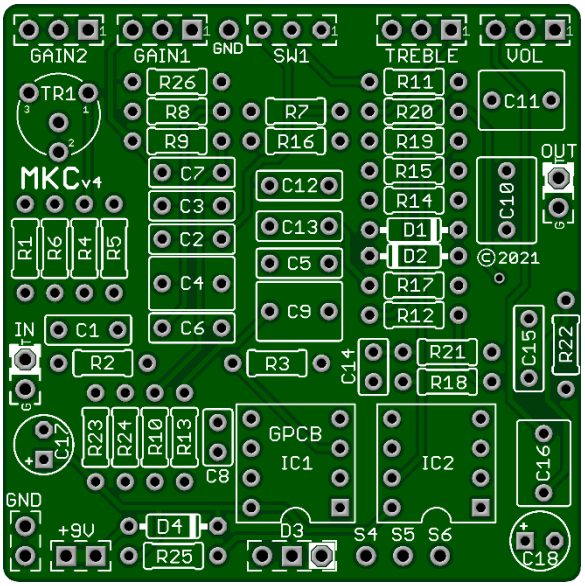
MKC v4 2021 - Modified Klon Circuit

Our MKCv4 allows you to build a stock Klon style circuit. For an even more versatile build we also allow you to make these individual controls. One for Dirt and the other for Clean as opposed to being forced to use them together. For even more versatility we also have included a Bass Boost option and our "Ultra Gain Mod".



Dimensions: 1.95" x 1.95"

Part	Value
R1	1M
R2	10k
R3	1M
R4	4k7
R5	1k
R6	1k5
R7	10k
R8	2k2
R9	15k
R10	470k
R11	1k5
R12	15k

Part	Value
R13	1k
R14	22k
R15	47k
R16	22k
R17	10k
R18	470k
R19	2k2
R20	4k7
R21	100k
R22	100k
R23	22k
R24	22k

Part	Value
R25	1k8
R26	68k*
C1	100n
C2	100n
C3	68n
C4	390n
C5	100n
C6	68n
C7	100n
C8	390p
C9	1u

Part	Value
C10	1u
C11	1u
C12	2n2
C13	22n
C14	820p
C15	4n7
C16	470n
C17	47u
C18	47u
SW1	SPDT on-on
TR1	100k

