



“Poolside Service at the Touch of a Button”

User's Guide

Rev A



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Notice

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Federal Communications Commission (FCC) Notice

The BarMate system complies with part 15 of the FCC Rules. 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.

The Service Request Device (SRD) and the Service Area Manager (SAM) have 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 his own expense.

The Gateway has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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 radio

communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, 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 antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CE Compliance

The BarMate System has been designed and tested to be CE compliant under the R&TTE Directive.



Safety Instructions

When installing/using this product, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Read and understand all instructions.
2. Do not use the Gateway near water.
3. Clean only with dry cloth.
4. Do not locate the antenna near overhead light or power circuits, or where it can fall into such power lines or circuits. When installing the antenna, take extreme care to avoid touching such power lines or circuits, as contact with them can be fatal.

Refer all servicing to qualified service personnel. Servicing is required when the equipment has been damaged in any way and does not operate normally.

SAVE THESE INSTRUCTIONS

Safety Symbols

Failure to comply with safety precautions in this guide violates the intended use of this product. The following safety symbols appear in this guide::



GENERAL HAZARD

This symbol represents a general warning or caution.

About This Guide

Purpose and scope

The purpose of this guide is to introduce the BarMate system and to help you successfully use this product. The scope of this guide describes the BarMate System, components, and functions, and provides task-based instruction for operating and using this system once installed.

Audience

This guide is intended for Administrators and Waiters. It is assumed that users have a basic understanding of a PC computer or laptop.


Organization

The following table is a roadmap to using this guide efficiently.

Refer to...	To...
Chapter 1, The BarMate Overview	Understand the BarMate System and the function of system components.
Chapter 2, Operations	Understand component operation and how to start and operate the Management Centre software.
Chapter 3, Starting and Using the Management Centre	Understand Management Centre Operations and how to manage personnel and service requests.
Chapter 4, Maintenance	Learn how to replace an SRD when it no longer operates (battery runs out).

Conventions

The following table describes typographical and icon conventions used throughout this guide.

Description	Example
A button or switch you press on a device appears in this TYPEFACE .	On the SRD, press the ON button.
A greater than symbol (>) indicates choosing a submenu from a menu.	On the status bar, choose Start > BARMATE Management Centre .
An arrow represents a tip or conveys related information.	

Acronyms

FCC – Federal Communications Commission

LED – Light Emitted Device

MC – Management Centre

MMC – Master Management Centre

PC – Personal Computer

SAM – Service Area Manager

SRD – Service Request Device

USB – Universal Serial Bus

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Chapter 1 BarMate Overview

This chapter provides an overview of the BarMate system. Topics discussed in this chapter include the following:

- **About BarMate on page 2**
- **How BarMate works on page 2**
- **System description on page 3**
 - **Technical description of system componentson page 4**
 - **BarMate softwareon page 5**

About BarMate

BarMate is a wireless system that allows guests to request bar service with the press of a button. The wireless device sends a signal to the Management Centre to request service. After providing prompt service, the Waiter clears the signal indicating the guest has been served.

The BarMate system is designed to be scalable, flexible, and accurate for any resort environment.

How BarMate works

To request service, a guest presses a button on a Service Request Device (SRD), which sends a signal to the Management Centre (MC) or the Master Management Centre (MCC), usually located at the bar or refreshment area to request service. The Management Centre consists of a Gateway and PC running BarMate software. A Waiter will identify the location of the guest using the BarMate software, and promptly respond to guest requesting service. An LED will illuminate on the SRD to help identify the guest requesting service. After responding to a guests request for service, the Waiter clears the signal on the SRD to indicate the guest has placed an order. Clearing the signal will switch the LED on the SRD off and send relevant service data (date and time service request was fulfilled) to the Management Centre.

Wireless communications between the SRD and the Gateway are managed by the Service Area Manager (SAM), inconspicuous devices located between the SRDs and the MC to manage wireless communication traffic between devices.

System description

The following diagram illustrates the BarMate System components. A description of system components follows.

