

INPUT 1984..2

the magazine of the EUROCONTROL GUILD of AIR TRAFFIC SERVICES

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Although arguably it is felt that airlines could sometimes make a better effort to alleviate the problem of call sign confusion, controllers should realize that there are many constraints involved.

Occasionally log entries refer to confusing call signs. More recently reference was made to Britannia, one of the world's largest charter airlines. Britannia's offer to visit them in Luton and to present the airline's point of view with respect to call sign confusion, was gratefully accepted by INPUT.

Many interesting details of their call sign allocation system were made available. "Call Sign Britannia" highlights several aspects of confusion. In addition the article attempts to be a credit to Britannia, as we were highly impressed by their organisation.



EGATS recently established an organizing committee for a R/T Forum to be held in the first trimester of 1985. During a first brainstorming exercise in which all old-timers of the 1982 Fuel Economy Forum and some newcomers were involved, the theme and development of this event were discussed extensively.

It can be concluded that in spite of all investments and human efforts to make ATC systems fail-safe R/T remains the weak link; the interface, which sadly enough, has often led to deplorable incidents and even to tragic accidents.

Phenomena such as misreading or misinterpretation, call sign confusion and the blocking of R/T frequencies are well-known irritations to both controllers and pilots. Can we, other than wearing a headset and applying good R/T discipline, find ways of convincing colleagues and pilots to promote R/T as the "vital link" and therewith optimize operations in the control centre and the cockpit?

This Forum intends to give controllers, airline/ATC engineers and pilots ample scope of discussing operational and technical aspects of R/T techniques in order to:

- become better informed about mutual problems; and
- achieve safer and more efficient operations.

These objectives will be realized by:

- questioning the industry on which technical means are available and which improvements can be attained;
- giving the industry specifications of operational requirements and ascertaining their feasibility;
- conducting a pilot/controller discussion in respect of R/T procedures.

To achieve an optimum result it is necessary to divide the event into two parts:

1. Technical. To provide and illustrate preliminary background information pertinent to the second part. It will include an exhibition with static displays, presentations, lectures and information circulars. It should ideally include contributions from all parties who have knowledge of the technical aspects of R/T, such as manufacturers, airline engineers, communication specialists, ATC engineers and experts in the field of ergonomics.

2. Operational. Mainly consisting of a panel discussion with audience participation. Information received through a questionnaire to all potential participants will serve as a basis of the discussion.

The fact that the industry will participate in the Forum, probably adds to the status of the event, but it also entails more organization and planning. We will soon send out the first letters and prepare the questionnaires. You will be informed about the response in due time and we look forward to your suggestions and support.

Jan Gordts
President EGATS

Call Sign Britannia

by Danny Grew and Rob Bootsma



Britannia presently operate two B767 aircraft and have another two on order.

Apart from the R/T equipment itself, the aircraft call sign is probably the air traffic controller's fundamental working requisite. Without it he would be unable to communicate with a particular airspace user. To accomplish his task of providing adequate separation between aircraft, it is essential that his instructions are received by the appropriate aircraft. Should it not, the consequences could be catastrophic. Instructions and flight information are directed to aircraft identified by their call sign. Therefore the need for, and the importance of, the call sign cannot be underesti-

mated. For the very same reason call signs should not be subject to confusion.

The air traffic controller operates in an environment almost totally dominated by alpha-numerics. Here we can think of radar vectors, flight levels, speeds, communication frequencies and frequencies of navigational aids, meteorological information, inter-sector and inter-centre telephone extensions, and so on. All these facets, though, revolve around what is perhaps the nucleus of the controller's world, the call sign. It too comprises alpha-numerics.

Weighed down with the burden of manipulating this multitude of figures in their true perspective, it is not difficult to detect one of the potential causes of call sign confusion. It certainly doesn't help therefore when individual call signs clash, confusing both controllers and pilots.

Call sign confusion does not exclusively originate from the way in which flight numbers are allocated by the aircraft operator. Should that be true, confusion would only exist within an airline. Unfortunately similarities also occur between airlines. Illustrative of the first group is LH212, LH112 and LH102 which depart almost daily from Frankfurt to Faro, Paris and Brussels respectively, at short time intervals, and enter the Maastricht airspace via Ruwer.

However, more frequently controllers face similar call signs pertaining to different companies. BA912 and AF912, for instance, cross each other's paths every day in the Brussels West Sector. Both LH131 and FD131 receive their instructions from the Olno Sector controller once a week at the same time, and recently MP004, MP3004 and JL004, separated by only 10 NM, were standing by for their descent into Amsterdam on the West Sector frequency. Many corporate and private aircraft use their national registration marks for their call sign. Unfortunately this does not preclude confusion either, as can be illustrated with these two recent examples: PHBDV closely followed by PHJDV and IEKET with IFKET. It is self-evident that we don't intend to point at certain airlines; the given examples shall be treated as such and show that confusion is likely and not a rare occurrence.

Many other factors, such as R/T quality and extraneous noise, contribute to the readability of a radio transmission. Additionally, the intelligibility of a message may also be influenced by pronunciation differences. Furthermore it should be recognised that the task of a radar controller implies that he may execute several actions simultaneously. For instance, he may be party to a last minute coordination with an adjacent unit or involved in the exchange of information with his planning controller, while an aircraft calls in on his sector frequency. Particularly in such circumstances it is quite possible that one hears what one wants or expects to hear. Although this phenomenon is not directly related to call sign confusion, one should not under-rate the important role of expectancy and its possible attribution to confusion in general.

With the knowledge that call signs can be confused the question arises as to what steps can be taken to alleviate this pro-

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blem. Is it possible to preclude confusion within an airline by modifying the system of call sign allocation? In order to gain more insight into the matter and grasp a more profound understanding of airline operations, INPUT visited Britain's largest independent leisure airline, Britannia Airways.

Based at Luton Airport, 45 km NNW of London, Britannia Airways began operations in May 1962 under the name of Euravia Limited with an initial fleet of three Lockheed L-049 Constellations. In 1963, with a fleet of eight "Connies" and two Avro Yorks, Euravia carried 67512 passengers.

The name change to Britannia came about in 1964 when Euravia began to re-equip with the Bristol Britannia aircraft. This type gave the airline sterling service until their last one was finally retired in December 1970. In 1968 however Britannia became

the second European airline after Lufthansa to take delivery of the B737.

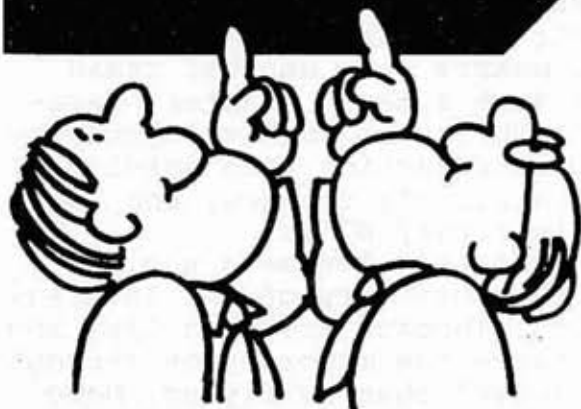
Ranking as one of the world's largest charter airlines, Britannia operated thirty-one B737s and carried 4.4 million passengers in 1983. All except two of their aircraft arrived new from the makers - an unusual trend for such a large charter operator. This year is highlighted by the introduction into service of the airline's two new, and Europe's first, B767s.

