



Checklist, Sequel II/Ile System Installation

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101-711-900

Level:
4

Revision:
13

Installation Summary

Customer Name: Stefano Pongolini


Site Name: Istituto Zooprofilattico Sperimentale della Lombardia e dell Emilia Romagna

Serial Number: SQ64543e

Service Engineer: Mark Gabrinez

Start Date: Jun 11, 2024

Item No.		Tasks
1	<input checked="" type="checkbox"/>	Shipment Information Instrument passes inspection for visible damage during shipment.
2	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	Installation Instrument Installation Complete - All Systems Pass Spec <ul style="list-style-type: none">• Internal Shipping Brackets Removed<ul style="list-style-type: none">- Seismic Brackets Installed (If Applicable)• Instrument Leveled and Feet Locked• Safety Ground Connected• Instrument Connected to UPS?<ul style="list-style-type: none">- Yes; Customer acknowledges UPS is not covered by PacBio- No- Other: _____• Optical Alignment Complete• Chillers Verified• Robot Verified• ICT passed specifications
3	<input checked="" type="checkbox"/> <input type="checkbox"/>	IT/Network Instrument Connected to Customer Network <ul style="list-style-type: none">• Customer is ready to schedule training with FAS. Customer Networking Infrastructure or SMRT Link not ready. <ul style="list-style-type: none">• Separate case is opened to track progress.• Customer will reach out to Tech Support and complete IT setup. FSE has provided the Tech Support Contact information and Case number to the customer. If needed, FSE will schedule a follow-up visit to connect instrument.

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Installation Summary (cont.)

Item No.	Tasks
4	<p>Instrument Environmental</p> <p>Nitrogen Flowrate set, Customer Regulator PSI = <u>50</u></p> <p><u>Customer System (Check one):</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> • Single Tank with Removable Regulator (<i>Not Recommended</i>) <input type="checkbox"/> • Dual Tank with Wall Mounted Auto-Switch-Over <input checked="" type="checkbox"/> • Dual Tank with Wall Mounted Manual-Switch-Over (<i>Not Recommended</i>) <input type="checkbox"/> • Nitrogen Generator <input type="checkbox"/> • Dewar System <input type="checkbox"/> • Other: _____ <p><u>Instrument Room Environment</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> • The Instrument Room has NOT maintained our environmental specifications during Installation. - Customer has been notified that their room is not within our specifications, and this may affect data quality or instrument stability. Corrective actions recommended. <input checked="" type="checkbox"/> • The Instrument Room has maintained our environmental specifications during Installation.

FSE (Printed): Mark Gabrinez Date: _____

FSE Signature: Mark Anthony Gabrinez Digitally signed by Mark Anthony Gabrinez
Date: 2024.06.13 12:52:17 +02'00' Date: _____

End of customer-facing document.

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PacBio and its authorized Service Engineers are responsible for performing and recording the findings from tests performed. The *"WI, Installation Manual, Sequel II/IIe Systems"* should be used in conjunction with this checklist.

Customer Information

Customer Name	Stefano Pongolini
Site Name	Istituto Zooprofilattico Sperimentale della Lombardia e dell Emilia Romagna
City	Parma
State, County (if applicable)	
Region/Country	Italy

FSE/Channel Partner Information


Name	
Phone Number	
E-mail	

Salesforce

Salesforce Case Number	
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PacBio Sequel II/IIe System

Serial Number	SQ64543e
Software Revision	11.0.1.159138
EngUI Revision	SequelEngUI-11.0.0.147461
Installation Start Date	Jun 11, 2024

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Instructions:

The following installation checklist should be used in conjunction with the "WI, Installation Manual, Sequel II/IIe Systems". PacBio and its authorized Service Engineers are responsible for performing and recording the findings from tests performed.

