



R829 School Zone Calendar Configuration Instructions

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1.0 School Zone Calendar Configuration Instructions

1.1 *Interface Installation and Configuration*

System Requirements

Minimum 266MHz, 32MB RAM

Windows 98, 2000, XP supported

NOTE

XP users: The drivers are not certified by Microsoft and a warning message will appear during installation. This simply means that the chip manufacturers have not paid to have the drivers certified for Windows XP. Ignore the messages and continue with the driver installations – they are fully compatible and will perform correctly.

1.1.1 USB Driver Installation

1. Plug the Interface Box into your computer using the supplied USB cable.
2. The “Found New Hardware Wizard” will appear – this may take some time depending on your system.
3. Click “Next”.
4. Follow the default for the drivers search. Click on “Next”.
5. Select “Specify a Location” only! Click on “Next”.
6. Insert the CD into your CDROM drive.
7. Click “Browse.”
8. Navigate to the CDROM drive and double-click on “*Interface Box Drivers*”.
9. Click “Open” (the default that is already selected).
10. You will be returned to the Wizard. Click “OK.”
11. Confirm that the driver found is `ftdibus.inf`. Click “Next” to install the driver.
12. Click “Finish.”

1.1.2 Serial to USB Interface Installation

1. The “Found New Hardware Wizard” will appear – this may take some time depending on your system.
2. Click “Next.”
3. Use the default selection, click “Next.”
4. Select “Specify a Location” only! Click “Next.”
5. Confirm that the location `YourCDROMDrive:\Interface Box Drivers` is selected. Click “OK.”
6. Confirm that `ftdiport.inf` is found.
7. Click “Next.”
8. You will be returned to the Wizard. Click “Finish.”

1.1.3 Installing the Software

1. Access the CDROM and run `Setup.exe`
2. The Wizard will appear – follow the prompts using the default selections.

1.2 GEN I and GEN II products.

There are GEN I and GEN II roadway beacons. The differences between the two are easy to spot. Refer to the diagrams below for visual queues to their differences.



Figure 1-1: GEN I – Beveled Design



Figure 1-2: GEN II - Square Design

Some sections in this instruction are specific for GEN I and GEN II beacons only. These sections are marked throughout.

1.3 Communications Setup

1.3.1 GEN I Beacon

To set up communications for the software and Interface Box follow these steps:

1. Open the application using the icon created on your desktop. When the calendar configuration window opens, pull down the Configure menu. Select "Communications."



Figure 1-3

2. Select which communications port the Interface Box is connected to. Keep the Baud Rate set to the value of 115200.
3. Ensure the Select Mode is set to Secondary.

4. Ensure the Channel selected is 0 (Refer to Section 5.3.2 in the Owner's Manual for channel selection).

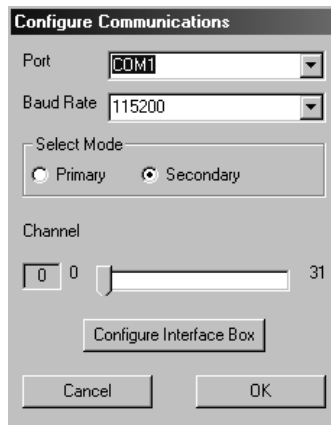


Figure 1-4

5. Once you are satisfied with the settings, click on the button labeled Configure. A progress bar will appear. The Interface Box is now being set up in preparation for communicating with your School Zone Beacon.

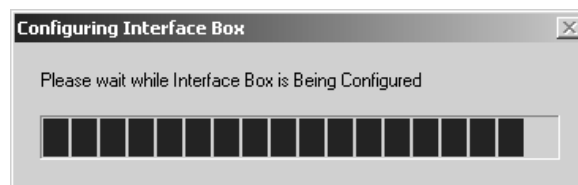


Figure 1-5

6. If setup is successful, you will see "SUCCESS!" Your Interface Box is now ready for use with your Beacon. After the Interface Box is configured, the following message will be shown:



Figure 1-6

7. Click on OK to continue.

1.3.2 GEN II Beacon

To set up communications for the software, follow these steps:

1. Open the application using the icon created on your desktop. When the calendar configuration window opens, pull down the Configure menu. Select "Communications."

