

## BELLWETHER

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The screenshot displays the Bellwether interface. On the left is a dark sidebar with a menu containing: Scheduler, This Month, Next Month (highlighted in blue), Today, Presets, Routines, Actions, Users, and Change Password. At the bottom of the sidebar, it shows 'Administrator' and a 'Logout' button. Below the sidebar, the text 'powered by Bellwether Copyright Programation.io' is visible. The main content area features a 'Presets' section with a green pill labeled 'Daily Announcements'. To the right is a calendar for 'January 2023' with days of the week (Sunday to Saturday) and dates (1 to 31). A green pill labeled 'Daily Announcements' is placed on the calendar cell for Monday, January 3rd.



## BELLWETHER

is a comprehensive scheduling and automation platform for Q-SYS. It offers user-friendly scheduling capabilities through the use of a web interface rather than dedicated software or a User Control Interface.

Bellwether allows individual Actions, Routines, and Presets to be created and managed all in one place with easy drag and drop scheduling on a calendar interface. Custom User Privileges can be created to prevent undesired changes or unauthorized access to the system.

The plugin features the ability to define Actions that can play audio files using built-in audio players, recall snapshots, manipulate named controls, issue paging codes for message commands, or change controls within the plugin such as trigger buttons, toggle buttons, number values, and textboxes. These controls provide labels for easier coordination and cross reference within the web interface and the controls can be wired to other functions or controls within Designer.

All data stored within the plugin can be backed up and restored for easier management or duplication between cores. In addition, the entire user interface can be translated into almost any language making it easier to schedule events in permanent installations around the world, opening opportunities for operations staff to maintain the events of a system in non-English-speaking countries.

## LICENSING AND AGREEMENT

This plugin follows our “Limited Project License” model in which a license key must be purchased for each project in which this plugin will be used. The License Key is paired with the Owner and Project name and the plugin bears this information as a watermark. The Owner is the company or agent that owns or operates the establishment in which the Q-Sys system is installed. The Project is the name of the facility or establishment specific to this Q-Sys system.

With each registration, you may use the plugin an unlimited number of times within the registered Project. Even if a single Project has multiple Cores, you may use it multiple times if all the Cores are part of the same Project. You may not reuse the same registration information multiple times for different Projects, even if they are for the same Owner. For example, Big Theme Park Company should purchase a new license for each of their performance venues or attraction buildings where the plugin is to be used, in each of their different park locations. Each performance venue would be considered a unique Project. It is acceptable to consider the general circulation (“area development”) outdoor public areas of a park as a single Project; however, this does not encompass or include standalone performance venues (buildings within the area development boundaries) as part of the same Project.

**As a system integrator or system programmer, it is your duty to protect your client and maintain legal compliancy.**

Licenses are 16 alpha-numeric characters arranged in 4 groups of 4, delimited by hyphens. They are unique to the plugin and the plugin’s major version and are paired with the Owner and Project. The license key may contain ones or zeros but not letters that look like those numbers (I, L, O).

## WARNINGS AND DISCLAIMERS

### LIMIT OF LIABILITY

**NOTICE:** This plugin is provided as-is and without warranty. While Programation makes every effort to test its software and correct functional issues and performance deficiencies, it is possible that differences in your system setup, use case, or configuration could present unforeseen issues and may cause the plugin to perform poorly, become completely unresponsive, or crash the Core. Programation LLC is not responsible for any damages arising from such scenarios but will provide software support, when and where possible, to correct issues that can be identified and recreated. Use this plugin at your own risk. You may contact Programation via the contact methods on our website to consult whether Bellwether is appropriate for your installation before purchase. Refunds will not be issued.

### READ THESE INSTRUCTIONS

**IMPORTANT:** Read these instructions before implementing the plugin into the design. This plugin may present security and performance implications for your system or network and may expose your system to bad actors. You should read this manual in its entirety to fully understand how the plugin works and the steps you must take to keep your installation secure.