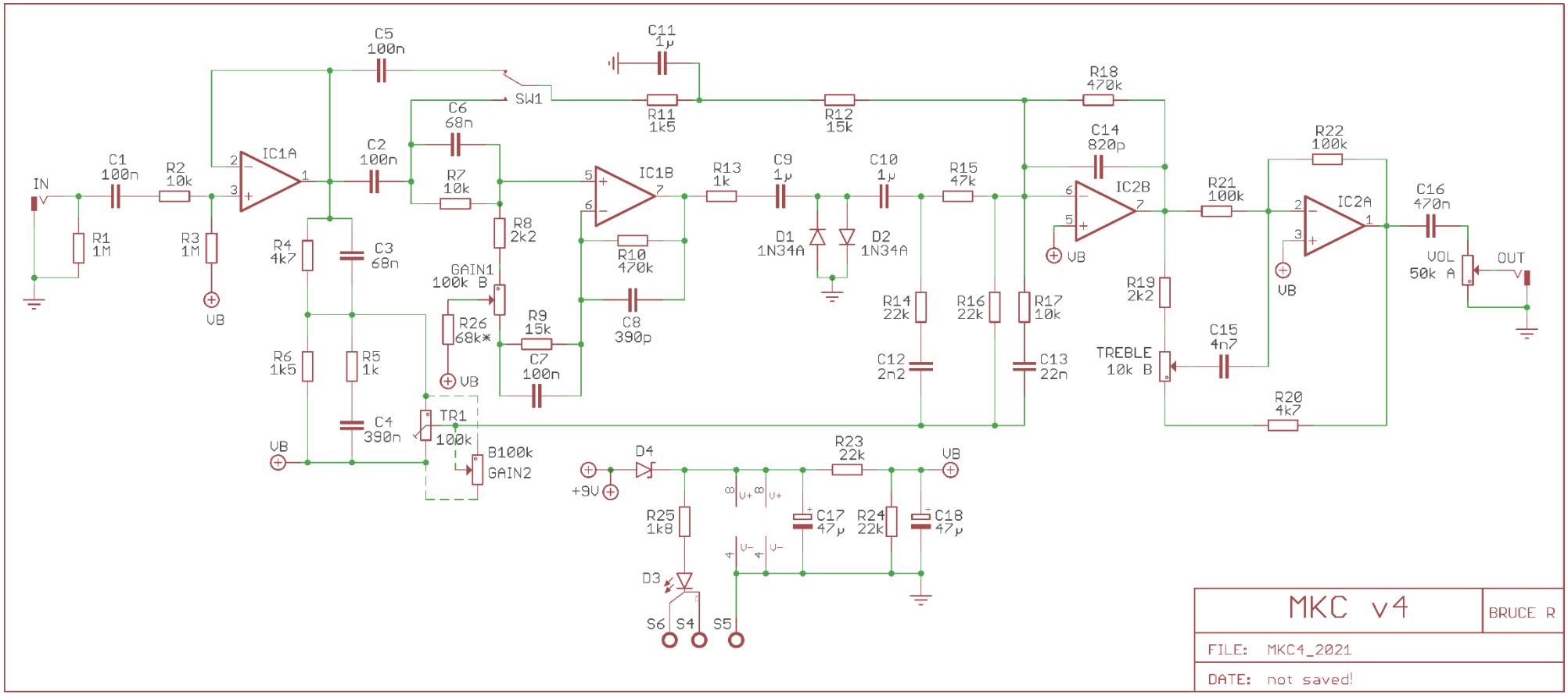
Part	Value
VOL	A50k
TREBLE	B10k
GAIN1	B100k
GAIN2	B100k
IC1	TL072
IC2	TL072
D1	1N34A
D2	1N34A
D3	Status LED
D4	1n5817

STATUS LED

***D3** is a Status LED that can be either a Bi-Color Common Anode or a Standard On/Off LED. (See Tip Sheet)

New in this GuitarPCB 2021 version release:

- Added 1N5817 circuit protection diode.
- Larger off-board wiring pads.
- Added extra +9v and Ground pads for "Combo Builds" allowing easy wiring options and connectivity.


IN
C1
100n
R1
1M
R2
10k
R3
1M
VB
IC1A
C5
100n
C2
100n
C6
68n
R7
10k
SW1
C11
1µ
R11
1k5
R12
15k
R18
470k
C14
820p
IC1B
R13
1k
C9
1µ
C10
1µ
R15
47k
D1
1N34A
D2
1N34A
R8
2k2
R10
470k
C8
390p
R4
4k7
C3
68n
GAIN1
100k B
R26
68k*
R9
15k
C7
100n
R6
1k5
R5
1k
C4
390n
TR1
100k
B100k
GAIN2
R14
22k
R16
22k
R17
10k
C12
2n2
C13
22n
IC2B
R19
2k2
TREBLE
10k B
C15
4n7
R20
4k7
R21
100k
R22
100k
IC2A
C16
470n
VOL
50k A
OUT
D4
+9V
R23
22k
R25
1k8
C17
47µ
R24
22k
C18
47µ
D3
S6
S4
S5
MKC v4
BRUCE R
FILE: MKC4_2021
DATE: not saved!

Modification Options

The original circuit calls for a B100kΩ Lin stereo pot (dual gang) for the GAIN and GAIN-2 pot. This is a stereo pot takes up additional space and restricts circuit versatility by forcing you to use both controls simultaneously. This means there is no way to "Blend".

