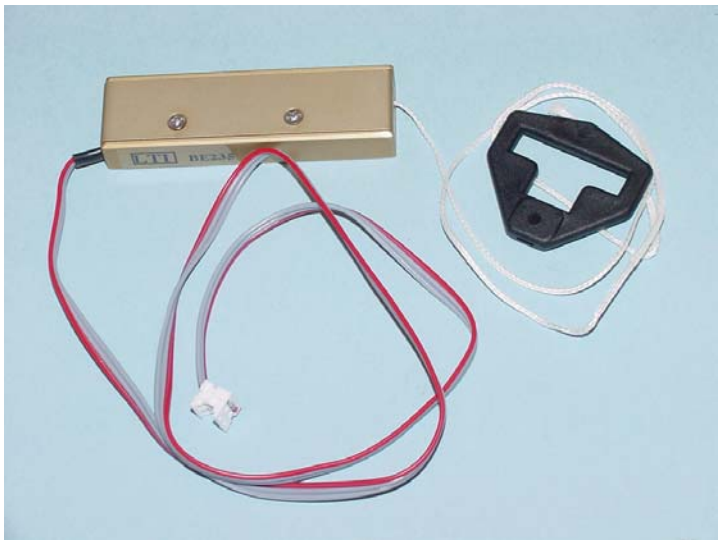
The Boston Digital Arm™ System – Input Devices and Cables



- **Pre-made cables and adapters for ease of assembly and reliability**
- **Standard connectors**
- **Easy to disassemble and troubleshoot**
- **"Keyed" connectors to assure correct polarity**
- **Mating connectors assure that connections are to the right device**

The Linear Transducer is a popular choice for servo control of elbow position

At LTI, we offer a variety of cables for connecting input and output devices to the Boston Elbow. These cables are pre-made for reliability. Customer made cables often require soldered joints, which are a common source of trouble. We also use commercial connectors which are usually "keyed" to assure proper assembly. Purchasing cables from LTI will simplify the assembly task and increase the reliability of the prosthetic system.

Our cables are supplied with standard connectors obtained from the terminal device suppliers themselves (Otto Bock, RSLSteeper, Centri, and VASI) to ensure reliability and convenience. Connectors in the wiring system provide a convenient way to assemble the components into a modular system that is easy to troubleshoot and repair.

Use of these cables with their unique connectors also ensures that the components will be assembled properly. Most cables are "keyed" to ensure proper insertion, and the mating connector prevents them from being connected to the wrong device. At LTI, we carefully design our cables, selecting the proper wire gauge, covering/insulation, wire length, and connector type for optimum performance and maximum durability.

The cables shown here represent the most common cable types used with Boston Digital Arm Systems, but there are approximately 30 other "standard" cables available from LTI. In addition, we can create custom cables if they are required for a particular prosthetic application. Our technical specialists are always ready to assist in specifying the standard or custom cables needed for your customer's prosthesis. Just call Customer Support at 1-800-437-0024, ext.10, to discuss your needs.

The Boston Arm Myoelectrode-Amplifier System

Boston Arm Electrode-Amplifiers operate on 5.0V, and they output an amplified raw myoelectric signal not a DC voltage. The raw signal permits the signal processing circuit in the elbow to create a more accurate myosignal than the typical signal from DC-output electrodes. There are three choices using the Electrode-Amplifiers. They can be mounted in the socket using a Mounting Kit, they can be used with large metal electrodes mounted through the socket wall, or they can be used with roll-on sleeves with another kit.

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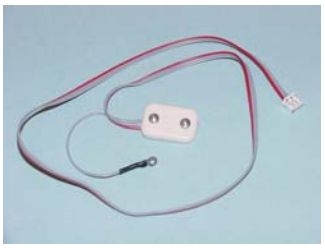
Myoelectrode-Amplifiers for In-Socket Mounting

BE324D Kit for In-Socket Mounting of 2 Electrode-Amplifiers
The kit consists of two of each of the following: BE326, BE327, and EL01.

BE324F Kit for In-Socket Mounting of 2 Electrode-Amplifiers
The kit consists of two of each of the following: BE326, BE327, and EL02.

BE325D Kit for In-Socket Mounting of 1 Electrode-Amplifier
The kit consists of one of each of the following: BE326, BE327, and EL01.

BE325F Kit for In-Socket Mounting of 1 Electrode-Amplifier
The kit consists of one of each of the following: BE326, BE327, and EL02.



BE326 Myoelectrode-Amplifier w/cable
For use with the Boston Digital Elbow. An auxiliary wire exits the back to go to a reference ground electrode.

