

# Maintaining your AED



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Maintaining your AED is easy to do and will insure that if the unit is needed it will be ready to go. The type and quantity of maintenance checks that you are required to perform may be determined by your workplace's emergency response plan, but at minimum monthly visual checks of the device are sufficient. This is meant to be a guide to help you in figuring out what kind of AED you have and what you can look for when determining if the AED is in working order. You should always refer to the owner's manual for specific information on your type of AED. Links to owner's manuals can be found at [www.allinahealth.org/heartsafe](http://www.allinahealth.org/heartsafe) under AED maintenance.

The most common cause for an AED malfunctioning is a dead battery. AED's have non-rechargeable batteries that should be replaced every 2-5 years per the manufactures recommendation. If you look at the battery in your AED you will find a date printed on it, this is not the expiration date in most cases, but the use by date or shelf life date. To avoid confusion on the expiration date of your AED's battery it may be best you write either the date the battery was installed or the expected expiration date of the battery when you replace it.



Not the expiration date,  
but the use by/install  
by date for most AEDS

AED's pads often have a shorter expiration date of 2-4 years, depending on the manufacturer. This is due to the water based gel that allows the pads to stick to the chest of a victim. Over time the pads could dry out so both the pad that is attached to the AED as well as the back-up or spare pad should be replaced by the expiration date found on its packaging.

This guide can help you in knowing where to look on your AED for expiration dates and readiness of the device. Each page has information about a specific AED; refer to the page that has your AED's information. If you do not know which AED you have you can refer to the pictures at the top of each page or contact Allina Health Heart Safe at [heartsafe@allina.com](mailto:heartsafe@allina.com) or 651-241-4470 and we would be happy to meet with you and answer any question you have about your AED.



The Readiness Display on the CR+ and the Express will let you know the status of the AED. Both of these AEDs have their battery and pads replaced every 2 years. A Charge-PAK will come with the battery and pads together so that everything is replaced at once. Below are the possible symbols you can see on the Readiness Display and the actions you should take if you see them.



If the "OK" symbol is showing then the AED is in working order and ready to use.



If a battery is visible then it is time to change the battery and the pads. The AED has enough charge to still operate for 6 addition months and can still be used even with this symbol showing, but a Charge-PAK should be ordered.



If the Attention triangle is showing the battery and pads need to be replaced right way, there is likely not charge in the internal battery for the AED to function properly.



If the wrench is showing then the AED need service from Physio Control. Please contact Physio Control at 1-800-442-1142.

#### Adult Pads



Expiration date

Non rechargeable battery

**Pediatric Pads**, used on victims under ~55lbs though you can use adult pads on any one of any age per AHA





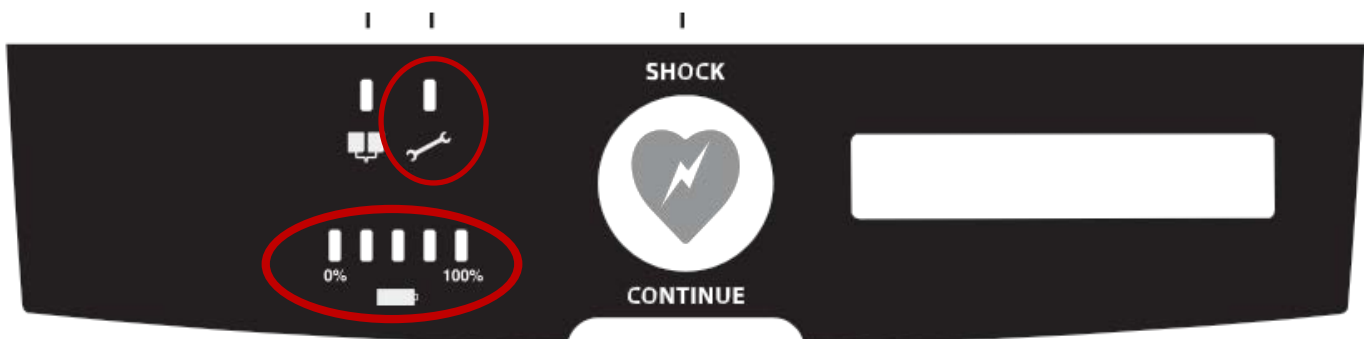
The Cardiac Science Powerheart AED G3 Plus has a battery that should be replaced every 4 years or when the AED prompts you and Adult and Pediatric pads that should be replaced every 2 years, the date can be found on the pad's packaging.



The rescue-ready light can be found just to the right of the handle. This light is green when the AED is ready to be used. If this light is red and the AED is beeping at 30 second intervals then the AED needs some attention.



