Goal of 2.5.0

This latest Control4® Operating System Release 2.5.0 (also known as OS 2.5) is a great new release. We are delighted to introduce two new lines of lighting products: New Generation Wireless Lighting and Panelized Lighting products that will take you into the future of advanced lighting. Our new Wireless Music Bridge lets your customers choose their favorite streaming audio to a zone from their smartphones and tablets that support AirPlay®, Bluetooth®, or DLNA. What’s more, we have some new tools to help dealers with day-to-day maintenance and deployments.
New Hardware
New Hardware Agenda

- Wireless Music Bridge
- Next Generation Wireless Lighting
- Panelized Lighting
The party

Thirty of your favorite friends are over, the night is young and everyone has a story to tell.

While your friends like you, they’re not always fond of your choice of music…

Your friends connect to your home and the party starts rocking!
Long day at the office and you’re almost home.

You’ve been listening to your favorite podcast over your car’s audio system.

You pull into your garage, get out of your car and immediately connect your podcast to your home audio system.
The Bridge’s beauty…It’s simplicity!

- Connects virtually any smart device to your audio system
  - AirPlay Enabled
  - Bluetooth Enabled
  - DLNA/uPnP Enabled
- Metadata comes directly from the user’s device
- Phone, Tablet or Computer automatically start your audio system immediately once streaming starts
- No tedious programming needed!
- Fast Installation
- Users don’t have to learn a new system
Your Music...Your Way.

If you listen to it on your phone or tablet, you can listen to it in your Control4 audio system...

...where ever you are in your home.
Music from virtually any device

With support for AirPlay, Bluetooth or DLNA, the Bridge supports wireless streaming from virtually any smart phone, tablet, PC or Mac.
Wireless Music Bridge

Features

• Full integration with Control4 touch screens and on-screen displays, including transport control, meta data and cover art
• Ability to automatically turn on one or more audio zones within the Control4 system simply by streaming audio to the Wireless Music Bridge
• Multiple units can be added to a single system allowing every family member to have their own assigned Wireless Music Bridge
• AirPlay for all iOS and Mac OSX devices
• Bluetooth Advanced Audio Distribution Profile (A2DP) mode support for streaming music from Bluetooth enabled devices
• DLNA support for Android and Windows based devices
• Stereo analog and Digital Coax outputs provide a common method for connecting to a Control4 amplifier, audio matrix switch or controller
• SDDP enabled for easy dealer set-up and installation
• 10/100 Wired Ethernet or 802.11 Wireless Ethernet options
The Bridge’s Scenarios
All for one and one for all !!!

• Key items to remember
  – Only one stream at a time
  – One Bridge per simultaneous stream

• Unique device name allows for various set-ups
  A. Individuals can have their own device in their space (i.e. Johnny’s Bridge)
  B. Bridge can be defined by a room (i.e. Office Bridge)
  C. Bridge can be associated to space (i.e. Outdoors)

Or  D. All of the Above
The Bridge Benefits

Why not use an AirPort Express?

• The Bridge provides
  – Seamless integration into the Control4 System through IP Control
  – Android/Windows Mobile/Windows/OSx support through multiple wireless technologies
    • AirPlay Certified
    • Bluetooth Certified
    • WiFi Certified
  – Metadata supported through device connection
  – Multiple devices easily integrated into the Control4 system
The Bridge Benefits
New Driver Features

• Auto Room(s) Select
  – Automatically starts the Audio System and selects the Bridge in any room chosen

• Rooms(s) Override
  – Disabled by default, the Bridge will NOT overtake a source in a selected room. When enabled, the Bridge will overtake an audio source

• Auto Room(s) Off
  – After a set number of minutes, Systematically cycles through all “Auto Room(s) Select” and turns off rooms if the Bridge is the selected source

• Automatic Firmware Updates
  – Enabled by default, the Bridge will automatically check for firmware updates whenever director is restarted and the WMB driver is loaded.
Device Name
Independent of the driver name, provides the name the user will see on the Phone, Tablet or Computer. Appended with –BT for Bluetooth differentiation

