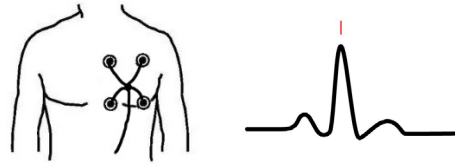


Gating Performance

Synchronized Cardiac (ECG) Gating

Trigger Delay	< 26ms
R-to-R Accuracy	±1.5ms dither (typ.) @ 1mV input
Gain Adj.	AGC on/off



*Input signal test conditions: 1/2 sine wave, 60ms width, 1mV amplitude, 1 pulse/sec

ECG

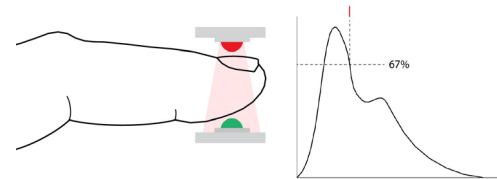
Configuration	4-Lead system
Trigger Lead Selection	II, or III
Patient Isolation	>4 kV rms, 5.5 kV peak (Class I)
Patient Leakage Current	<10 µA normally
Frequency Response	0.2 – 25Hz Filtered
Notch Filter	50 & 60 Hz
CMRR	≥ 90dB

Cardiotach

Adult/Ped	15-260 bpm
Accuracy	±1% ±1 bpm
Resolution	1 bpm
Sensitivity	300 µV peak

Synchronized Pleth (PPG) Gating

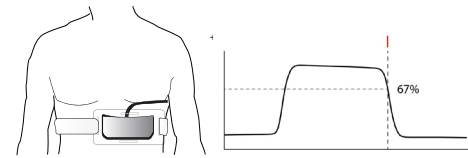
Trigger Point	67% Peak-to-Valley
Trigger Phase	Falling edge/Rising edge
Gain Adj.	AGC on/off



For additional specifications, refer to Operator Manual

Synchronized Respiratory (RESP) Gating

Trigger Point	67% Peak-to-Valley
Trigger Phase	Expiration/Inspiration
Gain Adj.	AGC on/off



Transmitter

Gating Parameters	Cardiac (ECG) Pleth (PPG) Respiratory (RESP) Power On/Off Wireless Link Battery Life
Indicators/Controls	BLE (wireless)
Communication	LiPo
Battery Chemistry	> 12 hrs run time
Battery Life	5"x3"x1"
Dimensions	Polycarbonate
Enclosure Material	Water Resistance IPX1

Sensor Cables

ECG - High Impedance	10 kohm/ft; 4-Lead
PPG - 660nm Transmissive	
RESP - Pneumatic Pillow	

Base Station

Input/Output Interface

Power Input	DB-15
Data Output	Digital optical
RF Input	SMA Connector
Antenna	Local: SMA Omni Remote: mini PCB

Analog Triggers

Individual discrete outputs per parameter	
Pulse Width	10 ms
Pulse Amplitude	3.3V
Pulse Polarity	Positive

Digital Triggers

Optical	Comm out
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Communication & Control

Optical Bus	Proprietary Protocol
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Mechanical

Size (HxWxD) approx.	7" x 5.5" x 2.5"
Weight	Approx 2.5 lb.
Case Material	Aluminum

Electrical

Input Voltage	12V-15 Vdc (conditioned)
Current	120 mA (typ)
Power Consumption	2W (max.)

Environmental

Water Resistance	IPX1 (protection against vertically dripping water)
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Operating

Temperature Range	15°C to 40°C
Relative Humidity	10% to 85% non-condensing
Altitude	-400m to +3,000m

Storage

Temperature Range	-40°C to +70°C
Relative Humidity	5% to 95% non-condensing
Altitude	-400m to +5,5000m

Charging Station

Mechanical	14"x10"x3.25" Wall mounted Dual Tx cradle
Power Input	100-240 Vac 50-60 Hz
Charge time	6 hrs full charge; 30 min 2hr charge

Compliance & Certifications

ANSI/AAMI ES60601-1:2012
CAN/CSA C22.2 No 60601-1:2014
CGMP
IEC 60601-1 Edition 3.1 (2012)
IEC 60601-1-2 4th edition
IEC 60601-1-6
IEC 60601-1-8
FCC
FDA

(Specifications subject to change without notice)



Key Features

- Economical 3-in-1 gating solution (ECG, PPG & RESP in one Transmitter)
- Wireless Bluetooth communication
- MR compatible up to 3T
- Excellent noise immunity in MR
- Long battery life
- Worldwide modular grant radio (US, Canada, Europe, Japan, AU/NZ)
- FDA

Product Description

The Ivy Biomedical Systems WGS-100 is a premium multi-parameter (ECG, PPG & RESP) wireless gating system compatible with select 1.5T & 3T MRI host scanners.

