Control Panel software usage guide (v 1.012 beta)

(note: the pictures throughout the guide may not directly correspond with your server installation, however all features are covered)

1. **Connecting to the webserver**
   a. Turn on the supplied Innovation wireless server by applying power, an Ethernet cable as well as an HDMI cable attached to a monitor into the device. Please also confirm that the Ethernet cable is plugged into a router/switch where the external clocks will be in the same subnet. The router/switch will initially have to have DHCP set up (although this can be adjusted at a later time to static IP)
   b. After the device has fully booted (this process will take at least 30 seconds) the devices IP address will show up.
   c. Finally navigate to the following web address in any standard web browser: http://<device IP address>/

2. **Logging in for the first time**
   a. When you are first navigate to your server (like described above) a dialog like this should pop up on your screen:

   b. This interface will allow you to set up your admin user. Please keep in mind that the admin username need not be "admin". Whatever username you do put in the field will become the administrative user. Please also keep in mind that currently password cannot be recovered so please keep this password stored in a safe place.

3. **Logging into your web server**
   a. You should first be faced with a webpage similar to this after initial configuration:

b. The username and password will be whatever you set it up to be in section 2. Please note here the "**Lost password**" link will NOT work.

4. **Configuring your web server**

a. Now you should see a webpage similar to this:

b. This warning that pops up is in reference to a device cache-ing feature. A history of all the devices that were used on the previous instance are cached on the server and are immediately recalled. However to continue managing the servers the device information needs to be updated on the **Single** page under **Combo Board**. If you've understood this hit **Ok** and you will be presented with this window:

Software version:	0.7 alpha
Server time:	2016-07-19.09:47:49
Server time zone:	Asia/Tokyo
Server IP address:	192.168.0.11
Server IP allocation:	dhcp

You can adjust your server settings here:

Change IP of device: 192.168.0. _____

Change IP allocation protocol: _____ ⬍

[Submit] [Adjust time zone]

NTP server manager (if you would like to delete an NTP server clear out the correspondind text box):

| # | NTP server address |

[Add new NTP server] [Submit] [Refresh]

Edit server DNS settings (if you would like to delete a DNS server clear out the correspondind text box; Please keep in mind you cannot remove this servers IP address from the DNS registery):

| # | DNS server IP |

[Add new DNS server] [Submit] [Refresh]

c. On this page confirm that the following are correct:
    i. **Software version** number should match the version listed at the top of this guide. (if they are different please update the software on your server. The steps are described below under "**Updates**" or section 8)
    ii. **Server time** should also display the correct time. Please check that it is.
    iii. **Server time zone** should also be correct.
d. If any of the above were not correct (specifically Server time/Server time zone) please correct these by adjusting them by clicking "**Adjust time zone**" and adjusting the NTP servers.
    i. To adjust the server's NTP servers first click "**Refresh**" under "**NTP server manager**" to show what NTP servers are already sync'ed on the server.
    ii. Then edit the entries as needed.
    iii. Updates to the software are discussed in its own section (section 8).
e. You can adjust the IP address of the clock under "**Change IP of device**". Please keep in mind here that this field is not checked (as of yet) and it will permit you to enter entries that will make your server in-accessible. This option is also only enabled on servers that are on static IP.
f. You can also adjust the IP allocation protocol (from DHCP to Static or vice versa) using the "**Change IP allocation protocol**" option.
g. There is also an option to edit this installation's DNS servers at the bottom. Simply hit "**Refresh**" under "**Edit server DNS settings**" to get a current listing of

DNS servers on the server and add and edit these listing as you see fit. Finally hit "**Submit**" when this is complete to apply final settings.

h. It is also suggested that you immediately (if this is the first time you are opening the webpage) that you set up a default reply SMTP server. This is discussed further in section 5G.

