

Slava Ukraine

Based on:

Ltava

Effect type:

Soviet analog Fuzz, Wah, Tremolo

Build difficult:

Advanced

Amount of parts:

High, total 132 components

Technology:

Russian germanium PNP/NPN ,
silicon NPN bipolar junction,
MOSFET transistor

Power consumption:

9V

Enclosure type:

1590DD

Get your board at:

[Slava Ukraine](#)

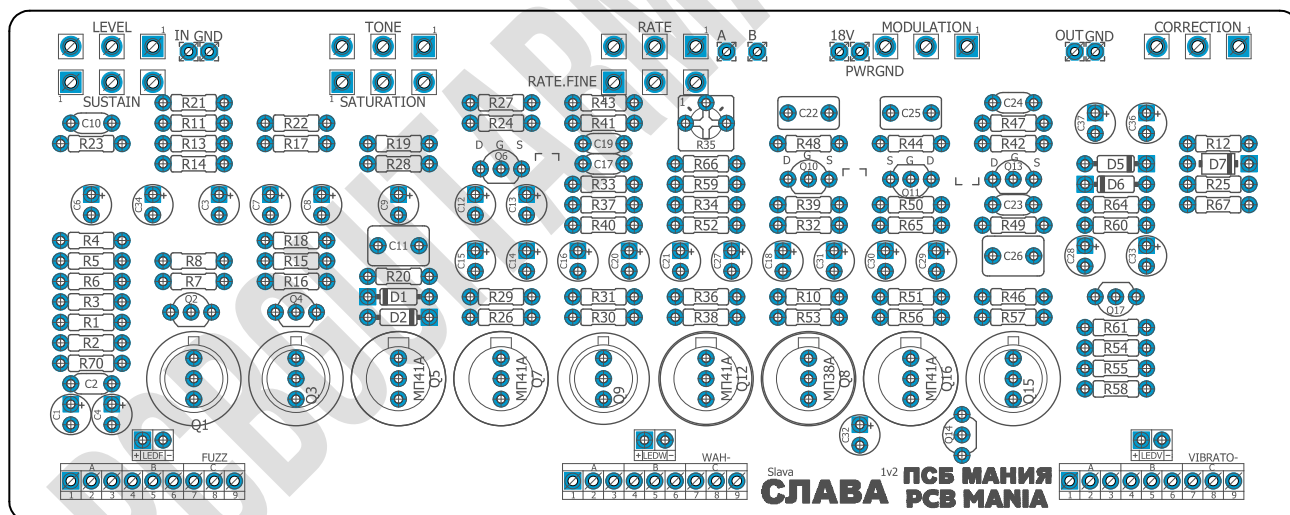
Get your kit at:

[Das Musikding \(Europe\)](#)

Project overview:

The Slava is based on an old Ukrainian-designed pedal from the 80s called Ltava, a multi-effect device featuring Fuzz, Wah, and Tremolo. Like is our tradition, we included some extra features and mods to make it more user-friendly. The expression pedal is connected separately.

All the sales of this model will be donated to the organization Voices Of Children.



Index

- | | |
|-----------------------------------|--|
| 1. Project overview | 5. Schematic |
| 2. Index, Introduction & Controls | 6. Components, Build Notes, Wiring Diagram |
| 3. Bills of Materials, BOM | 7. Drill Template, Licensing and Usage |
| 4. Shopping Lists | |

Introduction

Ltava is an extremely rare soviet analog pedal that can produce unique warm vintage Wah, Fuzz, and Tremolo effects. This pedal is the big brother of the famous soviet analog Wah/Fuzz/Tremolo pedal Poltava.

This PCB includes the inscription Слава Україні! Героям слава! – Sláva Ukrayíni! Heróyam sláva! In English: Glory to Ukraine! Glory to the heroes! And is a popular say in Ukraine since the mid-XIX Century.

The Final version of this board is made in Blue with Gold connectors, reflecting the traditional Colors of Ukraine. Here you can **contribute according to your means**. Write on the box next to the “add to cart” button how much you’d like to donate.

