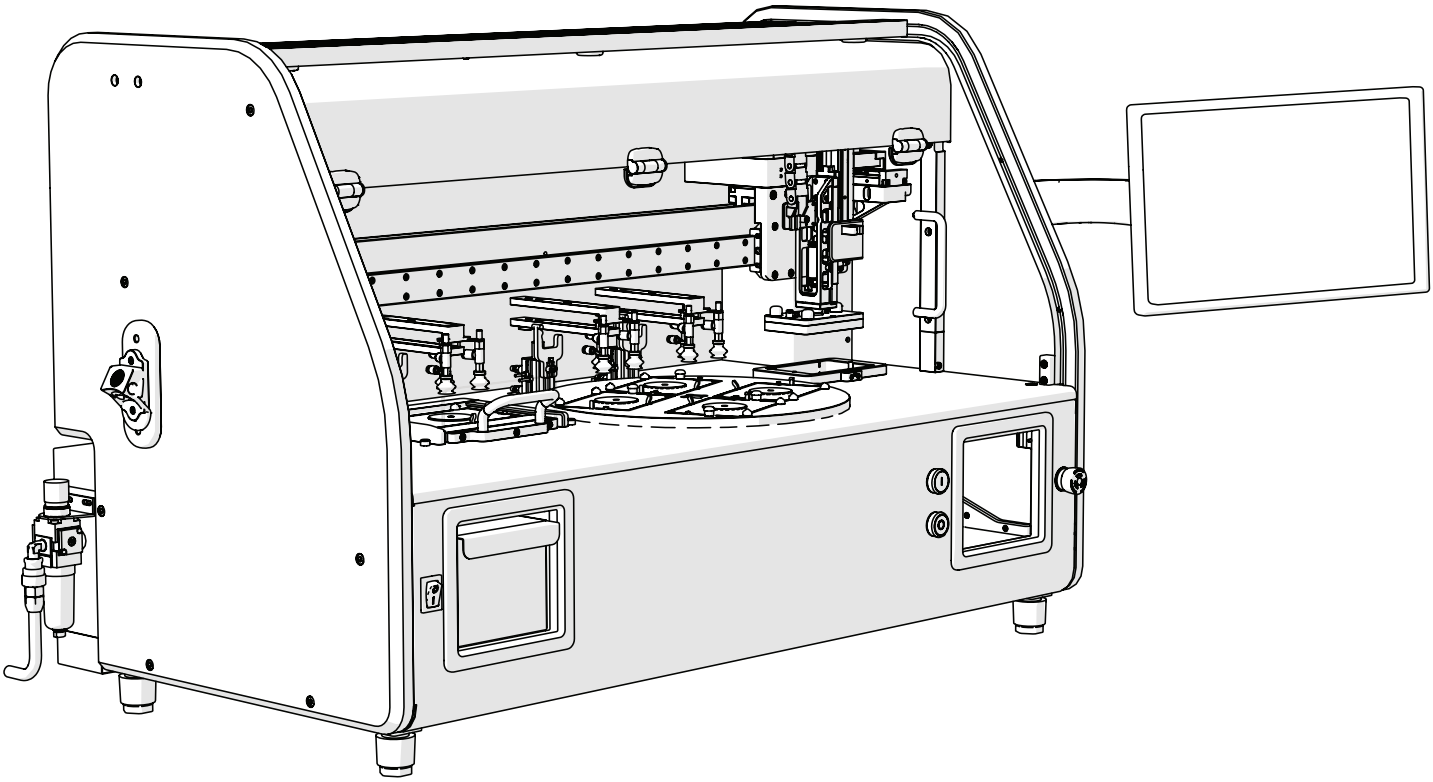
SINGER INSTRUMENTS
A RESPONSIBILITY TO SCIENCE!

ROTOR+™

QUICK START GUIDE
v1.6



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.
- Keep transit hardware in a safe place. These will be required should the ROTOR+ require moving.
- During Pad 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+.
- Always turn power OFF before changing heads. Leaving the power on can cause a hardware crash. Ensure you follow on-screen instructions when changing heads.

For more support resources visit
bit.ly/ROTORhelp

ROTOR+™

The ROTOR+ is a compact benchtop robot for easy, ultra-fast manipulation of high-density arrays of yeast, other fungi and bacteria. Reagent sets such as deletion mutant collections and the complete set of cloned yeast genes can be utilised for high-throughput screens; large-scale 2-hybrid, synthetic genetic array, phenotypic and chemical-genetic analysis. The ROTOR+ uses plastic replica plating pads (RePads™) and supports liquid pinning to and from 96 and 384-well microtitre plates and agar pinning at densities of 96, 192, 384, 768, 1536 and 6144.

