

N.E.W. – TTTSNB Main PCB Build guide

The N.E.W. TTTSNB is an ambitious project intended to replicate the Master of Puppets guitar tone using entirely solid state components. It's split between two PCB's, a preamp and an EQ section, each of which can be built as stand-alone pedals or together as a pair. This build guide covers the main PCB - the preamp of a Mark IIC+ amp.

This guide is intended for people who are very experienced building pedals. Component sourcing, component identification, assembly techniques, wiring stomp switches, etc. is not covered. Build some other N.E.W. DIY projects before attempting this build as it's quite time consuming and complicated.

Don't forget to connect the ground pad of the PCB to the ground lug of the input, output, and DC power jacks!

Due to the scope of this project, technical support is not available. However, consider joining the GCI DIY PCB Builders group on Facebook to get advice from and share your work with other builders. We require that all group members agree to the rules before being accepted into the group.

<https://www.facebook.com/groups/2454786551255317/>

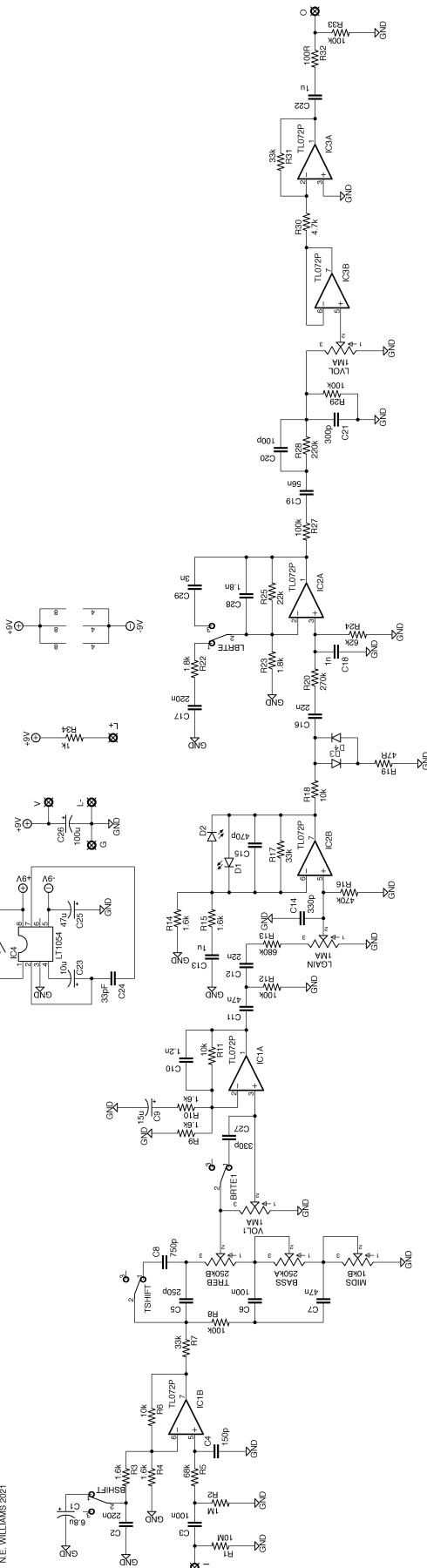
Component values for the PCB as well as some alternate values are listed below. This is a BOM for the PCB only. Resistors and diodes are 6.3mm leg spacing, film and ceramic capacitors are 5.08mm leg spacing, and electrolytic capacitors are 2.54mm leg spacing. I/O jacks, DC jack, switches, enclosure, and knobs are not listed. Due to the variety of ways the builder may decide to house these circuits, a detailed drill template is not included, however, a PDF suggested layout is.

Part	Value	Device	Package	Description
R1	10M	6MM.3	R0207/3	6mm Resistors
R2	1M	6MM.3	R0207/3	6mm Resistors
R3	1.6k	6MM.3	R0207/3	6mm Resistors
R4	1.6k	6MM.3	R0207/3	6mm Resistors
R5	68k	6MM.3	R0207/3	6mm Resistors
R6	10k	6MM.3	R0207/3	6mm Resistors
R7	33k	6MM.3	R0207/3	6mm Resistors
R8	100k	6MM.3	R0207/3	6mm Resistors
R9	1.6k	6MM.3	R0207/3	6mm Resistors
R10	1.6k	6MM.3	R0207/3	6mm Resistors
R11	10k	6MM.3	R0207/3	6mm Resistors
R12	100k	6MM.3	R0207/3	6mm Resistors
R13	680k	6MM.3	R0207/3	6mm Resistors
R14	1.6k	6MM.3	R0207/3	6mm Resistors
R15	1.6k	6MM.3	R0207/3	6mm Resistors
R16	470k	6MM.3	R0207/3	6mm Resistors
R17	33k	6MM.3	R0207/3	6mm Resistors
R18	10k	6MM.3	R0207/3	6mm Resistors
R19	47R	6MM.3	R0207/3	6mm Resistors
R20	270k	6MM.3	R0207/3	6mm Resistors
R22	1.8k	6MM.3	R0207/3	6mm Resistors
R23	1.8k	6MM.3	R0207/3	6mm Resistors
R24	62k	6MM.3	R0207/3	6mm Resistors
R25	22k	6MM.3	R0207/3	6mm Resistors
R27	100k	6MM.3	R0207/3	6mm Resistors
R28	220k	6MM.3	R0207/3	6mm Resistors
R29	100k	6MM.3	R0207/3	6mm Resistors
R30	4.7k	6MM.3	R0207/3	6mm Resistors
R31	33k	6MM.3	R0207/3	6mm Resistors
R32	100R	6MM.3	R0207/3	6mm Resistors
R33	100k	6MM.3	R0207/3	6mm Resistors
R34	1k	6MM.3	R0207/3	6mm Resistors
D1	LED3MM	LED3MM	LED3MM	3mm LED
D2	LED3MM	LED3MM	LED3MM	3mm LED
D3	1n4148	DO35.2	DO35-2	Schottky diode
D4	1n4148	DO35.2	DO35-2	Schottky diode
C1	6.8u	5mm	050_020_1	Electrolytic cap
C2	220n	072X0252	072X025	Film cap
C3	100n	072X0252	072X025	Film cap
C4	150p	072X0252	072X025	Ceramic cap
C5	250p	072X0252	072X025	Ceramic cap
C6	100n	072X0252	072X025	Film cap
C7	47n	072X0252	072X025	Film cap
C8	750p	072X0252	072X025	Ceramic cap

