

Muscle Training 2CH

Category: NMES/FES – auto repeat

Strengthening of antagonistic muscles with optional warming up and cooling down stages.

Indication: Paralysis or muscle weakness, e.g., after SCI, MS or stroke

Stimulation pattern: sequential activation

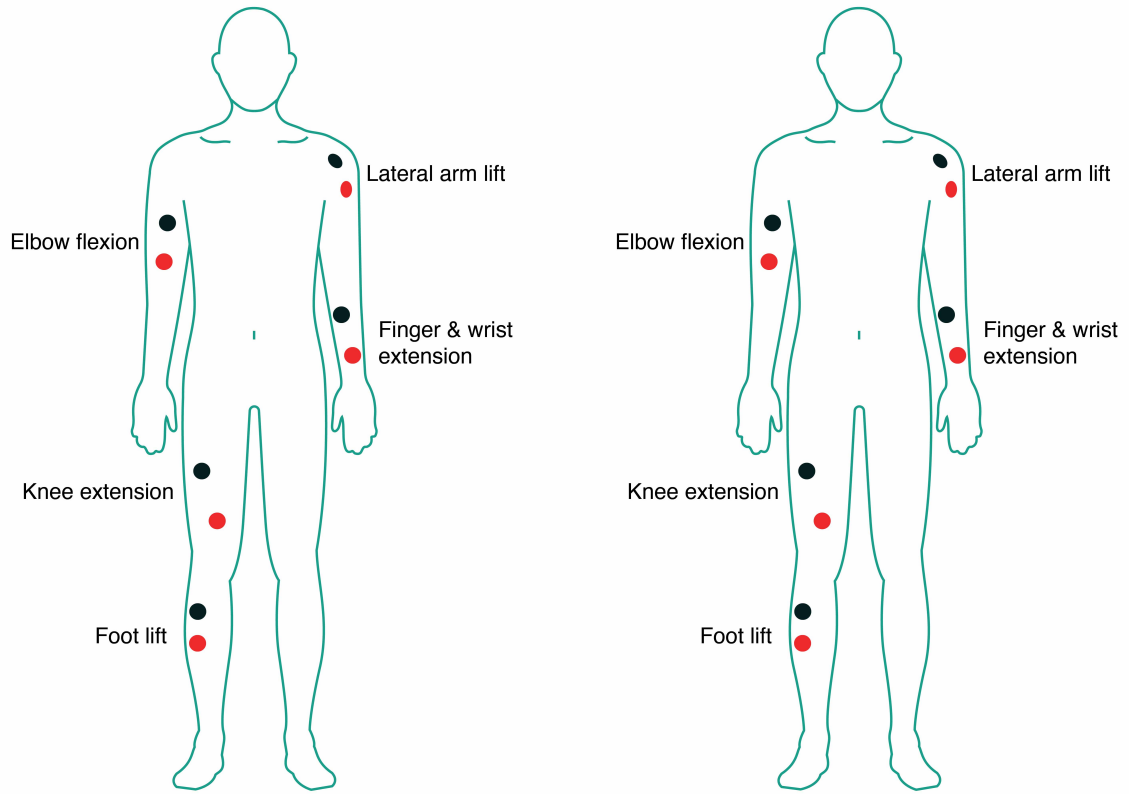
Stimulation cable: 2-channel

Active channels: Channel 1, Channel 2

Solo mode: No

Placement of electrodes and stimulator

| Channel | Function | Electrode type |
|---------|------------|--|
| 1 | agonist | bipolar, square ≥ 2" x 2" (5cm x 5cm) |
| 2 | antagonist | bipolar, square ≥ 2" x 2" (5cm x 5cm) |



