WWW.BEMERGROUP.COM

3 Years Warranty

EN – BEMER SYSTEM

BEMER-SET **PRO**

:: User Manual

ONLY VALID FOR USA
NOVEMBER 2020

BEMER GROUP

Congratulations on the purchase of your new BEMER set. These high quality products are manufactured by us with the greatest of care and meet our high quality standards, as well as the European and international production standards of medical products. Not only is this device of the highest quality, but it is also user friendly, with optimal functionality determined by our satisfied customers over the past 10 years.

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Contents

Scope of Delivery – Pro-Set* [Art. No. 410201]

ART. NO. 420201 B.BOX Professional (control device with multitouch display)

APPLICATORS

B.GRIP (holder module for B.SPOT)		[Art. No. 431000]
B.SPOT (application module for local treatment)		[Art. No. 431101]
B.PAD (flexible application module for local treatment)		[Art. No. 430301]
B.SCAN (scanning module for functional checks)		[Art. No. 450100]

ACCESSORIES INCLUDED

Wall mount	[Art. No. 450200]	Vehicle connection cable	[Art. No. 440300]
Attachment belt (B.GRIP)	[Art. No. 450700]		

Symbols found in the operating instructions	
Warning / Caution – failure to observe can result in possible injuries or property damage.	
Proper disposal	
Tip	
Manufacturer	
CE conformity marking according to Medical Devices Directive 93/42/EWG	
Temperature limit	
Air pressure limit	
Relative humidity limit	

Foreword

This instruction manual belongs to this device. It contains important information for usage and handling. Read these instructions completely. Non-observance of these instructions can lead to injury of the user or damage to the unit.

Device symbols	
CE conformity marking according to Medical Devices Directive 93/42/EWG	
Proper disposal	
Manufacturer	
Please refer to the user manual	
Protection class Device is of protection class II	
Application part type Application part is type BF	
Serial number	
Refer to instruction manual / booklet	

Safety instructions

BEMER products are manufactured according to the latest technology and are completely safe to operate. Nevertheless, hazards could be caused by this device. This is particularly the case when insufficiently trained personnel are operating the device, or should the device be inappropriately used and not according to its indications for use. Make sure that you have completely read and understood the instruction manual. If you have any questions, do not hesitate to contact us.

Direct contact between the device and its application modules is only permissible on undamaged skin.

- Consult with your doctor before using BEMER devices, if you are in the care of a doctor.
- Before you connect the BEMER device to the power supply, please make sure that the power supply is identical with that of the B.BOX power pack supply.
- Power cable and power plug must be in their original, undamaged condition. Immediately replace any damaged parts!
- Make sure to unplug the power plug when cleaning!
- Do not misuse BEMER devices! The devices may not be used for any purposes other than those mentioned here.

- Always keep BEMER devices in proper working order.
- Only use approved BEMER accessories.
- Please check BEMER devices on a regular basis for damage. Immediately replace any damaged parts.
- Please read the user manual before use.
- BEMER devices may only be used on a stable, non yielding surface (e. g. floor, sofa, bed, table).
- BEMER devices are not toys. Keep pets away from devices.
- The BEMER device is not intended to be used for use by people under 18 years of age.
- When using please make sure that the applicator connection cables are arranged in such a way that there can be no strangulation or restriction of breathing.
- Before somebody else uses the device, the unit and its components must be cleaned.
- Caution when expanding or collapsing the top part of the instrument (see chapter Connections – B.BOX).
- Do not modify this equipment without authorization from the manufacturer.
- Local laws and regulations must be observed by professional users.
- If you experience adverse reactions, stop using BEMER devices and consult your medical doctor.
- Stimulation should not be applied over the carotid sinus nerves, particularly in patients with a known sensitivity to the carotid sinus reflex.
- Stimulation should not be applied over the neck or mouth. Severe spasm of the laryngeal and pharyngeal muscles may occur and the contractions may be strong enough to close the airway or cause difficulty in breathing.
- Stimulation should not be applied transthoracically (through chest) in that the introduction of electro-magnetic stimulation into the heart may cause cardiac arrhythmias.
- Stimulation should not be applied transcerebrally (through the head).
- Stimulation should not be applied over infected, or inflamed areas or skin eruptions, e.g., phlebitis, thrombophlebitis, varicose veins, etc.
- The devices are not intended to be used during sleep.

Intended Use

- To temporarily increase local blood circulation in healthy leg muscles
- To stimulate healthy muscles in order to improve and facilitate muscle performance.

Contraindications

The following absolute contraindications must be observed:

- Immunosuppressive therapy in consequence of transplantation
- Immunosuppressive therapy in consequence of allogenic cellular transplantations or bone marrow stem cell transplantation
- Other conditions often requiring immunosuppressive therapy, e.g. autoimmune diseases or dermatological diseases are not contraindications to the use of BEMER therapy. BEMER therapy application has to be cleared by physician in charge.
- Do not use the device if you have a diagnosed Deep Vein Thrombosis (DVT)
- Active medical implants that lead to stimulation (e.g. pacemakers, defibrillators, brain stimulators, muscle stimulators) represent a relative contraindication. The adjuvant application of the BEMER therapy must be discussed with the patient's attending physician.
- All active medical implants that are intended to administer medication (medication pumps) are an absolute contraindication and prohibit the use of BEMER therapy.

BEMER products may not be used for any purpose other than that described in this chapter. Use of the device beyond that which has been specified is considered contrary to the intended purpose. The manufacturer is not responsible for any damages resulting from improper use. The user is solely responsible for any risks.

The BEMER may be used by adults (over 18 years old).

This system is not intended to be used by users with restricted physical, sensory or mental capabilities or lack of experience and/or lack of knowledge, unless they are supervised by a person responsible for their safety, or receive instructions from someone on how to use the device.

