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# Beaufort

**Dick Wels, Hans Drost and Henk de Ridder report from Beaufort, South Carolina on US Marine Corps F/A-18D Hornet operations**

Known as Fightertown East, Marine Corps Air Station Beaufort in South Carolina is home to Marine Aircraft Group 31 (MAG-31) with six F/A-18 Hornet squadrons assigned. The group's mission is to execute anti-air warfare and offensive air support operations in support of Fleet Marine Forces from land-based prepared airfields, expeditionary airfields and US Navy aircraft carriers.

US Marine Corps F/A-18 Hornet squadrons train for and conduct a mission set comprising:

**Offensive and Defensive Counter Air:** suppress enemy air power by destroying or disabling their aircraft, preferably while they are on the ground, to include disabling or damaging infrastructure such as runways or logistical nodes.

**Close Air Support:** targeted toward hostiles close to friendly ground or naval forces.

**Armed Reconnaissance:** locate and attack targets of opportunity, such as enemy materiel, personnel and facilities, in assigned general areas.

**Strike Coordination:** detect targets and coordinate or perform attack or reconnaissance on those targets.

**Suppression of Enemy Air Defences:** suppress enemy surface-based air defences, including but not limited to surface-to-air missiles, anti-aircraft artillery and early-warning radar and command, control and communication functions.

## D-model's Delta

Two of Beaufort's resident units Marine All Weather Fighter Attack Squadron 224 (VMFA[AW]-224) and 533 (VMFA[AW]-533) operate the two-seat F/A-18D. Unlike the US Navy, which uses the D-model as a training

aircraft, the US Marine Corps employs the F/A-18D configured as an all-weather tactical strike aircraft with the aft cockpit occupied by a weapon systems officer (WSO).

Major Dennis Dalton, MAG-31 Operations Officer, said: "In our F/A-18Ds, the back-seater is a WSO, very similar to the US Air Force F-15E Strike Eagle. However, what sets us apart from the F-15E is that we don't have a stick and throttle in the aft cockpit. We have two multifunction hand-controllers used to run the displays. The pedals are used for communications, so rather than push to throttle, it is push to talk with your feet; it's communication switches to key the radios.

"The F/A-18D has two additional roles in the air-to-ground arena: Forward Air Controller-Airborne [FAC-A], meaning we operate as an airborne JTAC [Joint Terminal Attack Controller], and Tactical Air Controller-Airborne [TAC-A], which is a

forward extension of the Marine Corps Direct Air Support Center [DASC]. We can do all our command and control on the battlefield, radio relay, control sectors of airspace where radars can't see, take tactical control and coordinate aircraft, airspace and altitudes. That's where the two-seat F/A-18D really brings an added capability."

Major Dalton explained the system used: "On the bottom [of the forward fuselage] where the vents for the gun are behind the pitot tube, you can see the Advanced Tactical Air Reconnaissance System [ATARS, see panel]. We removed the gun and inserted two cameras. It is very similar [in terms of functionality] to the SHARP [Shared Reconnaissance Pod] system, a tactical pod carried by the Super Hornet. Ours is embedded in the nose of the aircraft.



## ADVANCED TACTICAL AIR RECONNAISSANCE SYSTEM

The ATARS is a near real-time imaging system designed to acquire, store and down link high-resolution imagery. The system is installed in the nose of any Lot 14 or higher F/A-18D Hornet in place of the 20mm M61 Vulcan cannon.

The ATARS comprises infrared and electro-optical sensors, two digital tape recorders, a reconnaissance management system, a radar interface, and a digital data link pod

mounted on a centre-line pylon. The interface between the APG-73 radar and ATARS enables high-resolution ground mapping imagery to also be stored. The digital data link transmits imagery and data to any common ground station. The ATARS system was developed by the McDonnell Douglas Corporation as part of a November 1995 contract awarded by Naval Air Systems Command.

Each F/A-18D squadron has two or three aircraft configured with ATARS for intelligence gathering and pictures for the ground commander. With the guns removed, self-defence is done by using missiles. Because the gun ports remain in the aircraft, if necessary the jet can be reconfigured with guns in two days. The aircraft also has an additional data link pod, carried on the centre line to enable the down linking of images to the ground station in real time. Pictures can provide information about the location of enemy troops and their equipment. The system is very accurate. It delivers pre- and post-strike target damage assessments and visual reconnaissance.

