

CardiAid[®]

Public Access Defibrillator

The best public
access defibrillator





Lifesaver Technology for Sudden Cardiac Arrest



Sudden cardiac arrest (SCA), the leading cause of death in USA and Europe, is the condition in which the heart is no longer able to pump blood to the brain and other organs, because of an electrical problem resulting in a fatal arrhythmia in the heart. Most of the time, heart becomes chaotic (ventricular fibrillation, VF) or rapid (ventricular tachycardia, VT).

SCA can strike any person, anywhere, anytime. In most cases, there are no previous symptoms. When someone collapses from SCA, immediate defibrillation and cardiopulmonary resuscitation (CPR) are essential for any chance of recovery. Immediate treatment is critical for SCA victims since survival chances decrease by about 10% with every minute without defibrillation.

Authorities agree that defibrillation should be provided as early as possible, preferably within first 3 to 5 minutes. Even with the fastest emergency medical service system, the professionals may not be able to reach the victim on time. This results in the necessity of the lifesaving defibrillation to be performed at incident scene within first minutes and by any responder.

CardiAid Automated External Defibrillator (AED) is an easy-to-use device, specially designed for public

access use, to provide life-saving electroshock treatment for a patient having SCA within the critical first minutes, until the professional care is available.

Beside its successful detection and treatment algorithm, CardiAid AED is perfect for public access defibrillation programs (public AED programs) because it provides comprehensive assistance to the user.

CardiAid Automated External Defibrillator (AED) is an innovative first aid equipment which constitutes a critical element for public AED programs, schools, sports centres, occupational safety & health practices, emergency response teams and maritime safety solutions. It also meets the needs of professionals such as emergency medical services (EMS) professionals, physicians and dentists, whose profession also requires an AED implementation.



CardiAid is the most user friendly defibrillator available.





Features of CardiAid CT0207

CardiAid AED was specially designed to be simple, easy to use and quick to treat.

- ♥ CardiAid AED can be used by any person with basic life support (CPR) knowledge.
- ♥ It automatically turns on when its cover is opened.
- ♥ The pre-connected electrodes help save time and make the process simpler for the user.
- ♥ CardiAid AED guides the user with **clear verbal and visual instructions** from the beginning to the end of the whole process, including instructions reminding the user to call the emergency number and assisting the user through the reanimation process.
- ♥ The status indicator lights burn with **universal colours**: green and red, showing if there is any problem with the device, or not. This provides standardization.
- ♥ CardiAid guides the user with **a combination of verbal instructions, pictures and lights**. CardiAid is designed to assist the user with both pictures, flashing lights of different colours and sound at the same time, thus maximizing the performance. The pictures are simple and explanatory; the flashing lights are designed to emphasize the pictures and buttons, with white flashing light showing the stage of the process and red flashing light only indicating the shock button. In this way, all steps are ensured to be implemented accurately even if the user has limited knowledge or experience about first response.
- ♥ Verbal instructions of CardiAid are clear and have **optimum combination of content and duration**, enabling CardiAid to be time-efficient in case of an emergency.
- ♥ CardiAid works with **one-button operation principle** for providing immediate treatment and highest safety. The user is asked to press the shock-button, to ensure that the patient is not being touched or moved.
- ♥ CardiAid AED provides the most effective treatment with **biphasic defibrillation**.
- ♥ It provides **CPR assistance** with metronomic signals for maximum efficiency.
- ♥ CardiAid was specially designed for **public-access use**. This is why inessential functions like ECG display are omitted. A nonmedical person will not be able to read this graph, and will not have to, since CardiAid will automatically analyse the heart rhythm and decide whether shock is necessary or not.
- ♥ **To minimize the responsibility of the owner of CardiAid and risk of forgetting to charge the battery** CardiAid does not use a rechargeable battery.

