



Easy Motion Skin® Studio

Instruction manual

EN

Version 1.0

June 2016

This instruction manual forms part of the delivery scope of the Easy Motion Skin® Studio. The accompanying programme description and all manufacturer documentation relating to bought-in components supplement this present document. All documentation applies exclusively in conjunction with each other.

The instruction manual is aimed at the trainer.

They must be in a position to read and understand the information contained in the instruction manual and the accompanying documents.

This instruction manual must be kept in a well-known, easily accessible location at all times, and must be consulted if any issue is ever in the slightest doubt. The instruction manual, as part of the documentation will be kept as a verification document on the manufacturer's premises for at least 10 years.

The manufacturer accepts no liability for damage to persons, animals or property or to the product itself which arises from improper use, failure to observe or inadequate observation of the safety criteria contained in these instructions, or any alterations to the Easy Motion Skin® Studio or the use of unsuitable replacement parts (non-original parts).

Protection notice - Copyright in accordance with DIN ISO 16016:2007-12 (Technical Product Documentation - Protection notices for restricting the use of documents and products)

Copyright to the existing technical documentation remains with the company EMS GmbH. This instruction manual is intended for use by the user (trainer) and the people under their instruction.

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EU DECLARATION OF CONFORMITY

Original declaration of conformity in accordance with DIRECTIVE 1999/5/EU

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We, the manufacturer, do hereby declare that the product named below meets the relevant requirements of DIRECTIVE 1999/5/EU OF THE EUROPEAN PARLIAMENT AND COUNCIL of the 9th March 1999 relating to radio equipment and telecommunication transmission equipment and mutual recognition of conformity.

Description	Easy Motion Skin®
Purpose	The Easy Motion Skin® is a highly efficient training system consisting of the MotionSkin with Powerbox, which communicates with an iPad via Bluetooth. Low frequency electrical impulses (electromyostimulation) are controlled using an Easy Motion Skin® application, thus stimulating practically the entire musculature.

The manufacturer bears sole responsibility for publication of this declaration of conformity.

The object described above in the declaration meets the relevant harmonisation regulations of the Union:

- EN 300 328 V1.7.1: 2006-10
- EN 301 489-1 V1.9.2: 2011-09
- EN 301 489-17 V2.2.1: 2012-09
- EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011
- EN 62479:2011-09

Signed and on behalf of:

Leipzig, 17/06/2014

Ralf Kahlenberg (Managing Director)

Location, date of issue

Name, (Role)

This instruction manual clearly indicates hazardous situations and areas by means of safety instructions and symbols. The structure of a safety instruction is always the same. Colours, symbols and warnings classify the hazard.

A safety instruction is structured as described below. Signal word, symbol, colour bar and text units form the safety warning, surrounded by a black line.

There are generally four warning levels, identified by corresponding signal words and colouring:

DANGER	immediate threat to life
WARNING	possible threat to life or injury
CAUTION	possible risk of injury
CAUTION	possible material damage
NOTE	no danger/no material damage

At appropriate points in the text of this instruction manual, there are safety symbols, which require particular attention depending on the combination of signal word and symbol.






	General warning sign
	Warning about electrical voltage
	General mandatory sign
	Remove the power plug
	Follow the instruction manual

Table of Content

General Information 1

Instruction manual..... 1

Scope of delivery 1

Intended use..... 2

Improper use 3

Cardiac arrhythmia 4

Contraindications..... 5

Electrical hazards 7

User qualification 9

Charging the Powerbox..... 10

Setting up the MotionSkin 11

Connecting the Powerbox to the MotionSkin..... 11

Setting up the StudioSolution 12

Connecting the Powerbox to the StudioSolution..... 13

Switch on the Powerbox 13

Use iPad..... 13

Using the Easy Motion Skin® Studio app..... 14

Spare parts 14

Condensation 15

Powerbox care and cleaning instructions 15

MotionSkin care and cleaning instructions 16

StudioSolution care and cleaning instructions 17

Disposal/ protection of the environment..... 19

Technical data 20

General Information

Responsible handling of the Easy Motion Skin® Studio is a condition of successful and safe use. Safe operation when handling the Easy Motion Skin® Studio requires instruction from the manufacturer.

Instruction manual

The instruction manual accompanying the device as well as the programme description contain information for safe handling of the Easy Motion Skin® Studio and must be carefully read and understood by the user before using the Easy Motion Skin® Studio. The user must be capable of doing this.