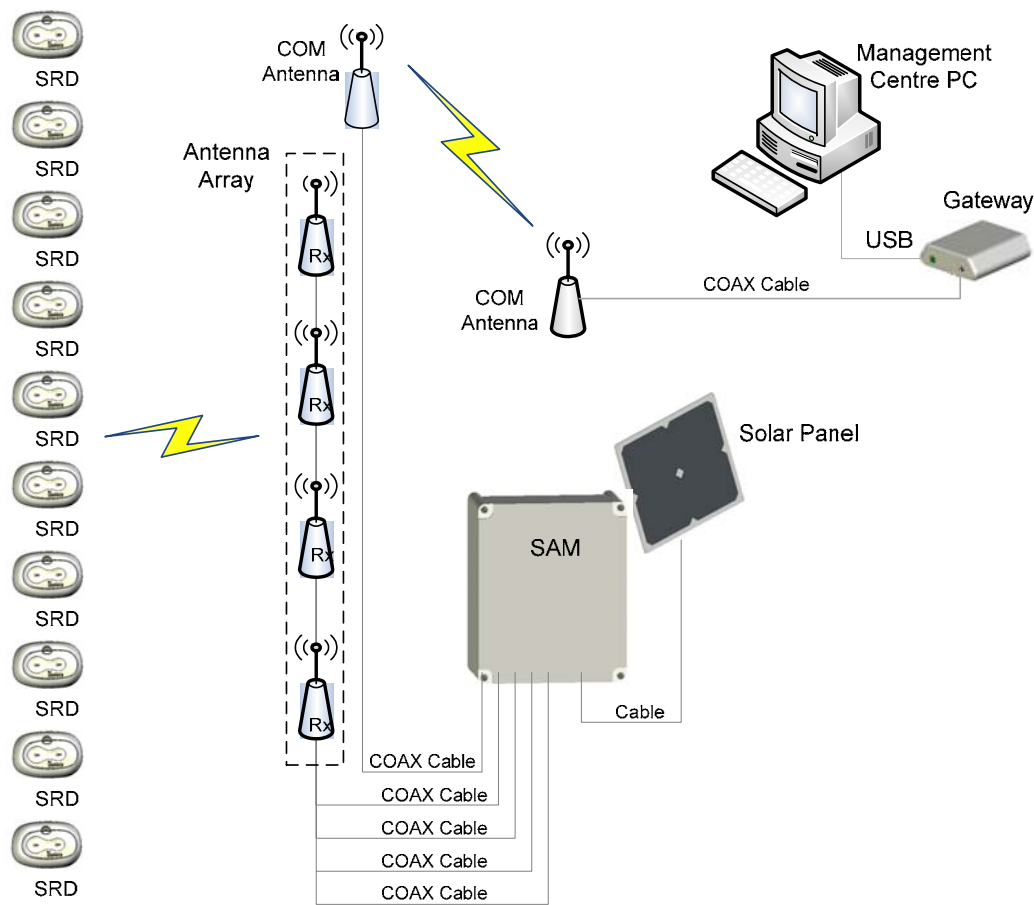


Figure 1: System Block Diagram

Technical description of system components

The BarMate system sends and receives data using multiple devices. Each device is described below.

Service Request Device (SRD) – A push button device that Transmits (TX) and Receives (RX) a signal to and from the Service Area Manager (SAM) at both 2.4 GHz and 13.5MHz. An LED (Light Emitted Device) illuminates on the SRD, indicating service request. The illuminated LED identifies the guest requesting service. This is a battery powered, wireless device that attaches to a surface, typically on a sun lounge.

Service Area Manager (SAM) – A device that manages service requests from SRDs. The SAM transmits and receives signals to and from SRDs using the Antenna Array. The SAM also uses a COM antenna to transmit and receive signals between the SAM and the Gateway. The SAM is powered with a battery that can be recharged using a solar panel. For environmental protection against outdoor elements, the SAM shell (box casing) is a NEMA 4 rated enclosure.

Antenna Array – Composed of four antennas that connect to a SAM. The array transmits and receives signals between SRDs and a SAM. The array locates the SRD requesting service by triangulation.

COM Antennas – Connect to the SAM and to the Gateway (one antenna for each device) by coaxial cable. The COM antennas transmit and receive signals between the Gateway and the SAM.

Solar Panel – Connects to the SAM to recharge the battery.

Gateway – Communicates wirelessly with one or more SAMs using a COM antenna. The Gateway is part of the Management Centre (MC) and connects to the MC computer using a USB cable. The COM antenna attaches to the Gateway with a coaxial cable.

Management Centre (MC) – Composed of a Gateway and a touchscreen computer running the BarMate software. The MC is usually located in the bar area, and provides the interface between the BarMate system and the site's wait

staff. A site may have multiple MCs. The MC computer connects to the Gateway with a USB cable.

Master Management Center (MMC) – Like the MC, the MMC is composed of a Gateway and a touchscreen computer running the BarMate software. At sites that have multiple MCs, the MMC routes messages between the MCs as required. The MMC can also function as an interface between the BarMate System and the site's wait staff.

BarMate software

The BarMate software enables Waiters to identify the location of guests requesting service and to indicate when the guest has been served. The BarMate software enables Administrators to manage and assign Waiters at specific MC locations.

Chapter 2 Operations

The purpose of this chapter is to describe basic operations of the primary BarMate components. (For information related to BarMate software, see Chapter 3, Starting and Using the Management on page 12.) Topics discussed in this chapter include the following:

- **Component operations on page 8**
 - **Gateway operation on page 8**
 - **SAM operation on page 9**
 - **SRD operation on page 10**

Component operations

This section describes the primary BarMate components. Components are shown with mounting brackets. For assembly instructions, refer to Chapter 2, Installation.

