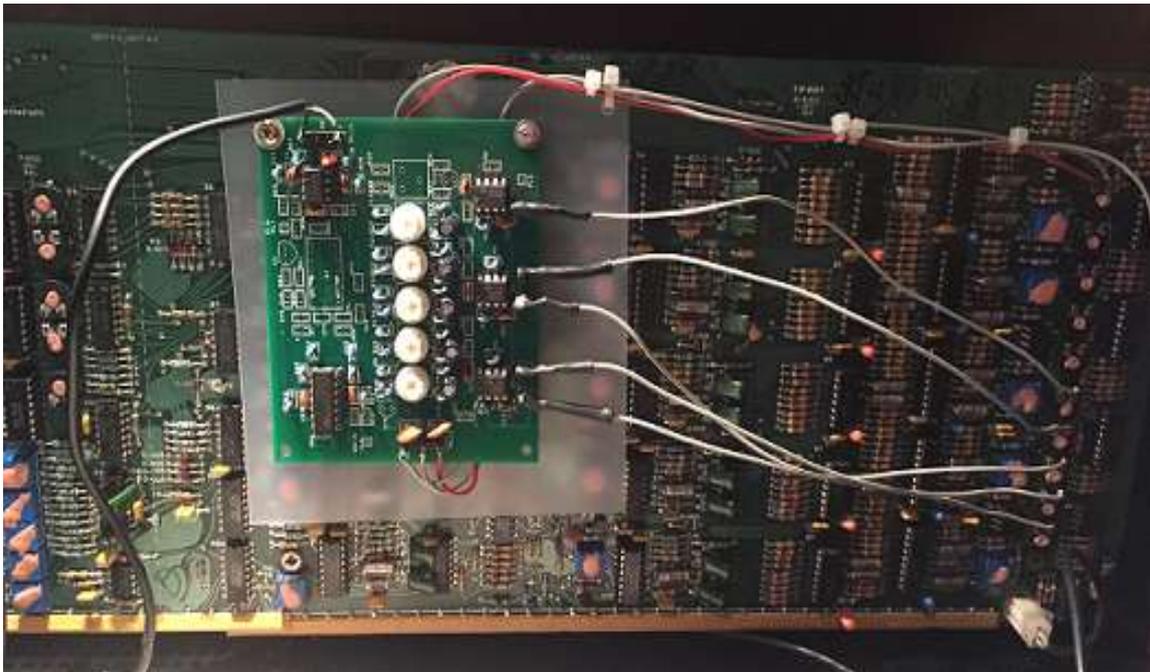


Sequential Circuits Prophet-5 Rev. 3.3

Panorama modification



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Munich / Germany, December 2020

Preface

This is a quick-and-dirty description of the panorama-modification of a Prophet-5 Rev 3.3 synthesizer.

This mod turns the Prophet-5 Rev 3.3 into a sonically enhanced instrument where each of the five voices can be individually spread in the stereo panorama. In addition to that, the mono-signal remains to be available unchanged and may be mixed with the stereo-signal in an external mixer for even more sound variation and sound richness.

Synthesizer panorama-mod kits are offered by the online store „Das Musikding“. Currently there are two variants available: one for Sequential Circuits' Prophet-600, and another one for the Korg Polysix synthesizer.

This Prophet-5 Rev 3.3 panorama-mod makes use of the [Polysix Panorama-Mod Kit](#). This kit can be used also for many other Poly-Synthesizers. Often only a littlebit tweaking is needed for optimum adaptation to the either synthesizer.

The Prophet-5 comes with five voices whereas the Polysix features 6 voices, means a couple of passive components may not need to be populated on the PCB for this mod.

Please study the Polysix Pan-Mod manual *first* to get an overview and read this little addendum in a second step, before you implement the pan-mod in your Prophet-5 Rev 3.3.

This modification may be also applied to previous Prophet-5 revisions. However please carefully check for any differences (!). The author only implemented this mod into a Rev 3.3 model therefore cannot comment on other / previous models.

Important note

A Prophet-5 synthesizer is powered by mains. This modification **must only be performed by schooled, experienced and authorized personnel**. Any modification is at your own risk. **The author clearly does not take any responsibility for any damage, of any kind.**

Note

This is a 100% non-profit oriented hobbyist project and there is no commercial relation between the author and the online-shop „Das Musikding“.

