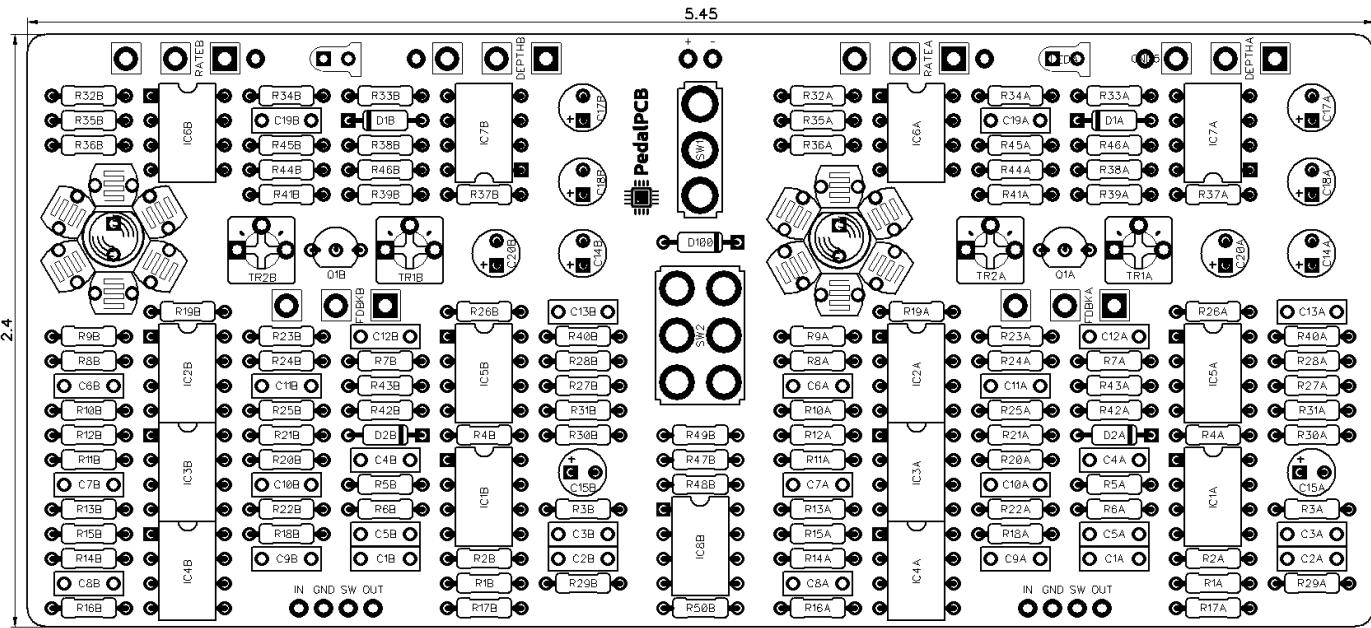




Revision 07.02.18



## Introduction

The Duo-Phase was inspired by the legendary Mu-Tron Bi-Phase.

## Controls

- **Rate A** – Sets the LFO speed of Phaser A
- **Depth A** – Sets the LFO depth of Phaser A
- **Feedback A** – Sets the regeneration of Phaser A
  
- **Rate B** – Sets the LFO speed of Phaser B
- **Depth B** – Sets the LFO depth of Phaser B
- **Feedback B** – Sets the regeneration of Phaser B
  
- **Sync** (*Toggle switch*) – Sets the LFO synchronization of Phaser B (Normal / Reverse)
- **Sweep** (*Toggle switch*) – Selects the LFO source of Phaser B (LFO A / LFO B)

