![CAPSAHEALTHCARE logo]

CAPSAHEALTHCARE
Engineering a path to better care.

KL1v
User Manual

Legal

Statement of Use

Capsa Healthcare's goal is to elevate your performance by offering innovative solutions that help optimize healthcare workflows and improve patient care.

- The KL1v is designed and manufactured by Capsa Healthcare for use in pharmacies for faster and more accurate prescription filling and inventory counting.
- The KL1v is not intended for home use.

To ensure safety, please read this manual carefully before installation and follow the instructions herein. Store this manual in a secure place for future reference.

The manufacturer shall not be legally responsible for any equipment damage or personal injury caused by incorrect installation or operation other than that covered in this manual.

Contents

Safety Notices

> ⚠️ **WARNING:** The lightning flash with arrowhead symbol in an equilateral triangle indicates the presence of dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

> ⚠️ **AVERTISSEMENT :** Le voyant clignotant composé d'une tête de flèche dans un triangle équilatéral indique la présence d'une tension dangereuse dans le boîtier du produit pouvant avoir une magnitude suffisante pour entraîner un choc électrique.

> ⓘ **IMPORTANT:** This symbol is intended to alert the user of the presence of important operating and maintenance instructions in the literature accompanying the machine.

> ⓘ **IMPORTANT :** Ce symbole vise à alerter l'utilisateur de l'existence d'instructions de fonctionnement et d'entretien importantes dans la documentation accompagnant la machine.

The following is a summary of important information provided throughout this manual.

> ⓘ **IMPORTANT:** To help ensure accurate pill counts and proper operation, the machine must be kept clean. Failure to clean the machine (especially the optical sensor windows) may result in inaccurate pill counts or inability to count pills.

> ⓘ **IMPORTANT :** Afin d'assurer l'exactitude du nombre de comprimés et le bon fonctionnement de la machine, cette dernière doit être gardée propre. L'absence de nettoyage de la machine (en particulier des fenêtres des capteurs optiques) peut entraîner des erreurs dans le compte des comprimés ou empêcher totalement l'opération.

> ⓘ **IMPORTANT:** It is the user's responsibility to remove the number of pills needed to bring the total count to the ordered quantity, and to return the excess medication to the bulk container.

> ⓘ **IMPORTANT :** L'utilisateur est responsable du retrait du nombre de comprimés nécessaire afin de respecter la quantité commandée et du retour de tout excès de médicaments dans le conteneur en vrac.

> ⓘ **IMPORTANT:** Your warranty does not cover damage due to misuse or abuse, including damage while cleaning (e.g., broken glass sensor windows).

> ⓘ **IMPORTANT :** La garantie ne couvre pas les dommages résultant d'une utilisation incorrecte ou abusive de l'appareil, incluant les dommages causés lors du nettoyage (bris des fenêtres en verre des capteurs, par exemple).

Capsa Healthcare shall not be responsible for any equipment damage or personal injury caused by incorrect installation or operation other than that covered in this manual.

- Bring the KL1v to room temperature before turning it on for the first time.
- Position the KL1v so that the cooling vents are unobstructed.
- Position the KL1v so that it can be unplugged easily.
- Unplug the KL1v before cleaning.
- *DO NOT* immerse the KL1v in water.
- *DO NOT* place the KL1v on an unstable surface.
- *DO NOT* pour liquids into the KL1v.
- When you need to move the KL1v, shut it off and unplug it, then lift it carefully from the bottom or sides.

> **NOTE:** While the KL1v is not particularly heavy, it might be awkward to move it with the counting tray installed.
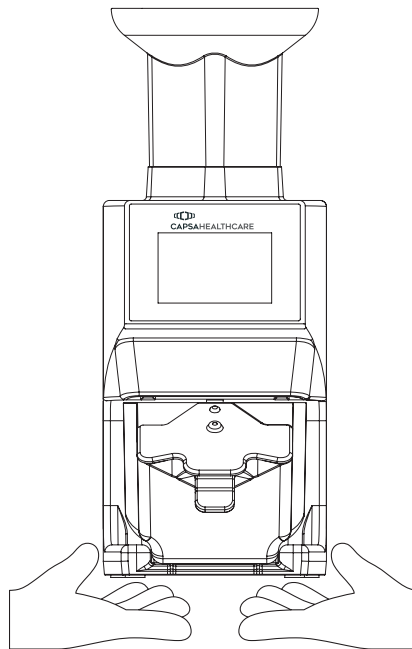
Figure 1: Lifting the KL1v