Media State/Source/Metadata
Provides the Installer with details on the current state of the Bridge

Play Time Interval
Sets time in which Navigator screens are updated with elapsed time information

Output Volume
No user configurable setting. Only provides debug information to tell the installer what the current output volume level defined by the AirPlay or DLNA device is set to. Bluetooth always represented as 100.
The Bridge’s Property Page

New Features

**Auto Room(s) Select**
Select one or more rooms that will automatically start the Bridge as a source. This setting works in conjunction with Room(s) Override and Auto Room(s) Off.

**Room(s) Override**
Allows the installer to overtake the currently selected source in a room defined by the Auto Room(s) Select property. This setting only works during the start of a streaming session.

**Auto Room(s) Off**
Set in minutes, can be configured to turn a room off immediately (0) or up to 24 hours (1440). When set to 1441, the Auto Room(s) Off is disabled.

**Bluetooth Module**
In situations, such as rack mounting, the dealer should opt to disable bluetooth, so that connectivity and audio quality are not an issue.

**Firmware Updating**
Automatic Firmware updating is enabled by default. A firmware update occurs if a new firmware version on on the Control4 server AND director is restarted/WMB driver is loaded.
The Bridge’s Property Page (cont)

**Network Settings**
Provided to the installer for debug and information purposes only. These settings can be configured via the WMB IP address through a browser.

**Wi-Fi Country Code**
This setting must be set to the country that the WMB is located in. This allows for optimal coverage based on regulatory requirements in a given region. Once set, the WMB will automatically reboot.

**Debugging Level / Mode**
Used by developers, this provides informational details, through the Lua tab, on the current status and logging details. These settings should not be configured unless asked to do so by a Control4 technician.
**OUTPUT_VOLUME_LEVEL**
This variable may be used for conditional programming when the volume level changes. This is Bridge specific and not Room specific

**OUTPUT_MUTE**
This variable may be used for conditional programming based on the mute state changing.

**STREAM_SOURCE**
This variable indicates whether the stream source is Airplay, Bluetooth or DLNA. For conditional programming use the numbers 1, 3 or 5 according to the following table.

1 = DLNA
3 = Airplay
5 = Bluetooth

**PLAYING**
Boolean value which indicates whether the stream is currently playing.

**BLUETOOTH_REMOTE_Name**
This variable holds the name of the currently connected device if streaming via Bluetooth. Remote device names longer than 15 characters will be truncated. This variable can be used to provide conditional programming based on which Bluetooth source device is connected.
A Bridge to …

Challenges you need to be aware of

- **Bluetooth**
  - Line-of-Sight technology up to 10m
  - Rack Mounting ≠ Bluetooth
    - Installers must be aware Bluetooth range is limited
- **WiFi**
  - You know this, but when possible use Ethernet
  - Bluetooth and 802.11b use the 2.4GHz spectrum
How many phones or tablets can connect to a Wireless Music Bridge at any given time?
One.

Do I need a Wireless Music Bridge for each iPhone or Android phone in my home?
No. The Wireless Music Bridge can easily link to multiple phones, but will only play from one phone at a time. If your customer wants to stream from multiple phones or tablets at the same time, you should specify and install multiple Wireless Music Bridges.

How many Wireless Music Bridges should I install in a home?
You should install the number of Wireless Music Bridges equal to the number of people in the home that want to stream music at the same time. For example, if there are four family members in the home who want to stream at any given time, then you should consider installing four Wireless Music Bridges.

Can I give each Wireless Music Bridge a unique “name” so that it’s easy to tell them apart?
Yes. In the driver Properties you can specify the name that is displayed over AirPlay, DLNA, and Bluetooth, as well as in the Control4 Navigators.

