Instruction Manual

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Pilot Profile Creation

When you first start Lunar Flight you will be greeted with the Pilot Profile Creation window.

Lunar Flight features online Leaderboards and your Profile name is used to upload all your personal progress. Your pilot name must be unique and will be reserved for you to prevent other players posting data against your name.

An internet connection is required to create the profile but it is possible to play offline once it has been created.

Getting Started

After you have created your profile you will be able load it and start the game.

Lunar Flight is a challenge based game where it is upto the player to choose what they would like to do.

Basic Keyboard Controls

Space	= Primary Thruster Up (increment thrust with thrust lock on)
Left Shift	= Thrust Down (decrement thrust with thust lock on)
Left Control	= Lock Main Thrust Toggle
W	= Translate Forward
S	= Translate Backward
A	= Translate Left (Strafe)
D	= Translate Right (Strafe)
Q	= Yaw Left
E	= Yaw Right
Up	= Pitch Forward
Down	= Pitch Backward
Left	= Roll Left
Right	= Roll Right

HUD Display
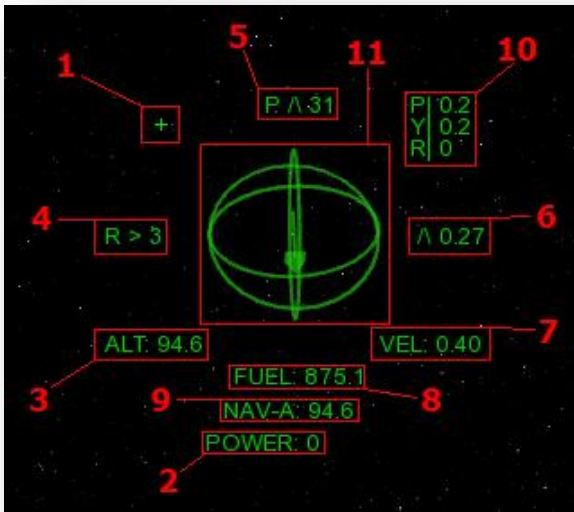
(1) Velocity Vector (+)
The Velocity Vector (VV), displayed as a + plus symbol, is a very useful indicator for the pilot. It shows the exact direction the Lunar Module will go if it continued its current course without any deviation. The Velocity Vector has its own Camera mode in the OHD.

(2) Power
The current primary thrust power output.

(3) ALT - Altitude (Radar)
The distance between the Lunar Module and the ground.

(4) Roll Angle (The current Roll angle of the Lunar Module)
< indicates rolling Left
> indicates rolling Right
= indicates 0 Roll (Level)

(5) P - Pitch Angle (The current Pitch angle of the Lunar Module)
/\ indicates pitching backward (nose up)
\/ indicates pitching forward (nose down)
= indicates 0 Pitch (Level)

(6) Vertical Rate (Displayed in meters per second.)
/\ indicates Ascending (moving up), the value will be positive.
\/ indicates Descending (going down), the value will be negative.
= indicates 0 (Hovering or Stationary)

(7) VEL (The current speed in Meters Per Second)

(8) Fuel (The remaining fuel in the tank)
Displays a (T) when the Thrustlock is activated.

(9) Nav
 Selected Navpoint and distance to it.

(10) Rotation Rate Display
Displays the Pitch, Yaw & Roll rotation rates in Degrees Per Second.

(11) Heading Alignment Sphere
Points towards the currently selected Navigation Point

Cockpit View

(1) Loaded Cargo Display and Cargo Recovery/Unload Switch

(2) Transponder On/Off Switch and Frequency Rate Light

(3) Data Acquisition Light, Progress and Acquire/Upload Switch

(4) Over Head Display (O.H.D)

(5) (O.H.D) Mode Buttons

(6) Centre Aligned Camera Monitor and HUD Display

(7) Rotation Rate Display

(8) Artificial Horizon

(9) Main Thrust Power Output

(10) Thrust lock On/Off Switch

(11) Fuel Quantity Display and Status Light

(12) Heading Alignment and Landing Aid Display

(13) Navigation Distance Display and Navpoint Selector Switch

OHD (Overhead Display)

The OHD is a Monitor mounted above in the cockpit. It is a multifunction display providing additional modes and information.

The modes cane be cycled with key (F8) or the Xbox 360 (X) button.

It has 4 modes of operation:
- Top View (F9)
- Map View (F10)
- Navigation Camera (F11)
- Velocity Camera (F12)

The Top and Map views mirror the same views of the Mission Computers views.
The Navigation Camera will target the currently selected Navigation Point. The most useful mode is the Velocity Camera which targets the Lunar Modules current Velocity Vector.

