



# Flo™ Series Laptop Cart



## Operations Manual

L01-465 Revision A

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## Contact Information:

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## FCC Information:

This device complies with FCC Rules, part 15. Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference that may be received, including interference that may cause undesired operation.

**Notice:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's expense.

**Warning:** Changes or modifications to this device not expressly approved by InterMetro Industries Corporation could void the user's authority to operate this equipment.

*Shielded cables must be used with this unit to ensure compliance with the FCC Class A limits.*

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## Industry Canada:

This class A digital apparatus meets all requirements of the Canadian Interface Causing Equipment Regulations. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

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## Symbol Explanations



Attention, consult accompanying documents

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## Important Safety Instructions

This document contains important safety and operating instructions for the Flo™ Series Laptop Cart. Please read all instructions and cautionary markings on the Laptop Cart before putting it into service.



**Caution:**

User maintenance consists of cleaning, minor external adjustments, periodic tightening of fasteners and the like. For safety purposes, any and all servicing other than the procedures detailed in the Maintenance section of this manual must be performed by qualified service personnel only. For all service items, please contact InterMetro Customer Service.



**Caution:**

Do not operate a Flo™ Series Laptop Cart if it has received a severe impact, been knocked over, fallen down stairs, or otherwise physically damaged. Please have a qualified service person inspect all components of the Laptop Cart for any performance or safety hazard prior to putting it back into service.



**Caution:**

The Flo™ Series Laptop Cart is not designed for use as a general purpose equipment cart. Please do not apply heavy loads to the cart top surface. The maximum design load (safe working load limit) for the Laptop Cart is 5 lbs.



**Caution:**

Ensure that the AC power cord is located and secured so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress. Please secure the AC power cord plug in the retaining clips provided on the Flo™ Series Laptop Cart when it is unplugged from the AC outlet in order to prevent accidental tripping and physical damage to the cord plug or electrical insulation.

To prevent damage to any cords or connectors when disconnecting, always grasp and pull by the connector and not the cord.

Do not operate the Flo™ Series Laptop Cart with damaged cords or connectors. Please replace the damaged component immediately. Contact InterMetro Customer Service for replacement parts and service.



**Caution:**

To reduce the risk of electric shock, unplug the Flo™ Series Laptop Cart AC cord from an AC outlet and switch the ON/Extended Storage Switch to the Extended Storage (OFF) position before attempting any maintenance or cleaning. Turning off computers or disconnecting the AC power cord alone will not reduce the risk of electric shock because the Power Supply is internally powered by a battery.



**Warning: Risk of Electric Shock - DC voltage output Power Supply (Series 1720)**

The AC power cord is the only means to disconnect the Flo™ Series Laptop Cart from the AC power grid (mains). The ON/Extended Storage Switch on the Power Supply does not disconnect from main power.

On the other side, the Power Supply employs a battery to provide mobile DC output power. Low voltage (10-16 VDC) DC power is available from the Power Supply, even when the AC cord is disconnected from an AC outlet. To remove DC power, put the ON/Extended Storage Switch in the Extended Storage (OFF) position.



**Warning: Risk of Electric Shock - AC Inverter Power Supply (Series 1520)**

The AC power cord is the only means to disconnect the Flo™ Series Laptop Cart from the AC power grid (mains). The ON/OFF switch on the Fuel Gauge controlling the AC Power Supply does not disconnect from main power.

On the other side, the Power Supply employs a battery to provide mobile AC output power. High AC voltage (120 or 230 VAC nominal) and current is available from the Power Supply, even when the AC cord is disconnected from an AC outlet. To remove AC power, press the ON/OFF switch on the Fuel Gauge for at least 2 seconds and ensure all the LEDs turn off.



**DANGER: Risk of Explosion**

The Flo™ Series Laptop Cart and the Power Supply are not for use in hazardous (classified) locations. Do not use the Flo™ Series Laptop Cart, nor recharge the Power Supply battery if so equipped in oxygen enriched areas; areas where flammable anesthetics are used or stored; or any other hazardous, classified location.

**Caution:**

Use caution when moving the keyboard tray to avoid trapping fingers between the keyboard and the workstation base.

**Caution (USA 240 V):**

If a Flo™ Series 1720 Laptop Cart with an MPE-7800 series or MPS-4007 Power Supply is connected to a 240 V supply system in the United States of America (USA), it shall be a center tapped single phase supply circuit.

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## Electromagnetic Interference (EMI) Recommendations

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does not cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation between the equipment.
- Connect the equipment to an outlet on a circuit different from that to which the other device(s) are connected.
- Consult the manufacturer or field service technician for help.

