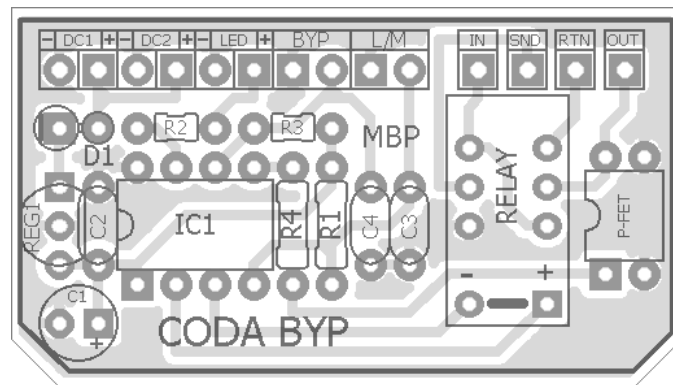
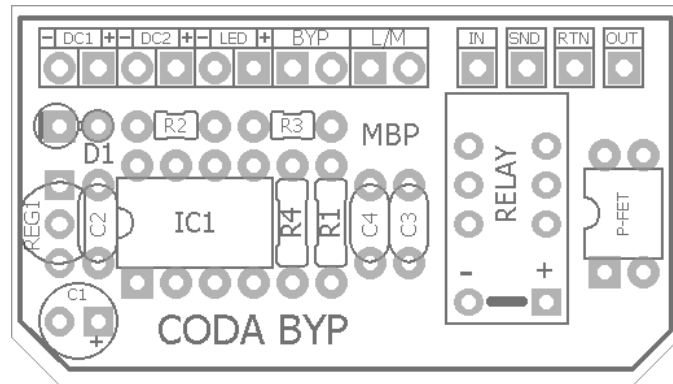


# CODA-BYP

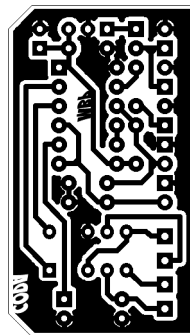
FX TYPE: Soft Bypass Switcher

<http://www.coda-effects.com>

Layout © 2017 madbeanpedals



1.73" W x 0.98" H



B.O.M.	
Resistors	
R1	10k
R2	1k
R3	10k
R4	1k5
Caps	
C1	10uF
C2	100n
C3	100pF
C4	100pF
Diodes	
D1	1N4001
IC	
IC1	12F675
Photofet	
P-FET	TLP222A
Regulator	
REG1	LM78L05
Relay	
RELAY	80-EC2-5NU

Shopping List			
Value	QTY	Type	Rating
1k	1	Metal Film	1/4 or 1/8W
1k5	1	Metal Film	1/4 or 1/8W
10k	2	Metal Film	1/4 or 1/8W
100pF	2	Ceramic/MLCC	16v
100n	1	Ceramic/MLCC	16v
10uF	1	Electrolytic	16v
1N4001	1		
12F675	1		
TLP222A	1		
LM78L05	1		
80-EC2-5NU	1		

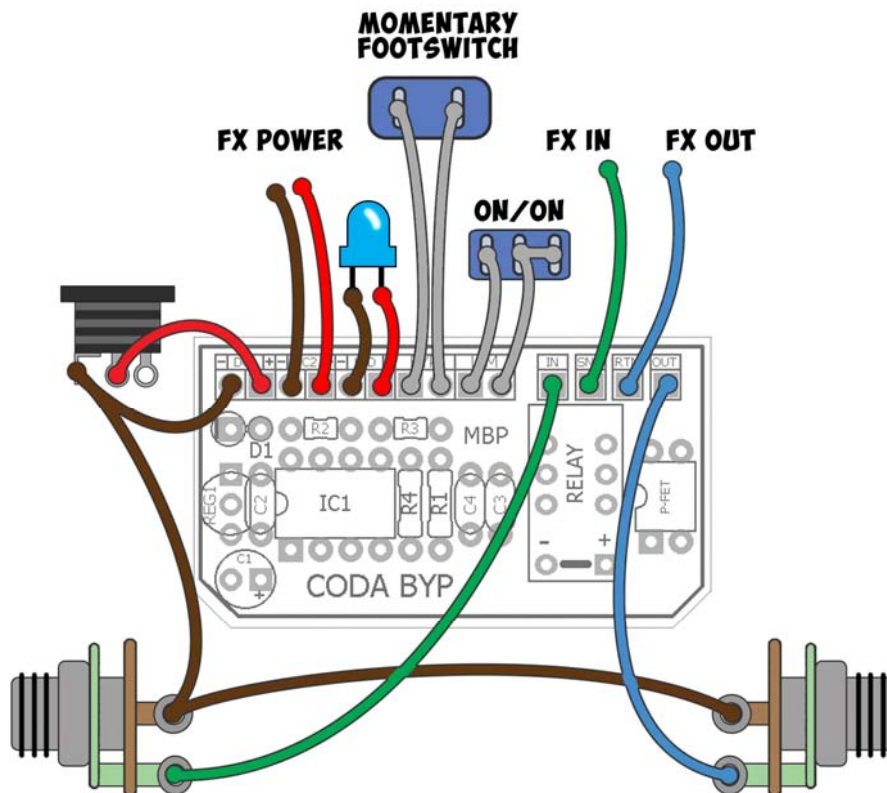
**Relay:** <http://www.mouser.com/Search/ProductDetail.aspx?R=EC2-5NUvirtualkey58580000virtualkey80-EC2-5NU>

**PhotoFET:**

<http://www.mouser.com/ProductDetail/Toshiba/TLP222AF/?qs=sGAEpiMZZMugPZL2oX39yOXoT7WOjhAebnSBXa29C%2f1%3d>

**PIC:** <http://www.mouser.com/ProductDetail/Microchip-Technology/PIC12F675-LP/?qs=sGAEpiMZZMvqv2n3s2xjsXReEaAKUmyLJEp5%252bQNBemA%3d>

## Wiring Guide



The toggle switch allows you to select momentary or latching function for bypass. If you do not wish to include the toggle switch, jumper the L/M pads together. This forces the switching system into latching function only.

