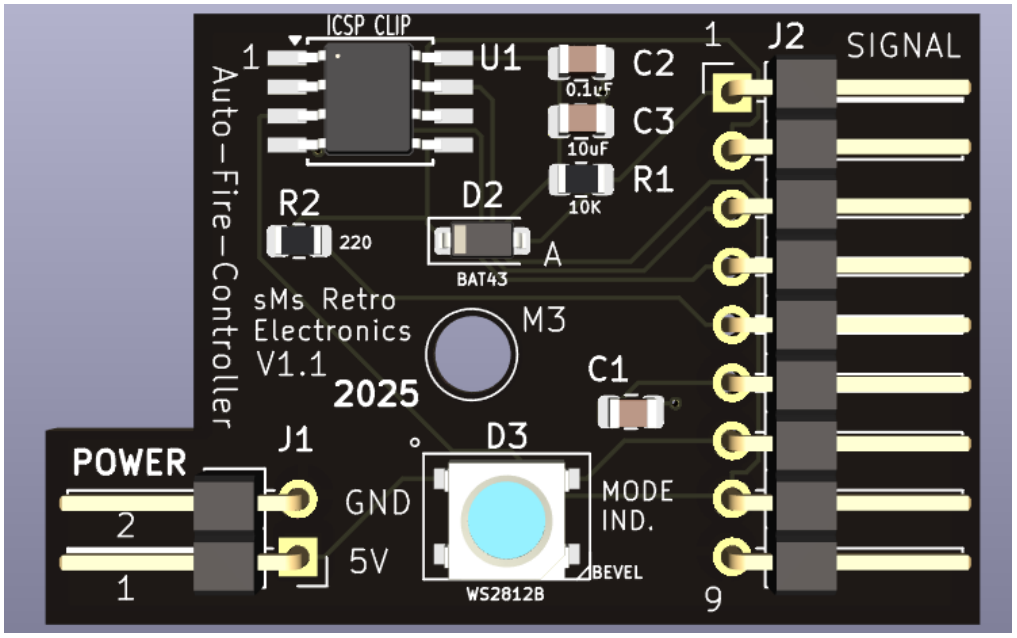
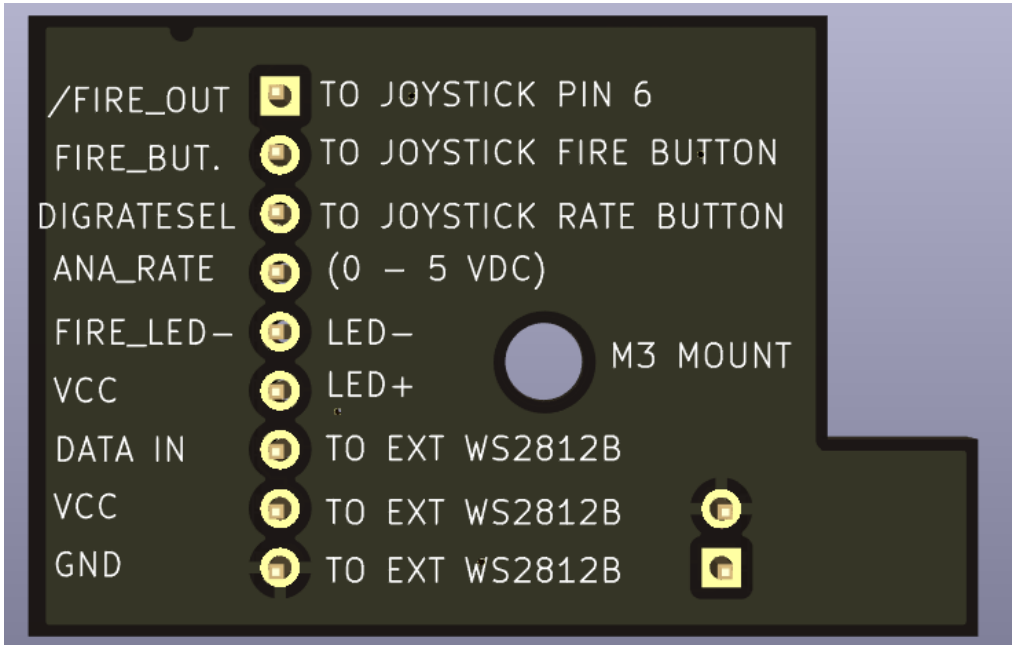
AUTOFIRE CONTROLLER ASSEMBLY

