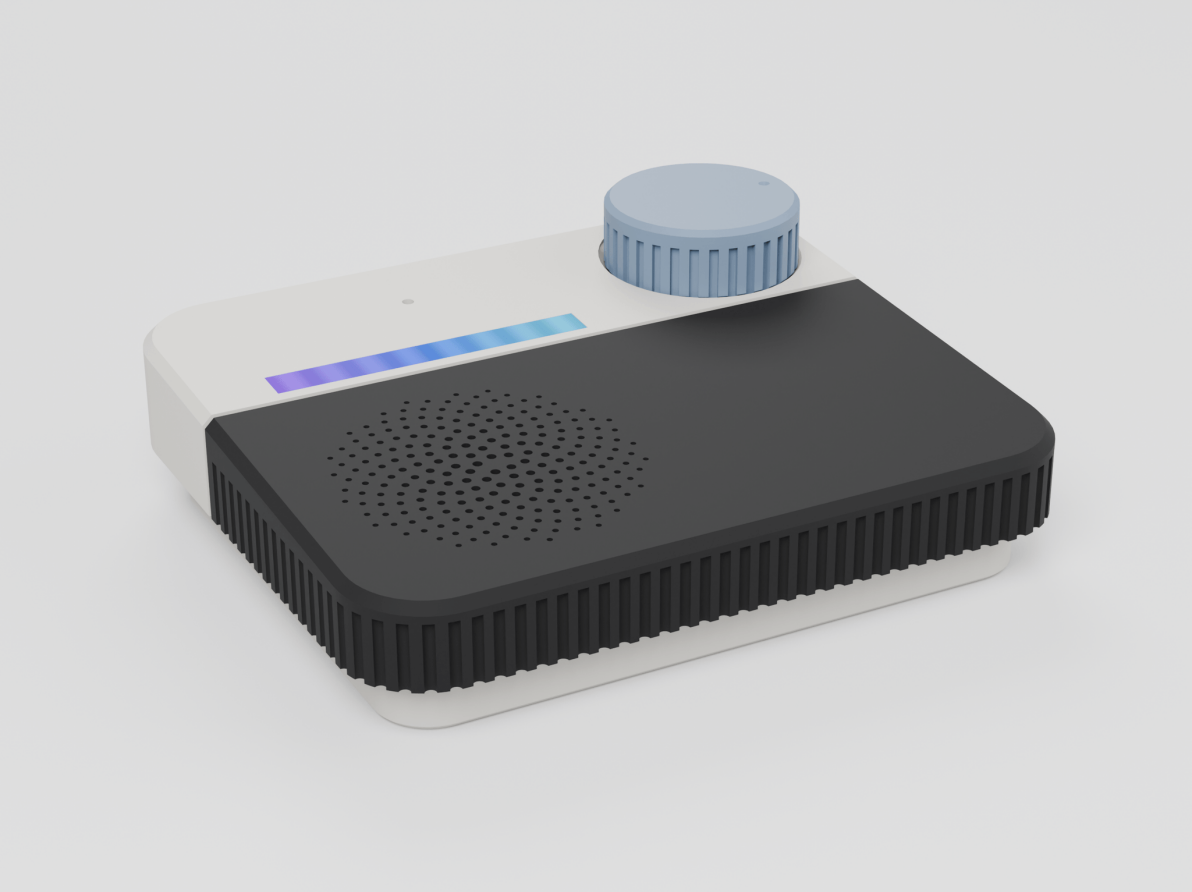
ASSEMBLY GUIDE / YOUR KIT

Press to Talk

Assemble the fixed electronics, hinge the lid, then check clearance before closing.

