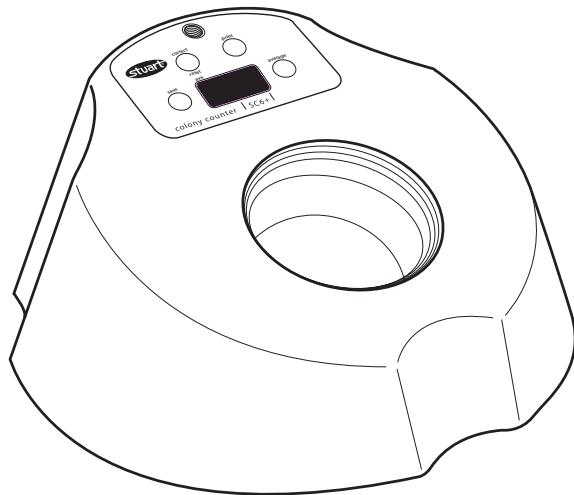




Colony Counter SC6 Plus

Instructions for use



English

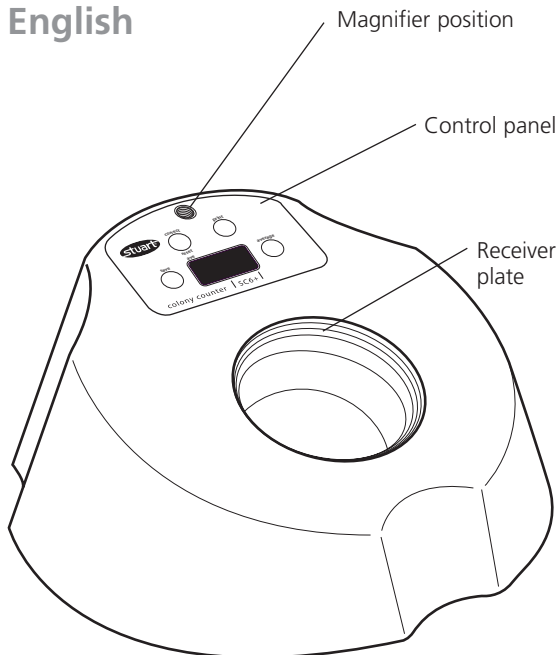


Figure 1: SC6 Plus controls

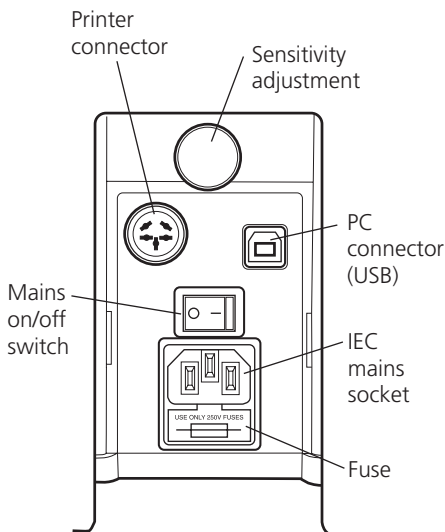


Figure 2: SC6 Plus back panel

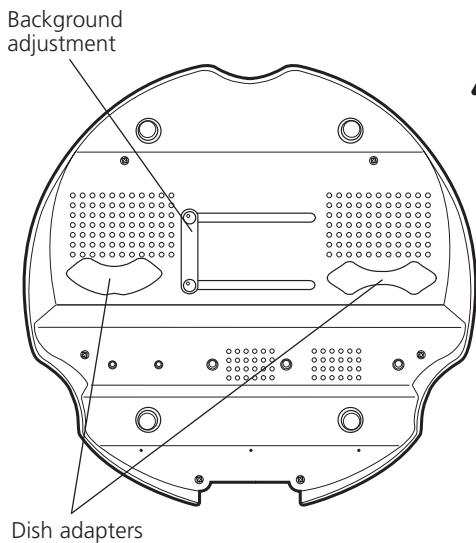


Figure 3: Underneath the SC6 Plus



Thank you for purchasing this piece of Bibby Scientific equipment. To get the best performance from the equipment, and for your own safety, please read these instructions carefully before use.

