

Raspberry Pi Setup Guide

From Sinden Lightgun

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The easiest way to get setup on the Raspberry Pi is to install the 'bare bones' image

Pi 4/400

Download from:

v6.1

https://mega.nz/file/ZxkCHCaA#VfTZR6frWTd9YHRSyjpBkQ3r_NKEviXJns08erDPkw

v5

https://mega.nz/file/NlMnRY4Z#J-0zUB88RMzCNE3XzOT4uO3votRZ_rG9MT11sZeezJw

Pi 3

(This is a work in progress)

https://mega.nz/file/ZhNCmJaK#a_bcoghL1DTTbedjp1HKMSHiy5wvRZlJB1xWHwNrkeY

How to setup a Raspberry Pi 4 for use with the Sinden Ligh...



Alternatively you can follow the guide below

A quick guide aimed (pun intended) at new users

Things you will need:

- A Raspberry Pi

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OK

- This is a credit card sized single board computer. In this tutorial I will be using a Raspberry Pi 4 with 4GB of ram
- A SD card
 - This is a small memory card that will be used for storage

A keyboard

There is some typing to do so a USB or Bluetooth keyboard is essential.

A Sinden Light Gun

Although it is possible to set up the system with the gun you will need one to test it.

A game controller (optional)

Retro pie is designed to be navigated with a game pad. You can configure it to be navigated with keyboard controls but it is not as intuitive

A Windows PC with an SD card reader

There are ways of setting the pi up without this but to make things as simple as possible you'll need a PC

Install RetroPie on your Raspberry Pi

On your windows PC go to <https://retropie.org.uk/download/> and download the latest version of Retropie. This will be a .zip file (you will need winzip or winrar to open it)

Inside the .zip file will be an image file with the extension “.img” extract this file to the hard drive on your windows PC

Now we need to write that image onto the SD card.

Download the pi image writer from <https://www.raspberrypi.org/software/> and load it up

Image1

Click the button that says “choose OS” scroll to the very bottom of the list and click on “use custom” and locate the image file you downloaded from retropie.

Click the button that says “choose SD” and select your SD card.

Click “write”

Those of the British persuasion might want to put the kettle on now.

Once the process is complete remove you SD card from your windows PC and pop it in your pi.

Install the Sinden software on your Pi

Connect power and also your monitor, game controller and keyboard.

Power up your pi.

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The first screen you see after loading will tell you a gamepad is connected and you need to configure it. Follow the instructions on screen. (remember your hotkey, I always set it to the central xbox button on my controller)

The next step is to connect your pi to the internet you can do this by setting up the inbuilt Wi-Fi on the pi but I just pop a network cable in the pi and the other end in my router.

Then we need to give the windows pc remote access to the pi:

Select RetroPie from the main screen (it's the only option) and then select "raspi-config"

Select option 3 "interface options"

Enable option 2 "remote command line access using SSH"

Exit the menu.

Once that is done return to your windows PC and install WinSCP from

<https://winscp.net/eng/index.php>

this is FTP (file transfer protocol) software that will let us drag and drop file from our windows pc to the pi (if they are on the same network)

download the driver software from Sinden

<https://www.sindenlightgun.com/drivers/>

this is another .zip file so extract it somewhere on your windows PC.

Load winSCP and start a new session

Hostname "retroPie"

Username "pi"

Password "raspberrypi"

You might get a security warning but just ignore it.

Image 2

The screen should now show your PC's file system on the left and the Pi's on the right

Copy the folder called "lightgun" from the Sinden archive in the "Pi-Arm" folder to the /home/pi/ directory on the pi.

Return to the pi.

Weirdly we have to install a game before we do anything else. Wolfenstein 3d (if you were born after the year 2000 its like CoD that you Dad plays). We have to do this to create a "ports" directory on the pi.

Go to retroPie setup in the main retroPie menu

Manage packages>Manage optional packages>wolf4sdl

Install the game

Exit and restart the pi

You should now have two menus “retropie“ and “ports”

On the main retropie screen press F4 on you keyboard. This will take you to a command prompt.

Type:

“cd Lightgun”

and hit return to get into the Lightgun directory (this is case sensitive)

Then type:

“chmod +x setup-lightgun.sh” (this changes the permission to access the file)

Then:

“./setup-lightgun.sh”

After a few minutes the installation will complete

Then do the same with the “retropie-setup.sh” file:

“chmod +x setup-retropie.sh” (this changes the permission to access the file)

Then:

“./setup-retropie.sh”

Then type

“emulationstation” to return to the graphic user interface.

Plug in your lightgun

Go to the “ports” menu and select “SINDENLIGHTGUNTESTP1”

You should get a black screen with a white boarder and be able to move the cursor with the gun. Move the cursor to the bottom right to exit.

Installing and setting up duck hunt Find a Duck Hunt rom (for legal reasons I cant be more specific)

Copy the duckhunt rom from your pc to the hom/pi/RetroPie/roms/nes/ directory on your pi

Restart your pi

Go into Ports and select SINDENLIGHTGUNSTARTP1

You should now have a NES menu in retropie go into it and start duck hunt

Bring up the menu with hotkey+x

Go to options and check that the zapper mode is set to lightgun

While in this menu set show advanced system options to on

Go out of this menu and the next option down should be On screen overlayselect this

Set hide overlay in menu to off

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OK

Go down to Overlay preset and select SindenBorderWhiteMedium.cfg

You should now see a border

Go out of this menu and select controls

Set the port 1 control device type to Gamepad

Set the port 2 control device type to Zapper

Go up two levels of menu until the title at the top says Main Menu

Select settings

Select Input

Select port 2 binds

Now this is the tricky bit. We want to assign the trigger button but it's not labelled infact a load of the buttons are just labelled "n/a". Well it is about 11 up from the bottom you can see what these inputs are when you press A on the gamepad to assign them. Once you've figured out which is the trigger press A and point your gun at the screen and press the trigger. Mouse 1 should appear next to it on the screen.

Go back to the quick menu and select options again. Make sure that "show crosshair is on" (recoil guns may require PORTS, RECOIL, STARTSINGLESHOT for crosshairs to display)

Go back to the main menu and save the configuration

Exit the menu and return to the game

Duck Hunt should now be playable!!!

However you sights are probably way off.

For example if you look down sight and the crosshair is to the left of it you need to raise you x axis value.

You can do this buy loading up WinSCP again and editing the light gun conguration file from your PC.

Goto

home>pi>Lightgun>Player1>LightgunMono.exe.config

just double click on the file and you can edit it from within WinSCP

the lines you need to edit are:

```
<add key="CalibrateX" value="" />
<add key="CalibrateY" value="" />
```

Pop a number between the qotes, save, retart the pi, load sinden and duckhunt see how much the sight is off, repeat.

There's no quick way of doing this I've found.

That should be all you need to do to get started.

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