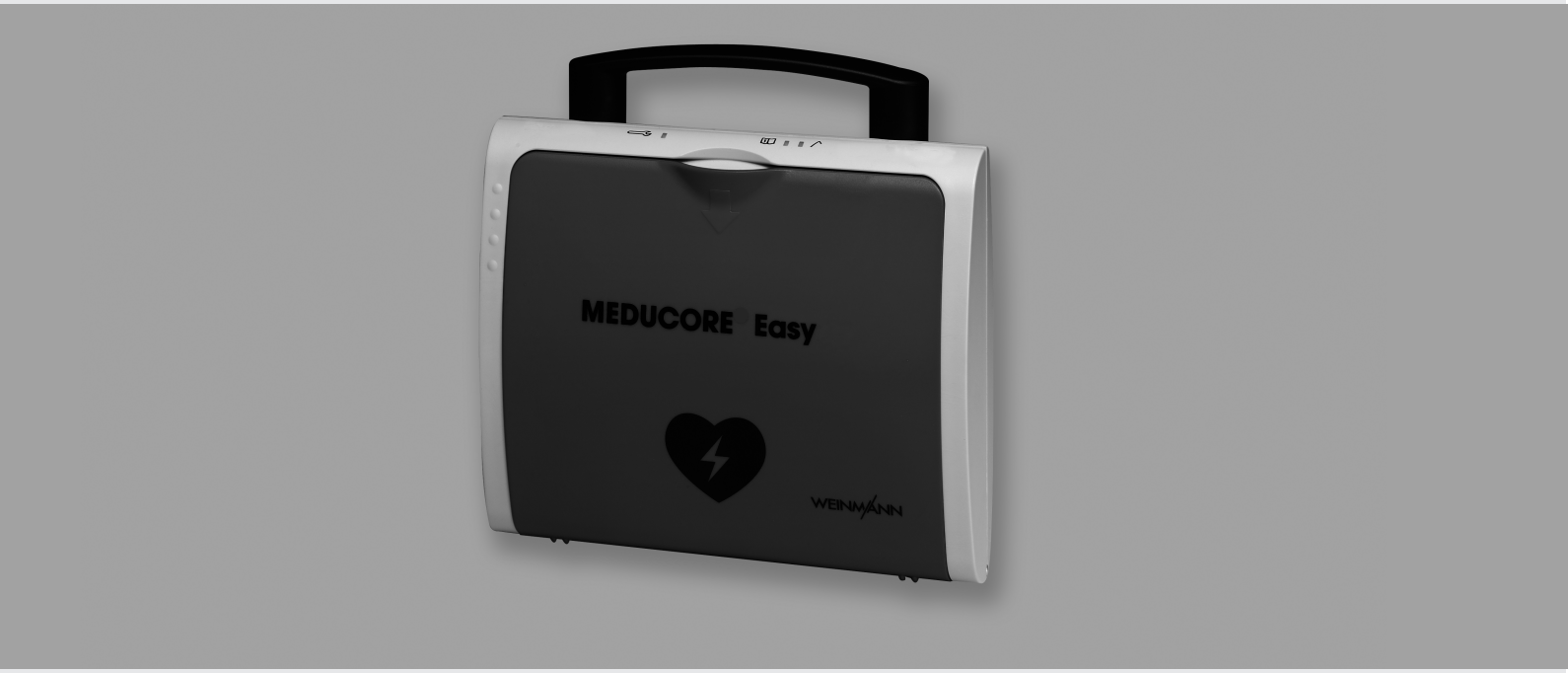
homecare



MEDUCORE Easy

Automatic external defibrillator
Device nos. 1000 to 1340 from device no. 1341 with ILCOR 2005

MEDUCORE Easy with Battery-Pack

MEDUCORE Easy with Rechargeable Battery-Pack

Service and Repair instructions

WEINMANN
medical technology

Contents

Introduction

WEINMANN has been developing, manufacturing and marketing emergency medical devices for oxygen and inhalation therapy for decades.

The aim of this service and repair manual is to bring you **to an expert level** on the MEDUCORE Easy, allowing you to understand the operation, technology and repairs of the device. In combination with the training, that you have already completed for WEINMANN, you now belong to the "trained, informed, experts", thereby allowing you to give your customers professional help and repair malfunctions independently and in accordance with the operation manual illustrated you have the possibility of making functional checks and if necessary carrying out repairs as shown in the service and repair manual.

In case of warranty claims all devices are to be sent to WEINMANN.

In order to handle warranty or goodwill requests we will require you to submit proof of purchase (invoice) of the customer.

Repair and maintenance work must be performed by WEINMANN or knowledgeable, well trained specialists.

They are responsible for all repairs carried out and all associated warranties!

When performing maintenance, **only genuine WEINMANN replacement parts** ought to be used.

Please consider:
Your customers puts trust in your capabilities just as much as you trust in WEINMANN.

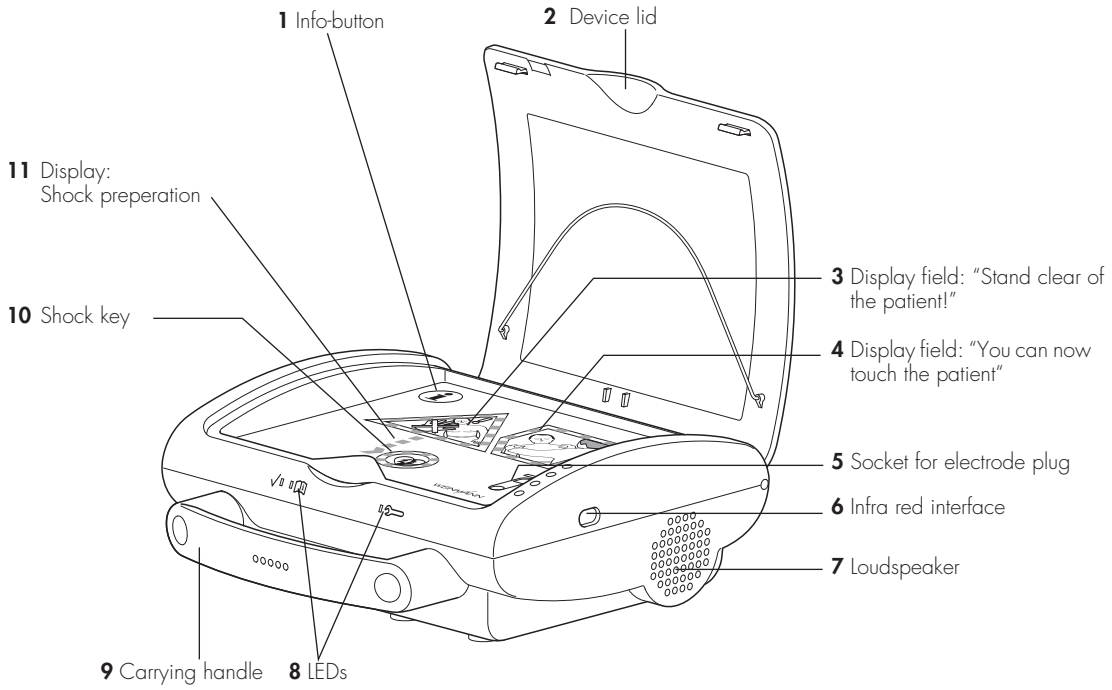
Note:

Please use the operation manual for the following information about MEDUCORE Easy:

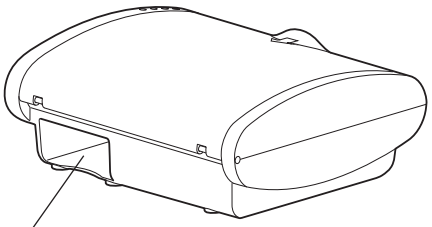
- Safety instructions
- Preparing the device for use
- Operation
- Cleaning and disinfecting while in use
- Warranty

Please note that the operation of devices with and without ILCOR 2005 is different.

1. Overview

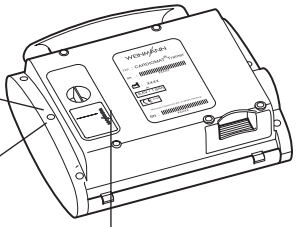


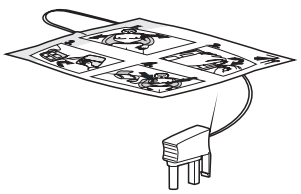
Underside of device:



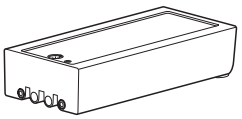
12 Battery compartment

Underside of device:

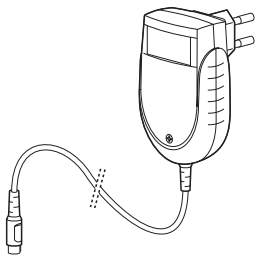




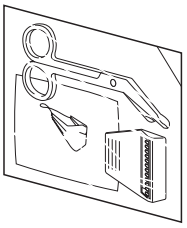
16 Self sticking defibrillation electrodes



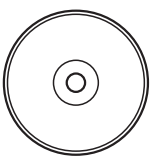
17 Battery-Pack/ Rechargeable Battery-Pack (optional)



18 Battery charger (only in Rechargeable-Pack model)



19 Emergency set



20 CD-ROM with software EasyView

2. Description of Equipment

2.1 Intended use

The MEDUCORE Easy is an automatic external defibrillator (AED). It has been devised to assist the user in the resuscitation of patients who show symptoms of acute cardiovascular arrest (pulseless ventricular tachycardia pVT or ventricular fibrillation VF).

The MEDUCORE Easy guides the user through the resuscitation process with the help of acoustic and optical instructions. The device conducts an ECG analysis on patients and, if necessary, makes preparations for the delivery of an electric shock. The delivery of a shock is carried out directly by the user, after the device has prompted to do so.

Only use the device MEDUCORE Easy for the purposes described below.

2.2 Scope of application

The MEDUCORE Easy has been devised for application in the heart/lung resuscitation (HLR) of patients from upwards of 20 kg body weight at the emergency's location.

2.3 User qualification

The MEDUCORE Easy may only be used by persons who hold documented proof of the following qualifications:

- Training in fundamental, life saving emergency care including the application of automatic defibrillators.
- Instructions for the application of the MEDUCORE Easy carried out by an WEINMANN authorized person.

2.4 Functional description

The MEDUCORE Easy is compact, light and ergonomic. The acoustic and optical user instructions make the operation of the device, to a great extent, self explanatory.

Persons with a nominal medical knowledge, after a short instruction, can therefore be in the position to operate a defibrillator in the case of a heart lung resuscitation.

