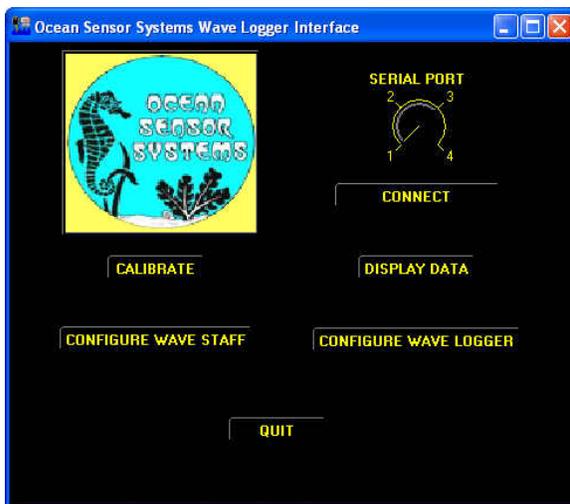


## Appendix B: Wave Logger and Wave Logger III Calibration Procedure

Every Staff and Wave Logger Unit has a variance in characteristics. A calibration must be performed after the two are assembled together. If the Staff is changed, without recalibration, the accuracy of the calibration could be off as much as 10%.

To calibrate the assembled unit the following steps must be performed:

1. Connected the Wave Logger to a PC using the serial cable.
2. Start the OSSI Interface Software on the PC. This is an interface program that may be downloaded from our web site [www.oceansensorsystems.com](http://www.oceansensorsystems.com).

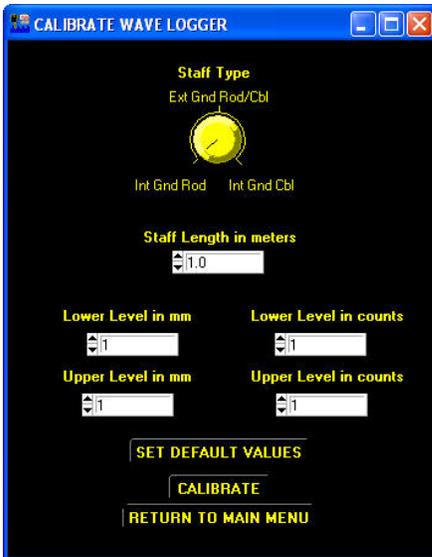


3. Select the serial port (typically #1) then click the CONNECT button. You should see a new window stating that you have successfully connected.
4. Now return to the first window and click on the CALIBRATE button. A Calibrate Wave Logger window should appear. In the new window enter the staff length of the unit you are calibrating and the staff Type.

For Wave Staff III and Wave Logger III with Coaxial Rod Staff select Int Gnd Rod

For Wave Staff III and Wave Logger III with Coaxial Cable Staffs select Int Gnd Cbl

For Wave Staff and Wave Logger with Rod and Cable Staff select Ext Gnd Rod/Cbl

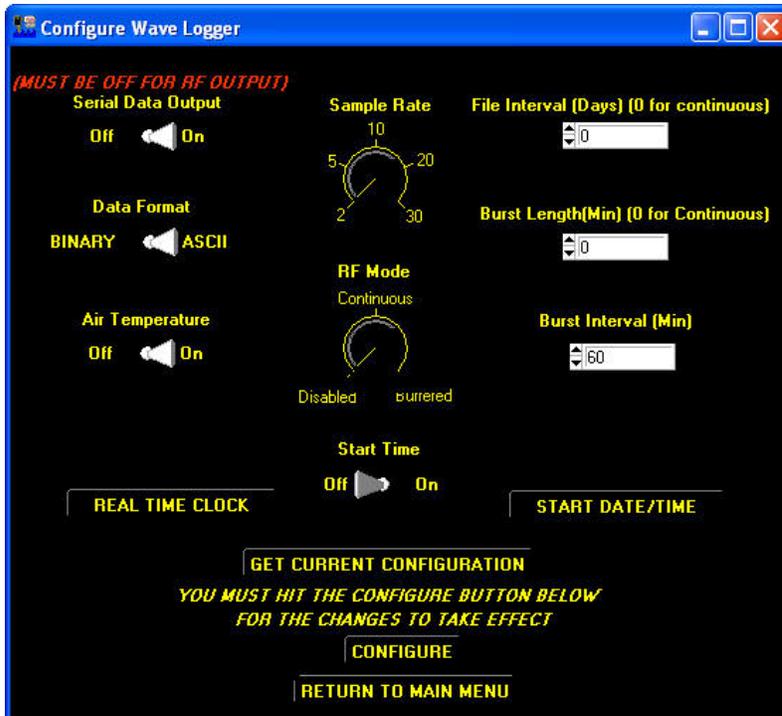


5. Then click on the SET DEFAULT VALUES button. You should see a SUCCESS window.

If the Set Default Test Results are available for the staff SET DEFAULT VALUE and skip to step 11. These Default Test Results may be received from us when extra staffs are purchased with a unit or units and we have calibrated them for you. See paperwork that shipped with units.



6. Return to the start window and click the CONFIGURE button.  
The unit will need to be configured to take two measurements for the calibration. There are 3 possible ways to take the two measurements; by the Serial Cable, by the Compact Flash Card or by a Wireless Connection.



First decide how you wish to take the measurements.

Then be sure to:

Set the file Interval to 0

Set the Burst Length to 0

Set Start Time to Off

Set Data Format to ASCII

Set the RF Mode to Continuous

Then if you are taking the measurements using the Wireless Connection, set the Serial Data Output to Off. If using the Serial Cable or Compact Flash Card set it to On.

Now click the CONFIGURE button. You should see a SUCCESS window.

7. Return to the start window and Quit the Interface software.



8. With a small piece of tape mark two points on the staff; typically at 20% and at 80% of the length of the staff.

9. Now take two measurements at the marked locations in a convenient pool or pond. Be sure to have the ground stud with wire connected to the water and keep the staff at least 6 to 12 inches from other metallic objects.

10. Now perform steps 1, 2, 3 and 4 again. Do not forget to set the staff length and the Staff Type in the Calibrate Wave Logger window.

11. In the Wave Logger Calibration Window enter the Lower Level measurement point (20% typically) in mm and the Data measurement in counts.

12. Enter the High Level measurement point (80% typically) in mm and the Data measurement in counts.

Example: A 4 meter staff at 20% and 80 % would be 800mm / 850 counts for the lower measurement and 3200mm / 3010 counts for the higher measurement

13. Click the CALIBRATE button. You should see a SUCCESS window.

14. Return to the start window and Quit the Interface software.

15. Now if you take the same two measurements again the data should be correct. Typically better than 0.1% however it depends on how accurate you were in taking the measurements. The object here is to be very accurate both times.

16. Remember to reconfigure the unit to your desired requirements.