

## **The Eagle Has Landed – 1969**

Ed Aldrin: Contact light. Okay. Engine stop. ACA – out of detent. Mode control – both auto. Descent engine command override – off. Engine alarm – off. 413 is in.

Capsule Communicator (CAPCOM): We copy you down Eagle.

Neil Armstrong: Houston. Tranquility Base here. The Eagle has landed.

CAPCOM: Roger Tranquility. We copy you on the ground. You got a bunch of guys about to turn blue. We're breathing again. Thanks a lot.

CAPCOM: We're getting a picture on the TV. There's a great deal of contrast in it, and currently it's upside-down on our monitor, but we can make out a fair amount of detail. Okay. Neil, we can see you coming down the ladder now.

Narrator: Sunday, July 20, 1969. Around the world, nearly a billion people watched this moment on television as the first man from Earth prepared to set foot upon the Moon.

Neil Armstrong: I'm at the foot of ladder. The LM footpads are only depressed in the surface about 1 or 2 inches, although the surface appears to be very, very fine grained as you get close to it. It's almost like a powder. Down there, it's very fine. I'm going to step off the LM now. That's one small step for man, one giant leap for mankind.

John F. Kennedy: I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to the Earth.

Lyndon Johnson: All that we have accomplished in space, all that we may accomplish in days and years to come, we stand ready to share for the benefit of all mankind.

Richard Nixon: As we explore the reaches of space let us go to the new worlds together, not as new worlds to be conquered but as a new adventure to be shared.

Narrator: Since the earliest time, man has imagined this moment, the moment when his fellow man would make the first journey to the Moon. Now the time had come. In the sixth decade of the twentieth century the ancient dream was to become a reality.

The flight of Apollo 11 was the culmination of many years of planning, working, building, and testing. Thousands of people had contributed toward this day of accomplishment. The great Saturn V rocket and the complex Apollo spacecraft had been assembled together and moved to the launch pad. The equipment and techniques and personnel had been proved in earlier missions and now they were ready. The astronauts chosen for this mission had flown it many times in ground-based simulators. They had all been in space before. They had trained carefully and well and now they too were ready.

Astronaut Michael Collins would pilot the Apollo Command Module. Astronaut Edwin Aldrin, Jr. would pilot the Lunar Module. And astronaut Neil Armstrong would serve as Mission Commander. Armstrong would be the first man to step upon the Moon.

July 16. The day had come, the Moon awaited. The men rose early, ate breakfast, and dressed in their spacesuits.

[Clapping]

Other astronauts had made this journey to the launch pad but never with such anticipation.

9:32 AM, July 16. [Apollo Launches]

Three hours later the Apollo Command Module moves forward to extract the Lunar Module from the third stage of the launch vehicle. Both are moving at more than 17,000 miles an hour. Docked together, they will sail a quarter-million miles across the sea of space and into orbit around the Earth's nearest neighbor.

Michael Collins: That was Neil. How are you reading Mike?

CAPCOM: Loud and clear now, Mike, and we understand that you are docked.

Narrator: During the three day journey to the Moon the astronauts kept busy: checklists, navigation and observation, housekeeping.

They must work in a weightless environment, keeping their spacecraft and themselves in good condition. Data must be collected and reported. Experiments must be performed, including photography both inside and outside the spacecraft. Because of the film speed these actions appear faster than they actually were.

July 19. Apollo 11 slows down and goes into orbit around the Moon. The bright blue planet of Earth now lies 238,000 miles beyond the lunar horizon. Astronauts Armstrong and Aldrin, now in the Lunar Module, separate from the Command Module. [Music]

Astronaut Collins remains behind. Preparation for the Lunar Module descent to the Moon now begins. [Music]

The Command Module assumes the new name Columbia. [Music]

The Lunar Module will be called the Eagle. From Columbia Michael Collins' camera sees bright rays of the sun reflecting patterns of color from the surface of the Eagle. In this strange metallic bird rides the ancient and endless dream of all mankind. The Command pilot can see detail which his camera cannot record. The four landing pads of the Lunar Module are fully-extended and locked in place. The Eagle is poised and prepared for its descent to the lunar surface. [Music]

The Moon landing craft rocket engine fires to slow it down, and to place it on the pathway to the landing site in the Sea of Tranquility. There is tension and caution as the Eagle flies lower. Warning lights blink on as the computer tries to keep up with the demand for control data, but the status remains "Go!"

