

TrekkerPhotoArt.com

# X10ManagerDesktop

Operations Manual

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4-5-2021

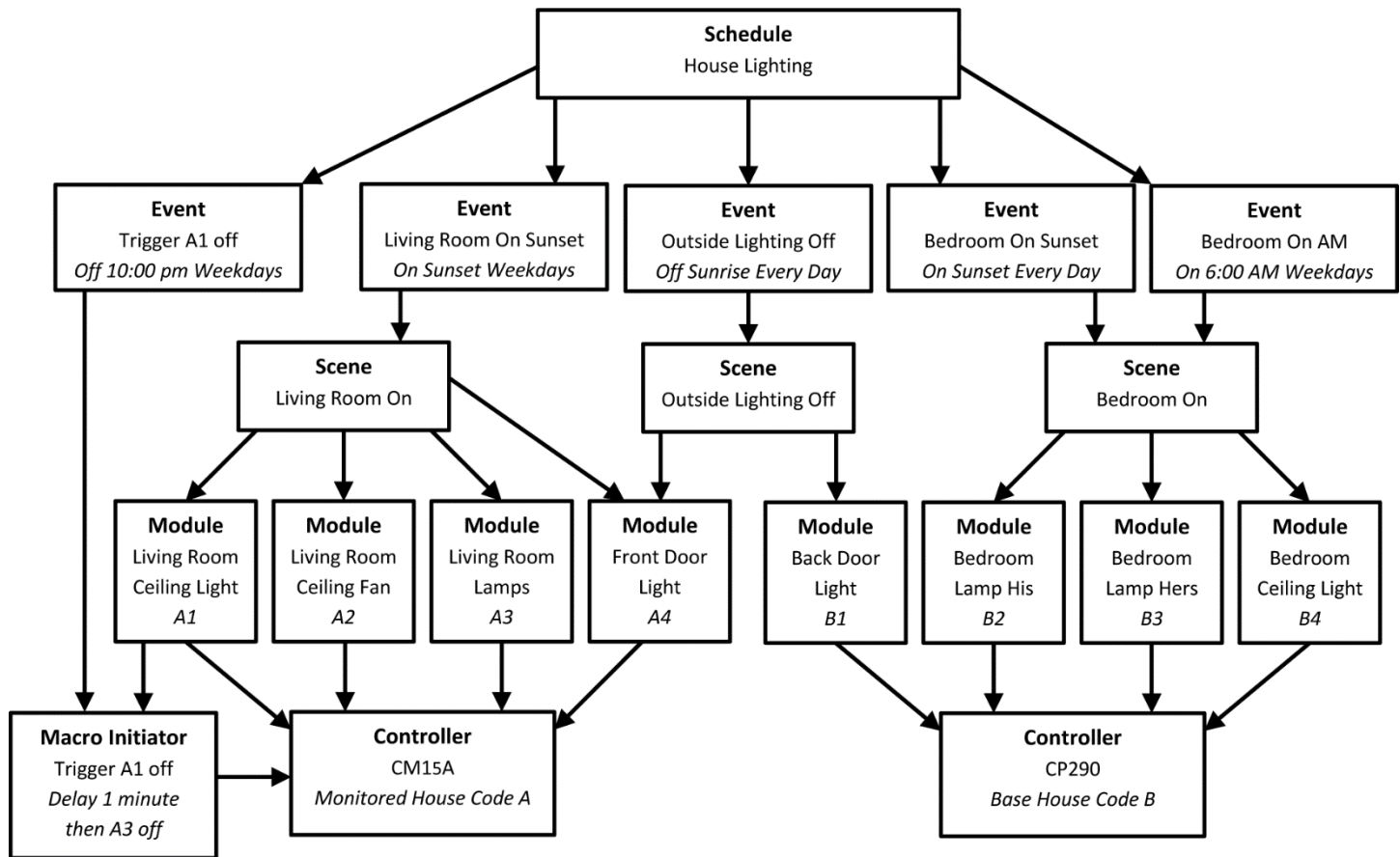
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# Overview

## X10ManagerDesktop Functional Operation



The “X10ManagerDesktop Functional Operation” diagram above shows relationships between **Schedules**, **Events**, **Scenes**, **Modules** and **Controllers**. The second item in each block is a freely formatted name of the **Schedule**, **Event**, **Scene**, **Module** or **Controller**. For example, the block labeled “Schedule” has been given a name “House Lighting”.

Items shown in *italics* would be an operation or designator. For example, the “Event” block “Living Room On PM” has an operation “*On 7:00 pm Weekends*”; the “Module” block “Living Room Ceiling Light” has a Module designation “*A1*”.

A **Schedule** consists of many **Events**. **Events** are unique to each **Schedule**. Each **Event** will trigger one **Scene** or one **Macro Initiator**. For example, Event “Living Room On PM” could not trigger an additional Scene.

One **Scene** or one **Macro Initiator** can be triggered by multiple **Events**. For example, Scene “Bedroom On” has two Events named “Bedroom On Sunset” and “Bedroom On AM” that triggers Scene “Bedroom On” at different times and days.

What’s shown above is for illustrative purposes. Additional **Events**, **Scenes** and **Macro Initiators** can be added. For example, a Scene can be added that will turn off the Bedroom Lights.

## Overview – continued

### X10ManagerDesktop Functional Operation – continued

**Scenes** can be limited to groups of **Modules** set to one **House Code** as shown above with **Scene** “Living Room On”.

-or-

**Scenes** can control groups of **Modules** set over multiple **House Codes** as shown above with **Scene** “Outside Lighting Off”.

**Macro Initiators** (or **Macros**) can be added for **Controllers** that support **Macro Initiators** such as the CM15A.

From a **Scheduling** -or- **Event** -or- **Scene** perspective, **Controllers** can support **Modules** set using multiple **House Codes**. For example, additional Modules set at House D could be added to the CM15A Controller.

However, **Controllers** can have limitations. For example, the CM15A Controller is limited to Monitoring one House Code (in this case House Code A). So Macro Initiators could only be Triggered by Modules set to House Code A.

There can be multiple **Controllers**. The “X10ManagerDesktop Functional Operation” diagram shows two **Controllers**. Supported **Controllers** can be added in any desired combination. For example, a 2<sup>nd</sup> CM15A Controller can be added that would support **Modules** in House Code D to allow a Monitored House Code D for Macro Initiators.

**The Scope of this project** is limited to **Controller** programming and operation of X10 **Event** Timers (and X10 **Macro Initiators** when supported by a **Controller**). The **Controller’s** X10 **Event** Timers (and X10 **Macro Initiators**) can be initiated by:

- X10 **Event** Timers (and X10 **Macro Initiators**) programmed to a **Controller**
- MS Windows Scheduled Events sending X10 Commands to a **Controller** via **X10Manager** (command line)

**Note:** Information regarding installation, setup and operation of X10 **Controllers** and X10 **Modules** is not covered in this Operations Manual.

## Overview – continued

## X10ManagerDesktop program Window

The screenshot displays the X10ManagerDesktop application window with a menu bar (File, Controller, Module, Scene, Schedule, Macro, Help) and status bars (Download, All Lights Off, All Lights On). The main area is divided into five panes:

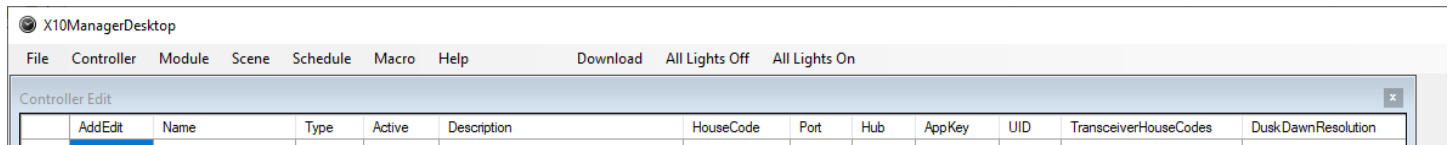
- Controller Edit:** A table with columns: AddEdit, Name, Type, Active, Description, HouseCode, Port, Hub, AppKey, UID, TransceiverHouseCodes, DuskDownResolution. It lists three controllers: CM15A, CP290, and CP290 X10 Controller.
- Macro Initiator Edit:** A table with columns: AddEdit, Name, Description, Trigger, Function, Enabled, StartDate, StopDate. It lists one macro initiator: Den Test Dimmer - Trigger J16 On.
- Module Edit:** A table with columns: AddEdit, Controller, Code, Name, Description, Enabled, Dimmer, Lighting, Extended. It lists 16 modules for various lighting locations like OutGar, FPorch, BDoor, HalFloor, etc.
- Scene Edit:** A table with columns: AddEdit, Name, Description, HouseCode, CurrentHouseCodeOnly. It lists 24 scenes such as A/V Comp ON, ALL OFF JS, ALL OFF KD, etc.
- Schedule Edit:** A table with columns: AddEdit, Name, Description, SunriseTime, SunsetTime, Active. It lists one schedule: House Lighting with Events.

**X10ManagerDesktop** program can concurrently manage multiple **Controllers**, **Macro Initiators**, **Modules**, **Scenes**, **Schedules** and their **Events** using their respective “Add” and “Edit” forms.

**Controllers**, **Modules**, **Scenes** **Macro Initiators**, **Schedules** and their **Events** will have freely formatted names and descriptions given when they are added or later modified via the **X10ManagerDesktop** program. “Add” and “Edit” forms.

The **Setup** section discusses a sequence for 1<sup>st</sup> time setup of **Controllers**, **Modules**, **Scenes**, **Macro Initiators**, **Schedules** and their **Events**.

## X10ManagerDesktop program Window Menus



### File

- Settings      X10ManagerDesktop program behavior
  - Longitude and Latitude used for calculating Sunrise and Sunset times are entered here.
- Backup      Backup X10 database
  - The “Backup Directory Path” location is found in “Settings”
- Restore      Restore X10 database
- Exit      Exit Program – Exiting program saves Windows size and positions per user

### Controller

- Add      Add a X10 Controller to the X10 database
- Edit      Modify a X10 Controller already in the X10 database
- Download      Download Event Timers to Selected Controllers

### Module

- Add      Add a X10 Module to the X10 database
- Edit      Modify a X10 Module already in the X10 database
- Import      Import a list of X10 Modules from a CSV file
  - Refer to “Appendix” – “X10Manager.exe” – “Operations Common to all Controllers” – “importModulesToX10Db” for “CSV Import File Format”
- Export      Export a list of X10 Modules to a CSV file

### Scene

- Add      Add a Scene to the X10 database
- Edit      Modify a Scene already in the X10 database

### Schedule

- Add      Add a Schedule to the X10 database
- Edit      Modify a Schedule already in the X10 database
  - Add Event / Edit Event is found in a selected Schedule

### Macro

- Add      Add a Macro Initiator to the X10 database
- Edit      Modify a Macro Initiator already in the X10 database

### Help

- View Help      Uses Adobe Reader or Adobe Acrobat to display this Operations Manual
- About X10ManagerDesktop      Displays X10ManagerDesktop run-time and version information

Download      Download Event Timers to Selected Controllers

**All Lights Off**      Turn Off all lights connected to “Enabled” Modules with “Control Lights” checked

**All Lights On**      Turn On all lights connected to “Enabled” Modules with “Control Lights” checked

# Specifications

## Supported X10 Controllers:

- CP290 X10 Home Control Interface
- CM15A X10 ActiveHome Pro

## Operating System:

Microsoft Windows 8, 8.1, 10 (32 bit or 64 bit)

Microsoft .Net Framework Version 4.0 [needed for **X10Manager (command line)**]

"Adobe Reader" or "Adobe Acrobat" is needed to read file **X10ManagerDesktop\_OperationsManual.pdf** which contains this "X10ManagerDesktop Operations Manual" document.

"Adobe Reader" or "Adobe Acrobat" can be found at:

<https://www.adobe.com/accessibility/products/reader.html>

<https://get2.adobe.com/reader/>

## Computer Interface:

- For each CP290 Controller: RS-232 Port (600 baud, 8 data bits, no parity, 1 stop bit, no flow control)
- For each CM15A Controller: USB Port (1.1, 2, 3)



# Revisions

## **"X10ManagerDesktop"**

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Version: 5

Revised: April 5, 2021

## **"X10Manager"** (command line)

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Version: 5

Revised: April 5, 2021

## **Program Schema:**

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Version: 5

Version Date: November 30, 2020

## **X10 Database Schema:**

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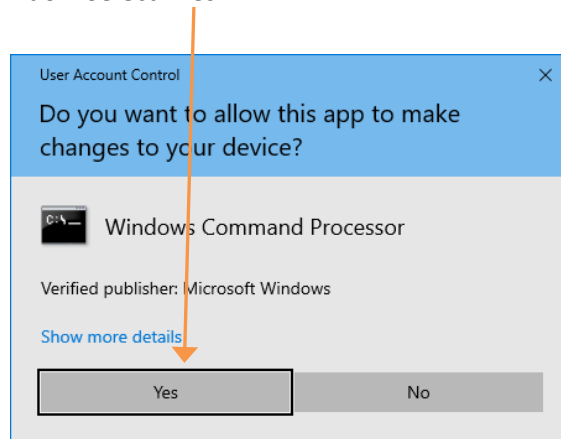
# Installation

## Extract install folder “X10ManagerDesktop\_Installer” from the ZIP Archive “X10ManagerDesktop\_Installer\_Release.zip”

- 1) Mouse-Right-Click Windows Start Menu
- 2) Select “File Explorer”
- 3) With “File Explorer” navigate to “X10ManagerDesktop\_Installer\_Release.zip”
- 4) Mouse-Right-Click “X10ManagerDesktop\_Installer\_Release.zip”
- 5) Select “Open”
- 6) Mouse-Right-Click “X10ManagerDesktop\_Installer”
- 7) Select “Copy”
- 8) With “File Explorer” navigate to “This PC”
- 9) Mouse-Right-Click “Local Disk (C:)”
- 10) Select “Paste”

## Import “X10ManagerDesktop\_Installer” Certificates.

- 1) With “File Explorer” navigate to “C:\X10ManagerDesktop\_Installer”
- 2) Mouse-Right-Click “ImportCert\_X10ManagerDesktop\_Installer.cmd”
- 3) Select “Run as administrator”
- 4) In “User Account Control” window Select “Yes”



## Installation – continued

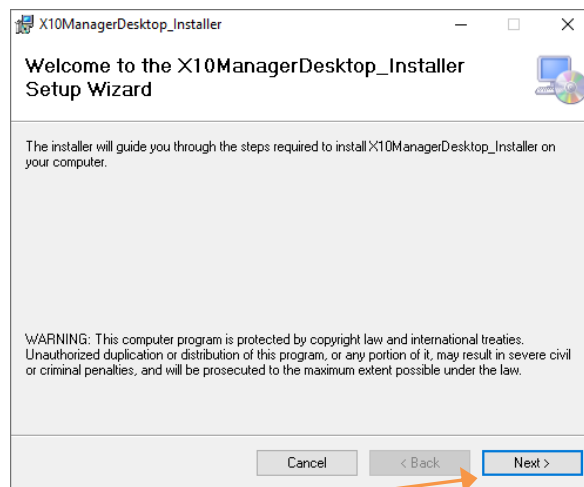
A normal **X10ManagerDesktop** and **X10Manager** (command line) installation will create new folders in the following locations:

- C:\X10ManagerDesktop\_Installer
- C:\Program Files (x86)\trekkerphotoart.com\X10ManagerDesktop\_Installer
- C:\X10Manager

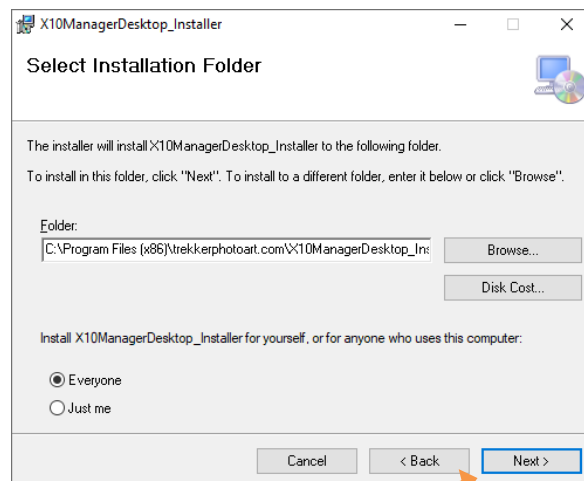
**Note: Existing folders and their contents will be replaced.**

### Install “X10ManagerDesktop”

- 1) With “File Explorer” navigate to “C:\ X10ManagerDesktop\_Installer”
- 2) Mouse-Right-Click “X10ManagerDesktop\_Installer.msi”
- 3) Select “Install”

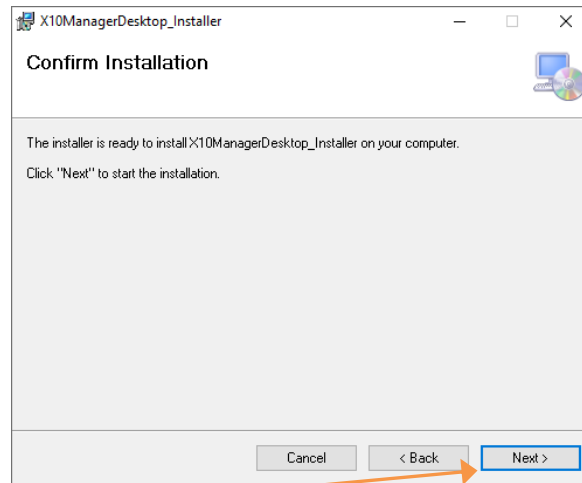


- 4) Select “Next”



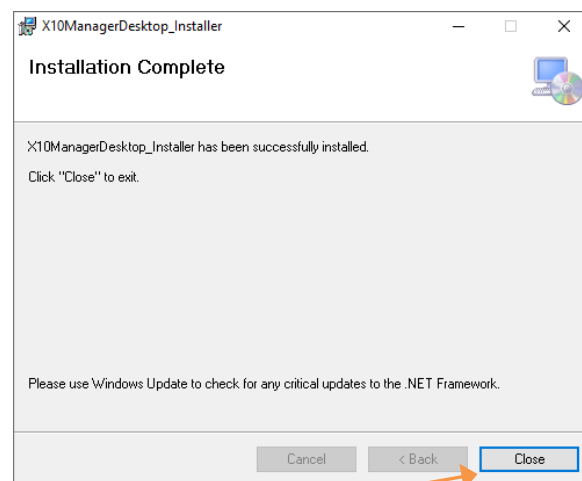
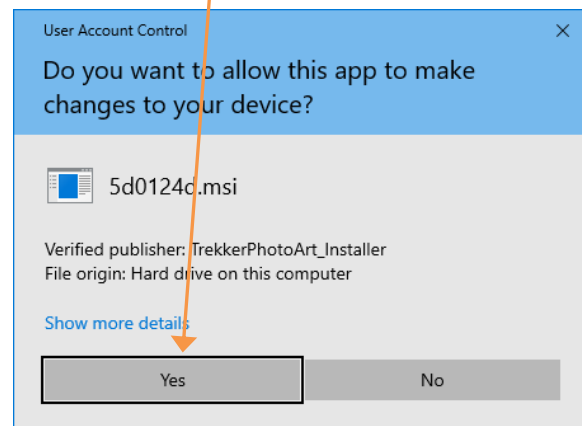
- 5) Use existing “Folder” location
- 6) Select “Everyone”
- 7) Select “Next”

## Installation – continued



8) Select "Next"

9) In "User Account Control" window Select "Yes"



10) Select "Close" to finish Installation.



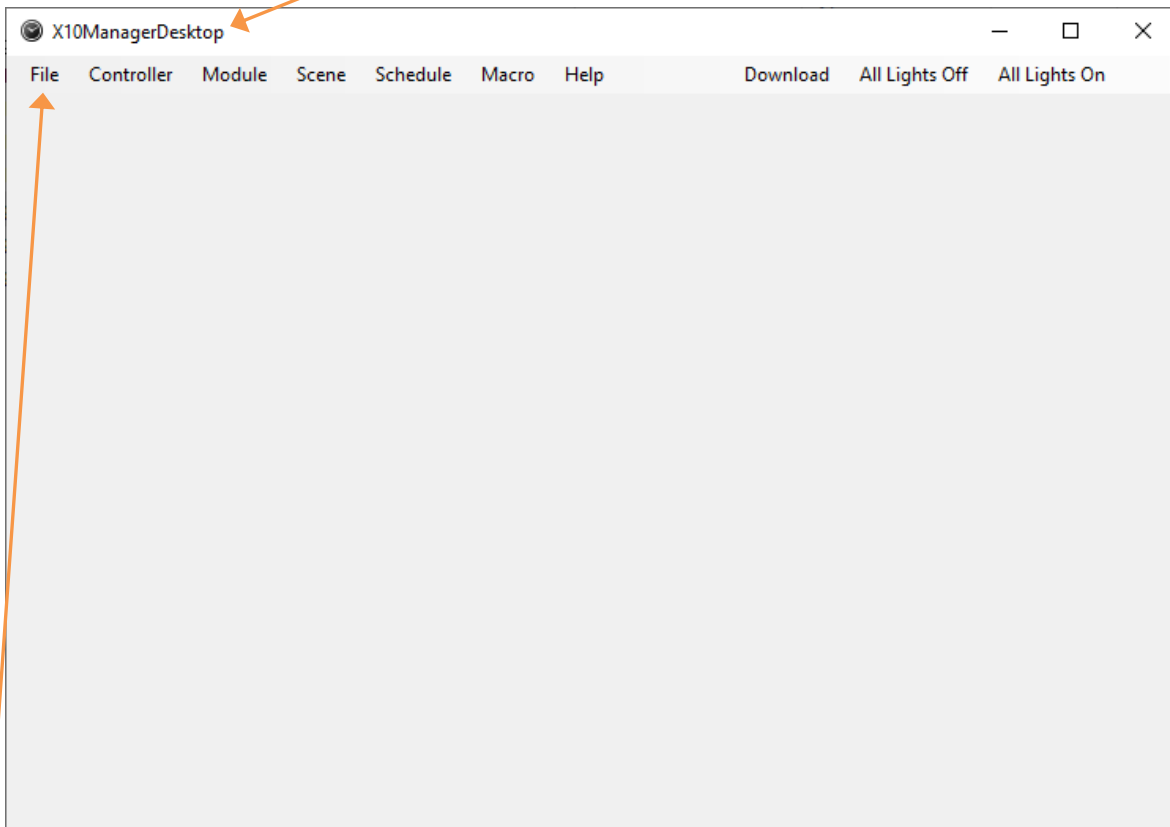
# Setup

## 1<sup>st</sup> Time Setup

Launch “**X10Manager Desktop**” by Double-Clicking on it’s Desktop Icon.



1<sup>st</sup> time **X10ManagerDesktop** program window will be displayed.



Select “File” – “Settings”

## Setup – continued

### 1st Time Setup – continued

“Settings” Form is Displayed.

Your locations “Longitude” and “Latitude” need to be defined. These are used for calculating Sunrise and Sunset times used by Timer Events.

Sites such as “[My Location](https://my-location.org/)” at <https://my-location.org/> can be used to find your “Longitude” and “Latitude” coordinates.

Settings

☒ Verify On Program Exit  
☐ Show Advanced Information

Longitude and Latitude are used for calculating current location's Sunrise and Sunset times.

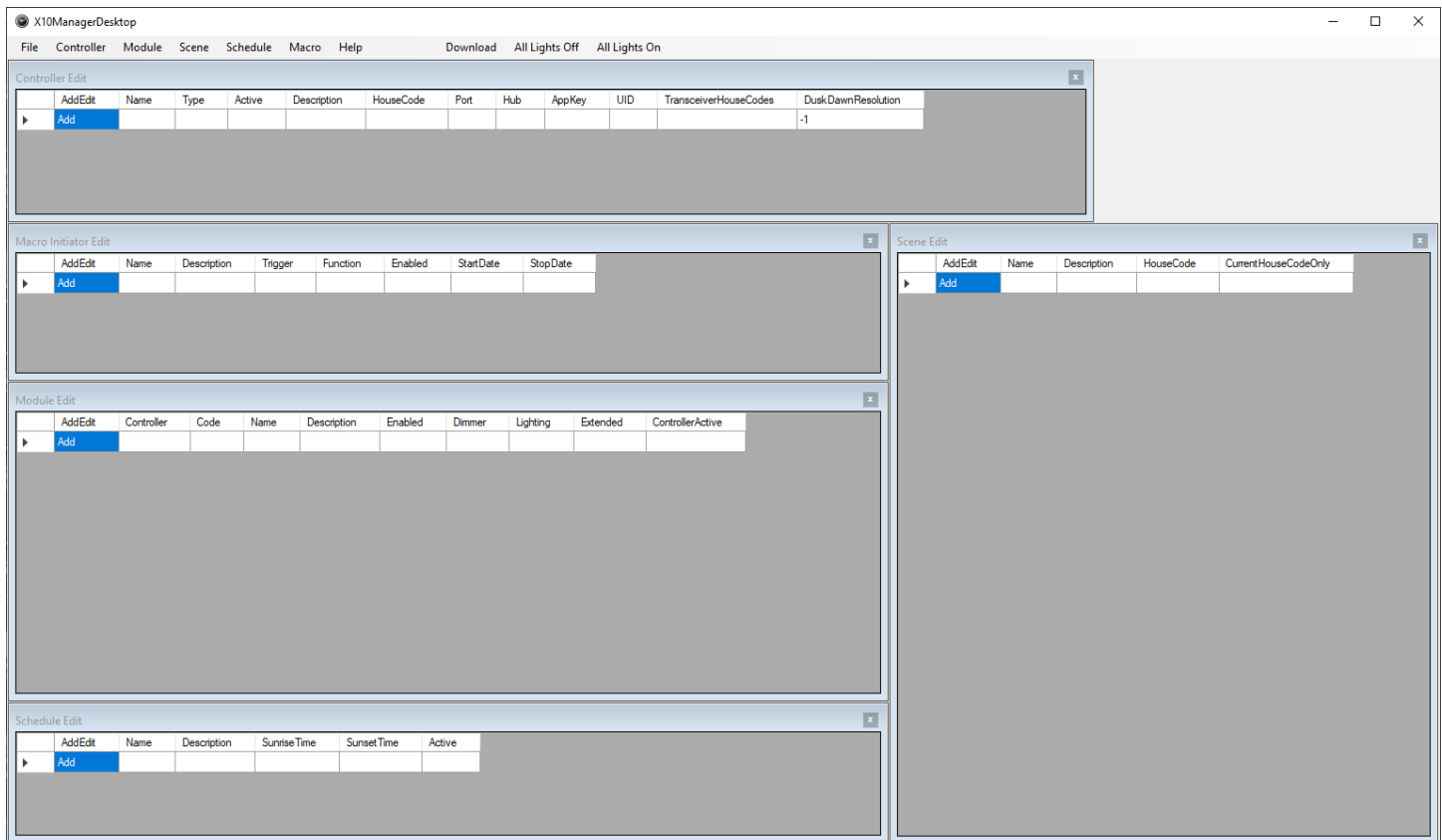
Longitude:  ex: -88.201175  
Latitude:  ex: 43.031488

Backup Directory Path:  ex: C:\X10Manager\X10DbBackup\

X10DbConnectionString:  ex: Provider=Microsoft.Jet.OLEDB.4.0;Data Source='C:\X10Manager\X10Db.mdb'

Click “Update” when finished.

## Customize the X10Manager Desktop program Layout



Above shows an example of the **X10ManagerDesktop** program run for the 1<sup>st</sup> time. The layout is accomplished by selecting “Edit” from each menu drop down, then sizing and placing the displayed Edit Window as desired.

The Window size and positions will be automatically saved per user at program close/exit.

The following sections discuss adding **Controllers, Modules, Scenes, Macro Initiators, Schedules** and their **Events**.

For 1<sup>st</sup> time setup “Add” at least one item to each category using the following order:

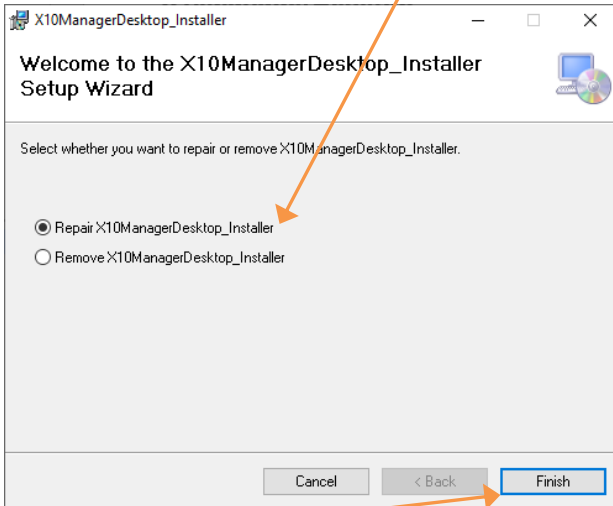
- 1) Controller
- 2) Module
- 3) Scene
- 4) Macro Initiator
- 5) Schedule
  - a. Event

# Repair Installation

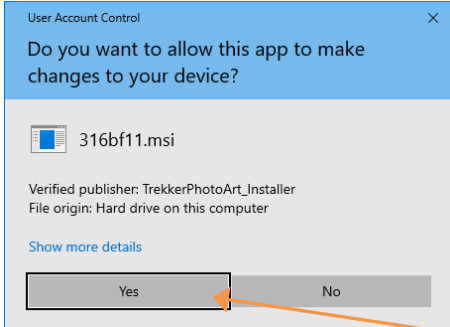
## To Repair or Re-Install “X10ManagerDesktop”

- 1) With “File Explorer” navigate to “C:\X10ManagerDesktop\_Installer”
- 2) Mouse-Right-Click “X10ManagerDesktop\_Installer.msi”
- 3) Select “Install”

Select “Repair X10ManagerDesktop\_Installer”



Click “Finish”



In “User Account Control” window Select “Yes”

The program will be re-Installed.

Note: **X10ManagerDesktop** and **X10Manager** folders will be replaced with a fresh copy of all original installed files and a clean X10 database. Any additional or modified files and script customizations in these folders, and data in the X10 database will be cleared.