Britannia became a wholly owned subsidiary of the International Thomson Group in 1965 and operates the majority of Thomson Holidays' charter flying. More than half its work consists of contracts flown for many leading tour operators, such as, among others, Portland, Pilgrim Air, Arrowsmith and OSL/Wings. Britannia also plays an important role in the "ad hoc" charter market for both passenger and cargo flying.



Britannia's B737 fleet average a daily utilisation of eleven hours per aircraft. This particular B737, G-AZNZ leads the fleet with 45,997 hours and 28,324 landings logged when photographed by INPUT in May 1984.

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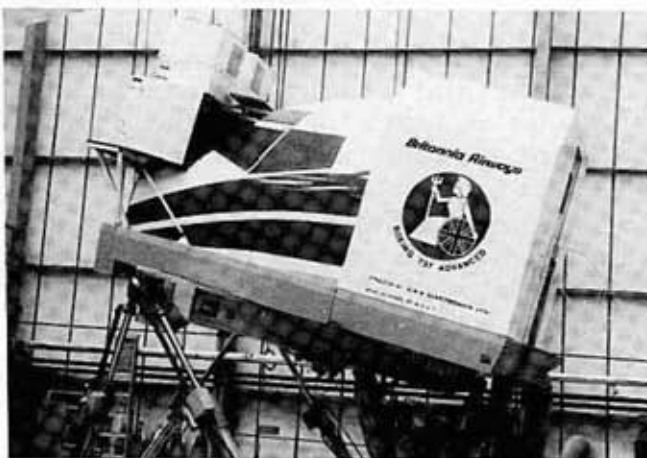
Two philosophies are at the root of Britannia's success. Firstly, when locating its facilities in Luton it started with the principle that everyone concerned with operations should be as close as possible to other service bodies. This also implied that the main buildings, and possible future extensions, would be near to the Aeronautical Information Service and the Air Traffic Control Service. Secondly, with regard to support services, it is common practice that nothing, which can be contracted out to others more specialised in the field, is done by Britannia itself.

Success also depends on the performance of highly motivated people. For instance, to achieve that cabin staff - who are the airline's front line - would remain highly productive, Britannia changed its management policy fundamentally. The keyword here is encouragement. Motivation fosters both productivity and efficiency. To this effect it is necessary that staff believe in the employer's wish to communicate with them, is genuinely interested in them and seeks to solve the many problems which they experience. In other words, Britannia cares about its people! Good performances are rewarded and small gestures of appreciation play an important role. Britannia's cabin staff identify themselves fully with the company. The sickness rate has reduced considerably and the service provided is consistently of high quality.

As depicted in figure 1 Britannia holds a major share in leisure flying. It operates extensively from its Luton base, London Gatwick, all the main British provincial airports and other smaller ones besides. Resorts mainly around the Mediterranean, Adreatic and Aegean, the Canaries, Madeira, the Alps, Scandinavia, West-Africa and the USSR are served.

First concern in scheduling flights is to meet customer demand. Holiday-makers prefer to travel at a convenient time, preferably not at night or during the week, and at a reasonable price. Although prices are geared to encourage mid-week travel, inevitably the majority travel on the weekend. Over one hundred rotations on a given day at the weekend is not extraordinary, and the total number of flights per week in the high season can amount to nearly 600. For reasons of economy and logistics regarding passenger transfers between airport and hotels at the holiday destination, a tour operator generally concentrates its flights to a particular destination on a particular day so that all arrivals, and subsequent departures, coincide. Consequently, Britannia flights operate in time-spans, departing the various UK points and arriving at a common destination within a ninety minute time span.

Aircraft capacity is normally sold to a charterer for two or three years and to a certain extent Britannia is compelled to follow the tour operator's operating criteria. After all, inclusive tours require many details



Britannia's Pilot Training Centre includes both the B737 and B767 simulators. The latter is shared with Braathens SAFE of Norway. Pilot training is undertaken for a number of other airlines.



Three Britannia B737s adorn Luton Airport's ramp, two of which are still in the old livery. As each aircraft goes for its major overhaul it is completely refurbished and painted in the new livery. In the background is the airline's new B767 hangar, built at a cost of £ 1,5 million.

to be arranged well in advance for the travel brochures, which need to include the holiday number for a particular flight. For administrative simplicity some tour operators associate the holiday- (or series-) number with the flight number (series number 3001 for instance becomes flight number 001).

The fact that the planning of inclusive tours requires time, is one of the reasons why changes in the allocation of call signs are impossible at short-term. Flight

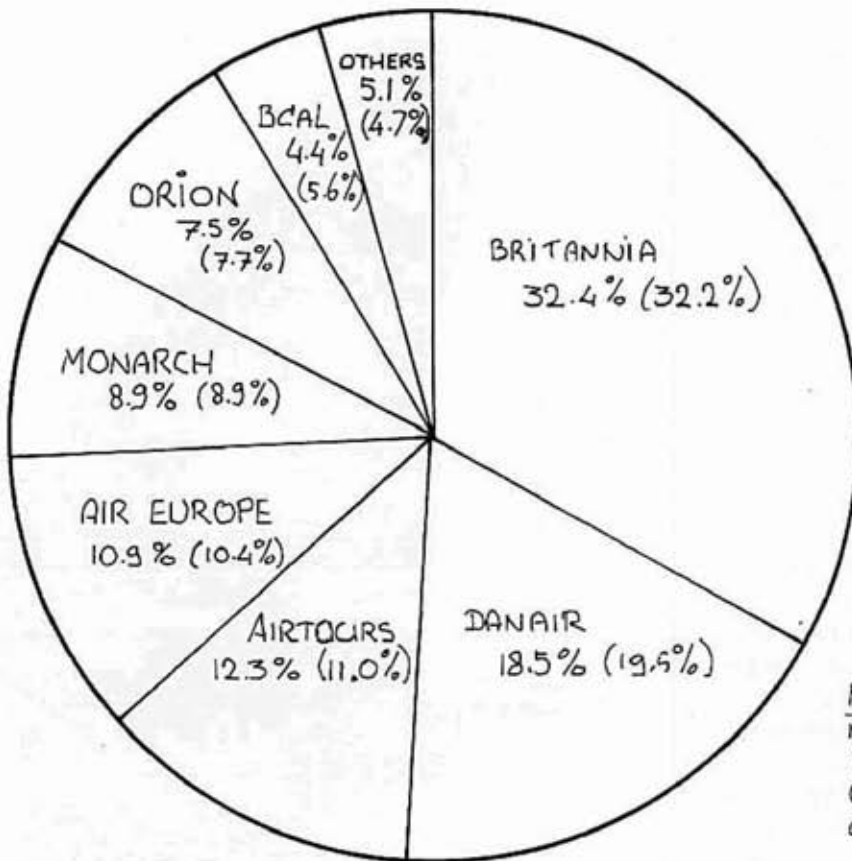


Figure 1.
Market share 1983 (1982).

N.B. - The airline paid \$ 24 million in Route Charges in 1983. Participation in the Central Data Bank will add another \$ 240,000.

numbers are allocated 15-18 months ahead and are integrated into the tour operator's planning computer. In addition, each flight is encoded and identified separately. Although it is not mandatory, Britannia uses suffixes "A" and "B" for southbound and northbound traffic respectively, in order to avoid exhausting the available number of call signs. Besides this, ATC require airlines participating in the RPL-scheme to file its flight plan data well in advance.

