AUSTRALIAN MONITOR
INTEGRATION INTELLIGENCE

OPERATION MANUAL

SCHEDULER & GPIO

ZONEMIX CONTROL SOFTWARE

SCHEDULER

OVERVIEW

The scheduler function of the ZONEMIX provides a powerful means to automate various functions of the system.

Tasks can be configured to adjust:

- **Volume level of input sources and zone outputs**
- **Mute/unmuting of input sources and zone outputs**
- **Message Player file playback with duration, pre and post delay and repeat customisation**
- **Tone generator playback with duration, pre and post delay and repeat customisation**
- **Recalling presets**
- **Triggering general purpose outputs**

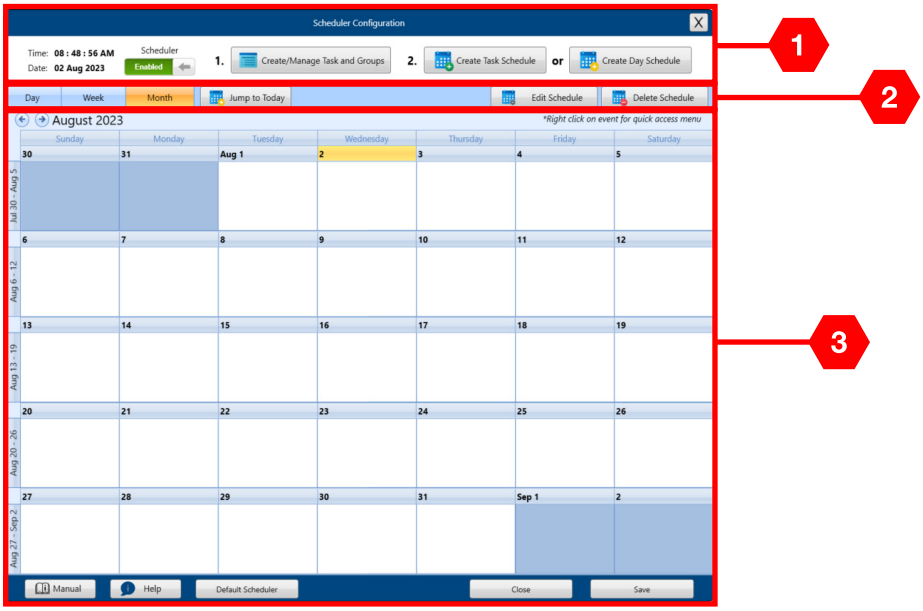
A powerful scheduling engine allows complex daily, weekly and monthly schedules to be applied to the associated tasks.

Tasks can also be grouped to create a Task Group allowing multiple actions to be performed from one trigger.

Additionally, tasks can be grouped to form a Day Group allowing an entire day of tasks to be programmed, this would typically be used in school applications or where complex daily schedules are required.

IMPORTANT: The ZONEMIX system has one Message Player which does NOT allow multiple messages to be played simultaneously. Ensure that the scheduler is not programmed to play multiple messages at the same time as it will only play the latest triggered message.

SCHEDULER WINDOW

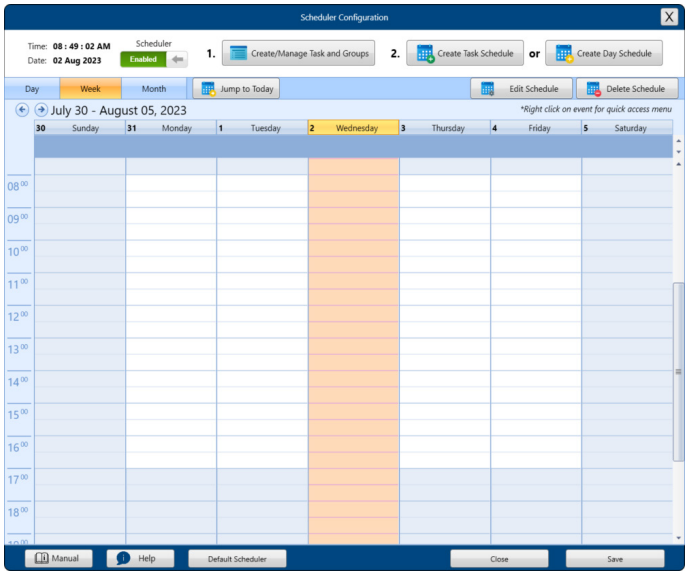


Month View

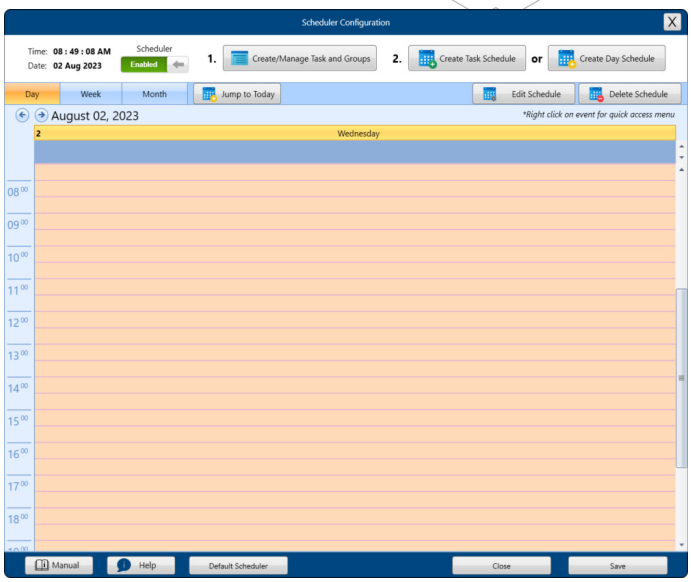
The first screen you see is the Scheduler Configuration panel. The three main sections of this view are.

1. **Navigation section**
   From where you set up Tasks, Groups, Schedules and Day Schedules
2. **View Settings**
   Allows you to swap between Day, Week and Month views as well as edit and delete schedules.
3. **Calendar section**
   Shows a Day, Week or Month calendar based on the view settings.

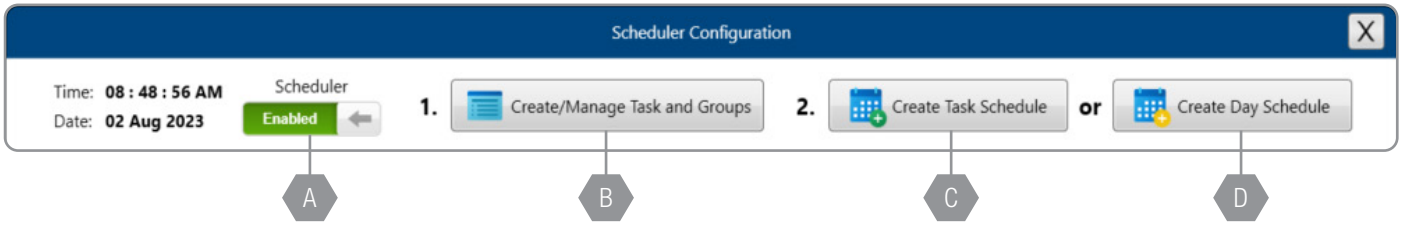
SCHEDULER CONT.



Week View



Day View



At the top of the Scheduler Configuration screen there are four options

A. Scheduler Enable/Disable

Simply enables or disables the scheduler. This can also be set via the System Setup menu of the front panel, a GPI (General Purpose Input) or a button on the WP4R or WP10 control panels.

Note: A bell icon will show on the LCD display of the ZONEMIX when the scheduler is active.

B. Create/Manage Tasks and Groups

Here you configure each task the scheduler performs.

Tasks can optionally be grouped to create Task Groups or Day groups.

