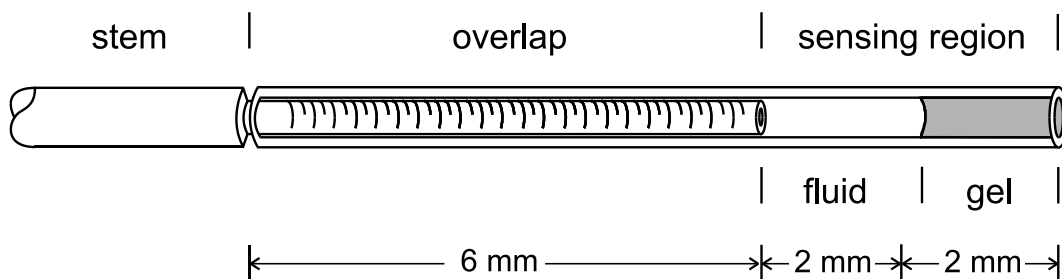


Guidelines for the Re-gel of Mouse-Sized Catheters

The design of the mouse pressure transmitter (PA-C10, HD-X11 and HD-X10) provides optimum performance when monitoring physiologic pressures in small laboratory animals. The extreme sensitivity of the device is largely dependent upon the integrity of the terminal 4 mm of the pressure-sensing catheter. Normal catheter manipulations can result in the inclusion of air bubbles, blood components, or foreign materials into the biocompatible gel. This document will provide guidelines for the maintenance of the pressure-sensing region of the catheter, specifically replacing lost gel, and displacing gel inclusions. The sensitive nature of this catheter design necessitates caution while performing these procedures. **Application of excessive force to the fluids inside the catheter will cause permanent damage to the transmitter and render it inoperable.**

There are two components of the pressure-sensing region of the terminal end of the catheter; the sensing region contains a viscous plug of biocompatible gel and a reservoir of non-compressible fluid. At the interface between these two components is a meniscus that is visible to the naked eye. The gel plug never extends beyond 2.0 mm from the distal tip of the catheter but can range in length from 1.25 mm to 2.0 mm; the proximal portion of the catheter contains fluid. **Use caution to avoid disturbing the non-compressible fluid portion of the catheter as this will compromise pressure readings and cause inaccurate results.** The recommended needle choice for re-gelling a PA-C10 or HD-X11 is the blunt-edge, lavender hub, 30-gauge needle provided with the re-gel syringe. The blunt-edging will help prevent damage to the catheter.



After verifying that the transmitter is on, keep an AM radio turned on and place it next to the transmitter to audibly monitor the amount of pressure applied to the transmitter. **This procedure should not significantly alter the tone of the transmitter. If the tone starts to change, adjust the pressure on the catheter to avoid damaging the sensor.** With clean, gloved hands, grasp the catheter at the proximal aspect of the sensing region and apply pressure in a distal direction. This will expel the air bubble or blood-product from the tip of the catheter. While continuing to apply pressure, wipe away the inclusion with a sterile cotton swab and apply a drop of gel to the catheter tip. While applying the gel, slowly releasing the finger hold on the catheter will draw the gel into the tip of the catheter. **Never insert the re-gel needle into the catheter!** Once the tip is full of gel and no air bubbles or foreign material is present, gently remove excess gel present on the outside of the catheter tip. The transmitter is now ready for implantation or re-sterilization if the transmitter is being re-used. **Do not attempt this procedure without an AM radio to monitor the applied pressure on the catheter as damage can occur to the transmitter!**

[A video clip demonstrating the proper re-gel technique for these transmitter models can be found in the technote section on our website, www.datasci.com](#)