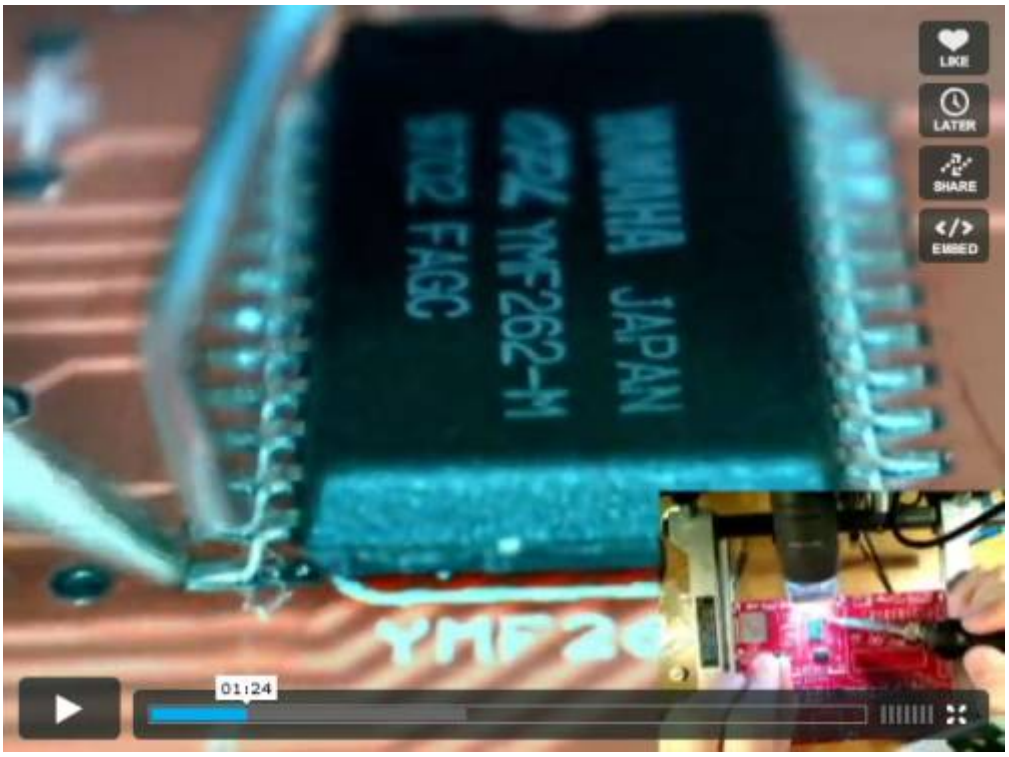

SAMMICHFM
INST
1
2
3
4
OP
sammichFM FTW!!!
CFG
ESC
SAMMICHFM
The cake is a lie.
There is no cake.
You can haz sammich!

More photos on Flickr.




sammichFM Assembly video made by Siempre La Luna (featuring backing track by TK!)

**The discussion thread where you can read the latest info and post questions about sammichFM kits is here.**

# sammichFM

**sammichFM** was designed to be the “no excuses” MIDIbox FM synthesizer kit - i.e. for all those people who want a MIDIbox FM but consider building it with modules too time-consuming, too newbie-unfriendly and/or too hard to design and construct a control surface.

**sammichFM** therefore has the following design constraints/features, which support each other:

- looks a lot like sammichSID!
- cheap (relative to fully modular MIDIbox FM with “pro-looking” control surface)
- small
- DIY newbie friendly
- minimal control surface
- single “walwart”/AC adapter supply, no bipolar PSU and mains power wiring!
- “sandwich-style” stacked PCB design, **no wires!**
- laser-cut 3mm acrylic case by Ponoko, customization possible
- industry standard 2×20 character LCD, customization possible
- common control surface parts used, customization possible
- **available as a complete kit, including PCBs, components, case, hardware and new OPL3 chipset!**

### MIDIbox FM Synthesizer features

- One Core module and one OPL3 module, fully integrated on one PCB with power supply.
- 4 simultaneous instruments of 6 voice polyphony each, plus drum kit. Each voice is a 4 operator waveform.
- Each instrument can be routed to one of four audio outputs, via two stereo 1/4“ phono jacks.
- Five “BankStick” slots, so you can store 5 banks of 128 patches, 32 “Ensembles” and 16 “Drumsets”
- Minimal control surface with up/down arrow buttons for fast menu scrolling.
- 2×20 character LCD with support for low-power (25mA) or high-power (250mA) LED backlight.
- Potential for future upgrade to 32-bit microcontroller via an undocumented “daughterboard” header.

## Buying a kit

**sammichFM** was planned from the start to be available as a complete kit, so all the hard work of sourcing parts, checking for fit, and refining the design has been done already.

Kits will be packed and sold in batches of 50.

If you want to order now, just email your details **(NOT MONEY!)** to: Jason.S.Williams@gmail.com

Include your MIDIbox username so I know who I'm talking to!

“Pre-order” just means I collect your email address, and I reserve a kit for you.

There is no commitment to buy, you can cancel or wait for another batch with no bad karma!

When the batch is ready to be prepared, I'll email people to get confirmation and then send out PayPal invoices. That will happen while I order and collect all the parts and put them into kit boxes.

