IMC-170™ Wi-Fi Controller Quick Reference Installation Guide

The Converging Systems IMC-170™ in an intelligent wireless controller for the Dynamic Mounting family of actuator-driven wall mounts. The controller implements legacy-based IR control (out-of-the box) as well as the CS-BUS command for control of the product using IP (Internet Protocol). IP connectivity allows WI-FI connectivity and control of the IMC-170 from a wide range of home automation/lighting systems (Elan, Control4, Crestron, Key Digital, AMX, RTI, Vantage, etc.) and even smartphone through a simple web page. Enhanced connectivity with Lutron lighting panels is also available through an accessory peripheral (e-Node™) connected to one of the CS-Bus Ports on the IMC-170. *Full Installation Manuals are available for e-Node models can be found at* http://www.convergingsystems.com/lighting_install_library.php

INITIAL SETUP (using IR remote)

Step 1

Initial Testing of the System (using IR)

Utilize the small IR remote provided within your kit to initially test and control your system. See the reference below for IR buttons that will initially operate.

↑ Move the mount to the topmost position
- Mount cannot be driven higher than the set limit
- Comes set for max top position
- Hold to drive to position

↓ Move the mount to the bottommost position
- Mount cannot be driven lower than the set limit
- Comes set for lowest button position
- Hold to drive to position

RUN Automatically moves to the position selected (i.e. **RUN** + ↑ or ↓**)**
- Select **RUN** and ↑ or RUN and ↓ to automove to desired direction without continuing to hold directional button.
- Press any button to stop movement

Note: Press each button firmly—a quick tap will not work.

Step 2

Setting of Presets (using IR)

Presets are ***not*** pre-programmed from the factory. If desired, they must be programmed by the installer in the field as follows:

Set Presets Positions
- Press and hold **SET**, then any position button (i.e. "**1**" or "**2**") within three seconds to set the current position for that button

Clear Preset Positions. Presets to not have to be cleared if you simply want to re-write a new position into the memory location (see above). However, if you wish to delete a current Preset position without writing a new value into that location, follow these directions:
- Hit the **SET** button **3** times followed by the Preset Button "1" or "2" or "↑" (for the top preset location).
- Hit the **SET** button **4** times in sequence to delete all Preset settings ("1" "2" and "↑" (for the top preset location).

Note: If a **Limits/Settings Reset** is invoked (Step 5), Presets "1" and "2" and the top/home position as well as the fully extended Limit Stop will be erased).

WI-FI Commissioning using Mobile Device or WI-FI-equipped Computer

Step 3

WI-FI Setup-Select SSID

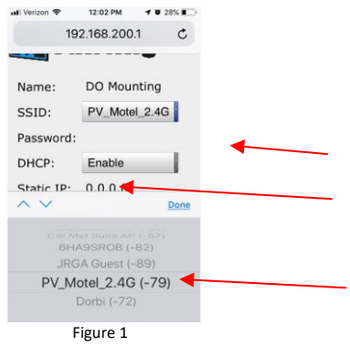

Figure 1

1. Power cycle your IMC-170 controller (or depress reset button on IMC-170 and hold until the on-board LED flashes White once). This will place your device in "Commissioning Mode" for 10 minutes with the IMC-170 acting as its own Access Point.
2. On you iPhone or Android device tap the Home Button>Settings>WIFI. The SSID of the controller (**IMC-170**) will appear in the list of available WI-FI networks. Tap on that SSID—**IMC-170.**
3. Within your wireless browser enter the default startup address for the controller (**http://192.168.200.1**) and connect to that address (see Figure 1 for web page that will display).
4. Select a valid SSID for an Access Point ("AP") within your network to which your device will connect. Typically, you should select an appropriate AP that is in proximity to the IMC-170 to enable the best communication.
   Note: The signal strength of your AP will be displayed as a negative number. Typically, values in the range to -50 to -65 are acceptable. Weaker signals for APs (-66 to -99) are typically inadequate for reliable connectivity.
5. Enter a **Password** for your AP and proceed to **Step 4** before finishing.

Step 4

WIFI Setup-DHCP and Static IP Addresses

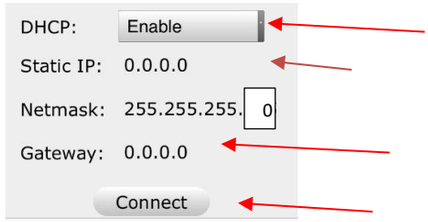

Figure 2

DHCP/Static Addressing. Most all lighting and automation systems require a static IP address for the IMC-170 (or dynamic address with reservation). If you choose Static IP addressing, enter the **STATIC_IP** intended address, the **Netmask** (typically 255.255.255.0) and finally the address for your **Gateway.** After these new settings have been made, select **DHCP** Disabled to enable the selected Static IP address to become active (after the completion of the next step).