C. Create Task Schedule

Here the Tasks and Task Groups are assigned to a day and time. They can be either a one-time event or set to recur weekly, monthly or on a specific day of the week

D. Create Day Schedule

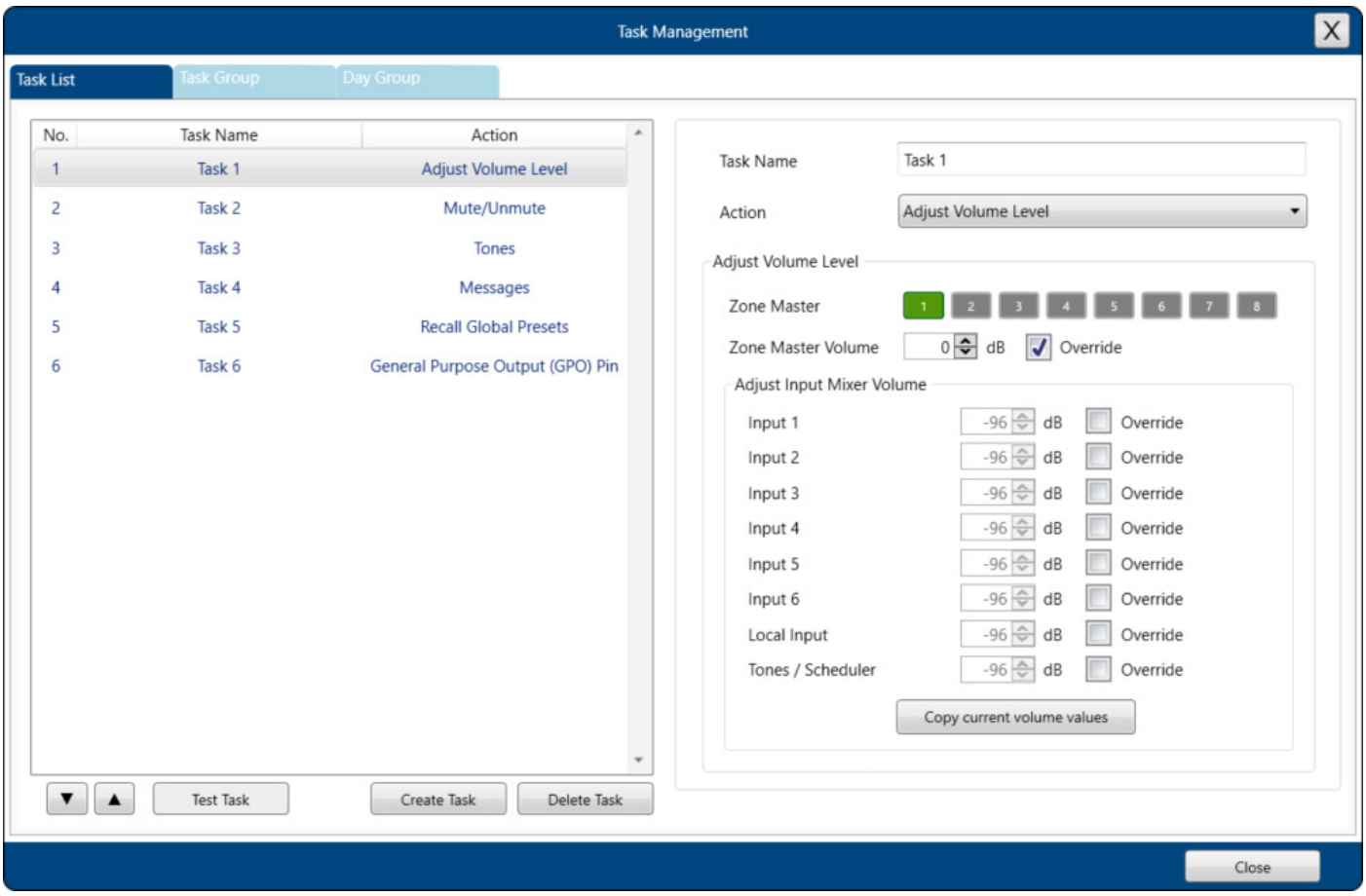
Here you assign the Day Groups to specific days of the week and the recurrence to weekly, bi-weekly, tri-weekly or quad-weekly.

SCHEDULER CONT.

STEP 1 - TASK CREATION

Select Create/Manage Tasks and Groups at the top of the screen:

FIRST PANE - TASK LIST



1. Select Create a New task and name it if desired
2. Select the desired task action from the Action dropdown list

Task Actions include:

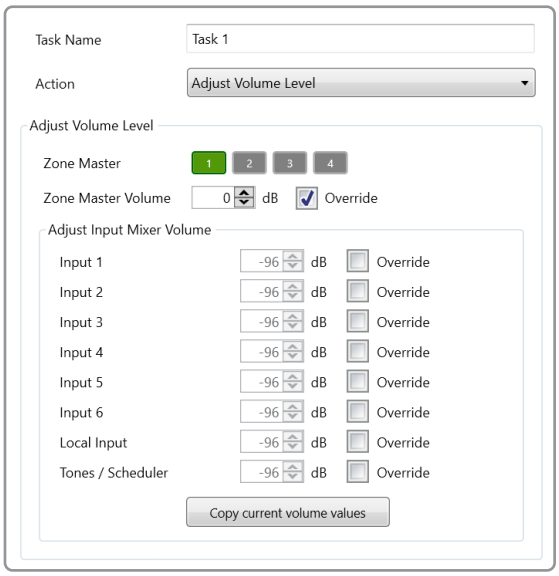
- Adjust Volume Level of inputs and outputs
  - If you wish to adjust more than one zone at the same time, create multiple tasks with each zone setup as a task and then group them together to form a Task Group.(See section below for more details on Task Groups)
  - Use the “copy current volume values” button to easily grab the current volume level settings for the zone you wish to adjust.
- Mute or unmute inputs and outputs
- Activate Tones
  - Remember, you can override the built-in tones be placing alternative files on an SD card. See the SD CARD section of the manual for more information.
- Activate custom Messages from the SD Card
- Recall Global Presets
- Activate a General Purpose Output

SCHEDULER CONT.

TASK ACTIONS

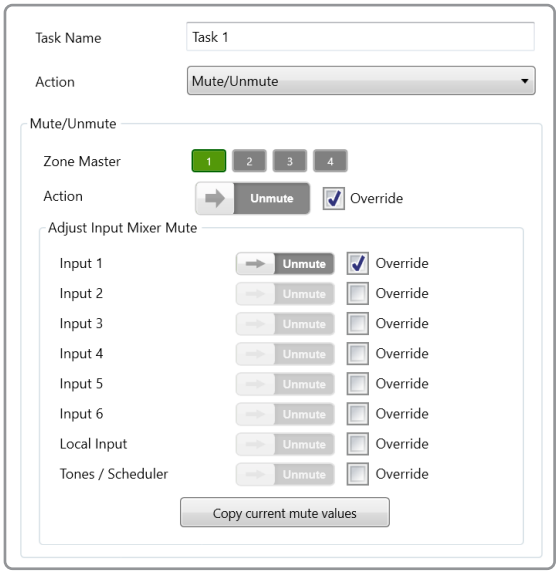
Adjust Volume Level - Adjust Volume Level of inputs and outputs

- Choose the Zone you want the task to adjust, check the Override box and set the Zone master volume
- You can also adjust the level of any inputs including local inputs and tones.
- Check the Override box and set the desired level
- Use the “copy current volume values” button to easily grab the current volume levels settings of the input for the zone you wish to adjust.