Optical and acoustic userguide

The acoustic and optical user instructions are made up of display fields and spoken orders.

After opening the device lid the user is led by MEDUCORE Easy with the help of detailed spoken orders through a step by step resuscitation process. During this process a green and red display field light up, indicating in which phase of the resuscitation the patient may be touched or not touched (traffic light principle).

Metronome function (only for devices with ILCOR 2005)

An activated metronome function gives off an acoustic metronome signal at a frequency of 100 beats per minute during the HLR-pause. Carry out the cardiac massage in rhythm with audible signal tone.

After 30 signal tones a spoken announcement is issued "Give 2 breaths now" You will now have time to carry out 2 respiratory sequences, before "Give 30 chest compressions now" is announced and 30 signal tones are given.

This ordered sequence repeats itself, until the HLR pause comes to an end and the red display field ("Stand clear of the patient") lights up.

If the info button is pressed during the HLR pause, the info announcement is made. The metronome continues to run in the background but without an audible tone.

ECG-recording and analysis

As soon as the electrodes are placed on the bare upper body of the patient, the device will automatically begin with the recording and analysis of the ECG. The ECG recording and analysis will continue until the electrodes are removed from the patient or as soon as the lid of the MEDUCORE Easy is closed, which results in the device being switched off.

Defibrillation

If the ECG analysis indicates defibrillation (pulseless ventricular tachycardia pVT or ventricular fibrillation VF), the MEDUCORE Easy prepares to deliver a shock. Afterwards the device instructs the user to administer a shock.

For other heart rhythms, the device informs the user that they should carry out a heart-lung revival.

Application documentation

The MEDUCORE Easy saves ECG and event data. The data could later be used e.g. in the follow-up of treatment. For this, use the documentation and configurations software EasyView.

Self testing

The MEDUCORE Easy initiates a self test at regular intervals and after every time it is switched on. The device status is shown via light diodes on its front side. Self test results can be requested via the documentation and configuration software EasyView and saved onto a PC.

3. Cleaning and disinfecting instructions

Warning!

- The Battery/Rechargeable Battery Pack must be removed from MEDUCORE Easy before cleaning.
- Never immerse the MEDUCORE Easy in any disinfectant or any other liquid. Only carry out disinfection by wiping over the surface. This can otherwise lead to damage of the device and consequently endanger users and patients.

The MEDUCORE Easy can be kept properly clean by simply wiping to disinfect. Please observe the users instruction for the disinfectant selected. We recommend that you wear suitable gloves when disinfecting the equipment (e.g. household or disposable gloves).

We recommend that you use TERRALIN disinfectant, which is available from the Schülke & Mayr Company, Robert-Koch-Str. 2, D-22851 Norderstedt (Internet: www.schuelkemayr.de).

4. Checking the device

Important!
The device must undergo the following tests after every repair and every maintenance according to WM 40006, and the results must be entered into the test records. Additionally the test can be used for fault finding in the device.

If you detect errors or deviations from defined values in the course of your final testing you must not redeploy MEDUCORE Easy before these errors have been eliminated.

You can determine possible causes of such errors and recommended countermeasures by referring to chapter "7. Malfunctions and Rectification" on page 22.

We recommend that you generally keep the following ready for use:

- Emergency-Set WM 15460
- Battery-Pack WM 40155
- Rechargeable Battery-Pack WM 40150
- Electrodes, packed WM 40116

Important!
The electrodes have a limited shelf life. Please make a note of the expiry date on the packaging.

4.1 Testing parts needed

- Fully charged Rechargeable battery Pack or Battery-Pack
- Defibrillator-Tester (see also 10.4, page 38)
- IR-Adapter WM 22498
- PC with installed software EasyView WM 40192
- Multimeter, Measuring range up to 20 A
- Battery adapter WM 40008
- Test line MEDUCORE Easy WM 40454

4.2 Preparations for testing

1. Boot up PC.
2. Start the PC software.

Overview of software versions:

- **EasyView**
  Reading, editing and saving usage data, modifying device settings.

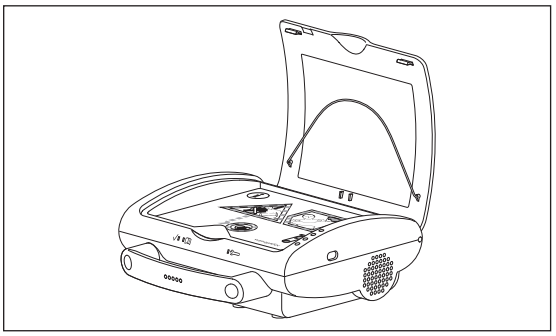
- **EasyView-Service**
  Works like EasyView, facility for programming the serial number.

- **EasyView-Light**
  Works like EasyView; device settings cannot be modified.

4.3 Entering the device data

Enter the serial number of the device (Device-No.) and the manufacturing date into the test records.

4.4 Checking the devices self testing

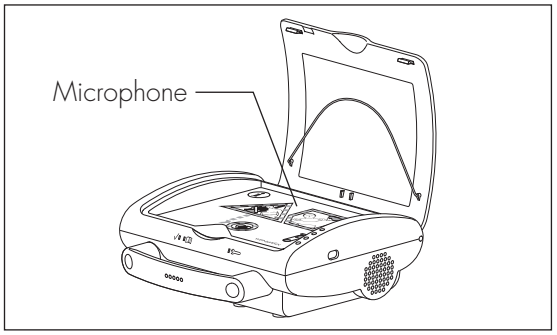


1. Insert rechargeable or Battery-Pack.
2. Open the device lid.

   Request:

   – The device is giving off a short double peeping tone.
   – All LEDs light up briefly.
   – The device announces clearly and completely the spoken order "This device will assist you.".
   – The green status LED lights up.
3. Close the device lid.

4.5 Checking the volume levels



1. Ensure that the volume setting is on "automatic". To do so, connect the device to EasyView and correct the setting if necessary.
2. Open the device lid.
3. Create a sound directly over the microphone of the MEDUCORE Easy, by scratching on the encasing for example.

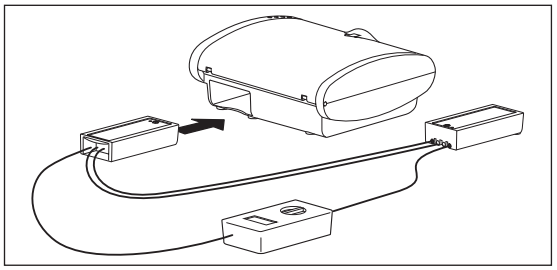
   The microphone in the MEDUCORE Easy can be found between the analysis triangle and pentagon.

   Request:

   – The volume of the repeated and clearly spoken order increases.

4.6 Testing the ECG detection, current input, shock button and shock output

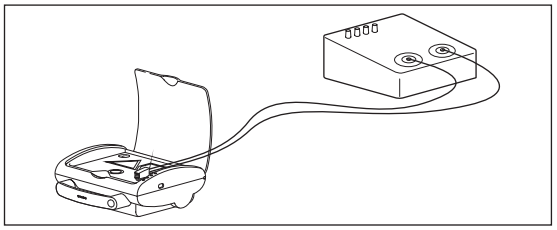
Preparation of the MEDUCORE Easy

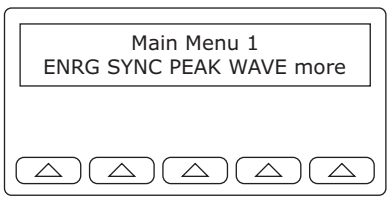


1. Connect the rechargeable battery adapter, current measuring device and rechargeable battery or battery pack as illustrated.
2. Install the rechargeable battery adapter in the MEDUCORE Easy.

Preparation of the defibrillator tester

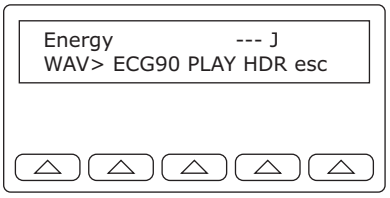
The defibrillator tester emulates a patient impedance of 50 Ω.





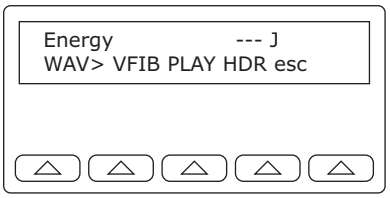
1. Connect MEDUCORE Easy test line WM 40454 to the defibrillator tester as illustrated.
2. Connect the defibrillator tester to a power supply (battery or mains plug).
3. Switch on the defibrillator tester (sliding switch **POWER** in position **I**).

   A self-test is performed. The main menu appears in the display (`Main Menu 1`).



4. Press the arrow button under ENERG.

   The indicator for the Energy Modus appears in the display.



5. To simulate venticular fibrillation: Press the arrow button under WAV until VFIB appears in the display.

Performing the test

1. Open the lid of the device.
2. Plug the defibrillator tester electrode plug into the device.

   Requirement:

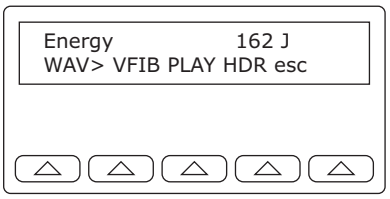
   – The device detects ventricular fibrillation and after a maximum of 10 sec clearly gives the spoken message "Shock required".
3. The device prepares to give the shock.

   Requirement:

   – The current consumption of the device is between 6 A and 12 A.
4. Note the current consumption in the test report.
5. After the spoken message: "Press the flashing shock key", activate this.

   Requirement:

   – The shock is triggered by activation of the shock button.
   – The shock is given. The device clearly gives the spoken message "Shock was delivered".
   – The energy discharged is between 168 J ± 10 % (Low Energy). The value is shown in the display of the defibrillator tester.



Note:
Only the testing of the "Low Energy" shock is necessary. If it is also required to test the "High Energy", the energy must be 298 J ± 10 %.
In this case, ventricular fibrillation must be set on the defibrillator tester as described above. Return to the main menu via esc.

4.7 Checking the procedure display and capacitor discharge

Note:
Do not press the shock key during this test!

1. Simulate ventricular fibrillation with the defibrillator-tester (Signal Vfib).

2. The device makes a clear spoken order "Stand clear of the patient" and "Analyzing".

   Request:

   – All of the LEDs in the red triangle light up.
   – The device continues to give spoken orders, during which all the LEDs on the shock key arrow are lit up in red.
   – All of the LEDs around the shock key flash red.

