

# GALAXY HOW TO GUIDE

## ONE-MINUTE TIME SCHEDULES

Compatible with 600- & 635-series Control Panels

2024 | SG 11.8.6

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# Introduction to One-Minute Time Schedules

*This section pertains to the 1-Minute Time Schedules. It does not apply to the 15-minute time schedule programming.*

## Overall Requirements for 1-Minute Time Schedules:

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### System Galaxy Software Requirements:

- ▶ You must have set your Loop Schedule Format option to be '1-Minute Schedules'
- ▶ You must **create your Day Types and Time Periods** before you can create your **Schedules**.
- ▶ You must **create your Schedules** and map your days to periods, before you can assign schedules to Access Groups, doors, inputs, outputs, elevators or other entities.
- ▶ You must **load your Schedules** to your panels before they are in effect.

### SG Hardware Requirements:

- ▶ **You must have 600-series Hardware to support 1-minute time schedules.**
- ▶ **You cannot mix 1-minute format with 15-minute format on the same loop/cluster.**

You can have one loop using the 1-minute format while other loops use the 15-minute format.

If you are upgrading or expanding an existing site where 15-minute schedules in use, you will want to plan how you incorporate 1-minute schedules.

- You can use 1-minute format only on chosen loops and leave existing hardware using the existing 15-minute format.
- Or you can rebuild any existing schedules into the 1-minute format to meet the control needs of doors or devices that must reside on the loops using 1-minute schedules.  
*You must be considerate (planning required) to properly meet your Day Type (special days and holidays) programming needs to support those schedules without conflict.*

## Concept for using 1-Minute Time Schedules:

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Setting up these time schedules requires a few steps. The steps must be accomplished in sequence before the schedules can take effect in the panels. Please see the Planning section to help you organize your programming efforts.

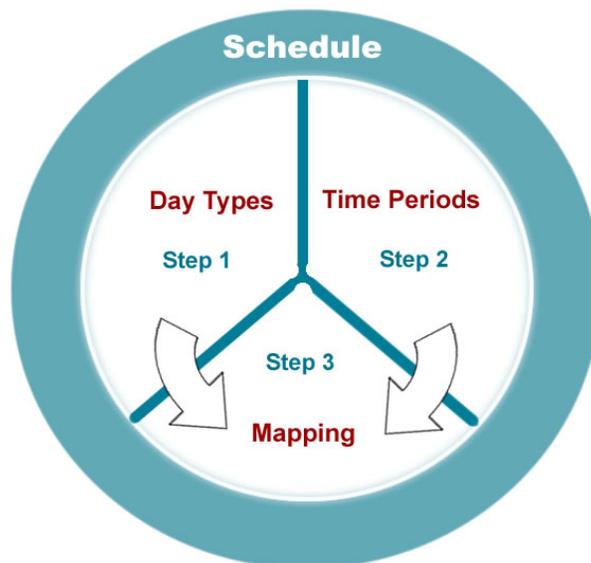
### UNDERSTANDING THE PARTS OF THE 1-MINUTE SCHEDULE:

**There are 3 basic parts of the 1-minute format:** You will configure each part in sequence.

- ▶ **Day Types** (assign calendar dates - basically date ranges) – day types are global to the entire loop, thus and you can use day types in any schedule on the same loop. See the following section on *Understanding Day Types* for details.
- ▶ **Time Periods** (1-min intervals of a 24 hr. span) - these can be mapped to any day type; and you can use your time periods in any schedule on the same loop. See the following section on *Understanding Time Periods* for details.
- ▶ **Schedules** - where you map the appropriate Time Period to each Day Type. See the following section on *Understanding Schedules* for details.

### The following programming rules apply to schedules:

- ◆ you must create **day-types** (calendar days) before you can map them to a schedule
- ◆ you must create **time-periods** (hours/mins) before you can map them to a schedule
- ◆ you must create the **schedule** and **map the day-types and time-periods** in order to use them in an access group or door schedule and load them to the panels.



## **PART-1: Planning Your One-Minute Time Schedules:**

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### **1. You need to determine which loop/panels are using 1-minutes schedules.**

You can use schedules to arm and disarm inputs and motion sensors, unlock doors, control access groups (cardholder access).

**SYSTEM PROGRAMMING:** You have several options on your 600-series panels...

- ▶ **You can use 1-minute schedules on all your panels** to simplify programming. An example of someone who probably needs minute-level granularity is a school, university campus, factory, large retail or business complex that needs schedules that operate within the quarter-hour. If you program to the one minute schedule from the beginning you will avoid having to split loops later.
- ▶ **You can use 1-minute schedules only on panels that need that level of granularity**, provided you put them on their own loop.