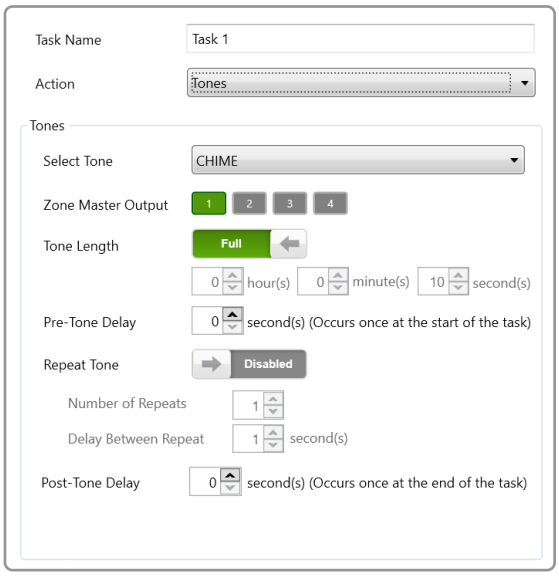
Mute or Unmute – Either mutes or Unmutes inputs and outputs

- Choose the Zone you want to mute, check the Override box and toggle the Mute/Unmute slider.
- You can also mute or unmute any input including local inputs and tones.
- Check the Override box and toggle the Mute/Unmute slider.
- Use the “copy current mute values” button to easily grab the current state of the inputs for zone you wish to change.
- If you wish to adjust more than one zone at the same time, create multiple tasks with each zone setup as a task and then group them together to form a Task Group.(See section below for more details on Task Groups)



Tones – Activate the built in tones

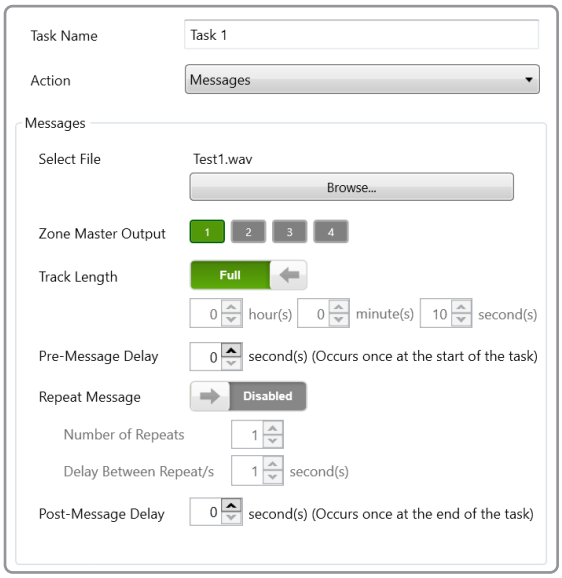
- Select the tone you want use from the drop down box
- Choose the Zone/s it is to play in
- Tone Length allows you to choose if it is played in full or for a custom amount of time
- Pre-Tone Delay sets the amount of time in seconds that occurs before a tone is played.
- Repeat Tone, when enabled allows the tone to be repeated for a set amount of times with a delay between repeats if needed
- Post-Tone Delay is the amount of time after the task is complete before the next task in a Task Group activates



SCHEDULER CONT.

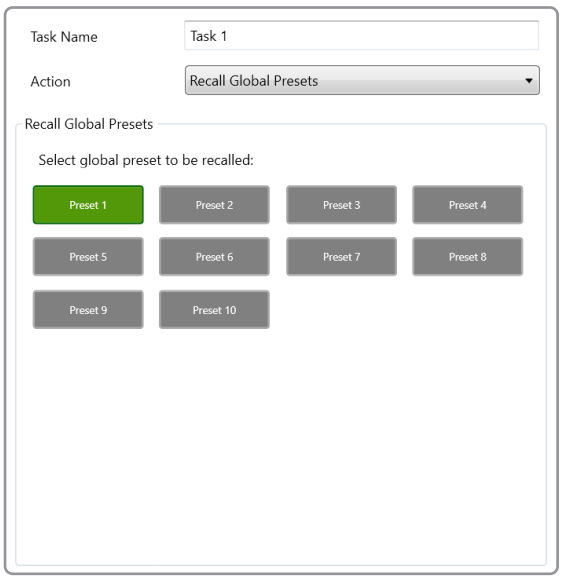
Messages – Activates the Messages form the SD Card

- Select the message you want use from the drop down box
- Choose the Zone/s it is to play in
- Track Length allows you to choose if it is played in full or for a custom amount of time.
- Pre-Message Delay sets the amount of time in seconds that occurs before a message is played.
- Repeat Message, when enabled allows the message to be repeated for a set number of times with a delay between repeats if needed.
- Post-Message Delay is the amount of time after the task is complete before the next task in a Task Group activates.



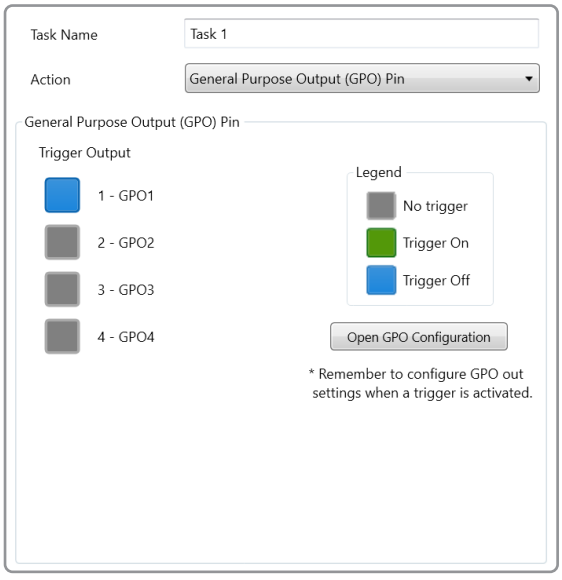
Recall Global Presets

- Allows previously created Presets to be activated.
- Note – when used in a task or day group a preset may affect settings adjusted by a previous task.



