

Chromium Connect: Instructions for Bypassing Consumable Scanning

Introduction

The Chromium Connect System is a fully-integrated automated system for running 10x Genomics workflows with minimal user interaction. An integrated Barcode Scanner reads the barcode labels on consumables before each run, ensuring that correct items are used.

Barcode scanning may fail in certain instances, such as when the barcode label is damaged or when the scanner is not functioning correctly. In such instances, the user **may choose to proceed** with the run after manually confirming that the correct items are loaded on the instrument deck. This Technical Note provides guidance about bypassing consumable barcode scanning.

Guidelines for Bypassing Consumable Scanning

Consult the Chromium Connect user interface and the relevant user guides to understand the instrument deck layout (Figure 1) and follow these guidelines for bypassing consumable scanning:

- **Verify consumables:** Visually inspect the consumables, labels, and packages to verify that the correct item/part number is being loaded.
- **Verify loading location:** Confirm that the correct consumable is loaded on the correct deck location as specified on the instrument user interface and the relevant user guide (Figure 1).
- Record and photograph the consumables that were not scanned by Chromium Connect and share the information with support@10xgenomics.com.

Bypassing Consumable Scanning

When the Chromium Connect instrument encounters a "BAD READ" (scan fail), the option to bypass a scan is presented as "CONTINUE" on the user interface. See the [Appendix](#) for additional details.

Follow the instructions provided below for bypassing consumable scanning for the indicated carriers (Figure 1).

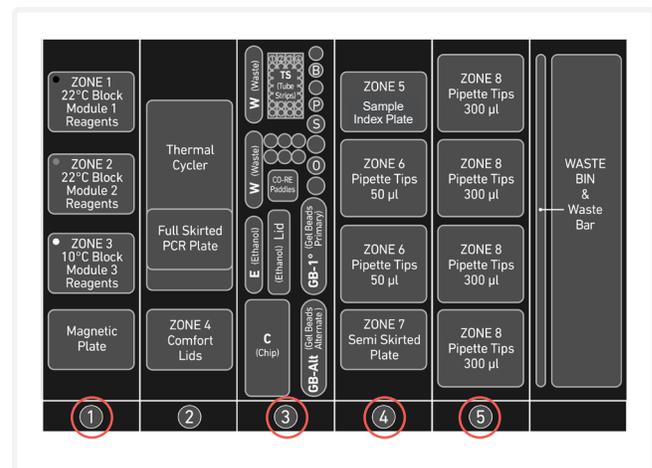


Figure 1. Chromium Connect deck layout. Carriers 1, 3, 4, and 5 are highlighted.

Carrier 1 (zones 1, 2 & 3)

To bypass barcode scanning for Carrier 1 (zones 1-3):

- Verify that Module 1 reagent tube strips are loaded into Zone 1 (black).
- Verify that Module 2 reagent tube strips are loaded into Zone 2 (gray).
- Verify that Module 3 reagent strips are loaded into Zone 3 (white).

- Verify the correct number of tube strips are loaded based on the number of samples being run.
- If running fewer than 8 samples, verify that the module reagent strips are loaded starting in position 1, backmost in each Zone, as highlighted in Figure 2.

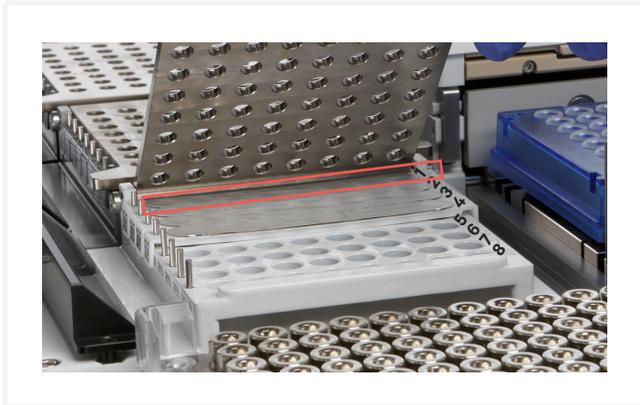


Figure 2. Start loading module reagent strips in each zone of Carrier 1 from the backmost position 1.

- Select SCAN → CONTINUE → CONFIRM on the instrument user interface.
- If “Wrong Part Number” is encountered or “CONTINUE” button is not displayed, see the Appendix.

