

# 6

## **Administer Mode**

Administer Mode provides an additional safety check by scanning the SLS syringe label barcode as shown below prior to administering a drug to:

- Confirm the drug indicated on the syringe label with an audible announcement and a visual display of the drug name and concentration on the main screen.
- Determine whether the drug in the syringe has passed its expiration date.

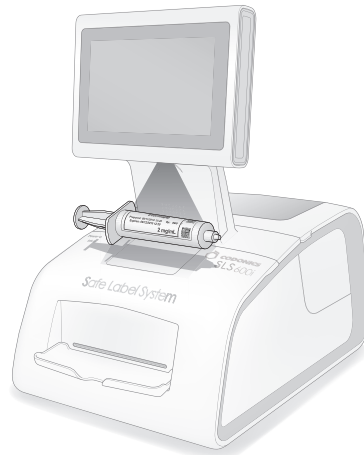


**NOTE:** Administer Mode requires a feature key on SLS PCS. Contact your Codonics Sales Representative to obtain the proper key. Administer Mode also requires configuration of the supported primary barcode definition.



To scan the syringe barcode

Align the syringe barcode with the barcode scanner located below the touch screen.



### Scanning a barcode on a syringe



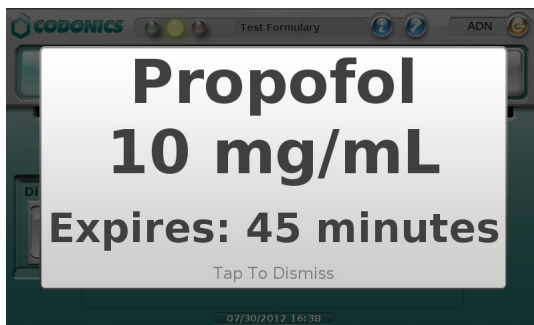
**NOTE:** Place the syringe below the scanner so that the red cross-hair lines up on the barcode. Placing the syringe closer to the cover, almost resting it on the cover, instead of placing it closer to the scanner, will also provide better results.

The drug information or other status from the scan is displayed and spoken.

The following topics describe the possible responses from SLS PCS. Messages that do not have a button on them will close after a few seconds. You can also press this type of message to dismiss it.

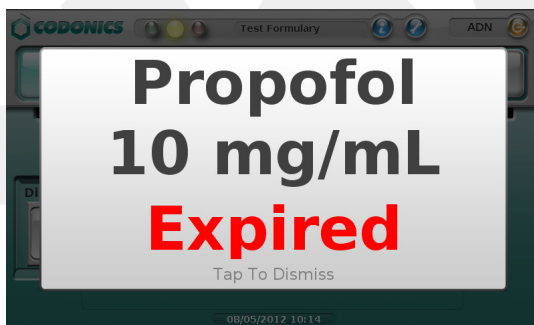
**Drug Is Found in the Formulary, Has Not Expired**

If the drug is found in the SLS formulary and it has not expired, SLS PCS announces the drug name and concentration. Both are also displayed with the amount of time remaining before the drug will expire.



**Drug Is Found in the Formulary, Has Expired**

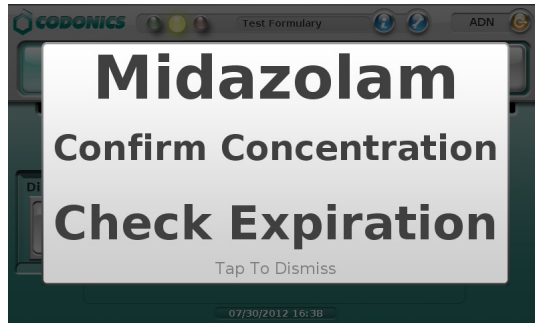
If the drug is found in the SLS formulary but its expiration date has passed, SLS PCS announces that the drug is expired and then announces the drug name and concentration. This information is also displayed.



**Drug Is Found in the Formulary, Requires Concentration Confirmation**

If the drug is found in the SLS formulary but requires that the concentration must be confirmed, SLS PCS announces the drug name and that the concentration has to be confirmed. This information is also displayed.

If a unique concentration (e.g., Other) is used for the drug or an audio file for the concentration is not available, SLS PCS announces “Confirm Concentration” only.

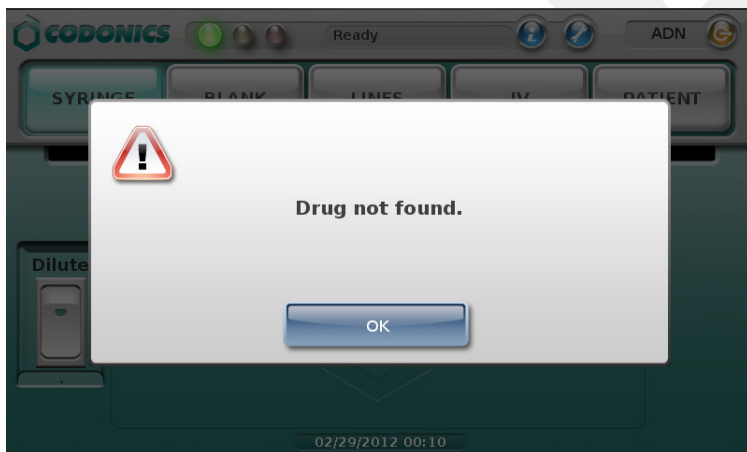


### **Drug Is Not Found in the Formulary**

If the drug is not found in the SLS formulary, a Drug Not Found message is displayed.



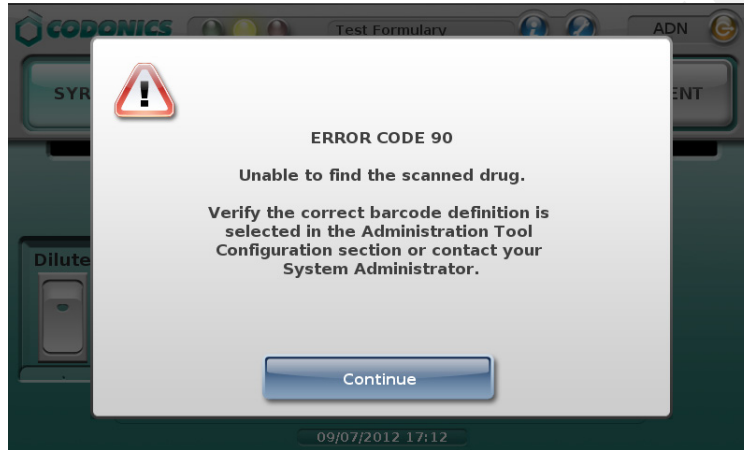
**CAUTION** Not finding the drug in the formulary is a serious issue. It means that the formulary is different than the one that was used to create the syringe label. Contact an SLS system administrator immediately to review the logs and correct the formulary.



Press **OK** to dismiss the message.

### **Unknown Error Occurs**

If an unknown error occurs during Administer Mode, an error message displays.



Press **Continue** to dismiss the message. Contact your SLS system administrator about the error.

# 7

## **Label Sizes and Template Packs**

### **Label Sizes**

The following label sizes are available:

<b>Label Size</b>	<b>Size</b>	<b>Catalog Number</b>	<b>Supported Label Template Packs</b>	<b>Typical Usage</b>
Small	48 x 17 mm	1SCB-SLX33-4	STD-S1, JP-S1, ME-S1, ZH-S1	5-ml syringes or smaller
Standard	60 x 22 mm	1SCA-SLX33-4	STD-1, STD-2, STD-3, JP-1, ME-1, ZH-1	5-ml syringes or larger

### **Label Template Packs**

Several label template packs are available. The templates determine the content and layout of the printed labels. Each template pack is designed to support specific use cases.

The label template packs and their typical usage is described in the following topics. For detailed template pack information, refer to “Label Template Properties” on page 7-6.

Label template usage is configured in the SLS Administration Tool. For instructions, refer to the *SLS Administration Tool User Manual Addendum* (905-081-001).

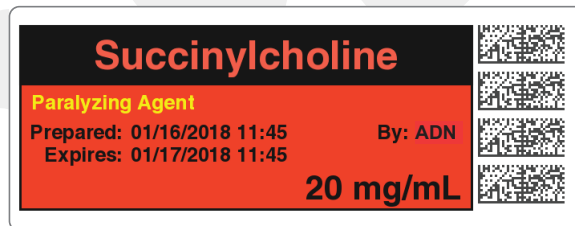
## **STD-1**

This pack includes traditional anesthesia templates for SLS standard-size labels. They provide all of the domestically-required labeling elements. The labels also comply with The Joint Commission NPSG.03.04.01 and meet the intent of ISO 26825, ASTM 4774 Standards, and ASA Guidelines.

Labels based on these templates can include a Dilution message when a drug is diluted or reconstituted. They can also be configured to print an Expiration Date or a Beyond Use Date (i.e., BUD).



**STD-1 Template 1**



**STD-1 Template 3**



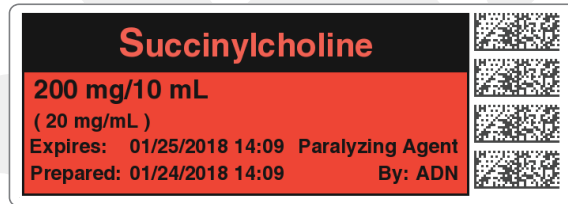
## STD-2

This pack includes templates for SLS standard-size labels. In addition to the operating room, these templates can be used in other syringe preparation locations in the hospital. They provide all of the domestically-required labeling elements. The labels also comply with The Joint Commission NPSG.03.04.01 and meet the intent of ISO 26825, ASTM 4774 Standards, and ASA Guidelines..

Labels based on these templates include all of the TJC elements in the STD-1 templates. In addition, they can include dose and volume, an area for writing in the patient name or including a 1-D barcode that includes the NDC, or a write-in area for a second preparer's initials.



*STD-2 Template 1*



*STD-2 Template 3*

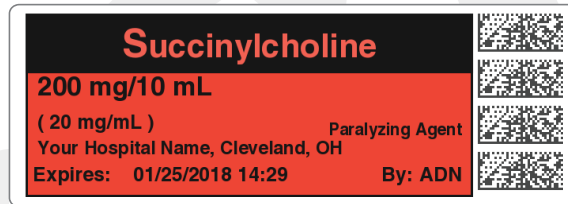
### STD-3

This pack includes templates for SLS standard-size labels. In addition to the operating room, these templates can be used in other syringe preparation locations in the hospital. They provide all of the domestically required labeling elements. The labels also comply with The Joint Commission NPSG.03.04.01 and meet the intent of ISO 26825, ASTM 4774 Standards, and ASA Guidelines..