CardiAid performs **automatic self-test** daily, monthly and when the cover of the device is opened. This function enables CardiAid to be in-use whenever needed, without a problem.
- ♥ Using CardiAid is **completely safe** for the patient and the user. CardiAid analyses the heart rhythm of the patient with the most accurate technique and it is impossible to give shock if shock is not necessary. The algorithm and the board used in CardiAid AED CT0207 offers the optimum combination of sensitivity and specificity.
- ♥ CardiAid AED is compliant with the latest ILCOR ERC Resuscitation Guidelines.
- ♥ Automatically stores the event data and the ECG of the patient.
- ♥ Special accessories provide safety, easy-use and the highest performance.



Card Aid





How to Use CardiAid?

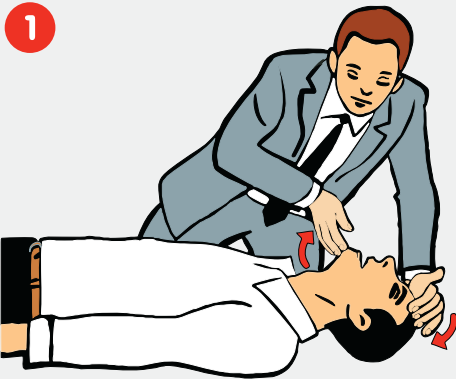
When you see a person lying unconscious;

- First, make sure you, the victim and any bystanders are safe.
- Check the victim for a response. Gently shake the shoulders and ask loudly: “Are you all right?”

If he responds;

- Leave him in the position in which you find him, provided there is no further danger.
- Try to find out what is wrong with him and get help if needed.
- Reassess him regularly.

If he does not respond, shout for help and follow these steps:



1 Turn the victim onto his back, open the airway by tilting his head back and lifting his chin. Look, listen and feel for breathing.



2 If breathing is absent or not normal, send someone for help and to bring the CardiAid AED. Perform CPR until CardiAid AED arrives.



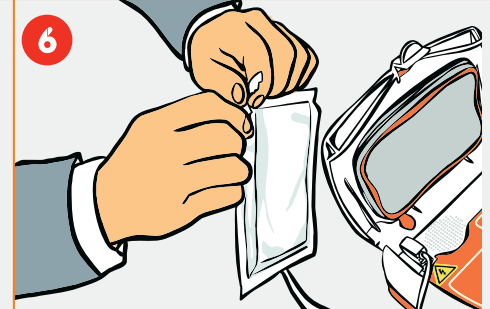
3 If you are on your own, use your mobile phone to alert the ambulance service.



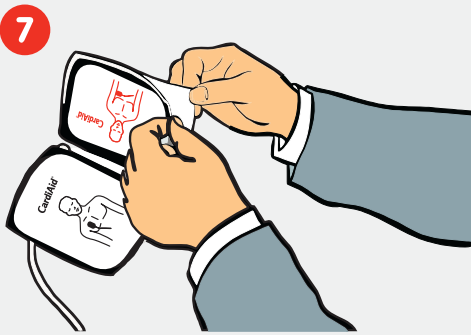
4 CardiAid switches on automatically, when the cover of the device is opened. Follow the verbal and visual instructions.



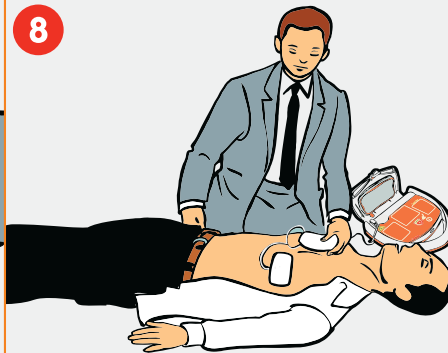
5 Open patient's chest. If necessary, use the scissors in the emergency kit of CardiAid to cut the cloth of the patient.



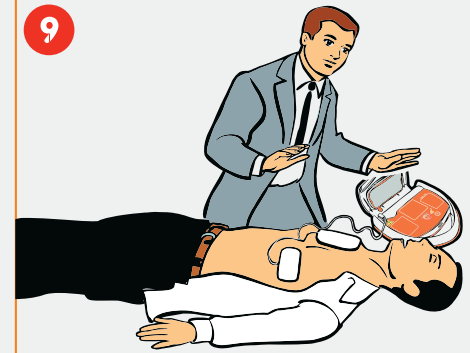
6 Open electrodes' package.



