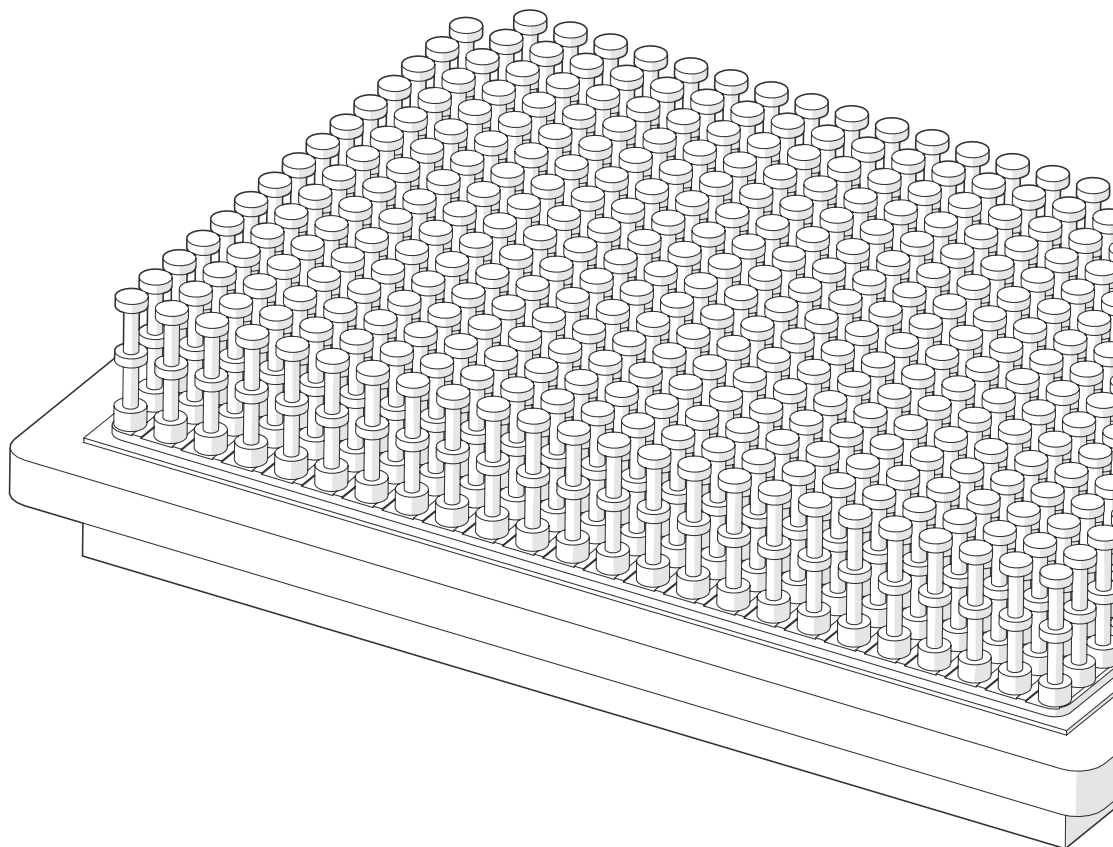
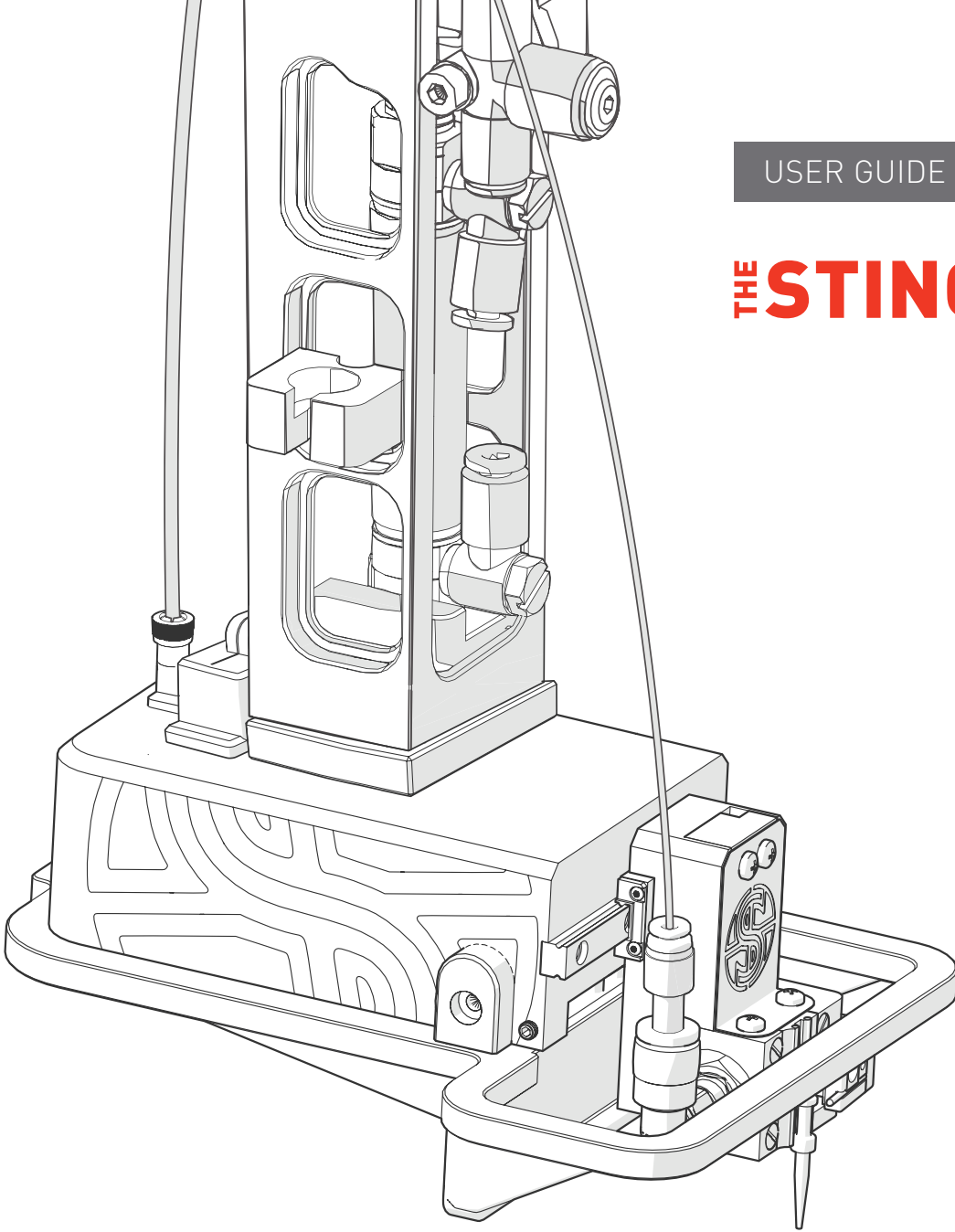


USER GUIDE v1.1

# THE STINGER™





## BEFORE YOU START!

- **All on-screen instructions MUST be followed.** Straying from the on-screen instructions could cause damage to the machine and the user.
- **Always check that wires and tubes are clear before fitting The Stinger or Pad Head.** Failure to do so could cause machine damage.
- **The Stinger and Pad Head should be stored in their foam case.** To prevent loss or damage always store The Stinger and Pad Head in their case as soon as they are removed.
- **Do NOT twist or rotate any connectors.** This will cause damage to both the ROTOR and The Stinger.
- **Take care when removing The Stinger or Pad Head.** The magnets are very strong — do not let The Stinger or Pad Head collide with the ROTOR HDA.
- **Pull all connectors by their plugs only.** NEVER pull connectors by the cables or damage will occur.
- **Always pinch down the white ring on the pneumatic connectors when removing.** The white ring locks the connector in place, trying to remove without unlocking will cause connection damage.
- **Ensure black connectors are orientated correctly.** The black connectors have locators that need to be align before inserted. Misalignment will cause damage.
- **During head removal, always ensure the push cylinder is cleared before moving away from the carriage.** The push cylinder runs from the carriage arm into The Stinger/Pad Head. If either are not pulled down far enough during removal, the cylinder will catch and damage the ROTOR HDA.
- **Ensure the unused connector is securely in the holder before operating the ROTOR HDA.** A loose cable may cause machine damage.
- **Always ensure the power is OFF before changing heads.** Leaving the power on can cause a hardware crash.
- **Ensure The Stinger's pin cartridge is pushed to back left corner of ROTOR pad rim.** This is to avoid damage to the pad rim's locator pins.

