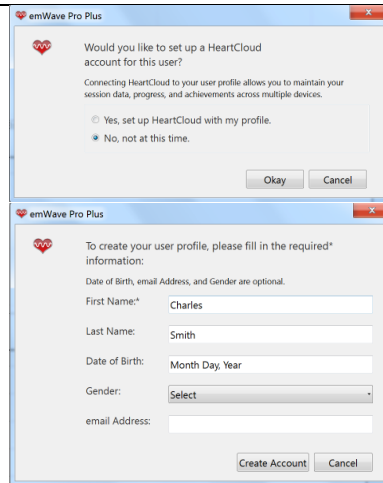


Resonant Frequency Determination Using emWave Pro, (Doc.Version 1.0)

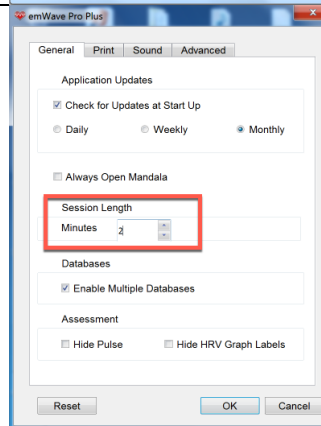
Create a new user for the client via User menu, New.

HeartCloud account, Date of birth, gender and email address are not necessary.

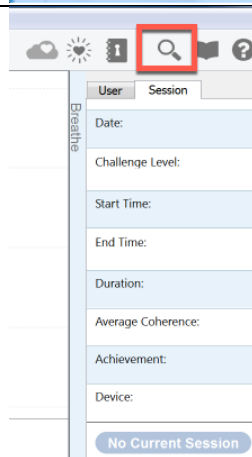
(You can turn off the HeartCloud prompt in Preferences, Advanced.)



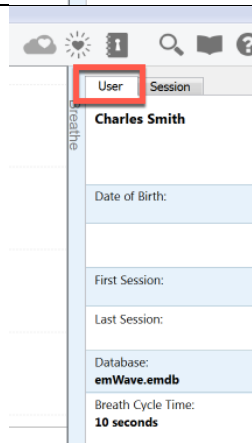
In the Preferences window, set the Session Length to two minutes. (Windows – Edit menu, Preferences; Macintosh – emWave Pro menu, Preferences)



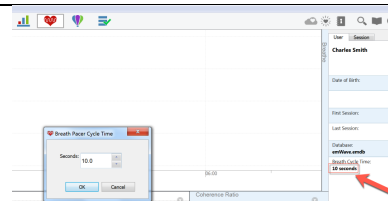
Check that the User/Session sidebar is on the right of the HRV screen. If it is not present, click on the magnifying glass so that the User/Session sidebar appears.



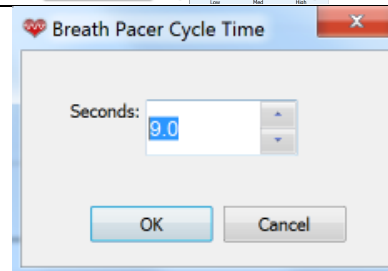
Click on the User label.



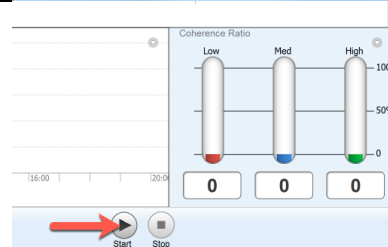
Click below the Breath Cycle Time label on the number of seconds so that a window pops up where you can set the breathing rate.



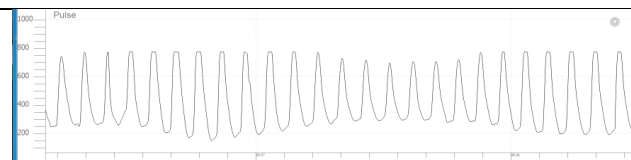
Set the rate to 9.0 seconds. Click the OK button.



