

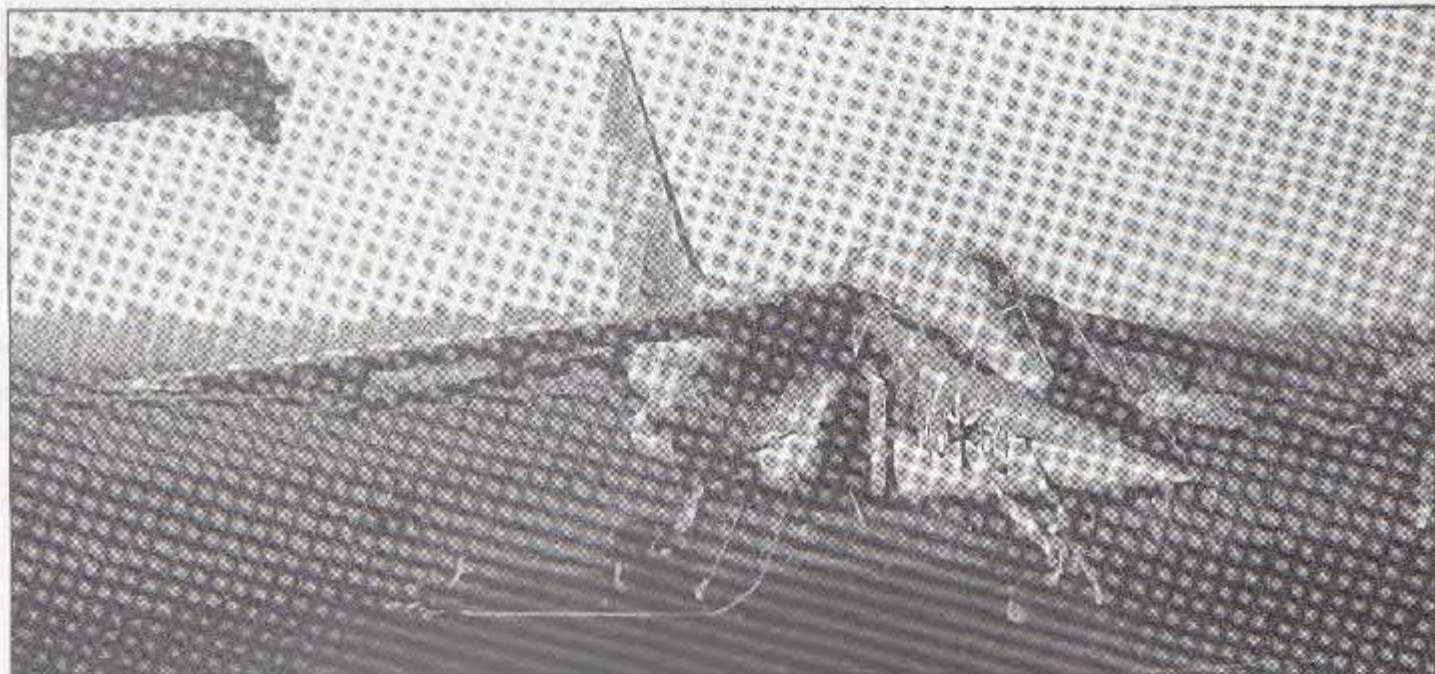
OCTOBER 1980



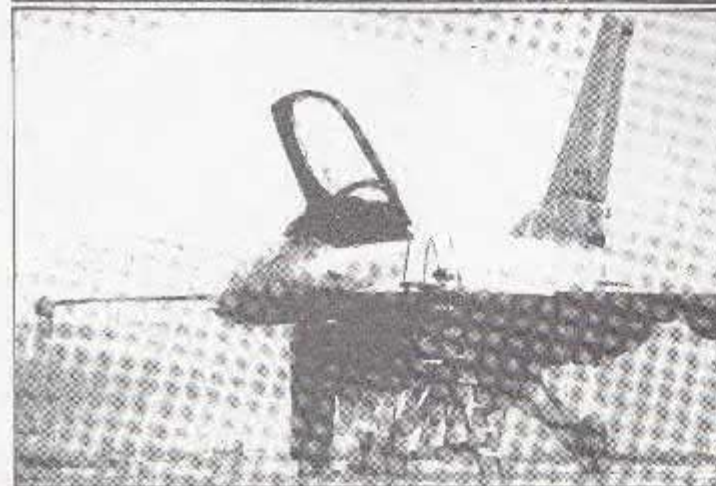
FLASH



AVIATION MAGAZINE
PHILIPS FLIGHT DIVISION
FLUGMEISTERSCHAFT
AUTUMN FORCE



Klu's OPEN DAG DE PEEL



(DE PEEL, HOLLAND). The annual open day organised by the Koninklijke Luchtmacht (Klu) this year was held at De Peel air base on 20 September. Although it had been expected that the open day would take place at Volkel air base, it was decided to divert to De Peel because of organization problems such as safety and the operational status of Volkel.

Brilliant weather and a good air show formed the ingredients for an excellent aviation day for 150,000 visitors. The three hour long air show was well-balanced with displays of all kinds of facets of aviation ranging from crazy flying by a Tiger Moth, the Grasshoppers helicopter aerobatic team, to the always impressive demonstration of an F-16. The spectacular part of the air show was provided by four Luftwaffe RF-4E Phantoms and twenty F-104G Starfighters, making low passes over the public. Ironically, the enormous noise produced during such passes (with and without afterburners used) are on these occasions experienced as exciting, whereas the same noise causes nuisance under everyday circumstances.

The static display consisted of 29 aircraft, outstanding among which were two Italian F-104S Starfighters. Due to safety measures the static aircraft were parked far behind a double fence, therefore photography would have been excellent with a 50mm lens, wasn't it the fact that one had to take one's photographs against the light.

The open day was perfect, except for the extraordinary distances people had to walk. Those who wanted to see both the exhibition and the aircraft static park had to walk as much as 12 km from car park to exhibition or static (depending on which entrance to the base they used) and back. □

Aircraft on display included:

35-72	RF-4E Phantom	Luftw/ARQ-52
14652	OV-10A Bronco	USAFB/601TCW
CR79-019	F-15A Eagle	USAFB/32TFS
WR79-104	A-10A	USAFB/81TFW
WR79-114	A-10A	USAFB/81TFW
30-MD/31	Mirage F.1C	AdA/Esc. 30
XZ134/AJ	Harrier GR.3	RAF/38sqn
XV795/AF	Harrier GR.3	RAF/38sqn
36-01/MM6818	F-104S	AMI/36 st
36-15/MM6732	F-104S	AMI/36 st
J-221 & 229	F-16A	Klu

COVER PHOTO: Looked to the deck, an F-14A Tomcat of the US Navy aboard the world's largest aircraft carrier, USS Nimitz during a goodwill visit to Portsmouth, U.K. on 18 September. (Barry Bailey-Rickman)



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EDITORIAL



10 YEARS FLASH AVIATION

Many FLASH editorials have been spent on relevant and irrelevant facets of the world of aviation. This month it was considered to be an excellent occasion to switch the limelight to the magazine itself by means of a critical editorial. The veteran FLASH reader knows the magazine started as a club publication of local Eindhoven spotters. The more recent reader knows FLASH built itself a respectable reputation as an enthusiast publication with many interesting registrations and/or movement reports. Today's reader will notice nearly all those registrations have disappeared, which many true registration spotters regret very much. How come this editorial change?

An editorial change towards more background information on the aviation scene as it takes place today was announced in the last December issue. This decision related to a changed view of the editorial staff on registration/photographic spotting. The fact that we were older and had been around a bit in Europe, furnished food for thought to the editorial staff. What does it mean to tell a reader that C-123K Provider 40663 was based at Stuttgart in September, that F-14A 160414/AJ201 was aboard USS Nimitz when it visited Wilhelmshaven, or that Tu.154 YR-TPH crashed in August? Frustration only. Frustration to know Providers were based at Stuttgart without having seen one, to know USS Nimitz was in Wilhelmshaven without having seen the aircraft aboard this impressive aircraft carrier, or to know Tu.154 YR-TPH crashed without having a negative of it in your collection.

Another conclusion was that so many registration spotters and aircraft photographers have lost the appreciation for the dynamic world of aviation itself, and only want a Kodachrome 25 colour slide of an USAF aircraft on the flight-line in the full sun without a ground power unit in front. Or doesn't even look at an F-111 making a touch and go because he has already logged all Upper Heyford and Ikenheath 'Aardvarks'. This is even more remarkable because it are those spotters who are amongst the people closest involved with aviation. In wind and rain they wait for that 'bloody' Starfighter that won't return from a sortie, or for that Flying Tiger DC-8 which they missed just the other week.

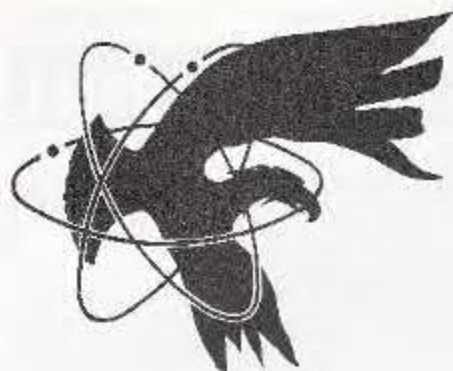
The low relevancy of a unique registration or a rare photograph, combined with the fact that there isn't really any aviation magazine covering operational aviation as a whole, prompted the editorial staff to decide to go ahead with the new concept. FLASH will therefore continue to describe operational aviation in columns and feature articles, whether they be on military, commercial or general aviation.

Some traditional spotters complain that the editorial staff has forsaken its role as an enthusiast publication in favour of the general dull complicated articles as given in so many other aviation publications. We want to refute this. The editorial staff is still convinced of the enjoyment which accompanies collecting registrations and photographs, but this is only as part of being an aviation enthusiast, and not the other way around. FLASH has no intention whatsoever to cooperate in the development of spotters as collectors of registrations and photographs without having a slightest interest in aviation. Therefore the editorial staff no longer wants to communicate with its readers by means of registrations only, but to tell its readers what is going on out there on all those airfields, what can be seen there, what is behind all those flying activities.

As we are in the middle of the process to improve the contents of FLASH, we hope the reader will be able to recognise this view in most, if not all, articles. One of the goals set for next year is to give more pre-information on air events so the reader knows what to expect at these events and can decide whether to attend at an event or not. Unlike other years, the editorial staff did not pay much attention to this subject prior this year's event season. On this occasion we promise to make up for this next year.

We sincerely hope you will enjoy reading FLASH as much as you have always done despite the change in editorial outlook. In fact it will increase our celebration of 10 years FLASH to know the magazine has become even more interesting to many readers.

Jac van Tuyn



MILITARY AVIATION NEWS

USAF F-15 Eagle update

Recent changes of aircraft serving with the USAF's 32 TFS at Soesterberg and 36 TFW at Bitburg AB, W. Germany, are but the tip of the iceberg, since most USAF F-15 units are swapping their aircraft around. Object of the exercise is to provide the two USAFE units with the newest aircraft available. For example, most aircraft delivered to 32 TFS during the summer months are FY79 F-15Cs and Ds, replacing F-15As and Bs, as well as the few FY78 F-15Cs delivered this year (CR78-550 only stayed a month and a half). 32 TFS was the first USAFE unit due to become operational on the 'C and D models, during September. It should be added that the full potential of these improved models won't be realized until the FAST packs are delivered. It is reported that these haven't even been bought yet.

The older USAFE aircraft are all returning to the US mainland. Most ex 32 TFS aircraft now fly with 33 TFW at Eglin AFB, which has recently been expanded into a three-squadron wing, although it only had enough aircraft to equip two squadrons in July since its own FY77 F-15s were passed on to 49 TFW at Holloman AFB. Possibly, the additional aircraft 33 TFW needs will come from Bitburg. Meanwhile, 49 TFW passed on its FY76 F-15s to 58 TFW at Luke AFB, whose FY76 F-15s went to 1 TFW at Langley AFB, whose FY74 F-15s have been swallowed whole by the Air Logistics Center at Warner-Robins AFB where they will be updated and then assigned to who knows which unit. Units apparently not affected by these changes are 18 TFW at Kadena AB, Japan, which was the first unit in the entire USAF to become operational on (FY78) F-15Cs and Ds, and 57 TFW at Nellis AFB.

FROM A FACILE PEN

CORRECTIONS

With reference to FLASH No. 120 p.4, the Belgian F-16A which crashed on 26 July was FA-08, not FA-16 as stated. And on the next page we wrote that MOTA would arrive at Beauvechain on 25 October. In fact that is when MOTA leaves Beauvechain for home.

IRISH SWEDISH TARGET TWO OPS. FOR DUTCH NAVY
Aviation England reports that Swedish target-boat MARSBOMER 20-28 SE-GMH operated from Cork Airport for six days in August to support a Dutch Navy exercise off the south coast of Ireland, an unusual involvement of two neutral countries in a NATO country's military affairs.

US NAVY BIDS ON 820 TANKER

Now that the USN is moving up the size scale with its KC-10A tanker aircraft, the US Navy is following suit in a more modest way. They have acquired a Convair 880 from the FAA, which will get a KA-6 Skywarrior refueling system, for use by the NATO at Patuxent River for the F/A-18 development program. The aircraft, for which no military designation (KC-10A?) is known yet, will become operational by the end of the year.

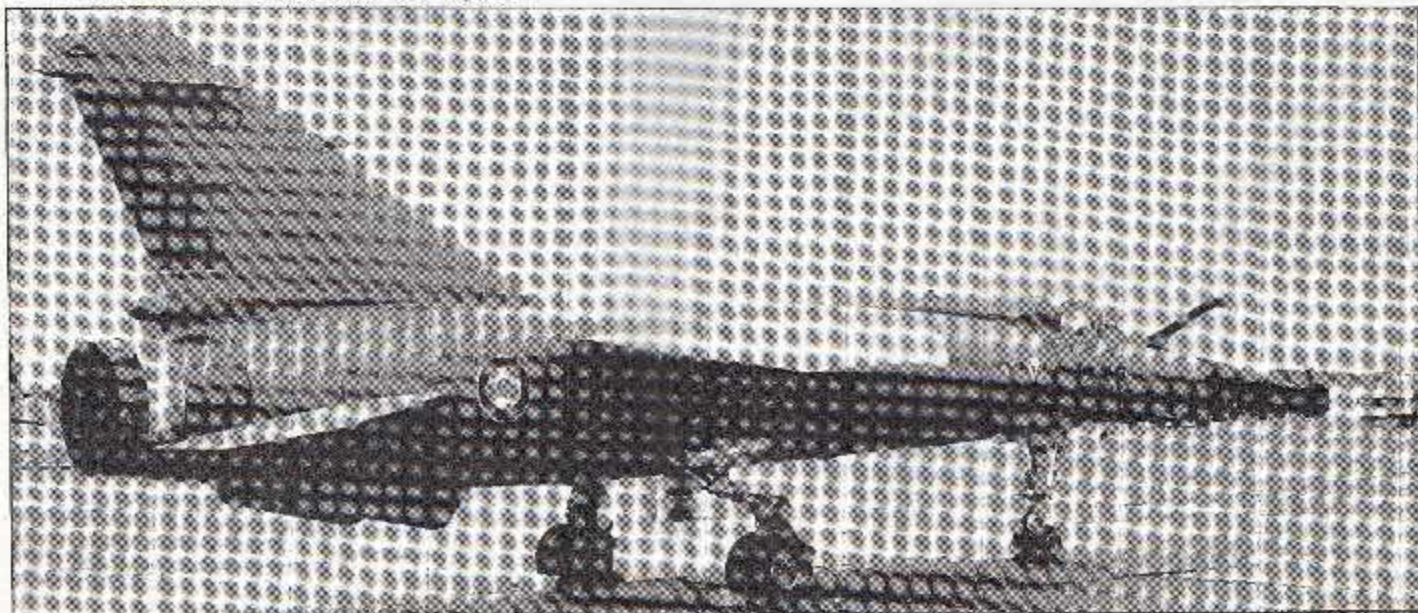
CANADIAN PILOT FLEW FROM NORTH SEA

The pilot of CF-104 104859, which crashed after making an attack run over the Vlieland range, Holland, was picked up from the sea within six minutes by a King Airspeed 111 of the SAS-Flight. He was ferried to a hospital in Sweden, where he was treated for a dislocated shoulder.

