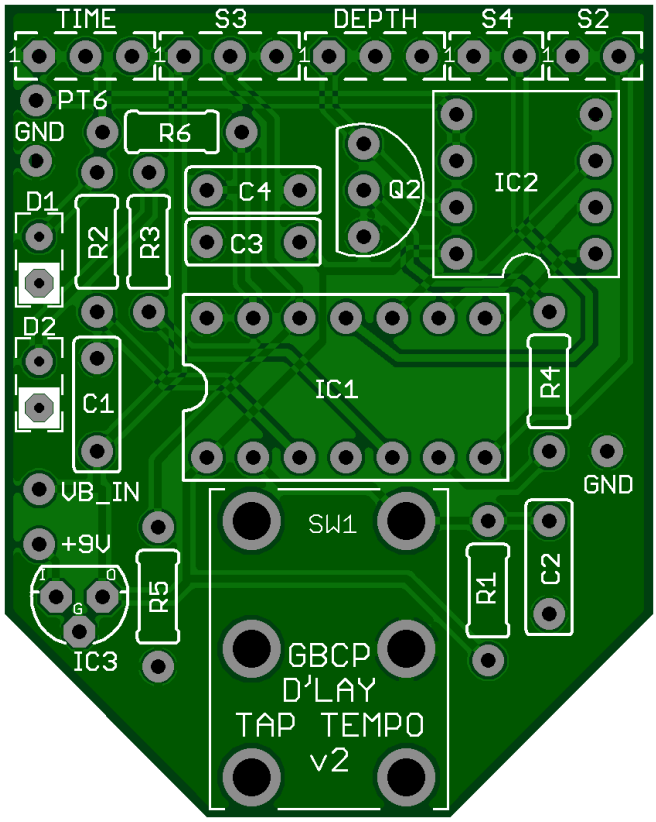
D’Lay Tap Tempo and Modulation Board v2

Board dimensions are (width by height): 1.76 x 1.4 inches, 45 x 36mm

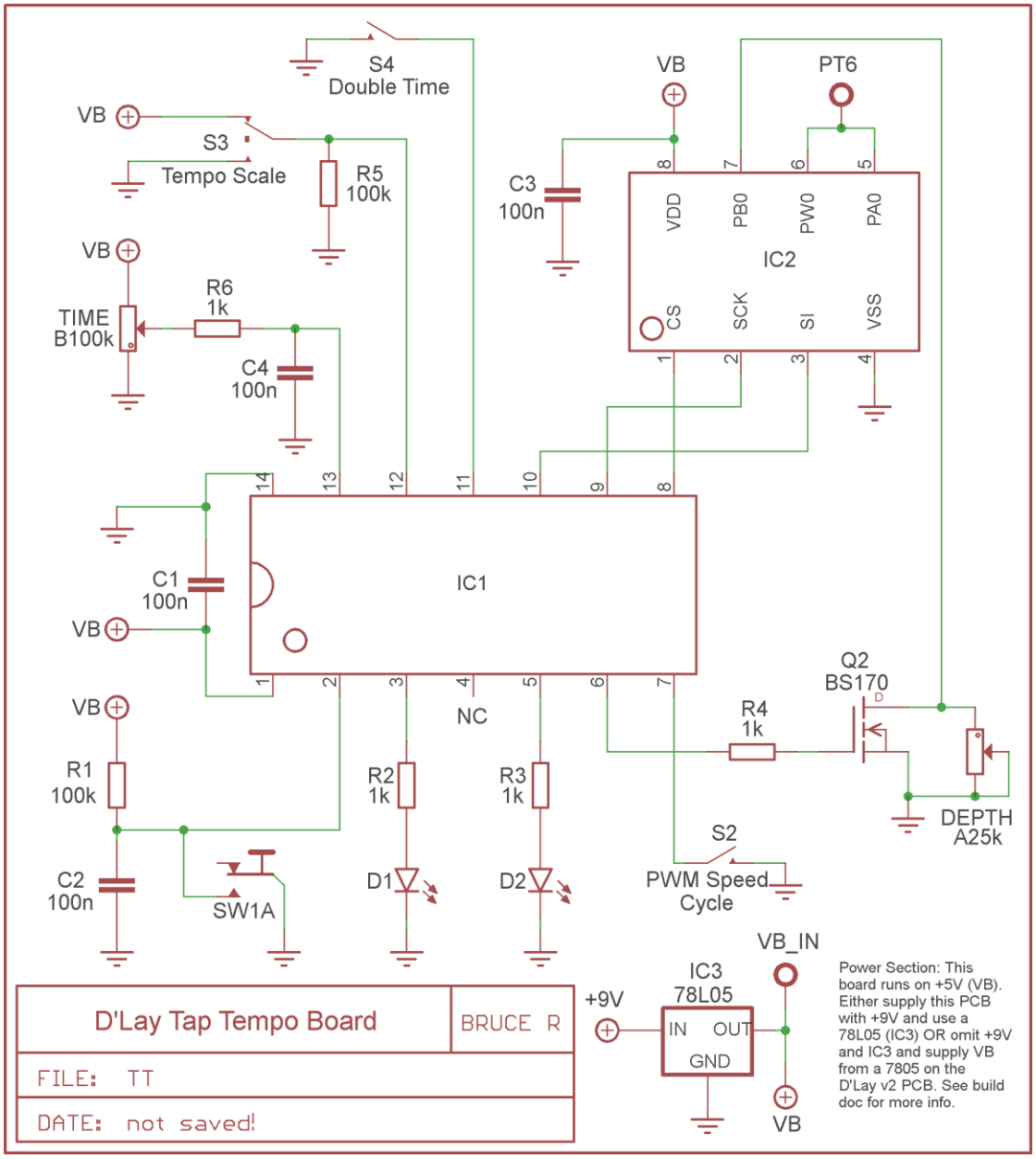
This board leverages the TapTation™ chipset from The Tone God™. These chips are available for sale on the DIYStompboxes.com™ website store. This new version of this board has a PCB-mounted DPDT switch for easy mounting in your enclosure. Please see the build notes regarding this switch. The schematic is basically a direct copy of The Tone God’s example circuit, as seen in the TapTation chipset datasheet and application notes documentation. This means that this board could be used for other delay projects in addition to the GuitarPCB.com D’Lay. This is an advanced build and is not recommended for new builders.



