



# INTRODUCTION

The history of this Flight Instructors Manual (Issue 2), published by CASA in 2006 has very interesting origins.

Robert Smith-Barry (1886 – 1949) was one of the first pilots to train at Central Flying School (CFS) and in the early stages of World War (WW) 1 (1914 – 1918) casualty rates at flying training establishments exceeded the number lost in combat. Smith-Barry secured approval to return to Britain and re-organize training at CFS in August 1917.

Smith-Barry's training doctrine clearly stressed that students were not to be led away from potentially dangerous manoeuvres but were instead to be exposed to them in a controlled environment in order that the student could learn to recover from instinctive errors of judgement.

Smith-Barry's methods were so successful as to gain worldwide renown and his approach to flying training was rapidly adopted by many allied air forces. He also served in a flying training role in WW2 (1939 – 1945).

The influence of Smith-Barry's flying training philosophies was most evident in the Empire Air Training Scheme of WW2, which trained some 37500 Australians as well as New Zealanders, Canadians and Rhodesians. In fact the 'flying training bible' of that era as adapted (AP1732A) was used almost exclusively in civil aviation flying training in Australia for about 20 years after WW2. That publication was the basis for the Australian flight instructor's manual - Publication 45, which served the civil flying training industry from 1967 until 2005.

This Flight Instructors Manual has its foundations in the documents mentioned above.

This manual has been written with the aim of presenting flying instructors of all experience levels a guide to elementary flying training. As flying instructional technique must to a large extent depend on the characteristics of the particular type of aeroplane and equipment being used, no direct reference is made to any particular type of aeroplane or equipment. It is sufficiently comprehensive to cover all aspects of flying training on simple aeroplanes with fixed undercarriages and fixed pitch propellers.

The manual will be of greatest benefit to the instructor if he or she understands how to use it correctly. Some



explanation of the arrangement and use of this manual is therefore given in the following paragraphs.

Although the exercises have been arranged in a logical order, this does not imply an order of importance or chronological order in which the exercises should be taught. The scope of each exercise, with the possible exception of Exercises 1 to 3, is such that it is unlikely that most students will become completely competent in each prior to first solo. It is an acceptable principle that in the early stages of training, instruction should be restricted to simple manoeuvres and no attempt made to teach really precise flying until the student has completed some solo flying and gained confidence.

Instructors must be familiar with the CASA Day VFR Syllabus (or the equivalent document in the future) which, amongst other matters, sets out the standards that must be achieved during various phases of training. Consideration was given to reproducing parts of that document in this manual. However, the idea was rejected on the grounds that flying instructors will have access to the Day VFR Syllabus in their flying training organisation.

The exercises are divided so far as is practicable into four parts:

- (i) Aim
- (ii) Instructional Guide
- (iii) Pre-Flight Briefing Considerations
- (iv) Air Exercise

**The Aim** as stated at the commencement of each exercise gives an overall picture of just what the instructor is ultimately endeavouring to teach the student.

**The Instructional Guide** contains advice to instructors and should be helpful in teaching the particular exercise.

**The Pre-Flight Briefing** Considerations are a brief explanation of the principles underlying the exercise.

It is imperative that the student receives an adequate briefing prior to attempting to learn a lesson in the air. There is no real substitute for a thorough briefing by the instructor on the exercise about to be taught. The instructor should use the considerations outlined in this manual to develop a picture of the exercises as a whole, but the manual is not the place for involved explanations on principles of flight, engine handling and the like. For this reason numerous detailed diagrams, formulae and complex explanations have, as far as possible, been avoided. The instructor should use the appropriate textbooks as the source of detailed information.

The pre-flight briefing is aimed at confirming recency to theory taught in theory lessons or self study.

Under normal circumstances the pre-flight briefing should be no longer than 15 minutes. Questioning should demonstrate the student's preparation. Additionally, a brief description of how the sequence will be managed and the instructor's expectation of the student should be clearly articulated.

**The Air Exercises** are a series of planned lessons arranged to provide the instructor with specific and clear direction on what to teach and how to teach it. Because of the various types of aeroplanes used, no set pattern is provided. Further, parrot-like repetition of words is undesirable, and for these reasons no set pattern is given. Rather, the instructor should put into his or her own words the instruction to be given in the air. Each instructor will, in any case, develop a personal style in talking to the student in the air as experienced is gained.

Generally the instructor should first demonstrate all air exercises and then the student should try them. Some exercises, for example spinning, are best taught by first demonstrating, then having the student manipulate the controls together with the instructor and then trying it with the instructor monitoring.

Flights should be linked in a logical sequence, often described as the building block approach. Ideally a demonstration should be given at the end of each flight showing what will be covered in the next flight.