what's becoming an increasingly difficult approach, may not recognise the warning signs in time to recover. Plan for, and don't be afraid to, go-around or abort.



Specific factors need to be taken into account with helicopters

If you haven't flown for a while, when the workload gets high it's relatively easy to become immersed in simply controlling the aircraft. This can result in a lack of spatial awareness, poor lookout and proximity to other aircraft, distraction via the radio and so on. Possible consequences include poor attitude and balance control, getting too close to the ground and other aircraft, runway incursions, causing others to go-around, and missing vital RT calls.

Many of the principles of confined area operations apply to the airfield as we tend to make our approach to a dedicated area, so good judgement of height/speed/power is a must. While there's generally more room to manoeuvre (and an overshoot or undershoot may only result in some friendly advice from ATC!), poor judgement can result in a situation which might be beyond your control, for example, vortex ring.

Even a straightforward manoeuvre such as taxiing can also be challenging in strong and/or gusty wind conditions. At times it will be necessary to taxi crosswind or downwind so you have to be responsive with the yaw pedals. If you're downwind, the pedal authority will be degraded potentially leading to loss of tail rotor effectiveness. The cyclic also might get close to or even reach its rearward limit. So know

the wind speed and direction, work with it and keep an eye on the windsock when manoeuvring.

The last consideration is dynamic rollover. This can occur when the rotor disc is too far out of level 'side-to-side', and the aircraft pivots around a skid/wheel in the direction of the rotor disc as you raise the collective, ending up on its side.

Aircraft are often unevenly balanced, and ice or a 'sticky' surface will increase the possibility. If a potential rollover is suspected, the take-off must be immediately aborted by lowering the collective. It cannot be overcome simply by applying opposite cyclic. This is particularly relevant to sloping ground operations where, to 'level' the rotor disc, it will start at an angle to the fuselage. Ensure the slope is within both your own and the helicopter's limits, level the rotor disc, be gentle on the collective and ensure that the rotor remains level as the downslope skid is raised.

These are points that we constantly consider and discuss in 'normal' times, so please see them as revision and a reminder of things to anticipate, especially when we've been denied the opportunity to fly for a while. However, be assured that, as the situation eases, your professional mentors will be on hand to ensure a safe and enjoyable return to rotary flight.

THINGS TO THINK ABOUT

- Consider how sharp your skills are and how safe you are to fly, especially if you haven't flown regularly.
- Check your licence, medical, ratings etc. are up to date.
- Self-fly-hirers and private owners should ensure aircraft documentation, service schedule etc are accurate and current, to confirm an aircraft is safe and legal to fly.
- Ensure charts and any software used are current.
- In planning your flight, check en-route radio frequencies are correct, minimum safe altitudes, availability of destinations/diversions, airfield opening hours and availability of fuel, suitability of weather for duration of flight, notams/airspace restrictions, Royal Flights, PPR. Many airfields have been operating restricted hours and facilities.
- The aircraft: complete a full pre-flight inspection including weight & balance calculation.
- If flying from a training school you might well need a currency/check flight with an instructor and any necessary refresher training before you can self-fly. Private owners are strongly advised also to have a refresher flight with an instructor.
- When you're up to speed consider a solo flight without 'passenger' pressure.
- Start with something straightforward and keep the odds in your favour. Pick a good day weatherwise with light wind, high cloud ceiling and good visibility if you can. You'll build confidence far more quickly than flying in poor conditions, even if accompanied by an instructor.
- Go at your own pace and don't be pushed by friends and peers.



GET READY GET SET

Right now time is your best friend when getting ready to go

I'm lucky to be preparing for a flight. It's still 'lockdown', no general private flying is allowed, so I'm about to fly for the first time in a while because instructors can keep their skills alive so that we can check out pilots as necessary when the 'instruction restart' gun fires.

Tedious as it might sound, the first thing I do before even starting the airframe checks is the paperwork, checking my rating and medical expiry dates.

'THIS SOUNDS LIKE ME'

I'm confused about flying post-EASA in my G-reg PA-28. My UK-issued EASA PPL-SEP is well in date, but my Class 2 EASA medical expires shortly and I can't get an appointment soon.'

In your case it might help to start to sort out any confusion if you know that your licence is now referred to officially as a 'UK FCL PPL'. Your PA-28 used to be called an 'EASA aircraft', but is now a 'G-registered Part 21 aircraft' — to untangle things a little

further there's a fuller guide to licences, ratings and medicals on Page 19.

'SO, OK, WHAT ELSE?'

It's not just your paperwork you need to think about, your PA-28's documents need scrutiny too (dates of its ARC, next maintenance due date, radio licence, insurance, etc). You are ultimately responsible for ensuring the aircraft is safe and legal to fly, even if it's a club, school or group one.

At very least, check the Certificate of Registration, Certificate of Airworthiness (or Permit to Fly), the ARC, the Certificate of Release to Service, or the Technical Log (or engine and airframe logbook) and the aircraft insurance. If any of these aren't available, don't take the aircraft.

Even if the mass & balance and performance plan was 'okay' last time you flew, check it again. While it might seem like overkill, particularly in an

aircraft you're used to, there are too many examples of aircraft having floundered due to inadequate performance planning — some of the sub 600kg, microlights and gyroplanes can be tight on weight; when was the last time you and any passengers had a close encounter with a set of scales and weighed all the (potentially new) stuff you're loading?

Not only do you have to be within limits, but where you put the weight is equally as important to ensure you're within the centre of gravity limits for take-off and landing. Some aircraft, for example, can't be flared properly on landing without some added weight, human or otherwise, behind the pilot somewhere.

I do all these checks with a school aircraft, but now I have enough non-paperwork issues to think carefully through, as like you, my very regular flying routine has been interrupted.



Yes, that really is a bird's nest

two nautical miles horizontally and 200ft vertically from controlled airspace) is sound, but in some cases it might be prudent to allow even more to minimise distracting warnings from your moving map, leaving you to get on with flying.

'WHAT ABOUT PRE-FLIGHTING ME?'

Use the mnemonic, I'M SAFE (**I**llness, **M**edication, **S**tress, **A**lcohol, **F**atigue and **E**ating). Much of it is self-explanatory but some elements are worth further discussion. Take stress for example, this doesn't fall into the illness category. The stress most of us associate with flying can be created by things such as time pressure, personal distraction or unfamiliarity with the task. It's important to be aware of such pressures and manage them as part of pre-flight planning. Combine such stress with missed meals or a changed diet and there's an increased likelihood that you won't be thoroughly ready to fly.

