

# Talko Alternative firmwares

## Talko Alternative firmwares

On this page we will list all the alternative firmwares available for Talko.

If you are a developer and you want to write your own firmware, the section below summarizes the Talko2 hardware pin map

Important note: in the Talko irmware, most inputs are configured with INPUT\_PULLUP. This means they are normally HIGH and become LOW when the switch closes to GND.

Gate input note: the gate signal is inverted by a transistor on the hardware, so the RP2040 pin sees an active-low signal when an external gate is present. For this reason, the Talko firmware attaches the gate interrupt on a FALLING edge (active-low trigger).

## Available alternative firmwares

- Coming soon (send me your firmware or link and I will add it here).

## Hardware pin map (Talko2 / RP2040-Zero)

Signal (firmware name)	RP2040 pin	Direction	Description	Notes
PIN_AUDIO	GPI01	OUT (PWM)	Audio PWM output	Low pass filtered PWM
PIN_POT_SOUND	GPI026 / ADC0	IN (ADC)	Sound potentiometer	Read with analogRead()

<b>Signal (firmware name)</b>	<b>RP2040 pin</b>	<b>Direction</b>	<b>Description</b>	<b>Notes</b>
PIN_POT_FX	GPI027 / ADC1	IN (ADC)	FX potentiometer	Read with analogRead()
PIN_POT_SPEED	GPI028 / ADC2	IN (ADC)	Speed potentiometer	Read with analogRead()
PIN_POT_PITCH	GPI029 / ADC3	IN (ADC)	Pitch potentiometer	Read with analogRead()
PIN_GATE	GPI02	IN (pull- up)	Gate / trigger input	INPUT_PULLUP. The gate is inverted by a transistor on the hardware, so the RP2040 sees an active-low signal. Interrupt on FALLING in the reference firmware.
PIN_ROTA	GPI03	IN (pull- up)	Rotary encoder A	INPUT_PULLUP, interrupt on CHANGE
PIN_ROTB	GPI04	IN (pull- up)	Rotary encoder B	INPUT_PULLUP, interrupt on CHANGE
PIN_SELECT	GPI013	IN (pull- up)	Rotary select / click	INPUT_PULLUP
PIN_ERROR	GPI00	IN (pull- up)	Push button	INPUT_PULLUP

<b>Signal (firmware name)</b>	<b>RP2040 pin</b>	<b>Direction</b>	<b>Description</b>	<b>Notes</b>
PIN_MODE_A	GPI015	IN (pull-up)	Mode select A	INPUT_PULLUP
PIN_MODE_B	GPI014	IN (pull-up)	Mode select B	INPUT_PULLUP
WS_PIN	GPI016	OUT	NeoPixel (WS2812) data	Single on-board NeoPixel
PIN_SEG_A	GPI05	OUT	7-segment display: segment A	Digital output
PIN_SEG_B	GPI06	OUT	7-segment display: segment B	Digital output
PIN_SEG_C	GPI07	OUT	7-segment display: segment C	Digital output
PIN_SEG_D	GPI08	OUT	7-segment display: segment D	Digital output
PIN_SEG_E	GPI09	OUT	7-segment display: segment E	Digital output
PIN_SEG_F	GPI010	OUT	7-segment display: segment F	Digital output
PIN_SEG_G	GPI011	OUT	7-segment display: segment G	Digital output

<b>Signal (firmware name)</b>	<b>RP2040 pin</b>	<b>Direction</b>	<b>Description</b>	<b>Notes</b>
PIN_SEG_DP	GPI012	OUT	7-segment display: decimal point	Digital output

If you publish your own firmware, you can send me:

- a short description
- a link (GitHub, zip, or release page)