This equipment is designed to operate under the following conditions:-

- ❖ For indoor use only
- ❖ Use in a well ventilated area
- ❖ Ambient temperature range +5°C to +40°C
- ❖ Altitude to 2000m
- ❖ Relative humidity not exceeding 80%
- ❖ Mains supply fluctuation not exceeding 10%
- ❖ Overvoltage category II IEC60364-4-443
- ❖ Pollution degree 2 IEC664

If the equipment is not used in the manner described in this manual the protection provided by the equipment may be impaired.

Electrical Installation

 **THIS EQUIPMENT MUST BE EARTHED**

Before connection, please read and understand this instruction manual and ensure that the line supply corresponds to that shown on the rating plate.

Power consumption is:

Model	Power	Frequency	Fuses
SC6+	70W	50/60Hz	2xF3.15A

The SC6 model is supplied with two mains leads fitted with IEC plugs for connection to the instrument. One has a UK 3 pin plug and the other has 2 pin "Shuko" plug for connection to the mains. Choose the lead appropriate for your electrical installation and discard the other. Should neither lead be suitable, take the lead with the UK plug and replace the plug with a suitable alternative. This involves cutting off the moulded plug, preparing the cable and connecting to the rewirable plug in accordance with its instructions.

IT IS IMPORTANT THAT THIS OPERATION SHOULD ONLY BE UNDERTAKEN BY A QUALIFIED ELECTRICIAN

NOTE: Refer to the equipment's rating plate to ensure that the plug and fusing are suitable for the voltage and wattage stated. The wires in the mains cable are coloured as follows:

- Live - Brown
- Neutral - Blue
- Earth - Green/yellow

The instruments are fitted with an IEC socket at the rear of the instrument for connection of the mains lead. The appropriate mains lead should be connected **BEFORE** connection to the mains supply.

Should the mains lead need replacement a cable of 1mm² of harmonised code H05W-F connected to an IEC320 plug should be used. N.B. the UK mains lead is protected by a 10A fuse mounted in the plug top.

IF IN DOUBT CONSULT A QUALIFIED ELECTRICIAN

General Description

The unit consists of an illuminated receiver plate and a large LED display. The pressure of marking a colony with a felt-tip pen registers a count by an audible bleep and advance on a digital display. A built in averaging facility allows multiple plates to be counted and then the average colony count calculated. The pressure required to register a count can be adjusted.

A choice of light or black background is available, and the unit is supplied complete with one Wolffhuegel graticule, segmentation disc and centering adapters for 50-90mm dishes. A printer and a magnifier for counting very small colonies are available as accessories.

Counting results can also be sent to a computer via USB.

Safety Advice Before Use

- ❖ The unit should be carried using both hands.
- ❖ Never move or carry the unit when in use or connected to the mains electricity supply.
- ❖ In the case of mains interruption, a fault or electrical failure, the unit will continue to operate on removal of the fault.

Controls

Figure 1 shows the controls for the SC6.
Figure 2 shows the back of the unit.
Figure 3 shows the underside of the unit.

Operation

Setting up the SC6 Colony Counter

To select either the dark or white background, slide the panel, which can be found underneath the unit to the left or right until the background clicks home in to place. To use a petri dish of less than 90mm in diameter, select the appropriate adapter, which can also be found on the underside of the unit and place on the receiver plate.

The SC6 is provided with a pack of clear discs, designed to protect the receiver plate from dust and scratches. Place a disc in the receiver plate. If this becomes damaged, remove and replace with another. If the Wolffhuegel graticule or segmentation disc is required, place on top of the clear protective disc on the receiver plate.

Position the apparatus on a firm level surface. The sensitivity control knob, located at the back of the unit, can adjust the pressure required to register a count. Turning it clockwise will increase the sensitivity, turning it anti-clockwise will decrease the sensitivity.

If small colonies are to be counted, a magnifier is available as an accessory. To assemble, screw the flexible support arm in to the designated area located on top of the unit. Adjust the flexible support arm until the required magnification and field of view is achieved.

