

Spain's last Freedom Fighters



Trainers ^{of} the Extremadura

report and photos:
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The Spanish AF, or Ejército del Aire (EdA), is entirely self-sufficient when it comes to training the pilots that operate the variety of fighter aircraft currently in its inventory. Aspiring Mirage F1, EF-18 Hornet and Eurofighter pilots all have to pass through the Air Force Academy, elementary training and basic training before they can apply for the advanced training course at Base Aérea Talavera la Real. Ala 23, operating the F-5M in the lead-in fighter trainer role, is host to the advanced training syllabus.



Before getting the chance to fly the Freedom Fighter advanced trainer, aspirant pilots must complete their elementary and basic training. The Spanish AF training syllabus is similar to those of other major NATO air forces in respect of the division of the training stages. Elementary and basic training — comprising theory and practice — are performed at Murcia/San Javier in south-eastern Spain. There, the Academia General del Aire, also known as Ala 79, is divided into two squadrons. 791 Escuadrón 'Escuela Elemental' operates the ENAERT-35C Pillán, alongside a number of gliders. 793 Escuadrón is the basic training squadron or 'Escuela Básica', which operates the C-101EB Aviojet, nicknamed 'Culo Pequeño' (small ass) by Spanish AF pilots.

By the time pilots graduate from the two classes at Murcia, they will have accumulated approximately 50 hours on the Pillán and up to 100 hours on the Aviojet. Now they will move up to the next level: advanced training. The advanced training course is conducted by Ala 23 at Talavera la Real, located in the autonomous region of Extremadura in the west of Spain. Ala

23 is divided into two squadrons, namely 231 Escuadrón and 232 Escuadrón. Both units operate the dual-seat F-5M, which is a modernized version of the SF-5B+, built under license by CASA (Construcciones Aeronáuticas, SA). The jet is operated under the Spanish military designation AE.9. From 1968 onwards, 70 F-5s were built in various versions for the EdA by CASA at Getafe. The remaining fleet consists entirely of two-seaters and these have seen upgrades in two major phases. The first upgrade was to the SF-5B+ standard in the early 1990s. Starting from 2002, the latest F-5M standard was implemented by EADS. Currently the EdA inventory includes 20 serviceable F-5Ms, all operated by Ala 23 from Talavera la Real.

'They know nothing!' is the credo for the instructors at Talavera, a reflection that the fledgling fighter pilots are still a long way from graduation. When the graduates from Murcia arrive for advanced training at Talavera, Plan 1 goes into action. This means that the new pilots will undergo three weeks of intensive classes, with a pre-defined syllabus expounding the theory behind aircraft systems and maneuvers. Thereafter, completion of a theoretical test marks the

start of the simulator phase. The pilots complete their simulator rides according to a strict schedule, and it is now that they learn the basic handling and maneuvering skills required for the F-5M.

Dollar flight

The student's first flight in the F-5 is conducted with an instructor and is of great symbolic importance. This initial trip is nicknamed the 'Dollar flight', after the long-standing tradition whereupon, after graduation, the student buys a silver Dollar coin engraved with both his name and that of the instructor.

During the initial flight, the instructor demonstrates the capabilities of the F-5M to the student. The flight typically includes a supersonic phase and a 500kt low-level section. The instructor is in the front seat (Cabin A), and the student is not flying, but only monitoring the ride from the back seat (Cabin B). In practice, the 'Dollar flight' is a huge morale-booster for the student, especially taking into account the difference in performance between the C-101 and the F-5M. The C-101 has a maximum speed of around 417kt (770km/h) — marginally





Above: The 'office' of the F-5M is fitted with two large multi-function displays that replaced the old analog versions during the upgrade program.

Above right: The view through the head-up display of an approach to runway 31 at Talavera-la-Real.



higher than the speed at which the F-5M's afterburner is disengaged! After the 'Dollar flight', the students are well aware that they will from now on be handling a very different aircraft.

Know your place

Plan 1 also includes seven to 10 flights in Cabin A, during which flight basics and safety procedures are drilled. It concludes with a solo flight which, when successful, is followed by the instruction course. During the latter the students will spend approximately 50 hours in the back seat.

