On crisis alert

A visit to JaboG 34- the fighter-bomber wing "Allgäu"

One of the Air force units continuing German heritage, is JaboG 34 "Allgäu", based in Memmingen, in south-west Bavaria. Today equipped with Panavia Tornado, the unit started in the late fifties with the Republic F-84F "Thunderstreak", which was replaced in the early sixties by the much maligned Lockheed F-104G "Starfighter". This type was operated until October 1987, when the last example of the type was retired from service. In those years in between some wing-members lost their lives in crashes. The introduction of the Tornado started in 1986, and it quickly earned the reputation of being a flexible and reliable aircraft.

The unit

The wing consists of two squadrons, with N° 1 being called "Grünherz" (Greenheart) and N°2 "Edelweiß" (lion´s foot), thus carrying on the tradition of these famed Luftwaffe fighter outfits. 98 pilots and weapon system officers are heart of the unit, of which 86 crews are organized in the two squadrons, with the rest executing primarily administrative duties besides the flying routine. If a squadron pilot or WSO is not away from the unit for too long, they can reach the required NATO-minimum of 180 flying hours per year, whereas those in the wing staff fly around 100 hours per year. The standardization officers fly even more than most squadron pilots, reaching a top of proficiency with around 200 hours a year. The wing flies approximately 7000 hours per year to achieve the requiered state of readiness.

To list all the various detachments executed by the wing is nearly impossible, but to name a few, it needs to pass its annual tactical evaluations for the German Air Force and NATO, and runs regular deployments to Decicommanu, Sardinia.

40 aircraft are pooled in the wing, and as there are no aircraft directly assigned to the squadrons, there are no squadron markings on individual aircraft. With the dissestablishment of MFG-1, the German Navy´s first maritime strike wing, a number of their former aircraft have been passed to JaboG 34, and these aircraft can be easily identified, because they still wear their former operators mission-dedicated camouflage. Interestingly individual aircraft differ by some instruments like Mach-speed indicator or altimeter being in different positions in the WSO´s cockpit according to the production lot. These differences will disappear with all aircraft being updated.

Mission planning

Such a complex and versatile aircraft like the Tornado and its difficult mission profiles require precise mission planning. To support the crews in this task, DASA has developed an air-shipable mission planning computer, equipped with two 20-inch screens, which can be loaded with high

resolution maps of the potential area of operation, permitting the operator to select the flight path by mouse-click. With the intended speed entered, the system then calculates everything from flight time, time over way-points to fuel consumption, and so the required fuel load and mission time is presented to the crew. The so planned mission can be stored on a device called □the bone□ by the crews due to its shape. It is then taken to the aircraft, and the data is fed into the nav-attack system of the Tornado. The whole system seems to be less complex, but at least equally capable and more modern than the one used for the MDD F-15E "Strike Eagle", which has the size of a large, deep wardrobe.

Maintenance

Maintenance is done on the base except for major overhauls, with these being executed at Manching with the manufacturer. Besides fixing of actual problems, the majority of work is focused on the 300 and 600 hour checks. Most time consuming is not the fixing of a problem, but, as with all large machinery, the identification of the cause for a malfunction. What does not help to minimise maintenance, are e.g. engine support systems having metric connections to the airframe and its systems, but inch-tubes and threads, as these parts have been designed and produced in the U.K. As one of the maintenance officers put it: "The Tornado is a good example of European cooperation: The Italian parts are light but fragile, the German part is good craftmanship, whereas the British parts let to some extent believe, they could not overcome the state of James Watt´s steam machine, most items large and heavy but sturdy. Nevertheless the cooperation with the partner-manufacturers works well, and the required flying hours can be provided. "

The aircraft and its systems

The twin-engine, swing-wing Tornado is now for more than ten years in service with the German Air Force, and the ground-attack version is in imminent need of updating some of its systems. With introduction of the ECR-version the Germans have an up-to-date aircraft for this specific role available, which already served with success in operation "Deny-Flight".

