

# MT BASE PLUS



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MA321IGBb



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## IMPORTANTE/ IMPORTANT

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 **WARNINGS**

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It is very important that this manual of instructions is preserved together the unit for any future consultation. If the unit must be sold or transferred to other consumer, make sure that the manual comes furnished together, so that the new consumer could be aware of the operation of the unit and of the relative instructions.

**THESE WARNINGS HAVE BEEN WRITTEN FOR YOUR SAFETY AND FOR THE OTHERS ONE, SO PLEASE PAY ATTENTION READING THEM BEFORE YOU INSTALL AND USE THE UNIT.**

- After have removed the packing we make sure of the equipment's integrity. If there is a doubt do not use it and turn to qualified staff.
- The electric security of the equipment is assured only when the same is correctly connected to an electric installation conformable to the standard norms. It is necessary to verify this fundamental requisite of security and, if there is a doubt, ask for a control by qualified staff.
- Before connecting the equipment be sure that the rating (on the back panel) is in conformity to the electric system.
- If there is incompatibility between the wall socket and the supply cable of the equipment substitute it with another one. In general it is not advised the use of adapters, multiple wall sockets and/or extensions. If their use is essential it is necessary to use only simple adapters and extensions in conformity to the norms of safe.
- The use of any type of electric equipment requires the observance of some fundamental rules. In particular:
  - do not touch the equipment with wet hands or feet;
  - do not use the equipment with barefoot.
- Do not expose the equipment to atmospheric agents (rain, sun, etc.)
- Do not keep the equipment uselessly connected. Switch off the general interrupter when the equipment is not used.
- This equipment is destined only to the use for which it has been designed. Every other use is improper and so dangerous. The manufacturer cannot be considered responsible for possible damages caused by improper or unreasonable uses.
- It is dangerous to modify the characteristics of this equipment. **WARNING:** No modification of this equipment is allowed.
- Before carrying out any type of cleaning or maintenance, disconnect the equipment through the plug or switching off the mains switch.
- If there is a damage or the equipment doesn't work well, switch it off. For the repairing turn only to a qualified center of Technical Assistance and ask for the original spare parts. The missed respect of these things can be dangerous for the safety of the equipment and for the user.
- Medical programs should be executed only after consultation with your doctor or physical therapist.

- This equipment was manufactured to satisfy the present electromagnetic compatibility. In case of the functioning of the unit is interfered or interfies with the normal functioning of other electrical and electronic equipments, it is recommended to feed the equipment by a different electrical plug and/or try to dispose the unit in a different way until to the interference ends.
- Do not use mobile phone near to the equipment to avoid possible interference with it.
- It is recommended to not carry out this therapy at the same time of TENS and/or Holter.
- When the unit is working do not put the magnets near any type of screens (monitor, tv, etc..), this could cause the images and colours distortion.
- Many components used inside this equipment are sensible to the electrostatic charges. If you need to hand any electronic component, avoid the eventual static energy that you can carry, by touching a mass plane to charge at hearth. If it is possible, wear a bracelet connected to earth. If you do not observe these precautions you could cause permanent damages to the electronic components of the unit.
- Before the use of the unit verify the conditions of cables and equipment to individualize electric dangers.
- The unit does not fit explosive or gas environments.



**Do not working inside the case.** During the operation do not clogged up the aeration grid. Put the equipment in a rigid surface (do not lean equipment on beds, sofas etc.)

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## GENERAL INFORMATION

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**MT BASE PLUS** is designed and manufactured for applications of magnetic therapy for home use, in compliance with Directive 93/42/EC as a medical device class IIa.

Unit has inside a generator of square waveform electrical current with frequency varying from 10 to 99 Hz and impulse time varying so to obtain a field's intensity determined from 10 to 80 Gauss. Magnetical field's intensity is obtained by changing realization's time of the circuit supplying the current into the transducer. Quick variation of field induces into the patient the electromotive forces producing the stimulating currents.

Current is monitored by a monitoring circuit managed by an electronic microcontroller that guarantees the precision.

**MT BASE PLUS** offers the freedom of setting customised therapy parameters with parameters, such as frequency, field intensity and duration time.

Unit has inside a sound sensor of magnetic field and a safety system that stops the delivery in the case of short-circuit.

