GALAXY LOOP GROUP ADDENDUM

for **Schedule Propagation**

Includes Programming 1-Minute Schedules *with* Loop Group Feature

SYSTEM GALAXY | VERSION 11.X

How to Program
*One-Minute Schedules
with Loop Groups*

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Introduction to Managing Schedules with Loop Groups

This guide does not offer instructions about how to configure 15-minute schedules. Fifteen-minute schedules are covered in the System Galaxy Software User Guide.

This guide explains how to use the **Loop Group Update feature** to propagate **1-Minute Schedules** to multiple loops, simultaneously. This feature is designed especially for large systems that have multiple loops, or school systems that have multiple campuses. The ability to propagate schedules eliminates the laborious task of configuring identical schedules on every loop. You can be sure all the loops have the exact same schedule. Additionally, the feature makes the ongoing task of maintaining schedules more efficient – however, great caution must be taken to ensure that you are consistently updating the schedules in the same way.

Managing Common Schedules using the Loop Group Update Option

Schedule Propagation is basically the ability to automatically copy/update a *common schedule* on multiple loops/clusters at the same time. This means the operator will manually program the schedule (day types and time periods) on the 'home loop'; and the system will use the *Loop Group Update option* to automatically propagate the schedule to every *target loop* that is a participating Loop Group Member.

Managing Local Schedules without Loop Groups

The Loops will also have schedules (day types and time periods) that are not maintained by the Loop Group Update feature. For these schedules you will UNCHECK the loop group option before you save your changes.

Establishing 'Best Practices'

Establishing 'best practices' will make managing your schedules easier and avoid conflicts.

Be sure to establish Best Practices like …
- Designating a "home loop" that the programming of common schedules originate from
- Designate a way to differentiate between your *common schedules vs. local schedules (i.e. common day types and time periods vs. local day types and time periods)*
- Develop and adhere to consistent processes for planning, creating and maintaining common schedules with the Loop Group feature.
- Use good training and communication practices with operators who maintain schedules
- Use naming and record-keeping conventions that make it easy to identify the purpose of a common schedule and where it is used.
- Keep good records of your work.
- Never attempt to use the propagation (loop groups) for exceptions and exclusions. When you need to temporarily alter a timing of doors and devices for a brief exception or duration, you should consider using the **Command Script feature** and **Command Scheduler**. See the Guide for using Command Scripts and Action Scheduler for details.

What's covered in this guide

This guide covers the following topics:

- Planning of Loop Groups
- Planning for Day Types
- Creating Loop Groups
- Assigning Loops to Loop Groups
- Programming Day Types
- Using the Calendar Tool to assign dates to a Day Type
- Using the Calendar Wizard to assign dates to a Day Type
- Finding unassigned dates and other related utilities
- Programming 1-minute Time Periods
- Configuring 1-minute Schedules (mapping day types to time periods)
- Viewing Reports
- Using (assigning) schedules throughout the system

The One-Minute Schedule in a Nutshell

The **One-minute Time Format** provides the ***ability to create precision schedules*** in *one-minute increments*. These schedules activate & deactivate at any minute of the day (i.e. 24-hr cycle) based on the programming.

COMPONENTS OF THE ONE-MINUTE SCHEDULE

In System Galaxy, the operator creates a **One-Minute Schedule** by first building the components of the schedule. The components are **[Day Types & Calendar Days]** and **[Time Periods]**. Once you have built your components, you must pair-up, or map these components together in the Schedules tab.
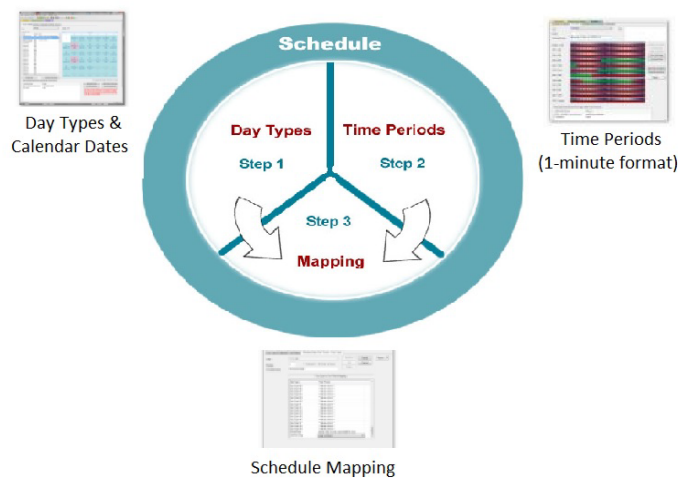
NOTE: After the operator has created the necessary schedules, they can be assigned to doors, hardware devices, and card access privileges in their respective programming screens. After the system programming is completed, the operator must load the loop(s)/control panels with the schedules and new system programming.

NOTE: If you are using Loop Groups to propagate schedules to multiple loops at the same time, then you must have already

- *assigned those Loops to a **Loop Group Member option** in the Loop Properties screen*

- *and you must enable the **Loop Group Update option** before saving the schedule or Day Type or Time Period. See more detail on this in the Concepts and Planning chapter.*

Important Terminology used in this Guide

TERM	MEANING
1-minute format	A *time format* that allows schedules to work in '1-minute increments' (instead of standard quarter-hour increments) for all panels on a loop (a loop-level setting).

TERM	MEANING
15-minute format	A *time format* that allows schedules to work in standard quarter-hour increments. NOTE: see the *System Galaxy Software User Guide* for all instructions about programming 15-minute schedules and holidays.
Command Scripts feature	A feature that allows the Administrator to create lists of system commands that temporarily override normal schedules. See *Command Script User Guide* for more.
Common Schedule (see local schedule)	The term '*common schedules*' refers to any schedule that is propagated or multiple loops have in common that is propagated and maintained by Loop Group updates. Ex: if three loops need their doors unlocked from 8a – 5p every day, then they have common schedules (i.e. can use the Loop Group Update feature).
Local Schedule	The term '*local schedule'* refers to any schedule (day type or time period) that is not updated or maintained by Loop Group Updates (schedule propagation feature).
Home Loop (source loop)	The loop you are currently editing in a programming screen. The Home Loop is considered to be the programming source for the member loops.
Loop (Loop/Cluster)	A **Loop (or Cluster)** is simply **a group of controllers** that use the same loop-level programming (settings & rules. For example: all control panels within a loop will use the same *time format*.
Loop-level Programming	Any software feature/option/setting that applies to all control panels in a loop (i.e. the Loop Properties; Schedules, Day Types, Time Periods, Access Groups, etc.).
Loop Group	A **Loop Group** is a feature in the software that allows the operator to propagate (copy & update) **common time schedules** to multiple loops simultaneously. Once a loop becomes a member of a Loop Group, it is subject to receive the changes that are made from any other loop in the same group.
Loop Group Member option	The *Loop Group Member option* is a checkbox option found in the Loop Properties screen. When checked, the loop is considered to be a member of the group.
Loop Group Update option	The *Loop Group Update option* is a checkbox option found in the schedule screens. When checked, changes will be propagated (copied) to all target member loops.
Loop Properties	The **software programming screen** where loop-level settings are configured (i.e. Loop Groups, 1-minute time format, etc). These properties apply to all control panels within the loop.
Member Loop (target loop)	Any loop that is a member of a Loop Group. Member loops are target loops that receive updates from the *home loop* when the Loop Group Update option is enabled.
Propagating (schedule propagation)	**Propagating schedules** means you are **simultaneously copying** the time schedule programming of one loop to all loops that are members of the same **Loop Group**.
Schedule, Day Type	A **Day Type** is a component of a *Time Schedule*. A Day Type allows the operator to define **which calendar days/dates** are to be reserved (used) for use with a particular time period.
Schedule, Time Period	A **Time Period** is a component of a *Time Schedule* that designates which minutes (during a 24-hour span) are "active"(on) or "inactive"(off). [* per typical wiring]
Schedule (mapping)	A **Schedule** maps (or pairs-up) the Day Types (calendar days) with the Time Periods.

