AutoPulse Script for new Deployment Training
(Hospital Version)

General overview - The AutoPulse gives automatic circumferential compressions to:
- Non-traumatic cardiac arrest patients
  - (may be used on pregnant women, but depends on position of fundus)
- For Adults 18 yrs of age or older
- Maximum patient weight = 300 lbs. / Patient Chest Circumference=29.9 to 51.2 inches

Battery System: Multi chemical charger (can take NICAM and Lithium Ion batteries)
- Lights on the charger
  - Top light / half gas can (amber light)=normal charging (takes 3 hrs to complete)
  - Top light / half gas can + battery with the Orange “?”= 10th Rotation or q30 days

Test Cycle. If on, make sure to leave the battery in charger until it is finished.
  - If the battery gets pulled out or power is interrupted in the Test Cycle, once the power is back on or the battery is reinserted in the charger, it will restart the Test Cycle.
    - A Test Cycle can take up to 12 hours to complete.
  - Middle light (green)/ Full gas can = Battery is ready for use (Fully charged battery allows for 30 minutes operating time)
  - Lower battery with red “X”= bad battery or battery failure
    - If the light on the battery charger is FLASHING RED, the battery is out of service = call ZOLL technical support.
    - If it is steady RED (not flashing), you have one attempt to reinsert it and let it try to charge; if it comes up steady red again, the battery needs to be taken out of service and ZOLL tech support needs to be contacted.

- Rotate battery every 24hrs or after each patient use.
  - Remember to turn on the AP after inserting the battery so it can time stamp the info from the battery and the board.

- Fan on the back of the charger needs to be cleaned off once a month or so.
  - Just use a rag and wipe off the fan or use a vacuum (call Biomed to clean)
  - IMPORTANT - do not use air to blow off fan, you don’t want the dust going in to the charger.  *Be sure charger is not plugged in when cleaning fan.

- Should get 30 minutes of battery run time on the average patient. (see below)
  - Could be longer, could be shorter - remember that the harder the AutoPulse needs to work, the shorter the run time you will get. The stiffer bigger chest =
shorter run time; just like manual CPR... with stiffer/bigger chested patients, you’re going to work harder to deliver high quality CPR. So will your AutoPulse.

- Battery can be changed in under 10 seconds when AutoPulse is in use:
  - Turn AutoPulse off, Open LifeBand, perform manual CPR, change battery, turn AutoPulse back on, close LifeBand, push the Green button to restart.

- If you drop and damage a battery:
  - Take dropped battery out of service right away until inspected by BioMed.
    - If it’s not inspected and the connector is damaged, if you insert the battery into the board or the charger you can damage the connector pins

- When inserting battery into charger or the board, **insert it firmly, but do not slam it in!**
  - Slamming it in can damage the connector. **Lift the latch to insert it more gently.**

**AutoPulse- positioning the patient**

- Which direction is the head?
  - Round side of board goes to the patient’s buttocks

- Black shoulder marks?
  - Used to tell you that the head is above them.
  - DO NOT USE FOR PATIENT ALIGNMENT!

- **Yellow line most important line on the board.**
  - The yellow line needs to be under the bottom of the arm pits. If the yellow line on the board is hard to see, the same yellow line is on the band. Make sure the band is properly aligned. Lift band straight up, No twist, 90 degree to the board, Yellow line is where your hands would be for CPR.
Educator to give quick demo of how board works

- Take board from rolling stand and
  - open Velcro LifeBand
  - turn ON the board (observe for no red lights or advisory codes)
- 2 people grab patient’s arms and pull patient forward, lifting patient’s back
- Place round side of board to patient’s butt
- Lay patient on board, positioning **patient’s arm pits above yellow line on the board**
- Place band 1 with yellow fin center mass, matching yellow line on band with yellow line on board (**band girth recommended for patients 29.9 to 51.2 inches**)
- Place band 2 on top of band 1, lining up yellow fin into slot, using all the Velcro
- Lift band fully up 90 degrees, ensuring band is not twisted on either side
- Place band back on patient (yellow fin center mass) lining up yellow line of band to yellow line on board (**Yellow line is where your hands would be for CPR**)
- Push the **Green** START button
  - Band will automatically size to patient’s chest, and will start circumferential compressions at a 30:2 ratio (**beeps at 28th, 29th, and 30th compression, and pauses so you can give 2 ventilations**)
  - If patient is intubated, can switch to “CONTINUOUS” compressions by pushing the **Grey** button and then immediately confirming with **Grey** button (**AutoPulse beeps periodically in Continuous Mode, GIVE 1 BREATH EVERY 6 SECONDS** for intubated patients per 2015 AHA Guidelines)
- Attach securing straps to stabilize patient
  - **Yellow** straps first near yellow line on small bars
  - **Black** straps next, onto Teflon wires near head
  - Tighten **yellow** straps first
  - Then tighten **black** straps
- **Use Head Immobilizer if needed**
- **If user Advisory Code stops AutoPulse:**
  - follow prompts on display to fix Advisory Code
    - Can also refer to “Advisor Code Description and Action” Quick Reference Card >>>>>>>>
  - If no quick fix, remove LifeBand from patient and **immediately start Manual Chest Compressions!**

