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**Trends in NATO Central Region Tactical Fighter
Inventories: 1950-2005**

**Christopher J. Bowie, Mark Lorell,
John Lund**

May 1990



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This Note identifies major trends since 1950 in the evolution of the force structures of non-U.S. allied air forces in NATO's Central Region. It also examines the direction of these trends to the year 2005, assuming no arms control. The number of squadrons in NATO's Central Region airpower has remained remarkably stable since the mid-1960s, as has the contribution of each nation. These nations have steadily increased the number of multirole and all-weather squadrons. Aircraft designed by multinational consortiums account for a growing percentage of NATO's aircraft; conversely, the share of aircraft designed by a single European nation has been steadily shrinking. Two disturbing trends also emerged: (1) despite the importance NATO places on equipment standardization, the variety of aircraft in the Central Region is higher now than it was in the 1950s, although it has declined slightly from its peak in the 1960s; and (2) the age of airframes in NATO's Central Region air forces has increased consistently, from roughly 4 years in 1950 to 15 years in 1990--a reflection of the tendency to keep aircraft in national inventories longer. If current national plans were implemented, most of these trends would continue. The number of multirole and all-weather aircraft would increase. The variety of aircraft types would decrease. However, the average age of airframes would grow steadily, so that by 2005, average airframe ages would range from 18 to 29 years.

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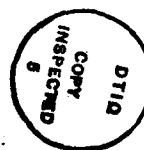
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Christopher J. Bowie, Mark Lorell,
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PREFACE

This Note was written in support of a larger Project AIR FORCE effort entitled "The Future of Allied Airpower in NATO's Central Region" under the auspices of the National Strategies Program. It is intended to provide a historical perspective and database of allied central region tactical airpower since 1950. It should be of interest to planners and operators concerned with NATO airpower issues.

The objective of this effort is to assist planners in the United States Air Force (USAF), United States Air Forces, Europe (USAFE), and Allied Air Forces Central Europe (AAFCE) in their long-range planning efforts by identifying major trends over the past four decades in the evolution of the force structures of the non-U.S. allied air forces on NATO's Central Region. The long lead times required to field aircraft and implement changes in operations and strategy have made long-range planning vital. Aircraft and surface-to-air missiles (SAMs) are kept in service for longer and longer periods of time, research and development often consume many years of effort, and the acquisition of modern weapon systems must be carefully scheduled years in advance to fit into increasingly constrained defense budgets.

SUMMARY

The long lead times required to field weapon systems and implement changes in operations and strategy have made long range planning increasingly important to NATO air force planners. This Note on the non-U.S. allied air forces in NATO's Central Region has two main objectives. The first is to **identify major trends over the past four decades in the evolution of the force structures of the air forces in question. It then examines the direction of these trends out to the year 2005.** The analysis assumes that current plans will be implemented; forthcoming RAND work will examine the prospects of such implementation in more detail.¹ The analysis assumes no Conventional Forces Europe (CFE) arms control reductions or constraints; however, the results may be useful in assessing various CFE regimes.

In the mid-1980s, NATO stated a requirement for an increased number of tactical aircraft to successfully prosecute future alliance air campaigns should conflict erupt. History indicates that the number of tactical aircraft squadrons in NATO's Central Region peaked in the mid-1950s and then steadily declined until the mid-1960s, when force levels reached a stable level at which they have largely remained.² It is extremely unlikely that the number of squadrons provided by non-U.S. allied air forces in the Central Region would increase even without CFE-mandated reductions—indeed, under pre-CFE plans, the number of squadrons would actually decline slightly. NATO requirements could perhaps be met if the number of aircraft assigned to individual squadrons were increased.

Although NATO has called for increased commonality in equipment, only recently has progress been made. Different types of aircraft in the non-U.S. Central Region air forces grew from nine major types in the mid-1950s to 16 by the late 1960s. In the early 1990s, 12 major types of aircraft will be in the inventory; and under current plans, only nine major different types of aircraft should be in the inventory by 2005. In addition, the F-16, the

¹ See Joseph Nation, *British Military Modernization Plans, Resources, and Conventional Force Reductions*, The RAND Corporation, R-3734-A/AF, forthcoming; and *German, British, and French Military Requirements and Resources to the Year 2000*, The RAND Corporation, N-2982-RGSD, forthcoming.

²Number of aircraft as opposed to numbers of squadrons would have been a preferable metric for measuring trends, but that was not possible given the limited historical data on squadron sizes available in the open literature. Available data suggest that allied squadrons in the 1950s were 1.5 to 2 times larger than in the 1970s and later, but that not all of the aircraft in the earlier years were necessarily "active."

Tornado, the Mirage 2000, and the European Fighter Aircraft (EFA) will compose over 75 percent of this future inventory.

During the 1950s, the inventories of non-U.S. air forces in the Central Region were dominated by aircraft designed in the United States and United Kingdom. During the 1960s, the British share declined, the U.S. share remained constant, and France's increased. In the 1970s, more and more multinational-designed aircraft entered service and should form almost 50 percent of the inventories of the air forces in question by the turn of the century.

Aircraft are being kept in service much longer than in previous decades. The weighted average design age of fighter aircraft in all the air forces in question has increased steadily during the past four decades. By the year 2005, the weighted average design age of tactical aircraft in the smaller air forces—the Royal Netherlands Air Force, the Belgian Air Force, the Royal Danish Air Force, and the Canadian Forces—will reach unprecedented levels (on the order of 23 to 28 years). The three larger air forces—the Royal Air Force, the German Air Force, and the French Air Force—will be at lower levels (19 to 21 years), but only if extensive modernization programs are completed on schedule. It is questionable, however, whether design age matters as much as in previous decades, since platform performance may have reached a plateau. **If existing platforms can be upgraded with advanced subsystems and munitions to continue performing key missions successfully, the seemingly inexorable increases in design age should become less relevant to the alliance's airpower capabilities.**

Capabilities have increased substantially, particularly in the multirole and all-weather areas:

- The manned penetrating reconnaissance force has remained very stable and under current plans will be maintained at roughly present levels to the 21st century.
- The number of squadrons capable of only single role day air defense or ground attack has decreased considerably since the 1950s. Under current plans, these day only units will continue to decline in numbers. However, the reduction in numbers of these units has been more than compensated for by the introduction of multirole and all-weather capable squadrons.
- The number of squadrons capable of conducting ground attack operations at night and in adverse weather has increased considerably. Previously, the only squadrons capable of such operations were USAFE's F-111 force. The introduction of Tornado and some versions of the Mirage 2000 has more than

quadrupled the number of such squadrons in the Central Region. Under current plans, the number will continue to climb.

- Multirole squadrons declined until the mid-1960s. At that point, however, an increasing number of day only, multirole units began to enter service. Under current plans, the number of multirole units will continue to increase. In addition, an increasing number will have all-weather capabilities in the air defense role. Questions remain about the quality of multirole compared with single role units, but these squadrons do provide a key element of flexibility.
- The pure all-weather interceptor force has declined considerably from the 1950s. In addition, a large number of all-weather units are located in the United Kingdom or France, hence are poorly based to help defend German air space. Surface-to-air missile units have to some extent compensated for this decline. In the 1990s and beyond, however, current plans will largely rectify the existing weaknesses in all-weather air defense. German and British EFAs will also play an important role in contributing to this mission by the turn of the century. In addition, as noted above, an increasing number of multirole squadrons will be capable of all-weather air defense missions as well as day ground attack missions. These include the Canadian Force's CF-18s, some units of the French Air Force, upgraded F-4Fs in Germany, and upgraded F-16s in Denmark and the Netherlands.
- In the future, a larger proportion of the force will have some all-weather capabilities, which are so critical in the inclement climate of the Central Region. In the 1990s, only some 40 percent of the force will have some all-weather capabilities; by 2005, over 70 percent of the force should have some all-weather performance.
- Electronic warfare (EW) and suppression of enemy air defense (SEAD) capabilities will continue to be an area of weakness. Currently, the non-U.S. air forces only maintain one dedicated EW/SEAD squadron. Plans call for only two more such squadrons to be added to the inventory.

Except for the issue of sheer numbers and airframe design age, a focus on aircraft platforms indicates that NATO's Central Region airpower prospects appear healthy if current plans are executed. Capabilities will increase greatly, particularly in the area of all-weather operations. The number of dedicated EW squadrons will remain the one continuing area of weakness.

All of this assumes, of course, that plans as of mid-1989 will be implemented. In general, it appears that the smaller air forces in the alliance—Denmark, the Netherlands, Belgium, and Canada—have less demanding replacement requirements than the larger air forces. These smaller nations made their major procurement decisions in the late 1970s and early 1980s. In the next decade and a half, their plans include the completion of scheduled buys and the upgrading of existing platforms to perform new missions. The upgrading of the F-16A to the F-16C standard will in particular play an important role in bolstering the Central Region's capabilities in all-weather air defense.

The larger air forces, under current plans, will need to replace from 43-54 percent of their inventories. In the past, the air forces have in fact typically completed planned purchases of aircraft, since aircraft programs tend to acquire bureaucratic, political, and economic momentums of their own. However, combat capabilities require more than air frames; trained aircrew and adequate stocks of modern munitions are equally important ingredients. Other RAND research suggests that severe budgetary constraints would prevent the completion of projected modernization programs, even assuming no CFE constraints.

ACKNOWLEDGMENTS

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We alone are responsible for the content of the Note.

CONTENTS

PREFACE	iii
SUMMARY	v
ACKNOWLEDGMENTS	ix
FIGURES AND TABLES	xiii

Section

I. INTRODUCTION	1
II. FORCE STRUCTURE TRENDS	3
Evolving Capabilities	10
Surface-to-Air Missiles	14
III. THE FUTURE	15
IV. CONCLUSIONS	21

Appendix

A. GUIDANCE FOR THE DATA BASES	25
B. THE BELGIAN AIR FORCE	26
C. THE CANADIAN AIR FORCES	28
D. THE ROYAL DANISH AIR FORCE	29
E. THE ROYAL NETHERLANDS AIR FORCE	30
F. THE FRENCH AIR FORCE	31
G. THE GERMAN AIR FORCE	33
H. THE ROYAL AIR FORCE	35

FIGURES

1. Air forces in the Central Region, 1950–1990	4
2. Inventory evolution	5
3. Weighted average design age of NATO fighter aircraft, 1950–1990	7
4. Aircraft design origin	8
5. Evolving capabilities, 1950–1990	12
6. Air force surface-to-air missile squadrons or batteries in the Central Region	14
7. Non-U.S. allied aircraft inventory in the Central Region, 2005	17
8. Future force capabilities	19

TABLES

1. Weighted average design age of air forces	17
2. Replacement requirements under current plans	22

I. INTRODUCTION

This research focused on non-U.S. allied air forces for several reasons. They provide the vast bulk of the Central Region's in-theater airpower; and the future directions of allied procurement plans naturally are of great importance to the plans, policies, and air campaign strategies of the coalition of air forces that will come under AAFCE command in time of war. In addition, the USAF, the largest and most powerful western air force, is the only allied air force besides the Canadian Forces that is not home-based in theater. The bulk of its strength is based on the North American continent. Accordingly, the USAF has the flexibility to alter the future composition of its European forces (and reinforcement plans) to complement potential trends in the force structures and capabilities of its allies.

Further, current USAF plans, for a variety of reasons, are far less certain than current European plans. No decisions, for example, have yet been made on replacements for the aging A-10, the RF-4C, and the F-4G. The recent Intermediate Nuclear Forces (INF) treaty may lead to additional changes in the USAFE force structure to help maintain NATO's theater nuclear deterrent. Finally, arms control proposals have raised the likelihood that USAF airpower will be reduced in exchange for reductions in Warsaw Pact air and ground forces. Given these pressures, USAFE force structure will undoubtedly change substantially over the next decade. The objective of USAF and AAFCE planners must be to identify where non-U.S. allied airpower capabilities are headed so that the flexible USAFE contribution can be shaped to provide the maximum deterrent and warfighting effect.

To assess long-term trends in Central Region airpower, we first developed an unclassified data base for each Central Region power—the Federal Republic of Germany, the United Kingdom, France, the United States,¹ Canada,² Belgium, the Netherlands, and Denmark.³ For each of these air forces, a listing of tactical airpower squadrons and their primary missions at five year intervals since 1950 was developed and analyzed in a variety of ways.⁴ Numbers of aircraft rather than numbers of squadrons would have been preferable,

¹In the U.S. case we restricted ourselves to forces of United States Air Forces, Europe (USAFE) based in the Central Region. Accordingly, USAF units based in the Southern Region were not included.

²Only Canadian units based in Europe were included in the data base.

³Although Denmark is officially part of the Northern Region, its location ensures that it would be heavily involved in defense of the Central Region as well.

⁴Until recently, USAF squadrons (typically with 18-24 primary assigned aircraft) have tended to be larger than European squadrons (typically with 15-18 primary assigned aircraft). In addition, squadron sizes vary in individual air forces. Accordingly, our measure of accounting may slightly underweight the contribution of USAF assets and slightly overstress the non-U.S. contribution.

but that did not prove possible given the limited historical data in open sources. We believe, however, that the squadron metric is a useful proxy for illustrating trends.⁵

In general, we focused on squadrons of tactical aircraft and SAMs. Strategic bombers, such as British V-bombers, French Mirage IVs, and USAF B-47s and B-58s, were not included, nor were other large aircraft (transports, aerial refuelers, maritime patrol). Naval airpower assets were also excluded. In addition, some of the large nations, in particular Britain and France, had substantial tactical forces based overseas also not included in the data base. Operational Conversion Units, which are training units that in some air forces become combat squadrons during mobilization, were typically not included in the data bases.⁶ The appendixes contain additional information.

When determining squadron roles or missions, we took into account aircraft capabilities, publicly listed squadron missions, and air force doctrinal preferences. For example, most Danish and Dutch F-16s are multirole, while Belgian F-16s are single role. Inaccuracies in role assignments may have crept into the air force listings, particularly in the rather murky period of the 1950s, but these probably do not detract from the main thrust of this Note.

The analysis focuses on conventional missions; nuclear aspects are addressed only tangentially. Aircraft that in NATO parlance had nuclear "strike" roles were counted only as conventional aircraft. Since the alliance adopted the policy of flexible response in the late 1960s, most dedicated "strike" aircraft also took on conventional roles, so exclusion of the nuclear aspect becomes less relevant.

Using these and other assumptions, force structures for each air force (and the conventional roles of individual squadrons) could be projected with high confidence out to the year 1990. Information from open sources and interviews was used to project notional allied force structures (and potential mission emphases) to the year 2000-2005. We believe these projections are quite accurate in terms of today's plans. This Note assumes that the nations in question will successfully implement their current plans—an assumption that is certainly optimistic given the competing demands on national budgets. Arms control constraints are disregarded. Other documents from this research forecast the likelihood that each Central Region nation will carry out its current plans given budgetary constraints; the objective is to shed some light on the past trends and future directions of non-U.S. Allied airpower in the Central Region should current plans be implemented.

⁵In the 1950s, both American and allied squadrons tended to be quite large (18-30 aircraft or more). However, it is unclear whether all these aircraft were "primary assigned" or if some were attrition fillers. By 1970, squadron sizes had largely settled down to the levels described above.

⁶The one exception was the French Air Force, which in public documents lists its OCUs as combat units. The Royal Air Force does not. Accordingly, the RAF data base did not include these or the Hawks of the Tactical Weapons Unit, which form "shadow squadrons" in war.

II. FORCE STRUCTURE TRENDS

A 1988 NATO study conducted by the SHAPE Technical Center aimed at identifying the alliance's offensive and defensive counterair requirements concluded that airpower in NATO's Central Region should be increased substantially in both size and capabilities. In the baseline case, increases in the number of ground attack (13 percent), multirole (8 percent), air defense (5 percent), and electronic warfare (22 percent) aircraft were called for.¹ Another scenario called for even greater increases in the numbers of tactical aircraft based in the Central Region. The evidence of the past 40 years, however, indicates that future increases of these magnitudes would be extremely unlikely even without arms control constraints.

The number of squadrons provided by each air force is shown in Fig. 1. Alliance airpower witnessed a massive build-up in the early 1950s following the formation of NATO. The expansion of the Royal Air Force (RAF) was particularly dramatic.² By the mid-1950s, almost 250 squadrons of aircraft were available for operations. Force levels of these magnitudes could not be maintained, particularly in the face of the increasing costs of modern aircraft. Squadron contributions by the Belgian Air Force (BAF), Royal Netherlands Air Force (RNLAf), the Royal Canadian Air Force (RCAF, later Canadian Forces or CF) and the RAF declined considerably; the force levels of USAFE and the French Air Force (FAF) declined somewhat less in proportion to individual air force sizes. The formation of the German Air Force (GAF) in the mid-1950s added substantial combat power to Central Region airpower. By the late 1960s, when the alliance adopted the present policy of "flexible response," the force structure stabilized at around 140 in-place total squadrons.

When beginning this analysis, we expected to see a continuing decline in the number of squadrons to the present day. What perhaps is most striking in Fig.1, however, is that force levels have been maintained at the levels reached in the late 1960s and indeed recent expansion programs in the RAF, GAF, the FAF, and USAFE have actually increased levels slightly during the 1980s. These latter increases, however, are modest; and current plans indicate that the number of squadrons provided by non-U.S. allies will decline slightly.³ In

¹ See "Tactical Air Upgrade Urged to Counter Warsaw Pact," *Aviation Week & Space Technology*, February 8, 1988, pp. 18-19.

² The British government ordered a massive expansion in the wake of the Korean War. However, many of the tactical aircraft ordered for the RAF at that time rapidly became obsolescent.

³ This is partly because of German plans to replace their Alpha Jet force with Tornados on a 1 for 2 basis, and the Dutch plan to drop its one reconnaissance squadron in 1993.

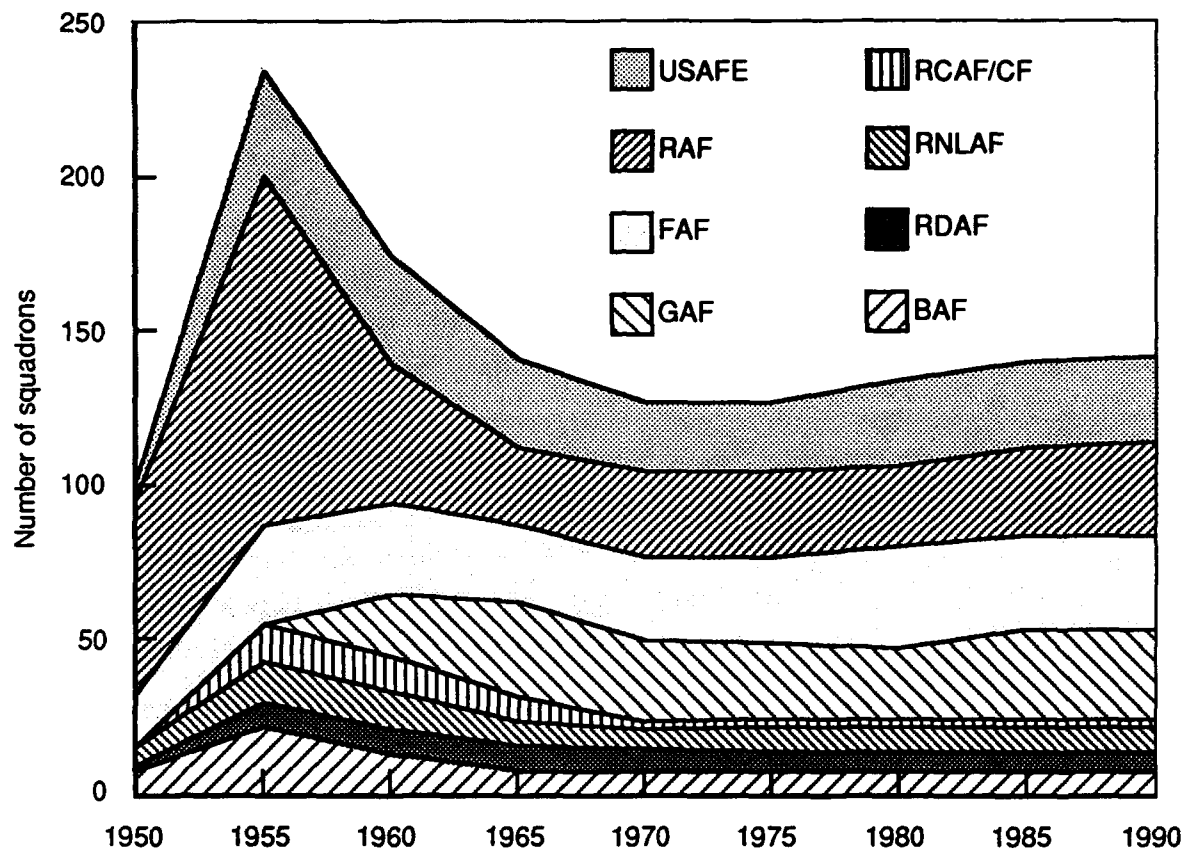


Fig. 1—Air forces in the Central Region, 1950-1990

general, the evidence of the past four decades suggests that the contributions by each air force have reached a level of stasis, and future major increases in force structure are extremely unlikely.

Figure 2 illustrates the changing aircraft inventories of non-U.S. allied air forces in the Central Region from 1950, the year after the alliance was formed, to 1990.⁴

World War II era fighters, which formed the bulk of Central Region airpower in 1950, were rapidly phased out of service in favor of the first generation of jet tactical aircraft—the British Vampire, Meteor, Venom, Hunter, and Canberra; the American F-86 Sabre and F-84 Thunderstreak; and the French Mystère and Ouragon.

During the late 1950s, a second generation of aircraft drew upon the increasing pace of aerospace technological innovation and began to enter service. Some of these, such as the

⁴For purposes here, inventories were taken at five year intervals. There are some slight inaccuracies regarding service entry and exit dates.

