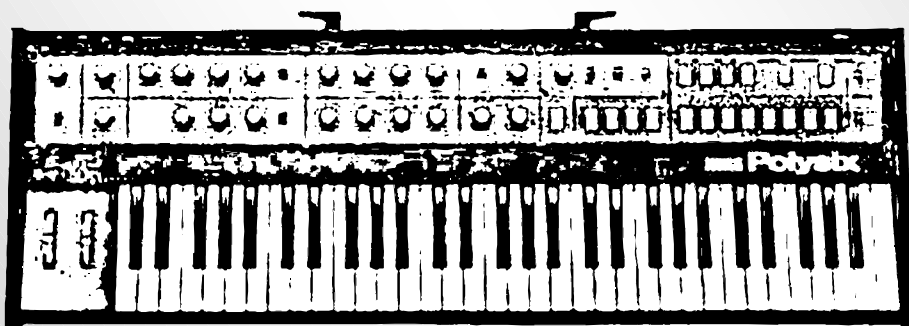


P 6 - K B D

MIDI Interface for KORG POLYSIX Keyboard

Model 8-431
ver. 1.1



INSTALLATION MANUAL
Rev. 2



© 2018 CHD Elektroservis



1	INTRODUCTION	3
1.1	MIDI INTERFACE KIT PARTS	3
1.2	GENERAL INFORMATION	3
2	MIDI INTERFACE INSTALLATION	4
2.1	RELEASING OF THE INSTRUMENT COVER	4
2.2	MIDI-IN SOCKET MONTAGE	5
2.3	BUNCHED CABLES MONTAGE	7
2.4	INTERFACE BOARD INSTALLATION	9
2.5	INSTRUMENT RE-ASSEMBLY	10



1 INTRODUCTION

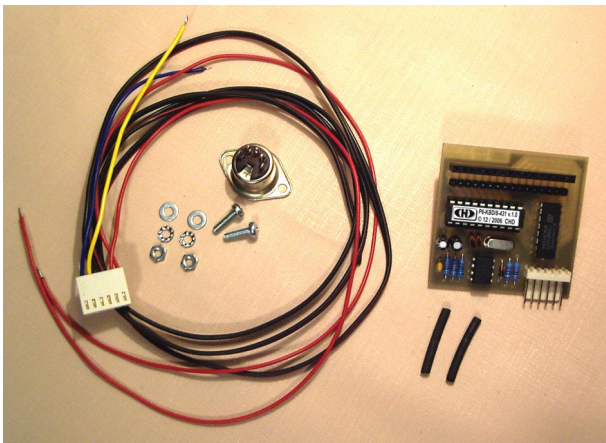
Korg Polysix Keyboard MIDI Interface enables the integration of MIDI in your Polysix instrument. The instrument's keyboard and arpeggiator speed can be controlled with this MIDI interface in parallel manner. The interface only receives MIDI data so it has MIDI input only.

1.1 MIDI INTERFACE KIT PARTS

Parts of the MIDI interface kit

The supplied MIDI interface kit contains all necessary parts, materials, and detailed installation instructions. The kit contains:

1. MIDI interface board
2. Bunched cables with MIDI socket
3. All necessary coupling elements (screws, nuts, washers, etc.)
4. Owner's and Installation manuals in printed form



1.2 GENERAL INFORMATION

The installation of all interface components is very easy. If you follow the instruction from this manual there will be no major problems during the installation procedure. The cover of the instrument will not be markedly damaged during the installation. The physical appearance of the vintage instrument remains nearly the same as before the installation. If necessary, the interface can be removed and the instrument restored back to original appearance. All original features of the Korg Polysix are kept. The instrument can be used the same way as before the retrofitting.

The following tools are necessary for the installation: Phillips screwdriver, driller, drills 3,2 and 16 mm, smaller rasp, pliers, soldering iron (a low heat iron and soldering paste).



Attention ! Disconnect the instrument from the mains prior to the installation. Otherwise, there is a risk of the electric shock!



Attention! Observe precautions for handling electrostatic discharge sensitive devices!