10.1 Instrument De-crating

(Pass/Fail/N/A)

Reviewed Site Prep Salesforce case and ensure it is closed.	Pass
Reviewed Pre-Installation Checks & Salesforce for Deviations.	Pass
Confirmed whether IQOQ was purchased with the instrument.	Pass
Set Date Delivered, Install Start Date, and Status to Delivered in Installations Details section.	Pass

De-crated instrument without damage.	Pass
Verified shipping container removed by shipping company.	Pass

10.2 Reagent Storage

(Pass/Fail/N/A)

Placed reagents in their correct storage locations.	Pass
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10.3 IT Questionnaire Verification

(Pass/Fail/N/A)

Notified customer of NRT/NRT2 MAC address, if necessary, to obtain static IP address.	Pass
---	------

10.4 Open Exterior Covers

(Pass/Fail/N/A)

N/A

10.5 Instrument Leveling

(Pass/Fail/N/A)

Installed seismic brackets (if required).	N/A
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Leveled instrument within center markings of bubble leveler.	Pass
Verified leveling remains in-spec after confirming all legs are contacting the ground.	Pass

Deviations and/or Notes
N/A



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10.6 Shipping Brackets Removal

(Pass/Fail/N/A)

Removed the following:	Pass/Fail/N/A
Robot X Shipping Bracket	Pass
Robot Y Shipping Bracket	Pass
Robot Z Shipping Bracket	Pass
Calibration Test Cell from Workdeck	Pass
Minus-K Retaining Bracket	Pass
Orange Protective Cap on Pipettor	Pass

Inspected and cleaned lubricant at base of Robot Z-axis bracket and where ball screw is mounted.	Pass
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Inspected and cleaned Pipettor of excess lubricant/oil; replaced if lubricant/oil is on proboscis.	Pass
--	------

Verified minimum exposure of non-insulated tubing where insulation is required.	Pass
---	------

10.7 Evaporation Lids Installation

(Pass/Fail/N/A)

Installed evaporation lids at designated locations on CPS.	Pass
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10.8 UPS Assembly

(Pass/Fail/N/A)

If Utilizing an UPS	
Assembled UPS.	Pass

10.9 Instrument Power Up


(Pass/Fail/N/A)

Connected ground cable between instrument and customer source.	Pass
Assembled power cable with correct torque specifications.	Pass
Connected power cable between instrument/UPS and customer source.	Pass

Connected exterior Ethernet cables.	Pass
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Deviations and/or Notes

N/A

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10.10 FSE Laptop Setup

(Pass/Fail/N/A)

N/A

10.11 Sequel II/Ile System Connection

(Pass/Fail/N/A)

Verified/Updated UPS IP address (if utilized).	Pass
Verified/Updated instrument configuration is correct (checked 'Skip Startup Diagnostics', etc.)	Pass
If instrument configuration was updated, ICS has been restarted so change(s) persists.	Pass

10.12 Customer Network Configuration

(Pass/Fail/N/A)

Configured network per IT Questionnaire	<input checked="" type="checkbox"/> Static	<input type="checkbox"/> DHCP	<input type="checkbox"/> Customer Not Ready	Pass
	NRT/NRT2 IP Address	10.34.12.27		Pass
	Netmask	255.255.255.0		Pass
	Gateway	10.34.12.1		Pass
	Domain	izsler.it		Pass
	Search	izsler.it		Pass
	Name Servers	10.34.8.20 (PRIMARY) 10.100.10.8 (SE		Pass

Enabled Firewall.	Pass
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Configured Transfer Scheme.	Pass
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N/A

Deviations and/or Notes

N/A



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10.12 Customer Network Configuration (cont.)

(Pass/Fail/N/A)

Configured NTP.	Pass
Configured SMRT Link.	Pass
URL Address	10.34.8.27
Pass	Pass
Configured SecureLink (if applicable).	N/A

10.13 User Door Functionality Verification

(Pass/Fail/N/A)

N/A

10.14 Optics Verification

(Pass/Fail/N/A)


Removed substrate cell from Stage (if present) and placed into a safe storage location.	Pass
Assembled and verified 2-piece N2 input assembly does not leak.	Pass
Utilized N2 input to remove any debris present on the socket/thermal pad assembly.	Pass
Verified default Sensor Data Path Tests pass.	Pass

Test Cell and Post-Alignment Data

	Test Cell (Offset)	EngUI (Post-Alignment)	Difference	Pass/Fail
Serial Number	DA103183	N/A	N/A	Pass
X (um)	7	24	17	Pass
Y (um)	-85	104	19	Pass
Yaw (deg)	N/A	-0.001	0.001	Pass

Deviations and/or Notes

N/A

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10.14 Optics Verification (cont.)

