



# MOTION MCW WITH FRONT-FACING C5

## INSTALLATION AND ASSEMBLY PROCEDURE

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Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

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## Required Tools and Materials

The following tools and materials are **required** for optimal MCW assembly:

|   |   |
|---|---|
| <input type="checkbox"/> T25 Torx bit         | <input type="checkbox"/> #2 Phillips Screwdriver  |
| <input type="checkbox"/> 3mm Allen Key        | <input type="checkbox"/> 4"- 5" Plastic Tie Wraps |
| <input type="checkbox"/> ½" Wrench (Supplied) | <input type="checkbox"/> Straight Edge            |
| <input type="checkbox"/> Diagonal Cutters     | <input type="checkbox"/> Razor Knife              |

**Table 1: Required Tools and Materials**

The following tools and materials are **optional**:

|  |
|--|
| <input type="checkbox"/> ½" Socket and Ratchet |
|--|

**Table 2: Optional Tools and Materials**

# Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

## Completed Assembly Illustrations

Please use the following images to help familiarize yourself with the completed workstation. Refer to these images as necessary during Component Assembly.

### Front View of Assembled MCW



Figure 1: Front View

## Left Side View of Assembled MCW



Figure 2: Left Side View

### Right Side View of Assembled MCW



Figure 3: Right Side View

## Rear View of Assembled MCW



Figure 4: Rear View

## Component Groups and Item Inventory

The following section outlines the various MCW component groups. Each component group contains an image that illustrates the individual items within that group. We recommend that you sort the MCW component items as shown below<sup>1</sup> as this will aid in Component Assembly.

Pay particular attention to the terminology used below, as this terminology will be used throughout the remainder of the document.

### Power Supply Base Assembly

The Power Supply Base Assembly contains the following items as shown in Figure 5.



Figure 5. Power Supply Base Assembly

The Power Supply Base Assembly contains the following items as listed in Table 3 below.

- ✓ Power Supply Shroud (A)
- ✓ Shroud Torque Screws (B)
- ✓ Power Cord Retainer (E)
- ✓ Power Supply Base (C)
- ✓ White Wire Loom (D)

Table 3: Items shown in Figure 5.

<sup>1</sup> With the exception of the Power Supply Base Assembly. You may leave the shroud as-is, as disassembly is part of Step 1.

## Column Assembly

The Column Assembly contains the following items as shown in Figure 6.

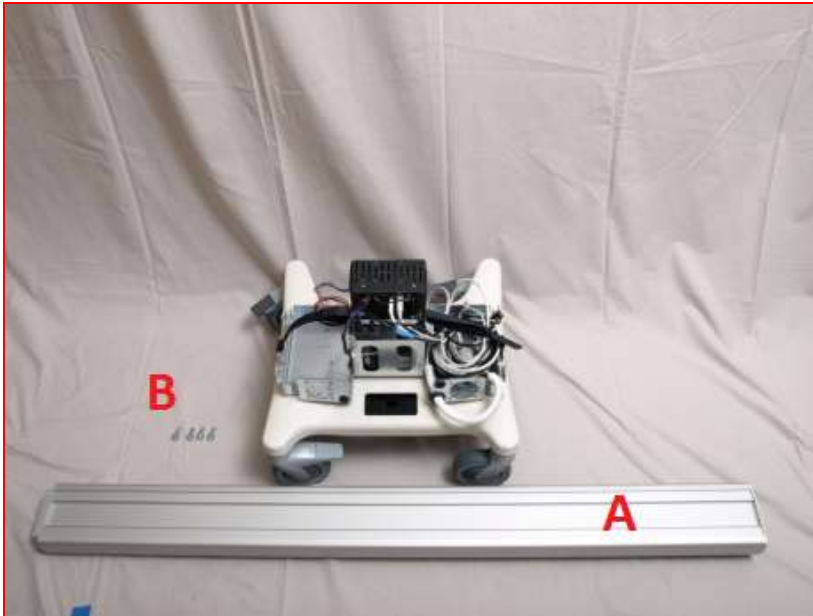


Figure 6. Column Assembly

The Column Assembly contains the following items as listed in Table 4 below.

|              |                           |
|--------------|---------------------------|
| ✓ Column (A) | ✓ 4 ½" Mounting Bolts (B) |
|--------------|---------------------------|

Table 4: Items shown in Figure 6.

