



air cadets

the next generation

air cadet publication

ACP 31

general service training
section 2 - the royal air force



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ACP 31

GENERAL SERVICE TRAINING

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The Royal Air Force

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Instructors' Guide

THE DEFENCE MISSION

The purpose of the Ministry of Defence, and the Armed Forces, is to defend the United Kingdom, and Overseas Territories, our people and interests, and to act as a force for good by strengthening international peace and security.

THE ROYAL AIR FORCE VISION

Our vision is an aspiration for the future state of the Royal Air Force, not a statement of where we are now; it is a declaration of the kind of organisation we intend to be. We want to see:

An Air Force that, person for person and pound for pound, is second to none.

An Air Force that:

- Is trained and equipped to generate air power as a vital contribution to the security of the United Kingdom and as a force for good in the world.
 - Is proud of its heritage but modern and flexible.
 - Fosters professionalism and team spirit founded on commitment and self-discipline.
 - Offers opportunity to all, and provides a rewarding career and skills for life.
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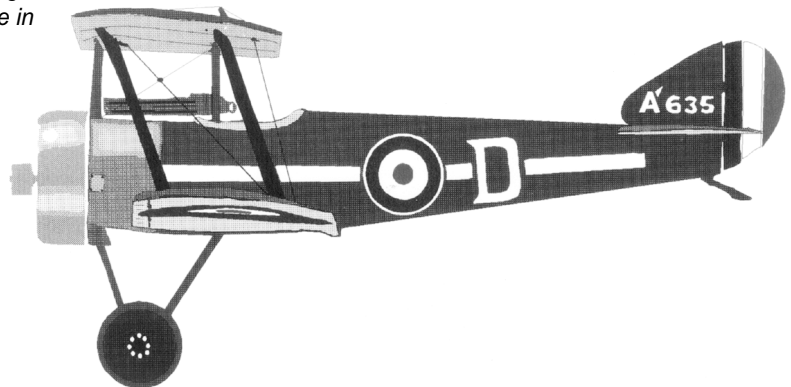
CHAPTER 1

DEVELOPMENT OF THE ROYAL AIR FORCE

The Organisation from which the Royal Air Force developed

1. Except for the use of balloons for reconnaissance, military aviation in the United Kingdom started in May 1912, with the formation of the Royal Flying Corps (RFC). All pilots were then trained at the central flying school at Upavon. The aircraft were unarmed and were intended to be used for reconnaissance in support of military and naval operations.
2. In June 1914, it was decided that the use of aircraft in support of naval operations posed special problems and the navy broke away from the RFC to form a Royal Naval Air Service (RNAS).
3. The aircraft were still used mainly for reconnaissance work and it was not until the Germans began to use fighter aircraft to shoot down our reconnaissance machines that we countered with our own British fighters to protect them. The introduction of fighter aircraft on both sides led to the now legendary battles over the western front in which men like Ball, McCudden, Mannock, Von Richthofen, Immelman and Boelcke fought for air superiority.

Fig 1-1 No 66 Squadron of the RFC flew the Sopwith Pup, with great success, in France in 1917



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4. By 1916, as a result of early Zeppelin raids, it was quickly realised that aircraft could also be used for bombing, and both the RFC and RNAS commenced bombing attacks against Germany. By 1917 the German Air Force used bomber aircraft to attack this country. This bombing and counter-bombing was to play a significant

***The Royal Air Force
is born***

part in the formation of the Royal Air Force and in fact spurred the Government into action. A committee under General Smuts was set up and its recommendations resulted in the formation of the Air Council and the establishment of the Air Ministry. On the 1st April, 1918, the Royal Air Force was born through the amalgamation of the existing RFC and RNAS.

The Father of the RAF

5. At the end of the war in November, 1918, the RAF had 190 squadrons with 290,000 officers and men. In less than two years the strength had dropped to 30 squadrons with 25,000 officers and men, and it was then that Lord Trenchard (the father of the Royal Air Force) and Sir Winston Churchill (Secretary of State for War and Air) agreed that the force should be kept at about this operational strength so that the annual budget of about £15 million could be concentrated on building up a sound training organization. As a result of this decision the Royal Air Force Cadet College, Cranwell, (1920), the Apprentices School at RAF Halton, (1922), and the RAF Staff College at Andover, (1922) were opened. The opening of these establishments was the first major step towards the provision of the high quality of aircrew and groundcrew whom we have in the RAF today.

6. The Auxiliary Air Force, destined to play a major role in the air defence of Great Britain, was formed in 1925. In 1937 The Royal Navy regained independent control of shipborne aircraft by taking over full responsibility for the Fleet Air Arm - a cause they had been fighting for since 1918. The responsibility for land-based maritime reconnaissance remained with the Royal Air Force.

7. Under the leadership of Lord Trenchard the organization of the RAF continued to grow in quality, not quantity. The capability for quick expansion was "built-in" automatically. The advantage of this policy was demonstrated towards the beginning of the Second World War when the worsening political situation in Europe led to such a rapid expansion of the RAF that it became necessary by 1936 to introduce Bomber, Fighter, Coastal and Training Commands. On this solid framework the RAF was able to expand further as war approached until, at the peak of its strength during the war, it had some 9,000 operational aircraft as well as 40,000 aircraft engaged in training and non-operational duties.

8. Meanwhile, the RAF was engaged on many active operations and small “wars”; in Russia; in Somaliland; in operations from Iraq and Kurdistan to Waziristan.

9. During the inter-war years, high speed flight was not neglected and the RAF won the Schneider Trophy in 1927, 1929 and 1931 at speeds ranging from 281-340 mph. It was from these aeroplanes that our eight-gunned fighters, the Spitfire and Hurricane, were developed. The Wellington and Whitley heavy bombers were also emerging.

RADAR was introduced

10. But probably by far the most important achievement of the inter-war years was the development of radio location to detect and locate aircraft - RAdio Detection And Ranging (RADAR). As a result, by the beginning of the war we had an early warning chain of 18 radar stations along the East Coast which, together with the Observer Corps, was to provide such vital assistance during later battles.

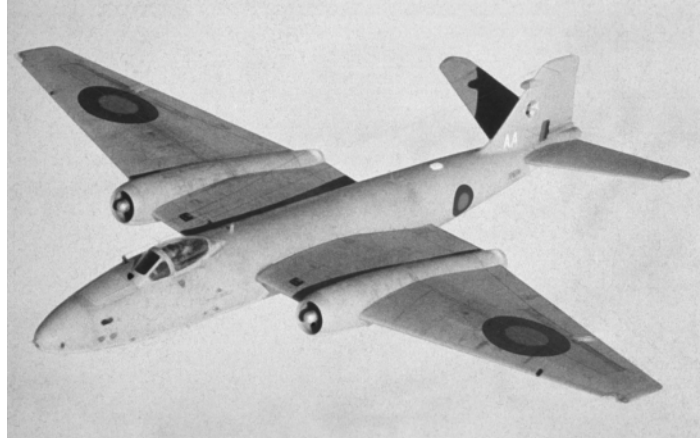
11. Between May and June 1940 Fighter Command flew more than 2,700 sorties to provide air superiority over the Dunkirk beaches, to cover the evacuation of the British Army from France. Then when the Germans turned their attentions on Britain, our air defences were ready - Fighter and Balloon Commands, the radar chain, the Army's Anti-aircraft Command and the Observer Corps. The Battle of Britain began in July 1940. Six hundred to 700 fighters, mainly Spitfires and Hurricanes, flew daily against the Luftwaffe's force of 1,000 fighters and 1,250 bombers. The German invasion was planned for September, but the Luftwaffe failed to gain air superiority and the project was abandoned. They suffered crippling aircraft losses in combat, while shipping, assembled in the invasion ports, was decimated by Bomber Command. This difficult battle between July and October 1940 was a turning point in the war against Germany.

12. As in 1918, the end of hostilities again led to the contraction of the Royal Air Force. From over 1,100,000 officers and men in 1945 the RAF had been reduced to about 200,000 by 1950, and to less than 100,000 by 1970. Wartime conscription was continued after the war in the form of National Service, but this ended in 1962 and the RAF is now a regular force, supported by the Royal Auxiliary Air Force (R Aux AF) and the Royal Air Force Volunteer Reserves (RAF VR).

The RAF's first jet-engined bomber

13. The re-equipment with jet-engined aircraft in the post-war years marked a revolutionary change in the Service. The Meteors and Vampires began a long line of military jet-engined aircraft, in which the Canberra became the first jet-engined

Fig 1-2 Canberra was the first jet bomber to enter RAF service. The PR9 version continues in RAF service as a photographic reconnaissance aircraft.



bomber to enter service. It was very successful and many other air forces, including the USAF, used it. A notable world's "first" for the RAF was a jet-engined transport squadron of Comet 2s in 1956.

Britain's strategic nuclear deterrent

14. Britain's decision to produce nuclear weapons and the four-engined V-bombers paved the way for the RAF to assume the task of providing the British strategic nuclear deterrent. Valiant aircraft dropped the first British atomic bomb at

Fig 1-3 Victor K2 was the standard air refueller of the RAF throughout the 1970s and early 1980s.



Maralinga in 1956 and the first British hydrogen bomb at Christmas Island in 1957. Vulcan and Victor aircraft followed the Valiant into V-bomber service. In 1970 the Royal Navy's Polaris submarine force became operational and assumed responsibility for providing Britain's strategic nuclear deterrent and the V-bombers reverted to other roles.

The Navy takes on the job of providing Britain's nuclear deterrent

15. In 1960 the first RAF supersonic fighter, the Mach 2 Lightning, entered service. The development of in-flight refuelling techniques and the creation of a tanker force - first with Valiant and subsequently with Victor aircraft - greatly improved the ability of fighters, and other combat aircraft, to rapidly reinforce overseas theatres.

