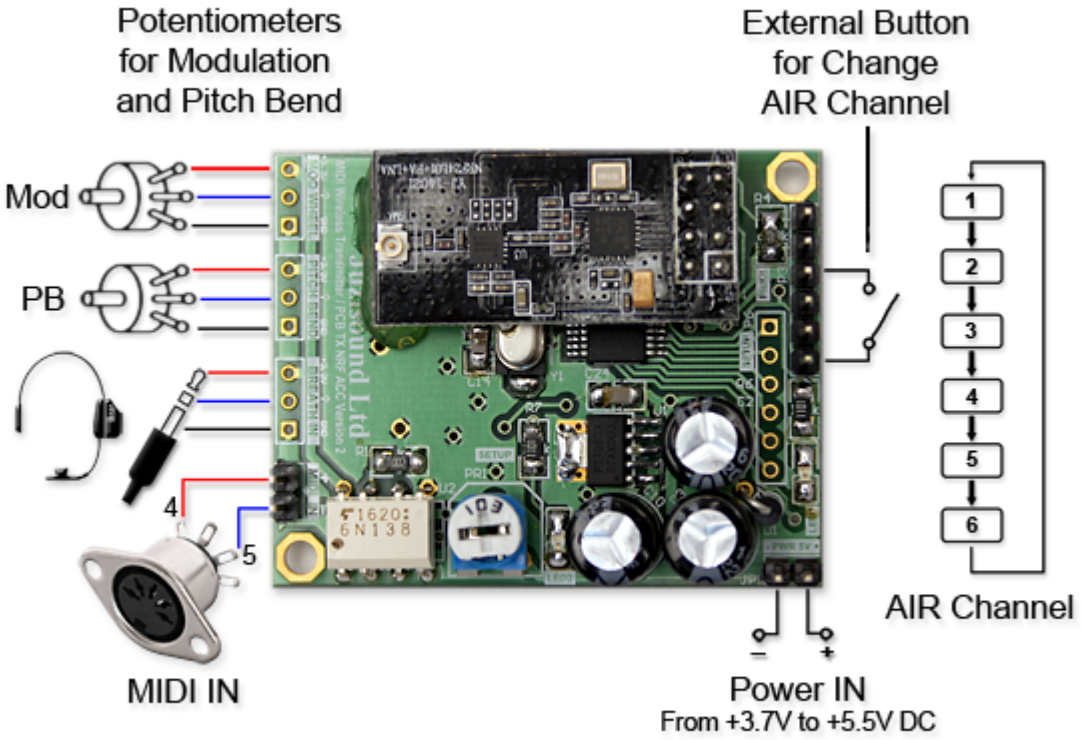
Juzisound MIDI Wireless
(Installable Version)

Transmitter Analog Inputs Settings



Transmitter Board Installable Version is made for installation inside any portable MIDI device add MIDI WIRELESS function to this device.
Main mission of this board is to transmit MIDI signals from you portable device to destination point, without cable. Yes, this is main mission, but this board is not only MIDI transmitter! This is powerful multy-input analog to MIDI converter/mixer too.

Whu need this analog to MIDI conversion, and whu multy-input?

Most often Analog to MIDI conversion is need when you need to use breath controller together with you portable device, and when you portable device not have input for breath controller. Then both MIDI out of portable device and breath controller are connected to Transmitter board, and transmitter board send mixed signal from both sources trought AIR to receiver. Additional analog inputs for PitchBend and Modulations if need, when you portable MIDI device not have one or both of these controllers. Then possible to add this controllers and connect to transmitter board. Transmitter make analog to MIDI conversion of all inputs, and common MIXED MIDI signal is transmited trought AIR to receiver.

About Connections

This board, have same set of connectors. In most cases you are use only 2 connectors: Power IN and MIDI IN.

- Power IN is used to give power supply to transmitter board. Use only DC power supply with voltage from +3.7 to +5.5 volts. If use battery, we recommend to use one Li-Ion or Li-Po battery with capacity of 2000 or more mA. Power consumption of Transmitter Board is qual or less of 20 mA. Please be very careful about power input polarity. Proper power polarity is shown on picture.
- MIDI IN is used to put MIDI signal to Transmitter board. This is no compromise opto-isolated MIDI input, like in another pro MIDI devices. Connect MIDI OUT of you portable device to this input. Proper pinouts are shown in picture too.