3. Introduction
4. Anatomy & features
6. Cleaning pins
7. Selecting & running from .csv file
10. Selecting manual mode
11. Manual 96-density
12. Manual 1536-density
13. Lawn / bath pinning
14. Notes

## **THE STINGER**

### **INTRODUCTION**

The Stinger is an accessory for the ROTOR HDA which enables individual colony manipulation by using one pin at a time. It allows colonies of interest to be cherry-picked from one (or multiple) source plate(s) to one (or multiple) target plate(s) on agar or in liquid medium. Programs may be compiled by file upload or by manual operation.

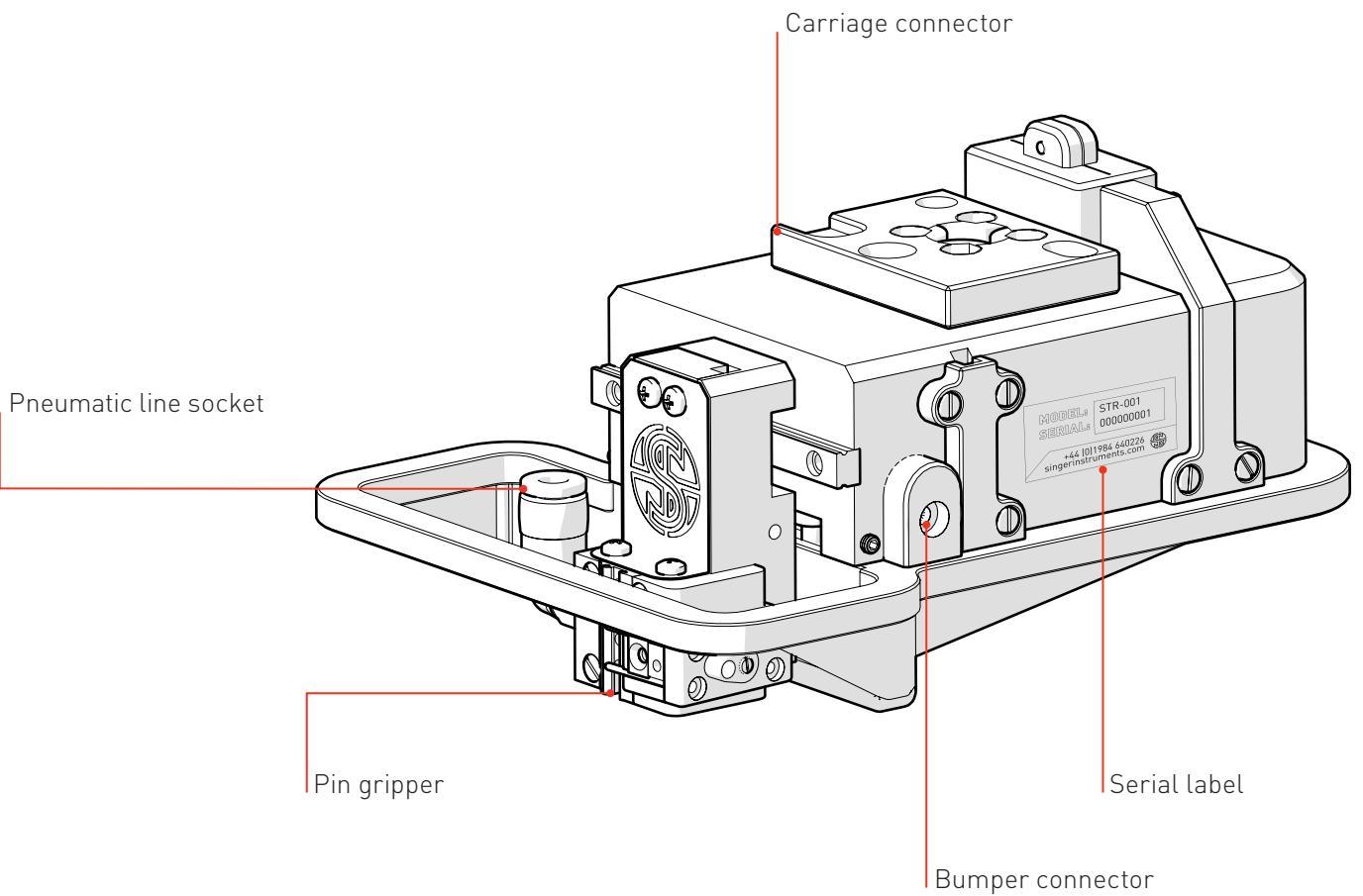
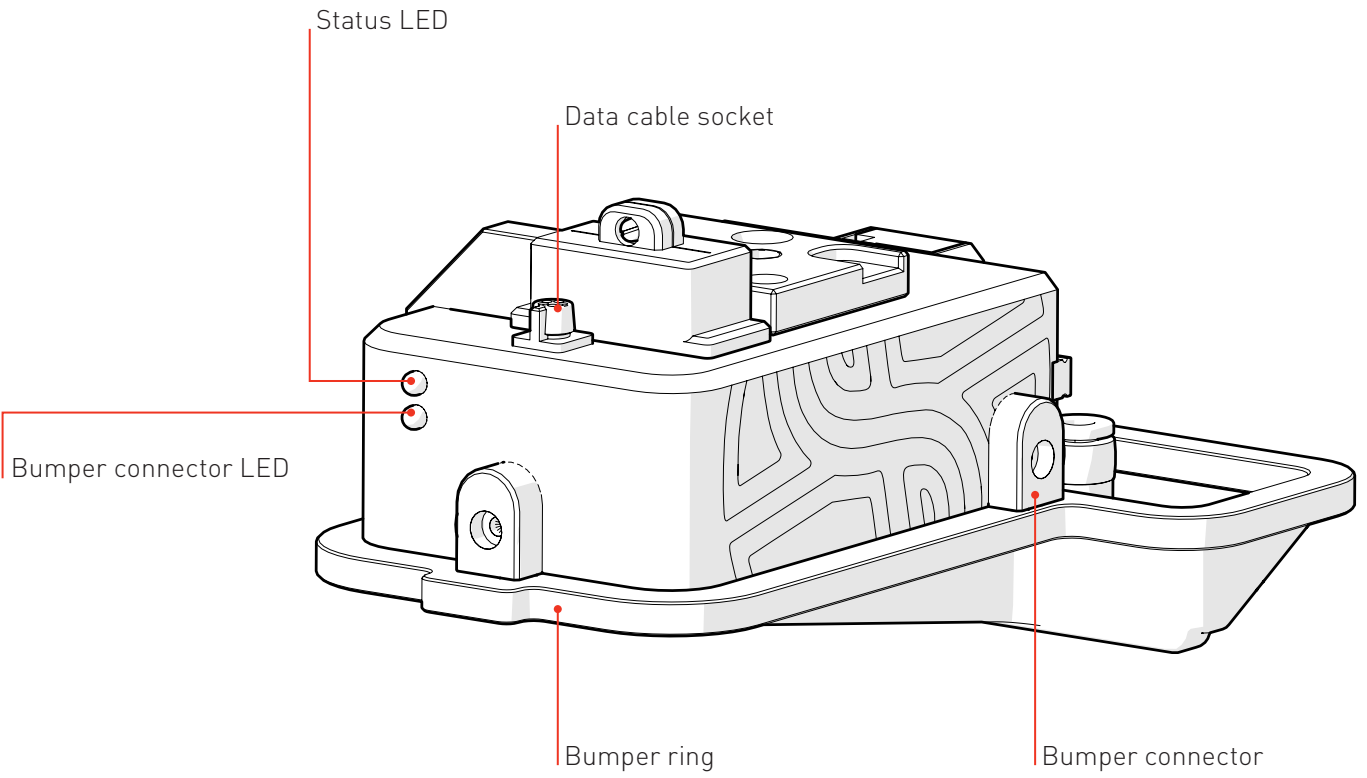
### **USER GUIDE**