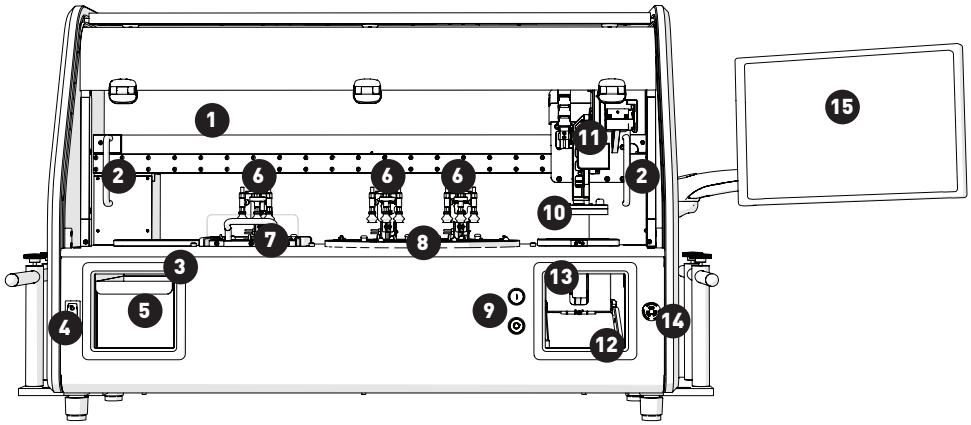
The information in this guide relates to software version: 5.22.0805.1

FULL USER GUIDE AVAILABLE HERE

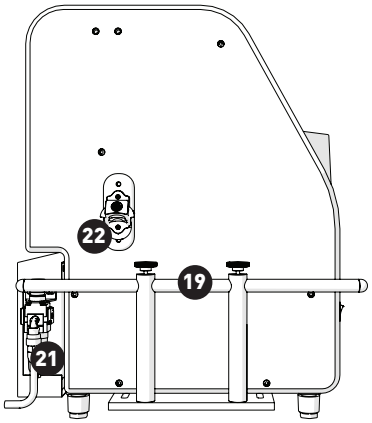
bit.ly/ROTORhelp

ANATOMY

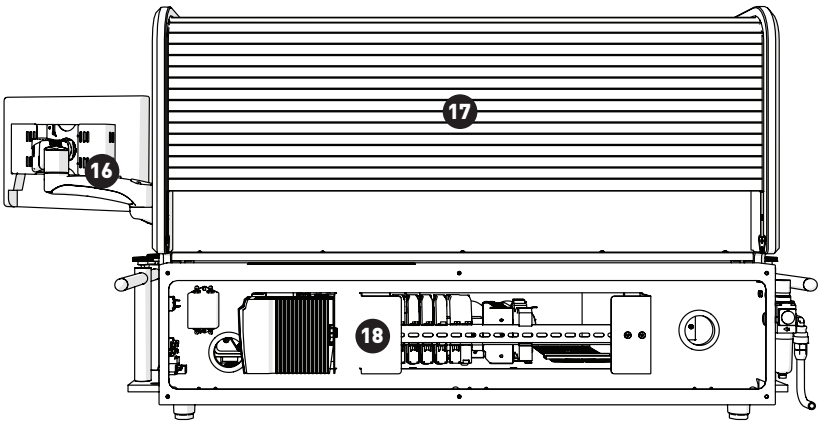
FRONT



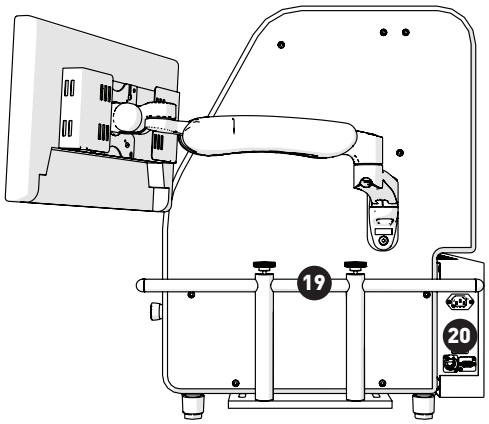
LEFT



BACK

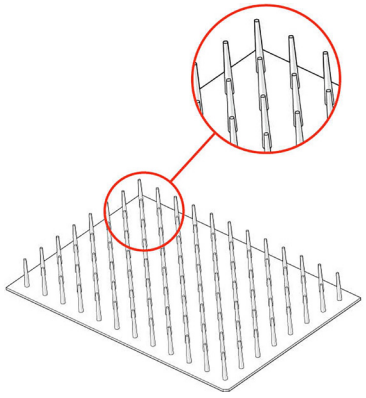


RIGHT

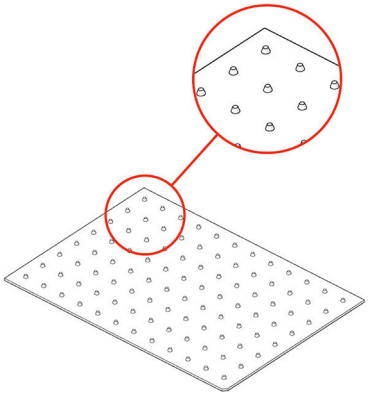


1. Protective Screen
2. Screen Handles
3. Dump Zone
4. Power Switch
5. Dump Drawer
6. Lid Lifters
7. Black Bay
8. Turntable
9. Fast Buttons
10. Pad Head
11. Carriage Arm
12. Hopper Loading Bay
13. Pad Hopper
14. Emergency Stop
15. MCI Touch Screen
16. MCI Mounting Arm
17. UV Decontamination Cover
18. Control Panel
19. Transit Brackets*
20. Power Socket
21. Air Line Connection
22. Bottle Opener

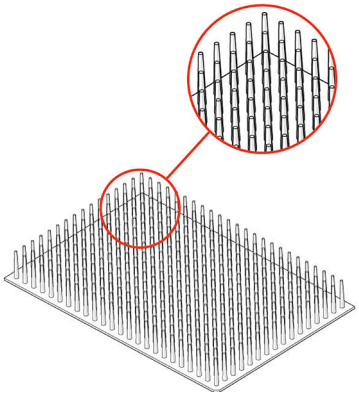
*Ensure to keep transit Brackets in a safe place should the ROTOR+ ever require moving.