'WHAT ABOUT THE AIRCRAFT?'

Well, three main things – checklist, checklist and checklist; however familiar you are with the aircraft, don't do it from memory. Walk-arounds must be even more thoughtful and thorough right now, especially as you might not have seen the aircraft regularly for a while – take some time; seeing is important and there's a world of difference between 'looking' and actually 'seeing'.

Talking of not seeing things for a while, chances are someone you haven't seen



If you don't normally use a checklist, give it an outing

'LET ME GUESS... CHECK NOTAM?'

Good guess... the first thing I do after the paperwork even for short 'local' flights. It's relatively simple nowadays, especially via the free graphical products for UK airspace; for example, SkyDemon light with some Windows browsers or as an App on i-devices. But even if you're used to checking the Notam, there are a few elephant traps around after a lay-off and some little safety-nets that can help.

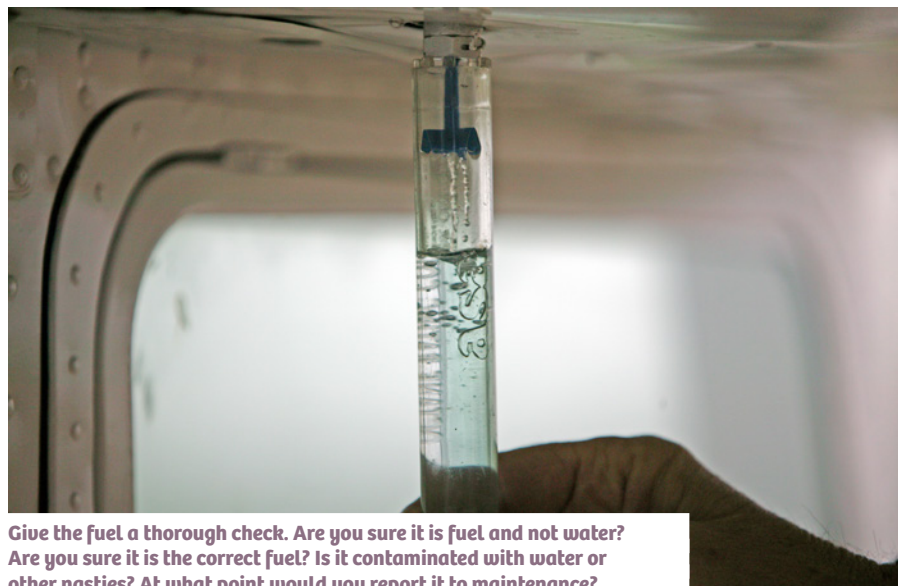
Using the official Notam (non-graphical) free website ais.org.uk, can need a bit of practice, so planning a fictitious flight or two helps before doing it for real on the day. As for safety nets, just in case you missed a Notam temporary airspace upgrade or restriction of flying, you can dial the free number 0808-5354802 early on the flight day. But remember, it isn't a substitute for a proper check as there are many safety issues (eg: parachuting) that would only be found in the Notam.

As for elephant traps, due to lockdown there are various bits of airspace Notam'd as non-operational at times, but remember these times will be UTC and British Summer Time starts on March 28, the day before flying restarts. Don't forget to connect your moving map to the internet for Notam updates close to the flight, and set 'time of flight' in it properly. Speaking of updates, don't forget that

there's a new paper chart out now with regular updates on the AIS website.

"SO, WE'RE TALKING AIRSPACE?"

Well yes, and whether you're an owner or renter, don't challenge yourself unnecessarily on the first few flights back. Yes, you must pre-plan and know where not to go, but it's equally important to minimise 'cockpit distractions' and avoid keeping your eyes inside for too long, so why not plan to keep well clear of airspace boundaries. As a general rule of thumb, the 'Take Two' advice (keep a boundary of



Give the fuel a thorough check. Are you sure it is fuel and not water? Are you sure it is the correct fuel? Is it contaminated with water or other nasties? At what point would you report it to maintenance?



Do check all the paper work



Plan your first route with care

for a while will inevitably turn up mid-check and understandably want to say hello; if you're in the middle of checking things over don't stop, tell them you'll grab a cuppa when you're done.

'ANYTHING ELSE?'

Well, yes. Don't rely on 'Fred flew it yesterday', he might not be as thorough as you... As well as the normal checklist items, look carefully for unexpected damage, whether the aircraft has been inside or out; check all drain holes are unblocked and, regardless of the aircraft being kept inside or outside, check very carefully for water or contamination in the fuel and unexpected over-wintering 'guests' in the various apertures - you certainly don't want to find a blocked pitot at just the wrong moment.

Right now it's bird-nesting season so here's a curious thing; when my club had a mix of PA-28s and Grummans, it seemed that if you wanted to keep birds from nesting in your PA-28 all you needed to do was to park next to a Grumman AA5, they seem to love being in them almost as much as I do. But whatever your aircraft, it's the time to look out for bird/mice nests and possible damage caused by wildlife.

'SO WHAT NOW?'

Go and fly your aircraft and enjoy it knowing that you're both ready.

VINTAGE VIEW

When it comes to some ex military and older types there will be plenty to consider before flying and no one knows it all, but here are some common things to think about — and the single biggest thing you can give yourself is time.

By their nature vintage types can take longer to get airborne, so give yourself a whole day for the first flight which means get the admin done the day before, checking all the usual stuff (timed items, life items etc) to ensure the aircraft and you are legal.

Then sit down with the Flight Manual by your side and mentally fly a difficult flight. Give yourself an emergency brief and don't forget things such as electrical problems as older avionics can suffer in the damp atmosphere of the average hangar. Consider, too, full and partial problems and don't forget to check your personal kit; is your parachute okay or due for a repack, for example. Then sleep well.

Get to the airfield, get the weather (if it looks challenging save the flight for another day) and get the Notam checks done, and then concentrate on the aeroplane. Take all the covers off and get it into as much light as possible and stand back - does it look right?

Check the system levels. Switch on the electrics and check the battery level. On air systems aircraft check the pressure and top up if appropriate. Switch on and listen, put your ear against the fuselage, Air leaks? No? Great. Let's start a walk-round. Many older aircraft don't have checklists, so diligence is required. How's the fabric? Depending on your engine you might need to check for a hydraulic lock. If you do get a lock follow the approved engineering procedure. Fluids and perishables will take extra attention.

Take your time (there is a theme here); if you have checklists and don't normally use them, today might be a day to get those reference cards out. Consider a ground run first to check for leaks.