Specifications

ITEM	SPECIFICATIONS
Size	**Height:** 14.6 in (37.1 cm) **Width:** 5.7 in (14.5 cm) **Depth:** 12.3 in (31.2 cm), including tray **Weight:** 7.00 lb (3.18 kg)
Placement	**Minimum Footprint:** 20 in (50 cm) wide by 24 in (60 cm) deep **Counter top Height:** 35–36 in (90 cm) recommended for ergonomic access Use only on a level, sturdy surface. Position the device so that its cooling vents are not obstructed. Position the device so that it can be easily unplugged.
Power adapter	Output cord approximately 6 ft (1.8 m)
Cooling	Air cooled
Counting capacity	Sensors capable of counting up to 15 pills per second
Power requirements	**Input Voltage:** 100–240 V AC **Frequency:** 50–60 Hz **Current Draw:** 0.7 A maximum Main supply voltage fluctuations are not to exceed 10% of the nominal supply voltage. *DO NOT* use a power adapter other than that supplied.
Power consumption	30 VA
Ingress Protection Rating	IP31
Pollution degree	2
Installation category	II
Altitude	Up to about 6500 feet (2000 meters)
Humidity	20% to 80%
Temperature	40°F to 95°F (5°C to 35°C)
Use	Intended for indoor use only.

Installation

1. Remove the KL1v from its box.
2. Remove the counting tray, pour funnel, and power adapter. Set them aside.

> ℹ **IMPORTANT:** Save the box and packing materials in case you need to return your KL1v for service.

3. Let the KL1v adjust to room temperature for at least 30 minutes before you start using it.
4. Place the KL1v on a stable counter with enough space to allow access to all sides and the top.
5. Insert the pour funnel into the square collar on top of the KL1v.
6. Slide the counting tray into the KL1v base, with the handle pointing to the front.
7. Connect the power adapter to the back of the KL1v, then plug the other end into a grounded outlet.
   For power requirements, see *Specifications* on page 6.
8. Turn the power on. (When you are facing the screen, the power switch is on the back at the bottom right.)

The KL1v will beep three times and be ready for you to pour.

If the display is alternating between -- and **0**, make sure the counting tray is inserted completely.
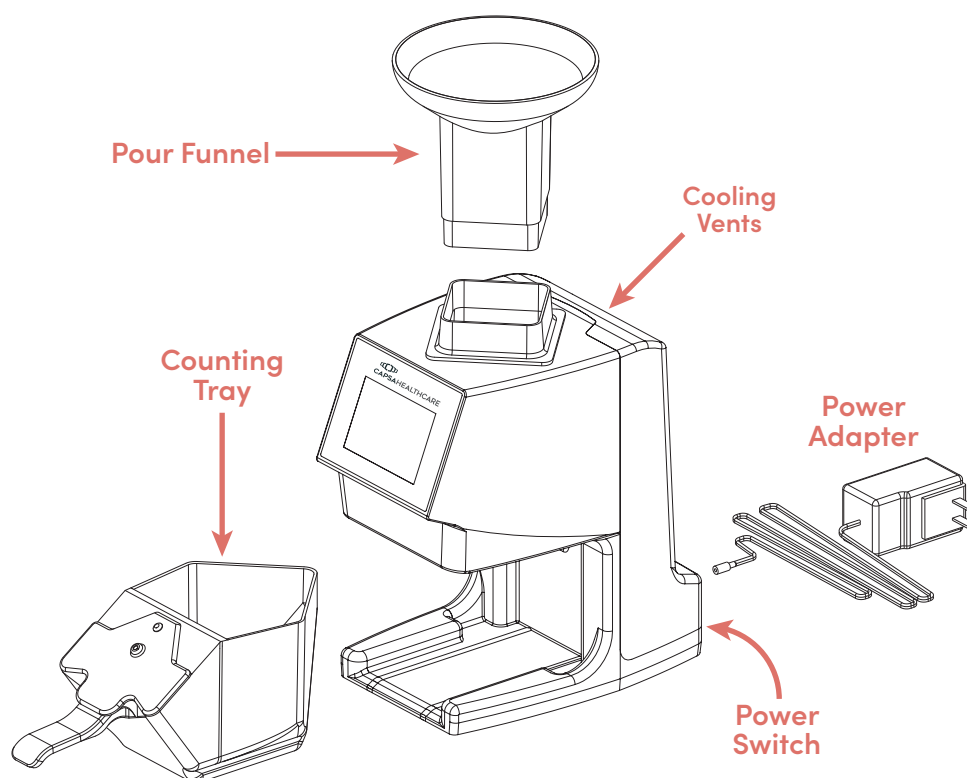
Figure 2: The KL1v pill counter