Overall Requirements for 1-Minute Time Schedules

SG HARDWARE REQUIREMENTS

1. You must have 635/600-series Control Panels to support 1-Minute Time Schedules and Loop Groups.
2. You <u>cannot</u> mix *1-minute format* with *15-minute format* on the same loop/cluster.
3. You must have *1-minute format* schedules on a separate loop if you are using both formats.

SYSTEM-WIDE SOFTWARE SETTINGS

1. System Installation UPGRADES: you must run Part 1 of the software installation DVD to upgrade to the latest .NET Framework.

2. **System Registration or Workstation Registration:** There are no system registration requirements pertaining to using Loop Groups or 1-Minute Time Schedules.

3. **System Settings (Workstation Options):** There are no *pre-configuration* requirements in the system settings screen for using *Loop Group* programming or 1-Minute Time Schedules.

LOOP PROPERTY SETTINGS

4. You **cannot mix the Sharing** of time schedules with Loop Groups feature.

5. The Loop Group feature is designed to work with 1-minute schedules.

6. To **enable 1-minute format** on a loop, you must set the [Time Schedule Format] field to '1-Minute Time Format' (in Loop Properties screen/Advanced tab).

7. To **make a loop a participating 'common' member of a Loop Group**, you must enable (check) the *Loop Group Member option* in the Loops Properties screen/Loop Group Members tab.

   a. To withdraw a loop from getting updates, the ***Loop Group Member*** option must be unchecked.

   b. Enabling the ***Loop Group Member option*** causes the *Loop Group Update option* to appear in all the schedule programming screens (inclu. day types & time periods) for the common loop(s).

   c. The ***Loop Group Member*** option must be used in combination with the ***Loop Group Update option*** in order to actually copy or propagate schedules.

SCHEDULE PROGRAMMING

8. You must **create your *Day Types* and *Time Periods*** before you can create your ***Schedules***.

9. You ***should*** reserve a block of your day types to be used for common schedules. There are 100 Day Types – for example use Day Types 1 through 30 for common schedules and holidays. Use the remainder of the day types for independent scheduling. If you can keep your common day types together and not intermixed with independent day types it will make programming more organized.

10. When building your day types, **you must build the day types that uses (claim) the most days/dates first, then build the day types that claim/take the least days last**. This is because day types steal the days from pre-existing day types when you pick a date range. **EX:** build the workdays and weekends

first for the entire year using the date ranges. Then build the day types for holidays or special days last. If you do Normal Days after Holidays then the system will steal days from the Holiday – the Holiday will loose its days to the Normal Day.

SCHEDULE PROPAGATION

11. To make a *common schedule** propagate to all members of a Loop Group, the operator must enable (check) the **Loop Group Update option** at the *local loop* **before saving the schedule*** (this includes day types and time periods).

    a. When unchecked the operator will only update the schedule at the *local loop* (i.e. the loop that is being edited).

    b. You must **create *Schedules*** (including time periods to the day types), before you can use them in the system or at the panels.

ASSIGNING AND LOADING SCHEDULES

12. You must assign your schedules to Access Groups, doors, inputs, outputs, elevators or other devices before they can be effective in the control panel.

13. You must **load *Schedules*** to your control panels after all programming is done and before they are in effect. Once you load the schedules to the Loops/control panels the first time, the system should update the panel when a schedule is edited.

14. if your panels (hardware) or access groups do not seem to be obeying the schedules, check the following:

    a. Verify that the *Loop Group Member option* is checked (or unchecked) for the loop in question if the update was supposed to be propagated through the Loop Group function.

    b. Verify that the *Loop Group Update option* is checked (or unchecked) the Loop Group update option as you desired BEFORE you save your changes in the following screens.

        • Verify that you have assigned the correct calendar days to the Day Type as you intended.

        • Verify you correctly configured the 1-minute intervals of the Time Period you intended.

        • Verify the correct Time Period is mapped to the correct Day Type in the Schedule screen.

    c. **Cardholder**: Verify you have assigned

        • the correct Schedule to the correct access group in Access Group Programming screen;

        • the correct access group to the card/cardholder in the Cardholder screen;

    d. **Doors/Readers**: Verify you have assigned

        • the correct Schedule to the correct door as you desired in the Reader Properties screen;

    e. **Inputs/outputs and I/O Groups:** Verify you have assigned **…**

        • the correct Schedule to the correct hardware device in the appropriate hardware Properties screen;

    f. **Load the loop/panel** including schedules, access rules, cardholders, readers and other hardware devices **if you are not sure your changes went to the panel**.

Planning & Best Practices for 1-min Schedules & Loop Group

This chapter addresses the concepts of the 1-**Minute Time Schedules** and the **Loop Group feature** that allows the operator to copy *common schedules* to multiple loops/clusters at the same time.

It is important to understand how the schedules work before you employ the LOOP GROUP feature.

Before Reading this Chapter …

Before reading this chapter you should

- Review and familiarize yourself with the *Terms & Definitions* section

- Review and familiarize yourself with the *Requirements section* found.

It may be helpful to print those sections for reference while reading this chapter.

Concept for using 1-Minute Time Schedules:

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.

◆ When you create the **Schedule***, you must "map" the *Time-Periods* (hours/mins) to the *Day-Types* (calendar days). TIP: Use logical, descriptive names.
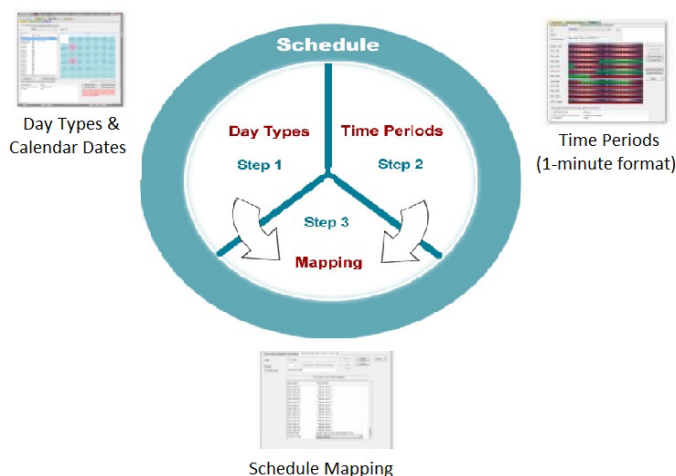
(*) FOOTNOTE: if you want your programming to be propagated to other loops, you must select the Loop Group Update option for the desired Loop Group. Note: the target loops must be a member of the chosen Loop Group.

IMPORTANT: Once a **Schedule** is created, it must be assigned - either to an access group or to a hardware device (i.e. door schedule, input, etc.). After being assigned, the schedule must be loaded to the control panels on the loop's **.**

STEP-1: Planning & Creating Loop Groups:

*Note that "**schedules**" here-in means any component of the schedule programming, i.e. the day types, calendar dates, time periods, and schedule mapping.*

UNDERSTANDING THE PARTS OF THE 1-MINUTE SCHEDULE

1. **Make a list of which loops/control panels will need common Day Types, Time Periods and Schedules.**

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

   b. **BEST PRACTICE:** Establish a *naming convention* for your loops and clusters that will allow your hardware to sort in the **Hardware Tree** as you desire.

   - Use *logical & descriptive names* for your loops and control panels – "Central High Exterior Doors", West Side Camera I/O Groups.

   - Include the *system ID of the loop/panel and its physical location* if you find it helpful. The table below is an example of how using a *consistent naming convention* will allow you to organize and identify your hardware easily, both when viewed in the hardware tree and event screens as well as on reports and logging.