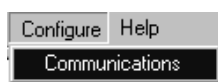


Figure 1-7

2. Select the appropriate communications port.

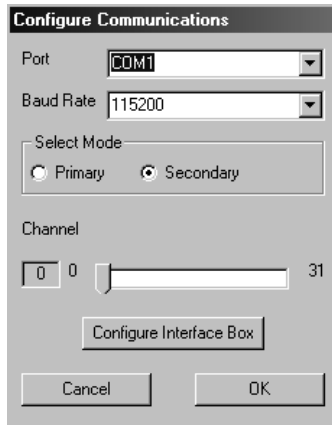


Figure 1-8

3. Click on OK to continue.

1.4 Creating a Calendar

This section is intended as a step by step guide to creating a calendar. We will cover calendar creation, setting the start day of the calendar, making the lights flash at different times on a different day and modifying the times when the light flashes on this day.

This is best performed prior to going to the location of your School Zone Beacon. Information on advanced features such as selecting “Schedules and Events” for your entire year, saving your new calendar and determining which calendar is currently loaded in the Beacon can also be found in the *Help Folder* on the software CD.

NOTE

When naming and saving your newly created calendar, it is important to note that the file name you choose **cannot have any blank spaces in it.**

1.4.1 Creating a New Calendar

To create a new calendar, navigate to the File menu and click on the **New** menu item.

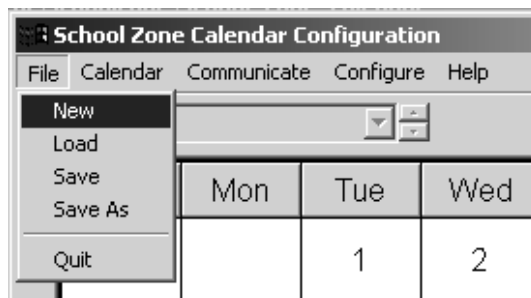


Figure 1-9

This creates a calendar that starts today with the weekends set to off and the weekdays set to a standard school day. Let's take a look at the calendar that was created:

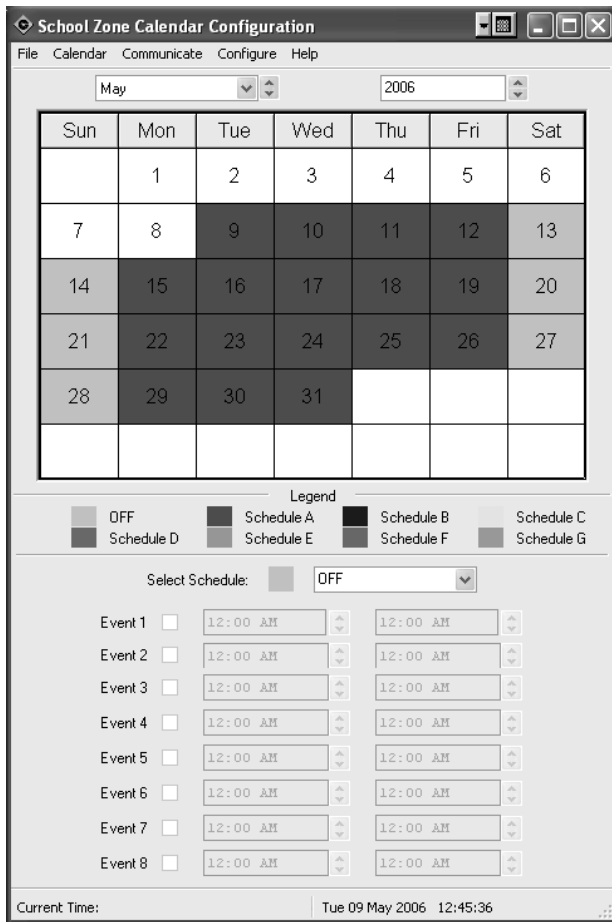


Figure 1-10

Your calendar will look similar to this one; the start date (in this case May 9th) will be different. Saturday and Sunday are coloured GRAY (OFF) and Monday through Friday are colored RED (Schedule A). This means that the lights will not flash on weekends and Monday through Friday the lights will flash according to Schedule A. Let's take a look at Schedule A's events so that we know when the lights are going to flash. Navigate the mouse down to the "Select Schedule" box below the legend and click on the down arrow. Then select Schedule A and left click on it.

