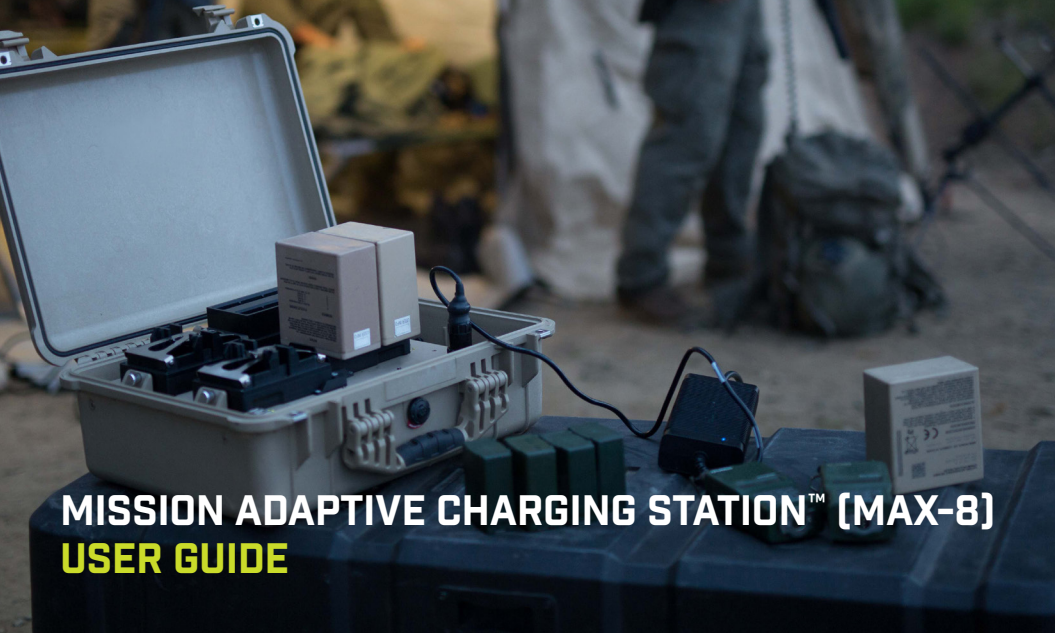




**NERV CENTR**



**MISSION ADAPTIVE CHARGING STATION™ (MAX-8)**  
**USER GUIDE**

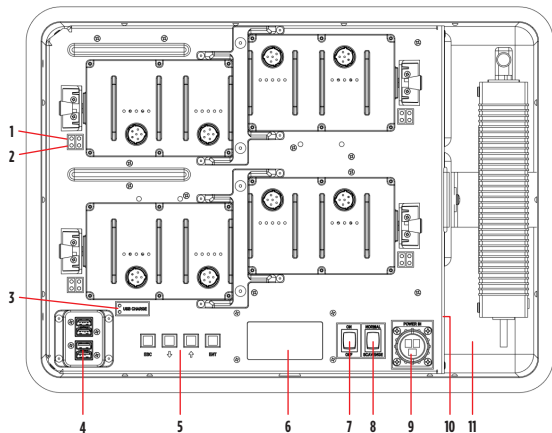
# TABLE OF CONTENTS

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# CONTROLS AND INDICATORS



1. Top Indicator Light (for each port)
2. Bottom Indicator Light (for each port)
3. USB Charge indicators
4. USB Charging Ports (x4)
5. Buttons
6. Graphical Display
7. On/Off Switch
8. Normal-Scavenge Mode Switch
9. Input Power Connector
10. USB Type B
11. Power Supply Bay

# CONTROLS AND INDICATORS

---

## 1. TOP INDICATOR LIGHT (FOR EACH PORT):

- **RED** = Battery Fault Detected
- **OFF** = No Fault Detected

## 2. BOTTOM INDICATOR LIGHT (FOR EACH PORT):

- **BLINKING GREEN** = Charging in Progress
- **SOLID GREEN** = Charge Complete
- **OFF** = No Battery Installed/Not Charging

## 3. USB CHARGE INDICATORS:

The “USB Charge” status lights will be green when each set of USB Ports have charging enabled. The top LED is lit when the top two ports are enabled, the bottom LED is lit when the bottom two ports are enabled. These ports are turned on and off depending on the power available in the system.

## 4. USB CHARGING PORTS (X4):

There are four USB Charging Ports capable of charging 5V at 1A out each port – this is enough to charge larger devices including tablets and cameras.

## 5. BUTTONS:

There are four buttons to navigate the user interface: Escape, Down, Up, Enter (from left to right).

## 6. GRAPHICAL DISPLAY:

This displays charging and status details, and features a backlight to increase visibility in lower light environments. The brightness of the backlight and the contrast of the screen are both adjustable in the User Interface option of the main menu (see page 14).



**NOTE: PERSONNEL SHOULD WEAR PROTECTIVE GLOVES WHEN USING THE SYSTEM, ESPECIALLY IN WET CONDITIONS.**

## 7. ON/OFF SWITCH

This switch enables the power to the system. If the switch is in the “On” position the system will run. If the switch is in the “Off” position the system is disabled.

