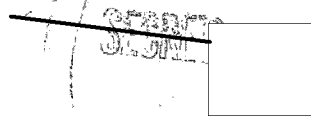
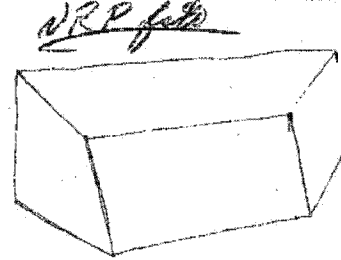


P-11 Spacecraft.



(b)(1)  
(b)(3)

TOTAL VOLUME AVAILABLE  
FOR CUSTOMER  $\approx 2 \frac{3}{4} \text{ft}^3$



*V.R.P. file*

$$V_1 = 2 \times \frac{3}{4} \times \frac{1}{2} = \frac{3}{4} \text{ft}^3$$

$$V_2 = \frac{1}{2} V_1 = \frac{3}{8} \text{ft}^3$$

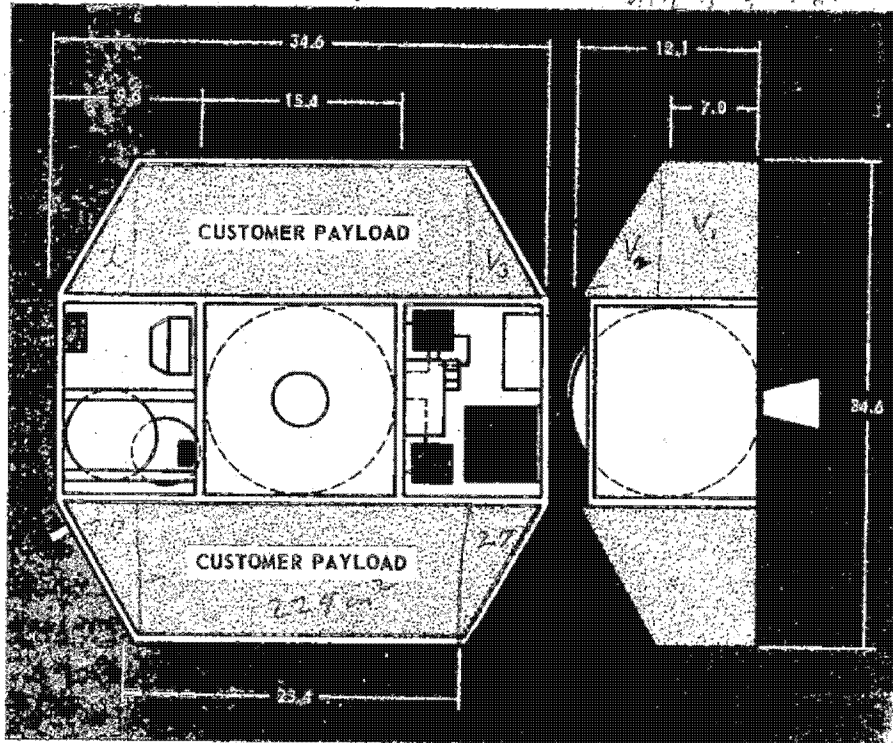
$$V_3 = \frac{3}{16} \text{ft}^3$$

$$V_4 = \frac{3}{32} \text{ft}^3$$

$$\frac{1}{2}(V_1 + V_2 + V_3 + V_4) = 1 \frac{3}{8} \text{ft}^3$$

**TECHNICAL DATA**

- Useful Orbital Life: 6 months
- Vehicle Weight: (including payload) 130 to 250 pounds
- Payload Weight: to 200 pounds
- Dimensions: approximately 35 x 35 x 13 inches (rocket motor nozzle extends an additional 4 inches along the thrust axis)
- Method of Stabilization: spin stabilized (60 to 80 rpm)  
cold gas ejected through 2 spin nozzles
- Propulsion System: any of 3 solid rocket motors for high and low orbit capability
  - Nominal Total Impulse:
    - Model 0207: 1237 pound-seconds (513 pounds thrust for 2.41 seconds)
    - Model 1207: 17,650 pound-seconds (856 pounds thrust for 20.6 seconds)
    - Model 2207: 800 pound-seconds per motor (1000 pounds thrust for 0.8 second)
- Electrical Power System: solar cells with secondary battery voltage limiter and control circuits for 22 to 29.25 volts dc  
power available/day 280 watt-hours
- Launch System: orbital-launched from Agena or other space vehicle  
swing-out launching frame incorporating soft-spring system for satellite separation



Handwritten notes and a small diagram in the bottom left corner, including a box and some illegible scribbles.



(b)(1)  
(b)(3)

*Volume of customer payload is not too hard*

Handwritten calculations:  
224  
54  
279  
21  
256

556 IN<sup>2</sup>  
P11.

CONTROL SYSTEMS  
CONTROL SYSTEMS  
CONTROL SYSTEMS  
CONTROL SYSTEMS  
CONTROL SYSTEMS