Having carefully planned the flight, think about doing a short sector first. On lining up in tailwheel aircraft it's attitude that matters. Get the perspective locked into your mind. Consider how the attitude will



change depending on what type of landing you will want to make.

Take-off is type-appropriate so rehearse beforehand mentally and action as necessary. Remember, you'll be spending more of your mental capacity flying the aircraft than you are used to. The saying 'never put your aeroplane somewhere your brain hasn't been five minutes before' is a little trite, but it's also true.

A personal suggestion for a flight outline would be take-off, practice a stall remembering older/ex-mil aircraft might not be benign, a couple of minutes of slow safe cruise and a go-around at height. Then come home and get a landing in while the picture is still fresh in your mind.

Land perfectly (you probably will after a lay off, but don't worry the next one will be shocking...). Taxi in, have a cup of tea and do another walk-round because any leaks will have had a chance to develop. If it's good to go fly again as you will have a bit more capacity/confidence.

On the next flight play with the aircraft again. Your G tolerances will have reduced so build up slowly — that great aerobatic routine you did with ease at 250ft last October might not be quite as straightforward as it was back then.

When it comes to faster aircraft, if your machine is capable of 180kt cruise consider limiting yourself initially to a slower speed to give your brain a chance. On the approach if everything isn't perfect then go around, this is not the time for heroics followed by a big flare.

On landings I tend to use: skip = resettle attitude; small bounce = resettle attitude, cushion with power; big bounce = go around.

Finally, don't forget that those vintage temperamental engines might need a cool down so don't forget the limits. Then have a good post-flight inspection and go home thinking 'only 49 days for a beer at the club bar all being well...'



FCS 1522 online

UK Airspace Access or Refusal of ATS Report

If a pilot is denied access to airspace or refused an air traffic service they can complete online form: **FCS 1522 - UK Airspace Access or Refusal of ATS Report**.

We use this data to inform airspace change proposals and post implementation reviews.

We can also intervene if an area of controlled airspace is not being serviced as it should be.

We encourage pilots to report to us if they are denied entry to airspace when requested.



Find out more about airspace change: airspacechange.caa.co.uk/about-airspace-change/

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GETTING BACK TO NORMAL (WELL, SORT OF!)



What is it like to get in the air again after 52 days without flying

Wednesday December 30, 2020 is etched on my memory, it wasn't a particularly nice day weatherwise, we were in the last throws of a very low-key Christmas and were preparing ourselves for the inevitable hard lockdown that everyone was expecting after a consistent surge in Coronavirus cases during late December. For me, though, the day was special for just one thing — the last day I went flying.

Fast forward to February 20, 2021 and the virus is on the decline, there's a noticeable upbeat vibe since those dark days of winter and even the weather is finally cheering up; there's another very special day coming because I'm about to make my first flight in 52 days or 1,267 hours (not that I had been counting...).

I've been flying small aircraft for quite some years and been lucky enough to get airborne for at least a few hours most

weeks and, while I'm never blasé about our incredibly privileged hobby, normally I don't usually have too many emotions about it, it's just something I love and do. However, since establishing that an aircraft maintenance flight was needed, I'd thought about little else.

Last night I cleared out my flight bag and then repacked it with all my flying paraphernalia, I put fresh batteries into my headset, updated my SkyDemon maps and fully charged my phone. I laid out my favourite flying clothes and trainers, then placed them in a pile by the side of the bed and, finally, I checked the weather again on the BBC. I went to bed early but struggled to sleep with the anticipation building.

After a morning Met Office update the 30-minute drive to the airfield has me buzzing with expectation. As I arrive, I can feel that pre-flight, slightly sickly, stomach-churning feeling, the same as you get before

an exam or flight check; you so want to do the very best you can, but you aren't 100 percent sure you can do it.

Arriving at the parking area next to the apron, the SportCruiser glints in the sun; the canopy cover is still on and hasn't been touched since the last time it flew nearly three months ago; she might not be my regular steed, but she looks wonderful.

I start my pre-flight in the same manner as I would as if it was a skills test. Remove the cover and fold it up neatly, open the canopy, put the parking brake on and pull out the checklist and fuel drain tester. On a simple aircraft such as this, and one I know so well, I'd normally do things from memory, but not today.

So, turn on the power, 'great the battery looks good', remove the gust lock then lower the flaps, turn on the lights and quickly inspect them before shutting off the master. I then start my walk around,

this time checking everything in microscopic detail. I check the pitot tube with my phone torch to ensure nothing has decided to move in there, the tyre treads and pressures, the fuel three times each side (just to be sure there is definitely no water in it), I use the screwdriver on the end of the fuel sample tester to check every screw is tight, then ‘burp’ the Rotax and check the oil, remove the chocks and stand back; she looks perfect and I am going to fly her — right now. I give the canopy a good clean and get in.

I set up my phone with the SkyDemon App and load the local route I had planned, plug in the headset, get the checklist and carry on with the internal setup, then it’s time to start the engine. After nearly 90 days sitting in a cold hangar, she starts on the first turn and I study the gauges, nursing the throttle as she comes up to temperature.

I set up the radio and call for airfield information; hearing the familiar voice from the tower is comforting and I write it down and repeat it back. As it’s the first day back after a fairly long lay-off I start my taxi slowly, checking the brakes and steering and all feels great. The adrenaline subsides fairly quickly into a feeling of familiarity as I trundle along the taxiway focused on the task ahead.

‘I take a good look at the approach to check for other aircraft’

We are blessed with a massive concrete runway at North Weald, and for this aircraft I would normally start my take-off run at an intersection, but not today; today I call for a back-track — I want the whole length. Pausing at an area at the side of the runway the run-up checks are performed with sharp concentration and then, finally, it’s time to go.

I take a good hard look at the final approach to check for other aircraft, announce my intentions and line up on runway 20. One last careful study of the instruments and everything is in the ‘greens’, so a gentle application of power and release the brakes. As I start accelerating the airspeed comes alive immediately, fortunately there’s a stiff breeze straight down the runway and I’m airborne in what feels like moments.

Immediately, I find I’ve set the elevator trim a little too far back and I’m having to hold the nose down, so I adjust the electric trim to reduce the stick force. With the wind unexpectedly gusty I get a flap over-speed warning so quickly bring them in as

I’m already at circuit height. I scan the area for traffic then begin my left turn and hit a large pocket of turbulence which almost lifts me out of my harness as I gain an instant 200ft; I realise I really have to think about what I’m doing.

As the aircraft settles I notice the GPS on the multi-function display has lost its signal — typical... But I also have my app for navigation, and of course my chart, for navigation and airspace, the sun is shining and the view is wonderful with the skyscrapers of the City of London standing out beautifully as I reacquaint myself with all the familiar sights — oh, how I have missed this!