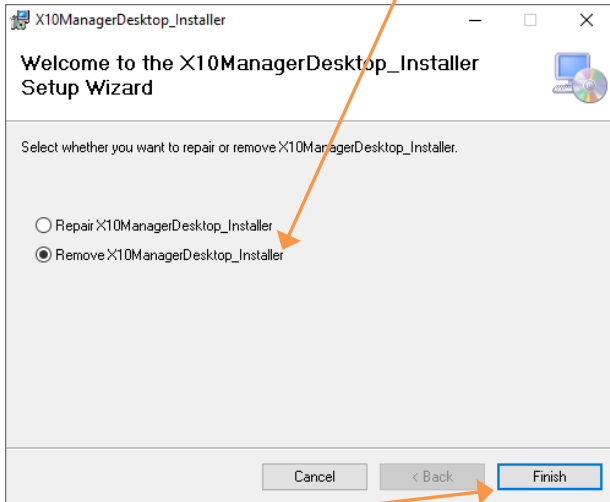
Refer to “**Preserve Files and X10 database**” section for details on how to preserve additional files, script customizations and data in the X10 database.

# Remove Installation

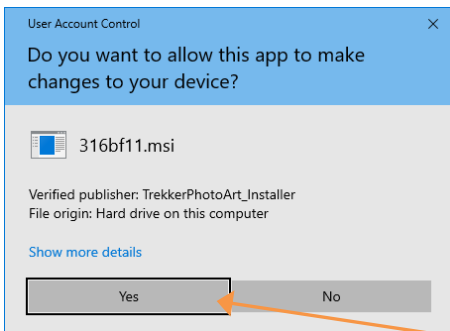
## To Remove “X10ManagerDesktop”

- 1) With “File Explorer” navigate to “C:\X10ManagerDesktop\_Installer”
- 2) Mouse-Right-Click “X10ManagerDesktop\_Installer.msi”
- 3) Select “Install”

Select “Remove X10ManagerDesktop\_Installer”



Click “Finish”



In “User Account Control” window Select “Yes”

The program will be removed.

Note: **X10ManagerDesktop** and **X10Manager** folders will be removed. Any additional or modified files and script customizations in these folders, and the X10 database will also be removed.

Refer to “**Preserve Files and X10 database**” section for details on how to preserve additional files, script customizations and data in the X10 database.

## Remove Installation – continued

### Preserve Files and X10 database

A normal **X10ManagerDesktop** and **X10Manager** (command line) installation will create new folders in the following locations:

- C:\X10ManagerDesktop\_Installer
- C:\Program Files (x86)\trekkerphotoart.com\X10ManagerDesktop\_Installer
- C:\X10Manager

**Note: Existing folders and their contents will be replaced.**

"C:\Program Files (x86)\trekkerphotoart.com\X10ManagerDesktop\_Installer" contains files needed for operation of **X10ManagerDesktop**.

- When a Repair or Remove Installation is performed, this folder and its contents are removed.
- A Repair Installation will re-create this folder and its contents.

**Note: Do not add or modify files in this location.**

"C:\X10Manager" contains files needed for operation of both **X10ManagerDesktop** and **X10Manager** (command line).

- When a Repair or Remove Installation is performed, this folder, its subfolders and its contents are removed.
- With a Repair Installation, the core files and some support command scripts (.cmd) are re-created.

The core files and subfolders within "C:\X10Manager" are:

- X10ManagerDesktop\_OperationsManual.pdf      A copy of this Operations Manual
- X10Db.mdb      X10 Access database
- X10Db\_SetFilePermissions.cmd      Resets X10 database file permissions (must use "Run as administrator")
- X10Manager\_backupX10Db.cmd
- X10Manager\_restoreX10Db.cmd
- X10Manager\_createX10DbTables.cmd      Resets X10 database, all existing data and settings are cleared
- X10Manager.exe      X10Manager (command line) executable
- X10Manager.exe.config      Configuration file for X10Manager.exe
- X10Include.dll      Library file for X10Manager.exe
- X10IncludeCM.dll      Library file for X10Manager.exe
- ParadoxReader.dll      Library file for X10Manager.exe
- X10Manager\_downloadEventsToActiveControllers.cmd
- X10Manager\_exportModulesFromX10Db.cmd
- X10Manager\_importModulesToX10Db.cmd
- PurgeFiles.vbs      Used by command scripts (.cmd) to purge script run-time log files
- C:\X10Manager\Examples      Folder that contains example command scripts (.cmd)
- C:\X10Manager\X10DbBackup      Default X10 database backup / restore location.

The next page shows steps for preserving and restoring files and X10 database.

## Remove Installation – continued

### Preserve Files and X10 database– continued

**BEFORE a Repair or Remove Installation is performed**, contents of the X10 database and your additional or customized command scripts need to be preserved.

- 1) Perform a X10 database backup by double-clicking on C:\X10Manager\X10Manager\_backupX10Db.cmd
- 2) Create a new folder, C:\X10Manager\_SAVE
- 3) Create a new folder, C:\X10Manager\_SAVE\X10DbBackup
- 4) Create a new folder, C:\X10Manager\_SAVE\Examples
- 5) Copy C:\X10Manager\\*.cmd command scripts only to C:\X10Manager\_SAVE
- 6) Copy C:\X10Manager\X10DbBackup\\*. \* to C:\X10Manager\_SAVE\X10DbBackup
- 7) Copy C:\X10Manager\Examples\\*. \* to C:\X10Manager\_SAVE\Examples

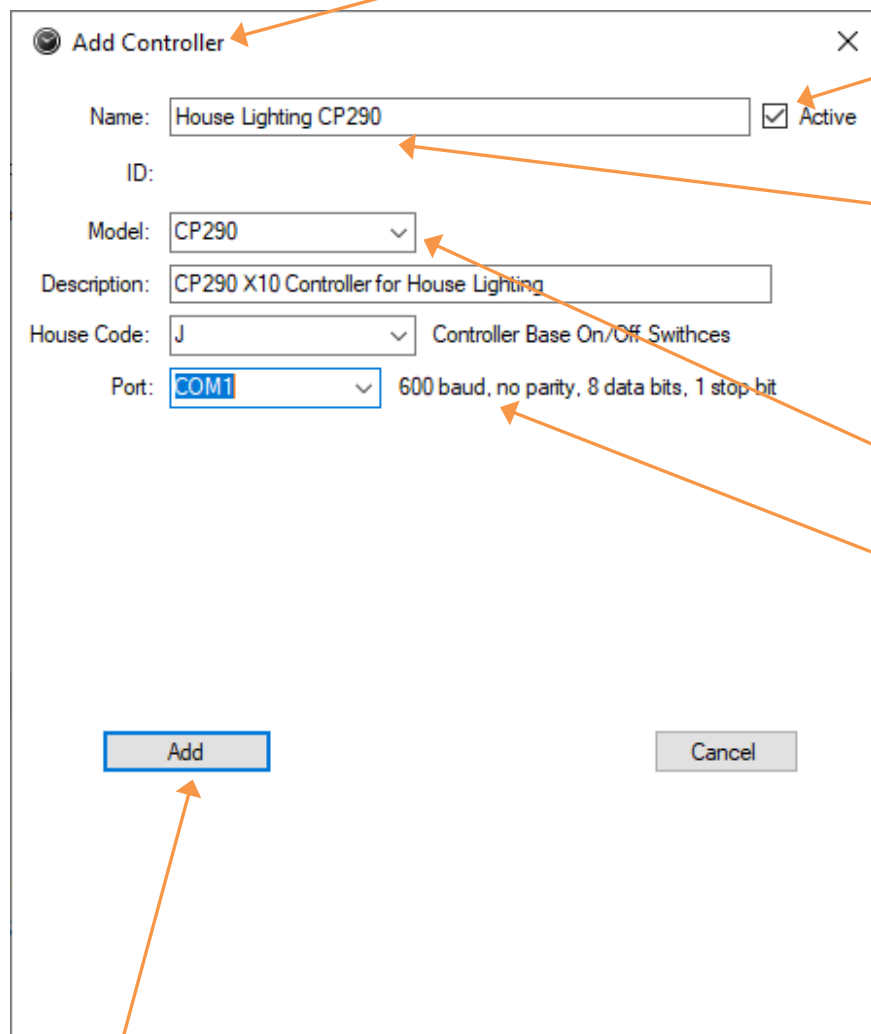
**After a Repair or Remove Installation is performed**, contents of the X10 database and your additional or customized command scripts can be restored ONLY if the above preserve steps were taken BEFORE the Repair or Remove Installation was performed.

- 1) Copy C:\X10Manager\_SAVE\X10DbBackup\\*. \* to C:\X10Manager\X10DbBackup
- 2) Select “C:\X10Manager\X10Db\_SetFilePermissions.cmd”, right-mouse-click, select “Run as administrator”
- 3) Perform a X10 database restore by double-clicking on C:\X10Manager\X10Manager\_restoreX10Db.cmd
- 4) Copy ONLY scripts and files you have added or customized:
  - a. C:\X10Manager\_SAVE\\*.cmd command scripts only to C:\X10Manager
  - b. C:\X10Manager\_SAVE\Examples\\*. \* to C:\X10Manager\Examples

# Controllers

## Add CP290 X10 Home Control Interface

“Controller” – “Add” will display the “Add Controller” form.



The screenshot shows the 'Add Controller' dialog box with the following fields and annotations:

- Name:** House Lighting CP290 (An arrow points to this field with the text: "Controller 'Name' is required.")
- Active:** ☒ (An arrow points to this checkbox with the text: "Checking 'Active' allows 'Download Events to Controller'".)
- ID:** (Empty field)
- Model:** CP290 (An arrow points to this dropdown with the text: "Select 'CP290' for Controller 'Model'".)
- Description:** CP290 X10 Controller for House Lighting (An arrow points to this field with the text: "After Controller 'Model' is selected, the remaining settings for the Controller will be displayed.")
- House Code:** J (Dropdown menu)
- Controller Base On/Off Switches:** (Text label)
- Port:** COM1 (Dropdown menu)
- 600 baud, no parity, 8 data bits, 1 stop bit:** (Text label)
- Buttons:** Add and Cancel

Click “Add” to finish adding Controller

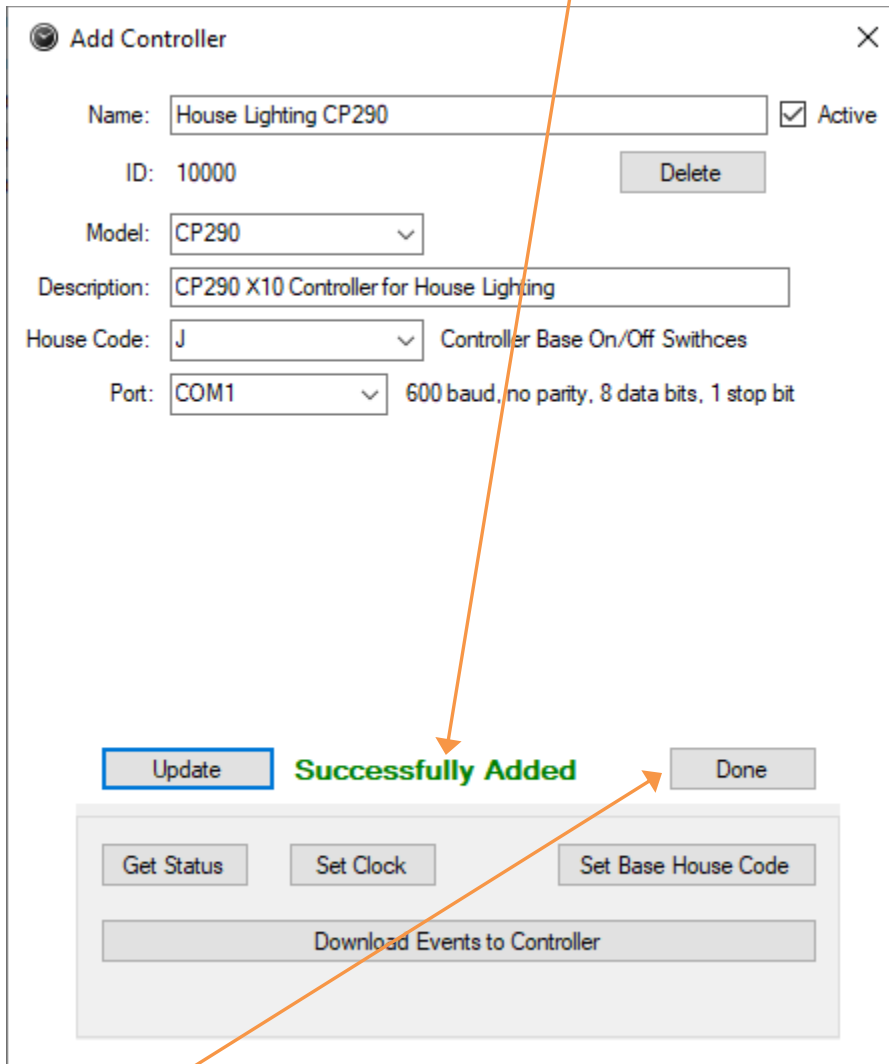
Next page shows a “Successfully Added” result.



## Controllers – continued

### Add CP290 X10 Home Control Interface – continued

“Successfully Added” will be displayed in the status box.



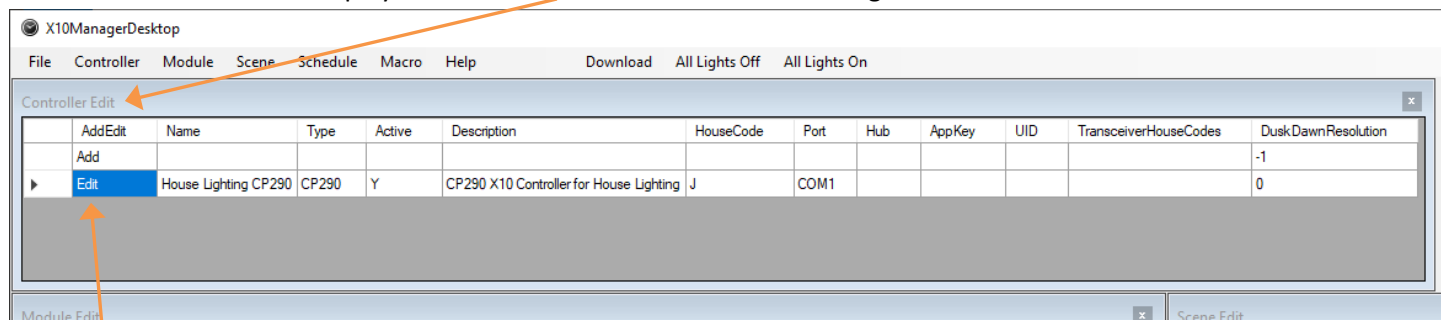
The screenshot shows the 'Add Controller' dialog box. The 'Name' field is 'House Lighting CP290', 'ID' is '10000', 'Model' is 'CP290', 'Description' is 'CP290 X10 Controller for House Lighting', 'House Code' is 'J', and 'Port' is 'COM1'. The 'Active' checkbox is checked. A 'Delete' button is next to the ID field. Below the input fields, the text '600 baud, no parity, 8 data bits, 1 stop bit' is displayed. At the bottom, there is a row of buttons: 'Update', 'Successfully Added', and 'Done'. Below this row is a section with buttons for 'Get Status', 'Set Clock', 'Set Base House Code', and a larger button for 'Download Events to Controller'. An orange arrow points from the text '“Successfully Added” will be displayed in the status box.' to the 'Successfully Added' text. Another orange arrow points from the 'Done' button to the text 'Click “Done” to close “Add Controller” form.'