However, would it be possible to alleviate call sign confusion through changes realised in the mid-term? Some detailed information about the process of call sign allocation is called for here. Each tour operator is assigned a block of numerals. Thomson Holidays for example uses the block 001 to 350 inclusive. Traditionally series numbers are allocated and grouped together to a resort area, thus involving the allocation of very similar flight numbers to flights planned for

the same destination within a narrow time band. Recalling the fact that Britannia's flights are destined for a particular area in Europe, it is not unlikely that similar call signs coincide on the same frequency and can lead to confusion. Therefore perhaps the only possibility to prevent this may be to abandon the present system, whereby a series number and flight number are related to each other, and instead adopt a random flight number allocation system.

Recently Britannia negotiated a change to the flight numbering system with Thomson Holidays, which will take effect during Winter 1984/85. Each flight number block will be divided into seven-day blocks, which in turn will be sub-divided into slot 1 and slot 2 groups. Allocation of flight numbers can be effected, as an example, in accordance with the following scheme:

Thursday

Slot 1 001, 015, 029, 043

Slot 2 008, 022, 036, 050

Friday

Slot 1 002, 016, 030, 044

Slot 2 009, 023, 037, 051

This system will minimise the probability of consecutive or reversed call signs taking off or landing within one hour of each other.

But, as always, there is no complete answer! Clean cut planning rules become suspect whenever route changes or delays are encountered. And charter operations especially bring about many changes (routinely 20% of planned flights)! The risk of confusing call signs increases too, whenever ad hoc flights or peak traffic necessitate the use of flight numbers from previous days. A 24 hour delay once resulted in two "Clipper ones" flying through the Maastricht area within $\frac{1}{2}$ hour of each other!

All this possibly illustrates that a change of the flight numbering system is not a simple problem to resolve. Furthermore, one has to keep in mind that this would only offer a partial solution to confusion within a given airline. As mentioned earlier many other factors are involved. Call sign confusion will continue to exist so long as VHF voice communication is used as the primary means of communicating instructions or flight information to aircraft. Too much stress cannot be placed upon the need for both controllers and pilots to maintain constant vigilance in order to contribute to air safety.



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KLM Flight 3117, Amsterdam-Toulouse

by Wim de Boer



On Monday 14th May, 1984 we left our residence early in order to collect our tickets for the flight to Toulouse at the Neckerman counter at Schiphol well in time. After a short visit to the tax-free shop and a quick coffee we boarded the KLM A310 and departed from runway 01L at 10 o'clock.

The comfort of the A310 is excellent; during our flight at FL370 almost no engine noise was heard. At 11.30 we landed automatically at Toulouse. The total number of passengers (210) was split into five groups during the flight. Upon arrival, five coaches were standing by for further transport.

A bus trip of half an hour through Toulouse took us to the Headquarters of the "Centre d'Essais Aéronautique de Toulouse" (C.E.A.T.), where we were welcomed by Airbus Industrie. A film about Airbus Industrie and one about the C.E.A.T. introduced us into the world of aircraft manufacturing. At the laboratories of the C.E.A.T. it was demonstrated how different materials and complete sections of aircraft are tested for strength, fatigue and vibration. Furthermore a birdstrike was simulated and its consequences on various

parts of the aircraft, such as wind screens, nose and leading edges of the wing. A birdstrike on a windscreen for instance is simulated by shooting a chicken with a speed up to 200 m/sec towards the window. You can imagine that there was not much left of the chicken.

Although much more was to be seen at the C.E.A.T. we had to leave at 15.00 for a visit to the A300/A310 assembly line at the Aérospatiale facilities. Manufacturing doesn't take place in Toulouse; the various aircraft parts and sections are built by different partners participating in the Airbus project and then shipped to Toulouse, where the different components are assembled. Starting with the nose section at one end of an enormous hangar, sections are joined while the "aircraft" moves forward and ultimately leaves the hangar at the other end. The present production rate is 4-5 aircraft per month, which can be increased to 8 per month.

KLM 3127 flew us back to Amsterdam. We arrived at 19.00 and had the opportunity to view the aircraft. The visit to Airbus was most interesting. Too much was to be seen in too short a time.



The Right Way to the Left Seat

by Paul J. Hooper and Rob Bootsma

Many former civil and military pilots in the Netherlands who are now enjoying their pension received their initial pilot training with the National Aviation School (NLS) - the Netherlands' first regular training school, established in 1927. Its training facilities, owned by the Royal Dutch Aviation Association (KNVvL), were located in Rotterdam at Zestienhoven Airport. After the second world war however the Dutch government decided to start its own training school, the RLS, and as a consequence the NLS degenerated to an aero-club with training up to PPL (Private Pilot Licence) standard only.

In 1968 Schreiner Airways - a Dutch operator with an airfleet of some 140 aircraft, fixed- and rotary-wing alike - became interested in an aviation school and bought the NLS. Domestic disagreement forced Schreiner to leave the charter market in 1967 and this family-owned company^x gradually obtained a considerable interest in support activities in the field of energy production all over the world. With the acquisition of the NLS, Schreiner entered into a new branch and although the school mainly provided for PPL-training, it sometimes ran courses leading to CPL (Commercial Pilot Licence) thus enabling Schreiner to train its own pilots.

A decade later in history the NLS took the opportunity to train students up to airline standard. As a matter of fact with F27 and F28 aircraft selling well in third-world countries in the seventies, many of their purchasers additionally required Fokker to provide for ab-initio training. The NLS took a keen interest in these developments and moved to Maastricht Airport in 1978. As a sub-contractor the NLS was highly dependent on Fokker at that time, as all students were under a Fokker contract. Naturally this was not a sound basis from a commercial point of view, but nevertheless a first step towards an independent aviation school besides the RLS was taken.

Future developments had to be anticipated and continuity had to be assured. Moreover, as a private company it was essential for the NLS to direct its attention to a completely different market. Here advantage could be taken of the fact that the Schreiner Aviation Group came into touch with potential customers through its many contacts in the aviation world. On those occasions public-

^x The current name is Schreiner Aviation Group, a holding company in which KLM is a major shareholder.



ity was given to the existence of the National Aviation School. It was evident that most second and third line operators couldn't afford their own training centre, but nevertheless similar problems were encountered and pilot training to certain standards was required. The NLS was able to meet this demand and to date training contracts have been concluded with a great variety of customers.

In common with any other conjuncture sensitive business, air transport fluctuates with the trend of the market. The effect of the recession did not pass unnoticed, witness the airline

operators who have discharged a large number of pilots. This development was accompanied by a general reduction of the intake of students in the various training centres. At first impression the NLS expansion may therefore be questioned. However, account could be taken of these aspects in their decision to enlarge and accommodate capacity to special needs. Attention is directed towards second and third line operators only.

A multitude of modest ground- and flight training facilities are presently available for 80 to 90 student pilots. The School has at its disposal 6 Piper Warrior IIs, 4 Piper Arrow IVs and 2 Beech 200 Super King Airs. Although one aims to achieve an optimum level of utilisation of aircraft capacity it is very difficult to attain that goal, considering that circumstances are never wholly favourable. As a subsidiary of the Schreiner Aviation Group however, the NLS will be able to acquire additional capacity, varying from light piston twins to helicopters, by means of intra- and inter-company leasing whenever a shortage of aircraft capacity occurs.

