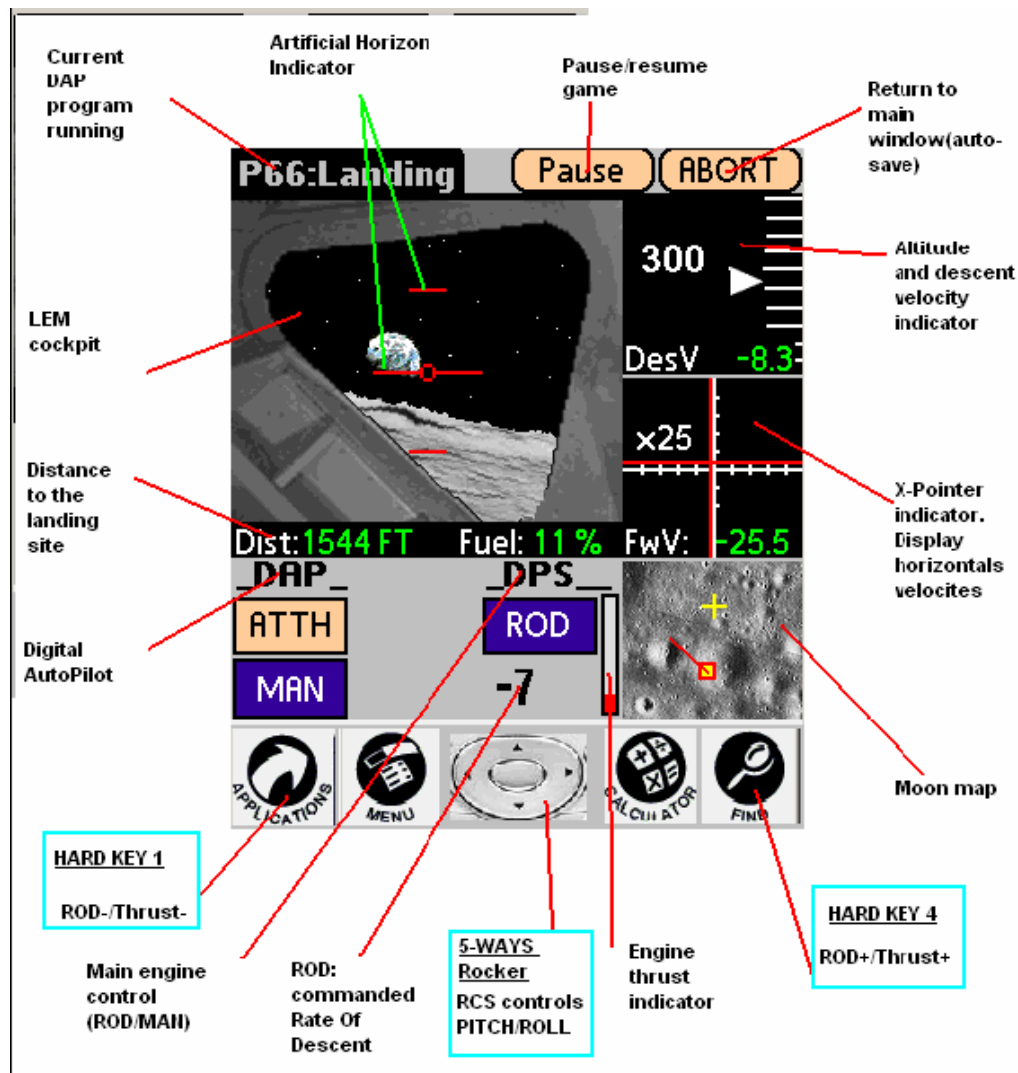


Lunar Lander Simulator Quick Start Guide

Welcome to Lunar Lander Simulator! This is a quick start guide to help you land successfully. Everybody wants a little success in life, and that includes landing on the moon! Since this is a realistic flight simulator, we strongly suggest that you watch the "demo" flight (simply click the DEMO button on the game splash screen). Why? Because we don't want to see you splattered across the surface of the moon now, do we? In the demo, the lander lands itself while giving some instructions on how to do it yourself! Once you are comfortable with the controls then you are go for landing! Give the demo a try...or two...maybe three. You will be tempted to take the controls, and when you do, you will experience the thrill of victory...or the agony of defeat. But even though this is a realistic flight simulator, we did take out the serious consequences of crashing. We promise no broken bones!

