

Magnus Pro USER Guide

For Equine and Large Animal use only



Revised July 1, 2023

Pulse Electro-Magnetic Field Therapy
for use as an aid in the management of
musculoskeletal disorders in the horse



Basic facts you'll want to know:

PEMF therapy is non-invasive, physical contact with the device is not even required.

PEMF therapy regenerates damaged and diseased tissue, repairs torn tendons and fractured bones.

PEMF therapy enhances the synthesis of protein within cells, allowing the body to take advantage of all the protein available.

PEMF therapy improves circulation, not by increasing heartbeat or blood pressure, but by opening and dilating the arteries and capillaries. This also reduces swelling.

PEMF therapy increases the cellular level of oxygen absorption. Studies have shown that oxygen partial pressure can be increased by 200%. This reduces pain associated with a lack of sufficient oxygen, in cells, which often causes lactic acid buildup under strenuous exercise.

PEMF therapy is particularly effective in treating deep muscle soreness because of its penetration.

USER CONTROLS AND SYMBOLS

First familiarize yourself with the control interface under the lid

One or two sets of coil connector sockets allow application coils to be safely and securely locked into place.



MAINS socket to plug in the medical grade power cord.



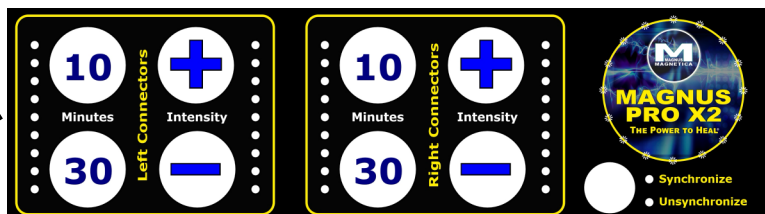
The MAINS power rocker switch turns the device on "I" and off "O".

Both models have:

1. Vertical blue lights to the LEFT of the timer buttons. These stacked LED's illuminate when a cycle begins and turn off incrementally as session progresses.

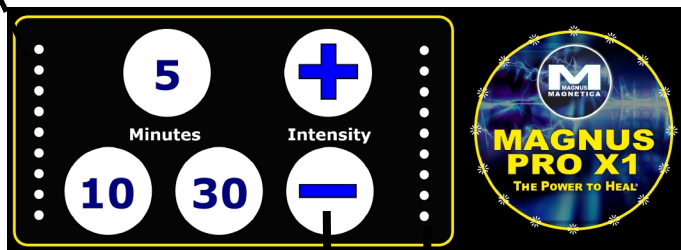
2. Vertical blue lights to the RIGHT of the timer buttons. These stacked LED's illuminate when the intensity is changed with the Plus or Minus button.

Magnus Pro X2 Models have preset 10 minute or 30 minute pushbuttons; press one to begin a session



Magnus Pro X2 Models have dual outputs that send independent PEMF signals from the device to its respective accessory. Pressing the Synchronize button enables the frequency and intensity of one output to be the same as the other output.

Magnus Pro X1 models have preset 5 minute or 10 minute or 30 minute pushbuttons; press one to begin a session



The LED lights encircling the Magnus Pro logo will illuminate when the device is running

Intensity pushbutton + plus and - minus :

Press plus to increase or minus to decrease the intensity to one of the nine preset intensity levels. One to nine blue lights will illuminate.

DIRECTIONS FOR USE



Magnus Pro X1 Model



Magnus Pro X2 Model

The MAINS power rocker switch turns the unit on "I" and off "O". Use the MAINS socket to plug in the medical grade MAINS power cord.



The exterior coil connector sockets allow application coils/accessories to safely and securely be locked into place.

Magnus Pro X1 Models have one set.

Magnus Pro X2 Models have two sets.

Close these protective covers when not in use.

Getting Started

Connect the power cord into the MAINS socket on the back of the device.

Always lock a treatment coil connector into the connector socket on the front of the device before turning the MAINS power switch on "I". The device will not start if the treatment coil is not properly connected.

Application Cycles

Depending upon your Magnus Pro Model an application cycle can last 5 minutes, 10 minutes or 30 minutes. Press the desired membrane timer button to commence a session. Each application cycle may be set at one of nine intensity levels by pressing the plus or minus buttons. A corresponding number of stacked lights to left of the timer buttons will illuminate.

