Introduction

Windows

Procedures

Overview of X10MSW

X10MSW, is a MS-Windows application which allows you to control lights, appliances, etc. around your home from your PC.   X10MSW is meant to be used with the CP290 "Powerhouse" computer interface manufactured by X-10 USA, although there is a demo mode which does not require a   CP290.   The CP290 attaches to your PC via a serial cable, and works with other X-10 devices (called <u>units</u>) to control lights, appliances, etc. around your home.   With X10MSW, you can send "direct" commands to turn things on, off, or, in the case of lights, dim or brighten them.   You can also download a set of <u>events</u> into the CP290's battery backed-up memory for execution at some preset time/day.   Once the CP290 has a set of events in its memory, you can turn the PC off and the CP290 will continue to execute those events.   Events are anything you can do with "direct" commands such as on, off, dim, etc., but you tell the CP290 when to do the command.

X10MSW also supports the PLIX evaluation board from Micromint Inc. which allows you to use a standard parallel printer port (LPT1-3) with a TW523 bi-directional powerline interface from X10 USA.   This allows you to monitor all X10 events and to do <u>bright</u> commands. See <u>PLIX</u> for contact information on Micromint Inc.

X10MSW allows you to define a set of icons which represent the various X-10 <u>units</u> you have around your home.   X10MSW has icons for lamps, generic appliances, fans, radios; or you can customize each X-10 unit with your own icons (which you must first build using any icon editor).   You give each unit a <u>location</u> and a <u>description</u> which are used throughout X10MSW.   You use these icons to control the units from your PC.

Once you have defined your units, you can create windows which display a bit map of the various rooms in your home and place the units in those windows.   Imagine "walking" around your home (by moving between windows), turning lamps, appliances, etc. on an off; all without having to leave the chair in front of your PC!   The betimes of your rooms are created outside of X10MSW, and help put you in control of your home.
X10MSW allows you to create and save multiple files which contain CP290 events. X10MSW also allows you to monitor the commands being sent by the CP290, or with the optional <u>PLIX</u> interface monitor all X10 commands.   It does all this using MS-Windows Multiple Document Interface (MDI) which allows several windows within the one X10MSW main window.

X10MSW <u>events</u> are fairly sophisticated, consisting of a command such as on, off, dim, bright, etc.;   the X-10 unit or units which are to be affected; a time of day including sunrise, sunset, or plus/minus offset from them; a day of the week; and a month of the year.   Each event can be frozen - meaning it will not occur until you thaw it; or it can be qualified to only occur when you are on vacation (you have to tell X10MSW you are going on vacation); or it can be qualified by any of 8 conditions which you define (like guests in your home), and set or reset.

X10MSW <u>events</u> may also be defined to happen "<u>now</u>", allowing you to build up event files which do a bunch of direct commands.   If you start X10MSW, giving the name of an event file with only "now" events, they will be done automatically and X10MSW will exit after all direct commands are done.   This allows you to define a series of event files which can put your home into different "modes" (sometimes called "scenes") simply by double clicking on that event file.

Installation

X10MSW comes with a Windows-based installation program called *install.exe*.   This will unpack the X10MSW files into a default directory (C:\X10MSW), or into any directory you choose, and set up a Program Manager group for X10MSW.   Once the files are unpacked, a configuration program is run which does the following:

Creates a x10.ini file if one doesn't exist

Creates an association between event files (.x10) and X10MSW

Allows you to select the COM port to which the CP290 is attached

Allows you to select your latitude/longitude for sunrise/sunset calculations

Allows you enable automatic downloads of an event file at regular intervals

The association between event files (those with an extension of .x10) and X10MSW allows you to double click on an event file to launch X10MSW and have it open the event file in an event window, or if it contains only "now" commands they will be executed and X10MSW will exit..

Procedures Associated with Installation

Choosing a COM port

Choosing a Latitude/Longitude

Enabling Automatic Downloads

X10MSW uses the current MS-Windows colors for things like title bars, backgrounds, text, etc.   If you change the MS-Windows colors via the control panel, X10MSW will change its colors accordingly.

Choosing a COM port (Installation)

Select the com port to which the CP290 is connected and click on OK.

If a x10.ini exists in the Windows directory, the com port from the .ini file is used to select a default port.   You can also choose demo mode to try some of X10MSW's features without having a CP290 attached.

The configuration program does not verify that a CP290 is indeed attached to the com port which you selected.   When X10MSW is started, it will check for a CP290 at the port you selected.   You can also change the com port selection in X10MSW by using the **Interface** menu.

See also

Selecting COM Ports
Selecting Demo Mode
Interface Menu

Choosing a Latitude/Longitude (Installation)

X10MSW needs your latitude and longitude to calculate sunrise and sunset event times. X10MSW comes with a small "database" of cities-lat/long pairs (latlong.dat) which is read into a list box.

1 Scroll through the list box, looking for the state/city in which you live (or to which you are closest).   Or, (as with most list boxes), you can type the first letter of your state to "jump" to the first entry for your state.   Once you have located a state/city which matches your latitude/longitude, double-click on the item to copy the latitude/longitude to the edit boxes below the list box.

2 If a state/city pair with your latitude/longitude does not exist, you can enter your latitude and longitude directly into the edit boxes below the list box

3   Click on OK to select the latitude/longitude which is in the edit boxes..   If you entered an illegal value, a error message will appear;   simply correct the value(s) and click OK again.

You can change your latitude and longitude in X10MSW by using the **Options** menu in any event window.

See also

Setting Latitude/Longitude.

Options Menu - Event Windows

Enabling Automatic Downloading

Automatic downloading allows you to keep your CP290 events accurate (up to date with the correct sunrise and sunset times) by initiating downloads at regular intervals.

You configure auto download by specifying an event file and an interval (in days)   via the procedures described below.   Then, during start-up, if the time elapsed since your last download is larger than the interval you configured, you will be asked if you want to automatically start a download of the event file you specified.

In addition, the AutoX10.EXE application can be added to your Window's Startup program group and, if the time elapsed since the last download exceeds the interval you configured, it will ask if you want to run X10MSW to initiate the download.   When X10MSW is started in this way, it will *not* ask again about doing the auto download.   This way, every time you start Windows, AutoX10 will make a (very) quick check to see if its time to do a download.

If you don't want to bother doing it right now, you can say "no", and do it later (X10MSW will still detect the need for an auto download when it starts), or wait until the next time you start windows.

If you start X10MSW with a command file, and the auto download interval has elapsed, both files will be downloaded, and X10MSW will exit just like it does with command files.

To Enable Auto download:

You can enable auto download either during installation or via the **Autodownload** item in the **Interface** menu, or both.   The dialog used to enable automatic downloading looks like the regular "open file" dialog - you use this to specify the name of the event file you wish to automatically download.   The dialog has an extra box in the bottom right corner where you specify the number of days between downloads.   Use a value of 0 to disable auto downloading.

During install, if you choose to enable auto downloading, the AutoX10.EXE application will be added to your Startup program group.   AutoX10 takes a single argument - the name of the application to start to do the auto download.   If AutoX10 finds the interval since the last download exceeds that which you configured, it will ask if an auto download should be started, and if so it will start the application with the name of the event file you specified for auto download.

See also

Downloading Events

Getting Started

You will probably want to do the following the first time you start X10MSW:

1 **Set the CP290 Base Housecode and Time**

If you were using the CP290 before, chances are you have its <u>base housecode</u> and time already set.   If not, you can use the **Interface** menu item to set the base housecode (for the keys on the CP290) and the time.

