MAKEBOOMBOXES

MOJOFESTO DIY Kit

Get Started Guide

2/27/2025

Contents:

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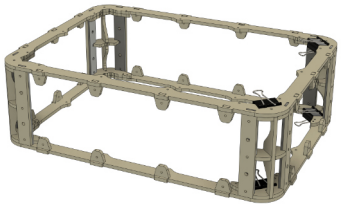
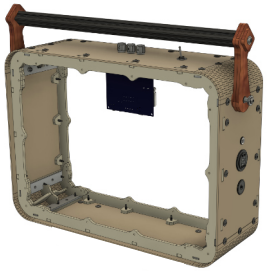
This is Your DIY Kit Boombox!

- Building a home-made boombox is not easy, but with this kit and assembly guide, the path is clear and fun.
- This “Get Started Guide” prepares you to build, to confirm the parts, and gather the needed tools.
- With every build step is completed, you and your DIY boombox can bring music to life and proudly say: “**@#$% yeah I made this, and so can you!**”
- So, let's get ready to turn a box of parts into a beautiful, personal, high-fidelity boombox…



A. Chassis



B. Expansion

C. Traction

🔍 Who is the Assembly Guide For?

Builders of any skill level, ages 12+ who are:

a) **Unboxing** the kit and starting to build right now, or

b) **Waiting** for the kit to be delivered after purchasing, or

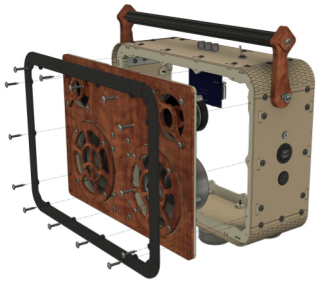
c) **Deciding** to purchase based on how doable it looks to build

⏰ Timing:

The total boombox can be made in one weekend-long project, or in 5 to 6 sessions of 1 or 2 hours each as fits the builder's schedule.

The milestones of the build, illustrated above, are accomplished by doing the series of steps and quality checks spelled out in the guide.

D. Soundboard



E. Closure

Done!!

💡 What’s the point of all this?

Why make a boombox in a distressed World that looks like we might not make it? Why build something to last when things are more disposable and the future is less certain every day? Why strive for musical connection in our communities when rising ugly selfishness and distrust threaten to pull us apart? … Yes, that’s exactly why.

Inside every home-made boombox is a call for togetherness; proof that we can create durable, joyful, musical experiences to share.

Behind each unique home-made high-quality boombox is a maker to show that: **Yes. We can make it.**

Online Help: https://makeboomboxes.com/help

Review all Parts

- The kit box contains the large parts and six ziplock small-parts bags grouped by build milestones.
- Go through each parts bag to identify and confirm all parts. Use the online guide's illustrated checkable checklist (see link below), or use the labels on the parts bags or the lists below as a paper check list.
- After checking in the parts, return them to their correct ziplock bag to stay organized for the build ahead.
- Aside from any minor visual differences between the assembly guide diagrams and the unboxed kit, the shipped parts should exactly match what's listed.

A – Chassis

8	frame ribs w/ tongue
8	frame ribs no tongue
28	bracket tabs
8	corner bulkhead braces
4	corner mid-braces
4	corner cross-braces
24	¾" self-tapping screws
4	corner curve walls
2	frame bulkheads

B – Expansion

28	¾" self-tapping screws
1	kill switch with wiring
1	DC power jack with wiring
1	*optional USB power out jack with wiring
1	*optional Auxiliary Input (Aux In) jack with wiring
4	shell walls: top, bottom, left, right
1	Bluetooth amplifier board with wiring

Not included: Guitar strap. Paint to skin the chassis.
For customization tips: https://mkbx.info/festo-customize

⚠ **Missing Parts** If anything is missing or wrong with the kit, email: help@makeboomboxes.com, or call / text: 510-463-4647

C – Traction

8	1" self-tapping screws
8	handle arm pieces (2 inner layer, 2 outer layer, 2 caps, 2 shoulders)
2	axle assemblies (each with: M5 x 45mm bolt, guitar strap flange, 5x11x5 bearing, M5 lock nut)
2	M6 x 16mm flanged button head socket cap bolt
4	2½" rubber feet
1	aluminum handle bar

D1 – Soundboard Wings

12	1¼" self-tapping screws
8	1" self-tapping screws
2	full-range speaker rings
4	woofer ring halves
2	Soundboard wings
1	soundboard front layer (5mm plywood)
2	Spirals of speaker foam tape

