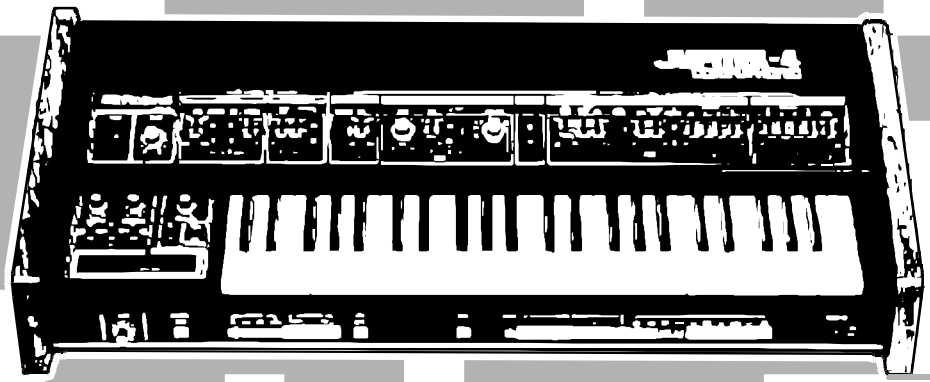
JP4-KBD

MIDI Interface for Roland Jupiter – 4 Keyboard

Model 8-432
Version 2.0



Installation Manual

Rev. 2

Contents:

1 INTRODUCTION

1.1 MIDI INTERFACE KIT PARTS

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

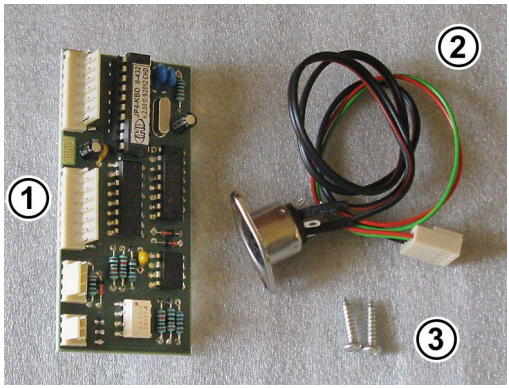
The kit contents:

MIDI Interface board ①

Bunched cables with connectors ②

Coupling elements (self-tapping screws) ③

Installation and owner's manuals in printed form



1.2 GENERAL INFORMATION

The Roland Jupiter-4 Keyboard MIDI Interface enables the integration of MIDI in your Jupiter-4 instrument. The instrument's keyboard (keys) and arpeggiator speed can be controlled with this MIDI interface.

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 Roland Jupiter-4 are kept. The instrument can be used the same way as before the retrofitting.

The installation of all interface components is very easy. There will be no major problems during the installation procedure if you follow the instruction from this manual.

The following tools are necessary for the installation: Phillips screwdriver, pliers, smaller rasper, gimlet or thick needle, driller with drill ϕ 16 mm, soldering iron with tin and soldering paste.

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

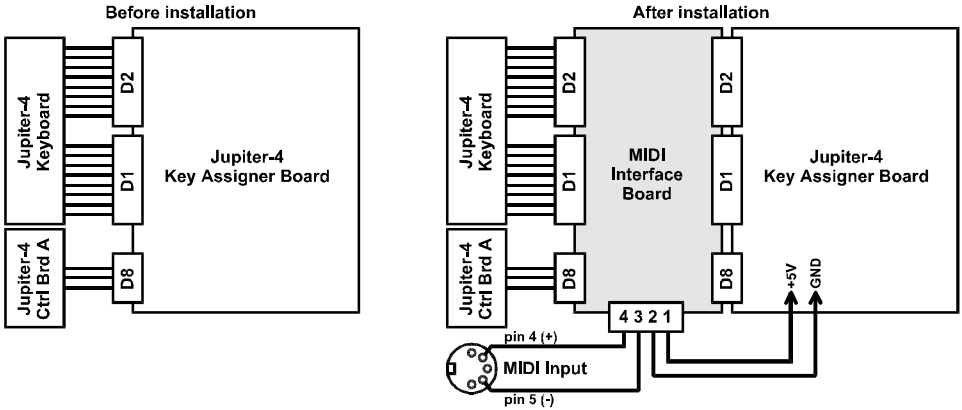
Attention! Observe precautions for handling electrostatic discharge sensitive devices!

