

CG000256 Rev D

QUICK REFERENCE CARDS

Chromium Connect

FOR USE WITH

Chromium Connect, PN-1000171

Chromium Connect, PN-1000180

- ① Front Panel
- ② Left side of the power base assembly:
 - ⚠️ ① Thermal Cycler Power Supply
 - ② System Power Supply
One or two independent circuits possible
 - ③ Fuses/Fuse covers
(two 12A fuses, two 4A fuses)
- ③ Right side of the power base assembly:
 - ① USB port: external devices
 - ② USB port: optional HEPA CAP hood
 - ③ USB port: Thermal Regulator
 - ④ Ethernet to customer Wired Network
 - ⑤ Power plug: optional HEPA CAP hood
 - ⑥ Power plug: Thermal Regulator



- ④ Touchscreen
USB port on monitor: User External Drive
(download log files/upload setup files)
- ⑤ Gantry (liquid-handling device)
- ⑥ Barcode Scanner
- ⑦ Deck Area
- ⑧ Chromium Automated Controller
- ⑨ Thermal Regulator
(kept on/underneath benchtop)



- ① Main power cable for Thermal Regulator
(plugs into 3f)
- ② USB port
- ③ ID port
- ④ External Sensor port

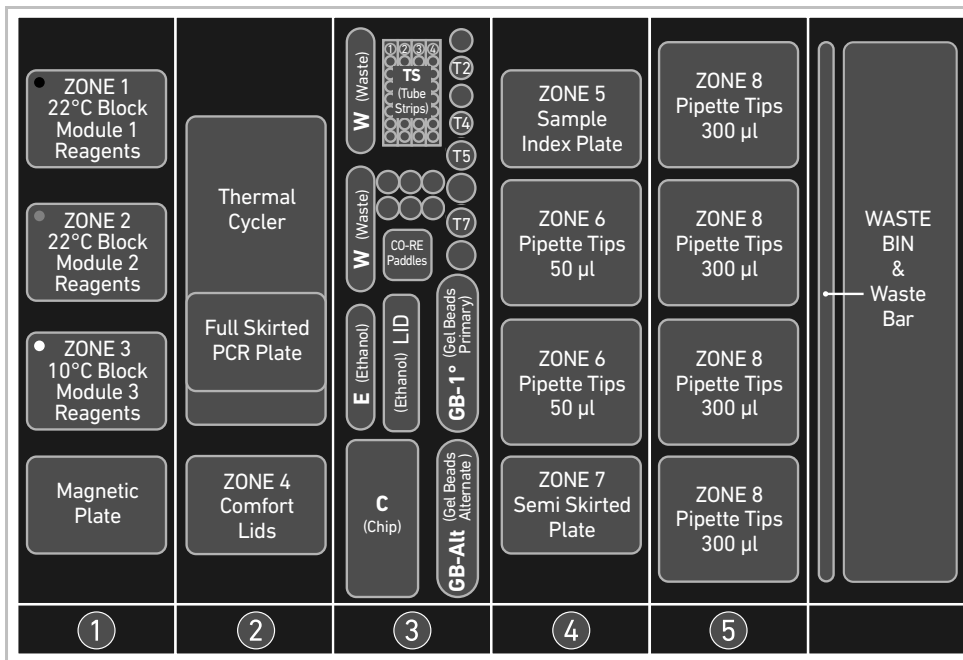
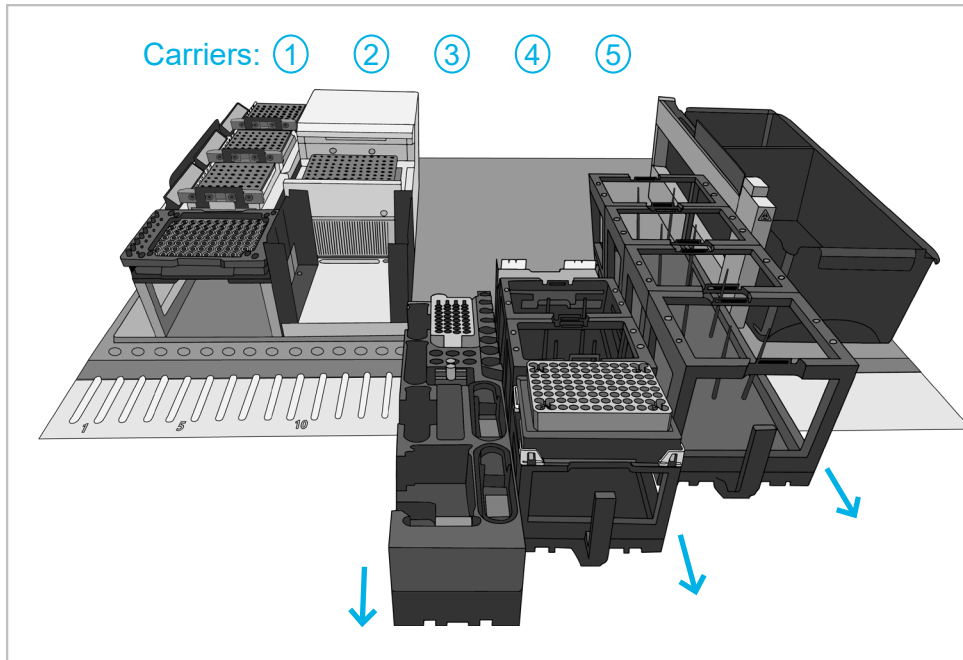
⚠️ REMOVE POWER FROM BOTH AC INLETS PRIOR TO ANY SERVICE ON THERMAL CYCLER OR SYSTEM.