Device sounds

The KL1v beeps in certain circumstances to get your attention, typically after some time has elapsed since it displayed a message on screen.

You can change the volume and tone of the beep:

1. Tap ⚙ **Settings** to display the audio options.

2. Tap 🔊 **Volume** to change the volume.

   You can cycle through three volume levels by tapping 🔊 again.

3. Tap 🎵 **Tone** to alternate between two different tones.

4. Tap ⚙ again to hide the audio settings.

Counting

> **ⓘ**   **IMPORTANT:** Don't pour liquids into the KL1v as this will damage the device and void the warranty.

1. Pour pills into the funnel until the display shows the correct quantity.
    - »   For best results, pour continuously, at an even rate.
    - »   Do not pour pills directly into the funnel hole as this may cause counting errors.
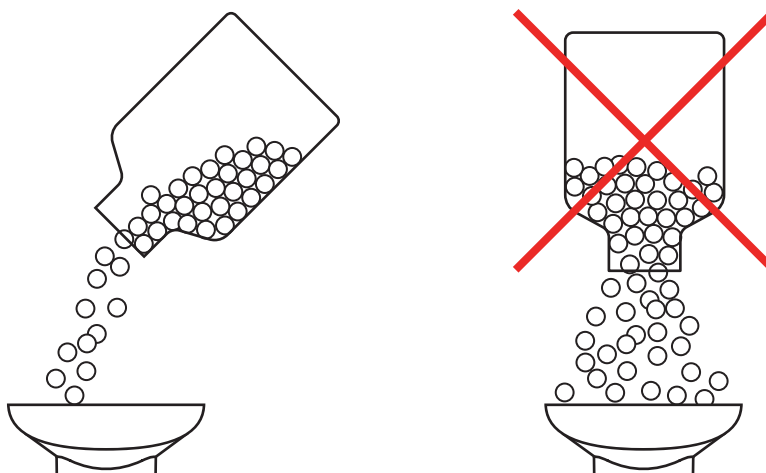
Figure 3:   Correct Pour (Left) and Incorrect Pour (Right)

Watch a video that shows you how to pour medications without miscounts:

https://www.youtube.com/watch?v=2rq3G7BEnjY

2. As you approach the desired quantity, slow your pouring speed and stop at the correct count, then remove the tray.

   If you exceed the correct quantity, remove the excess pills from the tray.
3. Select a vial or bottle according to the **Minimum Vial Size** shown on the display.

4. Rotate the tray cover to the left or right to pour the pills into the vial. If you are right-handed, flip the cover to the right to expose the spout hole on the left.
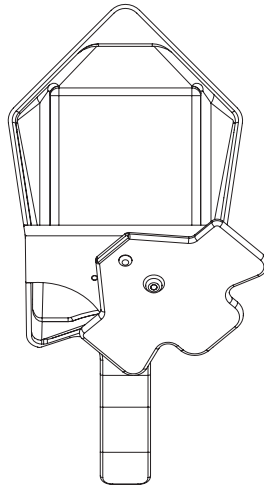
Figure 4: Opening the Tray Cover

5. Pour the pills from the tray into the vial.
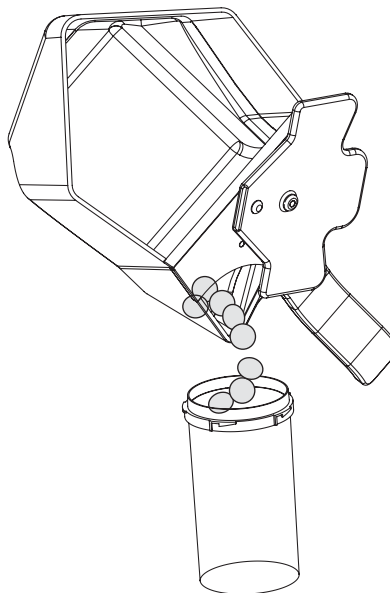
Figure 5: Pour Pills into the Vial

6. Return the tray. Make sure to insert it completely.

   The KL1v will automatically reset, and the display will show a count of zero. The device is ready for counting the next order.

Minimum Vial Size

After you pour a few pills, the KL1v estimates the average size of the pills.

Based on the estimated pill size, the KL1v will calculate the size of vial, in drams, required to hold the pills you have poured.

Pouring too many pills

> **i** **IMPORTANT:** It is the user's responsibility to remove the number of pills needed to bring the total count to the ordered quantity, and to return the excess medication to the bulk container.

> **i** **IMPORTANT :** L'utilisateur est responsable du retrait du nombre de comprimés nécessaire afin de respecter la quantité commandée et du retour de tout excès de médicaments dans le conteneur en vrac.

If you pour more pills than the quantity needed to fill a prescription, remove the tray, remove the excess medication and return it to the bulk container, then pour the pills from the tray into the vial.

You might wish to recount the medication before finalizing the prescription.

Count in progress

If you leave the KL1v with pills still in the tray, after 3 minutes it will display the message **Count in Progress** at the top of the screen, above the current pill count. The device will also emit a beep every 30 seconds until you empty the tray.

If the KL1v is idle for about 10 minutes, the display will shift to a screen saver. If you have left pills in the tray, the screen saver will read **Count in Progress**.

Tap the screen to wake up the KL1v.

Special Mode

Use the **Special Mode** setting to count odd-shaped pills, pills with holes, or small to medium sized translucent medications. Perform a test to ensure the KL1v can accurately count these items.

- To enter **Special Mode**, tap the **Mode** button, then tap the **Special** button so that it turns blue.
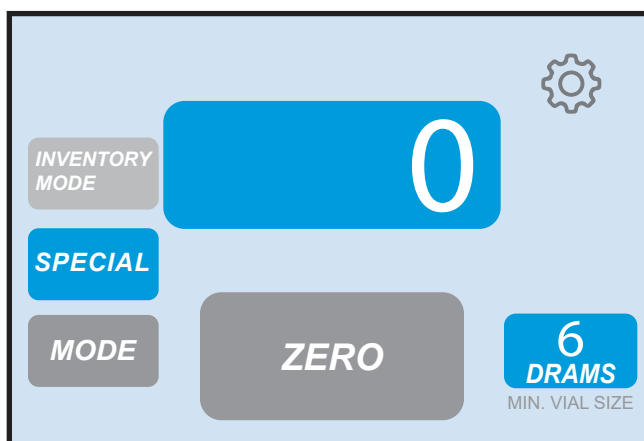

Figure 6: Special Mode

- Count your order.

  You should pour pills a little slower than you usually do.

  The KL1v will remain in **Special Mode**, so you can count another order of "special" pills.

- To exit **Special Mode**, tap **Special** so that it turns gray, then tap **Mode** to hide the mode buttons.

Inventory Mode

Use the **Inventory Mode** to count a large number of pills that may exceed the tray capacity.

1. To enter **Inventory Mode**, tap the **Mode** button, then tap the **Inventory Mode** button so that it turns blue.
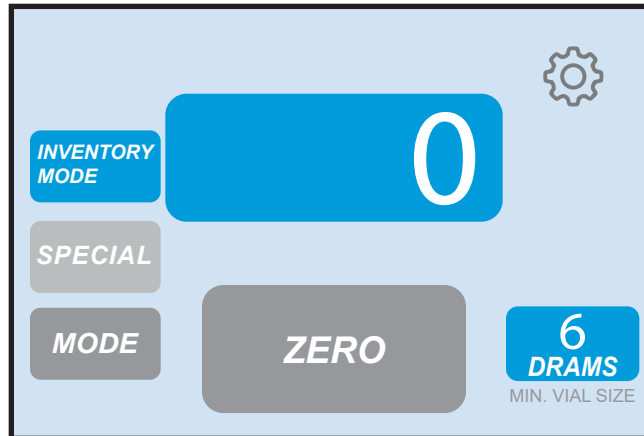
Figure 7: Inventory Mode

2. Count the order.

   If you need to empty the tray mid-count because the number of pills you are counting is larger than the tray capacity:

   a. Stop pouring and remove the tray.