   EXAMPLE 1 of a naming convention that will sort by purpose

LOOP/CLUSTER NAME: Purpose (Location, ID)	CONTROL PANEL NAME: Purpose (ID, Location))
Loop 01 – West High – Doors and Cameras	• "Doors – Exterior (pnl 01 Main Closet)" • "Cameras – West side (pnl 02 IT Closet)"

   EXAMPLE 2 of a naming convention that will sort by logical panel ID

LOOP/CLUSTER NAME: ID (Location, Purpose)	CONTROL PANEL NAME: ID (Purpose, Location)
Loop 01 –West High (Doors and Cameras)	• "Pnl 01 Exterior Doors – Main Closet"
	• "Pnl 02 Camera I/O Groups – Main Closet"

   EXAMPLE 3 of a naming convention that will sort by alphabetical name of the Location

LOOP/CLUSTER NAME: Location, ID, Purpose	CONTROL PANEL NAME: Location (ID, Purpose)
West High (Loop 01 – Doors and Cameras)	• "Main Closet - Pnl 01 Exterior Doors "
	• "Main Closet - Pnl 02 Camera I/O Groups "

(*) NOTE: if you want your programming to be propagated to other loops, you must select the Loop Group Update option for the desired Loop Group. Note: the target loops must be a member of the chosen Loop Group.

Create the Loop Groups that will serve each group of loops.

    c. Assign each loop to a Loop Group as needed.

- Multiple Loops will be assigned to each loop group – there is no limit to how many loops can be assigned to each loop group.

- It is possible to assign a loop to more than one loop group; however you should be very careful when creating schedules (day types and time periods) for these Loop Groups in order to avoid crushing your schedules when you do updates for multiple loop groups.

    d. **Loop Group Membership** is assigned in the Loop Properties screen. This is the intended and advisable way to use Loop Groups.

        For example, in the Loop Properties screen …

- ' All Schools' group will serve every school in the county;
- 'All High Schools' loop group will only serve the high schools;

    e. **BEST PRACTICE: Make a table similar to the one shown, to organize/track your planning of schedules . It is most effective to put the table into an Access or Excel Spreadsheet (or relational database that has an easy to manage user interface - to maintain maximum integrity and control of relational rows.**

- Note: **West High (loop 2)** uses the same *common schedules* (in red ink) which are propagated through the same Loop Groups as **loop 1**.

- Note: **West High (loop 2)** has a unique (uncommon) schedule for its *Summer Bell Schedule* which controls the same exterior doors using the same Time Period but a different Day Type (i.e. set for summer week dates).

TEMPLATE EXAMPLE of a Table that might help organize your Loop Group Planning:

Loop Name & (ID#)	Loop Group Membership (ID#)	Schedule Name (ID#) that updates this Loop Group	Names of components / mapping	
(Loop 1) – Central High	All Schools group (04)	1. **Night Security** schedule(ID 01) **/** motion detectors (inputs) and camera i/o groups	• Day Type 01: **Normal Week-days**	• Time Period 03: **Cameras & MDs**
	All High Schools group (05)	2. **Normal Days Bell** schedule (ID 02) (exterior doors)	• Day Type 01: **Normal Week-days**	• Time Period 03: **Exterior Doors**
(Loop 2) – West High	**All Schools group (04)**	1. **Night Security** schedule(ID 01) **/** motion detectors (inputs) and camera i/o groups	• Day Type 01: **Normal Week-days**	• Time Period 03: **Cameras & MDs**
	All High Schools group (05)	2. **Normal Days Bell** schedule (ID 02) (exterior doors)	• Day Type 01: **Normal Week-days**	• Time Period 03: **Exterior Doors**
	No loop group needed for *Summer Magnet Program*	3. **Summer Bell** schedule (ID 02) (exterior doors)	• Day Type 01: **Summer Week-days**	• Time Period 03: **Exterior Doors**

    f. It is **not advisable** to have a schedule (or day type or time period) being updating by more than one Loop Group because this will eventually become too confusing to control.

- If great care is taken, it might be safe to use the Loop Group feature to initially propagate a schedule for the purpose of cloning it other loops, withdrawing it when finished.

- but you must make sure you are not overwriting the wrong schedules.

PART-2: Planning & Creating Schedules (including Day Types & Time Periods):

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.*

   a. **BEST PRACTICE:** Designate which loop will serve as your "HOME LOOP" OR "LOCAL LOOP" – this should be the same as the HOME / LOCAL LOOPs designated to serve your Loop Groups.

   b. **BEST PRACTICE:** the system allows only **100 day types per loop**, but keep in mind that you can use a day type in more than one schedule. The diagram below shows how Day Type 01 "Regular Days" is used in the Lobby Doors Schedule and in the Lobby Sensors schedule.
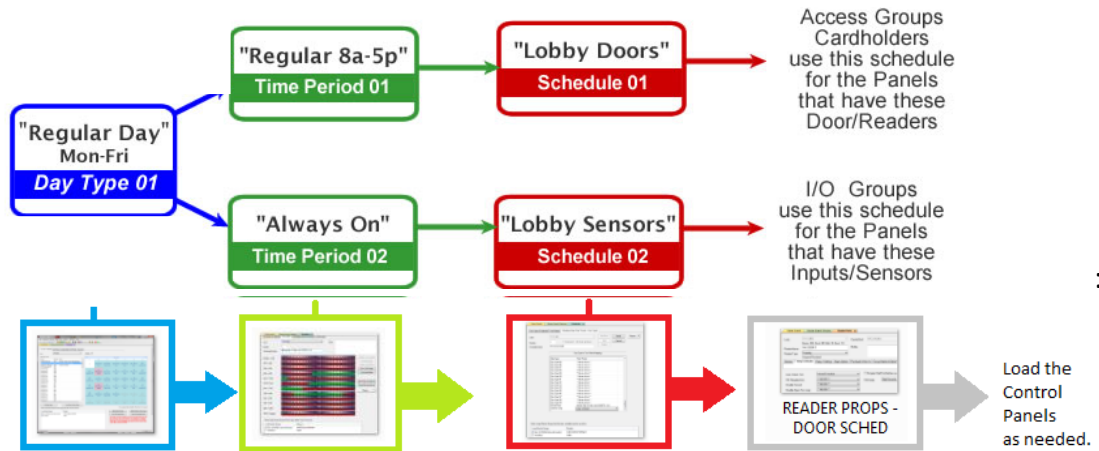
   c. **BEST PRACTICE:** remember when assigning the calendar days to the day types, <u>**you MUST begin with the majority days first – see examples for clarification on build sequence:**</u>

      1. normal week days = Monday thru Friday during the school session;

      2. normal week-end days = Saturdays and Sundays during the school session;

      3. Summer School Weekdays = during summer school

      4. Summer Weekends = during summer season;

      5. CLOSED/Holidays = Columbus Day, Christmas, Martin Luther King Day (dates that the school will be closed during the school session;

      6. Teacher In-Service Days = dates that teachers will be given access, but students entries will be locked;

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 decide how you will map Day Types and Time Periods in each schedule.** When mapping a schedule you can use any of the time periods with any day type as needed.

Example 1 shows a Day Type in more than one Schedule with different Time Periods.