## Revision History

REV/ Issue	Revision Description	Date	Approved
A	Initial Release	3/3/2011	Vance Bowman

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## References

Document Number	Title
402545	Flo MPE-7800 Series NiMH Power Supply Operations Manual Supplement
402546	Flo MPS-4007 Li-Nano Power Supply Operations Manual Supplement
402547	Flo MPS-3111 SLA Power Supply Operations Manual Supplement
L01-450	MPU Series Power Supply Operations Manual Supplement

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## Introduction

### *Fully Mobile Computing Cart for Point of Care*

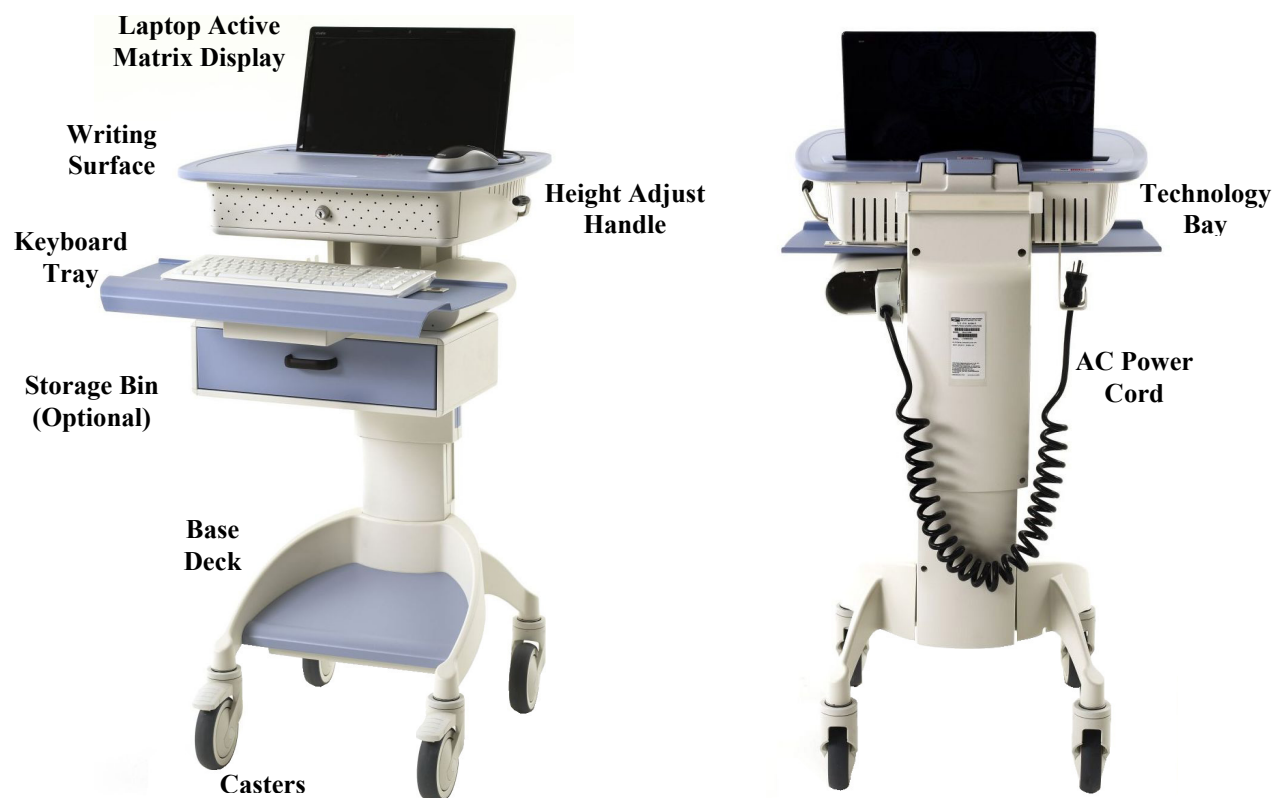
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Metro's Flo™ Series Laptop Cart is designed to meet your basic requirements for bedside access to patient information, enabling your facility to deliver quality patient care on a tight budget. Designed to meet clinician workflow, the Flo™ Series Laptop Cart integrates with your enterprise-standard notebook computer and features a compact footprint; durable, light-weight construction; and is easy to clean and adjust. Available in non-powered, AC, DC and swappable battery powered models.

### *Flo™ Series Laptop Cart Overview*

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The rendered image below shows the major components that comprise a Flo™ Series Laptop Cart.



**Metro Flo™ 1510 Laptop Cart**

## *Features*

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The Flo™ Series Laptop Cart features:

- Rugged, lightweight aluminum base with steel support and polymer body – built to last.
- Available as non-powered cart or with AC, DC or swappable battery Power Supply options with remote fuel Gauge on the work surface. Available Power Supply rechargeable battery technologies include Sealed Lead Acid (SLA), Nickel Metal Hydride (NiMH), and Lithium Ion Nano-Phosphate (Li-Nano).
- Integration ready for enterprise-standard notebook computer.
- Full size keyboard and mouse.
- Optional bar code scanner connected to USB or PS/2 ports.
- Large work surface and a full range, 13-inch pneumatic height adjustment.
- Storage options such as basket or locking storage cabinet.
- User manuals for cart, Power Supply and employed equipment (such as a scanner) are included.

## *Applicable Flo™ Series Laptop Carts*

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The Flo™ Series Laptop Carts covered by the provisions of this manual are:

- **Series 1510:** Non-powered Laptop Cart (no attached re-chargeable Power Supply)
- **Series 1520:** Laptop Cart with AC Inverter Power Supply
- **Series 1720:** Laptop Cart with DC Voltage Output Power Supply

## *Equipment Classification*

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According to the degree of protection against ingress of water, the Laptop Cart is considered ordinary.



### **Warning: Risk of Explosion**

The Flo™ Series Laptop Cart and any included Power Supply are not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.

The Flo™ Series 1520 and 1720 Laptop Carts are suitable for continuous operation.