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 INSTALLATION OF MIDI INTERFACE

The interface is connected to the keyboard switch matrix of the instrument in parallel manner. It is also inserted into the way of arpeggiator synchronization impulses. Fig. 1 shows electrical connection of the interface to the instrument.

Figure 1 – Electrical connection to the instrument



2.1 RELEASING OF THE INSTRUMENT COVER

a) Unscrew the four screws on the front panel (fig. 2-1). Keep the screws. They will be used again after the MIDI kit installation.

b) Lift off the instrument front panel carefully. Instrument's Key Assigner Board is accessible now (fig. 2-2).

Figure 2-1

Figure 2-2

2.2 MIDI-IN SOCKET INSTALLATION

The best way to the MIDI socket installation is to place it on the rear panel of the instrument (fig. 3-1 and 4-2). This allows easier operation with MIDI cable. However in this case it is necessary to drill a hole in the instrument's rear panel. If you decide for that solution, follow next installation instructions.

If you do not want to drill the instrument's cover, see chapter 3.

a) Turn over the front cover of the instrument back to sit on the sideboards of the instrument.

b) Drill one hole with 16 mm diameter in the left side of rear panel (fig. 3-2). Use sharp drill. Work carefully to not drill in the instrument parts inside the instrument (fig. 3-3).

c) Clean edge of the hole with small rasp. Also clean the hole from inside after turning over the front cover.

d) Clean all sawdust and splinters from the inside of the instrument. Clean the instrument carefully, so you do not damage electronic components on instrument's boards.

Figure 3-1

Figure 3-2

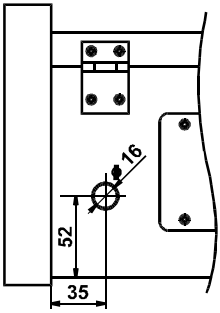


Figure 3-3

2.3 INTERFACE CABLE MONTAGE

The bunched cables (part of the kit) has flat 4-pin connector on one end. Two of wires the flat connector (Nr. 3 and 4 – see fig. 1) are already fixed to DIN socket. Remained two wires (Nr. 1 and 2 – see fig. 1) must be connected to the instrument's "Key Assigner" board (fig. 4-1).

Figure 4-1

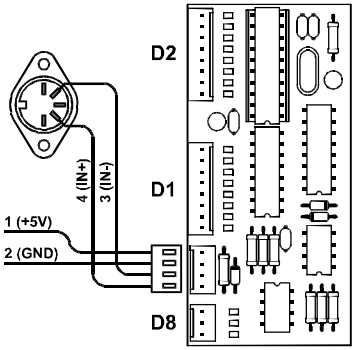
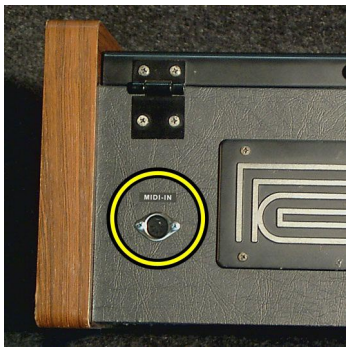


Figure 4-2



a) Get the flat connector of the bunched cable through the hole in rear panel from outside into the instrument.

b) Insert the DIN socket into hole in rear panel and fix the socket to the panel. Use two self-tapping screws (part of the kit). Make a holes for the screws to the wood panel with a gimlet or thick needle before.

c) It is recommended to mark the DIN socket ("MIDI IN"). Use self-adhesive foil for example (fig. 4-2).

d) It is necessary to solder remained two wires of bunched cables to "Key Assigner" board of the instrument now. The pertinent places are: lead Nr. 8 of IC3 (GND) for green cable and lead Nr. 16 of IC3 (+5V) for red cable (fig. 4-3 and 4-4). Be careful here, as the cables must not be connected with other leads of IC3 or with a line on the circuit board.