## 8. NORMAL-SCAVENGE MODE SWITCH

This switch changes the mode that determines how the system handles the input voltage. To use the MAX-8 in Normal mode, the switch must be in the top position. This enables the 22V under voltage lockout, which shuts the system when the input voltage gets below 22V. Use the Normal mode when powering the MAX-8 from a vehicle to prevent running the battery down too low. To operate in Scavenge mode, put the switch in the bottom position. This allows the MAX-8 to operate down to 6V.

## 9. INPUT POWER CONNECTOR

This 3-pin connector provides the input power to the system and has a quarter-turn fastener to prevent unwanted disconnection. Use only supplied cables to connect power to the system.

## 10. USB TYPE B PORT

This conveniently-located port provides a USB type B input connection in the power supply bay.

## 11. POWER SUPPLY BAY

This storage bay is used to store the AC and DC cords. It also contains the fan inlet and outlet vents.

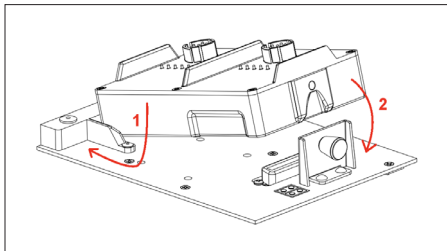


**CAUTION: CHECK AC AND DC POWER CABLES FOR BREAKS, ABRASIONS, BENT OR BROKEN PINS, DIRT AND DEBRIS.**

# INSTALLING AND REMOVING ADAPTERS

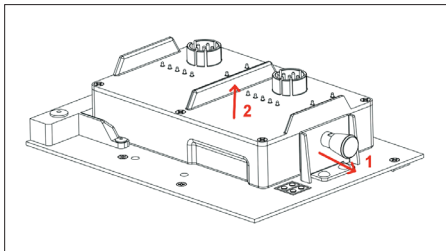
To **INSTALL** adapters into the Mission Adaptive Charging Station refer to the steps and figure below.

1. Push the locking tab down and slide the adapter back until it fits snug within the locking cavity, towards the center of the top of the MAX-8.
2. Put the opposite side (connector side) of the adapter down until the plunger locks in place.



To **REMOVE** adapters from the Mission Adaptive Charging Station refer to the steps and figure below.

1. Pull plunger out towards the outside edge of the MAX-8 unit.
2. Using the slots on each side of the adapter, pull the connector side of the adapter up and slide locking tab out from the cavity.



# CHARGING BATTERIES FROM AC POWER

---

The following instructions are a guide describing how to correctly charge batteries using the Mission Adaptive Charging Station. Below is a suggested order for using the Mission Adaptive Charging Station, however if these instructions are done out of order, no damage will result to the Mission Adaptive Charging Station unit or the batteries. The Mission Adaptive Charging Station will still charge the batteries.

- Select the appropriate adapter for the selected battery by referring to the table in the **ACCESSORIES** section (Page 21).
- Remove any unused adapters from the top of the unit. Install the selected adapter(s). If necessary, refer to the previous section: **INSTALLING AND REMOVING ADAPTERS** (Page 6).
- Install the batteries into the corresponding adapter with the correct orientation (batteries should only fit one way).
- Screw in the AC Power Supply cable to the Input Power connector and lock it in.
- Turn the Normal-Scavenge switch to the “Normal” position.
- Make sure the On/Off switch is in the “On” position.
- Plug the AC cable into a standard AC outlet.
- Ensure that the installed batteries are charging properly by checking if the **BOTTOM LEDS** are blinking green for each of the installed batteries. For the location of the **BOTTOM LEDS**, refer to the diagram in the **CONTROLS AND INDICATORS** section (Page 3).

# CHARGING BATTERIES FROM DC POWER

---

The following instructions are a guide describing how to correctly charge batteries from DC power using the Mission Adaptive Charging Station. Below is a suggested order, however if these instructions are done out of order, no damage will result to the unit or the batteries. The MAX-8 will still charge the batteries.

- Select the appropriate adapter for the selected battery by referring to the table in the **ACCESSORIES** section (Page 21).
- Remove any unused adapters from the top of the unit. Install the selected adapter(s). If necessary, refer to the previous section: **INSTALLING AND REMOVING ADAPTERS** (Page 6).
- Install the batteries into the corresponding adapter with the correct orientation (batteries should only fit one way).
- Screw in the DC Power cable to the Input Power connector and lock it in.
- Attach the DC power cable to a DC power source (to avoid danger, attach the return/neutral ring terminal first).
- Turn the Normal-Scavenge switch to the “Normal” position.
- Make sure the On/Off switch is in the “On” position.
- Ensure that the installed batteries are charging properly by checking if the **BOTTOM LEDS** are blinking green for each of the installed batteries. For the location of the **BOTTOM LEDS**, refer to the diagram in the **CONTROLS AND INDICATORS** section (Page 3).



