

DRAFT #1, AUGUST 26, 2004  
199th RAC Bird Dog M-60 Gun Systems  
AKA

The Little Bird Dog With A Bite

**THE BEGINNING:** The 199th Aviation Company developed a twin M-60 Machine Gun System for the L-19 Bird Dog in July 1967 to fill the requirement for immediate suppression of discovered enemy forces. The Bird Dog was utilized for the location of Viet Cong infiltration routes, troop movement, supply points and the coordination of friendly fire on targets in the Delta, to which the 199th was assigned. This mission required the aircraft to be operated between 1,000 to 1,500 feet altitude to best identify the targets and assure they were actually Viet Cong and not ARVN or civilian. The Viet Cong were very careful to mimic the appearance of the friendlies by pretending to be working the rice fields or fishing on the rivers and canals. When detected, they enjoyed greeting the little airplane with large volumes of small arms and automatic weapons fire. In March 1967 the Army Aviation School at Ft. Rucker, Alabama graduated a large fixed wing aviator class. Many of those pilots were assigned to the 199th, a new Reconnaissance Airplane Company to be formed at Fort Hood, Texas. Preparation, readiness and training followed with direct deployment to Vietnam. Until the arrival of the 199th Aviation Company in July 1967 the entire Delta was the responsibility of a single Bird Dog unit –the 221st Reconnaissance Airplane Company (RAC) based at Soc Trang and known as the Shotguns. The 221st RAC had arrived in Vietnam in July 1965, two years prior to the 199th, and shouldered the entire Delta visual reconnaissance mission alone. Captain Cline Preble, a graduate of the March 1967 arrived in Vietnam in May 1967 and was assigned to the 221st RAC as a sector pilot flying out of Vinh Long, about halfway between his home base of Soc Trang and Saigon.

**THE PACE QUICKENS:** While flying as the Vinh Long sector pilot with the 221st RAC, Captain Preble observed that the Viet Cong were exerting more and more pressure in the area and were coordinating infiltration routes from Cambodia along the Mekong River and its many tributaries. Preble was feeling this pressure in the form of the weapons fire he was receiving and he was seeking some solution to this problem. He really didn't appreciate the little round holes that seemed to appear in his tail feathers all too often. His first solution was to change his ordinance load from the 2.75 inch marking rockets (2 per wing) to 2.75 inch H.E. Rockets. He used smoke grenades for the target marking missions when directing helicopter gunships or U.S. Air Force air support in attacking targets. He felt he still had a need for more firepower and had heard of an M-60 machine gun system previously used on the H-23 helicopter. He secured a technical manual, read up on the characteristics and thought it might be a possible solution to his problem. He began a search for the system with the help of the U.S. Army sector advisor he was supporting at that time and eventually secured a pair of guns. The problem solving idea was forming in his mind in late June and early July coinciding with the July arrival of his flight school buddies of the 199th advance team. In early July Preble was re-assigned to the 199th and continued to function as the Vinh Long sector pilot. This new unit was

named the Swamp Foxes which was very appropriate for the Delta with its rivers, marshes and rice paddies. It was commanded by an experienced army aviator, Major Charles Hutchins, who had a very practical approach in leadership and problem solving. With the arrival of the 199th

the area that had been the primary responsibility of 221st was divided with the northern half of the Delta being assigned to the 199th and the southern half to the 221st.

**TAKING A CHANCE:** Three classmates of Prebles were in the 199th advance party which arrived in country on about 8 July 1967. The mission was to prepare the Vinh Long airfield site for the impending arrival of the aircraft, equipment and personnel scheduled to arrive later in July. The advance team was comprised of Captain Curt Herrick, the OIC of the advance team, Captain Larry Joyce, the unit operations officer on

his 2nd tour to the Delta and Captain Dan Aldridge, the unit aircraft maintenance officer. Preble immediately presented the case for adding machine guns to the armament package

on the Bird Dog and had a possible solution with the H-23 machine guns. The advance team could all see the merit of the idea and its tactical possibilities. Upon the arrival of Major Hutchins and the rest of the company, the idea was proposed and Major Hutchins gave the go ahead to the project. The H-23 gun racks were modified and wiring diagrams

and system integration was planned. The H-23 system had a nitrogen bottle system attached that was used to clear the guns if jammed and this method was used on the prototype. Preble was so anxious to try the system that he took it for a test flight with only one gun system attached. He returned elated with the results and the new project was about to being.

