

# MCB 1200

Biomagnetic Processing

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## Operator Manual



Sigris Research, Inc.

# MCB 1200 Operator Manual

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# 1. FOREWORD

## 1.1 Intended Use of the Instrument

The MCB 1200 is a table top instrument for the purification of nucleic acids from a broad variety of sample materials such as blood, serum, plasma, or cells using affinity magnetic particles available from many suppliers. The isolated nucleic acids is of high-quality and suitable for many down stream application including PCR and RT-PCR reactions in suitable amplification systems.

MCB 1200 is intended for general laboratory use for the purification of nucleic acid by qualified and trained laboratory professionals. The Instrument may not be used to analyze infectious materials unless additional safety measures to ensure safe sample handling are taken beforehand. The instrument is intended for worldwide use.

## 1.2 Contact Address:

**Manufactured by:** Sigris Research, Inc.  
 2841-A Saturn Street  
 Brea, California 92821, U.S.A.  
 Tel: + 1 714-672-0554; Fax: +1 714-528-6207



Dexter Magnetic Technologies Europe, Ltd.  
 Tavistock Industrial Estate, Unit 12  
 Ruscombe Park, Twyford, Berkshire, UK RG10 9NJ  
 Tel: +44 (0) 1189 602430, Fax: +44 (0) 1189 602431

## 1.3 Revision History

Rev Level	Rev Date	Instrument Version	Change Description
A	June 2002	Initial Version	First Market release
B	April 2003	Initial Version	Change in Contact Address
C	September 2008	Rev. A	New Keypad with additional "Set Time" function

## 2. COMPLIANCE

The MCB 1200 Rev. A had been tested for EMC and Safety requirements according to following Directives:

### 2.1 EMC


- IEC 61326-1 (Ed. 1.0; 2005-12-15) Electrical equipment for measurement, control and laboratory use - EMC requirements Part 1: General Requirements.
- IEC 61326-2-6 (Ed. 1.0; 2005-12-15) Electrical equipment for measurement, control and laboratory use - EMC requirements, Part 2-6: Particular requirement – In vitro Diagnostic (IVD) medical equipment.

### 2.2 Safety

- IEC 61010-1 (Ed. 2; 2001-02-13) Safety requirements for electrical equipment for measurement, control and laboratory use; Part 1: General requirements
- IEC 61010-2-101 (Ed. 1.0 2002-01-09) Safety requirements for electrical equipment for measurement, control and laboratory use; Part 2-101: Particular requirement – In vitro Diagnostic (IVD) medical equipment.

### 2.3 European Union

The MCB 1200 Rev. A conforms to following directives as issued by the European Union according to the Council Directive 98/79/EC, 89/336/EEC (Electromagnetic Compatibility) and 73/23/EEC (Electrical equipment for use within certain voltage limits).

Directive	Title	Symbol
98/79/EC	In Vitro Diagnostic Medical Devices	
89/336/EEC	Electromagnetic Compatibility	
73/23/EEC	Electrical equipment for use within certain voltage limits	

### 3. INTRODUCTION

This operator manual is intended as a reference and instruction manual for the user of the MCB 1200 instrument (shown below).

The manual is designed to familiarize you with the MCB 1200 instrument, its functions, specifications, operation, and routine care. It is recommended that you read this entire manual, especially all safety-related information, before operating the instrument to become familiar with the features and how they work. Keep this Operator Manual for the life of the MCB 1200 instrument. Pass it to any subsequent user of the instrument.











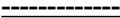
Make sure that any revision or amendment of this Operator Manual is made available to the user of MCB 1200.



**MCB 1200**

## 4. SYSTEMS DESCRIPTION

### 4.1 Symbols used in this Manual and on the instrument

<b><u>Symbol</u></b>	<b><u>Description</u></b>
	Consult instructions for use
	Caution
	Manufacturer
	This instrument complies with: European Directive 98/79/EC of 27 October 1998 on in vitro diagnostic medical devices and its relevant transposition into national laws of the member states.
	In Vitro diagnostic devices
	Instrument Serial Number
	Device Code
	<b>Biohazard:</b> Precautions must be taken when working with potentially infectious material.
	<b>Warning:</b> Strong magnetic field
	<b>Warning:</b> Magnetic field present. Can be harmful to pacemakers and other sensitive equipment.
	<b>Direct current:</b> Equipment is suitable for direct current only