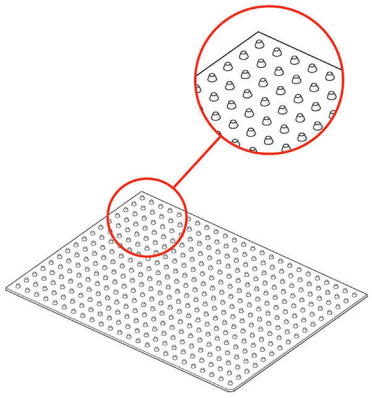
96 LONG
MEDIA: Solid agar, Liquid
PINNING DENSITIES: 96, 192, 384, 1536



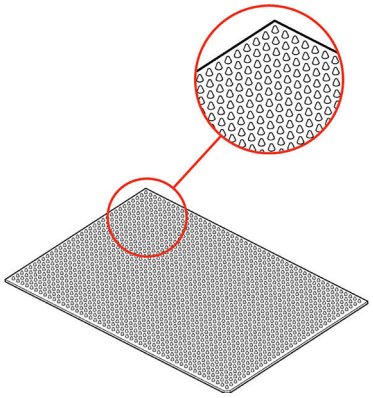
96 SHORT
MEDIA: Solid agar
PINNING DENSITIES: 96, 192, 384, 1536



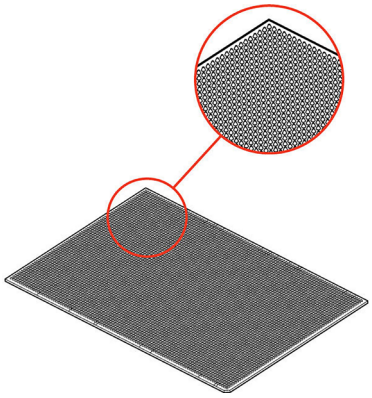
384 LONG
MEDIA: Solid agar, Liquid
PINNING DENSITIES: 384, 768, 1536, 6144



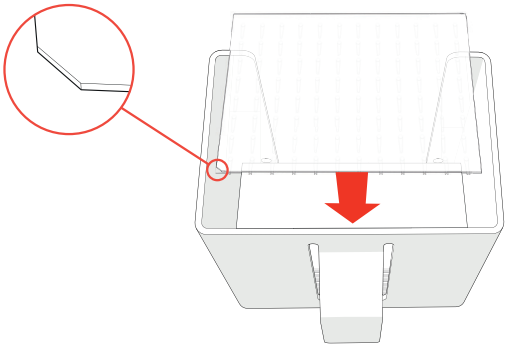
384 SHORT
MEDIA: Solid agar
PINNING DENSITIES: 384, 768, 1536, 6144



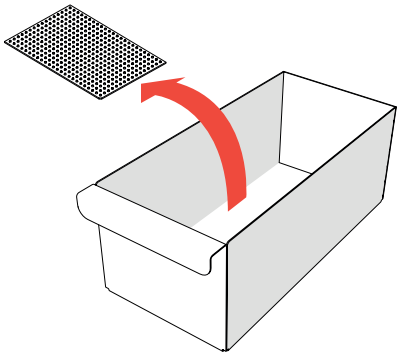
1536 SHORT
MEDIA: Solid agar
PINNING DENSITIES: 1536, 3072, 6144, 24567



6144 SHORT
MEDIA: Solid agar, Liquid
PINNING DENSITIES: 6144, 12288, 24567



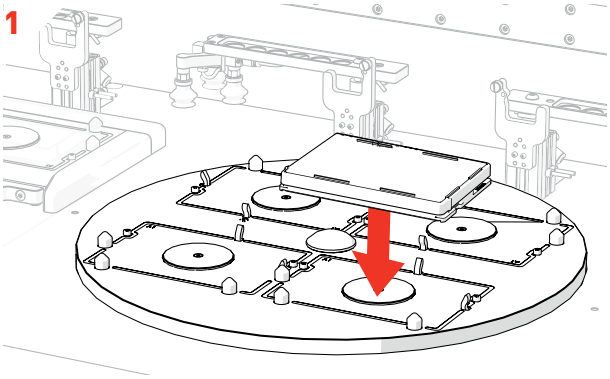
PAD HOPPER
- Load your RePads™ (pins facing down) into the Hopper as shown. The Pad Hopper is fully autoclavable.
- You will be instructed on-screen when to load your RePads.



DUMP DRAWER
- Used RePads™ are dropped into the Dump Drawer. When a program is finished, it can be removed to dispose of the used RePads™. The Dump Drawer is fully autoclavable.
- New RePads can be purchased from our online shop: singerinstruments.com/shop

