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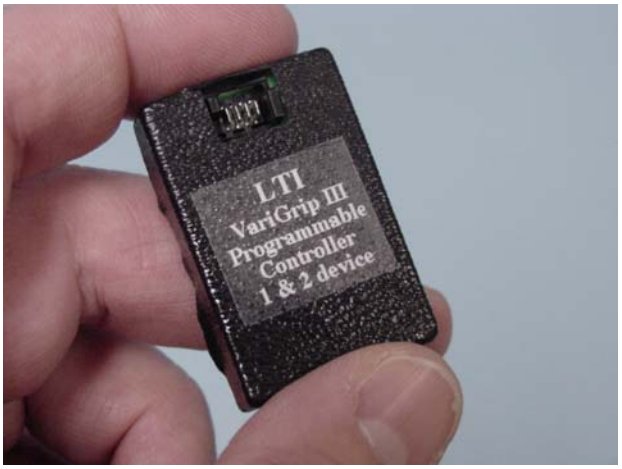
Liberating Technologies' VariGrip Multi-Device Controller

The latest advance in microprocessor technology for powered upper-limb prosthetic systems is the Programmable VariGrip™ III Multi-Device Prosthetic Controller from LTI. This controller operates up to four powered prosthetic devices using a control strategy tailored to the user. The system adapts to the patient rather than requiring the patient to adapt to the controller, thus reducing training time and increasing functionality. And since it is programmable, the clinician can quickly adjust it through their personal computer.



VariGrip III Multi-Device Controller

The VariGrip III is light weight (11 grams) and small, about half the size of competitive controllers, making it ideal for both pediatric and adult prostheses. It can be concealed in the prosthesis and when combined with built-in batteries results in improved cosmetic appearance. The controller is universal and operates devices from any manufacturer, even systems with a mix of components from several manufacturers. This means that prosthetists can choose the best combination of products for the user's individual needs.

Traditionally, prosthetic controllers were designed to perform one function. Early microprocessor-based controllers were similar, since they were pre-programmed to perform a specific task. However, they did allow the prosthetist to make some adjustments for the user.

The new VariGrip III Controller takes this one step further. In addition to the adjustment capabilities, it can be programmed with a variety of control strategies, making it easier for the user to operate the system. These strategies are down-loaded by the clinician to the prosthetic system. Prosthetist can try several strategies with the user and to choose the one best suited for their particular needs. Once a strategy is chosen, the controller is "fine-tuned" through software-adjustable settings, providing significantly more adjustment than offered previously with prosthetic controllers. The result is a control strategy and user-specific adjustments that allow the user to obtain maximum performance and functionality.

Patient Evaluation using MyoAssistant™

The VariGrip III Controller has an additional feature. It has the ability to **evaluate** the patient to determine which control strategy would be best for them. The patient evaluation tells the prosthetist if the patient has sufficient muscle signal strength and coordination to operate the prosthetic system myoelectrically. If not, the VariGrip III Controller can be reprogrammed to use a different input device. Input device options include: myoelectrodes, Touch Pads™, switches or a linear transducer. Again, the most suitable input device is chosen to accommodate the user.

The VariGrip III Controller uses proprietary software; MyoWizard™ and MyoAssistant™. **MyoWizard** provides sixteen control strategies along with a complete description of their features. To select one, the prosthetist simply highlights the preferred strategy and downloads it to the VariGrip III Controller. If the user is not satisfied with this control strategy, the prosthetist can select a different strategy until the best one is found. Once a suitable strategy has been chosen, **MyoAssistant** is used to make necessary adjustments to the system. This results in a custom control system that is optimum for the individual user. Additional control strategies are being developed and will be added in the next release of the software, scheduled for the first quarter of 2003.

Last year, HCPCS issued a new L-code for microprocessor-based prosthetic controllers. Code **L6882** "Microprocessor control feature, addition to upper-limb prosthetic terminal device", provides additional reimbursement for this new technology.

For more information about the VariGrip III Controller, contact Liberating Technologies, Inc. at 1-800-437-0024 or visit our website; www.liberatingtech.com

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