Connect/Reboot. Press **Connect** button shown in **Figure 2**. Your controller will now reboot and power up with the Static IP address selected and will no longer be accessible through the SSID of "IMC-170" nor be accessible with the initial default address of 192.168.200.1.

Final Test,

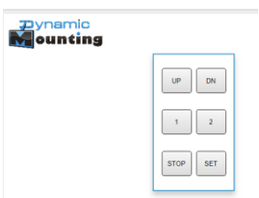

Figure 3

The Controller's webpage will now be accessible through either its auto-assigned DHCP address or its user-programmed Static IP address.
- DHCP Enabled. Here you can discover its IP address through the use of our third-party application Pilot which can be downloadable from http://www.convergingsystems.com/downloads_library.php
- Static Enabled, On any computer or wireless device connected to the same network as the IMC-170 is connected, type in the Static IP address to access a Home Page to control the unit.

Appendix 1
Calibration

The IMC-170 as integrated within a Dynamic Mounting mount comes from the factory calibrated. Should a replacement IMC-170 be installed within the system or a factory reset on the device occur, it will be necessary to once again calibrate the system.

To Set the fully extended (DOWN) limit stop setting.

-Using the IR remote, press and release the **SET** button
-The press and release the **RUN** button (within 3 seconds)
-Finally, press and hold the **SET** button (within 3 seconds). The actuator will retract, and the mount will move down until it hits it internal limit.
-Release the **SET** button when the actuator stops at its limit.

To Set the fully retracted (UP) Preset setting.

-Using the IR remote, press and hold the **UP** button until the desired home position is reached, then release the **UP** button
-Press and release the **SET** button and within 3 seconds, press and release the ↑ (UP) button.

Note: Press each button firmly--a quick tap will not register.

To Clear the limit stop settings (Limits/Settings Reset).

-Using the IR remote, press and release the **SET** button 4 times. (This will delete limit stop information as well as any Preset settings (Step 2).
-Alternatively, you can press the controller's on-board reset button and wait for 3 sequences of FLASHES. This will delete the limit stop information as well any Preset settings (Step 2).

Appendix 2
Technical Information

Wi-Fi Security. The IMC-170 supports the WI-FI security of the connected Access Point. The supported security protocols are:
-OPEN
-WPS
-WEP Personal
-WEP Enterprise.

If your AP is set to an alternative security setting, the IMC-170 will not connect.

LED Indicators (from on-board LED on IMC-170)

LED Color	Status
White	Commissioning Mode
Green	Station Mode-***Connecting*** to AP
Yellow	Access Point Mode- Broadcast as "IMC-170"
Slow Flash BLUE	Station Mode-Connected to remote AP with Telnet and HTTP servers active
Slow Flash White	Non-network mode IR only

Controller Reset Button (use paper clip to depress Reset button)

Hold for 1 flash of on-board LED	Removes IMC-170 control from Station Mode and resets it to an active Access Point (IMC-170)
Hold for 3 flash of on-board LED	Deletes all previously set Preset locations ("1" and "2" as well as Top/Home setting
Hold for 4 flash of on-board LED	Performs a factory reset (equivalent to both a 1-flash and 3-flash reset)

Appendix 3
FAQ -Setup and Operation

Issue/Question	Solution
I have made changes to my network such that the IMC-170 cannot connect (i.e. Access Point is out-of-service or network addresses have changed)	Place the IMC-170 in Access Point Mode (1 flash reset in **Appendix 2**) and follow **Steps 3/4**)
Will IMC-170 work with any WI-FI Access Point?	The IMC-170 will work with any WI-FI AP that uses the 2.4 GHz band and that can use the security settings specified in **Appendix 2**.
I am unable to see my network name (SSID) within the IMC-170 network setup page.	IMC-170 may be out-of-range of available APs
I am unable to access the network setup page shown in **Figure 1.**	Controller is not in Commissioning Mode. Power off unit or press on-board reset button for 1 flash of on-board LED
What types of security protocols does the IMC-170 support?	See **Appendix 2**
Where do I find the MAC address of the IMC-170? I need to add the MAC address to the "Allowed" list for MAC filtering or for reservations.	See label on controller.
How many IMC-170 can I install on one network?	You can install up to 255 per subnet.
Can I upgrade my firmware?	Currently, this feature is only available for units set to DHCP addressing. See separate Tech Note on this process.

Appendix 4
Control with 3rd Party Systems with IP

Issue/Question	Solution
What compatible third-party automation systems support the product	See http://www.convergingsystems.com/inres_atoz.php and click on target company logo and search for IMC-100 drivers (for e-Node). Download Integration Notes and modules/profiles/drivers). Contact Dynamic Mounting for more information
What information do I need to set-up my automation/lighting system	You will need the IP address of the IMC-170 controller. You will need it default user name (**Telnet**) and password (**Password**)
Can I control the IMC-170 from more than one automation system concurrently	No, the IMC-170 provides one IP socket accessible from one system at a time (but that system can have multiple touchscreens and user interfaces)