



PREMIER DIGITAL COMMUNICATIONS, INC.

# HydroFLASH® Users Manual

Flexible Lighting And Sprinkler Home Automation Controller

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# 1.0 Introduction to HydroFLASH®

**H**ydroFLASH is a wireless smart lighting and sprinkler controller designed for home and business automation needs. It is compatible with Insteon control devices that can be installed to turn on or off just about anything in the home or business environment. It is Internet Ready and can be accessed using an iPhone, iPad or Android based devices. Custom Apps for **iPhone** and **Android** are included **FREE** as part of HydroFLASH. Additionally HydroFLASH can be accessed using a standard java enabled web browser. Software updates to add new or additional features are easily uploaded via the built in web interface. User support is always available through the HydroFLASH forum at [forum.hydroflash.net](http://forum.hydroflash.net).

An installation quick start guide can be found here:

<http://cloud.hydroflash.net/docs/HydroFLASH-Installation.html>

HydroFLASH connects to standard sprinkler valves allowing control of up to 16 individual stations. It currently supports up to 64 Insteon devices (expandable) and 64 Lighting/Control programs.

HydroFLASH is designed to replace your existing irrigation controller adding additional water saving features including automatic rain delay based on local weather data accessed hourly via its internet connection. This feature can really help reduce excess watering and eliminate having to manually place your system on rain delay. Additionally all the features can be controlled at your fingertips via your smart phone!

With the built in Insteon control interface you can begin controlling just about anything you want around your home or office based on a program schedule or via manual control, all with your smart phone or java enabled web browser! Common uses are home/business lighting, garage door openers, gate openers, thermostats, pool pumps, fountains, green house control, fans, etc. All that is needed is a small plug in Insteon Modem that connects to the HydroFLASH controller and Insteon devices for each item you want to control at your home or business. HydroFLASH can even notify you on your Mobile Phone when your garage door is opened or motion is detected in your house!

HydroFLASH can be controlled from anywhere you have internet access. No additional router configuration is needed when using the HydroFLASH Cloud Server. Optionally you can connect direct to your smart phone by port forwarding your router without using the cloud server. The HydroFLASH Cloud Server is the preferred method as it requires no further configuration other than connecting HydroFLASH to your local network and pairing your phone with HydroFLASH.

All command and status data sent between the Mobile Application and HydroFLASH uses AES encryption to protect access and control of your HydroFLASH device.

In order to use the HydroFLASH WiFi version you will need to have a wireless network available (WiFi access point). HydroFLASH uses the latest encryption standards for your WiFi interface and you will need to configure HydroFLASH to join your network.

**Note:** While an Internet connection is highly desired to take advantage of all of the HydroFLASH smart features, it is not absolutely required as it can be controlled and accessed via your local wireless network alone. In order to take advantage of the hourly weather data, it is recommended to have an ‘always connected’ internet connection such as Cable or DSL.

## 2.0 Configuring Network Access

The steps to configure HydroFLASH for your network depend on which type of HydroFLASH device you purchased. For the hardwired version skip paragraph 2.1. For the WiFi version continue reading the next paragraph. There is a HydroFLASH controller [Hardware installation quick start guide here](#).

### CONFIGURING HYDROFLASH (WIFI)

To configure HydroFLASH WiFi, you will need to first configure it so that it can join your wireless network. Since the HydroFLASH device is completely wireless, it must be set up to match your wireless router or access point settings. Most, if not all, WiFi networks are set up to use some method of encryption to protect access from non-authorized access. HydroFLASH comes from the factory configured as an ‘open’ or ‘non-encrypted’. You will need to have access to your wireless router or access point to allow HydroFLASH to join your network.

HydroFLASH comes from the factory with its SSID set to nothing (blank) and configured as an ‘open’ system. To connect to HydroFLASH you will need to access your router or access point, change the router wireless system to open (briefly). HydroFLASH will join your network and display its DHCP assigned IP address on its LCD display. You can then use that IP address and your browser to connect and configure HydroFLASH to your desired WiFi security settings and encryption values. Following this you can change your router or access point back to its previous settings which now match the HydroFLASH device. HydroFLASH will then join your encrypted network with the settings you configured following a reboot of HydroFLASH.

It is HIGHLY recommended to use encryption on your WiFi network. We recommend using what is commonly known as WPA2 using TKIP + AES.

### 2.1 **Before you begin**

Place the HydroFLASH controller in a convenient location next to your computer so that you can access the device and see its display. Connect the WiFi antenna (if you have a HydroFLASH WiFi Version) or connect an Ethernet Cable between your router and the Ethernet connector on HydroFLASH (if you have a hardwired version).

Connect the two wires from the AC Power adapter to the 2 pin connector that plugs in to the location marked “24VAC” on the HydroFLASH controller.

**Note:** The connectors on HydroFLASH can be un-plugged if needed. The 16 pin connector may be removed by gently working it from each end. Do not use excessive force upward or downward when removing the connectors.

Plug the AC adapter in to a wall outlet.. The HydroFLASH display will show **HydroFLASH booting.....**'

If you purchased a WiFi version, follow the steps starting at paragraph **2.2**

If you purchased a Hardwired version that uses an Ethernet cable, follow the steps starting at paragraph **2.16**

#### HYDROFLASH WIFI SETUP STEPS (MANUAL METHOD)

2.2 Prior to manually configuring HydroFLASH to your network you should have the following at hand.

- Your Router or Access Point user name and password.
- Computer web page access to your local network.
- HydroFLASH controller.

2.3 Using your browser, connect to your Router or Access Point configuration web page and using enter your user name and password to gain access. Locate the wireless configuration section on the web page and record your **WiFi Security Mode** and **WiFi Passphrase** if not already known.

2.4 On your Router or Access Point set your security mode to Disabled or None. Save your changes to take effect.

2.5 Observe the HydroFLASH Display and verify that the IP address and signal state change to reflect it is now connected to your network. There is also an orange led on the side of the wireless interface next to the antenna that will be on SOLID if it is connected to a network. It will be blinking slowly if it is not connected. See WiFi troubleshooting section if this step is not completed successfully.

2.6 Open up a NEW browser window leaving your router or access point web page open. In the browser address field enter the following http:// followed by the IP address value you see on the HydroFLASH display. (Example <http://192.168.1.25>) Note: This is an EXAMPLE, not the address of your unit.

2.7 You should be presented the HydroFLASH main web status page. Click the link on the left labeled 'Wireless Settings'. You will be prompted with a login prompt. Enter the following values:

- Username : **root**
- Password : **hydroflash**

2.8 You will then be presented the Wireless Network Settings page where you can configure HydroFLASH for your desired WiFi network security settings. **These settings must match your router or access point WiFi settings.** The only settings you typically have to configure on this page are: (recommended settings are in bold)

**Wireless Network Settings**

Wireless Network | [TCP/IP](#)

Frequency Band:

Wireless Network Name (SSID):  (leave empty to search)

Authentication:

Data Encryption:

Passphrase:  (8-63 characters)

Wireless Login :

Wireless Password :

WEP Encryption:

Default WEP Key Index:

WEP key 1:

WEP key 2:

WEP key 3:

WEP key 4:

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- Frequency Band                      Leave set to **BG**
- Wireless Network Name (SSID)    Set this to your router's SSID (**\*\* Case Sensitive! \*\***)  
Note that this field will be blank following a factory reset.
- Authentication                        Recommended: **WPA Personal (WPA-PSK)**
- Data Encryption                       Recommended **TKIP+AES**
- Passphrase                             Set this to your router's desired WiFi passphrase

**Note:** Do not make any changes on the TCP/IP settings for now. You can configure this to be a fixed IP address later after completing the WiFi setup successfully.

- 2.9 Click the ‘Apply’ button at the bottom of the Network Settings Page when you are done and wait. HydroFLASH will reboot automatically and attempt to access your network using the settings you entered. Close this browser window.
- 2.10 Go back to your router or access point web page and restore the values for your WiFi Security Mode and WiFi Passphrase and save the settings.
- 2.11 After a few moments HydroFLASH should connect successfully to your WiFi network using the security setting you entered. (Orange LED on side will be on solid and the assigned DHCP IP address, connected state, WiFi signal strength will be visible on Display). You may have to wait for the display to cycle through other information before seeing the IP address. You can then use the displayed IP address with your web browser to access and configure HydroFLASH’s operational settings.
- 2.12 If the above step is completed successfully, continue to Section 3 to complete the system settings, otherwise continue with the steps below.
- 2.13 If HydroFLASH fails to connect to your WiFi network after a few minutes then some information was likely entered wrong on the HydroFLASH device. Don’t worry it happens and is easily recoverable by using the Reset access on side of HydroFLASH.
- 2.14 You will need a small paperclip to perform a reset. There is a small hole on the left side of the housing next to the WiFi antenna. With HydroFLASH up and running (after the ‘**HydroFLASH booting...**’ Message goes away), **lightly** press the reset button for greater than **3** seconds and release. The HydroFLASH display will briefly show “**Resetting Device to Factory Dflts**”. This will reset the HydroFLASH WiFi settings to Factory default and reboot the device.  
  