      The display will alternate between -- and the current count.

   b. Empty the pills into another container.

   c. Re-insert the tray.

      The display will show the count.

   d. Continue to pour the remainder of the pills, stopping as necessary to empty the counting tray.

3. To count another medication in **Inventory Mode**, tap the **Zero** button after emptying the tray.

   The count will return to zero. Proceed with counting the next medication.

To exit **Inventory Mode**, tap the **Inventory Mode** button so that it turns gray, then tap **Mode** to hide the mode buttons.

Inventory Mode and Minimum Vial Size

The maximum value for the **Minimum Vial Size** is 180 drams. During an **Inventory Mode** count it is possible to reach this value before the count is complete.

Typically, vial size is not an issue during an **Inventory Mode** count, but if this is relevant to your situation, you should perform your count in multiple sessions. When the **Minimum Vial Size** reaches 140 drams, you should stop your count, set aside the counted pills with a note indicating the pill count and the vial size, then tap **Zero** and start another counting session.

Special Mode with Inventory Mode

If you need to count a large quantity of odd-shaped or translucent pills, you can use **Inventory Mode** and **Special Mode** together.

1. Tap the **Mode** button.

2. Tap the **Inventory Mode** button so that it turns blue.

   This lets the KL1v know that you will be using multiple pours to count your pills.

3. Tap the **Special** button so that it turns blue.

   This lets the KL1v know that you will be pouring "special" medications. (You should pour a little slower than you do for regular medications.)

4. Count your order as shown in the instructions for **Inventory Mode**.

When you are done counting the order, tap the **Zero** button. The KL1v is ready to count another large order of "special" pills.

To deactivate the two modes, tap **Inventory Mode**, then tap **Special**, then tap **Mode** to hide the mode buttons.

Potential counting issues

- The KL1v can't accurately count clear pills or most gelcaps, and may not accurately count items with a large hole or an odd shape. To alleviate some issues with oddly-shaped pills, you can turn on **Special Mode** before starting to pour pills. See *Special Mode* on page 11.

- The KL1v is capable of counting up to 15 pills per second. If you pour pills a little too fast, the display will warn you to **Pour Slower**.

  Slow down, finish the count, and empty the tray into a vial.

  Even though the KL1v will count multiple pills passing the sensor at the same time, the Pour Slower message means that the count could be inaccurate. You should count the pills again using the KL1v to ensure an accurate count.

- If you pour pills much too fast, or slightly too fast for too long, the display will show the message **Error Over Speed**. The KL1v will stop counting.

  Clear any pills from the funnel, remove the pills from the tray, reinsert the tray, then count the pills again.

- If the KL1v detects a partial pill or fragment that is smaller than about 25% of a whole pill, it will display the **Partial Pill** message.

  Visually inspect the contents of the tray, remove the partial pill, then count the pills again.

See *Troubleshooting* on page 18 for other potential problems and possible solutions.

Cleaning

> **ⓘ IMPORTANT:** Your warranty does not cover damage due to misuse or abuse, including damage while cleaning (e.g., broken glass sensor windows).

> **ⓘ IMPORTANT :** La garantie ne couvre pas les dommages résultant d'une utilisation incorrecte ou abusive de l'appareil, incluant les dommages causés lors du nettoyage (bris des fenêtres en verre des capteurs, par exemple).

> **ⓘ IMPORTANT:** To help ensure accurate pill counts and proper operation, the machine must be kept clean. Failure to clean the machine (especially the optical sensor windows) may result in inaccurate pill counts or inability to count pills.

> **ⓘ IMPORTANT :** Afin d'assurer l'exactitude du nombre de comprimés et le bon fonctionnement de la machine, cette dernière doit être gardée propre. L'absence de nettoyage de la machine (en particulier des fenêtres des capteurs optiques) peut entraîner des erreurs dans le compte des comprimés ou empêcher totalement l'opération.

We recommend that you clean your KL1v once a day. If you experience multiple counting errors, or if you dispense many dust-generating medications, then clean it more frequently.

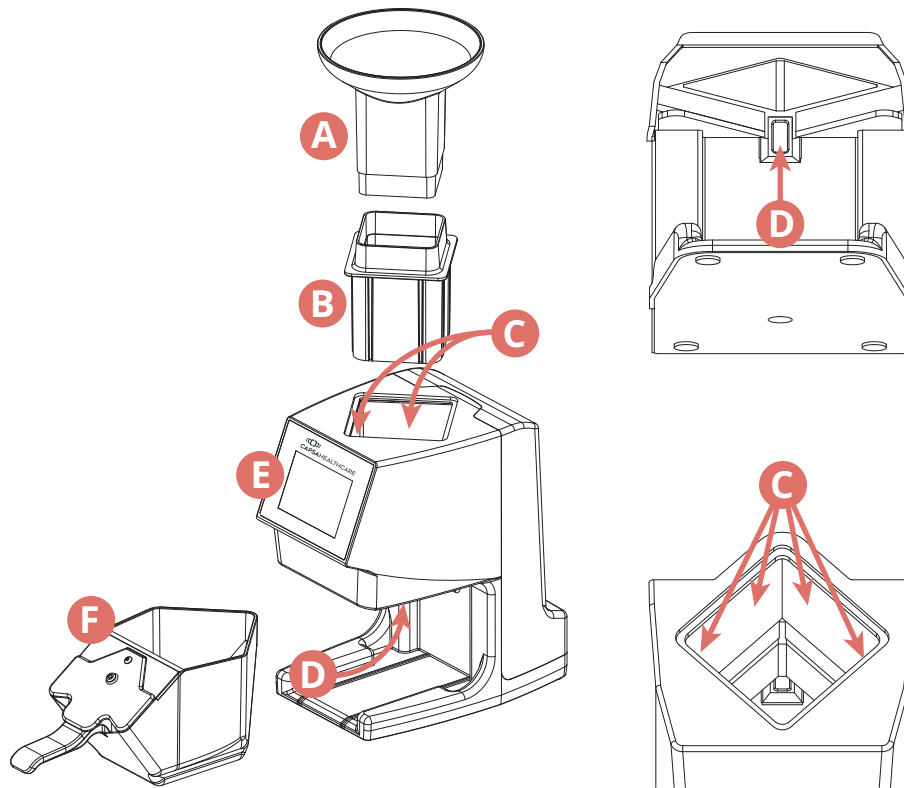Before you start cleaning, turn off the KL1v and unplug it.

Elements to clean

Figure 8: Elements to Clean

A. Pour funnel
B. Channel
C. Counting sensor windows
D. Tray sensor window
E. Touchscreen
F. Counting tray

Cleaning materials

To clean the KL1v thoroughly, you will need:

- Several soft, lint-free cloth or paper towels
- Mild, soapy water in a spray bottle (for cleaning the funnel, channel, and tray)

  The spray bottle uses less liquid than dipping your cloth in the cleaning solution.
- 70% isopropyl alcohol (for cleaning the glass windows in front of the counting and tray sensor windows)
- Non-ammonia glass cleaner or computer screen cleaner (for cleaning the screen)

  You can use a spray bottle or lint-free wipes

> **ⓘ IMPORTANT:**
> - You can use isopropyl alcohol to clean plastic parts but this may cause materials to yellow and become brittle over time, which may require earlier replacement (especially the pour funnel and counting tray).
> - **DON'T** use facial tissue, cotton balls or swabs, or alcohol wipes or swabs.
>   These can leave fibers on the counting sensor windows which could affect accurate counting.
> - **DON'T** use canned air, which can damage the KL1v.

Cleaning steps

1. Turn off and unplug the KL1v.
2. Remove the counting tray (**F** in **Figure 8**) and set it aside.
3. Remove and clean the pour funnel.
   a. Remove the funnel (**A** in **Figure 8**).
   b. Spray the funnel inside and out with mild, soapy water.

   You can also dampen a clean cloth with mild, soapy water and wipe the funnel thoroughly inside and out.
   c. Dry the funnel with a lint-free cloth.
   d. Set the funnel aside.
4. Remove and clean the channel.
   a. Remove the channel (**B** in **Figure 8**) from the KL1v body.
   b. Spray the channel inside and out with mild, soapy water.