KENYA HUNTERS FOR SALE IN 'FLIGHT INTERNATIONAL'

An anonymous company, New York, under T. J. FH-KLH, offers five Kenyan air force fighters for sale, one T-33 and four F/A-40s (serials resp. 882,883,884, 885 and 886). Another company, Dovan Engineering Co. Ltd, offers three Kenyan fighters with armament, including sidewinder launchers. These aircraft are of unknown origin.

In June, Escadron de Chasse 12 at Cambrai was joined by a third squadron. With the arrival of the latest production Mirage F.10s, which have in-flight refuelling capability, EC.2/12 'Gomouille' regained its original designation EC.3/12, and the new squadron was designated EC.2/12 'Picardie'. The Mirage F.10s of the new EC.2/12 are coded 12-K, as illustrated on this photo of 12-KF/897 on static display at RAF Mildenhall's air show in August.





Naval exercise Teamwork 80 (see pages 12 & 13) received much attention from Soviet Tu-16 Badgers and Tu-95 Bears. Sometimes they flew over NATO vessels as close as 1000 mtr to beam and at an altitude of 1000 ft. Such an incident involving a Tu-95 Bear D reconnaissance aircraft over the USS Nimitz is illustrated above. Watching the intruder is W-14A Tomcat AJ235 of VF-24. (USNavy)

The result of all these upheavals, combined with a lingering lack of spare engines, is that 1 TFW recently failed an Operational Readiness Inspection which led to the cancellation of a deployment to Gilze-Rijen, Holland, scheduled for September. Previously, 49 TFW's deployment to Lahar, W. Germany in August had also been cancelled. 33 TFW's deployment to Bremgarten, W. Germany has been postponed, and may take place during October. It should finally be noted that 1 TFW is not the only unit which is not combat ready, as according to a report leaked to the New York Times twelve of TAC's 123 squadrons were not combat ready on 15 September.

The travels of the USS Nimitz

(WILHELMSHAVEN, W. GERMANY) The USS Nimitz is now at the end of her second tour of duty since passing an Operational Readiness Evaluation in mid 1979. That she is indeed ready and able to serve operationally was proved by her first tour, which lasted nearly nine months and included a staggering 144 consecutive days at sea. The Nimitz left her home port, Norfolk, VA, on 10 September 1979 for Europe. She spent an agreeable three months cruising the length and breadth of the Mediterranean. Just before Christmas she entered port at Napoli. Meanwhile, the situation in Iran was deteriorating, and then, on 26 December, news came that Soviet troops had invaded Afghanistan. US Navy Task Group 70 was soon dispatched to the Indian Ocean to keep a close eye on developments. The Nimitz left Napoli on 4 January, and after a nineteen day transit around the Cape of Good Hope (South Africa) she arrived at her pre-arranged station, soon nick-named 'Gonzo Station', where she relieved the Pacific fleet's USS Kitty Hawk, and joined Task Group 70. The Nimitz stayed at Gonzo Station for 108 days, and flight operations were conducted every day, with the exception of only three days, which is something of a record. Finally, the Nimitz was relieved by sister ship USS Eisenhower of the Pacific fleet, and returned to Norfolk, arriving back home on 26 May. She left port again on 27 August to participate in Teamwork 80 (see page 12).

Meanwhile, the latest carrier news is that the US Navy active fleet now stands at twelve, since the USS Saratoga entered dock this month (October) for a service life extension program. Commissioning of the new USS Carl Vinson in 1982, reactivation of the USS Oriskany (withdrawn in 1976), and the return to service of the USS Saratoga should raise the number to fifteen, although this will drop to fourteen in 1986 when the (then) forty-year old USS Coral Sea is decommissioned. In 1987 this will rise to fifteen again when the fourth, as yet unnamed, Nimitz-class carrier is delivered.

Biggin Hill BATTLE OF BRITAIN Display



(BIGGIN HILL, UK). London's main general aviation airport, which still houses a non-flying RAF unit, hosted its annual Battle of Britain Display on 21 September, to commemorate the World War Two action which made Biggin Hill famous. Unfortunately, one of the participants, A-26C Invader N3710G/322612, crashed during its display, killing all seven crew members, including pilot/owner Don Bullock.

Aircraft on display included:

TF956	Sea Fury FB.11	Hist. Flight	RNFAA
WF791	Meteor T.7	CPS	RAF
WV908	Sea Hawk FGA.4	RNAS Culdrose	RNFAA
XE397/F	Hunter FGA.9	2 TWU	RAF
XH304	Vampire T.11	CPS	RAF
G-REDF/485784	B-17G	M.H. Campbell	

(Photos: Frank Struben)

RAF evaluates AV-8B Harrier

(LONDON, UK.) Possibly in an effort to keep the Harrier British, the RAF and the Ministry of Defence (MoD) have concluded from a preliminary evaluation of the McDonnell-Douglas developed AV-8B that the American version meets RAF technical requirements as defined in ASR403, and that at least sixty and possibly 100 AV-8Bs could be ordered if the program goes ahead. There will be considerable doubt as to whether the USMC will be allowed to buy AV-8Bs until after the US presidential election in November.

While an RAF buy of AV-8Bs would ensure continued British involvement on a large scale in all Harrier developments, British and American, and would please those British equipment manufacturers who would otherwise lose a vast amount of subcontractor business (estimated to be worth as much as £1,125 million if 1,000 AV-8Bs are built), it could squeeze out the Harrier GR.5, the re-winged, dog-fight capable, British Aerospace development. The RAF would not be in a position, financially, to buy both AV-8Bs and Harrier GR.5s. When it comes to deciding between the AV-8B and the Harrier GR.5 the British government will have to look at the operational differences between the two types, the former being a basic 'bomb-truck', while the Harrier GR.5 is a much more agile, and some would say more survivable, aircraft with air-to-air capability. Furthermore, they must consider the future of British V/STOL technology leadership, supersonic Harrier developments, and ASR403. These three considerations argue against adoption of the Harrier GR.5, as this would lead to a US V/STOL development program completely independent from BAE, Rolls Royce, and the rest of British industry.

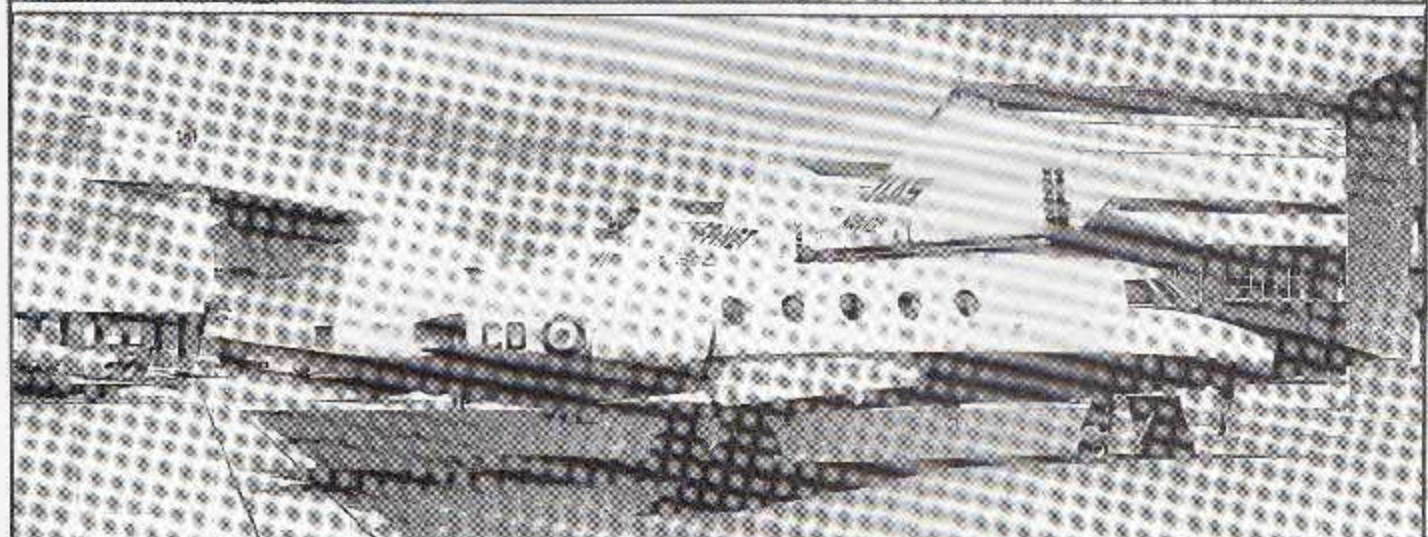
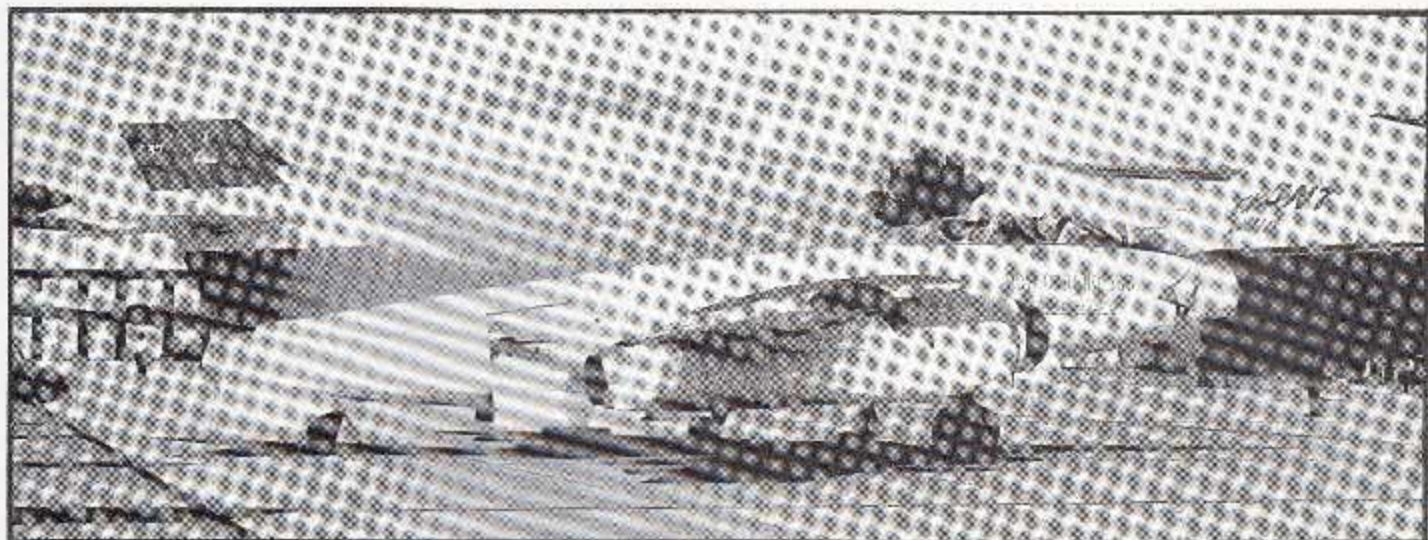


Bell Helicopters Textron is testing YAH-1S 70-10019 the latest model of the Huey Cobra. Displayed at Farnborough 80, this prototype had a four-bladed rotor system, designed for Bell's model 412 transport helicopter.

Continued co-operation between UK and US governments and industries could be important to ASR403, the supersonic replacement for the RAF's Jaguars and such Buccaneers as won't be replaced by Tornado GR.1s, which may also be of interest to the USAF, especially if BAE's USTOL (Ultra Short Take-Off and Landing) design is chosen. Lately the USAF has been reconsidering its objections against V/STOL types, now that anti-runway weapons are becoming more effective. □

Showing off its impressive wing-span B-52D 80606 of 82BW arrives at RAF Brize Norton on 28 August. Together with B-52Ds 80621 and 80617, the aircraft left for the U.S. again five days later. A new detachment of B-52s arrived on 10 September in the form of B-52Gs of 82BW. Also operating out of RAF Brize Norton, the latter stayed till 15 October supporting several NATO exercises. (Harry Parley-Hickman)





PORTES OUVERTES BRETAGNE, 14 SEPTEMBER 1980

(BRETAGNE, FRANCE). The biennial open day at this French air force test base, always displays many unique aircraft of the Armée de l'Air. Based at Brétigny, some 30kms south of Paris, the Centre d'Essais en Vol (CEV) is a test unit mainly involved in evaluation and development of military devices in cooperation with the national industry. Although CEV aircraft are generally based at Brétigny, the unit also has detachments at Istres, including ENSA for engine testing and EPNER for training of military test pilots.

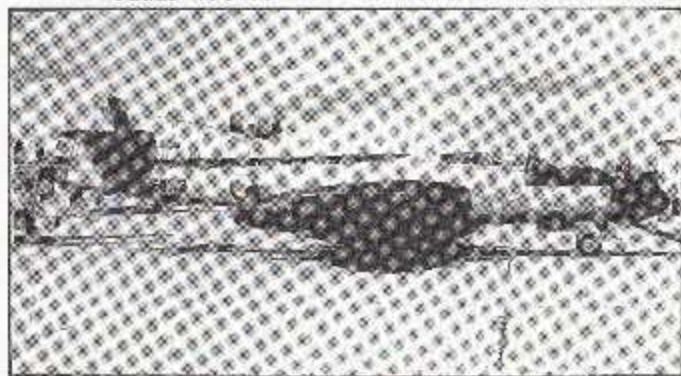
At 1400 hrs on 14 September, the air base opened its gates for the public. As usual the static display included many rare aircraft, like the Meteor NF.11, the Vautour with Mirage nose, and a Puma for testing new navigational instruments.

Also on display was Vautour IIN No.337 painted in a bright white/blue colourscheme. This Vautour is the test bed for the RDM Cyrano 500 radar, which will be installed in the Mirage 4000. This radar is an modified version of the Mirage 2000 radar giving additional air-to-ground performance.

