

MB
VIDEO
ELECTRONICS

VECTREX
CASSETTE

Star Fuel

By Andreas Bauer

Star Fuel

GAME CONTROLS

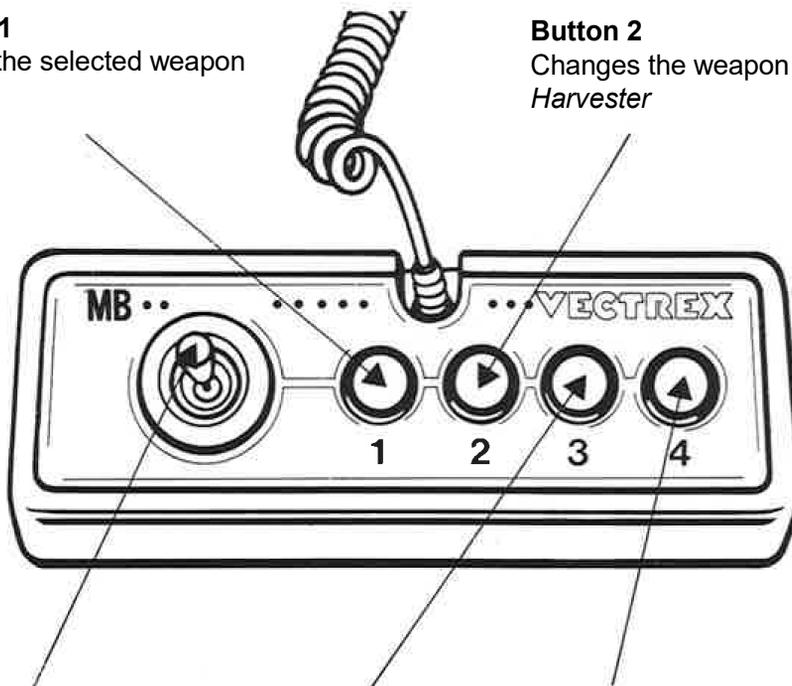
Star Fuel is designed to be played with the built-in control panel only. The functions of the controls are:

Button 1

Shoots the selected weapon

Button 2

Changes the weapon to the *Harvester*



Joystick

Is used to control the target cross

Button 3

Changes the weapon to the *Laser*

Button 4

Changes the weapon to the *Crusher*

HOW TO PLAY

PLAYER SELECTION

This game is only designed to be played by one player at one time. No one will stop you by playing alternately this game with your friend.

OPTION SELECTION

The game option sets the initial level. Button 2 increases the initial level and button 3 decreases the initial level. To start the game press button 4.

GAME PLAY

The game is about the HSP Great Congnition which is a science spaceship of the Hyper Space Predator class. The ship and its crew penetrated into the depths of space to explore our universe. To keep the generators, the life support system and the communication system running and to prepare a jump with the FTL-drive (Faster Than Light) to a new unexplored sector the ship needs energy.

Your task is to destroy asteroids and collect their precious star fragments. This fragments can be processed to fuel which we need for the systems. If we have enough energy we will start the FTL-drive and jump to the next sector where your job will begin again.

WEAPONS

To do you job you have three different weapons which you can use. The *Laser* and *Crusher* can be used to destroy asteroids and the *Harvester* can be used to collect star fragments.

	<i>Laser</i>	<i>Harvester</i>	<i>Crusher</i>
idle			
shooting			

HOW TO PLAY

WEAPON CHARACTERISTICS

Each weapon has its own cool down behaviour, influence radius, damage per shot, reload time and magazine size which you should keep in mind. To give you a short overview our engineers gave us the following table.

	Cool down behaviour	Influence radius	Damage per shot	Reload time	Magazine size
<i>Laser</i>	very fast	narrow	20	fast	20
<i>Crusher</i>	slow	wide	80	very slow	5
<i>Harvester</i>	fast	middle	-	middle	20

The technicians also said that they installed a signaling sound which you will hear if you try to fire a weapon which has no more ammo.

- Cool down behaviour determines how fast the weapon can be fired
- Influence radius shows you how precise the weapon has to be aligned
- Damage per shot specifies how destructive one shot of this weapon is
- Reload time says how fast the magazine will be reloaded automatically
- Magazine size indicates the number of bullets which are contained by a fully loaded weapon

SPACE OBJECTS

The vastness of the universe contains a infinite number of objects but our scientists gave us some pictures of the most important things which you should looking for during your work because they will bring us fuel.



Asteroids

Star fragment

SCORING

SPACE OBJECT CHARACTERISTICS

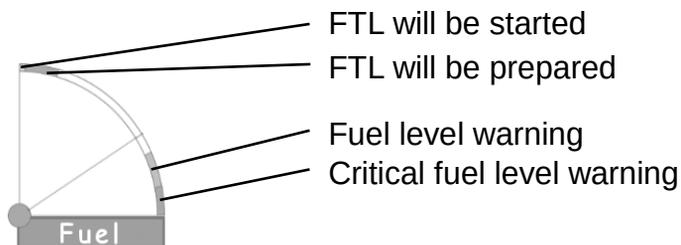
The scientist are researching every object which they can get and they presented us some useful notes about asteroids' and star fragments' properties.

		Hit points	Score points	Fuel quantity
Asteroid	small	10	-	-
	medium	50	-	-
	large	150	-	-
Star fragment	small	-	5	1
	medium	-	10	2
	large	-	20	3

- Hit points are the damage which the weapons have to deal before an asteroid will be destroyed
- Score points are the amount of points which will be scored when a star fragment will be collected
- Fuel quantity says how much fuel will be get when a star fragment will be collected

FUEL SYSTEM

The fuel display shows you the fuel level in twenty different stages. Depending on the level you hear an additional acoustic signal to get more information of the ship's status.