With lockdown still in place at the time of writing, this maintenance flight will be the last for at least a month under the current rules, though with luck it looks likely to resume soon. But today was something special, today brought back the thrill of flying, reminded me just how involved it is and how much thought needs to go into it after a lay-off — but above all it’s made me appreciate what we do so much more.

With all the chaos, turmoil and worry over the last few months, the thought of jumping into a small aircraft again and just climbing away from it all, even if only for an hour, fills my heart with joy.



Fuel checked three times — just to be sure

Oh, how I have missed this...



The sun is shining and the view is wonderful





HOW STABLE DO YOU FEEL?

We've all been there. Either too high, too fast or quite simply, too all-over-the-place. Here's how to stabilise your mind – and your aircraft

What do you do if the approach is going to worms – hang on and hope it will all sort itself out further down the line, or do you think ‘nope, this isn’t looking good, let’s bin it and try again’? And if you do go around what order are your actions going to be in? I’ve seen the results of the former, and they aren’t always pretty, while the latter has produced some interesting sequences of events...

In the commercial world there have been a number of high profile incidents and accidents that appear to have a common link – CFIT on final approach because the aircraft might not have been in the right steady state for landing.

Commercial operators have strict criteria that must be met to continue an approach. In simple terms these are based

around a set of ‘gates’ that ordinarily prescribe speed range, maximum rate of descent, aircraft configuration, position relative to desired flight path (lateral and vertical) and minimum power settings.

If these ‘gates’ aren’t achieved by a certain point, a go-around is mandatory. Failure to comply at best results in a chat with a Training Captain. But what relevance does this have to General Aviation? Some of these gate concepts are wholly applicable to us and we should never be afraid of throwing away an approach that doesn’t meet some simple criteria.

The following thoughts are generic because there are many variables that contribute towards the decision on whether or not to continue an approach: pilot qualifications and experience,

aircraft performance and the operating environment will all influence decision-making. The overwhelming requirement, though, is to make a decision.

SPEED

In just short of 60 years there have been more than 43,000 Cessna 172s manufactured under various guises. We all know it’s sturdy, relatively benign and simple to operate with good short-field performance and an undercarriage that will take a significant beating. So why have there been so many bent C172 firewalls, written-off propellers and shock-loaded engines?

I have also seen a few aircraft implanted in hedges at the far end of runways. Investigation always seems to point at

landings that have been completed despite the aircraft being unstable on approach.

On certified aircraft the Aircraft Flight Manual (AFM) is usually well constructed, clearly describing the configuration options together with recommended approach speeds. However, chatting with pilots who have had such bad experiences, without exception they have all selected an approach speed at, or above, the highest speed quoted in the manual.

Many pilots on approach add a few knots for luck, not realising that these extra knots actually contribute towards them having to rely on luck. Sure, there are times where extra speed may help (gusty conditions) but, generally speaking, an aircraft should be flown within the speed range described in the AFM.

Importantly if there is a speed range quoted, the top end of this range applies to an aircraft at maximum weight, whereas 'lighter' aircraft should be flown towards the bottom end of this range. Once the desired speed is obtained pilots should trim to it and minimise the amount of control input necessary to maintain a stable approach.

Excessive speed (energy) brings all sorts of problems during landing. First, any landing distance performance calculations can be dismissed but, as importantly,

the aircraft is going to spend more time losing energy in the flare before finally touching-down. During this extended time period, there is scope for the wind to create mischief and the pilot to relax back-pressure on the control column to try to expedite the landing. It's this last action that leads to bounced nosewheel landings, prop strikes and bent firewalls. My first top tip is to ensure that the aircraft is trimmed at an appropriate approach speed.

RATE OF DESCENT AND POWER

While it's relatively easy to adjust the rate of descent in a light aircraft, some pilots forget to address the secondary effects of doing so. Whether rate of descent is actually controlled by power or pitch might be a common after-flying bar discussion, the reality is that adjustment of either requires a corresponding input from the other. Think of it like this: Power + Pitch = Performance (P+P=P). So, if a pilot chooses to fly an approach with an excessive rate of descent, he or she needs to carefully plan energy management when finally reducing this rate of descent in order to achieve the required performance.

A low rate of descent or 'shallow' approach can also bring problems. It's

likely that the engine will be developing significant power while the aircraft is being 'dragged in', followed by a tendency to cut or 'chop' the power over the runway threshold to complete the landing. At this point a 'stable' aircraft has just become unstable; the P+P=P equation has changed, slipstream effect over the empennage has reduced and there is a likelihood that increased control column back pressure is required due to the aircraft being out of trim.

Piece of advice number two – plan and set a reasonable rate of descent. In most GA aircraft, this is around 500-750ft/min.

AIRCRAFT CONFIGURATION

This element largely relates to flap settings and ensuring the wheels are down (which is good). Again, the key element is setting-up the aircraft early enough that you do not need to reconfigure at the latter stages of the approach. Adding flap changes the performance of the wing so you have to adjust pitch and/or power to maintain the desired performance.

That said, for many GA aircraft the application of the last stage of flap merely reduces speed by a few knots and this can be used as part of the approach planning. However, it's not advisable for pilots to significantly adjust flap settings at low



A stable approach - nailed



Nose, prop and wing damage is most common

height and certainly not once in the flare. Make sure you are trimmed in your desired configuration.

FLIGHT PATH

There's little point in being stabilised speed, rate of descent and correct configuration if the aircraft isn't pointing somewhere near the right direction. That probably sounds a tad obvious, but we still hear of, and read about, aircraft landing long/short or off the side of the runway. The art of flying a successful approach is being stabilised so that you only need to apply small adjustments to attain and maintain the ideal flight path.

GOING AROUND

One of the first manoeuvres taught to students is the go-around. The rationale (in case no-one ever mentioned it during your training) is that there's an increased likelihood that early stage pilots won't achieve a stable approach and will inevitably have to decide to 'throw it away'.

Interestingly, as pilots become more proficient in landing, they tend to become less proficient in making go-around decisions, perhaps due to pride, economic factors or lack of confidence in completing

the manoeuvre. Whatever the reason, there are numerous accident/incidents each month that wouldn't have happened if the pilot had chosen to go-around from an unstable approach and landing.

The manoeuvre should be instinctive, and while the required actions might require some urgency, they shouldn't be rushed. Again, keeping things generic, the go-around should have the following format:

Apply full power – nothing less. Be aware of rich cuts and carb heat. Manage pitch – applying full power will result in a change of pitch if not managed. In some aircraft this change is significant and you need significant elevator force until you can trim out some of this effort. Fly the aircraft, don't let it fly you.

