

**SPACE
ADVENTURE™**

By *Sierra Software*

Space Adventure™ was
created by
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WELCOME ABOARD

Welcome to Space Adventure. By reading this manual completely, you will assure yourself of maximum playing enjoyment.

Since the dawning of time, Man has looked to the stars and wondered, "What is out there?" "What would it be like to travel among the stars, to see strange new worlds?"

Space has been the preoccupation of mankind for decades. Have you not longed to go there and really see space and all that goes with it?

All of us here at Sierra Software hope you will enjoy Space Adventure.

You are about to embark on a remarkable journey.

TO START

To start the game, simply boot the disk. But it is recommended that you make a backup of Space Adventure before you do anything else. Boot the supplied disk. Then, immediately press the letter "P". Follow the instructions you see on the screen carefully. For more information see the next section, Protect-O-Disk.

PROTECT-O-DISK

Protect-O-Disk is a disk backup — copy protection system developed by Bill Basham. The system allows you to make backups of Space Adventure. First, you must understand the difference between "active" and "dormant" copies. The supplied disk is an "active" copy of Space Adventure. When you make a backup, you are making a "dormant" copy of Space Adventure. You may make as many "dormant" copies as you wish, but only the active copy will allow itself to run. In the future, if the active copy should become damaged or simply wears out and stops working, boot one of the dormant copies, press "P" as above, press 3 when you see the menu, and then follow the instructions for activating a dormant copy. You will need the damaged active copy to do this.

★ ★ ★ WARNING ★ ★ ★

Do not try to fool the system, as you may be left without an active copy of Space Adventure. For more information, press "P" as above, and when you see the menu, press "4".

THE GAME

To start Space Adventure, boot the disk and wait for the title page to appear. After a brief moment, you will see the Callisto's instrument panel, and will be looking out into space through the viewport. This is the Callisto's immediate mode. Pressing certain keys on the keyboard will generate immediate commands. Press the letter "F". This generates a left turn command and the ship turns left. Now press the letter "C". This activates the onboard computer. The keyboard will now

behave as a regular keyboard, and the viewport is now the monitor for the onboard computer. Enter "TEST SYSTEMS" and press return. You should get a readout of the condition of the ship's systems. Press return a second time and you're back to the immediate mode. Note that the ship is still turning left from the previous left turn command. Press the letter "G" to command the ship to center all turns. You should now familiarize yourself with all of the immediate mode commands that follow. Afterwards go on to the section "THE ONBOARD COMPUTER."

IMMEDIATE MODE COMMANDS

- A - Engage/disengage the auto pilot at the current destination memory.
- B - Turn down.
- C - Activate/deactivate the onboard computer.
- F - Turn left.
- G - Center all turns.
- H - Turn right.
- K - Engage/disengage the tracking computer if there is an object to track.
- L - Fire lasers.*
- N - Turn right and down.
- P - Fire photon torpedoes.*
- R - Turn left and up.
- S - Activate/deactivate shields.
- T - Turn up.
- V - Turn left and down.
- Y - Turn right and up.
- 0-8 - Sets the speed (0-8).
- 9 - Engage the hyperwarp drives.

*Episode two.

***Note that the keys around the letter "G" turn the ship in that particular direction (i.e., "T" is above "G" and turns the ship up; "H" is to the right of "G" and turns the ship to the right.)

THE ONBOARD COMPUTER

Commands may also be entered through the onboard computer. The onboard computer will interpret up to three key words that are entered. The enclosed card lists all of the words that are "understood" for this episode. Words that are not understood are ignored. Thus, entering "where are we going" would be the same as entering "where going." Part of the game is learning how to communicate with the onboard computer.

ONBOARD COMPUTER COMMANDS

Below are listed some important onboard computer commands and their syntaxes.

Audio off — Turns off the audio.

Audio on — Turns on the audio.

C: aa,bb,cc,dd,ee,ff — Engages the auto pilot and sets the destination memory to quadrant aa,bb,cc, sector dd,ee,ff.

Color xxxxx — Changes the color of what you type to the color xxxxx. xxxxx can be orange, blue, green, and violet or purple.

Quadrant aa,bb,cc — Engages the auto pilot and sets the destination memory to quadrant aa,bb,cc, and the current sector.

Load game — Loads a previously saved game.