Follow these instructions to get the most out of The Stinger single colony picker. This guide outlines basic maintenance of The Stinger as well as using the software for a number of tasks. Read through this guide and you'll be ready for the exciting world of ultra-fast colony picking

### **DISCLAIMER**

At Singer Instruments, we are constantly seeking to improve our products and adapt them to the requirements of modern research techniques and testing methods. This involves modification to the mechanical structure and optical design of our instruments. Therefore, all descriptions and illustrations in this user guide, including all specifications are subject to change without notice.

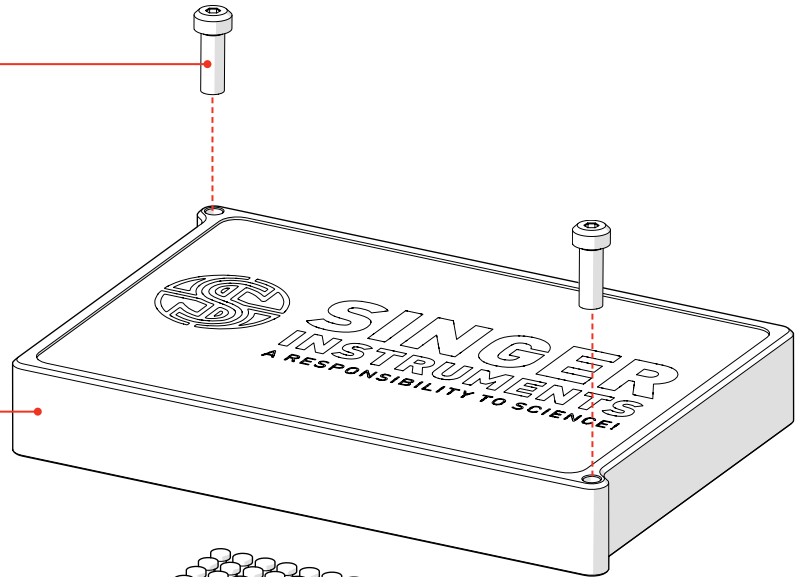
## ANATOMY & FEATURES



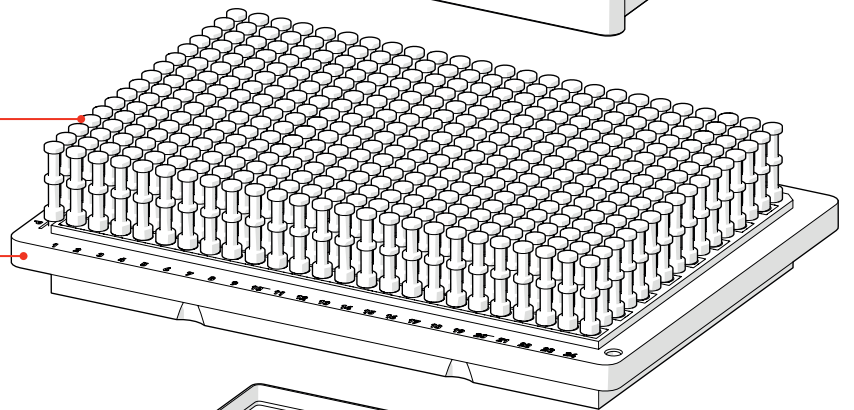
Cartridge screws

NOTE: Always load and remove the cartridge with cover in place and secured with screws (thumb-tight).

Cartridge cover

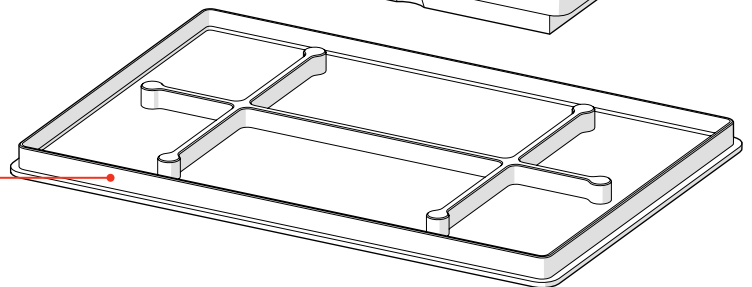


Tool-pins



Pin cartridge

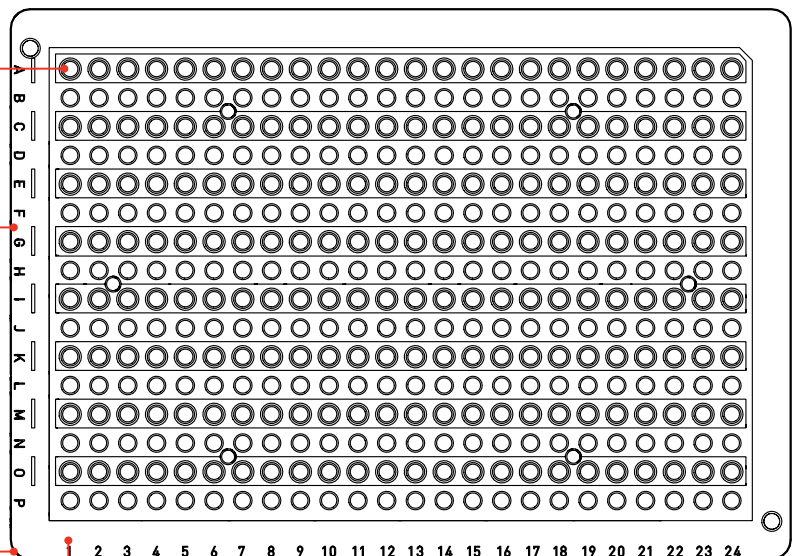
Bottom tray cartridge



Pin holes

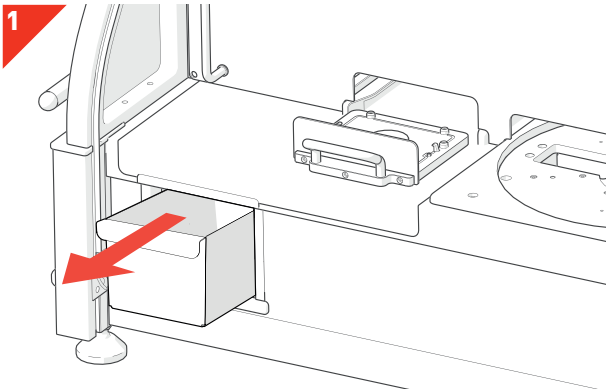
Row markers

NOTE: Always load cartridges with this corner to the front left.