ABOVE: Vautour IIN No.337, the test bed for Mirage 4000 radar systems.

MIDDLE: Mystere 50 No.131 (code CD), test bed for Mirage 2000 radar systems.

BELOW: Meteor NF.11 No.3, a chase plane used during radar tests. (Photos: Saul van Gers)



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F-5E Tigers debut at Swiss air force championships

AVIA-Meisterschaft der Fliegertruppen, 21 till 24 August

(DÜBENDORF, SWITZERLAND). This year was the first time F-5E Tigers of nos.11 & 18 Staffeln participated in the Swiss Flugwaffe championships. By late August, when the championships were held, the Flugwaffe had accepted 53 F-5E/F Tigers and 72 pilots had converted to these new aircraft. Although only little experienced on the Tiger IIa, the pilots of nos.11 & 18 Staffeln proved to be the best in their specialization as air defenders.

AMEF: an all-round air force competition

Annually the organization of air force pilots (AVIA) section zürich, invites volunteers from various air force units to participate in AMEF. In 1957, when this meet was known as AVIA-Meisterschaft der Flugwaffe, the event was started as a kind of competition amongst air force pilots, then flying Vampires and Venoms in the ground support role. Today's championships are an overall air force event, also including support and communication elements. This year the units could show off their skills in the various specialization categories, which were:

- Frontstaffeln (Front-line aircraft units)
- Leichtesfliegerstaffeln (Light aircraft units)
- Fallschirmgrenadiere (Paratroopers)
- Fliegerbodentruppen (Anti aircraft troops)
- Nachrichten/Übermittlungs- (Communication groups)
- Formationen
- Beobachtungs- & Melde (Observers corps)
- Formationen

Swiss Hunter, Mirage, and Tiger pilots competed for 'Meister der flugwaffe' title

The front-line units competed with Mirage IIIs, Hunter F.58s and Tiger IIa, while the light aircraft units competed for the 'Best light aircraft pilot' with Alouette II/IIIs and Porters. All fighter jockies had to fly a combat mission first, followed by an 8-minute aerobatic programme to be flown in a P-3 Pilatus. In addition to some athletics events, all pilots were tested on their knowledge on foreign aircraft recognition and emergency procedures practised in a simulator. The fighter jockies were really in their elements in their specialization, when the Mirage IIIs, Tiger IIa and some Hunter F.58s competed in the air defence part of the championships, while the remaining Hunters competed in the ground support part of the championships.

An air defence mission contains the following items:

- Identification of an approaching aircraft, time being a scoring factor
- Four gunsight film attacks on a target plane flying a known track
- Ground controlled interception by two aircraft of one known 'enemy' which attempts to 'fights back' time again being a scoring factor
- Defensive evasion of an 'enemy' aircraft which attacks from behind and counterattack with a 'kill'

A ground attack mission contained the following items:

- Navigation and object recognition in a target area, time being a scoring factor
- Attack of an anti-aircraft-artillery target
- Visual reconnaissance of an 'enemy' camp, represented by target banners.
- Defensive evasion of an attacking 'enemy' aircraft

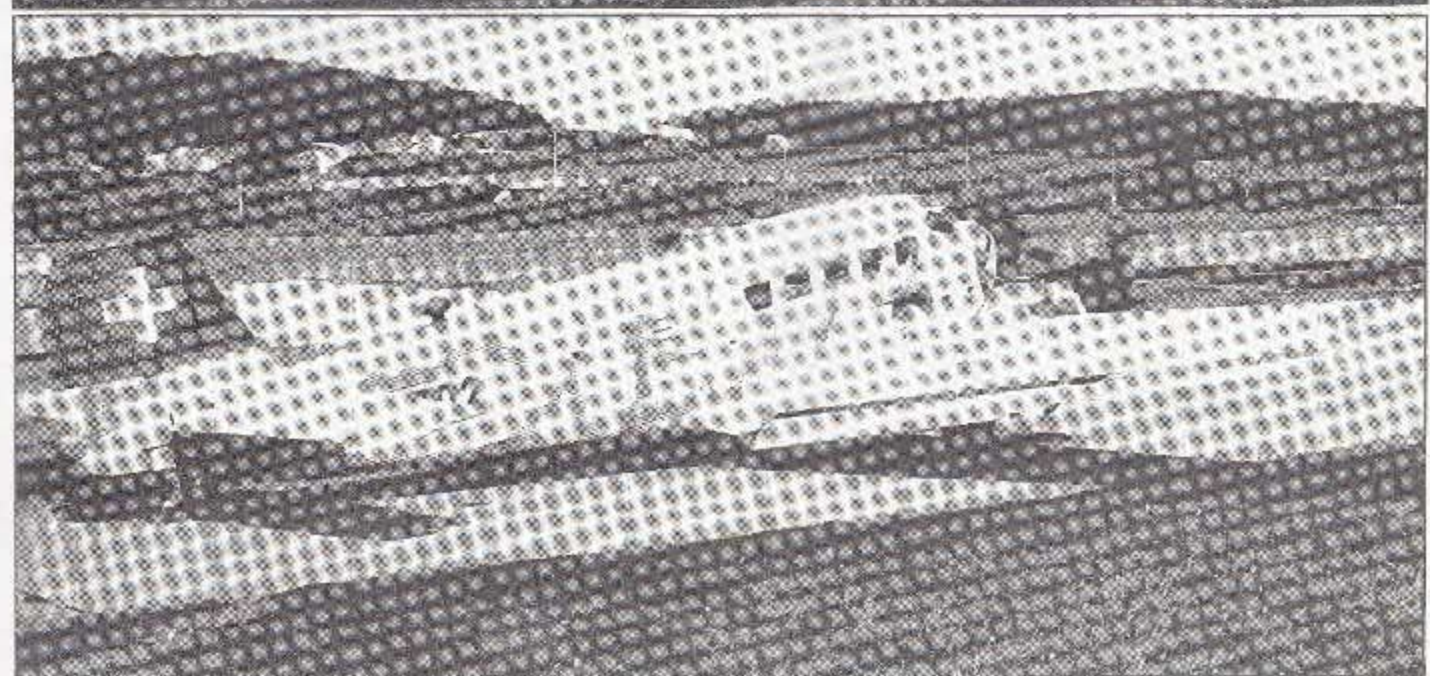
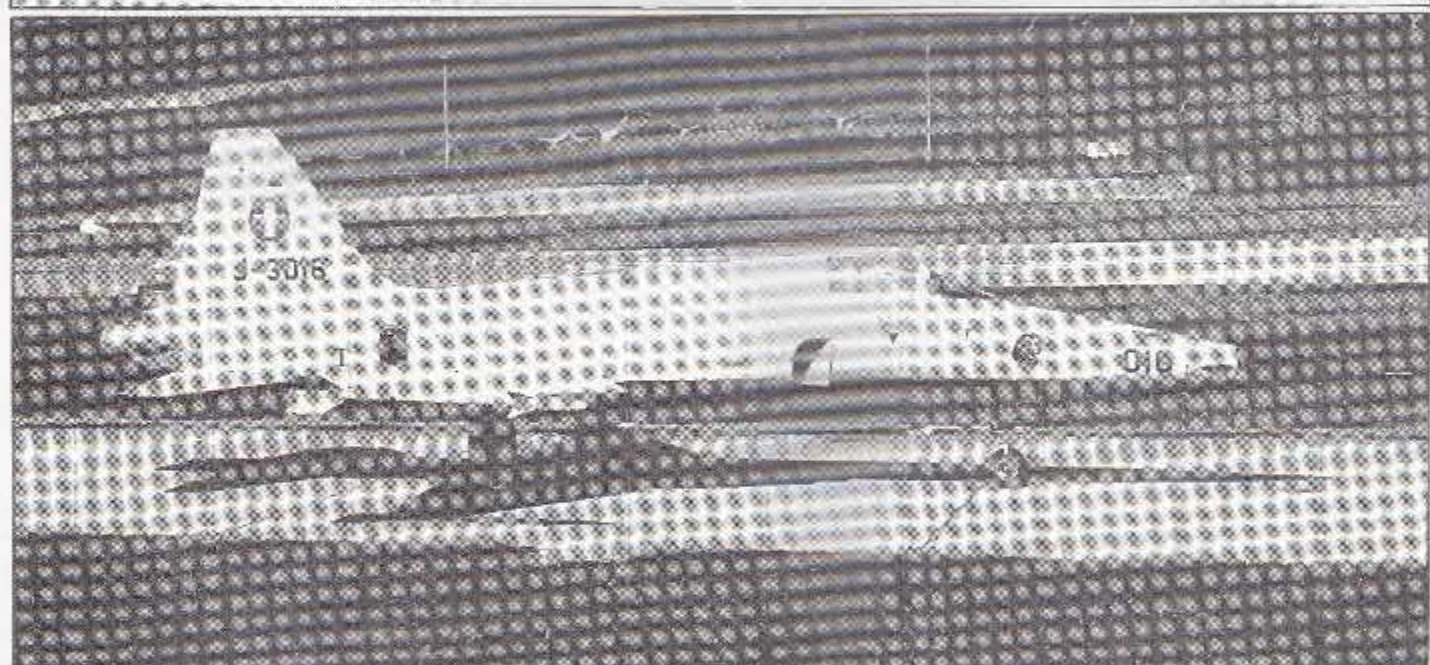
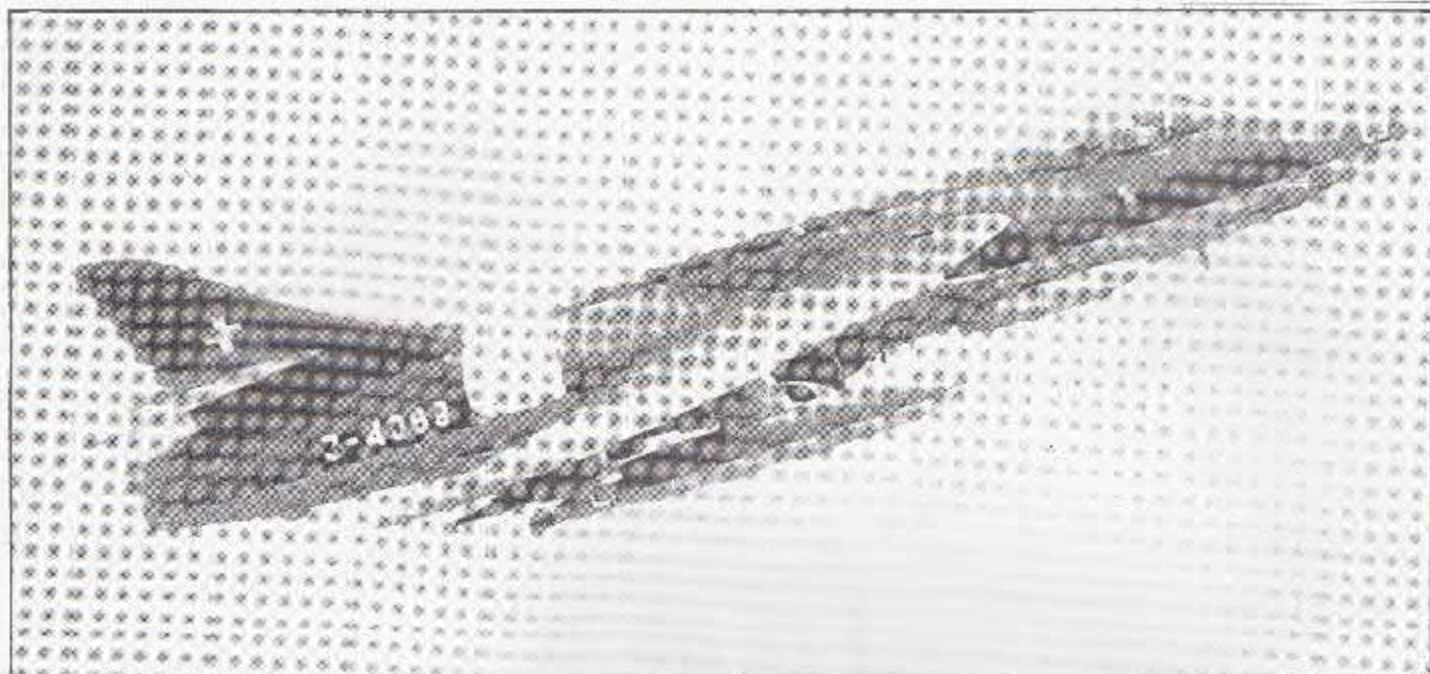
For the pilots of the Alouettes and Porters time played an essential role in all the various missions to be flown for the championships, as they were navigation, reconnaissance and transport. For them athletics were also a part of the competition, as well as theoretical test on their knowledge of tactical and technical procedures.

All three Swiss Jü-52s in AMEF's air display

As every year the AMEF is concluded with an air show. On Saturday 24 August, the Patrouille de Suisse aerobatic team performed with their six Hunter F.58s, a PC-6 Turbo Porter and an Alouette III showed their fire fighting capability, and two Mirage IIIs took off demonstrating the impact of Jet Assistance Take Off (JATO) rockets in shortening the runway length needed for a take off. And what would a proper air show at Dübendorf be without the demonstration of a Junkers Ju.52/3m. Three of these aircraft are still being operated by the Swiss air force out of Dübendorf, despite the fact that this aircraft type made its first flight 50 years ago on 13 October 1930.

For the first time since the late 1960s, when the Mirage III was introduced, AMEF 80 included a new aircraft type: the F-5E Tiger II. Within the Swiss Flugwaffe, the Tiger IIa replace the Hunter in their air defence role. All Hunter units therefore will become primarily ground support units, replacing the Venoms. The Venom in its turn will remain in service with three units for pilot training purposes only.

(Photos: Paul van Oort)

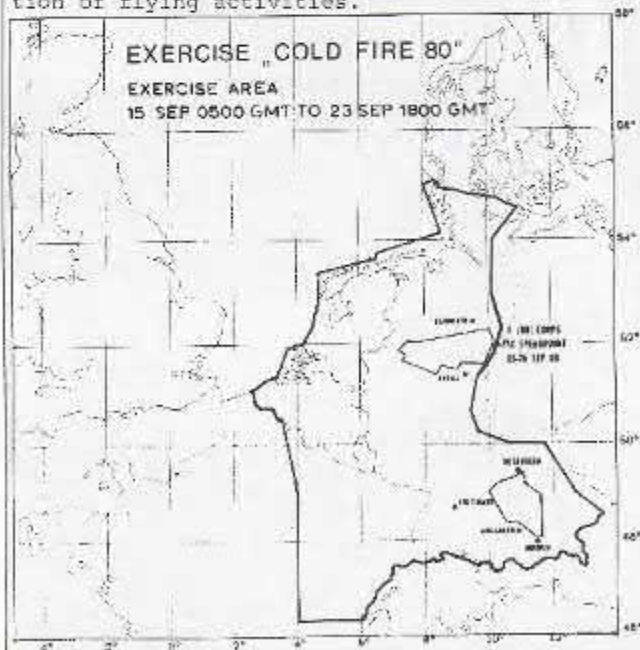




AIR: Morning fog cooled Cold Fire 80

A report on air activities during exercises Autumn Forge 80 and Cold Fire 80

(GUTERSLOH, W. GERMANY). "The Autumn Forge series of exercises is a learning experience; it is not a demonstration of military might. In no other way we can build the confidence and the competence, the cooperation, the trust, so essential to allied military solidarity". This was stated by the Supreme Allied Commander, Europe (SACEUR) General Bernard W. Rogers, during the inauguration ceremony of the Autumn Forge 80 exercises. Autumn Forge 80 is the overall name for a large series of exercises which were held by NATO during September and October. As far as aviation was concerned, highlights of Autumn Forge 80 were Starlifters flying in straight from the U.S., dropping paratroopers in the battle zone, and participation of the world's largest nuclear aircraft carrier, the USS Nimitz. Low point was the bad weather which caused the reduction of flying activities.