The instruction manual is a component of the Easy Motion Skin® Studio. The safety instructions contained in the instruction manual complement the local general safety regulations and accident prevention regulations where the Easy Motion Skin® Studio is used. Observing the safety instructions indicated in the instruction manual and the instructions relating to handling the Easy Motion Skin® Studio are a condition of safe training.

Scope of delivery

Delivery of the Easy Motion Skin® Studio includes:

- iPad including Easy Motion Skin® Studio app
- Powerbox
- Powerbox power supply unit
- MotionSkin (Training body) – optional sizes 1, 2, 3, 4
- StudioSolution (Training jacket) – optional sizes 1, 2, 3
- Instruction manual
- Tightening straps

The Easy Motion Skin® Studio uses the effective electromyostimulation method - or electro muscle stimulation (EMS) - for high intensity training units.

Intended use

The Easy Motion Skin® Studio is a highly efficient training system consisting of the MotionSkin with Powerbox, which communicates with an iPad via Bluetooth®. Low frequency electrical impulses (electromyostimulation) are controlled using an Easy Motion Skin® application, thus stimulating practically the entire musculature.

Originally developed for therapeutic and rehabilitation purposes, the Easy Motion Skin® Studio uses this technology for high-efficiency training results in short periods.

NOTE



The Easy Motion Skin® Studio is an EMS training device exclusively for human beings.

To avoid accidents and to guarantee full functionality of the Easy Motion Skin® Studio, a well-fitting MotionSkin of the correct size must be used.

Even when used appropriately, there are some risks associated with the Easy Motion Skin® Studio. These are described below.

To reduce the risks of personal injury or damage to property, and to avoid any hazardous situations, the safety instructions in the manual must be strictly observed.

**Improper
use**

To reduce the risks of personal injury or damage to property, and to avoid any hazardous situations, the safety instructions in the manual must be strictly observed.

Improper use occurs when the Easy Motion Skin® Studio is used in way other than that described in the instruction manual. Proper use requires observance of the instructions in the manual.

⚠ WARNING**Dangers of improper use**


Hazardous situations may arise if the Easy Motion Skin® Studio is used inappropriately. These instructions exclusively describe the possible applications of the Easy Motion Skin® Studio.


The Easy Motion Skin® Studio must only be used as an EMS training device for human beings, in a dry environment and not as a medical device.

- It may only be used when supervised and managed by a trained instructor.
- Please consider any contraindications which may oppose use.
- Ensure the MotionSkin and vests fit properly.
- Only train while the power supply unit is not connected to the Powerbox.
- Always start training at low intensity and increase slowly.
- Always tense the stimulated muscle area during stimulation by the Easy Motion Skin® Studio.
- Immediately stop training if any faults arise.
- Immediately stop training if any changes in health occur.

In accordance with legislation, we must warn of the risks of cardiac arrhythmia. There is theoretically a residual risk that training with the Easy Motion Skin® Studio can act as a trigger for cardiac arrhythmia, although this has never been identified up to now.

Cardiac arrhythmia

 **WARNING**



Threat to life caused by cardiac arrhythmia

Cardiac arrhythmia can lead to loss of consciousness.

There is a residual risk that EMS training can trigger cardiac arrhythmia, which can have fatal consequences if not treated.

- In order to react to any emergencies, it may only be used when supervised and managed by a trained instructor.
- Immediate action in the event of a loss of consciousness:
 1. Disconnect the Powerbox completely from the MotionSkin.
 2. Call the emergency services.
 3. Carry out resuscitation measures.
 4. Use a defibrillator if available.

Contraindications

If at least one of the following contraindications is present, the Easy Motion Skin® Studio may not be used:

- Heart complaints (e.g. acute infarction within the last 6 weeks, severe heart valve defects, hypertrophic obstructive cardiomyopathy (HOCM), acute myocarditis, unstable coronary heart disease, heart failure severity NYHA IV)
- Severe arterial circulatory disorders (e.g. forefoot gangrene in diabetics)
- Cancer
- Haemophilia
- Pregnancy
- Severe neurological illness (e.g. multiple sclerosis, amyotrophic lateral sclerosis, Parkinson's disease, epilepsy, spastic spinal paralysis)
- Advanced arteriosclerosis
- Abdominal wall or inguinal hernia
- Acute febrile, bacterial or viral illness
- Acute bleeding
- Extreme blood pressure
- Thrombosis
- Tuberculosis
- Diabetes mellitus
- Liver disease
- Recovery period after an operation

 **DANGER**



Risk of fatality from contraindications

Contraindications may cause injury or even death.