16. In 1969 the RAF achieved another "first" when the V/STOL Harrier, the world's first fixed-wing vertical/short take-off/landing, close support aircraft entered squadron service. Other developments brought the Nimrod, the Buccaneer, the Phantom and the Hercules into Royal Air Force service. Close ties with Europe has resulted in arrangements with France for the joint development and production of the Jaguar

Fig 1-4 The Anglo-French Jaguar in 1999 currently being upgraded from GR1A to GR3A standard, with both day and night capable



and three types of helicopter, the Puma, Gazelle and Lynx. Similarly, Tornado was developed and produced in Britain, Germany and Italy, as a multirole aircraft to

Fig 1-5 Hercules C1/C3 is the 'workhorse' of the RAF transport squadrons. From 2000, 25 of the Hercules fleet will be replaced by the all new C-130J model.



provide tactical reconnaissance, strike attack and long range fighter defence for all 3 countries. The Hawk replaced the Gnat and Hunter for advanced training and was also selected by the United States Navy and other foreign air forces.

NATO

17. To a large extent Britain's security rests in the strength of the North Atlantic Treaty Organization (NATO) alliance. It is to NATO that a large part of Britain's military force is committed. British interests and responsibilities are also world-wide and so Britain must be willing, within her means, to play her part in countering threats to peace outside Europe. This is a responsibility we share with other members

Fig 1-6 The last flying Vulcan (XH 558) was finally sold in March 1993.

**The Falkland Island conflict**

of the Commonwealth, with our Treaty partners and with the international community as whole. In 1982 the Falklands War provided a stern test of the RAF's ability to deploy force at extreme range. The nearest available air base was at Ascension Island, beyond normal range from the Falklands. Air-to-Air refuelling became the vital factor and the emergency conversion of tankers and receivers, together with training of crews became a top priority. During this conflict Vulcan bombers were used to carry out the longest range strategic bombing missions in the history of air power. The last Vulcan squadron was disbanded in 1984 and the last flying Vulcan aircraft, based at RAF Waddington, was sold in March 1993.

Operation Desert Storm starts

18. In 1990 Britain's ability to apply air power at long range was tested once again when Iraq invaded Kuwait and the RAF, as part of a United Nations Coalition force, played its part in liberating the country. Operation Desert Storm provided the

Fig 1-7 Tornado GR1 is the major weapon system in the overland strike/attack/reconnaissance roles. The Tornado GR4, equipped with Sea Eagle air-to-surface missiles, undertakes the anti-surface shipping role.



most demanding examination of the true capability of the Service, its people and its equipment since World War II.

19. It showed the value of rapid response - A Tornado F3 Sqn was flying operational missions from Saudi Arabia within 50 hours of the Government's decision to deploy its forces - effectively deterring further Iraqi aggression. Such a response does not allow much time for special training, but underlines the vital need for the high level of peacetime training RAF personnel receive.

20. Desert Storm also demonstrated the value of flexibility - for many years the RAF has trained to act within NATO to counter the Soviet threat to Europe. In the event, the area of operations turned out to be quite different, fighting a different enemy and with different allies.

Fig 1-8 The high level of accuracy reduces the risk of unwanted damage.



21. Another important feature of the Gulf War was the accuracy of the bombing, using laser, TV and infra-red guided bombs and rockets. An accurate bombing raid in 1943 was considered to be 90% of the bombs falling within 3 miles of the target - in the Gulf, 90% of the precision guided munitions landed within 5 feet of the point of aim. This high level of accuracy enabled the RAF to attack specific targets with little risk of unwanted damage or unintentional civilian casualties. This was also demonstrated in Kosovo in 1999 with NATO air attacks.

**NATO changes its
defence strategy**

22. With the rapid political changes occurring in Eastern Europe in the late 1980s and early 1990s - starting with the tearing down of the Berlin Wall, the joining together of East and West Germany and the collapse of the Warsaw Pact as a military alliance - NATO had to review its defence strategy. The massive threat from the Soviet Union which had concerned the Alliance for over 40 years had effectively disappeared. The Western response to these changes was to implement a plan to reduce the size of the Alliance's Defence Forces to produce a smaller, highly flexible

and more mobile force that could respond rapidly to threats whenever they occur. In July 1990 the British Government announced its intentions to reduce UK forces by the mid 1990s, under the title 'Options for Change'. Many stations were to be closed, Squadrons were to be disbanded or moth-balled and the RAF's manpower was to be reduced to about 53,000 by 2000.

23. To take the RAF into the new millennium, the far-reaching Strategic Defence Review published in 1998 is intended to create modern, high-capability conventional forces.

24. With the onset of the new Millennium, the Joint Force 2000 concept will bring about closer harmonization between existing Harrier forces, leading to a truly Joint Force for the future, and in time, to operate a common new aircraft to replace the RN Sea Harrier FA2 and the RAF Harrier GR7. The Joint Helicopter Command will create a unified force of some 400 battlefield helicopters including RAF support helicopters. In addition, the Chief of Defence Logistics organisation will combine all three Service logistics organisations to deliver support to the combat forces of all three Services. The RAF will benefit in this endeavour with a comprehensive range of new equipment including the Tornado GR4, Eurofighter, Nimrod MRA4, Hercules C-130J, Merlin HC Mk3, Chinook Mk3 support helicopters and a new strategic transport aircraft, as well as a variety of new weapons such as the Paveway III Laser Guided Bomb, Brimstone anti-armour weapon and the conventionally armed stand off missile, Storm Shadow.

25. In order to carry out the Government's defence policy Britain needs armed forces of sufficient quality and quantity. They must possess the high degree of skill and professionalism demanded by the conditions of modern conflict and the increasing complexity of military equipment. The Royal Air Force must continue to train, to re-equip and to redeploy if it is to play its part maintaining the strength of the Western Alliance sufficient to deter aggression and maintain peace.

Sample Questions

Do not mark the paper in any way - write your answers on a separate piece of paper.

1. The name of the organisation from which the RAF developed was:
 - a. Royal Naval Flying Corps(RNFC)
 - b. Royal Naval Air Service (RNAS)
 - c. Royal Flying Corps
 - d. Naval Flying Corps
2. The RAF was founded in:
 - a. 1912
 - b. 1918
 - c. 1936
 - d. 1945
3. Which aircraft was the first RAF jet engined bomber?
 - a. Canberra
 - b. Wellington
 - c. Meteor
 - d. Vulcan
4. Which aircraft type first provided Britain's strategic nuclear deterrent?
 - a. Vertical/Short Take Off and Landing (V/STOL)
 - b. Stealth Bombers
 - c. V-Bombers
 - d. Jet Bombers
5. The Falkland Island conflict happened in:
 - a. 1965
 - b. 1972
 - c. 1978
 - d. 1982

CHAPTER 2

ORGANISATION OF THE ROYAL AIR FORCE

1. The Royal Air Force, like the Navy and the Army is loyal to the Crown but is controlled by Parliament. Parliament votes the money needed to support the Air Force and, through the Air Force Act, lays down the law by which the Air Force is to be governed.

The role of the Defence Council

2. The Prime Minister and the Cabinet hold supreme responsibility for national defence and they decide what policies the country should follow. They exercise control of the armed forces through the Defence Council. The Secretary of State for Defence, appointed by the Prime Minister, is the Chairman of the Defence Council.

The role of the Air Force Board

3. Each of the three Services is controlled by a board of senior officers, ie Admiralty Board, Army Board, and Air Force Board. The heads of these Service Boards are members of the Defence Council where they advise the government on matters affecting their own service. It is in this way, that under the direction of the Defence Council, the Air Force Board controls the Royal Air Force.

4. Each member of the Air Force Board is a senior officer or civil servant heading a specialist Branch concerned with a particularly section of Royal Air Force work; all the different Branches added together are called "The Air Force Department" of the Ministry of Defence (MOD).

5. Outside the Ministry of Defence the directives of the Air Force Department are put into effect by:

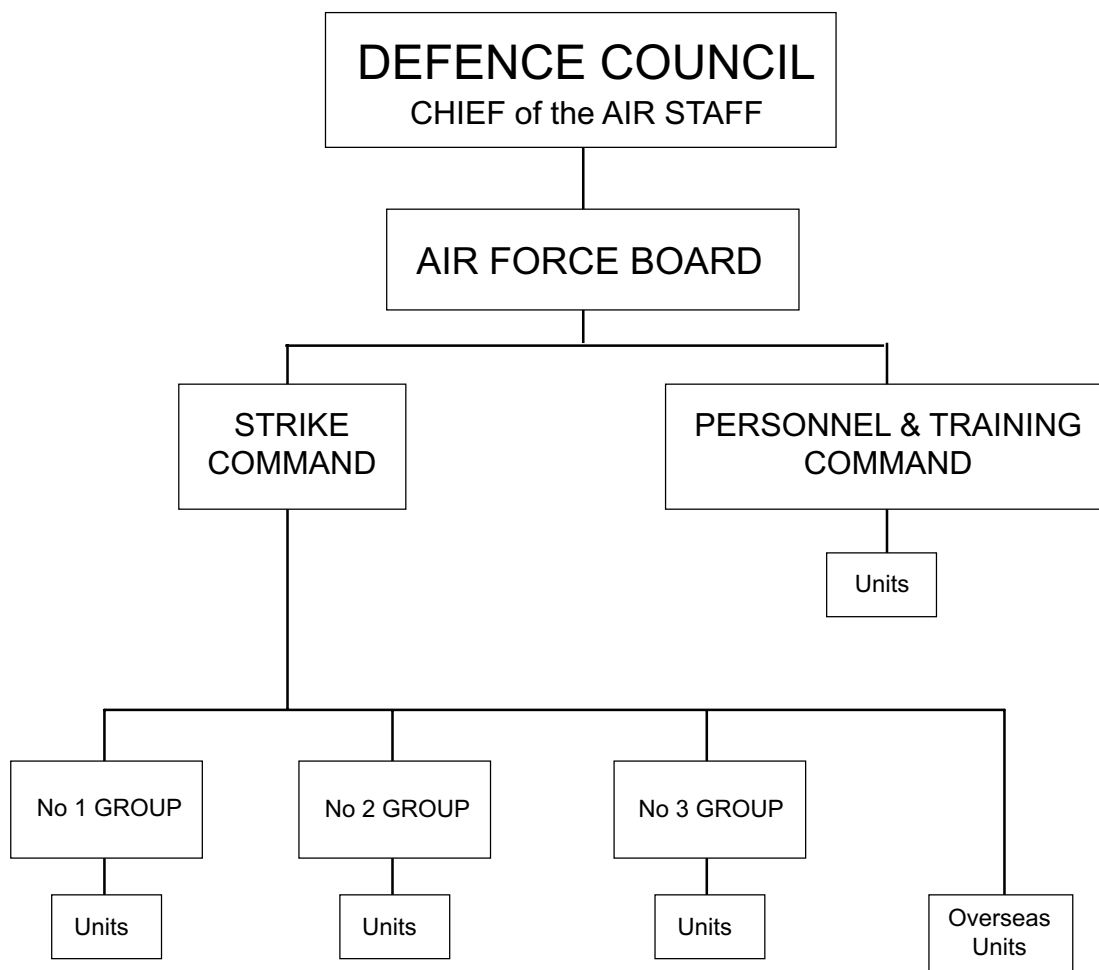
The RAF has 3 Commands

a. RAF Commands. RAF units are grouped into 2 Commands, determined by the jobs that they do. These two functional Commands are called Strike Command and Personnel and Training Command.