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# Duo-Phase

## Parts List

**RESISTORS (1/4W)**

R1A	390K	R30B	10K
R1B	390K	R31A	8K2
R2A	3K9	R31B	8K2
R2B	3K9	R32A	68K
R3A	390K	R32B	68K
R3B	390K	R33A	4K7
R4A	4K7	R33B	4K7
R4B	4K7	R34A	120R
R5A	4K7	R34B	120R
R5B	4K7	R35A	39K
R6A	4K7	R35B	39K
R6B	4K7	R36A	47K
R7A	8K2	R36B	47K
R7B	8K2	R37A	560R
R8A	4K7	R37B	560R
R8B	4K7	R38A	68K
R9A	4K7	R38B	68K
R9B	4K7	R39A	47K
R10A	220K	R39B	47K
R10B	220K	R40A	2K2
R11A	4K7	R40B	2K2
R11B	4K7	R41A	2K2
R12A	4K7	R41B	2K2
R12B	4K7	R42A	10K
R13A	220K	R42B	10K
R13B	220K	R43A	68K
R14A	4K7	R43B	68K
R14B	4K7	R44A	220K
R15A	4K7	R44B	220K
R15B	4K7	R45A	330R
R16A	220K	R45B	330R
R16B	220K	R46A	3K9
R17A	4K7	R46B	3K9
R17B	4K7	R47B	39K
R18A	4K7	R48B	39K
R18B	4K7	R49B	47K
R19A	220K	R50B	18K
R19B	220K		
R20A	4K7	<b>SWITCHES</b>	
R20B	4K7	SW1	SPDT Toggle <i>(On / On)</i>
R21A	4K7	SW2	DPDT Toggle <i>(On / On)</i>
R21B	4K7		
R22A	220K		
R22B	220K	<b>POTENTIOMETERS</b>	
R23A	4K7	RATEA	B25K
R23B	4K7	RATEB	B25K
R24A	4K7	DEPTHA	B10K
R24B	4K7	DEPTHB	B10K
R25A	220K	FDBKA	A10K
R25B	220K	FDBKB	A10K
R26A	10K		
R26B	10K	<b>TRIM POTS</b>	
R27A	8K2	TR1A	10K Trim (3362P)
R27B	8K2	TR1B	10K Trim (3362P)
R28A	18K	TR2A	1K Trim (3362P)
R28B	18K	TR2B	1K Trim (3362P)
R29A	560R		
R29B	560R		
R30A	10K		

**CAPACITORS**

C1A	100n
C1B	100n
C20A	220u
C20B	220u
C2A	47p
C2B	47p
C3A	100n
C3B	100n
C4A	1n
C4B	1n
C5A	3n3
C5B	3n3
C6A	6n8
C6B	6n8
C7A	6n8
C7B	6n8
C8A	6n8
C8B	6n8
C9A	6n8
C10A	6n8
C10B	6n8
C11A	6n8
C11B	6n8
C12A	470n
C12B	470n
C13A	820p
C13B	820p
C14A	10u
C14B	10u
C15A	1u
C15B	1u
C17A	10u
C17B	10u
C18A	10u
C18B	10u
C19A	470n
C19B	470n

**INTEGRATED CIRCUITS**

IC1A	TL072
IC1B	TL072
IC2A	TL072
IC2B	TL072
IC3A	TL072
IC3B	TL072
IC4A	TL072
IC4B	TL072
IC5A	TL072
IC5B	TL072
IC6A	TL072
IC6B	TL072
IC7A	TC1044SCPA
IC7B	TC1044SCPA
IC8B	TL072

**TRANSISTORS**

Q1A	2N4401
Q1B	2N4401

**DIODES**

D100	1N5817
D1A	1N4148
D1B	1N4148
D2A	1N4148
D2B	1N4148
D3A	Yellow 5mm LED
D3B	Yellow 5mm LED
LEDA	Indicator LED
LEDB	Indicator LED

Common offboard components (enclosure, footswitch, jacks, etc) are not listed

**RESISTORS (1/4W)**

2	120R
2	330R
4	560R
4	2K2
4	3K9
32	4K7
6	8K2
6	10K
3	18K
4	39K
5	47K
6	68K
14	220K
4	390K

**CAPACITORS**

2	47p	(Ceramic)
2	820p	(Ceramic)
2	1n	(Film)
2	3n3	(Film)
12	6n8	(Film)
4	100n	(Film)
4	470n	(MLCC or Film)
2	1u	(Electrolytic)
6	10u	(Electrolytic)
2	220u	(Electrolytic)

**INTEGRATED CIRCUITS**

13	TL072
2	TC1044SCPA

**TRANSISTORS**

2	2N4401
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**DIODES**

1	1N5817
4	1N4148
2	Yellow LED
2	Indicator LED

**OPTICAL**

12	LDR
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**POTENTIOMETERS**

2	B25K
2	B10K
2	A10K

**TRIM POTS**

2	10K Trim	(3362P)
2	1K Trim	(3362P)

