

# > EMY \_

The Expandable Speech Synthesizer



# Short description

Emy, the **E**xtensible **M**odular **Y**abber is a Eurorack module with a mikroBUS port that allows hardware speech synthesizer to be added to change its voice.

In its native form, Emy emulates the famous TMS5220 speech chip and read the LPC compressed data from the SD card to allow infinite vocabulary !

## What & when to speak

*Note : when using a jack, its pot should be rotated fully CCW to let the input voltage to its full scale.*

### 1) Gate

To trigger or hold the sound. (see mode for details)  
Remember to use various gate length when creating rhythm.

### 2) Function Selector

Turn the rotary to select a function and apply the choice by pressing the button.

The button can also be used to simulate a gate trigger and start the speech.

To exit a function: hold down the button until the screen becomes black, then immediately release it.

### 3) Sound

This signal is used to select the sound to be processed.  
When reading the SD card, it is used to choose a line from the file being processed.

### 4) Busy

5 volt level that goes up when Emy is busy talking.

### 5) Mode

**Speech mode** (position: up)

in Speech mode, the speech has the priority and will complete before starting again on the new gate signal.

**Repeat mode** (position: middle)

In Repeat mode, the gate has the priority and the speech is active only while the gate level is high. Playing with the gate length or duty cycle allows making nice shopping effects.

**VCO mode** (position: low).

in mode VCO the Stretch pot is disabled

## How to speak

### R) Rate

Used to affect the generator sampling rate without affecting the timing.

### S) Stretch

To slow down or accelerate the speech without affecting the rate.

### B) Bend

Distort the sound in a circuit bending effect. Turning the knob fully CCW disable the effect

### P) Pitch

Turn the knob fully CCW and to play the normal voice and disable the effect

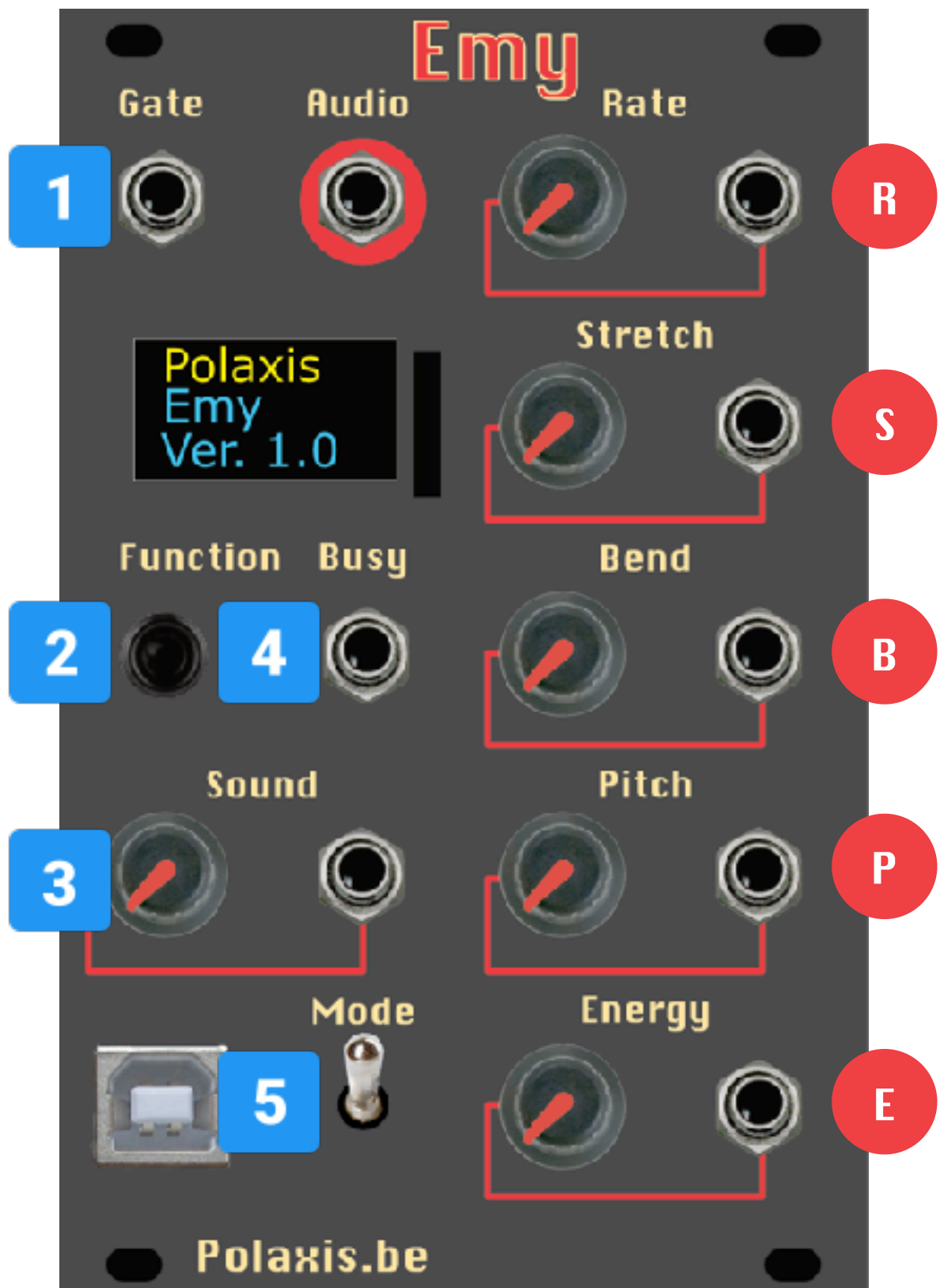
Turn the knob fully CW to activate the growling mode.

Any other position will override the normal pitch change with a fixed pitch. This produces a robotic voice.

### E) Energy

Turning the knob fully CCW disable the effect

Turning the knob CW override the speech engine volume of voiced sound. This effect can lead to heavy distorted sounds. Great to use in conjunction with the Pitch entry for robotic voices effects.



# Main menu

## Allophones

Use the rotary to pick an allophones table between “Voiced, Unvoiced, All or VCO friendly”

## Number

Use the rotary to change number range (the voice has the priority so the change will be effective when the speech ends)

## SD lpc

Group your sentences into a song file with a. lpc extension and place all your songs onto the SD card. First choose the song you want to play, then use the Sound pot to choose the lines or word to play

## SD phon

Group your sentences into a song file with a. phn extension and place all your songs onto the SD card. Choose first the song you want to play, then use the Sound pot to choose the lines or word to play

## Chatter

Use the sound pot to adjust the chatter length

Use Function to choose the allophones table between “Voiced, Unvoiced, All or VCO friendly”

(the voice has the priority so the change will be effective when the speech ends)

## Serial LPC

please check the manual for more instructions

## Serial PHN

please check the manual for more instructions

## Technical details

- 16 hp
- micro SD card reader
- Diode for reverse polarity protection
- Consumption : +12V 60mA / -12V 18 mA
- Cortex-M0 ARM processor, Arduino zero compatible
- All inputs: 100k impedance, 12-bit ADC.
- CV control designed for 0-5 V entries
- Busy out signal 5V
- OLED crisp display
- mikroBUS host with audio input.
- Trimpot to adjust mikroBUS amplification level.
- Output level 8 Vpp
- USB port for communication and firmware updates

## Online Manual & help

Emy's main page : [www.polaxis.be/emy](http://www.polaxis.be/emy)

Support forum : <http://www.polaxis.be/forum>

## More sounds

<http://www.polaxis.be/lpc-files/>

## Contacts

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