

**INSTALLATION INSTRUCTIONS FOR YOUR NEW CD SPECTROMETER**

A qualified/trained service engineer will install your new system; in addition the manuals provided will list the operations necessary and the testing criteria. In our experience however these are not 100% adequate and we added a few *further procedures*: pls be sure that your visiting engineer is performing these and exactly in the order listed\*:

1. unpacking, connections, software loading etc as from manual
2. baseline check  
run air baseline with nothing in the beam in the 800-200 nm range using very short response, high scanning speed and suitable bandpass (typically 500nm/min, 0.25 sec and 1 nm)  
Monitor both CD and HT data so collected. The HT profile is the most important at this stage since it'll indicate how well your system is aligned.
3. *go to 630 and tune carefully horizontal adjustment the exit collimator of second monochromator, to get minimum HT (this will assure best tracking)*
5. perform wavelength calibration check with the supplied neodymium glass filter using the 586 nm strong and broad band, take a note of the error
6. *using holmium glass filter perform the same on the 360.9 nm sharp band, take a note of the error*
7. using the 586 nm neodymium glass filter absorption band correct if necessary the error playing (very carefully) with the length of the wavelength lever
8. *recheck the position of the 360.9 nm band of holmium glass (typically you can get proper results in this way, if a residual error outside from specs is present at 360.9 nm you must act on wavelength counter disk ....)*
9. after adjustment store HT spectra of both Neodymium and Holmium glass for future reference
10. *check lamp alignment, trying to improve it (lower HT) at 300 nm*
11. *recollect air baseline as from point 2 and store the data. At this stage monitor also the CD data, baseline should be flat within a few millideg, if bended try to improve it rotating the PM tube in its holder. Pls mark best position and store data.*
12. verify and eventually correct CD scale calibration using a 0.06% (w/v) aqueous solution of the supplied ammonium d-10-camphorsulfonate sample in 1 cm cell, scanning from 350 to 220 nm, positive band is at 290.5 nm
13. *verify CD scale with another standard in the visible range, if not available pls fill the sample of point 12 in a 1 mm path cell and run spectra from 350 to 180 nm. The negative band at 192 nm should be twice as strong as the 290.5 nm positive one. To be fully sure of the data pls collect also baseline with same cell filled with water.*

You can further check noise level and zero drift to verify that official specs are met, but the point listed above are the most important. Your instrument has been by sure fully tested at factory before delivery and main aim is to correct the potential damages during the transport.

Than install, connect and test the optional accessories eventually supplied with the system, but it's important to do it later on, only when you are sure that the basic unit is meeting the expected performances.

Last: collect spectra of your samples, it's always better to get confidence with a new apparatus using samples you know (or you are interested in)!

\* service engineers tend to hate customers who are always behind while they are working ..... time wasters ...., but if you show a positive interest in the job they are performing they will be more than pleased to give proper details. Try to understand your new hardware as far as you can (and as far as you are interested) from the right beginning!