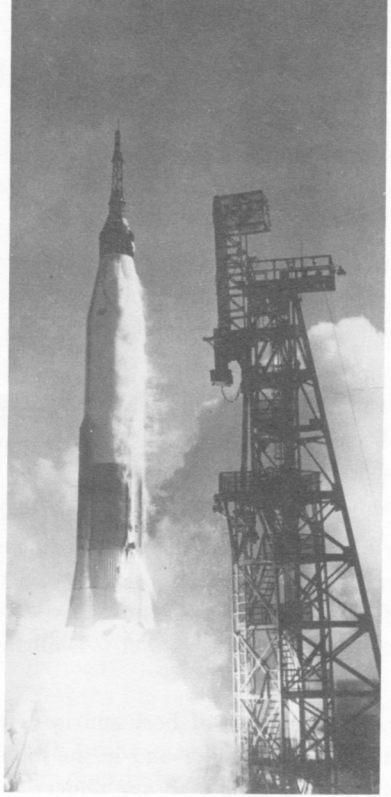
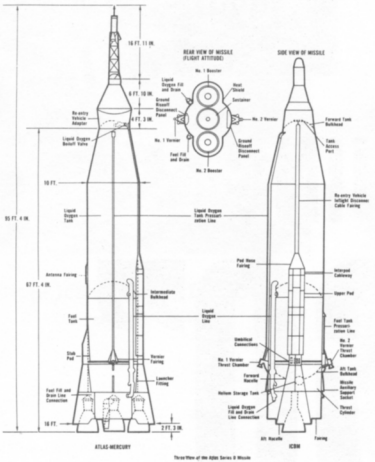


The historic space orbit of Friendship 7

Revell
Authentic Kits

EVERYTHING IS "GO"



Three-view of Atlas-Mercury and Atlas without Mercury

The whole world holds its breath. At Cape Canaveral days seem to have passed since this dawn of February 20, 1962—a date destined for history.

Marine Lt. Col. John Glenn, Jr., strapped into the couch-like seat of Friendship 7 secured atop the 10-story tall Atlas booster, waits for the moment he will be hurtled into space.

Teams of scientists, engineers, fellow astronauts, observers, Navy admirals and ordinary seamen—literally thousands, webbed around the globe, each one having his special task to perform, sweat out the dragging seconds.

Tension mounts—the countdown is held up—first one problem then another. The relief when each is solved can almost be felt. The calm reassuring voice of John Glenn reporting back to the control center as he checks out the Mercury Capsule instruments is like the sound of success.

The countdown picks up—"5 . . . 4 . . . 3 . . ."—Glenn's voice echoes each second. Then "2 . . . 1 . . . ZERO." A mighty blast. The earth billows with smoke and flame. It is 9:47 a.m. at Cape Canaveral. It's the next day, February 21st, 2:17 a.m. in Perth, Australia. It is night, February 20th, 6:47 p.m. in London, England and 6:47 a.m., dawn in Los Angeles, California. But yet it is all the same moment.

The giant Atlas rises from its launching pad, a blaze of fiery sunrises. Its 360,000 pound-thrust engines roar with momentous thunder and in the midst of it all—Glenn's quiet voice—"The clock is operating. We are underway."

The prayers of millions ride with him. Mercury-Atlas 6 (MA-6) arches upward. Col. Glenn is launched on his space trip—sealed as if in his own world—Friendship 7. Launched on his 81,000 mile race through space—a race to last but 296 minutes, but which takes him three times around the globe.

For two long, awful seconds, Atlas tears toward the heavens. The automatic guidance system takes over. The mighty rocket rolls north-east. But now, less than a minute after launch—the danger zone—the "High q" area. Here all the forces of nature conspire to keep man earthbound. It is the area of severe aerodynamic forces and enormous vibrations and enormous strain.

An earlier unmanned Mercury flight met disaster here. Friendship 7 had been strengthened to resist these forces—but strengthened on drafting board and in laboratory. This was the test. Were the engineers correct? Their hopes ride with Col. Glenn. And good hopes they are!