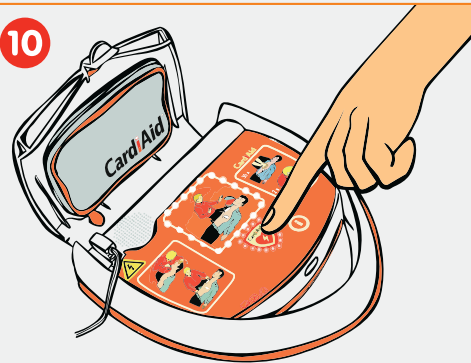
7 Peel off the film of one electrode and stick the pad on patient's bare chest as shown on the pad.



8 Peel off the film of the second electrode and stick the pad on patient's bare chest as shown on the pad.



9 CardiAid immediately starts analysing the heart rhythm. Do not touch the patient from now on.



10 If electroshock is necessary, CardiAid informs the user and prepares the shock. CardiAid gives shock by pressing the shock button. Before pressing the button, make sure patient is not being touched or moved.



11 CardiAid continues to guide the user through the resuscitation process. First give 30 chest compressions by following the verbal instructions of CardiAid. CardiAid provides a metronomic signal with the correct rhythm of the chest compressions.



12 After 30 chest compressions, give 2 mouth-to-mouth breaths. Continue CPR by following the instructions of CardiAid, until "Do not touch the patient from now on." instruction is heard.

CardiAid is designed to make lifesaving defibrillation possible for everybody, accessible at everywhere.

See CardiAid in action!
Watch the video:





Where to Have CardiAid?

Scientific studies have proven that immediate defibrillation is the most important factor affecting the chance of survival for sudden cardiac arrest victims. These findings have emphasized the necessity of public defibrillation and advancing technology has enabled defibrillators to be used by non-professionals.

Having CardiAid AED in these places can save many lives:



- Public buildings such as airports, railway stations, city halls, subway stations, shopping malls, and schools
- Hotels, restaurants & bars
- Outdoor sport clubs (Football, basketball, volleyball, hockey, tennis, golf...)



- Water sports centres and swimming pools
- Indoor sports centres, fitness clubs
- Public transport vehicles such as buses, trains, subway trains, trams
- Transportation stations such as bus stations and train stations





- Ships, ferries, charter yachts, private yachts, and boats
- Ambulances, police cars, fire engines



- Leisure centres such as theatres, concert halls, exhibition centres, and museums
- Medical clinics, pharmacies & dentists
- Factories, commercial and residential buildings
- Every company with one or more employees



There should be a CardiAid AED installed in every place where;

- People with higher risk of SCA live, work or spend time,
- SCA causing incidents may happen.





Survivor Stories

CardiAid saved life at a swimming pool!

August 2012, Spain

CardiAid was used successfully to save the life of a 39-year-old sudden cardiac arrest victim in a swimming pool complex. When the lifeguard noticed that the man was unconscious, he asked the staff to bring the CardiAid AED and immediately started CPR. The patient was brought back to life thanks to the successful defibrillation of CardiAid AED and immediate CPR.



CardiAid saved life of a teenage runner on the street!

June 2012, The Netherlands

A 14-year-old victim who suddenly collapsed on the street during the running event of his school was saved by the immediate defibrillation of CardiAid AED.



CardiAid saved life in a medical clinic!

May 2012, New Zealand

A 42-year-old sudden cardiac arrest victim was saved by the successful defibrillation of CardiAid in the resuscitation room of a medical clinic.



CardiAid saved life in a sports club!

February 2012, Denmark

A 53-year-old man was saved by one successful shock of CardiAid, in a sports club. He was reported to be in a stable condition and left the hospital a few days later.

CardiAid saved life at a supermarket!

November 2011, France

The customer, who was shopping at one of the supermarkets belonging to a super market chain in France, suddenly collapsed. He was revived after the successful intervention of CardiAid AED.



CardiAid saved life in a sports club!