Information also available in
Chromium Connect Instrument User Guide (CG000180)
and in the Software Menu Options.



Deck Area Layout

The deck includes five carriers. Carriers 1-2 are stationary while Carriers 3-5 slide out for loading/unloading items. The items displayed in the layout and table are specific to the assays listed above.



Zone	Item
Carrier 1 <i>Stationary</i>	
ZONE 1	22°C Block, Reagent Strips
ZONE 2	22°C Block, Reagent Strips
ZONE 3	10°C Block, Reagent Strips
-	Magnetic Plate
Carrier 2 <i>Stationary</i>	
-	Thermal Cycler
-	Full Skirted PCR Plate (within Thermal Cycler)
ZONE 4	ComfortLids
Carrier 3 <i>Rails: 15-18, Lights: 4</i>	
W	Waste Reservoir
TS-1 to TS-4	Tube Strips
T2	Dynabeads™ MyOne™ SILANE
T4	Primer
T5	Glycerol
T7	Partitioning Oil
-	CO-RE Paddles
E	Ethanol Reservoir
LID	Lid for Ethanol Reservoir
GB-1°	Gel Beads Primary
GB-Alt	Gel Beads Alternate
C	Chip
Carrier 4 <i>Rails: 19-24, Lights: 6</i>	
ZONE 5	Sample Index Plate
ZONE 6	Pipette Tips 50 µl
ZONE 7	Semi Skirted Plate
Carrier 5 <i>Rails: 25-30, Lights: 6</i>	
ZONE 8	Pipette Tips 300 µl

Chromium Connect Workflow

	Timing
<p>1 > 2 > 3 > 4 > 5</p> <p>Assay Select</p> <p>Setup Input Info</p> <p>Load Consumables, Reagents & Samples</p>	1 h
<p>1 > 2 > 3 > 4 > 5</p> <p>Run Executes assay</p> <p><i>Workflow may include specific and/or optional stopping points, such as:</i></p> <p>Inspection, Quantification, Aliquoting</p>	1.5 - 9 h
<p>1 > 2 > 3 > 4 > 5</p> <p>Complete Final Product QC & Quantification</p> <p>Unload Reagents & Consumables</p>	1 h