## 4.2 Operation Summary

The MCB 1200 can be used to simultaneously process up to 12 separate samples in 1.5 ml microcentrifuge tubes. Total test volumes of 50 µl to 1000 µl may be used. Collection of magnetic particles can be selected by placing the magnetic rack in upward position in back of the tube holders. Mixing speed can be selected from four different speeds for continuous or discontinuous mixing. These features allow the instrument to wash magnetic particles. MCB 1200 is simple to operate and offers users various modes of magnetic mixing to optimize their protocol. It may be safely used inside cold rooms or sterile hoods.

## 4.3 Specifications

### 4.3.1 Instrument

The Instrument housing is molded from durable ABS plastic and the keypad controls and display are covered by a protective overlay of polyester. Both are resistant to ordinary reagent solutions, 30 % ethanol and mild disinfectants.

- Weight (uncrated) 3.6 kg (8 lbs)
- Dimensions
  - Length 43.8 cm (17.25")
  - Width 11.4 cm (4.5")
  - Height 15.3 cm (6")
- Working Volumes
  - Minimum 50 µl
  - Maximum 1000 µl
- Operating Temperature 4 to 45 °C
- Power Requirement  
24 volts DC desktop switching power supply:
  - Europe 240 Volts AC 50/60Hz
  - USA and Canada 110 Volts AC 60Hz

### 4.3.2 Magnet Rack Assembly

The magnet rack assembly contains twelve high-energy (> 47 MGOe) rare earth magnets which can be tilted backwards to remove the magnetic field from the sample tubes to allow post isolation sample processing without removing the tubes from the instrument

### 4.3.3 Detachable Tube Holders

The detachable tube holders are made of clear polycarbonate, resistant to Chemicals and disinfectants, and suitable for standard conical bottom 1.5 ml microcentrifuge tubes.

### 4.3.4 Motion Control

The front keypad provides various motion profiles which can be selected by the user by pressing the CONT or STEP buttons for an elapsed time or for a fixed time. Lit red LEDs indicate the selected motion profile. LCD panel on the keypad displays the mixing time information. The lit red LEDs indicate the selected motion profile.



## 5. WARNINGS AND PRECAUTION

The laboratory manager and/or the safety officer are responsible for ensuring that a safe working environment is maintained while operating MCB 1200. The laboratory manager and/or the safety officer shall ensure that adequate training is provided to the designated operator(s) in the safe use of instruments and its maintenance. All safety instructions should be read and understood before installation, operation and maintenance of MCB 1200. Observance of safety precaution will also avoid actions that could adversely affect the performance of MCB 1200.

### 5.1 Electrical Safety

To reduce the risk of electrical shock, the 24 volts DC desktop power supply uses a three-wire electrical cord and plug to connect the unit to earth-ground. To preserve this safety feature:

- Make sure that the matching wall outlet receptacle is properly wired and earth-grounded. Check that the line voltage agrees with the voltage indicated in this manual;
- Never use a three-to-two wire plug adapter.
- Never use a two-wire extension cord or a two-wire non-grounding type of multiple-outlet receptacle strip.
- Never use MCB 1200 when not correctly earthed.
- Do not spill liquids on instrument as they could damage electrical components or electronic circuit boards.

### 5.2 Fire Safety

MCB 1200 is not designed for use with materials capable of developing flammable or explosive vapors.

### 5.3 Magnet Safety

The magnetic rack contains high-energy magnets, which generate strong magnetic fields. Keep all loose ferrous material away from the magnetic rack. Do not bring wrist watches and electronic media near the magnet rack. Credit cards, tapes and disks can be erased from contact with magnetic rack. Magnetic materials need to be kept away from sensitive electronic devices such as computers and CRT monitors. Air shipments need to be in accordance with IATA and DOT regulations.



Persons with cardiac pacemaker implants should avoid getting near the magnet rack.



#### 5.4 Chemical and Biological Safety

Normal operation may involve the use of solutions and test samples that are pathogenic, toxic, or radioactive. Such materials should not be used on this instrument unless all safety precautions are taken. Handle body fluids with care because they can transmit disease. Handle other infectious samples according to good laboratory procedures and methods to prevent spread of disease.

