White Paper

PureWave® Technology

Consideration of PureWave® Technology by the United States Army

Insofar as the innovative medical technology has any chance of integration into the Armed Forces of the United States and particularly the Army, the author (who is a retired Marine Corps Lieutenant Colonel having served in the I MEF Command Staff) notes that there have historically been operational constraints and doctrinal imperatives governing the decision-making process. To the best of his knowledge, the following eight important factors pertain:

1) Regulatory approval and DoD–FDA coordination

Medical products used by Service members are typically subject to **FDA** requirements (safety, effectiveness, device/drug approvals or clearances). The DoD cannot simply field most regulated medical products without navigating FDA requirements and DoD–FDA coordination agreements.
Implication: innovators must plan for regulatory pathways (510(k), PMA, NDA/BLA, Emergency/conditional pathways) and early FDA/DoD engagement to avoid show-stopping delays.

2) Acquisition rules, contracting vehicles and steady funding

DoD/Army acquisitions follow detailed acquisition rules and budgeting cycles; programs without an appropriate contracting vehicle, steady funding, or a transition partner often stall in the "valley of death" between prototype and fielding. Programs must fit into DoD acquisition authorities (including medical materiel frameworks).
Implication: having an identified contract vehicle (e.g., OTA, SBIR/DHA SBIR, IDIQ), a transition sponsor inside the service, and budget alignment is essential.

3) Clinical evidence, operational testing and safety validation

The Army needs robust clinical evidence and operational testing for safety/effectiveness in both clinical and austere operational environments. Military medicine commonly requires additional maturation, de-risking, and transition (technology-transfer offices and medical R&D pipelines exist to do this).
Implication: small firms must budget time/money for clinical trials, human-factors testing, and operational evaluation — not just a lab demo.

4) Interoperability, IT integration, and cybersecurity / data privacy

New technologies must integrate with Military Health System IT (e.g., electronic health records, logistics systems) and meet cybersecurity standards. GAO and other reviews highlight device cybersecurity as a major constraint and coordination gap. Privacy rules and Fed-level security (FedRAMP, CMMC considerations, HIPAA requirements where applicable) add constraints.
Implication: vendors must plan for secure interfaces, patching/updating, supply-chain risk management, and likely independent cybersecurity testing.

5) Logistics, sustainment, environmental ruggedness and supply chain

Military operational environments demand ruggedized hardware, long sustainment cycles, spare parts, and robust supply-chain logistics. Procurement decisions weigh total lifecycle cost and field supportability as much as initial capability.
Implication: a device/tech that works in a hospital but can't survive austere deployment is hard to adopt.

6) Legal, ethical and human-subjects' constraints

Testing on service members or deploying experimental treatments raises human-subjects protections, medical ethics, and legal limits. Special authorities exist for emergency countermeasures, but they require strict procedures and approvals.
Implication: expect IRB processes, extra oversight, and constrained use cases for experimental tech.

7) Organizational culture, leadership buy-in and workforce readiness

Adoption is slowed when there isn't a clear problem owner, senior-leader sponsorship, or personnel trained to use and maintain the new tech. Research shows the DoD's main gap is often adoption/transition — not invention.
Implication: programs need transition partners inside the Army, training plans, and champions at the right level.

8) Intellectual property, tech transfer, and small-business scale-up

Translating lab inventions to fielded systems involves IP/licensing, tech-transfer offices, and often funding/partnerships to commercialize. DoD offices (e.g., medical technology transfer) help, but gaps remain.

This White Paper endeavors to address each of the foregoing factors in obtaining its conclusion.

Brief Background of Magnetic Field Therapy

Although ancient civilizations were aware of the medical benefits of placing "lode stones" (rocks with magnetic properties) adjacent to painful or unresponsive locations of the body, the clinical value of magnetics was rediscovered by a small number of practitioners within the past century. The ability to modulate magnetism precisely and accurately with highly adjustable electromagnetic devices provided an advantage that the ancients did not possess in achieving predictable outcomes. Today, the evidence is overwhelming that the ability to control both the frequency and modulation of electromagnetism offers a variety of therapeutic benefits both safely and effectively, as highly specific treatments are possible to be "dialed in" for an array of indications that have been historically beyond the reach of medicine.

