

## Sound Switcher for live performance

### Development status

#### Phase 4

**The transition from the prototype to the final and fully functional form.** At this stage, the prototype is already fully tested, or the technology is certified and ready for mass deployment.

### IP protection status

CZ Patent, reg. č.: 309875

### Partnering strategy

licensing

#### Anotace

Zařízení pro noční přepínání programů a/nebo zvuků na hudebních přístrojích určených pro živé hraní

Zařízení pro noční přepínání programů a/nebo zvuků na hudebních přístrojích (4) určených pro živé hraní využívá tzv. MIDI pedál (1), který je známý z dosavadního stavu techniky. Podstatná výzkumná spočívá v tom, že MIDI pedál (1) je propojený nejenom s hudebním přístrojem (4), ale MIDI signál je dále veden do řídicí jednotky (5), která generuje obrazový signál, a ten je veden do projektoru (14), ze kterého se promítá obraz (15) na plochu MIDI pedálu (1) vešle spínačů (2), kterými se přepínají programy nebo zvuky v konkrétní zvolené bance (18). Uživatel tak u každého spínače (2) může vidět název programu nebo zvuku, nebo barevný symbol či pictogram přiřazený konkrétnímu programu nebo zvuku v konkrétní bance (18).

### Institution

University of South Bohemia in  
České Budějovice

### Vlastník

Jihočeská univerzita v Českých  
Budějovicích

### Challenge

When performing live music, musicians need to use more sounds and effects of their musical instruments. This is possible by special accessories. One of them is the MIDI pedal, which is widely used especially by guitarists for switching sounds and effects. MIDI pedals are constructed either quite simply with 4 switches or more complexly with up to 18 switches. It is often difficult for a musician to remember the distribution of sounds on the switches, and they solve the situation in different ways. Either they stick the names of sounds or effects on the switches, or they have a help in the form of a printed table with the layout of the switches and assigned sounds next to them. The intention of this solution is a MIDI Pedal, which would show the name of the assigned sound for each switch separately depending on the selected bank (sounds or effects are grouped into so-called banks). The presented solution also allows differentiation by colors, pictograms or the type of font used.

### Description

The innovation of the described solution consists in the interconnection of several devices. A MIDI pedal with multiple switches, a control unit (smartphone, NB, tablet) and a projector. The control unit is equipped with a processor, data storage and a what is essential, SW module containing instructions for evaluating the current information of the switches. The SW module also contains instructions for creating the appropriate image assigned to this current switch position in the current bank. Last but not least, the control unit is equipped with a communication interface. The projector is necessary, it is placed above the MIDI pedal during playing and is adapted to project the image onto the surface of the MIDI pedal to the individual switches. According to the selected sound bank, the projector projects the selected display onto the MIDI pedal switches, and the musician immediately and precisely sees which switch to press for the required sound or effect. The solution is adaptable to any type of MIDI pedal.

## Commercial opportunity

Especially the music industry. The device can be used to switch programs or sounds on musical instruments designed for live performance.