PEPPER

Instruction Manual

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Pepper Interactive Inc
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1 General Information

The Pepper EMS Training System uses electrical muscle stimulation (EMS) technology to stimulate healthy muscles in order to improve or facilitate muscle performance. To engage all your major muscle groups effectively and get the most out of your Pepper EMS Training System, please read this manual carefully before you start your first workout. The Pepper EMS Training System is wirelessly controlled by the Pepper EMS Training App (Pepper: EMS Training at Home) which can run on any Apple or Android Tablet or Phone. The Pepper EMS Training System is intended to be used in athletic and sports training environments.

In the event of improper use, non-compliance, or insufficient compliance with the safety instructions in this instruction manual, changes to the Pepper EMS Training system, or the use of unsuitable spare parts (not original parts), the manufacturer accepts no liability for damage to persons, animals, property, or the product itself.

If you have any further questions or comments, please contact the Pepper team via www.peppermove.com, email info@peppermove.com, or phone +49 160 97032942. You can also make an appointment with one of our EMS experts using the link in your purchase confirmation email.

2 Indications for use

The Pepper EMS Training System is an Over-The-Counter device intended to stimulate healthy muscles in order to improve or facilitate muscle performance. It is to be used by adults only.

The Pepper EMS Training System is not intended to be used in conjunction with therapy or treatment of medical diseases or medical conditions of any kind. None of the training programs or operational parameters are designed to target injured or ailing muscles and its use on such muscles is contraindicated.

The Pepper EMS Training System's electrical impulses allow the triggering of action potentials on motoneurons of motor nerves (excitations). These excitations of motoneurons are transmitted to the muscle fibers via the motor endplate where they generate mechanical muscle fiber responses that correspond to muscle work. Depending on the parameters of the electrical impulses (pulse frequency, duration of contraction, duration of rest, total session duration), different types of muscle work can be imposed on the stimulated muscles.

3 Warnings and Safety Guidelines

Pepper recommends that you consult with your physician before beginning this or any other fitness program.

Text marked with this symbol ⓘ indicates a situation, which may result in minor or moderate injuries to the user or damage to the equipment, if not avoided.

Safety Guide

Please review the following list of questions. If you answer any of these questions with "Yes", "Maybe", or "I don´t know", you should not use the device.

Table 1: Safety Questions

#	Question
2	Do you have a pacemaker, implanted defibrillator, or other implanted metallic or electronic device?
3	Are you pregnant?
4	Are you experiencing extreme muscle strain or trauma, or a muscle strain condition such as Rhabdomyolysis (a condition in which damaged skeletal muscle breaks down rapidly)?
5	Have you been diagnosed with any heart problem or condition?
6	Do you have an inadequate blood supply (ischemia) or serious blood circulation disorders in the lower limbs?
7	Have you been diagnosed with an abdominal or groin hernia?
8	Have you recently undergone surgery?
9	Have you recently experienced acute trauma or fractures?
10	Have you been diagnosed with epilepsy or another neurological disorder?
11	Have you experienced nerve damage resulting in a lack of feeling in a particular area of the body?
12	Do you have persistent pain?

13	Do you require muscle rehabilitation?
14	Do you have a suspicion of any heart condition?
15	Do you have cancer?
16	Do you have painful or afflicted joints?
17	Do you have muscle spasms?
18	Have you experienced a loss of muscle tissue or muscle atrophy?
19	Do you have a tendency to bleed internally (hemorrhage) following trauma or fracture?
20	Are you in the presence of electrical monitoring equipment (e.g., cardiac monitors, ECG devices)?
21	Are you under the age of 22?

Contraindications

The following are contraindications that indicate a situation in which the Pepper EMS Training System must not be used:

• Do not use the Pepper EMS Training System if you have a pacemaker (artificial pacemaker), implanted defibrillator, or other implanted metallic or electronic device. Such use could cause electric shock, burns, electrical interference, or death.

• Do not use the Pepper EMS Training System over a menstruating or pregnant uterus. The safety of using powered muscle stimulators during pregnancy has not been established.

• Do not use the Pepper EMS Training System if you are experiencing extreme muscle strain or trauma, or if you are experiencing a muscle strain condition such as rhabdomyolysis (a condition in which damaged skeletal muscle breaks down rapidly).

• Do not use the Pepper EMS Training System if you have been diagnosed with any heart problem or condition.

• Do not use the Pepper EMS Training System if you have an inadequate blood supply (ischemia) or a serious blood circulation disorder in the lower limbs.

• Do not use Pepper over an abdominal or groin hernia.

Precautions

Pepper recommends that you review the following precautions before using the Pepper EMS Training System:

• Caution should be used when there is a tendency to bleed internally (hemorrhage) following trauma or fracture.

• Caution should be used following acute trauma or a fracture or following recent surgery when muscle contraction may disrupt the healing process.

• Consult your physician before using Pepper if you have been diagnosed with epilepsy or another neurological disorder.

• Caution should be used when there is nerve damage resulting in a lack of feeling in a particular area of the body.

• Consult your physician before use if you have experienced a loss of muscle tissue or muscle atrophy, experience muscle spasms, or have muscles associated with painful or afflicted joints.

• Consult your physician before use if you have persistent pain.

• Consult your physician before use if you require muscle rehabilitation.

• Consult your physician before use if there is suspicion of any heart condition. The device may cause lethal rhythm disturbances to the heart in susceptible individuals.

Warnings and Safety Measures

The following are general warnings and safety measures that you should review before using the Pepper EMS Training System:

• The Pepper EMS Training System is only for use by adults (≥ 22).

• Do not use the suit on parts of the body it was not designed for.

• Do not touch the inside of the suit with your hands during training. If a suit adjustment is needed, stop the training first and then make the adjustment.

• No modification of Pepper EMS Training System is allowed.