POWER CONSUMPTION

The farther we are away form the earth the more energy will be consumed by the communication system.

How effective can you work and how far will we come?

NOTE FOR SPACE RECRUITS

The first space sector can be considered as training area because the space objects there don't move and the ship is so near to the earth that the power consumption by the ship's systems is minimal.

NOTE FOR SPACE VETERANS

If you don't want to start your mission in the first space sector you can try another game option. A higher game option leads to a start sectors with higher distance to the earth where are more space objects available at the beginning but you should keep in mind the correlation between the distance to the earth and the power consumption of the ship's systems. Your courage will be rewarded with some corresponding initial score points.

HIGH SCORE MEMORY

Your score will only become a new high score if you reach a new sector through a FTL jump or if the game comes to an end. The current high score can be seen when the Reset button was pressed. The stored high score will be lost when the console will be turned off.

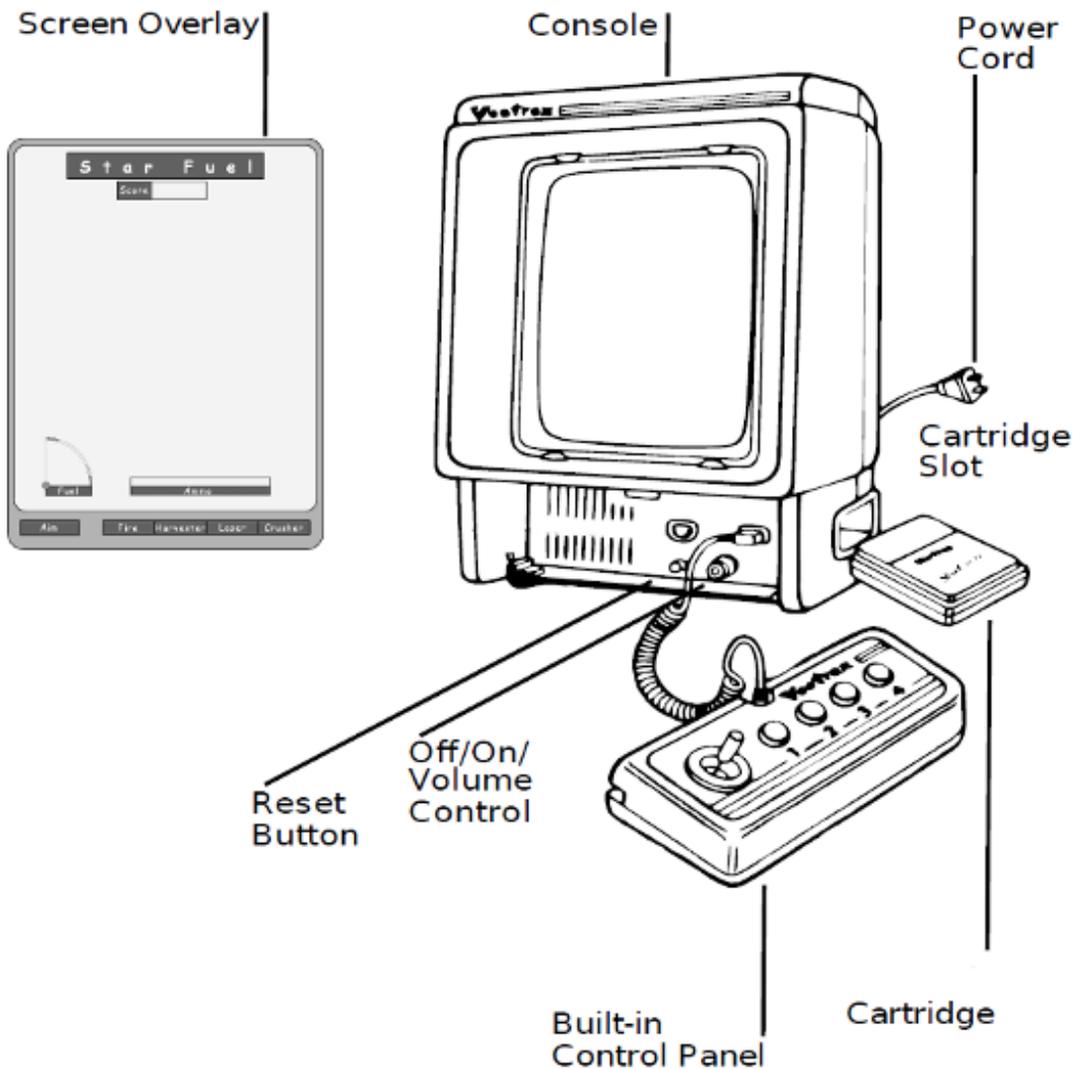
RESTARTING THE GAME

If you wish to restart the game before it is completed, or change the number of players or the game option, press the Reset button.

PLAYING ON AN EMULATOR

If you would like to play *Star Fuel* on an emulator it is highly recommended to use an analog input device (e.g. a modern gamepad like an Xbox-controller) because the speed of the moving target cross depends on the analog input. If you navigate the target cross without an analog input device the speed of the target cross will be the highest possible speed of it.

SETTING UP



CREDITS

This game was developed by **Andreas Bauer** and programmed in C and MC6809 assembly language. It is the outcome of a student project which was part of the elective course “Advanced hardware-oriented C and Assembly Language Programming” at Pforzheim University, Germany, in spring term 2017, supervised and tutored by Prof. Dr. rer. nat. Peer Johannsen.

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