

**ULTRABRIEF ECT - ENSURING EFFICACY
WHILE MARKEDLY REDUCING COGNITIVE SIDE EFFECTS**

These landmark parameters were introduced in the Fall of 2003 by MECTA and already are having a major impact on the field.^{1,3} Controlled research at Columbia University has shown that the 0.3 msec ultrabrief pulse width sharply reduces seizure threshold, allowing treatments to be given at much lower electrical dosage than had been previously possible. Most critically, when compared to standard brief pulse stimulation, use of ultrabrief parameters results in a profound reduction in cognitive side effects. In many domains, this advantage for ultrabrief stimulation is as large or larger than the difference between bilateral and right unilateral ECT in their cognitive effects. Definitive research published in

2008 confirms that right unilateral ECT given at 6 times initial seizure threshold with a 0.3 ms pulse width is equivalent in efficacy to the therapeutic effects using a robust form of bilateral ECT (1.5 ms pulse width and 2.5 times seizure threshold)³ Right unilateral ultrabrief ECT is a clear advance for the field as patients show rapid improvement with little sign of cognitive deficit. The SPECTRUMS offer the only ultrabrief parameter set that allows for ultrabrief pulse stimulation across nearly the full output range of the device. All four SPECTRUM units can be upgraded to include this new form of stimulation as a menu selection.

1. Lisanby SH MD, Sackeim HA PhD:New developments in convulsive therapy. *Epilepsy & Behavior* 2001;2:S68-73.
 2. Sackeim HA PhD:Convulsant and anticonvulsant properties of ECT:towards a focal form of brain stimulation.*Clinical Neuroscience Research* 2004;4:39-57).
 3. Sackeim HA PhD et al:Effects of pulse width and electrode placement on the efficacy and cognitive effects of electroconvulsive therapy. *Brain Stimulation* 2008;2.

Contact MECTA for pricing and upgrade information and also to order Titration Tables and/or a new MECTA Instruction Manual containing the instructions for using these new stimulus dosing parameters.



ECT PARAMETERS / 100 JOULES SYSTEMS

Q Models

Four Parameter Sets:	Set 1	Set 2	Set 3	Set 4
Stimulus Current in 100mA increments	500-800 mA	500-800 mA	500-800 mA	500-800 mA
Frequency in 10-Hz steps	20-90 Hz	20-60 Hz	20-60 Hz	20-120 Hz
Pulse Width in .10 msec steps	0.5-1.0 msec	0.5-2.0 msec	0.5-1.0 msec	0.3-0.37 msec
Stimulus Duration	0.5-4.0 sec	0.5-3.0 sec	0.5-6.0 sec	0.5-8.0 sec
Charge	5.0-576 mC	5.0-576 mC	5.0-576 mC	3.0-568.3 mC
Energy @ 220 ohm patient impedance	0.6-101.4 joules	0.6-101.4 joules	0.6-101.4 joules	0.3-100.0 joules

New! SPECTRUM Ultrabrief

M Models

Four Parameter Sets:	Set 1	Set 2	Set 3	Set 4
Stimulus Current	800 mA	800 mA	800 mA	800 mA
Frequency in 100 settings	20-90 Hz	20-120 Hz	20-60 Hz	20-120 Hz
Pulse Width	1.0 msec	1.0 msec	1.0 msec	0.3-0.38 msec
Stimulus Duration	0.18-4.0 sec	0.18-3.0 sec	0.18-6.0 sec	0.5-8.0 sec
Charge in 100 settings	5.8-576 mC	5.8-576 mC	5.8-576 mC	5.8-576 mC
Energy @ 220 ohm patient impedance	1.0-101.4 joules	1.0-101.4 joules	1.0-101.4 joules	1.0-101.4 joules

New! SPECTRUM Ultrabrief