

# ORBIT



**A game for the Sinclair QL with SMSQ/E**

**By**

**Timothy Swenson**

# Orbit

Orbit is a game that simulates an satellite orbiting around the Earth. The user can enter different starting parameters for the satellite and from there control on-board thrusters to adjust the direction and velocity of the satellite to get it into an orbit around the Earth.

## Game Requirements

- SMSQ/E GD2 colors
- 1400x800 minimum screen size

## Starting the Game

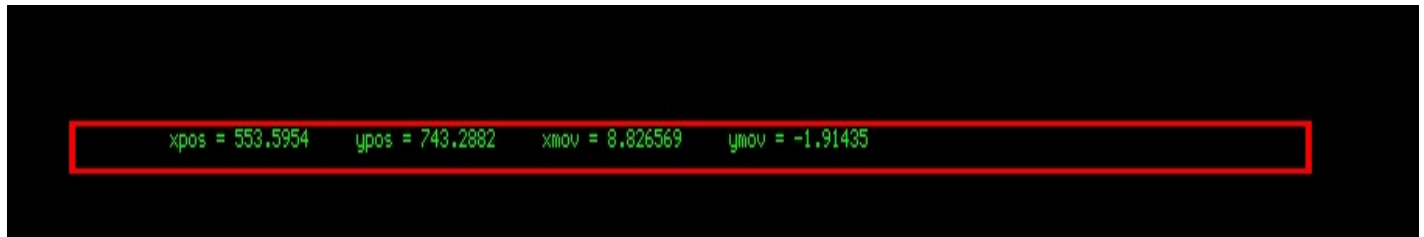
- Unzip the files to a device (ram1\_, win2\_, etc)
- LRESPR fun\_bin
- LOAD orbit\_bas
- Edit line 170 to reflect the location of the files  
The default is WIN2\_
- RUN

## The Screen

After the opening screen, the next screen in the main screen. The first part is the Starting Parameters (see below). After that, the screen will display the planet Earth and the satellite, which has a trail behind it of the last X positions, showing the direction and velocity of the satellite.



At the bottom of the screen, is the parameters window that shows the current value of the 4 parameters. These will change with each calculation of the next position of the satellite.



## Starting Parameters

When the game starts, the different parameters of the satellite can be set. The parameters are:

XPOS - The position of the satellite in the X dimension.

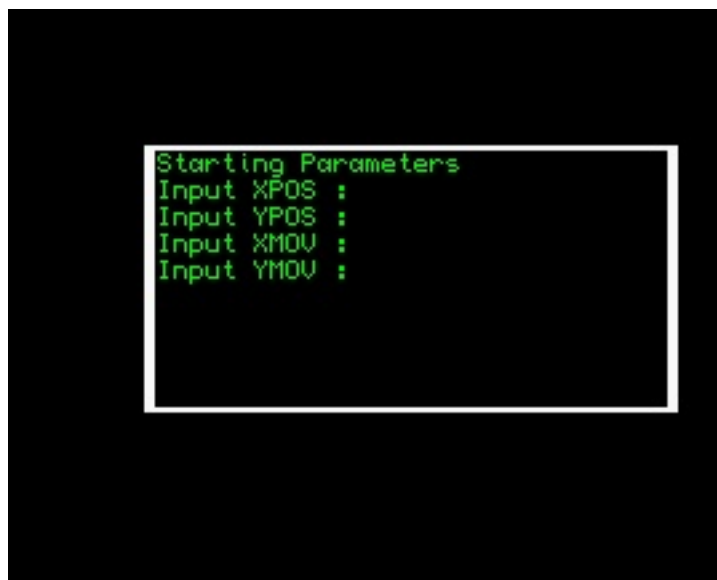
YPOS - The position of the satellite in the Y dimension.

XMOV - The rate of movement of the satellite in the X dimension.

YMOV - The rate of movement of the satellite in the X dimension.

Setting parameters sets the location, speed, and direction of the satellite.

The parameters have a default value, so hitting ENTER at each question will provide the default values.



## Known Orbits

The following is the parameters for known stable orbits. When playing the game, it is probably best to shoot for getting the satellite into a place with these values.

XPOS = 500	YPOS = 750	XMOV = 9	YMOV = 0
XPOS = 500	YPOS = 700	XMOV = 10	YMOV = 0
XPOS = 500	YPOS = 650	XMOV = 11	YMOV = 0

## Operating the Thrusters

There are four thrusters on the which coorespond with the 4 arrow keys on the keyboard. The thrusters always keep the same orientation in relation to the Earth. So, no matter where the satellite is, pressing the UP arrow key will give the satellite a change in the UP direction on the screen. The thruster keys can be held down to impart a large change in the direction and velocity of the satellite. It would first be advisable to use the thrusters in short bursts to see how they affect the satallite.

## Acknowledgments

I'd like to thank David Westbury for his toolkit that loads a PIC image to a location on the screen. He saved me a huge amount of programming to make this work. I'd like to think Bob Spelton Jr. for helping convert the PIC images from BMP images. He was able to succeed where I had failed.