▸ *Lobby Doors schedule* uses *Workdays day type* with *Regular 8-5 time period.*
▸ *Lobby Sensor schedule* uses *Workdays day type* with *Always On time period*.
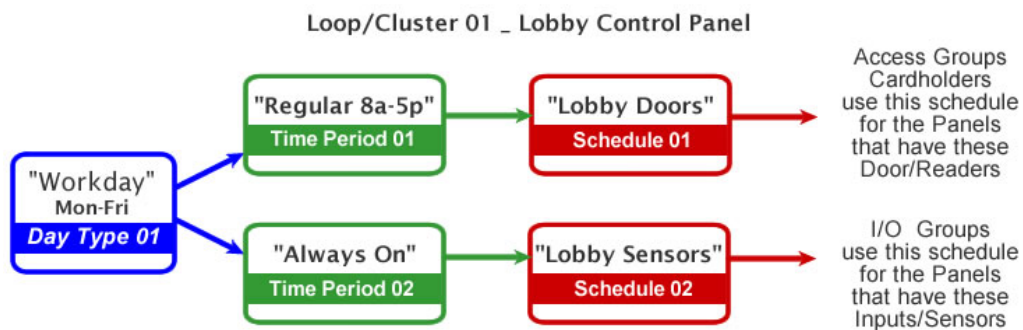
Example 2 shows a Time Period mapped to more than Day Type.

This can be done in the same schedule or different schedules in the 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*.
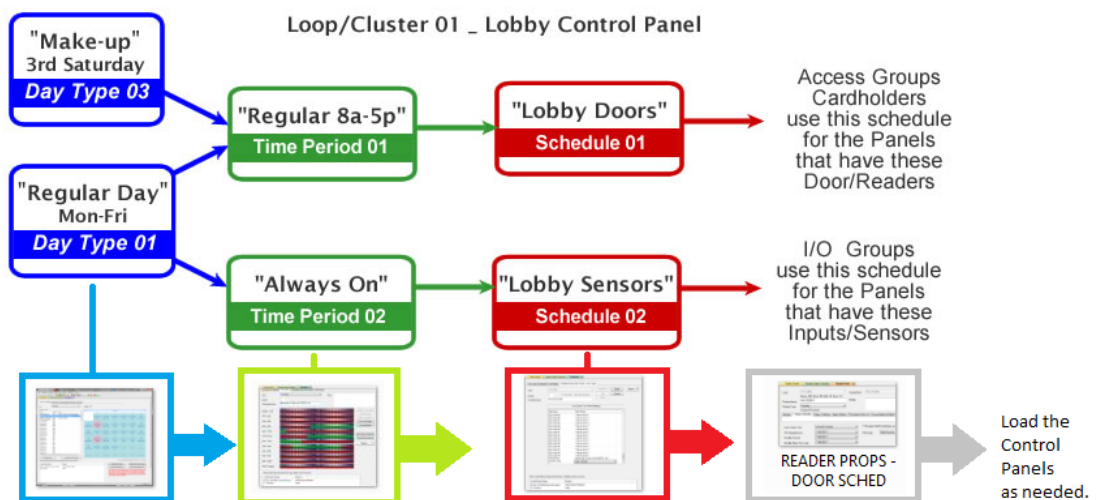
Configuring Loop Groups and 1-min Time Schedules

This chapter addresses the concepts of the **1-Minute Time Schedules** and the **Loop Group feature** that allows the operator to copy *common schedules* to multiple loops/clusters at the same time.

Before Reading this Chapter …

Before reading this chapter you should
- Review and familiarize yourself with the ***Terms & Definitions*** *section* in chapter 1
- Read the ***Requirements*** *section* in chapter 1
- Carefully Read the planning section in Chapter 2 and determine how you will plan your administration of loop groups and time schedules

It may be helpful to print those sections for reference while reading this chapter.

STEP 1: Configuring the Loop to use One-Minute Formatting:

You must configure the Loop to use 1-Minute format in the **Loop/Cluster Properties** 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
- ◆ remember, you cannot mix 1-minute schedules with 15-minute schedules – if you have 15-minute 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 *(508i must use 15-minute format; 600-series panels can use either)*
  - b. replicate/recreate compatible schedules under the 1-minute schema to meet needs *(this applies to 600-series panels)*

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. Select the 'Advanced tab'
5. Choose the **1-Minute Interval format** option in the **Schedule Format** droplist
6. Click **APPLY** to save changes

STEP 2: Assigning a Loop to a Loop Group:

You must create the Loop Groups and assign the Members in the **Loop/Cluster Properties** screen.

The following rules apply to the Loop:

- The loop must be a 600 type loop
- Loop Group names should be unique and descriptive

CREATING LOOP GROUPS:

7. 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).

8. Make sure you have chosen the correct loop and that it is set to 600 type

9. click the **EDIT** button

10. select the **Available Loop Groups** tab

11. Double-click inside the ***Loop Group Member*** *list box* to create a new Loop Group

12. Assign the loop you are currently editing to a Loop Group by "checking" the **Loop Group Member option;** also check/assign any other Loop Groups this loop should be a member of.

13. Click **APPLY** to save changes

NOTE: "CHECKED" groups appear in the schedules tabs for this loop. When 'checked' this loop can be updated with scheduling changes made from any member loop. "unchecked" groups are not available for this loop's scheduling screens.

STEP 3: Programming Day Types for the Calendar Year:

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

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

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

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

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 format (see Part-1).
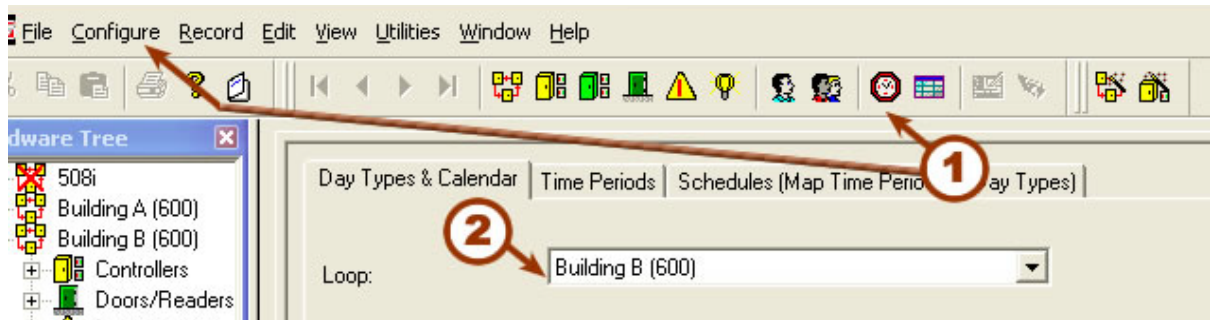
Programming a Day Type Name:

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
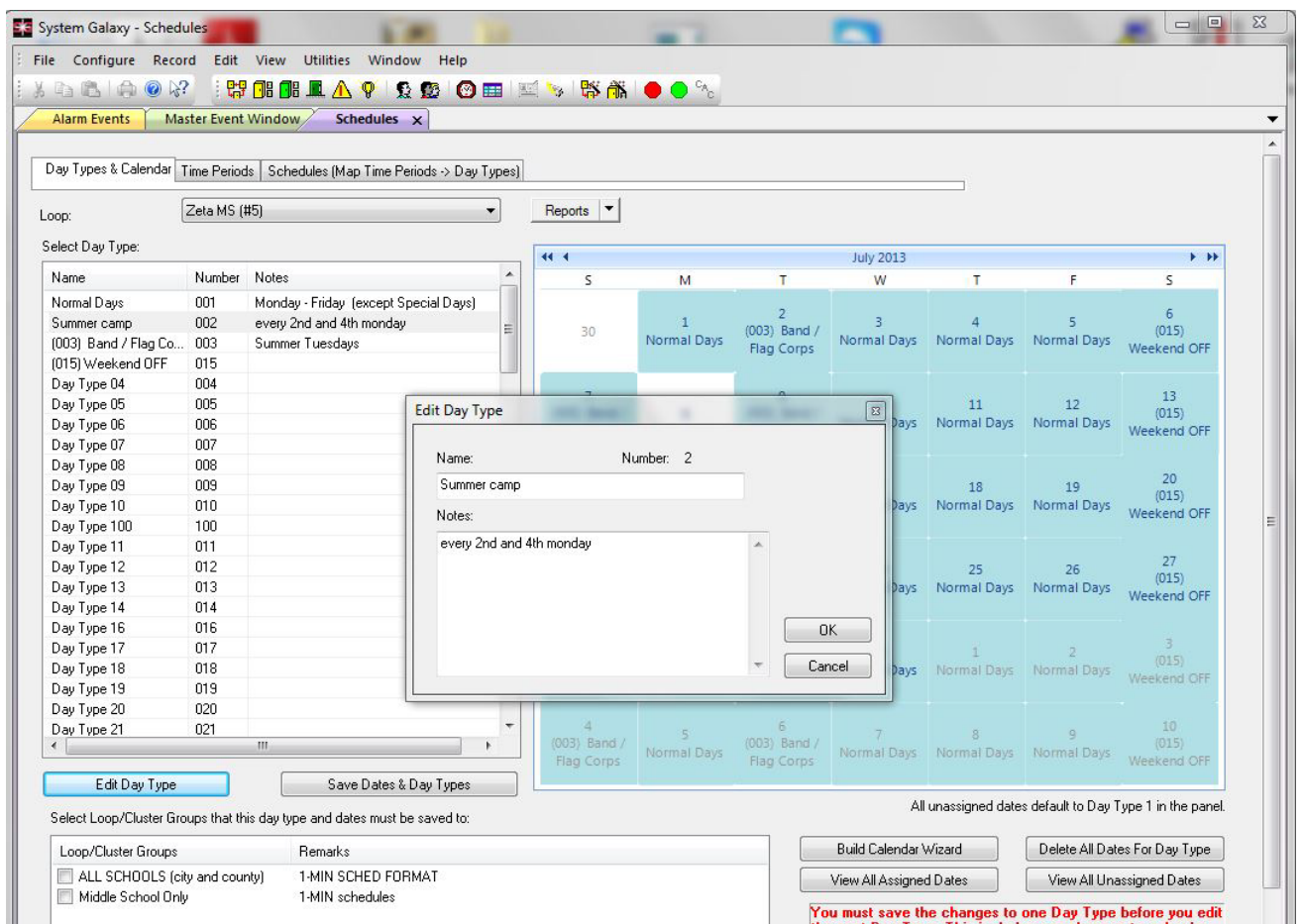
NOTE: remember to check the desired Loop Group Update option to propagate you programming BEFORE you save/apply changes. You can go ahead and assign your calendar dates before saving so the whole thing is saved at one time.
NOTE: if you want to withdraw a loop from getting Loop Group updates, you must uncheck it in the Loop Properties screen.

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 assign the dates to the Day Type

12. click **CLOSE** and then CHECK or UNCHECK any **Loop Group Update options** as needed

13. click **the [Save Dates & Day Types]** button to save changes before programming the next day type.

NOTE: repeat steps 7 thru 13 as needed to build your day types.
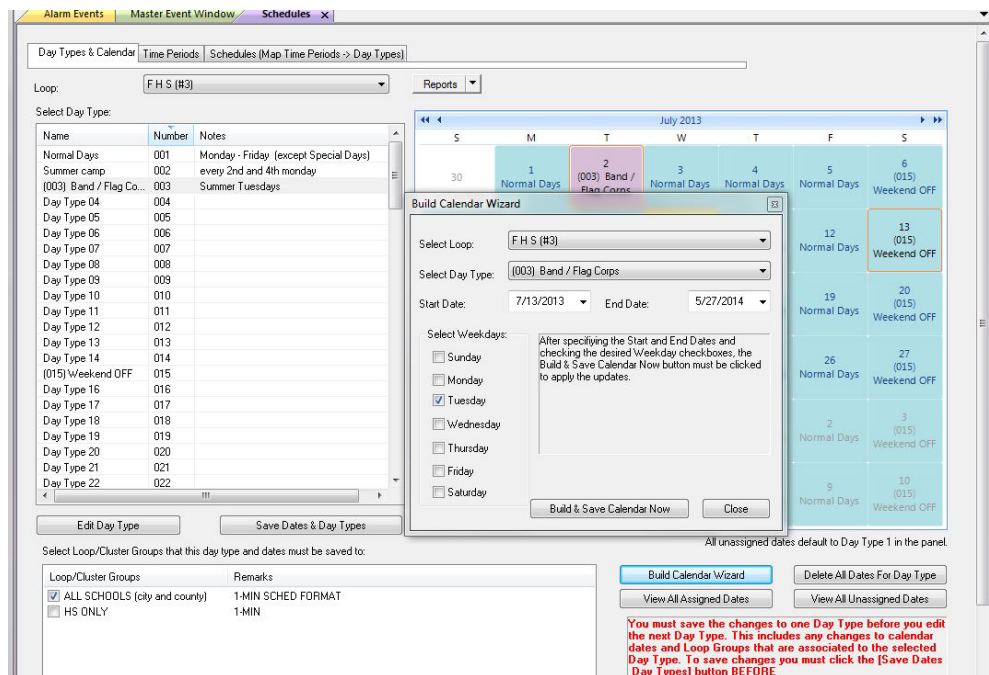
NOTE: you must click the [BUILD] button to build the dates and you also must [SAVE DAY TYPES AND DATES] before you select another day type to program or you will lose your changes. ***This can steal dates from other day types so be sure you follow correct order – see the planning section.***

NOTE: to withdraw a loop from the Loop Group Update, you must uncheck it in the Loop Properties screen. As long as it is a member it will receive updates.

NOTE: YOU MAY WANT TO DESIGNATE A CERTAIN SEGMENT OR BLOCK OF DAY TYPES TO BE USED FOR COMMON SCHEDULES OR CLONING – FOR EXAMPLE 1 THRU 30. USE YOUR OWN DESCRESSION ON HOW TO DO THIS.

Assigning the Calendar Days using the Calendar Tool:

The previous section described how to use the Calendar Wizard to assign dates/days to a day type, which is the typical method for assigning the vast majority of dates by date range. However, you can also add calendar days (distinct dates) to a Day Type using the Calendar Tool.

14. select/highlight the Day Type you wish to add dates to in the list view on the left side.

15. use the calendar **[<< | <]** and **[> | >>]** controls to move to the Month desired; or click on the name heading of the calendar to open a dialog that lets you change months and years.

16. **right-click the days** you want to add to (or release from) your selected Day Type; you will notice that the date will become selected (yellow) or deselected (return to its prior color) as you toggle your mouse clicks.

   ◆ **YELLOW BLOCKS** = dates you are **selecting** (adding or stealing) **for the currently selected Day Type**

   ◆ **WHITE BLOCKS** = dates that are CURRENTLY UNASSIGNED (have not been assigned to any Day Type);

   ◆ **PURPLE BLOCKS** = dates that are ASSIGNED to the CURRENTLY SELECTED DAY TYPE

   ◆ **BLUE BLOCKS** = dates that are CURRENTLY ASSIGNED to ANOTHER Day Types;

   > **IMPORTANT:** IF you select a blue block and make it a yellow block, you are **stealing it from the Day Type it belongs to.** To avoid stealing a blue block date, simply click on it again and allow the block to return to blue. Yellow blocks will be added to your selected Day Type when you click [Save Dates …].

   NOTE: You do not have to select continuous or contiguous dates. You can select various days/dates in one month and advance to the next month and select more non-contiguous dates. When you click the save button, all dates will be saved in every month you selected.