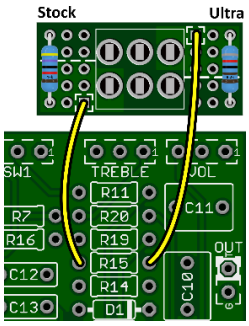
STOCK: Using a stereo (dual gang) pot, do not install the trim pot (TR1) and wire the GAIN 1&2 pads to a solder lug dual gang pot.
***Gain Pot Mod #1:** Use two 100kΩ Lin mono pots, one for GAIN 1 and the other for GAIN-2 (clean), in this case do not install TR1.
***Gain Pot Mod #2:** For a standard 3 Knob build we have included the option of changing the **GAIN-2 (clean)** pot to a trim pot (TR1).

With this method you can roll off all the **"Clean"** for a **Dirty Klon** or add **"Full Clean"** for a maximum **Clean Klon** that either way you would never be able to achieve these tones with a standard Klon circuit.

***R26** compensates for those who have high output pickups and plan to turn all knobs up to "11". This will prevent any squeal which may result from doing so. Anything close to 68k is fine. Otherwise, this can be any value from a Jumper 0-ohm (stock) to 68k.

Bass Boost Mod: This adds a switch SW1 which adds a capacitor **C5** to allow more Bass frequency through. If you do not wish to include the **Bass Boost** switch (**SW1**) do not install **C5** and put a jumper between pads 2 & 3 of SW1.

*Ultra-Drive Mod – This Mod is not Standard for Kits!



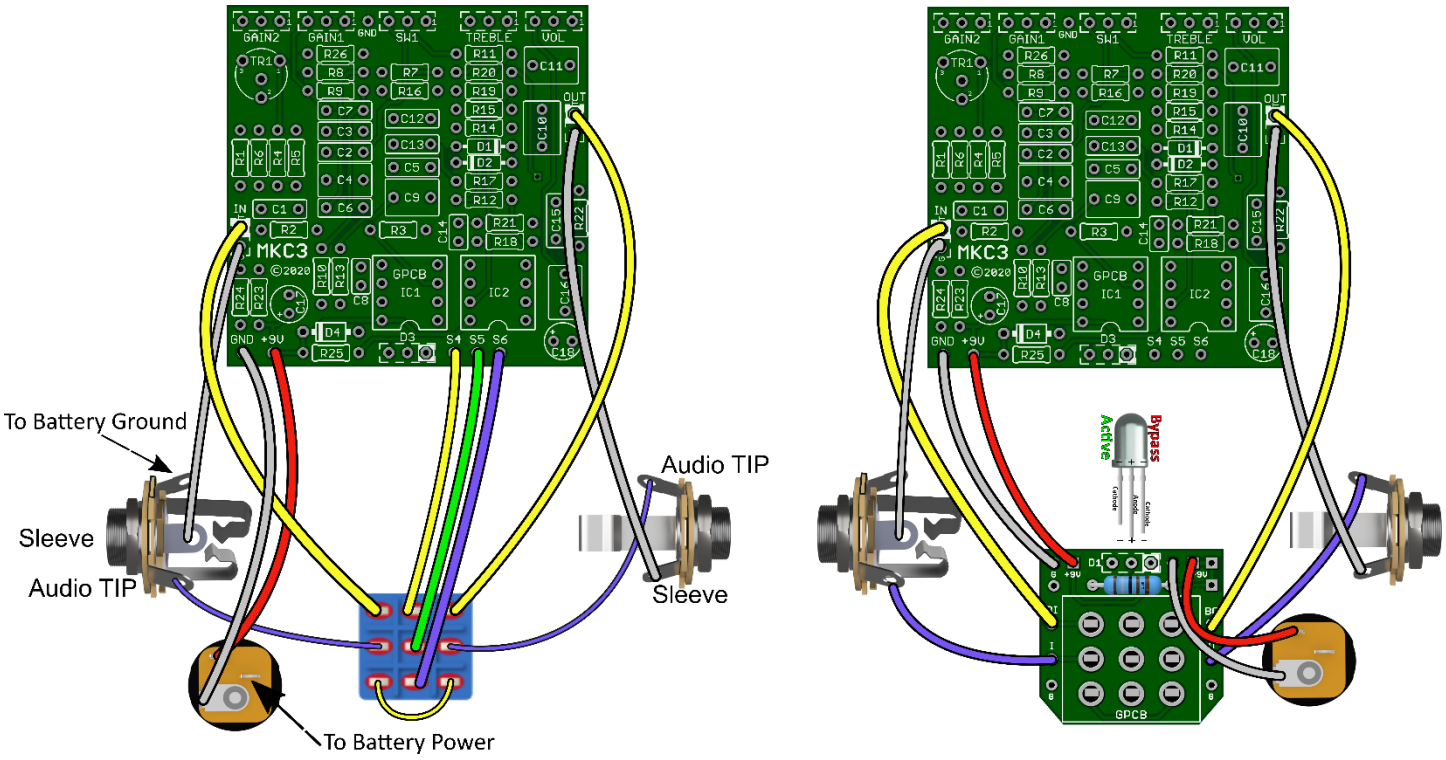
This is an excellent Mod and is highly recommended. Consider putting this on a DPDT Foot switch for even more flexibility than a toggle switch.

