Instruments

multipointelite™

USER AND MAINTENANCE MANUAL

By MAST Group Ltd.

V0.1-01/11/03

Contents

1.0 Introduction

Multipoint technology is a well recognised method for microbial identification and susceptibility testing of bacteria. The procedure is dependent on the accurate transfer of bacterial suspensions from sample wells to the surface of culture media plates. It is imperative that the volume of suspension dispensed and the position of the inoculation is precise and reproducible.

The **multipoint**elite™ (Figure 1) is designed to transfer 0.3 or 1.0 µl of suspension and inoculate in the same position every time to the nearest 0.15mm. The **multipoint**elite™ can be operated using the control panel on either single or continuous mode. Alternatively a foot-operated switch is supplied.

This manual will guide the operator on how to unpack, use and clean/maintain the **multipoint**elite™ routinely.

Figure 1 **multipoint**elite™

2.0 Preparing the multipointelite™ for Use

2.1 Unpacking the multipointelite™

Unpack the **multipoint**elite™ and all parts from the box to verify contents and examine to ensure there is no damage to the physical appearance of the exterior including the transparent lid. Remove the Transit Bolt, located on the bottom of the instrument using an allen key.. This must be done before any power is supplied to the instrument (Figure 2). See page 17, "Contacting MAST" if any items are missing or damaged. Retain the original packaging.

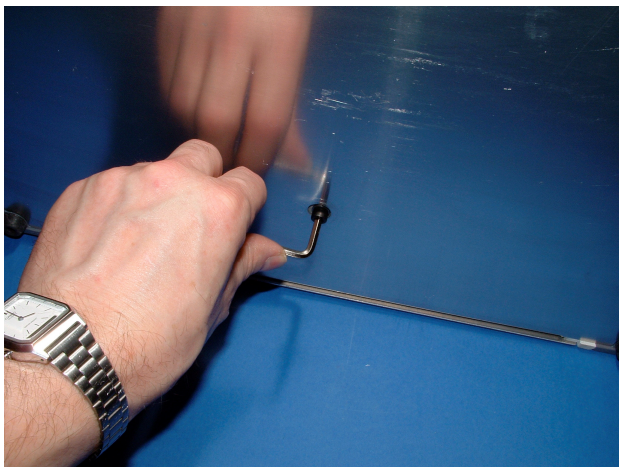

Figure 2 Removing The Transit Bolt

2.2 Components Checklist

1 x Inoculator fitted with Transparent protective lid and Transit Bolt
1 x Reversible Specimen Platen (90mm Petri dishes/96 microwell plates)
1 x 47-63Hz, 100-240V universal external power supply.
1 x Footswitch
1 x Decontamination Certificate
1 x Head Retainer Screw

2.3 Siting the **multipoint**elite™

The **multipoint**elite™ should be located on a firm and level laboratory bench within 2m of a power supply and with adequate space left and right to accommodate ready to use and inoculated plates. Make sure there is sufficient room above the instrument to allow the cover to be lifted.

Figure 3 Back of the Inoculator

2.4 Assembling the **multipoint**elite™

Select which side of the Reversible Specimen Platen (Figure 4) is to be used and fix into position on the **multipoint**elite™.

Important Note: Always remove the Reversible Specimen Platen before moving the **multipoint**elite™. The Reversible Specimen Platen should be removed by lifting vertically using both hand-holds. Never lift it from one side only.

Figure 4 Positioning The Reversible Platen

If the Foot Operated Switch (figure 6) is to be used then connect to the back of the **multipoint**elite™. The connection is a push fit.

Figure 6 Foot Operated Switch

Choose the correct Inoculation Head (accessory provided separately) and attach to the Head Carrier and fix in place using the Retaining Screw, Figure 7

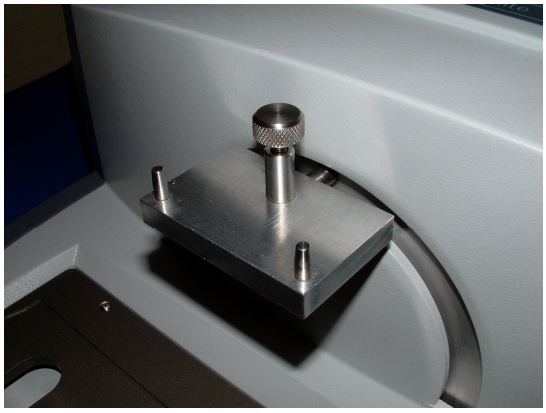

Figure 7 The Head Carrier

3.0 Operating the multipointelite™

3.1 Button/Display Panel

The **multipoint**elite™ is operated using the Button/Display Panel on the front of the machine, Figure 8.

