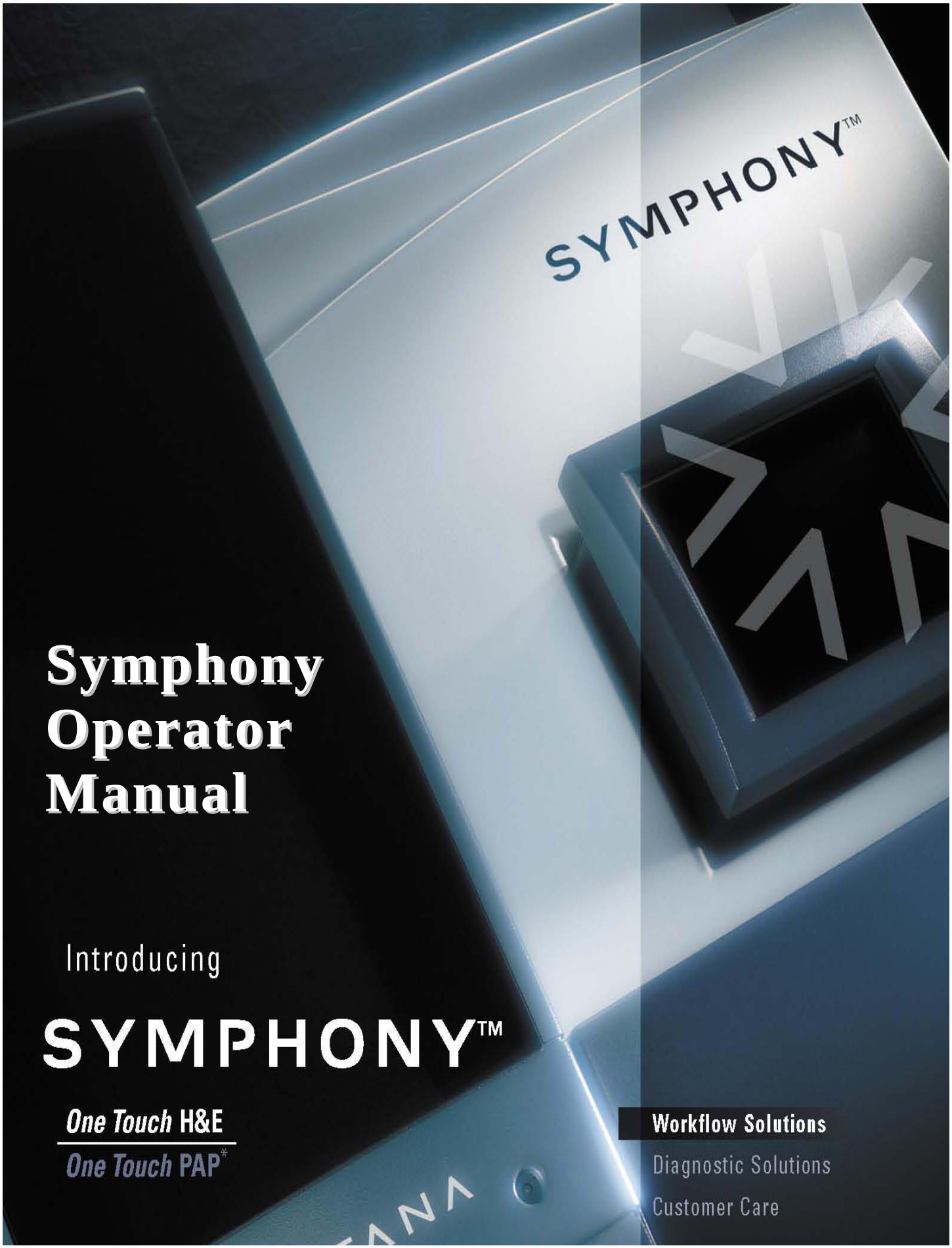
VENTANA



Symphony Operator Manual

Introducing

SYMPHONY™

One Touch H&E

One Touch PAP*

Workflow Solutions

Diagnostic Solutions

Customer Care

VENTANA®

SYMPHONY™

Operator Manual

A User's Guide to Installing, Configuring, Operating, and Troubleshooting the SYMPHONY System

Part Number 1488600
Revision A

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PREFACE

The VENTANA® SYMPHONY™ System has been designed to provide Ventana customers with a new generation of H&E and PAP* slide preparation automation. SYMPHONY is a high throughput staining system with the capability to fully automate the process of drying, paraffin removal, staining, glass coverslipping, and slide curing. SYMPHONY Solutions are biologic stains intended for standard histology laboratory use and are specifically designed to be used in conjunction with the SYMPHONY System.

* PAP application under development.

SAFETY INFORMATION

SYMPHONY SYSTEM SAFETY COMPLIANCE

All users of the Ventana SYMPHONY System must read and understand this user manual. For optimal user safety and operational benefit, the SYMPHONY System should be used only in an environment where good clinical practice guidelines are followed.

All safety related regulations, local codes, and instructions that appear in the manual or on equipment must be observed to ensure personal safety and to prevent damage to either the instrument or equipment connected to it. If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired or otherwise compromised.

Note:
No operator serviceable parts are behind the door that houses the Touchscreen.

SAFETY TRAINING

All operators must be trained in safe use of the instrument. After such training, operators should understand the following before attempting to use the system:

- The equipment must be connected to a grounded outlet.
- The equipment must be connected to a voltage source that is in agreement with the rating label.
- Instruments not used in a manner specified by Ventana may impair protection provided by the equipment.
- Replacement of internal fluid filters and tubing is performed by Ventana service personnel.
- Operators must keep their hands clear of the moving parts of the instrument.
- Operators must keep their hands clear of potential pinch points.
- Operators must keep their hands clear of all internal hot surfaces.
- Operators must consult the Material Safety Data Sheets for safe handling and disposal of reagents used with the instrument.
- Operators must comply with local and state codes for safe handling and disposal of reagents used with the instrument.

WARNING!

Good electrical safety practice should be observed at all times.

Make sure the unit is unplugged before relocating it or attempting to move it. It is recommended that mats be placed around the system to avoid risk of slipping or electrical shock in the event of reagent spills or leaks.

REAGENT HANDLING

Some, but not all, reagents to be used in the SYMPHONY System are flammable and/or may be considered an irritant. Use good clinical practice guidelines when handling reagents.

CAUTION!
Flammable Environment.

Some, but not all, reagents to be used in the SYMPHONY System are flammable. The system must be connected to a dedicated ventilation system and situated in a well-ventilated area per CLIA guidelines, free from any ignition sources in the area.

WARNING!
Do not squeeze or tilt the Bag-in-Box reagents after removing from the system as a small amount of fluid may leak through the pierced septum.

SAFETY LABELS

The following safety labels are affixed to the instrument. Labels are not to scale.

Caution: Hot Surface—Do Not Touch	
Caution: Refer to Accompanying Documents	
Caution: Laser	
Caution: Risk of Electric Shock	

INTRODUCING THE SYMPHONY PROCESS™ AND SOLUTIONS

Ventana's SYMPHONY and SYMPHONY Solutions are designed and optimized to bring exceptional productivity, safety, and quality to your laboratory. The SYMPHONY System greatly improves efficiency, user safety, and accuracy for greater productivity, higher quality biologic slides, and a better user experience.

Exceptional Productivity

SYMPHONY is an advanced, completely automated solution for H&E slide preparation. SYMPHONY is the only truly "One-Touch H&E" slide-staining system and provides…

An Improved Workflow

- All-in-one system, completely automating H&E processing including drying, paraffin removal, staining, and coverslipping.
- Greater walk-away time than any other system—at least 2.5 hours.
- Unattended operation for up to 500 slides.
- Faster time to first result than current methods.
- Improved over all turn around time.
- Less labor, higher productivity.
- SmartTrack automated tracking for reagents and consumables.
- Error reduction through better information management.

Ease of Use

- Easy to use software and an intuitive graphic user interface require minimal training and/or re-training.
- Fast and easy consumable management and ready to use reagents.
- Error reduction through reagent tracking, automated reporting, and ready-to-use reagents.

Maximum Flexibility

- Automation of all steps in the process.
- Flexibility in workflow design and ability to streamline processes.
- Information flow and management through connectivity.

Exceptional Safety

SYMPHONY is designed to improve the safety of the working environment in the histology laboratory.

Environmentally Friendly

- No xylene.
- Non-toxic reagents.

Safe and Ergonomic Design

- Lower exposure to reagents.
- No handling of open reagents.
- No toxic fumes.
- Ergonomically designed.
- No waste handling—direct to drain disposal.

Exceptional Quality

Ventana's SYMPHONY System sets a new standard of quality!

The usual methods for H&E have remained unchanged for nearly 40 years. Reagent degradation, sample carryover, and labeling errors seriously compromise stain quality, laboratory productivity and ultimately, patient care.

Ventana's SYMPHONY Process™ integrates unique reagent and automation technology to produce a high definition H&E stain of exceptional quality.

The Ventana High Definition H&E™ offers improved diagnostic visualization with superior clarity and discrimination of micro anatomic detail especially prominent in:

- Cytoplasmic membranes
- Nuclear detail
- Collagen fibers
- Keratin
- Nuclear membranes
- Sub-cellular structures including;
  - Cilia
  - Brush borders
  - Squamous intercellular bridges
  - Nuclear grooves
  - Vacuoles
  - Apoptotic bodies

Beyond Acceptable to Exceptional

The Ventana HDH&E is the ultimate product of the unique SYMPHONY Process—six attributes that work together to deliver exceptional results.

- Improved Diagnostic Visualization
- Cross Contamination Protection
- Unique Slide Identification and Tracking
- Consistent Reagent Quality
- Reproducible Results
- Image Quality Glass Coverslips

The exceptionally high quality of Ventana's HIGH DEFINITION H&E slide offers the potential to expand the diagnostic value beyond the ordinary "dip and dunk" H&E.

SYMPHONY INSTRUMENT AND OPERATION OVERVIEW

SYSTEM OPERATION

SYMPHONY is designed as a series of modules. This modular design allows the system to carry out many different operations at the same time. The modules are:

- Entry Portal
- IntelliQue™
- Slide Detect/Bar Code Reader
- Slide Drying Module
- Staining Module (Up to three staining modules can be installed in the system.)
- Slide Prep Module
- OPTISURE™ Coverslipper
- Slide Curing Module

SLIDE PROCESSING

The sections that follow describe the slide processing modules.

PORTAL

The Portal is where the operator loads and unloads slide trays.

INTELLIQUE™

The IntelliQue, including the Elevator/Transport Table, manages the movement of slide trays into and out of modules as required. The IntelliQue is located in the left half of the instrument. The Elevator/Transport Table is located in the IntelliQue. The Elevator moves the slide trays vertically within the IntelliQue. The Transport Table moves the slide trays horizontally from the IntelliQue to and from each slide processing station.

SLIDE DETECT/BAR CODE READER

The slide sensors gather information on the placement of the slides in the slide tray, and the Bar Code Reader scans and decodes bar code labels affixed to slides.

SLIDE DRYING MODULE

The Slide Drying Module removes excess moisture from the slides and heats the slides so that the paraffin sections are well adhered.

STAINING MODULE

The Staining Module performs the following processes:

- Deparaffinization
- All steps necessary for staining
- Hydration and dehydration
- Clearing and preparation for coverslipping

SLIDE PREP MODULE

The Slide Prep Module completes the dehydration and clearing process in preparation for coverslipping.

OPTISURE™ COVERSLIPPER

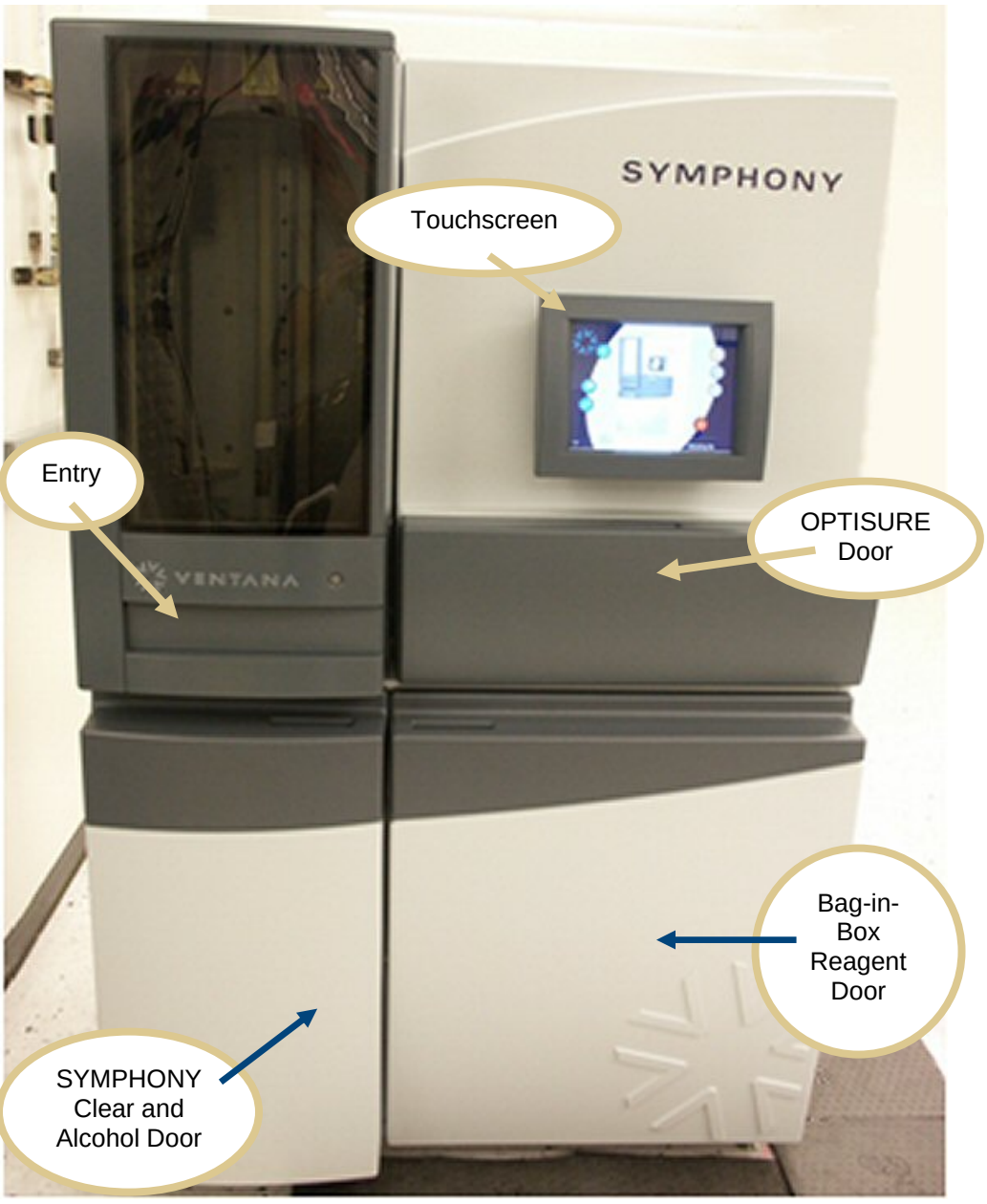
The OPTISURE Coverslipper applies glass coverslips to the slides using a combination of the SYMPHONY E reagent and SYMPHONY Clear prior to the application of the OPTISURE coverslip.

SLIDE CURING MODULE

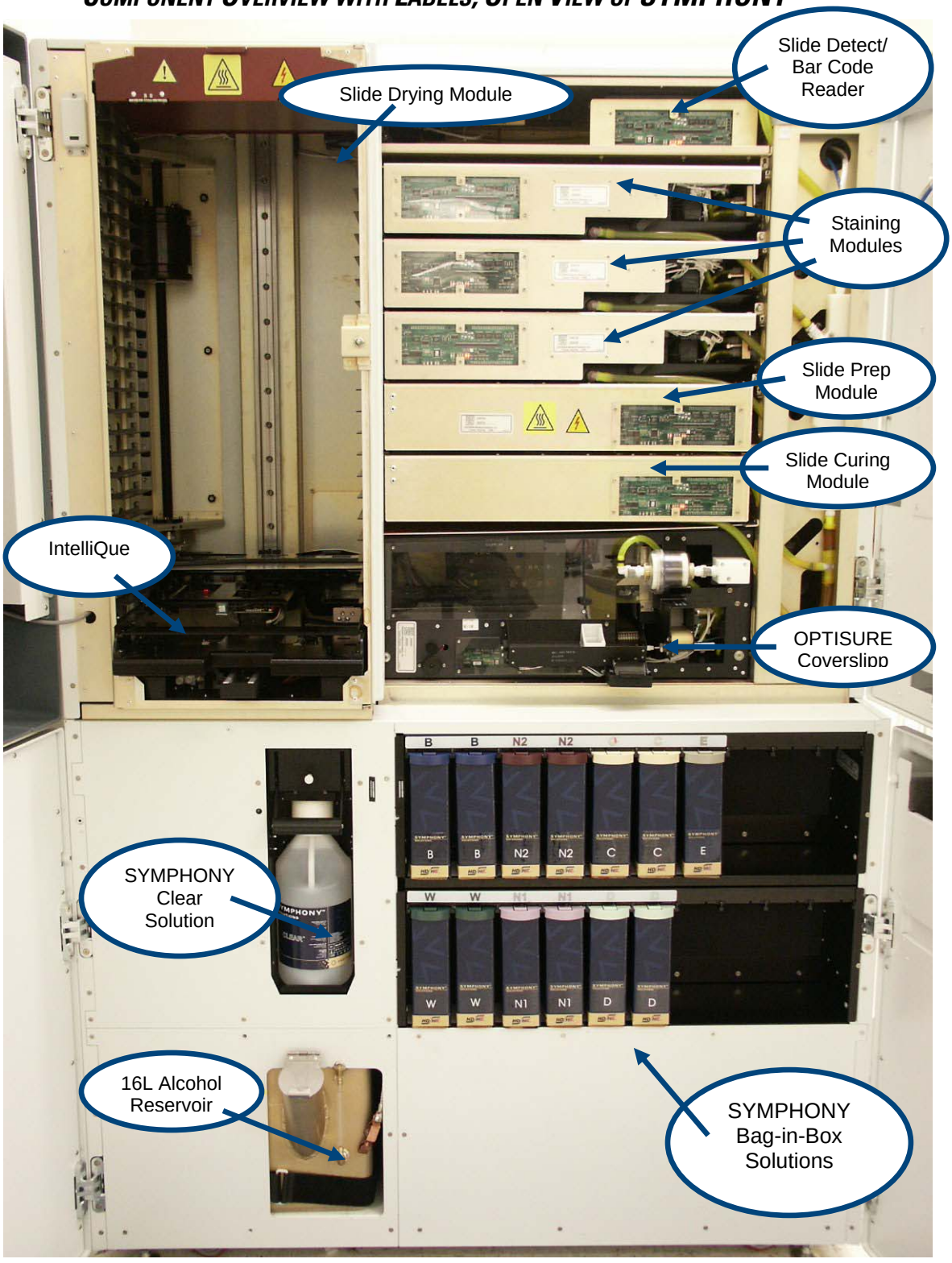
The Slide Curing Module is used to cure the coverslip mounting media and to ensure that a clean, dry tray of slides is ready for presentation to the pathologist.

SYSTEM FEATURES

COMPONENT OVERVIEW, CLOSED VIEW OF SYMPHONY



COMPONENT OVERVIEW WITH LABELS, OPEN VIEW OF SYMPHONY



INSTALLATION REQUIREMENTS

This section details the facility requirements for installation of SYMPHONY.

WARNING!
Ensure the unit is disconnected from the power source before moving it.

INSTRUMENT SPECIFICATIONS

DIMENSIONS

Size = height x weight x depth.

74” x 49” x 28” (187.9 cm x 124.46 cm x 71.12 cm)

WEIGHT

683 lbs.

INSTALLATION ENVIRONMENT

Pollution Degree 2 (office and laboratory).
Installation Category II (equipment connected to a wall outlet).
Instrument intended for indoor use only.

ALTITUDE

0 to 6,000 ft.

TEMPERATURE

15° C to 30° C

ELECTRICAL SUPPLY

208-240 V., 60 Hz

SPACE REQUIREMENTS

SYMPHONY requires a prescribed amount of space for optimal use.

- Minimum width 65” (door open 90°) to 98” (door open 180°) (165 cm to 249 cm)
- Height must be greater than 86” (219 cm)
- Depth must be greater than 51” (130 cm) spaced 5” (12.7 cm) from wall

CLEARANCE

SYMPHONY requires minimum clearances as follows:

- Rear of instrument: 5” (12.7 cm)
- Front of instrument: 18.5” (47 cm)
- Left side of instrument: 8” (20.32 cm)
- Right side of instrument: 8” (20.32 cm)
- Top of instrument: 10” (25.4 cm)

DELIVERY ACCESS

The entry way must be greater than 28” (71 cm) wide and 75” (190.5 cm) high to bring SYMPHONY into the facility. If access requirements cannot be met, SYMPHONY’s top and bottom sections may be disassembled (call Ventana Services).

WATER REQUIREMENTS

SYMPHONY requires a direct connection to **de-ionized** water.

DE-IONIZED WATER QUALITY

Water quality must be NCCLS Type III or Type II or equivalent

WATER FLOW RATE

The DI water source must have its own independent pressure regulation. The static pressure must to be set in the range of 24 psi to 30 psi.

The flow requirements of the system at the NPT connection are 22 oz./min (600 ml/min).

SUPPLY LOCATION AND CONNECTION

The water supply must be located within 15 ft. (457 cm) of the right side of the instrument and must be outfitted with a female ¼” NPT (National Pipe Thread) connection. Ventana installation personnel will thread a ¼” NPT x 3/8” hose barbed fitting into this female NPT at the source.

ELECTRICAL REQUIREMENTS

VOLTAGE/AMPERAGE

SYMPHONY requires a 208-240 VAC, 60 Hz, 20 amp dedicated/isolated circuit.

PLUG TYPE

The electrical plug must be a 220 volt NEMA 6-20R standard receptacle.

NEMA 6-20R PLUG ILLUSTRATION

LOCATION

The power outlet must be located within 8 ft. (244 cm) of the left side of the instrument.

WASTE MANAGEMENT REQUIREMENTS

All waste from the system must be managed in accordance with local facility regulations.

EFFLUENT DISPOSAL CONNECTIONS

SYMPHONY is designed to be directly connected to the waste water system. Location of drain must be within 15’ **(**457 cm**)** of right side of instrument and not exceed 3’ (91.4 cm) in height.

SYSTEM WASTE CONNECTION

The best way to plumb the system is using a dishwasher tailpiece between the trap and the wall of the facility. The tailpiece must be 3/8” OD (outside diameter) with an HB (hose barb) connection on it.

As an option, Ventana Medical Systems can provide catalogue number 2234900 to plumb the system.

Ventana Medical Systems supplies catalogue number 2234900 which consists of a sink p-trap with a modified tail piece. The modified tail piece has a quick-disconnect fitting that is to be used to connect the instrument waste line. This fitting has a shut-off valve so that sewer gases will not escape when the waste line is disconnected.

VENTING

LABORATORY EXHAUST SPECIFICATIONS

SYMPHONY must be connected to a dedicated ventilation system. The SYMPHONY Vent Kit, catalogue number 900-303, is designed to be connected directly to the exhaust system of the facility. The ventilation connection should be within 15 ft. of the top of the instrument.

COMMUNICATION REQUIREMENTS

SYMPHONY is equipped with network communication ports for printing and exchanging information.

PRINTER CONNECTION

The printer connection is located on the left side of the instrument. The system includes a stand-alone printer and is connected to the USB port.

NETWORK CONNECTION

The network connection is located on the left side of the instrument.

INSTRUMENT LEVELING

The SYMPHONY hardware must be leveled after:

- It has been placed in the planned footprint area
- Clearance requirements have been met
- The instrument has been connected to the water supply
- Venting requirements have been met

Ventana installation personnel will ensure proper instrument leveling at the time the system is installed.

CONSUMABLE REQUIREMENTS

CATALOGUE NUMBERS FOR SYMPHONY CONSUMABLES AND ACCESSORIES

SYMPHONY SOLUTIONS

Reagents for the SYMPHONY System are called SYMPHONY Solutions. They can be ordered individually using the following catalogue numbers.

SYMPHONY SOLUTION NAME	CATALOGUE NO.
SYMPHONY N1	900-201
SYMPHONY N2	900-205
SYMPHONY C	900-202
SYMPHONY B	900-204
SYMPHONY W	900-203
SYMPHONY D	900-210
SYMPHONY E	900-212
SYMPHONY Clear	900-209

ALCOHOL

Required, *but not supplied by Ventana*, is ethanol-based, anhydrous, reagent grade alcohol (SDA formula 3A). The approximate usage rate for alcohol is 14.0 liters per 500 slides processed, but varies with the staining protocol selected.

WARNING!

Reagents other than those listed above may damage some components of the instrument. Methanol-based alcohol solutions are not supported.

OPTISURE COVERSLIPS

OPTISURE coverslips are specifically designed for use with SYMPHONY. Coverslips are preloaded into cassettes, each of which contains 120 coverslips.

SYMPHONY CONSUMABLE	CATALOGUE NO.
OPTISURE Coverslip (12 cassettes)	900-501

ACCESSORIES

ACCESSORY	CATALOGUE NO.
SYMPHONY Tray Kit (5 trays)	900-301
SYMPHONY Accessory Kit	900-302
SYMPHONY Vent Kit	900-303
SYMPHONY Desiccant Filter	209-4800

STORAGE REQUIREMENTS

The following storage conditions are required for SYMPHONY Solutions and OPTISURE coverslips.

FLAMMABLE STORAGE

Certain flammable materials used with SYMPHONY require specific flammable-storage at room temperature (between 15° and 30° C).

REAGENT	CONTAINER QUANTITY
SYMPHONY Clear	2 liter bottle
SYMPHONY C	1 liter box

REFRIGERATED SOLUTION STORAGE

The following SYMPHONY Solutions require refrigerated storage (between 2° and 8° C).

REAGENT	CONTAINER QUANTITY
SYMPHONY N1	1 liter box
SYMPHONY N2	1 liter box

Note:
SYMPHONY N1 and N2 Reagents must be brought to room temperature prior to use.

ROOM TEMPERATURE SOLUTION STORAGE

The following SYMPHONY Solutions require storage and use at room temperature (between 15° and 30° C).

REAGENT	CONTAINER QUANTITY
SYMPHONY B	1 liter box
SYMPHONY D	1 liter box
SYMPHONY E	250 ml box
SYMPHONY W	1 liter box

OPTISURE COVERSLIP CASSETTE STORAGE

The OPTISURE coverslip cassettes require storage at room temperature (between 15° and 30° C).

REQUIRED ACCESSORIES

The accessories described below are required for SYMPHONY.

UNIVERSAL SLIDE TRAY

The Universal Slide Tray is used to transport slides through the “one-touch” SYMPHONY process. Each slide tray will hold up to 20 slides. Five slide trays are provided with SYMPHONY. Additional slide trays can be ordered as a kit of five trays. The catalogue number for the SYMPHONY Slide Tray Kit is 900-301.

DESICCANT FILTER

SYMPHONY’s desiccant filter (part number 2094800) is located on the Coverslipper module, adjacent to the coverslip loading belt. SYMPHONY’s desiccant filter must be replaced once the purple beads inside the desiccant filter have turned pink.

MICROSCOPE SLIDE SPECIFICATIONS

The following slide types have been evaluated and are suitable for use with SYMPHONY.

- Uncharged (Erie Scientific Superfrost)
- Charged (Erie Scientific Superfrost Plus)

Some slide types may be too large to fit in the universal slide tray. The user must validate other slide types prior to use.

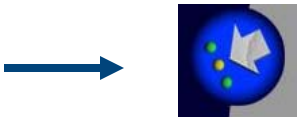
FIXATIVE SPECIFICATIONS

Tissue should be fixed according to the laboratory's current process. The following fixatives are acceptable.

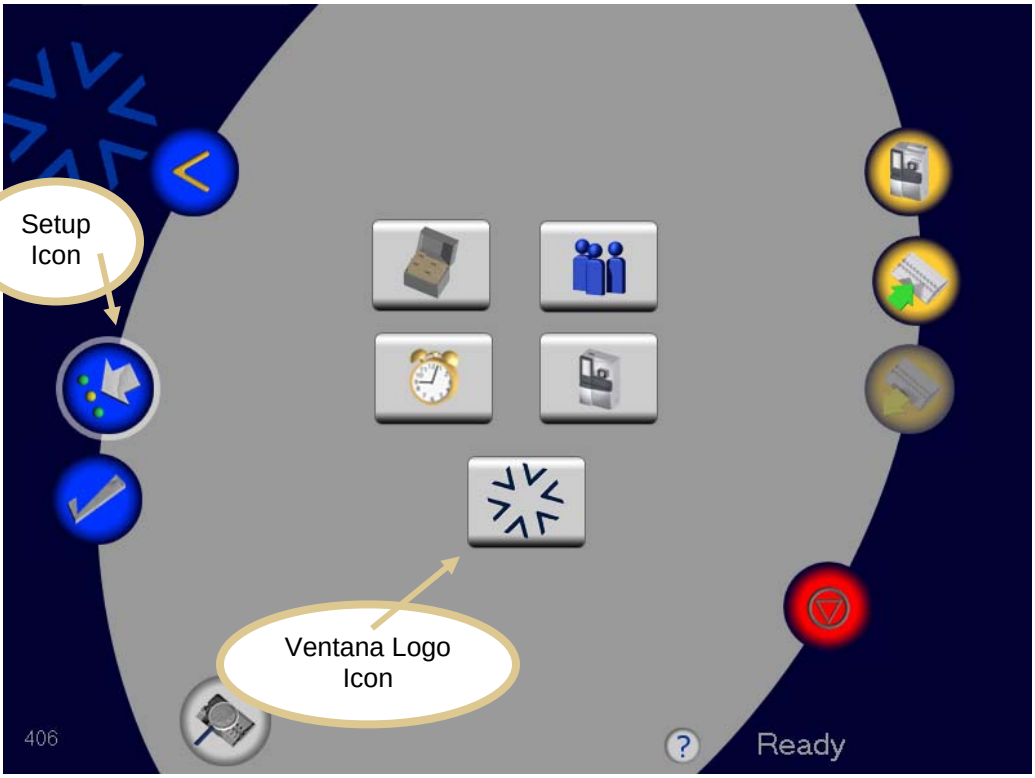
- NBF (Neutral Buffered Formalin)
- Zinc formalin
- Bouins
- Hollande's
- Streck
- NoTox
- B5

INSTRUMENT SETUP

To begin system setup, on the Main Setup screen touch the **Setup** icon:

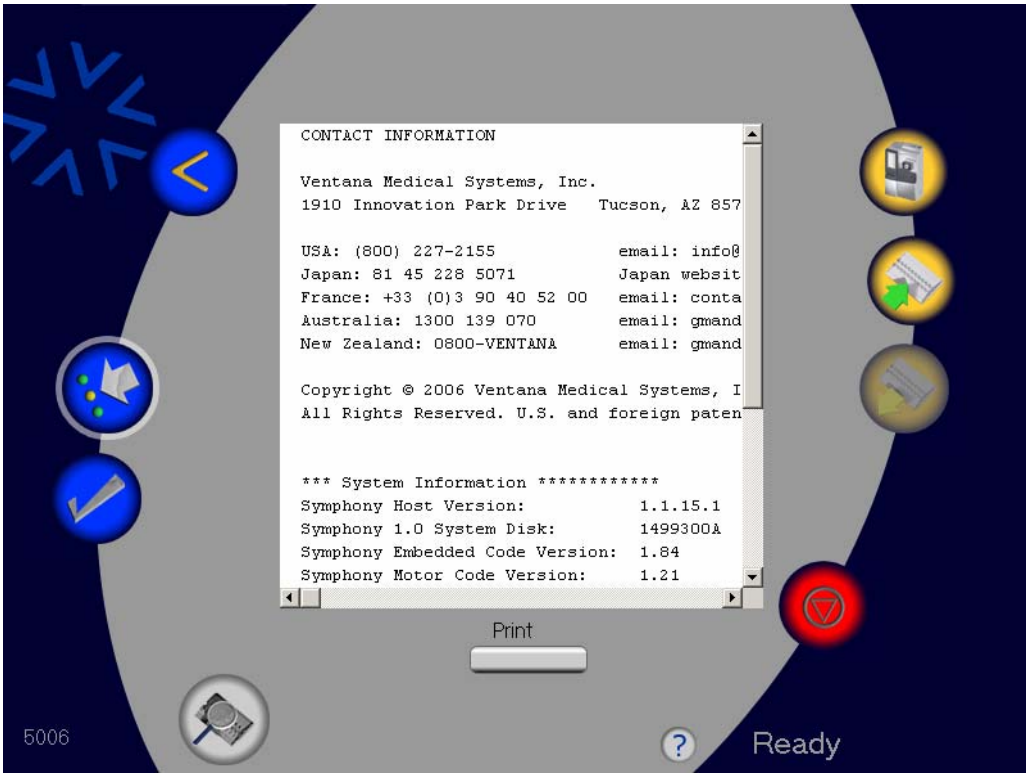


Touching the Setup icon will display the five icons shown in the center of the screen shown below:



Touching the Ventana logo icon shown above will display the **About SYMPHONY** screen.

The **About SYMPHONY** screen, shown below, displays contact information for all Ventana locations. It also provides system information such as the software version and serial numbers of internal components.



USER SETUP

USER PRIVILEGES

There are two levels of users: Administrator users and Operator users. Administrators by default have full system privileges.

Note:
Upon completion of installation, the first user entered must be assigned full administrator privileges to be able to assign appropriate permissions to all other users of the system.

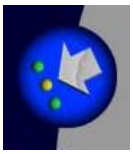
Operators can be assigned different levels of privileges by an administrator.

- User Maintenance: allows the operator user to delete, edit, and add users.
- Protocol Maintenance: allows the operator user to delete, edit, and add protocols.
- System Maintenance: allows the operator user to access system level settings.

SETTING OPERATOR PRIVILEGES

To set operator privileges…

1. From the Main screen, touch the **Setup** icon shown below.

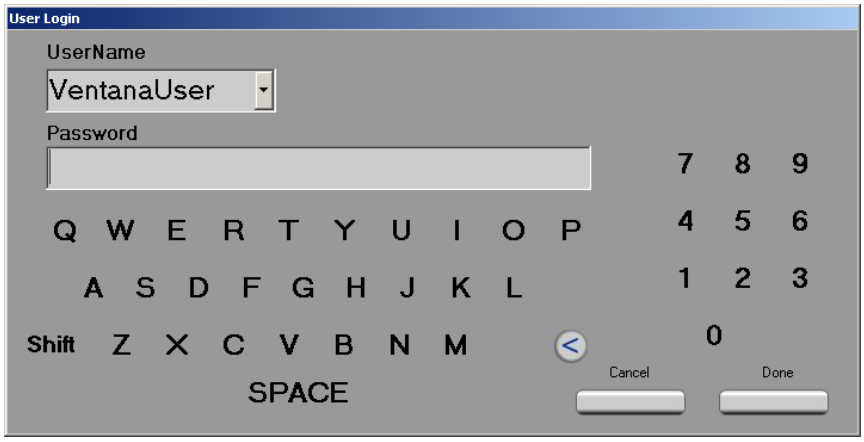


Five icons will display in the center of the Touchscreen as described earlier.

2. Touch the **Operators Setup** icon shown below.

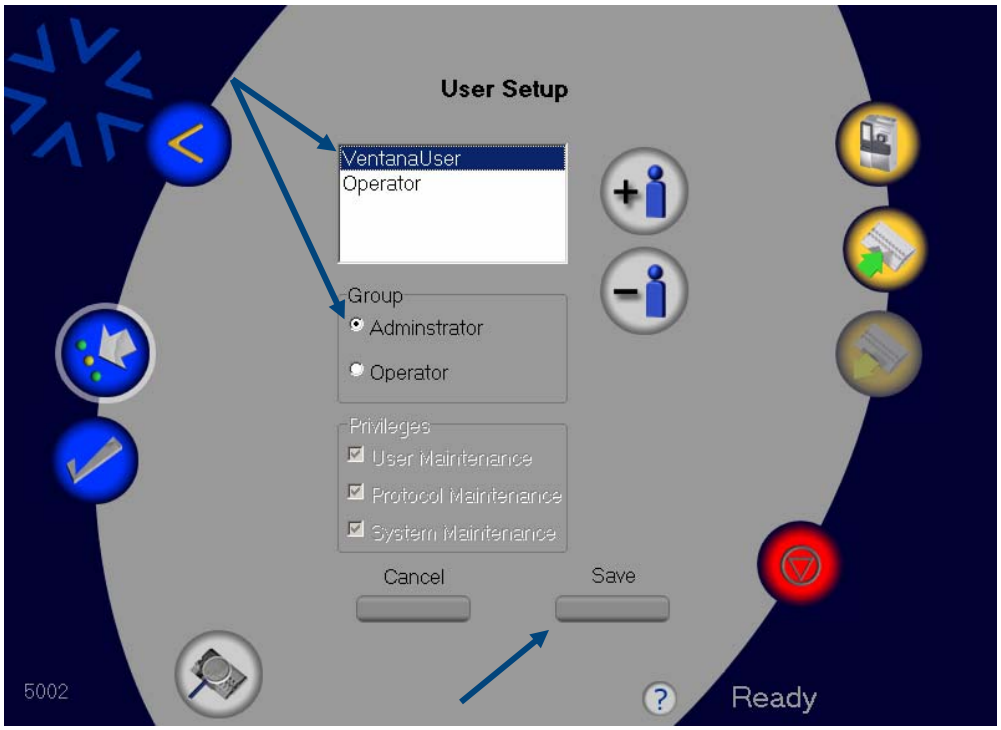
The **User Setup** screen will display:

If users already exist, the **User Login** screen shown immediately below will display before the **User Setup** screen displays.



a. Log in by touching the dropdown arrow of the **User Name** field and selecting the user name.
b. In the **Password** field enter the user password using the virtual "touch keypad."
c. Touch the **Done** icon. The **User Login** screen will close and the **User Setup** screen will reappear.

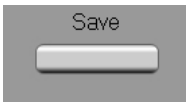
3. On the **User Setup** screen select a user from the list of user names displayed.



4. Select the type of user, **Administrator** or **Operator,** in the **Group** group box.

5. Select the appropriate type of privileges for the user in the **Privileges** group box.

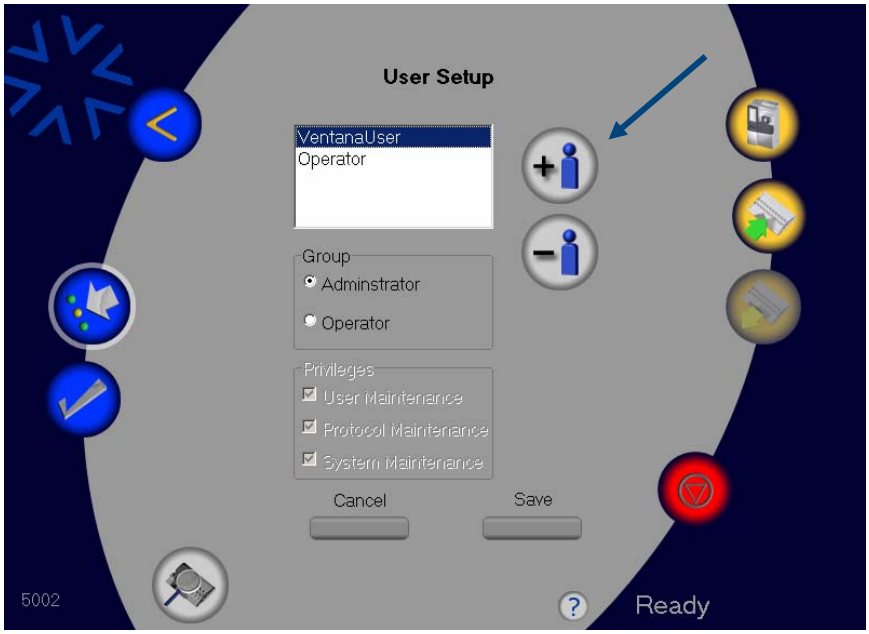
6. Touch the **Save** icon to save the settings.



SETTING UP A NEW USER

To set up a new user in the system…

1. Touch the **Add User** icon on the **User Setup** screen.



The **Enter User Name** screen, shown below, displays.

2. Enter the new user's name using the touch pad.
3. Touch **Done** to display the **Enter Password** screen shown below.

4. Enter a password for the new user.
5. Touch **Done** to display the **Re-Enter Password** screen shown below.

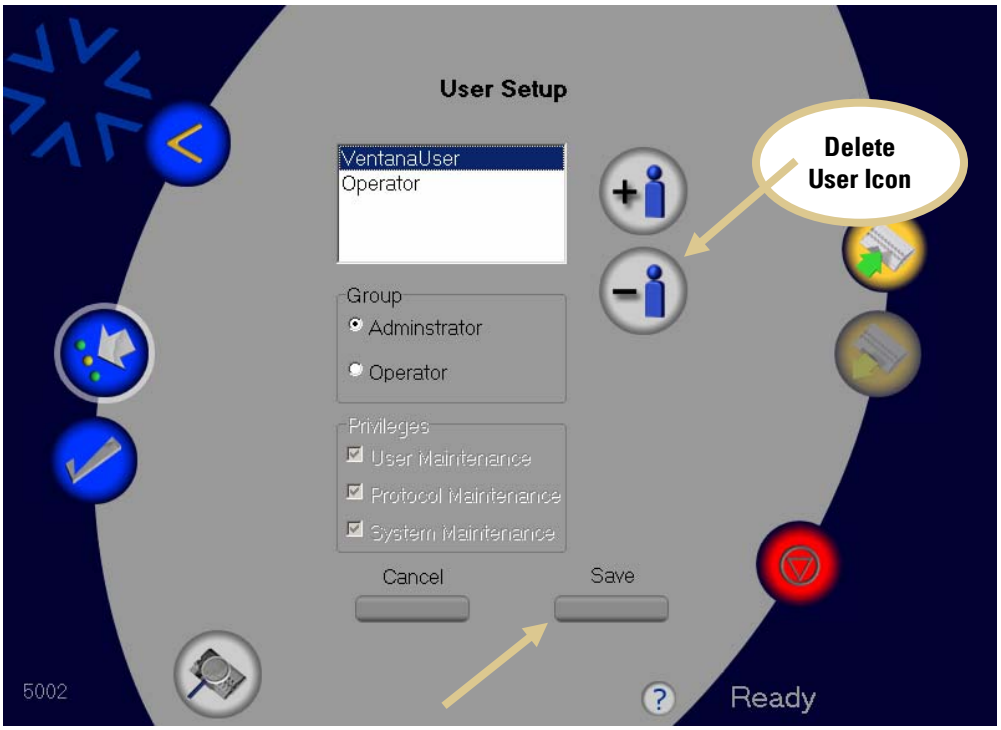
6. Enter the new user's password again in the **Re-Enter Password** field.

7. Touch **Done** to re-display the **User Setup** screen.

DELETING A USER

To delete a user from the system…

1. On the **User Setup** screen, select the user to be deleted.
2. Touch the **Delete User** icon shown below.



3. Touch the **Save** icon to save the settings.

INSTITUTION SETUP

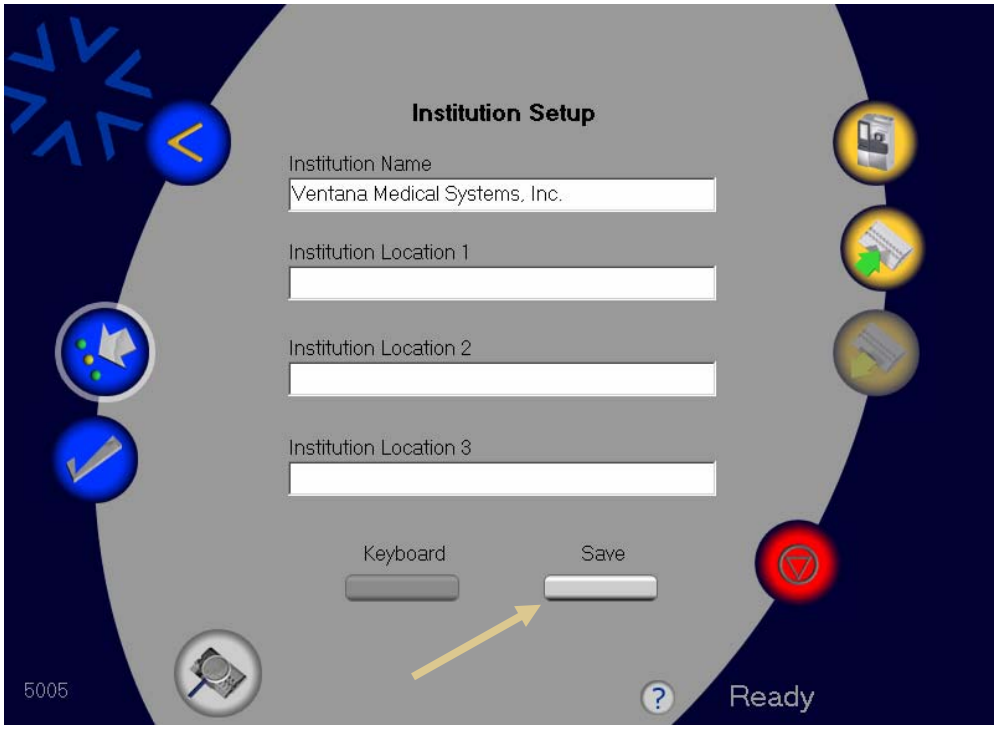
The **Institution Setup** screen is used to enter the institution name and location information that is to appear on reports.

To enter institution name and location…

1. Touch the **Institution Setup** icon to display the **Institution Setup** screen.

The **Institution Setup** screen, shown below, displays.

INSTITUTION SETUP SCREEN



2. Type the appropriate institution information in the available fields.

3. Touch the **Save** button to store the information.

ALARM SETUP

The fluid alarm levels determine when the user will be notified that the reagents will soon be exhausted. There are two different warning levels that indicate fluids need attention:

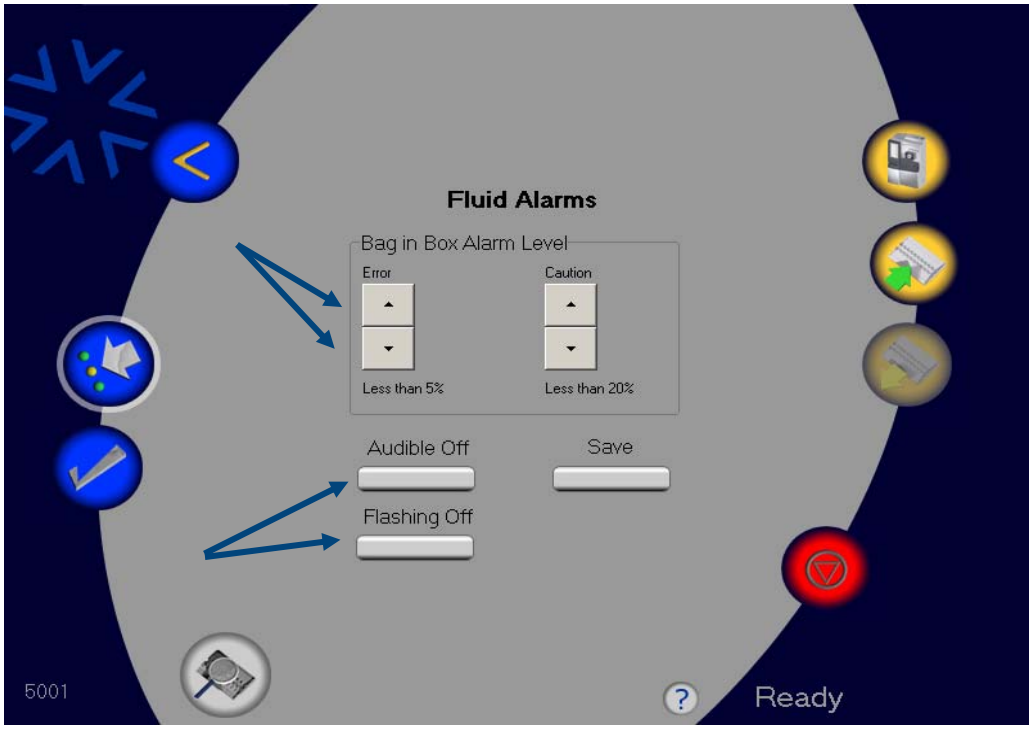
The user may set an alarm threshold by touching the Caution arrows on the **Fluid Alarms** screen, and the user also may set an alarm threshold by touching the Error arrows in the **Fluid Alarms** screen.

In the status view, yellow indicates fluids that are approaching low levels. Red indicates fluids that will soon need replacement. (See the **Continuous Access Reagents** section under the Instrument Operation section for information on accessing the status view.)

To set the fluid alarm levels…

1. From the Main screen, touch the **Setup** icon to display the **Fluid Alarms** icon shown below.

2. Touch the **Fluid Alarms** icon shown above to display the **Fluid Alarms** screen shown below.
   - The **Audible** icon toggles the alarm sound.
   - The **Flashing** icon toggles the flashing of the images.



3. Touch the Up or Down arrows in the **Bag in Box Alarm Level** group box to set the alarms for the fluid levels. The **Less than %** information shown under the alarm level arrows will change as the arrows are pressed to change the fluid level alarm settings.

4. Touch the **Save** icon to save settings.

SETTING A DEFAULT PROTOCOL

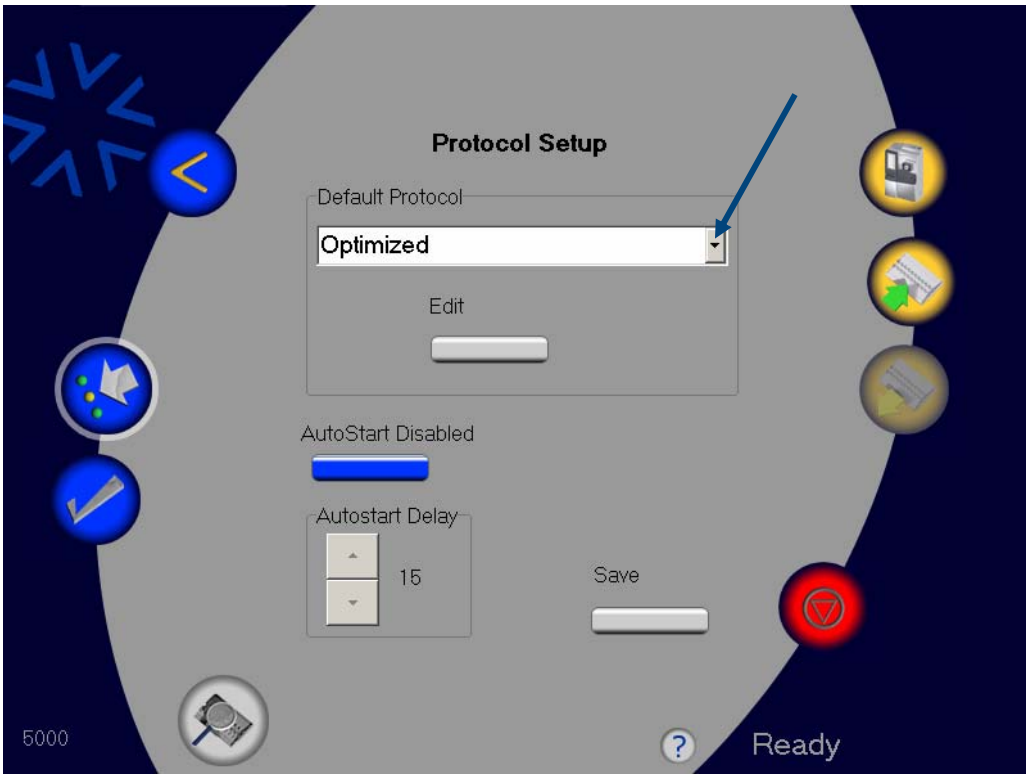
The user has the option of selecting the protocol that will be displayed when a tray is placed in the Portal (run is initiated). The SYMPHONY System comes with the preprogrammed "**Optimized**" protocol as the staining default.

To set a default protocol…

1. From the Main screen, touch the Setup icon shown below.

The **Protocol Setup** icon shown below will display.

2. Touch the **Protocol Setup** icon to display the **Protocol Setup** screen below.



3. Touch the arrow next to the **Default Protocol** group box to display available protocols.

4. Select the desired default protocol

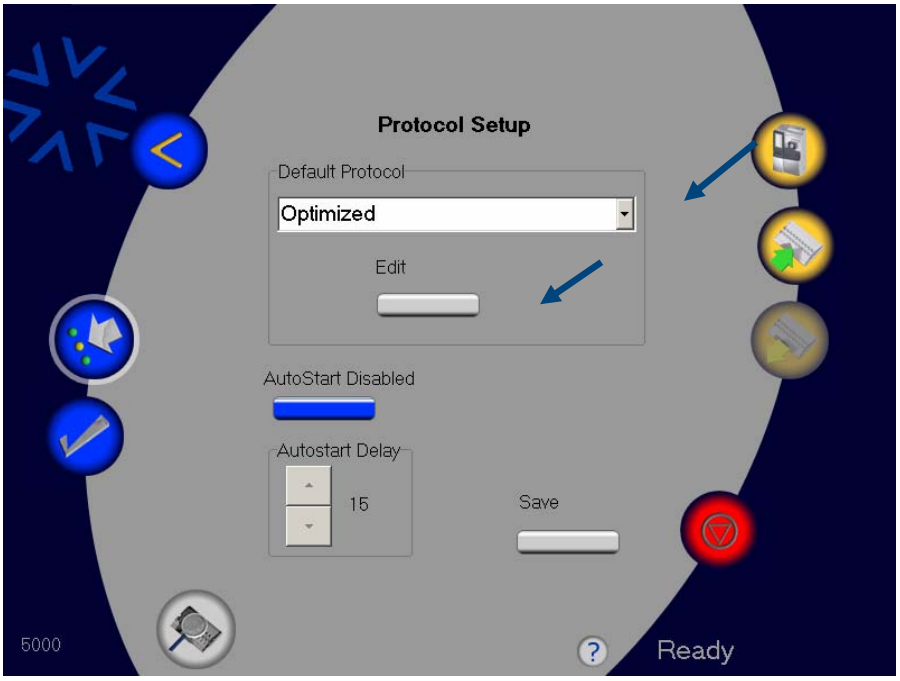
5. Touch the **Save** icon shown below to confirm and save the selection.

CUSTOMIZED PROTOCOLS

A custom protocol can be created by editing an existing protocol.

To create a customized protocol…

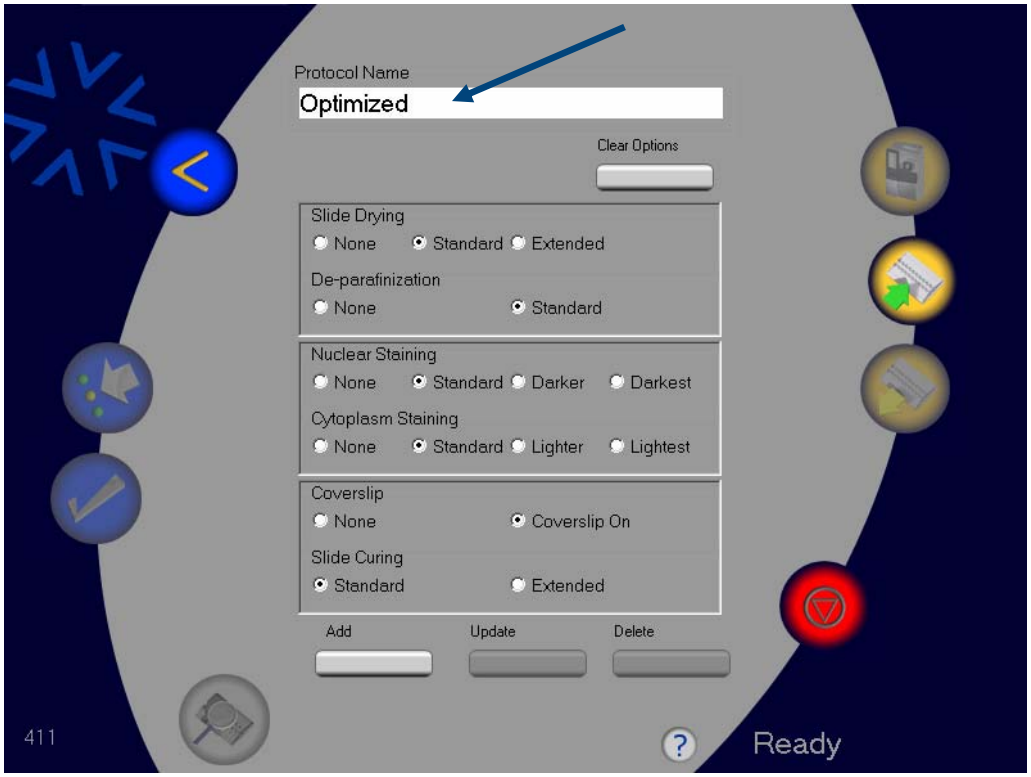
1. In the **Default Protocol** group box shown below touch the field's down arrow to select a protocol to edit.



2. Touch the **Edit** button to begin the task. Touching the **Edit** icon will display the **User Login** screen, described earlier, if users are already set up.

3. Enter the user's name and password.

4. Touch **Done**. The **Edit Protocol** screen, shown below, displays.



5. Touch in the **Protocol Name** field. A virtual touch-pad keyboard, similar to the **User Login** screen, will display.

6. Using the keyboard, rename the protocol.

   Important!
   If the user fails to rename the protocol, the protocol that appears in the Protocol Name field will be edited.

7. After naming the new protocol, select appropriate options in each of the three group boxes.

8. Touch the **Add** icon to add the newly named protocol and save its configuration settings. The new, custom protocol will now display in the **Protocol Name** dropdown box the next time it is accessed.

Staining Protocol Options

The SYMPHONY System provides for up to three different nuclear staining intensities, in addition to three different cytoplasmic staining intensities.

AUTOSTART

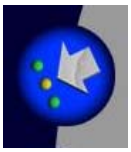
SYMPHONY has an *autostart* feature that enables the system to operate in “one touch” mode. The **Autostart Delay** is the amount of time (in seconds) that the user is given to select a protocol other than the **Default** protocol. The autostart delay time (or “seconds to start”) is specified by the user.

USING THE AUTOSTART FEATURE

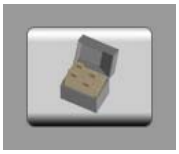
When the **Autostart** feature is enabled, the default protocol is automatically selected to run when a tray is loaded.

To change the delay time…

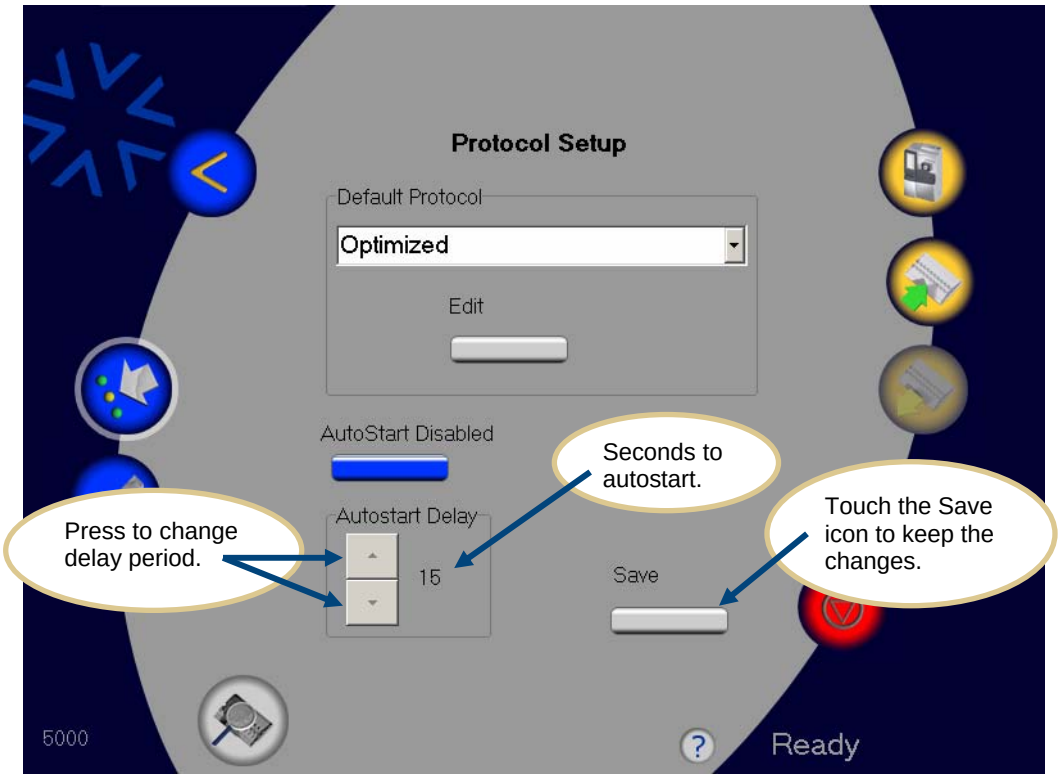
1. On the Main screen, touch the **Setup** icon.



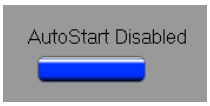
The **Protocol Setup** icon, shown below, displays.



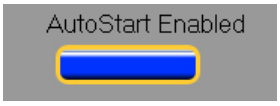
2. Touch the **Protocol Setup** icon. The **Protocol Setup** screen shown below displays.



3. Touch the **Autostart** icon, shown below, to toggle the autostart feature to on.



The AutoStart icon will change to **AutoStart Enabled**.



4. In the **Autostart Delay** group box change the number of seconds for the delay of the autostart feature by pressing the up or down arrows to increase or decrease the autostart delay period. The delay seconds selected are displayed in the group box.

5. Touch the **Save** icon to confirm and save the delay selection.

INSTRUMENT OPERATION

PREPARING TO USE SYMPHONY SOLUTIONS

SYMPHONY Solutions are all ready-to-use and come in two formats, a two liter plastic bottle for SYMPHONY Clear and Bag-in-Box packaging for the other SYMPHONY Solutions.

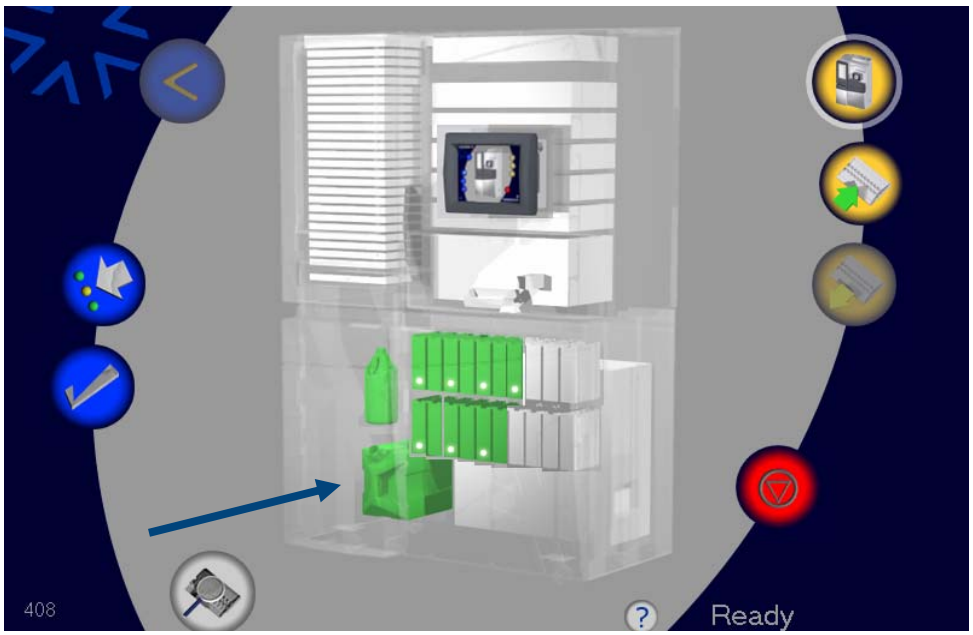
CONTINUOUS ACCESS REAGENTS

The SYMPHONY System's Touchscreen user interface will display the status of the reagents on the main status screen.

- Green reagent containers indicate adequate amounts of reagent
- A dot on a reagent container indicates that reagent is being drawn from that container.
- If a reagent is low, the reagent box icon will appear "yellow" as a notification that the reagent is approaching low levels (see the Alarm Setup section).
- When a reagent needs replenishing, the icon will appear "red" on the screen.

The SYMPHONY fluidics module can accommodate two of each of the Bag-in-Box reagents (SYMPHONY N1, N2, C, B, D, W), and it has the capacity to hold internally two of the 2L SYMPHONY Clear bottles.

SYMPHONY STATUS VIEW SCREEN



Note:
SYMPHONY E is limited to one container, as shown in the illustration above.

When any container is empty, SYMPHONY will automatically switch to drawing from the second container, and the white “in use” dot will switch to the next container. Empty containers can be replaced at any time during system operation, however they should not be removed until the white dot has transferred to the next full container. There is no need to pause SYMPHONY to replenish reagents.

LOADING AND UNLOADING SYMPHONY SOLUTIONS

WARNING!

It is important to note that some, but not all, of the reagents for use in the SYMPHONY System are flammable and/or may be considered an irritant. Therefore, it is strongly recommended that good clinical practice guidelines are closely followed when handling the reagents.

Wear appropriate gloves (nitrile-based)

LOADING BAG-IN-BOX SYMPHONY SOLUTIONS

The protective seal shown in the figure below must be removed prior to loading SYMPHONY Solutions Bag-in-Box reagents onto the system.

Pull the yellow protective seal off of the container by pulling on the loose end of the tab.

LOADING BAG IN BOX (PULL YELLOW SEAL)

Each top of a SYMPHONY Solutions Bag-in-Box is color coded. The color corresponds to the location labels on the instrument. The reagents cannot be loaded in the incorrect location because each color has a unique “key.”

ALIGNING PLASTIC TOP

To load Bag-in-Box reagents…

1. Align the plastic cap on the reagent box with the appropriate location on the system.

2. Push the reagent along the guide rails until it snaps into place. SYMPHONY’s SmartTrack label will automatically relay the lot number, expiration date, and volume of the SYMPHONY reagent into the database and record the date that the reagent was loaded.

Note:
All SYMPHONY Solutions N1 and N2 expire three months after they have been loaded in the instrument or on the labeled expiration date, whichever is earlier.

UNLOADING BAG-IN-BOX SYMPHONY SOLUTIONS

To unload Bag-in-Box reagents…

1. Press down on the tab on the colored top

2. Slide the reagent from its position

Recycling Information

The SYMPHONY Solutions Bag-in-Box packaging is designed to minimize waste generated by the system and to facilitate recycling. The reagent box can be separated from the plastic components for recycling where available.

Opening SYMPHONY Clear Solution

Remember to wear appropriate safety gloves (nitrile-based) when handling SYMPHONY Solutions.

SYMPHONY CLEAR BOTTLE AND STRAW WITH TOOL

To open a SYMPHONY Clear two-liter bottle place the Ventana-provided tool, shown above and below, over cap and turn it counterclockwise.

REMOVING THE CAP WITH VENTANA-SUPPLIED TOOL

Note:
Do not re-use an old “straw.” Unwrap a new “straw” and insert it into the bottle

LOADING SYMPHONY CLEAR SOLUTION

To load a SYMPHONY Clear two-liter bottle…

1. Pull and hold the white knob out.

2. While holding the white knob out, pull up the black lever until it locks into position.

LOADING THE SYMPHONY CLEAR BOTTLE

3. Install the bottle, bottom first.

LOADING SYMPHONY CLEAR BOTTLE

SYMPHONY CLEAR BOTTLE INSTALLED

UNINSTALLING THE SYMPHONY CLEAR BOTTLE

To uninstall and remove the SYMPHONY Clear solution bottle…

1. Pull and hold the white knob above the black handle.

REMOVING THE SYMPHONY CLEAR BOTTLE

2. While holding the white knob out, lift up the black lever. The lever will lock in the up position.

3. Grasp the bottle handle and carefully begin to pull the bottle, top first and then out.

4. Fully remove the bottle. The “straw” should remain in the bottle.

   Note:
   Pull the straw down if it remains in the white collar before removing bottle.

FILLING THE ALCOHOL RESERVOIR

WARNING!
Alcohol is Flammable.

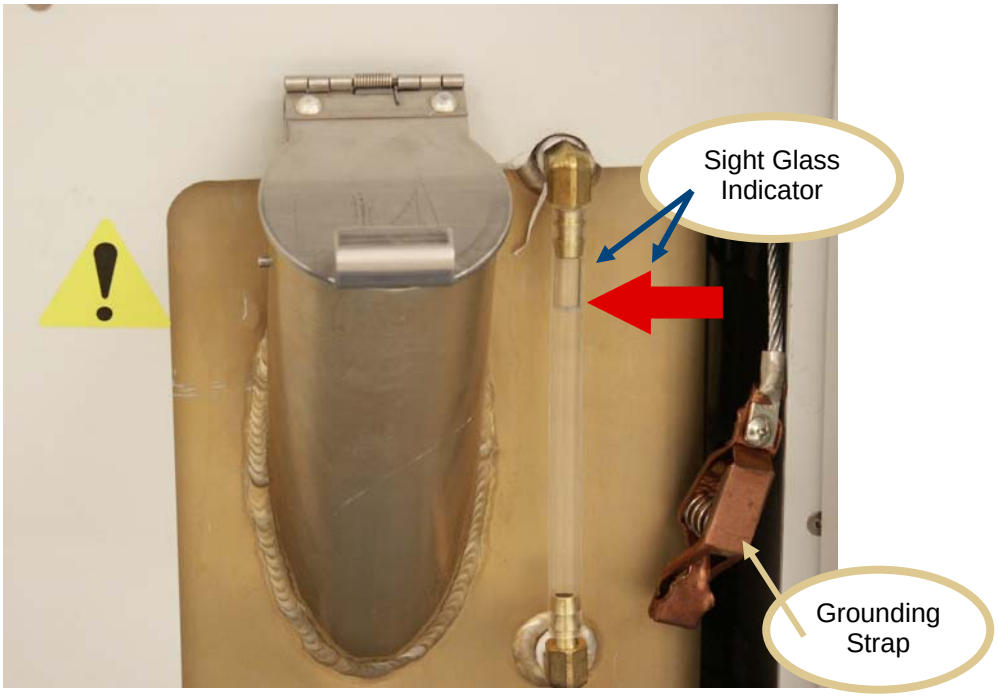
Good clinical practices should be followed when handling alcohol to ensure user safety.

Note:
In the event that your laboratory procedures require a safety can for transfer of alcohol, a grounding strap (shown below) is provided. Remember to wear appropriate safety gloves (nitrile-based) when handling solutions.

To fill the alcohol reservoir…

1. Open the lower left door to expose the alcohol reservoir compartment.

ALCOHOL RESERVOIR AND RESERVOIR FILL INDICATOR



2. Lift alcohol reservoir's cap.

3. Fill the 16-liter alcohol reservoir until the fluid reaches near the top of the sight glass indicator as shown in photo above.

   CAUTION:
   Do not fill the reservoir beyond the level indicated by red arrow next to sight glass indicator.

FILLING THE ALCOHOL RESERVOIR

PREPARING TO USE THE OPTISURE COVERSLIPPER

The OPTISURE coverslipper uses proprietary coverslips that come preloaded into ready-to-use cassettes. There is no need to handle the glass at all.
The cassettes should be stored in a clean dry area and should remain sealed in the plastic bag until they are to be loaded into the instrument.

LOADING OPTISURE CASSETTES

To load SYMPHONY with OPTISURE coverslip cassettes…

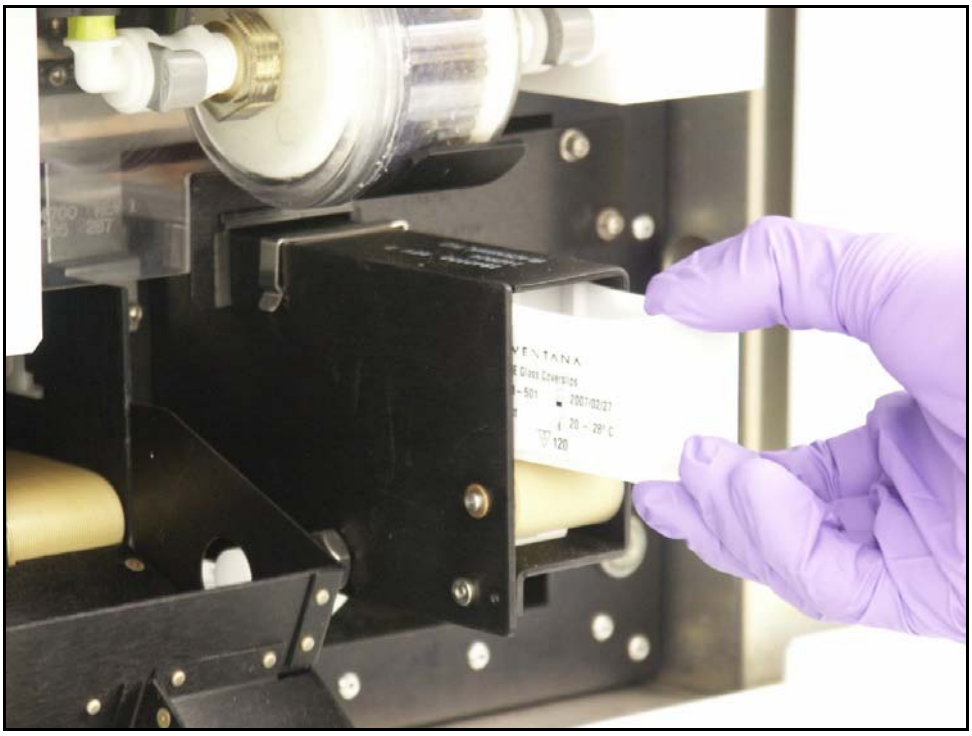
1. First remove the cassettes from their plastic bags.

OPTISURE COVERSLIP CASSETTE

2. Next, remove the tape covering the open end of the cassette. Make sure the desiccant pouches are removed with the tape.

3. Place the cassettes on the entry belt (right belt) with the label side to the left side of the instrument. The cassette is keyed so that it can be inserted only one way.

LOADING THE OPTISURE CASSETTE



The belt will start moving once the cassette reaches the inside sensor and will be positioned automatically for use inside the instrument.

Empty coverslip cassettes are ejected into the tray to the left of the entry belt and should be removed and discarded whenever new coverslips are loaded.

LOADING SLIDES AND SLIDE TRAYS

Up to 20 slides can be loaded into each slide tray. Slide trays need not be completely filled in order for the system to operate correctly.

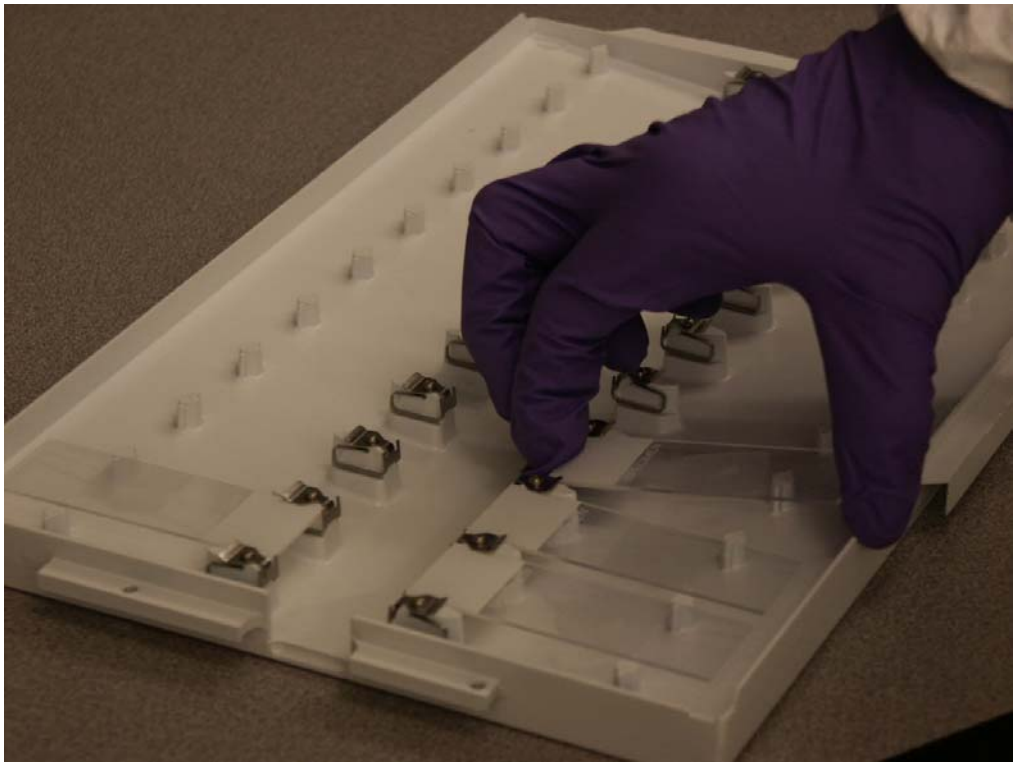
LOADING SLIDES INTO THE UNIVERSAL SLIDE TRAY

To load slides into the tray hold the slide at top and bottom (as shown) below and slip the label end of the slide under the metal slide clips. The slide should be pushed in until it “clicks.”

