

Rubbermaid®

Healthcare

M38 Carts

User Manual

For Models with Manual Lift



Increasing the Capacity to Care™

www.rubbermaidhealthcare.com

Warnings




IMPORTANT – Indicates a situation that does not present any hazard but is very important in maintaining a well functioning workstation.



ATTENTION – Consult manual to avoid a potentially hazardous situation which may result in minor or moderate injury.



ELECTRICAL – Indicates an impending electrical hazard which, if not avoided, may result in personal injury, fire and/or death.

- The supplied power cord is rated for medical use. Connecting the cord to an outlet that is not medical grade (indicated with a green dot) will not ensure grounding protection.
 - Where the integrity of the external PROTECTIVE EARTH GROUND CONDUCTOR arrangement is in doubt, the equipment shall be operated from its internal electrical power source (battery).
 - Power cord, USB extension, and workstation are for **INDOOR** use only. **DO NOT OPERATE OUTDOORS.**
 - Keep power cord away from water. **DO NOT PLUG CORD INTO OUTLET IF WET.**
 - **DO NOT OPERATE PRODUCT IF WET.** If the **WORKSTATION** becomes wet, unplug it immediately, wipe off any excess liquid, and allow it to dry before using again.
 - Inspect power cord before integration. **DO NOT USE POWER CORD IF DAMAGED.**
 - Fully insert power cord plug into outlet. **DO NOT** unplug by pulling on cord. **DO NOT** remove, bend or modify any metal prongs or pins of power cord.
 - **DO NOT** use excessive force to make mechanical or electrical connections.
 - **DO NOT** obstruct the cooling vents.
 - **DO NOT** use an electrical extension cord with your workstation.
 - **DO NOT** use a flammable cleaner on the station as it can result in fire or explosion.
 - **DO NOT** overload the cart. Weight of technology components and monitor not to exceed 30 pounds (13.6 kg). Weight of monitor not to exceed 15 lbs. (6.8 kg).
 - **DO NOT** operate the cart on an incline exceeding 10 degrees.
 - **DO NOT** use the cart to power equipment that is not part of the configured cart system.
 - **DO NOT** connect equipment that is not mounted on the cart into the power system outlets. The power system is designed for power cart mounted equipment only.
 - Equipment not suitable for use in the presence of a **FLAMMABLE ANESTHETIC FIXTURE WITH AIR**, or **WITH METERED OXYGEN OR NITROUS OXIDE.**
-  Do not adjust lift mechanism until cart has been outfitted with technology. Failure to do so may cause the shuttle and work surface to rise rapidly when actuator is released potentially causing personal injury or damage to the cart.



To avoid potential electrical shock, **DO NOT** simultaneously touch any cart system components and the patient or any apparatus not connected to the cart system. Electric current may try to flow through you between the M38 system and the other point of contact as it seeks the easiest path to ground.

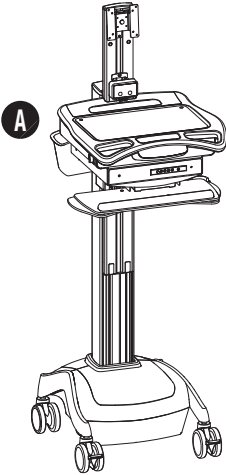
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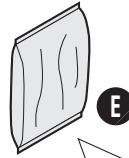
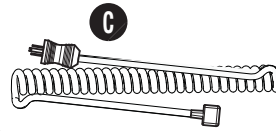
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Introduction

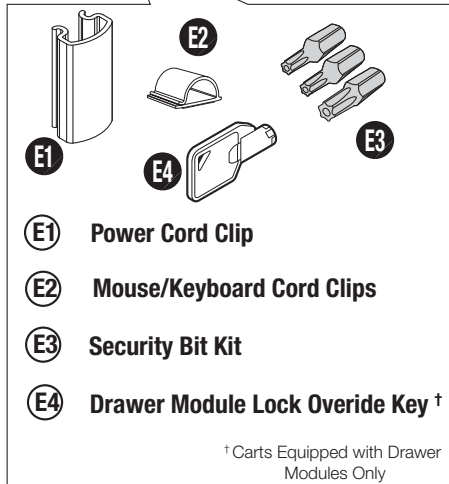
BOX CONTENTS



- A** M38 Cart
- B** Security Keys
- C** Power Cord
- D** M38 User Manual
- E** Accessory Kit



D



† Carts Equipped with Drawer Modules Only

Introduction

SPECIFICATIONS

Base Size	17" x 19" (43.2 cm x 48.3 cm)
Weight	Configurations starting at 100 lb (45.4 kg)
Height Adjustment	Up to 16" (40.6 cm)
Cart Height	49.3" to 65" (125.2 cm to 165.3 cm)
Keyboard Height	4.8" (12.2 cm) of vertical travel.
Work Surface	18" w x 15" d (52.7 cm w x 25.4 cm)
Casters	4" (10.2 cm) 2 Locking
Keyboard Platform	Accommodates 1.75" H x 18" W x 8" D (4.5 cm x 45.7 cm x 20.3 cm) USB keyboard
CPU Cavity	21.5" x 11.1" x 2.9" (54.6 cm x 28.3 cm x 7.5 cm)
LCD Monitor Mount	15 lbs (6.8 kg) max. 24" Monitor Max.
Power Cord	2.5 ft (.75 m) hospital grade spiral cord– extends to 8 ft (2.4 m), recharges on board technology, 120/240 VAC, 6.3 A, 50/60 Hz.
Power Strip	<ul style="list-style-type: none">• NEMA X3 Multiple Socket Outlet
UPS input	120 Vac, 5.1A (fused) North America 230 Vac, 2.5 A (fused) International Models
UPS output	12 Vdc @ 12.5A or 120 Vac @1.25A
Sealed Lead Acid (SLA) Battery	35 or 55 Ahr/12 V AGM (fused Battery Output) 12 Ahr (non-powered cart)
Lithium Battery	U1-12Vdc @ 512Wh (fused Battery Output)

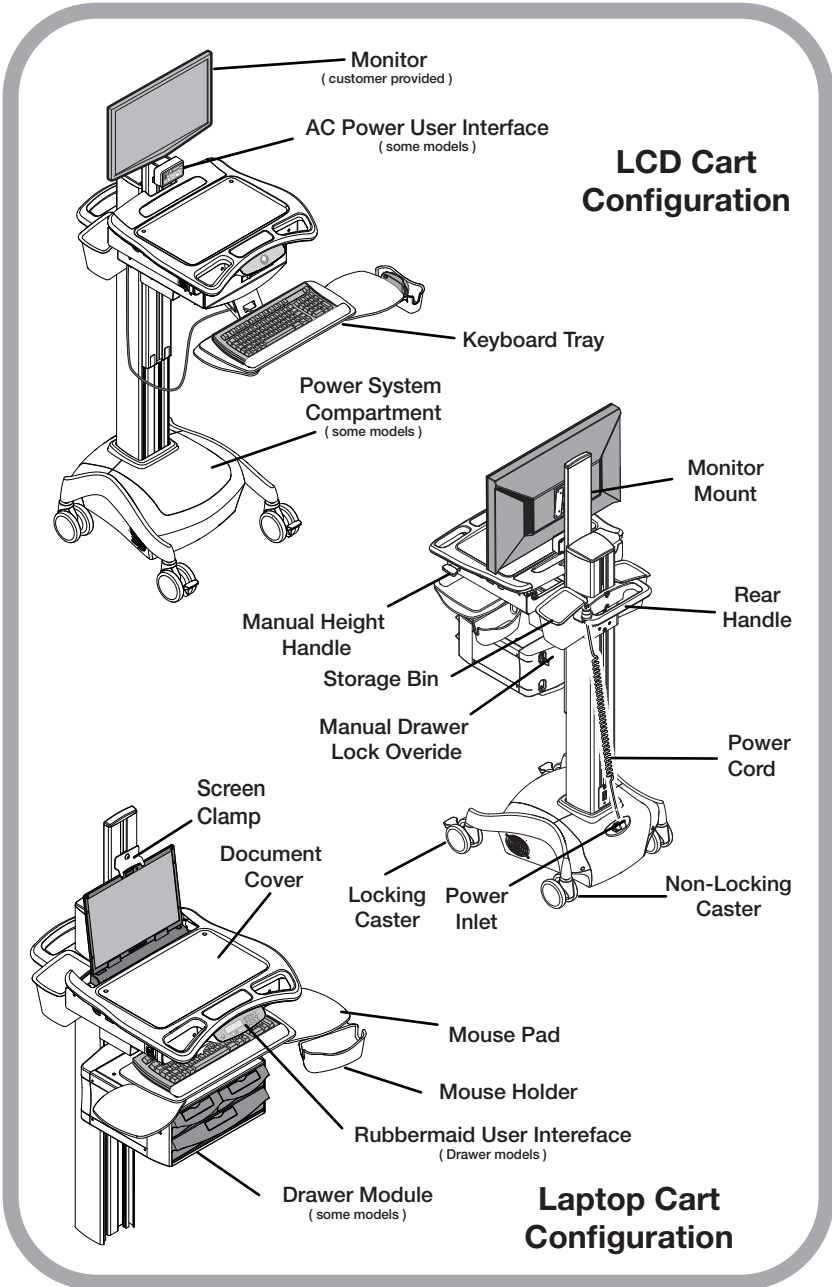
STATEMENT OF USE

The M38 Mobile Computer Cart is designed and manufactured by Rubbermaid Healthcare. Rubbermaid Healthcare is dedicated to providing innovative quality products. Our goal is to increase the capacity to care by improving productivity, ergonomics, and compliance while enhancing your facility image.

- The M38 Mobile Computer Cart is a mobile computing workstation cart designed for safe use in general patient areas for the purpose of clinical data entry and retrieval, and medication delivery.
- The M38 Mobile Computer cart is not intended for home use.
- The M38 Mobile Computer cart operates from both AC and DC (rechargeable battery) power sources.
- The M38 Mobile Computer cart has no potential electromagnetic or other interference risks when operated according to guidelines covered in this instruction manual.

