

SLS-WAVE™ Administration Scanner

Overview

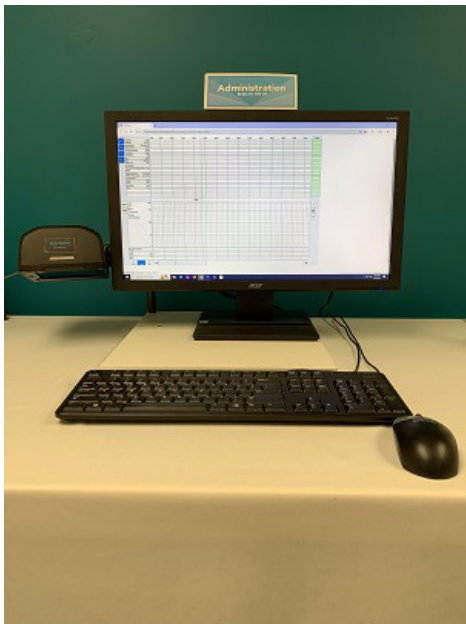
The Codonics SLS-WAVE Administration Scanner starting with serial numbers 25 (e.g. produced in 2025) or greater is used in conjunction with the Safe Label System® (SLS) Point of Care Station (PCS) and integrates with Epic's Anesthesia Information Management System (AIMS) and blood module. The SLS and SLS-WAVE are used together in the operating room to improve safety and provide accurate, electronic documentation at the time of preparation and administration.

Hardware Setup - SLS-WAVE/AIMS

1. Determine the location where the SLS-WAVE will be installed. For example, below an AIMS monitor or connected to an IV pole.

Note: An open USB port is required to connect SLS-WAVE into the computer where the AIMS application is operated.

2. By default, the SLS-WAVE is shipped as if you are going to connect it to the left side of the AIMS monitor or to an IV pole (see "Connecting to an IV Pole").



SLS-WAVE Hardware Unpacking

1. Remove all the components from the box.
2. Confirm that the following items are included:
 - ◆ SLS-WAVE scanner (1)



- ◆ Back mounting bracket assembly (1)



- ◆ Clamp mounting assembly (1)



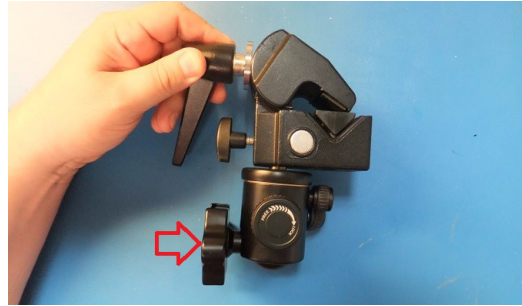
- ◆ Plastic bag containing a Hex L-key (1) and screw (1) for the back of the mounting bracket.



3. After opening and unpacking both of the internal boxes, turn the lever on the clamp to loosen the clamping jaw.



4. Rotate the mounting platform interface (arrow) as needed by rotating the locking wheel counterclockwise as shown below.



5. If the mounting location is the left side of the AIMS monitor, then continue with the section "Connecting to the Left Side of an AIMS Monitor" below. If connecting to the right side of the AIMS monitor, then go to "Connecting to the Right Side of an AIMS Monitor." If connecting to an IV pole, then go to "Connecting to an IV Pole."

Note: A T-15 driver not included may be required for installation.

Connecting to the Left Side of an AIMS Monitor

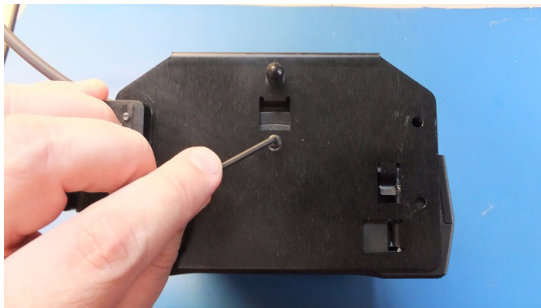
1. Rotate the ratchet handle on the clamp to open up the jaws. Connect the clamp mounting assembly to the left side of the monitor bracket and secure the clamp tightly by turning the ratchet handle.



