

# ORBITER

## Sputnik 1, R7 8K71 Version 1.0

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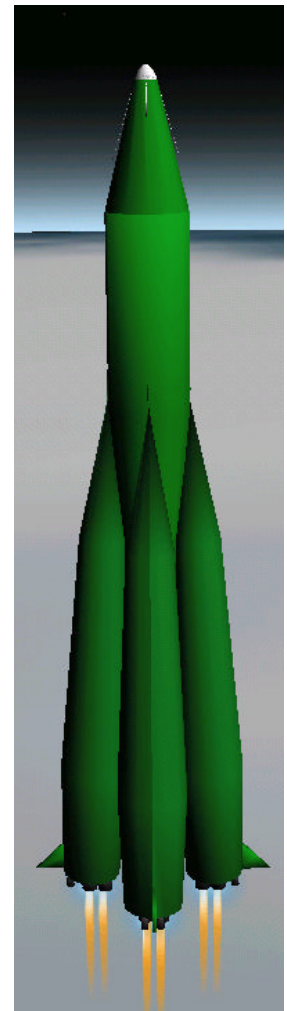
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<http://www.alltel.net/~estar/orbiter.html>,  
[http://www.geocities.com/voyager\\_sputnik/](http://www.geocities.com/voyager_sputnik/)  
<http://nav.to/orbitmods>

Special Thanks to Dr. Martin Schweiger  
who made it all possible and fun  
<http://www.orbitersim.com>

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## 1. INTRODUCTION

This document explains how to use and operate the Sputnik R7 8K71 module for Orbiter.

## 2. SPECIFICATIONS

To be added later

## 3. VERSION HISTORY

### Version 1.0

\*Initial Release

## 4. LAUNCH

The Titan 2 is a 2 stage ICBM adapted for use in the manned Gemini program. It was built as a backup for the Atlas Program and its descendents became a successful series of launchers for commercial, scientific, and military use.

### FLIGHT PLAN

MET+0	Launch
MET+2	HUD To Surface Mode
MET+4	Bring up Surface Mode MFD
MET+20	Pitch to 80 degrees
MET+35	Pitch to 70 degrees
MET+50	Pitch to 60 degrees
MET+65	Pitch to 50 degrees
MET+80	Pitch to 40 degrees
MET+95	Pitch to 30 degrees
MET+110	Pitch to 20 degrees
MET+123	BECO
MET+125	Pitch to 10 degrees
MET+140	Pitch to 0 degrees
MET+180	Pitch to -10 degrees
	Hold -10 degree pitch until vertical speed drop to 0.
	Pitch to 0 degrees
MET+291	SECO

### KEYBOARD

J	Jettison Stage	Booster -> Core -> Nose Cowling -> Sputnik
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## 5. ORBIT



## KEYBOARD

O	Operate Radio	Plays Sputnik telemetry beep
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## 6. CONFIGURATION

The R7 module is separate from the Sputnik module. This module uses the configurable payload option of the Atlantis\_Sat\_MMU and Ariane V. The R7 is configurable through the scenario file and you can put different types of payload on it through manipulation of the parameters.

```
Sputnik1:R7_8K71
  STATUS Landed Earth          <= Standard
  BASE Baikonur:1             <= Standard
  HEADING 90.00                <= Standard
  FUEL 1.000                   <= Standard
  CONFIGURATION 0              <= 0 for Booster Stage 1 for Core Stage only
  BOOSTER_FUEL 158400.000      <= Mass of Booster Fuel Remaining (kg)
  SAT_OFS_X 0.000              <= X Offset of Satellite Mesh
  SAT_OFS_Y 0.000              <= Y Offset of Satellite Mesh
  SAT_OFS_Z 14.685             <= Z Offset of Satellite Mesh
  SAT_JETTISONED 0             <= 0 for Satellite Attached 1 for No Satellite
  SAT_NAME SPUTNIK             <= Config name for Satellite
  SAT_MESH SPUTNIK             <= Mesh name for Satellite
  SAT_MASS 84.000              <= Mass of Satellite (kg)
  ADAPTER_NAME r7adapter       <= Mesh name for Adapter
  NOSECONE_NAME r7cowling      <= Mesh name for Nose Cone
  NOSECONE_OFS_X 0.000         <= X Offset of Nose Cone (measured from top of main body)
  NOSECONE_OFS_Y 0.000         <= Y Offset of Nose Cone
  NOSECONE_OFS_Z 0.000         <= Z Offset of Nose Cone
END
```

### Adapter & Nose Cone

To make this model as configurable as possible I have included the ability to specify the adapter mesh and the nose cone mesh. The zero point of a adapter mesh should be at the BOTTOM of the mesh. Use the ship edit utility to offset an existing adapter mesh. The z offset of the nose cone should be 16.91 (main body) + length of adapter + half the length of the nose cone.

For the Luna and Vostok the adapter would be the cage like arrangement of beams connecting the second stage to the main body.

## 6. SCENARIOS

### **Sputnik 1 at Baikonur**

For use with the Baikonur add-on available at the Tycho 7 Repository

### **Sputnik 1 at Canveral**

Get up and running with Orbiter's Default configuration

## 7. CREDITS

Rob Conley	- Module
Voyager	- Mesh
Dealer McDope	-Telemetry sound

Thanks for your support and help