## Large Work Surface and Keyboard Tray Assembly

The Large Work Surface and Keyboard Tray Assembly contain the following items as shown in Figure 7.



Figure 7. Large Work Surface and Keyboard Tray Assembly

The Large Work Surface and Keyboard Tray Assembly contain the following items as listed in Table 5 below.

---

✓ Large Work Surface (A)

---

✓ Keyboard Tray (B)

Table 5: Items shown in Figure 7.

## C5 Mobile Docking Station Assembly

The C5 Mobile Docking Station Assembly contains the following items as shown in Figure 8.



**Figure 8. C5 Mobile Docking Station Assembly**

The C5 Mobile Docking Station Assembly contains the following items as listed in Table 6 below.

---

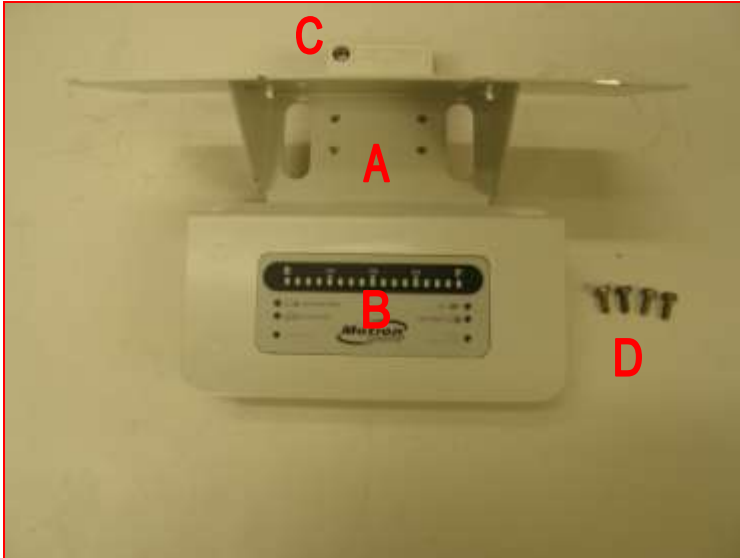
✓ **C5 Mobile Dock (A)**

---

**Table 6: Items shown in Figure 8.**

## Battery Gauge Assembly

The Battery Gauge Assembly contains the following items as shown in Figure 9.



**Figure 9. Battery Gauge Assembly**

The Battery Gauge Assembly contains the following items as listed in Table 8 below.

|                              |                                   |
|------------------------------|-----------------------------------|
| ✓ Gauge Housing (A)          | ✓ 4 M4 L16 MM Mounting Screws (D) |
| ✓ Gauge (B)                  |                                   |
| ✓ 1 Allen Head Set Screw (C) |                                   |

**Table 8: Items shown in Figure 9.**

## Decorative Plates and Wiring Assembly

The Decorative Plates and Wiring Assembly contain the following items as shown in Figure 10.

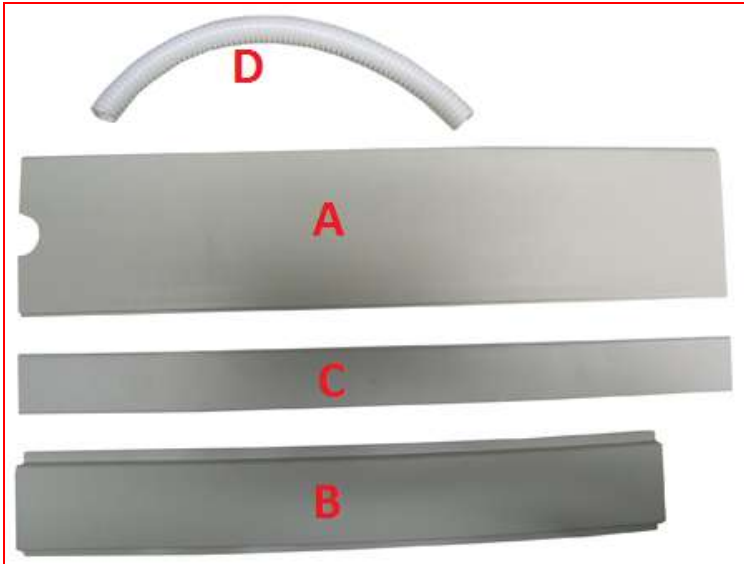


Figure 10. Decorative Plates and Wiring Assembly

The Decorative Plates and Wiring Assembly contain the following items as listed in Table 9 below.