Click “Done” to close “Add Controller” form.

## Controllers – continued

### Edit CP290 X10 Home Control Interface

“Controller” – “Edit” will display the “Controller Edit” window containing a list of all added **Controllers**.



Click “Edit” on the row of the CP290 Controller to be edited.

The “Update Controller” form will be displayed

**Update Controller**

Name:  ☒ Active

ID: 10000

Model:

Description:

House Code:  Controller Base On/Off Switches

Port:  600 baud, no parity, 8 data bits, 1 stop bit

**Controller Operations Panel**

Checking “Active” allows “Download Events to Controller”.

Items not ghosted can be modified.

Click “Update” to save changes.

Click “Done” when finished.

**Controller Operations Panel**

Click on an Operation button to perform operation directly to the **Controller**.

For Example, click on “Set Clock” to set the Controller’s time.

## Add CM15A X10 ActiveHome Pro

The 'Add Controller' dialog box contains the following fields and options:

- Name:** House Lighting CM15A
- ID:** (empty)
- Model:** CM15A (selected from a dropdown)
- Description:** CM15A Controller for House Lighting
- House Code:** J (selected from a dropdown)
- Port:** 0003.0004 (selected from a dropdown)
- Transceiver House Codes:** A grid of checkboxes for letters A through P. 'J' is checked.
- Dusk/Dawn Resolution:** 8 Days (selected from a dropdown)
- Buttons:** 'Add' (highlighted with a blue border) and 'Cancel'.

Checking “**Active**” allows “**Download Events to Controller**”.

Controller “**Name**” is required.

The “**Name**” can be freely formatted. For this “**Add**” example, the **Controller** is given “House Lighting CM15A” as a name.

Select “CMA15A” for **Controller “Model”**.

After **Controller “Model”** is selected, the remaining settings for the **Controller** will be displayed.

“**Port**” – “port.hub”

CM15A Controller must 1<sup>st</sup> be connected to computers USB port and powered.

If installing multiple CM15A Controllers, the “**Port**” – “port.hub” designation will be unique for each CM15A Controller.

The CM15A Controller must be directly connected to a computer’s USB port.

Click “**Add**” to finish adding **Controller**

Next page shows a “Successfully Added” result.

## Controllers – continued

### Add CM15A X10 ActiveHome Pro– continued

“Successfully Added” will be displayed in the status box.

**Add Controller** [X]

Name:  ☒ Active

ID: 10000

Model:

Description:

House Code:  Monitored House Code

Port:  X10 USB ActiveHome (ACPI-compliant)

Transceiver House Codes

<input type="checkbox"/> A	<input type="checkbox"/> C	<input type="checkbox"/> E	<input type="checkbox"/> G	<input type="checkbox"/> I	<input type="checkbox"/> K	<input type="checkbox"/> M	<input type="checkbox"/> O
<input type="checkbox"/> B	<input type="checkbox"/> D	<input type="checkbox"/> F	<input type="checkbox"/> H	<input checked="" type="checkbox"/> J	<input type="checkbox"/> L	<input type="checkbox"/> N	<input type="checkbox"/> P

Dusk/Dawn Resolution:

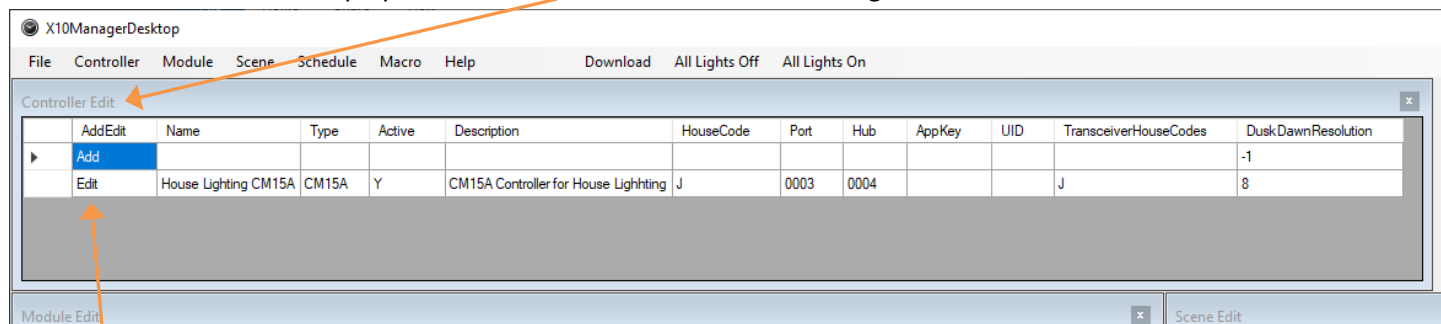
**Successfully Added**

Click “Done” to close “Add Controller” form.

## Controllers – continued

### Edit CM15A X10 ActiveHome Pro

“Controller” – “Edit” will display the “Controller Edit” window containing a list of all added **Controllers**.



Click “Edit” on the row of the CM15A Controller to be edited.

The “Update Controller” form will be displayed

**Update Controller**

Name:  ☒ Active

ID: 10000

Model:

Description:

House Code:  Monitored House Code

Port:  X10 USB ActiveHome (ACPI-compliant)

Dusk/Dawn Resolution:

Transceiver House Codes

☐ A ☐ C ☐ E ☐ G ☐ I ☐ K ☐ M ☐ O

☐ B ☐ D ☐ F ☐ H ☒ J ☐ L ☐ N ☐ P

**Controller Operations Panel**

"Set Clock" also sets Monitored and Transceiver House Codes

Checking “Active” allows “Download Events to Controller”.

Items not ghosted can be modified.

Click “Update” to save changes.

Click “Done” when finished.

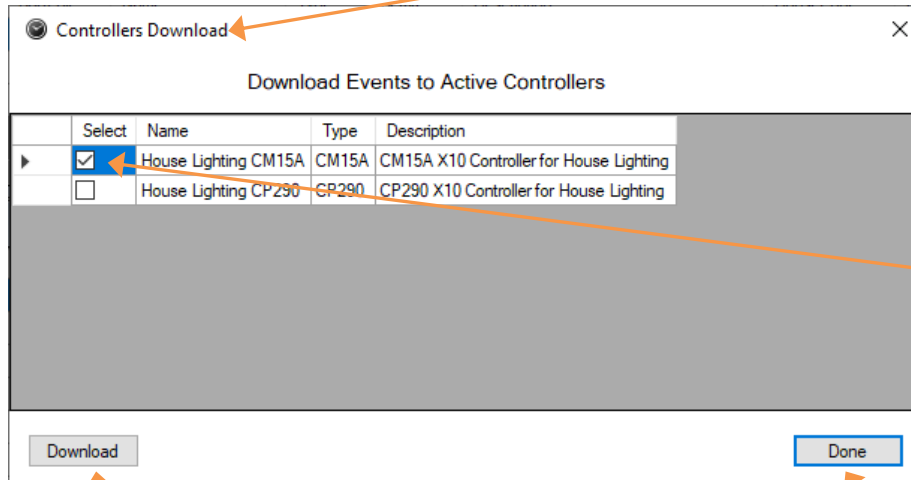
**Controller Operations Panel**

Click on an Operation button to perform operation directly to the **Controller**.

For Example, click on “Set Clock” to set the **Controller’s** time.

### Download Events to Controller

“Controller” – “Download” will display the “**Controllers Download**” window containing a list of all added **Controllers**.



**Events** will be downloaded to Selected **Controllers**.

Active **Controllers** will be pre-selected.

Note: Changing a selection here will not permanently change the **Controller** “**Active**” setting.

Click “**Done**” when finished.

Click “**Download**” when ready to download **Events** to **Controllers**.

#### Notes:

- 8) “**Download**” on the main program Window will also display this “**Controllers Download**” window.
- 9) When editing a **Controller**, “**Download Events to Controller**” button will download to that **Controller**.
- 10) Refer to **X10Manager** (command line) section regarding setup of scheduled download **Events** to active **Controllers**.

# Modules

## Add X10 Module

“Module” – “Add” will display the “Add Module” form.

The screenshot shows the 'Add Module' dialog box. It contains the following fields and controls:

- Name:** A text input field containing 'HalFloor'. An arrow points to this field with the text: "Module 'Name' is required."
- Enabled:** A checked checkbox. An arrow points to it with the text: "Checking 'Enabled' allows the Module to be active in Scenes. When not checked, the Module with its state is still present in the Scene, just not active in the Scene."
- ID:** An empty text input field. An arrow points to it with the text: "The 'Name' can be freely formatted. For this 'Add' example, the Module is given 'HalFloor' as a name."
- Description:** A text input field containing 'Hallway Floor/Wall Light'.
- Controller:** A dropdown menu showing 'House Lighting CM15A [CM15A]'. An arrow points to it with the text: "Select a Controller that will control the Module."
- Controller Active:** A text input field containing 'Yes'.
- House Code:** A dropdown menu showing 'J'.
- Module Code:** A dropdown menu showing '9'.
- Dimmer:** An unchecked checkbox.
- Control Lights:** A checked checkbox.
- Extended Commands:** An unchecked checkbox.
- Buttons:** 'Add' and 'Cancel' buttons at the bottom. An arrow points to the 'Add' button with the text: "Click 'Add' to finish adding Module"

Checking “Enabled” allows the **Module** to be active in **Scenes**. When not checked, the **Module** with its state is still present in the **Scene**, just not active in the **Scene**.

**Module “Name”** is required.

The “**Name**” can be freely formatted. For this “**Add**” example, the **Module** is given “HalFloor” as a name.

Select a **Controller** that will control the **Module**.

The remaining settings are specific to the X10 **Module** and its intended use.

Click “Add” to finish adding **Module**

Next page shows a “Successfully Added” result.

## Modules – continued

### Add X10 Module– continued

“Successfully Added” will be displayed in the status box.

**Add Module** [X]

Name:  ☒ Enabled

ID:

Description:

Controller:  [v]

Controller Active: Yes

House Code:  [v]

Module Code:  [v]

Dimmer: ☐

Control Lights: ☒

Extended Commands: ☐

**Successfully Added**

On/Off:  [v]

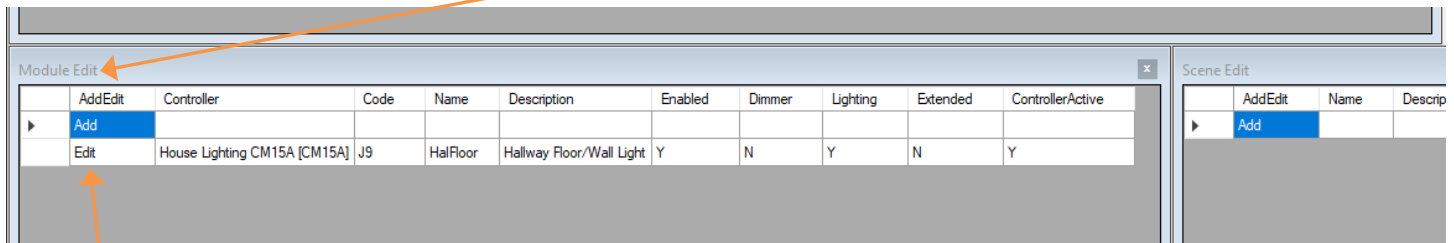
Click **Done** to close “Add Module” form.



## Modules – continued

### Edit X10 Module

“Module” – “Edit” will display the “Module Edit” window containing a list of all added **Modules**.



Click “Edit” on the row of the **Module** to be edited.

The “Update Module” form will be displayed

The 'Update Module' form is shown with the following fields and controls:

- Name: HalFloor
- ID: 10000
- Description: Hallway Floor/Wall Light
- Controller: House Lighting CM15A [CM15A]
- Controller Active: Yes
- House Code: J
- Module Code: 9
- Dimmer: ☐
- Control Lights: ☒
- Extended Commands: ☐
- Buttons: Update, Done, Test
- On/Off: Off

Annotations and instructions:

- Checking “Enabled” allows the **Module** to be active in **Scenes**. When not checked, the **Module** with its state is still present in the **Scene**, just not active in the **Scene**.
- Items not ghosted can be modified.
- Click “Update” to save changes.
- Click “Done” when finished.
- Module Operations Panel**
- Click on an Operation button to perform operation directly to the **Module** via its defined **Controller**.
- For Example, click on “Test” to turn the **Module** “Off”.

# Scenes

## Add Scene

“Scene” – “Add” will display the “Add Scene” form.

Add Scene

Name: Doors On

ID:

Description: Turn On Outside Door Lights

House Code: J

Current house code only: ☒

Modules In Scene

	Code	Controller	Name	On/Off	Description
	J1	House Lighting CM15A [CM15A]	OutGar	On	Outside Garage Lights
	J2	House Lighting CM15A [CM15A]	FPorch	On	Front Porch Lights
▶	J3	House Lighting CM15A [CM15A]	BDoor	On	Back Door Lights
	J9	House Lighting CM15A [CM15A]	HalFloor		Hallway Floor/Wall Light
	J16	House Lighting CM15A [CM15A]	Den Test Dimmer Module		Dimmer LED Light in Dimmer Module

<

>

Set All Off

Set All On

Clear All

Add

Cancel

Scene “Name” is required.

The “Name” can be freely formatted. For this “Add” example, the Scene is given “Doors On” as a name.

Use “House Code” dropdown to Select House Code with active Modules used in this Scene.

If There are Modules in multiple House Codes, they can be added later using “Scene” – “Edit”.

Use “On/Off” dropdown to select which Modules and their state for this Scene.

Scene “On/Off” speed buttons.

Click “Add” to finish adding Scene

Next page shows a “Successfully Added” result.

## Scenes – continued

### Add Scene– continued

“Successfully Added” will be displayed in the status box.

**Add Scene** [X]

Name:

ID: 10000

Description:

House Code:  Current house code only: ☒

**Modules In Scene**

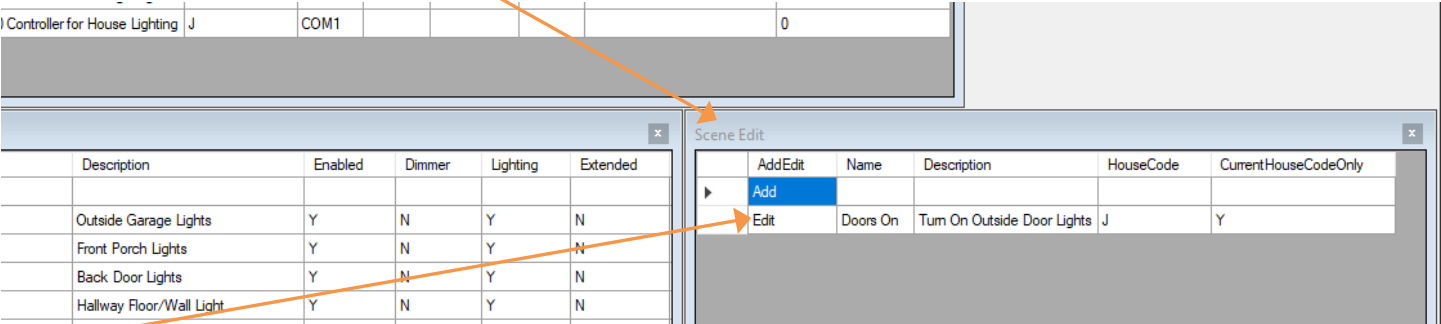
	Code	Controller	Name	On/Off	Description
▶	J1	House Lighting CM15A [CM15A]	OutGar	On ▼	Outside Garage Lights
	J2	House Lighting CM15A [CM15A]	FPorch	On ▼	Front Porch Lights
	J3	House Lighting CM15A [CM15A]	BDoor	On ▼	Back Door Lights
	J9	House Lighting CM15A [CM15A]	HalFloor	▼	Hallway Floor/Wall Light
	J16	House Lighting CM15A [CM15A]	Den Test Dimmer Module	▼	Dimmer LED Light in Dimmer Module

**Successfully Added**

Click “Done” to close “Add Scene” form.

