

# Rseries™

Confidence comes with knowing you are *Code-Ready*.



## ZOLL®

Advancing Resuscitation. Today.™



# The First and Only *Code-Ready* Defibrillator.

The worst time to find out a defibrillator isn't ready is at the code. Quick action is essential and stress is high enough without delays from problems like lost or tangled cables. Dried out, outdated, or missing electrodes don't help speed therapy either. Unfamiliar or confusing controls are the last thing needed when providing care. Not to mention unclear messages or prompts, hard-to-read displays, and alarms that don't tell you what to correct.

A *Code-Ready*™ defibrillator simplifies every aspect of being ready for a code – efficiently and cost effectively. It automatically monitors and tests the complete system – electronics, batteries, cables, electrodes, and defibrillator discharge, and can notify and alert users and technical staff about problems before they affect your ability to provide care. Should something need to be corrected, it turns on the display and shows an alert that the defibrillator needs attention. And in the future, it will generate a page or email to clinical and technical staff so a problem can be corrected.\*

A *Code-Ready* defibrillator should also help the user deliver better therapy with superior technology for pacing and defibrillation. And it provides users with help performing CPR at the correct rate and depth. A *Code-Ready* defibrillator provides the highest assurance that it is ready every time it is needed. A *Code-Ready* defibrillator sets a new standard.

There has never been a truly *Code-Ready* defibrillator. Until now.  
R Series™ from ZOLL®





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*OneStep Simplicity*

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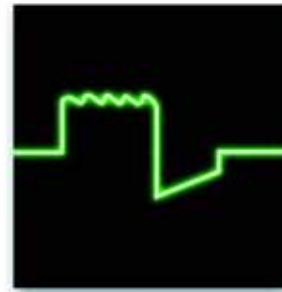
*Comprehensive Readiness Checks*

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*Unmatched Clinical Excellence*

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*Real CPR Help*

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*Smart Tools*

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# OneStep Simplicity

Simple, ingenious solutions that simplify and speed operation under the most stressful circumstances. That's Code-Ready.

Large, bright screen with oversized characters is easy to see from anywhere.



The new OneStep™ System delivers therapy to patients with the simplest, easiest method ever designed.

- A **single** cable paces, monitors, and defibrillates without the need for a separate ECG cable.
- Monitor, pace, defibrillate, and get Real CPR Help™ using only two electrodes. Electrode packaging is integrated with the defibrillator, pre-connected; electrodes are automatically tested.
- A new, unique sleeve stores the cable for rapid, tangle-free application.
- Apply just two electrodes, turn the R Series to "**Pacer**," and you are ready to provide pacing.
- Operating options include advisory and manual modes. What you want, when you need it.

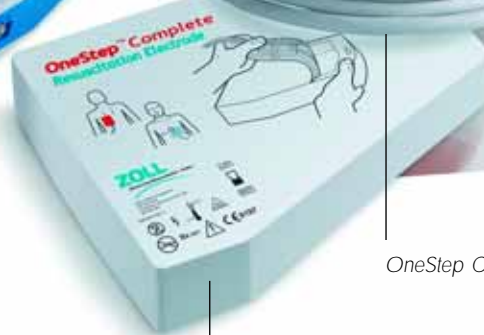


Small size and lightweight, with a grab-and-go handle, simplifies portability.



OneStep Cable Manager

OneStep Pacing



OneStep Cable

OneStep Complete Electrode

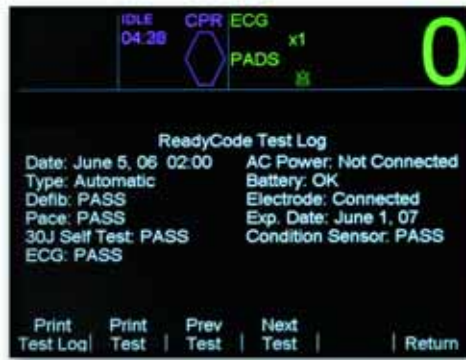


One simple Uniform Operating System used on every ZOLL ALS defibrillator ever made. Once trained, use any ZOLL device with confidence.