2. Next, connect the back mounting plate to the scanner by pressing and sliding down the tabs into the back of the SLS-WAVE. Make sure that the USB cable is routed over the bracket as shown below.



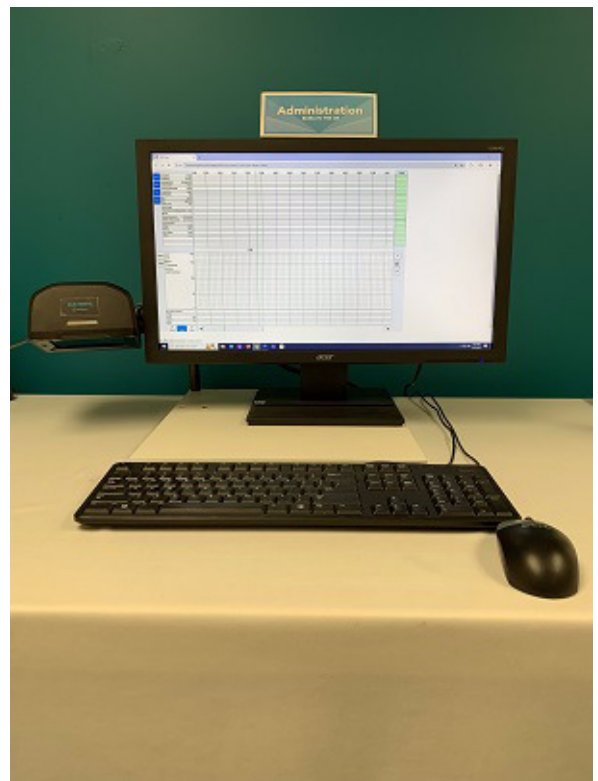
3. Insert the screw through the mounting bracket and tighten to the SLS-WAVE scanner with the L-key.



4. Next, remove the protective film liner from the SLS-WAVE. Attach the SLS-WAVE assembly to the clamp mount assembly, already attached to the monitor, by rotating the platform thumbwheel as shown below.



5. SLS-WAVE mounted to the left side of the monitor.



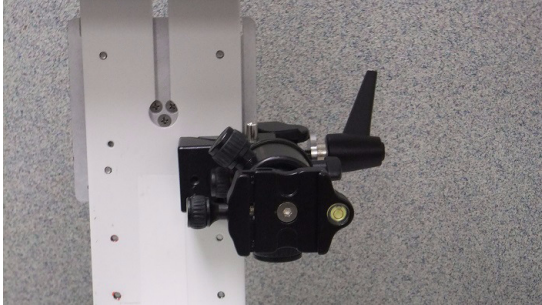
WARNING: The scanner should be pointing down and positioned to keep the scanner light from shining in the patient's or user's eyes.

6. Insert the SLS-WAVE USB into the AIMS computer.

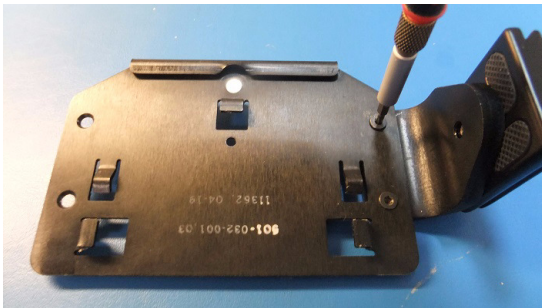
Note: USB extension cords are available if required to reach from the SLS-WAVE to the AIMS computer. They can be ordered using Codonics Part Number SLS-WAVE-USB-EXT.

Connecting to the Right Side of an AIMS Monitor

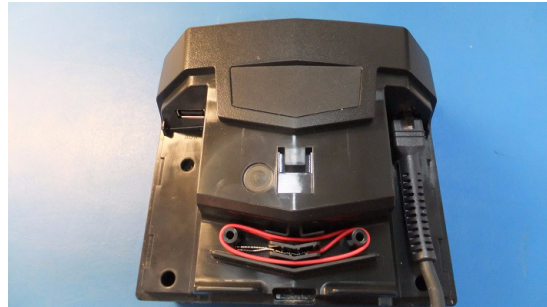
1. Rotate the ratchet handle on the clamp to open up the jaws. Connect the clamp mounting assembly to the right side of the monitor bracket and secure the clamp tightly by turning the ratchet handle.



2. Unscrew the thick bracket from the mounting plate using a T-15 driver (not included) as shown below and move it to the other side of the mounting plate. Using the T-15 driver, screw the thick bracket back into the mounting plate.



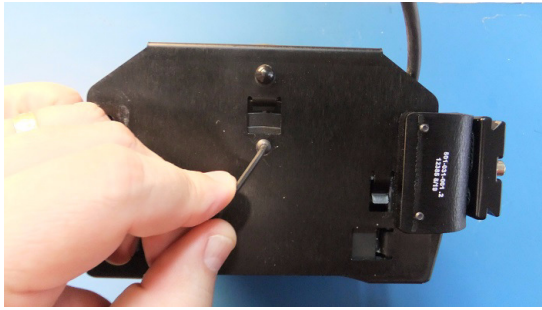
3. Remove the top of the SLS-WAVE and move the cable to the other side of the scanner. Slide the top back on the scanner.



4. Next, connect the back mounting plate by pressing and sliding down the tabs into the back of the SLS-WAVE. Make sure that the USB cable is routed over the bracket as shown below.



5. Then using the L-key, insert and tighten the screw removed in step 1.



6. Remove the protective film liner from the SLS-WAVE.
7. Attach the SLS-WAVE assembly to the clamp mount assembly by rotating the platform thumb wheel as shown below.



8. The SLS-WAVE is now mounted to the right side of the monitor.

WARNING: The scanner should be pointing down and positioned to keep the scanner light from shining in the patient's or user's eyes.

9. Insert the SLS-WAVE USB into the AIMS computer.

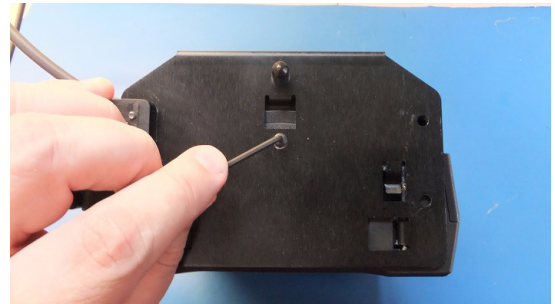
Note: USB extension cords are available if required to reach from the SLS-WAVE to the AIMS computer. They can be ordered using Codonics Part Number SLS-WAVE-USB-EXT.

Connecting to an IV Pole

1. Rotate the ratchet handle on the clamp to open up the jaws. Connect the clamp mount assembly to the IV pole and secure the clamp tightly by turning the ratchet handle.
2. Next, connect the back mounting plate to the scanner by pressing and sliding down the tabs into the back of the SLS-WAVE. Make sure that the USB cable is routed over the bracket as shown below.



3. Insert the screw through the mounting bracket and tighten to the SLS-WAVE scanner with the L-key.



4. Next, remove the protective film liner from the SLS-WAVE. Attach the SLS-WAVE assembly to the clamp mount assembly, already attached to the IV pole, by rotating the platform thumbwheel as shown below.



5. The SLS-WAVE is now mounted to the IV pole.



6. Insert the SLS-WAVE USB into the AIMS computer.

Note: USB extension cords are available if required to reach from the SLS-WAVE to the AIMS computer. They can be ordered using Codonics Part Number SLS-WAVE-USB-EXT.

Epic Anesthesia Setup

1. If you don't have barcoding enabled in Epic, follow the instructions in <https://galaxy.epic.com/?#Browse/page=8200!68!50!966749,966752,11351104>.
2. If you have barcoding enabled in Epic and need to enable scanning in the intraprocedure grid field:
 - ◆ In Clinical Administration, access EMR System Definitions and follow the path Specialities, Other Modules > Anesthesia.
 - ◆ Go to the Anesthesia Barcode Scan Settings screen.

- ◆ Enter Yes in the Allow barcode scanning from intraprocedure grid field.

Note: During setup, you should have access to your Epic "expert" and/or Epic resources available.

It is recommended that you check with your Epic resource and install the newest Epic AIMS module.

3. Create a drug preference list.
 - ◆ Typically, Epic Willow Pharmacy utilizes a medication library from a third-party vendor, which is chosen by the customer. These medication records come pre-configured with NDCs that can be used for barcoding, both on the inpatient floor and in Anesthesia. The appropriate medications, determined by the customer, are then added to the Anesthesia preference list for selection in the OR.
 - ◆ Depending on the third-party vendor, there might be medication records specific to each vial size. It is not recommended adding these to the Anesthesia preference list because it requires Anesthesia to unnecessarily choose from more medication records in their workflows (e.g. propofol 10 mg/mL 20 mL vial and propofol 10 mg/mL 100 mL vial as separate options).
 - ◆ To address this, the Willow project team should create wrapper records for documentation. They should also combine the NDCs from the child records to ensure barcoding works for all vials.
 - ◆ There is set up related to what preamble and terminator characters are used for barcoding medications. However, most of this will be done as part of the inpatient install.
 - ◆ Once this build is completed, barcodes received by Epic Anesthesia will function as expected.

Note: It is recommended using SLS-WAVE to test scanning of vials associated with the Anesthesia preference list prior to implementation in the OR.

Bolus Workflow

1. Log into Epic. Go to Epic Anesthesia work space.
2. Select a patient in Epic.

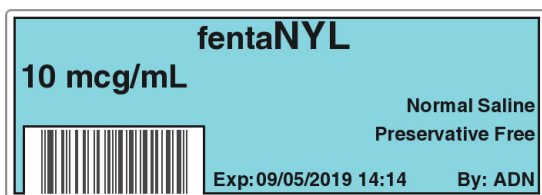
3. Scan a vial on SLS PCS.

Note: SLS PCS should be loaded with a minimum of 2.3.0 SW and configured to use EHR-1 label template. EHR-1 template requires the AT configuration to be set to **Primary Barcode #7**. This template prints a 1-D linear barcode which is easiest to be read by SLS-WAVE.

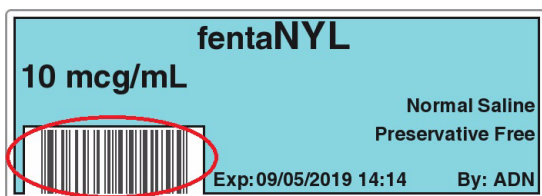
Note: SLS PCS can be configured for printing 2-D data matrix barcodes which can also be read by SLS-WAVE.

Note: The vial's NDC needs to be in both the SLS formulary and the site's Epic preference list formulary.

4. Prepare and label the syringe or IV Bag. If multiple syringes need to be prepared, repeat the process for each vial/ampoule. The label(s) will look similar to the following example:



5. When ready to administer the syringe or IV bag to the patient, scan the label's barcode using SLS-WAVE.



6. When the barcode is scanned, SLS-WAVE audibly beeps and passes the NDC to Epic Anesthesia for recording. The dose screen is presented which visually displays the NDC's drug name, concentration, drug class color and identifies patient allergies. The August 2018 and newer Epic Anesthesia release automatically timestamps the medication in the patient record and opens the dose screen.

Note: The SLS-WAVE can be set to one of three levels of beep volume when scanning: high, medium, or low. To change the volume, press the button on the right front corner of the SLS-WAVE to the required level.

7. Enter the dose and select Close. The drug administration is now complete in Epic.
8. Repeat step 5 as required with additional syringe(s).

Induction Mode

Epic Anesthesia May 2019 and newer SW releases provide support for Induction Mode.

This capability allows users to scan multiple syringes (e.g., Lidocaine, Propofol, Fentanyl, Rocuronium) in sequence using SLS-WAVE, automatically populating Epic with each NDC and adding the corresponding drug, concentration, and time stamp to the Epic Reminders screen.

When a drug is later selected from the Reminders screen, the Dose screen is presented. Once the dose is entered and screen closed, the medication is documented in the patient record.

Scanning Blood Bags

The SLS-WAVE supports scanning of blood bags (e.g., red cells, whole blood, platelets, plasma, cryoprecipitate) with Epic's blood module. It is configured to automatically scan four barcodes (i.e., DIN, ABO/Rh blood groups, product code, expiration date and time) at one time, pass the information into Epic's blood module automatically entering and displaying the information in the specific field.

