DOT
Instructions for Use

Manual colony counter

Doc. 50007848-02

Revision date: May 2023

Contents

INDICATION OF THE INTRODUCED MODIFICATIONS

If it's the first time that you use DOT, please read the entire document carefully.

If it's not the first time that you use DOT and you use it before, in the table below you can read the indication of the introduced modifications.

Revision	Description of change
02	Update section 3
	Update Appendix A, B, C, D, and E

1. INTRODUCTION

Thank you for choosing the DOT. We are confident that this instrument will become an integral part of your laboratory.

Before using the DOT, it is essential that you read this user manual carefully. Following the instructions and safety information in this user manual will ensure safe operation and maintain the system in a safe condition.

1.1. Intended use of the DOT

The last operation in any microbiological analysis consists of counting the bacteriological colonies which have been grown in the Petri dishes. They must contain the ideal medium for the best bacterial growth.

The microbiologist has to solve the tedious problem of counting the colonies, which, sometimes, are too small and can be masked by the specific color of the culture medium.

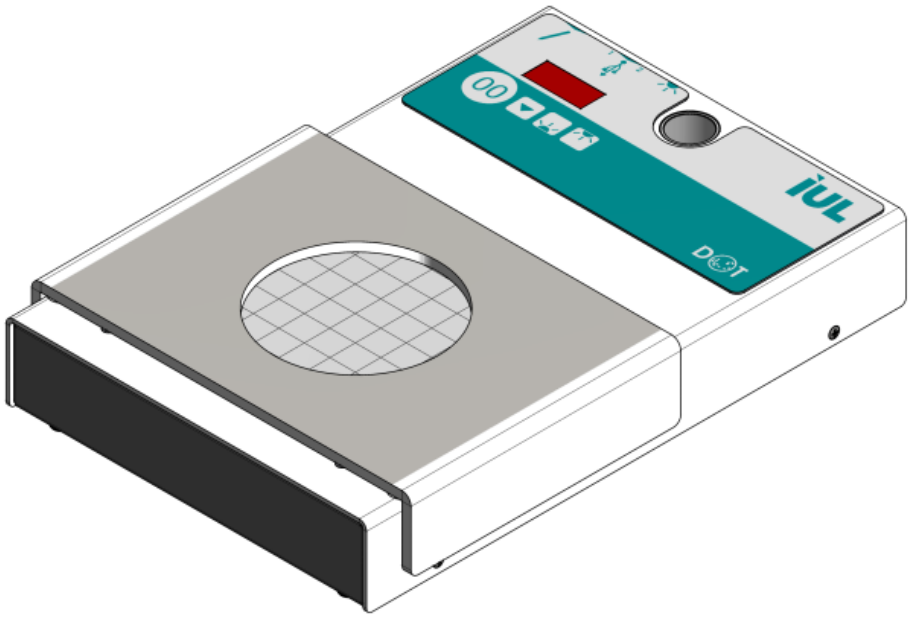
The DOT is intended for the manual counting of bacteriological colonies grown on Petri dishes.

1.2. General information

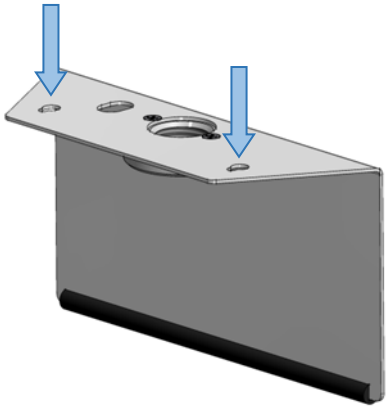
1.2.1. Scope of delivery

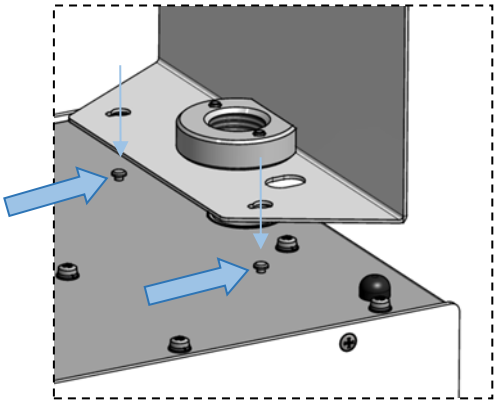
The delivery includes the following items:

- DOT instrument with centering device for ø90mm Petri dishes, Wolffhügel reticule, and its protective glass.

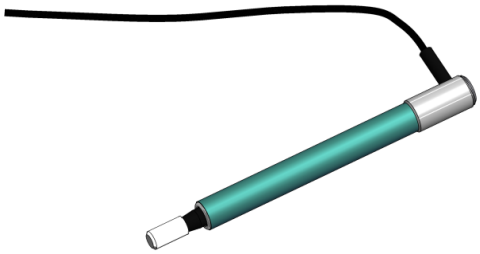


- Lifter angle.

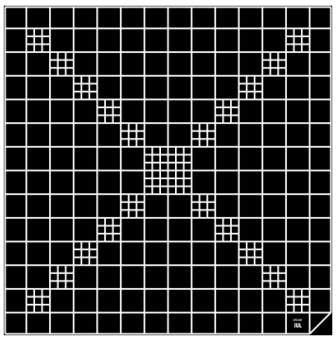




- Clickable permanent marker.

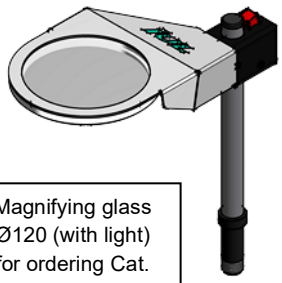


- Contrasting dark screen.

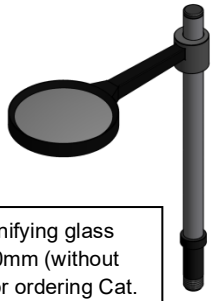


- Power cord according to the destination country.
- Instructions for Use.

- Magnifying glass Ø120mm (with light) for Cat. 90008700, or Magnifying glass Ø100mm (without light) for Cat. 90008701.