How do I control volume when using the Wireless Music Bridge?
The Wireless Music Bridge is simply a “bridge” from your smart phone or tablet to the Control4 system. Because of this, volume is controlled in two places independently....
The Bridge FAQs

Connectivity

What is the connection range for Bluetooth devices?
The Wireless Music Bridge is a Bluetooth class 2 device, so the expected range for Bluetooth is about 10m. Actual results will depend heavily on placement of the Wireless Music Bridge, house construction, and other wireless interference in the area.

Is there a limitation on the number of devices that can be paired with the Wireless Music Bridge?
Only one device can connect to the Wireless Music Bridge at a time. In Bluetooth mode, the user must disconnect from the Wireless Music Bridge in order to connect another Bluetooth device to the same Music Bridge.

If a customer wants to use Bluetooth, where should I install/mount the Wireless Music Bridge?
Bluetooth requires a line-of-sight placement. Therefore, it is imperative that the Wireless Music Bridge is installed in the same room as the user is located.

When using DLNA, how does a customer connect and stream to the Wireless Music Bridge?
DLNA can be used by Windows and Android based machines. On windows, a playlist can be pushed to the Wireless Music Bridge by right-clicking on it and selecting the Wireless Music Bridge. For Android systems, use the connection icon provided by your phone/tablet.

What should I consider if I need to install the Wireless Music Bridge using WiFi instead of Ethernet?
Placement and location of wireless access points must be considered when using the Wireless Music Bridge in WiFi mode. Audio quality can be diminished if inadequate wireless coverage or bandwidth is not present when using the Wireless Music Bridge.
Next Gen Wireless Lighting

Adaptive Phase Dimmer (120V, 240V & 277V)
Configurable Keypad (120V-277V & 240V)
Keypad Dimmer (120V, 240V & 277V) (120V-277V & 240V)
0-10V Dimmer (120V-277V & 240V)
Fan Speed Controller (120V Only)
Forward Phase Dimmer (120V Only)
Switch (120V-277V & 240V)
Auxiliary Keypad (120V-277V)

Training: www.control4.com/university
Panelized Lighting

Terminal Blocks Shipping Now

Panels Shipping Now

Modules Shipping Now

Training: www.control4.com/university

Must have completed training in order to have modules shipped to you.
Panelized Lighting & OS Versions

- Panels & Modules were available in OS 2.3 and 2.4 for planning purposes.
- Only OS 2.5 should be used to install and commission these products.
- Wired keypads are not available in OS 2.5. These will be part of the OS 2.5.1 release which will release when those products begin shipping in August.
New Software Tools for Dealers
New Software Tools for Dealers

• Driver Search interface
• Controller and ZigBee Coordinator replacement
• Display ZigBee signal strength
• ‘Disconnect all ZigBee devices’ option
• Composer installs required 3rd-party software libraries
• Alphabetic sorting added to various existing agents
• Keypad engraving report and export engraving order
• Lighting defaults
Driver Search

- Full-text indexing of most driver fields (name, model, creator, manufacturer, and so on) allows dealers to enter any information that he/she knows in the search field and get quick results.
- Driver search is not constrained to displayed field types or filters.
- Predictive type-ahead entry of search terms.
- Search across local and Online Driver Databases at the same time or separately.
- Select Info… (right click on the search result) to get additional information about the driver, including version and creation/modification dates.
- Select Download Driver (right click on the search result) to download a driver from the Online Driver Database to your local drivers directory without adding it to the current project.
- Use Device Type and Manufacturer filters to further hone in on search results.
ZAP Coordinator Replacement

• Prior to OS 2.5 – PAINFUL and Time Consuming
  – Devices leave current mesh (manual or disconnect through Composer)
  – Devices join new mesh

• Now, with OS 2.5 – EASY and FAST
  – Modify ZigBee configuration
  – Change ZAP Coordinator
  – Wait ~10 minutes as devices rejoin mesh automatically; sleepy devices (battery-powered) may take longer to rejoin
ZAP Coordinator Replacement