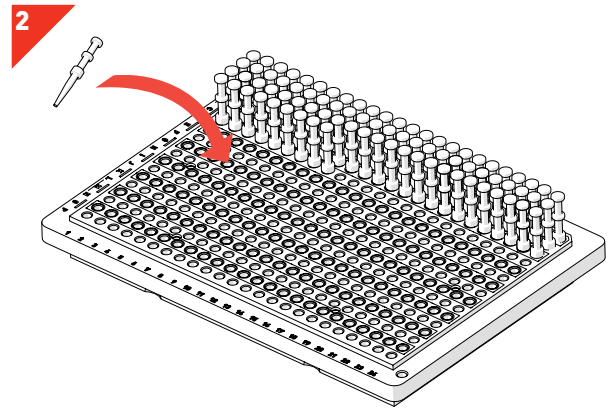


Column markers

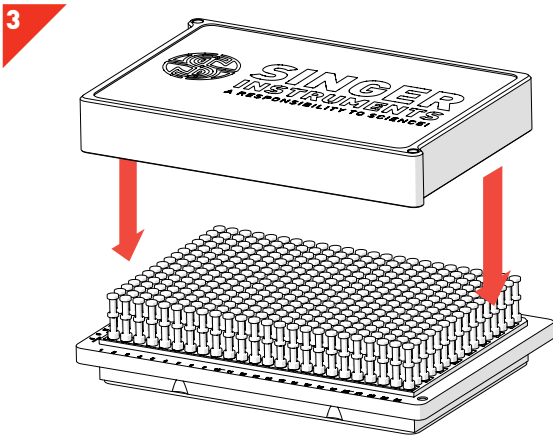
## CLEANING PINS



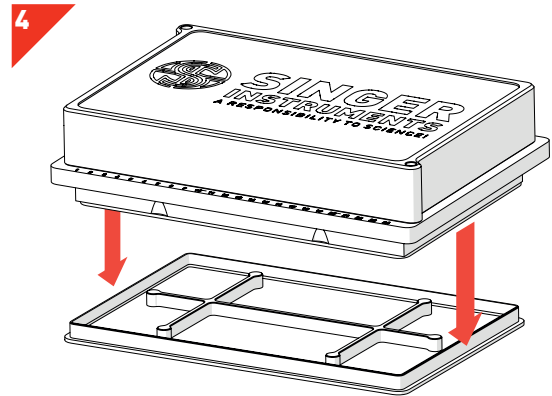
- Remove *Dump Drawer* from the ROTOR HDA.



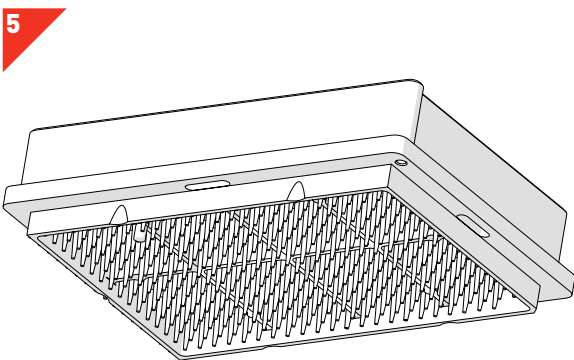
- Load *Used Pins* into the empty *Pin Cartridge*.



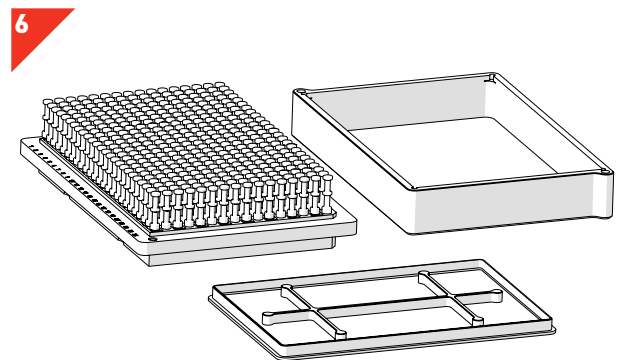
- Secure the *Cartridge Cover* to the full *Pin Cartridge* using the two *Cartridge Screws*.



- Remove the *Bottom Tray Cartridge* to enable access to the points of the used pins.



- Scrub the exposed *Pin Tips* with a 70% ethanol solution to clean, then rinse.
- Remove the *Cartridge Cover* and leave to dry.

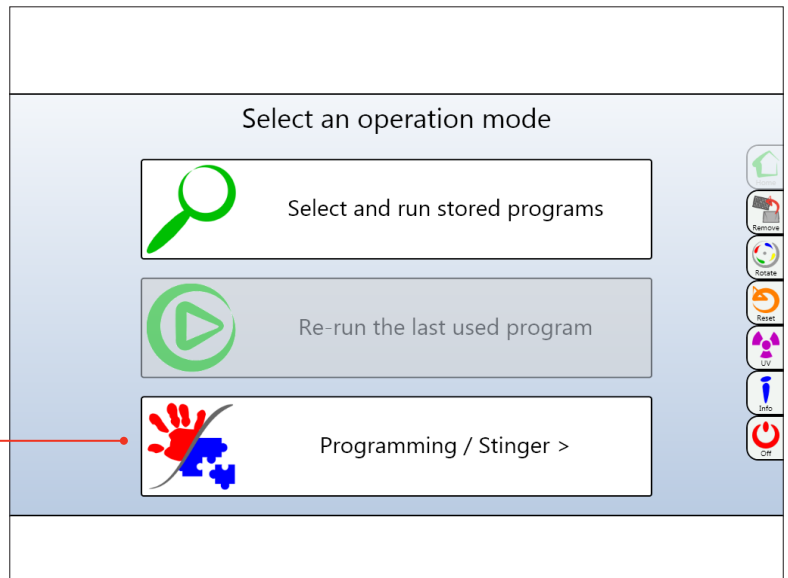


- Autoclave all parts of the *Cartridge*. Keep the pins in the cartridge but leave off the *Bottom Tray* and for optimum sterilisation.

## SELECTING AND RUNNING FILES

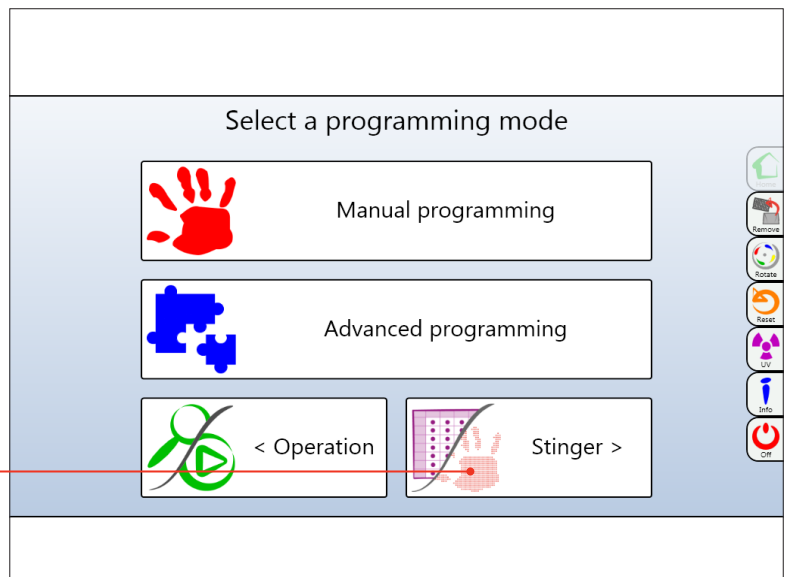
1

- On the ROTOR start-up screen you will be asked to select an operation mode. Select the *Programming /Stinger* option.