17. click the **SAVE DATES & DAY TYPES** button to save and assign the days to the day types.
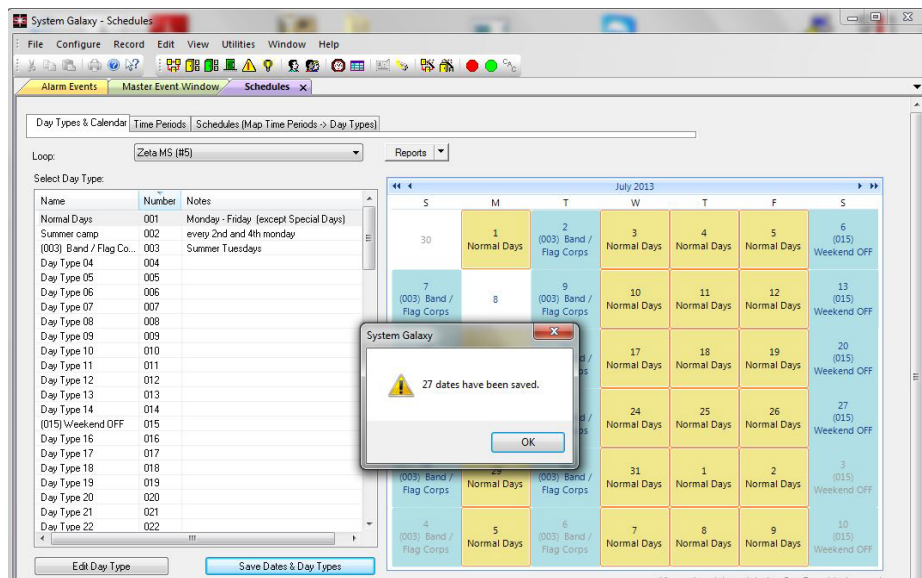
IMPORTANT: any unassigned days within the year will default to Day Type 1.

IMPORTANT: System Galaxy loads 365 days to the panel. That means 365 days from the current date when load occurs. If you did not assign days that far in advance they will default to day type 1.

DATE FINDER UTILITY – View All Unassigned (skipped) Days:

The **Unassigned Dates Finder utility** allows the operator to find and capture skipped dates and assign them to the correct Day Type.

The utility queries the all dates that are unassigned for the next 365 days from today's date (PC time).

1. Click the [**View All Unassigned Dates**] button in the main Day Type screen. The list view will be populated with all the unassigned dates for the next 365 days.

2. Select the desired **Day Type** from the droplist that you wish to assign dates to

3. Click (check) the individual dates you wish to assign. Unchecked dates remain unassigned.

   a. TIP: use the [Select All] button to select every date and then uncheck the few dates you wish to exclude

   b. TIP: Uses the [Clear All] button clear all check and refresh you programming.

4. Click the [**Assign Selected Dates to Day Type**] to assign the dates to a day type

IMPORTANT: any unassigned days within the year will default to Day Type 1.

IMPORTANT: if the dates you are assigning must be propagated to other loops, you must enable the **Loop Group Update options** in the main Day Types screen <u>before you click the [SAVE DATES & DAY TYPES] button</u> in main screen.
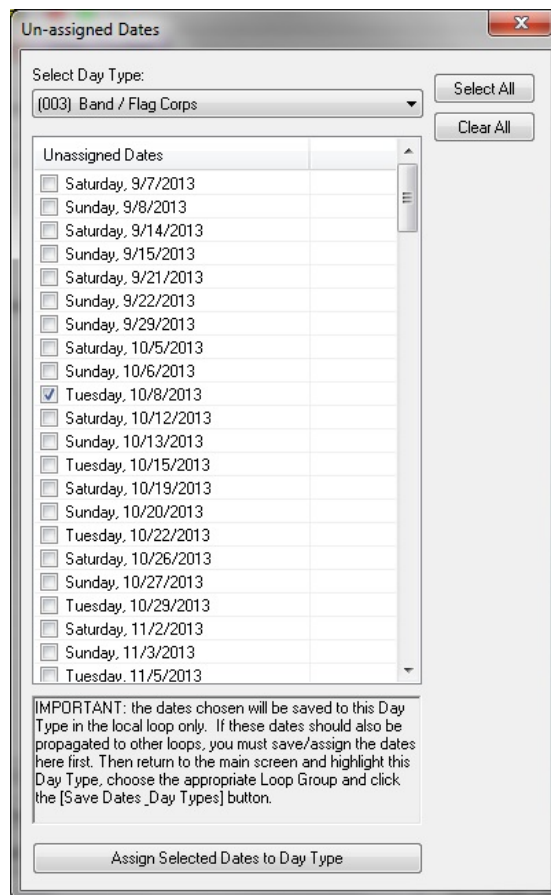
RELEASE ALL DATES UTILITY - Releasing All Assigned Days from a Day Type:

You can release all assigned days from a Day Type. This is useful if you want to free up a Day Type or just to refresh or start over with your programming.

1. Select/Highlight the Day Type
2. Click the **[Release All Dates for Day Types]** button.
3. A dialog box will appear asking for confirmation that you truly want to release the dates.
4. Click **YES** if you want to release all the dates that are assigned to your selected Day Types. Changes are permanent. You must rebuild the Day Type if you mistakenly release dates from the wrong one.

