

## DuoMAG<sup>®</sup> MP-Dual

### Transcranial Magnetic Stimulation system for research into paired pulse stimulation

The DuoMAG<sup>®</sup> MP-Dual combines two DuoMAG<sup>®</sup> MP units to provide fully programmable paired pulse stimulation through a single stimulating coil. By independently controlling the pulse intervals and power level of each DuoMAG<sup>®</sup> MP, it is possible to provide precise sub- and supra-threshold conditioning and test pulses. This is useful for the investigation of inter-cortical and intra-cortical inhibition and facilitation.

The inter-stimulus interval (ISI) of the two pulses is adjustable with the following methods: The first is via the supplied touch-screen programmable interface, and the second is via external triggering of two TTL inputs, one for each stimulator, offering complete user flexibility of the ISI setting.

It is also possible to connect two individual coils for additional uses including inter-hemispheric stimulation.

DuoMAG<sup>®</sup> MP-Dual provides:

- single coil delivery of paired pulses
- two coils for interhemispheric stimulation
- stimulation of up to 700 Joule
- up to 2 Hz repetition rate (0.5 Hz at maximum output)
- inter Stimulus Interval (ISI) of 0.1 ms for the range of 0.5-100 ms



## System Features

- DuoMAG<sup>®</sup>-MP Dual combines two DuoMAG<sup>®</sup> MP units to provide fully programmable paired-pulse stimulation through a single stimulation coil.
- By controlling the pulse intervals and power level of each DuoMAG<sup>®</sup> MP, it is possible to provide precise sub- and supra-threshold conditioning and test pulses.
- This is useful for the investigation of inter-cortical and intra-cortical inhibition and facilitation.
- The Inter-stimulus interval (ISI) of the two pulses is adjustable with following methods:
  - The first is via the supplied touch-screen programmable interface
  - The second is via external triggering of two TTL inputs, one for each stimulator, offering complete user flexibility of the ISI setting
  - The third is in connection with EMG from the TruTrace EMG
  - The fourth is in connection with EEG from the TruScan EEG software

## Specifications

- **Pulse mode:** paired / dual monophasic
- **Dimensions:** 2 x (49 cm x 19 cm x 38 cm)
- **Weight without trolley and coil:** 29 kg
- **Frequency of stimulation at 100 %:** 0.5 Hz
- **Frequency of stimulation at 50 %:** 1.4 Hz
- **Maximum repetition rate:** 2 Hz
- **Inter-Stimulus Interval (ISI):** 0 or 1 – 600 ms
- **Pulse width (Rise / Decay):** 100, 141  $\mu$ s / 1, 1.41 ms
- **Coil Compatibility:** Deymed coils
- **Mains voltage:** 100-240 Vac 50/60 Hz
- **Synchronization:** TTL in/out and/or USB
- **Communication:** USB full control, control on coil

## Options

- **Compact:** The DuoMAG<sup>®</sup> MP or DuoMAG<sup>®</sup> MP Dual can be placed on a desktop or elsewhere in a compact space
- **MagCart:** (see right) The MagCart configuration is an easy to move configuration that takes up minimal space. An articulating arm allows the coil to be quickly locked into place after positioning.



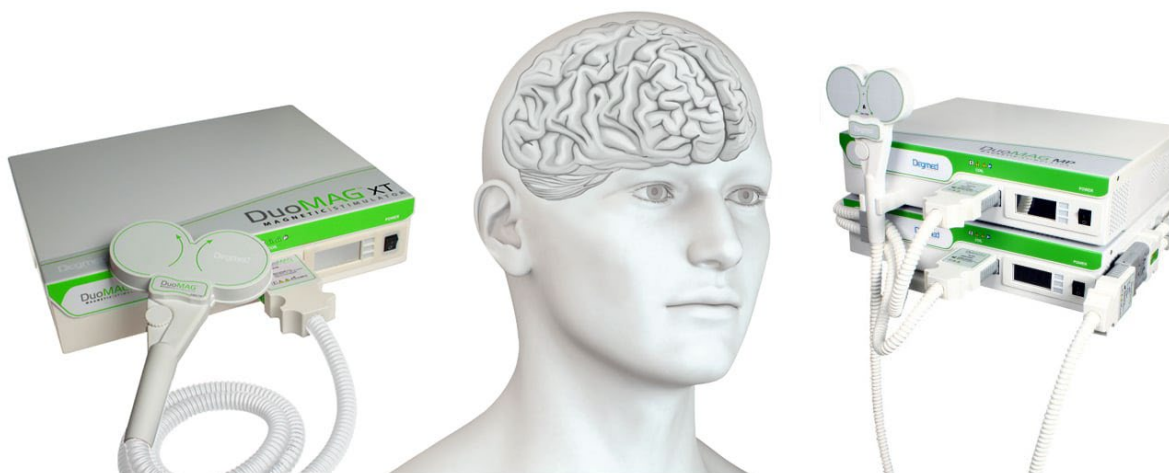
## Combine DuoMAG<sup>®</sup> systems for neuroscientific research

The DuoMAG<sup>®</sup> MP-Dual is a monophasic stimulator for single or double pulse stimulation with a maximum energy of 700 joules (100  $\mu$ s / 1ms).

The DuoMAG<sup>®</sup> XT is a biphasic stimulator for repetitive transcranial magnetic stimulation for therapeutic purposes providing a maximum energy of 320 Joule (290 ... 320  $\mu$ s).

The combination of both devices into one system allows both:

- the investigation of Neuroplasticity (change in intracortical inhibition (ICI/SICI) and intracortical facilitation (ICF))
- but also therapeutic applications according to the state of the art are possible.



## Contact

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