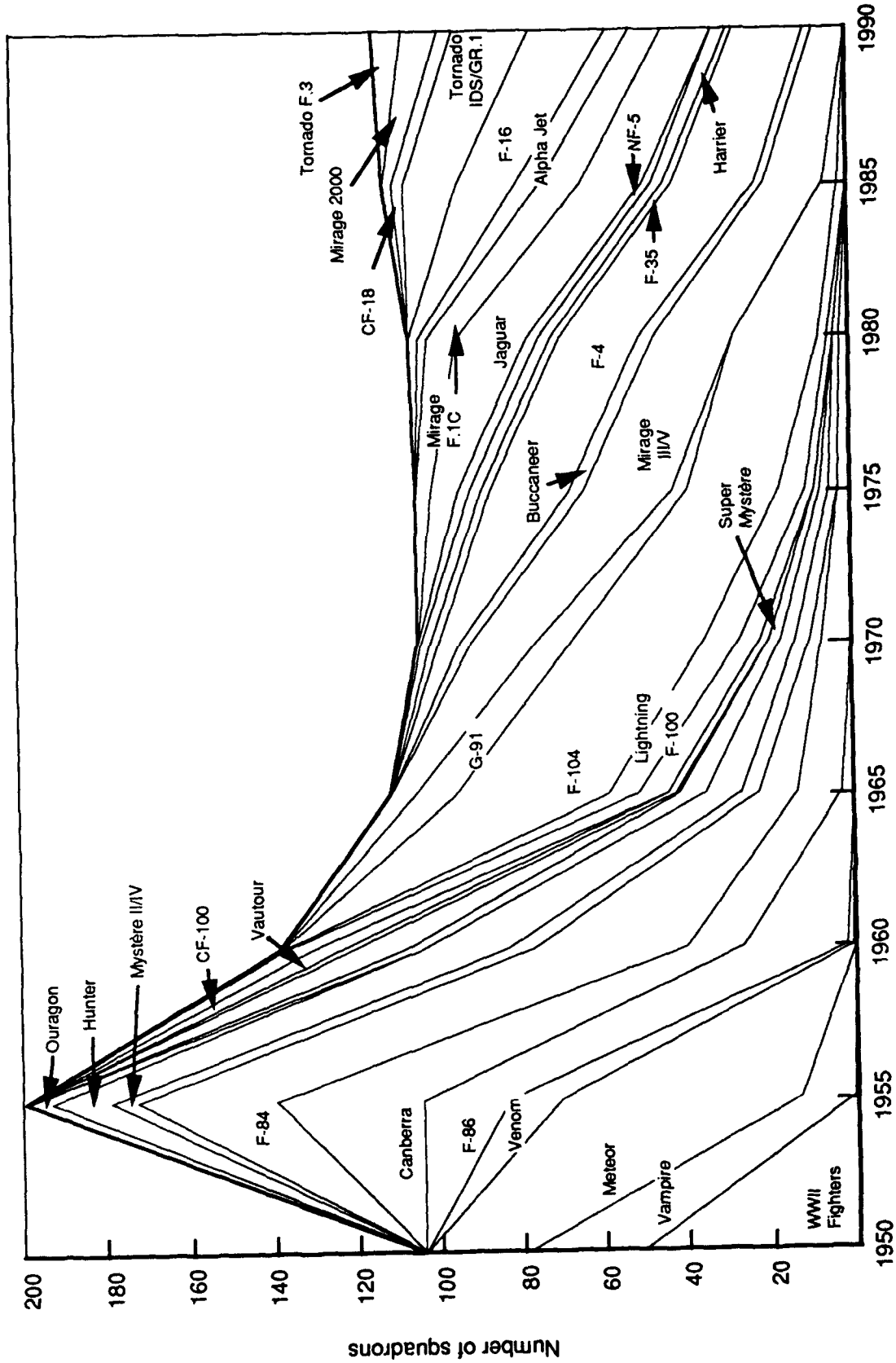


Fig. 2—Inventory evolution

Javelin and Vautour, featured improved all-weather intercept capabilities; others, such as the Lightning and the Mirage III, were also capable of supersonic flight. Beginning in the late 1960s, a third generation of aircraft began entering service in substantial numbers. These included the F-4, the Jaguar, the Mirage F.1C, the Harrier, and the Alpha Jet. A decade later, a fourth generation, which included such aircraft as the Tornado, the CF-18, the F-16, and the Mirage 2000, became operational.

An examination of the slope of the curves in Fig. 2 also suggests that aircraft brought into service since the late 1950s are being kept in service much longer than the first generation of jet fighters. With the exception of such aircraft as the Canberra, the Hunter, the F-84, and the F-86, most of the first generation of fighters were phased out of service by the late 1950s and early 1960s. Their replacements, in particular the F-100, the F-104, the Buccaneer, the Lightning, and the Mirage III, soldiered on for many more years than the first generation; and, indeed, a few of these will still be active well into the 1990s. The increasing longevity of aircraft suggests that aircraft currently in service, in particular the variants of the Tornado, the CF-18, the F-16, and the Mirage 2000, will still be in service after the turn of the 21st century.

The reasons for this increased longevity are manifold. Some aircraft, such as the F-4 Phantom II and Mirage III, were brilliant designs that could be kept effective through upgrade programs. Other aircraft were modified to perform different missions. Perhaps most important, the increasing cost of these weapon systems made it more and more difficult to replace them as frequently as in previous years. A necessary result of this policy is that the age of NATO aircraft has continued to increase.

To illustrate this point, Fig. 3 shows the weighted average design age of aircraft in the NATO air forces of the Central Region (USAFE is included for comparative purposes). The metric used for design age is the year the aircraft first entered service. Although a fairly simplistic calculation,⁵ the results indicate that the air forces in the Central Region are aging fairly steadily. Unless extensive modernization programs are carried out, at the turn of the century air forces could be even older in terms of design age.⁶ Of course, the actual age of individual airframes would be lower except for those in the batch delivered.

⁵Given the difficulties involved in determining individual aircraft delivery rates, the design age of each major type of aircraft was computed by subtracting the year the aircraft initially entered service from the year in question. This number was then multiplied by the number of squadrons of each aircraft type. This process was carried out for each aircraft type and then the total sum was divided by the total number of squadrons to calculate a weighted average design age.

⁶See below for projections on allied air force ages.

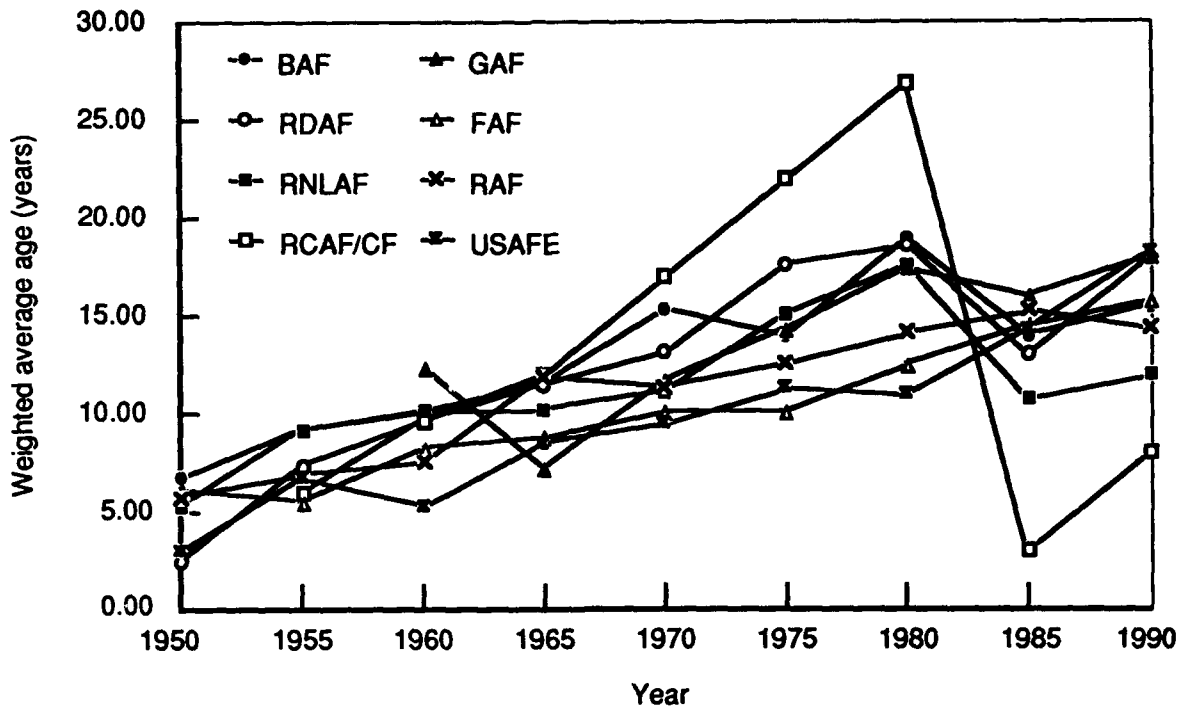


Fig. 3—Weighted average design age of NATO fighter aircraft, 1950–1990

The history of the past 40 years also illustrates that the Central Region air forces have not improved much in terms of equipment standardization. In 1955, nine major types of aircraft formed the non-U.S. Central Region air forces' 200 squadrons. Although much effort was expended in attempts to increase commonality further, the number of different types of aircraft in the Central Region inventory continued to increase. No less than 16 different types of aircraft were present in 1970; by the 1990s, 12 different types will form the backbone of non-U.S. allied airpower in the Central Region. Lack of progress in standardization has many causes. Nations have found it difficult to agree on requirements and the timing of replacements. Tactical aircraft have become increasingly expensive and must fulfill political and economic requirements as well as military needs and the alliance's quest for improved standardization in equipment.

The political and economic requirements placed on tactical aircraft are illustrated to some extent by changes in design origins. Figure 4 illustrates the sources of aircraft design from 1950 to 1990. In NATO's first decade, British and American-designed aircraft dominated the inventories of non-U.S. allied air forces, while French-designed aircraft slowly increased in numbers. The number of U.S.-designed aircraft stayed fairly steady. French-

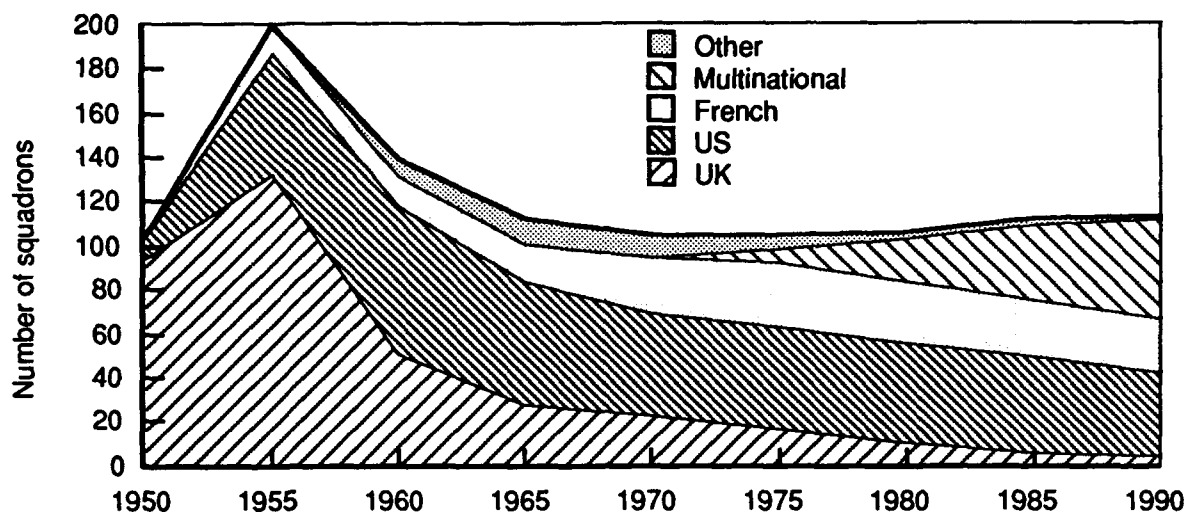


Fig. 4—Aircraft design origin

designed aircraft began to increase until the early 1970s, when they entered a period of stasis. The French never succeeded in selling many French-designed aircraft to members of the alliance, but their air force has been equipped almost exclusively with French products (the Jaguar and Alpha Jet being the major exceptions).⁷ British-designed aircraft, however, have sunk from their peak in the 1950s to almost zero in the present period.⁸

The number of multinational-designed aircraft, however, have increased dramatically since they began entering service in the early 1970s. The reasons for the increase are varied. The two European nations that developed postwar industries capable of designing advanced tactical aircraft on a national basis—France and Britain—experienced difficulties in competing with U.S. industry because their “buys” were typically much smaller than those of the United States. Rapidly increasing research and development costs were thus spread over smaller numbers, leading to higher costs compared with costs of similar products from the United States. In addition, Germany was eager to enter this high-technology field but was politically reluctant to develop a purely German combat aircraft industry.

To maintain their industrial infrastructures in the face of this competition, the Europeans have followed three main courses (and combinations thereof):

⁷The Alpha Jet and Jaguar are collaborative efforts derived largely from French designs. In French service, of course, the Alpha Jet was used as a trainer. In the GAF, the Alpha Jet assumed both a training and combat role.

⁸The Harrier GR.3 and GR.5 were considered British aircraft here, although the U.S. Marine Corps has co-produced variants for U.S. service.

- Many nations, after initially simply purchasing aircraft from the United States and Britain immediately after World War II, began to build aircraft under license. The main example of this approach was the F-104 in the late 1950s and early 1960s. Although aircraft industries were kept active, this policy failed to maintain the research and development base as successfully as had involvement in the design phase.
- The French pursued an alternative policy and attempted to "go it alone" by selling aircraft abroad to increase the size of their aircraft buys. Until recently, the French were highly successful in gaining foreign sales, but increasing competition and a shrinking market have led to doubts about the future viability of this policy.
- Several European nations, including France, have attempted to spread the costs of research, development, and procurement through the use of multinational programs. The Jaguar (an Anglo-French aircraft), the Tornado (an Anglo-German-Italian fighter), and the Alpha Jet (Franco-German) are three key examples. As can be seen in Fig. 4, multinational-designed aircraft have come to form a large percentage of the non-U.S. allied inventory. In the future, with the acquisition of the EFA and increased numbers of Tornados, the proportion of the force structure composed of multinational-designed aircraft will increase.

Multinational aircraft are not without problems. The European nations have experienced difficulties in coordinating requirements; the Jaguar, for example, evolved from a requirement for a light subsonic trainer to its present form as a single seat supersonic attack aircraft. The redesign of the wing for supersonic flight substantially increased costs, as did difficulties with the engine, which was procured specifically for the aircraft. Coordination difficulties have in general led to substantially longer development times than with national efforts—the Tornado, for example, was initially developed in the late 1960s but did not enter initial squadron service until 1979. In comparison, the USAF's F-15 was begun at the same time, but began entering squadron service in 1974.⁹ More recently, the members of the current EFA consortium (Britain, Germany, Italy, and Spain) proved unable to keep France within the program, thus leading to the development of two different European agile fighters, the EFA and the French Rafale. This is bound to increase the costs of both, since

⁹See Michael Rich et al., *Multinational Coproduction of Military Aerospace Systems*, The RAND Corporation, R-2861-AF, October 1981.

small buys will need to support two rather expensive programs. Frictions among the members of the EFA consortium have also led to continuing delays in the service entry date of this aircraft.

EVOLVING CAPABILITIES

Although numbers of squadrons have declined substantially since the hey-day of the mid-1950s, and average airframe design ages have increased, capabilities have, in general, increased. The fruits of technology have created modern tactical fighters that are more capable in almost every respect than those of previous generations. Modern aircraft have much higher sortie rates, can fly further, are capable of carrying substantially greater weapon loads, and can bomb much more precisely. Modern air defense aircraft are more agile and have much more powerful radars and more deadly air-to-air missiles than their predecessors. More and more modern tactical aircraft, using inertial navigation systems, radar, and/or optical infra-red devices, can conduct ground attack operations at night and in adverse weather. This promises greatly reduced attrition rates, since optically sighted defenses cannot function as effectively. In addition, such capabilities increase the vulnerability of Warsaw Pact maneuver forces, whose doctrine calls for movement, particularly in rear areas, under the cover of weather and/or night.

To illustrate the changing face of these capabilities for non-U.S. allied airpower, we categorized individual national squadrons with a range of mission types, based upon aircraft capabilities, squadron designations, and individual air force preferences. The categories included:

- **Reconnaissance:** Squadrons whose primary mission involves penetrating enemy airspace to gain information on enemy forces and dispositions.
- **Electronic warfare:** Squadrons whose primary mission is to suppress enemy air defenses (SEAD).
- **Day ground attack:** Squadrons capable of conducting offensive ground attack operations in good weather. These would include such aircraft as the RAF's Hunter FGA.9 in the 1960s to the Alpha Jets in the GAF and the single-role F-16s of the BAF today.
- **All weather ground attack:** Squadrons capable of conducting offensive ground attack operations in adverse weather and at night. These include such modern aircraft types as the Tornado.

- **Day air defense:** Squadrons capable of conducting defensive counterair missions in good weather. These would include such aircraft as the F-86E Sabre in the 1950s to the current GAF F-4Fs.
- **All weather air defense:** Squadrons capable of conducting defensive counterair missions in adverse weather and at night. These would include such aircraft as the RAF's Tornado F.3.
- **Day air defense/ground attack:** Multirole squadrons capable of both offensive ground attack operations and defensive counterair missions in good weather. These would include such aircraft as the F-16A in certain air forces, such as the RDAF.
- **All weather air defense/day ground attack:** Multirole squadrons capable of defensive counterair in adverse weather and at night and offensive ground attack operations in good weather. These would include the CF-18A and certain Mirage III, Mirage F.1C, and Mirage 2000 units.

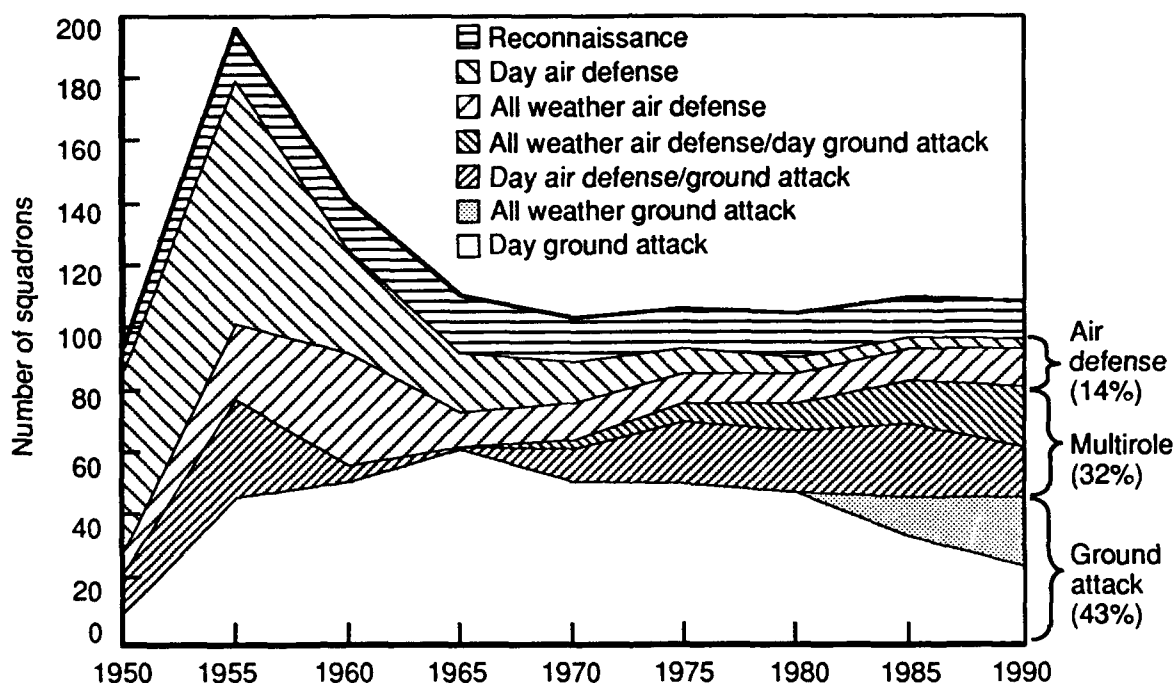
Applying these categories to the non-U.S. allied aircraft in the Central Region makes several trends become more apparent. The reconnaissance force has remained remarkably stable since the mid-1950s.¹⁰ Electronic warfare squadrons have received very short shrift by non-U.S. allied air forces—only one squadron exists today provided by the FAF. The bulk of the Central Region's EW capabilities has been provided by the USAF's Wild Weasel and EF-111 units.

The number of aircraft capable of only single role day air defense or day ground attack operations has decreased considerably; but the number of squadrons capable of conducting ground attack operations at night and in adverse weather has increased remarkably, largely through the introduction of the Tornado and some variants of the Mirage 2000. Previously, the only aircraft in the NATO inventory capable of such operations were the USAF's F-111s. The introduction of Tornado and some versions of the Mirage 2000 has in effect more than quadrupled the number of such squadrons based in the Central Region. As noted before, this promises to lower attrition and reduce the sanctuary of night and adverse weather from the Warsaw Pact.

The number of multirole aircraft grew during the mid-1950s, but then declined considerably. Many air forces using the early tactical fighters, in particular the Vampire

¹⁰The AAFCE reconnaissance force has actually declined substantially in terms of numbers of squadrons since the mid-1950s. The primary reason is the decline in the number of USAFE squadrons dedicated to this mission.

FB.5 variant, continued with the World War II tradition of arming day fighters with ground attack ordnance for clear weather ground support operations. Advancing technology, however, made it possible to build aircraft designed for a single role with far more advanced capabilities than these early multirole jets. More and more single role aircraft entered the inventory and, as can be seen in Fig. 5, by 1965, no multirole aircraft were in the non-U.S. inventory. Technology advanced, however, to enable some new designs, particularly the F-4 Phantom II and Mirage III, to perform almost equally well in either ground attack or air defense roles.¹¹ With the introduction of FAF multirole Mirage III/Vs and GAF F-4Fs¹² in the late 1960s and then Danish and Dutch F-16s and FAF Mirage F.1Cs in the 1970s, the multirole component grew substantially. Further, since the introduction of the F-4,¹³ the



Note: Does not include one French electronic warfare squadron.

Fig. 5—Evolving capabilities, 1950–1990

¹¹Both of these aircraft were initially designed as interceptors but enjoyed such good performance that ground attack capabilities were subsequently added.