Two level transducers can be connected, in the same time, to the **Magneto Base +**, they were realized by semirigid material to give more comfort to the application in contact with the body. Buttonholes for the fixing by elastic bands are on the transducers and the two polarities North (N) and South (S) are shown. This allows to use them singly or by coherent concatenate or repelling magnetic field.

### ***INTENDED USE***

Active Medical Device for temporary use, designed and built for domiciliary applications of magnetic therapy for the treatment of osteo-articular pathologies.



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# MAGNETOTHERAPY

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The effect of natural magnets has been known since ancient times and ancient too are the empirical attempts to use them in medicine. In reality, only in the last decades have studies been made on the phenomena resulting from the interaction between magnetic fields and biological tissues and an appropriate biophysical solution been sought. Two schools of thought have formed in western countries: one American and the other European, each referring to a different methodology. The American system (studied by Basset) uses magnetic impulses in order to obtain electromotive forces induced in the proximity of bone segments which have been fractured. The inductors must be positioned so as to obtain a dynamic between the piezoelectric component of the bone and the currents produced. In effect, a sort of deep electrotherapy is achieved without inserting needles or electrodes, as had already been pre-empted by French researchers, which can benefit, in particular, pseudoarthrosis.

The European system is based on magnetic fields, using the connection between the line of force of the external magnetic field and that of the microscopic components inside the biological structures, at both an ionic as well as cellular level.

## Devices

Besides the devices proposed by Basset which apply to specific indications (slow healing, pseudoarthrosis) and have a wide scientific and clinical following, although they do raise questions about the therapeutic methods (applications of 8 hours per day for at least 5 months), we are mainly interested in the devices more readily available in our country.

Excluding permanent magnets (placed on bracelets or in the form of plasters purchased from major stores), which do not have an insignificant experimental and clinical base, two types of devices are currently available:

- 1) Devices producing low frequency magnetic fields induced by sinusoidal or rectangular type currents.
- 2) High frequency electromagnetic therapy devices.

Magnetotherapy is part of physical therapy based on low frequency and low intensity pulsed magnetic fields, using the action of a magnetic field induced by electric current which travels along a coil (solenoid).

The fundamental principle on which magnetotherapy is based is that of bringing order in an area presumed to be in magnetic disorder.

This is achieved by direct or indirect action on certain important components of the body such as:

1. Endorphins and derivatives which modulate pain sensitivity (analgesic effect);
2. If the permeability of a cell membrane is altered, it cannot control the sodium pump and results in a cellular oedema (anti-oedemic and anti-inflammatory effect);
3. The ortho- and parasympathetic systems, which, stimulated on the basis of the quality, intensity and duration of the magnetic field, can induce various local (suprarenal medullar) and general (circulating catecholamines) responses. Depending on the ortho- and parasympathetic stimulation, alpha or beta receptors and various metabolisms (glucidic, protidic and lipidic) are affected.

Furthermore, magnetotherapy action favours the process of tissue repair and stimulates the natural organic defence mechanisms. In the light of the biological effects, a description of the therapeutic action of magnetic fields can be summarised in the two following points:

1. Anti-flogistic and anti-oedemigenic;
2. Stimulant of tissue repair processes.

Muscular-skeletal apparatus pathologies represent the most specific field of application of magnetotherapy; in particular, post-traumatic pathologies respond excellently to this type of treatment. All traumatic events, from minor distortive traumas to more severe fractures, can benefit from this therapy with reduced healing times.

Osteal pathologies treated with magnetotherapy have indicated processes of repair and shorter recovery times. Certain hypotheses have been proposed in explaining the rapid healing processes of fractures, corrective osteotomies, loosened endoprostheses, etc. brought about by magnetotherapy.

It can be said that magnetotherapy has biological effects which:

1. Induce a piezoelectric effect in connective tissues (collagen) which have been disturbed due to osteal discontinuity;
2. Determine the structural orientation of collagen and of newly formed bone and favour the process of calcium deposit with consequent improvement in the quality of callouses;
3. Increase blood flow and local oxygen pressure (hyper-vascularisation);
4. Improve healing process of soft tissues (connective and covering epithelium);
5. Have a minimal or no effect on the temperature of tissues, constituting a very important factor in the treatment of patients with metallic implants.

