

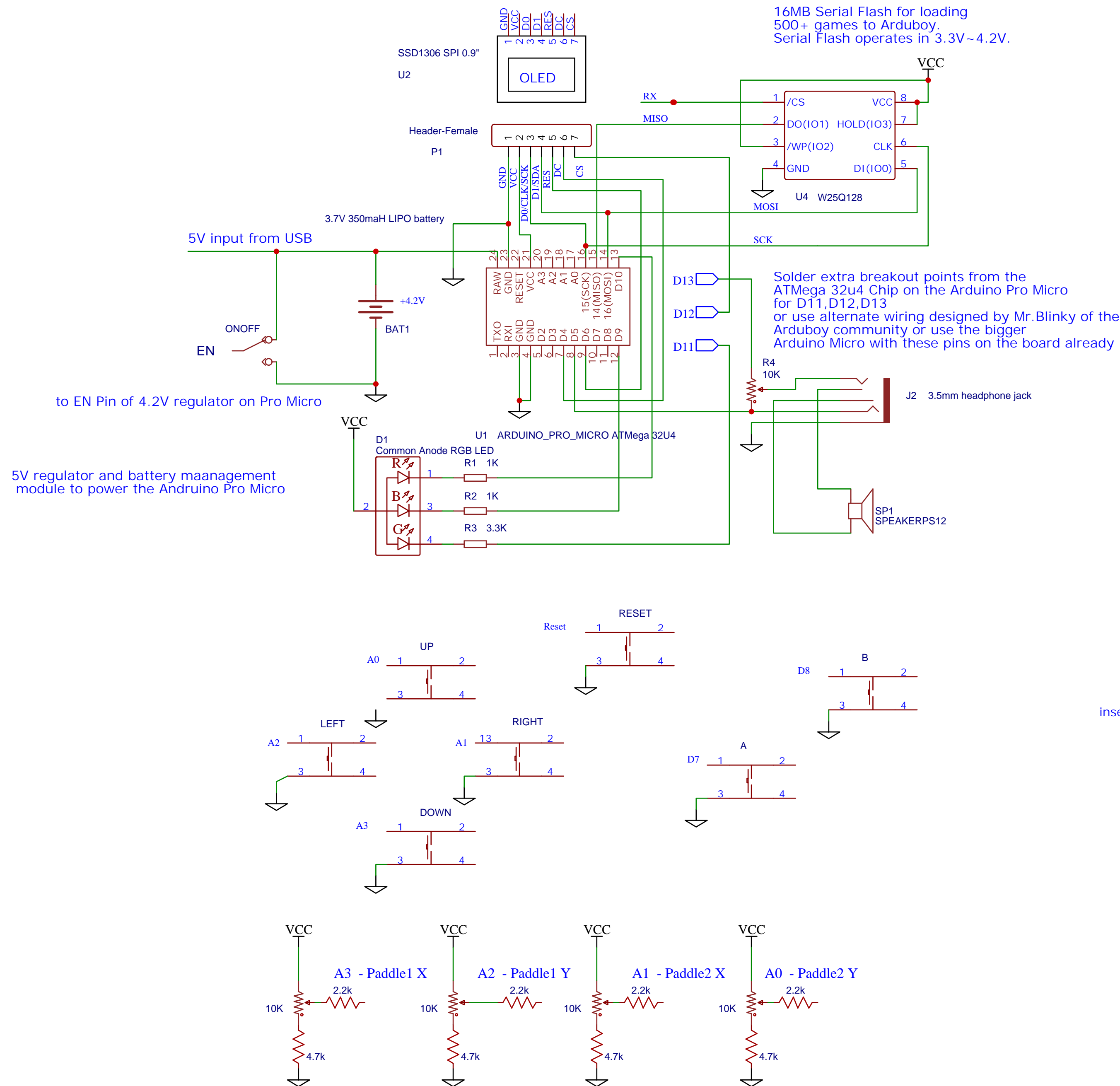
This is small arduboy that made using Pro Micro clone, 1.3: SSD1306 with paddle, volume control, and headphone jack, all in a foot print smaller than one third of a credit card.

Parts:
Arduino Pro Micro (or Arduino Micro)
0.9" mono OLED with SPI interface on SSD1306 controller. The 7 pin male header of the OLED is plugged into the female header.
The OLED chosen must have the 7th pin for CS. Otherwise, it'll conflict with the Flahcart, causing screen flickering and misalignment when loading games from flashcart or when playing video stored on the flashcart
16MB serial flash to load 500+ Arudboy games to be self-programmed to Arduino Micro anytime through the Cathy 3K bootloader (original circuit, python scripts for game loading, and the Cathy 3K bootloader and homemade arduby package is designed by Mr.Blinky (inks below).
4.2V LDO regulator IC - STO32-5 to replace the original on board 5V LDO regulator. When replacing, do not solder the EN pin to the Pro micro board, leave it hanging.
We will connect that to the power switch.
3.7V LiPO Battery is connected to the RAW pin of the Pro Micro to power the Pro Micro.
It's also being charged by the 5V USB when connected to USB port of the computer or a charger. The builtin overcharge proteciton circuit inside the Lipo battery to ensure no overcharging,
Winboard 128Mbit Serial Flash S25Q128
To use the serial flash for game loading, the Cathy 3K boot loader must be burnt to the Pro Micro using USBasp.

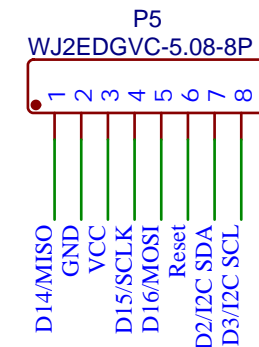
Credits and References to original authors of Arduboy and Flashcart:

1. Original Arduboy production schematics:
<https://community.arduboy.com/t/production-arduboy-schematic/702>
2. MR.Blinky's original design of flashcart:
<https://github.com/MrBlinky/Arduboy/tree/master/flashcart>
3. MR. Blinky;s GITHUB with python scripts and sample flash cart image binaries for sample games :
<https://github.com/MrBlinky/Arduboy-Python-Utilities>
4. MR. Blinky's homemade package (required to operate the flash cart with alternate wiring and different types of OLED other than the SSD1306 used in original Arduboy:
<https://github.com/MrBlinky/Arduboy-homemade-package>

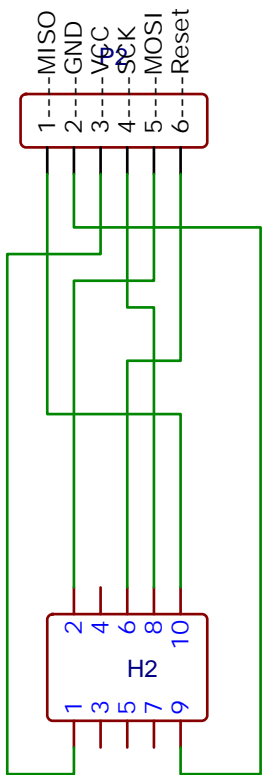
Ardubaby 2020 y chuengbx 2020/1/1
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Female Header for programming and expansion for I2C interface.
The first 6 pins doubles up as the port to connect to a conversion cable to a USBasp to burn the Cath 3K bootloader to the Pro Micro.
The USBasp conversion cable below can be used.



USBasp Cable for Credit Card ArduBoy



View from bottom of female header_2x5
insert to the male header of the USBasp Programmer