EQCM Checklist
(9/01/2016)

1. You need to have your own: QCM crystal, a reference and counter electrode. You ned the eQCM 10M and Ref 600 pstat. (The flow cell requires a special reference electrode that you need to buy).
2. Plug in eQCM 10 M power cord
3. Connect USB cables between the eQCM and the computer and the Gamry Reference 600 and computer.
4. Switch on the eQCM 10M and the Gamry Reference 600
5. Confirm that your eQCM 10M and Ref 600 are recognized
6. Double click the Gamry resonator icon.
7. Connect the eQCM crystal crystal to the special connector Fig 1.
8. Assemble the eQCM cell with your crystal and connect to the 10M fig 2.
    a. Make sure QCM crystal is centered in well and add solvent to the cell.
    b. Connect the black wire to the electrode with the green dot.

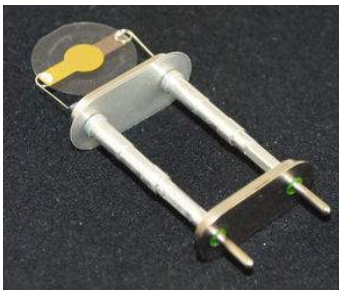

Figure 2 eQCM cell with electrical Connection to 10M

9. Find the resonant Frequencies
    a. Enter a width frequency of 30,000 Hz.
    b. Press single scan
    c. If the amplitude is less then 1 or greater then 4.5 adjust to between 2 and 4.
    d. If you do not see the S shaped spectrum increase your frequency window and press Single Scan.
    e. If the crystal is working in liquid
        i. Isolate a region that contains both the low and high frequency peaks with the two green cursors Figure 3.
        ii. Set the Fequency width to 0.05
    f. If the crystal is working in air
        i. Isolate only the low frequency peak (negative going) with the green cursors.
        ii. Set the frequency step to 0.02.
        iii. Press single scan if the peak has a flat bottom increase the Amplitude slider.
    g. Click Start and see if the frequency stabilizes.
    h. If you have trouble look at the videos on the web page.

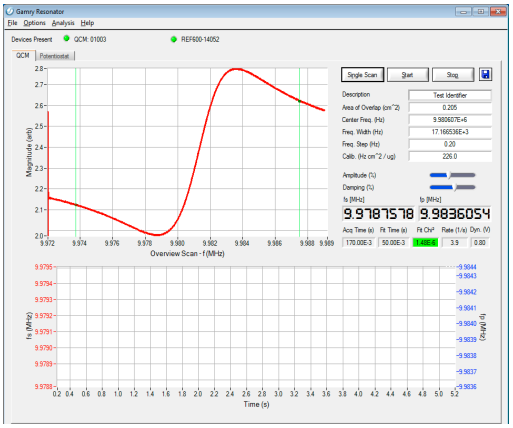

Figure 3 Resonator window

10. Choose the potentiostat tab in the Resonator window and set up the parameters for your scan.
11. QCM data acquired will be automatically saved if you are doing eQCM but for stand alone QCM experiment you need to save it manually.