

Flybe and the Multi-Crew Pilot Licence

Much has been written and said about the Multi-Crew Pilot Licence (MPL) since its inception and yet the knowledge about its rationale, purpose and means of achieving it is still relatively slight within the industry and existing pilot population though that has not prevented the expression of strong views on all sides. There is a noticeable tide of change, however, and with greater knowledge and stronger evidence, the new licence is gaining greater support from airlines, regulators and pilots from all around the world. Flybe is the first airline to partner a Flight Training Organisation (FTO) for the introduction of the MPL to the UK. But why would we want to do that? The very clear objective must be to provide training that is at least as high quality as anything presently on offer.

What is MPL?

This new licence allows a pilot to exercise the privileges of a co-pilot in a commercial air transport multi-crew aircraft. The course leading to its issue trains, from ab-initio, specifically for this role. On achievement of the required hours, the pilot is eligible for the issue of an ATPL, though still limited to multi-crew aircraft. Though training is still delivered by an approved FTO, this must be in partnership with an OPS 1 operator, whose TRTO delivers the final phase of training in the form of a Type Rating course.

The guidelines, upon which training and licensing for pilots are based, are contained in ICAO Annex 1 to the Chicago Convention, 1948. The annex was revised in 2006, the first major update in all those 38 years. That revision contained the concept of training for a licence that was specifically aimed at qualifying a pilot as a First Officer on a multi-crew aircraft and recognised the value of using technology that did not exist in 1948. In addition, greater knowledge of the tasks and training needs could be incorporated at a much earlier stage of training.

The MPL was born of a full review of international training provisions which commenced in October 2000. That review was based on concerns that the 40 year old standards and recommended practices (SARPs) of Annex 1 had become out of step with modern industry practice and did not take account of available high fidelity simulation devices. The ICAO panel of experts who devised MPL sought to question the means of delivering pilots to the airline industry. As part of their MPL proposals, they implemented a specific risk control programme and proposed a post-implementation proof-of-concept programme.

It is important to establish what the MPL is not. It is not a shorter course. It is not a cheaper course to deliver. It is not designed to cope with any perceived pilot shortage. If it were, now would be a poor time to introduce it. In short, the driver for ICAO, for the regulators and for the operators was not economic, but a refocus of training based on demonstrated needs.

An important departure from the traditional ATPL course is that flight training is competency based rather than achieving the required hours in various areas followed by checks. Trainees are continuously assessed against a clearly defined set of competencies for each phase of the operation and incorporated from a much earlier stage are the concepts of Crew Resource Management (CRM) and Threat and Error Management (TEM).

ICAO has imposed stringent qualification standards for FTOs and operators' TRTOs as well as for instructors delivering MPL training. Training Manuals must give very clear guidance on levels of competency required and how to assess them, thus fostering higher levels of standardisation and objectivity of assessment. Instructors must complete an MPL instructors' course and, for instructing the latter phases of the course, must be multi-crew experienced.

Course Structure

There are some differences between the structure of the MPL course and the existing frozen ATPL course. Most notably, and the one that causes greatest concern amongst many pilots, is the replacement of a certain amount of airborne flying experience with time in a simulator. The actual structure for the Flybe course, whilst based on the ICAO guidelines, exceeds, in many areas, the minimum requirements. Any time removed from the air has been carefully chosen and justified. Discretionary airborne training and experience believed by Flybe or the FTO to be beneficial has been retained. The scrutiny of the Authority has been intense and the justification must, as a part of the implementation of MPL, be data driven to ensure no erosion of safety margins.

Theoretical training is unchanged from the ATPL course, as it currently stands. The same subjects are studied, to the same depth and with the same examinations.

Flight training comprises four phases:

Phase One, the *Core* phase, is basic flying training. Included are 46 hours dual training and 22 hours solo flying in a single engine piston aircraft. In addition, there are 3 to 5 hours upset training and 15 hours multi-engine. The latter was considered important by Flybe to give experience of asymmetric flight in a real aircraft. Though not required by ICAO, this crucial experience will probably be the only, if lucky, in the pilot's career. The core phase also includes basic simulator training for both single and multi types.

Phase Two, the *Basic* phase, is an introduction to the multi-crew environment in a two crew FNPT II simulator. There is no motion or visual system at this stage though there is an introduction to systems management, CRM and TEM.