Autumn Forge 80 contained three major exercises, Crusader 80, which was conducted in Northern Germany, Teamwork 80, which involved an invasion in Norway, while, as usual, the tactical air element of these exercises was compromised in Cold Fire. This article describes the involvement of aircraft and helicopters in the various exercises.

Big air transport operations in support of reinforcements

The largest exercise in the framework of Autumn Forge was sponsored by the United Kingdom and included elements of the annual U.S. exercise Reforger. The first part of this exercise, Crusader 80, involved the deployment of British and U.S. troops to Europe's mainland. The more urgent material for these troops, which had arrived by sea in Holland and Belgium, was immediately transported by air from Ypenburg, Holland and Antwerpen, Belgium to the exercise areas in W. Germany. The latter airport saw 27 Hercules and 25 Transall flights during the second week of September alone. Some U.K. reinforcements arrived directly by air at Düsseldorf and RAF Gütersloh. Civil transport aircraft used to move 8,100 soldiers included Britannia Airways' Boeing 737s, 747s, Tristars and VC-10s of British Airways, as well as VC-10s of the RAF. Air transport for Reforger, the redeployment of U.S. forces to Germany, arrived via airports in the Benelux, Britain and of course Germany. The Americans, too, used commercially contracted aircraft, although most of the airlifted Army troops and equipment arrived in USAF Starlifters.

Starlifters were also used as tactical transports for an impressive operation during exercise Spearpoint, which was part of Crusader 80. After a nine hours' flight from Pope AFB on September 18th, 600 paratroopers and equipment were directly dropped over the battle zone in the Lühnde area, W. Germany. Two C-141Bs carrying equipment and vehicles flew the nine hours non-stop, refuelling over England. These two cargo aircraft were followed by

LEFT: A Harrier GR.3 of RAF Germany on display during the inauguration ceremony of Autumn Forge at Gütersloh on 8 September.

RIGHT: Three photos of F-104G 22-04 being serviced by ground personnel of JABOG-35 on 17 September.

eight C-141As which had made a fuel stop at Westover AFB, Massachusetts. The paratroopers of the 82nd Airborne Division, were only six minutes late, showing the quick response capability of the U.S.A. during conflicts, and the great potential of the C-141Bs with their in-flight refuelling capability. Bearing in mind that the USAF will have 250 C-141Bs on strength by 1982, fifteen thousand paratroopers with equipment, could theoretically be dropped at any point outside the USA within twelve hours.

Cold Fire 80 hindered by morning fogs

The real flying, which is how fighter aircraft flying is often characterized, had to cope with low visibility, especially due to morning fogs. The Cold Fire exercise had been planned to comprise some 12,000 sorties between 15 and 26 September. All requests for these missions came from field commanders asking for air coverage. Two aircraft Support Operation Centers (ASOC) translated the requests into taskings for air force units. Requests for Northern Germany, mainly for Speerpoint, were relayed to the ASOC at Kalkar, in Southern Germany, mainly for Sankt Georg and Certain Rampart, they were relayed to the ASOC at Sembach.

Air Forces involved in Cold Fire included the Armée de l'Air which participated with Mirage IIIs and Jaguars. Initially the Belgian Air Force had also planned to generate 850 sorties, involving Starfighters, Mirages and F-16s. However, due to lack of fuel, all Belgian sorties were cancelled.

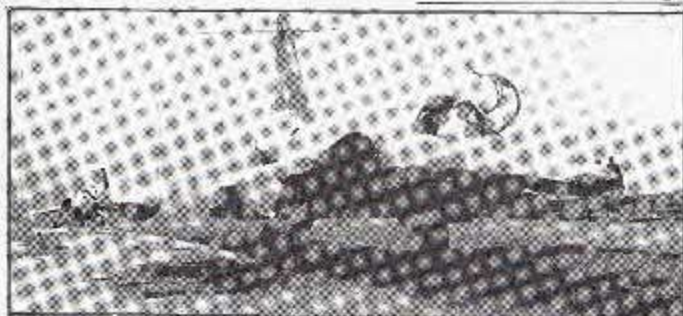
The missions during Cold Fire were all hindered by morning fog covering the battle areas. For 2nd ATAF the amount of sorties flown was 2,700, only half the amount originally planned.

Reinforcements of air force elements during Cold Fire included Crested Cap with 48 F-4E Phantoms of 4TPW at Ramstein, RAF Jaguars of 54Sqn at Wildenrath, and RAF Harriers of 15Sqn at Gütersloh.

Many cross-services practised during Cold Fire

Apart from generating an enormous amount of sorties Cold Fire also included many cross-servicing exercises. In war-time conditions is it very well possible that a fighter pilot will not be able to return to his own air base because it is destroyed or damaged. In these circumstances he will be forced to divert and operate from a different field. At the latter air base, the ground personnel must, therefore, be able to service the aircraft for a possible next mission.

Simulated diversions of sorties in support of Cold Fire 80, confronted the ground personnel at many an air base with a wide variety of unfamiliar aircraft types. Like a German pilot of JABOG-33, who diverted his Starfighter into Pferdsfeld. In three days he had flown four sorties of 80 minutes, all in support of Phase I of Cold Fire, over the battle areas in Southern Germany. Two of the missions he had flown, were in co-operation with French Mirage F.1Cs. Only one hour before take off, mission tasking arrived in his squadron's ops-room, directly from Sembach. In this short period, the pilot had to plan the mission, select the weaponry, determine time over target (TOT) and make an attempt to get his 1-0-4 airborne. When returning from his fourth mission he was tasked to divert to Pferdsfeld for a cross-servicing. The ground personnel of JABOG-35, normally servicing only F-4F Phantoms had to demonstrate their ability to make the 1-0-4 attain mission-ready again as quickly as possible. Upon arrival the post-flight checks were done, the wing protectors attached, the aircraft refuelled, the cockpit checked, weaponry attached to the underwing pylons. A final run through the checklist and the Starfighter was operational again. Fortunately for the pilot, he did not immediately receive a new tasking, and he was clearly relieved.



WHAT WAS AUTUMN FORGE 80 ABOUT?

The annual series of Autumn Forge exercises was initiated by SACFOR-Europe in 1975. Every year it comprises a number of national, multi-national and NATO exercises, conducted each autumn throughout Allied Command Europe's area of responsibility from Northern Norway to Turkey's eastern border.

According to tradition Autumn Forge is inaugurated at an air base in Germany by the Supreme Allied Commander Europe. This year SACFOR-Europe, General W. Rogers, did so at RAF Gütersloh on 8 September. In his opening speech he pointed out that the importance of Autumn Forge lay in increasing the confidence and allied military solidarity which has never been more necessary than now in the critical first half of the 1980s. This in relation to the Russian invasion in Afghanistan and the situation in Poland as German Minister of Defence Dr Hans Apel added later on in his opening speech.

Dr Apel also urged the soldiers, although it would be difficult in the given situation, where possible, to avoid harm and damage to civilian property in the exercise areas. "No one whose garden is flattened by a tank will be particularly happy about it, not even if he were compensated later on for the damage done". Because of experiences gained from previous NATO exercises, all exercise areas were monitored prior to Autumn Forge to be able to determine the extent of the damage likely to be done to civilian property.

All air activities providing cover for all ground actions between 16 and 25 September were combined in exercise Cold Fire. According to the exercise scenario 1,000 sorties would be generated every day, of which some 400-600 in support of Speerpoint only. Early morning fog, however, prevented 2nd ATAF and 4th ATAF to accomplish all planned sorties.

Cont. on page 13.



SEA: Teamwork is a USS Nimitz tradition

A report on NATO naval exercise Teamwork, 15-23 September

(WILHELMSHAVEN, W. GERMANY). Just outside the German naval port at Wilhelmshaven, the U.S. aircraft carrier USS Nimitz dropped its anchors on 1 October. The USS Nimitz came from a similar good-will visit to Portsmouth, U.K., after participating in a series of three European naval/air force exercises in the Atlantic Ocean, the Norwegian Sea and the North Sea. Together with the USS Saipan and the USS Iwo Jima, it provided air support for a convoy exercise, an amphibious exercise, and would have participated in Cold Fire, but because of heavy fog over the North Sea, all missions for the latter exercise had to be cancelled.

Around the clock surveillance for the reinforcement convoy

Playing the key role in naval exercise Teamwork 80, as far as air support was concerned, was nuclear powered USS Nimitz, which was the only aircraft carrier involved. With 77 aircraft aboard, it launched a wide variety of missions to protect the Standing Naval Force Atlantic (STANAVFORLANT) during a convoy exercise and an amphibious exercise.

For the USS Nimitz it all started late August with exercises United Effort. An impressive convoy consisting of cruiser, destroyer, tanker, replenishment and amphibious vessels left for Europe to exercise the supply of reinforcements and materials from the U.S. to European harbours.

USS Nimitz sailed along with its Carrier Air Group (CAG) tasked with Combat Air Patrols (CAP) and anti-submarine patrols (ASW). The CAG used its F-14A Tomcats of VP-41 and VP-84 to fly CAP stations over the convoy, while the S-3A Vikings of VS-24 maintained 24 hours surveillance around the convoy against 'enemy' submarines.

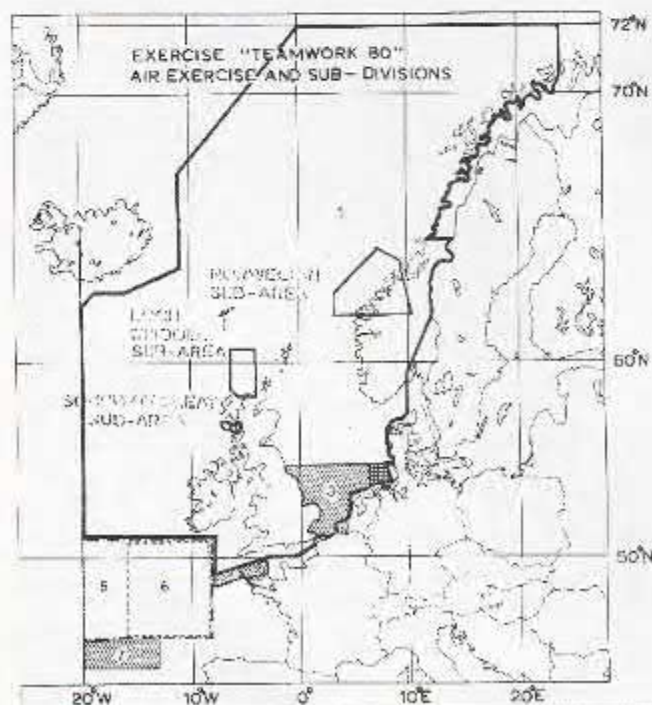
Nearing Europe the convoy entered exercise Teamwork 80, when the various vessels tried to reach European harbours under many simulated attacks from other surface vessels, submarines and aircraft. For the latter the exercise scenario called for 400 aircraft operating from W. Germany, Iceland, Norway, United Kingdom and the U.S.

While the convoy steamed up for the harbours, the USS Nimitz and two airborne assault vessels, USS Saipan and USS Iwo Jima, steamed towards the Scottish coast to prepare for the second major effort of Teamwork 80: an amphibious landing on the Norwegian coast.

Originally it had been planned to have a rehearsal on the Scottish coast near Cap Wrath, including fixed wing and rotary a/c, but bad weather caused high seas and prevented the assault force from going ashore. Instead the assault force of 160 vessels steamed to Kristiansund for the climax of Teamwork.

Phase II: an amphibious landing in the Sunndals Fjord

While the USS Nimitz took up position some 100 nm off Kristiansund, the amphibious 'Blue forces' sailed up the fjord in the night of 17 and 18 September. At four o'clock in the morning in the pouring rain, the US 4th Marine Amphibious Brigade disembarked some 65km inland. For the first time



the enormous amphibious force of 1500 men practised in the dark using infra-red vision devices. Some moments later a similar landing took place, involving the UK/NL Amphibious Landing Force. Once the landing areas had been cleared from enemy forces, some 16,000 men and their equipment were brought ashore to repel the 'Orange forces' to the ENDEX-line (END of Exercise) by 24 September, which ended Teamwork 80.

CAG fought its own air war

Because of the space needed to manoeuvre into the wind for aircraft launching, and so as not to block the fairway of other 'Blue force' vessels, USS Nimitz provided the air coverage for the assault landing from some 100 nm off the Norwegian coast. The aircraft carrier stood alone in its double role to intercept 'Orange force' aircraft from the W.German, Norwegian and US air forces, and to give simultaneously ground support to the 'Blue force' assault troops.

The F-14A Tomcats of VF-41 'Black Aces' and VF-84 'Jolly Rogers' flew CAP stations over the exercise area to prevent 'Orange force' aircraft from attacking the assault troops. The A-7E Corsair IIs of VA-82 'Marauders' and VA-86 'Diamond Backs' attacked land targets in support of the assault troops, while the A-6E Intruders of VA-35 'Black Panthers' did a similar job but on targets obscured by bad weather or complete darkness. The aircraft playing the most essential role in the CAG were the three E-2C Hawkeyes of VAW-124 'Bullseye Hummers'. The two-way data-link with the F-14A Tomcat enables the Hawkeye to act as an airborne control post and pass on information to the weapons officer in the back-seat of the Tomcat about the 'enemy' aircraft's heading, speed and altitude. A similar data-link with the A-7E Corsairs makes the Hawkeye a command post directing the attack aircraft to the area of rendezvous, and providing it with information on terrain characteristics and hazards.

It is not entirely true to state that USS Nimitz was all on its own, as a detachment of U.S. Marine Corps AV-8A Harriers operated from the amphibious assault ship USS Saipan. Directly assigned to the 4th MAB, the AV-8A Harriers supported the marine troops during their assault landing and subsequent efforts to reach the ENDEX-line. For this purpose the 4th MAB also disposed of OV-10A Broncos acting as Forward Air Controllers (FAC) directing the attacks of the AV-8A Harriers, A-7E Corsairs and A-6E Intruders from close by.

Other airborne elements involved in the assault landing were CH-46F Sea Knights and CH-53D Sea Stallions operating from the USS Saipan, USS Iwo Jima and USS Trenton, flying U.S. marine troops into the battle area. Similar missions for the UK/NL Amphibious Landing Force were flown by Royal Navy Wessex HU.3s of Nos.845 and 846 Squadrons.