### CONTROLLING EXTERNAL SYSTEMS

**WARNING:** Do NOT use this plugin to directly control any sort of external hardware or electrical systems where a failure may cause damage to property or pose a threat to the health and safety of people or animals. Bellwether is a time-based event scheduling system that does not accept feedback signals and cannot make real-time decisions before performing an action.

### PAGING AND ALARM SYSTEMS

**WARNING:** It is NOT advised to use this plugin in any installation where Q-SYS is responsible for “life-safety” or “emergency” paging, or in any installation where the failure of the system processor could result in injury or death.

## WARNINGS AND DISCLAIMERS

### NETWORK SECURITY

CAUTION: This plugin implements non-secure HTTP and WebSocket connections to host and serve the web interface. This is partially an intentional design feature (to prevent the confusing certificate warnings browsers show when using self-signed certificates on a LAN) as well as partially a platform limitation of the Q-SYS scripting environment. The configured TCP port should be protected on a local area network behind a firewall with access granted only to privileged users. Under no circumstances should the configured TCP port be exposed to or used over the public Internet.

### PASSWORD SECURITY

While passwords in transit are masked rather than being sent in plain text, they are not cryptographically hashed before flight. Passwords at rest are cryptographically hashed with a salt applied, however the hashes are visible in the configuration backup data which is accessible by Q-SYS users. User accounts of the Bellwether plugin should use unique passwords, ensuring they are not reused with other applications or accounts.

In the current version of Bellwether, password length and complexity are not enforced. Administrators should encourage users to use strong passwords.

Bellwether is a complete scheduling and control platform for the Q-SYS ecosystem. It allows for user-friendly drag and drop scheduling of complex control capabilities through a web browser-based interface. No UCI or graphics programming is needed. The interface can be translated to any language and various user privilege levels can simplify or lock-down the system making it an ideal solution for any installation, for any user, in any part of the world.

While the plugin may feel familiar inside Q-SYS using common control types and descriptions, the real power of Bellwether comes from its own interface and programming workflow that is a completely unique concept with its own nomenclature.

The basic building block of the control functionality is an Action. An Action is a simple control command such as triggering a button, setting a value, or playing an audio file. Multiple Actions can be put into a timed sequence called a Routine, with a definable delay, in seconds, between each Action. Both Actions and Routines can be arranged in a 24-hour timeline representing a single day and saved for frequent reuse. This is called a Preset.

Actions, Routines, and Presets must be scheduled for the plugin to be functional. When one of these is scheduled, this creates an Event. Events can be scheduled by dragging and dropping either a Preset, Routine, or Action bubble on one of the calendars. It is possible to see a calendar for This Month, Next Month (allowing for scheduling one month in the future), or Today. Presets can quickly be added to calendar dates in the This Month and Next Month calendar views. Actions and Routines may be added to a specific time using the Today calendar view.

Users can be created and managed with varying levels of Privileges. The basic Privilege only allows for view-only access to the schedule, making it ideal for signage displays to see what events are happening for the day. Intermediate and advanced Privileges allow for Schedule changes, Routine creation, Action editing, and User account management.

Bellwether offers an extensive list of features, making it an ideal solution for any installation where automation is needed. Below is a list of the features that Bellwether offers:

## WEB BROWSER INTERFACE

All programming and scheduling is performed in a web browser from any device on the network. No installation on the user computer and no UCI programming is needed.

## NAME CUSTOMIZATION

The plugin instance can be renamed to better describe what the plugin should be used for, such as “Building Control”, “Bell Schedule”, or “Paging Central”.

## CALENDAR LAYOUT

The calendar can begin on any day of the week.

## TIME FORMAT

Scheduling can be shown in either 12-hour or 24-hour time formats.

## USER MANAGEMENT

Bellwether has its own user management system with varying levels of Privileges

## VERBOSE LOGGING

Every login, configuration change, and Event can be logged to know exactly what’s happening in the system.