**IMPORTANT:** The 1-minute format cannot be intermixed with 15-minute format on the same Cluster/Loop.

**UPGRADING AND CONVERTING EXISTING SITES:** You have several considerations...

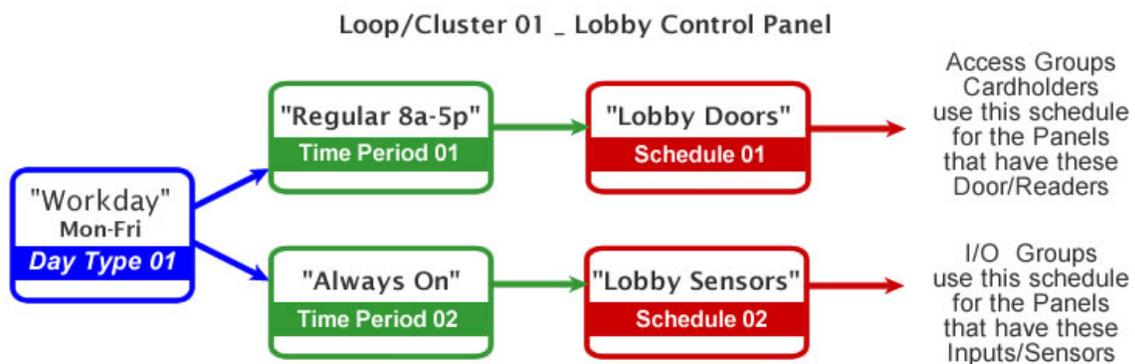
- ▶ **500i-series hardware:** only supports 15-minute format. You must upgrade panels to 600-series to use the 1-minute format. Use 600-series panels where your doors or devices need 1-minute format to the new panels..
- ▶ **600-series hardware:** supports both *15* and *1-minute formats*, but not on the same loop. If your site has an extensive amount of 15-minute schedules, you can split-out the panels that need 1-minute format. Be aware it may be better or faster to reprogram them for 1-min format.

## PART-1: Planning Your Schedules (continued):

2. You must determine which Day Types you need to configure. This means you will decide which days of the week will be associated with a day type (i.e.. workdays, weekends or holidays). Day Types are Loop specific. **See Understanding Day Types in Part-2 for more details.**
3. You must plan which Time Periods each day type will use. This means you will decide which hours/minutes will be active or inactive in a 24-hour period (e.g. 8-5, shifts, etc.). **See Understanding Time Periods in Part-3 for more details.**
4. You must consider how Day Types and Time Periods will be mapped in each schedule. When mapping a schedule you can use any of the time periods with any day type as needed.

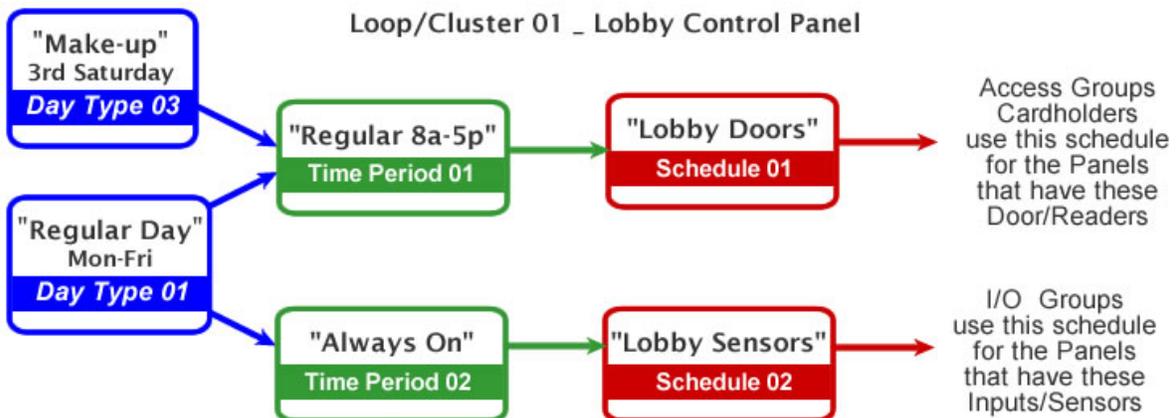
**Example 1 shows how a day type is used on more than one schedule in a Loop.**

- ▶ **Lobby Doors schedule** uses **Regular 8-5 time period** for **Workdays day type**.
- ▶ **Lobby Sensor schedule** uses a **Always On period** for **Workdays day type**.



**Example 2 shows how a time period is mapped to more than day type in a Loop.**

- ▶ **Lobby Doors schedule** uses **Regular 8-5 time period** for **Make-up day type**.
- ▶ **Lobby Sensor schedule** uses a **Regular 8-5 time period** for **Regular day type**.



