CHAPTER 4

PRE-FLIGHT BRIEFING—AIR EXPERIENCE FLIGHTS IN CHIPMUNKS

Introduction

1. The successful completion of any flight depends largely on the thoroughness of the preparations made by the captain and the crew before take-off.

2. The main purpose of a pre-flight briefing is to ensure that the captain, crew and passengers thoroughly understand the object of the flight and have done everything necessary to ensure its efficient and safe completion. Briefings vary widely and depend in great measure upon the role of the particular aircraft and the object of the flight. For example, the crew of a Nimrod aircraft may require a briefing lasting many hours, whilst a pilot making a short flight in a simple aircraft in the local flying area may need only a short briefing.

3. Pre-flight briefing for a cadet really starts from the time he joins the Corps. For example, by reading the preceding three chapters a great deal of knowledge should be absorbed about what to expect at the airfield and in the aircraft. There is also a film for showing to cadets who are being prepared for air experience flights. However, there is a great deal more to pre-flight preparation of the uninitiated and, when visiting RAF stations, cadets are advised to listen carefully to their briefings.

4. When visiting any airfield a most important point to remember is that it can be dangerous to wander about aimlessly or in isolation, especially on the roads or in the aircraft manoeuvring area. It could be fatal to be struck by a propeller; to get too close to running jet engines; to walk in front of a landing glider and so on. Keep with your party, and keep a good look-out.

Briefing for Air Experience Flights

5. The pre-flight briefing given to cadets by the Air Experience Flight (AEF), when cadets report there for one of the flights in the syllabus of air exercises, will cover the following:

a. The aim of the exercise.

b. The fitting and operation of parachutes.

c. The fitting and operation of the protective helmet assembly.

d. The fitting and operation of life-preserving waistcoats, if required.

e. The fitting and operation of the aircraft safety harness.

f. Check for loose articles.

g. Action to be taken in emergency, including abandoning the aircraft.

h. What not to touch in the cockpit.

j. Basic operation of the aircraft radio.

k. The local flying area.

l. Weather conditions.

(AL6, Jun 83)

m. Precautions on the ground in the aircraft manoeuvring area.

n. Medical aspects of flying.

The Aim of the Exercise

6. The general aim of the air experience syllabus is to give the cadet passenger an introduction to the aircraft and an opportunity to get used to the strange environment. Each exercise will include the effect of some of the aircraft controls so that the cadet passenger may be given the opportunity of actually flying the aircraft. As experience is gained, other aspects of flying will be introduced, in line with the air experience syllabus. The detailed aim of each exercise is specified in the syllabus.

The Parachute

7. **Description.** The parachute used in Chipmunks is the seat type (Fig 12) which consists of the parachute pack with a soft, rubber seat cushion on top, a back-pad, four straps, a quick release box, and the rip-cord and handle.