PureWave® Technology

The specific forms of magnetic field therapy provided by the PureWave® Technology draw from decades of independent research and development, primarily in Europe. The focus has been on the achievement of neurological benefits from electromagnetic stimulation both above and below sensory perception. Although acute treatments applying easily perceived frequencies provided some measure of temporary immediate relief of pain and similar conditions, the ability of imperceptible frequencies to provide durable outcomes gained recognition. The primary attribute of the PureWave Technology has been the ability to achieve clinical benefits applying extremely low frequency electromagnetic fields for the following effects:

1. Removal of ambient low frequency energy (<50Hz) commonly referred to as "electrosmog", that is produced within most environments and oscillates in and around neurons particularly and the mitochondria generally

2. Production of Nitric Oxide (NO) within the blood stream, which means better cardiovascular health, more performance during exercise, greater immune system function due to antimicrobial activity, improved neurological (brain) function, better sexual health in men, and stronger respiratory (lung) function

3. Improvement of oxygenation within the blood stream by means of vasodilation and repression of free radicals while removing cellular waste

4. Faster and better bone healing because of the stimulation of osteoblast activity and blood circulation

5. Reduced chronic pain from inflammation, arthritis, fibromyalgia and post-operative aches

6. Improved deep sleep

7. Faster recovery from injuries of the muscles, tendons and ligaments

The additional attributes include the abilities to achieve health effects, including greater alertness, metabolism, and resistance to the natural aging process both mentally and physically.

Pulsed Electromagnetic Field (PEMF) Therapy

In addition to understanding the benefits of the lower frequency of the electromagnetic field in achieving the desired effects of the intended use, the comparative methods of administration provided evidence in favor of the use of pulses versus a continuous wave. The advantages of what has become Pulsed Electromagnetic Field (PEMF) Therapy include the ability of the energy to enter the cellular structure more easily. Furthermore, the optimization of pulsation allows a more effective energization of the mitochondria, and a more durable effect. This is achieved by synchronizing the rate at which body at rest responds to the introduction of the electromagnetic frequencies with the pulsation of the electromagnetic stimulation, both within the blood/lymph vessels and the cellular membranes. The optimized ratio of 2:3 and eight minutes duration are the norm and is sufficiently erratic to prevent the body from becoming accustomed to the pulsation and otherwise unresponsive to the stimulation.

Applications of PEMF

Daily life can be a stressful and fatiguing experience due to various factors, including the following:

Lack of Sleep can lead to frustration, fatigue and a sense of helplessness.

Aggression: Dealing with others' aggressive behavior can be unsettling and stressful.

Inability to get exercise due to weather, gym schedules and other priorities can drive stress and fatigue.

Worries or anxieties, such as being late to a meeting or unsure of how to assert control in life, can be distressing and make people prone to making mistakes.

Distraction and inability to focus for sufficient periods of time on problems or life plans for self, family and loved ones.

Environmental challenges such as disturbing noise levels, uncomfortable living spaces due to temperature and/or humidity levels, lighting, vibrations and other unacceptable conditions.

Personal Factors: Stress from work, home life, lack of sleep or other personal issues can affect personal energy levels.

The PEMI

Portable PEMF Mat ("PEMI")

The extreme low frequency PEMI releases a pulsed electromagnetic field (PEMF) at levels that are imperceptible to the patient using the device, over a period of approximately 30 minutes to achieve any number of specific effects to include better sleep, reduced chronic pain, greater alertness, higher metabolism, and overcoming both mental and physical fatigue often associated with the natural aging process. The PEMI offers a selection of settings to allow the specific level of stimulation as well as the overall time of stimulation, with a general description of the intensity to be expected that is associated with an effect and duration.

As to general applications, the PEMI offers a significant synergistic potential for people facing the foregoing stress and fatigue related to various factors. The PEMI represents an improvement in pain management, improved mobility, better cardiovascular health, cellular function, and mental / physical wellbeing during daily activities. To the extent that the PEMI could be incorporated in domestic technology, this represents an opportunity to reduce stress, enhance relaxation and provide musculoskeletal (lumbar) support during periods of time at home away from others and before or after work. Examining the frame of mind of the user, the PEMI represents an opportunity to improve autonomic balance and clarity while reducing fatigue and anxiety leading to stress. Finally, users with chronic pain syndromes could be more comfortable while managing their conditions in concert with their regular wellness routines.