See also

<u>Changing Base Housecode</u>

<u>Setting the Clock</u>

2 **Look at the sample.x10 event file**

To see examples of some complicated events, you can open the sample.x10 event file by double clicking on the *sample* item in the X10MSW Program Group, or by using the Open item in the **File** Menu.   Note that when you open an event file by using the **File** menu you can tell X10MSW to remember a particular directory.   All file operations (open, save, etc.) will start in that directory from then on, including after you have exited and re-started X10MSW.   In general, you should not change X10MSW's data directory frequently, since it can cause the blueprint data file to be lost.

See also

<u>All about Events</u>

<u>Opening an Event file</u>

3 **Define the units in your home**

The sample <u>x10.ini</u> file included with X10MSW and set up during installation contains some sample units.   You should use the Units child window to add/change/delete the units so they match those defined in your home.   If you want to define your own unit types and use icons you have created for those types, you can do this when adding or changing units.   At this point you are ready to exert direct control over any units you have defined.   You can either start defining events for the CP290, or start arranging units on blueprints of the rooms in your home.   To start defining events, follow the next few steps.   To start arranging units on room blueprints, skip down to step 5 below.

See also

<u>Procedures Associated with Units</u>

<u>Creating New Unit Types/Icons</u>

<u>Controlling a Unit via the Units Window</u>

4 **Save any events currently in the CP290**

If you have been using the CP290, you probably have some events stored in its memory.   To upload and save these events, follow these steps:

a   Restore the child window called "current events" (by double clicking its icon).

b You will be prompted by a dialog box suggesting you upload with no conditionals.   Choose OK.

X10MSW uses a portion of the battery-backed-up RAM in the CP290 (called, in CP290 terms, graphics RAM) to save additional information about events, such as month of the year, user conditionals, frozen, etc.   Since your other CP290 control software did not use this graphics RAM like X10MSW, this uploads events without reading the (garbage) in the graphics RAM.   These events will be active for all 12 months of the year, not frozen, etc.   You can save these events to a file (use the Save item under the File menu) and edit them later.   If you do a regular upload, some or all of your events will not be active (show as grayed text in the event window), and when you edit them, the will be scheduled for strange months, conditions, etc.   If this happens,

you can always do another upload (use the **File** menu), but be sure to choose the "upload with no conditionals" item.

c   You can now edit any of these events (or add new ones), and save them to an event file, by following Procedures <u>Associated with Events</u>.

See also

<u>Uploading Events</u>
<u>Saving an Event file</u>
<u>Event Conditionals</u>

Units Window Definition

The Units child window displays the collection of icons that represent the <u>units</u> you have defined.

Note that this window cannot be closed;   selecting **Close** from the system menu (or using the Control-menu box) will simply minimize the window (much like in Window's Program Manager).

Units Window

The Units child window displays the collection of icons that represent the units you have defined.   Each unit has a <u>housecode</u>, a <u>unit number</u>, a <u>location,</u> and a <u>description</u>.   Each unit also has a <u>type</u> which causes a certain icon, such as a light bulb, a fan, etc. to be displayed.   You can define your own unit types and the icons that represent them.   There is usually an active unit whose description is highlighted (referred to as <u>selected</u>).

The unit icons are arranged based upon the size of the description.   If you resize the window, the icons may move, but their order will be unchanged.   If there are too many icons to fit the current window size, scroll bars will appear and you can use those to scroll the icons into view, or use the PgDn/PgUp keys.

Note that this window cannot be closed;   selecting **Close** from the system menu (or using the Control-menu box) will simply minimize the window (much like in Window's Program Manager).

See also

<u>Procedures Associated with Units</u>

Commands

><u>File Menu</u>
><u>Edit Menu</u>
><u>Direct Menu</u>
><u>AllUnits Menu</u>
><u>Interface Menu</u>
><u>Window Menu</u>

Monitor Window Definition

The Monitor child window allows you to monitor the commands sent by the CP290, either direct commands (via X10MSW or keys), or stored <u>events</u>.   Unfortunately, the CP290 cannot tell X10MSW about commands sent by other X-10 controllers. With the optional <u>PLIX</u> inteface X10MSW can monitor all X10 commands generated by any console/device in your house.   The monitor child window can display CP290 only, PLIX only, or both.   In addition, commands received by the PLIX interface can cause a short beep.

Note that this window cannot be closed;   selecting **Close** from the system menu (or using the Control-menu box) will simply minimize the window (much like in Window's Program Manager).

Monitor Window

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The Monitor window holds up to 100 commands, each of which is optionally time and/or date stamped.   You can scroll back and forth using the scroll bars and/or PgUp/PgDn; and also start a log file.   The log file is limited only by available disk space; it does not wrap.

The Monitor window will continue to monitor commands even when minimized.   If you scroll the most recent command off the screen, the window will not scroll; otherwise the window will scroll down as commands are displayed.

Note that this window cannot be closed;   selecting **Close** from the system menu (or using the Control-menu box) will simply minimize the window (much like in Window's Program Manager).

See also
<u>Procedures Associated with Monitoring</u>.

Commands

> <u>File Menu</u>
> <u>Options Menu</u>
> <u>Interface Menu</u>
> <u>Window Menu</u>

Current Events Window Definition

The current events child window is a special event window which   reflects the set of <u>events</u> currently in the CP290.   You can manipulate the events just as you would in an event file.

The current events window is in one of two modes - immediate or delayed.   When in immediate mode, any change you make to an event is immediately made in the CP290.   In delayed, you must download the set of events to the CP290.

The current events window starts minimized.   When you restore it, an upload from the CP290 is done.   If you download the CP290 from another event file, the current events window is updated to reflect the new set of events.

Note that this window cannot be closed;   selecting **Close** from the system menu (or using the Control-menu box) will simply minimize the window (much like in Window's Program Manager).

Current Events Window

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The current events window is in one of two modes - <u>immediate</u> or <u>delayed</u>.   When in <u>immediate</u> mode, any change you make to an event is immediately made in the CP290.   In <u>delayed</u>, you must download the set of events to the CP290.

The current events window starts minimized.   When you restore it, an upload from the CP290 is done.   If you download the CP290 from another event file, the current events window is updated to reflect the new set of events.

Note that this window cannot be closed;   selecting **Close** from the system menu (or using the Control-menu box) will simply minimize the window (much like in Window's Program Manager).

See also

<u>Procedures Associated with Events</u>.

Commands

<u>File Menu</u>
<u>Edit Menu</u>
<u>Options Menu</u>
<u>Interface Menu</u>
<u>Window Menu</u>

Event File Window Definition

Event file child windows allow you to manipulate a set of <u>events</u> and load/store them from/to files and/or download them to the CP290.   You can have multiple event file windows open at one time, allowing you to easily see the differences between them. X10MSW likes to save events to files with extension of .x10, but you could use any extension.

Event File Window

Event file child windows allow you to manipulate a set of events and load/store them from/to files and/or download them to the CP290.   You can have multiple event file windows open at one time, allowing you to easily see the differences between them. X10MSW likes to save events to files with extension of .x10, but you could use any extension.

To open an existing event file

   From the **File** menu, choose **Open Event File**

To make a new event file

   From the **File** menu, choose **New Event Window**

Each Event window has a list box which displays the events in the file.   If you resize the window,   the list box changes size with it.   The event list box has a vertical scroll bar but no horizontal scroll bar.

