

TrekkerPhotoArt.com

X10ManagerDesktop

Operations Manual

Alan Wagner
3-23-2021

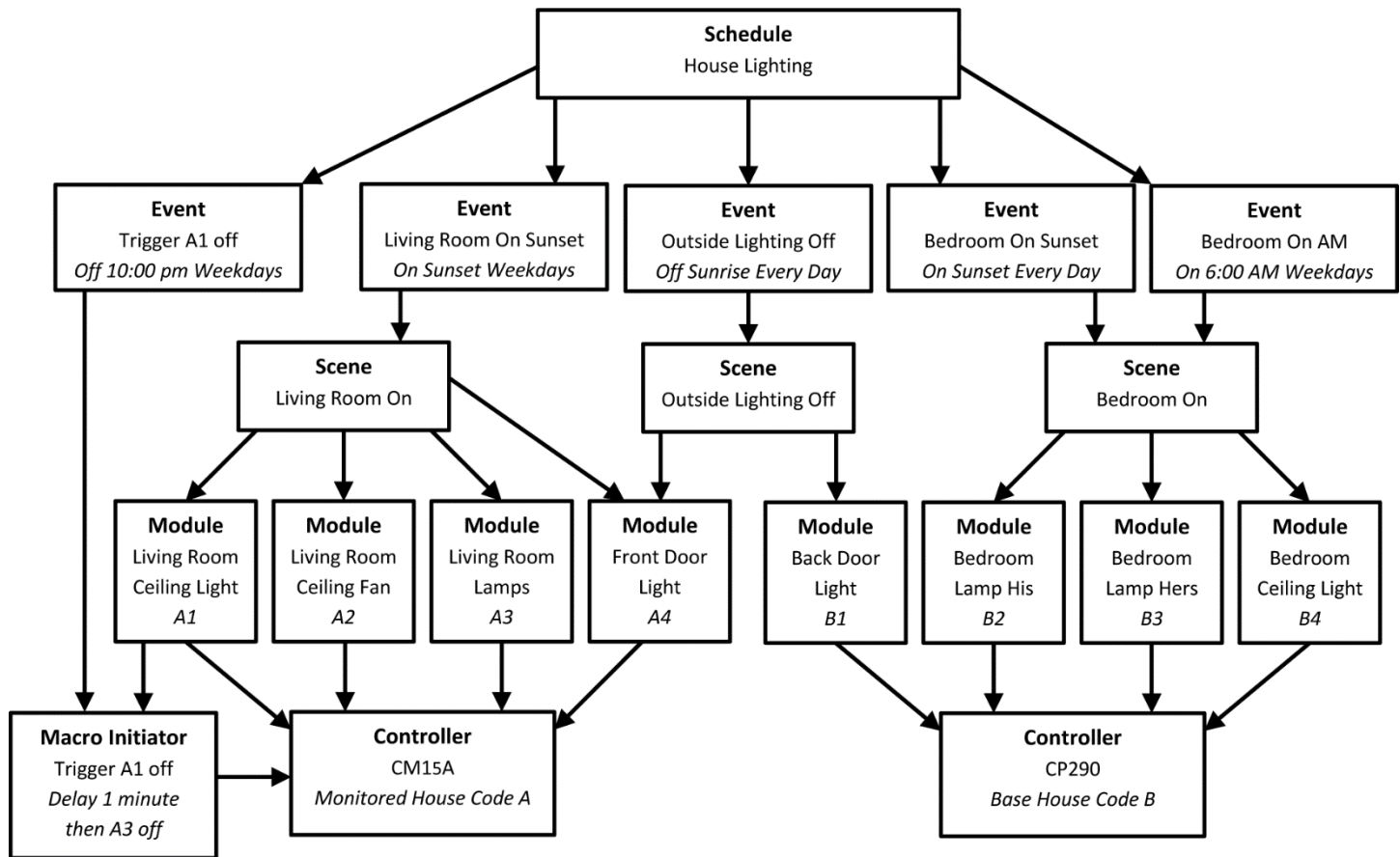
Table of Contents

Overview	3
X10ManagerDesktop Functional Operation	3
X10ManagerDesktop program Window	5
X10ManagerDesktop program Window Menus	6
Specifications	7
Revisions	8
Licensing.....	9
CREATIVE COMMONS PUBLIC LICENSE (CCPL)	9
Installation	13
Setup	16
1st Time Setup	16
Customize the X10Manager Desktop program Layout	18
Repair Installation.....	19
Remove Installation	20
Preserve Files and X10 database	21
Controllers	23
Add CP290 X10 Home Control Interface	23
Edit CP290 X10 Home Control Interface	25
Add CM15A X10 ActiveHome Pro	26
Edit CM15A X10 ActiveHome Pro	28
Download Events to Controller	29
Modules	30
Add X10 Module	30
Edit X10 Module	32
Scenes	33
Add Scene	33
Edit Scene	35
Macros	36
Macros Overview	36
Add Macro Initiator	37
Add Macro	39
Add Macro Command	42

Schedules.....	46
Add Schedule	46
Edit Schedule	48
Events	49
Add Event	49
Edit Event	52
Appendix.....	54
X10Manager (command line)	54
<i>X10Manager.exe</i>	55
<i>Operations common to all Controllers</i>	56
<i>CM15A Controller specific Operations</i>	59
<i>CP290 Controller specific Operations</i>	61
<i>Email Notifications</i>	62
Credits.....	63
<i>The Code Project Open License (CPOL) 1.02</i>	64

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 2nd 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 workspace is divided into five panes, each with an 'Add' and 'Edit' button.

Controller Edit

AddEdit	Name	Type	Active	Description	HouseCode	Port	Hub	AppKey	UID	TransceiverHouseCodes	DuskDownResolution
Add											-1
Edit	House Lighting CM15A	CM15A	Y	CM15A X10 Controller for House Lighting	J	0003	0004			J	8
Edit	House Lighting CP290	CP290	N	CP290 X10 Controller for House Lighting	J	COM1					0

Macro Initiator Edit

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

Module Edit

AddEdit	Controller	Code	Name	Description	Enabled	Dimmer	Lighting	Extended
Add								
Edit	House Lighting CM15A [CM15A]	J1	OutGar	Outside Garage Lights	Y	N	Y	N
Edit	House Lighting CM15A [CM15A]	J2	FPorch	Front Porch Light	Y	N	Y	N
Edit	House Lighting CM15A [CM15A]	J3	BDoor	Back Door Light	Y	N	Y	N
Edit	House Lighting CM15A [CM15A]	J9	HalFloor	Halfway Floor/Wall light	Y	N	Y	N
Edit	House Lighting CM15A [CM15A]	J10	GrgSrvDr	Garage Srv Door Light	Y	N	Y	N
Edit	House Lighting CM15A [CM15A]	J11	Garage	Garage Lighting	Y	N	Y	N
Edit	House Lighting CM15A [CM15A]	J12	FrontWlk	Front Sidewalk Lights	Y	N	Y	N
Edit	House Lighting CM15A [CM15A]	J16	Den Test Dimmer Module	Dimmer LED Light in Dimmer Module	Y	Y	Y	N
Edit	House Lighting CP290 [CP290]	K1	DinLight	Dinning Room Light	Y	Y	Y	N
Edit	House Lighting CP290 [CP290]	K2	CornrCa	Cornr Cabinet in Dinning Room	Y	Y	Y	N
Edit	House Lighting CP290 [CP290]	K3	Kitchen	Kitchen Light Under Cabinet	Y	N	Y	N

Scene Edit

AddEdit	Name	Description	HouseCode	CurrentHouseCodeOnly
Add				
Edit	A/V Comp ON	From Lighthouse db	K	Y
Edit	ALL OFF JS	From Lighthouse db	J	Y
Edit	ALL OFF KD	From Lighthouse db	K	Y
Edit	ALL OFF KS	From Lighthouse db	K	Y
Edit	Christmas Tree Off	From Lighthouse db	K	Y
Edit	Doors Off S	From Lighthouse db	J	Y
Edit	Doors On S	From Lighthouse db	J	Y
Edit	Front Walk Off	From Lighthouse db	J	Y
Edit	Front Walk On	From Lighthouse db	J	Y
Edit	Garage Off	From Lighthouse db	J	Y
Edit	Garage On	From Lighthouse db	J	Y
Edit	Garage Service Door ON	From Lighthouse db	J	Y
Edit	Halfway Floor Off	From Lighthouse db	J	Y
Edit	Halfway Floor On	From Lighthouse db	J	Y
Edit	Kitchen OFF	From Lighthouse db	K	Y
Edit	Kitchen ON	From Lighthouse db	K	Y
Edit	Living Room Lights Off	From Lighthouse db	K	Y
Edit	Living Room Wall Off	From Lighthouse db	K	Y
Edit	Living Room Wall On	From Lighthouse db	K	Y
Edit	LivRecess Off	From Lighthouse db	K	Y
Edit	Master Bedroom Lights Off	From Lighthouse db	K	Y
Edit	Master Bedroom Lights On	From Lighthouse db	K	Y
Edit	Test Dim 50%	Test Dim 50%	J	Y
Edit	Test Off	Test Off	J	Y
Edit	Test On	Test On	J	Y

Schedule Edit

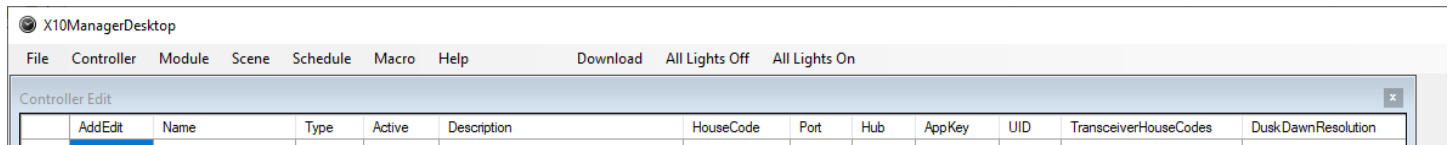
AddEdit	Name	Description	SunriseTime	SunsetTime	Active
Add					
Edit	House Lighting	House Lighting with Events	7:02:00 AM	4:19:00 PM	N

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 1st 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"

Copyright © February 2006 trekkerphotoart.com

Version: 5

Revised: March 23, 2021

"X10Manager" (command line)

Copyright © February 2006 trekkerphotoart.com

Version: 5

Revised: March 23, 2021

Program Schema:

Copyright (c) November 2006 trekkerphotoart.com

Version: 5

Version Date: November 30, 2020

X10 Database Schema:

Copyright (c) November 2006 trekkerphotoart.com

Version: 5

Version Date: November 30, 2020

Licensing

This entire project (including and not limited to Documentation, Images, Executables, Libraries and Scripts) is Licensed under the "CREATIVE COMMONS PUBLIC LICENSE (CCPL)".