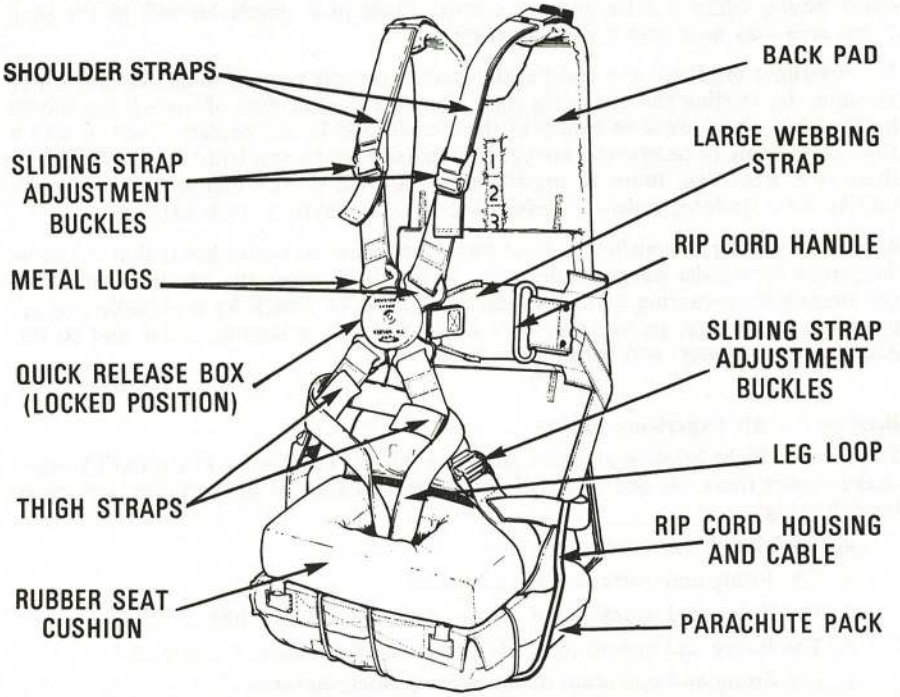

Fig 12 Seat Type Parachute

8. **Fitting.** To fit the parachute, the two straps which come up behind the back-pad are brought over the shoulders and allowed to hang vertically down. The other two lap straps are brought over the thighs, the left strap over the left thigh and the right strap over the right thigh, and both are then passed through the loop which protrudes

from the parachute pack itself and which comes up through the seat cushion and between the legs. Both these straps are then pulled upwards so that the *metal lugs* at the ends of the straps can be pushed into the *bottom slots* of the quick-release box. The *quick-release box* is fixed to the large webbing strap which comes round the left of the body. On the front of it is a round metal operating knob which can be turned into three positions—*fastening, locked* and *unlocked.* In order to push the lugs into the slots the operating knob must be turned and *held in the fastening position* and this is done by turning it slightly anti-clockwise. In the fastening position the operating knob is spring loaded and will *return automatically to the locked position* when let go. It should be noted that the operating knob cannot be turned into the *unlocked position* unless at least one harness lug is correctly engaged. Once the two lugs of the lap straps are inserted into the bottom slots the lugs of the two straps hanging down over the shoulders are inserted into the two slots at the top of the quick-release box.

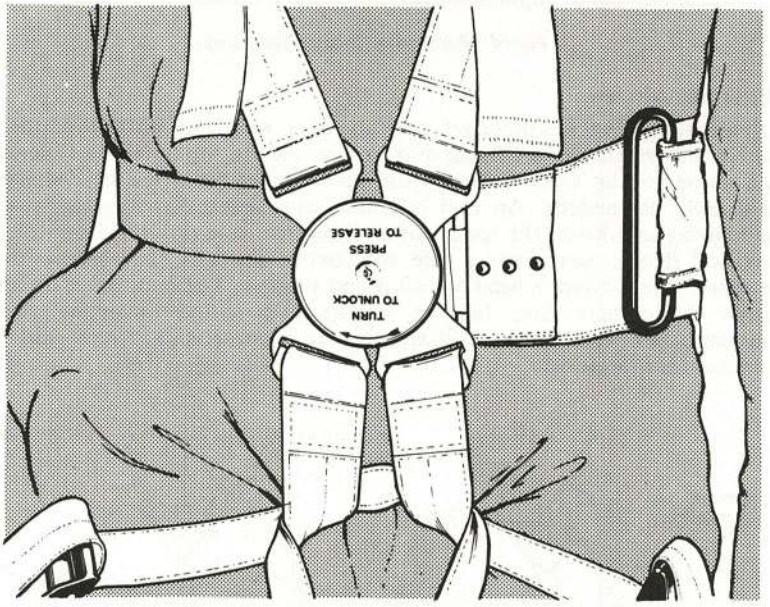

Fig 13 Parachute Fitted

9. **Adjustment.** The parachute harness is adjusted to fit the wearer by pulling on each of the free ends of the adjustable portions of the four straps. Adjustment is made so that the harness feels very tight in the standing position—in fact the wearer should be able to stand only in a stooped position.