¹²Luftwaffe F-4Fs cannot fire radar-guided missiles and, unlike other F-4s, have no all-weather air defense capabilities. The Luftwaffe plans to add a new radar system and advanced medium range air-to-air missiles (AMRAAMs) to these aircraft during the 1990s.

¹³Only the USAF's F-4s were multirole. The RAF's FGR.1s and FGR.2s have remained single role. Initially, the RAF's Phantoms were dedicated to strike/attack operations; when Jaguar was phased in, they turned to all weather air defense operations.

CF-18, and some variants of the Mirage III and Mirage 2000, an increasing number of squadrons have become multirole capable in all weather air defense as well as day ground attack operations.

Despite the increases in the number of multirole units, questions remain today regarding their capability. Some air forces, notably the RAF, doctrinally hold that multirole units cannot be as capable as single role units and thus will suffer unacceptable attrition and contribute little to the battle. As one experienced RAF officer has written:

I believe it is vital that aircrew should be thoroughly proficient in their role, and having commanded two ground-attack squadrons, in my experience it is a full time job to build up and then maintain the skills required for just one role. Typically, a ground-attack pilot can be required to be proficient in the delivery of 4 or 5 different weapons by up to 8 or so delivery profiles involving both automatic and manual weapon aiming systems, as well as self defence tactics against aircraft, missile and electronic threats, not to mention navigation, tactical formation and pure flying proficiency. Where resources are scarce it is important that mission success should be high. It is better, therefore, to be excellent in a single role than mediocre in a few.¹⁴

Other air forces disagree, notably the RNLAf, the RDAF, the FAF, and the USAF, arguing that multirole units provide a critical element of flexibility that is so vital given the uncertainty of wartime operations. Regardless of the merits of each side in this doctrinal dispute, there is no doubt that the number of multirole units has increased considerably.

Some weak areas remain. Only one squadron of dedicated electronic warfare aircraft is present—a single squadron of FAF Jaguars. The all-weather interceptor force has declined considerably since the late 1950s, largely because of the replacement of purpose-built all-weather interceptors with the F-104, which was incapable of making a head-on attack in poor weather. In addition, a substantial portion of the all-weather air defense force illustrated here is RAF assets based in Britain. Their rearward locations make it difficult for these units to help defend the forward airspace of the Federal Republic effectively.¹⁵ To some extent, the decline in pure all-weather intercept capabilities has been alleviated by the growth of multirole aircraft with an all-weather intercept capability. The French in particular have an increasingly large number of such aircraft. However, many of these French assets are not

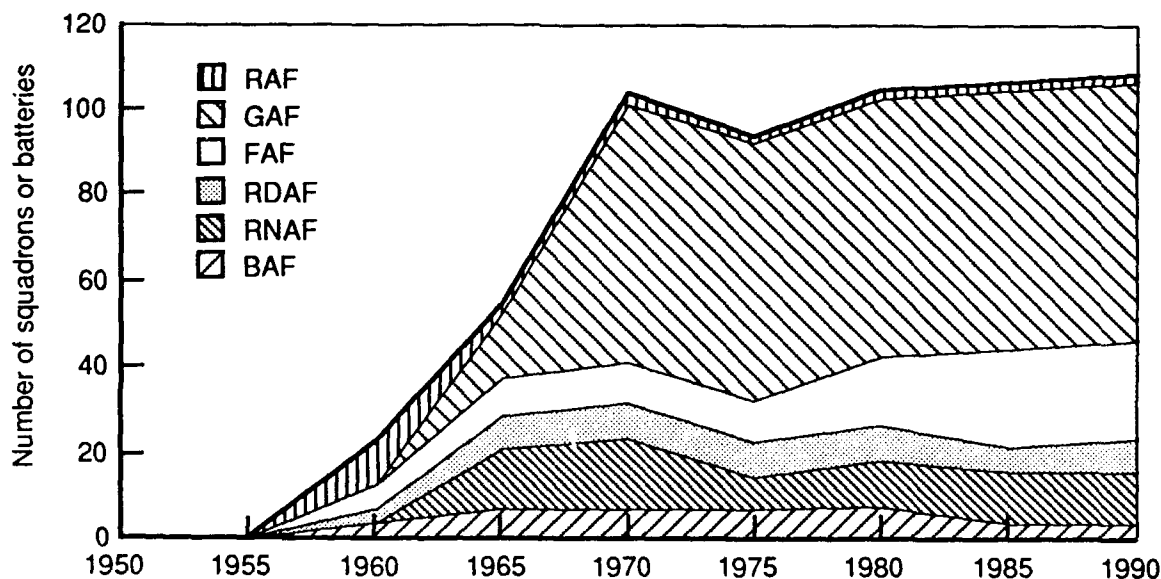
¹⁴Air Commodore Michael Gibson, *Technology and Air Power in NATO*, Society of British Aerospace Companies, 1986, p. 48.

¹⁵Unless supported by aerial refueling, most of these units would not be able to maintain much useful time on station and would be severely fuel limited for combat engagements. In addition, response times for aircraft based in the UK would lag substantially behind those of units based in the Low Countries and Germany.

favorably based to contribute to air defense of the forward region of Germany. Besides the French, only three squadrons of non-U.S. multirole aircraft with an all-weather defensive counterair capability (Canadian CF-18s) are currently present in the forward area.

SURFACE-TO-AIR MISSILES

At the same time, of course, the all-weather capabilities of the tactical air forces have been bolstered by the introduction of SAMs. All of the non-U.S. Central Region air forces (with the exception of Canada) maintain substantial numbers of medium and long-range SAM batteries or squadrons. In the United States, SAMs are the responsibility of the U.S. Army. The SAM batteries or squadrons maintained by the European air forces are illustrated in Fig. 6. As can be seen, the GAF, which has not fielded an all-weather interceptor since its F-86Ks were phased out of service in the early 1960s, places a substantial emphasis on SAMs to defend its airspace. This emphasis can in part be explained by the arrangements worked out after World War II, when defense of German air space was made the responsibility of the occupying powers. To this date, German interceptors still cannot be employed on a purely national basis to intercept intruders until combat begins. Some also argue that the GAF emphasis on SAMs stems from fears about the vulnerability of main operating bases.



Note: Does not include U.S. Army SAM units.

Fig. 6—Air force surface-to-air missile squadrons or batteries in the Central Region

III. THE FUTURE

We examined the publicly available plans of each of the allied air forces to project the likely state of allied airpower just after the turn of the century. Again, the purpose of this Note is to identify emerging trends should current plans be fulfilled; the likelihood of such implementation is examined more closely in forthcoming project reports. The following general assumptions underlie our long-range projections (see the appendixes for additional detail):

- **The French Air Force:** Variants of the Mirage 2000, including a tactical all-weather ground attack version, will be brought in to replace existing Mirage III, Mirage 5F, and some Jaguar squadrons. Some Mirage F.1C units will be upgraded to F.1T capabilities (a multirole F.1 with primary emphasis on the ground attack mission). Rafale will begin replacing F.1Ts and any remaining Jaguars in the late 1990s.
- **The German Air Force:** The GAF's six squadrons of Alpha Jets will be replaced by three squadrons of Tornado IDS. Two squadrons of Tornado Electronic Combat/Reconnaissance (ECR) aircraft will be brought into service. The mission of the four squadrons of reconnaissance RF-4Es will in part be fulfilled by the ECRs.¹ Finally, six of the eight squadrons of F-4Fs will be provided with all-weather intercept capabilities during the 1990s. By the end of the period under consideration, EFA will replace all of the aging F-4Fs and be dedicated to the all-weather air defense mission.
- **The Royal Air Force:** The two squadrons of Buccaneers will be replaced by two squadrons of Tornado GR.1s.² The two squadrons of Jaguars dedicated to reconnaissance operations will be replaced by two squadrons of Tornado R.1s. Harrier GR.5s will replace remaining GR.3 variants and will be equipped for night/adverse weather ground attack operations. Finally, all remaining F-4s and Jaguars will be replaced by EFA by 2000/2005.

¹We have assumed that all four RF-4E squadrons will be retained, but attrition could force the reduction in numbers of RF-4Es from four to two or three squadrons by 2005.

²Although the Buccaneers are primarily dedicated to maritime operations, our data base included them as ground attack aircraft. The replacement Tornados were counted as all-weather ground attack capable.

- **Belgian Air Force:** Plans call for existing F-16As to be upgraded to roughly F-16C standards and equipped with AMRAAM for all-weather intercept capabilities, although this program may be postponed or canceled. The two remaining Mirage V squadrons will be retained until 2005. However, the BAF will continue its doctrinal emphasis on single-role squadrons
- **The Canadian Forces:** CF-18s will remain in the inventory and continue with their multirole all-weather intercept/day ground attack emphasis.³
- **The Royal Danish Air Force:** The two squadrons of F/RF-35 Drakens will be replaced by F/RF-16s, one in the late 1990s and the other after 2000. All F-16As will be converted to F-16Cs and equipped with AMRAAM for all-weather intercept capabilities. The Danes continue their doctrinal emphasis on multirole squadrons except for one reconnaissance squadron.
- **The Royal Netherlands Air Force:** By 1990, the RNLAf will have completely converted to F-16s. These will be upgraded to roughly F-16C standards and equipped with AMRAAM. The Dutch will continue their multirole emphasis except for two squadrons dedicated to air defense (as in the current force posture). The reconnaissance squadron will drop the reconnaissance role in 1993 and convert to a standard multirole unit.

With these assumptions, Fig. 7 illustrates the aircraft inventories of non-U.S. allied air forces in the Central Region in the year 2000/2005. The overall number of squadrons, based on these assumptions, declines slightly.

Four types of aircraft predominate: the F-16, the Tornado, the Mirage 2000, and the EFA will form some 75 percent of the overall force. In addition, commonality has improved slightly over the current period, with nine different types, rather than 12.⁴

With the same assumptions as laid out in the previous section regarding aircraft ages, some interesting changes will take place in the weighted average design age of individual air forces, as shown in Table 1.

As can be seen, the average weighted design age of the smaller air forces increases quite steadily, since the backbone of their force structure—the F-16 and, in the case of the

³One possibility for the CF would be the acquisition of Low Altitude Navigation and Targeting Infrared for Night (LANTIRN) pods or night vision goggles to permit ground attack operations at night and in adverse weather.

⁴This is assuming the Tornado F.3 is the same major type as other variants of the Tornado series.

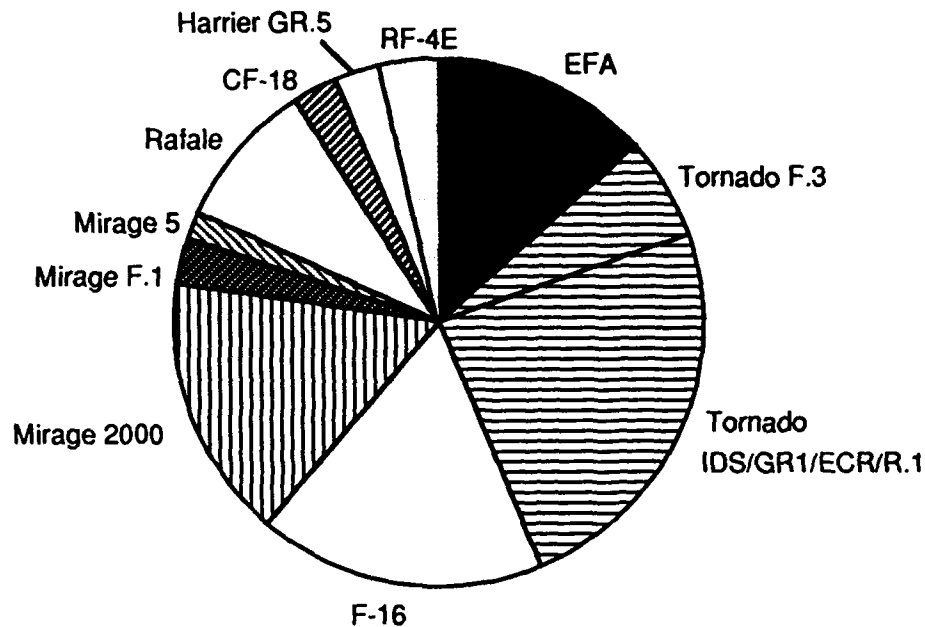


Fig. 7 — Non-U.S. allied aircraft inventory in the Central Region, 2005

Table 1
WEIGHTED AVERAGE DESIGN AGE
OF AIR FORCES

Air Force	1990	1995	2005
BAF	15.5	20.5	28.8
RDAF	18.0	20.0	27.0
RNLAF	12.0	17.0	27.0
CF	8.0	13.0	23.0
GAF	18.1	23.4	21.0
FAF	15.8	17.5	18.2
RAF	14.3	17.0	19.5

Canadians, the CF-18—entered service in the late 1970s and early 1980s. Actual airframe age, of course, will be lower in most cases, since in the case of the “F-16 states,” many aircraft did not enter service until the late 1980s and early 1990s. The design age of the GAF grows steadily into the mid-1990s, when a gradual reversal takes place with the replacement of the aging F-4Fs with EFA. The design age of the FAF stays fairly steady, because of the assumed steady introduction of Mirage 2000s and then Rafale into the inventory. The RAF’s design age also stays fairly level through the steady acquisition of additional Tornados and then the introduction of EFA.

This raises a fundamental question: Does airframe age matter as much in the present and future era? Many modern aircraft, such as the F-16, F-15, and Mirage 2000 enjoy such performance that they can exceed the physical limits of their human pilots. Some argue that the cost of improving airframe performance does not justify the marginal benefits and that more emphasis must be placed on subsystems and munitions that can be added to existing aircraft. The increasing pace of avionics miniaturization and processing speeds certainly has made it possible to upgrade existing platforms with advanced subsystems. The GAF, for example, plans to upgrade its F-4Fs with advanced radar systems to provide this day fighter with all-weather intercept capabilities. Previously, ground attack capabilities at night or in adverse weather required the development of extremely expensive, purpose-built aircraft, such as the USAF's F-111 and the RAF and GAF Tornado. Now it appears existing aircraft can be provided with such capabilities through the use of low-cost infrared optical devices.⁵

The new technologies also have led to the creation of far more deadly munitions, such as the AMRAAM, which enables aircraft to engage and attack multiple targets per head-on confrontation, and the promised new generation of stand-off dispenser weapons carrying "intelligent" submunitions.⁶ With the latter, a single aircraft will be able to destroy multiple enemy vehicles per sortie without necessarily needing to engage terminal defenses. Moreover, the improvements in effectiveness promised by new munitions do not necessarily require new airframes.

Some revolutionary technologies—notably "stealth"—require new airframes, but the number of these aircraft entering service will certainly be small and, in the case of non-U.S. air forces, nonexistent for the foreseeable future. In any case, it is far from certain whether the aging of NATO air forces will detract from their capabilities, particularly compared with the forces of today. Provided the CF-18s of Canada and the F-16s of Belgium, Denmark, and the Netherlands are upgraded and equipped with munitions adequate to meet the evolving threat, it is unclear whether they would benefit from procuring the latest generation of fighters. Planners for the smaller air forces argue that such acquisition would bankrupt

⁵For example, several of the USAF's F-16Cs are being fitted with LANTIRN pods to permit this aircraft to attack mobile and fixed targets at night and in adverse weather. The RAF is also in the process of using optical devices to provide its Tornado GR.1s and Harrier GR.5s with adverse weather and night capabilities.

⁶The Modular Standoff Weapon (MSOW) is being developed by a consortium composed of members of the NATO Alliance. The United States and the United Kingdom dropped out of the program in 1989. France had withdrawn earlier but is now developing its own Apache.

them for only a small increase in capability. As one allied military planner noted: "Exactly what improvement will EFA or Rafale provide over the F-16C?"⁷

Indeed, even though weighted average design age in the smaller air forces will reach unprecedented levels, potential improvements in capabilities are quite dramatic. The number of aircraft capable of only single role day operations (air defense or ground attack) decreases considerably, while the number of day-only multirole aircraft also declines. In the area of all-weather operations, however, the force improves substantially. The all-weather interceptor force increases greatly, because of the presence of dedicated EFA interceptors in the RAF and GAF and dedicated F-16Cs equipped with AMRAAM in Belgium. These units will also be bolstered with numerous multirole all-weather interceptor/day ground attack squadrons. The primary players are the F-16Cs of the RNLAf and RDAF and the Mirage

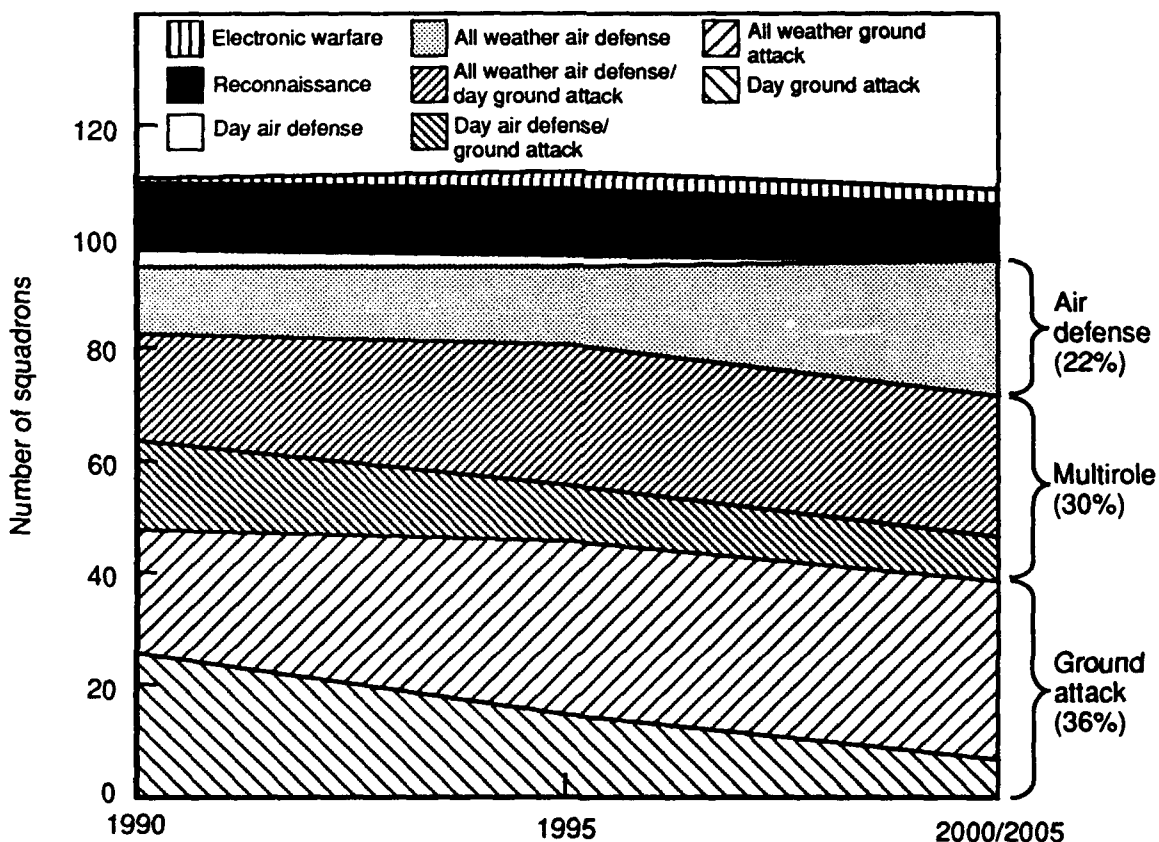


Fig. 8—Future force capabilities

⁷Personal communication.

2000s and CF-18s of the FAF and CF. Finally, the all-weather ground attack force will increase greatly in relation to the 1990 force structure as additional (and upgraded) Tornados, appropriately equipped Mirage 2000s, and night-attack capable Harrier GR.5s enter the force. In short, some 70 percent of the force has some all-weather capabilities, so critical in the inclement weather of the Central Region, whereas in the force today, only some 40 percent of the squadrons have all-weather capabilities.

The remaining area of weakness appears to be electronic warfare and SEAD. Only three such dedicated squadrons (one French and two German) are planned. Some improvements in SEAD may take place as more autonomous munitions are developed, such as the RAF's Advanced Low Altitude Radar Missile (ALARM), the proposed Self Protection Weapon (SPW), and various SEAD anti-radiation drones. These weapons require less queuing, hence more lethal SAM suppression weapons will be available without the need to create dedicated units. Nonetheless, the allies will remain highly dependent upon the USAF for advanced SEAD capabilities.

The reasons stem primarily from the high cost of EW/SEAD capabilities and related doctrinal disputes. Not only are the needed electronic systems and munitions quite expensive, but the development of intelligence support systems (intelligence gathering, analysis, software) required to program these systems is also extremely costly. In recent years, USAF attempts to elevate SEAD from a supporting mission to a separate operational task have encountered strong resistance in NATO. The non-U.S. allies argue that if SEAD is elevated to such a status, they would be required to procure necessary assets. Given the costs, other aspects of their force structure would have to suffer.⁸

⁸See David Stein, *The Development of NATO Tactical Air Doctrine*, The RAND Corporation, R-3385-AF, December 1987, pp. 48-49.

IV. CONCLUSIONS

The history of the past 40 years combined with successfully implemented plans for the next 15 years indicates the following:

- Even without CFE arms control reductions, the number of combat squadrons would decline slightly based on current plans.
- Numbers of different types of aircraft in the inventories of the various air forces should decline. Some 75 percent of the force at the turn of the century will consist of four major types: Tornado, F-16, Mirage 2000, and EFA.
- Weighted average airframe design ages will reach unprecedented levels in the smaller air forces, but capabilities should increase substantially.
- A larger proportion of the force will have multirole capabilities. In addition, many of these multirole units have some all-weather capabilities. The upgrading of the F-16s in Denmark and the Netherlands, whose air forces doctrinally support the need for multirole aircraft, will play a key role here, as will the continued acquisition of FAF Mirage 2000s.
- Some 70 percent of the non-U.S. force should have some all-weather capabilities. The addition of more Tornados and some variants of the Mirage 2000 will increase the alliance's all-weather ground attack capabilities in the Central Region.