**BIRD DOG WITH A BITE:** Captain Aldridge had been assigned to the Air Force 1st Commando Wing prior to flight school and had Air Force aircraft maintenance friends assigned to Ben Hoa near Saigon. A quick flight to Saigon resulted in all the necessary switches and panels required to rig firing systems for all of the units aircraft –all from the Air Force A1E/T28 scrap yard! All that was needed now were guns. However, the unit authorization for aircraft machine guns was ZERO!

**A PROACTIVE APPROACH!** Now, when something unauthorized is needed, where do you turn? To the NCOs. Enter SFC James Potere, the aircraft maintenance NCO. While solving the many problems facing him and his maintenance technicians, Sgt. Potere was searching for anything that would improve the maintenance facility he was tasked to build. During his search he discovered about twenty Conex containers, all of them

opened, except one which was padlocked with a rusty lock. Sgt. Potere then completed a

diligent search for the owners of the Conex containers and had been told they were there

when the support maintenance company arrived at Vinh Long. Later that evening he returned, cut the rusty lock on the single container, discovered what was in it, put a 199th

shiny new lock on it, and then went to find Captain Aldridge and said “Come with me. You have to see this.” When they arrived back at the site, Sgt. Potere took out a shiny

key to match the shiny lock, opened the door and behold, there were more D-Handled M-60 machine guns than Captain Aldridge or Sgt. Potere had ever seen. There were enough to equip every Bird Dog and have replacement spares, and all were in new condition. They returned to the 199th, picked up an empty Conex with their wrecker and proceeded to removed the container with the guns and replace it with the empty one with

a new shiny lock! No one outside of the 199th ever asked how they managed to get authorization for 80 plus M-60 machine guns.

With the full support of Herrick, who had now become Preble's platoon leader and Hutchins who really went out on a limb for an unauthorized aircraft modification, the maintenance technicians began the arming of most of the unit's aircraft. The system was exceptionally simple, which was complimentary to the simplicity of the Bird Dog. Each gun was mounted in a angle iron cradle which was the design of the 199th maintenance technicians. The cradle was placed on the inboard wing stations and was armed from a switch panel (1 switch per gun) and fired from a gun button mounted on the pilot's stick. Aiming was by a sight system consisting of a rod bolted to the cowling, between the pilot

and the propeller, and having a round cicle welded to the upper end of the rod for the front sight. The rear sight consisted of a simple grease pencil cross on the windshield. Sight alignment was accomplished by parking the aircraft in the maintenance area, raising and blocking the tail with the aircraft in a level flight position and then bore sighting the guns and the sight on a palm tree 3,000 feet down the runway. This had to be done with the aircraft and matching pilot due to each individual's sitting position and height. The rocket tubes were bore sighted in the same manner. Each gun cradle carried

550 rounds in a container. The nitrogen bottle, jam clearing system of the prototype was a logistical nightmare that the unit chose not to solve and developed its own mechanical system consisting of three pulleys, a stainless steel cable and one D-Handle from the M-

60 per gun. In flight gun jams were cleared by giving the handle a pull which actuated the bolt and cleared the gun. The arming switch system was set up to allow a single gun or both guns to fire at the same time, one rocket or two rockets to fire at the same time or

salvo all rockets or to ripple fire the rockets. Any combination of guns and rockets could be selected.

Futher development led to additional rocket configurations including two guns and eight rockets, four on each outboard wing station. This was the heaviest gun configuration giving us an aircraft weight, without pilot, of 2, 442 pounds versus the Zero guns, four rocket weight of 2,179 pounds. Weight and balance charts were developed and included

with aircraft records. A copy is attached. During Captain Aldridge's time as aircraft maintenance officer the aircraft were flown in all of the weight and balance configurations shown on the charts without serious malfunction or observed damage to the aircraft. Captain Aldridge departed Vinh Long on 3 July 1968 after 16 months as Swamp Fox 56.

A special thanks to the leadership of Major Hutchins and his trust in all the pilots and

maintenance crew members responsible for the development of this unique system. Kudos to the creativity and ingenuity to those who gathered around a table and brainstormed, designed and drafted the ideas on napkins and then created the system. This was a project designed by those who took the responsibility to maintain the aircraft and those who put their life on the line each time they climbed in the cockpit of the Little Bird Dog With A Bite.

FIRST DRAFT OF THIS DOCUMENT.

TO BE REVIEWED BY CLINE PREBLE, CHARLES HUTCHINS, CHARLIE BAKER, CURT HERRICK, RAY JENNINGS AND RICK BOZEMAN.

Signed: Dan Aldridge

Swamp Fox 56

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