

MISSION COMMANDERS OPERATION MANUAL

The goal of this simulation is to land on the surface of the moon and to return safely back to the Earth. There are three phases to the mission: Lunar Landing, Orbital Docking, and Earth Re-entry.

Before you begin your mission you might want to visit the mission options menu by clicking the bottom left of the Mission Control Center. There you can enable and disable several features of the game including the skill level. A skill level of 1 is the hardest, it gives you only one attempt to land, dock and return to the Earth. A skill level of 4 is the easiest and provides four attempts for a safe return. Skill levels two and three are similar providing two and three attempts. The control of the craft also increases in difficulty with the Skill Level. The attempts (or lives) are designated as Tanks on the control panels. The other features in the options menu are described in detail on the display screen of the menu.

Instructions:

Phase 1

Phase 2

Phase 3

Learn more about the APOLLO Program

How to Order

Please read the Legal Stuff.

Goal: Land the Lunar module on the surface of the moon.

Requirements: To conduct a safe landing on the moons surface the follow conditions must be met. The red cross hairs on the top leftmost display must be crossed inside the Landing Site. The latitude and longitude of the Lunar Excursion Module (LEM) is controlled be the cursor keys of your keyboard. (arrows up, down, left, and right). Indicator lights next to the latitude and longitude displays will light when the readings are within parameters.

NOTE: *It is important to note that the control thrusters of this simulation can only fire in one direction at a time. Any vertical thrust that is being applied will also be disengaged.*

Vertical speed must be no faster that -10 units at the altitude of 42 feet for the auto land feature to complete the landing sequence. To control the vertical thrust you press and hold the space bar on your keyboard. A meter on the bottom right corner of the screen will graphically represent the force of the thrust. An indicator light next to the Rate of Descent (ROD) will light up if the descent is to fast.

All movements made by firing thrusters will burn fuel. The longer the rate of burn the more fuel is consumed. If the fuel level falls below 150 units an alarm will sound and an indicator light next to the fuel display will turn on.

If the ROD is less than -10 and the latitude, longitude cross hairs are within the landing site when the altitude readout reaches 42 units then the screen will change to a window view of the automated landing. If any of the conditions are not met then the auto thrusters will fire and return the module to a higher orbit. Depending on the selected skill level you will be given another attempt or not.

Score: Points are given for the accuracy of the landing as well as for the speed of the landing. Both Score and Time are recorded.

Hints: Never let the approach speed get too high. Beware of firing the thrusters too often. They use much needed fuel.

[Back](#) [Next](#)

Goal: You must dock the Lunar Module to Orbiting Command Module

Requirements: Docking the LEM to the OCM is similar to landing the LEM on the moon but is far more precise. To properly dock the modules you must align the docking targets of each module. This is done by firing retrorockets to guide the LEM into position. The cursor keys control these jets. The RADAR Screen in the top right of the screen, displays the OCM's target. When the target is centered with the LEM's target then it will turn yellow. An indicator light to the right of the RADAR will blink to show you are on course.

**Remember you are in space and there is no gravity to counteract your movements!*

The LEM's Velocity at the time of connection is very critical. Your velocity must not exceed 5 units upon contact (Range=000). Pressing the spacebar fires the forward rockets to slow your approach toward the OCM. An indicator light to the right of the RADAR screen will blink when the velocity is within safe limits. Another indicator light next to the velocity readout will light up if the velocity is unsafe.

Score: Points are given for both the accuracy and the speed of the docking. Both Score and Time are recorded.

Hints: Never let the approach speed get too high. Beware of firing the thrusters too often. They use much needed fuel.

[Back](#) [Next](#)

Goal: You must set the proper thrust and angle of approach to enter the reentry window for your space capsule.

Requirements: To reenter Earth's atmosphere you must enter a designated area known as the reentry window. This area shows up on the computer display as a circle with a cross in it. The capsule's altitude is displayed on the right side of the display as a capsule icon and on the control panel on the bottom right. The range of the capsule from the window is given at the bottom right of the control panel. The range display is handy for determining the thrust needed to reach the window.

The Thrust is entered by sliding the throttle left to right on the bottom left of the control panel. A Display to the left will show the exact units. The Angle of Descent (AOD) is entered in the same way. The AOD Throttle is located just under the Thrust Throttle. You have three opportunities to make the window per Tank. (Tanks are determined by the skill level see above)

Score: Points are given for the speed of the reentry minus the number of attempts. Both Score and Time are recorded.

Hints: Keep an eye on the range. Use the Angle of Descent to reach distant windows.

