Copious input filtering.
Wall adapters can be noisy.

9VDC center positive
from wall adapter

J2
PJ-044AH
L1
744220103
FB1
74279219
FB2
74279219
F1
3403.0160.11
TVS1
SMBJ9.0A
C1
10n
C2
100n
C3
1u
C4
10u
C5
10u
C6
10u
C7
10u
9VF
GND
Power indicator LED.
R16
1.5k
LED1
LS M676

R22 and Q10 drive the output high.
ZD1 limits the output voltage to
a bit under 5V.

9VF
R22
300
Q10
PZT2222A
D9
BAT165A
C15
1u
GND
D8, Q9, and R21 drive
the output low.
D8
BAT165A
R24
47
F4
3403.0160.11
Output BNC Jack.
J3
0731000133
R21
1.3k
Q9
PZT2222A
ZD1
BZT52H-B5V1
R23
10k
TVS4
DLP05LC
R25
10
ZD2
BZT52H-B5V1
SCR1
MCR08B
R26
100
C14
100n

Q5 and Q6 form an SR latch.

R14
2.2k
R15
510
R13
2.2k
R12
15k
Q5
PMBT2222A
Q6
PMBT2222A
R10
47k
R11
47k
D7
BAT54
R17
9.1k
R20
56k
D6
BAV99
C13
8.2n
R19
47k
Q7
PMBT2222A
Q8
PMBT2222A
R18
47k

Q7 and Q8 drive the output stage
in one shot / single pulse fashion
after latch set.

ZD2, SCR1, and friends form
an output overvoltage crowbar.
F1 is opened if the output
voltage exceeds ~6V.

Q1 quickly discharges C9 and C10
upon switch close.
R3 slowly charges C9 and C10 upon
switch open.

Q3 resets the latch after
the switch debounces open.

9VF
R3
7.5k
D2
BAV99
R6
75k
Q3
PMBT2222A
F2
3403.0156.24
F3
3403.0156.24
R1
4.7k
Q1
PBSS4250X
C9
10u
C10
10u
R7
47k
C8
1u
TVS2
SMBJ9.0A
J1
0387406102
TVS3
SMBJ9.0A
R2
47k
D4
BAS16
GND
A normally open pedal switch
should be connected at J1.

Q4 sets the latch after
the switch debounces closed.

D1
BAT54A
D3
BAV99
R8
24k
Q4
PMBT2222A
R4
7.5k
Q2
PBSS5250X
C11
10u
C12
10u
R9
47k
R5
4.7k

Q2 quickly discharges C11 and C12
upon switch open.
R4 slowly charges C11 and C12 upon
switch close.

S1
Screw #2
S2
Screw #2
S3
Screw #2
S4
Screw #2
S5
Screw #2

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Title: Pedal Trigger

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