

XFp Extracellular Flux Analyzer

User Manual



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Table of Contents

1. XFp Analyzer Overview	4
2. Technical Specifications	5
3. XFp Analyzer Installation	
Unpacking and Component Identification	6
Suitable Locations for the XFp Analyzer	7
Safety Considerations.....	7
4. Basic Operation of the XFp Analyzer	
Power and Warm-Up.....	8
Welcome Screen on First Time Power Up.....	8
Communications and Network Connection Setup	8
Turning the XFp Analyzer Off	8
5. Navigating the XFp Analyzer software	
Setting up an XFp Assay.....	9
Running an XFp Assay.....	11
Modifying XFp Analyzer Settings.....	14
XFp Analyzer Diagnostics.....	16
Online Help and Support	18
Analyzing XFp Data Using Wave for Desktop	19
Appendices	
Appendix I: Networking Guide	20
Appendix II: Troubleshooting	24
Appendix III: Support Contact and Ordering Information.....	25

1. XFp Analyzer Overview

The Seahorse Bioscience XFp Analyzer measures the rate of change of dissolved oxygen and pH in the media immediately surrounding living cells cultured in a miniplate. Changes in the extracellular media are caused by the consumption or production of analytes by the cells. Therefore, a sensitive measurement of the media flux can be used to determine rates of cellular metabolism with precision and in a completely non-invasive, label-free manner.

A unique feature of XF technology is its ability to make accurate and repeatable measurements in as little as five minutes. This is accomplished by isolating an extremely small volume (approximately 2 μ L) of media above the cell monolayer. Cellular metabolism causes rapid, easily measured changes to the microenvironment in this small volume.

Typically, a measurement cycle is performed for 6 minutes. The media is gently mixed and the analyte levels are then measured until the oxygen concentration drops approximately 20-30% and media pH declines approximately 0.1-0.2 pH units. The measurement is performed using optical fluorescent biosensors embedded in a disposable cartridge that is placed into the specially designed Seahorse XFp Cell Culture miniplate.

Baseline metabolic rates are typically measured 3-4 times, and are reported in pmol/min for OCR (Oxygen Consumption Rate) and in mpH/min for ECAR (Extracellular Acidification Rate). Compound is then added to the media and mixed, and then the post-treatment OCR and ECAR measurements are made and repeated. As cells shift metabolic pathways, the relationship between OCR and ECAR changes.

The XFp Analyzer system includes a bench top analyzer, disposable sensor/compound delivery cartridges, tissue-culture treated miniplates for seeding cells for analysis, calibration solution, and Wave software.

Consumable cartridges, miniplates and calibration reagents are packaged and sold in sets under the trade name "FluxPaks".

Assay kits and reagents for performing gold standard XF assays are available. The XFp Cell Mito Stress Test and XFp Glycolysis Stress Test kits contain pre-measured, verified compounds for assessing the two major energy pathways in cells and are recommended for characterizing the metabolic phenotype of cells using the XFp Analyzer.

2. Technical Specifications

Model	XFp
Dimensions:	Width x height x depth 12" x 17" x 23" 30 cm x 43 cm x 58 cm
Weight:	33 lbs / 15 Kg
Power Requirements	100-240V AC 50/60Hz 6A/3A
Power cord rating	3- wire (grounded) AC power cord rated 10A or greater
Power fuse ratings	250V/5A Time Lag (2 fuses) 5mm X 20mm
Environmental Conditions	'Normal' environmental conditions - Indoor use, altitude to 2000 m
Room Temperature Range	+59°F - 86°F / +15°C - 30°C No direct sunlight Humidity 20 - 70 % RH, non-condensing
Data Interface	TCP/IP (external) USB Type A (one in front, two in back)

3. XFp Analyzer Installation

Unpacking and Component Identification

Upon receipt immediately check each box for damage. Report any shipping damage to the transportation company, and Seahorse Bioscience using the contact information on page 2 of this document.

The following items are included in an XFp system:

Instrument/Controller	Quantity
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XFp Analyzer	1
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Power Cord (region-specific)	1
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Wireless Micro USB Adapter	1
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Suitable Locations for the XFp Analyzer

The XFp Analyzer is designed for laboratory use. The internal environment for the XFp Cell Culture Miniplate is controlled to a preset temperature; therefore, laboratory room temperature must be maintained within the range listed in the specification table in Section 2. The miniplate tray temperature can be monitored using the status display on the upper right portion of the user interface.

