



User Guide

Software Version 2.x

Preface

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Acknowledgements

The DOSIS operating system is designed by Manchac Technologies, LLC. All DOSIS towers are designed and manufactured by Manchac Technologies, LLC.

Disclaimer

The information contained herein is considered accurate at the time of publication. Manchac Technologies, LLC reserves the right to make changes to the equipment or manual at any time without notice.



Customer Care and Product Support

1-877-626-2422 (877-MANCHAC)

help.dosis.com

support@manchac.com

Our standard help desk hours are Monday through Friday from 7:00AM to 7:00PM central and Saturday 8:00AM to 5:00PM central.

Requests after hours and on major holidays are screened for severity and escalated appropriately to on-call technicians for assistance.

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System Overview - Chapter 1

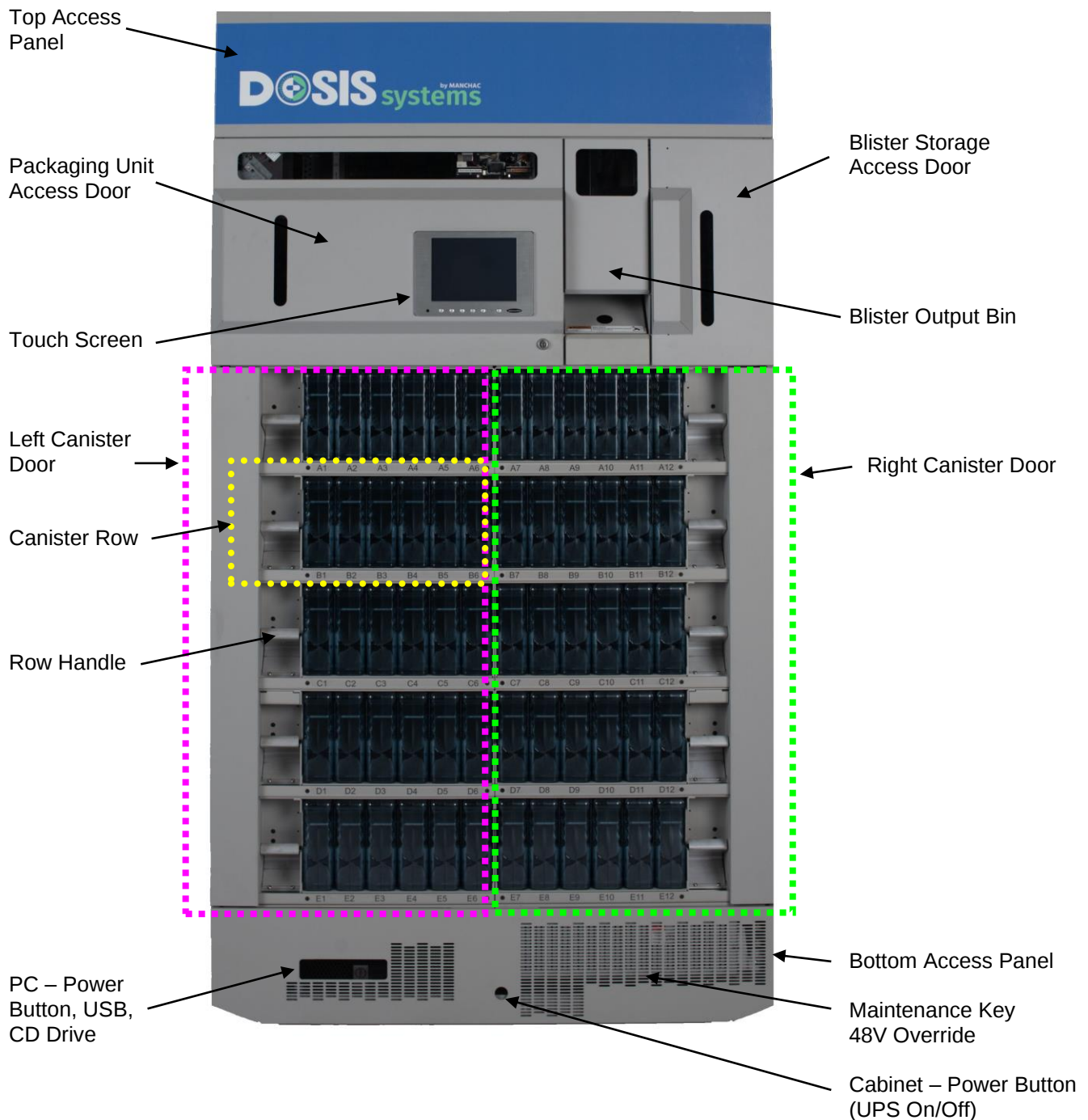
Overview

DOSIS Systems by Manchac is an autonomous workflow solution for blister card pharmacies which improves your efficiency, your productivity, and your bottom line. Realizing the optimum benefits of DOSIS involves a partnership between your pharmacy and our DOSIS team. Our most successful pharmacies adhere to best practices in their interactions with the DOSIS System and are in regular communication with us. Please alert our product support team promptly if anything out of the ordinary occurs.

Our team at Manchac Technologies is continuously working to improve DOSIS Systems. If there are features you would like to see or issues you need resolved, please let us know so that we are prioritizing our work based upon your needs.

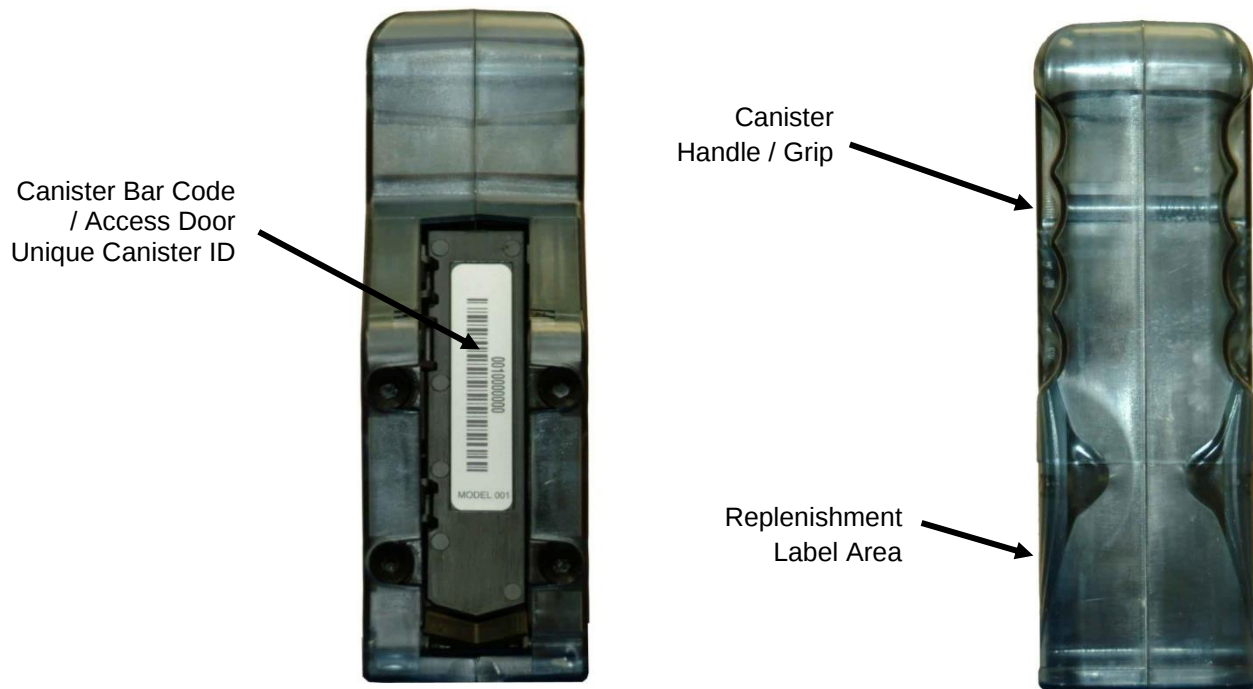
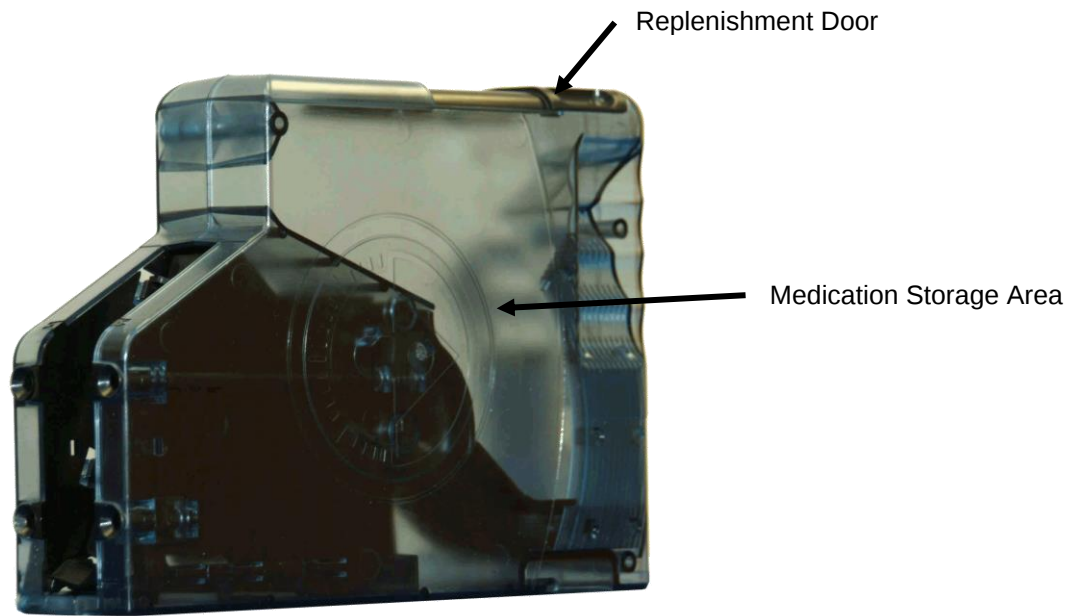
Each deployed DOSIS System is connected in two ways: 1) on your local pharmacy network, and 2) to Manchac's support infrastructure via secure remote connection. The connection on your local network enables multiple users within the pharmacy to interact with the DOSIS System – refilling canisters, running productivity reports, searching for the status of a specific prescription, etc. The connection to Manchac allows our team to monitor the efficiency and productivity of your system during regular usage and perform diagnostics and adjustments remotely when needed.

The DOSIS Tower



For detailed internal images see Troubleshooting Guide at the end of this document.

The DOSIS Canister



External Components of Your DOSIS System

External Label Printer

External printers have two functions in the DOSIS System: 1) to print the Replenishment labels that are adhered to each DOSIS canister upon refilling the canister with medications, and 2) to print prescription labels that are bypassed. Labels are printed to the bypass printer(s) based on custom rules specific to your pharmacy operation.



Bar Code Scanner

Each system is shipped with a bar code scanner which can be used at any PC workstation where the replenishments of DOSIS canisters is going to occur, the bar code scanner should be used to scan DOSIS canister bar codes as well as the stock-bottle bar codes.



Understanding DOSIS Systems - Chapter 4

Using Your DOSIS System

Realizing the full benefits of DOSIS Systems involves understanding how you, as a user, should interact with the system daily and keep your DOSIS system running smoothly to enhance your productivity and workflow. Just as a printer uses toner and paper as it prints, each DOSIS tower uses blister cards, blister lids, prescription labels and drugs to fill the prescriptions. Monitoring these levels and keeping your tower(s) stocked with consumable materials is essential to the realizing the most benefit from your autonomous system each shift in your pharmacy.

For operation during staffed hours of operation at your pharmacy, interaction with the system can be minimized by reacting to the color-coded status indicators as explained in detail in the next section. In general, red alerts mean that the system needs immediate attention to continue processing blister cards. Unless the status is highlighted in red, the system or tower is still operating and can be left unattended.

In preparation for operation during non-staffed hours at your pharmacy, each consumable level should be stocked such that the intended volume of work can be completed without need for restocking: lids and labels should have a full or nearly-full roll loaded and the blister card feeder should be topped-off with blister cards.

Monitoring Consumable Stock

Both the touch screen and the browser-based Web Access have indicators to show the current level of blister cards, lids, and labels. The Material Status column on the Web Access Dashboard quickly allows you to know when stock material is low and needs to be restocked. Web Access Cabinet Page (for each tower) also shows you the material statuses.

- **GREEN or BLUE** == Ok / Good
- **YELLOW** == Near Insufficient Quantity
- **RED** == Insufficient Quality / Needing Attention
- **GREY** == System Determining Above Statuses (in transition)

BLISTER LIDS

LABEL STOCK

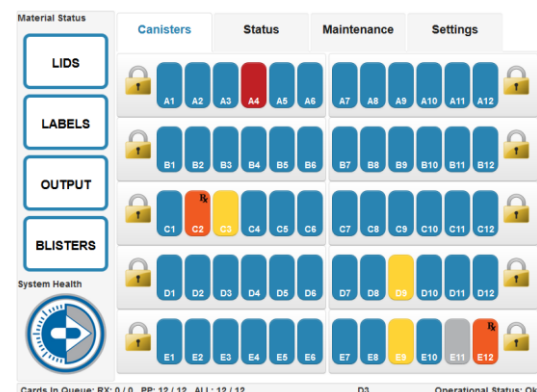
OUTPUT BIN

BLISTER CARDS

On the touch screen of each DOSIS tower, the Material Status is indicated with a color-coded box around each subsystem.

The colors to indicate the status are:

- **GREEN or BLUE** == Ok / Good
- **YELLOW** == Needs Attention Soon
- **RED** == Immediate Attention Required



Blister cards and lids are easily and quickly stocked by accessing their locations through the touchscreen.

- * The Lid Storage Unit Can Hold Approximately 500 Lids
- * The Blister Card Storage Unit Holds Approximately 400 Cards
- * A Label Roll is Approximately 1,000 Labels

Canister inventory can be monitored at a glance on the touch screen on each tower and the Web Access Page. The color legend below can be found at the bottom of the cabinet screen on the Web Access Page.

CANISTER SYMBOLS		
Symbol	Color / Description	Explanation of Symbol
 OK	Green or Blue	Canister is operational and has sufficient inventory.
 Low Quantity	Yellow	Canister is operational but the inventory is below the "low level" value.
 Demand Exceeded	Orange	Canister is operational but the inventory that the canister contains is not sufficient based on the number of pills being requested for dispensing.
 Replenish	Red	Canister is operational but the inventory is below 30 pills and soon will no longer be able to service dispensing request.
 Replen Verify Pending	Pink	Canister has been replenished but has not been verified by a pharmacist. (Security feature required. See Appendix C)
 Vacant	Light Grey	Canister is not present.
 No Drug	Black	Canister is recognized but does not have a drug associated.
 Needs Attention	Blue w/ White Explanation	"Needs Attention" occurs when too many counting discrepancies have occurred on a canister. A user needs to inspect the canister based on the system alert.
 Canister Broken	Orange w/ Black Explanation	"Canister Broken" only occurs when the Manchac Support Team deems a canister to be unusable.
 Work Pending	'Rx' Text	"Work Pending" appears on any canister that has at least one prescription order pending. This canister may also have pre-pack work pending. This indicator will be displayed on top of one of the color-coded icons.
 Prepack Only Pending	'P' Text	Represents that at least one Pre-Pack order is pending for the canister with the 'P' on it.
 Drug Deactivated	'H' Text	"Drug Deactivated" (a.k.a. on hold) is when a user decides to temporarily take the drug out of the active drug list for filling purposes. This indicator will be displayed on top of one of the colored icons.
 Needs Training	'T' Text	"Needs Training" is when the letter 'T' is overlaying a canister image. This new drug is in the canister and must be validated before the system can accept PMIS request for the drugs in that canister. Call our help desk if this persists for more than two hours: 1-877-626-2422

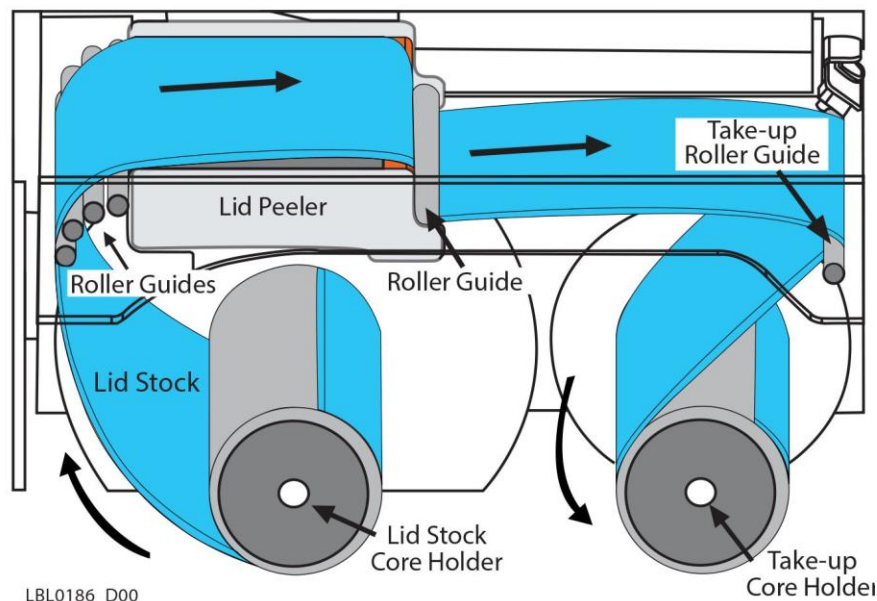
Stocking Supplies

Adding Blister Cards

1. Open the Blister Card Door using the touchscreen.
2. Stack Blister Cards with the top towards the back of the cabinet.
3. Close the Blister Card Door.



Replacing / Adding Blister Lids (without optional printing on lids)



1. Open the Packaging Unit Door using the touchscreen.
2. Place an empty core (either new or from old lid stock) on the Take-up Core Holder
3. Slide a new roll of lids on the Lid Stock Core Holder with the top of the lids towards the back of the tower and unrolling from bottom up.
4. Slide the lids stock between the roller guide and the wall, then up and over the Lid Peeler.
5. Route the lid stock under the next roller and then over and around the Take-up Roller (in between the roller and the wall). At this time, you will remove the lid that is immediately behind the lead lid.
6. Continue feeding the lid stock downwards and counter clockwise onto the Take-up Core Holder, and using one of the removed lids on the adhesive side, secure the leading end to the Take-up Core Holder ensuring the roll is taut.
7. Close the Packaging Unit Door.

