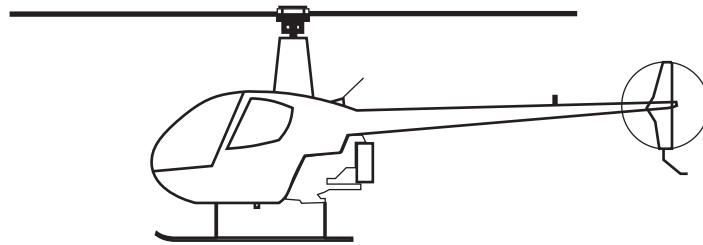


POOLEYS

AIR PRESENTATIONS



Flying Instructor's Guide to Pre-Flight Briefing

Mike Green

(HELICOPTERS)

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Introduction

1. This publication is an authoritative guide to helicopter instruction. It is not aimed at any particular helicopter and individual instructors need to adapt speeds, power settings and sequences to suit the type of helicopters being instructed on. The recommended sequence of air exercises is based upon considerable helicopter flying instruction. However, the publication is not intended as a substitute for individual instructor experience, nor does it in any way inhibit the individual instructor's initiative, nor is it intended to overrule any local or flying order. It is not essential, therefore, for each lesson to follow the precise form or order of sequence shown in this book. It may suit a particular student better if all, or part, of more than one exercise is combined into one lesson, or it may be necessary to break down an exercise over more than one lesson. The aim is that the individual student shall achieve the training objectives in the way best suited to them.

General Notes for Flying Instruction

2. The art of instructing is largely acquired through practice and each instructor evolves a technique that is best suited to their own individual personality. Experience has shown, however, that certain general rules should be followed. The most important are listed below:
 - (a) *Preparation*

Prepare every lesson thoroughly so that you know exactly what you have to teach.
 - (b) *Interest*

Make the exercise as interesting as possible by monitoring practical applications.
 - (c) *Method*

Although it may not fit every air exercise exactly, the broad method behind teaching in the air is in the following sequence:

 1. *A demonstration by the flight instructor.*
 2. *Student pilot practises with as much verbal or handling assistance as the flight instructor considers necessary until the student has reached an acceptable standard. But do not fly the exercise for them. Let them fly and make the mistakes—unless they endanger the aircraft! Avoid explanations whilst the student is at the controls. Confine your assistance to simple reminders or matters of degree. If explanations are required take over control from the student before explaining. It is very important that students are not allowed to practise mistakes, it is far easier to teach correctly the first time than try to correct mistakes at a later stage.*
 - (d) *Speech*

Speak clearly and deliberately; keep your voice pitched up and ensure that your student can hear every word.
 - (e) *Accuracy*

Demonstrations must be accurate and convincing and the aircraft must be doing what you say it is doing.
 - (f) *Explicitness*

Give the student clear and concise instructions when setting them a task.

(g) **Tolerance**

Be patient when a student makes mistakes and remember that they learn by them.

(h) **Division of Flying**

The student pilot should fly the aircraft as much as possible. They learn more by practice and you should normally take over only to give demonstration, explanations, when they need to rest, or when they cannot cope with the situation.

(i) **Anger**

Avoid becoming angry with the student while airborne as anger between crew members is detrimental to good flight safety. It is unlikely to help the slow student who fails to understand the point you have patiently made. Consider another method of clarifying the point.

(j) **Verbal**

Never talk too much in the air. Put over the important points and give a student a chance to absorb them.

(k) **Hypercriticism**

Do not criticise every mistake the student makes. Concentrate initially on the major errors, leaving the minor points until a noticeable improvement has been made. Always explain the reasons for the mistake whenever possible. Just saying that was not correct will leave the student confused.

(l) **Subterfuge**

Never try to gloss over or disguise your own mistakes, you will be found out and this will destroy the confidence of the student and instructor relationship.

(m) **Post Flight Debrief**

Post flight debriefs are most important as they give the opportunity to discuss any aspect of the sortie whilst the details are still fresh in the student's mind. This is the time to re-emphasise the important points of the exercise, speed, power settings to ensure the student commits to long term memory. No new material should be introduced at this stage.

(n) **Self-Criticism**

Encourage the student to be self-critical, especially when solo, of their own performance. Also be self critical of your own performance, if the student did not achieve the objective of the sortie, was this down to poor instruction? You may have to change the way you teach depending on the student, don't forget they are individuals.

(o) **Emergencies**

The student must be taught to handle all emergencies as soon as practicable, a good time for this is to make the maximum use of the transit time to and from the training area. Approach emergencies with common sense ie. having first experienced the more pleasurable side of flying, explain to the student that the emergency procedure is essential but not a daily occurrence.