When operating in Normal Mode, there is a 22V under voltage threshold that prevents the Mission Adaptive Charging Station from draining a 28V battery system used in a military vehicle. The Mission Adaptive Charging Station will stop charging batteries when the 28V vehicle battery reaches 22V.



**CAUTION: MOVING THE NORMAL-SCAVENGE SWITCH TO SCAVENGE MODE MAY CAUSE THE VEHICLE BATTERY TO BE COMPLETELY DRAINED.**



# SCAVENGING

---

The following instructions are a guide describing how to correctly charge batteries using the Mission Adaptive Charging Station scavenging mode. Scavenging mode allows the MAX-8 to pull power from unstable sources such as solar, wind and other renewable sources. Scavenging can also be used to completely empty batteries such as those used in a vehicle. Below is a suggested order, however if these instructions are done out of order, no damage will result to the unit or the batteries. The MAX-8 will still charge the batteries.

- Select the appropriate adapter for the selected battery by referring to the table in the **ACCESSORIES** section (Page 21).
- Remove any unused adapters from the top of the unit. Install the selected adapter(s). If necessary, refer to the previous section: **INSTALLING AND REMOVING ADAPTERS** (Page 6).
- Install the batteries into the corresponding adapter with the correct orientation (batteries should only fit one way).
- Screw in the DC Power cable to the Input Power connector and lock it in.

- Attach the DC power cable to a DC power source (to avoid danger, attach the return/neutral ring terminal first).
- Turn the Scavenge-Normal switch to “Scavenge”.
- Make sure the On/Off switch is in the “On” position.
- Ensure that the installed batteries are charging properly by checking if the **BOTTOM LEDS** are blinking green for each of the installed batteries. For the location of the **BOTTOM LEDS**, refer to the diagram in the **CONTROLS AND INDICATORS** section (Page 3).



**CAUTION: MOVING THE NORMAL-SCAVENGE SWITCH TO NORMAL MODE MAY RESULT IN LESS THAN OPTIMAL CHARGE TIMES.**

# SCAVENGING

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## SOLAR OPERATION

The Mission Adaptive Charging Station can scavenge from solar blankets and solar panels automatically. The user should follow the instructions for scavenging and pay special attention to the orientation of the solar panel. The following instructions will assist in optimizing solar performance:

- Orient the solar panel so that it is directly facing the sun. If possible, use something to prop the solar panel to get the best tilt. Laying the panel flat on the ground is rarely optimal.
- Obstructing the sunlight reaching the solar cells will result in a lower than optimal power output. Avoid casting shadows over the solar panel and be sure to keep it clear of dust and other debris.

- Keep the MAX-8 unit out of direct sunlight. The batteries or the MAX-8 may become too hot to charge. The MAX-8 will slow down or shut off if this is the case.
- Re-orient the solar panel as the sun moves throughout the day.

**NOTE:** If there is not enough sunlight to operate the MAX-8, it will automatically shut down. The MAX-8 will automatically restart itself when there is enough power. The MAX-8 may start and stop under low light conditions until the light improves.

## VEHICLE BATTERY DRAIN

The Mission Adaptive Charging Station can completely drain any battery to transfer the energy to the batteries being charged. Follow the instructions for scavenging and please note that:

- Completely draining a lead acid or other battery may be detrimental to the battery life.
- The MAX-8 will automatically shut off when a battery is drained. The MAX-8 may attempt to restart and retry.



**WARNING: DO NOT CHARGE BATTERIES NEAR FLAMMABLE MATERIALS.**



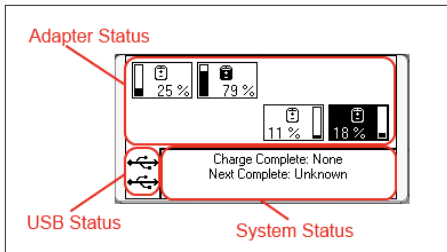
**NOTE: PERSONNEL SHOULD HAVE ACCESS TO FIRE-FIGHTING EQUIPMENT WHEN CHARGING LITHIUM BATTERIES.**



# USER INTERFACE

## STATUS SCREEN

The Status Screen is the heart of the User Interface for the Mission Adaptive Charging Station. It consists of three major parts. The top half is taken up by the Adapter Status region, which has a 1:1 representation of attached adapters. The bottom left is the USB Status region and the bottom right is the System Status region.



## ADAPTER STATUS:

This region shows the state of all attached batteries and adapters. If an adapter is not attached, then it will not appear on the screen.

## USB STATUS:

This region shows whether or not the USB chargers are enabled. If the chargers are enabled, the USB icons will appear. If there is insufficient power to run USB, the icons will disappear from the screen.

## SYSTEM STATUS:

This region shows general system information. By default, it shows which batteries have been fully charged and which battery is next to be completed (if it is able to determine it). This region will also update and display system messages, such as adapter connections, disconnections and errors.

