

Q2™ Abbreviated Operating Instructions

Q2 Setup:

PRIOR TO CATHETER INSERTION

1. Power on Q2 CCO/SO₂ Computer.
2. Connect Thermal Coil, Cardiac Output and Optical Module Cables to Q2 Computer.
3. Connect Cardiac Output Cable to OptiQ™ Catheter Thermistor Connector. Confirm that the Thermistor is working properly (PA T: should be approximately room temperature).
4. Change or Confirm Patient Parameters (BSA/ID information).
5. Connect Optical Module Cable to OptiQ Catheter Optical Connector.
Allow Optical Module to warm up for several minutes.
6. Press **SO₂ CAL** key.
7. Press **P** function key for PRE-INSERTION CALIBRATION.
8. Press **Y** function key.
9. Wait for **CAL OK**. Then remove catheter from package and insert according to hospital protocol.

AFTER CATHETER INSERTION

1. Connect Thermal Coil Cable to OptiQ Catheter.
2. Start Continuous Cardiac Output (press **CCO Start/Stop** key).
3. Assure that catheter is in proper position then press **SO₂ CAL** key.
4. Press **L** function key for Light Intensity Calibration.
5. Confirm that light intensity tracing covers a minimum of three dots in middle and upper boxes only.
6. Press **Y** function key to store calibration.



IN VIVO CALIBRATION

- Prior to IN VIVO Calibration confirm adequate light intensity and stable SvO₂ readings.
1. Press **SO₂ CAL** key.
 2. Press **I** function key for IN VIVO CALIBRATION.
 3. Press **Y** function key and draw waste from distal port slowly.
 4. Draw sample slowly and send to Lab according to hospital protocol.
 5. Compare Lab results with stored SvO₂.
 6. If values agree ± 4 , press **Y** function key: If difference is >4 , enter Lab value using \uparrow or \downarrow , then press **Y** function key.
 7. Press **Y** function key to complete calibration.

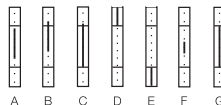
SIGNAL PROCESSING MODE SELECTION

1. Press **System Config** key.
2. Press **A** function key.
3. Select mode.
4. Press **System Config** Key to return.

BOLUS CO-TD MEASUREMENT

1. Prime and connect cardiac output injectate system.
2. Press **CARDIAC OUTPUT** key.
3. Verify that the correct information is displayed on the Main CO-TD display (i.e.):
CATHETER TYPE: OptiQ
INJECT VOLUME: 10 mL
PROBE TYPE: Closed Injectate
4. Press the **P** function key for PREP CO (TD).
This action will turn off CCO. Wait one minute prior to first CO-TD measurement.
5. Press **S** function key and inject CO-TD bolus. Repeat this step for additional CO-TD measurements.
6. Press **CARDIAC OUTPUT** key to exit CO-TD mode of operation.
7. Press **CCO START/STOP** key. This action will restart CCO.

TROUBLESHOOTING LIGHT INTENSITY



- A. Adequate
- B. Adequate
- C. Optimal
- D. High intensity - adjust catheter position
- E. Low intensity - check for kinks: flush system
- F. Dampened intensity flush or reposition
- G. Optimal

CATHETER PLACEMENT VALIDATION

PA Distal Port

- PA waveform verifies the location.

Balloon Inflation Volume

- Appropriate inflation volume is 1.25 - 1.5cc.
- If less than 1.25cc, reposition the catheter.

Distal Thermal coil Positioning Port (DTPP™)

- RV waveform verifies the location of the thermal coil.

QSI

is a graphic display that tells the user how strong the thermal cardiac output signal is in relation to the thermal background noise.

Thermal Background Noise

can arise from a number of sources. Some common examples include: patient rewarming post-bypass, fluid infusion, spontaneous respiration, patient movement, or pneumatic compression leg cuffs.

Response Time

is defined as the time required for a system to reflect 90% of any change in flow.

Averaging Time

refers to the “window” of time during which data are averaged. In the Normal and Fast Filtered modes, longer averaging times are used in the presence of high thermal noise, thus providing greater artifact rejection.

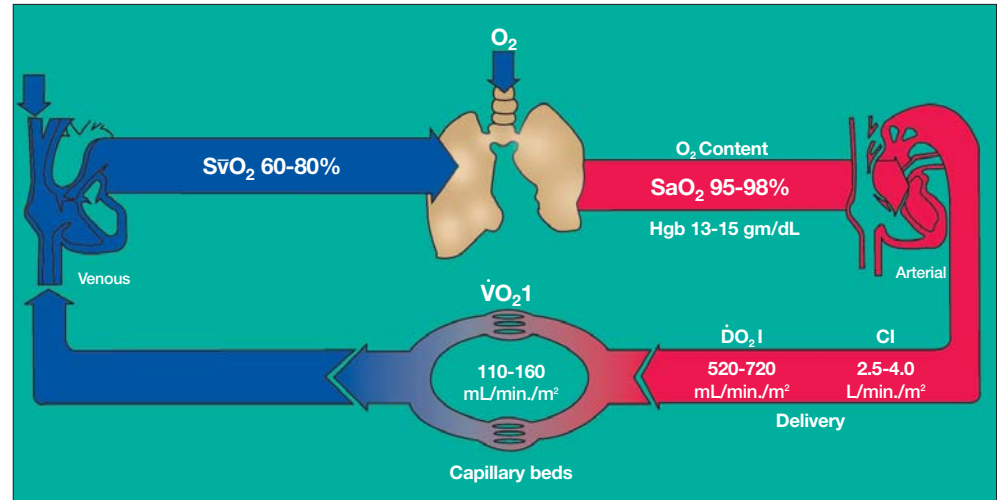
Light Intensity

is a graphic display that tells the user the quality of the reflected light signal obtained from the catheter.

Approximate Response Times

Signal Processing Mode	QSI =				Artifact Rejection
	< 3 Bars	3 Bars	4 Bars	5 Bars	
Normal	> 15 min.	10 - 15 min.	5 - 10 min.	3 - 5 min.	Maximum
Fast Filtered	15 min.	10 - 15 min.	5 - 10 min.	3 - 5 min.	Significant
Fast	5 min.	5 min.	5 min.	5 min.	Moderate
Urgent	90 sec.	90 sec.	90 sec.	90 sec.	Minimal

- Indicates an appropriate mode selection for this patient's level of thermal background noise.
- Indicates an inappropriate mode selection for this patient's level of thermal background noise.



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