   You can also dampen a clean cloth with mild, soapy water and wipe the channel thoroughly inside and out
   c. Dry the channel with a clean cloth.
   d. Set the channel aside.
5. Clean the counting tray.
   a. Spray the tray (**F** in **Figure 8**) inside and out with mild, soapy water.

   You can also dampen a clean cloth with mild, soapy water and wipe the tray thoroughly.
   b. Dry the tray with a clean cloth.
6. Clean the counting sensor windows.

   The counting sensors are located behind the four glass windows (**C** in **Figure 8**) inside the body of the unit, under the funnel and channel. Most counting errors are caused by an accumulation of pill dust on the edges and corners of these windows.

> **ⓘ IMPORTANT:** Don't press hard on the windows as this may break the glass. Your warranty doesn't cover damage due to misuse or abuse, including damage during cleaning.

   a. Wipe the windows with a dry, lint-free cloth to remove pill dust.

   b. Dampen a clean cloth with isopropyl alcohol and clean the windows thoroughly.

   Wipe side to side, not up and down.

   DO NOT spray liquid inside the device.

   c. Wipe the windows dry with a clean cloth to remove streaks.

7. Clean the tray sensor window.

   The tray sensor tells the KL1v when the tray is properly seated. It is located behind the counting tray.

   a. Dampen a cloth with mild, soapy water and clean the sensor window (**D** in **Figure 8**).

   Since the sensor window on the KL1v is glass, you can also use isopropyl alcohol to clean it. The window has a plastic frame; be careful not to saturate the frame with alcohol as this can cause the frame to become brittle over time.

   DO NOT spray liquid inside the device.

   b. Wipe the window dry to remove streaks.

8. Clean the screen (as necessary).

   a. Dampen a clean cloth with non-ammonia glass cleaner or a computer screen cleaner.
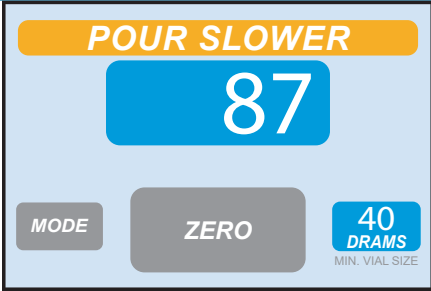
   Don't spray liquid directly on the screen; spray it onto the cloth, then wipe the screen.

   You can also use prepackaged screen cleaning wipes.

   b. Wipe the screen (**E** in **Figure 8**) side to side or up and down. Don't use a circular motion.

When you have finished cleaning, re-assemble the KL1v, plug it in, and turn it on.

