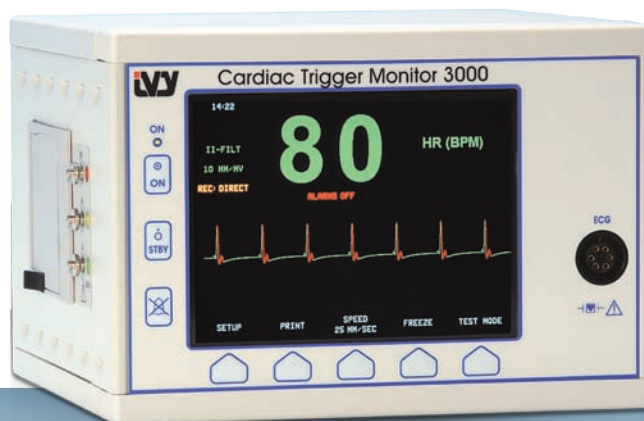


# Model 3000

For R-Wave Synchronization Applications



## Cardiac Trigger Monitor

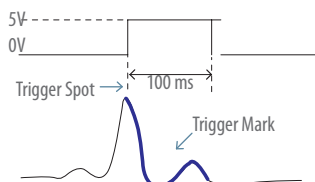


### World-Class Triggering

The Ivy Model 3000 Cardiac Trigger Monitor provides world-class cardiac triggering for use in synchronized applications such as Gamma Cameras, TMR/PMR, Lithotripsy, and also compatible with all major SPECT Cameras. The 3000's Synchronized Output produces a synch pulse starting at the peak of each R-wave. At the time of purchase, customer may choose RS-232 or TTL synch pulse output. Customers may also specify the pulse width of 1ms, 50 ms, 100 ms, or 150 ms. The "Auto-Notch" feature selects the correct ECG notch filter, reducing interference on the ECG signal.

### Precision Engineering

A color Trigger Mark clearly indicates the timing of each synch pulse with respect to the ECG, providing a visual reference for the timing and synchronization.



### Easy to Use

Once the patient cables are connected and the monitor is receiving an ECG signal, the monitor finds the peak of the R-Wave and generates synchronization pulses. No adjustments are necessary. The monitor has a small size and light weight, allowing for various mounting solutions and greater flexibility. A Bright 6.5" Color LCD Display with large Heart Rate characters, provides a wide viewing angle, and enhanced visibility of patient data. A "Soft Key" user interface and simple menu structure also contribute to the monitor's ease of use.

### Integrated Hardware

The monitor's optional recorder/printer produces hard copy supporting documentation. A mark identifies the precise synchronized timing for later review. Power input from 90 to 264 V ac and 47 to 63Hz will provide for worldwide operation.

### Accessories

Name	Part No.
3 Lead ECG Patient Cable	590406
Lead Wires (Set of 3)	590407
ECG Electrodes (Box of 30)	590342
Roll Stand (Shown below)	590297

### Mounting Solutions

Ivy Biomedical has a custom designed light duty roll stand that enhances the maneuverability of the 3000. Also available are various mounting brackets for wall and table configuration. Please contact us more information or for custom requirements.



**Make contact with your IVY sales representative at 1-800-247-4614, to learn more about the Model 3000 Cardiac Trigger Monitor.**

UNITED STATES FEDERAL LAW RESTRICTS THIS DEVICE TO SALE BY OR ON THE ORDER OF A PHYSICIAN.

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P/N: 3140-00-16 Rev. 01

## Technical Specifications

### ECG

Lead Selection: I, II, III  
 Patient Cable: 6-Pin AAMI Standard  
 Ground Isolation: 4 kV rms, 5.5 kV peak  
 CMRR: 90 dB  
 Input Impedance: 20 MΩ at 10 Hz w/patient cable

### Frequency Response:

LCD Display & Recorder: Filtered: 0.5 to 25 Hz  
 Unfiltered: 0.5 to 45 Hz  
 X1000 Output: Filtered: 0.5 to 25 Hz  
 Unfiltered: 0.2 to 100 Hz

