**Beginners notes for Stella on Windows and RetroN77**

A beginners perspective. Please read the complete document before buying anything.

What is Stella

Stella is an app that was written to emulate the Atari game operating system. It was written in several formats, so that it could run on various O.S. In this paper I will be discussing Windows and the Hyperkin RetroN77

Hardware

Haven’t seen any requirements for hardware regarding Windows 10 (win10).

Of course with the retron77 you may need a few things. MAY being the keyword.

They make a micro USB splitter for the power of the retron77 that can be used for a usb keyboard, or for usb paddles/sticks for games. The keyboard is used for changing both basic and advanced game settings and loading/joining large cassette games. I bought one, but found little use for it; as the developers have made these settings really great for out of the box use. A link to an example splitter: <https://www.amazon.com/dp/B07FY9Z9GD?psc=1&ref=ppx_pop_dt_b_product_details>



The male micro usb plug would go into the reton77, the male micro usb plug that came with the game for power would plug into the female micro usb plug. The regular usb would be used for a keyboard or for a 2600-dapter and cable.

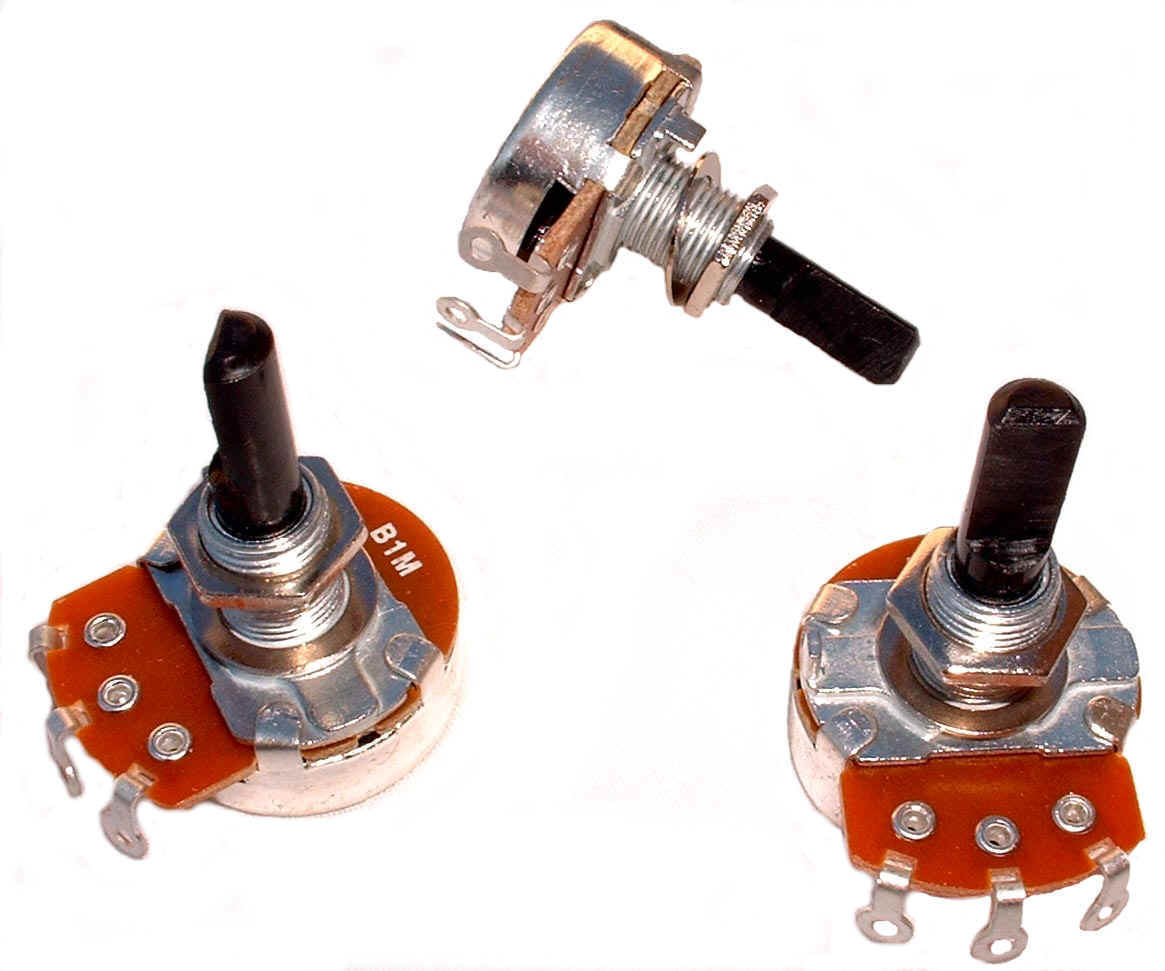


The 2600-dapter is a conversion unit to take Paddles/joysticks from a DB9 connector to USB (wire sold separately). I found that I did not need this for the retron77; but was a requirement (for me) in using my paddles/sticks on my win10 box. They can be found at: <http://www.2600-daptor.com/index.htm> Firmware for these are critical in making your paddles/sticks work. Also auto-sensing on a usb connection (win10). To reset your 2600-dapter if your paddles are not seen: Unplug USB, center paddles, hold button 1, plug in USB. (explained again below). I do not know what firmware my d2600-apter came with, but when I flashed it with one version; everything worked a whole lot better.

