

Spooky, Spectre and the Man

By Col Ronald Terry, USAF (Ret.)



“Stronger than all the armies in the world –
an idea whose time has come.”
-Victor Hugo



PREFACE

What follows is the true account of how a young Air Force Capt, Ron Terry, managed to sell the United States Air Force on a revolutionary air weapons system concept. What makes this story extraordinary is that he managed this despite immense opposition from the very bureaucracy he aimed to assist.

Terry's concept, the side firing Cargo Aircraft Gunship, was a flying platform of guns, sensors, reconnaissance systems, navigation, and command & control systems. This combination of tools, plus a highly trained crew, provided the first self-contained, night, adverse weather, close air support and armed reconnaissance weapons system in the Air Force. Due to the accuracy of the weapons and the control of the fires, gunships could be employed in extremely close support for ground personnel; all the while providing a high probability of crew survival and minimizing collateral damage to other

friendly personnel and property. It was revolutionary because, unlike fighter aircraft that had to reacquire a target after each pass, the gunship maintained complete control of the target for extended periods of time. The control was accomplished by flying a left pylon turn over the target, with the guns and aiming devices mounted on the left side of the aircraft.

Terry selected an ancient airplane, the Douglas C-47 Skytrain, to set this odyssey in motion. This C-47 soon became the AC-47 Gunship, an incredible weapon nicknamed “Spooky” and “Puff the Magic Dragon.” Later, “Spooky” became the official call sign of the AC-47 squadron.

Ron Terry was marked a maverick by the fighter Air Force... and yet his dream blossomed into the AC-130 Hercules “Spectre” gunship – the most accurate destructive weapon against enemy trucks, tanks, and troops during the war in Southeast Asia.

On an exceptionally dark night in Central Laos, Spectre 04, an AC-130A gunship, patrolled the skies over the Ho Chi Minh Trail. The flight was uneventful until Capt Jimmy Krause hit the intercom and calmly announced, "Pilot, I have movers." Krause, the father of FLIR (Forward looking Infrared) in the USAF was manning the FLIR scope.

The pilot, Maj Ron Terry, dipped the left wing and started a left turn as the computer fed the location of the "movers" – trucks – into his gunsight. If the truck drivers could've looked up and seen what was pointing at them ... well, the word "terror" seems inadequate, because sticking out the left side of this huge aircraft were two 40mm Bofors cannons, two 20mm Gating guns, and two 7.62mm mini-Gatling guns. Spectre was the truck killer. Krause said, "I count 21 trucks," as Terry fired the first rounds from the 40mm cannons. The leading truck burst into flames. The second and third trucks tried going around, but Terry destroyed them and the trail was blocked. The trucks at the rear of the convoy attempted a retreat, but the 40's fired into them. The back door for the convoy on the narrow road was shut. By this time, the trucks' cargo was exploding and igniting other trucks. Five 37mm antiaircraft artillery (AAA) batteries were protecting the trucks and they opened up trying to seek out Spectre on this black night, but Spectre also had protection. Two F-4 Phantom fighter-bombers dove past the gunship, dropped bombs, CBU, and napalm onto the AAA guns, and silenced them. Terry kept on firing with the 40s and 20mm Gatlings... until there was nothing left but huge fireballs, smoke, and explosions.

Spectre 04 and its 14-man crew left the destruction and flew to an area that was suspected as a truck park. In the thick jungle below there was no sign of activity. On a prearranged signal, Terry radioed the F-4s that he was low on fuel and going home. The North Vietnamese were listening in, just as Terry had hoped. Spectre and the Phantoms flew to a safe area and loitered for fifteen minutes. The North Vietnamese felt safe and signaled their trucks to start moving. As the 36 trucks emerged from under the jungle canopy, Spectre 04 arrived back on the scene and destroyed them all.

Ron Terry had perfected the skills of flying an aircraft in a left turning orbit and firing on the target with pinpoint accuracy using guns protruding out the left side of the airplane fuselage. In doing so, he had complete control of the target because he never lost sight of it. He later added the 105mm howitzer to the array of aircraft weapons, with devastating results for enemy targets.

The mission in Laos described above is an example of "an idea whose time had come." The concept for a side-firing gunship actually started many years ago, in 1926. It proved to be an effective weapon back then, but only to the guy who thought of the idea. He never got past first base. Since 1926, four other creative and imaginative men resurrected the idea, but they, too, were thwarted by conservative, close-minded decision makers. That is, until the tenacious Ron Terry embraced the concept of the gunship. Terry fashioned it into what GEN Westmoreland later called "The most effective weapons system in Southeast Asia."

This story will take us through 1975, the end of US air operations in Southeast Asia. As the stories in this edition of the *Air Commando Journal* show, the gunship has made its presence known in Grenada, Panama, Somalia, Bosnia, Iraq, Afghanistan and beyond. But that's the epilogue... let's start at the beginning.

In 1926, 1st Lt Fred Nelson was a flight instructor at Brooks Field, San Antonio. He had been teaching pilots to attack targets "the way it's always been done" – straight-in strafing passes with guns blazing forward. He knew there had to be a better way. When attacking a target in a conventional way the pilot had to fly away from the target after each pass and then had to spend precious time trying to reacquire the target before the next pass. Nelson had an idea. One morning he drove around the gunnery range marking ground targets with bags of lime (white powder). He then went back to the airfield, took a .30 cal machine gun and mounted it so it was pointing out the left side of his Dehavilland DH-4 bi-plane. Nelson then rigged a gun sight on the wing strut of the plane, got in, and took off. His fellow pilots who watched his shenanigans thought the lieutenant

was off his rocker. Nelson then flew a left-banked circle around the ground targets and with pinpoint accuracy hit each one.¹

His concept was proven effective. He had found a better way – flying in a pylon turn meant he never lost sight of the target area and therefore had complete control. When he landed, Nelson immediately and excitedly told his commander of his idea and the results. He was devastated when his commander told him to stop flying around in circles and "do it by the book."