Arrest the descent – we're not yet looking to climb away, we want to stop the aircraft from descending any further. Some aircraft simply will not climb until you have completed the next step.

Reconfigure if necessary – any reconfiguration should be minimal and in accordance with the flight manual. Ordinarily, this only involves the removal of drag flap.

Ensure you have climb speed – do not try to climb if there is not enough speed.

Pitch up to an appropriate climb attitude – select a climb attitude that corresponds to the aircraft configuration. At reasonable height (a few hundred feet), remove flap, raise gear etc.

Note: I haven't mentioned RT transmissions. The "go-around" call is largely irrelevant and should take second place to all of the above.

Finally, make the go-around decision early. If you are thinking about going around, you probably should be going around.

SUMMARY

I hope these thoughts stimulate discussion and encourage people to consider their approach profiles. If I were to be prescriptive, I'd offer that a pilot should have an aircraft correctly configured with a constant rate of descent and a steady approach speed in trim, by about 300ft when positioning to land. If this is achieved, the only challenge left is to achieve and maintain an ideal flight path.





HEADS-UP ON LOOKOUT

Chances are those who haven't flown for a while are going to have a higher workload than normal for the first few flights and one skill that's likely to suffer is lookout

How long do you reckon it takes from spotting another aircraft to hitting it – 30 seconds to a minute, maybe? It's an understandable estimate but you'd be wrong.

If you've been unlucky enough to have a very close encounter you'll know you have nowhere near as long as even 30 seconds to take action; a bit like a slow motion train crash everything seems to take a long time until the last few moments when it all happens in split seconds.

Apart from those instinctive 'jeez' moments when push or pull simply comes down to a split-second of survival instinct, research shows that in normal circumstances the average pilot and aircraft needs anything from 9 to 12.5 seconds (about half as long as it's taken to read to here...) from spotting another aircraft

to processing the closure geometry and avoiding a potential collision in a controlled manner.


Take two PA-28s meeting head-on at around 90kt each, for example; there's around ten seconds from the most eagle-eyed person being able to spot the other aircraft to impact. The crucial thing is that in the first five seconds little seems to happen with not much change in the size or motion of the oncoming PA-28, it's only in the last five seconds that it suddenly blooms in size, the mind then takes a couple of seconds to process it as a threat leaving perhaps just three seconds to take action.

Naturally, the odds of spotting a potential collision reduce in relation to the time spent looking out, hence the common 80:20 suggestion – 80 percent of the time looking out and just 20 percent inside the cockpit,

so even if you are a bit rusty with in-cockpit items it's essential not to fixate on what's going on inside the aircraft to the detriment of what's happening outside.

But just 'having a look' for other aircraft isn't enough, and here's why. Even in a featureless sky the eyes tend to focus somewhere, but if there's nothing specific to focus on they rather lazily revert to a relaxed intermediate distance which means you don't necessarily see anything outside that range.

Most pilots know that when looking out you should shift glances and try to refocus at intervals, but just doing it randomly doesn't really work; spotting a potential conflict needs an effective scan in front and to the side...

You'll probably be familiar with the problem of 'constant relative bearing', also known as 'stationary in the field of view', 



where colliding aircraft have a relative bearing constant to each other until impact. The subjective effect of this is that the collision threat remains in the same place on the canopy (stationary) unless you move your head to stimulate the eye's ambient visual system (the 'cones' in the periphery of the retina) that relies on an object's motion in the outside world to attract the focal system's attention. An unfortunate consequence of 'constant relative bearing' is that no other aircraft that the pilot has ever seen will have possessed the same characteristic as that of a colliding one...

So moving your head, relative to the canopy or windscreen, is an important aid to the lookout front and side and, of course, it helps to take out the blind spots such as canopy furniture, pillars, high/low wings etc.

A quick bit more science shows that as a collision threat approaches, its size on the retina roughly doubles with each halving of the separation distance, so colliding aircraft stay relatively small until shortly before impact when, as pointed out earlier, it all happens rather quickly. This presents a bit of a challenge even if you do perform a good 'lookout', and underlines the importance of apportioning the correct

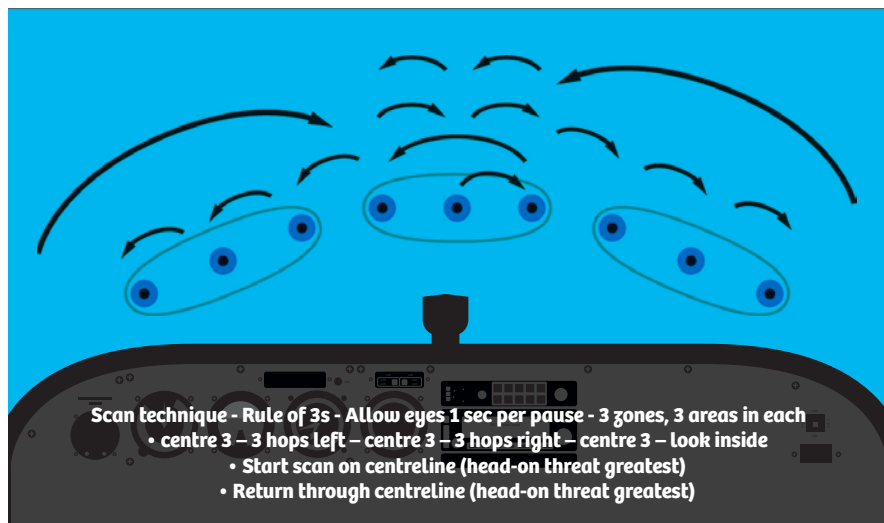
amount of time for a systematic and repetitious scan pattern.

One of the best ways to lookout is to use a series of small eye and head movements with intervening rests, the latter being the only time when the outside world is really being interrogated. Carrying out regulated scans might sound a bit formulaic and, let's be honest, boring, but they do work much better than looking 'here, there and everywhere'.

That said there's no one technique that suits all pilots and it's important to have a comfortable and workable scan, although horizontal back-and-forth eye movements seem preferred by most. First, you obviously need to concentrate on the most critical areas at any given time, which in normal flight are the areas at least 60° left and right of the intended flight path. This doesn't mean the rest of the visual area should be forgotten, at least 10° above and below the projected flight path also needs interrogating.

One of the simplest and effective scans is the rule of threes as detailed in the graphic.