See also

Procedures Associated with Events.

Commands

   File Menu
   Edit Menu
   Options Menu
   Interface Menu
   Window Menu

Procedures Associated with Units

Adding a Unit

Selecting a Unit

Controlling a Unit via the Units Window

Deleting a Unit

Changing a Unit

Creating New Unit Types/Icons

Rearranging Unit Icons

Printing Units Defined

Procedures Associated with Interfacing to the CP290

Procedures Associated with Monitoring

To change date and/or time stamping:

Use the **Options** menu item to choose time/date stamping.   A check mark indicates what is active.   Time/Date stamping will affect both the display and logging of commands sent by the CP290.

To clear the window:

From the **Options** menu, choose **ClearScreen**.

To start/stop logging to a file:

Use the **File** menu to start/stop logging to a file.   When starting, you will get a dialog box to select the log file.   If the file exists, you will be asked to confirm overwriting it. The full path and filename of the log file is placed in the monitor window title bar.

To control display of CP290 and/or PLIX commands:

Use the **Options** menu item and check any combination of **Show CP290** and/or **Show PLIX**.   A checkmark indicates commands received by that device will be displayed. Commands received via the PLIX interface will be prefixed with a "PLIX" string in the monitor output.

To cause a short beep when commands are received via the PLIX:

Use the **Options** menu item and check **Beep PLIX**.   A checkmark indicates a short beep will be made whenever a command is received from the PLIX interface.

File Menu

This menu has several items in common to all child windows, and some items which are unique and change with the active child window.   Items in common are:

New Event Window: creates a new event file (and <u>event window</u>)

Open Event File: open an event file (creates an <u>event window</u>)

Exit: exits X10MSW - asks for confirmation if you made any changes.   The size and location of the Units, Monitor, Current events, and Blueprint windows are saved and used next time X10MSW is run.

See also:

File Command Menu - Units Window

File Command Menu - Monitor Window

File Command Menu - Current Events Window

File Command Menu - Event File Window

File Command Menu - Monitor Window

The File menu when the Monitor child window is active has an item which allows you to start/stop logging of events.   The menu item changes depending on whether the log is open or closed.

See also

Procedures Associated with Monitoring

File Command Menu - Units Window

The File menu when the Units child window is active has an item which allows you to print the currently defined units.

See also

Procedures Associated with Units

File Command Menu - Current Events Window

The File menu when the current events child window is active has items which allow you to save the current events into an events file, append an events file, upload from the CP290 to the PC, download a set of events from the PC to the CP290, or print the current events.

See also

Procedures Associated with Events

Saving an Event file
Appending from another Event file
Uploading Events
Downloading Events
Printing an Event file

File Command Menu - Event File Window

The File menu when an event file child window is active has items which allow you to save the events into the file they came from or into a different file; open another event file using the same event window; append another event file to the event file open in this window; download this set of events, or print this event file.

See also

Procedures Associated with Events

Opening an Event file
Saving an Event file
Appending from another Event file
Downloading Events
Printing an Event file

Direct Command Menu - Units Window

Allows you to command a <u>unit</u> to turn on, off, <u>dim</u>, <u>bright</u>, <u>fade</u>, or go <u>up</u>.

To issue a direct command

1 <u>Select</u> a unit

2 From the **Direct** menu, choose the command

For dim and bright via the <u>PLIX</u>, you specify the number of dim or bright commands to send to the unit rather than the level.

See also

<u>Selecting a Unit</u>

<u>Controlling a Unit via the Units Window</u>

<u>AllUnits Menu</u>

Edit   Menu - Units Window

Allows you to add, delete, or change unit definitions.   When you define a unit, you supply its <u>housecode</u>, <u>unit number</u>, <u>location</u>, and <u>description</u>, and <u>type</u>.   This information is used to display a unit in the <u>Units window.</u>

See also

<u>Adding a Unit</u>

<u>Deleting a Unit</u>

<u>Changing a Unit</u>

Note that when there are no units defined, the **Del** and **Change** items are not valid.

Edit Menu - Event Window(s)

Allows you to add, delete, or change an <u>event</u>.   If there are no events in the window, delete and change are disabled.   The standard **cut**, **copy**, and **paste** clipboard operations are supported on events.

This menu also allows you to extend your control over which events the CP290 will perform by making all events dependent (<u>conditional</u>) on conditions like "Vacation" or any condition you define.

Note that if there are no events in the window, only the **Add** item is valid.

See also

<u>Adding an Event</u>
<u>Deleting an Event</u>
<u>Changing an Event</u>
<u>Defining user-defined Event Conditionals</u>
<u>Specifying Event Conditionals</u>

AllUnits Menu

Active when the Units window is the active X10MSW window, these commands allows you to command all units to turn on, off, dim, or bright to a level you choose, or fade.   Note that with the CP290, you will turn all units on, be they lamp or appliance units, which is different from other X-10 command consoles which will only turn all lamps on.   There are also a set of menu items which allow to command all lamps to turn on, off,   dim, or bright to a level you choose.   When using a CP-290, X10MSW uses the lamps you have defined to know which units to command, so if there is a lamp unit you have not told X10MSW about, it will not be affected by this action, which again differs from other X-10 command consoles when you use "All Lights On".   The PLIX interface fully supports the All Lights On command.

You can command units with the same housecode as the CP290 base housecode, or you can specify any other housecode.

See also

Controlling a Unit via the Units Window
Direct Command Menu

Interface Menu

This command allows you to set the com port (1-4) to which the CP290 is attached. Note that the com port you choose is saved in the x10.ini and will be used next time X10MSW is run.   This menu also allows you to select demo mode.

You also use this command to change the CP290's base housecode, clock, or run self-tests.

Lastly, you use this command to enable and control automatic downloading of an event file based on the time elapsed since your last download.

See also

Selecting COM Ports

Selecting Demo Mode

Changing the CP290 Clock

Changing the base housecode

Testing the CP290

Enabling Auto-download of an Event file

Options Menu - Monitor Window

This menu allows you to turn date and/or time stamping on or off.   You can also clear the window, control CP290/PLIX output, and cause a short beep when commands are received via the PLIX interface.

See also

Procedures Associated with Monitoring.

Options Menu - Event Windows

Gives you control over how underlined events are sorted; allows you to extend you control over which events the CP290 is to perform by defining your own conditionals; allows you to specify your latitude and longitude, allows you to specify an offset scale, and, for the current events window, allows you to switch between immediate and delayed mode.

See also

Controlling how Events are Sorted

Setting/Resetting Event Conditionals

Defining user-defined Event Conditionals

Setting Latitude/Longitude and Timezone

Specifying an offset scale

Window Menu

This is a standard MDI window menu which allows you to arrange the child windows or select the active child window.   Note that the **Arrange Icons** item does not mean arrange the unit icons.This menu also contains items for:

1 Closing all child windows

   This causes the <u>Units</u>, <u>Current Events</u>, and <u>Monitor</u> windows to be minimized, and all open <u>Event file windows</u> to be closed.

2 Closing all event windows

This menu also contains an item for enabling 3D controls.   These will look best when the color of your button faces is something other than white (typically light gray).   Note that 3D controls are not supported under Windows 3.0.   3D controls use the CTL3DV2.DLL which is installed into the Windows system directory.

Adding a Unit

You use the Units window to add new units.