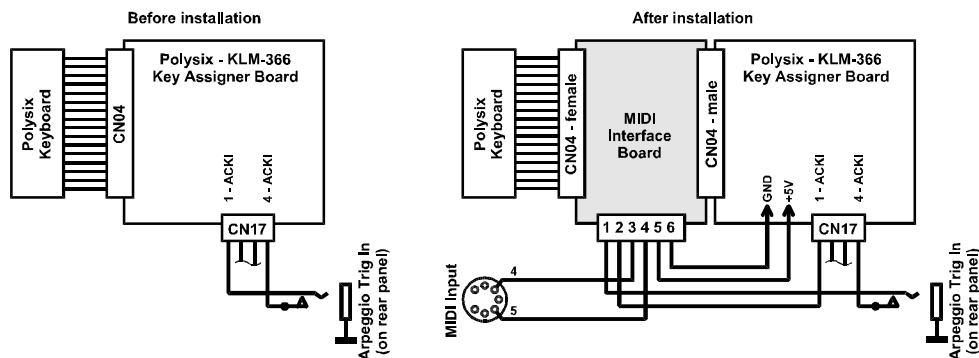
Attention! The producer is not responsible for any eventual mechanical or electrical damage of the instrument caused by the infringement of the described installation procedure or by careless manipulation during the installation of the MIDI interface!



2 MIDI INTERFACE INSTALLATION

The interface is connected to the keyboard switch matrix of the instrument. It is also inserted into the arpeggiator synchronization impulses pathway. The following diagram explains the electrical connection of the interface in the instrument.

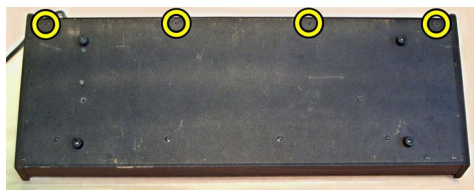
Connection of the interface



2.1 RELEASING OF THE INSTRUMENT COVER

- Unscrew the four screws from the bottom of the instrument (pic. 1-1) and the four screws on the front panel (pic. 1-2).
- Carefully lift off the instrument front panel (pic. 1-3).

Pic. 1-1



Pic. 1-2



Pic. 1-3

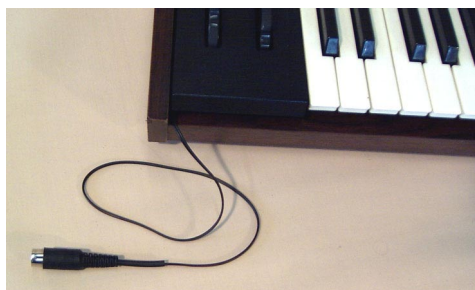


2.2 MIDI-IN SOCKET MONTAGE

There are three possible ways to install the MIDI-In jack.

- If you do not want to mechanically damage the rear panel of the instrument, take out the MIDI cable through the slot on the left side of the keyboard (see pic. 2-1) and replace DIN socket with a cable type.
- It is better to place the MIDI-In socket on the rear panel of the instrument for easier operation. It is necessary to drill three holes in the instrument panel however. (see pic. 2-4). The MIDI-In connector can be installed near the jack connectors (see pic. 2-2).
- If you do not want to damage the instrument, it is possible to mount the MIDI-In connector on the serial number plate on the power cord sub-panel instead. This solution is recommended, since you can revert the instrument to its original appearance at any time. The MIDI-In connector installation procedure is as follows:

Pic. 2-1



Pic. 2-2

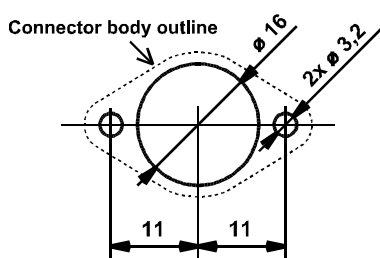


- Flip the front cover over and return it to its original closed position on top of the synth.
- Unscrew the serial number plate from the power cord sub-panel (pic. 2-3). Safely store the serial number plate and screws.