✓ 3 Plastic Face Plates (A)

✓ 1 Plastic Piston Cover (C)

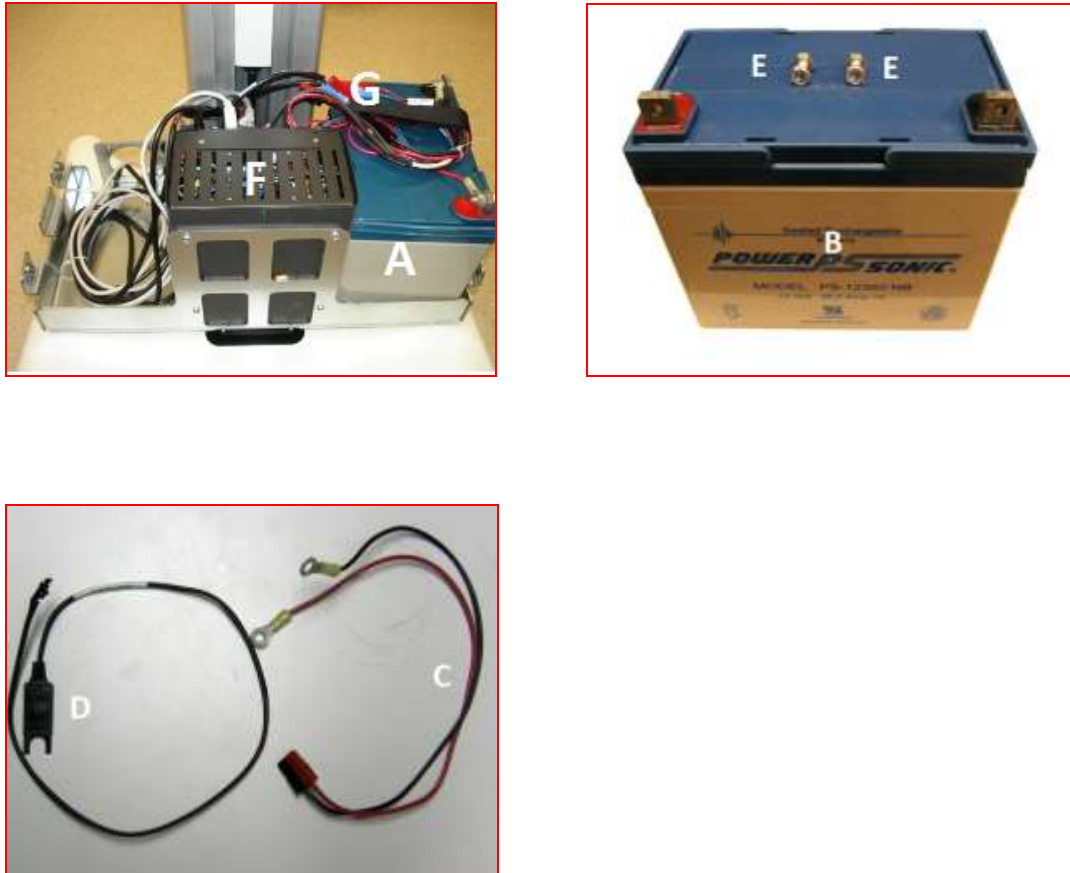
✓ 1 Plastic Front Channel Plate (B)

✓ 2 Pre-cut Wire Loom Sections (D)

Table 9: Items shown in Figure 10.

## Battery Component Assembly

The Battery Component Assembly contains the following items as shown in Figure 11.



**Figure 11. Battery Component Assembly**

The Battery Component Assembly contains the following items as listed in Table 10 below.

|  |                            |
|--|----------------------------|
| ✓ 1 36ah SLA Battery (A)                     | ✓ 2 Terminal Bolt Sets (E) |
| ✓ Additional 36Ah SLA Battery (Optional - B) | ✓ 1 Charging Unit (F)      |
| ✓ 2 Battery Leads (C)                        | ✓ Wire Harness (G)         |
| ✓ 1 Thermal Sensor Leads (D)                 |                            |

**Table 10: Items shown in Figure 11.**

## Miscellaneous Components

The Miscellaneous Components Assembly contains the following items as shown in Figure 12.