Panorama mod-kits can be offered at a very fair price not least because the author didn't ask for compensation of his development effort. His motivation is to make people happy and to provide them with additional sonical options for their beloved vintage synthesizers.

However if you value the effort of the author and would like to support his future developments you may find details on „Das Musikding“ website for a little donation.

Weblinks

Das Musikding - Polysix Panorama-Mod Kit (English version)

https://www.musikding.de/Polysix-Pan-Mod_1

Das Musikding - Polysix Panorama-Mod Kit (German version)

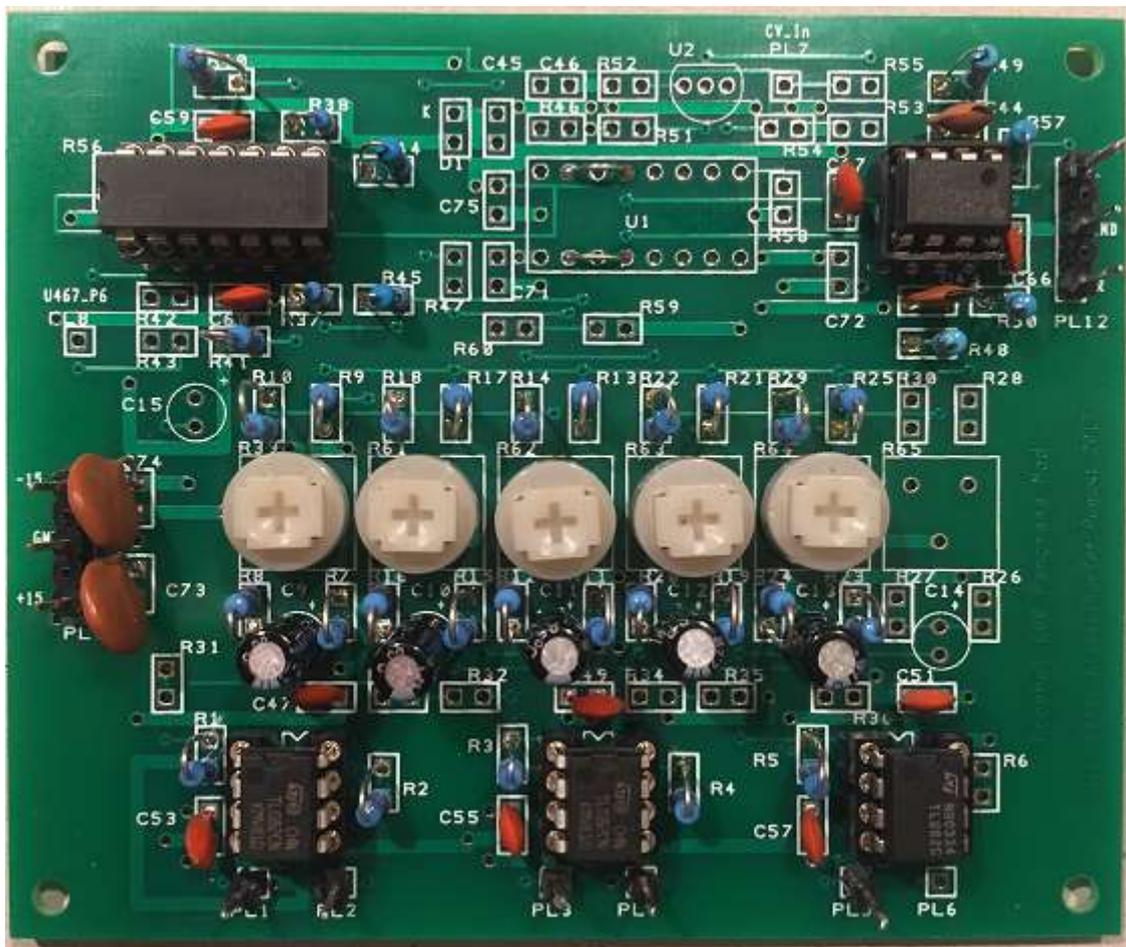
<https://www.musikding.de/Polysix-Pan-Mod>

