9.3. Miniature power supply/bus

9.3.1. Introduction

The **A-100 MNT** (**Miniature power supply / bus**) is composed of a miniature power supply and system bus, with connectors for four modules. It's designed to be used with a small set-up of just a few modules, in your own custom-designed case.

The idea is that then you can use individual A-100 modules - for instance the filters, the filterbank, ferquency shifter, sampler, MIDI interface, etc. - as free-standing pieces of equipment, **which can easily be integrated with your other instruments or recording equipment.**

The power supply provides the usual A-100 system requirements of **+12 V** and **-12 V**, and an additional **+5 V** supply, for the few modules (e.g. A-190) which need it.

The **maximum current loading capacity** totals **100 mA** for **+/- 12 V** and/or **50 mA** for the **+5 V** supply. **From spring 2007** the A-100MNT is equipped with larger heat sinks and is able to deliver **200 mA for +/- 12 V**. The max. current for +5V remains unchanged.

The system bus provides connections for four System A-100 modules. As well as the power supply, it also carries "INT.CV" and "INT.GATE" connections (see A-100 manual, main introduction, chapter 3, 'The A-100 signal flow'.).

The A-100 MNT is supplied as standard with an **external power supply**, which has to be connected to the socket on the MNT's circuit board.

⚠ The external power supply's transformer supplies **alternating current (AC)**. If you want to use another power supply instead of the one supplied, it must have a voltage output of about **7 to 9 V AC** and **a capacity of at least 300 mA**. **From spring 2007** the transformer has to be able to deliver **at least 500mA**.

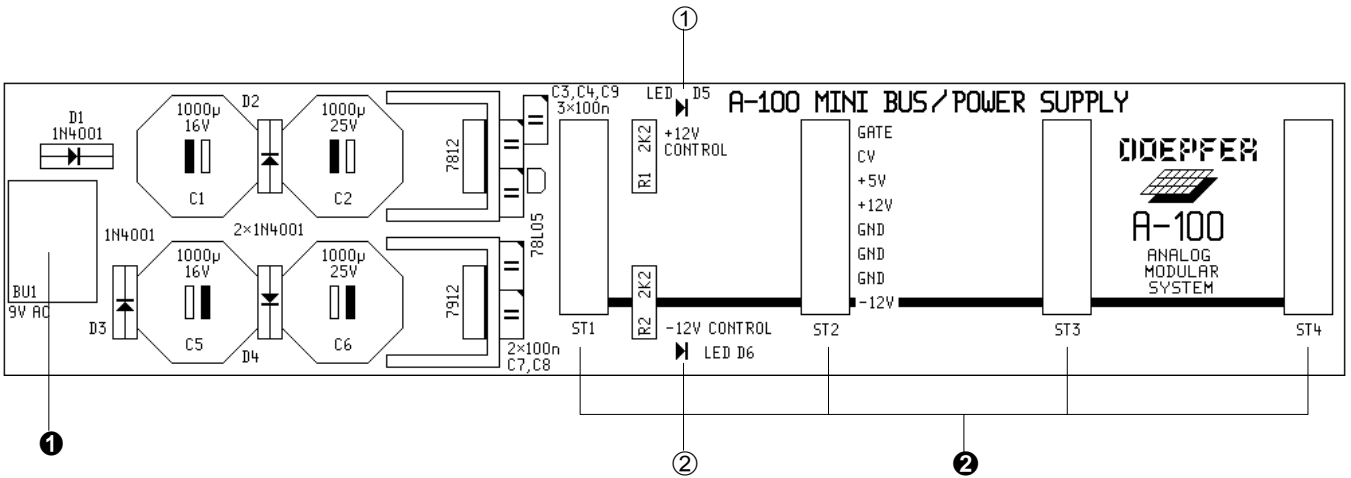
If you connect an external power supply which produces direct current (DC), the A-100 MNT simply won't work!

⚠ Both the A-100 MNT and any connected modules must be **firmly fixed into a proper casing.**

Any sort of **"flying construction" is absolutely discouraged,** because if two conductors from separate modules accidentally make contact, (for instance if the bus-bars from one module ended up touching another module's bus-bars), damage will almost certainly result.

