

# Operation Sun Run

Quest for the transcontinental speed record



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*This picture shows RF-101C 56-0165 at Ontario AP (CA) just days prior to the record attempt on 27 November 1957. The photograph shows all of the special markings applied to the 'Sun Run' Voodoos, of which the stripes on the nose are the most obvious. In this case they are red, just like the tail stripe. The other aircraft carried blue and yellow colours. Also note the oversized TAC badge on the fuselage, as well as the inscription 'Sun Run' and the individual aircraft number, in this case '3'. Note the California ANG F-86Fs in the background.* (all photos via Mark Nankivil/Greater St Louis Air & Space Museum, unless noted otherwise)

The rapid development in jet fighter technology in the late 1940s and 1950s gave rise to a steady stream of ever more capable and faster aircraft in several countries, with the USA, UK and Soviet Union leading the way. In order to show off the capabilities of these new aircraft, these countries were involved in numerous speed record attempts, like absolute speed, or speed at a certain height/distance and the one which is the subject of this article: the US transcontinental speed record. The first record time was set, in 1911, by a Wright biplane, which took 50 days to fly from the east to the west! Actual flying time, by the way, was a mere three days and ten hours. In 1919 there even was a 'Transcontinental Air Race', 67 competitors took part of which only 33 actually made it to the other coast! In the 1930s, numerous successful attempts were made, the last one before the war was made in February 1939 when the Lockheed XP-38 Lightning flew from west to east in just over seven hours. Early in 1945, a C-97 flew from Seattle to Washington in six hours and four minutes and in 1949 this was improved by a B-47, which crossed the continent in three hours and 46 minutes.

On 16 July 1957, during 'Project Bullet', a Navy F8U-1P Crusader, 143706, flown by astronaut-to-be John Glenn, flew from NAS Los Alamitos to NAS Floyd Bennett Field in 3 hours, 22 minutes and 50.05 seconds, an average speed of Mach 1.1, this was the first ever supersonic flight from Los Angeles to New York. One interesting fact is that one of the on-board cameras made the first continuous transcontinental panoramic photograph of the United States. There was some fierce inter-service rivalry between the Air Force and Navy and it took the Air Force just four months to recapture the transcontinental speed record on 27 November 1957. This time, it was due to stay: it took 33 years before the record was bettered by an SR-71 in 1990. The 'Habu' flew the distance in just 64 minutes, a time unlikely to be improved upon anytime soon.

Anyway, back to 1957! At the time, the relatively new McDonnell F-101 Voodoo was one of the fastest aircraft around and was a logical candidate for a speed record. Two separate record attempts were made: "Operation Firewall" was the absolute speed record attempt. It was broken over Edwards AFB by a JF-101A (53-2426) on 12 December 1957 (1207 mph - see photograph on the right) but bettered by an F-104 the next year and currently held by an SR-71A (3529 km/h in 1976). The other record attempt was the transcontinental speed record,

"Operation Sun Run". For Sun Run, the aim was to simultaneously set a one-way coast-to-coast speed record and a round trip speed record as well. The route flown was chosen as Los Angeles – New York – Los Angeles, and the participants took off from Ontario AP (CA) and flew to NAS Floyd Bennett Field, a distance of 2418.88 miles, although the officially recognized distance for the record attempt was 2445.90 miles, which was measured from the courthouse in LA to the courthouse in New York.