3. After approx. 15 seconds it is announced that "Shock was not delivered".

   Request:

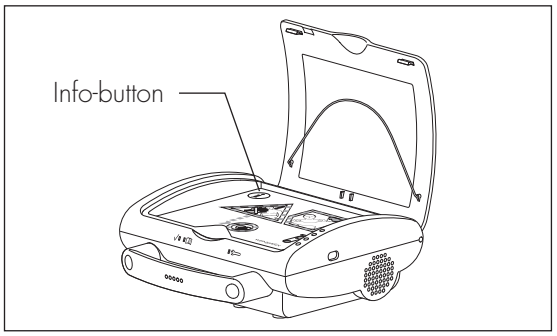
   – The capacitor is discharged with an audible sound.

4. Simulate f = 60 bpm with the defibrillator-tester Sinus EKG.

   Request:

   – All of the LEDs in the green pentagon light up.

4.8 Checking the info-button and reading contact



1. While the green pentagon is lit up, press the info-button.

   Request:

   – The device announces a spoken order similar to "Device has been in use for…in total 1 shock since device startup".

2. Pull the electrode plug out of the device.
3. Close the device lid.

   Request:

   – The device cuts short any spoken order, extinguishes all process LED lights and leaves only the green status LED blinking.
   – No new spoken order is made.

4.9 Checking the status LEDs

Open the device lid to turn the device on.

Request:

– All of the three Status-LEDs, (red, green, yellow) light up.

4.10 Checking the condition of the exterior, the equipment and the accessories

1. Firstly, carry out a visual test of everything.

Requests:

- **Encasing**
  - Encasing not scratched and without blemishes
  - Encasing completely screwed on
  - Front film and sticker stuck down firmly and correctly on the lid
  - Labelling OK?
  - The loudspeaker opening is free from dirt.
- **Electrode connection**
  - Undamaged
  - In working order
- **Push buttons**
  - Undamaged
  - Working correctly
- **Lid**
  - Lid not scratched and without blemishes
  - Lid is correctly attached, easy to open and closes firmly
  - Functions open, close, switch on are ok.
- **Inner part**
  - The socket for the electrode plug is free from dirt.
- **Rechargeable Battery-Pack**
  - Completely charged
- **Battery-Pack**
  - Check expiry date (see device sign Battery-Pack). Insert new Battery-Pack if necessary.
  - If the expiry date is not yet reached, then check the level of charging. Insert battery, open and close device lid. The green LED must flash; the yellow LED should not flash.

If these parts have been delivered, check:

- Defibrillation electrodes WM 40116 available. Check expiry date, if necessary replace.
- Rechargeable Battery-Pack WM 40150 available.
- Battery-Pack WM 40155 available.
- Emergency set WM 15460 available.

4.11 Checking the IRDA interface and the software version

1. Check that the interface is working correctly by retrieving the device data.

   Request:

   All the device data are displayed.

2. Ensure that a PCB with the latest device software is installed in the device. This can be done by comparing the software version displayed with table (see "12.2 Software" on page 43).

   If the software version is no longer current, replace the PCB with an up-to-date one as described in section 8.9 and enter the device number as described.

4.12 Checking the maintenance and safety related check (SRC) stickers

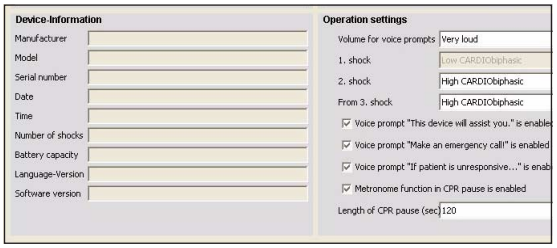
Check that the maintenance and SRC stickers are affixed correctly (SRC sticker applies only to Germany). If repairs have been carried out, then you should replace the stickers with new ones.

4.13 Preparing a device for dispatch following repair

Conditions

The Programme EasyView must be started up and the PC infrared interface or the infrared adapter must be aligned with the infrared interface of the MEDUCORE Easy (see chapter “Operation” in the PC-software operating instructions EasyView WM 16880).

Execution



1. Insert Rechargeable Battery or Battery-Pack.
2. Open the device lid.
3. Read off the charge status of the battery pack and compare it with the value specified in the test record.

   Depending on the Battery-Pack capacity displayed proceed as follows:

   - Capacity is > 50%:
     – The Battery-Pack is OK.
   - Capacity is < 50%:
     – Inform your customer about the charging level.

– Recommend that your customer regularly checks the charging level.
– Recommend that your customer replaces the Battery-Pack in good time.

- Capacity is < 15%:
  – Inform your customer about the charging level.
  – Recommend that your customer regularly checks the charging level.
  – Offer your customer a new Battery-Pack.
  – Recommend that your customer replaces the Battery-Pack as soon as possible.
- Capacity is < 8%:
  – Inform your customer about the charging level.
  – Offer your customer a new Battery-Pack.
  – Point out to your customer that the Battery-Pack should be replaced immediately for safety reasons.

4. Set the date and time with the help of the EasyView (see chapter "Operation" in the operating instructions for the PC-Software EasyView WM 16880).

After exchanging the printed circuit board, if no customer parameter are known

1. Delete the memory.
2. Enter serial number (Device-No.) (see "4.3 Entering the device data" on page 10).

After exchanging the printed circuit board, if customer parameter are known

1. Programme customer parameter.
2. Delete the memory.
3. Check the selected language version.

   Request:

   – EasyView-Service must display the selected language version without any error messages.

Note:
To continue testing, the volume must be set to "automatic".

Completion

1. Close the device lid.
2. Remove Rechargeable Battery or Battery-Pack
3. To unload the internal remaining charge, open and close the device lid again.

4.14 Documentation

Note down the points **4.3** to **4.12** as well as the test date and tester number in the test records.

5. Maintenance

Note:
After all maintenance and repair work the device must be tested, as described in chapter „4. Checking the device“on page 9.

5.1 Intervals

As a preventative maintenance measure **every 6 years** the device must be fully checked:

The points of maintenance are as follows:

- Testing for completeness (see chapter 4.10, page 14)
- Visual test (see chapter 4.10, page 14)
  - Mechanical damage
  - Electrode connections
  - Labelling
- Check the charge levels on the Battery/ Rechargeable Battery (see chapter 5.2, page 18)
- Replace internal battery (see chapter 8.8, page 29)
- Final check in accordance with test directive WM 40006 (see chapter 4., page 9)
- Renew maintenance sticker

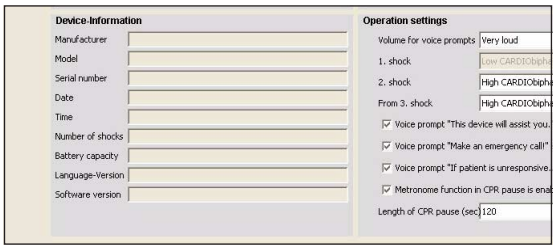
In Germany a safety related check (SRC) must be conducted within a statutory limit of 2 years in accordance with §6 Medicinal Products and Users Ordinance.

5.2 Check the Battery/Rechargeable Battery.

Conditions

The Programme EasyView must be started up and the PC infrared interface or the infrared adapter must be aligned with the infrared interface of the MEDUCORE Easy (see chapter "Operation" in the PC-software operating instructions EasyView WM 16880).

Execution



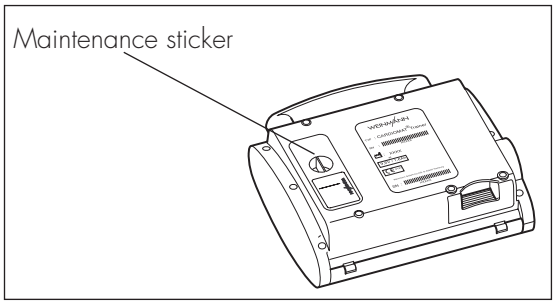
1. Insert Rechargeable Battery or Battery-Pack
2. Open the device lid.
3. Read off the level of charge of the Battery-Pack and note in the test records.

   Depending on the Battery-Pack capacity displayed proceed as follows:

   - Capacity is > 50%:
     – The Battery-Pack is OK.
   - Capacity is < 50%:
     – Inform your customer about the charging level.
     – Recommend that your customer regularly checks the charging level.
     – Recommend that your customer replaces the Battery-Pack in good time.
   - Capacity is < 15%:
     – Inform your customer about the charging level.
     – Recommend that your customer regularly checks the charging level.
     – Offer your customer a new Battery-Pack.
     – Recommend that your customer replaces the Battery-Pack as soon as possible.
   - Capacity is < 8%:
     – Inform your customer about the charging level.
     – Offer your customer a new Battery-Pack.
     – Point out to your customer that the Battery-Pack should be replaced immediately for safety reasons.

If required, replace the Battery or charge Rechargeable Battery

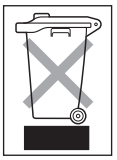
5.3 Renew maintenance sticker

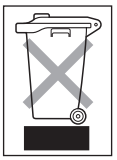


Renew the maintenance sticker (current year + 6 years) sticking it to the underside of the device.

- Replace the old maintenance sticker with one carrying the newly entered data. Cut out the correct month using a ticket puncher or the point of some nail scissors. Stick the new maintenance sticker on the underside of the device.

5.4 Disposal





Device

Do not dispose of the device as domestic waste. To dispose of the device properly, please contact a licensed and certified electronic waste recycler. Names and addresses can be obtained from your Environmental Officer or municipal authorities.

Disposal of batteries

Do not dispose of spent batteries in the domestic waste. Please either contact WEINMANN or or your official local public disposal authorities.

6. Safety related check according to §6 Medicinal products and Users ordinance

6.1 General

Important!

Performance of a safety related check [SRC] in accordance with §6 of the German Medicinal products and Users ordinance [Medizinprodukte-Betreiberverordnung] is only mandatory in Germany.

6.2 Execution

Safety related checks follow the same steps as described in chapter "4. Checking the device" on page 9.

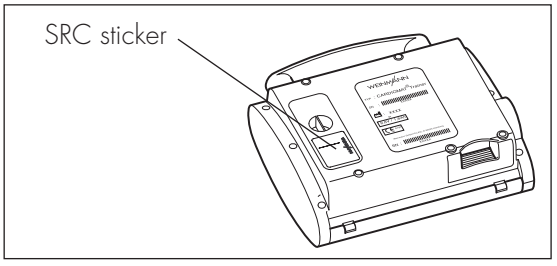
The following is only an **additional** description of the required steps to be taken.

6.3 Testing devices

Additional to the named testing devices described in chapter 4.1 you will need:

- SRC protocol (see " WM 40007f, page 2" on page 46)

6.4 Replace SRC sticker



If you have carried out a safety related check, a new SRC sticker (current year + 2 years) has to be stuck to the underside of the device.