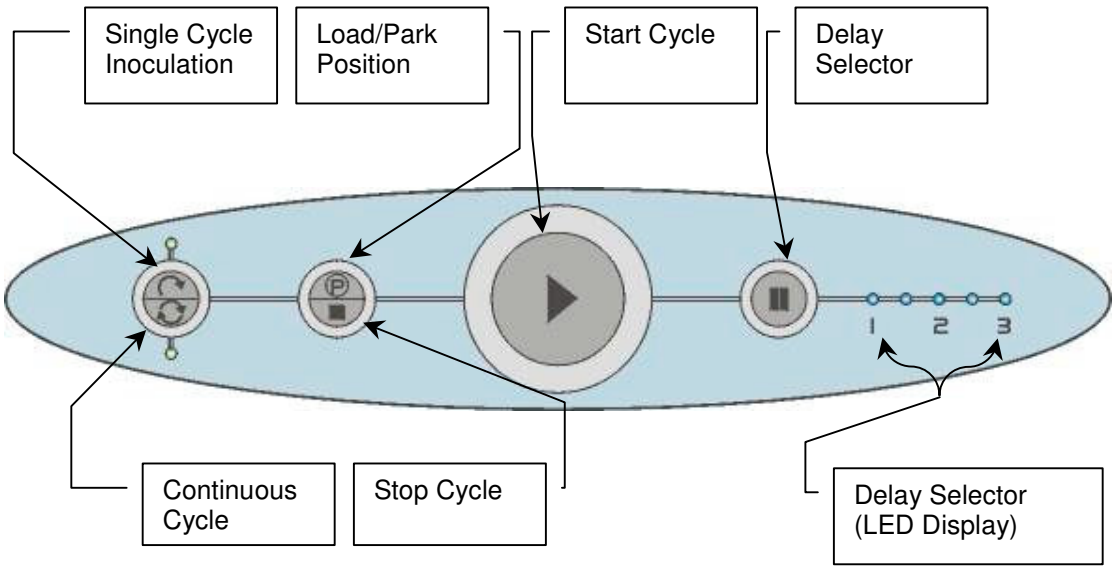

Figure 8 Button/Display

The display panel is a single continuous membrane array that can be easily decontaminated using a none-corrosive antimicrobial fluid. The functions on the panel are activated by a single gentle press with a fingertip on the buttons.

Attach the external power supply to the **multipoint**elite™ at the rear of the instrument (Figure 3) and turn the machine on. This will activate the instrument and guide the Head Carrier into the load position (vertical). The LED will illuminate indicating that the instrument is set to single cycle operation.

Important Notes: Do not switch off the **multipoint**elite™ while the Head Carrier is moving. Always press the STOP Button and allow it to come to rest then turn it off using either the rear panel rocker switch or the mains supply to the external power supply.
Never operate the multipointelite™ without an inoculator head in place.

3.2 Routine Operation

Place the specimen pot or microwell plate with all the bacterial suspensions on the platen whilst the Head Carrier is in the Park position.

Put the first plate to be inoculated on the other side of the platen in the inoculation position (Figure 9). Microwell plates locate into the cut channels on one side of the specimen platen on the other cams can be adjusted to allow secure placement of 9cm Petri dishes and the inoculum pot.

Figure 9 Loading Plates

Press ▶ on the control panel or depress the footswitch to inoculate a single plate.

Remove the inoculated plate and repeat for each of the plates to be inoculated.

3.3 Automatic Operation

The **multipoint**elite™ can be set to automatic by pressing the button that represents ↻ This will turn off the light representing ↷ and turn on the light representing ↻The delay indicator LED strip will also illuminate at position "2".

Load the first plate and press ▶ this will then automatically inoculate plates with a delay in between plates of 2 seconds.

The delay time can be altered while the **multipoint**elite™ is in automatic mode and is stationary. The delay can be set between 1 and 3 seconds in 0.5 second increments using the ⏸ button to increase the delay. The LED corresponding to the delay time is illuminated. Pressing the button when the delay is 3 seconds resets the delay to zero and extinguishes the LED's. Pressing the button again sets the delay to 1 second and illuminates the "1" LED.

Pressing the STOP Button, ■ , stops the unit after the current inoculation cycle is completed.

3.4 Changing Or Removing Inoculating Heads

When all the plates within a plate run have been inoculated the Head can be removed or changed by pressing Ⓟ The Inoculum Head will move into the Park position allowing access to remove the Head.

Unscrew the Head Retaining screw and take off the Head.

If another set of plates is to be inoculated then secure next Head in place with the Head Retaining Screw.

Replace the inoculum pot or microwell plate with the next set of specimens.