CREATIVE COMMONS PUBLIC LICENSE (CCPL)

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CREATIVE COMMONS PUBLIC LICENSE ("CCPL" OR "LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE OR COPYRIGHT LAW IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HERE, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. TO THE EXTENT THIS LICENSE MAY BE CONSIDERED TO BE A CONTRACT, THE LICENSOR GRANTS YOU THE RIGHTS CONTAINED HERE IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

1. Definitions

- a. **"Adaptation"** means a work based upon the Work, or upon the Work and other pre-existing works, such as a translation, adaptation, derivative work, arrangement of music or other alterations of a literary or artistic work, or phonogram or performance and includes cinematographic adaptations or any other form in which the Work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that a work that constitutes a Collection will not be considered an Adaptation for the purpose of this License. For the avoidance of doubt, where the Work is a musical work, performance or phonogram, the synchronization of the Work in timed-relation with a moving image ("synching") will be considered an Adaptation for the purpose of this License.
- b. **"Collection"** means a collection of literary or artistic works, such as encyclopedias and anthologies, or performances, phonograms or broadcasts, or other works or subject matter other than works listed in Section 1(f) below, which, by reason of the selection and arrangement of their contents, constitute intellectual creations, in which the Work is included in its entirety in unmodified form along with one or more other contributions, each constituting separate and independent works in themselves, which together are assembled into a collective whole. A work that constitutes a Collection will not be considered an Adaptation (as defined above) for the purposes of this License.
- c. **"Distribute"** means to make available to the public the original and copies of the Work through sale or other transfer of ownership.
- d. **"Licensor"** means the individual, individuals, entity or entities that offer(s) the Work under the terms of this License.
- e. **"Original Author"** means, in the case of a literary or artistic work, the individual, individuals, entity or entities who created the Work or if no individual or entity can be identified, the publisher; and in addition (i) in the case of a performance the actors, singers, musicians, dancers, and other persons who act, sing, deliver, declaim, play in, interpret or otherwise perform literary or artistic works or expressions of folklore; (ii) in the case of a phonogram the producer being the person or legal entity who first fixes the sounds of a performance or other sounds; and, (iii) in the case of broadcasts, the organization that transmits the broadcast.
- f. **"Work"** means the literary and/or artistic work offered under the terms of this License including without limitation any production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression including digital form, such as a book, pamphlet and other writing; a lecture, address, sermon or other work of the same nature; a dramatic or dramatico-musical work; a choreographic work or entertainment in dumb show; a musical composition with or without words; a cinematographic work to which are assimilated works expressed by a process analogous to cinematography; a work of drawing, painting, architecture, sculpture, engraving or lithography; a photographic work to which are assimilated works expressed by a process analogous to photography; a work of applied art; an illustration, map, plan, sketch or three-dimensional work relative to

geography, topography, architecture or science; a performance; a broadcast; a phonogram; a compilation of data to the extent it is protected as a copyrightable work; or a work performed by a variety or circus performer to the extent it is not otherwise considered a literary or artistic work.

- g. **"You"** means an individual or entity exercising rights under this License who has not previously violated the terms of this License with respect to the Work, or who has received express permission from the Licensor to exercise rights under this License despite a previous violation.
- h. **"Publicly Perform"** means to perform public recitations of the Work and to communicate to the public those public recitations, by any means or process, including by wire or wireless means or public digital performances; to make available to the public Works in such a way that members of the public may access these Works from a place and at a place individually chosen by them; to perform the Work to the public by any means or process and the communication to the public of the performances of the Work, including by public digital performance; to broadcast and rebroadcast the Work by any means including signs, sounds or images.
- i. **"Reproduce"** means to make copies of the Work by any means including without limitation by sound or visual recordings and the right of fixation and reproducing fixations of the Work, including storage of a protected performance or phonogram in digital form or other electronic medium.

2. Fair Dealing Rights. Nothing in this License is intended to reduce, limit, or restrict any uses free from copyright or rights arising from limitations or exceptions that are provided for in connection with the copyright protection under copyright law or other applicable laws.

3. License Grant. Subject to the terms and conditions of this License, Licensor hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated below:

- a. to Reproduce the Work, to incorporate the Work into one or more Collections, and to Reproduce the Work as incorporated in the Collections; and,
- b. to Distribute and Publicly Perform the Work including as incorporated in Collections.

The above rights may be exercised in all media and formats whether now known or hereafter devised. The above rights include the right to make such modifications as are technically necessary to exercise the rights in other media and formats, but otherwise you have no rights to make Adaptations. Subject to 8(f), all rights not expressly granted by Licensor are hereby reserved, including but not limited to the rights set forth in Section 4(d).

4. Restrictions. The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:

- a. You may Distribute or Publicly Perform the Work only under the terms of this License. You must include a copy of, or the Uniform Resource Identifier (URI) for, this License with every copy of the Work You Distribute or Publicly Perform. You may not offer or impose any terms on the Work that restrict the terms of this License or the ability of the recipient of the Work to exercise the rights granted to that recipient under the terms of the License. You may not sublicense the Work. You must keep intact all notices that refer to this License and to the disclaimer of warranties with every copy of the Work You Distribute or Publicly Perform. When You Distribute or Publicly Perform the Work, You may not impose any effective technological measures on the Work that restrict the ability of a recipient of the Work from You to exercise the rights granted to that recipient under the terms of the License. This Section 4(a) applies to the Work as incorporated in a Collection, but this does not require the Collection apart from the Work itself to be made subject to the terms of this License. If You create a Collection, upon notice from any Licensor You must, to the extent practicable, remove from the Collection any credit as required by Section 4(c), as requested.
- b. You may not exercise any of the rights granted to You in Section 3 above in any manner that is primarily intended for or directed toward commercial advantage or private monetary compensation. The exchange of the Work for other copyrighted works by means of digital file-sharing or otherwise shall not be considered to be intended for or directed toward commercial advantage or private monetary compensation, provided there is no payment of any monetary compensation in connection with the exchange of copyrighted works.
- c. If You Distribute, or Publicly Perform the Work or Collections, You must, unless a request has been made pursuant to Section 4(a), keep intact all copyright notices for the Work and provide, reasonable to the medium or

means You are utilizing: (i) the name of the Original Author (or pseudonym, if applicable) if supplied, and/or if the Original Author and/or Licensor designate another party or parties (e.g., a sponsor institute, publishing entity, journal) for attribution ("Attribution Parties") in Licensor's copyright notice, terms of service or by other reasonable means, the name of such party or parties; (ii) the title of the Work if supplied; (iii) to the extent reasonably practicable, the URI, if any, that Licensor specifies to be associated with the Work, unless such URI does not refer to the copyright notice or licensing information for the Work. The credit required by this Section 4(c) may be implemented in any reasonable manner; provided, however, that in the case of a Collection, at a minimum such credit will appear, if a credit for all contributing authors of Collection appears, then as part of these credits and in a manner at least as prominent as the credits for the other contributing authors. For the avoidance of doubt, You may only use the credit required by this Section for the purpose of attribution in the manner set out above and, by exercising Your rights under this License, You may not implicitly or explicitly assert or imply any connection with, sponsorship or endorsement by the Original Author, Licensor and/or Attribution Parties, as appropriate, of You or Your use of the Work, without the separate, express prior written permission of the Original Author, Licensor and/or Attribution Parties.

d. For the avoidance of doubt:

- i. **Non-waivable Compulsory License Schemes.** In those jurisdictions in which the right to collect royalties through any statutory or compulsory licensing scheme cannot be waived, the Licensor reserves the exclusive right to collect such royalties for any exercise by You of the rights granted under this License;
- ii. **Waivable Compulsory License Schemes.** In those jurisdictions in which the right to collect royalties through any statutory or compulsory licensing scheme can be waived, the Licensor reserves the exclusive right to collect such royalties for any exercise by You of the rights granted under this License if Your exercise of such rights is for a purpose or use which is otherwise than noncommercial as permitted under Section 4(b) and otherwise waives the right to collect royalties through any statutory or compulsory licensing scheme; and,
- iii. **Voluntary License Schemes.** The Licensor reserves the right to collect royalties, whether individually or, in the event that the Licensor is a member of a collecting society that administers voluntary licensing schemes, via that society, from any exercise by You of the rights granted under this License that is for a purpose or use which is otherwise than noncommercial as permitted under Section 4(b).

e. Except as otherwise agreed in writing by the Licensor or as may be otherwise permitted by applicable law, if You Reproduce, Distribute or Publicly Perform the Work either by itself or as part of any Collections, You must not distort, mutilate, modify or take other derogatory action in relation to the Work which would be prejudicial to the Original Author's honor or reputation.

5. Representations, Warranties and Disclaimer

UNLESS OTHERWISE MUTUALLY AGREED BY THE PARTIES IN WRITING, LICENSOR OFFERS THE WORK AS-IS AND MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND CONCERNING THE WORK, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF TITLE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, OR THE ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OF ABSENCE OF ERRORS, WHETHER OR NOT DISCOVERABLE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO SUCH EXCLUSION MAY NOT APPLY TO YOU.

6. Limitation on Liability. EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK, EVEN IF LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. Termination

- a. This License and the rights granted hereunder will terminate automatically upon any breach by You of the terms of this License. Individuals or entities who have received Collections from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 5, 6, 7, and 8 will survive any termination of this License.

- b. Subject to the above terms and conditions, the license granted here is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, Licensor reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License), and this License will continue in full force and effect unless terminated as stated above.

8. Miscellaneous

- a. Each time You Distribute or Publicly Perform the Work or a Collection, the Licensor offers to the recipient a license to the Work on the same terms and conditions as the license granted to You under this License.
- b. If any provision of this License is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this License, and without further action by the parties to this agreement, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.
- c. No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.
- d. This License constitutes the entire agreement between the parties with respect to the Work licensed here. There are no understandings, agreements or representations with respect to the Work not specified here. Licensor shall not be bound by any additional provisions that may appear in any communication from You. This License may not be modified without the mutual written agreement of the Licensor and You.
- e. The rights granted under, and the subject matter referenced, in this License were drafted utilizing the terminology of the Berne Convention for the Protection of Literary and Artistic Works (as amended on September 28, 1979), the Rome Convention of 1961, the WIPO Copyright Treaty of 1996, the WIPO Performances and Phonograms Treaty of 1996 and the Universal Copyright Convention (as revised on July 24, 1971). These rights and subject matter take effect in the relevant jurisdiction in which the License terms are sought to be enforced according to the corresponding provisions of the implementation of those treaty provisions in the applicable national law. If the standard suite of rights granted under applicable copyright law includes additional rights not granted under this License, such additional rights are deemed to be included in the License; this License is not intended to restrict the license of any rights under applicable law.