Pic. 2-3



Pic. 2-4



- Drill three holes in the sub-panel (see pic. 2-4). Work carefully so as to not drill the parts inside the instrument (pic. 2-5).



d) Clean the edge of the holes with small rasp (pic. 2-6). Also clean the holes from the inside after the turning over the front cover. The visible silver edge should be colored with dark blue or black cover (you can use permanent marker for this) (pic. 2-7).

Pic. 2-5**Pic. 2-6**

e) **Clean all iron sawdust and raspings from the inside of the instruments**, they can cause short circuits or serious electrical damage if left in the instrument. Please clean the instrument carefully!

f) Insert the MIDI-In (DIN plug of bunch of the cables - part of the kit) under the back cover (from inside) and fix it with screws and nuts. Insert the flat washers under the heads of the screws and tooth-lock type washers under the nuts. Hold the nuts with pliers during the fixing. All material is a part of the kit.

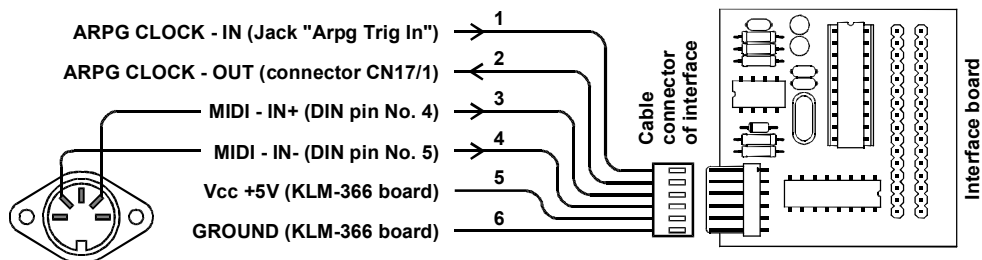
g) It is suitable to label the socket ("MIDI IN") using self-adhesive foil for example (pic. 2-8).

Pic. 2-7**Pic. 2-8**

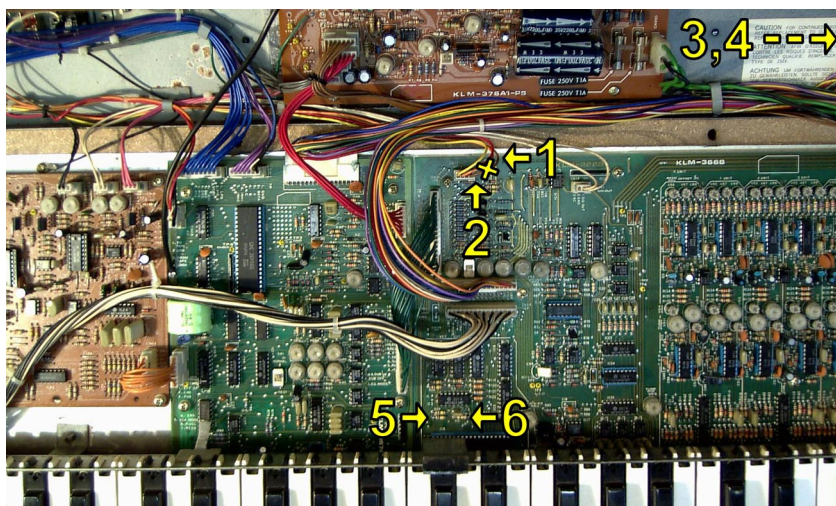


2.3 BUNCHED CABLES MONTAGE

The bunched cables (part of the kit) has a flat connector on one end (pic. 3-1). There are six terminals. Four of them must be soldered to the instrument's board, two of them are already fixed to the DIN - MIDI-IN socket (table 1 and pic. 3-2).

