

IFR – Taking the Training Wheels Off

You've completed your multi-IFR rating, but now's not the time to relax. The transition from IFR training to real commercial flying could be one of the most difficult periods of your career. Three pilots who've been there, done that, share their experience and advice.

Dan Foley, 2000 hours single pilot multi-IFR time, trained and instructed at Kapiti before flying with Vincent Aviation.

"It was all go. I was approached by Vincent Aviation, did a type rating the following day, and then departed in a crew of two to do calibration flying in Papua New Guinea.

"Vincent had a really good mentoring programme where you sit in the right-hand seat for a period of time, slowly building your expertise. You get opportunities to sit in the left on back flights, or non-revenue flights without passengers. After 200 hours in the right seat, I did my check which involved three hours of flight examining," says Dan.

Dan now works at the CAA as a Safety Investigator. He still flies multi-IFR in a training capacity to remain current.

Gareth Clare, a turboprop pilot, trained and instructed at Kapiti Aero Club.

"My multi-rating training was done in a Seneca, and that prepared me for the aircraft I'd eventually fly, in my first commercial job with air2there," says Gareth.

It's a Licence to Learn

When asked if he was pushed to his limits during his multi-engine training, Dan replies "in stages".

"A multi-engine instrument rating is a starting point. By no means do you have all the skills or the knowledge to fly IFR commercially at that stage.

"Training is mainly done in smaller regional towns where there isn't a lot of traffic. After I got my rating, it dawned on me that in the scheme of things, I didn't know a lot about flying in an instrument environment. I could fly routes that I'd flown 10 times during training, such as Paraparaumu to Foxton, but at airports such as Auckland, Wellington, and Christchurch, things are done a lot faster and more efficiently.

"I did a number of holds during my multi-IFR training, but during the six years I was flying for Vincent Aviation, I didn't do one operational hold. That's a reflection of the difference between the training and operational environments," says Dan.

Gareth cautions those who have just completed their training.

"The most dangerous point in your instrument flying career is when you've just got your licence. That's when you're going to learn those operational considerations that aren't taught during training.

"You have to be conservative. I can't stress that enough when making the transition. Set yourself personal minimums that are above the rules," says Gareth.

Commercial Pressures

Flying is only one part of the operation. There's security, passenger handling, communication with maintenance controllers, and the constant need to manage your time effectively.

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Simon Davenport has flown 2500 hours single pilot on both single and multi-IFR operations.

His first IFR job was in Kerikeri for Salt Air, before going to Paraparaumu to work for air2there. He is a Part 125 Airline Flight Examiner, and now flies for Air Nelson.

He says working in commercial IFR means quick turnaround times.

"There's a lot to do during that time.

"As an instructor, you can take your time planning before your flight to get a solid picture of the weather and everything else that's going on. When flying commercially, you're only picking out the information that's relevant to your flight – do I need an alternate, do I need extra fuel?

"You also have to think about your passengers' requirements. Is the weather going to be bumpy? Can I make it a nice flight for them?" says Simon.

"When tuning and identifying nav aids, always have two or three methods of navigation available, so if one fails, you can move to the other one," advises Dan.

Gareth says, "You tend to grow accustomed to the routes that you train on.

"It's easy to forget how your workload can increase when you fly somewhere out of the norm with a different arc or inbound, or have to conduct a missed approach.

"I remember my first solo missed approach into Paraparaumu. It occurred shortly after I got my instrument rating when I was building the hours needed for air2there. I'll never forget that feeling, and experiencing how high the workload was.

Simon encourages pilots to keep their brains engaged.

"Before pushing any button in the aircraft, think, 'is this what I actually want to do?' When you get an altitude change, write it down or program it into the aircraft



Managing your Workload

It's all about staying ahead of the aircraft, and keeping a handle on the big picture.

"When you're flying single-pilot multi-IFR, you're never sitting there fat, dumb, and happy. You are thinking ahead about the next task or action," says Dan.

"The Cessna 406 I trained in had dual radios that allowed me to pre-program frequencies. You're always tuning and identifying a radio, or listening to an ATIS to stay ahead of the game.

"At one stage when I was doing my operational check out of Blenheim, we had a simulated engine failure on departure. During the climb, I was already identifying nav aids, listening to the ATIS in Nelson, and briefing the approach.

"A short sector is already a time of high workload, but add a simulated engine failure into the mix and the workload becomes huge. This makes task prioritisation all the more important.

straightaway so you don't have to second guess yourself – it's good cockpit management. Of course, this depends on your workload, you have to be practical and prioritise.

"Trim the fat – you're trying to make all aspects of the operation efficient. Keep the preflight briefing and radio calls to the point. Say what you need to, but don't tell the air traffic controllers your life story. If ATC know you can be quick and efficient, they will have greater confidence fitting you into traffic sequences.

"I don't believe in rushing, but there's a certain amount of efficiency that you need to develop. For example, on reaching a holding point, you don't want to have a whole bunch of checks left to do – you should be almost ready to depart. If you receive a last minute change in departure clearance, and you haven't briefed the amended procedure, it can definitely throw you. Either request to stay with the original departure instructions, or tell controllers that you're going to need a minute or two to re-brief. Get your head in the right airspace before launching.

