



Part Number	Latching Relay	Non-Latching Relay	TrueSoft	NO TrueSoft	Buffer Switch	No Buffer Switch	Notes
R1					10M	10M	This dropdown resistor connected to ground to reduce switching pop.
R2					10M	0 ohms	Sets impedance presented to input of effect when its is turned off.
R4	1k ohm resistor						Current limiting resistor connects to foot switch to trigger effect on/off.
R5	EMPTY	0 ohms					Use jumper to make circuit compatible with non-latching relays equivalent to the TQ2-5V
R6	0 ohms	EMPTY					Use jumper to make circuit compatible with latching relays equivalent to the TQ2-L-5V
R7	0 ohms	EMPTY					
R11			100k	EMPTY			These dropdown resistors around the FET keep the switching noise quiet. Reduce to accelerate the on/off switching curve.
R12			100k	EMPTY			Works with C10 to set FET switching speed. LARGER = SLOWER
D3	EMPTY	1N4148					This diode protects the transistor from the reverse voltage spike generated by the inductor in the relay switch.
D6			1N4148	EMPTY			Part of FET switch to smooth transition to ON state.
C1	150uF 25V capacitor (I use a low ESR cap for better ripple filtering)						Filter capacitor to reduce power supply ripple / noise.
C10			0.1uF	EMPTY			Slows down FET switching for a smoother on/off transition. Larger values = slower FET switching.
Q2	EMPTY	BS170					The latching relay has a 3ms delay between the FET switch in TrueSoft operation to smooth out switching. The non-latching relay does not have a timing delay. You MUST use non-latching relays with NO TrueSoft for delay/reverbs that have TrueTrails bypass operation.
Q3			J175	JUMP pins 1 to 3			
K1	TQ2-L-5V	TQ2-5V					
DPDT					YES	TWO JUMPERS	Connect pins 2 & 3 together AND pins 5 & 6 together if effect doesn't have a buffered output. Use this slide switch: <a href="#">C&amp;K JS202011AQN</a>

The 2 pins marked BATT are for connecting a 9V battery. A latching relay is **HIGHLY** recommended with batteries!