Controls

Potentiometers

- Correction
- Level
- Modulation
- Rate
- Rate.fine
- Saturation
- Sustain
- Tone

Bill of materials

Resistors	
Part	Value
R1	750k
R2	180k
R3	10k
R4	3k3
R5	1k
R6	3k9
R7	220r
R8	1k
R10	470r
R11	10k
R12	10k
R13	10k
R14	10k
R15	10k
R16	3k3
R17	1k
R18	10k
R19	27k
R20	3k9
R21	47k
R22	47k
R23	22k
R24	330k
R25	10k
R26	220k
R27	390k
R28	1k
R29	3k9
R30	100k
R31	180k
R32	4k7
R33	82k
R34	33k
R36	8k2
R37	470k
R38	8k2

R39	2k7
R40	1k8
R41	1k8
R42	3k9
R43	100k
R44	220k
R46	68k
R47	1M5
R48	100k
R49	33k
R50	270k
R51	220k
R52	3k3
R53	5k1
R54	130k
R55	15k
R56	3k3
R57	100k
R58	10k
R59	1k
R60	3k9
R61	510r
R64	100k
R65	3k3
R66	470r
R67	6k8
R70	1m

Capacitors	
Part	Value
C2	82p
C10	4n7
C11	1u
C17	10n
C19	10n
C22	470n
C23	270p
C24	270p

C25	470n
C26	1u

Electrolytic Capacitors	
Part	Value
C1	1u
C3	100u
C4	100u
C6	10u
C7	220u
C8	100u
C9	4u7
C12	1u
C13	1u
C14	10u
C15	100u
C16	1u
C18	220u
C20	22u
C21	4u7
C27	22u
C28	33u
C29	4u7
C30	4u7
C31	4u7
C32	4u7
C33	4u7
C34	1u
C36	100u
C37	100u

Potentiometers	
Part	Value
CORRECTION	B2k
LEVEL	A100k
MODULATION	B50k
RATE	B20k
RATE.FINE	B20k
SATURATION	100k
SUSTAIN	100k

TONE	B100k
------	-------

Trim pots	
Part	Value
R35	33k

Transistors	
Part	Value
Q1	GT310B
Q2	KT315A
Q3	GT310B
Q4	KT315A
Q5	MP41A
Q6	KP103G
Q7	MP41A
Q8	MP38A
Q9	GT310B
Q10	KP103L
Q11	KP103L
Q12	MP41A
Q13	KP103L
Q14	KT315B
Q15	GT310B
Q16	MP41A
Q17	KT315A

Diodes	
Part	Value
D1	D220
D2	D220
D5	1N5817
D6	1N5817
D7	1N5817
LEDV	3mm red LED
LEDW	3mm red LED
LEDF	3mm red LED

Shopping list

Resistors		
Qty	Value	Parts
5	100k	R30, R43, R48, R57, R64
9	10k	R3, R11, R12, R13, R14, R15, R18, R25, R58
1	130k	R54
1	15k	R55
2	180k	R2, R31
1	1M5	R47
5	1k	R5, R8, R17, R28, R59
2	1k8	R40, R41
1	1m	R70
3	220k	R26, R44, R51
1	220r	R7
1	22k	R23
1	270k	R50
1	27k	R19
1	2k7	R39
1	330k	R24
2	33k	R34, R49
1	390k	R27
5	3k3	R4, R16, R52, R56, R65
5	3k9	R6, R20, R29, R42, R60
1	470k	R37
2	470r	R10, R66
2	47k	R21, R22
1	4k7	R32
1	510r	R61
1	5k1	R53
1	68k	R46
1	6k8	R67
1	750k	R1
1	82k	R33
2	8k2	R36, R38

Capacitors		
Qty	Value	Parts
2	10n	C17, C19

2	1u	C11, C26
2	270p	C23, C24
2	470n	C22, C25
1	4n7	C10
1	82p	C2

Electrolytic Capacitors		
Qty	Value	Parts
6	100u	C3, C4, C8, C15, C36, C37
2	10u	C6, C14
5	1u	C1, C12, C13, C16, C34
2	220u	C7, C18
2	22u	C20, C27
1	33u	C28
7	4u7	C9, C21, C29, C30, C31, C32, C33

Potentiometers		
Qty	Value	Parts
2	100k	SATURATION, SUSTAIN
1	A100k	LEVEL
1	B100k	TONE
2	B20k	RATE, RATE.FINE
1	B2k	CORRECTION
1	B50k	MODULATION

Trim pots		
Qty	Value	Parts
1	33k	R35

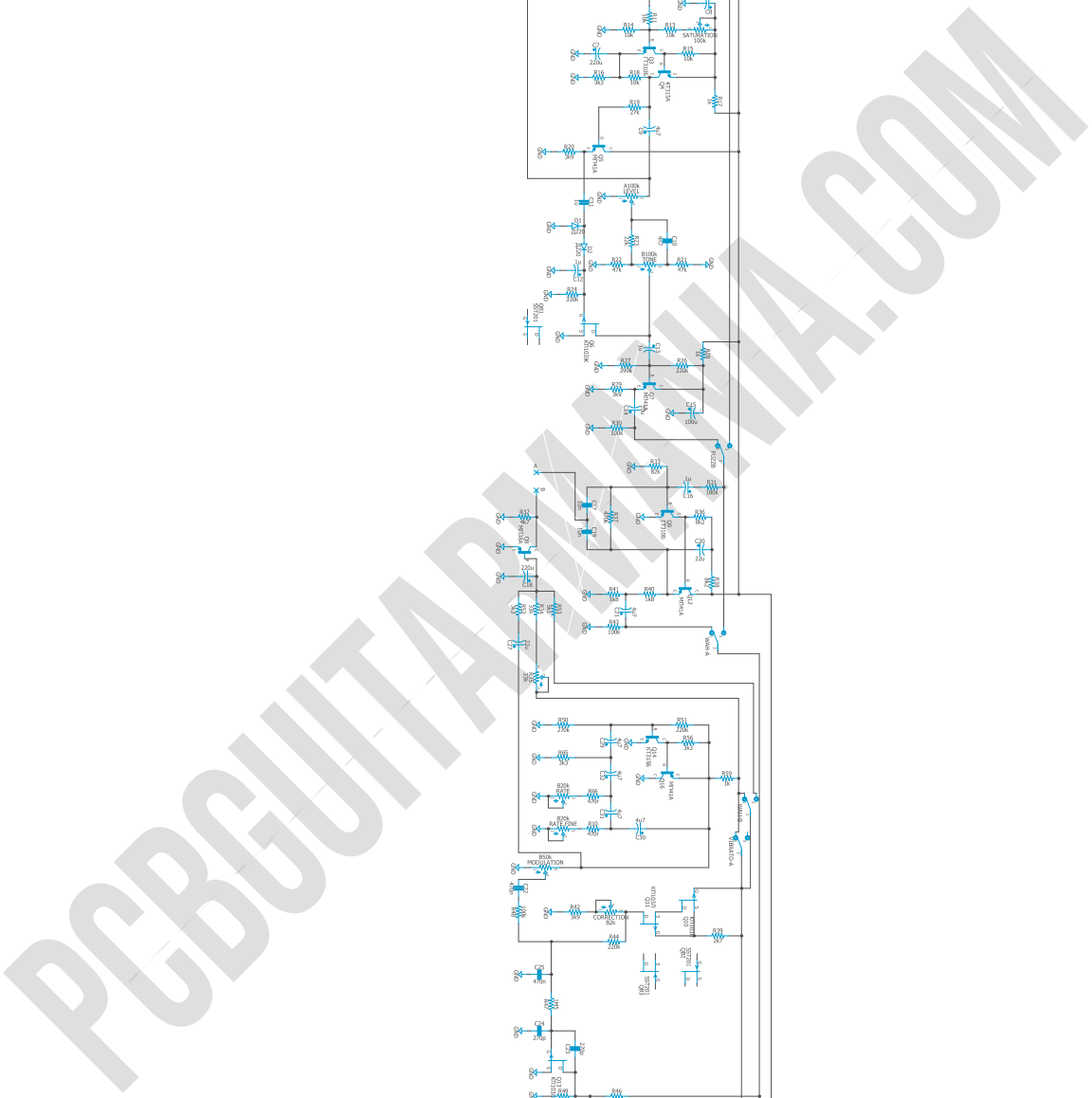
Transistors		
Qty	Value	Parts
3	KT315A	Q2, Q4, Q17
4	GT310B	Q1, Q3, Q9, Q15
1	KP103G	Q6
3	KP103L	Q10, Q11, Q13

1	KT315B	Q14
1	MP38A	Q8
4	MP41A	Q5, Q7, Q12, Q16

Diodes		
Qty	Value	Parts
3	3mm red LED	LEDF, LEDV, LEDW
3	1N5817	D5, D6, D7
2	D220	D1, D2

Switches		
Qty	Value	Parts
3	3PDT Stomp foot	-
3	5mm standard leds	-

Jacks		
Qty	Value	Parts
1	DC jack	-
2	Audio jack	-
1	Three-conductor audio jack	-



Components Recommendations

As many people like to experiment with some pedals with higher voltage, always ensure your **electrolytic capacitors'** max tolerance is over 25v.

This board has been tested using Film box capacitors for most of the values over 1nf and ceramics discs for those under 1nf. However, high-quality components such as Wima's Capacitors and Panasonic's electrolytics can deliver a better performance.

All the resistors used for testing this project are 1/4W Metal Film.

The BOM and Shopping list are exclusive regarding this project. It doesn't include all the hardware like the 3PDT bypass switch, audio/dc jacks, enclosure, etc.

