BPL Medical Technologies

Experience the Trace Quality

BPL

Happier Living Everyday

THREE CHANNEL ECG RECORDER

CARDIART GenX3

Three Channel ECG Recording with unique trace darkness control
ECG Trace Print on 80mm Wide Paper with selectable trace darkness feature

Colour TFT Screen
Wide 4.3 inch 65K Color TFT display to observe 12-lead, real-time ECG waveforms

Intuitive, One-Touch Function Keypad
Color-Coded Silicone function keys for soft One-Touch Operation with Alphanumeric keypad for entering Patient & Hospital information

Ergonomic Design
Enhanced portability with built-In power supply & integral handle

Short Recharge Time
Rechargeable Lithium battery for energy-efficient operation - Recharge time <3.5 hrs.

* compatible with selected printers only

ECG Analysis & Interpretation
*Gender, Age & Race specific Advanced ECG Analysis & Interpretation - **The Glasgow ECG Interpretation Algorithm***

Multiple Operating Modes
Auto & Manual modes with selectable rhythm, In-built PDF Converter for PDF Transfer of ECG via USB & Page Save Features

Paperless Workflow
ECG Data Export feature to multiple formats enables paperless workflow

Direct Print Feature*
Direct print on color A4 USB printers in different print layouts

Capacity
Internal record storage for up to 250 ECGs

Optional features
FTP Server Upload, HL7, RT-VIEW for PC connectivity.

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Optional Enhancements*

PC Connectivity with ECG Viewer Software
Stored and Real-time ECG transfer to PC through USB enabled by RT-Viewer software

* Upgradable at additional cost

The Glasgow ECG Interpretation Algorithm

Scan the above image with BPL AR App to view the recorded webinar on Glasgow ECG Interpretation Algorithm

Glasgow ECG Interpretation Algorithm is acknowledged as being one of the best ECG interpretation algorithms in the world. This algorithm is tried and tested across all major human ethnic groups the world over and hence has clinical application across all populations.

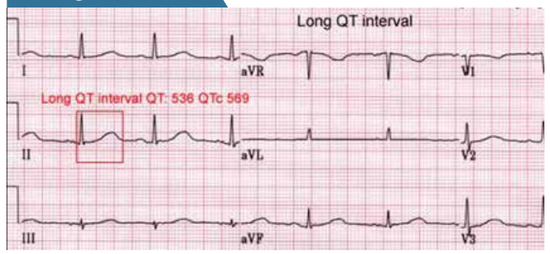
The ECG is particularly important in the emergency department, as it usually forms the basis for immediate therapeutic interventions and/or subsequent diagnostic tests.

The Glasgow ECG Interpretation Algorithm, developed at the University of Glasgow enables automated means of providing ECG analysis, interpretation and printing of reports and this makes it efficient in complementing the role of a clinician. This algorithm is very effective in interpreting STEMI (ST Segment Elevation Myocardial Infarction) appearances on the ECG.

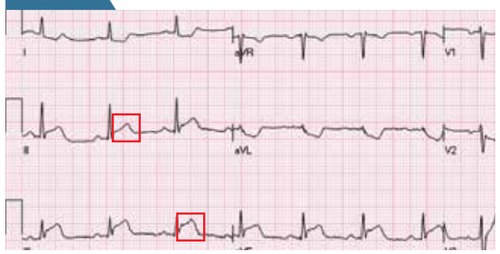
Unique Features of Glasgow Algorithm

- *QT_c measurements facilitating assesment of cardiac risk*
- *This algorithm is very effective in interpreting STEMI (ST Segment Elevation Myocardial Infarction) based on age and gender dependent criteria*
- *This algorithm uses measurement from large databases for children and adults giving a high specificity*
- *Has the ability to cope with patients of all ages from birth to old age*
- *"Critical values" included in diagnostic reporting template*
- *Can utilize V4R for neonates and children*
- *Offers short diagnostic reports for hospital market and detailed reports for primary care market*
- *The Glasgow ECG Interpretation Algorithm meets all the **IEC 60601-2- 51** requirements and **ISO 9001:2008** standards*