The XFp Analyzer uses optical detection technology to measure extremely low levels of fluorescent emission from analyte sensors. Therefore, although the instrument has been designed to shield room light, excessive light (such as direct sunlight) should be avoided.

Safety Considerations

WARNING: *The protection provided by this instrument may be compromised if it is used in a manner not specified by Seahorse Bioscience.*

Safe operation of the XFp Analyzer requires that all covers be securely attached and plate tray door is closed. This also prevents heat loss and system cooling, which can affect data quality.

The door opens automatically when the tray is extended, allowing the operator to insert or remove the assay consumables. The operator must exercise caution during the loading of the miniplate/cartridge in order to avoid the possibility of a pinch hazard. After the miniplate/cartridge is placed securely on the tray, the operator's hand must be removed from the area of the tray before continuing the assay. After the command is given to continue the assay via the user interface, the tray will move slowly back into the instrument and the door will close. An optical sensor is used to determine the status of the door.

The XFp Analyzer has heaters around the miniplate that maintain a stable temperature. Typically, the temperature will be maintained at 37°C, as monitored by temperature sensors and controllers embedded in above the tray. A thermal fuse will disable the heater should it reach an abnormally high temperature.

The user shall not replace the power cord provided with any other power cord that is rated at less than what is specified in Section 2, dependent on the power mains of the country the instrument will be used in.

4. Basic Operation of the XFp Analyzer

Power and Warm Up

To power on the XFp Analyzer, toggle the power switch on the back of the instrument.

Allow at least 20 minutes for the instrument to fully warm and equilibrate to the set temperature.



The status icon in the upper right corner of the screen will display the temperature and a green check mark.

Welcome Screen on First Time Power Up

On initial power up, a welcome screen will display some initial diagnostic tests on the instrument. Follow the on-screen directions to run them.

These tests can be run at any time by using the Diagnostics menu selection on the instrument user interface (*For more details, refer to Section 5: Navigating the XFp Analyzer Software*).

XFp Analyzer Communications and Network Connection Setup

The transfer of template and result files between the XFp Analyzer and an analysis computer running Wave can be accomplished through any of the USB connectors on the instrument. Seahorse recommends connecting the XFp Analyzer to a local network to ease file movement and aid Seahorse Technical Support in servicing the instrument. Please contact Seahorse Technical Support with any questions.

Refer to the XFp Networking Guide (Appendix I) for instructions on setting up a wired network connection as well as a wireless network connection using the included wireless adapter. NOTE: Only the included wireless adapter has been qualified to work with the XFp Analyzer.

Turning the XFp Analyzer Off

To turn off the instrument, press the power button in the lower-left corner of the Home screen to first shut down the XFp Analyzer screen. After the screen turns black, use the power switch on the back of the instrument to completely shut down power.

5. Navigating the XFP Analyzer

Setting up an XFP Assay

To set up an assay on the XFP Analyzer, select Start from the Home screen.

1. Select Template from Local, USB or Network drive

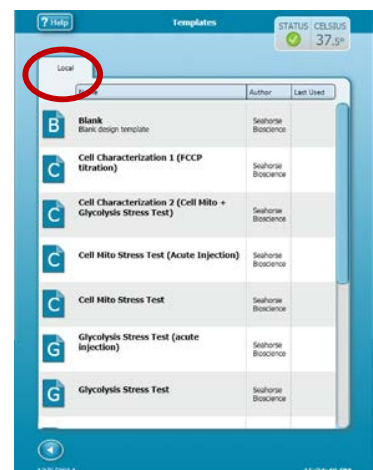
Seahorse Bioscience provides default templates for XF Stress Test and cell characterization assays. Templates can also be created in Wave running on a desktop or laptop computer then transferred to the XFP Analyzer via network connection or USB flash drive.

- a. Click **Start**
- b. Select a template provided by Seahorse Bioscience to perform a specific assay. These templates can be found in the **Local** tab.
- c. Templates designed in Wave can be transferred to the XFP Analyzer via USB or Network location.

- i. If the instrument is networked, a Network tab will appear and allow selection and running of a template from the networked location.
- ii. If a USB thumb drive containing a valid XFP template has been inserted into the instrument, a USB tab will appear. Templates can be run directly from this location.

Refer to the Wave User Guide for XFP (available from the Seahorse Bioscience website) for more information about creating and transferring templates.

Note! Only XFP assay template files (*.asyt) are recognized by the XFP Analyzer. Templates must reside on the root of the USB flash drive and NOT in a subfolder.



2. Verify Groups and Plate Map

After selecting the template file, make any necessary modifications to the Plate Map and Groups to be analyzed.

- a. To see the conditions defined for a Group, touch the group name and look at the header information, as shown.
- b. To change the wells assigned to each group, touch the Group name followed by the well(s) to be included.
- c. For other changes to Groups, Wave running on a desktop computer must be used.

Please refer to the Wave User Guide for XFP for more detailed information about modifying Group Conditions.



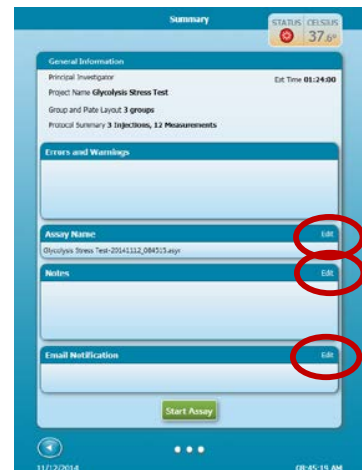
3. Review/Edit Instrument Protocol

Check that all desired steps are selected (check boxes checked). Seahorse Bioscience strongly recommends performing equilibration for all cell-based XF assays. If needed, increase or decrease the number of measurements that will be performed during the assay on the Instrument Protocol page by touching the circled number corresponding to the step to be modified, then adjusting the number of cycles up or down. (Refer to *Define the Instrument Protocol* section of the Wave User Guide for XFP Analyzer for more information about measurement cycles).



4. Review Summary and Start Assay

- a. Review the General Information, and Errors and Warnings sections to verify that the settings are as desired.



- b. Before beginning an assay, the following optional steps may be taken:

- i. Click **Edit** next to **Assay Name** to customize the name of the Assay Result file.
- ii. Click **Edit** next to **Notes** to add any notes related to the assay or protocol being performed.
- iii. Click **Edit** next to **Email Notification** to add email addresses for recipients to be notified when the assay is complete.

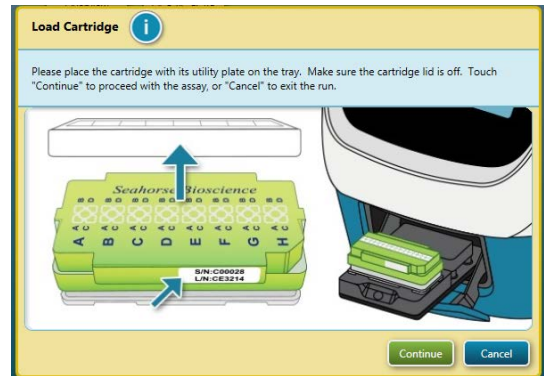


- c. Click **Start Assay** then follow the on-screen instructions.

NOTE: The XFP Analyzer will save assay results to a USB flash drive, if available. Seahorse Bioscience recommends inserting a USB flash drive into the instrument at the time of assay setup so that results will automatically be saved.

Running an XFp Assay

1. Load the Cartridge and Utility Plate onto the tray when prompted. Ensure the cartridge fits properly on the Utility Plate, the lid is removed from the cartridge, and the direction of the cartridge matches the image on the screen.



2. The XFp Analyzer will perform **Calibration** of the sensor cartridge, which takes approximately 20 minutes.
Note: *Although the sensor calibration may appear to be complete after 15 minutes, the instrument will be busy for a few more minutes. Wait for the user prompt to appear.*
3. Following calibration, the XFp Analyzer tray will open and present the utility plate. Remove the Utility Plate and load the Cell Plate. Ensure the lid is removed from the Cell Plate prior to loading onto the XFp Analyzer tray.
4. Once the Cell Plate is loaded, touch **Continue** to begin the equilibration step. Viewing the progress bar in the upper-left area of the screen can check progress of equilibration.

5. During the assay, two views are automatically available to visualize the data being acquired by the XFP Analyzer. Select either tab to toggle between the views.


a. Overview

The overview tab displays both OCR and ECAR as a function of time.

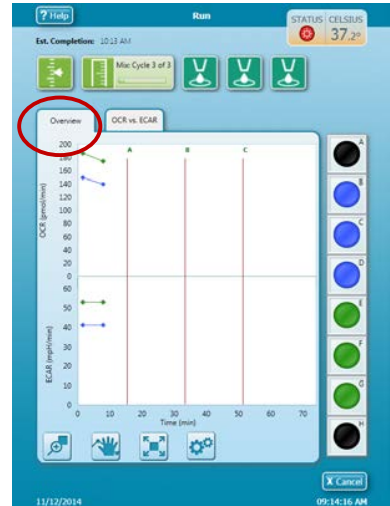
Red vertical lines indicate the injections and are labeled by injection port letter.

- i. In this view the charts can be zoomed and scaled by choosing one of the tools below the charts:

1. **Zoom**
2. **Move**
3. **Reset**

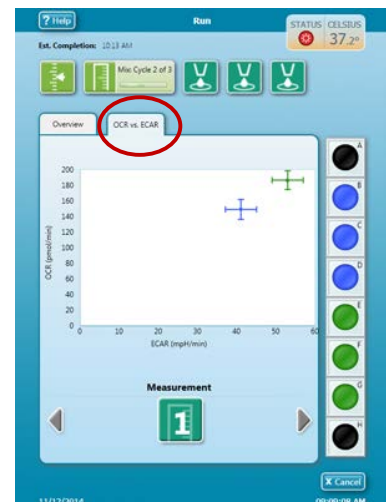
- ii. By default, Rate data is displayed in Group mode. By touching the Options button,  different data can be displayed:

1. **Show StdDev** turns on display of error bars for the each Group.
2. **Level Data** shows the concentration data from which the rate data is derived.
3. **Well Mode** shows the data from the individual wells instead of the average of the wells in each group.



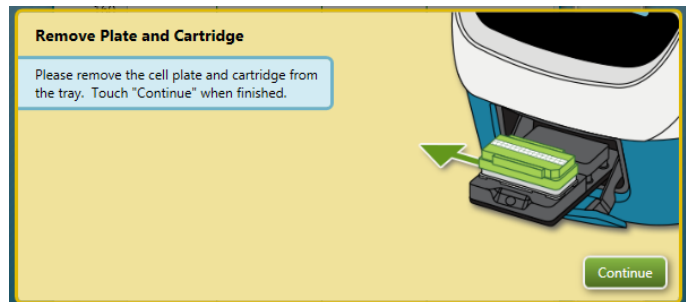
b. OCR vs. ECAR

The OCR vs. ECAR tab displays OCR on the Y-axis and ECAR on the X-axis. Choose a single time point at which to examine OCR vs. ECAR by using the Measurement selector below the chart. Data are displayed in Group Mode with standard deviations. The scale of this chart is fixed to allow easy comparison of values across measurements.

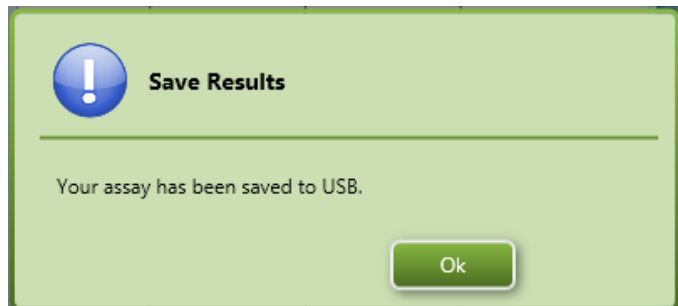


Note: In both the Overview and OCR vs. ECAR views, the display of individual wells can be turned off by touching the well graphic on the right. Background correction is always performed while the experiment is running.

6. Once the assay has finished, the XFp Analyzer will prompt the user to eject the cartridge and remove the cell plate.



7. After the assay is complete, the data will automatically be saved to a USB flash drive (if inserted), the local drive, or the networked drive (if configured). A message will appear indicating the location of the save Assay Result File (*.asyr).



Note: Canceling a run during an assay may cause the XFp Analyzer to stall. If this occurs, restart the hardware by using the power switch on the back of the instrument. After shutting down, use the same power switch to turn the instrument ON.

Modifying XFp Analyzer Settings

From the Start page, touch the Settings button to access the XFp Analyzer Settings page containing:

- System Preferences
 - Environmental Settings
 - Backup Assay Results
 - Auto Assay Naming
 - Template Management
- Device Settings
 - Setup Assistant



1. Environmental Settings

- a. **Adjust Tolerance:** Increase or decrease the temperature tolerance for the XFp Analyzer.
- b. **Temperature Alarm:** Enable or disable an alarm to notify users if the temperature of the XFp Analyzer falls outside the acceptable tolerance set above.
- c. **Atmospheric Pressure:** Customize the atmospheric pressure set on the XFp Analyzer to match that of the lab in which the instrument is located.

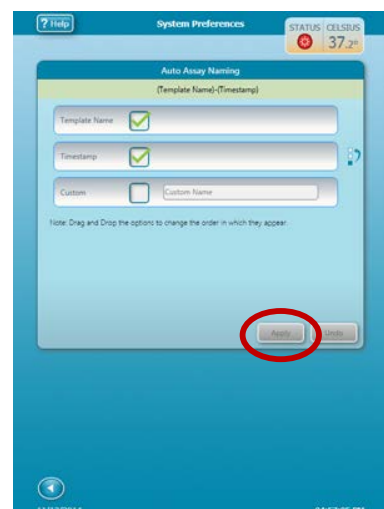


2. Backup Assay Results

- a. Backup Assay Results saves a copy of each assay performed within the previous 60 days on the local storage within the XFp Analyzer.
 - i. Insert a USB flash drive. It must be inserted and ready to use before proceeding to step 2.
 - ii. To export these files either individually or collectively to a network location or USB, click the individual check box or click **Select All** and then click **Export**.
 - iii. To delete, select either individual or multiple files and click **Delete**.

3. Auto Assay Naming

- a. Auto Assay Naming allows one to specify the default naming convention to be followed for each Assay Result File (*.asyr) that is created on the XFp Analyzer.
- b. The order of each variable can be adjusted by dragging and dropping the selection in the order desired. An example of the name will be displayed above.
- c. The Custom field can be used to add a keyword, instrument name, etc. to all assay results files.
- d. Click **Apply** to complete the process of setting up a custom name



4. Template Management

- a. Template Management allows transfer of assay template files between the XFP Analyzer and a Windows computer running Wave Desktop.
 - 1) Check the box next to an individual assay template or click **Select All** to select all the assay template files.
 - 2) Click **Import** (from either the USB or Network tab) to import files onto the XFP Analyzer.
- OR-**
- b. Click **Export** (from XFP Analyzer Local storage) to export files to a USB or network location.

5. Device Settings

The Setup Assistant is a series of screens that guide configuration of network settings.

Note: Seahorse recommends that the Device Settings be configured by the institution's IT department and reference the XFP **Networking Guide** (Appendix I) for assistance.

- a. **Wired Network** – Ethernet cable is required to set up wired network access. The Ethernet cable port is located on the lower backside of the XFP Analyzer

- b. **Wireless Network** – A wireless USB adapter can be plugged into one of the available USB ports (recommended on lower back side of XFP Analyzer) to gain wireless access. Once finished, select an available SSID from the list and click **Connect**. If there are no visible networks available, click **Refresh**.

Note: The XFP Analyzer must be restarted after the Wireless USB adapter is plugged in.

- c. **Network Directory** – Once network access setup has been completed, the **Network Directory** allows for setting a network location to save Assay Template and Assay Result files. It is essential to verify the spelling of the Shared Directory, Domain, User Name and Password for this to function.

- d. **Email Configuration** – Set up an email address for completed assay notifications. **Time Zone** – Set the time zone for the XFP Analyzer. Once set, the correct time will be visible on the screen as well as when using the time stamp function for auto assay naming.

- e. **Date & Time** – Adjust the date and/or time. This can be done automatically by connecting to a time server (screen 5), or set manually (screen 6).



XFp Analyzer Diagnostics

The XFp Diagnostics page contains a variety of functions that assist Seahorse Technical Support in debugging any issues or errors encountered during normal operation. The System Check diagnostic function should be performed upon initial startup of the XFp Analyzer and upon Seahorse Technical Support request.

To access the Diagnostics page, go to the Home pages then touch **Diagnostics**.

System Files – Press **Send** to send the system log files if the XFp Analyzer encounters an error or issue. Seahorse Technical Support will also request log files as necessary. The XFp Analyzer **must** be networked in order to automatically send system files to Seahorse Technical Support.

1. Diagnostic Tests

System Check - Overall System

- **Communication Test** – Verifies all system modules are communicating appropriately.
- **Voltage Test** – Ensures voltage levels are within specified ranges for operation.
- **Motor Test** – Verifies the movements and positions of the tray and probes
- **Holding Pressure Test** – Ensures the injection system does not have any leaks.
- **Injection Zero Test** – Ensures function of the zero pressure sensor.
- **Injection Solenoid Test** – Verifies proper open/close operation of internal valves.

Measurement System:

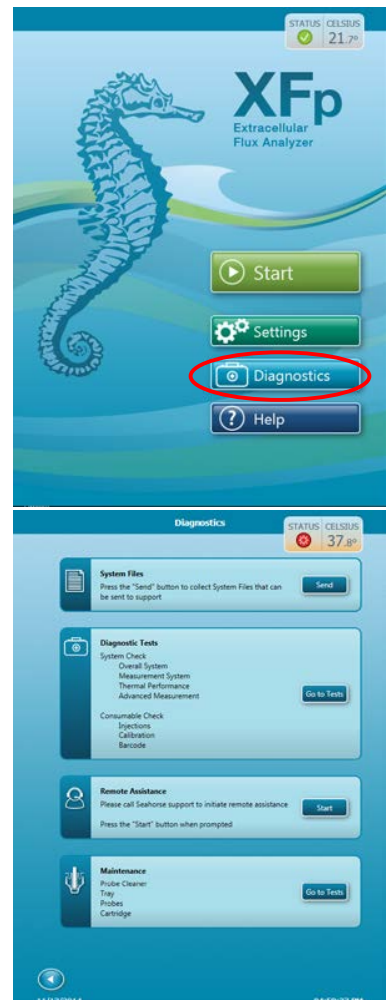
- **LED Reference Test** – Verifies system records LED intensity signal when ON.
- **Auto-zero Test** – Analyze and record any offset values found within the channels on each board.
- **Noise Test** – Analyze and record the amplitude of the noise level on each channel.
- **High-Gain Rise Time Test** – Conducts an amplifier rise time test.

Thermal Performance:

- **Thermal Test** – Verifies that the temperature remains within tolerance after a “Wait” period.

Advanced Measurement:

- **Drift Test** – Tests stability of each channel.
- **LED Drift Test** – Tests stability of each LED.
- **LED Noise Test** – Analyze the amplitude of the noise level of each LED when ON.



2. Consumable Check

- **Barcode Test** – Requires user interaction to complete test. Test verifies XFp Analyzer can read barcodes.
- **Calibration Test** – Performs Calibration procedure and will verify all wells are calibrated correctly.
- **Injection Test** – Verifies proper performance of Injection step.

3. Remote Assistance – Seahorse Technical Support has the ability to remotely access each XFp Analyzer that **has an active network connection**.

1. To perform a remote session with Seahorse Support first call the appropriate geographically located support line then click **Start**.
2. Next, an **ID** and **Password** will be presented; Seahorse Technical Support will request this information to connect to the XFp Analyzer.



4. Maintenance - The XFp Analyzer is designed to require minimal cleaning and maintenance. All consumables are disposable and none of the instrument components are exposed to the cell plate at any time, preventing cross-contamination of biological or chemical materials. However, the user, if necessary can perform some tasks.

- **Probe Cleaner** – Unavailable until June 2015.
- **Tray Movement** – Press **Tray Out** to open the door and eject the tray. Press **Tray In** to return the tray inside the XFp Analyzer.
- **Probe Movement** – Probe Movement will adjust the probes within the XFp Analyzer up or down.
- **Cartridge Eject** – Use this function to **Eject** or **Load** a cartridge into the XFp Analyzer*.



**Note: If a cartridge is suspected to be inside the XFp Analyzer, use this function to remove the cartridge before beginning another assay.*

Air filter replacement: At approximately one-year intervals, the air filter at the upper rear of the analyzer should be replaced. The filter retainer is held in place by magnets and can be pulled away from the housing by hand. [Replacement filters can be ordered using part number: 102799-000]

Online Help & Support

To access the Help page, go to the Start page then touch Help.



The following information is contained on the Help screen:

1. Support

Worldwide Seahorse Support contact information.

2. Version of Software/Hardware

Currently installed software and firmware versions on XFp Analyzer. If the XFp Analyzer is networked, Software Updates (Product Update Available) or Firmware Updates (Firmware Update Available) will be clickable.



3. **“Help” Text Info** - Most screens on the XFp Analyzer have a small Help button that will display Help text related to the current screen.



