



Ecolab[®] Hand Hygiene Program Compliance Monitoring System



Badge Configuration POD & Badge Programming Software,
Directions for Use (9205-3073)

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1. The Ecolab Badge Programming POD and Badge Programming POD Application Software

The Ecolab Hand Hygiene Compliance Monitoring System (HHCM System) **Badge Programming POD and Badge Programming POD Application Software**, together with the Dashboard Badge Settings page, allow hospital staff to quickly and efficiently manage administration of healthcare worker (HCW) **Badges**, for new staff members, staff members who may have lost or broken their badge, or for staff members who are no longer employed at the facility. The POD connects directly to the host PC's USB port via an A-A male-male USB cable (supplied with the POD). The POD is powered by the USB port and does not require an external power source. The **Application** is used exclusively with the Ecolab **Badge Programming POD**.

2. Ecolab Badge Programming POD and Badge Programming POD Software Installation

The **Badge Programming POD** (9205-3073) is used with the Windows PC based Ecolab **Badge Programming POD Application Software** (2.0) to communicate with the HHCM **Badge** (9205-3066).

2.1 Host PC Requirements

1. Windows 7 or higher
2. One Available USB High-Speed (2.0) or Full-Speed Port (3.0)
3. 1MB of Available Hard Drive Space
4. Minimum 128M of RAM
5. The Ecolab Badge Programming POD Software (downloaded from the Ecolab HHCM Dashboard)

2.2 Badge POD Application Software Installation

1. Download the POD application software from the HHCM dashboard
2. Create a new folder named "Ecolab" under "Program Files" folder on the computer's "C" drive.
3. Create a new folder named "Ecolab **Badge** Programming" under the folder "Ecolab."
4. Copy the downloaded file PodApplication_03_00_xx.zip into the Ecolab **Badge** Programming folder.
5. Unzip the file PodApplication_03_00_xx.zip
6. Right click on the "Ecolab**Badge**ProgrammingTool", select "Send To," then click on "Desktop (create shortcut)" and a shortcut to the **Application** will be placed on the computer's desktop for easy access to the **Application**.