 **Note:** The reset only resets the WiFi settings and the root password. All other user settings, programs, devices remain as previously set.
- 2.15 The manual WiFi procedure can then be repeated from step 2.2.

#### CONFIGURING HYDROFLASH (HARDWIRED)

- 2.16 To configure HydroFLASH (Hardwired Version) using a Ethernet cable perform the following steps:
  - 2.16.1. Plug an Ethernet cable into your router and into the RJ-45 Ethernet connector on HydroFLASH.
  - 2.16.2. Apply power to HydroFLASH with the supplied AC adapter.
  - 2.16.3. After HydroFLASH boots up it will obtain an IP address from your router’s DHCP server. The IP address will be shown on the HydroFLASH display. You may have to wait for the display to cycle through other information before seeing the IP address. You can then use that IP address with your web browser to access and configure HydroFLASH’s operational settings.

In the browser address field enter the following http:// followed by the IP address value you see on the HydroFLASH display. (Example <http://192.168.1.25>).

2.16.4. You should be presented the HydroFLASH main web status page. Click the link on the left labeled 'System Settings'. You will be prompted with a login prompt. Enter the following values:

- Username : **root**.
- Password : **hydroflash**

2.16.5. This completes the Hardwired Network setup. Continue to Section 3 to complete the system settings.

## 3.0 System Settings

System settings are accessed via the System Settings Web page interface and used to customize HydroFLASH to your needs and localized data information. From this page you can configure a number of items that establish parameters for HydroFLASH's performance and interfacing requirements. A few of these items are currently only accessible via the web page interface with most settings also available via the Mobile App. After making changes on this page you must click the Save Changes at the top to take effect.

The follow items are configured here:

**Localized Settings**

**Select Time Zone**  **Use Daylight Savings (Adjusts clock automatically Spring/Fall):**

This is only used if you are not connected to internet to and need to initially set clock.

**Set Real Time Clock (24 Hour Format)**

**Month (MM)**  **Day (DD)**  **Year (YYYY)**  **Hour (HH)**  **Min (MM)**  **Sec (SS)**

Enter a description here that identifies your HydroFLASH. Ex 'My House' etc.

**Controller Location Description:**

Enter your Latitude and Longitude here. Use helper Link if needed. West is entered as negative (-) value.

**Location Latitude (XX.yyy) S(-)**  **Location Longitude (XXX.yyy) W(-)**  [Lat-Long Selection Help](#)

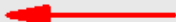
- Set up your time zone for the real time clock. It will automatically adjust for Daylight Savings Time. There is an option to enable automatic daylight setting adjustments (Spring and Fall). This defaults to Enabled.
- Set the battery backed up real time clock value (Normally set by network connection). If you are connected to the Internet then you will not need to change this value. The first three fields are prefilled out with the current values in the hardware battery backed real time clock. To update the real time clock manually the last three fields need to be filled in with the desired values, otherwise all the fields for this setting are ignored when clicking the Save Changes button.



- Enter Description for the HydroFLASH Location (Displayed on Web page and Mobile Apps). This field is used to enter a description of the HydroFLASH device that is meaningful to you. For instance, “John’s House” or “Green House #1” etc. This will be displayed at the top of the Web page and on your mobile device application.
- Enter the Latitude and Longitude for the HydroFLASH Location (Used to determine Sunrise and Sunset times for programs and obtain NOAA Weather Forecast Data). Helper Link is provided to get values for your location. Values for West Longitude are entered as negative values.

### Email Settings


When checked, HydroFLASH will email out daily log files at 8AM and on log file rotation.

**Enable Emailing of Log Files**  

Enter your SMTP server address and port number here. Authentication method is 'AUTH LOGIN' on ports that support it. If TLS/SSL is checked, SSL is used attempted on port 465 and TLS/SSL is attempted on ports that support TLS.

**Email SMTP Server Name:**  **Port:**  **Use TLS/SSL**

**Email Login User Name:**  **Password:**

**Email Address (To send log files to):**  

**Email Address (From):**  **Send Test Email on 'Save Changes'**

- Configure SMTP mail server address and Port Value for automated Email of Logs. Check with your current Internet provider for the appropriate settings. Example: SMTP Server Name: smtp.gmail.com Port: 465. Check the Use TLS/SSL box. HydroFLASH now supports TLS/SSL!
- Configure Email Address username and password for automated Email of Logs. The password field will always load as a blank text box for security purposes. Enter based on your Internet provider SMTP requirements for instance you may or may not have to enter the full email address for the User Name as in [john.doe@nowhere.com](mailto:john.doe@nowhere.com) or just john.doe. .
- Configure Email address to send Log files to. This is the address that you want to email log files to. Logfiles are sent out at 8AM every day. You can leave the Email Address From field as default however some providers require an address inside their own domain for PLAIN login so you may have to enter your email address here.
- After entering the Email changes you can Check the “Send Test Email on ‘Save Changes’ “ to have HydroFLASH send a test email to you to verify it is working correctly.

### Web Page and Mobile App Password Settings

**Web Page Login (for user "root") Password:**  **Confirm Password:**

- Id desired, change the Mobile Application and Web Page Log in Password. This is the password used to access HydroFLASH via the mobile applications and to navigate past the Web status page. After changing this you will be prompted to reboot the device at the top of the screen for it to take effect.

The password fields will always load as a blank text box for security purposes although the password is retained in Flash Memory. If you forget your password you will have to perform a reset of the device to return it to defaults.

### Ports and Network Time Server Settings

These values can remain at the default values unless you need/desire to change them.

**Mobile Device Port Number: Range 9000-65535 (default 9096):**

**Web Page Interface Port Number: Range 80-65535 (default 80):**

**Primary Network Time Server Name:**

**Secondary Network Time Server Name:**

- Configure the Mobile Application direct connect Port value. This is the port value used to communicate with your device over the internet for direct access modes and for initial pairing of the HydroFLASH with your mobile application. You can leave it as default unless you have reason to change it. Remember to change it in your mobile application if you change it here.
- Configure the Web Page Port value. This is the port value used to access the built in web page. You can leave it as default unless you have reason to change it.
- Configure Primary and Secondary Network Time Server names. (Used to automatically update the battery backed real time clock). These are the primary and secondary Internet Time server names. You can leave these as default as they point to a pool of servers that should provide reliable service. If you have a specific timer server you want to use you can enter it here. The default values are: 0.north-america.pool.ntp.org and 1.north-america.pool.ntp.org.

### Weather Data Source

HydroFLASH will use the data obtained from the selected source to evaluate for measured Precipitation, Wind and Humidity triggers below.

Click link for more information [Weather Data Sources and Settings](#)

- None - No Weather Data Source**
- METAR Weather Data Source** (Meteorological data obtained from your nearest airport station identifier entered below)
- Personal Weather Station Data (WUI) Source** ([Data provided by Weather Underground](#))
- Personal Weather Station Data - Source** (Direct Connect using Weather Bridge Server)

Enter the METAR Station Identifier evaluate weather events.

**METAR Weather Station Identifier:**

Enter your WUI PWS Station Identifier to evaluate weather events.

**PWS Weather Station Identifier:**

- Select your local weather source. (Used to obtain local weather for automatic rain delay, wind and freezing events) Helper Link is provided.

- For METAR - This is the 4 letter identifier that indicates the METAR station data that HydroFLASH will download data for each hour. These stations are typically located at airports. Choose an airport METAR identifier closest to your location.
- For PWS you have two choices. Get your data from your personal weather station via WUI or using your MeteoBridge (Available from Ambient Weather and other sources).

### Weather Data Settings

If checked, HydroFLASH will use the weather data obtained from the Internet or other source to evaluate for rain events. If triggered it will prevent watering for the number of hours entered in the Weather Rain delay field automatically.

**Rain Delay Option Enabled:**

This value is the minimum amount of rainfall required over the last 24 hours to trigger a rain delay event. Enter a Zero to trigger the Weather Rain delay for any detectable amount of rain.

**Rain Delay Trigger Level in Hundredths (1 = .01") Range 0 to 100:**

Enter the number of hours to delay watering in the event one of the weather data rain level triggers occur. (Weather Data Source or NOAA Forecast Rain)

**Weather Data Rain Delay Time Hours (1-99 Hrs):**

If checked, HydroFLASH will use the weather data obtained from the Internet or other source to evaluate for wind events.