Load the first plate to be inoculated

Press ▶ to begin the next cycle.

3.5 Turning Off the multipointelite™

The **multipoint**elite™ should be turned off when not in use.
At the end of inoculating operations stop the inoculator with the "Stop". Park the inoculum head and remove. Remove any inoculum container or specimen plates, switch off the machine using the rocker switch on the rear panel, replace the Head Retaining bolt and lower the protective lid.

3.6 Waste Disposal

Observe approved biohazard precautions and aseptic techniques while handling live cultures. Sterilise all biohazard waste before disposal according to local regulations and laboratory policy.

4.0 General Maintenance

It is recommended that the instrument is decontaminated periodically to avoid cross contamination and keep the **multipoint**elite™ clean. A non-chlorine based disinfectant is recommended.

Before cleaning the **multipoint**elite™ must be switched off and the mains plug disconnected.

All surfaces of the **multipoint**elite™ should be wiped with a soft cloth soaked in the relevant disinfectant. Abrasive materials such as scouring pads should not be used and the **multipoint**elite must be protected from aggressive chemicals.

All accessories from the SCAN range except for the inoculator must be autoclaved to remove bacterial contamination in between plate runs. Alternatively the inoculum pins can be left in the Inoculum Head and placed in 70% v/v aq. isopropyl alcohol for a period of time then taken out and air dried.

The **multipoint**elite™ contains no user serviceable parts.

5.0 Returning a multipointelite™ to MAST

In the unlikely event that a machine needs to be returned to MAST a Decontamination Certificate needs to be completed and the instrument decontaminated appropriately. It is also necessary for MAST Customer Services to authorise return of instruments (See page 17 "Contacting MAST"). MAST will not process any returned instruments without appropriate authorisation and a completed Decontamination Certificate, which should be faxed to MAST before shipment or placed in the box the multipointelite™ will be packed in. The certificate should be placed on top of the multipointelite™ inside the packaging.

A Decontamination Form is supplied with the instrument and included in this manual. If a certificate is lost or needs replacing contact either the Customer Services or Instruments Support Teams who will send replacement certificates. Alternatively the Decontamination Form in this manual can be photocopied and used for any return of goods.

To decontaminate the instrument use a suitable non-chlorinated disinfectant Wipe all surfaces using a soft/non-abrasive cloth soaked in disinfectant. Allow all surfaces to dry before packing the instrument. Clearly state the disinfectant used on the Decontamination Form. MAST will not process any returned instruments if the disinfectant used is deemed insufficient for the purpose of biological decontamination.

It is highly important that before packing the instrument for return to MAST the Transit Bolt is put in to position and tightened to prevent any damage in transit. Ensure the machine is in the Park position. Screw the Transit Bolt through bottom of the chassis and into the bottom of the Head Carrier. The multipointelite™ can now be placed into the box it was supplied in and despatched to MAST.

The decontamination form comprises the following 3 pages:-

Decontamination Certificate

Decontamination Prior To Inspection.

Servicing Or Repair Of Medical And Laboratory Equipment

1. We are seeking co-operation from all our customers to ensure that our sales staff are not exposed to health risks arising from exposure to residues of hazardous or potentially hazardous materials.

2. We require an authorised Decontamination Certificate for all equipment which we service, maintain or repair on site or which is returned to our premises or after a period of loan or demonstration.

3. Under the Health and Safety at Work Act (c.37 Pt. 1.3-(1). "It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably predictable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health or safety ."

4. Guidelines issued by the DHSS can be found in HEl No.98 January 1982 Appendix D.

5. We reserve the right to delay the commencement of any work until such a Decontamination Certificate has been completed by the customer evidencing that the equipment has been decontaminated and IS free from significant health or safety risks.

6. Where equipment is being returned to our premises we ask you to first contact the Customer Services Manager -See Para 8.. You will be issued with a "Returns Authorisation Number" which will be your reference for future correspondence. You will be required to include a signed Decontamination Certificate within the packaging in an easily accessible place. A Returns Authorised label must be attached to the outside of the packing where it can be clearly seen.

7. IN ALL CASES WE REQUIRE COMPLETION BY THE CUSTOMER OF A SIGNED DECONTAMINATION CERTIFICATE.

8. All enquiries regarding this form and its use should be directed to:

   THE CUSTOMER SERVICES MANAGER
   MAST GROUP L TD.,
   MAST House,
   Derby Road,
   Bootle,
   Merseyside L20 1 EA
   United Kingdom

9. All enquiries for Returns Authorisation, queries etc, should be directed to:

   THE CUSTOMER SERVICES MANAGER
   MAST GROUP L TD.,
   MAST House,
   Derby Road,
   Bootle

   Merseyside L20 IEA
   United Kingdom

Decontamination Certificate

Decontamination Prior To Inspection.