Yet we have reason to doubt the ability of the individual air forces to execute the modernization plans discussed above on financial grounds alone. The requirements of existing plans, particularly in the case of the larger air forces, are quite demanding, as illustrated in Table 2.

The smaller air forces appear to be in much better condition regarding platform replacement requirements than the large air forces, mainly because the smaller nations made their primary modernization decisions in the late 1970s regarding the F-16 and CF-18 and procured most of these aircraft during the 1980s.¹ The large air forces spent the bulk

¹See the appendixes for replacement assumptions. The Mirage F.1T is considered an upgrade, not a replacement. Also, the BAF looks fine in this table, but only because the Belgian government has postponed replacement of the two remaining Mirage V squadrons until after 2005, at which point they will be over 30 years old. By that time, the operational viability of those aircraft would be open to question. The BAF would need to replace those two squadrons if it wishes to maintain that capability.

Table 2
REPLACEMENT REQUIREMENTS UNDER CURRENT PLANS

Air Force	Number of Squadrons in 2000/2005	Number of Squadrons Replaced, 1990-2005	Percentage
RNLAF	8	0	0
CF	3	0	0
BAF	8	0	0
RDAF	6	2	33
RAF	30	13	43
GAF	24	12	50
FAF	31	17	54

of their resources in that period on the acquisition of Tornados and M-2000s and must now spend additional monies on replacing other obsolescent types. The French in particular must replace a large portion of their force structure.

The importance of these replacement requirements lies in the fact that airpower capabilities do not just stem from platforms. Aircrew and support personnel require many hours of extensive (and expensive) training, adequate stocks of spares and POL (Petroleum, Oil, and Lubricants) must be procured to support surge wartime sortie rates, and adequate stocks of munitions are needed for air forces to effectively contribute to battle.

When faced with inadequate resources and competing demands, air force planners typically have three major choices (and combinations thereof):

- Reduce the size of aircraft buys.
- Stretch out procurement. Although this tends to increase unit cost, it permits continued modernization within annual budgetary guidelines.
- Reduce training and readiness. This can involve cutting back on aircrew training time, reducing buys of spares, and slowing the introduction of modern munitions.

Historical analysis indicates that aircraft programs typically receive precedence. We have examined five major programs of particular relevance. Three—the multinational Jaguar, Tornado, and Alpha Jet programs—were intra-European collaborative efforts similar to the EFA project. Two—the Mirage F.1C and Mirage 2000—correspond to the Rafale program. With the exception of the Alpha Jet, after the refinement of the planned buy during the development phase (as opposed to the generally inflated numbers generated during earlier phases), actual buys met or exceeded the number of aircraft initially planned,

even though costs typically greatly exceeded initial expectations. Accordingly, readiness may have suffered. European air forces may find even more severe budget crunches in the future. Past trends suggest that high priority platform programs such as EFA and Rafale may end up crowding out readiness and munition programs.

Appendix A

GUIDANCE FOR THE DATA BASES

The following appendixes contain the data bases for each of the air forces examined in this document. For each air force, squadrons are characterized by both type and role. Where known, actual squadron numbers were employed. Tactical units, when based out of the region, were not incorporated into the analysis.

The RAF data base is particularly complete because individual squadrons were assigned a wide variety of aircraft during the era since World War II. That data base contains all types of aircraft (strategic bombers, maritime patrol aircraft, etc.) although the analysis focused on tactical aircraft.

The following codings are employed in the data bases for roles:

- IDF: Interceptor day fighter
- GA: Ground attack
- Recce: Reconnaissance
- AWX: All weather interceptor
- AWGA: All weather ground attack
- IDF/GA: Multirole (interceptor day fighter/day ground attack)
- AWX/GA: Multirole (all weather interceptor/day ground attack)
- EW: Electronic warfare/suppression of enemy air defenses

Appendix B

Squadron	1950			1955			1960			1965			1970			1975		
	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role		
1	Spitfire	IDF	F-84E/G	IDF/GA	F-84F	GA	F-84-F	GA	F-84-F	GA	F-84F	GA	Mirage 5B	GA				
2	Spitfire	IDF	F-84E/G	IDF/GA	F-84F	GA	F-84F	GA	F-84F	GA	F-84F	GA	Mirage 5B	GA				
3	Spitfire	IDF	F-84-E/G	IDF/GA	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—				
4	Meteor F.4	IDF	Meteor F.8	IDF	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—				
7	unformed	—	Meteor F.8	IDF	Hunter F.6	IDF	Hunter F.6	IDF	disbanded	—	disbanded	—	disbanded	—				
8	unformed	—	Meteor F.8	IDF	Hunter F.6	IDF	Hunter F.6	IDF	disbanded	—	Mirage 5B	GA	Mirage 5B	GA				
9	unformed	—	Meteor F.8	IDF	Hunter F.4	IDF	Hunter F.4	IDF	disbanded	—	disbanded	—	disbanded	—				
10	Mosquito NF.30	—	Mosquito NF.30	AWX	Meteor NF.11	AWX	Meteor NF.11	AWX	disbanded	—	disbanded	—	disbanded	—				
11	Mosquito NF.30	—	Mosquito NF.30	AWX	CF-100	AWX	CF-100	AWX	disbanded	—	disbanded	—	disbanded	—				
22	unformed	—	F-84G	IDF/GA	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—				
23	unformed	—	F-84G	IDF/GA	F-84F	GA	F-84F	GA	F-104G	GA	F-104G	GA	F-104G	GA				
25	unformed	—	Meteor F.8	IDF	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—				
26	unformed	—	F-84G	IDF/GA	F-84G	IDF/GA	F-84G	IDF/GA	disbanded	—	disbanded	—	disbanded	—				
27	unformed	—	F-84G	IDF/GA	F-84F	GA	F-84F	GA	disbanded	—	disbanded	—	disbanded	—				
29	unformed	—	Meteor F.8	IDF	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—				
30	unformed	—	F-84G	IDF/GA	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—				
31	unformed	—	F-84G	IDF/GA	F-84F	GA	F-84F	GA	F-104G	GA	F-104G	GA	F-104G	GA				
33	unformed	—	Meteor F.8	IDF	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—				
42	unformed	—	unformed	—	RF-84F	Rece	RF-84F	Rece	disbanded	—	RF-84F	Rece	Mirage 5BR	Rece				
349	Spitfire	IDF	Meteor F.8	IDF	CF-100 F.4	AWX	CF-100 F.4	AWX	F-104G	IDF	F-104G	IDF	F-104G	IDF				
350	Spitfire	IDF	Meteor F.8	IDF	CF-100 F.4	AWX	CF-100 F.4	AWX	F-104G	IDF	F-104G	IDF	F-104G	IDF				
351	unformed	—	Meteor F.8	IDF	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—				

THE BELGIAN AIR FORCE (Continued)

Squadron	1980			1985			1990			1995			2000/2005		
	Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role	
1	Mirage 5B	GA		Mirage 5B	GA		Mirage 5B	GA		Mirage 5B	GA		F-16C	GA	
2	Mirage 5B	GA		Mirage 5B	GA		Mirage 5B	GA		Mirage 5B	GA		F-16C	GA	
3	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
4	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
7	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
8	Mirage 5B	GA		Mirage 5B	GA		Mirage 5B	GA		Mirage 5B	GA		Mirage 5B	GA	
9	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
10	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
11	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
22	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
23	F-104G	GA		F-16A	GA		F-16A	GA		F-16A	GA		F-16C	GA	
25	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
26	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
27	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
29	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
30	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
31	F-104G	GA		F-16A	GA		F-16A	GA		F-16A	GA		F-16C	GA	
33	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
42	Mirage 5BR	Recce		Mirage 5BR	Recce		Mirage 5BR	Recce		Mirage 5BR	Recce		Mirage 5BR	Recce	
349	F-104G	IDF		F-16A	IDF		F-16A	IDF		F-16A	IDF		F-16C	AWX	
350	F-104G	IDF		F-16A	IDF		F-16A	IDF		F-16A	IDF		F-16C	AWX	
351	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	

Appendix C

Squadron (notional)	1950		1955		1960		1965		1970	
	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role
1	unarmed	—	F-86	IDF	CF-100	AWX	CF-104	GA	CF-104	GA
2	unarmed	—	F-86	IDF	CF-100	AWX	CF-104	GA	CF-104	GA
3	unarmed	—	F-86	IDF	CF-100	AWX	CF-104	GA	CF-104	GA
4	unarmed	—	F-86	IDF	CF-100	AWX	CF-104	GA	disbanded	—
5	unarmed	—	F-86	IDF	F-86	IDF	CF-104	GA	disbanded	—
6	unarmed	—	F-86	IDF	F-86	IDF	CF-104	GA	disbanded	—
7	unarmed	—	F-86	IDF	F-86	IDF	CF-104	R	disbanded	—
8	unarmed	—	F-86	IDF	F-86	IDF	CF-104	R	disbanded	—
9	unarmed	—	F-86	IDF	F-86	IDF	disbanded	—	disbanded	—
10	unarmed	—	F-86	IDF	F-86	IDF	disbanded	—	disbanded	—
11	unarmed	—	F-86	IDF	F-86	IDF	disbanded	—	disbanded	—
12	unarmed	—	F-86	IDF	F-86	IDF	disbanded	—	disbanded	—

[illegible]

Appendix D

THE ROYAL DANISH AIR FORCE

Squadron	1950		1955		1960		1965		1970		1975	
	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role
723	Meteor F.4	IDF	Meteor NF.11	AWX	F-86D	AWX	F-104G	IDF	F-104G	IDF	F-104G	IDF
724	unformed	—	Hunter	IDF	Hunter	GA	Hunter	GA	Hunter	GA	disbanded	—
725	Spitfire	IDF	F-84G	GA	F-100D	GA	F-100D	GA	F-35	GA	F-35	GA
726	unformed	—	F-84G	IDF	F-86D	AWX	F-104G	IDF	F-104G	IDF	F-104G	IDF
727	unformed	—	F-84G	GA	F-100D	GA	F-100D	GA	F-100D	GA	F-100D	GA
728	unformed	—	F-84G	IDF	F-86D	AWX	F-86D	AWX	disbanded	—	disbanded	—
729	unformed	—	RF-84G	Recce	RF-84G	Recce	RF-84G	Recce	RF-35	Recce	RF-35	Recce
730	unformed	F-84G	F-84G	GA	F-84G	GA	F-100D	GA	F-100D	GA	F-100D	GA

Squadron	1980		1985		1990		1995		2000/2005	
	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role
723	F-104G	IDF	F-16A	IDF/GA	F-16A	IDF/GA	F-16A	AWX/GA	F-16C	AWX/GA
724	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—
725	F-35	GA	F-35	GA	F-35	GA	F-35	GA	F-16C	AWX/GA
726	F-104G	IDF	F-16A	IDF/GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16C	AWX/GA
727	F-16A	IDF/GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16C	AWX/GA
728	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—
729	RF-35	Recce	RF-35	Recce	RF-35	Recce	RF-35	Recce	RF-16C	Recce
730	F-100D	GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16A	AWX/GA	F-16C	AWX/GA

Appendix E

THE ROYAL NETHERLANDS AIR FORCE

Squadron	1950		1955		1960		1965		1970		1975	
	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role
306	unformed	—	RF-84F	Rece	RF-84F	Rece	RF-104G	Rece	RF-104G	Rece	RF-104-G	Rece
311	unformed	—	F-84F	GA	F-84F	GA	F-104G	GA	F-104G	GA	F-104G	GA
312	unformed	—	F-84F	GA	F-84F	GA	F-104G	GA	F-104G	GA	F-104G	GA
313	unformed	—	unformed	—	unformed	—	unformed	—	unformed	—	unformed	—
314	unformed	—	F-84F	GA	F-84F	GA	F-84F	GA	NF-5A	IDF/GA	NF-5A	IDF/GA
315	unformed	—	F-84F	GA	F-84F	GA	F-84F	GA	disbanded	IDF/GA	NF-5A	IDF/GA
316	unformed	—	unformed	—	unformed	—	unformed	—	unformed	—	NF-5A	IDF/GA
322	Spitfire	IDF	Meteor	IDF	disbanded	—	F-104G	IDF	F-104G	IDF	F-104G	IDF/GA
323	Meteor	IDF	Meteor	IDF	Hunter F.6	IDF/GA	F-104G	IDF	F-104G	IDF	F-104G	IDF/GA
324	Meteor	IDF	Meteor	IDF	Hunter F.6	IDF/GA	disbanded	—	disbanded	—	disbanded	—
325	Meteor	IDF	Meteor	IDF	Hunter F.6	IDF/GA	Hunter F.6	IDF/GA	disbanded	—	disbanded	—
326	Meteor	IDF	Meteor	IDF	Hunter F.6	IDF/GA	disbanded	—	disbanded	—	disbanded	—
327	Meteor	IDF	Meteor	IDF	disbanded	—	disbanded	—	disbanded	—	disbanded	—
328	unformed	—	Meteor	IDF	disbanded	—	disbanded	—	disbanded	—	disbanded	—
700	unformed	—	Meteor	IDF	F-86K	AWX	disbanded	—	disbanded	—	disbanded	—
701	unformed	—	Meteor	IDF	F-86K	AWX	disbanded	—	disbanded	—	disbanded	—
702	unformed	—	unformed	—	F-86K	AWX	disbanded	—	disbanded	—	disbanded	—

Squadron	1980		1985		1990		1995		2000/2005	
	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role	Aircraft	Role
306	RF-104G	Rece	RF-16A	Rece	RF-16A	Rece	F-16A	IDF/GA	F-16C	AXW/GA
311	F-104G	GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16C	AWX/GA
312	F-104G	GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16C	AWX/GA
313	unformed	—	unformed	—	F-16A	IDF/GA	F-16A	IDF/GA	F-16C	AWX/GA
314	NF-5A	IDF/GA	NF-5A	IDF/GA	NF-5A	IDF/GA	F-16A	IDF/GA	F-16C	AWX/GA
315	NF-5A	IDF/GA	F-16	IDF/GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16C	AWX/GA
316	NF-5A	IDF/GA	NF-5A	IDF/GA	F-16A	IDF/GA	F-16A	IDF/GA	F-16C	AWX/GA
322	F-16A	IDF/GA	F-16A	IDF	F-16A	IDF	disbanded	—	disbanded	—
323	F-16A	IDF/GA	F-16A	IDF	F-16A	IDF	F-16C	AWX	F-16C	AWX
324	disbanded	—	disbanded	—	disbanded	—	F-16C	AWX	F-16C	AWX
325	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—
326	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—
327	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—
328	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—
700	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—
701	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—
702	disbanded	—	disbanded	—	disbanded	—	disbanded	—	disbanded	—

Appendix F

THE FRENCH AIR FORCE

Squadron	1950			1955			1960			1965			1970			1975		
	Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role	
1.1	unformed	—		F-84F	GA		F-84F	GA		disbanded	—		disbanded	—		disbanded	—	
1.2	unformed	—		F-84F	GA		F-84F	GA		disbanded	—		disbanded	—		disbanded	—	
1.3	unformed	—		F-84F	GA		F-84F	GA		disbanded	—		disbanded	—		disbanded	—	
2.1	P-47	GA		Ouragan	IDF/GA		Mystere IVA	GA		Mirage IIIE	GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA	
2.2	unformed	—		Ouragan	IDF/GA		disbanded	—		disbanded	—		Mirage IIIB	IDF/GA		Mirage IIIE	IDF/GA	
2.3	P-47	GA		Ouragan	IDF/GA		Mystere IVA	GA		Mirage IIIE	GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA	
3.1	Vampire	IDF		F-84F	GA		F-100D	GA		F-100D	GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA	
3.2	Vampire	IDF		F-84F	GA		F-100D	GA		F-100D	GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA	
3.3	Vampire	IDF		F-84F	GA		disbanded	—		disbanded	—		disbanded	—		Mirage 5F	GA	
4.1	Vampire	IDF		Ouragan	IDF/GA		F-84F	GA		F-84F	GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA	
4.2	Vampire	IDF		Ouragan	IDF/GA		F-84F	GA		F-84F	GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA	
4.3	Vampire	IDF		Ouragan	IDF/GA		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
5.1	unformed	—		Vampire	IDF		Mystere IVA	GA		Super Mystere B	IDF		Mirage IIIC	AWX/GA		Mirage F.1C	AWX/GA	
5.2	unformed	—		Vampire	IDF		Mystere IVA	GA		Super Mystere B	IDF		Mirage IIIC	AWX/GA		Mirage F.1C	AWX/GA	
5.3	unformed	—		Overseas	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
6.1	P-47	GA		Overseas	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
6.2	P-47	GA		Overseas	—		Vatour IIN	AWX		disbanded	—		disbanded	—		disbanded	—	
7.1	unformed	—		Overseas	—		Overseas	—		Mystere IVA	GA		Mystere IVA	GA		Jaguar	GA	
7.2	unformed	—		Overseas	—		Overseas	—		disbanded	—		disbanded	—		Jaguar	GA	
7.3	unformed	—		unformed	—		unformed	—		Mystere IVA	GA		Mystere IVA	GA		Jaguar	GA	
7.4	unformed	—		unformed	—		unformed	—		unformed	—		unformed	—		unformed	—	
8.1	Overseas	—		Overseas	—		Mystere IVA	GA		Mystere IVA	GA		Mystere IVA	GA		Mystere IVA	GA	
8.2	Vampire	IDF		disbanded	—		Mystere IVA	GA		Mystere IVA	GA		Mystere IVA	GA		Mystere IVA	GA	
9.1	unformed	—		F-84G	GA		F-84F	GA		disbanded	—		disbanded	—		disbanded	—	
9.2	unformed	—		F-84G	GA		F-84F	GA		disbanded	—		disbanded	—		disbanded	—	
10.1	P-47	GA		Mystere IIC	IDF		Super Mystere B	IDF		Super Mystere B	IDF		Super Mystere B	IDF		Mirage IIIC	AWX/GA	
10.2	P-47	GA		Mystere IIC	IDF		Super Mystere B	IDF		Super Mystere B	IDF		Mirage IIIC	AWX/GA		Mirage IIIC	AWX/GA	
10.3	P-47	GA		Mystere IIC	IDF		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
11.1	unformed	—		F-84G	GA		F-100D	GA		F-100D	GA		F-100D	GA		F-100D	GA	
11.2	unformed	—		F-84G	GA		F-100D	GA		F-100D	GA		F-100D	GA		F-100D	GA	
11.3	Overseas	—		F-84G	GA		disbanded	—		disbanded	—		F-100D	GA		F-100D	GA	
11.4	unformed	—		unformed	—		unformed	—		unformed	—		Overseas	—		Overseas	—	
12.1	unformed	—		Mystere IVA	GA		Super Mystere B	IDF		Super Mystere B	IDF		Super Mystere B	IDF		Super Mystere B	IDF	
12.2	disbanded	—		Mystere IVA	GA		Super Mystere B	IDF		Super Mystere B	IDF		Super Mystere B	IDF		Super Mystere B	IDF	
12.3	disbanded	—		Mystere IVA	GA		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
13.1	disbanded	—		disbanded	—		F-86K	AWX		Mirage IIIE	GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA	
13.2	disbanded	—		disbanded	—		F-86K	AWX		Mirage IIIE	GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA	
13.3	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—		Mirage 5F	GA	
30.1	disbanded	—		Meteor NF.11	AWX		Vatour IIN	AWX		disbanded	—		disbanded	—		disbanded	—	
30.2	disbanded	—		Meteor NF.11	AWX		disbanded	—		Vatour IIN	AWX		Vatour IIN	AWX		Mirage F.1C	AWX/GA	
30.3	disbanded	—		Meteor NF.11	AWX		Vatour IIN	AWX		Vatour IIN	AWX		Vatour IIN	AWX		Mirage F.1C	AWX/GA	
33.1	P-38	Rece		RF-84G	Rece		RF-84F	Rece		RF-84F	Rece		Mirage IIIR	Rece		Mirage IIIR	Rece	
33.2	P-38	Rece		RF-84G	Rece		RF-84F	Rece		Mirage IIIR	Rece		Mirage IIIR	Rece		Mirage IIIR	Rece	
33.3	P-38	Rece		RF-84G	Rece		RF-84F	Rece		Mirage IIIR	Rece		Mirage IIIR	Rece		Mirage IIIR	Rece	

THE FRENCH AIR FORCE (cont.)