• No use of the Pepper EMS Training System adjacent to or stacked with other equipment.

• Do not use accessories, transducers and cables other than those specified or provided by Pepper as this could result in increased electromagnetic emissions or decreased electromagnetic immunity and improper operation.

• Do not charge the battery box while it is attached to the suit. The app blocks the training while the battery box is being charged and an error message will appear.

• Stimulation should not be applied near metal. Remove all jewelry, body piercings, belt buckles, or any other removable metallic product or device in areas of stimulation.

• Stimulation should not be applied over the neck (specifically the carotid sinus nerves), particularly in users with a known sensitivity to the carotid sinus reflex.

• Stimulation should not be applied over the neck or mouth. Severe spasms of the neck or airway muscles may occur, and the contractions may be strong enough to close the airway or cause difficulty in breathing.

• Although the design of the Pepper EMS Training System prevents electrical current from crossing the chest cavity (transthoracically), please be advised that stimulation should not be applied across the chest cavity in order to prevent electrical current from reaching the heart, where it could cause an irregular heartbeat (cardiac arrhythmias).

• Stimulation should not be applied to the head or any sites that may cause electrical stimulation to pass through the head (transcerebrally). The effects of stimulation of the brain have not been established yet.

• Stimulation should not be applied over swollen, infected, or inflamed areas, e.g. phlebitis (inflammation of a vein), thrombophlebitis (inflammation of the wall of a vein), varicose veins (vein that is distended, lengthened, and tortuous).

• The long-term effects of chronic electrical stimulation have not yet been established.

• Stimulation should not be applied over, or in proximity to, cancerous lesions.

• Do not apply stimulation to muscle groups if you have any concerns related to your comfort or safety.

• Do not use the Pepper EMS Training System if connected to any electronic monitoring equipment (e.g., cardiac monitors, ECG devices). These devices may not operate properly when electrical stimulation is in use.

• Do not use the Pepper EMS Training System in water or a humid atmosphere (sauna, hydrotherapy, etc.).

• Do not use the Pepper EMS Training System in an oxygen-rich area, such as in the presence of oxygen tanks.

• Do not use the Pepper EMS Training System while driving, operating machinery, cycling or during any activity in which electrical stimulation can put you at risk of injury to yourself or others.

• Do not apply stimulation while sleeping.

• Keep the Pepper EMS Training System device and its accessories out of reach of children and pets.

• Do not use the Pepper EMS Training System on animals.

• Do not allow any foreign objects (soil, water, metal, etc.) to enter the battery box.

• Do not tamper with the suit or battery box (e.g. by trying to open them).

• Sudden temperature changes can cause condensation to build up inside the battery box. Only use once temperatures have returned to normal.

• Do not overexert yourself during electrical muscle stimulation training. Any training should be at a level comfortable for you.

• Do not use the Pepper EMS Training System if you are connected to a high-frequency surgical instrument as this could cause skin irritations or burns under the pads.

• Do not use the Pepper EMS Training System near shortwave or microwave therapy medical equipment. This may lead to instability in the battery box.

• The Pepper EMS Training System must not be used near medical devices such as MRI, CT, diathermy, and X-Ray as those could alter the current generated by the battery box, cause tissue damage, and result in severe injury or death.

• The Pepper EMS Training System must not be used in areas where unprotected devices are used to emit electromagnetic radiation. Portable communications equipment, RFID, and electromagnetic security systems (e.g., metal detectors and EAS) can interfere with the Pepper EMS Training System and alter the current generated by it.

• Do not use portable RF communications equipment (including peripherais such as antenna cables and external antennas) closer than 30 cm to any part of the Pepper EMS Training System, including cables. Otherwise, degradation of the performance of this equipment could result.

	Not all RF emitters are visible. If you experience any unexpected changes in intensity, please immediately end your training and consult Pepper.

Adverse Reactions

• Some people with very sensitive skin may experience redness or irritation under the pads after electrical muscle stimulation. Generally, this redness is completely harmless and should disappear shortly. Avoid starting training until the redness is no longer visible. If redness persists, stop using the Pepper EMS Training System and consult your physician.

• Some people may experience headaches and other painful sensations during or following the training. If this occurs, a physician should be consulted, and training should cease until gaining approval from a physician.

ⓘ	If you experience adverse reactions, stop using the Pepper EMS Training System immediately and consult your physician.

4 Pepper EMS Training System

The Pepper EMS Training System consists of two main components or accessories: the Suit and the Battery Box. Both accessories are described in this section.

Picture 1: Pepper Suit and Battery Box

The Suit

The suit delivers impulses directly from the connected battery box to all major muscle groups. The suit is directly worn on the skin which will lead to the best conductivity between the electrodes and muscles. Please make sure to wear full coverage undergarment underneath the suit. The suit is one piece which can be closed in the back with the zipper. The end of the zipper line is magnetic and can be attached to the suit.

The suit has 20 integrated dry electrodes covering eight major muscle groups:

- Left/right quadriceps & left/right hamstrings

- Left/right glutes
- Left/right lower back
- Left/right upper back
- Left/right shoulder
- Left/right biceps & left/right triceps
- Left/right chest
- Left/right abdominals

Picture 2: Pepper Suit front and back

ⓘ	It is advised not to share suits with others as this can lead to improper fitting of the suit or sharing of bodily fluids.
ⓘ	We advise you to wear full coverage undergarment underneath your suit.

The Battery Box

The Battery Box is the control center for the Pepper EMS Training System. This device employs low frequency impulses to generate muscle contraction, which multiplies each muscle group´s work rate and output. It communicates wirelessly with the Pepper App. The Battery Box is designed to fit in the mold on the side of the suit, which can then be secured with the straps. The Battery Box has a plastic housing for protection against electrical hazards.

