DOEPFER

Midi Keyboard
PK88
USB-Version

User's Guide

Contents

1. Introduction

PK88 is a Midi master keyboard designed especially for the requirements of the "mobile pianist" who needs a high class and easy to carry keyboard but is able to dispense with extended Midi features. PK88 includes no sound generation as is was made to combine it with a Midi piano expander or a computer with Midi or USB interface. The PK88 uses a 88 or 76 keys keyboard with real hammer mechanics.

The Midi features are limited to what the user of such a keyboard really needs: PK88 transmits Midi note events with velocity on Midi channel 1 and allows to connect a double foot switch and a foot controller. The double foot switch is used to transmit Sustain and Soft Pedal (Midi controller #64 and #67), the foot controller is used for Volume (Midi controller #7). If you need more Midi functions - like pitch-bend, modulation, after touch, program change, start/stop/continue, keyboard-zones or others - we recommend one of our large-scale master keybords (e.g. LMK2+ or LMK4+).

Overview:

- Midi keyboard with 76 (E-G) or 88 (A-C) keys hammer mechanics
- black flightcase with handle and removable
- Midi Note messages range: 28-103 (76 keys) or 21-108 (88 keys) with velocity (127 steps)
- Midi Output
- USB interface
- Connectors for double foot switch and a foot controller
- power supply +9VDC (wall outlet power supply with XRL connector) or via USB

2. Operating and Security Instructions

Please follow the given instructions for use of the instrument because this will guarantee correct instrument operation. Due to the fact that these instructions touch on Product Liability, it is absolutely imperative that they be read carefully. Any claim for defect will be rejected if one or more of the items was observed. Disregard of the instructions can endanger the 6 month warranty.

- ***The case (flight case) is not a packing suitable for shipment but the case of the instrument. If you want to ship the instrument via mail, UPS, rail, forwarding agency or others you always must use the original packaging. Therefore, you should keep the original packaging.***
- The instrument may only be used for the purpose described in this operating manual. Due to safety reasons, the instrument must never be used for other purposes not described in this manual. If you are not sure about the intended purpose of the instrument please contact an expert.
- Transport the instrument carefully, never let it fall or overturn. Make sure that during transport and in use the instrument has a proper stand and does not fall, slip or turn over because persons could be injured.
- The instrument or the external power supply may only be operated with the voltage written on the instrument power supply input on the rear panel or on the external power supply.
- Before opening the instrument or the external power the instrument or external power supply must be disconnected from mains power supply.
- All eventual modifications must only be carried out by a qualified person who will follow the valid safety instructions. Every modification should becarried out only at the manufacturer or an authorized service company. Any modification not released by the manufacturer leads to the extinction of the operation permission.
- With the introduction of a third person the warranty will be lost. In case of a destroyed warranty seal, any warranty claim will be rejected.
- The instrument must never be operated outdoors but in dry, closed rooms. Never use the instrument in a humid or wet environment nor near inflammables.
- No liquids or conducting materials must get into the instrument. If this should happen the instrument must be disconnected from power immediately and be examined, cleaned and eventually be repaired by a qualified person.
- Never subject the instrument to temperatures above +50°C or below -10°C. Before operation the instrument should have a temperature of at least 10°C. Do not place the instrument into direct sun light. Do not install the instrument near heat sources.
- Keep the top side of the instrument free in order to guarantee proper ventilation, otherwise the instrument could be overheated.

- All cables connected with the instrument must be checked periodically. If there is any damage the cables must be repaired or replaced by an authorized person.
- Never place heavy objects on the instrument.
- Never use the instrument in the immediate proximity of interfering electronic devices (e.g. monitors, power supplies, computers) since this could create disturbances within the instrument.
- The exchange of electronic parts (e.g. EPROMs for software update) is allowed only if the instrument is disconnected from power supply.
- The instrument should only be shipped in the original packaging. Any instruments shipped to us for return, exchange, warranty repair, update or examination must be in their original packaging! Any other deliveries will be rejected. Therefore, you should keep the original packaging and the technical documentation.
- When using the instrument in Germany, the appropriate VDE standards must be followed. The following standards are of special importance: DIN VDE 0100 (Teil 300/11.85, Teil 410/11.83, Teil 481/10.87), DIN VDE 0532 (Teil 1/03.82), DIN VDE 0550 (Teil 1/12.69), DIN VDE 0551 (05.72), DIN VDE 0551e (06.75), DIN VDE 0700 (Teil 1/02.81, Teil 207/10.82), DIN VDE 0711 (Teil 500/10.89), DIN VDE 0860 (05.89), DIN VDE 0869 (01.85). VDE papers can be obtained from the VDE-Verlag GmbH, Berlin.