5. **Managing Accounts (Account)**

a. Click on the "**Account**" tab and this will navigate you to the following page:

b. You can (and should) adjust the password for your Innovation Wireless server installation for security purposes by clicking "**Change password**". There is also functionality to log out of the message board software by clicking "**Log out**".

c. You can add users to your installation if you click "**Add user**" button. This is particularly helpful if you want to grant people only specific types of access to the webserver. When clicked a user registration window will pop up (displayed below). Please keep in mind that not only is the "**Email address**" field not necessary, but it serves no purpose. Also note that once you register a user you

will be immediately logged into that users account.

d. The "**Refresh**" button will bring up a listing of each user's access permissions (displayed below). Place a check by a permission to grant the permission to the user and remove a check under the permission to revoke it. Putting a check under the "**Remove**" column and hitting "**Remove selected users**" will delete those users from the installation. For any modifications to the permissions to be put into effect please hit "**Save Permissions**".

Manage user permissions:

Remove	Username	IP	NTP	DNS	User permissions	Mail accounts	Domains	SMTP
☐	admin	☑	☑	☑	☑	☑	☑	☑
☐	kevin	☐	☐	☑	☐	☑	☐	☐

| Add user | Remove selected users | Refresh | Save Permissions |

e. Click "**Add email address**" in order to add a new email address to your local environment. This will primarily be used for managing messages on message boards without relying on outside IMAP servers. Please note that on these local email addresses any device attempting to access them must have the server's IP address inside of their device's local registry.

f. Extra domains for those email addresses can also be added by clicking "**Add domain**".

g. There is also a section (which must be filled out in order for some functionality described in this document to work) that allows you to edit the SMTP credentials that the server uses by default when sending out email messages. Editing this information is pretty straight forward, simply enter the proper SMTP server credentials into the respective fields and hit "**Test credentials**". If the server confirms that it can connect to the SMTP server then the credentials will be saved automatically. To recall fields that have already been saved click "**Refresh fields**". (picture displayed below) Please note that "**Server address**" as noted by the warning on the webpage must be preceded by either 'smtp://' or 'smtps://'.

Manage reply email/SMTP server (for non-local use. Local emails will receive replys from 'test@mail.local'):

Username:	
Password:	
Server address:	
Port:	

Test credentials

Save fields | Refresh fields

6. **Managing Combo Boards (Single)**

   a. Click on the Combo Boards tab and navigate to "**Single**". This will allow you to manage Combo Boards on a one by one basis.
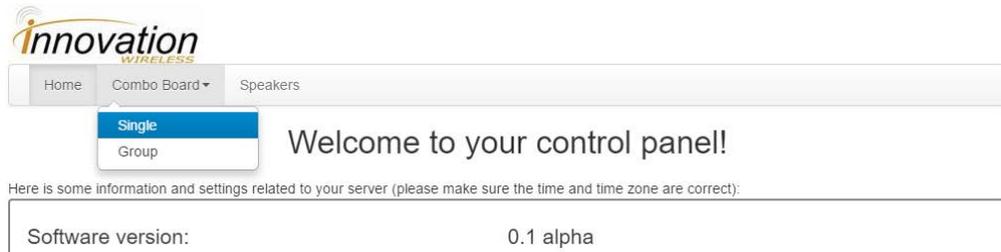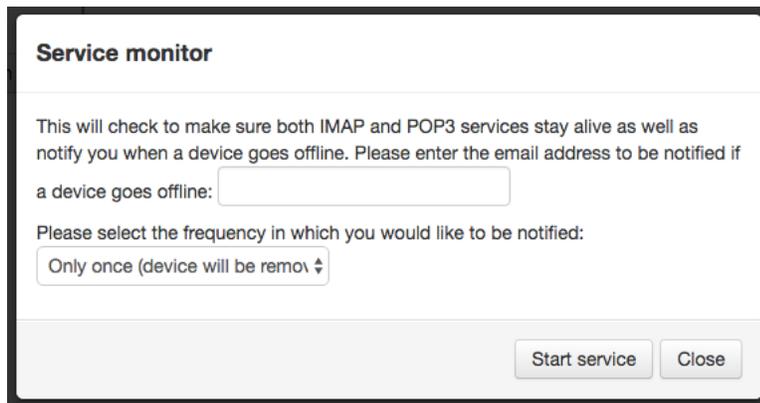