The original circuit is most well known as a Clean to Mild Gain Boost to give an already driven amp that something extra! This mod will add an additional switch to your pedal to give you that extra shot of Drive. One of my **DPDT Wiring Boards** is handy.

You can use it with a **DPDT On/On** switch and choose between stock (***R15 47k**) and Ultra Drive Mode, which is between 10k to 22k. The lower the value the HOTTER.

If you use my **DPDT wiring board** you can easily socket the Mod side and choose your value.

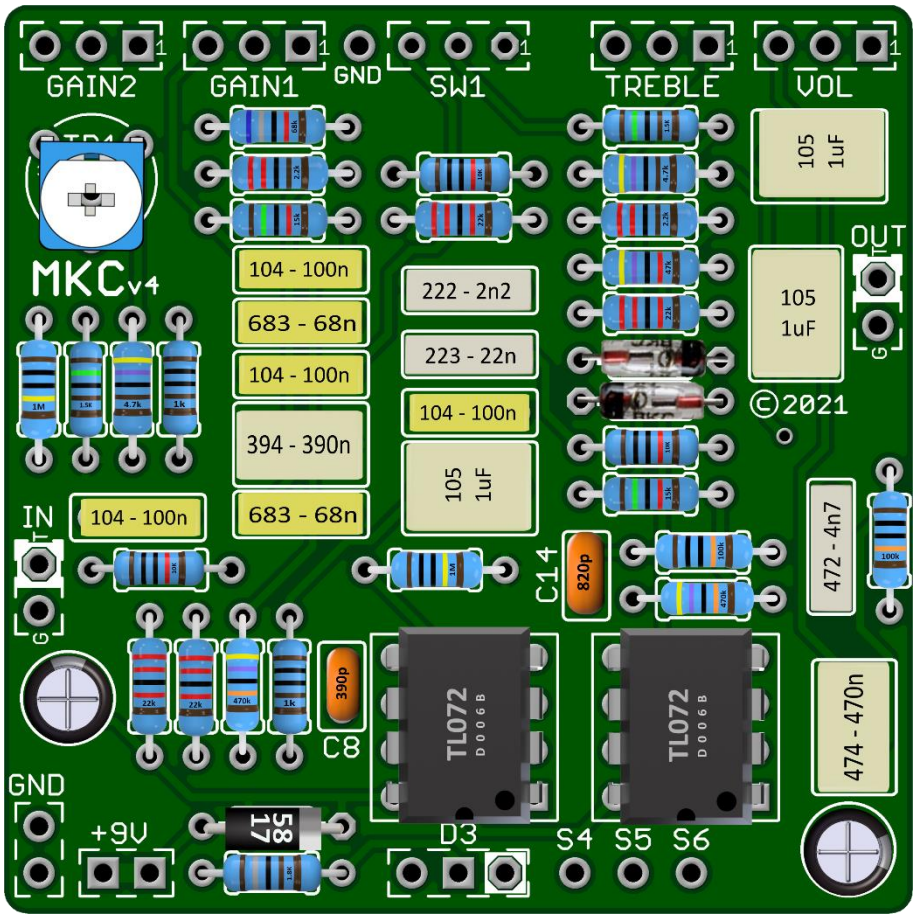
Wiring Diagram



STATUS LED

Note: If wiring the LED to our 3PDT board no need to connect S4, S5 & S6 or populate D3 or R25 (CLR) on the main board since you are wiring your LED and CLR directly to our 3PDT wiring board.

Populated Board Image

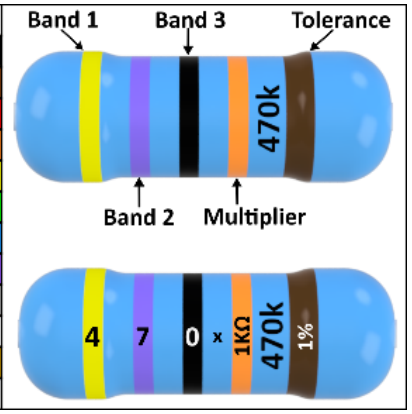