Gateway operation

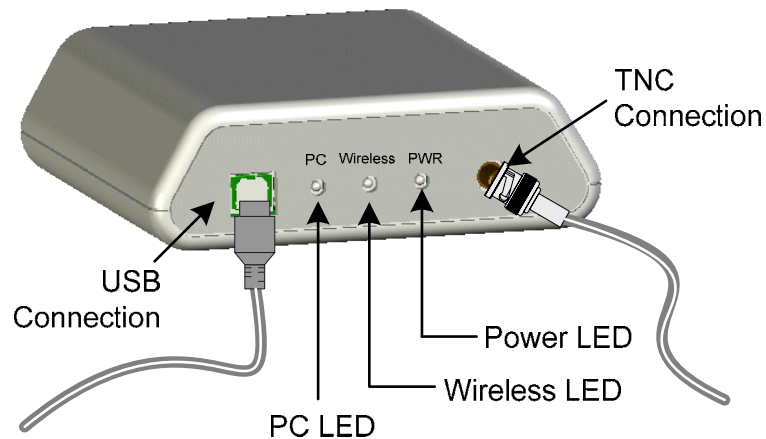


Figure 2: Gateway LEDs and ports.

USB-B port: Connects to a PC or laptop using a standard USB cable.

PC LED: Illuminates green to indicate successful communication between Gateway and PC.

Wireless LED: Illuminates green to indicate successful wireless communications.

Power LED: Illuminates green to indicate Gateway is on.

COM Antenna Connection: Connects to an Antenna that Sends and Receives communications with SAM(s).

SAM operation

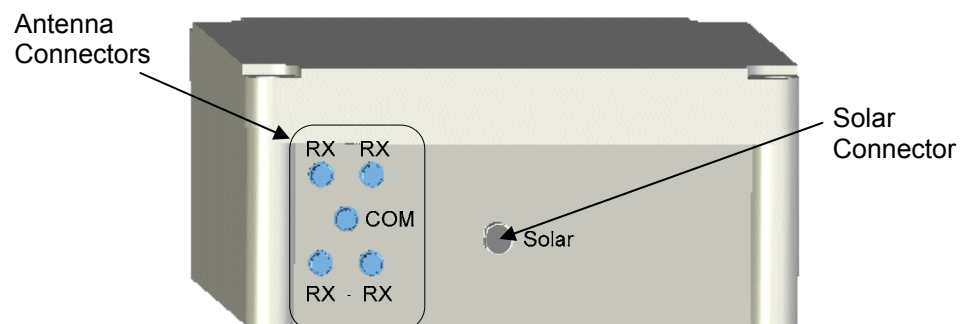
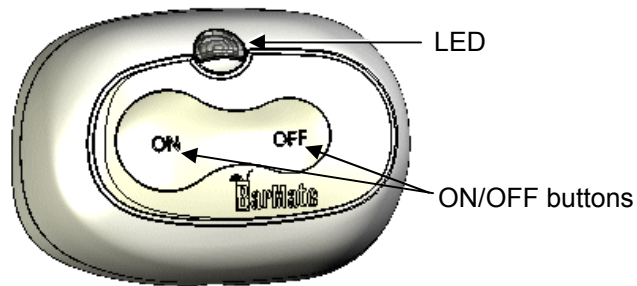


Figure 3: Description of SAM interface.

Antenna Connectors: There are four RX connectors for the antenna array, and one COM connector.

Solar Connector (Input): Connects to the solar panel.

SRD operation



SRD - Front

Figure 4: Description of SRD operation.

LED: Illuminates when the ON button is pressed (service is requested). The LED turns off when the OFF button is pressed, or when the SRD is “cleared” by the Management Centre.

ON/OFF buttons: Pressing the ON button sends a service request. Pressing the OFF button cancels the service request.

Chapter 3 Starting and Using the Management Centre

This section describes the BarMate Management Centre (MC) software application, including basic operations and tasks that Administrators and Waiters perform. Topics discussed in this chapter include the following:

- **Starting the Management Centre on page 12**
- **Management Centre operations on page 12**
 - **Map tab on page 13**
 - **Service Requests tab on page 14**
 - **Waiter Config tab on page 15**
 - **MC Config tab on page 16**
 - **SAM Config tab on page 17**
 - **SRD Config on page 18**
 - **Messages tab on page 19**
 - **Settings tab on page 20**

Starting the Management Centre software

To start the Management Centre application

- Click the **BarMate** icon on the desktop.
- or
- Click the Windows **Start** menu, and then select **Programs > BarMate**.

The Management Centre application displays showing a map of the Service Area in the Map window.

Management Centre operations

The Master Management Centre manages all elements of Administrative and Service operations. Administrators use the Management Centre to manage and control day-to-day operations: identifying waiters, and logging waiters on and off duty at their assigned areas. Waiters use the system to identify the location of a guest requesting service; to take ownership and respond to a request; and to indicate that the guest has been served. The primary tabs that Administrators and Waiters use are the *Service Request tab* and the *Waiter Config tab*. The remainder of tabs are primarily used by BarMate Installers and BarMate Service personnel for setting up and troubleshooting the system.