3. Power Supply

The PK88 does not have a built-in power supply. Instead it uses a plug-in type external power supply (AC adapter) or is powered via USB. The connector for the external power supply is labeled *9V DC*. The primary reason for this feature is the fact that line voltages and plug types vary considerably from country to country. Using a plug-in external supply the PK88 can be used anywhere with a locally purchased power supply, thus keeping the retail price down. The PK88 is switched ON by

- plugging the AC adapter into a wall outlet and connecting it to the appropriate jack on the back of the case labeled *9V DC*
- or connecting the the USB connector of the PK88 via a suitable cable (A-B type) to a computer with USB interface. The computer has to be able to deliver at least 100 mA current at the USB socket.

There is no separate ON/OFF switch. PK88 sold in Germany do include an AC adapter for 230V mains supply. In other countries the power supply may be not included with the PK88 and must be purchased locally by the user. The power supply must be able to deliver a voltage of 7-12 VDC (unstabilized), as well as a minimum current of 100mA. The pin-out of the XLR connector is shown in the appendix.

4. Midi Connector

The *Midi out* socket is located at the rear panel. If the sound generation unit has to be controlled via Midi (e.g. Midi Expander, Synthesizer, Sampler) this socket has to be connected to Midi In of the sound generation unit via a suitable Midi cable. If only USB is used this socket remains unconnected.

5. USB Connector

The *USB* socket is located at the rear panel. If the sound generation unit has to be controlled via USB (e.g. a computer with USB interface and suitable software) this socket is connected to the USB host via a suitable USB cable (type A-B). As soon as the PK88 is connected to a powered computer via USB the power supply takes place via USB and the external power supply (see 3.) is no longer required. The computer has to be able to deliver at least 100 mA current at the USB socket. The USB interface transfers the same data as the Midi output socket (see 2.).

6. Connection of the Foot Switch

Located on the rear of the keyboard case is a socket for connecting a single or double foot switch. It is labelled *Foot Switch*. Do not connect the footswitch unless the PK88 is switched OFF. The two foot switches have SUSTAIN (Midi controller #64) and SOFT PEDAL function (Midi controller #67). If a single foot switch is used only the SUSTAIN function is available. A suitable double foot switch is e.g. the Doepfer VFP2.

The PK88 requires a single or double foot switch with contacts "*closed at rest*". If a switch with contacts "open at rest" is used, the functions are reverse !

Please pay attention that some Midi expanders do not support the Midi controller #67 (Soft pedal). Sustain (#64) is recognized by nearly all expanders. Please refer to the user's guide of the expander used if both controllers are supported.

The double foot switch is not included with the PK88 and has to be ordered separately if required. The PK88 will work without the double foot switch, although the functions SUSTAIN and SOFT PEDAL will not be available to the user in that case.

7. Connection of the Foot Controller

Located on the rear of the keyboard case is a socket for connecting a foot controller. It is labelled *Foot Control*. Do not connect the foot controller unless the PK88 is switched OFF. The controller transmits VOLUME (Midi controller #7). A suitable foot controller is e.g. the Doepfer FP5. If another foot controller is used it has to be the same value (10k linear) and has to be connected as described in the appendix.
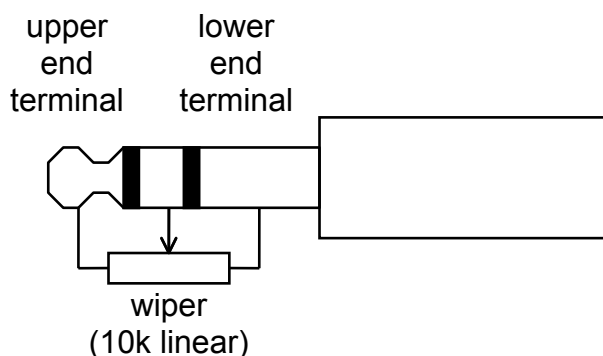
The foot controller is not included with the PK88 and has to be ordered separately if required. The PK88 will work without the foot controller, although the VOLUME function will not be available to the user in that case.

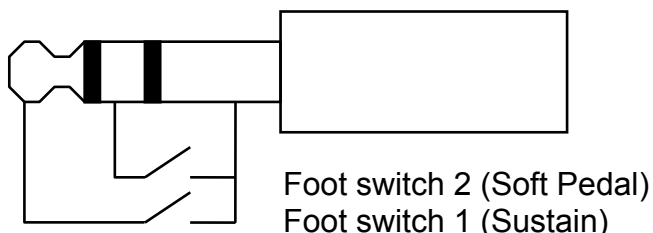## Appendix: Pin Assignment of the Jack Sockets
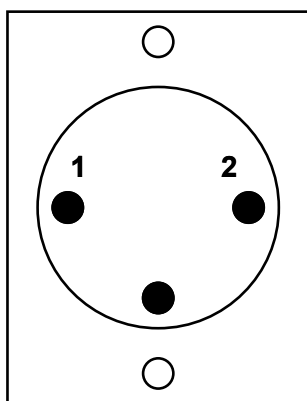
**9V DC
(Power Supply)**

**1 = +7...12V DC
2 = GND**

upper
end
terminal

lower
end
terminal

Foot Control

wiper
(10k linear)

Foot Switch

Foot switch 2 (Soft Pedal)
Foot switch 1 (Sustain)