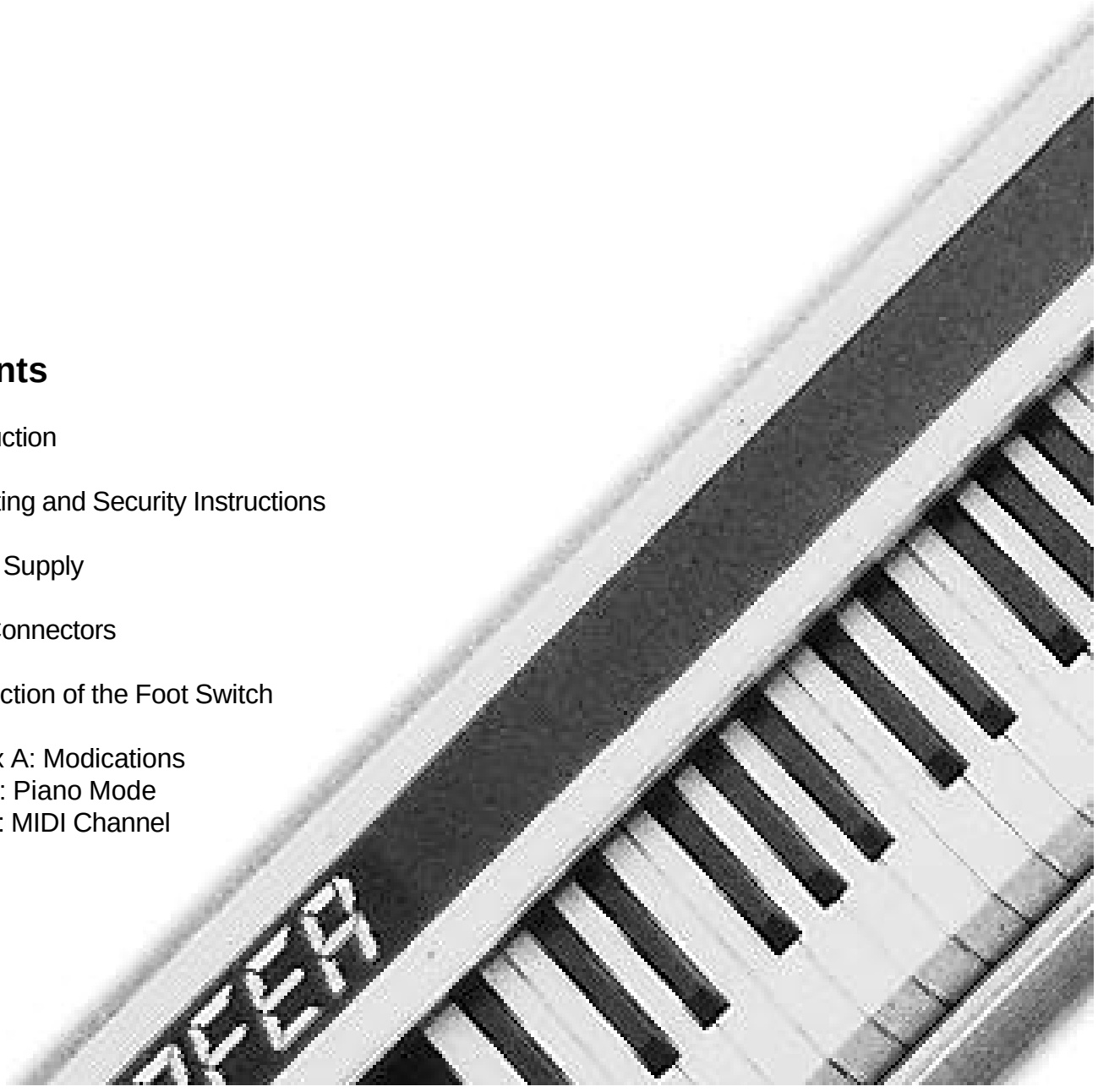
DOEPFER

MIDI Keyboard

PK88

User's Guide



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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 piano expander offered by some manufaturers (e.g. Kurzweil, Emu, Yamaha, Roland, Akai). The PK88 uses a 88 keys keyboard with real hammer mechanics. The case used is a rugged and easy to carry black flightcase with handle and removable lid. The dimensions are about 135 x 27 x 11 cm, the weight is about 20 kg.

The MIDI features are limited to what the user of such a keyboard really needs: PK88 transmits MIDI note events in the MIDI note range 21-108 with velocity on MIDI channel 1. The velocity resolution is 127 steps. We set a high value on the conversion of the mechanical impact to the MIDI velocity so that it is as close as possible to the bevaviour of a real piano - within the limited possibilities of MIDI. At the rear panel a double foot switch can be connected to obtain the piano features sustain (MIDI controller #64) and soft pedal (MIDI controller #67). 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 LMK1+, LMK2+ or LMK4+.

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 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.
- 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.
- 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.
- Never place heavy objects on the instrument.
- 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 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 (DC adapter). The connector is labeled "**9V DC**" and is located next to the two MIDI sockets. 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. 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 is 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.

4. MIDI Connectors

Next to the power supply connector you will find the two MIDI connectors labelled '**MIDI-Out".** On both connectors the same MIDI data are available. Connect one of both outputs with MIDI-IN of the device to be controlled (Expander, Synthesizer, Sampler) via a suitable MIDI-cable. If you want to control a second device with the same MIDI data you may use the second MIDI output or you link the devices via MIDI THRU/MIDI IN.

5. Connection of the Foot Switch

Located on the rear of the keyboard case is a jack for connecting a single or double foot switch. 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. Only foot switches with contacts "closed at rest" are suitable. Otherwise the pedal functions will be reverse, i.e. sustain will be active without operation of the pedal.

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.

Appendix: Modifications

These remarks are only for authorized service personal. If you open the device (removing the keyboard or the rear panel) the warranty will be lost. In case of a destroyed warranty seal, any warranty claim will be rejected. Every modification must be carried 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. For details you may ask for the PK88 service manual available at 10.- US$.

1. Piano mode on/off

On the connector board behind the rear panel there is a jumper near the 10-pin connector leading to the keyboard. If this jumper is set the so-called piano mode is selected. Otherwise the normal mode is active. The difference between piano mode and normal mode is the following: if a key is pressed very slowly a real piano will produce no sound. In this case a MIDI keyboard will send a note on message with velocity 1 (velocity 0 is reserved as note off). Most expanders will generate a audible sound in this case. To obtain the behaviour of a real piano the PK88 offers the possibility that no note on message is sent in this case. If the jumper is set no note message is sent if a key is pressed very slowly (piano mode). If the jumper is removed a note on message with velocity 1 is sent if a key is pressed very slowly (normal mode).
Normally this behaviour should be handled in the sound generation section of the expander but it seems that this problem is not realized by most of the expander manufacturers. An organ type sound must appear independendly of the key impact. However a piano type sound should not appear at very low key impacts.

The factory setting is normal mode (i.e. jumper not set).

2. MIDI channel

On the scanner board below the keyboard there are 4 solder bridges (J5...J8) to adjust the MIDI channel. With these jumpers any MIDI channel between 1 and 16 can be selected. For this the keyboard has to be dismounted and the jumpers in question have to be set with solder wire. If J5...J8 are left open MIDI channel 1 is selected. If J5...J8 are closed the MIDI channel is 16. For details you may ask for the PK88 service manual available at 10.- US$.

The factory setting is MIDI channel 1 (J5...J8 left open).