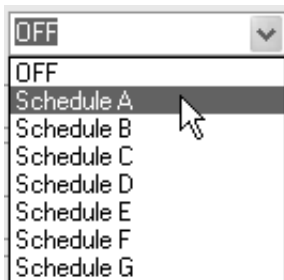


Figure 1-11

The whole lower half of the screen will change to reflect the events for Schedule A.

The screenshot shows a configuration window for a calendar. At the top, there is a 'Select Schedule:' label followed by a dropdown menu currently set to 'Schedule A'. Below this, there are eight rows, each representing an event. Each row contains a checkbox, a start time field, and an end time field. The start and end time fields have small up and down arrow buttons next to them. The events are as follows:

Event	Start Time	End Time
Event 1	07:45 AM	08:15 AM
Event 2	12:15 PM	12:45 PM
Event 3	02:45 PM	03:15 PM
Event 4	12:00 AM	12:00 AM
Event 5	12:00 AM	12:00 AM
Event 6	12:00 AM	12:00 AM
Event 7	12:00 AM	12:00 AM
Event 8	12:00 AM	12:00 AM

Figure 1-12

Here we can see that the lights will be flashing from 7:45 am to 8:15 am, 12:15 pm to 12:35 pm, and 2:45 pm to 3:15 pm for Schedule A. For the calendar that we just created, this will happen on all days that are coloured RED - in this case Monday through Friday.

1.4.2 Setting the Start Day

The new calendar that we just created is a good start, but in order for your calendar to look similar to mine throughout this tutorial, we have to adjust where your calendar starts. Normally, you would adjust the start date to the start of the school year. Navigate to the Calendar → Set Start Day menu and left click.

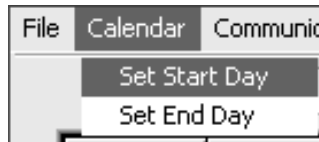


Figure 1-13

This will cause a calendar to pop up where you can select the start day from.



Figure 1-14

Navigate your way to May 2006 and highlight May 9th by clicking on it.



Figure 1-15

Click on the OK button. The calendar should now look like the following:

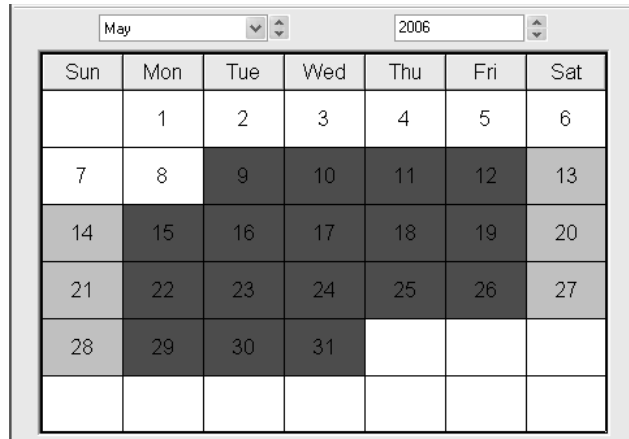


Figure 1-16

1.4.3 Setting the End Day

This works similarly to the Set Start Day command, except that you set where your calendar should end. Navigate to the Calendar → Set End Day menu and left click.



Figure 1-17

This will cause a calendar to pop up where you can select the end day.



Figure 1-18

This day and all days after this day will be set to OFF.

1.4.4 Turning the Lights OFF on a Specific Day

We need to take into account for holidays and may wish to have the lights OFF for these days.

Let's turn the lights off for a specific day. Navigate the mouse down to the "Select Schedule" box below the legend and click on the down arrow. Then select OFF and left click on it.

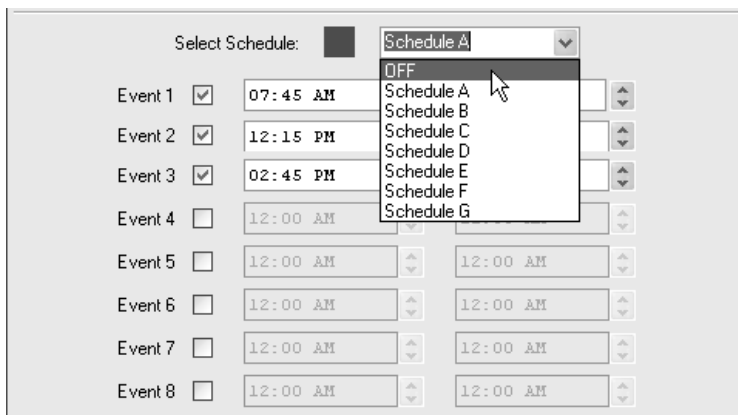


Figure 1-19

Now move the mouse over May 10th and left click. May 10th will change from RED to GRAY.

