ICES DigiCort P9

Complete Protocol Reference

All 30 Programs — Specifications, Applications & Clinical Guidance

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Created by M. Knapp 2026

Protocol overview

The ICES P9 contains 30 selectable protocols organized into six categories. These protocols are identical to those on the M1 model, as both share the ICES gen 6.0 firmware. The protocols are listed here in menu order (the order they appear when scrolling through the device interface).

All protocols use the ICES micropulse waveform at microtesla intensity levels. The 15 intensity settings (1–15) apply to every protocol. Dr. Robert Dennis generally recommends starting at intensity 8–9 for most applications. Higher intensity does not necessarily produce better results due to the biphasic dose-response curve.

Protocol menu at a glance

#	Protocol Name	Category	Type
1	B5–C5	Standard ICES	Multi-mode cycling (gen 6.0)
2	A9	Standard ICES	Multi-mode cycling (gen 5.0)
3	P2 (SomaPulse)	Standard ICES	Multi-mode cycling (gen 4.0)
4	Omni-8	Standard ICES	Multi-mode cycling (gen 5.0)
5	Schumann 1	Schumann	7.83 pps
6	Schumann 2	Schumann	7.83 + 14.3 pps
7	Schumann 3	Schumann	7.83 + 14.3 + 20.8 pps
8	Schumann 4	Schumann	7.83 + 14.3 + 20.8 + 27.3 pps
9	Schumann 5	Schumann	7.83 + 14.3 + 20.8 + 27.3 + 33.8 pps
10	1 pps	Constant Freq.	Continuous 1 pulse/sec
11	2 pps	Constant Freq.	Continuous 2 pulses/sec
12	3 pps	Constant Freq.	Continuous 3 pulses/sec
13	4 pps	Constant Freq.	Continuous 4 pulses/sec
14	5 pps	Constant Freq.	Continuous 5 pulses/sec
15	10 pps	Constant Freq.	Continuous 10 pulses/sec
16	scTMS 10pps 30min	scTMS	Sub-threshold TMS, 30 min timer
17	scTMS 10pps 60min	scTMS	Sub-threshold TMS, 60 min timer
18	Alpha wave	Brainwave	10–13 Hz sweep, 10 min cycle
19	Beta1 (low)	Brainwave	12.5–16 Hz sweep, 4 min cycle
20	Beta2 (mid)	Brainwave	16.5–20 Hz sweep, 4 min cycle
21	Beta3 (high)	Brainwave	20–28 Hz sweep, 4 min cycle
22	Delta wave	Brainwave	1.5–3 Hz sweep, 20 min cycle
23	Theta wave	Brainwave	5–6 Hz sweep, 20 min cycle
24	Mu wave	Brainwave	8.5–11 Hz sweep, 10 min cycle
25	SMA wave	Brainwave	13–15 Hz sweep, 10 min cycle
26	Gamma wave	Brainwave	32–47 Hz sweep, 10 min cycle
27	B5–C5 REST 5	Standard + REST	B5–C5 with 5 min rest between cycles
28	A9 REST 5	Standard + REST	A9 with 5 min rest between cycles

#	Protocol Name	Category	Type
29	P2 REST 5	Standard + REST	P2 with 5 min rest between cycles
30	Omni-8 REST 5	Standard + REST	Omni-8 with 5 min rest between cycles

Source: ICES M1/P9 User Manual and Micro-Pulse LLC product documentation

Category 1: Standard ICES protocols

These are the core ICES protocols developed through decades of research beginning with NASA-funded work in the late 1990s. They all share a common design: multi-mode cycling that alternates between 5 pps bipolar pulses and short bursts of 100 pps in positive and negative polarity. These patterns were developed to emulate neural impulse patterns in the developing musculoskeletal system in utero, hypothesized to signal tissue growth and repair.

Dr. Dennis notes that it is difficult to distinguish biological effectiveness between these protocols in controlled experiments — they all produce similar effects. User feedback suggests newer protocols (Omni-8 and B5–C5) may be 10–15% more effective than legacy protocols (P2 and A9), but individual variation is significant.