NOTE: that releasing dates only takes effect on local loop. It does not propagate to member loops even if the Loop Group Update option is enabled/checked.
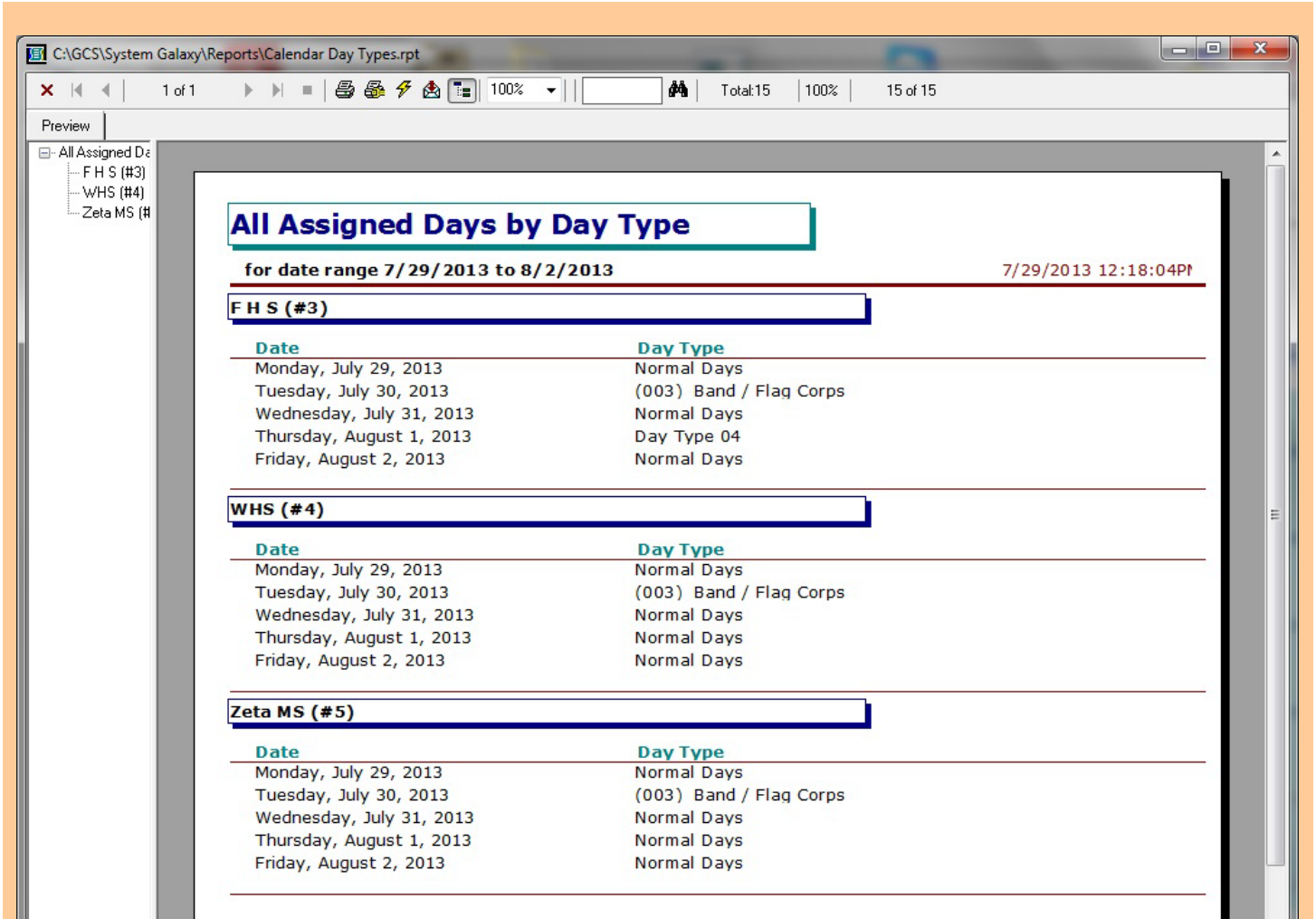
NOTE: if you are unsure whether you wish to release all dates, you can run the View All Assigned dates report and review the list of dates assigned to the Day Type.
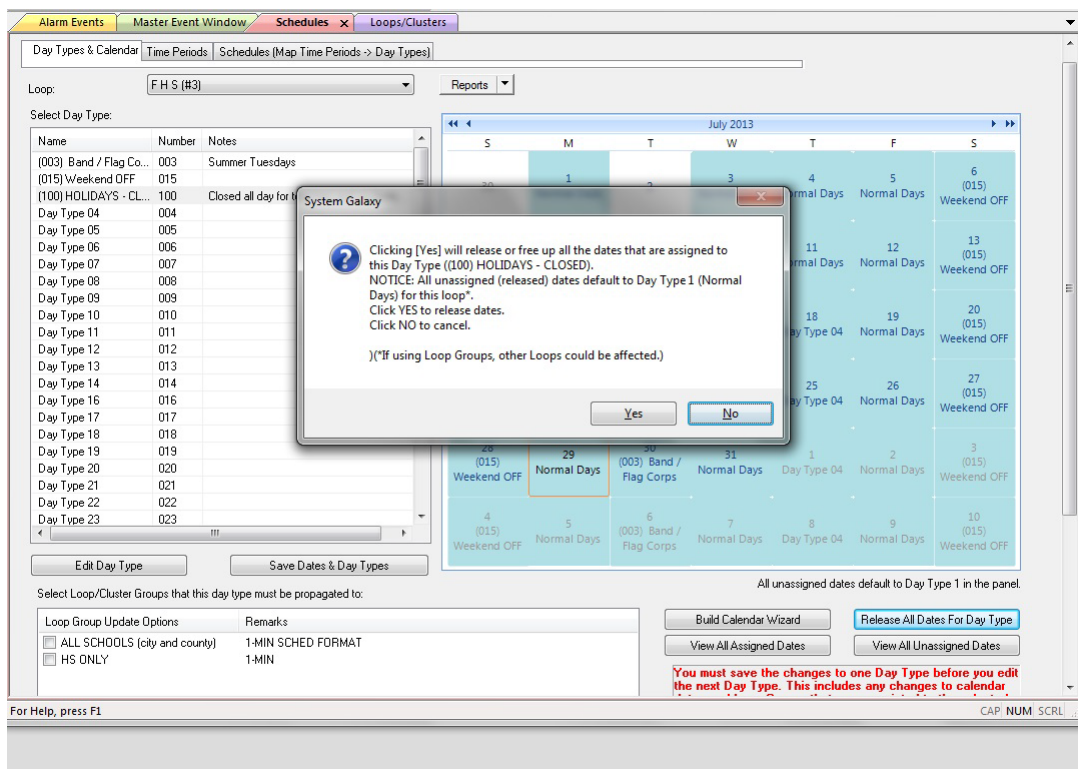
REPORTING – View All Assigned Days by Day Type:

You can use this report to determine which dates are assigned to each Day Type per Loop.

- This report is pulled by date range. The date range is printed under the title.

- This report can be large if the Day Type selected has a lot of dates assigned to it.

- Dates are listed in chronological order and are grouped by Loop.

STEP 4: Programming the Time Periods:

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

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 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 format.
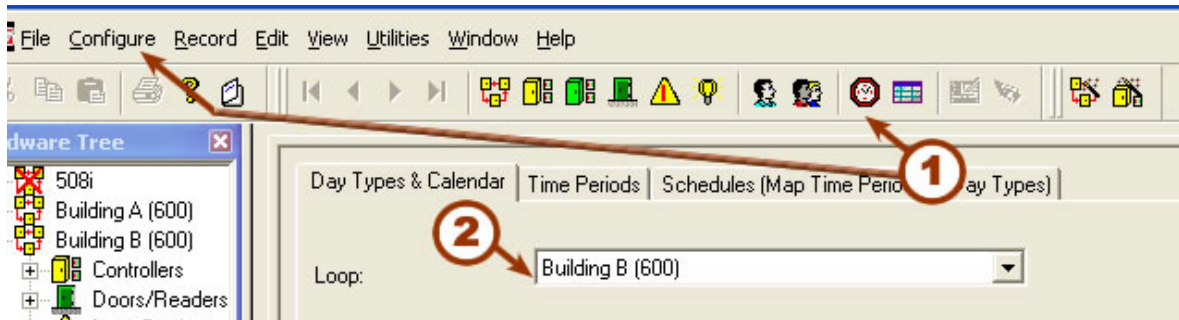
Creating a Time Period:

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. "for entrance").
7. use the left and right mouse buttons to **set the intervals**. Green is (active/on) or Red is (inactive/off) .
8. Check or uncheck any **Loop Group Update options** as needed to propagate or clone periods to other loops
9. click the **[SAVE TIME PERIOD]** button to save the Time Period

TIP: double-clicking a row of time intervals with the left-mouse button will turn on the whole row of minutes.

TIP: double-clicking a row of time intervals with the right-mouse button will turn off the whole row of minutes.

TIP: You can also use the SHIFT key in tandem with single-clicking on a minute-cell to select a range of minutes. To do this simply click (activate or deactivate) the first minute in your range, then hold the SHIFT key down while you click the last minute in your range. All the minutes in between will activate or deactivate according to whether you used the left or right mouse button.

NOTE: remember to check the desired Loop Group Update option to propagate you programming BEFORE you save/apply changes. Complete all programming before saving.
NOTE: deleting a time period will not propagate to member loops even if the Loop Group Update is checked

NOTE: to withdraw a loop from the Loop Group Update, you must uncheck it in the Loop Properties screen. As long as it is a member it will receive updates.

STEP 5: Programming the Schedules:

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 your programming in the previous steps. Any schedule you create will rely on the same 16 day types that the whole loop uses. When you map a time period to a day type, you are telling the schedule how to behave on that day type.