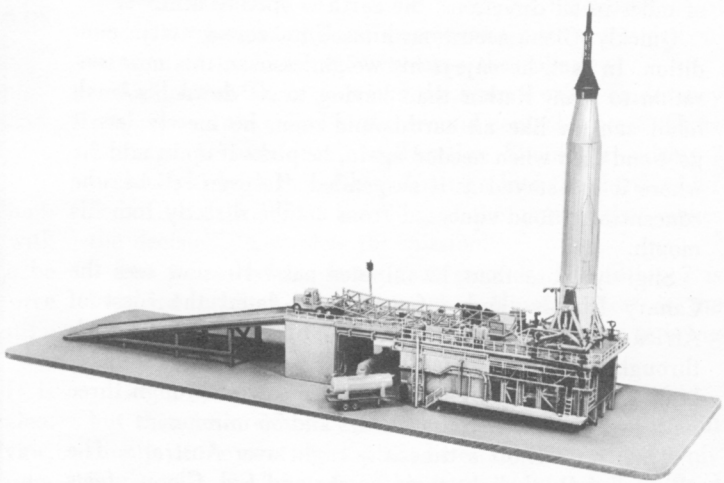
Friendship 7 speeds through the danger zone unharmed.

Now the big outboard booster engines are jettisoned. The huge sustainer engine goes on full thrust, pushing Friendship 7 upward toward the target door in space where it will enter orbit.

Everything is GO.

The explosive bolts holding Friendship 7 to Atlas are fired electrically. The Atlas separates and Friendship 7 is on its own. The blunt end swings forward—and at 17,000 miles per hour, she races toward the first encirclement of the globe.

(Revell photo)



Revell model of Friendship 7 and its Atlas booster on launching pad.

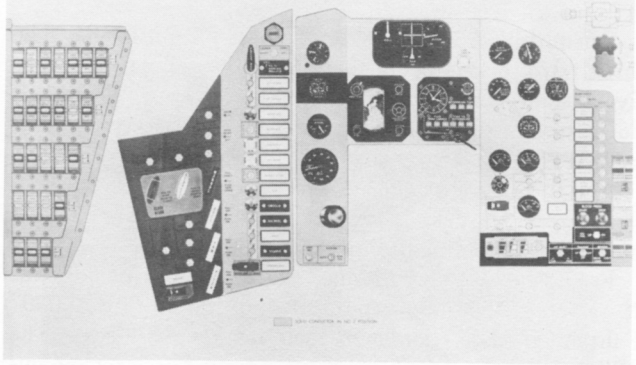
Col. Glenn takes a brief pause from his many tasks—his checking of instruments—his testing of his own physical reactions. He has jerked himself in his seat, he has tried to induce air sickness and nausea. But all has been planned well. He feels "just fine." He looks from the window toward earth. His "Wonderful!" as he sees the world unfold below him, symbolizes centuries of men's dreams. For hundreds of miles in all directions, the earth is open to him.

Quickly, Glenn accustoms himself to "zero-gravity" condition. In fact, he enjoys his weightlessness, this new sensation to man. Rather than having to set down his small hand camera like an earthbound man, he merely lets it go—and then when needed again, he picks it up in mid-air where it has stayed as if suspended. He even relishes the concentrated food squeezed from a tube directly into his mouth.

Slightly more than 10 minutes pass. He now sees the Canary Islands—and a few minutes later, the coast of Africa. As he swings over the Indian Ocean he speeds through the sunset, a day that will never exist in full for him, because on the trip he actually passes through three new days encompassed in 4 hours and 56 minutes.

Then in so short a time it is night over Australia. The citizens of Perth light their homes and Col. Glenn greets this welcome beacon with warm thanks.

Lt. Col. John Glenn Jr. in his historic suit climbs into Friendship 7.



Sketch of instrument panel of Friendship 7.

Now a strange encounter. He is surrounded by thousands of glowing luminous objects, keeping pace with him—a mystery still unsolved. Some believe these to be the lost millions of needles satellited as an Air Force experiment. But perhaps there will be a better scientific explanation for this phenomenon.