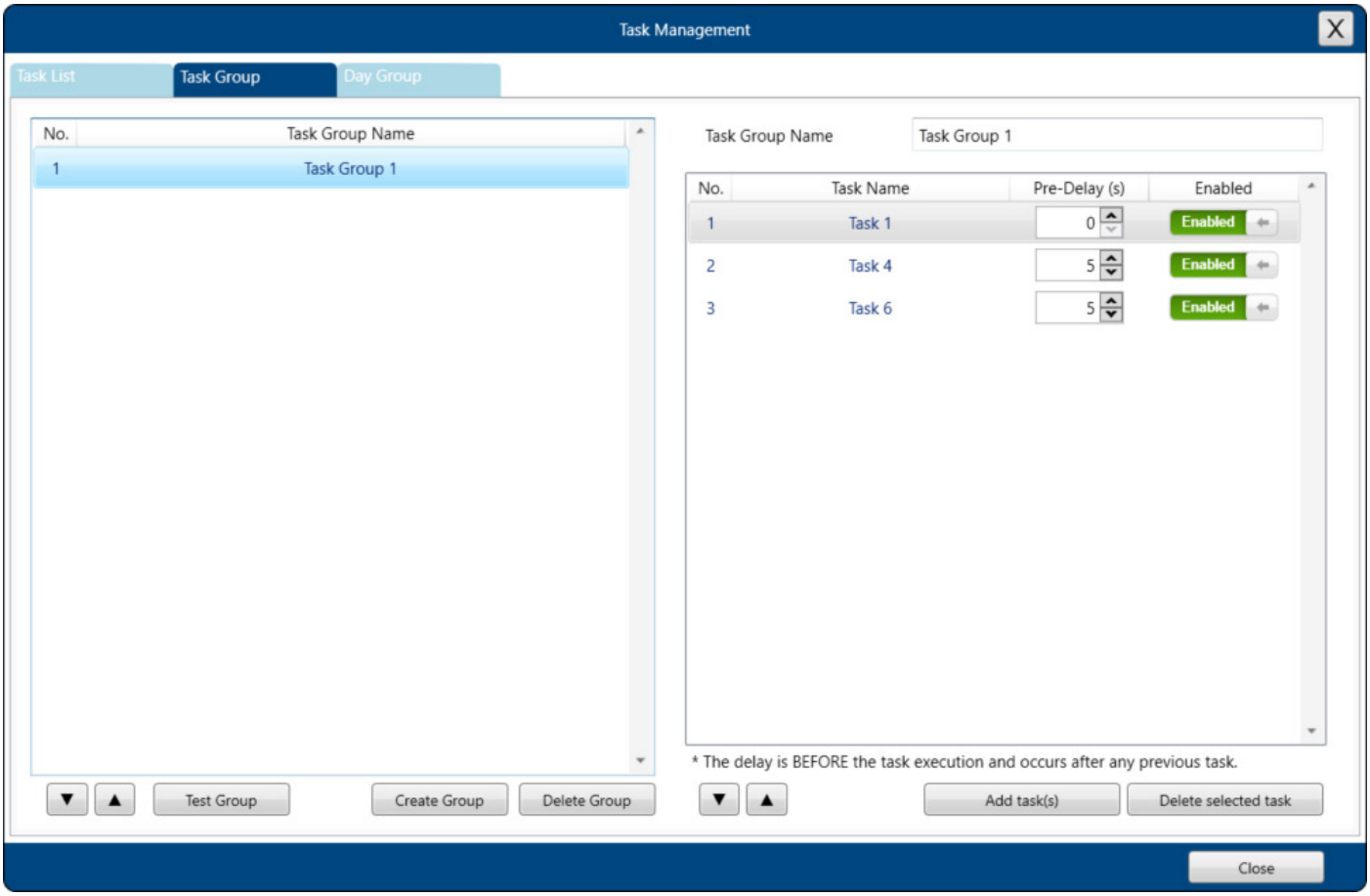
General Purpose Output (GPO) Pin

- Use this to activate the GPOs on the rear of the ZONEMIX. 4 GPOs available on the ZONEMIX4 and 8 GPOs on the ZONEMIX8
- Make sure the GPO settings have been made in the software and set to the required state (See GPIO General Purpose Input/Output section below)



SCHEDULER CONT.

SECOND PANE - TASK GROUP

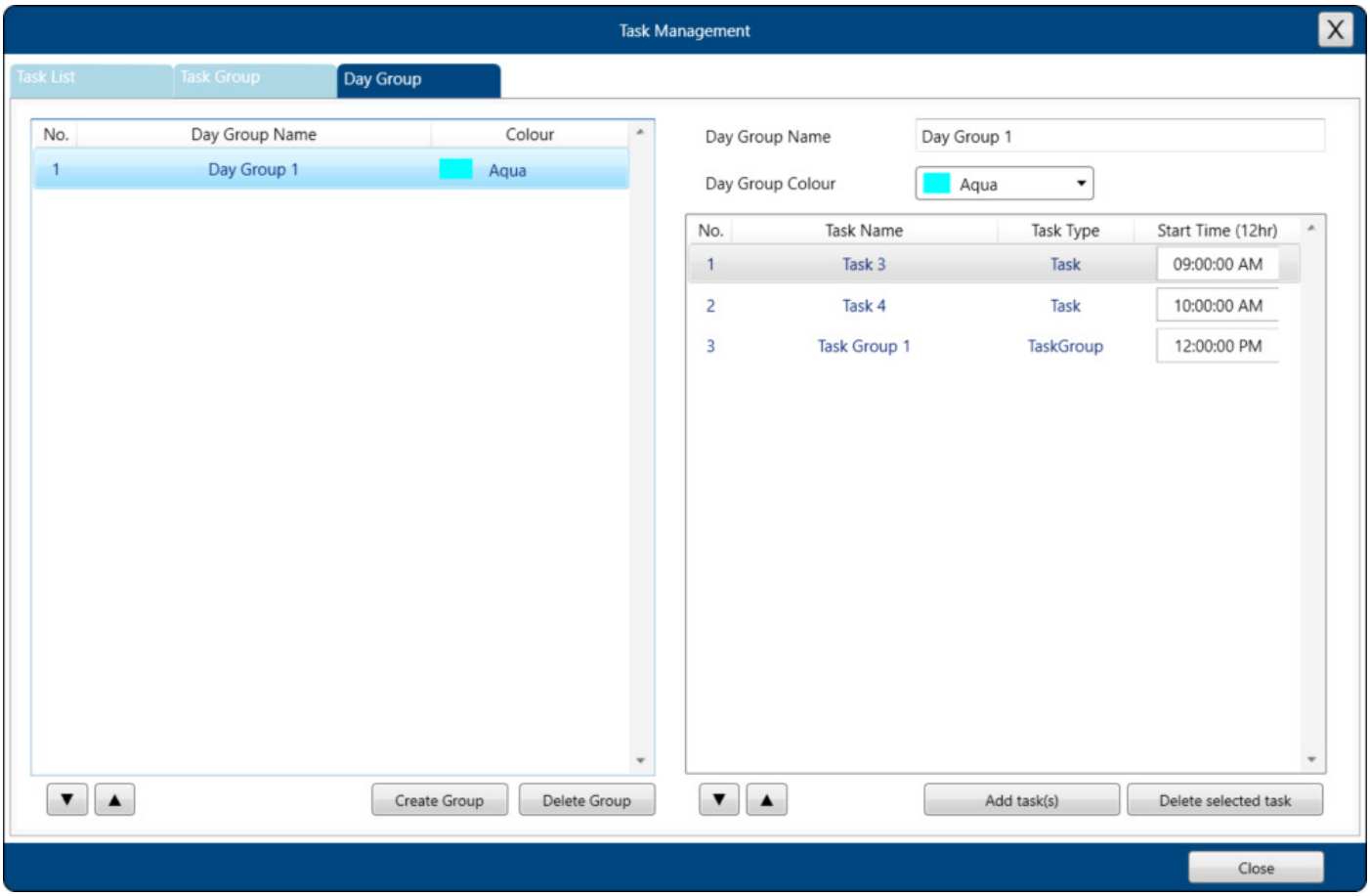


Here you put individual tasks into a group of tasks that can be triggered in a sequence.

1. Select Create a New Group in the left hand box and rename it as required on the right
2. On the right hand side select Add task(s).
   Each of the Tasks created in the Task List (first pane) can be assigned to a group allowing you to trigger each task in a sequence. Each task can be in multiple groups.
3. For each task in a group, you can set a Pre-Delay (in seconds) so that they will occur in order without mixing with a previous task.
   The delay is BEFORE the task execution and occurs after any previous task.
4. Each task in a group can be disabled if required without affecting other tasks in the group.

SCHEDULER CONT.

THIRD PANE - DAY GROUP

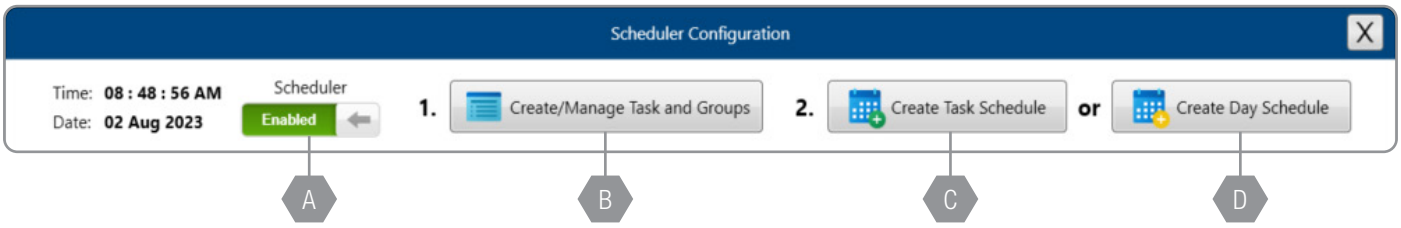


Day groups are used exclusively with the Day Schedule creator. Assign Tasks or Task Groups at a specific time in the day.

1. Select Create a New Group in the left-hand box and name it as required on the right. You can also assign each Day Group a different colour to make identification easier in the calendar view
2. On the right-hand side select Add Task(s). Each of the Tasks and Task Groups created in the first and second panes can be assigned to a Day Group.
3. Assign a start time for each Task/Task Group, so they will activate at specific times during the day
4. Each task can be in multiple groups.