If the Rescue Ready light is red and the AED is beeping then open the AED case to view the SMARTGAUGE battery status indicator in the lower left corner of the AED when the AED is opened. The 5 LED lights (4 green and 1 red) let you know the amount of charge left in the battery; if the LED light is red letting you know the battery is low the AED can still give 9 shocks. If the LED light above the wrench symbol is lit up then contact Cardiac Science or Allina Health Heart Safe to have the AED checked out.







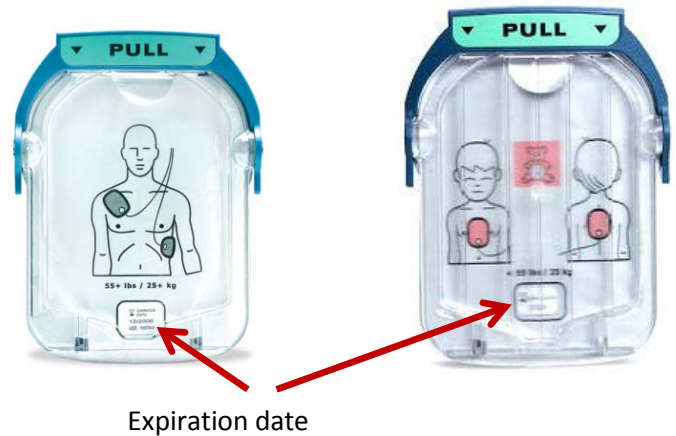
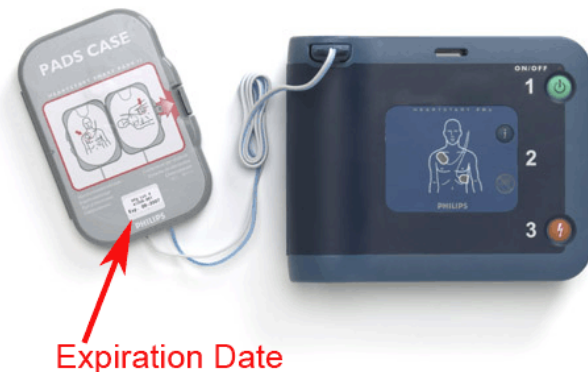
FRx

PHILIPS



Onsite

Both the FRx and the Onsite have Pads that need to be replaced every 2 years. The FRx has a pediatric key that can put the AED in to pediatric mode and the onsite has both Adult and pediatric Pad Cartridges. The expiration date can be found on the packaging.



Both the FRx and the Onsite have batteries that need to be replaced every 4 years or when the AED notifies you of a low battery. The battery is found on the back of the device and looks like this:



The light above the power button is the AED's ready light, this light should be **Flashing Green** letting you know the AED is ready to be used.

If the **Light is Red** the unit is in the middle of a self-test

If no light is visible then the AED needs a new battery or no battery is currently installed

If the AED is making a chirping noise then press the **Flashing i-Button** and the AED will let you know what needs attention.

“Replace battery immediately”- A new battery is needed right away

“Plug in pads connector”- The pads need to be plugged into the AED even during storage

“Insert a pad cartridge” -The current pad cartridge has been damaged and a new cartridge should be installed right away.

“Replace pads”- The AED has found a problem with the current pads plugged into the AED and a new set of pads should replace the current set of pads



**PHILIPS**

## HeartStart FR2 Defibrillator

\* Note this AED is no longer in production but replacement equipment is still available until December 31<sup>st</sup> 2018

The FR2 has an active status indicator in the upper right hand corner of the device.



A **black flashing hourglass** indicates that the AED is ready to be used



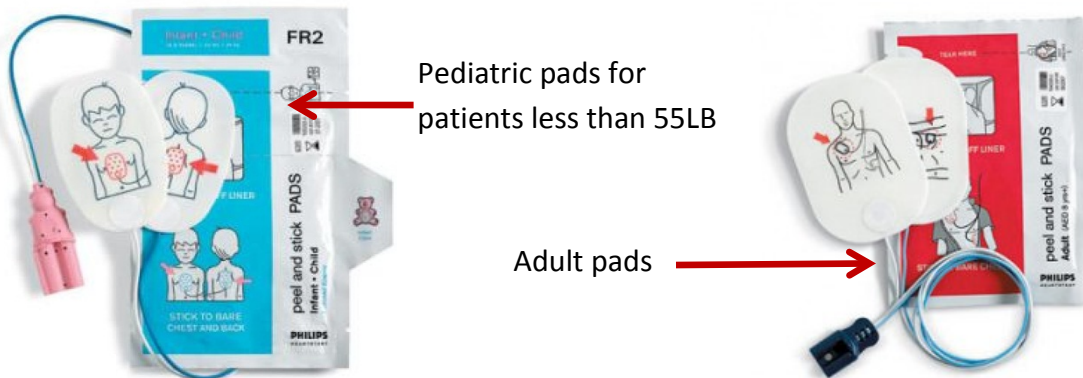
A **flashing Red "X" with the AED beeping** lets you know that the AED needs some attention most likely a replacement battery or that the AED has been stored outside of its usable temperatures. With a low battery the device should be able to provide 15 minutes of monitoring or 9 shocks. Turn the device on when a red flashing "X" is seen and read the display screen for more information.