3. Description of Badge Programming POD Main Screen

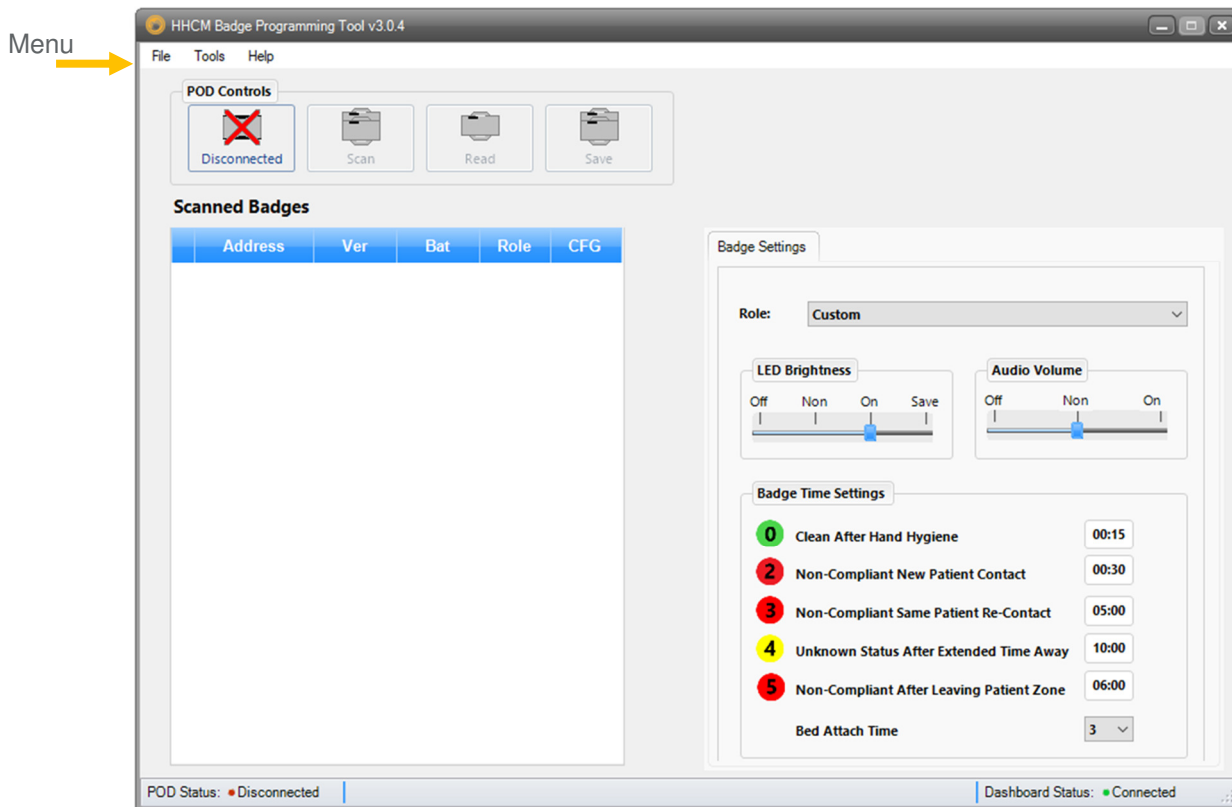


Figure 1. Main Screen

3.1 Menu Option (refer to Figure 1)

The “Menu” has three options: “File,” “Tools,” and “Help.”

File - Selections under “File” include:

- “Exit:” terminates the Ecolab **Badge Programming POD** program.

Tools - Selections under “Tools” include:

- “Set Badge State:” sets the hand hygiene state for **the Badge or Badges** being programmed. (For testing only)
- “**POD Mode:**” used to switch the **POD** between “Short Range” and “Long Range” modes. “Short Range” mode is useful when you want to limit the Badges scanned by the **POD** to only those that are close to it (within ~12”). “Long Range” mode is useful when you are scanning larger numbers of Badges, which might be located further from the **POD** (up to 36”).
- “Enter API Key:” used to enter a new API key and Hospital code (provided by Ecolab), allowing the Application to communicate with the Dashboard and retrieve or save the information associated with a **Badge**. You will be automatically prompted to enter the API Key upon initial set up of the **POD**. The **POD** will remember your API key after the initial set up.
- “Connect to **Dashboard:**” used to reconnect to the **Dashboard** if communications are lost for any reason.

Help - Selections under “Help” include:

“About” which gives information about the application and the Badge Configuration **POD** version.

3.2 POD Controls

The four buttons shown in Figure 2 are used to control the **Badge Configuration POD**.

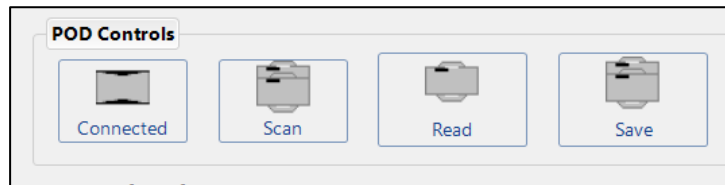
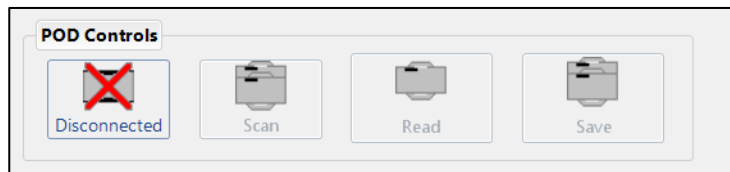


Figure 2. Main POD Controls

Connect: used to reconnect to the **POD** if communications between the **POD** and PC are lost for any reason. This button will display a red “X” if the PC has lost contact with the **POD**. If the red “X” is displayed, the remaining three buttons will be disabled.



Scan: used to update the list of Badges in the “Scanned Badges” window. After clicking on “Scan”, the application will then display up to 10 Badges located within range of the **POD**.

Read: used to retrieve the information for a specific Badge. This button will be disabled until a Badge is selected in the “Scanned Badges” window.