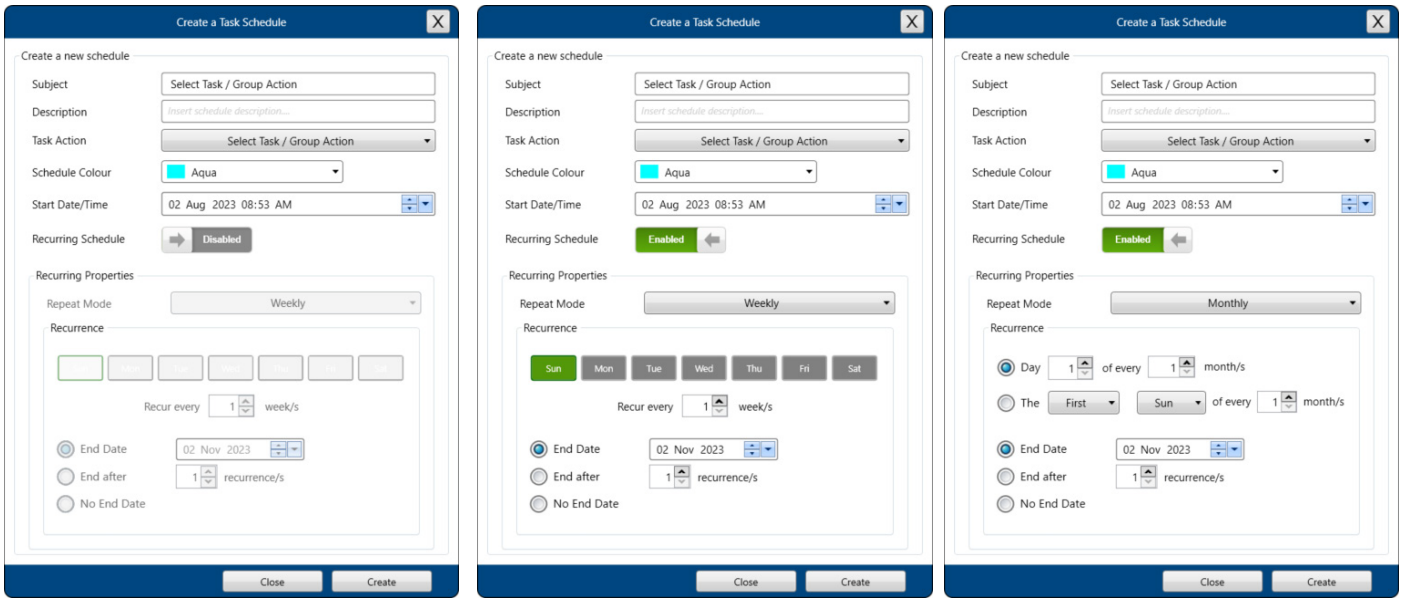
SCHEDULER CONT.

STEP 2 - SCHEDULE CREATION



At the top of the screen select either **C** Create Task Schedule or **D** Create Day Schedule

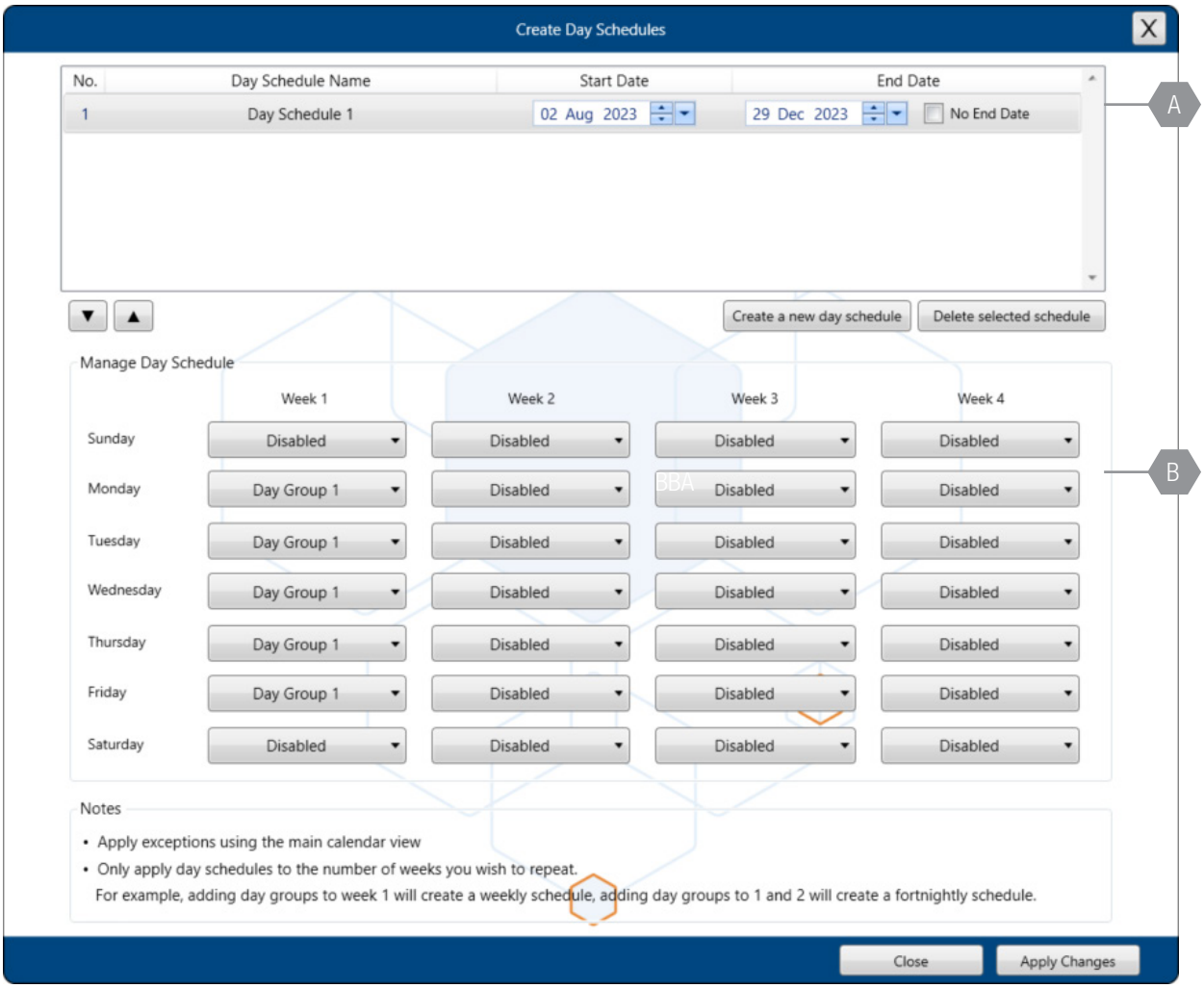
CREATE A TASK SCHEDULE



1. Enter the name of the task schedule in the subject field, as well as a description if required.
2. You can also assign each Task Schedule a different colour to make identification easier in the calendar view.
3. Select a task or task group (see Task Creation above) to be scheduled from the Task Action dropdown menu.
4. Set the date and time when the task is required to trigger.
5. If the task should be a recurring event enable Recurring Schedule
6. Set either Weekly or Monthly repeat mode.
   - Weekly lets you set which day/days the schedule repeats on along with the recurrence interval – every week, every 2 weeks etc.
   - Monthly lets you set the schedule to recur on either a specific date of a month or a specific day
7. The schedule can be set to end after either a number of recurrences, on a specific date or never end

SCHEDULER CONT.

CREATE DAY SCHEDULE



There are two sections in the Create Day Schedule pane.

A. **Day Schedules including creation and start and end times.**
B. **Manage Day Schedules where you assign a Day Group to each day of the week**

1. Select Create New Day Schedule in the top section and set the Start and End Date for the schedule. Alternatively tick the No End Date Box if the schedule is ongoing.

   Note: When you select a Schedule in the top part of the Create Day Schedule pane, the groups for the selected Schedule show below in the Manage Day Schedules section.

2. In the Manage Day Schedules section, select the required Day Group for each day in the week in the drop down box.

   Note: Only Day Groups defined in Step 1 show as available options

3. The schedule will repeat based on the number of weeks which have a day group assigned. For example, adding day groups to only week 1 will create a weekly schedule, adding day groups to weeks 1 and 2 will create a fortnightly schedule.