“Other than having ATARS, the configuration of our F/A-18Ds is pretty much the same as all other legacy F/A-18s operated by the US Navy and US Marine Corps. One difference, we carry the AN/AAQ-28 LITENING targeting pod, while the navy uses the AN/ASQ-228 ATFLIR pod, but all weapons are the same.

“If the marines on the ground ask for air support, it makes no difference if there is a navy or a marine F/A-18 in the area; the navy and marine corps are basically one and the same. We [the US Marine Corps] are our own service, but are a sister service to the navy. Funding and testing of the F/A-18D model is managed by Naval Air Systems Command in conjunction with the US Marine Corps.

Under the current plan all US Marine Corps F/A-18 squadrons will transition to either the F-35B or F-35C Lightning II. The process is due to be complete in 2030 when the F/A-18 will have its sundown.

Operation Desert Storm in 1991 was the operational debut for the F/A-18D. Twelve F/A-18Ds assigned to VMFA(AW)-121 ‘Green Knights’ based at Marine Corps Air Station El Toro, California deployed to Shaik-Isa Air

Base, Bahrain. The squadron was deployed to conduct the fast forward air controller missions consisting of two roles; Tactical Air Coordinator-Airborne and Forward Air Control-Airborne. The US Air Force had done the fast FAC mission in Vietnam, but the US Marine Corps had not. Thanks to a robust training programme and the intuition of 121’s marines, the type proved to be a good platform. The squadron’s 12 F/A-18Ds and 36 officers flew around the clock into target areas ahead of strike aircraft, to locate and identify high-value targets for coalition strike aircraft.

Both of Beaufort’s current F/A-18D squadrons flew the A-6E Intruder in Operation Desert Storm. At the time, VMFA(AW)-533 and VMFA(AW)-224 were stationed at Marine Corps Air Station Cherry Point in North Carolina before they moved to Beaufort and started transition to the F/A-18D on September 1, 1992 and March 5, 1993 respectively. A third unit, VMFA(AW)-332 also transitioned from the A-6E on June 16, 1993 and deactivated on March 30, 2007.

### Training

In order to stay combat ready, Beaufort’s squadrons train constantly; pilots and WSOs fly on average three missions a week. When not scheduled for flying duty, aircrew are kept busy with classes during which they can learn about and review tactics and exercises to fine tune their craft. Pilots may also hold collateral duties undertaken when not flying or training. Beaufort’s F/A-18 units are not tasked for homeland defence: this is a US Air Force mission that holds aircraft at alert status 24/7 every day of the year ready to intercept unknown or unannounced aircraft.

At weekends, the resident squadrons based at Beaufort fly their aircraft to a civilian airfield, where facilities and aircraft

handling are offered. This gives the aircrew an opportunity to test their flying skills under different circumstances.

The squadrons also deploy to locations around the United States to participate in large force exercises. For marine corps pilots and WSOs, the primary training event is the Weapons and Tactics Instructor Course staged by MAWTS-1 at Marine Corps Air Station Yuma in Arizona.

Both VMFA-115 and VMFA(AW)-533 participated in WTI 15-2 held during October. Two WTI courses are held each year to give pilots, WSOs combat familiarity and proficiency.

VMFA-115 and VMFA(AW)-533 deployed ten aircraft to Yuma, supported by 125 maintenance marines. The course is intended to train fixed and rotary wing pilots with classroom instruction and flight hours and involves ground combat and combat service support troops. The course offers realistic field training and the opportunity to work with most of the assets employed by the US Marine Corps on real-world missions.

Participants get ample opportunity to build their proficiency during the six-week course, three weeks of which is dedicated to live-fire training that focuses on the integration of marine aviation with a mobile ground force.

### MAG-31 F/A-18 HORNET SQUADRONS

VMFA-115	Silver Eagles	F/A-18A+
VMFA-122	Werewolves	F/A-18C
VMFA-251	Thunderbolts	F/A-18C
VMFA-312	Checkerboards	F/A-18C
VMFA(AW)-224	Flying Bengals	F/A-18D
VMFA(AW)-533	Hawks	F/A-18D



F/A-18D BuNo 164001/EX31 is currently painted in colours to mark the 70th anniversary of Marine Aviation Logistics Squadron 31 (MALS-31) ‘Stingers’ based at Beaufort. The squadron provides logistics support, guidance, planning and direction to all of the squadrons assigned to MAG-31. *Henk de Ridder*