Picture 3: Battery Box front and back

Turning on the Battery Box

The Battery Box has a single button to turn it on and off. If you press the button to switch it on, wait a few seconds until the LED status indicator on the front displays a color. If a LED light is visible, the battery box is on, if nothing is visible the battery box is off.

Turning off the Battery Box

When you are finished with your workout, press the button again to switch the battery box off. Wait a few seconds until the LED light disappears.

Battery Box LED Status Indicator

The Battery Box communicates using the LED light as status indicator, letting you know its current status. The following table lists the battery box states and the LED color and action associated with the state.

Table 2: LED light and description

State	**Indicator Light**	**Description**
Off	None	The Battery Box is powered off and is not charging.
Charging	White “P”	The Battery Box is charging.
On	Green “P”	The Battery Box is on and can be connected to the App.
Connected and ready	Blue “P”	The Battery Box is connected to the App and ready for training.

5 Directions for Use

Before you begin your workout with the Pepper EMS Training System, you must install and configure the Pepper App on your phone or tablet and adjust your suit so that it is tight against your body but still comfortable.

Installing and Launching the Pepper App

The Pepper App is an application that controls and manages your Pepper EMS Training System workouts.

To install the app, please use one of the following two methods.

- Open the Camera app on your phone or tablet and center the QR code below (or on the quick start flyer) on the screen. A banner notification displays allowing you to open the link associated with the QR code. Please press the link.

- Click one of these links for the App Store or Google Play Store to get to the App directly on your phone or tablet.
- Open the App or Google Play store from your phone or tablet and search for the **Pepper: EMS at Home** App and install it.

After you have successfully installed the Pepper App, open it and follow the on-screen instructions for signing up or logging in.

The App asks you to start a free test trial of the App. In order to continue with your Pepper training, please confirm the free trial. You can cancel the subscription after the free trial.

Putting on your Suit

The following provides instructions on putting on your suit.

ⓘ	Always inspect your suit for rips, tears, or any other type of damage. If damage is present, replace the damaged suit. Do not use the suit when damaged.

1. Put on the suit with the electrodes turned to the inside and the zipper on the back of the suit. You can wear underwear underneath your suit but make sure none of the electrodes are covered as they should be placed directly on your skin.

Picture 4: Put on Pepper suit

2. Close the Zipper in the back and make sure the magnetic end of the zipper line connects to the magnetic part of the suit.

Picture 5: Close zipper in the back

Starting your onboarding in the App

Open the Pepper App on your phone or tablet and start the onboarding process. You can start the onboarding process by starting any kind of workout or connecting the Battery Box. The onboarding process consists of an information video and with connecting your Battery Box to your phone.

Connecting your Battery Box

The Battery Box uses Bluetooth to communicate with the application. Before you can use the Battery Box in your workout, you must pair it with your phone or tablet. To do this, ensure that your device is close to the Battery Box with Bluetooth turned on and your Battery Box is switched on, which means the LED light is showing a green “P” on the display.

Click on “Find my Pepper suit” in the Pepper app and choose your Pepper Battery Box by clicking on it. It starts with Pepper and continues with a four-digit number.

Congratulations, your device is now paired with your Battery Box. From now on, whenever you start the Pepper App and turn on your Battery Box, it will automatically pair with it if the phone or tablet is in range.

ⓘ	Always inspect your thoroughly inspect your Battery Box. Do not use your Battery Box if any damage is present. For your safety, please consult Pepper.

Attaching the Battery Box to the suit

Once you have paired your phone or tablet to the battery box, you can attach it to the suit.

1. Place the mold of the battery box directly on the mold on the right side of the suit. Make sure that the power button is on the top.
2. Once the battery box is placed on the mold it is magnetically connected to it. In order to ensure that it stays there during your workout, use the strap on your suit.

Picture 6: Attach battery box to the suit

Manage your Training Session

The last step of your onboarding process will be your first Pepper video workout which will explain everything to you in detail and which will start with beginner exercises. This workout looks like all other workouts in the Pepper App. Once the workout session begins, the workout screen is displayed.

Understanding the Workout Screen

Picture 7: Overall workout screen

Table 3: Overall screen - screen parts and descriptions

Number	Screen Part	Description
1	Exercise	Displays the name of the current exercise.
2	Pause/Play	Pause and play the workout at any time.
3	Impulse Bar	Displays the remaining time for the current stimulation period: • When blue, the battery box sends electrical impulses to the Pepper EMS Training System components. • When white, the battery box is in rest and has stopped sending electrical impulses. Please note that the battery box provides constant stimulation in cardio and relax mode, so this bar is not shown.
4	Heat Zones	Represents the overall intensity zone of the training session based on your historical training intensity. Yellow and red zones are above the historical training intensity.
5	Pepper Points	Gamification element based on training intensity and training minutes and workout video level (all levels and advanced).
6	Overall electrode control	Controls the overall intensity of the electrodes. The "+" increases the overall intensity of the electrodes (below thirty in steps of 5, above 30 in steps of 1), the "-" decreases the overall

		intensity of the electrodes (below thirty in steps of 5, above 30 in steps of 1). The power button switches all electrodes on and off simultaneously.
7	Single electrode Control	This button opens the detailed view of the electrode control, where single electrodes can be controlled.

Picture 8: Detailed workout screen

Table 4: Detailed screen - screen parts and descriptions

Number	Screen Part	Description
8	Single Electrode	Each electrode (front: chest, arms, abs, legs; back: upper, middle and lower back, glutes) can be controlled individually. The "+" increases the electrode (below thirty in steps of 5, above 30 in steps of 1), the "-" decreases the electrode (below thirty in steps of 5, above 30 in steps of 1). The power button switches the electrode on or off.
9	Close detailed view	By pressing the "x" you can close the detailed workout screen and return to the overall workout screen.
10	Save and load preset	If you like a training intensity, you can press "save preset" to save this electrode setting for future workouts. If you press "load preset" you can load the intensity that you saved in the past. For each suit mode you can save one preset.

