

# Modem Warmup Feature: Modem Power Controlled by Remote Alarm Controller

## Question:

How can I prolong the life of my external battery during long term remote monitoring?

## Answer:

The Modem Warmup feature allows Micromate users to extend the life of external batteries used to power the modem in remote monitoring stations. This can reduce the size of the external battery and solar panel required to power the remote station or reduce the number of site visits to replace the external batteries.

When the Modem Warmup feature is enabled on the Micromate, the modem power is disconnected, reducing its power requirements to zero when there is no event data to send home (PC server). When an event occurs, the Micromate unit automatically turns on the power to the modem and waits the specified time for the modem to initialize. Once initialized all of the event data is transmitted to the PC and the power to the modem is once again disconnected.

This feature requires the factory install auxiliary port option (Part No. 721A0101) and a remote alarm controller (Part No. 721A0901).



**Micromate without Auxiliary I/O**



**Micromate with Auxiliary I/O installed**



**Remote Alarm**

# Configuring the Modem Warmup

1. The Modem Warmup feature is designed to function only when Auto Call Home is enabled (Figure 1). The Modem Relay menu is grayed out and not available when Auto Call Home is disabled (Figure 2).

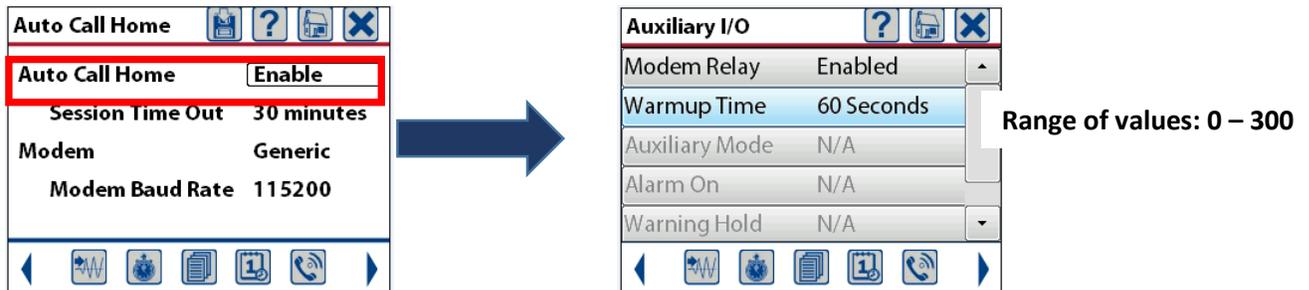


Figure 1: Auto Call Home must be enabled for the Modem Warmup feature to be accessible

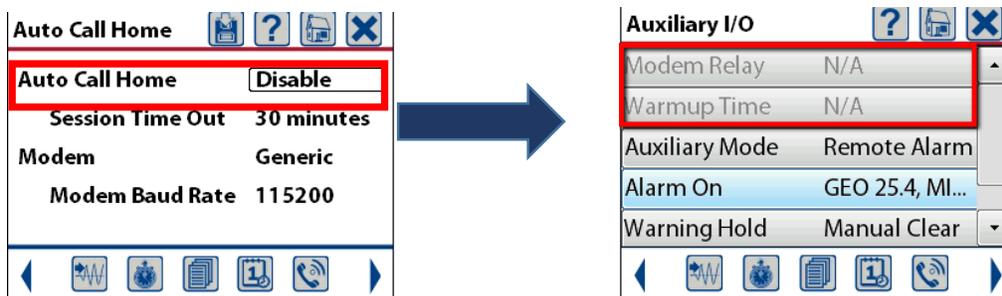
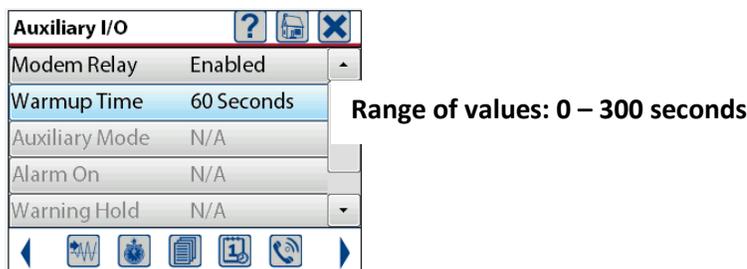


Figure 2: The Modem Warmup menu option is not accessible when Auto Call Home is disabled

**Note:** The Modem Warmup feature is currently only available on the Micromate unit. If you disable Auto Call Home on the unit using the keyboard, the Modem Warmup feature is disabled. Next time you enable Auto Call Home, you must manually enable modem relay again using the unit keyboard. Please review the Cautionary Notes outlined in the “General Operation” section before deploying the unit.