## CONFIGURATION BACKUP AND TRANSFER

All the data within Bellwether can be backed up and restored from within Q-SYS, or transferred between instances, like when synchronizing Users.

Bellwether can interact with Q-SYS processing components and controls in the following ways:

## AUDIO PLAYERS

A configurable number of internal audio players can be used for automating chimes or announcements without a paging router.

## SNAPSHOTS

Recall any snapshot in the design

## PAGE

When using a paging router, Bellwether can issue paging codes to trigger configured page messages.

## NAMED CONTROLS

Any Named Control in the design can be set using either a specified value, position, or string, or be triggered.

## TRIGGERS

A list of trigger buttons within the plugin can be tied via control pins to any control in the design.

## TOGGLES

A list of toggle buttons can be wired to other components in the design and be set to on, off, or to the opposite of the current state.

## VALUES

A list of number values allows for more advanced control capabilities and can crossfade according to a specified Ramp time.

## STRINGS

A list of text boxes provides string controls to change or display text in the design.



## Server Port

This is the TCP port that the plugin will use to serve web requests. This port can only be used once across the entire Core and must not conflict with other plugins or system services. Since the Core uses the normal web ports of 80 and 443 for Core Manager and Reflect, these cannot be used for Bellwether. In Q-SYS, ports 8080 and 8081 are also not available. Each instance of Bellwether will need its own unique port. Normal convention for alternative web server ports usually starts with or includes the number 8 and 80. The default port number is 801 and it is recommended to use port numbers in the lower 800's.

## Audio Players

Sets the number of internal audio players that can be used to play audio files.

*This number counts against your audio player quota which may require additional licensing on your core.*

## Paging Station Number

Paging commands can be issued from the plugin when a Public Address Router is part of the design. A paging station number must be given in order for the router to accept commands. Commands may fail if the provided station number is greater than the number of available stations on the PA Router. It is recommended that Bellwether has its own dedicated paging station number on the PA Router to avoid conflict with any other paging stations or queued commands.

## Trigger Buttons

Specifies the number of Trigger buttons that will be made available within the plugin that can be wired to other controls.

## Toggle Buttons

Specifies the number of Toggle buttons that will be made available within the plugin that can be wired to other controls.

## Control Values

Specifies the number of Value controls that will be made available within the plugin that can be wired to other controls.

## Control Strings

Specifies the number of String text boxes that will be made available within the plugin that can be wired to other controls.

## Registered Owner

This is used for licensing purposes and is tied to the license key. It should be the name of the owner of the system or installation, that is, the end user. The plugin and web pages will be watermarked with this information. If the water mark shows a different company's information, you may be victim to pirated or improperly licensed software and you should contact your system integrator or Programation.io immediately.

## Registered Project

Also tied to the license information, this should be the name of the installation where Bellwether is being used, like the name of a building or attraction. If this appears incorrectly, you should contact your system integrator or Programation.io immediately.

## Registered Key

This field holds the license key, which is a 16-character alphanumeric code that is unique to the client and installation.

## CONTROL PIN WIRING

By default, all Toggles, Triggers, Values, and Strings controls have their control pins exposed for easier wiring in the design. In addition, each control allows for a user-defined label to be supplied to make organization easier. These labels are shown in the web interface when defining Actions. Other control pins available for selection in the Properties pane are the audio player playing LED and status message, if any audio players have been configured. This may be useful to further automate other controls in the design when an audio file is playing, such as ducking background music during an announcement, for example.

## CUSTOMIZING CONTROLS

Each configured Audio Player, Trigger, Toggle, Value, and String control offers a Name text field. This applies a user-defined label to that control, making it easier to remember and identify its usage when selecting it as part of an Action. Actions are defined by their Index, that is, their specific number within the set of controls. Changing the Name will have no effect on stored Actions.

When adjusting the control wiring attached to the various control outputs, remember to update the control Name labels accordingly and if necessary, adjust the Index of any affected Actions.