Save: applies the settings/role selected in “Badge Settings” to all the Badges within range of the **POD**. Clicking this button also causes the **Application** to check the grace periods for consistency before sending the new settings configuration to the Badges.

3.3 Scanned Badges (refer to Figure 3)

The “Scanned Badges” window displays a list of the Badge addresses found in the last scan. Also displayed in this window are the firmware version, battery level, role setting and configuration number of each Badge. The information for up to ten (10) Badges can be displayed at one time. A single Badge can be selected from the list by clicking on its address. Selecting a Badge will enable the “Read” button (found in the “**POD Control**” area).

| Scanned Badges | | | | |
|----------------|------|------|------|------|
| Address | Ver | Bat | Role | CFG |
| 0A0091FC | 1.04 | Good | 5 | 13 |
| 0A0092BF | 1.03 | Good | 3 | 3598 |

Annotations: Yellow arrows point from labels below to specific cells in the table. 'Badge Firmware' points to '1.03', 'Badge Battery Level' points to 'Good', 'Badge Role' points to '3', and 'Configuration Version' points to '3598'.

Figure 3. Scanned Badges Display Window

3.4 Badge Settings

The “Badge Settings” area is used to view badge settings for all Roles. Settings for each role can be viewed by selecting that role in the drop-down box next to Role (see Figure 4 below). Adjustments to the settings for all “Roles” (except the “Custom” Role) are managed through the Dashboard by an Ecolab System Administrator. This allows the role timing rules to be updated as needed and passed directly to the HCW’s badge the next time they use a monitored dispenser, without the need to collect and manually adjust the badge settings. **Settings boxes are grayed out for all Roles except the Custom Role, so they can be viewed but not updated.** The “Custom” Role should be used rarely, since badges set to “Custom” require manual updates by the POD, whenever changes to settings are needed.