Magnifying glass Ø120 (with light) for ordering Cat. 90008700.



Magnifying glass Ø100mm (without light) for ordering Cat. 90008701.

1.2.2. Technical assistance

At IUL SA we pride ourselves on the quality and availability of our technical support. Our Technical Service Department is staffed by experienced technicians with extensive practical and theoretical expertise in the use of IUL SA products. If you have any questions or experience any difficulties regarding the DOT or IUL SA products in general, do not hesitate to contact us.

IUL SA customers are a major source of information regarding advanced or specialized uses of our products. This information is helpful to other customers as well as to the researchers at IUL SA. We encourage you to contact us if you have any suggestions about product performance or new applications and techniques.

For technical assistance, contact the IUL SA Technical Service Department, or local distributors.

1.2.3. Policy statement

It is the policy of IUL SA to improve products as new techniques and components become available. IUL SA reserves the right to change the specifications of products at any time.

To produce useful and appropriate documentation, we appreciate your comments on this user manual. Please contact IUL SA Technical Service with any feedback.

1.2.4. Requirements for DOT users

Table 1 covers the general level of competence for the use and servicing of the DOT.

Task	Personnel	Training and experience
Routine use	Laboratory technicians or equivalent	Training in techniques for laboratory instrument operation
Servicing	IUL SA Service Specialists only	Trained, certified, and authorized by IUL SA

2. SAFETY INFORMATION

Before using the DOT, it is essential that you read this user manual carefully. Following the instructions and safety information in this user manual will ensure safe operation and maintain the system in a safe condition.

The following types of safety information appear throughout the DOT Instructions for Use.

WARNING 	The term **WARNING** is used to inform you about situations that could result in **personal injury** to you or other people. Details about these circumstances are given in a box like this one.

CAUTION 	The term **CAUTION** is used to inform you about situations that could result in **damage to the instrument** or other equipment. Details about these circumstances are given in a box like this one.

The advice given in this manual is intended to supplement, not supersede, the normal safety requirements prevailing in the user's country.

2.1. Proper use

WARNING/ CAUTION 	**Risk of personal injury and material damage** Improper use of the DOT instrument may cause personal injury or damage to the instrument. The instrument must only be operated by qualified personnel.

CAUTION 	**Damage to the instrument** Avoid spilling water or chemicals onto the DOT instrument. Damage caused by water or chemical spillage will void your warranty.

In case of emergency, switch off the DOT at the power switch and unplug the power cord from the power outlet.

2.2. Electrical safety

If the operation of the DOT is interrupted in any way (e.g., due to interruption of the power supply or a mechanical error), first switch off the instrument using the power switch, then disconnect the electrical cord from the power outlet. Contact IUL SA Technical Service after such an incident.

WARNING 	**Electrical hazard** Any interruption of the protective conductor (earth/ground lead) inside or outside the instrument or disconnection of the protective conductor terminal is likely to make the instrument unsafe. Intentional interruption is prohibited. **Lethal voltages inside the instrument** When the instrument is connected to line power, its terminals may be live. Opening covers or removing parts is likely to expose live parts.

To ensure satisfactory and safe operation of the DOT:

- The line power cord must be connected to a line power outlet that has a protective conductor (earth/ground).
- No other power cords than the ones specified in Ordering Codes must be used. In case of replacement, this must be ordered at IUL SA.
- The instrument must not be operated with the cover removed.
- If liquid has spilled on or inside the instrument, switch it off, disconnect it from the power outlet, and contact IUL SA Technical Services.
- If you suspect any instrument damage, contact IUL SA Technical Services.

If the DOT becomes electrically unsafe, prevent other personnel from operating it, and contact IUL SA Technical Service.

The instrument may be electrically unsafe if:

- The instrument or the power cord appears to be damaged.
- The instrument has been stored under unfavorable conditions for a prolonged period.
- A different mains power cord is used other than the one provided by IUL.

2.3. Environment

Operating conditions

WARNING 	**Explosive atmosphere** The DOT is not designed for use in an explosive atmosphere.

WARNING 	**Risk of overheating** Slits and openings that ensure the ventilation of the DOT must not be covered.

2.4. Biological safety

Use safe laboratory procedures as outlined in publications such as Biosafety in Microbiological and Biomedical Laboratories, HHS:

http://www.cdc.gov/od/ohs/biosfty/biosfty.htm

WARNING 	**Samples containing infectious agents** Some samples used with the DOT may contain infectious agents. Handle such samples by the required safety regulations. With such samples do not use the optional contact pointer, instead, use the permanent marker. The responsible person(s) (e.g., laboratory manager) must take the necessary precautions to ensure that the workplace is safe and that the instrument operators are suitably trained and not exposed to hazardous levels of infectious agents, as defined in the applicable Safety Data Sheets (SDSs) or OSHA[1] ACGIH[2] or COSHH[3] documents. Venting of fumes and disposal of wastes must be in accordance with all national, state, and local health and safety regulations and laws.

[1] OSHA: Occupational Safety and Health Administration (United States of America).
[2] ACGIH: American Conference of Government Industrial Hygienists (United States of America).
[3] COSHH: Control of Substances Hazardous to Health (United Kingdom).

2.5. Maintenance safety

CAUTION 	**Damage to the instrument** Do not use spray bottles containing alcohol or disinfectant to clean the surface of the DOT instrument or its parts. Spray bottles should be used only to clean items that have been removed from the instrument.

WARNING 	**Risk of electric shock** Do not open the panels on the instruments. **Risk of personal injury and material damage** Only perform maintenance that is specifically described in this Instructions for Use.

2.6. Waste disposal

Used consumables, such as Petri dishes, may contain hazardous chemicals or infectious agents. Such waste must be collected and disposed of properly in accordance with local safety regulations.

For disposal of waste electrical and electronic equipment (WEEE), see Appendix D: Waste Electrical and Electronic Equipment (WEEE).

2.7. Symbols on the DOT instrument

Symbol	Location	Description
	Type plate on the bottom of the instrument	Waste Electrical and Electronic Equipment (WEEE), see Appendix D:
CE	Type plate on the bottom of the instrument	CE Mark, see Appendix E:.