- 32 -

Squadron	1980			1985			1990			1995			2000/2005		
	Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role	
1.1	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
1.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
1.3	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
2.1	Mirage IIIE	IDF/GA		Mirage 2000C	AWX/GA		Mirage 2000C	AWX/GA		Mirage 2000C	AWX/GA		Mirage 2000C	AWX/GA	
2.2	Mirage IIIB	IDF/GA		Mirage IIIB	IDF/GA		Mirage 2000B	AWX/GA		Mirage 2000B	AWX/GA		Mirage 2000B	AWX/GA	
2.3	Mirage IIIE	IDF/GA		Mirage 2000C	AWX/GA		Mirage 2000C	AWX/GA		Mirage 2000C	AWX/GA		Mirage 2000C	AWX/GA	
3.1	Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA		Mirage 2000N	AWX/GA		Rafale	AWGA	
3.2	Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA		Mirage 2000N	AWX/GA		Rafale	AWGA	
3.3	Jaguar	GA		Jaguar	GA		Jaguar	GA		Jaguar	GA		Rafale	IDF/GA	
4.1	Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA		Mirage 2000N	AWX/GA		Mirage 2000N	AWX/GA		Mirage 2000N	AWGA	
4.2	Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA		Mirage 2000N	AWX/GA		Mirage 2000N	AWX/GA		Mirage 2000N	AWGA	
4.3	disbanded	—		disbanded	—		Mirage 2000N	AWX/GA		Mirage 2000N	AWX/GA		Mirage 2000N	AWGA	
5.1	Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		M2000DA	AWX/GA		M2000DA	AWX/GA		M2000DA	AWX/GA	
5.2	Mirage F.1C	AWX/GA		Mirage F.1B	AWX/GA		Mirage F.1C	AWX/GA		M2000DA	AWX/GA		M2000DA	AWX/GA	
5.3	disbanded	—		Mirage F.1C	AWX/GA		M2000DA	AWX/GA		M2000DA	AWX/GA		M2000DA	AWX/GA	
6.1	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
6.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
7.1	Jaguar	GA		Jaguar	GA		Jaguar	AWGA		M2000N	AWGA		Rafale	AWGA	
7.2	Jaguar	GA		Jaguar	GA		Jaguar	GA		M2000N	AWGA		Rafale	AWGA	
7.3	Jaguar	GA		Jaguar	GA		Jaguar	GA		M2000N	AWGA		Rafale	AWGA	
7.4	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
8.1	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
8.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
9.1	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
9.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
10.1	Mirage IIIC	AWX/GA		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
10.2	Mirage IIIC	AWX/GA		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
10.3	Overseas	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
11.1	Jaguar	GA		Jaguar	GA		Jaguar	GA		Jaguar	GA		Rafale	AWGA	
11.2	Jaguar	EW		Jaguar	EW		Jaguar	EW		Jaguar	EW		Rafale	EW	
11.3	Jaguar	GA		Jaguar	GA		Jaguar	GA		Jaguar	GA		Rafale	AWGA	
11.4	Jaguar	GA		Jaguar	GA		Jaguar	GA		Jaguar	GA		Rafale	AWGA	
12.1	Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		M2000DA	AWX/GA		M2000DA	AWX/GA	
12.2	Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		M2000DA	AWX/GA		M2000DA	AWX/GA	
12.3	Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		M2000DA	AWX/GA		M2000DA	AWX/GA	
13.1	Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA		Mirage IIIE	IDF/GA		M2000N	AWGA		M2000N	AWGA	
13.2	Mirage 5F	GA		Mirage 5F	GA		Mirage 5F	GA		Mirage F.1T	GA		Rafale	AWGA	
13.3	Mirage 5F	GA		Mirage 5F	GA		Mirage 5F	GA		Mirage F.1T	GA		Rafale	AWGA	
30.1	disbanded	—		Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		M2000DA	AWX/GA	
30.2	Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		M2000DA	AWX/GA	
30.3	Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		Mirage F.1C	AWX/GA		M2000DA	AWX/GA	
33.1	Mirage IIIR	Recco		Mirage IIIR	Recco		Mirage F.1C	Recco		Mirage F.1C	Recco		Mirage F.1C	Recco	
33.2	Mirage IIIR	Recco		Mirage F.1C	Recco		Mirage F.1C	Recco		Mirage F.1C	Recco		Mirage F.1C	Recco	
33.3	Mirage IIIR	Recco		Mirage IIIR	Recco		Mirage IIIR	Recco		Mirage F.1C	Recco		Mirage F.1C	Recco	

Appendix G THE GERMAN AIR FORCE

Squadron	1950			1955			1960			1965			1970			1975		
	Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role	
AKG51.1	unformed	—		unformed	—		RF-84F	Rece		RF-104G	Rece		RF-104G	Rece		RF-4E	Rece	
AKG51.2	unformed	—		unformed	—		RF-84F	Rece		RF-104G	Rece		RF-104G	Rece		RF-4E	Rece	
AKG52.1	unformed	—		unformed	—		RF-84F	Rece		RF-104G	Rece		RF-104G	Rece		RF-4E	Rece	
AKG52.2	unformed	—		unformed	—		RF-84F	Rece		RF-104G	Rece		RF-104G	Rece		RF-4E	Rece	
AKG53.2	unformed	—		unformed	—		unformed	—		G-91	GA		disbanded	—		disbanded	—	
AKG53.2	unformed	—		unformed	—		unformed	—		G-91	GA		disbanded	—		disbanded	—	
AKG54.1	unformed	—		unformed	—		unformed	—		G-91	GA		disbanded	—		disbanded	—	
AKG54.2	unformed	—		unformed	—		unformed	—		G-91	GA		disbanded	—		disbanded	—	
JBG31.1	unformed	—		unformed	—		F-84F	GA		F-104G	GA		F-104G	GA		F-104G	GA	
JBG31.2	unformed	—		unformed	—		F-84F	GA		F-104G	GA		F-104G	GA		F-104G	GA	
JBG32.1	unformed	—		unformed	—		F-84F	GA		F-104G	GA		F-104G	GA		F-104G	GA	
JBG32.2	unformed	—		unformed	—		F-84F	GA		F-104G	GA		F-104G	GA		F-104G	GA	
JBG33.1	unformed	—		unformed	—		F-84F	GA		F-104G	GA		F-104G	GA		F-104G	GA	
JBG33.2	unformed	—		unformed	—		F-84F	GA		F-104G	GA		F-104G	GA		F-104G	GA	
JBG34.1	unformed	—		unformed	—		F-84F	GA		F-104G	GA		F-104G	GA		F-104G	GA	
JBG34.2	unformed	—		unformed	—		F-84F	GA		F-104G	GA		F-104G	GA		F-104G	GA	
JBG35.1	unformed	—		unformed	—		F-84F	GA		disbanded	—		disbanded	—		F-4F	IDF/GA	
JBG35.2	unformed	—		unformed	—		F-84F	GA		disbanded	—		disbanded	—		F-4F	IDF/GA	
JBG36.1	unformed	—		unformed	—		F-84F	—		F-104G	GA		F-104G	GA		F-4F	IDF/GA	
JBG36.2	unformed	—		unformed	—		unformed	—		F-104G	GA		F-104G	GA		F-4F	IDF/GA	
JBG38.1	unformed	—		unformed	—		unformed	—		unformed	—		unformed	—		unformed	—	
JBG38.2	unformed	—		unformed	—		unformed	—		unformed	—		unformed	—		unformed	—	
JBG41.1	unformed	—		unformed	—		unformed	—		G-91	GA		G-91	GA		G-91	GA	
JBG41.2	unformed	—		unformed	—		unformed	—		G-91	GA		G-91	GA		G-91	GA	
JBG42.1	unformed	—		unformed	—		unformed	—		G-91	GA		G-91	GA		disbanded	—	
JBG42.2	unformed	—		unformed	—		unformed	—		G-91	GA		G-91	GA		disbanded	—	
JBG43.1	unformed	—		unformed	—		unformed	—		G-91	GA		G-91	GA		G-91	GA	
JBG43.2	unformed	—		unformed	—		unformed	—		G-91	GA		G-91	GA		G-91	GA	
JBG44.1	unformed	—		unformed	—		unformed	—		unformed	—		G-91	GA		disbanded	—	
JBG44.2	unformed	—		unformed	—		unformed	—		unformed	—		G-91	GA		disbanded	—	
JBG49.1	unformed	—		unformed	—		unformed	—		unformed	—		unformed	—		unformed	—	
JBG49.2	unformed	—		unformed	—		unformed	—		unformed	—		unformed	—		unformed	—	
JG71.1	unformed	—		unformed	—		CL-13	IDF		F-104G	IDF		F-104G	IDF		F-4F	IDF/GA	
JG71.2	unformed	—		unformed	—		CL-13	IDF		F-104G	IDF		F-104G	IDF		F-4F	IDF/GA	
JG72.1	unformed	—		unformed	—		CL-13	IDF		CL-13	IDF		disbanded	—		disbanded	—	
JG72.2	unformed	—		unformed	—		CL-13	IDF		CL-13	IDF		disbanded	—		disbanded	—	
JG73.1	unformed	—		unformed	—		CL-13	IDF		disbanded	—		disbanded	—		disbanded	—	
JG73.2	unformed	—		unformed	—		CL-13	IDF		disbanded	—		disbanded	—		disbanded	—	
JG74.1	unformed	—		unformed	—		F-86K	AWX		F-104G	IDF		F-104G	IDF		F-4F	IDF/GA	
JG74.2	unformed	—		unformed	—		F-86K	AWX		F-104G	IDF		F-104G	IDF		F-4F	IDF/GA	

THE GERMAN AIR FORCE (cont.)

Squadron	1980			1985			1990			1995			2000/2005		
	Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role		Aircraft	Role	
AKG51.1	RF-4E	Rece		RF-4E	Rece		RF-4E	Rece		RF-4E	Rece		RF-4E	Rece	
AKG51.2	RF-4E	Rece		RF-4E	Rece		RF-4E	Rece		RF-4E	Rece		RF-4E	Rece	
AKG52.1	RF-4E	Rece		RF-4E	Rece		RF-4E	Rece		RF-4E	Rece		RF-4E	Rece	
AKG52.2	RF-4E	Rece		RF-4E	Rece		RF-4E	Rece		RF-4E	Rece		RF-4E	Rece	
AKG53.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
AKG53.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
AKG54.1	disbanded	—		disbanded	—		disbanded	—		Tornado ECR	EW/Rece		Tornado ECR	EW/Rece	
AKG54.2	disbanded	—		disbanded	—		disbanded	—		Tornado ECR	EW/Rece		Tornado ECR	EW/Rece	
JBG31.1	F-104G	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG31.2	F-104G	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG32.1	F-104G	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG32.2	F-104G	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG33.1	F-104G	GA		F-104G	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG33.2	F-104G	GA		F-104G	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG34.1	F-104G	GA		F-104G	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG34.2	F-104G	GA		F-104G	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG35.1	F-4F	IDF/GA		F-4F	IDF/GA		F-4F	AWX/GA		F-4F	AWX/GA		EFA	AWX	
JBG35.2	F-4F	IDF/GA		F-4F	IDF/GA		F-4F	AWX/GA		F-4F	AWX/GA		EFA	AWX	
JBG36.1	F-4F	IDF/GA		F-4F	IDF/GA		F-4F	IDF/GA		F-4F	AWX/GA		EFA	AWX	
JBG36.2	F-4F	IDF/GA		F-4F	IDF/GA		F-4F	IDF/GA		F-4F	AWX/GA		EFA	AWX	
JBG38.1	unformed	—		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG38.2	unformed	—		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG41.1	Alpha	GA		Alpha	GA		Alpha	GA		disbanded	—		disbanded	—	
JBG41.2	Alpha	GA		Alpha	GA		Alpha	GA		disbanded	—		disbanded	—	
JBG42.1	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
JBG42.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
JBG43.1	G-91	GA		Alpha	GA		Alpha	GA		disbanded	—		disbanded	—	
JBG43.2	G-91	GA		Alpha	GA		Alpha	GA		disbanded	—		disbanded	—	
JBG44.1	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
JBG44.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
JBG49.1	unformed	unformed		Alpha	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JBG49.2	unformed	unformed		Alpha	GA		Tornado	AWGA		Tornado	AWGA		Tornado	AWGA	
JG71.1	F-4F	IDF/GA		F-4F	IDF/GA		F-4F	IDF/GA		F-4F	AWX/GA		EFA	AWX	
JG71.2	F-4F	IDF/GA		F-4F	IDF/GA		F-4F	IDF/GA		F-4F	AWX/GA		EFA	AWX	
JG72.1	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
JG72.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
JG73.1	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
JG73.2	disbanded	—		disbanded	—		disbanded	—		disbanded	—		disbanded	—	
JG74.1	F-4F	IDF/GA		F-4F	IDF/GA		F-4F	AWX/GA		F-4F	AWX/GA		EFA	AWX	
JG74.2	F-4F	IDF/GA		F-4F	IDF/GA		F-4F	AWX/GA		F-4F	AWX/GA		EFA	AWX	

Appendix H

THE ROYAL AIR FORCE

Squadron	1950			1955			1960		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
1	UK	Meteor F.4	IDF	Cyprus	Hunter F.5	IDF	UK	Hunter FGA.9	GA
2	FRG	Meteor FR.9	Rece	FRG	Meteor FR.9	Rece	FRG	Swift FR.5	Rece
3	FRG	Vampire FB.5	IDF/GA	FRG	Sabre F.1	IDF	FRG	Javelin FAW.4	AWX
4	FRG	Vampire FB.5	IDF/GA	FRG	Hunter F.4	IDF	FRG	Hunter F.6	IDF
5	UK	Vampire F.3	IDF	FRG	Venom FB.4	IDF	FRG	Javelin FAW.5	AWX
6	Iraq	Vampire FB.5	IDF/GA	Iraq	Venom FB.4	IDF	Cyprus	Canberra B.6	GA
7	UK	Lincoln B.2	Heavy bmr	Aden	Lincoln B.2	Heavy bmr	UK	Valiant B.1	Heavy bmr
8	Aden	Brigand B.1	GA	Aden	Venom FB.4	GA	Aden	Meteor FR.9	Rece
9	UK	Lincoln B.2	Heavy bmr	Malaya	Canberra B.2	GA	UK	Canberra B.6	GA
10	—	disbanded	—	UK	Canberra B.2	GA	UK	Victor B.1	Heavy bmr
11	FRG	Vampire FB.5	IDF/GA	FRG	Venom FB.4	IDF/GA	FRG	Meteor NF.11	AWX
12	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.2	GA	UK	Victor B.1	Heavy bmr
13	Egypt	Mosquito PR.34	Rece	Egypt	Venom FB.4	IDF/GA	FRG	Meteor NF.11	AWX
14	FRG	Mosquito B.35	GA	FRG	Canberra B.2	IDF	UK	Canberra B.2	GA
15	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.2	IDF	Cyprus	Canberra PR.7	Rece
16	FRG	Vampire FB.5	IDF/GA	FRG	Hunter F.4	IDF	FRG	Hunter F.4	IDF
17	UK	Oxford T.2	Misc	FRG	Canberra B.2	GA	UK	Victor B.1	Heavy bmr
18	—	disbanded	—	UK	Venom FB.1	IDF/GA	FRG	Canberra B.1.8	GA
19	UK	Hornet F.3	IDF	UK	Canberra PR.7	Rece	FRG	Canberra PR.7	Rece
20	UK	Vampire F.3	IDF	FRG	Canberra B.2	GA	UK	Valiant B.1	Heavy bmr
21	—	disbanded	—	UK	Meteor F.8	IDF	UK	Hunter F.6	IDF
22	—	disbanded	—	UK	Hunter F.4	IDF	FRG	Hunter F.6	IDF
23	UK	Vampire NF.10	AWX	UK	Canberra B.2	GA	Kenya	Pioneer CC.1	Misc
24	UK	Hastings C.2	Airlift	UK	Whirlwind HAR.2	Helicopter	UK	Whirlwind HAR.2	Helicopter
25	UK	Vampire FB.5	IDF/GA	UK	Venom NF.2	AWX	UK	Javelin FAW.7	AWX
26	FRG	Vampire FB.5	IDF/GA	UK	Hastings C.2	Airlift	UK	Hastings C.2	Airlift
27	UK	Dakota C.4	Airlift	FRG	Meteor NF.12	AWX	UK	Javelin FAW.7	AWX
28	Hong Kong	Spitfire FR.18	Rece	UK	Hunter F.4	IDF	FRG	Hunter F.6	IDF
29	UK	Mosquito NF.36	AWX	UK	Canberra B.2	GA	UK	Vulcan B.2	Heavy bmr
30	UK	Valetta C.1	AWX	Hong Kong	Vampire FB.9	IDF/GA	Hong Kong	Venom FB.4	AD/GA
31	UK	Devon C.1	Airlift	UK	Meteor NF.11	AWX	UK	Javelin FAW.6	AWX
32	Cyprus	Vampire F.3	IDF	FRG	Valetta C.1	Airlift	Kenya	Beverly C.1	Airlift
33	Malaya	Tempest F.2	GA	Iraq	Canberra PR.7	Rece	FRG	Canberra PR.7	Rece
34	UK	Spitfire LF.16	IDF	UK	Venom FB.1	IDF/GA	Cyprus	Canberra B.2	GA
35	UK	Lincoln B.2	Heavy bmr	UK	Venom NF.2	AWX	UK	Javelin FAW.9	AWX
36	—	disbanded	—	UK	Meteor F.8	IDF	Singapore	Beverly C.1	Airlift
37	Malta	Lincoln MR.3	Maritime ptl	UK	Canberra B.2	GA	UK	Canberra B.2	GA
38	Malta	Lancaster ASR.3	Maritime ptl	Malta	Neptune MR.1	Maritime ptl	UK	Hastings C.1	Airlift
39	Egypt	Mosquito NF.30	AWX	Malta	Shackleton MR.2	Maritime ptl	Aden	Shackleton MR.2	Maritime ptl
40	UK	York C.1	Airlift	UK	Meteor NF.13	AWX	Malta	Canberra PR.3	Rece
41	UK	Hornet F.3	IDF	UK	Canberra B.2	GA	—	disbanded	—
42	—	disbanded	—	UK	Hunter F.5	IDF	UK	Javelin FAW.8	AWX
43	UK	Meteor F.8	IDF	UK	Shackleton MR.2	Maritime ptl	UK	Shackleton MR.2	Maritime ptl
				UK	Hunter F.1	IDF	Cyprus	Hunter FGA.9	GA

THE ROYAL AIR FORCE (cont.)

Squadron	1960			1965			1960		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
44	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.2	GA	UK	Vulcan B.1	Heavy bmr
45	Malaya	Brigand B.2	GA	Malaya	Vampire FB.9	IDF/GA	UK	Canberra B.15	GA
46	—	disbanded	—	UK	Meteor NF.14	AWX	UK	Javelin FAW.6	AWX
47	UK	Hastings C.1	Airlift	UK	Hastings C.1	Airlift	UK	Beverly C.1	Airlift
48	Malaya	Dakota C.4	Airlift	Malaya	Valetta C.1	Airlift	Malaya	Hastings C.1	Airlift
49	UK	Lincoln B.2	Heavy bmr	UK	Lincoln B.2	Heavy bmr	UK	Valiant B.1	Heavy bmr
50	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.2	GA	UK	Vulcan B.1	Heavy bmr
51	UK	York C.1	Airlift	—	disbanded	—	UK	Canberra B.2	GA
52	Malaya	Baltimore	Misc	Malaya	Valetta C.1	Airlift	UK	Canberra B.1	Airlift
53	UK	Hastings C.1	Airlift	UK	Hastings C.1	Airlift	UK	Beverly C.1	Airlift
54	UK	Vampire FB.5	IDF/GA	UK	Hunter F.1	IDF	UK	Hunter FGA.9	GA
55	—	disbanded	—	—	disbanded	—	UK	Victor B.1	Heavy bmr
56	UK	Meteor F.8	IDF	UK	Swift F.2	IDF	UK	Hunter F.6	IDF
57	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.2	GA	UK	Victor B.1	Heavy bmr
58	UK	Mosquito PR.34	Rece	UK	Canberra PR.7	Rece	UK	Canberra PR.7	Rece
59	UK	York C.1	Airlift	—	disbanded	—	FRG	Canberra B.1.8	GA
60	Malaya	Vampire FB.5	IDF/GA	Malaya	Venom FB.1	IDF/GA	Malaya	Meteor NF.14	AWX
61	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.2	GA	—	disbanded	—
62	—	disbanded	—	—	disbanded	—	UK	Bloodhound	SAM
63	UK	Meteor F.8	IDF	UK	Meteor F.8	IDF	—	disbanded	—
64	UK	Meteor F.8	IDF	UK	Meteor F.8	IDF	UK	Javelin FAW.9	AWX
65	UK	Hornet F.3	IDF	UK	Meteor F.8	IDF	UK	Hunter F.6	IDF
66	UK	Meteor F.4	IDF	UK	Sabre F.4	IDF	UK	Hunter F.6	IDF
67	FRG	Vampire FB.5	IDF/GA	FRG	Sabre F.1	IDF	—	disbanded	—
68	—	disbanded	—	FRG	Meteor NF.11	AWX	—	disbanded	—
69	—	disbanded	—	FRG	Canberra PR.3	Rece	—	disbanded	—
70	Egypt	Valetta C.1	Misc	Kabrit	Valetta C.1	Misc	Cyprus	Hastings C.4	Airlift
71	FRG	Vampire FB.5	IDF/GA	FRG	Sabre F.4	IDF	—	disbanded	—
72	UK	Vampire FB.5	IDF/GA	UK	Meteor F.8	IDF	UK	Javelin FAW.4	AWX
73	Malta	Vampire FB.5	IDF/GA	Cyprus	Venom FB.1	IDF/GA	Cyprus	Canberra B.2	GA
74	UK	Meteor F.8	IDF	UK	Meteor F.8	IDF	UK	Lightning F.1	AWX
76	—	disbanded	—	UK	Canberra B.6	GA	UK	Canberra B.6	GA
77	—	disbanded	—	—	disbanded	—	UK	Thor	IRBM
78	Egypt	Valetta C.1	Misc	Aden	Pioneer CC.2	Misc	Aden	Twin Pioneer CC.2	Misc
79	—	disbanded	—	FRG	Meteor FR.9	Rece	FRG	Swift FR.5	Rece
80	Hong Kong	Spitfire F.24	IDF	FRG	Canberra PR.7	Rece	FRG	Canberra PR.7	Rece
81	Malaya	Spitfire PR.19	Rece	Malaya	Meteor PR.10	Rece	Malaya	Meteor PR.10	Rece
82	Kenya	Spitfire F.19	IDF	UK	Canberra PR.3	Rece	UK	Thor	IRBM
83	UK	Lincoln B.2	Heavy bmr	UK	Lincoln B.2	Heavy bmr	UK	Vulcan B.1	Heavy bmr
84	Malaya	Brigand B.1	GA	Egypt	Valetta C.1	Misc	Aden	Valetta C.1	Misc
85	UK	Mosquito NF.36	AWX	UK	Meteor NF.12	AWX	UK	Javelin FAW.8	AWX
87	—	disbanded	—	FRG	Meteor NF.11	AWX	FRG	Javelin FAW.4	AWX

THE ROYAL AIR FORCE (cont.)

