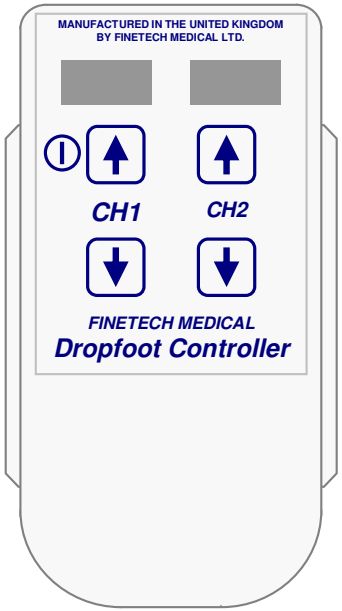
Finetech Medical

SPECIALISTS IN THE MANUFACTURE AND DESIGN OF ACTIVE SURGICAL IMPLANTS

THE STIMuSTEP® SYSTEM



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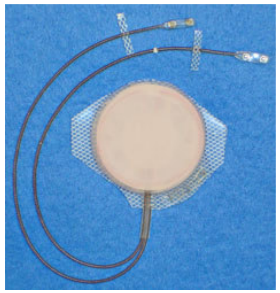
Helping to Correct the Dropped Foot Condition

WHAT IS THE STIMuSTEP® SYSTEM?

The system is designed to assist people with the correction of the dropped foot condition in patient who have had a stroke or got Multiple Sclerosis (MS). The system comprises of two main parts:

- The **Implanted Stimulator**.
- The **External Components**, include the Controller, Leg strap, Footswitch and Battery charger.

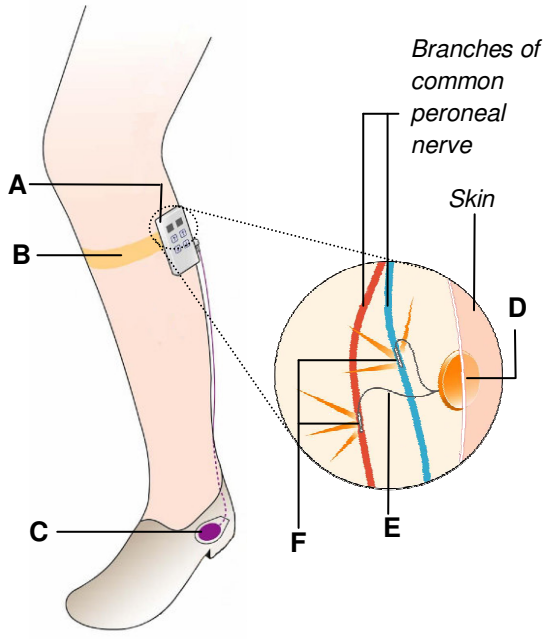


Implant Receiver

HOW IT WORKS?

The External Controller (A) is positioned over the site of the Implant Receiver (D) using the Leg Strap (B). The Footswitch (C) is placed under the heel of the foot inside the shoe and plugged into the External Controller.

While the External Controller is switched on, stimulation will start when the heel leaves the floor. While the heel is lifting, the implant stimulates the two branches of the common peroneal nerve causing the combination of muscles to contract appropriately, thus lifting and rotating the foot to the correct position for walking. Stimulation stops when the heel struck the ground.



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WHAT ARE THE BENEFITS?

The ***STIMuSTEP® System*** has a number of benefits for users. These are some of the benefits that users in various studies have identified:

- Easier to walk
- Less likely to trip or fall
- Increased walking speed
- Increased walking range
- Improved joint movement
- Improved ankle stability
- Improved muscle bulk/tone
- Improved local blood flow
- Enhanced quality of life

In addition, the ***STIMuSTEP® System*** has a number of advantages over surface electrode stimulators:

- 2 independently controllable, targeted channels
- No daily positioning of the electrodes required
- No skin irritation due to surface stimulation
- Much reduced stimulation sensation
- Lower running costs – no electrodes to replace.

A GUIDE TO IMPLANT PROCEDURE

What happens during the procedure?

The implant procedure will be done under a general anaesthetic to implant the Receiver, as a day surgery. The procedure takes under an hour and requires a small incision just below the knee, on the outer side of the affected leg to site the implant.

During the procedure, the two main branches of the common peroneal nerve are identified and suitable stimulation sites are located using a surgical nerve stimulator. The flexible electrodes are then placed at these sites and, following some initial tests to check that the electrodes are sited correctly, the Implant Receiver is then secured in position and the incision closed.

What happens after the procedure?

Once the incision has healed after two weeks, a clinician will program the External Controller with the appropriate stimulation parameters.

You will then try out the system under the clinician's supervision in order that the settings can be optimised for you.

You will then build up the usage of the system from ten minute periods, to being able to use the system all the time. This training period generally takes six to eighteen weeks.

IS IT RIGHT FOR YOU?

As a guideline, the most suitable candidates are people who fit into the following criteria:

1. A single dropped foot resulting from an upper motor neurone lesion
2. Able to stand up from a seated position and walk at least 50m with an appropriate walking aid.
3. Medically stable or at least 1 year post injury

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