(Disclaimer: This promise only good if you are in a sitting position, with your seat belt fastened, in a padded room, with no sharp implements within reach.)

**Your Cockpit Lander View



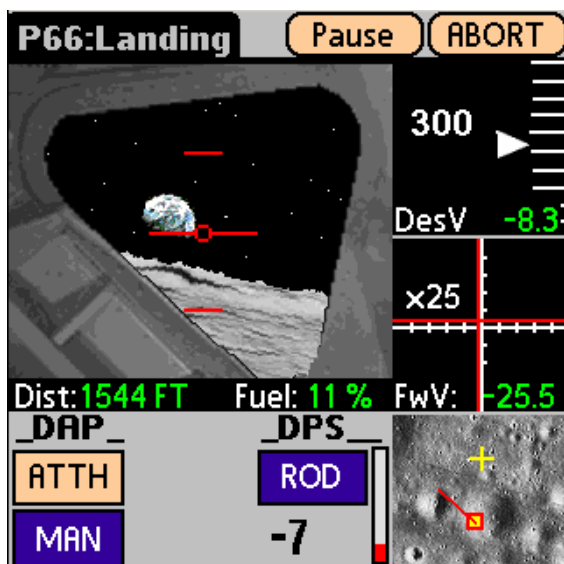
Have you watched enough demos? Do you think you see how the controls work? Do you want to give it a go for yourself? If you answered yes to these questions, then fasten your velcro[†] seat belt, it's gonna be a wild ride!

1- If you aren't already in LunarSim, Launch the application by clicking on the LunarSim icon. It looks like a Lunar Lander. If you don't know what a Lunar Lander is, go back to the Demo and watch it 20 more times:

The default mission is the "Landing Phase". The game starts with the following initial conditions:

- **Game level:** Rookie Pilot (trust us...it's a very good place to start)
- **Sound Level:** 50% (you don't want it too loud...annoys Martians)
- **Altitude:** 500 ft (This is different than '*attitude*', we aren't giving you any of that!)
- **Rate of descent:** -8 ft/s
- **Forward velocity:** - 80 ft/s
- **Lateral velocity:** 0 ft/s
- **DAP mode:** MAN (on-board computer in **manual** mode)
- **Program running:** P66 (landing phase)
- **DPS engine mode:** ROD (main engine control in semi-auto mode)
- **Fuel level:** 12% (this is all good!)

2- Press the "New" button to start a new mission



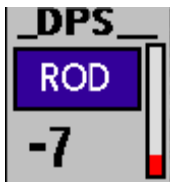
[†] Did you know that Velcro was invented as part of the Apollo missions? HEY! What are you reading this for, aren't you about to crash on the surface of the moon?

3 - The LEM cockpit above will be displayed and you will hear CapCom (the Capsule Communication officer in Houston) say "You are go for landing, over." CapCom likes to talk like that...saying 'over' after he tells you something. I'm not sure why, I think it's a control thing... Over.

4- At any time during the descent, you can abort the mission and come back to the main screen by pressing the ABORT button on the top right of the screen.

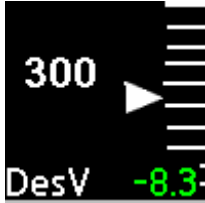
5- Once you reach around 400 feet, press the **UP 5-ways** (or analog joystick UP on Zodiac) pad twice. That way you do not slow your forward speed (FwV) too quickly. If you do then you risk running out of fuel before you reach the landing site!

6- At about 200 feet altitude, press the **ENGINE THRUST UP** once (SEE LANDER CONTROL SECTION). That will slow your descent speed by 1 feet/sec (watch the negative number under the button ROD which is the speed that you would like the lander to have)



← Rate of Descent or ROD (can be changed with THRUST UP and THRUST DOWN buttons).