Squadron	1950			1955			1960		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
88	Hong Kong	Sunderland FR.5	Maritime ptl	UK	Canberra B(I).8	GA	UK	Canberra B(I).8	GA
89	—	disbanded	—	UK	Venom NF.3	AWX	—	disbanded	—
90	UK	Washington B.1	Heavy bmr	UK	Canberra B.2	GA	—	disbanded	—
92	UK	Meteor F.8	IDF	UK	Sabre F.4	IDF	UK	Hunter F.6	IDF
93	FRG	Vampire FB.5	IDF/GA	FRG	Sabre F.4	IDF	FRG	Hunter F.6	IDF
94	FRG	Vampire FB.5	IDF/GA	FRG	Venom FB.1	IDF/GA	UK	Bloodhound	SAM
96	—	disbanded	—	FRG	Meteor NF.11	AWX	—	disbanded	—
97	UK	Lincoln B.2	Heavy bmr	UK	Lincoln B.2	Heavy bmr	UK	Thor	IRBM
98	FRG	Mosquito B.35	GA	FRG	Venom FB.1	IDF/GA	UK	Thor	IRBM
99	UK	Hastings C.1	Airlift	UK	Hastings C.1,2	Airlift	UK	Britannia C.1	Airlift
100	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.2	GA	UK	Victor B.2	Heavy bmr
101	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.2	GA	UK	Vulcan B.1	Heavy bmr
102	—	disbanded	—	FRG	Canberra B.2	GA	UK	Thor	IRBM
103	—	disbanded	—	FRG	Canberra B.2	GA	Cyprus	Sycamore HR.14	Helicopter
104	—	disbanded	—	FRG	Canberra B.2	GA	UK	Thor	IRBM
105	—	disbanded	—	—	disbanded	—	—	disbanded	—
106	—	disbanded	—	—	disbanded	—	UK	Thor	IRBM
107	—	disbanded	—	—	disbanded	—	UK	Thor	IRBM
109	UK	Mosquito B.35	GA	UK	Canberra B.6	GA	—	disbanded	—
110	Malaya	Dakota C.4	Airlift	Malaya	Valetta C.1	Airlift	Malaya	Whirlwind HC.4	Helicopter
111	—	disbanded	—	UK	Hunter F.4	IDF	UK	Hunter F.6	IDF
112	—	disbanded	—	FRG	Sabre F.4	IDF	UK	Bloodhound	SAM
113	—	disbanded	—	—	disbanded	—	UK	Thor	IRBM
114	Egypt	Valetta C.1	Misc	Egypt	Valetta C.1	Misc	UK	Hastings C.1	Airlift
115	UK	Washington B.1	Heavy bmr	UK	Canberra B.2	GA	UK	Varsity T.1	Misc
116	—	disbanded	—	UK	Varsity T.1	Misc	—	disbanded	—
118	—	disbanded	—	FRG	Hunter F.4	IDF	UK	Sycamore HR.14	Helicopter
120	UK	Lancaster MR.3	Maritime ptl	UK	Shackleton MR.2	Maritime ptl	UK	Shackleton MR.3	Maritime ptl
125	—	disbanded	—	UK	Meteor NF.11	AWX	—	disbanded	—
130	—	disbanded	—	FRG	Sabre F.4	IDF	UK	Thor	IRBM
138	UK	Lincoln B.2	Heavy bmr	UK	Valiant B.1	Heavy bmr	UK	Valiant B.1	Heavy bmr
139	UK	Mosquito B.35	GA	UK	Canberra B.6	GA	—	disbanded	—
141	UK	Mosquito NF.36	AWX	UK	Meteor NF.3	AWX	UK	Bloodhound	SAM
142	—	disbanded	—	—	disbanded	—	UK	Thor	IRBM
145	—	disbanded	—	FRG	Venom FB.1	IDF/GA	—	disbanded	—
149	UK	Lincoln B.2	Heavy bmr	UK	Lincoln B.2	Heavy bmr	UK	Valiant B.1	Heavy bmr
149	UK	Washington B.1	Heavy bmr	FRG	Canberra B.2	GA	—	disbanded	—
150	—	disbanded	—	—	disbanded	—	UK	Thor	IRBM
151	—	disbanded	—	UK	Venom NF.3	AWX	UK	Javelin FAW.5	AWX
152	—	disbanded	—	UK	Meteor NF.14	AWX	UK	Pembroke C.1	Misc
153	—	disbanded	—	UK	Meteor NF.14	AWX	—	disbanded	—
155	—	disbanded	—	Malaya	Whirlwind HC.4	Helicopter	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1960			1955			1960		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
192	—	disbanded	—	UK	Washington B.1	Misc	—	disbanded	—
194	—	disbanded	—	Malaya	Sycamore HR.14	Helicopter	—	disbanded	—
199	—	disbanded	—	UK	Canberra B.2	GA	—	disbanded	—
201	UK	Sunderland V	Maritime ptl	UK	Sunderland V	Maritime ptl	UK	Shackleton MR.3	Maritime ptl
202	UK	Hastings Met.1	Misc	UK	Hastings Met.1	Misc	UK	Hastings Met.1	Misc
203	UK	Lancaster GR.3	Maritime ptl	UK	Neptune MR.1	Maritime ptl	UK	Shackleton MR.3	Maritime ptl
204	Egypt	Valetta C.1	Misc	UK	Shackleton MR.2	Maritime ptl	UK	Shackleton MR.2	Maritime ptl
205	Malaya	Sunderland V	Maritime ptl	UK	Sunderland V	Maritime ptl	UK	Shackleton MR.3	Maritime ptl
206	UK	York C.1	Airlift	UK	Shackleton MR.1	GA	UK	Shackleton MR.3	Maritime ptl
207	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.2	GA	UK	Valiant B.1	Heavy bmr
208	Egypt	Spitfire FR.18	Recco	Egypt	Meteor FR.9	Recco	UK	Venom FB.4	GA
209	Malaya	Sunderland V	Maritime ptl	Malaya	Pioneer CC.1	Misc	Malaya	Pioneer CC.1	Misc
210	UK	Lancaster FR.3	Maritime ptl	UK	Neptune MR.1	Maritime ptl	UK	Shackleton MR.2	Maritime ptl
214	UK	Lincoln B.2	Maritime ptl	—	disbanded	—	UK	Valiant B.1	Heavy bmr
215	—	disbanded	—	—	disbanded	—	—	disbanded	—
216	Egypt	Valetta C.1	Misc	UK	Valetta C.1	Misc	UK	Comet C.2	Airlift
217	—	disbanded	—	UK	Neptune MR.1	Maritime ptl	—	disbanded	—
218	—	disbanded	—	—	disbanded	—	UK	Thor	IRBM
219	—	disbanded	—	UK	Venom NF.2	AWX	—	disbanded	—
220	—	disbanded	—	UK	Shackleton MR.1	Maritime ptl	UK	Thor	IRBM
222	UK	Meteor F.8	IDF	UK	Hunter F.1	IDF	UK	Bloodhound	SAM
223	—	disbanded	—	—	disbanded	—	UK	Thor	IRBM
224	Gibraltar	Shackleton MR.1	Maritime ptl	Gibraltar	Shackleton MR.2	Maritime ptl	Gibraltar	Shackleton MR.2	Maritime ptl
225	—	disbanded	—	—	disbanded	—	UK	Whirlwind HC.2	Helicopter
228	—	disbanded	—	UK	Shackleton MR.2	Maritime ptl	UK	Whirlwind HAR.2	Helicopter
230	UK	Sunderland V	Maritime ptl	UK	Sunderland V	Maritime ptl	UK	Pioneer CC.1	Misc
233	—	disbanded	—	—	disbanded	—	Aden	Valetta C.1	Misc
234	—	disbanded	—	—	disbanded	—	FRG	Sabre F.4	IDF
240	—	disbanded	—	UK	Shackleton MR.1	Maritime ptl	UK	Thor	IRBM
242	—	disbanded	—	UK	Shackleton MR.1	Maritime ptl	UK	Thor	IRBM
245	UK	Meteor F.8	IDF	UK	Meteor F.8	IDF	UK	Canberra B.2	GA
247	UK	Meteor F.8	IDF	UK	Hunter F.1	IDF	UK	Bloodhound	SAM
249	Egypt	Vampire FB.5	IDF/GA	Jordan	Venom FB.1	IDF/GA	Cyprus	Canberra B.6	GA
253	—	disbanded	—	UK	Venom NF.2	AWX	—	disbanded	—
254	—	disbanded	—	—	disbanded	—	UK	Thor	IRBM
257	UK	Meteor F.4	IDF	UK	Hunter F.2	IDF	UK	Bloodhound	SAM
263	UK	Meteor F.4	IDF	UK	Hunter F.2	IDF	UK	Bloodhound	SAM
264	UK	Mosquito NF.36	AWX	UK	Meteor NF.1.2	AWX	UK	Bloodhound	SAM
266	—	disbanded	—	FRG	Venom FB.1	IDF/GA	UK	Bloodhound	SAM
267	—	disbanded	—	Malaya	Pembroke C.1	Misc	UK	Dakota C.3	Airlift
269	—	disbanded	—	UK	Shackleton MR.1	Maritime ptl	UK	Thor	IRBM

THE ROYAL AIR FORCE (cont.)

Squadron	1950			1955			1960		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
275	—	disbanded	—	UK	Sycamore HR.13	Helicopter	—	disbanded	—
288	—	disbanded	—	UK	Balliol T.2	Misc	—	disbanded	—
297	UK	Hastings C.1	Airlift	—	disbanded	—	—	disbanded	—
360	—	disbanded	—	—	disbanded	—	—	disbanded	—
500	UK	Meteor F.3	IDF	UK	Meteor F.8	IDF	—	disbanded	—
501	UK	Vampire F.1	IDF	UK	Vampire FB.9	IDF/GA	—	disbanded	—
502	UK	Spitfire F.22	IDF	UK	Vampire FB.9	IDF/GA	—	disbanded	—
504	UK	Meteor F.4	IDF	UK	Meteor F.8	IDF	—	disbanded	—
511	UK	Hastings C.1	Airlift	UK	Hastings C.2	Airlift	UK	Britannia C.1	Airlift
540	UK	Moquito PR.3	Rece	UK	Canberra PR.7	Rece	—	disbanded	—
541	UK	Spitfire PR.19	Rece	FRG	Meteor PR.10	Rece	—	disbanded	—
542	—	disbanded	—	UK	Canberra PR.7	Rece	—	disbanded	—
543	UK	Valiant B.1	Heavy bmr	UK	Valiant B.1	Heavy bmr	UK	Valiant B.1	Heavy bmr
600	UK	Meteor F.4	IDF	UK	Meteor F.8	IDF	—	disbanded	—
601	UK	Vampire F.3	IDF	UK	Meteor F.8	IDF	—	disbanded	—
602	UK	Spitfire F.22	IDF	UK	Vampire FB.5	IDF/GA	—	disbanded	—
603	UK	Spitfire F.22	IDF	UK	Vampire FB.5	IDF/GA	—	disbanded	—
604	UK	Vampire F.3	IDF	UK	Meteor F.8	IDF	—	disbanded	—
605	UK	Vampire F.1	IDF	UK	Vampire FB.5	IDF/GA	—	disbanded	—
607	UK	Spitfire F.22	IDF	UK	Vampire FB.5	IDF/GA	—	disbanded	—
608	UK	Spitfire F.22	IDF	UK	Vampire FB.5	IDF/GA	—	disbanded	—
609	UK	Vampire FL.5	IDF/GA	UK	Meteor F.8	IDF	—	disbanded	—
610	UK	Spitfire F.22	IDF	UK	Meteor F.8	IDF	—	disbanded	—
611	UK	Spitfire F.22	IDF	UK	Meteor F.8	IDF	—	disbanded	—
612	UK	Spitfire F.14	IDF	UK	Vampire FB.5	IDF/GA	—	disbanded	—
613	UK	Spitfire F.22	IDF	UK	Vampire FB.9	IDF/GA	—	disbanded	—
614	UK	Vampire F.3	IDF	UK	Vampire FB.5	IDF/GA	—	disbanded	—
615	UK	Spitfire F.22	IDF	UK	Meteor F.8	IDF	—	disbanded	—
616	UK	Meteor F.3	IDF	UK	Meteor F.8	IDF	—	disbanded	—
617	UK	Lincoln B.2	Heavy bmr	UK	Canberra B.6	GA	UK	Vulcan B.1	Heavy bmr
622	UK	Valetta C.1	Misc	—	disbanded	—	—	disbanded	—
651	UK	AOP	Misc	UK	AOP	Misc	—	disbanded	—
652	FRG	AOP	Misc	FRG	AOP	Misc	—	disbanded	—
656	Malaya	AOP	Misc	Malaya	AOP	Misc	—	disbanded	—
661	UK	AOP	Misc	UK	AOP	Misc	—	disbanded	—
662	UK	AOP	Misc	UK	AOP	Misc	—	disbanded	—
663	UK	AOP	Misc	UK	AOP	Misc	—	disbanded	—
664	UK	AOP	Misc	UK	AOP	Misc	—	disbanded	—
665	UK	AOP	Misc	UK	AOP	Misc	—	disbanded	—
683	Egypt	Lancaster PR.1	Rece	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1965			1970			1975		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
1	UK	Hunter FGA.9	GA	UK	Harrier GR.3	GA	UK	Harrier GR.3	GA
2	FRG	Hunter FR.10	Rece	FRG	Hunter FR.10	Rece	FRG	FGR.2	GA
3	FRG	Canberra B(I).8	GA	FRG	Canberra B(I).8	GA	FRG	Harrier GR.3	GA
4	FRG	Hunter FR.10	Rece	FRG	Harrier GR.3	GA	FRG	Harrier GR.3	GA
5	FRG	Lightning F.3/6	AWX	UK	Lightning F.3/6	AWX	UK	Lightning F.3/6	AWX
6	Cyprus	Canberra B.16	GA	UK	FRG.2	GA	UK	Jaguar GR.1	GA
7	—	disbanded	—	UK	Canberra TT.18	Misc	UK	Canberra TT.18	Misc
8	Bahrain	Hunter FGA.9	GA	UK	Shackleton AEW.2	AEW	UK	Shackleton AEW.2	AEW
9	Cyprus	Vulcan B.2	Heavy bmr	Cyprus	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr
10	—	disbanded	—	UK	VC.10 C.1	Airlift	UK	VC.10 C.1	Airlift
11	FRG	Javelin FAW.9	AWX	UK	Lightning F.3/6	AWX	UK	Lightning F.3/6	AWX
12	UK	Vulcan B.2	Heavy bmr	UK	Buccaneer S.2	GA	UK	Buccaneer S.2	GA
13	Malta	Canberra PR.9	Rece	Malta	Canberra PR.9	Rece	UK	Canberra PR.9	Rece
14	UK	Canberra B(I).8	GA	FRG	FGR.2	GA	FRG	Jaguar GR.1	GA
15	—	disbanded	—	UK	Buccaneer	GA	FRG	Buccaneer	GA
16	FRG	Canberra B(I).8	GA	FRG	Buccaneer	GA	FRG	Buccaneer	GA
17	FRG	Canberra PR.7	Rece	FRG	FGR.2	GA	FRG	FGR.2	GA
18	FRG	Wessex HC.2	Helicopter	FRG	Wessex HC.2	Helicopter	FRG	Wessex HC.2	Helicopter
19	FRG	Lightning F.2	AWX	FRG	Lightning F.2	AWX	FRG	Lightning F.2	AWX
20	FRG	Hunter FGA.9	GA	FRG	Hunter FGA.9	GA	FRG	Harrier GR.3	GA
21	Aden	Pioneer CC.1	Misc	UK	Pembroke C.1	Misc	UK	Pembroke C.1	Misc
22	UK	Whirlwind HAR.2	Helicopter	UK	Whirlwind HAR.2	Helicopter	UK	Whirlwind HAR.2	Helicopter
23	FRG	Lightning F.3	AWX	UK	Lightning F.6	AWX	UK	Lightning F.6	AWX
24	UK	Hastings C.2	Airlift	UK	Hercules C.1	Airlift	UK	Hercules C.1	Airlift
25	UK	Bloodhound	SAM	UK	Bloodhound	SAM	UK	Bloodhound	SAM
26	—	disbanded	—	UK	Basset CC.1	Misc	UK	Basset CC.1	Misc
27	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr
28	Hong Kong	Hunter FGA.9	GA	Hong Kong	Whirlwind HAR.10	Helicopter	Hong Kong	Whirlwind HAR.10	Helicopter
29	Cyprus	Javelin FAW.9	AWX	UK	Lightning F.3	AWX	UK	FGR.2	AWX
30	Bahrain	Beverly C.1	Airlift	UK	Hercules C.1	Airlift	UK	Hercules C.1	Airlift
31	FRG	Canberra PR.7	Rece	FRG	Canberra PR.7	Rece	FRG	FGR.2	GA
32	Cyprus	Canberra B.15	GA	UK	Andover	Misc	UK	Andover	Misc
33	Malaya	Bloodhound	SAM	Malaya	Bloodhound	SAM	UK	Puma HC.1	Helicopter
34	Singapore	Beverly C.1	Airlift	—	disbanded	—	—	disbanded	—
35	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr
36	UK	Hastings C.1	Airlift	UK	Hercules C.1	Airlift	UK	Hercules C.1	Airlift
37	UK	Shackleton MR.2	Maritime ptl	—	disbanded	—	—	disbanded	—
38	UK	Shackleton MR.2	Maritime ptl	—	disbanded	—	—	disbanded	—
39	Malta	Canberra PR.9	Rece	UK	Canberra PR.9	Rece	UK	Canberra PR.9	Rece
40	—	disbanded	—	—	disbanded	—	—	disbanded	—
41	UK	Bloodhound	SAM	UK	Bloodhound	SAM	UK	FGR.2	Rece
42	UK	Shackleton MR.3	Maritime ptl	UK	Shackleton MR.3	Maritime ptl	UK	Nimrod Mr.1	Rece
43	Aden	Hunter FGA.9	GA	UK	FGR.2	AWX	UK	FGR.2	AWX

THE ROYAL AIR FORCE (cont.)

