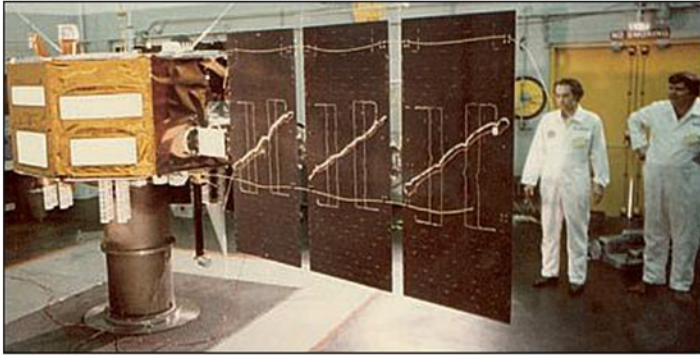


NTS-2 (Navigation Technology Satellite)



The first ever GPS Navstar satellite was launched on June 23, 1977 marked the beginning of a new era in navigation and timekeeping history.

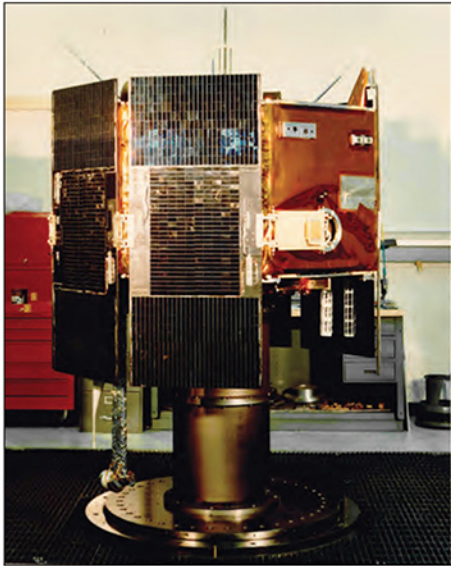
NTS-2 carried two caesium atomic clocks and demonstrated 'passive ranging, the all important ability to measure the distance from the receiver to the satellite.

NTS-2 technological features included cesium frequency standards, a nickel-hydrogen battery, three-axis gravity-gradient stabilization with momentum-wheel unloading, control of the spacecraft orbit, laser retroreflectors, solar-cell experiments, radiation dosimeters, and a worldwide network for data acquisition. The satellite experiment has verified Einstein's relativistic clock shift.

Rockwell Collins in 1977 received "the world's first GPS satellite signal". Rockwell Collins' receiver station was six feet tall and had two seats.

Working well after midnight on July 19, 1977, a Rockwell Collins engineer named David Van Dusseldorp sat on the rooftop of a company building in Cedar Rapids, Iowa, adjusting an antenna every five minutes to receive a signal from the world's first Global Positioning System (GPS) satellite.

Within a small window of time, the satellite was turned on and the message was successfully received and decoded by the team working the GPS receiver.

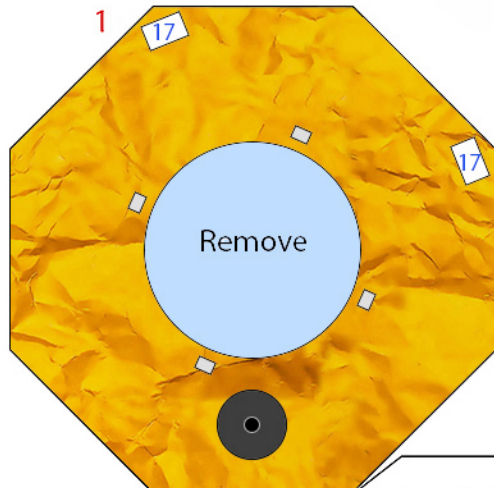


NTS-2 (Navigation Technology Satellite)