With its use of low frequencies, magnetotherapy can, therefore, be said to represent the therapy of first choice in flogistic, traumatic and degenerative pathologies of the osteal-articular and muscular-tendonal apparatus.

### **Applications include:**

- Healing of bone fractures.
- Positive magnetotherapy effects have been seen in the treatment of contusions, joint sprains and in all muscular-articular traumas
- Magnetotherapy acts on free radicals, trace elements and intracellular ferromagnetic substances, indicating its importance for the homeostatic equilibrium of cells
- Anti-inflammatory effect.
- Activation of metabolic exchanges and cell membrane functions

Magnetotherapy promotes an acceleration of all healing phenomena with bioregenerating, anti-inflammatory, anti-oedemigenic and analgesic effects and an absence of significant side effects.

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# **BIOENERGETIC EFFECTS OF MAGNETIC FIELDS**

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Electromagnetic waves favour:

- Increased mineralisation
- Resolution of muscular spasms
- Accelerated transmission of nerve stimulation

This results in an anti-oedemigenic and anti-flogistic effects that producing an analgesic and anti-inflammatory action, leading to increased well-being over time and longer-lasting biological benefits.

## **EFFECTS ON BONE TISSUE**

- Pulsed magnetic fields improve osteogenesis.
- Affects osteoblast membrane and piezoelectric properties of bone.
- Stimulates the production and deposit of collagen with consequent improved structure and orientation.
- Increases mineralisation.
- Increases bone strength.

## **EFFECTS ON INFLAMMATION**

- Anti-oedemigenic effect
- Effect on sodium/potassium pump
- Anthalgic action

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# MAGNETOTHERAPY AND DISEASES

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## ***MAGNETOTHERAPY AND SPORT***

Magnetotherapy is a valid therapy of the sport pathology, both local applications after luxations, fractures, contusions, distorsions, and for trauma of the muscular tissue due motory stress or fatigue and overloads. In these cases Magnetotherapy acts by reflected action, improving the time of resorption of the lactic acid that otherwise could be almost irrecoverable by the body due to the persist of the fatigue's sensation, until to cause muscular stretchings and tears.

## ***MAGNETOTHERAPY AND FOOT'S PATHOLOGY***

Magnetotherapy is a valid antiphlogistic therapy and so pain-relieving, for the distorsions of the ankle and per le distorsioni della caviglia e la talagia (or tallonitis).

## ***MAGNETOTHERAPY AND FRACTURES***

The interruption of the bony continuity could be caused by traumatic stress, cysts, tumor, osteoporosis. These pathologic fractures are distinguished in simple fractures and exposed fractures (with damages to the soft parts: muscles, covering tissues, etc.) and, according to their seat, in epiphysis fractures (on the proximal segment of the bone's head), diaphysis fractures (on the bony surface), metaphysis fractures (in the center of the bone). According to the extension of the lesion, the fractures are distinguished in longitudinal, trasversal, spiroid, fragmentary.

The symptomatology includes, according to the importance of the traumatic event, diffuse pain, visual difference, reduced mobility, pelt noise, ecchymosis, tumefaction, obliged mobility with functional impotence.

Magnetotherapy acts on the bony fractures inducing piezoelectrical effect on the structures interrupted by the bony discontinuity, promoting the calcium production with consequent improvement of the bony corn, it acts also on the post-traumatic shock (absence of hematic perfusion, oxygen deficit) of the vital organs.

## ***MAGNETOTHERAPY APPLIED AT THE CERVICAL***

Magnetotherapy is advisable against wryneck (lateral applications, under the nape in correspondence of the pain), comprehensive post-traumatic radiculopathy and wearing out pathologies (application on the nep and on the point of maximum pain). Far or reflexed applications have catecolaminico intent (antiphlogistic) and endorphinic (relief from pain) and the symptomatic point is treated indirectly.

## ***MAGNETOTHERAPY AND KNEE'S PATHOLOGIES***

Magnetotherapy is recommended against distorsions and other knee's pathologies, thanks to its anti-phlogistic action and relief from pain. Low frequency fields therapy can be unit to the instrumental physiotherapy or in presence of orthosis or advisable after a surgical operation at the ligaments. In this last case it is needed to restore, by magnetotherapy and physiotherapy, the circulation function, reduce the edema, begin the ossification process screw/cockroach

(Kenneth – Jones' reconstructive technique that consists in the placement of a bony-tendineous taking, from rotuleous tendines, in the place of the old frontal crossed ligament) pain reduction, restoring of the articular elasticity, promoting cellular exchanges.

