

User Instruction Book

The LED speaker has two main functionalities

1. Power Amplified Speaker
2. I2C LED Driver

Power Amplified Speaker

Power is provided (for both functions) via the rpi gpio pins (labelled on pcb). Once 5V power is provided, audio signal from the 3.5mm audio jack is amplified and transmitted.

I2C LED Driver

Power is provided (for both functions) via the rpi gpio pins (labelled on pcb). Once 5V power is provided, I2C data drives the rgb LEDs, as specified by the PCA9685 datasheet.

ables and connectors

all connector wires should be strong/thick

GPIO

2x3 2.54mm housing (aka dupont) - see picture below



wiring for connector block:

	5V	GND
	SDA	SCL

wire length 5cm

wire colours:

- SDA: Pantone 354c (green)
- SCL: Pantone 354c (green)
- 5V: Pantone 185c (red)
- GND: Black

As with previous speaker, gpio wires should be threaded through adjacent holes prior to soldering.

Use steel wire (as stronger than copper?). Use as thick wire as physically possible given the hole sizes on the pcb.

PCB to Speaker

wire colours:

- both wires: Pantone 299C (blue)

Minijack Audio Cable

- Ideal colour: Pantone 299C (#00a0df) (blue)
- 2mm diameter ultra flexible (silicon?) cable (needs to thread through holes in PCB)
- length 20 cm (total from pcb to end of connector)

Please wire like picture below:

(finish by pulling cable tight so no slack)



FCC Information and Copyright

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates,

uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference

to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does

cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is

encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

15.19 Labelling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.