Warnings

With the following conditions, it is strongly recommended that you consult a medical doctor prior to the use of BEMER therapy:

- Do not use on head and face
- Fever of unknown origin
- Infectious diseases
- Caution should be used for patients with severe cardiac rhythm disorders and active implants such as cardiac pacemakers and insulin pumps.
- Caution should be used for patients with cardiac pacemaker, implanted defibrilator, or other implanted metallic or electronic devices.
- Severe psychoses
- Non-controlled seizure disorders (e.g. epilepsy)
- Long-term use of β-recepter antagonists (Beta-Blockers)

- Long-term use of corticoid agents (corticosteroids)
- Long-term use of cumarin derivates (Warfarin / Coumadin)

  Other anticoagulant agents such as non-steroidal drugs like diclofenac or other anti-hypertonic drugs such as calcium antagonists and angiotensin-receptor-antagonists are not known to interact with the BEMER therapy.
- For users suffering from tumor diseases or other serious diseases that require ongoing medical treatment and/or medication, the complementary application of BEMER therapy has to be discussed with the treating medical doctor.
- If you feel any discomfort while using BEMER immediatley stop all applications and consult your physician in charge. Further applications of BEMER have to be cleared by him or her.

Warning

Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the BEMER Pro Set or BEMER Classic Set, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

Precautions

- Complaints, symptoms or diseases must be clarified by a medical doctor prior to the application of BEMER therapy
- Prescribed medications may only be altered after consulting the treating physician
- In users who regularly take blood thinning or clotting inhibitor medications, close monitoring of the clotting factors by the treating medical doctor are strongly recommended prior to starting BEMER therapy. BEMER therapy may intensify or weaken the effect of such drugs.
- In case of questions regarding BEMER therapy, the treating medical doctor is advised to contact BEMER medical support
- In general, application of BEMER therapy in users with active electronic implants and devices (such as medications pumps, neurostimulators etc) has to be discussed and cleared by the treating medical doctor.
- BEMER therapy is an important complementary therapy option and is not intended to replace other treatments
- Some patients may experience skin irritation or hypersensitivity due to the electrical stimulation.
- Powered muscle stimulators should be kept out of the reach of children.

- **Caution should be used in the presence of the following:**

a. Over the menstruating or pregnant uterus; and

b. Over areas of the skin which lack normal sensation.

Warning

Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

Warning

Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

These operating instructions contain important information. Keep them close to your device in order to inform yourself about safety instructions as well as proper handling.

Please read the operating instructions very carefully before using the device. In this way you can be assured that you benefit from all the advantages that this system has to offer and protect yourself and others from harm.

BEMER devices are designated only for the described, intended use according to the operating instructions.

The BEMER temporarily increases local blood circulation in healthy leg muscles and stimulates healthy muscles in order to improve and facilitate muscle performance.

The BEMER devices may be used for the following:

- To reduce stress
- To support sleep management

User Information

Treatment principles

1. **Local treatment**
   The application modules B.SPOT and B.PAD are intended for the local treatment of individual body parts, working with a maximum flux density of 150 µT. The targeted application should follow the application of the basic plan and should be applied to the shoulders, waist, back and lower extremities.

   B.SPOT is an intensively active application module for use in local treatment. B.SPOT is attached to the universal B.GRIP holder and held on the body area that is to be treated. Alternatively, the holder and application module can also be attached to the part of the body that is in need of treatment with the provided attachment strap.

   B.PAD is an intensively active application module for local treatment on individual body parts. The B.PAD is especially attractive because of its flexibility and can be attached with the help of a Velcro fastener strap to nearly every conceivable part of the body. When using on disabled or mobility impaired people, the B.PAD can provide a particularly valuable service.

2. Programs and intensity levels

The control devices B.BOX Professional offer 10 different intensity levels and three pre-defined programs. The intensity levels are applied during the generalized local treatment according to the basic plan, while the programs P1 – P3 are carried out in a step-by-step manner within the scope of the local treatment. The existing, predefined programs cover the wide range of application requirements needed for daily use.

Frequency of application

Whenever possible, BEMER therapy should be carried out on a daily basis. Intermittent applications mean a lessened effect, resulting in longer application durations.

There is no hard and fast rule for the distribution of applications throughout the day. It depends on the therapy goal and the situation of the individual user.

- For prevention, maintaining overall health, and supporting the body's performance, we recommend to use two applications a day following the Basic Plan on page 17.
- To treat acute stimulation targeted with the application module, we recommend the additional use of 2-3 local applications with the programs P1-P3 additionaly to the basic Plan. Overdosing or habituation effects from using the BEMER system are not known.
- At home, applications can be customized according to the individual's situation and needs. If possible, a treatment should be performed both in the morning and in the evening.
- At the doctor's office or therapeutic practices, it is usually possible to have only one application per day. Usually this consists of a local treatment with the B.PAD and, when necessary, this is immediately followed by another treatment with an application module for localized treatment (double treatment).
- Do not use two different local treatments at the same time, on the same user.

Practical tips for application

The effects of the specific signal configuration are scientifically proven and essentially independent of external influences. Nevertheless, the effects of the application can be optimized by taking into account these few tips:

- Make sure you find a comfortable position.
- Avoid wearing tight or constricting clothing.
- Choose a room with a comfortable temperature for your therapy.
- Avoid stress or distraction.
- Avoid drinking coffee or tea for at least one hour before and after the treatment.
- Avoid consuming tobacco products for at least one hour before and after the treatment.
- Drink a glass of still water before and after application.

Basic Plan

The Basic Plan is a local therapy that stimulates healthy muscles in order to improve and facilitate muscle performance. This is the basis of treatment with BEMER therapy and defines the standard of treatment for conditions of reduced well-being.

The Basic Plan treatment (BP treatment) with the B.PAD should generally be carried out 2x daily, each session has a duration of 8 minutes (see "Short treatments" for B.BOX Pro described on page 26).

The first cycle lasts 6 weeks, the following ones only 4 weeks. Begin with level 1 and increase a level each week up to level 6. After the 7th week, begin the new cycle starting with level 3.

For ongoing care to support the musculature, the "LOW" setting is recommended for usage with the "Basic Plan" (see "Default settings" for B.BOX Pro described on page 28).

	CYCLE 1					
	WEEK 1	**WEEK 2**	**WEEK 3**	**WEEK 4**	**WEEK 5**	**WEEK 6**
MORNING	Level 1 *plus*	Level 2 *plus*	Level 3 *plus*	Level 4 *plus*	Level 5 *plus*	Level 6 *plus*
EVENING	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	BY CYCLE 2					
	WEEK 7	**WEEK 8**	**WEEK 9**	**WEEK 10**		
MORNING	Level 3 *plus*	Level 4 *plus*	Level 5 *plus*	Level 6 *plus*		
EVENING	Level 3	Level 4	Level 5	Level 6		

Basic Plan (treatment plan for local treatment)

Programs on the Control Unit

The predefined program settings were specially developed for the use of local applicators (B.SPOT, B.PAD) so that an additional therapy impulse can be given locally.