## *Important Product Notices*

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The Flo™ Series Laptop Cart only carries valid safety certifications if the equipment is left in its original configuration as shipped from InterMetro Industries Corporation. If the user alters the Laptop Cart by changing components on, adding components to, or deleting components from the workstation, this will void any safety certifications for the Laptop Cart and is expressly prohibited by InterMetro Industries Corporation.

The Power Supply when included as part of the Flo™ Series Laptop Cart is provided with a “Hospital Grade” or “Hospital Only” attachment plug for connection to the AC supply circuit.

To ensure equipment grounding reliability, the Power Supply used with the Flo™ Series Laptop Cart should only be connected to AC outlet receptacles, which are marked “Hospital Grade” or “Hospital Only”. Where the integrity of the external protective earth connector arrangement is in doubt, equipment shall be operated from its internal electrical power source.

## *Disposal*

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Aluminum and steel sections of the cart can be disposed of or recycled.

Electronic components or printed circuit boards, etc., shall be disposed of in accordance with local, state and federal regulations.

Please refer to the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed for details for disposal of the Power Supply and its batteries used with the Flo™ Series Laptop Cart.



### Sealed Lead Acid Battery:

The SLA Power Supply contains a sealed lead acid battery. This battery must be recycled. Disposal of this battery must be in accordance with local, state, and federal regulations. In Canada, disposal must be in compliance with Canadian environmental protection laws.

For further information call InterMetro Customer Service.

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## Getting Started

### *Unpacking*

---

The Flo™ Series Laptop Cart will arrive fully assembled and fully functional at the customer's site in a cardboard box. After cutting the strapping bands, lift the top of the box over the Laptop Cart. In order to avoid any injury, two (2) people shall lift the Laptop Cart from the padding blocks. The cart may weigh between 61 and 85 lbs depending on the configuration.

### *Inspection*

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After the Flo™ Series Laptop Cart has been unpacked, the user should inspect the unit for any shipping damage. If there is any damage, please contact InterMetro Customer Service immediately.

### *Power Supply Preparation*

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If equipped with a rechargeable Power Supply, before placing a Flo™ Series Laptop Cart into service, the Power Supply battery may need to be connected and should be initially charged for a full 24 hours.

#### **Important Notice:**

Please refer to the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed for requirements and details on battery preparation and initial charging of the Power Supply.

To charge the battery, plug the coiled AC power cord into an AC outlet and put the ON/Extended Storage Switch into the "ON" position (see "Turning on the Power Supply" below).

**Notice:** For further information on Power Supply charge times and on the charge indicator lights of the Remote Fuel Gauge, please refer to the respective Power Supply supplement.

### *Turning on the Power Supply*

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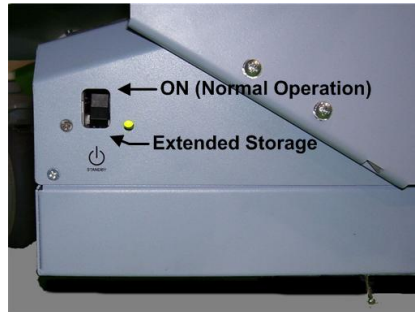
If so equipped, the Power Supply of the Flo™ Series Laptop Cart must be turned on to power all the cart equipment. The Power Supply is controlled by the "ON/Extended Storage" Switch located on the Power Supply that is typically mounted on the bottom of the cart.

ON/Extended Storage Switch	In the "ON" position, the Power Supply provides power to the Flo™ Series Laptop Cart systems. If the cart is not used for an extended period of time, the ON/Extended Storage Switch should be put in the "Extended Storage" (OFF) position. The switch position disconnects the battery from any internal or external equipment and avoids deep discharges of the battery, which can cause damage to the battery.
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### Important Notice:

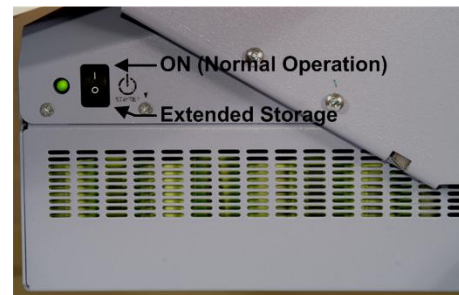
Please refer to the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed for further details of the “ON/Extended Storage” Switch and the requirements for long term (more than one week) storage.



**NiMH MPE-7800**



**SLA MPS-3111**



**Li-Nano MPS-4007**

### Example Locations of ON/Extended Storage Switch



### Warning: Risk of Electric Shock

The Power Supply employs a battery to provide mobile DC output power. Low voltage (11-16 VDC) DC power is available from the Power Supply even when the AC cord is disconnected from an AC outlet. Please refer to the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed for the proper way to completely remove DC power.

## *Powering up the Computer Equipment*

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Powering up the computer equipment

The computer power is controlled directly by the switch on the notebook computer.

When the Laptop cart is equipped with a Power Supply, you can power up the Laptop cart system during the initial charge. The equipment has been designed to operate while mobile or when plugged into an AC outlet.



### **Example Location of Computer Power Switch**

The ON/OFF switch for the computer is located on the computer. Depending on the configuration of the computer, it typically can be reached through the work surface slot opening for the laptop monitor display.

**Notice:** If the computer power switch cannot be reached through the slot opening, the work surface must be opened. To open the work surface and to reach the computer power switch, refer to the Section "Opening the Technology Bay" below.

