

## USAGE GUIDE (PLEASE READ)

These are general hints to use this PCB file. They are aimed specially at the general and to whoever wishes to use this project.

(1) If you want to check or reroute a specific trace, it is recommended that Turn it on at View > Contrast mode > Check "High Contrast Mode". The icon column.

(II) It is recommended that the user has some knowledge in Git usage, since for the Acheron Project.

(III) All footprints are available either through KiCad's native libraries or the <http://github.com/Gondolindrim/AcheronLibrary>). To facilitate the portability of the library is generally added at the `$(KIPRJMOD)` folder as a Git submodule. Here is how to add the library as a Git submodule to the PCB repository, run:

```
$ git submodule init --update
```

To update the submodules,

(IV) For detailed information, check the Acheron Docs page for the ArcticPC <http://gondolindrim.github.io/AcheronDocs/ruler/intro.html>

### MINIMUM VALUES

TRACE WIDTH: 6 thou (approx. 0.15 mm)

MINIMUM CLEARANCE: 6 thou

VIA HOLE SIZE: 12 thou (approx. 0.3mm)

VIA DIAMETER: 20 thou (approx. 0.5mm)

VIA-TO-VIA AND VIA-TO-TRACE CLEARANCE: 6 thou

SILKSCREEN CHARACTER HEIGHT: 25 thou (see General Observation (v))

SILKSCREEN CHARACTER TRACE WIDTH: 6 thou

TRACE-TO-EDGE AND VIA-TO-EDGE DISTANCE: 8 thou

## RECOMMENDED VALUES

These values were the default values used when possible.

TRACE WIDTH: 10 thou

MINIMUM CLEARANCE: 8 thou

VIA HOLE SIZE: 16 thou (approx. 0.4mm)

VIA DIAMETER: 32 thou (approx. 0.8mm)

VIA-TO-VIA AND VIA-TO-TRACE CLEARANCE: 8 thou

SILKSCREEN CHARACTER HEIGHT: 32 thou

SILKSCREEN CHARACTER TRACE WIDTH: 8 thou

TRACE-TO-EDGE AND VIA-TO-EDGE DISTANCE: 8 thou

## GENERAL OBSERVATIONS

(i) The grid unit (1U) value used was  $3/4'' = 19.05\text{mm}$

(ii) The PCB was designed to fit the standards of the PCBWay manufacture. Be aware that capabilities may vary among manufacturers, so be sure to confirm that they support the minimum values used.

(iii) All parts were quoted on the LCSC supplier (<https://lcsc.com>).  
Also be sure to check with your parts supplier if they have all the necessary parts and change parts and footprints accordingly to availability

(iv) You can always contact Gondolindrim through:

- ArcticPCB's GitHub page: <http://github.com/Gondolindrim/AcheronRules>
- E-mail: [alvaro.augusto.volpato@gmail.com](mailto:alvaro.augusto.volpato@gmail.com)
- Discord: [Gondolindrim#9738](#)
- Reddit: [/u/gondolindrim](#)

(v) Most manufacturers list minimum character height as 0.8mm, and warn below that will be undiscernable or unreadable. I have found that values below 0.8mm are not usable, although at that level a really close look is needed. Indeed, the minimum character height which characters are easily readable is 0.8mm

