

An Introduction to the EASA CB-IR (Competency Based Instrument Rating Course)

by

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Typical IFR weather

Acronyms & Abbreviations

We'll start with some acronyms & abbreviations used in the article below. For what it's worth.

- CB-IR: Competency-based training COURSE for Instrument Rating
- IFR: Instrument Flight Rules (follow your filed flight plan and you will not hit anything, anybody or violate any airspace)

- VFR: Visual Flight Rules (exactly the opposite to IFR, but the view is better)
- PBN: Performance Based Navigation
- IRI(A): Instrument Rating Instructor
- ATO: Approved Training Organisation (= flight school)
- MCQ: Multiple Choice Question
- FFS: Full Flight Simulator (the multi million dollar full motion stuff we use at the airlines, which is still cheaper than breaking real airplanes)
- FNPT II: Flight Navigation Procedure Trainer II (the less expensive stationary stuff used for learning to fly an airplane without reference to external visual cues. Like your 1998 home flightsim, but with some hardware, the outside view set to zero visibility and EASA certified)
- WX RDR: [On board weather radar](#) aka. color coded water drop reflectivity indicator
- SE IR: Single Engine Instrument Rating
- ME IR: Multi Engine Instrument Rating
- MEP: Multi Engine Piston Class Rating

TL;DR

(too long, didn't read) How to get your IR using the CB-IR Route

1. Find a freelance IFR Instructor
2. Sign up for distance learning at any ATO, study and pass theoretical exams
3. Fly 30h "outside ATO" and 10h "inside ATO", pass skill test (practical flying exam)

Introduction

It is often described among the flying community as the biggest step in a pilot's career: the Instrument Rating, qualifying a pilot to fly under IFR (Instrument Flight Rules) and in IMC (Instrument Meteorological Conditions, i.e. Clouds) without external visual reference. It includes [PBN](#) operations (basically a specified way of navigating using Satellite Navigation instead of receiving ground based radio stations) and instrument approaches down to a minimum decision height of 200 feet (60 meters). Sounds fancy, and it actually is. And the good news is that for once, acquiring a rating isn't as difficult and bureaucratic as you might think.



A thorough cockpit preparation is essential for IFR flying

If you happen to be an owner pilot, have access too or can charter an airplane, take a look at the EASA CB-IR and decide if it is advantageous for you.

Both the EASA IR and EASA CB-IR lead to exactly the same privileges (and license entry).

Namely: "IR". The difference between a CB-IR and IR course lies in how your training course looks like, not what rating you attain.

Therefore the correct definition according to EASA of CB-IR is actually "Competency-based training COURSE for Instrument Rating".

Any rumors floating around of "CB-IR" license entries, higher approach minima etc.. are FALSE.

The advantage of the CB-IR is, especially for the practical flying training, it can be done around your personal, operational and financial priorities. In

other words, you can train and focus on those elements and flights that you intend to do once you have the IR, and keep it within budget.

While for many years the “EASA IR” course had and still has to be done 100% via an ATO, the “EASA CB-IR” course allows for a more individual approach to obtaining the rating, where a significant part of the flying training can be achieved outside an ATO, for instance in your own airplane with a freelance IR instructor taking into account your individual schedule, types of flights (I avoid the term “mission” for private GA), area of operation and future utilization of your airplane. For EASA pilots, this is the closest we get to the FAA system, where you can train freely in your plane and instructor for most instances.

Prerequisites

- At least a EASA PPL
- Night Rating (otherwise it’s a day only IR, which is of course just as useful if you don’t want to fly at night. Flying in a single engine airplane at night (or in IMC with low clouds, down to minima) doesn’t exactly leave a lot of options open in case of an engine failure, but that topic is better suited for another article.)
- 50 hours PIC cross-country

Theoretical part

The good news first. The CB-IR theory has been tidied out quite a bit, and you can do 99% of it in the comfort of your home using distance learning. I recommend to completely finish the theory before flying. Why?