Details on the switching system design as well as the PIC code can be found here: <http://www.coda-effects.com/2017/02/relay-bypass-final-code.html>

Link to the HEX code:

[https://github.com/benoitme/relaybypass/blob/master/dist/default/production/Relay\\_Bypass\\_on\\_press.X.production.hex](https://github.com/benoitme/relaybypass/blob/master/dist/default/production/Relay_Bypass_on_press.X.production.hex)

I had a problem using the HEX file downloaded directly from GitHub (the Pickit2 software wouldn't recognize it). Easy to fix: copy the actual code, paste it in a text file on your desktop, save and then rename the extension from .txt to .hex. Import the HEX file into the Pickit2 software to program.

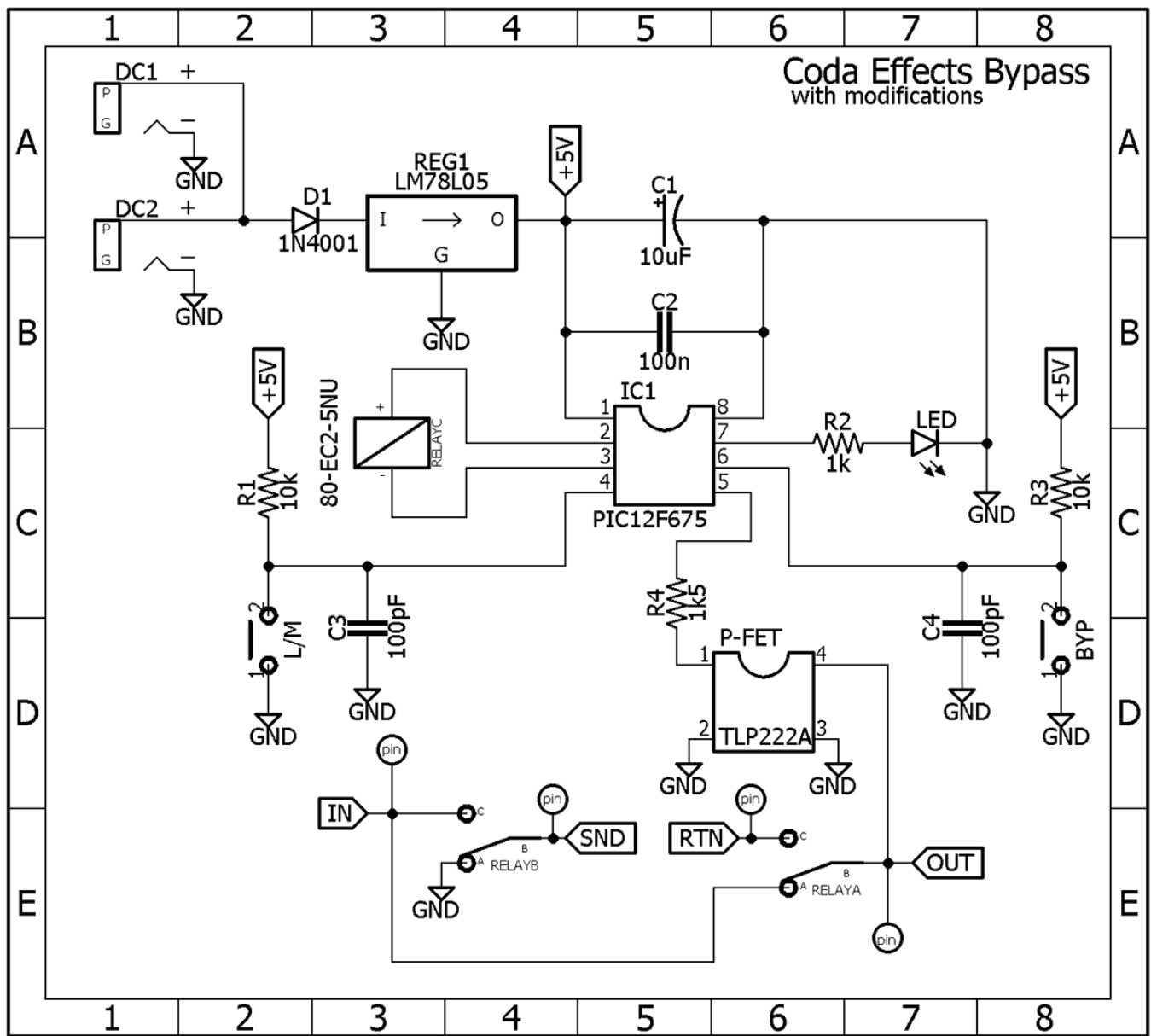
You will need a Pickit2 to program the PIC (these can be gotten from ebay). I also recommend the ZIF socket programmer (you can usually find them as a bundle for pretty cheap).

More info on the development of this switching system:

<http://www.coda-effects.com/2016/04/relay-bypass-conception-and-relay.html>

<http://www.coda-effects.com/2016/08/relay-bypass-with-anti-pop-system.html>

Be sure to thank Benoit for sharing his project!



Changes to the Coda design:

- Changed the bypass to fx input grounded on bypass
- Added C1 – C4, D1 and spec'd a different relay (cheaper one on Mouser)