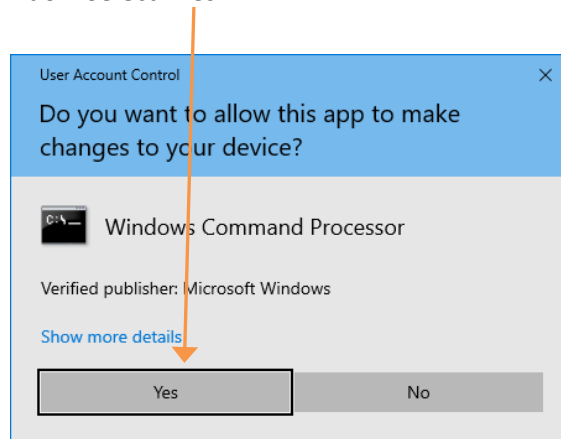
Installation

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

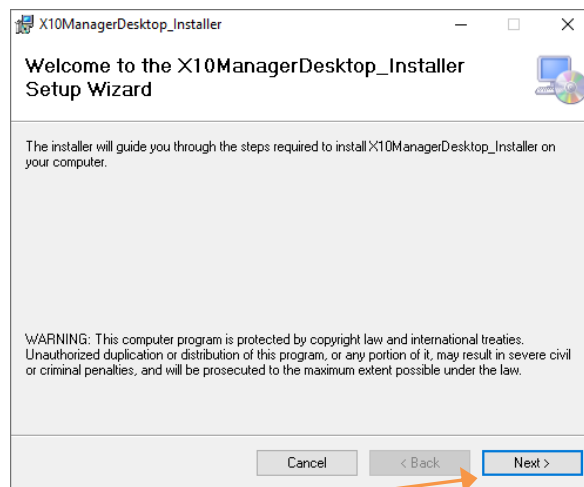
A normal **X10ManagerDesktop** and **X10Manager** (command line) installation will create new folders in the following locations:

- C:\X10ManagerDesktop_Installer
- C:\Program Files (x86)\trekkerphotoart.com\X10ManagerDesktop_Installer
- C:\X10Manager

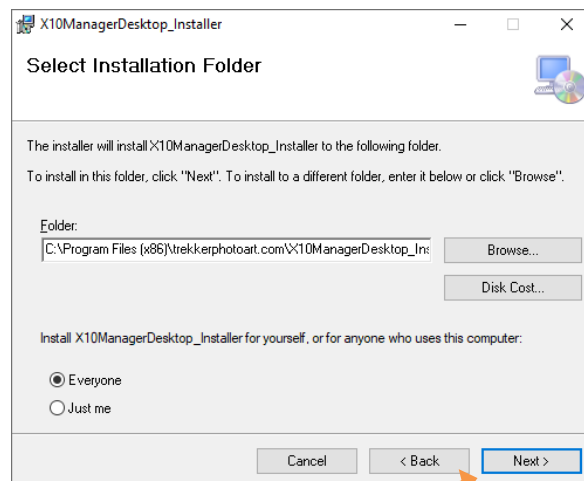
Note: Existing folders and their contents will be replaced.

Install “X10ManagerDesktop”

- 1) With “File Explorer” navigate to “C:\ X10ManagerDesktop_Installer”
- 2) Mouse-Right-Click “X10ManagerDesktop_Installer.msi”
- 3) Select “Install”

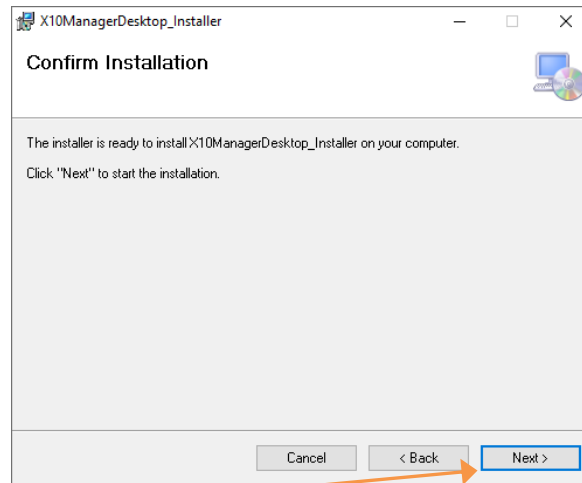


- 4) Select “Next”



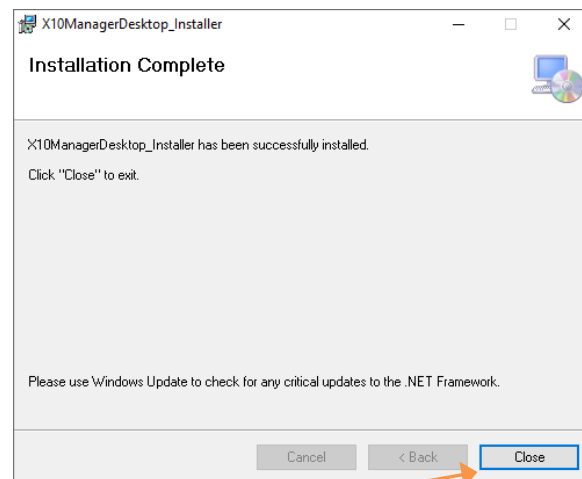
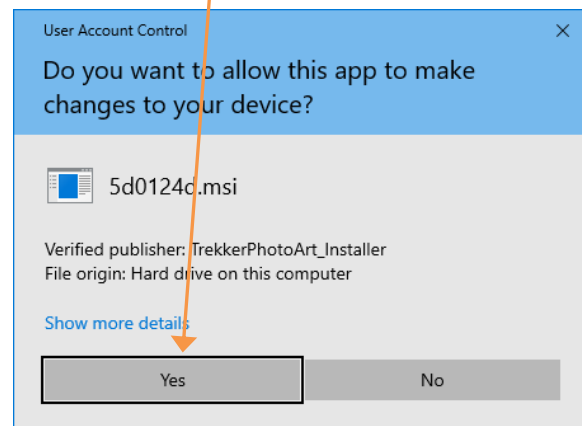
- 5) Use existing “Folder” location
- 6) Select “Everyone”
- 7) Select “Next”

Installation – continued



8) Select "Next"

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



10) Select "Close" to finish Installation.

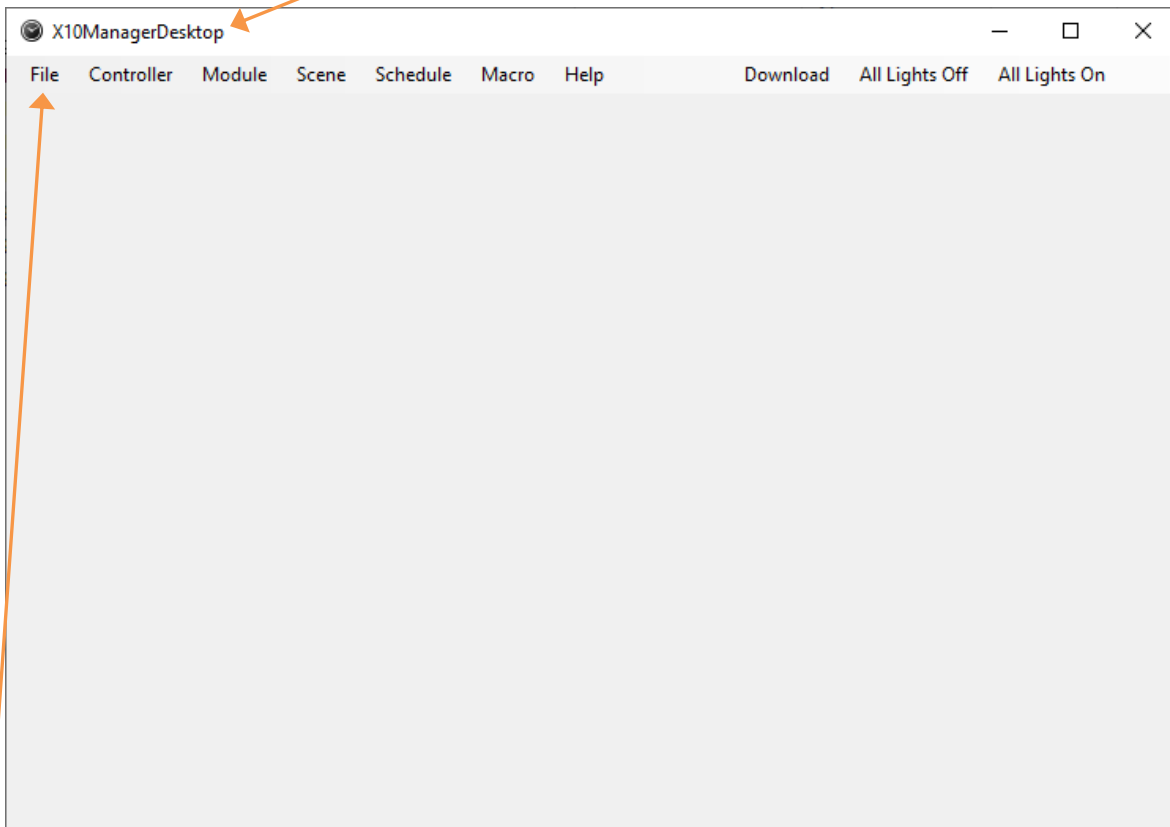
Setup

1st Time Setup

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



1st 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:
Browse ex: C:\X10Manager\X10DbBackup\

