CBS-2121 Software Modifications

Monday, September 11, 2017   5:13 PM

1. VIDEO Demos - https://photos.app.goo.gl/Gi3Iq6jPTAd0lv5v1
2. Programming Mode
    a. Change order of Menus [PROBLEM: current order does not make logical sense]
        i. Manual/Automatic
        ii. Temperature Scale (C/F)
        iii. Tank Set Point
        iv. File Valve Test (tstF)
        v. Calibration Factor
        vi. Change Full Carafe Brew time (see below)
        vii. Change Half Carafe Brew time (see below)
    b. Change Calibration Factor Auto-Increment[PROBLEM: It takes too long to go up and down]
        i. <mark>Up/Down by 10s instead of 1s</mark>
    c. Add means of Setting Timer for both Full and Half Sizes [PROBLEM: Timers do not correspond to behavior of Brew cycle)
        i. Measured Data
        ii. Brew Behavior (9/11/2017)
    d. tstF Screen Fill Valve bug [PROBLEM: touch area between touch areas triggers Fill Valve ON and it does not stop]
    e. Add screen to change brew time for both full and half carafes
        i. Full Carafe (currently 220 seconds) :   Increment/Auto-increment from 270-310 (???) seconds
        ii. Half Carafe (currently 178 seconds) :   Increment/Auto-increment from 178-200 (???) seconds

3. Brew Cycle
    a. PROBLEM: Sometimes when approaching set Point, Displayed temperature fluctuates back and forth between 2 temperatures and the Ready Screen Flashes before settling down
    b. SOLUTION add .5 degree of hysteresis to thermostat control
4. Heater Control
    a. Performance [PROBLEM: Heater does not turn on until end of a brew cycle
        i. The heating tank forms a thermocline in which the water at the top of the tank remains at the SET temperature while the lower tank remains at water inlet temperature
        ii. SOLUTION: would like to turn heater on immediately at the start of a brew for a set period of time (45 - 60 secinds)
            1) This would force water to mix and allow thermostat to work correctly after the temporary heater time
            2) CAUTION: need to turn heater OFF if brew is canceled prematurely
5. Normal Screen
    a. Remove entry into Program Mode by holding screen.