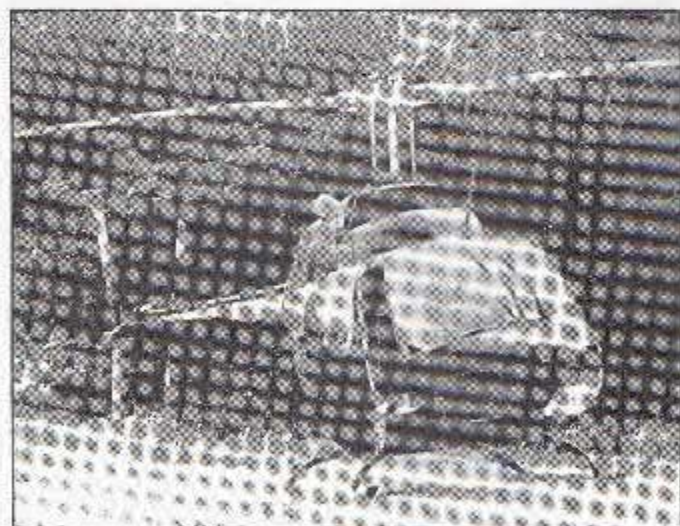
Carrier Air Group Commander Fred Lewis told FLASH during an interview on board the USS Nimitz at Wilhelmshaven, that the series of three exercises provided the CAG with an excellent opportunity to practise in all its facets. "United Effort was a great experience for the Viking crews flying around the clock, while Teamwork required all mission variants flown by CAG, being ASW, air defence and ground support. Unfortunately the four days planned to participate in Cold Fire exercise, were reduced to only a half day because of fog over the North Sea", according to Cdr. Lewis.

The USS Nimitz left Wilhelmshaven on 6 October, to return to its home port Norfolk, Virginia, where it had left on 27 August. The involvement in the three NATO exercises not only tested the air power of the carrier but also the ability to go without replenishment throughout this very demanding tour. As the CAG did not go for a 100% during United Effort because of the two other exercises ahead, and because of rough seas during Teamwork, and the fog during Cold Fire, this facet of the tour could not be tested to its full extent. However, many flights were launched from USS Nimitz without encountering any logistic problems. □



Cont. from page 10

Whereas the defence system in Central Europe was mainly a land force, in NATO's Northern and Southern Flanks, the naval force forms the basis of the defence system. Subsequently Autumn Forge in these areas were mainly amphibious exercises. The annual exercise in the south is Display Determination which takes place in the North Sea. In the north this is mostly an amphibious exercise in the Danish Straits. However, every four years the North Sea is the scene for a big naval exercise, named Teamwork. This year nine NATO countries participated in Teamwork 80 with 60,000 men, 170 ships and 400 aircraft. Phase I comprised a combined task force of ships from the United States, Canada and the United Kingdom crossing the Atlantic and being opposed by U.S. submarines. Phase II was an invasion exercise in Norway of 16,000 men. For a week the advanced landing force prepared the amphibious assault. Mine sweepers of the Standing Naval Force Channel (STANAVFORCHAN) cleared a 30 nm stretch of the Norwegian coast to make way for the Striking Fleet Atlantic of Standing Naval Force Atlantic (STANAVFORLANT). With the coast and fjord cleared of 'enemy' elements, the mine sweepers guided the amphibious fleet 55km inland to the landing zone. The 4th British Amphibious Brigade landed in the middle of the night of 17 to 18 September, soon followed by 1500 marines of the combined British/Dutch Amphibious Landing Force. Once the landing zone was cleared of 'Orange' troops, the main force was brought ashore to mark the advance of 'Blue' troops to the ENDEX-line. (cont. on page 11)



UNIT STRUCTURE (in the field)

8 INFANTRY DIVISION

8 COMBAT AVIATION BATTALION

A COMPANY (HQ & Support)	B COMPANY (Attack)	C COMPANY (Attack)	D COMPANY (Maintenance)
	3 platoons	3 platoons	
73 OH-58A and 5 AH-1S per attack platoon			

LAND: Gone hunting tanks

A report from the Goodwood phase of exercise Spearpoint 80

(HILDESHEIM, WEST GERMANY). Imagine there is a battle going on on the plains South of Hannover. It is Monday, 22 September. The day has started cold and foggy. The attack by Orange forces, consisting of Chieftain tanks of the UK's 4th Armoured Division and M60s of the US 2nd Armoured Division, ground to a halt during the morning near Elze (25 km South of Hannover) after crossing the river Leine from the East. The open plains give the attacking tanks little cover against defensive action by the UK's 7th Field Force, the Blue forces. Should the Blue forces be joined by tanks, Orange may have to withdraw. Therefore it is imperative that any Blue tanks are found and knocked out as soon as possible. However, Orange's most versatile anti-tank weapon, the US Army AH-1S Cobra/OH-58A Kiowa team, is grounded due to the fog. The US Army's 8th Combat Aviation Battalion, normally based at Mainz-Finthen AAF, is deployed in the field behind the front line to provide this anti-tank ground support to the Orange forces. Each of the Battalion's Companies (see box) has established itself in a field adjacent to a piece of forest, to enable them to hide as much as possible from aerial reconnaissance. The helicopters are parked as close to the tree-line as possible, although, because they have to be able to take-off at pretty short notice, they are not covered with camouflage netting. All tents and vehicles are positioned in among the trees.

PHOTOS: Taken during the anti-tank mission described in the accompanying article, these photos illustrate the Nap of the Earth (NoE) flying practiced by US Army OH-58As and AH-1Gs. At no time was 50 feet AGL exceeded. The last photo, on page 16, shows an AH-1G popping up out of the cover of some trees to simulate a TOW missile launch.

Bravo and Charlie Companies, the two attack units, are deployed well forward, though still some 15 minutes flying time behind the battle zone, while Alpha and Delta Companies are further back (some 25 minutes from the battle zone).

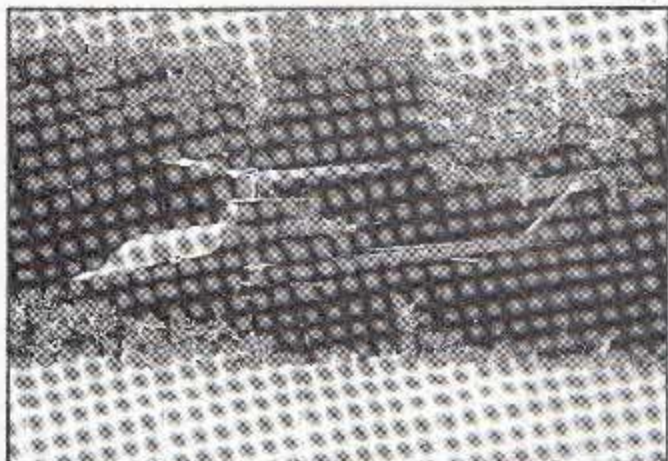
By the time the fog over the battle zone has lifted it is 1300 hrs. The weather is now better than the peace-time minimum, which remains in force throughout the exercise, and Bravo and Charlie Companies are 'launched'. The question remains whether the battle zone has been infiltrated by Blue tanks. We will soon find out.

We join a platoon of Bravo Company at a holding area just outside the battle zone. The slightly depleted platoon, consisting of three AH-1G Cobras (modified AH-1Gs, equipped with TOW launchers) and one OH-58A Kiowa, is on the ground in a plowed field, close to a tree-line. The crews are lounging around the aircraft. A few local civilians admiring the helicopters add a touch of peacefulness which belies the fact that the crews are on a seven minute alert. For the platoon's two other Kiowas are out looking for a target for the Cobras to knock out.

CONDITION ONE:

seven minutes from tasking to take-off

At 1433 hrs the word comes through on the crews' portable transceiver that a target has been found. Within seven minutes the four choppers forming the platoon's gun team are airborne, followed by UH-1H 16416 of 8 CAB's Alpha Company, crewed by Capt. Freeman, Lt. McCoy and crew-chief Sgt. Garcia; the Huey served as a photography aircraft during this mission. The gun team's first task is to meet up with the scout team, the two Kiowas which have found a target. They fly as low as possible, using every scrap of cover they can find: trees, even shallow folds in the terrain. They slowly cross a large, sloping field with the skids a bare 50 cm above the plowed clay. They fly underneath all but the lowest electrical wires, because their main concern is not to expose themselves against the sky. As we approach a field next to a small village we spot the two Kiowas of the scout team, which settle in the knee high crops in the field and are joined by the Kiowa of the gun team. The three Cobras take up defensive positions in a circle around the Kiowas. The six choppers sit in the field with the engines running while the leaders of the gun and scout teams confer with the platoon commander on tactics, face to face to minimize radio traffic. After a short time, perhaps five minutes, they all take off again to try and find the target. One Kiowa goes off in another direction to provide reconnaissance on the others' flank, so as to be able to warn the Cobras should enemy forces approach them from the rear or side, where they are very vulnerable to small arms fire. As they fly to the target area they try to stay invisible from the ground by flying behind the crest of a low hill, behind houses, and along tree-lines, against which the dark green camouflage of the helicopters is virtually impossible to see. Only the odd reflection off a rotor blade might give them away, and the Army is working on that problem too. The only times they are exposed against the sky is when they have to lift over low wires or houses. Capt. Freeman commented: "In the exercise we fly over houses. In war we fly between them".



Cont. from page 14.

Autumn Forge saw the deployment of 30,000 British soldiers in British sponsored exercise Crusader 80, and 17,000 U.S. soldiers in U.S. sponsored exercise Reforger to reinforce German-based troops. Crusader 80 started on 1 September when the first of 10,300 Regular and 20,000 Territorial (reserve) Army soldiers started to arrive on the continent at four harbours and four airfields, by road and rail the soldiers all gathered at Sennelager, W. Germany, and split up again to be spread over the exercise area, which was situated just south of Hannover. The deployment of U.S. forces followed its standard procedures of previous years when equipment arrived mainly by sea via Holland and Belgium and the troops were flown directly to W. Germany from the U.S.A.

Upon arrival both U.S. and British reinforcements were involved in field exercise Spearpoint lasting from 15 till 26 September. The scenario of Spearpoint started with Phase 1 when 4th (BR) Armoured Division delayed the advance of the 2nd US Armoured Division representing 'Orange', while 'Blue' created their defensive positions. In Phase 2, the 4th (BR) engaged 'Orange' and 'Orange' started an offensive but 'Blue' fell back to the river Emme. Part of Phase 3 was called Goodwood, when 'Blue' managed to stop the advance of 'Orange'. Deployment of 3 US Tanker Brigade on the 'Orange' side, allowed 2 US Armoured Division to join 'Blue', and when Phase 4 started, 'Blue' successfully drove 'Orange' back, ending exercise Spearpoint.

Recovery of British and U.S. forces took place between 26 September and 4 October and included a small blitz at Brussels national airport. A full tri-axial refueling airway was held up here due to an air traffic controller's dispute and 300 men had to disembark and go home by sea ferries instead.

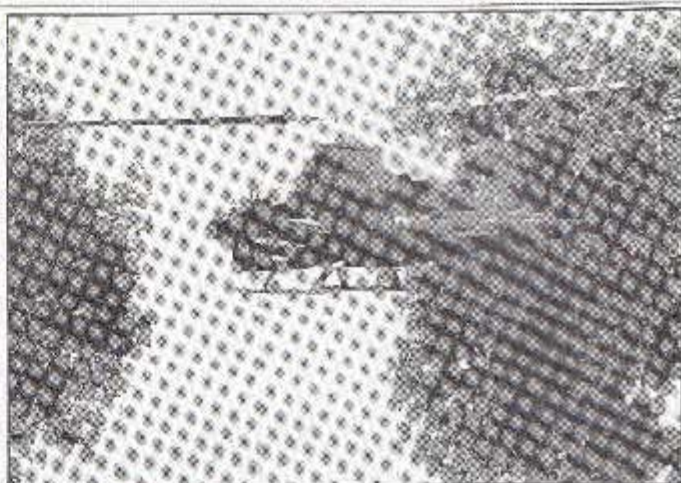
Concurrently with Spearpoint, no major army exercises were conducted in Southern Germany: Panzer Gekke, a German-sponsored field exercise, and Certain Rampart, a US-sponsored field exercise.

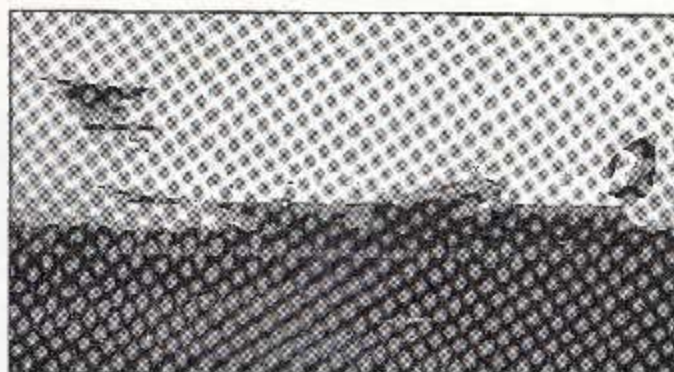
Hide-and-seek in three dimensions

Soon we approach the village near which the target was spotted just under 30 minutes ago. What follows can best be described as a deadly serious game of three-dimensional hide-and-seek. The problem is that the crews know, or think they know, where the target should be. But they cannot expose themselves until they know where the target actually is, and they can launch a TOW missile or shoot off a couple of grenades.

The Kiowas and the Cobras hide behind some trees and a farm building and creep about, trying to make positive visual contact with the target. It is now 1457 hrs. On the radio we hear: "Red 2, negative contact". (Red is the call sign for the scout team). One Cobra and one Kiowa go around one side of the village, the remaining two Cobras and single Kiowa around the other. We follow the latter, 1503 hrs: once more they hide and try to find the target. They think they see a tank some 1000 meters away at the base of a tree "... to the left of the barn". Slowly the two Cobras and single Kiowa edge closer, spreading out. The contact turns out to be a false alarm. Everybody continually checks the tree-lines, because they are favourite hiding places for tanks too. 1515 hrs: still no contact. At 1516 hrs, just as we turn away from the action to go back to Hildesheim because we are running low on fuel, the target is finally found. A Cobra pops up to launch a TOW, staying exposed above the tops of the trees for the few seconds it takes the wire-guided missile to reach the target.

But of course this was just an exercise. No tank was blown to pieces this time round. Apart from that, the mission we accompanied was real enough to give the Cobra and Kiowa crews the experience they need to survive and knock out tanks, real enemy tanks, whenever it becomes necessary. □





Galaxy 20224 of 418 M&W was the star of the 4th Air Cargo exhibition, which was held at Schiphol Oost concurrently with the Air Cargo Forum. The exhibition consisted of a large indoor trade fair, with stands of manufacturers, operators and service organisations filling a large temporary structure, behind which was parked the only aircraft on display, the Galaxy C-22.