To define a new unit:

1 Activate the Units window

2 From the Unit window's **Edit** menu, choose **Add**

   - or -

   Click anywhere there is no unit icon

3 Choose the housecode

4 Choose the unit number

5 Enter the unit location

6 Enter the unit description

7 Choose the unit type by selecting a type from the list box.   You can see the "on" and "off" icons that will be used to represent the unit by selecting a type from the list box. As part of this, you may create a new type and/or change the icons.

The **ADD** button adds this unit, and leaves the dialog so you can add another unit

The **OK** button adds this unit and exits the dialog

The new unit will be displayed in the Units window, and be selected.   This makes it easy to rearrange the new unit's icon in the unit window.   The add dialog starts with a unit number that is one greater than the currently selected unit (or the last unit added); and is started with the CP290's base houscode.

See also

Creating New Unit Types/Icons

Rearranging Unit Icons

Deleting a Unit

To delete a unit:

1 Select a unit from the Units window
2 From the Unit window'sEdit menu, choose **Del**
   - or -
   Use the Del key
3 You will be asked to confirm the deletion of the unit

The first unit in the Units window will be selected.

See also

Selecting a Unit

Changing a Unit

To change a unit:

1 Select a unit from the <u>Units window</u>

2 From the Unit window's **Edit** menu, choose **Change**

   - or -

   Double click the right mouse button on *any* unit (you do not need to select it first).

3 A dialog similar to that used during adding a unit will display the current unit's parameters

4 Make the changes required

5 Either the **CHANGE** or **OK** button will make the change

If you change the <u>unit number</u> or <u>housecode</u> to one already defined, you will asked if you want to really do that.   If you change only the location, description or type, the icon will not "move" in the Units window.   Otherwise the icon will move, but you can always rearrange the icons.

See also

<u>Selecting a Unit</u>

<u>Adding a Unit</u>

<u>Rearranging Unit Icons</u>

Selecting a Unit

To select a unit in the <u>Units window</u>**:**

mouse   Click on its icon or text.   Note that if not all units are visible in the Units window, you can use the scroll bar to scroll the Units window.

keyboard   Use the cursor or tab keys to move from unit to unit.   Note that not all the units are visible in the Units window, you can use the PageUp and PageDown keys to scroll the Units window.

Selecting COM Ports

To select/change the port to which the CP290 is connected:

1 From the **Interface** menu, choose **COM1-4**

   The port chosen will be checked.

X10MSW will try to get the base housecode from the CP290 immediately.   If the cable is not connected, the com port is not working, the CP290 is not working, you have the com ports configured in Windows incorrectly, or some other problem which prevents X10MSW from getting the base housecode, you will see a time-out message.   Correct the problem and re-select the com port .

The com port to use is changed in the x10.ini file and used by X10MSW next time it is started.

See also

Selecting Demo Mode

Selecting Demo Mode

To run X10MSW in demo mode

1 From the **Interface** menu, choose **Demo**

Note that if you were actually using a com port, it will be "forgotten" and you will have to re-select it.

2 X10MSW will run in demo mode (even if you exit and re-start it) until you select a com port.

See also

Selecting COM ports

Changing the base housecode

To change the CP290's base housecode:

1 From the **Interface** menu, choose **Housecode**.

2 Choose the new base housecode

Note that changing the base housecode will erase all events stored in the CP290. You will be asked to confirm that you really want to do this.

Changing the CP290 clock

To change the CP290's internal clock:

1 From the **Interface** menu, choose **Clock**.

The existing CP290 time/day will be displayed.

2 Change the time/day and choose **OK**. If you enter the time in 24-hour format, it will be converted to 12 hour AM/PM format.

- or -

You may choose the button displaying the system time/day to sync the CP290 with the system clock

Note that in either case, the time will be changed when you choose **OK**. If you take a few minutes to decide/review your selection, the CP290 clock will be slow.

Activating PLIX Ports

To activate a PLIX evaluation board:

1) From the **Interface** menu, choose **PLIX**.

2) Choose LPT1-LPT3 or No PLIX

X10MSW will check that a PLIX evaluation board is connected to the parallel port you specify, turn on the power to the PLIX board, and begin to poll for X10 commands received by the board.   The LPT port is saved in the x10.ini file and is opened when X10MSW is started.

A checkmark is placed next to the LPT port being used for the PLIX board.
If an error has occured when accessing the board no LPT ports will be checked.   X10 MSW expects LPT1 to be at (hex) 378, LPT2 at 278, and LPT3 at 3BC.

Choosing **No PLIX** will turn off the board's power and will stop the opening of a LPT port for the PLIX board when X10MSW is started.

Note that, if possible, the PLIX board should be powered either via a battery or an AC adapter connected via the battery leads rather than the J5 connection.   This allows X10MSW to turn off power and reset the PLIX chip to clear any errors.

Testing the CP290

To run the CP290's self-tests:

1 From the **Interface** menu, choose **TestX10**.

This takes a few seconds; you will be told whether the tests failed or succeeded.

Note that running self-tests will erase all events stored in the CP290 .   You will be asked to confirm that you really want to do this.   If you upload events after a self-test, you will see a lot of garbage events.

See also

Uploading Events

Creating New Unit Types/Icons

When adding or changing a unit, you specify a type.   Each type has an "on" icon and an "off" icon which is used when displaying the unit in the Units window.   X10MSW has a set of pre-defined types and icons that go with them (e.g. lamp, radio, etc.).   You can add your own types whenever you add/change a unit, but you must first create one icon to display when this type of unit is on, and one for when it is off by using any icon editor to create the "on" and "off" icons and save them to separate files.   When you define the new unit type, you will give the type a name, the name of the file with the "on" icon, the name of the file with the "off" icon, and whether the unit is a lamp (can be dimmed) or appliance.   This information is recorded in the x10.ini.   You can also change the icons used when displaying the pre-defined types (e.g. lamp, radio, etc.), but you will need to change both the "on" and "off" icons.

The following procedures assume you are in the Add/Change a Unit dialog box.

To define a new unit type:

1   Use the **New** button.
2 Specify the "on" icon file
3 Specify the "off" icon file
4 Give the type a description
5 Specify whether the type is a lamp or appliance
6 Choose **OK**

To customize an icon for a type:

1 Select the type from the list box
2 Use the **Change** button
3 Make changes as required.   Note that if you are changing a pre-defined icon (lamp, appliance, misc., coffee, lamppost, radio, or fan) you *must* change both the "on" and "off" icons.

Currently the only way to "delete" a custom icon is to edit the x10.ini file and remove the icon description from either the "LampIcon" or "OtherIcon" sections.

If X10MSW finds a unit icon that is unknown, a special icon with a question mark is used to represent the unit.

See also

Adding a Unit
Changing a Unit

Controlling a Unit via the Units Window

To turn a unit on or off via the Units window**:**

mouse   Double-click the unit icon. The icon will change to indicate on or off.

keyboard   Select the unit and hit enter.   The icon will change to indicate on or off.

To dim, bright, fade, or up a unit, you must use the Direct menu.

See also

Selecting a Unit

Direct Command Menu - Units Window

Rearranging Unit Icons

To rearrange unit icons within the Units window**:**

Drag the unit icon to where you want it.   You must drag it "on top of" another unit, that unit is "pushed over".   Note that the cursor changes when you are dragging a unit icon.

Alternatively, you can:

1 Select a unit

2 Hold down the shift key and click the left mouse button on the unit where you   want the selected unit to be moved to

All the units "after" (left to right, top to bottom) the spot you moved the icon to will be moved over.