10. **Method of Release.** To release the parachute harness after a flight is a simple matter. Rotate the operating knob on the front of the quick-release box in the direction of the embossed arrow (clockwise) to the *unlocked position* and *press.* All the metal lugs of the harness drop out of the box and the parachute falls away from the wearer (Fig 14).

(AL6, Jun 83)

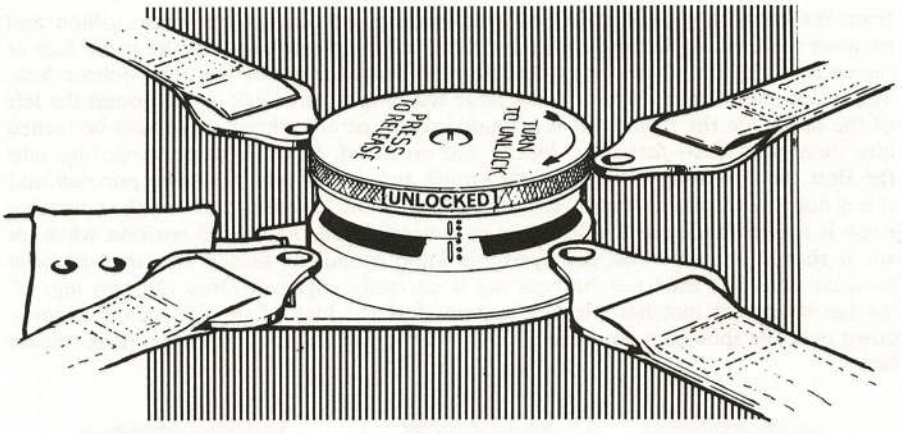

Fig 14 Parachute Harness Released

Life Preserver Aircrew

11. **Description.** The life-preserver consists of a waistcoat worn over the flying overalls by aircrew of aircraft flying over or near the sea. It contains a stole which is inflated automatically from a carbon dioxide cylinder when the beaded handle is pulled sharply downwards. An oral inflation valve allows for topping-up—by the wearer blowing into it—or the release of air from the stole (Fig 15). The stole, when inflated, will float a survivor in a safe and comfortable attitude whatever the state of the water. The survivor's head has all round support. The body takes up an angle of approx 45° to the surface, face up, weathercocks to face oncoming waves and rides up and down with them. It will also turn an unconscious survivor right way up from a face down position.

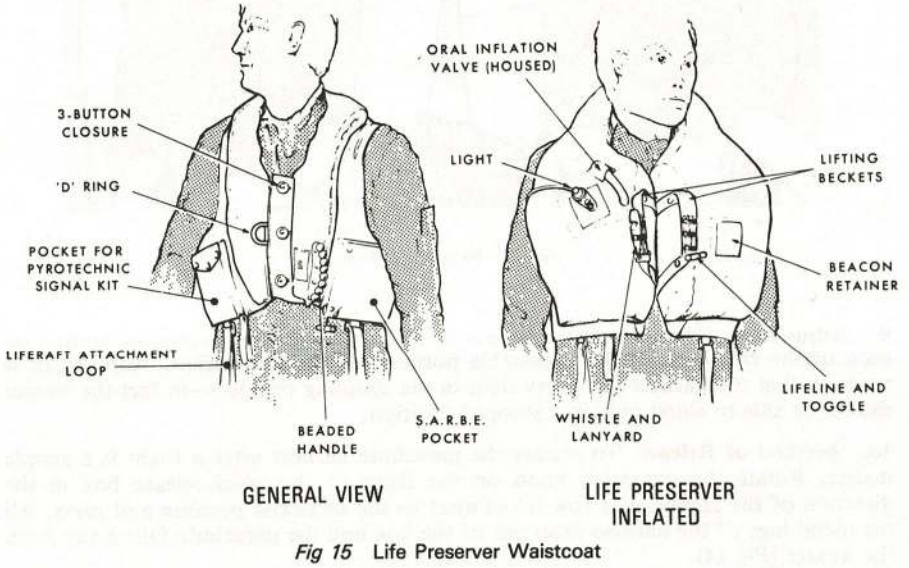

Fig 15 Life Preserver Waistcoat

(AL6, Jun 83)