Turn the unit ON at the ON/OFF switch located at the back of the unit.

Counting

Position the Petri dish on the receiver plate using the centering adapter if required. Ensure the display is set to zero before counting by pressing and holding the <correct/reset> key. Mark each colony with a felt tip pen. Every time a colony is marked, the apparatus will register the count with a bleep and counter advance. If unwanted counts are made, they can be removed from the display by pressing the <correct/reset> key once

for each count. When the count is complete either set the display to zero using the <correct/reset> key or switch the unit OFF at the mains.

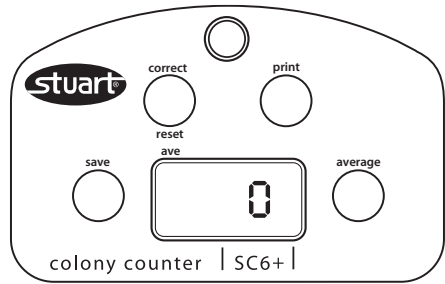


Figure 3: SC6 Control Panel

Averaging

To use the averaging facility, place the first Petri dish on the receiver plate. At the end of the count, press the <save> key to store the count in the memory. This will be indicated by three dashes on the display:

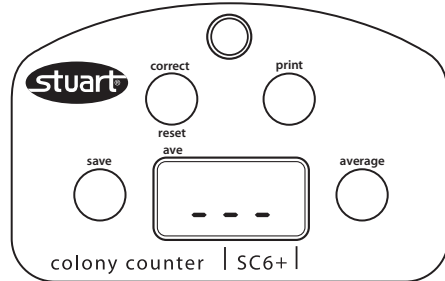


Figure 4: Saving counts on the SC6

Replace the Petri dish with the next and press <save> to resume the count. Repeat until all dishes have been counted. At the end of the run, press the <average> key to display the average count. The average count will be calculated from all previously saved counts. The average count may be viewed at any time during the batch counting of Petri dishes by pressing the <average> key when the three dashes are visible on the display. When the average facility is active

a red LED spot at the top left hand corner of the display will be visible:

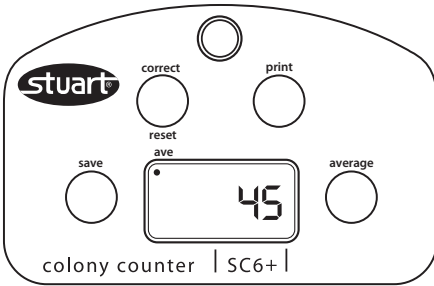


Figure 5: Active averaging facility on the SC6

To resume counting press the <average> key again. When the count is complete, press and hold the <correct/reset> key until the display returns to zero. This will clear the memory of saved counts.

When all counting is completed switch the unit OFF at the mains.

Printing results

Ensure the colony counter is off. Plug the printer into the port on back of the SC6 Plus (see fig 2) and connect the printer to the mains. Turn the SC6 Plus on.

To print the results of a single dish, complete the count and then press the <save> key to confirm. Three dashes will appear on the screen. Press the <print> key and the printer will be activated. Remove the dish and press the <save> key again followed by RESET to set the display to zero. You can now count another dish.

To print the results of multiple dishes, count each dish in turn pressing the <save> key after each count. The results can be printed by pressing the <print> key whenever the three dashes appear on the screen. The printed results will include all the dishes counted up to that point.

When the count and print is complete, press and hold the <correct/reset> key until the display returns to zero. This will clear the memory of saved counts.

Transferring data to a computer

Turn the SC6 Plus off and connect to a computer using the USB cable provided.

Turn on the computer and install the free SC6 Software*.

Turn on the SC6 Plus and count either single or multiple plates following the directions above. Now when the <print> key is pressed the data will be sent to the computer programme.

Turning the audible counting beep ON or OFF

Turn the unit off at the mains ON/OFF switch.

Hold the <save> key down and switch the unit ON at the mains ON/OFF switch.

Select either 'ON' or OFF using the <correct/reset> key.

To confirm, press the <average> key.

The colony counter is now ready to use.