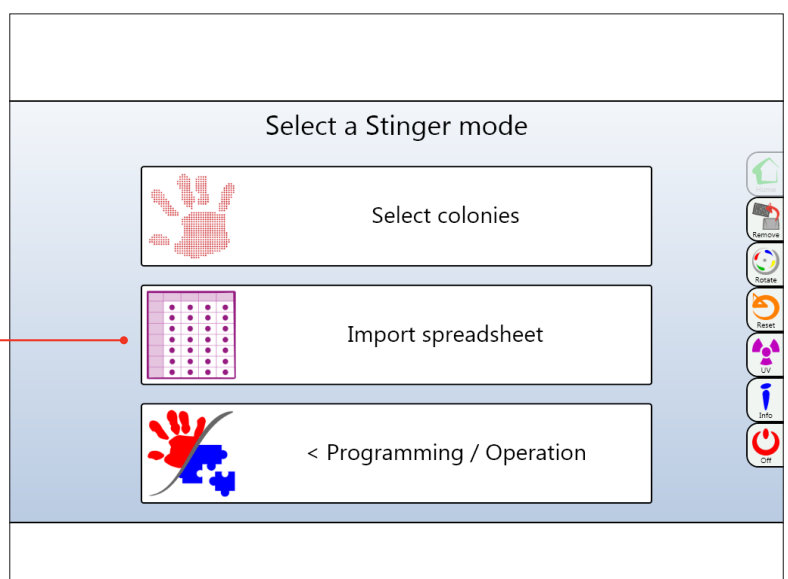
2

- On the next screen you will be asked to select a programming mode. Select the option labelled *Stinger*.



3

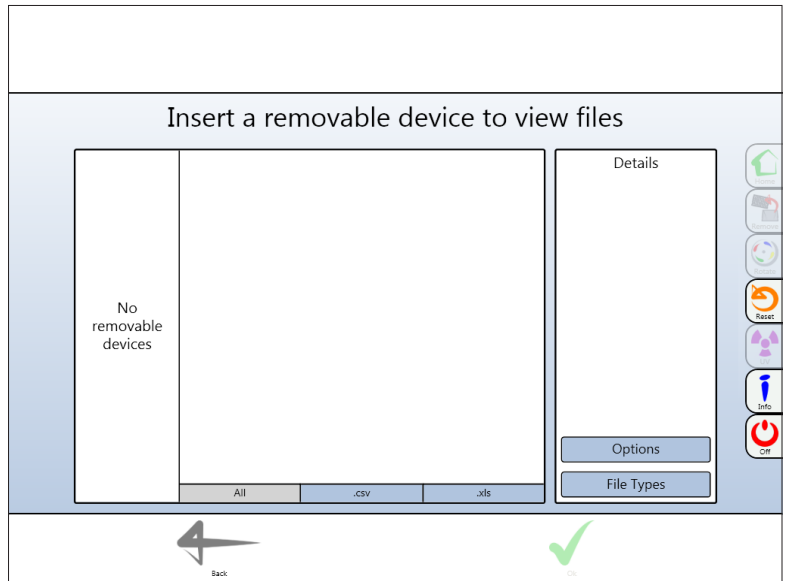
- On the *Stinger Home Screen*, select the *Import Spreadsheet* option.



## SELECTING & RUNNING FILES

4

This screen will appear if no USB memory stick is inserted. Insert your USB memory stick now.

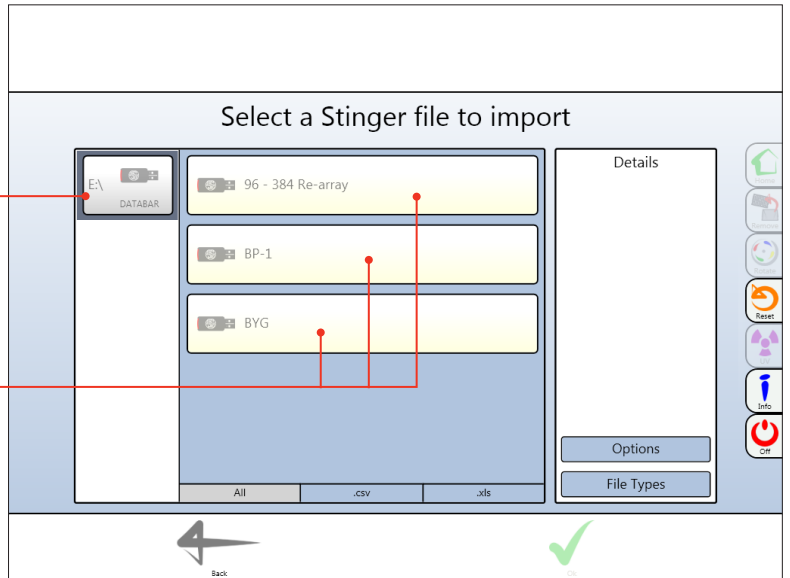


5

Once your USB memory stick has been inserted, all .csv files in the root directory are displayed.

Memory stick

Files available

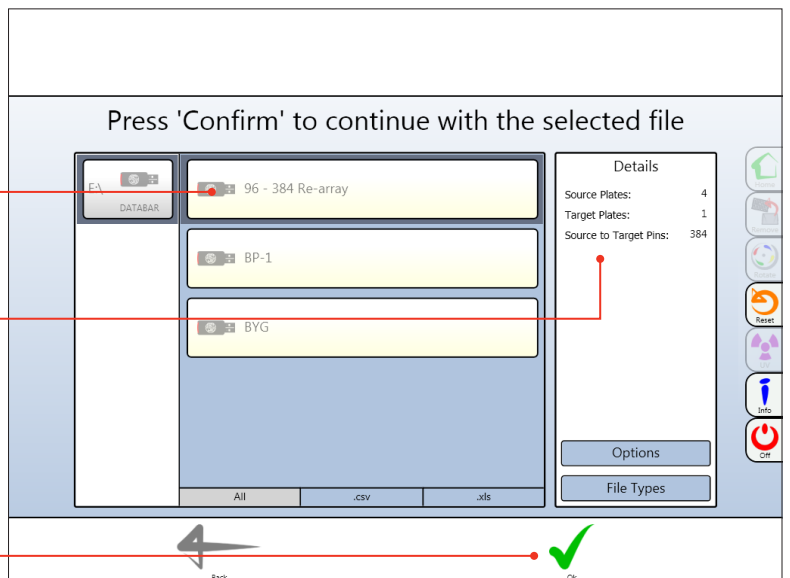


6

Select your desired file from the list.

Details of the file are displayed on the right.

Select *OK* to run chosen file.

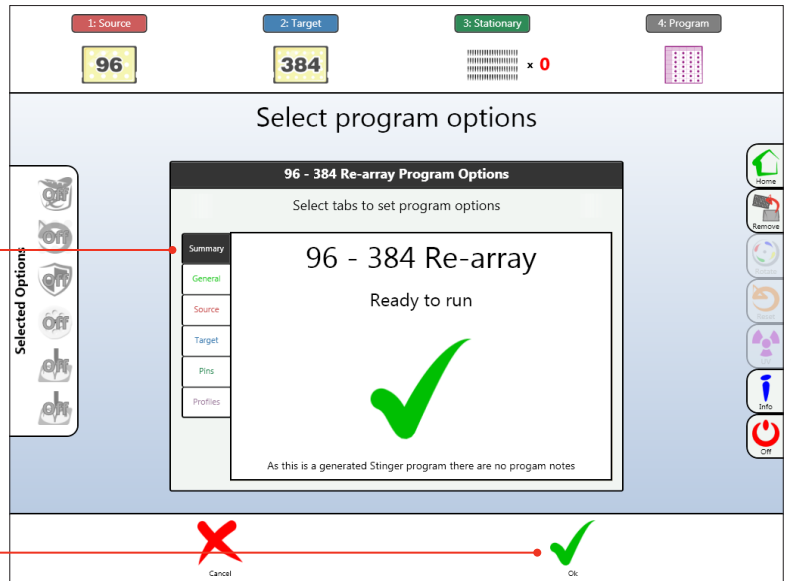




7

- The final confirmation screen will appear. Click on tabs to change advanced options if necessary.