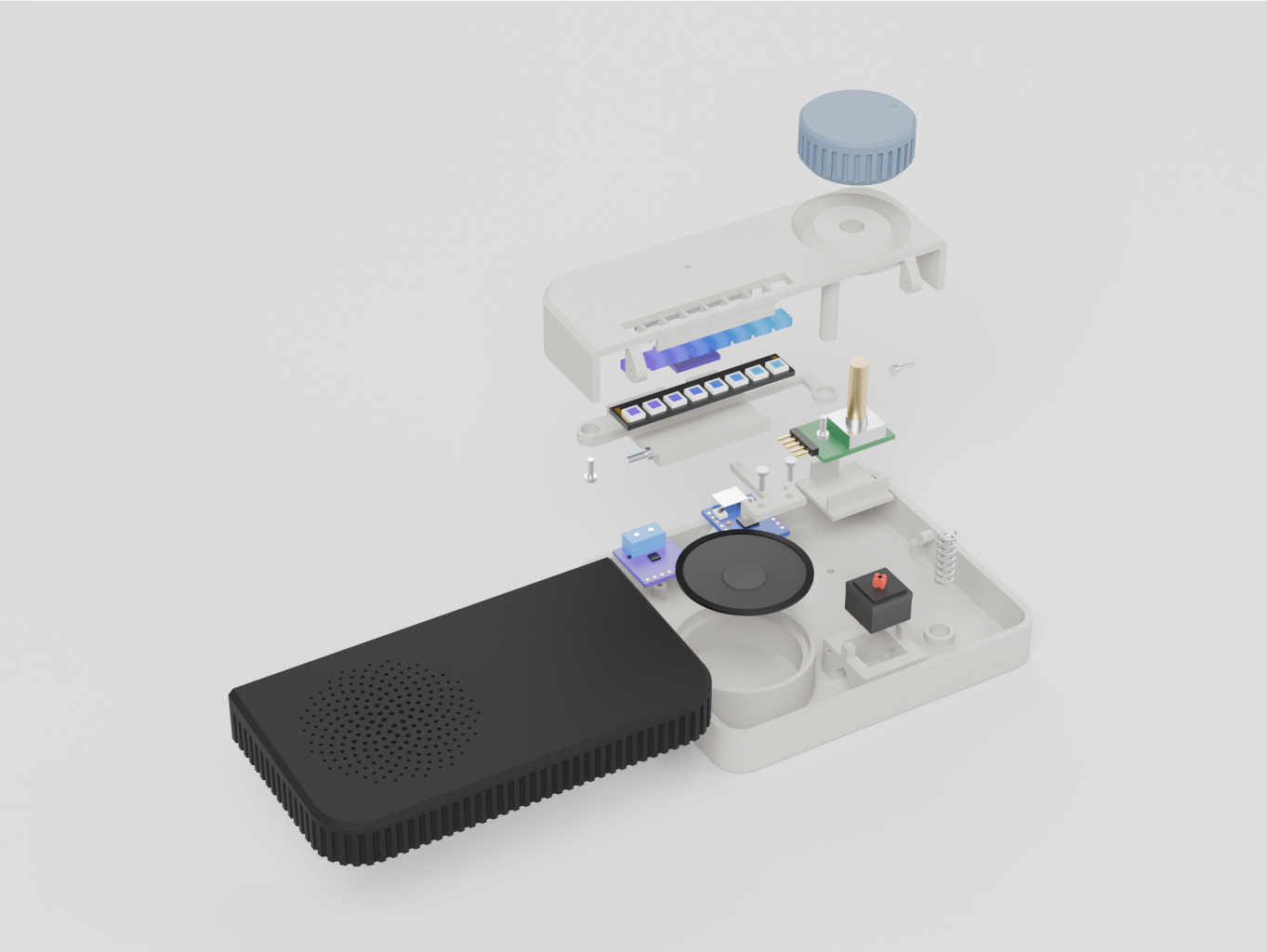


Disconnect USB power during assembly. The kit includes the printed parts, electronics, all 10 mounting and hinge screws, the lid-return spring, connecting wire and heat-shrink. Bring a soldering iron and solder, flush cutters, a small screwdriver for M2 screws and a USB-C data cable. Firmware is not included.

Assembly first. Follow the physical stages in order. Firmware installation and app setup are separate. Keep USB disconnected while fitting parts or changing wiring.

ASSEMBLY OVERVIEW

See how the parts fit.



Spring included. Fit the supplied lid-return spring in the base cup, beneath the lid guide tube. Step 5 shows when to fit it and how to check the return.

Existing product render from the shop gallery. Use the numbered steps and wiring table for the assembly sequence and connections.