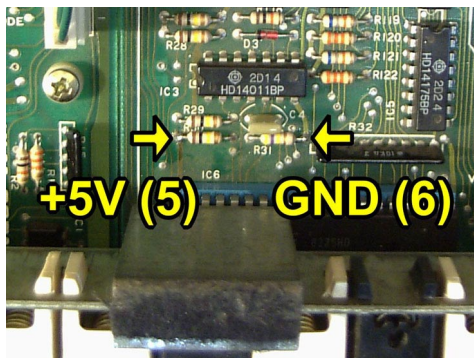
Pic. 3-1**Table 1 – Solder pads on KLM-300 / KLM-377 board**

Wire Nr.	Signal	Placed to	Solder pad / pin	Remarks
1	ACKI	CN17	to wire from "Arpg Trig" Jack	red wire
2	ACKI	CN17	to wire from CN17 connector	red wire
3	MIDI IN+	DIN socket	pin 4	already soldered
4	MIDI IN-	DIN socket	pin 5	already soldered
5	+5 V	R30 resistor	left pin	yellow wire
6	GND	R31 resistor	right pin	blue wire

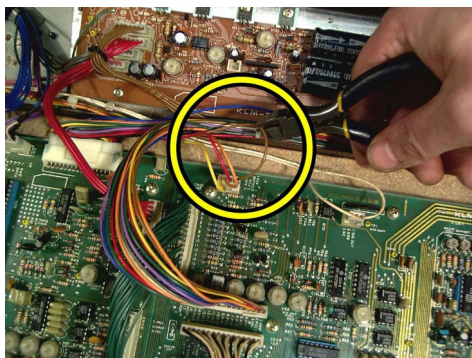
Pic. 3-2

- Solder the blue cable (GROUND - pin Nr. 6) to the ground of the KLM-366 board. The most suitable place is the right pin of the R31 resistor (pic. 3-3).
- Solder the yellow cable (Vcc +5V - pin Nr. 5) to the power distribution +5V on the KLM-366. The most suitable place is left pin of the R30 resistor (pic. 3-3).
- Cut the brown cable from the pin Nr.1 (ACK!) connector CN17 on the KLM-366 board (pic. 3-4). Remove the insulation (approx 5 mm) from both ends of the wire, tin both ends of the wire, and place a shrink-wrap insulation tube on both wires (pic. 3-5).

Pic. 3-3

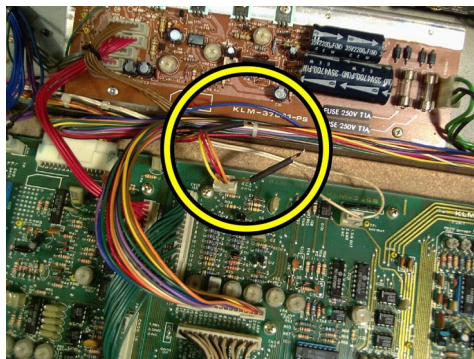


Pic. 3-4

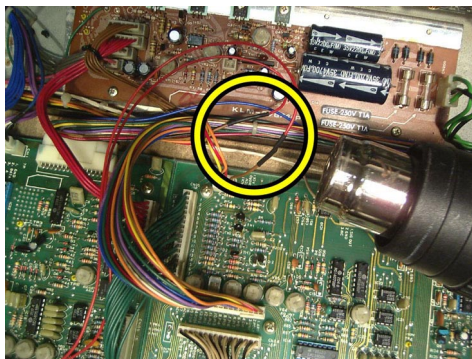


- Solder the end of the cable from the CN17 connector to the red cable from the pin Nr. 2 of the ARPEG CLOCK OUT connector. Isolate the connection with the insulation tube and heat it until it shrinks tightly to the wire. The tube can be heated with a hot-flue pistol, for example (pic. 3-6).
- Connect the other end of the cut wire in the same way (from the "Arpeggiator Trig In" jack) to red cable from pin Nr. 1 of the ARPEG CLOCK IN interface connector (pic. 3-6).
- Cables from pins Nr. 3 and 4 are already soldered to newly installed DIN connector.