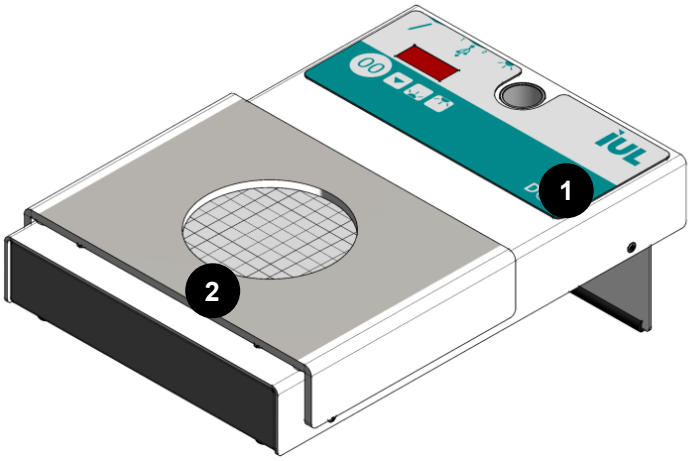
3. GENERAL DESCRIPTION

The DOT is an instrument that helps the operator to perform the manual counting of the bacteriological colonies in three ways:

- By making use of a good illumination (transmitted or reflected), the colonies in the Petri dishes are seen sharply outlined.
- Using an electronic counter, which is activated by either pressing the Petri dish lid with a clickable permanent marker or directly and softly touching the dish media with a stainless contact pointer (optional). In this way, the user does not have to memorize the number of colonies already counted.
- Sending the digits of a completed count to any (active) keyboard application running on a PC (Excel, Word, Notepad, etc.) as if it were a user typing on a standard computer keyboard.

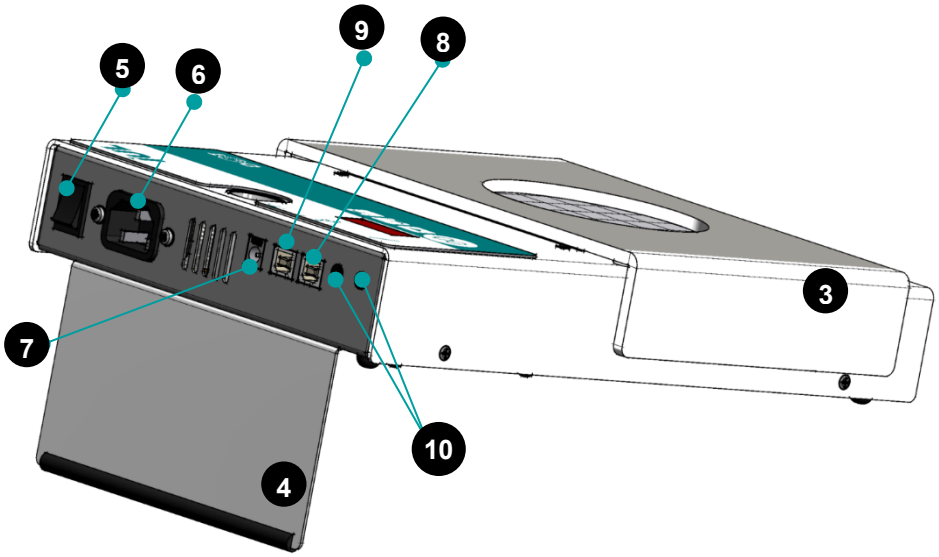
3.1. Instrument overview

FRONT VIEW:



1. Control panel
2. Illuminated screen holder for Wolffhügel reticule and its protective glass

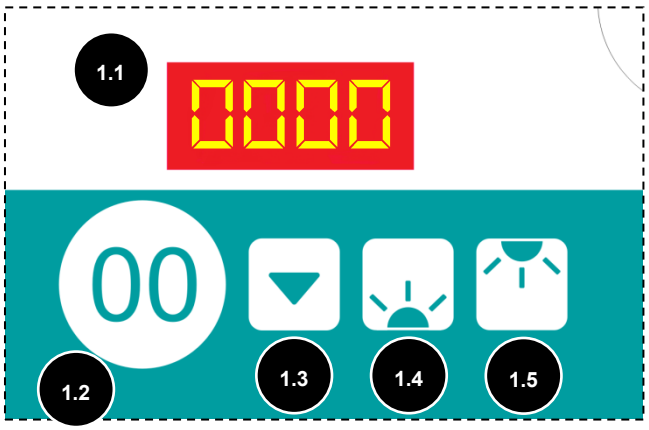
REARVIEW:



3. Centering device
4. Lifter angle
5. Mains on/off switch
6. Socket for power cable
7. Socket for upper light cable
8. USB socket #1 (VCP – serial emulation)
9. USB socket #2 (HID – keyboard emulation)
10. Sockets for permanent marker and optional contact pointer

3.1.1. Control panel (1)

1.1. Numerical display
1.2. Reset button
1.3. Undo button
1.4. Bottom light button
1.5. Upper light button



3.1.2. USB socket #1 (8)

This connection emulates standard PC serial port communication (Virtual COM Port) and is used for diagnosis and adjustment purposes by the technical service of IUL SA, and to communicate the instrument to compatible IUL SA applications.

3.1.3. USB socket #2 (9)

This connection emulates standard PC serial port communication (Virtual COM Port) and is used for diagnosis and adjustment purposes by the technical service of IUL, SA and to communicate the instrument to compatible IUL SA applications.

3.1.4. Power cord

The DOT is equipped with a power cable with a plug suitable for the destination country. See Appendix B: Ordering Codes for details.

WARNING 	**Risk of electric shock** In case of replacement or a loosing of the mains power cord, this must be replaced only with one of the power cords listed in Ordering CodesAppendix B: Ordering Codes, delivered by IUL SA.

4. INSTALLATION

4.1. Unpack the instrument

The packaging of the DOT can be stored for reuse.