Moving an icon to the last position requires two moves, one to move it to the second-to-last position, and then selecting the last icon and moving it to the second-to-last position.

See also

Selecting a Unit

Printing Units Defined

Choosing the **Print** item from the <u>Units window's</u> **File** menu will produce a short printout of all the units you have defined.   Information printed includes <u>Housecode</u>, <u>Unit</u>, <u>Location</u>, <u>Description</u>, and <u>Type</u>.

Glossary

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Unit

Each X-10 (or compatible) module, wall switch, etc. is a separate unit.   Each unit has a housecode and unit number (1-16) which you set.   Generally, each unit is a different lamp, appliance, etc., although you can assign the same housecode and unit number to multiple modules, wall switch, etc. and they all get lumped together under one unit.

Housecode

A letter from A to P.   Generally all your units will have the same housecode, although if you have more than 16 units you will need to use more than one housecode.   Housecodes prevent confusion should your neighbor be using X-10 units and command are crossing over between houses.

Lamp

A type of unit (wall module or wall switch) which can be used to control incandescent lamps only.   These units are capable of dimming the lamp and so should not be used with appliances.

Lamp Level Bar

Lamp units are displayed with a level bar when the lamp is dimmed to some level.   This bar is a dashed box running the width of the icon, and is the thickness of the frame of a window which can be sized.   Lamps which have been fully dimmed (PLIX only) will be at 0%.   Lamps which have been dimmed by the CP-290 will be between 6% and 93%.

Appliance

A type of unit (wall module) which can be used to control appliances, lamps, etc.   These units are *not* capable of dimming.   They contain a latched relay which during a power failure will stay in their previous "state" (on or off).

Unit Number

A number from 1 to 16 which is set on each unit.   Commands to control a unit (turn it on, off, etc.) always contain a unit number which specifies which unit to control.

Description

A text string which describes what a unit is controlling.   Try to avoid using words like lamp, appliance, etc. since the unit's icon will tell you that.   It should not be too long or the icon will take up too much room in the main window.   This can never be longer than 64 characters.   See also unit Location.

Location

A text string which describes where a unit is, typically a room in your home, e.g. *Living room.*   It should not be too long or the icon will take up too much room in the unit window. This can never be longer than 64 characters.   See also unit Description.

Type

Each unit has a type.   X10MSW has a bunch of pre-defined types such as *lamp*, *appliance, fan, radio.*   You can also define your own types and icons to go along with them by using any icon editor to create an "on" icon and a "off" icon..   You can specify new icons for the pre-defined types too, although you must specify both an "on"   and "off" icon.   Only lamp type units can be dimmed.

Base Housecode

The CP290 has a base housecode which is used when you depress the keys on top.

Dim

A lamp unit can be dimmed to one of 16 (0-15) levels, with 0 being the brightest and 15 the dimmest.   X10MSW uses hexadecimal notation (10-15 is a-f) so that accelerators can be used to specify the dim level for the CP-290 or the number of dim commands to send to the unit when using a PLIX interface.   In general, a lamp unit's level is displayed as a percentage (0 being dimmed off, 100 being fully bright).

NOTE: The CP-290 will set a lamp's level by fully brightening it, and then dimming it to the desired level.   This is (obnoxious) behavior that X10MSW cannot control.   The CP-290's lowest dim level is 6%.

The PLIX is capable of dimming a unit fully off, which is displayed as a level of 0%.   When in this condition, a lamp module will respond to a PLIX bright command by simply brightening the lamp.   When a lamp module is off, it responds to a bright command (PLIX or any command console) by turning the lamp on fully.

Up

This undocumented CP290 command causes an "All Lights Off" X-10 command followed by several bright commands to the selected unit.   The "All Lights Off" command is not standard and is not obeyed by all X-10-compatible modules.

Fade

This command will turn any unit off.   Lamp units are dimmed to fully off, appliance modules are switched off.   This is not documented in the CP290 documentation but seems to work very reliably.

Bright

This command will cause a lamp unit to increase in brightness.   If it is currently off it is turned fully on.   This is supported only when using the PLIX interface.   Like the PLIX dim command, you specify the number of bright commands to send to the unit.   The PLIX is capable of dimming a unit fully off, which is displayed as a level of 0%.   When in this condition, a lamp module will respond to a PLIX bright command by simply brightening the lamp.   When a lamp module is off, it responds to a bright command (PLIX or any command console) by turning the lamp on fully.

x10.ini

This file contains all the unit information in "Windows" format.   It must be in your windows directory. You can edit it manually, the format should be pretty easy to figure out.

Selected

When a unit is selected, its housecode/unit number and description are highlighted.   The color used for the background follows the active title bar background.

Demo Mode

When X10MSW runs in demo mode, no com port is needed, and no CP290 is needed. Almost all actions are simulated; exceptions are:

1 you cannot download an events file (you **can** save to a file)

2 upload causes the file **current.x10** to be opened and read

3 changes to <u>base housecode</u> are not remembered

Event

An event tells the CP290 to control some unit at some time on some day(s).   Events are stored in the CP290's battery backed-up memory and executed by the CP290 at their appointed time on their appointed day(s).   Each event can cause one command, such as on, off, dim, etc.   Each event can control up to 16 units, but they must all have the same housecode.

PLIX Interface

X10MSW supports a PLIX evaluation board from Micromint Inc.   which uses a standard parallel printer port (LPT1-3) to interface to a TW523 bi-directional powerline interface from X10 USA.   This allows X10MSW to monitor all X10 commands and to issue "bright" commands (which the CP290 does not support).   X10 commands received via the PLIX will update the status of the unit(s) affected.   The TW523 does not send every dim or bright command being sent on the power lines to the PLIX, so X10MSW has to do some interpolation.   If a lamp unit's level is adjusted by many dim/bright/dim/bright/etc cycles, the dim level displayed by X10MSW will probably not be accurate.
The PLIX interface is used for on, off, dim, bright, all lights on, and all units off commands either direct or via now events.

The PLIX evaluation board and TW523 can be ordered from:
Micromint Inc
4 Park Street
Vernon, CT   06066
(203) 872-2204

For best operation, use the PLIX evaluation board with a battery or an AC adapter which connects via the battery leads rather than via the J5 connection.

Procedures Associated with Events

All about Events

Events are stored in the CP290's memory and used to control <u>units</u> (turn some on, some off, etc.) at the times and on the days you want. This is done completely by the CP290, the PC does not have to be on (if it is the CP290 tells X10MSW when it does an event - you can see these in the <u>Monitor</u> window). The CP290 can hold a maximum of 128 events.

Each event consists of the following parts:

Info. stored and used by the CP290:

1 Housecode

2 One or more <u>units</u>

3 A command: on, off, <u>dim</u>, <u>up</u>, or <u>fade</u>

4 A <u>time</u> (more about this below)

5 A <u>day</u> or set of days

Extra info. stored and used by X10MSW:

6 <u>Time "qualifiers"</u> like **now**, **sunset**, **sunrise**, etc.

7 <u>Event conditionals</u> like **months**, **frozen**, **vacation**, and

8 up to 8 user-defined <u>conditionals</u>

The "extra" info. is used by X10MSW to determine if a particular event should be downloaded to the CP290, or if the time should be calculated by X10MSW before it is downloaded. An event which X10MSW determines should not happen is still downloaded to the CP290, but it is scheduled to occur on no days. This way, the current events window has all the events you have specified. This "extra" info is saved in a part of the CP290's memory called "graphics RAM", and is unique to X10MSW.