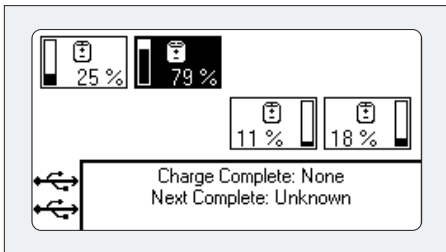
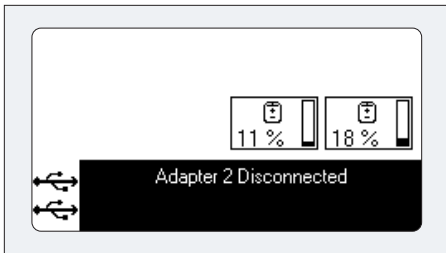


**CAUTION: ALWAYS ENSURE THE BATTERY TYPE IS CORRECTLY IDENTIFIED AND THE CHARGER SETTINGS ARE ADJUSTED ACCORDINGLY. INCORRECT IDENTIFICATION MAY RESULT IN IMPROPER CHARGING AND POTENTIAL DAMAGE TO THE BATTERY.**

## NAVIGATION

All User Interface navigation is done using the buttons shown in the **CONTROLS AND INDICATORS** section (Page 4). Up and Down are used to navigate around a single screen, while Escape and Enter are used to 'enter into' and 'exit from' screens. Enter is also used to confirm variable changes.

As an example, look at the previous **STATUS SCREEN** section (Page 14). On this image, the adapter in the bottom right with 18% is selected (its colors are inverted). In the next images, the System Status and a different adapter are selected. The Down and Up arrows were used to move from each selected region.

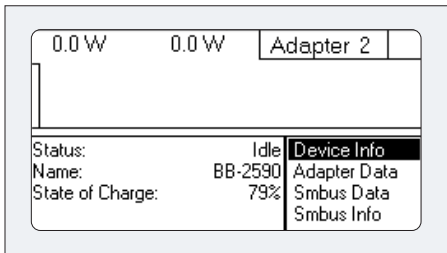


# USER INTERFACE

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## ADAPTER INFO SCREEN

If you have an adapter selected and press the Enter key, you will enter into the Adapter Info Screen.



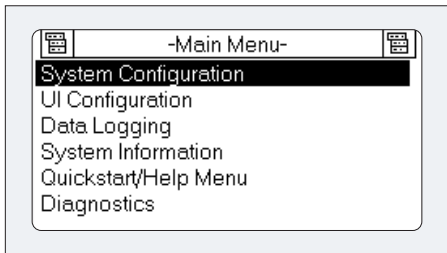
This screen has some basic information about the attached battery, the attached adapter and, if available, some Smbus information. By pressing the Up and Down keys, the selected field can be moved to Device Info, Adapter Data, Smbus Data and Smbus Info, thus changing the information displayed on the left half of the screen.

The top half of the screen is a power graph that will display the power going into the adapter (if any).



## MAIN MENU SCREEN

If you have the System Status region selected, when you press enter, it will bring you to the Main Menu screen.



**SYSTEM CONFIGURATION** contains options for changing how the system behaves. Currently, the only configurable behavior is the charging method, **SEQUENTIAL** and **FIRST TO FULL**.

**UI CONFIGURATION** contains options for changing how the backlight functions, how bright the backlight is and adjusting display contrast.

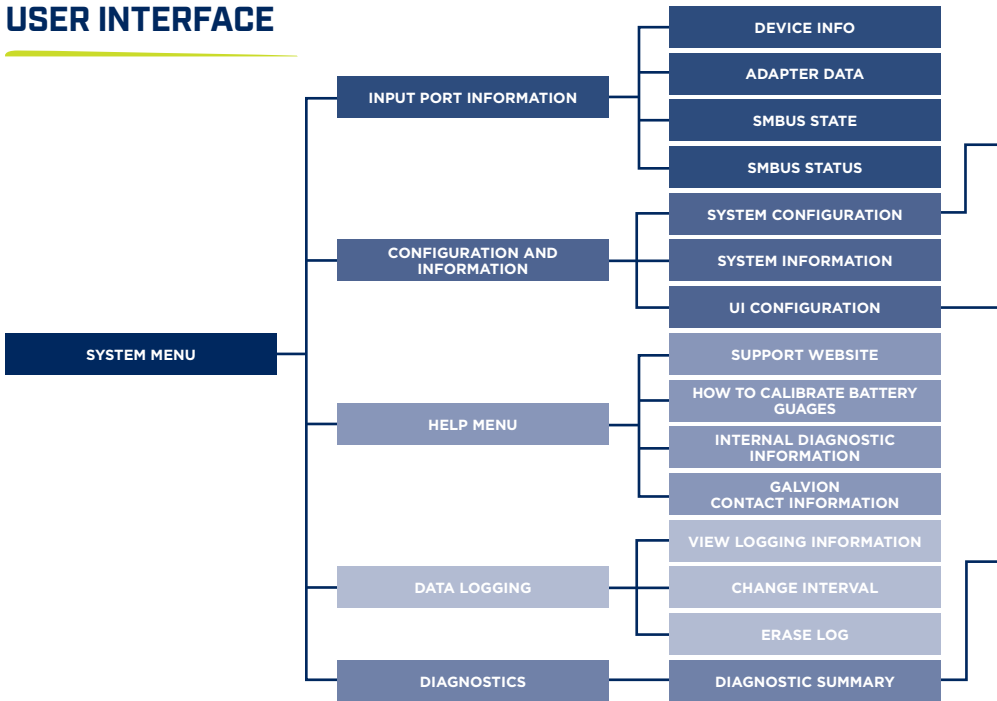
**DATA LOGGING** allows the user to view how much information is currently logged, change the logging interval and to erase the log. Erasing the log is non-reversible.