## Part 2: Setting the Loop to use One-Minute Schedules:

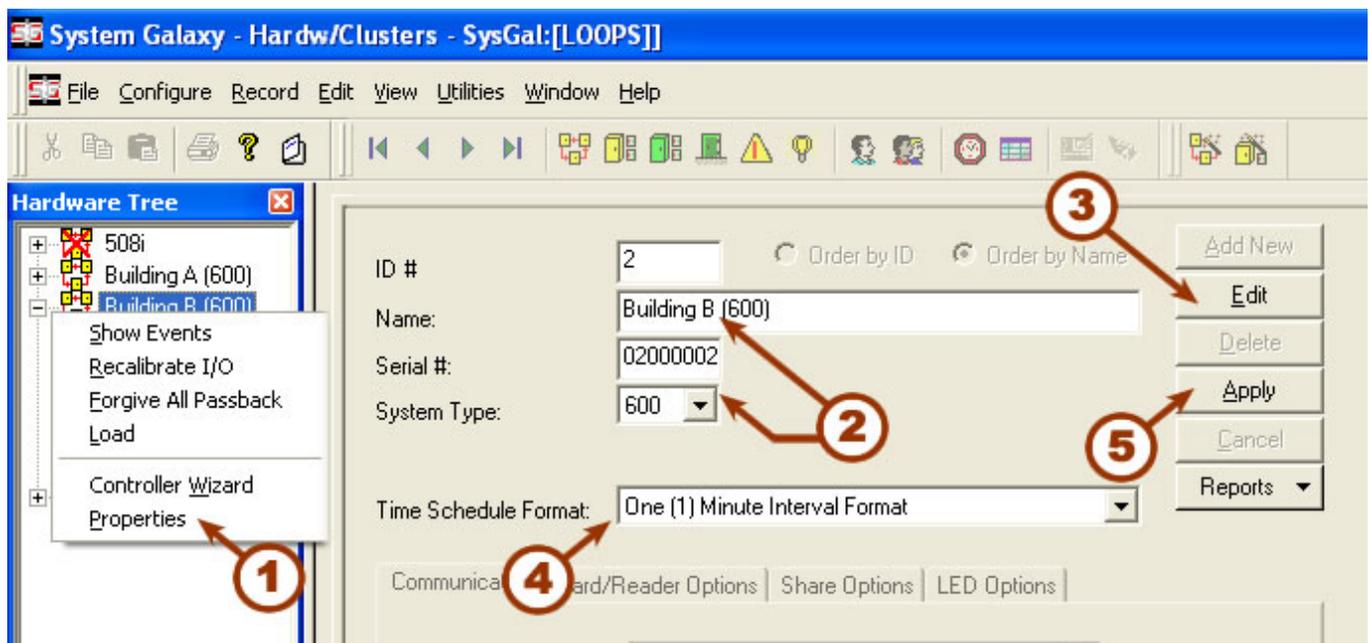
You must configure the option to use 1-Minute Schedules in the Loop/Cluster Programming screen.

### The following rules apply to the Loop:

- ◆ the 1 minute time format to applies to all panels on the loop.
- ◆ all panels in the same loop must use 1-minute schedules.
- ◆ you can't mix 1-minute schedules with 15-minute schedules – if you have 15 minutes schedules you wish to keep using you must do one of the following-
  - a. keep the panels using 15-min schedules on a different loop
  - b. create compatible schedules under the 1-minute schema to meet needs.

### SETTING THE LOOP PROPERTIES TO USE 1-MINUTE FORMAT:

1. Open the **Loop Programming screen** for the 600 Loop you want to configure (you can do this by right-clicking the Loop Name and selecting the Properties option from the context menu).
2. Make sure you have chosen the correct loop and that it is set to 600 type
3. click the **EDIT** button
4. Choose the **1-Minute Schedules** option in the **Schedule Format** droplist
5. Click **APPLY** to save changes



## Part 2: Programming Day Types for the Calendar Year:

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The **Day Types Programming screen** allows you to assign calendar days to a day type. Before you program Day Types you should have a clear understanding of how they work.

### UNDERSTANDING DAY TYPES:

A Day Type is simply the kind of days that are used in a time schedule (i.e. workdays, holidays, etc.). All the days of the year that need the same time schedule should be assigned to the same day type. In this way you will divide all the calendar days between the different day types you need (i.e. weekdays, week ends, holidays, half days, etc.).

You will use the Calendar Tool or the Calendar Wizard to select and assign the days you need to each day type.