Pause or stop your Training Session

To pause or stop your workout, there are three different possibilities:

1. Press pause on your workout screen.
2. Detach the battery box from your suit.
3. Switch off your battery box.

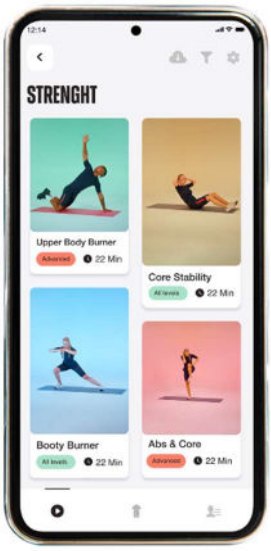
ⓘ	If you experience any major discomfort or pain during the workout, immediately pause or stop the training and decrease the intensity as needed.

Selecting your workout

When you open the Pepper App on your phone or tablet you can choose between a suit workout (Suit -> Training) or a video workout (Classes) where all available strength, cardio and relax videos are listed.

ⓘ	In the first few weeks we recommend that you start with all levels workouts and with using low intensity settings before progressing to higher intensities to familiarize yourself with the sensation. We also recommend that you start with one strength workout per week and slowly increase to two after 4-6 weeks.

Picture 9: Workout videos

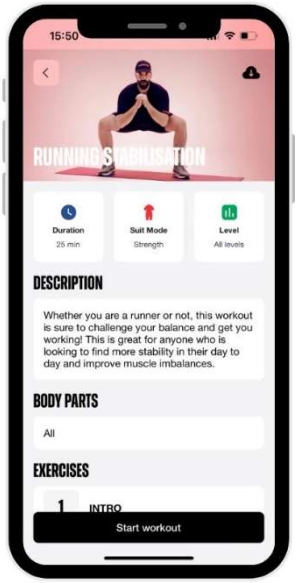


The classes overview provides the following details for each workout video.

Table 5: Workout information and description

Workout Information	**Description**
Training Mode	The training mode associated with the workout, Strength, Cardio or Relax.
Workout Name	The name describes the focus of the workout or recovery mode.
Workout Level	The overall level of difficulty of the individual exercises in the workout: • All Levels • Advanced
Workout Length	The length shows the duration of the workout video in training minutes.

Picture 10: Workout details



Once you select the desired workout, more information regarding the workout are displayed.

Table 6: Workout details and description

Workout Details	**Description**
Workout Description	A brief description of the workout.

Body Parts	The body parts which the exercises focus on are displayed.
Exercises	All exercises which are included in the workout are listed.

When you find the workout that fits to your training needs, press the **Start Workout** button on the screen to begin your training session.

6 Training Modes

The workouts in the Pepper App are assigned to a unique training mode. Each mode is designed to indicate the exercises and work that is focused on during the selected workout. The list below helps you choose a training program that is appropriate for your workout needs.

Table 7: Training mode and description

Mode	**Description**
Strength	This mode is intended to increase the maximum strength of muscles.
Cardio	This program improves overall muscle endurance and resistance to fatigue. It activates the aerobic metabolism of the fibers during the training.
Relax	This program helps to increase blood flow. It should be used after training sessions and competitions.

Training Recommendation

As the different training modes have different intensities we recommend a maximum training time per week for each mode.

Table 8: Training mode and recommendation

Mode	**Training Recommendation**
Strength	Maximum 25 minutes per session, maximum 50 minutes per week with a minimum of two rest days in between sessions (e.g. 2 x 25min)
Cardio	Maximum 125 minutes per week (e.g. 5 x 25min)
Relax	Maximum 125 minutes per week (e.g. 5 x 25min)

7 Charging your Battery Box

The Pepper App checks the battery level of the battery box and displays it on the Suit screen. The battery level should be above 10% before you start your training session. The App alerts you it needs to be charged before a training session.

To charge your battery box, please do the following:

1. Disconnect the battery box from the suit, if attached.
2. Ensure that the battery box is turned off by checking the LED status indicator.
3. Connect the micro-USB charging cable to the micro-USB connector at the bottom of the battery box.
4. Use a standard 5V 0.5A USB type C standard charger (DC5V) for charging.
5. Check for the white LED “P” which displays that the charging process is ongoing.

ⓘ	Never charge or recharge the battery box when it is attached to your body. Never charge or recharge the battery box from unreliable or problematic sources.

8 Troubleshooting

The following is a collection of possible issues with the Pepper EMS Training System. If you have additional questions or concerns, please contact Pepper.

Table 9: Troubleshooting – issue and resolution

Issue	Resolution
The battery box doesn´t turn on	Connect the charger to the battery box, make sure it is a standard 5V USB type C charger. While charging the display should show a white “P”. Allow the battery box to charge for 30 minutes. After charging, remove the battery box from the charger and turn it on. Press the power button once and wait for a few seconds until you see the LED light on the display.
The app cannot pair with the battery box	Ensure that your battery box is powered on. Ensure that you connect the Pepper app, not the phone´s or tablet´s Bluetooth settings, to the battery box. If your phone or tablet still can´t connect to the battery box, follow the instructions step by step: 1. Ensure the battery box is on. 2. Ensure that the Bluetooth of your phone or tablet is on. 3. Open the Pepper app and go to **Suit** and **Configuration**. 4. Press **Connect Suit** and **Find my Pepper suit**.

	5. Connect to your battery box. If no battery box appears, go to your phone or tablet settings and open the settings for the Pepper app. 6. Enable Bluetooth and Location (for Android). 7. Try again.
Suit contact issues / Stimulation is weak or uncomfortable even on high intensities	Ensure that your electrodes touch your skin, if they are too loose, use the provided belts to tighten the suit. The suit should not be used if it is loose and any of the electrodes are not in complete and firm contact with the skin. Ensure that the battery box is on and properly connected to the side of the suit. Although Pepper uses dry electrodes, the connectivity works best with a little moisture, so make sure to warm-up properly. If you can´t feel the impulses properly, extend your warm-up or use a wet towel to moisten the electrodes from the inside of the suit.