November 2011, France

CardiAid was used successfully in a sports club to restore the normal heart beat of a person who suffered a sudden cardiac arrest.



CardiAid saved life at a gym!

July 2011, The Netherlands

A 28-year-old man suffered a sudden cardiac arrest during his daily workout at a fitness centre. With one successful shock administered by CardiAid AED, he was brought to life.

CardiAid saved life in a supermarket!

March 2011, France

A man at an advanced age had a heart attack while he was shopping at one of the supermarkets belonging to a supermarket chain in France. The security officers of the supermarket intervened with the CardiAid AED installed at the supermarket and saved the life of the cardiac arrest victim.



CardiAid saved life at a grocery store!

January 2011, Denmark

A 60-year-old man shopping at a grocery store in Denmark suffered from sudden cardiac arrest. He was saved by CardiAid which was located at the dental clinic across the street.



CardiAid saved life at a tennis club!

July 2010, The Netherlands

A 62-year-old man who suddenly lost consciousness while playing tennis was saved with the successful electroshock of CardiAid AED which was installed at the tennis club.

CardiAid saved life at a supermarket car park!

July 2009, France

The security guard of a supermarket saved the life of a customer using CardiAid. The person was headed to his car in the car park when he suddenly fell. A security guard grabbed CardiAid which was in the store and saved his life. He was conscious again when the ambulance arrived.



CardiAid saved life at a football pitch!

May 2009

CardiAid saved the life of a 38-year-old man in the Netherlands. He had sudden cardiac arrest during an amateur football tournament between companies. When he suddenly fell, a colleague started CPR and a person ran to grab CardiAid which was located in a farm nearby. With one successful shock, he was brought to life.



CardiAid CT0207 AED Package Content



Always ready to use, ready to save...

CardiAid CT0207 – Technical Specifications

Defibrillation System

Operating Mode: Automated (one button operation)

Wave Form: Biphasic, current-limited

Shock Energy: Low energy (max. 181J) or high energy (max. 237J), programmable, energy adjusted to patient impedance

Shock Sequence: Constant or escalating, programmable (factory setting)

Charging Time: Typical <10 seconds*, maximum <15 seconds*

ECG Analysis System

Analysis Time: Typical <10 seconds*

Derivation: II

Asystole Threshold: <0,2 mV

Specificity NSR/Asystole: >95**

Sensitivity VF/VT: >90**

Reaction to Implanted Pacemaker: Normal cardiac pacemaker rhythms are not detected as being shockable.

Impedance Measurement: Checks electrodes contacts.

Movement Detection: Checks the signal quality, gives acoustic warning at patient movement.

Operation

Operating Elements:

- i) Automatic switch-on when cover is opened
- ii) Flashing shock button (one-button operation)
- iii) Info-button

Info Mode: Announcement of the elapsed time and number of shocks since device started, when info-button is pressed

Display Elements: Self-explanatory illuminated symbols (traffic light principle)

Defibrillation Electrodes

Range of Application: CardiAid can be used for adult or young patients over 20 kgs.

Delivery State: Disposable self-adhesive electrodes ready for use, sealed and packed with connector outside of package

Polarization: Not polarized

Electrode Surface Area: Each 125 cm²

Cable Length: 130 cm

Shelf Life: 36 months from date of manufacture

Data Management

Event Documentation: Automatic recording of ECG and event data in internal memory up to 4 sessions with a total maximum duration of 4 hours

Data Transfer: Bluetooth (only for technical service)

Event Review and Device Programming: Via bluetooth connection to PC with CardiAid Monitor Software (only for technical service)

Self-Test

Schedule: Automatic; daily, monthly and when device is switched-on

Timing: Programmable (factory setting)

Scope: Battery, internal electronics, software, charging

Energy Supply

Type: Alkaline

Monitoring Capacity: Up to 20 hours

Stand-by Period: 2 Years

Environmental Conditions

Storage and Transport:

i) 0°C to +50°C

ii) -20°C to +60°C (limited to max. 2 weeks, without battery and electrodes)