Servicing Or Repair Of Medical And Laboratory Equipment

TO: (Manufacturer/Supplier):

……..
……..
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……..

Make & Description of equipment:

……
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Returns Authorisation Ref.: ……
Model/Serial/Batch No: ……

Customers Ref./Order No ……
Other distinguishing Marks: ……

Has this equipment been exposed internally or externally to any of the following. Please answer all questions by deleting
Yes/No as applicable and by providing details in Section B below:

1.Blood, body, pathological specimens

YES/NO Provide details below

2.Chemicals or substances hazardous to health

YES/NO

3.Other biohazards

YES/NO Provide details below

4.Radioactive substances.
State below names and quantities of isotopes and checks made for residual activity

YES/NO

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5.Biodegradable material that could be hazardous.

YES/NO Provide details below

6.Other Hazard

YES/NO Provide details below

B. Please provide details of any hazard present as indicated above. Include details of names and quantities of agents as appropriate.

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C. Your method of decontamination (please describe)

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D. Are there likely to be areas of residual contamination (please specify)

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I declare that the above information is true and complete to the best of my knowledge and belief.

Authorised Signature: ……Date: ……..……...

Name (Printed): ……..Position: ……

Customer's Name…….....Tel:……..…….

Dept Address:

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……
……

6.0 Trouble Shooting

Problem	Solution
Switch on machine and it produces a humming noise then stops	Ensure the Transit bolt has been removed
No lights are on and the buttons do not respond	Ensure the power supply is connected properly at both ends
The automatic mode is too fast	Press the Stop Button then select a longer delay using the Delay Button
All Front Panel LED's flash	The unit has detected an internal error. Turn off and back on. If the error repeats contact MAST.

7.0 Technical Information

7.1 Supplied Components

The **multipoint**elite™ is always supplied with the following components:

1 x Inoculator

1 x Reversible Specimen Platen (90mm Petri dishes/96 microwell plates)

1 x 47-63Hz, 100-240V universal external power supply.

1 x Transparent protective lid

1 x Footswitch

1 x Decontamination Certificate

1 x Retainer Screw

1 x Transit Bolt

1 x Assembly Marker

7.2 Required Accessories

To operate the **multipoint**elite™ at east one of the following must be purchased separately:

SCANES019 EQUIPMENT SET FOR 19 POINT INOCULATION
SCANES019N EQUIPMENT SET FOR 19 POINT INOCULATION (NCCLS)
SCANES036 EQUIPMENT SET FOR 36 POINT INOCULATION
SCANES036N EQUIPMENT SET FOR 36 POINT INOCULATION (NCCLS)
SCANES096 EQUIPMENT SET FOR 96 POINT INOCULATION
SCANES096N EQUIPMENT SET FOR 96 POINT INOCULATION (NCCLS)

Depending on the country where the instrument is to be used an IEC socket replacement lead made be required to fit connect the external power supply to the mains

7.3 Optional Accessories

The versatility of the **multipoint**elite™ allows inoculation in different formats depending on the plate type and size. A wide range of accessories is available. Details of all accessories can be found in the Mast Price List.

7.4 Technical Data

External Power Supply
Mains Voltage 100-240VAC, 47-63Hz
Output 12VDC, 4A
UK Mains Plug 5A, 240V AC 50Hz

Power Consumption
50VA

On-Off Duty Cycle
100%

Operating Temperature
15^{o} – 50^{o}C

Dimension
430mm wide x 210mm high x 350mm deep

Weight

12 Kg (including accessories)

Regulatory Compliance

The equipment is CE marked to indicate conformity to the following standards:-

In vitro Diagnostic Medical Devices Directive (IVDD) - 98/79/EC

Electromagnetic Compatibility Directive (EMC) - 89/336/EEC.

Low voltage Directive - 73/23/EEC.

BS EN 61326:1998, IEC 61326-1:1997 Electrical equipment for measurement, control and laboratory use. EMC requirements

8.0 Contacting MAST

For more advice and help there are many ways to contact MAST.

TELEPHONE

CUSTOMER SERVICES **+44 (0)151 472 1444**

This line is open from 8.00am to 6.00pm Monday to Friday.

TECHNICAL SERVICES **+44 (0)151 472 1473**

This line is open 9.00am to 5.00pm Monday to Friday with an answer machine all other hours.

MAIN SWITCHBOARD **+44 (0)151 933 7277**

This line is open from 9.00am to 5.00pm Monday to Friday with an answer machine all other hours.

FAX **+44 (0) 151 944 1332**

E-MAIL **support@mastgrp.com**