TOP



J1 - POWER
J2 - SIGNAL



PIN 1
PIN 2
PIN 3
PIN 4
PIN 5
PIN 6
PIN 7
PIN 8
PIN 9

BOTTOM

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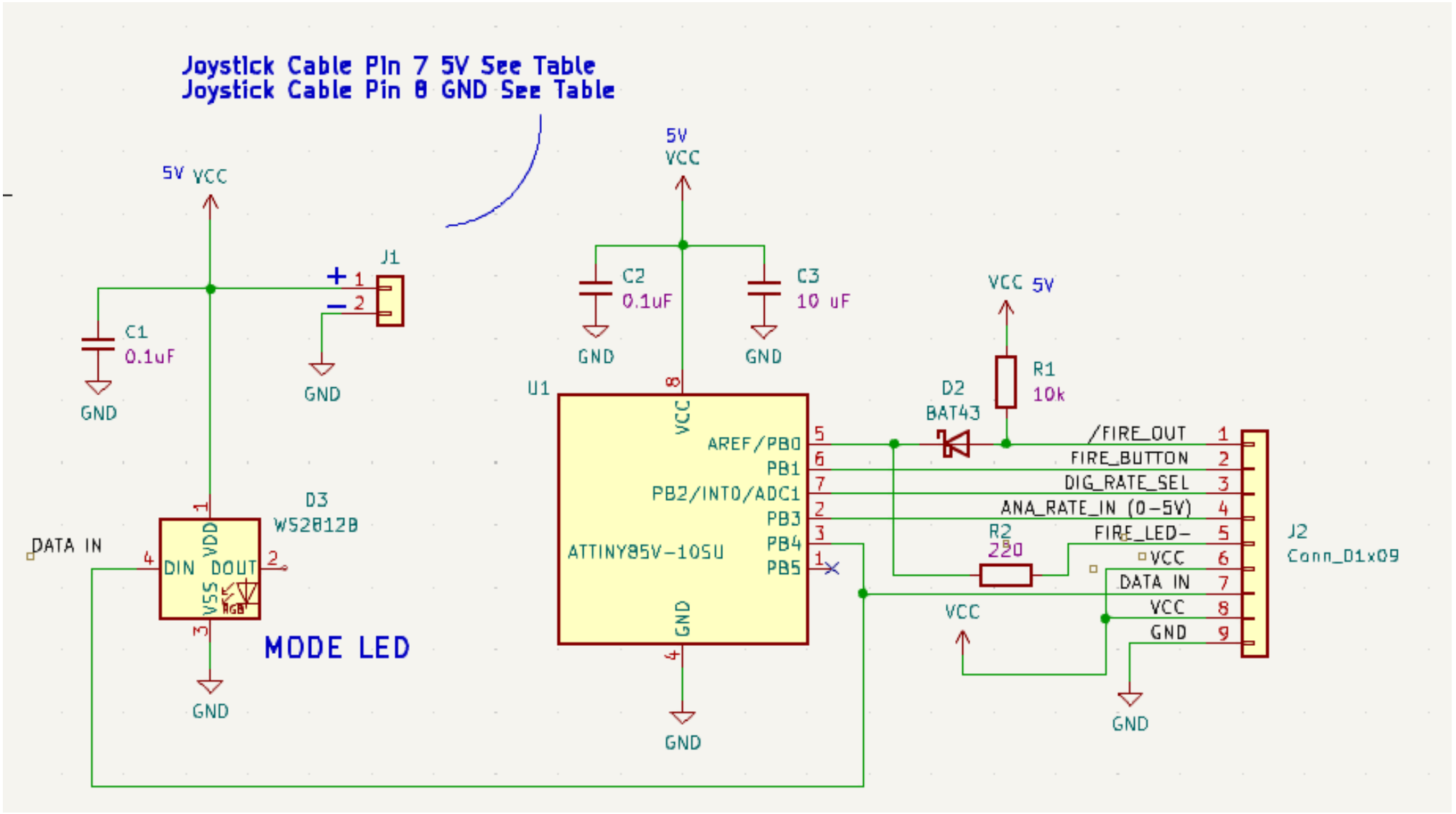
AUTOFIRE CONTROLLER SCHEMATIC DIAGRAM