Squadron	1965			1970			1975		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
44	UK	Vulcan B.1	Heavy bmr	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr
45	UK	Canberra B.15	GA	UK	Canberra B.15	GA	UK	Hunter FGA.9	GA
46	—	disbanded	—	UK	Andover C.1	Misc	—	disbanded	—
47	UK	Beverly C.1	Airlift	UK	Hercules C.1	Airlift	UK	Hercules C.1	Airlift
48	Malaya	Hastings C.1	Airlift	Malaya	Hercules C.1	Airlift	UK	Hercules C.1	Airlift
49	—	disbanded	—	—	disbanded	—	—	disbanded	—
50	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr
51	UK	Canberra B.2	GA	UK	Canberra B.2	GA	UK	Nimrod R.1	Rece
52	Malaya	Valetta C.1	Airlift	—	disbanded	—	—	disbanded	—
53	UK	Beverly C.1	Airlift	UK	Belfast C.1	Airlift	UK	Belfast C.1	Airlift
54	UK	Hunter FGA.9	GA	UK	FGR.2	GA	UK	Jaguar GR.1	GA
55	UK	Victor B.1	Heavy bmr	UK	Victor K.1	Tanker	UK	Victor K.1	Tanker
56	UK	Lightning F.1	AWX	UK	Lightning F.3	AWX	UK	Lightning F.6	AWX
57	UK	Victor B.1	Heavy bmr	UK	Victor K.1	Tanker	UK	Victor K.1	Tanker
58	UK	Canberra PR.7	Rece	UK	Canberra PR.7	Rece	UK	Hunter FGA.9	GA
59	—	disbanded	—	—	disbanded	—	—	disbanded	—
60	Malaya	Javelin FAW.9	AWX	FRG	Pembroke C.1	Misc	—	disbanded	—
61	—	disbanded	—	—	disbanded	—	—	disbanded	—
62	—	disbanded	—	—	disbanded	—	—	disbanded	—
63	—	disbanded	—	—	disbanded	—	—	disbanded	—
64	Malaya	Javelin FAW.9	AWX	—	disbanded	—	—	disbanded	—
65	—	disbanded	—	—	disbanded	—	—	disbanded	—
66	Malaya	Belvedere HC.1	Helicopter	—	disbanded	—	—	disbanded	—
67	—	disbanded	—	—	disbanded	—	—	disbanded	—
68	—	disbanded	—	—	disbanded	—	—	disbanded	—
69	—	disbanded	—	—	disbanded	—	—	disbanded	—
70	Cyprus	Hastings C.4	Airlift	Cyprus	Hercules C.1	Airlift	UK	Hercules C.1	Airlift
71	—	disbanded	—	—	disbanded	—	—	disbanded	—
72	UK	Wessex HC.2	Helicopter	UK	Wessex HC.2	Helicopter	UK	Wessex HC.2	Helicopter
73	Cyprus	Canberra B.2	GA	—	disbanded	—	—	disbanded	—
74	UK	Lightning F.3	AWX	Malaya	Lightning F.6	AWX	—	disbanded	—
76	—	disbanded	—	—	disbanded	—	—	disbanded	—
77	—	disbanded	—	—	disbanded	—	—	disbanded	—
78	Aden	Wessex HC.2	Helicopter	Oman	Wessex HC.2	Helicopter	—	disbanded	—
79	—	disbanded	—	—	disbanded	—	—	disbanded	—
80	FRG	Canberra PR.7	Rece	—	disbanded	—	—	disbanded	—
81	Malaya	Canberra PR.7	—	—	disbanded	—	—	disbanded	—
82	—	disbanded	—	—	disbanded	—	—	disbanded	—
83	UK	Vulcan B.2	Heavy bmr	—	disbanded	—	—	disbanded	—
84	Aden	Beverly C.1	Airlift	Bahrain	Andover C.1	Misc	Cyprus	Whirlwind HAR.10	Helicopter
85	UK	Canberra TT.18	Misc	UK	Canberra TT.18	Misc	UK	Canberra TT.18	Misc
87	—	disbanded	—	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1965			1970			1975		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
88	—	disbanded	—	—	disbanded	—	—	disbanded	—
89	—	disbanded	—	—	disbanded	—	—	disbanded	—
90	—	disbanded	—	—	disbanded	—	—	disbanded	—
92	FRG	Lightning F.2	AWX	FRG	Lightning F.2	AWX	FRG	Lightning F.2	AWX
93	—	disbanded	—	—	disbanded	—	—	disbanded	—
94	—	disbanded	—	—	disbanded	—	—	disbanded	—
96	—	disbanded	—	—	disbanded	—	—	disbanded	—
97	UK	Canberra B.2	GA	—	disbanded	—	—	disbanded	—
98	UK	Canberra B.2	GA	UK	Canberra B.2	GA	UK	Canberra B.2	GA
99	UK	Britannia C.1	Airlift	UK	Britannia C.1	Airlift	UK	Britannia C.1	Airlift
100	UK	Victor B.2	Heavy bmr	UK	Canberra TT.18	Misc	UK	Canberra TT.18	Misc
101	UK	Vulcan B.1	Heavy bmr	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr
102	—	disbanded	—	—	disbanded	—	—	disbanded	—
103	Cyprus	Whirlwind	Helicopter	Malaya	Whirlwind HAR.10	Helicopter	Malaya	Wessex HC.2	Helicopter
		HAR.10							
104	—	disbanded	—	—	disbanded	—	—	disbanded	—
105	Aden	Argosy C.1	Misc	—	disbanded	—	—	disbanded	—
106	—	disbanded	—	—	disbanded	—	—	disbanded	—
107	—	disbanded	—	—	disbanded	—	—	disbanded	—
109	—	disbanded	—	—	disbanded	—	—	disbanded	—
110	Malaya	Whirlwind HC.4	Helicopter	Malaya	Whirlwind HC.4	Helicopter	—	disbanded	—
111	UK	Lightning F.3	AWX	UK	Lightning F.3	AWX	UK	FRG.2	AWX
112	Cyprus	Bloodhound	SAM	Cyprus	Bloodhound	SAM	Cyprus	Bloodhound	SAM
113	—	disbanded	—	—	disbanded	—	—	disbanded	—
114	UK	Argosy T.1	Misc	UK	Argosy C.1	Misc	—	disbanded	—
115	UK	disbanded	Misc	UK	Argosy C.1	Misc	UK	Argosy E.1	Misc
116	—	disbanded	—	—	disbanded	—	—	disbanded	—
118	—	disbanded	—	—	disbanded	—	—	disbanded	—
120	UK	Shackleton MR.3	Maritime ptl	UK	Shackleton MR.3	Maritime ptl	UK	disbanded	Maritime ptl
125	—	disbanded	—	—	disbanded	—	—	Nimrod MR.1	—
130	—	disbanded	—	—	disbanded	—	—	disbanded	—
138	—	disbanded	—	—	disbanded	—	—	disbanded	—
139	UK	Victor B.2	Heavy bmr	—	disbanded	—	—	disbanded	—
141	—	disbanded	—	—	disbanded	—	—	disbanded	—
142	—	disbanded	—	—	disbanded	—	—	disbanded	—
145	—	disbanded	—	—	disbanded	—	—	disbanded	—
148	UK	Valiant B.1	Heavy bmr	—	disbanded	—	—	disbanded	—
149	—	disbanded	—	—	disbanded	—	—	disbanded	—
150	—	disbanded	—	—	disbanded	—	—	disbanded	—
151	—	disbanded	—	—	disbanded	—	—	disbanded	—
152	Bahrain	Pembroke C.1	Misc	—	disbanded	—	—	disbanded	—
153	—	disbanded	—	—	disbanded	—	—	disbanded	—
155	—	disbanded	—	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1965			1970			1975		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
192	—	disbanded	—	—	disbanded	—	—	disbanded	—
194	—	disbanded	—	—	disbanded	—	—	disbanded	—
199	—	disbanded	—	—	disbanded	—	—	disbanded	—
201	UK	Shackleton MR.3	Maritime ptl	UK	Nimrod MR.1	Maritime ptl	UK	Nimrod MR.1	Maritime ptl
202	UK	Whirlwind HAR.10	Helicopter	UK	Whirlwind HAR.10	Helicopter	UK	Whirlwind HAR.10	Helicopter
203	UK	Shackleton MR.3	Maritime ptl	Malta	Shackleton MR.3	Maritime ptl	Malta	Nimrod MR.1	Maritime ptl
204	UK	Shackleton MR.2	Maritime ptl	UK	Shackleton MR.2	Maritime ptl	—	disbanded	—
205	Malaya	Shackleton MR.2	Maritime ptl	Malaya	Shackleton MR.2	Maritime ptl	—	disbanded	—
206	UK	Shackleton MR.3	Maritime ptl	UK	Shackleton MR.3	Maritime ptl	UK	Nimrod MR.1	Maritime ptl
207	UK	Valiant B.1	Heavy bmr	UK	Pembroke C.1	Misc	UK	Pembroke C.1	Misc
208	Bahrain	Hunter FGA.9	GA	Bahrain	Hunter FGA.9	GA	UK	Buccannier S.2	GA
209	Malaya	Pioneer CC.1	Misc	Malaya	Pioneer CC.1	Misc	—	disbanded	—
210	UK	Shackleton MR.2	Maritime ptl	Oman	Shackleton MR.2	Maritime ptl	—	disbanded	—
214	UK	Valiant K.1	Tanker	UK	Victor K.1	Tanker	UK	Victor K.1	Tanker
215	Malaya	Argosy C.1	Misc	—	disbanded	—	—	disbanded	—
216	UK	Comet C.4	Airlift	UK	Comet C.4	Airlift	UK	Comet C.4	Airlift
217	—	disbanded	—	—	disbanded	—	—	disbanded	—
218	—	disbanded	—	—	disbanded	—	—	disbanded	—
219	—	disbanded	—	—	disbanded	—	—	disbanded	—
220	—	disbanded	—	—	disbanded	—	—	disbanded	—
222	—	disbanded	—	—	disbanded	—	—	disbanded	—
223	—	disbanded	—	—	disbanded	—	—	disbanded	—
224	Gibraltar	Shackleton MR.2	Maritime ptl	—	disbanded	—	—	disbanded	—
225	Malaya	Whirlwind HAR.10	Helicopter	—	disbanded	—	—	disbanded	—
228	—	disbanded	—	—	disbanded	—	—	disbanded	—
230	Borneo	Twin Pioneer CC.1	Misc	UK	Whirlwind HC.10	Helicopter	UK	Puma HC.1	Helicopter
233	—	disbanded	—	—	disbanded	—	—	disbanded	—
234	—	disbanded	—	—	disbanded	—	—	disbanded	—
240	—	disbanded	—	—	disbanded	—	—	disbanded	—
242	—	disbanded	—	—	disbanded	—	—	disbanded	—
245	—	disbanded	—	—	disbanded	—	—	disbanded	—
247	—	disbanded	—	—	disbanded	—	—	disbanded	—
249	Cyprus	Canberra B.16	GA	—	disbanded	—	—	disbanded	—
253	—	disbanded	—	—	disbanded	—	—	disbanded	—
254	—	disbanded	—	—	disbanded	—	—	disbanded	—
257	—	disbanded	—	—	disbanded	—	—	disbanded	—
263	—	disbanded	—	—	disbanded	—	—	disbanded	—
264	—	disbanded	—	—	disbanded	—	—	disbanded	—
266	—	disbanded	—	—	disbanded	—	—	disbanded	—
267	UK	Argosy C.1	Misc	—	disbanded	—	—	disbanded	—
269	—	disbanded	—	UK	Argosy C.1	Misc	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1965			1970			1975		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
275	—	disbanded	—	—	disbanded	—	—	disbanded	—
288	—	disbanded	—	—	disbanded	—	—	disbanded	—
297	—	disbanded	—	—	disbanded	—	—	disbanded	—
360	—	disbanded	—	UK	Canberra T.17	Misc	UK	Canberra T.17	Misc
500	—	disbanded	—	—	disbanded	—	—	disbanded	—
501	—	disbanded	—	—	disbanded	—	—	disbanded	—
502	—	disbanded	—	—	disbanded	—	—	disbanded	—
504	—	disbanded	—	—	disbanded	—	—	disbanded	—
511	UK	Britannia C.1	Airlift	UK	Britannia C.1	Airlift	UK	Britannia C.1	Airlift
540	—	disbanded	—	—	disbanded	—	—	disbanded	—
541	—	disbanded	—	—	disbanded	—	—	disbanded	—
542	—	disbanded	—	—	disbanded	—	—	disbanded	—
543	UK	Victor B.1	Heavy bmr	UK	Victor SR.2	Strat. Recce	—	disbanded	—
600	—	disbanded	—	—	disbanded	—	—	disbanded	—
601	—	disbanded	—	—	disbanded	—	—	disbanded	—
602	—	disbanded	—	—	disbanded	—	—	disbanded	—
603	—	disbanded	—	—	disbanded	—	—	disbanded	—
604	—	disbanded	—	—	disbanded	—	—	disbanded	—
605	—	disbanded	—	—	disbanded	—	—	disbanded	—
607	—	disbanded	—	—	disbanded	—	—	disbanded	—
608	—	disbanded	—	—	disbanded	—	—	disbanded	—
609	—	disbanded	—	—	disbanded	—	—	disbanded	—
610	—	disbanded	—	—	disbanded	—	—	disbanded	—
611	—	disbanded	—	—	disbanded	—	—	disbanded	—
612	—	disbanded	—	—	disbanded	—	—	disbanded	—
613	—	disbanded	—	—	disbanded	—	—	disbanded	—
614	—	disbanded	—	—	disbanded	—	—	disbanded	—
615	—	disbanded	—	—	disbanded	—	—	disbanded	—
616	—	disbanded	—	—	disbanded	—	—	disbanded	—
617	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr	UK	Vulcan B.2	Heavy bmr
622	—	disbanded	—	—	disbanded	—	—	disbanded	—
651	—	disbanded	—	—	disbanded	—	—	disbanded	—
652	—	disbanded	—	—	disbanded	—	—	disbanded	—
656	—	disbanded	—	—	disbanded	—	—	disbanded	—
661	—	disbanded	—	—	disbanded	—	—	disbanded	—
662	—	disbanded	—	—	disbanded	—	—	disbanded	—
663	—	disbanded	—	—	disbanded	—	—	disbanded	—
664	—	disbanded	—	—	disbanded	—	—	disbanded	—
665	—	disbanded	—	—	disbanded	—	—	disbanded	—
683	—	disbanded	—	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1980			1985			1990		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
1	UK	Harrier GR.3	GA	UK	Harrier GR.3	GA	UK	Harrier GR.5	GA
2	FRG	Jaguar GR.1	Rece	FRG	Jaguar GR.1	Rece	FRG	Jaguar GR.1	Rece
3	FRG	Harrier GR.3	GA	FRG	Harrier GR.3	GA	FRG	Harrier GR.5	GA
4	FRG	Harrier GR.3	GA	FRG	Harrier GR.3	GA	FRG	Harrier GR.3	GA
5	UK	Lightning F.3/6	AWX	UK	Lightning F.3/6	AWX	—	disbanded	—
6	UK	Jaguar GR.1	GA	UK	Jaguar GR.1	GA	UK	Jaguar GR.1	GA
7	UK	Canberra TT.18	Misc	UK	Chinook HC.1	Helicopter	UK	Chinook HC.1	Helicopter
8	UK	Shackleton AEW.2	AEW	UK	Shackleton AEW.2	AEW	UK	E-3A	AEW
9	UK	Vulcan B.2	Heavy bmr	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
10	UK	VC.10 C.1	Airlift	UK	VC.10 C.1	Airlift	UK	VC.10 C.1	Airlift
11	UK	Lightning F.3/6	AWX	UK	Lightning F.3/6	AWX	—	disbanded	—
12	UK	Buccaneer S.2	GA	UK	Buccaneer S.2	GA	UK	Buccaneer S.2	GA
13	UK	Canberra PR.9	Rece	—	disbanded	—	—	disbanded	—
14	FRG	Jaguar GR.1	GA	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
15	FRG	Buccaneer	GA	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
16	FRG	Buccaneer	GA	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
17	FRG	Jaguar GR.1	GA	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
18	FRG	Wessex HC.2	Helicopter	FRG	Chinook HC.1	Helicopter	FRG	Chinook HC.1	Helicopter
19	FRG	FGR.2	AWX	FRG	FGR.2	AWX	FRG	FGR.2	AWX
20	FRG	Jaguar GR.1	GA	FRG	Jaguar GR.1	GA	FRG	Tornado GR.1	AWGA
21	—	disbanded	—	—	disbanded	—	—	disbanded	—
22	UK	Wessex HAR.2	Helicopter	UK	Wessex HAR.2	Helicopter	UK	Wessex HAR.2	Helicopter
23	UK	FGR.2	AWX	UK	FGR.2	AWX	UK	FGR.2	AWX
24	UK	Hercules C.1	Airlift	UK	Hercules C.3	Airlift	UK	Hercules C.3	Airlift
25	UK	Bloodhound	SAM	UK	Bloodhound	SAM	UK	Bloodhound	SAM
26	—	disbanded	—	—	disbanded	—	—	disbanded	—
27	UK	Vulcan B.2	Heavy bmr	UK	Tornado GR.1	AWGA	UK	Tornado GR.1	AWGA
28	Hong Kong	Wessex HC.2	Helicopter	Hong Kong	Wessex HC.2	Helicopter	Hong Kong	Wessex HC.2	Helicopter
29	UK	FGR.2	AWX	UK	Wessex HC.2	AWX	UK	Tornado F.3	AWX
30	UK	Hercules C.1	Airlift	UK	Hercules C.1	Airlift	UK	Hercules C.3	Airlift
31	FRG	Jaguar GR.1	GA	FRG	Jaguar GR.1	GA	FRG	Tornado GR.1	AWGA
32	UK	Andover	Misc	UK	Andover	Misc	UK	Andover	Misc
33	UK	Puma HC.1	Helicopter	UK	Puma HC.1	Helicopter	UK	Puma HC.1	Helicopter
34	—	disbanded	—	—	disbanded	—	—	Tornado F.3	AWX
35	UK	Vulcan B.2	Heavy bmr	—	disbanded	—	—	Tornado F.3	AWX
36	—	disbanded	—	—	disbanded	—	—	Tornado F.3	AWX
37	—	disbanded	—	—	disbanded	—	—	Tornado F.3	AWX
38	—	disbanded	—	—	disbanded	—	—	disbanded	—
39	UK	Canberra PR.9	Rece	—	disbanded	—	—	disbanded	—
40	—	disbanded	—	—	disbanded	—	—	disbanded	—
41	UK	Jaguar GR.1	Rece	UK	Jaguar GR.1	Rece	UK	Jaguar GR.1	Rece
42	UK	Nimrod Mr.1	Maritime ptl	UK	Nimrod Mr.1	Maritime ptl	UK	Nimrod Mr.1	Maritime ptl
43	UK	FGR.2	AWX	UK	FGR.2	AWX	UK	Tornado F.3	AWX

THE ROYAL AIR FORCE (cont.)

Squadron	1980			1985			1990		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
44	UK	Vulcan B.2	Heavy bmr	—	disbanded	—	—	disbanded	—
45	—	disbanded	—	—	disbanded	—	—	disbanded	—
46	—	disbanded	—	—	disbanded	—	—	disbanded	—
47	UK	Hercules C.1	Airlift	UK	Hercules C.1	Airlift	UK	Hercules C.3	Airlift
48	—	disbanded	—	—	disbanded	—	—	disbanded	—
49	—	disbanded	—	—	disbanded	—	—	disbanded	—
50	UK	Vulcan B.2	Heavy bmr	—	disbanded	—	—	disbanded	—
51	UK	Nimrod R.1	Rece	UK	Nimrod R.1	Rece	UK	Nimrod R.1	Rece
52	—	disbanded	—	—	disbanded	—	—	disbanded	—
53	—	disbanded	—	—	disbanded	—	—	disbanded	—
54	UK	Jaguar GR.1	GA	UK	Jaguar GR.1	GA	UK	Jaguar GR.1	GA
55	UK	Victor K.1	Tanker	UK	Victor K.2	Tanker	—	disbanded	—
56	UK	FGR.2	AWX	UK	FGR.2	AWX	UK	FGR.2	AWX
57	UK	Victor K.1	Tanker	UK	Victor K.2	Tanker	—	disbanded	—
58	—	disbanded	—	—	disbanded	—	—	disbanded	—
59	—	disbanded	—	—	disbanded	—	—	disbanded	—
60	—	disbanded	—	FRG	Pembroke C.1	Misc	FRG	Pembroke C.1	Misc
61	—	disbanded	—	—	disbanded	—	—	disbanded	—
62	—	disbanded	—	—	disbanded	—	—	disbanded	—
63	—	disbanded	—	—	disbanded	—	—	disbanded	—
64	—	disbanded	—	—	disbanded	—	—	disbanded	—
65	—	disbanded	—	—	disbanded	—	—	disbanded	—
66	—	disbanded	—	—	disbanded	—	—	disbanded	—
67	—	disbanded	—	—	disbanded	—	—	disbanded	—
68	—	disbanded	—	—	disbanded	—	—	disbanded	—
69	—	disbanded	—	—	disbanded	—	—	disbanded	—
70	UK	Hercules C.1	Airlift	UK	Hercules C.1	Airlift	UK	Hercules C.3	Airlift
71	—	disbanded	—	—	disbanded	—	—	disbanded	—
72	UK	Wessex HC.2	Helicopter	UK	Wessex HC.2	Helicopter	UK	Wessex HC.2	Helicopter
73	—	disbanded	—	—	disbanded	—	—	disbanded	—
74	—	disbanded	—	—	disbanded	—	—	disbanded	—
76	—	disbanded	—	UK	FGR.2	AWX	UK	FGR.2	AWX
77	—	disbanded	—	—	disbanded	—	—	disbanded	—
78	—	disbanded	—	—	disbanded	—	—	disbanded	—
79	—	disbanded	—	—	disbanded	—	—	disbanded	—
80	—	disbanded	—	—	disbanded	—	—	disbanded	—
81	—	disbanded	—	—	disbanded	—	—	disbanded	—
82	—	disbanded	—	—	disbanded	—	—	disbanded	—
83	—	disbanded	—	—	disbanded	—	—	disbanded	—
84	Cyprus	Whirlwind HAR.10	Helicopter	Cyprus	Wessex HC.2	Helicopter	Cyprus	Wessex HC.2	Helicopter
85	UK	Bloodhound	SAM	UK	Bloodhound	SAM	UK	Bloodhound	SAM
87	—	disbanded	—	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1980				1985				1990			
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
88	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
89	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
90	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
92	FRG	FGR.2	AWX	FRG	FGR.2	AWX	FRG	FGR.2	AWX	FRG	FGR.2	AWX
93	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
94	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
96	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
97	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
98	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
99	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
100	UK	Canberra TT.18	Misc	UK	Canberra	Misc	UK	Canberra	Misc	UK	Canberra	Misc
101	UK	Vulcan B.2	Heavy bmr	UK	VC.10 K2	Tanker	UK	VC.10 K2	Tanker	UK	VC.10 K2	Tanker
102	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
103	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
104	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
105	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
106	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
107	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
109	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
110	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
111	UK	FRG.2	AWX	UK	FRG.2	AWX	UK	FRG.2	AWX	UK	FRG.2	AWX
112	Cyprus	Bloodhound	SAM	—	disbanded	—	—	disbanded	—	—	disbanded	—
113	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
114	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
115	UK	Andover E.1	Misc	UK	Andover C.1	Misc	UK	Andover C.1	Misc	UK	Andover C.1	Misc
116	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
118	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
120	UK	Nimrod MR.1	Maritime ptl	UK	Nimrod MR.2	Maritime ptl	UK	Nimrod MR.2	Maritime ptl	UK	Nimrod MR.2	Maritime ptl
125	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
130	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
138	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
139	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
141	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
142	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
145	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
148	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
149	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
150	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
151	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
152	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
153	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—
155	—	disbanded	—	—	disbanded	—	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1980			1985			1990		
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Aircraft	Role
192	—	disbanded	—	—	disbanded	—	—	disbanded	—
194	—	disbanded	—	—	disbanded	—	—	disbanded	—
199	—	disbanded	—	—	disbanded	—	—	disbanded	—
201	UK	Nimrod MR.1	Maritime ptl	UK	Nimrod MR.2	Maritime ptl	UK	Nimrod MR.2	Maritime ptl
202	UK	Sea King HAR.3	Helicopter	UK	Sea King HAR.3	Helicopter	UK	Sea King HAR.3	Helicopter
203	—	disbanded	—	—	disbanded	—	—	disbanded	—
204	—	disbanded	—	—	disbanded	—	—	disbanded	—
206	—	disbanded	—	—	disbanded	—	—	disbanded	—
206	UK	Nimrod MR.1	Maritime ptl	UK	Nimrod MR.2	Maritime ptl	UK	Nimrod MR.2	Maritime ptl
207	—	disbanded	—	UK	Devon	Misc	UK	Devon	Misc
208	UK	Buccaneer S.2	GA	UK	Buccaneer S.2	GA	UK	Buccaneer S.2	GA
209	—	disbanded	—	—	disbanded	—	—	disbanded	—
210	—	disbanded	—	—	disbanded	—	—	disbanded	—
214	—	disbanded	—	—	disbanded	—	—	disbanded	—
215	—	disbanded	—	—	disbanded	—	—	disbanded	—
216	—	disbanded	—	UK	Tristar K.1	Tanker	UK	Tristar K.1	Tanker
217	—	disbanded	—	—	disbanded	—	—	disbanded	—
218	—	disbanded	—	—	disbanded	—	—	disbanded	—
219	—	disbanded	—	—	disbanded	—	—	disbanded	—
220	—	disbanded	—	—	disbanded	—	—	disbanded	—
222	—	disbanded	—	—	disbanded	—	—	disbanded	—
223	—	disbanded	—	—	disbanded	—	—	disbanded	—
224	—	disbanded	—	—	disbanded	—	—	disbanded	—
225	—	disbanded	—	—	disbanded	—	—	disbanded	—
228	—	disbanded	—	—	disbanded	—	—	disbanded	—
230	UK	Puma HC.1	Helicopter	FRG	Puma HC.1	Helicopter	FRG	Puma HC.1	Helicopter
233	—	disbanded	—	—	disbanded	—	—	disbanded	—
234	—	disbanded	—	—	disbanded	—	—	disbanded	—
240	—	disbanded	—	—	disbanded	—	—	disbanded	—
242	—	disbanded	—	—	disbanded	—	—	disbanded	—
245	—	disbanded	—	—	disbanded	—	—	disbanded	—
247	—	disbanded	—	—	disbanded	—	—	disbanded	—
249	—	disbanded	—	—	disbanded	—	—	disbanded	—
253	—	disbanded	—	—	disbanded	—	—	disbanded	—
254	—	disbanded	—	—	disbanded	—	—	disbanded	—
257	—	disbanded	—	—	disbanded	—	—	disbanded	—
263	—	disbanded	—	—	disbanded	—	—	disbanded	—
264	—	disbanded	—	—	disbanded	—	—	disbanded	—
266	—	disbanded	—	—	disbanded	—	—	disbanded	—
267	—	disbanded	—	—	disbanded	—	—	disbanded	—
269	—	disbanded	—	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1980				1985				1990			
	Base	Aircraft	Role	Base	Aircraft	Role	Base	Role	Aircraft	Base	Role	Role
275	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
288	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
297	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
360	UK	Canberra T.17	Misc	UK	Canberra T.17	Misc	—	—	Canberra T.17	UK	—	Misc
500	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
501	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
502	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
504	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
511	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
540	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
541	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
542	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
543	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
600	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
601	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
602	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
603	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
604	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
606	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
607	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
608	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
609	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
610	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
611	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
612	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
613	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
614	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
615	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
616	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
617	UK	Vulcan B.2	Heavy bmr	UK	Tornado GR.1	AWGA	UK	—	Tornado GR.1	UK	—	AWGA
622	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
651	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
652	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
656	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
661	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
662	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
663	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
664	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
665	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—
683	—	disbanded	—	—	disbanded	—	—	—	disbanded	—	—	—

THE ROYAL AIR FORCE (cont.)

