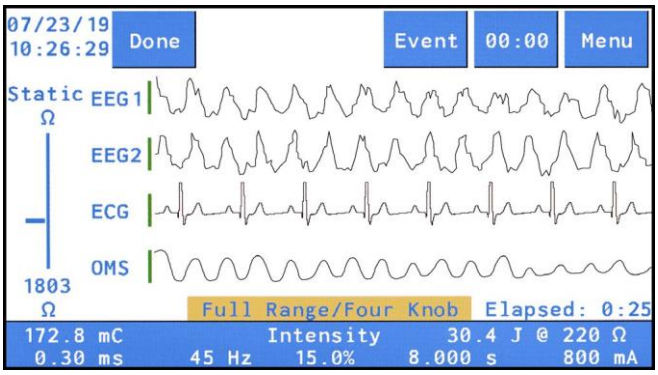
MECTA Σigma™ The Sum of All ECT Modalities

Optimal Stimulus Dosing and the Newest Treatment Options All in One Device

MECTA's Most Powerful and Flexible ECT Device

Physicians use a variety of dosing strategies to optimize ECT for the individual patient. In the past, no ECT device delivered both the broadest range of stimulus parameters and flexible modes of stimulus delivery. With the MECTA Σigma, practitioners can easily select any of four parameter sets for use in either One Knob or Four Knob Mode. This combination gives clinicians more opportunities to ensure that ECT stimulus delivery is safe and effective.



200 Joule

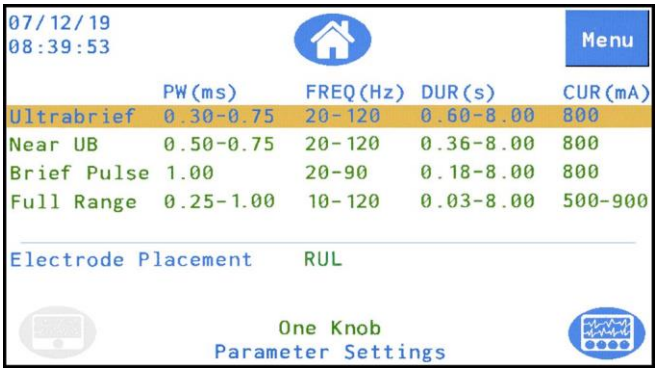
Flexible Stimulus Delivery

MECTA spECTrum users are familiar with the 5000Q (four stimulus knobs) and 5000M (single stimulus knob) models. Now MECTA has combined these popular operating modes in one device providing maximum treatment flexibility. Selecting One Knob or Four Knob Mode is simply accomplished by touching an icon on the Parameter Settings Screen.

One Knob Mode uses evidence-based algorithms to change stimulus dose. In One Knob Mode, dosage adjustment is simple. It only involves turning any knob with a single action. For example, increasing from 20% to 40% Intensity, doubles the overall stimulus dose, while optimally adjusting the individual parameters. Many practitioners prefer this mode because it simplifies parameter choice and reduces error by altering only one knob.

Four Knob Mode gives the ECT practitioner greater flexibility and breadth of individual parameter selection. Each of the four parameters (Pulse Width, Frequency, Duration, and Current) can be adjusted independently, with pulse widths as brief as 0.15 ms, current ranging from 500 to 900 mA, and duration as long as 8 seconds. In Four Knob Mode with the Full Range Parameter Set, the practitioner has access to a wider range of stimulus parameters than is available in the Optimized Parameter Sets.

With the MECTA Σigma, there is no need to decide between ECT devices, and users with different preferences can easily use the same device. Its superior capabilities, unique features, and remarkably simple and intuitive interface enhance ECT administration for both novice and experienced practitioners.



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The Newest ECT Treatment Modalities: Optimized Parameter Sets

MECTA's collaboration with leading research institutions across the globe has resulted in numerous innovations in ECT. These include new parameter settings that have had a widespread impact on the field. Randomized controlled trials at Columbia University and elsewhere, have shown that these ECT modalities maintain efficacy, while resulting in a profound reduction in cognitive side effects.

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200J Optimized Parameter Sets

The MECTA Σigma has the widest range of stimulus parameters: pulse width ranges from 0.15 to 1 ms, pulse amplitude (current) ranges from 500 to 900 mA, pulse frequency ranges from 10 to 120 Hz, and train duration ranges from 0.18 to 8 seconds. The MECTA Σigma's three "Optimized" parameter sets each use a fixed 800 mA current and are defined by their pulse widths:

0.3 ms Ultrabrief Optimized Parameter Set (coupled with high dose RUL ECT) provides a highly efficacious form of ECT with the least cognitive impact. Ultrabrief stimulation is increasingly recommended as the starting form of treatment for most patients.

0.5 ms Near Ultrabrief Optimized Parameter Set represents a compromise between Ultrabrief and Brief Pulse stimulation. This pulse width is mathematically, and likely biologically, closer to a 0.25 or 0.30 ms ultrabrief pulse than a 1.0 ms brief pulse. It is increasingly used with the bitemporal or bifrontal electrode placement in place of the 1.0 ms brief pulse.

1.0 ms Brief Pulse Parameter Set provides a traditional brief pulse width. This form of stimulation has the most extensive research database regarding efficacy and safety. It may be especially useful in patients with high seizure threshold, when rapid improvement is a primary consideration, or in patients who benefit insufficiently from treatment with shorter pulse widths.

Full Range Parameter Set is intended for the more experienced ECT practitioner and offers greater flexibility in the choice of stimulus parameters than is available in the Optimized Parameter Sets. This includes shorter ultra-ultrabrief pulse widths (0.15 ms), lower frequency (10 Hz), and selectable current (500 to 900 mA in 100 mA steps). In One Knob Mode, the practitioner can specify the algorithm used for dosage adjustment. In Four Knob Mode, the practitioner retains complete control over parameter selection across the entire range of the MECTA Σigma.

Parameter Ranges for the MECTA Σigma 200 J Device

Parameter Set: One Knob Mode	Pulse Width (ms)	Frequency (Hz)	Duration (s)	Current (mA)
Optimized Ultrabrief One Knob	0.3-0.75	20-120	0.6-8	800
Optimized Near Ultrabrief One Knob	0.5-0.75	20-120	0.36-8	800
Optimized Brief Pulse One Knob	1.0	20-90	0.18-8	800
Full Range One Knob	0.25-1.0	10-120	0.029-8	500-900
Parameter Set: Four Knob Mode				
Optimized Ultrabrief Four Knob	0.3-0.75	20-120	0.5-8	800
Optimized Near Ultrabrief Four Knob	0.5-0.75	20-120	0.5-8	800
Optimized Brief Pulse Four Knob	1.0	20-90	0.5-8	800
Full Range Four Knob	0.15-1.0	10-120	0.5-8	500-900

Contact MECTA or visit our website for product information and sales.

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