

COBRA JAW Project and Aircraft 053121

In the spring of 1970, four of the most experienced and proficient 343SRs electronic warfare officers (EWO) (Raven) crews of the **55th Strategic Reconnaissance Wing**, were selected to fly the COBRA JAW aircraft/program. The EW crews were deployed on a number of temporary duty assignments to March AFB, CA. Those TDYs occurred from the end of March until the end of May, for equipment installation, and a number of shakedown flights prior to operational deployments.

While at March and billeted in a motel in Riverside, CA, the EW crews worked closely with contractor personnel from Lockheed Ontario; ITT Gilfillan and GTE Sylvania. ITT designed, assembled and integrated the Precision Power Measurement System (PPMS) into the aircraft. This was the primary sensor on board. The Raven crew activity consisted of equipment familiarity, training and feedback to the contractors. The interface with the contractors included pre-mission briefings, post-mission debriefs and trips to the ITT plant at their San Fernando facility, where their reconnaissance related work took place. Their main plant was in Van Nuys, CA. ITT had one contractor who deployed on the COBRA JAW project, Mr. Kenny Moore. The other contractor, GTE provided special equipment that looked at specific targets. On most flights, the EWO operators were briefed on how the equipment worked on the aircraft just prior to takeoff. GTE had two representatives who always deployed with the aircraft, Mr. Stuart Jeffery and Mr. Steve Yost.

Lockheed did the mechanical engineering for the towed antenna mechanism (the winch and external fixture), and integrated the ITT antenna into a tow target for aerodynamics; engineered another system that was to look specifically at the Soviet Hen House radar at a known site bordering the Baltic Sea. The collection for this requirement required a towed antenna (*affectionately called 'the blivet'*) attached to a cable and a coaxial cable which permitted the Raven 1 to reel it out several hundred feet via an electronic winch and retrieve it while in flight. The controls were located at what use to be the boom operator's station in the rear of the aircraft.



Because of the frequency of the targeted Hen House radar (155-165MHZ), reflection from the aircraft could impact the accuracy of the collected data if the antenna was mounted on the aircraft skin, and thus, isolation from any reflected energy had to be insured. While flying in other than sensitive areas of interest, the antenna was kept in the stowed and locked position.

While the Ravens had all these special receivers, the Security Service personnel had a hodgepodge of old and new systems for their Advisory Support mission. They had an HF receiver full of CRTs that according to the AMS could have been used as a boat anchor. They also had the latest state-of-the-art VHF/UHF receiver (sleek and small for the time). The aircraft also had the older AIC-10 interphone system, which caused problems for Security Service personnel. Whenever the mike was keyed, all input to the headsets was cut off.

The front end crew of two pilots and two navigators arrived in Ontario in early May 1970 to begin the shakedown flying phase of the project.



A/C 3121 had been in modification for over two years and was not flown in that time. So, shakedown/test hops were flown 12, 13 and 15 May 1970. The flights out of Lockheed Ontario were limited to a fuel load, the amount of which was determined by how much foam the fire suppression personnel would need to extinguish a crash and burn incident. True story. Thus, a short hop over to March AFB was necessary to refuel for the longer test flights.

The first flight was on 12 May with the front end crew and 20-25 civilian technical personnel. The entire Lockheed staff and contractors were out to watch the take-off to see if the ol' bird would make it. It did to the cheers (*and no doubt, sighs of relief*) from the assembled crowd. As the aircraft lumbered into the sky, the crew observed a VW on the San Bernadino freeway and it seemed to be keeping pace with 3121. The Beetle was low and slow and so was the plane.

The aircraft arrived at March before the filed flight plan was communicated. So, in the good ol' days of Strategic Air Command tight security, no-notice IG arrivals, etc, after being parked, the plane was surrounded by Security Police in jeeps with mounted machine guns. And when the ramp was rolled up to the cargo door, and the civilian personnel with their beards and sneakers began to deplane, the SPs got very alert, jittery and noticeably concerned.

It took a while for Aircraft Commander Jimmy Jones and the March commanders to get the situation cleared up before the crew could go to base ops for breakfast and the refueling to take place. The ensuing test hop was for 3.2 hours and recovered at Ontario. The next sortie to March on 15 May was better coordinated and went much smoother. The systems test flight was for 5.8

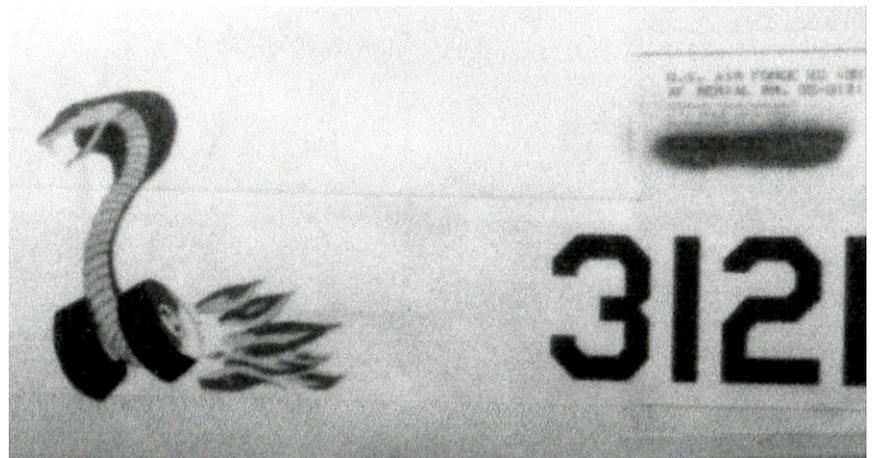
hours, and again recovered at Ontario. *(None of this is embellished or exaggerated. It is all true. Max)*

On 21 May 1970, with the full complement of SAC crewmembers, front and back, the aircraft was again flown on a 20 minute flight from Lockheed Ontario to March. After refueling it flew from March back to Ontario after a 5.7 hour training flight.