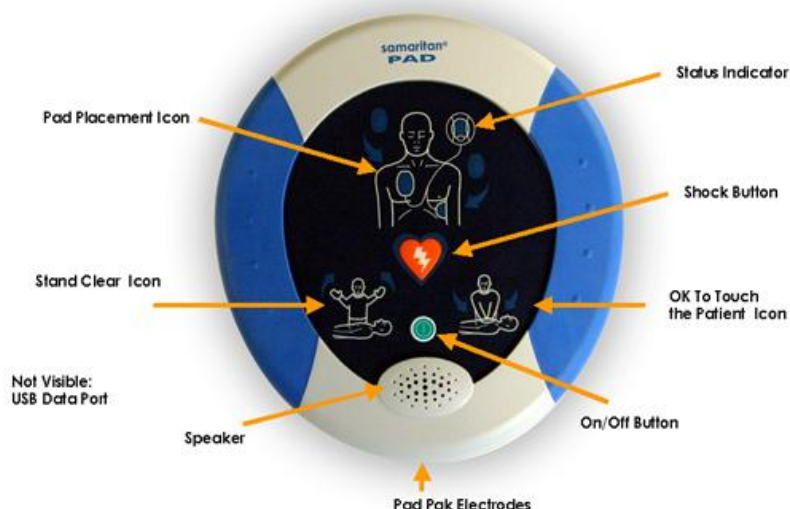


A **Solid Red "X"** means that the AED should not be used and Philips Medical Systems Customer Support should be called right away 1-800-263-3342

The FR2 has a battery that should be replaced every five years or if the AED prompts you to replace it by chirping.

The FR2 has pads available in both Adult and Pediatric both should be replaced every two years and the expiration date can be found on the packaging. The FR2 should not be stored with pads plugged into the device as it can lead to pads drying out or failure of self-tests.





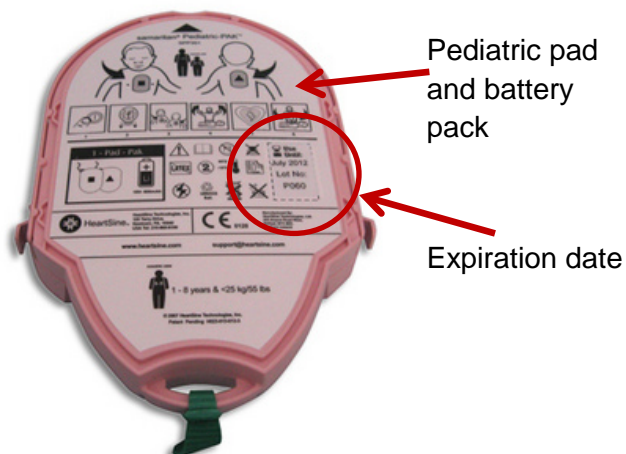
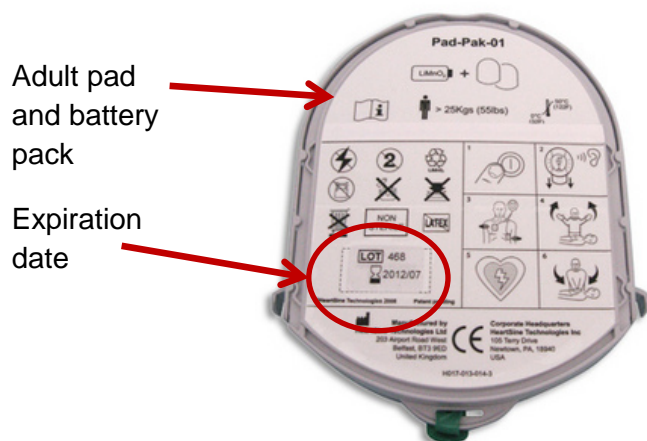
The HeartSine Samaritan PAD AED has a status indicator light on the front of the AED.

If the light is **Flashing Green** every 5 seconds the AED is in working order and ready to be used.

