![Motion Informatics logo](motion INFORMATICS)

Stimel-03

Accelerate Recovery, Restore Independence

FDA CLEARED

Innovative Technology for Comprehensive Rehabilitation

FDA cleared and validated through trials, the **Stimel-03** enhances motor function and overall abilities. Trusted by physiotherapists for its transformative impact, **Stimel-03** and its **BioRythmIQ Technology*** stimulates neural pathways, and optimizes recovery through personalized treatment tailored to patient neuromotor characteristics.

Stimel-03 Core functions

Comprehensive Multifaceted Rehabilitation

Stimel-03 addresses a wide range of impairments for holistic recovery.

Motor Function Recovery

Stimel-03 aids in restoring motor function for stroke survivors, enabling them to regain control over their affected limbs.

Neuroplasticity Enhancement

Stimel-03 promotes neuroplasticity, the brain's ability to reorganize and form new neural connections, thereby aiding in the rewiring process after injury.

Versatility and Adaptability

Stimel-03 - apart from being effectively used for upper and lower limb rehabilitation, it caters to various severities including strokes, car accidents, sports injuries, etc.

Advanced Technology Integration

Stimel-03 integrates NMES, FES, and Biofeedback technologies, utilizing patient-specific signals for personalized electrical stimulation and optimal outcomes.

Range of Motion Improvement

Stimel-03 helps enhance the range of motion in stroke-affected joints, facilitating better movement and flexibility.
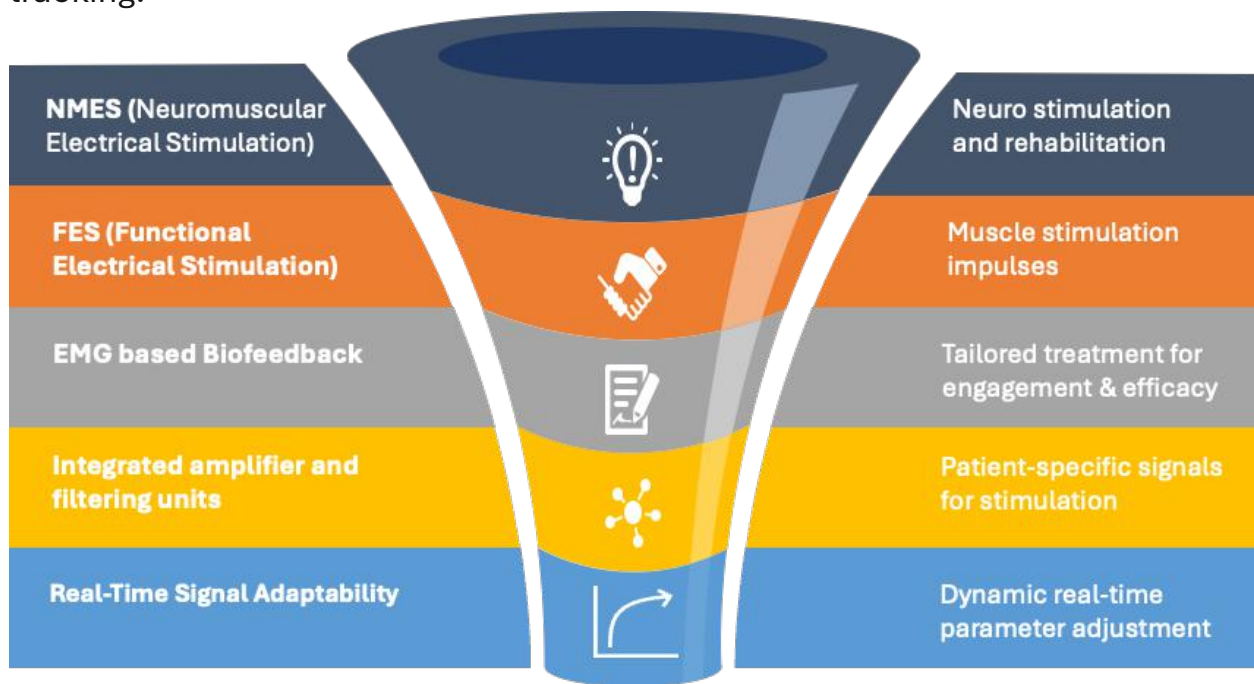
Muscle Strength Rehabilitation

Stimel-03 assists in rebuilding muscle strength in affected limbs, contributing to improved overall physical abilities.

Quality of life Enhancement

Stimel-03 is clinically proven to increase functional independence in activities of daily living, enhancing overall quality of life and restoring confidence to survivors.

MK-03

What is BioRythmIQ Technology*?

A patented technology that combines FES/NMES with precise and adaptive EMG-based biofeedback and signal amplification, to enhance rehabilitation through natural neuronal intent, personalization, and real-time progress tracking.

The **Stimel-03 device**, powered by **BioRhythmIQ technology**, introduces three layers of personalization to enhance therapeutic precision and clinical efficacy.

1) The first layer leverages **EMG-based biofeedback**, using real-time muscle activity to guide the timing and delivery of electrical stimulation. By incorporating customized threshold values, this layer tailors stimulation onset to the patient's neuromuscular profile, optimizing motor unit recruitment while minimizing fatigue and discomfort, thereby improving patient engagement and adherence.

2) The second layer of personalization integrates **patient-specific EMG signal characteristics** into the stimulation protocol, mimicking the brain's recognition of natural muscle activation patterns. By replicating this neurophysiological process,

the therapy aligns with the patient's intrinsic neuromuscular responses, promoting more effective motor relearning and rehabilitation.

3) The third is **real-time signal adaptability**, which continuously adjusts stimulation parameters based on EMG readings during the session. This ensures the treatment dynamically reflects the patient's clinical status and movement attempts in real time.

Together, these three layers of personalization create an individualized therapy framework that incorporates patient-specific data to optimize neuromuscular re-education, enhance therapeutic engagement, and prevent over- or under-stimulation. This approach represents a significant advancement in neuromuscular rehabilitation, offering clinicians a sophisticated tool for delivering highly tailored and effective treatments.