The stories of Nelson's side-firing gunship spread, but not until 1939 did another imaginative pilot try to do something about it. Capt Carl Crane's thesis at the Air Corps Tactical School was for the adoption of a side-firing airplane.² Crane knew about Nelson's exploits and expounded on them by recommending a two-man airplane with as many as 12 machine guns sticking out the side. His vision saw the gunship attacking mass flights of bombers, as well as "antiaircraft machine guns and gun emplacements, small sea craft, and troop concentrations." What foresight! Especially in 1939, with WWII already started. Can you imagine the difference a fleet of gunships could have made to the outcome of the many battles in Europe and throughout the Pacific Islands? No doubt thousands of American and Allied lives might have been saved.

Crane's thesis was a profound document – it fully justified the gunship concept, but he must have known the outcome of his recommendations, even before he wrote the thesis. At the beginning of the thesis, Crane quoted a speech given by Lt Col Donald Wilson, the Assistant Commandant:

"Failure to visualize the influence of new weapons and new methods is perhaps the greatest drawback to the efficient conduct of war. It has been the rule always; certainly throughout recorded history. It has been the rule for those who had to be shown – those who lacked the vision and courage necessary to accept a promising theory. These, the conservatives, are always in the majority, hence their actions and their failures are judged according to their own opinions..." and added, "in the year

1346, at Agincourt, 19,000 Englishmen demonstrated to more than three times that number of Frenchmen the value of the longbow, as opposed to mounted knights in armor. The French lost half their forces while the English lost only 50 men. In 1415, in Calais, after the French had 70 years to contemplate the adoption of the long bow, they marched 50,000 mounted knights and humble foot soldiers into the withering fire of a mere handful (14,000) of English archers using the longbow. Again, nearly half the French force was lost because they had retained their traditional weapons and methods.”³

Unfortunately for Crane, his thesis was shelved and history seemed to repeat itself. His vision went down the very same path the French generals chose leading up to the battle at Calais in 1415. Change can be daunting.

Another young officer, Gilmour Craig MacDonald also challenged the status quo. MacDonald had been a “blow up the chemistry lab boy,” a teen and adult inventor, and all-round risk taker. He was assigned to a coastal battery in Oahu during WWII. He had already invented a gunsight for anti-aircraft guns when he proposed a side-firing aircraft – a gunship. He knew of Nelson and Crane and went at the problem from a different angle. In a letter to his headquarters in 1942 he wrote:

“Dear Sirs: With a view to providing means for continuous fire upon submarines forced to the surface (German subs were blowing up a lot of ships along the East coast), it is proposed that a fixed machine gun be mounted transversely in the aircraft so that by flying a continually banked circle, the pilot may keep the undersea-craft under continuous fire if necessary. It will be realized that aircraft with normal types of gun mounting may make one pass at the target, but must then turn and come back before being permitted another burst of fire ...”⁴

MacDonald received no response – someone didn’t think his idea worthy of one. In 1945, MacDonald recommended a transverse firing super bazooka, plus rockets, be installed in aircraft to pin down troops in foxholes – again, as it flew a pylon turn. And once again, no response. This handsome army flier,

auto-racer, and glider pilot was persistent and when, in 1961, President Kennedy called for methods of dealing with counterinsurgency operations in Vietnam, MacDonald once more submitted his side-firing gunship proposal. At last he received a response! From Gen Disosway, the Commander of Tactical Air Command, came the words, “The silliest idea I’ve ever heard.” Perhaps the general saw the idea of a gunship as a threat to his fighter-bombers and thus a threat to future funding, mission assignments, etc?

MacDonald called the response “parochial stupidity and unwillingness to even try an unconventional weapon.” Undaunted, MacDonald got an AF Reserve buddy of his, Ralph Flexman, to come to the Targets Lab at Eglin AFB for his annual two-week active duty tour. Flexman was Assistant Chief Engineer at Bell Aerosystems and was himself an inventor. They brainstormed together and Flexman was told of the side-firing gunship and the dismal responses. Flexman was an expert on weaponry and a guy who conned his way into pilot training while wearing what was probably the first pair of contact lenses worn by a military man. The year was 1942. Flexman borrowed \$500 from his buddy to buy these plastic lenses, which covered the entire eyeball. With these new eyeballs, this poorly sighted, much determined man got past flight physicals and the various levels of flight training – and he was good. When the Army finally realized they had been duped, they initiated court-martial proceedings, but the commanding general said, “If you’re going to court-martial him, then you’re going to court-martial every flight surgeon he got by.” The general made Flexman an instructor pilot.