Desired Customer Experience

What does all this really mean to a customer? Given the previous understanding of the technology, the direct application of it to the user, and having it available to others who are willing to witness the results and try the PEMI for themselves step by step, is important to comprehend. The stresses of day-to-day life are familiar to the vast majority of Americans, and along with its benefits of hard work come the well-known challenges regardless of relaxation. Ergonomically designed furniture can only overcome so much. Treating the dissipation in human energy levels represents the next fundamental frontier on offering an energy-restoring experience that surpasses anything previously known or understood, and evokes the imagination of future fitness experts, dieticians and whole-body wellness clinicians.

The following scenarios serve to illustrate the desired customer experience:

1. After a night of fitful (non-restful) sleep, a mother of three children remains sleepy and unfit for work after getting her young ones to school. By activating the PEMI at home in the den, she feels more energy starting from the moment that the device is switched on and throughout the duration of the day. Specifically, by initiating the PEMI treatment sequence, the mother may notice the ability to focus and relax while working, and her co-workers may begin to experience productive interactions that usually follow a night of restful sleep.

2. En route to the gym for a morning session, a father can "pre-train" with the PEMI by conditioning himself for a better workout. This entails preparing the body for better oxygen absorption and preparing the muscles by means of the sympathetic nervous system modulation.

3. For hard physical work that may also be highly repetitive, the PEMI provides durable alertness, reduces chronic pain and muscle fatigue, and relaxes the body to sustain the challenges of sustained efforts that endure for an entire shift.

4. At the end of a stressful day of work, whether mental, physical or both, the PEMI slowly but effectively works on the parasympathetic nervous system in an almost imperceptible manner, evoking a relaxation that reduces stress levels and associated comorbidities, plus any bad habits that could result from the need to reduce the stress.

5. As a convenient replacement for other larger, bulkier and fundamentally less effective home gym systems, the obvious ability to recharge the body by means of the PEMI becomes an enormous advantage.

The following clinical outcomes are associated with the PEMI[1]:

Pain Management and Mobility

1. Sutbeyaz et al. 2005: In a trial of patients with cervical osteoarthritis, PEMF therapy significantly reduced pain levels, improved range of motion (ROM), and decreased disability scores compared to placebo.

2. Thamsborg et al. 2005: In a study of patients with knee osteoarthritis, PEMF therapy improved activities of daily living (ADL), stiffness, and pain.

3. Thomas et al. 2007: A trial of patients with fibromyalgia or other pain conditions found PEMF reduced pain severity in fibromyalgia patients.

4. Bagnato et al. 2015: Among knee osteoarthritis patients, PEMF therapy significantly reduced pain and WOMAC scores and improved physical health. Notably, 26% of patients discontinued NSAID use.

5. Abdelhalim et al. 2019: In a study of patients with non-specific low back pain, PEMF therapy significantly improved pain, mobility, and health- related quality of life scores.

6. Roostayi et al. 2020: PEMF therapy for hemophilia A patients with knee joint

arthropathy significantly improved clinical signs, pain intensity, and quality of life compared to placebo.

7. Kandemir et al. 2024: In a study of patients with subacromial impingement syndrome, PEMF therapy combined with exercise significantly improved pain, range of motion, functionality, and quality of life compared to sham PEMF at 4 and 12 weeks.

8. Risso Neto et al. 2017: In patients with degenerative spine disease undergoing lumbar posterolateral arthrodesis, PEMF therapy increased vertebral consolidation by 16% compared to controls and improved fusion rates over 90, 180, and 360 days post-surgery.

9. Sorrell et al. 2018: A randomized trial involving patients with persistent low back pain following lumbar surgery showed significant reductions in back and leg pain with PEMF therapy compared to sham (back pain reduced by 40.2%).

10. Kim et al. 2019: In patients with mild-to-moderate metabolic syndrome, PEMF therapy improved nitric oxide levels and reduced systolic blood pressure during exercise in hypertensive individuals, demonstrating cardiovascular benefits.

11. Liu et al. 2021: In postmenopausal women with vertebral fractures, PEMF therapy improved mobility, quality of life, and reduced back pain at one and three months post-treatment.

Neurological and Vascular Effects

12. Tran et al. 2016: In patients with multiple chemical sensitivity, PEMF reduced symptom severity.

13. Morberg et al. 2018: In idiopathic Parkinson's disease patients, transcranial PEMF improved mobility and ADL dimensions of quality of life.

