HARWELL MEDICAL & ONE STOP SHOP CORP.

MODEL: **PG-13**

PG-13

SERIES

COMPUTERIZED POLYGRAPH SYSTEM

8 CHANNELS ◇ REAL-TIME WAVEFORMS ◇ USB POWERED

GSR
0.01–2 Hz

RESP 1
0.05–20 Hz

RESP 2
0.05–20 Hz

PULSE
Finger pulse

BP
0.05–5 Hz



— NOTE —
The DAS (Data Acquisition System) shown in this image may not be the actual unit.

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8 CH
GSR, respiration, pulse, BP, activity, audio/video and skin temp.

500 g
Main unit, 160 × 155 × 65 mm

USB
Powered via computer through USB connection

3-YR
Warranty on hardware, plus lifetime technical support

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01 / OVERVIEW

PG SERIES COMPUTERIZED POLYGRAPH

A polygraph is an electronic instrument that records changes in many physiological parameters, such as **skin conductance, respiration, finger pulse and cardiovascular activity**. It can be used to research and detect the tested person's psychological behavior.



Note: The DAS (Data Acquisition System) shown in this image may not be the actual unit.

02 / BENEFITS

BENEFITS

2,000+

POLYGRAPH SETS IN USE IN CHINA

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01

PG Series polygraphs are the only products that have passed the identification of the Chinese Ministry of Public Security.

02

More than 2,000 polygraph sets are now in use in China, and our international market is expanding day by day. The technology has reached an advanced level worldwide.

03

We drafted the industry standard.

04

All products carry our own IP rights.

03 / SYSTEM

HOW THE SYSTEM WORKS

The computerized polygraph system consists of sensors, a main unit, a microprocessor and test software.

01 → 02 → 03 → 04

SENSOR

The components that convert the tested person's physiological parameters, such as GSR, respiration and activity, into analog signals.

MAIN UNIT

The device that converts the analog signals measured by each sensor into digital signals, then sends them to the microprocessor.

MICROPROCESSOR

The device that handles test preparation, test control and data analysis.

TEST SOFTWARE

The executable files stored on the microprocessor. It handles editing, display, printing, storage, analysis and automatic judgment.

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GENERAL MEASURED PARAMETERS



GALVANIC SKIN RESPONSE

GSR

Skin conductance changes with the activity of the skin's sweat glands. The tested person's sympathetic nervous system activity is reflected by changes in GSR.



CARDIO-ACTIVITY

BP · BLOOD VOLUME · PULSE

The polygraph measures cardio activity indirectly, using special methods applied to the outside of the body. Blood pressure passes through an intermediate medium, such as tissue and skin, and is then transferred to the sensor of the measuring instrument. Psychological behavior is reflected by changes in cardio activity, which include average blood pressure, blood volume and pulse.

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RESPIRATION

UPPER & LOWER CHEST

The changes in breathing parameters, including breathing rate and the ratio of exhalation time to inhalation time, caused by changes in physiological behavior. It includes upper and lower chest assemblies, i.e., chest and abdominal respiration.



PULSE

FINGER PULSE

The elastic distortion of the artery wall caused by the blood pushed out during each periodic heartbeat.

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05 / PERFORMANCE

PERFORMANCE PARAMETERS

SIZE	WEIGHT	POWER SOURCE
160 × 155 × 65 mm	500 g	Via computer through USB connection

WORKING ENVIRONMENT TEMPERATURE	WORKING ENVIRONMENT HUMIDITY	NOISE
-20°C to +40°C	20% to 80% (relative value)	< 50 dB

