

THEATRICAL CUE LIGHT SPECIFICATIONS

NOTE TO SPECIFIER: *The following specification language is written for the NuDelta Digital LogiCue NET System (LCN12 Controller and QLN2 Outstations). Quantities, cable lengths, and network switch configurations shall be as indicated on the drawings.*

1. General

1. Overview

- a. The system shall be ethernet-based and provide cue light control distributed over a network.
- b. The system shall incorporate network-based device discovery using UDP protocols to provide fast and easy setup and configuration of all connected devices.
- c. The system shall support multiple controllers operating simultaneously on the same network alongside lighting and audio control equipment.
- d. The system shall operate using Power-over-Ethernet (PoE) for outstation cue lights, eliminating the need for separate power supplies at each outstation location.
- e. The system firmware shall be field-upgradeable to accommodate future feature enhancements.
- f. Interfaces — I/O ports:
 - i. Ethernet port
 - ii. DMX port

2. Cue Light Control Panel — LCN12 Controller

- 2. Provide cue light control panel (LCN12 Controller) with the following minimum capabilities and equipment:
 - a. Desktop form factor; supply rack mounting hardware for end-user installation.
 - b. Twelve (12) control channels.
 - c. Tactile individual channel controls:
 - i. Twelve (12) "Standby" buttons — one per channel.
 - ii. Twelve (12) "Go" buttons — one per channel.
 - d. Per-channel multi-color LED indicators that mirror the color state of the corresponding outstation cue light.
 - e. Main "Go" and Main "Clear" buttons for grouped cue control across all active channels.
 - f. Two-way acknowledgment feature: outstation buttons shall allow performers or crew to confirm receipt of a standby or go cue back to the controller.
 - g. Self-test on power-up to verify all indicators and channel functions.
 - h. Six (6) single-color cue light modes available per channel:
 - i. Red
 - ii. Green

- iii. Blue
 - iv. Amber
 - v. Teal
 - vi. Pink
- i. Multi-color operating modes, selectable per channel:
 - i. Multi-Color Mode 1: Red/Blue/Off — cue light is Red in "Standby", Blue with "Go", and off when "Clear".
 - ii. Multi-Color Mode 2: Red/Blue/Green — cue light is Red in "Standby", Green with "Go", and Blue when "Clear".
- j. Channel Standby mode: Twelve (12) red standby buttons and twelve (12) green go buttons for individual single-channel control.
- k. Optional toggle switches for each channel: available as a factory-installed option; coordinate quantity and configuration with the drawings.
- l. Control Panel Material and Finish:
 - i. Enclosure shall be a desktop unit with integrated rack ear stands.
 - ii. Supply rack mount hardware for end-user installation into a standard 19-inch control rack.

3. Cue Light Control Outstations — QLN2

- 3. Provide cue light control outstations (QLN2 Cue Lights) with the following minimum capabilities and equipment:
 - a. Two (2) bright, color-capable LED indicators that are also functional buttons, allowing two-way communication with the controller.
 - b. LED/Buttons:
 - i. Functions as the Standby indicator — illuminates in the configured standby color (programmable, one of six available colors).
 - ii. Button press confirms performer or crew presence to the control panel and halts flash operation.
 - iii. Functions as the Go indicator — illuminates in the configured go color.
 - c. Two-line OLED display with address and menu displays.
 - d. Power-over-Ethernet (PoE) operation — no separate power supply required at the outstation.
 - e. Six (6) available cue light color settings per outstation, field-configurable.
 - f. The outstation may also be configured as a single-channel controller to communicate directly with another outstation without a central LCN12 controller (peer-to-peer mode).
 - g. Field-upgradeable firmware.
 - h. Outstation Material and Finish:
 - i. Injection molded textured ABS plastic.

5. Execution

1. Install the LogiCue NET system in accordance with the manufacturer's published installation instructions and the requirements of this Section.
2. Configure all devices on a dedicated cue light network with unmanaged switches or configure all devices on a shared network with managed switches with dedicated VLAN for cue light system.
3. Configure the system to provide no delay time between the controller "Standby" or "Go" button press and the corresponding illumination of the outstation cue light.
4. Program outstation color options as directed by the Theatre Consultant or Owner.
5. Perform a full system functional test in the presence of the Theatre Consultant or Owner's Representative, verifying:
 - a. All channels respond correctly from the LCN12 Controller.
 - b. All QLN2 outstations illuminate in the correct colors and modes.
 - c. Two-way acknowledgment functions correctly from each outstation.
 - d. OLED displays show correct status at all outstations.
 - e. Network switch PoE ports supply adequate power to all connected outstations.

6. Acceptable Products

1. Basis of Design:
 - a. NuDelta Digital — LogiCue NET — LCN12 or LCN12T (toggle switch) Controller and QLN2 Outstation Cue Lights
 - b. Manufacturer contact: NuDelta Digital, LLC — nudeltadigital.com
2. Or approved equal meeting all requirements of this Section. Substitution requests must be submitted in accordance with the General Conditions and must demonstrate compliance with each specified requirement.

End of Cue Light System — LogiCue NET Specification Language