- Replace the SRC sticker with a new one with the correct dates. Cut out the correct month using a hole puncher or the point of some nail scissors. Stick the new SRC sticker next to the maintenance sticker on the underside of the device.

6.5 Documentation

- Fill out the SRC protocol.
- Prepare an SRC certificate for the customer.

7. Malfunctions and Rectification

Malfunctions	Cause	Rectification
In stand by mode (lid closed) a signal tone is set off every four minutes.	A malfunction has been established while the device underwent the monthly/daily self tests.	Check which LED blinks and the procedure, according to the respective LED described in the following table.
When the lid is open the device can not turn on.	Battery capacity is exhausted.	Insert new Battery/Rechargeable Battery Pack (see chapter „Energy Supply" in the operating instructions MEDUCORE Easy).
	Damaged connection between the energy supply contacts and main circuit board	Opening device and checking connections (Chapter 8.3, Page 25).
	Main circuit board defective.	Open up device and replace the main circuit board (Chapter 8.9, Page 30).
Upon opening the lid the following message can be heard: *"Device is not ready for use"*		Device messages with EasyView voice prompting. If EasyView "Malfunction in the main circuit board" is displayed, then replace the main circuit board (Chapter 8.9, Page 30).
Upon opening the lid the following message can be heard: *"Battery is low"*	Battery power levels are low.	Finish off current treatment and then replace batteries (see Chapter "Energy Supply" in the operating instructions MEDUCORE Easy).
The red LED will light up (flashing when on stand by and constant when in operation).	If the battery power levels are low then fewer than 3 shocks can be delivered.	Replace battery (see Chapter "Energy Supply" in the operating instructions of the MEDUCORE Easy), to enable continued treatment.
	Device is not ready for operation, self test has detected a malfunction.	Finish off current treatment. Then read out malfunction protocol via the EasyView. If EasyView "Malfunction in the main circuit board" is displayed, then exchange main circuit board (Chapter 8.9, Page 30).
The green and yellow LEDs light up (flashing when on stand by and constant when in operation).	The battery/rechargeable battery power levels are low and barely 10/6 shocks can still be delivered.	Finish off current treatment and then replace batteries (see Chapter "Energy Supply" in the operating instructions MEDUCORE Easy).
The yellow LEDs light up (flashing when on stand by and constant when in operation).	A less critical malfunction has been detected, e.g. time is incorrect.	Finish off current treatment. Then read out malfunction protocol via the EasyView and if necessary correct malfunction e.g. reset clock.

Malfunctions	Cause	Rectification
After switching device on, one or more LEDs/display fields do not light up briefly.	One or more of the status LEDs/ display fields is defective.	Finish off current treatment, and then replace the main circuit board (Chapter 8.9, Page 30).
	RTC battery empty.	Replace Real Time Clock batteries (Chapter 8.8, Page 29).
Spoken command: *"Attach electrodes to bare chest!"* repeats itself even though electrodes have been stuck down.	Electrode plug is not correctly plugged in.	Insert plug correctly.
	Electrodes not correctly stuck down.	Press the electrodes directly down onto dry, and if necessary shaved skin.
	Electrodes touching each other.	Check the positioning of the electrodes.
	Electrodes defective	Replace electrodes, otherwise do not attempt to operate device.
	Wrong electrodes	Only use genuine WEINMANN-electrodes.
	Damaged connection between the electrode contacts and main circuit board	Open device and check connections (Chapter 8.3, Page 25).
	Main circuit board defective.	Open up device and exchange the main circuit board (Chapter 8.9, Page 30).
Shocks can not be delivered, in spite of flashing shock key.	Main circuit board defective.	Open up device and exchange the main circuit board (Chapter 8.9, Page 30).
Spoken command "Movement detected. Stand clear of the patient!" is made.	MEDUCORE Easy recognises artefact and carries out a new analysis.	Do not touch or move the patient during the analysis.
Green status LED does not flash when the lid has been closed.	Rechargeable Battery or Battery-Pack is drained.	Insert new Battery/Rechargeable Battery Pack (see Chapter "Energy Supply" in the operating instructions MEDUCORE Easy).
	LED is defective	Open up device and replace the main circuit board (Chapter 8.9, Page 30).
No automatic self test is carried out.	RTC battery empty.	Replace Real Time Clock batteries (Chapter 8.8, Page 29).
Time and date entries, after switching the device off and on again, display a default value.	RTC battery empty.	Replace Real Time Clock batteries (Chapter 8.8, Page 29).

8. Repair information and repair instructions

8.1 General

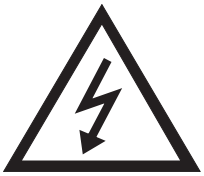
- **Please perform repairs on MEDUCORE Easy only on an ESD work station!**
- **Refer to the safety instructions in the operating manuals for MEDUCORE Easy.**
- Any handling of this device requires in-depth knowledge of and adherence to the operating manual and the maintenance and repair manual.
- Perform only the repairs as described in this maintenance and repair manual. This is the only way to ensure that the MEDUCORE Easy operates properly.
- Make sure that your hands and your workspace are clean when performing repairs.
- After every repair a maintenance check must be performed (see "4. Checking the device" on page 9).
- When replacing components or single parts, use only genuine WEINMANN Parts.
- When ordering the device's lower encasing **25** you have to state the device type, year of manufacture and serial number.

Note:
The item numbers stated in the following text are identical to the item numbers of the spare part list on page 34 and the overview on page 4.

8.2 Tools and facilities

In order to perform the repairs described in this chapter, you will need the following tools and facilities:

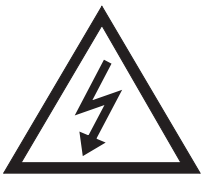
- Phillips screwdriver size: PZ 2
- Nail scissors or ticket-punch to mark the maintenance plaque
- Pincers
- High-voltage protected needle nose pliers
- ESD Workstation
- Discharging device WM 40009
  or:
  protected high-voltage workstation



Danger of death! Danger of electric shock! If no discharging unit is available, work on the MEDUCORE Easy must be carried out at a protected high-voltage workstation. Before carrying out any repair, it is essential to discharge the capacitor as described in Section "8.3 Discharge high voltage capacitor and open up device" on page 25, otherwise fatal injuries may be sustained.

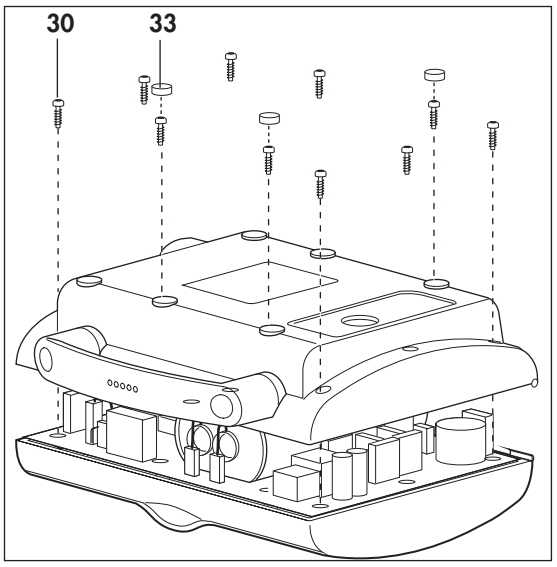
8.3 Discharge high voltage capacitor and open up device

Preparation



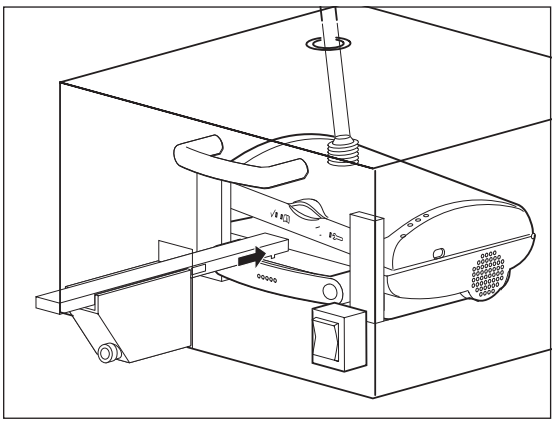
Danger! Risk of electric shock!
If a malfunction occurs in the device during a functional check, then it may not be used.

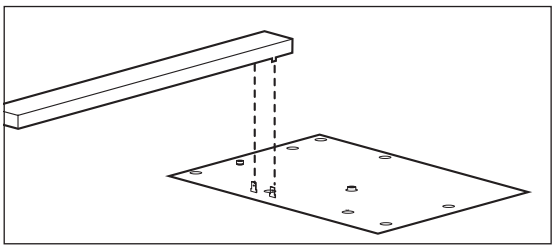
1. Remove the Battery-Pack/Rechargeable Battery Pack from the battery compartment MEDUCORE Easy.
2. Lie the MEDUCORE Easy with the red lid **facing down** on a non-slip surface.
3. Remove the sealing plugs **33**.
4. Loosen and remove the ten screws **30**.
5. Take the MEDUCORE Easy in both hands and hold both encasing elements together. Lie the MEDUCORE Easy with the red lid **facing upward** in the discharging device.
6. Close the discharging device lid.
7. Pull back the contact rocker of the discharge device and swing it upwards.



Discharging process

1. Slide the locking element back to release the lifting aid.
2. Press the bellows together and place the suction pad far left of the middle on the red lid of the MEDUCORE Easy.
3. Release the bellows. The suction pad will fasten itself.
4. Pull the lifting aid upwards. This serves to lift the upper part of the encasing.
5. Slide the locking element forwards to hold the lifting aid up and in so doing also the upper part of the encasing.





6. Slide the contact rocker into its resting position.
7. Check to see that the contact pin is directly above the capacitor contacts.

   If necessary, make some fine settings using the black screw on the front of the carriage.
8. Flip down the contact rocker. The contact pin must now be touching the capacitor contacts on the printed circuit board.

The capacitor is then completely discharged. The discharging process lasts approx. 4 seconds. It is completed when `-0.00` is displayed.

To be certain that the capacitor is discharged, carry out the following tests:

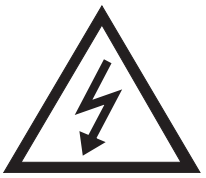
9. Press the red button on the front of the device.
   - The capacitor is very slightly charged. The display will now show for example `0.07`.
   - Upon releasing the button the display must **slowly** return to `-0.00` .

Danger! Risk of electric shock!
If the display returns immediately to `-0.00` then the contact pin is no longer in contact with the capacitor contact on the printed circuit board. The capacitor has in this case not been discharged. Adjust the position of the contact pin and check it again.