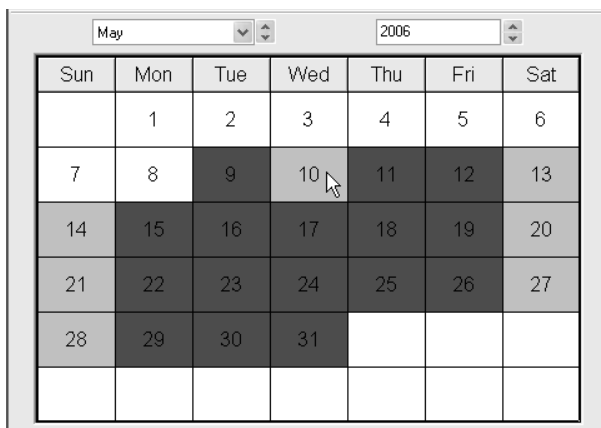


Figure 1-20

1.4.5 Turning the Lights ON for a Specific Day at Specific Times

We may wish to have the lights flash at different intervals for specific days.

What if we want the lights to flash from 8:30am to 8:45am then 12:00 pm to 12:15 pm on May 11th? Let's modify Schedule B to let us do this and add it to the calendar. Navigate the mouse down to the "Select Schedule" box below the legend and click on the down arrow. Then select Schedule B and left click on it.

Figure 1-21

Enable the Event 1 for Schedule B by clicking on the checkbox to the left of Event 1

Figure 1-22

Click on the up and down arrows to set Event 1 to start at 8:30am and end at 8:45am

Figure 1-23

Do the same for Event 2 but set it to start at 12:00pm and end at 12:15pm

Figure 1-24

Now left click the calendar on the 11th of May.

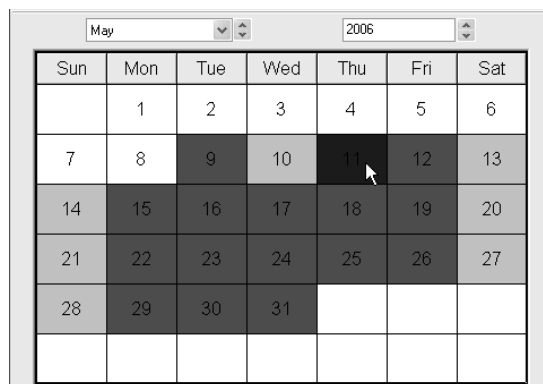


Figure 1-25

Now that you're familiar with the steps that you have to go through in order to configure a calendar, you should set your calendar to reflect how you want the lights to flash throughout your school year. After you've done this, move on to the next step → Sending a Calendar to the School Zone Beacon.

1.5 Adjusting the Brightness

NOTE

For Gen I Beacons follow the instructions outlined below to adjust brightness. For Gen II beacons follow the instructions in the owner's manual. **The brightness settings below do not apply to GEN II Beacons.**

Your beacon is factory configured for brightness and does not typically need additional configuration. Carmanah recommends speaking with a qualified Carmanah representative before setting the brightness.

NOTE

Important: Light intensity (brightness) is user-configurable; however, setting light intensity with energy requirements greater than the available solar energy will result in automatically reduced brightness (Automatic Light Control), reduced system efficiency, reduced battery lifetime, or even complete system failure. Contact your Carmanah representative if you need guidance in adjusting your settings for your geographic location and solar conditions

NOTE

If the Brightness Level option does not appear in the Configure menu, click on the frame (grey area) and then press the CTRL+ALT+b keys simultaneously.

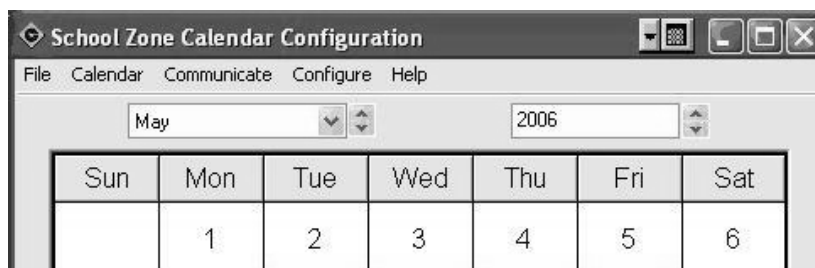


Figure 1-26

You can adjust the brightness of your school zone beacon from the Configure menu. Select Configure > Brightness Level.



