

First Mission

It is January of 1966, and I am the "new guy" in what could be considered to be the most elite unit of the Army to serve in Viet Nam. At the time it was simply called the 3rd RRU Air Section.

The 3rd RRU Air Section is a non TO&E unit somewhere between company and battalion size with Nearly 30 aircraft, and detachments in each of the four Corps tactical Zones in Viet-Nam. We are part of the Army Security Agency's 53rd USASA Special Operations Command, which is operating in Viet-Nam under the cover name of 3rd Radio Research Unit, and our particular mission is develop methods of short range radio direction finding using small aircraft as a platform. The accepted method of short-range direction finding using jeep mounted PRD-1 units (Portable Radio Direction finder model 1) has proven to be unworkable, and dangerous in the fluid environment of a guerilla war. In fact the first acknowledged casualty of the Viet-Nam war, Sp5 Davis, was a PRD-1 operator from the 3rd RRU.

In order to arrive at my position as the newest member of the team I have volunteered for the Army, have been selected for the Army Security Agency and volunteered for a four year first enlistment (verses my two year draft obligation, or the standard three year enlistment for all others), have completed a tour of duty in Southeast Asia, volunteered for my current tour in South Viet Nam, volunteered for flight duty, and most important of all, my application for transfer to The Air Section had been vetted and approved by my peers.

ARDF equipment has evolved since Herb Hovey arrived "in country" in 1962 carrying the mission gear to configure the first three U-6 (De Havilland Beaver) aircraft as checked baggage. The RU-6A aircraft have been supplemented by twin engine RU-8D (Beechcraft, Twin Bonanza). There is also one RU-8F (Beechcraft Queen Air) carrying one search operator, and one DF operator, and one RCV-2 (De Havilland Caribou) configured for both radio intercept and radio direction finding. Several of the RU-8's have Ryan Doppler navigational systems installed and the system has been tested and approved for ARDF.

Although the equipment has evolved to a level that will serve throughout the Viet-Nam war, operating techniques have just begun a period of rapid evolution. The original concept of using radio direction finding specialists on the aircraft and simply tying them into the existing DF net has not worked. We are now using Morse intercept operators in the aircraft, and a free roaming technique. Each aircraft is assigned an area of interest to patrol, and although the operator has assigned priority targets; at the operators discretion the crew is free to work any target of interest within the patrol area. This is where I come into the story.

I report to the air section and fly my first mission on the same day. Our area of responsibility, III Corps, is divided into areas of interest that we patrol on a regular basis. On this day my assigned patrol area is called "The Western Arc", and it covers the area from the end of runway 27 at Ton Son Nhut to the Cambodian border. It is mostly open grassland, and rice paddies, broken up by the occasional hedgerow. Due to the open nature of the country it does not have any large units of VC, and is known as a quiet area. It is considered just the place to break in a "new guy". Today, ARVN is opening a large sweep operation in the area and it will prove to be rather busy!

Operators are responsible for planning the mission. This includes having maps of the area of interest, usually maps of adjoining areas, a list of times, locations and frequencies of all known targets in the area (known as a "sked"), and the sundry items such as grease pencils for making notes on the acetate covered maps, rulers, and protractors for the rudimentary plotting that performed in the aircraft and secondary supplies needed to do the job. We also are responsible for survival gear and the extra ammunition for the rifles that we all carry. About an hour before the scheduled takeoff the pilots report to operations for their briefing. The operator explains the area of interest, and any peculiarities of that particular mission, and then it's time to fly! On this day I will be flying in a D model (RU-8D) with an experienced operator acting as copilot, and instructor.

At this time our aircraft are parked on the flight line only a couple of hundred yards from our operations building, and we simply gather up our gear and weapons, and walk to the aircraft. Considering the nature of the job, it all seems quite casual. The walk to the aircraft includes my introduction to the new M-16 rifle. The other operator, like myself, has grown up in the West where rifles are a part of everyday life and my familiarization is limited to an explanation of the controls of the rifle. Familiarization with the equipment in the aircraft is nearly as cursory. In matters concerning the mission we are all considered to be experts when we are accepted into the unit and the mission gear in the aircraft is quite simple to operate. The Collins 51S1 receivers fitted in the aircraft are similar to the R390A receivers that I have previously used and require little explanation. The "switchology" for the mission gear is simple and logical. Long wire antenna for search, dipole antennas for direction finding, and the switching necessary to change between antennas and feed the signal to the pilot via the intercom. We are developing and refining operating techniques as we go along, so my lessons on operator techniques consist of discussing what has previously worked for the other operators. (Three months later I would be flying with a Major from Arlington Hall in the right seat, who was observing my operating techniques, and writing the first ARDF operators manual.)