Operation 'Sun Run' originally was the brainchild of the McDonnell Aircraft Corp, who proposed it to the USAF in 1957. The name 'Sun Run' was symbolic for the desire to match the time it took the sun to travel from NY to LA (about six hours), which McDonnell thought was feasible. At that time, the RF-101A Voodoo had just entered operational service with 363rd TRW at Shaw AFB (SC). Although it would have been quite possible to break the records using RF-101As and KB-50 tanker support, it was decided to wait for the advent of the new RF-101C and KC-135A. The KC-135As would be able to refuel the Voodoos at higher speeds and altitudes, which allowed for much better record times. At the time, air crew training for the KC-135 fleet had been given high priority and it was up to the KC-135 test fleet from Edwards to support 'Sun Run', although 93rd BW, the



*Although it had nothing to do with 'Sun Run', JF-101A 53-2426 was the holder of the world speed record, as part of 'Operation Firewall' - see main text)*

### RF-101Cs involved in Operation 'Sun Run'

56-0163	No.1	yellow trim	dly 10nov57	round trip	Capt Sweet	total 6:42,06
56-0164	No.2	blue trim	dly 28oct57	West-East	Capt Kilpatrick	total 3:09,32
56-0165	No.3	red trim	dly 24oct57	West-East	Lt Klatt	total 3:05,39
56-0166	No.4	yellow trim	dly 29oct57	round trip	Capt Schrecengost	total 7:12,18
56-0167	No.5	blue trim	dly 12nov57	spare cell 1	Capt Hawkins	-
56-0168	No.6	red trim	dly 15nov57	spare cell 2	Capt Burkhart	-

training unit, supervised the operations. The reason the new RF-101C was chosen was the increased amount of internal fuel. Moreover, the afterburner on the RF-101A could only be used for set periods of time, while the use of the RF-101C afterburner was only limited by the amount of fuel carried by the aircraft. The plan was approved by the USAF Chief of Staff and the Department of Defense on 10 September 1957 and on 4 October HQ USAF directed TAC to establish the speed records before the end of the year. Four days later, TAC had made a plan and directed 363rd TRW to form a team consisting of 'the most qualified unit pilots, regardless of rank'.

However, in October 1957, the initial two squadrons were still working up on the RF-101A and were facing a shortage of spare parts, runway repairs at Shaw and a low in-commission rate. The most experienced Voodoo pilots had flown less than 100 hours on the type! 17th TRS was busy preparing for the 'Mobile Zebra' deployment to Formosa (nowadays also known as Taiwan), which left 18th TRS to provide most of the assets for the 'Sun Run' record attempt, although they 'borrowed' three experienced pilots from 17th TRS.

Six RF-101Cs were to be involved in the record attempt. Two for the round trip LA-NY-LA, two for the one-way flight from Los Angeles to New York and two as air spares, in case one of the four primary aircraft would be forced to abort. The operation largely followed the guidelines set by McDonnell, who calculated several optimum climb and cruise profiles. The entire operation took a substantial planning and coordination effort: all the tankers would have to be in place and be in their refueling tracks on time and radar and weather stations along the route would have to provide the pilots and ground observers with relevant data. The plan was to fly in two cells of three aircraft, each aircraft in the cell making a maximum power take-off from Ontario, climb to 45,000 ft and accelerate to supersonic speed. The first aircraft in each cell was the round-trip aircraft, which flew LA-NY-LA. The second aircraft followed five minutes later; this was the one-way Voodoo. Fifteen minutes later, the

air spare took off; this aircraft would make a single aerial refueling before heading for March AFB if his services were not needed. The second cell would follow the same procedure, but one hour after the first cell, allowing the KC-135As to return to the optimum position to refuel the Voodoos. The position of the refueling tracks was carefully calculated to provide the pilots with the best chance to obtain optimum results.