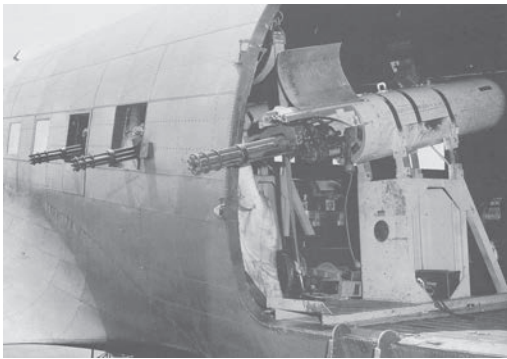
Flexman became a proponent of the gunship idea. He briefed his bosses at Bell and wrote a letter to his Air Force counterpart about the advantages of the side-firing gunship in a limited war situation – such as Vietnam. He also sent a copy of that letter to his friend Capt John C. Simons, along with the suggestion that a test program be initiated to prove the gunship theory.

John Simons was a psychologist who, like Flexman, was working on

the human aspects of flight. He worked at the Aerospace Medical Research Laboratory at Wright-Patterson AFB, OH – the hub of aeronautical research and development. To say that Simons got excited about the idea of gunships would be an understatement. He liked Flexman’s proposal to test the gunship idea and also saw the possibility that the concept would become more than a fire support platform. Simons thought that a laser could be used to designate targets or side-looking infrared equipment to acquire targets at night. He was right; fighters sometimes now use the pylon turn technique to mark targets with their lasers for laser-guided bombs.

In April 1963, John Simons set about proving the validity of the gunship idea. Simons submitted the idea to various Limited War panels at the Pentagon and to the weapons and ballistic experts of the Aeronautical Systems Division (ASD). Why they came back with negative responses is incredible, but they did, with a final retort that the idea was “technically unsound.” Simons tried sidestepping, going around, and going through, but decision-makers told him that he “should not get involved with the weapons aspect!” Simons was convinced live tests would prove the effectiveness of the gunship, but the word was “dabbling in weapons trajectories was stretching a research psychologist’s duties a bit too far.”

This battering would have stopped most men dead in their tracks. Not Simons...he persisted. One of his bosses gave him “under the table” approval for a few test flights – without armament. Day and night, Simons and other buddy pilots flew around Ohio selecting targets as they banked the C-131 and T-28 aircraft into left turn circles. They marveled at the simplicity and the ease with which a target could be acquired and held in the sight. Along the highways of Ohio, trucks and cars would stop and passengers would get out and look at the crazy airplane pilot who was flying around in circles. With cameras simulating guns, Simons presented the proof to an Aeronautical Systems Division panel, which gave the project zero priority. Simons appropriately named the effort “Project Tailchaser.” The low priority



slowed testing to a crawl and eventually Simons was assigned to other duties, but passed his gunship project along to others until it was lying dormant in a file cabinet.

Capt Ron Terry was a former fighter pilot brimming with self-confidence, and according to those who knew him, was a born leader with uncanny common sense and was also a super salesman. That such a man should pull the “Project Tailchaser” file out of the cabinet was pure fate. The gods must have really been grinning. Ron had spent time in Vietnam on a fact-finding team and came across some real problems. One in particular, the Viet Cong were rampaging through villages and forts almost unimpeded. The Viet Cong knew that normal response times for fire support requests were measured in hours before fast movers arrived on station. This allowed the Viet Cong to break contact before the fire support arrived. And more often than not, the Vietnamese had set up a “flak trap” to ambush the friendly fighters.

Terry’s vision was for the gunship to be like a police patrol car – ready to go anywhere, anytime, on short notice and with enough firepower and loiter time to inflict severe damage to the enemy and stop attacks before the enemy escaped. Furthermore, firing from a left pylon turn gave the pilot complete control over the target area, unlike conventional fighters that required a forward air controller in order to make a strike. Ron Terry was hooked. Thirty-eight years after Fred Nelson’s flight in 1926, Terry restored momentum to the gunship idea! He received permission to work the project and he and John Simons flew several flights with gun camera simulators.

Simons reiterated that a live test was needed to show the skeptics. Terry

submitted a scenario to the Limited War Office, which showed a tactical operation employing a gunship, mainly in defense of villages and forts. They liked it... but not enough to fund an official test. Terry borrowed an airplane and a crew and flew to the test range at Eglin AFB, FL. Because the trip was unofficial, Terry had to pay crew expenses with his personal credit card. At Eglin, he

borrowed a GE 7.62mm electric Gatling gun (the minigun) and, together with his team, mounted the gun on a pallet which was then fixed to the floor of the aircraft with the gun sticking out the left side door of the C-131. A triggering device was hooked to the gun, which extended all the way to Terry’s position. A camera reflex viewfinder was installed as a gunsight inside the pilot’s left side window. On the first test flight, after initial firings for alignment, Terry’s shooting was so accurate that he wrote his initial “T” on the target with this 6,000 round per minute weapon.

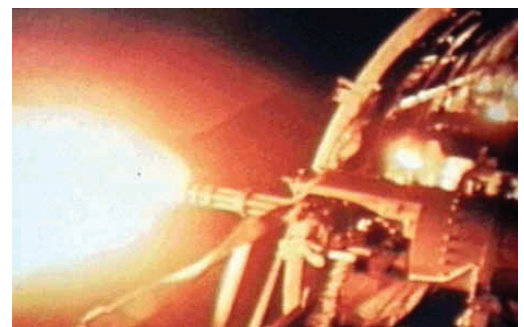
A curious passenger on the aircraft was Lt Col Phil O’Dwyer, who was the Director of Requirements for the 1st Combat Applications Group of the Special Air Warfare Center at Eglin AFB. He had never seen anything like this before. He was jumping up and down shouting, “Damn unbelievable! Son-of-a-gun, do it again! Let me see you do that again!” Terry did. When they got back on the ground, O’Dwyer asked Terry if he thought he could shoot as accurately at night using flares. Terry replied, “Definitely.” So, O’Dwyer said, “Show me.”