D2 – Soundboard

2	battery brackets (top and bottom)
4	velcro strap
2	finish washers
12	speaker mounting nuts
1	strip of anti-vibration tape
12	grille cover spacers – hex shaped (5mm plywood)
12	¾" self-tapping screws
2	3½" full-range speakers with wiring
2	6½" woofers with wiring
1	12V lithium ion battery

E – Closure

14	1" self-tapping screws
18	¾" self-tapping screws
6	12mm ring magnets (3 are North and 3 are South)
4	#4 x 1½" flat head wood screws
2	#4 x ¾" flat head wood screws
2	magnet spacer circles (5mm thick plywood)
2	zip ties
1	backboard
4	13" box border strips
4	18" box border strips

Online Guide: https://mkbx.info/festo-kit-parts-checklist

Core Toolset and Nice-to-Haves

- Aside from cleanup rags and a trash can to keep tidy, listed **below** are the must-have tools needed to reach the build milestones on the road your DIY boombox.
- On the **facing page** are the optional, extra tools that can make certain project tasks go faster and sometimes easier on the builder's hands. The step-by-step instructions call out when optional tools may come in handy.

Essential Toolset

- [ ] **Adjustable wrench** to tighten: the speaker mounting nuts, handle axle lock nut, DC power jack nut, amp potentiometer nuts.
- [ ] **Allen wrench 4mm** to tighten handle mounting bolts.
- [ ] **Allen wrench 3mm** to tighten handle arm axle bolts.
- [ ] **Allen wrench 2mm** to tighten art face magnet bolts.
- [ ] **Binder clips (medium size)** to clamp while gluing: the left and right shell walls, and the handles. Four are needed at minimum, but a dozen are most useful.
- [ ] **Phillips-head screwdriver #2** to screw in shell walls, feet, speaker mounts, soundboard, battery brackets.
- [ ] **Power drill with 11/64” or 3/16” drill bit** to widen the chassis back-corner feet holes.
- [ ] **Sharp scissors** to cut the full-range speaker mounting foam to size, and trim zip ties.
- [ ] **Yellow glue** with precise nozzle. Titebond III glue has great strength and open time. For extra glue control, put it in a FastCap Glu-bot bottle (we ❤ the 4oz size but all are great). Use the link here:

https://mkbx.info/recommended-glue-bottle

Optional Tools

- [ ] **Binder clips (XL size)** to clamp while gluing; shell walls to bulkheads, and end caps on handle arms. Six are the minimum, but a dozen are most useful.
- [ ] **Needle-nosed pliers with toothed jaw** to tighten various panel nuts. And to secure spade connectors to the kill switch and optional USB power out jack.
- [ ] **Fixed wrench or socket driver: 10mm, or 3/8”** for faster driving of amp potentiometer nuts.
- [ ] **Fixed wrench or socket driver: 9mm, or 11/32”** for faster driving of speaker mounting nuts.
- [ ] **Fixed wrench or socket driver: 8mm, or 5/16”** for faster driving of handle axle lock nuts.
- [ ] **Hex driver bit 4mm** for use with power drill to drive the handle mounting bolts faster.
- [ ] **Hex driver bit 3mm** for use with power drill to drive the handle arm axle bolts faster.
- [ ] **Phillips-head precision screwdriver #1** because sometimes the #1 works better than the #2 size.
- [ ] **Power drill with adjustable torque** for easier / faster driving of screws and nuts. Power drill must have torque control dial to prevent stripping pilot holes — generally set to the lowest possible setting.
- [ ] **Phillips-head bit #2** to use with power drilling screws. (A magnetic bit holder is also helpful.)
- [ ] **Very optional: 1/8" drill bit** and other drill sizes for future drilling use: ex: customizing the expansion panels, adding screws to fasten loose feet, etc.

Online Guide: https://mkbx.info/festo-kit-tools

What's Next:

Ready to build?

Build and Share

- With parts reviewed and tools gathered, the stage is set to follow the step-by-step Assembly Guide, and get to work building! (loud cheering)
- The start of the build is also a good time to meet and greet with other makers of MAKEBOOMBOXES via the online builder community at makeboomboxes.com. There you can introduce yourself, share and learn from others, and show the progress of your build.
- Please follow @makeboomboxes on major social media and video sites
- We love to see social posts about DIY builds in progress, cools customizations and stories / images of boombox enjoyment. Please tag and hashtag us

Notes:

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Open Source Licenses	
Hardware	**CERN-OHL-P-2.0**
Software	**not applicable**
Documentation	**CC-BY-4.0**

Full open-source project with licensing details:
https://mkbx.info/festo-opensource-license

This project is certified by Open Source Hardware (OSHW)

OSHW US002628