Refuelling & Repairing

The Service Dialog will display when you have successfully touched down at a Base. It will display the costs for any Repairs and Refuelling as well as your current Account amount.

Simply press the associated button to Repair or Refuel.

Additonaly you can use Fuel or Repair Action Items to instantly repair or refuel.

Missions

There are 3 types of missions in Lunar Flight:

Transport (Deliver a load of cargo to another base.)

The weight of the cargo affects the Lunar Modules performance:
- Increased inertia
- Higher Impact Damage, the extra mass and resultant inertia will increase the magnitude of impact forces.
- Increased Fuel Consumption
  - Due to the increase in weight, more power must be applied to move or stop the Lunar Module.

Larger load deliveries have higher rewards.

Survey (Fly to a location and acquire data then return to the base and upload it.

- The location is above ground.
  - The pilot must hover within 7.5 mtrs of the location while acquiring the data.
- Acquisition time is 10 seconds
- Return to base and upload the data

Lost Cargo (Locate a Lost Cargo Container and Deliver it to its intended destination)

- Use the Transponder and Map to help locate the container
- Recover the container
- Containers are heavy and the added mass will require more power to move
- Deliver the Cargo to the destination

Range Bonus: Money

The distance required to complete the mission dictates the amount received for the Range Bonus

Cockpit Bonus: XP

By completing a mission from beginning to end, while in the Fullscreen Cockpit view an experience bonus is awarded.

The Mission Computer (MC)

The Mission Computer pages can be cycled by pressing 'TAB' (default) key or the Xbox 360 (Y) button.

Top down Camera (1):

The top down camera's primary purpose is to act as a Navigation and Landing aid.

Map Page (2):

The map shows the Lunar Modules current location and all the Bases (Nav points) and Survey Locations if a Survey Mission is active. In the top right hand corner is a heading arrow indicating the Lunar Modules current cardinal facing direction.

Mission Page (3):

The Mission computer provides an interface for selecting Missions and detailing and information about the currently active Mission. After Starting a Mission a button will appear to select the next Mission Objective navigation point. It will also display additional Mission Objective buttons when they are applicable. E.g. Unload, Upload, Acquire, Recover.

Cargo Page (4):

The Cargo page details the current weight and cargo value and provides an interface for Recovering lost Cargo and Unloading. It also provides an interface for activating the Transponder to locate lost Cargo.

L.O.P.T.W Page (5):

The Lift Off Power To Weight (L.O.P.T.W) page contains a chart which indicates the required power setting to counter the effects of gravity. Using the appropriate setting is ideal for maintaining a stable flight trajectory.

Systems Page (6):

The Systems page details the current state of critical systems and any upgrades that are installed.

Trials Page (7):

The Trials page provides an interface for selecting and tracking the progress of Time Trial Challenges. While selected a Leaderboard quick access button is displayed.

Navigation

Lunar Flight has a simple system to help with the task of flying to your desired destination.

The Alignment Sphere:

The alignment sphere is displayed in both the HUD and in the Top Down camera view of the Mission Computer. It is a sphere with an arrow inside that points to the currently selected Nav Point. In general the Top Down sphere is used for aligning the Lunar Modules orientation toward the Nav Point. The HUD sphere is most useful when Landing as it will point directly down when you are over a refuelling pad.

Distance:

The Nav info display shows the distance to the currently selected Nav Point. The Distance is also displayed in the Cockpit and the HUD only view.

Selecting a Nav Point:

There are several ways to select a navigation point
- Map Icon Selection – Click on the desired Nav Point (Quad View Only)
- Press the Last & Next buttons in the Nav Info display.
- Press < or > keys to cycle.
- After accepting a mission the Mission Computer will provide a Button to select the current mission objectives location. For Survey Missions this will first select the Survey Location. After acquiring the data it will select the Upload destination base.

Nav Info:

The Nav info is displayed in the top right of all the Mission Computer pages. It provides an interface for selecting a navigation point and details the selected Nav Points distance from the Lunar Module.

The navigation point can be selected using the < > keys or by pressing the 'LAST' & 'NEXT' buttons. The Xbox 360 (B) button is assigned to the 'Next' action.

Upgrades and Action Items

Upgrade Shop:

Once you have enough money and have the required Rank you can purchase upgrades to improve the performance of the Lunar Module.

Active upgrades will reduce your Skill Bonus in the mission debriefing, to receive the highest Skill Bonus you should not use any upgrades.