If the light is **Flashing Red** and the AED is chirping it is in need of a new battery. The current battery will only have enough energy to give ten shocks.

**Solid Red** light indicates that the AED is running a self-check and the light will either turn green or flash red with a chirp once that self-check is done.

The HeartSine has a battery/pad cartridge that comes in both Adult and Pediatric. Each Pad-Pak has a shelf life of 3.5 years. An expiration date can be found on each cartridge.



# ZOLL®



The Zoll AED Plus has a status indicator near the handle of the AED on the left hand side.

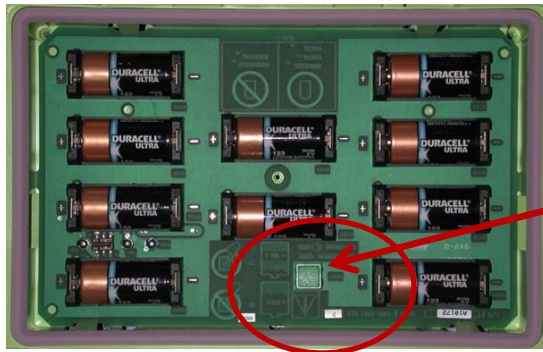


A green check means that the AED is ready to go, the batteries are ok and the pads are connected.



A red X means that the AE did not pass its self-test and it needs attention either by connecting the pads or replacing the battery

The Zoll AED Plus uses 10 consumer type 123A Photo Flash lithium manganese dioxide batteries. These can be purchased at most camera or electronic stores. The batteries should be replaced every 5 years or if the unit prompts you to replace them by beeping once every minute. After you replace all the batteries make sure to press the battery reset button in the battery compartment.



Battery replacement reset button

The Zoll AED Plus has 2 different adult pads that can be used with the unit. The one piece CPR-D-Padz has a 5 year shelf life and the two piece Stat-Padz have a 2 year shelf life. The two piece pediatric Pedi-Padz also has a 2 year shelf life.



Adult only CPR-D Padz

Adult Stat-Padz (could be used on a child if needed)

Pediatric Stat-Padz



# The MN AED Registry

The Minnesota AED Registry is part of the National AED Registry with Atrus and AED Link. Signing up with the Registry provides AED owners with resources for better maintenance and care of their AEDs free of cost and maps and locations of AEDs for 911 Dispatchers.

We encourage you to go to sign up and register your AED(s):

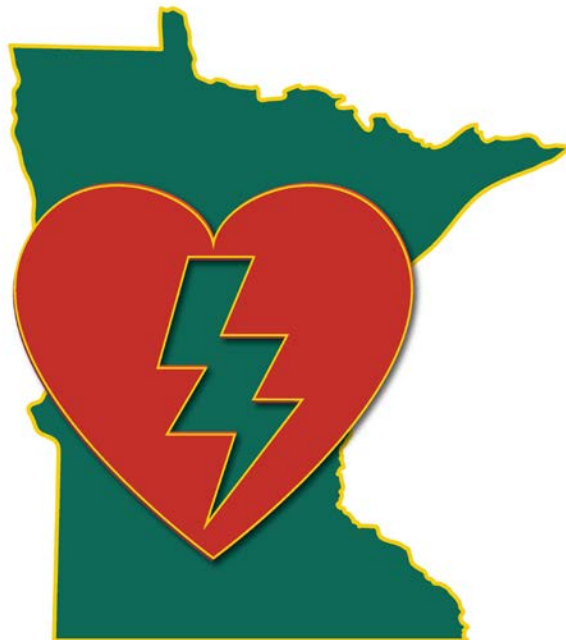
[minnesota.nationalaedregistry.com](http://minnesota.nationalaedregistry.com) or [www.nationalaedregistry.com](http://www.nationalaedregistry.com)

Again this is free to all AED owners and you will receive email reminders of when your AEDs battery or pads are due to expire, plus information on any national recalls or AED information. The locations of the AEDs can also be linked to 911 dispatch centers so that an AED can be easily found in the event of an emergency if you chose to opt in to this feature.

Heart Safe will receive quarterly reports and maps with the locations of the AEDs that can be shared with your community as well.

For more instructions on signing up please go to:

[www.allinahealth.org/heartsafe](http://www.allinahealth.org/heartsafe)





OSHA has several regulatory standards that cover First Aid and CPR training in the workplace. Please refer to [www.osha.gov](http://www.osha.gov) for additional information regarding worksite training on CPR and First Aid.

Both regulatory standards **29 CFR 1910.151(b)** and **29 CFR 1926.50(c)** state that if a job site is not in close proximity to professional care then a person(s) shall be adequately trained to render first aid and that adequate first aid supplies shall be readily available.