b. RAF Groups. Sub-headquarters called Groups control specialist units, eg those flying a particular class of aircraft such as fighters. Groups, however, exist only in Strike Command, where the expense is considered advisable and necessary; Personnel and Training Command controls its units directly.

c. RAF Units and Stations. "Unit" is the title applied to elements of the RAF which are established to cover a particular function, eg Maintenance Unit, Signals Unit. The basic operational unit is the squadron; squadrons are equipped with aircraft or missiles or they may be squadrons of the RAF Regiment. According to their size and role, squadrons may be sub-divided into two or more flights. The location of an individual unit or number of units is known as a Royal Air Force station. Normally, a Royal Air Force station is run by a number of specially trained staff, who are themselves arranged in squadrons.

6. Thus the framework of the Royal Air Force is shown below:



Strike Command - RAF High Wycombe

RAF Strike Command (RAFSTC)

7. From its headquarters at RAF High Wycombe, Strike Command controls all the RAF offensive and defensive operations at home and overseas. Overseas units include the Falkland Islands, Cyprus, Gibraltar and Ascension Island. Strike Command also administers the Tornado Training unit at Goose Bay in Labrador, and has commitments in Sardinia, Canada and Northern Island.

8. Reorganised on 1 April 2000 as a result of fundamental changes in the UK's strategic and military posture, Strike Command's ability to react to crises and undertake expeditionary operations has been greatly enhanced with the establishment of the Joint Rapid Reaction Force and other Tri-Service organisations such as Joint Helicopter Command and Joint Force Harrier.

9. The new look Strike Command continues to be based on 3 Groups but these have been organised around operational capability and collocated at High Wycombe to streamline command and control as well as generate better links between force elements with a similar role. No 11/18 Group, formed from No 11 Group - of Battle of Britain fame - and No 18 Group - famous for its maritime heritage - was disbanded, along with No 38 Group which operated the hercules, VC10 and Tristar aircraft. The three 'new' Commands are:

The role of No 1 Group

10. No 1 Group. No 1 Group, responsible for all strike attack and offensive support aircraft, remains and now bolstered by the inclusion of Tornado F3 units from No 11/18 Group. With the exception of the Harrier, the reformed No 1 Group will operate all the RAF's frontline aircraft including, in the future, Eurofighter.

11. The strike/attack aircraft of this Group, which are normally UK-based, would go out to seek and attack enemy targets on the ground. The battlefield support forces include long range transport aircraft to take troops and equipment to the operational theatre, and tactical transport and short range offensive aircraft, which would be used primarily to support battlefield operations.

Fig 2-1 Harrier GR5/7 used to support battlefield operations, with RAF Harriers able to operate off RN aircraft carriers, a new organisation for both the RAF and RN Harriers, called Joint Force 2000, is being formed for 1 April 2000.



The role of No 2 Group

12. No 2 Group. No 2 Group operates all the aircraft and force elements that support frontline operations. These will include the air transport and air-to-air refuelling aircraft formerly in No38 Group and the Nimrod R and Sentry aircraft from No 11/18 Group as well as the RAF Regiment and Ground Based Air Defence systems. The Group will also be responsible, in the future, for ASTOR.

Fig 2-2 Rapier Field Standard Model C, fitted with 8 Mk2 Missile Drill Rounds



13. Thus the Group provides the earliest possible warning of the approach to the UK of any air threat and defends the UK against air attack.

Fig 2-3 The Westland
Sea King HAR3



The role of No 3 Group

14. No 3 Group. No 3 Group which, last saw service operating V-Bombers in the 1960s, is now the home of the new Joint Force Harrier. The Group also includes Nimrod maritime patrol aircraft, Search and Rescue helicopters and the RAF's Mountain Rescue Teams. The Harriers and Sea Harriers will eventually be based at RAF Cottesmore and RAF Wittering as a joint force capable of operating either from land or the Royal Navy's carriers. Uniquely, the first Air Officer Commanding No 3 Group will be a Rear Admiral - Rear Admiral Iain Henderson.

Headquarters Personnel & Training Command - RAF Innsworth

**RAF Personnel and
Training Command
(RAFPTC)**

15. Personnel and Training Command, created on 1 April 1994 as a consequence of the RAF's restructuring programme, embraces all aspects of recruiting, training, career management, welfare, conditions of service, resettlement and pensions for RAF regular and reserve forces world-wide. All RAF policy and implementation staffs involved in the full span of personnel functions are based at the Command's headquarters at RAF Innsworth in Gloucester.

New Responsibilities

16. November 1999 brought new responsibilities to the Royal Air Force Headquarters Personnel and Training Command (HQ PTC), based at RAF Innsworth in Gloucester.

The change was precipitated by the Strategic Defence Review decision to form the new tri-Service Defence Logistics Organisation (DLO) under the Chief of Defence Logistics by 1 Apr 00. In the Royal Air Force's case this has resulted in the disbandment of Logistics Command on 31 October 1999.

Many of the RAF supply and engineering functions have been incorporated within

the DLO. However, some residual responsibilities and the support functions for former Logistics Command Units have transferred to HQ PTC and Headquarters Strike Command.

17. Given a budget of £800 million, the Air Officer Commanding-in-Chief aims to maximise the RAF's front-line capability by providing the right quality and quantity of personnel and training whilst ensuring maximum value for money.

18. The Command employs 17,000 people, including 4,000 civilians, at more than 30 locations. It is responsible for over 500 training aircraft of which 150 are gliders. Headquarters staff number some 1500, of whom a half are civilian.

19. The RAF Training Group Defence Agency, an integral part of the Command administered from Innsworth, has earned an international reputation for excellence in professional competence, customer service and cost-effectiveness. The Agency comprises nine RAF stations UK-wide with additional minor units elsewhere. It also has responsibility for administering the RAF Aerobatic Team, the Red Arrows, who have thrilled spectators world-wide for over 30 years, the University Air Squadrons and the Air Training Corps.

20. As the RAF continues to shrink over the next few years, further changes to its organisation and structure will continue to happen. It is important therefore, that you try to keep yourself up to date with these changes by listening to news broadcasts, and by reading the newspapers.

Units and Stations

21. More than one unit can be located on an RAF station. If the units are mostly operational squadrons, ie squadrons flying aircraft designed to perform an offensive, defensive or reconnaissance air role, the station is known as an operational station. Other stations can be either flying stations, eg stations housing Flying Training Schools; or non-flying stations, eg stations housing Maintenance Units or Command/Group Headquarters etc.

*The 3 Wings of a typical
RAF Station*

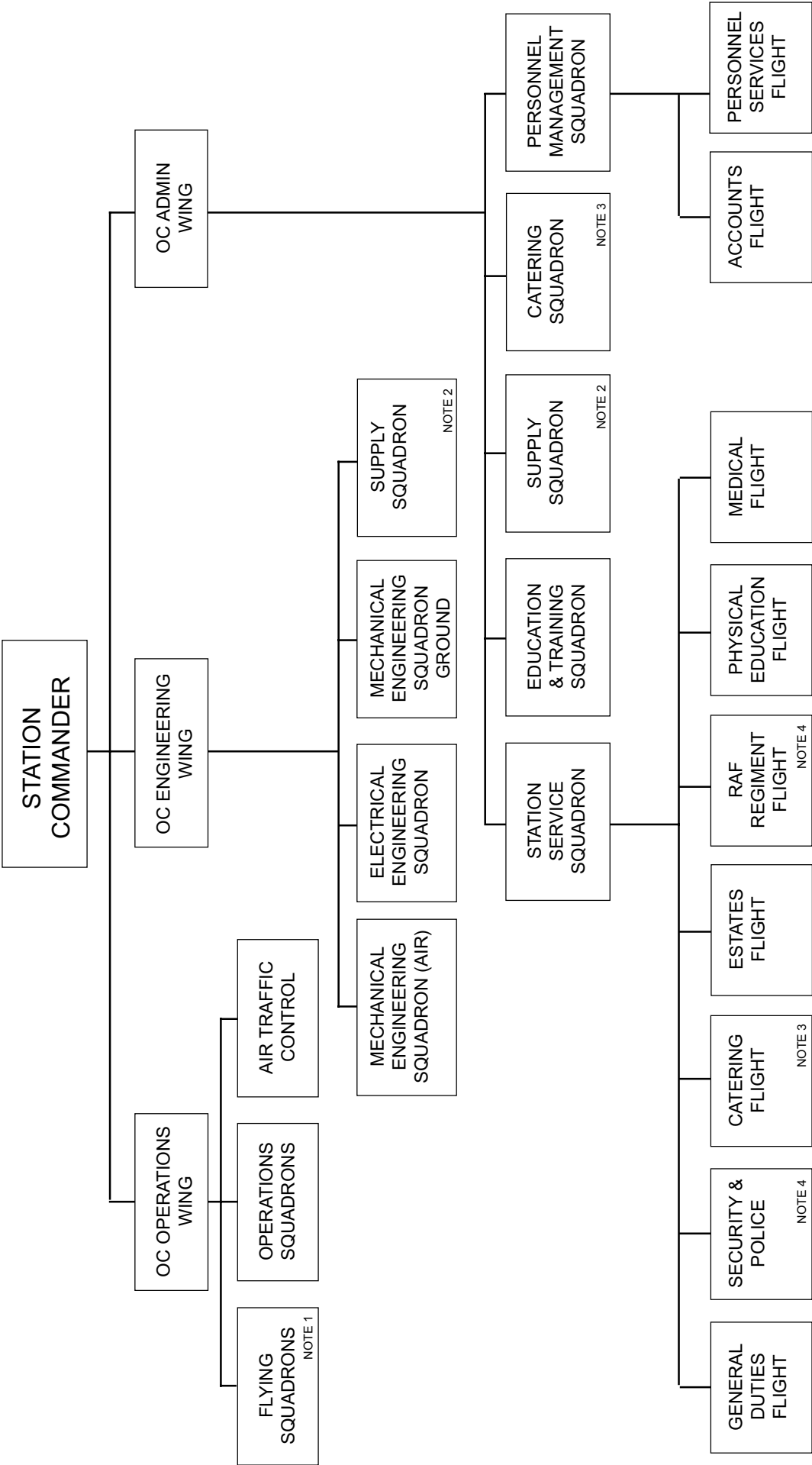
22. The organisation of all RAF stations follows a standard basic pattern, varied according to their sizes and roles. A typical station is shown in the diagram opposite, and is organised into 3 wings - operations, engineering and administrative. If it is a

flying station, the flying squadrons will be directly responsible to the station commander but will come under operations wing for operational co-ordination.