## *Starting Windows and Wireless Network*

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The computer starts with a Windows operating system preinstalled. Depending on the configuration, you may have a standard installation or a custom installation for your location that may require you to enter Windows authorization codes. For all codes required for operation, consult your IT department.

For setting-up the wireless LAN and connecting to the hospital network, consult your IT department.

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# Operation

## *Description of Major Components*

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Depending on your order, your Flo™ Series Laptop Cart will be delivered in a specific configuration. The configuration will employ each of the following components:

- Metro Flo™ Series Laptop Cart Base  
The Metro Flo™ Series Laptop Cart Base is common among all the different configurations. It consists of a lightweight aluminum base with steel support and pneumatic lift, and a polymer body with large work surface.
- Power Supply Options
  - No Power Supply with optional Hospital Grade Power Strip
  - AC to DC Power Supply with charger and one of the following types of battery technologies:
    - Sealed Lead Acid (SLA)
    - Nickel Metal Hydride (NiMH)
    - Lithium Iron Nano Phosphate (Li-Nano)
  - Swappable Battery: Lithium Ion
  - Remote Fuel Gauge
  - Optional Mobile Workstation Power Supply Management Software
- Integration ready for enterprise-standard notebook computer
- Optional locking to access computer bay
- Wireless PC Card
- Mouse
  - Any UL certified optical or ball, PS/2 or USB mouse
- Keyboard
  - Any UL certified PS/2 or USB keyboard
  - Optional tilting keyboard tray
- Optional Barcode Scanner
  - CCD USB Scanner
  - Approved laser scanner
- Optional Storage
  - Basket
  - Storage Cabinet with optional mechanical or electronic locking.



## ***Metro Flo™ Series Laptop Cart Base***

---

The Metro Flo™ Series Laptop Cart Base is the backbone of every Flo™ Series Laptop Cart.



**Metro Flo™ Laptop Cart Base  
(shown with Optional Storage Cabinet)**

The Base features casters to wheel it around easily, provides mounting hardware as required to mount a Power Supply, and offers a foot rest to the user, storage space in different options, a large writing/working surface, technology bay for the computer equipment, and keyboard tray as well as a pneumatic 13-inch lift to adjust the height. These features are explained in detail in the following pages.

### Writing Surface

The Metro Flo™ Series Laptop Cart Base has a large writing surface. In addition to using it as a writing surface, it allows you to easily navigate Windows and your applications using the attached mouse.



### **Writing Surface**

The writing surface is designed so that it may be easily gripped on the edge all the way around. The edge grip is used when you need to raise or lower the cart. The easy to grip edge and a handle at the front of the writing surface allow you to easily grip and maneuver the Flo™ Series Laptop Cart in and around a patient's room or through hospital corridors.



### **Caution**

Only use the edge gripping when raising or lowering the writing surface and rolling the Laptop Cart around. Never attempt to physically lift the Flo™ Series Laptop Cart off the ground by pulling on the edge grip or any other part of the writing surface. If you need to lift a Flo™ Series Laptop Cart off the ground, pick it up at the wheelbase. Generally, this task requires two (2) people.

## Height Adjustment

The height adjustment handle is used to adjust the height of the Flo™ Series Laptop Cart. The writing surface height can be set within a 13-inch dynamic range of adjustment, making it easier to type and read the monitor from either a standing or sitting position.



**Height Adjustment Handle**

### Raising the Flo™ Series Laptop Cart Writing Surface

Perform the following steps to raise the writing/work surface of the Flo™ Series Laptop Cart using the height adjustment handle:

- Stand in front of the cart and grasp the height adjustment handle with your right hand.
- Grab the left side of the writing surface with your left hand.
- Pull the height adjustment handle up.
- While holding the height adjustment handle up, lift the writing surface to the desired height and then release the height adjustment handle.

### Lowering the Flo™ Series Laptop Cart Writing Surface

Perform the following steps to lower the writing/work surface of the Flo™ Series Laptop Cart using the height adjustment handle:

- Stand in front of the cart and grasp the height adjustment handle with your right hand.
- Grab the left side of the writing surface with your left hand.
- Pull the height adjustment handle up.
- While holding the height adjustment handle up, push the writing surface down to the desired height and then release the height adjustment handle.

### Keyboard Tray

The keyboard tray is located directly underneath the technology bay. It is designed to lock into place when it is fully extended (an extra tug may be required to lock it into place) and to lock into place when it is recessed all the way back in under the technology bay (an extra push may be required to lock it into place). This prevents the keyboard tray from moving around while the user is typing or moving the Laptop Cart.



### **Keyboard Tray**

The keyboard is securely attached to the tray using Velcro. The keyboard is typically covered by a clear, non-latex, rubberized membrane that protects the keyboard from liquid spills and splatters. It can be easily cleaned using a hospital-safe disinfectant. It can also be removed and replaced with a new membrane. New membranes can be ordered from InterMetro Customer Service.



#### **Caution:**

Use caution when moving the keyboard tray to avoid trapping fingers between the keyboard and the cart base.

### Tilting Keyboard Tray Option

The Flo™ Series Laptop Cart can be deployed with an optional tilting keyboard tray for ergonomic comfort.

When the tray is fully extended, it can be adjusted by lifting the front edge until a click is heard, indicating the first and lowest tilt position, and then releasing it. The tray can be adjusted to one of three tilt positions.

To lower the tray to the original bottom horizontal (untilted) position, lift the tray all the way up and drop it back to the bottom position while holding the front edge of the tray.