Events are displayed in a list box in event windows. Events can also be saved in event files, which X10MSW likes to give an extension of .x10.

See also

<u>How Events Are Displayed</u>

<u>Event Dialog Box</u>

Event Dialog Box

The event dialog is used whenever you are adding or changing an event.   It is a pretty busy dialog.   Listed below are the things you will want to do with the event dialog in order to get events to be the way you want them:

Specifying Event Housecode and Unit(s)

Specifying Event Days

Specifying Event Times

Specifying Event Conditionals

Use the **OK** button to add/change the event

When adding, use the **Add this....** button to add this event and keep the dialog going for another new event.   If the previous command turned the unit(s) on, this event will turn the unit(s) off, or vice versa.

When changing, use the **Change this....** button to change this event and keep the event dialog going (see above).   The button will change to **Add this...**.

If you use the **Add this...** or **Change this...** button with a current event and the mode is immediate,   the event will be downloaded.

See also

Adding an Event

Changing an Event

Specifying Event Housecode and Unit(s)

To specify which unit or units will be affected by an event:

1 Drag a unit icon from the <u>units</u> window into the event window.

- or -

Use <u>add</u>/<u>change</u> event to start the event dialog box

When you are adding an event, the housecode/unit are initially set to whichever unit is selected in the Units window.

2 Use the drop-down list box in the upper-left corner to select a defined unit

- or -

Select a housecode

3 Select a unit.   To select multiple units, hold down the shift key and click/select each unit you want affected by this event - either by using the unit radio buttons or by clicking one of the units in the drop-down list box (all must be the same housecode).

- or -

Use the **All Units** button to select all units for a housecode.

Event Time and Time Qualifiers

Ultimately, each event is scheduled by the CP290 to occur at some time.

Events that occur on some day of the week (not Today or Tommorow) can be in security mode, which causes the CP290 to vary the actual time the command occurs in a pseudo-random pattern.   The actual time will be within one hour after the time specified in the event.

Event times may take one of the following forms:
1 A specific hour/minute, AM or PM
2 NOW - just what it means.   These events are not downloaded but done via the CP290's direct command capability.   Each NOW event is counted towards the 128 event limit per event file/download.
3 Sunrise, or a +/- 59 minute offset from sunrise (extended by offset scale)
4 Sunset, or a +/- 59 minute offset from sunset (extended by offset scale)

Sunrise and Sunset are calculated based on your Latitude/Longitude.   Note that when you download events you can tell X10MSW to not recalculate sunrise/sunset, otherwise these are recalculated each time you download.   Also, the event times displayed in the current events window can be either the time which would be used if the event were download, or the actual time stored in the event in the CP290.

Security mode

An event which uses security mode causes the CP290 to vary the actual time an event occurs within one hour *after* the scheduled event time in a pseudo-random fashion.

Normal mode

An event which uses normal mode causes the CP290 to perform the event at the time scheduled.

Offset and offset scale

The offset and offset scale let you tie events to sunrise and sunset.   You can use a different offset in each event; the offset scale is used for all events in all event windows.   The offset in minutes is the offset you've defined in the event multiplied by the offset scale.   The offset scale extends the range of the offset, but decreases the granularity.   An event offset is always limited to +/-59.   With a offset scale of 1, this gives +/-59 minutes, with a granularity of 1 minute.   With an offset scale of 5, the offset is +/-295 (+/-59 * 5) minutes, with a granularity of 5 minutes.

You specify an offset when adding or changing events.   To specify the offset scale, from any event window's **Option** menu, choose **Set Offset Scale**.

How Events Are Displayed

Events are displayed in a list box in each event window.   Events which are inactive because of one or more false conditionals are displayed in gray text if your display supports gray text, otherwise the event is prefixed with an exclamation mark (e.g. on CGA displays).

There are several sorting options which affect what is displayed first and hence how events are sorted, but a typical event is displayed as:

HU+ [Loc][Desc] CMD HH:MM isxx   MTWTFSS Months FV12345678

Where:

HU is Housecode and Unit.   If the event has multiple units, each is displayed on a different line with the "+" indicator.

Loc is the unit's location from the Units window.   If the event has multiple units, the description is for the unit with the smallest unit number.

Desc is the unit's description from the Units window.   If the event has multiple units, the location is for the unit with the smallest unit number.

CMD is one of: On   Off   DimX (X is 6-93%)   Fade   Up.   If the command is prefixed by a hyphen, it means that the current event in the CP290 would change if you did a download of the current events window right now.   For example, if the event in the CP290 was active only in January and the current month is **not** January, then the command will be prefixed by a hyphen.   This usually means you need to download either the current events or the event file which was previously downloaded.

HH:MM is hour and minute in 12-hour format, i is A for AM and P for PM

     - or -

Now for a direct command.   Note that the current events list box never contain any direct commands since they are not stored in the CP290 and are only done when an event file is downloaded.

s is S for Security mode, nothing for Normal mode

xx is:

  Nothing for normal time

  sr for sunrise with optional +/- offset (1-59)

  ss for sunset with optional +/- offset (1-59)

  Note that for times with an offset, just the offset (1-59) is displayed, but the effective offset (offset * offset scale) is reflected in the **HH:MM** displayed.

  Note that the actual time which will be downloaded is in **HH:MM**   For event files, this is calculated when the file is opened.   For   current events, you can have either the calculated time (the time which would be download if you did a download) displayed, or have the actual time defined in the event currently in the CP290 displayed; See Choosing how current event times are displayed.

MTWTFSS indicates days of the week, or one of:
  Everyday
  Weekdays
  Weekend
  Today
  Tomorrow

Months (JFMAMJJASOND) indicates months of the year, or one of:
  All Year

Winter

Spring

Summer

Fall

FV12345678 indicates any active <u>conditions</u>, such as:

F for frozen

V for vacation

1-8 for the 8 user-defined conditions

See also

<u>Procedures Associated with Events</u>

<u>Event Conditionals</u>

<u>Contolling how Events are Sorted</u>

<u>Specifying an offset scale</u>

<u>Downloading Events</u>

<u>Choosing how current event times are displayed</u>

<u>Defining user-defined Event Conditionals</u>

Specifying Event Times in an Event Dialog

To specify a time for an event:

1 Add or change an event to start the event dialog box
2 Use the time qualifier list box (near the HH:MM and AM/PM button) to select one of:
   - **As displayed** (no qualifications to the time displayed)
   - **Now**   - the days scheduled will still apply.
   - **Sunrise** with optional +/- offset
   - **Sunse**t with optional +/- offset

   Note that offsets are limited to 1-59, and can be extended by using the <u>offset scale</u>. Both the offset (+/-59) and the effective offset (offset * offset scale) are displayed.

   Also note that you cannot specify a <u>Now</u> event in the <u>current events</u> window
3 Use the buttons with numbers to select the hour, the minutes "tens", and minutes "ones".
4 Use the AM/PM button as required
5 Specify <u>security</u> or <u>normal</u> mode
6 Note that security/normal does not apply to events which occur   <u>Today</u> or <u>Tomorrow</u>.

See also

<u>Specifying an offset scale</u>
<u>Adding an Event</u>
<u>Changing an Event</u>

Event Days

An event can be scheduled for any day of the week, Sunday through Saturday.   An event can also be scheduled for <u>Today</u> or <u>Tomorrow</u>;   these happen only once and then are deleted by the CP290 once they are executed.