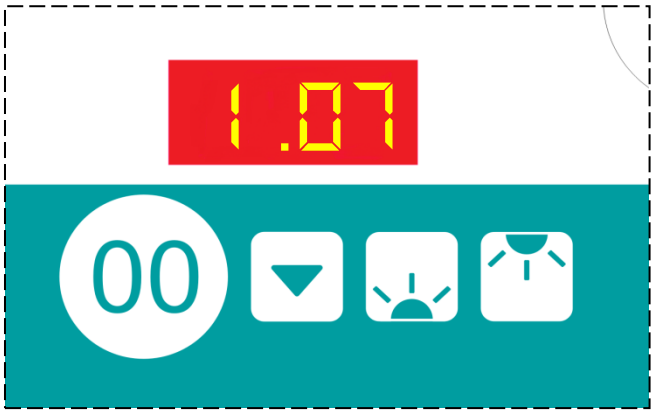
4.2. Site requirements

Place the DOT instrument on a level, stable surface, ideally a firmly secured benchtop, near an earthed/grounded electrical outlet. Allow at least 10 cm (4 in) of clearance on all sides of the unit for proper ventilation. While operating, make sure that the instrument does not touch other objects. Locate it away from vibration-sensitive instruments, such as an analytical balance.

4.3. Power cord connection

The socket for connecting the power cable is on the rear part of the DOT instrument.

1. Connect the supplied power cord to the socket on the instrument.
2. Plug the instrument into the electrical outlet.
3. Switch the instrument on.
4. The control panel numerical display (No. 1.1) shows the firmware version of the instrument for 3 seconds. After this delay, the 0000 count is permanently displayed.



When the DOT is not in use for a long period of time, we recommend disconnecting the power cable.

5. OPERATING PROCEDURES

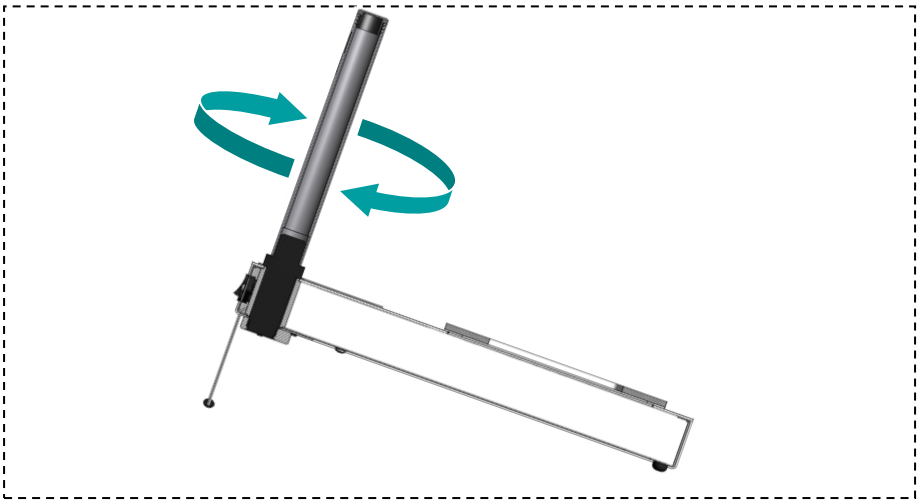
5.1. Preparation

Before switching on the instrument:

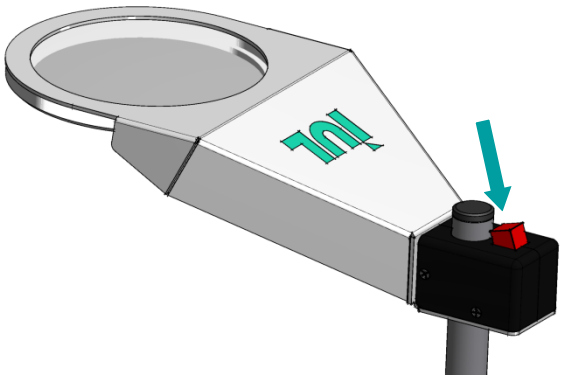
You can attach the lifter angle to the instrument mating the flat headpins on the instrument's lower side to the mounting holes on the lifter angle upper side (keyholes) and sliding them sideways as shown in section 1.2.1.

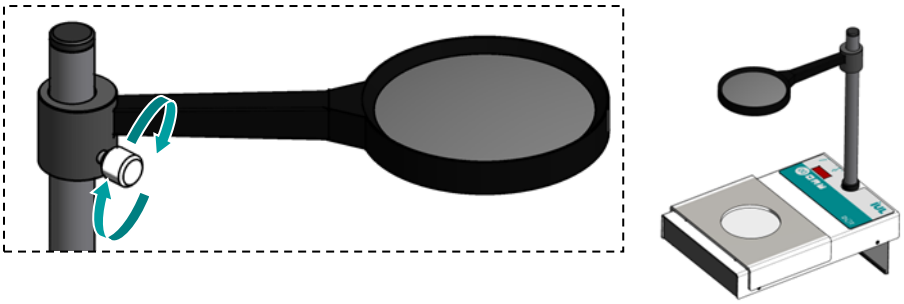
Mounting the magnifying glass:

1. You must attach the lifter angle to the instrument as explained above.
2. Place the magnifying glass holder rod into the bottom and thread it into the female of the lifter angle.



3. Pass the magnifying glass holder through its rod and adjust the height (both types of magnifying glasses are represented below).

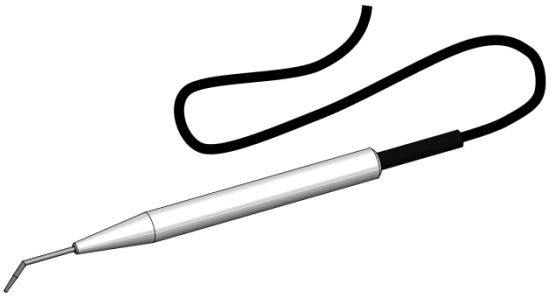




4. Connect the permanent marker to one of the sockets (No. 10). To obtain a count, the marker must be pressed against the upper face of the Petri dish lid.

If the optional stainless contact pointer is used:

5. Connect the contact pointer to one of the sockets (No. 10). To obtain a count, the pointer must touch the Petri dish media directly.



