

1. Introduction

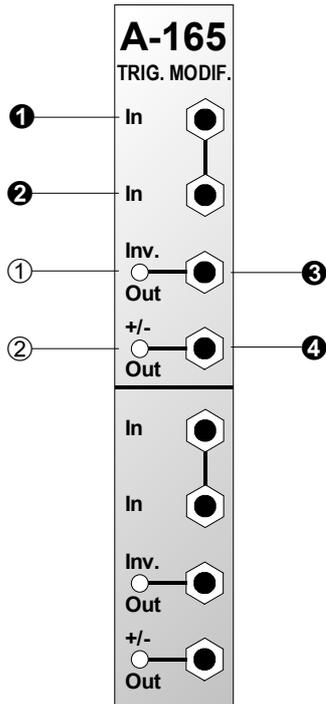
Module **A-165 (Dual Trigger Modifier)** contains two separate trigger modifiers, to use with logical / digital levels (Gate, Clock, Trigger). Each half of the module enables signals generated by the A-100 to communicate with other instruments (such as an external sequencer), or is simply used where you want to reverse a trigger polarity.

Whatever signal is patched into the input is inverted by the module, and fed out of the **Inv. Out (inverted output)** socket.

At the same time, a trigger signal of roughly 50 ms is generated every time an edge of the trigger pulse is sensed (negative as well as positive). This trigger signal is available at the **+/- output**.

Two **LEDs** act as indicators showing the level of signal available at the two outputs.

2. Overview



Indicators

- ① LED : Status indicator for the inverted trigger signal at output ③
- ② LED : Status indicator for the trigger pulse generated, and available at output ④

In / Outputs

- ① In : Input for trigger signal
- ② In : ditto, linked to input ①
- ③ Inv. Out : Output for the inverted trigger signal
- ④ +/- Out : Output for the trigger pulses generated by the A-165

3. Indicators

① LED

This LED is the **status indicator for the inverted trigger signal** at output ③.

② LED

This LED is the **status indicator for the trigger pulses the A-165 generates**, available at output ④.

4. In / outputs

① In • ② In

Sockets ① and ② are the interconnected **Inputs** to the A-165. This is where the trigger signal to be modified is patched in.



In practice, the original and inverted trigger signal are often both needed at the same time, so it's possible to use these two inputs as a mini-multiple - using one of them to send the original trigger to another module.

③ Inv. Out

The inverted trigger signal is available at **output ③** (see Fig. 1).

④ +/- Out

Output ④ carries the trigger signals generated by both the leading and falling edges of the original trigger signal (pulse length: approx. 50 ms). See Fig. 1.

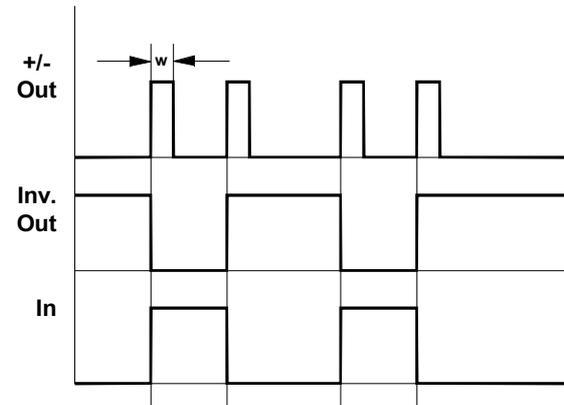


Fig. 1: How the A-165's outputs relate to the input.

5. User examples

Repeating notes played on keyboard

In the patch in Fig. 2 each note played on the keyboard produces two sounds: the first when the key is pressed, and the second when it's released.

To achieve this, output 4 (+/-) on the A-165 is used. The ADSR attack time needs to be very short.

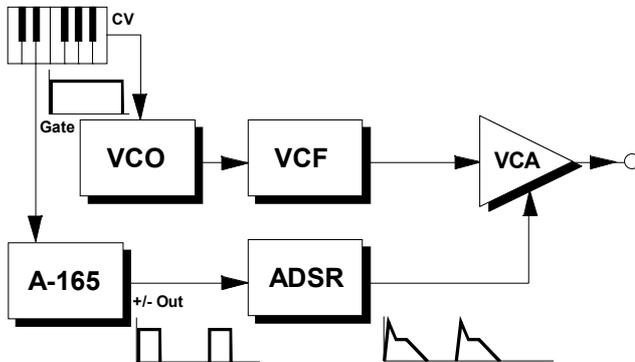


Fig. 2: Double sounds from single notes played.

Repeating notes with ping-pong echo

A modification of the previous patch is shown in Fig. 3. In this case, the sound is repeated when the key is released, but this time from a different output: at the original key-press, the sound goes to one VCA (**Out_L**), and on release goes to the other VCA (**Out_R**).

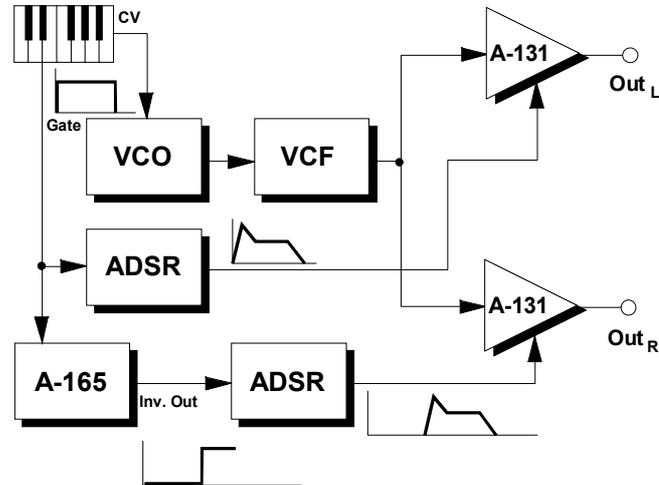


Fig. 3: Repeating notes with ping-pong echo effect.

The patch sounds particularly good if the triggering is provided by a sequencer (like the MAQ 16/3) instead of a keyboard.

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.

