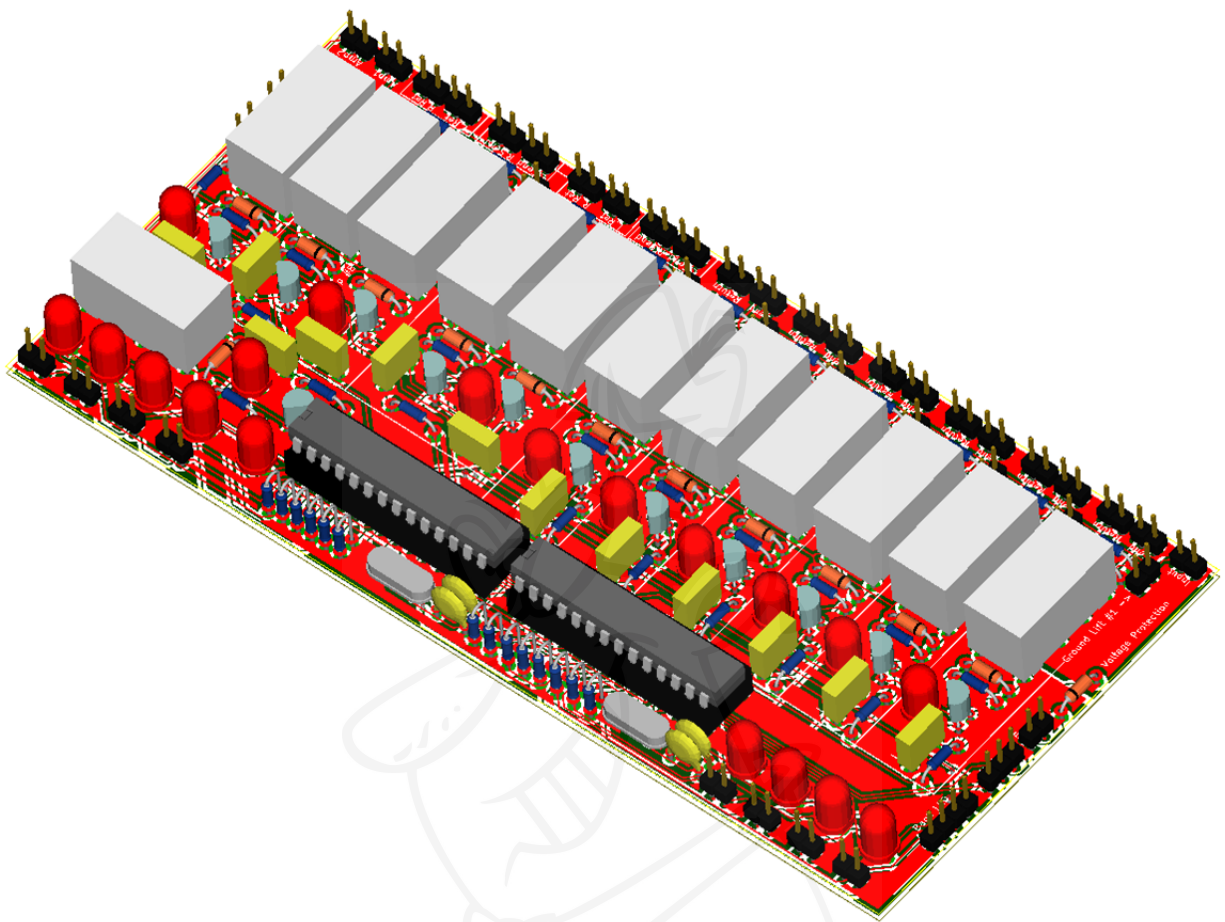


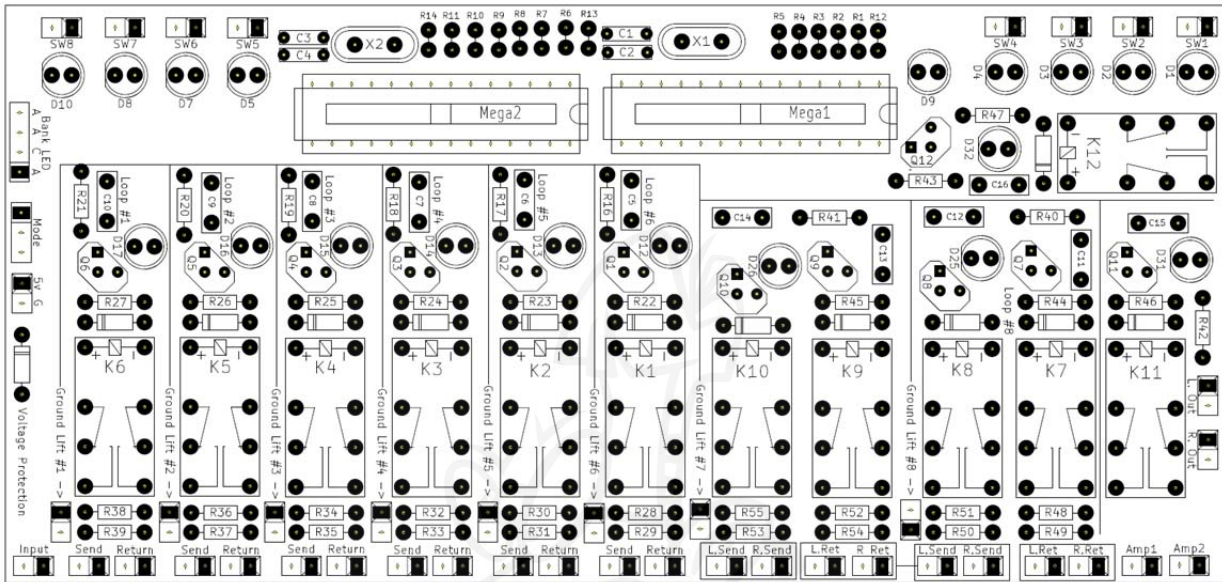
EffectBlade Switcher Build Documentation



Property of eFX Digital Design.com

All rights reserved 2013

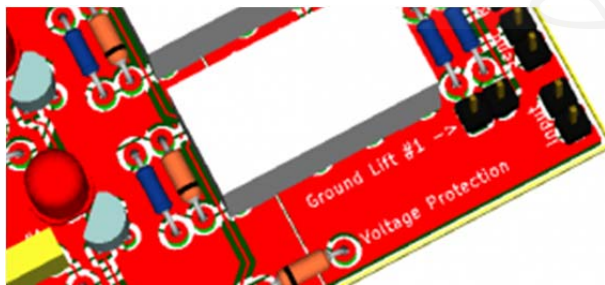
EffectBlade Switcher Build Documentation



Introducing our newest project, the EffectBlade. The EffectBlade is the very first and only DIY Programmable True Bypass Looper. The concept of a Programmable True Bypass Looper is not new, in fact many companies are already offering production ready switchers. But why pay someone to have all the fun when you can build your own!! To use simply hook one pedal into each of the loops and begin programming your patches. For each preset patch any combination of pedals can be either activated or bypassed. Within each bank you will have 8 instant recall patches and with 3 banks you can store a total of 24 different configurations!

Mono Loops

Loops 1 thru 6 on the EffectBlade are simple mono loops, meaning each loop features a send and return. These loops are great with overdrives, boosters, phaser's and more. Each mono loop also features its own ground lift if you find yourself experiencing any kind of pop while switching.



EffectBlade Switcher Build Documentation

Stereo Loops

Loops 7 & 8 of the EffectBlade are wired to be stereo loops. Each loop features a left and right send/receive. Stereo loops work great with stereo pedals such as modulation effects and delays. If you do not wish to use the stereo loops simply plug your mono pedal into the left send/return jacks and use as normal. Like the mono loops the stereo loops also feature a ground lift option.



Amp Control

The last trick the EffectBlade offers is amp control. The EffectBlade offers the built in functionality to be able to program in and store amp settings. With two amp control loops, the EffectBlade is able to control any two or three channel amp depending on wiring. Great for switching on/off vibrato, tremolo, reverb, drive, whatever your amp offers!

Operation Modes

The EffectBlade offers three operation modes which are selectable via a toggle switch. The three modes are as followed

- **Override Mode:** When changing presets all previous patches will be deactivated and the new patch activated
- **Combination Mode:** When changing presets, patches that are currently on will all be added together with the newly selected preset . This allows for blending or combining of several different presets.
- **Looper Mode:** This mode allows the unit to function just as a true bypass loopers strip would. Switch 1 controls loop 1, Switch 2 controls loop 2, etc.