MEASUREMENT

RESP · 01
PNEUMOGRAPH

RANGE	0.1 to 5 times / sec
FREQUENCY	0.05 Hz – 20 Hz
RESOLUTION POWER	1%

GSR · 02
GSR

RANGE	10 Ω – 10,000 Ω
FREQUENCY	0.01 Hz – 2 Hz
RESOLUTION POWER	1%

BP · 03
BLOOD PRESSURE

RANGE	50 – 70 mmHg
FREQUENCY	0.05 Hz – 5 Hz
RESOLUTION	1%

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06 / PG-13

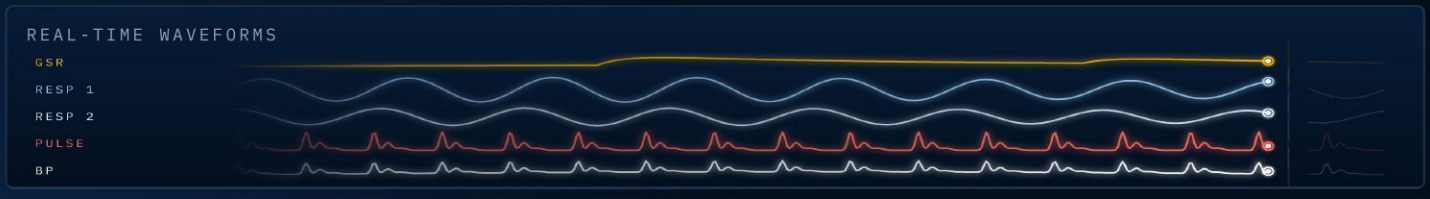
PG-13 POLYGRAPH SYSTEM

It uses high-end technology with high stability. Waveforms are displayed in real time, and pictures, characters, text, video and more can be displayed on screen at the same time as visual stimuli. With its exquisite appearance, powerful functions and high sensitivity, it is the best choice for you.

8

PG-13 SENSOR CHANNELS · 8 CHANNELS IN TOTAL

- GSR (GALVANIC SKIN RESPONSE)
- CHEST RESPIRATION
- ABDOMINAL RESPIRATION
- FINGER PULSE
- BLOOD PRESSURE
- ACTIVITY
- AUDIO / VIDEO
- SKIN TEMPERATURE



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07 / IN THE BOX

PG-13 INCLUDES

- PG-13 expert scoring system, manual scoring interface and synchronous monitoring system
- PG-13 polygraph instrument
- GSR stainless plate electrodes
- Pneumograph sensor for upper chest respiration
- Pneumograph sensor for lower chest respiration
- Standard blood pressure cuff
- Blood volume sensor
- Activity sensor
- Audio & video
- USB data cable
- All necessary cabling
- User manual
- Hard-shell carrying case



AUDIO / VIDEO SENSOR
PG-13

MAIN UNIT · FRONT PANEL



USB — COMPUTER & POWER
RESP1 — UPPER CHEST
RESP2 — LOWER CHEST
EDA — GSR
PULSE — FINGER PULSE

WARRANTY & SUPPORT

3-YR	2-YR	1-YR	∞
WARRANTY ON HARDWARE	FREE SOFTWARE UPGRADES	WARRANTY ON ACCESSORIES	LIFETIME TECHNICAL SUPPORT

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PG-13 SENSORS



01

MAIN UNIT

INCLUDED IN PG-13



02

RESP. SENSOR

PNEUMOGRAPH · UPPER & LOWER CHEST × 2

INCLUDED IN PG-13



03

GSR SENSOR

STAINLESS PLATE ELECTRODES

INCLUDED IN PG-13



04

BLOOD VOLUME SENSOR

FINGER PULSE SENSOR

INCLUDED IN PG-13

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05

BP SENSOR

BLOOD PRESSURE CUFF

INCLUDED IN PG-13



06

ACTIVITY SENSOR

INCLUDED IN PG-13



07

AUDIO / VIDEO SENSOR

INCLUDED IN PG-13



08

SKIN TEMP. SENSOR

INCLUDED IN PG-13

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09 / COMPATIBILITY

COMPUTER OPERATING SYSTEM COMPATIBILITY

The PG Series Computerized Polygraph System is compatible with Microsoft Windows XP, 2000, Vista, 7 and 8 (32-bit and 64-bit) or above.

Windows XP	2000	Vista	7	8	32-bit & 64-bit

10 / COMPUTER

COMPUTER SPECIFICATIONS

RECOMMENDED DESKTOP

DESKTOP

PROCESSOR	Quad-core CPU, 3 GHz
MEMORY	4 GB of RAM
STORAGE	500 GB hard drive
PORTS	2 USB ports
GRAPHICS	Onboard graphics accelerator
DISPLAY	Recommended resolution 1024 × 768
SYSTEM	Windows XP, Vista or 7 (x86 or x64)

RECOMMENDED LAPTOP

LAPTOP

PROCESSOR	Quad-core CPU, 2.4 GHz
MEMORY	2 GB of RAM
STORAGE	250 GB hard drive
PORTS	2 USB ports
GRAPHICS	Dedicated graphics card, 512 MB
DISPLAY	Recommended resolution 1280 × 1024
SYSTEM	Windows 7 (x86 or x64) or above

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PG-13 SERIES
COMPUTERIZED POLYGRAPH SYSTEM

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