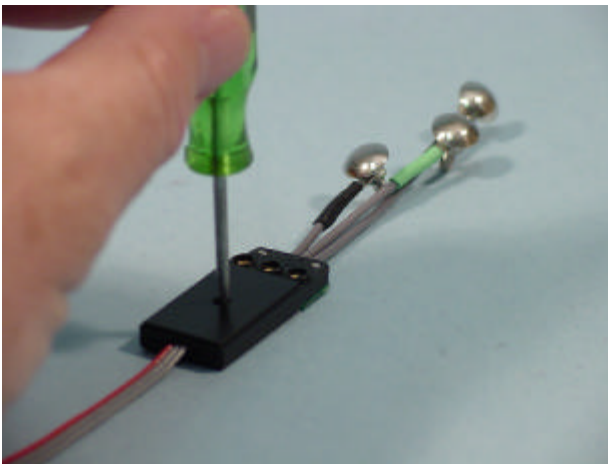


# Remote Electrode System Installation Instructions

## Electrode-Amplifier:

The LTI Remote Electrode System is built around a thin Electrode-Amplifier specifically designed to be used with remote metal electrodes for test sockets, frame-type sockets and roll-on silicone sleeve suspension systems. The case measures 1.2 x 0.7 x 0.2 inches, L x W x H, (31 x 17.5 x 5 mm). The Electrode-Amplifier has a performance similar to common cased electrodes and is compatible with all battery types from 3-10 volts. These are supplied with a 60Hz (US) notch filter to eliminate unwanted noise (a 50Hz European version is also available). The adjustable gain permits use with both microprocessor-based and traditional controllers and terminal devices. When used with microprocessor-based prosthetic controllers (like the LTI VariGrip III), simply set the gain of the Electrode-Amplifier at the mid-point and make further gain adjustments through the controller's software. When using an Otto Bock systems or other prosthetic system where no gain adjustment is provided, use the gain adjustment on the Electrode-Amplifier itself.



Adjusting the Electrode-Amplifier gain

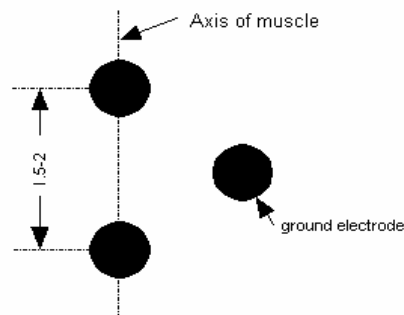
To adjust the gain, select a small flat-blade screw- driver and insert into the opening in the Electrode-Amplifier case. Gently attempt to turn the adjustment screw in one direction and then the other to establish the amount of force required to turn this potentiometer. Care should be taken to avoid applying too much torque to this screw, thus damaging the potentiometer. Then turn the screw fully counter-clockwise until you feel it contact the lower-limit stop. Turn it fully clockwise (about 270°) to establish the upper-limit stop. Then turn it back counter-clockwise to the center position (about 135°). This represents the mid-point or about a setting of "3" on a scale of 1 to 6.

## Cavity-Back™ Electrodes:

These Metal Electrodes are available in three shapes; High, Medium and Small dome. The Medium dome is the standard or default if no other shape is specified. These are used in most applications. The High dome electrode is intended for situations where there is significant soft tissue over the muscle site to assure good contact. Finally, the Small dome is primarily for pediatric applications or for adult cases where there are severe space constraints.



