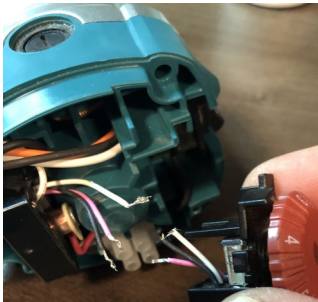# GRBL_SPD CONNECTION DIAGRAM

Router Speed Control

Cut red, black and white wire from Makita dial leaving enough to connect to wires from GRBL_SPD board and remove dial.

Makita black wire — (BLK)
Makita red wire — (WHT)
Makita white wire — (RED)

Router On/Off Relay

Cut white output wire from switch and connect the two wires (3&4) from relay to each end. This allows the original switch to still turn the router off for safety. The relay can be placed where the dial was.
(Leave switch on for normal operation)

CAUTION!! 120v/240v
UNPLUG FROM ROUTER FROM POWER SOURCE BEFORE CONNECTING!
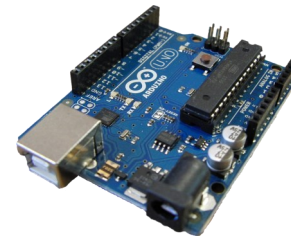

MAKITA
SWITCH
RELAY
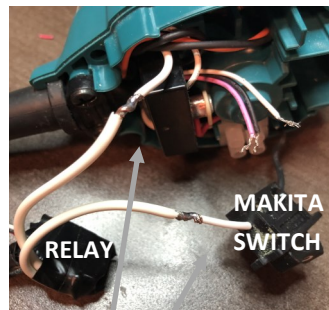
3   (-)
4   (+)

PWM INPUT

Connect to PWM Output
(pin 11 on GRBL 1.1)
Be sure to check the PWM is present with a voltmeter. Should see 0v to 5v fluctuating when adjusting rpm in your sender software. If not reflash GRBL 1.1 to your controller with variable spindle enabled.
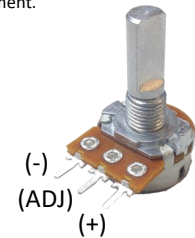

OPTIONAL MANUAL CONTROL

Both must be installed for this feature to work.

Manual Speed Control
(OPTIONAL)
Potentiometer for manual mode rpm adjustment.

(-)
(ADJ)
(+)

Manual Mode Switch
(OPTIONAL)
Two pin rocker switch for manual mode on/off control. Non-polarized connection so (+) and (IN) can be connected to either pin.

POWER CONNECTOR

Connect +5V to 5V and GND to GND on Arduino.

[TO ROUTER] BLK WHT RED   [TO RELAY] + −   [PWM] IN   [MANUAL CTRL] + ADJ −

POWER INPUT GND +5V

JHARRISON
GRBL_SPD
v3.03.22
MAKITA VERSION

[MANUAL SW] IN +

POWER ON   RELAY ON   MANUAL ON   RPM FINE ADJUST