The School is recognised by the Dutch Civil Aviation Authority and provides a wide range of courses in specific aeronautical subjects. Up to now only a limited number of students trained by the NLS have been Dutch, yet the largest number of students originated from third world countries such as Ghana, Ivory Coast, Tanzania, Oman, Indonesia, Algeria and Libya amongst others. Experience has shown that ATPL (Airline Transport Pilot Licence) trained students - the majority of them fly now on Fokker products - are well prepared to meet any operators' standards.

The backbone of the NLS curriculum is based on ab-initio pilot training up to airline standards. A preselection training of 12 weeks offers ample scope to assess the potential

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capabilities of a student pilot. Besides the theoretical part practical training is given for approximately 30 hours on the Piper Warrior II and for 5 hours on the procedure trainer. For those cases where it is required to stop the student's further training after the issuance of a PPL, the training contract contains a clause enabling the student to participate in additional courses, such as station manager and flight operations officer.

Subsequently the training programme continues with a 50-week course to obtain a CPL with instrument rating. The practical training consists of some 45 hours procedure training and some 180 hours flight training on the Piper Warrior II and the Piper Arrow IV. The ab-initio training, which can be completed in approximately 2 years (including holiday periods), is concluded with a 20-week course covering the theoretical aspects of ATPL.

Students are normally examined in compliance with Dutch CAA standards, nevertheless it is possible to adapt the training programme to non-Dutch CAA requirements and to the specific needs of any customer. In principle an operator should be able to specify his own training requirements, since he knows best the ins and outs of his kind of operation and its allied problems. It is essential therefore that the operator defines his specific training requirements as accurately as possible. If so required a student may obtain a twin rating on a specific type of aircraft.

The NLS employs 5 full-time theory lecturers, 9 flight instructors and 2 simulator instructors. Additional capacity is available with the use of part-time instructors. Their vast experience guarantees the quality of the training, with emphasis not only on the practical "know-how", but also the equally vital "know-why". Knowledge of the



customers' wishes permits adjustment of the training programme to particular operational requirements. The level of professional competence obtained meets any international aviation standard.

FLYING THE ARROW...

"Cockpit silence during take off".

"In case of malfunction before 75 knots call STOP and state reason".

"In case of engine failure after 75 knots: sufficient runway, we land straight ahead. No runway available, shallow turns to avoid obstacles. Actions on my command".

"You do the R/T".

"You check and set beacons on my command".

"You monitor the instruments and set power on my command".

The captain issued the crew briefing prior to releasing the parking brakes and taxiing into



position to hold on Beek's runway 22.

"P-B0 is cleared take off, Olno departure, climb initially to 3500 feet". Clearance acknowledged the take off roll was commenced, the nose gear oleo soaking up the thud of the occasional centre line light that came into contact with it. The 75 knots rotation resulted in a leisurely climb to 3,5 at around 700 feet per minute accelerating to 90 knots.

Full execution of the Olno SID would take us out of the Maastricht TMA, therefore almost immediately after establishing on the 013 degree radial to Olno VOR we broke off left for some airwork in the vicinity of the Gulpen NDB, to the southeast of Maastricht Airport.

In charge of our Piper Arrow was Naïma Kassoul, a very petite young Algerian lady who made up for in ambition what she lacked in stature; the assistance of a modern technology cushion allowed her feet to reach the rudder pedals! It will take more than a cushion to get her to the left hand seat of a 747 but I am quite sure her determination to prove her equality with the masculine race will get her there ultimately. It was this determination that got Naïma into flying in the first place. Having dropped out of university because of its inability to elevate her life above the level of mundane, Naïma heard about Air Algerie's flight training programme. The airline's own involvement with the scheme went little beyond providing elementary flying instruction in order to select those who displayed the required aptitude.

In twenty two months with the NLS Naïma has logged a total of 160 flying hours, including 40 or so under instrument conditions. In addition she has acquired a working knowledge of the English language: each new intake of students is sent to Bournemouth England for a period of six months to acquire or brush up on

aviation's premier mode of communication.

Recleared to FL40 we entered a loose holding pattern around the Gulpen NDB in order that our First Officer for today, NLS' Chief Flying Instructor Jan Minoli, could endear himself to his student by inflicting well loved manoeuvres and simulated failures upon her!

Simulated failure of vacuum instruments was executed by simply placing an appropriately shaped card over the relevant instrument faces. I noted with ironic amusement that some sadistic individual had drawn a smiling face on one of these cards and appended the words "Keep Smiling"!

The holding pattern continued to be maintained despite the apparent loss of both Direction Indicators and Attitude Indicator courtesy of the card method. Steep turns to the right without visual reference are not Naïma's list of favourite things to do on a Wednesday afternoon, nevertheless she accomplished the manoeuvre to her instructor's satisfaction. Meanwhile, the passenger in the back seat grinned blandly, loving every moment of it!

Clearance to the NW NDB, initial approach fix for runway 22, and instruction to climb to FL60 took us further into the already enveloping murk. At this juncture it was pointed out to me that it is NLS policy to advise their students that in the case of receipt of multiple instructions from ATC, priority should be given to altitude changes as these would normally be applied for separation purposes. Approaching the beacon we were recleared to FL50 to enter the hold, a pattern already bustling with NLS traffic. Next time around on the outbound leg we were cleared to the Initial Approach Altitude of 2500 feet and for the ILS approach. Through the rain and associated clag the lights came into view at around two miles and 1000 feet QNH but

Naïma remained head down until half a mile out at which point Jan instructed her to continue visually. The landing was a greaser!

When Naïma leaves the NLS in December 1984 she will be the proud owner of a CPL and Instrument Rating, ATPL theory and a King Air 200 rating. On her return to Algeria she will continue to accumulate hours on the King Air to obtain the necessary 1500 hours in command required before she can attempt her ATPL flight test: this requirement doubles if the student is logging hours as official First Officer.

With that qualification tucked safely under her belt she will convert to the right hand seat of an Air Algerie F27.

..... AND THE KING AIR.

Pride of the NLS fleet is its Beech 200 Super King Air. Such is the intensity of training on this aircraft that it is rarely seen on the ground during the course of a working day.

Prior to flying in the aircraft I spoke with NLS Operations Manager Bill van Gent who expressed his, and other instructors', appreciation of the versatility of the King Air. For example, in the approach phase of flight the aircraft can be used to simulate either Fokker F27 or F28 in respect of flap and landing gear limitation speeds. This feature is significant in that a large majority of the School's students will at a later date be converting to one of these types.

Around the time of my flight the King Air was plying both visual and instrument patterns within the Maastricht TMA and subsequent to the following week's written examinations would be line flying to various destinations in Europe. Bill, who was to be the instructor for this afternoon's detail, explained what was to be inflicted upon the Omani student during the course of the session. Continuing emphasis would be placed on familiarizing the student with the multiple crew environment and in command of today's flight he



would put the experience acquired to date to the test by reacting and responding to the number of engine failures that would be administered at significant junctures throughout the flight. The engine failures would of course be simulated. This is achieved by retaining propeller rpm and decreasing torque, thereby placing the propeller in a no thrust - no drag situation. The NLS approach to such simulations does not quite concur with the manufacturer's view but the NLS considers its method to be safer in that should the life engine genuinely fail during a simulated failure an increase in torque will quickly restore power on the other engine.

I strapped myself into a rearward facing seat at the front of the cabin as Bill manoeuvred his portly frame awkwardly into the right hand side of the cockpit.

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Checklists complete PH-SBK was taxied into position on 22.