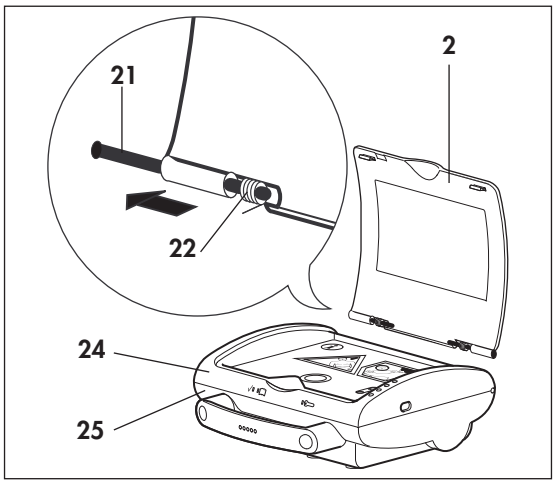
Completion

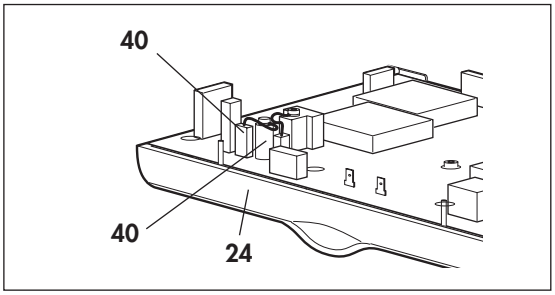
1. Pull the contact rocker back.
2. Slide the locking element back to release the lifting aid.
3. Lower the upper part of the encasing.
4. Rotate the lifting aid to release the suction pad from the lid.
5. Open the protective cover of the device and remove the MEDUCORE Easy.
6. Switch the discharging device via the rocker switch off.
7. Close the device (8.6, page 28).

8.4 Opening the device



Danger of death! Danger of electric shock! If no discharging unit is available, work on the MEDUCORE Easy must be carried out at a protected high-voltage workstation.

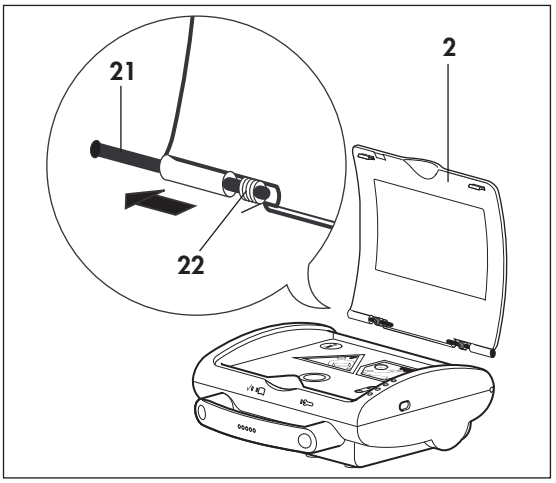




1. Take the red device lid **2** off.
2. Remove the pins **21** and springs **22** and store them in a safe place.
3. Lie the MEDUCORE Easy with the upper encasing **24 facing down** on a non-slip surface.
4. Carefully open the lower encasing device **25**.
5. Pull the loudspeaker cable from the printed circuit board.
6. Pull the red cable plug out of the printed circuit board.
7. Pull the capacitor out of the lower encasing part and place it carefully on the main circuit board.
8. Pull the plug belonging to the pad cable **40** and **41** out of the printed circuit board.
9. Pull the blue and black cable plugs out of printed circuit board.
10. Now you can set aside the lower encasing part **25**.

8.5 Exchange the device lids

Remove lid

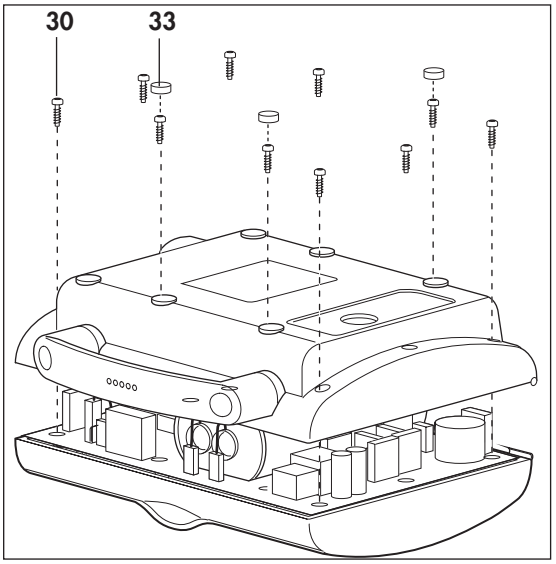


1. Open the red device lid **2**.
2. Slide the pins **21** out to one side and remove them.
3. Pull the springs **22** out and store them in a safe place.
4. Take the device lid **2** off.

Fitting lid

1. Place the ends of the springs **22** into the prepared holes of a new device lid.
2. Slide the pins **21** from the side far enough into the lid, so that the springs **22** are held in place.
3. Replace the lid **2**, so that the other end of the springs are situated between the encasing halves.
4. Slide the pins **21**right in.
5. Close the device lid.

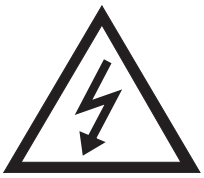
8.6 Close the device

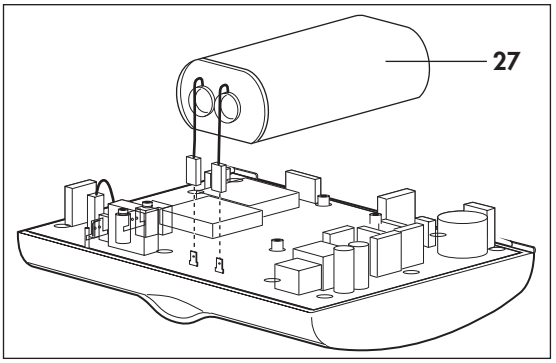


1. Hold the lower encasing part **25** up to the upper encasing part **24**.
2. Plug the blue cable into the printed circuit board (Labelled **HDQ**).
3. Plug the black cable into the printed circuit board (Labelled **ACCU -**).
4. Take the pad plug cable **40** and **41** and plug it into the printed circuit board.
5. Press the capacitor into the compartment of the lower encasing part. Guide the cable in through the slit.
6. Plug the cables for capacitor **27** onto the board. **Ensure that polarity +/- is correct (see labeling on the board and on the capacitor)! If the cables are the wrong way round, the top and bottom parts of the device will not fit together properly.**
7. Plug the red cable into the printed circuit board (Labelled **ACCU +**).
8. Plug the speaker cable into the printed circuit board.
9. Place the lower encasing part **25** onto the upper encasing part **24**.

   Please make sure that the cables do not get clamped.
10. Now screw the upper encasing part tightly with the ten screws **30** .
11. Set the sealing plugs **33** in place.
12. Turn the device around the right way again and fit the lid (see "8.5 Exchange the device lids" on page 27).
13. Check the device (see "4. Checking the device" on page 9).

8.7 Exchanging the capacitor

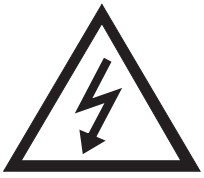


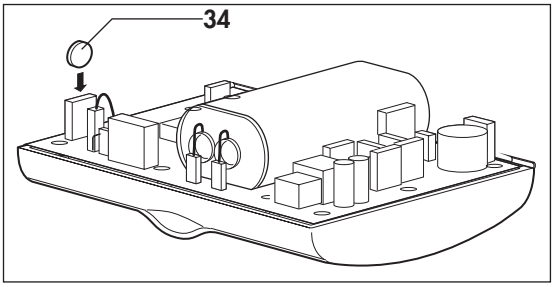


Danger of death! Danger of electric shock! The condenser must be completely discharged (see Chapter "8.3", Page 25).

1. Discharge the capacitor and open the device (see Chapter "8.3", Page 25).
2. Pull the capacitor cable **27** out of the printed circuit board with the aid of high-voltage protected needle nose pliers.
3. Remove the capacitor **27** and dispose of it (see Chapter "5.4", Page 20).
4. Place a new capacitor onto the printed circuit board. **Make sure that insulation mats 28 are lying between the capacitor and the main circuit board.**
5. Plug the capacitor cable **27** into the printed circuit board. **Make sure that the polarity is correct +/- (see the labelling on the printed circuit board and on the capacitor)! If the cables are mixed up then the upper and lower device parts will not fit to each other correctly.**
6. Close the device (see Chapter "8.6", Page 28).

8.8 Replace the Real Time Clock batteries

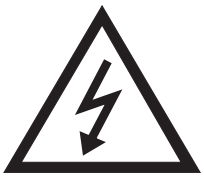




Danger of death! Danger of electric shock! The condenser must be completely discharged (see Chapter "8.3", Page 25).

1. Discharge the capacitor and open the device (see Chapter "8.3", Page 25).
2. Push the springs slightly backwards and remove the battery **34**.
3. Replace with new (button cell CR2032) battery. **Make sure that the polarity is correct!**
4. Close the device (see Chapter "8.6", Page 28).
5. Set the date and time with the help of EasyView (see chapter “Operation” in the operations manual for PC software EasyView WM 16880).

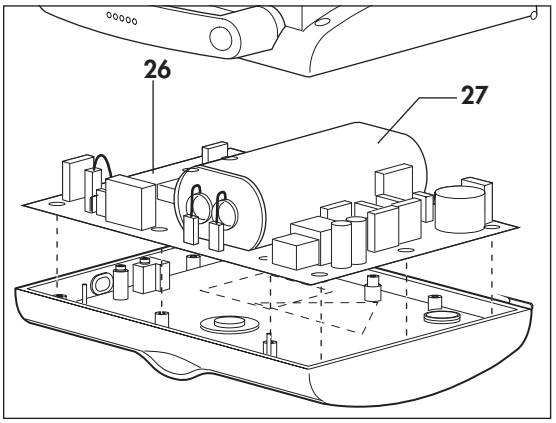
8.9 Replacing the main circuit board



Danger of death! Danger of electric shock! The condenser must be completely discharged (see Chapter "8.3", Page 25).

1. Discharge the capacitor and open up the device (see "8.3 Discharge high voltage capacitor and open up device" on page 25).

Remove the main circuit board



1. Pull the capacitor cable **27** out of the circuit board.
2. Remove the capacitor **27**.
3. Lever the main circuit board **26** out.