Figure 12. Miscellaneous Components Assembly

The Miscellaneous Components Assembly contains the following items as listed in Table 11 below.

|                  |                            |
|------------------|----------------------------|
| ✓ USB Hub (A)    | ✓ 2 Ferrite Snap Beads (E) |
| ✓ USB Webcam (B) | ✓ Power Cord (F)           |
| ✓ Keyboard (C)   | ✓ 2 Mouse Pads (G)         |
| ✓ Mouse (D)      |                            |

Table 11: Items shown in Figure 12.

## Component Assembly

### Installing the Power Supply Base and Column Assembly

#### ☑ Step 1:

Using a T-25 Torx bit, remove the plastic Shroud that covers the Power Supply Base as shown in Figure 13 below.



**Figure 13. Removing Plastic Shroud**

Tip: Setting the wheel locks will help hold the Base Assembly in place.

#### ☑ Step 2:

Set Shroud aside and lay the Power Supply Base on its back.



**Figure 14. Laying down Power Supply Base**

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 3:

Position Column, rail side up, above the Power Supply Base as shown below.



**Figure 15. Positioning Column**

### ☑ Step 4:

Insert bolts through the bottom of the base into the column. Thread each bolt before fully tightening any bolt. Tighten all four bolts securely using 12 inch-pounds of torque.



**Figure 16. Placing Bolts**

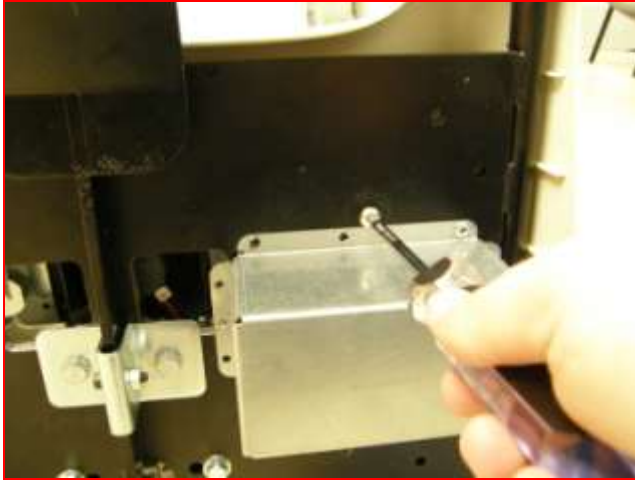


**Figure 17. Tightening Bolts**

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 5:

Using a T-25 Torx bit, remove the bolt in front of the power supply plug in as seen in Figure 18 below.



**Figure 18. Removing Bolt**

### ☑ Step 6:

Plug in the Power Cord to the base as seen in Figure 19 below and then place the Power Cord Retainer around the power cord as seen in Figure 20.



**Figure 19. Plug in Power cord**



**Figure 20. Put on Power Cord Retainer**

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 7:

Then thread the bolt that was removed in step five through the Power Cord Retainer as seen in the figure 21 below and then screw the bolt back in to the base of the assembly.



**Figure 21. Attaching the Power Cord Retainer to the base**

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### Step 8:

Set the base and attached column upright



**Figure 22. Set column upright**

Remove one screw and loosen the other screw of the column top plate to allow plate to swivel.



**Figure 23. Swiveling top plate**

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 9:

Insert first decorative cover in the back of the column channel grooves.



**Figure 24. First decorative cover**

Note: Notice the half moon on the first decorative cover

### ☑ Step 10:

Hold the monitor power cable, RJ-45 cable, PC cable, and USB cable against the back channel. Insert first decorative cover in the back of the column channel grooves. Slide decorative cover over the wires making sure the cables are flat against the back of the column. Slide decorative cover to the bottom of the column, all cables should exit from the half circle



**Figure 25. Sliding Cover over Cords**



**Figure 26. Cables coming out of half circle**

## Installing the Large Work Surface and Keyboard Tray Assembly



**Figure 27. Large Work Surface and Keyboard Tray Assembly**

Note: The Large work surface and Keyboard Tray come pre-assembled

### Step 11:

Slide the Large Work Surface assembly from the bottom of the front of the column rail. The bottom of the metal bracket should be around 5 inch from the bottom of the rail of the column as shown below. Once in place tighten the set screw.