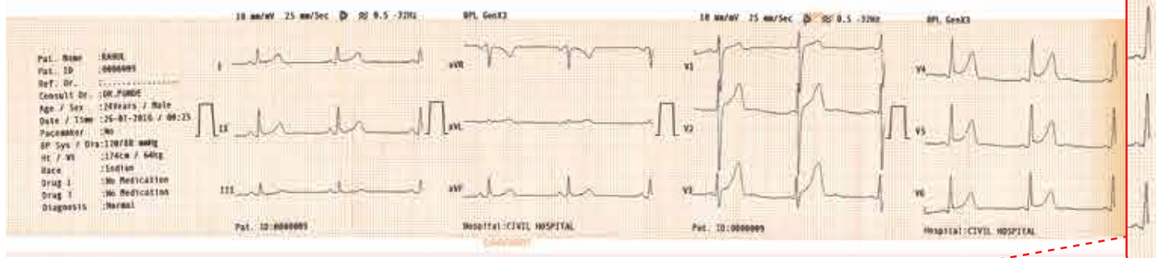
Prolonged QT interval



STEMI



Short (Minimal) Version of Glasgow Interpretation with Analysis & Medians

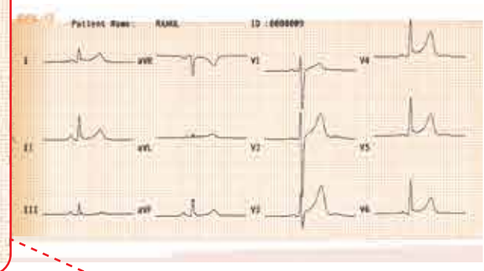


Heart Rate	57 bpm	HRV	175	Sinus rhythm	
				Normal ECG	
STFrontalAxis	21	TFrontalAxis	43		
ST Duration	92 ms	PR Interval	118 ms		
Q-T Interval	404 ms	QTc Hodge	399		
QT Dispersion	20				
P Terminal (V1)	880				

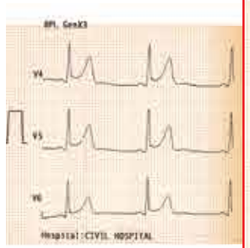
	Onset	Termination	Duration(ms)
P	326	428	94
QRS	444	542	98
T	634	848	214

Disclaimer: This report does not replace the diagnosis of a trained physician

Median



Detailed Version of Glasgow Interpretation with Analysis & Medians



Heart Rate	57 bpm	HRV	175	Sinus rhythm	
				Normal ECG	
STFrontalAxis	21	TFrontalAxis	43		
ST Duration	92 ms	PR Interval	118 ms		
Q-T Interval	404 ms	QTc Hodge	399		
QT Dispersion	20				
P Terminal (V1)	880				

	Onset	Termination	Duration(ms)
P	326	420	94
QRS	444	542	98
T	634	848	214

Disclaimer: This report does not replace the diagnosis of a trained physician

	I	II	III	III	aVR	aVL	aVF	V1	V2	V3/V4R	V4	V5	V6
P Ons(ms)	326	326	326	326	326	326	326	326	326	326	326	326	326
P Dur(ms)	94	94	94	94	94	94	94	94	94	94	94	94	94
QRS Ons	446	446	454	454	446	452	460	444	444	444	450	456	448
QRS Dur(ms)	80	98	78	78	88	56	76	94	86	72	92	86	92
ST80 Amp(mV)	61	76	14	14	-69	23	45	137	314	338	216	182	118
Q Dur(ms)	14	12	8	8	8	9	0	0	8	0	0	0	14
R Dur(ms)	65	77	78	78	13	46	76	31	32	40	92	86	77
S Dur(ms)	0	0	0	0	74	0	0	62	53	31	0	0	0
R' Dur(ms)	0	0	0	0	0	0	0	0	0	0	0	0	0
S' Dur(ms)	0	0	0	0	0	0	0	0	0	0	0	0	0
R'' Dur(ms)	0	0	0	0	0	0	0	0	0	0	0	0	0
S'' Dur(ms)	0	0	0	0	0	0	0	0	0	0	0	0	0
ST Dur(ms)	88	102	162	162	104	164	100	102	106	118	76	64	98
T Ons	606	638	694	694	638	672	636	640	636	634	620	606	638
T Dur(ms)	242	210	154	154	210	176	212	208	212	214	214	242	210
P+ Dur(ms)	94	94	94	94	0	36	94	50	94	94	94	94	94
T+ Dur(ms)	242	210	154	154	0	176	212	208	212	214	214	242	210

	I	II	III	aVR	aVL	aVF	V1	V2	V3/V4R	V4	V5	V6
QRS IntD	36	34	38	10	19	28	22	26	28	40	34	40
P+ Amp(mV)	63	169	114	0	18	140	63	38	76	74	67	50
P- Amp(mV)	0	0	0	-113	-35	0	-20	0	0	0	0	0
P2P Amp(mV)	538	892	488	705	137	625	1898	3047	1272	1370	1388	1243
R1 Amp(mV)	***	***	***	***	***	***	***	***	***	***	***	***
Q Amp(mV)	-34	-27	0	0	-24	0	0	0	0	0	0	-47
R Amp(mV)	504	865	488	26	113	625	513	976	840	1370	1388	1196
S Amp(mV)	0	0	0	-679	0	0	-1385	-2071	-432	0	0	0
R' Amp(mV)	0	0	0	0	0	0	0	0	0	0	0	0
S' Amp(mV)	0	0	0	0	0	0	0	0	0	0	0	0
R'' Amp(mV)	0	0	0	0	0	0	0	0	0	0	0	0
S'' Amp(mV)	0	0	0	0	0	0	0	0	0	0	0	0
ST Amp(mV)	46	38	-8	-42	27	14	58	172	209	154	131	81
STT28 Amp(mV)	67	72	5	-69	31	38	145	330	354	222	196	127
STT38 Amp(mV)	104	122	18	-112	43	70	188	479	521	316	293	190
T+ Amp(mV)	381	392	99	0	115	242	263	919	1182	878	792	572
T- Amp(mV)	0	0	0	-345	0	0	0	0	0	0	0	0

