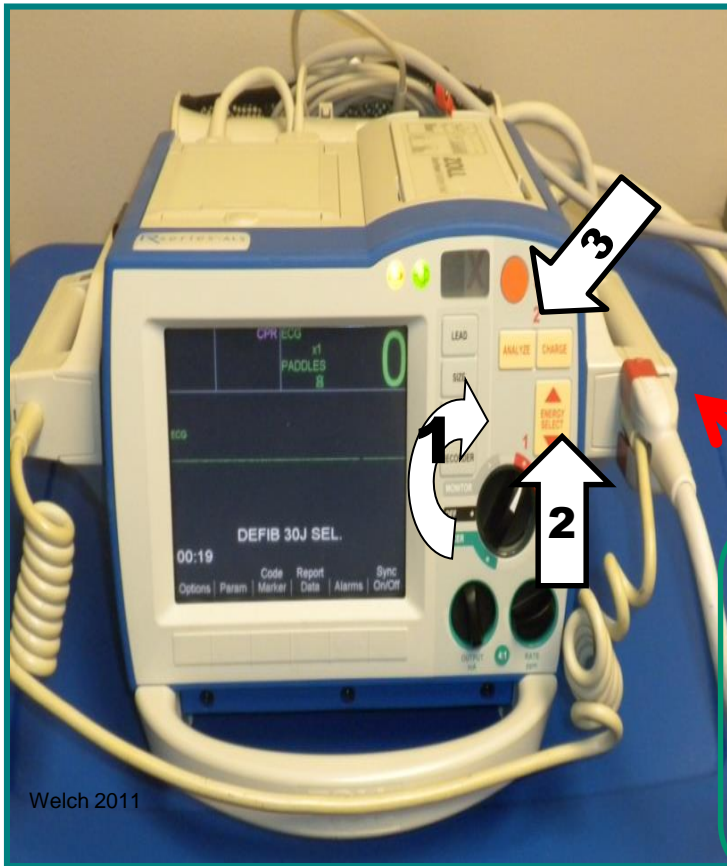
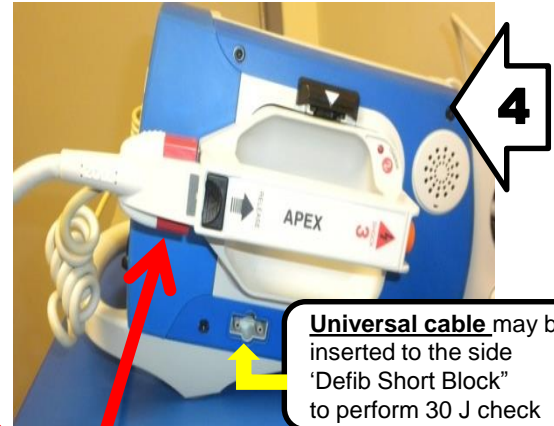


Cardioversion / Defibrillation / Transcutaneous Pacer Helpful Hints [ZOLL]

2018



Welch 2011



Universal cable may be inserted to the side 'Defib Short Block' to perform 30 J check

Universal Cable must be connected to **APEX paddle** or inserted into **Defib Short Block** [side] to pass automated 2 am Self Check

The automatic 2am Zoll self check does not count as the GWUH defib check!

Q Shift 30J Defibrillator Check (Mandatory)

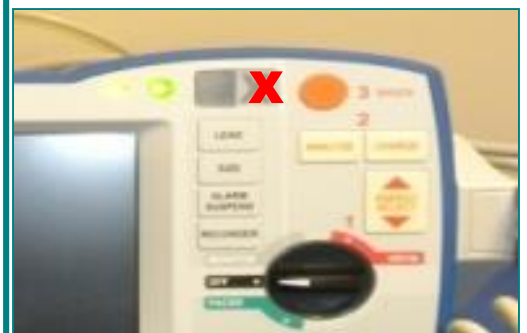
Universal Cable connected to APEX paddle

Confirm paddles are placed securely in side slots

- 1) insert the lower side of paddle first
- 2) then click the top into place

1. Turn control dial to **Defib Mode**
2. Select **30 joules**
3. Press **Charge**
4. Press both **Orange shock** buttons on the **defib paddles** simultaneously.
5. Confirm 30 J test passed
6. Document on Code Cart Checklist