**Figure 28. Front of Column**



**Figure 29. Sliding Large Work Surface up column**

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure



**Figure 30. 5.0” form bottom of rail**

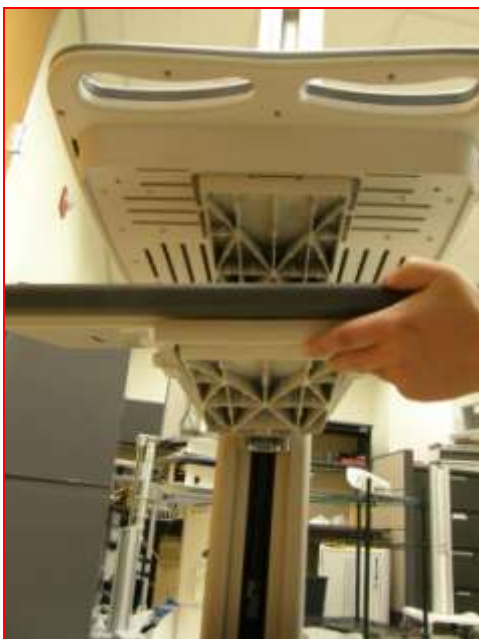


**Figure 31. Tightening Work Surface**

Note: Failure to fully tighten the set screw may result in damage to work surface or injury.

### Step 12:

Slide the Keyboard Tray assembly up the rail to where the bottom of the metal bracket is flush with the bottom of the rail. Once in place tighten the set screw as shown below.



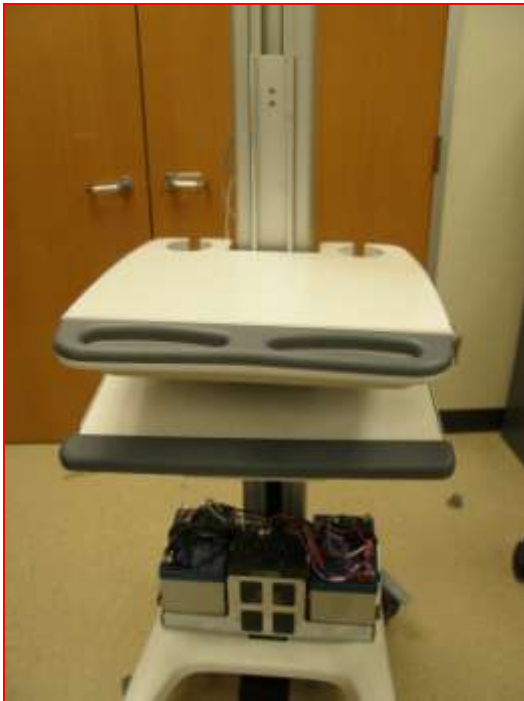
**Figure 32. Sliding Keyboard Tray in Place**



Note: Failure to fully tighten the set screw may result in damage to work surface or injury.

**Figure 33. Tightening Tray**

Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure



**Figure 34. Large Work Surface and Keyboard Tray Completed Assembly**

## Installing the C5 Mobile Docking Station Assembly with Battery gage



Figure 35. C5 Mobile Docking Station and Battery gage

### ☑ Step 13:

Using four M4 L16 MM screws to secure the C5 Mobile Docking Station to the back mounting bracket.



Figure 36. Tightening front screws



Figure 37. Tightening back screws

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 14:

Plug the RJ45 Battery Gauge cable into the jack, through the hole in the back of the Battery Gauge Housing.



**Figure 38. Plugging in RJ45 Cord**



**Figure 39. Assembly together**

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 15:

Slide the C5 Mobile Docking Station assembly mounting plate into the front of the column rail to where it is 3.50” from the top of the rail. (see Figures 40 through 42.)



Figure 40. Sliding C5 dock in rail



Figure 41. Making sure cord is to the side



Figure 42. Placing C5 dock

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 16:

Tighten the set screw using a 3mm diameter Allen wrench.



**Figure 43. Placing dock**



**Figure 44. Tightening set screw**

## Final Assembly

### ☑ Step 17:

Plug in PC power, battery diagnostic USB, and USB extension cables as shown.



Figure 47. Plugging in all cables to dock

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 18:

Raise column to highest point then pull the excess cable length to the bottom of the column. Then secure cables with cable ties as shown.



**Figure 46. Pulling excess cable and securing cables**

### ☑ Step 19:

Dress the cables at the C5 Mobile Docking Station assembly using corrugated cable wrap, securing with cable ties. Place the middle and top back decorative pieces in the back of the column. Then measure and cut a decorative piece to cover any space left. To cut the last decorative piece use a straight edge and a razor knife, lightly score plastic then break off two halves. It is not necessary to cut all the way through the plastic (see illustration below in Figure 48).