Important!

Make sure that the slide is seated securely against the clips and between the alignment posts. The label ends of the slides should always be inserted into the clips towards the center of the tray.

LOADING A SLIDE INTO TRAY



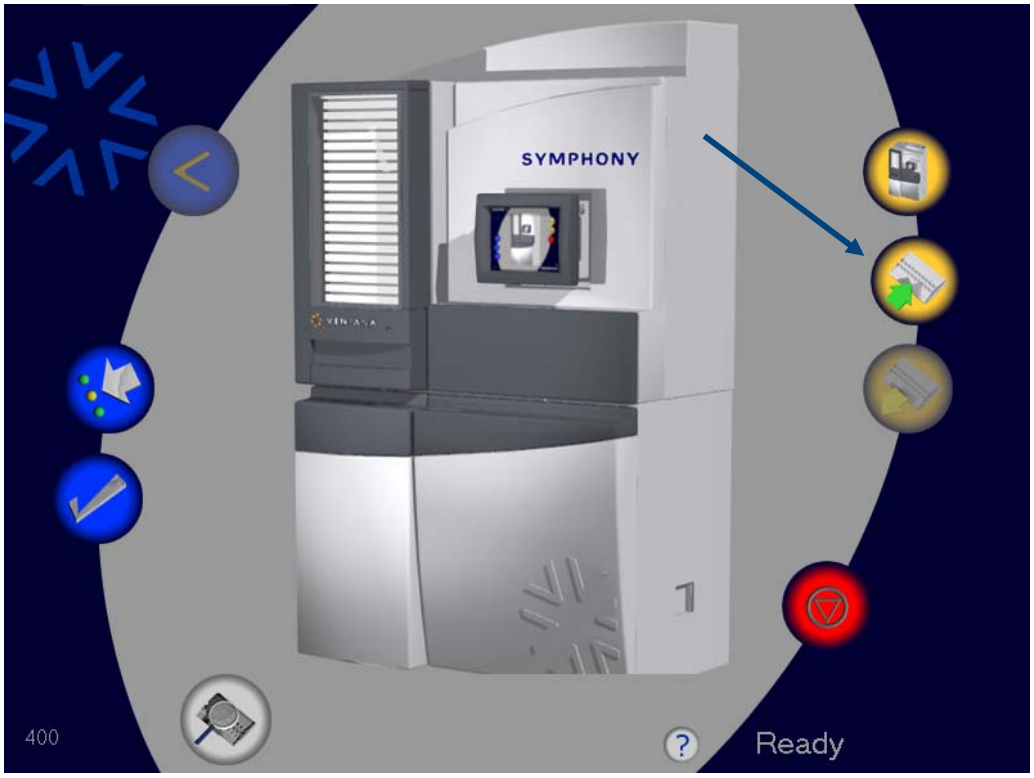
The instrument will detect the number and location of slides in each tray. Therefore, any number of slides, between 1 and 20 slides, can be loaded into any location.

LOADING AND RUNNING SLIDE TRAYS

To load a slide tray…

1. Touch the **Load Tray** icon on the Touchscreen interface shown below to display the **Load Tray** screen.

LOAD TRAY ICON



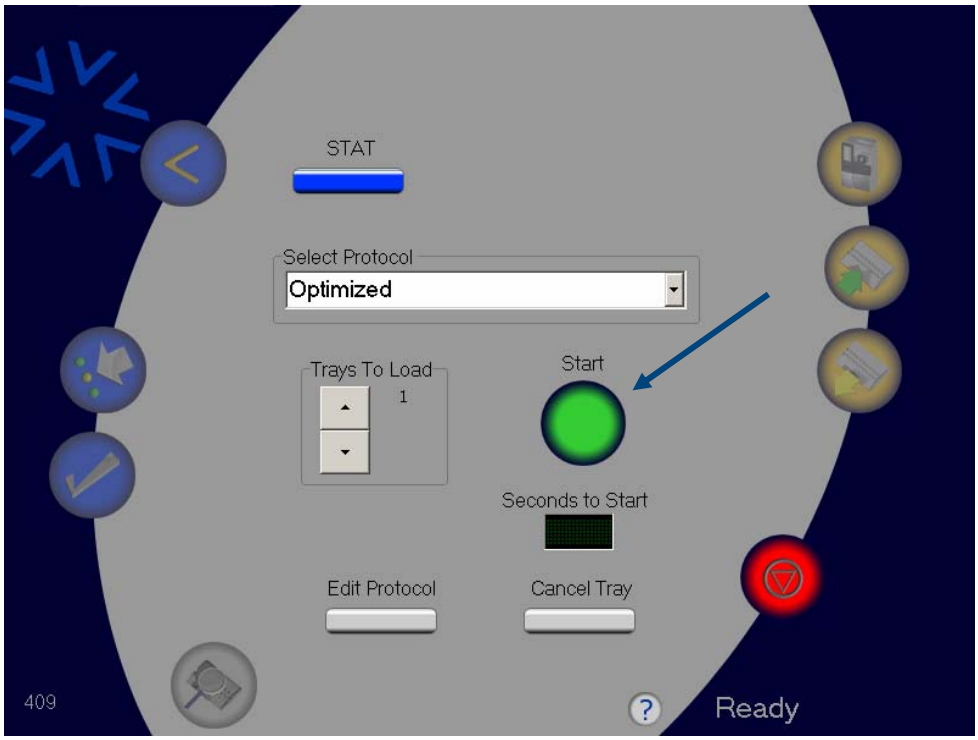
The tray loading portal door will open if the portal is clear and ready to accept a tray. If the indicator light beside the portal is red, the portal is busy and the portal will open as soon as the portal is clear.

LOADING A TRAY INTO SYMPHONY

2. Orient the slide tray with the long axis parallel to the front of the instrument with the “hook” end towards the back of the instrument and the open end towards the right. Slide trays are designed so that they can only be loaded one way.

3. Push the slide tray until it hits the internal stop. The tray will be retracted automatically by the instrument. The **Run Start** Screen, shown below, will be displayed.

RUN START SCREEN

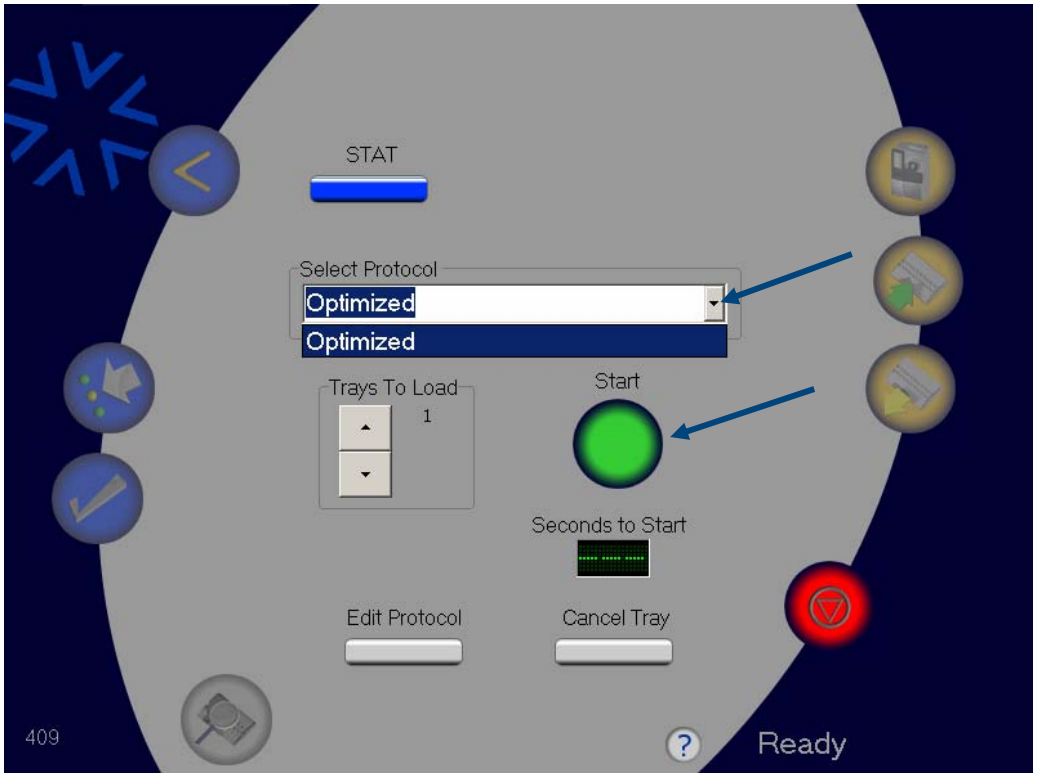


To run the default protocol, simply touch the **Start** icon shown above.

To run a protocol other than the default protocol…

1. Touch the drop down arrow at the right of the **Select Protocol** field to display the dropdown protocol menu shown below.

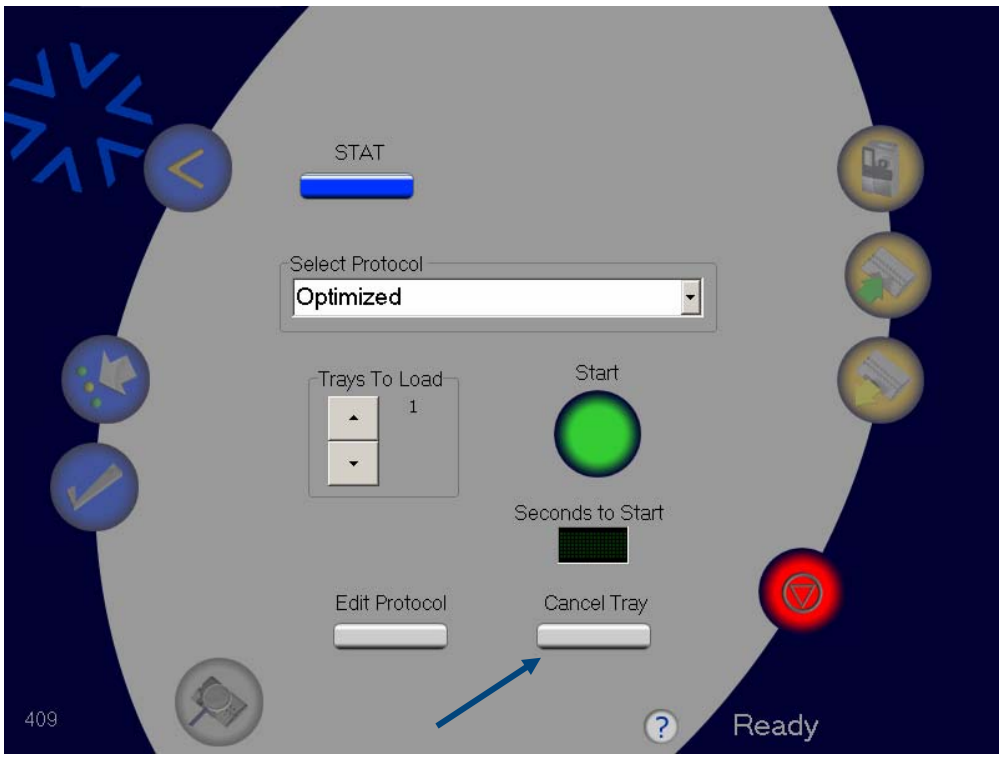
SELECTING THE PROTOCOL



2. From the list of names displayed in the drop down list, select the protocol to run by touching it. The selected protocol's name will appear in the **Select Protocol** field as shown below.

3. Touch the **Start** icon, shown in illustration above, to initiate the protocol run.

DEFAULT PROTOCOL SCREEN

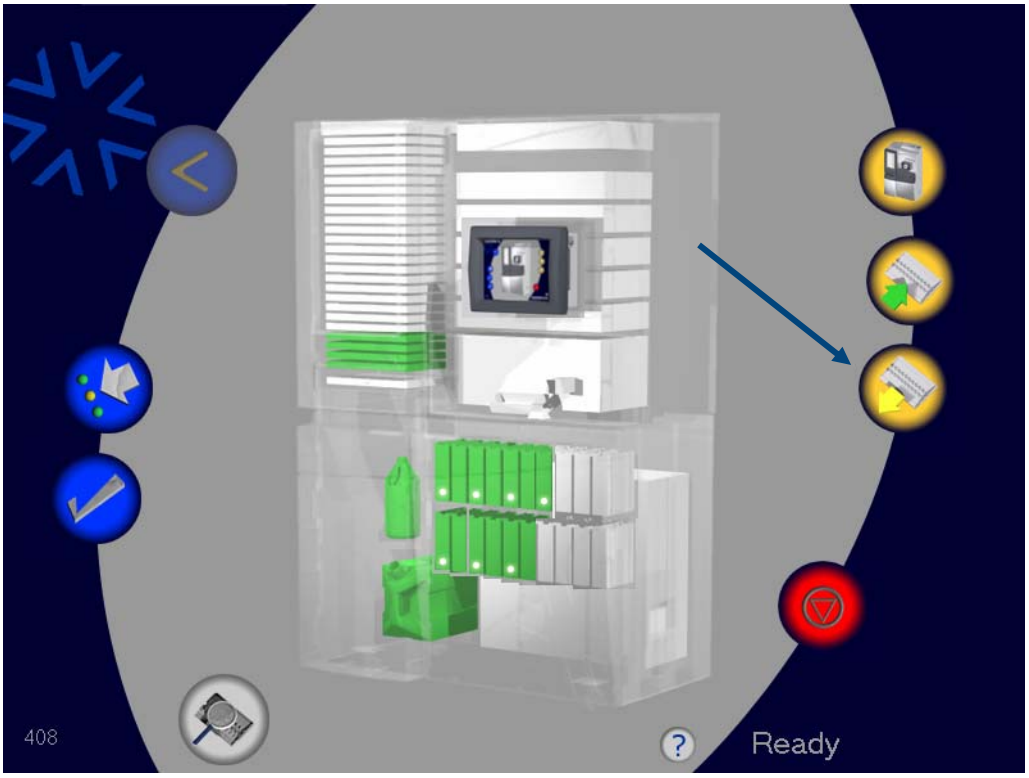


If necessary, touch the **Cancel Tray** icon to cancel the run and unload the tray from the entry portal.

UNLOADING SLIDE TRAYS

When a tray of slides has completed all processing steps in a protocol, it is placed in the instrument's IntelliQue to cool. When it is cool enough to remove, the icon for unloading trays will become active and the trays on the **Status** screen will turn green.

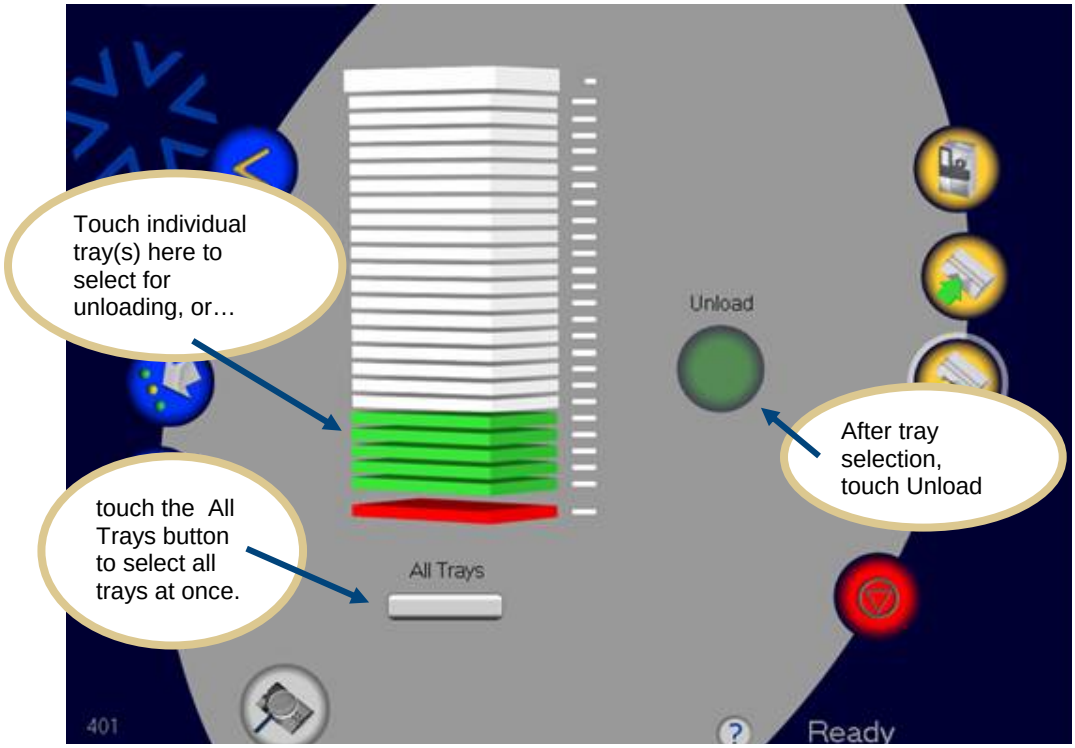
TRAY UNLOAD ICON



To unload completed trays…

1. Touch the **Tray Unload** icon indicated above to display the **Tray Unload Selection** screen shown below. The screen will show a display of all trays available to be unloaded.

TRAY UNLOAD SELECTION SCREEN



2. Select one or more trays to be unloaded by touching individual trays or touch the **All Trays** icon to unload all trays. The selected tray or trays will begin to flash as confirmation.

3. Touch the green **Unload** icon to remove completed trays from the SYMPHONY System.

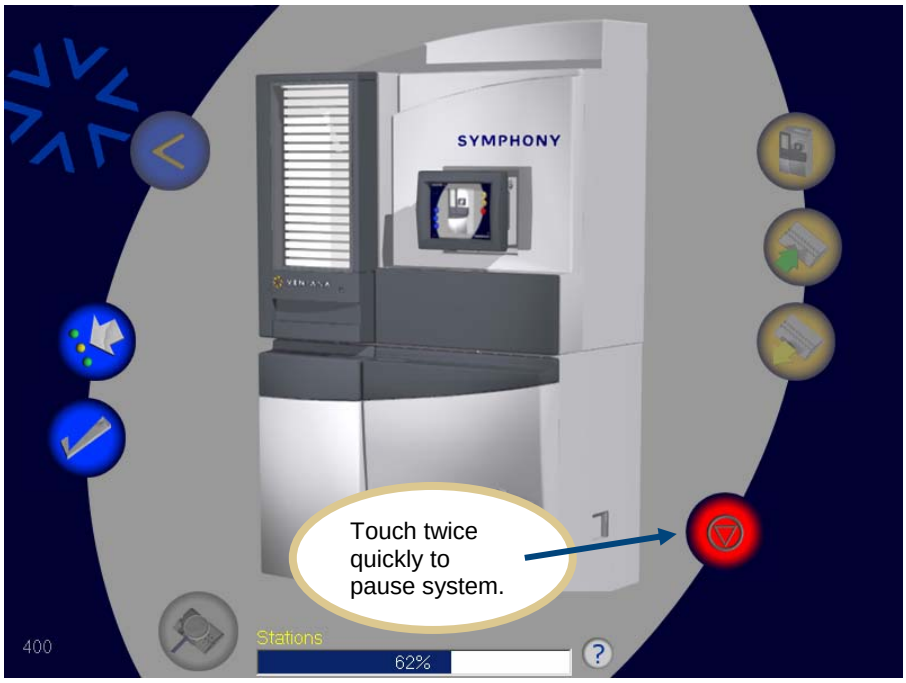
4. Pull the tray from the instrument.

REMOVING A TRAY FROM SYMPHONY

PUTTING SYMPHONY INTO STANDBY

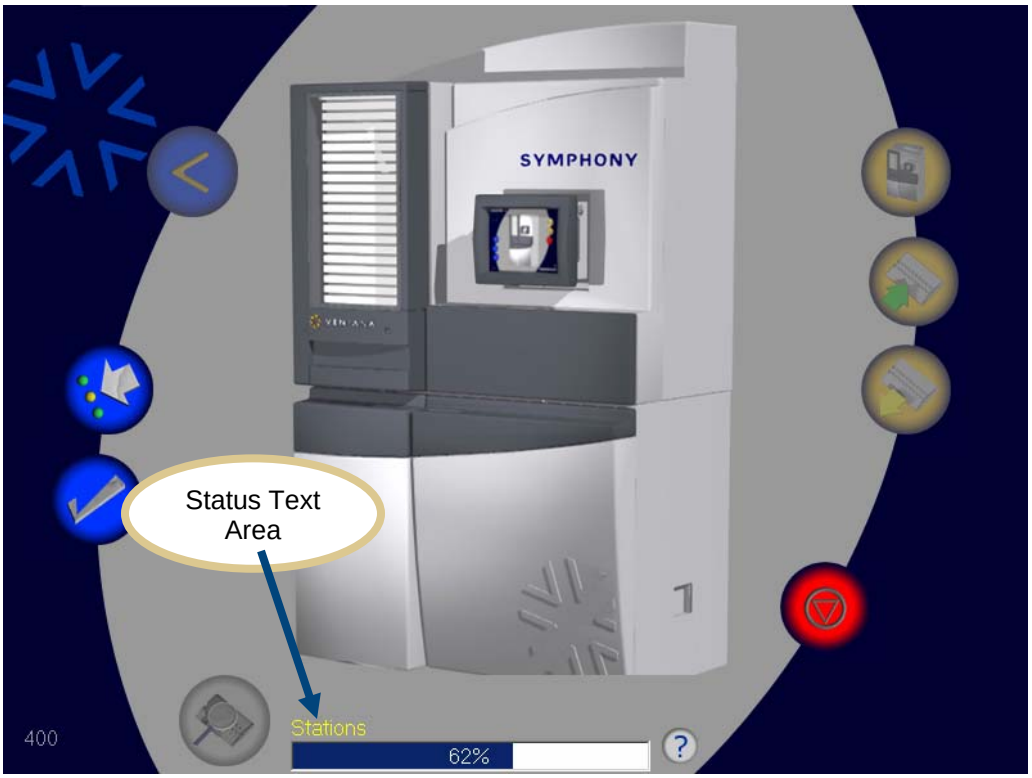
An operator can place the SYMPHONY System in Standby mode. In this mode compressor and other hardware components can be in a standby state while software functions continue to be usable. Touch the **Stop** icon two times in rapid succession to put the system into Standby mode.

STOP ICON



Touch **DOUBLE-CLICK HERE TO RESTART** in the **Status Text** area to remove the system from Standby mode. A brief re-initialization will occur automatically to put the system into a **Ready** state.

STATUS TEXT AREA

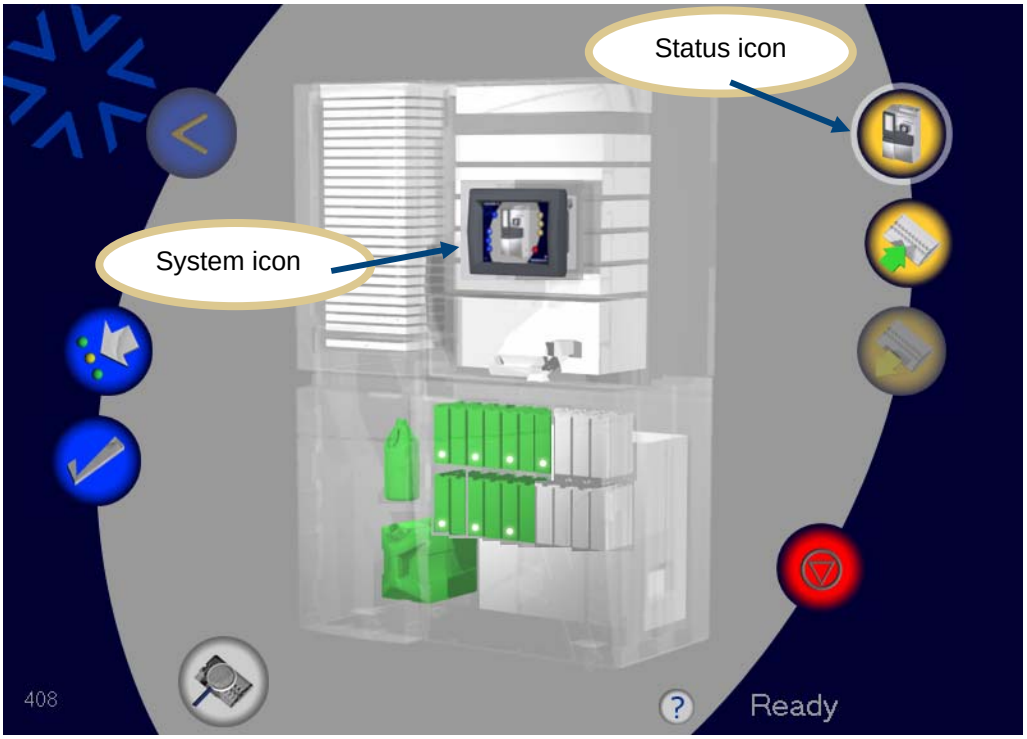


DISPLAYING SYMPHONY INFORMATION

Information about any of SYMPHONY's functions can be displayed by touching the appropriate region/module in the **Status View** screen.

To display the **Status View** screen touch the **Status** icon shown below.

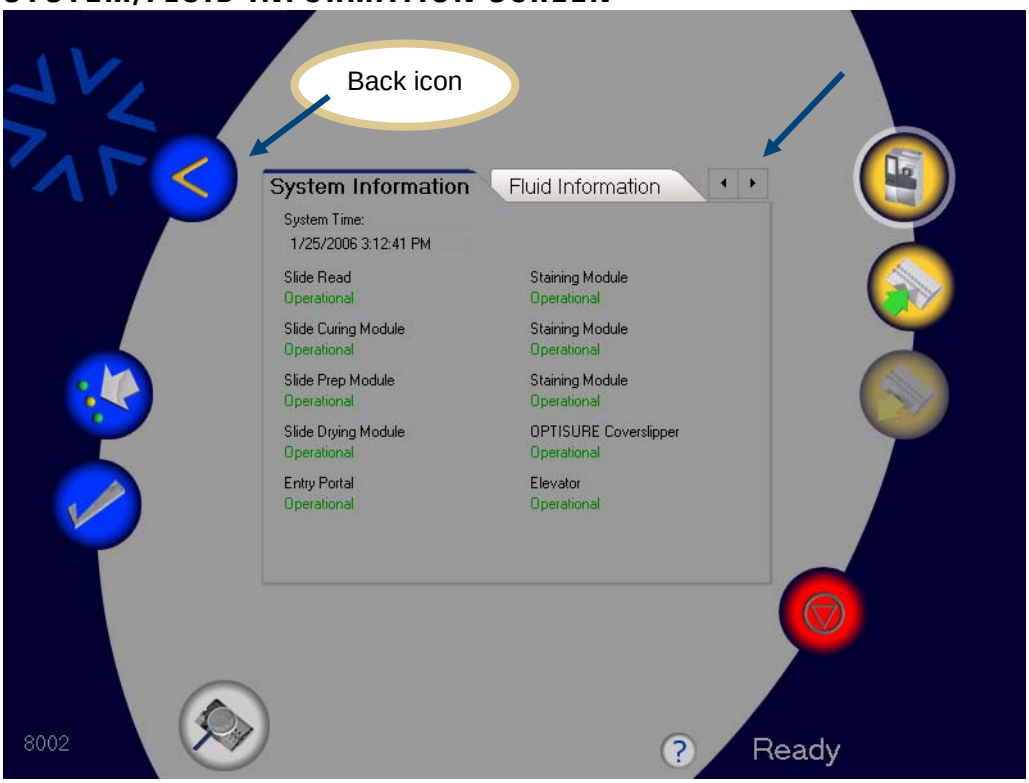
SYSTEM AND STATUS ICONS IN STATUS VIEW SCREEN



Touch the System icon shown above to display the **System/Fluid Information.**

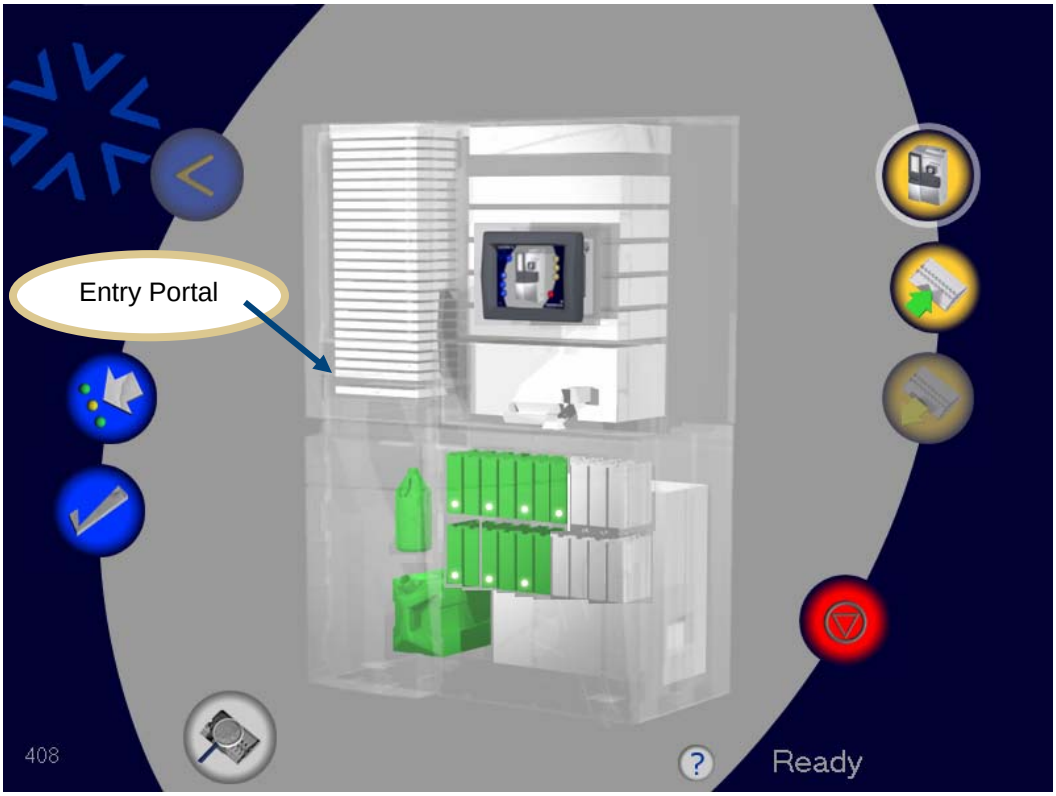
System and Fluid information is shown on the screen below. Toggle between **System Information** and **Fluid Information** by touching the corresponding tab or left and right arrows.

SYSTEM/FLUID INFORMATION SCREEN



Touch the **Back** icon shown above to re-display the **Status View** screen shown below.

ENTRY PORTAL IN STATUS VIEW SCREEN



Touch the **Entry Portal** region shown above to display the **Entry Portal Tray/Station** Information screen.

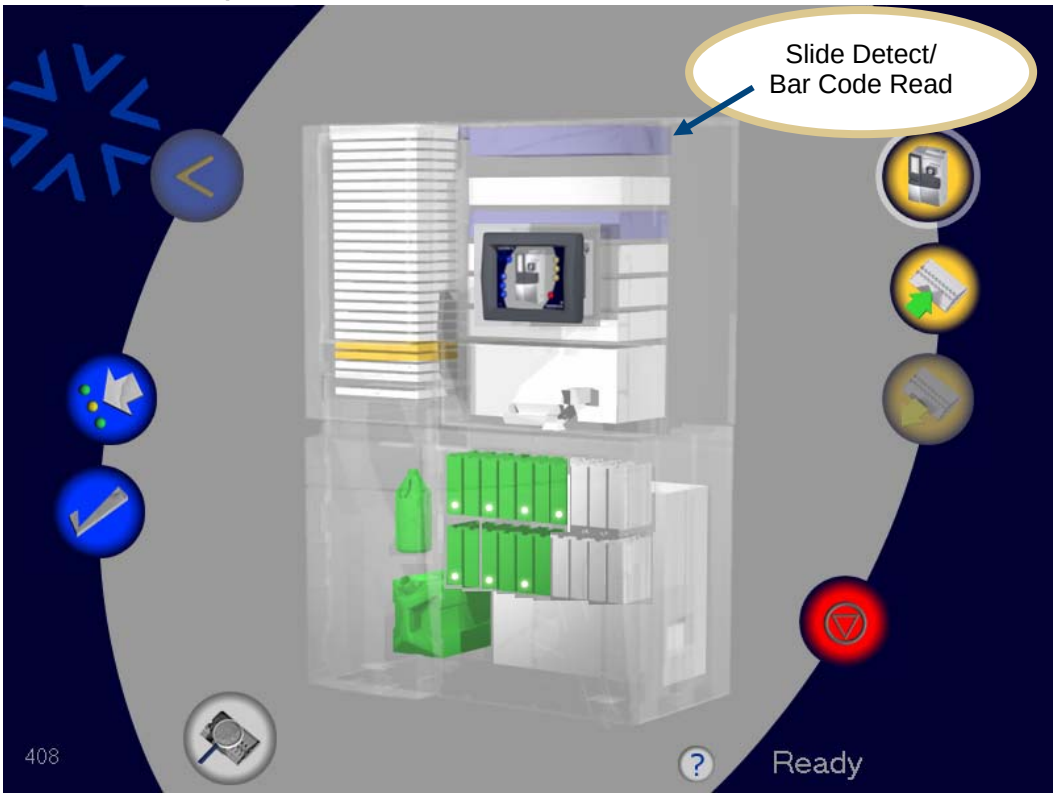
Toggle between **Tray Information** and **Station Information** by touching the corresponding tab or left and right arrows.

ENTRY PORTAL TRAY/STATION INFORMATION SCREEN

Touch the **Back** icon shown above to re-display the **Status View** screen.

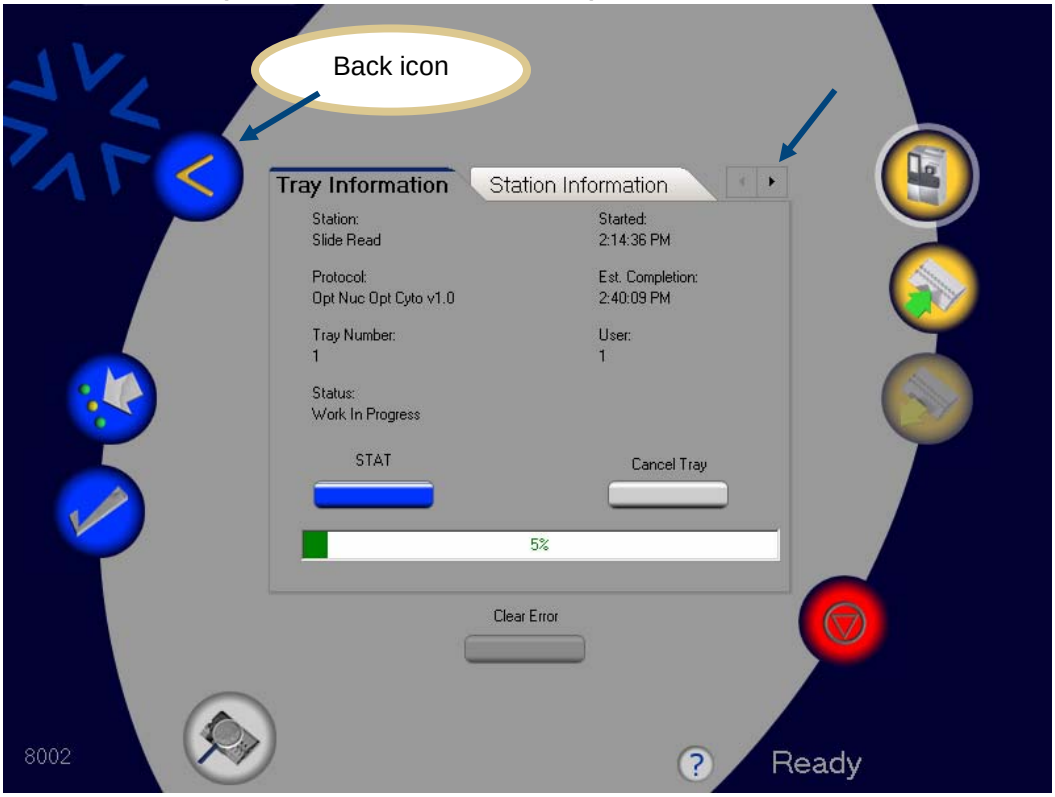
Touch the **Slide Detect/Bar Code Read** region shown below to display the **Slide Detect/Bar Code Read Tray/Station Information**.

SLIDE DETECT/BAR CODE READ IN STATUS VIEW SCREEN



The **Slide Detect/Bar Code Read Tray/Station Information** screen provides information about the tray and the station where the tray is located.

SLIDE DETECT/BAR CODE READ TRAY/STATION INFORMATION

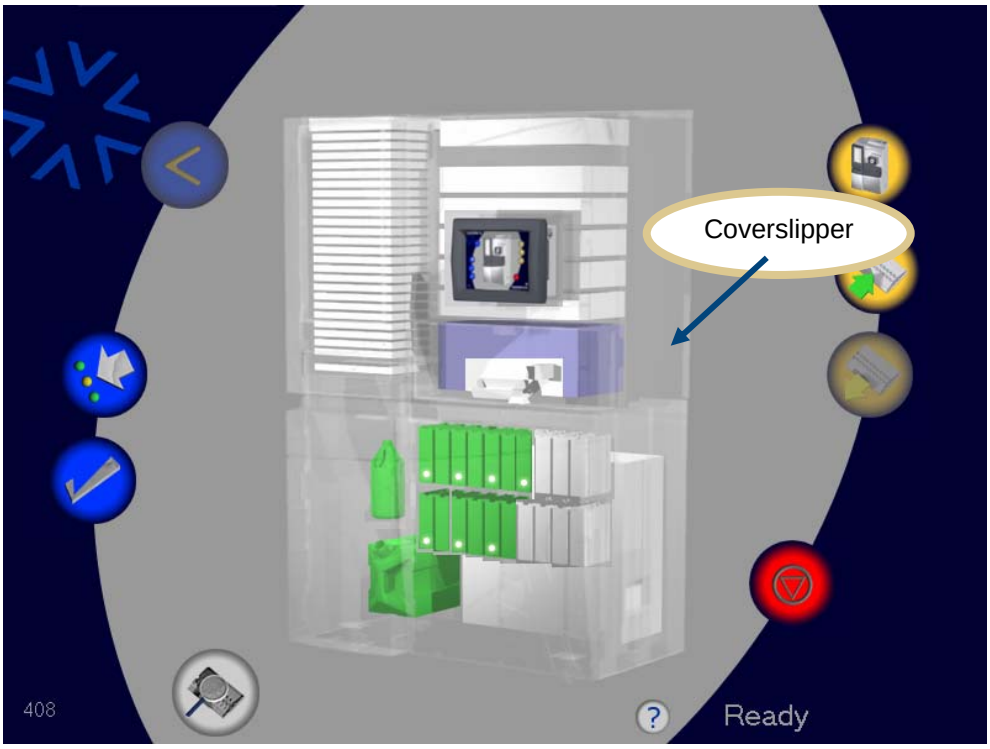


Toggle between **Tray Information** and **Station Information** by touching the corresponding tab or the left and right arrows.

Touch the **Back** icon to re-display the **Status View**.

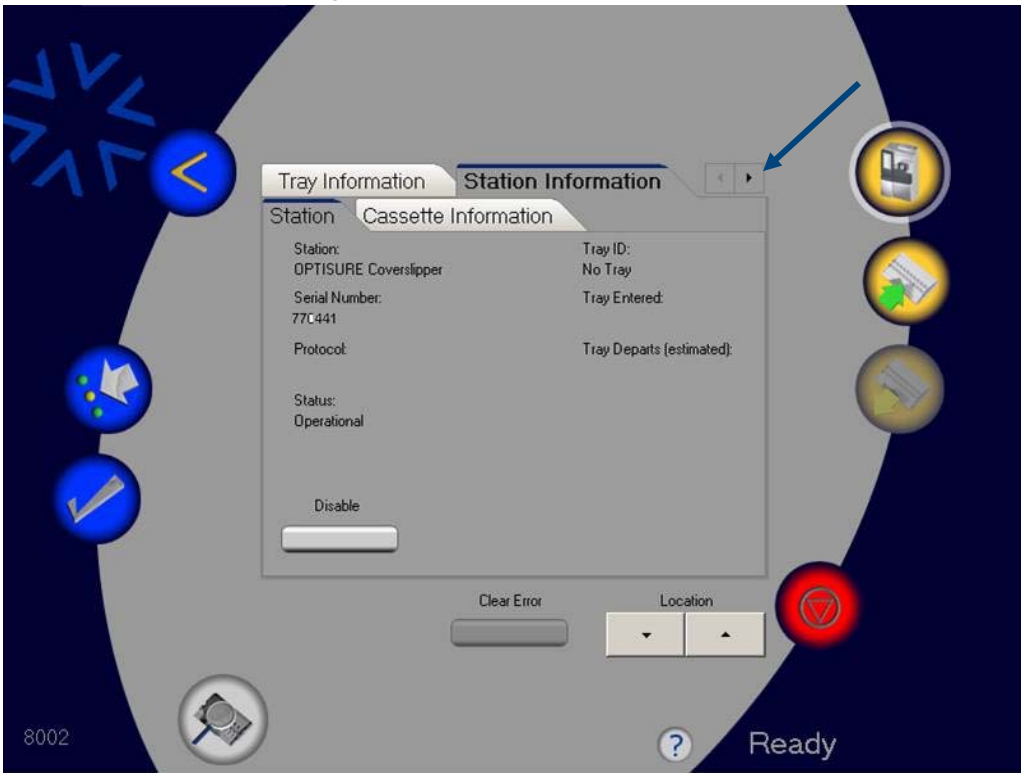
Touch the **Coverslipper** region shown below to display the **Coverslipper Tray/Station Information** screen.

COVERSLIPPER IN STATUS VIEW SCREEN



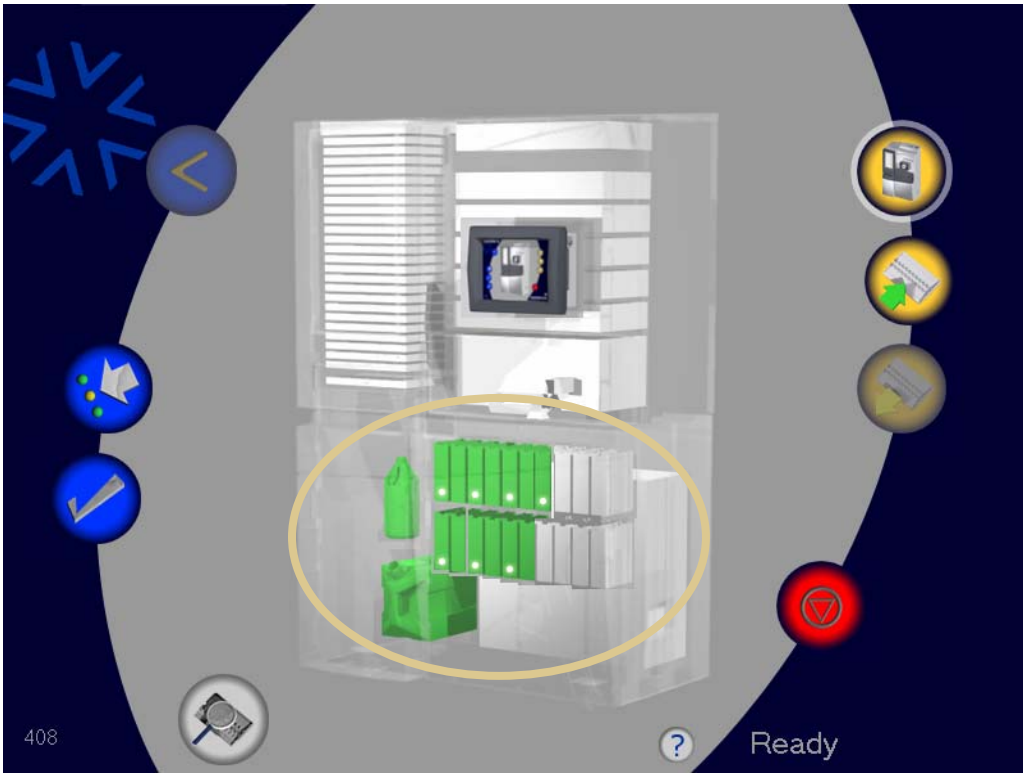
Toggle between Coverslipper **Tray Information**, **Station Information**, and **Cassette Information** by touching the corresponding tab or the left and right arrows.

COVERSLIPPER TRAY/STATION INFORMATION SCREEN

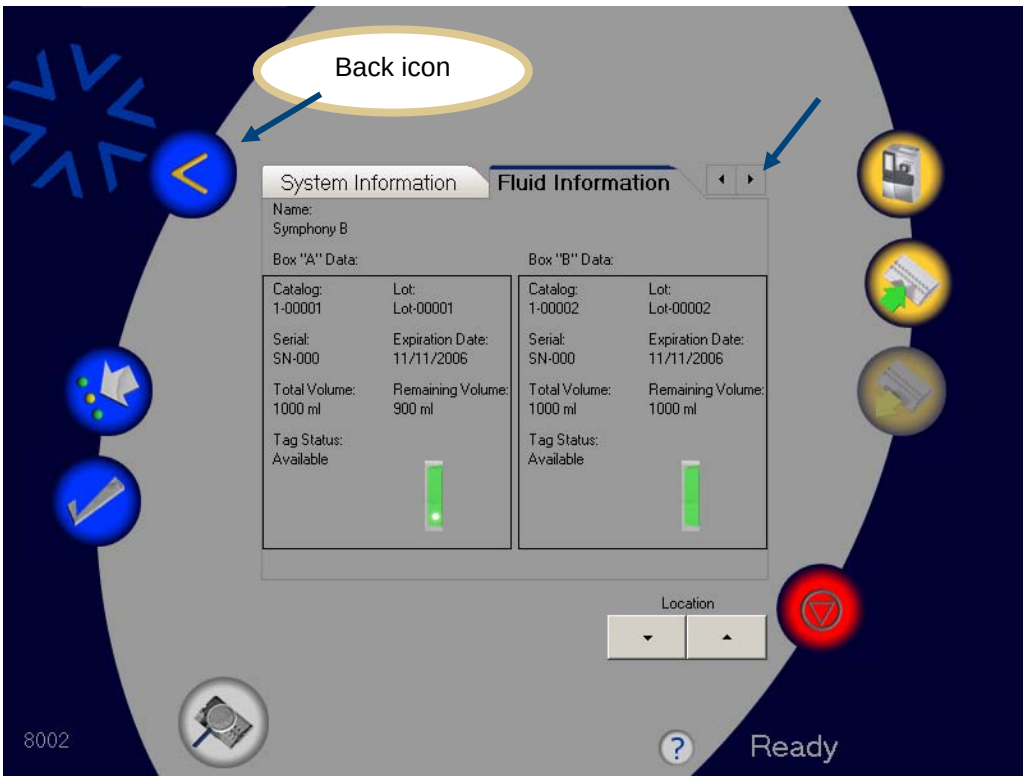


Touch the **Fluids** region shown above to display the **System/Fluid Information** screen below.

FLUIDS REGION IN STATUS VIEW SCREEN



SYSTEM FLUID INFORMATION SCREEN

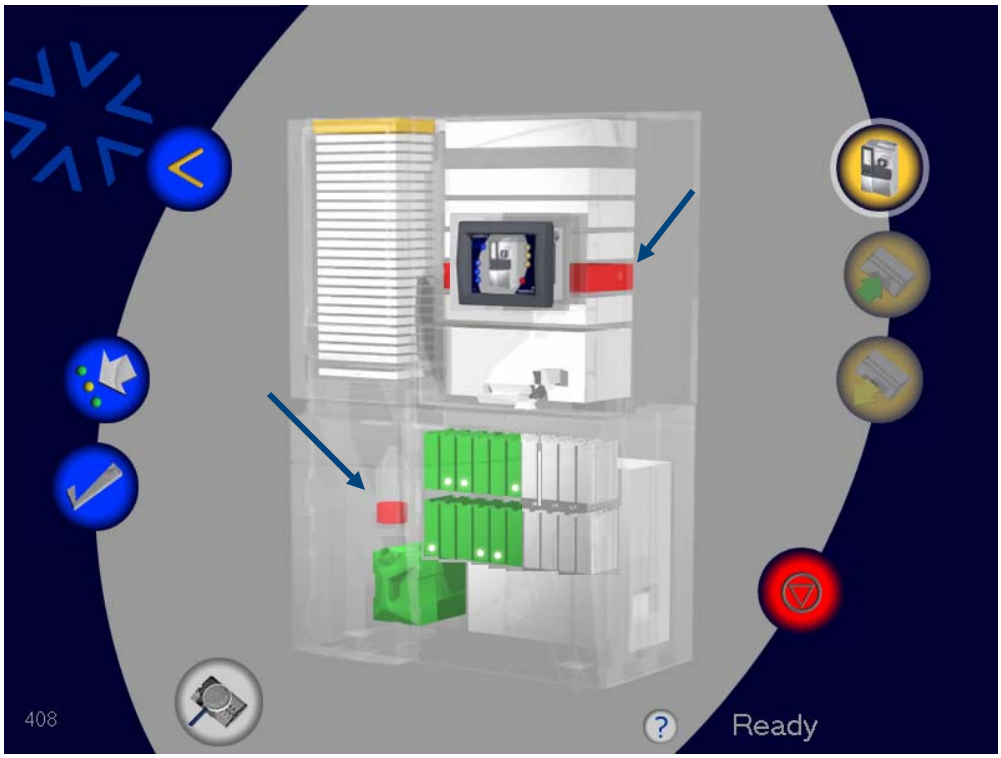


Toggle between **System Information** and **Fluid Information** by touching the corresponding tab or the left and right arrows.

Touch the **Back** icon shown above to re-display the **Status View** screen.

Modules that are shown in red on the **Status** screen indicate that an error has occurred.