9 Storage and Maintenance

Pepper has the following recommendations for storing and caring for your Pepper EMS Training System:

- Keep your suit in a cool, dry, well-ventilated area.
- When not in use, keep the battery box in the provided case.
- If you plan to store the battery box without using it for an extended period of time, you should fully charge it every six months.
- Do not pack the suit for an extended period when it is wet (e.g. after training or washing) as mildew and bacteria may build up.
- If you wash the suit, wash it at 30° Celsius and use regular detergent. The suit is designed to be used in household washers.
- To ensure the longevity of your suit, Pepper recommends hand washing it with cold water and mild detergent, and infrequent laundry machine washing.
- The suit is designed to be machine washable with cold water and mild detergent; however, it is possible that repeated washings in your washing machine eventually may reduce the efficacy of the suit.
- Always visually inspect the suit after cleaning for residual soil. If the suit is not visually clean at the end of cleaning and residual soil is visible on the device, please repeat cleaning. If residual soil remains even after repeated cleaning, please contact info@peppermove.com for further instructions.
- Always air dry your suit. Do NOT place your suit in the dryer, as it will damage it.
- You can wipe the connector pins on your suit and battery box carefully with a dry rag to ensure no dust or particles are visible on any part of the connector pins.
- Clean your battery box with a soft dry cloth only.
- The battery box is systematically inspected for quality and, therefore, never requires additional calibration or verification. The workout parameters for the Pepper EMS

Training System are set in the hardware and software and do not degrade over time when used in normal conditions.

- Do not open or alter your Pepper EMS Training System. This is considered tampering with the unit and releases the manufacturer from any responsibility with regards to the warranty, as well as the hazards that the operator or user may be exposed to.

10 Warranty

The Pepper battery has a warranty of two years, and the Pepper suit has a warranty of one year, starting from the original purchase date for the original purchaser's benefit. More than 150 training sessions and cleanings with a washing machine were evaluated for the expected service life of the suit with battery box. The suit and battery are warranted to be free from manufacturer defects, excluding any damage or defects resulting from 1) normal wear and tear associated with the intended use, 2) commercial use, and 3) failure to follow instructions in the instruction manual, accident, misuse, neglect, abuse, alterations, modification, improper assembly, installation, or use of any non-original parts. The Pepper battery warranty does not include damage from using an improper charger, improper maintenance, or water damage. Warranty claims must be submitted to info@peppermove.com. Please note that prior to replacement of any element, our Pepper team may require seeing photos or videos of the damaged part.

11 Technical Specifications

The following are the technical specifications for the Pepper EMS Training System.

Suit Specifications

Table 10: Suit parameters and values

Parameter	Value
Suit Weight	600-800g
Material	68% Nylon, 32% Spandex, Silver Ion Silicone

Table 11: Suit Length Female Body Type

	Length in cm XXS	XS	S	M	L	XL
Full length	90	91	92	93	94	95

Waist	29	30	31	32	33	34
Arm	10	10,5	11	11,5	12	12,5
Leg	16	16,5	17	17,5	18	18,5

Table 12: Suit Length Male Body Type

	Length in cm					
	XS	**S**	**M**	**L**	**XL**	**XXL**
Full length	96	97	98	99	100	101
Waist	34	35	36	37	38	39
Arm	11,5	12	12,5	13	13,5	14
Leg	19	19,5	20	20,5	21	21,5

Electrode Specifications

The electrodes in your suit are placed according to the position of the specific muscle groups to be stimulated. They are made out of specialized conductive fabric, silver-ion-material. Pad sizes for different suit sizes are as follows:

Table 13: Electrode Size Female Body Type

		Surface area in cm²					
Muscle Group	**Electrode**	**XXS**	**XS**	**S**	**M**	**L**	**XL**
Front	**Front Arms**	35,26	40,70	46,14	51,58	57,02	62,46
	Chest	44,58	45,62	46,66	47,71	48,75	49,79
	Abs	117,96	121,51	125,07	128,63	132,18	135,74
	Front Legs	182,38	193,20	204,01	214,83	225,65	236,46
Back	**Back Legs**	122,90	127,26	131,63	136,00	140,37	144,74
	Glutes	94,95	100,63	106,32	112,00	117,68	123,37
	Lower Back	91,72	96,18	100,64	105,10	109,56	114,02
	Middle Back	60,78	66,14	71,51	76,88	82,24	87,61
	Upper Back	26,60	28,37	30,15	31,92	33,69	35,47
	Back Arms	34,88	40,45	46,01	51,58	57,15	62,71

Table 14: Electrode Size Male Body Type

		Surface area in cm²					
Muscle Group	**Electrode**	**XS**	**S**	**M**	**L**	**XL**	**XXL**
Front	**Front Arms**	43,20	50,00	56,80	63,60	70,40	77,20
	Chest	50,69	51,99	53,30	54,60	55,90	57,20

	Abs	130,03	134,47	138,92	143,36	147,81	152,25
	Front Legs	201,40	214,92	228,44	241,96	255,48	269,00
Back	**Back Legs**	136,06	141,52	146,98	152,44	157,90	163,36
	Glutes	114,75	121,86	128,96	136,06	143,17	150,27
	Lower Back	101,33	106,91	112,48	118,05	123,63	129,20
	Middle Back	67,82	74,53	81,24	87,94	94,65	101,36
	Upper Back	34,04	36,25	38,47	40,69	42,90	45,12
	Back Arms	41,32	48,27	55,23	62,19	69,14	76,10