In cases like that, the DOEPFER guarantee is definitely void.

9.3.2. A-100 MNT - Overview



Controls:

① **LED** : LED indicator for +12 V supply.

② **LED** : LED indicator for -12 V supply.

In- / Outputs:

❶ **BU 1** : Input for external power supply (7 ... 9 V AC)

❷ **ST 1 ... ST 4** : Bus output sockets for four modules.

For the new version of the pc board from spring 2007 the positions of the control LEDs are a bit different.

9.3.3. Controls / indicators

① LED • ② LED

LEDs ① and ② indicate that the power supply is working properly. Once the MNT is connected, both LEDs should come on.

⚠ If both LEDs don't come on, first of all check that mains power is available at the socket which the MNT power supply was connected to; then that the mains adaptor is actually putting out voltages, and that a DC adaptor hasn't been used by mistake. If both these points are checked, then the MNT must be defective. The same applies if just one of the LEDs comes on.

9.3.4. In- / outputs

❶ BU 1

This is the socket to which the plug from the external power supply is connected.

❷ ST 1 ... ST 4

The sockets labelled ❷ on the diagram on p.2 are where the modules are connected.

So... to connect modules up to the MNT .....

❒ Disconnect the power supply lead from socket ❶.

❒ Connect the **ribbon cable supplied with each module** to the module's **bus connector** (see ① in Fig. 1). As a rule, this is 16-way, but on some modules it's only 10-way. Check that the cable connector is oriented correctly, (see ② in Fig. 1), and press it on to the module's bus pins.

⚠ Be very careful to ensure that **the coloured marking** on the ribbon cable is at the **bottom of the module's connector** (see ③ in Fig. 1) and that the connection is perfect, and **pushed fully home, not at a slight angle**. Failure to check this may result in the module's instant destruction as soon as the power is re-connected.

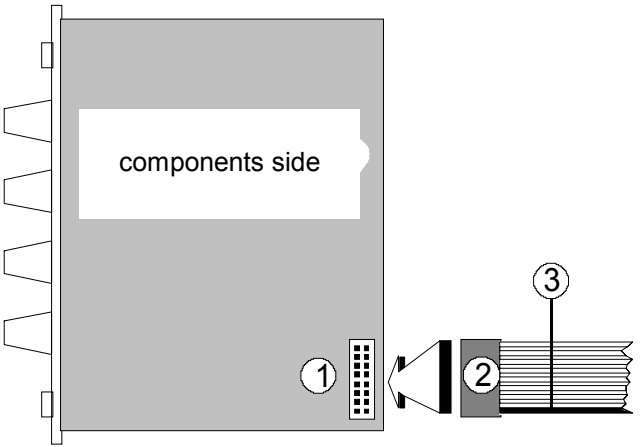


Fig. 1: Connecting the ribbon cable to the module

❒ Now join the free end of the ribbon cable (see ② in Fig. 2) to the nearest available position on the system bus board (see ① in Fig. 2).

⚠ Again ensure that **the coloured marking** on the ribbon cable is at the **bottom of the module's connector** (see ③ in Fig. 1) and that the connection is perfect, and **pushed fully home, not at a slight angle**. Failure to check this may again result in disaster.

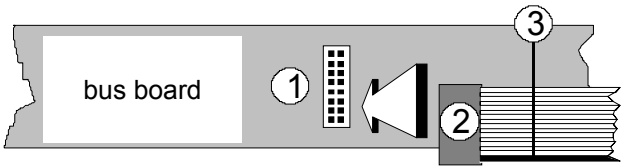


Fig. 2: Connecting the ribbon cable to the bus board.

❒ Now fix the module solidly in its case.

❒ Re-connect the A-100 MNT's power supply, and then switch on the mains again.

❒ Test out the newly installed module.

If it doesn't seem to be working as expected, **immediately** disconnect the system from the power supply again.

In this case, double-check the connections, making completely sure that the ribbon cable is the right way round where it connects to the module and to the bus.