**Figure 47. Securing cables**

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure



Figure 48. Placing decorative cover

### Step 20:

Dress the cables at the bottom of the column using corrugated cable wrap, securing with cable ties, and pulling the excess cable length into the metal base.



Figure 49. Securing cables at bottom of column

## Installing the Battery

### ☑ Step 21:

Install Batteries with terminal pointing out. If the batteries are turned in, the thermal sensors will read incorrectly.

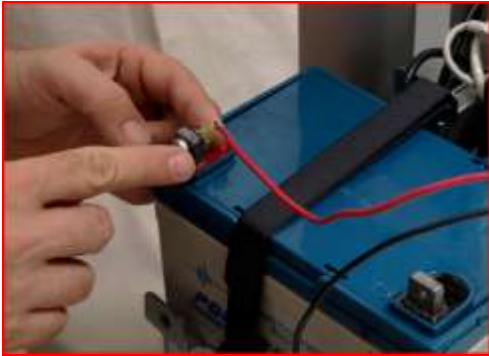


Figure 50. Placing cord



Figure 51. Tightening cord

### ☑ Step 22:

Install the thermal sensor with the unpainted side towards the battery post. The unpainted side of the thermal sensor must be in contact with the battery post.



Figure 52. Placing Thermal Sensor



Figure 53. Tightening Sensor

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 23:

Secure the Velcro straps over the batteries and coil up the wires in the unused battery tray. Before re-installing the base cover skip to system test in the next section to validate that the cart is operational (see figure 54).



**Figure 54. Securing Batteries and Cords**

# Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

## System Test

To test the system plug the main power cord into an A/C outlet. This will initiate the battery system. After about 1 minute you should hear the fan from the charging unit activate.

Check the battery gauge on the front of the cart and verify that the A/C LED is on as well as the charging LED. If so, a C-5 may be placed in the RAM Dock to verify that the dock, Monitor, keyboard and mouse are functional.

If the dock is receiving power you will see the charge light illuminate on the front of the C-5 (See figure 57).



Figure 55. Plugging in the cart



Figure 56. Checking the Battery Gauge

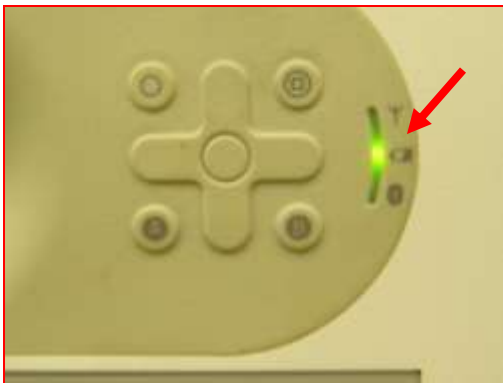


Figure 57. Checking Power

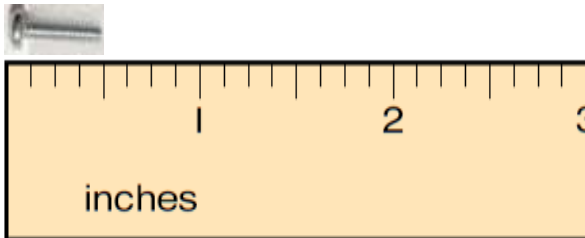
## **Troubleshooting**

Please contact your local Motion Computing Representative for appropriate troubleshooting steps.