Intensity Settings

The pulse rate/intensity button a **+** or **-** sign increases the intensity of the electro-magnetic pulse as it decreases the pulse rate. The pulse intensity can be adjusted from low (bottom LED light) to high (top LED light).

More about inserting/Changing an Applicator Coil

To connect an applicator coil, align the metal tab on the coil connector to an “11:00 o'clock” position with the metal tab on the coil connector socket of the device. Push the connector into the socket, then turn right until you hear a “click”. The applicator coil is then locked into place. To remove the applicator coil, pull the metal tab back and turn the end of the coil connector to the left (counter-clockwise) to disengage and pull it out. Do not plug or unplug the applicator coil during any active session.

Magnus Pro X2 Models have a second set of exterior sockets on the right side of the device.



11 o'clock position



Press into the socket



Turn right to lock in

Beginning a Session

Press the MAINS power rocker switch to “I” to turn the device on. Place an applicator coil on or around the targeted area on the animal. The closer the coil is to the targeted area, the more effective the application cycle will be. See Usage Hints on the following page.

Press the 5 minute, 10 minute or 30 minute timer button to begin the session. Blue lights spiral when an session begins. The lights turn off and the device emits a single long beep when the session

Pausing/Resetting/Ending the Session

During a session, briefly press the active pushbutton to pause the session. The corresponding blue light flashes continuously while in “paused mode”. To resume the session, briefly press the same pushbutton again.

To end the session cycle prior to completion, press and hold the active pushbutton until you hear a single long beep and the led lights turn off.



Go to www.magnusmagnetica.com. Watch a 9 minute video on use of PEMF technology on horses.

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Introduction Process:

- Introduce yourself to the horse - letting the horse smell you, if you are new to the horse.
- Introduce the Loop - turn the Device on a low intensity setting and let the horse smell the Loop.
- Avoid any and all "surprises".
- For a new horse, maintain contact with one hand as you slowly bring the Loop toward the horse's torso.
- The primary goal is to get the horse to relax.

Approach Targeted Areas Slowly:

- At a Fast Pulse rate (low intensity) approach treatment areas slowly/carefully.
- Watch for signs of discomfort or alarm.
- If you are treating an area with an open wound or suture, always consult a Licensed Veterinarian

USAGE HINTS

The torso and rump are very sensitive. Be careful initially with the magnetic pulse delivery loop. This is especially true near the hips and back. This is the area that most horses are stiff and sore or may have arthritic conditions. Use the lowest power initially to determine the sensitivity of the horse. If it the first application, approach the horse very carefully. The pulses are deep and the horse will be completely unfamiliar with this powerful, pulsing sensation. Carefully and slowly glide the delivery loop about 2-3 inches over the hindquarters, loins and croup. This will provide a gauge of how sensitive the horse is to a very low level magnetic pulse. The level sensitivity and response from the horse is usually an indication of the severity of the afflicted area.

Very slowly, move the delivery loop closer to the horses body. You will see greater contraction of the muscle beneath the delivery loop as the delivery loop is moved closer and/or the speed is made slower, intensifying the delivery of magnetic pulse. If the horse becomes startled, quickly pull the delivery loop away from the horse. After the device is running you can turn the speed slower to adjust the pulse speed to the level of comfort of the horse. Over time, the horse will habituate and become more comfortable with stronger pulses.

The joints are not sensitive. Use the doubled joint loop for a more powerful and concentrated pulse. The joint loops are tightly wound, use this delivery loop to deliver deep a penetrating PEMF for maximum results. Be careful that if the horse pulls away the loops must release quickly.

Pulsed Magnetic Therapy for the best results. Use the machine on the same area of the horse's body more than once. Take the magnetic pulse delivery loop and rotate it 90 degrees in different directions from the last timed 3 minute application cycle, thus applying it on the same body part, but from different directions.

Strength of each individual pulse. Each pulse should be strong enough to make the cells and muscles spasm strongly, but not cause pain. As you work on each horse, you will find in a few minutes that their sensitivity to the EquiPulse subsides.

Pulse Speed. A slower pulse speed (stronger pulse) penetrates deeper. Therefore, as the horse's sensitivity decreases, the more tightly looped joint delivery cable may be used on other areas of the horse's body.



24" Equine Wings



Joint Loop

- **If There Are Signs of Discomfort:**

- Retreat by immediately pulling the loop off the treatment area.
- Avoid “chasing” or trapping the horse.
- Turn the intensity level down and try again.

