

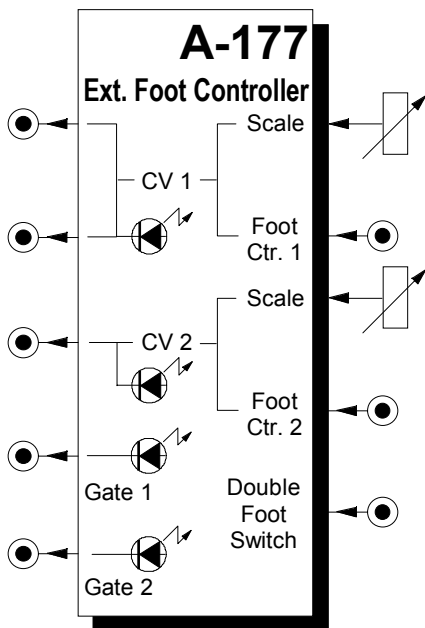
## 1. Introduction

Module **A-177 (External Foot Controller)** gives you the option of integrating **two foot pedals** and **one double foot switch** into the System A-100.

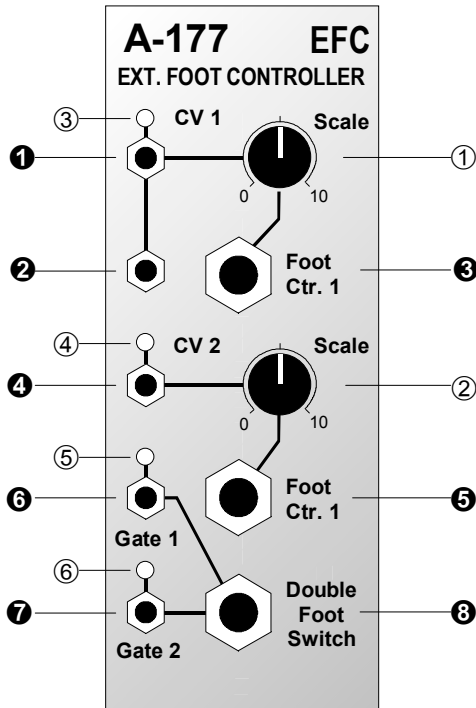
That gives you the ability to use **pedals** to send **control voltages**, and **foot-switches** to send **gate signals**, in real time - very useful in the creative sound-making process.

The foot pedal inputs have scale control knobs, for manual adjustment of the voltage scale they put out.

**Trim pots** are available to provide an **offset** for the particular foot pedals you use (if for instance they don't otherwise go exactly to zero at the minimum point of their travel).



## 2. Overview



### Controls:

- ① **Scale** : voltage range control for pedal 1
- ② **Scale** : voltage range control for pedal 2
- ③, ④ **LEDs** : LED indicators to show the voltage being sent by pedals 1 and 2
- ⑤, ⑥ **LEDs** : LED indicators to show the gate signal being sent by switches 1 and 2

### In / Outputs:

- ①, ② **CV 1** : CV outputs for pedal 1 (internally linked)
- ③ **Foot Ctr. 1** : input socket for pedal 1
- ④ **CV 2** : CV output for pedal 2
- ⑤ **Foot Ctr. 2** : input socket for pedal 2
- ⑥ **Gate 1** : gate output for foot-switch 1
- ⑦ **Gate 2** : gate output for foot-switch 2
- ⑧ **D. Foot Sw.** : input for double foot-switch

### 3. Controls

#### ① Scale • ② Scale

Controls ① and ② are used to set the **overall range** of the control voltages ( CV 1 or CV 2) put out by footpedals 1 or 2.



*DOEPFER's* own design of footpedal is ideally suited to the System A-100, but other makes can be used. If you do use other designs, it may happen that the control voltage won't go all the way down to zero.

In this case, you can use an internal trim pot to adjust the offset until the pedal does go to zero. You just need to use a miniature screwdriver to adjust the screw in the small blue square trim pots on the A-177's circuit board.

#### ③ LED • ④ LED

LEDs ③ and ④ give a visual indication of the **control voltages** CV 1 and/or CV 2 put out by foot pedals 1 and/or 2.

#### ⑤ LED • ⑥ LED

LEDs ⑤ and ⑥ give a visual indication of the **gate signals** Gate 1 and/or Gate 2 put out by a double foot switch.

