SixtyKnobs
OPERATION MANUAL

OVERVIEW

SixtyKnobs might look like a shuttle´s control panel but in it´s core it is a midi-controller, designed specifically for the Sonic Potions LXR drum machine. On top of that it is capable of controlling any device with midi input and external parameter control possibility. Also it can handle some more tricky and less common control protocols such as NRPN or SysEx.

SixtyKnobs is available only as a DIY kit, so you have to build it on your own using your very own hands and stuff. It comes with preflashed microcontroller containing the firmware with a factory preset for the LXR so you can start making dope beats right away.

If you are reading this part for the first time, you probably still have your SixtyKnobs in pieces. So if you have your soldering tools ready, you can get into the building!
You can find the step by step building instructions here: **http://bit.ly/2xoSyU8**

Using our SixtyKnobs Editor software you can create up to 5 custom presets, create a backup and dive deep into all of SixtyKnobs features. The latest version is downloadable for Windows and MacOS at: **https://tinyurl.com/y84663rp**

FEATURES
- 60 controller pots independently customizable through the editor;
- MIDI messages supported: CC (Control Change), NRPN (Non-Registered Parameter Number), DX7 (Yamaha sysEx DX7);
- Button for MIDI DUMP current value of each knob;
- MIDI IN and OUT DIN connector;
- 5 user customizable presets;
- Indication LED shows setting changes
- FTDI connector for firmware flashing (arduino based=hacker friendly!)

SPECIFICATIONS
Power: 9V DC 50 mA center positive
Dimensions (without enclosure): 26.4 x 13.3 x 4.3 cm

IN THE BOX

- PCB;
- Component parts;
- ATMEGA328 already flashed with the latest firmware;

ENCLOSURE

You can either visit our Noise.Kitchen eshop and look at available SixtyKnobs enclosures or you can make your very own enclosure!

TIP: Look for local lasercutting-lab and make your very own design using the fabrication data that you can download from following address:

https://tinyurl.com/y8jofsrm

POWER

Every electronic device needs some juice. SixtyKnobs like most other machines likes only one type of juice so you better prepare a juicy 9V DC (center positive) power supply providing at least 50mA or more.

FIRST RUN

1. Plug a 9V DC (center positive) power adaptor into the power connector
2. Move the power switch to ON. The power LED should light up now (if not, switch OFF immediately and doublecheck the power adaptor specs!)
3. Hold FN button + tweak a MIDI CH pot to choose a midi channel. LED will blink.
4. Close your eyes and take a deep breath.
5. Hold FN button + tweak PRESET pot 1 to recall the factory preset (LXR). LED will blink
6. Eat an orange.
7. Connect MIDI OUT from SixtyKnobs to MIDI IN of LXR
8. Be sure the MIDI channel of both devices are matching
9. Tweak stuff, make some music and HAVE FUN!

Note: Steps 4 and 6 are not crucial for succesful device operation.

PRESET EDITING

1. Download and install the SixtyKnobs editor software from: **https://tinyurl.com/y84663rp**
2. Connect MIDI IN from Sixtyknobs (while powered) to MIDI OUT of your computer's midi device
3. Run the application and select your midi device from the list
4. Create your custom preset by editing each desired knob
5. Upload the preset to device by clicking on "upload to (slot number)"
6. If the LED on the device blinks you have successfully uploaded your preset, if not, check the following

PROBLEMS uploading a preset?

1. Check if Sixtyknobs is correctly powered and switched on
2. Connect your MIDI device to the computer before launching the editor∗
3. Be sure that your midi cable is working and is properly connected

∗SixtyKnobs fulfills standard MIDI requirements and it might not work with non-standard devices as USBtoMIDI sticks.

FN BUTTON TRICKS

To set the GLOBAL MIDI CHANNEL: Hold FN BUTTON and tweak a midi channel knob∗, the LED will blink.

To RECALL A PRESET: Hold FN BUTTON and tweak a preset knob∗∗, the LED will blink.

To MIDI DUMP ALL KNOB VALUES: Double tap the FN BUTTON, the LED will blink.

∗knobs 1-16 in text-reading order starting from left-top corner
∗∗knobs 1-5 in text-reading order starting from left-bottom corner

WHEN THE STUFF DOESN´T DO THIS STUFF

If you had problems building the DIY kit and it does not work correctly, feel free to contact us for an advice at **diy@bastl-instruments.com**
If you have issues with the device operation you can get in touch with our customer support at **help@bastl-instruments.com**