Inserting the main circuit board

1. Insert a new main printed circuit board **26** in place. **Make sure that the capacitor buffer 29 is jutting out of the main circuit board.**
2. Place the capacitor onto the printed circuit board. **Make sure that insulation mats 28 are lying between the capacitor and the main circuit board.**
3. Plug the capacitor cable **27** into the printed circuit board. **Make sure that the polarity is correct +/- (see the labelling on the printed circuit board and on the capacitor)! If the cables are mixed up then the upper and lower device parts will not fit to each other correctly.**
4. Close the device (see Chapter "8.6", Page 28).

Program the serial number on new main circuit board

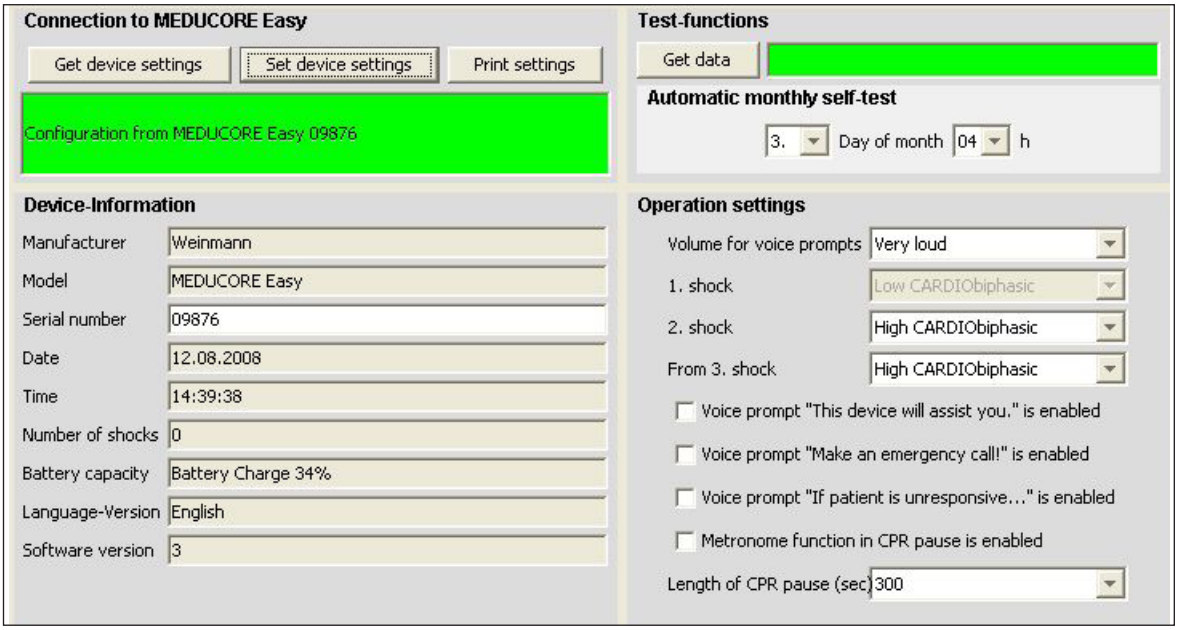
To change the serial number on the main circuit board in MEDUCORE Easy you will require the EasyView-Service software (see Chapter "4.2", Page 10).

Note:
Remember that the serial number entered can be 4 or 5 characters, and can only consist of the numbers 0 to 9!

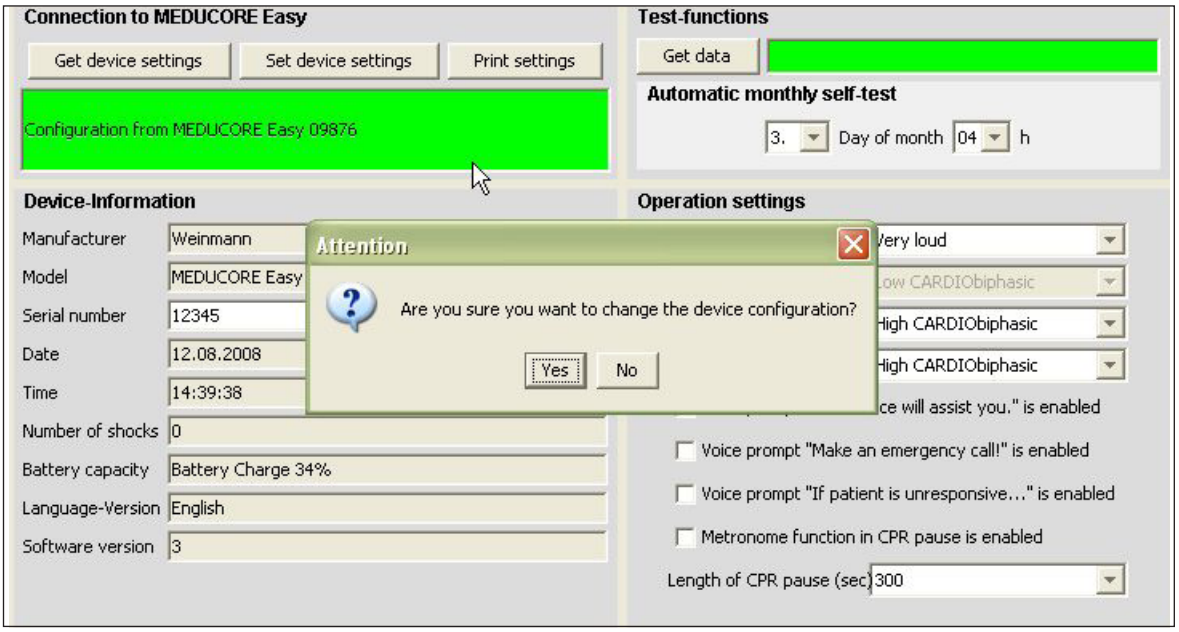
1. Start the EasyView-Service software and choose the "Device settings" tab.

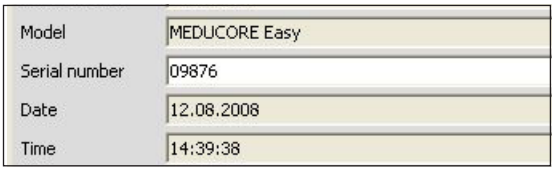
Click the "Get device settings" button.

The device configuration will be displayed.



2. Enter the device's 5-digit serial number. Then click the "Print settings" button.
3. Next, confirm the change to the device configuration. The number will now be stored in MEDUCORE Easy.





If a 4-digit serial number is entered, the system will automatically pad it out to 5 digits by adding a leading "0".

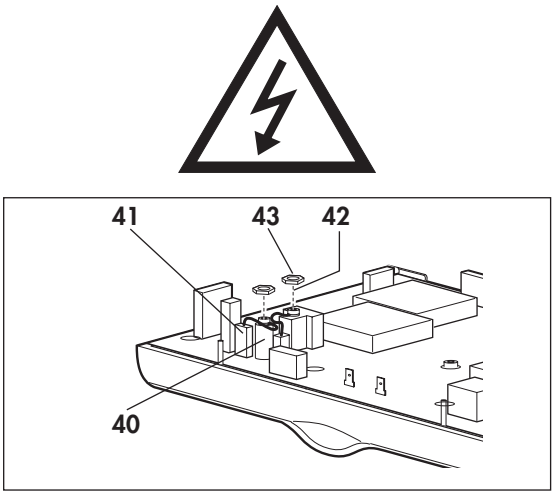
If the serial number was entered successfully, the following message will appear: "Communication successful".

If you have entered a serial number with less than 4 (or more than 5) digits, the following message will appear: "Serial number must have 4 or 5 digits".

Repeat the process with a number of the correct length.

This concludes the programming of the serial number.

8.10 Exchanging pad plug cable



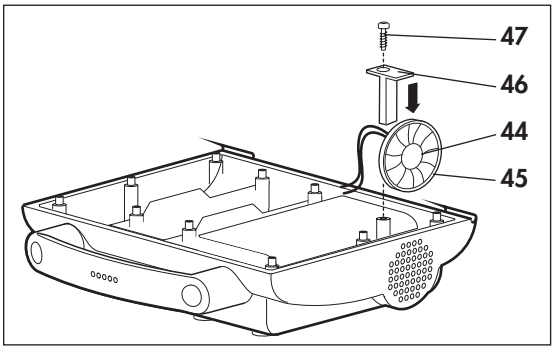
Danger of death! Danger of electric shock! The condenser must be completely discharged (see Chapter "8.3", Page 25).

1. Discharge capacitor and open up the device (see "8.3 Discharge high voltage capacitor and open up device" on page 25).
2. Loosen the nuts **43** and take the spring washer **42** off.
3. Pull the plug belonging to the cable **40** and **41** out of the printed circuit board.
4. Plug the new cable in its place.
5. Place the cable lug and spring washer onto the screw and screw the nut onto it. **Make sure that the order is correct!**
6. Close the device (see Chapter "8.6", Page 28).

8.11 Exchanging the speaker

Removing the speaker

Danger of death! Danger of electric shock! The condenser must be completely discharged (see Chapter "8.3", Page 25).



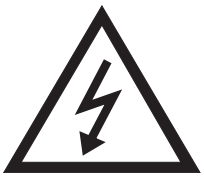
1. Discharge capacitor and open up the device (see "8.3 Discharge high voltage capacitor and open up device" on page 25).
2. **In the lower encasing part:** Rotate the screw out of the wedge **47** .
3. Pull the wedge **46** out.
4. Remove the loudspeaker **44** together with the seal **45**.

   Dispose of the old seal and the old wedge, together with the defective loudspeaker.

Fitting speaker

1. Use only parts from spare parts set WM 15705.
2. Take new seal **45** from the spare parts set and put it on the new loudspeaker.
3. Place the new speaker into the device. Make certain the seal is well fitted and flush.
4. Put the wedge into its position and screw it in tightly.
5. Close the device (see Chapter "8.6", Page 28).

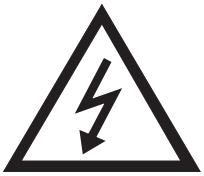
8.12 Exchange encasing, upper part



Danger of death! Danger of electric shock! The condenser must be completely discharged (see Chapter "8.3", Page 25).

1. Discharge capacitor and open up the device (see Chapter "8.3", Page 25).
2. Remove the main circuit board (see Chapter "8.9", Page 30).
3. Install the main circuit board into a new upper encasing part **24** (see Chapter "8.9", Page 30).
4. Close the device (see Chapter "8.6", Page 28).

8.13 Exchanging encasing, lower part



Danger of death! Danger of electric shock! The condenser must be completely discharged (see Chapter "8.3", Page 25).