No one's immune to a mid-air collision, but keeping in-cockpit time to a minimum, understanding of the limitations of vision, collision geometry and using visual scanning techniques will help to avoid one.



EYE SEE...

You'll probably know much of this already, but it's worth a quick reminder of how the eye works to understand why a regulated scan is good.

Essentially, the lens focuses light to form an image on the retina which is made up of more than 100 million light sensitive cells that convert the light (image) to electrical impulses which are then sent to the brain. So to develop an effective lookout it's important to understand the distribution and function of the retina's two types of cells, rods and cones.

What you see might seem like one big picture, but detailed interrogation of the world is only provided by rods in the central, focal, part of the visual system, an area no larger than a thumbnail held at arm's length. Not only is this area small compared with the whole visual field, but an image falling on this portion of the retina has to be stable and the pilot's attention directed towards it for active interpretation.

Meanwhile, the cones in the periphery of the retina are responsible for the ambient visual system that relies on an object's motion in the outside world to attract the focal system's attention, so movement is a very important attention-getter.

With no visual cues to attract the eye's attention, there's a tendency for it to focus at a point in space one to two metres away, making you effectively short-sighted so you're not necessarily going to see something at a distance; one good way to get around this is to periodically glance at objects such as the wingtips to stop this 'empty field myopia'.

Quite apart from the physiological limitations, the eyes are vulnerable to other visual distractions, not all of which are confined to flight; lighting, foreign objects, illness, fatigue, emotion, the effect of alcohol, certain medications and, as you probably expect, age all play their part. Then there are additional challenges such as atmospheric conditions, glare, deterioration of transparencies, aircraft design and cabin temperature, which all take their toll on your eyes and what you can see.



PRE-FLIGHT YOUR LICENCE

As well as the practical considerations of getting back to flying, it's also important to check your licence, ratings and medical

Since Covid-19 related restrictions started in March 2020, various exemptions and alternative means of compliance for keeping ratings valid have come and gone. Some people may have taken advantage of these, but for many Covid has probably put flying on the back-burner until restrictions lift in full.

So if you have lost track, now's a good time to establish whether you need to do anything to be legal again.

For pilots operating on a normal PPL with a Class 2 medical there haven't been any major changes recently, other than that the UK's departure from the EU means that licence holders can no longer fly aircraft registered in other EASA member states. However, once we start talking Light Aircraft Pilot Licences (LAPL), National Private Pilot Licences (NPPL), medical declarations and the

associated menu of options away from the ICAO standard, things can become complicated. But let's start with the basics.

REVALIDATION AND RENEWAL

Your actual licence document is non-expiring — this applies to all aircraft categories for which a CAA issued licence is required. What expires are the ratings attached to the licence, as displayed on the 'certificate of revalidation' box of the licence.

Let's start with the common combination of PPL (Aeroplanes) and ratings such as the Single Engine Piston (SEP) or Touring Motor Glider (TMG). These ratings are valid for 24 months and can be 'revalidated' by experience or a proficiency check.

A common question is what is the

different between revalidating and renewing a rating? Revalidation refers to the extension of the rating for another validity period while the rating is still valid, whereas renewal refers to the case in which a rating has expired, and the holder is seeking to reactivate it.

For helicopters the key period is one year





Know when your rating renewals are

So, the first step is to establish whether the rating has expired or not. If it has you'll need to take a proficiency check with an examiner, which will generally be an abbreviated version of your initial PPL skills test, or whatever the test was to gain the rating in the first place.

There is a requirement to have some refresher training beforehand, although if only a few months have elapsed since expiry, it's possible to get a Training Organisation (Approved or Declared, it matters not which) to certify no training is required.

There were also changes towards the end of 2019 which mean refresher training for SEP or TMG can now be done by an independent instructor if the rating has expired by not more than three years. If you possess the same rating on a foreign ICAO licence (for example FAA) which is still valid, you are not required to do any refresher training before taking the check.

If the rating has not yet expired, you'll be interested in knowing how to revalidate it for another period. In 2020 while the first lockdown was in force there was a process that allowed an extension of validity via a briefing with an examiner, but this is no longer applicable. The standard experience requirements for the SEP or TMG consist of 12 hours in the 12 months preceding the expiry date of the rating, including six hours as pilot in command, 12 take-offs and landings and one hour's 'refresher' training with an instructor. Note that the experience requirements must be completed in the second 12 months of the rating's 24-month validity period.

If you meet the experience requirements you need to find an examiner qualified to sign the new rating validity period on the Certificate of Revalidation section of your licence. This can also be done with an instructor qualified under the FCL.945 rule, but the catch is that the instructor must also have done the one-hour refresher training, whereas if an examiner signs they are just assessing that the

experience requirements have been met, there is no need to fly with them.

ALTERNATIVE EXPERIENCE REQUIREMENTS

As part of the Covid related alleviations, there is still an active exemption (At the time of writing ORS4 1418 for ANO licences, 1416 for Part-FCL licences, see caa.co.uk/ors4 for full details.) that allows some reductions in the normal experience requirements for the SEP, TMG, Self-Launching Motor Glider (SLMG) and the suite of ratings that may be attached to an NPPL(A). Please note it does not cover the LAPL 'rolling validity' requirements, which must be met as normal if you hold a LAPL.

Essentially there is sliding scale of experience which means if you are just short of the normal 12 hours you might be able to revalidate either by doing some more take-offs and landings or taking a slightly longer flight with an instructor. If you are further off the total, you are back into proficiency check territory.

The exemption is currently in force until April 30, 2021. Both exemptions No.1416 and 1418 are likely to be extended until the end of July 2021 and for those who have managed some flying but not the magic 12 hours prior to rating expiry, this may provide an alternative to taking a proficiency check with an examiner.

The CAA provide the following (see below) alternative revalidation by experience requirements that are permitted until April 30, 2021:

Flight Time Relevant for Revalidation by Experience*	Minimum Take-Offs/Landings	Minimum Cumulative Total Refresher Training with an Instructor
11 or more – less than 12	15/15	1 hour
10 or more – less than 11	16/16	1 hour
9 or more – less than 10	17/17	1.5 hours
8 or more – less than 09	18/18	1.5 hours
Less than 8	Proficiency Check or Flight Test required	

*This must include the normal required PIC time (6hrs for PPL, 8hrs for NPPL)

Now the sharp-eyed might have noticed that at the time of writing there is a two-week gap between when solo flying for leisure is permitted under the Covid rules (March 29) and when flights with instructors can begin (April 12). This mismatch is obviously driven by the general approach taken to the lifting of social restrictions — it doesn't make much sense purely in the context of flying since those out of practice (even if they do not need to revalidate a rating) will likely want to fly with an instructor before going solo. The Department for Transport and CAA are keen to emphasise that if in any doubt about skill level, it is better to wait until you can fly with an instructor.