Student Behaviour

3. Most students will at sometime during their training fall into one or more of the following behaviour patterns. These notes are designed to help the instructor to recognise the symptoms and offer a suggested course of action:

(a) *Over-Confidence*

A conceited student often displays a degree of confidence which is not borne out of their ability. The instructor should insist relentlessly on high standards of accuracy and airmanship criticising all imperfections in a firm but fair manner so the student is constantly aware of their shortcomings. A more difficult case occasionally arises in which a feeling of inferiority or insecurity is cloaked in an attitude of aggressiveness; the student may betray themselves by nervous gestures or mannerisms when off his guard. This complex requires careful handling, since repressing the apparent over-confidence may only aggravate the cause.

(b) *Under-Confidence*

The nervous, difficult student needs encouragement. They tend to be extremely self-critical and become discouraged if not assured that their progress is normal. They should be praised freely when doing well and their mistakes should be explained carefully without undue reflection on their ability. Care must be taken in the air to avoid any signs of apprehension while they are in control of the aircraft.

(c) *Forgetfulness*

Most students forget a great deal of what they are taught and facts must be instilled by constant revision. One way of doing this is teaching from the known to the unknown to keep the student focused. Forgetful students should be made to take an active part during dual instruction and should be called upon to recount on the ground what they have been taught in the air. Faulty checks should be corrected and the student made to repeat the correct drill in its entirety.

(d) *Inconsistency*

The process of learning is an irregular one, and many instructors are discouraged when they find that their students become stale from time to time. This is because the mind can become saturated with new ideas and the student's receptivity often deteriorates until the fresh information has been consolidated in his memory. Flying training takes place in an entirely new medium and it is not uncommon for a student to make a slow start, only to progress rapidly at a latter stage.

(e) *Apathy*

If a student becomes unusually slow, inattentive or erratic it can be due to a number of troubles. It is always possible that they may be distracted by a problem not related to flying. Worry can often be reduced simply by having someone in whom to confide. The most common reasons for loss of enthusiasm are private worries, distaste for flying or personal antipathy between student and instructor.

Notes on Basic Helicopter Instruction

If the basic student is an experienced fixed wing pilot, some aspects of instruction may be facilitated – particularly airmanship. The fact that the student is an experienced fixed wing pilot can produce its own problems, probably in his mental approach to the problem. They must accept the idea that they are learning a new form of flying, not merely converting to a new type of aircraft.

Introduction to Objectives

This study guide introduces objectives for flying training instruction. The system centres upon two basic terms:

(a) *Training Objectives*

This is the precise definition of the aim.

(b) *Enabling Objectives*

This states the required knowledge or skills, without which the student cannot achieve the training objective.

Exercise Format

All exercises (with exception of ? and I2) are presented using the sections listed in the following paragraphs.

Lesson Objectives

These represent a convenient breakdown of the exercise skills.

Assumed Knowledge and Skills

These are the knowledge or skills which the instructor assumes the student has acquired through previous reading or exercises. However this knowledge is checked during the exercise briefing.

Introduction

This consists of a brief statement of any future or operational applications of the exercise.

Exercise Briefing Objectives

This section presents all the enabling objectives for each individual training objective. These form the basis of the briefing given by the instructor. They in no way indicate the style of the briefing but, obviously should not be used as a simple question and answer session. All enabling objectives are framed such that a simple statement directly relevant to the flying of the exercise is sufficient.

Notes for the Instructor

This section is divided into sub-sections.

(a) *General*

This provides a general guide to the instructional technique for this exercise.

(b) *Common Faults*

This lists the most common student faults encountered.

Air Exercises Teaching Plan

This gives a suggested sequence, with notes, for carrying out the air exercise.

Exercise Debrief

Exercise 4 Effects of Controls

- Lesson Objective:**
1. Operate the cyclic stick observing the effects.
 2. Operate the collective lever observing the effects.
 3. Operate the throttle observing the effects.
 4. Operate the yaw pedals observing the effects.
 5. Display airmanship.

- Assumed Knowledge & Skills:**
1. Objectives of Exercise 1-3
 2. Students' Study Guide Exercise 4.

Introduction: *This exercise introduces helicopter controls and their functions and aircraft instruments.*

Exercise Briefing enabling objectives:

1. Operate the cyclic stick observing the effects:
 - 1.1 Describe the operating characteristics of the cyclic stick.
 - 1.2 Describe the use of cyclic right trim.
 - 1.3 State how fore and aft movement of the cyclic stick affects the following:
 - (a) Disc attitude and loading
 - (b) Aircraft attitude
 - (c) IAS
 - (d) Height
 - (e) Yaw
 - 1.4 State how the lateral movement of the cyclic stick affects the following:
 - (a) Disc attitude and loading
 - (b) Angle of Bank
 - (c) Yaw
 - 1.5 State how MAP and RRPM are affected by the following:
 - (a) IAS
 - (b) Disc loading
 - (c) Roll effect in either direction
2. Operate the collective lever observing the effects:
 - 2.1 Describe the operating characteristics of the collective lever.
 - 2.2 State what factors limit the amount of collective pitch that can be applied.
 - 2.3 State how the collective lever movements affects the following:
 - (a) Collective pitch and MAP
 - (b) Yaw
 - (c) Aircraft attitude
 - (d) Height