You do not want to descend too fast! Watch your actual descent speed (DesV).

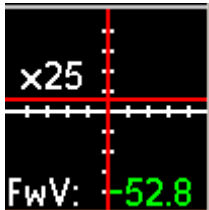


← Current Descent Velocity

On the altimeter display (DesV) should be lower than 10 feet/sec to land successfully. Of course, if you waste too much time watching your actual descent speed, you might forget to watch your forward speed, or your lateral speed, or how far you are from your targeted landing location...IT'S CRAZY, but that's why it's fun.

7- Wait until you reach 100 feet, then press the **UP 5-ways** pad once. You want to touchdown with the lander as upward as possible. The Moon horizon should now be more or less level with the center red line indicator ---○---

Make sure you land with a forward speed (FwV) lower than 10 feet/sec as display on the X-Pointer instrument:



← X-Pointer (horizontal red line= forward speed indicator)

here the lander forward speed of - 58.2 is too fast!! If you try landing with this kind of forward speed...it will be a mess! So let's slow it down a lot more by pressing the **DOWN 5-ways** (or analog joystick DOWN on Zodiac) pad once or twice. Once the forward velocity has just about

reached zero, press the **UP 5 ways** once or twice to stabilize and bring your lander as upright as possible.

8- Finally at about 50 feet altitude, go ahead press one more time **ENGINE THRUST UP** key to reduce even more your descent speed (DesV).

9- Congratulation you landed it in one piece! Better than Neil Armstrong! Guess you didn't need that extra life insurance after all!

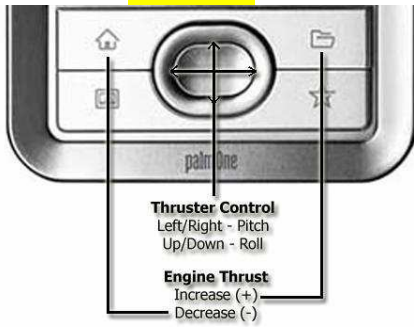
10- A few moments after you land (or crash!), the simulator will display a result window. It will either give you your score, or tell you why you crashed. It will not give you your horoscope or hot stock picks.

Highest Score: 5445 points			Crash Data		
Flight Data		Score	Flight Data		Status
Distance(ft):	779.7	2220	Distance(ft):	1,466	OK
Descent Vel(ft/s):	-1.3	2373	Descent Vel(ft/s):	-17.6	FAIL
Forward Vel(ft/s):	2.3	42	Forward Vel(ft/s):	-23.5	FAIL
Lateral Vel(ft/s):	0.1	250	Lateral Vel(ft/s):	0.0	OK
Fuel Left(%):	8.8	439	Pitch (degree):	20.0	FAIL
Pitch (degree):	-0.5	21	Roll(degree):	0.0	OK
Roll(degree):	0.1	100	Fuel Left(%):	11.1	
Manual DPS Bonus:		0			
Your Score: 5445			Your Score: 0		
Done			Done		

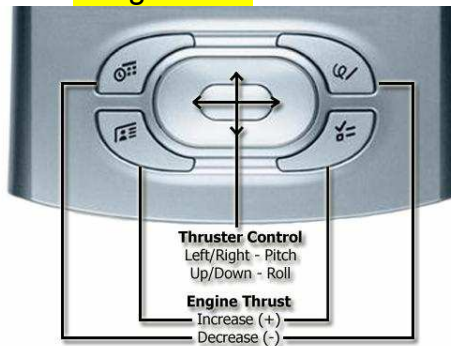
Lander Controls

Main engine thrust controls location depends on the device you have. Here some Examples (the game runs on other devices not shown here):