Build Notes

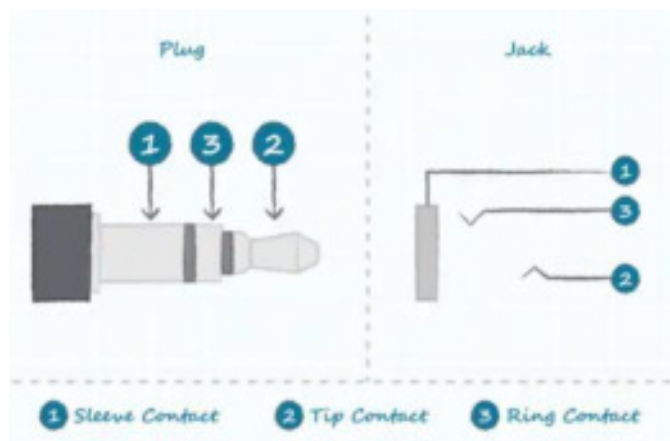
If this is one of your first projects, I recommend you to take a look at our [Pedal Building Guide](#).

For a successful and tidy build, it's recommended the following order:

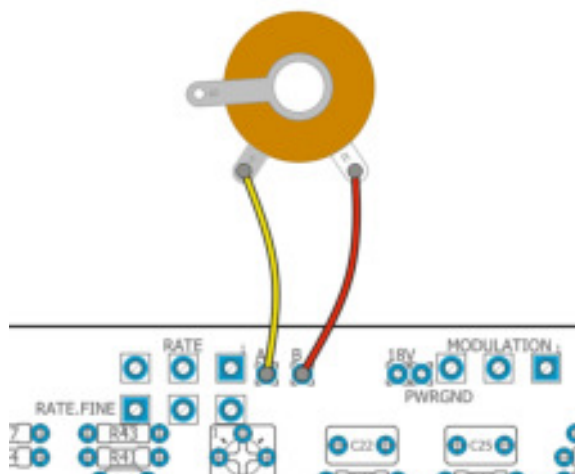
1. Resistors & diodes
2. Capacitors, starting with the smaller ones and the ceramic ones.
3. Electrolytic capacitors (always check the polarity)
4. Transistors
5. Wires
6. Potentiometers and switches
7. Off-board wiring

A-B Pads

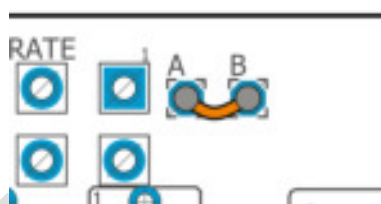
These pads allow the possibility of controlling the rate with an **external expression pedal**. If you want to add this feature, you will need a **three-conductor audio jack with a tip switch** (a stereo switch with an additional tip as shown below). This jack allows you to have the pedal fully working with or without the expression pedal plugged in.



To add the expression jack, connect pad A with the TIP of the expression jack, pad B to RING, and leave SLEEVE unpopulated, as shown in the diagram below.



If you don't want to add the expression jack, you MUST place a jumper connecting the pads A and B to make the pedal work correctly.



Wiring Diagram

All our projects include a free 3PDT Board to make the wiring easier and tidier. Also, all of our PCBs feature the status LED on board.

The pad named “Ctrl” or “LED” is the one that controls the status of the led; wire it to the “LED” pad on the 3PDT board or in the control slug of your 3PDT.

This board has been designed to match our EZ 3PDT PCB; check it [here](#) to access our [Pedal Wiring Guide](#).

Drill Template

This Project has been planned to fit into a 125b enclosure type.

Check the Attached “Drilling templates” to drill the box properly. The files are on Scale 1:1, ready to print on an A4 page.

Licensing and Usage

We really appreciate your trust and support in buying this PCB, as well as your will to dive into the DIY electronics world. For us, that's why you can make this project work properly and enjoy not only the building process but also experiment and play with it on your rig.

We try to reply to every question we receive on our email or our social media. Still, we try to encourage all our customers to join our [PCB Guitar Mania – Builders Group](#) on Facebook to post all your doubts, issues, suggestions, or requests, share your builds, and have some feedback from other fellow builders and us!

We tested all our projects following this same guide on their standard configurations. Although, not all of the variations and mods have necessarily been checked. These are suggestions based on the schematic analysis and the experiences and opinions of others. Feel free to share with us your views and recommendations regarding the mods your personal experimentation.

These boards may be used for commercial endeavors in any quantity unless expressly noted. No attribution is necessary, though accreditation or a link back is always much appreciated.

If you are a builder planning to make your own run of pedals, we also offer the service of custom-made boards with your brand and logo, design according to your specifications.

The only usage restrictions are that, first, you cannot resell the PCB as part of a kit without prior arrangement with us, and second, you cannot scratch off the silkscreen or other way of trying to hide our logos and the source of the PCBs. Like it's written above, if you want to have your designs with your brand and logo, we could undoubtedly reach an agreement.

Follow us on [Instagram](#) and [Facebook](#) to stay in tune with the latest projects!