Cleaning solutions containing bleach should not be used to clean spillage of chaotropic solutions such as guanidine thiocyanate to prevent harmful chemical reactions occurring.

*Note: MCB 1200 is intended for professional use only. Laboratory personnel should be qualified and adhere to Good Laboratory Practice. All biological fluids should be considered as potentially infectious. Suitable protective equipment is required when handling chemical or biological substances.*

## 6. INSTALLATION

### 6.1 Shipment Inspection

The MCB 1200 Instrument is shipped in shaped polyether foam packing inside a cardboard box. Before opening it, inspect the container carefully for damage. Report any damage to the shipping company before accepting the unit.

The shipping box contains the following components:

- ❖ 1 MCB 1200 Instrument
- ❖ 12 Polycarbonate Tube Holders (installed on MCB 1200)
- ❖ 1 Switching Desktop Power Supply with coaxial connector for 24 VDC output
- ❖ 1 US power cable
- ❖ 1 European power cable (Export Models only)
- ❖ 1 Operator Manual

The MCB 1200 was carefully inspected and tested prior to shipping. Ensure that instrument and accessories have arrived in good condition. Please read the detailed WARRANTY at the end of this manual.

If you find signs of physical damage, DO NOT ATTEMPT TO INSTALL OR OPERATE the instrument until the delivering carrier has been notified. Claims for any damage must be made against the delivering carrier, and also notify your dealer for assistance or questions.

Carefully remove the unit and accessories from the shipping container. Save the container and packing material for possible future relocation or storage.

### 6.2 Additional Items (not provided):

In addition you will need:

- Disposable 1.5 ml conical bottom tubes with either flip tops or with screw caps.
- Pipettes and pipette tips with aerosol filters.

- Magnetic particles reagent kits from a reputable supplier. For in-vitro diagnostics use, Sigris Research recommends using bioMérieux NucliSens™ diagnostic kits for best results.

### 6.3 Initial Setup

Place instrument on a flat and stable surface with sufficient ventilation. The Tube Holders are detachable but the instrument is shipped with the tube holders installed. Make sure the tube holders are securely attached and not loose. If they are loose, secure the tube holders to the shafts with a gentle twisting movement. Do not use excessive force.

Place the Power Supply at a safe distance away from liquids. Use correct power cord and make sure the matching AC outlet is properly wired and grounded.

- First insert the output connector (24volts DC) to the power jack at the back of MCB 1200.
  - Attach the power cord to the power supply;
  - Insert the main plug to the AC outlet.

The front keypad will light up with the lit LCD and the red LEDs lit at the “STOP” and the STEP 0.5 second buttons. If you suspect any malfunction, disconnect the power and contact your dealer.

## 7. OPERATING PROCEDURE

We recommend that you familiarize yourself with the MCB 1200 instrument and operational controls by referring to Figures 1 and 2.



**FIGURE 1. MCB 1200**

1 Keypad; 2 Mounting Shafts; 3 Tube Holders; 4 Screw cap 1.5 ml microcentrifuge tubes; 5 Flip cap 1.5 ml microcentrifuge tubes.



**FIGURE 2. Keypad Controls**

1 Time Display; 2 MIN Button (to set time); 3 LEDs select RPM speed; 4 CONT Button select; 5 STOP Button; 6 START Button; 7 STEP Button select; 8 LEDs select delay times; 9 SEC Button (to set time).

## 7.1 Functions

### 7.1.1 Magnet Rack Assembly

Place magnet rack assembly in upright position against the tube holders. The magnetic field is now focused on the tube holders. By tilting the magnet rack assembly backward, the acting magnetic field is removed from on the tube holders.

### 7.1.2 Keypad

Refer to Figure 2, The keypad is mounted at an angle on the front of the instrument for easy visibility and access. Pressing the keypad push buttons accesses motion controls. A lit LED light at top indicates its active status.

The keypad buttons provide the following control functions:

- Pressing the **START** will initiate the rotation of the tube holders and magnetic particles will mix.
- Pressing the **STOP** will stop the rotation by cutting off the current supply to the motor, stop mixing and also stop the timer.
- In the **STOP** status, the instrument is in stand-by mode and is left connected to the main power supply. As the motor is not energized in the **STOP** status, the user may leave the MCB 1200 plugged on for days without harm. The LCD display and LEDs consume very little energy and the instrument is essentially turned-off.

