

# INSTRUCTION/INSTALLATION SHEET

## ALC ENHANCED BRANCH HUB

IS-0289 REV.A

### 1. Introduction

On-Q Home offers an ALC Enhanced Branch Hub, PN 364736-01, (see *Figure 1*) which extends the wiring distances of ALC branches up to 1000 additional feet from a lighting controller. The Hub incorporates active electronics that selectively recondition weakened communication signals on an ALC two-wire communications branch. The Hub supports direct wiring of ALC switches to a centralized connection location providing a structured ALC lighting system installation. A direct wiring methodology is conducive to testing and efficient isolation of faults when they occur. The Hub acts as a conduit to pass ALC communications between all connected switches and a lighting controller. Each ALC Enhanced Branch Hub provides a DIP switch at each ALC switch connection point to allow efficient isolation of individual lighting controls from the ALC communication branch. A single category cable may provide ALC communications and 12 VDC, 100mA power to each Hub. Each ALC Enhanced Branch Hub is installed in a Hide-A-Port outlet (included) for a clean professional installation and easy accessibility.

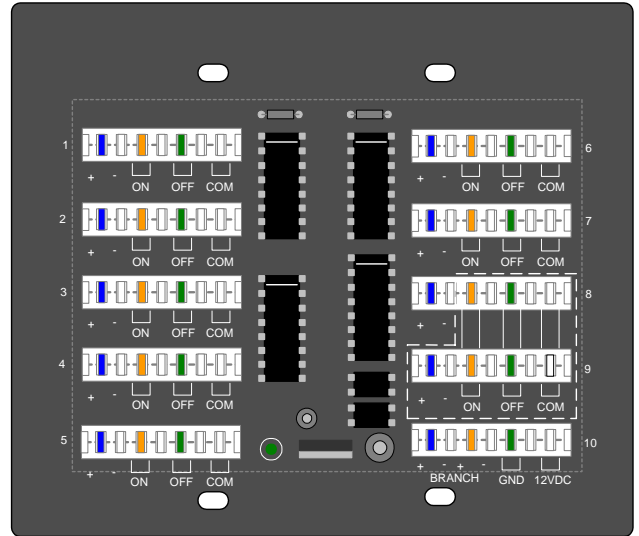


Figure 1. ALC Enhanced Branch Hub

### 2. Description

The ALC Enhanced Branch Hub provides connection points for up to 9 ALC Dimmers, Relay Switches, Scene Switches, Program Switches or I/O Modules, (see *Figure 1*). All connection points consist of 110 style IDC connectors for connection of category 3, 5 or 5E cable. Connection Points 1 thru 7 provide connections for ALC Auxiliary Switches to support 3-way dimming and switching applications. Connection Point 8 is provided for connection of an ALC Scene Switch, Program Switch or an ALC Dimmer or Relay Switch where multi-way local control is not required. Connection Point 9 provides connections for up to 3 ALC Auxiliary switches for 3, 4 or 5-way dimming or switching applications.

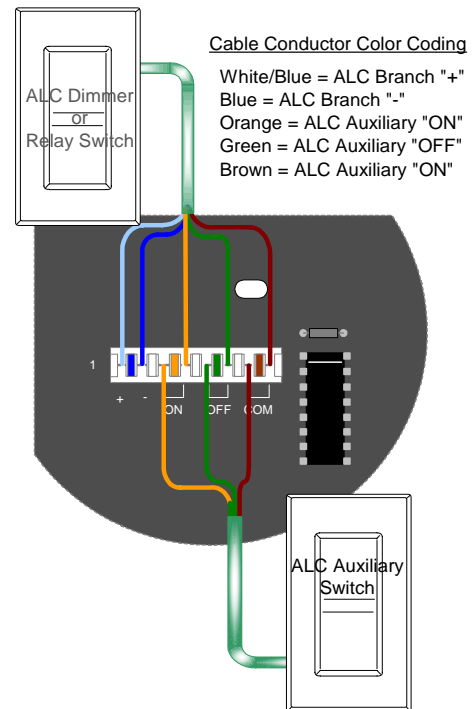


Figure 2. Communications and 3-Way Switching Connections

### 3. Installation

**Note:** The total cumulative length of all cables connecting ALC Dimmers, Relay Switches, Scene Switches, Program Switches and I/O Modules to the ALC Enhanced Branch Hub should not exceed 500 feet. Connection Point 10 provides connections for a single category 3, 5 or 5E cable that is homerun directly

# INSTRUCTION/INSTALLATION SHEET

## ALC ENHANCED BRANCH HUB

to the lighting controller. Connection Point 10 provides additional connections for cascading additional Hubs. The maximum cable distance between the ALC Enhanced Branch Hub and the lighting controller should not exceed 1000 ft. Up to four(4) Hubs may be connected to each controller ALC branch. The wiring distance of each Hub from the controller should not exceed 1000 ft. If ALC switches are connected directly in parallel with the Hub to the controller, the total cumulative branch wiring length should not exceed 500 ft. (see *Figure 6*).