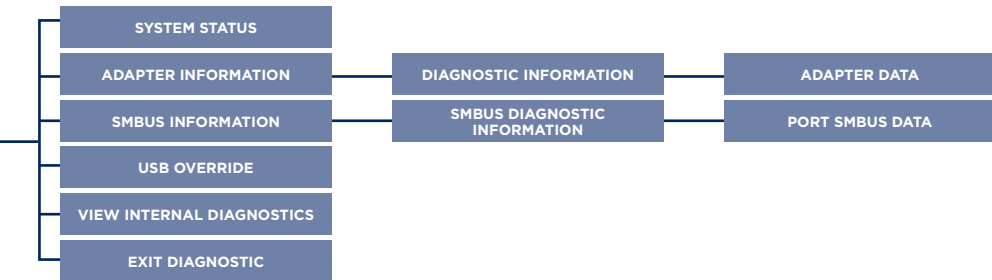
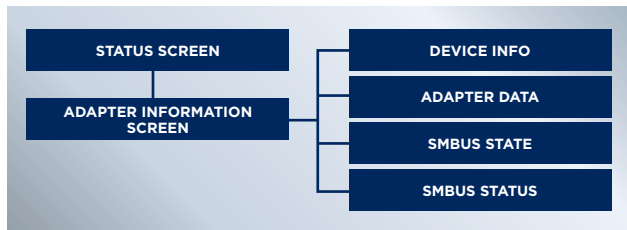
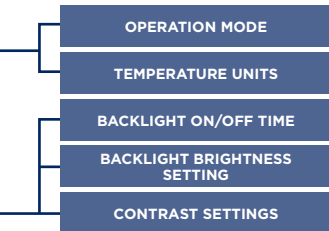
**SYSTEM INFORMATION** displays some basic system data such as run time, firmware version, etc.

**QUICKSTART/HELP MENU** contains some basic help information.

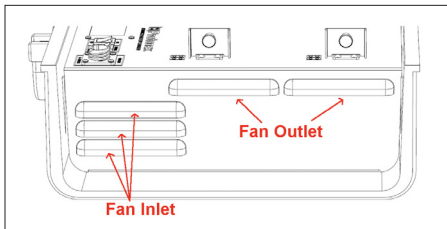
**DIAGNOSTICS** brings you to a more detailed information page that displays voltage and current for each adapter slot. Pressing enter on that page will bring you to a **DIAGNOSTIC MENU** screen that contains very detailed information about each adapter. Detailed **SMBUS INFORMATION** is also available from this menu.

# USER INTERFACE





# PRECAUTIONS



There are some precautions that should be followed while operating the Mission Adaptive Charging Station.

- The user should only charge batteries with the lid open to allow proper ventilation.
- The unit is only waterproof with the lid closed, so caution should be used with the lid open while charging batteries.
- There are fan inlet and outlet vents located on the side of the MAX-8 (facing into the **POWER SUPPLY BAY**), shown on the left. Do not cover these vents as it will affect the thermal performance of the unit.

- Do not put non-rechargeable batteries in the Mission Adaptive Charging Station.
- If powering the Mission Adaptive Charging Station from 28V vehicle battery and Scavenge Mode is selected, the unit can drain the battery of the 28V vehicle. It is advised to select the Normal Mode when powering from 28V vehicle battery.
- Only install the designated batteries in the proper orientation for each adapter.



**CAUTION: DO NOT BLOCK FAN INLET AND OUTLET PORTS DURING CHARGING. EXCESSIVE HEAT CAN DAMAGE THE CHARGER AND BATTERY AND EVEN CAUSE A FIRE.**



**WARNING: DO NOT PUT NON-RECHARGEABLE BATTERIES IN THE UNIT. DO NOT CHARGE DAMAGED OR LEAKING BATTERIES. DOING SO MAY RESULT IN INJURY, BATTERY RUPTURE OR EXPLOSION.**

# ACCESSORIES

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## AC POWER SUPPLY AND CABLE

An AC/DC power supply is provided with an AC cable to plug into a North American AC outlet. An international AC adapter is available as a separate accessory.

## BATTERY ADAPTERS

We have developed adapters for many different battery types and are developing new ones continuously to meet user demands. Please contact Galvion for an up-to-date list.

## VEHICLE DC POWER SUPPLY

The MAX-8 can also operate on power drawn from DC sources such as vehicle batteries, vehicle power ports and cigarette lighter plugs. We offer a number of different DC power supply cables as add-on accessories.

