

MK-312BT parts substitution

petem #1 September 28, 2018, 10:58pm

For those of us building a MK-312, the exact parts listed in the Bill Of Materials list may not be available locally. Some parts may have been discontinued by the manufacturer or local distributor. This is the place to discuss part substitutions.

I'll start the topic. The suggested PacTec enclosure is no longer available locally and is only available internationally. Delivery costs are more than the cost of the enclosure (and import taxes to be added as well). A Hammond 1598D series case (I used 1598DBK, RS part number 119-8934) is a good replacement. The pre-made front panel fits well and the overall dimensions are virtually the same. The internal moulded PCB fixings are in different places in this box, so you will have to provide alternative means of fixing the PCB to this case.

Pete

ErikF #2 September 29, 2018, 2:49pm

Thank You for the hint with the enclosure. Has anyone a good replacement for the two transformers? Mouser has the Xicon ones on backorder. The production can take up to 18 weeks ...

<https://www2.mouser.com/ProductDetail/Xicon/42TL004-RC?qs=%2bLh6ltJumVRX87vpOY3zCA==>

Zafphod #3 October 1, 2018, 3:24pm

Observations from Europe.

I ordered all the components about a month ago.

Transformers were in stock at the time of the mouser in large quantities. I do not know what happened, they are not.

The proposed PacTec cabinet is in stock at Mouser where you can buy most of the parts.

<https://eu.mouser.com/ProductDetail/PacTec/63025-510-000-CM86-225-Black-Kit?qs=%2fha2pyFadujBqPyK5jyEoc%2f6nE8aciKTKbXmbro0lovW%252b0NrdlYoow==>

I bought lots of items that were not in the Mouser stock at my local European supplier tme.eu. Available, perhaps, in most continental Europe.

AVA #4 October 1, 2018, 8:27pm

Cases can be back-ordered at RS in the UK, but not in black.

<https://uk.rs-online.com/web/p/instrument-cases/2205730/>

I got 3 recently after phoning them up to check seeing as they've been discontinued. 3 made it to me, so there's stock sitting somewhere.

For what it's worth I ordered the transformers from Mouser which said they were backordered and they showed up in 2 weeks. I mean they've already got 4000+ of them on order, so it's not going to be a full 18 week wait.

ErikF #5 October 10, 2018, 7:07pm

Thanks for the update on Mouser and availability of the transformers. I have tried to ask them for a delivery date, but got only the offer, that they are willing to send me them, as the transformers are available again ...

If the build goes fast, I will try these transformers:

Xicon 42TU200-RC

<https://www.mouser.com/ProductDetail/Xicon/42TU200-RC?qs=plB1iWz%2bJMzK7dX0IJf81Q%3D%3D>

Same manufacturer, slightly larger, a bit more powerfull and a bit lower resistance and same impedance. They might work, but will be a problem to mount mechanically. I see wires incoming.

qdot #6 October 11, 2018, 11:40pm

Talked to the MK312 designers about the 42TU200-RC.

i'm going to go ahead and guess it would provide substantially more kick

1ohm : 12 ohm versus 0.5 ohm : 12 ohm

That is the right turn ratio, but there is probably going to be some more current draw during the self test so it might Error 20. The 0.5 ohm resistor may have to be changed to 0.22 or two 0.5s in parallel so the voltage drop looks the same to the micro-controller.

ErikF #7 October 13, 2018, 8:51pm

Thanks qdot. Build will take a while, if the "right" transformers will not be available in time, I try the 42TU200-RC and will report.

bkiff #8 November 24, 2018, 9:36pm

42TU200 passes the POST with the original 0.5R without any problem.