The ALC Enhanced Branch Hub installs within an 8-Port Hide-A-Port outlet which mounts directly to a two-gang electrical box or an On-Q Home New Construction Dual Mud Ring, PN 364524-02. Upon powering up the ALC Enhanced Branch Hub, the integral green Power LED will illuminate.

**Note:** If the green Power LED does not illuminate check the 12 VDC and Ground (GND) power connections. Ensure that correct voltage polarity is maintained when connecting 12 VDC power to the ALC Enhanced Branch Hub. Failure to maintain correct polarity may result in damage to the ALC Enhanced Branch Hub.

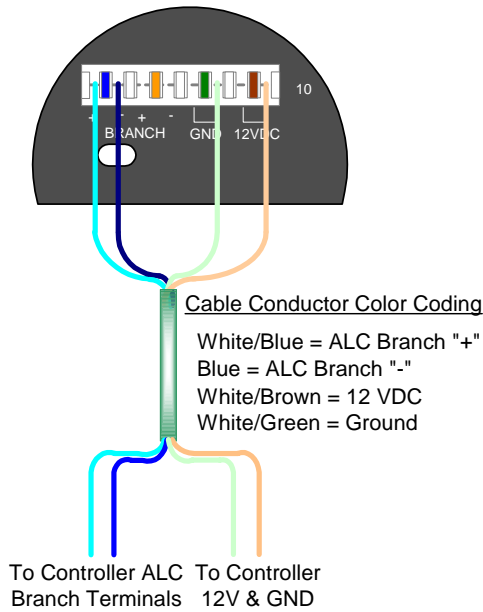


Figure 3. Connections to Lighting Controller

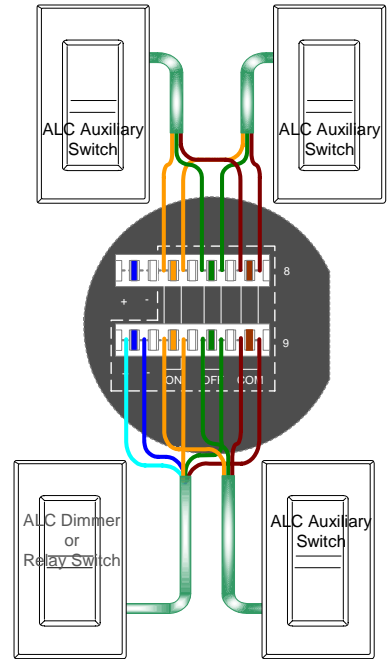


Figure 4. Communications and 5-Way Switching Connections

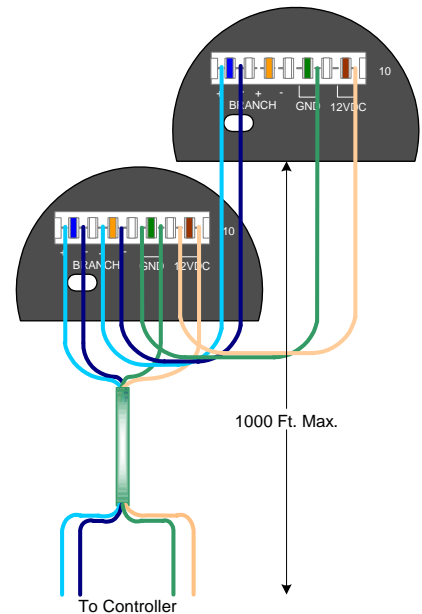


Figure 5. Wiring Cascaded Hubs

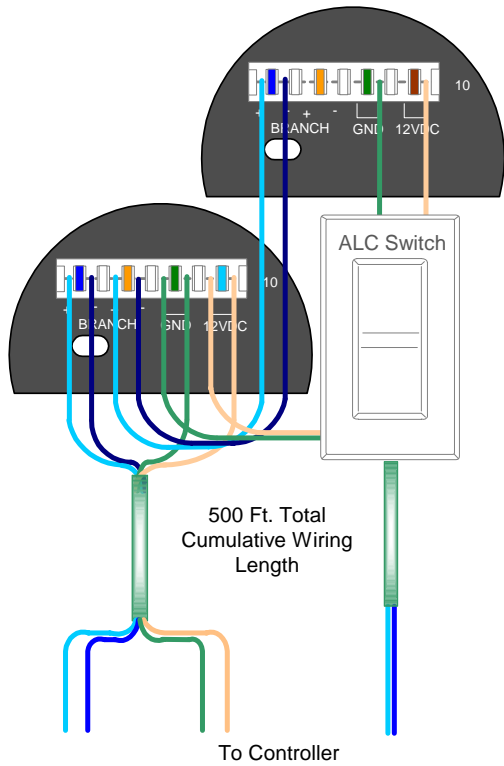


Figure 6. Parallel Switch Wiring Limitation

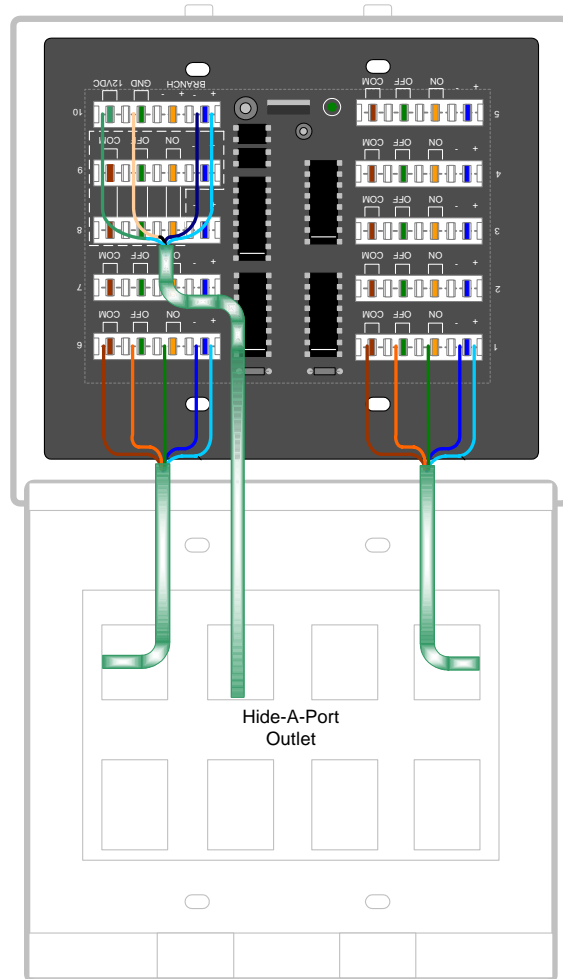
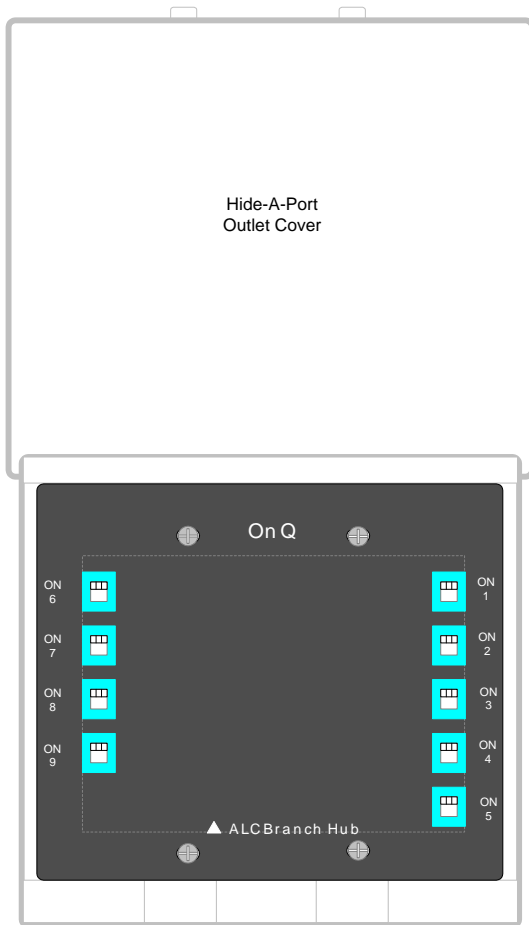


Figure 7. Hub with Hide-A-Port Outlet, Connection Side