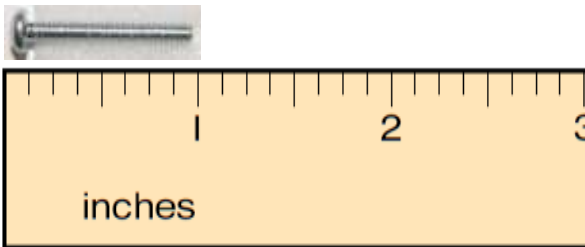
## Appendix A

### Screws, Nuts, and Washers Template

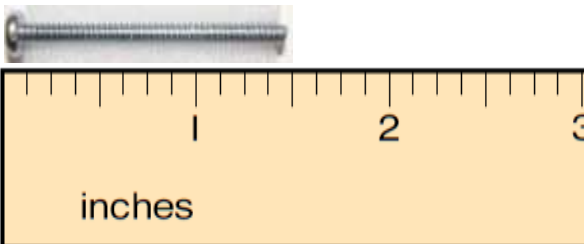
**(4) 6-32 X 0.500" PANHEAD, PHILLIPS**



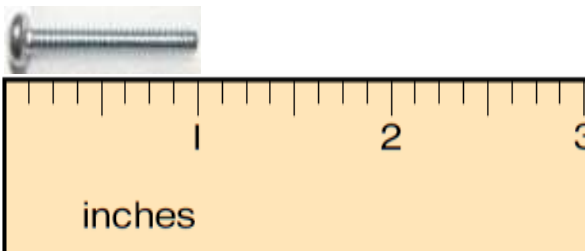
**(4) 6-32 X 1.000" PANHEAD, PHILLIPS**



**(4) 6-32 X 1.500" PANHEAD, PHILLIPS**

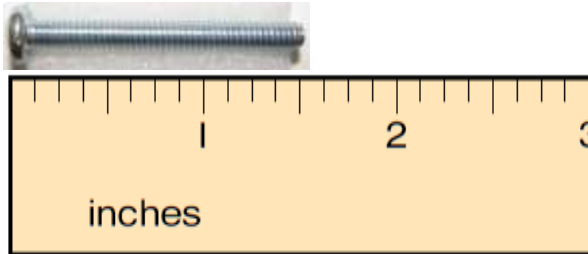


**(4) 8-32 X 1.000" PANHEAD, PHILLIPS**

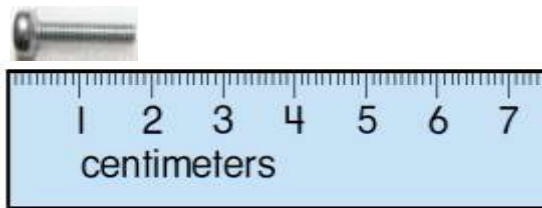


Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

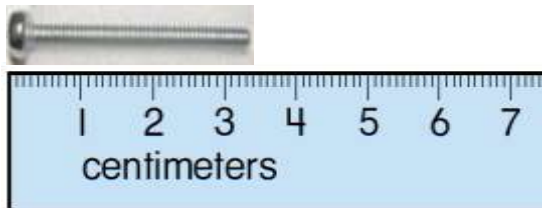
**(4) 8-32 X 1.500" PANHEAD, PHILLIPS**



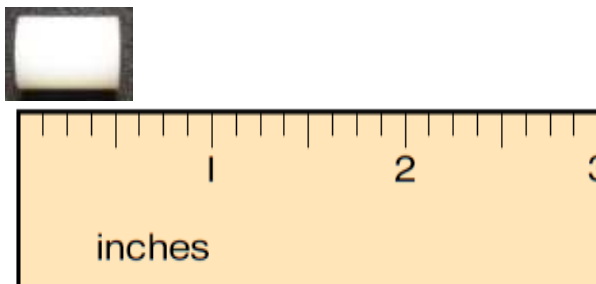
**(4) M4 L18 MM PAN HEAD PHILLIPS**



**(4) M4 L34 MM PAN HEAD PHILLIPS**



**(4) PLASTIC SPACER 0.500" LENGTH, 0.375 OD, 0.175 ID.**



Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

**(8) #6 ZINC WASHER**



**(8) #8 WASHER**



**(4) 6-32 NYLOCK HEX NUT**



**(4) 8-32 NYLOCK HEX NUT**



## Appendix B

### Insert Tray Removal and Installation

#### Removing the Insert Tray

Step 1:

Un-screw the four screws from underneath the large work surface as shown in the figures below.

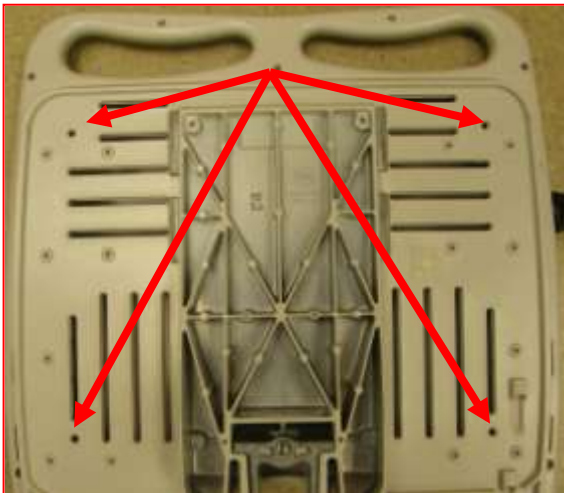


Figure 1. Showing where Screws are      Figure 2. Un-screwing the Insert

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### Step 2:

Lift lid of large work surface and slide out the insert tray from the bottom of the drawer as shown in the figures below.