## SOLAR POWER SUPPLY

The MAX-8 can also operate from solar power harvested with folding solar blankets or solar panels. We offer a number of different solar power cables as standard accessories. Please contact Galvion for an up-to-date list.

# MAINTENANCE

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The Mission Adaptive Charging Station requires no scheduled maintenance. The unit can be operated continually if needed.

Care should be taken to avoid exposure to dust and water while the Mission Adaptive Charging Station is operating. Prolonged exposure to dust and moisture will degrade the life of the system. Note, if sand, dust or water gets inside the unit, it can be opened to be cleaned.



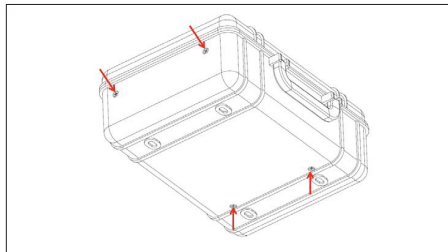
**WARNING: DO NOT OPEN THE UNIT WITH POWER APPLIED. REMOVE ALL POWER AND BATTERIES.**



**CAUTION: ELECTROSTATIC DISCHARGE (ESD) CAN DAMAGE THE UNIT. ONLY ESD TRAINED TECHNICIANS SHOULD OPEN THE UNIT IN A SAFE ENVIRONMENT. TAKE APPROPRIATE ESD PRECAUTIONS WHEN OPENING THE UNIT: GROUND THE TECHNICIAN WITH A STATIC STRAP, PROVIDE AN ESD SAFE AREA FOR THE ELECTRONICS.**

The following steps are used to clean the unit:

- Turn the Off switch to the “Off” position.
- Unplug the Mission Adaptive Charging Station from the power source.
- Remove the batteries and adapters
- Unscrew the 4 screws on the outside of the case as shown in the following illustration.



- Lift the tray assembly straight up.
- Dump debris from unit, remove lint from fan, allow unit to air dry.

The unit can be reassembled by following the steps in the reverse order.

After assembly, use compress air to blow out any dust in the connectors for the Adapters and Power.



**CAUTION: DO NOT USE WATER TO CLEAN ANY OF THE CONNECTORS. DO NOT INSERT ANYTHING INTO THE CONNECTORS. PIN DAMAGE CAN OCCUR IF ANYTHING OTHER THAN AIR IS USED TO CLEAN THE CONNECTORS.**

# MAINTENANCE

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**CAUTION: DURING THE UPGRADING, DO NOT UNPLUG THE USB CABLE. THE UNIT COULD BE DAMAGED.**

## UPGRADING FIRMWARE

Galvion typically releases one or two firmware updates each year for the MAX-8. Usually, these releases add additional features or capabilities due to user feedback or technological advances. It's highly recommended to update the firmware when new firmware is made available. Here's how to upgrade the firmware in your MAX-8:



**NOTE: UPDATE FIRMWARE/SOFTWARE REGULARLY AS INSTRUCTED BY OEM. FIRMWARE/SOFTWARE GLITCHES MAY RESULT IN INCORRECT CHARGING, OVERCHARGING, UNDERCHARGING OR DAMAGE TO BATTERY.**

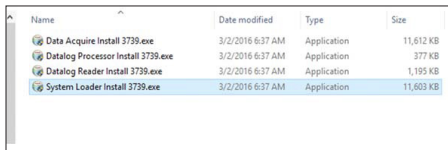
### **1. BEFORE YOU START, YOU'LL NEED THREE THINGS (BESIDES THE MAX-8):**

- a. A standard type A plug to type B plug cable. This cable connects the USB type B receptacle of the MAX-8 to a USB port on a laptop or desktop Windows computer, and is how the MAX-8 gets the firmware.
- b. The MAX-8 “System Loader” Windows application. You'll need to install this software on the computer that you'll be using to do the upgrade. If you were provided a CD, it will be on there. If it does not auto-play when the CD is inserted, you can find it under the “Apps” folder.
- c. The hex image of the firmware you want to put on the MAX-8. If you were provided a CD, it will be on there. You can also request this image if it was not given to you.



## 2. INSTALL THE “SYSTEM LOADER” APPLICATION SOFTWARE:

a. Double click on the “System Loader.exe” file.

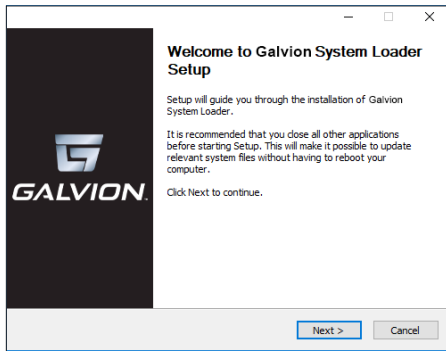


Name	Date modified	Type	Size
Data Acquire Install 3739.exe	3/2/2016 6:37 AM	Application	11,612 KB
Datalog Processor Install 3739.exe	3/2/2016 6:37 AM	Application	377 KB
Datalog Reader Install 3739.exe	3/2/2016 6:37 AM	Application	1,195 KB
System Loader Install 3739.exe	3/2/2016 6:37 AM	Application	11,603 KB

**NOTE**, the number at the end is the version number. The version you install will likely be different.

b. The user Account control menu will pop up, click yes.