Figure 4-3

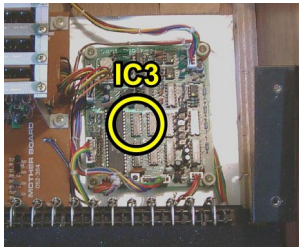
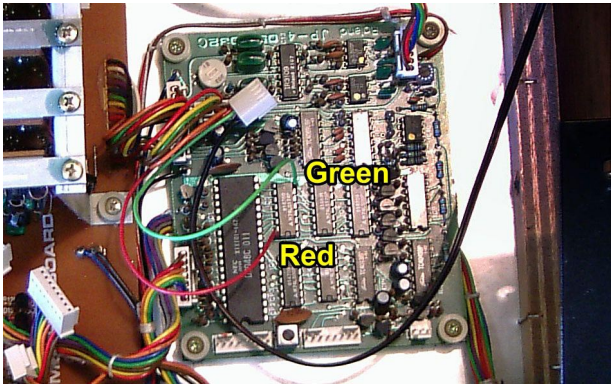


Figure 4-4

e) Solder the green cable (GROUND - pin Nr. 2) to the ground of the "Key Assigner" board - lead Nr. 8 of IC3 (fig. 4-5).

f) Solder the red cable (Vcc +5V - pin Nr. 1) to the power distribution +5V on the "Key Assigner" board - lead Nr. 16 of IC3 (fig. 4-5).

Figure 4-5



2.4 INTERFACE BOARD INSTALLATION

a) Detach two 8-pin connectors (D1, D2) on the "Key Assigner" board of bunched cables from the keyboard and one 3-pin connector (D8) of the bunched cables from the "Control Board A" board (fig. 5-1).

b) Plug interface board onto "Key Assigner" board of instrument (onto connectors D1, D2, D8) (fig. 5-2).

Figure 5-1

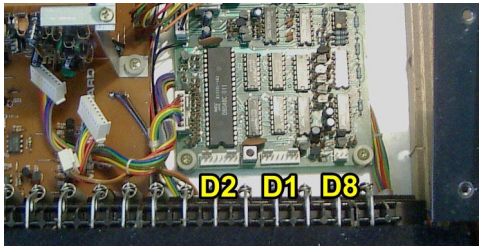
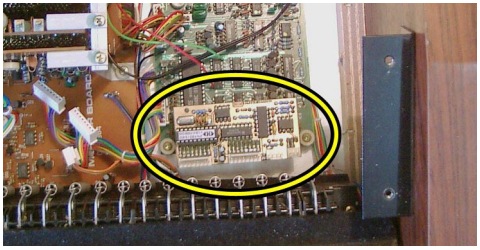


Figure 5-2



c) Plug the flat 4-pin connector of newly installed cable harness from the "Key Assigner" board and from MIDI-IN connector onto the 4-pin connector on interface board. The connector can not be connected in a wrong way, as there are locks on it (fig. 5-3).

d) Plug two 8-pin connectors (D1, D2) of the bunched cables from the keyboard and one 3-pin connector (D8) of the bunched cables from the "Control Board A" board onto interface board (fig. 5-4). Attention - the 8-pin connectors must not be interchanged! It is possible to recognize them according to number of wires leading to them. D1 connector has only 7 wires and D2 connector has 8 wires.

Figure 5-3

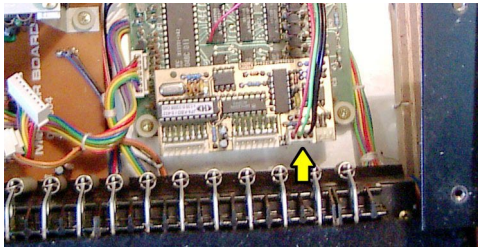
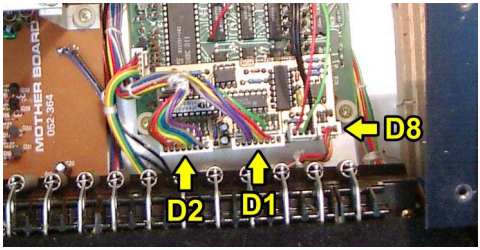


Figure 5-4



2.5 INSTRUMENT ASSEMBLY

Figure 6-1

a) Turn over the front panel of the instrument.
b) Reattach the front panel to the side-boards of the instrument with four original screws (fig. 6-1). This is the reverse procedure of that described in the chapter 2.1.

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.

3 TIPS FOR NON-DESTRUCTIVE INSTALLATION

If you would not like to mechanically modify cover of the instrument (to drill in it), take out the MIDI cable through a crevice in cover of instrument - for example near right sideboard (see fig. 7).

Figure 7

In that case, it is suitable to replace the original DIN socket (intended for panel installation) with another one which is intended to mounting on cable.

MIDI Interface for Roland Jupiter-4
Model JP4-KBD, Nr. 8-433, ver. 2.00
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