

# Eclipse™ PRO

The Eclipse PRO is a versatile Ambulatory ECG recorder from Spacelabs Healthcare that can record 3 channels of ECG for up to 14 days using a range of patient cables, a 3 channel patch sensor, or up to 3 days of true 12-Lead ECG with a 10 lead patient cable.

Eclipse PRO is a waterproof recorder free from dirt traps, and can be cleaned with a range of disinfectants. A single USB-C port can be used to rapidly recharge the internal battery and for programming and download.



## Features

The ECG monitor has the following features:-

- 14 day, 3 channel ECG recording without recharging
- 10-Lead, true 12 channel ECG recording for up to 72 hours
- Multi channel patch option for multi day use
- Low energy BLE wireless interface for communication to Symptoms - Spacelabs Mobile App with 128 bit encrypted AES security for event management
- Provides haptic feedback
- 2.5  $\mu$ V digitization for maximum ECG fidelity (12-bit)
- Pacemaker Spike Detection
- Patient activity acquisition using an accelerometer
- Lead off detection and Time and Date Recording
- Patient event button
- Patient event with symptoms / activities can be entered via the patients smartphone using the Mobile App.
- Full color display (23 x 23 mm) for configuration and hook-up
- Lightweight and comfortable to wear
- Long life rechargeable lithium-ion battery
- Fast data download (< 60 seconds for 14 day, 3-Lead procedure)
- Hard wearing and easily cleanable

Internal Storage	16 GB
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## Physical Dimensions

Dimensions	70 x 48 x 15 mm (max)
Weight	Recorder body < 40 g (12-Lead patient cable < 85 g)

## Electrical Requirements

Battery	Rechargeable Lithium Ion battery (non replaceable)
Battery Check	Recording days available displayed on screen

## Environmental Requirements

Storage & Transport	Temperature	-20 °C to 60 °C
	Humidity	10 % - 90 % RH (non-condensing)
Operating	Temperature	0 °C to 45 °C
	Humidity	10 % - 95 % RH (non-condensing)
	Pressure	700 to 1060 hPa
	Altitude	-381 m (-1253 ft) to 3010 m (9878 ft)
Water Ingress Protection	Waterproof recorder, tested to IP67	
Shock	1 m drop	

## General

ECG Recording	<ul style="list-style-type: none"> <li>Standard 12-Lead via IEC or AHA 10 electrode cable</li> <li>3 channel Ambulatory ECG via 3 Electrode &amp; 4 Electrode cables (long, medium, or short)</li> <li>3 channel patch recording</li> </ul>
Sampling Rate	8192 samples per second
Stored Rate	128 samples per second
Dynamic Range	10 mV
Amplitude Resolution	2.5 $\mu$ V (Noise < 2 $\mu$ V RMS) 12-bit
ECG Accuracy	Meets 60601-2-47 Standard Amplitude +/- 10 % at 5Hz
Data Stored	Full disclosure ECG, with pacing and patient event markers. Recording date & time, patient name & record number, and recorder serial number.
Frequency Response	0.05 Hz to 40 Hz Ambulatory ECG bandwidth (patch, 3 or 4 electrode cables) and 0.05 Hz to 160 Hz enhanced bandwidth (12-Lead).
Pacing Pulse sensitivity	Pulse widths 0.1 ms to 2.0 ms, 2 mV to 200 mV amplitude between defined pacing electrodes
Common Mode Rejection	>= 80 dB at 20, 50, 60, 100 and 120 Hz
Input Impedance	> 10 M Ohm
Noise Suppression	Active neutral system (in 12-Lead mode)
Display	23 x 23 mm color display
Clock	Clock & Calendar, selectable 12/24 hour and US / EU / Chinese formats.
Accuracy	Better than +/- 30 seconds in 24 hours.

## Electromagnetic Compatibility

Emissions	CISPR11/FCC Part 15 Class B
Immunity	IEC 61000-4-3 Radiated RF 10 V/m 80 MHz to 2.7 GHz IEC 61000-4-2 ESD 8 kV contact, 15 kV air

## Regulatory

Regulatory	CE marked in accordance with Medical Device Directive 93/42/EEC as amended by 2007/47/EC IEC60601-1:2012, IEC60601-2-47:2012, IEC60601-1-2:2014, IEC60601-1-6:2013, IEC60601-1-11:2015	
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## Accessories

3 electrode cable long	700-0372-00	4 electrode cable short	700-0379-00
3 electrode cable medium	700-0373-00	10 electrode patient cable IEC	700-0376-00
3 electrode cable short	700-0378-00	10 electrode patient cable AHA	700-0377-00
4 electrode cable long	700-0374-00	Patch (box 10)	712-1052-00
4 electrode cable medium	700-0375-00	Belt Clip	706-0207-00
Patient Diary	000-0585-00	Patient Self-Hook-Up Guide	073-0607-00