#### The following rules apply to Day Types:

- ♦ Every day of the year must be assigned to a Day Type to be used in a schedule.
- ♦ There are 16 Day Types available for per Loop – you must assign all the calendar dates in the upcoming year to the Day Types in order to have schedule coverage.
- ♦ The days/dates in a day type can be contiguous or non-contiguous dates.
- ♦ A specific date (individual day) can only be assigned to one Day Type at a time. For example. You assign all Mondays thru Fridays to a “Week Day” day type. Then assign a date such as July 4<sup>th</sup> to a “Holidays” day type. If July 4<sup>th</sup> falls on a weekday (m-f), then that date is removed from the “Week Day” day type and assigned to “Holidays” day type.
- ♦ Calendar days are distinct dates – this means that if you assign July 4<sup>th</sup> 2009 to the “Holiday” day type, then you do not have July 4<sup>th</sup> of 2010 assigned also. To add it, you must advance the Calendar Function to the 7/4/2010 date and select that day.

**TIP:** Program the day types that use the most or majority of days first, like weekdays. Work your way down to the day types that use the least days, like holidays.

#### Examples of Day Type configurations for various customers:

##### Business Day Types

Day Type 01 “Work Day” – Mon-Fri from Jan to Dec 2009  
Day Type 02 “Week End” – Sat-Sun from Jan to Dec 2009  
Day Type 03 “Holidays” – Closed dates for year 2009

##### School Day Types

Day Type 01 “Regular Attendance” – Mon-Fri year 2009  
Day Type 02 “Early Dismissal” – any dates assigned 2009  
Day Type 03 “Closed” – Sat-Sun year 2009  
Day Type 04 “Sat School” –Saturday make-up dates 2009  
Day Type 05 “Holidays” – Closed dates for year 2009

##### Retail Day Types

Day Type 01 “Regular Day” – Mon-Thu from Jan to Dec 2009  
Day Type 02 “Long Day” – Fri-Sat from Jan to Dec 2009  
Day Type 03 “Sunday” – Sunday hours for year 2009  
Day Type 04 “Holidays” – Closed dates for year 2009

##### Seasonal Swimming Pool Hours

Day Type 01 “weekly off season” – Mon-Thu; Jan/May;Sep/Dec  
Day Type 02 “weekend off season” – Fri-Sat; Jan/May;Sep/Dec  
Day Type 03 “weekly Summer” – Mon-Thu; Jun/July/Aug  
Day Type 04 “weekend Summer” – Fri-Sat; Jun/July/Aug

## PROGRAMMING DAY TYPES:

### Opening the 1-Minute Schedules screens:

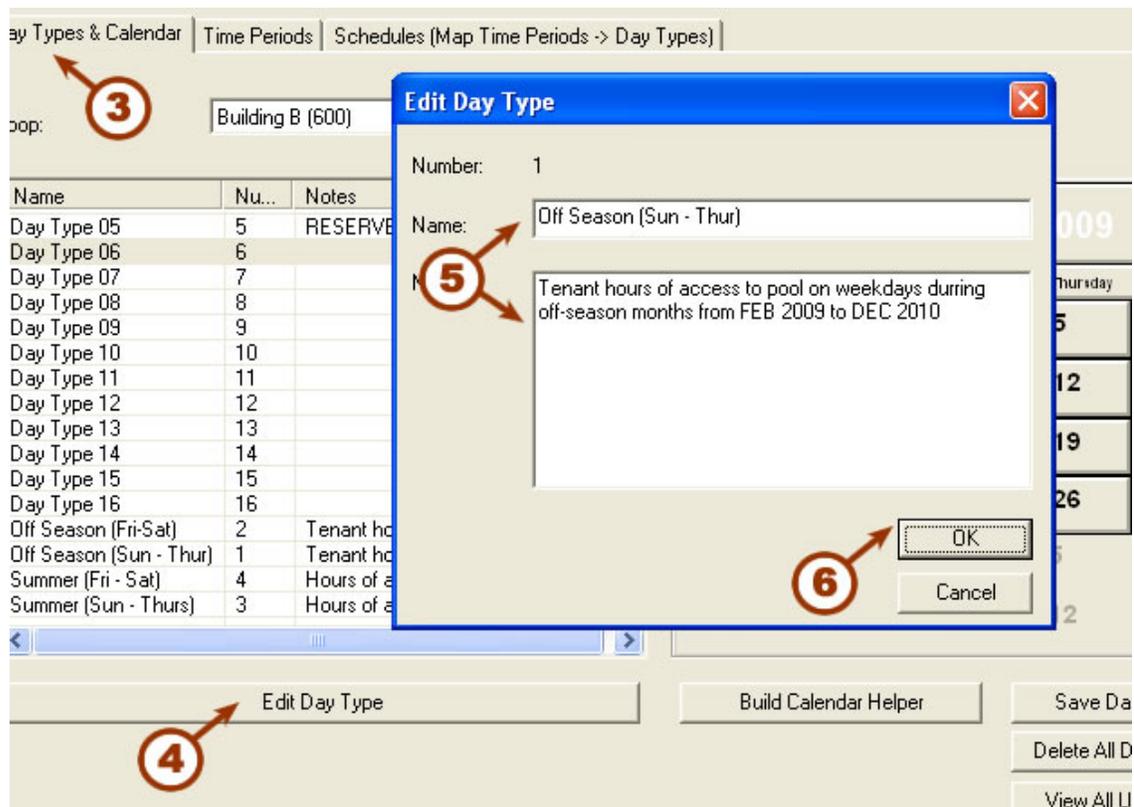
1. Open the **1-Minute Schedules Programming screens**:
  - ♦ Select **Configure > Schedules > Time Schedules** from the Menu
  - ♦ or Click on the **CLOCK icon button** on the Galaxy toolbar..
2. Select the correct loop from the **Loop** droplist to show the 1-Minute programming screens. If you see 15-Minute programming screens, then you have selected a loop that is 500i-series or you have not set your Loop's properties to use the 1-minute schema (see Part-1).