### ***MAGNETOTHERAPY AND GONOARTHRISIS***

ELF applications (at least 45 minutes, to obtain relax and decontracting action of lumbar muscles, overtired by unstable movement) gives, also in this case, helps against pain symptoms and, in old patients, represents a strong help against the degenerative condition. magnetotherapy is effective in patients with prosthesis (transducer under the knee), thanks to its anti-phlogistic, pain relief and bioenergetic action.

### ***MAGNETOTHERAPY AND PAIN***

Pain is the final product of a mechanical and inflammatory event. At tissue level the pain interests zones mostly great and this causes enzymatic and difensive reactions by the organism. The intent of the magnetotherapy is, in this case, the transfer of energy with pain relief, but also with pain relief due to reflexed action, promoting the action of the used structure. The frequencies have to be low, and in "loco", to have pain relief. Magnetotherapy can promote the assimilation of anti-inflammatory and pain relief products and in the acute phase antibiotics too, accelerating the cellular exchanges reaction; it helps the permeability and the action of emunctory organs, in the elimination of the organic discharging substances after extended pharmacological therapy, by high frequencies.

### ***MAGNETOTERAPIA AND LUMBALGIA***

Lumbalgia means local pains at the inferior part of the back. The pain turns up suddenly, after an abrupt movement of the vertebral column, or it could be gradually and have several causes, from the pressure on a nerve by a "hernia" or arthritis.

The symptomatology is represented from pain in lumbar, lumbarsacral seat and from defending muscular contractures of interested segment.

In these clinical cases Magnetotherapy is useful, generalized at all vertebral system, by using big plates, and by a frequency range for the anti-phlogistic effect of the root and nucleus. The pain relief is consequent for the direct action on the enzymatic catecolaminic (adrenal) and endorfinic (ipophisis) productions. This method gives a good clinical-symptomatic aid in important forms of radiculopathies, in collaboration with medical and anti-phlogistic therapy.

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## **CONTRAINDICATIONS AND COLLATERAL EFFECTS**

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Magnetotherapy applications must be avoided in the following patients:

- Those with pace-makers or other electronic implants;
- Pregnant women;
- Epileptics.

Magnetotherapy must not be used in the proximity of the following patients:

- Those with pace-makers or other electronic implants;
- Pregnant women.

In the case of obvious severe pathologies, it is generally advisable to obtain prior advice from a physician.

Patients with magnetisable metallic prostheses or magnetisable synthesis devices should first consult the medical staff who inserted such devices.

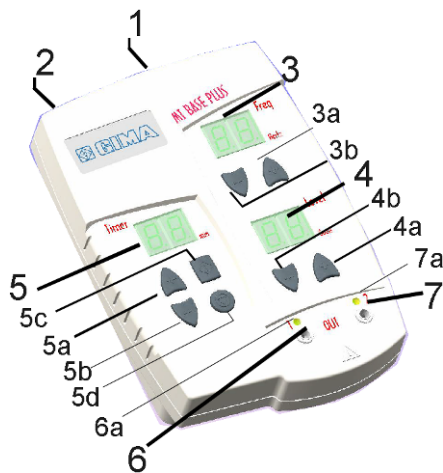
Any acoustic prostheses should be removed when the treatment is being applied in their proximity.

Therapy using magnetic fields may cause:

- Algic symptoms in rheumatic patients to become temporarily acute again,
- Vertigo and insomnia in applications which concern the rostral segment.
- Ureteral colics in applications on the lumbar segment.

In this case it is advisable to suspend therapy and to consult a physician.

## DESCRIPTION OF THE UNIT



1	Main socket
2	Main mechanical switch
3	Display frequency "Freq" (Hz)
3a	+ key to increase
3b	- key to decrease
4	Display intensity "Level" (Gauss)
4a	+ key to increase
4b	- key to decrease
5	Display Time "Timer" (min)
5a	+ key to increase
5b	- key to decrease
5c	Output start key (Start)
5d	Output stop key (Stop)
6	Connector OUT 1
6a	Warning light output 1
7	Connector OUT 2
7a	Warning light output 2

	Output start key (Start)
	Output stop key (Stop)

### CONTROLS

#### MAIN SOCKET (1)

On the back panel of the unit there is the main socket. Put in this socket the supplied main cable. The cable must be connected to a main socket with compatible characteristics with the unit (see the plate's data on the underside part of the unit).