Labels based on these templates include all TJC elements in the STD-2 templates. In addition, they can include a free-form text field for information such as the facility name.

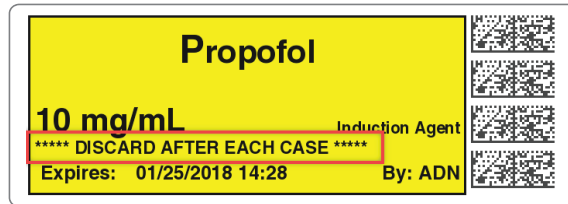


*STD-3 Template 1*



*STD-3 Template 3*

STD-3 labels can include Miscellaneous Field information. The information is entered in the formulary using the SLS Administration Tool and deployed to SLS PCS via a formulary package.



## Label Template Properties

As identified in the following table, the templates have been designed for specific applications and uses. While they can be used for applications other than those for which they were designed, they might not be optimal for use in all applications. For example:

- Sites that want to include the total dose and total volume must use STD-2 or STD-3.
- Sites using Omnicell integration that require unique identification of the label preparer can use STD-1, STD-2, and EHR-1. Omnicell users who used label template ID-1 prior to version 2.4.0 can continue to use that template, as it will migrate and work with version 2.4.0.

**Table 7-1. Label Template Properties**

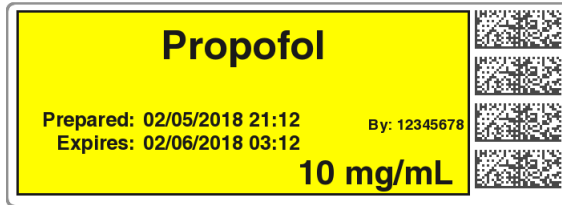
	STD-1	STD-2	STD-3
<b>Target Applications</b>			
Anesthesia	Yes	---	---
Anesthesia w/Omnicell AWS	---	---	---
Pharmacy	---	Yes	Yes
Nursing	---	Yes	Yes
BCMA (Bar Coded Medication Administration)	---	Yes	Yes
<b>Label Info</b>			
Size	Standard 60 x 22 mm	Standard 60 x 22 mm	Standard 60 x 22 mm
Labels/Roll	1,000	1,000	1,000
<b>Included Fields</b>			
Drug Name/Point Size	Yes/12 pt	Yes/12 pt	Yes/12 pt

**Table 7-1. Label Template Properties (Continued)**

	<b>STD-1</b>	<b>STD-2</b>	<b>STD-3</b>
Tallman Lettering/Point Size	Yes/12 pt	Yes/12 pt	Yes/12 pt
Concentration/Point Size	Yes/10 pt	Yes/10 pt	Yes/10 pt
Diluent	Yes	Yes	Yes
Total Dose/Total Volume	---	Yes	Yes
Message/Warning (e.g., Preservative Free)	Yes	Yes	Yes
Miscellaneous (free text; e.g., site name or instructions)	---	---	Yes
User Initials	Yes	Yes	Yes
User ID	---	---	---
Preparation Date and Time	Yes	Yes <i>or</i> 1D Barcode <i>or</i> Write-In box	Yes <i>or</i> 1D Barcode <i>or</i> Write-In box
Expiration Date and Time, or Beyond Use Date (BUD)	Yes	Yes	Yes
2D Barcode	Yes	Yes	Yes
Number of 2D Barcodes	4	4	4
1D Barcode	---	Yes <i>or</i> Prep. Date/Time <i>or</i> Write-In box	Yes <i>or</i> Prep. Date/Time <i>or</i> Write-In box
Dilution Message	Yes	---	---
<b>Optional Feature Supported</b>			
Batch/Copy Mode Printing	Yes	Yes	Yes
Administer Mode	Yes	Yes	Yes
Advanced Smart Scanning (SASS)	Yes	Yes	Yes

## **User Initials and User IDs in STD-1, STD-2, and EHR-1 Template Labels**

By default, labels in the STD-1, STD-2, and EHR-1 template packs include user initials. However, these labels can be configured to include user IDs instead. Examples of these labels with user IDs are shown below.



*STD-1 label with user ID*



*STD-2 label with user ID*

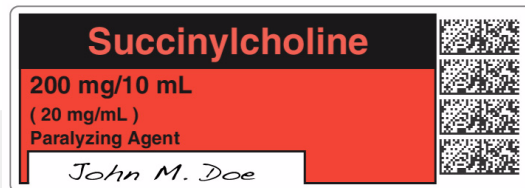


*EHR-1 label with user ID*

## **Additional Label Template Packs**

### **Label Templates That Support Over-Labeling (RBX-1)**

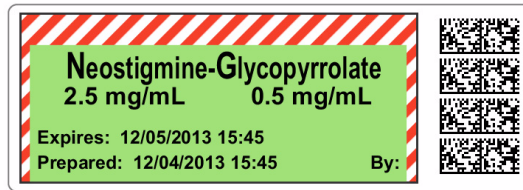
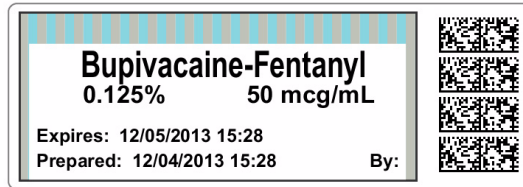
These label templates allow over-labeling in specific applications [e.g., Intelligent Hospital System (IHS) RIVA robot, Baxter, Health Robotics]. The label is only supported in English.



**WARNING** For RBX-1 labels, users should not rely on the expiration date embedded in SLS PCS label 2D barcode. The expiration date/time on the original label already affixed to the syringe should be used. This is because the time that the SLS label was prepared will be different than when the syringe was actually filled/prepared. Users should either leave the expiration time blank or the time should be set it to 0 for this label in the SLS Administration Tool.

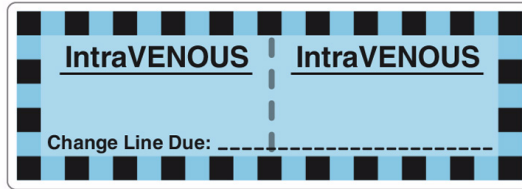
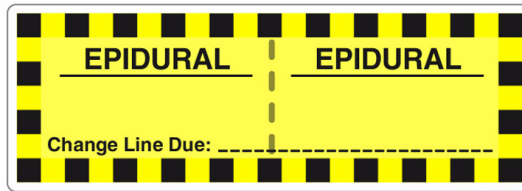
## **Middle East and Australia Combination Drug Label Template Packs (ME-S1, ME-1)**

These combination drug label template packs for the Middle East and Australia are based on the STD-2 template pack. They are available in small (ME-S1) and standard (ME-1) sizes. These templates also support a Local Anesthetic with Narcotic combination drug and a Relaxant Antagonist with Anticholinergic Agent combination drug.



*Middle East template examples*





*Australian Line Label template examples that are included in the ME-1 template pack*

### **China Label Template Packs (ZH-S1, ZH-1)**

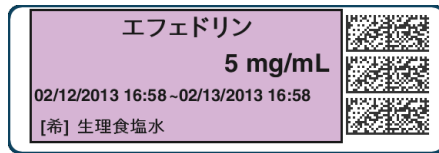
These label template packs for China are available in small (ZH-S1) and standard (ZH-1) label sizes.



## Japan Label Template Packs (JP-S1, JP-1)

These label template packs for Japan are available in small (JP-S1) and standard (JP-1) label sizes.

These templates can include a Use Date range, without the year (e.g., 12/18 13:42 ~ 12/19 13:42).



## **EHR Template Pack (EHR-1, EHR-2)**

This label template pack is available for integration between SLS PCS-produced syringes and EHR systems. When scanned, the label's barcode provides the 10-digit NDC to an EHR system (e.g., Epic Anesthesia).



## **EBD Template Pack (EBD-3)**

This label template pack is available for integration between SLS PCS-produced syringes and EHR systems and WasteLog Drug Diversion devices. When scanned, the label's barcode provides the 10-digit NDC to an EHR system or a WasteLog Drug Diversion device (e.g., Epic Anesthesia).





# 8

## **Third-Party Product Integration**

This chapter describes features that support third-party production integration with SLS PCS.

### **SLS Wired Hand Scanner**

SLS PCS supports using a Codonics-approved barcode scanner as a wired hand scanner for scanning labels on containers that are large or not easily scanned (for example, IV bags) by the built-in scanner.



**NOTE:** *Wired hand barcode scanner support requires a feature key on SLS PCS. Contact your Codonics Sales Representative to obtain the proper key.*

When using the wired hand scanner with SLS PCS, the scanner must be in SNAPI mode (SNAPI is the scanner's communication interface). By default, the scanner is shipped in SNAPI mode.

Note that following about the wired hand scanner:

- Support for the wired hand scanner on SLS PCS must be configured from the SLS Administration Tool.
- The use of the wired hand scanner requires a feature key on SLS PCS. Contact your Codonics Sales Representative to obtain the proper key.
- It is recommended that you purchase the DS4308-HC scanner from Codonics.

### **Connecting the Wired Hand Scanner to SLS PCS**



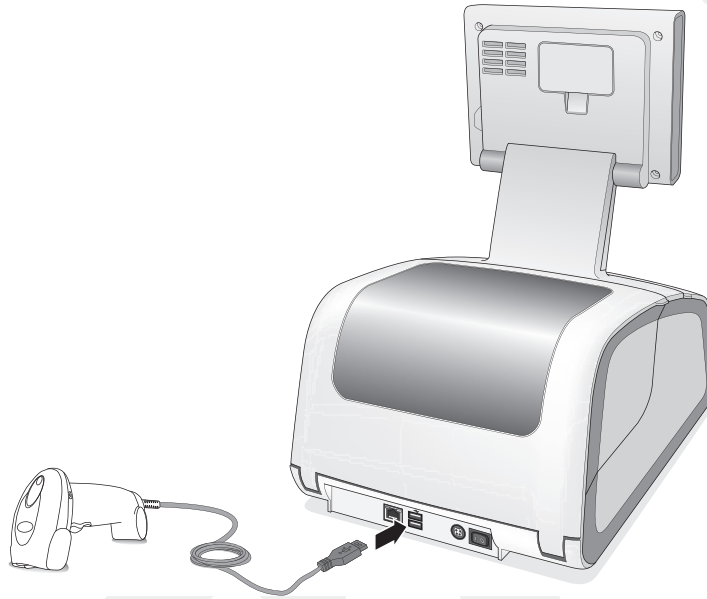
**WARNING** The use of the wired hand scanner with SLS PCS can create a tipping hazard. Secure SLS PCS using the VESA mount points on the bottom of SLS PCS.

Included with the Codonics-approved barcode scanner is a wired hand scanner USB cable. This cable includes an RJ-45 connector that connects to the scanner and a standard USB connector that connects to a USB port at the rear panel.

To connect the wired hand scanner to SLS PCS:

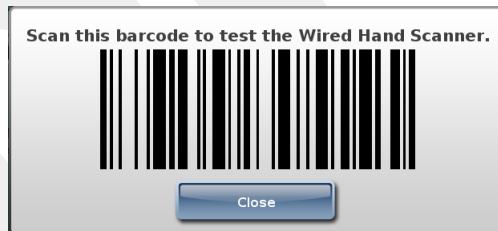
1. Make sure that SLS PCS is powered off.
2. Clean and disinfect the wired hand scanner. Refer to “Cleaning and Disinfecting the Wired Hand Scanner” on page 8-4.
3. Push the RJ-45 connector of the wired hand scanner USB cable into the wired hand scanner RJ-45 port until you hear it click.
4. Gently pull the wired hand scanner USB cable to make sure that the RJ-45 connector is securely connected.

5. Insert the USB connector of the wired hand scanner USB cable into one of the USB ports at the rear panel, as shown in the following figure.



### **Testing the Wired Hand Scanner Communication with SLS PCS**

After connecting the wired hand scanner and starting SLS PCS, the following prompt displays:



Scan the barcode displayed in the prompt.

This will confirm that the wired hand scanner is communicating with SLS PCS.

### **Configuring the Codonics-Approved Scanner for SLS PCS**

By default, the Codonics-approved scanner is configured to work with SLS PCS. If you ever need to reconfigure the scanner to work with SLS PCS, please contact Codonics Technical Support (+1 440.243.1198).

### **Cleaning and Disinfecting the Wired Hand Scanner**

Following are the cleaning and disinfecting instructions for the wired hand scanner in environments that require daily or more frequent cleaning to prevent the spread of germs.

To avoid long-term damage to the wired hand scanner, it is recommended that you disinfect it only when necessary as determined by your hospital's policy.



**WARNING** Codonics makes no claims regarding the efficacy of the listed chemicals or methods as a means of controlling infection. Consult your hospital's infection control officer or epidemiologist.



### **Daily Cleaning and Disinfecting Instructions**



**WARNING** Always disconnect the wired hand scanner or power off SLS PCS before cleaning it. An electrical shock could occur if SLS PCS is powered on and liquid is spilled into the wired hand scanner or SLS PCS.

1. Dampen a soft cloth with one of the approved cleaning or disinfecting agents or use pre-moistened wipes.
2. Gently wipe all surfaces, including the front, back, sides, top, and bottom of the wired hand scanner.



**CAUTION** Never apply liquid directly to the wired hand scanner. Be careful not to let liquid pool around the scanner window, trigger, cable connector, or any other area on the wired hand scanner.

3. Clean the trigger and in between the trigger and the housing. Use a cotton-tipped applicator to reach tight or inaccessible areas.
4. Immediately dry the scanner window after cleaning it with a soft non-abrasive cloth to prevent streaking.
5. Allow the wired hand scanner to air dry before using it.



**NOTE:** If the temperature is low and the humidity is high, longer drying time is required. Warm temperatures and low humidity require less drying time.

### **Monthly Deep Cleaning and Disinfecting Instructions**

Maintain the wired hand scanner in good working order with a regular comprehensive cleaning routine to remove the natural build-up of dirt that occurs with everyday use on connectors, scanner window, and housing surfaces.

**Housing surfaces:** Follow the instructions in “Daily Cleaning and Disinfecting Instructions” in the previous page to perform a general cleaning of the housing surfaces.

**Scanner window:** Wipe the scanner window with a lens tissue or other material suitable for cleaning optical material such as eyeglasses.

**RJ-45 port:**

1. Dip the cotton portion of a cotton-tipped applicator in isopropyl alcohol.
2. Rub the cotton portion of the cotton-tipped applicator back-and-forth across the RJ-45 port. Do not leave any cotton residue on the port.
3. Repeat steps 1 and 2 at least three times.
4. Use the cotton-tipped applicator dipped in isopropyl alcohol to remove any grease and dirt near the connector area.
5. Use a dry cotton-tipped applicator (that is, with **no** isopropyl alcohol applied) to dry the RJ-45 port and the connector area.

Allow the wired hand scanner to air dry before using it.



**NOTE:** *If the temperature is low and the humidity is high, longer drying time is required. Warm temperatures and low humidity require less drying time.*

## **Common Login/Common Scan**

SLS PCS supports Common Login/Common Scan so that it can be integrated with the following:

- Omnicell Anesthesia Workstation (AWS).
- Plexus TG Pharmacy Touch™ (Pharmacy management system and Capsa medication distribution cart application).

Common Login/Common Scan support provides the following features:

- Logging in or logging out of the Omnicell AWS or Plexus TG Pharmacy Touch will automatically log in or log out the user from SLS PCS.
- Scanning the barcode of an item removed from the cart using the SLS PCS scanner will cause the information to be sent to the Omnicell or Plexus TG system for inventory control and, at the same time, initiate printing of a syringe label on SLS PCS.



*NOTE: Remote SLS PCS login names can be up to 255 characters.*

SLS PCS can announce a voice alert when Remote Login/Logout fails. This feature can be configured using the Administration Tool (refer to Administration Tool Release Notes, part number 901-245-020).

## **Plexus TG Anesthesia Touch™**

SLS PCS supports integration with Plexus TG Anesthesia Touch.

After a vial has been scanned at SLS PCS and a 2D barcode label generated, users have the following options to document administration in Anesthesia Touch.

- Manually administer the documentation in Anesthesia Touch using the iPad or Windows touchscreen.
- Scan the SLS PCS-generated barcode using the scanner at the Anesthesia Touch Windows station (typically close to the head of the patient, where the monitor is set up).
- Scan the SLS PCS generated barcode using the iPad's camera.
- Scan the initial SLS PCS-generated barcode again at SLS PCS, which triggers the administration pop-up box in Anesthesia Touch, as well as send concentration, drug class, auditory notifications, and so on.

Scanning the syringe label barcode on SLS PCS using Administer Mode will pass the syringe label information to the Plexus TG Anesthesia Touch.

## **B.Braun Space Pump**

SLS PCS supports integration with the B.Braun Space Pump. B.Braun-compatible barcodes can be included on printed SLS syringe labels and then used to transfer data (i.e., drug name, concentration value, and concentration units) to a B.Braun Space Pump.



**NOTE:** *B.Braun Space Pump support requires a feature key on SLS PCS. Contact your Codonics Sales Representative to obtain the proper key.*



**NOTE:** *The Space Pump requires revision "J" or higher software in order to be compatible with SLS labels.*

## Printing Patient Information on Labels

Using custom label templates, SLS PCS can receive patient information (e.g., Patient Name, Patient ID, Order ID, Patient Date of Birth, Patient Weight) from approved third-party equipment and print that information on labels.





**WARNING** To ensure that the correct drug is administered to the correct patient, the patient's wristband should be scanned. Do not scan the 1-D Patient ID barcode on the patient information syringe label when prompted to scan the actual patient wristband.

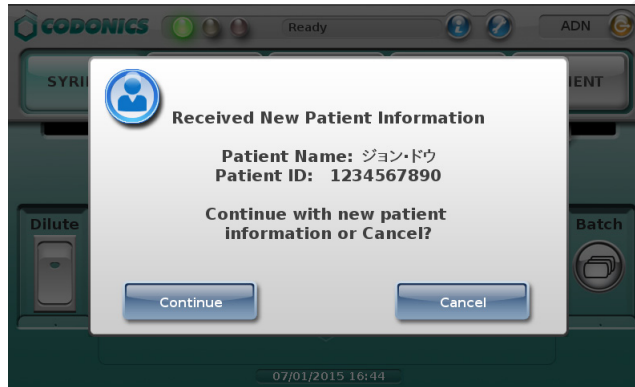


**NOTE:** Patient Information support requires a feature key. Contact your Codonics Sales Representative to obtain the proper key.

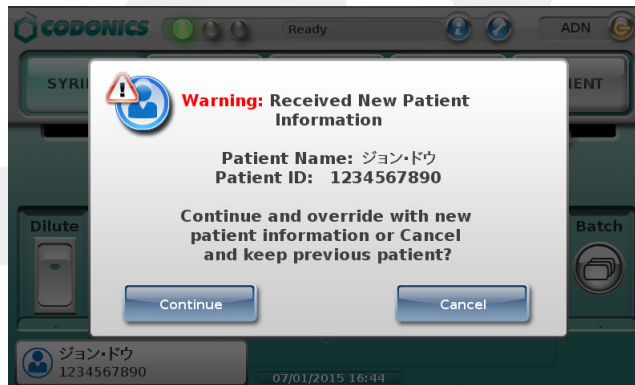
The Patient Information feature is configured in the SLS Administration Tool. For details on how to configure this feature, refer to SLS Administration Tool Technical Brief (901-245-015).

## Starting a New Patient Case

When SLS PCS receives notification from third-party equipment that a patient case has been started, a message indicating that a new case has started is displayed.

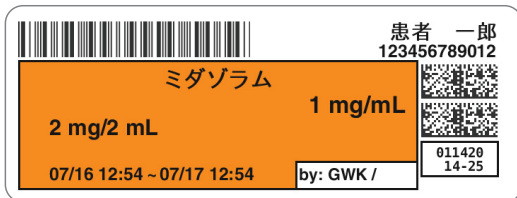


When starting a patient case while another case is already in progress, a warning message is displayed to indicate this.



## Labels That Support Patient Information

Labels using the Japan template pack JP-2 can include patient information. This standard label template conforms to the JSA standard and provides support for including patient information on them. Included on these labels is Patient Name, Patient ID, and a 1-D barcode that includes the Patient ID.



*JP-2 syringe label example*



*JP-2 Patient label example*

Note the following about these labels:

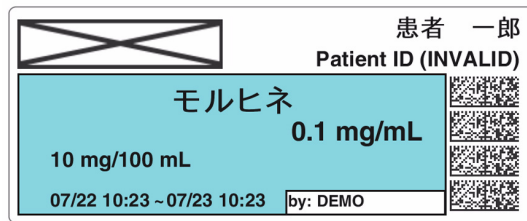
- Patient Name can be up to 20 ASCII Characters (12 Kanji characters).
- Patient ID can be up to 12 numeric characters.



- Patient ID can be received as numeric and/or alpha characters. The set of numbers supported is 0-9 and the characters supported are dot (.), slash (/), colon (:), plus (+), and dash (-). For example, the Patient ID 00231-12345 will be displayed as well as encoded in the barcode. Optionally, the dash can be removed from the barcode. Contact Codonics for support removing the dash from the barcode.

### **How Invalid Patient Information Is Handled**

If the patient information from a third-party system does not conform to the specifications (e.g., the Patient ID had more than 12 numeric characters), it will be replaced with an indication on the label that the data for that field is invalid. An example is shown below.





# 9

## Maintenance

### Ordering Supplies and Parts

The following table lists the label and print supplies that can be ordered from Codonics:

Supplies	Catalog Number
Type 1 ink cartridgea	1SCT-LR833-4
Type 2 ink cartridge*	1SC2-LR233-4
Label media, small	1SCB-SLX33-4
Label media, standard	1SCA-SLX33-4
Wi-Fi adapter (optional)	SLS500-WIFI

a Contact Codonics if you have questions about which ink type to order.

The following table lists the replacement parts that can be ordered from Codonics:

Part	Catalog Number
Safe Label System external power supply	SLS-PS
Power cord, North America, Medical Grade	SP-00800
Power cord, Europe, Medical Grade	SP-00418

To order parts in the USA, contact Codonics Customer Service at:

**Phone:** +1 440.243.1198  
**Fax:** +1 440.243.1334  
**Toll Free:** 800.444.1198 (USA only)  
**Web:** www.codonics.com

To order parts outside of the USA, contact your Codonics Customer Support Representative.

## **Cleaning the Enclosure**



**WARNING** Always power off the system before cleaning. An electrical shock could occur if the system is powered on and liquid is spilled into it. Refer to “Powering Off the System” on page 3-45.

- To clean the system’s enclosure, use a clean, lint-free cloth moistened with either warm water and mild soap, a diluted non-caustic detergent, or one of the following approved cleaning agents:
  - Ammonia: Dilution of Ammonia <3%
  - Alcohol: Ethanol 70%, Isopropanol 70%.
- Over time, ink overspray might gather at the base of the device. The device uses a vacuum system to gather most of this ink on a series of saturation pads. Eventually, these pads might need to be replaced. Contact Codonics Technical Support to determine if pad replacement is necessary.
- If ink has gotten onto the system’s enclosure, it can be cleaned with an ammonia-based window cleaner and a lint-free cloth.

- If scanning barcodes is inconsistent or the device is having difficulty scanning, clean the scanner's glass window.

## **Cleaning Precautions**

To avoid damage to the device, observe the following general precautions for cleaning the device:

- Apply the cleaner to a clean, lint-free cloth first and then clean the device. Liquid applied directly to the device could possibly leak inside the device and cause damage. Use extra caution when cleaning around the vents on the back of the touch screen and rear panel.
- Allow the device to completely dry before operating it again.
- Many plastic components are used in SLS PCS construction. Coat flecking and deformation is likely to occur if the device is wiped with chemical dusters, benzene, thinners, insecticides, or other solvents. Rubber and PVC materials left in contact with SLS PCS for extended periods of time will cause damage. Never use petroleum-based solutions or abrasive cleansers.
- Never use abrasive material.
- Always dilute cleaning agents according to the manufacturer's instructions, or use the lowest possible concentration.
- Do not allow the cleaning agent to remain on the device surfaces. Wipe it off immediately with a lint-free cloth moistened with water.

## Disinfecting the Enclosure

It is recommended that you disinfect the product only when necessary as determined by your hospital's policy, to avoid long-term damage to the product.

The device must be cleaned first, as described in "Cleaning the Enclosure" on page 9-2, before using a general disinfecting agent.

Recommended disinfecting agents include:

- 1 part household bleach and 5 parts water solution
- A-456-N
- Virex II 256
- PDI Super Sani-Cloth<sup>®</sup>



**WARNING** Codonics makes no claims regarding the efficacy of the listed chemicals or methods as a means of controlling infection. Consult your hospital's infection control officer or epidemiologist.

### Disinfecting Precautions

To avoid damage to the device, observe the following general precautions for disinfecting the device:

- Do not use Povodine, Sagrotan, or Mucocit disinfecting agents or strong solvents (for example, acetone).
- Do not use any disinfecting agents that corrode or damage polycarbonate.

## Installing Update Packages

SLS formulary and configuration packages, SLS system software, and user packages can be installed remotely from the SLS Administration Tool, if the PC on which the SLS Administration Tool is running and SLS PCS are connected to the same network. They can also be installed manually at SLS PCS.

A formulary update package includes the formulary database, which contains drug records and associated content such as drug-specific label templates, sound files, watermark images, and localization files. A configuration package includes the configuration settings for SLS PCS.

Formulary, configuration, user, and system software updates can also be configured into one multiple update package.



**CAUTION** Installing system software should only be performed as directed by Codonics Technical Support. Do not attempt to install system software without the assistance of Codonics Technical Support.

For a multiple update package, all update packages have to be at the same major SLS software version. For example:

- When upgrading from major version 2.2.0 to 2.3.0, create a combined package of 2.3.0 software, formulary, and configuration packages.

- Minor version updates (for example, from version 2.3.0 to 2.3.1) affect only the SLS software and not the formulary or configuration. However, software updates do remove the formulary. So you first have to install the 2.3.1 software update package, then install a 2.3.0 formulary package. Because configuration is not removed during the 2.3.1 software upgrade, a 2.3.0 configuration package does not have to be installed again.

## **Manually Installing an Update Package**



**WARNING** The formulary or configuration should be updated only when SLS PCS is not in use.

An administrator uses the SLS Administration Tool to create these update packages and store them on a USB flash drive for manual installation in an SLS PCS. For more information about creating update packages, refer to the *SLS Administration Tool User's Manual*.



**NOTE:** If the formulary update package contains a formulary in Test/Review mode, the yellow LED on the Dashboard will be on and a system message will indicate that the system is in Test/Review mode. Any syringe label that is printed while in this mode will have a watermark indicating that it is a test label and for demo use only.



**NOTE:** It is strongly recommended that each SLS PCS customer create and set up a process and audit plan to check that the latest, approved versions of the formulary and configuration are correctly deployed on each SLS PCS.





To manually  
install an update  
package

1. Log in to SLS PCS, as described in “Logging In” on page 3-3.
2. Insert the USB flash drive into the USB port on the left side of the touch screen.



***Inserting the USB flash drive into the touch screen USB port***

You are prompted to confirm installation of the packages or software on the USB flash drive.

3. Press the **Yes** button to continue with the installation.

After copying the installation files to internal memory, the system displays a message indicating that the installation process is beginning and that the USB flash drive can be removed.

4. Remove the USB flash drive.

The system displays status of the installation process. During installation, the system is not usable and cannot be interrupted.

When installation is complete, the system restarts automatically.



**CAUTION** The SLS PCS customer is responsible for ensuring that the correct formulary is being installed in SLS PCS.



**CAUTION** Practice standard information technology (IT) precautions to protect data associated with the formulary (for example, securing the content of the USB flash drive on which the formulary update package is stored).

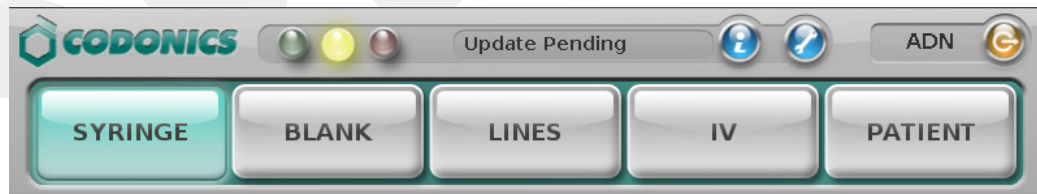


**CAUTION** The SLS PCS customer is responsible for the accuracy of the data in the formulary, including drug data that has been copied from third-party drug databases.

## **Remotely Installing Update Packages**

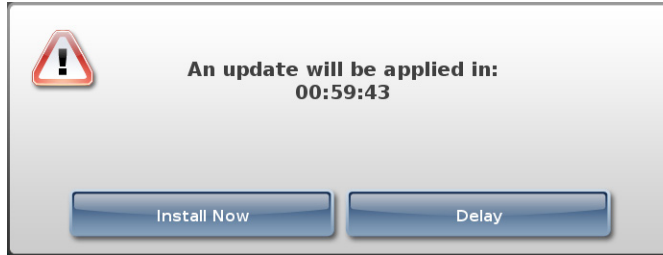
A user who has Read-Write privileges for the SLS Administration Tool Device Manager can remotely initiate the installation of an update package from the SLS Administration Tool at any time. However, the installation will begin only when there is no user logged into SLS PCS.

When an update package has been downloaded to SLS PCS and is ready to be installed, the status message “Update Pending” is displayed in the Dashboard.



*“Update Pending” message in Dashboard*

When the user logs out, the following prompt is displayed. The user has the option of postponing the installation or beginning it immediately.



### **Update package prompt**



**NOTE:** If the user postpones the package installation by pressing the **Delay** button in the package Update prompt, either a user must log in to and then out of SLS PCS or it must be restarted for the Update prompt to be displayed again. Otherwise, the package installation will not occur.

When an update package is being installed, a message indicating that the installation is occurring is displayed.

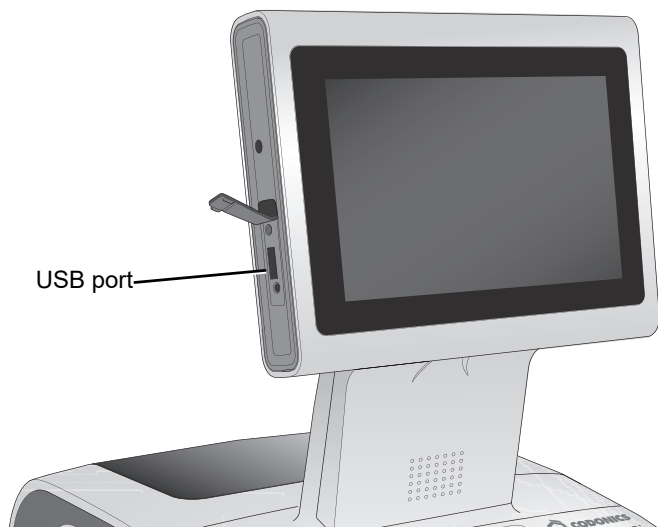
## **Manually Installing SLS System Software**



To manually install system software

1. Shut down and power off SLS PCS.
2. Remove the USB SmartDrive from the USB port inside the touch screen rear panel door.

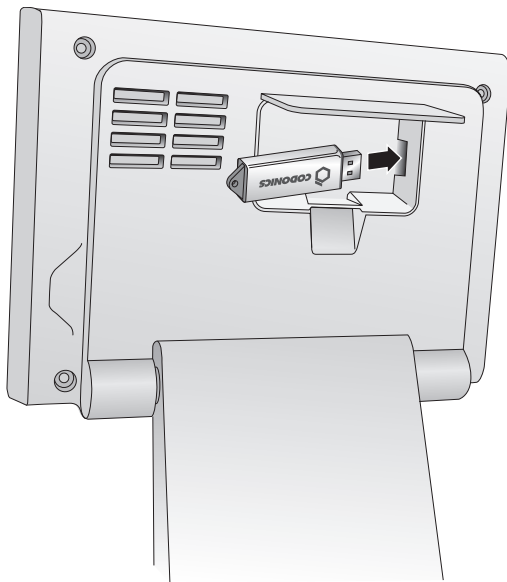
3. Insert the software installation USB flash drive into the USB port at the left side of the touch screen.



***USB port at left side of touch screen***

4. Power on SLS PCS.
5. Wait several minutes for the progress bar to complete and the message to remove the software installation USB drive to display.
6. Leave SLS PCS powered on.
7. Remove the software installation USB flash drive.

8. Re-insert the USB SmartDrive in the back access panel.



***Inserting the SmartDrive into the USB port inside the touch screen rear panel door***

SLS PCS automatically restarts.

9. Wait for SLS PCS to finish installing the software and display the Login screen.

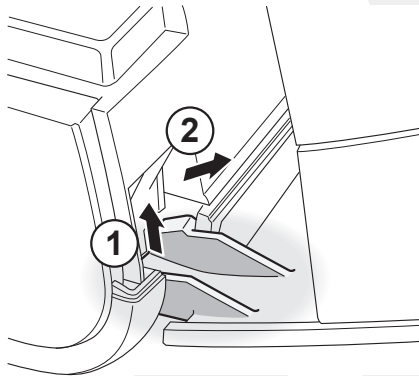
## Removing the Rear Cover

You might need to remove the rear cover for cleaning purposes, to clear a label jam, or to load labels in a restricted space.



To remove the rear cover

1. Partially open the rear cover (do not fully open the cover).
2. Hold the cover on both sides and gently lift it up until the hinges separate.
3. Carefully pull the cover away from SLS PCS.



*Removing the rear cover*



**WARNING** Re-glove in the event of a cut or pinch to prevent using a possible torn glove.

## Swapping Systems

You can move the SmartDrive from one SLS PCS to another to move the system's configuration and formulary database, thus allowing the second SLS PCS to operate exactly like the first. This feature is helpful when swapping SLS PCS for service purposes.

To swap systems, contact Codonics Technical Support so that they can direct you through the required steps.



**NOTE:** When swapping systems, if SLS PCS has a Codonics Wi-Fi adapter, remember to also move the adapter to the new SLS PCS.

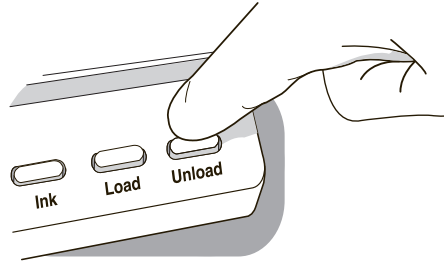
## Preparing the System for Shipping

If you have to ship SLS PCS for any reason (for example, to return it to Codonics for service), you must use the original boxes and packing materials. If you do not have the original box and packing materials, contact your Codonics representative for instructions on how to return SLS PCS.



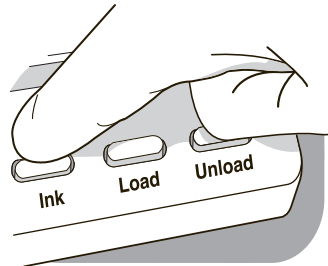
To prepare  
SLS PCS for  
shipping

1. With SLS PCS powered on, open the front cover and press the Unload button to back out the label media so that it can be removed.



**Unload button**

2. Open the rear cover, remove the label media, and close the rear cover.
3. Shut down SLS PCS. Refer to “Shutting Down or Restarting the System” on page 3-43.
4. Press the Ink button.

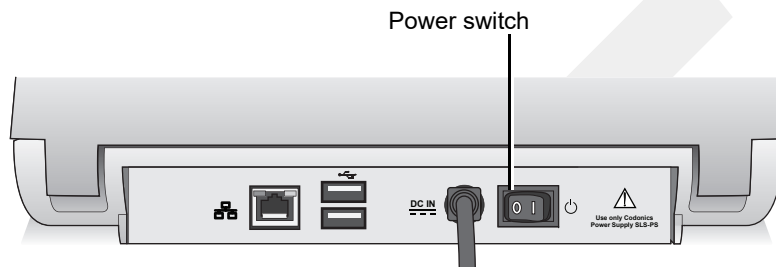


**Ink button**

The ink cartridge carriage moves to a position that allows you access to the ink cartridge.



5. Remove the ink cartridge and close the front cover. For information about how to remove the ink cartridge, refer to “Installing the Ink Cartridge” on page 2-21.
6. Set the Power switch on the rear panel to Off.



*Power switch on the rear panel*



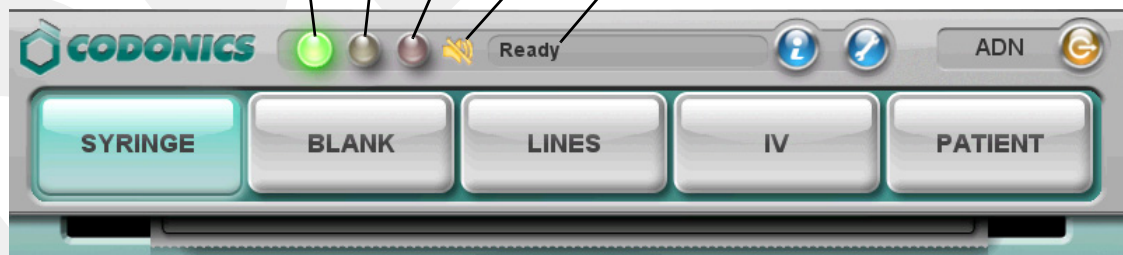
# 10

## Troubleshooting

### Status Indicators

The Dashboard includes three LED-style lights that indicate the overall status of SLS PCS, a Muted icon if the volume has been turned off, and a status message area.

- Alert condition:** The system can still process jobs but requires user attention (for example, low ink).
- Normal:** The system is ready to process or is processing a job (for example, printing).
- Critical or fault condition:** The system might not be able to process jobs. The system requires immediate user attention (for example, out of labels).
- Muted icon:** Displays when the volume is muted.
- Status messages.



## Displaying System Information

You can display information about SLS PCS configuration and its current status.

Press the System Information button.



To display  
system  
information

System Information button



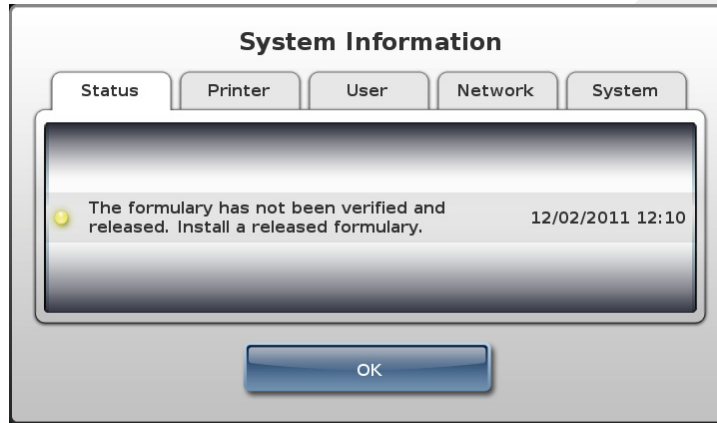
The **System Information** window displays.



Press the **OK** button to dismiss the **System Information** window.

The tabs in the **System Information** window include the information described in the following topics.

### **Status Tab**



- A list of active system status messages:
  - Each line of the list has a descriptive message about the status
  - To the left of each message, there is an LED status indicator that displays the color-coded severity of the system state
  - To the right of each message, the time this status message first appeared is indicated

The LED status indicator severity states are:

- **Green:** Normal operation. No issues.
- **Yellow:** Alert condition. The system can still process jobs but requires user attention (for example, low ink).

- **Red:** Critical or fault condition. The system might not be able to process jobs. The system requires immediate user attention (for example, out of labels).

### **Printer Tab**



- Percent of ink remaining in the ink cartridge for all three colors
- Codonics part numbers for ordering ink cartridges and label media
- Codonics contact information for ordering ink cartridges and label media

## User Tab



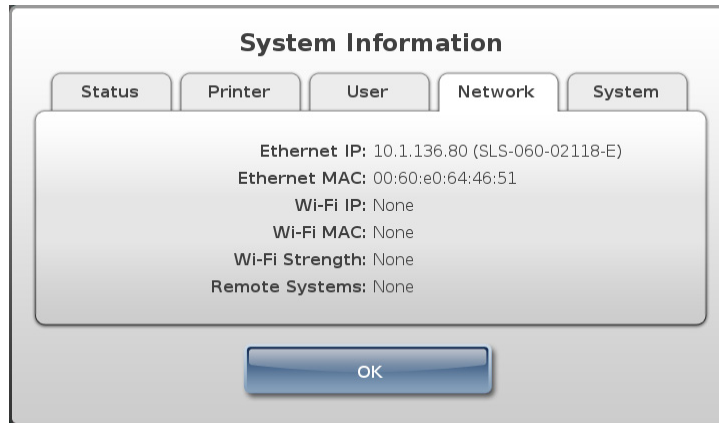
The screenshot shows a dialog box titled "System Information" with five tabs: "Status", "Printer", "User", "Network", and "System". The "User" tab is selected. The dialog displays the following information:

- User Name: Admin
- User Initials: ADN
- User ID: 1111
- Log In Time: 12/10/2011 03:04
- Previous Log In: 12/08/2011 17:51

An "OK" button is located at the bottom center of the dialog.

- Name of the currently logged-in user, along with their initials, ID, current login time, and previous login time

## Network Tab



- Ethernet IP address (SLS device name)
- Ethernet MAC address
- Wi-Fi IP address
- Wi-Fi MAC address
- Wi-Fi signal strength
- Remote systems



## System Tab



- Serial number of the system
- Current software version
- Current printer firmware version
- Current scanner firmware version
- Current formulary version
- Current users version
- Current configuration version
- License code

## System Status Messages

The following table lists the system messages that can be displayed on the Dashboard and the corresponding longer version of the message that is displayed on the **Status** tab of the **System Information** window.

**Table 10-1. System Status Messages**

Messages Displayed on Dashboard	Messages Displayed on Status Tab of System Information Window
Ready	Ready.
Printing	Printing label.
Ink Low	Ink low. Replace ink cartridge soon.
Labels Low	Labels low. Replace labels soon.
Printer Error	Printer error.
Printer Cover Open	Printer Cover is open.
No Labels	Labels out. Load a roll of labels.
No Ink	Ink out. Load new ink cartridge.
No Ink Cartridge	Ink cartridge missing. Insert ink cartridge.
No Printer	Printer error. Cycle power or contact Codonics.
No Scanner	Barcode Scanner error. Cycle power or contact Codonics.
Auto-logout Imminent	Auto-logout in # seconds. Touch screen.
Update Found	Update found. Analyzing...
Update Invalid	Update invalid. Please remove the USB drive.

**Table 10-1. System Status Messages (Continued)**

Messages Displayed on Dashboard	Messages Displayed on Status Tab of System Information Window
Update Failed	Update failed to install. Try again or contact Codonics.
Update Required	Applying updates... Do NOT power off.
Out of Service	System out of service.  Refer to the message on the <b>Status</b> tab of the <b>System Information</b> window. The message includes a description of the problem and suggested corrective actions.
SmartDrive Removed	SmartDrive missing.
SmartDrive Not Found	SmartDrive missing.
SmartDrive Data Damaged	SmartDrive data damaged.
SmartDrive Invalid	Cannot verify authenticity of the SmartDrive.
No Key Found	No key found. Not for clinical use.
Demo Mode	Install the Clinical Feature Key in order to use the device without limitations.
Test Formulary	The formulary has not been verified and released. Install a released formulary.
No Formulary	No formulary is installed. Install a formulary to scan drug containers.
Disk Space Low	Running low on internal disk space. Contact Codonics.
Expiring Feature	One or more Feature Keys are approaching the expiration date.
Drug Failed Verification	Drug failed verification. Install an updated formulary.
Label Failed Confirmation	Scan of barcode on printed label does not match what was printed on syringe label.

**Table 10-1. System Status Messages (Continued)**

<b>Messages Displayed on Dashboard</b>	<b>Messages Displayed on Status Tab of System Information Window</b>
Label Failed Confirmation	Failed to confirm a printed syringe label because user indicated unable to scan.
Label Failed Confirmation	Failed post print confirmation of syringe label because inactivity time-out occurred.
Label Failed Confirmation	User selected option to fail the visual inspection of the contents of the syringe label.
Update Transferring	An update is currently being transferred.
Update Pending	A network update will be installed upon logout.

## **Troubleshooting Common Problems**

The following table lists common problems, their possible causes, and how to solve them.

**Table 10-2. Troubleshooting**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
<b>System Problems:</b>		
The system fails to power on.	The system does not have power connected.	Check the power cables. Check the power supply switch on the rear panel.
	The external power supply has failed.	Replace the external power supply.

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
The system has lost power.	The system does not have power connected.  There is an internal power problem.	Check the power cables. Check the power switch on the rear panel. Cycle power to the system.  Contact Codonics Technical Support (+1 440.243.1198).
During startup, the system indicates that the SmartDrive is missing (error codes 70, 71).	The SmartDrive is not inserted in the USB port inside the touch screen rear panel door.	Insert the SmartDrive. Refer to "Inserting the SmartDrive" on page 2-18.
During startup, the system indicates that the SmartDrive is not compatible with the SLS application (error code 73).	The version number on the SmartDrive does not match the version number of the SLS application.	Contact Codonics Technical Support (+1 440.243.1198).
The system is not responding.	A variety of conditions.	Cycle power to the system.
The system starts in an error state.	A variety of software and/or hardware conditions.	Follow on-screen resolution prompts to correct issues.  Refer to the on-screen information section about error codes.  Contact Codonics Technical Support (+1 440.243.1198).
The user cannot log in.	The PIN has been forgotten or misplaced.	Create a new badge for the user with a new user ID.

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
The system indicates that it is in Test/Review mode.	<p>The most recent formulary update package that was installed contains a formulary in Test/Review mode. This mode is used to test formularies before they are actually deployed on SLS PCSs.</p> <p>The installed localization pack is in Test/Review mode and has not been validated yet by Codonics.</p>	<p>To return SLS PCS to the normal mode, a formulary update package at the Approved level must be installed. For more information about formulary levels, refer to the <i>SLS Administration Tool User's Manual</i>.</p> <p>Install a localization pack that has been validated by Codonics. For more information, refer to the <i>SLS Localization Reference Guide</i> and the <i>SLS Administration Tool User's Manual</i>.</p>
The system indicates that a cover is open (error code 7).	The front or rear cover is open. While it is open, the printer cannot print labels.	Close the front or rear cover.
The system indicates that the printer is not responding (error code 8) or has an error (error codes 9, 12).	There is a problem with the label printer.	<p>Cycle power to the system.</p> <p>If the problem persists, contact Codonics Technical Support (+1 440.243.1198).</p>
The system indicates that disk space is low (error code 61).	Storage capacity is at or below 10%.	Contact Codonics Technical Support (+1 440.243.1198).
The system indicates that disk space is full (error code 62).	Storage capacity is below 1%.	Contact Codonics Technical Support (+1 440.243.1198).
The system indicates that the data on the SmartDrive is damaged (error code 72).	The SmartDrive is corrupted.	Contact Codonics Technical Support (+1 440.243.1198).

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
The system indicates that the SmartDrive is not valid (error code 74).	The SmartDrive does not have the necessary files.	Insert a valid SmartDrive and restart the system.  If the problem persists with a SmartDrive that you believe to be valid, contact Codonics Technical Support (+1 440.243.1198).
Copying log files failed (error code 84).	The USB flash drive is full.	Delete files on the flash drive to provide enough storage space for the log files.
	The USB flash drive is damaged.	Try using another flash drive.
	The USB flash drive was removed while the copy operation was still being performed.	Insert the SmartDrive in the USB port inside the touch screen rear panel door and copy the log files again.
The system indicates that a system setting was not found (error code 85).	The installed version of the configuration is not compatible with the installed version of the SLS application.	Update the SLS application software or create a compatible version of the configuration update package and install that package. For more information, refer to the <i>SLS Administration Tool User's Manual</i> .
<b><i>Touch Screen Problems:</i></b>		
The touch screen does not respond properly when touched.	Potential hardware problem.	Contact Codonics Technical Support (+1 440.243.1198).
<b><i>Formulary Problems:</i></b>		
The formulary fails to load (error code 60).	The formulary database is corrupt.	Clear the error; refer to "Clearing Errors" on page 3-30. Create and load a new formulary update package. For information about how to create a formulary update package, refer to the <i>SLS Administration Tool User's Manual</i> .

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
The system indicates that the updated formulary is invalid (error code 81).	The formulary update package that was installed is damaged or the version of the formulary update package is not compatible with the current SLS software.	Create and load a new formulary update package. For information about how to create a formulary update package, refer to the <i>SLS Administration Tool User's Manual</i> .  If the problem persists with a new formulary update package, contact Codonics Technical Support (+1 440.243.1198).
The system indicates that the formulary update is incomplete (error code 82).	The formulary update package did not install correctly.	Reinstall the formulary update package.  If the problem occurs again, create and load a new formulary update package. For information about how to create a formulary update package, refer to the <i>SLS Administration Tool User's Manual</i> .  If the problem persists when installing the new formulary update package, contact Codonics Technical Support (+1 440.243.1198).



**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
<b><i>Drug Container Barcode Verification Problems:</i></b>		
A drug container failed verification when the barcode was scanned to print a syringe label (error code 20).	The user indicated that the drug in the formulary that matched the Container ID in the scanned drug container barcode is not the same drug as that in the drug container. To prevent a syringe being improperly labeled, that drug record is assigned a verification status of Failed and a label will not be printed anytime this drug container's barcode is scanned.	<p>Make sure the barcode on the drug container is of good quality.</p> <p>Use the SLS Administration Tool to correct the drug information in the Master Drug Database (MDD), create a new version of the formulary update package, and load the new version into SLS PCS. For more information, refer to the <i>SLS Administration Tool User's Manual</i>.</p>
When a drug container's barcode is scanned to print a syringe label, the system indicates that the barcode previously failed drug verification (error code 21).	The first time this drug container barcode was scanned, the user indicated that the drug in the drug container did not match the drug found in the formulary with the same Container ID. To prevent a syringe being improperly labeled, the drug record's verification status was set to Failed and a label will not be printed anytime this drug container's barcode is scanned.	<p>Make sure the barcode on the drug container is of good quality.</p> <p>Use the SLS Administration Tool to correct the drug information in the MDD, create a new version of the formulary update package, and load the new version into SLS PCS. For more information, refer to the <i>SLS Administration Tool User's Manual</i>.</p>
<b><i>Printed Syringe Label Confirmation Problems:</i></b>		
The displayed label in the pre-print confirmation screen was incorrect so the user pressed the <b>Cancel</b> button (error code 25).	There is an error in the formulary (unless the user just decided that they did not want to print the label).	If the label content or label color are incorrect, discard the label or the syringe (if the label is affixed to it), and contact your SLS system administrator.

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
The confirmation scan of a printed syringe label's barcode failed (error codes 30, 31, 32).	The barcode that was scanned was not a syringe barcode (error code 30).	Scan the barcode on the syringe label that was just printed.
	The barcode that was scanned was not the syringe barcode of the label that was just printed (error codes 31, 32).	Make sure that the label whose barcode you are scanning is the label that was just printed. <ul style="list-style-type: none"><li>• If it is not, then scan the correct label.</li><li>• If it is, then the label did not print correctly. Do not use the label or the syringe (if the label is affixed to it). Contact your SLS system administrator and Codonics Technical Support (+1 440.243.1198) to notify them of the problem.</li></ul>

**Table 10-2. Troubleshooting (Continued)**

Problem	Possible Causes	Solutions
<p>The visual confirmation of a printed syringe label failed [that is, on the post-printing confirmation dialog box, the user has pressed the <b>No</b> button (error code 37), and then pressed the <b>Content Error</b> (error code 35) or the <b>Printing Error</b> (error code 36) button].</p>	<p>The wrong drug information was printed on the syringe label (error code 35).</p> <p>The label print quality is not satisfactory (error code 36).</p>	<p>Discard the label or the syringe (if the label is affixed to it), try printing the syringe label again, and contact your SLS system administrator to notify them of the problem. If the wrong drug information is printed again, then the match between the Container ID in the scanned barcode and the Container ID in the drug record in the formulary is incorrect. The drug record in the formulary needs to be corrected. For more information, refer to the <i>SLS Administration Tool User's Manual</i>.</p> <p>Discard the label or the syringe (if the label is affixed to it), try printing another one, and contact your SLS system administrator to notify them of the problem. If the problem continues, refer to the label problems and solutions described below in this table.</p>
<p>The confirmation of a printed syringe label is not able to be performed (error code 33).</p>	<p>The user pressed the <b>Unable to Scan</b> button.</p>	<p>Discard the label or the syringe (if the label is affixed to it). Print another label or a blank label.</p> <p>If the problem persists, contact your SLS system administrator.</p>

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
<b>Label Printing Problems:</b>		
The test label fails to print (error code 1).	A variety of printer conditions.	Print the label again.  Check to make sure that there are labels on the label media and that the label media is properly loaded.  Check the ink cartridge.  Cycle power to the system.
The test label did not print correctly (error code 2).	A variety of printer conditions.	Refer to the appropriate problem in this table for a solution.
The system indicates that the printing of a syringe label was canceled.	The user canceled the print operation at the pre-print confirmation.	If the content of the preview syringe label did not match the drug container whose barcode was scanned, contact your SLS system administrator to correct the drug record problem in the formulary.
The system indicates that it is out of label media (error code 6).	The label media is empty.	Install label media. Refer to "Loading or Replacing the Label Media" on page 2-26.

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
Print is light, there is banding or gaps, or there is no printed image.	The ink cartridge is low or out of ink.	Replace the ink cartridge. Refer to “Installing the Ink Cartridge” on page 2-21.
	The ink cartridge is clogged.	Purge the ink cartridge (refer to “Cleaning the Ink Cartridge Nozzles” on page 3-15). Remove the ink cartridge and wipe the copper contacts with an alcohol-based wipe.
	The ink cartridge still has the protective seal on it.	Remove the ink cartridge and peel the protective seal from the cartridge.
	Low-quality labels are being used.	Use only Codonics labels. For ordering information, refer to “Ordering Supplies and Parts” on page 9-1.
	The ink cartridge has been refilled.	Use only new ink cartridges from Codonics.
Printed content is not properly centered on the label.	The media path is out of alignment.	Adjust the media path. Refer to “Adjusting the Media Path” on page 3-18.
Labels are incorrectly cut.	The cutter is out of adjustment.	Contact Codonics Technical Support (+1 440.243.1198).
	Labels are not being advanced correctly.	Reload the labels.
	The label offset is not set correctly.	Adjust the media path. Refer to “Adjusting the Media Path” on page 3-18.
Printed labels are not being cut.	The cutter is not properly positioned.	Contact Codonics Technical Support (+1 440.243.1198).

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
Labels are being printed but are not being dropped into the output bin.	Labels are jammed in the media path.	Clear the label jam. Refer to “Clearing a Label Media Jam” on page 10-24.
	A label is jammed in the discharge slot above the output bin.	Place your finger on the leading edge of the label and pull it forward to pull the label from the discharge slot.
Labels are not being printed correctly. For example, after scanning a barcode to confirm a printed label, the system displays an error message indicating that the scanned barcode is not correct.	The software, scanner, or printer is not operating properly.	Follow on-screen resolution prompts to correct issues.
Poor print quality.	Saturation.	Adjust the label black levels. Refer to “Adjusting the Label Black Levels” on page 3-20
	The wrong labels are loaded.	Load the correct labels for SLS PCS.
	The ink cartridge is not functioning properly.	Replace the ink cartridge with a proper SLS ink cartridge from Codonics. Refer to “Installing the Ink Cartridge” on page 2-21.
	The ink cartridge has been refilled.	Use only new ink cartridges from Codonics.

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
<b><i>Ink Cartridge Problems:</i></b>		
The system indicates that the ink cartridge is low (error code 5) on ink or out of ink (error code 4).	The ink cartridge is about to become empty or is empty.	Install a new ink cartridge. Refer to “Installing the Ink Cartridge” on page 2-21.
The system indicates that the ink cartridge is not installed (error code 3).	There is no ink cartridge in the carriage.	Install an ink cartridge. Refer to “Installing the Ink Cartridge” on page 2-21.
The ink cartridge carriage is not moving (error code 9).	An obstruction is preventing the ink cartridge carriage from moving.	Open the front cover and remove the obstruction. Press the Ink button to reset the position of the ink cartridge carriage.

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
<b>Barcode Scanner Problems:</b>		
The barcode scanner is not scanning.	The scanner's glass window is dirty.	Clean the scanner's glass window. Refer to "Cleaning the Enclosure" on page 9-2.
	The low-light red light is on, but the scanner laser cross-hairs are not on.	Shutdown the system from the touch screen and then cycle power to the system.
	The barcode symbology is not supported.	Contact Codonics Technical Support (+1 440.243.1198).
	The barcode on the printed syringe label has poor quality.	Follow the on-screen resolution prompt to fail the post-confirmation and try printing the label again. If the barcode quality is still poor, contact Codonics Technical Support (+1 440.243.1198).
	The barcode is incorrectly positioned.	Place the container or syringe below the scanner so that the red cross-hair lines up on the barcode. Placing the container or syringe closer to the cover, almost resting it on the cover, instead of placing it closer to the scanner, will also provide better results.
The system indicates that the scanner is not responding (error code 18).	There is a problem with the barcode scanner.	Cycle power to the system.  If the problem persists, contact Codonics Technical Support (+1 440.243.1198).



**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
<b>Network Problems:</b>		
SLS PCS will not connect to the network.	There are general network connectivity issues at the access point or SLS PCS.	Verify that other devices connected to the network via the same access point are active on the network.
	SLS PCS network settings are not configured properly.	Check the SLS PCS IP address and the other network settings.
	If using Ethernet, the network cable is not connected.	Verify that the network cable is connected to the SLS PCS Ethernet port. After reconnecting the cable, disable and then enable the Ethernet connection; refer to “Disabling the Network Connection” on page 4-32.
	If using Wi-Fi, the Wi-Fi adapter is not working.	Verify that the Wi-Fi adapter is inserted in the USB port located at the bottom front right corner of SLS PCS. Switch to Ethernet connection, if available, to see whether a network connection can be established. When correcting the Wi-Fi connection, disable and then enable the network connection to reset it; refer to “Disabling the Network Connection” on page 4-32. Also refer to the “Network/SLS Device Status Problems” section of the troubleshooting table in Chapter 9 of the <i>SLS Administration Tool User’s Manual</i> .
	The SmartDrive has been removed.	Verify that the SmartDrive is connected.

**Table 10-2. Troubleshooting (Continued)**

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
Wi-Fi network connectivity is intermittent or weak, causing SLS PCS to lose its connection to the network.	The distance between SLS PCS and the Wi-Fi router is too far, or there are objects between them that are interfering with the signal.	Add a Wi-Fi repeater to the network that is closer to SLS PCS.

## **Clearing a Label Media Jam**



To clear a label media jam

1. Remove your gloves.
2. Open the front and rear covers.
3. Identify the location of the jammed media and use the appropriate procedure below.

### **Clearing a Label Jam in the Front Media Guide**



To clear a label media jam in the front media guide

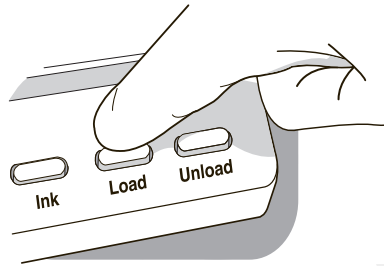
1. Gently remove the label media from under the front guide by pulling up the label media near the ink carriage.

**CAUTION** Avoid peeling up a label in the media path. You might have to pull the media forward through the cutter to avoid peeling a label. If a label is peeled up in the media path, do not press the adhesive side of the label against the sheet metal guides.

2. Use scissors to cut the liner between two labels by the ink carriage to allow you to remove the jammed label media.

**NOTE:** Scissors are recommended for cutting the liner so that the label media will have a straight edge. The straight edge will make loading the label media easier.

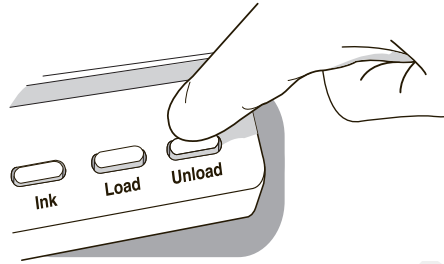
If required, press the **Load** button to advance the label media.



**Load button**

3. Gently remove the jammed portion of the label media.
4. Review the strip of labels. Make sure that you can account for all of the labels and that no labels are stuck in the front media guide. Discard the damaged label media.
5. If portions of the label media are still jammed in the media path, power off the system (refer to “Powering Off the System” on page 3-45). Use non-metallic tweezers and carefully remove any additional label media from the media path.

6. Press the **Unload** button to reverse any portion of the label media that is still in the media path.



**Unload button**

7. Inspect the label media. Use scissors to cut off any damaged labels.
8. Close the front cover, load the label media, and close the rear cover.

### **Clearing a Label Jam in the Rear Media Guide**



To clear a label media jam in the rear media guide

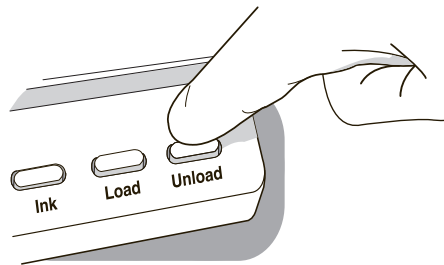
1. Identify the location of the jammed media under the rear media guide.  
The rear media path can be exposed by using the thumb screws to remove the rear media guide cover.
2. Use scissors to cut the liner between two labels by the ink carriage. This will reduce the number of labels being pulled back through the media path.
3. Gently remove the cut portion of the label media from the front media guide and discard it.
4. Use scissors to cut the liner between the jammed portion of the label media and the label media roll.

**NOTE:** Scissors are recommended for cutting the liner so that the label media will have a straight edge. The straight edge will make loading the label media easier.

5. Gently remove the jammed portion of the label media.

**CAUTION** Avoid peeling up a label in the media path. If a label is peeled up in the media path, do not press the adhesive side of the label against the sheet metal guides.

6. Review the strip of labels. Make sure that you can account for all of the labels and that no labels are stuck in the rear media guide. Discard the damaged label media.
7. If portions of the label media are still jammed in the media path, power off the system (refer to “Powering Off the System” on page 3-45). Use non-metallic tweezers and carefully remove any additional label media from the media path.
8. Press the Unload button to reverse any portion of the label media that is still in the media path.



**Unload button**

9. Inspect the label media. Use scissors to cut off any damaged labels.
10. Close the front cover, load the label media, and close the rear cover.



# A

## **Hazardous Material Information**

### **Materials of Construction**

Codonics has set very stringent standards for evaluating products to ensure the marketing of regulatory compliant products worldwide.

We do not intentionally add, nor are we aware, that the products or packaging contain the following materials:

- Mercury, except as used in lamp applications (for example, scanning lamps, backlit LCDs).
- Cadmium, except as used as thick film inks on printed circuit boards.
- Hexavalent Chromium, except as used as thick film inks on printed circuit boards, as chromate conversion coatings on metal surfaces, and as a photoresist on glass panels of cathode ray tubes.
- Polybrominated diphenyl ethers and polybrominated biphenyls.
- Bioavailable arsenic (small amounts of arsenic used in glass, LEDs, and semiconductors are not considered to be bioavailable).
- Bioavailable crystalline silica (small amounts of crystalline silica are used in certain paints, coatings, and filler materials).
- Polychlorinated biphenyls (PCBs).

- Asbestos.
- Organic tin (not used in tin lead solder applications).
- Ozone-depleting substances such as chlorofluorocarbons, methyl chloroform, and carbon tetrachloride.

## **Matériaux de Construction**

*Afin d'obtenir les certificats de conformité de ses produits dans le monde entier, Codonics utilise les standards d'évaluation les plus contraignants pour tester ses produits.*

*Codonics assure notamment n'avoir ajouté ou avoir été informé que soit ajouté les composants suivants dans son produit et son emballage:*

- *Mercuré, sauf dans le cas de systèmes d'éclairage (lampe à balayage, rétroéclairage LCD)*
- *Cadmium, à l'exception des encres de couche épaisse sur les circuits imprimés*
- *Chrome hexavalent, à l'exception des encres de couche épaisse sur les circuits imprimés, des protections de surface métallique et des photo-résistances de tubes cathodiques*
- *Des éthers de diphenyl polybromé ou des biphenyls polybromés*
- *Arsenic (de très faible quantité d'arsenic sont présents dans le verre, les leds et les semi-conducteurs sans portée atteinte à l'organisme)*
- *Cristaux de silicium*
- *Biphenyls polychlorés*
- *Amiante*
- *Matières organiques*



- *Substances portant atteinte à la couche d'ozone tels que des carbones chlorofluorés du chloroforme et des tétrachlorures de carbone*

## **Manufacturing**

During manufacturing operations that produce Codonics products (including packaging), no ozone depleting substances (such as chlorofluorocarbons, methyl chloroform, and carbon tetrachloride) are used.

### **Fabrication**

*Aucun composant susceptible de détruire la couche d'ozone ne sont utilisés lors de la fabrication (emballage inclus) des produits Codonics.*



# B

## Specifications

### Specifications (English)

System:	Integrated capacitive touch screen computer, 2D barcode scanner, color ink jet printer, audio feedback, and provision for a network interface
Ink Cartridges:	One color cartridge (CMY)
SmartDrive:	USB flash drive for storing configuration data, formulary database, log files
Readable Barcodes:	GS1 DataBar Limited (RSS Limited), GS1 DataBar Stacked (RSS-14 Stacked), GS1-128, UPC-A, Data Matrix, Code 128, Code 128 barcodes with GS1-128, Code 39, Code 32, IFT-14, Interleaved 2 of 5, EAN-8, EAN-13
Writable Barcodes:	Data Matrix
Network Interfaces:	Ethernet (RJ-45), included standard Wi-Fi (USB-2 adapter), optional, available from Codonics
Network Speeds:	Ethernet, full duplex 100 Base-T only Wi-Fi, 802.11 b/g/n (2.4 GHz) and 802.11 a/n/ac (5.0 GHz)
Network Protocols:	SSH (Secure Shell) and SCP (Secure Copy) Used to access SLS PCS from Codonics-authorized applications
Dimensions:	Height: 16.5 in. (41.9 cm) Width: 10.43 in. (26.5 cm) Depth: 15.67 in. (39.8 cm)
Weight:	14.5 lbs (6.6 kg)

Power: Universal Input: 100-240 VAC, 50/60 Hz

Intentional Transmitters: When equipped, SLS transmits radio frequency energy at 13.56 MHz using ASK modulation: Effective Radiated Power: -43.14 dBm (48.5 nW).

When equipped, SLS transmits radio frequency energy within the band of 902–928 MHz using PR-ASK modulation: Peak Effective Radiated Power: 21.94 dBm (156 mW).

Environmental:

*Operating:*

Temperature: 15–30°C (59–86°F)

Humidity: 20%–80% noncondensing

*Shipping and Storage:*

Altitude: Sea Level to 5790 m

Temperature (Hardware): -22.2–51°C (-8–123.8°F)

Temperature (Ink Cartridge and Label Media): 1–43°C (34–110°F)

Humidity (Hardware): 5%–85% noncondensing

Humidity (Ink Cartridge and Label Media): 5%–80% noncondensing

Medical Compliance and Regulatory: FDA cleared to market per 510(k) K101439 Class II, MDR CE (Class I), GMP/QSR ISO 13485:2016, Safety IEC 60601-1 and EMC IEC 60601-1-2 for Professional Healthcare facilities

Classification: Class II equipment, Product Code BSZ, Regulation Number 868.5160



**CAUTION** Federal law restricts this device to be sold for use by or on the order of a physician.

## Specifications (French)

<i>Système :</i>	<i>Ordinateur à écran tactile capacitif intégré, 2d barcode scanner, imprimante à jet d'encre, feed-back audio, et prestation d'un network interface</i>
<i>Cartouches :</i>	<i>Une cartouche couleur (CMY)</i>
<i>Smart Drive :</i>	<i>USB flash drive pour garder data du configuration, database de formulaire, dossiers du registre</i>
<i>Barcodes livrable :</i>	<i>RSS, UPC-A, B, C, Data Matrix</i>
<i>Barcodes inscriptible :</i>	<i>GS1 DataBar Limited (RSS Limited), GS1 DataBar Stacked (RSS-14 Stacked), GS1-128, Code 128 barcodes with GS1-128, Code 39, Code 32, IFT-14, Interleaved 2 of 5, EAN-8, EAN-13</i>
<i>Interfaces réseau :</i>	<i>Ethernet (RJ-45), inclu en standard Wi-Fi (USB-2 adaptateur), en option, disponible à partir Codonics</i>
<i>Vitesses réseau :</i>	<i>Ethernet, full duplex 100 Base-T seulement Wi-Fi, 802.11 b/g/n (2,4 GHz) et 802.11 a/n/ac (5,0 GHz)</i>
<i>Protocoles réseau :</i>	<i>SSH (Secure Shell) et SCP (Secure Copy) Permet d'accéder SLS PCS d'applications autorisées par Codonics</i>
<i>Dimensions :</i>	<i>Hauteur: 41.9 cm (16.5 in.) Largeur: 26.5 cm (10.43 in.) Profondeur: 39.8 cm (15.67 in.)</i>
<i>Poids :</i>	<i>14.5 lbs (6.6 kg)</i>
<i>Puissance :</i>	<i>Universel Input: 100-240 VAC, 50/60 Hz</i>
<i>Transmetteurs intentionnels :</i>	<i>Lorsqu'il en est équipé, SLS transmet l'énergie radiofréquence à 13,56 MHz en utilisant la modulation ASK. Puissance rayonnée effective : -43,14 dBm (48,5 nW) Lorsqu'il en est équipé, SLS transmet l'énergie des radiofréquences dans la bande de 902 à 928 MHz en utilisant la modulation PR-ASK. Puissance rayonnée efficace maximale : 21,94 dBm (156 mW)</i>

<i>Conditions du travail :</i>	<i>Opération:</i>	
	<i>Température:</i>	15–30°C (59–86°F)
	<i>Humidité:</i>	20%–80% non condensation
	<i>Transport et Stockage:</i>	
	<i>Altitude:</i>	Niveau de la mer to 5790 m
	<i>Température (appareil):</i>	-22.2–51°C (-8–123.8°F)
	<i>Température (les cartouches et les et étiquettes):</i>	1–43°C (34–110°F)
	<i>Humidité (appareil):</i>	5%–85% non condensation
	<i>Humidité (les cartouches et les et étiquettes):</i>	5%–80% non condensation
<i>Conformité Médical/ Réglementaire :</i>	<i>Conformité Médicale/Réglementaire: Autorisé par la FDA sur le marché selon 510 (k) K101439 Classe II MDR CE (Classe I), GMP/QSR ISO 13485:2016, Conformité IEC 60601-1 and EMC IEC 60601-1-2 pour les établissements de santé professionnels</i>	
<i>Classification :</i>	<i>Class II équipement, code de produit BSZ, numéro de règlement 868.5160</i>	



**CAUTION** Conformément à la loi, il est interdit de vendre cet appareil par l'ordre d'un médecin.

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