14. Stewart et al. 2020: A study of hypertensive individuals found PEMF therapy improved vascular function (flow-mediated dilation) and reduced systolic and diastolic blood pressure.

15. Pulay et al. 2024: In a pilot study involving children with cerebral palsy, PEMF therapy demonstrated significant improvements in fine balance coordination tests without observed side effects, highlighting its safety and potential efficacy.

Clinical Data[2]

Study #1 - Acute Effects of the RELAX/Tranquility PEMI Program on Heart Rate Variability and Bilateral Flow Gain: A Pilot Study

Objective: Evaluated the acute effects of a single 20-minute session of the RELAX/Tranquility PEMI2 Program on heart rate variability (HRV) and Bilateral Flow Gain (BFG) in healthy participants.

Key Findings:

- HRV Parameters:
  - Mean HR decreased by 3%.
  - SDNN increased by 32%.
  - RMSSD increased by 37%.
  - Total Power increased by 5%.
  - VLF, LF, and HF power increased by 5%, 2%, and 14%, respectively.
  - Sympathetic dominance (SNS LF%) reduced by 24%.

Conclusions:

- The study identified trends toward improved autonomic regulation and cardiovascular health.
- While changes were not statistically significant, they indicate potential benefits from the RELAX/Tranquility PEMI2 Program.
- The results suggest that cumulative effects from regular PEMI2 therapy (e.g., twice daily) may yield more pronounced benefits.
- Emphasizes the need for larger, long-term studies with control groups to confirm findings.

Study #2 - Impact of Purewave PEMF on Blood Flow, Heart Rate Variability, and Wellness: A Pilot Study

Objective: Evaluated the effects of Purewave PEMF therapy on blood flow, heart rate variability (HRV), and other physiological and subjective health measures over a three-week period.

Key Findings:

- Blood Flow:
  - Blood flow volume increased by 23% after three weeks, though not statistically significant.
  - Cerebral blood flow in the prefrontal cortex increased by 5%.
- Heart Rate Variability (HRV):
  - Mean HR decreased by 3%, reflecting reduced sympathetic activity.
  - SDNN increased by 25%, indicating improved cardiovascular health and stress resilience.
  - HF power increased by 10%, suggesting enhanced parasympathetic dominance.
- Cellular Function:
  - Phase Angle (a marker of cell membrane integrity) improved by 14%.
- Subjective Health Improvements:
  - Depression and anxiety reduced by 45% each.
  - Stress levels decreased by 54%.
  - Medically unexplained symptoms reduced by 35%.
  - Sleep quality improved by 29%.
  - Overall well-being showed significant improvement.

Conclusions:

- Purewave PEMF therapy showed potential benefits for parasympathetic activity, cardiovascular health, and cellular function, alongside improvements in mental well-being and subjective health outcomes.
- Although some findings, like blood flow improvements, were not statistically significant, the positive trends underscore the need for larger, controlled studies to confirm these effects.

Study #3 - Effects of a Single PEMI Device Session on Heart Rate Variability: A Pilot Study Evaluating Autonomic Regulation and Relaxation

Objective: Assessed the effects of a single 30-minute session with the PureWave PEMI device on heart rate variability (HRV) and autonomic regulation.

Key Findings:

- Heart Rate Variability (HRV):
  - Mean HR significantly decreased, suggesting enhanced relaxation and reduced sympathetic cardiac activation.
  - Total Power (TP) significantly increased, indicating improved overall autonomic adaptability and resilience.
  - Increases in RMSSD and Parasympathetic Nervous System Contribution (PNS HF [%]) suggest trends toward enhanced parasympathetic activity.
  - Decreases in Sympathetic Nervous System Contribution (SNS LF [%]) point to reduced sympathetic activity and better autonomic balance.
  - SDNN increased, reflecting improved HRV and greater autonomic adaptability and resilience.

Conclusions:

- The PureWave PEMI device demonstrated potential benefits for autonomic regulation and relaxation, as indicated by positive trends in HRV parameters.
- The findings highlight the wellness potential of PEMI technology, particularly its ability to influence physiological markers of relaxation and autonomic health.
- Further studies with larger sample sizes are recommended to confirm these preliminary results.