23. As the RAF has grown in complexity, its traditional rank titles have sometimes ceased to correspond to the operational units they lead. On a station, flight lieutenants still command flights, squadron leaders squadrons and wing commanders wings, but most operational flying squadrons are led by wing commanders and operational flights by squadron leaders. Usually, a station commander is a group captain. Groups are commanded by air vice-marshals or air marshals. The RAF's Commands are led by air marshals or air chief marshals.

Fig 2-4 *Air Traffic Control*





Notes:

1. Flying Squadrons come under Ops Wg for operational purposes only and in all other matters are directly responsible to the Station Commander
2. Supply Squadron can come under the control of either Admin Wg or Eng Wg, depending on the role of the Station.
3. Catering Squadrons are found on larger Stations. Smaller Stations have Catering Flights.
4. These Flights can also be under the control of Ops Wg.

The role of Operations Wing

24. Each of the station's wings covers several specialisations. For example, operations wing, as well as the planning and organisation of support for the station's operations, may include air traffic control, fire services and photographic interpretation.

The role of Engineering Wing

25. Engineering wing is typically divided into mechanical, electrical and electronic engineering both for aircraft and for ground equipment. It is responsible for the

Fig 2-5 Engineering Wg maintain all Service Equipment



maintenance and repair of all service equipment. Engineering wing could also include:

- a. The Armoury where the technical work required to support the aircraft and station's weapons is carried out.
- b. The MT section - housing and servicing the vehicles needed to refuel, rearm and ground handle the aircraft, as well as all the vehicles needed to support the station's domestic task.

The role of Admin Wing

26. Administrative Wing looks after the personnel who live and work on the station. Through its specialist squadrons and flights, Admin Wg controls the day to day management of:

- a. Catering - meals are provided for all personnel working on station in one of 3 Messes:
 - (1) The Airmen's Mess, for corporals and airmen/airwomen.
 - (2) The Sergeants' Mess, for Warrant Officers and SNCOs.
 - (3) The Officers' Mess, for Officers.

Fig 2-6 *Airmen's Mess*



In addition, the Messes usually provide facilities for relaxation and the enjoyment of leisure time.

b. Accommodation - barrack block accommodation is provided for single corporals, airmen and airwomen. Barrack blocks are usually made up of either single rooms or rooms with 3 or 4 people sharing. They are friendly places,

Fig 2-7 *Barrack accommodation is warm and friendly*



well furnished and centrally heated. Married personnel who choose to, can live in married quarters. These are generally good, well maintained houses that can be either on site or a short distance from the station. The maintenance of all accommodation on station is the responsibility of Estates Flight.

c. Recreation - leisure activity is extremely important to life on an RAF station. Most stations have excellent sporting facilities together with a good selection of hobbies and club activities from which people can choose.

d. Security - the Police Flight is responsible for the day to day routine security aspects of living on a RAF station. They control who is admitted on to the station and patrol constantly to ensure a safe working environment for all.

Fig 2-8 The RAF police on regular patrol



The Regiment Flight train station personnel in Ground Defence and have overall responsibility for defending the station against possible attack.

e. Financial - the Accounts Flight control both public money - government money used to keep the station running, and non-public money - money raised locally to finance recreational facilities.

f. Medical - the Station Medical Centre is like a miniature hospital, housing the Station Medical Officer (SMO), the Station Dental Officer (SDentO) and their staffs. An ambulance will often be sited close by in case of an emergency.

Fig 2-9 Station Medical Centre - like a miniature hospital



g. Education - The Station Education Section is run by the Station Education and Training Officer (SEdTO). The SEdTO and his staff provide facilities for studying for promotion examinations or civilian educational qualifications which might assist personnel in their future careers. The station library is a facility for everyone on station to use. It will almost certainly contain books for both reference and general interest.

h. Personnel Administration - Personnel Services Flight (PSF) administer a complete range of services for the staff on a unit. These services include:

- a. Adjustments to pay and rationing.
- b. Handling movements.
- c. Leave and leave travel.
- d. Allowances.
- e. Processing charges, Boards of Inquiry and Courts Martial.

Fig2-10 PSF staff at work in the Station General Office



27. You will probably by now appreciate that a Royal Air Force station is like a small town, needing a lot of land and buildings to accomplish its task. It also needs to provide all the day to day facilities required by a large number of men and women - and their families - to live in as much comfort as possible and in good spirit. It is a place in which responsible, disciplined conduct is essential. When you get the opportunity to visit a RAF station it is important for you remember that you will be expected to behave in the same responsible and disciplined way. If you use a bedspace or washing and toilet facilities that someone else is likely to use after you, then it is obvious that you must leave them in the same state that you would like to find them. This also applies, of course, to any other property which you might use. Remember, whatever you break or spoil someone else cannot use, whether it be a football, table tennis bat, bedding or operational equipment. Ordinary civilized conduct makes an RAF station a very happy place on which to be.

Sample Questions

Do not mark the paper in any way - write your answers on a separate piece of paper.

1. Britain's defence policy is decided upon by:
 - a. The Prime Minister and the Cabinet
 - b. The Secretary of State for Defence
 - c. The Defence Council
 - d. The Air Force Board
2. No 1 Group has responsibility for:
 - a. Air Defence aircraft
 - b. RAF Search and Rescue aircraft
 - c. Surface-to-Air missile squadrons
 - d. Strike/Attack aircraft
3. Overseas units are under the control of:
 - a. RAFSC
 - b. RAFSTC
 - c. No 11 Group HQ
 - d. No 1 Group HQ
4. HQAC is part of:
 - a. RAFPTC
 - b. RAFSTC
 - c. No 11 Group HQ
 - d. No 1 Group HQ
5. Who works in a station general office?
 - a. Catering Flight
 - b. Personnel Services Flight
 - c. Estates Flight
 - d. Supply Flight

CHAPTER 3

SECURITY

How important is Security

1. From the moment you enrol as a cadet you have a responsibility to the RAF to guard its secrets to the best of your ability. Most cadets will learn something about the RAF which other countries would like to know. It may only be a very small piece of information, but the manner in which you safeguard that information is a test of your trustworthiness.

2. A few people give away information deliberately - they are traitors. There are many more who give away information unknowingly or through lack of thought. These people are not traitors in the same sense, but they do just as much harm. One of the first things you must learn as a cadet, is the meaning of Security, because the security of the RAF is now partly your responsibility, and a trust you must never betray.

What is Security ?

Direct, Indirect and Terrorist attacks

3. In war, both sides make use of direct and indirect attack. Direct attack is a shooting war using guns, rockets, aircraft, etc. Indirect attack, although rarely as spectacular, can be equally destructive. It includes the collection of information by agents, the destruction of materials by sabotage, the lowering of the morale of the fighting Services and of the general public by the use of propaganda.

4. Even when not at war some extremist organisations may try to carry out violent terrorist attacks against Service personnel and property. All cadets need to be aware of the possibility of terrorist activity and should be vigilant against it at all times.

What is Security

5. The threat from indirect and terrorist attack is very real and is with us all the time. Security is our defence against this kind of attack and it is just as important as the defence against direct attack. All cadets must play their part in helping to maintain the security of the RAF, and indeed the nation.

Squadron Security

6. Every cadet is responsible for the security of his squadron, or detached flight. Security is mostly a matter of common sense. For example, every cadet must play his part in looking after the unit's equipment and buildings. Each unit has a lot of equipment, either its own or on loan, much of it very valuable, that it would cost money to replace - whether from unit resources or ultimately the taxpayer. All cadets, therefore, must do their best to protect everything at their unit against loss, theft or damage.

7. Certain items need special care. Many units possess rifles, and for obvious reasons these must be looked after particularly well; and there are special rules for this.

Classified Material

Classified Material

8. Information and written material can be either **CLASSIFIED** or **UNCLASSIFIED**. Unclassified material has no security value at all but special action must be taken to prevent unauthorised people gaining access to Classified material. Classified information is graded according to its security importance:

4 levels of classification

RESTRICTED - applied to information and material which it would be undesirable in the interests of the Nation to reveal to any unauthorized person.

CONFIDENTIAL - applied to information and material which, if revealed to any unauthorized person, would prejudice the interests of the Nation.

SECRET - applied to information and material which, if revealed to any unauthorized person, would cause serious injury to the interests of the Nation.

TOP SECRET - applied to information and material which, if revealed to any unauthorized person, would cause exceptionally grave damage to the interests of the Nation.

9. It is quite likely that as a cadet you will see some training manuals or handbooks that are classified **RESTRICTED**. Remember to keep the information to yourself and the Service and do not discuss it with outsiders.

Finding Secret or Top Secret material

10. When visiting an RAF station you may well see training books classified **CONFIDENTIAL**. They are there for those who 'need to know' and will be locked away when the room is not in use. It is extremely unlikely that you will ever see anything classified **SECRET or TOP SECRET**. If, however, you do come across such material, you must report it at once and take steps to ensure that no unauthorised person has access to it.