STATUS VIEW WITH ERRORS SCREEN



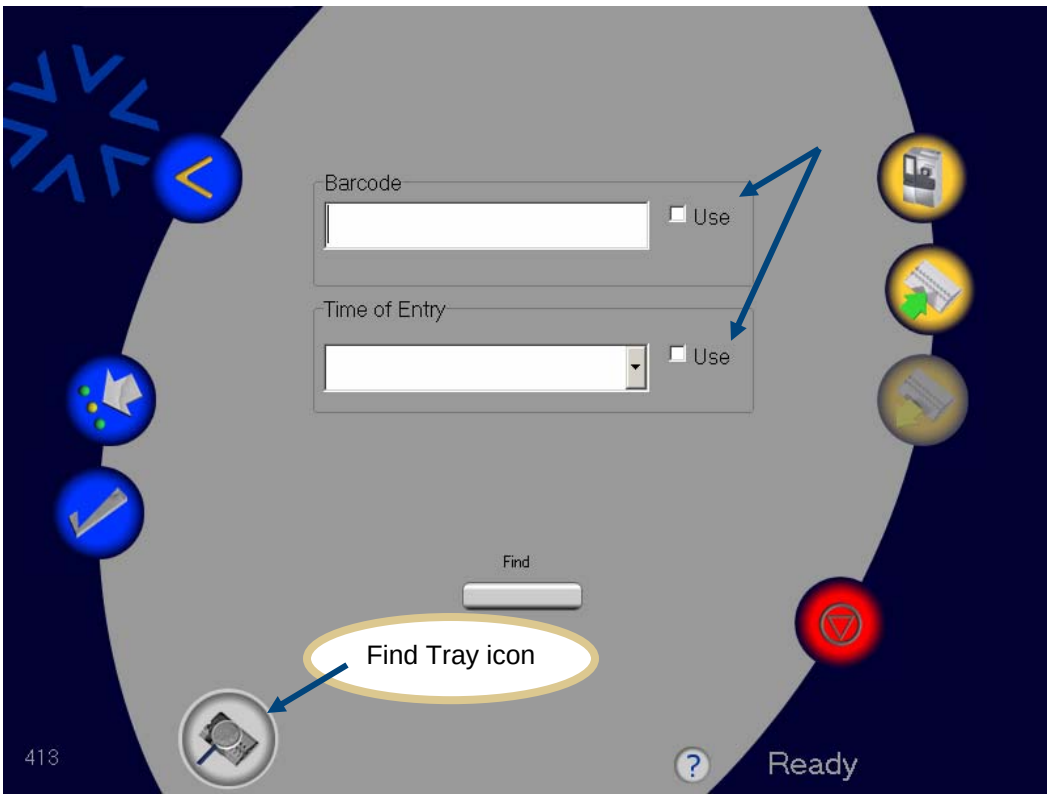
See the **Troubleshooting** and **Recovery Procedures** sections for more information.

FINDING A TRAY IN THE SYSTEM

To find a particular tray in the system touch the **Find Tray** icon shown on the screen below to display the **Find Tray** screen.

There are two ways to find any tray(s) and slide(s) in the system:

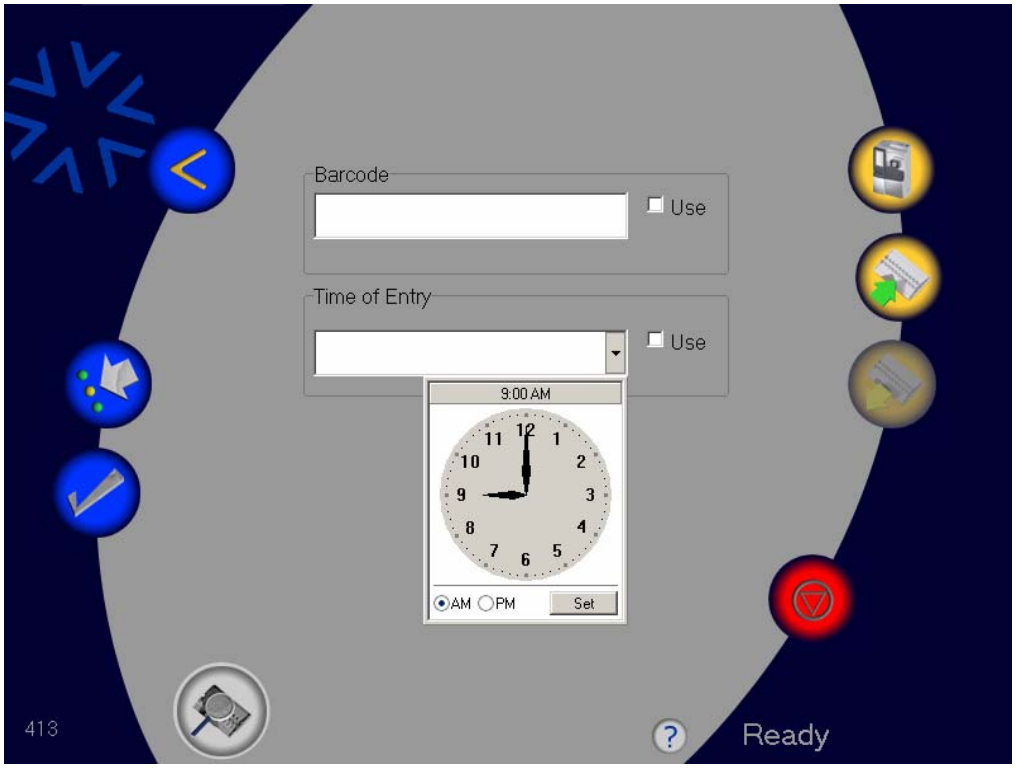
FIND TRAY SCREEN



- Touch the **Use** box in the **Barcode** field to activate the **Barcode** field and display the virtual keyboard. On the virtual keyboard enter the barcode of the slide of interest.

- Or, touch the **Use** box in the **Time of Entry** field to activate the **Time of Entry** field and display the virtual clock shown below.

FIND TRAY SCREEN WITH VIRTUAL CLOCK

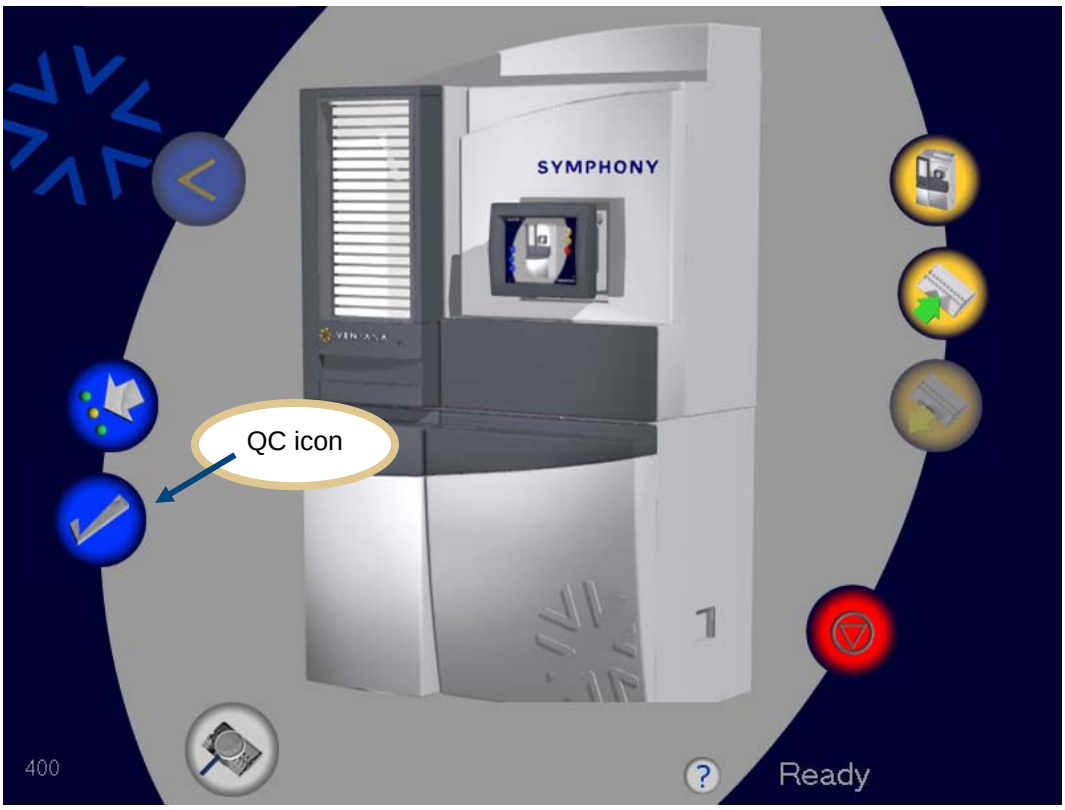


Choose the time that the tray was entered into the system. The system will look for the entered time in five-minute increments.

QA/QC OPTIONS

Display Quality Control information by touching the **QC** icon shown below to display the **QC** screen.

MAIN SCREEN

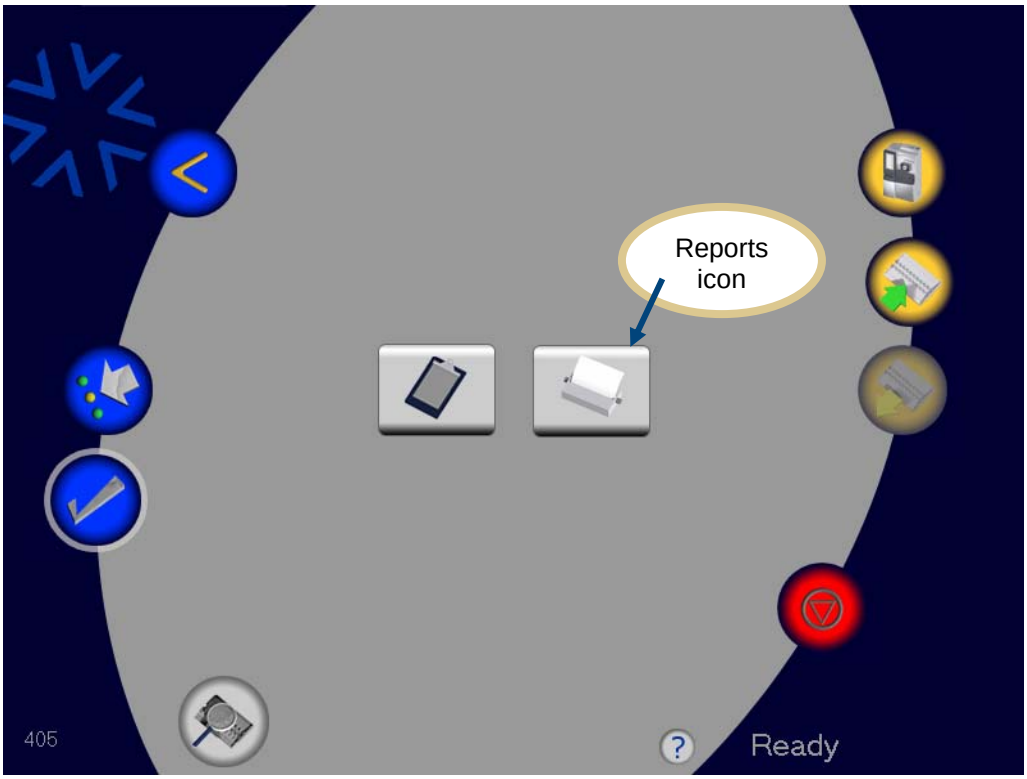


The **QC** screen has icons for displaying

- Runtime log
- Reports
- Solutions inventory
- Slide and Tray
- Tray usage
- Operators
- Reports

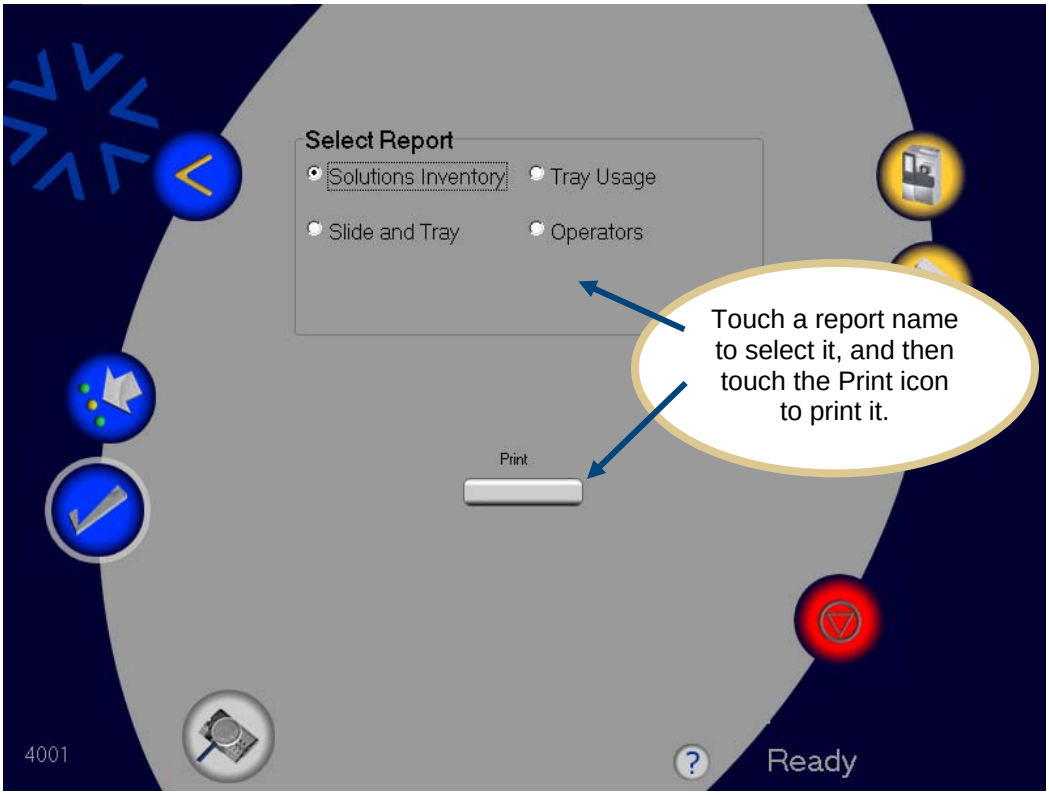
Touch the **Reports** icon to display the Select Reports screen.

QC SCREEN



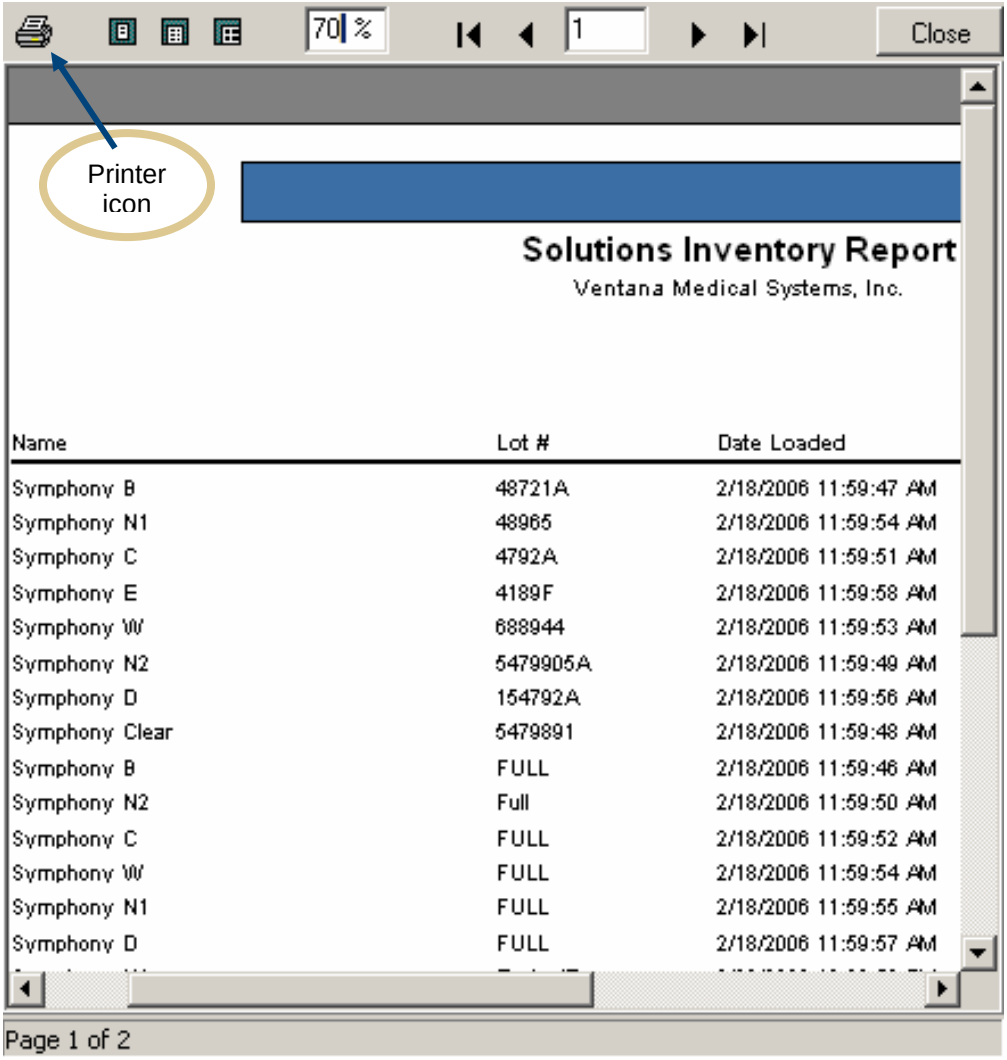
Select any of the four reports shown above by touching an option in the **Select Report** group box.

SELECT REPORTS SCREEN



On the **Select Reports** screen touch the **Print** button icon to display the report on screen as shown in the **Solutions Inventory Report** example below.

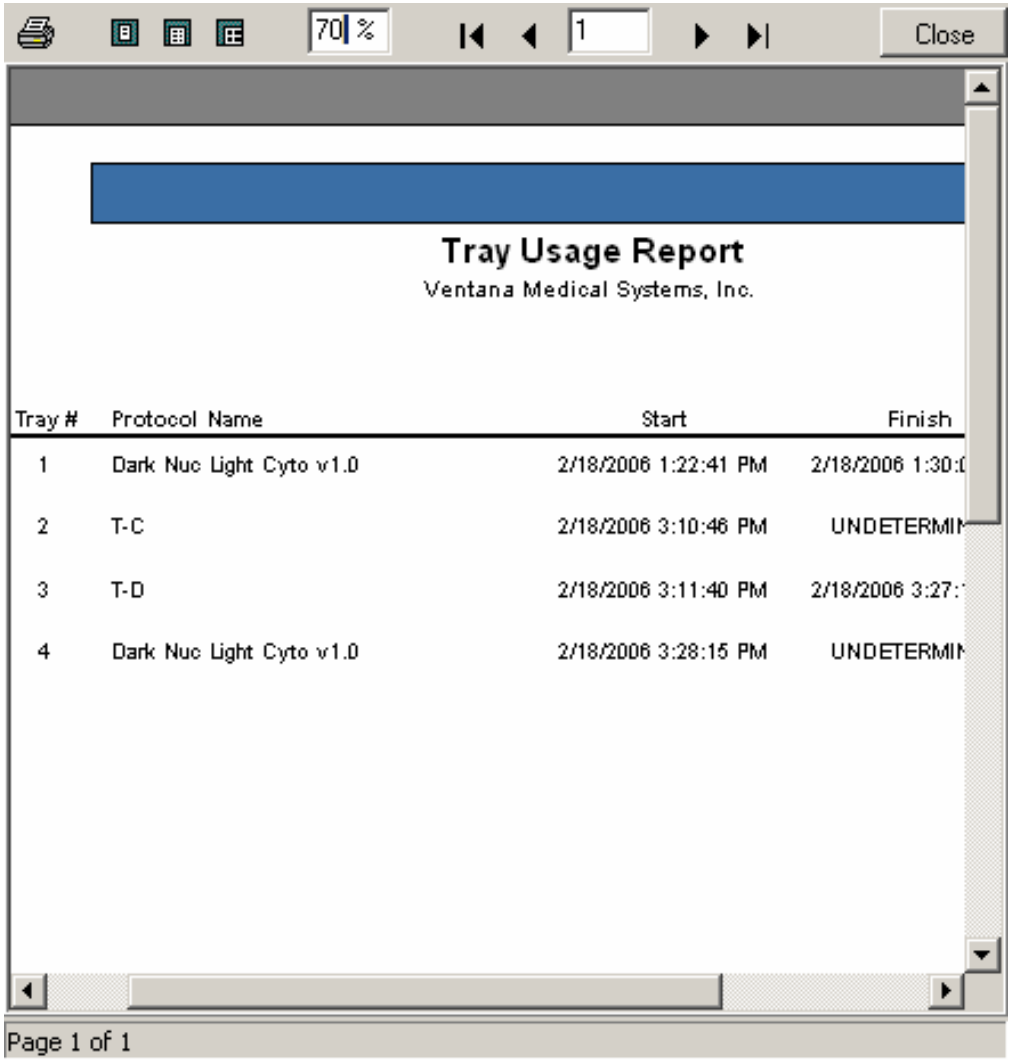
SOLUTIONS INVENTORY REPORT SCREEN



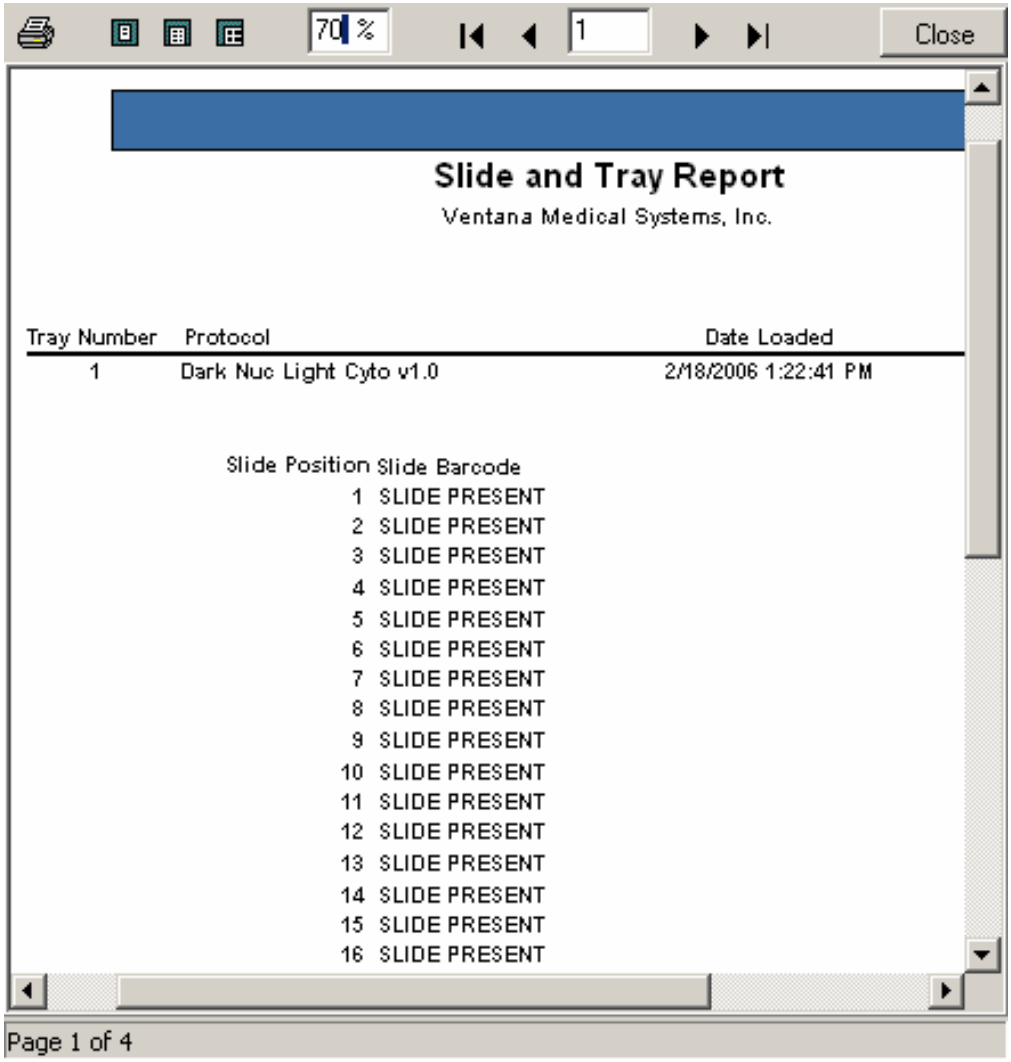
Touch the **Printer** icon to print a hard (paper) copy of the report.

Examples of the remaining reports follow.