Edit Scene

“Scene” – “Edit” will display the “Scene Edit” window containing a list of all added Scenes.



Click “Edit” on the row of the Scene to be edited.

The “Update Scene” form will be displayed

**Update Scene**

Name:

ID:

Description:

House Code:  ☐ Current house code only

**Modules In Scene**

Code	Controller	Name	On/Off	Description
J1	House Lighting CM15A [CM15A]	OutGar	On	Outside Garage Lights
J2	House Lighting CM15A [CM15A]	FPorch	On	Front Porch Lights
J3	House Lighting CM15A [CM15A]	BDoor	On	Back Door Lights
J9	House Lighting CM15A [CM15A]	HalFloor		Hallway Floor/Wall Light
J16	House Lighting CM15A [CM15A]	Den Test Dimmer Module		Dimmer LED Light in Dimmer Module

Items not ghosted can be modified.

Click “Update” to save changes.

Click “Done” when finished.

Scene Operations Panel

Click on “Test Modules In Scene” to set each Module in the Scene to their specified “On/Off” state.

# Macros

## Macros Overview

Each **Macros** is entered using a three step process:

### 1) **Macro Initiator**

Note: A **Macro Initiator** can have multiple **Macros**

- A) Controller
- B) Enabled [Yes/No]
- C) Trigger [House Unit]
- D) Function [On/Off]

### 2) **Macro**

Note: A **Macro** can have multiple **Macro Commands**

- A) **Macro** Sort Order – Order of execution
- B) RF (Radio Frequency) [On/Off] Note: “On” will allow sending RF **Macro Commands**.
- C) Delay – Maximum 4 hours, 30 minutes (hh:mm:ss)
- D) Inhibit Retrigger [On/Off] Note: “On” disables sending both RF and Power Line **Macro Commands**.

### 3) **Macro Command**

- A) **Macro Command** Sort Order – Order of execution
- B) Command
- C) Standard Commands
  - a. House Code
  - b. Unit(s)
  - c. Pre-Bright / Pre-Dim
  - d. Brights / Dims
- D) Extended Commands
  - a. House Code
  - b. Unit Code
  - c. Extended Command
  - d. Extended Data Byte

The following **Macros** sections “**Add Macro Initiator**”, “**Add Macro**” and “**Add Macro Command**” show steps for adding an operational **Macros**.

Note: Each **Macro Initiator** must include at least one **Macro**. Each **Macro** must include at least one **Macro Command**.

**Macros** sections “**Edit**” / “**Modify**” steps have the same relationships and similar screens.

Note: Example **Macros** sections “**Edit**” / “**Modify**” steps and screens have been omitted for document clarity.

## Add Macro Initiator

“Macro” – “Add” will display the “Add Macro Initiator” form.

The screenshot shows the 'Add Macro Initiator' dialog box. It contains the following fields and controls:

- Macro Initiator Name:** A text box containing 'Den Test Dimmer - Trigger J16 On'.
- ID:** A text box.
- Description:** A text box containing 'When Trigger J16 On, Turn On J9'.
- Controller:** A dropdown menu showing 'House Lighting CM15A [CM15A]'.
- Controller Active:** A checkbox labeled 'Yes'.
- Macro Initiator Enabled:** A checked checkbox.
- Start Date:** A date picker showing 'Friday, January 1, 2021'.
- Stop Date:** A date picker showing 'Friday, December 31, 2021'.
- Trigger:** A dropdown menu showing 'J'.
- UnitCode:** A dropdown menu showing '16'.
- Function:** Radio buttons for 'On' (selected) and 'Off'.

Below the form is a table with the following columns: AddEdit, Macro Name, Macro Sort Order, Macro Description, Flag, RF, Delay (hh:mm:ss), and Inhibit Retrigger. The table is currently empty.

At the bottom of the dialog are two buttons: 'Add' and 'Cancel'.

Annotations with orange arrows point to the following elements:

- The 'Add Macro Initiator' title bar.
- The 'Macro Initiator Name' field.
- The 'Controller' dropdown.
- The 'Trigger' dropdown.
- The 'UnitCode' dropdown.
- The 'Function' radio buttons.
- The 'Add' button.

“Macro Initiator Name” is required.

The “Macro Initiator Name” can be freely formatted. For this “Add” example, the **Macro Initiator Name** is given “Den Test Dimmer - Trigger J16 On”

Select **Controller** to support **Macro Initiator**.

Select **Macro Initiator** “Trigger” “HouseCode” and “UnitCode”

Select Trigger “Function”.

**Macros** can be added after new **Macro Initiator** is added.

Click “Add” to finish adding **Macro Initiator**

Next page shows a “Successfully Added” result.

## Macros – continued

### Add Macro Initiator– continued

“Successfully Added” will be displayed in the status box

**Add Macro Initiator**

Macro Initiator Name:

ID:

Description:

Controller:

Controller Active: ☒ Yes

Macro Initiator Enabled ☒ Start Date:  Stop Date:

Trigger:

Function: ☒ On ☐ Off

**Macros**

AddEdit	Macro Name	Macro Sort Order	Macro Description	Flag	RF	Delay (hh:mm:ss)	Inhibit Retrigger
<input checked="" type="button" value="Add"/>							

**Successfully Added**

Macros can now be added.

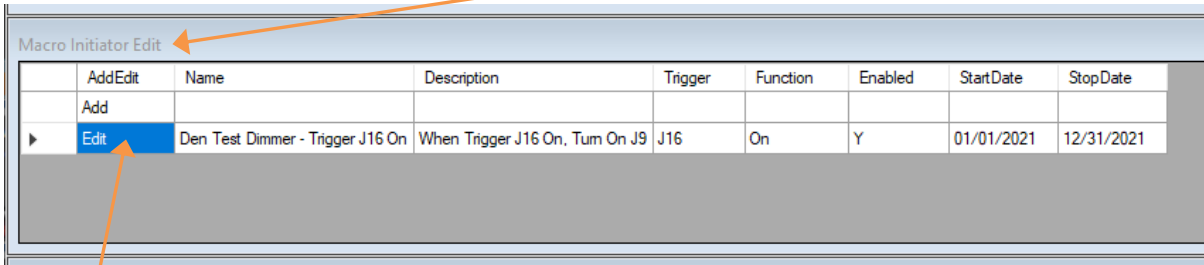
Click “Done” to close “Add Macro Initiator” form

Next page continues on with adding a **Macro** to this **Macro Initiator**.

## Macros – continued

### Add Macro

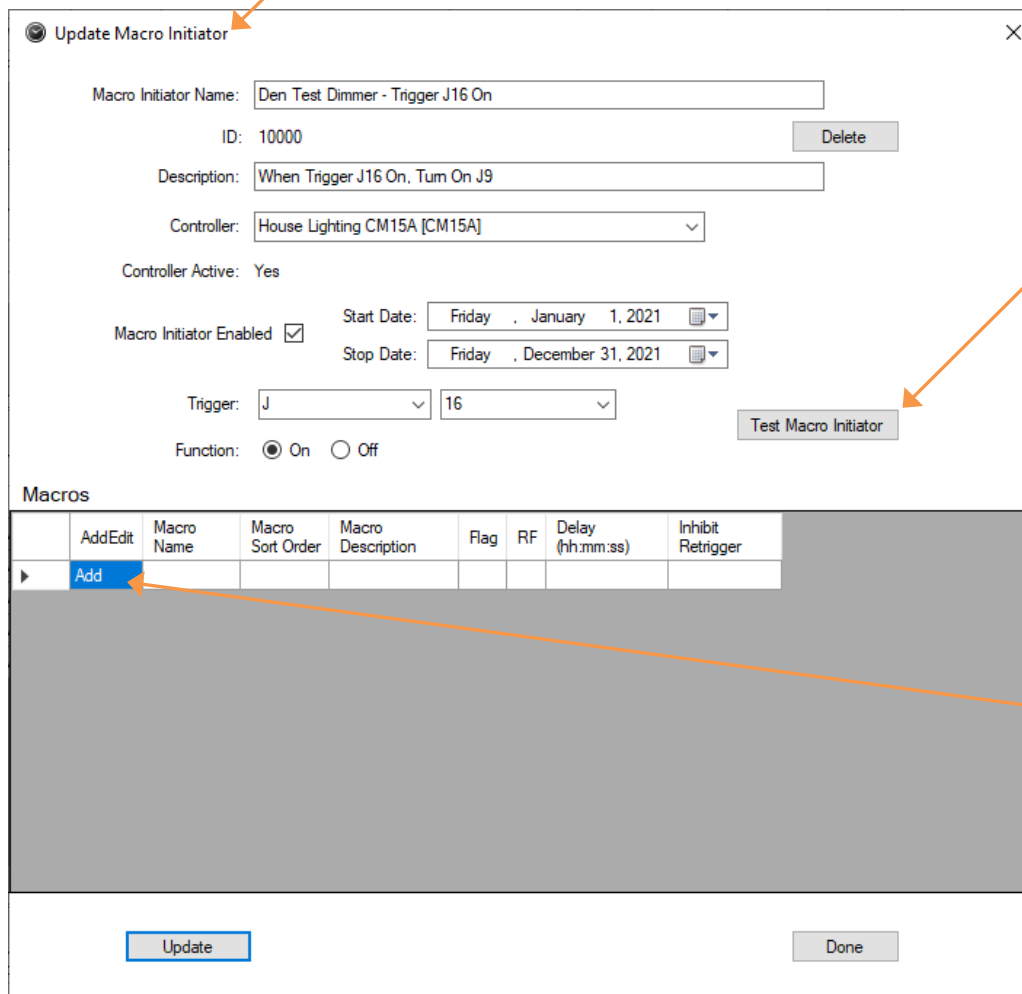
“Macro Initiator” – “Edit” will display the “Macro Initiator Edit” window containing a list of all added **Macro Initiators**.



AddEdit	Name	Description	Trigger	Function	Enabled	StartDate	StopDate
Add							
Edit	Den Test Dimmer - Trigger J16 On	When Trigger J16 On, Turn On J9	J16	On	Y	01/01/2021	12/31/2021

Click “Edit” on the row of the **Macro Initiator** to be edited.

The “Update Macro Initiator” form will be displayed



Update Macro Initiator

Macro Initiator Name: Den Test Dimmer - Trigger J16 On

ID: 10000 Delete

Description: When Trigger J16 On, Turn On J9

Controller: House Lighting CM15A [CM15A]

Controller Active: Yes

Macro Initiator Enabled ☒ Start Date: Friday, January 1, 2021 Stop Date: Friday, December 31, 2021

Trigger: J 16

Function: ☒ On ☐ Off

Test Macro Initiator

Macros

AddEdit	Macro Name	Macro Sort Order	Macro Description	Flag	RF	Delay (hh:mm:ss)	Inhibit Retrigger
Add							

Update Done

The “Test Macro Initiator” button can be used after:

- 1) This **Macro Initiator** has a **Macro**
- 2) The **Macro** has a **Macro Command**
- 3) A **Controller Download** has been performed

Click “Add” to add a **Macro**.

Next page shows “Add Macro” form.



## Macros – continued

### Add Macro – continued

The “Add Macro” form will be displayed

The screenshot shows the 'Add Macro' dialog box with the following fields and controls:

- Macro Name:** Turn On J9
- MacroID:** (empty)
- Description:** After Trigger J16 On, Turn On J9
- Macro Initiator Name:** Den Test Dimmer - Trigger J16 On
- Macro Sort Order:** 0
- RF:** ☐ On ☒ Off
- Delay:** 00:00:00 (Maximum 4 hours, 30 minutes (hh:mm:ss))
- Inhibit Retrigger:** ☐ On ☒ Off
- Macro Commands:** A table with columns: AddEdit, MacroCommandID, Macro Command Sort Order, Command, House Code, Unit Code Mask Odd, Unit Code Mask Even, pre Dim/Bright, Dims/Brights, Unit Code. The table is currently empty.
- Buttons:** Add, Cancel

Annotations with arrows point to the following elements:

- The 'Add Macro' title bar.
- The 'Macro Name' field.
- The 'Macro Sort Order' dropdown.
- The 'RF' radio buttons.
- The 'Delay' field.
- The 'Inhibit Retrigger' radio buttons.
- The 'Add' button.

“Macro Name” is required.

The “Macro Name” can be freely formatted. For this “Add” example, the Macro Name is given “Turn On J9”

Select the “Macro Sort Order”. This sets the order of execution within this Macro’s - Macro Initiator.

“RF” (Radio Frequency) “On” will allow sending RF Macro Commands.

“Delay” before Macro Commands in this Macro are executed. Maximum Delay time is 4 hours and 30 minutes.

“Inhibit Retrigger” “On” disables sending both RF and Power Line Macro Commands.

Macro Commands can be added after new Macro is added.

Click “Add” to finish adding Macro

Next page shows a “Successfully Added” result.

## Macros – continued

### Add Macro – continued

“Successfully Added” will be displayed in the status box

Macro Name:

MacroID:

Description:

Macro Initiator Name:

Macro Sort Order:

RF: ☐ On ☒ Off

Delay:  Maximum 4 hours, 30 minutes (hh:mm:ss)

Inhibit Retrigger: ☐ On ☒ Off

Macro Commands

	AddEdit	MacroCommandID	Macro Command Sort Order	Command	House Code	Unit Code Mask Odd	Unit Code Mask Even	pre Dim/Bright	Dims/Brights	Unit Code
▶	Add	-1								

**Successfully Added**

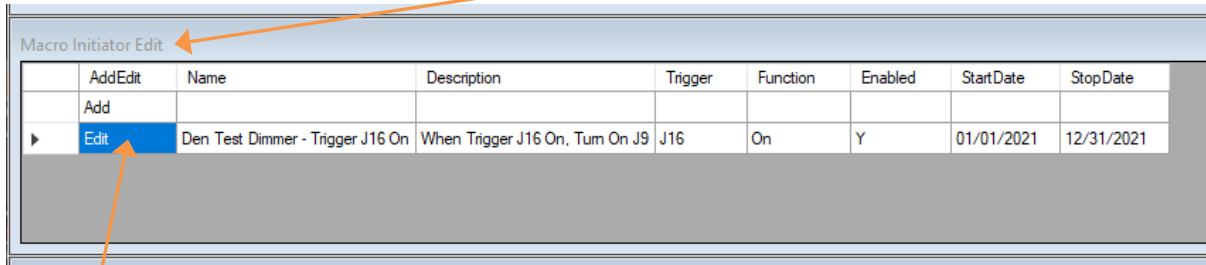
Macro Commands can now be added.

