

# MedStim

Bi-phasic Transcranial Magnetic Stimulator



MEDICAID  
An ISO 13485 - 2003 Company

rTMS



rTMS Useful in...

- Neurology
- Psychiatry
- Physiotherapy
- Pulmonology
- Ophthalmology

## Features

- Biphasic waveform
- Stimulation rates up to 100 pps
- All parameters displayed on LCD
- Sweepmode with variable repetition rate
- Flexible protocol storage in built-in computer
- Single pulse, repetitive stimulation & train modes

**High-performance, non-invasive magnetic stimulators for use in both the clinic and research**

## Company Profile

**Medicaid Systems, Chandigarh (India)** focusing on research, manufacturing and distribution of medical instruments, was founded in 1987 as a high-tech company. Our product line covers a wide range of Neuro-Psychiatry Instruments. Most of the leading Govt. Hospitals, Medical Colleges & Private Doctors are our customers.

Now, we have developed first time in Asia **Transcranial Magnetic Stimulator (rTMS)**. The researching team endeavors to enhance the quality to give an edge over others. A few of our products are CE certified.

## Introduction rTMS

**rTranscranial magnetic stimulation (rTMS)** is a noninvasive method to cause depolarization or hyperpolarization in the neurons of the brain.

TMS uses electromagnetic induction to induce weak electric currents using a rapidly changing magnetic field; this can cause activity in specific or general parts of the brain with minimal discomfort, allowing the functioning and interconnections of the brain to be studied.

A variant of TMS, repetitive transcranial magnetic stimulation (rTMS), has been tested as a treatment tool for various neurological and psychiatric disorders including migraines, strokes, Parkinson's disease, dystonia, tinnitus, depression and auditory hallucinations.



## How does rTMS work?

The rTMS device allows a trained person to use an electromagnet to non-invasively stimulate the brain of a patient. A rapidly changing magnetic field created by a hand held magnetic coil causes weak electric currents in the brain through electromagnetic induction. By stimulating different areas of the brain, it is possible to elicit a therapeutic response in different disease states. rTMS can currently target sites in the brain to within a few millimeters and this eliminates the various side effects as would be seen by a non-specific treatment such as Electro Convulsive Therapy (ECT)

## Advantages : Medstim rTMS

- Highly effective (based on result of clinical research, **rTMS** surpasses the success rates of Pharmacotherapy intervention and ECT)
- Few or no side effects (most severe side effect is a mild headache)
- Quick onset of therapeutic effect (typically within 1 week)
- Painless procedure, Non-invasive,
- No anesthesia required
- Outpatient therapy
- Excellent ability to target specific neuron areas
- Effectiveness requires 2 to 3 week treatment
- Ability to provide therapeutic benefit for treatment-resistant individuals.
- Patients do not have to stop taking medication in order to receive **rTMS**.
- Equivalent effectiveness in treating both patients with Major Depressive Disorder and those suffering from Bipolar Disorder.



**Medstim** is a complete line of non-invasive magnetic stimulation systems designed for clinical examinations and research within the areas of **Neurology, Rehabilitation, Psychiatry** and **Physiotherapy** developed by highly qualified technocrats having rich experience of 35 years in Biomedical Instruments Provides reliability -quality service to the **Neuro-Psychiatry** Community.....

## Application :

**Psychiatry** : **rTMS** is very useful tool in treating Psychiatric disorders:- Bipolar disorder, Depression, Anxiety, OCD, Schizophrenia, ADHD and behavior disorders.

**Neurology** : **rTMS** is also useful in the treatment of some neurological disorders:- Parkinson's disease, writer's cramp, stroke, neuropathic pain, migraine and tinnitus.

**Physiotherapy** : **Medstim** is useful in rehabilitation and management of chronic pain.

## MEP Monitoring (Optional)

The MEP Monitor can be added to the Medstim MS-10, MS-30 & MS-100 to acquire compound muscle action potential recording.

- Display MEP's on monitor screen.
- Up to 16 responses can be shown with superimpose function.
- Latency & amplitude display.



MEP CONTROL UNIT

## Coils

- The system stop stimulation in case coil heats up to 40 degree temperature.
- Coil stand with rotation at 360 degree.
- Provides very deep stimulations.
- Integrated with trigger button.

Butterfly Angular Coil



MQ-80

Butterfly Coil



MQ-60



### Technical Specification Coils

Model	Optional		
	MQ 80 (100mm)	MQ 60 (90mm)	MQ 20 (90mm)
Type of Coil (Air cooled)	Angular figure of 8 coil	Butterfly/big ring	Sham/Placebo
Length of the coil	1.5 meters	1.5 meters	1.5 meters
Coil angle	120 degrees	Straight	Straight
Magnetic field	32 kT/sec.	31 kT/sec.	31 kT/sec.
Pulse width	320 $\mu$ s	320 $\mu$ s	320 $\mu$ s
Inbuilt core Temperature monitoring and protection.	Provided	Provided	Provided
Equipped with trigger button	Provided	Provided	Provided
Maximum stimulations before warm-up (75%)	1600 Pulses	1600 Pulses	1600 Pulses

### Technical Specification rTMS

TECHNICAL SPECIFICATIONS	Model -MS 30	Model -MS 50	Model-MS 100
Pulse type	Bi-phasic (Full Sine)	Bi-phasic (Full Sine)	Bi-phasic (Full Sine)
Pulse width	320 $\mu$ s	320 $\mu$ s	320 $\mu$ s
Pulse modes	Single & Repetitive	Single & Repetitive	Single/Standard, Repetitive and Burst
Repetition rate	30 pps	50 pps	100 pps
Output energy range	30% – 100%	30% – 100%	30% – 100%
Max. Initial dB/dt (coil surface)	36 kilo tesla	36 kilo tesla	36 kilo tesla
Operating supply	230V +/-10% 50/60Hz	230V +/-10% 50/60Hz	230V +/-10% 50/60Hz
Maximum Power Consumption	2200VA	2200VA	2200VA
Standby Power Consumption	90VA	90VA	90VA
Theta Burst Protocol	Not Provided	Provided	Provided
Unit Weight	Approx. 15kg	Approx. 15kg	Approx. 15 kg.
Safety	BF type	BF type	BF type

## MEDICAID SYSTEMS

An ISO 13485 : 2016 Company

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