## Instance Name

The Instance Name is shown on the login page, in the navigation menu of the main interface, and on the browser tab. This allows you to customize the tab name to make usage more clear to average users. If a design contains more than one instance of Bellwether, it also helps differentiate them.

## Admin Password

When getting started, Bellwether only contains one user account, called “admin” and has administrative privileges. This user account cannot be deleted as it is the failsafe account. The default password is also “admin” which should be changed to prevent malicious access. To change the password, simply type the desired password into this control and press Enter. When the password is accepted, the text field will be blank again, hiding the password. Use this same procedure to replace the admin password any time it is forgotten.

## Inactivity Timeout

If desired, users can be automatically signed out after a period of time of inactivity for security reasons. This is specified by the Inactivity Timeout, expressed in minutes. Users with privileges to make modifications to the data (Schedule, Routines, etc) are affected, while view-only accounts will not be automatically logged off by the server. In some browsers, the page may automatically refresh after a period of inactivity, or if the tab is in the background which will cause the page to return to the login screen.

## First Day of Week

The calendar interfaces are a traditional 7-column date grid. The calendars can be configured to rearrange the columns to start on any day of the week.

## Time Format

Events can be scheduled and displayed using either a 12-hour format, including the half day indicators of “AM” or “PM” (or any label provided in the language localization), or in the 24-hour format with time ranging from 00:00 to 23:59.

## Logging Options

Bellwether offers full audit logging capabilities for every configuration change and event. Each log message is broken into categories that can be individually enabled or disabled:

### User Connection

Logs any time a user attempts to log in and whether it was successful, when a user session times out and is force-logged off, when a user manually logs off, or when the session is closed.

### Schedule Changes

Logs any events that are added to, or removed from, a calendar and who made the change.

### Event Success

Logs any event that was executed successfully, either via a manual test, or via the automated schedule.

### Event Error

Logs any event that did not complete successfully, usually with additional information as to what caused the error.

### Preset Changed

Logs any time a Preset is added, modified, or deleted and who made the change.

### Routine Changed

Logs any time a Routine is added, modified, or deleted and who made the change.

### Action Changed

Logs any time an Action is added, modified, or deleted and who made the change.

### User Changed

Logs any time a User is added, modified, or deleted and who made the change. This also includes logging when a user changes their own password.

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## BELLWETHER CONCEPTS

Bellwether is an event scheduling system that allows users to automate tasks based on date and time. An Event may be scheduled in either the current month or one month in the future. An Event is made up of either a single Action, or a set of Actions called a Routine. Multiple Actions and Routines can be arranged in a single day and saved as a Preset. Presets can be reused across multiple days allowing for quick scheduling of commonly repeating Events. More than one Preset may be scheduled on a day.

## INTRODUCTION

### CONNECTING TO BELLWETHER

The power of Bellwether's features is contained within its web interface, which is a simple website accessible by any web browser on the local network. Open your favorite web browser (except Internet Explorer, sorry) and type into the address bar the IP address of the Core, followed by the port number of the server. It should look something like:

```
http://192.168.1.10:801
```

Depending on the configured web server port in the Plugin Properties, the exact URL will differ. This page can be bookmarked for easier access.

### LOGGING IN

On the login page, enter your username and password and click Login. For security, be sure to close the page or press the Logout button whenever you are finished making changes.

The default administrator account username is "admin" with a password of "admin". It is strongly recommended to change this password before allowing other users access to the system.

## **THE USER INTERFACE**

After logging in, the main user interface is displayed after a brief moment of loading. The Loading screen is a gray triangle that slowly rotates. If the interface stays on the loading screen, there could be a connection problem or an issue with the data set and you should contact support for further assistance.

The user interface is broken into three parts; the navigation menu on the left, the list pane which appears in certain pages next to the navigation menu, and the workspace which shows the various pages. Clicking on any of the links in the navigation menu will open the corresponding page in the workspace.