Additional Anthology of Clinical Literature

Synopses from Originators of PEMF in Europe

Prof. Dr. med. G. Bothmann, head of the Specialist Clinic in Wolfsburg, Germany with main focus: Perinatal center and oncology with oncoplastic operation: Several individual observations on patients that have been treated with PEMF. Impressions partly confirmed objectively: improvement of the psychological and physical sense of well-being, better coping with stress, less up to no pain, better vascular circulation, better peripheral oxygen supply,

shorter stays in hospital after operations, less complications, remedying of sleeping disorders and depressions.

Prof. Dr. G. Fischer, Hygiene Institute of the University of Graz, research department for bioclimatology: Experimental, pilot and controlled clinical studies on animals and human beings with different diagnoses. Strengthening of the immune response, accelerated reduction of induced edema, accelerated fracture healing (animal examinations), reduction of sleeping disorders, sensitivity to changes in the weather, acute and chronic rheumatism, polytrauma, acceleration of the healing process in hip-joint-near fractures, increase of the mobility and pain relief in diseases of the movement apparatus and caliper, improvement of the condition and reduction of the medicine requirements in geriatric illnesses (human studies, partly randomized double-blind).

Prof. Dr. med M. Grandi, oncologist, University Clinic Torino, Italy: pilot study with 23 oncological patients (18 of which with mamma carcinoma) with different prehistory (mastectomy, chemotherapy, radiation), which have been treated with PEMF. This has been preceded by extensive morphological and functional experiments with tissue cultures. Results: All patients have reacted positively to the treatment. The symptoms “pain reduction, accelerated healing of wounds, increased inflammation reduction (as far as relevant)” were significantly and obviously better than with the customary therapy.

Dr. med. W. Haas, Internist and general medicine, practice Frankfurt/Main: Over 150 specific PEMF therapies on patients of various diagnoses. Essential experiences: Exceptionally high response rate with negligible side-effects in expert and individual application in many cases that have elsewhere not been treated any more or not been treated successfully, primarily on the following diagnoses: illnesses of the movement apparatus such as arthrosis, degenerative damages of the vertebral column, rheumatic arthritis, fibromyalgia, sports injuries, neuropathies, in addition, circulation illnesses such as cervical syndrome, hypertension, arterial occlusion disease, KHK, diabetic gangrene, neuronal illnesses such as neuropathy, multiple sclerosis, morbus Parkinson, diseases of the respiratory tract such as chronic bronchitis, bronchial asthma; skin diseases such as neurodermitis, rosacea and psoriasis; other like primary headache, sleeping disorders, depressive syndrome. The most striking findings were (to a large degree concurrent): medicine savings, pain reduction; function improvement, relatively rapid onset of taking effect, nearly free of side-effects.

Prof. Dr. R.B. Pelka, Chair of Applied Statistics at the University of the Armed Forces in Munich, focus of his research: Biometry and Public Health: 10 individual observations on patients that have been treated with PEMF, several controlled clinical studies. Impressions, for the most part confirmed objectively: reduction or remedying of sleeping disorders, increase in the vitality in the case of sleep deficiency, overwork, reduction of the pain and improvement of the functionality in arthritis pain, tenseness, continual distress; pain reduction and improvement of the functionality in the leg after (not operated) slipped discs, reduction of the pain and side-symptoms in headache of different genesis.

Addressing the Army's Factors in Adopting Innovative Medical Technology, Particularly PureWave® Technology

1. **Regulatory approval and DoD–FDA coordination**
   The Army's medical mission is to preserve fighting strength, and any new technology is judged by how well it supports operational readiness—preventing illness, diagnosing injuries quickly, and restoring personnel to duty as fast as possible. The Army relies upon regulatory approvals by means of coordinating with the FDA, with the exception of decision-making within SOCCOM, where clinically trained officers are permitted to adopt innovations in medicine in advance of FDA sanctions. Technologies that reduce medical evacuation needs or shorten recovery timelines are highly valuable because they keep soldiers in the fight. Innovations that improve preventive care directly protect force health and mission continuity. The PureWave® Technology responds exactly to this imperative, in that it provides the most efficient and basic solution to ensuring mission readiness and unit health protection.

2. **Acquisition rules, contracting vehicles and steady funding**

   The Army has explicitly developed rules of acquisition that make use of well-established contracting vehicles, with which PureWave® is familiar and becoming fully qualified with its own CAGE Code and UEI. Regardless of steady funding needs by many suppliers, PureWave® is able to support the U.S. Army long-term on the basis of its own financial strength.