12. **Aids to Location.** Life-preserving waistcoats are provided with:

a. Red mini-flares and pistol (pyrotechnic pocket).

b. Whistle and lanyard.

c. A heliograph which reflects the sun's rays to flash signals to rescuers (in the SARBE pocket).

d. A light; the current being supplied by a battery which operates as soon as it comes into contact with sea (or fresh) water.

e. SARBE (*Search and Rescue Beacon Equipment*). This is a small transmitter and battery which when operated sends out signals to search aircraft or surface vessels.

The Aircraft Safety Harness

13. **Description.** The aircraft safety harness is attached to the aircraft itself and ensures that the wearer will not fall out of his seat if the aircraft is inverted. It consists of four adjustable straps plus a fixed negative *g* strap. Two of the adjustable straps come from behind the seat over the shoulders and down over the chest and the other two are located on each side of the seat coming up over the legs (Fig 16). Once the parachute is fitted and the wearer is sitting in the back seat of the Chipmunk the aircraft safety harness must be put on. It goes on over the parachute harness and is locked with its own quick-release box located in the negative *g* strap.

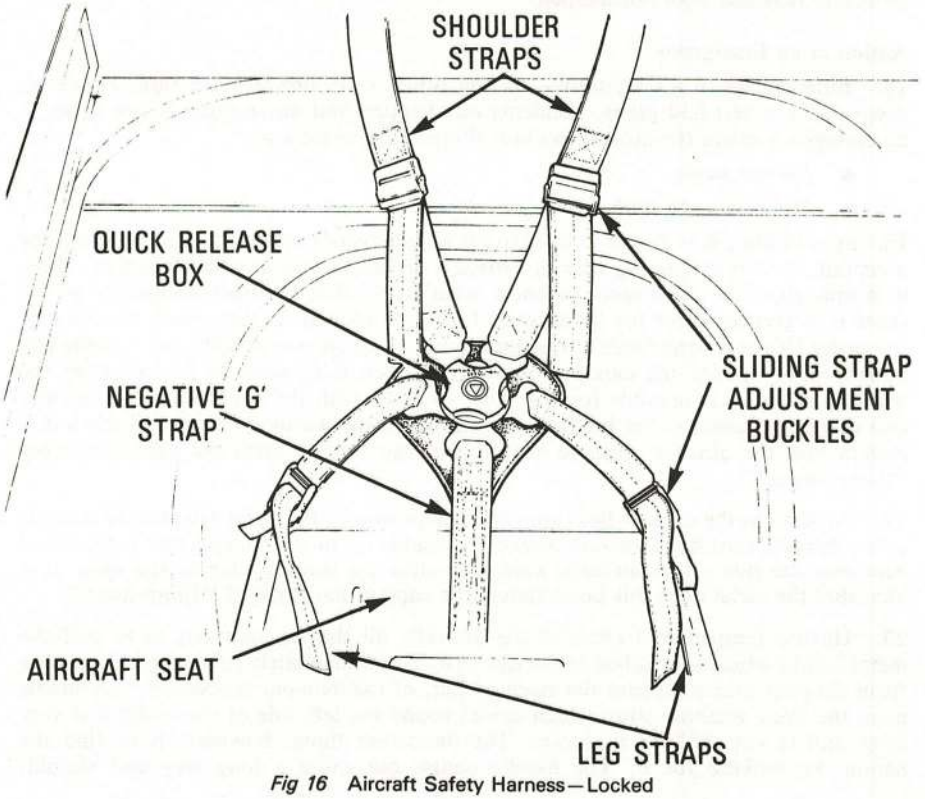

Fig 16 Aircraft Safety Harness—Locked

14. **Fitting.** To fit the aircraft safety harness, loosen off the adjustable straps and then turn the cruciform operating knob of the quick-release box approximately 12° to the left or right. Hold the operating knob in this position against the spring tension and insert the four adjustable-harness lugs. The operating knob will automatically return to the locked position when let go.