Take off and climb out is a demanding phase of flight at the best of times but when the ogre on your right sneakily reaches out and pulls one of the taps at 200 feet life does not take on a rosier tint! The student identified the right hand engine as having failed and kicked in left rudder accordingly. The climb was continued, albeit at a more sedate pace, to 3500 feet at which point symmetrical power was restored. Each simulated engine failure was timed to coincide with a period of above average workload and the next one "struck" just as we had completed the procedure turn and were intercepting the localizer. The ILS approach was flown single engine and power re-applied during the ground run of the touch and go.

And so the simulated failures continued at key points around a number of ILS and ADF approaches. I noticed the student's forehead lined with beads of sweat. Why not? He was working hard! Bill's brow was dry, as it probably had been for the larger part of his 36 year flying career. During that time he had amassed a total of nearly 19000 flying hours on types such as the Meteor, DC3, DC7, F27, Sikorsky S61N and the Super Constellation. Despite such an eminent career (eminent must describe a man who flew Super Connies!) he remains surprisingly void of nostalgia when asked to recall exploits from the past. With only a year to go before retirement Bill has become a part-time desk flyer in his capacity as Operations Manager, a reality which doesn't appear to perturb him unduly. I think we can safely assume that his flying is tidier than his desk!!

Bill does have one ambition which he would like to see securely in the pipeline before he retires and that is the development of the NLS beyond its present rather limited flying

training function into a complete aviation training centre. Let's hope that Schreiner management is as far sighted as Bill to allow such a project the opportunity to reach fruition.

Another single engine approach followed by a touch and go led us into the local circuit at 1500 feet. A couple of times around and it was time to call it a day, only one hour and sixteen minutes after the initial take off. It probably felt a lot longer to the student!

Shut down complete we vacated the aircraft for the more capacious environment of one of the School's classrooms for a debriefing. Bill's occasionally hostile attitude in the air was left far behind as he attempted to make

the student aware of some of the inadequacies displayed during the detail. For example; his commands for power settings should be clearer and more positive. On one occasion he misidentified the failed engine resulting in an incorrect rudder input. The consequences of misidentifying a genuine engine failure were laid on the line. The student was told to exercise greater accuracy with his circuit flying; the continuous base and final should be flown with 30 degrees of bank, 500 fpm, with 60% and 120 knots reducing to 105 over the threshold.

It was time for coffee.

(Photos: Paul J. Hooper)

A Swissair A310 Fam-Flight

by Henk van Hoogdalem

After negotiations between EGATS and Swissair a possibility was offered to make familiarisation flights with the Airbus A310 from Zürich Airport. For me, being the first to make this trip, it was a pleasant and educational experience to be a guest of Swissair.

At Schiphol, Amsterdam, from where all Swissair familiarisation flights start, the station manager and the crew were well informed about my trip. All required papers and information were waiting for me and the deputy of Mr. Simons accompanied me to the flight deck of the waiting DC9-51.

I was given a warm welcome by the crew who were expecting me. Here I received the first positive remarks with respect to the service given by the Maastricht UAC. The DC9 crew was aware of the fact that, if available, they could always expect a short



cut and the best cruising level, without the need of prior requests on the frequency.

At Zürich Airport I reported to Mr. Gächter, Swissair cockpit crew administration, with whom I discussed the procedures to be followed on the Swissair familiarisation flights. I was introduced to Captain A. Schneider, deputy chief pilot of the A310. At a coffee bar we

talked about subjects of interest to both pilots and controllers. Once again confidence was expressed in the Maastricht Centre and Mr. Schneider was looking forward to the extension of Maastricht airspace.

Mr. Sutter then showed me the check-in procedure for pilots and how meteorological information is made available to them. Thereafter I was introduced to Mr. Meier, captain of the A310 on which I would later be flying from Zürich to London vice versa.



Mr. Meier, an instructor on the A310 simulator, answered all my questions and explained the functioning of the navigation computer. After the flight plan is input by means of a code, the complete route is checked step by step by the pilot via the CRT panel. Swissair has no program in the vertical plane yet, so information about the optimum cruising level and top of descent is still to be obtained from maps and charts.

After a very quiet take off (you hardly hear the engines) we climbed continuously to FL240 with 2500 feet/min. Swissair crew members must wear a headset below FL150; upon passing this flight level all pilots I met immediately switched to speaker. When later we reached FL390 over the north of France in a very clear sky, it was easily possible to recognize many cities and rivers.

Over the Channel we started our descent to London Heathrow with a rate of 5000 feet/min, which is normal practice for the A310. The approach route is called up simply by activating the runway in use and not by a "STAR-figure" as we are accustomed to giving for inbounds to Brussels.

On the way back to Zürich we passed through the Maastricht Brussels sectors at the optimum flight level via the shortest route (at FL410 even Belgium looks good!). After a smooth approach and landing the crew continued for Geneva, leaving me highly impressed and with the knowledge that such flights really give controllers the back-up information needed to fulfil their tasks as efficiently as possible. It would be much appreciated when Eurocontrol could arrange for these flights as part of our official duties.

While I was in Zürich I took the opportunity to visit Radio Suisse SA, Zürich ACC, where Mr. Peter Tiegel showed me over the operations room and explained everything with respect to equipment and procedures.

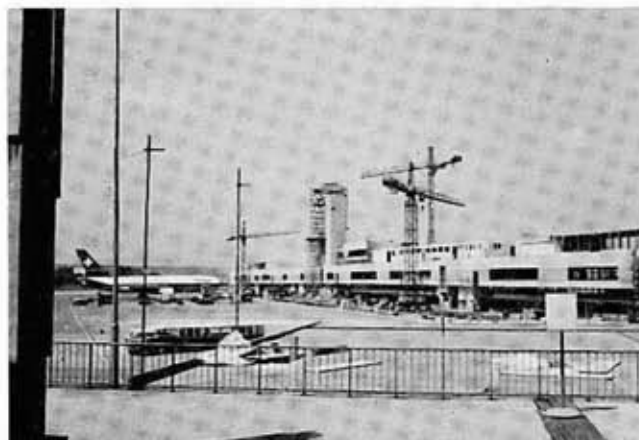
The Zürich area is divided in six sectors; four lower sectors up to FL245, one middle sector from FL245 to FL320 and one upper sector above FL 320. Each sector is manned by a radar and a planning controller, whereby the radar controller uses one strip and the planning controller several strips for his sector. The ATS assistants, seated at the back of the planning board, receive and pass estimates. The controllers use a standing microphone and directional speakers. For inter-sector coordination a fast and simple recorded intercom system is available, also via the speakers. The atmosphere in the large operations room is very quiet because of the distance between the sectors and the relaxing presence of daylight.

All controllers started their training as military controllers and have to refresh their military functions each year in the Swiss Air Force for three weeks. The cooperation with Milano, Geneva, Reims/Paris, Frankfurt/Stuttgart and Rhein is at a satisfactory level and a standard release from Rhein to FL270 facilitates the climb of Frankfurt departures to their cruising flight level.

The day-light Thomson-CSF radar screens present a dynamic "blip" with a label including the aircraft ground speed. A QDM can be obtained via the rolling ball and if required a Flight Data Message is presented on the display. As in our environment the upper wind forecast is poor and in practice obtained via pilot reports.

The seven teams run a 4/2 - 4/1 duty roster. At night rest-rooms for sleeping are available for the non-active team members.