Security at RAF Stations

11. At RAF stations officers and airmen, because of the work they do, are aware of the need to safeguard themselves, their information and equipment. All stations have a Security Officer whose job it is to maintain a high standard of security of information, material and personnel. However, his job is possible only if all members of the station contribute equally. When you visit a station you become, in effect, a member of that station and have a part to play in achieving this high standard of security.

Need to know principle

12. The best rule you should remember as a cadet is based on the "need to know" principle. When you visit an RAF station, sooner or later, you are bound to hear or see something which a foreign power would like to know - for example, information about aircraft, aircraft movements or aircraft accidents. Before talking about it you should ask yourself "does the other person 'need to know'?". The answer is usually "no", but of course common sense should prevail. Should you ever see or hear anything which you think might be a threat to the security of that station, then you must report the matter to your own officer or a regular officer of the station.

National Security

13. To every country, information about a possible enemy is of the greatest importance. There are several countries in the world who think that Great Britain is an enemy. Some of these countries have a lot of highly trained specialists collecting information about the Royal Air Force. The work of defending Royal Air Force personnel, information and material is the responsibility of every officer, airman and cadet.

Sample Questions

Do not mark the paper in any way - write your answers on a separate piece of paper.

1. Security on an RAF station is the sole responsibility of:
 - a. The Security Officer.
 - b. The RAF Regiment.
 - c. The RAF Police.
 - d. Everybody on the station.
2. Security is the defence against:
 - a. Propaganda.
 - b. Indirect and Terrorist attack.
 - c. Direct attack.
 - d. Low morale.
3. The lowest grade of Classified material is:
 - a. Confidential.
 - b. Secret.
 - c. Restricted.
 - d. Top Secret.
4. If, whilst visiting an RAF station, you see 2 men climb over the perimeter fence and run away from the station. Would you:
 - a. Shout to frighten them away.
 - b. Run after them and try to catch them.
 - c. Report it to your Sqn Cdr on your return to the squadron.
 - d. Report the incident immediately to an officer or adult.
5. Make a list of your actions in the event of a fire on your squadron.

CHAPTER 1



INSTRUCTORS GUIDE

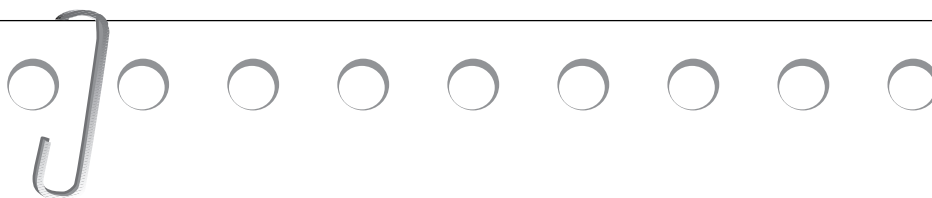
DEVELOPMENT OF THE ROYAL AIR FORCE**Page 31.2.1-1 Para 1**

1. The realisation that Britain was falling behind in the aviation race came towards the end of 1911 then the British Army and Royal Navy between them could muster approximately three airships and between four and eight aircraft with 19 competent aviators. By comparison France had over 200 aircraft and 263 aviators, whilst Germany mustered a fleet of 30 airships. Something had to be done. The Committee of Imperial Defence set up a technical sub-committee (a typical British reaction) to look into British military aviation. But this committee outperformed most of its type: its findings were speedily formulated with complete agreement, and issued in a White Paper in 1912 which set up a unified flying service called The Flying Corps. However, His Majesty the King decided that as flying, let alone fighting in the air, was a hazardous occupation, he would issue a royal warrant to grant it the title The Royal Flying Corps (RFC). This Royal Flying Corps would have a Central Flying School, a Military Wing to work with the Army, a Naval Wing to work with the Navy, a Reserve, and the Royal Aircraft Factory (RAF, at Farnborough) to build its military aircraft.
2. From the start, the Admiralty had no intention of allowing its air affairs to escape from under its own control, and in fact the name Royal Flying Corps, Naval Wing, never really appeared anywhere other than on a few official documents. A new title, Royal Naval Air Service (RNAS), gained rapid currency and, by the time that World War I broke out in August 1914, it had received official sanction. With only a token participation in the Central Flying School, the Admiralty carried on with its own aviation affairs, training its own aviators and ordering its own aircraft direct from the manufacturers, thereby spurning most of the products of the Royal Aircraft Factory at Farnborough.
3. On 19th August 1914 the RFC began its air war with two reconnaissances, one by Captain Philip Joubert de la Ferte of No 3 Squadron in a Bleriot, and the other by Lieutenant G W Mapplebeck of No 4 Squadron in a BE2. The value of aerial reconnaissance was quickly made crystal clear with the German advance and the Allies hurried withdrawal, the RFC squadrons keeping the troops posted with information on the Germans' latest strength, location and movement. Allied casualties could well have been higher without the advantage of this new method of reconnaissance.

Page 31.2.1-1 Para 3

1. By 1915 the war in the air was moving into a different phase - the joy of simply sitting up in the air watching the land battle below had been spoilt by one or two pilots taking their revolvers aloft with them and taking pot shots at the enemy's aircraft. By October the French had already armed a Voisin with a machine-gun and shot down a German reconnaissance aircraft - war in the air was on.
2. As early as March 1915 the assault on Neuve Chapelle benefitted from the availability of tactical maps based solely on aerial photographs. Up until now the RFC had largely been observers of the battle scene, but in that same month the BE2s and other suitable aircraft were bombed up and sent in to attack behind the enemy lines to prevent reserves from moving up to the front line.
3. The leisurely days of aerial warfare were soon over for ever, and the most spectacular symbol of this change was the Fokker Eindecker (monoplane). Both sides in the struggle had progressed towards scouts armed with machine-guns for the express purpose of aerial combat, but none so far had approached the effectiveness of the Fokker Monoplane. This aircraft could have fought with the British for Anthony Fokker, a Dutchman, had offered his services first to the Allies, only to be spurned. He then moved to Germany where his Monoplane was evolved being the first production aircraft successfully to solve the problem of firing the machine-gun through the propeller.

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**Page 31.2.1-2 Para 5**

Hugh Trenchard came into the RFC after an Army career which had not shown him at his best. This was not wholly his fault, because he suffered from ill-health: but it has to be said that he was a difficult man to get on with, and was blunt to the point of rudeness with his superiors. He carried the DSO for his activities in the Boer War, in which he was badly wounded and in 1912 at the age of 39 after a severe and nearly fatal dose of pneumonic type fever in Nigeria he had been found a staff job in the Army to see him through to retirement. With the advent of flying in the Army he soon arranged to qualify for his pilot's licence and move into this sphere of military activity, becoming Station Staff Officer to the embryo Central Flying School and ending up as Assistant Commandant. When war broke out most of the RFC went to France. What little was left was put under Trenchard's command to build up a training organisation and to feed out to France a growing supply of reserves of men, machines and equipment. His flair for administration enabled Trenchard to set the machinery in motion within 3 months, whereupon he was posted to France himself to command the 1st Wing, and nine months later he commanded the whole of the RFC on the Western Front. It was Trenchard who, seeing the mounting losses of British aircraft and crews, had to battle with those at home for better aircraft with which to prosecute the air war, and it was here that he began to learn the art of inter-departmental warfare. He was not naturally gifted at this, for he was a gruff man, and he had to rely on the power of his personality. It was this gruff forcefulness which acquired him the nickname 'Boom', which stuck to him throughout his career.

Page 31.2.1-2 Para 7

As the political situation in Europe deteriorated through the thirties, pressure mounted for an expansion of the RAF. In 1936 a series of specialised commands were established: Bomber, Fighter, Coastal and Training. In September 1938, after the Munich crisis, the government agreed to a large expansion of the fighter and heavy bomber programme. The seed-corn which Trenchard had so carefully preserved was now able to produce the rapid expansion the country so desperately needed. At the outbreak of war the RAF had 1,911 combat-ready aircraft to face Germany's 3,609.

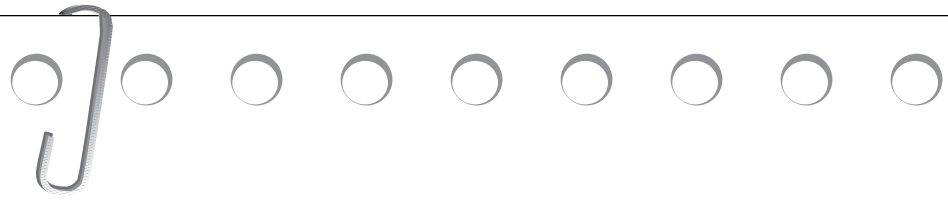
Page 31.2.1-3 Para 10

British scientists were beavering away to advance the art and science of flying so as to give the RAF the edge over any opponent in the approaching war. No where was this so marked and yet so successfully secret as in the development of radar (known then as RDF, or radio-direction-finding). By September 1939 some 20 RDF stations had been set up around the coasts of the UK, able to detect aircraft at medium heights up to 100 miles (161 km) away - and a solution to the low-flying aircraft problem was under active development. A means had been found to identify hostile from friendly aircraft by means of a device called IFF (identification: friend or foe) which has since been developed into a normal civil aviation identity system. And the whole radar chain had been incorporated into Fighter Command's control system so that the information gleaned could be fed to the controllers with virtually no delay.

World War II**Page 31.2.1-3 Para 11**

1. Fighter Command had won the Battle of Britain of Britain, but Bomber Command still had the task of taking the war to the enemy's homeland. Four-engined bombers - the Stirling, Halifax and Lancaster - entered service and, with the twin-engined Mosquito, provided the strategic bombing capability. In the first three years, 90,329 tons of bombs were dropped; but it needed new navigational aids, operational analysis, and new tactics through such methods as the Pathfinder Force for strategic bombing to become fully effective. Bomber Command dropped just under a million tons of bombs during the war, and the major weight of this effort was in 1944. Some 47,000 air crew were killed and 17,000 were wounded, taken prisoner or missing.