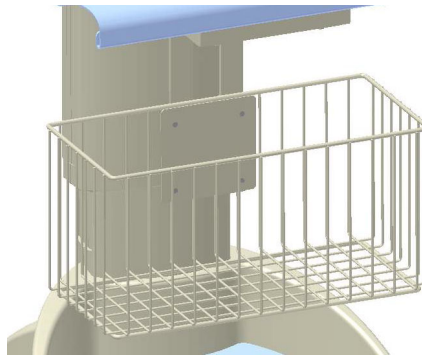
#### **Caution:**

Do not push the keyboard tray in while it is in a tilted position. Lift the tray all the way up and drop it back to the bottom position while holding the front edge of the tray before pushing it in.

### Storage Options

The Flo™ Series Laptop Cart can be deployed with storage designed to carry documents, accessories or supplies needed by a nurse or doctor.

The basket is very sturdy and can hold virtually anything up to a maximum weight of 10 lbs. The additional weight will, however, make adjusting the workstation height more difficult.



**Metro Flo™ Series Basket Option**

The storage bin can be deployed in one, two or three drawer versions. The storage bin can be configured to be locked with a TouchPoint™ pin cipher lock or with an ELC 100 Electric Latching Cabinet system. The ELC 100 storage bin can be unlocked through the cart computer or optional stand alone credentialing device, such as a keypad. The storage bin can hold anything up to a maximum total weight of 10 lbs. The additional weight will, however, make adjusting the Laptop Cart height more difficult.



**One Drawer Storage Cabinet**

### Foot Rest Base

The base deck of the Flo™ Series Laptop Cart is designed to be used as a footrest while either standing or sitting. Placing your feet on the deck will not cause any problems with any Power Supply that may be installed.

### Casters

The Flo™ Series Laptop Cart is configured with two locking and two non-locking casters. The two locking casters are on the front of the workstation.

*Lock*                      To lock a caster in the front, press its locking tab down.

*Unlock*                    To unlock a caster, lift its locking tab up.



**Metro Flo™ Series Laptop Cart Base Casters**

## *Computer*

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The Flo™ Series Laptop Cart is designed to accommodate a notebook style laptop computer. The notebook computer can be secured in the technology bay of your Flo™ Series Laptop Cart with its monitor display upright through the work surface slot for viewing your work. The technology bay contains an adjusting tray and necessary cabling for mouse, keyboard, power conditioning to power the computer hardware and optional equipment, like barcode scanners or ELC 100 Electric Latching Cabinet.



**Technology Bay for Computer**

### **Powering up the computer**

The power switch is located directly on the notebook computer. Depending on the configuration of the computer, it typically can be reached through the work surface slot opening for the laptop monitor display.

**Notice:** If the computer power switch cannot be reached through the slot opening, the work surface must be opened. To open the work surface and to reach the computer power switch, refer to the Section "Opening the Technology Bay" below.



**Example Location of Computer Power Switch**

In order to power up the computer, press the power button for about one second and it will boot up.

### **Turning off the computer**

The computer is typically shut down with the Windows' shutdown feature. To perform a hardware shut down of the computer, depress the power button for at least 4 seconds.

### Troubleshooting computer problems

If the computer equipment does not function properly, please refer first to the computer manufacturer's user manual.

If your problem is not addressed in the computer's user manual, please consult your IT department. If the IT department determines a hardware defect with the computer, please contact the provider of the computer. If the IT department determines a hardware defect with the cart systems, please contact InterMetro Customer Service.

### Technology Bay

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The Flo™ Series Laptop Cart Technology Bay contains an adjusting tray for the computer and necessary cabling for mouse, keyboard, power conditioning to power the computer hardware and optional equipment. The Technology Bay is designed for access in order to install or remove the computer, reach the computer power switch and adjust the computer tray. The cart may be equipped with a key lock or a pad lock hasp to provide easy but secure access.

**Notice:** Be sure to switch off all equipment including any Power Supply and unplug the AC power cord and other electrical cables or harnesses before removal of laptop cart equipment.

### Opening the Technology Bay

The Technology Bay is opened by releasing and lifting the front of the work surface. The work surface is secured either by:

- A key lock or a pad lock on the front of the Technology Bay housing, or
- Fixed screws that must be removed that are located under the work surface where it extends beyond the Technology Bay housing.



**Key Lock on the Technology Bay**



1. Release the work surface:
  - a. Key Lock option: Insert the key into the lock on the front of the Technology Bay and turn to the left.



#### **Unlocking the Technology Bay (Key Lock Option)**

- b. Pad Lock option: Insert the key in the pad lock, turn key to unlock it and remove the pad lock.
  - c. No Lock option: Loosen and remove the six Phillips head screws holding the work surface. The screws are located under the work surface where it extends out from the Technology Bay housing (two under the front edge and two under each side edge left and right).
2. Lift up the front of the work surface from technology bay housing to access the laptop computer and its mounting tray. You can also now reach the computer Power Switch if you otherwise cannot.

**Work  
Surface**



#### **Lift Work Surface Up from Front**

3. Continue to remove the work surface to access the computer or equipment for installation or removal by lifting it off completely.



#### **Removing the Work Surface**

### Closing the Technology Bay

To close the Technology Bay, replace the work surface and make it secure.

1. Place the work surface on the cart by slipping the opening slot over the laptop display (if the computer is present) and starting with the back edge of the work surface slightly off and below the top of the back of the cart, pull it forward until it catches.