Input Bias Current: Any lead configuration <200 nA dc  
 Electrode Offset Potential: ±0.5 V  
 Noise: <20 μV peak-to-peak, referred to input  
 Defibrillator Protection: Protected against 360 J discharge  
 Leakage Current: <10 μA at 120 V ac, 60 Hz  
 Electrosurgical Interference Protection: Standard  
 Gain Selections: 5, 10, 20, 40 mm/mV

### Cardiotach

Range: 15 to 260 bpm  
 Accuracy: ±1%  
 Resolution: 1 bpm  
 Sensitivity: 300 μV peak  
 Pace Pulse Rejection Width: 0.1 to 2 ms at ±2 to ±700 mV  
 Tall T Wave Rejection: Rejects T waves ≤ R wave

### Synchronized Output

Test input signal at electrode leads:  
 1/2 sine wave, 60ms width, 1mV amplitude: 1 pulse per second  
 Output Trigger Delay: < 6ms w/ notch filter off: < 9ms w/ notch filter on  
 R to R Trigger Accuracy: ± 50 μs typically  
 Trigger Pulse Width: Options include 1, 50, 100, or 150ms  
 Pulse Amplitude: Options include 0 to 5 V, or ± 11 V  
 Color Marker on ECG display identifies Trigger Point

### Alarms

High Rate: Adjustable in 5 bpm increments  
 Low Rate: Adjustable in 5 bpm increments  
 Asystole: R to R interval >6 seconds  
 Lead Off: Detached Lead or Offset Potential >0.5 V

### Display

Type: Active Matrix TFT Color LCD (640 x 480)  
 Trace: Single Trace with Freeze Mode  
 Screen Size: 13.25 cm x 9.94 cm, 16.5 cm (6.5 in.) diagonal  
 Sweep Speed: Moving Bar Selectable @ 25 or 50 mm/sec

### Recorder

Direct Mode: Records without any delay  
 Timed Mode: Records 30 seconds of real time ECG, then stops.  
 Delay Mode: Records 20 sec. before alarm and 20 sec after @ 25 mm/sec  
 Chart Speed: 25 or 50 mm/sec  
 Mark: Recorder marks the Peak location and the duration of trigger pulse  
 Chart paper: Standard 50mm ECG thermal paper 2"  
 Diameter Max  
 Number of Channels: 1  
 Recording Waveform: ECG  
 Channel Width: 40 mm

### Mechanical

Size: Height: 6.70 in. (17.2 cm)  
 Width: 9.25 in. (23.5 cm)  
 Depth: 9.21 in. (23.4 cm)  
 Weight: 6.5 lb. (2.9 kg)

### Test Mode

ECG: 1mV/100 ms @ 70 bpm

(Specifications subject to change without notice)

### Power Requirements

User Voltage Selector Switch: 115V or 230V ac  
 Input Range @ 115V: 90V to 135V ac, 47 to 63HZ  
 Input Range @ 230V: 180V to 264V ac, 47 to 63HZ  
 Maximum ac Power Consumption: 35 VA

### Environmental

Operating Temperature Range: 5°C to 40°C  
 Storage Temperature Range: -5°C to 55°C  
 Relative Humidity: 0-90% non-condensing

### Simulator

Simulated ECG waveform: 1mv amplitude.  
 Rate selections: 40, 60, 90, 120, and 150 BPM.  
 Also, manually adjustable rate in increments of 1 BPM.

### Communications Options

RS232 or Ethernet

### Configurations

3000R with Recorder  
 3000 without Recorder

### Regulatory

Unit meets or exceeds the specifications for FDA/CGMP, CMDCAS (CDN MDR), AAMI EC13 Cardiac Monitor Standard, ISO 13485:2003, MDD93/42/EEC, UL 60601-1, and CE 0413

### Warranty

One Year (parts and labor)



A representation of the recorder output is shown above.

Manufactured by:



This product is available through:

**JRT Associates**

5 Nepperhan Avenue, Suite 2B  
 Elmsford, NY 10523  
 800-221-0111