CHAPTER 1



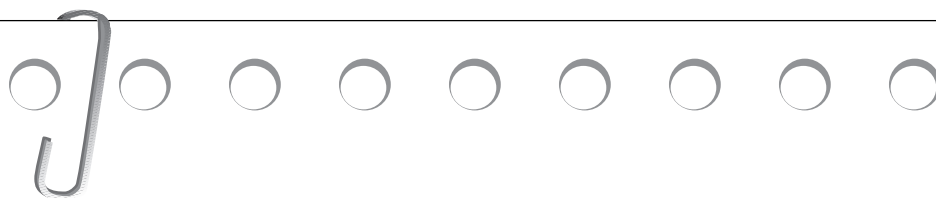
2. Full production required secure sea lanes so that the necessary resources could be imported. Coastal Command was engaged in the Battle of the Atlantic to reduce the potentially disastrous shipping losses to the German submarine threat. Of the 706 German submarines sunk, 195 were credited to RAF aircraft, and a further 1,500 enemy surface vessels were sunk by the RAF in the Atlantic.
3. When Italy entered the war, operations spread to the Middle East theatre. Thereafter, fighting in East Africa and Greece, the RAF played a major part in the desert battles, culminating in the victory of El Alamein and the drive to Tunisia. The combined RAF and US Army tactical air forces provided the air superiority for the ground forces to push back the enemy through Italy. In the Far East similar co-operation between the Army and the RAF paid dividends.
4. For the final assault on the continent, all the air power resources were used to provide total air supremacy over the battlefields. Troops were transported into battle by air, and precision bombing was used to great effect. By V-E Day the RAF had 55,469 aircraft of which 9,200 were front line fighters or bombers. The RAF lost 70,253 killed in action and 22,924 wounded during the Second World War.

Strategic Nuclear Deterrent

Page 31.2.1-4 Para 14

1. Britain's decision to produce nuclear weapons and the four-engined V-bomber meant that the RAF was to provide the British strategic nuclear deterrent. The RAF participated in the first British atomic test in the Monte Bello islands in October 1952. The Valiant - the first of the V bombers, becoming operational in January 1955 - dropped the first British atomic bomb at Maralinga, South Australia in October 1956 and the first British hydrogen bomb at Christmas Island, in the Pacific, in May 1957.
 2. The Vulcan and Victor followed the Valiant into service in 1956 and 1957 respectively. The V-force grew steadily in strength and maintained a high state of alert and readiness. The American missile Thor was deployed in Bomber Command from 1958 until 1963 to supplement the V-bombers. In 1960 it was announced that a Ballistic Missile Early Warning System base would be built at Fylingdales in Yorkshire, capable of providing at least four minutes warning of a ballistic missile attack on the United Kingdom from Russia. Techniques were developed - and regularly practised - for 'scrambling' dispersed detachments of four V-bombers well within this warning time.
 3. It was planned to prolong the effective life of the V-force by the acquisition of the American air-launched Skybolt missile which was to succeed the British stand-off nuclear weapon Blue Steel. The decision by the US Government not to proceed with development of Skybolt for the USAF led to the Nassau Agreement, in which the US was to provide Polaris missiles for Royal Navy submarines. Vulcans and Victors, some equipped with Blue Steel, continued to form the British contribution to the Western strategic nuclear deterrent until the Polaris force became operational in mid-1969, when the UK based V-bombers transferred to the tactical role, remaining assigned to NATO. The Victor was taken off bombing in the mid-sixties and converted to the tanker role. Throughout the 1970s the Vulcan continued as a bomber, with one squadron specialising in maritime radar reconnaissance duties.
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CHAPTER 1

**Page 31.2.1-4 Para 15**Air Defence

1. Fighter Command forces were improved by the introduction of the Bloodhound Mark 1 surface-to-air missile in 1958. In 1960, the first RAF supersonic fighter the Mach 2 Lightning became operational, armed with the Firestreak - and subsequently Red Top -air-to-air missiles. In 1961 the air defence squadrons of Fighter Command were assigned to NATO. The development of in-flight refuelling techniques and the creation, within the Command, of a tanker force - first with the Valiant and subsequently with Victor aircraft - greatly enhanced the abilities of fighters and other combat aircraft to rapidly reinforce overseas theatres.

Page 31.2.1-5 Para 16

2. During the 1970s the Phantom was gradually phased out of the ground attack and reconnaissance roles and converted to air defence. By the end of the decade, it had become the RAF's main air defence fighter, supplemented by the shorter-range Lightnings. From 1984 the Hawks of the Tactical Weapons Units also took on a secondary role earmarked for air defence duties in times of hostilities. In 1987 the Tornado Air Defence Variant, the F3, entered squadron service to become the mainstay of the RAF's Air Defence force.

3. Since WW11 the UK Air Defence Ground Environment (UKADGE) has comprised a mixture of radar, display and data link systems. With the introduction over the next two years of improved UKADGE the air defence of UK will be very significantly enhanced. The new system combines modern mobile radars, integrated computerized displays and the latest data link systems to give the UK one of the most advanced command and control systems in the world. The RAF Regiment provides Rapier surface-to-air missile defence of key installations.

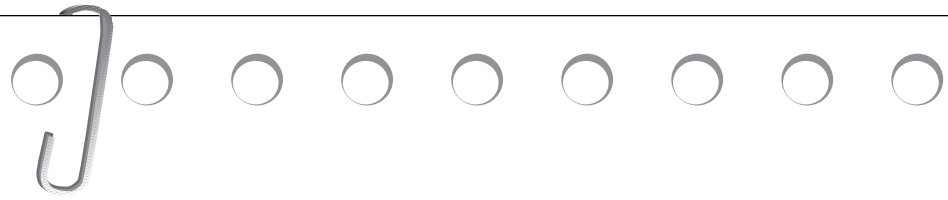
4. Bloodhound was phased out in July 1991, and a requirement for a replacement long range SAM was announced for introduction in 1995. The Phantom was phased out by 1993, when air defence forces of the United Kingdom will be provided solely by the Tornado F3 interceptor supplemented by armed Hawks. Together with the Sentry (Boeing E3D) Airborne Early Warning aircraft, which become operational in 1992, and the support of in-flight refuelling tanker aircraft and IUKADGE, the advanced F3s will be able to detect and intercept intruders far from our shores. Development of the new European Fighter Aircraft (EFA), which is due to enter RAF service by the end of the 1990s, will further enhance the RAF's air defence capability.

Offensive Air Power**Page 31.2.1-5 Para 16**

1. Throughout the postwar era, the RAF has retained the capability to deliver offensive firepower over the battlefield and also deep into enemy territory. This has been provided by forces based both in the United Kingdom and in West Germany. The Canberra bombers of the 1950s and 60s gave way to Phantoms and Buccaneers. The Phantom tasks were then taken over by the Jaguars in the mid-70s to release the Phantoms for their air defence role. The Buccaneers were reallocated to an anti-shipping task, with the Tornado GR1s taking over their overland offensive role. Through the 1980s, Tornado replaced the Jaguars in Germany to provide an extremely potent modern offensive firepower force.

2. For close air support of army operations, the ground attack Hunters were replaced by the unique capabilities of the Harrier in the early seventies. The Harrier GR3 was the world's first fixed-wing vertical/short take-off and landing close support aircraft. In 1989/90 these were superseded by the more advanced Harrier GR5, which retains the ability to deploy into the field in support of ground forces but with considerably greater range and weapon load. The GR5s are now being progressively upgraded to GR7 standard to give them a full night operations capability.

CHAPTER 1

**Page 31.2.1-5 Para 17**NATO'S New Strategic Concept

1. At their meeting in London in July 1990, NATO's Heads of State and Government agreed on the need to transform the Atlantic Alliance to reflect the new, more promising, era in Europe. Whilst reaffirming the basic principles on which the Alliance has rested since its inception, they recognised that the developments taking place in Europe would have a far-reaching impact on the way in which NATO's aims would be met in future. They therefore set in hand a fundamental review of strategy. The resultant new strategic concept was agreed at the North Atlantic Council meeting in Rome on 7 and 8 Nov 91. The key points of this concept are outlined below.

Geo-Political Changes.

2. Significant changes have taken place in both East and West. In the latter, Germany has been united and remains a full member of the Alliance and of European institutions. The fact that the countries of the European Community are working towards the goal of political union, including the development of a European security identity and the enhancement of the role of the Western European Union, are important factors for the security of Europe.

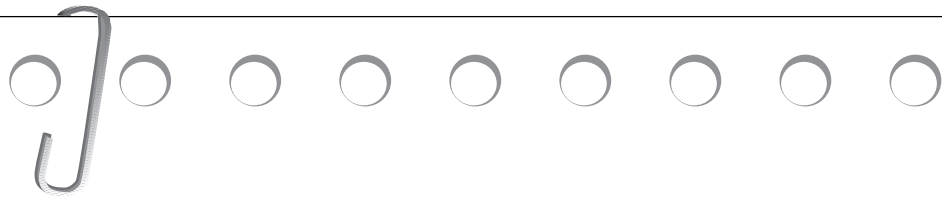
The Threat.

3. The historic changes that have occurred in Europe have significantly improved the security of the Allies. The monolithic, massive and potentially immediate threat which was the principal concern of the Alliance in its first forty years has disappeared. On the other hand, the future is uncertain and risks to the security of the Alliance remain. The new strategic concept anticipates a security environment in which the positive changes recently begun in the old Eastern Block come to fruition. In particular, it assumes both the completion of the planned withdrawal of Soviet military forces from Central and Eastern Europe and the full implementation by all parties of the 1990 CFE treaty. Implementation of the strategic concept will thus be kept under review in the light of the evolving security environment.

4. In contrast with the predominant and predictable threat of full scale attack on all fronts in the past, NATO now faces multifaceted and multidirectional risks. These are hard to predict and assess, but are less likely to result from calculated aggression against the territory of the Allies than from the adverse consequences of instabilities arising from the serious economic, social, ethnic, territorial and political difficulties faced by many countries in central and eastern Europe. Whilst such tensions need not threaten the security and territorial integrity of Alliance members, they could lead to crises inimical to European stability and even to armed conflicts involving outside powers. In addition, in the case of the Soviet Union, the risks and uncertainties that accompany the process of change cannot be seen in isolation from the fact that its conventional forces are significantly larger than those of any other European state and its large nuclear arsenal comparable only with that of the USA.