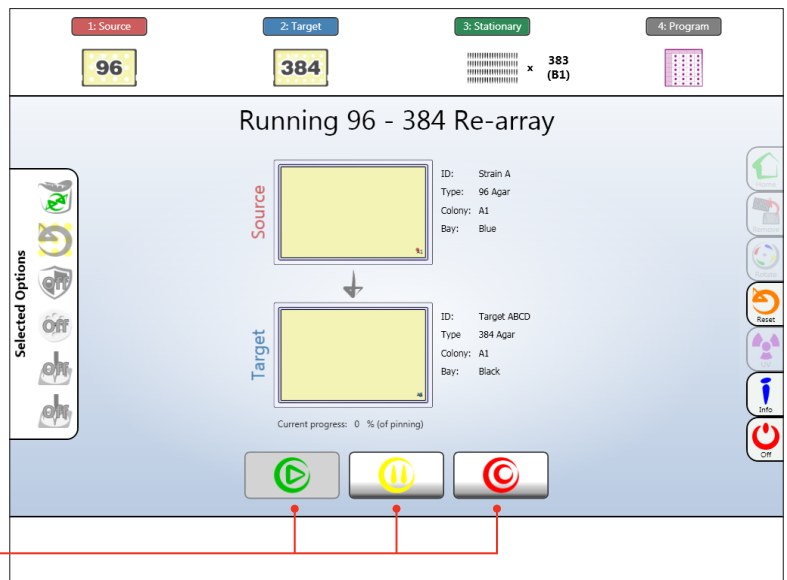
- Select *OK* to start program.



8

- Live program information will be updated throughout the operation.

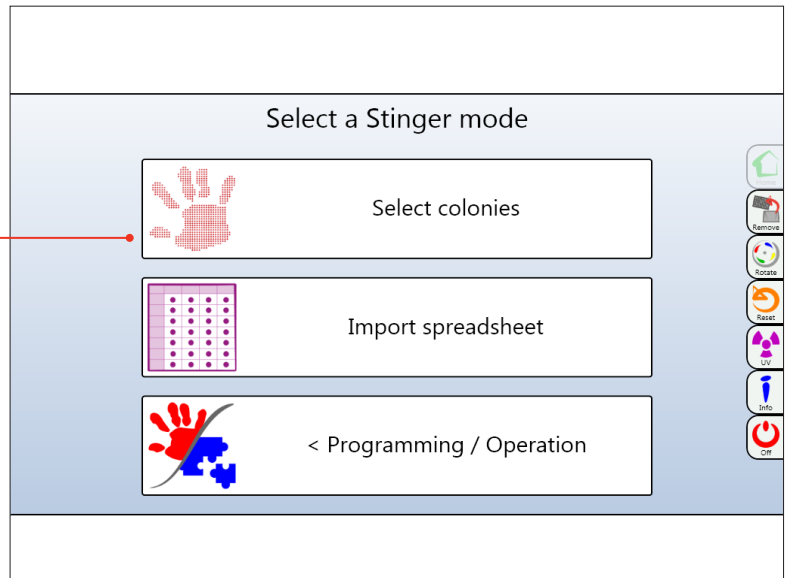
- Program: resume, pause, stop / abort.



## SELECTING MANUAL MODE

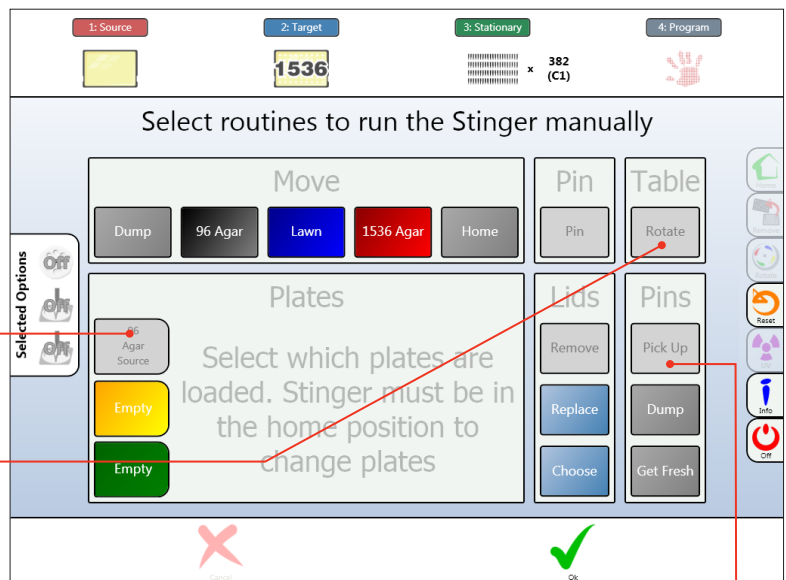
1

- To run The Stinger in manual mode, return to the *Stinger Home Screen* and choose the *Select Colonies* option.

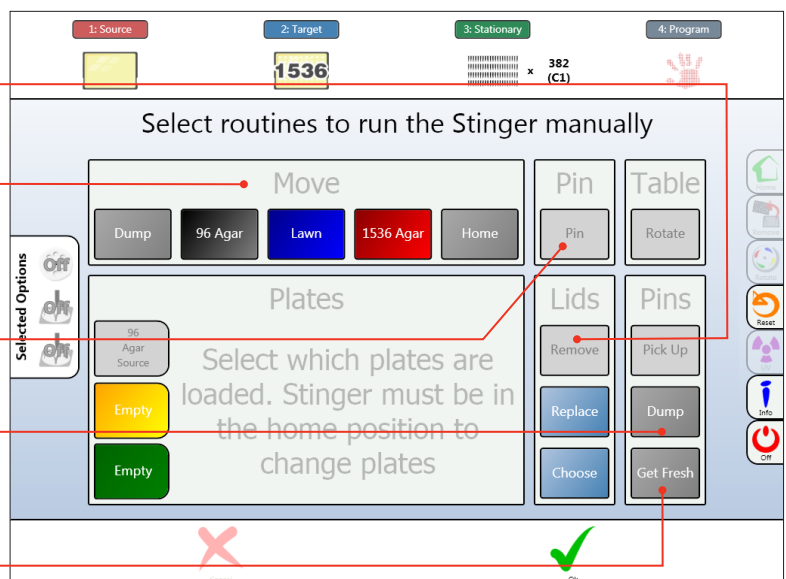


2

- This is the *Manual Control Panel*. Here you can manually control all of the functions of the ROTOR HDA.
- You can assign your plate types to the empty bays using the *Colour Coded Buttons* on the left.
- Rotate the ROTOR HDA turntable using the *Rotate Button*.
- Once the plates have been assigned, select *Pick Up* to grab a sterile pin.