Friendship 7 swoops across the broad Pacific. It is approaching the tracking station at Guaymas, Mexico. Suddenly the capsule moves erratically. It starts to yaw, swinging dangerously from one side to another. The automatic control system is not working. The ground control center recognizes the malfunction practically at the same time as Col. Glenn.

A quick reaction. Colonel Glenn takes over manual control of his space vehicle. He is now "flying by wire," a system which conserves the all-important hydrogen peroxide fuel that is consumed by the pitch and yaw jets and is used to keep the capsule stable.

If an astronaut had not been aboard Friendship 7, it would not have completed its mission—a dramatic demonstration of man's superiority over the robot.

As Colonel Glenn goes into the second orbit, emergency conferences are called at the ground control centers. There is danger because of this malfunction. Should Friendship 7 be brought back to earth and not go into the third orbit? It is Glenn's brilliant handling of the capsule that makes the decision, "Complete the mission."

The miles reel by faster than seconds. Friendship 7 is in third orbit. Glenn approaches Hawaii. Now is the scheduled time for starting the re-entry procedure to bring him back to earth.

Glenn synchronizes his time with the Hawaii station—but then loses contact—a terribly lonesome moment. But finally, at the next check point he establishes contact. Only 50 seconds are left before the retro-rockets must be fired to bring him out of orbit.

Lt. Col. Glenn in flight. This photograph taken while in orbit by an automatic camera.

A message from the control center. He must not jettison the retro-rocket package. This is contrary to the plan of operation. Col. Glenn is baffled—for the first time on his historic trip, anxiety floods him. The explanation from the control center gives him understanding, but not relaxation.

To the control center monitors below, their data indicated that the heat shield was loose. Complete disaster seemed ahead for Col. Glenn. It is only this heat shield that will protect him from the searing, enormously high heating that will come with re-entry of Friendship 7 into the earth's atmosphere. The jettisoning of the retro-rocket package might shake the heat shield from the space craft. Glenn, aware of the danger, rides with it.

Friendship 7 is off the west coast of California. The three retro-rockets begin their firing sequence; one every five seconds, each one braking Friendship 7, slowing it down so that the earth's gravity can more easily exert its pull. With each firing, anxiety rises.

And then a great moment. Ground control informs Glenn that the heat shield is secure—that a faulty signal light had caused the dreadful apprehension.

Friendship 7 glows orange, like the hottest of coals, as it re-enters the atmosphere. Its outside skin is 3,000° Fahrenheit—hot enough to melt the toughest steel. The "G" (gravity) load builds up to nearly 8—a tremendous pull on every nerve and every fibre. But Col. Glenn, knowing now that the heat shield is intact, lightly reports to ground control, "Boy, that was a real fireball."

The first of the capsule's two parachutes is scheduled to break out automatically at 23,000 feet. But the space man decides to do it a bit earlier. At 30,000 feet, he drops the switch. The drogue chute deploys. The capsule drops to 10,800 feet, and the main chute automatically releases.

He heads toward the welcome waters of the Atlantic. The men aboard the U.S.S. Noa let out a cheer. Giant aircraft carriers have been stationed to recover Col. Glenn and his capsule. But the crew of the small destroyer knows

President John F. Kennedy decorates Lt. Col. John Glenn, Jr. with the NASA Distinguished Service Medal at Cape Canaveral Space Center.

it will have the honor because Friendship 7 is heading directly toward them.

The epic flight ends—a grinning, happy man comes back to earth—but certainly with memories ever space bound.

Even the dry statistics are dramatic. On the three-orbit flight, Friendship 7 reached a top speed of 17,545 miles per hour. Colonel Glenn was in a state of weightlessness for four hours and 45 minutes. The highest point of its orbit (apogee) was 162 miles. Its nearest point (perigee) during orbit, 99 miles. It travelled 81,000 miles in four hours and 56 minutes. Friendship 7 weighed 42,000 pounds.

A miracle of electronic science—the brilliant teamwork of thousands of engineers, scientists, sheet metal workers and one courageous man, opened up a bit wider the door to the age of space which holds so much promise for all humanity.

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Official NASA pictures.

Pre-flight testing of Lt. Col. Glenn's astronaut suit.

Lt. Col. Glenn, Jr., first American to orbit the earth.

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