

# Zoll AutoPulse

## INDICATIONS:

The AutoPulse is intended to be used as an adjunct to manual CPR, on adult patients only, in cases of clinical death as defined by a lack of spontaneous breathing and pulse. The AutoPulse must be used only in cases that manual CPR would normally be initiated. Personnel certified in manual CPR must always be present during AutoPulse operation.

## CONTRAINDICATIONS:

- Patients with traumatic injury (wounds resulting from sudden physical injury or violence)
- Patients under the age of 18.
- Patient's parameters that are not within the AutoPulse's Operating Parameters.

## AUTOPULSE OPERATING PARAMETERS:

Patient Parameter	Auto Pulse Specification
Patient chest circumference permitted	29.9 to 51.2 in (76 to 130cm)
Patient chest width permitted	9.8 to 15 in. (25 to 38cm)
Maximum patient weight permitted	300lbs (136kg)

## DEPLOYING THE AUTOPULSE SYSTEM:

1. Power up the Auto Pulse. The ON/OFF button is located on the top ("head") edge of the Auto Pulse Platform
2. The Auto Pulse illuminates the green Power light-emitting diode (LED) on the User Control Panel and performs self-tests. **Note:** Make sure that no User Advisory, Fault or System Error messages display.
3. Sit the patient up and make a single cut down the back of the patient's clothing. The posterior defibrillation/pacing pad may be placed on the patient's back at this time if the local protocol calls for anterior-posterior placement.
4. Slide the Auto Pulse Platform into position behind the sitting patient and lay the patient down onto the platform. Placing the Auto Pulse to the patient's side and "log rolling" him or her onto the platform is an acceptable alternative.
5. Grasp the Clothing by the sleeves and pull down toward the ankles to remove all of the clothing from both the front and pack torso. The anterior pad(s) may be placed at this time.
6. Position the patient so that he/she is centered laterally (from left to right) and that the armpits are aligned with the Auto Pulse using the yellow line positioning guides on the platform.
7. Close the Life Band around the patient's chest. To properly align the two sides of the Life Band:
  - a) Place band on top of patient's chest
  - b) Locate mating slot of band over the alignment tab
  - c) Press the bands together to engage and secure the Velcro fastener
  - d) Lift up the Life Band to its fullest, ensuring that the side bands are at a 90 degree angle to the platform, that they are not twisted and that there are no obstructions.
  - e) Center the Life Band on the patient's chest, placing it such that its center is over the area upon which manual compressions are conducted**Note:** If the bands cannot be closed, use manual CPR

Addendum RFD Approved \_\_\_\_\_ Dr Brad Johnson Medical Director \_\_\_\_\_

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### STARTING CHEST COMPRESSIONS:

1. Make sure that the yellow upper edge of the Life Band is aligned with the patient's armpits, and is directly over the yellow line on the Auto Pulse Platform. Also make sure that there are no obstructions, such as clothing, straps or equipment, with the bands.
2. Press and release the Start/ Continue button once. The Auto Pulse Automatically adjusts the bands to the patients chest.

**Warning:** Do not touch the patient or the Life Band while the Auto Pulse Platform is analyzing the patient's size.

3. The Auto Pulse will pause for 3 seconds to allow you to verify that the patient is properly aligned and that the Life Band has taken up any slack in the bands. **Note:** If the patient is not properly aligned, press Stop/Cancel button, realign the patient, and begin compressions again with step 1.  
**Warning:** If the Stop/Cancel button is not pressed within 3 seconds, compressions will automatically begin. Press the Stop/Cancel button to immediately stop the compressions.
4. After the 2 second verify patient alignment pause is complete, compressions will automatically begin. You may press the Start/Continue button to immediately initiate compressions ahead of the time.