It was ferried to March and then to Kelly AFB, TX, on May 25. On May 27 it flew a 2 hour ferry flight from Kelly to Offutt AFB, NE, to return the EW teams home. Later on the 27th, the plane was ferried by the flight crew from Offutt to Ontario in 2.9 hours. Again on 28 May the a/c was ferried from Ontario to March to Offutt in 0.4 and 2.8 hours. Now it was ready to do the missions for which it was modified and tested.

A test/training flight was flown on June 16 for 5 hours from/to Offutt. On August 18 the first operational flight with the full crew was flown for 8.4 hours from/to Offutt. On September 4 with a crew of six Ravens the aircraft deployed from Offutt AFB to RAF Lakenheath, UK. The runway at RAF Mildenhall was being upgraded, and although flights were from/to Lakenheath, the crew, staff and maintenance were billeted and/or stationed at Mildenhall.

September 9th then saw the first operational flight in the Baltic Sea area on a 9 hour sortie from/to Lakenheath. On this flight a Soviet interceptor pilot radioed his controllers that the a/c had "a snake painted on the nose". Once this info filtered thru the Security Service and SAC after mission report channels, the Cobra nose art painted by crewdog Dave Johnson was summarily ordered removed.



Most flights were fairly routine, but two flights are worth mentioning. On Sep 15, 1970, there was the first collection of the Hen House by the COBRA JAW equipment, and what a collection it was. The aircraft was able to fly in and out of the beam all the while collecting three plus hours of vital data.

When it came time to bring in the towed antenna, it would only come within 18 inches of the locked position, even after trying a number of times to run it out and bring it in. In the middle of this frustrating activity, a battery fire broke out in the cockpit, filled the entire aircraft with smoke, and all crewmembers went on 100% Oxygen

The Raven 1, knowing that there were only two antennas in existence *(another had been previously jettisoned on one of the shakedown missions)*, called the aircraft commander and apprised him of the situation, and suggested to him that if he could do a touch and go at Lakenheath, the Raven 1 could cut

the cable and drop the antenna on the runway. The A/C thought about that, and checked with the navigator who confirmed it would be dark on arrival. The A/C determined that would be too dangerous to execute. He directed the Raven 1 cut it over the North Sea, and after checking with the Nav 1 to insure via radar scan that there were no ships in the area, the A/C told the Raven 1 to cut it “now”. The blivet was cut free and flew aerodynamically for a time, then plummeted into the blackness. The crew always wanted to tell this story in case someday someone discovers an UFO in the North Sea.

On November 17, the crew was tasked to fly a figure-8 route in international air space over the Pechora Sea between Novaya Zemlya and the Soviet mainland. Two Soviet fighters (MiG 17s) intercepted and pulled in behind and on both sides of



COBRA JAW aircraft. The fighters were in so close that they were observed by the front-end crew to be under the engine nacelles.

In addition, their SRO-2 IFF radars saturated the bandwidth of one of the special purpose GTE receivers being tested. After several minutes the fighters were visually observed firing their cannons abeam and in front of the aircraft. While some operators were feverishly working the mission, spare operators monitored the fighters through the overwing hatches.

After the fighters had “cleared their weapons”, and ignoring the potential threat, the A/C Jones turned the plane back inbound over the Pechora Sea and elected to complete the route as planned.

The lead fighter pilot reported “the target is turning inbound” and asked for

instructions from his ground controllers, who told him “to standby”. The ensuing time waiting to learn what his instructions would be was intense indeed. Finally, the fighters were told to “escort the target” to the



collective relief of those on board 3121. They did and the crew completing the mission without further incident, our pilots waving ‘good-bye’ to the Soviets as 3121 departed the area of interest at the end of the route.

On the return leg home, A/C Jones opined that if we reported the firing incident, there would be a lengthy and detailed debriefing with the staff. He was correct. That is a story unto itself.

Upon returning to RAF Lakenheath (the runway had been reopened while the mission was flown), the crew was informed that the Soviets had protested the flight path as being 'in their air space'; however, the staff reported to SAC HHQ in detail and at great length on the occurrence, and Washington fired back a strong counter protest to the Soviets for firing in international airspace.

When the CINCSAC was briefed on the incident, he suggested the crew be awarded the Silver Star, but was dissuaded by his staff that such action would draw undue attention up channel to the mission, so the award came out as DFCs for the SAC crewmen.



*L to R: CP Earl Mayfield, EWOs: Dave Johnson, Jim Caldwell, Lee Holbert, Charlie McBride, Nav2 Bill Simon, Nav1 Max Moore, AC Jimmy Jones.
DFC presentation at Offutt AFB parade ground 20 June 1971*

Four days later, on 21 November 1970, the project was deemed a success by 'the powers that be' and was terminated. The crew and aircraft returned to Offutt AFB, NE

Thus ended the COBRA JAW project as aircraft 3121 was again modified to fly regular operational sorties and training missions from/to Offutt.

COMBAT SENT, the successor aircraft and follow-on equipment to COBRA JAW, was in modification to perform newer technical ELINT missions.

Article initiated by Gary Nelson, with contributions from Ken Bryars and Charlie McBride; additional material and edited by Max Moore.