- **When EquiPulse is Working:**

- Discomfort eventually subsides.
- Increase the Intensity Level for deeper penetration/treatment.
- There is no need to rush.

- **Avoid using the EquiPulse:**

- with fly spray
- with toxins or agents
- with liniment
- on tranquilized or sedated animals.

- **Because:**

- PEMF creates more Cell Permeability
- Toxic Agents can then
- Penetrate more deeply than intended
- Can cause an adverse response

But...

- DMSO is OK ...
 - Because it already penetrates the Cells
 - Works well with EquiPulse
- Antibiotics are OK...
 - Aids antibiotic performance
 - Aids cellular mobility



MORE ABOUT HIGH-POWERED PEMF DEVICES

- High-Powered PEMF devices deliver the “pulsed electromagnetic (not electrical) energy” through an applicator coil and into the area (e.g. Leg) it is applied on. The recurrence of the “pulse event” depends on the intensity setting of the device: the higher the pulse intensity is set, the longer the interval between pulses lasts. (As a frame of reference on a very low intensity setting there may be as many as 4 or so pulses per second; at a higher intensity there may be only one pulse per second). The high intensity combined with (only seconds) duration produces more activation of molecules. The short “on-time” of the charge means cells have sufficient “off-time” to utilize the energy received and reset to receive it again unless the cell is fully-recharged (at which point the energy passes to other cells in need). High PEMF intensities produce sufficiently-high charges in the horse’s body to increase a cell’s Adenosine Triphosphate (ATP) by up to 500%. This gives cells more fuel to be efficient while stimulating the body’s own capacity for healing.

- High-Powered PEMF affects the physics of the cell first; the physics, in turn, affect the chemistry which affects the tissue. PEMF does not discriminate: PEMF works to restore cell performance regardless of where the cell is situated, what it does, whose it is, or (even) what has happened to it; PEMF works with what there is to work with. The charges produced by High-Powered PEMF positively affect circulation, coagulation, fractures, emotional/cognitive issues, immunology, muscle actions, nerve conductivity, EEG effects, intestinal motility, skin respiration, antioxidant activity, and many other bodily functions.

- High-powered PEMF creates a time-varying magnetic field which induces an electric field (with magnitude proportional to the rate of change of the magnetic wave) in the body. The ability of High-Powered PEMF to produce up to 5.3T per microsecond produces significant changes quickly (often) leading to noticeable results rapidly.

DEVICE SPECIFICATIONS

- Voltage input: 120 to 230 VAC, 50 to 60Hz 1 Amp maximum
- Current input: 1 Amp Maximum
- Dimensions: 13.56" x 5.76" x 11.70" • Weight: 7 lbs • Shipping weight: 8 lbs

There has been much speculation and guessing about gauss levels by different manufacturers and distributors of PEMF technology. The most significant challenge with emerging multi-powered devices capable of a high voltage discharge is the simple fact that the discharge is so fast that a standard PEMF gauss meter cannot accurately measure the peak level of gauss. To be more precise, it has not been possible to measure gauss on our multi-powered PEMF technology with any traditional gauss meters because of the 5 microsecond discharge. Thus, without a proper gauss meter, the claims of gauss ratings are published by manufacturers and distributors based up calculations derived from a device's specifications of voltage, resistance and impedance. The fact that claimed, gauss ratings will vary widely and are not entirely accurate is no longer a surprise.

Gauss terminology: The gauss, abbreviated as G or Gs, is the cgs unit of measurement of magnetic flux density (or magnetic induction). It is named after German mathematician and physicist Carl Friedrich Gauss. One gauss is defined as one maxwell per square centimeter. The cgs system has been superseded by the International System of Units (SI), which uses the Tesla (unit T) as the unit of magnetic flux density.[1] One gauss equals 1×10^{-4} tesla (100 μ T), so 1 Tesla = 10,000 gauss. You may refer to this simple formula when reviewing our manufacturer's gauss ratings below.