Analyzing XFp Data using Wave for Desktop

While assay design can either be done on the XFp Analyzer or in Wave for Desktop, Seahorse recommends Assay Result files (*.asyr) be analyzed using Wave for Desktop.

Note that Wave for Desktop can be downloaded and installed on any personal computer via the Seahorse Bioscience website.

<http://www.seahorsebio.com/support/software/update.php>

Refer to the Wave User Guide for XFp (Seahorse Document 103244-400) for a detailed description of how XFp data can be analyzed.

Additional information and protocols for preparing medium associated with XF assays, experimental design, running XF assays and analyzing XF data may be found online at <http://www.seahorsebio.com/resources/documentation/basicprocedures/index.php>, or by contacting Seahorse Bioscience Support [support@seahorsebio.com; 1-800-671-0633 or 001-978-671-1600 (option 3)]

APPENDIX I – Networking Guide

Required Materials: Approved Wireless USB Adapter or Wired Connection (Ethernet cable); Network connection settings from IT Department.

Note: XFp Analyzers are shipped with Microsoft® Security Essentials (MSE) configured for Real Time protection and weekly scheduled virus scans using default actions for its four alert levels. This will provide sufficient protection from common threats originating in network connections and removable media; however, MSE® will not scan media automatically on connection/insertion.

1. XFp System Information

- The XFp Analyzer ships with an integrated 100Mbps Ethernet network adapter.
- The XFp Analyzer ships with a Netgear® USB Wi-Fi Adapter (only 2 models are approved WNS 1000M and WNA 3100-100ENS)
- There is no internal Wi-Fi adapter in the instrument.
- The Ethernet (RJ-45) jack is located at base of the instrument, in the back.
- The XFp Analyzer can be connected to any Microsoft Windows®-compatible network and the Local Area connections can be configured, as required by the network.

2. Hardware Setup

The two options for network connection are (1) wired via Ethernet cable or (2) wireless via Wireless USB Adapter.

Wired Connection

1. Plug the wired network connection into the back of the XFp Analyzer. Ensure that the connection is firmly seated.
2. Power the XFp Analyzer **OFF**
3. Power the XFp Analyzer **ON**
4. Wait for the temperature to display before proceeding with the Wired Setup instructions (Section 3)

Wireless Connection

1. Plug the USB Wireless adapter into one of the available USB ports on the back of the instrument.
2. Wait 1-2 minutes after installing the adapter and ensure that the lights on the adapter are on or blinking.
3. Power the XFp Analyzer **OFF**
4. Power the XFp Analyzer **ON**
5. Wait for the temperature to display in the upper right corner of the home screen before proceeding with the Wireless Setup instructions (Section 3).

3a. Wired Setup

1. From the **Home** screen select the **Settings** button.
2. Select the **Go to Setup** button. The **Wired Network Connection Settings** screen will appear.



There are two options to use, depending on the settings required by the facility IT department:

Option 1: Automatic IP Address Assignment

1. Ensure the check box at the top of the **Wired Network Connection Settings** screen is selected and an IP address is populated into the address field.

Option 2: Manual IP Address Assignment

1. Remove the green check from the Obtain IP Address Automatically check box.
2. Manually enter the information provided by the local IT department for the instrument.
3. After setting the IP options, click the **Save** button.
4. Power the XFp Analyzer **OFF**
5. Power the XFp Analyzer **ON**
6. Once the temperature in the upper right corner of the user interface displays 37°C, click **Settings**, and then select **Go To Setup**.
7. Press the **Ping** button to ensure there is a working connection. A “Pass” message should appear if there is an active connection and correct settings.
 - a. *If the connection fails, re-confirm the IP address setting with the IT department and confirm the information in the hardware setup steps.*
8. Use the left and right arrows at the bottom of the user interface to exit the setting options.

3b. Wireless Setup

1. From the **Home** screen, select the **Settings** button
2. Click the **Go to Setup** button
3. Click the right arrow (bottom right) once. The **Wired Network Connection Settings** screen will appear.



4. Select the desired network to connect to, click **Connect**.
5. Enter the password when prompted.
6. If no errors are received, select the desired network again, and verify that the connect button displays "disconnect".
7. Power the XFp Analyzer **OFF**
8. Power the XFp Analyzer **ON**
9. After the instrument completes the boot process and is displaying the temperature value in the upper right corner, click **Settings**, and then **Go To Setup**.
10. Click the **Ping** button in the **Wired Network Connection Settings** screen.
11. If there is a "Pass" message and icon, the wireless setup is complete.
 - a. If it fails, confirm the information in the wireless networking setup steps and reattempt connecting to a wireless network.
12. Use the left and right arrows at the bottom of the user interface to exit the setting options.