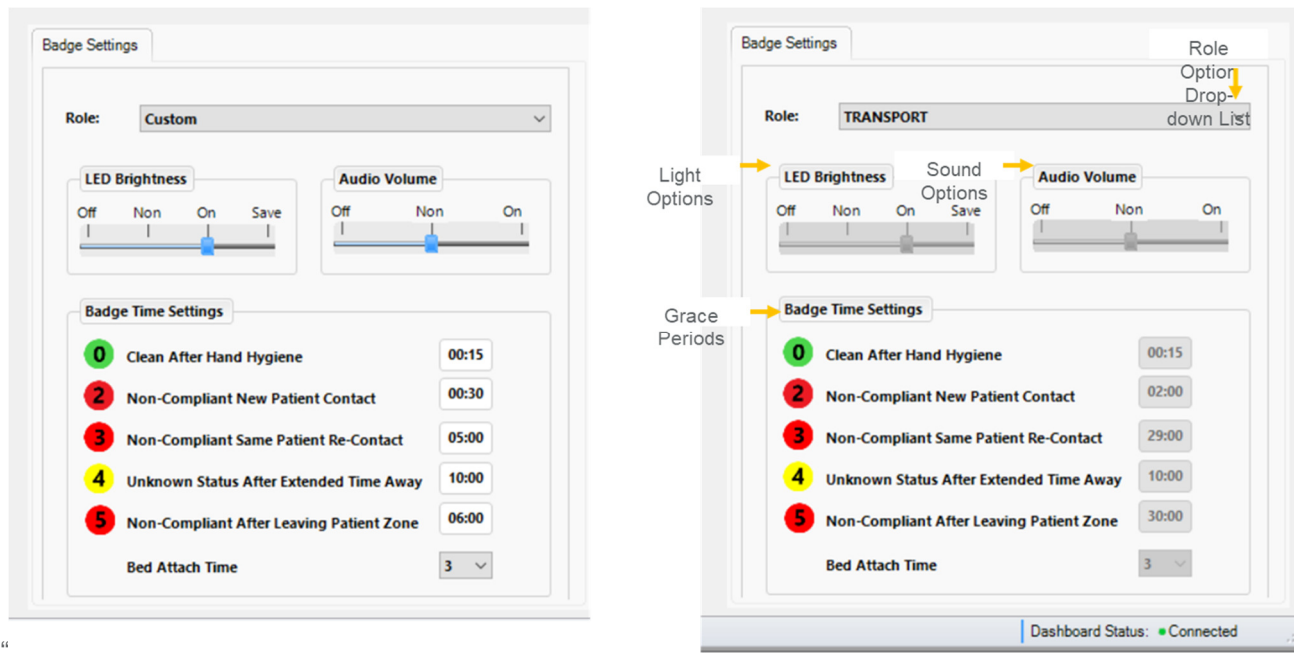


Figure 4. Badge Settings: “Custom” Versus Pre-Set Views

Setting Options: The information below explains what the options are for each configurable setting. Changes to SETTINGS, can be made through the POD ONLY FOR CUSTOM BADGES. For predefined Role settings, changes are made through the Dashboard ONLY. Please ask your Ecolab representative if you have any questions or need to make changes to predefined roles.

LED Brightness: There are four options for the LED visual reminders.

1. "Off": Turns off all visual reminders on the badge (no LED lights will be visible).
2. "Non": Turns on the LED reminders only for non-compliant badge status.
3. "On": Turns on the LED reminders for all badge states (except sleep).
4. "Save": Power Save Mode. Visual reminders are on for non-compliant states, + the green LED is turned on for 20 seconds only after a HH event at a monitored dispenser. This will extend the Badge's battery life while still providing user feedback.

Audio Volume: There are three options for the audio reminders.

1. "Off": Turns off all the Badge's audio reminders
2. "Non": Turns on the audio reminders only for non-compliant events or warnings prior to non-compliance (after grace period 3 has expired, or during the state 2 grace period)
3. "High:" Turns on the audio reminders for all events, both compliant (e.g., after a HH event, or compliant patient zone entry) and non-compliant

Grace Periods: Grace periods are designed to allow flexibility of the System, so that it fits realistically into the workflow of a wide range of healthcare workers. Grace periods can be adjusted by an Ecolab System Administrator, for all Roles, by entering the desired time (within the allowed range).

1. "Clean after Hand Hygiene: "Specifies the length of time the HCW's Badge will ignore Patient Zones after using a soap or sanitizer monitored Dispenser.
2. "Non-Compliant New Patient Contact": Specifies the length of time the HCW Badge will ignore a second Patient Zone after leaving a first Patient Zone without performing hand hygiene using a soap or sanitizer monitored Dispenser. This grace period is meant to reduce unintended non-compliant events when working between two (2) Patient Zones.
3. "Non-Compliant Same Patient Re-contact:" The length of time a HCW can be out of a particular Patient Zone and return to the same Patient Zone, before performing hand hygiene is required.
4. "Unknown Hand Hygiene Status After Extended Time Away:" At times, a HCW will wash or sanitize their hands, and then be away from patient care for an extended period (e.g., end of shift, charting, etc.). During this time, their hands may come into contact with many surfaces. This grace period sets the length of time, after performing hand hygiene, at which a HCW would be required to re-wash or sanitize prior to approaching a Patient Zone.
5. "Non-Compliant After Leaving Patient Zone:" Specifies the length of time a HCW has after leaving a Patient Zone to perform hand hygiene, in order to be compliant (assuming they have not tried to enter another Patient Zone before this).

Note: For the Custom Role only, the allowed timing range for a grace period can be displayed by hovering the cursor over the setting box for that grace period.

4. How to Use the Badge Programming Pod

This section contains instructions on how to perform common tasks using the **Badge Programming Pod**.

Note: If at any time while using the **Badge Programming Pod** a popup window should appear, please read the message carefully and follow its instructions.

4.1 Connecting the POD to the PC

The POD and PC communicate with each other via an A-A male-male USB cable, supplied with the POD. If the POD and PC are connected when the Application is launched, the Application will detect that the POD is connected and the “Connected” button in the “POD Controls” will be enabled. When the “Disconnected” button is displaying instead, with a red “X” over it, this indicates that the Application has not detected the POD. In this case, check the connections to make sure that one end of the cable is attached to the PC to a functional USB port, and that the other end is firmly connected to the POD. Then click the “Disconnected/Connected” button to tell the Application to check again for the POD. If for any reason the POD should become disconnected during use, the Application will stop detecting the POD and the red “X” will reappear over the “Disconnected/Connected” button or the Application will simply close. You should also check in the lower right corner of the screen, to ensure that the Dashboard Status shows “Connected” with a green dot next to it.