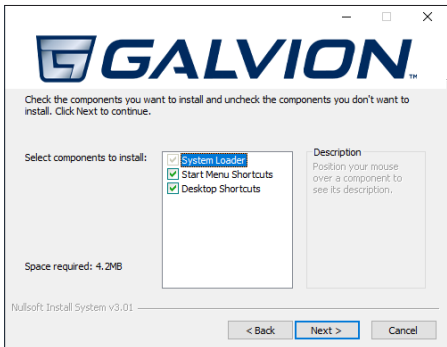
c. The “Welcome to System Loader Setup” Wizard will appear, click next.



d. Click “I agree” on the “Welcome to System Loader Setup” wizard.

# MAINTENANCE

- e. When the “Check the components” window appears, click Next.

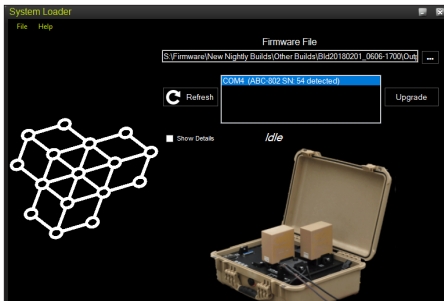


- f. The Destination Folder window appears next, click “Install” if you accept the directory location.



- g. Click the “Finish” button when you see the “Completing the System Loader Setup Wizard”.

- h. You should see the “System Loader” icon on your desktop.
- 3. CONNECT THE USB TYPE B PLUG INTO THE MAX-8 AND THE TYPE A PLUG TO YOUR COMPUTER.**
  - 4. RUN THE “SYSTEM LOADER” APPLICATION ON THE PC.**
  - 5. USING THE PULL-DOWN, SELECT THE COM PORT THAT YOUR MAX-8 IS CONNECTED TO - THE APPLICATION SHOULD TELL YOU WHICH ONE (COM4 IN THE EXAMPLE BELOW):**



**NOTE**, the path to the file you use will be different than the example below, depending on the method that you received the file (see 1c above).

# MAINTENANCE

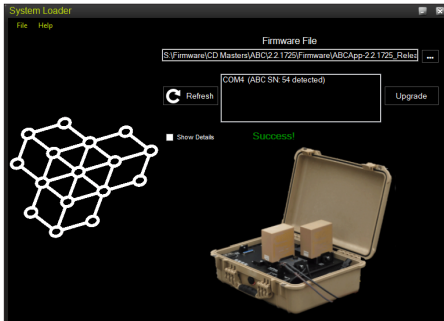
6. SELECT THE FIRMWARE IMAGE YOU WANT TO LOAD TO YOUR MAX-8, USING THE “. . .” BUTTON AT THE RIGHT. IF YOU ARE GIVEN BOTH AN “APP” AND A “BOOT” IMAGE, USE THE “APP” ONE:

ABCApp-2.2.1283.3.hex	7/28/2016 12:01 PM	HEX File
ABCBoot-2.1.1458.hex	3/3/2017 12:58 PM	HEX File

**NOTE**, the number at the end is the version number, the version you install will likely be different

7. CLICK THE “UPGRADE” BUTTON. YOU SHOULD SEE THE PROGRESS BAR AT THE BOTTOM OF THE SYSTEM LOADER MOVE TO THE RIGHT ALONG WITH A POP UP BOX THAT SAYS PROGRAMMING. AT THE END OF THE UPGRADE PROCESS, THE PROGRESS BAR AT THE BOTTOM SHOULD TURN GREEN AND IT WILL DISPLAY THE TEXT SUCCESS. AT THIS TIME, YOU CAN SAFELY UNPLUG THE USB.

THE ENTIRE PROCESS SHOULD TAKE APPROXIMATELY 45 SECONDS. THE MAX-8 WILL RESET AND RESTART WITH THE NEW FIRMWARE.



# TROUBLESHOOTING

---

## **LOOK UP THE SYMPTOM AND CHECK POSSIBLE CAUSES FROM THE LIST BELOW.**

### **NO LIGHTS ON UNIT, UNIT DOES NOT POWER UP FROM AC**

- Check if the On/Off switch is in the “On” position
- Check power connection at unit
- Check power connection at AC adapter
- Check power source

### **NO LIGHTS ON UNIT, UNIT DOES NOT POWER UP FROM DC**

- Check if the On/Off switch is in the “On” position
- Check power connection at unit
- Check if the DC positive and negative terminals are reversed

### **UNIT RUNNING, BATTERIES DO NOT CHARGE**

- Check if the battery is already charged
- Check if adapter battery contact pins are clean and unbent
- Check if adapter to unit connectors contact pins are clean and unbent
- Check temperature, if too hot or too cold, batteries will not charge