## **NAVIGATION**

The navigation menu is arranged in four sections. From top to bottom they are the scheduling section, the event section, the user management section, and the information section.

The scheduling section offers three different views; This Month, Next Month, and Today.

The event section offers creation and management of Presets, Routines, and Actions.

The user management section allows administrators to create and manage user accounts on the Users page, and all users can change their password on the Change Password page.

Lastly, the information section at the bottom displays the name of the currently logged in user and provides a Logout button. Additional information in the lower right corner displays the current version of Bellwether and the license registration information.

## GETTING STARTED

### USERS

The first step on a clean installation should be to establish user accounts for the system. The administrator account's password should be changed from the default. It is also advisable to create individual accounts with user's names and assign appropriate privileges rather than using the built-in administrator account. There is no limit to the number of users or users with administrative privileges.

### PRIVILEGES

User accounts will be configured with one of the following Privileges, which specifies that User's permissions within Bellwether.

#### View-Only

This basic Privilege only allows a user to view the schedule calendars and cannot make any changes. This User also cannot change their password and will not be automatically logged off, even when an Inactivity time has been specified.

#### Scheduler

The Scheduler Privilege is permitted to see the schedule calendars and make schedule changes. Presets may be added to the monthly calendars and Routines and Actions may be added to the Today view. These Events may not be edited by this User.

#### Controller

The Controller Privilege is permitted to create and modify Presets and schedule them on the calendars.

#### Manager

The Manager Privilege is permitted to create and modify Routines with existing actions, as well as Presets and modify the schedule.

#### Technician

The Technician Privilege is permitted to create and modify Events on the schedule, Presets, Routines, and Actions.

#### Administrator

The Administrator Privilege has full access, including the ability to manage Users.

## CREATING USERS

To create an account:

1. Click on the Users navigation link.
2. Click the [+] button on the top left of the workspace.
3. Provide the user's full Name. This is displayed in the information section of the navigation menu for that user.
4. Provide a Username. This will be used to log in.
5. Provide a Password. This may be a temporary password and the user should be encouraged to change their password after they log in for the first time.
6. Specify the user's Privilege level.
7. Set the account as Active by checking the box. Clearing the check will not allow the user to log in.
8. Click the [Done] button to save the User.

## MODIFYING USERS

To edit an existing User account:

1. Navigate to the Users page.
2. Click the Edit icon (the pencil image) on the right side of the User table, corresponding to the desired User to be edited.
3. Make the changes as desired. Leaving the Password field untouched will not modify the User's password.
4. Click [Done] to apply the changes.

## DELETING A USER

To delete a User account:

1. Navigate to the Users page.
2. Click the Edit icon (the pencil image) on the right side of the User table, corresponding to the desired User to be edited.
3. Click [Delete] in the upper right corner of the workspace.
4. You will be prompted to confirm the action. Click [Delete] again to confirm.

## CHANGING YOUR PASSWORD

Once logged in, you can change your password at any time without the need for an Administrator to do it for you:

1. Navigate to Change Password link in the Navigation menu
2. Provide the new password in the Password field in the workspace
3. Click the [Done] button to save the change.

## PROGRAMMING EVENTS

### ACTIONS

Actions are the basic building blocks of functionality. An Action is an instruction that tells Bellwether what to do and can perform the following functions:

#### Audio Player

Play an audio file using one of the internal audio players. Audio files must be a complete file path starting from the root folder and ending with the file extension. No quotes are necessary. For example:

Preambles/Gong low.wav  
Audio/Chimes/Bell1.mp3  
Messages/Start of day.mp3

*This option is only available if the plugin has been configured with > 0 audio players.*

#### Snapshot

Recall a snapshot from any snapshot bank with the exception of the Global bank. (Using the Global bank can cause Bellwether to lose its internal data that is not saved into the snapshot.) You can recall any individual snapshot number within the bank and specify a ramp (crossfade) time in seconds.