PHYSICAL BUILD / 01

1. Identify the parts

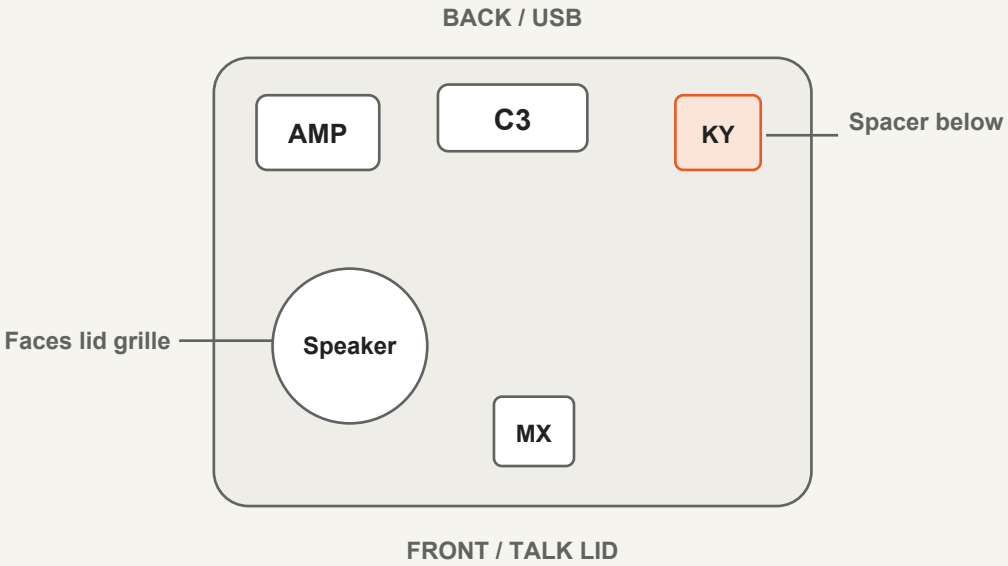
Printed parts	Electronics	Hardware and supplies
Base, fixed cap, hinged lid, knob, clear meter insert, C3 clamp bar, LED/mic holder, loose encoder spacer	ESP32-C3 board, KY-040 encoder, LED stick, INMP441 microphone, MAX98357 amplifier, speaker and MX switch	M2 screws, including two hinge axle screws; silicone wire and heat-shrink
Spring shims (two each of 1, 2 and 3 mm)	-	Supplied lid-return spring; two M2 mounting screws each for the amplifier and encoder

All required hardware is supplied. The screw set contains four M2 x 6 screws for the hinge axles and C3 clamp, two M2 x 8 countersunk screws for the cap, and four mounting screws for the amplifier and encoder. Use the screws supplied for each mounting position.

Check: Identify the parts before starting. Contact the shop if anything is missing or differs from the guide.

PHYSICAL BUILD / 02

2. Prepare the base



Placement map viewed from above. Symbols show the mounting regions from the desk CAD; they are not a dimensional fit drawing. KY is the encoder above its floor spacer.

1. Place the C3 on its four pads in the base, with its USB connector aligned to the rear opening and solder tails clear of the floor. Fit the printed clamp bar and secure it with two supplied M2 screws that fit.

2. Seat the 40 mm speaker in the circular pedestal at the front-left of the base, sound face upward toward the lid grille. Keep the leads clear of the moving lid.

3. Place the MAX98357 amplifier on the two short rear-left posts beneath the fixed cap, components upward. Secure its two mounting holes with M2 screws. Choose screws that secure the board without bottoming out.

4. Clip the MX switch stem-up into the square holder near the front centre. Its clips engage under the lip. Route its pre-soldered leads through the lower side openings, clear of the lid stops. It needs no mounting screws.

Check: The USB plug can enter cleanly, the C3 is held without bending, the speaker faces the lid grille and the switch clips are engaged. Keep every lead clear of the moving lid.

PHYSICAL BUILD / 03

3. Populate the cap

1. Place the clear meter insert in its recess. Seat the LED stick in the cap cradle, with its LEDs aligned with the meter cells. Place the microphone board flat under the cap roof, with its port at the roof hole.