Training started and each pilot prepared himself for the round-trip flight, since he would not know which flight they were assigned to, until a few days before the operation. Different flight profiles would induce different performance statistics, for example, a one-degree Celsius decrease in temperature would increase the speed by three to five knots. Each pilot developed their own methods of making the F-101 go further and faster. Initially, a few 'old' RF-101As were used to train with from George AFB (CA), but on 24 October, the first RF-101C (56-0165) was delivered new from the factory to California. The record attempt Voodoos carried a yellow, blue and red sash along the fuselage to allow FAI officials to identify the aircraft. They also trained with the KC-135s they would work with during the attempt. The pilots trained the departure routine, and sometimes Los Angeles suffered six sonic booms in the space of over just one hour! This led to some complaints and the route was changed, so that aircraft would go supersonic over Death Valley. Following the delivery of the sixth and final Voodoo (56-0168), the date for the record attempt was set and one week prior to the actual mission, a dress rehearsal flight was made which was planned to go as far as Kansas City. However, it nearly ended in disaster due to a communications and planning error. The first tanker was out of position and the second one aborted, unknown to the pilots when they took off. Capt Schrecengost could not find the first tanker and diverted to Kirtland AFB, landing on fumes only. Capt Sweet found the tanker, but returned to George AFB when he learned the second tanker had aborted. Lt Klatt, flying 56-0168, also found the tanker, but was unable to refuel and also unable to reach Kirtland. He saw the small airfield at



Another shot from Ontario a few days prior to the record attempt, this time with RF-101C 56-0163, which carried yellow nose and tail stripes. This aircraft was used to set the Los Angeles - New York - Los Angeles record, which took pilot Capt Sweet just over 6 hours and 42 minutes.

Gallup (NM, runway length 5000 ft) and made a successful emergency landing; both his engines flamed out when he was taxiing to the ramp... He was met by the airport manager who wanted to know what he was doing and why he had not contacted the tower. As it turned out, the Voodoo was the first jet aircraft to successfully land at the airfield, two T-33s had crashed while trying to do the same! The people of the town of Gallup turned up *en masse* to see the Voodoo. After fuel and a starter had arrived from Kirtland, the Voodoo took off again – ‘with room to spare’. The Voodoo turned out to be a good choice for ‘Sun Run’, although the lack of a good autopilot (it was limited to Mach 0.95) was tiring for the pilots and each mile of the flight had to be flown by hand.



*Unfortunately, the photographer of this photo forgot to include the nose, but it shows the appearance of ‘Sun Run’ participant 56-0166 in 1958, when the normal 363rd TRW tail markings had replaced the ‘Sun Run’ stripes. Note the name ‘Cin-Min’. This aircraft was used by Capt Schrecengost during the round-trip attempt. (via Henk Scharringa)*

As the date of the attempt came nearer, the Voodoos were repositioned from George to Ontario AP, near Los Angeles. Also, on Monday 25 November, the pilots and aircraft were selected for each mission. On Tuesday, the day was spent tying up some loose ends, the aircraft were fully serviced and towed to the end of the runway and parked in the order in which they were due to take-off. That evening, Gen Stephen B Mack, 363rd TRW CO and commander of Shaw AFB, visited Ontario to wish the pilots well.

Finally, the big day came. On Wednesday 27 November 1957, at 06:59 AM, the first Voodoo took off for the first round-trip of Operation ‘Sun Run’. It was flown by Capt Ray Schrecengost (“Schreck” to his friends); the aircraft was named ‘Cin Min’, after his two daughters Cindy and Mindy. Next into the air were Capt Robert Kilpatrick on a one-way flight, and Capt Donald Hawkins as the air spare; upon conclusion of the first aerial refueling he landed at March AFB (CA). At 07:50 AM, Capt Robert Sweet took off for the second round-trip flight, followed by 1Lt Gustav Klatt, who was flying the one-way trips in 56-0165, which had the best maintenance record and a reputation for being a good flyer. It was the aircraft of choice for most of the pilots. The air spare was flown by Capt Robert Burkhart, who had been kept awake during the night in anticipation of the mission. He later commented that he “was only doing his duty and didn’t realize how significant Operation Sun Run would be. I never thought it would be remembered 50 years later”, he said. He also flew back to March AFB after the first aerial refueling.