Local application is not a sufficient replacement for the Basic Plan.

Use the local application two or three times per day, beginning with P1 and change after two or three days to P2. The aim is not to get to P2, if you feel uncomfortable with P2, return to P1.

PROGRAM	DURATION	PENETRATION DEPTH INTO THE BODY
P1 recommended for home use	8 min.	Low intensity for superficial / minor stimulation
P2 recommended for health care facilities	16 min.	Middle intensity for somewhat deeper / moderate stimulation

P1-P2 for daily users

P3	20 min.	Strong intensity for muscle stimulation and training

P3 for active athletes

For local application using the pre-defined programs, the "HIGH" setting is recommended for use (see "Default settings" for B.BOX Pro described on page 28).

BEMER Usage Support

If you still have questions or are uncertain, please contact your treating medical doctor or contact BEMER medical support:
Email: usage-support@bemer.services

General Information

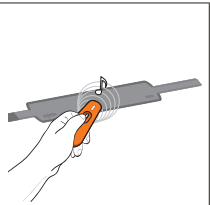
The Basic Plan treatment is carried out using the B.PAD according to the basic plan using intensities 1-6 (short application). Local treatments are carried out using the application modules B.SPOT and B.PAD and are used depending on the desired depth of penetration with the use of the predefined programs (P1-P3).

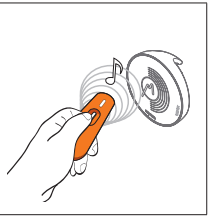
General tips

- Please note that several application modules can be connected to the B.BOX.
- Basic plan treatments always last 8 minutes, regardless of the chosen intensity.
- Programs have different durations and use varying intensities (see page 18).
- Ongoing treatments can be canceled at any time by pressing the power button [START / STOP].
- Canceled treatments can not be continued; they must be restarted.
- The plus Signal is switched on by default and can be switched off if needed.

Both the Basic Plan and all other application suggestions are based on many years of experience. This experience has also proven that regular applications are more important than the optimal choice of intensity. Successful therapy results are achieved most quickly through regular application. However the duration of the applications depends on how difficult the problem and for how long the body's own regulatory systems have been impaired.

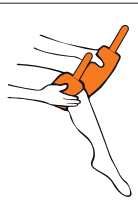
Examples of Application

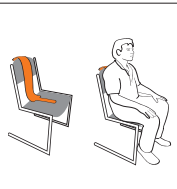




B.SCAN

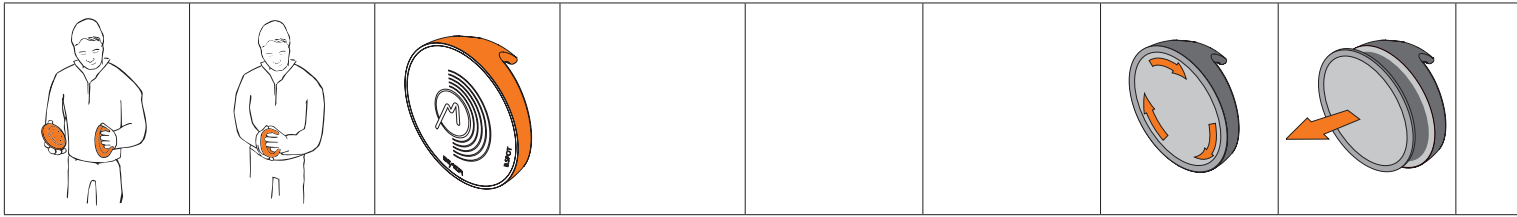
The B.BOX has an integrated test device for checking the performance of your application module.



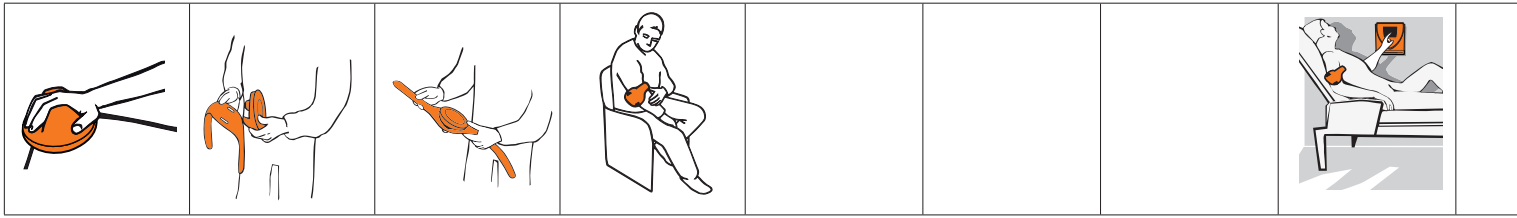


B.PAD

Handy, flexible and universally mobile.
This application module is made for local treatment.

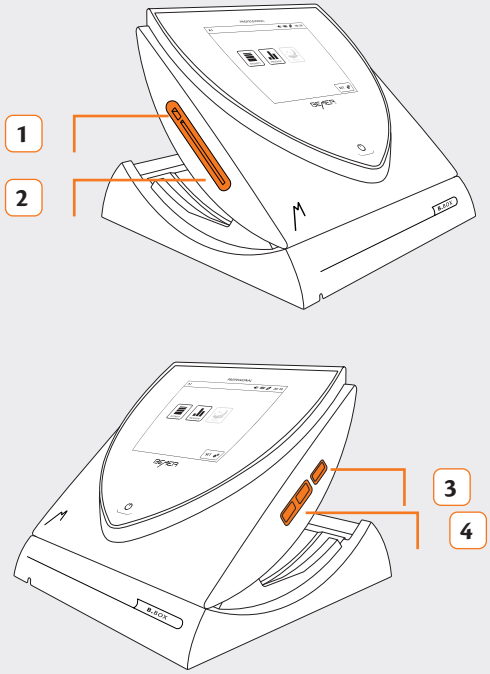


B.GRIP
Multi-functional grip for B.SPOT.