#### **Placing the Work Surface onto the Cart**

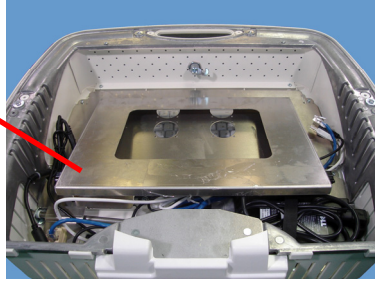
2. Lower the front of the work surface onto the cart in reverse of how it was removed (see Section "Opening the Technology Bay" above). Ensure that the work surface comes down completely over the Technology Bay housing (you should only be able to lift it from the front since the back should be caught on the back edge of the housing).
3. Secure the work surface:
  - a. Key Lock option: Insert the key and turn it to the right. Remove key and ensure the work surface does not lift up from the front or back.
  - b. Pad Lock option: Insert pad lock hasp in loop and lock it. Ensure the work surface does not lift up from the back.
  - c. No Lock option: Install the six Phillips head fasteners and tighten. The fastener holes are located under the edge of the work surface that extends beyond the Technology Bay housing, two under the front edge and two each under the side edges left and right.

### Installing the Computer

A notebook style laptop computer is installed by: opening the Technology Bay, placing and securing the laptop on the computer tray with the display open, adjusting the angle height of the tray for optimum position to the work surface, connecting required electrical connections and closing and securing the Technology Bay.

1. Remove the work surface. See Section "Opening the Technology Bay" above.
2. Place the computer securely on the computer tray. One of two methods available to attach the computer to the tray are:
  - a. Eight squares of Velcro tape provided with the cart: Peel backing off from each of four Velcro squares and attach to the corners on the bottom of the computer. Peel backing off from each of four Velcro squares and place them in matching locations on the computer tray. Place the computer on the tray and press to secure the computer with the Velcro squares.
  - b. Velcro strap provided with the cart: Open the laptop and loop the strap under the tray and over across the keyboard area of the laptop. Attach and secure the ends of the strap so the computer is secure and does not move.

Computer  
Tray



### Computer Tray in the Technology Bay

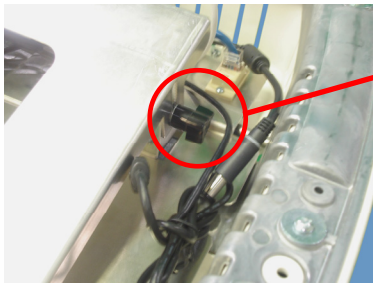
3. Connect all necessary cables and cords (AC or DC power, USB, external mouse and keyboard, etc.) to the computer.



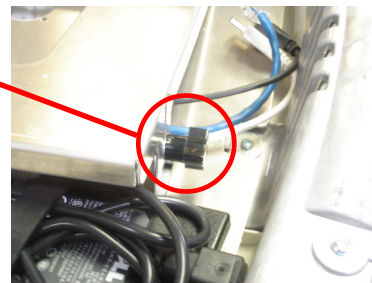
**Caution:**

Ensure AC cord is disconnected from AC mains and all equipment Power Supplies are set to the "OFF" position before connecting any cables, cords or harnesses.

4. Ensure the laptop computer is open. Adjust the height of the computer tray angle so the edge of the slot in the work surface will just rest on the computer. The tray is adjusted by loosening the knobs below each side of the back of the tray, moving the tray up or down and tightening the knobs again. It may be necessary to place work surface on the cart to check the proper adjustment of the computer tray (See Section "Closing the Technology Bay" above).



Height Adjustment  
Knobs



### Height Adjustment Knobs

5. Replace and secure the work surface. See "Closing the Technology Bay" above.

### Removing the Computer

A notebook style laptop computer is removed by opening the Technology Bay, disconnecting all electrical connections, releasing the laptop from the computer tray, and closing and securing the Technology Bay.

1. Remove the work surface. See Section "Opening the Technology Bay" above.



**Caution:**

Ensure AC cord is disconnected from AC mains and all equipment Power Supplies are set to the "OFF" position before disconnecting any cables, cords or harnesses.

2. Disconnect all cables and cords (AC or DC power, USB, external mouse and keyboard, etc.) from the computer.

3. Release and lift the computer from the computer tray. The computer may be secured to the tray by one of two methods:
  - c. Velcro tape squares: Close the laptop computer and pull the computer firmly up from the tray.
  - d. Velcro strap: Pull apart the ends of the strap to release the computer.
4. Unless replacing the computer (See Section "Installing the Computer" above), replace and secure the work surface (See Section "Closing the Technology Bay" above).

## ***Power Supply***

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Your Flo™ Series Laptop Cart may be equipped with a Power Supply or swappable battery system with one of the following battery technologies: Nickel Metal Hydride (NiMH) Power Supply, Lithium Ion, Lithium Ion Nano Phosphate (Li-Nano or LiFePO<sub>4</sub>) or Sealed Lead Acid (SLA).

**Notice:** The preparation and operation of the Power Supply are detailed in the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed.

The Power Supply is designed for continuous operation and service is not interrupted by plugging in or unplugging the Power Supply.

### **Powering Up the Power Supply**

The Power Supply is controlled by the “ON/Extended Storage” Switch located on the Power Supply that is typically mounted on the bottom of the Laptop Cart.