*This option is only available if there are any snapshot banks included in the design.*

## Page

Paging codes can be issued to the paging router using this action. The codes must be configured using Administrator. Bellwether uses the paging station number configured in the plugin Properties during design time.

*This option is only available if the paging router is part of the design.*

## Named Control

Named Controls can be manipulated by either triggering, setting the value, setting the position, or setting the string as defined in the action. For value or position changes, a ramp (crossfade) time in seconds can also be specified.

*This option is only available if there Named Controls in the design.*

## Trigger Button

The Trigger Buttons that are configured in the plugin are listed in the Index dropdown for easy selection. This action will simply trigger the button.

## Toggle Button

The Toggle Buttons that are configured in the plugin are listed in the Index dropdown for easy selection. This action can either set the button to be On, Off, or the Opposite state.

## Control Value

Control Values that are configured in the plugin are listed in the Index dropdown for easy selection. This action can set any numerical decimal value between -1000 and 1000 with an optional ramp (crossfade) time in seconds.

## Control String

Control Strings that are configured in the plugin are listed in the Index dropdown for easy selection. A string is simple text that can be used to pass status or control messages to other components.

## CREATING ACTIONS

To create a new Action:

1. Click the Actions link in the Navigation menu.
2. Click the [+] button in the top left corner of the workspace.
3. Select the desired Action Type.
4. Complete the corresponding fields for the selected Action Type.
5. Give the Action an easily identifiable Name.
6. Give a Description for what the Action does.
7. Select a color to represent the Action.
8. Click the [Done] button.

## MANAGING ACTIONS

Actions are organized in collapsible lists according to their types. By default, all lists are collapsed to make the workspace less cluttered. Click the arrow next to the Action Type heading that you wish to view to expand the list. Clicking an open section will collapse it again.

When an Action Type table is visible, all Actions within that table default to being sorted by their Names, as designated by the Name field being colored blue. Clicking on any other heading in the table will re-sort the table by that column. Actions may also be sorted by their color by clicking in the empty space in the table header to the left of the Name field.

## EDITING ACTIONS

To Edit an existing Action:

1. Open the Action Type collapsible group for the type of Action you wish to edit.
2. Find the appropriate Action in the table.
3. Click the edit button (pencil icon) on the right for the corresponding row.
4. Make the desired changes to the Action.
5. Click the [Done] button to save the changes.

## TESTING AN ACTION

Actions can be tested while creating or editing them to verify their intended functionality. While in the Action editor, click the [Test] button at the top of the workspace. A confirmation prompt will appear and the Test button must be clicked a second time to run the Action. This is a feature to prevent accidental miss-clicks or screen touches from running Actions.

## DELETING ACTIONS

To delete an Action:

1. Edit the Action that should be deleted.
2. Click the [Delete] button in the upper right corner of the workspace.
3. You will be prompted to confirm the action. Click [Delete] again to confirm.

Deleted Actions are automatically unscheduled from the calendar(s) and also removed from Routines.



## ROUTINES

Routines are a more advanced type of Event that builds on the functionality of Actions. Routines allow multiple Actions to happen together as a single scheduled Event. Routines maintain their defined order and each Action can have a specified delay time before executing. Delays stack on top of each other and there is technically no limit to the delay time or number of Actions that can be programmed.

## CREATING ROUTINES

To create a Routine:

1. Click the Routines link in the Navigation menu.
2. Click the [+] button in the upper left of the workspace.
3. Give the Routine an easily identifiable Name.
4. Give a Description for what the Routine does.
5. Select a color to represent the Routine.
6. Begin building the Routine steps:
  - a. Drag Actions from the Actions List on the left into the workspace under the table header
  - b. Set the time delay as desired
  - c. Reorder the steps by dragging the Action bubble up or down the list and dropping it into the desired position.
  - d. Remove undesired Actions by either clicking the X on the row or dragging the Action bubble to the bottom and dropping it on to the [Remove] bar that appears.
7. When finished, click the [Done] button at the top of the workspace.