Innovations - the key to Air Cargo

A report from the 10th Air Cargo Forum, 30 September to 3 October

(AMSTERDAM, HOLLAND). The 10th International Forum for Air Cargo was visited by many people from many firms and organizations concerned with Air Cargo, who all had their own views and perspectives on the problems and achievements of air cargo. However, they all shared a concern that the end of air cargo as a viable business is inevitable, if nothing is done about it.

To understand why this feeling predominated, it is necessary to look at the air cargo business from the point of view of the customer, or, in the jargon of the business, the shipper. This is indeed where the emphasis of the Air Cargo Forum lay. The shipper has a requirement, namely to transport goods from point A to point B, often within a certain time span. When the time span is short and/or the distance long, the air cargo mode would seem to be the obvious choice. Cargo aircraft, epitomized by the (civilian) Boeing 747F and the (military) C-5A Galaxy, certainly have the capability to transport even large bulky items from one continent to another in less than a day, much faster than surface transport. However, there are penalties to be paid for this achievement, which at any rate is limited in practice. The limitations lie in the ground sectors of the trip. Depending on how far the shipper and the consignee are located from the airports of departure and arrival, a certain amount of time is added to the flight time. This includes time when the cargo doesn't move at all. It often happens that a shipment which travelled e.g. 2,000 km in 2½ hours, spends the next two days sitting in an airport cargo terminal while its papers are being processed by customs or (worse) the airline or handling agent. On average, only 8% of the door-to-door time is spent in flight. World wide, air cargo is only 8% faster (door-to-door) than surface transport. In Europe, some road hauliers recently introduced cargo transport which is faster, and cheaper, than air cargo. One of these is the Australian firm IPEC which now operates its express freight system in Europe, and which claims to be faster (delivery within 24 hours between continental points) and cheaper than air cargo. IPEC's rates are claimed to be 20% to 40% less than IATA rates and about the same as non-IATA rates.

The penalties that must be paid, ultimately by the customer, for faster transport of cargo lie in the high costs inherent in air transport. Disregarding for a moment the wider costs of aviation to society, fuel cost is the ingredient which, more than any other, is driving airlines' operational costs ever upward. Aviation fuel has increased 167% in price since 1975, according to Shell, and continues to increase almost daily. The ratio of fuel costs to total operational costs has increased from roughly 10% to 30%. True, other forms of transport are suffering fuel cost increase as well, and the aviation fuel cost increase is pretty much in line with the general increase in oil prices. But it remains an increase in cost, no matter how you look at it.

As can be seen, the choice for air cargo is less obvious than it might seem. Air Cargo is expensive, not much faster, and not easy to use. The shipper

would like to see a flexible physical transport system (as shipment vary a lot in size and weight) and a simple rate structure. What they see is a fixed, containerized, transport system and a chaotic rate structure.

Who is going to break tradition?

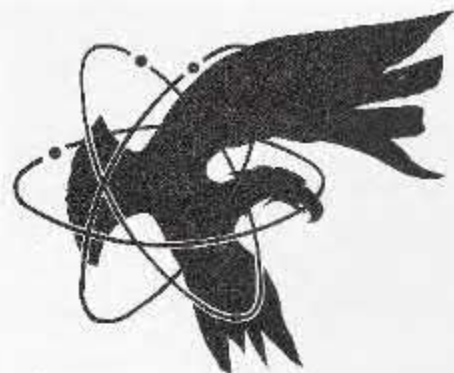
Some solutions to these problems may well be very simple. For example, as Mr. J. J. Tulp of NV Philips, a major shipper, suggested at the Air Cargo Forum, the problem of too large containers might be solved by a "box-in-box" using "a smaller air freight unit, matched to the standard container".

Rates are a more complicated matter, but still one which is reasonably within the airlines' control. That some airlines are aware such a problem exists is clear. However, there is no evidence that they are approaching the problem correctly. While they are changing rate structures, they remain complicated, and still vary from airline to airline. They are reducing rates, but the only effect this seems to be having is the erosion of profitability. A better solution might be a flat rate per kg for a given route, with possible discounts for flights during off-peak periods. Cargos which are difficult to handle, such as livestock or dangerous chemicals, might require a fixed surcharge.

Even such straightforward changes require a good deal of courage, a total commitment to innovation. It is all too tempting, in a time of recession and declining revenue, to entrench oneself in a tradition-bound position, just at the time when changes are vitally necessary. After all, one could reason, how can one know with any certainty that one has found the right answer, when the penalty for being wrong is bankruptcy? The answer to such reasoning is that one can't be certain, but that innovation is necessary, because the penalty for entrenchment is also bankruptcy. This might not have been so for the larger passenger/cargo operators if passenger transport were bringing in large profits.

Only if commitment to innovation becomes widespread throughout the air cargo, and the aviation, business, will more drastic changes in technology and the way business is done become possible. Somebody, however, must start the ball rolling. And that is the true significance of Redcoat's airship venture. Fuel efficiency must be improved. Airships offer a vast improvement in fuel efficiency. They are not now a conventional form of air transport, but if no-one dares use them, they never will become conventional.

This by no means describes the full spectrum of innovations discussed during the Air Cargo Forum. One thing is certain, events such as the 10th Air Cargo Forum can help the process of innovation along, especially when, as happened for the first time this year, the customer's point of view is considered in detail and with the active participation of the customers.



AIRLINE NEWS

Two UK routes awarded to Western Airlines

(WASHINGTON, DC, USA). Western Airlines' requests to operate services from Denver and from Anchorage to Gatwick have received US presidential approval. The requests now must be negotiated with the British government. Supporting authority for the two routes has been awarded to Northwest Orient (Anchorage) and Continental Airlines (Denver). This means that, should Western Airlines make use of its authority on the routes, the airlines with support authority will get full authority, and will operate the routes instead.

PanAm to restart New York to Paris service

(NEW YORK, USA). PanAm will start Tristar 500 services between Kennedy International and Paris Orly Airport on 1 April 1981. PanAm hasn't flown to Paris since 1975 when TWA and PanAm stopped competing on most of their transatlantic services in the wake of the 1973/1974 oil crisis.

Air Europe continues to grow

(GATWICK, ENGLAND). In spite of an overall decline in holiday traffic, British IT charter operator Air Europe, who now use five Boeing 737s, carried almost twice as many passengers in May, June and July 1980 (the first half of the summer season) as during the same period last year when they operated three 737s. The figures are respectively 220,000 passengers and 115,000 passengers. Load factors went up from 85% to 90%, and average aircraft utilization from 13.2 hr per day to 14.3 hr. 1979 was the company's first year of business, which they finished with a \$1 million profit. A good result for 1980 should enable Air Europe to weather what may become a bad winter for the holiday travel trade.

KLM runs into losses

(AMSTERDAM, HOLLAND). KLM has announced its first quarter figures (i.e. for April to June 1980), which showed a loss of DFL 12 million, compared to a DFL 30 million profit during the same period last year. This marks the end of a two-year long slide away from profitability for KLM. Fiscal 1978/79 was ended with DFL \$2 million over the year. Fiscal 1979/80, however, saw a reduction in profit to DFL 15 million. The loss recorded during the current fiscal year's first quarter, usually the high-profit quarter of the year, makes it likely that fiscal 1980/81 is ended with a larger loss, even if the second quarter would be profitable, which is unlikely.

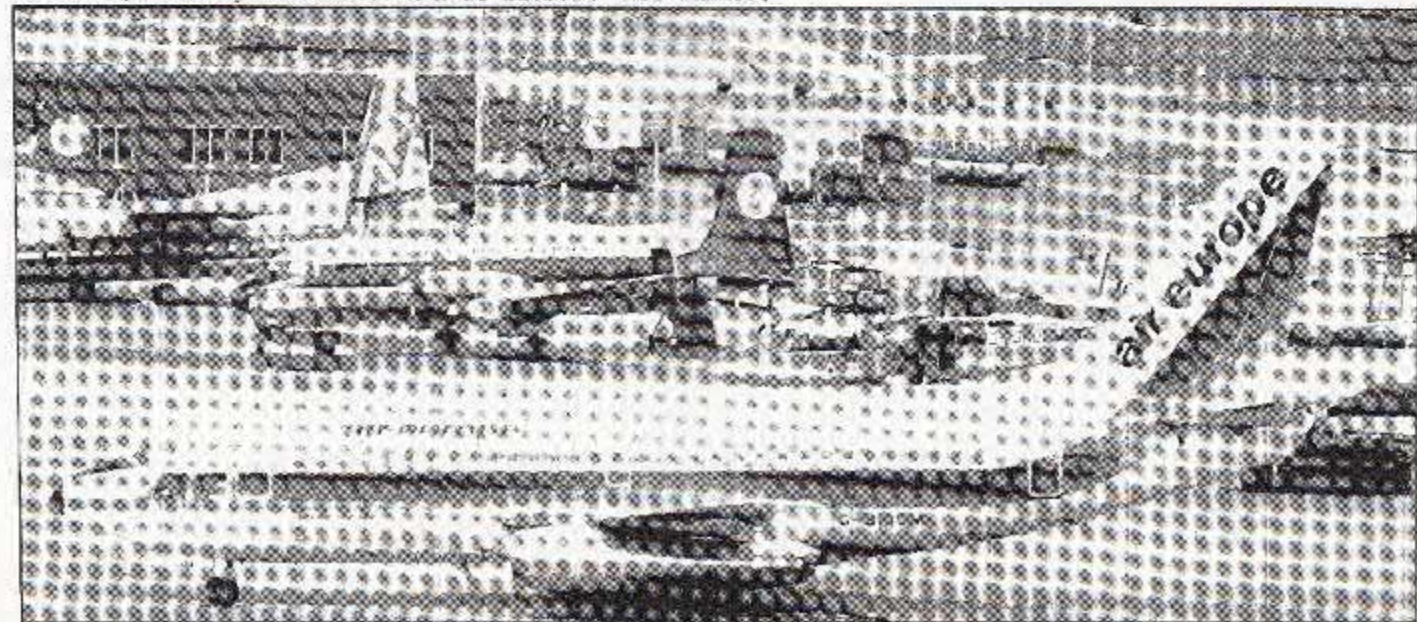
In order to return to profitability and to adjust to the smaller than forecast growth in traffic, KLM intend to reduce the growth in fleet capacity, and in staffing and other costs. There will be a few service cuts during off-peak periods (winter weekends). Two or possibly three DC-8-55Fs which were due to be withdrawn in 1984 and 1985 will be sold during late 1980, to be followed by the two remaining DC-9-15s. The lease of a VIASA DC-10-30 was ended last July, nine months before the original end of the contract. The only fleet additions planned, now that two DC-9-32s have been delivered, are two 747s, to be delivered before April 1981, and ten A.310s to be delivered between 1983 and 1986. These will replace some DC-9s and make the KLM fleet more fuel-efficient over all.

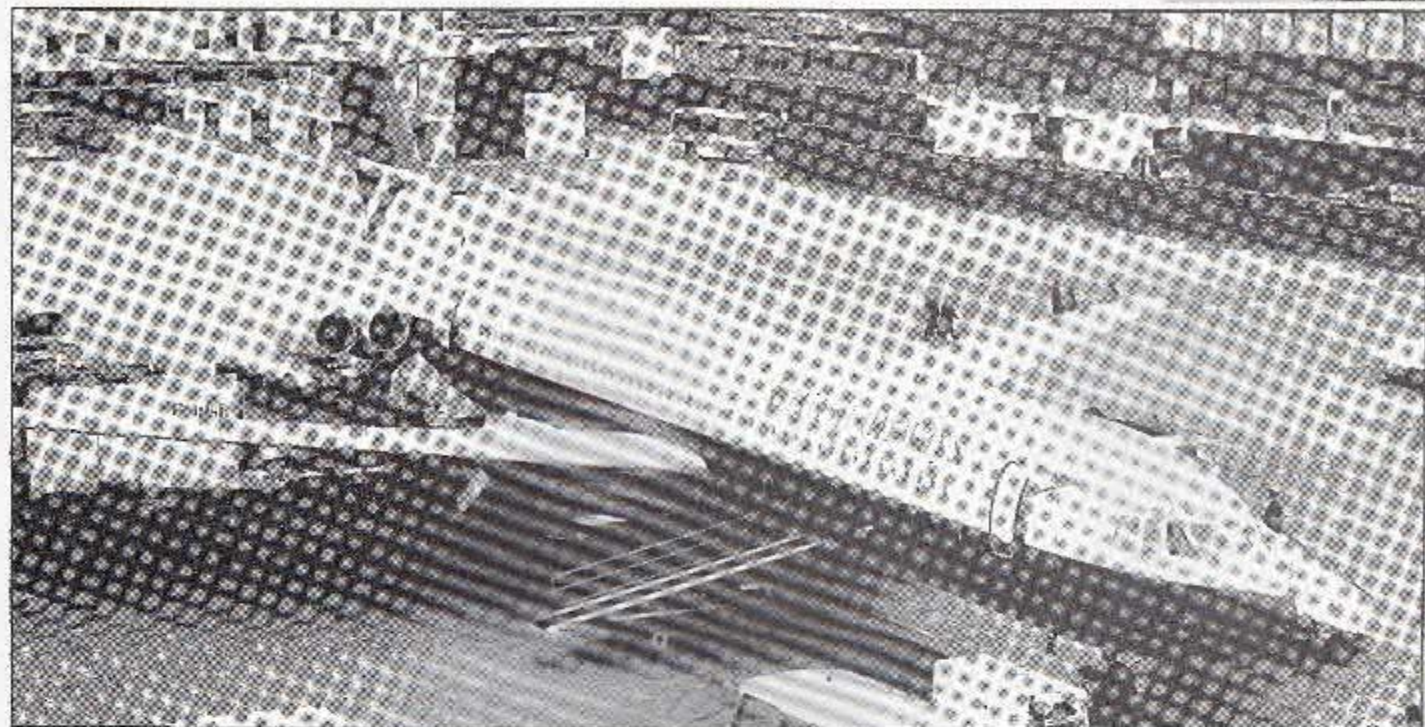
The loss is attributed primarily to a low growth in passenger traffic, coupled with a rapid growth in operating costs. The loss on passenger transport is so great now that the airline's other activities, which as a rule are profitable, cannot compensate.

