

1. Introduction

Module **A-138 (MIXER)** is a **four channel mixer**, which can be used with either control voltages or audio signals.

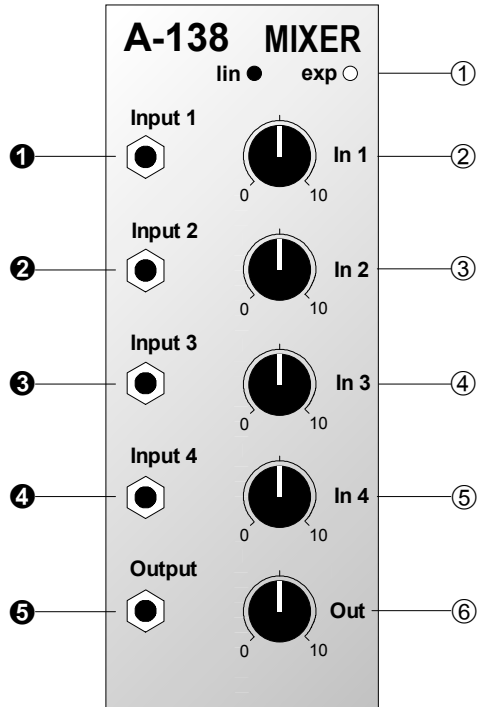
Each of the four inputs has an attenuator, and there's a master attenuator, so that the mixer can be used at the end of the audio chain - ie. it can be used to interface directly with an external mixer, amplifier, etc..

The module can be supplied in two versions:

- **A-138 a**: potentiometers with linear response, so especially suitable for control voltage mixing.
- **A-138 b**: potentiometers with logarithmic response, so especially suitable for audio signal mixing.

From about middle of 2004 the module is equipped with an additional offset function for input 1. An internal jumper is used to decide if control input 1 works as a positive or negative DC offset generator provided that no plug is inserted into input 1.

2. MIXER - Overview



Controls and markings:

① **lin. / exp.:** indication of type of mixer:

A-138 a: linear potentiometers

A-138 b: logarithmic potentiometers

- ② **In 1:** Attenuator for input ①
- ③ **In 2:** Attenuator for input ②
- ④ **In 3:** Attenuator for input ③
- ⑤ **In 4:** Attenuator for input ④
- ⑥ **Out:** Output attenuator

In / Outputs:

- ① **Input 1**
- ② **Input 2**
- ③ **Input 3**
- ④ **Input 4**
- ⑤ **Output**

3. Controls and markings

① lin. / exp.

Check which little circle is filled in, to see which version, linear or exponential (logarithmic), the VCA is.

② In 1 ... ⑤ In 4

Attenuators ① to ④ control the level for inputs ① to ④.

⑥ Out

The **output level of the mixer** is controlled by attenuator ⑥. Unlike on most A-100 modules, the output has an attenuator, so that it can act as the end of the audio chain, and interface directly with a mixing desk, amplifier, etc.

From about middle of 2004 the module is equipped with an additional offset function for input 1. The pin header labelled JP4 (located behind input 1 on the pc board) is used for this option. With no jumper on JP4 the offset option is disabled. If a jumper is put to JP4 in the right position (near the edge of the pc board) a positive offset voltage (~ 0...+5V) is generated by control 1 provided that no plug is inserted into socket 1. If a jumper is put to JP4 in the left position (direction to the front panel) a negative offset voltage (~ 0...-5V) is generated.

4. In / Outputs

① Input 1 ... ④ Input 4

Sockets ① to ④ are the mixer's **inputs**. Patch in what you want to mix via these sockets.



You can use the mixer for either control voltages or audio signals (see chapter 5, user examples)

⑥ OUT

The mixed signal is available at the **output**.

5. User examples

Mixing audio signals

- ❑ Use **A-138 b**, and patch the audio signals to be mixed into sockets ① to ④.
- ❑ Adjust the relative amount of each signal with controls ① to ④, and the volume of the whole mix with control ⑤.
- ❑ The whole mix is output at socket ⑥.

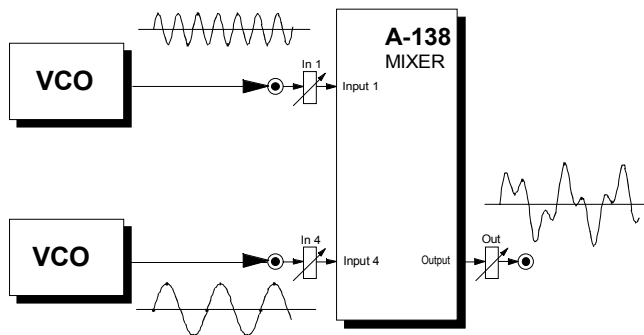


Fig. 1: Mixing audio signals with an A-138 b

Mixing control voltages

You may sometimes need more CV inputs than a particular module has - for instance if you want to control VCF 1 with an **ADSR**, **LFO**, **aftertouch**, and **keyboard tracking**.

In that case, you'll need to use an **A-138a VCA** to mix at least two of the CVs, and send the output to one of the VCF's free inputs (see Fig. 2).

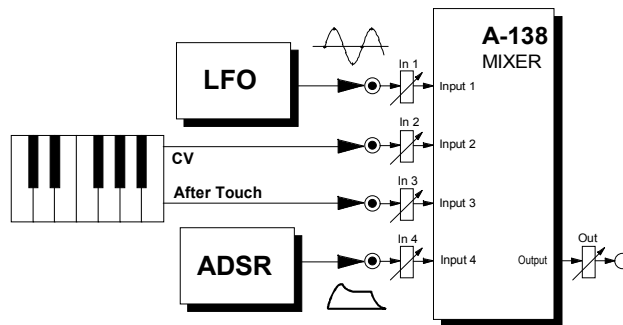


Fig. 2: Mixing control voltages with an A-138 a