If Defib Short Block is used: the Orange shock button on the front of the defibrillator will illuminate to press for 30 J check

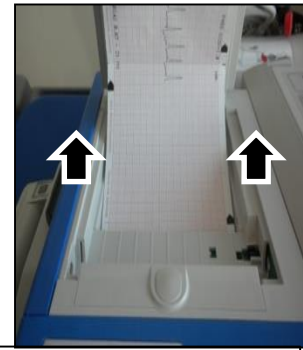
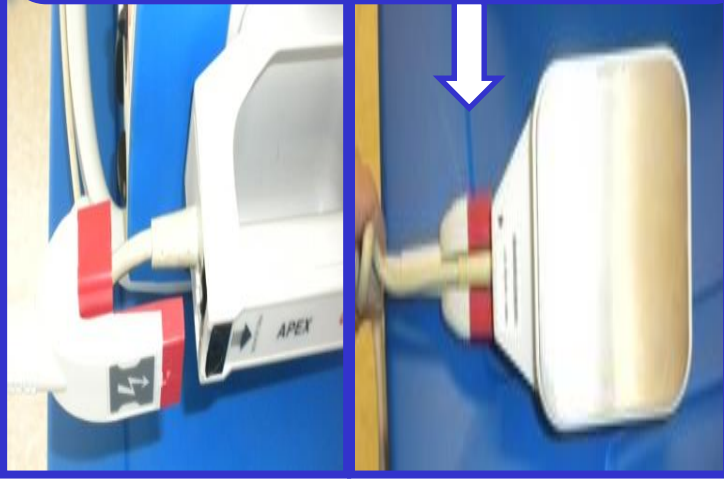


RED X in window means the defibrillator failed the 2am self check.
1) **Connect** the universal cable to the paddles or defib short block
2) **Perform** the 30J check.

Proper Paddle / Universal Cable connection

Cable should be connected to APEX paddle with no kinks in the cord

The paddle cord should sit straight in the groove of the cable .



Changing Paper

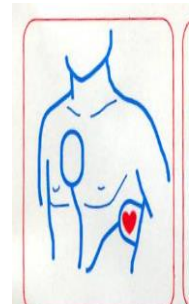
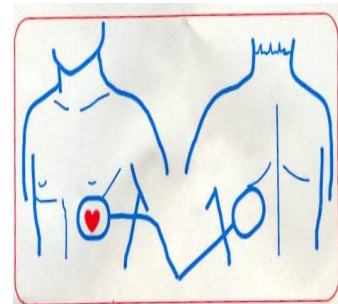
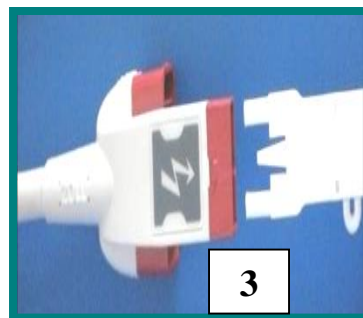
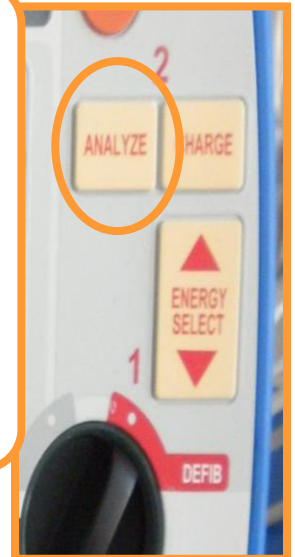
- 1) Press button on top to open
- 2) Place flat paper pack with black arrows facing toward the back of machine
- 3) Close lid carefully , printed side faces you press record to make sure paper moves freely.