The following sections describe the functionality that each tab provides and the primary user of those functions.

Map tab

This tab displays a map of the service area and can identify the location of BarMate components. The text box identifies which map displays in the Map window. (Multiple service area maps may be installed on a system to provide clear resolution of a service area.) The arrow is a pull-down menu of service area maps; the selected map displays in the map window. The check boxes display the location of BarMate components MCs, SAMs, and SRDs (routers are not currently used). The primary users of this tab are Administrators and Waiters to locate components, specifically the location of SRDs (guests requesting service).

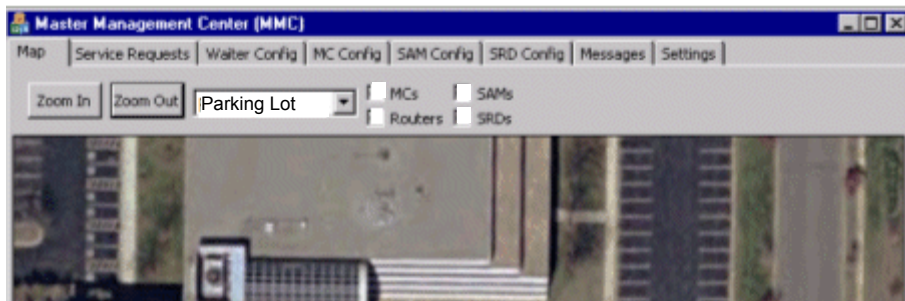


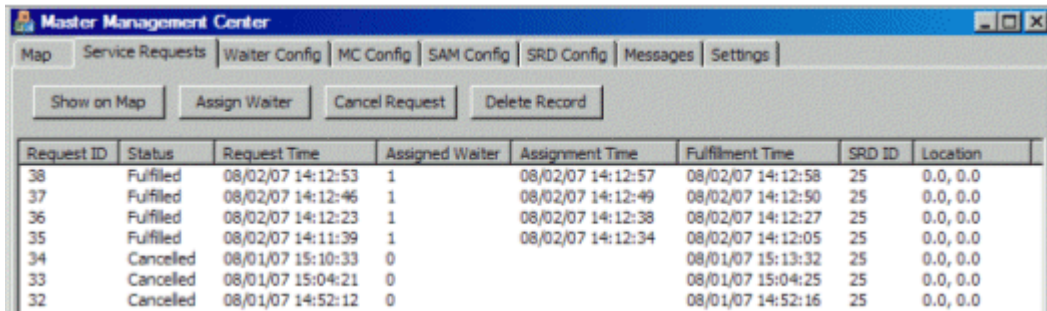
Figure 5: Description of Map tab.

To view BarMate components on a resort map

- Click the text box arrow and select the desired map to display in the map window.
- Click the **Zoom in** or **Zoom out** buttons for optimal resolution of the service area map.
- Click the check boxes to select or deselect components that display on the map: **MCs** (Management Centres), **SAMs** (Service Area Managers), and **SRDs** (Service Request Devices) on the map. Deselecting a check box will remove it from the service area map displaying in the map window.

Service Requests tab

This tab manages service requests. Each state of a request illuminates a different colour to indicate a pending request, the device location, when the request is assigned, when a request is satisfied, and when a request is cancelled. The primary users of this tab are Waiters and Administrative personnel.



Request ID	Status	Request Time	Assigned Waiter	Assignment Time	Fulfilment Time	SRD ID	Location
38	Fulfilled	08/02/07 14:12:53	1	08/02/07 14:12:57	08/02/07 14:12:58	25	0.0, 0.0
37	Fulfilled	08/02/07 14:12:46	1	08/02/07 14:12:49	08/02/07 14:12:50	25	0.0, 0.0
36	Fulfilled	08/02/07 14:12:23	1	08/02/07 14:12:38	08/02/07 14:12:27	25	0.0, 0.0
35	Fulfilled	08/02/07 14:11:39	1	08/02/07 14:12:34	08/02/07 14:12:05	25	0.0, 0.0
34	Cancelled	08/01/07 15:10:33	0		08/01/07 15:13:32	25	0.0, 0.0
33	Cancelled	08/01/07 15:04:21	0		08/01/07 15:04:25	25	0.0, 0.0
32	Cancelled	08/01/07 14:52:12	0		08/01/07 14:52:16	25	0.0, 0.0

Figure 6: Description of Service Requests tab.

To manage service requests

- Click the **Show on Map** button to display the location of the device/guest.
- Click the **Assign Waiter** button and identify waiter taking ownership / responding to the service request.
- After attending guest,
 - Press **OFF** on the SRD to clear the server request.
 - Click the **Cancel Request** button to cancel a request for service without deleting the record (service request).
 - Click the **Delete Record** button to delete the database record of request from the system.