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AUTOFIRE CONTROLLER SIGNAL DESCRIPTIONS

Notes:

J2 Signal Definitions:

PIN 1 /FIRE OUT – Active low signal output that emulates the trigger into the C64 or other computer to autofire a weapon at the following 3 selectable rates of 5, 10 and 15 pulses per second or make selections, etc. This signal is normally HIGH. Signal wires to pin 6 of a joystick See TABLE 1

PIN 2 FIRE_BUTTON – Signal from fire control button on joystick. This signal pulls LOW each time the joystick fire button is presssed. This signal is normally HIGH. Long press on power up selects the analog in for fire rate The analog mode is remembered. The analog mode is indicated by fading in and out of the RGB LED

PIN 3 DIG RATE SEL – Selects the autofire rate PULSED LOW. Rate of 5, 10 and 20 PPS are selectable. Quclck press cycles the rates and log press disables autofire.

PIN 4 A 0–5 VDC Input from external 10K potentiometer to vary the fire rate from 2 to 15 pulses per second. This pot is only active if the joystick is set to analog rate control. (Hold FIRE button on power up)

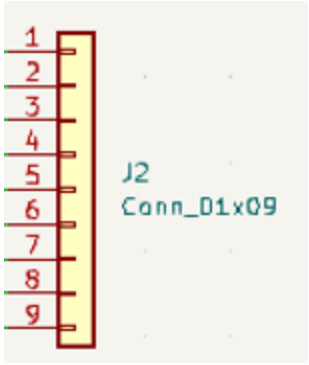
PIN 5 Fire LED – output for user option to mount external led to indictae the press of the fire button or to indicate autofire pulsing.

PIN 6 5v supply for LED–. Limiting resistor is onboard so no resistor is required

PIN 7 DATA OUTPUT for external Neopixel RGB LED

PIN 8 5V supply for Neopixel

PIN 9 GND for Neopixel



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Three Modes of Operation. (Modes 1 & 2 Press and Hold Fire Button)

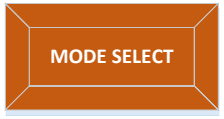
1) Fixed Auto Fire

2) Smooth or Analog Auto Fire

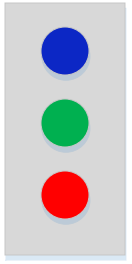
3) Normal Mode (No Autofire, One shot each press of fire button)

1) Fixed Auto Fire Mode

If the RGB LED is a fading purple pattern, then enter this fixed mode by pressing MODE SELECT and holding for 2+ seconds then release.



LED COLOR ON RGB LED



Each Mode Select Press Results in this color verses fire rate. These are the sub-modes

5 PPS

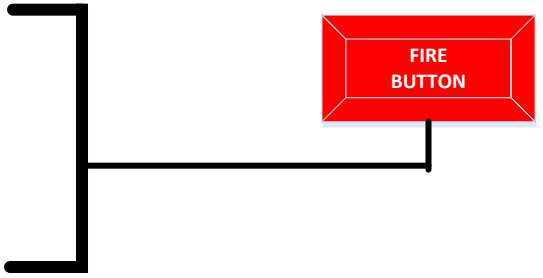
10 PPS

20 PPS

AUTOFIRE OFF DEFAULT MODE

PPS "Pulses Per Second"

Each pulse pulls the fire control signal low.



Each successive press Of the Mode Select button will select each of the three autofire sub-modes shown. Note : a fourth press will enter Normal Mode (LED White) Explained Later.

RGB LED

FIRE \ LED

BLINKS EACH TIME THE FIRE BUTTON IS PRESSED. IT WILL PULSE AT THE ABOVE RATES FOR AS LONG AS THE FIRE BUTTON IS PRESSED IN AUTOFIRE.