Regulatory standard **29 CFR 1910.266(i)(7)** states that first aid training is mandatory for those who operate a chain saw during their job and regulatory standard **29 CFR 1910.269(b)** requires first aid training for those who work in the electric power industry.

**Both regulatory standards 29 CFR 1910.266(i)(7) and 29 CFR 1910.269(b) define First Aid training as including Cardiopulmonary Resuscitation (CPR) training.**

There is not currently any OSHA statute that requires an AED at any worksite, but they do recognize that AEDs are becoming more readily available and that many worksite chose to have one.



## Minnesota Good Samaritan Law

### 604A.01 GOOD SAMARITAN LAW.

Subdivision 1. **Duty to assist.** A person at the scene of an emergency who knows that another person is exposed to or has suffered grave physical harm shall, to the extent that the person can do so without danger or peril to self or others, give reasonable assistance to the exposed person. Reasonable assistance may include obtaining or attempting to obtain aid from law enforcement or medical personnel. A person who violates this subdivision is guilty of a petty misdemeanor.

Subd. 2. **General immunity from liability.** (a) A person who, without compensation or the expectation of compensation, renders emergency care, advice, or assistance at the scene of an emergency or during transit to a location where professional medical care can be rendered, is not liable for any civil damages as a result of acts or omissions by that person in rendering the emergency care, advice, or assistance, unless the person acts in a willful and wanton or reckless manner in providing the care, advice, or assistance. This subdivision does not apply to a person rendering emergency care, advice, or assistance during the course of regular employment, and receiving compensation or expecting to receive compensation for rendering the care, advice, or assistance.

(b) For the purposes of this section, the scene of an emergency is an area outside the confines of a hospital or other institution that has hospital facilities, or an office of a person licensed to practice one or more of the healing arts under chapter 147, 147A, 148, 150A, or 153. The scene of an emergency includes areas threatened by or exposed to spillage, seepage, fire, explosion, or other release of hazardous materials, and includes ski areas and trails.

(c) For the purposes of this section, "person" includes a public or private nonprofit volunteer firefighter, volunteer police officer, volunteer ambulance attendant, volunteer first provider of emergency medical services, volunteer ski patroller, and any partnership, corporation, association, or other entity.

(d) For the purposes of this section, "compensation" does not include payments, reimbursement for expenses, or pension benefits paid to members of volunteer organizations.

(e) For purposes of this section, "emergency care" includes providing emergency medical care by using or providing an automatic external defibrillator, unless the person on whom the device is to be used objects; or unless the person is rendering this care during the course of regular employment, the person is receiving or expects to receive compensation for rendering this care, and the usual and regular duties of the person include the provision of emergency medical care. "Automatic external defibrillator" means a medical device heart monitor and defibrillator that:

(1) has received approval of its pre-market notification, filed pursuant to United States Code, title 21, section 360(k), from the United States Food and Drug Administration;

(2) is capable of recognizing the presence or absence of ventricular fibrillation or rapid ventricular tachycardia, and is capable of determining, without intervention by an operator, whether defibrillation should be performed; and

(3) upon determining that defibrillation should be performed, automatically charges and requests delivery of an electrical impulse to an individual's heart.

### History:

*1994 c 623 art 2 s 1; 1995 c 205 art 2 s 8; 1998 c 329 s 1; 2001 c 107 s 1*

### Located:

[www.revisor.leg.state.mn.us/bin/getpub.php?type=s&year=current&num=604A.01](http://www.revisor.leg.state.mn.us/bin/getpub.php?type=s&year=current&num=604A.01)

If you need to order any replacement equipment for your AED please go to our website [www.allinahealth.org/heartsafe](http://www.allinahealth.org/heartsafe) and you will find our order forms under the “Order an AED” tab.



For more information contact us at:

All of MN: 651-241-4470 [HeartSafe@allina.com](mailto:HeartSafe@allina.com)

Wright County: 763-684-6604 [BuffaloHeartSafe@allina.com](mailto:BuffaloHeartSafe@allina.com)

Brown County: 507-217-5344 [NewUlmHeartSafe@allina.com](mailto:NewUlmHeartSafe@allina.com)

Scott/Carver County: 952-428-2240 [StFrancisHeartSafe@allina.com](mailto:StFrancisHeartSafe@allina.com)

Dakota County: 952-953-2560 [HeartSafe@allina.com](mailto:HeartSafe@allina.com)

[www.allinahealth.org/heartsafe](http://www.allinahealth.org/heartsafe)



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A community service of:

