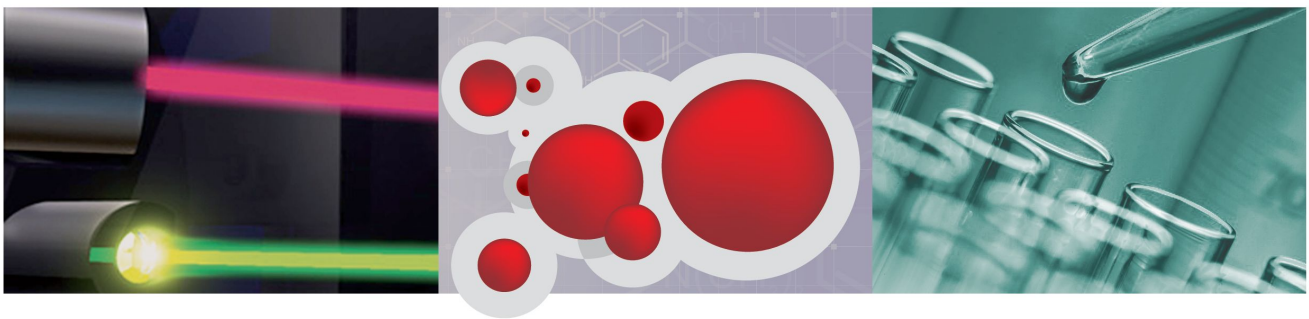
Luminex®

MAGPIX® User Quick Guide 4.2



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MAGPIX® User Quick Guide 4.2

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Chapter 1: Starting the MAGPIX System for the First Time

Detailed instructions on how to install the MAGPIX System are provided in the *PC Installation Instructions* (89-30000-00-263) and *Installing MAGPIX* (89-30000-00-236) foldouts that you received with the instrument.

This manual provides step-by-step instructions on how to start your MAGPIX system for the first time, how to perform daily operations, and how to properly maintain the instrument.

WARNING: Improper installation or use of the MAGPIX System can result in injury, damage to the instrument, and/or incorrect results. Before installing or using MAGPIX you must complete the training modules located in the **Training** tab at http://www.luminexcorp.com/MAGPIX

Additional "How-To" videos describing specific operations can be found on the same page under the **Support** tab.

Starting xPONENT

Perform the following steps to launch xPONENT:

- On the PC desktop, click the Luminex xPONENT icon, or click **Start** > **All Programs** > **Luminex** > **xPONENT** > **Luminex xPONENT**.
- If you have a trial license, contact Luminex Technical Support to obtain a full license, or click **OK** in the dialog box to continue.
- If this is the first time you have started the software, the **User License Agreement** may display. Read the license agreement. Select **I accept the terms of this license agreement**, then click **OK**.

NOTE: For safety and legal information, refer to the *MAGPIX Installation and Hardware User Manual* that you received with your instrument.

Start-up Indicators

When you turn on the Luminex MAGPIX system, the following start up indicators occur:

- Blue light indicator turns on.
- Fans turn on.
- Syringe pump initializes.
- The filter wheel initializes.
- Software connects to the instrument.

NOTE: It may take several minutes for the instrument to initialize and connect to the software.

The Software Connectivity indicator is located on the lower left corner of the software screen.

Logging On to xPONENT

If your version of xPONENT is licensed for 21 CFR Part 11, or Security, or both, an application administrator must set up user IDs (and passwords, if required). If you are not using a version with 21 CFR Part 11, or Security, or both, users can log in with any user name or with no user name.

CAUTION: Use of this software by untrained personnel can result in inaccurate data and test results. Personnel who use xPONENT must read this manual thoroughly before operating the software.

1. On the **System Login** tab, type your user ID.
2. If you are using a secure version of the software, type your password. The **Home** page opens.

Initial Startup

When you turn on the system for the first time, perform the following procedures.

1. **Adjust the Sample Probe Height**
2. **Revive After Storage (Luminex) Routine**
3. **System Initialization**
   - Fluidics Preparation
   - Calibration
   - Performance Verification

Adjusting the Sample Probe Height

Adjust the sample probe height to ensure that the probe drops far enough into the well to acquire sample.

NOTE: Ensure that there is no liquid in the wells or reservoirs before adjusting the sample probe height.

1. On the **Home** page, click **Probe and Heater** under **Daily Activities**. The **Probe & Heater** tab opens.
2. Use well **D6** (this is the center of a standard 96-well plate).
3. Ensure that the well location is selected on the plate image. A green pin marks the selected well.
4. Based on the type of plate you are using, place alignment disks or an alignment sphere in the well.
   - For a standard 96-well plate - none
   - For a Filter-bottom plate - two 5.08 mm disks
   - For a Mylar-bottom plate - two 5.08 mm disks
   - For a conical (v-shaped) plate - one sphere
5. Click **Eject** to eject the plate carrier.
6. Place the off plate reagent block on the plate carrier. Make sure it is well seated so that it clips into place.
7. Place a strip well (provided with the Calibration and the Performance Verification kit) in the off-plate reagent block.
8. In the **Strip Wells** section, click **SD1**.
9. Verify that the reservoir is empty.
10. In the **Reservoir** section, click well **RB1**.
11. Verify that the plate is not warped. Warped plates can lead to incorrect probe height adjustment.
12. Place the plate on the plate carrier with well A1 positioned as indicated on the plate carrier.
13. Click **Retract** to retract the plate carrier.
14. Type a name for the plate in the **Plate Name** box.
15. Click **Auto Adjust Height**. The probe automatically adjusts itself to the locations you selected.

    NOTE: The probe height is automatically set to 0.98 mm. The probe automatically adjusts this distance from the bottom of the plate, or calibration disks or spheres.
16. Click **Eject** to eject the plate holder. If you used alignment disks or spheres, remove them from the plate.

    NOTE: When you adjust and save the probe height settings for all three areas under a plate name, all areas retain the adjustment.

WARNING: Correct sample probe height is critical to successful sample acquisition and calibration. Problems with the sample probe can lead to fluid leaks and inhibit sample acquisition.

CAUTION: Ensure that the probe height is set correctly before calibrating the system.

FIGURE 1. **Sample Probe Height Adjustment**

Revive After Storage Routine

NOTE: The **Revive After Storage** routine is necessary when the system runs for the first time and is recommended when the system has been idle for more than a week.

After you have adjusted the sample probe height, run the **Revive After Storage (Luminex)** routine.

1. Open the **Maintenance** page, then the **Cmds & Routines** tab.
2. Select **Revive After Storage (Luminex)** from the drop-down list. The **Revive After Storage** routine performs the following commands:
   - **Prime**
   - **Rinse**
   - **Alcohol Flush**
   - **Rinse**
3. Add 70% isopropanol or ethanol to reservoir RB1 on the off-plate reagent block as indicated on the **Cmds & Routines** tab.

   NOTE: The rinse reservoir (RD1) should be empty.
4. Click **Retract.**
5. Click **Run.**

After the **Revive After Storage** routine is complete, run the **System Initialization** routine.

System Initialization

System initialization prepares the system for data acquisition. On initial startup, the System Initialization should consist of:

- Fluidics Prep
- Calibration
- Performance Verification

Calibration normalizes the settings for the system and ensures optimal and consistent microsphere classification. Verification uses system controls to ensure that the analyzer is functioning properly with current calibration settings.

1. On the **Admin** page, select the **System Setup** tab.
2. In the **Maintenance Options** section, select the **System Initialization** procedure that contains **Fluidics Prep, Calibration, and Performance Verification**.
3. Click **Save**.
4. On the **Home** page, click **System Initialization** under **Daily Activities**. The **Auto Maint** tab opens.
5. Import the **Calibration Kit** lot information from the CD provided with the kit or select the appropriate kit from the drop down menu if the kit information has been preloaded.

   NOTE: See the *Adding or Importing CAL and VER Kit Information* section on how to import the kit.
6. Import the **Performance Verification Kit** lot information from the CD provided with the kit or select the appropriate kit from the drop down menu if the kit information has been preloaded.

   NOTE: See the *Adding or Importing CAL and VER Kit Information* section on how to import the kit.
7. Vortex the xMAP calibrator, verification, and fluidics containers at a medium speed for approximately 10 seconds to ensure homogeneity. Do not dilute xMAP calibrator, verification, or fluidics agents.
8. Click **Eject** on the status bar.

   NOTE: To ensure that you get the necessary bead count, invert the calibrator and verifier vials perpendicular to the strip well as you add drops to the wells. This ensures that the maximum fluid drop size is dispensed into the wells.
9. Luminex recommends adding 6 drops of each reagent into the designated well.
10. Verify that reservoir RB1 is 3/4 filled with 70% isopropanol or ethanol.

    NOTE: The rinse reservoir (RD1) should be empty.
11. Click **Retract.**
12. Click **Run**.

Adding or Importing CAL and VER Kit Information

You can add CAL and VER Kit information from the **Home** page.

To add or import CAL and VER kit information:

1. Load the CAL/VER CD (provided with the kit) on the computer.
2. On the **Home** page, click **System Initialization**.
3. Click **Import Kit** at the bottom right side of the window. The **Import Calibration or Performance Kit** dialog box opens.
4. Select **Locate the CD** in the appropriate drive and select the ***.mpx** folder and click **Open**.
5. Select the ***.lxl** file and click **Open.**
6. Click **OK**.