## MANAGING ROUTINES

Routines are organized in a table with a default sorting by Name, as designated by the Name field being colored blue. Clicking on any other heading in the table will re-sort the table by that column. Routines may also be sorted by their color by clicking in the empty space in the table header to the left of the Name field.

The list of Routines will also indicate the number of Actions or steps that they contain. Fields that are designated with an asterisk (\*) indicate that they contain an Action that has been deleted. When editing the Routine, the deleted Action will be replaced with a “missing” indication. This serves as a place holder to maintain the same overall timing of the Routine.

## **EDITING ROUTINES**

To edit a Routine:

1. Navigate to the Routines page.
2. Click the edit button (pencil icon) on the right for the corresponding row of the desired Routine.
3. Make the desired changes to the Routine.
4. Click the [Done] button to save the changes.

## **TESTING A ROUTINE**

Routines can be tested while creating or editing them to verify their intended functionality. While in the Routine editor, click the [Test] button at the top of the workspace. A confirmation prompt will appear and the Test button must be clicked a second time to run the Routine. This is a feature to prevent accidental miss-clicks or screen touches from running Routines.

## **DELETING ROUTINES**

To delete a Routine:

1. Navigate to the Routines page.
2. Click the edit button (pencil icon) on the right for the corresponding row of the desired Routine.
3. Click the [Delete] button in the upper right of the workspace.
4. You will be prompted to confirm the action. Click [Delete] again to confirm.

## USING THE CALENDARS

### MONTH CALENDAR

Bellwether has two monthly calendar views; one for the current month and one for the upcoming month, allowing for scheduling of future Events. The two calendars work the same so the following descriptions apply to both views.

The calendar is a typical 6-week block with 7 columns. The first day of the week, that is, the left-most column, can be configured in the Q-SYS plugin to any day of the week and the grid will be adjusted accordingly. The first day of the month will always be in the top-most row. The current day will be outlined in green.

Clicking on the date number will change the workspace to the Today view for that particular date.

### TODAY VIEW

The Today view defaults to the current date, which is why it's referred to as "today". The view is a 24-hour timeline from midnight to midnight. The timeline is denoted with thicker lines representing an hour and thinner lines representing the half hour. Hour designations are shown on the left side of the timeline. The hour format is configurable between 12-hour and 24-hour formats with 12-hour style using the day half suffixes (like "AM"/"PM", which are translatable) and 24-hour style using the two-digit hour followed by "h".

At the top of the view is the current date between two arrows. Clicking the right arrow button will advance to the next date. Clicking the left arrow will move to the previous date. You can only view up to the first of the current month or the last date of the next month. Whenever the view is set to a date that is not the current date, the "Today" link in the Navigation menu will not be selected. Clicking "Today" in the Navigation menu will always return you to the current date.

## SCHEDULING EVENTS

An Event is either a Routine or Action that associated with a particular date and time. Events can be directly scheduled for a desired date and time, or they can be placed for a particular time but in a generic group called a Preset. Presets can be scheduled for any date and be reused over and over.

### SCHEDULING AN EVENT

Routines and Actions can only be scheduled at a particular date and time and must be done in the Today calendar view. To schedule:

1. Click the Today link in the Navigation menu.
2. Use the arrow buttons next to the date at the top of the workspace to change to the desired date, if not the current date.
3. Drag and drop the desired Routine or Action from the list on the left side of the workspace onto the timeline near the desired time.
4. At the top of the workspace, use the hour, minute, and if available, day half fields to adjust the exact start time of the Event.

### ADJUSTING AN EVENT TIME

Once an Event is scheduled for a particular day, it can be easily changed by simply dragging the bubble to a different time slot, or by single clicking the bubble to select it (as indicated by a red outline) and using the time controls at the top of the workspace to directly enter the desired time. Clicking away from the time controls accepts the change and the calendar will be updated accordingly.