To Connect External Pads Remove Universal Cable from Apex Paddle

- 1) Pull black trigger in the direction of the black arrow
- 2) Pull universal cable straight out (avoid rocking or twisting)
- 3) Connect universal cable to pad
ARROW to ARROW

Pressing the Analyze button activates the AED mode

To de-activate AED mode:
press Analyze button again



CARDIOVERSION / DEFIBRILLATION TRANSCUTANEOUS PACING TIPS

R-Series

Demonstrate Preparation and paddle placement (for Defib and Cardioversion)

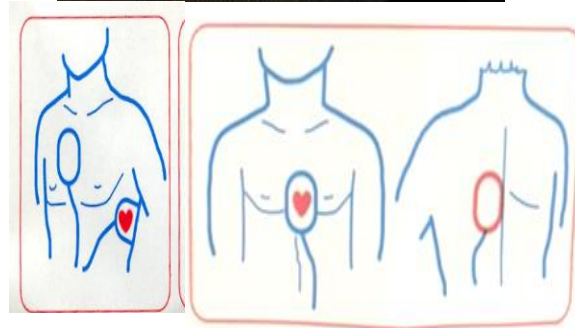
Avoid

- Pacemakers
- Ports [Mediports]
- Patches [medication]
- Piercings / jewelry
- Products: wires / drains / powder



Paddle placement :

- Prepare paddles with Electrolyte Gel or Defib gel pads
- STERNUM: Right of the sternum below the clavicle
- APEX: Placed to the Left of the nipple line with the center of the paddles in the midaxillary line



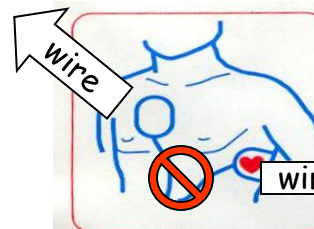
Use Quick Look Paddles

- Gel (gelpad) and place the paddles as above
- Lead select on the Defibrillator MUST be on PADDLES.
– (Not Lead I, II, or III)
- This will give you the same EKG view as Lead II

Defibrillation

Identify the rhythms requiring defibrillation

- 1) V-Fib
- 2) V-Tach without a pulse



For patient's going to Cath Lab
Defib Pad wires
should not cross
the chest

Set Joules

- Biphasic 200 Joules (all shocks)

Demonstrate Defibrillation

- Charging : Everybody Clear & (Take a Look)

Shocking with pads

- 1) Turn to defib mode
- 2) **200Joules**
- 3) **Charging / Clear**
- 4) **Shock**



Shocking with paddles

- 1) Energy Select on Sternum paddle
Default to 200 Joules
- 2) Charge Button on APEX paddle
- 3) Shock: press both orange buttons.



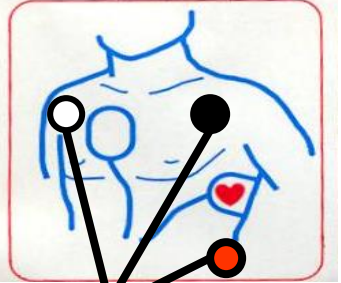
Pressing Analyze puts the defibrillator into AED mode.
Press Analyze again to stop AED mode.

CARDIOVERSION :

Rhythms requiring cardioversion

IF THE PATIENT IS UNSTABLE OR SYMPTOMATIC

- 1) Rapid A-Fib
- 2) Rapid A-Flutter
- 3) SVT
- 4) Vtach with a Pulse



Preparation for Cardioversion

REMEMBER S M S

Sedate

Sedative or amnesic or analgesic

Monitor (Select Defib Mode)

* **Place LEADS** Connect Defib leads to patient (RA = White / LA = Black / LL = Red)

* **Select LEAD** Use the Defib Lead Select :to display the **best QRS** waveform.

Choose Lead I , II or III **DO NOT use PADDLES to synchronize:**
if your hand moves , the defibrillator may think it sees an R wave and shock

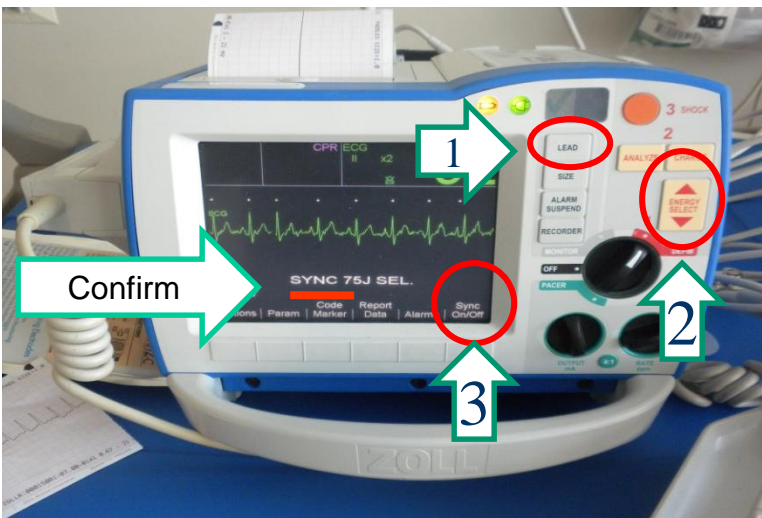
SEDATE

MONITOR [connect leads]