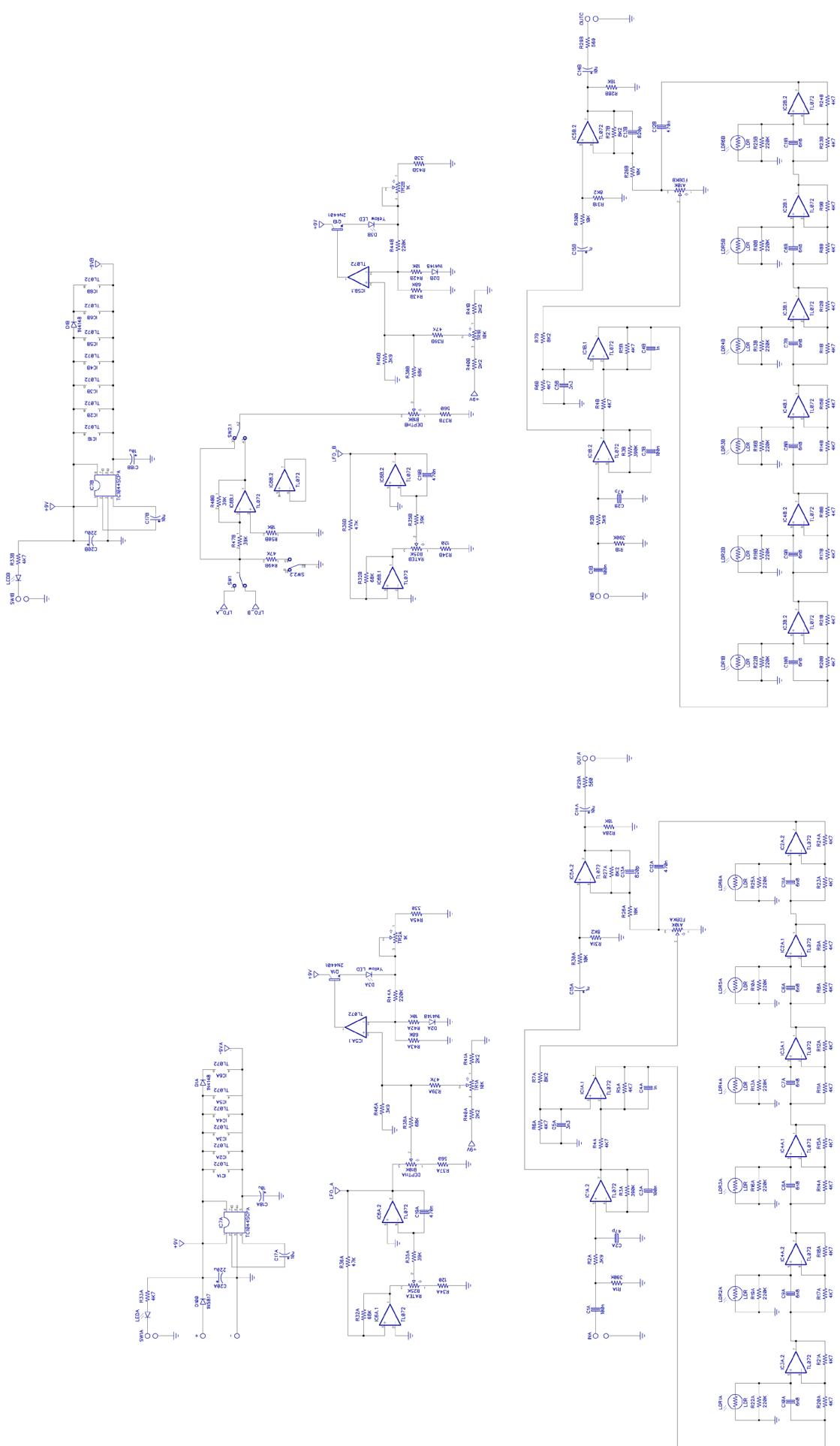
**SWITCHES**

1	SPDT (On/On)
1	DPDT (On/On)