Waiter Config tab

This tab manages waiters: logs waiters who are on duty in and out, and provides the ability to add or remove waiters to an MC. The MC that a waiter is logged in on determines the area to which a waiter is assigned. For example, if a waiter logs into MC "A", the waiter is assigned to area "A". The primary users of this tab are Administrators.

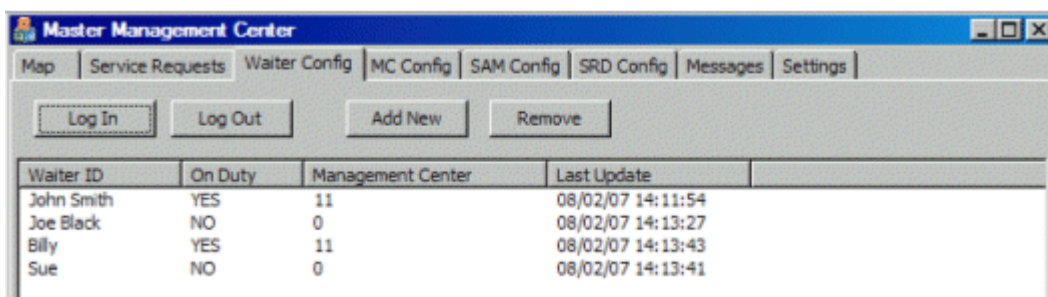


Figure 7: Description of Waiter Config tab.

To manage waiters

- Select the appropriate name or ID and click **Log In** to sign into the BarMate system.
- Select the appropriate name or ID and click **Log Out** to sign out of the BarMate system.
- Click the **Add New** button and enter a new name or ID to add a new waiter to this MC.
- Select the name or ID to be removed and click **Remove** to remove a waiter from this MC.

MC Config tab

This tab provides a list of all MCs configured in the system and the. The window displays the location of MCs. The primary users of this tab are BarMate Installers and BarMate Service personnel.

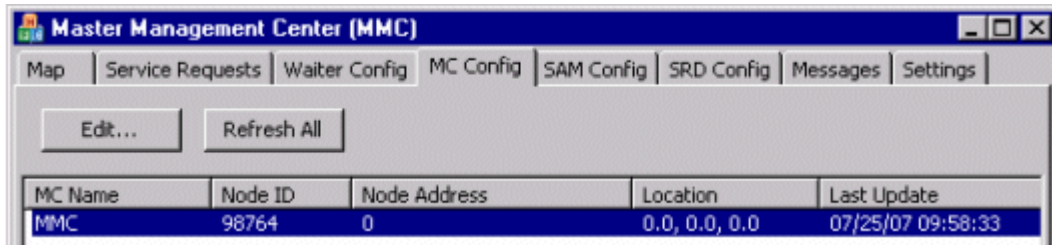


Figure 8: Description of MC Config tab.

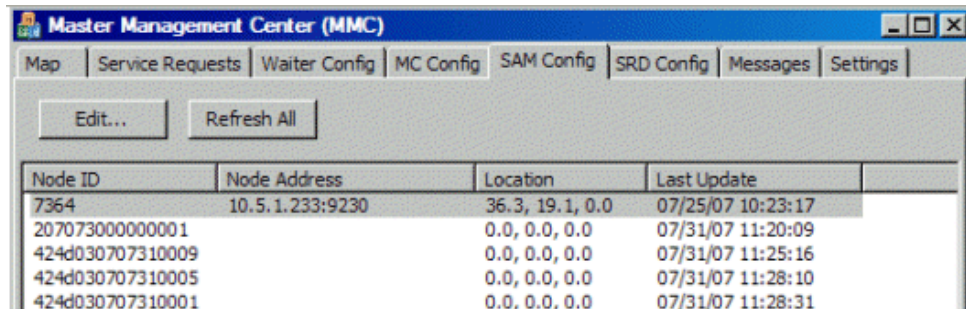


CAUTION:

Modifying information on this tab could change a components configuration, which may require BarMate Personnel to reconfigure a component. Only trained BarMate Installers or BarMate Service personnel should use this tab.

SAM Config tab

This tab provides a list and pertinent information about all SAMs configured in the system. The primary users of this tab are BarMate Installers and BarMate Service personnel.



Node ID	Node Address	Location	Last Update
7364	10.5.1.233:9230	36.3, 19.1, 0.0	07/25/07 10:23:17
207073000000001		0.0, 0.0, 0.0	07/31/07 11:20:09
424d030707310009		0.0, 0.0, 0.0	07/31/07 11:25:16
424d030707310005		0.0, 0.0, 0.0	07/31/07 11:28:10
424d030707310001		0.0, 0.0, 0.0	07/31/07 11:28:31

Figure 9: Description of SAM Config tab.