Pic. 3-5



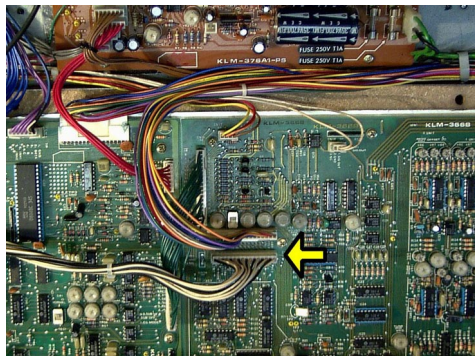
Pic. 3-6



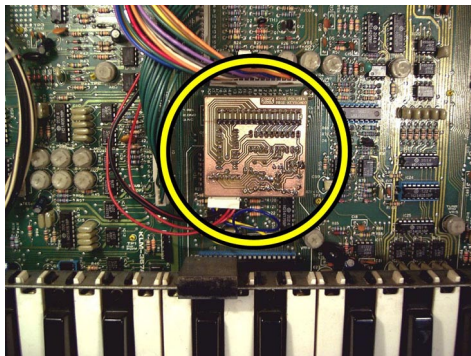
2.4 INTERFACE BOARD INSTALLATION

- Plug the flat 6-pin connector of the bunched cables from the KLM-366 to the connector on the MIDI interface board. The connector is shaped such that it cannot be connected the wrong way. There are locks on it.
- Detach the CN04 connector from the KLM-366 board plug (pic. 4-1) – it is the cable leading from keyboard.
- Plug the interface board into the CN04 connector, the flat connector of the interface leading to the instrument's keyboard (pic. 4-2).

Pic. 4-1

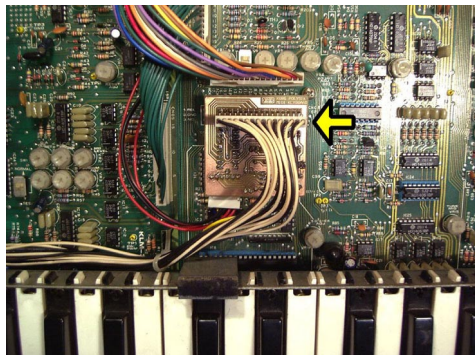


Pic. 4-2

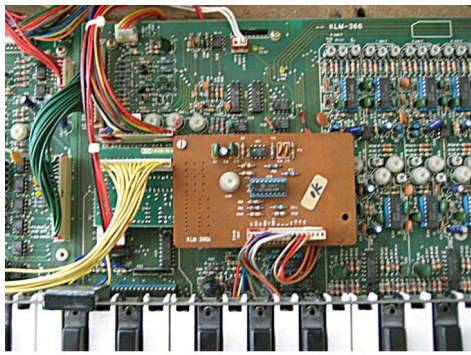


- Plug the connector of the cable leading from the keyboard to the plug on the interface board (pic. 4-3). Be careful and do not turn the connector - the lock of the connector must lead to the instrument's keyboard.
- If you have older version of the Polysix, there is a little problem with installation of interface board onto the CN04 connector because additional board (KLM-396) is too near CN04 connector. In this case, it is necessary to remove KLM-396 board from KLM-366 board and to mount it back with using of longer screws and supports so that it is mounted over the interface board (pic. 4-4).

Pic. 4-3



Pic. 4-4





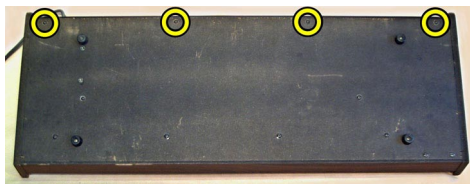
2.5 INSTRUMENT RE-ASSEMBLY

- a) Turn over the front panel of the instrument.
- b) Reattach the front panel to the sides of the instrument with four screws (pic. 5-1) and reattach four screws to the bottom of the cover (pic. 5-2). This is the reverse procedure of that described in the chapter 2.1.

Pic. 5-1



Pic. 5-2



The installation of the MIDI kit is now finished, the instrument is ready for use with MIDI.

Please read the user's manual carefully before the MIDI interface usage.



Document :
8431_install_rev2

Manufacturer :
CHD Elektroservis

Nad kundratkou 27, 19000 Praha 9, Czech Republic

info@chd-el.cz www.chd-el.cz