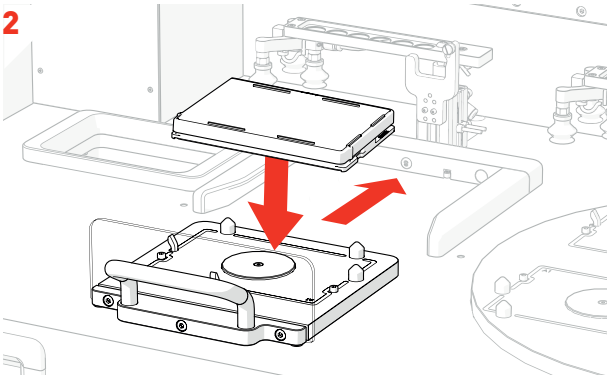
MECHANICAL OVERVIEW

1



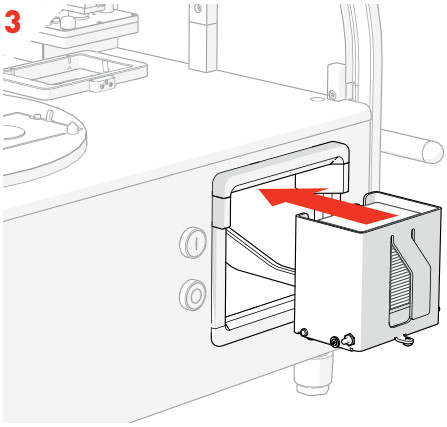
- Plates are loaded (lids on) into the Turntable.
- The front two plates are loaded first. The turntable will rotate to allow you to load two more plates.
- Plates will sit loose in the bays until the program starts. The plates will then be gripped securely in place.

2



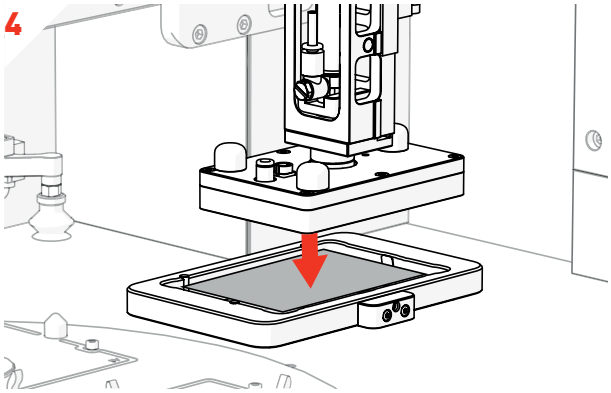
- A plate can also be loaded (lid on) into the Black Bay. This gives the ROTOR+ a 5 plate capacity. The turntable can rotate throughout the program allowing you to swap in new plates, creating a limitless capacity.
- Plate bays are colour coded and the software will tell you where to correctly load your plates.

3



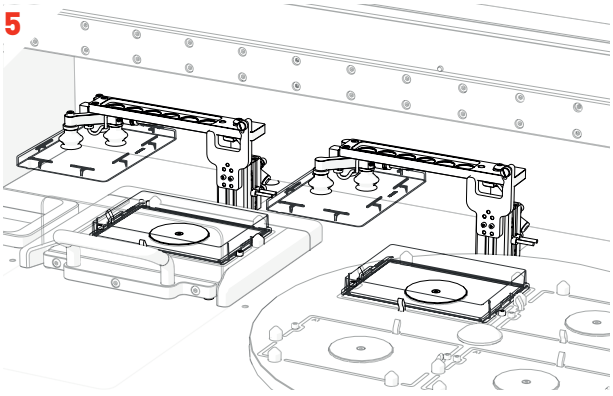
- RePads are loaded (pins facing down) into the Pad Hopper. RePads come in a variety of densities and are used to transfer strains from Source Plates to Target Plates.

4



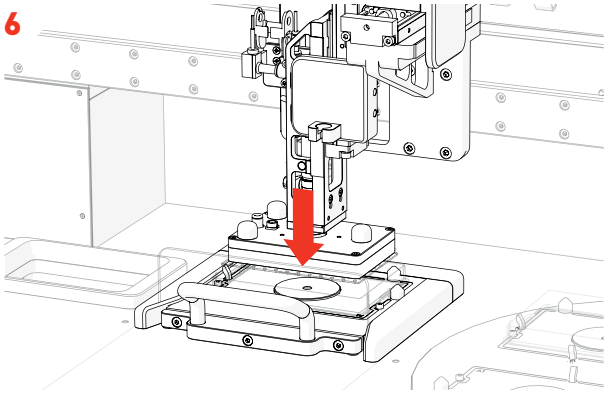
- The Pad Head lowers and picks up a RePad.

5



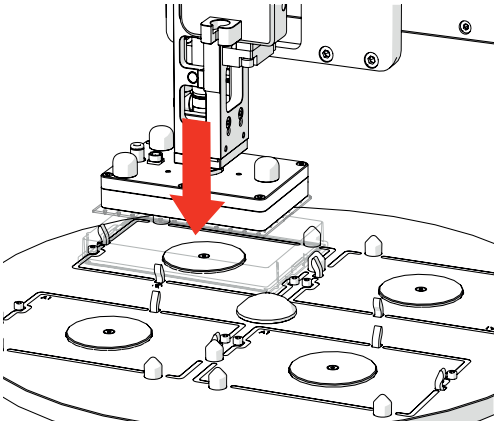
- Plate lids are automatically removed from the plates ready for pinning.

6



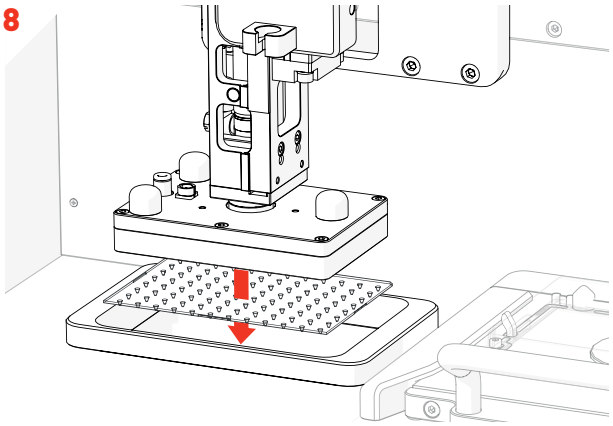
- The Pad Head moves to the Source Plate, lowers and collects a sample of cells.