Battery Box Specifications

Table 15: Battery box parameters and values

Parameter	**Value**
Material	Lithium Polymer (LiPo)
Housing materials	Plastic injection molding, Polylac Abs (J01)
Battery Weight	152g
Battery Size	96x65x29mm
Battery Capacity	2650mAh
Charging Input	Rechargeable, 5V through Micro USB Connector
Battery Voltage	3.8VF
Stimulation channels	16 channels
Output Frequency	15-100Hz
Output Pulse Width	160-490 microseconds
Stimulation Waveform	Bipolar Symmetrical
Shape	Rectangular
Maximum Output Voltage	54 Volts
Maximum Output Current	108 milli-Amps
Operating Temperature and Humidity	5°C to 40°C , 15% to 90% RH
Transport and Storage Temperature and Humidity	-25°C to 70°C , 15% to 90% RH
Operating Pressure	700hPa to 1060hPa
Transportation and Storage Pressure	500hPa to 1060hPa
Wireless Connection	Built-in BLE Module
Type BF	Type BF applied part

Bluetooth Specifications

Type of BT Module: EZ-BLE PSoC XT/XR BT 4.2 Module

Frequency band of reception/transmission: 2.402 - 2.480 GHz

Bandwidth: 2 MHz

Maximum radio range: 50 meters / 165 feet

Limitations

The product is not suitable for use in the environments with a high concentration of oxygen and/or flammable liquids and/or flammable gas; do not use with equipment for electrosurgery or shortwave or microwave therapy; the device may be interfered by other equipment, even if that other equipment complies with CISPR EMISSION requirements.

Emissions

Table 16: Emissions table

Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The above listed model uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The above listed model are suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	N/A (battery supply)	/
Voltage fluctuations / flicker emissions IEC 61000-3-3	N/A (battery supply)	/

Immunity

Table 17: Immunity table

Enclosure Port			
Immunity test	**Test Condition**	**IEC 60601 Compliance level**	**Remarks**
Electrostatic discharge (ESD) IEC 61000-4-2	±,8 kV Contact ± 2,4,8,15 kV Air	±8 kV Contact ± 15 kV Air*	No performance degradation observed.
Radiated RF EM fields and Proximity fields from RF wireless communications equipment IEC 61000-4-3	10 V/m 80 MHz – 2,7 GHz 80% AM 1kHz	10 V/m 80 MHz – 2,7 GHz	No performance degradation observed.
	385MHz (18Hz Pulse Modulation)	27 V/m	
	450MHz (FM+/-5KHz deviation 1kHz sine or 18Hz Pulse Modulation)	28 V/m	
	710MHz (217Hz PM)	9 V/m	
	745MHz (217Hz PM)	9 V/m	
	780MHz (217Hz PM)	9 V/m	
	810MHz (18Hz PM)	28 V/m	
	870MHz (18Hz PM)	28 V/m	
	930MHz (18Hz PM)	28 V/m	
	1720MHz (217Hz PM)	28 V/m	
	1845MHz (217Hz PM)	28 V/m	
	1970MHz (217Hz PM)	28 V/m	
	2450MHz (217Hz PM)	28 V/m	

	5240MHz (217Hz PM)	9 V/m	
	5500MHz (217Hz PM)	9 V/m	
	5785MHz (217Hz PM)	9 V/m	
RATED power frequency magnetic fields IEC 61000-4-8	50Hz or 60Hz	30 A/m	No performance degradation observed.
Proximity magnetic fields IEC 61000-4-39	30 kHz (CW)	8 A/m	No performance degradation observed.
	134,2 kHz (2,1 kHz PM)	65 A/m	
	13,56 MHz (50 kHz PM)	7,5 A/m	
Comment: /			

Table 18: Immunity table 2

Patient Coupling PORT			
Immunity test	**Test Condition**	**IEC 60601 Compliance level**	**Remarks**
Electrostatic discharge (ESD) IEC 61000-4-2	±,8 kV Contact ± 2,4,8,15 kV Air	±8 kV Contact ± 15 kV Air	No performance degradation observed.
Conducted RF induced by RF fields IEC 61000-4-6	3 Vrms 150 kHz - 80 MHz also 6 Vrms ISM and Amateur Radio Bands 80% AM 1kHz	6 Vrms	No performance degradation observed.
Comment: /			

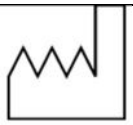
If loss or degradation of essential performance occurs, safety and effectiveness can be compromised, and it is advised to terminate the training.

The Pepper EMS Training System was tested according to the recommendations of IEC TR 60601-4-2: Medical electrical equipment – Part 4-2: Guidance and interpretation – Electromagnetic immunity: performance of medical electrical equipment and medical electrical systems.

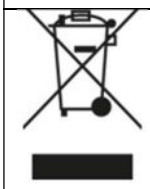
12 Symbols Glossary

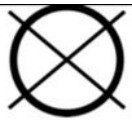
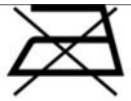
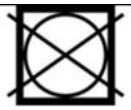
Table 19: Symbols and Explanations

Symbol	Symbol Title	Description	Symbol Reference #	Designation #	Standard Title
	Caution	Indicates the need for the user to consult the instructions for use for important cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device itself.	5.4.4	ISO 15223-1:2021	Medical devices – Symbols to be used with medical device labels, labeling and information to be supplied – Part 1: General requirements
	Refer to instruction manual/ booklet	Indicates the instruction manual must be read.	M002	ISO 7010	Graphics symbols – Safety colors and safety signs – Registered safety signs
	Manufacturer	Indicates the medical device manufacturer, as defined in Directives 90/385/ECC, 93/42/EDD and 98/79/EC		ISO 15223-1:2021	Medical devices – Symbols to be used with medical device labels, labeling and information to be supplied – Part 1: General requirements