Memory a — Engages the auto pilot and sets the destination memory to the coordinates saved in a. a must be 1,2, or 3.

Message — Prints a received message on the screen.

Print message a — Prints the message saved in message memory a. a must be 1,2, or 3.

Save game — Saves the game to disk.

Save memory a — Saves the current location coordinates in a. There are three destination coordinate memories. a must be 1,2 or 3.

Save message a — Saves the message on the screen in a. There are three message memories to which you can save. a must be 1,2 or 3.

Sector aa,bb,cc — Engages the auto pilot and sets the destination memory to Sector aa,bb,cc, and the current quadrant.

Set course aaa,bbb — Sets theta to aaa and fie to bbb.

Set fie aaa — Sets fie to aaa.

Set theta aaa — Sets theta to aaa.

3-D SPACE

You don't have to be a mathematician to play Space Adventure. But those of you mathematically inclined will revel in the three dimensional aspects of Space Adventure. If this and the next section seem confusing to you, though, bear through it and you will appreciate why the Callisto has an auto pilot and tracking computer.

Three dimensional space is natural to all of us. After all, we live in three dimensions, and it is natural for us to think in three dimensional terms.

The 3-D space in Space Adventure is represented by a three dimensional Cartesian coordinate system, and is broken down into quadrants, sectors, and sub-sectors. In any linear direction there are 100 sub-sectors in a sector, and 100 sectors is a quadrant. Thus in a three dimensional quadrant there are one million sectors (100 x 100 x 100 = 1,000,000). We see that space is very large, indeed. A point in

space is specified by its coordinates in x,y,z. Thus the coordinates: quadrant 56,58,53, sector 91,05,40, sub-sector 00,00,00 represent a location in space.

The left side of the instrument panel shows the Callisto's coordinates in space. Internal registers keep track to the nearest millionth of a sub-sector. The registers Q, S, and . stand for quadrant, sector, and sub-sector, respectively. X, y, and z are read across each register from left to right.

COURSE

When traveling in space, you must know the direction in which you are traveling. The center registers are the direction registers. The first center register is theta (θ), the left side of which gives your direction in the x-y plane. It reads from 0-359 degrees counter clockwise beginning with the x axis (the current mathematical convention). The right half of this register belongs to the tracking computer and gives the theta direction in which you would have to travel to reach an object in your sector.

The register below the theta register is the fie (ϕ) register. The left half gives your direction plus or minus in the Z direction and reads from -90 to $+90$ degrees. The fie reading is the degree direction from the x-y plane. The right half of this register belongs to the tracking computer and gives the fie direction in which you would have to travel to reach an object in your sector.

The small box directly below the left half of the fie register is the fie direction indicator light. It lights whenever you have exceeded the -90 to $+90$ reading for the fie register and tells you that you are upside down with respect to the Callisto's starting position. Whenever this indicator light is lit, the theta register is 180 degrees off from what it reads, since you will be upside down and pointing in the opposite direction from what theta reads. Suppose you start turning upward from the starting position by pressing the letter "T". Fie will increase up to $+90$ and the indicator light will go on. Fie will now start decreasing to zero and will continue until it reads -90 , at which time the indicator light will go out. Fie will now increase from -90 to zero, which was the starting point. This gives a total displacement of 360 degrees. In essence, the indicator light doubles the -90 to $+90$ (180 degree total displacement) reading giving the correct 360 degree total displacement. A fie reading of -60 with the indicator light lit is the same as (-90) for the indicator light plus $(60-90)$ for the -60 degree reading or $(60-90-90 = -120)$ degrees or 240 degrees in conventional terms. A fie reading of 45 with the indicator light lit is the same as (90) for the indicator light plus $(90-45)$ for the 45 degree reading or $(90+90-45 = 135)$ degrees.

The -90 to $+90$ degree convention was chosen over others because it is easy to tell if you are moving plus or minus (up or down) in the Z direction. If fie is positive you are pointing in the $+Z$ direction and if fie is negative you are pointing in the $-Z$ direction.

The register below the right half of the fie register is the distance register (D). This register belongs to the tracking computer and gives the distance of an object in hundredths ($1/100$) of a sub-sector.