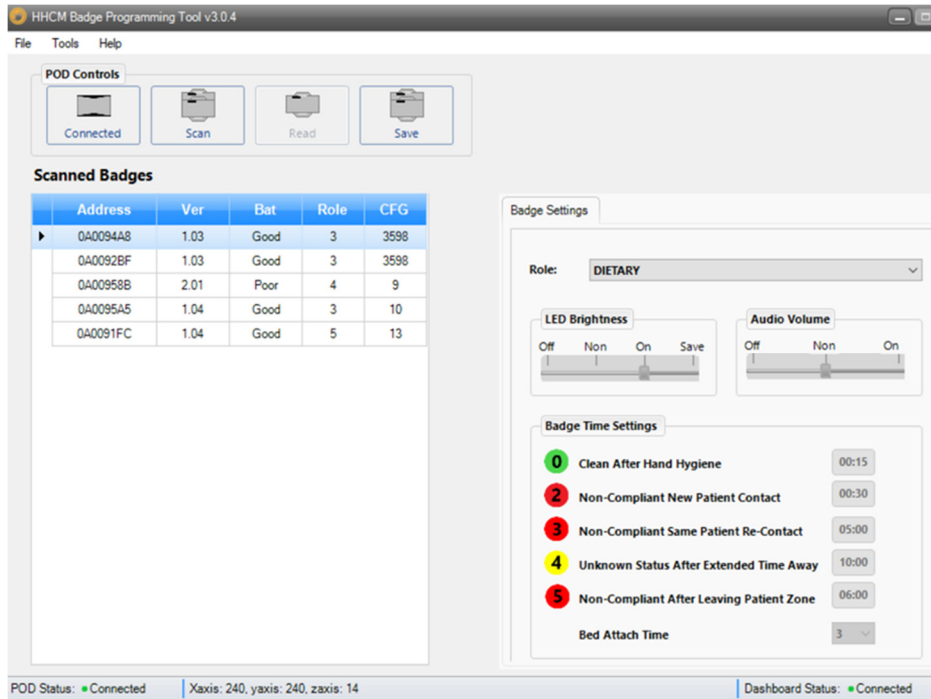
4.2 Scanning for Badges

When the Application is first launched, the POD will scan for any Badges that may be in range. The user can have the POD scan for new Badges at any time while the POD is connected to the PC. A new scan is started by clicking on the “Scan” button; this tells the POD to look again to see what Badges are within its range.

4.3 Changing the Badge Settings

There are two options for making changes to the “**Badge Settings**.”

1. Update the Badge “Role”: so that it will automatically pick up badge settings for that “Role” when a HCW next uses a monitored dispenser. Simply selecting the correct Role from the list and saving that to the Badge will ensure that the Badge will get any future updates to the Badge settings for that “Role”. Roles are defined by the hospital during the implementation of the system and are maintained by an Ecolab System Administrator for the hospital. (*To make changes to specific settings for a Role, contact your Ecolab representative.*)
 - a. Bring the badge(s) that you wish to set to a Role close to the POD.
 - b. Ensure that any badge(s) that you do not wish to reset are out of range of the POD, to prevent inadvertently resetting the Role on those badges.
 - c. Click on the “Scan” Button on the Application screen and wait for badges to be scanned. If all badges are not picked up in the initial scan, bring them closer to the POD and repeat. Badges picked up by the POD will be listed in the “Scanned Badges” window.
 - d. Choose the desired role from the dropdown box in the Badge Settings area. This will cause the Badge Settings for that Role to be displayed, grayed out, on the screen. See below for an Example, where the “Dietary” Role has been selected.



- e. Click on the “Save” Button. The POD will save the new Role to each badge, and then Verify that it has been correctly saved. If all badges are not updated, a message will display asking you to check that all badges are in range and repeat the process or cancel.