Now (immediate) events

Now events are not downloaded but done via the CP290's direct command capability. They may be affected by <u>event conditionals</u> and by any day of the week.   They count towards the 128 event limit in event files.

Today or Tomorrow events

Events scheduled for Today or Tomorrow occur only once at the time specified.   The CP290 deletes the events after they have been executed.

These types of events are always in <u>normal</u> mode.

Specifying Event Days in the Event Dialog

To specify on which day(s) the event will occur:

1 Add or change an event to start the event dialog box
2 Select the days of the week as required
   - or -
   Use the shortcut buttons for everyday, weekdays, or weekends
   - or -
   Use the Today/Tomorrow buttons.   These types of events are forced into normal mode, and cannot be Now events.

See also

Adding an Event
Changing an Event

Event Conditionals

Event conditionals extend your ability to control when and if an event should be performed by the CP290.   The CP290 handles simple conditions like time, day.   X10MSW extends these by using **event conditionals** to determine if an event should occur.   If it should, it is downloaded as normal to the CP290.   If not, it is downloaded to occur on no days, meaning the CP290 will never perform the stored event.

The following event conditionals are supported:

1 Month(s) of the year
2 **Frozen** events which do not occur until you "thaw" them
3 **Vacation**
4 up to 8 **user-defined conditions** which allow you to build up your own conditions.   This allows you to specify, for example, which events you want to happen only when you have guests staying with you by defining (a user-defined) conditional called "guests".

Events whose **event conditionals** make them inactive are displayed in gray text in event windows (or prefixed with an exclamation mark for displays that cannot display gray text such as CGAs).

Specifying Event Conditionals

You can specify conditions for a specific event when you add or change it, or you can add or strip a conditional for all events in an event window.

To specify conditionals for a specific event:

1 Add or change an event to start the event dialog box
2 Check the box(es) for the <u>conditionals</u> you wish to apply:
   - **Frozen** events never occur until they are un-frozen (thawed?)
   - **Vacation**
   - **User-defined** conditionals
   - **Months of the year** - you can use the shortcut buttons, which are "additive"

To add or strip conditionals for all events in a window:

1 Activate the event window
2 From the event window's **Edit** menu, choose **Global Cond Set** or **Global Cond Strip**

   The user-defined conditionals are listed as "User1 - User8"; the drop-down menu does not have the conditional names.

   The numbers 1-8 correspond to the numbers displayed in the dialog box used to define/set/reset conditionals (See <u>Defining user-defined Event Conditionals</u>).

   Note that you cannot globally set or strip conditions in the <u>current events window</u> when it is in <u>immediate</u> mode.

3 Choose the conditional you which to add/strip.   Note that you can choose a conditional which has no name defined.

See Also:

<u>Adding an Event</u>

<u>Changing an Event</u>

<u>Setting/resetting Event Conditionals</u>

<u>Defining user-defined Event Conditionals</u>

<u>Working with Current Events</u>

Setting/resetting Event Conditionals

You can set or reset conditions which will affect <u>events with conditionals</u>.   This gives you a lot of control over your events, and extends the CP290's basic time/day capabilities.   The conditions which you can set/reset are:

Vacation

user-defined conditions

To set or reset an event conditional:

1 Select any event window

2 From the **Options** menu, choose **Set Conditionals**

3 To set a condition, check its checkbox; to reset, uncheck it.

The conditional is set/reset for all event windows.   Its state is stored in the <u>x10.ini</u> file. Note that just because you change a condition, it **does not** mean the CP290 knows about it.   You **must** do a download in order for the change in conditions (and hence change in which events are now active or inactive) to take effect.

If you change conditions without doing a download, you will prompted when you try to close the <u>event window.</u>

See Also:

<u>Defining user-defined Event Conditionals</u>

<u>Download Events</u>

Defining user-defined Event Conditionals

The CP290's ability to perform stored events based on time and day is great, but X10MSW extends your control by allowing you to define conditions of your own, make events "conditional" on them, and set or reset these conditions to control which events are active or inactive.   A good example of a user-defined event conditional is "Guest Present".   Once you've defined a condition with this name, you can add some events which will be done by the CP290 only when you have guests.   To activate these events, you would

1 Use the **Option** menu to **Set Conditionals** and tell X10MSW guests are present

2 Do a download to activate events which depend on that condition

But first, you have to define this condition called "Guest Present".

To define or change a user-defined event conditional:

1 Activate any event window

2 From the event window's **Options** menu, choose **Set Conditionals**

Each conditional has an edit box for its name, and a checkbox to make the condition "true" or "false".   To delete a conditional, just clear out its name.

If you delete a conditional and some event in the active event window is dependent on the conditional you will be notified.   You may want to use the **Global Condition Strip** item from the **Options** menu to remove any dependencies.   Note that other event files may still have this dependency so you should think carefully about deleting user-defined conditionals..

The conditionals are stored in the x10.ini file.

See also:

Setting/resetting Event Conditionals

Specifying Event Conditionals

Download Events

Opening an Event file

To open an Event file:

1 Use the **File** menu in any window

2 Select **Open** to open a file into a new event window

   - or -

   Select **OpenAnother** to open a file into the currently active event window.   If you have
   made changes to the event file, you will be asked to confirm abandoning the changes.

3 Use the dialog box to select a file to open

Note that if you change directories, you can tell X10MSW to remember the directory for
next time it is started by using the checkbox in the dialog box.

You will get an error message if the event file is corrupt or not readable.

If the **Open** is successful, a new Event window will be displayed with the name of the file in
the title bar and the events displayed in a list box.   If the **OpenAnother** is successful, the
Event window title bar will be changed to reflect the new open file, and the list box will
contain the events from that file.

See also

Appending from another Event file

Saving an Event file

Closing an Event window

Adding an Event

To add a new Event:

1)Drag a unit icon from the <u>units</u> window into the event window

   - or -

   Use the **Edit** menu in any event window, followed by the

   Add item

You will get an event dialog box to specify the event.

After exiting the event dialog box, the event you added will be selected in the list box.

When in the event dialog box, you can use the **Add** button to add an event and keep the dialog box going for another new event.   The command will toggle between on and off.

If you add a current event and the current events window is in <u>immediate</u> mode, the change will be made immediately.

See also

<u>Specifying an Event (the Event Dialog Box)</u>

<u>Working with Current Events</u>

<u>Appending from another Event file</u>

Deleting an Event

To delete an event:

1 Select an event in the list box

2 Use the **Del** key or the **Edit** menu

Don't forget that an event which affects multiple units will be displayed as multiple lines in the list box (these have a + after the housecode/unit).   When you delete any of the lines that make up an event, that entire event is deleted.   If you want to remove a particular unit from that event, change the event.

If you delete an event in the <u>current event</u> window and it is in <u>immediate</u> mode, the change will be made immediately.

See also

<u>Working with Current Events</u>
<u>Appending from another Event file</u>

Changing an Event

To change an event:

1 Double-click the event in the list box you wish to change

   - or -

   Use the **Change** item in the **Edit** menu

You will get an event dialog box to change the event. If possible, the event you changed will be selected upon return from the event dialog box.

When in the event dialog box, you can use the **Change** button to change an event and keep the dialog box going for another new event.   The command will toggle between on and off,   and the **Change** button will change to **Add**.

If you change an event in the current event window and it is in immediate mode, the change will be made immediately.