2. After seating the boards, fit the printed holder: slide its end rings over the cap screw posts and engage its legs around the cradle. Route the microphone leads through the holder's wire corridor.

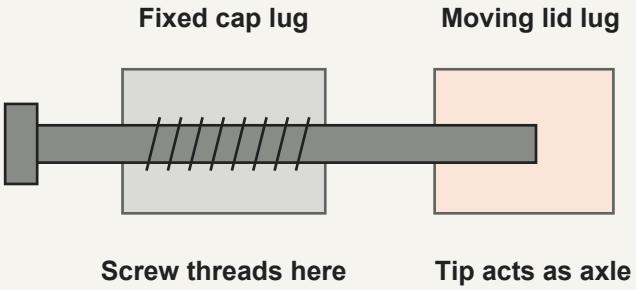
3. From below the cap, pass the KY-040 shaft through the knob opening. Its header end faces inward, toward the left. Align the two board holes with the cap posts and secure with two M2 screws; choose screws that secure the board without bottoming out.

4. Position the loose encoder spacer on the base floor under the board edges before closure. It supports knob presses; keep it clear of the board's pin tails.

Check: The holder acts as a backstop and does not press the LED stick upward; the mic port is unobstructed and leads are not trapped. Confirm insert retention and board fit on the physical parts.

PHYSICAL BUILD / 04

4. Join the lid and cap



M2 x 6 screw from inside - repeat at the other side

Hinge principle, not to scale. The cap holds the screw; the lid pivots on its tip. Check that the supplied hinge screws engage the cap while leaving the lid free to move.

1. On the bench, align the lid hinge lugs with the cap lugs. Insert one supplied M2 hinge screw from the inside at each side, threading it into the cap lug so its tip serves as the lid axle.

2. Tighten only into the cap lug; the moving lid must remain free. These screws do not clamp the moving part.

Check: The lid pivots smoothly without binding. Use the supplied hinge screws in these pilot holes. The spring is fitted during closure in the next step.

PHYSICAL BUILD / 05

5. Wiring and closure

Connect the following with power disconnected, checking the labels on the actual boards. The microphone and amplifier share GPIO6 and GPIO7. GPIO8 is the C3's onboard LED, not the LED stick connection.

Part	Signal connections	Power and ground
MX switch	One leg to GPIO1; other leg to GND	-
INMP441 microphone	SCK to GPIO6; WS to GPIO7; SD to GPIO0; L/R to GND	VDD to 3V3; GND to GND
MAX98357 amplifier	BCLK to GPIO6; LRC to GPIO7; DIN to GPIO5	VIN to 5V; GND to GND
KY-040 encoder	CLK to GPIO3; DT to GPIO4; SW to GPIO20	+ to 3V3; GND to GND
LED stick	DIN to GPIO10	5V and GND

Power the KY-040 from 3V3, not 5V: its pull-ups connect to the C3 inputs. Connect the speaker to the amplifier output, matching the actual terminal labels. Insulate connections and keep the 5V, 3V3 and ground nets distinct. Check each connection against this table before powering the build.

Route leads clear of the hinge, screw posts and spring. Seat the supplied spring upright in the base's round spring cup. As you lower the cap/lid assembly, guide the spring's upper end into the guide tube beneath the lid. The supplied shims fit beneath the spring; use them only as needed for a reliable return without lifting the lid above its resting stops.

Secure the cap with the two supplied M2 x 8 countersunk screws upward through the base floor. Align the knob's bore with the encoder shaft and fit it without forcing.

Check: Verify every connection and polarity before power; no leads should be pinched. The lid should move freely, the knob should turn and its push action should not flex the encoder board, and USB should remain accessible. Press and release the lid: it should return to its resting stops without binding. If it does not, check the spring seating and shim height; contact the shop if the supplied parts do not fit.

PHYSICAL BUILD / 06

6. Final inspection and setup

Before connecting USB, check every connection and its polarity, insulate the joints, and make sure no wire is pinched. Check the lid and knob move freely and the USB port is accessible. Press and release the lid to check that the supplied spring returns it freely. If any part or connection differs from this guide, contact the shop before powering the build.

Once assembled, continue with your chosen compatible firmware and app setup separately; no firmware is included in the kit.