- Before every use, you must ensure that none of the contraindications listed are present.
- Do not use the Easy Motion Skin[®] Studio if there is any doubt about the presence of a contraindication.
- The Easy Motion Skin[®] Studio must absolutely not be used by persons fitted with a pace-maker or other active medical implants.
- If in doubt, or where medication is taken, please consult a doctor before use.

Electrical hazards

 **DANGER****Danger of fatal injury from electric shocks**

There is an immediate risk of fatal injury from electrocution by touching live components. There is a risk of fatal injury if moisture penetrates components or if they are damaged!



- If individual components or the insulation are damaged, stop use immediately, remove the plug and do not continue use.
- Only use in dry surroundings.
- Only connect the power supply unit to a mains supply of 100 – 230 V ~ 47 – 63 Hz and only use power supply units supplied by the manufacturer.
- Always inform the manufacturer in the event of faults or damage.

 **CAUTION****Risk of injury from damage to cables and connectors**

There is a risk of damage to property and personal injury due to damage to connectors or cables.



- Do not trap or kink cables.
- Do not place any heavy objects on cables.
- Remove the plug before cleaning.
- Ensure the plug socket is accessible

Where Lithium Ion batteries are used wrongly or improperly (e.g. broken, decomposed, exposed to fire or high temperatures) they can catch fire, explode or cause a fire.

 **WARNING**

Risk of personal injury from damaged or open batteries



Batteries contain flammable or irritating solutions and lithium salts, which can cause irritation to the skin, eyes and the mucous membrane in the event of a leak.

When batteries bleed, the vapours emitted can be a health hazard.

- Keep away from heat, open flames and corrosive liquids.
- Do not punch, break or burn.
- Avoid vapour contact with the skin, eyes and do not inhale.
- To extinguish a fire, conventional extinguishing materials may be used (such as ABC powder, CO₂ extinguisher or water).
- In case of contact with released electrolytes, gases or fire byproducts with the eyes,
 1. rinse thoroughly with water for at least 15 minutes and consult a doctor if necessary.
 2. Remove contaminated clothing from skin and rinse thoroughly with water for at least 15 minutes, consult a doctor if necessary.
 3. Ensure fresh air can reach the patient's airways and keep them calm. Monitor breathing and circulation, consult a doctor if necessary.

User qualifica-
tion

In order to ensure ideal implementation of the training and to achieve optimal training results, the training parameters must be set individually. This must be done by the trainer.

⚠ WARNING**There is a risk where the user is inadequately qualified**

Without adequate knowledge of use, handling the Easy Motion Skin® Studio may lead to dangerous situations. In extreme cases, these could be fatal.

- Before use, every user must have read and understood this instruction manual. Training must only be carried out by a trainer informed accordingly. In addition, the trainer must be fully aware of the effective principles of EMS training on the body, possibly by means of special training.
- Anyone under 16 years of age may not train with the Easy Motion Skin® Studio.
- Do not entrust operation to an untrained user.


NOTE**Repairs and service**

Repairs, maintenance and service may only be carried out by EMS GmbH.

The Powerbox features an internal chargeable battery.

Charging the
Powerbox

NOTE



Charge for 10 hours before using for the first time

Please charge the Powerbox for at least 10 hours before using it for the first time.

Only use the power supply unit supplied to charge the Powerbox.

This is how you charge the battery in the Powerbox:

1. Ensure that the Powerbox is not connected to a MotionSkin.
2. Connect the Powerbox to a socket using the power supply unit supplied.

The following status is displayed when the Powerbox is turned on or during charging.

- Red light flashes quickly Low battery
- Red light flashes: Battery charging
- Red light is on: Battery is charged

Rechargeable batteries have a limited number of charging cycles and must be replaced over time. The charging cycle and battery charging time depend on the use of the device and the application environment.

Setting up the MotionSkin

Please choose a properly-fitting MotionSkin in the correct size.