   b. You should be brought to an interface like this (if this is your first time using the web app there won't be anything listed under **Device List**, otherwise a listing of devices from the previous instance will appear):
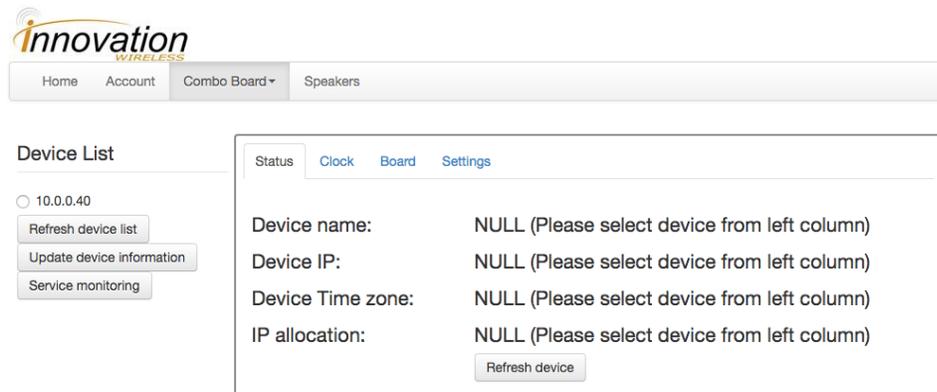
   c. Hit "**Refresh device list**" to view all of the Combo Boards in your network. (This applies to all the buttons on this interface: please only hit the buttons one time, if the server is computing your request a red "Loading…" label will pop up in the top left corner of the screen) This step is not necessary if this isn't your first time opening this page and you haven't added or removed any devices from your local sub-net.

   d. After the devices have been pulled up hit "**Update device information**" to have the data on the devices be updated (this step is necessary to manage your clocks properly).

e. The "**Service monitoring**" button allows you to monitor whether or not devices listed under your "**Device List**" have gone offline. It will also allow you to monitor if your POP3/IMAP listeners (in the "**Email**" tab) have gone offline. If the monitoring service discovers that there was an error and one of the listeners went offline it will restart those services. This step is mandatory if you would like to use the email related features (such as the POP3/IMAP listeners). Clicking the button will bring up a dialog window (displayed below) that will simply query you for an email address to be notified when a device goes offline and a notification frequency. The monitoring service can be stopped by clicking the button again (also displayed below). Warning: if you select "**Only once**" for the notification frequency then you will only be notified once that the device has gone offline. Once a device goes offline on this setting it will be removed from the "**Device List**" and will only re-appear if "**Refresh device list**" is hit again.
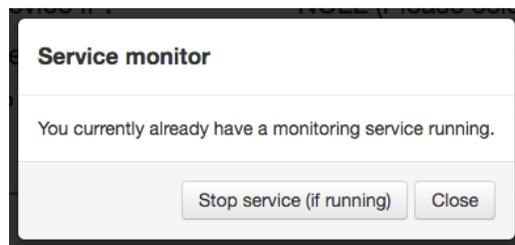

f. Under "**Device List**" you will see all the devices that are in your local subnet (the same subnet that the Innovation wireless server is). Click the radio button next to any device to manage it. For device information click "**Refresh device**". It will look something like this:

g. Once you have a device selected you will be able to manage many of its settings here. To adjust clock settings click on **Clock**.

h. Similar to your server settings, you can also adjust the individual clock NTP server settings here. Simply click "**Refresh**" to see an updated listing of the NTP servers currently on the Combo Board and edit as you would need.

i. You can also adjust the clock output format by adjusting "**Clock output format**", "**Top color**" and "**Bottom color**". Adjust until you are satisfied with the way your clock looks (These settings will be saved on the clock).

j. Finally similar to your server settings you can adjust the time zone of this Combo Board by clicking on "**Adjust time zone**".

k. You can send formatted messages to selected clocks under the "**Board**" tab.

l. These settings should be pretty self-explanatory. Text that is put in the "**Top**" field will be displayed on the top of the Combo Board and same with the "**Bottom**" field. You can also save messages that are often used as a "Choice Message". Simply enter the settings you would like to have saved and easily recalled then hit "**Save as choice message**" and a dialogue window will pop up with a way to give a name to the settings you've inputted as well as the option to update a previously saved choice message. If you'd like to recall a choice message simply select in under "**Load choice message**". Finally to delete a previously saved choice message simply click "**Delete choice message**" and select the choice message you'd like to delete.

m. The "**Clear**" button will remove any messages sent to the screen via the "**Submit**" button and put the clock displays back on the screen.

n. The last tab, named "**Settings**", will allow you to set miscellaneous settings for the Combo Boards.

o. Items on this page are also self-explanatory. To adjust the name of the device use "**Change name of device**" etc. Please keep in mind the following:
   i. You can only adjust the IP address of a device with static IP. Please also note that this field is not protected. It will allow you to put in entries that will make your device in-accessible.
   ii. Brightness settings are saved on the Combo Boards after being set once.
   iii. When changing to static IP allocation please note that these fields are not protected either and it will allow you to input information that may make your device in-accessible.

7. **Managing Combo Boards (Group)**
   a. Click on the Combo Boards tab and navigate to "**Group**". This will allow you to manage Combo Boards on a grouping basis.

   b. You should be re-directed to an interface like this:

   c. If you would like to add a new grouping to your server please click "**Add a Group**". Consequently, if you would like to delete a group please select the group under "**Group List**" and hit "**Delete Group**".
   d. For adding a subtracting devices to your group please click "**Refresh IPs**". This will take an updated listing of IP addresses of Combo Boards (as listed in the "**Single**"

tab) and list them under "**Update devices for this group**". From there just select and de-select the IP address of the devices you'd like to group.

    i. Please keep in mind that if you would like to use the "**Refresh IPs**" button you must first go to the "**Single**" tab and click "**Refresh device list**".