(Pass/Fail/N/A)

Lightbrush Alignment Verification	
Initialized Lightbrush before verifying alignment.	Pass
Verified all fiducials are greater than 0.8.	Pass
Verified all alignment tasks pass in Alignment tab.	Pass
Verified laser beamlets are within the 4 vertical alignment squares (final).	Pass

Returned Calibration Test Cell to front-left CPS well.	Pass
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Laser Power Tooling Quality Data				
	Ophir Juno Power Meter Adapter	Serial Number	PMC1444	Pass
		Calibration Due Date	Aug 9, 2024	Pass
	Ophir Laser Power Sensor	Serial Number	PMC2464	Pass
		Calibration Due Date	Aug 9, 2024	Pass

Laser Power Sensor Calibration Verification			
Automated Laser Power and Forward Sensor Calibration			
	Observed	Spec.	Pass/Fail
Laser 1 Transmission (%)	89	≥35.0	Pass
Laser 2 Transmission (%)	94		Pass

Flow Meter Quality Data			
	Serial Number	PMC2985	Pass
	Calibration Due Date	Aug 4, 2024	Pass

Deviations and/or Notes
N/A



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10.14 Optics Verification (cont.)

(Pass/Fail/N/A)

Setting N2 Flow Rate				
	Observed	Min. Spec.	Max. Spec.	Pass/Fail
Low N2 Flow Rate (L/min)	0.30	0.25	0.35	Pass
PWM value entered	46500			Pass
High N2 Flow Rate (L/min)	0.94	0.90	1.00	Pass
PWM value entered	57900			Pass

Retracted Minus-K, reinstalled and securely pinned front retaining bracket.	Pass
Secured laser fibers properly onto spindle and cleared plumbing lines from front door before closing.	Pass
Removed Minus-K shipping hold-downs, removed zip ties securing side latches, disengaged and verified side latches do not contact floating table, and set the vertical position indicator to the center line.	Pass

10.15 Environmental Verification

(Pass/Fail/N/A)


AC Chiller				
	Observed	Min. Spec.	Max. Spec.	Pass/Fail
AC Chiller current temperature (°C)	21.5	20.0	25.0	Pass

Reagent Chiller				
	Observed	Min. Spec.	Max. Spec.	Pass/Fail
Reagent Chiller current temperature (°C)	5.1	2.0	6.0	Pass

Verified relative humidity is in-spec.	Pass
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Deviations and/or Notes

N/A

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10.16 Robot Verification

(Pass/Fail/N/A)

Robot XYZ Verification	
Verified 100/100/300 cycle tests at slow, medium, and fast, respectively, pass.	Pass

RF ID Tag Reader/Writer Verification	
Verified NFC readers are capable of reading tags at all positions.	Pass

Workdeck Location Calibration Verification	
Verified the Pipettor is centered at all Workdeck locations.	Pass

Stage TPS Calibration	
Performed Stage TPS calibration and saved the calibration data.	Pass
Verified cell drop off does not land on locating features.	Pass

Stage Rotation Measurement	
Performed and verified Stage Rotation Measurement passes.	Pass


Pipette Accuracy Test	
Performed and verified Drip and Pipette Accuracy Tests pass.	Pass

10.17 Close Exterior Covers

(Pass/Fail/N/A)

Closed left and right exterior covers.	Pass
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Deviations and/or Notes
N/A

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10.18 Software Verification

(Pass/Fail/N/A)

Verified/Upgraded ICS version to match "Official Release" version.	Pass
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Final software version	11.0.1.159138	Pass
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Verified Primary output is configured in "Customer Mode".	Pass
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10.19 IUI Self-Test

(Pass/Fail/N/A)

IUI Self-Test	
Verified IUI Self-Test completed without any errors.	Pass

Verified StageTPSRotationAngle (in Dashboard) is below 0.008.	Pass
---	------

10.20 Instrument Wrap-Up

(Pass/Fail/N/A)

Removed subfolders from NRT's /data/pacbio/context/collection directory.	Pass
--	------

Re-enabled "Startup Diagnostics" and verified instrument successfully boots up after ICS restart.	Pass
---	------


10.21 File Transfer Test

(Pass/Fail/N/A)

Verified fluentd server is set to production status.	Pass
--	------

Verified file transfer works properly.	Pass
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Deviations and/or Notes
N/A

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10.22 Installation Confirmation Test (ICT)

(Pass/Fail/N/A)

1-Cell Installation Confirmation Test Results			
Cell	1	Spec	Pass/Fail
% of Genome Covered	100	100	Pass
Consensus Accuracy (%)	100	≥ 99.9	Pass
Mean Mapped Read Length (bp)	5,495	≥ 5,000	Pass
Reads per SMRT Cell	3,065,211	≥ 2,000,000	Pass

