

cBot System

Configuration Guide

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Introduction

This guide provides information and instructions on configuring the Illumina® cBot™ 2 and cBot™ systems.

Configuration Screen

From the Configuration screen of the cBot software, you can configure system settings, input requirements, and wash preferences. Using a network connection, you can enable remote monitoring, email alerts, and LIMS support.

The Configuration screen includes the following 6 tabs:

- ▶ **Run Setup**—Name your instrument, configure wash and sensor bypass options, and indicate which fields are required input during run setup. For cBot 2, you can configure positive sample tracking from this tab.
- ▶ **Remote**—Configure the software to monitor your run remotely.
- ▶ **Alerts**—Configure the instrument to send an email alert if a system issue occurs or when a run is complete.
- ▶ **Time**—Set your instrument to the current date and local time.
- ▶ **LIMS**—Connect to LIMS and configure options for generating a run data file. For more information on run data files, see *Run Data File Format* on page 9.
- ▶ **Validation**—Set validation expressions to standardize how your template and custom primer IDs are recorded.

Configuring Run Requirements

Use the tabs on the Configuration screen to set up your cBot for a cluster generation run. These settings can be modified as needed before the start of each run.

For remote monitoring information, see *Setting Up Remote Monitoring* on page 8.

Access Configuration

- 1 Select **Menu** in the upper-left corner of the Start screen, and then select **Configure**.

Figure 1 Start Screen Menu

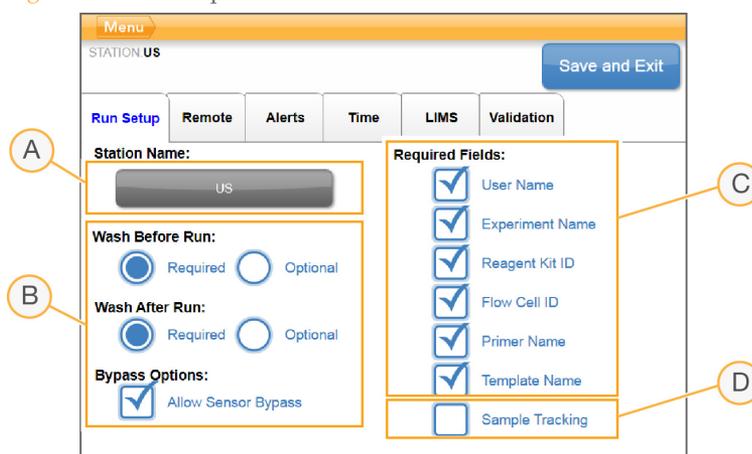


- 2 Use the onscreen keyboard to type the default password, **admin**, and then select **Enter**.

Configure Run Options

- 1 Select the **Run Setup** tab.

Figure 2 Run Setup Tab



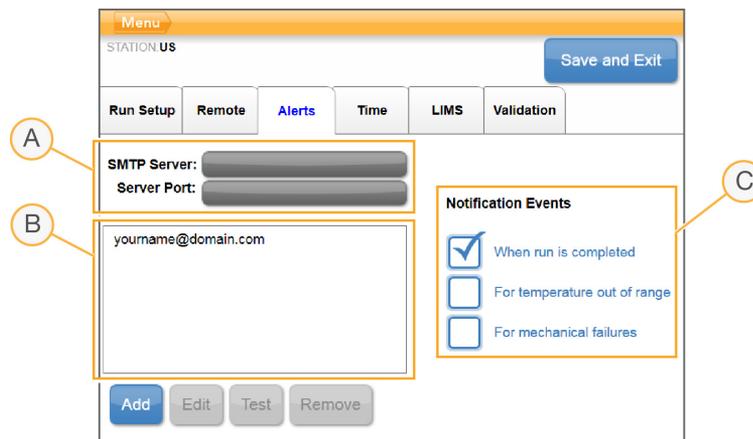
- A Station Name
- B Wash Options and Bypass Options
- C Required Fields
- D Sample Tracking Option (cBot 2 only)

- 2 Name your cBot as follows.
 - a Select the **Station Name** field.
 - b Type a name for your instrument using the onscreen keyboard.
 - c Select **Enter**.
 - 3 Select the radio buttons for wash options before and after a run.
-  **NOTE**
A wash before and after each run ensures optimal performance.
- 4 [Optional] Select the **Allow Sensor Bypass** checkbox to provide the option of allowing a run to proceed if an invalid sensor reading occurs during the pre-run check.
 - 5 Select checkboxes in the Required Fields area to select which fields are required input during run setup. To enable positive sample tracking, select the **Sample Tracking** checkbox.
-  **NOTE**
Positive sample tracking is available for cBot 2 only, and is disabled by default.

Set Up Email Alerts

- 1 Select the **Alerts** tab.