Two young airmen volunteered to go along and throw out flares. That night they went out on the water test range where Terry’s shooting was as good as it had been earlier that day. The next day, O’Dwyer arranged for 30 mannequins to be placed in foxholes and behind trees on the tactical range at Eglin AFB and told Terry, “Those represent an enemy squad in the jungles of Vietnam – see what you can do.” Terry hit all of the

mannequins. Over the next couple of days, O’Dwyer arranged various targets and Terry’s gunship hit them all. O’Dwyer then asked Terry if he could mount the guns on the types of aircraft, already being used extensively in Southeast Asia (C-47 and C-123). This was exactly what Terry wanted, as he knew that he would never be authorized to get new aircraft introduced to Southeast Asia. The C-47 was his aircraft of choice at that time because of its loiter time, dependability and availability.

Terry returned to Wright-Patterson with proof of the gunship’s effectiveness, as Technical Sergeant Tom Ritter filmed all of the Eglin test missions in their entirety. The Limited War Office really got excited when they saw the film. They reimbursed Terry for his trip and gave him official orders and funding to return to Eglin to try his experiment with the C-47.

When Terry and his crew got back to Eglin, Phil O’Dwyer was standing by with the C-47 and an audience of interested Special Forces officials. Terry surprised O’Dwyer when he asked permission to mount three miniguns on the C-47 instead of one. O’Dwyer couldn’t believe his ears and excitedly said, “Hell yes!” The triggering mechanism was rigged so he could fire one gun, two guns, or all three at the same time. Over the next two weeks, the Air Commandos concocted various target scenarios, which required very precise shooting – with immense firepower. From “killing” one or two “guerrillas” with short, accurate bursts from one gun, to “blowing away” enemy-filled hootches with all three miniguns on “full auto,” the gunship never failed. The Air Commandos were ecstatic – this was



Spooky minigun firing during a night mission. (US Air Force photo)



The 1st Air Commandos with Puff in December in 1965 , prior to their assignment to the 4 ACS. (Gunships: The Story of Spooky, Shadow, Stinger, and Spectre by Wayne Mutza, page 35. USAF Photo via Dick Noble.)

exactly what was needed in Vietnam.

At last, someone was impressed. The Special Air Warfare Center sent a wire to headquarters US Air Force and just about everyone else in the world that a “new idea” – a new concept had just been tested that would be a tremendous asset to US forces in Vietnam and “we recommend immediate deployment for combat evaluation.” Unfortunately, the response from Tactical Air Command, Pacific Air Forces, and Headquarters USAF was a resounding, “No!” Their justification was that “this is not the way we deliver ordinance in the Air Force.”

Terry kept fighting, in spite of the fact that his bosses warned him it would be an impossible task – with resistance coming from the very top. Col Cook, Chief of the Limited War Office at Wright Patterson, advised Terry that the only thing that could be done at this time was for Terry to go to the Pentagon and see if he could gather support for the program. Terry proceeded to Washington, where he knocked on many doors, showed the Eglin test footage, and briefed the concepts to many

offices in the Acquisition and Operations staffs. Although the concept and test footage impressed nearly everyone, he still received no support; too many senior generals opposed the program.

Not one to give up, Terry casually walked into the Vice Chief’s Executive Office and announced that he had an appointment to brief the Chief of Staff, Gen Curtis LeMay, on a new and important concept for SEA. The Vice Chief’s executive officer, a colonel, checked the calendar and found nothing. So, he checked with Gen LeMay’s executive officer. There was no appointment logged on General LeMay’s calendar either, but both officers were acutely aware that he often scheduled appointments without informing either of them. They assumed this to be the case. After all, it was inconceivable that a mere captain would brazenly show up without an appointment!

Having penned an appointment on LeMay’s schedule for the following week, Gen McConnell’s executive officer returned to his office and proceeded

to chew Terry out for getting his dates mixed up. Terry apologized profusely and pleaded that his boss at Wright Patterson not be informed of his error. Terry then promised to return the following week with the briefing in hand.

The following week, Terry and Ritter were back to brief the most powerful man in the Air Force about using gunships to defend villages and forts. While waiting his turn, Terry overheard the Intelligence Director tell LeMay that Viet Cong sappers and mortar crews had destroyed most of our A-1, T-28, and some B-57 aircraft the night before at Bien Hoa AB. Again, serendipity! Terry marched in and told Gen LeMay that he was going to brief him on how gunships could defend our bases against sappers and mortar crews... as well as stopping attacks on villages and forts.

The entire Air Council was in attendance, including Lt Gen Ruegg, Terry’s old boss. Ritter showed the film where Terry destroyed the Eglin targets and wrote his initial with the minigun. In a scene reminiscent of a Roman arena,

LeMay looked around and asked for a “thumbs-up or thumbs-down.”

All of the Air Council three-star generals gave thumbs down. That is... all but one. It was General Ruegg, who spoke up, “General LeMay, this is a new concept and could very well revolutionize air to ground warfare.”

General LeMay, looking at Terry, “Son, how many guns do you have?”

Terry, “Twelve, sir, three for each of the three C-47s, and three for spares.”

General LeMay, “How much funding do you need?”

Terry, “None, sir.”

