

Silence, utter silence. This is a lonely, desolate place, the mountains and foothills surrounding it as scarred and barren as the sage-covered basin floor.

There is a dry lake bed at the eastern end of this valley known as Mud Lake. It's accessible only by a twelve-mile stretch of dusty desert track. The lake itself has worn the cracks and ruts of an arid nakedness for ages, the mud so sun-baked

and hard-packed that the normally lethal bullets of now ancient weapons literally bounced off its surface when it was used as a gunnery range for a wartime air corps.

It is the size and nature of this broad, level expanse of dried earth that led to its selection for what was about to take place this cold weekend of October 2nd.

But Nature had intervened. A plague of bitter storms struck this

valley repeatedly in the weeks prior. The once dry lake bed now rested beneath several inches of slimy clay and murky water; a continuing satanic procession of heavy, vengeful black thunderheads providing a constant reminder that Nature is still master here, still to be challenged.

The silence is overwhelming. There is wind, blowing across the rippling sheets of water, punctuating the stillness of the early afternoon. There

STARFIGHTER

Story and photography by Scott Rayburn

Greenamyre's F-104
speeds at
1,000-plus mph.



are the distant voices of the handful of men and women calling out to one another in preparation for what is to happen very soon. And, occasionally one can hear the glopping sounds of a boot being pulled free of the sticky, oozing mud that forces the activity to take on an agonizingly slow pace.

The wind carries a new, subtle sound now, one so very alien to this primal arena. It is the faint, yet unmistakable whine of a powerful jet engine, somewhere off among the clouds.

Eyes begin to search the horizon, scanning the rich brown earth of the surrounding mountains to pick up the source. One small group of men, positioned on a nearby hilltop, a panorama of the vast brown lake spread out beneath them, pay a special attention to this new sound. They have a special responsibility in this place, for they must send out the warning to the tiny figures on the lake's surface that the time is upon them.

These spotters are equipped with radios and, as the noise becomes clearer and steadily increases, they prepare to transmit.

On the lake bed, all eyes are peering towards the south, waiting for the first glimpse of the red and white bullet that is due any moment.

The radios come alive with the crackle of electronic voices. The spotters have done their job, and the responsibility now falls on the crews shivering in the biting cold of the lake as they prepare to switch on the maze of electrical equipment and high-speed cameras.

"They've got him! Here he comes!" yells a radio operator who has picked up the transmission. Immediately, everyone focuses on the spot on the

horizon, the spot where a tiny speck against the backdrop of the mountains will appear at any second. The entire episode will last but a few moments. There will be no sound to forewarn them—the speck is well beyond the limits of sound.

"There he is!" Sure enough, dropping down low, barely distinguishable against the darkened hills behind him, the shadow of a passing cloud obliterating most of the light and contrast, comes the airplane—no longer a speck, but now a growing presence, its graceful lines and stub-



Fuel proved to be a major gremlin for Greenamyre, as the low altitude and high power settings gobbled every drop within a matter of minutes. Despite having over 1100 gallons aboard, the Starfighter would have an endurance of less than half an hour. Tip tanks were not used in an effort to lighten and streamline the aircraft.

by wings taking on definition and form.

It appears in the field of vision like a thin pencil gliding along a wire strung along the surface of the lake. There is no sound; only a presence.

The airplane streaks by the first camera station, flying only a few feet above the water's surface. Its trajectory is as smooth and effortless as a dream as it continues its path along the submerged course line. Now it is past the last station, nearly two miles away, and begins to arc gently off the course, the glowing fireball of its afterburner pinpointing its diminishing size. The silence remains.

A few put their hands over their ears. Others wince and brace themselves in anticipation. They all know what comes next; yet they will never quite get used to it. It comes: a shotgun, a stick of dynamite, a terrible clap of sound explodes in the ears of each person watching, waiting. The retort is deafening, frightening—momentary and sudden.

Now all sound returns. The screaming whoosh of the engine struggles to catch up with its source; a low, steady grumbling as the secondary shock waves bounce off the surrounding terrain.