7



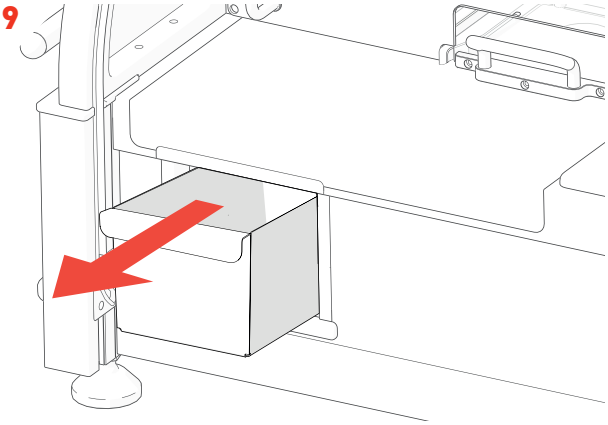
· The Pad Head moves to a Target Plate and deposits the sample of cells.

8



· The Pad Head moves to the Dump Zone and drops the used RePad.
· These steps will be repeated until your chosen program is finished.
· The software will guide you through any necessary plate swapping throughout the program.

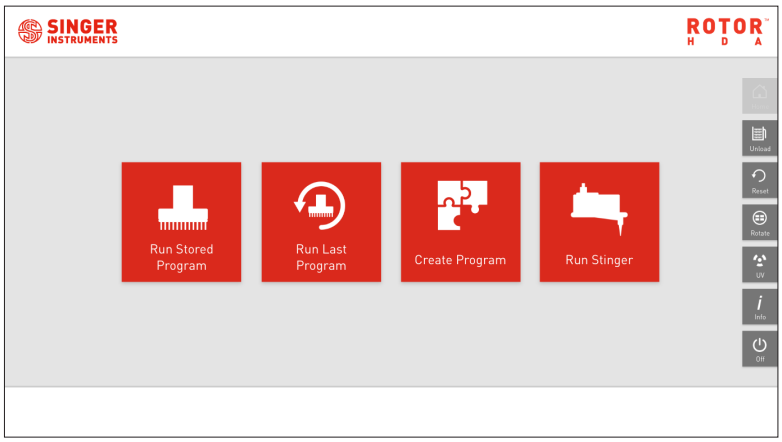
9



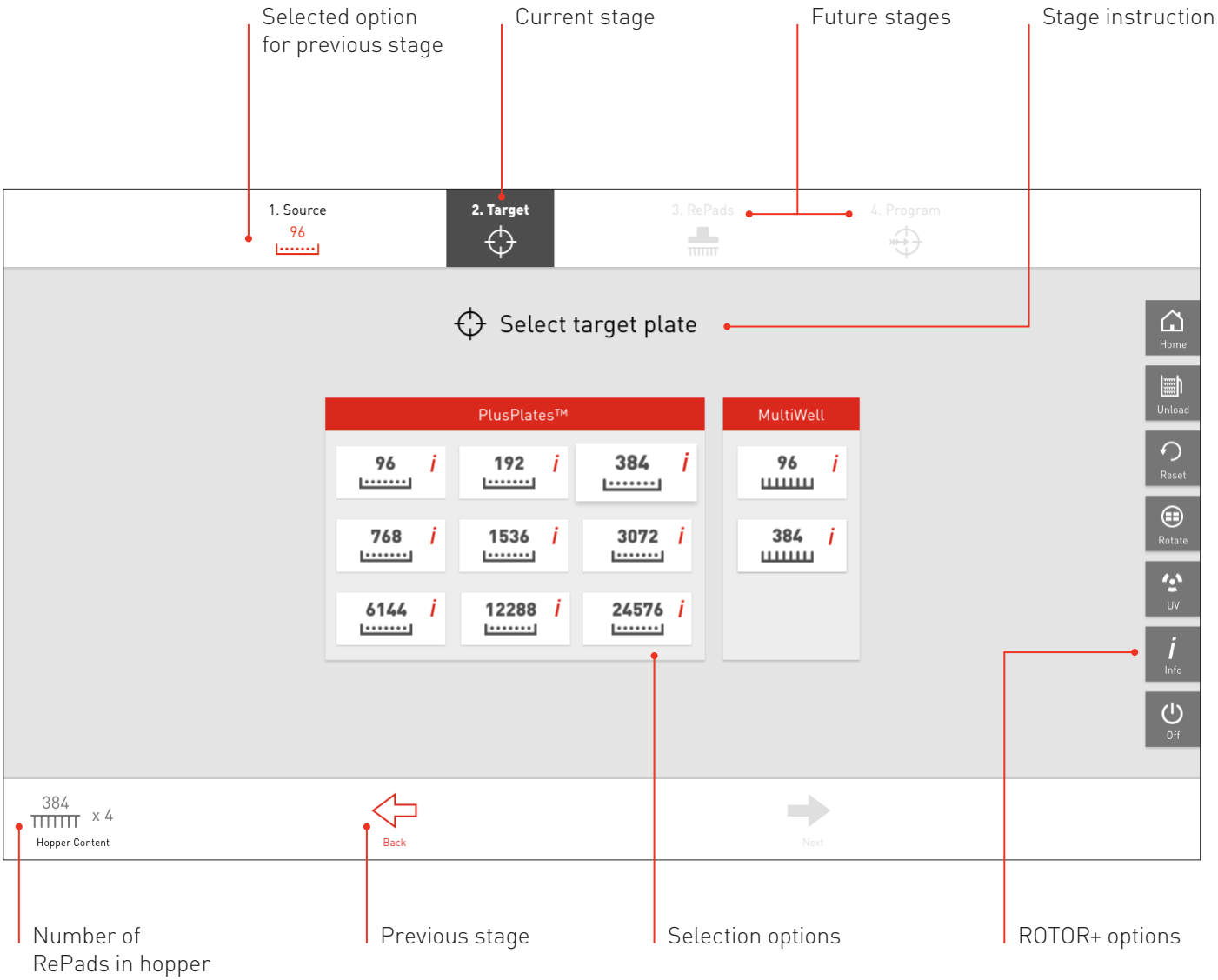
· Used RePads are collected in the autoclavable Dump Drawer ready to be disposed of when you're finished.