4. Shared Folder Setup

1. From the **Home** screen, click **Settings** and then click **Go To Setup**
2. Click the right arrow at the bottom right twice. The **Network Directory** tab will appear.
3. Enter the information for the shared drive into the dialogue boxes (the facility IT department should provide this information).

Note: *Accuracy is essential* Double-check your entry before clicking the "Check Access" button.
4. Once the required information has been entered, click **Check Access** and verify no errors are generated.
5. Use the left and right arrows at the bottom of the user interface to exit the setting options.

5. Email Setup

1. From the **Home** screen, click **Settings** and then click **Go To Setup**
2. Click the right arrow at the bottom three times. The **Email Configuration** tab will appear.
3. Enter the required information and enter a working test e-mail address into the **Test Email Address** dialogue box. Click the **Test** button.
4. The test e-mail address should receive the test email verifying the success of the setup.
5. Use the left and right arrows at the bottom of the user interface to exit the setting options.

6. Time Settings

Time can be set manually, or if connected to a network, it can be automatically set.

Time Zone Setup

1. From the **Home** screen, click **Settings** and then click **Go To Setup**
2. Press the right arrow at the bottom right four times. The **Time Zone** tab will appear.
3. Select a time zone.
4. *Optional: 24-hour clock.* Check the box to activate the **24 Hour Clock**.

Setting the Time

1. From the **Home** screen, click **Settings** and then click **Go To Setup**
2. Press the right arrow at the bottom right five times. The **Date & Time** tab will appear.
3. The day and time can be manually entered in here. Otherwise, if there is a network connection, the provided network time server can be used. Alternatively, a national time server (*for example: time.nist.gov*) to automatically set the time and account for daylight savings adjustments.
4. Once the information has been entered, click **Sync**, and then click **Apply** for the changes to be saved.
5. Use the left and right arrows at the bottom of the user interface to exit the setting options.

APPENDIX II – Troubleshooting

Problem	Possible Cause	Fix
The template page takes 8-10 seconds to appear.	An incomplete or broken network connection	<ul style="list-style-type: none"> • Go to the Settings menu. • Touch the Go To Setup button in the Device Settings pane. • Browse to the Network Directory page. • Click the Disable button. When the button changes to Enable, click it again. • If after a brief delay you see a green “OK” icon appear next to the button, then the network connection is functional. • If you instead get a “Fail” result, delete the contents of every field on this page and click Apply. The templates page should now be displayed quickly.
Instrument gives a “load error message” and it is not clear whether a cartridge has already been loaded		<ul style="list-style-type: none"> • Select Diagnostics from Home Screen • Select Maintenance • Select Eject Cartridge • The XFp Analyzer will eject a cartridge if one is left inside the instrument.

For any other problems or questions, please contact Seahorse Technical Support at support@seahorsebio.com

Refer to section 5 of this document for a detailed description of running instrument diagnostics to aid in troubleshooting problems.

Please visit www.seahorsebio.com for FAQs.

For further information, please contact Seahorse Support or your local distributor:

Email: support@seahorsebio.com

Phone (US): 1-800-671-0633 #3

Phone (world-wide): +1-978-671-1600 #3

APPENDIX III – Support Contact and Ordering Information

Product Questions

For questions about XF technology, the XFp Analyzer, XF experimental design, data analysis, troubleshooting and other information:

Email: support@seahorsebio.com

Phone Support:

United States - Toll Free: (800) 671-0633, option #3

Global/ United States: +1 (978) 671-1600, option # 3

United Kingdom: 0800 096 7632

Germany: 0800 180 6678

Europe: +45 31 36 98 78

Consumables Order

To order XFp FluxPaks (including cell culture plates, sensor cartridges and calibrant solution) or other supplies:

United States:

Email: orders@seahorsebio.com

Phone: (978) 671-1600 option #2 or 1-800-671-0633

Fax Purchase Orders to: (978) 671-1611

United Kingdom:

Email: euorders@seahorsebio.com

Phone: 0800.096.7632

Fax Purchase Orders to: +45.31.73.25.67

Europe:

Email: euorders@seahorsebio.com

Phone: +45.31.36.98.78

Fax Purchase Orders to: +45.31.73.25.67