WARNING!	**Do not use power supply outside absolute min-max range: +3.7V MIN to +5.5V MAX. This will be damage you transmitter.**

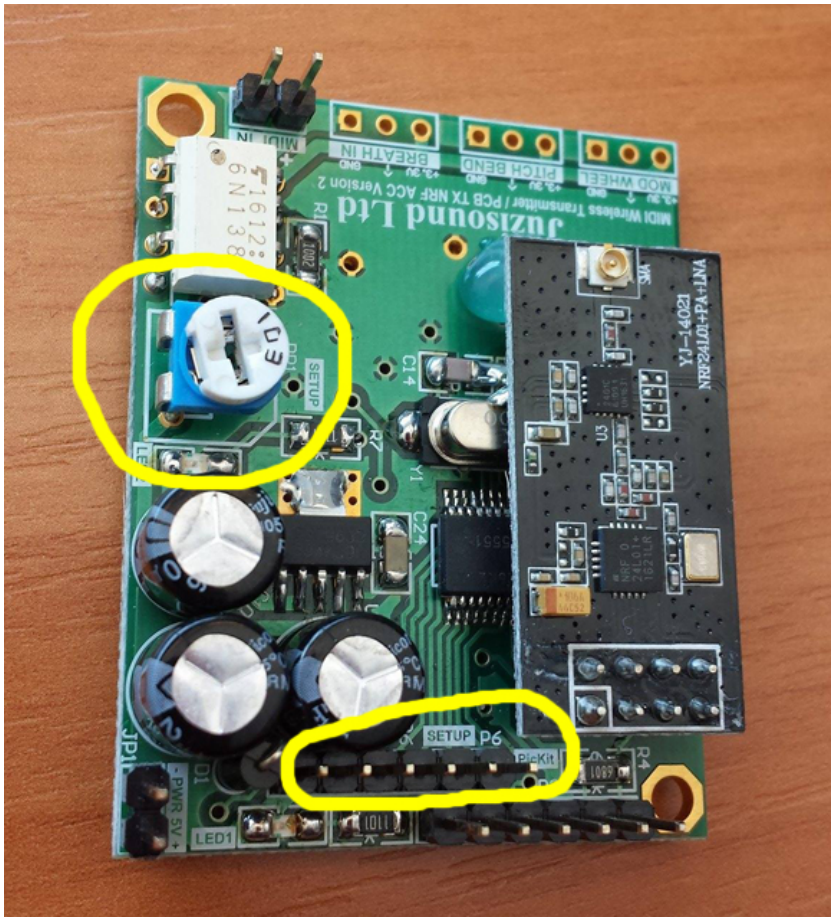
About additional analog inputs:

Transmitter board have 3 additional analog inputs. These inputs are specialized to use with different analog controllers.

- Breath input is for connecting analog version of Juzisouind Breath Controller. Comply pinouts.
- Pitch Bend input is for connect potentiometer used like Pitch Bend. Recommend to use linear potentiometer with resistance of 10 kOhms.
- Modulation inputs are for connect potentiometer used like Modulation Wheel in keyboards. Recommend to use linear potentiometer with resistance of 10kOhms.

Pinouts for connecting potentiometers are shown in picture.

Connecting of harware is only one part of job. For activation of theese functions need to make same settings.



How to make settings of analog inputs ?

Principe:
Configuration of analog inputs are made with combination of jumpers plugged in connector P6 (SETUP).
When transmitter power up, if in this connector not have any jumpers, transmitter continue to **normal work**.
If in this connector have **any jumper**, then transmitter enter to **setup mode**, and **position of jumpers determines exact parameter who you change**.
Value of parameter is change, with **trimmer potentiometer** PR1 shown in picture.

Indication of setup mode:
When transmitter enter in setup mode, this will be confirmed with 1 second fast blinking of both leds.

Indication of changed parameter?
When you change parameter, no any indication is available on transmitter leds. You need to see
What is MIDI messages is produced by transmitter. To do this, need to connect wireless receiver MIDI out to computer or another device with MIDI analyzer function. If use computer, use software MIDIOX. Possible to use MIDI analyzer of Juzisound Total SOLO sampler too.