Scanned Badges

| Address | Ver | Bat | Role | CFG |
|----------|------|------|------|------|
| 0A009473 | 2.01 | Low | 6 | 0 |
| 0A0092BF | 1.03 | Good | 6 | 3598 |
| 0A0095A5 | 1.04 | Good | 6 | 10 |
| 0A0094A8 | 1.03 | Good | 6 | 3598 |
| 0A0091FC | 1.04 | Good | 6 | 13 |

- f. Once the desired Role has been saved to the badge(s), remove them from within range of the POD. The process is complete.

2. Update Badges Using Controls in the “Badge Settings” Area: These are used to make setting adjustments ONLY for the Custom Role. **NOTE: the “Custom” Role should only be used in rare occasions. Custom Role badges will not receive automatic updates to their badge settings,** which all other roles receive when they interact with monitored dispensers.

LED Brightness: There are four options for the LED visual reminders.

- a. “Off”: Turns off all visual reminders on the badge (no LED lights will be visible).
- b. “Non”: Turns on the LED reminders only for non-compliant badge status.

- c. "On": Turns on the LED reminders for all badge states (except sleep).
- d. "Save": Power Save Mode. Visual reminders are on for non-compliant states, + the green LED is turned on for 20 seconds only after a HH event at a monitored dispenser. This will extend the Badge's battery life while still providing user feedback.

Audio Volume: There are three options for the audio reminders.

- a. "Off": Turns off all the Badge's audio reminders
- b. "Non": Turns on the audio reminders only for non-compliant events or warnings prior to non-compliance (after grace period 3 has expired, or during the state 2 grace period)
- c. "High:" Turns on the audio reminders for all events, both compliant (e.g., after a HH event, or compliant patient zone entry) and non-compliant

Grace Periods: Grace periods are designed to allow flexibility of the System, so that it fits realistically into the workflow of a wide range of healthcare workers. Grace periods can be adjusted by an Ecolab System Administrator, for all Roles, by entering the desired time (within the allowed range).

- a. "Clean after Hand Hygiene: "Specifies the length of time the HCW's Badge will ignore Patient Zones after using a soap or sanitizer monitored Dispenser.
- b. "Non-Compliant New Patient Contact": Specifies the length of time the HCW Badge will ignore a second Patient Zone after leaving a first Patient Zone without performing hand hygiene using a soap or sanitizer monitored Dispenser. This grace period is meant to reduce unintended non-compliant events when working between two (2) Patient Zones.
- c. "Non-Compliant Same Patient Re-contact:" The length of time a HCW can be out of a particular Patient Zone and return to the same Patient Zone, before performing hand hygiene is required.
- d. "Unknown Hand Hygiene Status After Extended Time Away:" At times, a HCW will wash or sanitize their hands, and then be away from patient care for an extended period (e.g., end of shift, charting, etc.). During this time, their hands may come into contact with many surfaces. This grace period sets the length of time, after performing hand hygiene, at which a HCW would be required to re-wash or sanitize prior to approaching a Patient Zone.
- e. "Non-Compliant After Leaving Patient Zone:" Specifies the length of time a HCW has after leaving a Patient Zone to perform hand hygiene, in order to be compliant (assuming they have not tried to enter another Patient Zone before this).

Note: For the Custom Role only, the allowed timing range for a grace period can be displayed by hovering the cursor over the setting box for that grace period.

The Application will check each of the five grace periods to ensure that there are no conflicts between the various Badge states before they are downloaded to any Badges, and prompt you to make any needed changes to the settings. See Figure 6 below.