Two buttons each with a column of LED above it provide either the **CONT** (continuous) or **STEP** (180°) the modes of rotation (mixing).

- Select a mixing mode by pressing the either **CONT** or **STEP** buttons.
- **CONT** Button: if continuous rotation is selected then select a desired speed of rotation by repeatedly pressing “**CONT**” button till the desired speed LED is lit. LEDs at C1 to C4 represent 100 rpm to 250 rpm in 50 rpm increments.
- **STEP** Button: If a step rotation (180°) is selected then select a desired delay time between successive 180° rotations by repeatedly pressing

- “**STEP**” button till the desired delay time LED is lit. LEDs at 0.5 to 2.0 represent the delay time in seconds.

### 7.1.3 Timer Modes

LCD displays the duration of mixing time and the user may select either an elapsed time or fixed time mode. In either case pressing the “**START**” or “**STOP**” button will simultaneously start or stop the mixing and time displayed on the LCD panel.

- **Elapsed Time:** This is the default mode of MCB 1200 but the timer can be reset to elapsed mode by pressing the **STOP** button twice. Zero on the LCD panel indicates that it is in Elapsed time mode. The counter will start when the “**START**” button is pressed and the timer will increment up to 99:59, at which time it will reset to zero and continue automatically till the **STOP** button is pressed. The display indicates the time duration of the last operation up to only 99.59 minutes. Pressing the **START** button after pressing the **STOP** button the will reset the counter to “**Zero**” and the previous value will be lost.
- **Set Time:** The operator may set a desired time up to 99 minutes for mixing using the “**MIN**” and “**SEC**” buttons. The instrument will operate for the time set by the operator. The counter will count down to time value set by the operator and then automatically reset to the duration set by the operator. Experiment by pressing these buttons to familiarize yourself of their functions. The LCD display on the keypad indicates the duration of the last operation.

### 7.1.4 Test Run

Operate the instrument by pressing the **START** push button. The LED will come on and the power will be applied to the motor to rotate the Tube Holder in the selected mode. At the same time the Elapsed Time Display will reset to zero and begin to increment at the rate of one count per second and count will continue until the **STOP** push button is pressed. Test run for a few times at the Elapsed Time and Set Time settings to thoroughly familiarize yourself with the operation and controls of MCB 1200.

Note: Changing from the **STEP** to **CONT** modes including the step delay time or the rotation speed (RPM) can be made on the fly while the motor is in operation.

## 8. NUCLEIC ACID EXTRACTION PROCEDURE

Consult the test kit manual provided by the manufacturer for any additional information concerning the recommended test kit protocol.

### 8.1 Start up

With the instrument in **STOP** position, insert up to twelve 1.2 ml microcentrifuge tubes into the tube holders on the MCB 1200 platform. Pipette in each microcentrifuge tube:

- A desired volume of sample followed by.
- A desired volume of chaotropic solution such as guanidium thiocyanate and mix by pipetting up and down.
- A desired volume of a magnetic bead suspension to each of the microcentrifuge tubes.
- Place the magnetic rack assembly in upright position against the tube holders. Allow the particles to be separated on the wall.
- Select a desired mixing mode by pressing “**STEP**” or “**CONT**” buttons. Then repeatedly press the selected button till the desired LED is lit for either speed (C1 – C4) delay time (0.5 – 2.0). Usually a **STEP** mode will be selected;
- Select either a Fixed time or Elapsed time mode.
- To select Fixed time duration, press the **MIN** and **SEC** buttons on the key pad and the set time will be displayed on the LCD display. Press **START** button and the timer will count down till it comes to the end of set time. At reaching the set time, the rotation will stop and the timer will reset to the set time value.
- To select Elapsed time mode press **Stop** button again if previously the timer was in Fixed time mode, (Elapsed time mode is the default setting). Pressing the **START** button will automatically set the timer to zero and the timer will continue counting up till the stop button is pressed. The LCD will display the total elapsed time.

## 8.2 Mixing

Pressing the **START** button starts the mixing of the magnetic particles in the test solution and simultaneously the **TIMER** also starts. Depending on the bead size and magnetic susceptibility, the setting for **STEP** or **CONT**, speed or delay time should be adjusted to lower or higher values to obtain optimal mixing. Continue mixing the particles for a desired period of mixing required to bind the target species to particles. (The efficiency of magnetic mixing should allow a significant reduction of the required incubation time).