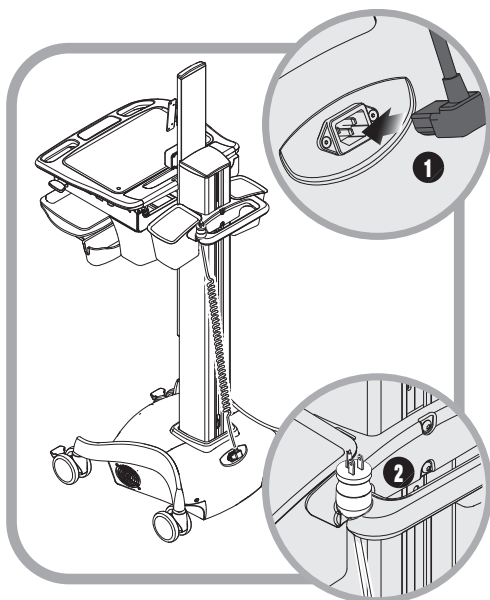
Introduction

OVERALL VIEW



Get Started

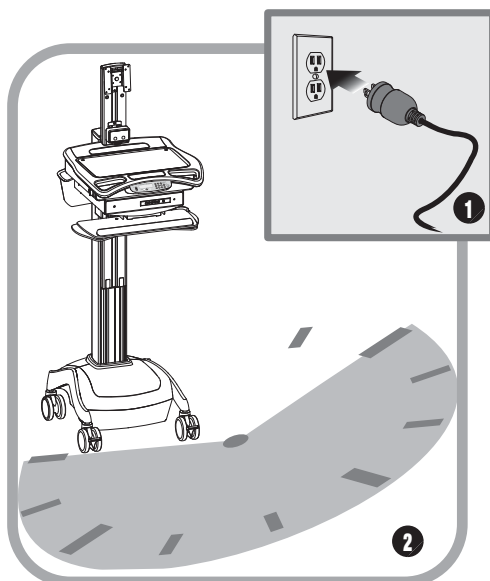
INSTALL THE POWER CORD



Install the power cord.

1. Plug the power cord into the power inlet as shown.
2. Place the plug in the cord holder.

CHARGE THE BATTERY (CARTS W/POWER, RX/XP MEDPAK EXPANSIONS)



When carts configured with battery powered expansions are new, or have been removed from service for more than 30 days, the battery must be conditioned.

To condition the battery:

1. Plug in the power cord.
2. Leave the cart plugged in for approximately 8 hours.

Note: The initial RUI (Rubbermaid User Interface) charge indicator reading may be incorrect. Charge the cart for 8 hours to ensure that battery is at full charge, and that charge indicator is set to the correct level of charge.

Setup

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Setup

SETUP PROCEDURE

1. De-energize the M38 cart.
 2. Remove the storage bins.
 3. Remove the work surface.
 4. Install the keyboard and mouse.
 5. Install any technology devices.
 - Monitor, CPU or laptop, USB hub . . .
 6. Test and Troubleshoot the installation
 - Make sure all connections are correct
 - Power the M38 cart
 - Start the technology devices and troubleshoot as necessary
 - Configure the technology devices to power on when the cart is powered on
 7. Configure the control system on models equipped with electronic controls.
 8. Replace the work surface and storage bins.
 9. Adjust lift mechanism preload on carts equipped with the manual surface lift.
- The M38 cart is ready for use.



To fully shut down (de-energize) a DC powered cart for service or cleaning you must:

1. Unplug the power cord.
2. Press and hold down the Power button to power down the cart and internally disconnect the battery from the electrical system.

If the power cord is plugged in after the POWER button is pressed, the battery will reconnect and the cart will power up automatically.

To power up the cart after shut down, you must plug in the power cord to reconnect the battery to the cart electrical system.



To fully shut down a non-powered cart:

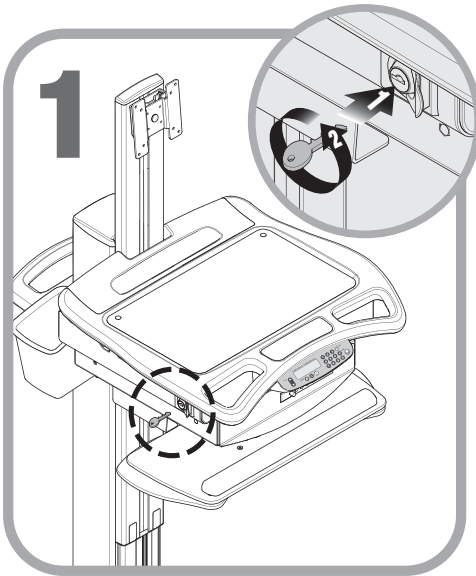
1. Unplug the power cord.
2. Position the battery cut-off switch to the OFF position.



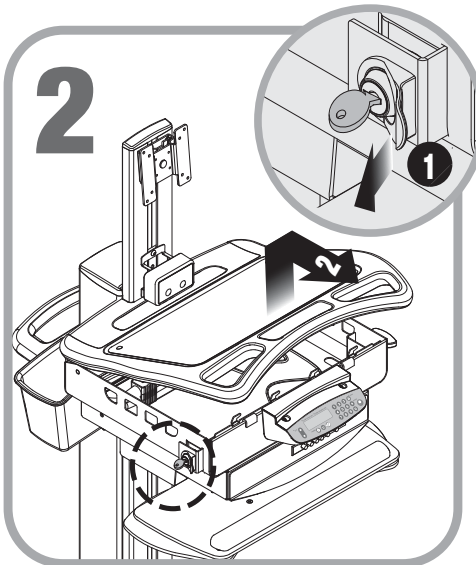
Observe local safety procedure (e.g., lock out/tag out) to ensure that cart remains de-energized during maintenance and cleaning cycles.

Setup

REMOVE THE WORK SURFACE



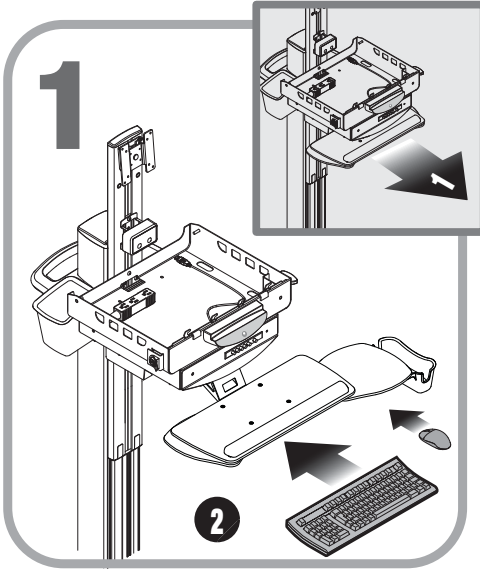
1. Insert the security key in the lock as shown.
2. Turn counter clockwise to unlock the work surface.



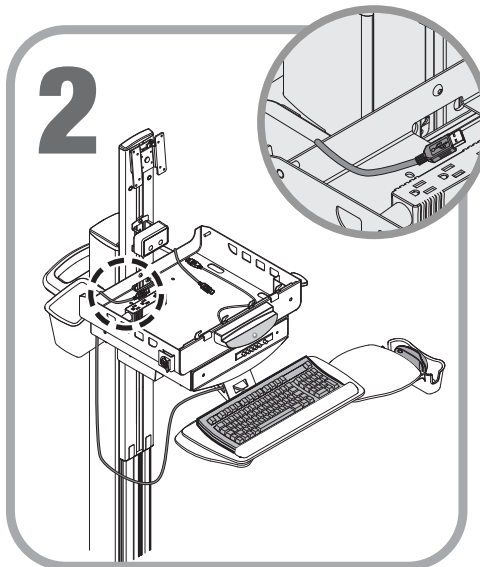
1. Pull the latch to unlock the work surface.
2. Grasp a front handle, and grasp the opposite side of the of the work surface.
3. Lift the front of the work surface, then pull the work surface toward you.

Setup

INSTALL KEYBOARD AND MOUSE



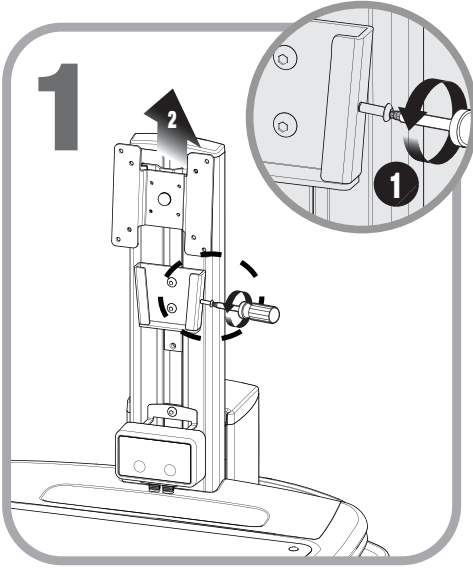
1. Grasp the front edge of the keyboard tray and pull it toward you to extend the keyboard tray.
2. Place the keyboard and mouse on the keyboard tray. Use self adhesive hook and loop material to keep the keyboard in position.



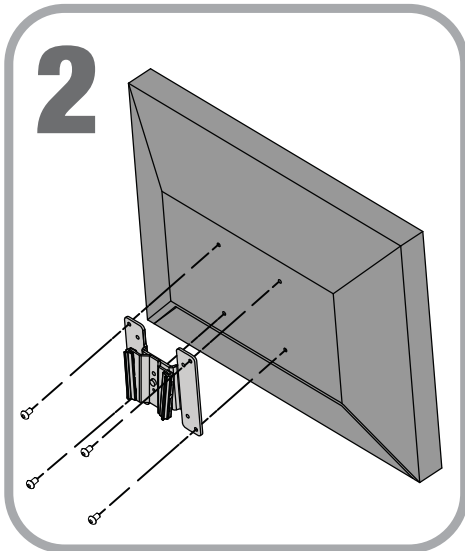
Route the keyboard and mouse cables through the rear or side ports of the technology tray as shown.

Setup

INSTALL THE MONITOR



1. Turn the locking screw counter clockwise to loosen the locking screw as shown.
2. Remove the monitor mount.



Use the mounting screws provided with the monitor to attach the monitor mount to the monitor.

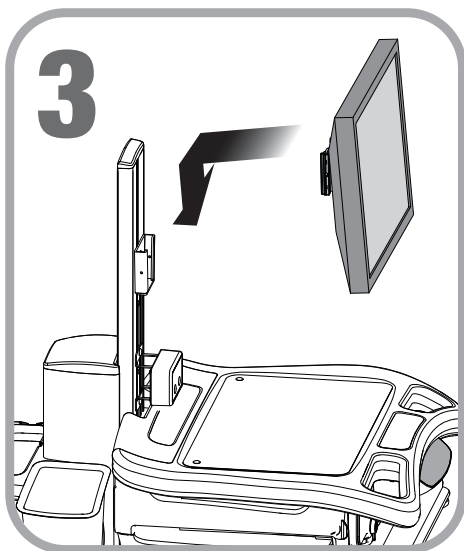
Note: The mounting holes may need to be enlarged to accommodate the monitor mounting screws.

Note: If mounting screws are not provided, refer to the monitor documentation for the correct mounting screw size.

Note: It may be easier to connect the monitor cables while the monitor is off the M38.

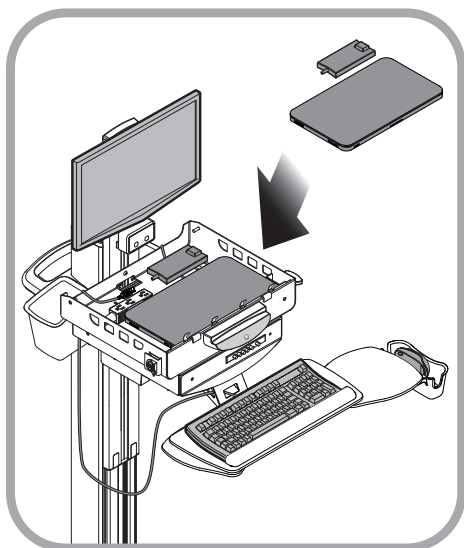
Setup

INSTALL THE MONITOR



1. Insert the monitor/mount assembly onto the column mount.
2. Install the monitor cables.
3. Route the video and power cables to the technology tray; then plug the power cord into the power strip.

INSTALL A THIN CLIENT OR CLOSED LAPTOP



1. Place the laptop/thin client and power supply in the technology tray.
2. Connect the cables.
3. Plug the power cord into the power strip.

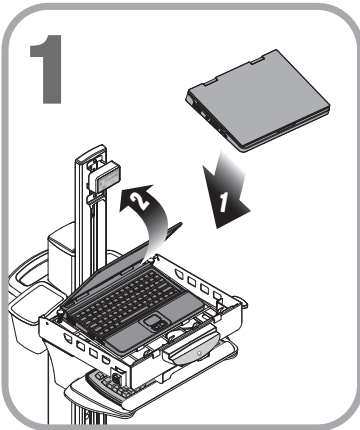
Note: to power the task light on an unpowered cart, plug in the black USB cable onto a powered USB port or hub.

Note: To monitor the power supply, connect the beige USB cable to the computer.

Note: A small form-factor computer may be mounted to the rear column. Contact Rubbermaid Healthcare at customer.service@rubbermaidhealthcare.com or 888-859-8294 for more information.

Setup

INSTALL A LAPTOP COMPUTER



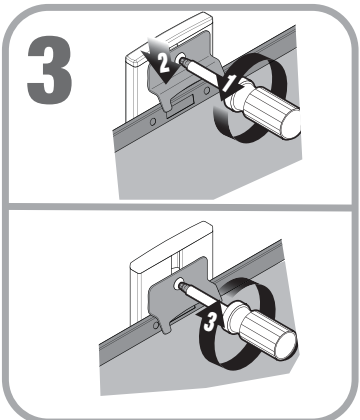
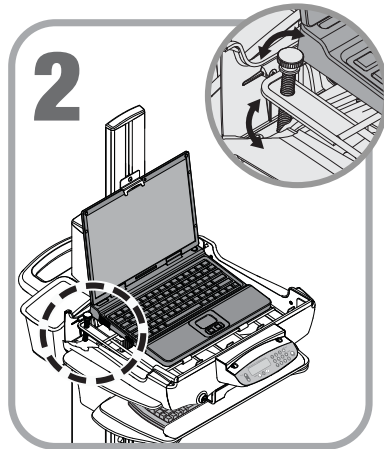
1. Place the laptop on the wire-form platform.
 - Connect the cables to the laptop.
 - Plug the power supply into the power strip.

Note: Use self-adhesive hook and loop material to anchor the laptop to the platform

Note: to operate the task light on a non-powered cart, plug in the black USB cable onto a powered USB port or hub.

2. Open the laptop and rest the lid against the column.

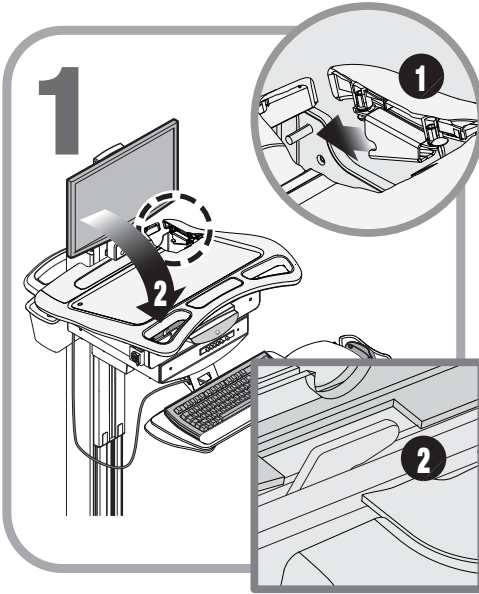
Use the thumb screws to raise the rear of the laptop platform so the bottom of the screen will be visible when the work surface is installed.



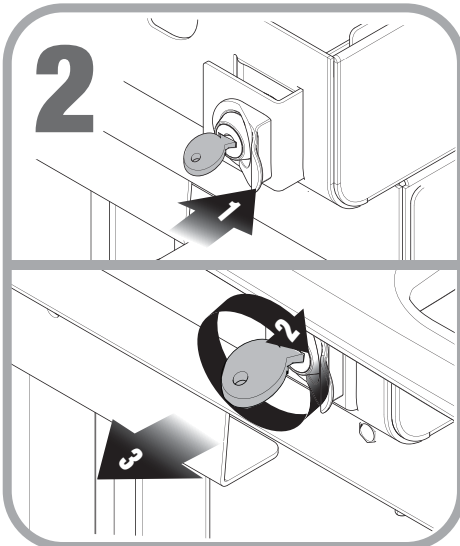
1. Loosen the monitor clamp screw.
2. Lower the monitor clamp until it contacts the top of the monitor as shown.
3. Tighten the monitor clamp screw.

Setup

INSTALL THE WORK SURFACE



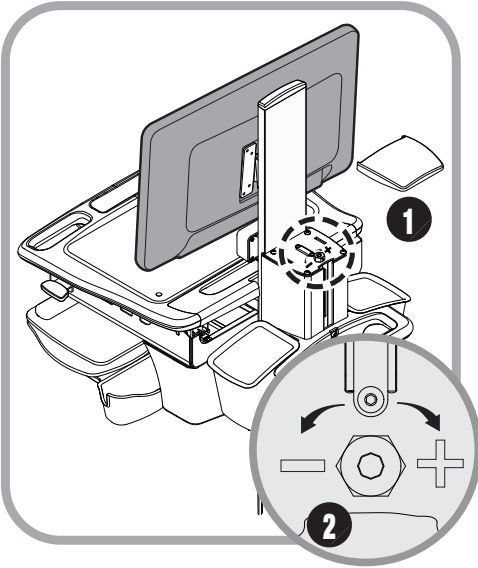
1. Align the work surface rear latches with the latch pins on the technology tray as shown.
2. Lower the front of the work surface and engage the latches at the front of the technology tray.



1. Push in the latch.
Try to lift the work surface to make sure the latch is locked.
2. Turn the security key clockwise to lock the work surface.
3. Remove the security key.

Setup

ADJUST THE MANUAL WORK SURFACE LIFT PRELOAD



On models equipped with the manual work surface lift, it may be necessary to adjust the lift preload to compensate for the weight of the technology components added during setup.

Adjust the lift preload as follows:

1. Use a soft tool to pry and remove the column top cap (1).
2. Use a 17mm (11/16) wrench to turn the adjusting screw (2) as necessary.
 - Turn the screw clockwise to increase the preload.
 - Turn the screw counter clockwise to decrease the preload.
3. Raise and lower the work surface to test the adjustment
4. Repeat steps 2 — 3 until the lift is adjusted

Note: The lift is adjusted when the work surface can be raised and lowered with approximately the same effort.

5. Replace the top cap (1).

Setup

CONFIGURE THE CONTROL SYSTEM (RX/XP MEDPAK EXPANSION)

The electronic drawer control system offers a number of configurable advanced features which aid cart and fleet management.

Cart interface configuration software application and drivers are available for download at – www.rubbermaidhealthcare.com/welcome

Control system features available for configuration are listed below:

Keyless Entry System PIN Number Management– The drawer control system stores up to 128 PIN numbers. PIN numbers control the locking mechanism for the RX and XP and side mounted drawer modules.

Keyless Entry System Auditing– The drawer control system keeps a rolling log of PIN transactions listed by PIN number. Log data can be exported for off-line review.

Asset ID/Tagging– The **Cart Name** and **Serial** are provided for asset management. **Serial** is entered into the controller at manufacture and may only be viewed with the configuration software. **Cart Name** is displayed on the LCD, and is configurable with the with the software application.

Timers– The configuration software sets timers for the following:

- Drawer Lock-Down Time 1 - 255 seconds
- Keyboard Light Time-out 1 - 255 seconds
- LCD Backlight Time-out 1 - 99 seconds

Power Alert/Power Management Applications

The optional battery/power supply monitoring software application may be installed on the (customer supplied) installed computer. This software monitors battery usage and provides an indication of the current physical condition of the battery. The monitoring software also logs data log to either the installed computer or user's network depending on the configuration. The Power Alert/Power Management Applications are available for download at– www.rubbermaidhealthcare.com/welcome

Operation

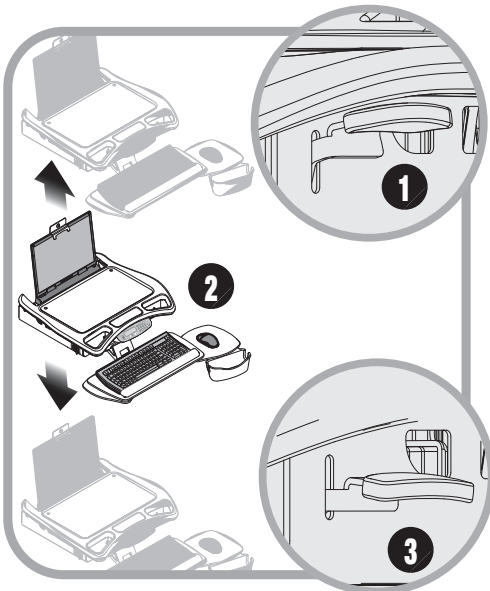
QUICK START PROCEDURE

Good practice for starting the M38 cart is as follows:

1. Turn on the cart (see "Power On the M38 Cart" p24-28)
2. Note the condition of the battery (the cart may need to be plugged in p30-31)
3. Move the cart to the desired location.
 - Unplug the cart from the wall outlet.
 - Place the plug in the cord holder.
 - Unlock the casters. (p-24)
 - Move the cart.
4. Lock the casters.
5. Adjust the work surface height. (see "Manual Work Surface Lift" p-21).
6. Enter Your PIN to unlock the drawers (see p32-33).
7. Set work light as needed. (see "Keyboard Light" p21)
8. When you finish your work cycle return the cart and plug it in to charge.

Note: Plug the cart into an electrical outlet when it will be left unattended for any length of time.

THE MANUAL WORK SURFACE LIFT

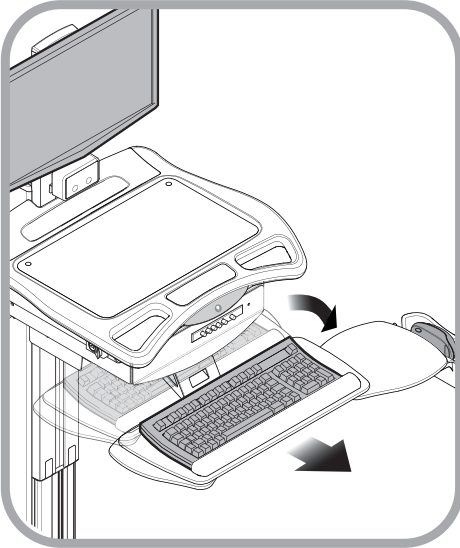


To raise or lower the work surface:

- 1a. Position your hands to hold the work surface steady,
- 1b. Lift the height lever that is located beneath the right handle.
2. Raise or lower the work surface to the desired height.
3. Release the height lever; then, slightly raise or lower the work surface to make sure the locking pin is seated. (You will feel the locking pin detent and lock in position if is not seated.)

Operation

THE KEYBOARD TRAY



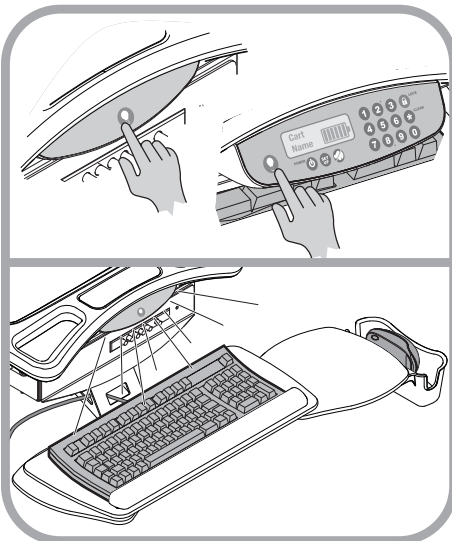
To extend the keyboard tray, pull the key board tray toward you until it stops.

To retract the keyboard tray, push in on the keyboard tray until it stops.

To extend the mouse pads, grasp the edge of the mouse pad and twist it to the open position.

To push the front edge of the mouse pad to twist it to the closed position.


THE KEYBOARD LIGHT



A keyboard light is included to enhance cart usability in darkened patient areas. The keyboard light that is operated by using the Light button located on the membrane keypad at the front of the cart.

The keyboard light is designed to illuminate the keyboard in the extended position. When the keyboard tray is retracted, the keyboard light will illuminate the floor in front of the cart.

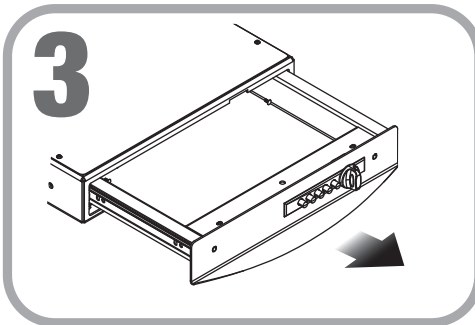
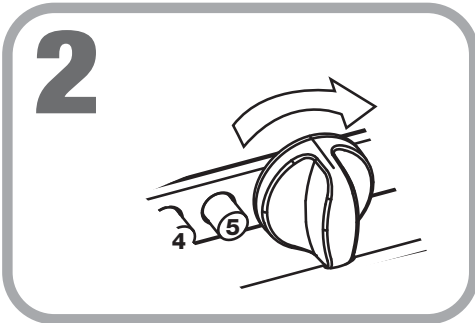
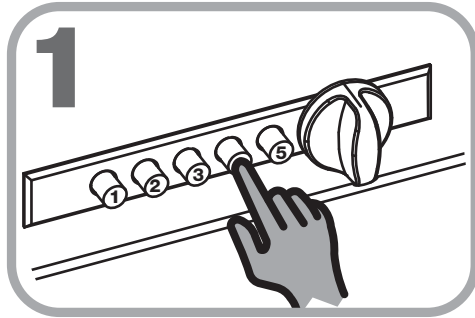
To use the keyboard light:

- Press the Light button  to turn on the keyboard light.
- Press the Light button again to turn off the keyboard light.

Note: *The keyboard light will turn off automatically when the when the keyboard light timer counts down to zero.*

Operation

SINGLE LOCKING DRAWER



Unlock the Drawer

Enter the combination.

Note: The factory preset combination is as follows:

1. Press and release buttons 2 and 4 simultaneously.
2. Then press and release button 3.

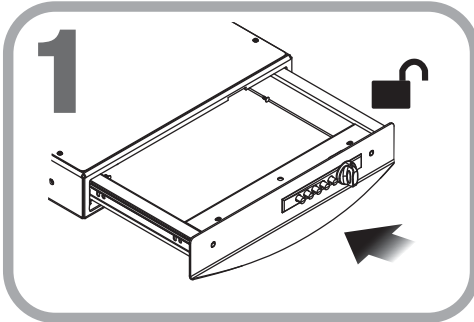
Turn the control knob to the right (clock wise).

Open the drawer.

If the drawer will not open, repeat steps 1-3.

Operation

SINGLE LOCKING DRAWER

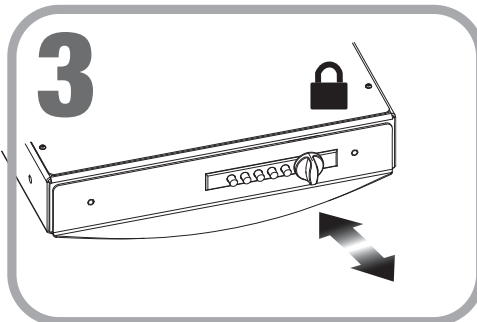


Lock the Drawer

With the drawer unlocked,
Close the drawer.



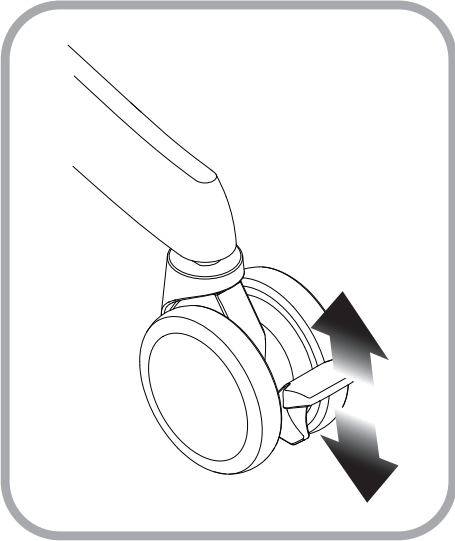
Turn the control knob to the
left (counter clockwise) until it
stops, then release.



Try to open the drawer.
If the drawer is not locked
repeat steps 1-3.

Operation

THE CASTERS



To operate the casters:

- Lower the tab with your toe to lock a caster.
- Lift the tab with your toe to unlock a caster.

POWER ON/POWER OFF THE M38 CART

Note: *The M38 cart should only be powered off for the following conditions:*

- *The audible alarm cannot be muted.*
- *When the cart will not be used for an extended period (the cart is placed in storage.)*
- *For maintenance.*
- *If the cart is moved to a different facility.*



To fully shut down a **DC** powered cart for service or cleaning you must:

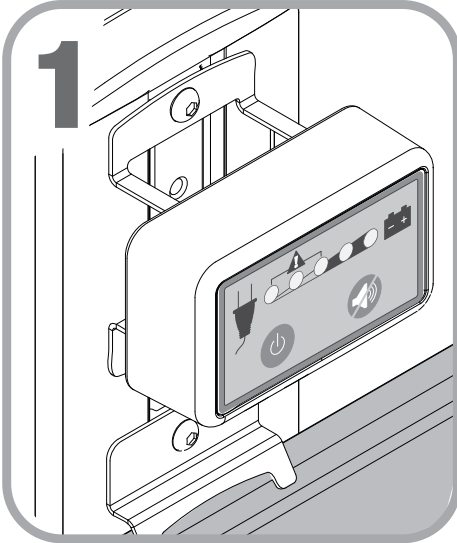
1. Unplug the power cord.
2. Press the power button to power down the cart and internally disconnect the battery.

If the power cord is plugged in after the shutdown button is pressed, the battery will reconnect and the cart will power up automatically.

To power up the cart after shutdown, you must plug in the power cord to reconnect the battery to the cart electrical system.