EffectBlade Switcher Build Documentation

Features

- 6 mono loops
- 2 stereo loops (end)
- 2 amp controls
- 8 presets per bank, 3 banks
- Ground Lift on each bank.
- 3 operation modes (Override, Combination, Looper)
- Completely scalable! No need to build the whole thing out if you aren't going to use them (I will provide guides on how to do this!)
- **100% analog signal path**



ref	value
C1	22pF
C2	22pF
C3	22pF
C4	22pF
C5	100nF
C6	100nF
C7	100nF
C8	100nF
C9	100nF
C10	100nF
C11	100nF
C12	100nF
C13	100nF
C14	100nF
C15	100nF
C16	100nF
D1	LED
D2	LED
D3	LED
D4	LED
D5	LED
D6	TRI_LED
D7	LED
D8	LED
D9	LED
D10	LED
D12	LED
D13	LED
D14	LED
D15	LED
D16	LED
D17	LED
D18	1N4148
D19	1N4148
D20	1N4148
D21	1N4148
D22	1N4148
D23	1N4148
D24	5.1v Zener
D25	LED
D26	LED
D27	1N4148
D28	1N4148
D29	1N4148
D30	1N4148
D31	LED
D32	LED
D33	1N4148
D34	1N4148
J1	1/4 Jack
J2	1/4 Jack
J3	1/4 Jack

ref	value
K1	Omron Relay
K2	Omron Relay
K3	Omron Relay
K4	Omron Relay
K5	Omron Relay
K6	Omron Relay
K7	Omron Relay
K8	Omron Relay
K9	Omron Relay
K10	Omron Relay
K11	Omron Relay
K12	Omron Relay
Q1	2N3904
Q2	2N3904
Q3	2N3904
Q4	2N3904
Q5	2N3904
Q6	2N3904
Q7	2N3904
Q8	2N3904
Q9	2N3904
Q10	2N3904
Q11	2N3904
Q12	2N3904
R1	220R
R2	220R
R3	220R
R4	220R
R5	220R
R6	220R
R7	220R
R8	220R
R9	220R
R10	220R
R11	220R
R12	10k
R13	10k
R14	220R
R16	470R
R17	470R
R18	470R
R19	470R
R20	470R
R21	470R
R22	220R
R23	220R
R24	220R
R25	220R
R26	220R
R27	220R
R28	1M
R29	1M

ref	value
R30	1M
R31	1M
R32	1M
R33	1M
R34	1M
R35	1M
R36	1M
R37	1M
R38	1M
R39	1M
R40	470R
R41	470R
R42	470R
R43	470R
R44	220R
R45	220R
R46	220R
R47	220R
R48	1M
R49	1M
R50	1M
R51	1M
R52	1M
R53	1M
R54	1M
R55	1M

ref	value
P1	1/4 Jack
P2	1/4 Jack
P3	1/4 Jack
P4	1/4 Jack
P5	1/4 Jack
P6	1/4 Jack
P7	1/4 Jack
P8	1/4 Jack
P9	1/4 Jack
P10	1/4 Jack
P11	1/4 Jack
P12	1/4 Jack
P13	2p Header
P14	2p Header
P15	2p Header
P16	2p Header
P17	2p Header
P18	2p Header
P19	Power Jack
P20	1/4 Jack
P21	1/4 Jack
P22	1/4 Jack
P23	1/4 Jack
P24	1/4 Jack
P25	1/4 Jack
P26	1/4 Jack
P27	1/4 Jack
P28	1/4 Jack
P29	1/4 Jack
P30	2p Header
P31	2p Header
SW1	SPST Momentary
SW2	SPST Momentary
SW3	SPST Momentary
SW4	SPST Momentary
SW5	SPST Momentary
SW6	SPST Momentary
SW7	SPST Momentary
SW8	SPST Momentary
SW9	SPDT Toggle
X1	16mHz Crystal
X2	16mHz Crystal

Speciality Mouser Part Numbers

Omron Relay - 653-G5V-2-H1-DC5

16mHz Crystal - (815-ABL-16-B2)