Paddles; I really like my paddle games, probably more than my stick games. My paddles are also very old. I tried the Hyperkin combination Ranger paddles/sticks; I did not enjoy my paddle experience, but found the sicks to be easy to use; but not like the original sticks. Pic of them below.



I didn’t want to buy someone else’s stuff, my stuff was old and jittery (like myself). So I decided to rebuild. The best place to buy parts is: [http://www.best-electronics-ca.com](http://www.best-electronics-ca.com/ordering.htm#Order). They are also very helpful in diagnosing problems you may have with any part on your Atari systems. I got their new POTs for my paddles and they are working great.



If you are using the 2600-dapter and having an issue with them:

1. Unplug the USB  
   2) Make sure the DIP switches are all up  
   3) Plug in the the 2600 paddles  
   4) Turn both paddle knobs to approximate center  
   5) Hold the button on paddle #1  
   6) Plug in the USB, still holding the button on paddle #1  
   7) Keep holding the paddle #1 button until the D9 LED is flashing regularly - should only take a few seconds  
   8) The D9 is now ready use and or reset

So what is working

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 6.1.1 DB9 | 6.2.1 DB9 | 6.1.1 USB | 6.2.1 USB |
| RetroN77 |  |  |  |  |
| 2600 Pad | Yes | Fail | Yes \*1 | Yes |
| 2600 Stk | Yes | Yes | Yes | Yes |
| Ranger Pad | Yes | Fail | Fail | Fail |
| Ranger Stk | Yes | Yes | Fail | Yes |
|  |  |  |  |  |
| Windows 10 |  |  |  |  |
| 2600 Pad | N/A | N/A | ? | Yes |
| 2600 Stk | N/A | N/A | ? | Yes |
| Ranger Pad | N/A | N/A | ? | Hyper\*2 |
| Ranger Stk | N/A | N/A | ? | Yes |

Yes\*1-- ROM menu does not work with paddles at all; but paddles work in games

Hyper\*2—Very little movement of paddle in hand shoots paddle on screen across screen