Creating Calibration and Verification Reports

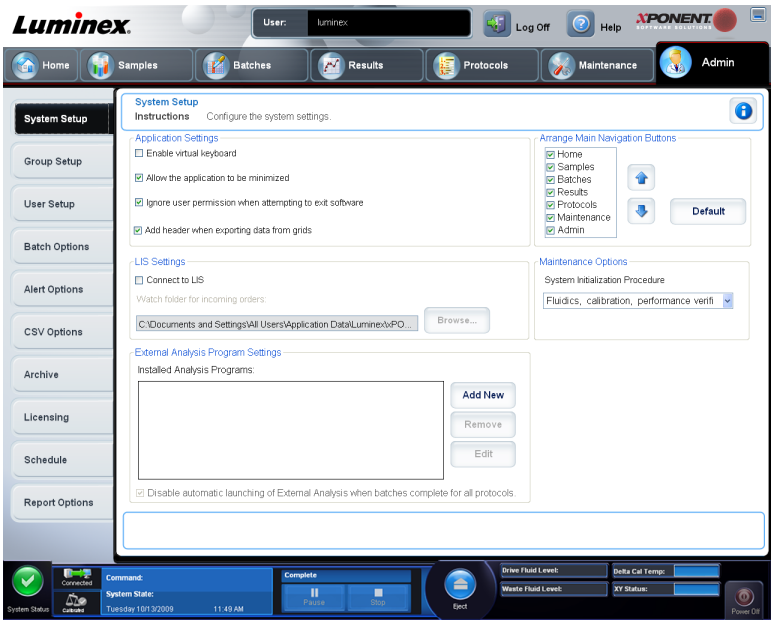
1. Open the **Results** page, then open the **Reports** tab.
2. In the **Report** drop-down list, select **Calibration and Verification Reports.**
3. In the **Type** drop-down list, select **ALL**, **CAL**, **VER**, or **Fluidics**.
4. Type a **Start** date and a **Through** date for the date range you want to view.
5. Click **Generate** to display the report.
6. Use the left or right **Page** arrows to navigate to the different report pages.
7. Click **Print** to print the report, or **Save** to save the report.
8. Click **New Report** to generate another report.

Chapter 2: Daily Start-Up Activities

Defining the System Initialization Routine

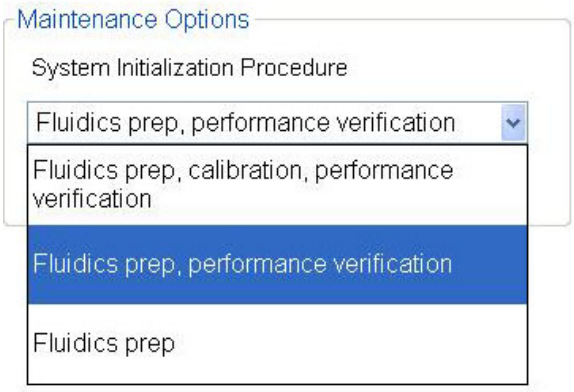
NOTE: Luminex recommends daily performance verification and weekly calibration of the MAGPIX system. You can set up the system initialization routine to include calibration and verification on the **Admin** page, **System Setup** tab, **Maintenance Options** section.

1. Open the **Admin** page.
2. Click **System Setup**.



3. Under **Maintenance Options**, select **Fluidics prep, performance verification** from the drop-down list.

FIGURE 2. **Setting System Initialization Routine**



4. Click **Save**.

Running the System Initialization Routine

1. On the **Home** page, click **System Initialization** under **Daily Activities**. The **Auto Maint** tab opens. On the **Auto Maint** tab, the **System Initialization** option is automatically selected.
2. Verify that the correct lot kit is displayed in the **Calibration and Performance Verification** drop down field and that the correct reagents (for example, VER and Fluidics reagents) have been added to the off-plate reagent block.
3. Fill reservoir RB1 3/4 full of 70% isopropanol or ethanol.
4. Verify that the **Rinse** reservoir **RD1** is empty.
5. Click **Retract**.
6. Click **Run**.

Chapter 3: Running Assays

Creating a Quantitative Assay Protocol

The protocol must contain multiple standards. The standards are assigned lot value information for each test. A standard curve is generated according to the lot values. Including controls in the protocol is optional, but recommended for judging the acceptability of batch results.

To create a quantitative assay protocol:

1. Open the **Protocols** page, then open the **Protocols** tab. Click **Create New Protocol**. The **Settings** tab opens.
2. In the **Name** box, type the name of the protocol.
3. Type a description in the **Enter optional description here** box.
4. In the **Version** box, type the version of the protocol.
5. In the **Manufacturer** box, type the manufacturer information for the protocol.
6. Define settings in the **Acquisition Settings** section.
7. Define settings in the **Analysis Settings** section, selecting **Quantitative** as the analysis type. The protocol for a quantitative assay must contain multiple standards. Controls are optional in a quantitative assay protocol.
8. Click **Next**. The **Analytes** tab opens.
9. Click the desired analytes (bead ID) in the numbered analyte grid. Information about the analyte displays to the right side of the grid.
10. Click and type an analyte name in the **Name** column to the right of the analyte grid.
11. Click and type the desired unit of measurement in the **Units** box to the left of the **Apply All** button.
12. Click and type the desired bead count for each analyte in the **Count** box. Click **Apply All**.
13. To set a bead count and the units for a single analyte, click in the **Units** and **Count** columns directly to the right of the analyte grid, and type a bead count and units value.
14. To change the default analysis for all analytes, click **Change**. The **Analysis Settings** dialog box opens.

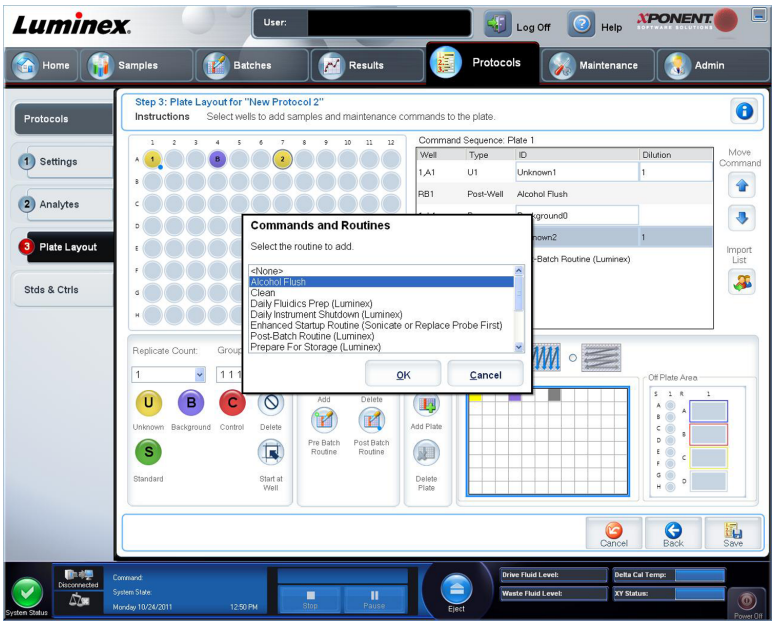
15. In the **Analysis Settings** dialog box, select the analysis method from the **Method** list, and the weighting in the **Weight Type** list. Click **Apply to All Analytes** to apply the selection to all analytes.
16. To change the analysis for a single analyte, click the **Analysis** field for the analyte you want to modify. The **Analysis Settings** dialog box opens.
17. Select an analysis method in the **Method** list.
18. Select a weight type in the **Weight Type** list (**Weight Type** may not display, depending on the analysis method selected in the **Method** list).
19. Check **Mark as Intra-Well Normalization Bead** if you want to use the analyte as a normalization bead. The normalization bead is a microsphere set that is included in the assay as an internal control. It controls for sample variation and can be used to normalize data between samples in a run.
20. Check **Use Threshold Ranges** if you want to use a range for the analysis.
21. Click **Add Range** to setup the threshold range.
22. Type a name for the range in the **Range Name** field.
23. Type low and high range values in the **Low Value** and **High Value** fields.
24. Select the check box in the **Inclusive** column to include the value in the range, or leave it clear to make the range value one unit higher than the low value, and one unit lower than the high value.
25. Highlight a range and click **Delete Range** to delete the range.
26. Click **OK** to apply the new settings to the analyte first clicked, or **Apply to All Analytes** to apply them to all the analytes in the protocol.

27. Click **Next**. The **Plate Layout** tab opens.

    - To add well commands, highlight the appropriate wells and mark them as unknown, standard, control, background, or wash. You can also delete commands that you have added and change the starting location on the plate. If you want to run in replicate, change the **Replicate Count** to the appropriate number and the **Grouping** to your preferred grouping method.

      NOTE: Select the **Replicate Count** and **Grouping** settings before adding a well command.

    - To add maintenance commands, choose a command from the list. Highlight the well that you want to apply it to, and then choose **Pre Batch Routine** or **Post Batch Routine**. The **Commands and Routines** dialog box opens.



    If you are working with more than one plate, choose **Add & Change Plate**. Here, you can add a plate, change the order of the plates, and scroll through all plates.

    - Delete a command by clicking the well, and clicking **Delete**. The **Delete Options** dialog box opens. Select **Delete just the selected wells** to delete a single well command, or **Delete all wells containing these samples** to delete all wells with the same command.

    - As you add commands to your plate, they appear in the **Command Sequence** list. Type a well ID in the **ID** field. Here, you can give each of your wells an ID. You can also import a protocol file by clicking **Import List**.

    - Move commands up or down in the sequence by highlighting a command and using the **Move Command** arrows to move the command up or down in the list.

28. Click **Save**.

    NOTE: The **Pre Batch** routine runs before the batch begins. This routine is selected by default when the protocol or batch is set up. The default **Pre Batch** routine can be changed in the **Batch Options** page.

    NOTE: The **Post Batch** routine runs after the batch is complete. This routine is selected by default when the protocol or batch is set up. The

default **Post Batch** routine can be changed in the **Batch Options** tab of the **Admin** page.

Creating a Kit

To create a kit:

1. Open the **Protocols** page, then open the **Protocols** tab.
2. Select the protocol that you want to use for the kit, then click **New Std/Ctrl**. The **Std/Ctrl Details** tab opens.
3. Type the name of the kit in the **Name** box, the lot number in the **Std/Ctrl Kit Lot#** box, the expiration date using MM/DD/YY format in the **Expiration** box, and the manufacturer in the **Manufacturer** box.
4. Click **Apply Std Lot** if you want to apply a standard lot. The **Select Lot** dialog box opens. Click a lot and select **OK**.
5. Click **Apply Ctrl Lot** to apply a control lot. The **Select Lot** dialog box opens. Select a lot and click **OK**.
6. Alternatively, type the appropriate information in the **Assay Standard Information** and **Assay Control Information** sections. The number of standards, controls, or both in these sections is defined in the protocol. If your batch uses controls, select **Expected**, **Low** or **High** from the **Show Value** options. Use the **Apply Values** arrows to apply values down or across the range of analytes.
7. Click **Save**.

Creating a Lot

To create lots, you must use a protocol that uses either **Quantitative** or **Qualitative** analysis settings.

To create a lot:

1. Open the **Protocols** page, then open the **Protocols** tab. Click the **Stds & Ctrls** tab, then click **Create New Std/Ctrl Lots**.
2. In the **Select Protocol** dialog box, select the protocol you want to use for this lot, then click **OK**. The **Std/Ctrl Details** tab opens.
3. If the protocol uses standards, type the appropriate information for each standard in the **Assay Standard Information** section. In each analyte column, type the expected concentration for the analyte.
4. Alternatively, click **Apply Std/Ctrl Kit** and select a lot from the **Select Lot** dialog box. Click **OK** to apply the lot.
5. If your batch uses controls, select **Expected**, **Low**, or **High** from the **Show Value** options. Use the **Apply Values** arrows to apply values down or across the range of analytes.
6. Click **Save**.

Create a New Batch from an Existing Protocol

This option creates a new batch using a selected protocol from the **Installed Protocols** list. The list contains the following information about each protocol:

- **Name**
- **Version**
- **Manufacturer**
- **Date**

When you click this option, the following tabs appear:

1. **Protocols**
2. **Stds & Ctrls**
3. **Plate Layout**

These tabs are numbered because you must complete the steps on each tab sequentially. For example, you must complete the **Protocols** tab before you can access the **Stds & Ctrls** tab.

> **NOTE:** Luminex recommends that you analyze the manufacturer's assay kit controls with each batch.

To create a new batch from an existing protocol:

1. Read the instructions provided with the assay kit you are using.
2. Open the **Batches** page.
3. Click **Create a New Batch from an existing Protocol**.
4. Type the batch name in the **Batch Name** box.
5. If you want a description for the batch, type it in the **Enter Optional Description** box.
   - Click the existing protocol that you want to use. If the protocol uses standards, controls, or both, you can view the active reagents. If the selected protocol uses standards, controls, or both, the next tab that appears is the **Stds & Ctrls** tab. You can view details about the active reagents, apply different standards/controls, or manually add new information on this tab.
   - If the selected protocol does not use standards or controls, the next tab that appears is the **Plate Layout** tab. You can assign well commands for this batch on this tab.
6. Click **Next**.
7. Click **Run Batch** to begin batch acquisition, or click **Save** to save the batch information as a pending batch. Pending batches can be run at any time.

   > **NOTE:** If the batch spans more than one plate, the tray ejects automatically when all defined wells have been acquired. A dialog box opens, prompting you to insert the next plate.

Generating a Report

1. Open the **Results** page, then the **Reports** tab.
2. In the **Report** drop-down list, select the category of report: batch, protocol, calibration and verification, performance verification, system log, or advanced. Depending on what you choose in the **Report** list, the content of the **Type** list changes and other features can be displayed in the window.
3. Select the specific report from the **Type** list.
4. If you selected either a batch report or a protocol report, select the specific batch or protocol from the list.
5. If the report you selected requires a date range (calibration and verification, performance verification, and system log), use the calendars available when you click the **Start** and **Through** buttons to establish the date range.
6. If the report you selected requires a choice of analytes, select them from the **Select Analytes** box. Select them all using the **All** button; clear your selections using the **Clear** button.
7. Click **Generate**.

If the report includes multiples analytes, use the arrows above the report to move through the list of analytes.

If the report is lengthy, use the **Page** arrows to scroll through the pages in the report.

Use the **Zoom** button to focus on a particular part of the report.

Chapter 4: Shutdown

Shutting Down the Analyzer

Run the daily shutdown routine to prevent clogs and crystallization of salt in the sample probe. Clogs and crystallization of salt in the sample probe can cause problems with calibration, verification, and data acquistion; they can also cause sample splashing. Shut down the system properly to ensure system integrity.

1. On the **Home** page, click **Shutdown**. The **Auto Maint** tab opens, with **System Shutdown** selected.
2. Click **Eject**.
3. Fill reservoir **RA1** with 3/4 of DI water.
4. Fill reservoir **RC1** with 3/4 of 10%-20% household bleach solution.
5. Verify that reservoir **RD1** is empty.
6. Click **Retract**.
7. Click **Run**.

Chapter 5: Troubleshooting

If you are not successful troubleshooting problems with MAGPIX, contact Luminex Technical Support. See *Technical Support*. If necessary, attach a support utility file to provide detailed information. To create a support utiltity file, access the **Support Utility** tab of the **Maintenance** page and follow the instructions in *Sending a Support.zip File*.

MAGPIX New System Initialization Troubleshooting

This section provides you with information to troubleshoot issues that you can encounter during the MAGPIX® installation and system startup. The procedures are presented as step-by-step instructions and assume basic knowledge of xPONENT software and xMAP Technology.

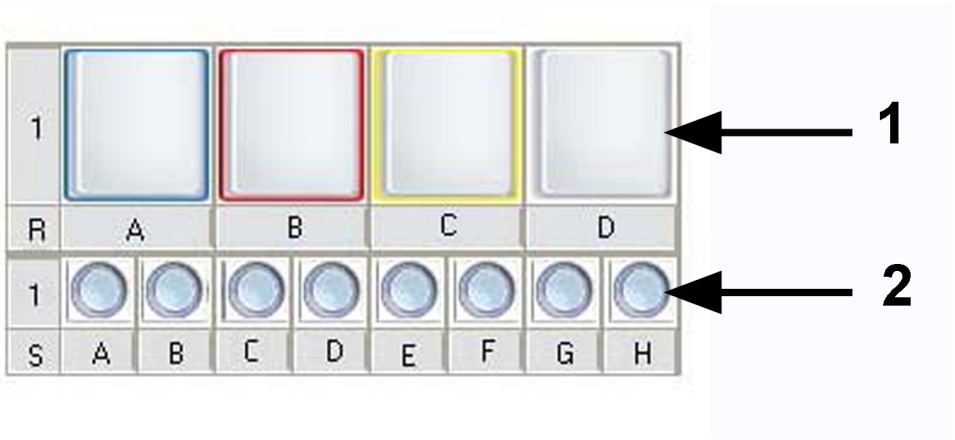
System Startup

Verify that the following procedures were performed when the MAGPIX system was turned on for the first time:

- Adjusting the Sample Probe Height
- Revive After Storage Routine (Luminex)
- System Initialization

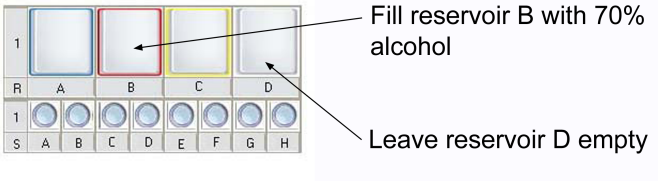
All system startup routines are run from the MAGPIX Off-Plate Reagent Block. For detailed instructions on how to perform these operations, refer to the *Starting the MAGPIX System for the First Time* section of this manual.

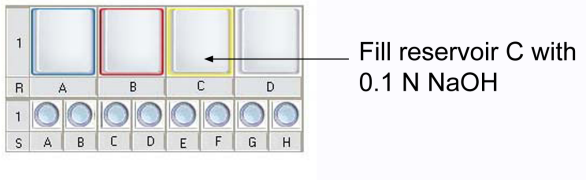
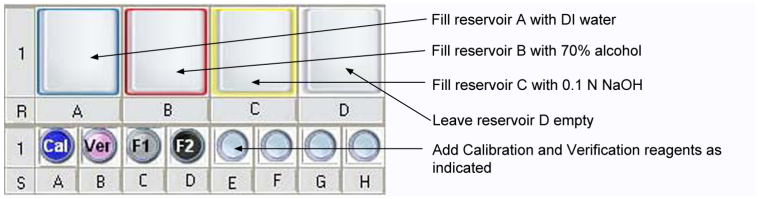
FIGURE 3. **MAGPIX Off-Plate Reagent Block**

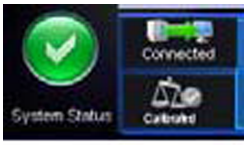


1	Reservoirs
2	Strip Wells

MAGPIX New System Startup Errors

Problem	Resolution
	1. Check the sample probe height for correctness.
Calibration Failure	2. Create and run the following routine. Create routines in the xPONENT **Maintenance** page **Cmds & Routines** tab. Approximate run time: Five minutes
	
	(2x) **Clean** with 70% isopropanol or ethanol alcohol (reservoir B)
	(2x) **Alcohol Flush** with 70% isopropanol or ethanol alcohol (reservoir B)
	(3x) **Rinse** (reservoir D)
	(3x) **Prime**
	Run **Calibration** routine Verify that reagent is freshly vortexed. Use 6 drops of reagent.
	3. If calibration continues to fail, create and run the following routine. Create routines in the xPONENT **Maintenance** page **Cmds & Routines** tab. Approximate run time: Five minutes

Problem	Resolution
	
	(1x) **Clean** with 0.1 N NaOH (reservoir C)
	(3x) **Rinse** (reservoir D)
	Run **Calibration** routine. Verify that reagent is freshly vortexed. Use 6 drops of reagent.
	4. If calibration continues to fail, contact Luminex Technical Support.
Performance Verification Failure	1. Sonicate and flush the sample probe using distilled water. Observe the probe calibration for positional accuracy (see procedure below). Verify all fittings are secured in place (see flowchart below). Refer to the *MAGPIX Calibration and Performance Verification Troubleshooting Guide* flowchart below for detailed information about the fittings.
	2. If system continues to fail, create and run the enhanced start-up routine outlined below. Create routines in the xPONENT **Maintenance** page **Cmds & Routines** tab. Approximate run time: Thirty minutes
	
	Sonicate and flush the sample probe (flush from narrow to wide end) using distilled water.
	(4x) **Rinse** (reservoir D)
	(3x) **Alcohol Flush** with 70% isopropanol or ethanol alcohol (reservoir B)
	(1x) **Alcohol Flush** with DI water (reservoir A)
	(1x) **Sanitize** with 0.1N NaOH (reservoir C)
	(2x) **Clean** with 0.1N NaOH (reservoir C)
	(2x) **Rinse** (reservoir D)
	(1x) **Alcohol Flush** with70% isopropanol or ethanol alcohol (reservoir B)
	(1x) **Prime**
	(4x) **Rinse** (reservoir D)
	CAL (strip well A) Verify that reagent is freshly vortexed. Use 6 drops of reagent.
	(3x) **Rinse** (reservoir D)