**Wind Option Enabled:**

If the reported Wind Speed is above the value below, prevent watering cycles from executing.

**Wind Trigger Value**  Mph (Range is 5 to 30 Mph with 5 Mph hysteresis)

If checked, HydroFLASH will use the weather data obtained from the Internet or other source to evaluate for humidity level run time adjustments.

**Humidity Option Enabled:**

If the reported Humidity value is above this value, reduce watering times by the 'Humidity Watering Time Reduction Percentage' entered below.

**Humidity Trigger Value**  % (Range is 50 to 95 Percent)

The maximum applied reduction is limited to 25%.

**Humidity Watering Time Reduction Percentage Value**  % (Range is 0 to 25 Percent)

If checked, HydroFLASH will use the weather data obtained from the Internet or other source to evaluate for low temperature conditions.

**Low Temperature Option Enabled:**

If the reported Temperature is lower than the value below, prevent watering cycles from executing.

**Low Temperature Trigger Value**  Deg F (Range is 30 to 60 Degrees with 5 Degree hysteresis)

- Select the 'Rain Delay Option Enabled' Checkbox if you want HydroFLASH to evaluate the weather station data for Rain Events to automatically place HydroFLASH on a Rain Delay.
  - Enter the 24 hour precipitation trigger level that will place HydroFLASH on rain delay when detected in the weather station data.
  - Enter the number of hours that you want the delay to last before resuming your watering schedules. Weather station data will be re-evaluated at the end of the time period and watering schedules will be resumed if the weather data indicates that the trigger level is no longer met.
- Select the 'Wind Options Enabled' Checkbox to prevent HydroFLASH from watering if the weather station wind data indicates a value above the trigger level.

- Enter the Wind Trigger Value in MPH.
- Select the 'Humidity Option Enabled' Checkbox to reduce watering times by the percentage entered below when the humidity is above the specified value.
  - Enter the Humidity Trigger value in percentage.
  - Enter the Watering time reduction in percentage.
- Select the 'Low Temperature Option Enabled' Checkbox to prevent watering if the weather station data indicates the temperature is below the trigger value.
  - Enter the Low Temperature Trigger value in Degrees F.

### NOAA Forecast Temperature Based Run Time Adjustment Settings

If checked, HydroFLASH will use the values below to adjust station run times based on temperature.

**NOAA Forecast Temperature Options Enabled:**

The "Monthly Average High Temperatures" is the User entered temperature values to use with "Temperature Variance Step" and "Watering Adjustment Percent" values. You can locate this information on the Internet for your specific location.

**Monthly Average High Temperature Baseline Values - Entered in Deg F, Range 30 to 120:**

Jan 66 Feb 67 Mar 68 Apr 73 May 77 Jun 84  
 Jul 90 Aug 91 Sep 88 Oct 80 Nov 73 Dec 67

The "Temperature Variance Step" is used with the baseline value to adjust watering times up or down by the "Watering Adjustment Percent" for each step in "Temperature Variance" above or below the "Monthly Average High Temperature Value".

**NOAA Forecast Temperature Variance Step - Entered in Deg F, Range 1 to 20:**

The "Watering Adjustment Percent" is the percentage of increase or decrease in watering time to apply for each step in "Temperature Variance Step" above or below the "Monthly Average High Temperature Value".

**NOAA Forecast Watering Adjustment Percent - Entered in Percent, Range 1 to 20:**

Example: Average Monthly High is 70 Deg, Temperature Variance is set to 5 Deg, Watering Adjustment Percent is set to 3%  
 NOAA Forecast Temperature reports expected high of 85 Deg which is 15 Deg above your baseline value of 70 Deg.  
 This will result in an increased watering time of 9%  $((85-70)/5) * 3\% = 9\%$  when the program runs.

[Download Run Time vs Temperature Excel File](#)

Note: The Calculated value is applied in addition to the [Monthly Watering Rate Adjustment](#) below so this can be used to compensate those values for seasonal deviations (abnormally hot or cool days). See the HydroFLASH manual to learn more about how to enter the seasonal / monthly adjustments values. The maximum applied change is limited to 50% in software. **Be cautious with this calculation as it could result in overwatering or under watering if non realistic values are entered here!**

- Configure and enable the NOAA Data Forecast Temperature Based Run Time Adjustment values. The values entered here will adjust your watering run times by a calculated percentage based on the temperature obtained from the NOAA Forecast Data or Daily High Temperature.

The values enter here are:

**Monthly Average High Temperature Baseline Value** – This is the temperature value that is selected to make adjustments from when the actual temperature is higher or lower than this value. You can obtain this information for your location from weather underground or weatherbase.com.

**Temperature Variance Step** – This is used with the baseline value to adjust watering times up or down by the ‘Watering Adjustment Percent’ for each step in ‘Temperature Variance Step’.

**Watering Adjustment Percent** – This is the percentage of increase or decrease in watering time to apply for each step in ‘Temperature Variance Step’ above.

Example: Baseline is set to 70 Deg, Temperature Variance is set to 5 Deg, Watering Adjustment Percent is set to 3% .

NOAA Forecast Temperature reports 85 Deg which is 15 Deg above your baseline value of 70 Deg..

This will result in an increased watering time of 9%  $((85-70)/5) * 3\% = 9\%$  when the program runs. Note: The Calculated value is applied in addition to the Monthly Watering Rate Adjustment (below) so this can be used to compensate those values for seasonal deviations (abnormally hot or cool days.

The maximum applied change is limited to 50% in software. Be cautious with this calculation as it could result in overwatering or under watering if non realistic values are entered here.

### NOAA Forecast Preemptive Rain Delay Settings

If checked, HydroFLASH will use the NOAA data based on your entered Latitude and Longitude to place HydroFLASH on Rain Delay prior to an expected rain event based on the values entered below.

**NOAA Data Probability of Precipitation Options Enabled:**

The value entered here reflects the percent chance of rain required before HydroFLASH will begin a Rain Delay event.

**NOAA Probability of Precipitation Threshold - Entered in Percent, Range 1 to 100:**

The value entered here is the number of days in advance to look 'forward' and evaluate the percent change of rain.

**NOAA Probability of Precipitation Days in Advance Threshold - Entered in Days, Range 1 to 6:**

Places System on Rain Delay if the NOAA "Probability of Precipitation" % is greater than the "Threshold" value and within future time window of days in advance value.

- Configure and enable the NOAA Forecast Preemptive Rain Delay Settings. If enabled, HydroFLASH will use the NOAA data download from the internet based on your latitude and longitude to place HydroFLASH on rain delay **prior** to an expected rain event. You select the desired chance of rain percentage level to trigger a rain delay and how many days in advance to evaluate the data (forward looking from the current day). HydroFLASH will then place your system on rain delay for the number of hours you have entered in the Weather Rain Delay Time field (above). After the delay has expired the latest data will be reevaluated causing the delay to be reset or expire allowing watering programs to execute.

### Rain Sensor Settings

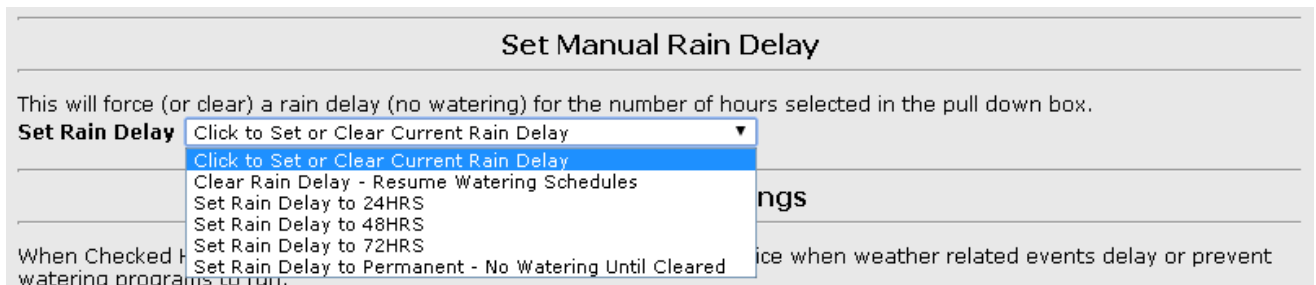
Most Rain Sensors are Normally Closed when it is Not Raining and Open when rain is sensed. Others have options for either types of connections. Refer to the user guide that came with your rain sensor.

**Rain Sensor Input Select (Default setting is Normally Open, Un-Checked = Normally Closed):**  (If not used, leave this Checked)

Enter the number of hours to delay watering in the event your local rain sensor input is triggered.

**Rain Sensor Rain Delay Time Hours (1-99 Hrs):**

- Configure external Rain Sensor input sense. (Normally Open or Normally Closed). This defaults to Normally Closed. Rain sensors come in two varieties. A lot of Rain Sensors provide a normally closed contact when its not raining, so when it starts raining it opens up, breaking contact and disrupting the flow of power to your valves. Others operate the opposite way and are designed to connect to a specially provided connector to signal the controller that it is raining. HydroFLASH operates with either type connected to its Rain Sensor (RS) input connector and is configured using this option checkbox.
- Enter desired Default Rain Delay in hours. This value defaults to 24 hours and can be set for a value of 1 to 99 hours. This is the value that is applied to the Rain Delay time when the Rain Sensor is activated. When the Rain Sensor input is triggered, any currently running programs will be canceled. The Rain Delay Time value will begin counting down and when expired reevaluates the sensor input. If the Rain Sensor is still indicating a rain condition the Rain Delay Time will be reset to the specified delay and begin counting down again.



- Set or Clear current Rain Delay timer. This allows you to manually set the system on Rain Delay (no watering) or Clear the current rain delay that may be actively counting down. This function is exactly like using the Cloud Icon on the mobile app main status page. You must click the Save Changes at the top of this page after selecting the desired command for it to be executed. It will always show the first selection on the list after saving.

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### Misc System Settings

When Checked HydroFLASH sends push notifications to your mobile device when weather related events delay or prevent watering programs to run.

Note the the "Enable Push Notifications" on your HydroFLASH mobile device app must also be checked.

**Enable Watering Delay Mobile App Push Notifications:**

When checked, this valve will be turned ON with any station selected in Valve Options below.

**Enable Master Valve (#16):**

Enter the default run time in minutes for manual control via the front panel buttons.

**Manual Control Run Time (1-60 Minutes):**

Enter the LCD Display back light timeout value in seconds.

**LCD Back Light Display Timeout (0-30 Seconds):** (0 = Always On)

Leave Un-Checked unless troubleshooting Insteon communication issues. (Adds Timeout messages to Log File)

**Enable Insteon Logging:**

Disable All Logging to File System. This prevents all logging activities.

**Disable All Logging:**

- Enable Watering Delay Mobile App Push Notifications – Enabling this will tell HydroFLASH to send your Mobile Device a notification for any rain events that place HydroFLASH on Rain Delay, Wind Event or Low Temperature Event including expiration of any of these when normal watering schedules have resumed. Each Mobile device can be configured to receive or not receive push notifications from HydroFLASH via the Edit Controller options within the Mobile App.
- Configure HydroFLASH to use station 16 as a Master Valve if needed. This check box can be checked in the event you have a Master Valve that feeds your other sprinkler valves. When checked HydroFLASH will always activate station 16 when any other station is activated. Note that you must also check the Master Valve checkbox next to the individual station in the table at the bottom of this page. This allows selected stations to use the Master Valve while others do not to support mixed systems that are connected to both a pump and municipality water sources.
- Enter the default Manual Control Run Time value here. This is the value that will be used when a station is manually activated from the HydroFLASH front pane. (For Maintenance Access, etc).
- Enter the LCD back light timeout. The LCD back light will turn off if there has not been any data activity between the mobile app and HydroFLASH or no front panel buttons have been pushed after the specified timeout. Enter 0 to force the LCD back light to stay on. This option is to help reduce heat when HydroFLASH is mounted in an enclosure. The LCD is fully readable with the backlight OFF in daylight.
- Enable Insteon Logging – Enable this as an aid in troubleshooting Insteon device communications issues. It will log any communication errors or timeouts to your system log file. Leave this off unless actively troubleshooting as it could fill up your log file with in the event a device goes off line.
- Disable All logging. This would prevent HydroFLASH from logging activity to FLASH memory. Recommended setting is to leave this unchecked.

### Station Valve Options

Station #	Description	Number of Valves	Flow Rate in GPM	Use Master Valve	Water Even Days	Water Odd Days	Water Any Days
1	Back Yard Lawn - North Side	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
2	Back Yard Lawn - South Side	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3	Front West Lawn - East Side	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
4	Front West Lawn - West Side	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
5	Rear Annex Shrubs	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
6	Side House HB and Rear Palms	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
7	Front Lawn Wall Shrubs	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
8	Front House Shrubs	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
9	Front Lawn - South East	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
10	Front Lawn Center	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
11	Front Lawn - North East	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
12	Front Lawn - West	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
13	Station 13	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
14	Station 14	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
15	Station 15	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
16	Station 16	1	0.00	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

- Enter Station Valve assignments and Flow Rates for each Station. (Used to assign number of valves per station (Max of 3)) and Calculated Flow rates for water usage estimation reports. It is very important to enter the number of valves connected to each station in the event that it is more than one per station. HydroFLASH will operate up to 3 standard solenoid valves per station. Entering the correct number here allows the software to limit the number of valves on at any given moment to 3. Not entering the correct number of valves per station could allow a user to turn on more valves than 3 and could result in blowing the internal safety fuse (easily replaced by removing the top cover).
- Enter your Even or Odd watering days. You can select Even, Odd or Any based on your local requirements. Remember that you will need to set your scheduling to water at least on consecutive days for the rule to water once a week, 4 days for twice a week and so on. Note that this is individually selectable per station as some local ordinances do not enforce the rule for drip systems. This way you can customize your watering as needed allowing drip systems to run any day.
- Enter your self calculated flow rates in GPM. (Future enhancement). This will be used to generate weekly reports on estimated water usage, emailed to you.



### Monthly Watering Rate Adjustments

Month	Adjustment (10-100%)
Jan	33
Feb	38
Mar	56
Apr	67
May	82
Jun	97
Jul	100
Aug	93
Sep	75
Oct	50
Nov	38
Dec	33

- Enter the Monthly Watering Rate Adjustment values desired. This field contains entries for each Month of the year allowing you to reduce the run time minutes by a percentage each month. This allows you to enter seasonal adjustments automatically each month.

Generally you calculate and enter your run times for the watering needed for your hottest seasonal month. Typically this might be June or July. That month would be configured for 100 percent. You then tailor the other month's percentage values as desired based on watering needs. There is data available online that you can access to determine these values for your area and is commonly referred to as Evapotranspiration Data or ET.

Note that the 'Watering Time Adjustment for Temperature' (above) is applied on top of the Monthly percentage value.

## 4.0 Status Page

The Main Status page provide a top look at the current HydroFLASH status data. It displays the current Date and Time along with Sunrise and Sunset times for the current location. Additionally this page provides an overview of currently running watering stations and active Insteon devices along with Rain Delay status. This section also displays the current Cloud Connection status (This is also shown on the LCD display). The upper portion of the status page is automatically refreshed with new data including WiFi signal strength every 5 seconds.

✈ All of these controls are also accessible via the iPhone and Android Mobile Apps.

**Saturday April 05, 2014 11:08 AM**  
**Sunrise 06:29 AM - Sunset 07:10 PM**

**\* System Normal \***

**No Watering Stations are Currently Active**

Insteon Device	State	Set Value	Mode	Program #
West Wing Thermostat	66 Deg	*****	OFF	Status
East Wing Thermostat	64 Deg	*****	OFF	Status
Garage Door	CLOSED	*****	Sensor	Status
Front Gate	CLOSED	*****	Sensor	Status

**HF to Cloud Connection State : Polling**

**System Up Time 4 days 15 hours 48 minutes 42 seconds**

The data above this line automatically refreshes every 5 seconds.

The lower portion of the status screen shows the current Meteorological data , NOAA forecast data obtained each hour, Weekly Temperature Forecast and local Network information. This page is not password protected and is viewable on web page load. From here you can navigate to the other password protected screens after entering the proper credentials. Clicking on the HydroFLASH logo will navigate to the HydroFLASH main web site where there are links to purchase controllers, access the user forum and get additional support.

**Calculated Watering Time Adjustment Percentage based on Temperature**  
 A 5% Reduction will be applied to watering times today.