1. Discharge capacitor and open up the device (see Chapter "8.3", Page 25).
2. Remove the handle from the old lower encasing part and fit it to the new lower encasing part **25** (see operating instructions “Fitting accessories”).
3. Close the device (see Chapter "8.6", Page 28).

9. Replacement parts

Note:

The item numbers of the following table are identical to the numbers used in the body of text of this service and maintenance manual.

Item-No.	Name	Ordering-No.
2	Lid, complete DE	WM 40125
	Lid, complete GB	WM 40337
	Lid, complete FR	WM 40347
	Lid, complete IT	WM 40357
	Lid, complete TH	WM 40367
	Lid, complete JP	WM 40377
	Lid, complete NO	WM 40387
	Lid, complete SE	WM 40397
	Lid, complete DK	WM 40407
	Lid, complete RU	WM 40417
	Lid, complete PL	WM 40427
	Lid, complete NL	WM 40437
	Lid, complete ES	WM 40447
	Lid, complete PT	WM 40457
	Lid, complete FI	WM 40467
	Lid, complete IS	WM 40477
	Lid, complete TR	WM 40487
	Lid, complete CZ	WM 40497
	Lid, complete GR	WM 40507
	Lid, complete SI	WM 40517
	Lid, complete SK	WM 40527
	Lid, complete HR	WM 40667
	Lid, complete ID	WM 40677
	Lid, complete CN	WM 40687
	Lid, complete IR	WM 40558
16	Defibrillation electrodes DE GB	WM 40116
	Defibrillation electrodes FR	WM 40349
	Defibrillation electrodes IT	WM 40359
	Defibrillation electrodes TH	WM 40369
	Defibrillation electrodes JP	WM 40379
	Defibrillation electrodes NO	WM 40389
	Defibrillation electrodes SE	WM 40399
	Defibrillation electrodes DK	WM 40409
	Defibrillation electrodes RU	WM 40419
	Defibrillation electrodes PL	WM 40429
	Defibrillation electrodes NL	WM 40439
	Defibrillation electrodes ES	WM 40449
	Defibrillation electrodes PT	WM 40459
	Defibrillation electrodes FI	WM 40469
	Defibrillation electrodes IS	WM 40479
	Defibrillation electrodes TR	WM 40489
	Defibrillation electrodes CZ	WM 40499
	Defibrillation electrodes GR	WM 40509
	Defibrillation electrodes SI	WM 40519
	Defibrillation electrodes SK	WM 40529
	Defibrillation electrodes HR	WM 40439
	Defibrillation electrodes ID	WM 40019
	Defibrillation electrodes CN	WM 40069
	Defibrillation electrodes IR	WM 40468

Item-No.	Name	Ordering-No.
17	Battery-Pack Rechargeable Battery-Pack	WM 40155 WM 40150
18	Battery charger	WM 40003
19	Set, Emergency MEDUCORE Easy	WM 15460
20	PC-Software EasyView	WM 40192
21	Hinge pin	WM 40123
22	Spring for lid	WM 40124
23	Retaining bracket	WM 40024
24	Encasing, upper part, preassembled	WM 40076
25	Encasing, lower part, assembled*	WM 40002
26	Main circuit board DE, new Main circuit board DE, replacement Main circuit board GB, new Main circuit board GB, replacement Main circuit board FR, new Main circuit board FR, replacement Main circuit board IT, new Main circuit board IT, replacement Main circuit board TH, new Main circuit board TH, replacement Main circuit board JP, new Main circuit board JP, replacement Main circuit board NO, new Main circuit board NO, replacement Main circuit board SE, new Main circuit board SE, replacement Main circuit board DK, new Main circuit board DK, replacement Main circuit board RU, new Main circuit board RU, replacement Main circuit board PL, new Main circuit board PL, replacement Main circuit board NL, new Main circuit board NL, replacement Main circuit board ES, new Main circuit board ES, replacement Main circuit board PT, new Main circuit board PT, replacement Main circuit board FI, new Main circuit board FI, replacement Main circuit board, IS, new Main circuit board, IS, replacement Main circuit board TR, new Main circuit board TR, replacement Main circuit board CZ, new Main circuit board CZ, replacement Main circuit board GR, new Main circuit board GR, replacement Main circuit board SI, new Main circuit board SI, replacement Main circuit board SK, new Main circuit board SK, replacement	WM 40130 WM 40063 WM 40330 WM 40313 WM 40340 WM 40343 WM 40350 WM 40353 WM 40360 WM 40363 WM 40370 WM 40373 WM 40380 WM 40383 WM 40390 WM 40393 WM 40400 WM 40403 WM 40410 WM 40413 WM 40420 WM 40423 WM 40430 WM 40433 WM 40440 WM 40443 WM 40450 WM 40453 WM 40228 WM 40483 WM 40368 WM 40023 WM 40244 WM 40493 WM 40258 WM 40503 WM 40375 WM 40193 WM 40268 WM 40203 WM 40378 WM 40243

Item-No.	Name	Ordering-No.
26	Main circuit board HR, new Main circuit board HR, replacement Main circuit board ID, new Main circuit board ID, replacement Main circuit board CN, new Main circuit board CN, replacement Main circuit board IR, new Main circuit board IR, replacement	WM 40277 WM 40303 WM 40294 WM 40463 WM 40295 WM 40473 WM 40435 WM 40464
27	High voltage capacitor	WM 40078
28	Insulation mat for capacitor, bottom	WM 40137
29	Capacitor buffer	WM 40106
30	Fillister head screw KB 40x25	WM 40143
31	Shock button, printed	WM 40168
32	Info button	WM 40167
33	Sealing plug	WM 40158
34	Battery 3 V	WM 40089
35	Handle	WM 40103
36	Handle sealing	WM 40186
37	Cylinder head screw M8x30; DIN EN ISO 4762 ST-ZN	WM 50607
38	Flexible handle including attaching brackets	WM 40164
39	Protective and carrying bag	WM 40100
40	Cable, long	WM 40282
41	Cable, short	WM 40283
42	Serrated lock washer J3,2 DIN 6798-V2A; WNR.1.4310	WM 51850
43	Hexagonal nut M3 DIN 934 MS-NI	WM 50910
 44 **45** **46**	Set Speaker, consisting of: Speaker with wiring Speaker sealing Wedge	WM 15705 WM 40266 WM 40113 WM 40178
47	Fillister head screw KB 40x8	WM 40141
48	Cable, blue	WM 40281
49	Cable, red	WM 40284
50	Cable, black	WM 40285
51	Contact, rechargeable battery compartment	WM 40139
52	Sealing plate	WM 40138

Item-No.	Name	Ordering-No.
	Instructions for use MEDUCORE Easy DE	WM 16799
	Instructions for use MEDUCORE Easy FR; NL; IT	WM 16912
	Instructions for use MEDUCORE Easy GB; ES; PT	WM 16913
	Instructions for use MEDUCORE Easy DK; NO; SE	WM 16920
	Instructions for use MEDUCORE Easy JA; TH	WM 16921
	Instructions for use MEDUCORE Easy PL; RU	WM 16922
	Instructions for use MEDUCORE Easy IS; FI	WM 66450
	Instructions for use MEDUCORE Easy TR; GR	WM 66451
	Instructions for use MEDUCORE Easy ID; CN	WM 66452
	Instructions for use MEDUCORE Easy CZ; SL	WM 66453
	Instructions for use MEDUCORE Easy HR; SK	WM 66454
	Instructions for use MEDUCORE Easy IR	WM 66455
	Fitting instructions MEDUCORE Wall bracket DE; GB; FR	WM 16264

* When placing an order please make sure to include type, unit serial no. and year built.

10. Tools and testing devices

The following is a list of all tools and testing devices mentioned in this maintenance- and repair manual. Special tools can be obtained from WEINMANN, the manufacturer.

10.1 General tools

- Phillips screwdriver size:PZ 2
- Nail scissors or ticket-punch to mark the maintenance plaque
- ESD Workstation
- High-voltage protected needle nose pliers

10.2 Special tools

- Discharging unit WM 40009 (obtainable from WEINMANN)
- IR-Adapter WM 22498
- Rechargeable Battery Adapter WM 40008
- Test line MEDUCORE Easy WM 40454

10.3 Software

- EasyView-Service PC software

10.4 Testing devices

- Multimeter, measuring range up to 20 A
- Defi-tester

  ECG graphs: Sinusoidal rhythm and arrhythmias (VT/VF), as described under 201.102.3 in EN 60601-2-4.
  Discharge resistance: 50 ohms ±1% (non-inductive)
  Maximum energy: up to at least 350 joules
  Maximum voltage: > 2500 V
  Maximum current: > 50 A
  Precision of energy measurement: < ±2% of measured value

  The tester should be calibrated by the manufacturer.

  e.g. Defi-tester from the Fluke Company, Type: QED6H

  Fluke Deutschland GmbH
  Heinrich-Hertz-Straße 11
  D-34123 Kassel
  Germany

  Fluke Corporation
  P.O. Box 9090
  Everett, WA 98206-9090
  USA

  www.fluke.com

11. Technical data

Device

Dimensions/Environment/Norms	
Dimensions L x B x H (in mm incl. handle)	240 x 240 x 93
Weight, empty: With Rechargeable Battery/Battery-Pack and electrodes:	2.1 kg 2.6 kg
Device class according to MPG and Guidelines 93/42/EEC:	IIb
Operation: Temperature range: Without Rechargeable Battery/Battery-Pack and electrodes: Air humidity: Air pressure:	 0 °C to +50 °C 0 °C to +50 °C 0 % to 95 % 700 to 1060 hPa
Transport/Storage:	0 °C to +50 °C
Temperature range: max. 2 weeks	-20 °C to +60 °C
Without Rechargeable Battery and electrodes:	-30 °C to +70 °C
Air humidity: Air pressure:	0 % to 95 % 500 to 1060 hPa
Protective class	IEC 529: IPX4 (protected against sprayed water)
Vibration and knock	DIN-EN 1789:1999
Free fall	EN 60601-1: 1996
Electromagnetic compatibility:	EN 60601-1-2:2001 EN 55011:1998/A1 EN 55014 -1: 2000/A1 EN 61000-4-2:1995/A1/A2 EN 61000-4-3: 1996/A1 EN 61000-4-4.5: 1995 EN 61000-4-6: 1996/A1 EN 61000-4-8: 1993
Norms:	EN 1789, AAMI ANSI DF 39, EN 60601-2-4: 2003, rarely used
Resuscitation protocol	ERC, AHA; 2005

Self testing	
Interval	daily, monthly, when switched on
Time	programmable
Range	battery, electronic, software, charge, shock button, environmental temperature