General LeMay, “How long will it take you to be ready?”

Terry, “A week! I just need a plane to get me, my crew, and equipment over to Vietnam.”

General LeMay looked around his staff and, with his trademark stogie stuck in his mouth said, “Send this boy over there.”

Terry and Ritter went back to Wright-Patterson to ready the equipment and manpower. However, the “thumbs-down” staff did not give up easily. Terry’s transport to Vietnam did not materialize until a call went through from Terry’s boss to the Vice Chief of Staff, General McConnell. When Gen McConnell told Gen LeMay, he was furious! As a result, a C-141 was immediately re-routed to Wright-Patterson to transport Terry and his crew to Vietnam.

The team both modified the aircraft and served as the flight crew for combat evaluation and training of the 1st Air Commando Wing personnel. Team members included: 1st Lt Ed Sasaki, 1st Lt Ralph Kimberlin, TSgt Tom Ritter, SSgt Paul Bunch, A1C James Schmeiser, and A2C Alan Sims. Also accompanying the team was Tom Morse, a General Electric technical representative for the 7.62 Gatling guns.

Still the top brass were not finished. A wire from Gen Sweeney, Commander of Tactical Air Command, was sent to fighter commanders around the world. “This concept will place a highly vulnerable aircraft in a battlefield environment in which I believe the results will not compensate for the losses of Air Force personnel and aircraft – we should continue to vigorously oppose...

employment of such highly vulnerable aircraft.” This of course belied the fact that that C-47’s were already flying both flair and Forward Air Control (FAC) missions in Vietnam on a regular basis.

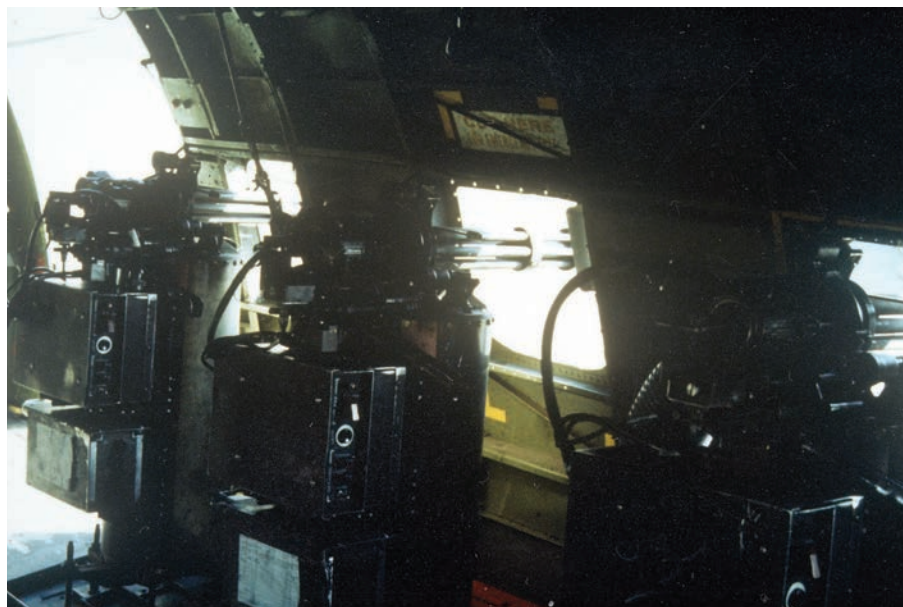
As a direct result of Gen Sweeney’s wire, an armed entourage met Terry and his team when they arrived in Saigon. They told Terry the team would be going back to the US on the next passenger flight and their mod kits and supplies would be sent later. However, before the next outbound flight was ready, a wire came in from the Gen McConnell, which angrily replied to the TAC Commander, “Be advised that this concept has had Air Staff consideration. This has the Chief’s personal okay. It certainly is in the Air Force’s interest to try the program rather than to sit on the sideline commenting...” The entourage returned and escorted Terry to the 7th Air Force Commander in Saigon, where Terry briefed him on the gunship.

With the commander’s blessing, Terry and crew were sent off to Bien Hoa AB where they modified three C-47 aircraft with guns and sights, trained crews, and got on with fighting the war. Each gunship crew consisted of pilot, co-pilot, navigator, two gunners (who actually loaded and repaired the guns – only the pilot fired the guns), a loadmaster who dispensed the flares, and a Vietnamese liaison officer who coordinated by radio with Vietnamese friendly forces. Terry’s team arrived on

December 2nd. The first daylight mission was on December 15th, and when the 1st Air Commando Wing crews were trained in gunship tactics, they flew the first night mission on December 23rd. The aircraft’s designation changed from C-47 to FC-47 (later AC-47 Armed Cargo Attack Aircraft) and the volunteer crews were transformed overnight from “trash-haulers” to combat crew members.

“Spooky” was born. The AC-47 took its name from the night missions it flew and the particular camouflage paint scheme. The aircraft’s other, unofficial, nickname, “Puff the Magic Dragon” came from the Vietnamese who, when they saw the “tongues” of fire coming from the sky (tracers), called it a dragon. This was also the Year of the Dragon in Southeast Asia.