B.SPOT
Flexible, portable application module for local treatment.

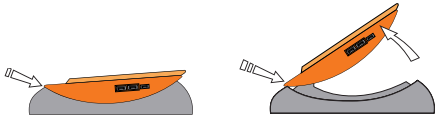
Wall mount
A wall mount for easy fixation of the B.BOX –
for example, on the wall next to a double bed.



Connections – B.BOX

Service interface[1]	1
Memory card slot	2
Communication interface[1]	3
Connections for the applicator modules (A1 and A2)	4

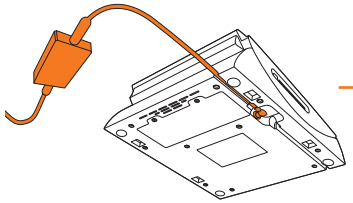
Basic position, recommended when using the wall mount



Position 1 and position 2, recommended for table application with different angles.

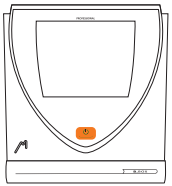
[1] Only use approved BEMER accessories.
Suitable for software updates and approved BEMER accessories.

Start-up Procedure – B.BOX



The plug on the power cord is the AC mains disconnect device and must remain readily operable. To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.

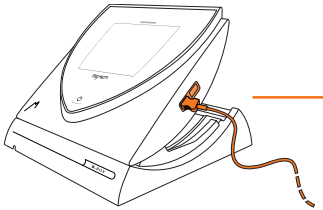
Turn the B.BOX over and connect it to the adapter. Place the device on a stable surface and plug the adapter in to the power supply.



A short press on the power button switches the device on, and a longer press will switch it off.

After 2 minutes of inactivity, the device automatically switches off.

Connection – Applicator Modules



Connection of application modules

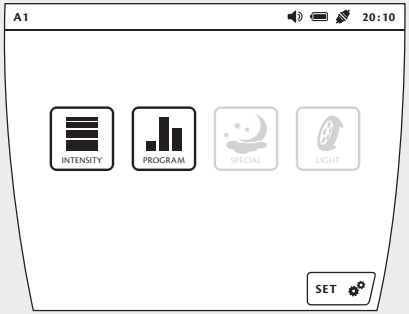
The two ports, A1 and A2, are available for connecting the application module. These are not specifically assigned, which means that they can connect any application module with any port.

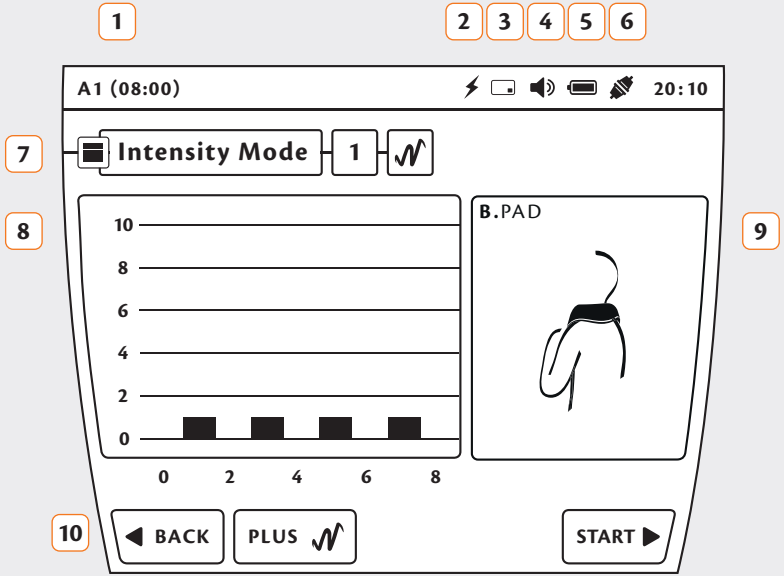
The magnetic plug prevents incorrect connection of the application module.

Display – B.BOX Professional

Wait several seconds after turning on the device unit until it is ready for operation (see display below).

From the main window you can access the individual menu items by pressing the various buttons.





Applicators (display the remaining time of the ongoing application)	1
Power Save (default activated)	2
Memory card (if inserted)	3
Volume (in current setting)	4
Rechargeable battery (state of charge)	5
Power supply operation (if connected)	6
Displays the active mode (the intensity and status of the *plus* signal)	7
Application window (displays the application progress incl. level and period of time)	8
Applicator window (displays the connected application module on the chosen port)	9
User and navigation lines (contain important operating elements, e. g. *plus* button or [START / STOP])	10

By pressing the buttons [A1 / A2] you can switch between the connected application modules.

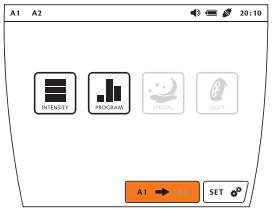
Applications – B.BOX Professional

Example

A B.PAD is connected on port [A1] and a B.SPOT on port [A2].

- Press the button [A1 / A2] and proceed as described on page 27.
- Now press the button [A1 / A2] and proceed as described on page 27.

  The remaining duration of both applications will be displayed in the upper information bar.

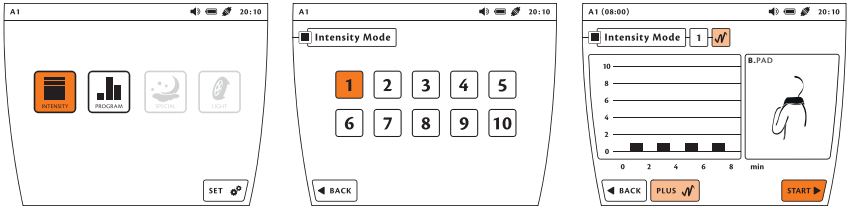


Short application (intensity levels 1-10)

- Press the button [INTENSITY].
- Select the desired intensity by pressing the respective number (1-10).
- Activate or deactivate the *plus* Signal by pressing [PLUS].
- After making the selection, start the short application by pressing [START].

The [A1 / A2] button is only available when 2 application modules are connected.