Let me elaborate a bit. The disadvantage of power studying for the theory exams first (without any practical flying alongside) is that the concepts you are supposed to learn will be completely, well, uhm, theoretical (if not foreign) to you. There will be no “aha, that’s how it works in the plane” effect. So why do I recommend to get the theory out of the way first then?

At this point I’d like to separate two things:

1. Theoretical Knowledge



A purely motivationally intended picture to get you through the theory

2. If you really take the distance learning course seriously, take notes, research topics further on your own etc.. and in fact manage to deeply understand EVERYTHING that's a good thing, but you will most likely still fail the theoretical exams without MCQ exam question prep. In my role as an IR instructor, I am always available and accompany my students during the distance learning course for discussion and any questions they might have, but that also doesn't suffice for passing the exams.
3. Theoretical Exams
4. Thousands. Of. Multiple. Choice. Questions. In an ideal world, there would be a far better suited way to establish if you fulfill the legally mandated learning objectives. In reality, you need to pass those MCQ tests. Clicking question banks over and over is almost completely pointless from an educational point of view, but it is what it is.

Most people pilots seem to be very motivated about the practical flying part, and not so much about learning question banks and clicking through

distance learning courses after a long day at the office. Netflix and Chill certainly didn't make this easier. Anyway, it means that the 30 hours of flight training are quickly scheduled and completed, while they haven't even tackled a single theoretical exam yet. People Pilots then push the "boring" stuff out further, life gets in the way and time flies by, and suddenly it takes a year, maybe two or, in the worst case, it never gets done. Now that is frustrating. Also, doing both flying and theory at the same time might be too time and energy consuming for some, which isn't beneficial for immersion of training as well.

Back to the "Ahh, that's how it works in real life" effect I mentioned above: Once my students get their theory out of the way and start flying, I consistently engage with them and spend many hours of explaining, reviewing and repeating the theoretical concepts targeted to the actual flights. I hope this completes the circle of theory first, exams second, followed by third, individually tailored theory instruction alongside practical IFR flight training. It's just one way of many to see it. Everyone is different, and it might suit you to do theory and flying at the same time, perfectly fine, do what works for you.



For the theory exams (consisting of a question bank of countless multiple choice questions that need to be memorized, as there is no way to answer them correctly only through understanding the subject matters) you get to pick any EASA ATO that offers a theory course. You do not need to complete the practical flying training at this ATO. Theoretical part and practical part can be done at different ATOs if you desire. You could sign up with this [ATO](#), or [this one](#), just examples.

Since most private pilots and owner pilots have demanding jobs, (the money for flying has to come from somewhere, right?) I highly suggest to use a distance learning provider. Unless you live 5 minutes from a renowned ATO that offers a classroom theory course with good instructors, that is. I've had students use this [ATO](#), which uses the course provided by [CAT Europe](#) which includes the well known [Aviation Exam](#) question bank prep software.



One thing is clear: You're not doing the IR for the view

To make this clear: You can do your training at any ATO anywhere in EASA land, no matter where you intend to fly during your training. Subsequently, you can sit your theoretical exams at any EASA authority.

In my opinion, extended cross country flying, experiencing different weather, terrain and foreign ATC is an important part of IFR flight training. Limiting the area of training to national boundaries would be silly, especially if it involves some of Europe's smaller countries.

Yes, some ATOs are not interested because they understandably only want students using the ATO's own airplane and instructors. I can help you find a solution in that regard.

And while it is called distance learning, there is also at least 8 hours of face to face theory instruction required. A little excursion to how I do this: It's one day spent together, usually 1-1 instruction, by going over all the theory subjects as well as clarifying any open questions before the exams. In addition to the minimum 8 hours, over the course of the CB-IR, I far exceed these 8 hours as I constantly interact with my students, discussing and answering any questions that come up along the way. It just doesn't always happen face to face (rather via Messenger, Telephone, Videocalls etc.), except for those 8 hours in person of course! And don't forget the extended briefings before, and debriefings after each flight. In my experience, over the course of the 30 hours practical flying, I repeat and go over all the relevant theory for IFR flying, again.



Sometimes picking your clouds is like picking battles. Tread wisely.