Click “Done” to close “Add Macro” form

Next page continues on with adding a **Macro Command** to this **Macro**.

## Add Macro Command

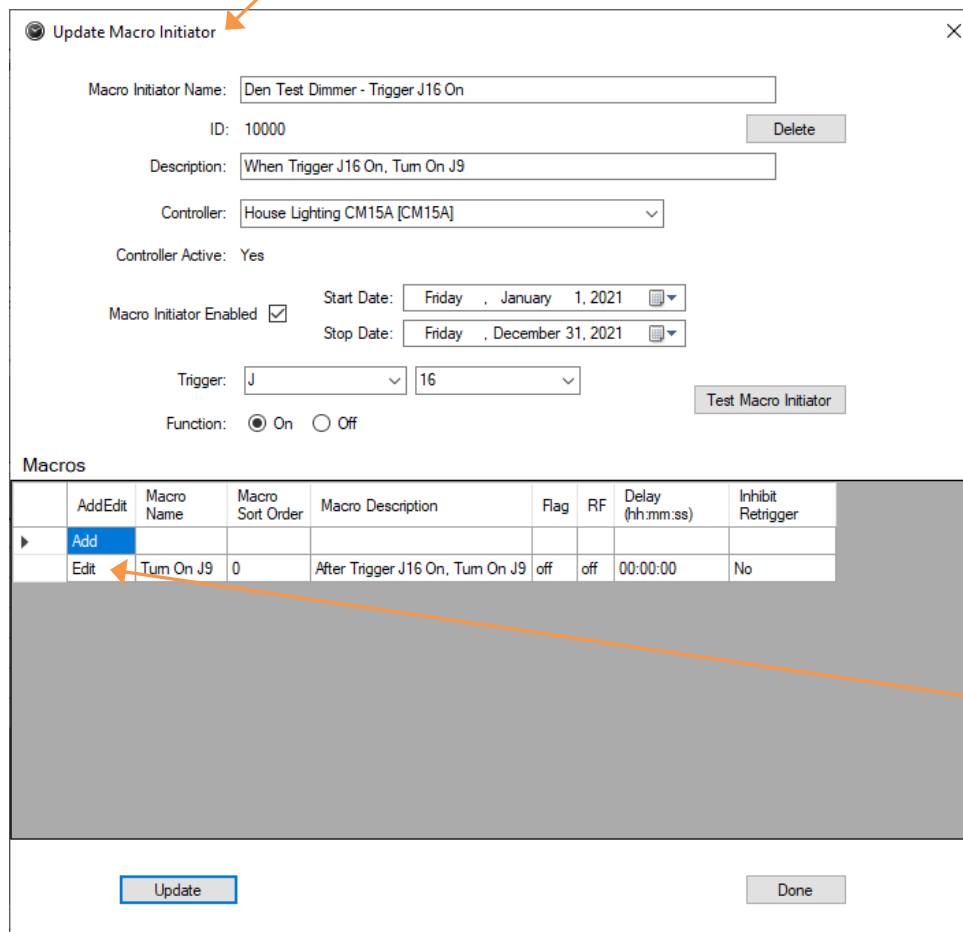
“Macro Initiator” – “Edit” will display the “Macro Initiator Edit” window containing a list of all added **Macro Initiators**.



Macro Initiator Edit									
	AddEdit	Name	Description	Trigger	Function	Enabled	StartDate	StopDate	
	Add								
▶	Edit	Den Test Dimmer - Trigger J16 On	When Trigger J16 On, Tum On J9	J16	On	Y	01/01/2021	12/31/2021	

Click “Edit” on the row of the **Macro Initiator** to be edited.

The “Update Macro Initiator” form will be displayed



**Update Macro Initiator**

Macro Initiator Name:

ID:

Description:

Controller:

Controller Active: ☒ Yes

Macro Initiator Enabled ☒

Start Date:

Stop Date:

Trigger:

Function: ☒ On ☐ Off

**Macros**

	AddEdit	Macro Name	Macro Sort Order	Macro Description	Flag	RF	Delay (hh:mm:ss)	Inhibit Retrigger
▶	Add							
	Edit	Tum On J9	0	After Trigger J16 On, Tum On J9	off	off	00:00:00	No

Click “Edit” on the **Macro** where the **Macro Command** is to be added.

Next page shows “Update Macro” form.

## Macros – continued

### Add Macro Command – continued

The “Update Macro” form will be displayed

Update Macro

Macro Name:

MacroID:

Description:

Macro Initiator Name: Den Test Dimmer - Trigger J16 On

Macro Sort Order:

RF: ☐ On ☒ Off

Delay:  Maximum 4 hours, 30 minutes (hh:mm:ss)

Inhibit Retrigger: ☐ On ☒ Off

Macro Commands

	AddEdit	MacroCommandID	Macro Command Sort Order	Command	House Code	Unit Code Mask Odd	Unit Code Mask Even	pre Dim/Bright	Dims/Brights	Unit Code
▶	Add	-1								

Click “Add” to add a Macro Command.

Next page shows “Add Macro Command” form.

## Macros – continued

### Add Macro Command – continued

The “Add Macro Command” form will be displayed

The screenshot shows the 'Add Macro Command' dialog box. It contains the following fields and options:

- MacroCommandID:** (empty)
- Macro Name:** Turn On J9
- Macro Initiator Name:** Den Test Dimmer - Trigger J16 On
- Macro Command Sort Order:** 0 (dropdown)
- Command:** [2] On (dropdown)
- House Code:** J (dropdown)
- Unit(s):** A grid of checkboxes for units 1 through 16. Unit 9 is checked.
- Buttons:** 'Add' and 'Cancel' at the bottom.

Orange arrows point from the following text to specific elements in the dialog:

- From 'The “Add Macro Command” form will be displayed' to the dialog title bar.
- From 'Select the “Macro Command Sort Order”. This sets the order of execution within this Macro Command's - Macro.' to the 'Macro Command Sort Order' dropdown.
- From 'Select “Command” to be executed' to the 'Command' dropdown.
- From 'Select “House Code”.' to the 'House Code' dropdown.
- From 'Check “Units”. Minimum of one Unit is required.' to the 'Unit(s)' checkboxes.
- From 'Click “Add” to finish adding Macro Command' to the 'Add' button.

Select the “**Macro Command Sort Order**”. This sets the order of execution within this **Macro Command's - Macro**.

Select “**Command**” to be executed

Select “**House Code**”.

Check “**Units**”. Minimum of one **Unit** is required.

Click “**Add**” to finish adding **Macro Command**

Next page shows a “Successfully Added” result.

## Macros – continued

### Add Macro Command – continued

“Successfully Added” will be displayed in the status box

**Add Macro Command**

MacroCommandID: 10000 Delete

Macro Name: Turn On J9

Macro Initiator Name: Den Test Dimmer - Trigger J16 On

Macro Command Sort Order: 0

Command: [2] On

House Code: J

Unit(s): ☐ 1 ☐ 3 ☐ 5 ☐ 7 ☒ 9 ☐ 11 ☐ 13 ☐ 15  
☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ 10 ☐ 12 ☐ 14 ☐ 16

Update **Successfully Added** Done

Click **Done** to close **Add Macro** form

# Schedules

## Add Schedule

“Schedule” – “Add” will display the “Add Schedule” form.

The screenshot shows the 'Add Schedule' dialog box. It has a title bar with a close button (X) and a subtitle 'Add Schedule'. The form contains the following fields and controls:

- Name:** A text input field. An orange arrow points to it from the text 'Schedule "Name" is required.'
- ID:** A text input field.
- Description:** A text input field.
- Sunrise Time:** A text input field.
- Sunset Time:** A text input field.
- Events:** A table with the following columns: AddEdit, EventID, Scene/Macro, Days, Time, Security, Enabled, StartDate, StopDate. An orange arrow points to the table header from the text 'Events can be added after new Schedule is added.'
- Buttons:** 'Add' and 'Cancel' buttons at the bottom. An orange arrow points to the 'Add' button from the text 'Click "Add" to finish adding Schedule'.

Below the 'Sunset Time' field, there is a note: 'Add sets Sunrise/Sunset times (also reset by Controller downloads).'

Below the 'Events' table, there is a message: 'Events - New Schedule must first be added.'

Schedule “Name” is required.

The “Name” can be freely formatted. For this “Add” example, the **Schedule** is given “House Lighting” as a name.

**Events** can be added after new **Schedule** is added.

Click “Add” to finish adding **Schedule**

Next page shows a “Successfully Added” result.

## Schedules – continued

### Add Schedule– continued

The screenshot shows the 'Update Schedule' dialog box. It contains fields for Name, ID, Description, Sunrise Time, and Sunset Time. There is an 'Active' checkbox and a 'Delete' button. Below these fields is an 'Events' section with a table. At the bottom of the dialog are 'Update' and 'Done' buttons. A green status message 'Successfully Added' is displayed between the buttons. Orange arrows point from text annotations on the right to specific elements in the dialog.

**Update Schedule** [X]

Name:  ☐ Active

ID:

Description:

Sunrise Time:  Sunset Time:  Update resets Sunrise/Sunset times (also reset by Controller downloads).

Events

	AddEdit	EventID	Scene/Macro	Days	Time	Security	Enabled	StartDate	StopDate
▶	Add	-1							

**Successfully Added**

Checking “**Active**” allows **Schedule’s Events** to be included with **Controller** downloads.

**Events** can now be added.

**Add Event** section will show how an **Event** can be added.

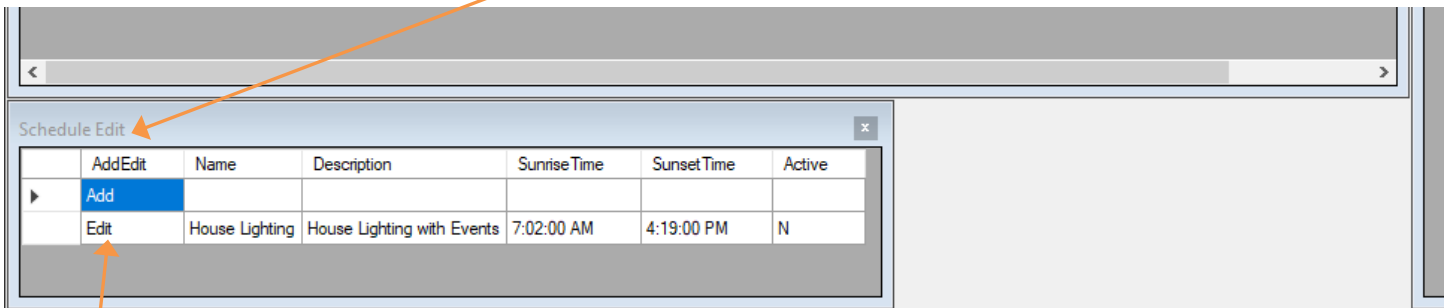
“Successfully Added” will be displayed in the status box.

Click “**Done**” to close “**Add Schedule**” form.



### Edit Schedule

“Schedule” – “Edit” will display the “Schedule Edit” window containing a list of all added Schedules.



Click “Edit” on the row of the **Schedule** to be edited.

The “Update Schedule” form will be displayed

The 'Update Schedule' form contains the following fields and controls:

- Name: House Lighting
- ID: 10000
- Description: House Lighting with Events
- Sunrise Time: 7:02:00 AM
- Sunset Time: 4:19:00 PM
- Active: ☐
- Delete button
- Events table:

	AddEdit	EventID	Scene/Macro	Days	Time	Security	Enabled	StartDate	StopDate
▶	Add	1							
	Edit	10000	[s] Doors On	Every Day	Sunrise - 30 minutes	N	Y	01/01/2020	12/31/2020

Update button: Update

Done button: Done

Checking “Active” allows **Schedule’s Events** to be included with **Controller** downloads.

Items not ghosted can be modified.

**Events** can be added or edited.

**Add Event** section will show how an **Event** can be added.

**Edit Event** section will show how an **Event** can be edited.

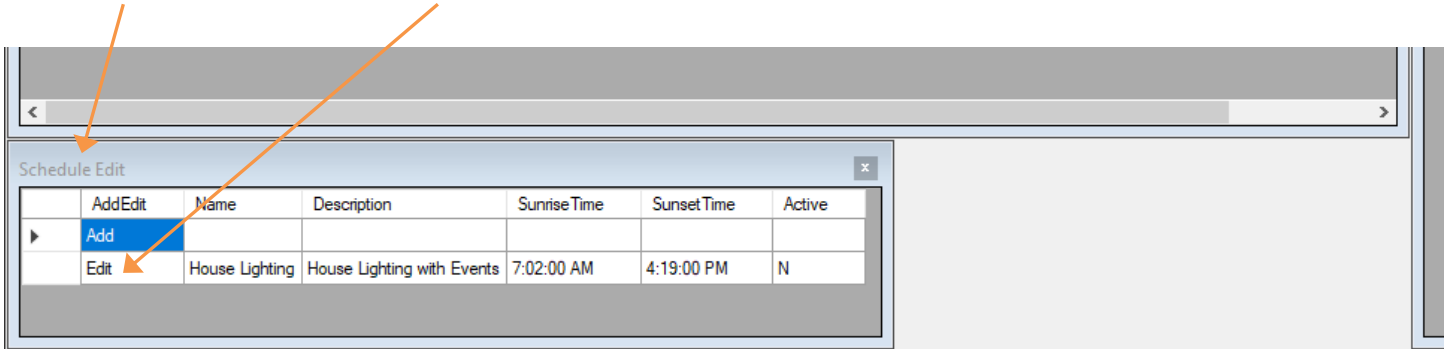
Click “Done” when finished.

Click “Update” to save changes.

# Events

## Add Event

In “Schedule Edit” window, click “Edit” on the row of the **Schedule** that will contain the **Event** to be added.



The “Update Schedule” form containing the selected **Schedule** will be displayed

The screenshot shows a window titled "Update Schedule" with a form containing the following fields: Name (House Lighting), ID (10000), Description (House Lighting with Events), Sunrise Time (7:02:00 AM), and Sunset Time (4:19:00 PM). Below these fields is a table with columns: AddEdit, EventID, Scene/Macro, Days, Time, Security, Enabled, StartDate, StopDate. The first row is highlighted with a blue background and contains the text "Add". An orange arrow points from the text "Click 'Add' to add an Event." to the "Add" button in the first row.

Click “Add” to add an Event.

Next page shows “Add Event” form.

## Events – continued

### Add Event– continued

An **Event** can trigger a **Scene** or **Macro**. Adding a **Macro Event** uses the same steps as adding a **Scene Event** with the exception of selecting the “Macro” Radio Button, then selecting a **Macro** from the list of available **Macros**.

“Add Event” form.