Protocol	Generation	History & Best For	Clinical Notes
B5–C5 (Default)	Gen 6.0 (2017)	Newest protocol, developed from user feedback and beta testing. Best for: general use, pain, inflammation, orthopedic injury, tissue repair.	Default recommendation for new users. Start here unless there is a specific reason to choose another protocol.
A9	Gen 5.0 (2014–15)	Original A9 model protocol, refined from P2-era clinical and user feedback. Best for: same as B5–C5; preferred by some long-term users.	Some patients who started on A9 devices prefer to continue with this protocol. Functionally very similar to B5–C5.
P2 (SomaPulse)	Gen 4.0 (2008–14)	First commercial ICES protocol. Used in MagnaFix, AllevaWave, SomaPulse. Used in Egypt craniofacial reconstruction study. Best for: bone healing, post-surgical recovery.	The most studied protocol in formal research (animal studies + Egypt clinical study). Good choice when research fidelity matters.
Omni-8	Gen 5.0 (2016)	Developed with extensive beta testing. Judged 'slightly better' than A9 by testers. Best for: general use; most popular by user feedback.	Most user feedback favors Omni-8. Strong choice for patients who report standard protocols feel 'too intense' or 'too buzzy.'

If you are completely unsure which protocol to use, Dr. Dennis recommends starting with B5–C5 or Omni-8. The differences between the four standard protocols are small and individual.

Category 2: Schumann resonance protocols

The Schumann resonance frequencies correspond to the electromagnetic resonant modes of the Earth-ionosphere cavity. The fundamental frequency is approximately 7.83 Hz, with harmonics at 14.3, 20.8, 27.3, and 33.8 Hz. Each successive Schumann protocol adds one additional harmonic to the sequence.

Dr. Dennis has expressed scientific skepticism about the claimed Earth-resonance mechanism behind these protocols. He notes that commercial PEMF systems cannot detect the phase of the actual Schumann wave, so the device could just as easily be in anti-resonance as resonance with the Earth's field. However, he acknowledges that these frequencies are within a biologically active range and that many users report beneficial effects.

Protocol	Frequencies (pps)	Characteristics & Applications	Clinical Notes
Schumann 1	7.83	Single fundamental frequency at the alpha-theta border. Applications: relaxation, meditation, grounding.	7.83 Hz sits at the transition between relaxed wakefulness and drowsiness. May support meditative states.
Schumann 2	7.83, 14.3	Fundamental + 2nd harmonic, adding a low-beta component. Applications: calm focus, relaxation with mental clarity.	The 14.3 Hz addition introduces gentle alertness. Good balance of calm + clarity.
Schumann 3	7.83, 14.3, 20.8	First three harmonics spanning theta/alpha/beta range. Applications: broader neural activation, general wellness.	Wider frequency coverage engages more diverse neural populations. A reasonable general-purpose Schumann setting.
Schumann 4	7.83, 14.3, 20.8, 27.3	Four harmonics extending into high-beta range. Applications: cognitive engagement combined with grounding.	The 27.3 Hz component pushes into higher cognitive territory. May be more stimulating than Schumann 1–3.
Schumann 5	7.83, 14.3, 20.8, 27.3, 33.8	All five harmonics, full spectrum from theta to low-gamma. Applications: maximum Schumann coverage, experimentation.	Broadest Schumann protocol. The 33.8 Hz component enters the gamma range. Most stimulating of the five.

Clinical perspective

Regardless of whether the Earth-resonance mechanism is valid, these protocols provide well-spaced pulse frequencies in a biologically relevant range (7–34 Hz). Schumann 1 and 2 are reasonable alternatives to the alpha brainwave protocol for relaxation-focused sessions. The progressive harmonic structure provides a natural way to titrate stimulation complexity — start with Schumann 1 and advance to higher harmonics if the patient tolerates well.

Category 3: Constant frequency protocols

These protocols deliver a continuous, unchanging pulse train at a fixed frequency. They have been used from the very beginning of ICES research (NASA era, 1996–2001) and continue to be used in controlled scientific studies. The 5 pps protocol is identical to the one used in a TBI study, and the 10 pps protocol was used in the Texas A&M; rabbit ulna surgical defect study (2007).

Dr. Dennis generally recommends the standard multi-mode protocols (B5–C5, Omni-8) over constant frequency for most applications, as the multi-mode cycling helps prevent tissue accommodation (habituation). However, constant frequency protocols are valuable for research replication and for users who want to experiment with specific frequencies.

Protocol	Frequency	Applications & Research Context	Clinical Considerations
1 pps	1 pulse/sec	Deep relaxation, delta-range stimulation. No specific ICES study at this rate.	Very slow rate. Minimal neural activation. May support deep rest or sleep.
2 pps	2 pulses/sec	Slow-wave sleep support, deep tissue healing. No specific ICES study at this rate.	Falls in delta range. Consider for overnight/sleep applications.
3 pps	3 pulses/sec	Deep relaxation, tissue repair. No specific ICES study at this rate.	Still in delta range. Low arousal, deep restorative state.
4 pps	4 pulses/sec	Theta-range stimulation, meditative state. No specific ICES study at this rate.	Theta border. May support relaxation and light meditative states.
5 pps	5 pulses/sec	TBI recovery, theta-range neural modulation. Used in concussion/TBI pilot study (Cortical Metrics, 2017).	The most research-supported constant frequency. Primary choice for TBI/concussion applications.
10 pps	10 pulses/sec	Tissue healing, bone repair, alpha-range stimulation. TAMU rabbit ulna study (2007); NASA-era protocols (1996–2001).	The original NASA frequency. Well-established in bone and tissue healing research. Falls in alpha range for neural work.