Sequencing Consumables			
	Lot Number	Expiration Date	Pass/Fail
Sequencing Plate	135330	Jan 16, 2025	Pass
Cell Tray	420435	Oct 1, 2024	Pass
SMRT Oil	034229	Aug 1, 2026	Pass

Reverted transfer scheme to customer setting.	Pass
---	------

10.23 Instrument Consumables Storage

(Pass/Fail/N/A)


Stored leftover consumables and shipping hardware in storage box for future use.	Pass
--	------

10.24 Upload Documents into Salesforce Case

(Pass/Fail/N/A)

Deviations and/or Notes
N/A


Completed customer receipt and acceptance acknowledgement form.	Pass
Verified Acceptance Form is saved as "SQ64XXX(e)_Signed-Acceptance_YYYY_MM.pdf".	Pass
Verified Install Checklist is saved as "SQ64XXX(e)_Install-Checklist_YYYY_MM.pdf".	Pass
If IQOQ was performed, ensure it is part of the above documents to be uploaded into Salesforce.	Pass
In Salesforce's Installed Product page, set Date Installed and Status to Installed .	Pass

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REVISION HISTORY

For reference only - see PLM for official master release information

Revision	Author	Description of Changes
01	P Li	Initial Release into Prototype.
02	P Li	Removed parameter pertaining to Axeda, added parameter confirming Primary output is configured in "Customer Mode", added parameter verifying instrument is set to push data to HQ, added SAT passing parameters, and added parameter confirming completion of receipt and acceptance acknowledgement form.
03	P Li	Added parameters pertaining to updating Salesforce and SecureLink (if applicable).
04	P Li	Updated input parameter in Section 10.23 to accept multiple lines.
05	P Li	Corrected two incorrect mentionings of "ICC" and "PAC" to more accurately state "NRT".
06	P Li	Corrected section 10.17 to include both side covers (versus just the right side) and updated section 10.20 to include parameter to ensure "Startup Diagnostics" is enabled.
07	P Li	CO-13094: Added "System" after mentioning of "Sequel II", added parameter to ensure UPS is properly set up (if applicable), added parameter to verify 2-piece Nitrogen input assembly, updated Minus-K shipping bracket parameter to include new Delrin hold-downs, updated Pipette Accuracy Test to include Drip Test, and updated "Dry Run" section to "IUI Self-Test" to match Installation Manual.
08	P Li	CO-13095: Removed "Comments" column from Summary pages, updated Summary pages with more details pertaining to tasks, updated Section 10.12 to include parameters to enter actual customer network details, added parameter to verify relative humidity, added parameter to ensure Robot Z-axis and ball screw is free of excess lubricant, added parameter to ensure Pipettor is free of excess lubricant/oil, add parameter to potentially replace Pipettor if lubricant/oil is present on proboscis, added StageTPSRotationAngle check post-IUI Self-Test, and added parameter to ensure consistency when naming Acceptance Form and Install Checklist.
09	P Li	CO-13707: Updated various "Sequel II" statements to include "Ile", and updated Test Cell Offset table to explicitly show the difference between the Test Cell label and post-alignment values.
10	P Li	CO-13829: Added text fields to record transfer scheme and SMRT Link URL.
11	P Li	CO-14528: Added text stating PacBio is not responsible for servicing UPS, added parameter to record EngUI revision, added parameters to record quality data (calibrated tools), added parameters to record sequencing consumables data, and updated parameter in Section 10.23 to explicitly include shipping hardware.

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REVISION HISTORY

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Revision	Author	Description of Changes
12	P Li	CO-15515: Updated PacBio logo, updated Site Acceptance Test (SAT) to Installation Confirmation Test (ICT) to match Install Manual, updated Summary table to remove mentioning of sequencing results being analyzed on customer server, added parameter to Section 10.3 pertaining to forwarding NRT/NRT2 MAC address to customer if a static IP address is needed, moved Robot and Pipettor oil residue verification to Section 10.6, and added parameter to revert transfer scheme to customer setting after ICT.
13	P Li	Updated title to reflect file name, updated footer to reflect "PacBio", removed customer signature field (since installations are accompanied by the Customer Receipt and Acceptance Acknowledgement form), updated title of referenced installation manual, added check for IQOQ, and added deviations/notes text box to each page.