3. **Clinical evidence, operational testing and safety validation**

   Military medicine places a premium on proven outcomes. For a technology to be considered, it generally needs FDA clearance (or equivalent) and peer-reviewed clinical evidence demonstrating that it improves outcomes compared to current practice. The Army also sponsors its own research, which can evaluate operational suitability. Anecdotal benefits are not enough—the technology must be demonstrably effective in both controlled studies and real-world military environments. The PureWave® Technology provides clinical benefits as outlined and enumerated within the preceding sections of this White Paper, residing below the threshold of an evaluation by the U.S. FDA. Nevertheless, in support of its future clinical claims, a premarket notification clearance by "510(k)" is contemplated for ease of adoption and use within an expanded label.

4. **Interoperability, IT integration, and cybersecurity / data privacy**

   The Army cannot afford "standalone" systems. Medical innovations must integrate smoothly with existing Department of Defense health IT systems, particularly electronic health records, supply chains, and logistics. Compatibility across joint services (Navy, Air Force, Marines, Space Force) and allied partners is also considered, given the frequent multinational nature of operations. Interoperability ensures that data flows seamlessly, enhancing continuity of care and operational efficiency. For the PureWave® Technology, this consideration is moot, as there are no concerns with interoperability nor integration. It works seamlessly with all adjacent systems, as it is not required to be integrated at all.

5. **Logistics, sustainment, environmental ruggedness and supply chain** Unlike civilian hospitals, Army medicine operates in small, mobile, and often resource-constrained environments. Medical devices must be usable in field environments and within expeditionary medical units, and humanitarian missions. That means they need to be compact, lightweight, ruggedized against corrosion by the elements and vibration, and operable with limited power. A technology that works well in a stateside hospital may be unsuitable if it cannot survive the rigors of deployment in the field or in combat zones. The ruggedized portability of the PureWave® Technology responds to these operational constraints, although it most likely will not ever be in forward locations as it is not supporting combat medicine.

6. **Legal, ethical and human-subjects' constraints**

   The PureWave® technology presents no legal, ethical or human subject constraints, as it is not a medical device that has an essential performance with regard to patient safety or performance. It is intrinsically safe, and has a long history of safe and effective use.

7. **Organizational culture, leadership buy-in and workforce readiness**

   The adoption of the PureWave® technology fits the organization culture of Army readiness, and furthermore aligns with leadership priorities for ease of "buy-in" at both the operational and strategic levels. As to the "workforce", the PureWave® technology supports both field and particularly garrison activities, both for training and recovery of Army personnel.

8. **Intellectual property, tech transfer, and small-business scale-up**

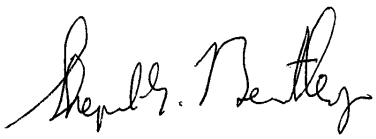
   As soldiers often operate far from large hospitals, telemedicine capabilities are highly valued. Technologies that allow remote patient monitoring, virtual consultations with specialists, and secure data transmission enable advanced care even in isolated

environments. Devices that support real-time communication over limited bandwidth or satellite links are especially important for battalion-strength units or brigades in forward-deployed roles. The PureWave® Technology supports telemedicine and is designed for the ultimate connectivity, operating without interference and able to connect wherever the forward elements of the Army are able to communicate with the rear. The intellectual property, tech transfer support and scalability required to meaningfully provide a significant impact regarding the telemedicine aspects of the PureWave® technology are supportable by the design and manufacturability / usability of the product.

Conclusion

The use of the PureWave PEMF breakthrough as a restorative technology for the clinical and/or performance benefit of a user with the PEMI represents an innovation in whole-body wellness design that could essentially provide an altogether unparalleled satisfactory daily living experience. This may be for the sailor or Marine before and after working, exercising or going about the daily tasks of the Plan of the Day, and before and after sleeping. It promises to offer any service member with the means of obtaining a treatment that overcomes numerous challenges of access that limit overall enjoyment of the experience of living, studying, working and supporting others in a stressful environment. The improvement in personal health and performance, and the enjoyment of service members during and after a PEMI treatment within a home, bunk, barracks or office that has successfully adopted a PEMF design, represents an exciting new threshold in wellness history.

Respectfully Submitted,



Shepard G. Bentley, RAC
President & Principal Consultant