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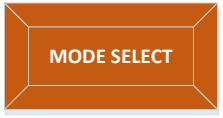
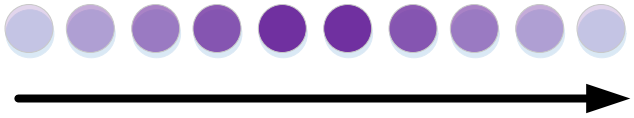
2) Smooth or Analog Auto Fire Mode

If the RGB LED is not in a fading purple pattern, then enter the smooth or analog mode by pressing MODE SELECT and holding for 2+ seconds then release.



In this mode, this pushbutton is only for entering and leaving this mode. To leave or exit this mode, pressing MODE SELECT and holding for 2+ seconds then release.

LED COLORS ON RGB LED



LED ANIMATED: PURPLE FADE IN/ OUT, REPEATING

RGB LED 

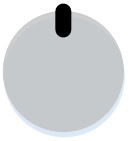
FIRE \ LED 

BLINKS EACH TIME THE FIRE BUTTON IS PRESSED. IT WILL PULSE AT THE ABOVE RATES OR JUST STAY ON AS LONG AS THE FIRE BUTTON IS PRESSED IN AUTOFIRE OFF.

Note that if this mode is entered from mode 1 that was in sub-mode “auto fire OFF”, then this smooth mode will also be in auto in auto fire OFF.

RANGE:
2 – 25 PPS

Press the fire button to auto fire and turn the potentiometer to change the rate of firing. Fully counter clockwise will result in 2 PPS. Fully clockwise will result in 25 PPS and will smoothly transition from CW to CCW with a resolution of 1 PPS.



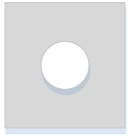
FIRE RATE CONTROL POTENTIOMETER

3) Normal Mode

If the RGB LED is a fading purple pattern, then enter this fixed mode by pressing MODE SELECT and holding for 2+ seconds then release.

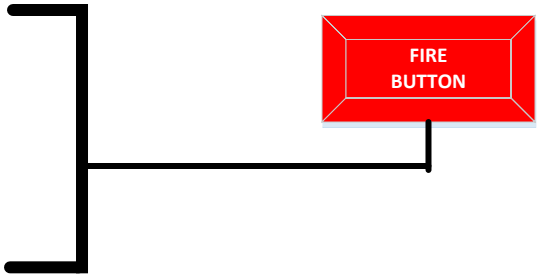
Each successive press Of the Mode Select button will select each of the four sub-modes shown. Keep pressing until the LED is White

LED COLOR ON RGB LED



RGB LED

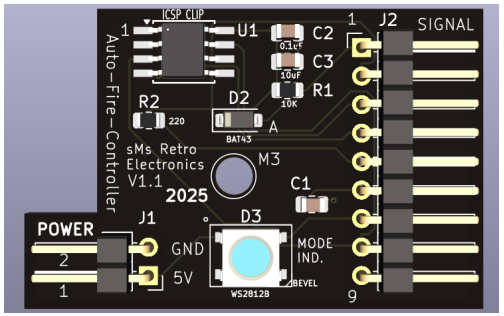
NORMAL MODE IS THE DEFAULT MODE



FIRE \ LED

WILL STAY ON AS LONG AS THE FIRE BUTTON IS PRESSED.THERE WILL BE NO AUTOFIRE IN THIS MODE.