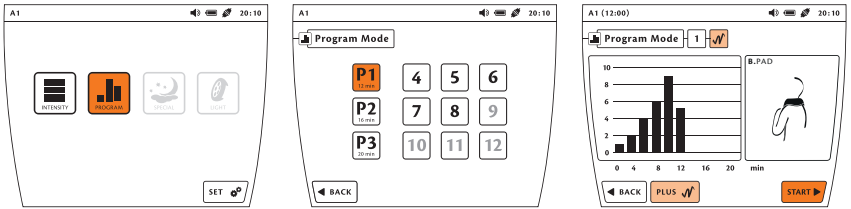
Example – short application with intensity 1
(using the application B.PAD via port A1)



Program selection

- Press the button [PROGRAM]; if a memory card is inserted, press the button [PROGRAM] again.
- Select the desired program by pressing the button of one of the predefined programs P1 – P3 and as needed, the available programs 4 – 12.
- Activate or deactivate the *plus* signal by pressing the button [PLUS].
- After making the selection, start the choosen program with [START].

Example – Program P1
(with the application module B.PAD via port A1)



Default Settings – application parameters / Basic settings – B.BOX Professional

The parameters [PLUS] and [INTENSITY] can be adjusted to be the default setting.

Setting the *plus* Signal as default

- To switch the *plus* Signals on/off, press the [PLUS] button before starting the program.

Setting the intensity to HIGH / LOW as default

The B.PAD can be used for program treatment and treatment by Basic Plan.

- Press the [SET] button.
- Press the [HIGH/LOW] button. When pressed, the button switches from [HIGH] to [LOW] and vice versa.

Setting the signal volume

- Press the [SET] button.
- Press the [VOLUME] button.
- Set the desired signal volume with the help of the arrow keys.
- The selection is always acknowledged by a signal at the chosen volume.
- Press the [SAVE] button to save your settings.

Confirmation of the [SET] button is possible only if no application is active.

Adjusting the display brightness

- Press the [SET] button.
- Press the [BRIGHTNESS] button.
- Now set the brightness with the help of the arrow keys. The display appears at the desired brightness.
- Press the [SAVE] button to save your settings.

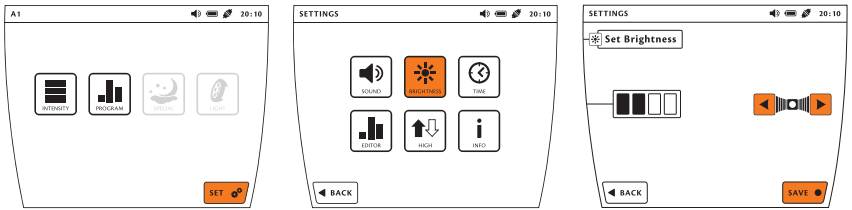
Setting the time

- Press the [SET] button.
- Press the [TIME] button.
- Now set the current time with the help of the arrow keys.
- Now press [SAVE] to save your settings.

To access the system information

- Press the [SET] button.
- Press the [INFO] button.
- Press the [OK] button to close the [INFO] window.

Example – setting the display brightness



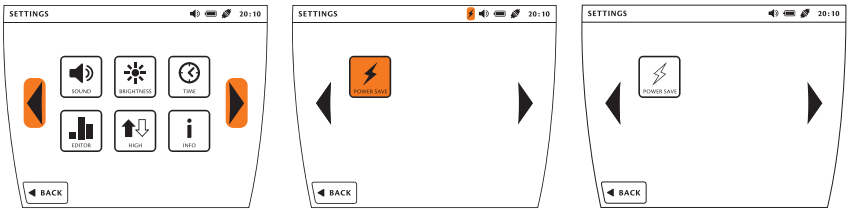
Activate/deactivate Power Save mode (default activated)

- Press the [SET] button.
- Scroll through by using the arrow keys.
- Activate/deactivate the Power Save mode by pressing the [POWER SAVE] button.

The Power Save mode influences the stand-by characteristics of your machine. If it is deactivated, the machine turns itself off after approx. one hour of inactivity (switch-off time 2 minutes).

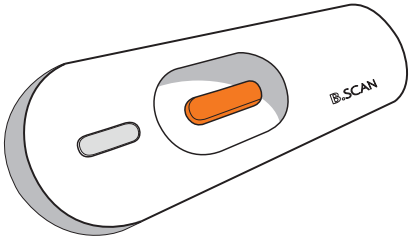
Attention: this also applies when battery operated.

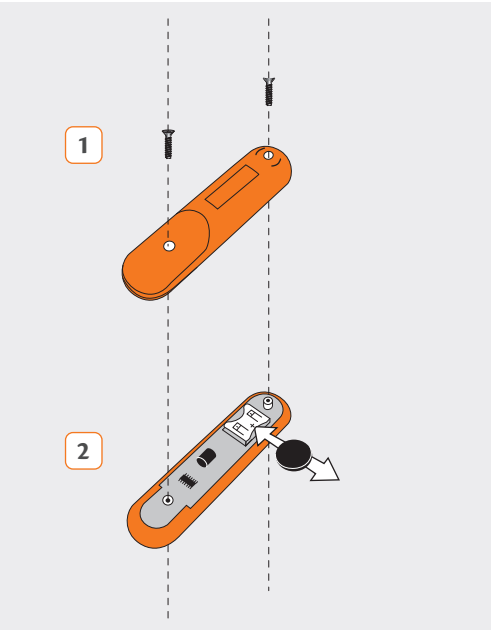
Example: Setting the Power Save mode



Updates

BEMER product are a secure investment and are therefore designed to transfer product advancements with the corresponding updates to the B.BOX through the communication or maintenance interface. Because different approaches are possible, you will receive exact instructions for proceeding with any updates along with the delivery.





B.SCAN

The B.SCAN is integrated in your B.BOX and is designed to check your BEMER product along with safety precautions for their proper operation. The B.SCAN makes the specific BEMER Signal configuration audible.