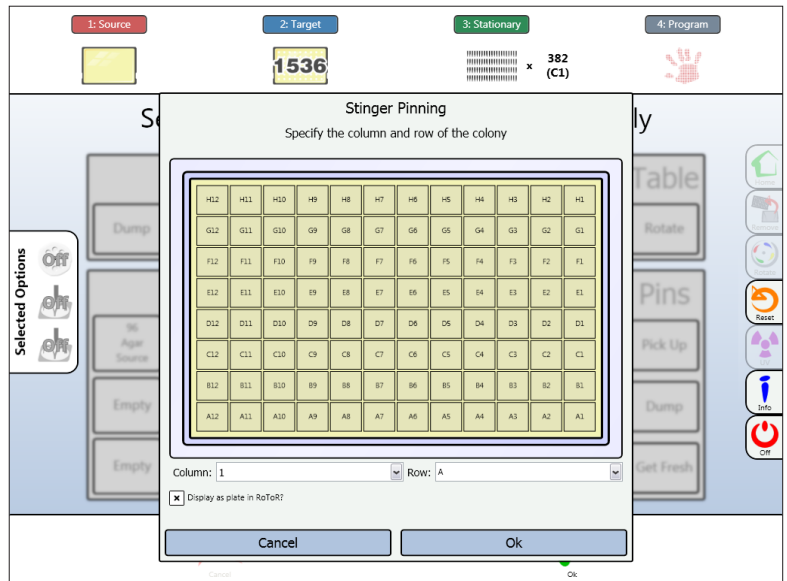


- Select *Remove* to remove the plate lids.
- Move The Stinger over your desired plate using the *Move* menu. Here you'll find the plates that are ready for pinning.
- Once your desired plate is chosen, select *Pin*.
- Discard spent pin using the *Dump* Button.
- Get a new pin by choosing *Get Fresh*.



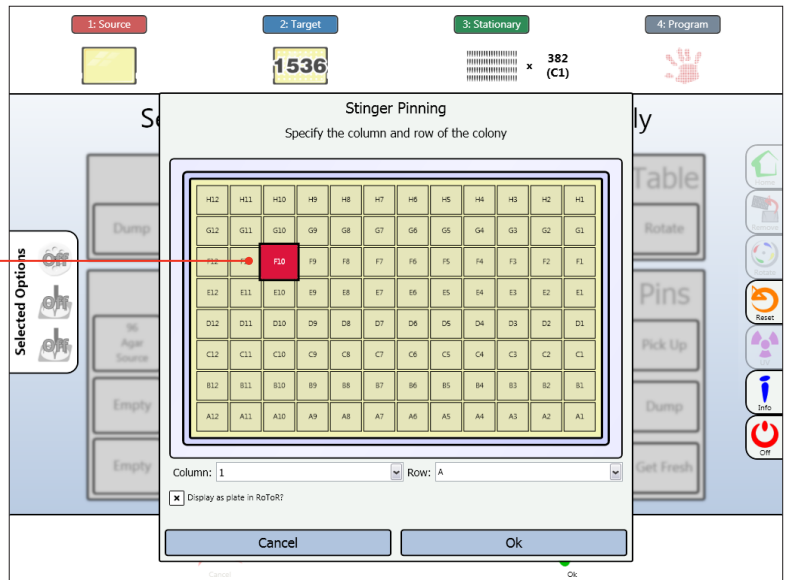
1

After selecting *Pin*, a grid of the chosen plate will be displayed. This example shows a 96-density plate.



2

Use the touch screen to select the colony location.

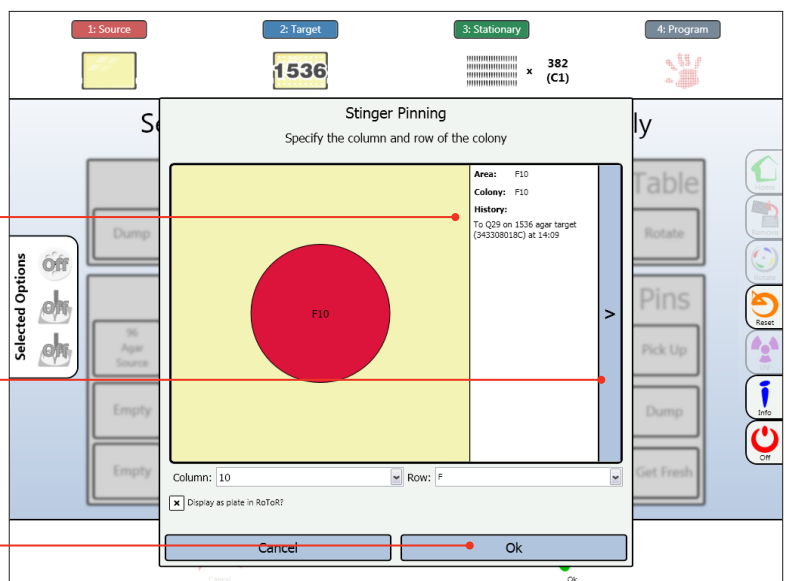


3

This page shows the pinning history of the chosen colony.

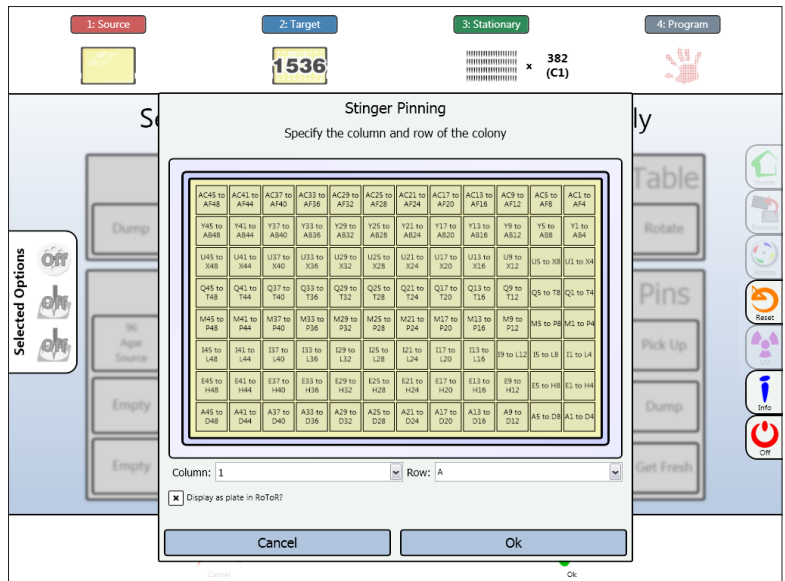
Use the *Blue Tab* on the right to return to the colony grid.

Select *OK* to pin.



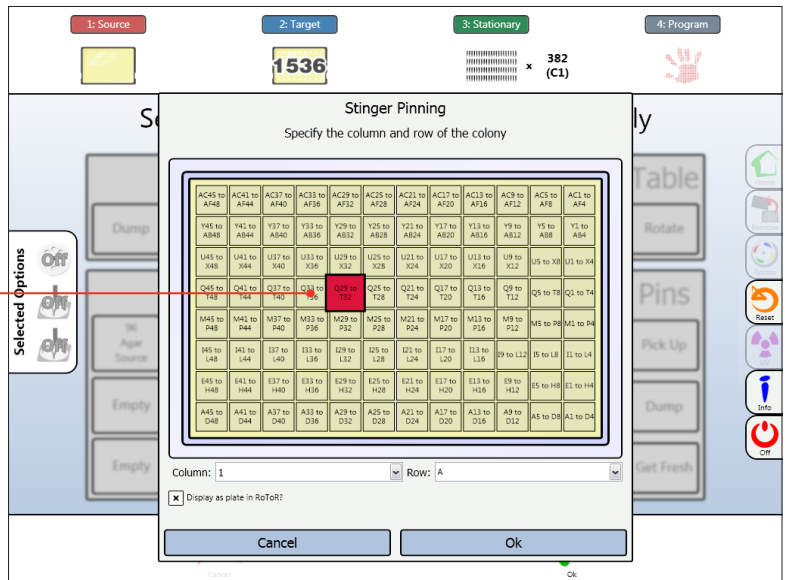
1

On the *Manual Control Panel*, we have selected a 1536-density plate to pin. Again, you will be asked to specify the grid reference of your chosen colony. As the density is much higher, the grid spaces contain quadrants of 16 colonies.