Defibrillation electrodes	
Condition upon delivery	self sticking once-only electrodes, packed with connecting plug extruding
Polarisation	not polarized (exchange allowed)
Cable length	125 cm
Electrodes upper surface	every 125 cm^2
service life	30 Months from date of manufacture

Power supply

Version	**Battery-Pack**	**Rechargeable Battery-Pack (optional)**
Type	$LiSO_2$	Li-Ion
Dimensions LxBxH (in mm)	148.6 x 71.6 x 32.6	
Weight:	400 g	
Shock capacity*,**:	up to 200 shocks	up to 100 shocks
Minimum capacity	100 shocks	–
Monitoring capacity*,***:	up to 18 hours	up to 9 hours
Rated capacitance:	3800 mAh	
Rated voltage:	11.2 V	12.4 V
Fuse	–	16 A
Stand-by-Time*: Minimum Stand-by-Time:	up to 5 years 4 years	
Maximum charging time	–	< 4 h
Maximum charging power	–	1,2 A
Transport/Storage: Temperature range: Air humidity:	–	 - 40°C to +85°C 0% to 90%
Service life	–	> 300 full charges

* For new Rechargeable Battery or Battery-Pack, 20 C.
** At Low-Energy settings
*** At the lowest volume

Battery charger (optional)	
Dimensions LxBxH (in mm)	108 x 65 x 77
Mains voltage	100-240 ~V
Mains frequency	50/60 Hz
Output voltage	15 V
Weight	230g
Ambient temperature Operation Transport/Storage	 0°C to 40°C -20°C to +85°C
Fuse	T2A 250 V
Short circuit proof	Durable
Protective function	Voltage surge protection
Charger plug	Quadripolar Secured against incorrect polarity
Mains plug	Exchangeable, for different countries
Electromagnetic compatibility	see "Dimensions/Environment/Norms"

Defibrillation/Analysis

Defibrillation system *CARDIObiphasic*	
Operational mode	Automated (1-button operation)
Wave form	Biphasic, current limited
Energy levels	Low Energy (max. 200 J at 75 **Ω**) High Energy (max 310 J at 75 **Ω**)
level of energy at 50 **Ω**	Low Energy: 168 J ±10% High Energy: 298 J ±10%
Max. patient imp. Max. patient imp.	200 **Ω** 5 **Ω**
Shock sequence	programmable: constant or rising
HLR pause adjustable	60-300 s
Energy levels adjustable	Low High

* For new Rechargeable Battery/Battery-Pack, 20°C.

ECG analysis system *CARDIOlogic*	
Analysis time	< 10 s
Conduction	II
Impedance measurement	checked electrode contact, matches energy to the impedance
Movement and object detection	Constant checking of signal quality, acoustic warning when patient moves
Reacts to implanted pacemakers	Pulses from implanted pacemakers may affect or prevent the proper identification of arrhythmias. It is thus possible that not all defibrillatable rhythms will be identified, and shock output from the device is not recommended under certain circumstances.
Asystoly threshold	< 0.08 mV
Sensitivity VF/pVT*	> 93 %
Specificity NSR/Asystoly*	> 99 %

* The test report on the analysis system is available upon request from the manufacturer WEINMANN.

Operation/Data management

Operation	
Control element	– automatic switch on when lid is opened – flashing shock button (1-button operation) – Info-button
Info-mode	Announcement of elapsed time and total shocks delivered since device was started with start button
Display elements	– Lighting symbols (traffic light principle) – Device LEDs (Stand by, Change batteries, Self test results/ Maintenance display)
Acoustic signals	– Spoken instructions – Signal tones (during operation) – Signal tones (in stand-by mode for device malfunction or low battery levels) – Metronome function in resuscitation pause

Data management	
Utilisation documentation	automatic registration of ECG and event data.
Storage capacity	up to 4 data records with a total of a max. 2 hrs. complete ECG and event data
Data recall, data evaluation, device configuration	via infrared interface and and PC software EasyView

Data management	
Configurable parameter	– Volume (Level 1 - 4, automatic) – Self test times – Pause time period – Selected messages on/off – Energy level low/high – Energy protocol constant/rising – Metronome function on/off

Distance from HF telecommunications equipment

Recommended safe distance between mobile HF telecommunications devices (e.g. mobile telephones) and the MEDUCORE Easy			
Nominal output of HF equipment in W	**Safety distance dependent on transmission frequency in m**		
	150kHz - 80MHz	**80MHz - 800MHz**	**800MHz – 2.5GHz**
0.01	0.04	0.04	0.07
0.1	0.11	0.11	0.22
1	0.35	0.35	0.70
10	1.11	1.11	2.21
100	3.50	3.50	7.00

Subject to design modifications.

CE 0197

12. Technical Changes

12.1 Device: MEDUCORE Easy

Technical Changes	From Device No.	Date
ILCOR 2005	1342	13.12.2006

12.2 Software

Technical Changes	Software version	Date
Adjustment for ILCOR 2005 reanimation procedure	V1.2.2 WM 40192a	08.12.2006
Adjusting the EasyView software for the extended flash memory erase time on the WM 40130 PCB (revision by the manufacturer)	V.1.2.3. WM 40192b	21.02.2007
Adjusting the EasyView software for the new languages offered (10 new languages)	V1.2.4 WM 40192c	03.07.2007
Adjusting the EasyView software for the new language editions (1 new language + dummy entry for "other, unknown" languages)	V1.2.5 WM 40192d	11.12.2007

13. Protocol

13.1 Repairs and maintenance protocol

Device master data	Service and repair work carried out in accordance with service instructions	
Manufacturer: WEINMANN GmbH + Co. 22525 Hamburg Device type: **MEDUCORE Easy** Order No.: _____ Date of manufacture: _____	**Measures / Comments**	Service performed in accordance with MEDUCORE service instructions
		Company _____ Date _____ Signature
Safety check - 2 years _____		Company _____ Date _____ Signature
Safety check - 4 years _____		Company
Safety check - 6 years _____		_____ Date _____ Signature
Safety check - 8 years _____		Company
Safety check - 10 years _____		_____ Date _____ Signature

13.2 Test record "Safety related check in accordance with §6 of the MP BetreibV (German Medicinal Products and Users Ordinance)"

Certificate
to verify that a safety related check has been carried out
in accordance with §6 of the Medicinal Products and Users Ordinance

Type of device:	Defibrillator
Serial-No:	_____
Manufacturer:	WEINMANN GmbH & Co. KG
Device type:	MEDUCORE Easy ☐ WM 40000 ☐ WM 40005
(Manufacturer's designation)	
Operator:	.....
	.....
	.....

Safety related check:

Due date:	2 years
Scope:	Verify that the equipment is complete
	Visual inspection for mechanical damage
	Test of system components
	Safety related check as specified in manufacturer's test instructions WM 40006
Note:	The safety related check is no substitute for necessary maintenance or the preventative replacement of wearing parts.

Test result:	The device meets the requirements of § 6 of the German Medicinal Products and Users Ordinance.

Date:	**QM tester:**
_____	_____

WEINMANN medical technology

Geräte für Medizin GmbH+Co. KG, P.O. Box 54 02 68, D-22502 Hamburg, Fax +49 40/54 70 24 61, Phone +49 40/54 70 2-0

Test record for safety related check in accordance with § 6 Medicinal Products and Users Ordinance, based on test instructions WM 40006

Unit: MEDUCORE Easy **WM-No.**: 40000 40005 **Serial-No.**: ..... **Date of manufacture:**.....

1. Testing devices
- Defi-Tester Type Fluke QED6H, PC with IrDE interface, Software EasyView, Rechargeable Battery Adapter WM 40008, Rechargeable Battery Pack WM 40150 (completely charged), tool for removing the safety check (STK) sticker

2. Preparations for testing
- Connect MEDUCORE Easy to the testing device

3. Entering the device data	**Value**	**OK**	**not OK**
• Entering the above mentioned device data			
4. Checking the device's self testing			
• Device self test is carried out		☐	☐
5. Checking the volume levels			
• The speech is clear and with a gradual increase in volume		☐	☐
6. Testing the ECG detection, current input, shock button and shock output			
• The ECG ventricular fibrillation is recognized		☐	☐
• The middle charging current is 9 ± 3 A	☐ A	☐	☐
• The shock button is operational, the shock meets the requirements		☐	☐
7. Checking the procedure display and capacitor discharge			
• LEDs belonging to the progress displays: pentagon, triangle, charge and shock button are all lighting correctly		☐	☐
• The capacitor is discharged if the shock is not delivered		☐	☐
8. Check the info button and the reed contact			
• The info button is correctly recognised		☐	☐
• The reed contact is switching the device correctly		☐	☐
9. Checking the Status-LEDs			
• The status LEDs red, green, and yellow are all lighting correctly		☐	☐
10. Test IrDE interface and the software version			
• The interface is functioning correctly		☐	☐
• The software version corresponds to the current release		☐	☐

11. Check maintenance sticker and safety check (STK) sticker	**yes**	**no**		
• Maintenance executed	☐	☐	☐	☐
• Maintenance sticker stuck down correctly	☐	☐	☐	☐
• STK sticker stuck down correctly	☐	☐	☐	☐

12. Check the equipment and the accessories (system components)	**available**	**yes**	**no**		
• Defibrillation electrodes undamaged **Attention!** The customer should be notified if the minimum durability falls below 6 months.		☐	☐	☐	☐
• Set, Emergency Meducore Easy WM 15460 complete		☐	☐	☐	☐
• Undamaged rechargeable Battery Pack		☐	☐	☐	☐
• Undamaged Battery Pack		☐	☐	☐	☐
• Capacity (mark wth a cross) ☐ ≥ 8 ≤ 15 % ☐ > 15 ≤ 50 % ☐ >50 %				☐	☐
• Medicinal products book		☐	☐	☐	☐
• Instruction manual		☐	☐	☐	☐

Maintenance executed: yes ☐ no ☐ Final test executed: _____ Date _____ Tester-No. _____ Signature

Weinmann
Geräte für Medizin GmbH+Co. KG

P.O. Box 540268 • D-22502 Hamburg
Kronsaalsweg 40 • D-22525 Hamburg
T: +49-(0)40-5 47 02-0
F: +49-(0)40-5 47 02-461
E: info@weinmann.de
www.weinmann.de

Center for
Production, Logistics, Service

Weinmann
Geräte für Medizin GmbH+Co. KG
Siebenstücken 14
D-24558 Henstedt-Ulzburg
T: +49-(0)4193-88 91-0
F: +49-(0)4193-88 91-450

WM 16941b- 01.09

emergency | homecare | diagnostics

WEINMANN
medical technology