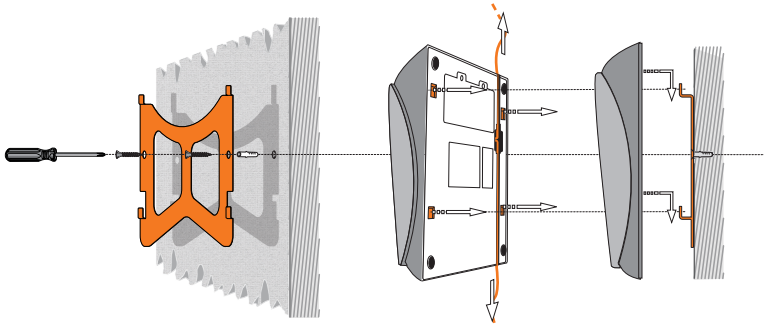
The device is switched on by pressing the button once; pressing and holding the button down (for several seconds) will switch off the device. If no signal is detected, the B.SCAN automatically switches off after 10 seconds.

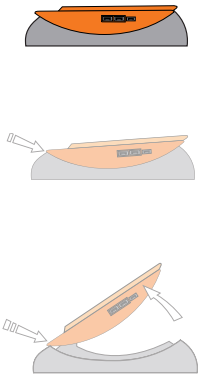
Changing the B.SCAN battery

- Remove both screws (see Fig. 1).
- Now carefully remove the back panel.
- Now slide the old battery sideways (in the direction of the arrow) away from its holder (see Fig. 2).
- Now slide the new battery (type CR 2032) into the holder. Please note the "+ pole" battery symbol (see Fig. 2).
- Now place the back panel back on the device and screw it back together.

Wall Mount Assembly – Pro-Set

Assemble the wall mount as shown. Please note the course of the cable duct and use to assemble according to the circumstances.





Basic position recommended when using the wall mount.

Position 1 and position 2, recommended for table application at different angles.

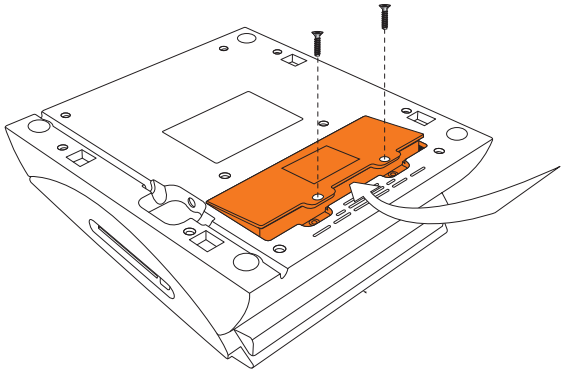
Rechargeable battery – B.BOX (optional accessory)

The high capacity, rechargeable battery used with the B.BOX makes it independent of electricity obtained from a power outlet and allows mobile application of the BEMER technology.

- Completely charge the battery before using for the first time.
- It takes about 6 hours to completely charge the unloaded battery.
- A newer battery, or one that has not been used over a period of time, will not be able to initially attain its full loading capacity.

Assembly / Changing the battery

- Loosen the screws and remove the cover of the battery compartment.
- Tilt the rechargeable battery into the battery compartment and make sure that it is securely in place.
- Now attach the battery.



Cleaning

- Remove the adapter from the power supply.
- Repeat the cleaning procedure at regular intervals. **Observe the safety notes.**
- Do not use abrasive, alkaline, or acidic cleaning agents.
- Do not use sharp or pointed objects.
- For cleaning and disinfection, we recommend using mikrozid® universal liquid from Schülke.
- Solutions containing a small amount of alcohol can be used for quickly disinfecting medical products based on the same active substances. **Please follow the manufacturer's instructions for use in the product data sheet.**
- Ensure that liquid does not enter the devices during cleaning and disinfection.

Components:
B.BOX // B.GRIP // B.SPOT

- BEMER devices and the associated components are neither waterproof nor protected against spray water. For this reason, the housing parts must be cleaned or disinfected with a slightly damp cloth.

B.PAD

- The components are not washable.
- To clean and disinfect them, evenly spray the surfaces with a cleaning/disinfection agent and follow the manufacturer's instructions with regard to exposure time. Next, wipe them with a soft, non-abrasive cloth.

B.GRIP fixing band // B.PAD cover

- Machine wash up to 30 °C with mild detergent
- **Do not machine dry**

Maintenance

BEMER products, when used correctly, are maintenance-free. Nevertheless, check your device condition regularly.

- Repair work may only be carried out by the manufacturer or by an authorized specialist, otherwise the warranty is no longer valid.
- Before you send a BEMER product for repair to the manufacturer or to one of their authorized specialists, make sure to first carry out a generalized error troubleshooting check.
- For simplified processing of repairs or to rule out an error, contact the corresponding service address.

  Use the original packaging for safer delivery.

Proper Disposal

Properly dispose of the device or batteries according to local laws. You can receive further information from your sales dealer or directly from the manufacturer.

Dispose of used batteries correctly, do not throw in an open fire. Danger of explosion!

Batteries do not belong in household garbage!

Troubleshooting

General information

BEMER devices are equipped with intelligent electronics. Therefore they can automatically detect and display errors. Should an error be displayed or should you suspect a malfunction, then check the following:

- Is the power supply connected to the outlet correctly (does the power supply have a corresponding control light)? If not, then connect the power supply to the outlet.
- Is the power supply connected to the B.BOX corectly? If not, then connect the power supply to the B.BOX.
- Are the desired application modules properly connected?
- Are all the cables and plugs that come into consideration undamaged??

If an error still persists or if one has not been properly located, please follow the instructions of the corresponding error code or contact your responsible service address. When in doubt, you can get information at **WWW.BEMERGROUP.COM**, where you will find your closest contact person.

Switching off the error message

When the error or cause has been remedied, you can switch off the error message on the device. This procedure using the B.BOX Pro is self explanatory and is found in the menu navigation.

ERROR MESSAGE	CAUSE	TROUBLESHOOTING
ERROR 1	An active applicator has been removed during the application.	Reconnect the applicator and start the application again.
ERROR 2	The temperature of the product is too high.	Check the environmental conditions and let the product cool down. When in doubt, contact service.
ERROR 3-4	There is a problem with the applicator module.	Please contact service.
ERROR 5-6	There is a malfunction of the power supply.	Please check for the possible sources of error such as: the power supply, the vehicle connection cable (12 volt) or the rechargeable battery (see technical data). When in doubt, contact service.
ERROR 7-8	There is a malfunction of the control unit.	Please contact service.
ERROR 9-12	There is a malfunction of the applicator module.	Please contact service.
ERROR 101	There is no applicator connected.	Please connect an applicator to the product.
ERROR 104	An unknown applicator has been detected.	The applicator module is invalid; please contact service.
ERROR 105	The capacity of the battery is too low.	The battery is empty; recharge the battery by connecting to the power supply.
ERROR 108	Chipcard cannot be read properly.	Please contact service.

