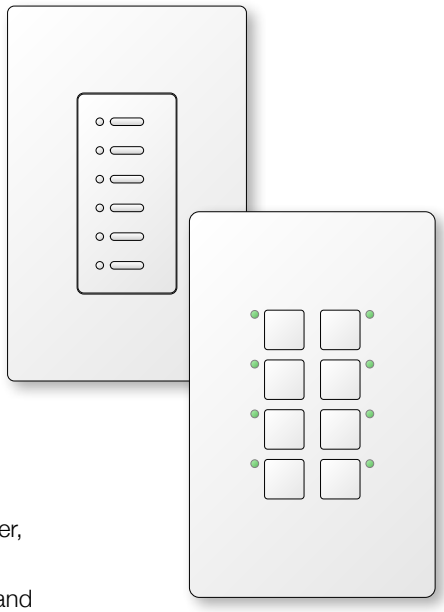
2-Wire CueStation Specifications

Overview

The CueStation 2-Wire network is one of three different network topologies available for CueStations. It allows up to 10 CueStations to be wired together using a simple 2-conductor polarity-free and topology-free network. The 2-Wire network carries both power and data to each of the stations.

Both the Mystique and Ultra families of CueStations are available with 2-Wire network technology. Use with the ST-HUB CueStation Network Hub to power and control 2-Wire CueStations and/or to interface with a CueServer system.



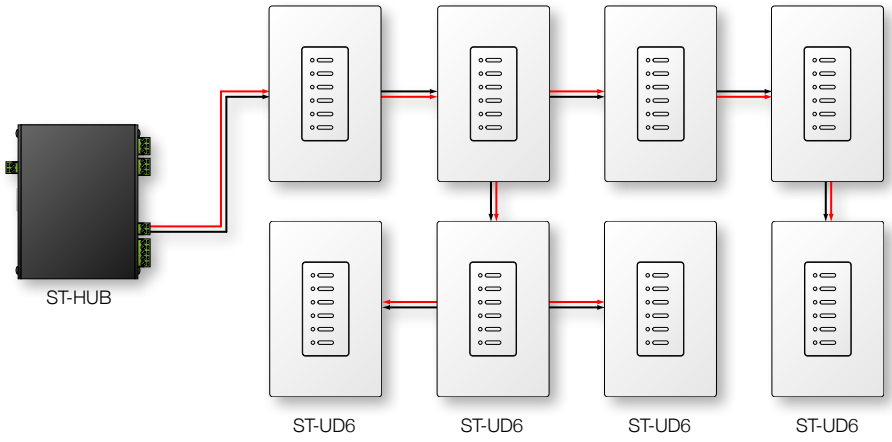
Features

- Low-cost 2 conductor button station network
- Polarity-free network does not require separate + and - signals
- Topology-free network allows stations to be wired in either a “star” or “daisy-chained” manner, or a combination of both
- Individually controllable RGB indicator for each button can display 7 colors, 4 brightnesses and 6 flashing patterns
- Maximum of 10 stations on a single 2-wire network
- Maximum cable distance to farthest station (on a single wire branch) is 500 feet (150m)
- Maximum total cable length (connected to a single CueStation Hub) is 1000 feet (300m)
- **Required cables:**
  - 18AWG twisted pair cable (Belden 9740 or similar) for total cable length under 250 feet (75m)
  - 16AWG twisted pair cable (Belden 8719 or similar) for total cable length over 250 feet
  - Total resistance of the network, including the stations, should be less than 5 Ohms (measured on the 2-pos connector, unplugged from the hub, with the last station(s) at the end(s) of cable run(s) removed and the wires connected together instead).
  It is strongly recommended to use the same wire type between all the stations connected to the same CueStation Hub.
- Uses CueStation Hub as power and signal controller interface
- Recommended for retrofit or small installations only. Use the 5-Wire CueStation network for larger installations.

Wiring

- The 2-Wire CueStation Bus uses a 2-conductor 16AWG or 18AWG cable (see Features above for details) to carry both power and data to and from each station location. The network is both topology free (meaning a random combination of “star” and “daisy-chain” connections may be used) and polarity free (meaning it does not matter if the conductors are reversed at any station).

NOTE: Use of inferior cable types may seriously degrade performance, especially on longer cable runs.



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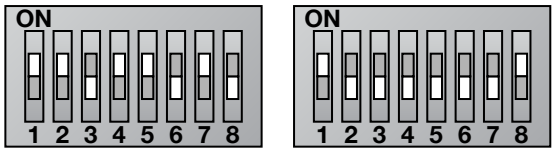
Prepared by:	**Date:**

Configuration

Every station connected to a Hub must be assigned a unique station address from 1 through 64. Also, the number of physical buttons on the station must be properly selected. These assignments are made by setting DIP Switches on the back of the station.

View the DIP Switches so that the writing on the switches is upright, with the word "ON" in the top left corner. There are two banks of 8 switches. The bank of 8 on the left side are the **option switches**. The bank of 8 on the right side are the **address switches**.



Option Switches **Address Switches**

Option Switches	1	2	3	4	5	6	7	8
Number of Buttons on Station								
1-Button Station			**ON**	OFF	OFF			
2-Button Station			OFF	**ON**	OFF			
3-Button Station			**ON**	**ON**	OFF			
4-Button Station			OFF	OFF	**ON**			
5-Button Station			**ON**	OFF	**ON**			
6-Button Station			OFF	**ON**	**ON**			
8-Button Station			OFF	OFF	OFF			
Reserved Switches Must Be As Specified								
Reserved	**ON**	**ON**				OFF	**ON**	OFF

The station address is set using a binary combination of seven dip switches. The table below shows the value of each switch when set to the ON position. To set a station to Station 1, switch 1 should be ON and switches 2-7 should be OFF. To set a station to Station 37, switches 1, 3 & 6 should be ON and switches 2, 4, 5 & 7 should be OFF.

Address Switches	1	2	3	4	5	6	7	8
Station Address								
Binary Station Address	+1	+2	+4	+8	+16	+32	+64	
Protocol								
CueServer Protocol								**ON**

Setting LED Colors

The color and intensity of each individual LED on a 2-Wire station are controlled remotely. ***See the CueStation Hub Hardware and Installation Guide for more information***.

Ordering

2-Wire Digital CueStation:
ST- *(series)* D *(buttons)* - *(color)* - *(indicators)*

(series)

M	Mystique Series
U	Ultra Series

(buttons)

1	1 Button (Mystique or Ultra)
2	2 Button (Mystique or Ultra)
3	3 Button (Mystique or Ultra)
4	4 Button (Mystique or Ultra)
5	5 Button (Ultra Only)
6	6 Button (Ultra Only)
8	8 Button (Mystique Only)

(color)

CW	White
CB	Black
CI	Ivory
CA	Light Almond

(indicators)

RGB	RGB LEDs
NL	No LEDs

Part Number Examples:

ST-MD8-CW-RGB
Mystique 2-Wire 8-Button Station White with RGB Indicators

ST-UD6-CB-RGB
Ultra 2-Wire 6-Button Station Black with RGB Indicators

ST-UD2-CA-NL
Ultra 2-Wire 2-Button Station Light Almond with No Indicators