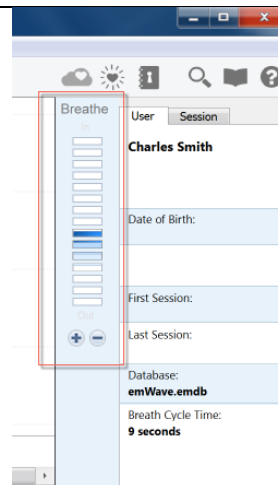
Start the session by clicking on the Start button at the bottom center of the screen.



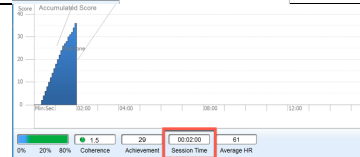
Check the pulse wave in the lower left. Tall, narrow, rounded peaks indicate that the HRV data is high quality. (The sample rate is 370 Hz.)



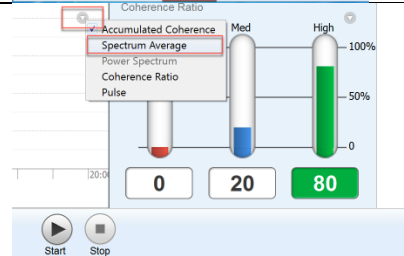
Instruct the client to breathe in concert with the breath pacer that's on the upper-right corner of the screen. Breathe in when the blue bar goes up, and breathe out when it goes down.

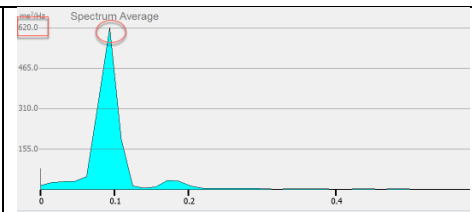
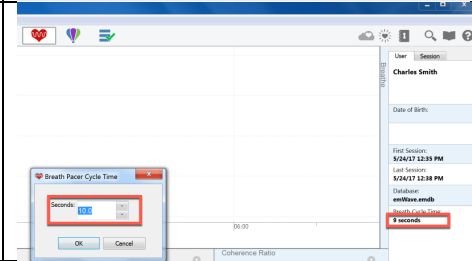
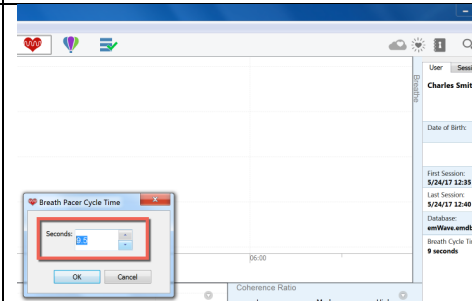


The session will automatically stop when the session time reaches two minutes.



Click on the gray circle with the small white triangle to the left of the Coherence Ratio label and select Spectrum Average from the drop-down list.



<p>Note the power spectrum peak value</p>	
<p>Click below the Breath Cycle Time label and change the breath rate to 10 seconds, and start a new session.</p>	
<p>Repeat this process for Breath Cycle Times of 11, 12, and 13 seconds.</p> <p>The breathing rate that results in the highest low frequency power spectrum peak in the neighborhood of 0.1 Hz is the client's resonant frequency.</p>	
<p>Enter the client's resonant frequency breathing rate in the User section of the screen. This value will be retained in their record for future sessions.</p>	

The original description of the resonant frequency procedure is from:
 Resonant Frequency Biofeedback Training to Increase Cardiac Variability: Rationale and Manual for Training

We will now find your “resonant frequency”—the speed of breathing at which your RSA is the highest. In this procedure we will ask you to breathe at various rates for periods of about 2 minutes each. You should not find this task difficult. Breathe easily and comfortably. Do not try too hard. Do you have any questions? Have the trainee breathe for three minutes at each of several frequencies in the neighborhood of 0.1 Hz (e.g., 6.5, 6, 5.5, 5, 4.5 breaths/minute), as prompted. Set a pacing stimulus for each frequency. Ask the trainee to breathe at each frequency for 2 minutes (to allow computation of frequency spectra from at least ten breaths at each frequency). Do not begin this count until the trainee is breathing at the prescribed rate.

Please refer questions or comments about this document to Tom Beckman at tom@heartmath.com or 831-338-8745.x