

VMAT-203 Produces Combat-Ready Harrier Crews

By Rick Llinares

The vertical/short takeoff and landing (V/STOL) AV-8B Harrier II is unique among fixed wing military aircraft. Even though the latest version is 20 years old, it's still a marvel of aviation. Also known as a "jump jet," the Harrier is operated exclusively within the U.S. military by the Marine Corps. Capable of operations from either Navy amphibious assault ships or forward area landing fields, the AV-8B has the ability to quickly provide support to Marine ground forces. Thanks to advanced avionics, the versatile aircraft can strike targets day and night, and its ability to operate close to the battlefield translates into rapid response and flexibility for Marine ground commanders in need of close air support.

Training aviators in the AV-8B is the sole responsibility of the *Hawks* of Marine Attack Training Squadron (VMAT) 203 at MCAS Cherry Point, N.C. As the only Harrier II fleet readiness squadron, its mission is to provide replacement pilots for all AV-8B squadrons in the Marine Corps. VMAT-203 is comprised of 60 officers and 220 enlisted personnel. It operates 14 single-seat AV-8Bs and 13 two-seat TAV-8Bs. The unit flies approximately 7,000 hours per year, completing 5,200 syllabus events. The training syllabus includes 69 flights for 80 hours and 50 simulator events. Nonflying academics require almost 250 hours. The training time for a Harrier II pilot is approximately 36 weeks after instruction begins at VMAT-203, where the *Hawks* train approximately 40 U.S. Marine and Italian AV-8B pilots per year.

Prospective instructors must have a minimum of 500 hours in model, been designated a division leader and completed the Weapons and Tactics Instructor course at



Above, Capt. Michael J. Black prepares to launch his AV-8B from Tarawa (LHA 1). Photo by Wendy Leland. Facing page, Rick Llinares shot this VMAT-203 two-seat TAV-8B used to train Harrier II replacement pilots.

Marine Aviation Weapons and Tactics Squadron 1, MCAS Yuma, Ariz. To become qualified, instructors

must complete a combination of simulators and proficiency flights over a period of six to eight weeks.

The Harrier II is a demanding aircraft to fly. Operating in the V/STOL regime requires significant training and attention on the part of the pilot. VMAT-203 operations officer Major Sean Dobeck described teaching the students to fly the AV-8B, "From an instructor and student standpoint, the most challenging part of the curriculum is

transitioning the student to the V/STOL aspects of the weapons system. In traditional flight, the Harrier flies like any other tactical jet fighter where lift is provided by airflow over the wings. In jet-borne flight, in which the Harrier can transition to zero airspeed to perform a vertical landing, the pilot uses a combination of nozzles, reaction controls and flaps to achieve the desired result."

According to Maj. Dobeck, the VMAT-203 Operations Department, in particular, faces unique challenges. These include producing a replacement pilot who meets the standards required by the commanding officer and fleet squadrons, daily synchronization of requirements with proper resources to accomplish the specific mission objectives, and long-term training and planning to deal with the high volume of instructor turnover on a yearly basis.

The *Hawks* trace their beginnings to 1 July 1947 when Marine Training Squadron (VMT) 1 was activated. After deactivation, VMT-1 was reactivated as VMT-203 in 1967 and redesignated VMAT-203 on 1 May 1972. Over the years, unit aircraft have included

continued on page 24



the T-33 Shooting Star, TF-9J Cougar and TA-4F Skyhawk. VMAT-203 also flew the TA-4J.

The advent of V/STOL aviation began a new era for the *Hawks*. The squadron's A-4 Skyhawks were retired, and VMAT-203 became the AV-8A training squadron as part of Marine Aircraft Group (MAG) 32. In December 1983, the first AV-8B Harrier II was delivered and VMAT-203 was assigned the dual missions of instructing both AV-8A/C and AV-8B replacement pilots. After the last AV-8A/C pilot completed instruction in March 1985, VMAT-203's exclusive mission became the training of AV-8B aircrews and maintenance personnel.

There are seven fleet AV-8B squadrons and one training squadron assigned to two Marine air wings (MAW), each with one Marine aircraft group. On the East Coast, the 2d MAW at MCAS Cherry Point, N.C.,



Top, a TAV-8B and AV-8B fly in formation during a training mission over the Atlantic Ocean. Above, Sgt. Jason Tomlin is responsible for the life support gear on board Harriers.

has three single-seat Harrier units—Marine Attack Squadrons (VMA) 223, 231 and 542—and VMAT-203 under MAG-14. On the West Coast, the 3d MAW's MAG-13 at MCAS Yuma, Ariz., includes VMAs 211, 214, 311 and 513.

The Harrier has been in service with the Marine Corps since 1971. For a relatively compact aircraft, just 46 feet in length, the AV-8 can carry a wide assortment



of weapons. The Harrier is first and foremost a close air support aircraft, and can be configured for the specific mission required. The aircraft carries all of its weapons as external stores either under the fuselage, as with its 30mm cannon, or on six under-wing stations. Unguided bombs, rockets and AGM-65 Maverick missiles can be carried for strike missions, while the AIM-9 Sidewinder is used for self-defense as well as armed escort missions protecting Marine assault helicopters.

There are three single-seat versions of the V/STOL aircraft: the AV-8B, Night Attack jet and Harrier II Plus. Over the years, the Harrier has undergone continuous upgrades to its power plant and avionics systems. The Night Attack jet has a night vision goggles-compatible cockpit, forward-looking infrared sensor atop the nose, and enhanced cockpit displays to effectively conduct strike operations at night. The Harrier II Plus includes improvements in the night attack avionics and the APG-65 multimode radar. The advanced Litening II navigation/laser targeting system will allow the AV-8B to employ the precision Joint Direct Attack Munition.

Until its planned replacement, the F-35 Joint Strike Fighter, enters service in the future, the AV-8B Harrier II will remain a critical component in the Marine Corps' combat capability. And the instructor pilots, officers and Marines of VMAT-203 will continue to train the pilots who take this remarkable aircraft into combat. ✈

Rick Llinares is a professional photographer and writer specializing in Naval Aviation. The author is grateful to Majors Sean Dobeck, Christopher Guilford, Grant Pennington and Jason Waldron; Capt. Gordon Limb; and all of the *Hawks* for their support; as well as Lt. Col. Hector Velez, Maj. Carbonero and the *Yankees* of Marine Aerial Refueler Transport Squadron 452. Special thanks to Maj. Ken Zieleck, MSgt. Gary Griffin and SSgt. Maurice Bease.



Above, an AV-8A, the early Harrier, with fixed in-flight refueling boom prepares to take off. Right, an AV-8B carrying the Litening II targeting pod launches from Bataan (LHD 6). Below, combat-ready aircrews trained at VMAT-203 used their skills in Operation Iraqi Freedom.



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