Replacing / Adding Lids for Tower with Printing on the Back

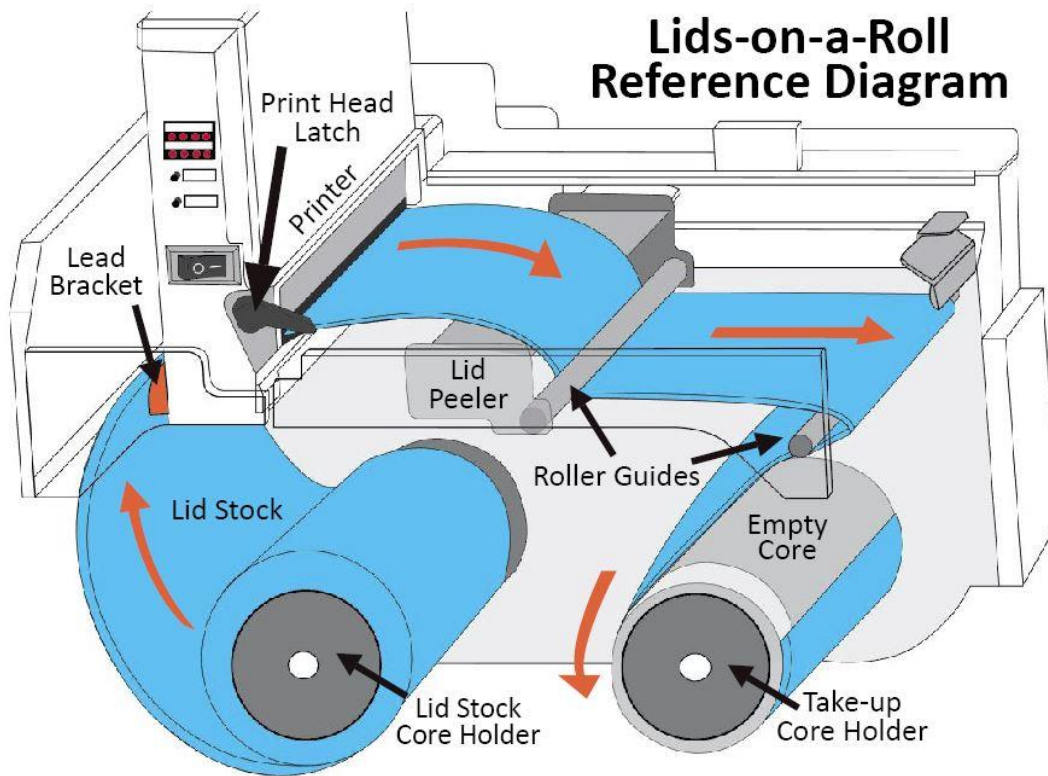


Figure 1: Lids-on-a-Roll Lidding Threading Diagram

1. Place the new roll of lids on the Lid Stock Core Holder
2. Open the print head latch
3. Feed the lidding materials up around the printer in-take guide and pull some Lid Stock through the printer (Figure 2)
4. Remove two (2) Lids from the roll (keep at least one of them for a future step).
5. Pass the lids with liner on top of the Lid Peeler's then in from of its roller guide, and then feed it over the take-up roller guide at the right side of the Lids-on-a-Roll.
6. Use one of the labels you removed earlier to adhere the liner to the empty cardboard core on that is on the Take-up Core Holder, Note you should adhere the liner to the left side of the cardboard roll.
7. Close the Print-head Latch.
8. Follow the instructions for Moving Printer to an IDLE State to move the printer to an IDLE state.
9. The printer should now be in an IDLE state and can be tested by following the instructions for printing an Alignment Test Label.

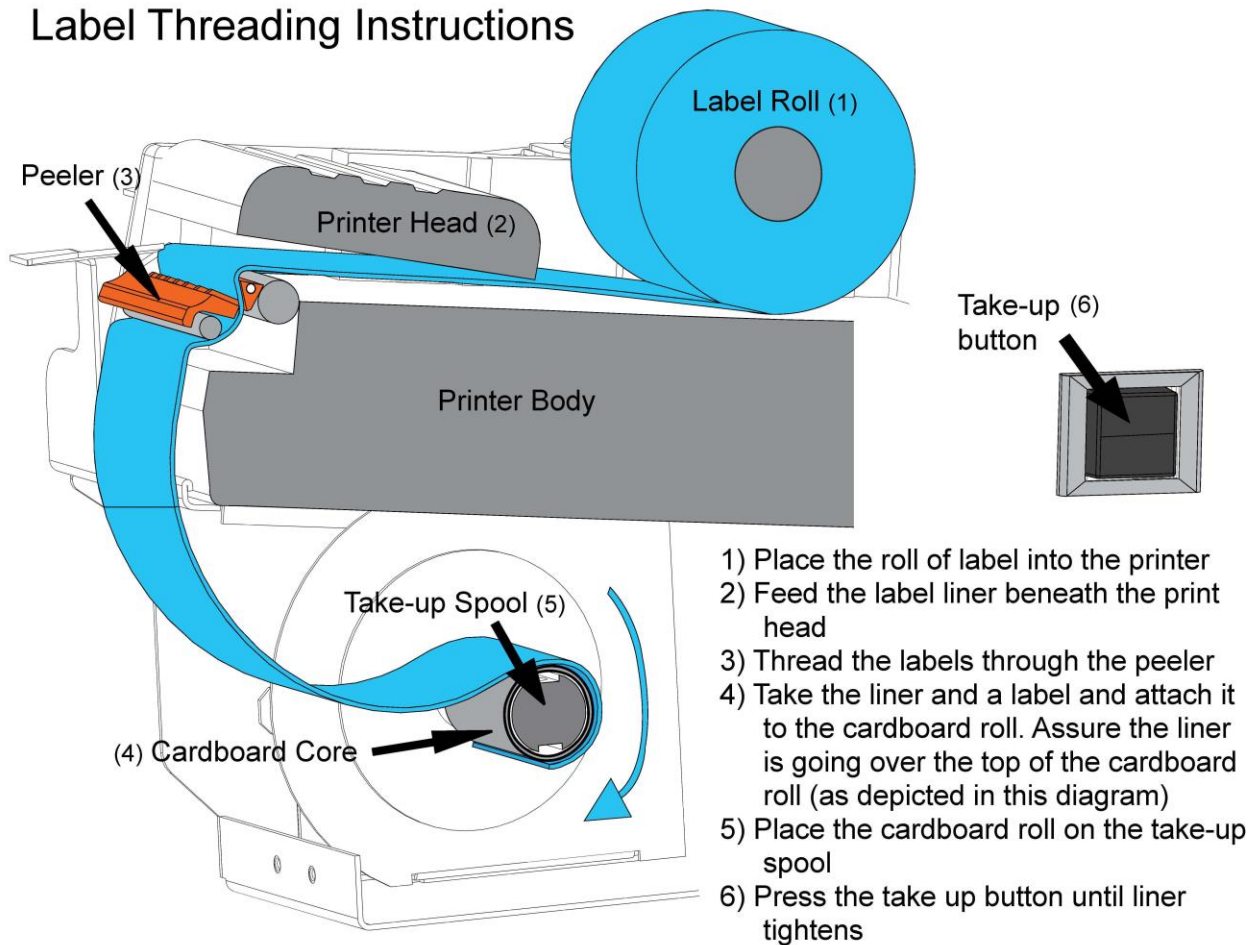


Figure 2. Intake Guide

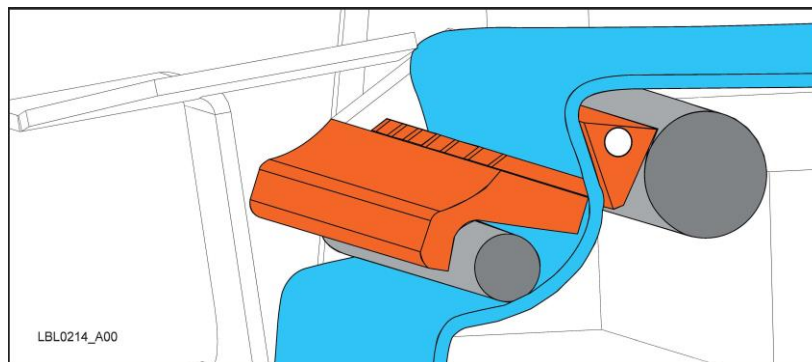
Restock Prescription Labels in DOSIS

Overview

Label Threading Instructions

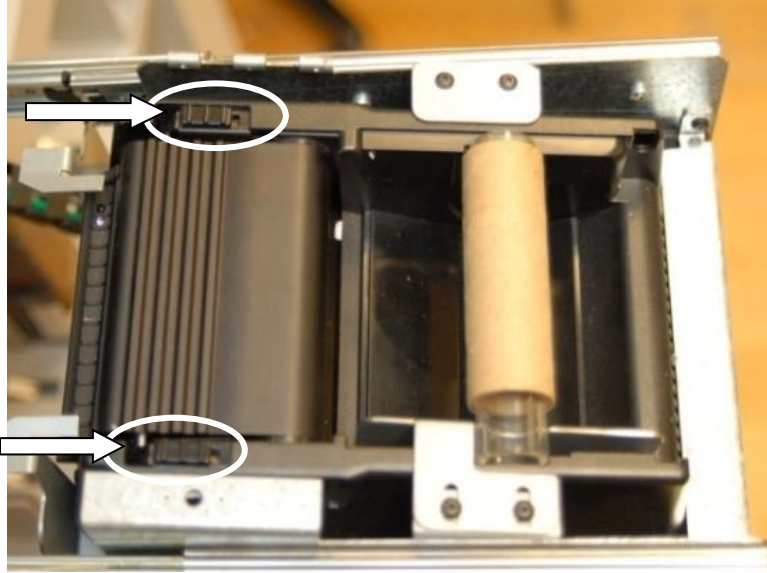


When routing through the printer's peeling mechanism, pay special attention to the zoomed-in cut-away view of the peeler below - improperly routed labels will not peel.



Step-by-Step Label Routing Instructions

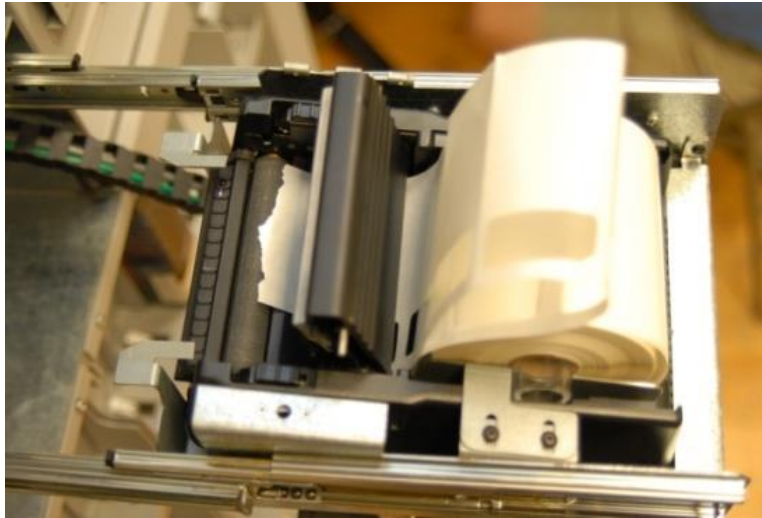
1. Open the print head by pushing the release latches towards the back of the printer.



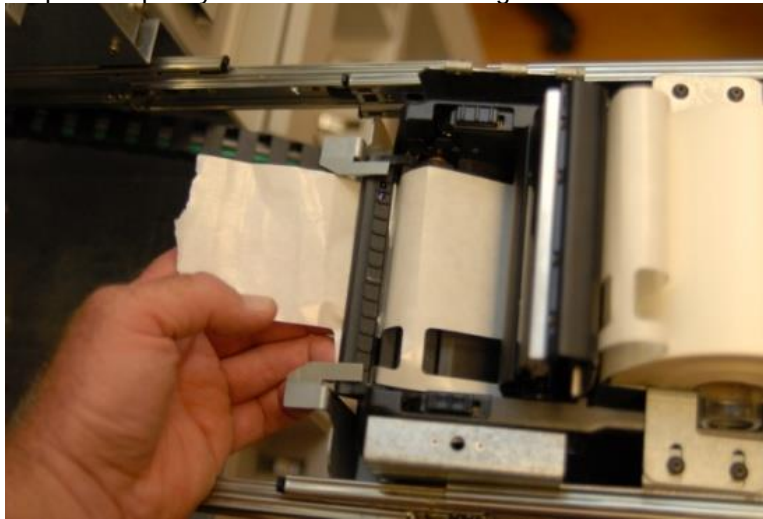
2. Put the plastic label roll guide through the core of the labels and place the roll into the printer with the leader unwinding from the bottom of the roll towards the inside of the cabinet.

NOTE: Based on the label manufacture, the clear plastic tube may not be required.

3. Remove 6-8 labels from the leader and throw them away.
4. Feed the media under the print head.



5. Feed the leader through the peeler by lifting the peeler up to expose the slot. Continue holding the peeler up as you feed the leader through it.

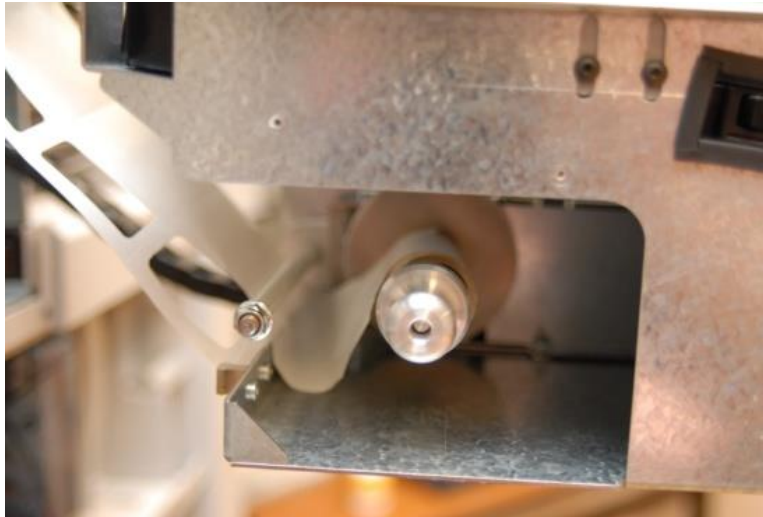


6. Place a label on the end of the leader and secure it to the old core.



7. Ensure that the leader is under the tension bar and push the core onto the take up reel and put the retaining knob back in place.





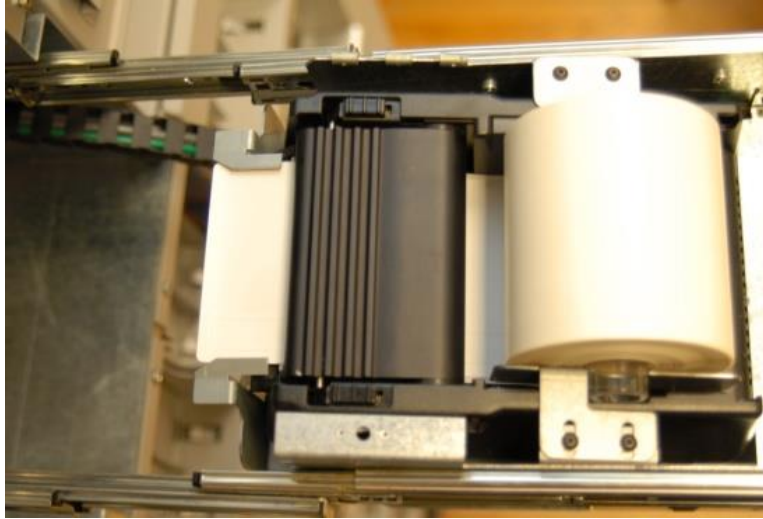
8. Press the take-up spool switch until the media leader is tight and the take-up spool quits turning.



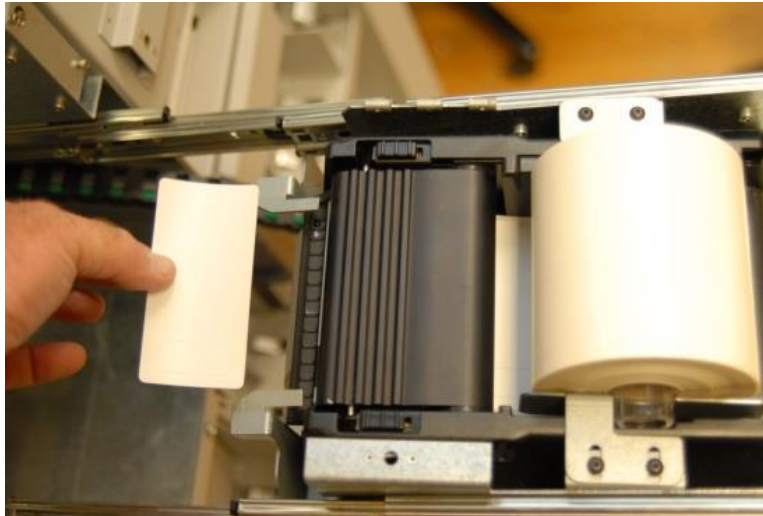
9. Test the printer by pressing the feed button on the front of the printer.



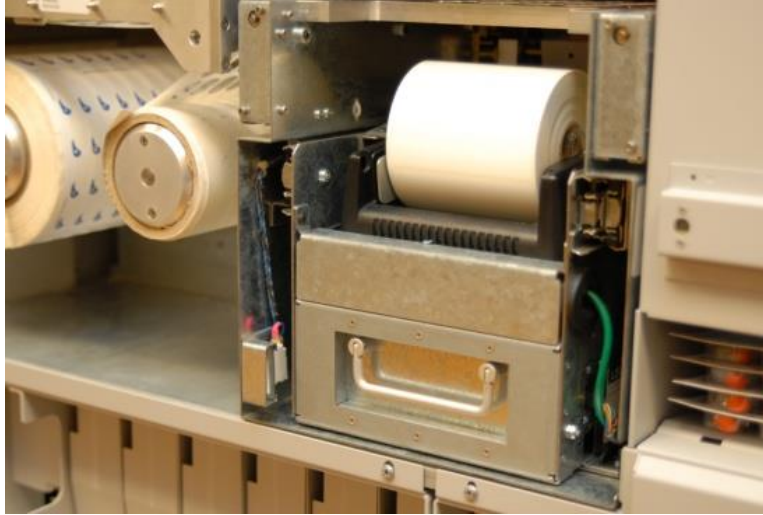
10. The label should feed out and peel.



11. Remove the label and tighten the tension by pressing the button on the side as illustrated below.



12. Push the printer back into the tower, ensuring the drawer handle is flat against the drawer.



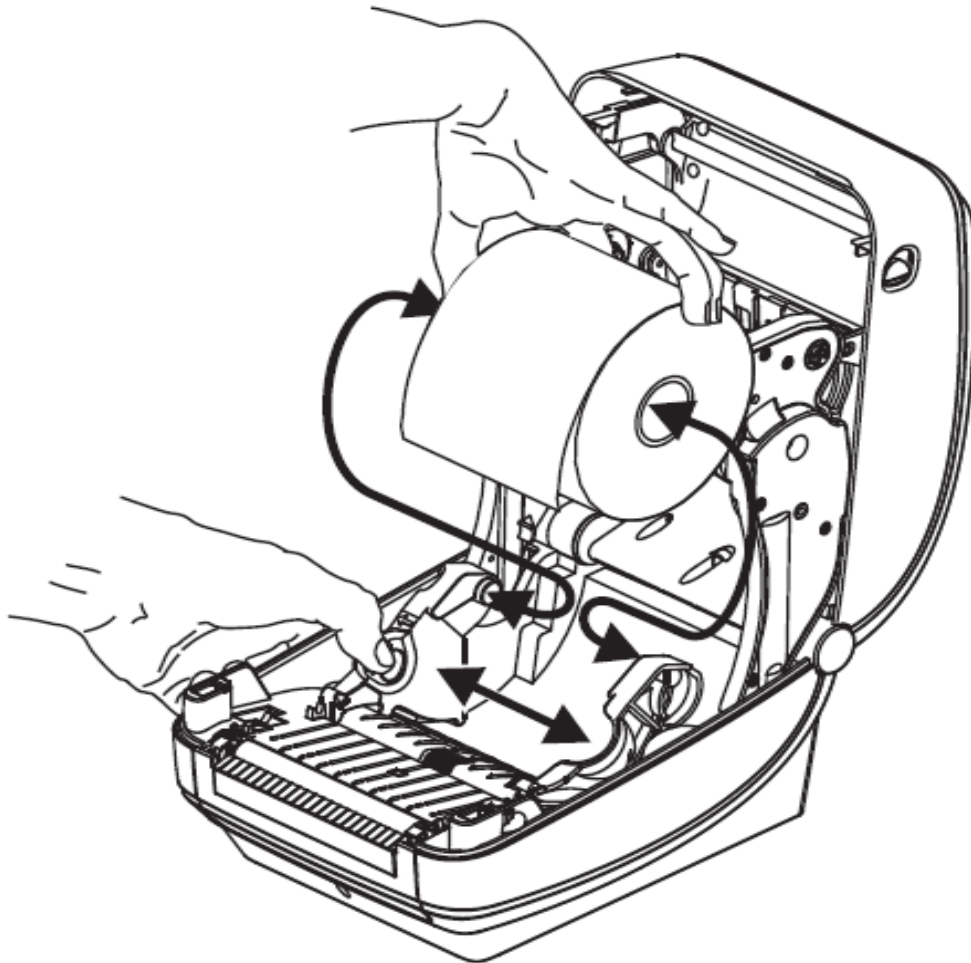
13. Close the access door and press the run button on the GUI to continue filling prescriptions.