Once you have done the distance learning course and clicked through the exam prep software (including progress tests to check if you are ready) you can schedule an exam appointment at any EASA authority (e.g. you could do the theory at an Austrian ATO and sit the exams in Germany) for the 7 theoretical exams. Most people spread the 7 exams around three separate days of exam sittings (3-2-2, 2-3-2 etc..).

Practical part



IFR in IMC

So you've clicked away like mad and passed the multiple choice exams? Good job. What a relief. Now it's time for flying.

A single-engine competency-based modular IR(A) course must include at least 40 hours of instrument time under instruction, of which up to 25 hours may be done in an

- FFS (Full Flight Simulator, nice, but that would be very costly) or
- FNPT II (Flight Navigation Procedure Trainer, a simulator category defined by EASA. If, this is what you'd use).

When the applicant has completed instrument flight instruction provided by an IRI(A) these hours may be credited towards the 40 hours above up to a maximum of 30 hours. In any case, the flying training shall include at least 10 hours of instrument flight time under instruction in an aeroplane at an ATO.

This means:

Minimum flight training hours required: 40

Of these 40 hours:

- a maximum of 25 hours can be done in a SIM (FNPT2)
- a maximum of 30 hours can be done outside an ATO with a qualified instructor
- Depending on the plane you own or intend to charter, it can be cheaper to fly for real instead of using the 25 hours in the SIM, or vice versa. Some FNPT II can cost as much as a cheaper plane that might do the trick as well. Depends and can be decided on a case by case basis. Advantage of a sim is that, unlike real flying, it's independent of weather, can be scheduled in advance and one can always hit the „freeze“ button to explain and discuss.
- Note: The training outside ATO can, technically speaking, also be done in a VFR aircraft under VFR. This can be an option to learn the basics such as attitude flying in a less expensive plane and save some money for the first few hours. This might be subject to authority interpretation though.

Summary: You can fly 30 or more hours with an IR instructor in your own airplane, or in a chartered one. You could also fly a 100 hours, but the ATO will still need you to fly at least 10 hours “inside” with them. The 10 hours “inside ATO” are a minimum and are always required. Some of my students who own an airplane would add their plane to an ATO, and apart from a “outside vs. inside” ATO transition, nothing changes.

Note: For Multi Engine it is the same, but it is 45 total hours required and up to 35 hours possible outside the ATO creditable. Unless you absolutely want to skip an IR for single engine airplanes, it's generally recommended to do the single engine IR followed by a multi engine IR „transition“. Expect around 5 (instead of 45 hours) in a MEP to add ME IR on top of your SE IR. Your license will then say something like SEP(I) IR and MEP(I) IR. Or, SEP(I), SE IR, MEP(I), ME IR.



Descending into the overcast on an approach
ILS Approach in IMC, G1000 avionics with satellite weather overlay

Once you have 30 hours training completed, you sign up at an ATO and perform the remaining minimum of 10 hours followed by the skill test. The liberty of the CB-IR is nice, but I must say it makes sense to choose the ATO beforehand, and in spite of flying 30 hours outside of this ATO, make sure you (or rather, your instructor will) already align the training procedures to this ATO during those 30 „outside“ ATO hours. This will make things easier for you, as you will already be accustomed to the finer and minor differences that are present in the aviation training approach (no milder words 😊 have ever been issued).

Examples

Floris, a keen pilot ready to advance his flying repertoire at fast pace, owns a Cirrus SR22 Turbo single engine piston since a year and would like to get his IR. He signs up for the theory course at an ATO. He clicks away, passes all exams, and is ready to fly.

He then looks for a qualified instructor who provides individual instruction according to the planned future utilization of the plane. The instructor also

recommends an ATO where he will eventually finish the 10 last hours of flight training. Ideally, as is the case with myself, the instructor can provide 30 hours individual instruction, and for the last 10 hours inside the ATO, is cooperating with said ATO.

He flies 30 hours with his own instructor, and combines IFR training with the type of flying he intends to do (vacation, business, mountain etc..) as well as with the ATO procedures (yup, everyone re-invents the wheel).