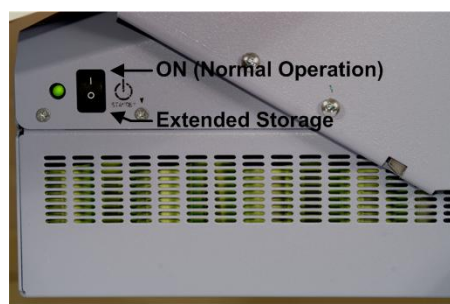
In the “ON” position, the Power Supply provides power to the Flo™ Series Laptop Cart systems. In the “Extended Storage” position, power is removed from the workstation equipment.



**NiMH MPE-7800**



**SLA MPS-3111**



**Li-Nano MPS-4007**

### **Example Locations of “ON/Extended Storage” Switch**

### Extended Storage

If the Laptop Cart will not be used for an extended period of time, the ON/Extended Storage Switch should be put in the “Extended Storage” (OFF) position. The switch position disconnects the battery from any internal or external equipment and avoids deep discharges of and possible damage to the battery that would occur if the Power Supply is left in the “ON” position.

**Notice: Long Term Storage** (Longer than one week)

If the Laptop Cart is to be placed in long term storage (longer than one week), the Power Supply should be fully charged before placing the “ON/Extended Storage” switch in the “Extended Storage” (OFF) position.



#### **Important Notice:**

Please refer to the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed for further details of the “ON/Extended Storage” Switch and the requirements for long term (more than one week) storage.

### Remote Fuel Gauge

To display the charge level of the Power Supply battery cells when operating on DC power, a Remote Fuel Gauge is connected to the Power Supply. The Remote Fuel Gauge (if present) is mounted above the back of the work surface and gives the user the current battery status at eye level height.

The LED's of the Remote Fuel Gauge will always display the battery's charge level whether the computer is operating or not.

**Notice:** The functions of the Remote Fuel Gauge are detailed in the respective supplemental operations manual included with the workstation for the Power Supply installed.

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## Maintenance

### *Cleaning*

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Use Flo Cleaner (foaming aerosol available from InterMetro Industries Corporation), or an equivalent mild hospital disinfectant, to clean the exposed surfaces of the workstation on a regular basis. Flo Cleaner is compatible with all of the components of the Flo™ Series Laptop Cart.

- Dampen a soft cloth with Flo Cleaner or equivalent cleaner
- Wipe surfaces until clean
- Do not spray any cleaner into any openings (like slot for computer display or air vents on power supply, etc.) of the Laptop Cart or on the computer display screen.
- Do not use Flo Cleaner for medical devices used for patient contact (EKG contacts, etc.)

### *Adjustments and Tightening*

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**Notice:** Periodic checks should be performed for tightness of fasteners and screws. For additional details, please contact InterMetro Customer Service.

### *Power Supply Batteries*

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Power Supply Batteries have a charge cycle lifetime based on technology and may need periodic replacement. Please refer to the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed for details of battery replacement for the Power Supply or contact InterMetro Customer Service.

Power Supplies using Lithium-Ion type batteries are subject to special shipping conditions and are not connected during shipment due to USDOT and IATA regulations. Please refer to the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed for requirements and details on battery preparation for the Power Supply.

### ***Power Supply Fuse Replacement***

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Please refer to the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed for requirements and details of Power Supply fuse replacement.



**Caution:**

For continued protection against risk of fire, replace only with the same type and rating of fuse.

### ***Storage and Transport Conditions***

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Environmental conditions for shipping and storage are:

- Ambient temperature range of -40°C to +70°C (-40°F to 160°F).
- Relative humidity range of 10% to 100%.
- Atmospheric pressure range of 14.76 in. Hg to 31.29 in. Hg.

### **Special shipping conditions for Lithium-Ion Batteries:**



**Caution:**

The following applies to Power Supplies using Lithium-Ion type batteries only:

In accordance with USDOT and IATA regulations, the Lithium-Ion cells shall not be shipped or transported in another vehicle on public roads with the Lithium-Ion cells or battery packs connected. Please refer to the respective supplemental operations manual included with the Laptop Cart for the Power Supply installed for requirements and details on battery preparation for the Power Supply.



## *Power Savings*

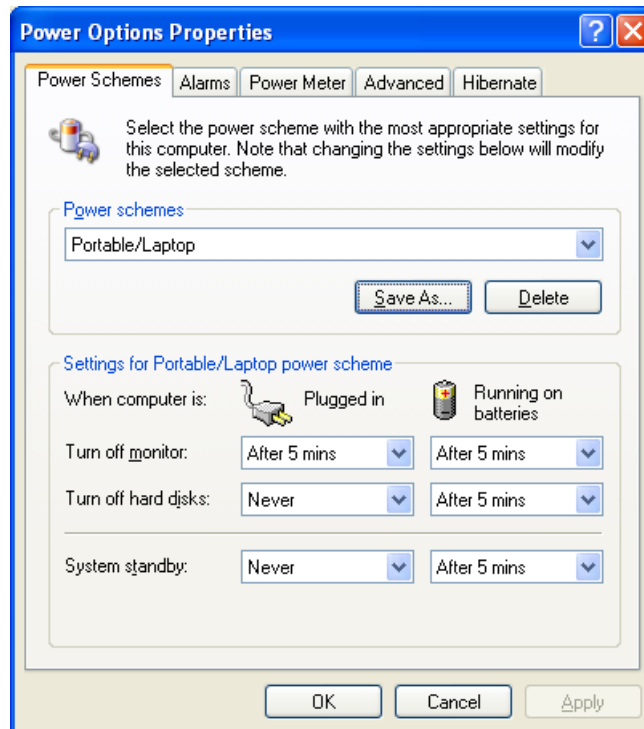
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In order to conserve power and enjoy a long run-time with a single battery charge, several parameters need to be set on the notebook computer.