See also

Specifying an Event (the Event Dialog Box)

Working with Current Events

Using the Clipboard

The standard clipboard functions (Cut, Copy, Paste) can be used in any event window.   The functions have standard accelerator keys.   Events are put into the clipboard in a private format and so cannot be edited by other Windows applications.

Appending from Another Event file

To append from another Event file:

1 Use the **File** menu in any event window
2 Select the **Append** item
3 Select the event file you wish appended

Note that you cannot append to the current events window in immediate mode.

Don't forget about the limit of 128 events (including <u>now</u> events) per event file and that the CP290 cannot hold more than 128 events.

See also

<u>Working with Current Events</u>

Saving an Event file

To save an event file:

1 Use the **File** menu in any event window

2 Select either **Save** to save the events to the same file as is displayed in the event window title bar

   - or -

   Select **Save As** to save the events into a file with a name you specify.

Note that the current event window only allows the **Save As** operation.

If you change directories as part of specifying the file name, you can tell X10MSW to remember the directory for next time it is started by using the checkbox in the file **Save** dialog.

If, when using **Save As**, you specify a file name that already exists, you are asked to confirm you want to overwrite the file.

The event window size, location, and options are saved in the event file and restored when you open the event file.

See also

Opening an Event file

Closing an Event window

Creating a New Event File

To create a new event file:

Use the **New** item of any window's **File** menu.

The new event window will be given a title of **Untitled**. Both the **Save** and **Save As** menu items act as **Save As** when you go to save the events.

See also

Appending from another Event file

Saving an Event file

Closing an Event window

Downloading Events

To download a set of events to the CP290:

1 Use the **File** menu in any event window

2 Use the **Download** item - X10MSW will recalculate any time(s) like sunrise, sunset, etc.

   - or   for the current event window you may -

   Use the **Download - no sun recalc.** to download without recalculating any time(s) like sunrise, sunset, etc.

A dialog box is displayed during the download allowing you to see the progress of the download and to stop the download.   The keyboard/mouse is disabled when the mouse is within in the X10MSW window during a download.

Upon completion of a download from any event file window (not the current events window), the current events window is updated to reflect the events downloaded.

See also

Uploading Events

Uploading Events

To upload a set of events from the CP290:

1 Select the current events window

2 Use the **File** menu

3 Select the **Upload** item

    - or -

Select the **Upload - no conditionals** item to upload events without any of the X10MSW-unique <u>conditional</u> information like months, frozen, vacation, etc.   This is useful when you are uploading for the first time after using some other X-10 software.   The events uploaded are forced to have all month conditionals on and all user-defined conditionals off.

A dialog box is displayed during uploading and shows you how the upload is progressing. The keyboard/mouse is disabled when the mouse is within the X10MSW window during the upload.

See also

<u>Downloading Events</u>

Controlling how Events are Sorted

Events can be sorted by:
   housecode/unit first, and then by event time (the default),

   housecode/unit first, and then by event command (**on** comes before **off**),

   or with the time first.

To change how events are sorted:

1 Use the **Options** menu in any event window

2 Choose the sort option you want

The sort option takes effect in that event window only.   The option is saved in either the event file or for the current event window in the x10.ini file, and is restored the next time the event window is opened.

Setting Latitude/Longitude and Timezone

In order to calculate the time of day for sunrise and sunset, X10MSW must know your latitude and longitude.   These are available from almanacs, maps(?), etc.

X10MSW also calculates whether daylight savings is in effect via the TZ environment variable.   This has the format   TZ=zzz[+/-]d[d][lll] where zzz is a three-character string representing the name of the current time zone,   [+/-]d[d] is a required field containing an optionally signed number with 1 or more digits specifying the local time zone's difference from GMT in hours, and [lll] is an optional three-character string which, if present, indicates that standard US daylight savings applies.   TZ defaults to EST5EDT.

To specify your Latitude and Longitude:

1 Use the **Options** menu in any event window

2 Select the **Specify Lat/Long** item

   Use the edit boxes to specify the values in degrees (only minutes, no seconds).

   Use the **ReCalc** button to recalculate and show the various times

3 Use the **OK** button to actually change the values.

The values for Latitude and Longitude are saved in the x10.ini file.   X10MSW comes with a file (latlong.dat) which contains the latitude and longitude of major cities around the world. You can use your favorite editor or Windows Notepad to search the file.

To specify that daylight savings does not apply:

Before starting Windows, set a TZ environment variable (See your DOS manual) which does not have the [lll] part described above, e.g. EST5.

Working with Current Events

The current events window is meant to always reflect the current contents of the CP290's RAM.   It starts out minimized and uploads the contents of the CP290 when it is first restored.   The current events window is pretty much like other event file windows, with the following differences:

It is only in the current events window that you can upload events from the CP290.

The current events window can send any changes/additions you make immediately or you can make all the changes at once (called a download).

When you download another event file, the current events window is updated to reflect the contents of the CP290.

You cannot close the current events window (you can minimize it).

Direct commands (now events) are not stored in the CP290 since they are done during download and then do not need to be remembered, so the current events window will never have direct command (now) events.

The event times displayed in the current events window are (by default) the times that would be download, i.e. sunrise and sunset is calculated when you uploaded.   You can choose to have the actual time currently in the CP290's event displayed.

To select that changes be sent to the CP290 as you make them:

From the **Options** menu of the current events window, choose **Immediate Mode**.   This will be recorded in the x10.inifile.

To select that changes not be sent to the CP290 as you make them:

From the **Options** menu of the current events window, ensure **Immediate Mode** is un-checked.

See also

Downloading Events

Uploading Events

Choosing how current event times are displayed

Closing an event window

To close an event window:

1 Use the **File** menu of any event window except current events

2 Choose the **Close** item

If you have made any changes to an event file and have not saved them to a file or have made changes to the current events window and not downloaded them, you will be asked to confirm abandoning the changes.   If you want to save the changes, answer No and save the events (when closing an event file window) or download the events (when closing the current events window).

See also

Saving an Event file

Downloading Events

Printing an event file

To print an event file or the current events:

1 Use the **File** menu of any event window including <u>current events</u>

2 Choose the **Print** item

The printed output includes:

The name of the event file and current date/time

Any user-defined conditionals, and the "vacation" state

All events, double spaced.   Inactive events are prefixed with an exclamation point; these would be displayed in gray text on a display that supports gray text output.

See also

<u>How events are displayed</u>

Specifying an offset scale

The <u>offset scale</u> allows you to extend the range of offsets from sunrise and sunset, but with a decrease in granularity (or resolution).   It applies to all event files, and is not "stored" in an event file.   Only the event offset is stored in the event file.

To specify an offset scale:

1 Use the **Option** menu of any event window including <u>current events</u>

2 Choose the **Set Offset Scale** item

The minimum (and default) value is 1, the maximum value is 10.

Choosing how current event times are displayed

The event times displayed in the current events window are, by default, the times that would be downloaded.   You can choose between displaying these "calculated" times and the actual times in the CP290's event by:

1 Use the **Options** menu of the <u>current events</u> window

2 Choose either of the **Show actual event times** or **Show calculated event times** items

The title bar of the current events window will change to reflect how the event times are being displayed.   The option is saved in the x10.ini file, and restored next time X10MSW is started.

Immediate Mode

Any changes made to events in the current event window will be sent to the CP290 immediately.   If you have only a few changes to make, this will be faster than having to download the entire set of current events.

Delayed Mode

Any changes made to events in the current event window will be made inside X10MSW only.   You must download the current events to the CP290 in order for the changes to take effect.