#### MAIN MECHANICAL SWITCH (2)

At the left of the unit there is the main switch. Putting the switch on I position, the unit switches on. The switching on of the unit is shown by the lighting of the display.

#### DISPLAY FREQUENCY FREQ (3)

On top at right of the unit there is a display for the visualization of the frequency, in Hertz. Switching on the unit, the frequency is at 75 Hz and can be changed in the steps 10 - 25 - 50 -

75 - 99 Hz by the suitable keys. The + key is used to increase the frequency value, while the – to decrease it.

### ***DISPLAY INTENSITY LEVEL (4)***

On the central part of the unit, at the right, there is a display to visualize the intensity values, in Gauss. Switching on the unit, the intensity is at 30 Gauss and can be changed (from 10 to 80 Gauss, with 5 steps) by the suitable keys. The + key is used to increase the intensity value, while the – to decrease it.

### ***DISPLAY TIME TIMER (5)***

At the left of the unit, there is a display to visualize the time values, in minutes. Switching on the unit, the time is at 30 minutes and can be changed (from 0 to 60 min) by the suitable keys, when the apparatus does not supply. The + key is used to increase the frequency value, while the – to decrease it. By the start key (5c) it is possible to start the time count and start the output too. The output start condition is indicated by the lighting of a light point at right of minutes' display. By the stop key (5d), it is possible to stop the time count and stop the output too. The stop condition is indicated by the switching off of the point at the right of the minutes' display. The end of the treatment time is indicated by an acoustic signal of 10 seconds. By setting the 00 time it's possible to realize an infinite treatment time, without programmed interruption.

### ***CONNECTOR OUT 1 (6)***

Connection point of the supplied magnetic transducer. If there is current output , the corresponding warning light, warning light 1, is lighted (patient connected).

### ***CONNECTOR OUT 2 (7)***

Connection point of the supplied magnetic transducer. If there is current output , the corresponding warning light, warning light 2, is lighted (patient connected).



**MAGNETIC FIELD SENSOR**

The unit has inside a system of magnetic field survey.

To take the field (indicated by an acoustic signal) it needs that:



- 1 the unit must be in START condition.
- 2 the FREQ section must be set at 99Hz.
- 3 the LEVEL section must be set at 80 Gauss.
- 4 the transducer must be placed as shown in the figure.

**TECHNICAL CHARACTERISTICS**

Inside fuses	1xT500mAL, 250V (delayed) type 5x20	
Max intensity	80 Gauss (8mT)	
Output frequency	10 → 99Hz	
Safety class	II BF	
Medical Devices Class (93/42/EC)	IIa	
Protection	Unit IP20	Transducers IP20

**TRANSDUCERS:**

Delivered radiation:	electromagnetic field
Max. electromagnetic field intensity:	100 Gauss (10mT)
Frequency:	2 → 100 Hz

**DIMENSIONS****UNIT:**

Max height	68mm	Width	138mm
Length	193mm	Weight	1.040 Kg

**TRANSDUCERS:**

Max height	33mm	Width	97mm
Length	155mm	Weight	0.6 Kg

**STANDARD COMPOSITION**

1 REF	80200.10A	<b>MT BASE PLUS</b> unit
1 REF	00100.02	Main cable 2mt
2 REF	80100.80	Transducers 80 Gauss 155x97
1 REF	00602.060	Velcro elastic band 8x60 cm
1 REF	00602.100	Velcro elastic band 8x100 cm
1 REF	MA321	Instruction's Manual

# INSTALLATION AND TREATMENT START

- Unpack the equipment and accessories, check that them do not have damages caused by the transport. If there are damages (of you have doubts), do not use the unit and / or the accessories and refer to a qualified staff.
- Check that the disposable main voltage is conforming to the one required.
- Put the main switch on O (switched off). Insert the supplied main cable into the socket.
- Connect the unit to a main socket of 220-240V / 50-60 Hz.
- Switch on the equipment by the main switch on I (switched on), on the frontal panel the display of the three parameters: frequency, intensity, time, , switch on.
- Insert into the outputs OUT one or two transducers.
- By the keys of the “Freq” section, set the desired frequency; by the keys of the “Level” section set the desired intensity and by the keys of the “Timer” section the desired time.
- Connect one or two transducers on the part to treat. Hold the transducers with the supplied bands and be careful they do not hold too much to avoid any impediment to blood circulation.
- To end the treatment it is sufficient to switch off the equipment.
- Environmental conditions:

	<i>STORING</i>	<i>WORKING</i>
Environmental temperature	between -10 and 50 °C	between 10 and 40 °C
Relative damp	between 10 and 85%	between 30 and 75%
Atmospheric pressure	between 50 and 106 kPa	between 60kPa and 106 kPa

## MEANING OF GRAPHIC SYMBOLS ON THE UNIT



Manufacturer



Consult instructions for use



Conforming to the European Directive 93/42/CE and suc. mod. (2007/47/CE)



II Electric Class device



Protection against direct and not direct contacts: Type BF



Manufacturing Date



Serial Number



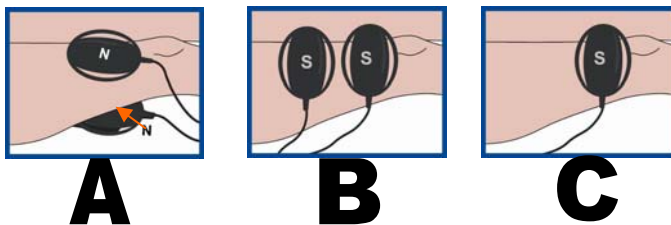
The symbol on the side (barred dustbin on wheel) denotes that the products mustn't throw into urban refuses container but it must be eliminated with separate collection.

## PLACEMENT OF THE TRANSDUCERS

The applicators are marked with the letters N (North) on one side, and S (South) on the other side.

Place the applicator(s) corresponding with the area or areas to be treated and, if necessary, use the elasticised bands provided.

The various magnetic fields generated depending on the positions of the applicators, are indicated below. For the sake of clarity, a leg has been illustrated. Positioning on other parts of the body will be similar.



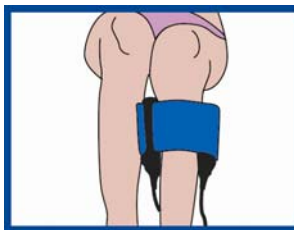
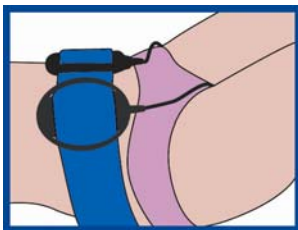
**A** – Use of two applicators facing each other in opposite positions. An applicator with the letter N in contact with the area to be treated and the other applicator with the letter S in contact with the area. The section to be treated is between the two magnets. Type of field generated: **COHERENT**

**B** – Use of the two applicators next to each other for treatment of two areas or larger areas. Both applicators are positioned with the letter N in contact with the area to be treated. The area to be treated is under the two magnets. Type of field generated: **NORMAL-EXTENDED**

**C** – Use of only one applicator. The applicator is positioned with the letter N directly on the area to be treated. Type of field generated: **NORMAL**

### *Suggestion:*

The applicators can be secured on the relevant zone with the elasticised bands provided, taking care not to make them too tight so as to avoid inhibiting the blood circulation.



## APPLICATIONS

The table below provides certain indicative protocols. Initially, daily applications are recommended, followed by treatments on alternate days, progressively increasing the intervals between applications until the pathology disappears. In the event that excellent results are obtained after a few sessions, it is nevertheless advisable to complete the cycle of applications so as to ensure a stable result. In the case of degenerative or chronic pathologies, session cycles should be repeated twice within the course of one year.

**IMPORTANT:** All details on treatments are provided purely for information purposes and are not intended to replace treatment procedures indicated by legally authorised medical staff. No responsibility is assumed by the supplier of the equipment for consequences due to inadequate use or contrary use to the instructions of the medical staff.