The screenshot shows the 'Add Event' dialog box with the following fields and options:

- EventID:** (empty text field)
- Schedule:** House Lighting
- Scene/Macro Selection:** ☒ Scene, ☐ Macro
- Scene:** Doors On (dropdown menu)
- Event Enabled:** ☒
- Start Date:** Wednesday, January 1, 2020 (calendar icon)
- Stop Date:** Thursday, December 31, 2020 (calendar icon)
- Time:** ☐ Specific Time: 03:55 PM (spinner), hh:mm AM/PM
- After Sunrise By:** ☒ -30 minutes (spinner)
- After Sunset By:** ☐ (empty spinner) minutes
- Security Variations:** ☐
- Day(s):** ☐ Today, ☐ Tomorrow, ☐ Weekends, ☐ Weekdays, ☒ Every Day, ☐ Selected Day(s)
- Days of Week:** ☒ Sun, ☒ Mon, ☒ Tue, ☒ Wed, ☒ Thu, ☒ Fri, ☒ Sat
- Buttons:** Add, Cancel

Annotations with arrows point to the following elements:

- “Add Event” form. (points to the dialog title)
- Schedule that owns Event. (points to House Lighting)
- To Add a Scene Event, select “Scene” Radio Button to show list of available Scenes. (points to the Scene radio button)
- Select “Scene” from list of available Scenes. (points to the Scene dropdown menu)
- When Events are downloaded to Controllers, the “Start Date” and “End Date” year is updated to the current year. (points to the Start Date field)
- “After Sunrise” and “After Sunset” minutes can be positive (+) or negative (-). (points to the -30 minutes field)
- Click “Add” when ready to Add new Event. (points to the Add button)

Schedule that owns Event.

To Add a **Scene Event**, select “Scene” Radio Button to show list of available **Scenes**.

Select “Scene” from list of available **Scenes**.

When **Events** are downloaded to **Controllers**, the “**Start Date**” and “**End Date**” year is updated to the current year.

**Controllers** such as the CM15A internally support “**Start Date**” and “**Stop Date**” as part of their Timer Initiators.

**Controllers** such as the CP290 need to have their **Events** regularly re-downloaded to have the **Event “Start Date”** and “**Stop Date**” implemented.

Refer to **X10Manager** (command line) section regarding setup of scheduled download **Events** to active **Controllers**.

“**After Sunrise**” and “**After Sunset**” minutes can be positive (+) or negative (-).

CM15A **Controller** maximum +-60 minutes.  
CP290 **Controller** maximum +-120 minutes.

Click “**Add**” when ready to Add new Event.

Next page shows a “Successfully Added” result.

## Events – continued

### Add Event– continued

**Add Event** [X]

EventID: 10000 [Delete]

Schedule: House Lighting

☒ Scene ☐ Macro

Scene: Doors On [v]

Event Enabled ☒

Start Date: Wednesday, January 1, 2020 [calendar]

Stop Date: Thursday, December 31, 2020 [calendar]

Time: ☐ Specific Time: 03:55 PM [up/down] hh:mm AM/PM

☒ After Sunrise By: -30 minutes

☐ After Sunset By: [ ] minutes

☐ Security Variations

Day(s): ☐ Today ☐ Tomorrow ☐ Weekends ☐ Weekdays ☒ Every Day ☐ Selected Day(s)

☒ Sun ☒ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☒ Sat

[Update] **Successfully Added** [Done]

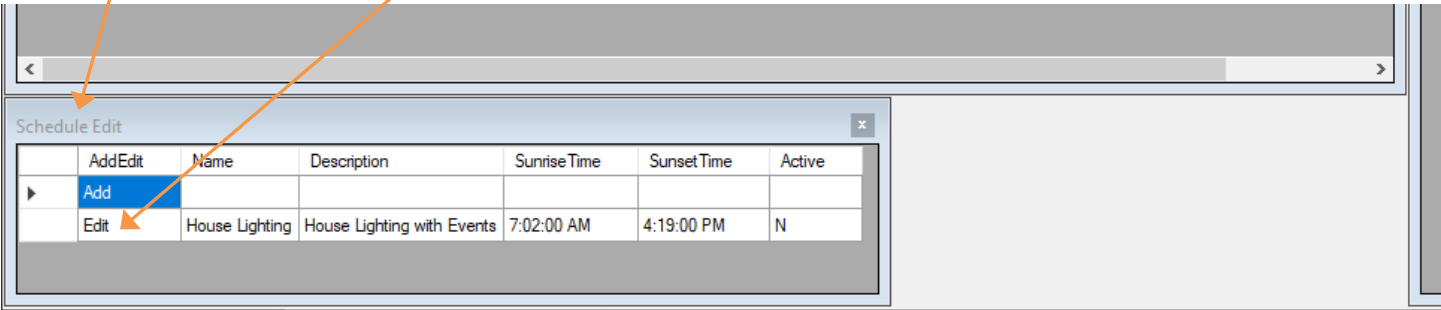
“Successfully Added” will be displayed in the status box.

Click **“Done”** to close **“Add Event”** form.

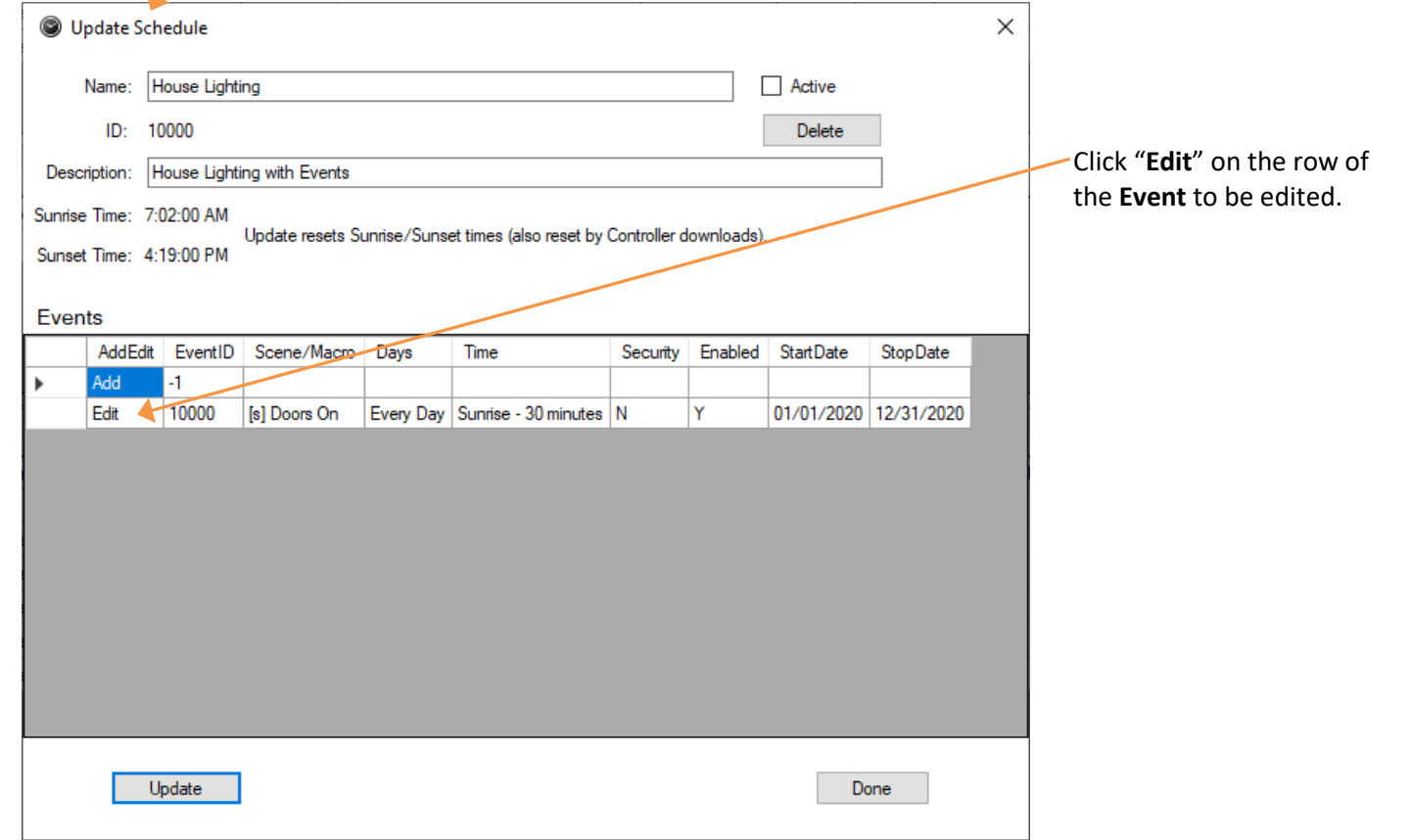
Events – continued

Edit Event

In “Schedule Edit” window, click “Edit” on the row of the **Schedule** that will contain the **Event** to be edited.



The “Update Schedule” form containing the selected **Schedule** will be displayed



Next page shows “Edit Event” form.

## Events – continued

### Edit Event– continued

“Update Event” form.

The "Update Event" form is a window with a title bar and a close button. It contains the following elements:

- EventID:** 10000
- Schedule:** House Lighting
- Scene:** Doors On (selected from a dropdown menu)
- Event Enabled:** ☒
- Start Date:** Wednesday, January 1, 2020
- Stop Date:** Thursday, December 31, 2020
- Time:**
  - ☐ Specific Time: 03:47 PM hh:mm AM/PM
  - ☒ After Sunrise By: -30 minutes
  - ☐ After Sunset By: minutes
  - ☐ Security Variations
- Day(s):**
  - ☐ Today
  - ☐ Tomorrow
  - ☐ Weekends
  - ☐ Weekdays
  - ☒ Every Day
  - ☐ Selected Day(s)
- Days of the Week:** ☒ Sun ☒ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☒ Sat
- Buttons:** Update, Done, Delete

Schedule that owns Event.

Modifying a **Scene Event**, shown by selected “Scene” Radio Button.

Select **Scene** from available **Scenes**.

When **Events** are downloaded to **Controllers**, the “**Start Date**” and “**End Date**” year is updated to the current year.

**Controllers** such as the CM15A internally support “**Start Date**” and “**Stop Date**” as part of their Timer Initiators.

**Controllers** such as the CP290 need to have their **Events** regularly re-downloaded to have the **Event** “**Start Date**” and “**Stop Date**” implemented.

Refer to **X10Manager** (command line) section regarding setup of scheduled download **Events** to active **Controllers**.

“**After Sunrise**” and “**After Sunset**” minutes can be positive (+) or negative (-).

CM15A **Controller** maximum +-60 minutes.  
CP290 **Controller** maximum +-120 minutes.

Click “**Update**” to save changes.

Click “**Done**” to close “**Update Event**” form

Note: Modifying a **Macro Event** uses the same steps as modifying a **Scene Event** with the exception of when the “Macro” Radio Button is selected, a list of available **Macros** will be displayed.

# Appendix

## X10Manager (command line)

**X10Manager** can be used to perform command line operations on X10 Database, X10 Controllers and X10 Modules.

After successful installation of **X10ManagerDesktop**, **X10Manager** (command line) is typically located at "C:\X10Manager". **X10Manager** Command Line settings and examples are found in **X10Manager.exe** section.

The Access Database "X10Db.mdb" used by **X10ManagerDesktop** and **X10Manager** (command line) must be in the same folder with "X10Manager.exe" and its operating support files "X10Manager.exe.config, ParadoxReader.dll, X10Include.dll and X10IncludeCM.dll".

**X10Manager** (command line) **Command Scripts** can be executed directly.

-or-

**X10Manager** (command line) **Command Scripts** can be submitted to the "Windows Task Scheduler".

This will allow automation of back-end tasks such as:

- 1) Setting a Controllers time and day clock  
C:\X10Manager\Examples\X10Manager\_setX10Time\_xxxxxxx.cmd
- 2) Get a Controllers operating status  
C:\X10Manager\Examples\X10Manager\_getControllerStatus\_xxxxxxx.cmd  
C:\X10Manager\Examples\X10Manager\_getX10DuskDawn\_CM15A\_xxxxxxx.cmd  
C:\X10Manager\Examples\X10Manager\_getX10TransceiverSetup\_CM15A\_xxxxxxx.cmd
- 3) Change a Controllers settings or operating status  
C:\X10Manager\Examples\X10Manager\_updateX10ControllerToX10Db\_xxxxxxx.cmd  
C:\X10Manager\Examples\X10Manager\_putX10TransceiverSetup\_CM15A\_xxxxxxx.cmd  
C:\X10Manager\Examples\X10Manager\_clearX10Memory\_CM15A\_xxxxxxx.cmd  
C:\X10Manager\Examples\X10Manager\_downloadX10BaseHousecode\_CP290\_xxxxxxx.cmd
- 4) Download Event Timers and Macros to Controllers  
C:\X10Manager\Examples\X10Manager\_downloadEventsToActiveControllers.cmd  
C:\X10Manager\Examples\X10Manager\_putTimersAndMacrosToX10Memory\_CM15A\_xxxxxxx.cmd  
C:\X10Manager\Examples\X10Manager\_getX10DbTimersPutX10\_CP290\_xxxxxxx.cmd
- 5) Directly execute Module Commands  
C:\X10Manager\Examples\X10Manager\_sendSceneUnitCommands.cmd  
C:\X10Manager\Examples\X10Manager\_sendUnitCommand\_xxxxxxx.cmd  
C:\X10Manager\Examples\X10Manager\_sendUnitExtendedCommand\_xxxxxxx.cmd

Above and additional **Command Script** (.cmd) examples can be found at "C:\X10Manager\Examples".

**Note:** Run-time **Command Scripts** (.cmd) must be placed in "C:\X10Manager".

## Appendix – continued

### X10Manager (command line) – continued

#### *X10Manager.exe*

/O:Operation

#### **Operations common to all Controllers**

*[addX10ControllerToX10Db|backupX10Db|compileTimersFromX10DbEventsPlaceInX10Db|  
createX10DbTables|downloadEventsToActiveControllers|exportModulesFromX10Db|  
getControllerStatus|getX10MemoryPutToFile|getSerialPortsPutX10Db|getUSBPortsPutX10Db|  
importModulesToX10Db|restoreX10Db|sendAllLightsOff|sendAllLightsOn|  
sendAllUnitsOff|sendAllUnitsOn|sendSceneUnitCommands|sendUnitCommand|  
setX10Time|updateX10ControllerToX10Db]*

#### **CM15A Controller specific Operations**

*[clearX10Memory|getX10DuskDawn|getX10MemoryVersionStamp|getX10TransceiverSetup|  
putX10TransceiverSetup|putTimersAndMacrosToX10Memory|sendUnitExtendedCommand|  
sendMacroInitiatorTrigger|setX10TimeClearBatteryTimers|setX10TimeClearMonitoredStatus|  
setX10TimePurgeTimers]*

#### **CP290 Controller specific Operations**

*[compareX10TimersToX10Db|downloadX10BaseHousecode|getX10DbTimersPutX10]*

/F:Filename

/N:X10ControllerName

/T:X10ControllerType [CP290|CM15A]

/D:X10ControllerDescription

/E:Enabled [Y/N]

/P:Port [COMn| for USB ex: "0003"]

/B:Hub [for USB ex: "0004"]

/C:SceneName

/H:HouseCode [A|B|C|D|E|F|G|H|I|J|K|L|M|N|O|P]

/M:ModuleCode [comma delimited List within double quotes of numbers 1-16. ex: "1,3,5,7,9,16" or just a code ex: "10"]

/1:Dimmer [Y]

/2:OnOff [Off|On|100|94|88|81|75|69|63|56|50|44|38|31|25|19|13|6]

/O:BrightenDim [B|D] (B=Brighten, D=Dim)

If BrightenDim not specified, Dimmer Module will pre-brighten then Dim. Note: CP290 is not supported

/1:Dimmer [N]

/2:OnOff [Off|On]

/3:StandardExtended [S|E] (S=Standard transmission, E=Extended transmission)

/4:ExtendedData [Extended transmission Data byte as string]

/5:ExtendedCommand [Extended transmission Command byte as string]

/6:MemoryAddrLow [byte as string]

/7:MemoryAddrHigh [byte as string]

/8:TransceiverHouseCodes

[comma delimited List within double quotes of House Codes. ex: "A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P"]

/9:DuskDawnResolution [dusk/dawn resolution in Days as number. Use multiples of 8. ex: For every 8 Days, enter "8"]

### **X10ManagerDesktop Operations Manual**



## Appendix – continued

### X10Manager (command line) – continued

#### *Operations common to all Controllers*

##### *addX10ControllerToX10Db*

Caution: There are no defaults. All values for each Controller Type MUST be specified as shown in the following examples.

```
X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName> /D:<10ControllerDescription> /E:<Active> /H:<HouseCode> /P:<USBPort>  
/B:<USBHub> /8:<TransceiverHouseCodes> /9:<DuskDawnResolution>
```

```
X10Manager.exe /O:"addX10ControllerToX10Db" /T:"CM15A" /N:"House Lighting CM15A" /D:"CM15A X10 Controller House Lighting" /E:"Y" /H:"K" /P:"0003"  
/B:"0004" /8:"J,K" /9:"8"
```

```
X10Manager.exe /O:"addX10ControllerToX10Db" /T:"CP290" /N:"House Lighting CP290" /D:"CP290 X10 Controller House Lighting" /E:"Y" /H:"K" /P:"COM3"
```

##### *backupX10Db*

Backups by default are placed in "C:\X10Manager\ X10DbBackup".

