

Vanguard 3



18 September 1959: At 12:20:07 a.m., Eastern Standard Time (05:20:07 UTC), a three-stage Vanguard Satellite Launch Vehicle lifted off from Launch Complex 18A at the Cape Canaveral Air Force Station on the eastern coast of Florida. The rocket placed a 50 pound (22.7 kilogram) scientific satellite, Vanguard 3 (also known as Vanguard III) into Earth orbit.

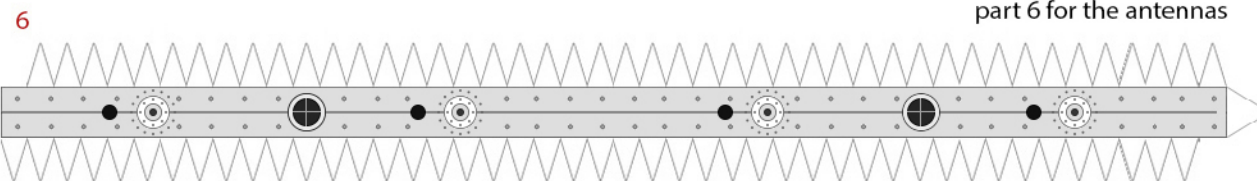
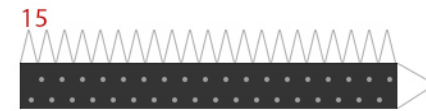
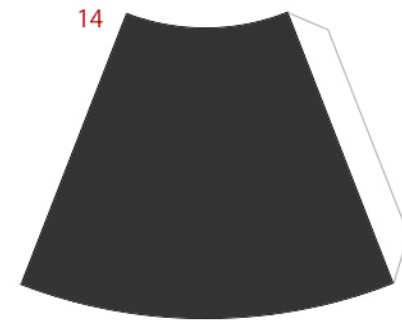
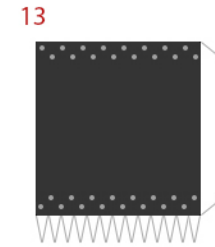
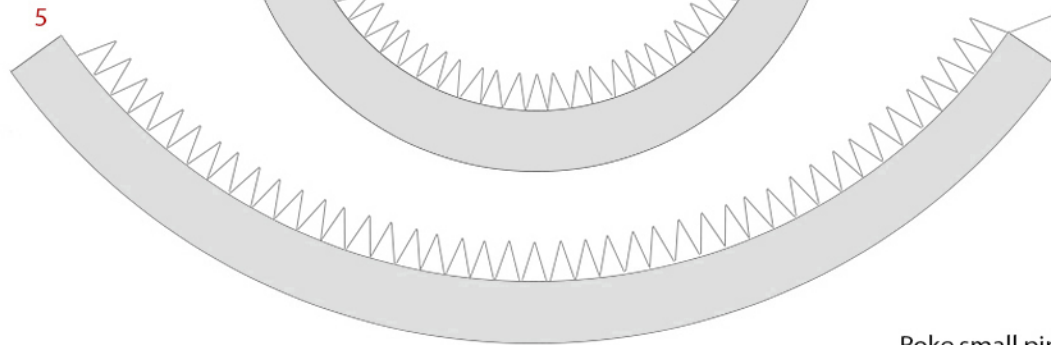
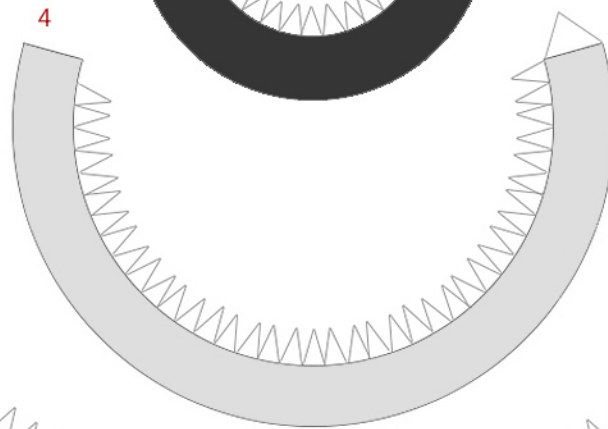
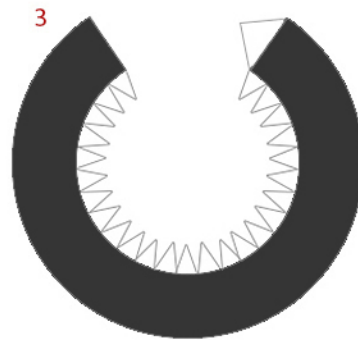
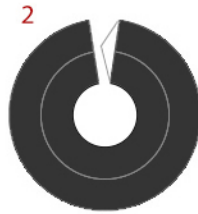
Contained inside the satellite's 1 foot, 8.0 inch (50.8 centimeter) diameter magnesium spherical outer shell were sensors and transmitters. The satellite collected data on the Earth's magnetic field, the Van Allen Radiation Belt, micrometeorite impacts on the satellite, and measured drag acting to slow the satellite in its orbit. The 2 foot, 2 inch (0.66 meter) cone-shaped structure at the top of the satellite contains a magnetometer.