	Date of Manufacture	Indicates the date when the medical device was manufactured.	5.1.3	ISO 15223-1:2021	Medical devices – Symbols to be used with medical device labels, labeling and information to be supplied – Part 1: General requirements
	Catalogue number	Indicates the manufacturer's catalog number so that the medical device can be identified.		ISO 15223-1:2021	Medical devices – Symbols to be used with medical device labels, labeling and information to be supplied – Part 1: General requirements
	Serial Number	Indicates the manufacturer's serial number so that a specific medical device can be identified.	5.1.7		Medical devices – Symbols to be used with medical device labels, labeling and information to be supplied – Part 1: General requirements

	Lot number	Indicates the manufacturer's lot number so that the lot number can be identified.	5.1.5	ISO 15223-1:2021	Medical devices – Symbols to be used with medical device labels, labeling and information to be supplied – Part 1: General requirements
	Type BF Applied Part	Indicates a type BF applied part complying with ICE 60601-1 BF=Body Floating. Used for devices which have conductive contact with patient or having medium- or long-term contract with patient. May not be connected to earth (floating).		IEC 60417:2002	Graphical Symbols for Use on Equipment
	Temperature limit	Indicates the temperature limits to which the medical device can be safely exposed.	5.3.7	ISO 15223-1:2021	Medical devices – Symbols to be used with medical device labels, labeling and information to be supplied – Part 1: General requirements
	Humidity limitation	Indicates the range of humidity to which the medical device can be safely exposed.	5.3.8		Medical devices – Symbols to be used with medical device labels, labeling

					and information to be supplied – Part 1: General requirements
	Atmospheric pressure limitation	Indicates the range of atmospheric pressure to which the medical device can be safely exposed.	5.3.9	ISO 15223-1:2021	
	WEEE	Waste in Electrical and Electronic Equipment. Indicates a product should not be disposed of in a landfill; the black bar indicates that the equipment was manufactured after 2005.	-	EN 50419:2006	Marking of electrical and electronic equipment in accordance with article 11(2) of directive 2002/96/EC (WEEE)
	Stand-by	Indicates a sleep mode or low power state. The switch does not fully disconnect the device from its power supply.	5009	IEC 60417:2002	Graphical Symbols for Use on Equipment
	FCC Marking	The marking indicates the electronic device, which sold in the United States, is certified and the	-	Federal Communications	-

		electromagnetic interference from the device is under the limits that are approved by Federal Communications Commission.			
	Do not use if package is damaged	Indicates the device should not be used if the package has been damaged or opened.		ISO 15223-1:2021	Medical devices – Symbols to be used with medical device labels, labeling and information to be supplied – Part 1: General requirements
	Do not dry clean	Indicates the garment cannot be safely dry cleaned without damage		ISO 3758:2021	Textiles – Care labeling code using symbols
	Do not iron	Indicates the garment cannot be safely ironed without damage.	-	ISO 3758:2012	Textiles – Care labeling code using symbols
	Do not tumble dry	Indicates the garment cannot be safely tumble dried without damage.	-	ISO 3758:2012	Textiles – Care labeling code using symbols
	Do not bleach	Indicates the garment cannot be safely bleached without damage.	-	ISO 3758:2012	Textiles – Care labeling code using symbols
	Maximum washing tempera	Indicates the maximum temperature the garment can be	-	ISO 3758:2012	Textiles – Care labeling code using symbols

	ture 30°C (105°F) in normal conditi on	safely washed without damage			
	Wash in cold water in normal conditi on	Indicates the garment can be safely washed in cold water without damage.	-	ISO 3758:201 2	Textiles – Care labeling code using symbols
IP22	IP code	Indicates that the device is protected against fingers or similar objects and vertically dripping water doesn´t have a harmful effect when the battery box is tilted at an angle of 15° from its normal position.		IEC 60529	
CE	CE confor mity	Indicates that the manufacturer affirms the goods´ conformity with European health, safety and environmental protection standards.	-	-	European conformity symbol
	Keep dry	Indicates the battery box needs to be protected from moisture.		ISO 15223-1	Medical Device Symbols
	Not safe for pacema kers	No access for people with active		ISO 3864-3:2012	Medical Device Symbols

	and defibrillators	implanted cardiac devices.			
	MR unsafe	Keep away from magnetic resonance imaging (MRI) equipment.		ASTM F2503-20	Medical Device Symbols

13 App Error Messages

Table 20: Error Messages with Explanations

E#	Error Message	Explanation
E1	Password validation error	Password format not valid. Minimum 8 characters are required and 3 out of 4 conditions have to be fullfiled: one big letter, one small letter, one special character, one number.
E2	Invalid credentials	When entering invalid credentials during login
E3	Login error	When not entering email or username during login
E4	Email doesn't exist	When entering an email that does not exist in our database on forgot password screen
E5	Please enter valid *fieldname*	When registering and leaving some of the fields blanks
E6	Weight must be between 30 and 150kg (65 and 350lb)	When entering weight outside this span during registration
E7	Height must be between 130 and 230cm (4.1 and 7.5ft)	When entering weight outside this span during registration
E8	Height must be between 130 and 230cm (4.1 and 7.5ft)	When entering height outside this span during registration
E9	Please agree to apps's Terms and Conditions and Privacy Policy to finish registration	When not agreeing to T&C and PP during registration
E10	User has not been verified. Please check your inbox for the verification email.	When trying to log in with non verified user