### Compression Modes:

- **30:2-** The AutoPulse will perform 30 compression and then pause for 3 seconds to permit the user to ventilate the patient before automatically resuming compressions.
  - **Continuous-** The AutoPulse will continually perform ventilations until the stop button is pressed. An audio cue tone for ventilation will sound 8 times per minute.
  - The current compression mode is displayed in the left upper corner of the screen. The words above the gray Menu/Mode switch button indicate the alternate mode the AutoPulse will switch to. Pressing the Menu/ Mode switch once will indicate that you want to change compression modes. Press the Menu/Mode switch twice in rapid secession to confirm your compression change.
5. To access the patient or to pause the Auto Pulse for any reason, press the Stop/Cancel button. The Auto Pulse Platform releases the tension on the Life Band, allowing the user to pull the bands to the maximum extended position.
  6. After either successful resuscitation or termination of activities, press the Stop/ Cancel button followed by the ON/Off button. The Stop/Cancel button action will cease the compression cycles and relax the Life Band. The On/ Off button action will power down the Auto Pulse.
  8. Open the Velcro fastener and lift or log roll off the patient from the Auto Pulse Platform as necessary.

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### **Patient Alignment and Securing for Transport:**

**Warning:** The Auto Pulse is **NOT** intended for carrying or transporting a patient. The Auto Pulse should be secured to the top of a backboard or other equipment used to carry or transport the patient, if necessary. During Transport, Regular Checks of the patient's alignment should be performed.

1. Attach the Shoulder Restraint to keep the patient properly aligned on the Auto Pulse Platform.
2. The head Immobilizer assists in keeping the patient's head from moving, especially when combined with cervical collar. A cloth may also be placed under the patients head.

### **Removing the LifeBand:**

**Note: DO NOT** cut the LifeBand before removing it from the AutoPulse. Cutting the LifeBand may cause the AutoPulse to report a fault and will require specific steps to clear the fault.

1. Place the AutoPulse platform with the surface facing down on a smooth, flat surface
2. Flip up the hinged belt guards of the LifeBand cover plate to disengage the LifeBand from the rollers. You will hear the guards "snap." This is normal.
3. Using both hands, pinch together the locking tabs of the LifeBand cover plate and firmly pull the plate straight up and away from the AutoPulse.
4. Remove the LifeBand from the AutoPulse by grasping the LifeBand chest band with the thumb and index finger of both hands, on either side of the LifeBand clip. Push the guide plate, using both middle fingers. Keeping the guide plate pushed in, pull up on the band to remove the clip from the shaft.

### **Removing a LifeBand that is cut or not in the home position:**

**Warning:** The chest band must be completely unwound from the driveshaft before it is removed. When the chest band is completely unwound the seam is visible and the driveshaft rests in the home position. Removing the band clip when the driveshaft is not in at its home position will result in a permanent User Advisory (45) that the user will not be able to clear. The LifeBand should only be removed from the driveshaft **ONLY** from its home position. If the chest bands have been cut it is quite possible that the chest band is still wound onto the driveshaft. Care should be taken to ensure that the bands are fully extended before the cover plate is opened and the band clip is removed.

1. Once the cover plate is removed, take hold of the chest band on either side of the driveshaft and pull both bands outward.
2. The chest bands should now be fully extended. The seam securing the band clip should easily be seen and the driveshaft is centered. The LifeBand may now be removed using the "Removing the LifeBand" procedures.

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### **Preparing the Auto Pulse for Its Next Use**

1. Remove the Life Band from the Auto Pulse Platform. Refer to "Removing the Life Band" for more information.
2. **Discard the Life Band as it is a single-use component. Treat the Life Band as a contaminated medical waste and dispose of it accordingly.**
3. Clean the Auto Pulse Platform Before its next use. Refer to "Cleaning the Auto Pulse"
4. Replace the Life Band before returning the Auto Pulse to service Refer to "Installing the Life Band"
5. Remove the Auto Pulse Battery  
**Note:** Ensure that the Auto Pulse is powered down before removing and replacing the Battery.
6. Replace the Battery with a fully charged Battery before returning the Auto Pulse to Service.
7. Recharge the used Battery as necessary for future use.

### **Cleaning the Auto Pulse Platform:**

1. Remove and dispose of the Life Band.
2. Wipe all the surfaces of the Auto Pulse Platform free of foreign matter and spills with a disinfectant or bactericidal wipe. Check the vents to ensure that they are free and clear of any obstructive matter.  
**Caution:** Do **NOT** submerge the Auto Pulse in liquid.
3. Ensure that the Auto Pulse is dry before storing.