A tape recorder was used to store data for playback during ground station passes. Four spring loaded aerials extended from the equator of the sphere at 90 degree intervals. A small solar cell and cadmium sulfide cell were also mounted on the sphere wall near the equator to study the longevity of solar cells in space. The magnetometer sensor head was mounted at the end of the conical boom. The sphere was spin-stabilized and had passive thermal control. It had no engines for thrust or attitude control.

Vanguard 3 transmitted data for 84 days before its batteries failed. It is estimated that it will remain in orbit around the Earth for 300 years.

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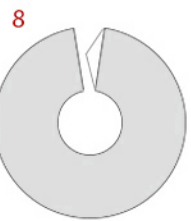
TOP



Poke small pin holes onto the four black dots on part 6 for the antennas

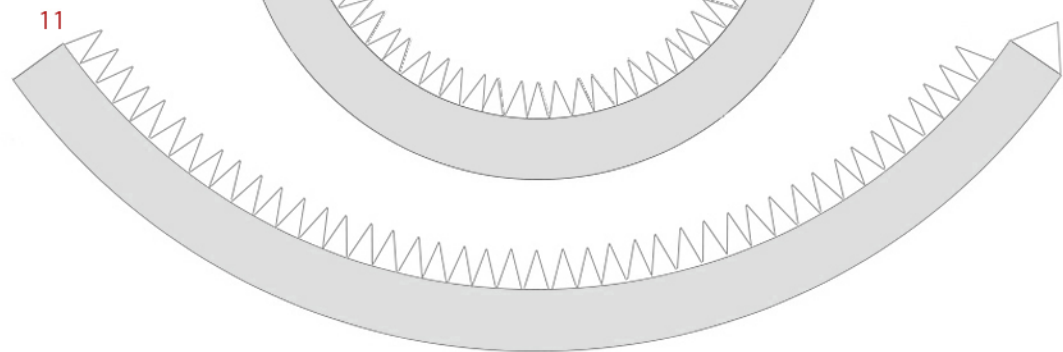
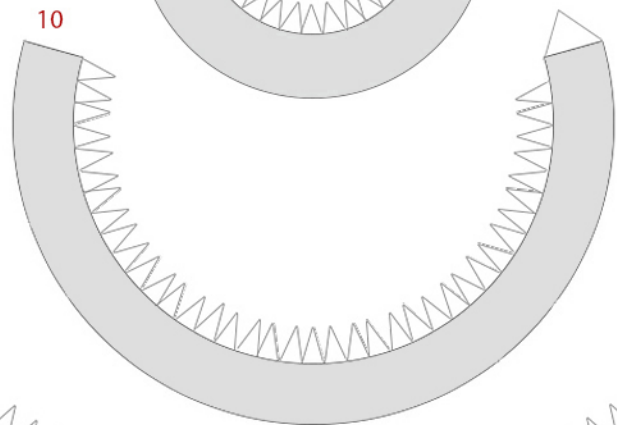
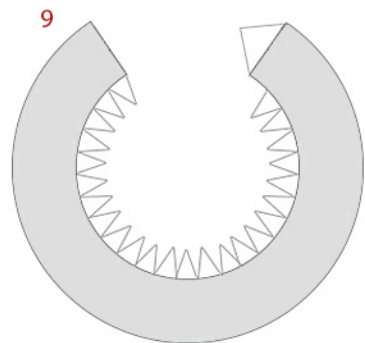
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BOTTOM



Color back Black. glue over the black circle on part 7

Cut two music wires or thin-stiff wires around 1mm diameter, the same length as the line above (5 inches) colored light grey or silver for the antennas.



Important: Mark the center of the antenna with a marker

Cut a music wire or thin-stiff wire around 1mm diameter, the same length as the line above (10 inches) colored light grey or silver for the antennas.