Voluntary donation to the author:

https://www.paypal.com/donate/?cmd=_s-xclick&hosted_button_id=DYJPAPHJATBKY

Step-by-step Instruction

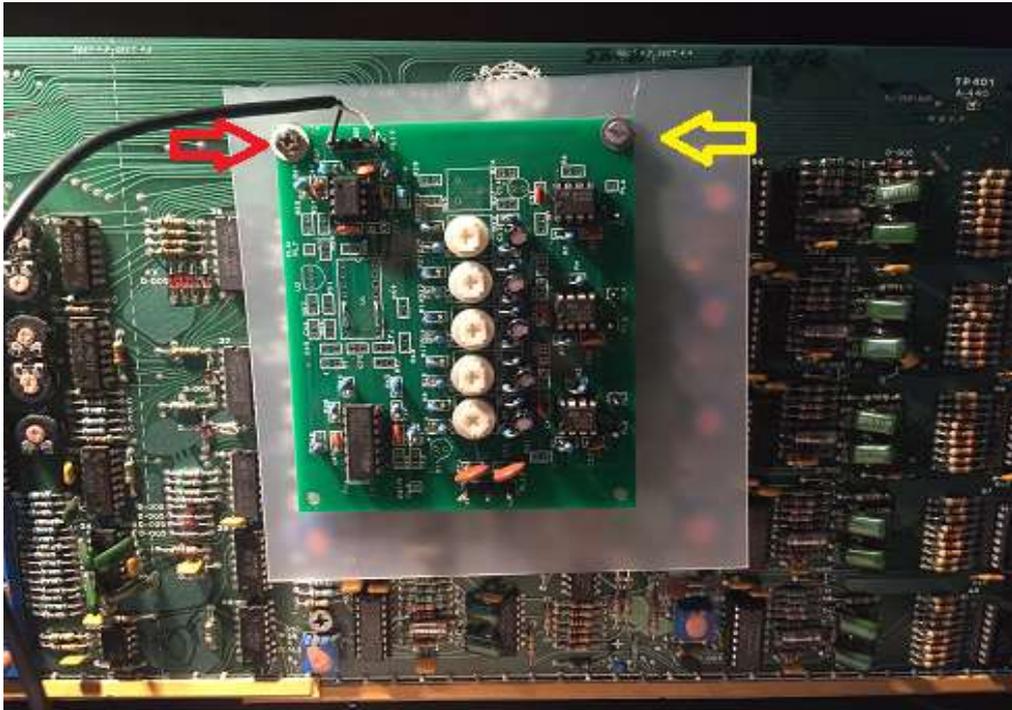
1. Order a **Polysix** Panorama-Kit at „Das Musikding“. Order one additional 50KOhms trimmer when you also want to use stereo output level adjustment as described below.
2. Download the Polysix Panorama-Kit Manual from „Das Musikding“ website and make yourself familiar with this modification.
3. Solder the PCB according to manual. For the Prophet-5 Rev3.3 panorama-modification a couple of passive components do not need to be populated since this synthesizer features only five voices. It however does not harm if you populate all components which are delivered with the kit. Here a list of parts which do *not* need to be populated:
R6, R26, R27, R28, R30, R65, C14, PL6.



Picture 1: Pan-mod PCB.

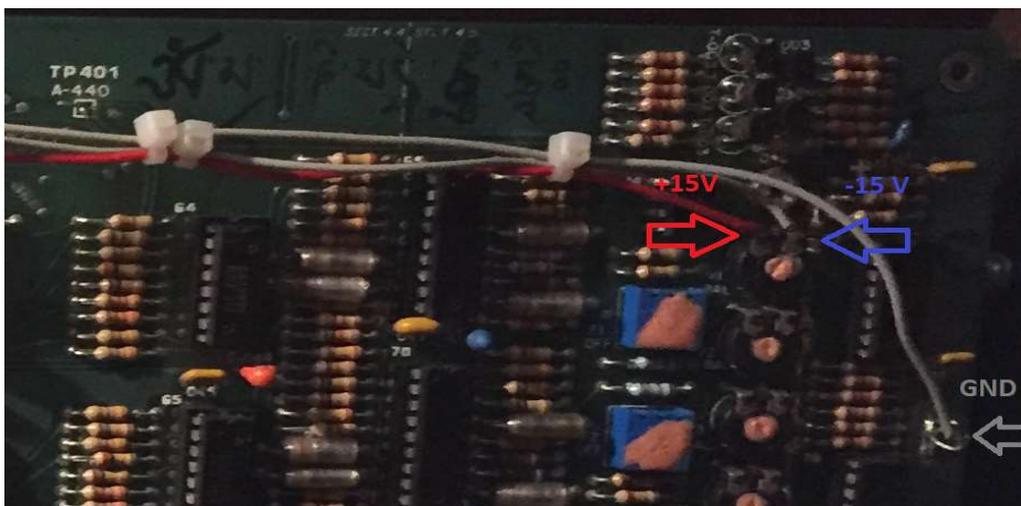
4. Physical implementation of the pan-mod PCB. Care must be taken (!) that the pan-mod PCB and its components do not unintentionally connect with any parts of the Prophet-5 circuitry or with the Prophet-5 cabinet. Also, care must be taken (!) to not squeeze or bend any components on the voice board which sit *below* the pan-mod PCB (e.g. there are a couple of „tall“ non-polarized capacitors). Use a thick plastic foil for isolation as shown in below picture. Fix one plastic spacer to the upper right of the pan-mod PCB (see yellow arrow). Remove one screw from the Prophet-5 voice board. Take another plastic spacer to fix the upper left side of the pan-mod PCB and use the free hole on the voice board to fix the pan-mod PCB with a screw (see red arrow). Use some hot glue to fix the plastic spacer

on the upper right so that the pan-mod PCB solidly sits on a blank area of the voice PCB. Note: depending on the mechanical situation of your Prophet-5 model (which may varies) it may be needed to use different plastic spacers.



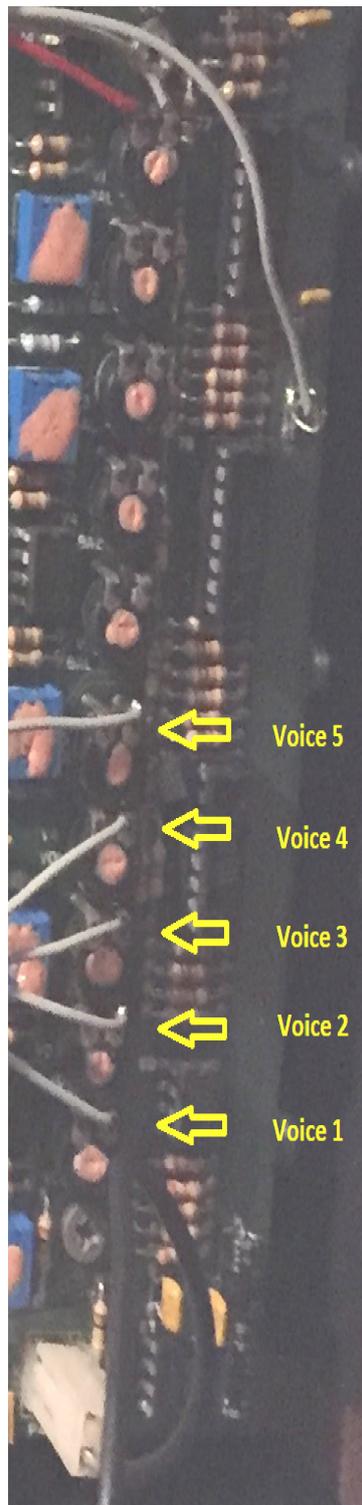
Picture 2: Pan-mod PCB fixing

5. Next is to wire the pan-mod PCB. Let's start with the power supply. We need **+15V**, **-15V** and Ground **GND** connection. This all can be found at the right hand side of the voice board as shown in next picture. For the sake of simplicity the author decided to tap both supply voltages from the topmost potentiometer, and to tap ground from the ground base as indicated. Care must be taken (!) not to damage the potentiometer when soldering the power supply wires. Tap +15V from the upper left, and -15V from the upper right connection of the potentiometer.



Picture 3: Power supply of the pan-mod

6. Let's continue with the five voices. They are to be tapped from the voice board as shown in next picture. Tap from the *right* connection of the lowest five potentiometers each. Care must be taken (!) not to damage the potentiometers when soldering the voice wires.



Picture 4: Voices tapping

The wires coming from the voice-pots have to be as short as possible. Solder 22KOhms resistors between each voice wire and the corresponding input connectors PL1~PL5 on the pan-mod PCB. The three TL082 (or TL072) OpAmps should be ideally from the same lot to ensure same amplification level.

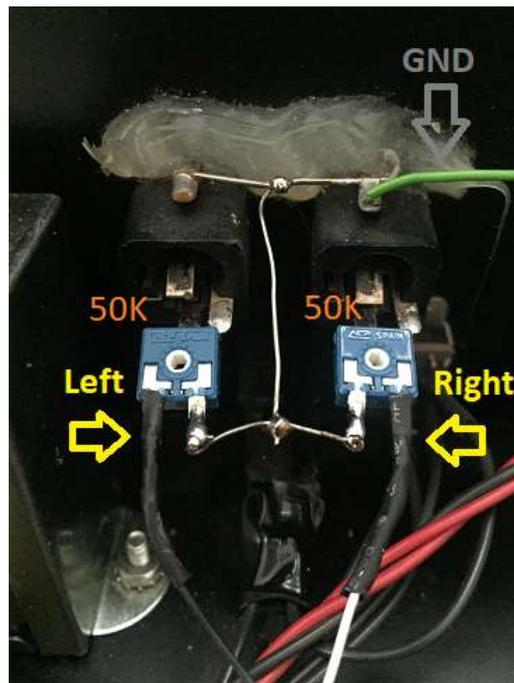
Use cable tie and shrink hose for proper isolation of each resistor as shown in the picture on the title page.

7. Finally, wires for the stereo output signals are to be placed. Connect wires to PL12 L (left) and R (right) of the pan-mod PCB. A wire for GND is not needed here (we tap it from somewhere else, see later). The author clearly (!) does not want to encourage drilling holes into the cabinet of a vintage instrument. The Prophet-5 model shown here luckily *already* came with two built-in unused (!) 6,3mm mono sockets from a previous owner so decision was easy to make use of them for the pan-mod. Yes, ouch, holes were drilled into the fine Prophet-5 logo. Shame!



Picture 5: Stereo Output

In the bottom of the cabinet there is a ground wire spanned between the other connectors. Tap ground from here for the pan-mod output sockets.



Picture 6: Stereo-Output wiring

It turned out that the output signal of the stereo-mod is relatively high. Whilst mixers can easily handle, some audio interfaces may have difficulties with strong input signals. In extreme cases this might lead to distortion, especially when OSC A and OSC B are fully turned up in the MIXER section and/ or all voices are played at the same time.

To avoid any such trouble use another two 50KOhms trimmers as shown in **Picture 6** to adjust output levels, one trimmer for *Left* and *Right* each. Use an appropriate UNISON sound and adjust the levels of the stereo signal in accordance with the level of the mono signal. Easiest is to use an oscilloscope for this purpose.

Note: There is one 50KOhms spare trimmer from the kit (we just have five voices...) means another 50KOhms trimmer is needed.

Note: Another possibility for (fix) level reduction would be to use different (smaller) values for R37 and R38 on the pan-mod PCB.

The author however decided to use trimmers as described above which also allow to eliminate any level differences between the left and right amplification chain of the pan-mod.

8. Done! Enjoy the new sonical experience of your panorama-modded Prophet-5 Rev 3.3!

Epilogue

Adjust the pan trimmers on the pan-mod PCB for each voice according to your preference. The author went for a simple adjustment: voice 1: 100% Left, voice 2: 100% Right, voice 3: 100% Left, and so forth. Note the stereo-output signal is fixed to a certain level and independent from the VOLUME pot.

The design of the pan-mod allows to mix both signals mono and stereo in an external mixer, resulting in a very rich sound. Of course not all sounds are suited for making use of stereo effect. For instance bass may be better kept „mono“.

Just play and try according to your gusto - and have fun! :-)