Workflow

1. From the Epic AIMS module select the blood module.
2. The Blood Products interface will display. Select the type (e.g., red cells, whole blood, etc.) of Blood Product for scanning.
3. The Blood Documentation for the patient will display specifying the Blood Product Flowsheet documentation.
4. Place the blood bag under the SLS-WAVE which will scan all four barcodes and pass the information to the Blood Product Flowsheet and display the appropriate data in the appropriate field.
5. If another blood bag is required, select Add Product which returns the user to the Blood Products interface in step 2.

WARNING: To scan SLS prepared syringes and other medications, a user needs to exit the Epic blood module and return to the Epic medication interface.

If you scan a medication in the blood module, a Barcode Scan Error will be displayed alerting the user can not be scanned. The medication will not be documented in the AIMS.

Interoperable Pump Workflow

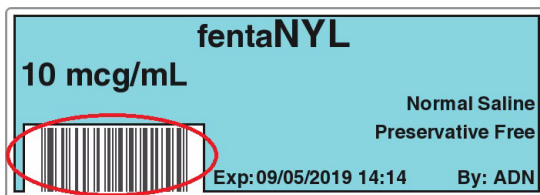
1. Prepare a syringe or IV bag as defined in step 3 and 4 in "Bolus Workflow" on page 6. The label(s) will look similar to the following example:



Note: SLS PCS should be loaded with a minimum of 2.3.0 SW and configured to use EHR-1 label template. EHR-1 template requires the AT configuration to be set to **Primary Barcode #7**. This template prints a 1-D linear barcode.

Note: SLS PCS can be configured for printing 2-D data matrix barcodes. By default, the SLS-WAVE will also read these barcodes.

- Using SLS-WAVE, scan the label's barcode on the SLS labeled syringe or IV bag. When the barcode is scanned, SLS-WAVE will beep, automatically populate Epic OpTime with the NDC, display the drug name and drug class color, announce the drug name, automatically time stamp the administration, and identify if the patient has any allergies to that drug.



Note: The vial's NDC needs to be in both the SLS formulary and the site's Epic preference list formulary.

Note: The SLS-WAVE can be set to one of three levels of beep volume when scanning: high, medium, or low. To change the volume to the desired level, press the button located on the corner of scanning side of the SLS-WAVE.

Note: Epic Anesthesia November 2021 and newer releases provide audio support.

- If administering the medication as an infusion (syringe or bag), the provider scans the pump's barcode (i.e., license plate) using a handheld scanner, visually confirms the drug, and connects it to the pump.
- Epic OpTime automatically displays the Pump Setup user interface. The provider enters the Rate, Dose, and Duration for the drug then clicks on Send Order Details to Pump.

Note: Support for infusion pump interoperability is available with Epic's February 2019 or newer release. The Epic user interface will only allow pump integration if the pump is interoperable.

- Epic OpTime communicates the information to the pump.
- The provider then confirms the settings and selects Start on the pump to start the infusion. The pump begins to administer at the programmed rate/dose. This information along with every subsequent click at the pump is automatically documented in Epic without the provider having to enter it manually.

Configuring SLS-WAVE

SLS-WAVE is delivered preconfigured to support scanning of 1-D and 2-D barcodes, including simultaneous scanning of all four barcodes on a blood bag. If reconfiguration is required to enable scanning one barcode at a time on blood bags, scan the barcode below. To restore simultaneous four-barcode scanning, contact Codonics Technical Support..



SLS-WAVE can parse the 10-digit CID from the Extended Barcode Data (#8 barcode definition in the Administration Tool) and can scan 2D Data Matrix, GS1 2D Data Matrix and Aztec barcodes.

Cleaning SLS-WAVE

To clean the system, use a clean, lint-free cloth moistened with one of the following approved cleaning agents:

- ◆ Bleach and water (1:5)
- ◆ 70% isopropyl alcohol
- ◆ Super sani cloth

Technical Support

If problems occur during installation or operation, contact Codonics Technical Support at any time.

Phone: +1.440.243.1198

Email: support@codonics.com

Website: www.codonics.com

Note: The SLS-WAVE device serial number begins with 25 or greater to designate the year produced (e.g., 2025) and has a square brand SLS-WAVE label on the front face of the device.

Get it all with just one call
800.444.1198

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