    ii. Also keep in mind that you must do this step first in order for any actions related to the groupings will work properly.
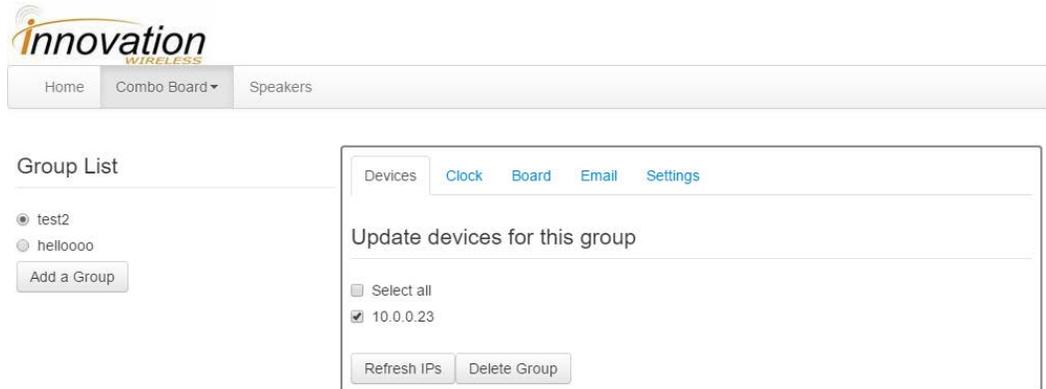
e. The "**Clock**" tab here is a stripped down version of the "**Clock**" tab you can view in the "**Single**" tab under Combo Board. It will allow you to adjust the clock output format for all the devices in the group, adjust the time zone for all the devices in the group as well as add one NTP server to all of the devices in the group.
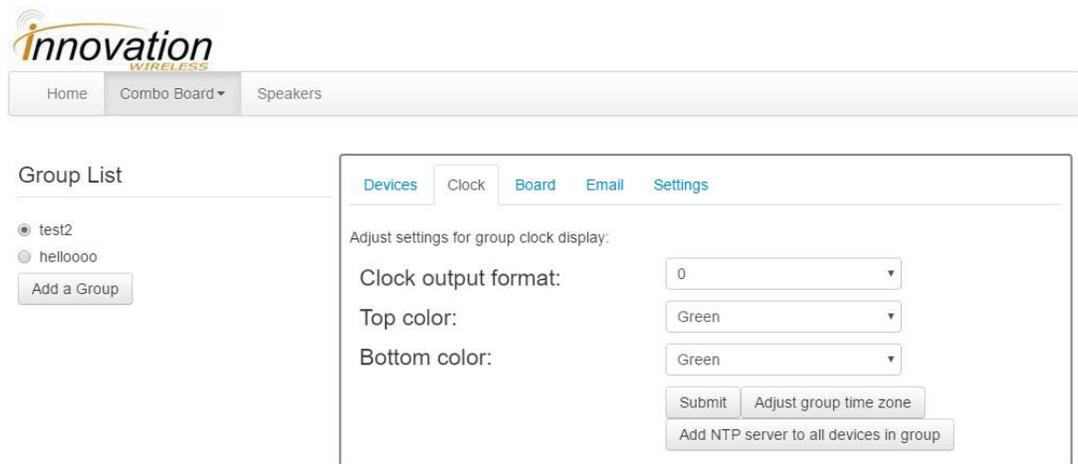
f. There is also a "**Board**" tab similar to the "**Board**" tab in the "**Single**" tab under Combo Board. The features presented here are identical to the features in the "**Single**" tab, the only difference being that this will broad cast to a group. For more information on this please scroll up to the "**Single**" tab explanation of the "**Board**" tab.

g. The "**Settings**" tab will allow you to adjust many settings related to the Group. If you would like to change the name of the group please use the "**Change name of group**" field. If you would like to change the clock brightness of the whole group please use the "**Adjust brightness of clocks in group**" field. And finally if you would like to change the IP allocation protocol for the devices in the group please use the "**Change IP allocation protocol for group**".

   i. Please keep in mind that when changing the "**Change IP allocation protocol for group**" for static IP the fields that show when you click "**Submit**" are unprotected and it will allow you to input information that may cause all of the devices in the group to become in-accessible.

   ii. Please also keep in mind when using "**Change IP allocation protocol for group**" there may be a significant delay in the devices all coming back online as all the devices are rebooted at this time.

h. The "**Email**" tab will allow you to set up an emailing protocol for the devices in the currently selected group. Basically what this means is that you will be able to send emails to a specified address and have actions occur on your clocks (Actions similar to the ones displayed on the "**Board**" tab). When you first select the "**Email**" tab or when you switch groups please always first hit "**Refresh fields**" to get the latest information. Below I have posted two examples of what your configuration settings should look like. All the fields should be self-explanatory. The "**Username**" field is where your username goes etc. The "**Access code**" field will essentially be the password for the email protocol. This string will need to be in the subject line for the server to take any actions. The "**Local**" field should be set when the email address you are using is locally hosted (refer to the "**Account**"

tab). Remember that all field values (as shown below) must be enclosed in quotes. Please also be careful when clicking "**Start server**", if there is already an email service running it will say "**Stop server**". The email format should be as follows:

> To: <insert username>
> Subject: <insert access code>
>
> top:"<insert message to be displayed on top>"
> bottom:"<insert message to be displayed on bottom>"
> color:"<0,1,2 for Green, Red, Orange respectively>"
> speed:"<0,1,2,3 for slow to fast>"
> strobe <start strobe light if applicable>
> clear <clear any messages and show clock>

i. Please note that all of these fields are extremely strict! Please use the same exact format as is listed in the two images below.
ii. The email format is case sensitive (however the first letter can be capital case).
iii. One email address CANNOT be used for two groups running simultaneously.
iv. One email address should not be used for both POP3 and IMAP (for example most Gmail addresses will allow for both POP3 and IMAP, please do not use this).
v. If IMAP is not working please check your server time or the time on the client you are sending emails from. If these do not match up it will not work.
vi. If you change the IP address of a device while it is running under an email service it may break the email service.
vii. Please use plain text ONLY when sending emails.
viii. Please do not touch the mail inbox while it is being used by the email service (it is good practice to clear the mail box before you begin to use this program).
ix. The mail listener service will not start if there is no monitoring service running. (Please refer to 6e in the guide)
x. Yes the 'imaps://' and 'pop3s://' are required for the "**Server address**" fields (for non-ssl encrypted servers remove the 's').

xi. Please also note that the allowed character limits are as follows: email subject lines cannot be more than 250 characters, email body's cannot be more than 500 characters.

i. Finally there is a field (displayed below) called "**Polling frequency**". It is highly recommended that you adjust this to higher than "**No delay**" as with this setting your pop3/imap server will be bombarded with request related packets.

8. Updates

    a. If you find that the software version you are running and the version of this guide are miss matched then you require an update! Please navigate to the "**Home**" tab and check under "**You can adjust your server settings here**". You will see a button labeled "**Updates**".


    b. When you click "**Updates**" you should be brought to the updates page (displayed below). You must first check that there actually is an update available by clicking "**Check for updates**". Based on the result of this query you will either be able to hit the "**Update**" button or not. If the update button is no longer shaded out then you can issue an update, otherwise no update is needed. Before actually clicking update make sure that it is okay for the server to be rebooted at the time (this software update will require a reboot in order to be applied). Please also read over "**Message from server**" before updating as it may give some insight about the update. Once you are ready to update hit the "**Update**" button. A progress bar will appear signifying how far through the update the server has gotten. Make sure the server doesn't lose internet connection or power during the update. Once the update is complete the server will prompt you to power cycle

it. Once you issue a reboot the newer software will be installed!
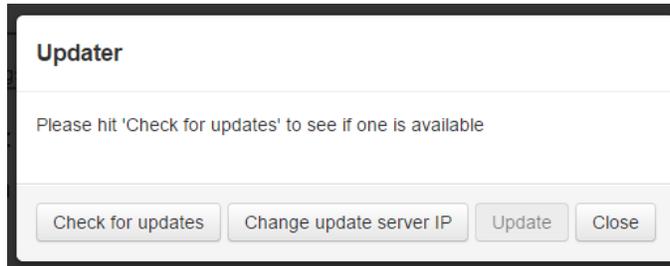
c. You can click "**Change update server IP**" to actually adjust the server that is queried by the Innovation wireless server when fetching updates. The default IP address is: "72.194.87.76". This should already be set on all servers but **IS** subject to change. If when you click "**Check for updates**" the server stops responding this is probably because either the updates server is down or the updates server has acquired a new IP address. Please contact Innovation Wireless for the new IP address for the updates server.

d. Finally the "**Clear all settings**" button (displayed below) will allow you to clear all settings your server. Use this button to return your server to factory settings (after the reboot you will have to run through section 2 of this guide again to set up your admin user).

e. **WARNING:** most of the changes signaled in this guide are permanent changes and cannot be undone. Please exercise caution when using these functions. Also when the server requests you to reboot the machine please promptly do so as the server's functionality after some of these functions without a reboot are undefined and may act strangely. It is highly suggested to create multiple users (instructions listed in section 5D) and disallow permissions to this portion of the software so that these functions are not accidentally used.

9. **Problems?**

a. It's always best to just give the Innovation Wireless server a reboot!