### Computer Settings

Two parameters need to be set on the notebook computer:

1. Turn off any computer screen saver. Some screen savers require a high amount of computational power and cause high power consumption.
2. Through the Windows Control Panel, open the Power Options Properties and set it to the following:



**Power Options Properties Control Panel**



#### **Caution:**

Under no circumstances should the computer “Power schemes” be set to “Always On”: the setting significantly reduces Power Supply run time on batteries and may cause the computer equipment to overheat.

## *Troubleshooting*

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Use the tips in this section as a guide. They include solutions to the simplest problems as well as things to observe when trying to diagnose problems.

Consider the following:

- If a problem occurs while you're working, stop immediately. If you continue, you may lose data and destroy problem-related information.
- Observe what is happening. Write down what the notebook computer and any optional devices are doing as well as what actions you took immediately before the problem occurred.
- Is notebook computer running? Are all cables properly attached to the computer and any attached Power Supply?
- Which part of the system is operating erratically? Keyboard? Disk/Flash Drive? Radio? Display? Power Supply? Each produces different symptoms.
- What program and/or optional devices are you using?
- What appears on the screen? Do you see any messages or random characters? Look up any messages in the documentation for your software.
- Are any LEDs illuminated? Which ones on which devices?
- Do you hear any beeps? How many? Are they long or short?
- Is the notebook computer making any unusual noises?
- Are the locking wheels locked or unlocked?
- Are the fuses in the Power Supply intact?
- See if you can cause the problem to occur again. This may help you understand the source of the problem and will help you describe the problem if you must call InterMetro Customer Service for technical assistance.

Additional troubleshooting details are also provided in the Power Supply Operations Manual Supplement for the Power Supply, if the cart is so equipped, and may be included in other manuals for equipment and software applications included with the workstation.

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## Technical Specifications

### *Flo™ Series 1510, 1520, and 1720 Laptop Carts*

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Work Surface Height	Adjustable from 33.5" to 46.5"
Overall Height	43.5" to 56.5" (depending on adjustment)
Work Surface Dimensions	21.5" x 18"
Maximum Work Surface Load	5 lbs
Weight	61 to 85 lbs. (depending on configuration)
Base Dimensions	15.5" x 16.5"
Construction	Lightweight aluminum base with steel support and pneumatic lift, and polymer body.
Finish	Industrial powder coat
Wheels	4 swivel (2 locking, 2 non-locking)
Input Voltage	120 VAC, 60 Hz, 3.0 A Series 1720 Models with MPE-7800: 100-240 VAC, 50/60 Hz, 5 A max Series 1720 Models with MPS-4007: 100-240 VAC, 50/60 Hz, 2.5 to 1.5 A
Battery Technology	Series 1520 and 1720: NiMH, Li-Nano, or Sealed Lead Acid (please see applicable Power Supply supplement)
Computer	Accommodates enterprise-standard notebook computer
Communication	Wireless LAN, IEEE802.11a/b/g/n
Approvals	Tested to FCC Part 15 Subpart B, Class A, Industry Canada Class A RoHS compliant (RoHS Directive 2002/95/EC)

### *Power Supply*

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For Power Supply, please refer to the Power Supply Operations Manual Supplement that is supplied with your Flo™ Series Laptop Cart.

### *Computer Equipment*

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For computer equipment like mouse, keyboard, etc. please refer to the equipment user manuals, which are supplied with your Flo™ Series Laptop Cart.

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# Contacting InterMetro Industries Corporation

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## *InterMetro Industries Corporation Contact Information*

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### **InterMetro Industries Corporation**

651 North Washington Street

Wilkes-Barre, PA 18705

Phone: 1-800-992-1776

<http://www.metro.com/support>

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## *InterMetro Customer Service*

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For all customer service related issues, or if you need technical assistance, please call our customer service department at:

**1-800-992-1776**

**Americas**

**+31 76 58 77550**

**Europe**

**+9714 811 8286**

**Middle East**

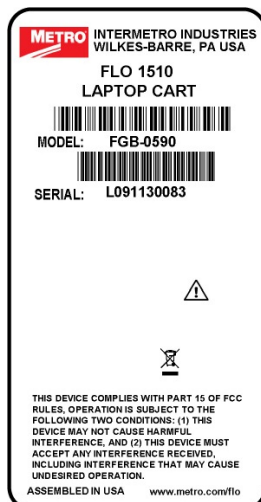
**+65 6567 8003**

**Asia-Pacific**

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## *Repair*

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To return equipment for repair:

- Have model and serial numbers ready: obtain the Laptop Cart information from its label as shown at left.
- Contact InterMetro Customer Service at the contact number given above to obtain a RMA number.
- Please write the RMA number on the air bill in the reference section on the outside of the package.
- Return the equipment to:

### **InterMetro Industries Corporation**

501 Gunnard Carlson Drive

Coatesville, PA 19320