Category 4: Sub-threshold continuous TMS protocols

These two protocols are designed for users interested in transcranial magnetic stimulation (TMS) experimentation. FDA-approved TMS for depression uses high-intensity repetitive TMS (rTMS) at 10 Hz. The P9 cannot generate the extremely high power levels of clinical TMS devices. Instead, it delivers sub-threshold, continuous TMS (scTMS) at 10 pps with a built-in safety timer.

Important: Dr. Dennis emphasizes that these protocols have never been evaluated using ICES technology for depression or any TMS indication. The safety of this approach has not been independently tested and verified. These protocols are included for responsible adult self-experimenters only.

Protocol	Parameters	Placement	Safety Notes
scTMS 10pps 30 min	10 pulses/sec, sub-threshold intensity. Auto-stops at 30 min.	Cranial placement: typically left DLPFC (F3 in 10–20 system)	Start at low intensity. Monitor for any adverse effects including headache, dizziness, or unusual sensations. The 30-min timer is a safety feature — do not bypass by restarting immediately.
scTMS 10pps 60 min	10 pulses/sec, sub-threshold intensity. Auto-stops at 60 min.	Same as 30-min protocol	Extended duration for experienced users only. Same safety considerations apply. Dr. Dennis recommends caution: high-intensity rTMS is known to cause seizures in a small percentage of people. While scTMS intensity is well below motor activation threshold, the risk has not been formally assessed with ICES.

If a patient has or believes they have depression, professional clinical advice is essential. The P9 scTMS protocols are not a substitute for professional treatment. No Micro-Pulse device is FDA-approved for TMS applications.

Category 5: CNS/cortex brainwave protocols

These nine protocols target canonical EEG frequency bands. Unlike classical brainwave entrainment devices, the P9 uses a gentle frequency sweep (ramp) between two boundary frequencies within each band, mimicking the natural oscillatory variability of living brain rhythms. Each protocol ramps from high to low, then low to high, in a continuous cycle.

Dr. Dennis notes that these protocols have never been scientifically evaluated using ICES technology. They were included at the request of a large number of ICES users and self-hackers. Their effects and safety have not been established. However, the frequencies are within a biologically relevant range.

Protocol	Range	Ramp / Cycle	Associated State	Suggested Applications
Alpha	10–13 Hz	5 min / 10 min	Relaxed wakefulness, calm alertness	Anxiety reduction, calm focus, autonomic rebalancing. Primary recommendation for anxious patients.
Beta1 (low)	12.5–16 Hz	2 min / 4 min	Relaxed attention, low-level alertness	Mild cognitive enhancement without excessive arousal. Bridging protocol between alpha calm and beta focus.
Beta2 (mid)	16.5–20 Hz	2 min / 4 min	Active thinking, problem solving	Cognitive focus, task performance. Use cautiously in anxious patients as beta can increase arousal.
Beta3 (high)	20–28 Hz	2 min / 4 min	High alertness, executive function	Complex cognitive tasks, executive function support. Avoid in anxious or hyperaroused patients.
Delta	1.5–3 Hz	10 min / 20 min	Deep sleep, unconsciousness	Sleep onset support, deep restorative states. Use at bedtime with suboccipital placement.
Theta	5–6 Hz	10 min / 20 min	Drowsiness, light meditation	Meditative states, creative visualization, hypnagogic exploration. Memory consolidation support.

Protocol	Range	Ramp / Cycle	Associated State	Suggested Applications
Mu	8.5–11 Hz	5 min / 10 min	Sensorimotor idle, motor planning	Sensorimotor integration, body awareness, meditation. Mu rhythm suppressed during movement planning.
SMA	13–15 Hz	5 min / 10 min	Supplementary motor area rhythm	Motor planning, movement preparation. Niche — may be relevant for motor coordination issues.
Gamma	32–47 Hz	5 min / 10 min	Cross-modal binding, peak cognition	Memory encoding, perceptual integration, neurodegeneration support. Vielight provides stronger 40 Hz specificity.