### INDICATIVE TABLE OF THE APPLICATIONS

<i>Treatment</i>	<i>FREQUENCY (Hertz)</i>	<i>LEVEL (Gauss)</i>	<i>TIMER (minutes)</i>	<i>SESSION (number)</i>	<i>Position</i>
ARTHRITIS	99	40	45	20-25	C
ARTHROSIS	25	60	45	20-25	C
ARTICULAR PAIN	25	80	30	15-20	NE
BURSITIS	25	80	45	15-20	C
CERVICAL ARTHROSIS	10	30	30	20-25	NE
CERVICALGIA	10	30	45	15-20	NE
CHONDRITE	99	40	30	20-25	C
COXOARTHROSIS	10	60	30	15-20	C
DISCOPATHIES	25	50	20	25-30	NE
ENTHESITIS	10	80	20	10-15	N
EPICONDILITIS	50	80	45	25-30	C
EPITROCHLEITIS	50	80	45	20-25	C
FRACTURES	25	80	45	-	C
GONOARTHROSIS	50	80	30	15-20	C
HEEL PAIN	10	60	30	10-15	N
JOINT INFLAMMATION	25	80	30	10-15	N
LIMB NEURALGIA	99	60	30	20-25	C
LOMBOSCIATALGIA	50	50	20	25-30	NE
LUMBAGO	50	60	45	25-30	NE
LUXATIONS	10	80	45	20-25	C
METATARSALGIA	50	80	30	20-25	N
MUSCULAR CONTRACTURE	50	80	45	15-20	NE
MUSCULAR PAIN	99	60	30	10-15	C
MUSCULAR SPRAINS	25	80	30	8-12	NE
OMARTHRTIS	99	60	30	20-25	C
OMARTHROSIS	10	60	45	15-20	C
OSTEOPOROSIS	10	80	45	All Days	NE
PATELLAR CHONDROPATHY	99	30	30	20-25	N
PLANTAR FASCIITIS	10	60	20	10-15	N
POLYARTHRTIS	10	80	30	15-20	C

<i>Treatment</i>	<i>FREQUENCY (Hertz)</i>	<i>LEVEL (Gauss)</i>	<i>TIMER (minutes)</i>	<i>SESSION (number)</i>	<i>Position</i>
PSEUDOARTHROSIS	10	80	45	20-25	C
RHEUMATIC DISEASES	99	30	45	15-20	C
RHIZOARTHROSIS	25	50	30	10-15	C
SCAP. PERIARTHTRITIS	10	50	30	20-25	C
SCIATICA	10	40	20	25-30	NE
SPRAINS	50	80	45	8-12	C
TENDINITIS	25	60	30	8-12	C
TENDINOPATHY	10	80	45	10-15	C
TENOSYNOVITIS	25	80	30	20-25	C
TORTICOLLIS	10	30	30	8-12	NE
VERTEBRAL ARTHROSIS	25	30	30	20-25	NE
VERTEBRAL PAIN	25	60	25	15-20	NE

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# MAINTENANCE

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## ***PREVENTIVE MAINTENANCE***

### **DETACH THE ELECTRIC CONNECTIONS BEFORE PERFORMING ANY OPERATION OF MAINTENANCE.**

The preventive maintenance consists mainly:

- in before every use control of the state of the unit and of the accessories to examine the integrity of all the cables, the isolations, the wraps etc. projected to avoid the access to powered parts.
- in the periodic cleaning of the units regularly effect for maintaining of the unit at the best of functionality conditions and appearance.
- in the periodic cleaning of the accessories.

## ***CLEANING OF THE UNIT***

Clean the external cabinet and the control panels with a damp cloth: no use of abrasive or solvent products it is recommended. The use of ethyl alcohol or of detergents containing high percentage of ethyl alcohol is not allowed on the control panels.

Don't dip the unit in liquids. In case of penetration of liquids do not use the unit and address to professionally qualified personnel.

## ***CLEANING OF THE TRANSDUCERS***

Clean the transducers with a damp cloth: no use of abrasive or solvent products it is recommended. If you use the applicators on different people and in order to avoid the risk of cross-infection, they should be cleaned with a disinfectant solution using a cotton swab to reach the creeks present. Don't dip the unit in liquids. In case of penetration of liquids do not use the unit and address to professionally qualified personnel.

## ***CLEANING OF THE BANDS***

For the cleaning of the bands do not use warm water; in case of use of detergents rinse with carefully. If you use on different people in order to avoid the risk of cross-infection, they should be cleaned with a disinfectant solution.