For more build guides and tutorials please visit the Guides Page at GuitarPCB.com
For specific build support please visit our dedicated Support Forum
Soldering Tutorial on YouTube

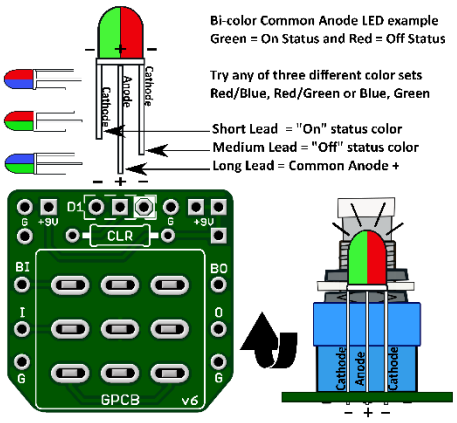
Need Kits - Check out our authorized worldwide distributors:

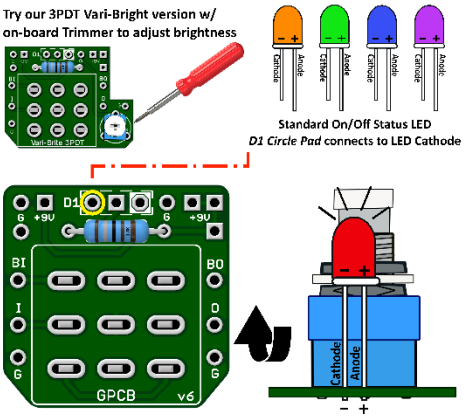
- **USA – Check out PedalPartsAndKits for all your GuitarPCB kit needs in the USA.**
- **Europe – Das Musikding Order either boards or kits direct from Europe.**
- **PedalPartsAustralia - Order either boards or kits direct from Australia**

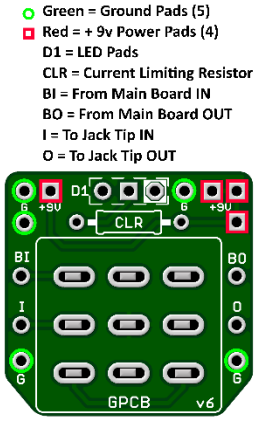
COLOR	1st Band	2nd Band	3rd Band	Multiplier	Tolerance
BLACK	0	0	0	1Ω	
BROWN	1	1	1	10Ω	±1%
RED	2	2	2	100Ω	±2%
ORANGE	3	3	3	1KΩ	
YELLOW	4	4	4	10KΩ	
GREEN	5	5	5	100KΩ	±0.5%
BLUE	6	6	6	1MΩ	±0.25%
VIOLET	7	7	7	10MΩ	±0.10%
GREY	8	8	8	100MΩ	±0.05%
WHITE	9	9	9	1GΩ	
GOLD				0.1Ω	±5%
SILVER				0.01Ω	±10%