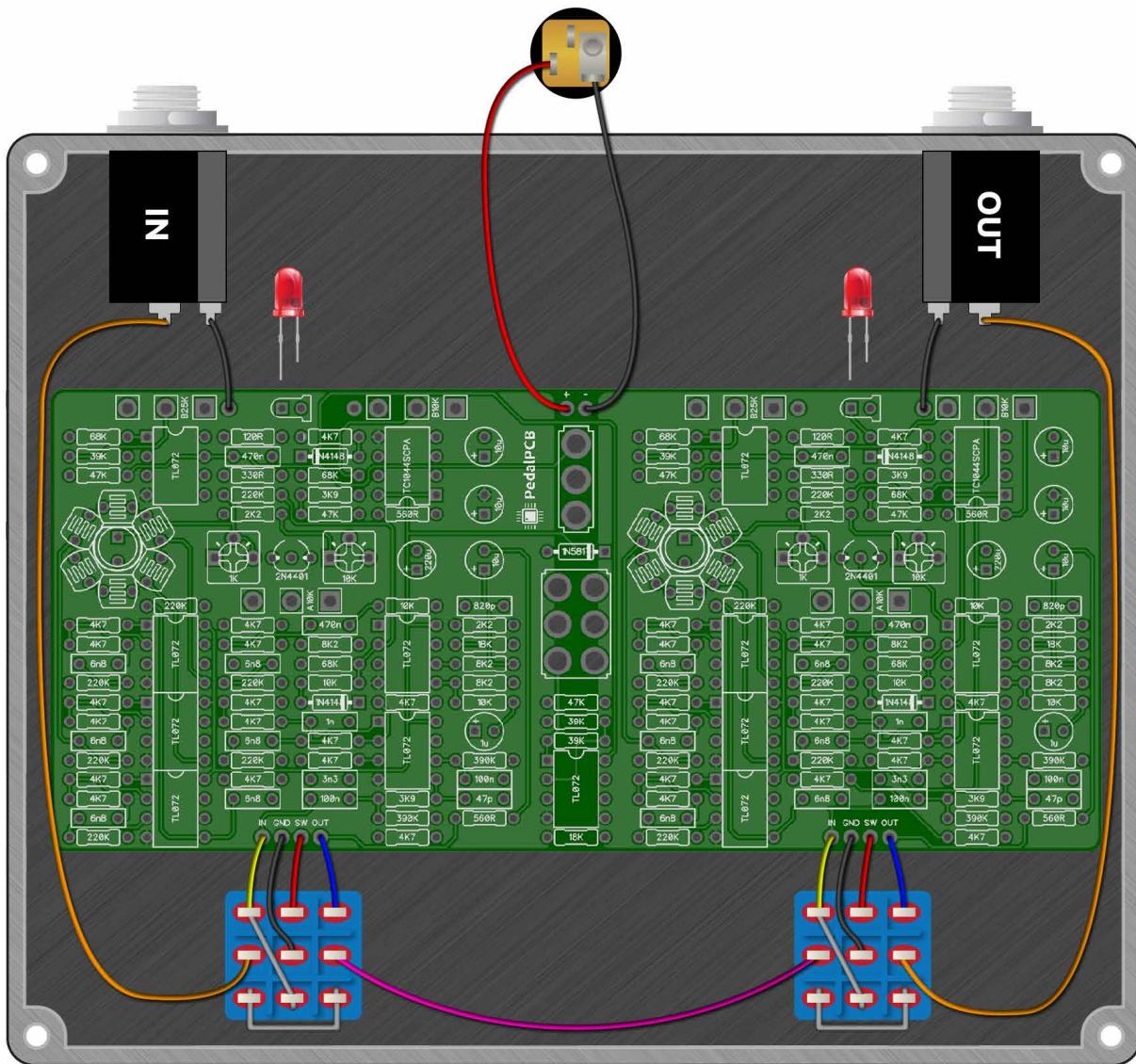
*Common offboard components (enclosure, footswitch, jacks, etc) are not listed*