**Current Weather Conditions: (Updated Hourly)**

<b>METAR Weather Report</b>	
RAMONA AIRPORT, CA, United States (KRNM) 33-02N 116-55W 427M	
Apr 12, 2014 - 07:53 PM EDT / 2014.04.12 2353 UTC	
Wind: from the WSW (250 degrees) at 12 MPH (10 KT):0	
Visibility: 10 mile(s):0	
Sky conditions: clear	
Temperature: 61.0 F (16.1 C)	
Dew Point: 46.0 F (7.8 C)	
Relative Humidity: 57%	
Pressure (altimeter): 29.91 in. Hg (1012 hPa)	
Pressure tendency: 0.02 inches (0.6 hPa) lower than three hours ago	
ob: KRNM 122353Z 25010KT 10SM CLR 16/08 A2991 RMK AO2	
SLP121 T01610078 10189 20156 55006	
cycle: 0	

**NOAA 12 Hour Probability of Precipitation Forecast: (Updated Hourly)**

<b>Week Day</b>	<b>Day 5AM-5PM</b>	<b>Night 5PM-5AM</b>
<b>Today</b>	----	5%
<b>Sunday</b>	0%	0%
<b>Monday</b>	0%	0%
<b>Tuesday</b>	0%	0%
<b>Wednesday</b>	0%	0%
<b>Thursday</b>	0%	4%

**NOAA 7 Day Temperature Forecast: (Updated Hourly)**

<b>Week Day</b>	<b>High Temp</b>	<b>Low Temp</b>
<b>Today</b>	64	50
<b>Sunday</b>	64	51
<b>Monday</b>	82	56
<b>Tuesday</b>	79	54
<b>Wednesday</b>	69	52
<b>Thursday</b>	71	54
<b>Friday</b>	71	55

**More Weather Information**  
[NOAA Local Weather Map](#)

# 5.0 Watering Programs

Hydroflash currently supports 4 programs with 4 start times each. Each station can be independently enabled or disabled if desired and configured to run different days within a given Start Time or program providing a very flexible program schedule.

Start Times are entered and enabled for each station targeted to run at that time. The total Run Time (Max) is displayed along with the calculated end time so that follow on start times overlapping can easily be determined.

⚡ All of these controls are also accessible via the iPhone and Android Mobile Apps.

**Program Selection**

View Program #1
View Program #2
View Program #3
View Program #4

Save Changes
Clear Changes

**Start Times**

	Start Time	AM	PM	Run Time	End Time	Enabled
A	8 : 00	<input checked="" type="radio"/>	<input type="radio"/>	00:30	08:30 AM	<input type="checkbox"/>
B	12 : 00	<input type="radio"/>	<input checked="" type="radio"/>	00:30	12:30 PM	<input checked="" type="checkbox"/>
C	5 : 00	<input type="radio"/>	<input checked="" type="radio"/>	00:30	05:30 PM	<input checked="" type="checkbox"/>
D	12 : 00	<input type="radio"/>	<input checked="" type="radio"/>	00:00	N/A	<input type="checkbox"/>

**Station Run Times**

Station	Description	Run Time	S	M	T	W	T	F	S	Assigned Start Times	Enabled
1	Rear Trees and Plants	0 : 10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Front Porch Trees and Plants	0 : 10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Garage Planter and Fountain	0 : 10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Station 4	0 : 00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>	<input type="checkbox"/>
5	Station 5	0 : 00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>	<input type="checkbox"/>
6	Station 6	0 : 00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>	<input type="checkbox"/>

The following items are configured here:

- Select Program to View or Edit. Select the program using the web buttons or the pull down selection on the Mobile App.
- Set Start Times values for each Program. Enter the desired start time in Hours and Minutes and select AM or PM. The Run Time and End Time fields are automatically updated based on the Station Run Times selected in the lower section of the form or on the Mobile App when clicking the Save Changes button. The Start Time must be Enabled using the check box provided.

- Set Enable of individual Start Times. The Start Time must be Enabled using the check box provided.
- Set Station Description Values (Description of the Station or Watered Items). Enter a textual description of the station valve(s) location that has useful meaning. Example: Front Lawn West Side, Side House Flower Bed, Garden Drip, etc.
- Set Run Times for the currently viewed program. Enter the run times for the station in Hours and Minutes.
- Set Days On for the currently viewed program. Select the days you want to schedule watering for the station in question.
- Set Assigned Start Times for each Station for the currently viewed program. Check the box for the desired Start Time(s) you want this station to run.
- Set Station Enabled option for each Station (Allows disabling a specific station for maintenance or other reason). Check the Enabled checkbox to enable or disable this station. For instance if this station is broken and needs repair then you can un-check this and it will be skipped in the watering schedule.

**Note:** After configuring the Start Times and Station Run Times and clicking Save Changes, The Total (Longest) Run Time and End Times are displayed the Start Times configuration fields. These values should be examined to ensure you do not have any overlapping of run times. These calculated values will represent the longest run times. For instance you could have some stations only run Mon, Wed, Fri and others stations running every day. This would result in total run times for some days being shorter than other days.

It is OK to enter a Start Time value that is Equal to the End Time Value of the previous Start Time for back-to-back End and Start Times.

## 6.0 Manual Watering

This page allows Manual watering control via individual station control or manually starting of the 4 watering programs. It provides the current state of all stations and reflects if they are currently on in Manual mode or active under a Program control. From this page you can also cancel a currently running program or simply skip to the next station that is scheduled. This comes in very handy when doing maintenance or simply checking the system. You can quickly start a program and after verifying the station sprinklers are working correctly you can skip to the next valve and verify its operation and so on through the stations.

✍ All of these controls are also accessible via the iPhone and Android Mobile Apps.

### Manual Station Control

Station #	Description	Run Time	Action	Manual State	Program State
1	Back Yard Lawn - North Side	0 : 00	Turn ON	OFF	OFF
2	Front West Lawn - East Side	0 : 00	Turn ON	OFF	OFF
3	Back Yard Lawn - South Side	0 : 00	Turn ON	OFF	OFF
4	Front West Lawn - West Side	0 : 00	Turn ON	OFF	OFF
5	Rear Annex Shrubs	0 : 00	Turn ON	OFF	OFF
6	Side House HB and Rear Palms	0 : 00	Turn ON	OFF	OFF
7	Front Lawn Wall Shrubs	0 : 00	Turn ON	OFF	OFF
8	Front House Shrubs	0 : 00	Turn ON	OFF	OFF
9	Front Lawn - South East	0 : 00	Turn ON	OFF	OFF
10	Front Lawn Center	0 : 00	Turn ON	OFF	OFF
11	Front Lawn - North East	0 : 00	Turn ON	OFF	OFF

The following items are configured here:

- Program Manual Control. (Used to Start a Program, Stop a Program or Skip a Station in a active running program)
- Enter Run Time for individual stations under Manual Control. (Used to run a single station manually for the entered time)
- Turn On or Off Station Manually.
- Provides Status and of Station State and remaining runtime.

## 7.0 Insteon Programs (Includes Watering Scenes)

Insteon devices can be added to the HydroFLASH controller simply by purchasing a Insteon serial modem, plugging it in to a wall outlet and connecting it to the HydroFLASH Insteon interface connector. Insteon devices are then added to your home or business by plugging in small modules or replacing standard wall switches with Insteon compatible switches. These devices are available as simple On/Off devices or as Dimmable devices including additional devices like Thermostats. HydroFLASH currently supports all On/Off and Dimmable devices, Motion Detectors, Door and Window Sensors and the Insteon

and Venstar Insteon compatible Thermostats. A list of compatible devices is provided at the end of this document. For more information about Insteon devices please visit their web site at: [www.insteon.net](http://www.insteon.net).

If you don't currently have any Insteon devices this section can be skipped as no configuration is needed. If you have Insteon devices then please skip to the section 'Insteon Devices' to enter device information and then return here to continue.

There are five links on this page for Insteon programming.

- Device Programs
- Thermostat Programs
- Scene Programs
- Event Programs
- Edit Scenes

**Device Programs** - From this Page you can configure Insteon device programs to run at schedule times and days. After entering your device information on the 'Insteon Devices' page the devices will be available from the Selected Device pull down on this page.

There are 4 Pages of programs for a total of 64 programs providing options for turning On a device, Turning Off a device including setting the brightness or Dim level etc.

Each Program allows setting the Start or End times. Start or End times can be absolute times in the terms of Hour and Minute of the day or night or can be relative to Sunrise or Sunset times based on your exact location. This is a powerful feature allowing tailoring of lighting to follow the daily migration of sunset or sunrise. Start or End Times can be set to Exactly at Sunrise or Sunset or entered as a minute offset before or after Sunrise or Sunset.

For devices that you only wish to turn OFF or only Turn ON you simply select a Start Time or End Time Option of 'None'. This allows you to manually turn on a device when convenient but know that a program will always turn it Off at a specific time.

Additionally each device program can be Enabled or Disabled simply by checking the Enabled check box and saving the settings. This is handy for instance when going away for a few days and not needing specific devices on during that period without having to modify a specific program.

✈ All of these controls are also accessible via the iPhone and Android Mobile Apps.

