Lambda 4-s (L4-S) Rocket



The Lambda 4S or L-4S was an experimental Japanese expendable carrier rocket. It was produced by Nissan and the Institute of Space and Astronautical Science and launched five times between 1966 and 1970 with Osumi technology demonstration satellites. The first four launches failed, however the fifth (L-4S-5), launched on 11 February 1970, successfully placed Ohsumi (Osumi-5), the first Japanese satellite, into orbit.



This vehicle had no on board guidance system and is, to date, the smallest ground based launch vehicle to place a satellite into orbit. This vehicle provides some interesting lessons to those with small launch vehicle orbital aspirations.

The Lambda 4S consisted of four stages, with two booster rockets augmenting the first stage.

SB-310 rockets were used as boosters, with an L753 first stage. The second stage was a reduced length derivative of the L753, whilst an L500 was used as the third stage. The fourth stage was an L480S. All of the stages burned solid fuel.

The Lambda 4S could place 26 kilograms (57 lb) of payload into low Earth orbit. It was launched from the Kagoshima Space Centre. Following its retirement in 1970, a sounding rocket derived from it, the Lambda 4SC, flew three times. The Mu replaced Lambda for orbital launches.

Height 16.5 metres (54 ft)
Diameter 0.74 metres (2 ft 5 in)
Mass 9,400 kilograms (20,700 lb)

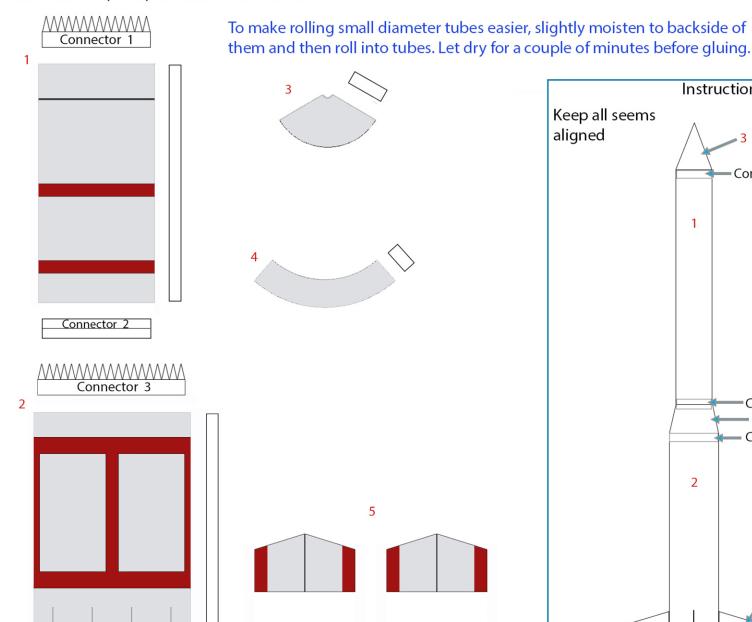
Mass 9,400 kild Stages 4

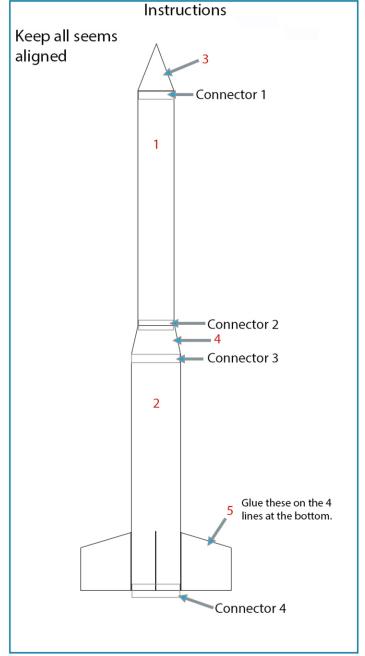
First flight 26 September 1966 Last flight 11 February 1970

Connector 4

to backside of s before gluing.



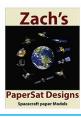


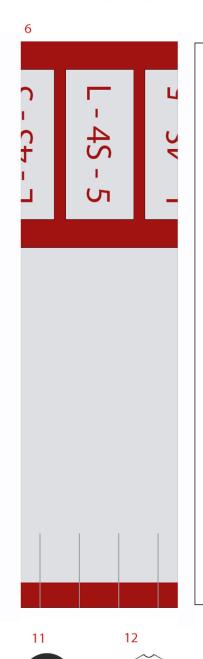


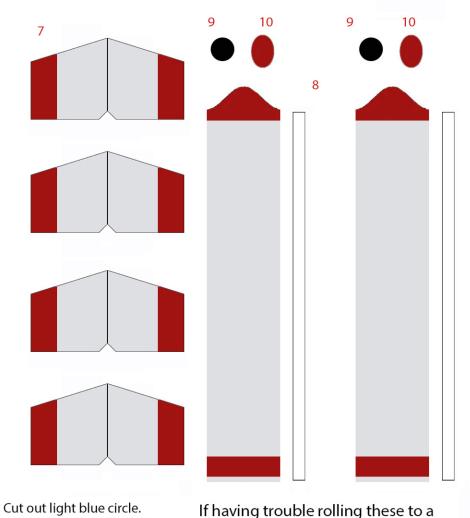
Color back side of 12 Black.

Glue 12 to backside of 11.

Roll 12 to a cone.

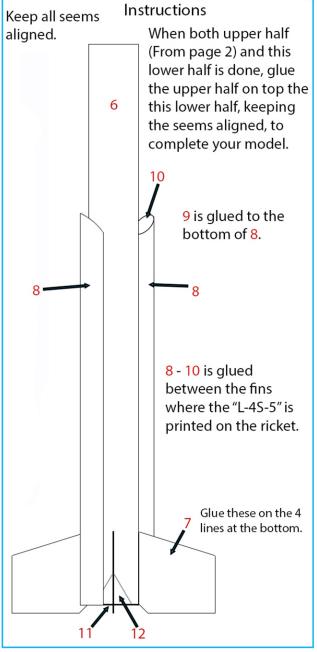






regular paper.

long-thin tube, print the next page on





If having trouble rolling to a long-thin tube, print these on regular paper.