Operation

AC POWER EXPANSION RUBBERMAID USER INTERFACE (RUI)

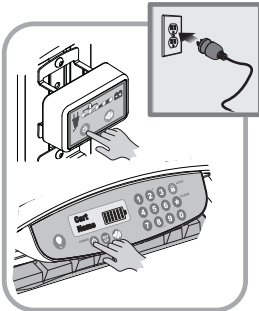


The LED RUI is included on M38 computer carts configured with the AC Power Expansion but without drawer expansions. The LED RUI controls the AC power supply and monitors the condition of the cart power battery.


Power Indicator The left hand LED is the power indicator. If the light is green, there is AC power to the installed technology devices.

Battery Charge Indicator The other four LEDs are the battery charge. Each LED indicates roughly 25% charge. The battery indicator is further explained on pages 30-31 of this manual.

POWER ON/POWER OFF AC POWERED CARTS

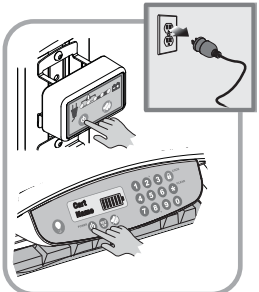


To Power On AC powered carts:


1. Plug in the power cord.
2. Press and hold the power button  for 3-5 sec.

Note: The RUI displays the battery condition and the keypad will function.

Note: Plug the cart into an electrical outlet when it will be left unattended for any length of time.



To Power Off AC powered carts:

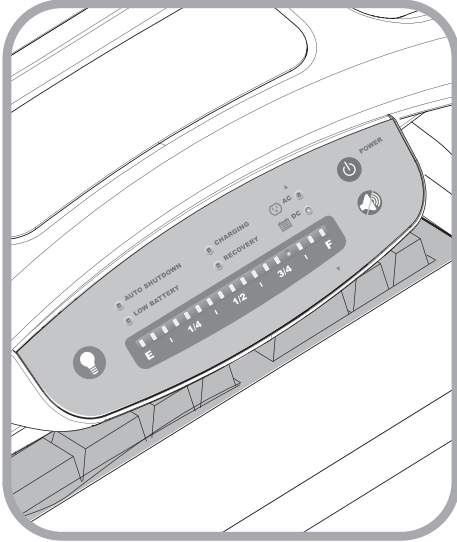
1. Unplug in the power cord, and place it in the cord holder.
2. Press and hold the power button  for 3-5 sec.

The RUI goes dark or blank and the keypad will not function. Cart power to all devices plugged into the cart power system is turned off.

The cart is electrically de-energized for cleaning or maintenance

Operation

DC POWER EXPANSION USER INTERFACE (RUI)



The DC RUI is included on M38 computer carts configured with the DC Power Expansion but without drawer expansions. The DC RUI controls the dc power supply and monitors the condition of the cart power battery.

Auto Shutdown – indicates the battery level is too low to operate the cart and a safe shutdown of the cart has started.

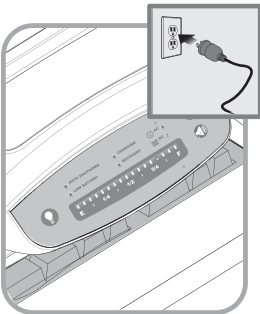
Low battery – The battery charge must be topped up. LED will illuminate at 20 min. run-time or less.

Charging – A flashing **Charging** LED indicates the battery is accepting a charge from ac power.

Recovery – Indicates the dc power system is in a recovery cycle, and should be left to charge for 6-8 hours.

AC/DC – AC indicates the cart is plugged into a wall outlet. DC indicates the cart is unplugged and operating on battery power. Battery Indicator is explained on pgXX of this manual.

POWER ON/POWER OFF DC POWERED CARTS

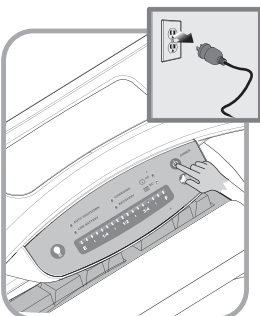


To Power On dc powered carts:


1. Plug in the power cord.
2. Wait 3-5 sec the power supply will turn on automatically.

The RUI will display the battery condition and the keypad will function.

Note: Plug the cart into an electrical outlet when it will be left unattended for any length of time.



To Power Off the dc powered carts:

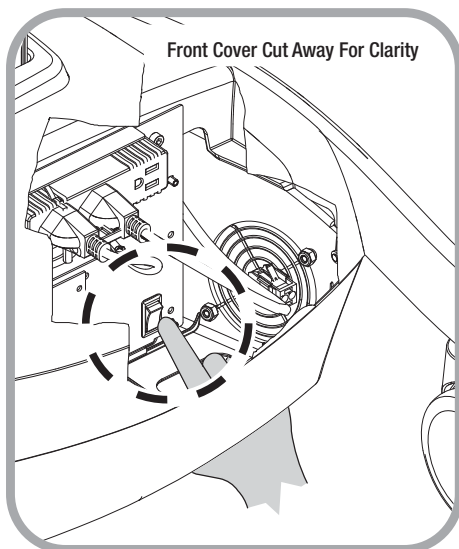
1. Unplug in the power cord.
2. Press and hold the power button  for 3-5 sec.

The RUI goes dark or blank, the keypad will not function, and power to all devices plugged into the cart power system is turned off.

The cart is electrically de-energized for cleaning or maintenance as long as the power cord is **not** plugged in.

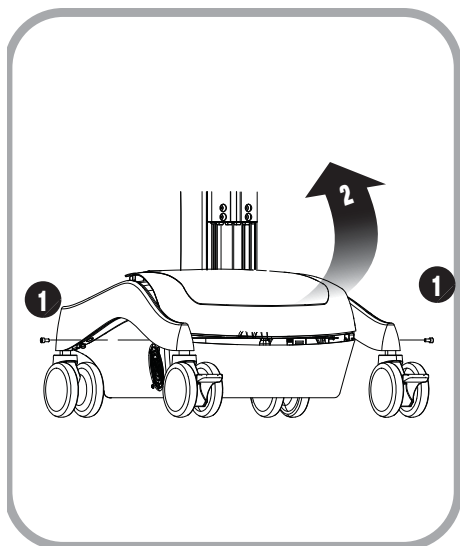
Operation

BATTERY CUTOFF SWITCH (NON-POWERED W/DRAWER EXPANSION)



Non-powered carts configured with electronic expansions are fitted with the battery powered non-powered control system. The control system design includes a battery cutout switch to de-energize the control system for maintenance, storage, and shipping. New M38 carts are shipped in the de-energized state, with the cutout switch off. The cutout switch must be switched on as shown in order to power-on the cart. There are two methods to access the cutout switch.

- The easiest method is to reach under the cart and switch on cutoff switch through the opening at the bottom of the cart as shown.



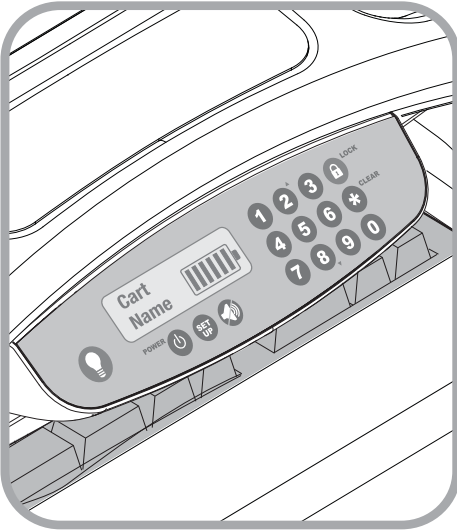
For those who are unsure of where the switch is located:

1. Remove the 2 front cover screws (1) from base of the cart.
2. Lift and remove the front cover from the base as shown.
3. Switch on the cutoff switch from above. The cutoff switch is located as shown above.
4. Replace the front cover (2) and screws (1).

The cart is ready to power on.

Operation

LCD RUBBERMAID USER INTERFACE (RUI)

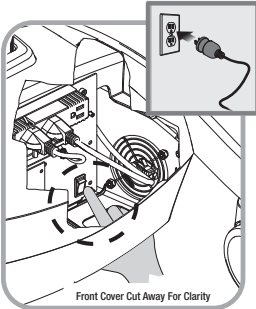


M38 powered and non-powered carts configured with the electronic locking RX or XP drawer expansion are equipped with the Rubbermaid User Interface (RUI). The RUI controls the low battery alarm, keyboard light, drawer control system, power supply, and PIN entry to unlock the drawers.


Depending on the cart power configuration, use one of 3 methods to power on/power off the Cart:

- For **AC** powered carts see page 25.
- For DC powered carts see page 26.
- For Non-Powered carts see page 28.

POWER ON/POWER OFF NON-POWERED CARTS



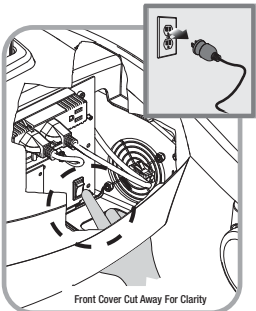
To power on non-powered carts:

Note: The Power button  is not used by the non-powered control system. The battery cutoff switch is the power switch.

1. Turn on the Battery cutoff switch as shown.
2. Plug in the power cord.

The RUI will display the battery condition and the keypad will function.

Note: Plug the cart into an electrical outlet when it will be left unattended for any length of time.



To power off non-powered carts:

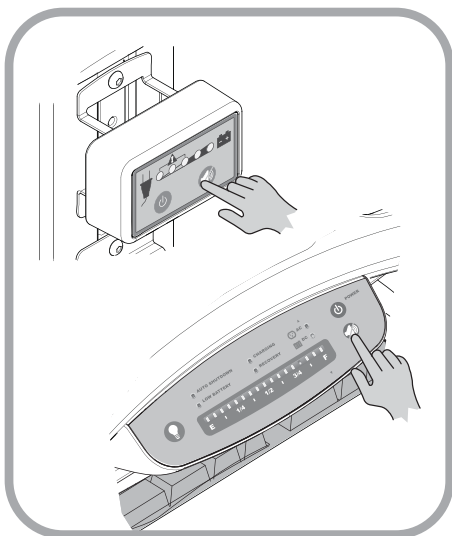
1. Unplug in the power cord.
2. Turn off the battery cutoff switch as shown.


The RUI goes dark or blank and the keypad will not function. Cart power to all devices plugged into the cart power system is turned off.


The cart is electrically de-energized cleaning or maintenance.

Operation


THE MUTE BUTTON



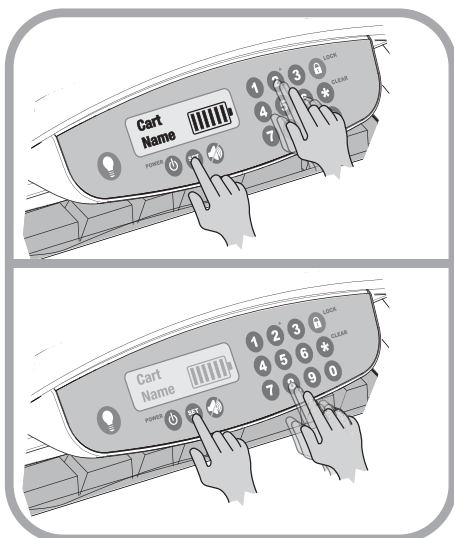
The Mute Button  is used to silence the power system audible alarm.

To mute the audible alarm, press and hold down the mute button  until the alarm is silenced.

Note: When the battery is at 10% (1/8) charge or less, the audible alarm will sound after again a minute when the mute button is used until the power system is turned off or the cart is plugged in to charge the battery. Failure to plug-in or turn off the power system will damage the battery.

 **Note:** Do not allow the battery charge to drop below 20% (1/4), the battery may lose the ability to recharge.

ADJUST THE CONTRAST OF THE LCD



The LCD level of contrast is adjusted as follows:

To increase the contrast:

1. Press and hold down the **SETUP** key.
2. Repeatedly press the **2** key (the up arrow) until the display shows the desired level of contrast.

To decrease the contrast:

1. Press and hold down the **SETUP** key.
2. Repeatedly press the **8** key (the down arrow) until the display shows the desired level of contrast.

Operation

BATTERY CHARGE INDICATORS (POWERED CARTS)

M38 cart power expansions are equipped with a battery gauge that displays the level of battery charge. Powered carts without powered drawer expansions are equipped with LED battery gauges. The RUI for powered carts equipped with powered drawer expansions has an LCD battery gauge.

The RUI also indicates power system status:

- | | | |
|----------|---------------------------|--|
| • Normal | greater than 50% to 100%, | The cart may be unplugged and used on battery power. |
|----------|---------------------------|--|

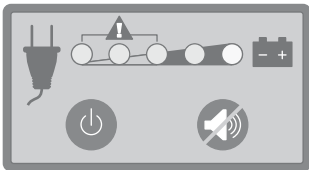
- | | | |
|---------------|----------------------|---|
| • Charge Mode | less than 50% to 20% | The cart should be plugged in to charge, but may be used on battery power alone. The audible alarm will sound but may be muted. |
|---------------|----------------------|---|

- | | | |
|------------|---------------|---|
| • Recovery | less than 20% | The cart must be plugged in. The cart may shutdown for deep discharge recovery cycle and should remain plugged in for 6-8 hours. Powered components will not be available during this period. The audible alarm will continue to sound. When battery level drops below 10% the alarm cannot be muted unless the cart is plugged in. |
|------------|---------------|---|



Caution: Never allow battery charge level to drop below 20% (1/4). Failure to keep the battery charge greater than 20% may damage the battery and render it unable to recharge.

AC Power LED User Interface



The condition of the LEDs and audible alarm for corresponding levels of battery charge are listed in the table below

Charging Indicator Summary (Discharging)					
Indicates Power On/Off Only					
	○	○	○	○	○
Approximate Battery Charge Level					Low Battery Alarm
90-100%	Green	Green	Green	Green	Off
50-89%	Green	Green	Green	Off	Off
20-49%	Yellow	Yellow	Off	Off	On
<20%	Flashing Red	Off	Off	Off	On

Operation

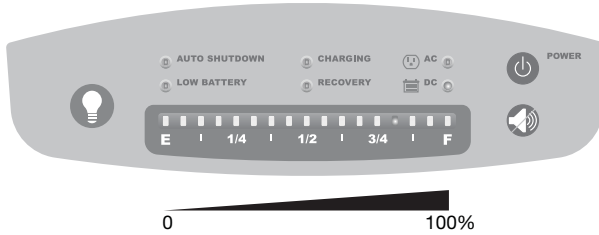
BATTERY CHARGE INDICATOR (CONTINUED)

DC Power LED User Interface

The DC power LED RUI battery gauge uses 17 LEDs arrayed in a straight line pattern along the gauge area of the RUI. Charge level is indicated on the scale one illuminated LED at a time.

The **Recovery** LED will flash when the power supply shifts to recovery mode.

The **Charge** LED will flash when the power supply is plugged in and charging the battery.



Battery Charge Level	Cart Condition	Low Battery Alarm
7/8 - F	Normal	Off
1/2 - 13/16	Normal	Off
1/8 - 7/16	Charge Mode	On
less than 1/8	Recovery	On

Powered Drawer Expansion LCD User Interface

The LCD displays a graphic battery gauge. The interior of the battery graphic displays 6 bars to indicate charge level.

Charging - The indicator bars scroll to indicate charging.

Recovery - The xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx




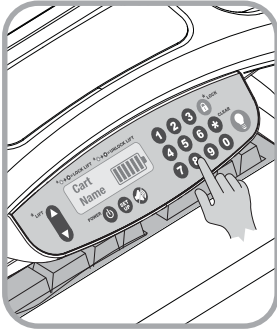
Approximate Battery Charge Level	1	2	3	4	5	6	Low Battery Alarm
>83%-100%	On	On	On	On	On	On	Off
>65%-83%	On	On	On	On	On	Off	Off
>49%-65%	On	On	On	On	Off	Off	Off
>33%-49%	On	On	On	Off	Off	Off	On
>16%-33%	On	On	Off	Off	Off	Off	On
>0%-16%	On	Off	Off	Off	Off	Off	On

Operation

UNLOCK AND LOCK THE DRAWER MODULES

Drawer Locks

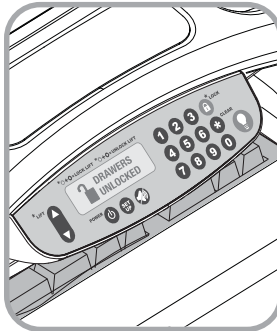
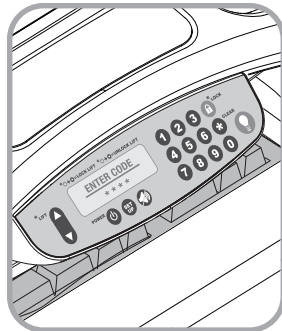
The drawers are accessible when a valid personal identification number (PIN) is entered into the controller. A user may lock the drawers by either pressing the **Lock**  button or by waiting until the drawer lock timer counts down. The electronic drawer lock will not function when the battery is dead, conditioning, or if the cart is electrically de-energized. When there is no power to the drawer module, open the drawers by using the manual lock override that is located at the rear of the drawer module.



Press the number keys (1-0) to enter the 4 digit PIN code.

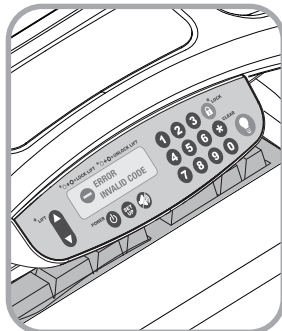
Note: The factory default PIN is **8034**.

As you enter digits a * symbol is displayed to indicate that a digit has been entered into the controller.



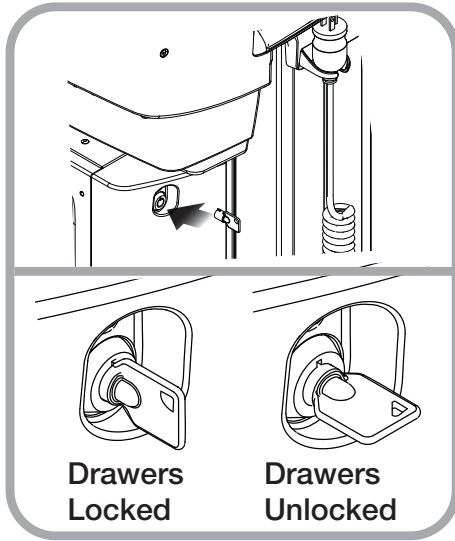
If the 4 digits entered are a valid PIN, the drawer module will unlock and the **Drawers Unlocked** message will be displayed.

If the digits are not a valid PIN, the **Error Invalid Code** message is displayed for a short time; then the display changes to the battery monitor.



Operation

THE DRAWER MODULES (CONTINUED)



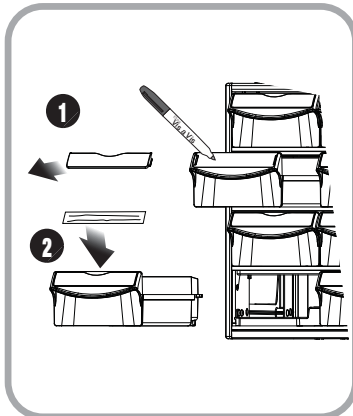
Manual Drawer Lock

Use the manual drawer lock override as follows:

1. Insert the lock override key into the lock located on the rear of the drawer module. The Drawers are locked, the key may be removed from the lock.
2. Turn the key clockwise to open the drawers. The key cannot be removed while the drawers are unlocked.
3. Turn the key counter clockwise to lock the drawers and remove the key.

Drawer Labeling

Drawers are equipped with a dual labeling system that is located on the drawer pull. There are Wet-erase labels located beneath the clear label guard (white for locking drawers, gray for non-locking). Also, the label guard forms a pocket which accepts a 4 1/8" (10.5 cm) X 7/8" (2.2 cm) paper or card label.

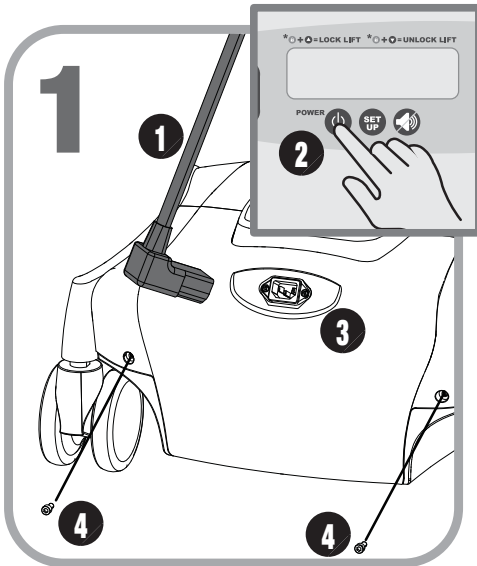


Label the drawers in the following manner:

1. Wet-erase labels:
 - a. Remove the clear plastic label guard.
 - b. Use a wet-erase marker (Expo Vis-A-Vis or equivalent) to label the drawer.
 - c. Replace the label guard.
2. Paper labels
 - a. Cut out and print a sufficient number of 4 1/8" X 7/8" labels.
 - b. Insert the label between the label guard and the dry-erase surface.

Maintenance

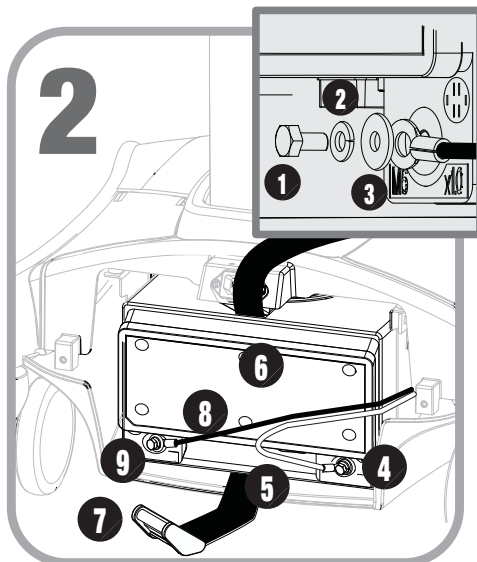
REMOVE AND REPLACE THE BATTERY



Power down the M38 cart and remove the rear cover:

1. Unplug the M38 cart from the wall outlet.
2. Press and hold down the power button (approximately 2 seconds) to turn off the M38 cart.
2. Remove the power cord (1) from the rear of the M38 cart.
3. Use a 4mm hex key wrench to remove 2 screws (4) and Battery Cover (3) from the rear of the M38 cart.

Reverse the steps of this procedure to replace the rear cover and power cord.



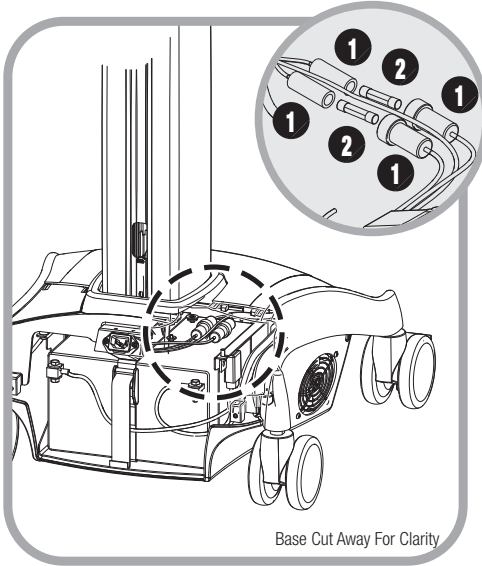
Remove the battery:

1. Unbuckle the web belt (7).
2. Remove bolt (1), lock washer (2), washer (3), and **Red** cable (5) from positive battery terminal (4).
3. Remove bolt (1), lock washer (2), washer (3), and **Black** cable (8) from negative battery terminal (9).
4. Remove battery (6) from the M38 cart.

Reverse steps of this procedure to install the battery.

Maintenance

REMOVE AND REPLACE THE INPUT POWER FUSES



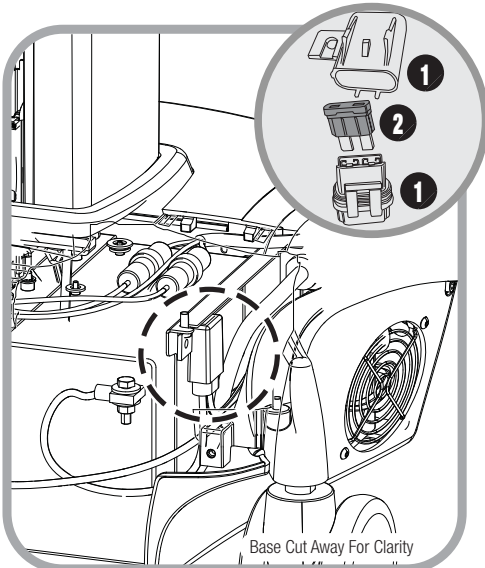
Power down the M38 cart, remove the rear cover, remove the battery, remove and replace the fuses.

1. Power down the M38 cart and remove the rear cover as directed on page 34 of this manual.
2. Remove the battery as directed on page 34 of this manual.
3. Twist open fuse holders (1) and remove fuses (2). Discard blown fuses.

Replace fuses with Cooper Busman AGC-6 or equivalent.

Reverse the order of the steps of this procedure to reassemble the cart.

REMOVE AND REPLACE THE BATTERY POWER FUSE



Power down the M38 cart, remove the rear cover, remove and replace the battery fuse.

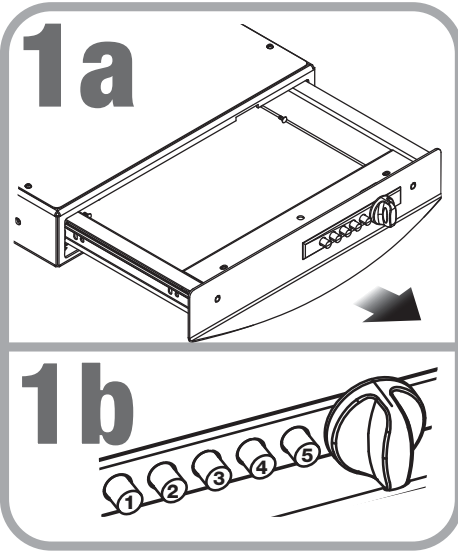
1. Power down the M38 cart and remove the rear cover as directed on page 34 of this manual.
2. Remove the lower half of battery fuse holder (1) as shown.
3. Remove fuse (2). Discard the blown fuse.

Replace fuse with Littlefuse ATOF 0287030 30A or equivalent.

Reverse the order of the steps of this procedure to reassemble the cart.

Maintenance

CHANGE THE DRAWER LOCK COMBINATION

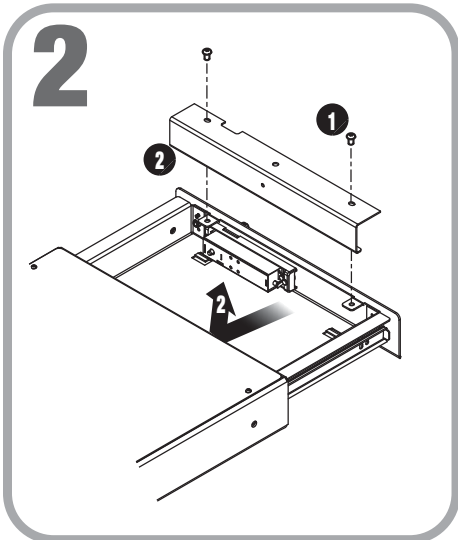


⚠ Never close the drawer to test a new combination. If the combination fails, you will need a service call to get the drawer open.

Use the current combination to open the drawer.

Note: The factory preset combination is as follows:

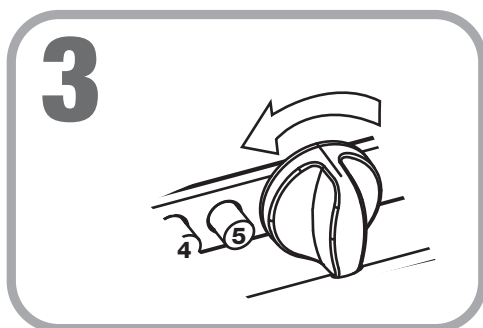
1. Press and release buttons 2 and 4 simultaneously.
2. Then press and release button 3.



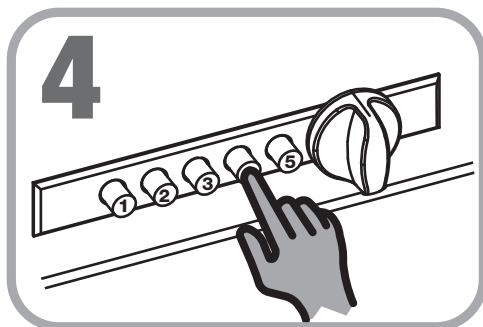
1. Remove the 2 screws (1) from the cover (2).
2. Slide the cover (2) back, then lift it away from the drawer assembly to expose the drawer lock.

Maintenance

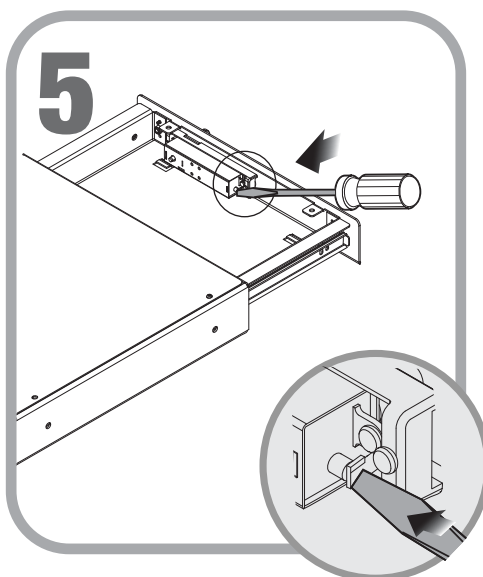
CHANGE THE DRAWER LOCK COMBINATION (CONTINUED)



Turn the control knob to the left (counter clockwise) to the stop position, then release. This clears previously used buttons.



Enter the existing combination.