New weapons have been eliminated from the modernisation plans, as the acquisition of the Matra "Apache" stand-off weapon was halted, due to inacceptable difficulties with its narrow, preprogrammed launch window totally dependent on precise navigation.

Starting in 1998 with the first part came the most comprehensive modernisation package since introduction into service. The installation of the "New Avionics Structure" incorporated an expansion of computing capability from 256 KB to 8 MB, the change of the programming language from Assembler to Ada and the integration of the MIL-STD-1760 Databus for guidance of "smart" weapons. The basis is formed by installation of an integrated laser-gyro inertial navigation system, backed by a GPS-receiver.

In 1999 the "Litening"-Pod by Rafael should have become available to the Tornado, thus permitting autonomeous identification and targeting for attack with LGB´s. The Rafael pod is 2.2m long with a diameter of 41cm and a weight of approximately 200kg. It contains a laser designator, and a FLIR. This configuration permits visual identification of targets also by night, especially important on crisis-reaction missions under UN or NATO-mandat, as a "blind" attack under risk of civilian casualties is politically inacceptable nowadays.

Third step to take place sometime around the turn of the century, is the total modernisation of the IDS-Tornado´s electronic self-defence, primarily an improvement of the RWR-system seems mandatory, which is planned to be enhanced by a missile approach warning system.

The armament available to the wing includes the officially "multi-purpose weapon" called MW-1, the MK82, either retarded or not, the BL755 cluster bomb, as well as the Matra 500lb retarded bomb. The ammunition for the MW-1 is selected according to targets, ranging from anti-personnel mines(today popularly called "area denial"), armour penetrating bomblets to runway cratering devices. Although the MW-1 is thus more flexible than the British Hunting JP-233, which is only used for airfield attack, the questions remains, whether a low overflight of a heavily defended battle-front on land for anti-armour attack will not inevitably result in the loss of the aircraft and its crew. Therefore a stand-off derivative of the MW-1 would be tempting, but as the recent cancellation of the intended Matra "Apache" indicates, there seems to be a long way to go, trying to achive a capability comparable to the Texas Instruments JSOW. For self-defence the AIM-9L "Sidewinder" can be loaded on rails on the inner side of the inner swivelling pylons, being supplemented by the two internal Mk-27 Mauser cannons. Interestingly the AGM-65 "Maverick" is not in the inventory of JaboG 34, but available to other Tornado-units of the German Air Force.

For training purposes usage of the "buddy-buddy"-refuelling pod is frequent, with the crews showing impeccable perfection in establishing probe and drogue contact. As my pilot demonstrated on our sortie, he simply slid into position below and behind the tanker-Tornado, and without noticeable correction of speed and heading guided the probe into position on first try. In operational scenarios KC-135´s and KC-10´s are the most frequently used tankers, as the amount of fuel transferable from one Tornado to the other is limited to around five tons, which would be sufficient only for one attacking aircraft. From KC-10´s tanking is made possible at night, as the basket is equipped with lamps and reflective strips aiding the receiving pilots aim.

Crisis reaction forces

Since last year fighter-bomber wing 34 is part of the German crisis reaction forces, and maintains readiness for deployment. This important challenge requires a level training and flexibility exceeding the fullfillment of NATO-standards by far. Frequent detachments of men and machine to Decicommannu, Sardinia or Goose Bay, Canada permit a high density of training opportunities for the risky low-level penetration missions and air-to-air combat. On average a squadron pilot can except to be on detachment for one month a year. It can hardly be compared with USAF or RAF, but taking into account the number of international commitments and budgetary restrains, a rapidly evolving problem, it is self-explanatory.

Although some soldiers of the unit were already dispatched to Piacenza, to support "Einsatzkontigent 1" or "Deployment Force 1" in participaton of Operation "Deny Flight", the unit as a whole was not called to duty under UN or OSCE mandat so far. But with some potentially instabile situations in a number of countries in and around Europe this could happen quite quickly, as the Albanian crisis demonstrated.