Figure 3. Lift lid

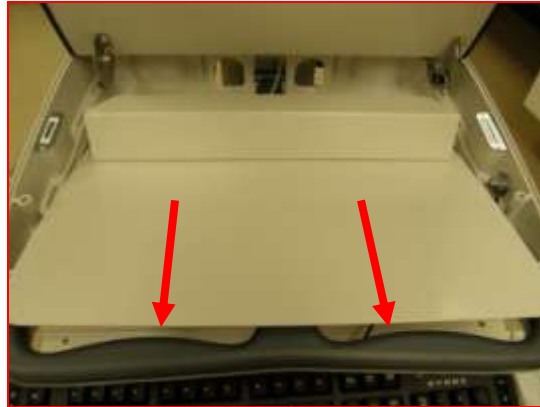


Figure 4. Slide Insert out



Figure 5. Tray with out Insert

## Installing the Insert Tray

Step 3:

Lift lid of large work surface and slide in the insert tray to where it lays flat on the bottom of the drawer as shown in the figures below.



Figure 6. Tray with out Insert

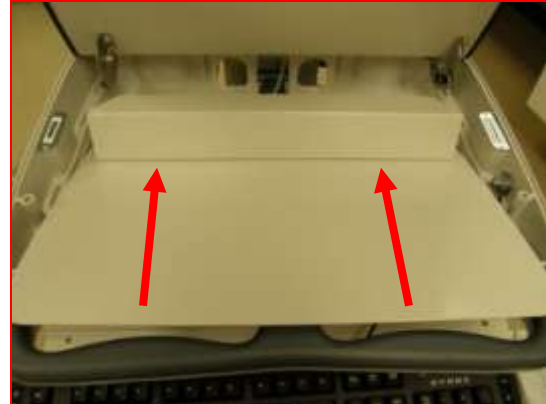


Figure 7. Slide in Insert

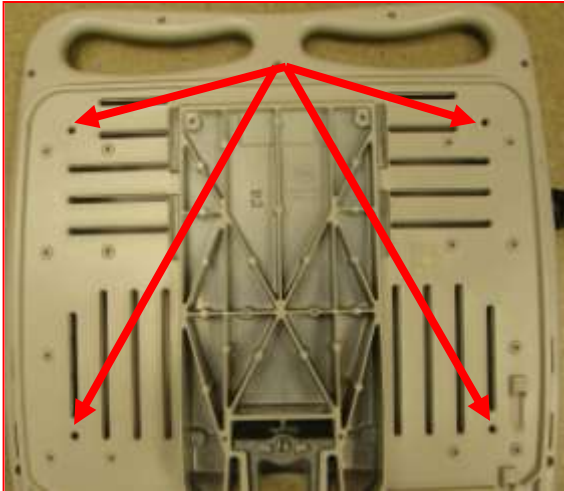


Figure 8. Insert in Place

# Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

## ☑ Step 4:

Screw in the four screws from underneath the large work surface as shown in the figures below.



**Figure 9. Showing where screws go**



**Figure 10. Screwing in Insert**

## Appendix C

### AC Cable Installation

Step 1:

Lay cart down on its back to view the bottom of the base. Then remove the five screws around the inverter box as shown below.



Figure 1. AC converter box



Figure 2. Showing where the screws are

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### ☑ Step 2:

Connect AC cord to the outlet. Then run cord through the hole in the AC inverter box and place the grommet around the AC cord in the hole of the inverter box as shown below.



**Figure 3. Plugging in the cord**



Note: Cut the grommet with a pair of scissors to insert the AC cord

**Figure 4. Cutting Grommet**



**Figure 5. Placing Grommet**

Note: Install the grommet and AC cable as shown.

## Motion MCW with Front-Facing C5 Mobile Docking Station – Installation and Assembly Procedure

### Step 3:

Screw the inverter box back into place with the five screws removed previously in step one with the AC cord routed towards the back of the cart as shown below in the Figure 6.



**Figure 6. Completed Assembly**