Approach and Tower are still rather old-fashioned in their



Construction work in progress at Zürich Airport (a new location for TWR and APP).

equipment and are looking forward to a new location which will be available in 1985/86. It is recommended to future "Swissair fam-flight" controllers to visit the friendly Zürich colleagues in their working environment.

More detailed information is available from EGATS.



IFATCA '84

A report by Geoff Gillett

This report attempts to summarise the events of the International Federation's 1984 Conference. For a more detailed description of the work programme and conclusions, readers should consult the documentation which is available on request from the EGATS Executive Board.

I would like to express my appreciation to my colleagues, Philippe Domogala, Willem Pieneman, Fred le Noble and Gerrit Horsman who assisted in the production of this article.

The twenty-third Annual Conference of the International Federation of Air Traffic Controllers' Associations was held in Estoril, Portugal from April 25th - 30th. In spite of the EGATS policy of keeping a "low profile" in recent years, because of the Ministerial declaration of intent to expand the functions of the Maastricht Centre, it was decided to send an enlarged delegation to this year's Conference.



The delegation consisted of Messrs. Domogala (Director), Scholts, Pieneman and Le Noble (Deputy Directors) and Gordts, Horsman, Bonne and Gillett as delegates. Also travelling with the team was Jan van Eck, who made a useful contribution in establishing and renewing contacts with industry (the Corporate Members of IFATCA).

The work of IFATCA Conferences, which have been held annually since the inaugural meeting in Amsterdam in 1961, is to define and update policy on subjects of specific importance to Air Traffic Controllers. The day-to-day work is divided between various Standing Committees (SC's):-

- SC 1: Technical Matters
- SC 11: Publications and Public Relations
- SC111: Finance
- SC 1V: Human and Environmental Factors
- SC V: Recruitment and Training
- SC VI: Constitution and Administration
- SCVII: Legal Matters

There are currently 59 Member Associations (MA's) united under the IFATCA Organisation, presided over by Mr. Harry Henschler of Canada. Although this year's host Association was only founded in 1975, the Portuguese Controllers' Association produced an extremely well organised Conference, including an intensive social programme which severely tested the stamina of some of our delegation!

At the opening ceremony, His Excellency, the President of the Republic, General António Ramalho Eanes, presided over the event, attended by many Government Ministers and high ranking civil and

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military officials. Then followed a magnificent display of aerobatics performed by a youthful Portuguese Air Force Team, consisting of six T37s, which took place immediately in front of the Conference Hotel. We had the pleasure of meeting the team during one of the social functions and took the opportunity to hand over six EGATS stickers for attachment to their aircraft. The name of EGATS can now be found in some unlikely places, being subjected to loops, barrel rolls, bomb-shells and other procedures not normally associated with our type of service!

The Roll Call of Delegates having been completed, Conference then divided into the three working Committees and got down to business.

COMMITTEE A - Administration

Although a relatively quiet year, this Committee nevertheless spent twenty-seven hours in session. No new Associations joined but regrettably two departed, France and Colombia. Brazil was accepted as a full MA, thanks in part to those members of EGATS who voted to assist our Brazilian colleagues at the last EGATS An-



Philippe Domogala in the company of Paulo A. de Menezes, the President of the Brazilian Air Traffic Controllers' Association.

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nual General Meeting. Thanks were due also to TAP-Air Portugal who enabled the President of the Brazilian Association to be present in Lisbon.

The problems of "the not-so-rich" Associations, in particular their inability to pay IFATCA subscriptions, remain to be solved and EGATS will assist, since our A.G.M. gave a mandate for this and together with Denmark, a working paper on the subject will be presented to next year's Conference.

Election results for IFATCA Executive Board Members were as follows:-

Mr. Harry Henschler (President);
Mr. Bernard Crezet (Treasurer);
Mr. Eric Sermijn (Vice-President, Professional); Mr. Adrian Enright (Regional Vice President). These were all re-elected for two years in the absence of alternative candidates.

The European regions (Central and West) have been re-organised and the first of the joint meetings will take place in Maastricht on 27th/28th October 1984. The 1985 IFATCA Conference will be held in Athens. A paper proposing bi-ennial conferences was rejected once again.

A well-known and much respected figure in IFATCA circles, Mr. John Saker (UK), has left after 20 years of dedicated service to the Federation. As a token of appreciation for his contribution to the ATC profession, EGATS proposed that he be awarded the Scroll of Honour of IFATCA which was unanimously accepted.



COMMITTEE B - Technical

As usual a full and complex agenda occupied delegates to this Committee under the Chairmanship of Mr. Art Cauty of Canada. The

main items of interest within the Upper Airspace environment were as follows:-

- Review of R/T Phraseology.

A new requirement for R/T Phraseology including Area Control has been implemented by ICAO on 7th June, 1984.

- Elimination of Ambiguity in R/T Call-signs.

The trials conducted by Germany, Canada, South Africa and the UK using the new alpha-numeric call signs have not led to the conclusion that they would be suitable operationally for universal application. Anticipation and strict adherence to standard R/T phraseology by both pilots and controllers is still an absolute priority in avoiding confusion.

- R/T Frequency Jamming.

EGATS made a final attempt to bring the use of the emergency/distress frequencies back into the discussion on this subject but without success, due to opposition from IFALPA and some other Member Associations. However, IFATCA policy is that a technical solution (in the cockpit) must be found.*

- Air Traffic Flow Management.

IFATCA policy is somewhat outdated so new policy will be prepared in the form of a working paper for next year's Conference. An essential requirement is that any new policy should have world-wide application, although in the author's view, this would not be practicable.

- SSR MODE S and TCAS.

TCAS is a feature that might well drastically change ATC in the '90's and some controllers believe that it could be the beginning of the end of ATC as it

* A prototype device developed by a company in Singapore has been produced for airborne trials. Any Company or Operator who would be willing to assist in any way should contact the author of this article, c/o POSTBOX 47, 6190 AA, BEEK-L, The Netherlands.

is now practised. EGATS will be involved in the production of a working paper, together with Standing Committee 1.**

- Reduction of Vertical Separation Standards.

It is understood that trials have been carried out in Japan, USSR and in the European Region but it seems unlikely that implementation will be possible prior to 1987 at least, nor will other cruising levels be considered till then.

One of the highlights of IFATCA Conferences is the Corporate Members Technical Panel and this year's proved to be outstanding. Most of the innovations were of importance to Tower and Approach Control, perhaps the most interesting being a runway/taxiway anti-intrusion device, which would prevent an aircraft entering, for example, a runway already occupied by another. Such a device being a powerful safety aid in conditions of poor visibility.

COMMITTEE C - Professional

Under the chairmanship of Mr. Egbert Just (FRG) a large number of working papers were dealt with among which were the following:-

- The Information Handbook, being a work of reference containing essential information on the various Member Associations.

- A study of "Nightshift Paralysis", a subject being studied in close cooperation with the University of Sussex. A questionnaire was produced which will shortly be distributed at random among EGATS members who may also volunteer for this by obtaining a copy from Mr. Fred le Noble.

- A working paper proposing the adoption of regional policy was rejected. However necessary re-

gional policy might be in technical matters, it would be detrimental to controllers in matters of a professional nature.

- This year, SCIV will investigate deeper the subjects of Training facilities and Scholarships.

- In the Legal field, the limitation of the Legal Liability of the Controller is still topical. However, few States seem interested in settling this problem by means of a world-wide convention and some States, for example Canada, have National limitations. Revocation of Controllers' licences also came under discussion.