Figure 3 Alerts Tab



- A Email Server
- B Email Addresses
- C Notification Events

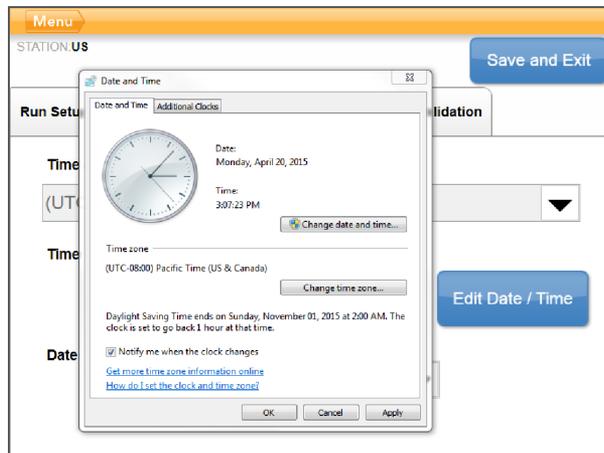
- 2 Select **SMTP Server**.
 - 3 Enter the SMTP server name using the onscreen keyboard, and then select **Enter**.
-  **NOTE**
Consult your facility administrator for the name of your SMTP server and service port.
- 4 Select **Server Path**.
 - 5 Enter the email SMTP server port using the onscreen keyboard, and then select **Enter**.
 - 6 Add alert recipients as follows.

- a Select **Add**.
 - b Enter an email address using the onscreen keyboard, and then select **Enter**.
 - c To test the email address, select the address and then select **Test**.
- 7 Select checkboxes in the Notification Events area to identify which events trigger an email alert.

Set Date and Time

- 1 Select the **Time** tab.
- 2 Select **Edit Date/Time**.
- 3 In the Windows Date and Time dialog box, select the time zone for your area, the current date, and the current time.

Figure 4 Date and Time Settings

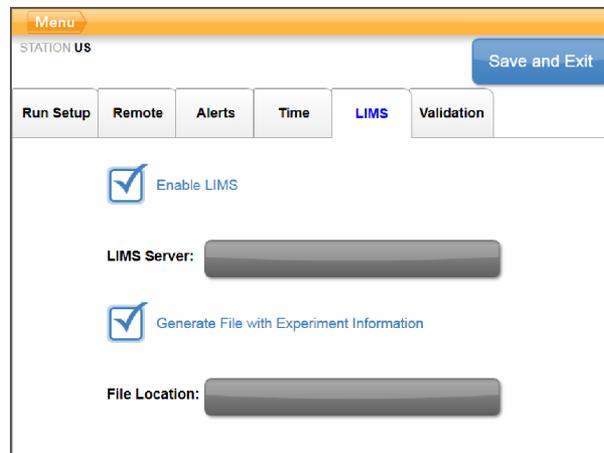


- 4 Select **OK** to close the Windows Date and Time dialog box. The changes appear on the Time tab.

Enable LIMS Support

- 1 Select the **LIMS** tab.

Figure 5 LIMS Tab

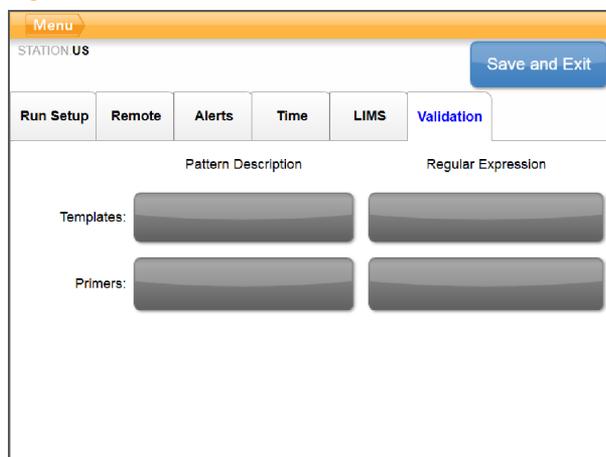


- 2 If you are connecting to LIMS, do the following:
 - a Select the **Enable LIMS** checkbox.
 - b Select the **LIMS Server** field.
 - c Enter the LIMS server name using the onscreen keyboard, and then select **Enter**.
- 3 If you are generating a run data file for each run, do the following:
 - a Select the **Generate File with Experiment Information** checkbox.
 - b Select the **File Location** field.
 - c Enter the preferred network location using the onscreen keyboard, and then select **Enter**.

Set Validation Expressions

- 1 Select the **Validation** tab.

Figure 6 Validation Tab



- 2 To set expressions for template IDs, select the fields next to Templates.
- 3 Enter the following values using the onscreen keyboard:
 - ▶ A pattern description for the template ID.
 - ▶ A regular expression for template ID.

Table 1 Example Validation Expressions

Pattern Description	Regular Expression	Valid Value
Template - (###)	Template - \(\d{3}\)	Template - (123)
ILMN - <A to F>###	ILMN - [a - fA - F]\d{3}	ILMN - D341
PR - <Number from 30 - 59>	PR - [3 - 5] [0 - 9]	PR - 41

- 4 To set expressions for custom primer IDs, select the fields next to Primers and repeat step 3.

