Measurement System Operation / Sequence of Events

1. Instrument Powered “On”
2. Power Distribution Unit sequences power to all peripherals
3. TDA4 RVP powers up/initialization
4. Touch Display power up initialization
5. Peripherals initialized
    a. Laser Safety System
    b. Laser Control System
    c. FPDLink- Himax HM5530 Cameras (Through TDA4 RVP)
    d. 1x8 Fiber Optic Switch

Completion of these steps constitutes “Measuremet System Ready”

Patient Measurements

1. Operator positions camera-laser headset on patient
2. “Measurement Check”
    a. Trigger Laser and acquire frames from cameras 1 and 2, compute black level parameters and image histogram
    b. Move 1 x8 Fiber Switch to alternate position
    c. Trigger laser and acquire frames from camera 3 and 4,compute black level paramters and image histogram
    d. Confirm correctly positioned headset
3. “Patient Measurement”
    a. Move 1 x 8 Fiber Switch to first position
    b. Trigger laser
    c. Acquire frames from cameras 1 and 2
    d. Compute black level image mean and variance
    e. Compute image histogram
    f. Store image histogram
    g. Repeat n times
    h. Move 1 x 8 Fiber Switch to second position
    i. Trigger laser
    j. Acquire frames from cameras 1 and 2
    k. Compute black level image mean and variance
    l. Compute image histogram
    m. Store image histogram
    n. Repeat n times
    o. Repeat m times

After initialization, these activities are generally controlled through the touch interface on the instrument. Error reporting will be to this display and all user control functions are routed to this

display Laser Safety Functions, Power Distribution Unit related functions and Laser Pulse height and width will be accessible through this interface but not by a normal end user