Carrier 3

To bypass barcode scanning for Carrier 3:

- Verify the proper loading location of all consumables, including those not scanned. This includes the:
 - Dynabeads™ MyOne™ SILANE tube in position B
 - Primer in position P (i.e., Template Switch Oligo or poly-dT RT Primer)
 - 50% Glycerol in position S
 - Partitioning Oil in position O
 - Gel Beads in positions GB-1° and optionally GB-Alt
- Verify the Gel Beads are positioned so that available Gel Bead wells correspond to those selected by the user during the step “Gel Bead Select.”

- Select SCAN → CONTINUE → CONFIRM on the instrument user interface.
- If the user interface shows “Wrong Part Number” or does not show the “CONTINUE” button, see the Appendix.

Carrier 4

To bypass barcode scanning for Carrier 4:

- Verify the proper number of full 50 µl pipette tip racks are loaded on the deck (barcodes to the right).
- Verify the Sample Index Plate name and part number are as indicated for the run setup. Ensure that the plate is loaded in Zone 5 in the proper orientation before the run (barcode to the right). Confirm that the plate is loaded correctly by actuating the clip lever when placing the plate into position and check that the plate cannot wiggle side to side and front to back. If the plate moves, it is not secured under the clip.
- Select SCAN → CONTINUE → CONFIRM on the instrument user interface.
- If the user interface shows “Wrong Part Number” or does not show the “CONTINUE” button, see the Appendix.

Carrier 5

To bypass barcode scanning for Carrier 5:

- Verify the proper number of full 300 µl pipette tip racks are loaded on the deck (barcodes to the right).
- Select SCAN → CONTINUE → CONFIRM on the instrument user interface.
- If the user interface shows “Wrong Part Number” or does not show the “CONTINUE” button, see the Appendix.

Appendix

A damaged consumable barcode label may provide a “BAD READ.” No manual intervention by the user is required to continue.

An incorrectly registered barcode may provide a “Wrong Part Number” message (Figure 3). The user will need to conceal the barcode and repeat the scan as per the guidelines below:

- a. Record and photograph the consumable barcode that provides a bad read and share the information with support@10xgenomics.com later.
- b. Verify that the correct consumables are being loaded during the run setup.
- c. To conceal the damaged barcode label (Figure 4), apply an opaque tape over the damaged label of a Sample Index plate, Gel Bead holder barcode, and/or a module strip 2d barcode. To conceal the label on a tube, change the tube orientation in the carrier.
- d. Ensure that all consumables are gently handled to avoid displacing the liquids from the bottoms of the tubes/wells.
- e. If needed, centrifuge briefly (as described in specific user guides) to collect the liquids at the bottoms of the tubes/wells. If the dynabeads are disturbed, vortex briefly followed by pipette mixing (as prepared during deck loading).
- f. With the barcode obscured, and the deck correctly loaded for the run, repeat the carrier scan. Select “OK” or “RETRY,” then “SCAN.”
- g. Scanning with the concealed barcode should result in “BAD READ | Not Read” (Figure 5), allowing the user to proceed with the run by selecting “CONTINUE” and “CONFIRM.”

Examples



Figure 3. A damaged or incorrectly registered barcode may result in “Wrong Part Number” without the option to “CONTINUE.”



Figure 4. A damaged or incorrectly registered barcode concealed by applying a piece of opaque lab tape or by changing the tube orientation.

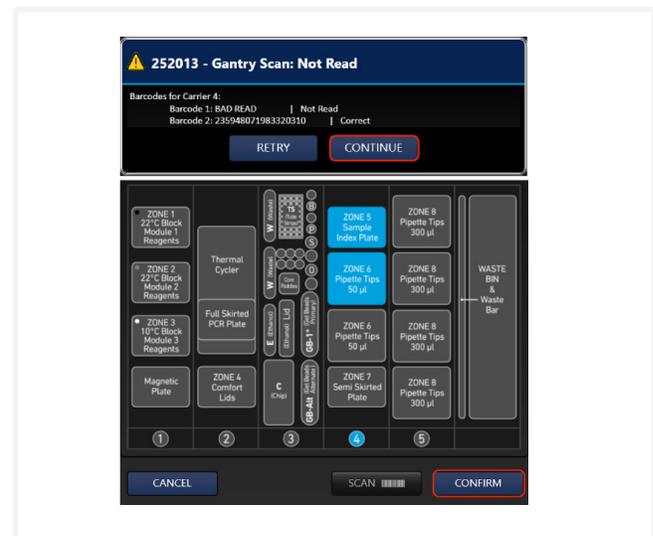


Figure 5. Re-scanning with a concealed label should result in “BAD READ | Not Read,” allowing the user to proceed/bypass further scanning by selecting “CONTINUE” and “CONFIRM.”

Document Revision Summary

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