

## THE THORENS BAERWALD ARC PROTRACTOR

www.vinylengine.com

This protractor is an arc protractor. Arc protractors are far superior to classic protractors since they allow a very precise, rapid and accurate setting of your cartridge. The only problem is that they are designed for a specific mounting distance. In the case of this protractor, the mounting distance used is 215.6 mm which is the mounting distance of some thorens tonearms mounted on some thorens tables.

Thorens tonearm: TP11 I, II & III, TP16 I, II, III & IV, TP21 and TP28

This protr actor should work on (if you have on your deck one of the tonearm listed here) : ambiance, TD 125-II, TD 126-I, TD 126-II, TD 126-III, TD 126-IV, TD 145-IV, TD 145-II, TD 146, TD 146-II, TD 146-IV, TD 160-IV, TD 160-V, TD 165-I, TD 165-II, TD 166-II, TD 166-II, TD 166-V, TD 280, TD 280-II, TD 316, TD 316-II, TD 318, TD 318-II, TD 320, TD 520

The data I'm using comes from the analog dept: http://www.theanalogdept.com/index.html every thorens user should know this excelent website!!

If your mounting distance (the distance between the pivot to the spindle) is not EXACTLY 215.6 mm DON'T USE THIS PROTRACTOR

1- print it - remove the grey parts of the draw 2- check the distances AA' and BB'

3- rescale if these distances are not the one I indicated

4- the black hole in the middle of the draw is the spindle center hole : use a pin to cut it and be precise!

5- set the antiskate at zero (very important)

6- now, the stylus must follow the arc - use the C and C' dots.

Move the cartridge front/back to follow the arc

7- the cartridge edge must be aligned with the lines on the greed:

rotate the cartridge clockwise/anticlockwise.

8- check : does the stylus still follow the arc? does the cartridge body still aligned with the lines ?
9- no? try again
10- yes! perfect

oops, impossible for me to set up my cartridge using your protractor : two possibilities :

1- your mounting distance is not 215.6 mm- I told you not to use this protractor!
 2- the baerwald tonearm effective length associated with a mouting distance of 215.6 mm is 233.37 mm.
 This is 3.37mm more than the effective length given by Thorens for the arms listed here. Accordingly, you'll have to move the cartridge front to the headshell. For some cartridges, the baerwald alignment could be impossible - contact me in that case

The difference between the first version and this new version? I just add a strobo disc 33.1/3 50hz (outside) 60 hz (inside)

Is this protractor free? yes but if you feel that every work need to be paid, my paypal account will be very happy to welcome your little money. More than 300 persons downloaded the first version of this protractor,