15. **Adjustment.** The harness is adjusted by *first* pulling down on the free ends of the adjustable portions of *the shoulder straps,* thereby tensioning the negative *g* anchor strap. The free ends of the adjustable lap straps are then pulled through the single-pass buckles until the harness is comfortably tight and affords maximum restraint against upward movement.

16. **Method of Release.** To release, depress the thumb-catch bearing the red arrow and turn the operating knob of the quick-release box approximately 75° to either **the left or right undo position.** The harness attachment lugs will then fall from the slots.

Loose Article Check

17. The paraphernalia carried in the pockets of cadets is generally limited only by the cadet's imagination and the size of his pockets! Much of it, if dropped in the cockpit, can lead to dangerous situations if not recovered. For example, a pen-knife, if locked in a sprocket of a control run, could lead to jamming of the controls, with dire results. *Passengers are to remove everything from their pockets before a flight* to ensure that this does not happen.

Action in an Emergency

18. Emergencies in a Chipmunk—or any other RAF aircraft—are rare. However, even with the best-laid plans, accidents *can* happen and an emergency *can* arise. If an emergency arises the most important things to remember are:

- *Do not panic.*
- *Do as you are told.*

Having said that, it is also true to say that an emergency is not the time or place for a captain to start explaining what is expected of you in response to his orders. Thus, it is important for passengers to know what to do if it becomes necessary for the captain to give an order for the aircraft to be abandoned. If this arises, he will give the order "*Check parachutes*". Depending upon the time available, the captain will already have opened the canopy, or else will open it as soon as he has given the warning order. It is possible for the cadet to assist with the opening of the canopy, and this is explained at the briefing. Having given the warning order, and when it is certain that the aircraft must be abandoned, the captain gives the executive order "*Jump-jump*".

19. As soon as the captain has ordered "Jump-jump", the cadet releases the aircraft safety harness (*not his parachute harness!*), stands up in the cockpit and jumps head first over the side of the aircraft, aiming to clear the trailing edge of the wing. It is vital that the cadet does this immediately the captain has ordered "Jump-jump".

20. Having jumped well clear of the aircraft, all that is necessary is to pull the metal handle which is attached to the rip-cord. This immediately releases the parachute from the pack and completes the essential part of the bale-out procedure. The handle is on the thick webbing strap which comes round the left side of the body; it is very large and is not difficult to locate. The important thing, however, is to find the handle *by looking for it.* The handle comes out quite a long way and should,