## 8.3 Separation

Press the **STOP** button to arrest the rotation of the sample tubes and start the bead separation process. Allow one minute or less for the suspended particles to move to the side of the tubes. Test solution in the microcentrifuge should appear clear. The aggregated mass contains particle with bound target species. Carefully pipette out and discard the supernatant.

**Note:** Magnetic particles smaller than 1 $\mu$ m or of low magnetic susceptibility may take a longer time to separate.

## 8.4 Washing

Add a desired volume of wash buffer to the sample tubes and mix and separate as described above. Repeat this washing 2-3 times or as desired. Make sure to remove the supernatant completely between washing steps without aspirating the magnetic particles. The particle-target complex in the aggregated mass is now ready for elution.

## 8.5 Elution

With the instrument in **STOP** position, carefully tilt the magnet assembly rack backward to remove magnetic field from the sample tubes and add a desired volume of the elution buffer to the microcentrifuge tubes. Homogenize the aggregated mass by repeated pipetting. Place the tubes in a heating block at 65-70° to completely elute the nucleic acid. Tilt the magnet assembly rack in the upright position and transfer back the microcentrifuge tubes in to the Tube holders. Press the **START** button and mix briefly. Press the **STOP** button and allow the particles to separate leaving the purified nucleic acid.

## 8.6 Nucleic Acid Transfer

Aspirate and transfer the eluted nucleic acid from the microcentrifuge tubes into clean PCR tube or microtitre plate. The purified nucleic acid is now ready for downstream applications such as PCR.

## 9. MAINTENANCE

Disconnect the instrument from the main power supply when cleaning the instrument. Reconnect the instrument to the main power supply only when the instrument is dry.

### 9.1 Routine Cleaning

Use 5 % Extran<sup>®</sup> (MERCK KGAA) or other mild soap solution and a damp cloth to clean the unit. Other cleaners may contain chemicals, which could seriously damage the plastic. Do not allow liquid to get inside the instrument. Clean the instrument at least once every week, preferably at the end of each working day.

### 9.2 Chemical Hazard

First remove the tube holders and clean them if necessary. The instrument is then cleaned by first absorbing the spilled reagent with an absorbent material. The instrument is then cleaned with a lint free cloth moistened with deionized water. Wipe clean the instrument with a lint free cloth moistened with a 70% ethanol solution. All cleaning material used in cleaning the instrument must be disposed in a container marked Hazardous Material. Cleaning solutions containing bleach should not be used to clean spillage of chaotropic solutions containing guanidine thiocyanate to prevent harmful chemical reactions from occurring.

### 9.3 Biohazards

As with all potentially biohazardous specimens, use universal safety precautions when handling and processing samples. If a sample or other biohazardous materials is spilled on the instrument it is imperative that you follow the procedure below. It is recommended that this procedure is also performed before relocating the instrument from one laboratory to another. Use disposable gloves.

- Switch off the instrument and disconnect the power supply cables from the power source.
- In case of a spill, absorb the spill with disposable towels prior to cleaning and disinfection.
- Detach the tube holders;
- Clean the tube holders and the surface with a disposable damp towel using 5 % Extran or other soap solution and subsequently rinse with a damp towel using water.
- Disinfect the surface with disposable damp towels using 0.1 % sodium hypochlorite solution.
- Ensure that the tube holders are dry before placing them on the instrument.
- Always use disposable gloves and protective clothing and operate in a well ventilated place when performing this procedure. Dispose of gloves and towels according to local regulations.

#### 9.4 Waste Disposal:

Dispose all liquid waste according to the MSDS (Material Data Safety Sheet) and local regulations. The waste bottles must to be cleaned each time it is emptied, to avoid contamination.

*Note: Commercial liquid household bleach typically contains sodium hypochlorite at a concentration of 5.25%. A 1:10 dilution of household bleach will produce a 0.5% sodium hypochlorite solution.*

## 10. DISPOSAL

To decommission MCB 1200, the instrument can be sent back to your local Sigris representative. Take care that the instrument is disinfected/decontaminated before transport. As the MCB 1200 contains strong magnets, it is advised to use the original container and packaging material (see also Magnet Safety).