Set up the dry MotionSkin, initially without a Powerbox. You must ensure the electrodes are sitting correctly and securely on the muscles being stimulated. If they are loose or not secure, the electrode may not be connected to the skin or the electrode connection may be lost during training. Depending on the programme setting, this may lead to a reduction in stimulation or the electrode channel in question until the connection is re-established properly.

If required, different sizes of MotionSkin should be tested for fit and the most suitable MotionSkin chosen for the person training. If in doubt, the fit of the MotionSkin can also be optimised using the tension straps supplied.

The MotionSkin should never be overstretched since this can lead to damage.

Connecting the Powerbox to the MotionSkin

Connect the Powerbox with the MotionSkin. The push buttons on the MotionSkin should be connected accordingly with their counterparts (paddles) on the Powerbox.

During training, the Powerbox should be kept in the pocket provided on the MotionSkin. Ensure the Powerbox is held securely and firmly to make sure it does not fall out accidentally.



A StudioSolution consists of a three-part jacket plus arm, leg and buttock electrodes. Please choose a properly-fitting jacket in the correct size.

Setting up the
StudioSolution

Set up the StudioSolution while the zip is closed on the three-part jacket and spray the electrodes with sufficient water. Start by spraying all the electrodes evenly and then re-spray the moistened electrodes until they are sufficiently wet.

NOTE



Wetting the electrodes

The electrodes on a new product do not yet take on water very well.

- This means the wetting process should be repeated for longer until the electrodes are sufficiently wet.



DANGER

Danger of fatal injury from electric shocks



There is a risk of fatal injury if moisture penetrates the electronic components!



- Make absolutely sure that water never comes into contact with the Powerbox.
- If water does get in, stop use immediately, remove the plug and do not continue use.

Set up and removal of the StudioSolution should be carried out by the trainer. Ensure the electrodes are sitting correctly and securely on the respective muscles to be stimulated. If they are loose or not secure, the electrode may not be connected to the skin or the electrode connection may be lost during training. Depending on the programme setting, this may lead to a reduction in stimulation or the electrode channel in question until the connection is re-established properly. If required, different sizes of StudioSolution should be tested for fit and the most suitable jacket set chosen for the person training. Fit can be optimised using the tightening straps supplied.

Jerking cables should be fundamentally avoided. Always remove the buttons on the plug and not on the cable. Before every training session, check the correct colour alignment of the cable ends with the corresponding contact surfaces on the StudioSolution.

Connecting the
Powerbox to the
StudioSolution

Connect the Powerbox to the contact surfaces located on the jacket and place them in the side pocket of the hip belt worn.



Switch on the
Powerbox

Switch on the Powerbox by pressing the on/off button.

The flashing green LED indicates the system is ready for operation. The flashing yellow LED indicates communication between the Powerbox and the iPad.

Use
iPad

NOTE



iPad manufacturer documentation

Please use the iPad in accordance with the instructions supplied separately in the iPad's original packaging.

Start the Easy Motion Skin[®] Studio app by tapping on the corresponding icon. This is located on the iPad's home screen.



Using the Easy Motion Skin[®] Studio app

NOTE



Programme description

Please see the Easy Motion Skin[®] Studio app programme description for further information.

WARNING



There is a risk of personal injury with use of non-authorised replacement parts

The Easy Motion Skin[®] Studio should only be used with the manufacturer's original parts. There may be a danger associated with non-original parts and they may cause injury.

- Only use original parts.
- Do not connect other devices or device components.
- Do not manipulate the Easy Motion Skin[®] Studio or its components.
- Non-original parts can alter the functionality of the Easy Motion Skin[®] Studio.
- Non-original parts can damage the Easy Motion Skin[®] Studio.

Spare parts

Condensation

ATTENTION



Damage from condensation

Condensation can arise through changes in the air humidity and temperature. Condensation in the Easy Motion Skin® Studio components can lead to a fault or damage.

- Do not use the Easy Motion Skin® Studio if condensation can be seen.
- Acclimatise the device after a change of location.
- Store the Easy Motion Skin® Studio in a dry place and operate in dry surroundings.
- If any faults arise, disconnect the Easy Motion Skin® Studio from the mains and inform the manufacturer.

Powerbox care and cleaning instructions

Always use a soft cloth when cleaning the Powerbox.






Remove the power supply. Keep the device away from liquids and ensure that moisture does not penetrate the openings.