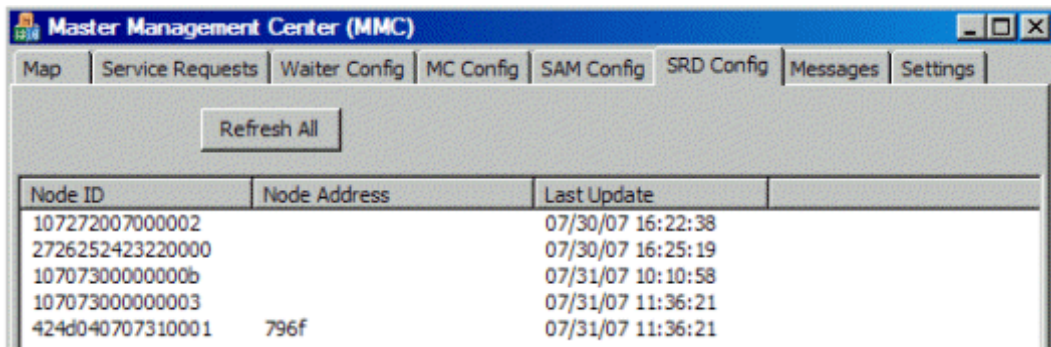


CAUTION:

Modifying information on this tab could change a components configuration, which may require BarMate Personnel to reconfigure a component. Only trained BarMate Installers or BarMate Service personnel should use this tab.

SRD Config

This tab provides a list and pertinent information about all SRDs in the MC. The primary users of this tab are BarMate Installers and BarMate Service personnel.



Node ID	Node Address	Last Update
107272007000002		07/30/07 16:22:38
2726252423220000		07/30/07 16:25:19
10707300000000b		07/31/07 10:10:58
107073000000003		07/31/07 11:36:21
424d040707310001	796f	07/31/07 11:36:21

Figure 10: SRD Config tab description.



CAUTION:

Modifying information on this tab could change a components configuration, which may require BarMate Personnel to reconfigure a component. Only trained BarMate Installers or BarMate Service personnel should use this tab.

Messages tab

This tab is used for troubleshooting purposes. The Message window provides internal status and troubleshooting information exchanged between a Gateway and MC. The primary users of this tab are BarMate Installers and BarMate Service personnel.

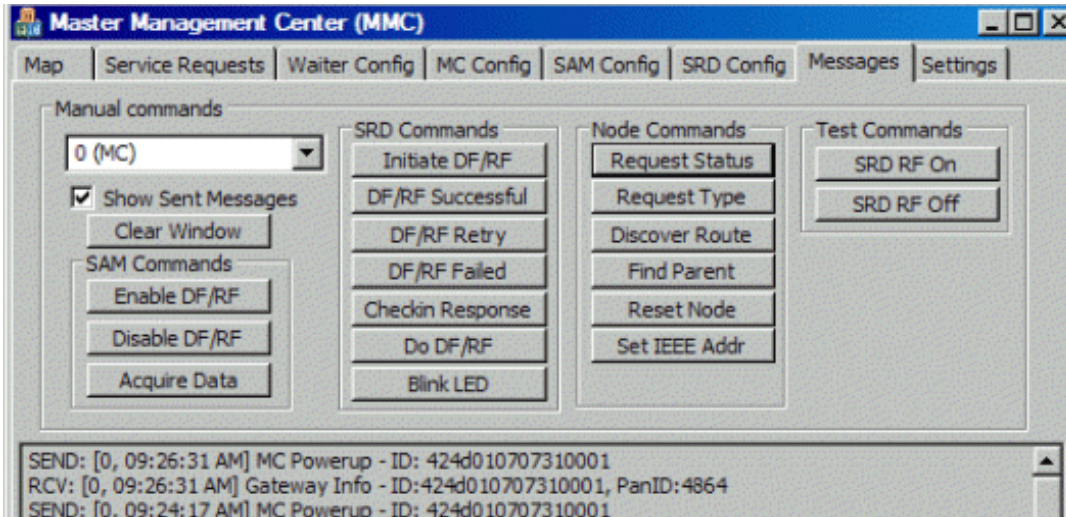


Figure 11: Description of Messages tab.



CAUTION:

Modifying information on this tab could change a components configuration, which may require BarMate Personnel to reconfigure a component. Only trained BarMate Installers or BarMate Service personnel should use this tab.

Settings tab

This tab provides the ability to add and configure new maps to the system and to configure various parameters related to system operation. The primary users of this tab are BarMate Installers and BarMate Service personnel.

