

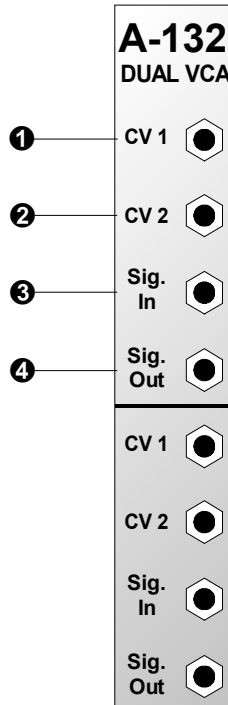
1. Introduction

Module **A-132 (Dual Low Cost VCA)** contains two **voltage controlled amplifiers**, with a linear response most suited to regulating the level of control voltages (ADSR amount, level of vibrato effect, etc.).

In non-critical situations, though, its VCAs can be used to control audio signals - see chapter 4, user examples.

Amplification is governed by the sum of the voltages patched into the two CV inputs.

2. Dual Low Cost VCA - Overview



In / Outputs:

- ① **CV 1** : Input 1 for amplification CV
- ② **CV 2** : Input 2 for amplification CV
- ③ **Sig. In** : Amplifier input
- ④ **Sig. Out** : Amplifier output

3. In / Outputs

① CV 1 • ② CV 2

Sockets ① and ② are the VCA's **control voltage inputs**. Whatever voltages are patched in here are summed, and determine the amount of **amplification** in the VCA (0 V: zero amplification; 5 V: maximum amplification).

③ Sig. In

Patch the signal to be controlled by the VCA into input socket ③.

④ Sig. Out

The VCA output socket ④ sends the signal out once it's been amplified by the sum of the control voltages patched into the VCA.

4. User examples

Control of modulation amount by AM

In Fig. 1 an A-132 is added to the patch to make the **amount of modulation** voltage-controlled. Each of the VCAs has the following function in this patch:

- VCA 1 : A-130, control of AM
- VCA 2 : A-131, control of total volume
- VCA 3 : A-132, control of modulation amount

The control voltage for modulation amount (eg. from a MIDI-CV interface) is patched in at point A.

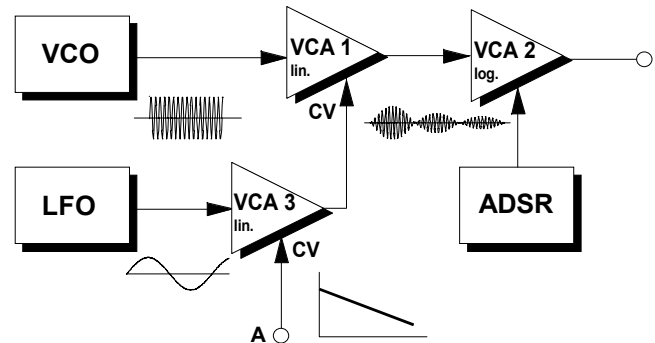


Fig. 1: AM with voltage-controlled modulation amount

MIDI-controlled VCF or VCA envelope amount

One important use of the A-132 is to control a VCF or VCA envelope according to how much velocity CV a MIDI-CV interface is putting out, as in Fig. 2.

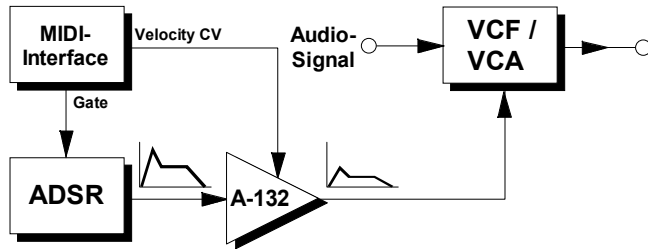


Fig. 2: Controlling the level of a VCF or VCA envelope by the velocity CV output from a MIDI interface.

Audio signal amplitude control

For non-critical applications, the A-132 can also be used for amplifying audio signals.

In the example in Fig. 3, an A-132 is patched in to make the level of noise in an audio signal voltage-controlled. The control voltage CV_N could for instance come from the velocity output of a MIDI-CV interface; or from an envelope, for a chuff at the start of each note.

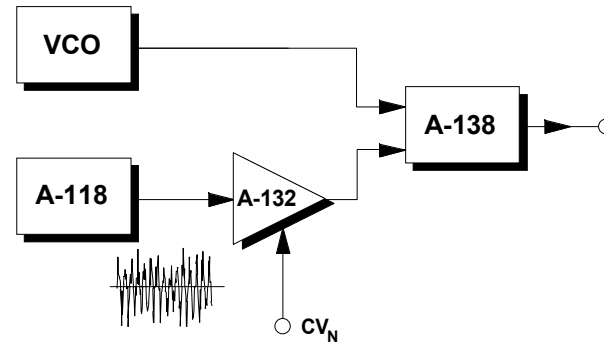


Fig. 3: Audio signal amplitude control

6. Patch-Sheet

The following diagrams of the module can help you recall your own **Patches**. They're designed so that a complete 19" rack of modules will fit onto an A4 sheet of paper.

Photocopy this page, and cut out the pictures of this and your other modules. You can then stick them onto another piece of paper, and create a diagram of your own system.

Make multiple copies of your composite diagram, and use them for remembering good patches and set-ups.



- Draw in patchleads with colored pens.