5. The stability and peace of the countries in the southern periphery of Europe are also important for the security of the Alliance, as the 1991 Gulf War has shown. This is all the more so because of the build-up of military power and the proliferation of weapons' technologies in the area, including weapons of mass destruction and ballistic missiles capable of reaching the territory of some member states of the Alliance, or of posing risks of a wider nature, including disruption of the flow of vital resources and actions of terrorism and sabotage. Hence, whilst the end of East-West confrontation has greatly reduced the risk of major conflicts in Europe, there is greater risk of different crises arising, which could develop quickly and require a rapid response. The preservation of stability in Europe and the security of Alliance members requires that NATO continues to be capable of responding to all such threats.

CHAPTER 1



Alliance Capability.

6. In providing such capability, the Alliance seeks, through arms control and disarmament, to enhance security and stability at the lowest possible level of forces consistent with the requirements of defence. The maintenance of an adequate military capability and clear preparedness to act collectively in the common defence remain central to the Alliance's security objectives. Such a capability, together with political solidarity, is required in order to prevent any attempt at coercion or intimidation, and to guarantee that military aggression directed against the Alliance can never be perceived as an option with any prospect of success. Equally, it is indispensable so that dialogue and cooperation can be undertaken with confidence and achieve their desired results.

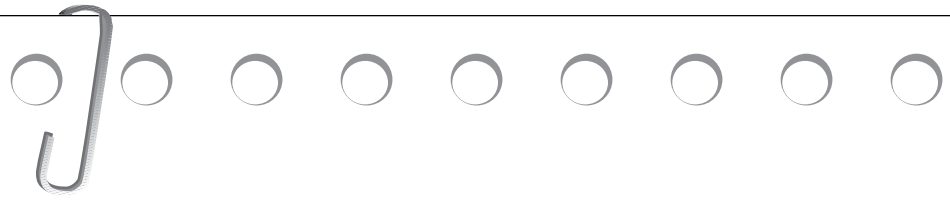
7. The achievement of the Alliance's objectives depends critically on the equitable sharing of roles, risks and responsibilities, as well as the benefits, of common defence. The presence of North American conventional and US nuclear forces in Europe remains vital to the security of Europe, which is inseparably linked to that of North America. As the process of developing a European security identity and defence role progresses, and is reflected in the strengthening of the European pillar within the Alliance, the European members will assume a greater degree of the responsibility for the defence of Europe. To protect peace and to prevent war or any kind of coercion, the Alliance will maintain for the foreseeable future an appropriate mix of nuclear and conventional forces based in Europe and kept up to date where necessary although at a significantly reduced level. Both elements are essential to Alliance security and cannot substitute one for the other. The Alliance will also expand in the future to include countries from the old communist block.

New Force Posture.

8. At the London summit, the allies concerned agreed to move away, where appropriate, from the concept of forward defence towards a reduced forward presence, and to modify the principle of flexible response to reflect a reduced reliance on nuclear weapons. The changes stemming from the new strategic environment and the altered risks now facing the Alliance enable significant modifications to be made in the missions of the Allies' military forces and their posture:

- a. The overall size of the Allies' forces, and in many cases their readiness, will be reduced.
 - b. The maintenance of a comprehensive in-place linear defensive posture in the Central Region will no longer be required. Nonetheless, some forward deployment may be necessary, and geographical and regional differences will be taken into account, including the shorter warning times to which the Northern and Southern regions are subject, plus the potential for instability and the adjacent military capabilities in the Southern region.
 - c. To ensure that at this reduced level the Allies' forces are effective, enhanced flexibility, mobility and an assured capability for augmentation are required.
9. Forces will be structured to provide:
- a. A limited, but militarily significant proportion, of ground, air and sea immediate and rapid reaction elements able to respond to a wide range of eventualities.
 - b. The ability to build up by reinforcement, by mobilising reserves, or by reconstructing forces, in proportion to potential threats to Alliance security - including the possibility of a major conflict.
 - c. The organization and procedures to build, deploy and draw down forces quickly and discriminately in order to permit measured, flexible and timely responses; these arrangements must be exercised regularly in peacetime.

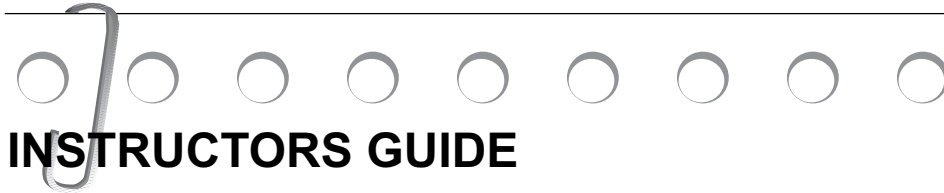
CHAPTER 1



10. Air Forces will continue to be essential to the overall effectiveness of the Allies' military forces. They will be required to fulfil their fundamental roles in both independent air and combined operations - counter-air, air interdiction and offensive air support, as well as to contribute to surveillance, reconnaissance and electronic warfare operations. Their role in supporting operations, on land and at sea, will require appropriate long-distance airlift and air refuelling capabilities. Air defence forces, including modern air command and control systems are required to ensure air defence environment.

11. The Allies will maintain adequate sub-strategic forces based in Europe which will provide an essential link with strategic nuclear forces, reinforcing the trans-Atlantic link. These consist solely of dual capable aircraft which could, if necessary, be supplemented by offshore systems. Sub-strategic nuclear weapons will, however, not be deployed in normal circumstances on surface vessels and attack submarines. There is no requirement for nuclear artillery or ground-launched short-range nuclear missiles and they will be eliminated.

CHAPTER 2



INSTRUCTORS GUIDE

ORGANISATION OF THE ROYAL AIR FORCE

Page 31.2.2-1 Para 2

The Service Boards

The single-Service Executive Staffs in the Department concentrate on the management of their respective Services within a policy framework of plans, programmes and resources determined centrally under the Defence Council. The management of the Services is the responsibility of the three Service Boards and their Executive Committees. The Secretary of State is Chairman of all three Boards, and all the other Defence Ministers are members. The Service Chief of Staff, Second Permanent Under Secretary (2nd PUS), the Principal Personnel Officer (PPO), the Principal Administrative Officer (PAO) and the appropriate Systems Controller (expert on procurement) are also members.

The Chiefs of Staff

The Chief of the Naval Staff (CNS), Chief of the General Staff (CGS) and Chief of the Air Staff (CAS) are the professional heads of the Navy, Army and Air Force. Each Chief of Staff is the senior adviser to the Chief of the Defence Staff (CDS), and through him to the Secretary of State (Sof S), on matters relating to the employment of his Service, and is responsible for its fighting effectiveness, morale and efficiency. All three are members, with VCDS, of the Chiefs of Staff Committee, chaired by CDS. Each Chief of Staff chairs his Service's Executive Committee. He is advised on single-Service matters by his own staff, headed by an Assistant Chief of Staff.

Page 31.2.2-3 Para 7

Offensive Air Action. Carrying the fight to the enemy allows the attacker to seize the initiative, exploit to the full the capabilities of air power and concentrate strength against weakness. It reduces the number of offensive sorties that the enemy can mount and compels him to devote a proportion of his total air power assets to purely defensive duties. It can better exploit the three-dimensional space of the skies, the vagaries of light and weather and the masking effect of terrain, and it denies the enemy a sanctuary.

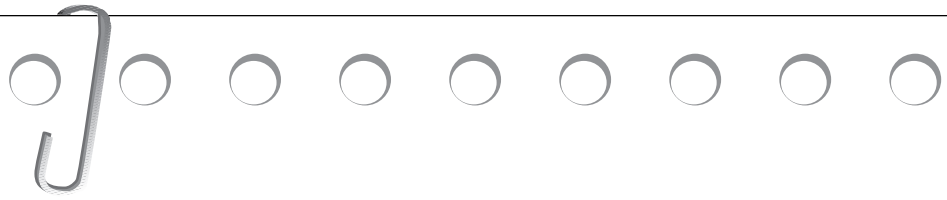
Defensive Air Action. Offensive air action may not always be possible, and some defensive counter-air action will invariably be necessary. A defensive battle allows the defender to draw upon his supporting infrastructure and bring a greater number and diversity of weapon systems into the battle. Defending aircrew who abandon their aircraft over friendly territory can frequently be fed back into the battle, whereas aircrew who survive an abandonment over hostile territory are generally taken prisoner. Because the defender's airfields are normally far closer to the battle area than those of the attacker, the defender is able to make more intensive use of the assets at his disposal.

Page 31.2.2-3 Para 7

AEW/AWACS. AEW/AWACS is defined as air surveillance and control provided by airborne vehicles equipped with search and height-finding radar and communications equipment for controlling weapon systems. AEW can provide timely information about an enemy's air activity. In addition, it provides positive control, direction and integration of friendly offensive and defensive air operations. This capability may also be used to assist friendly air forces to penetrate enemy defences.

Search and Rescue Operations. Air search and rescue operations involve the use of aircraft (usually helicopters) to locate and rescue personnel in distress and, in particular, to recover aircrew who have abandoned their aircraft. Search and rescue operations contribute to the prosecution of the air campaigns by allowing aircrew who have survived abandonment to resume the fight, denying the enemy a potential source of intelligence and promoting high morale amongst aircrew.

CHAPTER 2



Page 31.2.1-5 Para 17

Air-to-Air Refuelling Operations. Air-to-air refuelling operations are those which involve the transfer of fuel from one aircraft to another in flight. They can contribute to combat-air and combat support air operations by extending the range, payload, time-on-task and flexibility of aircraft.

Close Air Support. Close air Support is defined as air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces. It can make an immediate and direct contribution to the land battle, especially against targets which are either inaccessible or invulnerable to available surface weapons. It is especially important as a means of offsetting shortages of surface firepower.