For all other advisories and fault codes immediately open the LifeBand and perform manual CPR. After the event please call Technical Service at 1-800-348-9011 or 978-421-9655 for assistance.
LifeBand

- ONE TIME USE ONLY
- Size range: 29.9 inches to 51.2 inches chest circumference
- Has 3 parts:
  - #1 band (load sensor) with yellow fin (goes center mass on patient)
  - #2 band that fits on top of band #1, must use all of the velcro
  - Bottom plastic portion has locking key that connects to the drive mechanism
- NEVER cut the band/let anyone cut the band (this could damage the drive mechanism).
- #1 band = load sensor; make sure there is nothing between the patient and the band (defib electrodes are OK under the band, can defibrillate with band connected).
- AutoPulse can be used in a cath lab and allows for some viewing angles:

  ![Image of AutoPulse Platform]

The AutoPulse Platform: Approved for use on 18 years of age or older; Max weight=300 lbs.

- Clean using your normal approved cleaning wipes/protocols.
  - DO NOT HOSE OFF THE PLATFORM
    - There are large vents on the back of the AutoPulse.
    - If you get water in the vents, it will damage your AutoPulse.
  - Also make sure you do not pack blankets into the vents - this can cause the AutoPulse to overheat.
- Can be used in Pregnancy (depending on position of the fundus), BUT NOT Trauma Pt’s; anything that is making them bleed is just going to make them bleed out faster.
Shoulder straps... make sure you are using them any time the patient will be moved or to stabilize patient on the platform; apply them sooner rather than later.

- Apply **YELLOW** straps first, then the **BLACK** straps
Once connected, tighten the yellow straps first then the black.
Remember: no straps over the LifeBand.
  - Shoulder straps are reusable.
  - **Clean the straps like you would clean long board straps.**

**BUTTONOLOGY**

- **ON/OFF button is the on the top edge of the board;** grey in color; note the yellow sticker on the face of the board.
- **Green** button is the start button, once the LifeBand sizes the patient it’s going to pause for 3 seconds, then start compressing. *If you know the band is in the right spot press the green button again and it will start up right away.*
- **Grey** menu button does two things:
  - Menu button when just powered on
  - Press it while compressing switches from 30:2 to Continuous and back. First time you press it, it’s going to ask you to CONFIRM, it gives you two seconds to confirm! Otherwise, it stays in the mode you were in.
- **Orange / Red** button is the STOP/QUIT button.
  - First time you Push STOP, it will stop the compressions and
    - at 10 seconds it going to beep once
    - at 20 seconds it’s going to beep 3 times, and
    - at 30 seconds it’s going to beep continuously; *Remember... someone or something needs to be doing compressions on your patient.*

**Removing LifeBand after use:** *(see next page as a reference)*

1. Flip up the LifeBand’s hinged skirts
2. Pinch the LifeBand locking tabs
3. Remove the LifeBand from the AutoPulse Platform and discard
   a. Remember to clean board with approved cleaning wipes

**Installing a NEW LifeBand:** *(see next page as reference)*

1. Slide the Band Clip into the Drive Shaft Slot
2. Seat the Band Clip
3. Snap the LifeBand cover plate into place *(line up yellow symbol)*
4. Flip down the LifeBand skirts and check installation
Making your AutoPulse “Code Ready”:

1. Remove used battery and dispose of used LifeBand and clean the AutoPulse
2. New battery installed and used battery in charger (*rotate q24hrs or after every pt*)
3. Once new LifeBand properly installed, connect Velcro straps of the new LifeBand
4. Fully extend LifeBand by lifting up band 90 degrees, ensure NO twists in band, place center on the platform
5. Turn ON AutoPulse, Push Green START button, LifeBand will shrink/size to the board, and the battery will be time stamped to the board – then Turn OFF the AutoPulse
6. Place clean/prepped AutoPulse on Rolling Stand, ensure battery charger is plugged in

**PRACTICE TIME:**

- Have groups of 3 individuals practice placing the AutoPulse onto a manikin
- Each individual will rotate through each of the 3 assigned roles (as stated on Pit Crew Card) and also practice installing/removing LifeBand and new Battery.

---

**ZOLL LifeBand Load-distributing Band**

Product Insert

Preparing the AutoPulse System for Use

The instructions contained herein are for information only. Thez Handbook System is designed for use by medical and/or first aid responders. ZOLL, Inc. and its subsidiaries are not responsible for the accuracy of the information contained in this Handbook System. For additional information, contact your local ZOLL representative or visit www.zoll.com.

---

**Removing the LifeBand**

1. Flip up the LifeBand Hinged Skirts
2. Pinch the LifeBand Locking Tabs
3. Remove the LifeBand from the AutoPulse Platform

**Installing the LifeBand**

1. Slide the Band Clip into the Drive Shaft Slot
2. Seat the Band Clip
3. Snap the LifeBand Cover Plate into Place
4. Flip Down the LifeBand Skirts and check installation

---

---