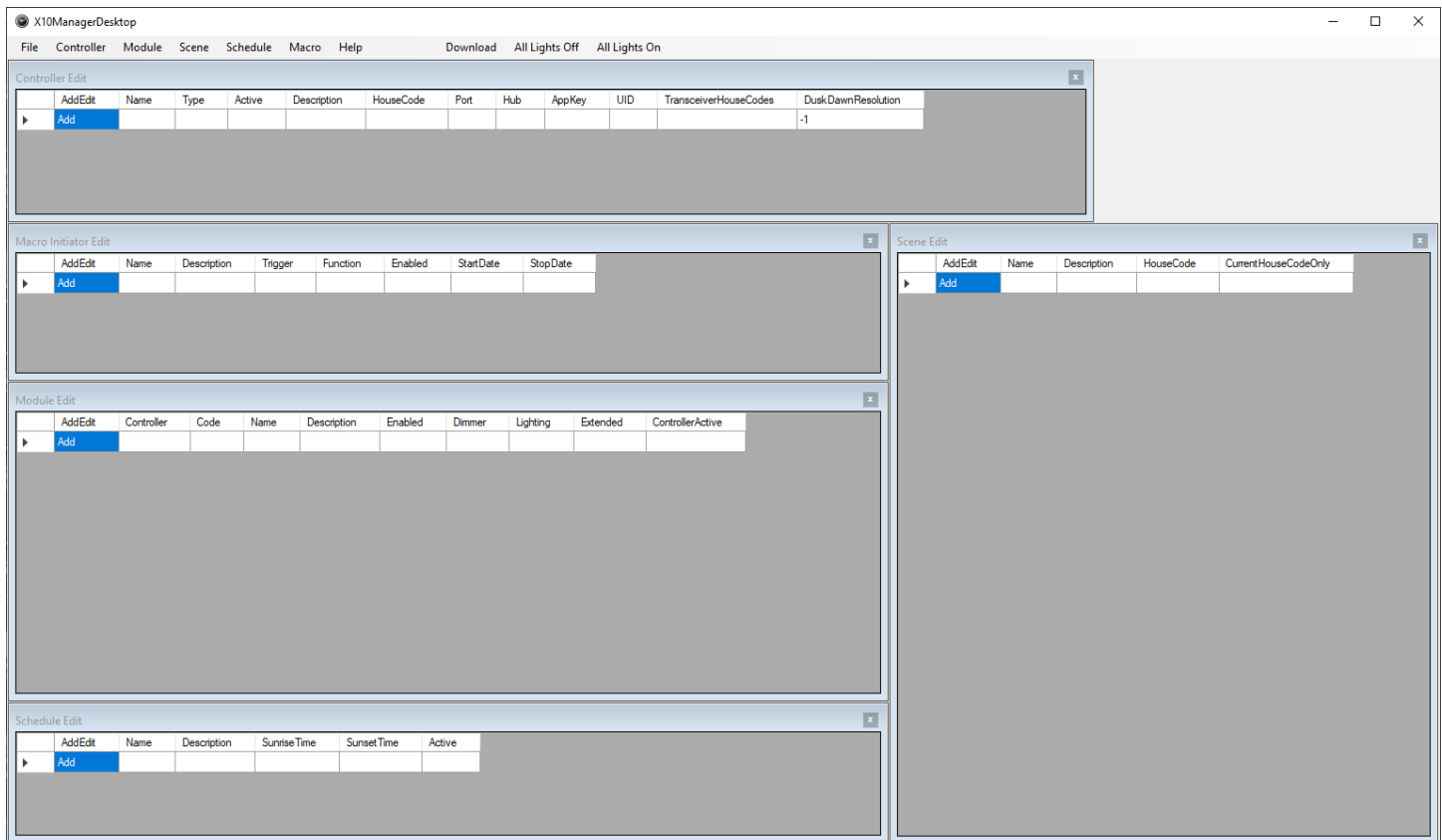
X10DbConnectionString:
ex: Provider=Microsoft.Jet.OLEDB.4.0;Data Source='C:\X10Manager\X10Db.mdb'

Reset Your Program Window Layouts

Update Cancel

Click “Update” when finished.

Customize the X10Manager Desktop program Layout



Above shows an example of the **X10ManagerDesktop** program run for the 1st 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 1st time setup “Add” at least one item to each category using the following order:

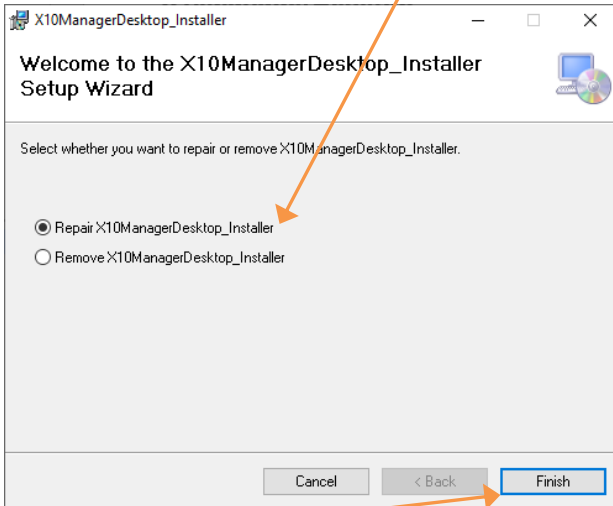
- 1) Controller
- 2) Module
- 3) Scene
- 4) Macro Initiator
- 5) Schedule
 - a. Event

Repair Installation

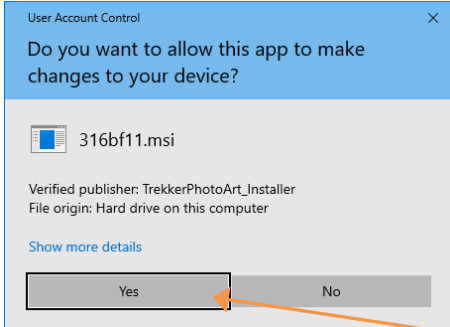
To Repair or Re-Install “X10ManagerDesktop”

- 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.

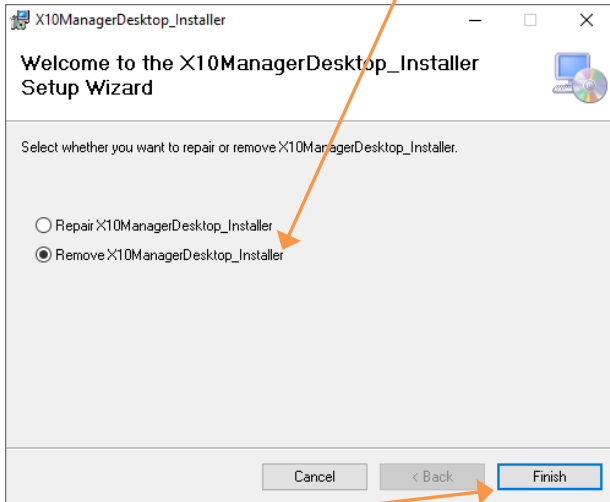
Refer to “**Preserve Files and X10 database**” section for details on how to preserve additional files, script customizations and data in the X10 database.

Remove Installation

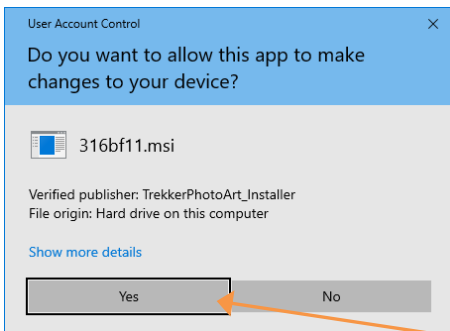
To Remove “X10ManagerDesktop”

- 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 values:

- Name:** House Lighting CP290
- ID:** (empty)
- Model:** CP290
- Description:** CP290 X10 Controller for House Lighting
- House Code:** J
- Port:** COM1
- Active:** ☒
- Controller Base On/Off Switches:** (checked)
- 600 baud, no parity, 8 data bits, 1 stop bit:** (checked)

Annotations with arrows point to the following elements:

- The 'Add Controller' title bar.
- The 'Active' checkbox.
- The 'Name' field.
- The 'Model' dropdown menu.
- The 'Port' dropdown menu.
- The 'Add' button.

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 CP290” as a name.

Select “CP290” for **Controller “Model”**.

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

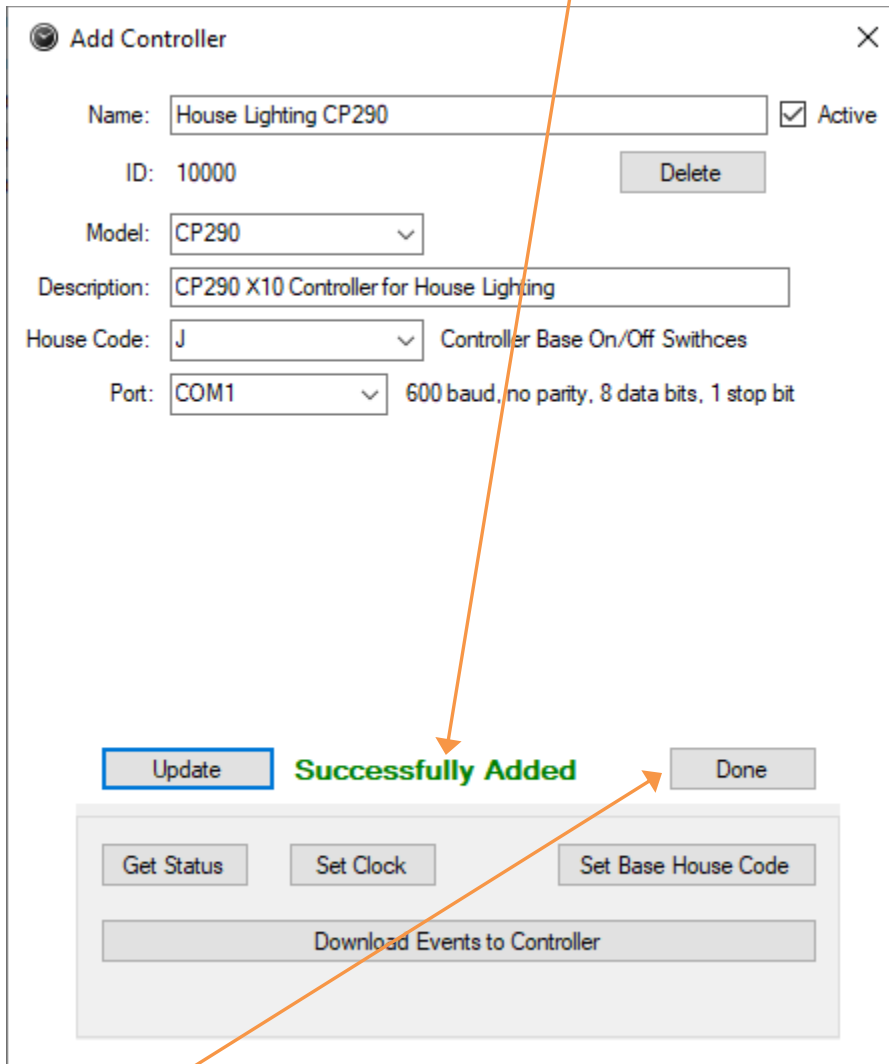
Click “Add” to finish adding **Controller**

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 form, the 'Update' button is highlighted with a blue border. The status box displays 'Successfully Added' in green text. Below the status box are buttons for 'Get Status', 'Set Clock', 'Set Base House Code', and a 'Download Events to Controller' button. An orange arrow points from the text above to the 'Successfully Added' message, and another orange arrow points from the 'Done' button to the text below.