2. Once Auto Call Home has been enabled, navigate to **View/Edit Current Setup > Auxiliary I/O**. Enable Modem Relay and set the Warmup Time to 60 seconds (Default = 20 seconds). This will allow the modem sufficient time to initialize.

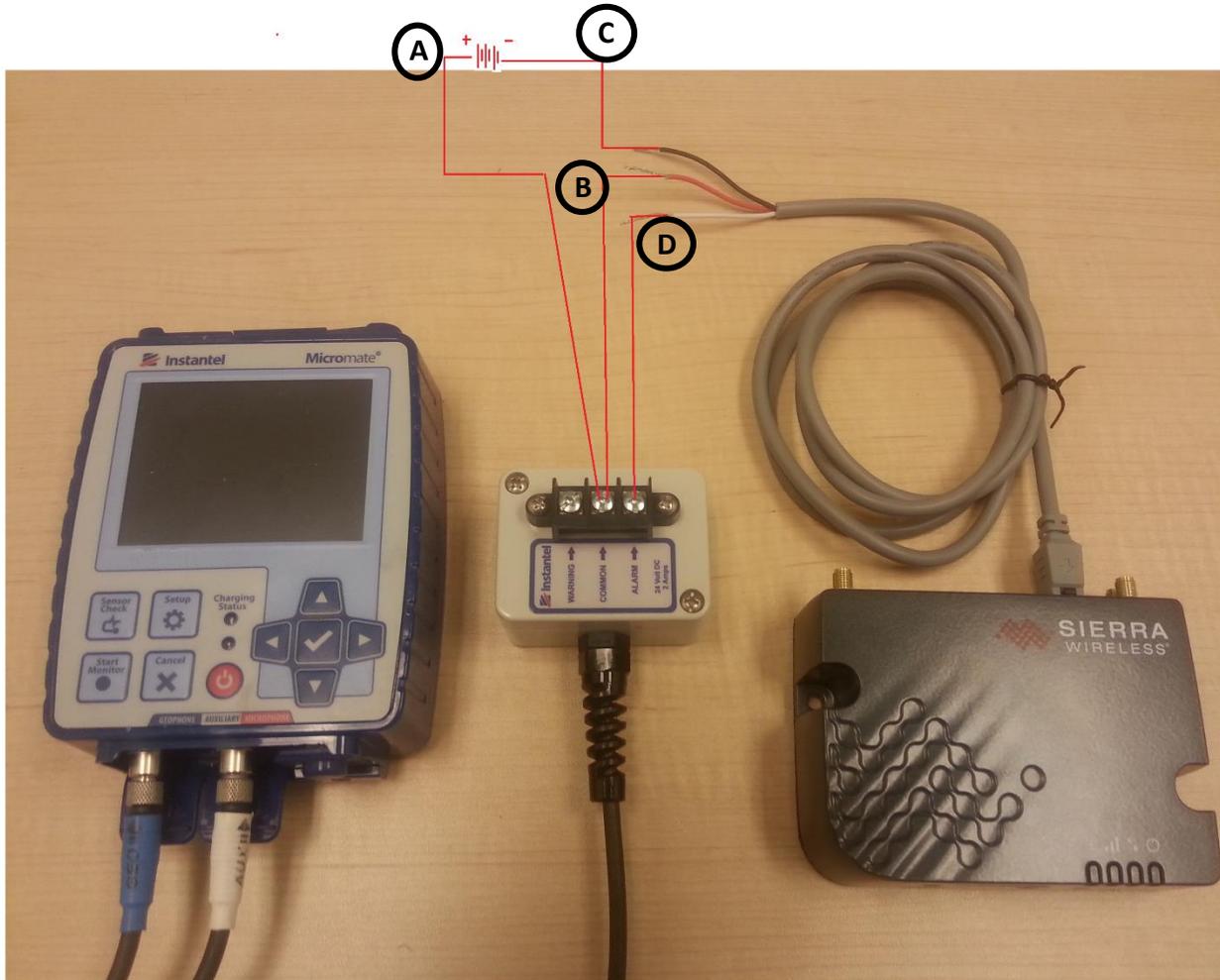


3. Save these settings before exiting the Auxiliary I/O screen. Commit all changes using the  icon at the top of the screen that follows.



## Connecting the Modem to Remote Alarm

The following diagram illustrates a Micromate unit setup for Modem Warmup using a remote alarm controller and a Sierra wireless LS 300, GX 400 or RV50 modem. The external battery referenced below is 12 volts.

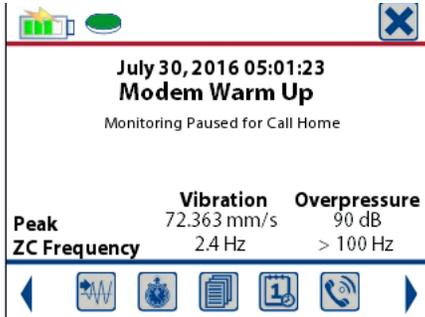


- A-** Connect the positive terminal of the 12 V Battery to the Common output of the Remote Alarm controller.
- B-** Connect the Power wire (Red) of the modem to Common output of the Remote Alarm controller.
- C-** Connect the Power ground wire (Black) of the modem to the negative terminal of the battery.
- D-** Connect the Ignition sense wire (White) of the modem to the Remote Alarm controller's Alarm output.

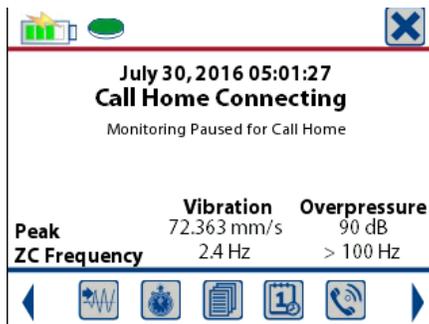
\* Reference your Sierra Wireless Modem for Power Connector Pin and DC cable wire name

## General Operation

Assuming that Auto Call Home has been enabled, the Modem Warm up feature has been enabled, and the modem is connected to the remote alarm, the Micromate will now control the power to the modem. Depending on the Auto Call Home configuration, when the Micromate has event data to send it will enable the power to the modem and wait the programmed amount of time for the modem to initialize. During Warmup Time the Micromate status will read “Modem Warm Up”.