"When airborne, it's also about knowing what the next step is and 'massaging' the flight. That could be requesting direct to shave off a couple of minutes, or anticipating the next set of instructions. When practical, it's also useful to have a look every now and then to see if you can get a visual approach. It will make your life easier and save the company money," says Simon.

Gareth brings situational awareness into the picture.

"If you're flying VFR, the big picture is easier to maintain as you can see what's going on around you. When flying with instruments you need to maintain that same mental picture with limited information.

"During your training, it's really difficult to reach that level of awareness. Your capacity is completely taken up by the constant flow of new information you have to assimilate.



"But when you're in your first job and you start getting some time under your belt, then you have some extra capacity to take all of those other considerations into account – maintaining your situational awareness is invaluable," says Gareth.

Prior Preparation

"If I'm flying into an airport for the first time, I'll have a read of the AIP the night before," says Simon.

"You need to grasp the important information, such as speed requirements or ATC frequencies. The preparation is invaluable and it costs you nothing.

"You also need to be aware of the exceptions. For example, if you're going from Woodbourne to Nelson and you're cleared for the VOR/DME A approach, theoretically you'd need to make a reversal procedure before the outbound. However, on closer inspection of the AIP Nelson procedure pages, that isn't the case."

"A multi-engine instrument rating is a starting point."

Terrain Clearance

When you're flying IFR in controlled airspace, air traffic controllers are responsible for your terrain separation. But what happens if your radio fails? Gone are the days when you could look across at your instructor for guidance.

Always keep an ear to the ground and make sure you have VORSEC and enroute charts at your fingertips.

Aircraft Performance

"You really need to know the performance characteristics of your aircraft and its limitations," says Gareth.

"Initially, I flew the Partenavia. The Partenavia and Caravan boast similar speeds. The Chieftain on the other hand was more demanding to fly. Not only was it 25 to 30 kts quicker, but as it's a piston, you always had to be conscious of engine management. You need to have different approach plans for different aircraft. You also need to consider what you would do in the event of an engine failure – that's an article in itself."

Simon adds, "Know your aircraft specs and the specific aerodrome rules in the AIP.

"For example, one company I worked for climbed at 90 knots until 3000 feet which is fine at uncontrolled aerodromes; however in Wellington, the controllers want you to get airborne and out of the way so they can launch other traffic behind you."

Weather

"A good number of instructors can become 'fair weather pilots'," Simon remarks.

"When instructing, they have to fly in weather conditions suitable for their students, so they lack exposure to real world weather. When flying commercially, you're flying in weather conditions that aren't the greatest – sometimes at minimums.

"I remember when I was with Salt Air flying Whangarei to North Shore. Conditions were marginal and being a brand-new IFR pilot in my first job, it definitely got the adrenaline going. We had big, scary Auckland as the alternate, so there were all these considerations, like what to do with the passengers.

"If you're training, you'd just head back – no biggie. But when you're flying commercially, the chance of a missed approach can be a bit daunting.

"The actual thought of missing at North Shore was quite exciting as I'd never done a missed approach for real at that stage.

"We ended up getting in all right so it wasn't a big deal. It all comes down to prior preparation. I've seen a few students over the years that let themselves down on that front," says Simon.

Gareth warns new licence holders about the risk of icing.

"There are a host of challenges that aren't covered in great detail during your training – I cannot stress enough the dangers of icing in GA aircraft," says Gareth.

"Looking back on my experiences and the things that scared me, icing was the biggest. It's not really covered in great detail during your training. In the training environment, you're probably lucky if you're flying an aircraft with prop de-icing.

The CAA's *Aircraft Icing Handbook* is available free on the CAA web site, www.caa.govt.nz, "Publications – Good Aviation Practice booklets".

Night Flying

When night flying, you'll need to manage the additional risks: reduced pilot reports, ATC off-watch, fatigue, and limited visual references.

"I got caught off-guard flying between Auckland and Christchurch at night," recalls Dan.

"At 2 am, a front was coming up the east coast of the South Island and nobody had flown through it, or could give me any advice on its exact location or severity. In hindsight, I shouldn't have been flying.

"I was the first person to reach the front and I got hammered. Fortunately, a Boeing 737 was in the vicinity. After coordinating with ATC, it slowed down behind me and helped to vector me out of the front and around the CBs," says Dan.

Gareth cautions those who have minimal night flying experience.

"Your work schedule can become hectic when a good chunk of your sectors are at night – especially during winter when it gets dark around 5:30 pm. And there are the classic difficulties: illusions, fatigue, aerodrome lighting, and so on.

"I'm grateful that I did quite a bit of night instructing, but I still found the night shifts challenging.

"There are a lot of subtleties you need to understand, such as how specific aerodrome lighting systems function. If you're flying into aerodromes where air traffic control has gone off-watch, you'll need to coordinate with the nominated person to turn on the aerodrome lighting. Have a backup plan if they fail to do so." ■

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