After switching on the instrument:

6. To use transmitted (bottom) or reflected (upper) light turn on the corresponding switch (No. 1.4 or 1.5). To use reflected light the upper light connector must have also been plugged into its socket (No. 7).

7. To contrast the Petri dishes media with the black screen provided, proceed as follows:

   Take out the centering device (No. 3), the Wolffhügel reticule, and its protective glass.

   Place the black screen, the protective glass, and the Petri dish centering device (No. 3) on the screen holder of the instrument.

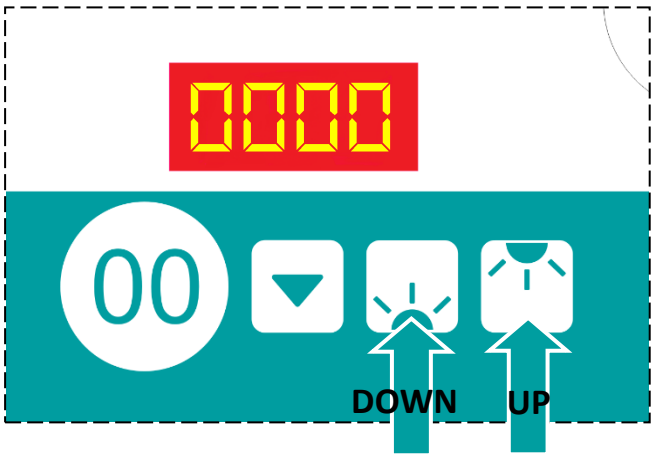
   Switch off the transmitted light using the switch (No. 1.4).

5.2. Settings

Note: Light sources and intensities must be adjusted according to the particularities of the Petri dish colonies to be counted. When a new Petri dish is to be counted, some preliminary trials should be performed to determine the proper light source and intensity setting that will ensure better counting results. Acoustic signal volume level must be adjusted according to the workplace regnant noise.

5.2.1. Switching the light sources

- Toggle between on and off the bottom light by pressing the control panel bottom light button (No. 1.4) briefly.
- Toggle between on and off the upper light (if connected) by pressing the control panel upper light button (No. 1.5).

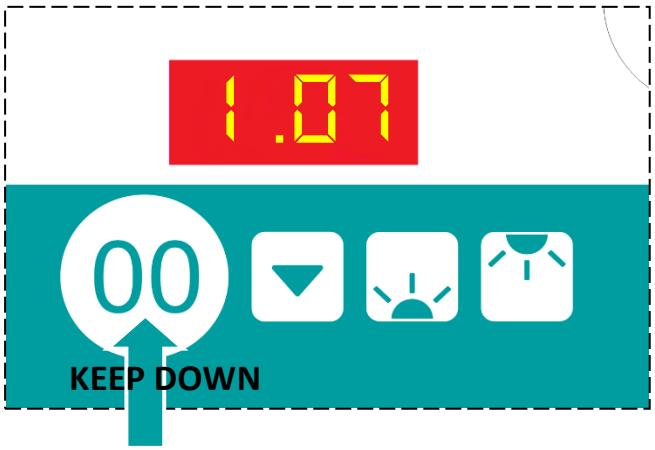


5.2.2. Setting the bottom light intensity

- To select the appropriate bottom light intensity, do not release the control panel bottom light button (No. 1.4) when you turn on the bottom light. As long as you continue pressing the button, the selected intensity will change every second elapsed. Release the button to accept the intensity change.

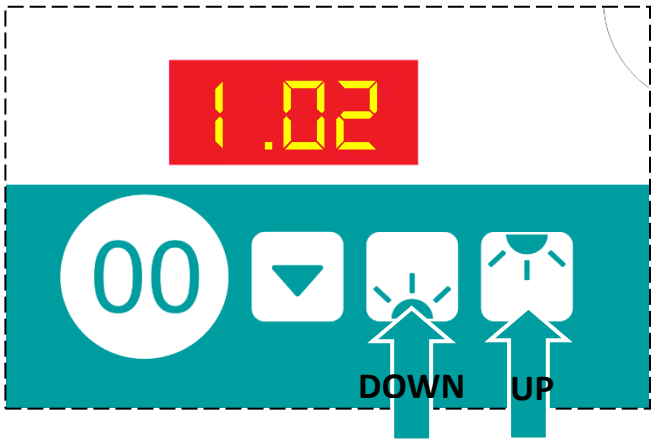
5.2.3. Setting the acoustic signal level

- Power off the instrument (No. 5) and turn it on while keeping down the control panel reset button (No. 1.2).



- The control panel numerical display (No. 1.1) shows the firmware version of the instrument for 3 seconds. After this delay, the acoustic signal level selection is displayed as 1.0X. Release the reset button (No. 1.2).

- Select the appropriate volume level of the acoustic signal navigating through the 3 available options (1 .00 = Zero; 1 .01 = Low; 1 .02 = High), downward by pressing the control panel bottom light button (No. 1.4) or upward by pressing the upper light button (No. 1.5).



- Accept selection changes by pressing the control panel to undo the button (No. 1.3) or discard turning the power switch off. After accepting the changes, the 0000 count is permanently displayed.

5.3. Performing a colony count

1. Once you have decided on the type of light and screen to be used, place the Petri dish on the hole of the centering device.
2. Slide the centering device up and down until it reaches the desired position.
3. Check that the control panel numeric display (No. 1.1) shows the 0000 count, otherwise press the control panel reset button (No. 1.2).
4. To obtain a count, on the point where a colony lies either press the clickable permanent marker against the upper face of the Petri dish lid or touch the dish

media directly using the optional stainless contact pointer having the lid removed. Once a count is made, the instrument gives a slight acoustic signal. The intensity of this signal can be adjusted as described above.

5. If you pressed or touched a point where colonies do not lie, you can press the control panel to undo the button (No. 1.3) briefly to cause the instrument to ignore the last count made.

6. Once the counting is finished push the control panel reset button (No. 1.2). The instrument is ready to start again with the 0000 count displayed.