Spooky’s reputation became well known – with incredible speed. Everyone involved in a firefight was crying out for gunship support. Viet Cong would break off attacks on villages or outposts, sometimes after the first fusillade was fired. Spooky proved itself versatile by being on airborne alert day and night. Along with flying close air support missions for ground forces and escorting friendly convoys, Spooky saved villages, forts, and Special Forces camps. During a mission flown on February 8, 1965, an AC-47 stopped a major Viet Cong offensive in the Highlands in a strike that killed over 300 Viet Cong. Before one full month of actual combat missions had



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been completed, the AC-47, was credited with having changed the order of battle for the Vietcong in the Mekong Delta. It is certainly fitting that the classic John Wayne movie, "The Green Berets," depicted Spooky saving a remote Special Forces camp from being overrun.

Before the combat evaluation was completed, the AC-47 had made its name. Terry couldn't have been more pleased when Gen Moore, 2nd Air Division Commander, asked for a full squadron of AC-47s. Moore was seconded by Gen Ferguson, commander of the Air Force Systems Command, who noted to Air Force Headquarters, "The reports which have been received indicated spectacular success in killing Viet Cong and in stopping attacks, together with a concurrent psychological factor way out of proportion to the effectiveness of other air and ground force efforts."

When the squadron of 20 AC-47s arrived in Vietnam, it was designated the 4th Air Commando Squadron and was dispersed to every corner of Vietnam, plus Thailand, from where the crews flew missions into Laos every night. In Laos, the AC-47's became truck busters.

In 1969, the AC-47s were handed over to the Vietnamese Air Force. At the time of the turnover to the South Vietnamese, the AC-47 had successfully defended more than 4,000 forts, hamlets and enclaves. In fact, history states that they never lost a group they were assigned to defend!

Meanwhile, Terry had been working on something a little larger, with more loitering capability, more technical equipment, greater stand-off range, and of course, more firepower. It was to be more powerful and capable all the way around. The chosen prototype aircraft was the 4-engine, high wing, C-130 Hercules. Support for the idea came from the White House, Secretary of Defense, and Secretary of the Air Force, but was still grudgingly accepted by the Air Staff. Nevertheless, approval was granted. Terry gathered around him the best flyers and engineers he could find, including Maj Jimmy Krause, a master navigator, avionics lab engineer, and the leading infrared expert in the Air Force. Krause, plus Maj Jimmy Wolverton, Chief Engineer, and Royal Air Force Wing Commander Tom Pinkerton, Fire Control Systems Engineer, were Terry's closest friends. Wg Cdr Pinkerton was at the time on loan to the Air Force Avionics Laboratory at Wright Patterson. The program was authorized the rather paltry budget of \$500,000 to design, build, and manage the entire project. This figure included flight-testing! Together, these men conceived, engineered, and built the next gunship, appropriately named Gunship II, in the flight test modification shops at Wright Field. The prototype was modified to include four GE 7.62 miniguns (firing at 3,000 or 6,000 rounds-per-minute) and four 20mm M-61 Vulcan Gatling guns (which Terry fired at 2,500 rounds-per-minute, both to save ammunition and to increase reliability), plus sensor equipment, including the Night Observation Device, Side-looking Radar, Forward-Looking Infrared set, and a 40-Kw illuminator. These sensors were mounted on the left side of the aircraft and controlled by an analog computer, built by Pinkerton, which allowed the pilot to aim, fire, and hit the target – without ever seeing it with the naked eye.

Terry asked the Pentagon for funds to provide a beacon tracking radar for Gunship II. The Air Staff refused, so Terry "borrowed" a radar unit from the Bomarc Missile Program and mounted it on the C-130. The home-on jam feature of this particular radar was used to track small noise jammers powered by aircraft batteries and later was given to several Special Forces camps to demonstrate a first-of-its-kind, very close support capability to a friendly unit under extreme adverse weather conditions. These beacons were fabricated for Terry by technicians in



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the Flight Test Modification Branch at Wright Patterson.

In 1967, Terry, his experts, plus volunteer C-130 ground and aircrew members headed to Southeast Asia and with the new gunship. The sensors and radar worked beautifully and soon the Gunship II was in high demand. They were also able to validate the significance of the all-weather support capability by saving several Special Forces camps in near zero visibility weather conditions.

It was then decided to try a new mission, night and adverse weather interdiction over the Ho Chi Minh trail in Laos. The Gunship II test was an unqualified success. The combat evaluation "...far exceed fighter type kill ratios on enemy trucks and other equipment... a three-fold improvement over its predecessor, the AC-47." Gunship II was so successful that by the end of 1967, Gen Westmoreland was reluctant to let the aircraft return to the US for refurbishing.

Great debate took place about the actual aircraft to replace the AC-47. Secretary of the Air Force, Dr. Harold Brown selected the C-119 (The Flying Boxcar as it was known in Korea), while others who saw the results of the Gunship II tests wanted the C-130. Finally, Dr. Brown decided on both aircraft. Controversy abounded. Gen Momyer, now Commander of 7th Air Force in Saigon, did not want the C-119 "...introduction of another obsolete system into the theater weighs heavily against the C-119." But the troops on the ground and their generals were screaming for more gunships.

In early 1968, the gunship idea, a concept once called, "The silliest idea I've ever heard," had evolved to where Secretary Brown asked for a force of 44 AC-47's, 26 AC-119G's, 52 AC-119K's, and 32 AC-130A's.

While Terry was testing the prototype in combat, production had started on the AC-130 gunship fleet. Without Terry's supervision, the first four AC-130As arrived at Ubon Royal Thai Air Force Base with 3 major discrepancies and 57 less drastic discrepancies. Terry and his team were sent to make repairs and modifications while the aircraft were flying combat missions. Wg Cdr Pinkerton was "smuggled" into Thailand to make repairs to the fire control system, then smuggled out again. With the repairs made and the crews retrained by Terry, the AC-130 gunships patrolled the skies of Laos nightly, with resounding success.