# PedalPCB

## Duo-Phase



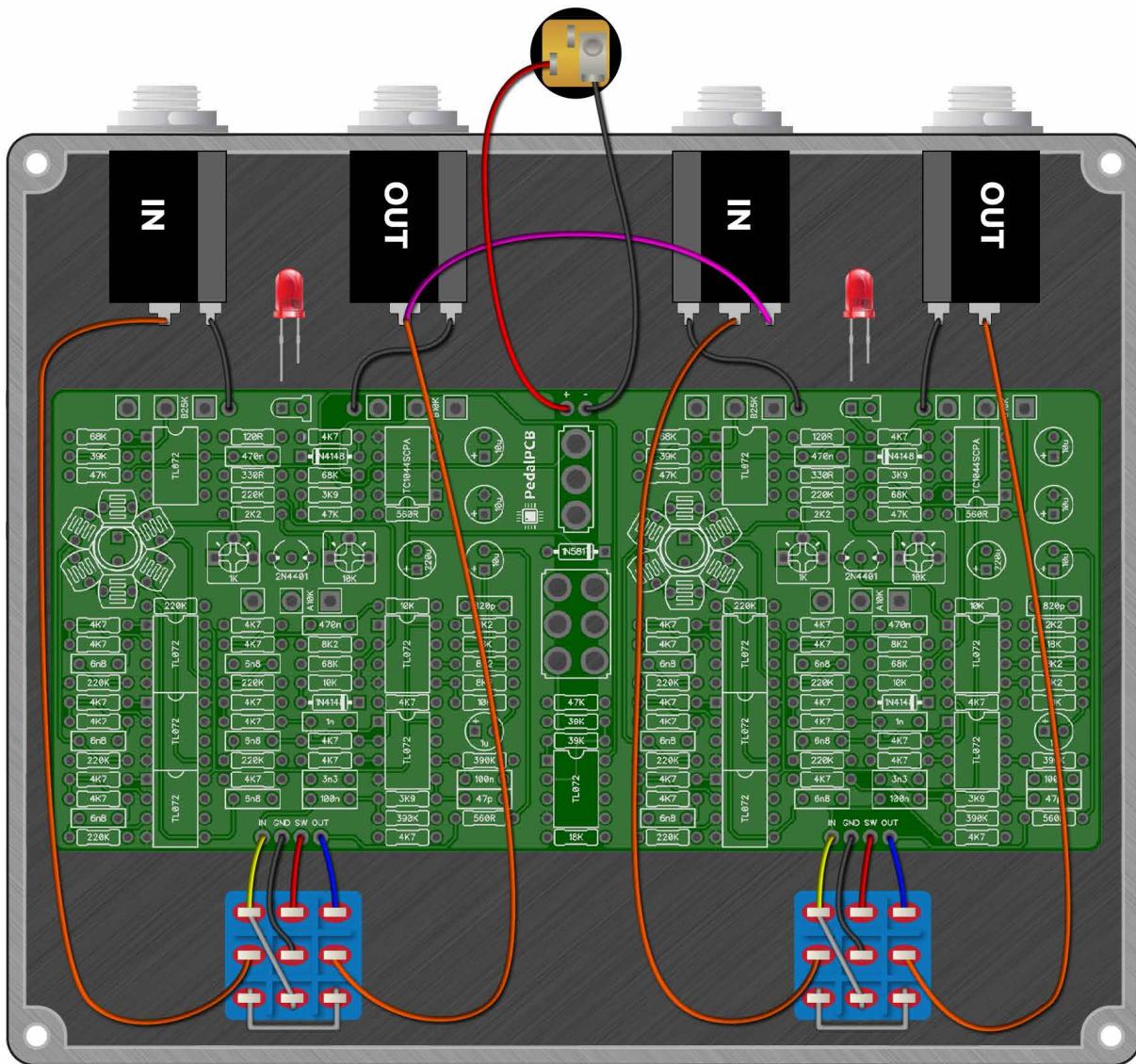
### One Input / One Output (Series Operation)



Using this wiring method the pedal will function as a basic “two-in-one” series phaser.

**Requirements:**  
2 x 1/4" Jacks

**Two Inputs / Two Outputs**  
 (Internally Normalled Series Operation)



Using this method the pedal can function as a series “two-in-one” pedal, or each side can be patched independently in the signal chain by using the corresponding pair of IN/OUT jacks.

When no cable is plugged into the right input the two sides will be internally jumpered by way of the switched input jack.

**Requirements:**

4 x 1/4" Jacks (**one must be the switched input type**)



# Duo-Phase

Drill Template  
1590XX / 4S6500 enclosure with top mounted jacks