Optional Assays

- qPCR Setup
- Pooling

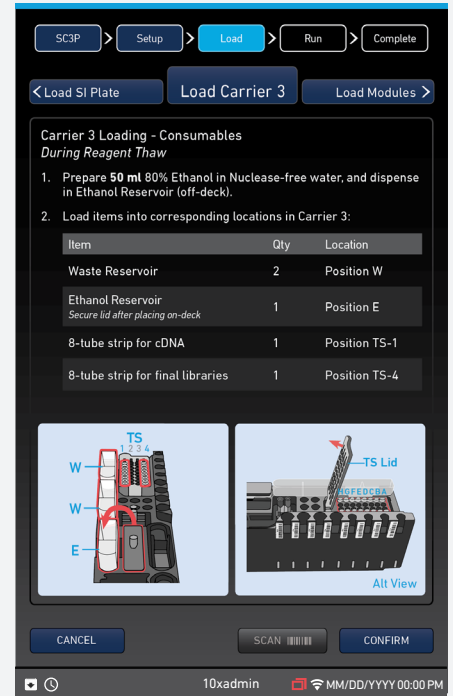
Load Screen

Navigation Bar
Review previous & next steps

Confirm
Required to proceed to next step

Scan
Activated (blue) for barcode scanning

Cancel
Ends assay (reagents not compromised)



Toolbar

Screen Capture

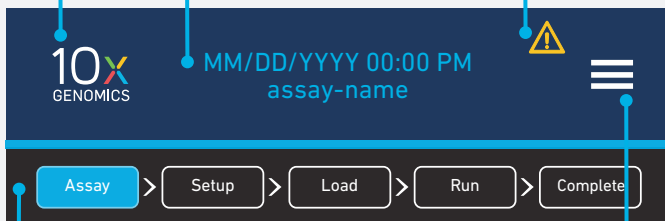
Tap logo (saved in run data package)

Time Stamp

Experiment-specific display

Notification Alert

Tap to see message



Workflow Steps

Menu Options

Admin settings & maintenance

'Apply Upgrade' Icon

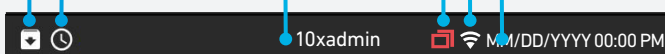
'Remote Connectivity' Icon

'Network Connectivity' Icon

'Daylight Savings Time Approaching' Icon

Username

Real-Time Stamp



Run Screen

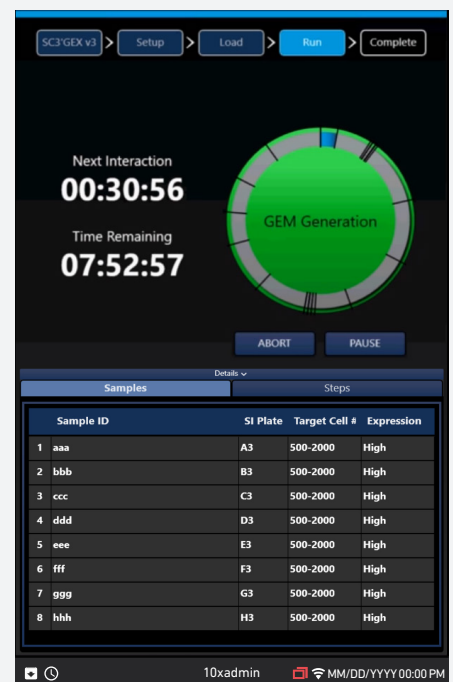
Timer
Counts down to next interaction and total time remaining

Progress Wheel
Shows current step and time progression, with step lengths indicated in black line

Abort
Ends assay (may compromise reagents)

Pause
Completes in-progress step before pausing

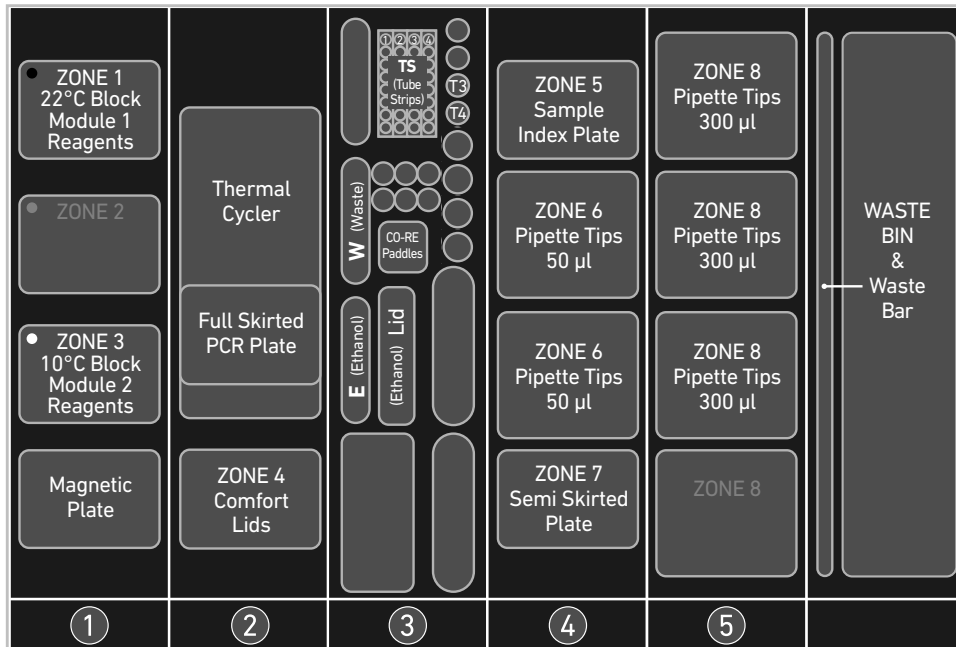
Subwindows
Collapsible info updated in real-time