### Start and End Times

Selected Device	Start Time or Offset	Start Time Option	End Time or Offset	End Time Option	Dim %	S	M	T	W	T	F	S	Enabled
None	0 : 00	None	0 : 00	None	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pool Pump	0 : 00	None	11 : 00	AM	100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Corner Lamp	0 : 00	(+)Sunset	11 : 30	PM	30	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chair Lamp	1 : 00	(+)Sunset	11 : 00	PM	30	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Garden Fountain	1 : 00	(+)Sunrise	10 : 00	PM	100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
None	0 : 00	None	0 : 00	None	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	0 : 00	None	0 : 00	None	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following items are configured here:

- Select the Device for each program. (devices can be controlled by additional programs)
- Set the Start Time and End Time in Hours and Minutes or Offset value in minutes from Sunrise or Sunset.
- Select the Start Time or End Time Option of:
  - None
  - AM
  - PM
  - Before Sunrise
  - After Sunrise
  - Before Sunset
  - After Sunset
- Select the Brightness or Dim Percent for the On Value. This sets the brightness of the lamp or bulb.
- ☐ **Note:** The Insteon SwitchLink Dimmers should only be used with incandescent or LED light bulbs.
- Select the Days of the Week the program runs.
- Set or Clear the Enable for Each program. This can be used to enable or disable a device from running its program. For instance if you were on vacation and wanted fewer lights on at night while away.

**Thermostat Programs** - From this Page you can configure Insteon Thermostat programs to run at schedule times and days. After entering your thermostat information on the 'Insteon Devices' page the thermostats will be available from the Selected Thermostat pull down on this page.

There are 2 Pages of programs for a total of 32 programs providing options for setting the mode and temperature.



Each Program allows setting the Start Time. Start times are implemented exactly like Device Programs.

With Thermostat programs there is no End Time. You simply schedule the times you want it to be in a specific mode and temperature and enter those times and values as different programs on this page.

✂ All of these controls are also accessible via the iPhone and Android Mobile Apps.

Thermostat Program Times													
Selected Thermostat	Start Time or Offset	Start Time Option	Thermostat Mode	Heat Setpoint	Cool Setpoint	S	M	T	W	T	F	S	Enabled
West Wing Thermostat ▼	6 : 00	AM ▼	HEAT ▼	70	80	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
West Wing Thermostat ▼	10 : 00	AM ▼	HEAT ▼	65	80	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
West Wing Thermostat ▼	4 : 00	PM ▼	HEAT ▼	70	80	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
West Wing Thermostat ▼	11 : 00	PM ▼	HEAT ▼	65	80	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
East Wing Thermostat ▼	5 : 45	AM ▼	HEAT ▼	70	80	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
East Wing Thermostat ▼	6 : 15	AM ▼	OFF ▼	65	80	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
East Wing Thermostat ▼	11 : 00	PM ▼	HEAT ▼	65	80	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
None ▼	0 : 00	None ▼	OFF ▼	65	85	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following items are configured here:

- Select the Thermostat for each program. (Thermostats can be controlled by additional programs)
- Set the Start Time in Hours and Minutes or Offset value in minutes from Sunrise or Sunset.
- Select the Start Time or End Time Option of:
  - None
  - AM
  - PM
  - Before Sunrise
  - After Sunrise
  - Before Sunset
  - After Sunset
- Select the Desired Mode of:
  - OFF
  - HEAT
  - COOL
  - AUTO

- FAN ON
- PROGRAM
- PROG HEAT
- PROG COOL
- FAN AUTO
- Select the Desired Heat and Cool Setpoint
- Select the Days of the Week the program runs.
- Set or Clear the Enable for Each program. This can be used to enable or disable a device from running its program.

**Scene Programs** - From this Page you can configure your Scene programs to run at schedule times and days. After creating you custom scenes from the Edit Scenes page, the scenes will be available from the Selected Scene pull down on this page.

There are 4 Pages of programs for a total of 64 programs providing options for running scene programs

Each Program allows setting the Start Time. Start times are implemented exactly like Device Programs with the addition of the 'Run Every' start time option.

With Scene programs there is no End Time. You simply schedule the times you want it to run and it will run at the desire time.

✎ All of these controls are also accessible via the iPhone and Android Mobile Apps.

Start Times										
Selected Scene	Start Time or Offset	Start Time Option	S	M	T	W	T	F	S	Enabled
Movie Mode ▼	8 : 00	PM ▼	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GoToBed ▼	11 : 00	PM ▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
GetUp ▼	6 : 00	AM ▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
None ▼	0 : 00	None ▼	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None ▼	0 : 00	None ▼	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None ▼	0 : 00	None ▼	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following items are configured here:

- Select the desired Scene for each program
- Set the Start Time in Hours and Minutes, Offset value in minutes from Sunrise or Sunset or the Run Every value in Hours and Minutes. The Run Every will run the selected scene repeatedly at the interval you specify. This can be used for the Watering Scenes (advanced feature) to repeat a watering cycle multiple times during the scene conditional time value in the scene file. It can also be used to run a scene that will turn off outside lights during day light hours if someone turned them on accidentally.
- Select the Start Time or End Time Option of:
  - None
  - AM
  - PM
  - Before Sunrise
  - After Sunrise
  - Before Sunset
  - After Sunset
  - Run Every
- Select the Days of the Week the program runs.
- Set or Clear the Enable for Each program. This can be used to enable or disable a program from running its selected scene.

**Event Programs** - From this Page you can configure your Event programs to run at to run scenes when a Insteon Event you have selected occurs. After creating your custom scenes from the Edit Scenes page, the scenes will be available from the Selected Scene pull down on this page.

There are 4 Pages of programs for a total of 64 programs providing options executing scene programs or sending push notifications to your mobile device.

With Scene programs there is no Start or End Time. It simply identifies the Scene file to run when the specified event is received from the selected Insteon Device. Conditional time value can be placed into the scene file to specify desired time windows if desired.

✍ All of these controls are also accessible via the iPhone and Android Mobile Apps.

Device Event and Action											
When Selected Device	Sends Command	Execute Scene	S	M	T	W	T	F	S	Push Msg	Enabled
Front Gate	OFF	GateOpening	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Back Porch Lights	FAST OFF	GoToBed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Bedroom Area Cans	FAST OFF	GoodNight	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Dressing Area Cans	FAST OFF	GetUp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Garage Door	OFF	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Front Gate	ON	GateClosed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
None	ON	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	ON	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following items are configured here:

- Select the desired Insteon Device for each program.
- Select the command that you want to monitor.
  - ON (For manual switches is generated by clicking the ON button)
  - OFF (For manual switches is generated by clicking the OFF button)
  - FAST ON – (For manual switches is generated by double clicking the ON button)
  - FAST OFF (For manual switches is generated by double clicking the OFF button)
- Select the Days of the Week the events are processed.
- Set or Clear the Push Message Notification option – When set HydroFLASH will send a notification to your mobile device to inform you of the event.
- Set or Clear the Enable for Each program. This can be used to enable or disable an event from running its scene or pushing a message.

**NOTE:** You must first **reverse link** the Insteon devices to your Insteon Modem in order to receive events from them. This is the reverse process that you used to link your Modem to your devices. In this case you put the Insteon Device in linking mode first and then press the Modem Linking button until the link is established. This is known as a two way link and when completed your Insteon device will notify HydroFLASH when the Insteon device's state is changed.

**Edit Scenes** – This is the page where you can create, edit or delete a scene file. A list of your devices is provided on the left side of this page so you can use the text to cut and paste device names into the script file.

**Edit Scenes**

[Device Programs](#) | [Thermostat Programs](#) | [Scene Programs](#) | [Event Programs](#) | [Edit Scenes](#)

**Device Name**

Chair Lamp

Corner Lamp

Desk Lamp

Pool Deck Light

Garden Fountain

Swamp Cooler

Pool Pump

Pool Fountain

**Scene Editor**

**Edit Scene Text**

Pool Pump, ON, NONE, AD0:20

Select Scene to Load: Run Pool Pump ▾

Enter New Scene Name:

Select Scene to Delete: Run Pool Pump ▾

**Insteon Scene Macro Commands - Examples**

Name	Desired State/Mode	Conditional Execution Time	Delay Time
DEVICE NAME	NONE   ON   OFF   ON% HEAT   COOL   AUTO...etc	NONE   Sx HH:mm \ Sx HH:mm	NONE   ADHH:mm   CDHH:mm
Lab Lamp,	50%,	+SR0:00\~SS0:00,	AD0:01
Lab Fan,	ON,	+SR0:00\~SS0:00,	AD0:01
Lab Fan,	ON,	ST7:00\ET22:00,	NONE
Lab Thermostat,	AUTO 68:75,	NONE,	NONE

**Conditional Time Option Format**  
 +/-SShh:mm = Sunset plus or minus time  
 +/-SRhh:mm = Sunrise plus or minus time  
 SThh:mm = Start Time (beginning of range or after this time)  
 EThh:mm = End Time (end of range or before this time, only relative to Start Time to form window)  
 \ = Token between Start and End Times  
 , = Field Separator

Each line in a scene file represents commands sent to one device providing the Name of the device, Desired state or mode, Conditional Execution Time and Delay Time. Below is an example of a scene file that has a number of options with explanation to right. This might be named GoToBed.

```

Front Door Entry Light, 50, NONE, AD0:05           (Turn ON at 50%, Turn OFF in 5 Minutes)

Dressing Area Cans, 25, NONE, NONE                 (Turn ON at 25%)

Livingroom Ceiling Cans, OFF NONE, NONE           (Turn OFF)

Dining Room Corner Lamp, OFF NONE, NONE           (Turn OFF)

Rear Patio Pole Light, OFF, NONE, NONE            (Turn OFF)

Landscape Lights, OFF, NONE, NONE                 (Turn OFF)

West Wing Thermostat, HEAT 65:75, NONE, NONE      (Set Heat Mode to 65 deg)
    
```

You can add Conditional Time and Delay to turn off parameters like below.