Action Items:

In addition to Upgrades you can purchase Action Items. You can have upto 3 on board at a time. The available items are displayed in the Action Bar.

The types of action items that can be purchase are:

- Fuel: Instant 500 Units of fuel, excess over 1000 is lost.
- Repair: Instant 50 Units of repair, excess over 100 is lost.
- Boost: 5 Second instant %300 power output.
- Gyro: Cancels out all rotation (Very Strong Temporary Stabiliser)

Miscellaneous

Impact Warning System:

The Lunar Module is equipped with an Impact Detection system that will alert the pilot of a potential crash. The system will be triggered if it detects a speed above 6.5KPH and a minimum range to impact of 20 meters. The range scales with speed to ensure enough warning is given to avert the crash.

Crashing or Out of Bounds:

- A new Lunar module costs $3500
- Active Mission is lost.

Out of Fuel:

- If the Lunar Module lands safely when out of fuel, the recovery of the Lunar Module costs $1500.
- Active Mission is lost if recovered.
- It is possible to run out of fuel on the landing pad and still be able to complete your mission and refuel.

Out of Money:

If the account goes into the negative you will not be able to purchase any Upgrades or Action Items until the account is back in the black.

Cargo Recovery:

Transponder:

The Lunar Module is equipped with a Transponder to help locate lost cargo. It consists of an audio Beep and pulsing light in the cockpit that increases in rate as the proximity to the cargo decreases. It can be switched off by Pressing 'T' (default) or pressing the Transponder Button on the Cargo Page of the Mission Computer.

Recovering:

Once the Lunar Module is within 3 mtrs of the Cargo it can be recovered into the Cargo Hold by pressing 'R' (default)or pressing the Recover Button on the Cargo Page of the Mission Computer.

Unloading:

Before unloading check to see where the Cargo was destined on the Cargo Page of the Mission Computer as it cannot be unloaded at the wrong location. It can be Unloaded by pressing 'U' (default) or pressing the Unload Button on the Cargo Page of the Mission Computer.

DEFAULT KEYBOARD CONTROLS

[GENERAL]
Enter - Start Game/ Reset after Crash or OOF / Accept Mission on Mission Page of Mission
Computer
Backspace - Recover Cargo
T - Toggle Transponder On/Off
U - Unload Cargo/Upload Data (At Nav Point)
R - Repair
F - Refuel
LAlt - Acquire Data
P - Pause (Pause/Break)
M - Hide/Show Fullscreen Mission Computer
O - Hide/Show OHD when in Fullscreen HUD, Track or Follow Cameras
L - Toggle Look Nav / Follow Camera

Numpad 7 - Use Action Item 1 (Top)
Numpad 4 - Use Action Item 2 (Middle)
Numpad 1 - Use Action Item 3 (Bottom)

[MISSION COMPUTER]
Tab - Cycle Mission Computer Page (Top, Map, Missions, Cargo, L.O.P.T.W, Systems)

1 = Top Down Camera
2 = Map
3 = Missions Page
4 = Cargo Page
5 = Lift Of Power To Weight Page
6 = Systems Status Page
7 = Time Trials

[- Last Mission on Mission Page of Mission Computer
] - Next Mission on Mission Page of Mission Computer

> - Next Nav Point Keyboard
< - Last Nav Point Keyboard

[THRUST]
Space - Primary Thruster Up (increment thrust with thrust lock on)
Left Shift - Down (decrement thrust with thust lock on)
Left Control - Lock Main Thrust Toggle

[TRANSLATE]
W = Forward
S = Backward
A = Left
D = Right

[ROTATE]
Q = Yaw Left
E = Yaw Right
Arrow Up = Pitch Forward
Arrow Down = Pitch Backward
Arrow Left = Roll Left
Arrow Right = Roll Right

C - Toggle Cockpit
X - Toggle Fullscreen
PageUp - Next Fullscreen Camera (When in Fullscreen) (Flyby, Follow, Cockpit)
PageDown - Last Fullscreen Camera (When in Fullscreen) (Flyby, Follow, Cockpit)

F1 = Fullscreen Cockpit/HUD toggle
F2 = Fullscreen Follow Camera
F3 = Fly by Camera
F4 = Quad View

F8 = Overhead Display - Cycle
F9 = Overhead Display - Topdown Camera
F10 = Overhead Display - Map
F11 = Overhead Display - Navpoint Camera
F12 = Overhead Display - Velocity Vector Camera

DEFAULT XBOX 360 CONTROLS