CAPCOM: Eagle, we've got you now. It's looking good. Over.

Ed Aldrin: Roger. Copy.

CAPCOM: Eagle, Houston. After yaw around, angles: S-band pitch, minus 9, yaw plus 18. Roger. You're a Go to continue – Go to continue powered descent. You're a Go to continue powered descent.

Ed Aldrin: Altitude now 21,000 feet. Still looking very good. Velocity down now to 1200 feet per second.

CAPCOM: You're looking great to us Eagle.

Neil Armstrong: Give us a reading on the 1202 program alarm.

CAPCOM: Roger we got – we're a Go on that alarm.

Ed Aldrin: Good radar data. We're now in the approach phase. Everything looking good. Altitude 4,200...

CAPCOM: [interrupts] Houston. You're Go for landing. Over.

Ed Aldrin: Roger. Understand. Go for landing. 3,000 feet. Program alarm. Altitude 1,600. 1,400 feet. Still looking very good. 700 feet, 21 down, 33 degrees ... 600 feet down at 19. 1201.

Neil Armstrong: 1201.

CAPCOM: Roger. 1201 alarm. We're Go. Same type. We're Go.

Ed Aldrin: Altitude- velocity light ... 3 ½ down, 220 feet, 13 forward ... 11 forward. Coming down nicely ... 200 feet, 4 ½ down ... 5 ½ down ...

CAPCOM: 60 seconds.

Ed Aldrin: Lights on ... Down 2 ½ ... Forward, forward ... 40 feet, down 2 ½. Kicking up some dust... 4 forward, 4 forward ... Drifting to the right a little ... Contact light. Okay. Engine stop.

CAPCOM: We copy you down Eagle.

Neil Armstrong: Tranquility Base here. The Eagle has landed.

Narrator: Through the window of the Eagle, Armstrong and Aldrin see what no human eyes have ever seen before. Their spacecraft casts a long shadow across the undisturbed dust of centuries. [Music]

Seven hours after landing, after careful preparations for later ascent were completed, Armstrong opens the Eagle hatch and begins his climb down to the surface. [Music]

The first footsteps on this strange new world must be taken cautiously. The Moon has only one-sixth the gravity of earth. The nature of its surface was still unknown.

Neil Armstrong: Okay. I'm going to step off the LM now. That's one small step for man, one giant leap for mankind. [Music]

Narrator: Once on the surface, Armstrong scoops up a small sample of lunar dust and rock, precaution against the possibility of an emergency takeoff. [Music]

According to plan, astronaut Aldrin now descends from the Eagle. He and his equipment would weigh 383 pounds on Earth. Here, they weigh about 66 pounds. [Music]

For a brief moment, the first men on the Moon stand and look at the stark, lonely landscape around them, an experience which no one before them can share. But there is much to be done in the limited time which they can stay on this airless, cloudless satellite of Earth. This sheet of metal foil traps and holds particles from the sun, the so-called solar wind or barrage of solar energy which constantly strikes the Moon's surface. Results of this experiment will be taken back to Earth to reveal new secrets to anxious scientists.

An American flag is left behind on the Moon together with medals honoring American and Soviet spacemen who lost their lives in earlier space tests and a small disc carrying messages of goodwill from 73 nations on Earth.

A plaque on the Lunar Module reads "Here men from the planet Earth first set foot upon the Moon. July 1969 A.D. We came in peace for all mankind."