Note from the manual: "While gamma waves may affect memory, recall, and awareness by altering stochastic resonance, it may also just be irritating. Please exercise caution when self-experimenting with these protocols." — Dr. Robert Dennis

Category 6: Standard protocols with 5-minute REST

These are identical to the four standard ICES protocols but with an added 5-minute rest period at the end of each cycle. During the rest period, no pulses are sent to the coils and the yellow LED flashes to indicate rest mode.

Protocol	Base Protocol	Rationale	When to Use
B5–C5 REST 5	B5–C5 (gen 6.0) 5 min rest between cycles	Provides periodic recovery time for tissue. May reduce habituation further by giving a rest period at the end of each pulse cycle.	Overnight use, extended sessions (4+ hours), patients who report diminishing returns during long continuous sessions.
A9 REST 5	A9 (gen 5.0) 5 min rest between cycles	Same rationale as above, using the legacy A9 protocol pulse pattern.	Same as above, for patients who prefer the A9 pulse pattern.
P2 REST 5	P2 (gen 4.0) 5 min rest between cycles	Same rationale, using the legacy P2 protocol for research continuity.	Research protocol replication with added rest periods.
Omni-8 REST 5	Omni-8 (gen 5.0) 5 min rest between cycles	Same rationale, using the popular Omni-8 pattern that most users prefer.	Overnight use with the popular Omni-8 pattern. Good default for extended wear.

Clinical guidance on REST protocols

The REST variants are particularly useful for overnight or extended-wear applications. Some practitioners report that patients who wear the P9 overnight for pain or sleep support get better results with the REST variants than continuous protocols, likely because the periodic rest prevents neural accommodation. For standard 30–60 minute clinical sessions, the REST period is generally unnecessary — the session typically ends before the first rest cycle would occur.

Quick selection guide by clinical goal

Clinical Goal	Protocol / Intensity	Placement	Duration
Chronic pain / orthopedic injury	B5–C5 or Omni-8 Intensity: 8–9	Directly over injury site	4–12 hrs/day (REST variants for extended)
Anxiety reduction	Alpha wave or Omni-8 Intensity: 6–9 (start low)	Bilateral mastoid	30–60 min daily
Sleep support	Delta wave or Omni-8 REST 5 Intensity: 6–8	Suboccipital midline	30–45 min before bed or overnight
Cognitive enhancement	Beta1 or Beta2 Intensity: 7–9	Temporal (T3/T4) or bilateral mastoid	20–30 min
Post-concussion / TBI recovery	5 pps constant Intensity: 8–9	Over affected region or bilateral temporal	30–60 min (matches TBI study)
Bone healing / fracture recovery	B5–C5 or P2 Intensity: 9–12	Directly over fracture site	8–24 hrs/day
Meditation support	Theta, Mu, or Schumann 1 Intensity: 5–8	Suboccipital midline	20–40 min
Neurodegeneration / memory support	Gamma wave + Vielight Neuro Gamma Intensity: 7–9	Temporal or bilateral mastoid	30–45 min

Clinical Goal	Protocol / Intensity	Placement	Duration
General inflammation	Omni-8 or B5–C5 Intensity: 8–9	Over affected tissue	4–12 hrs/day
Autonomic dysreg. (HRV, GI, palpitations)	Alpha wave or Omni-8 Intensity: 6–9	Bilateral mastoid (weight left for GI)	30–60 min daily
Self-experimentation (Schumann, brain hack)	Any Schumann or constant frequency Intensity: start 5–7	User preference	Start 20–30 min; titrate as tolerated

General principles

- **Start conservative:** Use intensity 6–9 and standard protocols (B5–C5 or Omni-8) for new patients. Increase intensity or change protocols only based on patient response.
- **More is not better:** The dose-response curve is biphasic. Intensity 12–15 is rarely optimal for neural applications.
- **Placement matters more than protocol:** For anxiety and autonomic work, the bilateral mastoid or suboccipital placement drives most of the clinical effect through vagal and cervical nerve modulation. The protocol adds frequency-band specificity on top of the placement-dependent anatomical effect.
- **Track outcomes:** Use HRV monitoring (RMSSD, HF power), Creyos cognitive assessment, and GAD-7 at baseline, 2 weeks, and 4 weeks to objectively measure treatment response.

This document is a clinical reference. Protocol information is sourced from the ICES M1/P9 User Manual (Micro-Pulse LLC, 2017) and Micro-Pulse product documentation. No Micro-Pulse product is FDA-approved for any use. All protocols are experimental. Parameters should be individualized based on patient response and clinical judgment.

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