To help prevent possible patient injury resulting from incorrect ICP measurements, follow the steps below before transducer catheter implantation. Always make sure to adjust the catheter’s ICP value to zero before implantation while the catheter is in the air. Never attempt to change the zero adjustment while the transducer catheter is inside the patient.

Monitor Setup

1. Connect the black fiber optic catheter cable (CAMCABL) to the ports on the Camino® monitor
   - Attach the cable’s ICP connector (P) into the port labeled ICP by aligning the red dot on the cable connector with the red triangle on the monitor’s port and push firmly
   - Since temperature is not measured with the 1104HM catheter, connection to the port labeled ICT is not required; the temperature value on the monitor will appear as two dashed lines

2. Identify the appropriate catheter by the label on the outside of the box (see picture of label on right)

3. Using sterile technique, remove the catheter from its sterile package and place in sterile field

4. Using proper technique to maintain sterility, connect the preamp connector at the end of the CAMCABL to the black transducer connector at the end of the catheter

5. Check the monitor display to determine the ICP reading
   - If it does not read zero, use the zero adjustment tool from the catheter kit to turn the screw on the bottom side of the transducer connector (Figure 1) until the monitor display reads zero

6. Prior to implanting the catheter into the patient, disconnect the preamp connector at the end of the CAMCABL from the black transducer connector at the end of the catheter
   - Ensure the black transducer connector does not breach sterility

Figure 1
**Area of insertion**

- The standard right and left prefrontal areas are the primary areas of insertion

**Catheter Placement**

1. Prepare sterile field: clip hair, prep skin, drape area, open skin
2. Using drill bit from Camino kit, create burr hole and rinse with saline
3. Open dura using #11 blade to make a cruciate incision
4. With the stylet in place, insert the ventricular catheter assembly into the ventricle
5. When CSF is obtained, hold the ventricular catheter securely, remove the stylet, slide down the bolt and screw into the skull
6. While holding the ventricular catheter, turn compression cap to lock ventricular catheter in place
7. Slide strain relief down and attach to compression cap
8. Cap ventricular catheter with luer cap to prevent unwanted CSF drainage
9. Prior to inserting transducer catheter, follow appropriate steps to zero the catheter (see opposite side of card)
10. Remove luer cap from ventricular catheter, insert the transducer catheter and secure luer lock
11. Reconnect the catheter to the CAMCABL and verify waveform on the Camino and/or bedside monitor
12. Prepare external drainage system and connect to side port of the y-connector (e.g. drainage system connector)

To ensure a tight seal between the skull and the bolt, apply bone wax as needed. Do not overtighten as stripping of threads may cause loss of seal.

Drainage system should be closed for approximately five minutes before recording ICP during monitoring. If drainage is not properly closed, accuracy of ICP reading may be compromised.

The safety stop on the drill can be positioned as desired by loosening the set screw with the hex wrench, sliding the safety stop to the desired position, and tightening the set screw.

The Integra® Camino® ICP Monitor is indicated for use by qualified neurosurgeons or neurointensivists for measurement of intracranial pressure and temperature. The use of the Camino® Micro Ventricular Pressure Monitoring Kit is indicated for use by a qualified neurosurgeon when direct pressure measurement and cerebrospinal fluid drainage is clinically important. The Camino Micro Ventricular Pressure Monitoring Kit is intended to be used with an external drainage system as indicated by individual manufacturers.