

Welcome to Liberty16



Congratulations on your purchase of Liberty16! The Liberty16 enables real time PCR on your terms. Light and compact, the Liberty16 can operate on battery for up to three hours and deliver you mobile real time PCR performance in as little as 20 mins. Leveraging iPhone usability and connectivity, the Liberty16 connects via Bluetooth to the Liberty16 iPhone app for run set-up, real time observations and post run data analysis. App is currently only available on iOS, check the store for current version

Liberty16 System

The Liberty16 system consists of:

- Liberty16
- Power adaptor with extension cable
- Liberty16 iPhone app

Product Orientation

1. Logo LED on/off/Bluetooth connection indicator
2. On/off button
3. Charge port for power adaptor (supplied)



4. Sample tray with 8 strip PCR tubes and flat caps



5. Liberty16 iPhone app (follow on screen prompts)



Scan this QR code to go to the Apple app store

Technical Specifications

INSTRUMENT

Block Format	16 wells
Thermal system	Peltier-based system
Consumables	8 strip low profile PCR tubes and optically clear flat caps
Sample volume	10µl to 40µl
Calibrated dyes	SYBR Green, FAM
Real-Time PCR run time	As little as 20mins
Thermocycling temperature range	95°C Maximum/0°C Minimum
Mobile and connectivity	Secure bluetooth connectivity technology To enable bluetooth pairing, use the last six digits of the serial number as the pin code

PHYSICAL

Weight	2.5kg (excluding power supply)
Outside dimensions	Length closed: 21.2 cm Width: 11 cm Height: 11.5 cm

BATTERY

Type	Internal - rechargeable lithium ion
Input voltage	12.6V
Input current	7A
Battery capacity	98Whr
Battery life on single charge	2 - 3hrs
Battery recharge time	90mins

ENVIRONMENTAL

Electrical	100 - 240V, 50/60Hz
Temperature range	5°C - 40°C
Humidity range	20% - 85% relative humidity

Scan this QR code to download the quick guide



PRODUCT CARE

The Liberty16 has been designed for mobility with a unique solid state construction and rugged aluminum housing. With the exception of the manual sliding mechanism to add and remove the consumable, moving parts have been eliminated in order to minimize sensitive parts. Nonetheless care should be taken whenever moving the device. As a rule of thumb, you should treat the Liberty16 the same way you would treat an iPhone or normal laptop without protective casing. For additional protection when moving the device, users may want to consider the use of a hard shell protective case with appropriate foam inserts.

Cleaning and Maintenance

Clean the block and housing as needed, following these directions.

CAUTION

If hazardous or biohazardous material is spilled onto or into the equipment, clean it immediately.

1. Turn the system off and allow the block to cool completely.
2. Using a lint-free cloth slightly dampened with clean water, gently wipe the surfaces of the equipment. If a stronger cleaning agent is needed, use a lint-free cloth slightly dampened with 95% isopropyl alcohol.

Follow these practices for proper maintenance of your Liberty16 system.

- Every time you use the system, visually check it to confirm there is no obvious physical damage such as dents and frayed cords. If you see any damage, discontinue use and contact Ubiquitome.
- Once a year, run a known test sample to confirm accurate analysis.

Battery

Don't attempt to replace the Liberty16 battery yourself – you may damage the battery which could cause overheating, fire and injury. The lithium ion battery in your Liberty16 should be serviced by Ubiquitome or a Ubiquitome authorized service provider, and it must be recycled or disposed of separately from household waste. Dispose of batteries according to your local environmental laws and regulations.

To preserve battery life, if power is available, we recommend to use the device while plugged in.

If you need to use the Liberty16 on battery power alone, the battery should first be fully charged. Check the indicator light on the provided charger, if the light is **GREEN**, it is fully charged. If the light is **RED**, it is not fully charged. Only use the original charger provided by Ubiquitome to charge your Liberty16.

Product Warranty

The Liberty16 comes with a 12 month warranty which covers parts and labor where a manufacturing defect has been deemed to be the cause.

SYMBOLS AND DECLARATIONS OF CONFORMITY



CAUTION: Hot Surface



The instrument meets the requirements laid down in Council Directive 89/336/EEC relating to "Electromagnetic Compatibility" and Council Directive 73/23/EEC relating to "Low Voltage Equipment". The following standards were applied: IEC/EN 61326 (EMC) and IEC/EN 61010-1 (Safety).

UL 61010-1 Electrical Equipment for Measurement, Control and Laboratory Use; Part 1: General Requirements

CAN/CSA-C22.2 No. 61010-1 (Second Edition) Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use;

Part 1: General Requirements



Contains • FCC ID 2SBPY-0D06E Model No: AMS002

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause un-desired operation



This symbol means that, according to local laws and regulations, your Liberty16 must be disposed of separately from household waste. When they reach the end of their life, take them to a collection point designated by your local authority for safe disposal or recycling. The separate collection and recycling of your product will help conserve natural resources, protect human health and help the environment

⚠ WARNING

Read all instructions and warnings prior to using this product. Failure to read and follow these safety instructions could result in fire, explosion, electrical shock or other hazards, causing serious and/or fatal injury and/or property damage.

1. Do not modify, disassemble, open, drop, crush, puncture or shred the product.
2. Do not expose the product to rain, water or dust.
3. Keep away from open flames or sunlight to prevent heat build up. Keep away from high voltage devices.
4. Only ever use the Liberty16 device on a flat surface. The Liberty16 device should be positioned to allow unencumbered access to the sample tray for the consumables at the front of the device and for the power cable to be connected/disconnected to/from the back of the device, as well as to be able to readily switch the device on and off.
5. Care should always be taken whenever opening or closing the Liberty16 device and when adding or removing consumables. Excessive force should be avoided. Appropriate personal protective equipment such as gloves and safety glasses are recommended when using the Liberty16 device.
6. While it is fitted with a magnetic catch and interlock which disables any protocol running while the device open, the heating and cooling element beneath the samples should never be touched with an unprotected hand as it may be hot. Consumables should be allowed to cool to ambient temperature after use and before appropriate disposal.
7. Do not operate if there is condensation on any visible part of the unit. Remove condensation by moving the unit to a warm, dry environment for one (1) hour.
8. For the benefit of the community the Liberty16 device is maintained as an open system. For assay reliability and protection against contamination, users should ensure that reaction tubes are completely sealed with appropriate caps or film. Failure to ensure a tight seal can result in evaporation of reagents leading to assay failure or external contamination. Contamination of the device may impair the optical performance and necessitate return of the device for servicing at the customer's expense.
9. Ensure that all persons who use the product read and follow these warnings and instructions.