### 4. In / Outputs

#### ① CV 1 • ② CV 1

**CV outputs** ① and ② are the sockets for the control voltage CV 1 put out by foot pedal 1. LED ③ shows the level of the voltage. The sockets are internally connected ("a mini-multiple").

#### ③ Foot Ctr. 1 • ⑤ Foot Ctr. 2

Connect a foot pedal to either or both **input sockets** ③ and ⑤. The connection system for the 6.3 mm stereo jack plug adopted by Doepfer is shown in fig. 1.



Unfortunately, not all manufacturers follow the same system. *DOEPFER* foot pedals are the only ones we can guarantee will definitely work.

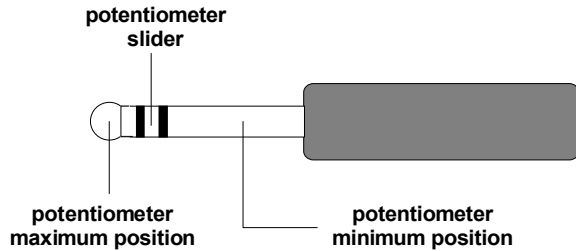


fig. 1: foot pedal connection diagram

#### ④ CV 2

CV output ④ is the socket for the control voltage CV 2 put out by foot pedal 2. LED ④ shows the level of the voltage.

#### ⑥ Gate 1 • ⑦ Gate 2

Gate outputs ⑥ and ⑦ are the sockets for the gate signals put out by the double foot switch. LEDs ⑤ and ⑥ give a visual indication of whether each of the switches is active.

#### ⑧ Double Foot Switch

Socket ⑧ is the input for a double footswitch. It is designed to take a stereo 6.5mm jack plug. The connection diagram is shown in fig. 2.

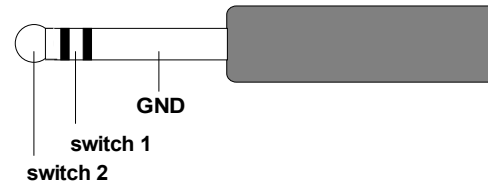


fig. 2: connection diagram for the double footswitch



The chosen footswitch must be one that breaks rather than makes the connection. The DOEPFER footswitch design fits that criterion, and also uses the connections shown in fig. 2.

If you use a foot switch which makes rather than breaks the connection, it will be necessary to patch in an **A-165 Trigger Modifier module**, to invert the signal.

## 5. User examples

### Typical foot pedal uses

You can connect a foot pedal or two up to the A-177 whenever you want to use a real-time variable control voltage in your creation of sounds.

Classic uses are, for instance, to control loudness with a VCA, or timbre with a VCF, or to vary the intensity of a modulation, etc..

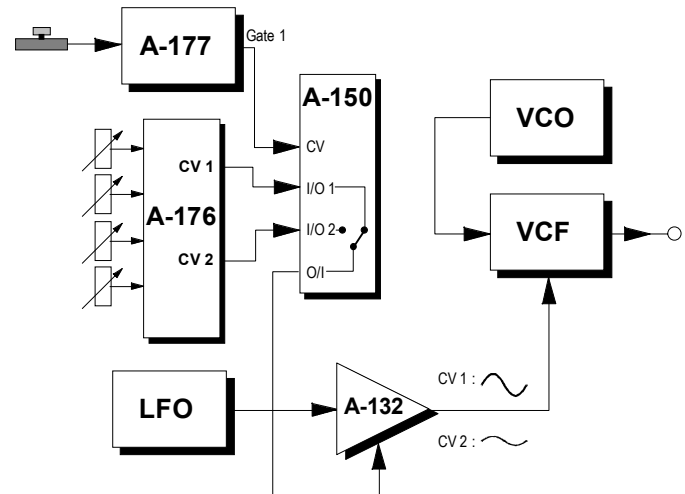
Patching in a foot pedal via the A-177 is particularly useful if you're using an A-190 MIDI interface (which has just one pitch CV and one other controller CV).

### Typical foot switch uses

You can connect footswitches up to the A-177 whenever you want to trigger certain events in real time.

Typical uses might be to connect to the Start / Stop / Reset sockets of sequencer modules (A-155, A-160/1), or the Reset socket on the A-145 LFO; to re-trigger an ADSR (A-140, A-141), to trigger percussive sounds using an ADSR, and to switch between

different voltage levels (see fig. 3) or signal sources by means of voltage-controlled switches (the A-150 and/or A-151).



**fig. 3:** switching between two levels of filter modulation intensity with a foot switch

## 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.
- Draw or write control settings in the little white circles.