For error messages that are not described here, please contact service.

Technical Data

B.BOX Pro	**Art. No. 420201**
Dimensions (W x H x D)	22 x 23 x 7 cm
Weight	1.4 kg
Operating voltage	12-15.1 V DC
Power input	2 A
Performance	max. 30 W

- Connections for 2 application modules
- Maintenance interface
- Communication interface

B.PAD	**Art. No. 430301**
Dimensions (W x H x D)	1110 x 130 x 15 mm
Weight	380 g
Coils	3
Average flux density	≈ 100 µT (max. level)
Average flux density *plus*	≈ 150 µT (max. level)
Cable length	≈ 250 cm
Surface material	Neoprene

B.GRIP	**Art. No. 431000**
Dimensions (W x H x D)	12 x 12 x 5 cm
Weight	200 g
Connection plug	6 pin
Cable length	≈ 250 cm

B.SPOT	**Art. No. 431101**
Dimensions (W x H x D)	13 x 13 x 3 cm
Weight	300 g
Coils	1
Average flux density	≈ 100 µT (max. level)
Average flux density *plus*	≈ 150 µT (max. level)

B.SCAN	**Art. No. 450100**
Dimensions (W x H x D)	12 x 3 x 2 cm
Weight (incl. battery)	39 g
Power supply	Battery CR2032
Operating time	≈ 1000 Measurements
Power input	Approx. 2 mA

B.BOX power supply	**Art. No. 440100**
Primary voltage	100-240 V AC
Primary current	1 A
Frequency	50-60 Hz
Secondary voltage	15 V DC
Secondary current	2.5 A max.
Protection class	SK II
Primary connection	≈ 180cm
Secondary connection	≈ 180 cm
Power supply	US connecting cable
Power supply indicator	LED green

Attachment belt (B.GRIP)	**Art. No. 450700**
Dimensions (W x H x D)	730 x 120 x 4 mm
Weight	50 g
Surface material	Neoprene

Vehicle connection cable	**Art. No. 440300**
Primary voltage	12 V
Max. cable length	≈ 160 cm

Rechargeable battery	**Art. No. 440200**
Dimensions (W x H x D)	14 x 6 x 2 cm
Weight	220 g
Operating voltage	7.2 V
Battery type	Li-Ion
Capacity	6700 mAh
Operating time	56 applications *

* Value are taken from the measurements (by a respective short application with the level 5) with a connected application module.

Technical Specifications	**BEMER**
PRIMARY MODE OF ACTION	Non-invasive tissue stimulation via magnetic field induction
Waveform	Pulsed asymmetric, constant amplitude during treatment
Shape	Sinusoidal, monopolar
Pulse repetition rate	All accessories: 10-30Hz
Single pulse duration	All accessories: 10 - 33µs
Maximum Power density applied:	All accessories: 35 - 150µT
Maximum Output Current	Current directly applied to the patient's body All accessories: < 5mA (acc. to IEC 60601-1)

Environmental conditions during operation

Temperature	+41° - +104°F
Air pressure	700 … 1060hPa ≅ 3000 m (ASL)
Relative humidity	15 … 93 % RH, +158 °F non-condensing

Storage and transportation

Temperature	-13° - +158°F
Air pressure	700 … 1060 hPa ≅ 3000 m (ASL)
Relative humidity	15 … 93 % RH, +158°F non-condensing

Protection against moisture

IP 21 protection against vertically dripping water
IP 22 protection against dripping water when the enclosure is tilted up to 15°

Expected lifetime

Expected minimum lifetime of the equipment and its applicators is 10 years. The determined minimum lifetime of 10 years is a purely statistical value that is influenced by many factors, such as the intensity of the application, the maintenance, climatic conditions, etc.

Maximum temperatures

B.SPOT	108°F

Standard marking

IEC 60601-1	Medical electronic equipment
IEC 60601-1-2	Electromagnetic compatibility
IEC 60601-1-6	Usability
IEC 60601-1-11	Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment
IEC ISO 14971	Application of risk management on medical products
IEC 62304	Software life cycle processes
IEC 62366	Application of usability on medical products

Guideline and Manufacturer's Declaration of Conformity (tables according to IEC 60601-1-2)

Electromagnetic emission

The BEMER-SET PRO is designed for operation in the electromagnetic environment listed below.
The customer or user of the BEMER-SET PRO should ensure that the product be used in such an environment.

EMISSION TESTS	COMPLIANCE	ELECTROMAGNETIC ENVIRONMENT – GUIDELINES
RF emisions according to CISPR 11	Group 1	The BEMER-SET PRO uses RF energy exclusively for its internal operation. Therefore, its RF emission is very low. It is unlikely that nearby electronic devices will be disturbed.
RF emisions according to CISPR 11	Class B	The BEMER-SET PRO is designed for use in all premises, including residential areas that are directly connected to a public power supply that also supplies residential buildings.
Harmonics according to IEC 61000-3-2	Class A	
Voltage fluctuations/flicker according to IEC 61000-3-3	Compliant	

Table according to EN 60601-1-2

Recommended safety distance between portable and mobile RF telecommunication devices and the BEMER PRO SETS

The BEMER-SET PRO is designed for operation in an electromagnetic environment in which the RF disturbances are controlled. The customer or the user of the BEMER-SETS PRO can help to prevent electromagnetic disturbances by keeping a minimum distance between portable and mobile RF telecommunication devices (transmitters) and the BEMER-SET PRO – depending on the power output of the communication device, as indicated below.