Problem	Resolution
	VER (strip well B) Verify that reagent is freshly vortexed. Use 6 drops of reagent.
	(1x) **Rinse** (reservoir D)
	Fluidics 1 (strip well C) Verify that reagent is freshly vortexed. Use 6 drops of reagent.
	Fluidics 2 (strip well D) Verify that reagent is freshly vortexed. Use 6 drops of reagent.
	(3x) **Rinse** (reservoir D)
	Check the Cal/Ver icon in the System Monitor Bar located at the bottom of the xPONENT screen to confirm that the operation has been completed successfully. 
	3. If performance verification continues to fail, contact Luminex Technical Support.
First well has a low bead count	1.On the xPONENT 4.2 **Admin** page, verify that **Run Rinse Before Batch Starts** is checked.
	2. Rerun the plate.
	3. Close and restart xPONENT.
	4. Change the sample load volume (see procedure below).
Error at xPONENT start	If you configured your PC to auto-start xPONENT when booting, disable this function.

Probe Positioning

1. Cover a 96-well plate with foil and insert it into MAGPIX.
2. Access the **Probe and Heater** tab of the **Maintenance** page.
3. Select a well and click **Probe Down**.
4. Move the probe up and eject the plate.
5. Verify that the probe pierced the well you selected at its center.

Changing Sample Load Volume

NOTE: You can change the sample load volume only after pausing the batch. You can pause it manually while a procedure is running, or you can select **Single Step** on the **Batches** page to create an automatic pause after each well.

1. While the batch is paused, click **Chg Vol** on the **Current Batch** tab.
2. Enter the new volume (in µL) and click **OK**.

MAGPIX Calibration and Performance Verification Troubleshooting Guide

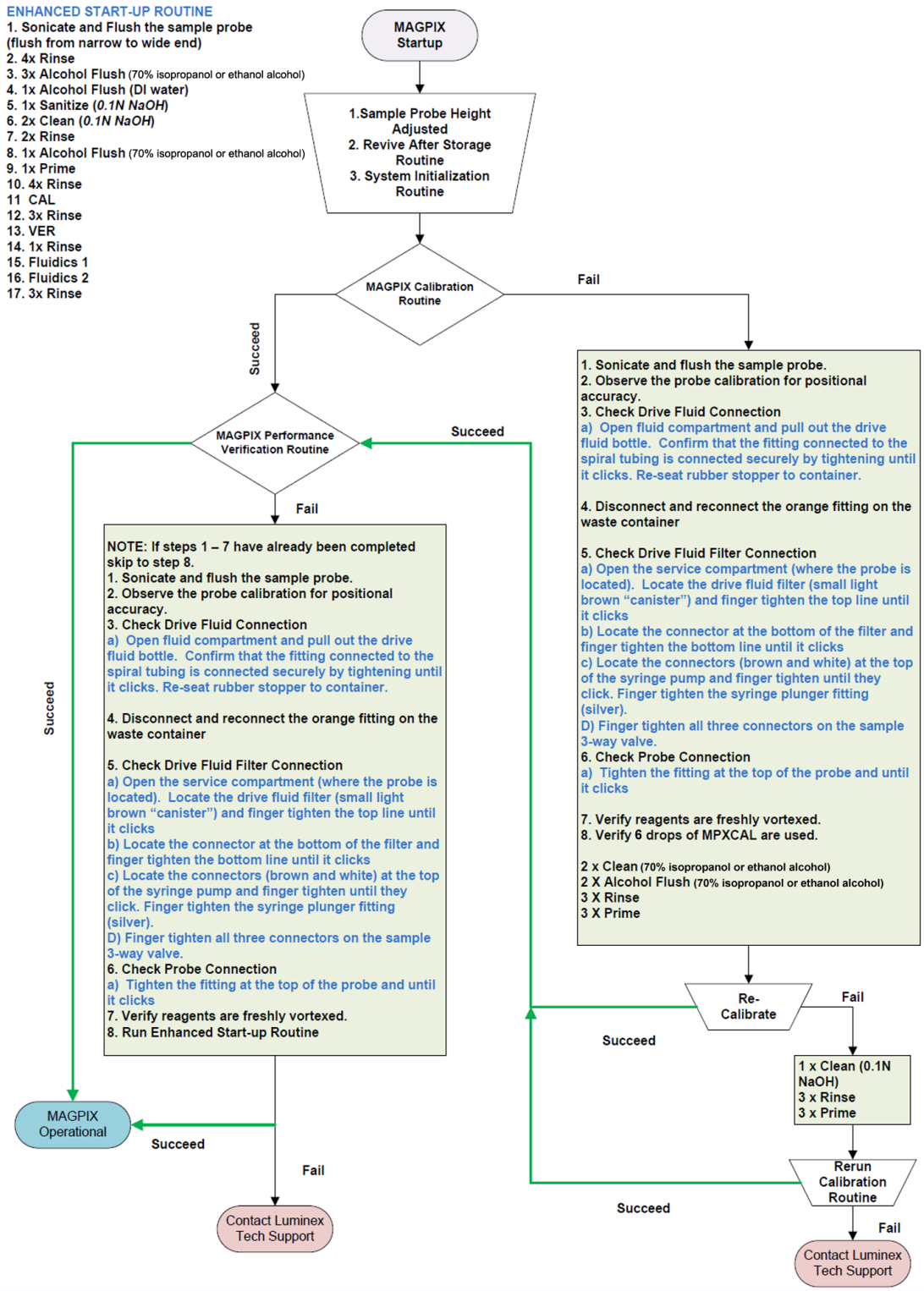
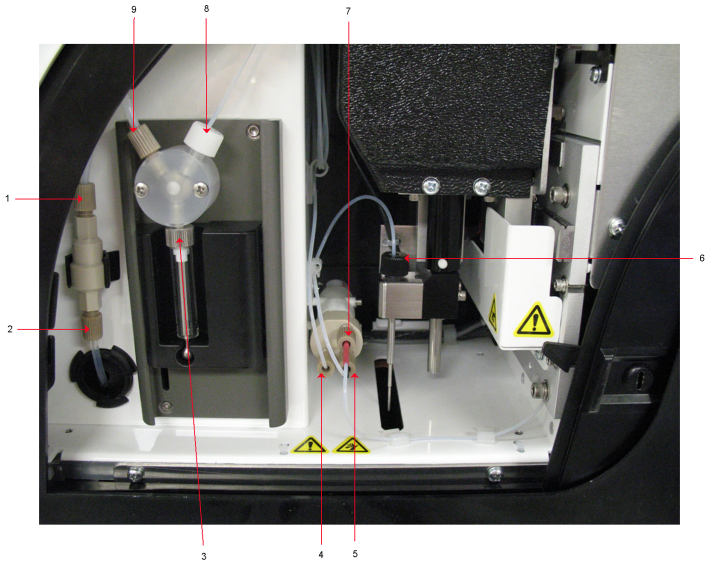