The North Vietnamese responded to the gunships with ever-increasing anti-aircraft defenses, most notably the 23mm and 37mm guns, so F-4 Phantom began to escort the gunships. While the AC-130, nicknamed "Spectre," was working the trucks, the Phantoms would attack the AAA batteries when they fired. One crewmember on the gunship, the Illuminator Operator, would actually extend himself over the open aft ramp so that he could scan for AAA tracers and warn the pilot if they were getting too close. Although tethered to the inside, on rare occasions, he would actually fall out during evasive maneuvers, so the words coming through the intercom "Request permission to come aboard" at 5,000 feet could break up an otherwise tension filled night.

In November 1968, DARPA and HQ USAF decided to demonstrate the gunships to a number of groups, including a sizeable contingent from the Army. The AC-47, AC-119G,



AC-47 crewmember preparing to throw a flare out of the open fuselage door. These flares helped expose enemy night attacks. (US Air Force photo)

AC-119K and the AC-130A were to do a nighttime demo at Hurlburt Field. This exercise, under the direction of then Col Harry 'Heinie' Aderholt, took place on Range 52 during the darkest moon phase. It featured many different targets highlighted by a Vietnamese village under mock siege and defended by the AC-130. Col Aderholt was cautioned by the TAC Commander not to hype this demo because "platforms of this type tend to vitiate more viable weapon systems." But the show was spectacular! Heinie was reassigned from Hurlburt five days later. The anti-gunship clique was still at work!

On May 24, 1969, the Spectre force lost its first aircraft to a 37mm gun. The aircraft took two hits, mortally wounding the illuminator Operator, Jack Troglen, and severely damaging the plane. Most of the crew was ordered to bail out and the pilot decided to try and nurse the gunship back to Ubon, Thailand. The crew was rescued, but unfortunately Troglen and Cecil Taylor, the Flight Engineer, died in the catastrophic landing.

With the loss of the first Spectre gunship and the massive increase of North Vietnamese anti-aircraft batteries, particularly in Laos, it became obvious that there was a need for the aircraft to fly at a higher altitude and standoff distance, but still have the lethal weaponry to get the job done. Terry scrounged 40mm Bofors anti-aircraft guns from the US Navy and modified one of the C-130s with two of these cannons, plus two 20mm Gatling guns. Tom Pinkerton upgraded his fire-control system from analog to digital and the team came up with an inertial navigation system that would store the location of targets to be

struck later by gunships or fighters. Also integrated into the computer system was a new “active” low-light-level TV. This new program was designated “Surprise Package.”

Even the Chief of Staff, Gen Jack Ryan, was impressed by the innovations of Terry and his team. Ryan remarked, “Your engineers are to be commended for evolving an inventive and unique proposal to counter a potentially serious threat to our gunship operations.” At about this time another very serendipitous event occurred. Lt Col Charles Gentzel took over as the program element monitor in the Air Staff. Also, Lt Col Charles Spicka completed a tour of duty in gunships in Vietnam. He returned to the Air Staff and was assigned as the action officer for the gunship program under the Deputy Chief of Staff for Operations. These two men were strong believers in the gunship program and became an integral part of the total gunship team, along with Terry and his band of test engineers.

The actions of Gentzel and Spicka in setting up proper direction and procedures for the gunship programs are nothing short of heroic. What these two men accomplished over the next four years was spectacular. An entire story could be written about their efforts. For example whenever Spicka ran into

opposition about something required from the operations side, he would locate the latrine Gen Ryan was visiting at the time and managed to be there and in the stall to the right or left. Invariably, Gen Ryan, who was very fond of the gunship, would ask Spicka how it was going. Spicka’s response would be something to the effect, “It’s going great boss, but we do have this small problem.. .” and then he’d proceed to outline what really needed to be done. Shortly thereafter, direction would usually come down with the orders necessary to get it done. As the gunship program element monitor, Gentzel was always able to secure the necessary funds and ensure that the program had adequate direction from higher headquarter, while allowing all of the flexibility that Terry and the team needed to bring the programs in ahead of schedule, under budget, and exceeding the performance goals desired.

By February 1970, the Spectres had destroyed or damaged their 5,000th truck. John Simons had predicted the gunship would someday use a laser target designator... and six years later, the “Surprise Package” aircraft had one installed which guided F-4s and other strike aircraft onto AAA sites and other lucrative targets with their laser guided bombs. Because of this additional

equipment, the crew size aboard the AC-130 Spectre jumped to 14.

Haggling whether to increase the number of gunships and upgrade them continued, with feuds between President Nixon’s office, Secretary of Defense Melvin Laird, Secretary of the Air Force Robert Seamans, and the military. Meanwhile, Under Secretary of Defense David Packard, who was really impressed by the gunship results, asked for a plan for the gunship for the decade 1970-1980. This opened up a future for the gunship beyond the Vietnam War, allowing development to continue. The strongest argument for more gunships was the figures that showed they destroyed or damaged 48 percent of trucks while flying only 8 percent of the missions against trucks. Even Dr Kissinger got into the act. Terry no longer had to advocate the system – it was telling its own story with results in combat.