- Update system to OS 2.5 and wait for ALL firmware updates to be completed
- The controller currently serving as the ZAP coordinator must be online and operational
  - This enables us to clear the mesh parameters from that device.
  - Do not delete device from project before migration
- Edit ZigBee Configuration -> Manage Servers… -> Modify…
- Wait 5-10 minutes
ZAP Coordinator Replacement

- **Refresh…**
  - Update the display to see operational status of the ZigBee Server and ZAP Coordinator

- **Network Tools – ZigBee Network**
  - Monitor the online status of the ZigBee devices
ZAP Coordinator Replacement

• WARNINGS
  – Current ZAP Coordinator should be Online
    • This enables the system to clear the mesh configuration from that device
    • If for some reason this is not possible (for example, an RMA situation), you must ensure that the device is not brought back online at this location. If this were to happen, it is very likely that you would experience mesh conflicts.
  
  – Do NOT remove Controller before migrating ZAP Coordinator
    • This causes the mesh information to be LOST
  
  – HTC and Media Controller can no longer be ZAP Coordinator
    • They will continue to work if previously configured; but we recommend you migrate the mesh to a new generation Controller as soon as reasonably possible after updating to OS 2.5.
  
  – RECOMMEND: HC-800 and HC-250 as ZAP Coordinator
ZigBee Signal Strength

To more easily determine the strength of the ZigBee network, we have provided the ability for you to determine the ZigBee device signal strength (an indicator of how well it can hear and talk to its neighbor).

• Network Tools, ZigBee Network interface using a 0-4 bar indicator.
ZigBee Signal Strength

- Signal Strength displayed when a device joins the mesh by blinking LEDs on the device after joining.
  - 0 bars – won’t join
  - 0-1 bars – LED blinks red
  - 2 bars – LED blinks yellow
  - 3-4 bars – LED blinks green

- Using the Network Tools, ZigBee Network interface, the dealer can cause all connected ZigBee devices to blink and show the ZigBee Signal Strength LED color for a set amount of time.
ZigBee Signal Strength

• When you identify devices that have inadequate signal strength, you can evaluate your options for strengthening the signal, which may include one or more of the following:
  – Change the location of or add a ZigBee Access Point
  – Add additional neighbor device(s) to improve the routing path
  – Replace device(s)

• IMPORTANT! Only the more recent Control4 lighting and keypad ZigBee devices will blink when the ZigBee Signal Strength is to be displayed.
  – The original Control4 lighting devices and keypads (those with mini-app images) will report their signal strength through Network Tools, but will not blink.
  – Third-party ZigBee devices do not currently report their signal strength or blink.
**Disconnect ZigBee**

- Added a ‘Disconnect ZigBee’ to Connections | Network interface
Composer Installs Add-Ons

Composer requires some third-party software libraries in order to function properly. The following changes apply to the installation of Composer 2.5.

- The MS Visual C++ 2005 redistributable will be automatically installed—this is required for the operation of Virtual Director.
- The MS Visual C++ 2012 redistributable will be automatically installed—this is required for the operation of certain capabilities of Composer.
- .NET 2.0 is no longer required for the operation of Composer Pro 2.5. We no longer check for and prompt for the installation of .NET 2.0.
- .NET 4.0 is required for the operation of Composer Pro 2.5. We check for and prompt the Control4 installer to install this required software before we allow Composer Pro 2.5 to be installed.
- MS Reporting 2012 redistributable is automatically installed—this is required for the lighting and keypad reports.
Alphabetic Sort – Various Agents

To improve the ability for the dealer to maintain systems, we added the ability to alphabetize entries in the following agents:

- Announcement Agent
- Custom Button
- Lighting Scenes
- Wakeup

- All other agents already have the ability to alphabetically sort items.
Engraving for the New Wireless Lighting and Wired Keypad products can now be entered into Composer Pro when setting up the system.

Once entered, a Keypad Engraving Report can be printed and reviewed with the customer.

After approval, the engraving order can be exported to an XML file (Export Engraving Order) which can be uploaded to the Control4 online store. XML uploading feature to the online store will be operational by the end of June.