Yes—Works Fine

Fail—Does not work at all

?—Could not find Stella version to test

Downloading Images

If you need the original RetroN77 image got to: <https://www.hyperkin.com/r77>

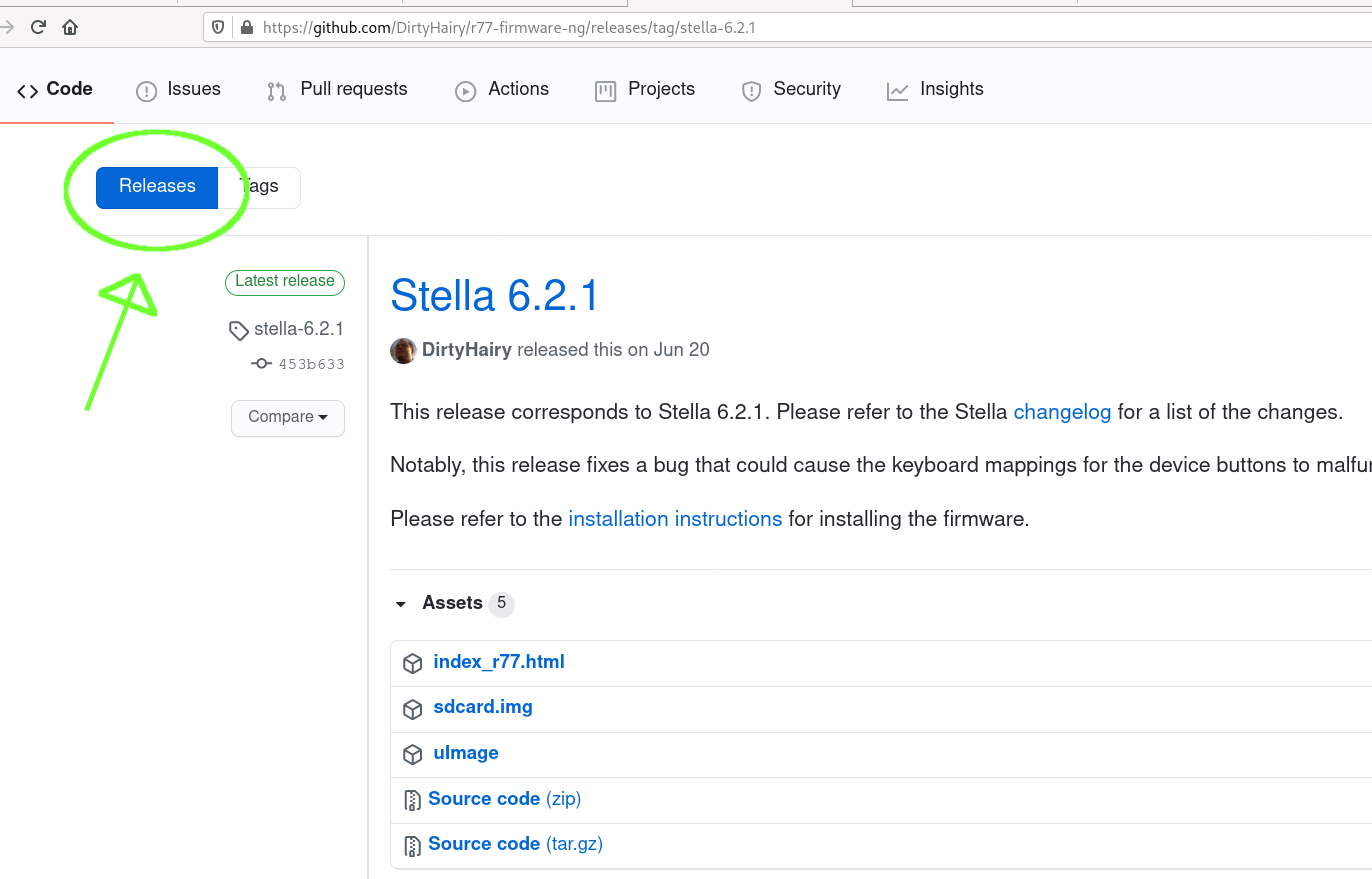


As you can see there is also an image there that stops the game limitations; but I have not tested that as 6.1.1 and 6.2.1 do that and much more.

The Stella community has stored their latest image: <https://stella-emu.github.io/downloads.html>

And documentation for it : <https://github.com/DirtyHairy/r77-firmware-ng/blob/master/INSTALL.md>

For other versions of the RetroN77 go to download: <https://github.com/DirtyHairy/r77-firmware-ng/releases/tag/stella-6.2.1>



Sorry, but I do not know the link to download other versions for windows and other operating systems.

You want games? Go to this link for all the games you could ever want: <http://www.atarimania.com/pgemainsoft.awp?type=G&system=2>

So now you have a list of hardware and software. How to get started.

For the RetroN77 you need a micro SD card if using, Windows discussed below. You can get a second one (microSD) or just use the one that came with the unit. I personally have 3 cards. 1st for the original version it came with. 2nd for ver 6.1.1 that supports all of my paddles and sticks thru the DB9 connector on the front of the box without need of a 2600-dapter. The 3rd one for testing new versions that the Stella group puts out.

Once you've downloaded the R77 version of stella (I recommend 6.1.1), you'll need to format either a new SD card, or the one that came with the RetroN77. If you format the original card, you won't be able to return to the RetroN77 (unless you go to the Hyperkin site, explained above) to its stock configuration.

