System Key Features:

1. Modern design with 9-inch coloured LCD touch screen
2. Portable with compact design integrating EMG assessment, examination and therapy
3. Digitized muscle strength test and rehabilitative training system for extremities
4. Centralised data management system for clinicians' ease of access to patient's information
5. User-friendly system helps to increase user satisfaction and adoption

Software Examination Protocols Features:

Surface EMG Evaluation (SEMG)
As a non-invasive electrophysiological examination, SEMG can be used to observe muscle movement continuously.

Muscle Training
Using multimedia games enables patients to understand muscle control training process, helps to train patients' muscle relaxation capacity, endurance, control, precision and increases patients' adherence and interest to the training.

Force Measurement
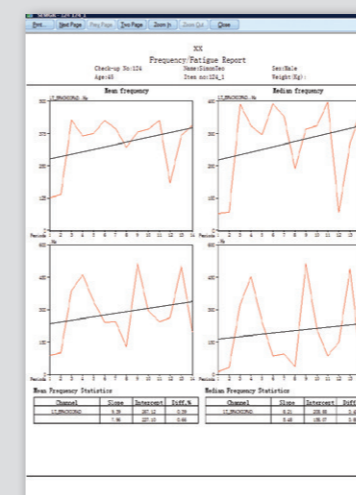**Force Evaluation –** Measurement of upper limb push force can be recorded for clinicians' analysis.

Rehabilitation

NS-RHB-A-1, a limb functional rehabilitative assessment and training system, serves as a multi-functional pack for medical professionals to conduct rehabilitative assessment and training anytime, anywhere.

The great variety of evaluations functions, comprehensive training modules enable clinicians to perform simple yet engaging rehabilitation therapy for patients in medical institutions, families and communities.

Report

SEMG

Grab and Release

Grab and release evaluation and training helps clinicians to engage patients in their upper limb muscle recovery process.

- **Pinch Force Evaluation** – Measurement of maximum finger strength and its duration
- **Grab and Release Evaluation** – Measurement of maximum grip strength and its duration
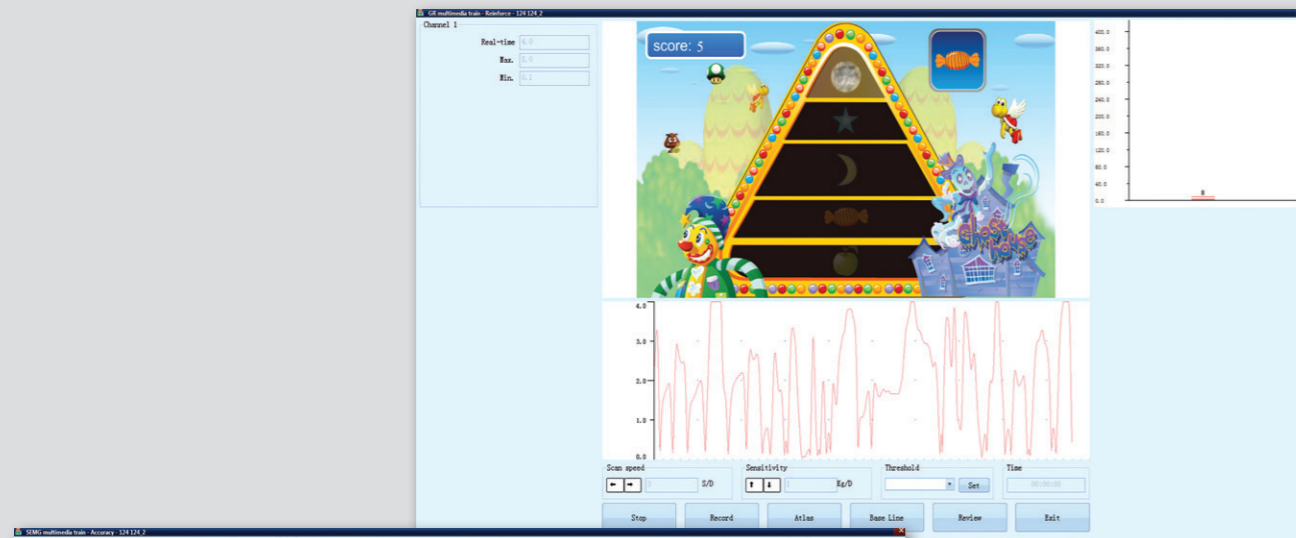- **Grab and Release Training** – A series of multimedia games

Stimulation

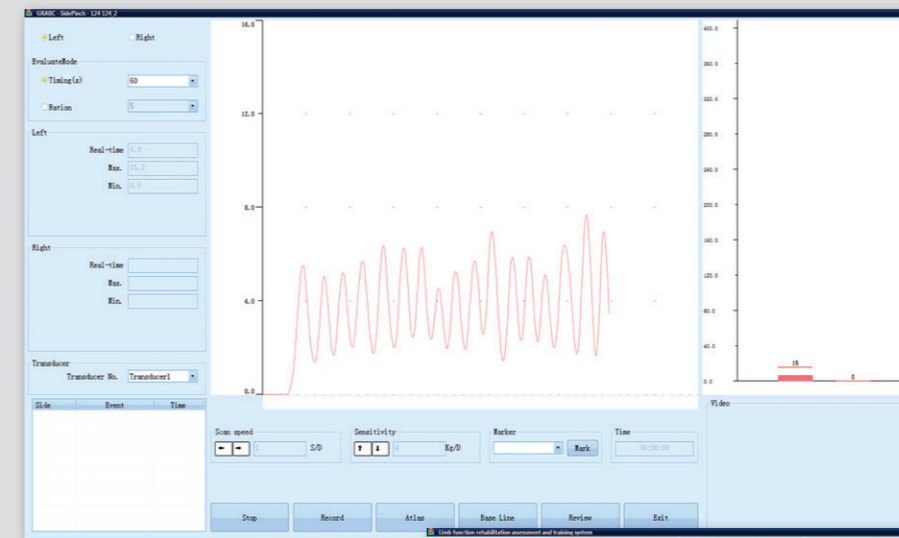The stimulation module consists of programs designed for various therapeutic purposes.

- **TENS** – Transcutaneous Electrical Nerve Stimulation
- **Prescriptive Stimulation** – Pre-set stimulation schemes for various body parts
- **Freestyle Stimulation** – Stimulation with customized parameters
- **Feedback Stimulation** – Stimulation based on real-time feedback

Clinical Applications

1. The system utilises low frequency pulse current which incorporates pre set stimulation programs to stimulate stressed/relaxed muscles as to enhance the muscle functions and capability.
2. NS-RHB-A-1 is also applicable for construction/building of nerve function neural network, myogenic disease (muscle fibre), neuromuscular diseases including paraplegia after spinal cord injury, cerebral palsy, flaccid paralysis, disuse muscle atrophy, pain syndrome, peripheral nerve injury, spasmodic torticollis and postural back muscle pain.
3. VR and video game applications are novel and potentially useful technologies that can be combined with conventional rehabilitation for upper arm improvement after stroke *(http://stroke.ahajournals.org/ content/42/5/1380.short)*.

Grab and Release Evaluation

Games for Training

Muscle Selection