Lower Back Disorder Quantification System Instruction Manual (Rev 1)

1. Run program
   1. OPTIONAL: Once program opens, press “Feedback Display” in order to open separate window to show real time patient position analysis for use in trial
2. Input window for COM port will appear. If COM port that IMU is connected to is known, enter value into window. If not:
   1. Press Start and navigate to Control Panel
3. Press initialize button once IMU COM port value is entered
   1. Program will set up connection to IMU(s)
4. Input relevant patient information into appropriate boxes (age, gender, etc)
5. OPTIONAL: Set directory for the collected data during trials to be stored in text files
6. Select a trial to capture:
   1. Trials 1-3: 0 degree flex exercise, see image below
   2. Trials 4-6: Rotate in transverse plane as far as is comfortable to the left of center and perform flex exercise, see image below
   3. Trials 7-9: Rotate in transverse plane as far as is comfortable to the right of center and perform flex exercise, see image below
   4. Trial 10: Repeatedly rotate back and forth to maximum comfortable regions in transverse plane, see image below
7. Once trial is selected, push “Start Trial” to being trial
   1. Patient will have 15 seconds to complete the exercise, or until the technician presses the manual stop button
8. Once trial is completed, press “Data Display”
   1. This will begin post processing of data, so a pause may be expected
   2. If all 10 trials have been completed when “Data Display” is selected, the quantification algorithm will complete and output the result
9. Input the trial name and specify which data set is desired to be viewed, then press the “Graph” button to plot a visual representation of data