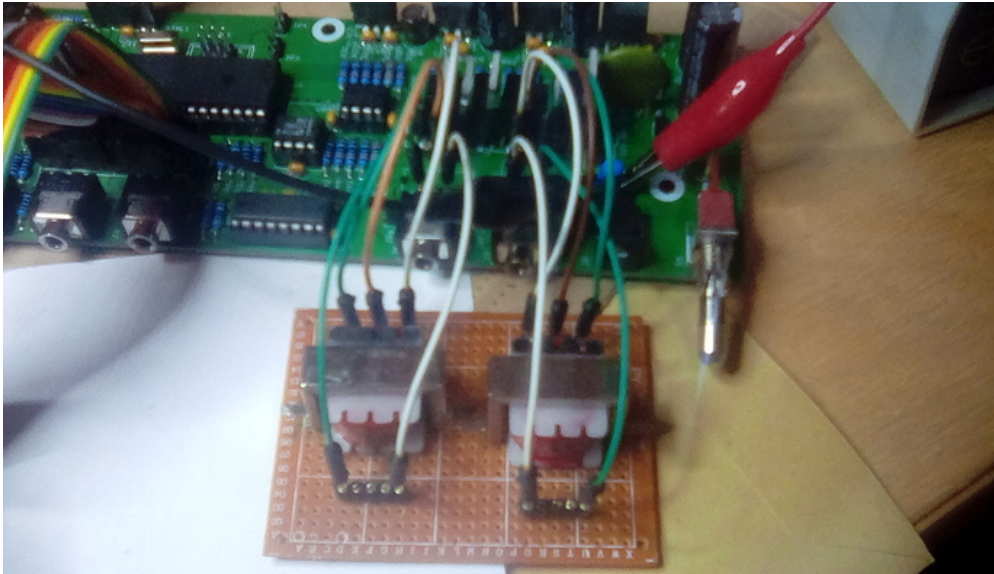
Side by side comparison with an ET-312:

Waves, channel A on one thigh each, both boxes having default advanced settings, MA at 50%.

About the same feeling with the ET at 40 and the MK at 30.

edit: sidenote warning: the 42TU200 has a different footprint, about double the size of the 42TL004, so you'll need to do some off board tinkering. I've put them on perfboard.

Please excuse the potato quality, only have my kindle fire 7 as camera.



bumerang #9 February 8, 2019, 11:58am

Hi,

so what is a better option?

42TU200 8:200 impedance, **0.5:12** resistance

OR

42TL001-RC 8:**500** impedance, **1:35** resistance

I guess the higher turn ratio of 42TL001 will generate higher voltages at lower current -> it would feel not as strong?

voncosel #10 February 8, 2019, 4:55pm

I'd go with the 42TU200. My results with the 42TL001 have been lackluster.

Advanderburgt #11 December 25, 2019, 10:40am

Hi guys, i can only order a minimum of 100 42TU200-RC units at Mouser on any Mouser website.
Where can i buy only a few of these...?
Or any alternative...?

Is the source code of the cpu also available for checking or editing.?
Thanks

Ad

qdot #12 December 25, 2019, 5:02pm

@Advanderburgt The original part is back in stock:
<https://www.mouser.com/ProductDetail/42TL004-RC>

thesyke #13 April 9, 2020, 7:27pm

Does anyone know a good replacement for the LVR100S fuse? this one is currently out of stock. can i use those as a replacement: <https://www.aliexpress.com/item/32732395323.html>

bumerang #14 April 10, 2020, 8:56pm

Just use a piece of wire.
Any 500-1000mA polyfuse will work.
Only downside of high voltage polyfuses is high internal resistance.

thesyke #15 September 30, 2020, 4:17pm

does anyone know a source for 42TL004RC? they are currently not available at mouser or any other source i know.

Cerb #16 October 24, 2020, 8:29pm

Not sure where you're from, but there is one seller on [ebay.co.uk](https://www.ebay.co.uk) that has them. It's definitely more expensive than Mouser, but i've ordered two times from him and everything is fine. So if Mouser takes too long it might be an option.

bumerang #17 November 2, 2020, 1:01am

Mouser: 164 Can Dispatch Immediately - how much do you need?!

[thesyke](#) #18 December 19, 2020, 10:26pm

Is there a Replacement for c25 and c27 80-C315C102K1G does it have to be a C0G condensator, or is a x7r also fine?