Readiness Indicator



Ready Code Log



Shift Check Log

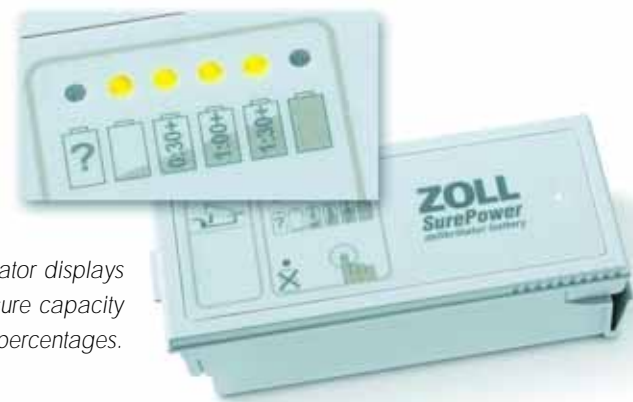


## Comprehensive Readiness Checks

Problems during a code are often related to inadequate tests, compromised supplies, batteries, and missed shift checks. The R Series extends testing far beyond a basic test shock to check more than 40 individual indicators of readiness. That's *Code-Ready*.

- o Comprehensive testing automatically confirms the presence of the correct cables and electrodes, senses the type of electrode, and checks important circuitry, including discharge.
- o There is no need to disconnect the electrodes or paddles, or get additional test equipment to test shock delivery. The system will even detect missing or dried-out electrodes and provide a printed or electronic log.
- o A simple indicator unmistakably communicates the defibrillator is ready, and if it's not, a screen message tells you why.
- o In the event a fault is detected, a page or email is wirelessly generated to notify appropriate personnel. \*
- o Users can even log the crash cart status on the defibrillator during shift checks, making quality compliance easier than ever. \*

The battery indicator displays runtime, not obscure capacity percentages.



# Unmatched Clinical Excellence

Being ready also means having the best technology available for resuscitation. R Series is built on an industry-leading pacing technology and unsurpassed biphasic waveform. That's *Code-Ready*.

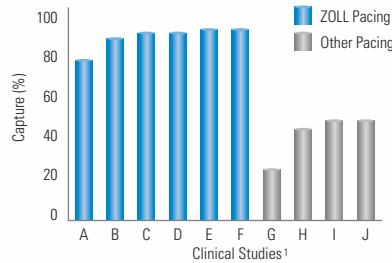
o *Unique, constant-current 40 msec pacing has the highest capture rate at the lowest average current required, assuring efficacy and patient comfort.*

- Validated in over 4000 patients in more than 16 studies.

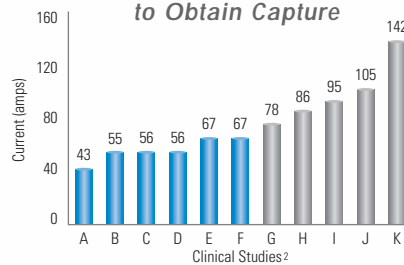
o *Rectilinear Biphasic™ waveform delivers constant current at the optimal duration for defibrillation.*

- Automatically adjusts for patient impedance with pads or paddles.
- The highest voltage capacity of any defibrillator delivers maximum current to the high-impedance patient.
- Rectilinear Biphasic is the most validated and published waveform, with 16 separate peer-reviewed studies in over 7000 patients.
- The only waveform cleared by the FDA with labeling of clinically superior to monophasic waveforms for the cardioversion of AF and the defibrillation of VF in high-impedance patients.
- Optional Pulse Oximetry with Masimo Signal Extraction Technology (SET®) assures accurate, reliable SpO<sub>2</sub> measurements.