   Note: Up to 20 day group schedules are supported

SCHEDULER CONT.

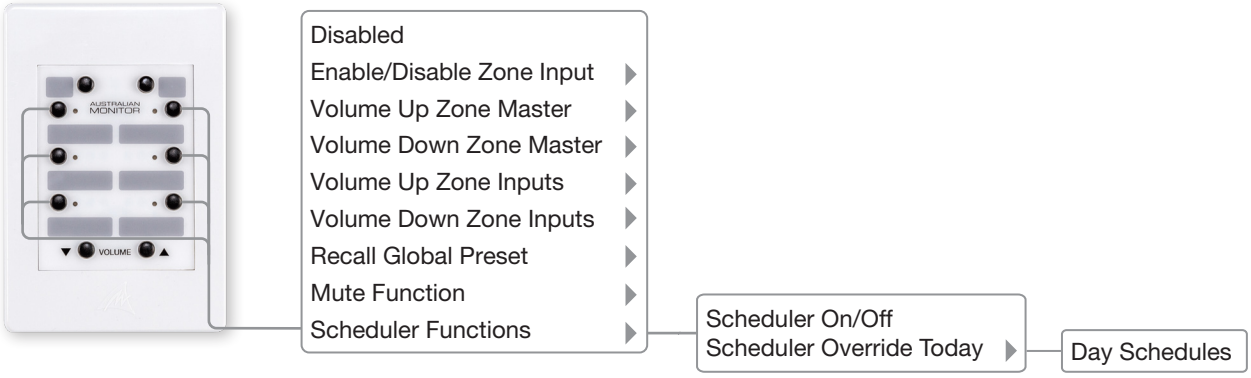
OVERRIDE DAY SCHEDULE

The scheduler supports the ability to override day schedules with alternative day schedules WITHOUT using the software for on-the-fly changes. For example, a school application can change a normal day schedule into a wet day schedule. The override can be triggered from the front panel, wall panel controllers or general purpose input triggers.

Firstly, configure a **Day Group** in the **Task Creation** section of the scheduler you wish to use as the override.
Secondly, assign the day schedule to a wall panel button or the general purpose inputs.

Wall Panel Controller Triggering

- Select the following functions from a button dropdown list:
  Scheduler Functions – Scheduler Override Today – Select Day Group
  When activated the LED next to the button on the wall panel illuminates.
- To cancel the override and return to the normal schedule, push the button on the wall panel again. The LED will turn off. Otherwise at midnight the schedule will reset to the normal Day Schedule.
- Any button assigned as an override day will turn red if the scheduler is turned off.
- If another override day is triggered from another wall panel button, or other source, the current override will be replaced.



General Purpose Input Triggering

- Select the following functions from a button dropdown list
  - Scheduler Override Today – Select Day Group
  - Scheduler Override Today triggers an alternate Day Schedule which overrides the default day schedule currently running. For example, change a Normal Day to a Wet Day in a school installation.
- To cancel an override day and return to the normal schedule assign the following function to another GPI input
- Scheduler Cancel Override Day Schedule

Front Panel Triggering

The front panel allows greater flexibility to select ANY override day from the available day schedules.

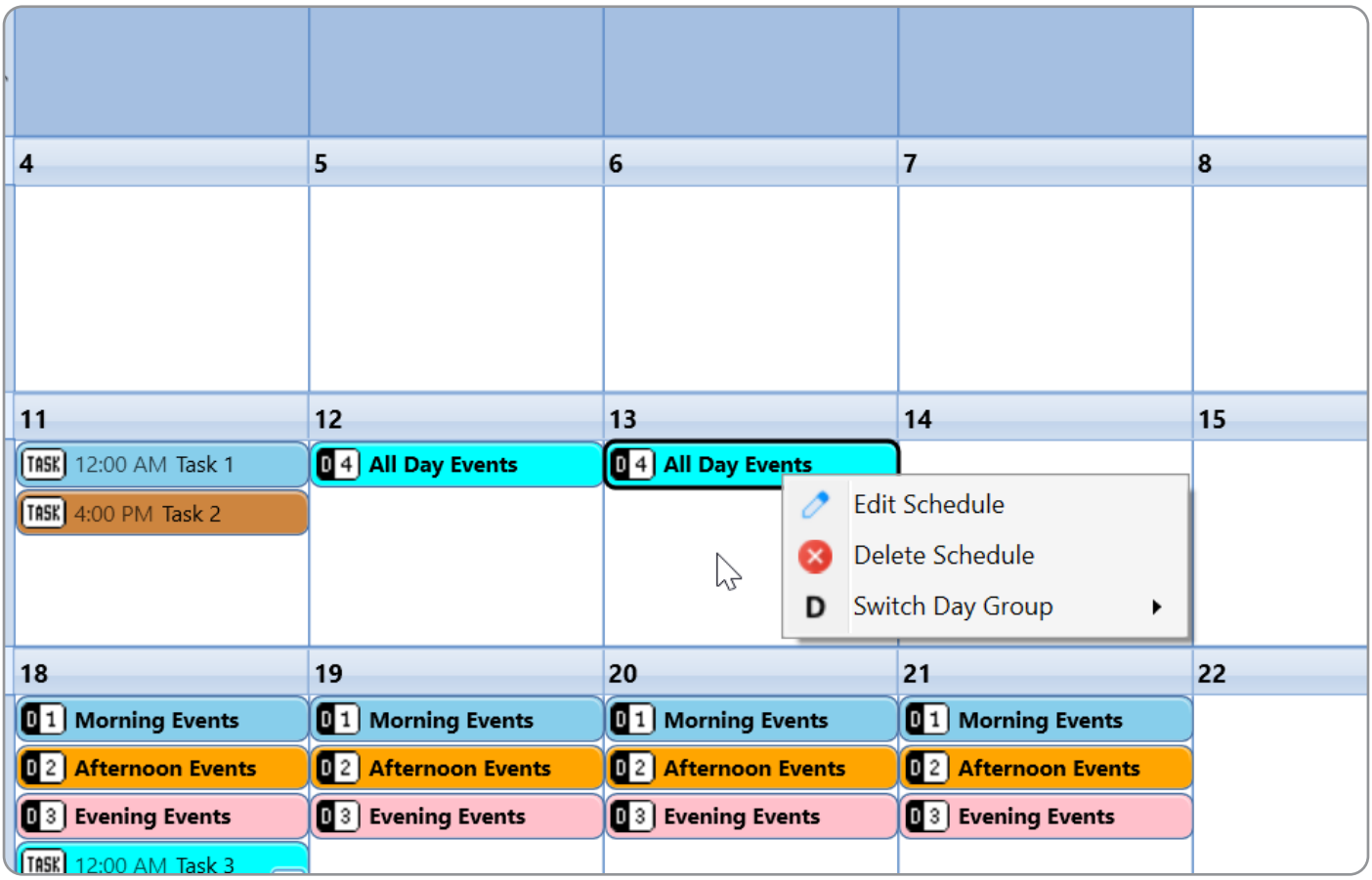
Enter the System Setup Menu by holding down the INPUT MIX knob.

- System Setup Menu - Sch 🔔 Override Status
  - Shows which override day is active
- System Setup Menu - Sch 🔔 Override Select
  - Select the override day you wish to activate
- System Setup Menu - Sch 🔔 Override Cancel
  - Select to cancel any active override day and return to the normal schedule

See page 14 for further details on how to configure General Purpose Inputs.

SCHEDULER CONT.

EDITING SCHEDULES



If you need to edit, remove, or replace a task or day schedule

1. Navigate to the required day on the calendar.
2. Right click on the schedule and then select the required option.
   - Edit schedule opens either the Edit Task Schedule or Create Day Schedule panes.
   - Delete Schedule allows you to remove the current instance or the complete series for this task/day Schedule.
   - Switch Day Group sets a different Day Group for that day.