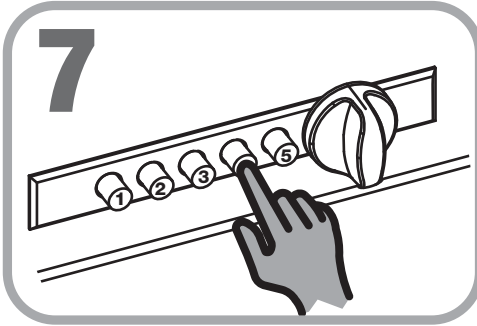
Press on the combination change lever (located at the rear of the lock) until you hear and feel a detent.

Maintenance

CHANGE THE DRAWER LOCK COMBINATION (CONTINUED)



Turn the control knob to the left (counter clockwise) to the stop position, then release. This clears previously used buttons.



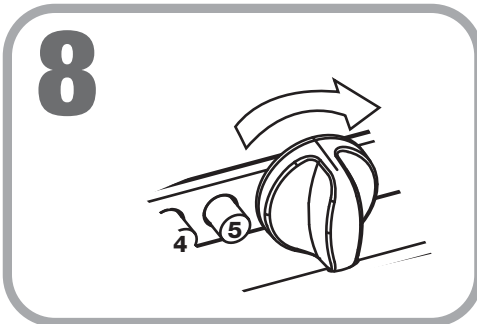
Enter the new combination.

Note: Any of the buttons may be used in the new combination, either pressed simultaneously or individually.

Each button may only be used once.

A one button combination is not recommended.

Write down your new combination.



Turn the control knob to the right (clockwise) to the stop position, then release. This activates the new combination.

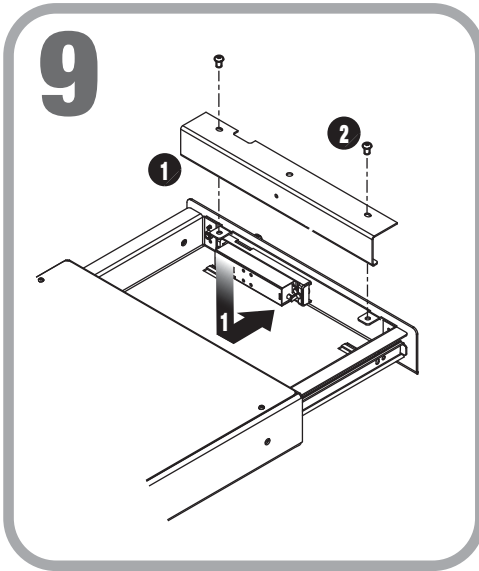
Enter the new combination and test the operation of the lock (**with the drawer open**).

Note: The lock can be disabled by following the combination change procedure and omitting step 7.

To reactivate the lock follow the combination change procedure and omit step 3

Maintenance

CHANGE THE DRAWER LOCK COMBINATION (CONTINUED)



1. Slide the lock cover into position.
2. Install the 2 screws on the cover.
3. Close and lock the drawer.

Troubleshooting

Cart Will Not Power Up:

- Plug power cord into a working hospital grade outlet
- Check to ensure power cord is plugged securely into back of cart
- Check to see if the Power System Interfaces (PSI) is charging when plugged in.
- If the charge level is critically low (last one or two LED's on) let cart charge until full
- If the cart does not start, check that cables to the PSI are securely plugged in.

Cart Will Not Charge:

- Check to ensure external spiral cord is plugged into base of cart.
- Ensure outlet is functionally operational
- Plug the power cord into a working hospital grade outlet.
- Check to make sure the power cord is plugged securely into the back of the cart.
- Check to see if the PSI indicates the station is charging when plugged in.
- If the charge level is critically low (last one or two LED's on) let the cart charge until full
- If the cart still does not charge, check to see if cables to the PSI are securely plugged in.

Audible Alarm Will Not Turn Off:

- When the battery reaches approximately 10% of capacity remaining, the audible alarm will sound. The alarm may be muted for 1 minute. Until the cart is plugged in to charge the audible alarm will continue to sound every minute.
- If alarm fails to go off after plugging in cart for several minutes, power down unit by holding on/off button for 2 seconds.

Cart Is Hard To Push:

- Check that the caster locks are in the unlocked (up) position
- Examine casters to see if any debris is caught in them

Troubleshooting

Keyboard Tray will Not Raise or Lower:

- Check for cable obstructions.
- Adjust the keyboard arm tray arm knob counter-clockwise to loose
- Adjust the keyboard arm tray arm knob clockwise to tighten

Keyboard Light Does Not Work for Non-Powered Version:

- Make sure USB cable is plugged into Laptop

Keyboard Light Does Not Work for Powered Carts:

- Verify powered USB Hub is plugged into power supply (green light indicator)
- Check to ensure USB cable is plugged into Hub

Mouse Does Not Work Properly (Powered Cart Only):

- Verify powered USB Hub is plugged into power supply (green light indicator)
- Make sure mouse is plugged into the USB hub
- If problem persists, plug device into another cart to see if it functions properly

Keyboard Does Not Work Properly:

- Ensure USB Hub is powered and plugged into power supply (green light indicator)
- Make sure keyboard is plugged into the USB hub
- If problem persists, plug device into another cart to see if it functions properly

Computer Does Not Work Properly:

- Check that computer has power
- Check the battery charge. If less than 20%, recharge the battery
- If problem persists, plug device into another cart to see if it functions properly

Cleaning



CAUTION: *Because of the close proximity of electrical power and equipment, flammable cleaners should never be used on the cart!*

- Verify that your cart is powered down and unplugged from the wall outlet before cleaning.
- Allow your cart to dry completely before plugging the power cord into a wall outlet.
- When cleaning the cart, wipe cleaners off of surface with a damp cloth and thoroughly dry.
- Never cover the cart or its components in liquid or allow liquids to flow into the cart.
- Never use steel wool or other abrasive material as these could damage the surface finish
- Before using any cleaner on the cart, first test on a small area to ensure that the surface is not harmed. These guidelines cannot guarantee infection control. The hospital's Infection Control administrator should be consulted for cleaning procedures and processes.

RECOMMENDATIONS:

- Clean plastic components with diluted, non-abrasive solutions. Suggested cleaners are water, soap, diluted bleach and alcohol solutions.
- Remove pen and dry erase marker stains with a soft cloth and 91% isopropyl alcohol.
- Remove iodine stains with a soft cloth and any cleaners suggested above.

DO NOT use the following chemicals to clean your cart: Acetone, Mineral Spirits, Abrasive Cleansers, Paint Thinner or any other harsh or toxic chemicals.

CLEANING OF HIGH TOUCH POINT ITEMS

1. Work Surface is fully removable to facilitate cleaning (see Step 1 of Start up instructions)
2. Document Protector is removable for cleaning by pulling up on back corners. To replace press nylon fastener into hole in work surface. Document protector is a replaceable item
3. Back Handle is fully removable (see Step 9 of Start up instructions)
4. Rear Bins can be removed by grabbing outside edge of bin and lifting up
5. Keyboard Tray and Mouse Pads - Tray and mouse pads are composed of melamine resin and are easy to wipe down.

Service

SERVICE REQUEST

Contact your IT department, or file a service request at our website:

www.rubbermaidhealthcare.com/service

SERVICE LEVEL COMMITMENT

Rubbermaid Healthcare is committed to providing best-in-class service. This document details our standard warranty and instructions to request service using our customer support system.

- Rubbermaid Healthcare will provide a service manual upon request.

Warranty

LIMITED WARRANTY FOR M38 COMPUTER CART

Rubbermaid Healthcare is pleased to offer a three-year warranty on durable components and a three-year warranty on electronic components.

If during the warranty period this Rubbermaid Healthcare product proves defective in materials or workmanship under normal use by the original purchaser, please contact Rubbermaid Healthcare technical support (please be ready to furnish complete information, including product serial number, description of the issue, and full contact information). Rubbermaid Healthcare will determine, at its sole discretion, how to best address your warranty issue, which may include sending you a replacement part covered under warranty or for sale. Rubbermaid Healthcare reserves the right to require proof-of-purchase prior to honoring any warranty request. This warranty does not cover product abuse, modification, failure to adhere to product instructions, or improper operation/misuse. RUBBERMAID HEALTHCARE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state or country to country.

SERVICE DETAILS

Consumable components are not covered under warranty and include:

- Locks and Keys
- Document Cover

Other standard components will be replaced under the applicable warranty following a filed service request.

*The above terms for replacement parts applies to facilities located in the United States. All other customers should contact the appropriate reseller for the terms of part replacement.

All terms are subject to change without notice.

Transport/Storage/Disposal

TRANSPORT/STORAGE

- The shipping weight of the M38 cart is approximately 105-160 lbs (50-72 kg). Use proper lifting techniques to prevent injury.
- Care should be taken to transport and store this system within a temperature range of 32° F to 90° F (0° C to 32° C); Humidity 20% RH to 95% RH non-condensing.

CART/BATTERY DISPOSAL

Battery Disposal/Recycling

Dispose/Recycle Lithium and SLA batteries according to local guidelines and regulations for disposal/recycling of batteries.

Cart Disposal

Dispose of this cart according to local guidelines and regulations for disposal of electronic equipment. For more information contact Rubbermaid Healthcare Customer Service at: 1-800-859-8292.

Standards Compliance

Tested to comply with:

- NRTL certified to:
 - o UL 60601-1:2003
 - o CAN/CSA-C22.2 No.601.1-M90
 - o IEC 60601-1/A2:1995
 - o EN 60602-1/A2:1995

Standard for Safety Medical Electrical Equipment, Part 1: General Requirements for Safety - Collateral Standard: Safety Requirements for Medical Electrical Systems
- FCC PART 15, Subpart B, Class A – Unintentional Radiators

This product is classified as:

- o Class 1/ Internally powered device with no applied parts.
- o This equipment is designed for continuous operation.
- o Class A, Group 1 ISM Equipment
- o This device is classified IPX0 for water ingress
- o Input 120 Vac, 60 Hz, 5.1 Amp North America
- o Input 230 Vac, 50 Hz, 2.5 A International Models



Authorized Representative

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REVISION HISTORY

Revision	Date	Description of Changes
Draft	12/2013	Initial Release



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