## PROGRAMMING DAY TYPES (continued):

### Programming a Day Type Name:

3. select the **'Day Types & Calendar'** tab
4. click the **Edit Day Types** button.
5. Enter the descriptive **Name** of the Day Type. You can add **Notes** to explain the purpose of the day type and which date ranges it affects.
6. click **OK button** to save the Day Type name and notes



## PROGRAMMING DAY TYPES (continued):

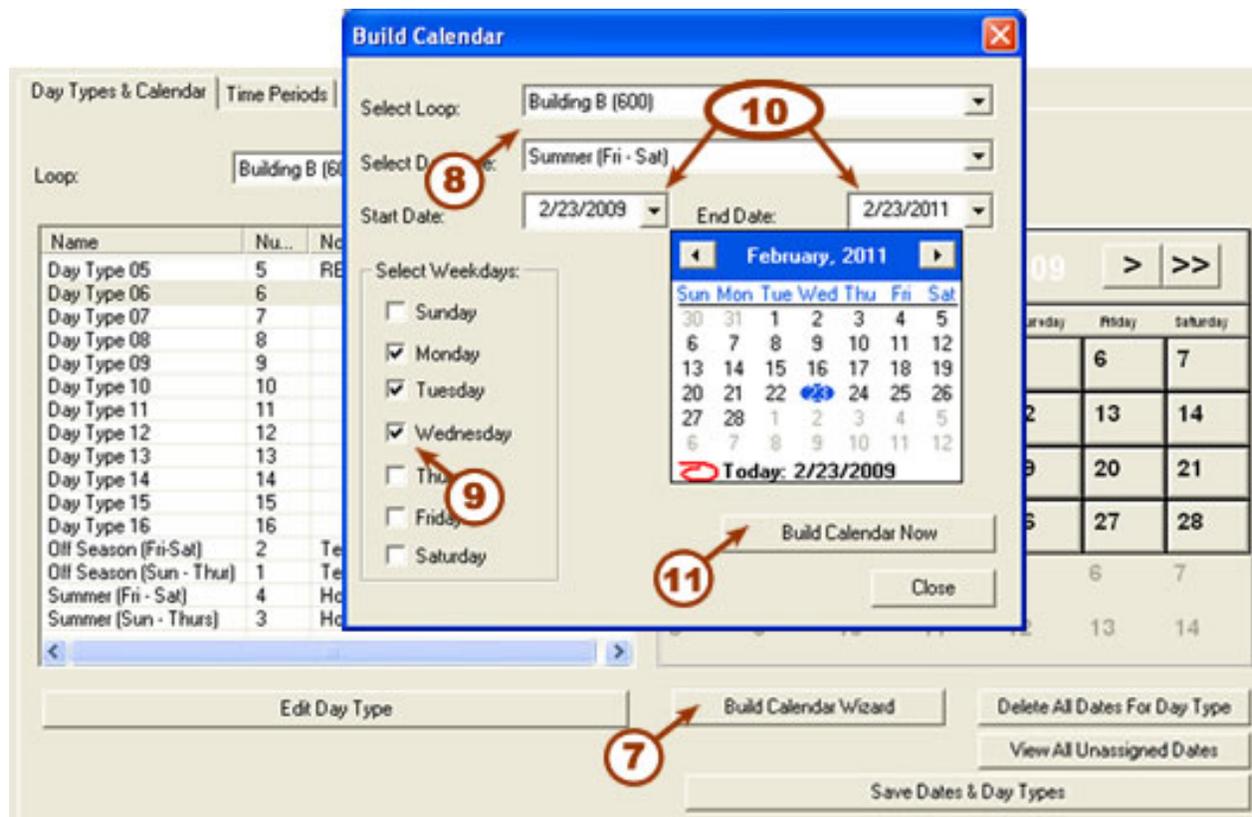
### Assigning the Calendar Days using the Calendar Wizard:

The Calendar Wizard will help you configure large spans of time in a situation where the same days of the week are usually assigned to one day type (e.g. workdays = M/T/W/TH/F ).