Add 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

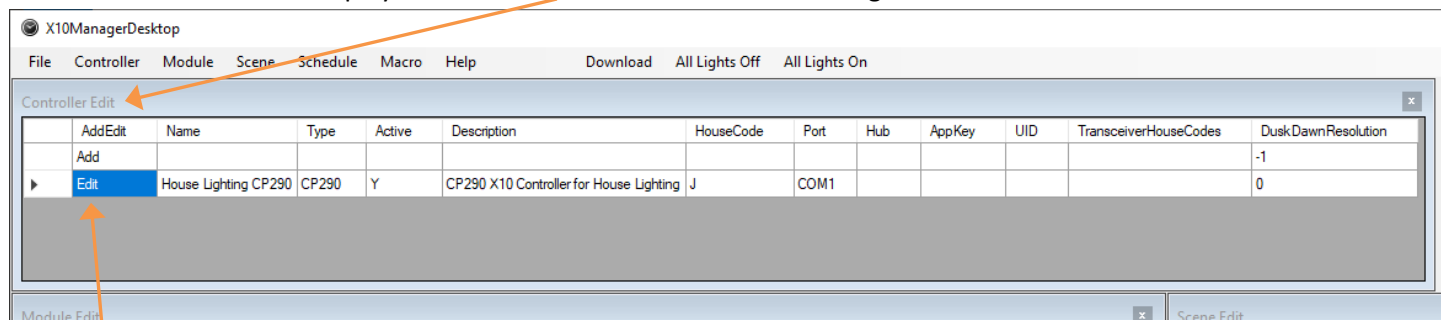
Successfully Added

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

Add Controller

Name: ☒ Active

ID:

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:

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 “**CM15A**” for **Controller “Model”**.

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

“**Port**” – “port.hub”

CM15A Controller must 1st 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

Name: ☒ Active

ID: 10000

Model:

Description:

House Code: Monitored House Code

Port: X10 USB ActiveHome (ACPI-compliant)

Transceiver House Codes

☐ A ☐ C ☐ E ☐ G ☐ I ☐ K ☐ M ☐ O
☐ B ☐ D ☐ F ☐ H ☒ J ☐ L ☐ N ☐ P

Dusk/Dawn Resolution:

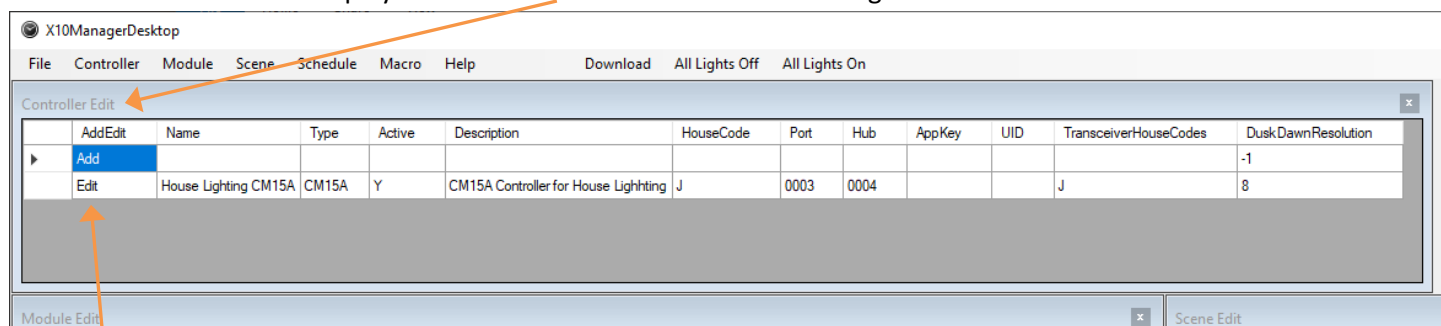
Successfully Added

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

"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.

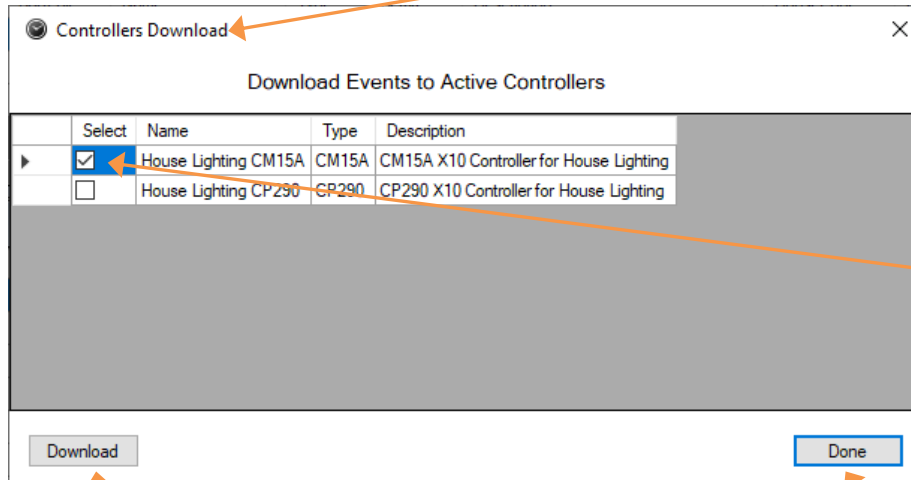
Controller Operations Panel

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 with the following fields and controls:

- Name:** Text field containing 'HalFloor'. An arrow points to this field with the text: "Module 'Name' is required."
- Enabled:** Checkmark box checked. 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:** Empty text field.
- Description:** Text field containing 'Hallway Floor/Wall Light'.
- Controller:** Dropdown menu showing 'House Lighting CM15A [CM15A]'. An arrow points to this dropdown with the text: "Select a Controller that will control the Module."
- Controller Active:** Text field containing 'Yes'.
- House Code:** Dropdown menu showing 'J'.
- Module Code:** Dropdown menu showing '9'.
- Dimmer:** Unchecked checkbox.
- Control Lights:** Checked checkbox.
- Extended Commands:** Unchecked checkbox.
- Add:** Button at the bottom left. An arrow points to it with the text: "Click 'Add' to finish adding Module"
- Cancel:** Button at the bottom right.

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.

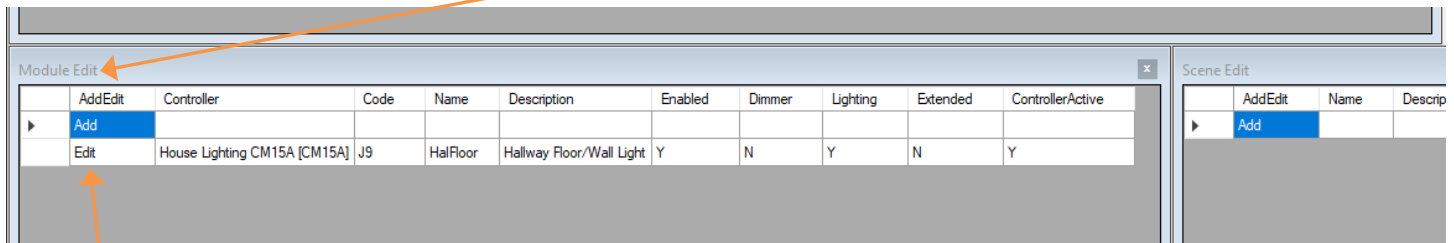
The screenshot shows the 'Add Module' dialog box. The 'Name' field is 'HalFloor', 'ID' is '10000', 'Description' is 'Hallway Floor/Wall Light', and 'Controller' is 'House Lighting CM15A [CM15A]'. The 'Enabled' checkbox is checked. Below these are 'Controller Active: Yes', 'House Code: J', 'Module Code: 9', 'Dimmer: [unchecked]', 'Control Lights: [checked]', and 'Extended Commands: [unchecked]'. At the bottom, there is an 'Update' button, a 'Test' button, and a 'Done' button. A status box at the bottom right shows 'On/Off: Off'. A green message 'Successfully Added' is displayed in the center. An orange arrow points from the text '“Successfully Added” will be displayed in the status box.' to the 'Successfully Added' message. Another orange arrow points from the text 'Click “Done” to close “Add Module” form.' to the 'Done' button.

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

Orange arrows point from the text on the right to the 'Update' button, the 'Done' button, and the 'Test' button.

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.

Add Scene—continued

Add Scene

Name:

Doors On

ID:

10000

Delete

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

Update

Successfully Added

Done

Test Modules In Scene

X10ManagerDesktop Operations Manual

Scenes – continued

Edit Scene

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

AddEdit	Name	Description	HouseCode	CurrentHouseCodeOnly
Add				
Edit	Doors On	Turn On Outside Door Lights	J	Y

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="checkbox"/>	Add						

Successfully Added

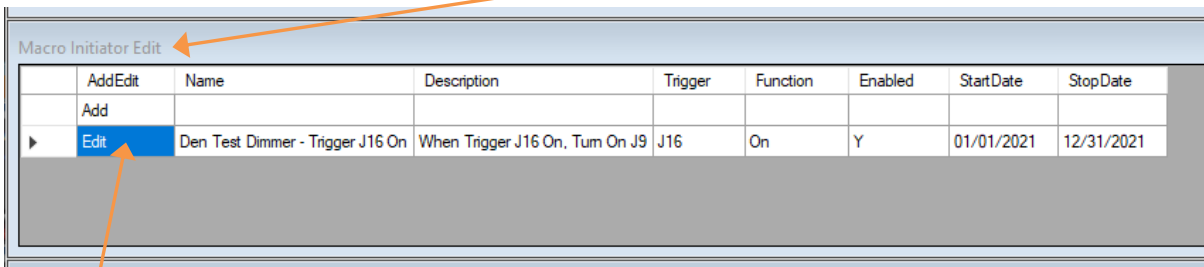
Macros can now be added.

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

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

Add Macro

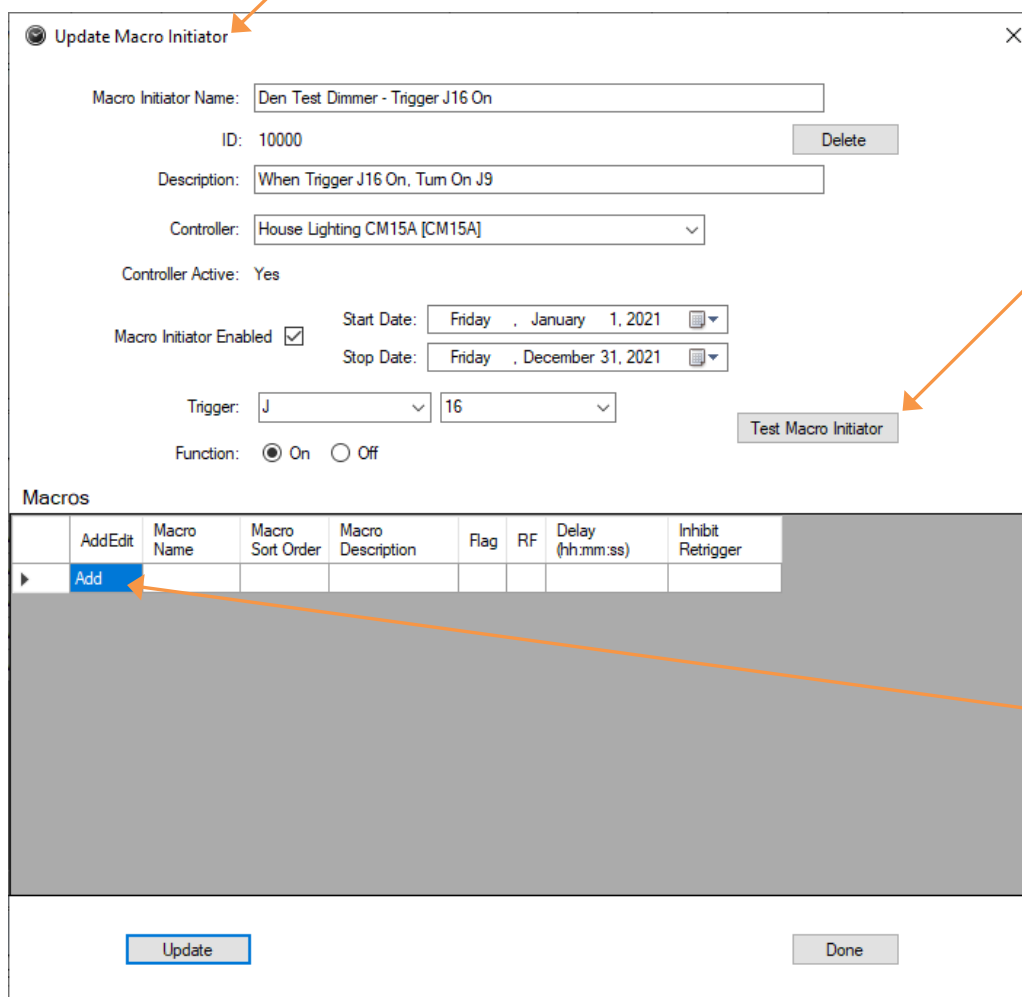
“Macro Initiator” – “Edit” will display the “Macro Initiator Edit” window containing a list of all added **Macro Initiators**.