SPEED and ENERGY

The top rightmost register is the speed register (S). The left half of this register is the speed you command and the right half of the register shows the speed actually attained. If you are at a standstill and press "6", the left half shows the speed you commanded (6) and the right half slowly increases up to 6 as the ship increases its speed.

The maximum speed on a turn is 6. The Callisto will not allow itself to go faster than 6 during a turn because of the structural damage that would occur.

The register below the speed register is the energy (E) register. It shows fuel remaining in kilograms (kg). The game ends when you run out of fuel.

Note that as your speed increases, fuel is used more quickly. When you engage in hyperwarp drives, speed will increase up to 9 and then you will hyperwarp. While in hyperwarp, energy is used more efficiently and you get double the speed of speed 9 at the same energy usage as speed 9.

Speed 1 is equal to one light year per second. Every speed larger than 1 is twice as fast as the next slowest speed. That is, speed 2 is equal to 2 light years per second, speed 3 is equal to 4 light years per second, speed 4 is equal to 8 light years per second, and so on.

MATS

The indicator lights below the energy register are the MATS indicator lights. MATS is an acronym from Messages, Auto pilot, Tracking computer, and Shields. The leftmost indicator is the message indicator. The next one to the right is the auto pilot indicator and so on.

If the message indicator lights, it means there is at least one message. If the auto pilot indicator is lit, it means the auto pilot is engaged, and so forth.

MESSAGES

There are three message holding registers. Messages are retrieved from them by entering "message" in the onboard computer mode. If the message holding registers are full, you will be unable to receive any more messages. Therefore it is recommended that you take all of the messages immediately. You may, of course, save any of these messages in message memory 1,2, or 3 (these are different from the message holding registers).

THE AUTO PILOT

When the auto pilot is engaged, it will set the course for the current destination and fly you there. The auto pilot does all of the necessary mathematics and navigation for your safe arrival at the current destination.

THE TRACKING COMPUTER

The tracking computer is engaged with the command "track object" or by pressing "K" in the immediate mode. If there is an object in the sector you are in, it will set the course and fly you there. If the object happens to be moving, the tracking computer will chase it.

An indication of objects in your sector is the right halves of the theta and fie registers coming alive; that is, these registers will have numbers in them. If there are no objects in your sector, the right halves of the theta and fie registers, and the distance register, will have dashes.

If there is an object in your sector, and it is farther away than 100 linear sub-sectors, then the D register will have dashes. As you begin to approach the object, the D register will eventually start reading your distance from it.

PLAYING THE GAME

When you first start playing Space Adventure, the messages will present a problem to you. The object of the game is to solve the puzzles, achieve the maximum number of points, and overcome the problem. The maximum number of points can be achieved only by overcoming the problem. Each episode of Space Adventure has 1,000 points of score to achieve.

SAVING THE GAME

You may save the game as many times as you wish, but you will need a blank diskette for saving each game. If there is any data on the diskette, it will be destroyed. Be sure to label the diskette, including the episode number.

Enter "save game" in the onboard computer mode and you will receive additional information to save the game.

To load a previously saved game, insert the diskette to which you saved the game in the disk drive that you booted Space Adventure on. Enter "load game" in the onboard computer mode, and the previously saved game will be loaded.

We will be glad to answer inquiries concerning Space Adventure. Address: Space Adventure, 536 E. Sahara Avenue, Las Vegas, NV 89104.

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It is against the law to copy Space Adventure™ on cassette tape, diskette, or any other medium. It is against the law, and it is expressly forbidden, to GIVE AWAY or RESELL copies of Space Adventure.™ Sierra Software will exercise full legal recourse against violators.

Sierra Software

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- Episode One Word List -

0	Left
1	List
2	Load
3	Memory
4	Message
5	Mix
6	Object
7	Off
8	On
9	Orange
Around	Pi
Audio	Pilot
Auto	Plot
Beam	Print
Black	Pulsar
Blue	Purple
Callisto	Quadrant
Cargo	Quasar
Center	Ratio
C:	Refuel
Color	Right
Compute	Save
Course	Score
Define	Sector
Design	Set
Destination	Shields
Direction	Speed
Down	Stop
Engine	Systems
Equation	Tactical
Fie	Test
Fuel	Theta
Game	Track
Going	Turn
Golly	Up
Green	Violet
Help	What
Hole	Where
In	Who
Inventory	