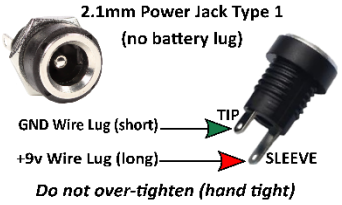


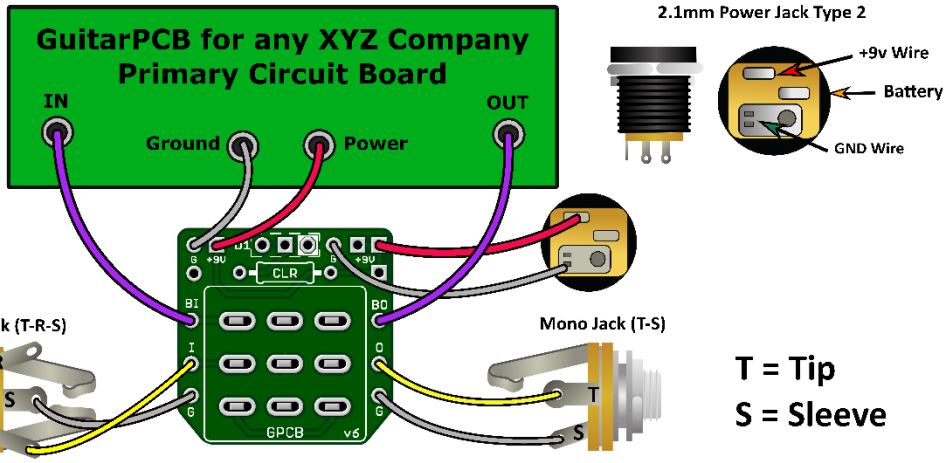
GuitarPCB Tip Sheet







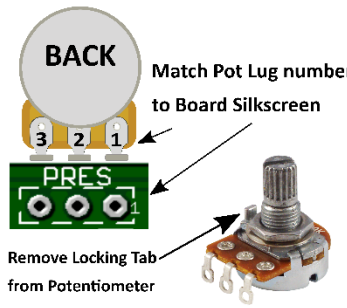




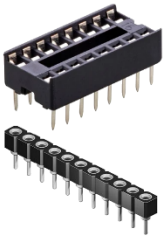
T = Tip
R = Ring
S = Sleeve

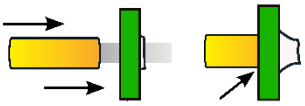
T = Tip
S = Sleeve

Multiple +9v and Ground Pads are convenient hookup points for additional circuits within the same enclosure. This also allows for diverse wiring schemes to suit indiviual needs.



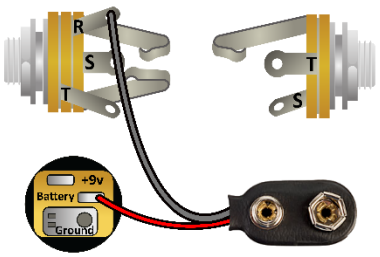
Sockets make troubleshooting easier





When soldering wire to a PCB push the protective PVC jacket flush with the board and pad.

Main Board IN/OUT Pads



Input/Output Jack Wiring

T = Tip | R = Ring | S = Sleeve

A Stereo Jack is only needed if using a Battery. Otherwise use a Mono Jack
Battery Strap RED wire is connected to Power Jack
Battery Strap Black wire is connected to RING (stereo jack)
If wiring an LED to our 3PDT Wiring Board then S4, S5 & S6 are not needed