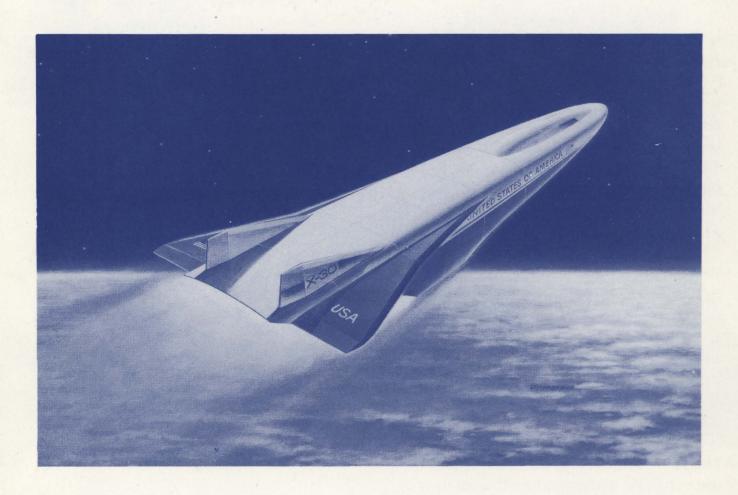
The X-30 National Aero-Space Plane Glider Kit



National Aeronautics and Space Administration

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X-30 National Aero-Space Plane

The X-30 National Aerospace Plane will be the biggest, fastest experimental "X-plane" ever. Shortly after the year 2000 it will take off, orbit the Earth, then come back through the atmosphere and land on a runway. The goal: Give the U.S. space program the means to build an airplane-like vehicle that can fly regularly into space.

The X-30 will differ from today's space vehicles in several ways:

- ▲It will take off horizontally like an airplane, unlike the Space Shuttle and other boosters that lift off straight up. That means the X-30 can be prepared for flight inside a large hangar and then rolled out to the runway. It won't need a special launch pad.
- ▲ The X-30 will have "scramjet" engines that burn a mix of hydrogen fuel carried on board and oxygen scooped up from the air as the plane flies at very high speeds. Today's rocket boosters must carry all their fuel and oxidizer aboard at liftoff, a heavy weight that must be lifted from the ground.
- The Space Shuttle and other launchers use very cold hydrogen fuel to cool only their engines. The X-30 will circulate hydrogen fuel through some of its structures to keep them within temperature limits; its flight path is more shallow and the plane will be heated for a longer time.

The X-30's body will be shaped to produce "lift," in the atmosphere to support its own weight. The bottom of the X-30's nose also will compress and feed air to the scramjet engines. The bottom of the tail is curved to act as a nozzle that will add power when the exhaust (mostly water vapor) leaves the engines.

NASA, the Department of Defense and a team of America's leading aerospace companies are now working on advanced designs in materials, engines and flight controls that will make the X-30 a reality. X-30 test flights are expected to start around the year 2000.

The National Aero-Space Plane program will:

- ▲ Lower cost to send people and cargo into space.
- ▲ Maintain America's world-wide leadership in aviation and space.
- Lead to new technology for everyday use.
- Make new jobs and careers.