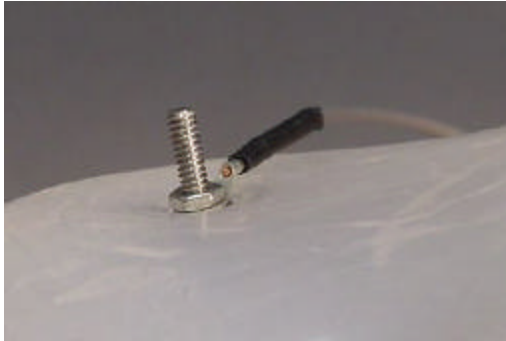
Medium, Small and High Dome Cavity-Back Electrodes



Metal Electrode Spacing

Metal Electrodes are generally mounted in a triangular pattern with the two active electrodes (identified by the black bands on the REC cables) lying along the muscle axis for optimal signal reception and the ground electrode (green band) placed off to one side, equal-distance from the two active electrodes. The active electrodes should be spaced approximately 1½" (3.8 cm) apart, center-to-center. This spacing depends on the size of the muscle, but in no case should these metal electrodes be closer than 1 cm edge-to-edge.

Metal Electrodes are used in test sockets and soft inner socket applications. With the Cavity-Back™ design in a soft socket liner, you will get excellent electrical continuity with just a thin washer, the cable eyelet and the small pattern 4-40 nut supplied. These components will push the liner down into the cavity. Tighten the nut gently against the eyelet (avoid over tightening) and apply Loctite® to secure it. Then cut the stud to the desired length. When the stud on the electrode is cut flush with the nut, only the 2mm thick nut and cable will protrude above the surface resulting in a cosmetically appealing socket.



### Remote Electrode Cables (REC):

Three shielded cables attach to the Electrode-Amplifier with a detachable strain-relief clamp. Eyelets with strain-relief on the other end of each cable connect to the Metal Electrode stud with 4-40 small pattern nuts. To accommodate various prosthetic configurations, these Remote Electrode cables are offered in four standard lengths; 3, 6, 12 and 24 inch. Generally, 3" cables are used for pediatric and long residual limb trans-radial clients, 6 and 12" for shorter trans-radial and trans-humeral applications and 24" for shoulder-level cases.



A complete LTI Remote Electrode System consists of the Electrode-Amplifier, a Remote Electrode Cable (offered in various lengths: 3, 6, 12, and 24 inches) and the Metal Electrodes in one of three sizes/shapes shown above. The Electrode-Amplifiers are provided with a 6" output cable and connector for the LTI VariGrip controller or 3-pin Otto Bock system. To order, specify the number of Electrode-Amplifiers (1 or 2) and the connector type, the length of Remote Electrode Cables and the shape of the Metal Electrodes.

### Remote Electrode-Amplifiers:

<b>DC200B</b>	One Remote Electrode-Amplifier, Otto Bock connector
<b>DC200A</b>	One Remote Electrode-Amplifier, Animated connector
<b>VGC625</b>	One Remote Electrode-Amplifier for LTI VariGrip III controller
<b>VGC626</b>	Two Remote Electrode-Amplifiers for LTI VariGrip III controller

### Cables to Connect Remote Metal Electrodes:

<b>REC03</b>	Remote Electrode Cable, 3-inch (76mm)
<b>REC06</b>	Remote Electrode Cable, 6-inch (150mm)
<b>REC12</b>	Remote Electrode Cable, 12-inch (300mm)
<b>REC24</b>	Remote Electrode Cable, 24-inch (600mm)

**Metal Electrodes:** Electrodes are supplied with appropriate nuts and washers.

<b>EL01</b>	Metal Electrode, High Dome 0.56in dia. x 0.19in high (14.2mm dia. x 4.7mm)
<b>EL02</b>	Metal Electrode, Medium Dome 0.56in dia. x 0.13 high (14.2mm dia. x 3.2mm)
<b>EL03</b>	Metal Electrode, Small Dome 0.38in dia. x 0.10 high (9.5mm dia. x 2.5mm)
<b>EL11</b>	Kit of 6 EL01 High Dome Metal Electrodes with nuts
<b>EL12</b>	Kit of 6 EL02 Medium Dome Metal Electrodes with nuts
<b>EL13</b>	Kit of 6 EL03 Small Dome Metal Electrodes with nuts & washers

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