Operation:

i) Temperature: 0°C to +50°C

ii) Relative Humidity: 0-95%

Standards

Device Class: II B (93/42/EEC)

Norms: EN60601-1:1998 +A1:1991 +A2:1995, EN60601-2-4:2002, EN60601-1-2:2001 +A1:2004, EN60601-1-4:1996 +A1:1999

Resuscitation Protocol: ERC, ILCOR 2010

EMC: EN60601-1-2: 2003, EN55011:1998 +A1:1999 +A2:2002, EN61000-4-3:2006

Protection Class: IEC 529, IPX4 (resistant to water splash)

Dimensions and Weight

Width: 301 mm

Height: 304 mm (including handle)

Depth: 112 mm

Weight: 3,1 kgs (including battery and electrodes)



* Data are valid at 20°C with new, fully-charged batteries. Values can vary and are dependent upon storage and environmental conditions, frequency of use, pre-configured settings and the shelf life of the product.

** The algorithm and the board of CardiAid CT0207 AED offer the optimum combination of sensitivity and specificity.

(Published in "Automated analysis of electrical signals of the human body for detecting of life threatening cardiac abnormalities", Igor Tchoudovski, Mensch and Buch Verlag, ISBN 3-89820-984-9, Page 141)

CardiaTech, at its own discretion, reserves the right to make changes pertaining to the technical features and the accessories of the device.

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CardiAid[®] CPR | Check: A Vital Assistant



CardiAid CPRICheck is a vital signs sensor which decides whether the patient needs CPR or not, by evaluating the vital parameters of pulse and breathing.

With CardiAid CPRICheck, the rescuer may start the lifesaving resuscitation process without losing any time for evaluating the patient.

Latest ILCOR Guidelines emphasize that either first aid rescuer or professional, a responder should not spend more than 10 seconds for analysing the signs of life; and this is ensured with CardiAid CPRICheck.

Features of CardiAid CPRICheck

- Checks for pulse and breathing through its special self-adhesive disposable electrode.
- Completes the analysis within only 10 seconds.
- By illuminating symbols of green, red and white colour; it shows whether the patient needs CPR or not.
- Reanalyses the patient continuously.
- Performs self-test before and during operation.
- Operates on 2 CR2016 Lithium Button Cell Batteries.
- Dimensions are 4,4cm x 3,6cm x 1,7cm.
- Weight is only 15g including batteries.

Did you know?

- CPR is executed by layman only in 14% of the cases.*
- 45% of bystanders did not detect the cardiac arrest situation.**
- The average diagnostic delay is 24 seconds.***
- Only 2% of the rescuers can identify pulselessness correctly within the first 10 seconds.***

* Priv.-Doz. Dr. med. H.-R. Arntz / Universitätsklinikum Benjamin Franklin / Berlin; S.N. Willich Institut für Arbeitsmedizin, Sozialmedizin und Epidemiologie, Klinikum Charité / Berlin; Sudden cardiac death: Is it really an unforeseeable event?; Intensivmedizin und Notfallmedizin, Band 36, Heft 6 (1999)

** Jan Breckwoldt et al, Department of Anesthesiology and Perioperative Intensive Care, Charité-University Medicine Berlin; Perceptions of collapse and assessment of cardiac arrest by bystanders of out-of hospital cardiac arrest (OOHCA). Resuscitation (2009), doi:10.1016/j.resuscitation.2009.06.028

*** B. Eberle et al; Department of Anaesthesiology, The Johannes Gutenberg University Medical School, Mainz; Checking the carotid pulse check: diagnostic accuracy of first responders in patients with and without a pulse.



Best fit with your CardiAid AED!

Product Overview

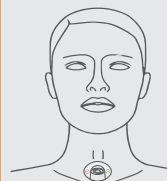


Who should have CardiAid CPRICheck?

- ♥ First aid responders in places equipped with an AED
- ♥ Fire fighters and police officers
- ♥ Emergency room personnels
- ♥ Doctors and nurses
- ♥ Lifeguards
- ♥ EMS professionals
- ♥ Security personnel
- ♥ Receptionists in public places

HOW TO USE?