OUTPUT POWER OF THE TRANSMITTER W	SAFETY DISTANCE, DEPENDENT ON THE TRANSMITTED FREQUENCY m (IN METERS)		
	150 KHZ TO 80 MHZ $d=1.2\sqrt{P}$	80 MHZ TO 800 MHZ $d=1.2\sqrt{P}$	800 MHZ TO 2.7 GHZ $d=2.3\sqrt{P}$
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters whose maximum output power rating is not listed in the table above, the distance can be determined by calculating the equation on each column, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

Warning: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the BEMER Professional device, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

Electromagnetic immunity

The BEMER-SET PRO is designed for operation in the electromagnetic environment listed below.
The customer or user of the BEMER-SET PRO should ensure that the product is used in such an environment.

IMMUNITY TESTS	IEC 60601 TEST LEVEL	COMPLIANCE LEVEL
Electrostatic discharge according to IEC 61000-4-2	± 6 kV Contact discharge ± 8 kV Air discharge	± 6 kV Contact discharge ± 8 kV Air discharge
Fast transient electrical interferences according to IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 2 kV for input/output lines
Surge voltage/surges according to IEC 61000-4-5	± 1 kV Voltage outer conductor – outer conductor ± 2 kV Voltage outer conductor – earth	± 1 kV Voltage outer conductor – outer conductor ± 2 kV Voltage outer conductor – earth
Voltage dips, interruptions and variations of the power supply according to IEC 61000-4-11	< 5% U_T for 1/2 cycles (> 95% dip in U_T) < 40% U_T for 10 cycles (60% dip in U_T) < 70% U_T for 25 cycles (30% dip in U_T) < 5% U_T 5 s (> 95% dip in U_T)	< 5% U_T for 1/2 cycles (> 95% dip in U_T) < 40% U_T for 5 cycles (60% dip in U_T) < 70% U_T for 25 cycles (30% dip in U_T) < 5% U_T 5 s (> 95% dip in U_T)
Power frequency (50/60 Hz) magnetic field according to IEC 61000-4-8	3 A/m	3 A/m

Note: U_T is the alternating power supply voltage prior to of the test level

Electromagnetic immunity

The BEMER-SET PRO is intended for use in the home health care (e.g. domiciles, homes) or professional health care (e.g. physician offices, clinics) facility environment.

ELECTROMAGNETIC ENVIRONMENT – GUIDELINES

	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
	The quality of the power supply should correspond to that of a typical commercial or hospital environment.
	The quality of the power supply should correspond to that of a typical commercial or hospital environment.
	The quality of the power supply should correspond to that of a typical commercial or hospital environment. If the user of the equipment requires continued operation during power mains interruptions, it is recommended that the equipment be powered from an uninterruptible power supply or a battery.
	The quality of the power supply should correspond to that of a typical commercial or hospital environment.

Electromagnetic immunity

Portable and mobile radio equipment should be used no closer to the BEMER-SET PRO and its power cables than the recommended safety distance calculated from the equation applicable to the frequency transmitter.

EMISSION TESTS	IEC 60601 TEST LEVEL	COMPLIANCE LEVEL	
Conducted RF interference according to IEC 61000-4-6	3 V_{eff} 150 kHz to 80 MHz outside of the ISM bands	3 V_{eff}	
Radiated RF interference according to IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m	

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2: These guidelines may not apply in all situations. The propagation of electromagnetic waves is affected by the absorption and reflection from structures, objects and people.

Use of BEMER Professional products near HF surgical equipment, trains, boats, planes, short wave therapy equipment or inside the RF shielded room of MRI systems may cause degradation or loss of device functionality due to EM disturbances.

ELECTROMAGNETIC ENVIRONMENT – GUIDELINES

	Recommended safety distance: $d=1.2\sqrt{P}$ $d=1.2\sqrt{P}$ for 80 MHz to 800 MHz $d=2.3\sqrt{P}$ for 800 MHz to 2.7 GHz
	Where P is the output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended safety distance in meters (m). The field strength from a stationary radio transmitter, according to an onsite survey[a] is less than the compliance level [b] for all frequency ranges. Interference may occur in the vicinity of equipment marked with the following symbol. 

a) Field strength from fixed transmitters such as base stations for radio (cellular/wireless) telephones and land mobile radios, amateur radio, AM/FM radio stations and TV stations cannot be predicted theoretically with accuracy. To determine the electromagnetic environment of a stationary transmitter, a site survey should be considered. If the measured field strength in the location in which the BEMER-SET PRO is used exceeds the conformity level listed above, the BEMER-SET PRO should be monitored to verify normal operation. If abnormal performance is observed, additional measures might be necessary, such as readjusting the BEMER-SET PRO or changing to another location.

b) The field strength is less than 3V/m over the frequency range of 150 kHz to 80 MHz.

Warranty

The manufacturer guarantees that BEMER products are free from defects in workmanship and material quality under normal operating and maintenance conditions for a period of 24 months from the date of delivery.

This warranty does not cover any recalibration and/or maintenance work of any kind that may be necessary.

The warranty is only valid for the first purchaser and does not cover products or parts thereof that have been used improperly or to which modifications have been made. All warranties and guarantees shall become void if the BEMER products are not used as intended.

The warranty obligation is limited to the repair or replacement of a product that was returned to the manufacturer within the warranty period.

A precondition is that the manufacturer agrees that the product is defective and that the fault is not attributable to improper handling or modification of the device, or to abnormal operating conditions.

Within the framework of the warranty obligation, the manufacturer accepts no liability for direct or indirect incidental or consequential damage.

The above warranty provisions shall apply irrespective of the statutory warranty regulations.

Defects that are the result of force majeure, improper handling and/or repairs to or interference with the device without the consent of BEMER shall not constitute grounds for warranty claims or claims for defects.

In all other respects, claims asserted by the customer for damages and/or the reimbursement of expenses, regardless of the legal grounds – in particular due to a breach of duties arising from the contractual obligations or unlawful acts – are excluded. This does not apply to product liability claims or in cases of intent and gross negligence or involving loss of life or bodily injury, or if the claims are based on the breach of an obligation whose fulfillment makes the proper execution of the contract possible in the first place and on whose fulfillment the customer may regularly rely. However, any claims for damages due to the violation of essential contractual obligations shall be limited to the kind of foreseeable damages that are typical for the contract, except in cases of gross negligence or if liability is assumed for loss of life and/or bodily injury.

Guarantee and warranty claims can be asserted via our website: www.warranty.bemergroup.com

WWW.BEMERGROUP.COM

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