2

Select the quadrant that contains your desired colony.



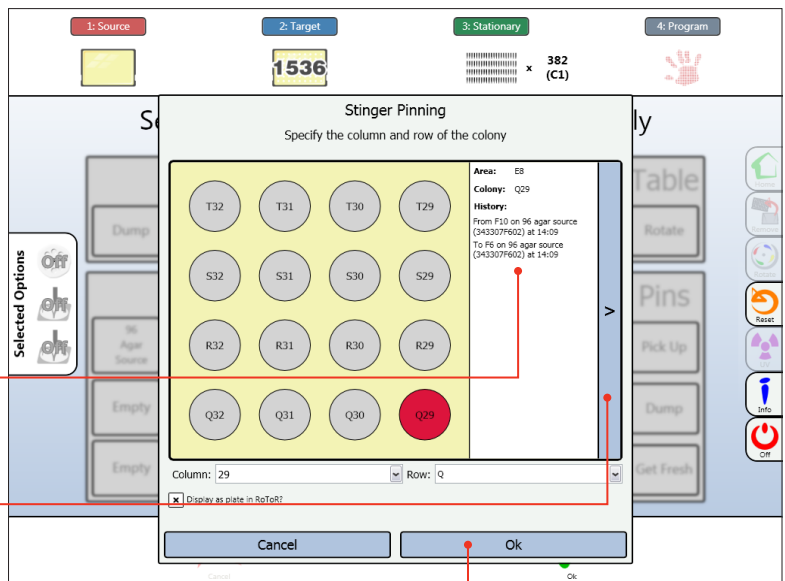
3

This screen shows all 16 colonies within the selected quadrant. Select the correct colony for pinning.

The pinning history of the selected colony is displayed on the right.

Use the *Blue Tab* on the right to return to the colony grid.

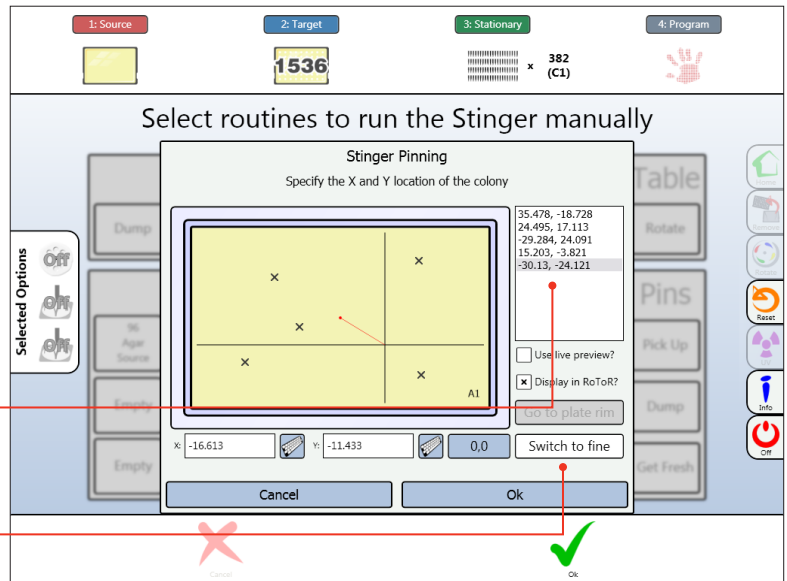
Select *OK* to pin.



## LAWN / BATH PINNING

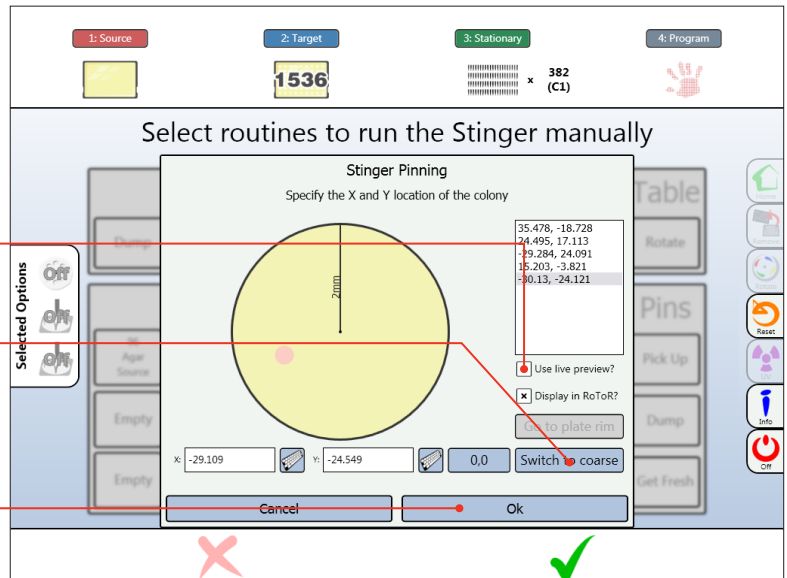
1

- On the *Manual Control Panel*, we have now selected a lawn plate to pin. Unlike the previous two examples, there are no grid references for the lawn plate. Select the location of your colony using the touch screen.
- Previously pinned locations are listed on the right and also marked with crosses on the plate.
- The screen is currently in *Coarse Mode*. For more precise control, select *Switch To Fine*.



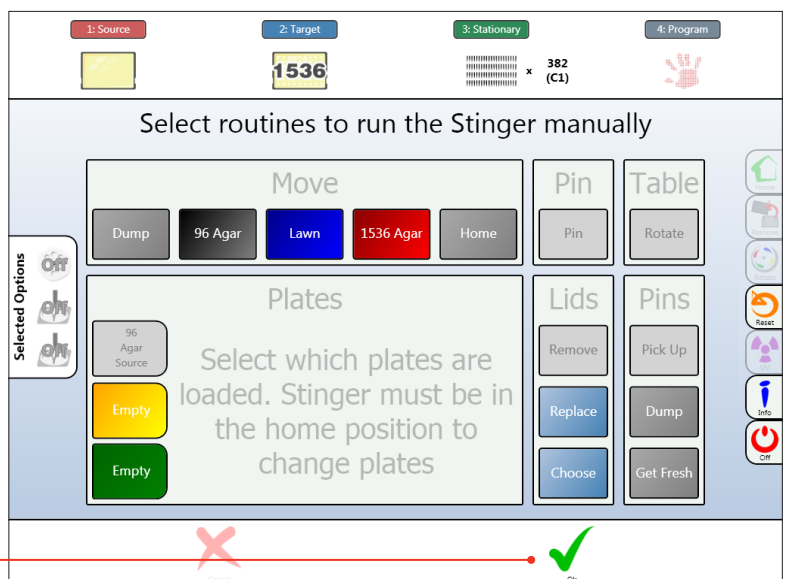
2

- After selecting *Switch To Fine* the screen zooms in on your current location. Selecting *Live Preview* will move The Stinger as you move on screen.
- To zoom out select *Switch To Coarse*.
- If the colony is correctly located, select *OK* to pin.



3

- When you have finished running The Stinger manually, select *OK* to exit.









# SINGER INSTRUMENTS

A RESPONSIBILITY TO SCIENCE!

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