- If you notice a person lying unconscious, bring CardiAid CPRICheck immediately.
- Take CardiAid CPRICheck out of its box. The device will start working automatically.
- CardiAid CPRICheck will make a short self-test and both white lights will blink which means it is ready to analyze.



- Place CardiAid CPRICheck on patient's neck and press analyze button.
- CardiAid CPRICheck analyzes pulse and breathing.

After the analysis, the device will activate either green or red light according to the result of the analysis.

- CardiAid CPRICheck will continuously reanalyze while it is connected.

ANALYSIS RESULT



RED and **GREEN** flashing simultaneously:
Analysis not possible
(Patient moved or device not placed correctly.)



Perform Chest Compressions Correctly with CardiAid ECC Assistant!



CardiAid External Chest Compression (ECC) Assistant is designed to help the rescuer perform the most effective and consistent chest compressions on a sudden cardiac arrest victim. For a patient having SCA, immediate cardiopulmonary resuscitation (CPR) is critical. CPR which is performed starting from the early minutes of the incident might be lifesaving for the patient since it supports blood circulation. CPR cycle consists of 2 rescue breaths followed by 30 chest compressions. Most rescuers cannot perform effective external chest compressions consistently since CPR is extremely exhausting. Performing chest compressions by placing CardiAid ECC Assistant on the patient's chest helps achieving the correct compression depth without harming the ribcage of the patient.

Being an easy-to-use product, CardiAid ECC Assistant is developed for emergency professionals, first aid responders, CPR instructors and trainees. CardiAid ECC Assistant can also be used in CPR courses as a CPR training mate.

- ♥ It indicates where on the chest and how fast to perform the compressions.
- ♥ It guides the rescuer about how much force to apply on patient's chest according to patient's weight category.
- ♥ It gives support also with flashing LEDs.
- ♥ It states the rate of compressions with clearly audible metronome signals according to the latest Resuscitation Guidelines (100beats/min).
- ♥ It is light-weighted and small sized.
- ♥ It is provide with a belt pouch accessory enabling mobility.
- ♥ It works with a 9V alkaline battery and tests the battery level whenever it is turned on.



For Emergency Professionals

According to the latest studies, 80% of emergency response team members and nurses are not able to perform adequate chest compressions consistently. CardiAid ECC Assistant is a perfect mate for the emergency professionals with its simplicity, durability and guidance according to the weight of the patient.

For First Aid Responders

In SCA cases, 95% of patients die before reaching the hospital. Early CPR plays an important role for maintaining the blood circulation through the body and preventing irreversible brain damage. CardiAid presents the perfect public access life-saving combination; CardiAid ECC Assistant and CardiAid Automated External Defibrillator (AED) provided in public areas, transportation vehicles, production plants, offices, hotels, sport centers and leisure centers make immediate treatment available for SCA.



For CPR Instructors

CardiAid presents a training team including CardiAid ECC Assistant, CardiAid AED Trainer and CPR Manikin for a full training of CPR and defibrillation.

CardiAid training team is prepared for CPR instructors working at first aid courses, diving clubs etc. or for the corporates which prefer to train their employees periodically.



For CPR Trainees

Although learning CPR is easy, performing CPR is exhausting and requires regular practice to remind the compression rate and depth perception.

CardiAid ECC Assistant is a convenient product for CPR practices. Placing the device on a smooth place, everyone can easily practice chest compressions and acquire the correct depth and rate perception.

CardiAid Trainer: The Best Training Companion

When a person has sudden cardiac arrest, the situation will be stressful, hectic and even chaotic. It is difficult, yet critical to act quickly in this environment since every second counts. For this reason, it is advised for potential users of CardiAid AED to be trained periodically with CardiAid Trainer which was developed specially for this purpose.