Electrode placement: channel 1 – agonist and channel 2 – antagonist

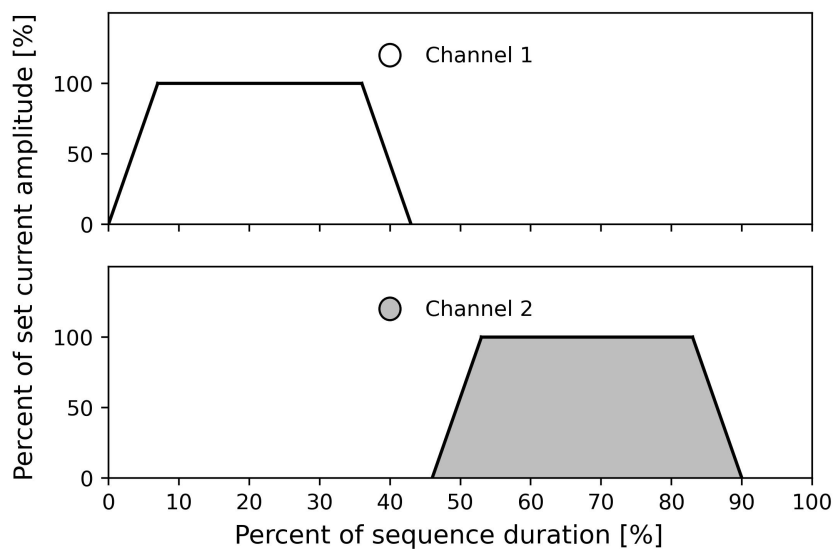
Current settings for stimulation stages

Warm-up:

| Total duration | | 05:00:000 (min:sec:msec) | | | |
|----------------------------------|-----------------|--------------------------|-----------|---------------------------------|-------------------------|
| Sequence duration | | 00:00:010 (min:sec:msec) | | | |
| Sequence mode¹ | | automatic repetition | | | |
| Channel | Maximal current | Maximal pulse width | Frequency | Pulse form | Pulse mode ² |
| 1 | 50.0 mA | 300 μ s | 10.0 Hz | biphasic (100 μ s pause) | always on |
| 2 | 50.0 mA | 300 μ s | 10.0 Hz | biphasic (100 μ s pause) | always on |

Training:

| Total duration | | 30:00:000 (min:sec:msec) | | | |
|----------------------------------|-----------------|--------------------------|-----------|---------------------------------|-------------------------|
| Sequence duration | | 00:28:000 (min:sec:msec) | | | |
| Sequence mode¹ | | automatic repetition | | | |
| Channel | Maximal current | Maximal pulse width | Frequency | Pulse form | Pulse mode ² |
| 1 | 100.0 mA | 300 μ s | 50.0 Hz | biphasic (100 μ s pause) | sequential |
| 2 | 100.0 mA | 300 μ s | 50.0 Hz | biphasic (100 μ s pause) | sequential |



Activation of the stimulation channels for training

Cool-Down:

| Total duration | | 05:00:000 (min:sec:msec) | | | |
|----------------------------------|-----------------|--------------------------|-----------|---------------------------------|-------------------------|
| Sequence duration | | 00:00:010 (min:sec:msec) | | | |
| Sequence mode¹ | | automatic repetition | | | |
| Channel | Maximal current | Maximal pulse width | Frequency | Pulse form | Pulse mode ² |
| 1 | 50.0 mA | 300 μ s | 3.0 Hz | biphasic (100 μ s pause) | allways on |
| 2 | 50.0 mA | 300 μ s | 3.0 Hz | biphasic (100 μ s pause) | allways on |

**¹Sequence modes**

- Automatic repetition: The stimulation sequence will be automatically repeated until the total duration of the stage is reached.
- Motion triggered cyclic: The stimulator is placed on a limb and the cycle percentage will be estimated during cyclic movements like leg cycling or arm cranking. The Stimulation is controlled as a function of the current cycle percentage and can be activated in up to three phases per active channel.
- Motion triggered with threshold: The stimulation sequence will be triggered by an change in the inclination angle of a body segment on which the stimulator is placed. The angle and direction of change (increasing or decreasing) must be defined.
- Manually triggered: The stimulation sequence will be manually triggered by the therapist or patient using the Stim2Go app.

²Pulse modes

- Sequential: The stimulation is activated in up to three phases within a sequence duration or motion cycle.
- Always on: For a current amplitude larger than zero, the stimulation of a channel is permanently on over the entire sequence duration.