[Back](#) [Next](#)

The Apollo program was the successful conclusion of the U.S. effort to achieve, within the decade, the goal set by President John F. Kennedy on May 25, 1961 "of landing a man on the MOON and returning him safely to Earth." It followed the GEMINI manned-flight program conducted in 1966-67 to develop the necessary techniques of orbiting, docking, and extravehicular activity (EVA). The main elements of the Apollo project were the three-man Apollo spacecraft; the two-man LUNAR EXCURSION MODULE (LEM), or Lunar Module (LM); and the SATURN family of rockets, consisting of the Saturn 1, the Saturn 1B, and the Saturn 5. These units made up the first manned, interplanetary transportation system. Using this system, astronauts landed on the Moon, where they explored and collected samples at six sites on the near side between July 1969 and the end of December 1972. The total cost of developing and operating the Apollo-Saturn transportation system in the lunar program was \$25 billion.

Between October 1968, when the Apollo-Saturn transportation system underwent its first full space test, and July 1975, when it was used for the last time, the National Aeronautics and Space Administration (NASA) launched 15 manned Apollo-Saturn flights. Eleven of these were missions in the lunar landing program, including two test flights in low Earth orbit, two test flights in lunar orbit, six landings, and one circumlunar flight, during which the planned landing was aborted. During the testing period three fatalities occurred on the launch pad at the Kennedy Space Center, Florida, but none in actual flight.

After completion of the lunar landing program, four flights were carried out: three were missions that ferried astronauts to and from the SKYLAB experimental space station in 1973-74, and one was a joint flight with Soviet cosmonauts in the APOLLO-SOYUZ TEST PROJECT in 1975.

[Back](#)

APOLLO - mission to the moon

Please use Check or Money Order only.

FEE: \$10.00 (Online ordering information below)

Number of Copies : _____ (It makes a great gift!)

Name: _____

Address: _____

City: _____ State: _____ Zip: _____ Country: _____

Email address: _____

What type of a computer do you have? 386() 486() Pentium()

Do you have a CD-ROM? YES() NO()

Would you like to hear more about my software? YES() NO()

Mail To: Roger Robertson
PO Box 6217
Bluefield WV 24701-6217

Email: Rob24701@aol.com : AOL
102076.406@cis.com : CIS
cna00037@mail.wvnet.edu : Internet

CompuServe users can purchase APOLLO - mission to the moon online by going to the Shareware Registration Database {GO SWREG} and using ID: 10994
A fee of \$10.00 dollars will be added to your CompuServe bill.
Your registration will be Emailed to you.

ROGER ROBERTSON LICENSE AGREEMENT

1. GRANT OF LICENSE. Roger Robertson grants to you the right to use this Program ("Software") provided that (i) the Software is not distributed or copied; (ii) the Software may NOT be modified; (iii) all copyright notices are maintained on the Software; and (iv) the licensee/end user agrees to be bound by the terms of this Agreement.
2. COPYRIGHT. The Software is owned by Roger Robertson and is protected by United States copyright laws and international treaty provisions. You may not remove the copyright notice from any copy of the Software or any copy of the written materials, if any, accompanying the Software.
3. OTHER RESTRICTIONS. This Roger Robertson License Agreement is your proof of license to exercise the rights granted herein and must be retained by you. You may not rent or lease the Software. You may not reverse engineer, decompile or disassemble the Software.

NO WARRANTY. ANY USE BY YOU OF THE SOFTWARE IS AT YOUR OWN RISK. THE SOFTWARE IS PROVIDED FOR USE ONLY WITH MICROSOFT WINDOWS 3.XX AND RELATED SOFTWARE. THE SOFTWARE IS PROVIDED FOR USE "AS IS" WITHOUT WARRANTY OF ANY KIND. TO THE MAXIMUM EXTENT PERMITTED BY LAW, ROGER ROBERTSON AND ITS SUPPLIERS DISCLAIM ALL WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ROGER ROBERTSON IS NOT OBLIGATED TO PROVIDE ANY UPDATES TO THE SOFTWARE.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES. In no event shall Roger Robertson or its suppliers be liable for any damages whatsoever (including, without limitation, incidental, direct, indirect special and consequential damages, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use or inability to use this Roger Robertson product, even if Roger Robertson has been advised of the possibility of such damages. Because some states/ countries do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

INDEMNIFICATION BY YOU. If you distribute the Software in violation of this Agreement, you agree to indemnify, hold harmless and defend Roger Robertson and its suppliers from and against any claims or lawsuits, including attorney's fees that arise or result from the use or distribution of the Software in violation of this Agreement.

U.S. GOVERNMENT RESTRICTED RIGHTS

The Software and documentation are provided with RESTRICTED RIGHTS. Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of The Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 or subparagraphs (c)(1) and (2) of the Commercial Computer Software-Restricted Rights at 48 CFR 52.227-19, as applicable. Manufacturer is Roger Robertson PO Box 6217 Bluefield West Virginia 24701-6217. If you acquired this product in the United States, this Agreement is governed by the laws of the State of West Virginia. Should you have any questions concerning this Agreement, or if you desire to contact Roger Robertson for any reason, please contact Roger Robertson PO Box 6217 Bluefield West Virginia 24701-6217.

All efforts have been made to make the accuracy of the information complete however the publisher is not responsible for typographical error or misrepresentation of article data.

[Back](#)