### **ADAPTER NOT RECOGNIZED**

- Check if adapter battery contact pins are clean and unbent

# TROUBLESHOOTING

---

## FAN NOISE IS LOUD

- Check temperature, heat may cause fan to run faster
- Check for debris in fan

## MISSION ADAPTIVE CHARGING STATION RUNS DOWN MILITARY VEHICLE BATTERY

- Check Normal-Scavenge switch is in “Normal” position

## SOLAR CAN'T CHARGE BATTERIES IN LOW LIGHT

- Check solar panel orientation
- Check Normal-Scavenge switch is in “Scavenge” position



# FREQUENTLY ASKED QUESTIONS

---

## **Q: I ONLY HAVE ONE BATTERY PLUGGED IN, WHY ISN'T IT CHARGING?**

**A:** If you have just plugged in a battery and it doesn't appear to be charging, there are a few things to check. Proceed down the following list until the battery starts charging.

- Confirm that the adapter is installed correctly. Refer to **INSTALLING AND REMOVING ADAPTERS** (Page 6) to see how to properly install them.
- Make sure that the On/Off switch is in the "On" position.
- Make sure a power cable is screwed all the way into the Input Power connector. You must press it on and then screw until it stops.
- Make sure the power cable is connected to a power source. If the User Interface turns on, you are connected to power.

- When using an AC Power Supply cable, it must be plugged into a standard AC outlet.
- When using a HMMWV cable, make sure it is plugged into the vehicle.
- When using a solar cable, make sure the solar panel is in sunlight.

## **Q: I HAVE MULTIPLE BATTERIES CONNECTED TO THE SYSTEM. WHY ARE SOME NOT CHARGING?**

**A:** The MAX-8's powering capabilities depend on what power source it is connected to. Depending on how many batteries are connected, it may not be able to charge all of them at the same time. The system will also limit its output to protect itself from overheating if it is hot outside, in direct sunlight or the air vents have been blocked.

## FREQUENTLY ASKED QUESTIONS

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### **Q: HOW DO I KNOW WHICH ORDER BATTERIES WILL BE CHARGED IN?**

**A:** The system has two different modes in which it can operate: **SEQUENTIAL** and **FIRST TO FULL**.

**FIRST TO FULL** means that the system will search out the fullest battery and start charging it, regardless of its position on the MAX-8. It will then find the next fullest battery, and so on. This method guarantees the user the shortest amount of time to having a fully charged battery.

**SEQUENTIAL** means that it will charge batteries starting in the top left and ending in the bottom right (the same way you would read a book). If a slot is empty, it is skipped and the next available slot will be charged.

By default, the system uses the **FIRST TO FULL** method, but it can be changed using the User Interface. Highlight the system status box (the one in the bottom right) and press enter. Scroll down to **SYSTEM CONFIGURATION**. From there you can change the charging method.

### **Q: HOW DO I KNOW A BATTERY IS CHARGED?**

**A:** The easiest way to tell is to look at the LEDs next to the adapter. If the LED is solid green, the battery is fully charged and ready to be used. Alternatively, the system status box featured on the User Interface contains a list of all charged batteries (if any) as well as the next battery the system thinks will be fully charged.



**Q: CAN I REMOVE A BATTERY BEFORE IT IS CHARGED?**

**A:** Yes. This will not damage the system or the battery.

**Q: CAN I ADD A NEW BATTERY WHILE THE SYSTEM IS RUNNING?**

**A:** Yes. This will not damage the system or the battery.

**Q: CAN I CHANGE ADAPTERS WHILE THE SYSTEM IS RUNNING?**

**A:** Yes. This will not damage the system or any batteries.

**Q: HOW DO I CHANGE ADAPTERS WHILE THE SYSTEM IS RUNNING?**

**A:** To change an adapter, refer to the **INSTALLING AND REMOVING ADAPTERS** section (Page 6). No special care has to be taken even though the system is running.

You can also remove an adapter that has batteries on it that are actively being charged. No harm will come to the system, the adapter or the batteries.

**Q: THE RED LED CAME ON, NOW WHAT?**

**A:** The red LED means that a fault was detected, either with the battery, the adapter or the MAX-8 itself. Try removing the battery, if the red LED disappears, something erroneous was detected with the battery. Set it aside and do not try to charge it. If the red LED stays lit, then there is a fault with either the adapter or the MAX-8. While the red LED is lit, no battery will charge in that port. If this happens, please call +1-508-490-9960 for further assistance.

## CONTACTING GALVION

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For technical assistance, or to order replacement or additional cables or adapters, please contact Galvion via e-mail or telephone:

**WEB: [WWW.GALVION.COM](http://WWW.GALVION.COM)**

**E-MAIL: [CUSTOMERCARE@GALVION.COM](mailto:CUSTOMERCARE@GALVION.COM)**

**TELEPHONE: 1-508-490-9960**

We are open from 8AM to 5PM, Eastern Time, USA.





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