- Concern was expressed with regard to the subject of intimidation of controllers, although the precise definition of intimidation was not yet clear.

- A request was made to investigate threats of replacing controllers by independent or military personnel.

EGATS will continue to be represented in Legal Matters in the persons of Messrs. McCluskey Bootsma, together with South Africa, Canada, Sweden, New Zealand, Cyprus and Italy.

During the Committee A sessions, Vice-President Professional, Mr. Eric Sermijn was present on behalf of the Executive Board, to advise and inform whenever this became necessary.

Following the daily Committee sessions, the EGATS delegation met to debrief and debate further the business of the day. Thereafter we had the pleasure of dining together in one of the many local restaurants in Estoril; the excellent standard of cuisine and service we can highly recommend to anyone who might be considering a visit to Portugal, a country with a rich tradition in air and sea navigation and discovery. And there is the sunshine and the hospitality of the people.

** A copy of the relevant documentation is available in the Technical Committee file in the Operations Room.

The question is sometimes asked, "What is the value or benefit of an IFATCA Conference?" It is only possible to answer that by being there and experiencing just how seriously the advancement of our profession is taken by a small but dedicated number of controllers. The Portuguese Association was proud to announce that a completely new ATC System, NAV-1, will be implemented shortly. This System, the culmination of nearly six years of study together with their consultants EUROCONTROL, will be supplied by Hollandse Signaalapparaten. It is con-

ceivable that, by taking an interest in their working environment and by focussing attention on their requirements for improvement, the National and International Authorities became more aware of ATC requirements and gave the matter an improved degree of priority. In any event, when the NAV-1 system is commissioned in 1985, Portugal will be equipped with one of the most modern ATC systems in the world, thus furthering the aims and objectives of ever-improving safety in Aviation.

HELP US TO HELP

The Belgian Friends of Madras Social Service Guild (BFMSS no. 1) organizes a constructive and direct assistance to three Indian villages near Madras:

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Their objectives and activities are:

- A rural health programme: a health centre running three sessions per week was started in 1979.
- A dairy project: to train the villagers in scientific dairy farming based on communal herd.
- An agricultural demonstration scheme: to improve agricultural production.
- Sponsorship for poor school-going children.
- A community irrigation and crop storage scheme.
- Rehabilitation of socially handicapped children.



We appeal to your generosity to subscribe to the purchase of a refrigerator and typewriters for use in the Health Centre. If you are willing to help us with donations, please contact: Roger Feyens - President of the BFMSS no. 1 - 1, Crucifix Bouillon - B-4560 Warsage. Tel. (041) 76.65.89

A Trip to the Tigers

by Rainer Huckenbeck

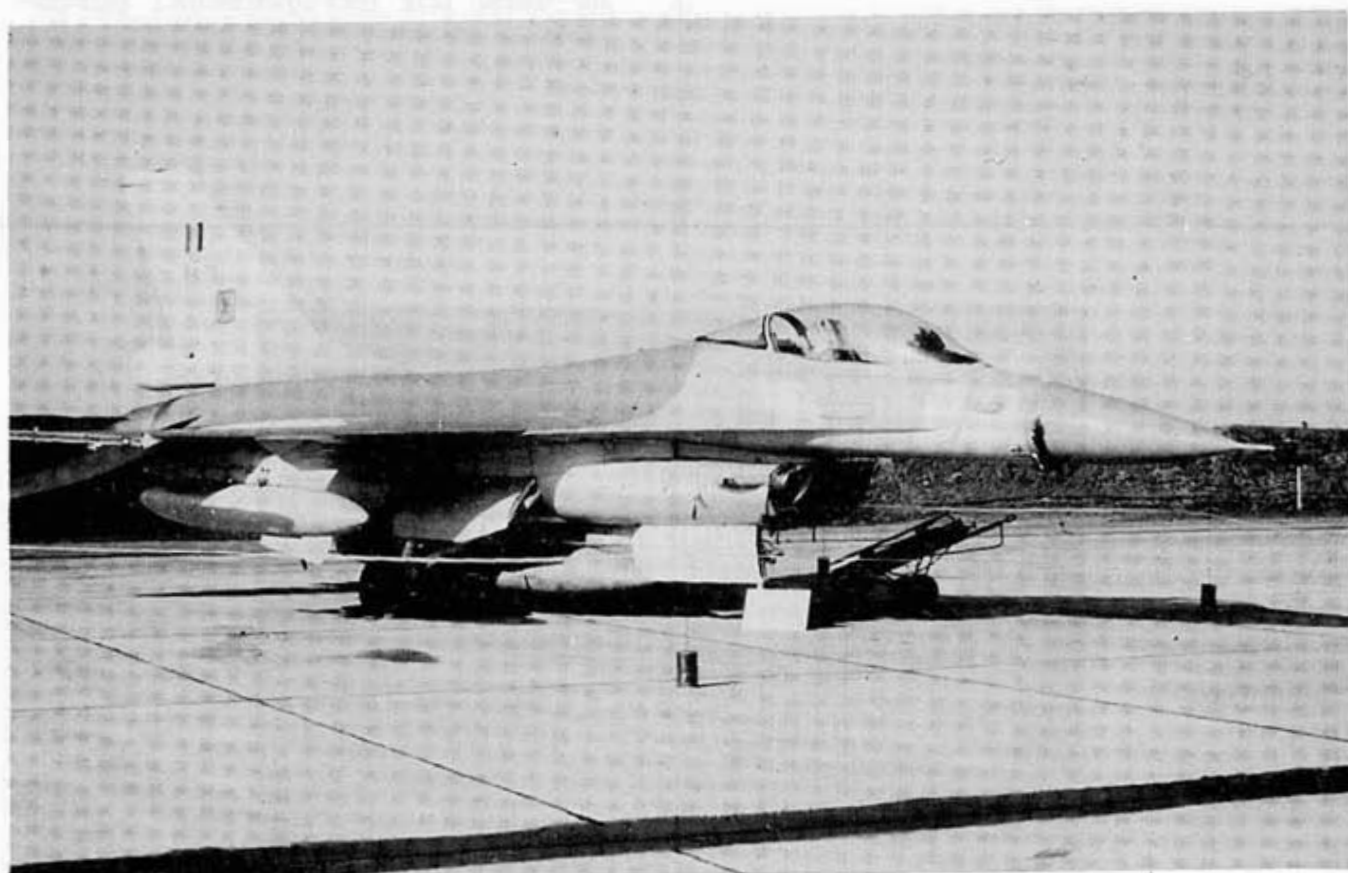
On the early morning of the 18th April, 1984, three cars occupied by EGATS members, were still searching for the main entrance of Kleine Brögel (all others arrived punctually). It took us nearly 30 minutes, equal to three times around the air-field, to reach the main gate. So one can imagine how secret our mission was (or the air base is?).

We were welcomed by the Commanding Officer of the 31 Smd, Mjr. W. Blendeman, and guided to the end of the runway to witness a spectacular take off of four F16s ("Tigers"). Prior to lunch, which was excellent as usual in all Belgian Officers clubs, we had the chance to take a brief look at TWR/GCA and the 31 Smd.

In the afternoon we visited the "Pampa-Shooting-Range" on the



The 31st Smd features a tiger in its emblem. The different NATO Squadrons which share similar distinctive marks attend a "meet" every year. On one occasion an F104 was painted as a tiger (the 31 Smd was a former operator of the type).