A momentary look of shock, and then a smile. Everyone turns to his neighbor, and affectionate laughter breaks out. Darryl has done it—he has broken the record. It is over.

In a span of less than seven seconds, Darryl Greenamyre brought to a climax over ten years of work and worry. He has made a successful assault on the world jet speed record.

One of the observers on the lake bed, operating a portable ham radio



A proud and happy Darryl Greenamyre (left) receiving a well-deserved congratulatory handshake from his sponsor, Ed Browning, owner of the Red Baron Air Racing Team.

The product of ten years of work and sweat eases onto the runway at Tonopah Airport after a successful series of passes in the assault of the speed record. In an effort to do away with excess weight, no drogue chute, designed to help slow an aircraft on landing, was installed.



inside of his motor home, is talking to a neighbor of his in Baja California during the run. As Greenamyer approaches, Ed Everett tells his neighbor to stand by; he is going to key the microphone to transmit the event live over the airwaves. The blast of the sound barrier being shattered is carried over the frequency. Everett speaks into the mike to his friend: "You've just heard history in the making."

"That was real nice, real nice," answered his neighbor.

Indeed. Across this flooded dry lake bed twenty miles outside of the small Nevada desert town of Tonopah, Greenamyer flew an arrow-straight course at less than 100 feet above the rippled surface at a speed of well over 1,000 mph—more than enough to make him the new holder of this tough and significant speed mark.

The greatest significance lay with the aircraft he used. No mere flying machine, this. It was the specially built, specially modified Lockheed F-104 Starfighter that Greenamyer spent the past decade of his life constructing with a painstaking thoroughness—a labor of love aimed at this one moment in time. (It was also a labor that nearly cost him his eyesight when he inadvertently arced two high-voltage cables only inches from his face during final assembly. Even with dark glasses, his eyes were excruciatingly sore for days.)

The final result was an exquisitely beautiful machine; the brilliant red with white and gold trim paint scheme masking the brute power of the massive J-79-10 engine encased in her smooth shell.

Airplane and man were after what is officially categorized as the Class C-1, Group III low altitude jet speed

record; a category established by the international organization which has officiated, sanctioned, and governed all aviation and space records since the inception of manned, heavier-than-air flight: the Federation Aeronautique Internationale (FAI).

Requirements for this class call for an "unaugmented" (non-rocket) jet-powered aircraft to make four consecutive passes, two in each direction, along a 3 km (1.86 miles) straight-line course at less than 100 meters (328 feet) above the surface.

In addition, at the end of each pass, when the pilot must wrestle his supersonic bird in a tight 180 for the next attempt, the aircraft must be kept within a 500-meter (1,640-foot) altitude envelope. This is to prevent the obvious advantage of beginning the run at extremely high altitudes, thus allowing an exaggerated speed to be reached at the end of a descent.

(Watchdogging the Starfighter at the two key altitudes are, in a flash of contrast, a Cessna 150 and 172 with official observers aboard.)

The course itself—a mere straight line—is relatively simple to prepare. At least it would have been without the annoying interference from the days of rain. Surveyors dispatched to set up the course arrived at the peak of the storm activity and were forced to wade through ankle-deep mud as they lined up their scopes and plumb lines.

At each end of the course are the camera stations; 16mm high-speed cameras focused exactly perpendicular to the course-line at the 3 km marks. Tied into the cameras is a digital timer. The whole setup is akin to the system used in the Olympics: millisecond time readouts from the timers are superimposed on the film,

thus marking the precise beginning and end of each pass. This film is later analyzed and the time converted into a corresponding speed figure. Only then can the attempt be certified an official success, and Greenamyer's name added to the roster of record holders.

(This will mark Greenamyer's second entry in the FAI record listings. He successfully flew his six-time Reno Air Race champion F8F Bearcat to a new absolute speed mark for propeller driven aircraft in 1969, with an average of 482.462 mph. Ironically, that record will soon be assaulted by another of Greenamyer's sponsor's fleet of exotic aircraft: the sleek, contra-rotating, modified Mustang RB-51.)