Zach's



PaperSat Designs
Spacecraft Paper Models



3
Glue to cardstock

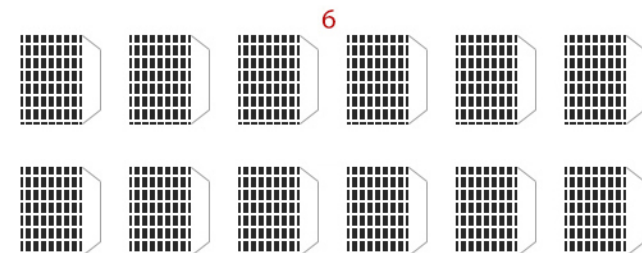
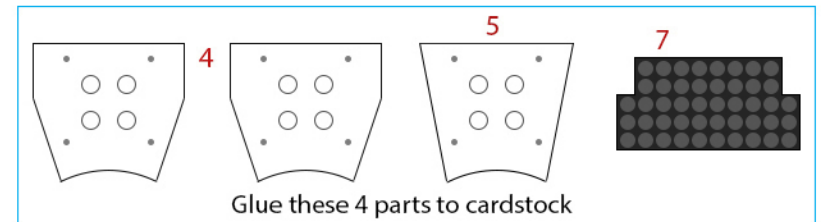
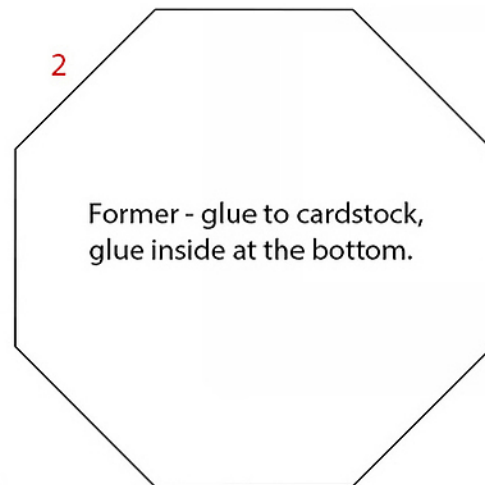
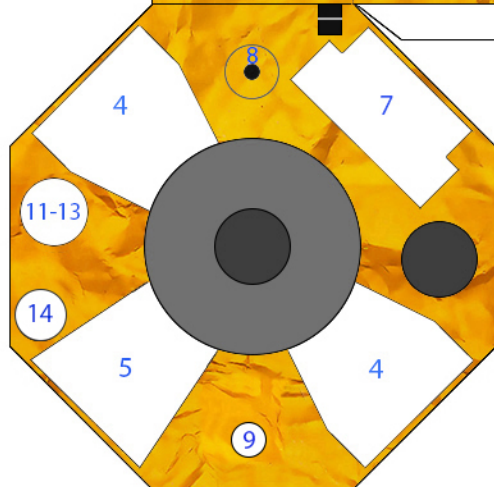
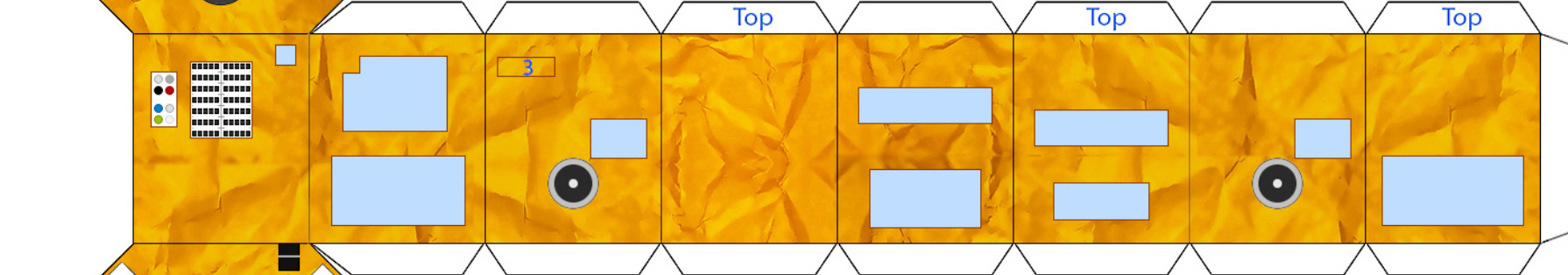


10
Color backside grey

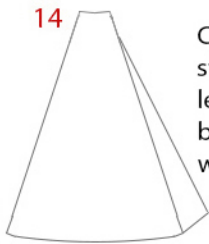
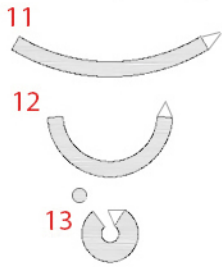
Parts 1a



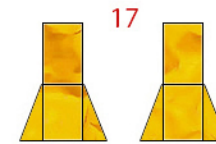
Cut out all blue areas, poke small holes in the middle of the two black circles near the bottom