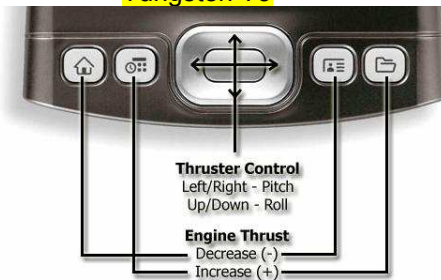
LifeDrive



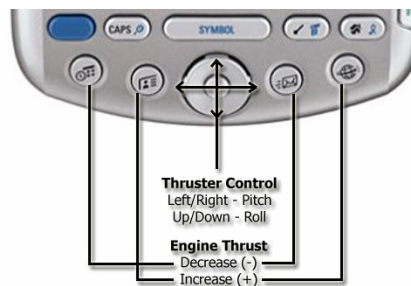
Tungsten T3



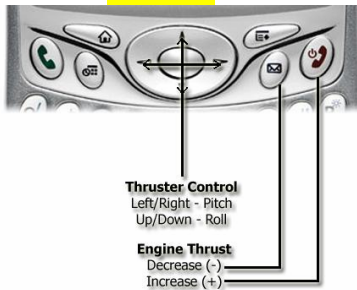
Tungsten T5



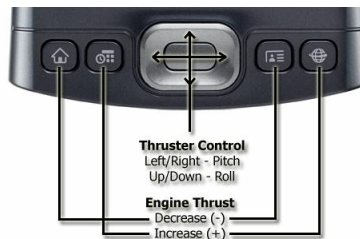
Tungsten TC



Treo 650



Tungsten TX



Flight Plan Display

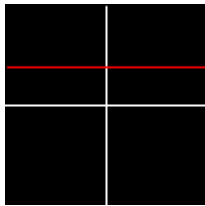
Alt	DesV	FwV
500	17	80
400	14	67
300	12	50
200	9	15
100	5	10
50	3	3

At any time during the flight, you can get access to the flight plan by simply taping the cockpit image. This flight plan shows you the descent and forward speed (for a specific altitude) you will need to have to make a successfully landing. This flight plan is an actual Apollo mission plan! Of course you can still land w/o following the flight plan.

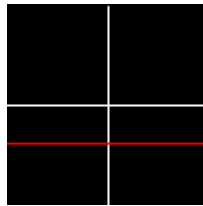
X-Pointer Display

The X-Pointer instrument may need a little more explanation. X-Pointer tells you which direction (forward/backward and left/right) your lander is going. It does that by showing you a red horizontal line (forward speed) and a vertical red line (lateral speed). Examples may help.

Let's start with forward/backward lander movement. An horizontal line will tell you if you are going forward or backward. The X-Pointer will show something like:

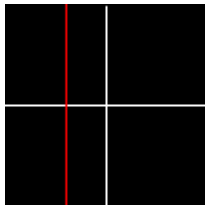


← Going Forward

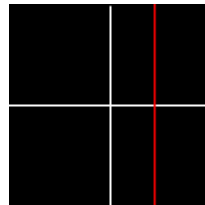


← Going Backward

Now for your lander lateral movement. A vertical red line will tell you which way you are going (left or right) and how fast.

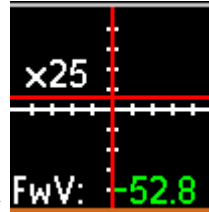


← Going Left



← Going Right

Please note, since the X-Pointer can display a range of horizontal speeds from +/-1 feet/sec to +/- 300 ft/sec, the instrument has two scales X1 and X25. To land safely, you need to be in scale X1. If any of your horizontal speed is higher than 25 ft/sec then the system will automatically switch to X25. Please also note that the more the red line is far from the center the fastest you are going.



** The forward speed is also displayed as FwV →

what's next?

Once you landed successfully coupled times then you are ready to explore the other features of the game such as:

- Multiple missions and even make your own!
- Pilot and Commander game levels
- In addition to the Moon, you can also try to land on Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and sometimes Pluto!
- Experience lander failures like real Nasa astronauts did! Including fuel leaks, stuck thrusters and computer failure among others

Conclusion

This is a very short guide to get you going. If you like to know more about your lander controls and instruments and how to use the extra features of the game, please read the full Lunar Lander Simulator User' Guide.

We wish you many happy landings with Lunar Lander Simulator!

Edited by: **Ward Dilworth**

Lander controls pictures provided by: **Chris Marentette**