HOME SCREEN

- There are four main options on the ROTOR+ Home Menu:
- **Run Stored Program** - Select your plate types and choose from a list of compatible ROTOR+ programs.
- **Run Last Program** - Run the last program performed.
- **Create Program** - Create a new ROTOR+ program.
- **Run Stinger** - If you have a Stinger add-on for the ROTOR+, you can run single colony picking programs from here.



PROGRAM SCREEN

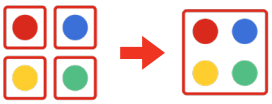


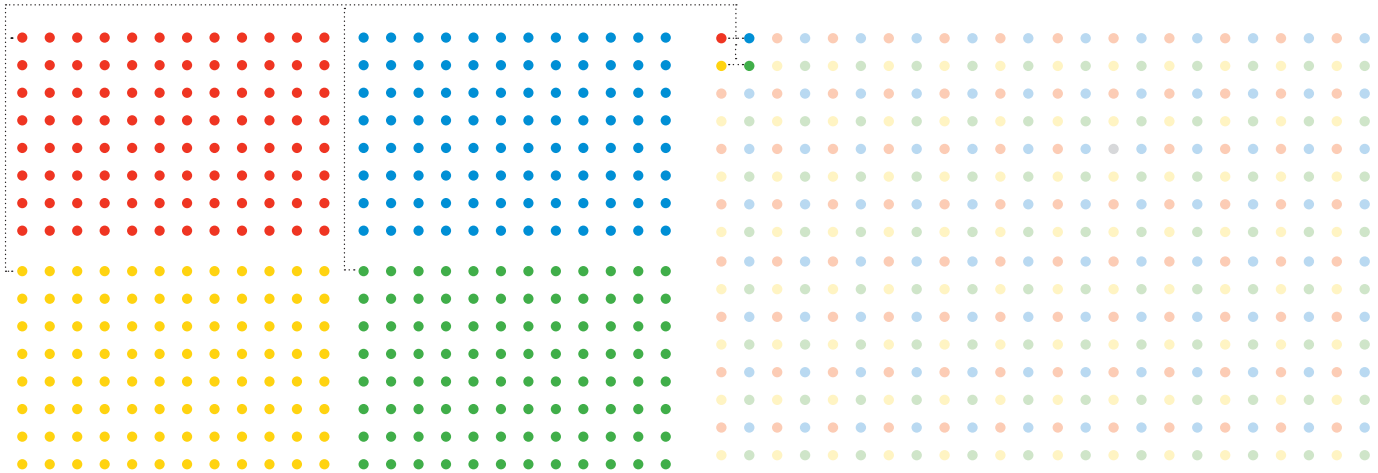
PINNING EXAMPLES

1

1:4 ARRAY

· 4x 96-density plates are combined onto 1x 384-density plate.