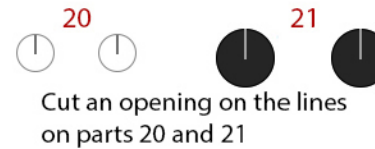
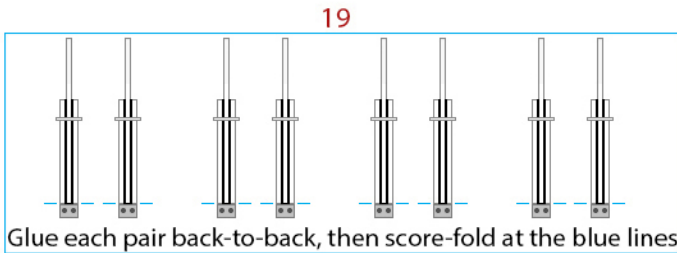
NTS-2 (Navigation Technology Satellite)



Cut plastic broom straw the same length as the line below, colored white

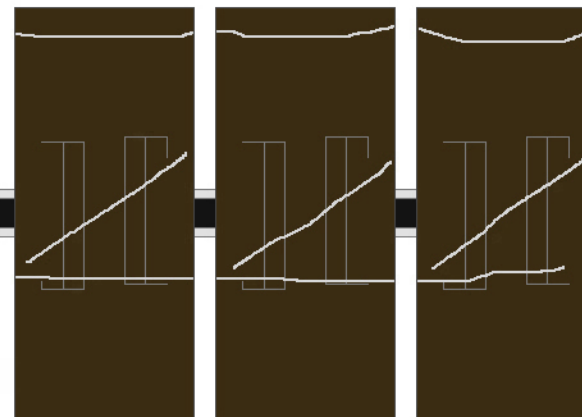
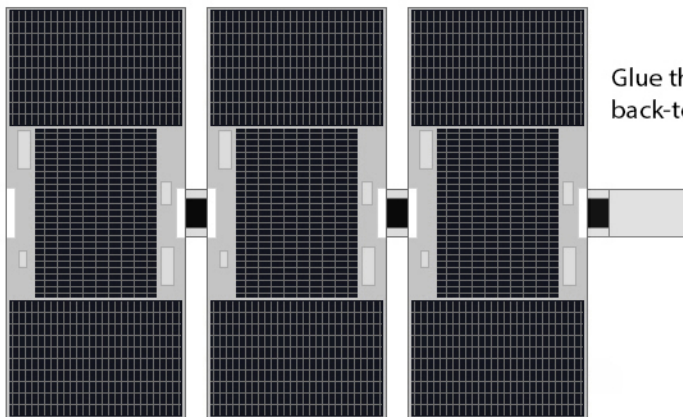


Color back grey.



These two parts (20 and 21) simulates round spheres for the stabilization booms.

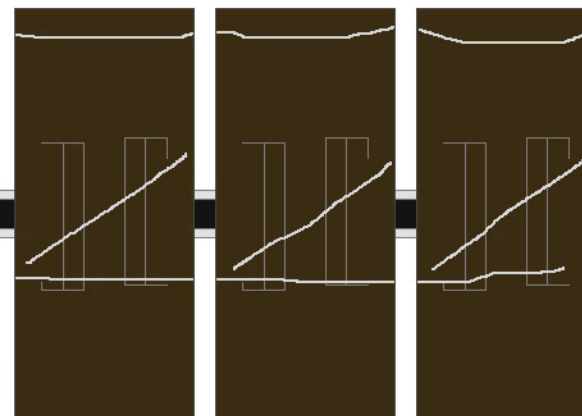
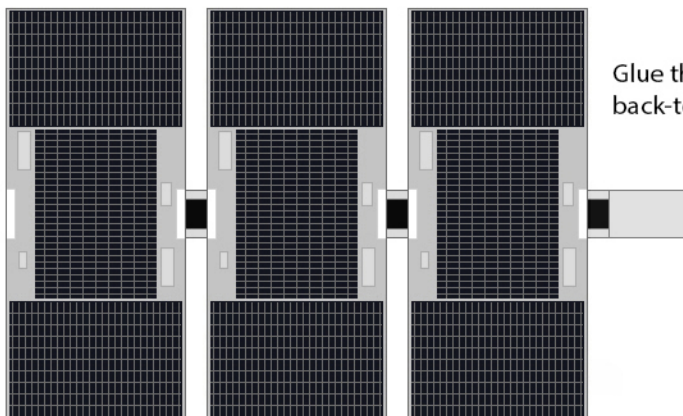
For a better realistic look, use plastic beads or similar material the same size as 20 and 21, colored the same colors.



Need a Acrylic - for similar material - rod around 1.6 mm diameter, cut at 115 mm (4 1/2 inches) long colored black for the stabilization booms.

Need a thin, stiff wire (example, thin music wire) cut at at 190 mm (around 7.5 inches) long for the solar array support rod.

Not included in this kit, try to find a spring around 48 mm long and 9 mm in diameter for the antenna.



22 Glue these back-to-back