BE327 Myoelectrode Housing Kit
Two housings and dummies are supplied, one for the check socket and one for the definitive.

EL01 Metal Electrode, High Domed
0.56" (14.3mm) dia. dome rises 0.19" (4.8mm) with 4-40 threaded stud for attaching a ring terminal. Supplied with two small profile 4-40 nuts.

EL02 Metal Electrode, Medium Domed
0.56" (14.3mm) dia. Disc rises only 0.12" (3mm) with 4-40 threaded stud for attaching a ring terminal. Supplied with two small profile 4-40 nuts.

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Myoelectrode-Amplifiers for Separate Electrodes

BE328 Remote Myoelectrode-Amplifier, 3 Rings
Separate Ring terminals are supplied for use with 4-40 studs on EL01 or EL02 metal electrodes. For use with Boston Arm Systems only.

The ring terminals on LTI's Remote Myoelectrode-Amplifiers accept the 4-40 studs on the EL01 or EL02 Metal Electrodes above. These three ring terminals are only 0.35" (9mm) wide and are just a tenth of an inch thick (2.5mm).

BE330D Kit, 2 Remote Myoelectrode-Amplifiers, High Domed Electrodes
Consists of two BE328 below and six EL01 Metal Electrode, High Domed.

BE330F Kit, 2 Remote Myoelectrode-Amplifiers, Medium Domed Electrodes
Consists of two BE328 below and six EL02 Metal Electrode, Medium Domed.

BE331D Kit, 1 Remote Myoelectrode-Amplifier, High Domed Electrodes
Consists of one BE328 below and three EL01 Metal Electrode, High Domed.

BE331F Kit, 1 Remote Myoelectrode-Amplifier, Medium Domed Electrodes
Consists of one BE328 below and three EL02 Metal Electrode, Medium Domed.

Input Cables for Switches

BE230 - Cable, Bock Compatible Switches
Accepts Bock 9X14, 9X18, 9X25, and 9X37 and any LTI Bock compatible switch

BE265 - Cable with Bump Switch, Bock-Compatible
Requires use of BE230 above

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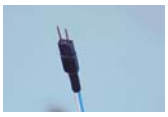
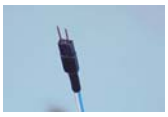
Input Cables for LTI Touch Pads™

BE340 – Cable, One Touch Pad Plug
Requires one Touch Pad from a TP01 Touch Pad Kit

BE341 – Cable, Two Touch Pad Plugs
Requires two Touch Pads from a TP01 Touch Pad Kit





TP01 Touch Pad Kit - 3 Pads ¾" (diameter), 4 covers

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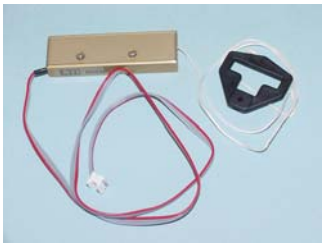
Cables for Position-Servo Control



BE235 – Linear Transducer with cable
For position servo control of the Elbow or quick-slow proportional control of some other device

BE238 – Cable, Servo Transducer for Steeper Hand
Requires an SC23 Servo Transducer

SC23 – Servo Transducer for Steeper Hand
Plugs into BE238 above

Cables for Hands & Wrists

Pulse width modulation (PWM) makes the best use of the Boston Digital Arm Electronics. It allows both fast operation and slow, controlled motion. Some hands like the Bock Sensor or Steeper Servo must have both voltage and control inputs. They attach to a different receptacle on the circuit board.

BE242 - Cable, Steeper Hand
For PWM control of an Electric Hand or for control of a Servo Hand

BE243 - Cable, Bock QD, Hand or Greifer only
Use for PWM control of either *an 8E37 Hand or an 8E32 Greifer*

The Boston Digital Arm™ System - Cables

BE244 - Cable, Bock QD, 10S17 Wrist Rotator only
Use for PWM control of only a 10S17 Wrist Rotator

BE247 - Cable, Bock QD, Hand with 10S17 Wrist
Use for PWM control of either *a Hand or Greifer and a 10S17 Wrist Rotator*

Cables for Hands Needing a 6V Supply

The digital electronics will simulate the output of the open and close electrodes when the TD must have its own source of power. If a wrist rotator will be used with the BE343 below a separate BE244 should be ordered.

BE343 - Cable, Bock QD, TD with 6V Electronics
Use for a Bock Sensor Hand, RSLSteeper Powered Gripper, or other TD needing a 6V supply.