Part	Value
R1	100k
R2	1k
R3	1k
R4	1k
R5	100k
R6	1k
C1	100n
C2	100n
C3	100n
C4	100n
D1	Tempo Clock LED
D2	Tempo Scale LED

Part	Value
Q2	BS170
IC1	TTG_TAPTATION
IC2	MCP41100
IC3	78L05*
SW1 Tap Tempo	DPDT Momentary Stomp*
S2 PWM Speed Cycle	SPST
S3 Tempo Scale	SPDT On-Off-On
S4 Double Time	SPST
TIME	B100k
DEPTH	A25k

*See build notes



Build Notes –There have been a few changes from Version 1 of the GuitarPCB.com Tap Tempo and Modulation Circuit and PCB, which are covered below.

- A board-mounted DPDT momentary stomp switch (SW1) is now incorporated, which is designed to be mounted on the component side of the board. It is critical that the orientation of this switch is correct. As you look at the component side of the PCB as seen on page 1 of this document, the "normally open" pins must be toward the center of the board, and the "normally closed" near the bottom edge. Test connectivity between the center pins and that row's outside pins using a multimeter. Without the button pressed, the normally closed side will have ~0 resistance, the normally open will have infinite resistance. This should reverse when the stomp switch is depressed. Only 2 pins of this switch are used. If you do not want PCB mount the switch, pins 4 and 5 (top right and middle right) are the two that can connect to an off-board momentary switch.
- The 5V voltage regulator on this board is now optional, as you may leverage the 5V+ VB pad from the v2 D'Lay board, which now is outfitted with an L7805 voltage regulator (previously each of these boards used a L78**L**05). If you are using this board with another delay or the version 1 GuitarPCB.com D'Lay, you'll need to install a 78L05. ***IMPORTANT***: Do **not** install a voltage regulator on this PCB **and** connect 5V+ from the v2 D'Lay board. *One or the other, not both.*

- The board was completely redesigned to make the board easier to mount in an enclosure with cut corners and organize most of the external wiring along 2 edges of the board. The board is now commercially fabricated.
- The PT6 pad on this PCB will connect to the left pad of R22 on the version 2 D'Lay board. A wiring diagram will be added to this document soon for your convenience. R22 and the Time pot are removed from the main D'Lay board when using the optional Tap Tempo board.
- From The Tone God's TapTation Interface Application Note: "*The PWM Cycle Speed switch will select the rate the Tempo PWM Output will sweep allowing for chorus and vibrato effects. Some delaytempos will not exibit strong chourus / vibrato characteristics until an appropriate cycle speed and/or large enough modulation depth setting is selected causing enough pitch shift in each audio delay cycle.*"

Standard Wiring Diagram