- Dealers outside the U.S. and Canada: please contact your distributor or inside sales representative (ISA) to determine the proper process for processing engraving orders.

To generate the Keypad Engraving Report or export the order file, click on the **Tools** menu and select **Reports**. In the Reports window that pops up, select either **Keypad Engraving** or **Export Engraving Order**.
Upload Engraving to Web Store

Place an Order

Upload Keypad Xml Order

Chaston Home
- Master Fan
- Switch
- Fan
- Light
- Med-High
- Med-Low
- Low
- Forward Phase Dimmer
- Switch
- Fan
- Shower

Complete: 50%

Create Saved Order

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Lighting Defaults

- Configure default button LED colors and Panelized Lighting modules settings
- Every new device added to the project inherits those settings
Maintenance, Improvements, and Notifications
Lighting Scenes

- Starting with OS 2.5, the legacy Lighting Scenes agent is deprecated
- Advance Lighting Scene agent should be used for all new projects
- If the legacy Lighting Scenes agent is not already in a project, it will not be possible to add it.
- Existing legacy scenes will continue to work but if the agent is removed, it won’t be possible to add it back to the project.
- Next Gen Wireless Devices cannot be added to Legacy Lighting Scenes
  - Convert legacy scenes to Advanced Lighting Scenes prior to updating a project with the Next Gen devices
Important Bug Fixes after OS 2.4

• TT#45489 - Fixed a navigator memory leak that was found while using Tuneln. Resolved in 2.5
• TT#45534  Fixed a bug where NTP only performs a gross time sync once when you first update your system. This is causing a time drift of the controller over time. Resolved in 2.5
• Fixed an issue where remotes could receive a “low battery warning” at times when the battery wasn’t low.
• TT#46298 - TSTAT update issue when performing an embernet update. 2.5. now updates to new residential firmware instead of hospitality.
• TT#43506 – HC-1000 audioserver offline after update to 2.4. Resolved in 2.5.
• TT#46368 – HC-200, HC-300, HC-500 will not play internet radio after update to 2.4. Resolved in 2.5
Sony STR Updates

• The Sony STR Receiver will be updated to OS 2.5. This update will include some minor bug fixes, but mostly is required to align with the OS 2.5 release. Specifically, MyHome Anywhere Access will now work on Sony STR receivers that have upgraded to OS 2.5 based software. The Sony STR Receiver, running as a primary controller, now supports Anywhere Access.

• The Sony STR Receiver will lag the Control4 update process by one or two weeks. This time is needed for Sony to populate the build on their update system. Remember that the Sony STR Receiver is updated separately from the rest of the Control4 system (explained in Support Knowledgebase Article 745).
• **Wireless Music Bridge and Default Room**—If you are running the Wireless Music Bridge output through your controller and you do not have a default room setup on the properties page, you will have to manually select the Wireless Music Bridge though navigator in order for it to stream audio to the appropriate room.

• **Announcements and Switching HDMI Sources**—If you have an announcement that should play over HDMI (for example, to a TV), and you are watching another source (BD, DVD, satellite) on the TV, the announcement will play, but the path won’t switch back to the source you were watching. The workaround is to configure a popup on the controller in addition to the audio announcement. This forces Control4 to change the audio AND video source to play the announcement, and they will both be switched back after the announcement so that the user can seamlessly continue to watch their original source.
• **USB Restores on controllers**—Control4 has always recommended that dealers use the same version of Composer as the OS version of Director when configuring a project. If you are using USB Restore or a Factory Image reset on a controller that will be running Director, you will want to create the new project using the matching version of Composer and then update it to the most current version. Beginning with OS 2.5, Composer 2.5 will not be able to create and add controller drivers to projects with Director versions earlier than OS 2.2.1.

• **iTunes**—If you are using AirPlay, in iTunes > Preferences, make sure you enable remote control of iTunes via AirPlay for iTunes to play music and podcasts through your AirPlay device.