OR

3. Select the schedule to change and use the Edit and Delete buttons at the top of the pane. This can be done from either the month, week or day views.
4. The dropdown arrow will appear when there are more Tasks/Schedules than can be viewed. It will switch the view to the Day View.

Notes

If the scheduler is disabled when executing tasks:

- Tones or message playback tasks will be immediately stopped.
- If a task group is running, delays are ignored and all remaining tasks in the group will be immediately executed. Any tones or messages in the task group will be ignored.

GPIO (General Purpose Input/Output)

OVERVIEW

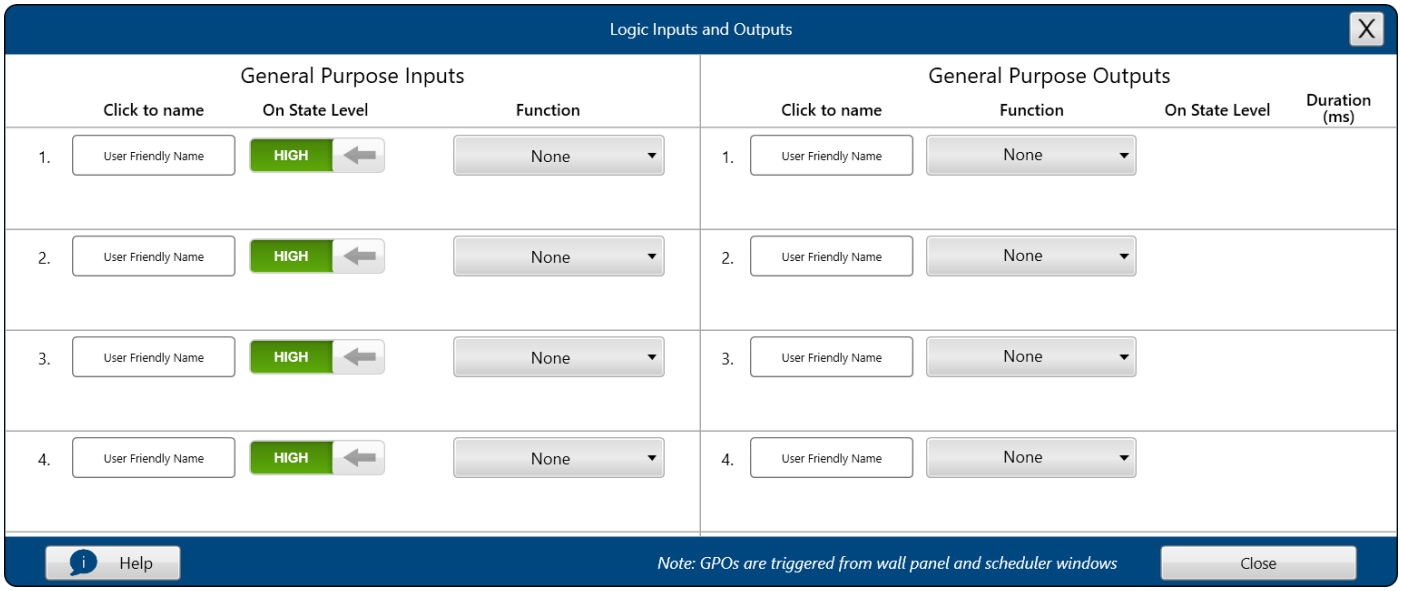
The GPIO function of the ZONEMIX System provides a powerful, flexible way to either control 3rd party devices via contact closure outputs or have 3rd party devices control the ZONEMIX via contact closure input.

The ZONEMIX4 has four General Purpose Inputs (GPI) and four General Purpose Outputs (GPO). The ZONEMIX8 has eight of each.

Each GPI can be configured to

- Activate or deactivate the Master Override feature.
- Turn the Scheduler On or Off
- Activate or cancel an Alternative Day in the Scheduler
- Run a Task or Task Group from the Scheduler
- Recall a Global Pre-set
- Run a Task or Task Group

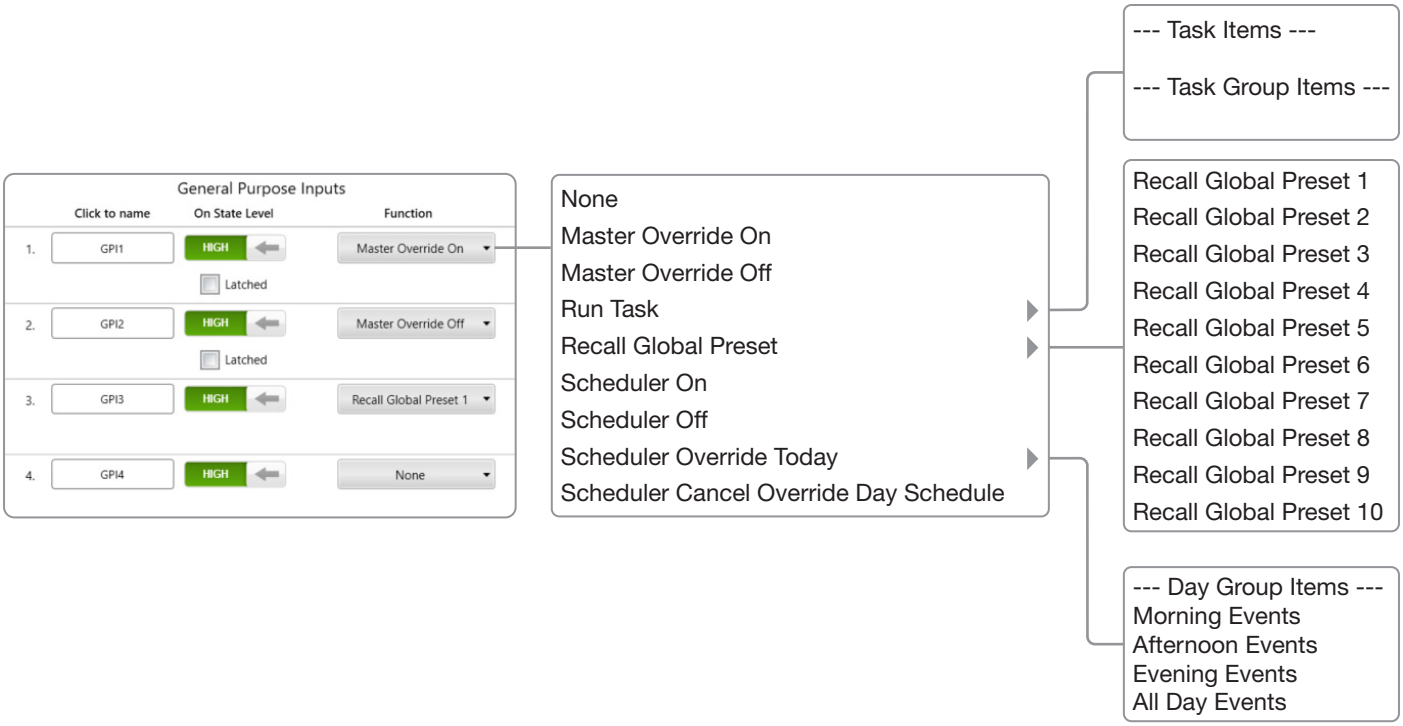
SETUP



The Logic Inputs and Outputs pane has two sections the left is for setting GPIs and the right is for GPOs

GPIO CONT.

GENERAL PURPOSE INPUTS



- The Name Box lets you set a user-friendly name for the equipment attached to the input pin for easy identification.
- On State Level - defines whether a high or low input signal activates the function
- The Function dropdown box is where you select what the GPI is going to do when it is triggered.
  - Master Override On activates the master override feature. Ensure the feature is enabled in the software and set to “GPI Input Trigger” mode
  - Master Override Off deactivates the master override feature. Ensure the feature is enabled in the software and set to “GPI Input Trigger” mode
  - Scheduler On turns the scheduler on
  - Scheduler Off turn the scheduler off
  - Recall Global Preset recalls one of the 10 presets available in the ZONEMIX setup
  - Scheduler Override Today – Select Day Group
    - Scheduler Override Today triggers an alternate Day Schedule which overrides the default day schedule currently running. For example, change a Normal Day to a Wet Day in a school installation.
  - Scheduler Cancel Override Day Schedule - cancels any Override Day Schedule and reverts to standard scheduler schedule
  - Run Task allows you to run either a Task or Task Group from the task management window in the scheduler.