CardiAid Trainer is designed considering special needs for AED training:

- ♥ It has the same appearance with CardiAid AED, aimed to make trainees familiar with the product.
- ♥ It can simulate all possible scenarios a user may face while using CardiAid AED; and the user can be trained about the actions to take in each situation.
- ♥ It is operated by the instructor with remote control. The instructor may set different scenarios instantly according to the need of each user and/or the subject of the training session.
- ♥ It can operate in 22 languages: English, French, German, Dutch, Turkish, Italian, Spanish, Catalan, Portuguese, Brazilian Portuguese, Danish, Norwegian, Swedish, Finnish, Russian, Polish, Czech, Macedonian, Arabic, Persian, Chinese-Mandarin and Chinese-Cantonese.





CardiAid AED Accessories

Storage and Protection

When someone suffers from sudden cardiac arrest, every second is critical. In a public place, it may be a problem for the responder to know whether there is an AED on site and bring the AED to the scene. On the other hand, the AED should be protected when in a public place; like airports, city halls, schools etc. For this reason, CardiAid AED should be stored where it may be noticed and reached quickly while providing safety of the device. With their special designs, CardiAid AED Cabinets ensure that CardiAid AED is noticeable and easily reachable in case of an emergency.



Basic Indoor Cabinet with Transparent Cover

- It provides basic protection to CardiAid AED.
- It enables storage to also CardiAid CPRiCheck and CardiAid ECC Assistant.
- It has standard lock with 2 keys.
- Dimensions: 37cm x 37cm x 16cm.
- Colour Options: White, grey, green
- ILCOR Universal AED sign printed on the cover.
- Plexiglas transparent cover for high visibility.



Basic Indoor Cabinet with Metal Cover

- It provides basic protection to CardiAid AED.
- It enables storage to also CardiAid CPRiCheck and CardiAid ECC Assistant.
- It has standard lock with 2 keys.
- Dimensions: 37cm x 37cm x 16cm.
- Colour Options: White, grey, green
- ILCOR Universal AED sign printed on the cover.
- Metal cover with Plexiglas window enabling observation of the device.



Featured Indoor Cabinet

- It has alarm and strobe light which are activated when the door is opened. This provides the authorized personnel of the public place to be informed that there is an emergency and also helps providing safety of the device.
 - It uses standard 9V alkaline battery for power source, therefore does not need any electrical connection. The battery may be changed easily by the user.
 - It has lock with 2 keys. For further precaution, the owner may also prefer to use the key which is provided with the cabinet, when needed.
 - Dimensions: 55cm x 54cm x 26cm.
 - ILCOR Universal AED sign printed on the cover.
 - Glass cover for high visibility.
- Optional Features:**
- Digital Lock for highest safety.
 - GSM Module for sending SMS when door is open.



CardiAid Wallmount

With its special design, CardiAid Wallmount ensures that CardiAid AED is noticeable and easily reachable in case of an emergency. CardiAid Wallmount provides practical storage for CardiAid AED. CardiAid Wallmount also provides storage for spare electrodes, if necessary. CardiAid Wallmount is especially suitable for places where there is no need to secure the AED with CardiAid AED Indoor or Outdoor Cabinet.

It is advised to install CardiAid Wallmount with Wallmount Board and AED signs to increase the visibility of the AED point and thus the effectiveness of the public access defibrillation / AED Program. Click here for further information.

Signalisation Products

Wallmount and AED Cabinet Boards

In an emergency, every second counts. For this reason, it is critical for the AED to be noticeable and reachable. CardiAid offers the best accessories for a complete Public Access Defibrillator Program:

1. **AED Cabinet Sign:** Includes the universal sign of AED suggested by ILCOR.
2. **Information Board for AED Cabinet:** Includes general information about sudden cardiac arrest and AEDs.
3. **Instruction Board for AED Cabinet:** Includes step-by-step instructions to be followed in case of a sudden cardiac arrest incident.
4. **Wallmount Board:** Includes useful information, instructions together with the universal sign of AED suggested by ILCOR.



AED Wall Sign



AED Direction Sign



"AED Equipped Building" Sign



AED Flag

AED Signs & Flags

Mark the location of your CardiAid AED with AED wall signs, AED direction signs and AED flags. Make sure your facility's AED is easy to reach and make further assistance for saving a life by reducing the emergency response time by improving the efficiency of your public access defibrillation AED program.



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