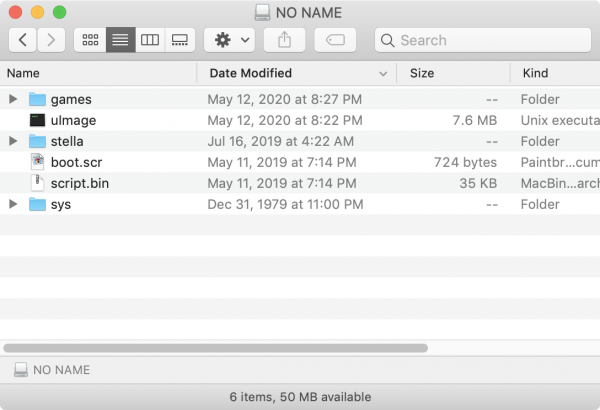
The instructions are available here: <https://github.com/DirtyHairy/r77-firmware-ng/blob/master/INSTALL.md>

You only need to do the section under "Rewrite the SD image". The other section "Replace the uImage" is for updating later as Stella is further updated.

If on a Mac, and use [balenaEtcher](https://www.balena.io/etcher/) to format the card.

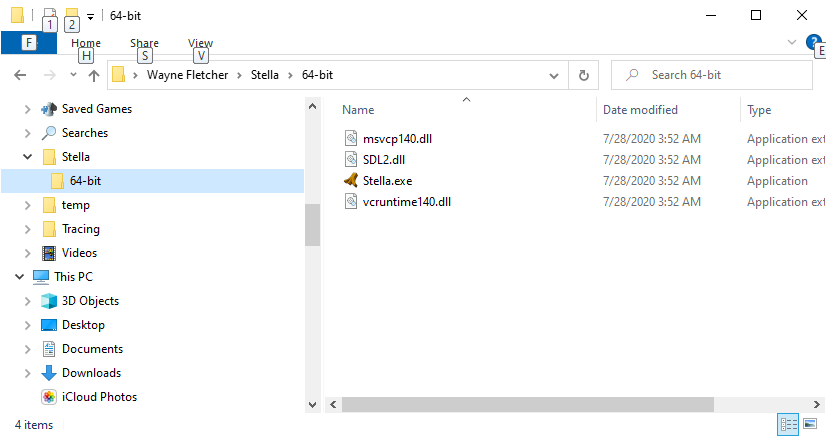
If on Windows use win32diskimager to format the card.

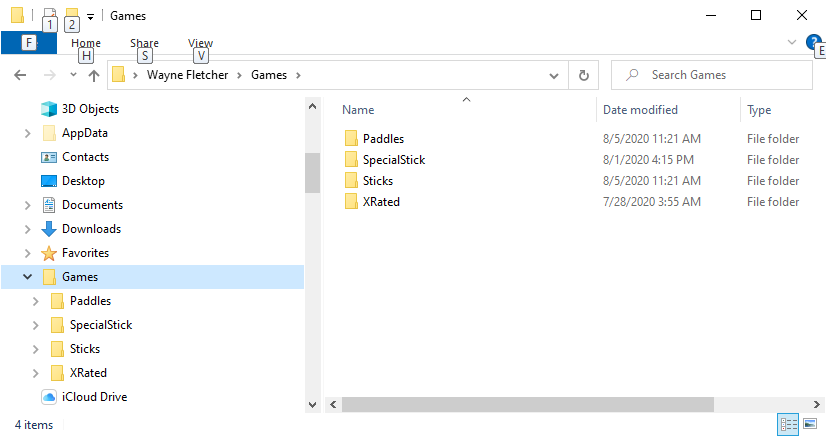
Before you put your SD card back in the RetroN77, make a new directory at the root level of the SD card titled **games** and put your ROMs in there. A bunch are available here on [AtariAge](https://atariage.com/software_search.php?SystemID=2600), or at [AtariMania](http://www.atarimania.com/rom_collection_archive_atari_2600_roms.html). (Links above)

[](https://atariage.com/forums/uploads/monthly_2020_07/951593085_ScreenShot2020-07-03at12_15_35PM.png.89101035487c95d7d85ed09ce0dfe093.png)

Plug SD card back into RetroN77 and have fun.

For setting up a Windows Game use Stella 6.2.1. Download the files (link above) Create a directory and place extracted file in it. Then Create another folder in it called games and put all of you ROMS in it. I did my games folder a little different, shown below.





Please feel free to write me with any beginner questions. But by no means am I an expert.

Good luck!