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 a day type is used in two different schedules on the same loop.
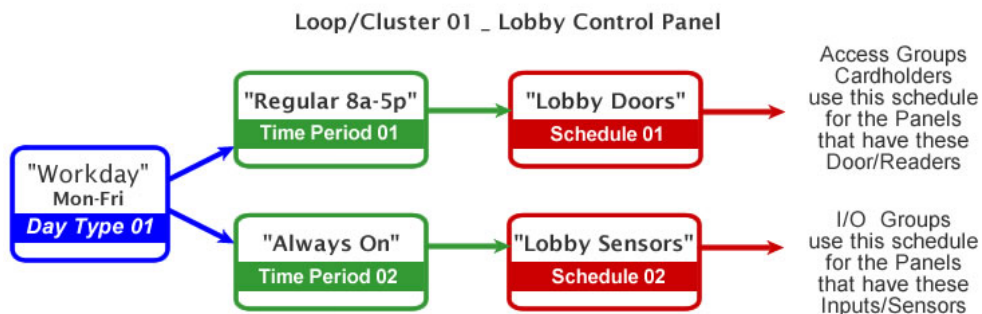
Example 2 shows a time period is mapped to two different day types in the same schedule.
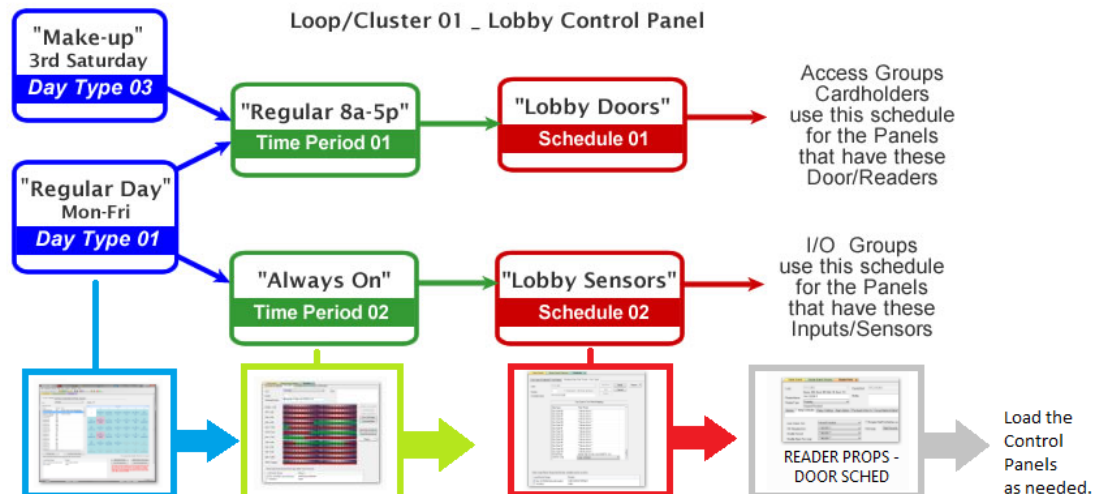
Opening the 1-Minute Schedules screens:

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 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 format.
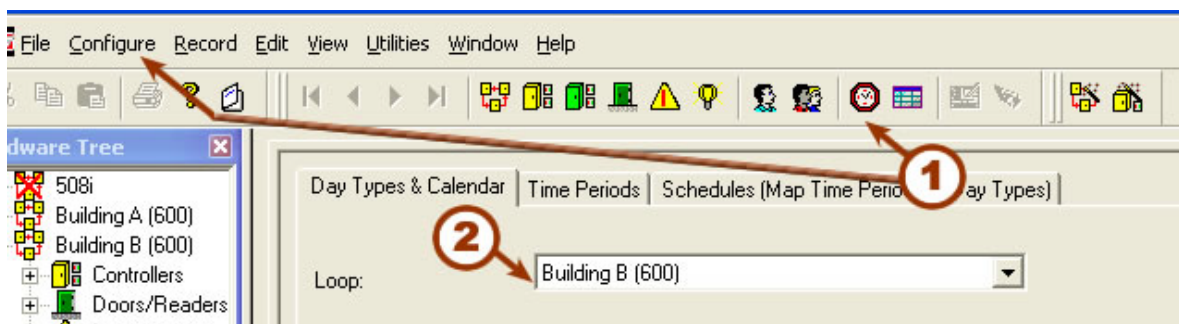
Creating the Schedules:

1. select the *'Schedules'* tab
2. select the desired **Loop Name** if it is not already selected
3. click the **Add New** button
4. enter a descriptive and unique name for the Schedule (e.g "Lobby Doors").
   Note: this is the schedule name you will see and use throughout the system programming screens.

5. 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.
6. Check or uncheck any **Loop Group Update options** as needed to propagate or clone schedules
7. 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.

Using Schedules in the System Programming screens

This chapter briefly covers how you will use **Schedules** in the system programming screens. The schedules created in the last chapter must be assigned to access groups and cardholders in order for access cards to work properly.

About Assigning Schedule to an Access Groups:

The ***Access Group Programming screen*** allows you to choose the schedule you want to use for each access group.

Open the *Access Groups window*: (Menu Bar – Configure/Cards/Access Groups)

> Dependencies: Schedules must be created first; otherwise, only the built-in schedules (ALWAYS and NEVER) are available.

1. **Pick a loop from the [Loop] droplist.**
2. **Click [Add New] button.**
3. **Type in a descriptive name for the group.**
4. **Pick (highlight) the desired readers and Click on the [>>] button to move the readers.**

   Note: The [>>] button moves all the ports over to authorized. Also, you can hold the <Ctrl> key on the keyboard while you select/highlight the reader ports you want. Then user can click the [>>] button on the screen to move all the selected readers at once.

5. **Select a schedule for as prompted: Pick a schedule name from the droplist.**

   Note: If the [Use this schedule for all readers] option is "CHECKED", then this schedule will apply to all chosen readers in this Access Group. User can apply schedules individually by "unchecking" this option. Then the software will prompt user through picking each reader's schedule individually.

6. **Click [Apply] button to save.**
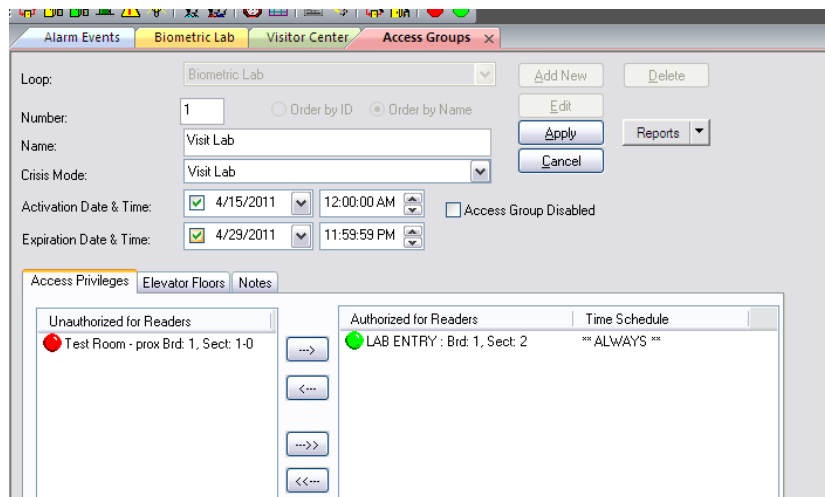
*NOTE: see the main **Software User Guide, chapter 7** for information on adding schedules to **access groups and access profiles**.*

*NOTE: ACCESS GROUPS must be assigned to a cardholder before they are in use. Refer to the **Software User Guide** for cardholder programming details. Remember you may need to load your loops once your programming is completed.*

*NOTE: see the main **Software User Guide, chapter 5** for detailed information on **loading data to your loops**.*

About Assigning Schedules to Doors, Inputs and other Hardware:

> The schedules created in the last chapter must be assigned to hardware (doors, inputs, outputs, i/o groups) in order for the hardware to function properly.

The **Reader Programming screen** allows you to set the schedule you want to use for various scheduling options. Likewise the Inputs and Outputs and I/O Groups also allow schedules to be used in various ways.

- The Schedule name you created in the Schedule Mapping tab is the name that shows up in the droplist of any option that uses a schedule to control the door or reader.

Because these programming screens are so complex, you must use the Software User Guide for this part of the programming.

Chapter 9 of the Software User Guide covers all the hardware programming as well as the features that can use schedules.

Chapter 5 of the User Guide covers loading your data after it is programmed. Once all initial programming is loaded to a panel, the system will automatically update minor changes to these screens when you save your changes in the screen. If you have concerns that your changes did not load due to network traffic, you can always load your panels as needed.