Troubleshooting

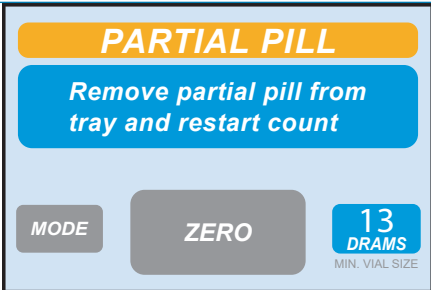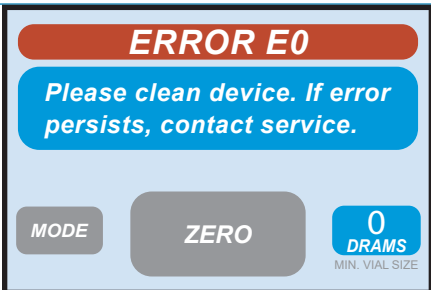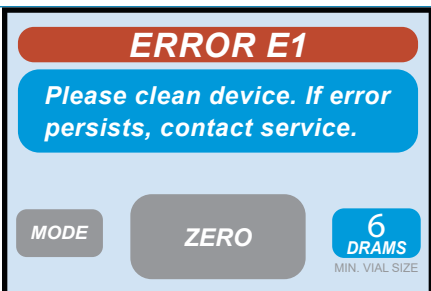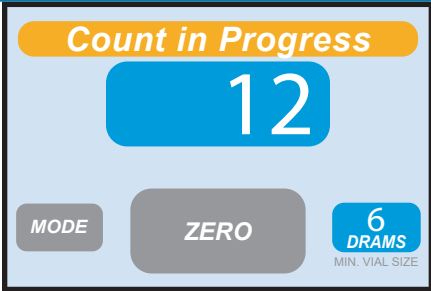| PROBLEM OR ERROR	POSSIBLE CAUSE	SOLUTION
POUR SLOWER 87 — MODE ZERO 40 DRAMS MIN. VIAL SIZE	Pouring too fast.	Even though the KL1v will count multiple pills passing the sensor at the same time, this message means that the count could be inaccurate. Slow down, finish the count, then empty the tray into a vial. You may wish to count the pills again to ensure an accurate count. See *Counting* on page 9 for a link to a video showing pouring technique.
ERROR OVER SPEED *Remove pills from tray and repeat pill count* MODE ZERO 6 DRAMS MIN. VIAL SIZE	Pouring too fast.	The Over Speed error means you were pouring too fast for the KL1v to keep up. Clear any pills jammed in the funnel. Remove and empty the tray, reinsert the tray, then count the pills again. See *Counting* on page 9 for a link to a video showing pouring technique.
PARTIAL PILL *Remove partial pill from tray and restart count* MODE ZERO 13 DRAMS MIN. VIAL SIZE	A partial pill or fragment was poured through the funnel.	Visually inspect the contents of the tray, remove any pill fragments, then count the pills again.
ERROR E0 *Please clean device. If error persists, contact service.* MODE ZERO 0 DRAMS MIN. VIAL SIZE	An obstruction was detected during startup.	Remove the funnel, tunnel, and tray and check for an obstruction.
	There is dust or residue buildup on the detector windows.	Clean the glass detector windows thoroughly.
	A detector window is cracked.	Use a flashlight and dental mirror to examine the windows. Contact technical support to arrange for repair.
ERROR E1 *Please clean device. If error persists, contact service.* MODE ZERO 6 DRAMS MIN. VIAL SIZE	An obstruction was detected during operation.	Remove the funnel, tunnel, and tray and check for an obstruction.
	There is dust or residue buildup on the detector windows.	Clean the glass detector windows thoroughly.
	A glass detector window is cracked.	Use a flashlight and dental mirror to examine the windows. Contact technical support to arrange for repair.

PROBLEM OR ERROR	POSSIBLE CAUSE	SOLUTION
Count in Progress 12 MODE ZERO 6 DRAMS MIN. VIAL SIZE	Pills were left in the tray for longer than 3 minutes.	If you are finished counting pills, remove the tray and empty the pills into a vial. If you are not finished, continue pouring. If you are not sure, you should consider removing the tray and starting your count over, so you don't accidentally mix medications.
The KL1v counts by itself.	There is dust or residue buildup on the detector windows.	Clean the glass detector windows thoroughly.
	A glass detector window is cracked.	Send the unit in for repair.
Overcounts (more pills counted than poured)	There is dust or residue buildup on the detector windows.	Clean the glass detector windows thoroughly.
	There were pill fragments in the poured pills.	Remove the pill fragments, then count the pills again.
	A glass detector window is cracked.	Contact technical support to arrange for repair.
Undercounts (fewer pills counted than poured)	Pouring too fast, or pouring pills directly into the funnel hole.	Slow pouring speed so the **Pour Slower** message does not appear.
The count alternates between **0** and --.	The tray is not fully inserted.	Fully insert the tray.
	The tray sensor window is dirty.	Clean the tray sensor window.
The KL1v beeps when you press **Zero** and the count remains.	The tray has not been emptied.	Empty the tray and return it to the device.
The count shows **0** even though the counting tray is not fully inserted.	The tray sensor window is dirty.	Clean the tray sensor window.
	The tray sensor window or tray sensor is damaged.	Contact technical support to arrange for repair.

Support

You can get additional technical assistance from:

Capsa Healthcare
8170 Dove Parkway
Canal Winchester, OH 43110
800.243.2465
techsupport@capsahealthcare.com

To display the version number of the KL1v firmware, tap ⚙ **Settings**. The version is shown at the bottom left of the screen.

Tap ⚙ **Settings** again to resume operation.

CAPSAHEALTHCARE

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