Phase Three, the *Intermediate* phase, is conducted, multi crew, on a complex, multi engine turbine type simulator with motion cueing and a full daylight visual system. Multi crew training to airline SOPs, advanced

instrument flying training, emergency situations, CRM and TEM, high altitude flight and emergency descents are all included. As far as possible, Flybe SOPs will be used.

Phase Four, the *Advanced* phase is conducted by Flybe's TRTO and is the delivery of the final Type Rating course. The course is identical in content, though the assessments are still competency based and scrutiny of performance during the first few courses will be high. The simulator course has been updated to reflect this. A significant difference is that base training in the aircraft, following LST, will comprise at least 12 take-offs and landings, twice the current requirement.

The total flight training time for MPL students will be 265 hours, of which around 90 will be spent in the air.

So what has been removed? Some 23 hours solo time in a single engine piston aircraft, the twin engine piston class rating and the single crew piston instrument rating are no longer there. Solo time is important and the 22 hours, which includes navigational exercises, is considered sufficient. Neither the light twin class nor the instrument ratings contribute significantly to a multi-crew airline career, provided they are replaced by high quality competency based multi-crew IFR training.

Added are some 120 hours of multi-crew, multi-engine simulator training to airline standards matching those required by Flybe, based on our operation and our demonstrated requirements. They are taught in suitable levels of simulator by highly qualified instructors with both basic instructional and multi-crew experience. Phase three must be taught by a holder of a TRI rating on a multi-crew type. This level of instruction is not cheap and hence the overall cost of delivery of the MPL course is similar to that of the conventional frozen ATPL.

Simulator Standards

Much work is being undertaken on the reclassification of Flight Simulator Training Devices (FSTDs) by an International Working Group through the Royal Aeronautical Society. The aim is to define a device by the training need rather than the level of technology it offers. Completion of the work to update ICAO Document 9625 may redefine the level of simulators used for MPL.

Concerns have been raised that the MPL was designed around the level of technology available on today's FSTDs. It is important to stress that the training requirements of the various phases of MPL training have driven the level of simulator to be used and, in some respects, the FSTDs used exceed the requirements.

Safeguards

A great deal depends on the quality of the course structure, on the quality of delivery and the data that is collected in the latter stages of training. That data

will be used to assess not only the competency of the trainees but also the effectiveness of the course. Such data will be studied carefully by ICAO, the Authority, the FTO and Flybe and will be used, where necessary, to modify and enhance the course.

Ultimately, the trainee pilot will have to pass the same LST, aircraft landings and Line Check that any other new pilot to the business, undergoing a Type Rating course, would face. The Authority will demand very strict quality control of training both in the FTO and Flybe's TRTO. We will be watched closely.

There must be safeguards for the trainees themselves. The MPL will cost them a great deal of money. For that, they are tied to a type and, initially, an operator. At a time when some airline operators are facing financial difficulties, there is an enhanced risk to the trainee. The mitigation of that risk comes in three parts. If Flybe are unable, for unforeseen reasons, to complete the Phase Four of the MPL, or if data gained through the course show it to be inferior to the ATPL in respect of delivering airline pilot training, the FTO will fund a reversion to a conventional frozen ATPL course. Flybe will, similarly, guarantee the final phase of training. Finally, Flybe will partially sponsor the MPL course under the terms currently on offer for partially sponsored students.

Flybe has a long history of training new pilots fresh from their FTOs with whom we have worked closely for many years. Levels of competence and previous areas of weakness are well known and much data already exists. We are, therefore, well placed to safely carry forward this new licence.

The way forward

The MPL had an inauspicious start with the unfortunate demise of Sterling, the Danish budget carrier that first trod the MPL path. Though the performance of their new MPL holders on the line was excellent, commercial constraints threw them to the mercy of a sceptical and cash strapped industry. Acceptance is widening and courses now exist in Denmark, Germany, China and Australia, whose first MPL students are due to graduate. EASA, when it supersedes JAR-FCL, will carry with it the means to transfer to any European member state.

It is unlikely that the MPL will replace, entirely, the current proven route to a professional pilot licence in the near future. Much has still to be done to prove and validate the new course and to widen confidence in a new way of training. However, everything that can be done, ahead of conducting these courses, has been done. The ultimate proof and validity will be the performance of real MPL graduates on line in an airliner. We are confident that the planning and safeguards in place will ensure safe and competent airline pilots who will contribute to the continued safe operation of the Flybe fleet.

Courses are due to commence through Flight Training Europe, in Jerez, in June and at Oxford Aviation Academy at Kidlington in August.