Although the U-8 seems to be a large hulking beast from the outside, the operator's area is less than spacious. The pilots' share a bench seat designed for three and have a bit of room, but the operator is in the second row, wedged between the skin of the aircraft and the mission gear. One of the things that I will learn is how to sit absolutely immobile for four hours. Being a "southpaw" I also learn to be a bit of a contortionist. With a pencil in my left hand, a clipboard balanced on my knees, and the switches and knobs that control the mission gear also on my left; I must cross my right hand over to operate the mission gear. In order to save weight, the interior of the aircraft is stripped of everything unnecessary including soundproofing. There is a mechanical inverter behind the operators seat that emits a high pitched whine, up to five radios (2 mission gear, one to talk to the DSUs, and two aircraft radios) chirping and squawking thru the headset, and 480 cubic inches of unmuffled, supercharged Lycoming engine exhausting within a few feet of either ear, it is loud!

The operator searches a known frequency spectrum on the radio until he locates a likely signal. He then determines if it is an enemy transmitter, tries to identify the target, attempts to copy enough traffic to prove identification, attempts to determine if the target will be transmitting long enough to fix, and determines that the target is close

enough to work by switching between longwire and directional antennas. (Now I'm beginning to understand why "The Air Section" has such high standards!) After meeting all of the parameters necessary to qualify the target, the operator switches the top radio to the directional antennas, tunes the bottom radio (connected to the longwire antenna) to the same signal, and feeds the signal from the top radio over the intercom. Then it's showtime! The pilot begins a gentle turn; simultaneously the copilot looks over the side of the aircraft and identifies the exact location of the aircraft using a tactical map. As the aircraft turns, the signal fades when the nose (or tail) is pointed at the source of the signal (the aural null). The pilot then rolls the wings level and skids the aircraft back and forth across the "null" while watching the compass. When he has determined the null, usually less than a five-degree spread, he calls "mark", and the copilot then marks the exact position of the aircraft on an acetate covered map with a grease pencil. The pilot calls the compass headings for the null to the copilot, and immediately begins a turn 90 degrees to the null. The landmarks in the area usually determine the direction of this turn. You have just got a "shot". If you fly on the new heading for a half-minute or so, and then repeated the process you have a "cut"(two shots), which is not reportable, but is useful in determining the general area where the target is located. A third shot would qualify as a fix, but was is not considered accurate. If you repeat the process four times you have a good fix, and that is what you are paid to do!

Within a few months, we will be plotting our final fix in the aircraft, and calling the results to ASA direct support units (DSU), who are attached to the headquarters of the ground units that we were supporting. A year later, I will be testing the feasibility of calling selected fixes directly to "supporting arms," and controlling artillery, or air strikes on the target. By the end of the war, DSU's will be relaying fixes to inbound B-52 bombers. But, today we do it the old way. The co-pilot roughly plots each shot on an acetate-covered map using grease pencils and a pocket protractor. When we have taken a few shots and it appears that we have a useable fix we move on and begin searching for another target. The co-pilot then calls the location of the shots (using UTM grid coordinates) and the compass bearings back to the operator, who writes them down on a yellow legal pad along with identifying data.

On this particular day the whole process is conducted to a backdrop of artillery fire prepping landing zones. A-1 Skyraiders are dropping bombs that blow great chunks of mud way up in the air, and then return to strafe with their 20mm cannon. Helicopters swoop in to drop off troops, then race back out of the area, while artillery strikes go in around the area. Just trying to negotiate the traffic in the area, and make sure that we avoid the gun target line of the artillery working the area is a full time job. Our pilot is a very busy guy.

Today, we repeat the process of locating enemy transmitters three times in four hours. It is considered pretty good for that area.

After the mission is flown, the operator takes the fixes to operations where he plots the fixes on a large-scale map using an onionskin overlay. The operator then turns in the fixes as well as the identifying data to be included in various reports that will be sent out overnight. The end user will receive the intelligence the following day. A typical four-hour mission takes between six and eight hours total time. As we are not a TO&E unit, there are no support personnel assigned, so the operators also assumed the responsibility of doing the clerical work. We rotate these responsibilities, and about

once a week, after completing a mission, you go to Davis station for supper, then return to operations, to spend the rest of the night completing these reports.

At the end of this first day, as a 20 year- old enlisted man, I am amazed and somewhat intimidated by the level of responsibility I have assumed, and the skill and dedication of my fellow operators is of a standard that is impressive, even in the Army Security Agency. The following 20 months will prove to be them most exciting, hard working and fulfilling period of my life.

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