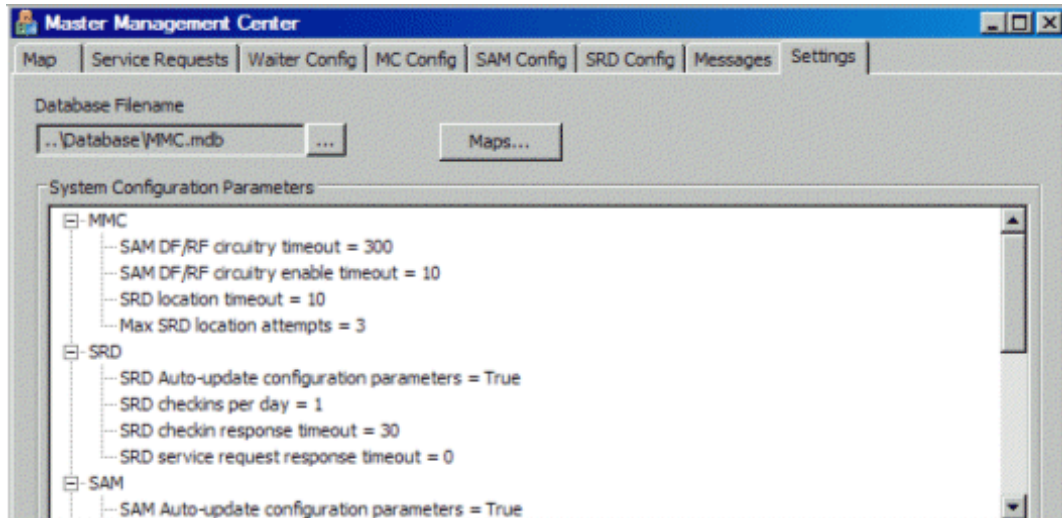


Figure 12: Description of Settings tab.



CAUTION:

Modifying information on this tab could change a components configuration, which may require BarMate Personnel to reconfigure a component. Only trained BarMate Installers or BarMate Service personnel should use this tab.

Chapter 4 Maintenance

This chapter describes how to install the BarMate system. Topics discussed in this chapter include the following:

- **Removing an SRD from a Bracket Mount on page 22**
- **Installing an SRD on page 23**
- **Replacing the SAM Battery on page 25**

Removing an SRD from a Bracket Mount

If an SRD fails, it must be replaced as each SRD includes a non replaceable battery. To protect internal electronics, the SRD case is hermetically sealed.



CAUTION:

Trying to open the SRD case will likely break the device (damaging internal electronics), and the device will no longer be water resistant.

To remove an SRD from its Bracket Mount

- 1 Insert a small, slotted screwdriver with 1/8" tip into the Disconnect Slot on the side of the SRD.
- 2 Apply slight upward pressure with the screwdriver, while sliding the SRD away from the Disconnect Slot and lifting upward.

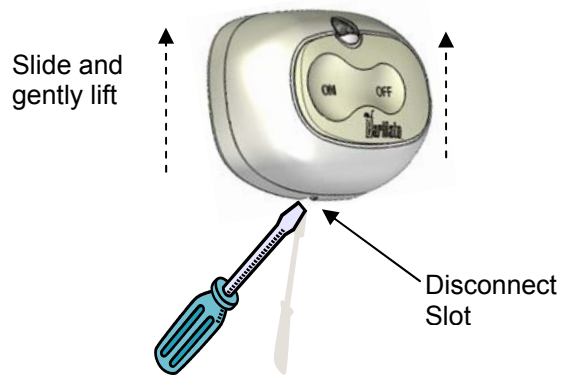


Figure 13: Removing an SRD from its bracket.

Installing an SRD

The SRD is a battery operated device. The SRD contains an internal battery that is magnetically activated when the SRD is attached to the Bracket Mount.

To install and mount the SRD

- 1 Observe orientation of SRD and mounting bracket.

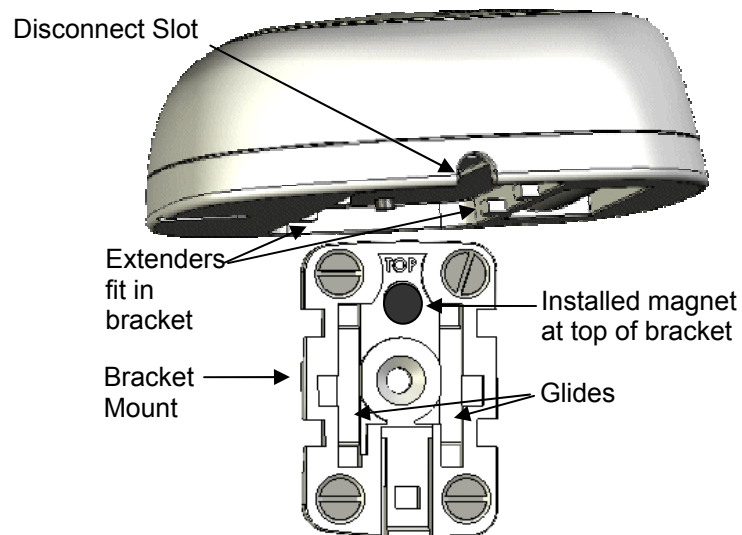


Figure 14: Orienting an SRD over its bracket mount.