Once the 30 hours “outside ATO” are done, and if the ATO is of the cooperating persuasion, Floris’ plane can be added to the ATO certificate and he can finish his training inside the ATO on his own plane, with the same instructor he used so far. The skill test is also done on his own plane.

Claudia, an established pilot and frequent flyer doesn’t want to own an airplane, but charters a Cessna 172 at her local field. She does the theory just like Floris. Once that is done, she gets a good deal by buying 30 hours in bulk on her favorite charter plane, and uses an individual instructor to train



Somehow I felt „cornered in“ when taking this picture

30 hours in it. She then uses the local ATO which happens to also operate a Cessna 172, flies the remaining 10 hours at this ATO to complete the training and then does her skill test.

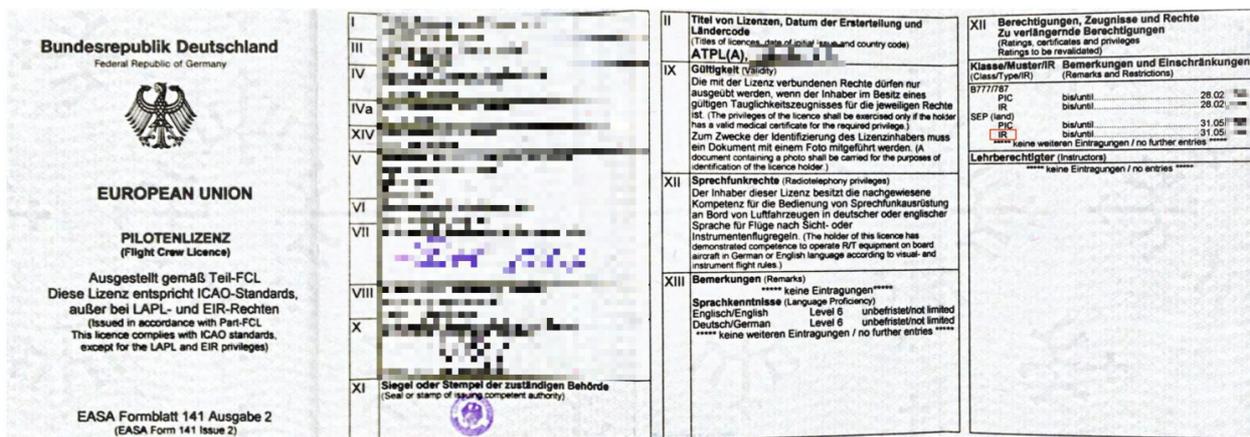
While certainly not the norm, there is nothing (except for serious amounts of money) prohibiting doing the IR in something fancy like a Piper Malibu (now called the M350), Meridian (Piper M600), TBM 940, Pilatus PC12 or similar. Pressurization always helps, and the named airplanes do certainly allow for a higher dispatch rate when meteorological conditions mandate on board WX RDR and sufficient anti-ice equipment. But, that's a "whole 'nother story" for another article.

License



Breaking out at minimum (Decision Altitude)

For motivational purposes, here is a license with an IR. Yes, even with the efficient CB-IR it is still a bit of fuss for just two letters in your licence, but it's worth it. It's also a much more professional aviation system that you will be a part of. Cruising along in the flightlevels, ATC handing you from one sector to the next, not worrying about visual reporting points, airspace infringements, traffic and terrain, it is nice. And so is climbing through some overcast clouds into bright sunlight on a day where VFR would keep you grounded. Or descending through IMC layers, picking up radar vectors to an ILS, spotting the lead in lights for landing. I once heard an accomplished IR Pilot say "IFR flying should not be exciting, it is supposed to be boring and uneventful, that's the goal." I'd say he is right, and add that IFR flying is a fantastic way to experience joy, excitement and feeling accomplishments while keeping the flying structured, uneventful and safe.



EASA License with IR

I hope this intro to the EASA CB-IR was useful. Please comment below or contact me anytime via my website to discuss your path to the IR.