

Ellington Field Aircraft

Ellington Field is the heart of Johnson Space Center's flying operations. NASA's primary function at Ellington is the training of astronauts for spaceflight. The field is also a base for administrative, cargo transport and high-altitude aircraft, with many types of NASA aircraft at the hangers.



T-38 Jets

The T-38 is a two-engine jet that can hold two crew members and reach speeds as high as Mach 1.2. The T-38, which can fly to heights of 50,000 feet, is used for aerobatic maneuvers to help the astronauts become adjusted to unusual attitudes that they will experience in the space shuttle. It can also be used to simulate orbiter landings. Each astronaut receives dedicated training in the T-38.

Shuttle Training Aircraft

The Shuttle Training Aircraft (STA) are Gulfstream II business jets modified to perform like the space shuttle during approach and landing. The STAs are used to train shuttle pilots by reproducing the shuttle's characteristics with amazing accuracy from 35,000 feet to touchdown.

One half of the STA cockpit is virtually identical to the shuttle's and has the same guidance and control systems. This high-fidelity trainer provides the astronauts hands-on experience at the actual shuttle landing sites — Kennedy Space Center, Fla., Edwards Air Force Base, Calif., and the White Sands Test Facility in New Mexico.



NASAfacts

C-9

The Boeing C-9 jet, nicknamed the “Weightless Wonder,” is a modified aircraft used to simulate weightlessness for NASA’s Reduced Gravity Program. The important functions of the C-9 include reduced-gravity training for all astronauts and space-bound experiments. The aircraft simulates weightlessness through a series of steep



climbs and dives between 24,000 and 33,000 feet, making passengers float in midair for up to 30 seconds at a time.

Shuttle Carrier Aircraft

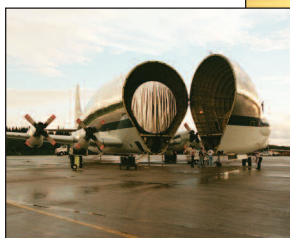
The Shuttle Carrier Aircraft (SCA), a modified Boeing 747-100 jet, is vital to the shuttle program. Attach mounts and tip fins are the only modifications from a basic 747. JSC uses the SCA to carry orbiters back to Kennedy Space Center if they land at other locations.



Super Guppy

The B377 SG Super Guppy is the only aircraft of its type in the world. This “fat” aircraft is designed to carry oversized spacecraft components — in particular, modules of the International Space Station. The Super Guppy’s cargo compartment is 25 feet tall, 25 feet wide and 111 feet long. It can carry cargo weighing more than 26 tons.

The Super Guppy has a unique “fold-away” nose that creates an unobstructed loading area.



WB-57

The two highly modified Martin WB-57 F Jet Bombers are based at Ellington and are used primarily for scientific work.

They are two-engine, tandem, two-seat research aircraft used to carry payloads to altitudes 12 miles above the Earth. The WB-57 can fly above 60,000 feet at speeds around 470 miles per hour.



Gulfstream III

The Grumman G1159A Gulfstream III is used as an administrative aircraft. Five of NASA’s centers operate airplanes for mission management; JSC’s is called NASA-2. The aircraft is used to transport astronauts and their family members between JSC and Kennedy Space Center for spaceflight mission support, as well as many flights supporting the needs of mission and project managers.