The second stage of training is Plan 2, in which the student will spend their flying time in the front seat. Plan 2 consists of approximately 14 flights. During successive phases, the student will pass through the next three tiers of training (Plans 3 to 5), including formation flying, tactical and close formation operations, instrument training, air-to-ground and air-to-air maneuvering and tactics. In total this part of the course takes around nine months to complete, and sees another 60 flight hours accumulated. The total flying hours during all tiers number approximately 110. During the

course, the students also get the chance to experience a dissimilar air combat training scenario in two missions against the EF-18 or Eurofighter, learning at first hand about the flying and weapons characteristics of these powerful 'opponents'.

The course planning is fairly rigid, with the graduation date established before the course even begins. Since the entire syllabus is planned before the student starts, falling behind is not an option. When a student passes, he or she will receive a second star (lieutenant) at Murcia/San Javier. Students that fail to meet the course's very high standards will get a second chance to become a pilot at the Spanish AF's transport or helicopter wings. Courses for transport pilots take place at the Grupo de Escuelas de Matacán, which operates the CN235M and C-101 from Salamanca/Matacán in central Spain. Helicopter training is conducted at Granada/Armillá, where Ala 78 operates the EC120B Colibri for basic helicopter training and the Sikorsky S-76C in the advanced training role. On average, around 10-15 per cent of students fail fighter training and are passed on to other roles.



An impressive line-up of SF-5Bs at Talavera-la-Real.



The future

The arrival of the Eurofighter has not altered the Spanish AF training syllabus. However, the introduction of the F-5M in 2005 saw some changes in training. The F-5M is equipped with modern avionics that allow it to serve as a lead-in to the Eurofighter. The F-5M update program included a 'zero-hours' structural upgrade as well as the introduction of up-to-date avionics including a 'glass' cockpit, several multi-functional displays, hands on throttle and stick (HOTAS) controls and a new radar system. These changes enable the students to become acquainted with the systems found in modern fighter aircraft. The syllabus is standardized to enable training that is independent from the front-line type that the student will fly in future. The front-line squadrons execute type conversion from the F-5M onto the Mirage F1, Hornet or Eurofighter, immediately after the students have graduated from advanced training at Talavera.

In November 2010, the F-5 marked its 40th anniversary in Spanish AF service. The current fleet is kept serviceable and in pristine condition by the ground personnel of Ala 23. Depot-level maintenance is completed at Talavera, while Albacete's Air Arsenal, also known as the Maestranza Aérea de Albacete (MAESAL), conducts structural maintenance. The General Electric J85 engines are maintained in-house at Talavera. The Mando Aéreo de Combate (MACOM, Combat Air Command), headquartered at Torrejón, has set the out of service date of the current F-5 fleet at approximately 2020. Currently, there is no designated successor to the F-5. This, however, can be explained by the downturn experienced by the Spanish economy in recent years. The Freedom Fighter will therefore soldier on in Spanish skies for the foreseeable future, enabling pilots to be capable of handling the third- and fourth-generation fighters in the Ejército del Aire inventory.

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Budget constraints

Due to the economic situation in Spain, the F-5s are currently not used in an adversary role. When the budget permits, the instructors from Talavera serve as aggressors. This is not part of the advanced training course, but provides a job 'on the side' for the instructors. When funds allow, the F-5 instructors regularly fly against the Hornet, Mirage F1 and Eurofighter, helping train the fighter pilots and sharpen their own skills as instructors.

Since NATO's Tactical Leadership Program has moved to Albacete, a lack of financial means has prohibited the F-5s from participating in these multi-national exercises as 'Red Air'. However, the instructors hope to be able to take part in an adversary role in future TLPs. Even for aircraft with beyond visual range capabilities, the F-5 proves a tough opponent, thanks to its combination of agility and small size.



Top: Capt Alfredo Lago of Ala 23 preparing to board his F-5M for a 'Plan 1' flight with a student in the rear seat.

This photograph: An F-5M on short finals to land.