

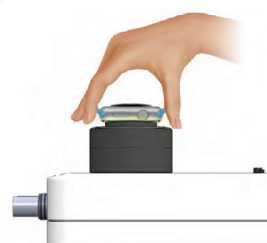


AECG100

The Innovative Simulator to Output ECG and PPG Analog Signals Simultaneously

Adjustable time difference parameters to generate various Pulse Wave Transit Time (PWTT) Signals

- AECG100 main console unit includes ECG module with built-in test circuits with auto-select switches per ECG standard required
- PPG-1R-525 module offers optical waveforms simulating PPG heart rate signals
- PPG-2TF-660, PPG-2R-880, and PPG-2R-940 modules offer red and infrared optical waveforms for SpO₂ testing
- Adjustable PWTT parameters allows user to check and improve the algorithm of blood pressure applications
- Test parameters in each test mode can be saved and integrated as a series of customized test sequences for improving the testing efficiency
- Waveform player function reproduces and repeats recorded or programmed waveforms
- AECG Assistant software pack simplifies test sequences of medical standards into adjustable parameters, selectable options, test procedures and pass criteria
- Software Development Kit (SDK) assists users in developing customized or automated test software with less efforts



AECG100 Test System



AECG100 ECG Module

PPG-1R-525 Module

- Built-in photodiode and green LED
- Photodiode detects DUT's LED brightness and behaviors
- Green LED simulates PPG heart rate signals with various parameters

PPG-2R-880 / 940 Module

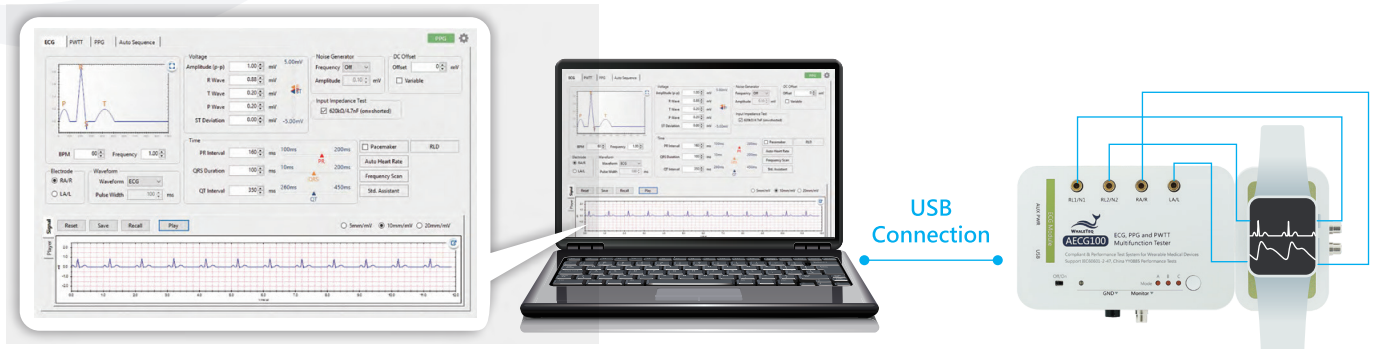
- Built-in photodiode, Red LED and IR LED
- Photodiode detects DUT's LED brightness and behaviors
- Red LED and IR LED simulates SpO₂ signals with various parameters

ECG Test Mode



Adjustable test parameters and various waveforms are designed to meet the requirements of IEC 60601-2-47, YY 0885, and YY 9706.247 medical standards

Pulse Wave Transit Time Test Mode



- Output ECG and PPG analog signals simultaneously
- Adjustable time difference between ECG and PPG waveforms

Reflectance SpO₂ Test Mode



- SpO₂ test mode is only available when connecting with R / IR PPG module
- Adjustable AC, DC and PI values in both channels
- User can import and play programmed R curve

Reflectance PPG Heart Rate Test Mode



- Adjustable PPG waveforms and parameters
- Offer basic waveforms and simulated noise signals

Auto sequence Test Mode



- Program a test of selected test items in preferred sequence and duration time
- Simply click Play button to proceed required tests

AECG100 Assistant Software

Simplify test clauses into parameters, selectable options, test procedures and pass criteria.
Simply click to conduct the required test clause with confidence.

Standard: IEC60601-2-47 (2012)
201.12.4.4.101 Linearity and dynamic range

Pass Criteria: The output signal amplitude referred to input shall not change by more than 10 % or 50 μ V, whichever is greater
RA: Measure lead II, LA: Measure lead I

Preparation: Setup ECG to 5mm/mV and 25mm/s

Test Parameter: Output Lead:
☒ RA (R) ☐ LA (L)

Amplitude:
☒ 0.5 mV ☐ 1 mV ☐ 2 mV ☐ 6 mV (analog) ☐ 10 mV (digital)

DC Offset:
☒ 0 mV ☐ +300 mV ☐ -300 mV

Run Cancel

标准: YY0985 (2013): 动态心电图系统
51.5.1 动态输入范围

通过准则: 对于叠加了 ± 300 mV直流偏压, 以125 mV/s的速率变化的, 幅度为6 mV (模拟记录仪)/ 10 mV (数字记录仪) 峰-谷值的差模电压, 模拟/数字记录仪应具备响应和显示的能力。时变输出信号的幅度等效到输入的3倍变化不应超过10%或者50 μ V取大者。

准备: 待测设备增益设置为5 mm/mV

测试参数: 输出导联电极:
☒ RA (R) ☐ LA (L)

测试信号的幅度:
☒ 6 mV (模拟记录仪) ☐ 10 mV (数字记录仪)

直流偏压:
☒ 0 mV ☐ +300 mV (等待30秒) ☐ -300 mV (等待30秒)

测试步骤: 1. 输出三角波, 10.4 Hz, 6 / 10 mV 的测试信号至待测电极, 测量对应导联的信号幅度为 v_{ref} 。

Assistant - YY9706.247 (2021): 动态心电图系统

标准: YY9706.247 (2021): 动态心电图系统
201.12.4.4.101 线性和动态范围 (模拟动态记录仪)

通过准则: 输出信号振幅, 等效输入时, 改变不应超过10%或50 μ V中较大者内。

准备: 设置ECG为5mm/mV及25mm/s

测试参数: 输出导联电极:
☒ RA (R) ☐ LA (L)

测试信号的幅度:
☒ 0.5 mV ☐ 1 mV ☐ 2 mV ☐ 6 mV

直流偏压:
☒ 0 mV ☐ +300 mV ☐ -300 mV

执行 取消

Software Development Kit

- All test parameters correspond to specific SDK commands
- DLL (Dynamic-link library) shared library supports efficient program binding and version upgrade
- Support C / C++ header and C# interface
- Easy for users to develop customized or automated testing software



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