7. Before starting a new count (while having 0000 displayed), you can restore the last count made by keeping pressed the undo button (No. 1.3) for about 1 second.

5.4. Interfacing with a PC

The DOT has a USB Human Interface Device (HID) keyboard interface. Connecting it to a Windows® PC, without installing drivers, the instrument behaves like a standard PC keyboard automatically writing the counting results into any active application running on the PC which accepts keyboard input (Excel, Word, Notepad, etc.).

5.4.1. Preparation

Plug the appropriate USB cable (AB type) end into the instrument USB #2 socket (No. 9) and the other end into one of the PC USB sockets. Run the desired target application on the PC and make sure it is the keyboard input receiving one (active).

5.4.2. Settings

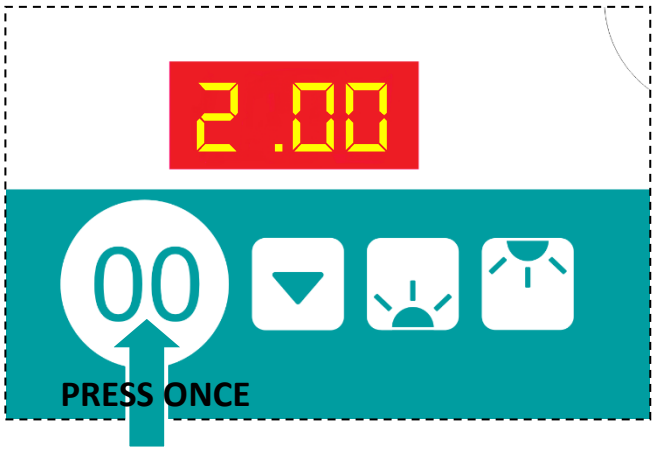
Note: Emulated keystrokes sent to the PC should be adjusted according to the terminating key and number key code set required by the target keyboard application (Excel, Word, Notepad, etc.) running on the PC.

5.4.3. Setting the terminating key

- Like in section 0, having the instrument power switch (No. 5) off, turn it on while keeping down the control panel reset button (No. 1.2).

- Like in section 0, the control panel numerical display (No. 1.1) shows the firmware version of the instrument for 3 seconds. After this delay, the acoustic signal level selection is displayed as 1.0X. Release the reset button.

- Pressing the reset button once, the terminating key selection is displayed as 2.0X.



- In a similar way to section 0, select the appropriate terminating key navigating through the 2 available options (2. 00 = Tab; 2. 01 = Enter), downward by pressing the control panel bottom light button (No. 1.4) or upward by pressing the upper light button (No. 1.5).

  The "Enter" terminating key is the appropriate selection when you want to write at line start either nothing or dish related data (such as a bar code reading or a user typing) terminated with "Tab". The "Tab" terminating key is the appropriate selection when you want to write at line end dish related data terminated with "Enter" (see section 5.4.5).

- Like in section 0, accept selection changes by pressing the control panel to undo the button (No. 1.3) or discard turning the power switch off. After accepting the changes, the 0000 count is permanently displayed.

5.4.4. Setting the number key code set

- Like in section 0, having the instrument power switch off (No. 5), turn it on while keeping down the control panel reset button (No. 1.2).

- Like in section 0, the control panel numerical display (No. 1.1) shows the firmware version of the instrument for 3 seconds. After this delay, the acoustic signal level selection is displayed as 1.0X. Release the reset button (No. 1.2).

- Pressing the reset button twice, the number key code set selection is displayed as 3.0X.

- Like section 0, select the appropriate number key code set navigating through the 2 available options (3. 00 = Numbers across the top of the typewriter keys; 3. 01 = Number keys in the numeric keypad), downward by pressing the control panel bottom light button (No. 1.4) or upward by pressing the upper light button (No. 1.5).

  Select the "3.01" option (keypad number keys) when it is possible to keep active the "Num Lock" key on the PC keyboard. Otherwise, select the "3.00" option (typewriter number keys) and, if the target application expects French keyboard input, keep active the "Caps Lock" key on the PC keyboard.

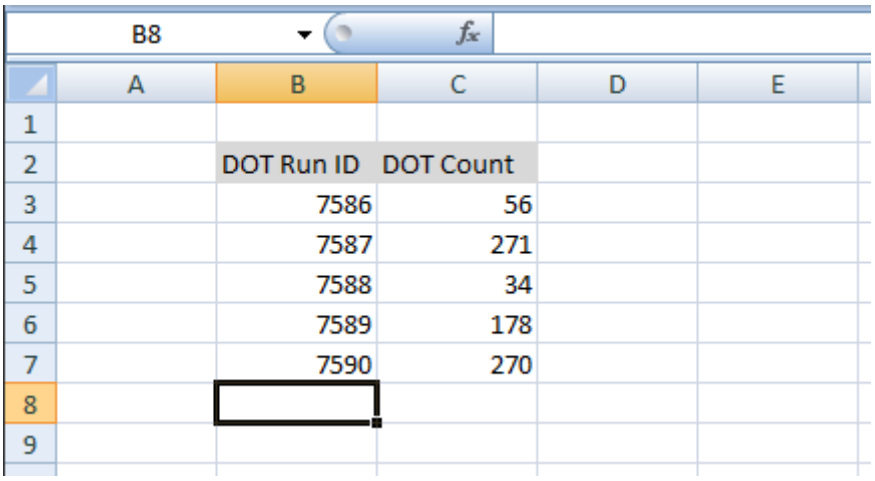
- Like in section 0, accept selection changes by pressing the control panel to undo the button (No. 1.3) or discard turning the power switch off. After accepting the changes, the 0000 count is permanently displayed.

5.4.5. Automatically writing colony count results to PC applications

When the control panel reset button (No. 1.2) is pushed, the count on the control panel numerical display (No. 1.1) is sent (as standard PC keyboard keystrokes) to the active keyboard application running on the connected PC.