### **NOTE:**

The unit has to be periodically controlled (at least once a year) by qualified personnel to ascertain the electrical safety about the measurement of the leakage current

***CORRECTIVE MAINTENANCE***

If a malfunction of the equipment is found it is suggested to check first of all the control setting of the unit.

The unit and its accessories should have checked by professionally qualified personnel in case that they are exposed to external mechanical solicitations, for instance after a serious fall, to liquid dripping, to strong overheating (for instance direct light of the sun, fire), or if their functionality seems to have altered or if some part of the unit's cabinet it has broken, lacking, or displaced or if some connector or cable show signs of deterioration.

***PROBLEMS SOLUTION***

These are some easy solutions to the problems with **MT BASE PLUS**:

**Problem****Solution**

The main switch is switched on but the unit doesn't work.	Inspect if the main cable is correctly inserted.
Unit is switch on but there is not magnetic field's output	Check if the warning light of the output is lighted. Check if the transducers are correctly connected on the outputs OUT.
Yellow warning is not lighted	Disconnect the transducers: if after this the light will light-on please refer to the assistance service.
At the switching on the unit does not work correctly.	Switch off the apparatus, wait for at least 30 seconds and after this time try a new switch-on.



If the problems are not overcome, please refer to the qualified staff to control yours **MT BASE PLUS**. Do not open the unit for any reasons, this could be dangerous and decline any warranty.

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## F.A.Q.

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We report the **Frequently Asked Questions** about the **Magnetotherapy**.

	
<b>What is Magnetotherapy?</b>	Magnetotherapy is a kind of physiotherapy that uses, for a therapeutic intent, electromagnetic waves.
<b>How many types of magnetic fields are?</b>	There are constant magnetic fields and pulsed magnetic fields. Pulsed magnetic fields are divided in high frequency magnetic fields and in low frequency magnetic fields.
<b>What is a pulsed magnetic field?</b>	Pulsed magnetic field is a not alternated magnetic field (it do not invert its polarity), but <b>pulsing</b> .
<b>Why pulsed magnetic fields are used?</b>	Low frequency pulsed magnetic fields are an optimal therapeutic instrument for several pathologies, because they have cyclic course and not fixed. Thanks to this characteristic they are considered most effective
<b>How do you carry out the applications of Magnetotherapy ?</b>	The applications are carried out by supplied transducers that change electric impulse in magnetic field.
<b>When a device for Magnetotherapy can be defined safe?</b>	To define a device for Magnetotherapy as safe, it must be according to the Standards in force. LED SpA is an Italian company, that projects and produces safe electro medical equipments that respect the Standards in force
<b>Does Magnetotherapy have any contraindications?</b>	Magnetotherapy has not particular contraindications, but its use is advised on patients by pace-maker e, in pregnancy .
<b>How long does a session of Magnetotherapy ?</b>	The session's time changes according to the person, the disease, the age, because the time of the cure depends from the disease and its entity.

*The information given in this chapter are explicative and they do not replace the medical opinion.*



**Informazioni in base all'Art. 13 del D.Lgs. 151/05 del 25/07/2005 "Attuazione delle Direttive 2002/95/CE e 2003/108/CE, relative alla riduzione di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti.**



A fine vita il presente prodotto non deve essere smaltito come rifiuto urbano, lo stesso deve essere oggetto di una raccolta separata.

Se il rifiuto viene smaltito in modo non idoneo è possibile che alcune parti del prodotto (ad esempio eventuali accumulatori) possono avere effetti potenzialmente negativi per l'ambiente e sulla salute umana.

Il simbolo a lato (contenitore di spazzatura su ruote barrato) indica che il prodotto non deve essere gettato nei contenitori per i rifiuti urbani ma deve essere smaltito con una raccolta separata.

In caso di smaltimento abusivo di questo prodotto sono previste delle sanzioni.

**Information about elimination of this product (Applicable in the European Union and other European countries with separate collection systems)**



On the end of the life, the present product mustn't be eliminated as urban refusal, but it must be eliminated in a separated collection.

If the product is eliminated in unsuitable way, it is possible that some parts of the product (for example some accumulators) could be negative for the environment and for the human health.

The symbol on the side (barred dustbin on wheel) denotes that the products mustn't throw into urban refuses container but it must be eliminated with separate collection.

In case of abusive elimination of this product, could be foreseen sanctions.