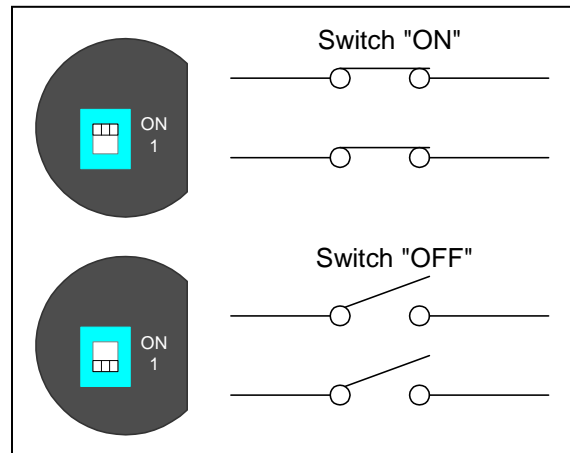
# INSTRUCTION/INSTALLATION SHEET

## ALC ENHANCED BRANCH HUB

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**Figure 8. Hub with Hide-A-Port Outlet**



**Figure 9. Hub Isolation Switch Positions**

On-Q Home warrants to the end-user, each new ALC product to be free of defects in materials or workmanship for a period of one year from the date of original purchase from On-Q Home or its authorized reseller or installer. Each product is deemed warrantable under conditions of normal use and when installed and operated within On-Q Home specifications and in accordance with the applicable National Electrical Code and Safety Standards of Underwriters Laboratories. When determined to be warrantable, On-Q Home shall at its option and expense, replace any defective product with a new or reconditioned product. On-Q Home will continue to warrant any replaced product for a period of ninety (90) days from shipment, or through the end of the original warranty period, which ever is longer.