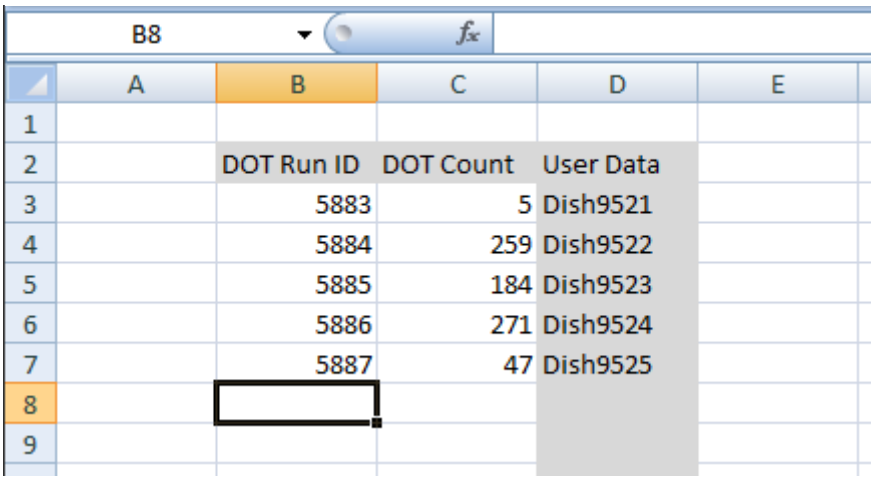
To resend the last count made, restore it as described in section 5.3 and then press the reset button.

The following are spreadsheet application screenshots in which the user has entered the grayed cells and the instrument has written the white cells:



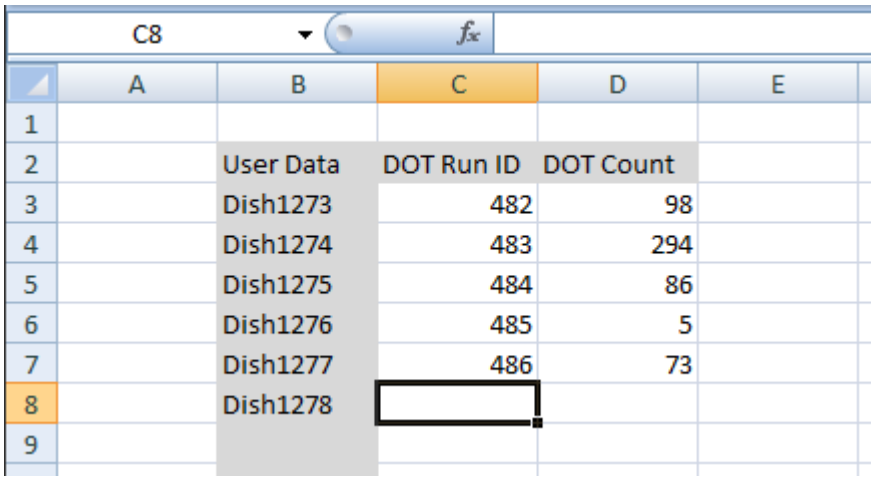
	A	B	C	D	E
1					
2		DOT Run ID	DOT Count		
3		7586	56		
4		7587	271		
5		7588	34		
6		7589	178		
7		7590	270		
8					
9					

Fig. 1: User wrote nothing at line start. What instrument wrote was "Enter" terminated (see section 5.4.3).



	A	B	C	D	E
1					
2		DOT Run ID	DOT Count	User Data	
3		5883	5	Dish9521	
4		5884	259	Dish9522	
5		5885	184	Dish9523	
6		5886	271	Dish9524	
7		5887	47	Dish9525	
8					
9					

Fig. 2: User wrote dish data at line start. What instrument wrote was "Enter" terminated (see section 5.4.3).



	A	B	C	D	E
1					
2		User Data	DOT Run ID	DOT Count	
3		Dish1273	482	98	
4		Dish1274	483	294	
5		Dish1275	484	86	
6		Dish1276	485	5	
7		Dish1277	486	73	
8		Dish1278			
9					

Fig. 3: User wrote dish data at line end. What instrument wrote was "Tab" terminated (see section 5.4.3).

6. TROUBLESHOOTING

Symptom	Probable cause	Recommended action
The counter stops counting, and the acoustic signal cannot be heard when the tip of the clickable permanent marker is pushed.	The marker cap switch fails. The marker connection fails. The marker pen movement is prevented.	Try to check that the cap of the marker makes a "click" when the tip is pushed. If this noise can be heard and the signal does not arrive at the counter, check the marker cable, plug, and socket (No. 10). If the counter remains not responding, replace the body with a cable and connector of the permanent marker. If the “click" cannot be heard, take the pen out of its body, and see if there is any dirt that prevents it to move freely.
The counter stops counting, and the acoustic signal cannot be heard when touching the Petri dish media with the optional stainless contact pointer tip.	The pointer connection fails.	Check the pointer cable, plug, and socket (No. 10).
After pressing the control panel and the reset button, no characters are written to the target keyboard application running on the PC.	The USB HID connection fails. The target application is not the active one.	Check the USB cable, plug, and socket (No. 9). Activate the target application (see section 5.4.5). To resend the last count when not received by the target application, restore it (see section 5.3) and then push the reset button.
After pressing the reset button, unexpected characters are written to the target keyboard application running on the PC.	Numeric keypad keys are selected in the instrument, but "Num Lock" is deactivated on the PC keyboard. Typewriter keys are selected in the instrument and the PC running application expects French keyboard input, but "Caps Locks" is deactivated in the PC keyboard.	If possible, keep the PC keyboard "Num Lock" activated. Else select the typewriter keys in the instrument (see section 5.4.4). In this case, if the PC running application expects French keyboard input, keep "Caps Lock" activated (see section 5.4.4).

Note: The replacement of the upper light is easy to do but the bottom light should be changed by the official service. To reduce time and expenses and due to the small dimensions of the instrument, we recommend sending it to the IUL SA Technical Service Department, or local distributors.

7. MAINTENANCE

7.1. Cleaning procedure

Disconnect the DOT from the power supply for cleaning. Use a lightly moistened cloth or an antistatic cloth. Do not use cleaning agents or abrasive solvent products.

CAUTION 	**Damage to the instrument** Do not use spray bottles containing alcohol or disinfectant to clean the surfaces of the DOT instrument or its parts. Spray bottles should be used only to clean items that have been removed from the instrument.

APPENDIX A: TECHNICAL DATA

IUL SA reserves the right to change specifications at any time.

Specifications

Counter	Four digits, 9 mm high. Maximum count: 9999.
Magnifier	Glass, biconvex, ø100mm or ø120mm (with light), 4 diopters, DIN 2x.
Inputs	Clickable permanent marker. Stainless contact pointer (optional).
Outputs	USB Human Interface Device (HID) emulating standard PC keyboard output receivable by PC running keyboard compatible applications (Microsoft Windows ®). USB Virtual COM port (VCP) reserved for IUL SA Technical Service purposes. Upper light power (12V DC, 500mA).
Lighting	Bottom light, 4 selectable intensities, On/Off switching powered from the instrument. Upper light (depending on the glass magnifier ordered), On/Off switching powered from the instrument.

Operating conditions

Power range	100-240V AC
Frequency range	50-60Hz
Maximum power	15W
Overvoltage category	II
Air temperature	5-32ºC (41-90ºF)
Relative humidity	15-75% (non-condensing)
Altitude	Up to 2000m. (6500ft.)
Place of operation	For indoor use only
Pollution level	2

Transportation conditions

Air temperature	-25ºC to 60ºC (-13ºF to 140ºF) In manufacturer's packaging
Relative humidity	Maximum of 75% (non-condensing)

Storage conditions

Air temperature	5ºC to 40ºC (41ºF to 104ºF) In manufacturer's packaging
Relative humidity	Maximum of 85% (non-condensing)

Dimensions and weight with 120mm (light) magnifier (Cat. 90008700)

Dimensions	Width: 211mm (8.30in) Height: 320mm (12.6in) Depth: 335mm (13.19in)
Weight	3200 grams (7.05lb)

Dimensions and weight with 100mm magnifier (Cat. 90008701)

Dimensions	Width: 211mm (8.30in)
	Height: 320mm (12.6in)
	Depth: 395mm (15.55in)
Weight	2700 grams (5.95lb)

APPENDIX B: ORDERING CODES

Product	Contents	Cat. #
DOT System with 120mm Magnifying Glass with Light	• DOT instrument with centering device for ø90mm Petri dishes, Wolffhügel reticule, and its protective glass. • Lifter angle • Clickable permanent marker • Contrasting dark screen • Power cord according to the destination country • Instructions for Use • Magnifying Glass 120mm with light	**90008700** 900011397 900011459 9000638 (…) 50007848 900011398
DOT System with 100mm Magnifying Glass without Light	• DOT instrument with centering device for ø90mm Petri dishes, Wolffhügel reticule, and its protective glass. • Lifter angle • Clickable permanent marker • Contrasting dark screen • Power cord according to the destination country • Instructions for Use • Magnifying Glass 100mm without light	**90008701** 900011397 900011459 9000638 (…) 50007848 9000672

Accessories

The following accessories can be purchased separately. State the order number (Cat. No.) when ordering the accessory.

Product	Cat. #
Centering device for ø60mm Petri dishes	9000606
Centering device for ø70mm Petri dishes	9000725
Centering device for ø80mm Petri dishes	9000608
Centering device for ø100mm Petri dishes	9000610
Centering device for ø120mm Petri dishes	9000612

Product	Cat. #
Centering device for ø150mm Petri dishes	9000615
Stainless contact pointer	900011460
USB cable (AB type)	90006071
Spiral grid	9000625
Mixed grid 1/16 cm²	9000613
Mixed grid 1/9 cm²	9000616

Spare Parts

Product	Cat. #
Centering device for ø90mm Petri dishes	9000609
High-quality magnifying glass, ø100mm, 4 diopters, DIN 2x, with lifting and blocking system.	9000672
High-quality magnifying glass, ø120mm, 4 diopters, DIN 2x, with incorporated light; lifting, and blocking system.	900011398
Wolffhügel grid	9000617
Contrasting dark screen	9000638
Lifter angle	900011397
Clickable permanent marker	900011459

APPENDIX C: WARRANTY

The DOT instrument has a 12-month warranty period which starts when the instrument is purchased to IUL SA

The warranty is void when misuse of the equipment can be proved. Damage or manufacturing faults caused by impacts, chemical or corrosive products, liquids, damp, or other external factors, such as radiation, fire, or inadequate transport are not included.

In addition, the warranty will not apply if the equipment has been handled, repaired, or modified by not qualified or specifically designated personnel.

As part of this warranty, all shipping costs to the selected technical service are the responsibility of the Buyer.

APPENDIX D: WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

This section provides information about the disposal of waste electrical and electronic equipment by users.

The crossed-out wheeled bin symbol (see below) indicates that this product must not be disposed of with other waste; it must be taken to an approved treatment facility or a designated collection point for recycling, according to local laws and regulations.

The separate collection and recycling of waste electronic equipment at the time of disposal helps to conserve natural resources and ensures that the product is recycled in a manner that protects human health and the environment.

APPENDIX E: EC DECLARATION OF CONFORMITY

Manufacturer Name:

IUL SA

Manufacturer Address:

Carrer Ciutat d'Asunción, 4 08030 Barcelona Spain

Declares that the product Name:

DOT

Catalog Numbers:

90008700 and 90008701

Conforms the Council Directives:

- Directive **2014/30/EU** of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to electromagnetic compatibility (recast).
- Directive **2014/35/EU** of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits (recast).
- Directive **2011/65/EU** of the European Parliament and of the Council o f 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast)

Standards which Conformity is Declared:

- **UNE-EN 61326-1:2006** Electrical equipment for measurement, control and laboratory use - EMC requirements -- Part 1: General requirements (IEC 61326-1:2005)
- **UNE-EN 61010-1:2011** Safety requirements for electrical equipment for measurement, control, and laboratory use -- Part 1: General requirements.
- **EN 50581:2012** Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

Barcelona, November the 26th 2018

CE

Daniel Blanch / Director de ingeniería electrónica

Notes