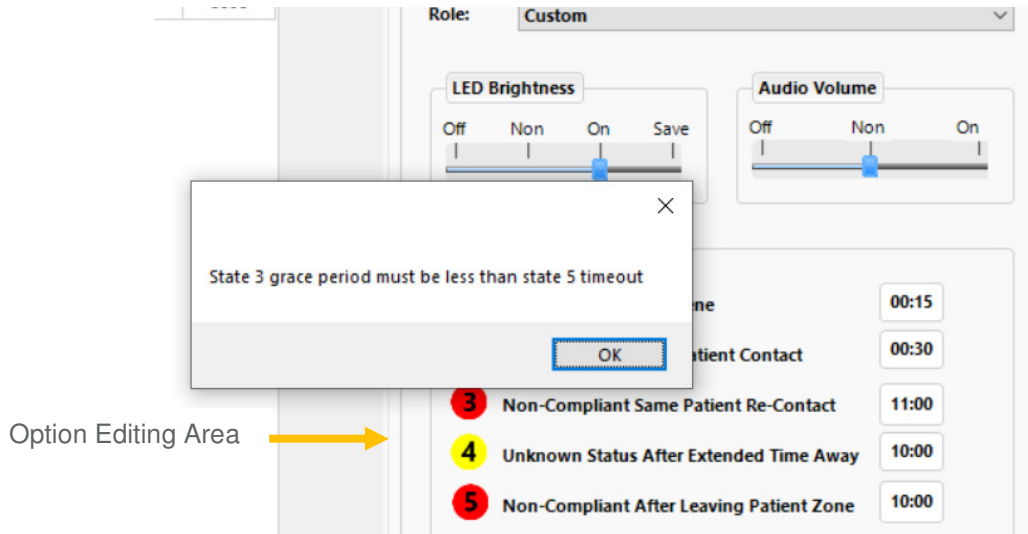


Figure 6. Error Message Prompting Change to Grace Periods to Comply with Priority Rules

4.9 Changing the POD's Range

Select either the "Short Range" or "Long Range" button. "Short Range" mode is designed to scan for Badges that are less than 18" from the POD, ideally a Badge placed on top of the POD, or "Long Range," which will allow the POD to find Badges that may be up to 48" away.

4.10 Changing Badge Revision Level Supported

Not currently used.

5. Troubleshooting

5.1 The Badge Programming POD Displays a Red "X" on the Connect Button

If the Application is displaying a red "X" on the "Connect" button, and displays "Disconnected" under the button, this indicates that the Application has lost contact with the POD. The Application will not be able to communicate with a Badge. Try the following to correct the problem:

1. The POD has become disconnected from the PC. Ensure that the USB cable is plugged into the PC's USB port. Ensure that the USB cable is plugged into the POD. Click on the "Connect" button, this will cause the Application to search again for the POD.

5.2 The Badge Programming POD Application will not Communicate with the Dashboard

The Application uses the internet to communicate with the Dashboard. If the Application has a problem with the internet, it will not be able to communicate with the Dashboard. You can confirm whether you are connected to the dashboard by looking in the lower right-hand window of the Application window. You should see a green dot next to "Dashboard Connected". If you do not see this, try the following to correct the problem:

1. The PC has lost connection to the internet. Ensure that the host PC can connect to the internet.

2. The API Key has become corrupt or is out of date. Click on “Tools” on the main menu, then select “Enter API Key” and enter the correct API Key and check the Hospital Code (provided by Ecolab). Next click the “Save” button. The Application will test the new API Key and Hospital Code before closing the pop-up window.

6. Cleaning the Badge Programming POD

The Badge Programming POD should be cleaned by wiping with a soft cloth. The cloth may be damp but should not be dripping wet. A pre-moistened alcohol swab or any common hospital cleaner may also be used. Only the exterior of the Badge Programming POD may be cleaned. Do not attempt to clean the interior surface of the POD as this can damage the circuitry. Do not use abrasive cleaners or cleaning products in aerosol cans as they will damage the POD’s finish.

Appendix A – Certification and Safety Approvals

FCC Statement

NOTE: This equipment 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 causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and 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.

WARNING: Changes or modifications not expressly approved by Ecolab could void the user's authority to operate the equipment.

RF Exposure. In order to comply with FCC / ISED RF Exposure requirements, this device must be installed to provide at least 20 cm separation from the human body at all times.

Industry Canada

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This radio transmitter (IC: 10060A-92053073) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 10060A-92053073) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

1. Magnetic Loop antenna, 125kHz
2. Ceramic Chip Antenna, 858-928MHz, -2.5dBi