Sample Factory Specs on Gauss and Frequency Output

Updated 2/5/2022						Cumulative Gauss in a 10 minute Application using Gauss on:	
Magnus Pro X1 MP 1-9 Settings Output	Gauss at Center of 14" Loop	Gauss directly on 14" Loop	Gauss at Center of 4.25" Mag Disc	Pulses Per Second	MP-MF PEMF	Perimeter of Large Loop	Mag Disc
Intensity Level 1	50	90	1070	10.00	N/A	540,000	6,420,000
Intensity Level 2	90	190	1840	3.80	7.83 HZ	433,200	4,195,200
Intensity Level 3	160	220	2250	2.22		293,040	2,997,000
Intensity Level 4	200	330	2950	1.61		318,780	2,849,700
Intensity Level 5	210	500	3480	1.10		330,000	2,296,800
Intensity Level 6	220	660	4010	0.86		340,560	2,069,160
Intensity Level 7	270	720	4880	0.65		280,800	1,903,200
Intensity Level 8	300	920	5420	0.52		287,040	1,691,040
Intensity Level 9	320	1040	5670	0.40		249,600	1,360,800
Magnus Pro X2 HP 1-9 Settings Output	Gauss at Center of 14" Loop	Gauss directly on 14" Loop	Gauss at Center of 4.25" Mag Disc	Pulses Per Second	MP-MF PEMF	Perimeter of Large Loop	Mag Disc
Intensity Level 1	83	121	210	10.00	7.83 HZ	726,000	1,260,000
Intensity Level 2	85	148	1360	7.87		698,856	6,421,920
Intensity Level 3	195	330	2510	5.00		990,000	7,530,000
Intensity Level 4	268	473	3660	2.70		766,260	5,929,200
Intensity Level 5	344	650	4810	1.45		565,500	4,184,700
Intensity Level 6	425	786	5960	1.28		603,648	4,577,280
Intensity Level 7	521	944	7110	0.92		521,088	3,924,720
Intensity Level 8	590	1095	8260	0.57		374,490	2,824,920
Intensity Level 9	618	1136	9360	0.48		327,168	2,695,680

MAINTENANCE

Service

- The device has no user serviceable parts and must be returned to the manufacturer for servicing.
- Application coils, mats and MAINS power cords are available from the manufacturer.
- The device is a sealed unit and lint, dust, light, including sunlight, etc. have no effects on it.
- Dangerous Voltage inside; DO NOT remove the cover or tamper with the device.

REMOVING THE COVER OR TAMPERING WITH THE DEVICE VOIDS THE WARRANTY.

- Contact Magnus Magnetica for assistance in setting up, using or maintaining the device.
- Disposal: This device is an electronic device. Electronics should never be disposed of with regular trash. Take non-working electronics to an electronics recycling center.
- Cleaning: There is no mandatory or scheduled cleaning, maintenance or sterilizing necessary. If you choose to clean the device:
- Disconnect the device from the MAINS before cleaning,
- DO NOT immerse any part or pour any liquids on the device.

CONTRAINDICATIONS

- The use of rubs or solutions, while using pulsed magnetic therapy, must be monitored. When using a LOW setting, do not use any iodine based leg paints. Iodine induces heat and this will interfere with the effectiveness of the LOW setting (which is to reduce heat in the area).

Note: Something to watch for when you begin a session; it is common to see an animal hang its head slightly and look extremely relaxed.

GENERAL CAUTIONS AND WARNINGS

- CAUTION: Should pain, swelling, inflammation or lameness become worse at any time, discontinue use of PEMF therapy and consult a veterinarian immediately.
- WARNING: Pulse Electro-Magnetic Fields are in use with this equipment and may interfere with human medical devices such as pacemakers and electronic stimulators.

TROUBLESHOOTING

If the device fails to function, use the following troubleshooting steps:

- If there are beeping sounds:

Proceed to identify the error beep code the device emits.

Single two second beep: End of session. Solution: Press a start pushbutton to begin a new treatment.

- Three short beeps & one long beep: The coil is not connected properly or was disconnected while the device was in use. Solution: Connect the coil properly and press a start pushbutton to begin a treatment.

- Two short beeps three times, followed by one long beep: Device overheating. Solution: Allow the device to cool down for 10 minutes by leaving the power on while no session is activated. The cooling fan will cool the device. Press a start pushbutton to begin a session after the 10 minutes have elapsed.

If the lights do not illuminate and there are no beeping sounds: Make sure the MAINS power cord is properly connected at the control unit and a MAINS outlet. Make sure the MAINS outlet is functioning. Try plugging another electrical appliance into the outlet to determine if it works. If the outlet works, test the device with another MAINS power cord.