Exit Configuration

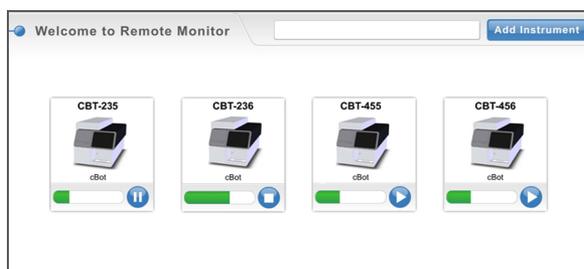
- 1 When configuration is complete, select **Save and Exit**.
The cBot Start screen opens. You are ready to begin a cluster generation run.

Setting Up Remote Monitoring

Remote monitoring is a feature that allows you to monitor the status of your cBot from another computer. Steps to set up remote monitoring include enabling your cBot for remote monitoring and then adding it. Your cBot must be connected to a network.

After your instrument is set up, you can use the Remote Monitor screen to monitor run progress and the current state of the instrument. There are 4 possible states: running, paused, stopped, or error.

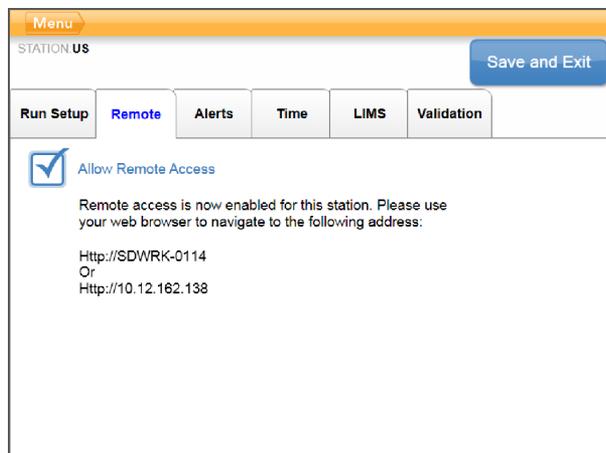
Figure 7 Remote Monitor Screen



Enable Remote Monitoring

- 1 From the Configuration screen, select the **Remote** tab.
- 2 Select the **Allow Remote Access** checkbox.
The IP address of the instrument appears.

Figure 8 Remote Tab



Add Your cBot

- 1 Using a web browser from another computer, navigate to the remote monitoring IP address listed on the Remote tab.
- 2 In the field on the Remote Monitor screen, enter the IP address of your cBot.
 **NOTE**
This address is the same IP address listed on the Remote tab of your cBot.
- 3 Click **Add Instrument**.
Your instrument is added to the Remote Monitor screen.

Run Data File Format

Created at the end of a run, the run data file lists settings, barcode IDs, and other data from the run. Parse this data for use with LIMS, or use it for general reference.

The file naming format is [yymmdd]_[computer name]_[run number]_RunData.xml, where run number is the run number for the day. The file is written to a preferred network location, which you can configure from the LIMS tab.

The following list provides examples of key XML elements contained in each run data file.

```
<ProtocolName>C:\TFS\Illumina.Franklin\Dev\cBot-
  3.0\Galaxy\Src\bin\Recipes\HiSeq_3000_4000_HD_Exclusion_Amp_
  v1.0.xml</ProtocolName>
<ExperimentType>PairedEnd</ExperimentType>
<FlowCellID>H008JBBXX</FlowCellID>
<TemplateID>LP0030003-CST</TemplateID>
<PrimersID>primername</PrimersID>
<ReagentID>HS0072874-PC6</ReagentID>
<ExperimentName>Experiment 10</ExperimentName>
<StartTime>2015-02-27T08:51:57.8747072-08:00</StartTime>
<FinishTime>2015-02-27T08:59:40.0464735-08:00</FinishTime>
<UsedOnBoardScanner>false</UsedOnBoardScanner>
<RunFolderName>150227_SDIL-OFBLFL_0003</RunFolderName>
<RecipeVersion>1.0</RecipeVersion>
<ReagentVersion>6</ReagentVersion>
```

Notes

Technical Assistance

For technical assistance, contact Illumina Technical Support.

Table 2 Illumina General Contact Information

Website	www.illumina.com
Email	techsupport@illumina.com

Table 3 Illumina Customer Support Telephone Numbers

Region	Contact Number	Region	Contact Number
North America	1.800.809.4566	Japan	0800.111.5011
Australia	1.800.775.688	Netherlands	0800.0223859
Austria	0800.296575	New Zealand	0800.451.650
Belgium	0800.81102	Norway	800.16836
China	400.635.9898	Singapore	1.800.579.2745
Denmark	80882346	Spain	900.812168
Finland	0800.918363	Sweden	020790181
France	0800.911850	Switzerland	0800.563118
Germany	0800.180.8994	Taiwan	00806651752
Hong Kong	800960230	United Kingdom	0800.917.0041
Ireland	1.800.812949	Other countries	+44.1799.534000
Italy	800.874909		

Safety data sheets (SDSs)—Available on the Illumina website at support.illumina.com/sds.html.

Product documentation—Available for download in PDF from the Illumina website. Go to support.illumina.com, select a product, then select **Documentation & Literature**.



Illumina
5200 Illumina Way
San Diego, California 92122 U.S.A.
+1.800.809.ILMN (4566)
+1.858.202.4566 (outside North America)
techsupport@illumina.com
www.illumina.com