AddEdit	Name	Description	Trigger	Function	Enabled	StartDate	StopDate
Add							
Edit	Den Test Dimmer - Trigger J16 On	When Trigger J16 On, 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: Den Test Dimmer - Trigger J16 On

ID: 10000 Delete

Description: When Trigger J16 On, Tum 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 - New Macro must first be added.** (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)
- Add** button
- Cancel** button

Annotations point to the following elements:

- Macro Name
- Macro Sort Order
- RF
- Delay
- Inhibit Retrigger
- 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: Turn On J9

MacroID: 10000 Delete

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

	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								

Update Successfully Added Done

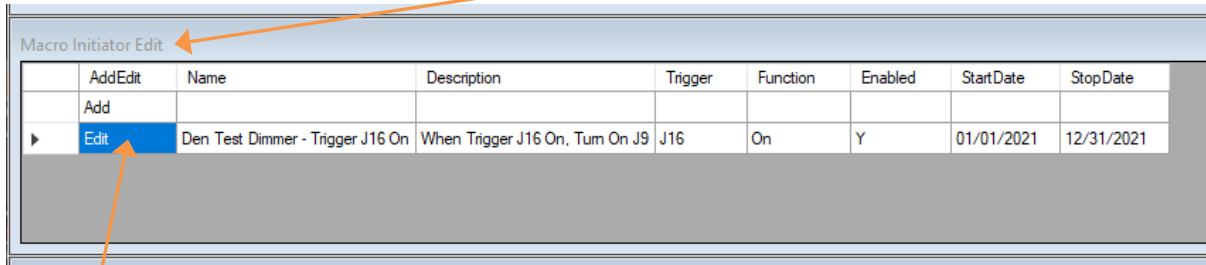
Macro Commands can now be added.

Click “Done” to close “Add Macro” form

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

Add Macro Command

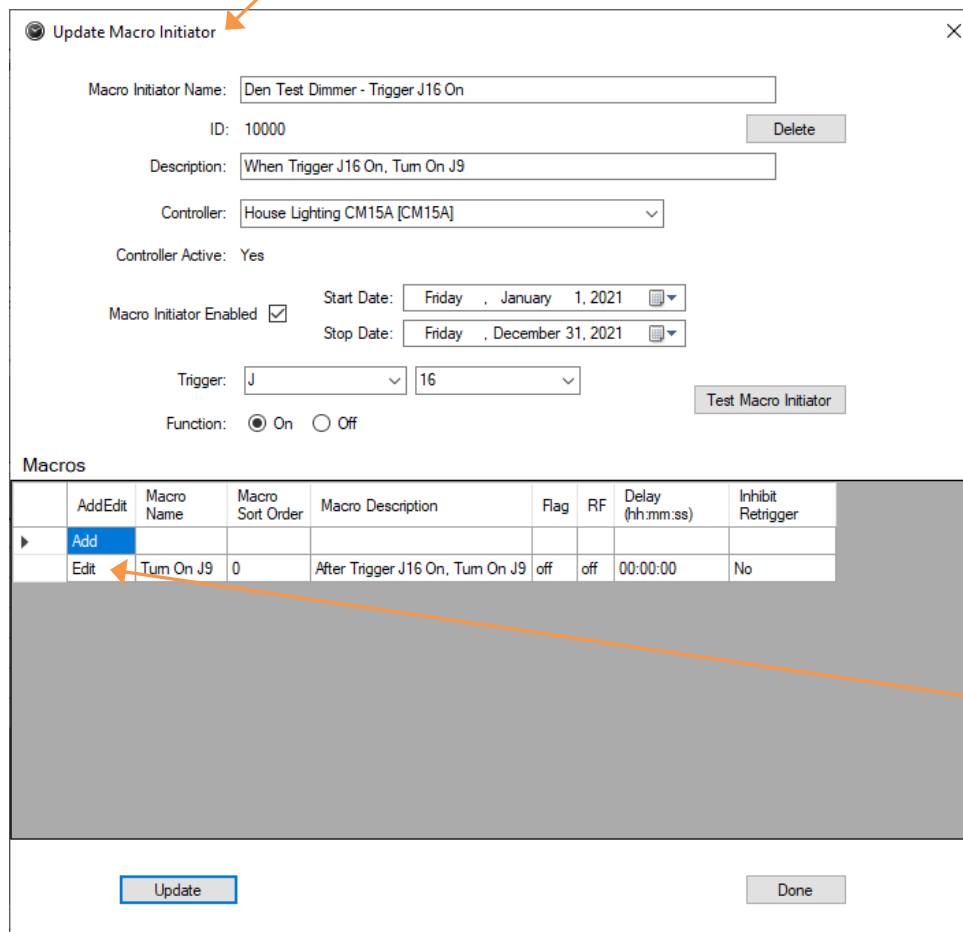
“Macro Initiator” – “Edit” will display the “Macro Initiator Edit” window containing a list of all added **Macro Initiators**.



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: Den Test Dimmer - Trigger J16 On

ID: 10000 Delete

Description: When Trigger J16 On, Tum 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 Test Macro Initiator

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

Update Done

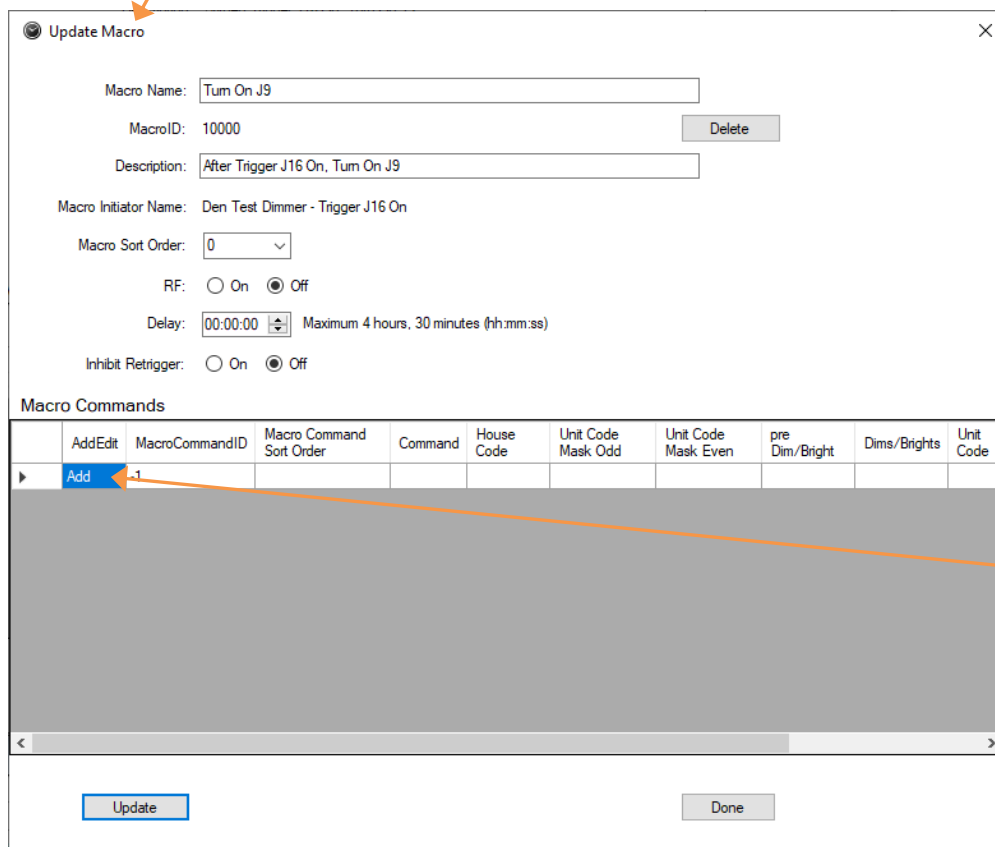
Click “Edit” on the **Macro** where the **Macro Command** is to be added.

Next page shows “Update Macro” form.

Macros – continued

Add Macro Command – continued

The “Update Macro” form will be displayed



The screenshot shows the 'Update Macro' dialog box. An orange arrow points to the 'Update Macro' title bar. The form contains the following fields and controls:

- Macro Name: Text box containing 'Turn On J9'
- MacroID: Text box containing '10000', with a 'Delete' button to its right.
- Description: Text box containing 'After Trigger J16 On, Turn On J9'
- Macro Initiator Name: Text box containing 'Den Test Dimmer - Trigger J16 On'
- Macro Sort Order: Dropdown menu showing '0'
- RF: Radio buttons for 'On' and 'Off', with 'Off' selected.
- Delay: Time picker showing '00:00:00', with a note 'Maximum 4 hours, 30 minutes (hh:mm:ss)'.
- Inhibit Retrigger: Radio buttons for 'On' and 'Off', with 'Off' selected.
- 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.
- Buttons: 'Update' and 'Done' at the bottom.

An orange arrow points to the 'Add' button in the 'AddEdit' column of the 'Macro Commands' table. Another orange arrow points from this 'Add' button to the text 'Click “Add” to add a Macro Command.'

	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 controls:

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

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.