You can use the interactive Calendar object also (described in the next section) for individual, distinct dates – such as holidays or irregularly occurring dates.

7. click the **Build Calendar Helper/ Wizard** button to open the calendar wizard
8. the correct **Loop Name** and **Day Type** must be selected
9. **check (click) the days** of the week that will be affected by the intended schedule
10. select the **Start Date** and **End Date** for the date range/year desired
11. click the **Build Calendar Now** button to save and assign the dates to the Day Type

**NOTE:** repeat steps 7 thru 11 as needed to build your day types.



## PROGRAMMING DAY TYPES (continued):

### Assigning the Calendar Days using the Calendar Tool:

The calendar days (distinct dates) can also be assigned using the Calendar Tool.

12. click the [**<< | <**] and [**> | >>**] buttons to change the Month of the year.

13. **right-click the days** you want to assign (red means it will be assigned). Select or un-select a day/date by right-clicking the day block as needed.

**NOTE:** You do not have to have continuous or contiguous dates. You can select dates in one month and advance to the next month and select more non-contiguous dates. When you click the save button all the distinct dates will be saved if they are red.

14. click the **SAVE** button to save and assign the days to the day types.

15. repeat steps 12 thru 14 for each day type as needed.



**TIP:** You can put all your holiday dates that will use the same schedule in the same day type. Thus if you are closed all day for New Year's Day, July 4<sup>th</sup>, Thanksgiving Day, etc. then you can assign them all to one day type named "Holidays".

**TIP:** The [ Delete All Dates for a Day Type] button will release or clear all the assigned days to the currently selected day type. This is useful if you change your mind or need to adjust which days or dates you have assigned.

## PROGRAMMING DAY TYPES (continued):

### Assigning the Unassigned (skipped) Days:

Unassigned calendar days can be queried and assigned using the Unassigned Date Finder. The system will query all dates that are unassigned from the current day to the last known date configured in the system for this loop. This way you can identify any skipped dates and assign them to the desired day type.

16. click the [ View All Unassigned Days ] button allows you to see a list of any/all skipped dates
17. Use the mouse to check the days to assign them or uncheck to avoid assigning them
18. Choose the Day Type from the droplist at the bottom of the screen
19. Click the [ Assign Selected Dates to Day Type ] to assign the dates to a day type

The screenshot shows a window titled "Un-assigned Dates" with a close button (X) in the top right corner. The window contains a table with the following data:

Un-assigned Dates	
<input checked="" type="checkbox"/> Monday, 2/21/2011	
<input checked="" type="checkbox"/> Tuesday, 2/22/2011	
<input checked="" type="checkbox"/> Wednesday, 2/23/2011	
<input checked="" type="checkbox"/> Thursday, 2/24/2011	
<input checked="" type="checkbox"/> Friday, 2/25/2011	
<input type="checkbox"/> Monday, 2/28/2011	
<input type="checkbox"/> Tuesday, 3/1/2011	
<input type="checkbox"/> Wednesday, 3/2/2011	
<input type="checkbox"/> Thursday, 3/3/2011	
<input type="checkbox"/> Friday, 3/4/2011	
<input type="checkbox"/> Monday, 3/7/2011	
<input type="checkbox"/> Tuesday, 3/8/2011	
<input type="checkbox"/> Wednesday, 3/9/2011	
<input type="checkbox"/> Thursday, 3/10/2011	
<input type="checkbox"/> Friday, 3/11/2011	
<input type="checkbox"/> Monday, 3/14/2011	
<input type="checkbox"/> Tuesday, 3/15/2011	
<input type="checkbox"/> Wednesday, 3/16/2011	
<input type="checkbox"/> Thursday, 3/17/2011	
<input type="checkbox"/> Friday, 3/18/2011	

On the right side of the table, there are two buttons: "Select All" and "Clear All".

At the bottom of the window, there is a "Select Day Type:" label, a dropdown menu showing "Day Type 05", and an "Assign Selected Dates to Day Type" button.

## Part 3: Programming the Time Periods:

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The *Time Periods Programming screen* allows you to configure the active and inactive intervals of a given time period.

### UNDERSTANDING TIME PERIODS:

Time Periods are the 1-minute intervals that the schedule will be 'active' or 'inactive' during a 24-hour span. There are 1,440 minutes in a 24-hour span.