Select **Lead II**

Select **Energy**

Select **SYNCHRONIZE**



Select **Defib Mode**
(orange controls)
To Cardiovert

Cardioversion:
Place leads on patients

- 1) Select **Lead II**
- 2) Select **Energy**
- 3) Select **Synch**
Confirm SYNCH & arrows on R waves

<u>Biphasic</u>	<u>Monophasic</u>
Aflutter: 50 – 100j	100j, 200j, 360j
SVT: 50 - 100j	
Vtach : 100 - 200j	
Afib : 120 - 200j	

Synchronize

- Pressing synch allows the ECG to identify and **synchronize to the R wave**
 - An arrow on the R wave show synchronization
- The defibrillator will **ONLY** deliver the shock when it sees the R wave in order to avoid T wave.
- Shocking on the T wave could result in V-fib (R onT)

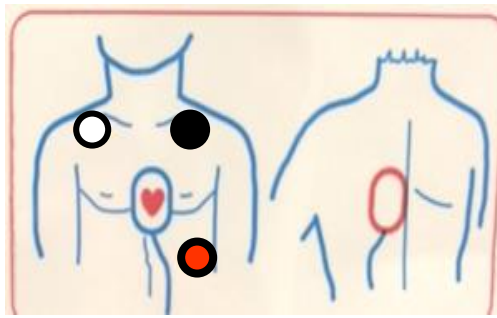
Resynchronize before every shock [Press Synch & Confirm Synch before each shock]

- GWUH defibrillators automatically default back to defibrillation after each synchronized cardioversion.

TRANSCUTANEOUS PACING EXTERNAL PADS

Identify Rhythms requiring Transcutaneous Pacing

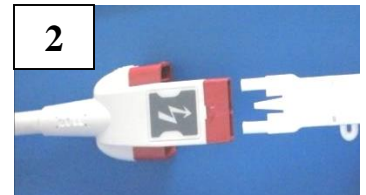
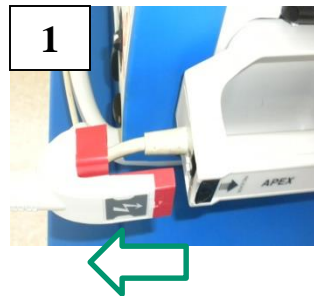
- ANY Symptomatic Bradycardia
- Sinus Brady Slow Afib
- Junctional rhythms Idioventricular Rhythm
- Advanced Heart Blocks
- 2nd degree Type I and II , 3rd degree



PLACE PADS and LEADS

Zoll recommends ANTERIOR AND POSTERIOR pad placement : PICTURES ARE ON THE PADS

- 1) Place **anterior** pad at the apex
- 2) Place **posterior** pad on the left side of the patient's back below the scapula.



Connecting External pads to UNIVERSAL CABLE
DO NOT FORCE THE CABLE: IT ONLY FITS ONE WAY



Pacer defaults to Demand:
screen should say PACE

NOT: ASYNCH PACE)

mA Rate
controls

Pacer Mode:

- 1) Turn control dial counterclockwise to **Green pacer Controls**
- 2) Set **Rate**
- 3) Set **mA** to capture + 10%
Increase mA (output) until you get **Ventricular capture**
(spike followed by a **wide QRS + palpable pulse that correlates with set pace rate**)

To check underlying rhythm

Press 4:1 button
allows you to look at the underlying rhythm
Paces every 4th beat while button is depressed

Zoll Pediatric Paddles

- Located under the adult paddles.
- Pinch the black button toward the outside of the paddle
- Slide the adult paddle off.
- Defib 2 joules / Kg
- Cardiovert 1joule / ke



Zoll Internal Paddles

- ICU: located in ICU –2 Chest cart
- Operating Room
- ED: located in the defibrillator carts in Trauma bay (CC3)
- CVC : beside the crash cart