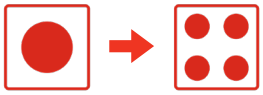


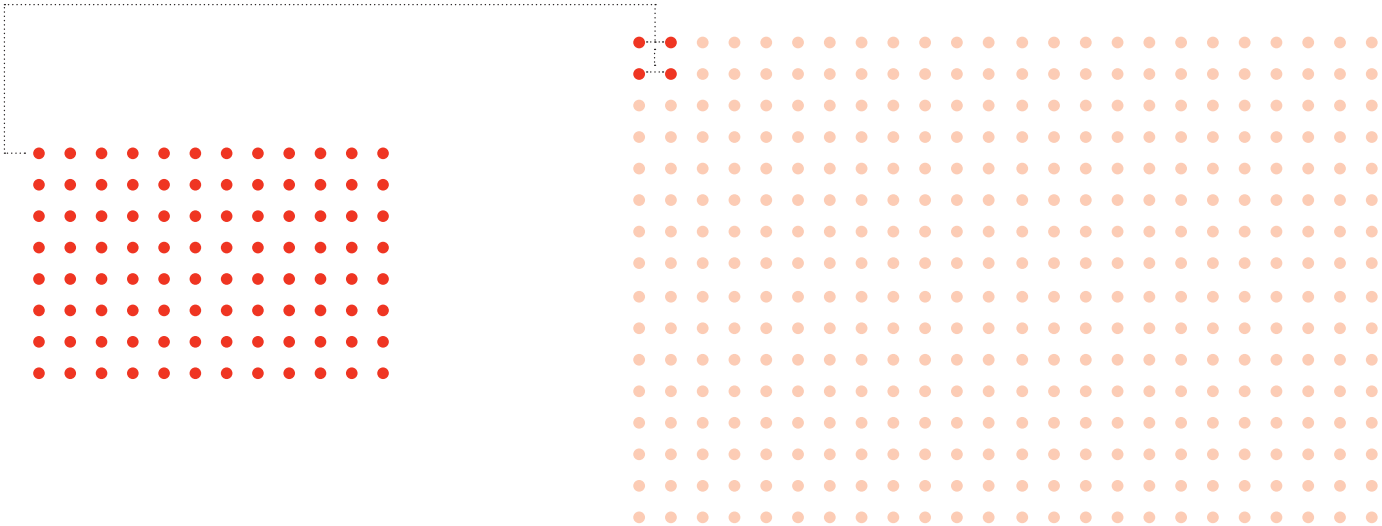


2

1:4 SINGLE SOURCE

· Each colony from a 1x 96-density plate replicated in quadruplicate to a 1x 384- density plate. These protocols can be applied at all pinning densities.



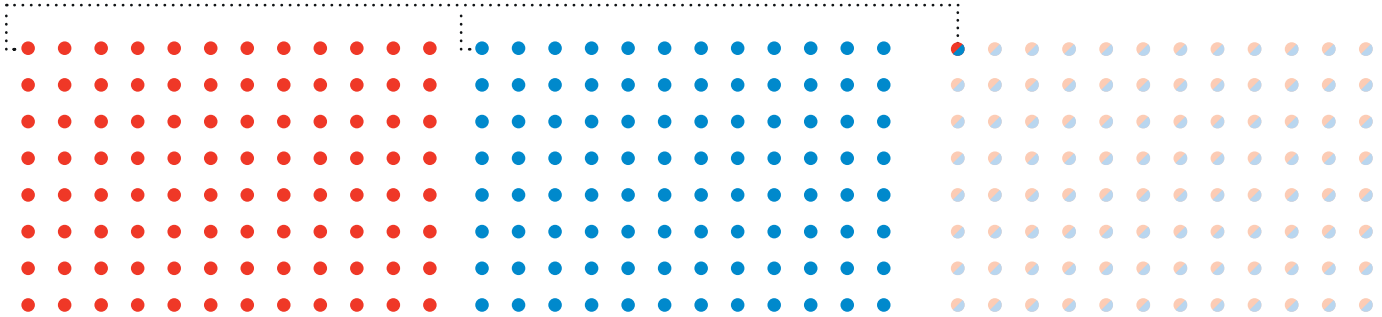


PINNING EXAMPLES

3

MATE

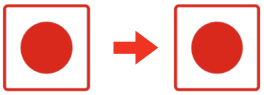
· 2x 96-density plates are mated onto 1x 96-density plate.

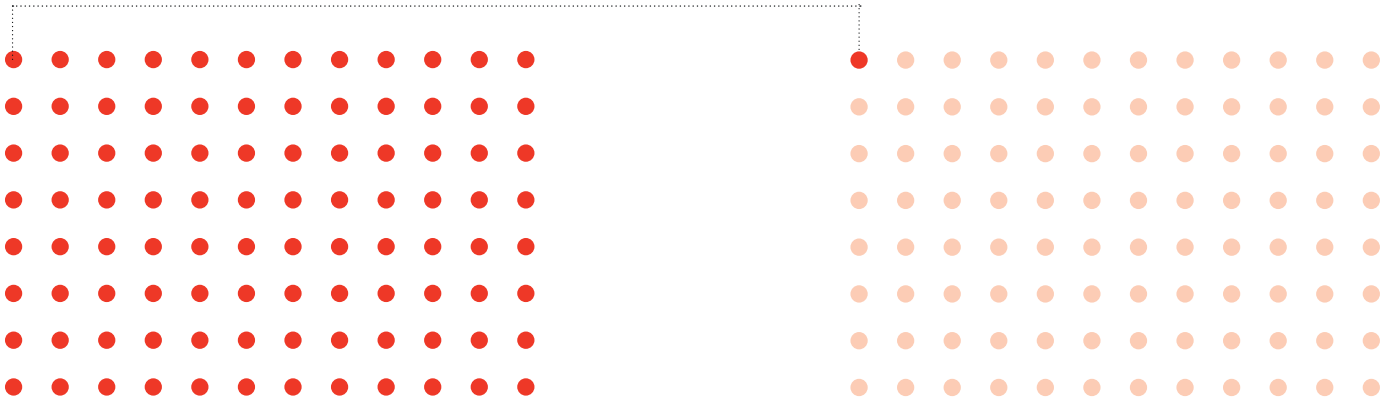


4

REPLICATE

· 1x 96-density plate is replicated onto 1x 96-density plate.