Figure 1-27

Now the Brightness Configuration box will open. Select the Brightness Level by clicking the mouse onto the Brightness Level indicator and sliding it to the desired brightness level. Press OK when done.

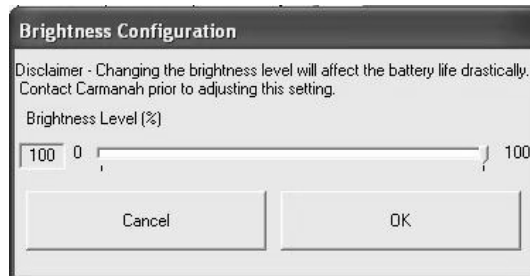


Figure 1-28

1.6 Sending a Calendar to the School Zone Beacon

Once the calendar is setup, follow the instructions below to load it to the school zone beacon:

NOTE Steps 1, 2 & 4 are for GEN I beacons only.



Figure 1-29

1. Open the Switch Box (see above) and flip the switch to the “Manual Override” position. You will notice that the lights begin flashing immediately. This is normal because it tells you the School Zone Beacon is functional. The lights will always flash when the switch is in the OVERRIDE position.
2. Have a look at the LED on the end of the Interface Box – it should be glowing green. This shows that the interface box is configured, recognizes the School Zone Beacon and is ready to communicate. If

the LED is not on, check the configuration of the Interface Box following section 1.2 Configuring the Interface Box.

3. Navigate to the Communicate Menu and click on the Send Calendar menu item. Wait for the calendar to be sent. Please be patient while the calendar is being sent. The amount of progress that has been made in sending the calendar is reflected by the progress bar.

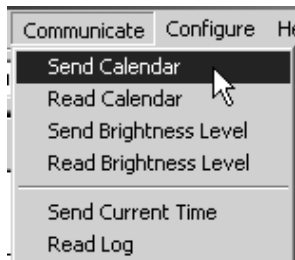


Figure 1-30

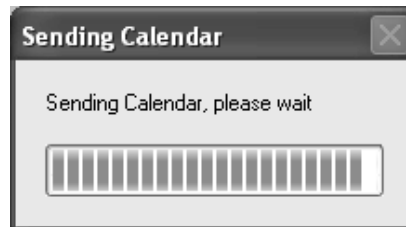


Figure 1-31

After the calendar has been sent successfully, a message will be shown as follows:

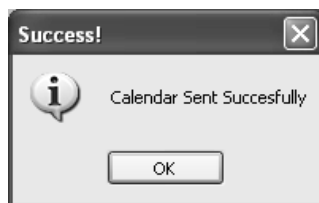


Figure 1-32

Your calendar is now programmed into the School Zone Beacon and the lights will flash at the times that you specified on your calendar.

1. Flip the switch in the pole-mounted box back to the "Auto" position.



Figure 1-33

1.7 Saving a Calendar to File

After you have downloaded the calendar to the School Zone Beacon, you may wish to save it to file so that you can reuse the same settings when you program it next year. Navigate to the File Menu and click on Save As.



Figure 1-34

Enter a name for the file that you wish to save (no spaces in the file name) and click on the save button

1.8 File Operations

The following is a description of each operation on the File Menu

1.8.1 New

The File → New action creates a default calendar starting on the current day. Saturday and Sunday are set to a default value of OFF(gray), Monday through Friday are set to a default value of Day 1(red). Day 1 is set to flash from 7:45AM to 8:15AM, 12:15PM to 12:45PM and 2:45PM to 3:15PM.

1.8.2 Load

The File → Load action allows you to load a Calendar that you saved to file on a previous occasion. Click on this menu item, navigate to the file that you wish to open, select it and click the Open button. The calendar that you had saved is now loaded into the School Zone Configuration Program.

1.8.3 Save/Save As

The File → Save action allows you to save a calendar to file. Click on this menu item, navigate to the folder where you wish to save the file, enter a filename and click on the Save button.