Note: Task and Task Groups will run when triggered from the GPI even if the scheduler is turned off

MOMENTARY TRIGGERING

By default, the GPIs are Momentary inputs. A trigger signal must be present on the input pin for more than 150ms for activation. To re-trigger the function, the ***input*** pin must go to the ***off*** position and then back on. When enabling or disabling either the Master Override or Scheduler functions, if momentary triggering is used then one input is set for on and another is set for off.

When doing this ensure the correct active state (high or low) is set in the On State Level box.

GPIO CONT.

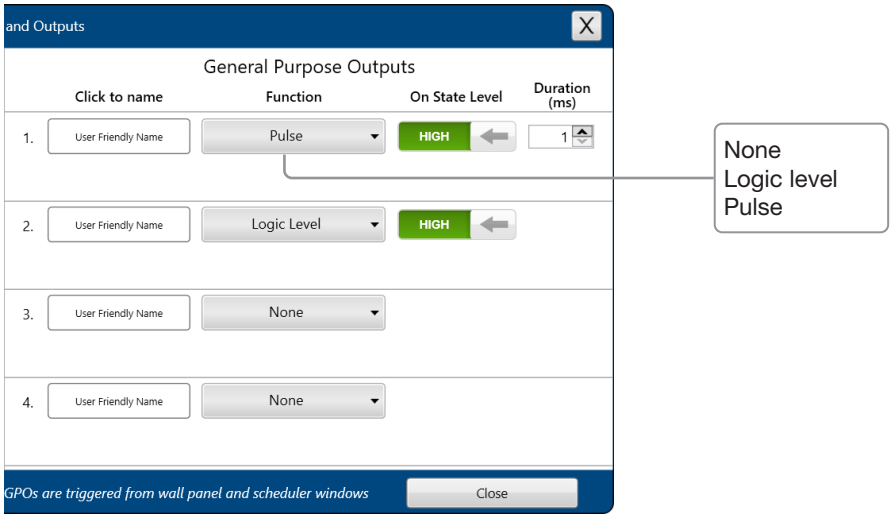
LATCHED TRIGGERING

The Master Override On/Off and Scheduler On/Off functions can also be set to latched mode by selecting the 'Latched' checkbox which appears as an option when either of these functions are selected. Select this function if you are using a latching input switch (as opposed to a momentary switch) for activation.

Advantages of Latched Triggering are;

1. The ZONEMIX is locked into this mode preventing any other source from changing it until the activating device is released.
2. Only one input is used for both on and off states

GENERAL PURPOSE OUTPUTS



The output pins are triggered from the scheduler and wall panels, however the output level setting must be configured in the GPO (right hand box above)

For example, On Signal is triggered from the scheduler and sends out a pulse as the GPO pin function was set to pulse.

Note: Ensure the correct active state is set (high or low) in the On State level Box

Each output consists of the following settings:

- The name box lets you set a user-friendly name for the equipment attached to the output pin for easy identification.
- Function
  - Logic Level.
    - A high or low signal is output from the GPO pin depending on the setting of the state of the On State Level box.
  - Pulse
    - A high or low pulse is output from the GPO pin depending on the setting of the On State Level box
  - Duration
    - Set the required length of the pulse in milliseconds
- On State Level is used to define if a high or low active signal output is required

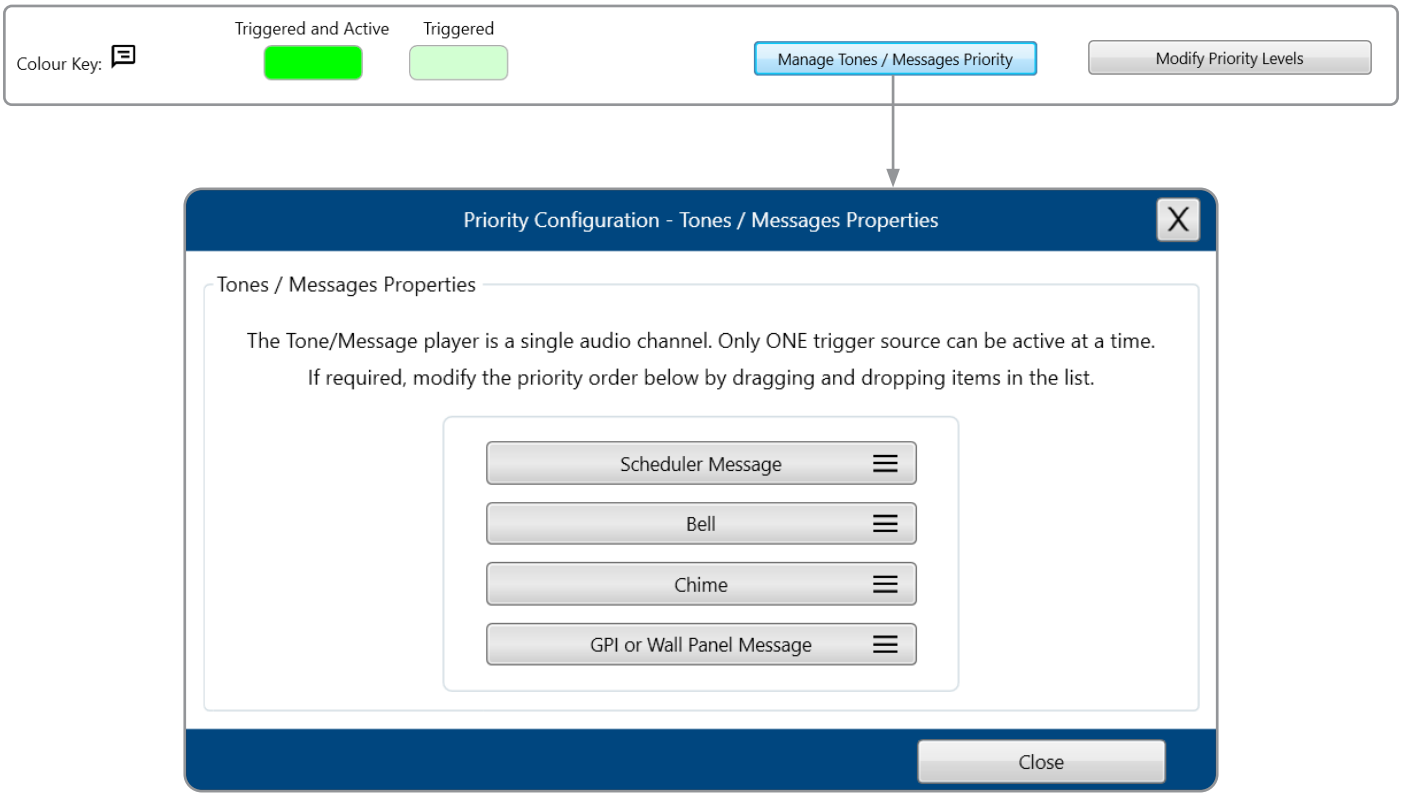
GPIO CONT.

MESSAGE PLAYBACK PRIORITY

The ZONEMIX system has one Message Player which does NOT allow multiple messages to be played simultaneously. It is important to understand that if multiple sources are configured to trigger messages that they will interrupt any current message playing. For example, a wall panel set to run a task that plays a message could interrupt a message that the scheduler is currently playing.

In order to prevent unwanted cancellation of messages, apply the required Priority level using the Priority Configuration – Tones / Messages Properties window in the ZONEMIX Control software.

For example, to prevent any other source interrupting the scheduler make the “Scheduler Message” the highest priority.



AUSTRALIAN MONITOR
INTEGRATION INTELLIGENCE

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