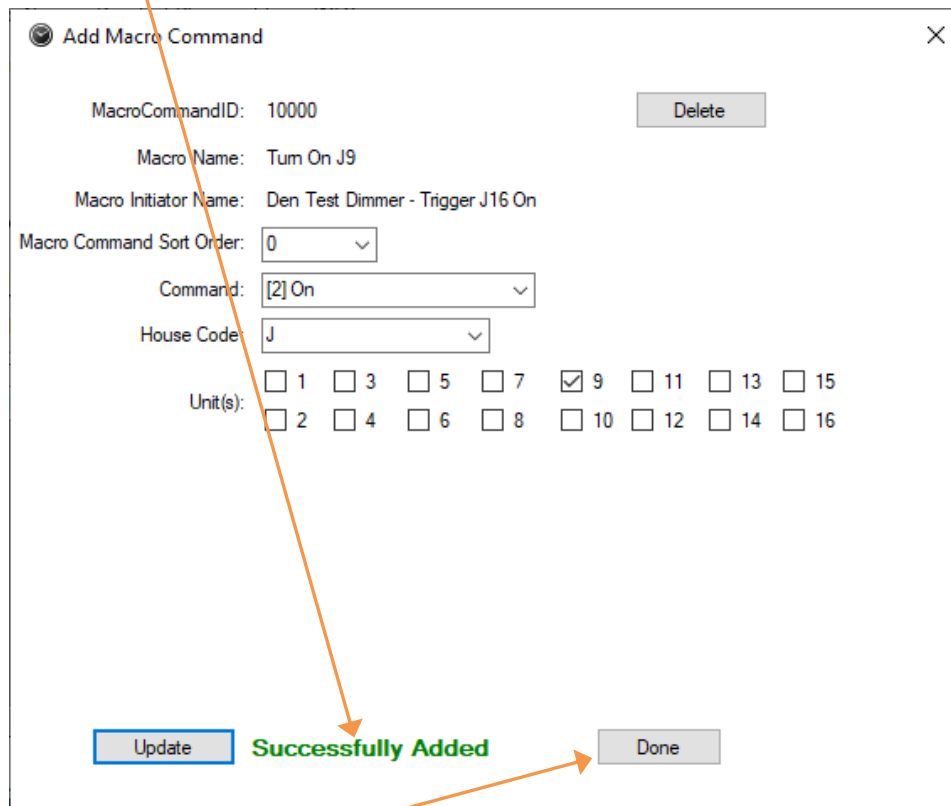
Click “**Add**” to finish adding **Macro Command**

Next page shows a “Successfully Added” result.

Macros – continued

Add Macro Command – continued

“Successfully Added” will be displayed in the status box



The screenshot shows the 'Add Macro Command' dialog box. At the top, there is a close button (X). Below it, the fields are: MacroCommandID: 10000 (with a 'Delete' button), Macro Name: Turn On J9, Macro Initiator Name: Den Test Dimmer - Trigger J16 On, Macro Command Sort Order: 0 (dropdown), Command: [2] On (dropdown), and House Code: J (dropdown). Below these fields is a section for 'Unit(s):' with checkboxes for units 1 through 16. Unit 9 is checked. At the bottom, there is an 'Update' button, the text 'Successfully Added' in green, and a 'Done' button. 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 Macro” form'.

Click “Done” to close “Add Macro” form

Schedules

Add Schedule

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

Add Schedule

Name:

ID:

Description:

Sunrise Time:

Add sets Sunrise/Sunset times (also reset by Controller downloads).

Sunset Time:

Events - New Schedule must first be added.

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

Add

Cancel

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.

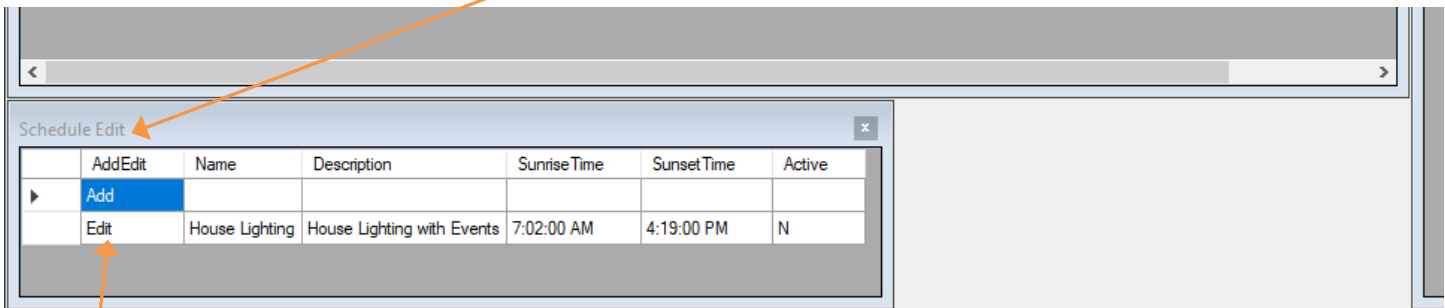
Add Event section will show how an **Event** can be added.

“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 sections:

- Name:** House Lighting
- ID:** 10000
- Description:** House Lighting with Events
- Sunrise Time:** 7:02:00 AM
- Sunset Time:** 4:19:00 PM
- Active:** ☐ (checked)
- 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

Buttons: Update, 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.

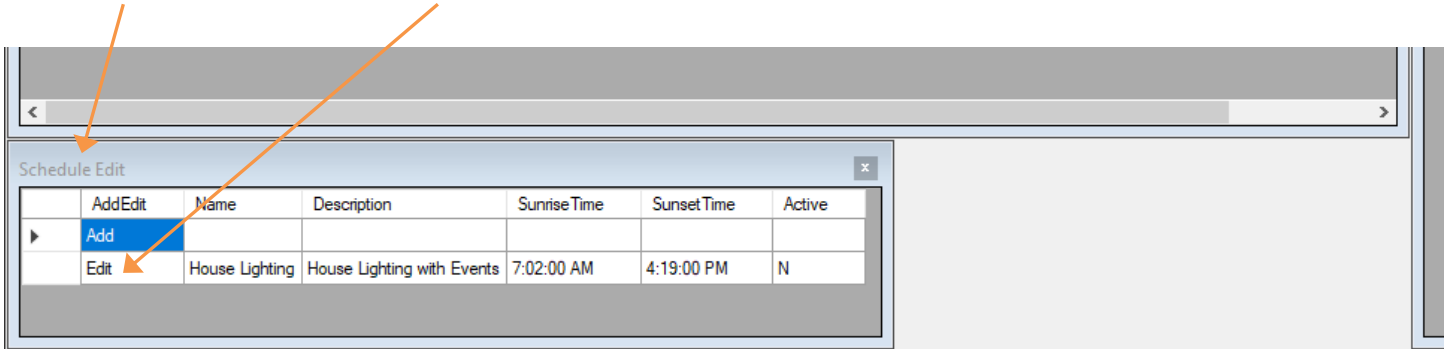
Click “**Done**” when finished.

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 '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							

Click “Add” to add an Event.

Update button: Update

Done button: Done

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. It has a title bar with a close button. The form contains the following fields and controls:

- EventID:** A text input field.
- Schedule:** A dropdown menu showing 'House Lighting'.
- Scene/Macro Selection:** Two radio buttons, 'Scene' (selected) and 'Macro'.
- Scene:** A dropdown menu showing 'Doors On'.
- Event Enabled:** A checked checkbox.
- Start Date:** A date picker showing 'Wednesday, January 1, 2020'.
- Stop Date:** A date picker showing 'Thursday, December 31, 2020'.
- Time:** Three options: 'Specific Time' (03:55 PM), 'After Sunrise By' (-30 minutes), and 'After Sunset By' (empty). A 'Security Variations' checkbox is below.
- Day(s):** A group of radio buttons: 'Today', 'Tomorrow', 'Weekends', 'Weekdays', 'Every Day' (selected), and 'Selected Day(s)'.
- Days of the Week:** A row of checkboxes for Sun, Mon, Tue, Wed, Thu, Fri, and Sat, all of which are checked.
- Buttons:** 'Add' and 'Cancel' buttons at the bottom.

Orange arrows point from text annotations to specific elements in the form:

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

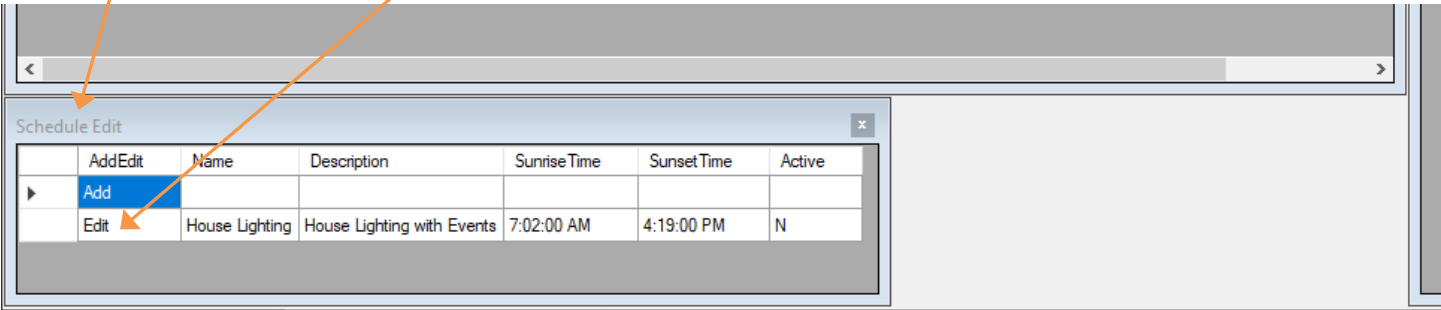
“Successfully Added” will be displayed in the status box.