1.8.4 Quit

The File → Quit action closes the School Zone Configuration Program.

1.9 Calendar Operations

Please refer to 2.3.2 Set Start Day and 2.3.3 Set End Day in Section 2.0 of this document; it contains a detailed description on how to perform these actions.

1.10 Communicate Operations

This section describes the actions that send and receive information to the School Zone Beacon

1.10.1 Send Calendar

The Communicate → Send Calendar action sends a complete image of the calendar at the current time to the School Zone Beacon. Please refer to Section 2.5 Sending a Calendar to the School Zone Beacon for more detailed information.

1.10.2 Read Calendar

The Communicate → Read Calendar action reads a complete image of the calendar from the School Zone Beacon. After performing this action, a progress bar will appear - once the calendar is read, the School Zone Configuration Software is updated with the calendar that is read from the School Zone Beacon. Now you know exactly what is contained in the calendar that was previously sent to the School Zone Beacon.

1.10.3 Send Time

The Communicate → Send Time action sends the current time from the software to the School Zone Beacon.

1.10.4 Read Time

The Communicate → Read Time action reads the time from the School Zone Beacon and sends it to the software.

1.10.5 Read Log

The Communicate → Read Log action is for Carmanah's internal use only.

1.11 *Configure Operations*

This section describes how to configure the Interface Box.

1.11.1 Communications

The Configure → Communications action opens the Configure Communications box enabling the configuration of the communications port, baud rate, mode, and channel selections.

2.0 FAQs and Troubleshooting

2.1 Frequently Asked Questions

Do I have to worry about Daylight Saving Time?

Starting 2007, daylight saving time will be observed from the second Sunday in March to the first Sunday in November, adding a month to daylight saving time. This will require R829 customers to follow an update sequence to ensure that their products are functioning using the revised time change schedule.

Carmanah's R829 functions using Microsoft software allowing for easy system updates without the hassle of making firmware changes. Microsoft released the necessary update sequence for the revised time change schedule on February 7, 2007 as part of its Daylight Saving Time Updates. This update sequence can be found at: http://support.microsoft.com/gp/dst_overview.

After you have updated your PC with the revised schedule, connect to your R829, create a new calendar and send the calendar to the R829. Once the calendar has been sent from a PC with the revised daylight saving time schedule your R829 will function using the updated information.

How do I contact Carmanah?

The toll free number for North America is 1.877.722.8877, worldwide Carmanah can be reached at 1.250.380.0052.

Where can I find information about the R829 School Zone Beacon?

This information is available on the Carmanah website at <http://www.carmanah.com/> or at <http://www.roadlights.com/>

Do I need an Interface Box to program my calendars into the R829 School Zone Beacon?

Only if you have a GEN I beacon - contact Carmanah or one of our distributors for further information.

2.2 Troubleshooting

I'm having trouble configuring the R829 Interface Box, what should I do?

Ensure that the drivers for the Interface Box are correctly installed. Check that the Interface Box is connected to your computer with the supplied USB cable. Unplug the Interface Box from the computer, plug it back in and try configuring it again. The baud rate should be set to 115200, the Mode should be secondary. The default channel of the School Zone Beacon is Channel 0, if you haven't changed the configuration of the R829 School Zone Beacon select Channel 0 (factory default is 0). The Interface Box and School Zone Beacon must be on the same channel in order for them to communicate properly.

I'm having trouble communicating with the School Zone Beacon from my computer, what should I do?

Are the beacons on the School Zone flashing? If they are not, the radio on the School Zone Beacon is not turned on! Flip the override switch on the School Zone Beacon to enable the radio. As soon as you flip the switch, the beacons will start flashing. If the Interface Box is configured properly, the green light on the side of the box will now turn on.

If the green light on the side of the Interface Box is not on, the interface box is either not configured properly or is not in range. If you are standing near the School Zone Beacon, and the green light is on, you are in range and the issue may be with the Interface Box configuration. It is possible to stand too close to the School Zone Beacon, if you are having communication problems, you may need to back up slightly. Run through the troubleshooting step for configuring the Interface Box as shown above. While configuring the Interface Box, ensure that you have selected the port on your computer or laptop that the Interface Box is connected to.

My beacon isn't flashing, what should I do?

Flip the manual override switch. If your beacon still isn't flashing contact Carmanah customer service.



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