F16A (FA-79).

time table. Four F16s demonstrated attacks with rockets, guns and napalm bombs. Last but not least a simulated attack was executed against the range tower, occupied by the EGATS members. Fortunately it was not forgotten to switch on the reheat when they passed overhead.

Finally we were taken to one of the hangars where we received a detailed briefing by the mechanics.

While debriefing in the 31 Smd Tiger pilots joined the bar; many important things were subject to discussion. At the end no one could say what was the best, Brüstern or Kleine Brögel. I suggest to visit a third wing, hoping that the choice will then be less difficult.

AJACCIO ENCORE.

This year's first issue reported on the findings of an investigation into an accident at Ajaccio on 1st December, 1981, involving Inex Adria Flight 1308.

Although the Jeppesen Approach Chart draws attention to the highest obstacle by a large arrow in the chart neckline, it has been recommended that the highest obstacle should be marked with an appropriate symbol. It is therefore worth mentioning that the Investigation Board has used many other charts as reference material during the investigation.

Following the report and with effect from 15th June, 1984 the approach procedures for Ajaccio have been revised; both holding pattern and the instrument approach procedure are no longer to be executed over high terrain.

Jeppesen kindly granted permission to reproduce the Approach Charts of Ajaccio, which are included for the purpose of illustration only and shall not be used for navigational purposes.



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LOC 110.3 AJ

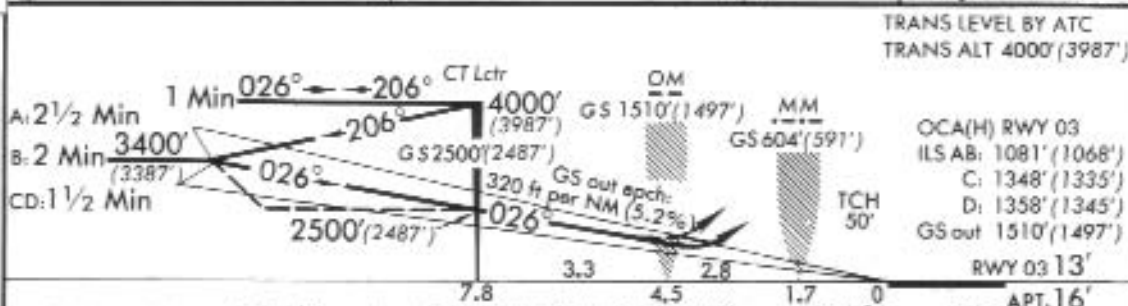
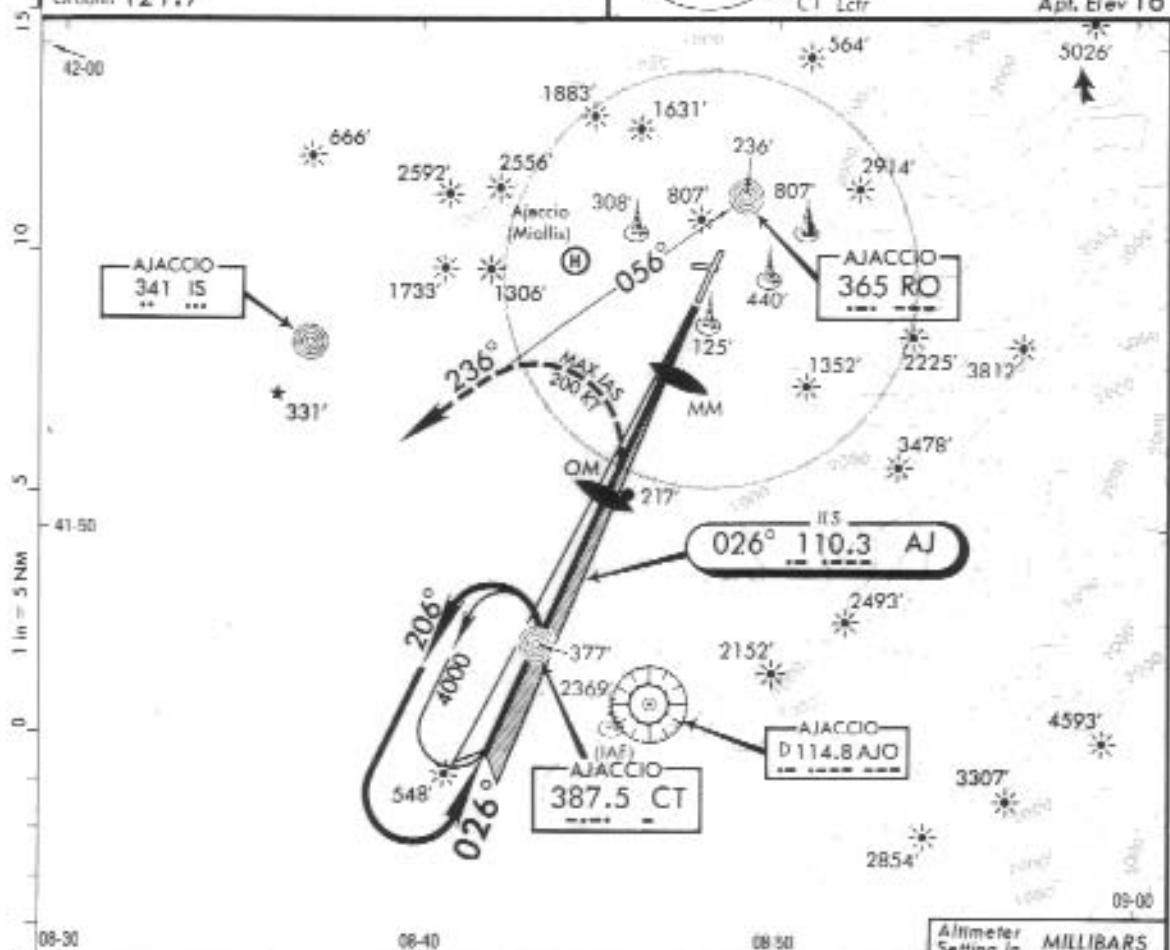
AJACCIO Approach See first apch chart for freq.

AJACCIO Airport 118.1

Ground 121.7

MSA
CT Lctr

Apt. Elev 16'



MISSED APPROACH: Climbing turn LEFT (MAX IAS 200 KT) onto 236° from RO Lctr to 2500' (2487') and as directed.

NOTE: Climb to 2100' (2087') prior to level acceleration.

STRAIGHT-IN LANDING RWY03					CEILING REQUIRED		CIRCLE-TO-LAND		
AB: 1083' (1070')			LOC (GS out) 1			NOT AUTHORIZED			
DA(H) C: 1353' (1340')			MDA(H) 1520' (1507')			East of airport			
D: 1363' (1350')						DAY		NIGHT	
FULL		MM out		MM out		MDA(H) CEIL VIS		MDA(H) CEIL VIS	
A	220m- 2000m		305m- 2000m		A	1210'	365m- 2000m	NOT AUTHORIZED	
B					B	1194'			
C	275m- 2800m		305m- 2800m		C	2290'	695m- 3000m		
D	275m- 3200m		305m- 3200m		D	3070'	930m- 4000m		
Gnd speed-Kts		70	90	100	120	140	160	Without air transport authorization see terminal page E-21.	
GS 3.00°		377	484	538	646	753	861	1 OM must be operative.	
MAP at OM								2 After GS out apch: MDA(H) 1520' (1504') 460m-2000m.	

CHANGES: GS out OCA(H) & minimums.

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