Through a specially made television camera, viewers in many nations on Earth were able to watch the astronauts as they walked and worked on the Moon. Despite the bulky spacesuits and the backpacks containing oxygen, temperature control, and communications equipment, the Apollo 11 crew found they could move easily about the surface. [Music]

Because there is no wind or rain on the Moon, these footprints will remain for centuries. [Music]

In addition to collecting rock and soil samples, the explorers leave behind a seismometer. This highly sensitive device would send back valuable information on external meteoroid impacts as well as internal lunar movements. [Music]

A 100 prism laser reflector would help man to measure the exact distance from Earth to Moon to an accuracy of six inches. These were the first of many experiments which would be taken to the Moon to provide man with continuing and increasing knowledge about the Moon and the vastness of space beyond. After 2 hours and 31 minutes the first lunar explorers had completed their research on the Moon. A night of rest in the Lunar Module, countdown preparations, and they were ready to come home.

CAPCOM: Tranquility Base, Houston. Guidance recommendation is PGNS and you're cleared for takeoff.

Neil Armstrong: Roger. Understand. We're number one on the runway.

Ed Aldrin: 7, 6, 5, abort stage, engine arm ascent... Beautiful. Very smooth. Very quiet ride. There's that one crater down there. 1000 feet high, 80 feet per second vertical rise.

CAPCOM: Eagle, Houston. You're looking good at 2. PGNS, AGS, and MSFN all agree.

Neil Armstrong: We're going right down U.S. 1.

CAPCOM: Eagle, Houston. Going right down the track. Everything's great.

Ed Aldrin: Horizontal velocity approaching 2,500 feet per second.

CAPCOM: Roger.

Ed Aldrin: Some 120 miles to go until insertion.

Narrator: July 21. The Eagle and its two man crew lifted off the Moon perfectly and climbed slowly to rendezvous and dock with the mother ship, Columbia. [Music]

While Armstrong and Aldrin explored the Moon, astronaut Collins had kept a long and lonely vigil in the Columbia. The approaching Eagle was a welcome sight. Later the three men would share their reflections on this adventure with the world.

Ed Aldrin: I believe that from the early space flights we demonstrated a potential to carry out this type of a mission. And again it was a question of time until this would be accomplished.

Michael Collins: I think it is a technical triumph for this country to have said what it was going to do a number of years ago and then by golly do it.

Ed Aldrin: The relative ease with which we were able to carry out our mission, which of course came after a very efficient and logical sequence of flights, I think that this demonstrated that we were certainly on the right track when we took this commitment to go to the Moon.

Neil Armstrong: I just see it as a beginning, a beginning of a new age. [Music]

Narrator: Once again the bright blue planet of Earth rises over the lunar horizon. For those who had witnessed man's landing in the Sea of Tranquility, the Moon would never again appear quite the same. [Music]

July 24. Dawn in the Pacific. Apollo blazes across the heavens coming back to Earth at 25,000 miles an hour. President Richard Nixon, who had talked with the astronauts by telephone while they were on the Moon, was waiting aboard the recovery carrier to welcome the returning voyagers.

The President later expressed the nation's response to this historic mission.

President Nixon: Some way, when those two Americans stepped on the Moon the people of this world were brought closer together. That it is that spirit, the spirit of Apollo, that America can now help to bring to our relations with other nations. The spirit of Apollo transcends geographical barriers and political differences; it can bring the people of the world together in peace.

Narrator: To protect against any possible lunar contamination, the astronauts put on air-tight special garments before coming aboard the rescue ship.

[Cheers]

They transferred directly from the helicopter to a mobile quarantine van, in which they would be flown back to the Manned Spacecraft Center in Houston, Texas.

July 27. The journey was ended; they were home again. Ahead lay three weeks of isolation, medical tests, and mission debriefings, then visits to major cities of America and abroad. The details of their unique mission would be relived and remembered so that others might learn what they had learned, and that future travelers in space might build upon their experience.

The rock and soil samples brought back would be examined and analyzed by scientists in many lands. They would reveal new insights into the origin and the age and the composition of the Moon and perhaps new knowledge of the Earth as well. Already experiments left on the Moon were sending back revealing new information. [Music]

The mission was successfully completed. The Eagle had landed the first men on the Moon and Columbia had returned them safely to Earth. Wherever man journeys tomorrow across the ocean of our universe, history will remind him that Apollo 11 was mankind's first encounter with a new world.