#### The following rules apply to Time Periods:

- ♦ There are 254 programmable Time Periods per Loop. You can assign your Time Periods to any schedule or day type that you make within the Loop. You can map either of these to any day type within a schedule.
- ♦ There are 2 reserved Time Periods per Loop. "Always Active" and "Never Active". These cannot be altered but can be used as often as you like. You can map either of these to any day type within a schedule.
- ♦ You can map only one period to a day type at a time, but you can use a time period for more than one day type.
- ♦ Green segments are considered active or on. Typically the system would be installed and configured to mean unlocked or accessible for doors. For inputs the relationship to armed and disarmed is based on how the relay is wired Normally Open or Normally Closed.
- ♦ Red segments are considered inactive or off

## PROGRAMMING TIME PERIODS:

### Opening the 1-Minute Schedules screens:

1. Open the **1-Minute Schedules Programming screens**:
  - ♦ Select **Configure > Schedules > Time Schedules** from the Menu
  - ♦ or Click on the **CLOCK icon button** on the Galaxy toolbar..
2. Select the correct loop from the **Loop** droplist to show the 1-Minute programming screens. If you see 15-Minute programming screens, then you have selected a loop that is 500i-series or you have not set your Loop's properties to use the 1-minute schema (see Part-1).



## PROGRAMMING TIME PERIODS (continued):

### Creating the Time Periods:

3. select the **'Time Periods'** tab
4. select the desired **Loop Name** if it is not already selected
5. click the **Add New Time Period** button
6. enter a descriptive and unique name for the time period (e.g. "Day Shift 8a to 5p" might be needed to map to the "Workdays" day type. Also, enter any descriptive notes about the schedule (e.g. "used for main entrance").
7. use the mouse buttons to **left-click and right-click to set the intervals**. Green is (active/on) or Red is (inactive/off) .
8. click the **SAVE** button to save the Time Period

**TIP:** double-clicking the mouse buttons will either turn on the whole row or turn off the whole row of time intervals.

The screenshot displays the 'Time Periods' configuration window. At the top, there are tabs for 'Day Types & Calendar', 'Time Periods', and 'Schedules (Map Time Periods -> Day Types)'. The 'Time Periods' tab is active. Below the tabs, there are input fields for 'Loop' (set to 'Building B (600)'), 'Number' (set to '1'), and 'Notes'. A 'Select Time Period' dropdown is also present. The main area shows a grid of time intervals. The intervals are: Midnight - 2 AM, 2 AM - 4 AM, 4 AM - 6 AM, 6 AM - 8 AM, 8 AM - 10 AM, 10 AM - Noon, Noon - 2 PM, and 2 PM - 4 PM. Each interval is represented by a horizontal bar with a 5-minute grid. The 10 AM - Noon interval is highlighted in green, indicating it is active. The other intervals are red, indicating they are inactive. On the right side, there is a control panel with buttons: 'Add New Time Period', 'Edit Time Period', 'Delete Time Period', 'Save Time Period', and 'Cancel Add/Edit'. Red callout boxes with numbers 3 through 8 point to specific UI elements: 3 points to the 'Time Periods' tab, 4 points to the 'Loop' dropdown, 5 points to the 'Add New Time Period' button, 6 points to the 'Notes' field, 7 points to the 10 AM - Noon bar, and 8 points to the 'Save Time Period' button.

## Part 4: Programming the Schedules:

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The **Schedules Programming screen** allows you to map the time periods to the day types as needed for each schedule.

### UNDERSTANDING SCHEDULE MAPPING:

Schedules have up to 16 Day Types available based on how you set them up in the previous steps. Any schedule you create will rely on the same 16 day types that the whole loop uses. You can create as many time periods as you like and use them as often as you like.

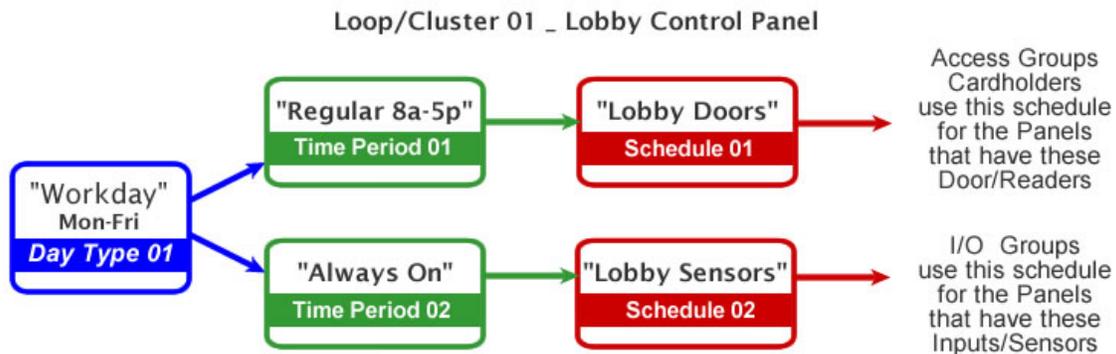
For your door schedules, you may want the doors use a time period that unlocks from 8 - 5 on regular workdays (m-f). But you might want to have motion sensors in the lobby remain active all the time even on regular workdays. Thus, you will map a different time period to the Workdays day type in the Sensor schedule than you did in the Door schedule.