Terry kept up his relentless pursuit of a better gunship and in 1971 a new C-130E was modified and armed with the US Army’s 105mm howitzer, the 40mm Bofors cannon, and two 20mm Gatlings, plus new ammunition with greater destructive power.

On August 12, 1971, Gen Brown addressed a Department of Defense symposium. To paraphrase his remarks,



One of the first AC-130As at Can Ranh AB, South Vietnam, in March 1969. (Gunships: The Story of Spooky, Shadow, Stinger, and Spectre by Wayne Mutza, page 130.)

he stated that as a creative innovation, the first experimental gunships were delivered to combat units in Southeast Asia in record time. They were so successful that it was decided to make this a regular Air Force program and it was put into the formal acquisition system. He found it would take two years to get more gunships to the theater using the formal process. So, he took the program out of the formal system, turned it back to the original small project group and received the gunships in six months.

The North Vietnamese demanded, and received from the Soviets, still heavier weapons to counter the gunship's armament and tactics. They introduced the radar-controlled 57mm and 85mm guns ...and they were effective. Case in point:

"...on March 30, 1972, during night armed reconnaissance over Laos. Capt Waylon O. Fulk, commander of Spectre 22, and his crew destroyed or damaged three enemy supply trucks and touched off four secondary fires and explosions. While attacking the third truck to make sure it was destroyed, the gunship flew into a solid barrage of 57mm and 37mm AA fire. One 57mm round slammed into the right wing and another ripped the right side of the fuselage. Fuel leaking from a pylon tank burst into flames, enveloping the right wing. The spray of burning fuel also set fires on the fuselage's right side."

Capt Fulk ordered all emergency measures to put out the fires. Seeing the seriousness of the situation, he directed the other 14 crewmembers to prepare for bailout. Fulk steered the Spectre away from the intense antiaircraft fire, while reporting the emergency to controlling radar stations and nearby aircraft. Another plane soon came along and advised the gunship crew on the extent of the damage. Steadying the wounded Spectre as best he could, the aircraft commander called for crew bailout and radioed position information. Serving as jumpmaster, the illuminator operator informed Capt Fulk that 13 of the crew had "hit the silk." Fulk engaged the automatic pilot and placed the gunship in a slight turn to insure a crash-landing heading away from friendly territory. He then joined the illuminator operator at the AC-130's cargo ramp. After checking

parachute harnesses, both men jumped. Moments later, the fires and ammunition explosions turned the aircraft into three plummeting fireballs. Next day all 15 crewmembers were picked up, the largest and most successful mass crew rescue ever recorded.

Successes far outnumbered losses. From November 1971 to March 1972 over 10,000 trucks were destroyed or damaged in Southern Laos. Gunships alone accounted for 70 percent of that destruction.

The spring of 1972 saw a major offensive throughout Vietnam by the North Vietnamese and from April through June, the gunships fought in major battles, climaxing with the siege of An Loc – about 50 miles from Saigon. Spectre, along with the AC-119K Stinger, and B-52s using a "cooperative weapons delivery" technique were employed with devastating effect. They fought against tanks, antiaircraft artillery, ground artillery, mortars, and thousands of enemy troops. The battle lasted for several weeks and finally a defeated force crawled away to Cambodia. An Loc was saved even though the friendly forces were outnumbered more than 50-to-1. The gunships had come full circle – defending villages and providing close air support against the Viet Cong in the 1960s and now in 1972 – defending cities and providing close air support against battalions of North Vietnamese regulars.

The truce of January 27, 1973 ended gunship operations in Laos and Vietnam. Spectre went on to fight in Cambodia for several months thereafter and its future was assured when Gen Ryan, Air Force Chief of Staff, asserted that "One of the most successful developments arising from our experience in Southeast Asia is the gunship, and we intend to keep this capability to deliver a tremendous volume of sustained accurate firepower in the tactical force."

Finally the war was over, at least for the United States. Ron Terry was assigned to Washington, DC, and in 1973, he was promoted to colonel. Ron Terry had brought a new weapons system to the Air Force – despite formidable obstacles and almost stifling opposition. He fought for constant development to keep the systems viable and surrounded himself

with a team of experts who helped attain these goals.

Colonel Terry remained involved with the gunship program even beyond his retirement in 1983. He and several of the old team served as operational and technical advisers to Lockheed Ontario for the SOFI update program for the AC-130H and to Rockwell International, Inc. for the design of the latest version of gunships, the AC-130U.

Some years later while Terry was traveling on a commercial flight in the US, his fellow passenger was a soldier who had survived the battle for Hue. When he found out that Terry was a gunship pilot and had been the Program Director for the Spooky's and Spectre; the soldier shook his hand and simply said, "You saved my life." Terry humbly acknowledged the honor, sat back in his seat and reflected back to Nelson, Crane, MacDonald, Flexman, and his buddy John Simons, and thought to himself, "How many more might have been saved?"

The story of Ron Terry and the gunships is really much more than a Vietnam War story. It is also a story about pursuing an idea until the breakthrough is made. If Nelson or Crane had made the breakthrough, then the story of WWII and Korea would have been vastly different.

"There is nothing more difficult to carry out, nor more doubtful of success, than to initiate a new order of things. For the reformer has enemies in all those who profit by the old order."

–Machiavelli 

About the Author: Ron Terry is a former Air Force Pilot, Program Director and Laboratory Commander. He retired from active duty in 1983 after more than 31 years service, but continued to assist Special Operations in many projects thereafter. Ron currently resides in San Antonio, Texas.

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