 Clicking Abort or Pause may compromise reagents

Deck Area Layout

The deck includes five carriers. Carriers 1-2 are stationary while Carriers 3-5 slide out for loading/unloading items. The items displayed in the layout and table are specific to the assay listed above.

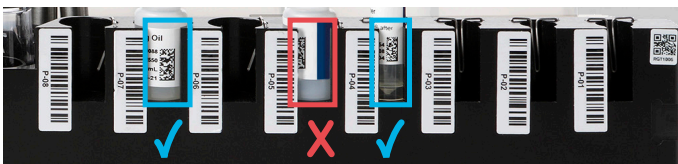


Zone	Item
Carrier 1	<i>Stationary</i>
ZONE 1	22°C Block, Reagents, Module 1
ZONE 2	-
ZONE 3	10°C Block, Reagents, Module 2
-	Magnetic Plate
Carrier 2	<i>Stationary</i>
-	Thermal Cycler
-	Full Skirted PCR Plate (within Thermal Cycler)
ZONE 4	ComfortLids
Carrier 3	<i>Rails: 15-18, Lights: 4</i>
W	Waste Reservoir
TS	Tube Strips
T3	Primer Mix 2
T4	Primer Mix 1
CP	CO-RE Paddles
E	Ethanol Reservoir
LID	Lid for Ethanol Reservoir
Carrier 4	<i>Rails: 19-24, Lights: 6</i>
ZONE 5	Sample Index Plate
ZONE 6	Pipette Tips 50 µl
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ZONE 8	Pipette Tips 300 µl

Chromium Connect Workflow <i>V(D)J Amplification</i>		Timing
<div style="display: flex; justify-content: space-between;"> 1 > 2 > 3 > 4 > 5 1 h </div>		
Assay	Select	
Setup	Input Info	
Load	cDNA, Reagents & Consumables	
<div style="display: flex; justify-content: space-between;"> 1 > 2 > 3 > 4 > 5 7 h </div>		
Run	V(D)J Amplification 1 & 2 V(D)J Amplification QC Library Construction, Cleanup & Sample Indexing	
<div style="display: flex; justify-content: space-between;"> 1 > 2 > 3 > 4 > 5 2 h </div>		
Complete	Final Library QC & Quantification	
Unload	Reagents & Consumables	
<div style="display: flex; justify-content: space-between;"> Optional Assays 1.5 h </div>		
	qPCR Setup Pooling	

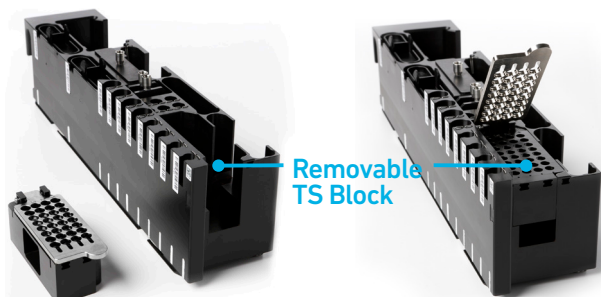
Carrier Handling

- Establish a clean space near the instrument for placing sliding carriers during loading.
- To scan barcodes, slide carrier in SLOWLY and follow software prompts (chime & flashing lights).
- Practice sliding the carriers completely off the deck and replacing them back using rails.