CHAPTER 3



INSTRUCTORS GUIDE

SECURITY

Page 31.2.3-1 Para 1

Security of Information - ACTI 112 (Extract)

Introduction

1. From the moment a cadet enrolls in the Air Training Corps he has a responsibility to the country to guard, to the best of his ability, any classified information he may learn through his association with the Air Training Corps and the Royal Air Force.
2. It is the duty of all RAFVR(T) officers and instructional staff to bring this obligation to the notice of all cadets under their control.

Page 31.2.3-1 Para 2

Visits to RAF Stations

3. Squadron commanders and detached flight commanders are to ensure that before any visit to a RAF station (eg under the affiliation scheme or to the annual camp), all cadets engaged on the visit are briefed on the security instructions in ACP 31 (Chapter 3 of Section 2 - the Royal Air Force).
4. The briefing is also to include instruction that anything they may learn about Royal Air Force aircraft, aircraft movements or aircraft accidents is not to be published, printed or divulged in any form.

Security Instructions - Uniforms - ACTI 113 (Extract)

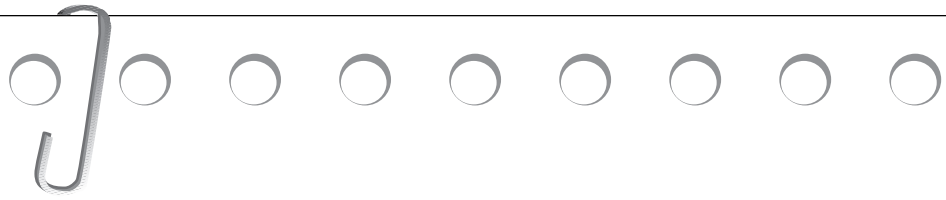
Travel. When travelling to and from official activities:

- a. **By public transport.** Cadets and adults should wear civilian clothes whenever practicable; otherwise, their uniform should be covered by a civilian outer garment and without head-dress.
- b. **By non-public transport.** Cadets and adults should travel in uniform covered by a civilian outer garment and without head-dress.
- c. **Exceptions within the Squadron local area.** At the discretion of the Squadron Commander, cadets and adults may travel in uniform openly with head-dress, or under a civilian outer garment without head-dress. However Commanders may direct that uniform is not worn on local journeys, if, in their opinion, known local circumstances warrant such action as a commonsense precaution.

Security - Wing and Squadron Headquarters - ACTI 115

1. There is a continuous threat of opportunist attack on unprotected transport and buildings which may be regarded by extremists as "soft" targets. Whereas there is no evidence of a direct threat against the Air Training Corps, Squadron and Wing HQs must be considered as being within this category.
2. The problem of ensuring maximum security in respect of a squadron HQ is fully recognised. The diversity of buildings, widely differing locations and ease of access make it difficult to lay down hard and fast rules or regulations governing acceptable standards of security. There are, however, many active commonsense measures which can be introduced to minimise the risk of injury to personnel or damage to buildings. These include:

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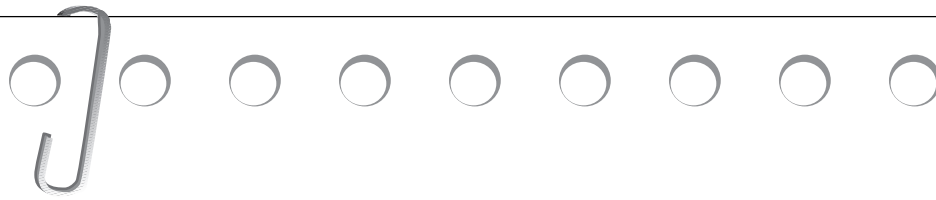
Action Affecting Parade Nights

- a. Keys to buildings to be drawn by nominated adults only.
- b. Cadets to be forbidden to assemble within the immediate vicinity of squadron HQ until the arrival of a responsible adult.
- c. Action on arrival of responsible adult:
 - (1) Check approach roads, immediate area for parked cars.
 - (2) Check exterior for:
 - (a) Signs of entry (broken windows etc).
 - (b) Suspicious parcels or packages placed against or near buildings. **UNDER NO CIRCUMSTANCES ARE SUCH OBJECTS TO BE DISTURBED OR HANDLED (SEE PARA 5).**
 - (3) Look through all windows for signs of other than normal state of interior eg, doors open, furniture or fittings disturbed etc.
- d. Staff cars and civilian vehicles are to be parked away from the immediate area of buildings. They are always to be locked when left unattended.
- e. On cessation of parade:
 - (1) Before allowing cadets to leave buildings, a responsible adult is to carry out a check of the exterior for:
 - (a) Suspicious parcels or packages placed against or near buildings (see para 5).
 - (b) Strange cars parked in immediate area.
 - (2) Carry out physical check of buildings to ensure:
 - (a) Windows properly closed, shutters (if fitted) secured.
 - (b) Interior doors closed, and locked, where possible.
 - (c) Exterior doors properly locked.
 - (d) Alarm system (if installed) switched on.

Physical Security Duties - ACTI 114

1. These instructions apply only to cadet activities in Great Britain. Separate directions are issued by the GOC Northern Ireland for activities in the Province.
2. When sharing, accommodation or facilities with regular or reserve units, cadet forces will be incorporated into the overall security arrangements under the military units concerned and will be protected to the same degree as the personnel with whom they are sharing. Corps personnel are to obey all security measures imposed by the unit commander. At sites which are manned full-time by regular or reserve forces, Corps adults and cadets are not to be employed on formal security duties; however, on overnight stops, an adult supervisor is to be made responsible for the

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**Page 31.2.3-3 Para 11**

internal security of the cadet accommodation.

3. At military sites which are manned part-time by regular or reserve forces, those forces should normally be responsible for all physical security duties. Where this is not possible, uniformed Corps adults and cadets may assist by undertaking, limited security duties; however, this is not allowed for non-uniformed Corps adults. The following, instructions are to be observed in such circumstances:

- a. Uniformed Corps adults may carry out security duties by day or night. Such duties include being a Security Duty Officer, sleeping in or near the Guardroom, and supervising control of entry to the site.
- b. Cadets aged 16 or over may carry out the duties of Fire Picquet, in pairs, by day or night.
- c. Cadet NCOs aged 18 or over may man gates or barriers for control of entry in daylight hours and also at night up to 2200 hrs, provided that the area is well lit, and that a uniformed Corps adult is on immediate call.
- d. Corps adults and cadets are not to be posted specifically as guards for arms or ammunition stores; however, this does not preclude them from carrying out security duties elsewhere on the site.
- e. Corps adults and cadets are not to be armed; this precludes the carrying of weapons of any kind, including pick-helves, truncheons, etc.
- g. The senior Corps adult present is to brief cadets carefully on their duties and is to warn them to be on the lookout for anything suspicious, whether of people in the area of the camp, or of material left lying around; they are to report any suspicion to the Guardroom or to a Corps adult.
- h. Before cadets or adults occupy accommodation sometimes used by regular or reserve units but not under their full-time control, the senior Corps adult present is to organise an extensive search of the building.
- i. Where regular and reserve forces are present but in insufficient numbers to carry out security duties without the assistance of Corps adults and cadets, Corps personnel are to be employed separately and are not to form joint parties with those forces.

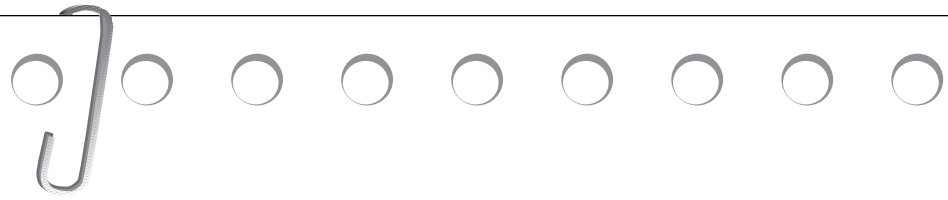
4. At non-military sites (which includes Sqn HQs not on or sharing with regular or TA units) security activities are normally to be confined to the use of common sense and vigilance by all Corps members, and to the physical checks by adults of vehicles, buildings and their surrounds before their use by cadets, as prescribed in ACP 20A, ACTI No 103.

5. Squadron Commanders are to promote security awareness in all cadets and adults, and instruct them on the need to report suspicious incidents swiftly up the chain of command.

GENERAL

1. Additional security measures which may be taken include:
 - a. Extra care to be taken with safeguarding of keys - exterior keys to be held by nominated adults only - numbers to be restricted to absolute minimum.
 - b. Use of one entrance only to squadron HQ ideally this to be the door giving access on the more easily observed side of the building. Any other doors to be made fully secure from the

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inside by use of battens etc, consistent with observance of local fire regulations.

c. Cutting down undergrowth or shrubs immediately adjacent to the building.

d. Removing rubbish bins to a safe distance from the building.

e. Applying of normal security measures:

(1) Keeping cars locked when parked at or away from the squadron HQ.

(2) Challenging of strangers and reporting to local police any incident involving questions being asked concerning ATC activities.

f. A search of buildings, rooms and cupboards not in regular use, after which they should be secured.

g. A check of hired coaches, the passengers and their baggage. Collection and disembarkation points should be varied if possible.

h. One person keeping watch for any suspicious activity whenever a recognisable Corps gathering is held outside Squadron or Service property. This is called Sharkwatch. Cadets on watch are to be briefed on what to look for and what to do if they see it.

2. In the event of evacuation of buildings, staff and cadets are to be fully briefed to take with them their personal belongings, outer clothing, haversacks, briefcases etc.

3. Any suspicions aroused when carrying out the foregoing security measures are to be reported immediately to the local police. Suspicious or unaccountable objects are not to be touched. On no account are individuals to take any action other than to direct staff and cadets away from the area of immediate threat.

4. Wing and Squadron Commanders are to maintain a simple programme of security education to acquaint personnel with the foregoing instructions.' New members are to be briefed immediately upon joining the Corps.

5. Measures taken locally to implement these instructions are to be the subject of inspection during staff visits by Regional and Wing staff officers.

Self Assessment Questions - Answer Sheet

Chapter 1 Page 31.2.1-9

1. b
2. b
3. c
4. c
5. d

Chapter 2 Page 31.2.2-13

1. a
2. d
3. d
4. a
5. b

Chapter 3 Page 31.2.3-4

1. d
2. b
3. c
4. d