For other ratings that always require a proficiency check to revalidate, such as Multi-Engine Piston (MEP), Instrument Rating, or aeroplane or helicopter type ratings, the normal rules apply since the rating extension procedure from 2020 is no longer available.

THE LIGHT AIRCRAFT PILOT'S LICENCE

The LAPL probably merits a special mention since it has slightly different requirements to that of the PPL and other licences.

The LAPL has its own associated medical and also works on a rolling validity concept in which on the day of intended flight rather than checking you are 'in date' for the relevant rating, you need to 'look back' over the previous two years and determine whether you have completed:

- At least 12 hours of flight time as PIC or flying dual or solo under the supervision of an instructor, including: 12 take-offs and landings; and
- Refresher training of at least 1 hour of total flight time with an instructor.

If you do not have the above, then you must have taken a LAPL proficiency check with an examiner within the previous



two years. As noted earlier there are currently no Covid related alleviations for LAPL holders in terms of the experience requirements.

The requirements quoted above are for aeroplanes — for helicopters the key period is one year and the experience requirements slightly different. Remember that LAPLs do not have ‘ratings’ as such and there is no requirement for the examiner or instructor to sign the licence document after a proficiency check, they should only do so in your logbook.

Leaving EASA has disadvantaged LAPL holders; originally, they would have been EASA licences and valid throughout the EU, but since the UK is no longer part of EASA they are not recognised as such. They remain valid for flight in the UK but since they do not have ICAO status they are not automatically recognised outside of the UK.

ANO AND PART-FCL LICENCES

This is one area that sometimes causes confusion. As you may recall from when the UK was still in the European Union and part of EASA, there were licences issued under the EASA Part-FCL regulation and those issued under the UK Air Navigation Order (ANO), the latter often referred to as ‘national’ licences. For example, the National Private Pilot’s Licence (NPPL) is issued under the ANO rather than Part-FCL. Despite having left the European Union, the legal situation is still similar since there is now an equivalent version of Part-FCL in UK law.

Now you might recall that under EASA, you needed a Part-FCL licence to fly an EASA aircraft. Most modern factory-built aircraft were with the scope of EASA regulation, while vintage, amateur build and microlight aircraft were generally non-EASA. Under UK law the distinction

between EASA and non-EASA is now known as ‘Part-21’ and ‘non-Part-21’. At the moment you still need a Part-FCL licence to fly a Part-21 aircraft, although at the time of writing there is an exemption that allows national licence holders to fly up to 12 hours in a Part-21 aircraft. This is to facilitate competence and currency on aircraft that fall within either the SEP (SSEA in the case of an NPPL(A) holder) or TMG/SLMG class ratings. For full details of the exemption look for ORS4 1471 at caa.co.uk/ors4

As part of the post-Brexit Red Tape Challenge, the CAA and Department for Transport are looking at a more permanent change to legislation that would allow national licence holders to fly Part-21 aircraft that fall within the class ratings held on their licence. The majority of private pilots in the UK have a Part-FCL licence and are therefore not affected by this, however there are probably still a few NPPL holders who would welcome the ability to fly Part-21 aircraft such as the Cessna 172 again.

MEDICALS

For those with a Class 2 or LAPL medical the validity periods will be printed on the certificate. Since late 2019 it has been possible to ‘downgrade’ from a Class 2 medical to a Light Aircraft Pilot’s (LAPL) medical standard without obtaining an actual LAPL licence document.

So, if you are a PPL holder and for some reason no longer able to hold a full Class 2, you may be able to get a LAPL medical instead, which is a less onerous medical standard. For those over 50 the LAPL medical is also valid for 24 months rather than the 12 months it would be for the Class 2.

For PPL holders flying with a LAPL medical your rating validity arrangements

do not change, but you are restricted to the privileges of the LAPL — this is VFR only, single engine, MTOW of not more than 2000 kgs and not more than four people onboard. Since the UK is no longer in EASA, LAPL medicals issued by the UK are not recognised for flight in Europe, so are limited to UK airspace. They are, though, valid on both Part-21 and non-Part-21 aircraft.

Another option is to declare your medical fitness by using the CAA’s online medical declaration process. This has probably been popular during Covid because it avoids having to visit a medical practitioner. The main requirement is to meet the Ordinary Driving Licence standard for driving a car, however there are some terms and conditions over and above that to make a CAA medical declaration, so read the guidance notes carefully to make sure you would qualify for making one.

Pilot medical declarations are also restricted to UK airspace since they do not meet the ICAO requirement for a medical certificate. A recent change in January now allows medical declarations to be used with both national and Part-FCL licences and a Part-FCL licence holder can now fly a Part-21 aircraft on a medical declaration, although a medical certificate is still required for the initial issue of a Part-FCL licence.

As noted earlier though, a national licence holder cannot yet fly a Part-21 aircraft (other than in accordance with the exemption, ORS4 1471), regardless of medical held.

You can make a medical declaration regardless of the type of licence held, but you will always be restricted to either the privileges of the licence or the scope of the medical declaration privileges, whichever are more limiting.



KEEP IT CLEAN

It's a nuisance — we've all spent the best part of a year washing our hands, using hand sanitiser and wearing masks, but we still need to be careful

If you have your own aircraft, and you're the only one who flies it, and always solo, then obviously life's pretty straightforward. BUT flying schools', clubs' and group aircraft need to be properly disinfected between each flight.

As you know by now, the virus can survive for a significant amount of time in, around, and on an aircraft. So, touching surfaces and belongings that are contaminated by an infected person who has coughed, sneezed on, or touched, might expose you to the virus.

First, before you start on the aircraft – protect yourself!

Consider using suitable PPE - wear a mask if you are in a hangar/building or close proximity to/with other people; wear disposable gloves for your pre-flight inspection; use single-use cloths or paper towels. Make sure you dispose of your cleaning materials safely and securely.

Have a small bottle of hand sanitizer (70-100ml) in your pocket or flight bag to use regularly after touching things commonly touched by others i.e., hangar doors, towbars, tech logs etc.

Switches, levers, knobs, instruments and many more items will have been handled in flight so clean and disinfect every part of the cockpit (and aircraft) that might have been touched.