Use **X10ManagerDesktop**—“File”—“Settings” to change backup folder location.

```
X10Manager.exe /O:<Operation>
```

```
X10Manager.exe /O:"backupX10Db"
```

##### *compileTimersFromX10DbEventsPlaceInX10Db*

Timers are compiled from Active Schedules, Enabled Events, Enabled Modules, Active Controllers

```
X10Manager.exe /O:<Operation>
```

```
X10Manager.exe /O:"compileTimersFromX10DbEventsPlaceInX10Db"
```

##### *createX10DbTables*

Caution: This operation clears/resets X10 database.

All Controllers, Modules, Scenes, Schedules, Events and Macros will be removed.

```
X10Manager.exe /O:<Operation>
```

```
X10Manager.exe /O:"createX10DbTables"
```

##### *downloadEventsToActiveControllers*

Steps performed on Controllers marked "Active":

- 1) Set Controllers Time
- 2) Set new Sunrise and Sunset times
- 3) *compileTimersFromX10DbEventsPlaceInX10Db*
- 4) Reset CP290 Controller Base House Code
- 5) Download Event Timers to Controllers CP290 Timers and CM15A Timer / Macro Initiators
- 6) Compare Event Timers in X10 database to Controllers CP290 Timers and CM15A Timer / Macro Initiators

```
X10Manager.exe /O:<Operation>
```

```
X10Manager.exe /O:"downloadEventsToActiveControllers"
```

##### *exportModulesFromX10Db*

```
X10Manager.exe /O:<Operation> /F:<Filename>
```

```
X10Manager.exe /O:"exportModulesFromX10Db" /F:"X10Db_Modules.csv"
```

## Appendix – continued

### X10Manager (command line) – continued

#### *Operations common to all Controllers* – continued

##### *getControllerStatus*

```
X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>
X10Manager.exe /O:"getControllerStatus" /T:"CM15A" /N:"House Lighting CM15A"
X10Manager.exe /O:"getControllerStatus" /T:"CP290" /N:"House Lighting CP290"
```

##### *getX10MemoryPutToFile*

```
X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName> /F:<Filename>
X10Manager.exe /O:"getX10MemoryPutToFile" /T:"CM15A" /N:"House Lighting CM15A" /F:"getX10MemoryPutToFile_CM15A_HouseLightingCM15A.txt"
X10Manager.exe /O:"getX10MemoryPutToFile" /T:"CP290" /N:"House Lighting CP290" /F:"getX10MemoryPutToFile_CP290_HouseLightingCM15A.txt"
```

##### *getSerialPortsPutX10Db*

```
X10Manager.exe /O:<Operation>
X10Manager.exe /O:"getSerialPortsPutX10Db"
```

##### *getUSBPortsPutX10Db*

All USB connected Controllers, such as the CM15A, must be connected and powered on.

```
X10Manager.exe /O:<Operation>
X10Manager.exe /O:"getUSBPortsPutX10Db"
```

##### *importModulesToX10Db*

###### **CSV Import File Format:**

Comma Delimited, each Cell with Double Quotes.  
".csv" Extension for file name. Example: X10Db\_Modules.csv

###### **Header Row:**

"ControllerName","UnitCode","UnitName","UnitDescription","UnitEnabledYN","UnitDimmerYN","UnitLightingYN","UnitExtendedCommandsYN"

###### **Data Row Examples:**

"House Lighting CP290","J1","OutGar","Outside Garage Lights","Y","N","Y","N"  
"Test CP290","J16","Den Test Dimmer Module","Dimmer LED Test Light in Dimmer Module","Y","Y","Y","N"

```
X10Manager.exe /O:<Operation> /F:<Filename>
X10Manager.exe /O:"importModulesToX10Db" /F:"X10Db_Modules.csv"
```

##### *restoreX10Db*

Backups by default are placed in "C:\X10Manager\ X10DbBackup".

Use **X10ManagerDesktop**–**"File"**–**"Settings"** to change backup folder location.

```
X10Manager.exe /O:<Operation>
X10Manager.exe /O:"restoreX10Db"
```

## Appendix – continued

### X10Manager (command line) – continued

#### *Operations common to all Controllers* – continued

##### *sendAllLightsOff*

X10Manager.exe /O:<Operation>  
X10Manager.exe /O:"sendAllLightsOff"

##### *sendAllLightsOn*

X10Manager.exe /O:<Operation>  
X10Manager.exe /O:"sendAllLightsOn"

##### *sendAllUnitsOff*

X10Manager.exe /O:<Operation>  
X10Manager.exe /O:"sendAllUnitsOff"

##### *sendAllUnitsOn*

X10Manager.exe /O:<Operation>  
X10Manager.exe /O:"sendAllUnitsOn"

##### *sendSceneUnitCommands*

X10Manager.exe /O:<Operation> /C:<SceneName>  
X10Manager.exe /O:"sendSceneUnitCommands" /C:"Hallway Floor Off"

##### *sendUnitCommand*

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName> /H:<HouseCode> /M:<ModuleCode> /0:<Brighten> /1:<Dimmer> /2:<OnOff> /3:<StandardExtended>  
X10Manager.exe /O:"sendUnitCommand" /T:"CM15A" /N:"House Lighting CM15A" /H:"J" /M:"1,2,3,10" /1:"N" /2:"Off" /3:"S"  
X10Manager.exe /O:"sendUnitCommand" /T:"CM15A" /N:"House Lighting CM15A" /H:"J" /M:"1,2,3,10" /1:"N" /2:"On" /3:"S"  
X10Manager.exe /O:"sendUnitCommand" /T:"CM15A" /N:"House Lighting CM15A" /H:"K" /M:"6,7" /1:"Y" /2:"25" /3:"S"  
X10Manager.exe /O:"sendUnitCommand" /T:"CM15A" /N:"House Lighting CM15A" /H:"K" /M:"6,7" /0:"Y" /1:"Y" /2:"50" /3:"S"  
X10Manager.exe /O:"sendUnitCommand" /T:"CP290" /N:"House Lighting CP290" /H:"J" /M:"9" /1:"N" /2:"On" /3:"S"  
X10Manager.exe /O:"sendUnitCommand" /T:"CP290" /N:"House Lighting CP290" /H:"J" /M:"16" /1:"Y" /2:"50" /3:"S"  
X10Manager.exe /O:"sendUnitCommand" /T:"CP290" /N:"House Lighting CP290" /H:"J" /M:"16" /1:"Y" /2:"Off" /3:"S"

##### *setX10Time*

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>  
X10Manager.exe /O:"setX10Time" /T:"CM15A" /N:"House Lighting CM15A"  
X10Manager.exe /O:"setX10Time" /T:"CP290" /N:"House Lighting CP290"

##### *updateX10ControllerToX10Db*

Values for ControllerName and ControllerType cannot be changed using this command.

User **X10MangerDesktop** – “**Controller**” – “**Edit**” to change values for ControllerName and ControllerType

Caution: There are no defaults. All values for each Controller Type MUST be specified as shown in the following examples.

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName> /D:<10ControllerDescription> /E:<Active> /H:<HouseCode> /P:<USBPort> /B:<USBHub> /8:<TransceiverHouseCodes> /9:<DuskDawnResolution>  
X10Manager.exe /O:"updateX10ControllerToX10Db" /T:"CM15A" /N:"House Lighting CM15A" /D:"CM15A X10 Controller House Lighting" /E:"Y" /H:"K" /P:"0003" /B:"0004" /8:"J,K" /9:"8"  
X10Manager.exe /O:"updateX10ControllerToX10Db" /T:"CP290" /N:"House Lighting CP290" /D:"CP290 X10 Controller House Lighting" /E:"Y" /H:"K" /P:"COM3"

## Appendix – continued

### X10Manager (command line) – continued

#### *CM15A Controller specific Operations*

##### *clearX10Memory*

Caution: This operation will Clear all Timer and Macro Initiators from CM15A Controller.

A *downloadEventsToActiveControllers* or *putTimersAndMacrosToX10Memory* operation will need to be performed.

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName> /F:<Filename>

X10Manager.exe /O:"clearX10Memory" /T:"CM15A" /N:"House Lighting CM15A" /F:"clearX10Memory\_CM15A\_HouseLightingCM15A.txt"

##### *getX10DuskDawn*

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>

X10Manager.exe /O:"getX10DuskDawn" /T:"CM15A" /N:"House Lighting CM15A"

##### *getX10MemoryVersionStamp*

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>

X10Manager.exe /O:"getX10MemoryVersionStamp" /T:"CM15A" /N:"House Lighting CM15A"

##### *getX10TransceiverSetup*

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>

X10Manager.exe /O:"getX10TransceiverSetup" /T:"CM15A" /N:"House Lighting CM15A"

##### *putX10TransceiverSetup*

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>

X10Manager.exe /O:"putX10TransceiverSetup" /T:"CM15A" /N:"House Lighting CM15A"

##### *putTimersAndMacrosToX10Memory*

Steps performed on specified Controller with Enabled Events in all Active Schedules:

- 1) Set Controller Time
- 2) Set new Sunrise and Sunset times in X10 database
- 3) *compileTimersFromX10DbEventsPlaceInX10Db*
- 4) Download Event Timer / Macro Initiators to Controller Memory
- 5) Compare Event Timers in X10 database to Timer / Macro Initiators in Controller Memory

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName> /F:<Filename>

X10Manager.exe /O:"putTimersAndMacrosToX10Memory" /T:"CM15A" /N:"House Lighting CM15A"

/F:"putTimersAndMacrosToX10Memory\_CM15A\_HouseLightingCM15A.txt"

##### *sendUnitExtendedCommand*

X10Manager.exe /O:"sendUnitExtendedCommand" /T:<X10ControllerType> /N:<X10ControllerName> /H:<HouseCode> /M:<ModuleCode> /1:<Dimmer> /2:<OnOff> /3:<StandardExtended> /4:<ExtendedData> /5:<ExtendedCommand>

X10Manager.exe /O:"sendUnitExtendedCommand" /T:"CM15A" /N:"House Lighting CM15A" /H:"J" /M:"9" /1:"N" /2:"Off" /3:"E" /4:"0" /5:"15"

##### *sendMacroInitiatorTrigger*

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName> /H:<HouseCode> /M:<ModuleCode> /2:<OnOff>

X10Manager.exe /O:" sendMacroInitiatorTrigger" /T:"CM15A" /N:"House Lighting CM15A" /H:"J" /M:"9" /2:"Off"

## **Appendix – continued**

### **X10Manager (command line) – continued**

#### ***CM15A Controller specific Operations*** – continued

##### ***setX10TimeClearBatteryTimers***

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>  
X10Manager.exe /O:"setX10TimeClearBatteryTimers" /T:"CM15A" /N:"House Lighting CM15A"

##### ***setX10TimeClearMonitoredStatus***

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>  
X10Manager.exe /O:"setX10TimeClearMonitoredStatus" /T:"CM15A" /N:"House Lighting CM15A"

##### ***setX10TimePurgeTimers***

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>  
X10Manager.exe /O:"setX10TimePurgeTimers" /T:"CM15A" /N:"House Lighting CM15A"

## Appendix – continued

### X10Manager (command line) – continued

#### *CP290 Controller specific Operations*

##### *compareX10TimersToX10Db*

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>

X10Manager.exe /O:"compareX10TimersToX10Db" /T:"CP290" /N:"House Lighting CP290"

##### *downloadX10BaseHousecode*

Caution: This operation will Clear all Timers from CP290 Controller.

A *downloadEventsToActiveControllers* -or- *getX10DbTimersPutX10* operation will need to be performed.

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName> /H:<HouseCode>

X10Manager.exe /O:"downloadX10BaseHousecode" /T:"CP290" /N:"House Lighting CP290" /H:"J"

##### *getX10DbTimersPutX10*

Steps performed on specified Controller with Enabled Events in all Active Schedules:

- 1) Set Controller Time
- 2) Set new Sunrise and Sunset times in X10 database
- 3) *compileTimersFromX10DbEventsPlaceInX10Db*
- 4) Reset Controller Base House Code
- 5) Download Event Timers to Controller
- 6) Compare Event Timers in X10 database to Timers in Controller

X10Manager.exe /O:<Operation> /T:<X10ControllerType> /N:<X10ControllerName>

X10Manager.exe /O:"getX10DbTimersPutX10" /T:"CP290" /N:"House Lighting CP290"

## Appendix – continued

### X10Manager (command line) – continued

#### *Email Notifications*

X10Manager (command line) can use a SMTP server to send Email Notifications when run-time errors occur.

To enable Email Notifications:

- 1) Using “Windows” - “Accessories” - “Notepad” open “C:\X10Manager\X10Manager.exe.config”
- 2) In the **<appSettings>** section, add an Email Address to **<add key="MailErrorsTo" value="">**

For example:

```
<add key="MailErrorsTo" value="trekkerphotoart@gmail.com" />
```

- 3) Modify the SMTP server host and logon credentials information in section  
**<system.net>** - **<mailSettings>** - **<smtp deliveryMethod="network">**

*defaultCredentials* example:

```
<network host="127.0.0.1" port="25" defaultCredentials="true" />
```

*username and password* example:

```
<network host="127.0.0.1" port="25" userName="username" password="secret" defaultCredentials="false" />
```

- 4) Save the edited X10Manager.exe.config file
- 5) Exit the text editor

6) **Appendix** – continued

**Credits**

ParadoxReader.DLL (ParadoxReader ) contains source code from "Code Project", "Paradox database native .NET reader" by Petr Bříza, March 17, 2011, v1.2.

Modifications have been added by Alan Wagner that allow ParadoxReader, as used in X10ManagerDesktop and X10Manager, to read X10 Lighthouse Scene BLOB data.

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