To turn the beep on, repeat steps 1 to 5.

Cleaning the receiver plate


The receiver plate can easily be removed for cleaning.

To remove, make sure that the instrument is switched off at the mains. Tip the colony counter upside down to remove the plate. Clean the plate using a damp cloth only. Once cleaned the plate should be returned to the colony counter.

Replacement plates are available (see Spares and Accessories section).

* This can be downloaded from the Stuart website at www.stuart-equipment.com

Maintenance & Servicing

 **WARNING:** Ensure the unit is disconnected from the mains electricity supply before attempting maintenance or servicing.

Periodically clean the instrument using a damp cloth and mild detergent solution. Do not use harsh or abrasive cleaning agents.


Any repairs or replacement of parts MUST be undertaken by suitably qualified personnel.

Spares and Accessories

The following spares and accessories are available from your laboratory dealer:

Description	Catalogue Number
x1.7 magnifier	SC6/1
x3 magnifier	SC6/1/3
Wolffhuegel graticule & segmentation disk (pack of 10)	SC6/2
Centering adapter (pack of 2)	SC6/3
Clear protective discs (pack of 10)	SC6/4
Receiver plate	SC6/5
Printer	SMP30/1

For a comprehensive list of parts required by service engineers conducting internal repairs, please contact the Sales Department at Bibby Scientific Ltd quoting both the model and serial number.

 Only spare parts supplied or specified by Bibby Scientific Ltd. or its agents should be used. Fitting of non-approved parts may affect the performance and safety features designed into the instrument.

If in any doubt, please contact the Technical Service Department of Bibby Scientific Ltd. or the point of sale.

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Warranty

Bibby Scientific Ltd warrants this instrument to be free from defects in material and workmanship, when used under normal laboratory conditions, for a period of three (3) years. In the event of a justified claim, Bibby Scientific will replace any defective component or replace the unit free of charge.

This warranty does NOT apply if damage is caused by fire, accident, misuse, neglect, incorrect adjustment or repair, damage caused by installation, adaptation, modification, fitting of non-approved parts or repair by unauthorized personnel.

Technical Specification

Digital display 3 digit	LED
Light source	White LED
Count	0 to 999
Dish size up to	90 mm
Dimensions (w x d x h)	310 x 300 x 140 mm
Net weight	1.5Kg



These products meet the relevant EC harmonised standards for radio frequency interference and may be expected not to interfere with, or be affected by, other equipment with similar qualifications. We cannot be sure that other equipment used in their vicinity will meet these standards

and we cannot guarantee that interference will not occur in practice. Where there is a possibility that injury, damage or loss might occur if equipment malfunctions due to radio frequency interference, or for general advice before use, please contact the Technical Service Department of Bibby Scientific Ltd.

Declaration of Conformity

Colony Counter

Models

SC6
SC6/100V/50, SC6/100V/60
SC6/120V/60
SC6/220V/50, SC6/220V/60

These products comply with the requirements of the EU Directives listed below:

89/336/EEC Electromagnetic Compatibility Directive amended by 93/68/EEC.

73/23/EEC Low Voltage Directive amended by 93/68/EEC.

Compliance with the requirements of these Directives is claimed by meeting the following standards:

EN 61326: 1997 + Amendments A1: 1998. (Electrical Equipment for Measurement, Control and Laboratory use).

EN61010-1: 2001. (Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory use).

Compliance Certificates and Full Reports.
Ref: RETS0620/A/1 and RETS0620/A/2

From "Epsilon Technical Services," an Independent Accredited Test House, showing compliance to the above standards, are available on request.

CE mark affixed '03.

Signed:  (Mr D. E. Hicks)

Date: 18/10/05

Authority: Technical/Development Manager

for

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INSPECTION REPORT

MODEL SC6 Plus

ELECTRICAL SAFETY

1. Earth continuity
2. Insulation
3. Flash test

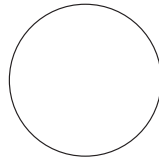


FUNCTIONAL

1. Indicators
2. Counting function
3. Visual acceptance



QUALITY CONTROL INSPECTOR



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