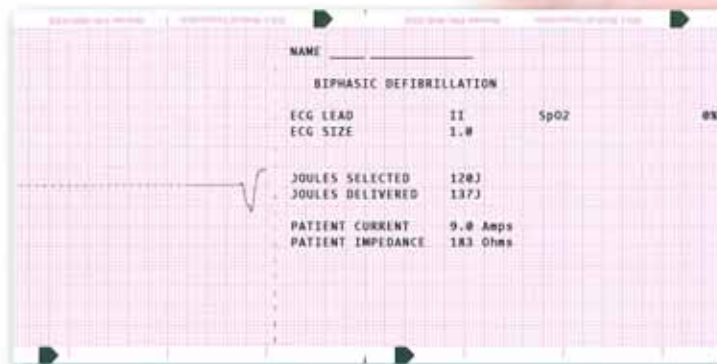
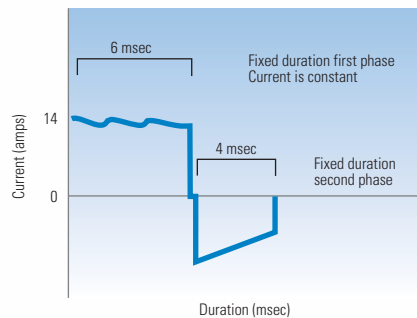
**Pacing Capture Rates**



**Current Required to Obtain Capture**



**The ZOLL Rectilinear Biphasic Waveform**



Strip chart printout post shock





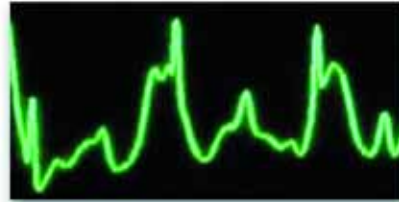
*Integrated CPR sensor coaches rate and depth.*

*CPR Index*



*No compressions*

*Good compressions*



*Unfiltered ECG signal during CPR*



*Signal filtered by See-Thru CPR*

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## ***Real CPR Help™ for ALS***

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Good CPR is critical for effective resuscitation, so feedback to provide better CPR performance is standard on the R Series. That's *Code-Ready*.

- o The integrated CPR sensor provides help to achieve proper compression rate and depth.*
- o Easy to use, the sensor is incorporated in the electrodes, eliminating extra steps or cables.*
- o Configurable visual and audio cues give feedback without excessive prompts or screen clutter.*
- o The CPR Index provides rapid visualization of compression rate and depth to help provide better support.*
- o See-Thru CPR™ reduces interruptions by allowing clinicians to see organized electrical activity during compressions.*
- o All CPR performance data, as well as the entire resuscitation record with ECG, is available for review and quality assurance with ZOLL CodeNet® software.*

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## Smart Tools

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Better training and better maintenance can both help staff be better prepared for a code. R Series will have a complete suite of tools to help with training and deliver cost-effective maintenance, support, and efficient asset management. That's *Code-Ready*.

### Clinical Education and Quality

Comprehensive tools support training and operation.

- o *Smart prompts provide users with specific guidance rather than mindless alarms.*
- o *An on-screen tutorial allows staff to quickly familiarize themselves with defibrillator operation.*
- o *Interactive, self-paced online training enables staff training 24/7.*
- o *R Series automatically uploads code data to ZOLL CodeNet, making electronic code documentation faster and easier.*



#### References

1. Clinical studies on file.
2. Clinical studies on file.

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\*Advancing Resuscitation. Today\*. Code-Ready, OneStep, R Series, Real CPR Help, See-Thru CPR, and SurePower are trademarks of ZOLL Medical Corporation. All other trademarks are the property of their respective owners.

\*WiFi, networked support, remote support, email capability, and clock synchronization are integrated in the R Series electronic design and will be released as a software upload to R Series devices. Some future capabilities may require 510(k) clearance.

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### Technical

New and planned biomedical and asset management software utilities can bring efficiency to maintenance programs and can help reduce the hidden costs of defibrillator ownership.

- o *The SurePower™ Battery System tests, calibrates, and captures battery information to optimize battery life and reduce costs.*
- o *A unique log records all messages, keystrokes, and interactions, and helps technical staff distinguish between user understanding and technical issues.*
- o *Industry-standard (802.11) wireless networking will be able to send an email or page when the readiness is compromised, complete with specific information about the fault.\**
- o *Remote troubleshooting and configuration management, defibrillator tracking, clock synchronization, and centralized test records are all planned for in the design of the R Series.\**

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