E11	Payment error – Something went wrong… Please try again or contact our support at info@Peppermove.com if the issue persists.	When something is wrong with the payment
E12	Please confirm that you have read Health Check/Safety Check/Instruction manual first	When not confirming you read this during the intro tutorial process
E13	Increase/decrease all electrodes – This increases/decreases all electrodes. All electrodes below 30% increases/decreases by 5%, all other by 1%	When trying to increase/decrease intensity for the first time
E14	Safety first – These advanced workout videos can only be watched after completing 4 of the all level workout videos for strength suit mode, or 1 all level workout for cardio and relax suit modes.	When trying to start visible later video even if you haven't unlocked it
E15	Suit only workout explanation – Pepper user can train on their own, without video, by entering the so-called „Suit only“ mode you just entered. In this way, you have full control over the suit but the workout itself is up to you, there is no trainer to guide you. Have in mind that these workouts are also recorded in your lifetime stats available under the „Activity“ menu item. Good luck!	When entering the suit only mode for the first time
E16	Error, cannot save workout statistics while offline	When trying to save workout while being offline
E17	Strenght workout limit – The duration of strength workouts is limited to 20 min accross three sessions per week. For your health and safety we recommend not exceeding this amount.	When you try to workout more than 60 mins per week in strength mode
E18	No internet connection – There seems to be an issue with your internet connection	When opening list of workouts or statistics while offline
E19	Workout stopped – There seems to be an issue with your internet connection	When you lose internet connection in the middle of the workout
E20	Low battery – Your battery box level is below 10%, do not forget to recharge after the workout	When starting the workout with battery level below 10%
E21	Subscription expired – Your subscription has expired. Please go online to subscribe or if you are	When being offline for a long time and we cannot be sure

	already subscriber go online to synchronize your data.	you are still an active subscriber
E22	No internet connection – Unable to start the video. There seems to be an issue with your internet connection.	When trying to start an online video while offline
E23	Please answer all questions	When not answering all video rating questions and trying to submit your rating
E24	You have an active subscription. Any account that has an active subscription cannot be deleted. Please click the Manage subscription button on the Subscription screen and cancel your active subscription, then try deleting your account.	When trying to delete your account while having an active subscription
E25	The manage subscription feature is not available for users who got a one-year free subscription. It will be possible after you become a paying subscriber, in August 2023.	When clicking on Manage subscription if you have one year free plan
E26	Please disconnect the charger – please disconnect the charger from your battery box to start a workout. You are not allowed to start a workout while the battery is being charged.	When trying to start a workout while battery box is being charged
E27	Workout stopped – workout stopped. You are not allowed to work out while the battery is being charged.	When plugging in your battery box charger while working out
E28	Code needs to be exactly 6 characters long	When entering shorter or longer code during forgot password procedure
E29	Passwords do not match	When password and confirm password fields to not match during registration, forgot password or edit profile password change
E30	Email/Username unavailable	When trying to register with already taken email or username

14 Electromagnetic Compatibility (EMC)

The Pepper EMS Training System is designed to be used in typical domestic approved environments in accordance with the safety standard IEC 60601-1-2.

The Pepper EMS Training System is designed to support the anticipated disturbance originating from electrostatic discharge, magnetic fields for the power supply, or radiofrequency emitters. However, the Pepper EMS Training System may be affected by powerful radiofrequency fields that come from other sources.

If loss or degradation of essential performance occurs, safety and effectiveness can be compromised, and it is advised to terminate the training.

15 Essential Performance

According to the intended use our powered muscle stimulator is required to stimulate healthy muscles to improve and facilitate muscle performance. The essential performance for these functionalities is:

- Safe and effective stimulation of targeted muscles.
- Accurate control of stimulation parameters such as intensity, frequency, and pulse width.
- Compatibility with the intended user population (healthy adults).
- Compliance with applicable standards for electrical safety and electromagnetic compatibility.

16 Interoperability

The Electronic Interface is the Pepper application for phone or tablet with the purpose of connecting the software with the Pepper EMS Training System. To properly work, the screen of the electronic interface (phone or tablet) has to work without defects or malfunctioning. We recommend a secure and fast internet connection when using the online version of the application.

17 Cybersecurity Recommendations

Make sure to use a strong password and don´t use your name, surname, date of birth. Please use a minimum of 8 characters consisting of capital and small letters, numbers, and special characters.

Always make sure to use the latest OS version on your phone and tablet and the latest Pepper App version in the Apple and Google Play Store.

Make sure to use a safe Internet connection when you use the app with the internet. The ‘suit-only’ part of the app and downloaded workouts can also be used offline.

Make sure that only you have access to your phone while training, so that only you can choose the training program and intensity of your electronic impulses.

18 Bluetooth Specifications

Type of BT Module: EZ-BLE PSoC XT/XR BT 4.2 Module

Frequency band of reception/transmission: 2.402 - 2.480 GHz

Bandwidth: 2 MHz

Maximum radio range: 50 meters / 165 feet

The Pepper EMS Training System is specifically designed to be used together with the Pepper App, which is supported for the selected Android and iOS mobile devices.

The Pepper EMS Training System is capable of independent execution of a pre-loaded stimulation program with the latest intensity values as well as implementing automatic Bluetooth re-connections.

In this regard, temporary radio frequency interference (e.g. caused by co-existence of multiple Bluetooth and/or Wi-Fi devices in your range) should not affect the overall efficiency and safety of your stimulation session.

Due to hardware-level emergency stop mechanisms (see Directions For Use), Bluetooth disconnections of more permanent nature should not affect the safety of stimulation, and can only cause temporary inconvenience by forcing you to postpone your planned stimulation session until a more favorable Bluetooth connectivity environment is established.

Like any wireless device, the Pepper EMS Training System emits very low levels in the radio frequency (RF) interval, and is therefore not likely to cause any interference with nearby electronic equipment (e.g. radios, computers, telephones, etc.).

The Pepper EMS Training System is designed to withstand foreseeable disturbances originating from electrostatic discharges, mains supply magnetic fields, or radio frequency transmitters.

19 Product Support

Please contact the manufacturer via info@peppermove.com for additional information on setup, use and maintenance, or to report any issues regarding your Pepper EMS Training System.

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