Deck Loading – Consumables

- Follow touchscreen for assay-specific handling.
- Ensure correct barcode orientation (on tubes and racks) as prompted by the touchscreen.
- The deck orients the A1 position to the back left corner of the instrument.
- Keep chip and gasket in sealed package until prompted to load.
- DO NOT use chips or gaskets specific to other 10x Genomics protocols.
- Optional removal of the TS block from Carrier 3 may facilitate loading tube strips.
- When loading PCR plates, press down firmly.
- When positioning the sample index plate into Carrier 4, the plate will audibly click into place and rear black clips will be visible.



User Interaction

- CSV file upload enabled for Assay Setup
- For sample prep, refer to assay-specific Automation Kit User Guide.
- The touchscreen provides a window for sample prep during which reagents are safely held on deck.
- Optional emulsion check requires user interaction ~30–50 min into the run.

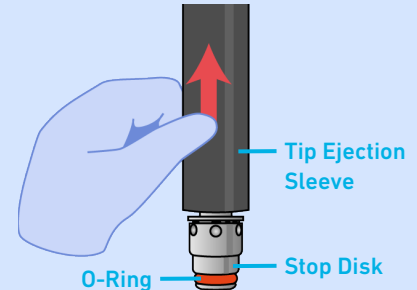
Deck Loading – Reagents

- Follow touchscreen for assay-specific handling.
- Ensure that no air gaps or precipitate remain at the bottoms of tubes.
- Prepare and dispense 80% ethanol off-deck to avoid spilling on consumables (e.g. chip).
- Carrier 3 gel bead positions allow use of one full tube strip or two partially used tube strips (adding up to 8 tubes total). Use GB-Primary first.
- Reagent thaw begins at specified points on touchscreen, with continued loading during thaw.
- Module loading: Use black handles to lift lids. Load from row 1 (back to front), inserting barcode end onto pin.
- **Press black handles while closing lids.** DO NOT allow lids to forcefully snap shut.
- DO NOT touch module mirrors. Smudges can prevent barcode scanning. Wipe clean when necessary.

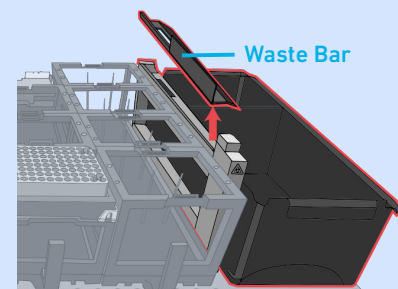


Running Maintenance via Software	Daily 15 min	Weekly 40 min
Inspect for Condensation, Dust & Smudges	✓	✓
Clean Touchscreen Lens-cleaning tissue and nuclease-free water	✓	✓
Empty Waste Bin & Liquid Waste	✓	✓
Channel Tests Pipette Channel Tightness Test Capacitive Liquid Level Detection Test	✓	✓
Clean Deck, Rails, Carriers, Mirrors & Walls Wipe down with laboratory wipes to minimize sources of particles and fibers 70% isopropanol or microcide on metal Deionized water or microcide on nonmetal		✓
Clean Gantry Channels Lens-cleaning tissue and nuclease-free water		✓
Calibration		✓
Chromium Automated Controller Self Check		✓

Access Gantry pipette channels for cleaning by lifting up on tip ejection sleeve



Remove Waste Bar prior to maintenance and replace when prompted by UI



References

- Chromium Connect Instrument User Guide (Document CG000180)
- Chromium Connect Specifications (Document CG000255)
- 10x Genomics Support website

Support

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Document Revision Summary

Document Number	CG000256
Title	Chromium Connect Quick Reference Cards
Revision	Rev C to Rev D
Revision Date	March 2023

Specific Changes:

- Deck Layout map now labels the positions that hold reagent tubes more universally on page 3.
- User Interface screens and workflow table updated on page 4.
- New best practice for loading sample index plate into carrier on page 6.
- Hardware change to gantry pipette channel illustration on page 7.

General Changes:

- Updated for general minor consistency of language and terms throughout.