Labels - External

Typically, the external printer is a Zebra® desktop printer with a User Guide which can be found online at www.zebra.com

Here is a brief example of how to load a roll of labels into the Zebra printer:

1. Open the printer. Remember that you need to pull the release latch levers toward the front of the printer.
2. Open the media roll holders. Pull the media guides open with your free hand and place the media roll on the roll holders and release the guides. Orient the media roll so that its printing surface will face up as it passes over the platen (drive) roller.



Monitoring Canister Inventory Levels

DOSIS' integrated reporting system gives you the ability to view which canisters need replenishing. A DOSIS system can have more the 60 active canisters in use, even with a single tower. In this case where canister are not in a DOSIS tower, the DOSIS Web Access Page will reports on all canisters as being on the 'Shelf'.

To know what drugs needing replenishing, run the Canister Needing Replenishment Report from the Web Access Page.

1. Open the DOSIS Web Access Page. Point to REPORTS and click Canisters Needing Replenishment. This will open a report showing you what canisters are low on inventory or are empty and needing more pills. The "low level" is defaulted initially to 60 pills but can be modified.

Canisters Needing Replenishment							Q Search:
Serial Number ▼	Drug Number	Drug Name	Location	Quantity	Pend. Work	Status	
0010014773	000544741	PREDNISONE 1 MG TABLET	D8	283	0	Empty	↻
0010014915	001151494	SEVELAMER 800 MG TABLETS, COATED	SHELF	0	0	Empty	↻
0010015659	007815608	VALSARTAN 80 MG TABLETS	SHELF	-31	0	Empty	↻
0010015667	000938943	ACYCLOVIR 400 MG TABLET	D2	42	0	Low	↻
0010015668	250100711	LODOSYN 25 MG TABLET	SHELF	-370	0	Empty	↻
0010015826	669930417	RALOXIFENE HCL 60 MG TABLET	A11	-11	0	Empty	↻
0010015954	435470275	DONEPEZIL HCL 5 MG TABLET, FILM COATED	SHELF	60	0	Ok	↻
0010015976	572370017	DULOXETINE 20 MG CAPSULE, DR	B12	60	0	Ok	↻

2. Once you have determined which canisters need replenishment, use the list to pull the drugs and take them to the replenishment workstation that is running the DOSIS Web Access Page. This workstation must have a bar code scanner and typically has the DOSIS external label printer nearby.
3. As room allows, retrieve the canisters that need replenishing from the DOSIS tower or from their shelf location.
4. Open the DOSIS Web Access Page. On the menu bar, point to the DRUG menu and click on Replenishment. The Replenishment screen appears. You can also utilize the shortcut icon on the DOSIS Web Access short-cut icons in the upper-right corner.
5. In the Canister Information text box, enter the canister serial number by scanning it or manually typing it in the canister's serial number

Canister Information

Scan Canister Barcode:

6. The drugs associated to that canister will be seen in the Drug Information text box.

Canister Information

Scan Canister Barcode: 0010000789

Low Level: 60 Quantity / Pending: 396 / 0 ☐ Reset "Ran Empty" ☐ Canister is Completely Empty

Drug Information - 00186- 5040

NEXIUM 40 MG CAPSULE, DELAYED RELEASE (CAPSULE, PURPLE)
ASTRAZENECA LP NEXIUM 40 MG, None

Stock Bottle Information

Barcode	Quantity	Lot	Expiration
			/

Bottles: 1 Total Qty: 0

- If the canister is completely empty, select the check box in the Canister Information panel box. This will clear all current lots stored for that canister.
- Enter in the Barcode, Quantity, Lot, and Expiration Date from the stock-bottle that you are going to empty into the canister

Stock Bottle Information

Barcode	Quantity	Lot	Expiration
301865040829	1000	GR89PH	10 / 2016

Bottles: 1 Total Qty: 1000

- The Web Access Page changes to a confirmation report showing the canister's replenishment history.

Replenishment label has been printed on external printer.

Canister Information								
Serial Num.	Quantity	Pill Demand	Low Level	Location	Status	Exp. Date	Time Left	Active
0010000789	406	0	60	B12 (L60 D02)	Canister Ok	08/31/2015	8 months, 1 week	True

Drug Detail Information								
Drug Number	Drug Name	Manufacturer	Shape	Color	Imprint Front	Imprint Back	Active	
00186-5040-XX	NEXIUM 40 MG CAPSULE, DELAYED RELEASE	ASTRAZENECA LP	CAPSULE	PURPLE	NEXIUM 40 MG	None	True	

Replenishment History								
Date/Time	Drug Number	Quantity	Lot Number	Lot Expiration	Tech	RPh	Empty Date	
12/20/2014 01:27:27 PM	00186-5040-82	10	GR89PH	Oct. 31, 2016	N/A	N/A		
10/13/2014 03:05:42 PM	00186-5040-54	180	CJ0075	Oct. 31, 2015	N/A	N/A		

- Also when apply is pressed, the system will print a new Canister Label which you are to apply to the front of the canister which you have just replenished.
- Place the canister label on the front of the canister by aligning the marks on the center of the label with the marks on the canister. (below is an example Canisters Label)

Mfr: Teva WHITE ROUND Printed on 9/23/12 Tech: RM Rph: MM	FUROSEMIDE 20 MG TABLET 00005-0004-03	Lots: ABC1234 - 12/2015
	Fu 12/ 2015 CAN: 0010000123	

- The canister can be returned to the DOSIS tower. It does not matter in which location you put the canister as the DOSIS tower scans each row while it relocks itself and verifies which drug has been returned to the tower.

Filling Operations - Chapter 5

On Demand

On Demand filling is when DOSIS interacts with your pharmacy's Pharmacy Management System (PMS) using our proprietary interface(s) to accept prescriptions that can be automatically filled by the DOSIS tower(s). These automatically filled cards will have a patient specific label already applied to the dispensed cards.

For patient specific prescriptions the electronic (PMIS) interface is the main point of entry for receiving prescription information for the fulfillment process within DOSIS. The DOSIS software physically utilizes an Ethernet connection and communicates via TCP/IP (or a file based configuration) to the pharmacy's PMIS. The DOSIS interface software supports many different protocols due to the disparity amongst PMIS brands and protocols.

DOSIS also interfaces to other DOSIS systems via an Ethernet network on systems that are deployed with more than one DOSIS tower. This external PC (a.k.a. Site Server) serves the purpose of routing and load leveling prescriptions across multiple towers. The communication between DOSIS systems is a proprietary protocol.

If you choose to use your PMIS to send prescriptions to DOSIS, our team works with your pharmacy team to help set up all the proper settings. This will ensure a smooth transition to filling on demand with DOSIS towers. Our team will also customize DOSIS prescription labels to match your existing label formatting.

Except for daily maintenance and monitoring of supplies, the DOSIS software communicates directly with your PMIS and fills the prescriptions sent to it to fill.

CAUTION: If the Site Server is powered off, then no prescriptions will be received nor processed by any of the DOSIS towers.

Pre-Pack

Pre-Pack allows you to select a drug and quantity of drug, as well as the number of cards you wish to dispense from your system. Pre-Packing a drug can be done in two ways in the system as described below.

Pre-Pack by Drug

- From the DOSIS Web Access Page.
- On the menu bar, point to DISPENSE and click Pre-Pack Fill. The Pre-Pack screen displays.

Scan Canister Barcode or Enter Drug Name/Number for Pre-pack:

- Place the cursor into input textbox, you can either Scan in a Canister's bar code, or enter a Drug Name or a Drug Number (i.e. NDC).

Note: enter a few characters of the Drug Name; for example, enter in "alp", and then the following would be shown based on the drugs that are contained in your system.

Scan Canister Barcode or Enter Drug Name/Number for Pre-pack:

Drug Lookup Results								
	Drug Number	Drug Name	Location	Quantity	Manufacturer	Shape	Color	Imprint
☐	00603-2127-XX	ALPRAZOLAM 0.25 MG TABLET	D3 (A1) 0010000440	544	QUALITEST PHARMACEUTICALS	OBLONG	WHITE	2087 / None
☐	00603-2128-XX	ALPRAZOLAM 0.5 MG TABLET	D3 (A2) 0010003191	810	QUALITEST PHARMACEUTICALS	OVAL	ORANGE	2088 / None
☐	57237-0048-XX	DIVALPROEX SODIUM 500 MG TABLET, DELAYED RELEASE	D3 (B6) 0010000498	400	CITRON PHARMA	OBLONG	PINK	D 86 /

Select the drug to prepack to continue..

- Select the radio button next to the drug you want to fill. Afterwards the screen will change to allow you to enter how you want to Pre-Pack.

Select the drug to prepack to continue..

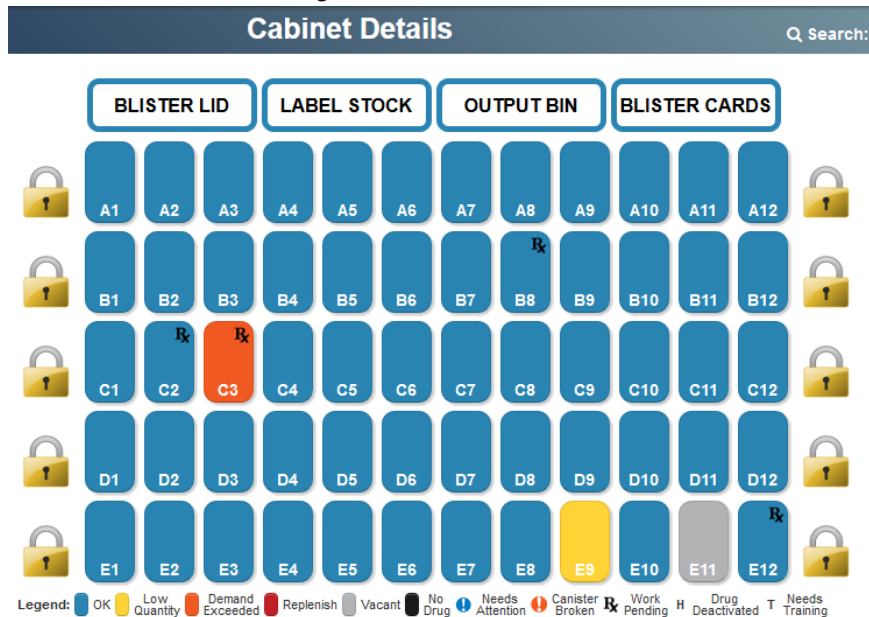
Number of Cards: Days Supply (Number of Doses): Pills Per Dose: Start Day: Last Day of Month:

Batch Id: Requesting Tech: Requesting RPh:

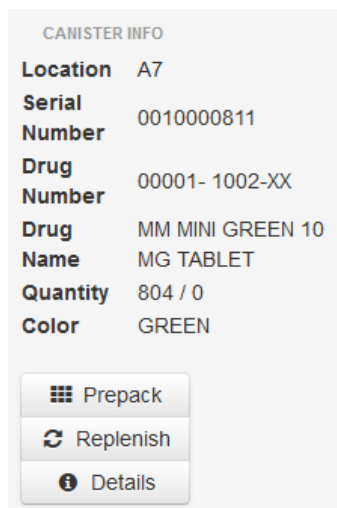
- Then proceed to enter the following:
 - Number of Card, this is the total quantity that you want to pre-pack of the chosen drug
 - Days' Supply/Number of Doses, the total number of doses you want to request
 - Pills per Dose, the number of pill per blister cup
 - Start Day, defaults to 1, but optionally be changed so that you can pre-pack a calendar filling methodology
 - Last Day of Month, options here are EOM, 28, 30, or 31. EOM is end-of-the-month of the current month when you are dispensing
 - Batch ID, this is an optional field that is placed on the label such that you can associate an internal code that can be later referenced.
 - Requesting Technician, pulled from the User that have been entered into the DOSIS system
 - Requesting RPh (Pharmacist), pulled from the User that have been entered into the DOSIS system
- Press the "Submit Pre-Pack Order" button to begin the filling process.

Pre-Pack Using the Status Dashboard

1. From the DOSIS Web Access Page.
2. Go to the Cabinet View screen; select the canister you wish to Pre-Pack from by hovering over it with the mouse and clicking it.



3. Once you click on the canister, the following panel will appear to the left of the Cabinet Details view.



4. Next validate this is the Drug and Strength that you intend to pre-pack from and press the “Pre-Pack” Button.

5. A canister history report will display with Pre-Pack request information at the top of the window.

Number of Cards: Days Supply (Number of Doses: 30 Pills Per Dose: 1 Start Day: 1 Last Day of Month: EOM

Batch Id:

Canister Information								
Serial Num.	Quantity	Pill Demand	Low Level	Location	Status	Exp. Date	Time Left	Active
0010000811	804	0	60	A7 (L60 D02)	Canister Ok	05/31/2018	3 years, 5 months	True

Drug Detail Information							
Drug Number	Drug Name	Manufacturer	Shape	Color	Imprint Front	Imprint Back	Active
00001-1002-XX	MM MINI GREEN 10 MG TABLET	MANCHAC TEST	ROUND	GREEN	M		True

Replenishment History							
Date/Time	Drug Number	Quantity	Lot Number	Lot Expiration	Tech	RPh	Empty Date
10/16/2014 06:46:02 AM	00001-1002-01	1000	kd82js	May 31, 2018	N/A	N/A	

6. Then proceed to enter the following:
- Number of Card, this is the total quantity that you want to pre-pack of the chosen drug
 - Days' Supply/Number of Doses, the total number of doses you want to request
 - Pills per Dose, the number of pill per blister cup
 - Start Day, defaults to 1, but optionally be changed so that you can pre-pack a calendar filling methodology
 - Last Day of Month, options here are EOM, 28, 30, or 31. EOM is end-of-the-month of the current month when you are dispensing
 - Batch ID, this is an optional field that is placed on the label such that you can associate an internal code that can be later referenced.
 - Requesting Technician, pulled from the User that have been entered into the DOSIS system
 - Requesting RPh (Pharmacist), pulled from the User that have been entered into the DOSIS system
7. Press the "Submit Pre-Pack Order" button to begin the filling process.

Orders Processing

Once all prescriptions as well as pre-pack orders are entered into the DOSIS system, they are managed by the Request Queued Report from the DOSIS Web Access Page. This report is what the pharmacy staff will watch to determine what is in queue and what can and cannot be dispensed. Request Queued report can be found beneath the Report drop-down menu or on the short-cut bar.

Requests Queued										
										Q Search:
Type	Id	Order Date	Drug Number	Drug Name	Qty	Complete	Location	Status	Priority ^	
RX	07830719-1	12/23/2014 08:46:34 AM	55111-0199-05	SIMVASTATIN 20 MG TABLET TAB	7	0 of 1	D3	Processing	NORMAL	
RX	07833724-1	12/23/2014 08:48:00 AM	13668-0141-05	CLOPIDOGREL 75 MG TABLET TAB	7	0 of 1	D3	Processing	NORMAL	
RX	07793680-4	12/23/2014 08:49:42 AM	57237-0048-05	DIVALPROEX SOD DR 500 MG TAB TAB	30	0 of 1	D3	Queued	NORMAL	
RX	07821369-3	12/23/2014 08:49:51 AM	00527-1342-10	LEVOTHYROXINE 50 MCG TABLET TAB	14	0 of 1	D3	Queued	NORMAL	
RX	07824788-3	12/23/2014 08:50:14 AM	00456-3210-60	NAMENDA 10 MG TABLET TAB	14	0 of 1	D3	Queued	NORMAL	

Prescription orders are denoted by the Type column: RX for Prescriptions orders and PPK for Pre-Pack orders.

Type ▼	Id	Order Date	Drug Number	Drug Name	Qty	Complete	Location	Status	Priority	
PPK	65862-0198-XX	12/19/2014 03:48:35 PM	65862-0198-XX	GABAPENTIN 100 MG CAPSULE	180	4 of 6	Shelf	Manual	PREFILL ▼	✕
PPK	45963-0556-XX	12/22/2014 05:10:29 PM	45963-0556-XX	GABAPENTIN 300 MG CAPSULE	900	8 of 30	D3	Queued	PREFILL ▼	✕

Also on the orders are the visual indicators assist your to find the status of the orders. The above image is indicating that there is a Pre-Pack order for Gabapentin 100mg that is on the “Shelf”, which means if the canister is placed back into DOSIS then the order would be then filled by DOSIS.

To find a specific order, you can use the Filtering options for the to enter any of the search fields, as seen below.

Filter Report ✕

Report Filters

Rx Number:

Canister Serial:

Drug Name:
Drug Number:

Basic Operations - Chapter 4

Adding Drugs to the System

Before you can use a drug in DOSIS, you must add the drug to the DOSIS database, and associate it to a canister. The placement of the canister is dynamic; you can place a DOSIS canister in *any* position within a DOSIS tower. Having the correct drug information in detail is one of the most important steps in getting the correct drug into your dispensed blister cards correctly. *Generally this operation is either done or supervised by your on-staff pharmacist.*

NOTE: DOSIS does make decisions on the information entered; not putting correct information can cause fulfillment discrepancies!

Add Drugs to the Database

1. On the menu bar, point to Drugs and click Add Site Drug.
2. The Add Site Drug screen displays.

3. Enter the NDC as it is printed on the Stock-Bottle, then press the Check button.
4. If it is a new NDC, then the following pop-up will appear.

5. Fill in the Drug Name. Note as you type it will search for entry that are pre-populated in the DOSIS database. If the item is not in the DOSIS database of drugs, you will be presented with the following then you can add your new item.

• ALP is not in the drug name list.

6. So once you have entered the required information into the pop-up form (see example below), you can press the Save button

Required Information:

- Drug Number – the FDA's NDC number for the drug being entered
- Drug Name – the name as it is spelled on the stock bottle, or how it is spelled in your PMS software system
- Strength -- as it is labeled on the stock bottle
- Unit – the unit as it is labeled on the stock bottle (i.e. MG, MCQ, etc...)
- Dosage Form – the form from the stock bottle label or attached description sheet (Tablet, Tablet Coated Capsule, etc...)
- Manufacture – the manufacture of the drug from the stock bottle label
- Shape - the form from the stock bottle label or attached description sheet (Oblong, Round, Oval, etc...)
- Color - the form from the stock bottle label or attached description sheet
- Front Imp. – the imprint on the actual pill, usually if it there exist an imprint on only one side it is considered the front
- Back Imp. – the imprint on the opposite side of the actual pill
- Quantity – this should be the stock bottle quantity
- Barcode – this is the bar code from the FDA labeler of the drug that represents this drug, not the wholesalers'

Optional Information

- Alt. Id – Alternate ID can be utilized to enter a inventory number in your Drug's Distributor ID that may be used for ordering purposes
- Pill Cost – If you would like for the pill cost to show up on the DOSIS inventory reports, you can add the pill cost and DOSIS will keep that for reporting.
- NDC-11 Match? – This is for OTC items that share NDC numbers across products, not required for non-OTC drugs. This forces the DOSIS software to match on the full NDC, including the 'packaging type' portion of the NDC number

Add Site Drug

Drug Number: 00229 - 2078 - 01

Drug Name: AMLODIPINE Strength: 20 Unit: MG

Dosage Form: TABLET Alt. Id: ☒ NDC-11 Match?

Manufacturer Information

Manufacturer	Shape	Color	Front Imp.	Back Imp.	Pill Cost
BAYER HEALTHCARE	ROUND	ORANGE	A	20	

Stock Bottle Information

Quantity	Barcode
1000	306032128287

Save Close

Associating/Disassociating a Drug to a Canister

Because DOSIS's canister design allows you the flexibility to put the same drug in it (despite manufacturing differences like color, size, and shape), you must first indicate which drug instances can be counted in the same canister. *What drugs you associate to a canister is what the system will allow users to replenish into a canister.*

1. On the menu bar, point to Drugs and click Drug Association.
2. Enter or scan the canister serial number located on the back of the canister.

NOTE: Only drugs associated can be replenished in a specific canister.

CAUTION: DOSIS will allow users to switch NDCs' that are different pharmaceuticals in a canister: THESE OPERATIONS SHOULD ONLY BE DONE BY A PHARMACIST!

Drug Association
Q Search:

Scan or Enter Canister Barcode to Associate:

No Drug Currently Associated to this Canister.

Scan the stockbottle barcode, enter the ndc number, or enter the drug name of the drug to associate to this canister:

Drug Lookup Results	
Drug Number	Drug Name

Select the drug to associate to the canister and click the Associate button.

3. Enter the drug name or NDC number in the Drug Search text box and click on the dialog box in a blank area. If there is a drug in the system that matches your search criteria, it will appear in the Drug to Add dialog box.
4. Select the radio button next to the drug you want to associate the canister to and click the Add Drug button.

No Drug Currently Associated to this Canister.

Scan the stockbottle barcode, enter the ndc number, or enter the drug name of the drug to associate to this canister:

Drug Lookup Results	
Drug Number	Drug Name
☐ 67877-0199-XX	AMLODIPINE BESYLATE 10 MG TABLET

Select the drug to associate to the canister and click the Associate button.

5. If the drug selected does not match a currently associated drug you will not be able to associate it and an error message will pop up and display the text “Drug Not Equivalent”.
6. If you have selected your drug, press the ‘Associate’ button to finish
7. If this is a new canister, the system will automatically bring you to a screen where you can move on with the Replenishment screens with the data you have already entered by press the Replenish button

Scan or Enter Canister Barcode to Associate:

0010005011

Current Drug Associated to Canister
AMLODIPINE BESYLATE 10 MG TABLET

List of Allowed Drug Numbers:

- ☐ 13668-0024-XX
- ☐ 31722-0239-XX
- ☐ 60505-0195-XX
- ☒ 67877-0199-XX

Current Drug Associations

After your initial association of a drug to a canister, the Drug Associations can be utilized to alter or remove drugs that are associated to a Canister in the DOSIS system.

1. On the menu bar, point to Drugs and click Drug Association, the following screen will appear. Here scan the Canister serial number, and press the Search button

Drug Association

Scan or Enter Canister Barcode to Associate:

Current Drug Associated to Canister
AMLODIPINE BESYLATE 10 MG TABLET

List of Allowed Drug Numbers:

- ☐ 13668-0024-XX
- ☐ 31722-0239-XX
- ☐ 60505-0195-XX
- ☒ 67877-0199-XX

2. If you want to disassociate a drug from the canister, select the radio button next to that drug in the Current Drug Mapping dialog box and click the Remove Drug button.

Scan or Enter Canister Barcode to Associate:

0010005011

Current Drug Associated to Canister
AMLODIPINE BESYLATE 10 MG TABLET

List of Allowed Drug Numbers:

- ☐ 13668-0024-XX
- ☐ 31722-0239-XX
- ☐ 60505-0195-XX
- ☒ 67877-0199-XX

3. Press the “Remove Associated Drug” to remove a selected drug from the canister

Replenishment

Adding drugs to a canister is the same process whether the canister is brand new or has previously been filled with drugs.

1. On the menu bar, point to the Drugs, and click Replenishment or the shortcut icon in the upper right corner of the Web Access screen.
2. Retrieve the canister from the DOSIS cabinet if necessary. (See touchscreen instructions).
3. Enter / Scan the canister which you are going to Replenish, the following screen will appear.



Replenishment
Q Search:

Canister Information

Scan Canister Barcode:
Q Search
⊗ Clear

Low Level: 60 Quantity / Pending: 600 / 0
 ☐ Reset "Ran Empty"
 ☐ Canister is Completely Empty

Drug Information - 00456- 3210

NAMENDA 10 MG TABLET (CAPSULE, GRAY)
 FOREST PHARMACEUTICALS FL, 10

Stock Bottle Information

Barcode	Quantity	Lot	Expiration

Bottles: 1 Total Qty: 0

4. Inspect the information displayed.
 - a. The drug that is associated to the canister will display in the Drug Information area.
- b. Also notice the current Quantity is displayed, along with the demand for the canister in this example, the current quantity is 600, and there is no outstanding work/demand so its value is 0.
- c. If the canister is empty and the system is displaying a quantity, then please check the "Canister is Completely Empty" check box. This will zero out the quantity, as well as remove any existing lots associated to this canister.

NOTE: At this time, the software will display all the allowable instances to select from. This selection also clears the current drug lots. This allows your pharmacy to only have one lot at a time based on your pharmacy preferences (see also "System Preferences").

- d. If the system has reported "Ran Empty" erroneously for a canister and there are still sufficient pills in the bulk area of the canister and now the system is displaying the canister as RED on the Cabinet View, then the user can simply select the check box beside Reset "Ran Empty" and press Apply button. This will restore the count and maintain the last replenishment record associated to the selected canister.

5. Next step, within the Stock Bottle Information, scan a stock bottle(s) bar code in the Barcode input box.

Stock Bottle Information				
Barcode	Quantity	Lot	Expiration	
304563210600	60	GR89PH	8	2016

- a. The Quantity Field is automatically populated with the Quantity Field that is entered during adding the given drug to the Site Drug List.

NOTE: The user can optionally override this field by clearing the Quantity Field and entering in a different number.

- b. Lot information for the scanned stock bottle should be entered next.
- c. Expiration date drop-down menus are provided for both the month and the year.

6. If you are doing multiple stock-bottles in the same DOSIS canister, then you will need to click the plus (+) button. Once the plus button is clicked, a new row will appear below the first row.

Stock Bottle Information				
Barcode	Quantity	Lot	Expiration	
304563210600	60	GR89PH	8	2016
304563210600	60	GR89PH	8	2016

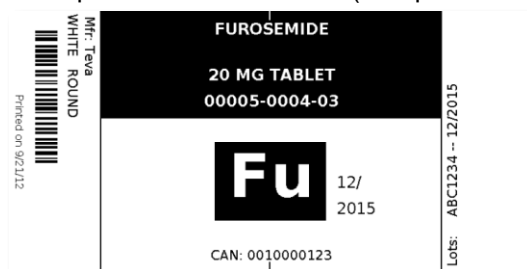
- a. Next scan the stock bottle barcode into the Barcode Entry Field, and the system will pre-populate the next field with Quantity, Lot, and Expiration Date, if the barcode is the same as the prior entry. When the stock bottle bar code is different, the Rows Fields will be left blank.
- b. The number of bottles that have been added and the total quantity is displayed at the bottom left corner of the Replenishment screen.

Bottles: 2 Total Qty: 120

- c. You can repeat this process for as many stock bottles as you wish to replenish in the given DOSIS canister.

7. Pour the content of each stock bottle that has been scanned into the DOSIS canister
NOTE: DO NOT pour desiccants into the canister during Replenishment. This leads to counting DISCREPENCIES as well as the canister going into attention state unnecessarily.

8. Once finished press the Apply button. This will automatically generate a canister label that you can apply to the front of the canister to stay in adherence to State Board of pharmacies' Example of a Canister Label (Sample here isn't the Namenda in the above examples).



9. Upon a successful submission you will be presented with an information report as follows:

Canister Detailed Info								
								Q Search:
Replenishment label has been printed on external printer.								
Canister Information								
Serial Num.	Quantity	Pill Demand	Low Level	Location	Status	Exp. Date	Time Left	Active
0010001011	720	0	60	B8 (L60 D02)	Canister Ok	08/31/2015	8 months, 1 week	True
Drug Detail Information								
Drug Number	Drug Name	Manufacturer	Shape	Color	Imprint Front	Imprint Back	Active	
00456-3210-XX	NAMENDA 10 MG TABLET	FOREST PHARMACEUTICALS	CAPSULE	GRAY	FL	10	True	
Replenishment History								
Date/Time	Drug Number	Quantity	Lot Number	Lot Expiration	Tech	RPh	Empty Date	
12/26/2014 07:35:40 AM	00456-3210-60	60	GR89PH	Aug. 31, 2016	N/A	N/A		
12/26/2014 07:35:40 AM	00456-3210-60	60	GR89PH	Aug. 31, 2016	N/A	N/A		
10/17/2014 11:59:42 AM	00456-3210-60	600	45846	May 31, 2018	N/A	N/A		
01/06/2011 11:03:24 AM	00456-3210-60	600	A186839	Aug. 31, 2015	SYSTEM	SYSTEM		
01/05/2011 08:53:07 AM	00456-3210-60	384	A186839	Aug. 31, 2015	SYSTEM	SYSTEM		

10. The final step is to return the canister to the DOSIS.

NOTE: The canisters do not have to be returned to the same locations. The DOSIS rescans the row after it has been locked to verify what canister(s) have been placed in a given row.

DOSIS Settings

The DOSIS Settings are overall administration of your DOSIS Systems within your pharmacy. **These settings can have a negative impact if not utilized properly.** We suggest you work with the DOSIS support staff for guidance on proper usage.

System Settings

From the Settings Menu, you can go to System Setting to manage the overall operations of your DOSIS system.

PMIS Settings

☒ Interface Dispensing On ☒ Automatic Bypass Printing On

Cancel All in Request Queue

Cancel All Requests in Queue Print & Cancel All Requests in Queue

Reset Services

Reset PMIS Reset DbMonitor Reset Printservice

Change Cabinet Parameters

Cabinet	Blister	Order Processing	Allow Filling?
D255	Rx Systems 31 Day (31-1) D1316	Allow All Types	☒ Allow Filling?
D39	Rx Systems 31 Day (31-1) D1316	Allow All Types	☒ Allow Filling?
D40	Rx Systems 31 Day (31-1) D1316	Allow All Types	☒ Allow Filling?

Site Server Shutdown/Reboot

Shutdown Site Server Reboot Site Server

Clear Report Filters

Clear Report Filters

Cabinet Reboot

Shutdown D255 Reboot D255

Shutdown D39 Reboot D39

Shutdown D40 Reboot D40

PMIS Settings

Automated Dispensing On – by un-checking this your system will halt (ignore) processing all prescription orders from your PMS system

Bypass Printing On – by un-checking this the system will not print any prescription by pass labels

Cancel All In Request Queue

Cancel All Request in Queue – pressing this button will empty / flush all request for both prescriptions and pre-pack request in the DOSIS system

Print & Cancel Request in Queue – pressing this button will empty / flush all request for both prescriptions and pre-pack request from DOSIS, but then print a prescription label for prescription request that is being flushed

Reset Services

Reset PMIS – pressing this button will reset the software to reestablish a connection to the PMS software where DOSIS is receiving orders from. Mostly used when you have rebooted the PMS server in your pharmacy

Reset DBMonitor – pressing this will reset the DOSIS software responsible for managing all orders in the DOSIS system. Mainly used if the system has work and the system status is 'BLUE' but the system may be idle

Reset Printservice – pressing this will reset the DOSIS print service software. Mainly used when DOSIS hasn't printed in by-pass labels but has been processing orders that should have been printed

Clear Report Filters

Clear Report Filters – pressing this button will reset all the report filter setting back to default which no filters

Change Cabinet Parameters

Per tower cabinet, you can change the following

Blisters – this drop down allows you to select the blister card style and manufacture

Processing Types – Typically this drop down isn't active and is set to "allow all types", in specific deployments a customer may dedicated certain towers to only handle specific types of prescriptions.

Allow Filling – This check box if not checked takes an individual tower out of service. It will not receive any prescriptions if un-checked!

Cabinet Reboot

Here you have buttons to restart or power down individual towers

Site Server Shutdown/ Reboot

Here you have buttons to restart or power down the Site Server.

DOSIS® Web Access - Chapter 5

DOSIS Systems has two primary software methods of user interaction: 1) the Web Access browser-based interface which can be accessed from any workstation or mobile device on your pharmacy network; and 2) the touchscreen located on each tower.

Web Access Usage

The Web Access Page is for remote functions by the pharmacy users, administrators, and installation/repair technicians. Some functionality is duplicated with the touchscreen for convenience, but each user interface also has unique functionality.

Users in different roles will need to utilize the Web Access for different purposes:

Pharmacy Users:

- Monitor DOSIS Systems for status
- Add/Replenish Drugs to the System
- Monitor work in queue and adjust as necessary
- Activate / Deactivate Canisters
- Issue Pre-Pack/Pre-Pack Request
- Reports

Administration:

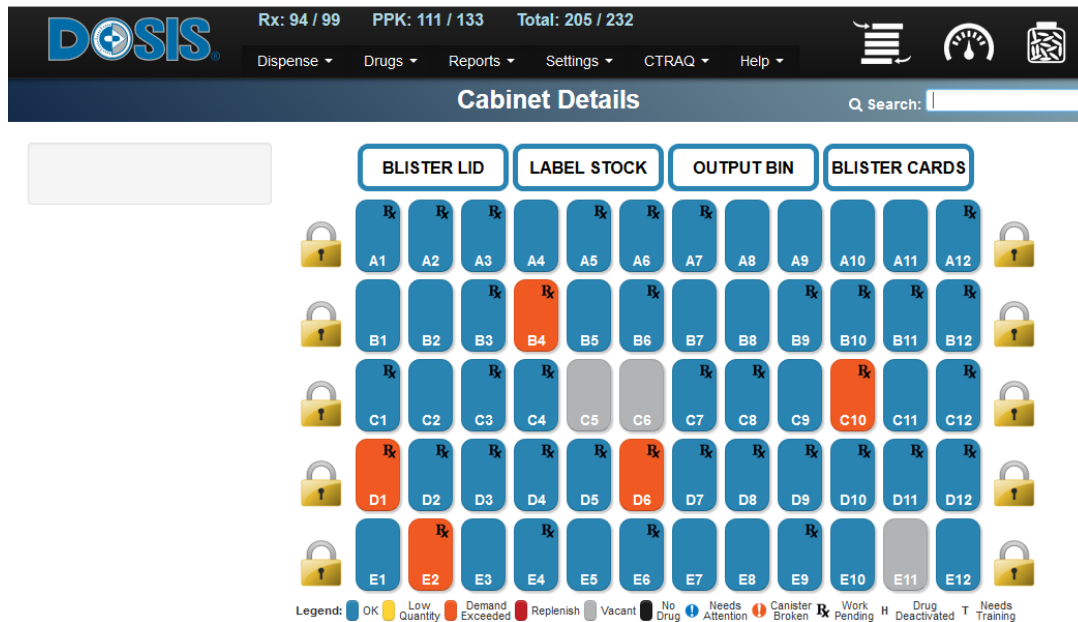
- Add Drugs into DOSIS Systems
- Associate Drugs to Canisters
- Reports

Technician Function:

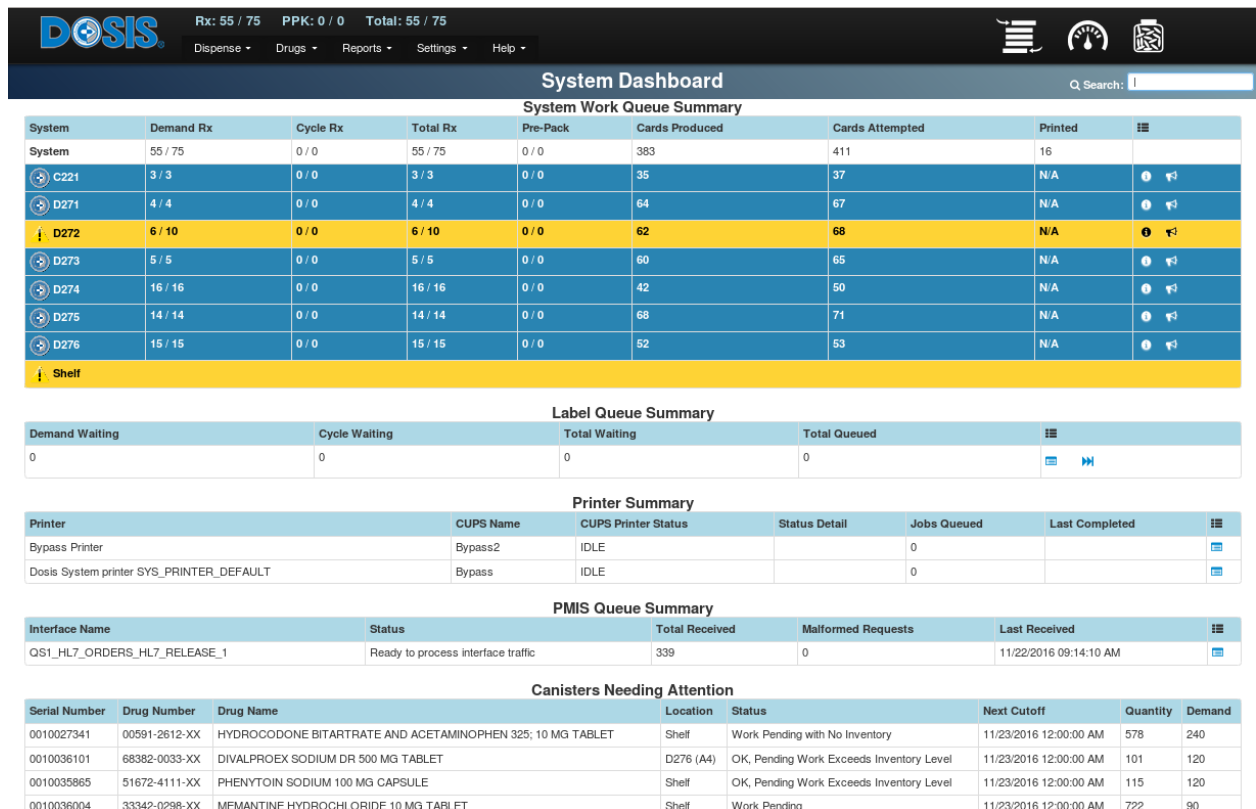
- Diagnosis and
- Analyze Logs to Verify Operation of DOSIS
- Monitor and Perform Data Backups
- Set up External Label Printers

Web Access Cabinet View Screen Layout

Your DOSIS system has been designed to allow you to manage your DOSIS system at a glance. For single unit deployments, the Cabinet Details web-page is the default. As seen below.



If you have multiple DOSIS towers then the system automatically changes the default view to the Dashboard view. The dashboard gives a higher-level view of 'work-in-process'. As seen below.



Web Access Shortcut Icons

For quick access to the most frequented items in the DOSIS Web Access, we have provided you some shortcuts for one-click access.



Request Queue – is for viewing all prescriptions and pre-pack orders that your DOSIS System has queued to fill.



Dashboard – is the high-level view of all work and system health of your DOSIS System.



Replenishment – one-click access to adding additional drug inventory to your canisters.



DOSIS logo – will bring you to the homepage

Web Access Status Dashboard

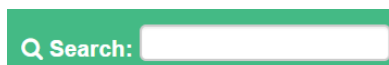
Across the top of all Web Access pages you will see the following.

Rx: 96 / 101 PPK: 111 / 133 Total: 207 / 234

These numbers show the Work-In-Process (WIP) for orders that have been requested from your DOSIS system. In the above example, the system has 101 prescription requests but can only currently satisfy 96 of those orders. Similarly for outstanding pre-pack request the system has 133 requests but can only satisfy 111 of those orders. Also a total is given in the same format. Typically when the numbers are not equal, this is due to insufficient inventory in the canisters.

Web Access Search Box

The search box featured of the Web Access is essential to doing some simple and quick navigation to the screen and or information you are seeking.



You can search on the following items:

- Canister Barcode (partial or the complete number)
- Drug Name (partial or the complete name)
- NDC Number (partial or the complete number)

Web Access Menu Navigation

The navigation menu is designed to take you to the appropriate location in the DOSIS software to perform needed tasks.



Dispense

Pre-Pack Fill – Done by the DOSIS when filling multiple blister cards with the same drug and printing a stock drug label on each card

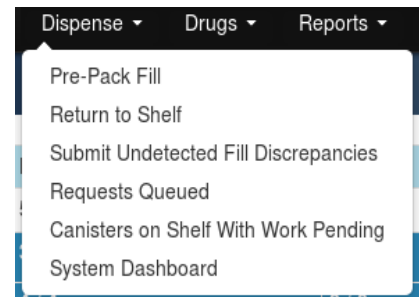
Return to Shelf – a form to enter a work-order ID so you can reprint a Pre-Pack type of label so that you can return it to your pre-pack inventory

Submit Undetected Fill Discrepancies – a form to enter a work-order ID so that you can report to Manchac Support team undetected fill discrepancies

Requests Queued – report that shows all pending work that the DOSIS is processing

Canisters on Shelf with Work Pending – report that show you all the canisters with work pending on them but these canister are not inside a DOSIS tower.

System Dashboard – the high level view of all work that is being process as well as the overall system status of each L60 that is in your system



Drugs

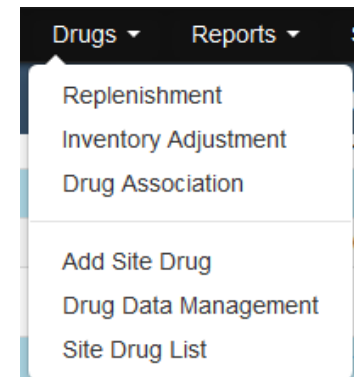
Replenishment – To add drugs to a canister that has a drug associated to it

Inventory Adjustment – Allows the user to adjust the inventory in the system. For instance if a user has a recall or filling directly from a canister outside of the DOSIS

Drug Association – Initiating and managing the associated drugs to a specific canister

Add Site Drug – Entering a drug's information into the DOSIS system. You must first do this in order to perform Drug Association

Drug Data Management – Under the Data Management menu selection are five different areas of drug data that you can modify. These data elements are selectable items in the Add Site Drug list.



- i. **Drug Names** - Edit or add a drug name.
- ii. **Drug Strengths** - Edit or add drug strengths.
- iii. **Drug Units** - Edit or add drug units.
- iv. **Drug Manufacturers** - Edit or add drug manufacturers.
- v. **Drug Colors** - Edit or add drug colors.

Site Drug List – Reports all of the drugs that have been added to the system. Users can also update/modify drug data as well as adding or removing different stock bottle sizes and drug instances

Reports Menu

Report menu is divided in to sub-sections to assist you in finding the correct type of report. Below is the support menu and the relative descriptions:

<u>System</u>	<u>Canister</u>	<u>Statistics</u>
Alert History	Current Lots in Canister	Canister Dispense Statistics
	Demand Details	Card Discrepancies
PMIS Requests	Discrepancies	Card Quantities
Requests Dispensed	Drug Quantities Dispensed	Drug Throughput
Fill Discrepancies	Overview	Performance Summary
Submitted Fill Discrepancies	Current Inventory	Cabinet Fill Summary
	Needing Replenishment	Facility Summary
Pre-Pack Log	Replenishment History	Printer Summary

SYSTEM

Alert History – list of all system alerts that have occurred

PMIS Request – allows you to look up all PMIS requests that have been submitted to DOSIS and allows you to re-print a prescription label to external DOSIS printer for reprints

Requests Dispensed – displays the queue for prescriptions that have been sent to DOSIS from your PMIS or Pre-Pack entered via the DOSIS Web Access Page

Fill Discrepancy – shows what cards are dispensed where in error. It also shows the reported error for each dispensed card

Pre-Pack Logs – Allows you to see what pre-packs have been run in DOSIS. If you are dealing with user tracking, then this sheet can be utilized as a log of who dispensed which pre-packs

CANISTER

Current Lots in Canister – displays the current drug and lot information for all canisters associated to the system

Demand Details -- what canisters need to be replenished and their specific location in or out of DOSIS

Discrepancies – displays the current status of all canisters associated to the DOSIS system

Drug Quantities Dispensed – displays the total number of pills dispensed for all canisters associated to the system

Overview – shows you the status of the canisters in the system. You can activate or deactivate the drug in the canister from this screen as well as re-print canister labels for a specific canister

Needing Replenishment – a report that tells what canisters need to be replenished and their specific location in or out of DOSIS

Replenishment History – a searchable report that gives you the replenishment histories of each canister. If your system is configured for tracking users, then this report can be used as a log of who replenished which canisters for a given time period

STATISTICS

Canister Dispense Statistics – displays when a canister was commissioned or decommissioned, the total fills by the canister and the total number of pills dispensed by the canister

Card Discrepancies – displays the current status of all canisters associated to the DOSIS system

Card Quantities – gives a break out on what types of prescriptions are handled by DOSIS

Drug Throughput – a report gives a view of what drugs are being used the most in the DOSIS system

Performance Summary – this report provides the performance numbers relative to the work received from your PMIS and how your tower(s) is performing relative to the work received.

Cabinet Fill Summary – the overall blister card production based on a per tower basis. This allows you to view the load balance across your towers.

Facility Summary – many times in the LTC market you want to see the tower utilization by your customer/facility.

Printer Summary – often since the DOSIS software does more than just fill cards, we often print a large portion of the prescription labels, especially in Cycle Filling scenarios, this report shows the breakdown of the number of prescriptions printed.

Help Menu

User Documentation – this option opens the user guide, quick references, and Printer Threading guide as a PDF file in another tab

Help Desk – is a link out to our Help Desk (www.help.dosis.com) Ticketing system

Contact Information – displays the phone numbers and contact emails for obtaining help from Manchac Technologies, LLC

About – provides you with the date and the software versions of the DOSIS software.

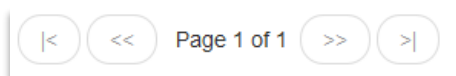
Operating DOSIS Reports

DOSIS reports allow DOSIS to provide feedback about the current status to the historical data of what occurred. All reports are run from the DOSIS Web Access Page so that the user can access the reports from any PC on the same network as DOSIS.

Navigation of the reports happens when simply clicking on the report's name. The report name is beneath the report menu on the Web Access Page. Below are the basic mechanisms to allow you to best utilize the data being displayed.

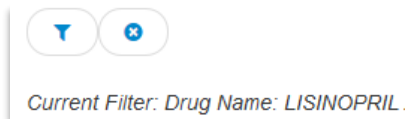
Paging

Since the reports are web based, the reports only bring the data set that fits on a given page size. At the bottom of each report is the paging icon that allows you to move to the next page of data.



Filtering

At the bottom left corner of each report is a filter icon, and a clear filter icon.



Below the two icons, the system will also show you what your current filter is. Here the filter was Drug Name with the value Lisinopril.

Each report filter may differ. However, if the data you are viewing is based on time, the filter will give you the ability to select a date range as show below:

Filter Report

Report Filters

Workorder Id:

Drug Name: Drug Number:

Date: ☐ Today ☐ Yesterday ☒ Range

From: To:

Calendar View:

Dec 2014 | January 2015 | February 2015

Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31							

Today Done

Other possible filters include canister serial number, drug number, drug name, prescription number, timeframe grouping, and orders type.

Exporting

In the bottom right corner of exportable reports you can find two icons that allow you to either export to Portable Document Format (PDF) or comma delimited data text file (CSV)



By selecting either report format will cause your browser to open a 'save dialog box' such that you can save the exported file off to a storage location of your choice.

Dashboard Page

The overall status of your system in regards to work-in-process can be viewed at the system dashboard of DOSIS. It is from here that you can drill down to get to causes of potential problems. Below is the basic dashboard page.

Rx: 55 / 75 PPK: 0 / 0 Total: 55 / 75
 Dispense ▾ Drugs ▾ Reports ▾ Settings ▾ Help ▾

System Dashboard
Q Search:

System Work Queue Summary

System	Demand Rx	Cycle Rx	Total Rx	Pre-Pack	Cards Produced	Cards Attempted	Printed	
System	55 / 75	0 / 0	55 / 75	0 / 0	383	411	16	
⊕ C221	3 / 3	0 / 0	3 / 3	0 / 0	35	37	N/A	ⓘ ↻
⊕ D271	4 / 4	0 / 0	4 / 4	0 / 0	64	67	N/A	ⓘ ↻
⚠ D272	6 / 10	0 / 0	6 / 10	0 / 0	62	68	N/A	ⓘ ↻
⊕ D273	5 / 5	0 / 0	5 / 5	0 / 0	60	65	N/A	ⓘ ↻
⊕ D274	16 / 16	0 / 0	16 / 16	0 / 0	42	50	N/A	ⓘ ↻
⊕ D275	14 / 14	0 / 0	14 / 14	0 / 0	68	71	N/A	ⓘ ↻
⊕ D276	15 / 15	0 / 0	15 / 15	0 / 0	52	53	N/A	ⓘ ↻
⚠ Shelf								

Label Queue Summary

Demand Waiting	Cycle Waiting	Total Waiting	Total Queued	
0	0	0	0	ⓘ ↻

Printer Summary

Printer	CUPS Name	CUPS Printer Status	Status Detail	Jobs Queued	Last Completed	
Bypass Printer	Bypass2	IDLE		0		ⓘ
Dosis System printer SYS_PRINTER_DEFAULT	Bypass	IDLE		0		ⓘ

PMIS Queue Summary

Interface Name	Status	Total Received	Malformed Requests	Last Received	
OS1_HL7_ORDERS_HL7_RELEASE_1	Ready to process interface traffic	339	0	11/22/2016 09:14:10 AM	ⓘ

Canisters Needing Attention

Serial Number	Drug Number	Drug Name	Location	Status	Next Cutoff	Quantity	Demand
0010027341	00591-2612-XX	HYDROCODONE BITARTRATE AND ACETAMINOPHEN 325; 10 MG TABLET	Shelf	Work Pending with No Inventory	11/23/2016 12:00:00 AM	578	240
0010036101	68382-0033-XX	DIVALPROEX SODIUM DR 500 MG TABLET	D276 (A4)	OK, Pending Work Exceeds Inventory Level	11/23/2016 12:00:00 AM	101	120
0010035865	51672-4111-XX	PHENYTOIN SODIUM 100 MG CAPSULE	Shelf	OK, Pending Work Exceeds Inventory Level	11/23/2016 12:00:00 AM	115	120
0010036004	33342-0298-XX	MEMANTINE HYDROCHLORIDE 10 MG TABLET	Shelf	Work Pending	11/23/2016 12:00:00 AM	722	90

The dashboard is broken up in to five basic sections: System Work Queue Summary, Label Queue Summary, Printer Summary, PMIS Queue Summary, and Canisters Needing Attention

System health icons come in the basic three DOSIS status colors that indicate the overall status of each DOSIS L60:



GREEN or BLUE == Ok / Good



YELLOW == Needs Attention Soon



RED == Immediate Attention Required

These icons have three functions:

1. If you click on the icon, it will bring you to the Cabinet Details for the particular cabinet you are clicking.
2. If you click the , it will bring up a pop screen that shows the card that is being filled and the card that is being currently packaged (sealed and labeled)
3. If you click the  this will bring up the current system alerts, that describe what has caused your system to go either into the YELLOW or the RED system health status

Cabinet Details Page

Material Status

The Material Status row above the canisters quickly allows you to know when stock material is low and needs to be restocked. This status is always visible on the Cabinet Details screen is being displayed on the Web Access.

- BLUE = good
- YELLOW = low quantity
- RED = needs immediate attention
- GRAY = the system is determining the status

BLISTER LID

LABEL STOCK

OUTPUT BIN

BLISTER CARDS

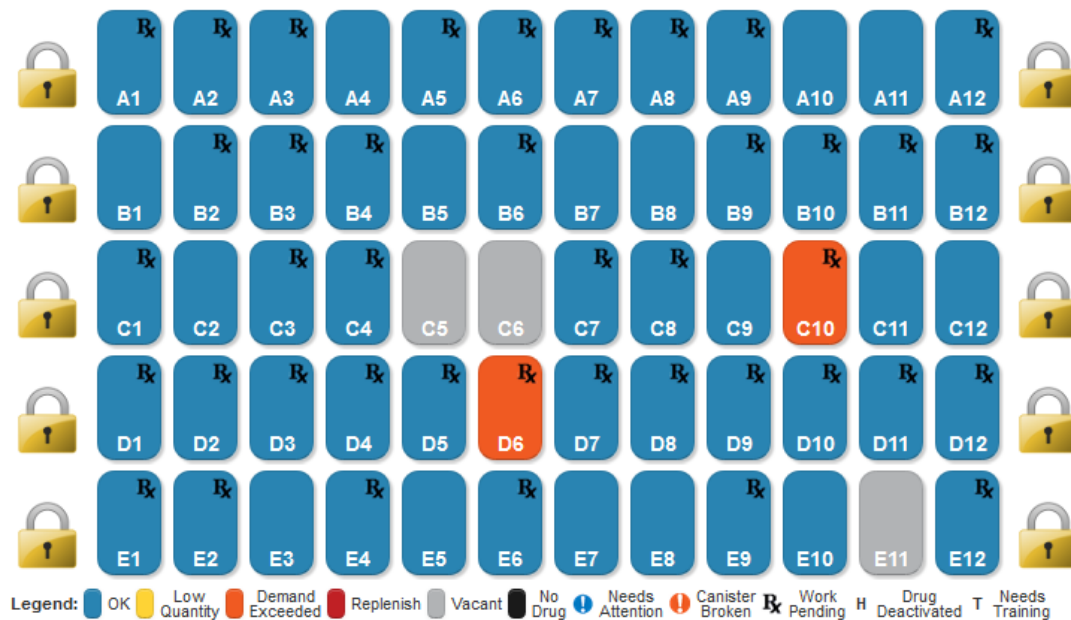
System Health Icons

The System Health icon is an indicator of the tower's state.

- GREEN or BLUE is good; all systems are operational.
- YELLOW indicates that the system needs attention, although not immediately.
- RED means the system has an issue that must be resolved by the user in order to proceed. An event has occurred and the system is going to eventually come to a stop.
- GRAY means the system is determining the status (a transition is occurring).

Canister Locations

In the Cabinet Details screen, the system displays 'numbered locations' to indicate the canister locations stored in DOSIS. The locations are color-coded based on their current status.



By clicking on any canister location from this screen it will bring up details of that canister as well allow you to take direct action to the selected canister. The canister detail will expand to the left of the cabinet's canisters as seen below:

Cabinet Details
Q Search:

CANISTER INFO

Location B3

Serial Number 0010015386

Drug Number 00228-2127-XX

Drug Name CLONIDINE HCL 0.1 MG TABLET

Quantity 97 / 90

Color BEIGE

⚙️ Prepack
🔄 Replenish
ℹ️ Details

BLISTER LID
LABEL STOCK
OUTPUT BIN
BLISTER CARDS

A	Rx	Rx	Rx		Rx	Rx	Rx	Rx	Rx			Rx
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
B		Rx	Rx	Rx		Rx			Rx	Rx	Rx	Rx
	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
C	Rx		Rx	Rx			Rx	Rx		Rx		
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
D	Rx	Rx	Rx	Rx	Rx	Rx	Rx	Rx	Rx	Rx	Rx	Rx
	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12
E	Rx	Rx		Rx		Rx			Rx			Rx
	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12

Legend: ■ OK ■ Low Quantity ■ Demand Exceeded ■ Replenish ■ Vacant ■ No Drug ! Needs Attention ! Canister Broken Rx Work Pending H Drug Deactivated T Needs Training

The Canister Info provides the following information:

Location – physical numbered location of the canister

Serial Number – canister's serial number

Drug Number – NDC number that has been associated to the selected canister

Drug Name – the name of the drug

Quantity – current quantity in the canister and after the forward slash '/' shows the current quantity being requested (a.k.a. Demand)

Drug Color – the color of the current drug instance associated to the selected canister

Prepack Button – will take you to the Pre-Pack screen to so you can add some pre-pack request for this particular drug

Replenish Button – will take you the replenishment screen. Mostly used from this screen so you can do “rest empty” when the system falsely thinks there are no pills to dispense

Details Button – will take you to the Canister Details page, so you can see the replenishment history of the canister, as well all the drug information for the drug in this canister.

Touch Screen Interface - Chapter 6

Touchscreen Interface Usage

The touch screen is the small display located on the front of each DOSIS tower. The touchscreen controls the functions that are executed at the cabinet by the pharmacy users, administrators, and installation/repair technicians.

Pharmacy Users:

- lock and unlock pill canisters for removal and return
- pill canister removal and return
- removal and restocking of consumable supplies (blisters, lids, & prescription labels)
- retrieve completed cards
- basic troubleshooting

Administration:

- run diagnostics for support assistance
- change-out field replaceable parts intended for change-out by a pharmacy worker
- advanced trouble shooting
- configure the network connection
- manage backups of DOSIS
- take the system down or reboot

Technician Functionality:

- verify system functionality
- change-out field replaceable parts intended for change-out by a technician

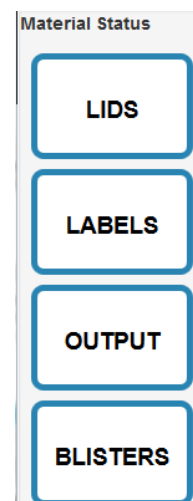
Consistent throughout the touchscreen interface, as in the Web Access, is the Material Status and System Health notifications, as well as the cabinet status at the bottom of the screen.

Material Status

The Material Status is indicated with a shaded box around the word indicating what area is covered.

The colors to indicate the status are:

- **Green or Blue** == OK
- **Yellow** == Needs Attention Soon
- **Red** == Immediate Attention Required



System Health

The System Health is indicated with three different icons.

- **Blue:** Symbolizes that all things are operational and in good status.
- **Yellow:** Symbolizes that an event has occurred which potentially could soon cause a failure; but the system is still operational.
- **Red:** Symbolizes that the system has detected an error. Also, all operations are halted until the error is corrected.



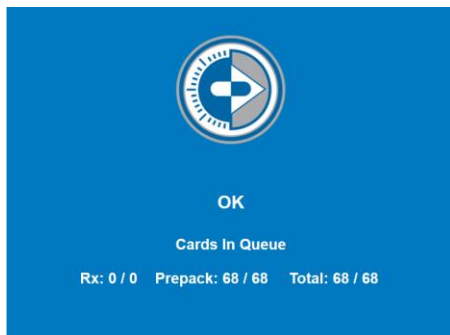
Cabinet Status

The cabinet status is indicated at the bottom of this screen. It shows the number of prescriptions in the queue and the operational status of DOSIS, as well as the unit's serial number (D3 in the below example)

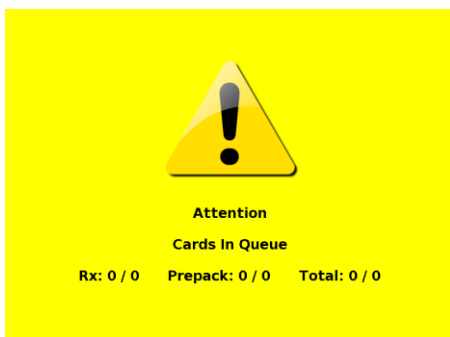
Cards In Queue: RX: 0 / 0 PP: 69 / 69 ALL: 69 / 69 D3 Operational Status: Ok

Idle Screens

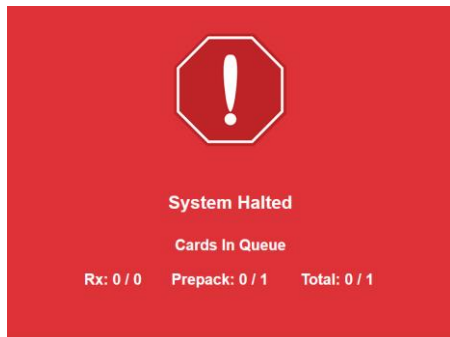
When the touchscreen has not been touched within the previous few moments, it displays one of the following idle screens.



If the system is operating correctly, it displays the green or blue OK screen.



If the system has an issue that does not halt the system, it displays the Needs Attention screen.



If the system has an issue that halts the system and needs your immediate attention, it displays the Error! System Down! screen.

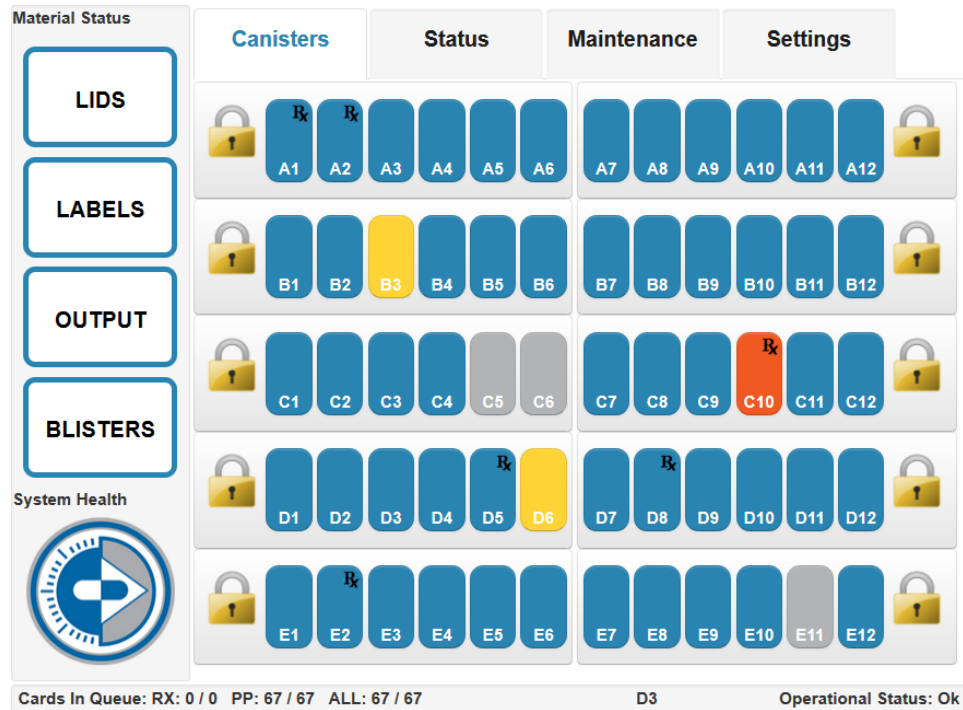


When the system is initializing and starting up, it will display a gray Status screen.

Touchscreen Interface Tabs

Canister Tab

The Canister Tab is the touchscreen's default display. This screen gives you an “at-a-glance” status of the system. The canisters are represented in rows that correlate with the physical Canister Rows within the DOSIS tower.



Canister Access

Access to the canisters is also managed from this screen with representational locks at the edge of both doors on their respected rows.



To access a canister row, touch the “locked” icon.

DOSIS will release the locking solenoid on the cabinet allowing you time to open the latch.

While the above pop up is displayed, grasp the row handle and pull down.

If you wish to cancel your request, just re-touch the “lock” icon.

By default, if you do not get the latch open in time, the solenoid will re-lock. When a row is unlocked it's

represented by the “unlocked” icon. Closing the physical latch on the cabinet door will reset the icon to “locked.”

An LED light will also indicate which row you have unlocked, helping guide you to quickly access the handle.



To remove a canister from the unlocked row, grasp the canister handle and pull it straight out from the tower. To return the canister, reverse the process.



Canister Status

Canister status is represented as follows:

- **Green or Blue** indicates the canister is working fine and pills are above the low indicator.
- **Yellow** indicates the quantity in the canister is low. Below 60 pills in a canister.
- **Orange** indicates that the inventory in the canister doesn't meet the demand/prescription request
- **Red** indicates that the canister needs immediate attention and the quantity is below 30 pills.
- **Gray** indicates a vacant location, or the row is unlocked.
- **Black** indicates a location that does not have a drug associated to the canister.
- The **orange circle** with an exclamation mark overlaying a canister means that the canister is broken and must be replaced.
- The **blue circle** with an exclamation mark overlaying a canister means that the location needs attention.
- The **Rx** overlaying a canister means that there are prescriptions pending for that canister.
- **HOLD** over a canister indicates that it is deactivated.
- A **T** overlaying a canister means that this is a new drug in the system and it must be validated before the system can accept PMIS requests for the drugs in that canister. **CALL TECHNICAL SUPPORT WHEN THIS OCCURS.**

Status Tab

When DOSIS encounters an issue, it displays the information on the problem and tells you how to fix it in this text area.

The screenshot displays the DOSIS Status Tab interface. At the top, there are four tabs: Canisters, Status (selected), Maintenance, and Settings. On the left side, under 'Material Status', there are four buttons: LIDS, LABELS, OUTPUT, and BLISTERS. The main area is titled 'Current Alerts' and contains a table with two columns: Code and Instructions. The first row shows a code '80005' and the instruction 'Replenish the indicated red canister and return it to the system.' Below the table, there are three sections: 'System Health' with a red octagonal warning icon, 'Cabinet Door Access' with two buttons for 'Packaging Unit' and 'Blister Cards' (both labeled 'DOOR SECURE' with a lock icon), and 'System Control' with a 'Run' button. At the bottom, a status bar shows 'Cards In Queue: RX: 0 / 0 PP: 0 / 1 ALL: 0 / 1', 'L60 D02', and 'Operational Status: Halt'.

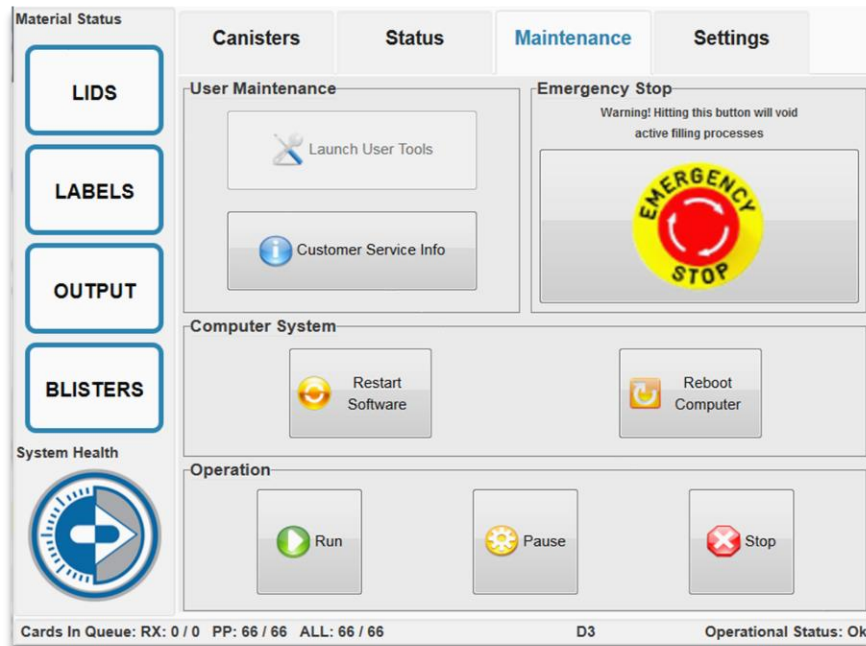
Code	Instructions
80005	Replenish the indicated red canister and return it to the system.

You will notice on this page that you have access to both the Packaging Unit and the Blister Cards doors.

On the bottom right is the RUN button. After you perform the task as requested in the Current Issues text box, press the Run button. DOSIS will go through a series of checks and balances, clear the codes, and start running prescriptions in the queue.

See the Trouble Shooting chapter for common issues with which you will need to become familiar.

Maintenance Tab



Operation Group:

Run Button

Press this button to initialize the system after a stop or a pause operation.

Stop Button

Pressing this button tells the tower to finish the movement being performed and to stop. DOSIS will not finish a prescription if it is in the process of filling it.

Pause Button

Pressing this button tells the tower to finish the prescription it is currently working on and then to stop.

Computer System Group:

Restart Software Button

This button restarts the DOSIS software processes. DOSIS retains the queued prescriptions and will continue filling upon restart.

Reboot PC Button

This button shuts down the PC and leaves the PC in a powered *OFF* state.

CAUTION: DOSIS will not retain prescription requests in on-demand filling.

Emergency Stop Group:

Emergency Stop Button

Pressing the Emergency Stop will *immediately stop all working processes* in the DOSIS. In order to recover from an Emergency Stop, you will have to depress the Run button to restart the system.

NOTE: An Emergency Stop should only be used in extreme emergency.

CAUTION: Emergency Stop voids the active filling processes and shuts down 48 volts of power.

User Maintenance Group

Customer Service Button

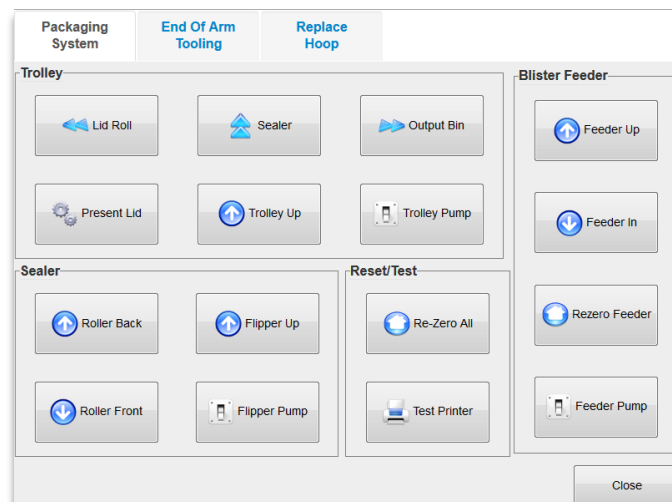
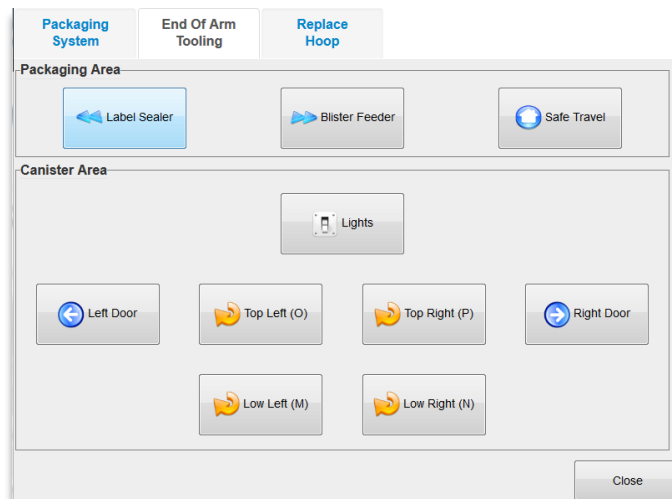
This button launches a dialog box with the important contact information for Manchac Technologies.

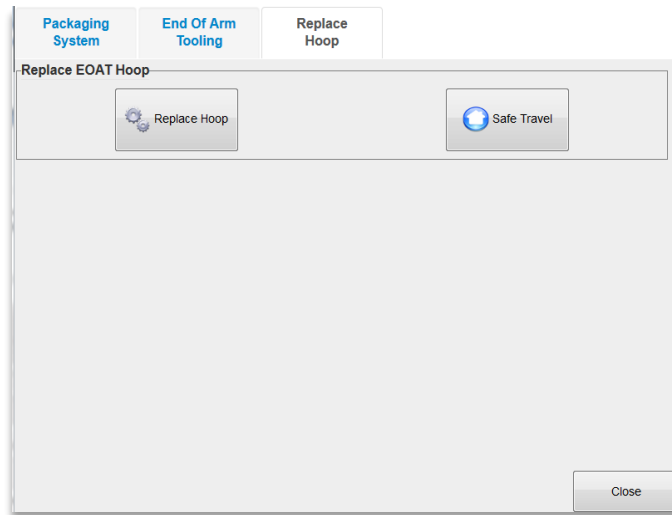
Launch User Tools

This button will launch another dialog box that will allow the user to manipulate the DOSIS system. This group of functionality is provided to allow the general user to move and test different parts of the DOSIS system.

NOTE: Generally, a Manchac Technology support person will be instructing you to use the best methods for these two screens.

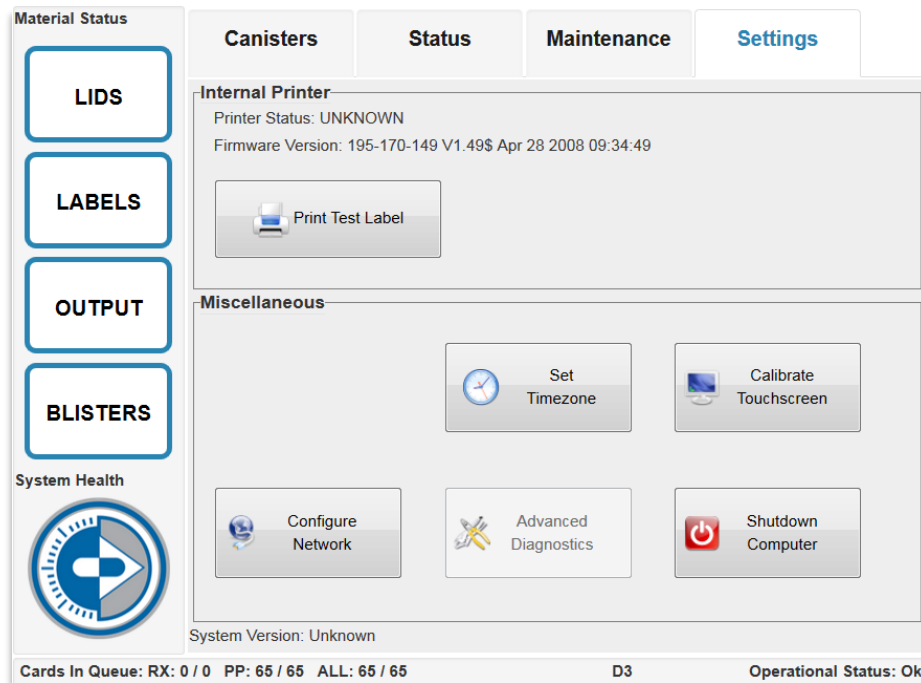
Functionality is split between: Packaging System, End of Arm Tooling, and Hoop Replacement





Settings Tab

The Settings Tab allows the user to view details about the configuration of the DOSIS unit. These include detail statuses of the Internal Printer, Networking settings, and Time Zone. The Calibrate Touch screen is generally a utility for the Manchac manufacturing team and for touch screen replacement. On the Training Dialog Box, there is a Launch Button that opens screens intended for DOSIS technicians. Changing settings in this area can create extreme operational problems for DOSIS. The screens will not be explained in this document. The current System Version is also listed on this screen.



Internal Printer Group:

Printer Status

Printer Status displays the current operational status; operational or disconnected.

Test Label Button

This button will print a generic prescription label to the internal printer.

CAUTION: Once the label is printed, the user must remove it. Not removing label will result in an ERROR in the system.

Printer Firmware Information

Firmware Information displays detailed information on the Part Number, Revision, Time, and Date.

Miscellaneous Group:

The Network Configuration dialog box launches the Network configuration screen. This screen determines how DOSIS behaves on your IP network. DOSIS has the ability to operate dynamically utilizing DHCP, or operate utilizing static IP and DNS settings.

IP Address

☐ Obtain IP Address Automatically (DHCP)

☒ Use The Following IP Address:

Static Address

IP Address:

Subnet Mask:

Default Gateway:

DNS Settings

☐ Obtain DNS Info Automatically

☒ Use The Following DNS Info:

Manual DNS

Preferred DNS:

Alternate DNS:

DNS Suffix:

Hostname Settings and Tools

Host Name:

Current IP Address: 10.104.0.10
Current Subnet Mask: 255.255.255.0
Current Gateway: 10.104.0.1
Current MAC Address: 18:03:73:c2:c0:a9

Network Interface: eth0

Ping Tool Show Route Info

Traceroute Tool

Apply Changes Close

Hostname Settings and Tools Group:

This grouping is for either the DOSIS technician or the pharmacy's IT staff. DOSIS provides some tools that can aid in troubleshooting IP connectivity within the pharmacy as well as to destination out of the pharmacy.

Tools Section

Route Button – This button shows the current route table for the DOSIS tower.

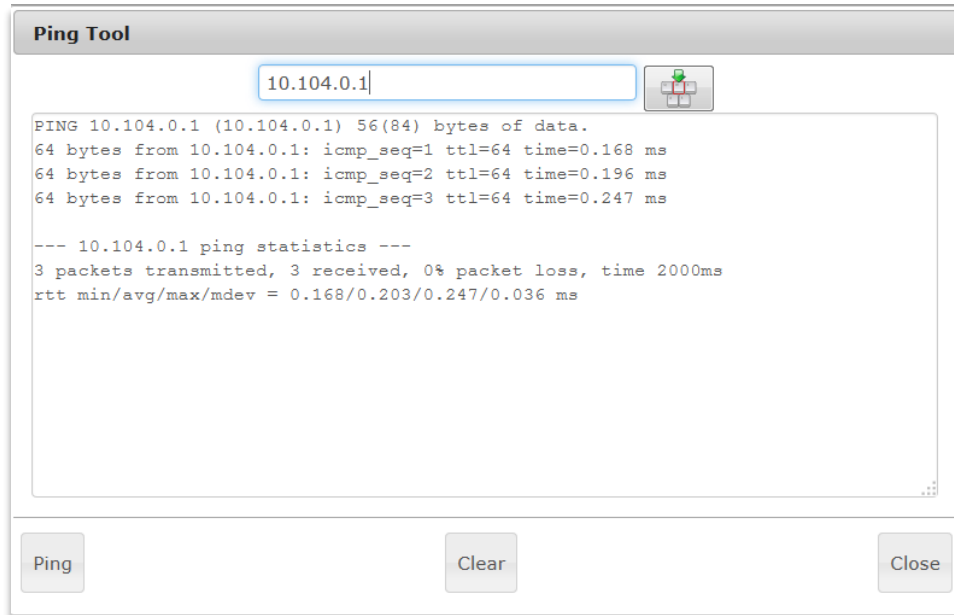
Route Info

```

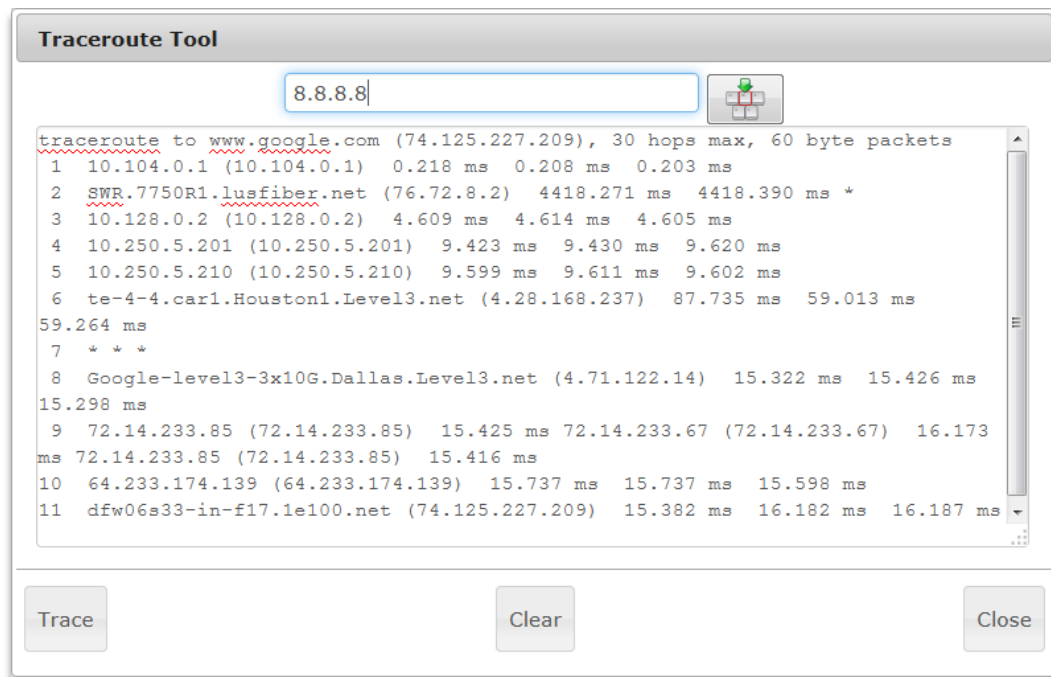
Kernel IP routing table
Destination      Gateway         Genmask         Flags         MSS Window  irtt Iface
10.110.20.50     0.0.0.0         255.255.255.255 UH             0 0          0 tun0
10.110.10.1      10.110.20.50    255.255.255.255 UGH            0 0          0 tun0
192.168.53.0     10.110.20.50    255.255.255.0   UG             0 0          0 tun0
192.168.3.0      0.0.0.0         255.255.255.0   U              0 0          0 eth1
192.168.2.0      0.0.0.0         255.255.255.0   U              0 0          0 eth2
10.104.0.0       0.0.0.0         255.255.255.0   U              0 0          0 eth0
169.254.0.0      0.0.0.0         255.255.0.0     U              0 0          0 eth0
0.0.0.0          10.104.0.1      0.0.0.0         UG             0 0          0 eth0
          
```

Close

Ping Button – This button allows a user to ping a user defined IP Address / destination to check for connectivity.



Trace Route Button – This trace feature allows a user to trace a path to a user destination / IP Address.



Frequently Asked Questions – Appendix A

Request Queued FAQ

1. How do I find a prescription that has been sent to DOSIS but has not yet been completed by DOSIS?

Simplest is to enter the prescription number into the Search Box. Alternatively, the user would run the Request Queued report, select the filter icon, and then enter the prescription number that is being sought.

2. How do I view only the prescription orders that are in the queue for DOSIS?

The orders are by default grouped first by Prescription (RX) and then by Pre-Packs (PPK). You have the option to click on the heading of the Type column to reverse the order in either direction.

3. How do I cancel a prescription in queue and have a prescription label(s) print to the DOSIS external by-pass printer?

Find the prescription by paging or adding a filter to narrow down your search. Once located, the user can 'Cancel', 'Priority', or 'Print-Cancel'. In this scenario the user needs to select 'Print-Cancel'. Once 'Print-Cancel' is selected a label / multiple labels will automatically print so that a user can now fulfill the printed prescription based on the label(s).

4. How do I determine what prescriptions are pending upon canisters that are not currently in DOSIS (shelf status)?

Go to the Requested Queue, and sort by the status. These items should show up as RED and the location should say Shelf.

Type	Id	Order Date	Drug Number	Drug Name	Qty	Complete	Location	Status	Priority ^	
PPK	50458-0578-XX	12/24/2014 04:22:44 PM	50458-0578-XX	XARELTO 15 MG TABLET, FILM COATED	15	0 of 1	Shelf	Shelf	PREPACK	x
PPK	53746-0271-XX	12/26/2014 02:18:58 PM	53746-0271-XX	SULFAMETHOXAZOLE AND TRIMETHOPRIM 400; 80 MG; MG TABLET	29	0 of 1	Shelf	Shelf	PREPACK	x
PPK	00456-1201-XX	12/26/2014 02:48:58 PM	00456-1201-XX	LINZESS 145 UG CAPSULE, GELATIN COATED	14	0 of 1	D138	Processing	PREPACK	x

T +
|< << Page 1 of 1 >> >|
PDF PDF

Current Filter:

Other available status to sort by are, Queued, Attention, Empty, Broken, or Drug Not Trained...

5. How do I select an action for a group of prescriptions that are queued in DOSIS?

The user would select all the prescriptions by putting a check in the checkbox at the beginning of each row. If a filter was used and all the items want to be selected, utilize the select all checkbox on the header row. Once items are selected, use options of either "Cancel Sel", 'Prioritize Sel.' or 'Print-Cancel Sel' located in the header row (far right).

6. How do I get a prescription or pre-pack to be filled NEXT?

Go to Request Queued, select the filter icon, enter or scan the prescription/RX number into the Prescription Number text box. Hit Apply Settings. Once the item is displayed, select the priority option for the displayed row. Then, click on the Priority Drop-down Box and select 'Now'.

Troubleshooting Guide - Appendix B

Troubleshooting Terms

When performing troubleshooting tasks, the following terms and techniques are repeated throughout the solutions.

Restart

Restarting the software consists of opening the Maintenance Tab on the touchscreen and pressing the Restart Button on the screen. This action will restart the DOSIS software on the computer. This does NOT reboot the computer.

Reboot

1. Rebooting the system consists of opening the Maintenance Tab on the touchscreen and pressing the Shutdown button.

CAUTION: If you use the power button on the front of the PC, push in and release it. The power button is on the front of the computer. **DO NOT PRESS AND HOLD THE BUTTON.** By holding the button in too long, the PC will not shut down properly and this **CAN CAUSE AN IRRECOVERABLE DATABASE ERROR.**

2. Wait for the computer to shut down.
3. Wait for the green light on the front (under the power button) to go off.
4. To start the system back up, press the power button on the front of the PC.
5. The system will initialize and start.

Cycle the Cabinet Power

1. Open the bottom access panel of the DOSIS. Push in and release the power button on the front of the computer.

CAUTION: Push in and release the power button momentarily on the front of the computer. **DO NOT PRESS AND HOLD THE BUTTON.** By holding the button in too long, the PC will not shut down properly and this **CAN CAUSE AN IRRECOVERABLE DATABASE ERROR.**

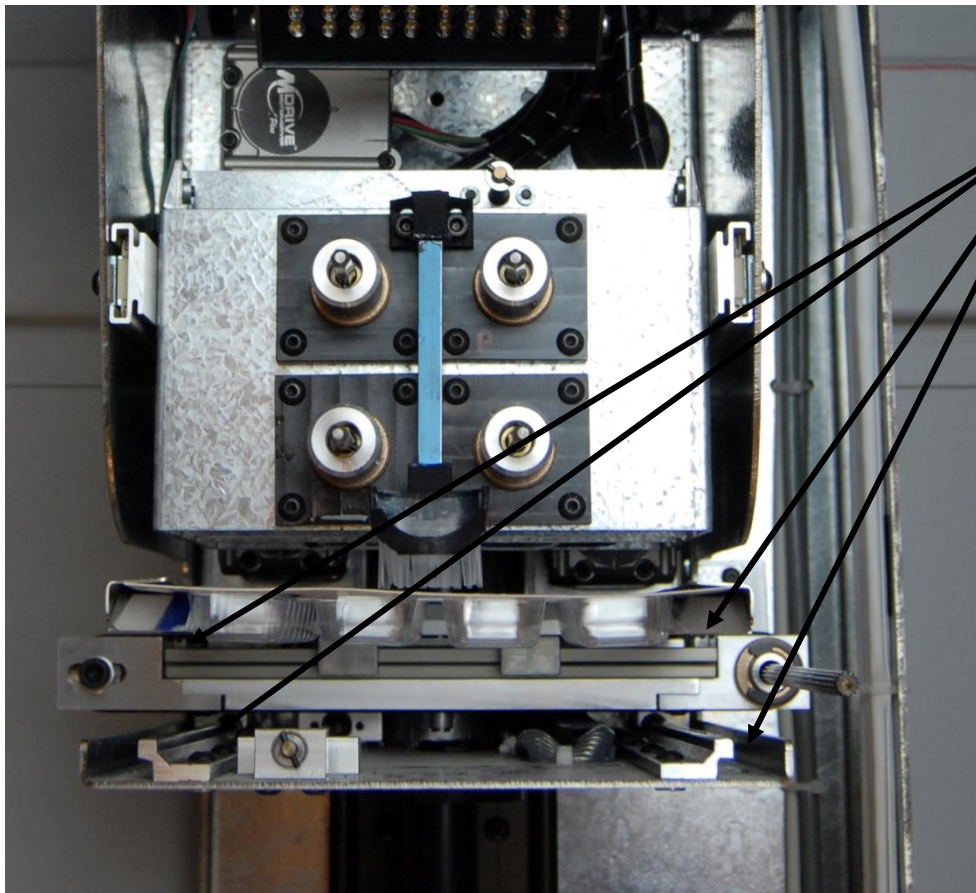
2. Wait for the computer to shut down and the green light on the front (under the power button) to go off.
3. Press and release the power button on the front of the uninterruptible power system (UPS).
4. Wait for the UPS to shut down and the green lights on the front to go off.
5. Press and release the power button on the front of the UPS.
6. After the UPS powers up, press the power button on the front of the computer.
7. The system will initialize and start.

Checking for Obstructions

During daily operations, you can potentially get debris on areas of the end-of-arm tooling and around the rollers and other moving parts that can interfere with the movement of the key parts of DOSIS.

Checking the End-of-Arm Tooling

The end-of-arm tooling has several areas to check when looking for obstructions. The blister card forks move in and out and side to side. The following photo depicts some of the common areas to look for obstructions.



Check the following areas for obstructions.

Obstructions consist of pills that bounce, or other trash that has gotten into the mechanisms.

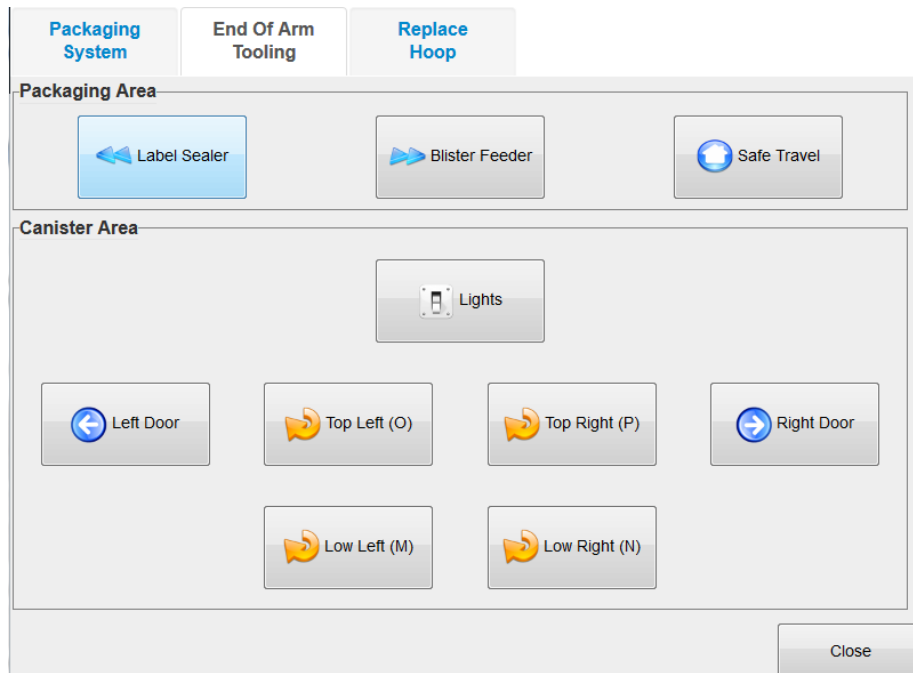
Checking the Bottom of the Cabinet

1. Remove the bottom access panel.
2. Open the packaging unit access door.
3. Open the blister card door.
4. Remove the four screws; two at the top and two at the bottom of each door.
5. Pull each door straight out until it clears and opens.
6. Check the bottom of the cabinet around the backplane rail and e-chain for any type of debris.
7. Reverse the process to close the doors.

Checking for Axis Movement

1. Open the packaging unit access door.
2. Insert the override key in the DC power supply and turn.
3. Go to the Maintenance Tab on the touchscreen interface.
4. Launch the User Maintenance screen.
5. Go to the End of Arm Tooling Tab.

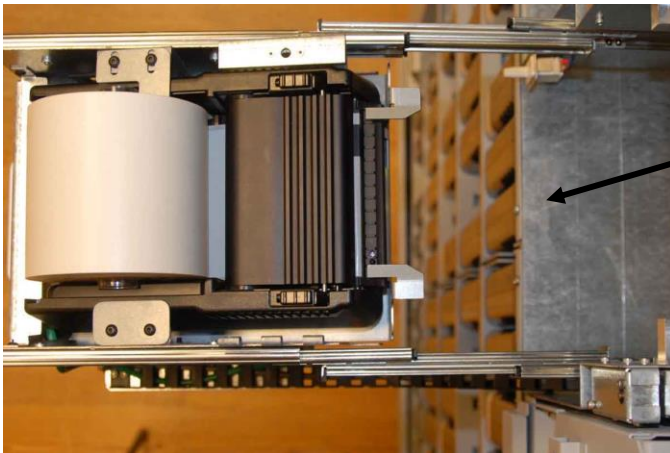
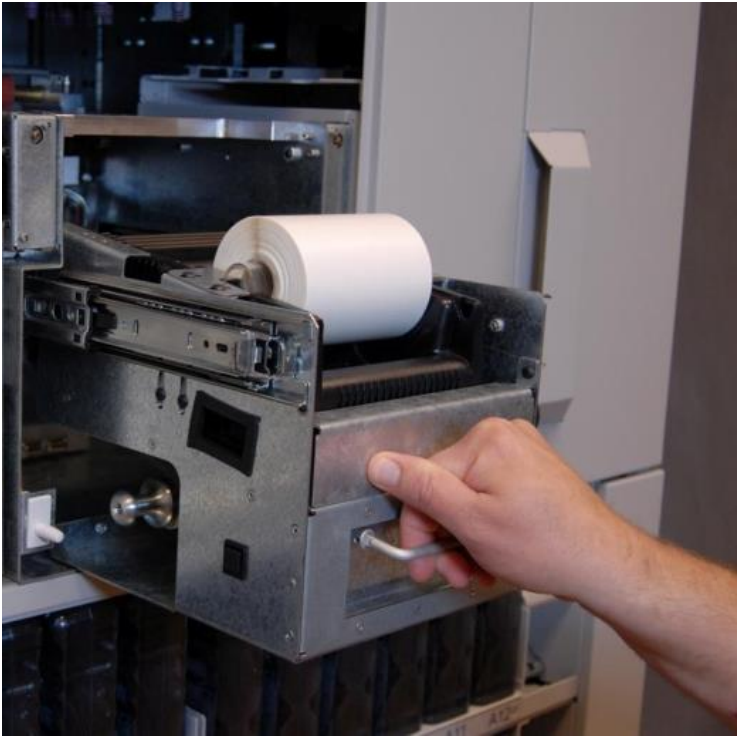
6. Press the Safe Travel button.
7. Press the Go To Label Sealer button. The end-of-arm tooling will move to the hand-off position.
8. Now to verify that the system canister engagements all can rotate each of the following:
 - a. Press the Spin Upper Left button, and again stop the Upper Left motor from turning.
 - b. Press the Spin Upper Right button, and again stop the Upper Right motor from turning.
 - c. Press the Spin Lower Left button, and again stop the Lower Left motor from turning.
 - d. Press the Spin Lower Right button, and again stop the Lower Right motor from turning.
9. Press the OK button to return to the Maintenance tab.



Use this tab to check all of the axes of the end of arm tooling as well.

Check for Stuck Label

1. Open the packaging unit access door.
2. Open the access drawer with the printer.

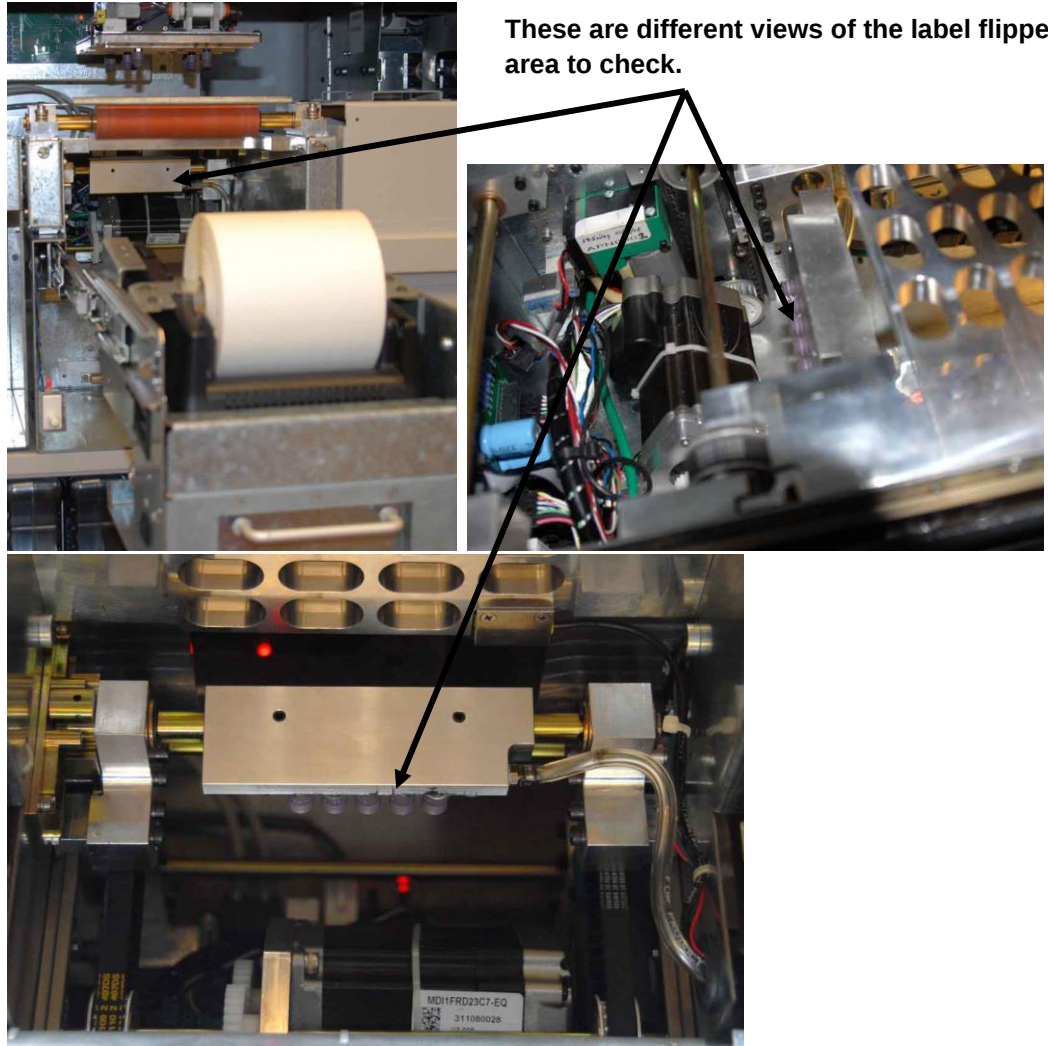


Top View of Internal Printer

Check this area for stuck labels.

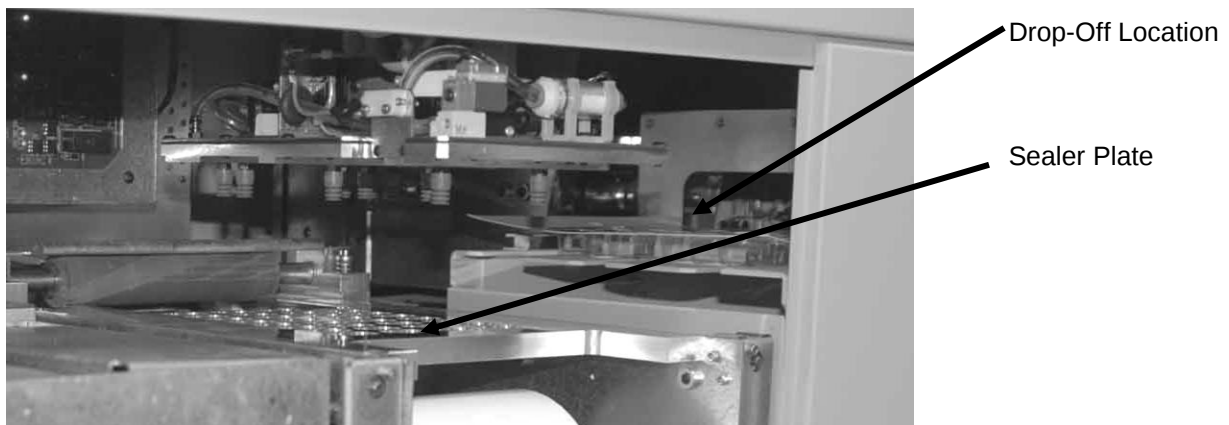
3. Check the front of the printer for a label stuck to the peeler.