Squadron	1995			2000/2005		
	Base	Aircraft	Role	Base	Aircraft	Role
1	UK	Harrier GR.5	AWGA	UK	Harrier GR.5	AWGA
2	FRG	Tornado R.1	Recco	FRG	Tornado R.1	Recco
3	FRG	Harrier GR.5	GA	FRG	Harrier GR.5	AWGA
4	FRG	Harrier GR.5	GA	FRG	Harrier GR.5	AWGA
5	—	disbanded	—	—	disbanded	—
6	UK	Jaguar GR.1	GA	UK	EFA	GA
7	UK	Chinook HC.1	Helicopter	UK	Chinook HC.1	Helicopter
8	UK	E-3A	AEW	UK	E-3A	AEW
9	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
10	UK	VC.10 C.1	Airlift	UK	VC.10 C.1	Airlift
11	—	disbanded	—	—	disbanded	—
12	UK	Tornado GR.1	AWGA	UK	Tornado GR.1	AWGA
13	—	disbanded	—	—	disbanded	—
14	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
15	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
16	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
17	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
18	FRG	Chinook HC.1	Helicopter	FRG	Chinook HC.1	Helicopter
19	FRG	FGR.2	AWX	FRG	EFA	AWX
20	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
21	—	disbanded	—	—	disbanded	—
22	UK	Weesex HAR.2	Helicopter	UK	Weesex HAR.2	Helicopter
23	UK	FGR.2	AWX	UK	EFA	AWX
24	UK	Hercules C.3	Airlift	UK	Hercules C.3	Airlift
25	UK	Bloodhound	SAM	UK	Bloodhound	SAM
26	—	disbanded	—	—	disbanded	—
27	UK	Tornado GR.1	AWGA	UK	Tornado GR.1	AWGA
28	Hong Kong	Weesex HC.2	Helicopter	Hong Kong	Weesex HC.2	Helicopter
29	UK	Tornado F.3	AWX	UK	Tornado F.3	AWX
30	UK	Hercules C.3	Airlift	UK	Hercules C.3	Airlift
31	FRG	Tornado GR.1	AWGA	FRG	Tornado GR.1	AWGA
32	UK	Andover	Misc	UK	Andover	Misc
33	UK	Puma HC.1	Helicopter	UK	Puma HC.1	Helicopter
34	UK	Tornado F.3	AWX	UK	Tornado F.3	AWX
35	UK	Tornado F.3	AWX	UK	Tornado F.3	AWX
36	UK	Tornado F.3	AWX	UK	Tornado F.3	AWX
37	UK	Tornado F.3	AWX	UK	Tornado F.3	AWX
38	—	disbanded	—	—	disbanded	—
39	—	disbanded	—	—	disbanded	—
40	—	disbanded	—	—	disbanded	—
41	UK	Tornado R.1	Recco	UK	Tornado R.1	Recco
42	UK	Nimrod Mr.1	Maritime ptl	UK	Nimrod Mr.1	Maritime ptl
43	UK	Tornado F.3	AWX	UK	Tornado F.3	AWX

THE ROYAL AIR FORCE (cont.)

Squadron	1995			2000/2005		
	Base	Aircraft	Role	Base	Aircraft	Role
44	—	disbanded	—	—	disbanded	—
45	—	disbanded	—	—	disbanded	—
46	—	disbanded	—	—	disbanded	—
47	UK	Hercules C.3	Airlift	UK	Hercules C.3	Airlift
48	—	disbanded	—	—	disbanded	—
49	—	disbanded	—	—	disbanded	—
50	—	disbanded	—	—	disbanded	—
51	UK	Nimrod R.1	Recco	UK	Nimrod R.1	Recco
52	—	disbanded	—	—	disbanded	—
53	—	disbanded	—	—	disbanded	—
54	UK	Jaguar GR.1	GA	UK	EFA	GA
55	—	disbanded	—	—	disbanded	—
56	UK	FGR 2	AWX	UK	EFA	AWX
57	—	disbanded	—	—	disbanded	—
58	—	disbanded	—	—	disbanded	—
59	—	disbanded	—	—	disbanded	—
60	FRG	Pembroke C.1	Misc	FRG	Pembroke C.1	Misc
61	—	disbanded	—	—	disbanded	—
62	—	disbanded	—	—	disbanded	—
63	—	disbanded	—	—	disbanded	—
64	—	disbanded	—	—	disbanded	—
65	—	disbanded	—	—	disbanded	—
66	—	disbanded	—	—	disbanded	—
67	—	disbanded	—	—	disbanded	—
68	—	disbanded	—	—	disbanded	—
69	—	disbanded	—	—	disbanded	—
70	UK	Hercules C.3	Airlift	UK	Hercules C.3	Airlift
71	—	disbanded	—	—	disbanded	—
72	UK	Weeser HC.2	Helicopter	UK	Weeser HC.2	Helicopter
73	—	disbanded	—	—	disbanded	—
74	—	disbanded	—	—	disbanded	—
76	UK	FGR-2	AWX	UK	EFA	AWX
77	—	disbanded	—	—	disbanded	—
78	—	disbanded	—	—	disbanded	—
79	—	disbanded	—	—	disbanded	—
80	—	disbanded	—	—	disbanded	—
81	—	disbanded	—	—	disbanded	—
82	—	disbanded	—	—	disbanded	—
83	—	disbanded	—	—	disbanded	—
84	Cyprus	Weeser HC.2	Helicopter	Cyprus	Weeser HC.2	Helicopter
85	UK	Bloodhound	SAM	UK	Bloodhound	SAM
87	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1996			2000/2005		
	Base	Aircraft	Role	Base	Aircraft	Role
88	—	disbanded	—	—	disbanded	—
89	—	disbanded	—	—	disbanded	—
90	—	disbanded	—	—	disbanded	—
92	FRG	FGR.2	AWX	FRG	EFA	AWX
93	—	disbanded	—	—	disbanded	—
94	—	disbanded	—	—	disbanded	—
96	—	disbanded	—	—	disbanded	—
97	—	disbanded	—	—	disbanded	—
98	—	disbanded	—	—	disbanded	—
99	—	disbanded	—	—	disbanded	—
100	UK	Canberra	Misc	UK	Canberra	Misc
101	UK	VC.10 K2	Tanker	UK	VC.10 K2	Tanker
102	—	disbanded	—	—	disbanded	—
103	—	disbanded	—	—	disbanded	—
104	—	disbanded	—	—	disbanded	—
105	—	disbanded	—	—	disbanded	—
106	—	disbanded	—	—	disbanded	—
107	—	disbanded	—	—	disbanded	—
109	—	disbanded	—	—	disbanded	—
110	—	disbanded	—	—	disbanded	—
111	UK	Tornado F.3	AWX	UK	Tornado F.3	AWX
112	—	disbanded	—	—	disbanded	—
113	—	disbanded	—	—	disbanded	—
114	—	disbanded	—	—	disbanded	—
115	UK	Andover C.1	Misc	UK	Andover C.1	Misc
116	—	disbanded	—	—	disbanded	—
118	—	disbanded	—	—	disbanded	—
120	UK	Nimrod MR.2	Maritime ptl	UK	Nimrod MR.2	Maritime ptl
125	—	disbanded	—	—	disbanded	—
130	—	disbanded	—	—	disbanded	—
138	—	disbanded	—	—	disbanded	—
139	—	disbanded	—	—	disbanded	—
141	—	disbanded	—	—	disbanded	—
142	—	disbanded	—	—	disbanded	—
145	—	disbanded	—	—	disbanded	—
148	—	disbanded	—	—	disbanded	—
149	—	disbanded	—	—	disbanded	—
150	—	disbanded	—	—	disbanded	—
151	—	disbanded	—	—	disbanded	—
152	—	disbanded	—	—	disbanded	—
153	—	disbanded	—	—	disbanded	—
155	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1995			2000/2005		
	Base	Aircraft	Role	Base	Aircraft	Role
192	—	disbanded	—	—	disbanded	—
194	—	disbanded	—	—	disbanded	—
199	—	disbanded	—	—	disbanded	—
201	UK	Nimrod MR.2	Maritime ptl	UK	Nimrod MR.2	Maritime ptl
202	UK	Sea King HAR.3	Helicopter	UK	Sea King HAR.3	Helicopter
203	—	disbanded	—	—	disbanded	—
204	—	disbanded	—	—	disbanded	—
205	—	disbanded	—	—	disbanded	—
206	UK	Nimrod MR.2	Maritime ptl	UK	Nimrod MR.2	Maritime ptl
207	UK	Devon	Misc	UK	Devon	Misc
208	UK	Tornado GR.1	AWGA	UK	Tornado GR.1	AWGA
209	—	disbanded	—	—	disbanded	—
210	—	disbanded	—	—	disbanded	—
214	—	disbanded	—	—	disbanded	—
215	—	disbanded	—	—	disbanded	—
216	UK	Tristar K.1	Tanker	UK	Tristar K.1	Tanker
217	—	disbanded	—	—	disbanded	—
218	—	disbanded	—	—	disbanded	—
219	—	disbanded	—	—	disbanded	—
220	—	disbanded	—	—	disbanded	—
222	—	disbanded	—	—	disbanded	—
223	—	disbanded	—	—	disbanded	—
224	—	disbanded	—	—	disbanded	—
225	—	disbanded	—	—	disbanded	—
228	—	disbanded	—	—	disbanded	—
230	FRG	Puma HC.1	Helicopter	FRG	Puma HC.1	Helicopter
233	—	disbanded	—	—	disbanded	—
234	—	disbanded	—	—	disbanded	—
240	—	disbanded	—	—	disbanded	—
242	—	disbanded	—	—	disbanded	—
245	—	disbanded	—	—	disbanded	—
247	—	disbanded	—	—	disbanded	—
249	—	disbanded	—	—	disbanded	—
253	—	disbanded	—	—	disbanded	—
254	—	disbanded	—	—	disbanded	—
257	—	disbanded	—	—	disbanded	—
263	—	disbanded	—	—	disbanded	—
264	—	disbanded	—	—	disbanded	—
266	—	disbanded	—	—	disbanded	—
267	—	disbanded	—	—	disbanded	—
269	—	disbanded	—	—	disbanded	—

THE ROYAL AIR FORCE (cont.)

Squadron	1995			2000/2005		
	Base	Aircraft	Role	Base	Aircraft	Role
275	—	disbanded	—	—	disbanded	—
288	—	disbanded	—	—	disbanded	—
297	—	disbanded	—	—	disbanded	—
360	UK	Canberra T.17	Misc	UK	Canberra T.17	Misc
500	—	disbanded	—	—	disbanded	—
501	—	disbanded	—	—	disbanded	—
502	—	disbanded	—	—	disbanded	—
504	—	disbanded	—	—	disbanded	—
511	—	disbanded	—	—	disbanded	—
540	—	disbanded	—	—	disbanded	—
541	—	disbanded	—	—	disbanded	—
542	—	disbanded	—	—	disbanded	—
543	—	disbanded	—	—	disbanded	—
600	—	disbanded	—	—	disbanded	—
601	—	disbanded	—	—	disbanded	—
602	—	disbanded	—	—	disbanded	—
603	—	disbanded	—	—	disbanded	—
604	—	disbanded	—	—	disbanded	—
605	—	disbanded	—	—	disbanded	—
607	—	disbanded	—	—	disbanded	—
608	—	disbanded	—	—	disbanded	—
609	—	disbanded	—	—	disbanded	—
610	—	disbanded	—	—	disbanded	—
611	—	disbanded	—	—	disbanded	—
612	—	disbanded	—	—	disbanded	—
613	—	disbanded	—	—	disbanded	—
614	—	disbanded	—	—	disbanded	—
615	—	disbanded	—	—	disbanded	—
616	—	disbanded	—	—	disbanded	—
617	UK	Tornado GR.1	AWGA	UK	Tornado GR.1	AWGA
622	—	disbanded	—	—	disbanded	—
651	—	disbanded	—	—	disbanded	—
652	—	disbanded	—	—	disbanded	—
656	—	disbanded	—	—	disbanded	—
661	—	disbanded	—	—	disbanded	—
662	—	disbanded	—	—	disbanded	—
663	—	disbanded	—	—	disbanded	—
664	—	disbanded	—	—	disbanded	—
665	—	disbanded	—	—	disbanded	—
683	—	disbanded	—	—	disbanded	—

BIBLIOGRAPHY

- Allward, Maurice, *Buccaneer*, Ian Allan Ltd., London, 1981.
- Allward, Maurice, *Gloster Javelin*, Ian Allan Ltd., London, 1983.
- Anderton, David, *Republic F-105 Thunderchief*, Osprey Publishing Ltd, London, 1983.
- Archer, Robert, *United States Military Aviation: The Air Force*, Midland Counties Publications, 1980.
- Beamont, Roland, and Arthur Reed, *English Electric Canberra*, Ian Allan Ltd., London, 1984.
- "Belgian Air Force Shackled by Budget," *Flight International*, October 17, 1987, p. 11
- "Belgium Plans to Update Mirages," *Flight International*, August 13, 1988, p. 18.
- Beyers, Daniel, "Dutch May be Fulcrum for F-16C Codevelopment," *Defense News*, November 9, 1987, p. 15.
- Birtles, Philip, *De Havilland Vampire, Venom, and Sea Vixen*, Ian Allan Ltd., London, 1986.
- Bond, Steven J., *Meteor: Gloster's First Jet Fighter*, Midland Counties Publications, 1985.
- Briganti, Giovanni, "European Nations Join with U.S. to Study Possible F-16 Upgrades," *Defense News*, May 14, 1988.
- Brown, David, "Europe Faces Decision on Future of Military Aircraft Development," *Aviation Week & Space Technology*, March 14, 1988, pp. 54-55.
- Canby, Stephen, *The Contribution of Tactical Airpower in Countering the Blitz: European Perceptions*, Technology Service Corporation, Maryland, 1977.
- Challenge and Commitment: A Defence Policy for Canada*, Ministry of Defence, Ottawa, 1987.
- Cook, Nick, "EFA Systems Procurement to Go Ahead Despite Doubts," *Janes Defence Weekly*, January 23, 1988.
- Cook, Nick, "W Germany, UK, and Italy Set to Order More Tornados," *Janes Defence Weekly*, February 13, 1988, p. 245.
- Davis, Larry, and David Menard, *F-84 Thunderjet in Action*, Squadron Signal Publications, Carrollton Texas, 1983
- Defence 1984*, Ministry of Supply and Services, Ottawa, 1985.
- Delve, Kenneth, "Tornados in the EW Environment," *Air International*, October 1987, pp. 188-193.

- Dorfer, Ingemar, *Arms Deal: The Selling of the F-16*, Praeger, New York, 1983.
- Eustance, Marilyn, *Canada's European Force, 1964-1971: Canada's Commitment to Europe*, Centre for International Relations, Kingston Ontario, 1982.
- "Five Air Forces to Modernise F-16s," *Jane's Defence Weekly*, April 5, 1986, p. 608.
- Flume, Wolfgang, "German Air Force Planning Until the Year 2000," *Military Technology*, 1988.
- "France Gives Rafale Go-Ahead, but EFA Program Still in Doubt," *Aviation Week & Space Technology*, February 1, 1988, pp. 16-17.
- Gaines, Michael, "European Agile Falcon Deal 'Close,'" *Flight International*, July 2, 1988, p. 7.
- Gaines, Michael, "Harriers for the Future," *Flight International*, October 17, 1987, pp. 24-25.
- Gander, Terry, *Encyclopaedia of the Modern Royal Air Force* (2d ed.), Patrick Stephens, Wellingborough, 1987.
- Gibson, Michael J., *Technology and Air Power in NATO*, Selwyn College, Cambridge, 1986.
- Gunston, Bill, *Fighters of the Fifties*, Specialty Press, Osceola, Wisconsin, 1981.
- Gunston, Bill, *Modern Fighting Aircraft*, Crown Publishers, New York, 1984.
- Halfpenny, Bruce Barrymore, *English Electric / BAC Lightning*, Osprey Publishing, London, 1984.
- Halley, James J., *The Squadrons of the Royal Air Force*, Air-Britain Publications, London, 1980.
- Hatch, Paul, "The Royal Air Force Today," *Air Pictorial*, September 1987, pp. 337-348.
- Hobson, Sharon, "Canada's Defence," *Jane's Defence Weekly*, November 21, 1987, pp. 1185-1208.
- Jackson, Paul, "Dassault's Mid-life Mirage," *Air International*, March 1988, pp. 121-129.
- Jackson, Paul, "Regaining Momentum—The RAF Tornado," *Air International*, Vol. 34, No. 2, February 1988, pp. 84-85.
- Jackson, Robert, *Strike Force: The USAF in Britain Since 1948*, Robson Books, London, 1986.
- Johnson, Paul, *Belgian Military Aviation, 1945-1977*, Midland Counties Publications, 1977.
- Johnson, Paul, *Dutch Military Aviation, 1945-1978*, Midland Counties Publications, 1978.
- Johnson, Paul, *German Military Aviation, 1956-1976*, Midland Counties Publications, 1976.

- Jose, J. Erwin, "The Royal Danish Air Force," *Reconnaissance*, No. 13, 1986, pp. 3-17.
- Kostenuk, Samuel, and John Griffin, *RCAF Squadron Histories and Aircraft, 1924-1968*, Samuel Stevens, Toronto, 1977.
- Lambert, Phillippe, "Les Armées de l'Air de l'O.T.A.N.," *Air Action*, No. 8, May 1989, pp. 41-51.
- Lewis, Peter, *The British Fighter Since 1912: Fifty Years of Design and Development*, Putnam and Co., Ltd., London, 1965.
- Mason, Francis, *Hawker Hunter: Biography of a Thoroughbred*, Patrick Stephens, Cambridge, 1981.
- Mechtersheimer, Alfred, *MRCA Tornado: The History and Functioning of the Biggest Western European Armaments Program*, 1977, RAND-held translation.
- The Military Balance*, IISS, London, 1960-1988
- Milberry, Larry, *The Avro CF-100*, Bryant Press Ltd., Toronto, 1981.
- Milberry, Larry (ed.), *Sixty Years: The RCAF and CF Air Command, 1924-1984*, CANAV Books, Toronto, 1984.
- MILAVNEWS, various editions, 1982-88.
- Mordoff, Keith, "Funding Delays Continue to Plague EFA Development," *Aviation Week & Space Technology*, August 24, 1988, p. 29.
- Mordoff, Keith, "German Report Identifies Technical, Cost Problems in EFA Development," *Aviation Week & Space Technology*, June 27, 1988.
- "More F-16s for Belgium—in 1988," *Flight International*, August 14, 1982, p. 350.
- Morocco, John D., "Tactical Air Upgrade Urged to Counter Warsaw Pact," *Aviation Week & Space Technology*, Feb. 8, 1988, pp. 18-19.
- Morocco, John D., "U.S. Will Discuss Codevelopment of Updated F/A-18 with Allies," *Aviation Week & Space Technology*, December 21, 1987, p. 20.
- "Netherlands Considers F-16 Update Program," *Jane's Defence Weekly*, March 21, 1987, p. 484.
- "Panavia Offers Advanced Tornados," *Flight International*, June 27, 1988, p. 5.
- "RAF Harrier II Plans Revealed," *Flight International*, July 9, 1988, p. 7.
- Ravenstein, Charles A., *Air Force Combat Wings: Lineage and Honors Histories*, 2d ed., Office of Air Force History, Washington D.C., 1984.
- Rich, Michael, et al., *Multinational Coproduction of Military Aerospace Systems*, The RAND Corporation, R-2861-AF, 1981.

Robinson, Anthony (ed.), *Air Power: The World's Air Forces*, Ziff-Davis Publishing Co., New York, 1980.

Robinson, Robert, *USAF Europe in Color, 1948-1965*, Squadron Signal Publications, Carrollton Texas, 1982

Skinner, Michael, *USAFE: A Primer of Modern Air Combat in Europe*, Presidio Press, Novato, California, 1984.

Spick, Mike, *Jet Fighter Performance: Korea to Vietnam*, Ian Allan Ltd., London, 1986.

Stein, David J., *The Development of NATO Tactical Air Doctrine, 1970-1985*, The RAND Corporation, R-3385-AF, December 1987.

Thetford, Owen, *Aircraft of the Royal Air Force Since 1918* (4th ed.), Funk and Wagnalls, New York, 1968.

"Tornado Targeting Pod Bids Narrow," *Flight International*, November 7, 1987, p. 3.

"Tornado Targeting Pod Aimed for Export," *Flight International*, September 5, 1987, p. 37.

"UK Takes EFA Initiative," *Flight International*, November 14, 1987, p. 9.

Walker, Karen, "Tornado Mid-life Update Set for 1992," *Jane's Defence Weekly*, September 12, 1987, p. 1208.

Wanstall, Brian, "The European Fighter Aircraft—Optimised for NATO Europe," *Interavia*, March 1988, pp. 249-252,

Webb, Alan, "RAF May Cut EFA Program in Half," *Armed Forces Journal International*, July 1987, p. 24.

"West German Budget Delay Pushes Back EFA, PAH-2," *Jane's Defence Weekly*, October 24, 1987, p. 929.

"West Germany Faces Budget Dilemma," *Flight International*, October 24, 1987, pp. 13-14.