If the device still fails to start or function properly, contact the manufacturer, listed on the enclosed Warranty Card to get a Return Merchandise Authorization (RMA) number. Disconnect the coil and the power cord. Package the device securely and return it to the manufacturer for servicing with the RMA number and your contact information.

STORAGE AND TRANSPORTATION

- Keep the device dry and store in a dry place. Storage in a damp place may cause corrosion.
- Store and transport at temperatures between 10° to 50°C at a relative humidity of up to 93% non condensing.
- Remove the MAINS power cord and the detachable treatment coils from the control unit and pack all parts of the device securely before transporting.

WARRANTY

The Warranty Registration Card must be filled out and returned to the manufacturer within 30 days of the date of purchase to activate the warranty.

The manufacturer warrants this device to operate properly for a period of three years from the date of the original purchase invoice. In the event of a malfunction during the warranty period, the manufacturer will, at its discretion, replace or repair the device to its original operating condition. Freight and insurance to and from the manufacturer's repair facility are not included. Freight and Insurance are the responsibility of the registered owner.

A Return Material Authorization (RMA) number must be obtained from the manufacturer, through the distributor, prior to returning any device or accessory for service. Got to www.magnusmagnetica.com/warranty.

The device must be delivered with prepaid freight, the RMA provided, the registered owner's name and address, and a brief description of the difficulties encountered. The device is to be shipped to the address designated by the manufacturer.

Such service, repair or adjustment of the device is guaranteed to the original purchaser provided the device has not been tampered with, does not have any physically broken parts and the control unit was not opened, altered or damaged as a result of misuse, accident, water, grit, impact, or lack of proper care.

If your device has a 7 year Extended Warranty go to www.magnusmagnetica.com/warranty to view terms and conditions

Compliance with the following Electrical Safety Standards:

- IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)
- EN 60601-1:2006+A11:2011
- CAN/CSA-C22.2 No. 60601-1

Compliance with EMC/EMI standards:

- IEC 60601-1-2:2007 ed3.0 (with A1:2008+A2:2009)
- CISPR11 ed5.1 (with A1:2010) Class B
- CISPR11 ed5.1 (with A1:2010) Class B
- IEC 61000-3-2 ed3.0 (with A1:2008+A2:2009)
- IEC 61000-3-3 ed2.0 (2008-06)
- IEC 61000-4-2 ed2.0 (2008-12)
- IEC 61000-4-3 ed3.0 (with A1:2007+A2:2010)
- IEC 61000-4-4 ed3.0 (2012-04)
- IEC 61000-4-5 ed2.0 (2005-11)
- IEC 61000-4-6 ed2.0 (with A1:2004+A2:2006)
- IEC 61000-4-11 ed2.0 (2004-03)

Magnus Magnetica, LLC
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Lexington, KY 40509
323.680.5411
www.MagnusMagnetica.com

MANUFACTURER'S INFORMATION:

PEMF Systems, Inc.
+1 (702) 448-2660
support@pemfsystems.com www.pemfsystems.com

Pulsed ElectroMagnetic Field Generator

EC REP QARAD Ciplastraat 3 B-2440 Geel Belgium

2020 - MADE IN USA
www.pemfsystems.com

PEMF Systems, Inc.
15131 Califa Street
LA, CA 91411
001-702-448-2660

VOLTS: 120-230VAC 50-60Hz
AMPS: 1 Fuse: 3A 250VAC
STORAGE: -25 to 70°C IP: 21

User Manuals at www.pemfsystems.com/500-HN.pdf
No User Serviceable Parts - Removing Cover Voids Warranty

Conforms To
AAMI STD ES60601-1
IEC STD 60601-1-6
IEC STD 60601-1-11
Certified To
CSA STD C22.2# 60601-1

REF 500-HN
SN

Pulsed ElectroMagnetic Field Generator

PEMF Systems, Inc.
Las Vegas, NV 89123 USA
www.pemfsystems.com
001-702-448-2660

2020 - MADE IN USA
Vesper Manufacturing
14556 Weddington St.
LA, CA 91411 USA

VOLTS: 120-230 VAC: 50-60Hz
AMPS: 1.5A FUSE: 2A 250VAC
STORAGE: 0 - 50°C

No User Serviceable Parts Inside - Removing Cover Voids Warranty

Conforms To
AAMI STD ES60601-1
IEC STD 60601-1-6
IEC STD 60601-1-11
Certified To
CSA STD C22.2# 60601-1

REF XXXX-XXXX
SN 00000