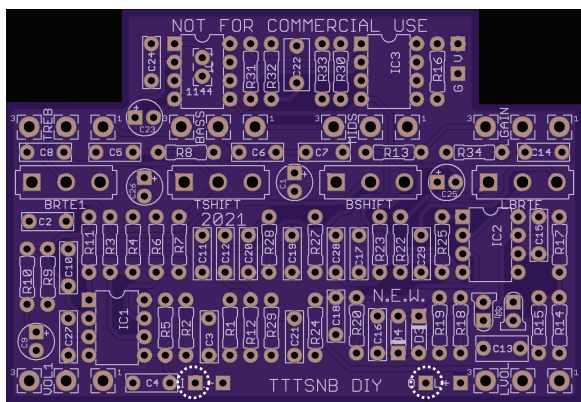
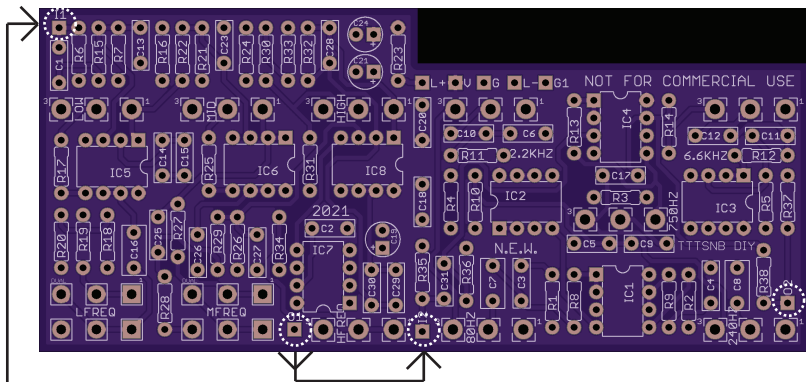
C9	15u	5mm	050_020_1	Electrolytic cap
C10	1.2n	072X0252	072X025	Film cap
C11	47n	072X0252	072X025	Film cap
C12	22n	072X0252	072X025	Film cap
C13	1u	072X0352	072X035	Film cap
C14	330p	072X0252	072X025	Ceramic cap
C15	470p	072X0252	072X025	Ceramic cap
C16	22n	072X0252	072X025	Film cap
C17	220n	072X0252	072X025	Film cap
C18	1n	072X0252	072X025	Film cap
C19	56n	072X0252	072X025	Film cap
C20	100p	072X0252	072X025	Ceramic cap
C21	300p	072X0252	072X025	Ceramic cap
C22	1u	072X0352	072X035	Film cap
C23	10u	5mm	050_020_1	Electrolytic cap
C24	33pF	072X0252	072X025	Ceramic cap
C25	47u	5mm	050_020_1	Electrolytic cap
C26	100u	5mm	050_020_1	Electrolytic cap
C27	330p	072X0252	072X025	Ceramic cap
C28	1.8n	072X0252	072X025	Film cap
C29	3n	072X0252	072X025	Film cap
IC1	TL072P	TL072P	DIP08	OP AMP
IC2	TL072P	TL072P	DIP08	OP AMP
IC3	TL072P	TL072P	DIP08	OP AMP
IC4	LT1054	MAX1044	DIP08	Voltage Regulator
LGAIN	1MA	POT16MM	16MM	Potentiometers
LVOL	1MA	POT16MM	16MM	Potentiometers
MIDS	10kB	POT16MM	16MM	Potentiometers
BASS	250kA	POT16MM	16MM	Potentiometers
TREB	250kB	POT16MM	16MM	Potentiometers
VOL1	1MA	POT16MM	16MM	Potentiometers
TSHIFT	SPDT	SPDTPIN_MOUNT	TOGGLE SWITCH	TOGGLE SWITCH
LB RTE	SPDT	SPDTPIN_MOUNT	TOGGLE SWITCH	TOGGLE SWITCH
BRTE1	SPDT	SPDTPIN_MOUNT	TOGGLE SWITCH	TOGGLE SWITCH
BSHIFT	SPDT	SPDTPIN_MOUNT	TOGGLE SWITCH	TOGGLE SWITCH
V	PAD	PAD	SQUARE	PAD
G	PAD	PAD	SQUARE	PAD
I	PAD	PAD	SQUARE	PAD
L+	PAD	PAD	SQUARE	PAD
L-	PAD	PAD	SQUARE	PAD
O	PAD	PAD	SQUARE	PAD

NEW:
THE THING THAT SHOULD NOT BE
(MAIN PCB)
N.E. WILLIAMS 2021

JUMP TO USE LTC1144



SINGLE MASTER SWITCH WIRING



EFFECT OUT

EFFECT IN

DUAL SWITCH WIRING