**Landscape Lights, ON, +SS0:30/-SR0:30, NONE** (Only Turn ON if 30min past sunset and 30 min before sunrise)

**Landscape Lights, ON, +SS0:30/-SR0:30, AD4:00** (Same as above except turn off 4 hours later)

**West Wing Thermostat, AUTO 70:76, NONE, AD0:30** (Set to Heat Mode but turn off 3 minutes later. Example: This could be executed by an Event Program from a Motion Sensor to ensure system was off in room was not occupied)

The complete command list and examples can be viewed on the Edit Scenes page. This is a powerful tool and can be used to create all kinds of scenes that can be executed by programs, events and a single push of a button via the Manual Insteon web page under Scene Control or via the Mobile App.

## WATERING SCENES

**Watering Scenes** – For the advanced user who has additional requirements or needs or based on local watering restrictions, we have added the ability to start a watering program using a scene file similar to the Insteon Scene files. This will allow you to create your watering program using the Watering Programs page but simply do not Enable any Start Times. Several watering scene examples are given below along with explanations.

Run Program 1 Any Day of the week when executed.

**WATERCYCLE, RUN, NONE, ANYDAYS, 1**

Run Program 1 Odd Days Only when executed.

**WATERCYCLE, RUN, +SR0:30/-SS0:30, ODDDAYS, 1**

Run Program 1 on the 5<sup>th</sup>, 12<sup>th</sup> and 20<sup>th</sup> of the Month when executed.

**WATERCYCLE, RUN, +SR0:30/-SS0:30, 5;12;20, 1**

Run Program 1 every 3 days using August 1<sup>st</sup> as the Epoch date or reference date.

**WATERCYCLE, RUN, NONE, EVERYXDAYS; 3; 8/1/2014, 1**

When combined with the use of the 'Run Every' Start time option under the Scene Programs page you can also create a customized watering schedule that can repeat during specific times of the day as set by the Conditional Execution Time value. This can be very useful if you have a newly seeded lawn and want to run a program that will water for 2 minutes every hour during the day from Time X to Time Y. Or for a custom Cycle and Soak Program.

The complete watering command list and examples can be viewed on the Edit Scenes page at the bottom of the page. This is a powerful tool and can be used to create all kinds of scenes that can be executed by programs, events and a single push of a button via the Manual Insteon web page under Scene Control or via the Mobile App.

<b>Watering Scene Macro Commands - Examples</b>				
Key Word	Action	Conditional Execution Time	Run Dates or Days	Program Number
WATERCYCLE	RUN	NONE   Sx HH:mm \ Sx HH:mm	ANYDAYS   ODDDAYS   EVENDAYS   EVERYXDAYS; DAYS; DAY/MONTH/YEAR   DATE; DATE; DATE...	1   2   3   4
WATERCYCLE,	RUN,	NONE,	ANYDAYS,	1
WATERCYCLE,	RUN,	+SR0:00\SS0:00,	EVENDAYS,	2
WATERCYCLE,	RUN,	+SR0:30\ET10:00,	ODDDAYS,	3
WATERCYCLE,	RUN,	NONE,	EVERYXDAYS; 3; 7/1/2014,	3
WATERCYCLE,	RUN,	ST6:00\ET14:00,	1; 5; 9; 13; 17; 21; 24; 28,	4

Using the above example you can schedule a watering program using the 'Insteon Scene Programs' page for any given time of the day. You can also include a conditional execution time window in the event you are using the 'Run Every' option as the 'Insteon Scene Programs' start time option. This could be used to water a newly seeded lawn for 3 minutes every X minutes/hours. (X = 'Run Every' value)

You can also use the optional times offsets just like Insteon Devices to schedule a floating start time if desired. (30 minutes after Sunrise, etc.)

Set up the watering programs using the 'Watering Programs' page but don't enable any Start Times.

Since the macro simply forces a manual activation of a program exactly like done via the 'Manual Control' page, it ignores days of the week check boxes that may or may not be set on the 'Watering Programs' page, performing the necessary run qualification on the days selected on the 'Insteon Scene Programs' page followed by the values in the macro. It will not run if there is a active Rain Delay exactly like the standard scheduled watering programs.

**Example of a 'Watering Scene' Macro to water on specific calendar dates**  
 Run Program #4 on the 1st, 7th, 14th and 21st of each month.  
**WATERCYCLE, RUN, 1; 7; 14; 21, 4**

Note that the character required between Date values is a semi-colon not a comma!!

**Example of a 'Watering Scene' Macro to water Every X days**  
 Run Program #4 every 3 days using 7/1/2014 as the starting date.  
**WATERCYCLE, RUN, EVERYXDAYS; 3; 7/1/2014, 4**

Note that the character required after the 'EVERYXDAYS' and the 'DAYS' value is a semi-colon not a comma!!  
Additionally the Year value must be the full year as in '2014' not '14'.

If desired you can craft up short run times via the 'Watering Programs' page and then schedule them to run multiple times per day simply by adding additional scheduled scene programs to the 'Insteon Scene Program' page, or by selecting a "Run Every" value as a start time option.

Please refer to the HydroFLASH user manual for more information and tips on watering scene macros.

## 8.0 Manual Insteon

Controlling Insteon devices directly can be done via this page. The available devices are listed with Thermostat devices at the top of the page. From this page you can turn on or off devices, set the brightness or dim level and control thermostats if configured via the 'Insteon Devices' page. Additionally you can manually activate any of your Scene macros from here, so with a single button press you can set the lighting for Movies, Early Morning lighting etc.

## 9.0 Insteon Devices

To add Insteon devices to your configuration, use this page to enter the device description, its unique address values, momentary control option and device type. When entering your devices it is best to assign Thermostats and SwitchLink I/O devices as the first devices in the list. These device types are always visible on the status display and it is best to have these visible at the top of the list. Devices that are located in the same room or have similar characteristics are best entered together in the list. This provides a basic grouping that you will find helpful when accessing devices in the list from the mobile application later on.

The following items are configured here:

- Enter the Description for the device. (Table Lamp, Front Porch Light, Pool Pump, etc.)
- Enter the Insteon Address value. The value is located on the back or side of each Insteon Device and is represented as a Hexadecimal Value. These address are unique for each device similar to a MAC address. There are two ASCII digits per field. Example: 1A 3B 45.
- Check the Momentary option box if you want HydroFLASH to automatically turn the device back off after a 3 second delay. This would be used primarily for use with a Insteon I/O linc type of module and used to operate a garage door or gate opener.
- Program Assigned Field. This is only an informational field indicating that a program is assigned to this device entry. In the event that you wish to delete a device you must first remove any programs that are currently assigned to control this device first. (Go to the Insteon Programs Page and delete any programs associated with the device you are deleting.
- Select the Device Type from the pull down list. HydroFLASH groups most devices into five types.
  - Dimmable devices (Lamp Linc type)
  - ON/OFF Only (Switch Linc type)
  - Single Output Relay and One Input Sensor. (I/O Linc)
  - Thermostats
  - Open/Close Sensor (Wireless)
  - Motion Sensor (Wireless)

See the end of this document for a list of the currently supported Insteon devices by model number.



## 10.0 Wireless Settings / Network Settings

This page is used to configure your wireless or wired settings. For wireless models the following fields are modified here as needed to configure HydroFLASH for your network. There are two pages here for the wireless models. One page is specifically for your wireless settings and the other is for general network settings allowing you to configure HydroFLASH for a fixed IP address if desired.

The following items are configured on the Wireless Network Settings Page:

- Select the Frequency Band. Should you have any difficulties using it in the ALL mode with your Access Point, set it to the BG mode.
- Enter the Desired Wireless SSID for your Network. This is **case sensitive** so be sure it matches your SSID on your Router or Access point. At reset this field is set to “HydroFLASH”
- Select your desired Authentication mode. WPA Personal includes WPA2 Modes. At reset this field is set to Open System. We always recommend using encryption modes. We do not recommend using WEP as the security is breakable.
- Select your desired Data Encryption value. This is router or Access Point dependent but we recommend TKIP+AES.
- Enter the passphrase for your Wireless Router or Access point. This field will always be blank when the page loads as to not reveal your password.
- The remaining fields are for WEP modes only.