Lead pilot of the first cell of three aircraft, Capt Schrecengost, came in trouble shortly after take-off. His aircraft did not accelerate the way it should have, and even was reluctant to go supersonic. Result was an increased fuel consumption and the need to stay on the tanker’s boom longer than anticipated. He passed over Floyd Bennett Field after 3 hours and 14 minutes, before turning around and heading back for California, landing at March AFB after 7 hours and 12 minutes, a new record but one that would be broken about an hour later! Actually, he was met by a large crowd of reporters and television people, who quickly lost interest when they learned the record would be broken in an hour! The second aircraft in the first cell, flown by Capt Kilpatrick, also suffered from some refueling problems and lost some time, but made it to Floyd Bennett in 3 hours, 9 minutes and 33 seconds before landing at McGuire AFB. The third aircraft, the air spare flown by Capt Hawkins, was not needed despite the refueling problems of the other two aircraft and returned to March AFB.

The second cell of three aircraft was led by Capt Sweet; he was flying 56-0163 which had the reputation of being a ‘hangar queen’, as it had never made a flight without write-ups. He also had his share of refueling problems and equipment failures during the initial leg of the flight and even strayed off course over Indiana due to a compass failure. The rest of the round trip flight

was uneventful and he passed over Ontario AP in 6 hours, 42 minutes and 6 seconds before landing at March AFB amidst a warm welcome of Gen. Mack, Capt Schrecengost and the collective press corps. Lt. Klatt flew the one-way trip to New York in 3 hours, 5 minutes and 39 seconds, the quickest of all four voodoos, leaving both Sweet and Klatt to hold one of the records. While approaching Floyd Bennett Field, Klatt performed a high ‘G’ pullout at low altitude over Manhattan and rocked the city with a sonic boom, passing over Floyd Bennett at very high speed. Like Capt Kilpatrick before him, he landed at McGuire to appear before the waiting press. One funny incident occurred later that day. Both pilots had been flown to La Guardia and appeared on national TV. They had a room in a Park Avenue hotel, but were unable to catch a taxi in the busy evening rush hour. Kilpatrick knew the area and they both decided to walk the distance of about a mile. They must have been quite an attraction in their bright orange flying suits! The next day, much to the annoyance of the USAF aides assigned to Sun Run, a local New York newspaper ran a big human interest story about the ‘Sun Run’ records and on “how these two record-breaking pilots could fly across the country and then had to walk across town to their hotel!”. The final pilot involved in ‘Sun Run’, Capt Robert E Burkhart, took off from Ontario, but continued to March AFB when all looked well for the other two aircraft.

So, the end results were spectacular. Everything went according to plan and all four RF-101C pilots easily broke the existing speed records and established new ones, although each pilot was convinced they could do better if they were given a second chance. Each of them would receive a medal for their efforts and received a great deal of media attention. Additionally, during the actual record flight, the RF-101Cs had photographed a strip of land during the coast-to-coast flight, although the results were not too good as they were using an untested camera installation with cameras taken from old RF-84Fs.

After the event, all six Voodoos returned to operational service after the flight. The special colours were quickly removed, the only thing that remained for some time was the ‘Sun Run’ legend on the fuselage. At least one of the aircraft, 56-0166, was also involved in overflights of Cuba during the 1962 missile crisis. It has since been preserved at the Air Force Museum at Wright Patterson AFB, with a grand total of 6604.9 flight hours. 363rd TRW was also involved in establishing a new point-to-point record in December 1957, flying from Tachikawa in Japan to Hickam AFB (HI) in 6 hours and 3 minutes. In any case, these record-breaking flights earned the Voodoo a rightful place in history and is a fitting way to remember this beautiful aircraft!

Credits: Air Force Association, USAF Fact Sheet, American Aviation Historical Society – summer 1983, Greater St Louis Air & Space Museum, Mark Nankivil, Stephen Miller, Henk Scharringa, Rex Barker. If you have any additions, corrections or remarks, contact me at [jwaarde@chello.nl](mailto:jwaarde@chello.nl)