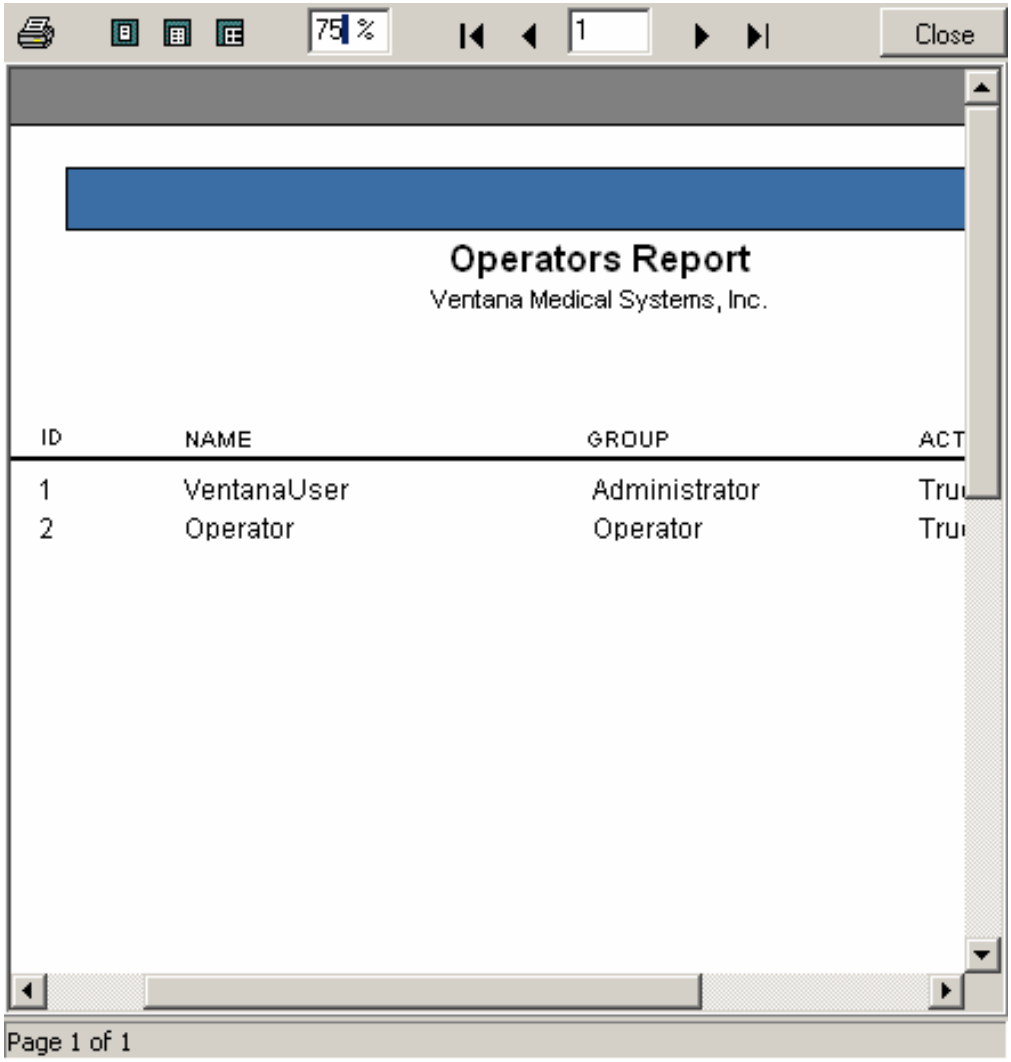
TRAY USAGE REPORT SCREEN



SLIDE AND TRAY REPORT SCREEN

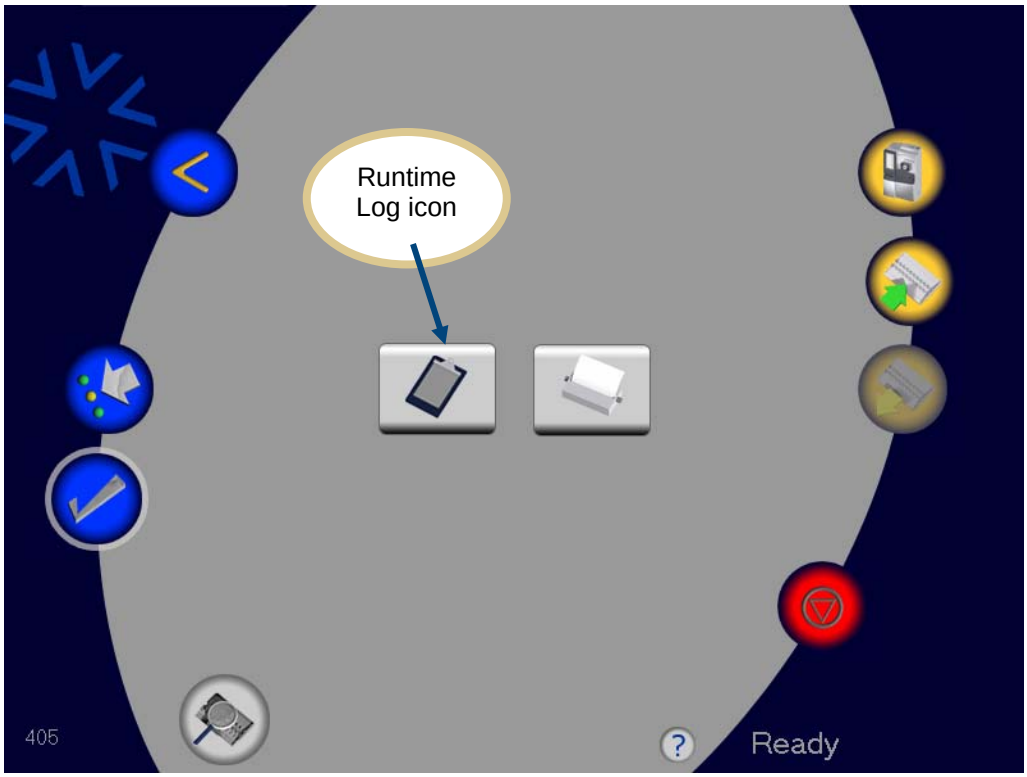


OPERATORS REPORT SCREEN



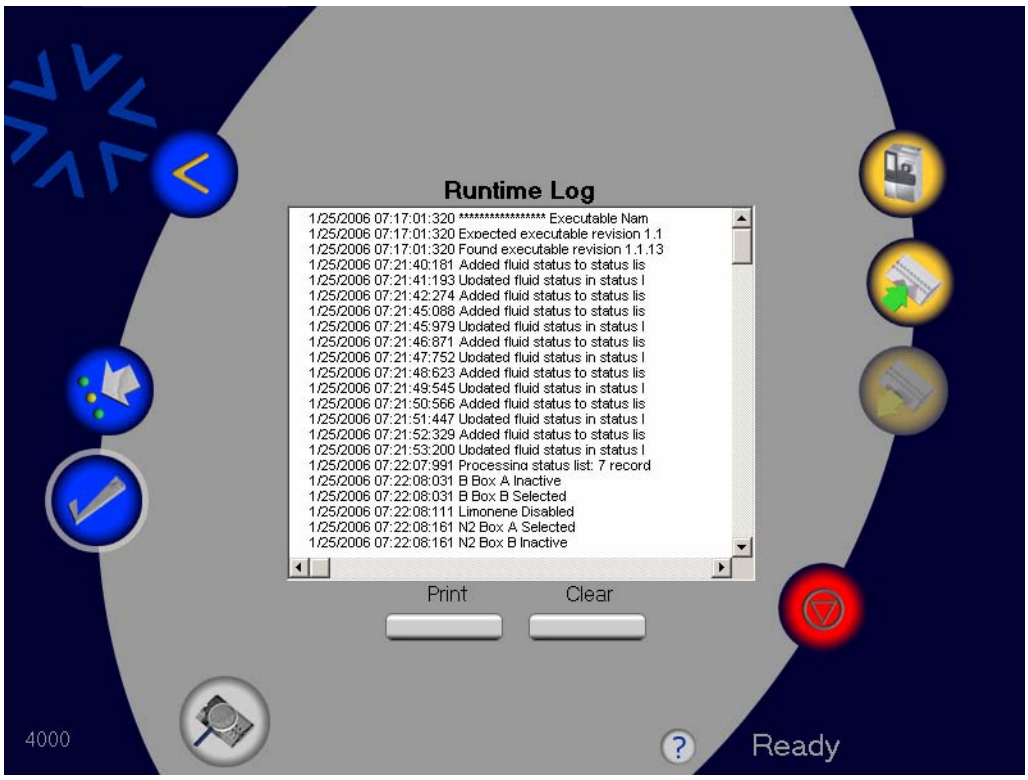
Logs

QC SCREEN



Touch the **Runtime Log** icon to display the **Runtime Log** screen shown on the page that follows.

RUNTIME LOG SCREEN

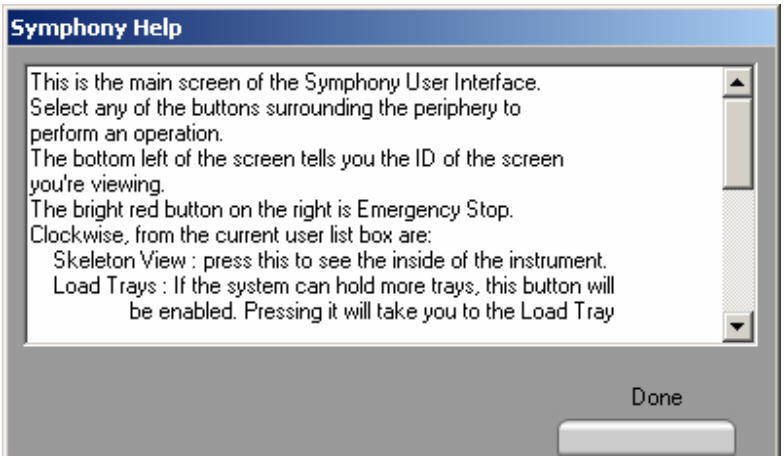


ON-LINE HELP

MAIN SCREEN

Touch the **Help** icon to display the **Help** screen shown below

HELP SCREEN



MAINTENANCE

GENERAL CLEANING

Clean the instrument cover by wiping with a damp cloth. Use a mild solution of tap water and Dawn® liquid detergent. Periodically clean the slide trays. The trays will discolor with use, but staining can be minimized with regular cleaning. The trays are dishwasher safe.

Important!
Do not use detergents, solvents, or bleach on the computer Touchscreen.

DAILY MAINTENANCE

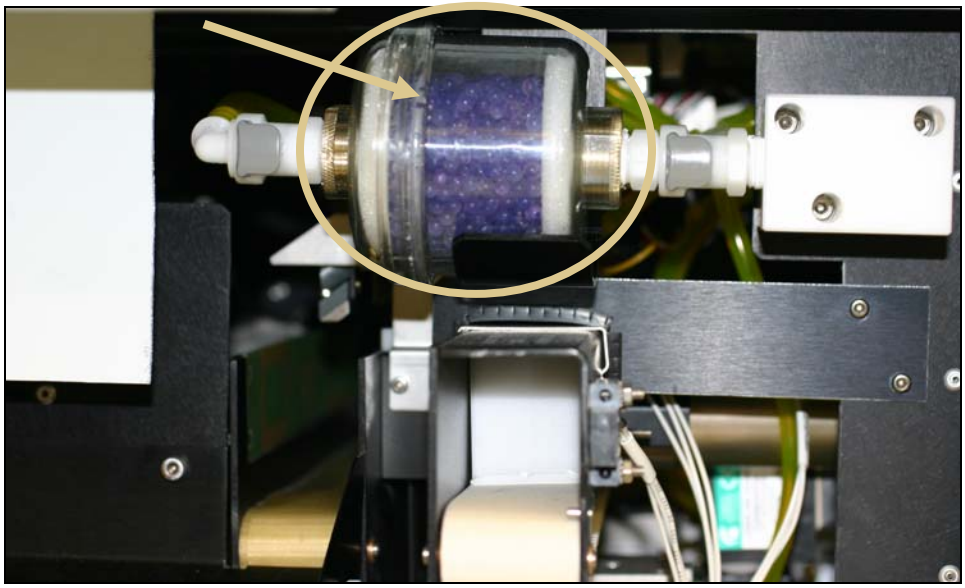
Perform the following procedures daily. Detailed instructions for these procedures follow the table shown below.

PROCEDURE	DATE	TIME	INITIALS
Check the desiccant filter and replace it if necessary. (See **Desiccant Filter** in this section below.)			
Refill the alcohol reservoir with ethanol-based, anhydrous, reagent grade alcohol (SDA formula 3A). (See **Filling the Alcohol Reservoir** in the *Instrument Operation* section.)			
Set out any needed N1 or N2 solutions and let them come to room temperature prior to use. (See Note under **Check All SYMPHONY Solutions** in this section.)			
Check the fluid levels for all SYMPHONY Solutions and replace them if necessary. (See **Check All SYMPHONY Solutions** in this section.)			
Remove any broken or unused OPTISURE coverslips. (See **Removing Broken Coverslips** in this section.)			
Remove any empty OPTISURE cassettes. (See **Removing Empty OPTISURE Cassettes** in this section.)			

DESICCANT FILTER

The desiccant filter is located on the coverslipper module directly above the OPTISURE coverslip input area. The catalogue number for the desiccant filter is 2094800.

DESSICANT FILTER

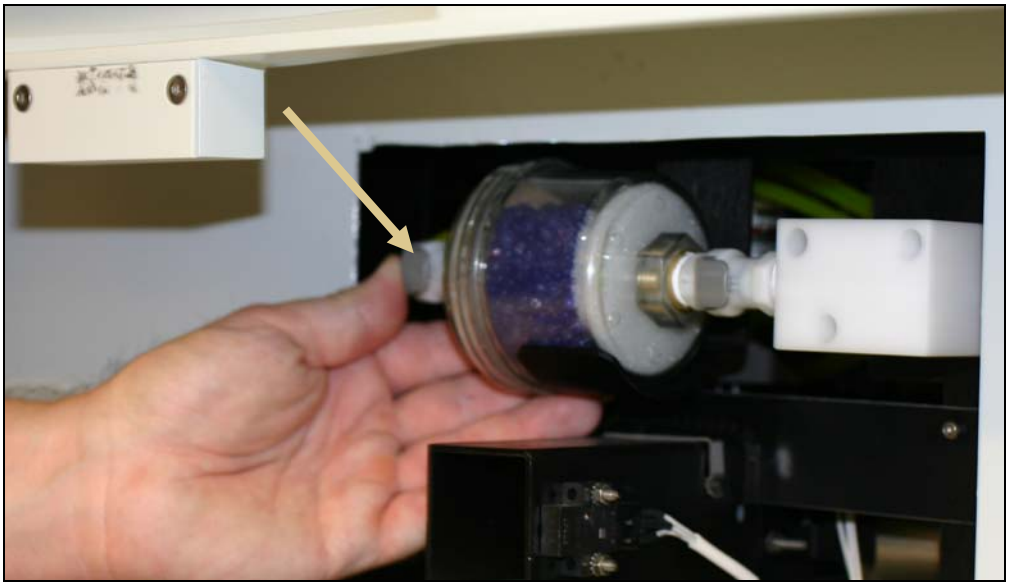


The desiccant filter should be visually inspected on a daily basis. When the internal beads turn from purple to pink in color the filter needs changing.

To remove the used filter…

1. Disengage the cartridge's left quick release tab (shown below by arrow), and pull the hose's fitting from the cartridge.

DISENGAGING THE LEFT QUICK RELEASE TAB



2. Disengage the cartridge's right quick release tab (shown below by arrow), and pull the cartridge to the left to remove it from the other fitting.

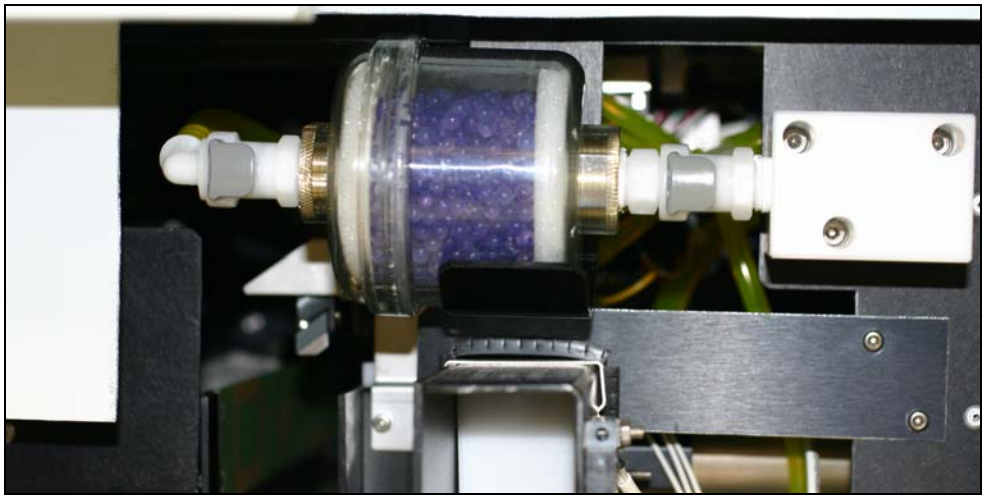
DISENGAGING THE RIGHT QUICK RELEASE TAB

3. Pull the cartridge out.

REMOVING THE CARTRIDGE

Reverse the procedure to install a new cartridge.

INSTALLING A NEW CARTRIDGE



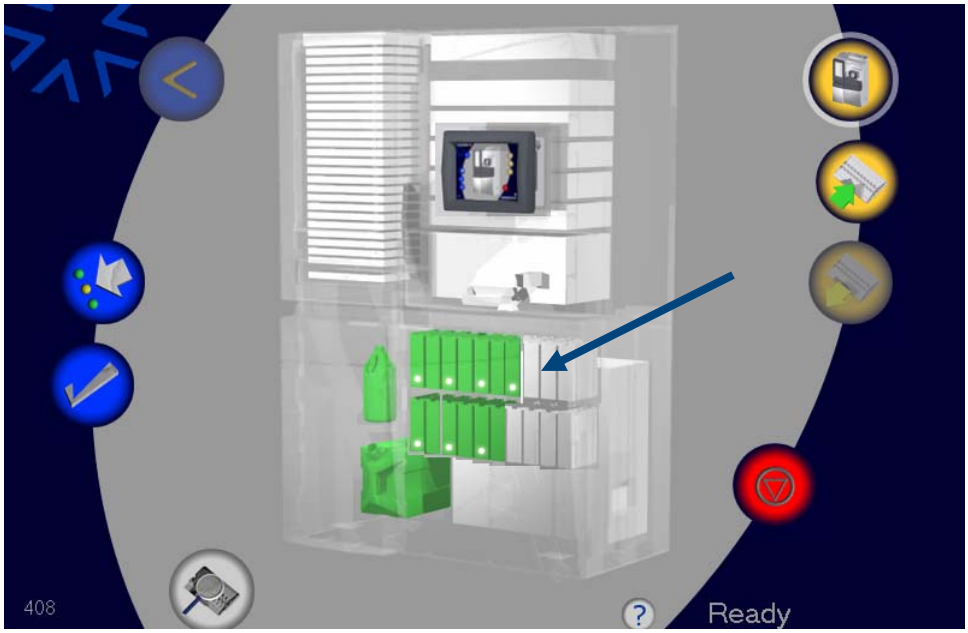
CHECK ALL SYMPHONY SOLUTIONS

Check all SYMPHONY Solutions and replace them if necessary.

Important!

Set out Needed N1 or N2 Solutions and allow them to come to room temperature prior to use.

STATUS VIEW SCREEN

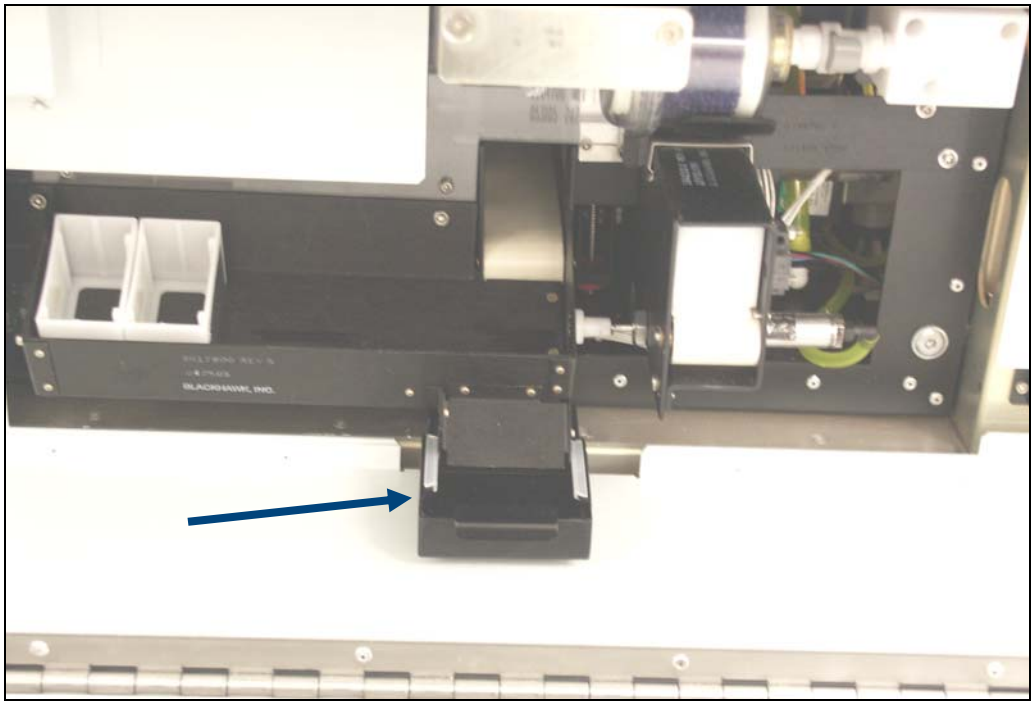


- In the **Status View** screen shown above, green reagent containers indicate adequate amounts of reagent.
- A white dot on a reagent container indicates that reagent is being drawn from that container.
- When a reagent needs replenishing, it will appear “red” on the screen.
- If a reagent is low, it will appear “yellow” as a notification that the reagent is approaching low levels (see *Alarm Setup*).

REMOVING BROKEN COVERSLIPS

Daily remove the small drawer located at the base of the coverslip module adjacent to the right side of the empty cassette tray. Dispose of broken glass according to the facility procedures for handling broken glass.

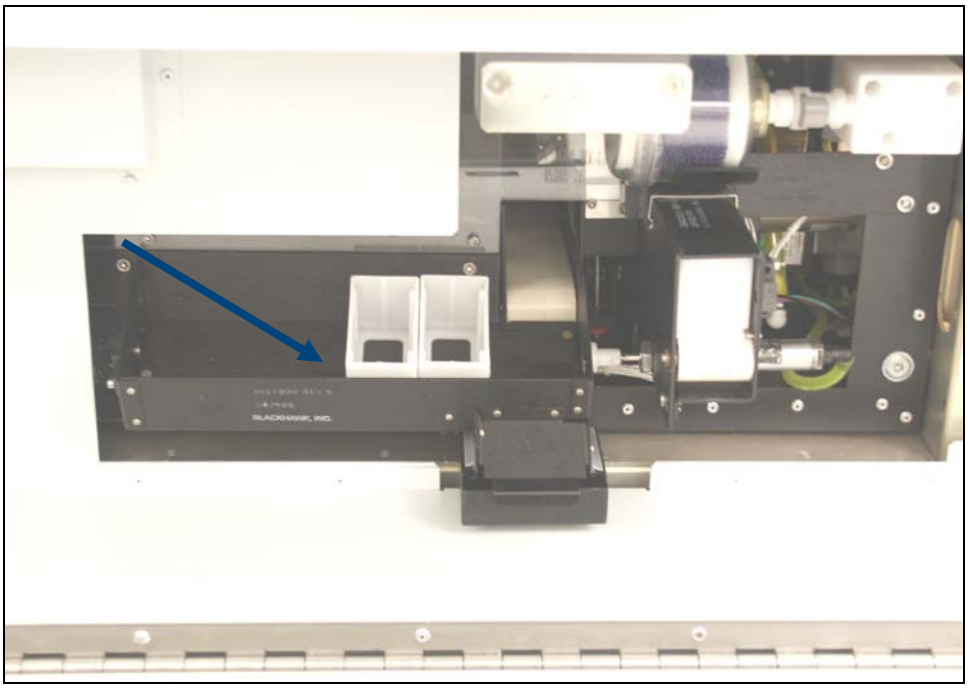
COVERSLIP DRAWER



REMOVING EMPTY OPTISURE CASSETTES

The SYMPHONY System automatically discards empty OPTISURE cassettes. Daily remove any empty OPTISURE cassettes from the discard bin.

CASSETTE DISCARD BIN



RECOVERY PROCEDURES

In the event the SYMPHONY System delivers a slide with air bubbles or other coverslipping faults follow the procedure below to manually remove and recover the slide. Contact Ventana if coverslipping faults are occurring often.

REMOVING A COVERSLIP

WARNING!

Use caution while performing this procedure. The glass will be hot.

To remove the coverslip…

1. Set a laboratory hot plate to a setting of at least 150° C and allow the hot plate to warm up.

2. Place the slide on the hot plate to warm up and, with one hand, hold the slide in place while using forceps to push the glass coverslip off.

   Note:
   Not more than 20 to 30 seconds should be required for the coverslip to begin moving with ease.

3. Allow the slide to come to room temperature before placing the slide into any solvents.

4. Place the slide into 95% ethanol for one minute with agitation.

5. Remove the slide and place it into a second jar of 95% ethanol for one minute.

6. Place the slide through 100% ethanol for one minute, twice.

7. Place the slide in xylene or equivalent for two minutes with agitation.

8. Remove the slide and excess xylene, add a few drops of mounting medium and slowly place a new glass coverslip on the slide without allowing excess air bubbles to form.

9. Air dry the slide and have it re-read by the pathologist.

REMOVING TRAYS FROM MODULES

Certain precautions are required to prevent injury to operators and damage to the instrument when clearing jammed trays.

WARNING!