Manufactured by:



Ivy Biomedical Systems, Inc.
11 Business Park Drive
Branford, Connecticut 06405 USA
Toll Free 800 247 4614
Main 203 481 4183
Fax 203 481 8734
www.ivybiomedical.com

Distributed by:



Transmitter



Transmitter

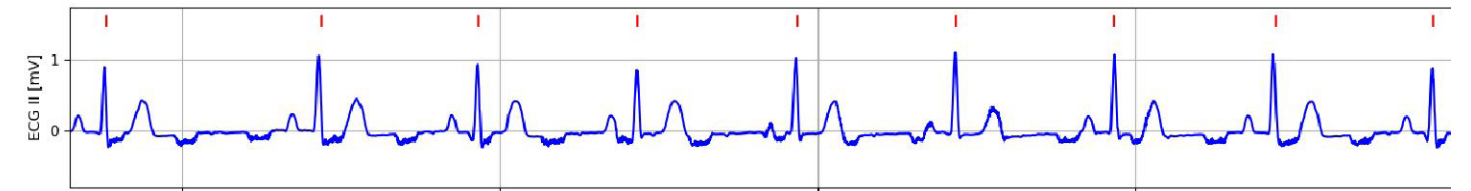
- Operates in the bore of 3T magnet
- Supports 3 gating parameters (ECG, PPG & RESP) in one compact transmitter
- Robust wireless Bluetooth communication
- Compact and ergonomic design
- Long battery life
- Local status indicators
- Non-coherent emissions in 1.5T and 3.0T

Charging Station

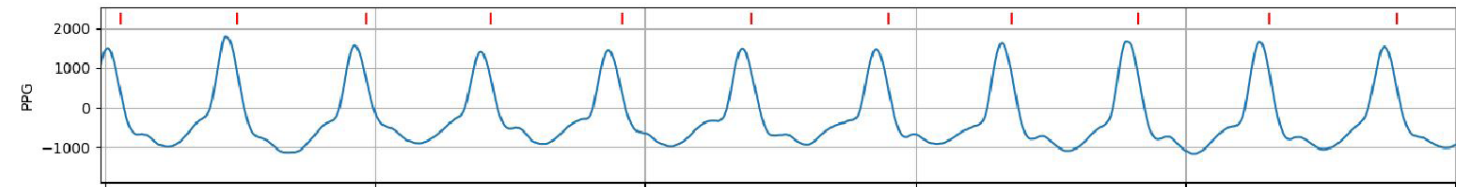
- Dual cradle for two transmitter charging
- Integral cable management solution
- Wall mount installation
- Optional desktop mount
- Rapid 6hr full charge time
- Universal voltage

Waveforms

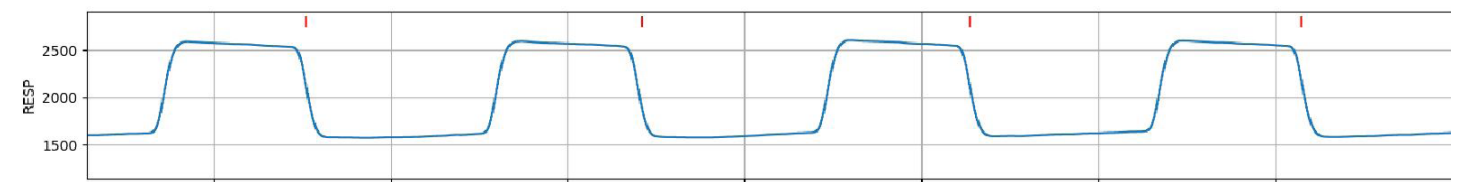
ECG*



PPG*



RESP*



*Recorded from actual 3T MR room performance

Sensor Cables



ECG Cable

- Cardiac gating
- 4-Lead (orthogonal) format
- High impedance conductors
- Low noise design
- 24" overall length
- MR Safe

PPG Cable

- Plethysmography gating
- 660 nm detector/emitter
- Transmissive technology
- Fixed/adjustable finger bands
- 24" overall length
- MR Safe

RESP Sensor

- Respiratory cycle gating
- Pneumatic technology
- Adjustable elastic strap
- Small 2" x 7" pillow size
- 30" hose length
- MR safe

Base Station



Integrated Base Station

- Provides wireless link with transmitter(s)
- Mounts in MR equipment cabinet or magnet
- Includes bore mounted PCB antenna & coax cable
- Optical communication output to console computer

Integrates with existing infrastructure

Base station mounts inside the equipment cabinet next to the MR magnet, or in MRI utility room.