- 2 Slide SRD extenders on glides until the SRD snaps into place, locking the SRD to the mounting bracket.

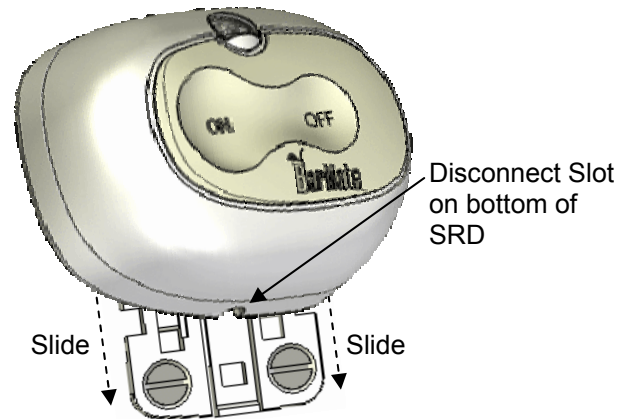


Figure 15: Sliding an SRD onto its bracket mount.

- 3 Verify that the battery is activated; Press **ON** to illuminate the LED. Press **OFF** after verification.

Replacing the SAM Battery

The SAM contains a replaceable lead acid battery. To replace the battery, you will need the following items:

- A replacement 12V Power Up battery (P/NPUBP-7-12 or equivalent)
- Screw driver



CAUTION:

Before powering up a SAM, make sure the Management Centre (Gateway, computer, and software) are running.

To replace the battery

- 1 Remove the (4) screws from the SAM cover; and then remove the cover.
- 2 On the small PC Board, switch the power to **OFF**.

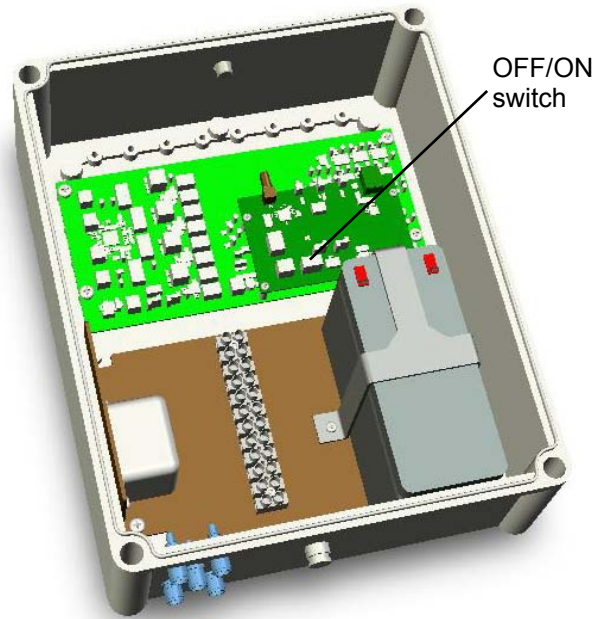


Figure 16: Power switch inside SAM.

- 3** Remove the two screws that secure the battery bracket; and then remove the bracket.

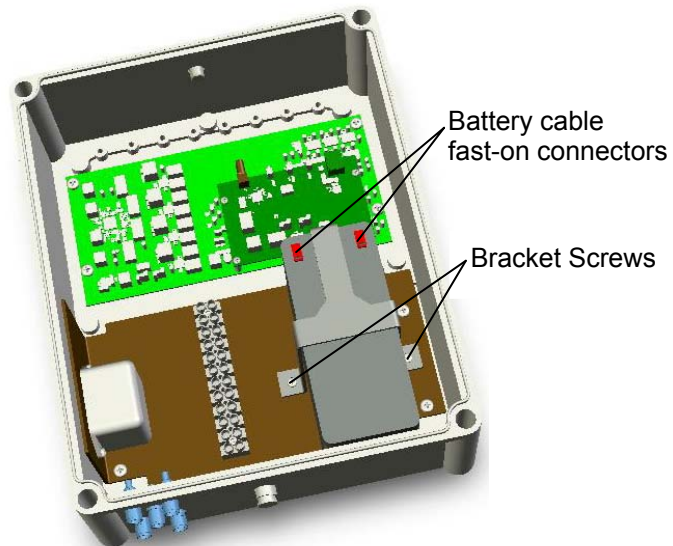


Figure 17: Battery installed in SAM.

- 4 Disconnect the battery cables from the battery, and then remove the battery from the SAM.
- 5 Insert the replacement battery into the SAM.
- 6 Place the bracket over the replacement battery, and then secure the bracket using the two bracket screws.
- 7 Connect the red (positive) battery cable to the red fast-on connector on the battery. Connect the black (negative) battery cable to the black fast-on connector on the battery.
- 8 Make sure the Management Centre (computer, Gateway, and software) are running, and then, on the small PC Board in the SAM, switch the power to **ON**.
- 9 Replace the SAM cover, and then secure it using the cover screws.



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