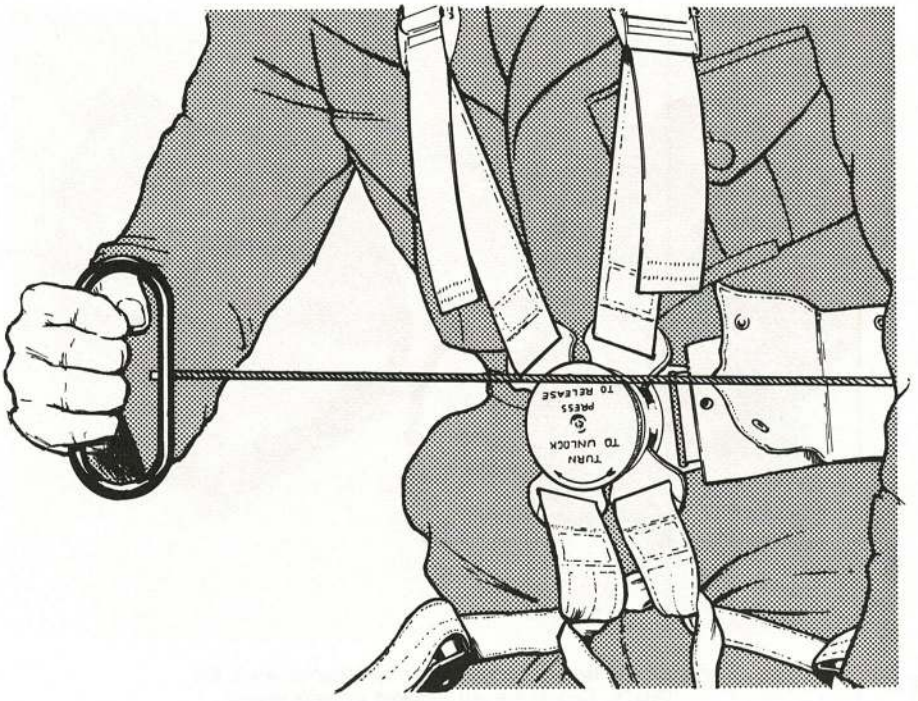

Fig 17 The Rip Cord Pulled

therefore, be held firmly and given a good pull to its fullest extent (Fig 17). The effect of the parachute is such that, when landing, the impact with the ground is roughly comparable to jumping off a wall about 10–15 feet high.

The Cockpit

21. As was said in Chapter 3, an aircraft cockpit is a fascinating collection of knobs, levers, switches, *etc.* There is nothing which needs to be touched by a cadet passenger other than the control column, rudder pedals and throttle lever. These, and any other items specifically referred to by the captain, should only be handled when the captain says so. At all other times the contents of the cockpit are to be left strictly alone.

Radio

22. The inner part of the protective helmet assembly contains earphones; an oxygen mask fitted with a microphone and an ON/OFF switch is attached to the inner helmet. To reduce the amount of background noise in the pilot's earphones, this switch should be kept in the OFF position, except when it is necessary for the cadet to speak. It should be switched OFF again as soon as possible. (Fig 18).

23. The radio will normally be set up for operation from the front cockpit. When need arises for the cadet to participate in the operation of the radio the captain will tell him, at the time, precisely what to do. The radio control box is on the right hand cockpit wall.

Fig 18 Protective Helmet and Inner Headset Assembly
(NOTE: Cadets are not required to wear visors)

Local Flying Area and Weather

24. Cadets will be given a very general briefing on the local flying area and the weather to be expected. Places of interest will probably be pointed out and should be looked for during the flight. Most cadet crew rooms have a local area map and it pays to study this for its major features whilst waiting to fly.

Precautions on the Ground

25. The aircraft movement area can be a dangerous place for the careless. It is vital to keep alert with your eyes and ears open when walking about. One golden rule is never to walk within the propeller disc, even if the engine is stopped—a habit which helps to avoid doing so when the engine is running! Keep a good look-out for moving aircraft at all times and move only where you are told you may go.

Medical Aspects

26. As height above ground increases the normal air pressure reduces. The human body reacts quite naturally to this with no discomfort at all. However, if a passenger has a cold, or the catarrhal after-effects of a cold, discomfort will be experienced in the ears and possibly sinuses. Pressure will build up inside the head cavities and it may prove difficult to clear. RAF aircrew are not allowed to fly in these circumstances and cadets should not do so either. So if you have a cold, or are still suffering from the after-effects of one, tell the escorting officer who will inform the flight commander.

27. Some people find the environment of flying a little strange and consequently may feel slightly unwell in the air. This is not unusual and need not cause concern. The feeling wears off with almost everyone after two or three flights. Should you experience a feeling of nausea, simply inform the captain who will tell you what to do. Deep breathing often helps to avoid it and minimizes the effect.

Conclusion

28. **Air Experience Flying.** Before arriving at an AEF a cadet will have been briefed at his squadron and, it is hoped, will have seen the film as part of his official syllabus training. At the AEF he will receive a pre-flight briefing on the particular exercise he is to carry out and on the particular airfield from which he is to fly so that he will be able to make full use of every minute he is airborne.

Fig 19 Ready to Go!