### REMOVING (UN-SCHEDULING) AN EVENT

To remove an Event from the schedule, select the bubble by clicking once on it and then clicking the [-] button in the upper left area of the workspace, or drag the bubble to the bottom of the workspace and drop it onto the [Remove] bar that appears.

## PRESETS

Presets are a 24-hour timeline of Routine and Action Events, similar to working in the Today view. Presets themselves do not contain specific date information but instead allow the collection of Events to be scheduled to any day on the calendar and be reused over and over again. This allows common events that occur frequently or repetitively to be easily scheduled without having to define each Action on each day of occurrence.

### CREATING A PRESET

Similar to scheduling Events on the Today calendar, start by defining a preset:

1. Click the Presets link in the Navigation menu.
2. Click the [+] button in the upper left of the workspace.
3. Give the Preset an easily identifiable Name.
4. Give a Description for what the Preset is for.
5. Select a color to represent the Preset.
6. Begin scheduling Events in the Preset timeline:
  - a. Drag and drop the desired Routines or Actions on to the timeline
  - b. Select individual bubbles and use the time tools at the top of the workspace to finely adjust the times
  - c. Repeat for however many Events should be contained in the preset
7. Click the [Done] button at the top of the workspace when finished.

More than one Preset may be scheduled to any day on the calendar allowing for complex layering of saved Events and Presets. Presets may be scheduled in addition to Routine and Action Events. Therefore, it is recommended that Presets contain the minimum functional grouping of similar Events for easier maintenance over time.

## SCHEDULING PRESETS

There are two ways to schedule Presets. Method 1:

1. Click the “Today” link in the Navigation menu and change the view to the desired date.
2. Drag the desired Preset from the Preset list at the left of the workspace onto the Presets area at the top of the timeline.
  - a. A Preset may only be scheduled once on a single day

When in the Today view, the Events that comprise the Preset will appear faded in the timeline and in the color of the associated Preset. This allows for a comprehensive view of all schedule Events for the day regardless of their source. Events belonging to a Preset cannot be manipulated directly on the calendar. Instead, the Preset will need to be edited accordingly.

Method 2:

1. Click the “This Month” or “Next Month” link in the Navigation menu.
2. Drag the desired Preset from the Preset list at the left of the workspace onto the desired date square.
  - a. Multiple copies of a Preset may be dragged and dropped onto different dates using the Ctrl key while dragging.

More than one Preset can be added to a single day using either of these methods. When enough Presets are scheduled that cannot fit into the calendar square on the monthly views, a scroll bar will appear allowing all items to be viewed.

## REMOVING (UN-SCHEDULING) A PRESET

To remove a Preset from the Today view, do one of the following methods. Method 1:

1. Click the bubble in the Presets area at the top of the workspace to select the Preset. It will be outlined in red indicating it has been selected.
2. Click the [-] button at the top left of the workspace to remove the Preset from the calendar.

Method 2:

1. Drag the Preset bubble to the bottom of the workspace and drop it on the [Remove] bar that appears.

To remove a Preset from one of the monthly calendar views, the bubble must be dragged to the [Remove] bar at the bottom of the workspace.

## EDITING A PRESET

To edit a Preset:

1. Click the Presets link in the Navigation menu.
2. Find the Preset in the table that is to be edited.
3. Click the edit button (pencil icon) on the right of the table corresponding to that Preset.
4. Make the desired changes.
5. Click the [Done] button at the top of the workspace when finished to save the changes.

Modifying a Preset will affect all instances of that Preset, even ones that are already scheduled. Use caution when changing Event timings.

## DELETING A PRESET

To delete a Preset:

1. Navigate to the Presets page.
2. Click the edit button (pencil icon) on the right for the corresponding row of the desired Preset.
3. Click the [Delete] button in the upper right of the workspace.
4. You will be prompted to confirm the action. Click [Delete] again to confirm.

## V1.0.0 – DECEMBER 23, 2022

Original release

## V1.0.1 – JANUARY 3, 2023

- Fixed an issue that prevented Routine steps from being able to be reordered.