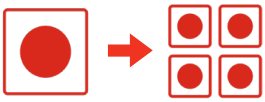


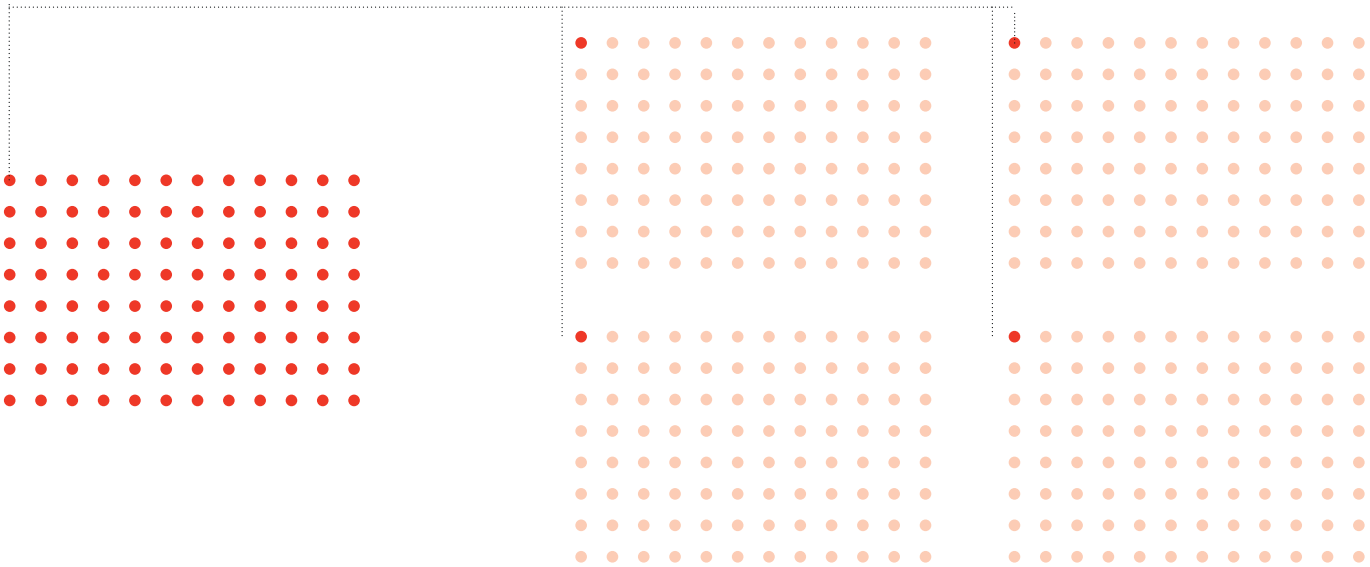


5

REPLICATE MANY

· 1x 96-density plate is replicated onto 4x 96-density plates.



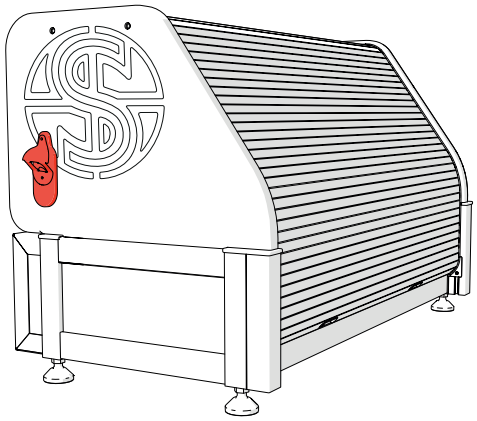


POST-EXPERIMENTAL PROCEDURE

1

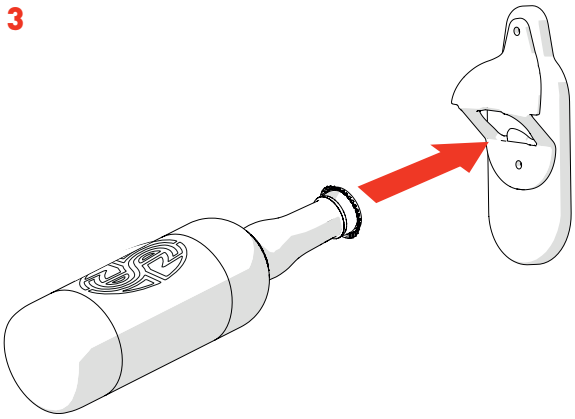
· Select a **Delicious Beverage.**

2



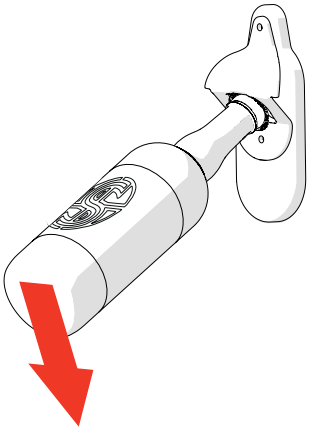
· Locate the Bottle Opener on your ROTOR+.

3



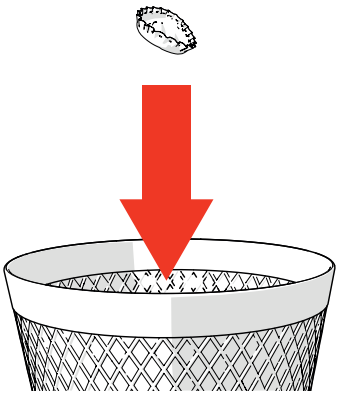
· Insert the Bottle into the Bottle Opener.

4



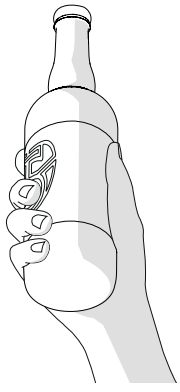
· Lever the Bottle to remove the Bottle Cap

5



· Place the Bottle Cap in the Bin. Nobody likes a litter bug!

6



· Success! Time to enjoy your Delicious Beverage - you've earned it!
· Repeat steps 1-6 until suitably relaxed.

SINGER INSTRUMENTS

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SCAN TO VISIT WEBSITE FOR MORE HELPFUL TIPS AND TUTORIALS!

/SingerInstruments

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 these original instructions, including all specifications are subject to change without notice.