So, what to use? Always check first anything you plan to use with the Aircraft Maintenance Manual or manufacturer. Here's a few don'ts and do's:

Don't be tempted to use mechanical devices, they could just spread it around and make matters worse. Compressed air, steamers or pressure washers can potentially send bits of the virus back into the air. Similarly, with a vacuum cleaner, not all vacuum filters stop the virus so there's a risk of blowing back out into the air again, ready to inhale! (If you do use a vacuum cleaner, ensure the exhaust is directed to outside the aircraft.)

Don't use an Ionizer, it creates a static charge around airborne contaminants which then simply stick to the nearest surface (not the result you're after...), even worse, some can create ozone which attacks organic material such as rubber (think hoses), plastics and leather.

Do use a disinfectant that has a documented effect on the Coronavirus. Ideally it should contain alcohol as this is highly effective against Covid-19. Leather and windows should not be treated with alcohol. Household washing-up liquid is another option.

Make sure you read the manufacturer's label for suitability, and be careful to apply the correct disinfectant on the right surface, for example:

- Some chemicals are corrosive so don't use them on metals; others can make plastic brittle so be careful not to spill on electric wires; take special care when disinfecting seatbelts, certain chemicals/sprays

are destructive to textiles.

- Electronics and instruments are best cleaned with a gentle microfibre cloth on the displays and glass to avoid causing scratches. Anti-reflective glass can be cleaned with a 50/50 IPA solution, for plastic screens use a mild soap solution. Whatever you use, keep the amount of fluid to the minimum necessary to kill the virus, avoid any getting into the instruments.
- Wet-wipes may not be ideal, check what they contain, citric acids or sodium bicarbonate can etch displays. Whereas Clinical Disinfectant Surface Wipes would be suitable for cleaning control columns, throttle levers and other similar knobs.
- Use only your own personal equipment. Headsets, especially, should not be shared. Using a headset that has been used by others represents a high risk, even if it has been cleaned. If you have special flying gloves, yes use them in flight but not for cleaning.
- Remember, even with a cleaned and disinfected aircraft, you could still be infected by another person.

So, to protect yourself and others – Keep It Clean, Disinfect Thoroughly, Dispose of Cleaning Material Safely

TIPS FROM OUR GA VOICES



PLAY VIDEO

Steve Slater, Light Aircraft Association

If there's one piece of advice I would give it is take your time. It's not a race, you don't have to leap back into the air immediately. When you do, take away all the distractions that are likely to be around you.



PLAY VIDEO

David Walton, Flying Display Director

I think patience is probably going to be the biggest thing for everybody involved, just to make sure that things run smoothly, and everybody has a role to play in that.



PLAY VIDEO

James Ketchell, Aviation Ambassador

My top tips for anyone after a little bit of a break would be to check you are still current. Does your club or airfield have any requirements around that? There's some fantastic information on the CAA and LAA websites. Also slow everything down, double-check everything, go through your checklist again and again.



PLAY VIDEO

Jonathan Porter, Aviation Ambassador

Personally, the day I prepare an aircraft after a long lay-up, I will not fly it that day. I will get it all prepped, no matter how good the weather is, I will go home and sleep on it.



PLAY VIDEO

Kirsty Murphy, Aviation Ambassador

Think about the things that have changed since you last flew. Airspace might have changed, so don't just get up in the morning to go and fly. The day before, or a couple of days before, get your head in the books, get online, and really have a look at the airspace you're looking to use and see if anything has changed.

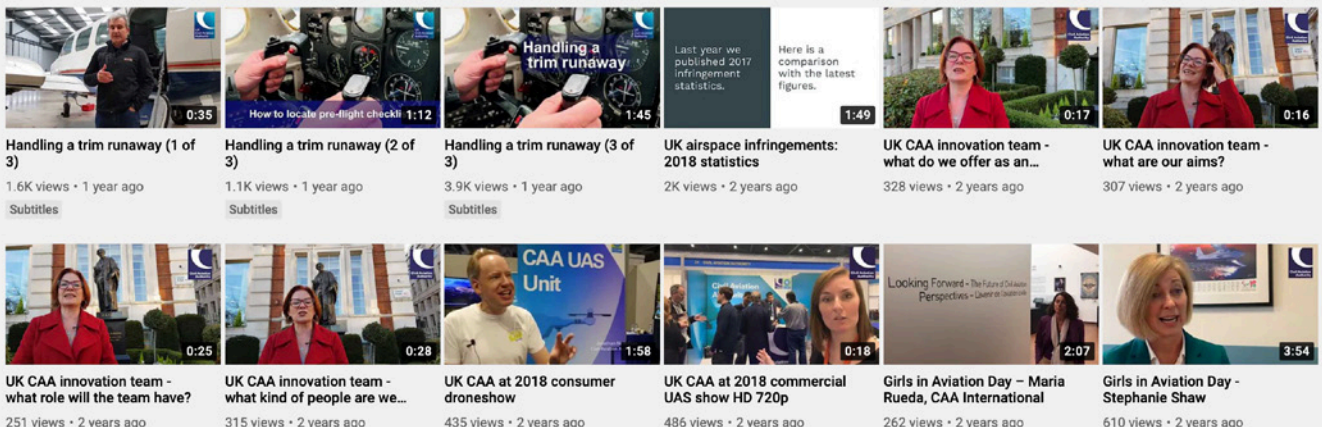


PLAY VIDEO

Pete Stratten, British Gliding Association

Threat and error management isn't quite in every pilot's mindset, but you're halfway there if, before you fly, you think, what could possibly go wrong?

Check out our YouTube Channel for more GA videos and information





Good practice for all pilots.

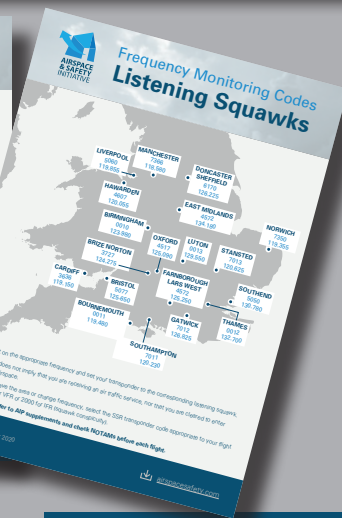
Safety through collaboration.

Use a **moving map** to help prevent airspace infringements.

Use a **listening squawk** to help air traffic control help you.



Download squawks
airspacesafety.com/listen



Hot-spot narratives

Infringement occurrences

Resources

Essential pilot knowledge

Statistics

Pre-flight planning

Guidance and resources online:
airspacesafety.com

A joint CAA, NATS, AOA, GA and MoD initiative to tackle major safety risks in UK airspace.