TABLE 1. **Fittings to Check**

Fitting	Location, Step, and Fitting
	Fluid Compartment Step 3: Drive Fluid Fitting
	Fluid Compartment Step 4: Waste Container Fitting
	Side Compartment Step 5 (a): Drive Fluid Filter Connector, top (1) Step 5 (b): Drive Fluid Filter Connector, bottom (2) Step 5 (c): Syringe Pump Connectors (8, 9) and Syringe Plunger Fitting (3) Step 5 (d): Sample 3-Way Valve Connectors (4, 5, 7) Step 6: Probe Connection (6)

Technical Support

On the Web

For more information, visit the Luminex FAQ page at `http://www.luminexcorp.com/support/`.

You can access the Technical Support website using a user name and password at `https://oraweb.luminexcorp.com/OA_HTML/jtflogin.jsp`.

By Phone Inside the U.S. and Canada

Phone: 1-877-785-BEAD (-2323)
Fax: 512-219-5114

By Phone Outside the U.S. and Canada

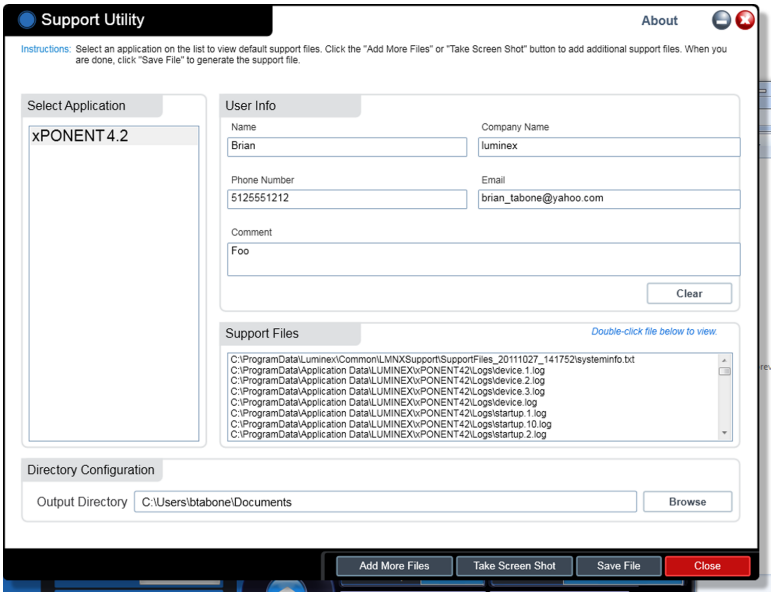
+1 512-381-4397

Email

Email questions to support@luminexcorp.com.

Sending a Support.zip File

1. If you want to include a batch file, select it and check **Include Batch Information**.
2. Press **Support**. The Support Utility launches.
3. Type your name in the **Name** box.



4. Type your company name in the **Company** box.
5. Type your phone number in the **Phone** box.
6. Type your email address in the **Email** box.
7. In the **Comment** box, type a detailed description about the problem you are experiencing.

8. Verify the location where you want to store the file. To change the location, click **Browse**, then navigate to the new folder and click **OK.**
9. Click **Save File**. The saved file includes date and time information.
10. Send an email to support@luminexcorp.com and attach the support file (**xPONENTSupportFile.zip**) to the email.