After the Warmup Time expires, the Micromate will proceed with the normal call home procedure.



The modem will remain on for the full duration of the call home session. When the call home session ends, the Micromate will turn off the power to the modem and return to monitoring mode.

### Cautionary Note:

Currently, the Modem Warmup feature can only be modified on the Micromate unit. Blastware and Thor do not presently support the Modem Warmup feature. As such, please note the following:

- a) It is possible to disable Auto Call Home using Blastware/Thor during the modem warmup time (while the modem is warming up). However, doing this action also disables the Modem Warmup feature. If Auto Call Home is disabled using Blastware or Thor during modem warmup time, the Micromate leaves the modem powered on and completes the current call home session. This change affects future Auto Call Home sessions. *Note that if Auto Call Home is disabled remotely during the modem warmup time, the modem power never gets turned on again after the current Auto Call Home session is completed. In this case, the Modem Warmup and Auto Call Home must be re-enabled directly on the unit.*
- b) If Modem Warmup was disabled on the unit prior to deploying the unit in the field, Modem Warmup cannot be enabled by activating Auto Call Home using Blastware or Thor.

- c) Modem Relay is disabled by default, and will be disabled if the Micromate unit is reset to the factory default settings using the Micromate keyboard.
- d) Restarting the Micromate using Blastware or Thor in an attempt to reboot the unit does not impact the Modem Warmup setting. The Modem Warmup feature still retains its settings from before the unit restart.