Do not directly spray cleaning agents onto the device. Do not use any sprays, solvents or abrasives while cleaning

In order to guarantee a long working life of the Motion Skin, we recommend the EMS GmbH following approach to care and cleaning.

The following washing symbols can be found on the MotionSkin and should be observed.

[MotionSkin care and cleaning instructions](#)

	<ul style="list-style-type: none"> • To identify textiles which require special cleaning in the normal wash cycle at a water temperature of 30° C.
	<ul style="list-style-type: none"> • To identify textiles which may not be bleached.
	<ul style="list-style-type: none"> • To identify textiles which may not be dried in a tumble dryer.
	<ul style="list-style-type: none"> • To identify textiles which may not be ironed.
	<ul style="list-style-type: none"> • To identify textiles which may not be dry cleaned.

Washing

Easy Motion Skin® Studio training suits are suitable for machine washing (gentle wash at 30°C). EMS GmbH recommends hand-washing

Detergents

All mild detergents which do not contain chlorine (bleach) and fabric softener are suitable. EMS GmbH recommends e.g. PERWOLL/Color or Merusal freshTEX.

This recommendation refers to the time at which the instruction manual was published. Check from time to time whether the detergent you use now contains chlorine or bleaching agents.

⚠ ATTENTION**Damage caused by disinfectants**

Disinfectants contain isopropyl alcohol (or similar). These negatively affect the conductivity of the MotionSkin by washing out the silver nano-particles.

The manufacturer has produced the MotionSkin using anti-bacterial fibres.

- Do not disinfect the MotionSkin.

Spin drying

The MotionSkin can be spun at 400 rpm after washing.

NOTE**Residual dampness after spinning**

The MotionSkin can be used immediately after spin drying. It may still feel slightly damp, which is not an issue when in use and actually enhances the functionality of the electrodes.

Drying

The MotionSkin should be air-dried hanging on a hanger, with the electrodes turned inside out.

⚠ ATTENTION**Damage caused by drying**






The MotionSkin should be air-dried. If dried in a tumble dryer or in direct UV radiation, the material may be damaged.

- Do not dry the MotionSkin in a tumble dryer.
- Do not put the MotionSkin in direct sunlight (UV radiation).

In order to guarantee a long working life of the jacket set we recommend the following approach to care and cleaning.

The following washing symbols can be found on the jacket set and should be observed.

[StudioSolution
care and cleaning
instructions](#)

	<ul style="list-style-type: none"> Identifies textiles which require special cleaning in the gentle wash cycle at a water temperature of 20° C.
	<ul style="list-style-type: none"> Identifies textiles which may not be bleached.
	<ul style="list-style-type: none"> Identifies textiles which may not be dried in a tumble dryer.
	<ul style="list-style-type: none"> Identifies textiles which may not be ironed.
	<ul style="list-style-type: none"> Identifies textiles which may not be dry cleaned.

Washing

Fasten the zip and place the StudioSolution on its own in a laundry net.

Detergents

Only wash the StudioSolution with “MERUSAL freshTEX”.

For machine treatment using “MERUSAL freshTEX” (antimicrobial textile cleaning concentrate), please select the wool programme on your washing machine, or alternatively the gentle or delicate programme.

NOTE



Tip

If your washing machine has a soak programme, we recommend soaking the textiles for the recommended soaking time.

At the end of the wash cycle, please rinse the textiles using plenty of water and spin dry. Hang up to dry

Disposal/
protection of the

Do not dispose of the Easy Motion Skin® Studio components in domestic waste, as the electronic components may contain poisonous substances which should not contaminate the environment. Disposal must therefore be carried out appropriately.

⚠ ATTENTION

Environmental hazard



Improper disposal can endanger the environment. Batteries should not be disposed of in domestic waste.



- Environmentally responsible and accurate disposal should be carried out in accordance with local regulations for the disposal of electrical components and electrical waste.
- Recycle appropriate elements such as plastics or metal.
- Batteries should be brought to a local recycling site for environmentally responsible disposal.

Powerbox	
Bluetooth® version	4.0
Input	DC 12 V, 1,0 A
Power supply	Li-polymer accumulator
Accumulator	2x 3.7 V, 1300 mAh
Dimensions	66 mm x 24 mm x 118 mm
Weight	140 g
Power supply	
Input	AC 90 V - 264 V 47 Hz - 63 Hz
iPad	
Design	in accordance with manufacturer's information

Technical
data

Notes

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