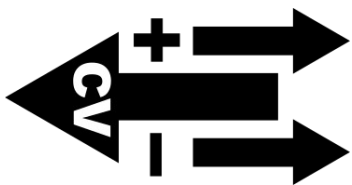


# Notes on noisio's Powered CV Signal Flow

The Powered CV Signal Flow is a little trick to power CV modules and get the control voltage via a single stereo jack cable. It is used by noisio devices to build a mini modular system without having to power the CV generators. As a side effect, it is now possible to run noisio CV modules independently with a simple 5V source - e.g. a USB power supply.

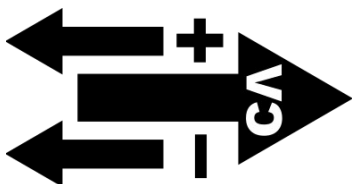
You can recognize the powered CV sockets by their **red color**. Do not connect normal audio lines to these sockets. It will not destroy your equipment, but unexpected behavior is to be expected.

The ATBase sends the 5V power supply through the tip of the jack cable and receives the control voltage through the ring of the cable. It is marked with this symbol:



Sending power ~ receiving CV

And vice versa on the CV Modul you'll find:



Receiving power ~ sending CV

The ground as a reference is connected to the sleeve of the cable.

With this knowledge you can now build your own CV devices for the ATBase. The easiest way is to just hold your finger to the open end of the connected cable. Your body will act as a resistor, allowing some of the electrons to flow back from the jack tip to the synthesizer. Another simple way is to connect two LDRs (Light Depending Resistors). One from the tip to the ring and the other from the ring to the jack. With this you can now translate light movement into sound movement.

To use the noisio CV sources standalone with other devices, you must apply 5 volts to the module. This is easily done by ripping and connecting a stereo jack and a USB cable. You need to figure out which of the colored inner cables of the USB connector carries the power. Usually, the red cable provides 5V and the black cable is the ground. If you search the internet for DIY USB power cables, you will find a lot of information on this topic.

You then need to connect the 5V wire to the tip and the ground to the jack plug socket. To get the CV signal on it, you can now connect the black jack labeled 5V CV right next to the red jack with a mono or stereo cable.

Here's a video illustrating the topic:

<https://www.youtube.com/watch?v=cwPqQMjDY8A>