4. Check on the flipper, up by the drop off location on the sealing plate.



5. Remove the label from its stuck location.
6. When finished, push the printer back into place.
7. Close the door and press run to continue.

Areas Referred to in Trouble Codes



The above photo depicts the common areas that you will have to interact with.

The fulfillment process will continue throughout the work day.

Trouble Codes and Solutions

CODE	PROBLEM	PROBABLE SOLUTION
10002	System paused	Press the RUN button on the Status Tab to continue.
10003	System stopped	Press the RUN button on the Status Tab to continue.
20002	System request to open the packaging unit access door.	Wait for the packaging unit access door to open or press the CANCEL button.
20003	Blister card door latch failed.	 If you have to access the door latch manually, insert a paper clip into the hole in the upper left corner of the door to manually release the lock.
20004	Packaging Unit Access Door latch failed.	 Use the provided key to override the lock. This will cause an E-stop if the tower is running and can have some adverse effects if you are filling a prescription when you instigate an E-stop. Use this override only as a last result.
20005	Internal messaging error.	Press the RESTART on the Maintenance Tab button to continue. If error continues, reboot the computer.
20006	Input/output board failed to open a port.	Reboot the computer. Refer to the above guidance.
20007	Software failed to start up.	Press the RESTART button to continue.
20008	Lost 48V power.	Cycle the cabinet power. Refer to the above guidance. If the problem persists, call technical support.
20009	24V power is missing.	Call technical support.
20010	Lost 24V power.	Press the RESTART button to continue. If the problem persists, call technical support.
20011	48V power missing.	Call technical support
20012	An E-stop occurred.	Close all doors and press the RUN button to continue.
20013	Input/output board read failure.	Press the RESTART button to continue. If the problem persists, call technical support.
20014	Input/output board write failure.	Press the RESTART button to continue. If the problem persists, call technical support.
20015	Fatal software configuration error.	Call technical support.
30001	End-of-arm tooling is unsafe to travel.	In the touchscreen interface, navigate to the Maintenance tab, press the STOP button. Press the LAUNCH button in the End-of-Arm Tooling Dialogue box. In the Position tab, press the SAFE TRAVEL button. Press the OK button to return to the Maintenance tab. Press the RUN button to continue.
30002	A canister's access door not closed.	Remove the canister and ensure the door is closed. Return the canister to the system and lock the row. The system will automatically continue.
30003	End-of-arm tooling's vibratory axis(M) failed.	See Checking for Axis Movement in the above section. If the axis does not spin, call technical support.

30004	A motor failed to respond.	Press the RESTART button to continue. If the problem persists, call technical support.
30005	End-of-arm tooling failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30006	End-of-arm tooling blister card forks failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30007	End-of-arm tooling backplane failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30008	End-of-arm tooling blister card forks motor(U) failed.	Press the RESTART button to continue. If the problem persists, call technical support.
30009	End-of-arm tooling blister card forks motor(V) failed.	Press the RESTART button to continue. If the problem persists, call technical support.
30011	End-of-arm tooling motor(X) failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30012	Backplane side to side axis(Y) failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30013	Backplane side-to-side axis(Y) failed to position correctly.	Check for obstructions/debris on rails. Refer to the trouble shooting guide for assistance.
30014	Backplane up/down axis(Z) failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30015	Backplane up/down axis(Z) failed to position correctly.	Check for obstructions/debris on rails. Refer to the trouble shooting guide for assistance.
30016	End-of-arm tooling vibratory axis(M) failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30017	End-of-arm tooling angle adjustment axis(N) failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30018	End-of-arm tooling angle adjustment axis(O) failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30019	End-of-arm tooling angle adjustment axis(P) failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
30020	End-of-arm tooling failed to position behind a canister.	Press the RUN button to continue. If the problem persists, call technical support.
30021	End-of-arm tooling failed to position blister card, axis(u), for counting.	Press the RUN button to continue. If the problem persists, call technical support.
30022	End-of-arm tooling failed to position blister card, axis(v), for counting.	Press the RUN button to continue. If the problem persists, call technical support.
30023	Blister card is missing or misaligned.	Open the packaging unit access door and remove blister from the drop-off location or the carrying forks. When finished, press the RUN button to continue. If this problem persists, call technical support.
30024	A canister needs attention.	Remove the canister and inspect it for visible issues. Return canister to location. If the problem persists, call technical support.
40001	The packaging system failed to initialize.	Call technical support.
40002	Trolley front to back motor(A) failed during a move.	Open the packaging unit access door and check for any obstructions. Refer to the above section for assistance.
40003	Trolley left to right motor(B) failed during a move.	Open the packaging unit access door and check for any obstructions. Refer to the above section for assistance.
40004	Trolley up and down motor(C) failed during a move.	Open the packaging unit access door and check for any obstructions. Refer to the above section for assistance.
40005	The lid lifter motor(D) failed during a move.	Open the packaging unit access door and check for any obstructions. Refer to the above section for assistance.
40006	The lid roller motor(D) failed during a move.	Open the packaging unit access door and check for any obstructions. Refer to the above section for assistance.
40007	The lid peeler motor(E) failed during a move.	Open the packaging unit access door and check for any obstructions. Refer to the above section for assistance.

40008	The lid slider motor(E) failed during a move.	Open the packaging unit access door and check for any obstructions. Refer to the above section for assistance.
40009	The label applicator motor(F) failed during a move.	Open the packaging unit access door and check for any obstructions. Refer to the above section for assistance.
40010	The blister sealer motor(G) failed during a move.	Open the packaging unit access door and check for any obstructions. Refer to the above section for assistance.
40011	A packaging system motor failed,	Call technical support.
40012	Labeler failed to pick up the label.	Remove the label. Refer to the above section for instructions.
40013	A label is stuck on the internal printer.	Remove the label. Refer to the above section for instructions.
40014	A label is on the label applicator.	Remove the label. Refer to the above section for instructions.
40015	A label is stuck on the printer.	Remove the label. Refer to the above section for instructions.
40016	A blister card is on the sealer plate.	Open the packaging unit access door and remove it. When finished, press the RUN button to continue.
40017	A blister card is on the drop off location.	Open the packaging unit access door and remove it. When finished, press the RUN button to continue.
40018	Lids need restocking.	Open the packaging unit access door to restock. When finished, press the RUN button to continue.
40019	Failed to retrieve blister card from the drop off location.	Open the packaging unit access door and remove the blister card from the drop off location. When finished, press the RUN button to continue.
40020	Failed to drop off blister card onto the sealer plate.	Open the packaging unit access door and remove the blister card. When finished, press the RUN button to continue.
40021	Failed to drop off blister card onto the sealer plate.	Open the packaging unit access door and remove the blister card. When finished, press the RUN button to continue.
40023	Failed to pick up a lid from the lid roll.	Open the packaging unit access door and verify that the roll is not jammed or torn. When finished, press the RUN button to continue.
40026	A blister is on the trolley.	Open the packaging unit access door and check for a lid stuck to the trolley. When finished, press the RUN button to continue.
40027	The lid was dropped before sealing the blister card.	Open the packaging unit access door and remove the lid. When finished, press the RUN button to continue.
40028	Packaging system timed out while waiting for the label to print.	Call technical support for assistance.
40029	Failed to drop blister in to output bin.	Open the packaging unit access door and remove the blister card. When finished, press the RUN button to continue.
40030	Failed to drop blister in to output bin.	Open the packaging unit access door and remove the blister card. When finished, press the RUN button to continue.
40031	Failed to drop blister in to output bin.	Open the packaging unit access door and remove the blister card. When finished, press the RUN button to continue.
40032	Failed to drop blister in to output bin.	Open the packaging unit access door and remove the blister card. When finished, press the RUN button to continue.
40033	Packaging system failed.	Open the packaging unit access door and remove any blister cards and/or lids. When finished, press the RUN button to continue.
40034	Unable to communicate with the internal label printer.	Call technical support.
40038	Lid roll is empty.	Verify and replenish lid roll. When finished press the RUN button to continue.
50001	Blister storage process failed to initialize.	Call technical support for assistance.
50002	Blister storage process failed to initialize.	Press the RESTART button to continue. If the problem persists, call technical support.
50003	Blister feeder axis(H) failed to initialize.	Open the blister card door and check for obstructions.
50004	Blister feeder extender axis(I) failed to initialize.	Open the blister card door and check for obstructions.
50005	Packaging system failed to retrieve a blister card from the storage unit.	Open the blister card door and check to ensure the card stack is straight and clear of obstructions.

50006	Blister storage and feeder system failed.	Press the RESTART button to continue. If the problem persists, call technical support.
50007	Blister card stock is empty.	Open the blister card door and restock the blisters.
50008	A door is not closed.	Close the blister card door to continue initializing the system.
60001	An internal system software function failed.	Press the RESTART button to continue.
70001	Camera configuration failed.	Press the RESTART button to continue. If the problem persists, call customer support.
70002	Camera configuration failed.	Press the RESTART button to continue. If the problem persists, call technical support.
80001	Pill signature data not present.	Call technical support.
80002	Maximum missed camera frames.	If problem persists, call technical support.
80003	The filling system errored.	Press the RUN button to continue. If the problem persists, call technical support.
80004	Canister needs attention.	Remove the canister in the attention state and inspect for visible defects. If the problem persists, call technical support.
80005	Canister in system needs replenishment.	Replenish the indicated red canister and return it to the system.
80006	Canister bar code read failure.	Remove the canister and ensure the access door is closed and there are no smudges on the bar code. Return the canister to the system. If the problem persists, call technical support.
80007	Canister bar code verification failure.	Remove the canister and ensure the access door is closed and there are no smudges on the bar code. Return the canister to the system. If the problem persists, call technical support.
80008	Canister registration error.	Remove the canister and return it to the row. If the system fails to register again, follow these steps. 1. Open the end-of-arm tooling Maintenance tab. 2. Move the end-of-arm tooling to the position in the Position tab. 3. In the Canister tab, turn on the EOAT lights. 4. Press the Snapshot button in the Imager tab. 5. If the camera is lined up on the registration marks, call technical support. 6. If it appears there is a smudge on the lens, you will have to clean the lens with an approved lens cleaner and cloth by moving the EOAT to the LSU position and cleaning it. 7. If the problem continues, call technical support.
80009	A critical memory error has occurred.	Power down the system and restart. Refer to the above section for assistance.
80010	Missing blister card.	Please verify that a blister is in the end-of-arm tooling blister card forks. 1. Launch the EOAT maintenance window in the touchscreen interface. 2. Move the EOAT to the LSU position. Open the packaging unit access door. 3. Verify if a blister is in the forks. If not, open the cabinet doors and check to see that the blister did not drop to the bottom of the cabinet. 4. If present, remove the blister from the forks. 5. After clearing the blister, close all the doors and press the RUN button. 6. If the problem persists, call technical support.
80011	End-of-arm tooling failed to move to the blister pickup position.	Press the RUN button to continue. If the system does not recover, call technical support.
80012	Blister drop-off failure.	Open the packaging unit access door and remove the blister from the end-of-arm tooling forks. Refer to error 8010 for assistance.
80013	Row lock failure.	Press the RUN button to continue.
80014	Backplane side-to-side axis(Y) failed to move to a safe position.	Press the RUN button to continue. If the problem persists, call technical support.
80015	Failed to move to a canister location.	Press the RUN button to continue. If the problem persists, call technical support.
80016	Failed to sense the blister card after picking it up.	Open the blister card door and remove the card from the end-of-arm tooling forks. If the problem persists, call technical support.
80017	Blister drop off failure.	Open the packaging unit access door and remove the blister. Press the RUN button to continue.

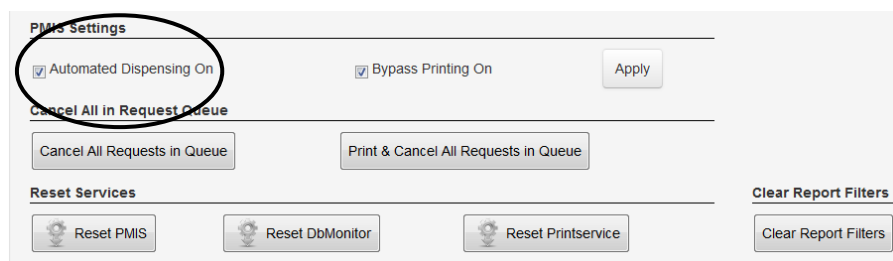
80018	Blister drop off failure.	Open the packaging unit access door and remove the blister. Press the RUN button to continue.
80019	Failed retrieving blister from storage unit.	Open the blister card door and remove the blister from the end-of-arm tooling. If the problem persists, call technical support.
80020	Blister card is missing.	Refer to the trouble shooting guide for further instructions.
80021	Blister card is still on the end-of-arm tooling forks.	Open the blister card door and remove the blister from the forks.
80022	Blister card storage area error.	Open the blister card door and inspect for any obstructions. Remove the blister if it is in the end-of-arm tooling.
80023	End-of-arm tooling is not safe to travel, (u/v)axis.	Press the RUN button to continue. If the problem persists, call technical support.
80024	Failed blister card handoff to the end-of-arm tooling.	Open the blister card door and clear any cards/obstructions. If the problem persists, call technical support.
80025	End-of-arm tooling axis(X) failed to engage the canister.	Press the RUN button to continue. If the problem persists, call technical support.
80026	The system encountered a critical error.	Reboot the computer. If the problem persists, call technical support.
80027	Blister card movement error during fill.	Inspect the end-of-arm tooling rails for obstructions.
80028	Blister card hand off failed.	Open packaging unit access door and remove blister card. Press the RUN button to continue.

Hardware Failure Workarounds

Removing Prescriptions for Manual Filling

In the event that your DOSIS System has a major hardware failure and is unable to fulfill prescriptions received from your Pharmacy Management System (PMS) you can turn off the interface and reprint the prescription labels to DOSIS's external printer for manual filling.

1. In order to ensure that the DOSIS is halted, press the Stop button on the touchscreen Maintenance tab.
2. On the DOSIS Web Access Page, point to Settings and select the System Settings from the drop down menu.
3. In the Interface Settings dialog box, you can ensure the Dispensing On check box is not selected. You can select or deselect by clicking the check box.
4. Click the Update button. This stops new prescriptions from entering the queue.



5. On the menu bar, point to REPORTS, Queues and select Prescription Requests.
6. Make a note of the prescription numbers in the queue by exporting (PDF or CVS) for record purposes.
7. After you have the numbers referenced, on the menu bar, point to REPORTS and select PMIS Requests.
8. Click the filter icon to filter the prescriptions.

9. In the Prescription dialog box, enter the first prescription number referenced from the queue



Current Filter: Drug Name: LISINOPRIL.

Prescription

Number:

Date

☒ Today ☐ July 16 2009 to July 16 2009

report and click the Apply button.

10. In the ACTIONS column, click the Print hyperlink. The system will send the prescription to the external printer.

PMIS REQUESTS						
PRESCRIPTION	FILL INSTANCE	DRUG NUMBER	DRUG DATA	QUANTITY	TIME RECEIVED	ACTIONS
7117112	1	60505-2510-02	FOSINOPRIL SODIUM 10 MG TAB	60	16 Jul 2009 07:07:21 AM	Print

11. Continue steps 8, 9 and 10 for all the queued prescriptions.
12. After printing the prescriptions, you must now cancel the prescriptions from the queue.
13. On the menu bar, point to REPORTS, Queues and select Prescription Requests.
14. In the ACTIONS column, click Cancel to remove each prescription from the queue.

Security Guide - Appendix C

Security Features

If you wish to run the DOSIS software with a higher level of security, there are options that will allow you to do so. Contact a Manchac Technology support person to enable this feature in your software. Once enabled, you will be able to manage users, permissions and user roles in the software.

Security Options

When having a Manchac Technology support person enable your security features, you have the following options to set:

- **Replenishment Check** – This option when enabled allows a user to perform a two-step replenishment process on a canister. It allows you to set up users with the Replenish Canister permission and/or Verify Replenishment permission. If a user with only Replenish Canister permission replenishes a canister, another user (typically a pharmacist) with Verify Replenishment permission would have to verify the replenishment before that canister would be allowed to be used in our system
- **PIN Method** – When a user initially logs in to the DOSIS software, they will need to provide a username and password at login. Once this has been done, that user can use a PIN number to validate themselves within the system. There are three different modes that this PIN operates in:
 - **Generate:** The DOSIS software will generate the pin automatically for the user at login. It will change each time the user logs in with username and password.
 - **User Supplied:** The user will provide their own pin number when they log in. The pin must be set each time login is performed with username and password.
 - **Permanent:** The system will generate the pin automatically for the user at login and it will not change from login to login.
- **PIN Length** – Number of digits in the PIN. Default is 5
- **Password Life in Days** – Number of days until a user is forced to change their password. Setting this to 0 will allow the password to last forever. Default is 0
- **PIN Activity Timeout** – Number of minutes a screen can be idle before a user is forced to re-enter their PIN number. Default is 5 minutes
- **Login Activity Timeout** – Number of minutes after username/password login before a user is forced to login again using username and password. Default is 10 hours.

Default User Roles

The system comes with 3 preset default user roles to assign users to. You may add more roles to further classify users if you wish. A Manchac Technology support person will need to assist you in managing these user roles:

- **Manager:** Pharmacy and IT Managers. Typically has basic system management rights.
- **Pharmacist:** Can do most non-management tasks in the software.
- **Technician:** Basic rights in the software.

Permissions

The following list contains the different permissions that can be enforced in the system and assigned to user roles. Each of these permissions can be set to be enforced or not enforced. By default when security is enabled, all of these permissions are enforced. Contact a Manchac Technology support person to assist you in managing these permissions:

- **Adjust Inventory** – Ability to perform an inventory adjustment operation in the software on a canister
- **Advanced Diagnostics** – User is allowed to use the Advanced Diagnostics button on the touchscreen
- **Associate Drugs** – Ability to associate a drug to a canister
- **Label Editor** – Ability to access the label editor
- **Manage Facilities** -- Ability to manage facilities and facility rules
- **Manage Pharmaceutical Rules** – Ability to manage the pharmaceutical rules
- **Manage Secure Drug** – Allows a user to set/unset the secure drug flag in site drug management
- **Manage Site Drug** – Ability to manage site drug data in the software
- **Prepack** – Allows a user to enter a prepack order in the software
- **Replenish Canister** – Ability to replenish a canister in the system
- **Row Lock** – Ability to unlock a canister row using the touchscreen on the cabinet
- **Secure Drug** – User is allowed to prepack and unlock rows with canister containing drugs marked as secure in the site drug management
- **Verify Replenishment** – When two-step replenishment is being used, user has the ability to verify the replenishment done on a canister

Reports

When security is enabled, there are 2 additional reports that will be visible in the reports menu on the Web Access screen:

- **Cabinet Access Log** – Gives a list of every time a row is unlocked in a cabinet or if the Advanced Diagnostics button was pressed on the touchscreen screen on a cabinet. Report is listed by date/time and user
- **Inventory Adjustment Log** – Gives a list of inventory adjustment operations done on canisters in the system listed by date/time and user.

If two-step replenishment is being used in addition to security, another report will be visible in the Drugs menu on the Web Access screen:

- **Replenishments Needing Verification** – lists all valid replenishments done that have not been verified. Once a user with Verify Replenishment rights validates the replenishment (by clicking the check mark on the report screen for that replenishment), if there are no more pending replenishments for that canister, that canister will be marked as available for filling in the system.