It is the responsibility of laboratory manager and/or the safety officer to ensure that the instrument and accessories are properly decontaminated before requesting service and that the Air Shipments are in compliance with IATA and OT regulations is being shipped by commercial courier such as DHL, UPS or FedEx.

<b>Europe</b>	<b>North America (USA &amp; Canada)</b>
Dexter Magnetic Technologies Europe, Ltd. Tavistock Industrial Estate, Unit 12 Ruscombe Park, Twyford, Berkshire, UK RG10 9NJ	Sigris Research, Inc. 2841-A Saturn Street Brea, California 92821, U.S.A.
Tel: +44 (0) 1189 602430	Tel: 714-672-0554
Fax: +44 (0) 1189 602431	Fax: 714-528-6207

## 11. TECHNICAL SERVICE

Should MCB 1200 require service attention or if replacement parts are required, please contact Sigris Research, Inc. Please check our website, [www.sigris.com](http://www.sigris.com), for up-to-date information regarding the address of Sigris Research, Inc; or its distributor nearest you. For further information or questions on product performance or application, please contact SIGRIS RESEARCH, INC.

### 11.1 Replacement Policy

- Carefully read the detailed Warranty/ Liability section.
- The product has been carefully tested and packed. Each new instrument is warranted against defects in materials and workmanship for one year from the date of delivery.
- Warranty will be voided, if the instrument is altered or tampered by unauthorized personnel nor shall it apply to any products that have been subjected to misuse or mishandling.
- Before returning the MCB 1200 or its accessory for any reason, prior permission (a Returned Goods Authorization form) must be obtained from Sigris Research. Except public holidays, Sigris Research is open Monday to Friday during 8:00 am to 5:00 pm PST.

**Phone:** (714) 672-0554

**Fax:** 714) 528-6207

**Website:** [http:// www.sigris.com](http://www.sigris.com)

### 11.2 Spare Parts and Ordering Information

Sigris/Bio Merieux Article Number	Part Description
45685071	Set of 12 Tube Holder
45685072	Keypad Assembly
45685073	Motor
45685074	Motor Controller

## Standard Warranty and Return Policy

SIGRIS WARRANTS TO THE FIRST PURCHASER ONLY THAT THE GOODS SOLD WILL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ORIGINAL SALE, AND THIS WARRANTY WILL BE LIMITED TO THE REPAIR AND REPLACEMENT OF PARTS AND THE NECESSARY LABOR AND SERVICES REQUIRED TO REPAIR THE GOODS. IT IS EXPRESSLY AGREED AND UNDERSTOOD BY THE PURCHASER AND USER OF THE GOODS THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS FOR A PARTICULAR USE AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY, WHICH WARRANTIES ARE EXPRESSLY DISCLAIMED. IN NO EVENT WILL SIGRIS BE LIABLE TO ANY PERSON FOR ANY LOSS, DAMAGE, INCLUDING INCIDENTAL, EXEMPLARY, CONSEQUENTIAL AND/OR SPECIAL DAMAGES, LOST PROFITS, EXPENSE, INJURY, COST OR ATTORNEYS FEE ARISING FROM OR RELATING TO ITS GOODS AND PRODUCTS, EVEN IF SIGRIS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED ARE PROVIDED BY SIGRIS. SIGRIS LIABILITY SHALL NOT EXCEED THE PURCHASE PRICE OF THE PRODUCT. SIGRIS SHALL HAVE NO LIABILITY FOR DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM THE USE, RESULTS OF USE, OR INABILITY TO USE ITS PRODUCTS.

If the customer desires to send SIGRIS a Product for repair or replacement under the warranty, please contact Sigris Research customer service for a Return Goods Authorization number. All returns must include an RGA number, original packaging and a written statement concerning the nature of the problem the customer has encountered with the Product. All returns must be shipped pre-paid and fully insured for loss or damage during transit to Sigris Research. Once your Product is received, Sigris Research will perform an evaluation of the returned Product. If the nature of the problem is determined (SIGRIS' sole discretion), to be a matter covered under warranty, SIGRIS will repair or replace the Product as it deems appropriate and will return the product to customer at its expense. Otherwise, SIGRIS will contact customer and advise customer of the cost of repair or replacement to customer.



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