TYPICAL JOYSTICK USING sMs Retro Electronics AUTOFIRE CONTROLLER DETAILED WIRING DIAGRAM



NUMBER OF SIGNALS

MODE RGB LED
WS2812B PANEL MOUNTE
5MM PANEL MOUNT LED
SUPPLIED WITH AUTOFIRE
BOARD

FLAT EDGE HERE

9 CONDUCTOR CONTROL CABLE TO C64 OR ATARI 2600

SEE NEXT PAGE FOR JOYSTICK CABLE WIRING DETAILS

FIRE OUT(J2-1)

+5V(J1-1)

GND J1-2

DATA, 5V, GND
J2-7 J2-8 J2-9

FIRE LED-, 5V OUT
J2-5 J2-6

AUTOFIRE CONTROLLER
PCB v1.1

FIRE IN (J2-2)

DIG_RATE_SEL (J2-3)

0-5 VDC ANALOG IN (J2-4)

FIRE \ LED
5V (A) LED-(K)

FIRE BUTTON

MODE SELECT

SANWAH 30 MM
OBSF-30

SANWAH 30 MM
OBSF-30

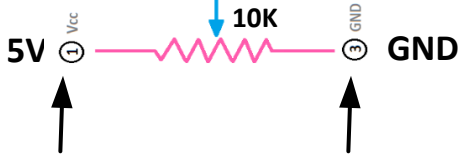
SIGNALS(5):
UP/DOWN
LEFT/RIGHT/
GND REF

JOYSTICK ASSEMBLY

GND GOES TO FIRE and MODE BUTTONS (USE J2-9 CONNECTION)

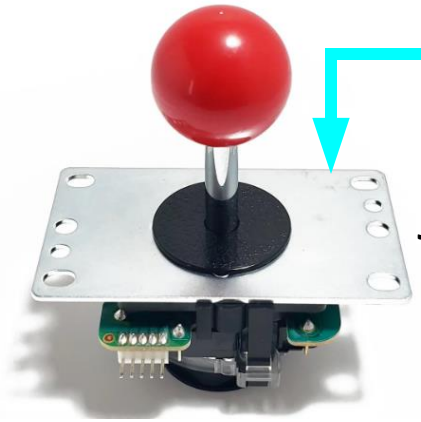
X2

AUTOFIRE SPEED CONTROL USE 10K LINEAR : B10K



CW = FASTER

CCW = SLOWER



SANWAH
JLF-TP-8YT

NOTE: MODE SELECT_IN IS MARKED DIG_RATE_SEL ON BOARD

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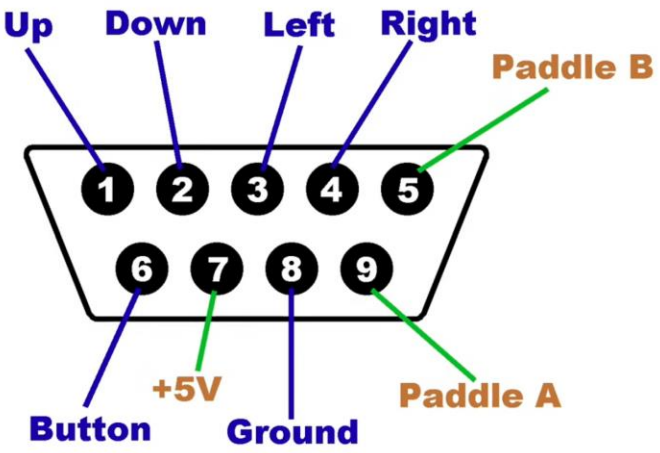
JOYSTICK WIRING DIAGRAM FOR ATARI AND COMMODORE 64 COMPUTERS

CABLE



SANWAH JLF-TP-8YT

FROM BOTTOM

DOWN

FUNCTION	CABLE PIN
Ground	8
Right	4
Left	3
Up	1
Down	2

Please Note:

The pinout is only correct if the Joystick is positioned as per this picture.

UP

VIEW LOOKING INTO PORT 1 OR 2 CONNECTOR ON COMPUTER

PIN 1 = RED = UP
PIN 2 = BLACK = DOWN
PIN 3 = GRAY = LEFT
PIN 4 = ORANGE = RIGHT
PIN 5 = BROWN = PADDLE B
PIN 6 = GREEN = FIRE BUTTON
PIN 7 = WHITE = +5V
PIN 8 = BLUE = GROUND
PIN 9 = YELLOW = PADDLE B

JOYSTICK MAY BE FITTED WITH A INTERMEDIATE CABLE AND PLUG

NOTE WIRE COLORS AS SHOWN

WIRE COLOR TO CONNECTOR PIN MAY BE DIFFERENT ANONG CABLES