Median

Size of the above ECG trace not to scale

Product Specifications

ECG ACQUISITION	
ECG Acquisition	12 bits; 1000 samples/ sec/ channel
ADC Resolution	2.55 µV/LSB
Input Dynamics	DC offset: ± 300mV; AC Differential: ± 5mV in the pass band
ECG Lead	Standard 12 leads or Cabrera; Acquired 8 leads & Reconstructed 4 leads (Lead III, Lead aVR, Lead aVL, Lead aVF)
Recording Sensitivity	**Manual:** 2.5 - 5 -10 - 20 mm/mV ± 5%
	Auto: Dependent on the signal strength, Optimizes automatically to 2.5-5-10-20 mm/mV ± 5%
Input Impedance	> 10 MΩ @ 10 Hz
Frequency Response	0.05 Hz to 150 Hz (-3dB) without Mains /Muscle and ADF Filters
Time Constant	> 3.2 seconds
CMRR	> 90dB @ 50Hz
DF Protection	Internal

ECG PROCESSING	
ECG Analysis & Interpretation	Gender, Age & Race specific Advanced ECG Analysis & Interpretation - Glasgow ECG Interpretation Algorithm in Auto mode
ECG Analysis Sampling Rate	500 samples/ second (sps)
Filters	**Mains interference/ Muscle filter:** Linear phase digital 50 Hz Notch filter with selectable 32 Hz.
	Anti-drift filter: Selectable Digital 0.5Hz Anti Drift High pass linear phase filter
Pacemaker Recognition	Recognizes pulse in accordance with applicable IEC standards
Signal Memory	10 Seconds for each lead in Auto mode
Operating Modes	**Manual:** acquisition and printing in real time
	Auto: simultaneous acquisition and printing
Heart Rate Meter	30 to 240 BPM ±10% or ±5 BPM, whichever is greater

DISPLAY & STORAGE	
Display	4.3 inch Color TFT LCD with 480 x 272 pixel resolution; 65k Color
Keyboard	Silicone Rubber keypad with 23 keys & 4 LED indicators
Indicators	Mains Connection, Battery Charging, Battery Low & System Errors
Audible Beep	Heart Rate and Key Press
Startup Time	< 4 seconds
Record Storage	250 ECGs in internal memory

SAFETY CLASSIFICATION	
Safety Classification	Class I with internal power supply
Degree of Protection	Type CF

THERMAL RECORDING	
Recording System	Thermal printer, 8 dots/ mm, 72 mm usable print width
Paper Transport Speed	5 mm/sec or 12.5 mm/sec or 25mm/ sec or 50 mm/sec
Thermal Paper	**In rolls:** Height 80mm, Length 20m, gridded
Print Channel	3 Channel + 1 Rhythm or 3 Channel;
Print Formats	**Manual:** 3 Ch.
	Auto: 3 Ch, 3 Ch + 1 Rhythm with selectable print durations of 2.5 secs./ 5 secs./ 10 secs.

PC CONNECTIVITY	
Paperless Workflow	ECG Data Export feature to multiple formats enables this specification
PC Connectivity	Real-time ECG transfer to PC over USB (Optional)

BATTERY & POWER	
Battery	Rechargeable Lithium battery 11.1Vdc, 3000mAh
Mains Protection	**Fuse:** T2A 250 V
Battery Protection	In built PCM Module
Power Supply	100-240 VAC; 50/60 Hz
Battery Charging Time	Approximately 3 hours 30 minutes from total discharge (Unit off)
Power Consumption	Less than 60VA

ENVIRONMENT SPECIFICATIONS	
Operating Temperature	+10 to +40 °C
Relative Humidity	Upto 95% RH Non-condensing
Storage/ Transport Temperature	-10 °C to 50 °C
Relative Humidity	Upto 95% RH Non-condensing

PHYSICAL SPECIFICATIONS	
Dimension	Approx. 300mm x 260mm x 80 mm (length x width x height)
Weight	Approx. 2 Kgs.

STANDARD ACCESSORIES	
Patient Cable	1 No.
Limb Electrodes	4 Nos.
Chest Electrodes	6 Nos.
Thermal Paper Roll	1 No.
Cardijelly Bottle	1 No.
User Manual	1 No.
Earth cable	1 No.
Power Cord	1 No.

*Technical specification subject to change

CERTIFIED ISO 13485 : 2016 COMPANY

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