How to exit from setup mode?
It is possible to go out from setup mode in 2 ways:
1. Exit without save changed parameter. To do this, simple POWER OFF transmitter.
2. Exit with saving of changes of edited parameter. To do this, remove any jumpers from connector P6 (SETUP). Transmitter will be confirm saving and exiting with 1 second fast blinking of both leds, and will be continue to work in normal mode.

How to change multiple parameters?
Not possible to change multiple parameter in one setup cycle. If need to change another parameter, need to power off transmitter, assign jumpers in position for new parameter, and repeat the same setup procedure.

Jumper position and selected parameter

For proper setting of most parameter, need to see generated MIDI messages in MIDI analyzer.

JUMPERS POSITION	SELLECTED PARAMETER
O O O O O O	No edited parameter. Transmitter go to normal mode.
● O O O O O	SETUP_PARAMETER_OUT_MIDI_CHANNEL Choice main MIDI channel, for all generated MIDI messages. INTERNAL VALUES: от 1 до 16
O ● O O O O	SETUP_PARAMETER_ADD_MIDI_CHANNELS Choice additional MIDI channels for generated analog MIDI messages. INTERNAL VALUES: from 0 to 2; 0- sending only main MIDI channel, 1 - +1 MIDI channel; 2 - +2 MIDI channels.
O O ● O O O	SETUP_PARAMETER_BREATH_GEN_MODE Select type of MIDI messages, generated from analog input BREATH IN: INTERNAL VALUES: 0-10 max - OFF; (CC Message Number 2, 7, 11, 74. 11+74) (Inverted CC Message Number 2, 7, 11, 74, 11+74)
O O O ● O O	SETUP_PARAMETER_BREATH_GAIN INTERNAL VALUES: 1 = 0-255 max. Internally gain value is based on 32. Then possible to set overall input gain from 1/32 = **x 0.03125** to 255/32 = **x 7.96875**
O O O O ● ●	SETUP_PARAMETER_BREATH_OFFSET INTERNAL VALUES: 1 = 0-255 max - OFFSET - FULL RANGE. To make proper settings of offset for breath controller, don't apply breath pressure, watch produced MIDI signal and select trimmer position near before MIDI out is 0.
● ● ● ● O O	SETUP_PARAMETER_MODULATION_GEN_MODE INTERNAL VALUES: 0-85 max / 0 – 10: OFF; 11- 20: Only modulation ; 21-85: - KORG mode – UP modulation, Down CC2. If use KORG mode, this parameter determine size of death zone in middle position.
● ● O ● ● O	SETUP_PARAMETER_MODULATION_GAIN INTERNAL VALUES: 0 – 255; Gain of modulation analog input from **x 0.03125** to **x 7.96875**
● ● O O ● ●	SETUP_PARAMETER_MODULATION_OFFSET If modulation work only in modulation mode, this parameter set point from where modulation potentiometer will be work. Use this if mechanically potentiometer not go to minimum position. If modulation mode is KORG mode, then this parameter determine center point of potentiometer. INTERNAL VALUES: 0 – 255;
O ● ● ● ● O	SETUP_PARAMETER_PITCH_BEND_GEN_MODE This parameter determine generation or not MIDI Pitch Bend messages, from analog in for Pitch Bend. If parameter is 0, generation is disabled. If parameter is not 0, then determine Pitch Bend GAIN. INTERNAL VALUES: 0 -OFF; 1-63 ON+GAIN = MIN <-> MAX
O ● ● O ● ●	SETUP_PARAMETER_PITCH_BEND_CENTER Determine center point of Pitch Bend controller INTERNAL VALUES: 0-255 max - Pitch Bend Center Position - FULL RANGE
O O ● ● ● ●	SETUP_PARAMETER_PITCH_BEND_DEATH_ZONE Determine size of death zone (non-sensitive zone around of center point of Pitch Bend controller). INTERNAL VALUES: 0-255 max - Pitch Bend Death Zone - FULL RANGE
● ● ● ● ● ●	SETUP_PARAMETER_RESET_ALL_PARAMETERS If when transmitter is power on and jumpers are in this position, this execute RESET ALL PARAMETERS to the default state. After this, transmitter continue to work in normal mode.