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

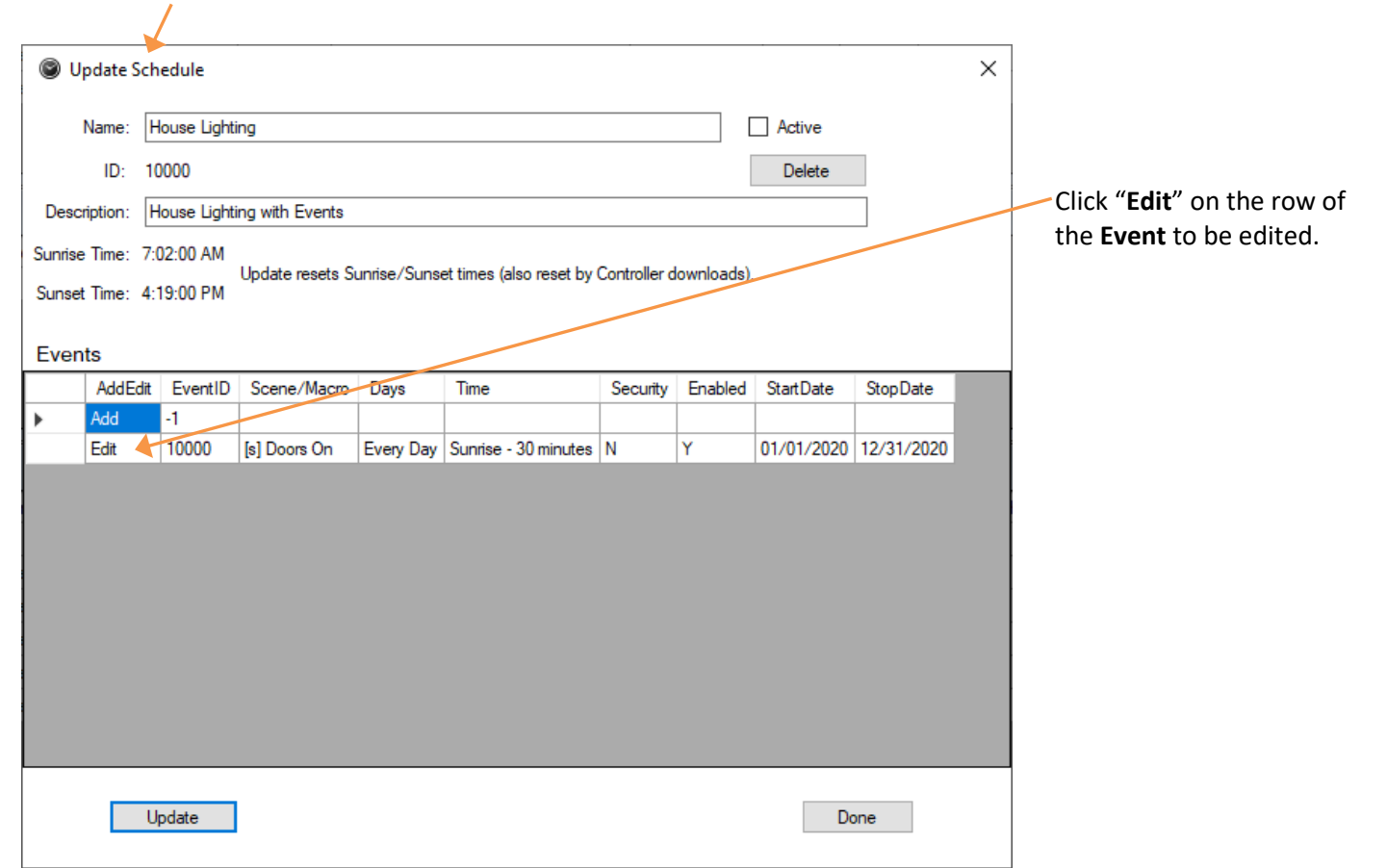
Events – continued

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:** ☒ After Sunrise By: -30 minutes
- Day(s):** ☒ Every Day
- Weekdays:** ☐ Weekdays
- Weekends:** ☐ Weekends
- Today:** ☐ Today
- Tomorrow:** ☐ Tomorrow
- Selected Day(s):** ☐ Selected Day(s)
- Security Variations:** ☐
- 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.

Original ParadoxReader source code is Licensed under: "[The Code Project Open License \(CPOL\) 1.02](#)"

The Code Project Open License (CPOL) 1.02

Preamble

This License governs Your use of the Work. This License is intended to allow developers to use the Source Code and Executable Files provided as part of the Work in any application in any form.

The main points subject to the terms of the License are:

- Source Code and Executable Files can be used in commercial applications;
- Source Code and Executable Files can be redistributed; and
- Source Code can be modified to create derivative works.
- No claim of suitability, guarantee, or any warranty whatsoever is provided. The software is provided "as-is".
- The Article accompanying the Work may not be distributed or republished without the Author's consent

This License is entered between You, the individual or other entity reading or otherwise making use of the Work licensed pursuant to this License and the individual or other entity which offers the Work under the terms of this License ("Author").

License

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CODE PROJECT OPEN LICENSE ("LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE OR COPYRIGHT LAW IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HEREIN, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. THE AUTHOR GRANTS YOU THE RIGHTS CONTAINED HEREIN IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS. IF YOU DO NOT AGREE TO ACCEPT AND BE BOUND BY THE TERMS OF THIS LICENSE, YOU CANNOT MAKE ANY USE OF THE WORK.

1. Definitions.

- a. **"Articles"** means, collectively, all articles written by Author which describes how the Source Code and Executable Files for the Work may be used by a user.
- b. **"Author"** means the individual or entity that offers the Work under the terms of this License.
- c. **"Derivative Work"** means a work based upon the Work or upon the Work and other pre-existing works.
- d. **"Executable Files"** refer to the executables, binary files, configuration and any required data files included in the Work.
- e. **"Publisher"** means the provider of the website, magazine, CD-ROM, DVD or other medium from or by which the Work is obtained by You.
- f. **"Source Code"** refers to the collection of source code and configuration files used to create the Executable Files.

- g. **"Standard Version"** refers to such a Work if it has not been modified, or has been modified in accordance with the consent of the Author, such consent being in the full discretion of the Author.
 - h. **"Work"** refers to the collection of files distributed by the Publisher, including the Source Code, Executable Files, binaries, data files, documentation, whitepapers and the Articles.
 - i. **"You"** is you, an individual or entity wishing to use the Work and exercise your rights under this License.
2. **Fair Use/Fair Use Rights.** Nothing in this License is intended to reduce, limit, or restrict any rights arising from fair use, fair dealing, first sale or other limitations on the exclusive rights of the copyright owner under copyright law or other applicable laws.
3. **License Grant.** Subject to the terms and conditions of this License, the Author hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated below:
- a. You may use the standard version of the Source Code or Executable Files in Your own applications.
 - b. You may apply bug fixes, portability fixes and other modifications obtained from the Public Domain or from the Author. A Work modified in such a way shall still be considered the standard version and will be subject to this License.
 - c. You may otherwise modify Your copy of this Work (excluding the Articles) in any way to create a Derivative Work, provided that You insert a prominent notice in each changed file stating how, when and where You changed that file.
 - d. You may distribute the standard version of the Executable Files and Source Code or Derivative Work in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution.
 - e. The Articles discussing the Work published in any form by the author may not be distributed or republished without the Author's consent. The author retains copyright to any such Articles. You may use the Executable Files and Source Code pursuant to this License but you may not repost or republish or otherwise distribute or make available the Articles, without the prior written consent of the Author.

Any subroutines or modules supplied by You and linked into the Source Code or Executable Files of this Work shall not be considered part of this Work and will not be subject to the terms of this License.

4. **Patent License.** Subject to the terms and conditions of this License, each Author hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, import, and otherwise transfer the Work.
5. **Restrictions.** The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:
- a. You agree not to remove any of the original copyright, patent, trademark, and attribution notices and associated disclaimers that may appear in the Source Code or Executable Files.
 - b. You agree not to advertise or in any way imply that this Work is a product of Your own.
 - c. The name of the Author may not be used to endorse or promote products derived from the Work without the prior written consent of the Author.
 - d. You agree not to sell, lease, or rent any part of the Work. This does not restrict you from including the Work or any part of the Work inside a larger software distribution that itself is being sold. The Work by itself, though, cannot be sold, leased or rented.
 - e. You may distribute the Executable Files and Source Code only under the terms of this License, and You must include a copy of, or the Uniform Resource Identifier for, this License with every copy of the Executable Files or Source Code You distribute and ensure that anyone receiving such Executable Files and Source Code agrees that the terms of this License apply to such Executable Files and/or Source Code. You may not offer or impose any terms on the Work that alter or restrict the terms of this License or the recipients' exercise of the rights granted hereunder. You may not sublicense the Work. You must keep intact all notices that refer to this License and to the disclaimer of warranties. You may not

distribute the Executable Files or Source Code with any technological measures that control access or use of the Work in a manner inconsistent with the terms of this License.

- f. You agree not to use the Work for illegal, immoral or improper purposes, or on pages containing illegal, immoral or improper material. The Work is subject to applicable export laws. You agree to comply with all such laws and regulations that may apply to the Work after Your receipt of the Work.

6. **Representations, Warranties and Disclaimer.** THIS WORK IS PROVIDED "AS IS", "WHERE IS" AND "AS AVAILABLE", WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS OR GUARANTEES. YOU, THE USER, ASSUME ALL RISK IN ITS USE, INCLUDING COPYRIGHT INFRINGEMENT, PATENT INFRINGEMENT, SUITABILITY, ETC. AUTHOR EXPRESSLY DISCLAIMS ALL EXPRESS, IMPLIED OR STATUTORY WARRANTIES OR CONDITIONS, INCLUDING WITHOUT LIMITATION, WARRANTIES OR CONDITIONS OF MERCHANTABILITY, MERCHANTABLE QUALITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF TITLE OR NON-INFRINGEMENT, OR THAT THE WORK (OR ANY PORTION THEREOF) IS CORRECT, USEFUL, BUG-FREE OR FREE OF VIRUSES. YOU MUST PASS THIS DISCLAIMER ON WHENEVER YOU DISTRIBUTE THE WORK OR DERIVATIVE WORKS.

7. **Indemnity.** You agree to defend, indemnify and hold harmless the Author and the Publisher from and against any claims, suits, losses, damages, liabilities, costs, and expenses (including reasonable legal or attorneys' fees) resulting from or relating to any use of the Work by You.

8. **Limitation on Liability.** EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL THE AUTHOR OR THE PUBLISHER BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK OR OTHERWISE, EVEN IF THE AUTHOR OR THE PUBLISHER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

9. **Termination.**

- a. This License and the rights granted hereunder will terminate automatically upon any breach by You of any term of this License. Individuals or entities who have received Derivative Works from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 6, 7, 8, 9, 10 and 11 will survive any termination of this License.
- b. If You bring a copyright, trademark, patent or any other infringement claim against any contributor over infringements You claim are made by the Work, your License from such contributor to the Work ends automatically.
- c. Subject to the above terms and conditions, this License is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, the Author reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License), and this License will continue in full force and effect unless terminated as stated above.

10. **Publisher.** The parties hereby confirm that the Publisher shall not, under any circumstances, be responsible for and shall not have any liability in respect of the subject matter of this License. The Publisher makes no warranty whatsoever in connection with the Work and shall not be liable to You or any party on any legal theory for any damages whatsoever, including without limitation any general, special, incidental or consequential damages arising in connection to this license. The Publisher reserves the right to cease making the Work available to You at any time without notice

11. **Miscellaneous**

- a. This License shall be governed by the laws of the location of the head office of the Author or if the Author is an individual, the laws of location of the principal place of residence of the Author.
- b. If any provision of this License is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this License, and without further action by the parties to this License, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

- c. No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.
- d. This License constitutes the entire agreement between the parties with respect to the Work licensed herein. There are no understandings, agreements or representations with respect to the Work not specified herein. The Author shall not be bound by any additional provisions that may appear in any communication from You. This License may not be modified without the mutual written agreement of the Author and You.