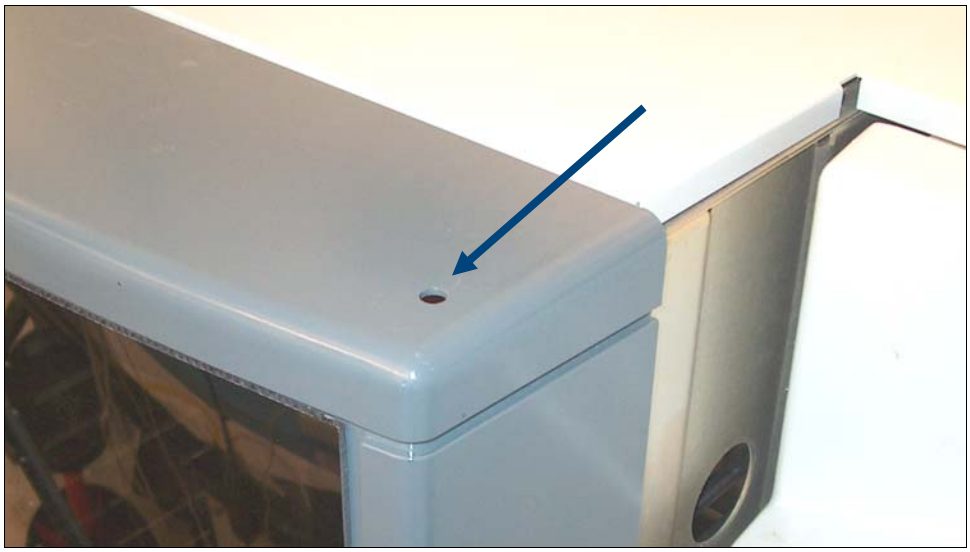
Allow slide trays in the slide drying module and in the slide curing module to cool before removing them by hand. Do this by powering off the system and then waiting 10 minutes.

Unplug the unit from the wall socket before removing slide trays by hand.

To open the Tray Access door…

1. Open the tray access door by inserting the special tool in the hole on the top of the door's upper right corner shown below.

HOLE IN ACCESS DOOR



2. Insert the special tool in the hole as shown below, then push the tool down to unlatch the door.

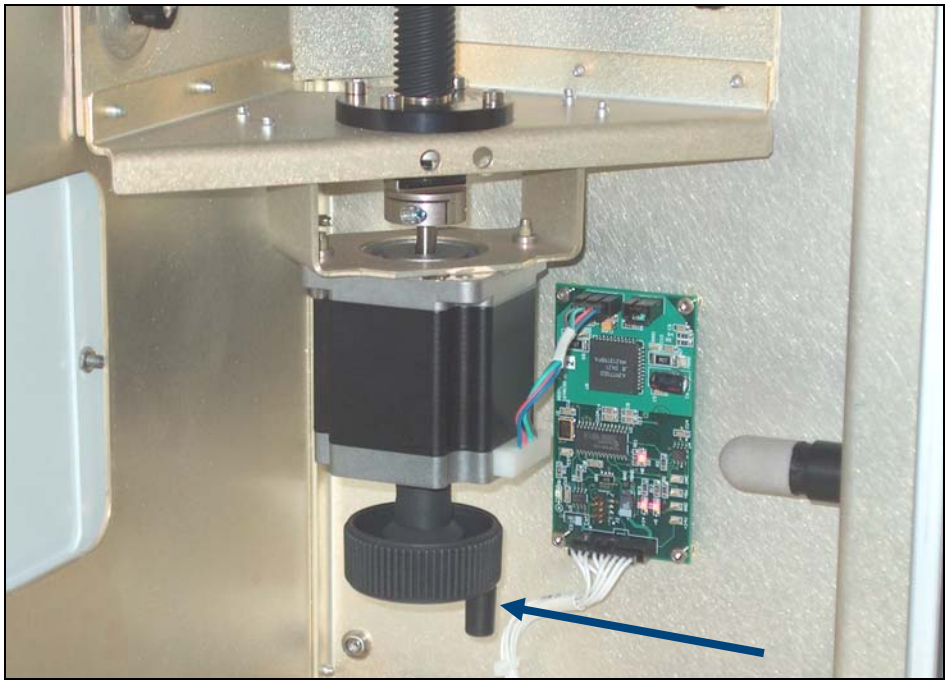
PUSHING SPECIAL TOOL TO RELEASE LATCH

MANUALLY MOVING THE ELEVATOR/TRANSPORT TABLE FOR ACCESS TO STATIONS

If the Elevator/Transport Table is blocking access to a station, turn the Elevator Hand Crank to raise or lower the Elevator/Transport Table, preferably to the top of the IntelliQue.

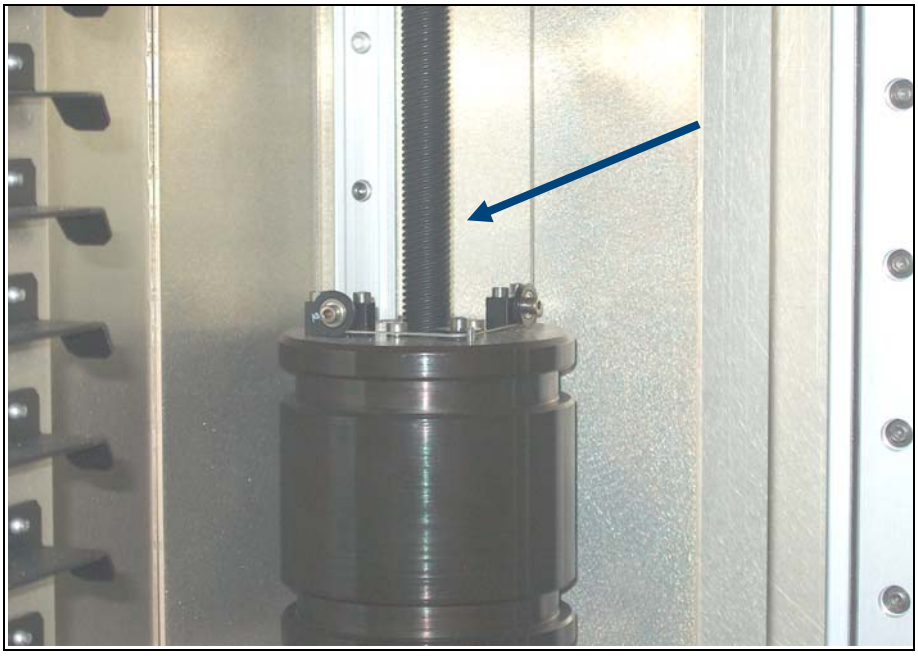
Moving the Elevator/Transport Table to the top of the IntelliQue will ensure that its vertical cable does not block the slide tray when it is removed from the station.

ELEVATOR HAND CRANK



If the Transport Table is blocking the Elevator Hand Crank, turn the Elevator Lead Screw by hand.

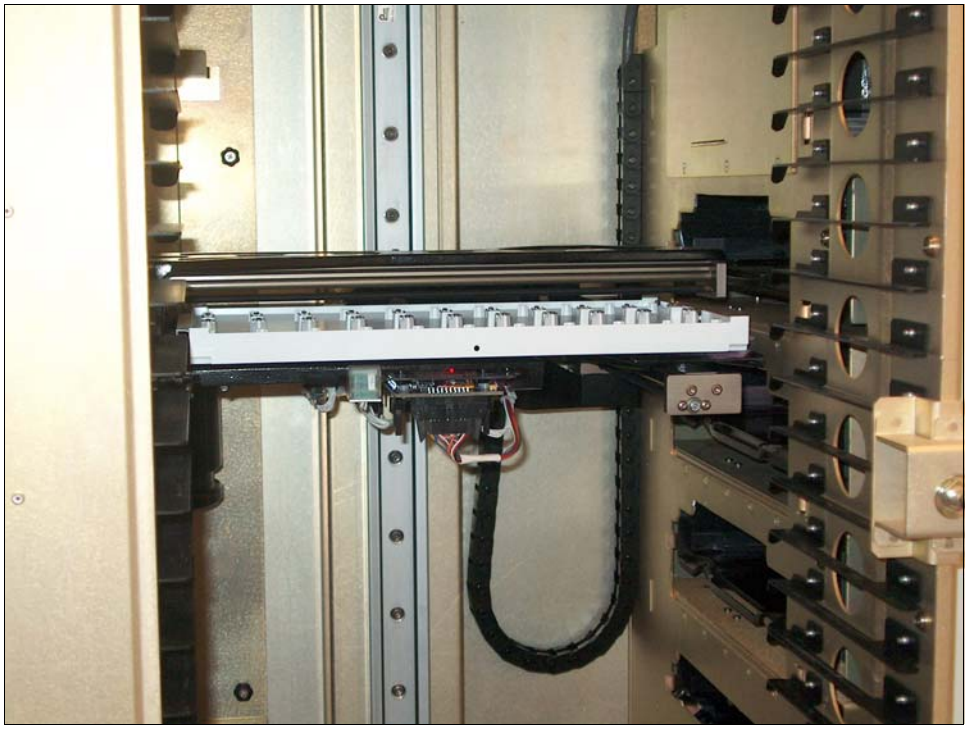
ELEVATOR LEAD SCREW



REMOVING A SLIDE TRAY FROM THE TRANSPORT TABLE

In the event of a power failure, a slide tray may remain on the Transport Table.

TRAY ON TRANSPORT TABLE



Lift the slide tray off the rear hooks of the Transport Table before pulling it out.

CAUTION!
Slide trays may be hot.

LIFTING THE SLIDE TRAY OFF THE REAR HOOKS

REMOVING A SLIDE TRAY FROM THE SLIDE DRYING MODULE

WARNING!
Allow slide trays in the slide drying module and in the slide curing module to cool before removing them by hand. Do this by powering off the system and then waiting 10 minutes.

WARNING LABELS ON SLIDE DRYING MODULE DOOR

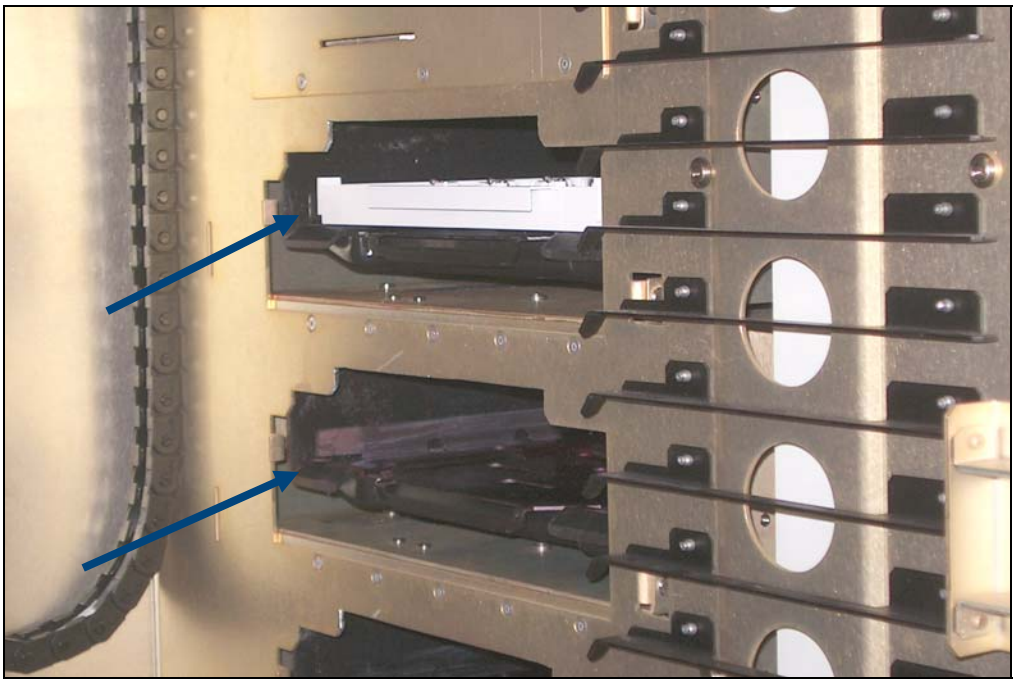
After the slide tray in the Slide Drying Module has cooled, open the Slide Drying Module door and pull out the tray.

TRAY IN SLIDE DRYING MODULE

REMOVING A SLIDE TRAY FROM THE STAINING MODULE

Before removing the tray, lift the black lift pan to lift the left side of the tray for 30 seconds to allow any fluid in it to drain.

TRAY IN STAINING MODULE



REMOVING DRAINED TRAY FROM STAINING MODULE

REMOVING SLIDE TRAY FROM SLIDE PREP MODULE AND SLIDE CURING MODULE

WARNING!

Allow the Slide Tray in the Slide Prep and Slide Curing Modules to cool before removing it by hand. Do this by powering off the system and then waiting 10 minutes.

After the slide tray in the Slide Curing Module has cooled, pull out the tray.

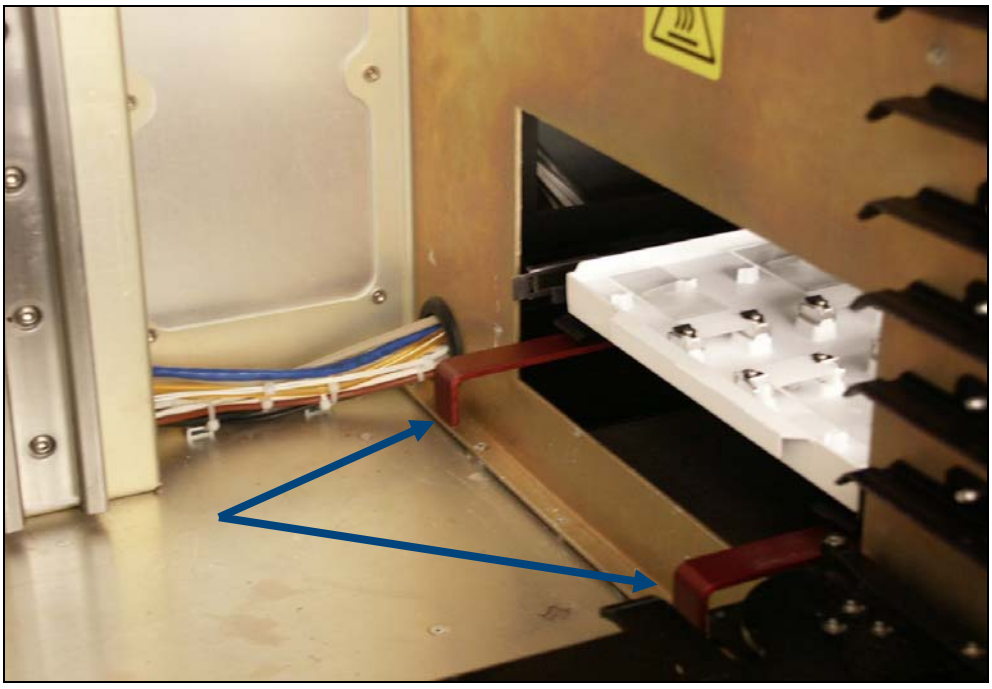
TRAY IN SLIDE CURING MODULE

REMOVING A SLIDE TRAY FROM THE COVERSLIPPER

Pull the red brackets out before removing the tray.

TRAY IN COVERSLIPPER

BRACKETS PULLED OUT BEFORE REMOVING TRAY



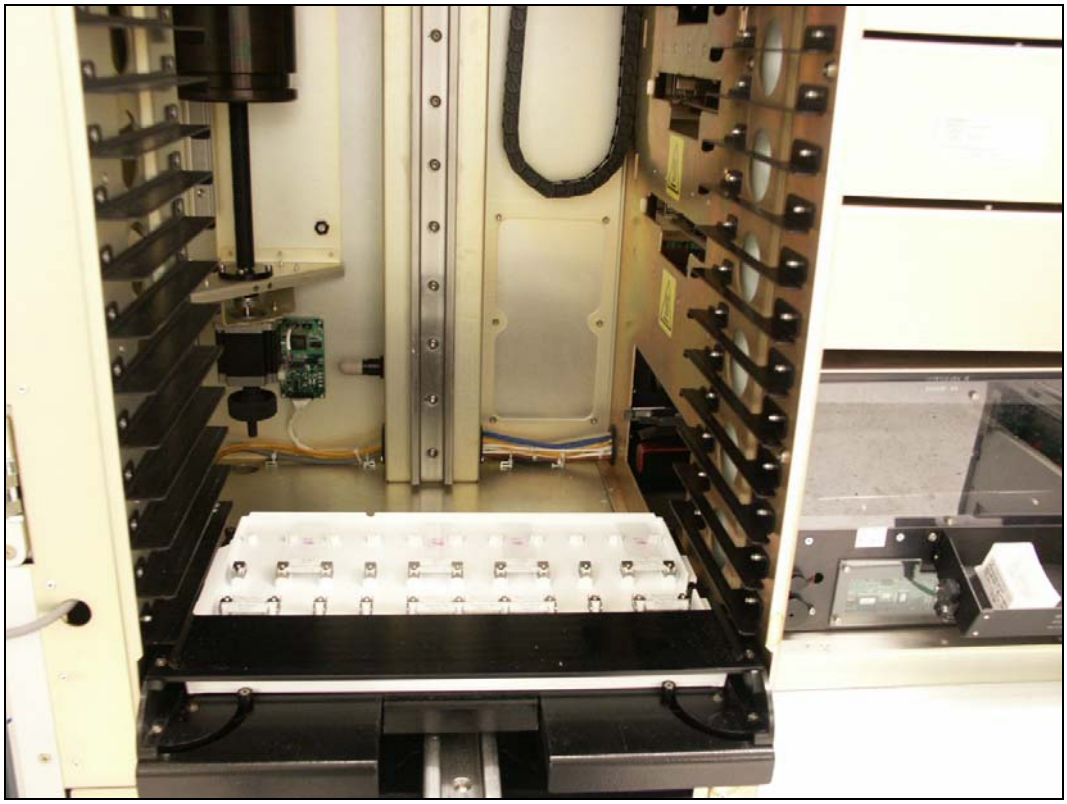
Important!

Return the red brackets to their original position after removing the tray.

REMOVING A SLIDE TRAY FROM THE PORTAL

Pull the straight out from the Portal.

TRAY IN PORTAL



Note:
In the event a complete re-installation is necessary contact Ventana Medical Systems.

TROUBLESHOOTING

ERROR MESSAGES GENERATED DURING SYSTEM OPERATION

The following tables provide a comprehensive list of error messages that might display on the SYMPHONY Touchscreen. Error messages indicate a problem with the hardware or software.

Wherever possible, solutions are suggested that should be tried first. Check the tables below for corrective actions that can be taken to resolve the issue. If this fails, call the Ventana Technical Consultation Center (TCC). Before calling Ventana TCC, please record the error number of the message that was generated.

Note:
Normal operational messages are not included in this listing, since they are self-explanatory and do not require attention.

System Issues Without a System Error Message

Symptom	Description	Action
Tray Loading		
Tray loaded with wrong protocol.	The tray was inadvertently loaded with the wrong protocol.	Cancel and unload the tray. Reload the tray with the correct protocol.
Staining		
Hematoxylin staining too light or too dark.	The tissue thickness or fixation may require a different protocol.	Create additional protocols using the alternative hematoxylin options: standard, darker or darkest.
Hematoxylin staining too light.	Hematoxylin may have been placed on the system cold instead of reaching room temperature.	Ensure hematoxylin Bag-in-Box containers are allowed to warm to room temperature prior to loading reagent on the system.
Eosin staining too light or too dark.	The tissue thickness or fixation may require a different protocol.	Create additional protocols using the alternative eosin options: standard, lighter or lightest.
Non-staining event.	The slide may have been placed in the tray upside down.	Verify tissue is on top of the slide. If problem persists call TCC

System Issues Without a System Error Message		
Symptom	**Description**	**Action**
Inappropriate staining.	A system failure may have caused the slides to not stain appropriately for an H&E stain, e.g., pink blotchy staining with little hematoxylin staining.	Call TCC.
Tissue lifting or loss.	The tissue may be sensitive to the system processing. The Optimized protocol setting for tissue drying is standard.	Create or modify the protocol with the extended slide drying option to improve tissue adherence.
Reagents		
The Clear bottle is difficult to open; the cap is very tight.	The cap is a tight fit to prevent leakage during shipping.	Use the tool provided in the Accessory kit to open the Clear bottle.
When removing the empty SYMPHONY Clear reagent the straw remains in the white collar on the system.	The straw can occasionally remain seated in the system.	Wearing nitrile gloves pull down on the straw with your fingers. Discard the empty bottle and straw.
Bag-in-box containers have large amounts of fluid after the system transfers to the other container.	The system could not detect fluid being transferred from the Bag-in-Box container and marked the container as empty in the software and on the Smart Track tag.	Call TCC for replacement Smart Track tags.
Slide and Trays		
Clips on the trays are skewed making loading the slides awkward.	The clips can twist on the posts.	Twist the metal clips to better accommodate slide loading, or call TCC.
Slides are too wide to fit in the Universal Slide Tray.	The tray is designed to accommodate 1" x 3" slides. Some slide types such as *Mercedes StarFrost* and *Thermo Shandon SuperFrost* may be too wide and/or too long to fit properly due to different tolerances.	Switch to charged or uncharged slides of the appropriate size (*Superfrost* or *Superfrost Plus* from Erie).
Universal Slide Tray jams in Portal or in System.	Universal Slide Tray hook(s) may have been damaged by being dropped or hit.	Inspect Universal Slide Tray. Remove from service if damaged. Note: Coating will not flake even if metal has been bent.

System Issues Without a System Error Message		
Symptom	**Description**	**Action**
OPTISURE Coverslipper		
Trays stop processing and part of the coverslipper on the screen turns red.	The output queue for the OPTISURE Cassettes is full.	Remove empty cassettes from the output queue.
OPTISURE Coverslips are not adhered to the slides.	Coverslips may be upside down in the OPTISURE Cassette.	Confirm by scratching on the top surface. If the coverslip is upside down the glue can be scratched off. Call TCC for a replacement OPTISURE Cassette.
OPTISURE Coverslips are misaligned on the slide or multiple OPTISURE CoverSlips were applied.	OPTISURE Coverslips may be sticking together in the OPTISURE Cassette due to high humidity or other conditions.	Open the OPTISURE Cassettes immediately before use. Recover any affected slides, if needed, by using the **Removing Coverslip** procedure.
OPTISURE Cassettes on the output queue still have significant quantities of OPTISURE Coverslips left.	Glass shards may have prevented full utilization of all the OPTISURE Coverslips.	Hold the coverslips in place and turn the OPTISURE cassette over to discard any glass shards or other debris. Feed the OPTISURE Cassette through the OPTISURE Coverslipper again (the inventory will still be accurate).
OPTISURE Cassettes on the output queue are still full of OPTISURE Coverslips.	The Smart Track tag may be defective or on the wrong side of the OPTISURE Cassette.	Call TCC for a replacement Smart Track tag.
Computer and Touchscreen Interface		
Touchscreen is hard to use.	Selecting items on the Touchscreen Interface can be difficult for individuals with long fingernails or larger fingers.	Use the stylus included in the accessory kit for selecting items on the Touchscreen.
Touchscreen is gray or black when the system is powered up.	The Touchscreen Interface may have failed.	Power cycle the system and call TCC if the problem persists.

System Issues With a System Error Message (System stops operating and displays an error message)			
Symptom	**Error Msg #**	**Description**	**Action**
Motor Error	501	A motor in the system could not move or did not move as far as expected. The affected module will be red on the skeleton view.	Let the system finish processing any trays that are not affected by the error. Use the **Removing Trays from Modules** procedure to recover any trays that could not finish processing. Trays that have not yet had fluid dispensed in the Staining Module may be reloaded and run. Trays that have completed the Staining process (i.e., stained and covered with SYMPHONY Clear) may be coverslipped using the Coverslip (Recovery) protocol listed in the drop down list on the **Run Start** Screen. Trays that stopped processing in the middle of the Staining process will need to be recovered using the lab's manual processes. Trays that have processed beyond the Staining process may be manually coverslipped or may be coverslipped using the Coverslip (Recovery) protocol. Let trays cool before handling. Call TCC.
Motor Home Seek Error	504	A motor in the system could not home as expected. The affected module will be red on the skeleton view.	If the Staining Module produced the error, check the slide positioning in the tray. Slides that are not completely seated in the spring and posts can obstruct the splash guards inside the Staining Module. If problem persists call TCC.
Motor Home Failure Error	505	See Error 504.	See Error 504.
Motor Move Failure Error	506	See Error 501.	See Error 501.

System Issues With a System Error Message (System stops operating and displays an error message)			
Symptom	**Error Msg #**	**Description**	**Action**
Homing Failure Error	507	The motor controlling the elevator could not home as expected.	Let the system finish processing any trays that are not affected by the error. Check for any obstructions in the elevator. Use the *Removing Trays from Modules* procedure to recover any trays that could not finish processing. Trays that have not yet had fluid dispensed in the Staining Module may be reloaded and run Trays that have completed the Staining process (i.e. stained and covered with SYMPHONY Clear) may be coverslipped using the Coverslip and Cure (Recovery Only) protocol listed in the drop down list on the **Run Start** Screen. Trays that stopped processing in the middle of the Staining process will need to be recovered using the lab's manual processes. Trays that have processed beyond the Staining process may be manually coverslipped or may be coverslipped using the Coverslip and Cure (Recovery Only) protocol. Let trays cool before handling. Call TCC.
Tray Missing	601	The system has lost track of a tray.	Check for the presence of the magnet in the tray and if absent use another tray. Call TCC.
No Slides in Tray	604	A tray was loaded with no slides. The system will place the tray in the IntelliQue.	Unload the tray. If slides are present call TCC.
Tray In Elevator Shaft	605	See Error 601.	See Error 601.
User Aborted Tray	606	The user cancelled a tray in process.	Unload the tray.
IntelliQue Door is Open	612	The IntelliQue door was opened while the system was running.	Use the procedure described for Error 501 to remove any trays and process slides that could not be completed. If problem persists call TCC.

POWER FAILURE

In the event of a power failure, SYMPHONY will stop processing slides. The slide trays can be safely removed by following the procedure in the section *Removing Trays from Modules* for processing by hand, or for later sending the trays to the processing stations where they have not yet been processed.

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