The current record for this class stood at just under 903 mph, set in 1961 by a Navy F4H Phantom. To be awarded the new record, Greenamyer would have to better that speed by 3 percent, or a 931 mph average. No sweat, thought the former Lockheed SR-71 test pilot—he was consistently breaking the thousand-mile mark during his test runs earlier in the week.

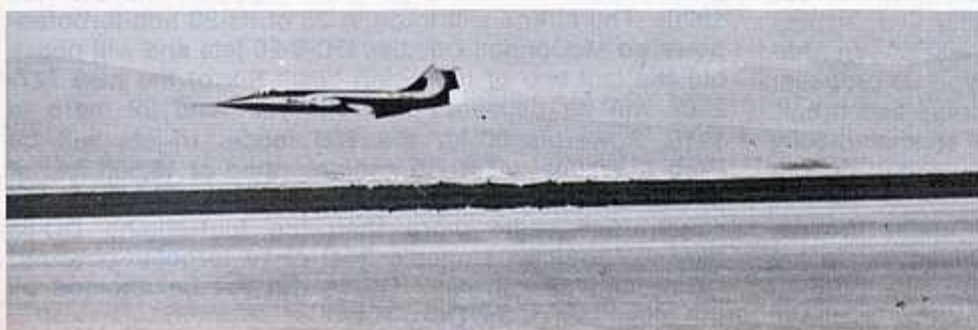
"Only 1,000 miles per hour?" asks one incredulous soul upon hearing of the attempt. "Gee, jets fly that fast, and faster, every day."

To be sure, our military friends go supersonic daily in their sleek, sophisticated machines. But, pause and consider that Greenamyer's Starfighter would have to make its attempt on the deck. Even at the 5400-foot elevation of Tonopah, the air is very dense; considerably more so than the 30- and 40,000-foot environments such aircraft usually frequent. Furthermore, just flying at over a grand only 100 feet or so above Mother Earth is an achievement in

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Man and machine break ground after a thundering take-off roll. The GE J-79-10 engine powering the Starfighter produced over 19,000 pounds of thrust—almost exactly a one-to-one ratio with the weight of the plane.



The silence is literally deafening as Greenamyer streaks soundlessly along the 3 km course during one of four official speed passes. The sound would catch up moments later with an explosive vengeance; the shock wave so intense that one vehicle parked underneath the course (as a marker) had its trunk blown open and rear window popped out of the frame. At this point, Greenamyer is traveling in excess of 1010 mph.

STARFIGHTER

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itself, let alone a record.

"And you say this guy Greenamyer built the thing himself?" continues the skeptical questioner.

Yep. The 38-year-old test pilot began assembling parts a decade ago, scavenging from all over the country the exotic hardware necessary to make his dream a reality (including sections of fuselage salvaged from four wrecked Air Force Starfighters).

He set up his operation at Van Nuys Airport, north of Los Angeles, and began to methodically piece together his own jet interceptor.

It was in the last few months of Spring, 1976, that the bare aluminum hulk began to take a final shape. Now it was affectionately known as "the project," and crewmembers Roger Davies and Phil Greenburg, with the help and technical expertise of men like Bob Allen, Bob Hariston, Bruce Boland, Pete Law, Jim Black, Randy Scoville, and others—all swept up in the mystique of this unique affair—put in double overtime to get the final nuts and bolts in place.

A flawless paint scheme was added in late May, a magnificent job of application performed by a local auto shop owner known as Fudge.

The premiere unveiling of the Starfighter took place during the California National Air Races at Mojave in early June.

All was now ready—with one small exception: a gaping cavity remained in the aft section; a cavity that should have housed the jet's mighty engine.

Starfighters still make up the air defense fleet for many nations, and a variant of its General Electric-produced powerplant is used to power the Phantom fighter, among others. So, engines are plentiful. But how many civilians try to buy one?

Two dates for the record attempt—July 4 and August 15—were cancelled; an engine still had not been procured. Greenamyer toured the country, talking with the brass in the Pentagon, and with the corporate giants who either manufactured, serviced, or used the J-79 for test purposes. No-go all the way down the line. Speculation had it that no one in the top echelons wanted to assume any sort of liability in allowing this one man, this civilian, to have one of their engines.