British Airways to cut costs in order to survive

(LONDON, ENGLAND). A comprehensive package of cost-cutting measures has been announced by British Airways' chief executive, Roy Watts. The announcement comes after an unusually bad April to June quarter, during which £17 million was lost before tax. Heightened competition on the North Atlantic, with its concomitant fare cuts and low load factors, can become the last straw for British Airways, which already suffers from relative

Air Europe Boeing 737-252 G-BNSM at Gatwick this summer.





inefficiency and a large proportion of unprofitable routes in its system. The following measures will or are likely to be taken:

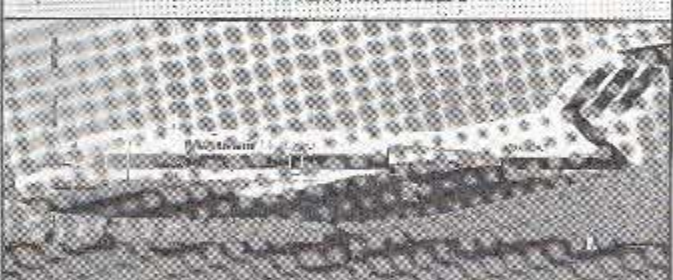
- **Service cuts.** From 1 November 1980 fifty services will be cut. These are all services which are losing the airline money, and they include the Concorde route to Bahrain and Singapore (which has suffered declining load factors, 56% last year to 40% this year, and lost £2 million per year), Gatwick services to Düsseldorf, Frankfurt and München (which often carried less than ten passengers per flight), Heathrow to Tokyo via Moscow, and Heathrow to Georgetown (Guyana). This will lead to a reduction in losses but will ground aircraft and crews.
- **Service reduction.** Many routes will have frequency reductions, including North Atlantic routes. This should lead to higher load factors and will reduce costs. Again, more aircraft and crews will remain idle.
- **Staff reductions.** It is planned to reduce staff by 2,000 per year through natural wastage, voluntary redundancies and early retirement. This will include at least some of the crews who become idle due to the service cuts. It will also reduce the surplus of staff which already existed. This will bring staffing levels in line with the amount of work to be done and reduce wage and salary related costs. Unnecessary overtime will also be reduced to cut costs.
- **Fleet reduction.** One Boeing 747 is being offered for immediate sale. More may follow. These are older JT9D powered aircraft. This will raise cash (to build up a cash reserve, which currently doesn't exist) and get rid of aircraft which would have been sitting on the ground uselessly. For the latter purpose, the VC-10s will all be withdrawn from service (during this winter, only two will remain flying, to be withdrawn in April 1981). These may be followed by the Boeing 707s.
- **Sale of unnecessary assets.** A number of buildings will be sold, and those which British Airways still needs for its operations will be leased back. British Airways is to reduce its involvement in the hotel business. While sales will raise cash, the hotels were sources of income, apparently not profitable ones though.

All these cuts should make the airline more efficient and balance out the costs vs. incomes equation to such an extent that money remains available to continue the airline's vitally necessary aircraft and ground equipment procurement program. There are no cuts planned here, although British Airways hopes to be able to postpone delivery of some Boeing 757s and the sixth Boeing 734 Commercial Chinook by a year.

First DC-9-80 delivered to Swissair

(ZURICH, SWITZERLAND). The first DC-9-80 to be delivered to an airline arrived at Zurich's Kloten Airport on 14 September, two and a half weeks after this version of the DC-9 received its FAA type certificate. Swissair expect to fly the first commercial service with the aircraft on 5 October, to London Heathrow. Their fifteen aircraft will be configured to carry twelve first-class and 123 economy seats, an increase of 15 economy seats over the airline's DC-9-51s, and delivery is expected to be completed by the end of 1981. D

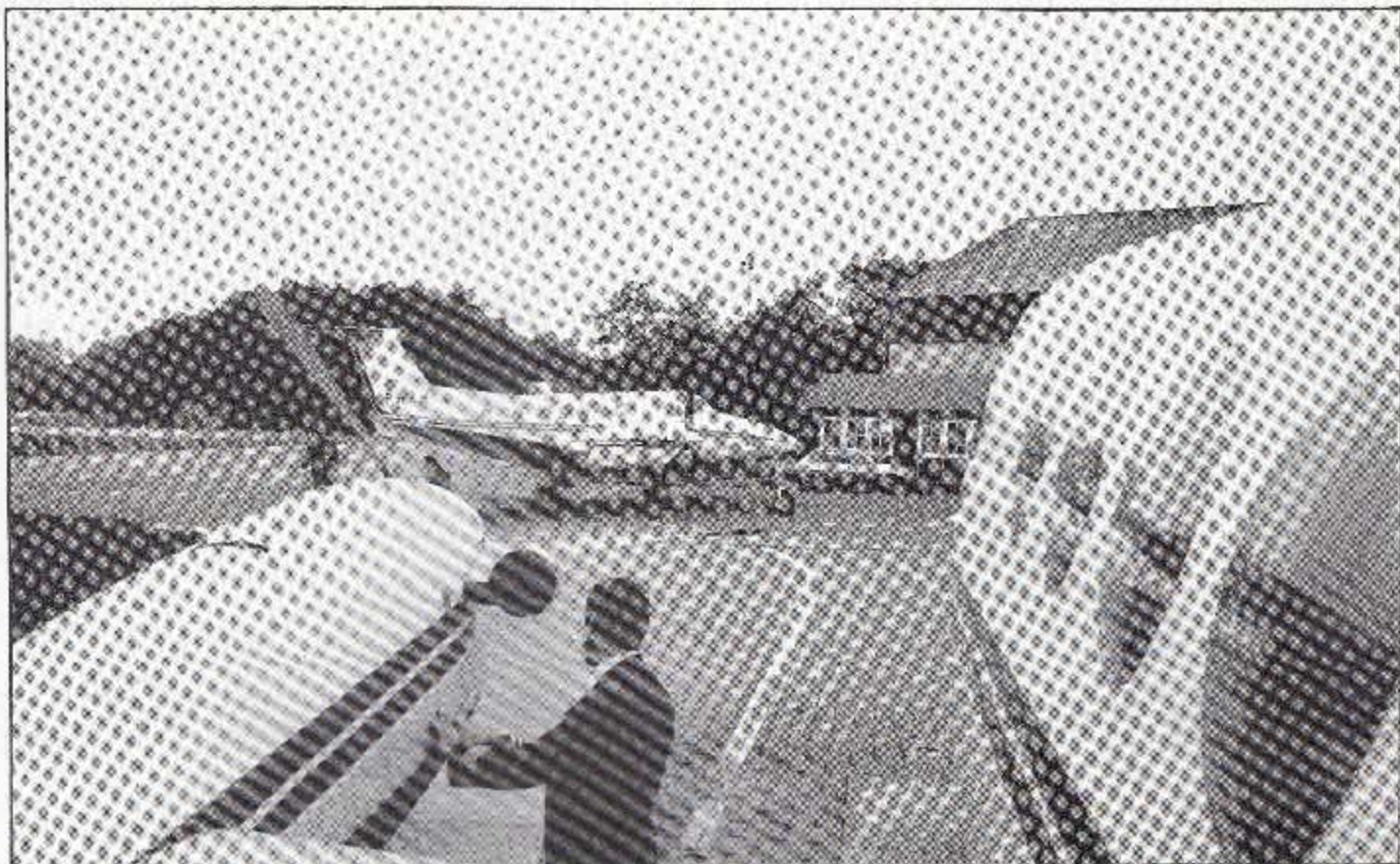
AIRLINER MARKET



AIR NEW ZEALAND has ordered two F.27-500s, their ninth and tenth of the version. The airline also operates nine F.27-100s. The two F.27-500s were ordered will be delivered in July and October 1981.

MARTINAIR has sold F.28-1000 RH-MAT to Ansett Airlines of Australia. The aircraft had been on a 10-year term lease from Fokker, which ran out on 1 October 1980, when Martinair bought the aircraft. Because of the aircraft's fuel consumption figures, which have become too high for Martinair, it had been planned well in advance that the aircraft would be sold. As soon as Martinair became its owner, a customer was found earlier this year. In Ansett who took delivery of the aircraft at Schiphol on 1 October.

TA has ordered three Boeing 747s for delivery between June 1981 and mid 1982 for its passenger services to the Middle East, Far East and South Pacific. These routes have seen such a increase in traffic that the company's DC-10-30s won't be able to cope beyond 1982. The DC-10s will eventually be sold, necessitating more 747s for the African routes.



PHILIPS FLIGHT DIVISION:

Standardized though flexible

(EINDHOVEN, HOLLAND). Recently, new business air-craft have been delivered to the Philips Flight Division. The Flight Division was set up 25 years ago to support the Dutch multinational Philips. This support always was supplied by a large variation of aircraft types, but with three new aircraft delivered, the optimal form of a standardized fleet has been obtained. As the chief of the Flight Division, J. Velenturf, said: "This standardized fleet doesn't interfere with our flexibility."

Falcon 50 also economical on short hauls

The Flight Division's flagship is the recently delivered Falcon 50, PH-ILR. The Falcon is used to connect Eindhoven, group headquarters of Philips, with offices and factories spread all over the world. For the longer distances, e.g. to South

America and the Middle East, an economical and comfortable aircraft was needed. The two candidates were the Falcon 50, which the Flight Division helped to develop, and the "wide-bodied" Challenger. The initial design performances of the latter turned out to be overestimated, as weight of the Challenger increased during the prototype construction phase which resulted in a decrease in fuel efficiency. The Falcon 50 however, is not only fuel efficient on long flights but also short (European) flights.

The three engined aircraft's operational costs per hour are almost the same as those of its little brother, the Mystere 20. The Flight Division's experience with the Mystere 20 and Falcon/Mystere standardization considerations, also led to the selection of the Falcon 50.

Now that the Falcon 50 is delivered, the Flight Division is very satisfied with it. On 5 September PH-ILR left for a route proving to South America to obtain certification for transatlantic crossings by the Philips Flight Division, and the aircraft is already in normal service in Euro-



HELICOPTER OPERATIONS PHASED OUT

After ten years of service, AB.206 Jet Ranger PH-PSW left the Flight Division early this year. The helicopter became too old, and operation costs were high. The Flight Division, still having a requirement for a helicopter, did look for a replacement. Main candidate was the Bell 222, being fast and capable of IFR (blind flying) operations. Although the type is IFR certified, the Netherlands RLD (CAA) prohibit IFR flights to and from points other than airfields. As this would result in much less frequent use, it was decided to purchase a fixed wing aircraft (King Air 200) rather than a helicopter.

pe, and hasn't experienced mishaps or even minor faults. The Falcon 50 of Philips has an eight passenger lay-out, which can be converted into four beds, if necessary on long trips.

Mystere 20 equals quality

The Mystere 20 has been the backbone of the Flight Division for more than ten years, and is likely to stay for another ten years to come. "The Mystere is quality", according to J. Velenturf, the maintenance costs curve is still improving and that's why the Mystere 20 would have lasted forever if it hadn't been for fuel efficiency which will make the Mystere uneconomical in the future. J. Velenturf has already thought of a replacement. However there is no aircraft currently in production with the same capacity, the same fuselage width, but of lower weight and having a better fuel efficiency than the Mystere 20. The Falcon 50 would be a perfect replacement, if it didn't cost DFL 16 million; the '50 has a larger range, larger fuselage, shorter take-off distance and has a nicer sound ("an aircraft doesn't produce noise"). Two of the four Mystere 20s are more than twelve years old. Despite their age, both Mystere 20s are still in excellent condition, as after each landing at their homebase, the aircraft are inspected for the slightest defects and smallest cracks. The aircraft have been overhauled completely (upto the primer) at least twice, including the installation of lights and instruments. "Even a car would last at least 35 years this way," according to J. Velenturf, "however, it's not payable for a car, but for an aircraft it is." Indicative of the Mystere 20s' quality is that there haven't been any accidents with the (four) aircraft in service with the Flight Division.

Cargo door on Super King Air adds versatility

The two new Beech Super King Air 200s which were delivered during September this year, complete the fleet. They replace the old single King Air 90 and AB.206 Jet Ranger. These aircraft were less productive than the other aircraft of the Flight Division. Due to disparity in quality, most passengers preferred the Mystere 20s. More profitable operations are expected of the King Air 200s which are characterized by the fuel economy (turboprops) and comfort. The King Air 200s will be used on short to medium trips in Europe, although the range of the aircraft is actually larger than of the Mystere 20. This range capability will be used by PH-ILG in particular. This aircraft has a cargo door which enables it to transport models and other small car go items. In principle, PH-ILG won't be used for bulk cargo, but more for urgent cargo suddenly needed at e.g. a Philips branch. Except for the lack of a cargo door, PH-ILH has the same characteristics as its brother PH-ILG, but flies in a six passenger configuration. Both King Air 200s have low pressure tyres which enables them to operate from airfields with grass runways.



PHILIPS AIR FLEET

REG.	TYPE	RANGE	T/O WEIGHT
PH-ILH	Falcon 50 B	5,500 km	13,500 kg
PH-ILG	Mystere 20 B	4,500 km	13,000 kg
PH-ILK	Mystere 20 B	4,500 km	13,000 kg
PH-ILM	Mystere 20 B	4,500 km	13,000 kg
PH-LPE	Mystere 20 D	2,300 km	12,000 kg
PH-ILG	King Air 200C	3,150 km	6,700 kg
PH-ILH	King Air 200	3,150 km	6,700 kg

With these seven aircraft the Flight Division has an aircraft for any mission. The missions are mainly passenger flights and some 15,000 passengers are transported annually. Orders for such flights come from Philips' own internal travel agency which receives applications from so-called "trip originators". These trip originators are some 300 people who may claim a flight at any time. Seats not occupied by these trip originators can be taken up by employees going the same direction.

The entire fleet is available at peak times, as maintenance is carried out by the Flight Division itself during quiet times like July and December. This summer saw the 100,000th flight hour, which figure was achieved in 25 years of flying operations. With the current fleet approximately 5,000 hours per year will be flown. This means on average 700 hours per aircraft. Four to five hundred hours are considered to be the break-even point for business aircraft.

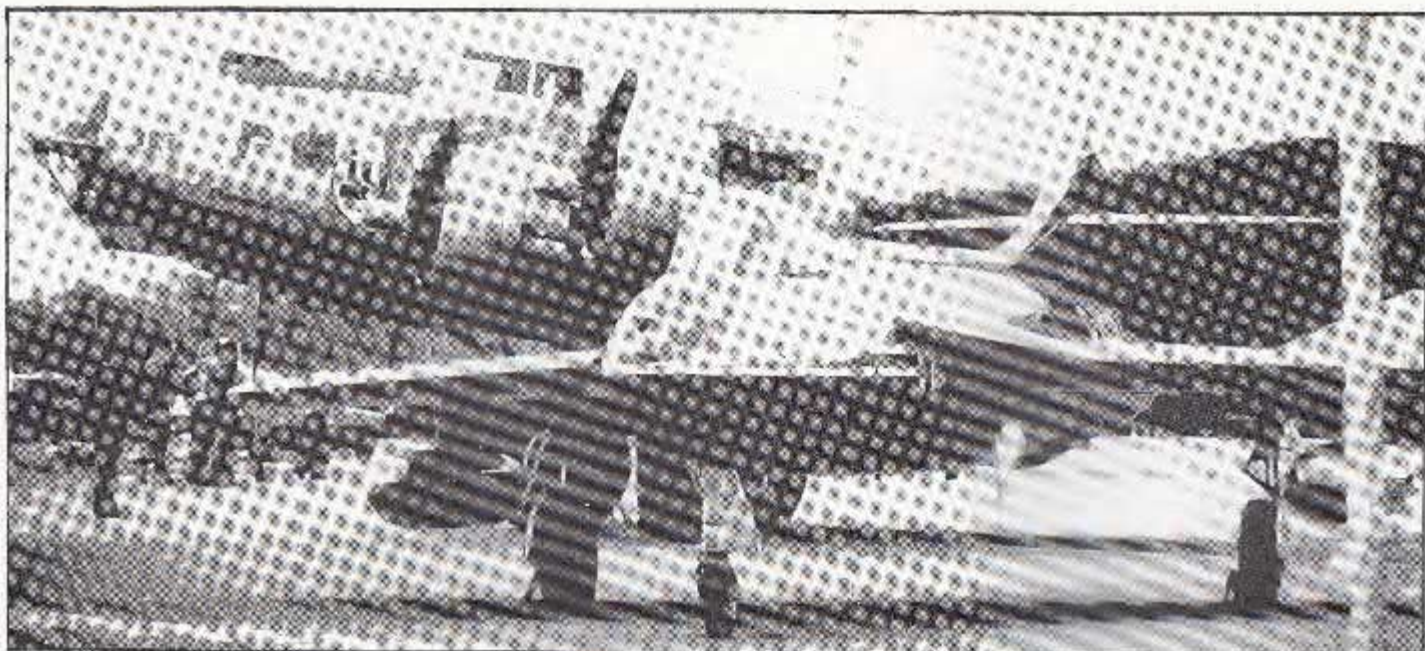
The enormous growth from a single Beechcraft D-18 to seven highly sophisticated business aircraft is illustrative of the need for aircraft in today's international business. With 70 employees and three types of aircraft, the Flight Division has combined low maintenance costs (due to standardization) and flexibility with economic operation.

