My original MB-6582 and the newer ones have panels made by Front Panel Express (aka. Schaeffer in Germany), with a big endorsement from me. Their quality and service is excellent, and their only limitation is that artwork must be engraved and not silkscreen.

The rearpanel must be 1.5mm thick to fit the PT-10 case, as it fits into a 1.5mm thick slot in the rear of the case. If you're using a different case, it could be 2mm or even 2.5mm without interfering with rear panel components.

The frontpanel ideally should be 1.5mm thick to match the recess in the top of the PT-10 case, and also so 13mm tactile switches will protrude 1.5mm when using a gap of 10mm between panel and control surface PCB. I did one experiment in red anodized aluminium from FPE, which only comes in 2mm thick, and it still matched the recess in the top of the PT-10 case, and 13mm tactile switches protruded only 1mm but were still functional.

Front Panel Designer is the software supplied by Front Panel Express (and Schaeffer in Germany). Be sure to download the software from the location you will be ordering panels, as the cost will be calculated differently and you use the same software to order the panels.

Also, it should be noted that due to a rule in the software, you cannot always specify 1.5mm panels over a certain size, so the frontpanel has 2.0mm specified in the file and a note that thickness should be 1.5mm.

Be sure to confirm in email you want 1.5mm thickness when ordering, as they can and do make panels of this size in 1.5mm aluminium, with engraving. If they say they don't, I will personally remind them that they do.

Frontpanel FPD Files

By using a single HPGL engraving object instead of lots of text and line objects in FPD, you can save quite a bit. For these three files, the prices from FPE for 1-4 panels are $125.78, $107.98 and $102.00 respectively. Don't ask me why the same length, thickness and filling of engravings can differ by this much... just use these files to order your panels.

This one has all artwork as objects in FPD, with two HPGL engravings for the Osc and LFO waveforms. You can change individual text labels if you want:

http://www.mb6582.org/plans/MB-6582_frontpanel_r2.fpd

This one has all artwork as a single HPGL engraving object with a different “pen” used for the different types of artwork - 1=text, 2=arrow labels, 3=control group lines, 4=waveform lines, 5=section dividing lines. You can then change the colour and/or thickness of each type of artwork.

http://www.mb6582.org/plans/MB-6582_frontpanel_r2_opt.fpd

This one is the same as the one above, but pen 1 is used for all text, control group lines and waveform lines, i.e. - 1=text & control group lines & waveform lines, 2=arrow labels, 3=section dividing lines. You can then change the colour and/or thickness of each type of artwork.

http://www.mb6582.org/plans/MB-6582_frontpanel_r2_opt2.fpd **This one is the cheapest! Use this if you just want different colours than the “standard” white artwork with red divider lines.**

Rearpanel FPD Files

For the rearpanel, the use of a single HPGL engraving object doesn't save much, $35.61 vs. $34.54 but it's $1.07 you don't have to pay.

This one has all artwork as objects in FPD:

http://www.mb6582.org/plans/MB-6582_rearpanel_r2.fpd

This one has all artwork as a single HPGL engraving object:

http://www.mb6582.org/plans/MB-6582_rearpanel_r2_opt.fpd **This one is the cheapest!**

DXF Files

Should you be interested in making your own panels, or ordering from somewhere other than Front Panel Express/Schaeffer, here are the panel layouts in DXF format. There are files with cutouts and engraving, and files with just the cutouts (in case you don't have a CAD program). Before using them, please check the dimensions match those in the FPD files, i.e. I cannot guarantee that whatever program you use will not modify the dimensions in the DXF! In all cases, the FPD is the definitive “known good” file which has dimensions that match the PCB exactly.

http://www.mb6582.org/plans/MB-6582_panels_r2_dxf.zip

Mount Hole Locations

If for some reason you want the locations of the corner mount holes (where screws would be glued) and locations of some of the threaded spacer mount holes (where threaded spacers would be glued to panel), here is a file with these. Note only some of the threaded spacer mount holes are specified, the minimum required, instead of all 23 holes in the PCB.

CAUTION: DO NOT ORDER USING THIS FILE!!! THIS FILE IS FOR REFERENCE ONLY!!!
http://www.mb6582.org/plans/MB-6582_frontpanel_r2_with_mount_holes.fpd

I strongly recommend anyone who thinks they need this file to contact me for advice and checking their plans, I can save you a costly mistake!

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