Federal laws prohibited Greenamyer from attempting a purchase from the military inventory of a foreign government. So the ten years of work and sweat, not to mention the money, were about to go down the

tubes.

Meanwhile, Greenamyer had signed with Ed Browning, the owner of the Idaho Falls, Idaho-based Red Baron Flying Service (the folks who brought you the Red Baron Air Racing Team) in a sponsorship agreement in early May. ("Darryl was in a pinch, and I happened along at the right time," said Browning in a recent interview.) With Browning's financial and logistical support, Greenamyer made one last, desperate effort.

The engine was finally installed in late summer at the Starfighter's new home in Idaho Falls. The source of the powerplant, which was only loaned for the record attempt, remains a closely guarded secret; a secret that is reported to be an integral part of the loan agreement.

No matter. The bird had her feathers now. She lifted off for the first time in mid-September.

"It's been 15 years since the Navy set the record. Why such a long interval?" queries our skeptic.

Well, until Greenamyer, no one had an aircraft capable of such speeds and performance except the military. And why should they want to break their own record?

Indeed.

The speed mark is only the first of Greenamyer's targets. His sights are now set on shattering the world altitude record, this one held by the Soviet Union in their sophisticated MiG-23 "Foxbat," which flew to 118,000 feet in 1973. (One source has reported that the service ceiling for a stock F-104 is a mere 60,000 feet.)

Greenamyer's biggest glitch in his record attempt (aside from a reluctant APU starting unit which had people running for cover) was a fuel flow problem. During one test run, his deceleration upon leaving the course was so great that the aircraft flamed out (jet talk for an engine abruptly quitting), the remaining fuel having been thrown forward in the tanks, uncovering the boost pump intakes. He successfully re-lit and made for home.

Later, he would be plagued with an oscillation in the afterburner ("it chugged along like a Model T," he quipped afterwards), again, the probable victim of a suspect boost pump system.

Fuel was a key factor throughout. Although topped off with over 1100 gallons (6,800 lbs.), the Starfighter would be flying on fumes upon its return to the usually quiet Tonopah Airport strip only 15 minutes later—the high power settings and low altitude gobbling up every drop in the

tanks (tip tank nacelles were absent in the effort to streamline and lighten the 19,500 lb. gross aircraft).

Furthermore, the borrowed dash-10 engine was nearly 500 lbs. heavier than the standard dash-7 powerplant that Greenamyer had been counting on. To compensate, an equal amount of lead was added in the nose cone—1,000 lbs. of dead-weight for the stubby-winged craft.

As this one, lone man taxied out and applied power for a thundering takeoff, one question remained: why?

Few people will ever get a direct answer from Greenamyer himself. He is a reserved, private individual—with only a very small circle of close friends and advisors privileged to hear his inner thoughts.

To answer this final, and perhaps most important, question, one must speculate, relying upon this quiet man's record. He is a doer, a challenger, familiar and comfortable with the world of high performance and the unknown. He is not a "playboy," or an adolescent-minded *nouveauriche* by any means. Greenamyer has worked hard for everything he has ever accomplished—and will always continue to do so.

For the chance to pit his skills in a calculated attempt against the odds, strapped in the driver's seat of a glistening red missile, he has weathered the constant storm of tight money, military aloofness, government indifference, and corporate power and influence—all of which were obstacles. He ultimately overcame and beat those odds, without sacrificing his own pervasive and strong convictions of the individual.

A generation ago, a famous columnist eulogized the passing of another conqueror of the unknown. Although these are not his exact words, these are the thoughts which can apply equally well here:

Man is not mere dust on this Earth; no mere cog in the daily machinery of life. If his spirit is allowed to be free to search the unknown, for those higher levels of achievement, he then becomes a glowing ember, occasionally fanned into brilliant flame by the winds of the endless sky.

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UPDATE: As we go to press, word has just been received that Darryl Greenamyer's unofficial record of 1010 mph will remain unofficial due to technical problems with filming of the speed run. Unfortunately, the film was not exposed properly and the jet's critical start and stop points are not discernable on the film. We understand that a second record attempt will be made later this year.