TOP: Super King Air PH-ILH just arriving at the homebase from Groningen, a place regularly visited by Philips.

LEFT: Seen at this picture is the large luggage compartment under the Falcon 50s' 2 engine.

RIGHT: Although it looks like PH-ILH as a low tail, the hangar entrance had to be changed if they didn't want some 20cm tail being cut off!

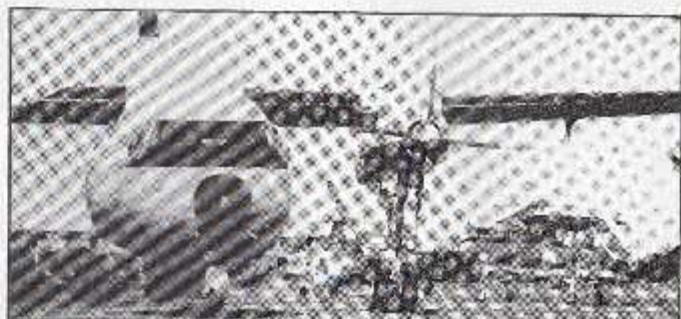




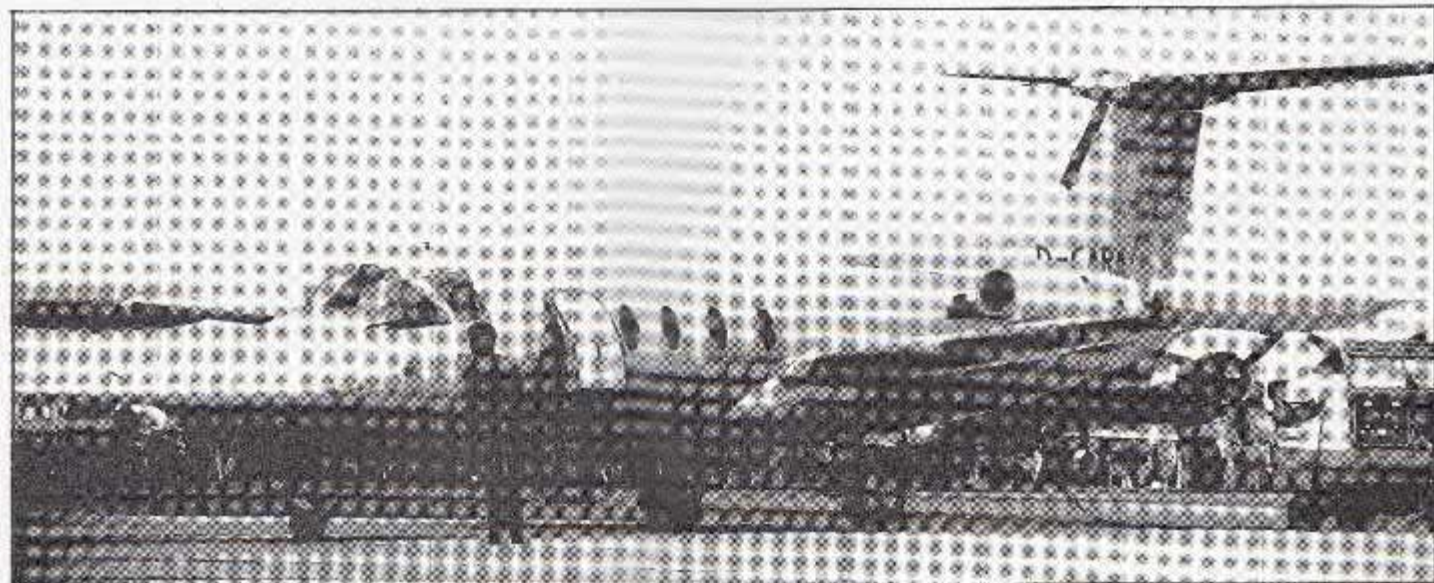
AIR SHOW LEONARDO DA VINCI

(ROTTERDAM, HOLLAND). They say that the Dutch people are penny-pinchers; this was proven once more at the airshow held at Rotterdam/Zestienhoven Air port on 13 September. Of the 60,000 people enjoying the show, only 30,000 paid to get in, while the rest remained outside the airfield boundaries. This certainly influenced the income which should have paid for such a big event. Chances that another show will be held here might be decreased by such penny-pinching.

However, the organizers, the "Vliegtechnisch Studievereniging Leonardo da Vinci", were satisfied with the excellent show, though it barely passed the break even point. An excellent show it was indeed, with lots of civil and military aircraft to be seen on the ground and in the air. Two items were missing though, the F-16 and good old 'Sally B'. 'Sally B', the British based Flying Fortress, had been publicized as main attraction. But she damaged one leg just a week before the show. As this leg couldn't be X-rayed until the morning of the show, the organizers began to look out for another aircraft. Fortunately the French I.G.N. company, who still operate two B-17 Flying Fortresses, made an exception to their general rule not to participate in airshows. So, nobody was disappointed, as they could see the even more interesting (because rarely seen) B-17 F-BEKA. □



TOP: G-HUNT Hunter of Sir R. Flack and F-BEKA B-17 Super Fortresses of IGH.
MIDDLE: 160238 P-30 Orion of the US Navy and PH-FTU P-37 Maritime for Angola, resp.
BOTTOM: D-CARA BFB.320 of BNVP.

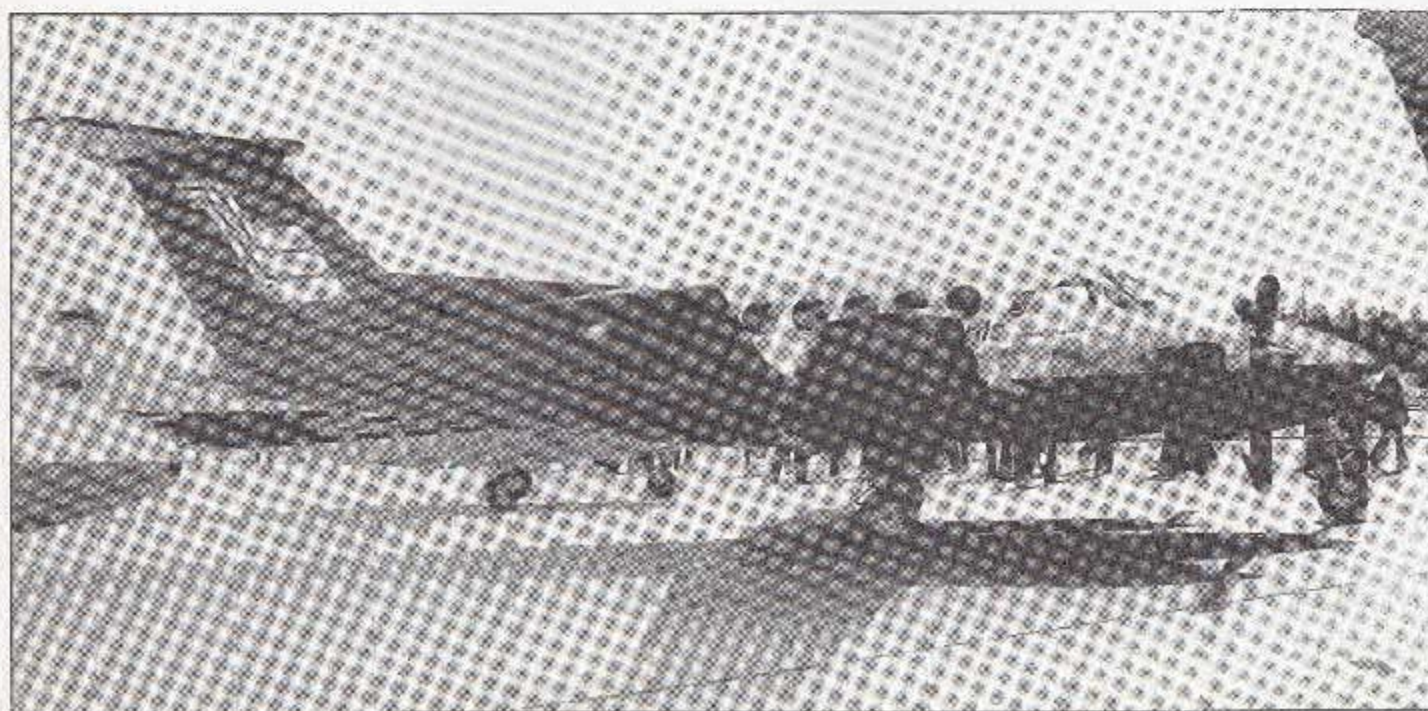


DUTCH REGISTER AUGUST 1980



N77443/DE-ESU T.307A seen at rough before becoming PH-DIJ (H.Dekker), PH-DPC Cessna 172RG (B. Ulickman)

Reg.	Type	Cn	Remarks
PH-AAD 2544	Falcon Jeans Special	228	C.J.Hoogstede & L.W.C.v.Tongerens to Ad Air Ootmarsum BV
PH-BAA 2427	Piper PA-31-350	31-7652162	Business Air Service BV to N803PC 5-8-80 (out)
PH-BAS 2116	Piper PA-31-350	31-7305043	Business Air Service BV to N804PC 14-8-80 (out)
PH-CEA 2447	Cameron G-77	245	C.J.Hoogstede & L.W.C.v.Tongerens to Ad Air Ootmarsum BV
PH-CES 1956	Reims Cessna F.150L	0822	Air Service Holland BV to (out)
PH-DPC 3046	Reims Cessna 172RG	172RG00369	Air Service Holland BV to D.A.P.Aeroclub
PH-ECO 3062	Piper PA-31-350	31-8052174	Netherlands European A.S. BV ex N4501Y dd 14/7 (new)
PH-FCX 2226	Fokker F.27-100 Maritime	10183	Fokker-VFW BV to Fokker BV
PH-FTU 3011	Fokker F.27-200 Maritime	10395	Fokker-VFW BV to Fokker BV
PH-FTV 3059	Fokker F.27-400 Troopship	10600	Fokker BV ex PH-EXE (new)
PH-FTW 3060	Fokker F.27-400 Troopship	10601	Fokker BV (new)
PH-GRC 2540	Piper PA-18-135	18-3828	St.Vliegsport Gilze Rijen to R.E. Versteeg
PH-HOT 2620	Cameron V-56	296	C.J.Hoogstede & L.W.C.v.Tongerens to Ad Air Ootmarsum BV
PH-IND 1637	Beech 65-A90	LJ-285	NV Philips' Gloeilampenfabrieken (out)
PH-JHC 1841	Fokker F.28-6000	11001	Fokker-VFW BV to Fokker BV
PH-KFT 3068	Fokker F.27-500	10603	Fokker BV (new)
PH-MEX 3054	Cessna 550 Citation II	550-0166	Martinair Holland NV 3d 8-8-80 (new)
PH-NKN 1063	Cameron V-77	672	Holland Balloon Service BV to Aviadome (out)
PH-NLA 1082	Piper L-4J Cub	12732	C.J.Hoogstede & L.W.C.v.Tongerens to Ad Air Ootmarsum BV
PH-OLM 2407	Cameron O-77	227	C.J.Hoogstede & L.W.C.v.Tongerens to Ad Air Ootmarsum BV
PH-PUF 2894	Beech RX-6	RX6-257	Ryfas-Heli-Service or 30-6-80 Gravend(out)
PH-RYF 3025	Hughes 269C	1050444	C.J.Hoogstede & L.W.C.v.Tongerens to Ad Air Ootmarsum BV
PH-SBK 3064	Beech 200 Super King Air	DB-180	BV Nationale Luchtvaart School ex SN-AKR, G-BHVX (new)
PH-SKD 3021	Reims Cessna F.172N	1992	Air Service Holland BV to Skylight BV (new)
PH-SPY 3065	Reims Cessna F.172N	2003	J.F. Spijker (new)
PH-VRZ 1835	Piper PA-28-140	28-7125223	Tobo Air BV to A.Troost & vd Meijde
PH-VSF 1971	Reims Cessna F.172L	0877	Air Service Holland BV to F.W.M. Stevens
PH-ZBV 3066	Fokker F.28-4000	11153	Fokker BV (new)
PH-ZBW 3067	Fokker F.28-4000	11157	Fokker BV (new)
PH-312 2842	Ra-8B	8264	H.Jans en D.G. Beulink to H.Jans & T.Olthoorn
PH-431 2366	AS-K 13	13529	Twentsche Zweefvliegclub to F.Bosveld & W.v.Rijn
PH-674 2926	Mistral C	MC 022/79	Venlose Zweefvliegclub (out)





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B-24 Liberator
A-7 Corsair II
B-52 Stratofortress
F-15 Eagle
P-38 Lightning
Curtiss P-40
F-104 Starfighter
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Rolling of the production lines in 1944 and 1945, the B-29 Superfortresses were mainly delivered to the 20th Air Force to enter the war in the Far East and Japan. Many bomber missions were carried out by these huge bombers until the last and well-known atomic bomb droppings on Hiroshima and Nagasaki. Well-illustrated is the nose art painting on the B-29 which ranged from patriotic to blatantly sexual.

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To put such a vast amount of information on paper must have been a daunting job to start with. In this book, however, Bob Archer proves the formula can successfully be applied to even the world's largest air force. Because of the extent of the subject, this book has nearly twice as many pages as French Military Aviation. Subsequently the price is also higher. With this book Midland is no longer amongst the cheap enthusiast publishers, which is surely a shame.

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U.S. MILITARY AIRCRAFT DESIGNATIONS & SERIALS DFL 22.50

All serial numbers of aircraft serving with the U.S. Army, Air Force, Navy, Marine Corps and Coast Guard since 1909, have been indexed according to type designation.

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VLIEND VOR DE VREDE



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A Dutch publication containing over 400 photographs of aircraft of the United States Air Force in Europe. Additionally explained (in Dutch) are the organization of the USAF today, as well as the phenomena 'aggressors' and 'deployments'.