#### The following rules apply to Time Periods:

- ◆ There are 256 programmable Time Periods per Loop.
- ◆ You can use your Time Periods in any schedule in the same loop
- ◆ You can map your Time Periods to any Day Type in the same schedule.

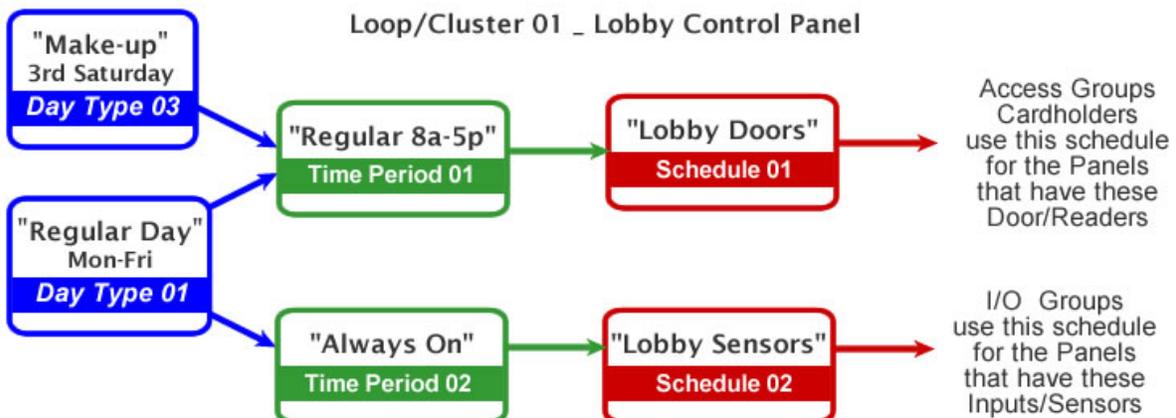
**Example 1 shows how the same day type is used in two different schedules on the same loop.**

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**Example 2 shows the same time period is mapped to two different day types in the same schedule.**

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## PROGRAMMING TIME PERIODS:

### Opening the 1-Minute Schedules screens:

1. Open the **1-Minute Schedules Programming screens:**
  - ♦ Select **Configure > Schedules > Time Schedules** from the Menu
  - ♦ or Click on the **CLOCK icon button** on the Galaxy toolbar..
2. Select the correct loop from the **Loop** droplist to show the 1-Minute programming screens. If you see 15-Minute programming screens, then you have selected a loop that is 500i-series or you have not set your Loop's properties to use the 1-minute schema (see Part-1).



## PROGRAMMING TIME PERIODS (continued):

### Creating the Schedules:

3. select the **'Schedules'** tab
4. select the desired **Loop Name** if it is not already selected
5. click the **Add New** button
6. enter a descriptive and unique name for the Schedule (e.g "Lobby Doors" ).
7. click the **Time Period droplist** that is inside the Mapping listview object. Choose the period you want used for each Day Type in this schedule.
8. click the **APPLY** button to save the Schedule

**NOTE:** See the Main Software Manual for how to assign schedules to the Access Groups and doors, I/O Groups, inputs and outputs, elevators, etc.

**NOTE:** See the Main Software Manual for how to Load all schedules to the panels.

The screenshot shows the 'Schedules (Map Time Periods -> Day Types)' window. It features a 'Loop' dropdown set to 'Building B (600)', a 'Number' field with '1', and a 'Schedule Name' dropdown set to 'Pool Schedule'. A table titled 'Day-Type to Time Period Mapping' lists various day types and their corresponding time periods. A dropdown menu is open for the 'Summer (Sun - Thurs)' row, showing options like 'Access Summer Days', 'Always Active', and 'Never Active'. Buttons for 'Add New', 'Apply', 'Edit', 'Delete', and 'Cancel' are visible, along with a 'Reports' dropdown.

Day Type	Time Period
Day Type 05	** Never Active **
Day Type 06	** Never Active **
Day Type 07	** Never Active **
Day Type 08	** Never Active **
Day Type 09	** Never Active **
Day Type 10	** Never Active **
Day Type 11	** Never Active **
Day Type 12	** Never Active **
Day Type 13	** Never Active **
Day Type 14	** Never Active **
Day Type 15	** Never Active **
Day Type 16	** Never Active **
Off Season (Fri-Sat)	Access OffSeason Weekends
Off Season (Sun - Thur)	Access OffSeason Weekdays
Summer (Fri - Sat)	Access Summer WE
Summer (Sun - Thurs)	Access Summer Days