## **PLEASE NOTE** I have OPL3 chipsets but if you bought some from me already (or plan to salvage your own from soundcards), please use them.

I will give some preferential treatment to people who don't order OPL3 chipsets, i.e. I might queue jump you ahead of others. There are limited supplies of YMF262 and YAC512 chips and I'd rather they get bought by people who need them. There is no need to “buy spares”, so if you have them already, use them. In the worst case scenario, I can sell you spares on demand.

## BATCH #1 SHIPPED APRIL 1st 2011

## BATCH #2 SHIPPED MAY 15th 2011

# BATCH #3 HAS BEEN PREPARED AND SHIPPED SEPT. 26th 2011 - I HAVE SPARES!!!

# BATCH #4 WILL RUN WHEN I HAVE 50 PRE-ORDERS. THIS WILL BE THE LAST BATCH EVER!!!

Prices as of 2011-09-26: (actual payment will be in AUD with 3.5% PayPal fee added)

- full kit (inc OPL3): 212.50 AUD (207.04 USD, 153.80 EUR)
- full kit (no OPL3): 200.00 AUD (194.86 USD, 144.76 EUR)
- ship to USA: 39.25 AUD (38.24 USD, 28.41 EUR) * includes $9 “security surcharge”
- ship to Canada: 30.25 AUD (29.47 USD, 21.89 EUR)
- ship to EU/UK: 35.65 AUD (34.73 USD, 25.80 EUR)

Cases are available in matte black or Arctic Ice (semi-transludent, matte white). Scratch and fingerprint resistant. The default kit contains an FSTN negative yellow-green backlight LCD and green LEDs, as show above.

LCD, LEDs and case are optional, if you want to source your own. I will deduct cost of parts not included.

**ALSO** Let me know if you're an Aussie, I can help you with a suitable plugpack and give you custom postage cost.

# BATCH #5 PREORDER-WAITING LIST

2015-06-10: This is the current waiting list for sammichFMs. Put yourself down for how many you want. Once there are enough preorders... You know the drill!

| MIDIbox User Name | Quantity | Sum |
|---|---|---|
| nILS | 0 | 0 |
| Rowan | 1 | 1 |
| BulletZ | 1 | 2 |
| Academic Planner | 1 | 3 |
| v4 | 1 | 4 |
| ArnoNym | 1 | 5 |
| Macotronic | 1-2 | 6 (+1) |
| rwo | 1 | 7 (+1) |
| taximan | 1 | 8 (+1) |
| jojjelito | 1 | 9 (+1) |
| jaytee | 1 | 10 (+1) |
| mooch0 | 1 | 11 (+1) |
| timtim | 1-2 | 12 (+2) |
| blingy | 1 | 13 (+2) |
| _-_- | 1 | 14 (+2) |

| MIDIbox User Name | Quantity | Sum |
|---|---|---|
| Sabored | 1 | 15 (+2) |
| Shiftone | 1 | 16 (+2) |
| Malarkey | 1 | 17 (+2) |
| homercartman | 1 | 18 (+2) |
| Fudgers | 1 | 19 (+2) |
| xyzzy | 1 | 20 (+2) |
| widdly | 1 | 21 (+2) |
| veau | 1 | 22 (+2) |
| kibbies | 1 | 23 (+2) |
| amp1ron | 3 | 26 (+2) |
| stobiepole | 1 | 27 (+2) |
| Holyver | 1 | 28 (+2) |
| thumper | 1 | 29 (+2) |
| MaG2k | 1 | 30 (+2) |
| Blatboy | 1 | 31 (+2) |
| jh0n | 2 | 33 (+2) |
| Magus517707 | 1 | 34 (+2) |
| mirmidi | 1 | 35 (+2) |
| Elop | 1 | 36 (+2) |
| brocca | 1 | 37 (+2) |
| gburks | 1 | 38 (+2) |
| foodeater | 1 | 39 (+2) |
| floki | 1 | 40 (+2) |
| SpaceFire | 2 | 42 (+2) |
| Triffki | 1 | 43 (+2) |
| falfa | 2 | 45 (+2) |
| thatguy | 1 | 46 (+2) |

# sammichFM Build Guide

You can find v1.0 of the build guide here (6MB PDF):

sammichfm_build_guide_v1_0.pdf

Please download it and view offline.

Here is the PDF of the base PCB. Ground plane is removed. Pads with no tracks can be assumed connected to ground.

sammichfm_base_pcb_rev_1.pdf

Here is the PDF of the control surface PCB.

sammichfm_cs_pcb_rev_1.pdf

# sammichFM Troubleshooting

Post on the forum with “sammichFM” in the subject. I or someone else will help you.

# sammichFM Power Supply

Here is a place for people to add links to suitable power supplies.

#### USA

- Jameco: 9V 500mA Linear Regulated Wallwart

#### Europe

- Nordic Power: NP DCU 09V08 http://www.nordicpower.se/

#### UK

#### Australia

#### Other

- RP Electronics (Canada): 9V 500 mA Linear Regulated Wallwart

# sammichFM Merch

NYI. I will upload a sammichFM T-shirt soon-ish.

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