The following items are configured on the Wireless TCP/IP or the Wired Version Network Settings Page:

- Select “Obtain an IP address automatically” to use DHCP. This is the default setting and will be adequate for most users. Select “Use the following IP address” if you want to enter a specific IP address on your network to use. This option would be for more advanced network users that are configuring HydroFLASH for direct access perhaps and need to ensure that their port forwarding router entries will always be able to access the HydroFLASH device from the Internet. When using DHCP it is possible to have HydroFLASH be given a different IP address in the event of a power outage or other network reset event. When using the cloud server connection this is not an issue. The IP address of HydroFLASH can always be viewed on the LCD display on the device.

When using a fixed IP address, the additional fields will need to be filled out correctly if not already filled in by your router. This would include Subnet Mask (Typically 255.255.255.0), Default Gateway (Your Router IP address), and DNS entries (Name Server IP addresses).

- The IP V6 Settings should remain unchecked unless you understand the use of IP V6 and advanced networking.

- Any changes on these pages will require a ReBoot of HydroFLASH to take effect. Remember that if you change Wireless network settings and can no longer communicate with HydroFLASH you can reset HydroFLASH to Open System and SSID of “HydroFLASH” using the reset access hole near the bottom right side of the WiFi module / Antenna. Please refer to section 2 for the detailed steps to perform a reset and connect to your wireless network.
- Once configured for your network you will not need to perform these steps again unless you make changes to your wireless configuration.

## 11.0 File Management

The File Management page provides access to your configuration files that are saved on the device and allows uploading configuration files if desired. The configuration files are located under a sub directory named “Config”. Here you will see the files that are contain your customized programs and system settings for HydroFLASH.

After you have finished configuring your system or perhaps make changes it is recommended that you download and save these files. You do this by clicking on each of the file names in the browser which should prompt you as to where to download them or will automatically download them to your computer download directory. We recommend zipping these up into a single file named to identify the HydroFLASH device and date in the event a restore is needed in the future. This way you can easily upload the files via the Upload File option on this page. The files are:

- SysSettings.json – Contains all of your System Settings.
- WPrograms.json – Contains all of your Watering Programs.
- IDevices.json – Contains all of your Insteon Device information.
- IPrograms.json – Contains all of your Insteon Device Programs.
- IScenePrograms.json – Contains all of your Insteon Scene Programs.
- IEventPrograms.json – Contains all of your Insteon Event Programs.
- IThermPrograms.json – Contains all of your Insteon Thermostat Programs.

Additionally you should download and save any Scene Files that you have created. These are located under the ‘Scenes’ directory.

This page also has a “View Current Log File” link that you can click to view the current activity log file. This can also be viewed via the Mobile App.

There are also two additional files used for the HTTPS SSL Web interface. These are automatically generated during system initialization and do not need to be archived. These files are located under the .cfg directory.

## 12.0 Upload Firmware

From this page you can upload new firmware for HydroFLASH as newer versions become available. There is a provision to upload a backup recovery image from this page also. Backup recovery images are located in hardware on HydroFLASH and are automatically loaded in the event the main HydroFLASH program was corrupted. This case is very rare however it can happen if you were uploading a new HydroFLASH software update and during the update the power was removed from the device. In this event the uploaded image would have been corrupted when it was being written to memory and on power up the backup image would be loaded. This would allow you to re-upload the main HydroFLASH image again successfully. Backup images preprogrammed at the factory however may be deployed for updates in the future. Typically the backup image is the same as the current HydroFLASH software image.

When uploading a new image, be sure you WAIT for the “Upload Complete – System is Rebooting” message before removing power to the device. The Upload Firmware process can take up to 2 minutes to complete.

It is recommended to use the ‘Update From Clouds Server’ button on this page. Now available in HydroFLASH version 3.0.0 and above.

This eliminates having to download firmware, unzip it, and then locally upload it to HydroFLASH. When the ‘Update From Clouds Server’ button is clicked, HydroFLASH will connect to our web server, check for the latest version and if it needs updating, it will update and reboot your device automatically. If you are running the latest version it will display a message indicating so after it checks your version against what is on the cloud server.

## 13.0 Rebooting

This page is used to remotely re-boot the HydroFLASH device. Any currently running watering programs will be canceled and valves will be turned off and reset. Currently active Insteon Devices will remain as they were before the reboot however will be reflected as in Manual mode on the status screen following a reboot (after a complete Insteon status query) even though they may have been

activated by a HydroFLASH program. Insteon programs will continue to function and turn off or off Insteon devices correctly following a reboot. For example if a light was turned on by HydroFLASH and is indicated in the status it was running under Program 1, following a reboot the light would show up as On and in Manual mode. Later if the program that turned the device on was scheduled to turn that light Off, it will at the correct time.

## 14.0 Mobile Applications

**T**here are Mobile Applications available for HydroFLASH for both iPhone and Android. These are included **FREE** as part of HydroFLASH and can be downloaded from the iTunes store or the Google Play store. By developing these applications in house we can closely control and test the complete system and provide application updates that are lock-step with the HydroFLASH controller software as additional features are added.

## 15.0 Troubleshooting

**W**hat could possibly go wrong? Well for the most part hopefully nothing! Usually the most difficult thing you might have to deal with is configuring your Wireless network settings. Sometimes there are other (Neighbors Routers) that have open guest networks active and it is possible that HydroFLASH will attempt to join their network, making it difficult to access your unit. We recommend being within a few feet of you access point when initially configuring HydroFLASH. You can also try removing the antenna during the initial configuration so the HydroFLASH will not be able to hear the other access points but will be close enough to yours to join. Then after configuring HydroFLASH for your network put the antenna back in place.

Getting everything correct in the settings between your Router and HydroFLASH can sometimes be a challenge but if you can't seem to get it to join your network email us at [support@hydroflash.net](mailto:support@hydroflash.net). We will do our best to assist you!

There is a HydroFLASH controller [Hardware installation quick start guide here](#). This goes over the physical installation procedures and information related to connecting your sprinklers, rain sensors etc.

**It is highly recommended that you configure and become familiar with HydroFLASH while having it conveniently located by your computer. This way you can get it all set up and then go install it at its final location.**

## 16.0 Supported Insteon Devices

- **Dimmers and Switches:**
  - #2477D – SwitchLinc Dimmer.
  - #2477S – SwitchLinc On/Off.
  - #2477DWH – SwitchLinc Dimmer (2 Wire).
  - #2477DH – SwitchLinc Dimmer High (High Wattage).
  - #2478D – SwitchLinc Dimmer (240V).
  - #2466DW – SwitchLinc Dimmer.
  - #2466SW – SwitchLinc On/Off.
- **Plug In Modules:**
  - #2457D2 – LampLinc Dimmer.
  - #2635-222 Plug-In On/Off.
  - #2634-222 Outdoor Plug-In On/Off.
  - #2456S3 Plug-In Appliance On/Off.
- **Wire In Modules:**
  - Outlet Linc Model #2472DWH – Wall Outlet Dimmer.
  - Outlet Linc Model #2473SWH – Wall Outlet Switch On/Off
  - In-Line Linc Model #2475SDB – Large Loads On/Off .
  - In-Line Linc Model #2475DA1 – Large Loads Dimmer.
  - In-Line Linc Model #2477Sa1 – 240V Large Loads On/Off .
- **Low Voltage Input/Output Controllers:**
  - I/O Linc Model #2450 - Low Voltage Relay and Sensor Input.

- **HVAC (AC and Heating Thermostats):**
  - Thermostat Model #2441TH – Insteon Thermostat with Humidity Sensor.
  - Thermostat Model #T2800 – Venstar 7 Day Programmable (Requires Insteon Thermostat Adapter #2441V).
  - Thermostat Model #T2900 – Venstar 7 Day Programmable Commercial (Requires Insteon Thermostat Adapter #2441V).
  - Thermostat Model #T2700 – Venstar Non Programmable (Requires Insteon Thermostat Adapter #2441V).
  - Thermostat Adapter #2441V – Used with Venstar 7 Thermostats.
  
- **Wireless Sensors:**
  - Motion Sensor #2842-222 – Trigger Events and Control other Insteon Devices.
  - Open-Close Sensor #2843-222 – Trigger Events and Control other Insteon Devices.
  - Hidden Door Sensor #2845-222 – Trigger Events and Control other Insteon Devices.
  - Water Leak Sensor #2852-222 – Trigger Events and Control other Insteon Devices.

Please contact us at: [support@hydroflash.net](mailto:support@hydroflash.net) if the device you have is not listed. It may already be supported or we may be adding support for it in the near future.