STRAND NEO COMPACT 10 PC WING SPECIFICATION

1.   LIGHTING CONTROL PC WING

1.01   SYSTEM OVERVIEW

A)   General Description

The lighting control shall be microprocessor based and specifically designed to provide complete control of stage, studio, and entertainment lighting systems. The lighting control shall be comprised of a Windows PC running the Strand NEO PC software and the tactile control surface shall be a Strand NEO Compact 10 PC Wing.

1.) The PC Wing shall comprise a free-standing table-top control surface with LED status indicators and backlit buttons, an internal 7-in. LCD touchscreen with LCD labeling, faders, numerical keypad, user-defined functionality, and view buttons.

2.) Ten (10) 60 mm non-motorized, user-defined, multi-function faders shall be provided with an associated bump key and two (2) assignable action buttons. The total number of faders available may be extended to one hundred (100) using ten (10) virtual pages.

3.) A high-resolution level encoder shall be provided to control intensity for selected channels and scrolling for some displays.

4.) A set of four (4) push button soft touch encoders shall be provided for control of multi-attribute luminaires. Encoders may be operated in coarse or fine mode for up to 16-bit control of attributes where required. The encoders shall have a variable RGB backlight feature, associated with the attribute feature selected.

5.) Control surface buttons shall be backlit with the ability to adjust their intensity.

6.) Communication to other system devices shall be available over DMX, USB, or via the host PCs ethernet port. SMPTE and MIDI shall be supported using an approved USB to SMPTE or USB to MIDI interface.

7.) Connection to the host PC running the NEO PC software shall be via a USB 3.0 cable from the USB 3.0 Type B port on the rear panel.

8.) Data output shall be distributed over a network interface card on the host PC using industry standard protocols or via a minimum of three (3) connections consisting of (2) DMX 5-pin XLR outputs and one (1) DMX 5-pin XLR input on the control surface. Standard communication protocols shall include DMX/RDM (E1.11 – 2008, USITT DMX512-A), Art-Net, Strand ShowNet, sACN (E1.31 Streaming ACN), Color Kinetics KiNet, and Pathway Protocol.

9.) The NEO PC software shall be capable of storing an almost unlimited number of Cues, Cue Lists Groups, Palettes, Effects, Macros and Shortcuts. The total storage capability shall be governed by the limits of memory and system address space.

10.) Recorded cue lists may be assigned to a fader and may be played back simultaneously on any of the 10 user-defined faders.

1.02   PHYSICAL & ELECTRICAL

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1.) The control surface shall be constructed of dark grey, industrial high-impact flame retardant thermo-plastic. All internal control components shall be fully modular to permit simple removal and exchange. The face panel shall be removable and may be easily detached to allow access to the internal components of the unit.

2.) The control surface shall have an external universal 12 VDC, 5 A power supply and shall support 100-240 VAC 50-60 Hz power systems. The power connector shall engage with the unit via a locking barrel connector presented on the rear panel of the control surface. Power and current consumption shall typically not exceed 60 W, 1.4 A.

3.) Physical measurements of the control surface shall not exceed 19.1 in. (486 mm) x 11.9 in. (302 mm) x 3.6 in. (92 mm). The control surface weight shall not exceed 4.55 lb. (2.06 Kg).

4.) The control surface shall be capable of being installed into a standard 19" wide equipment rack using an optionally supplied rackmount kit consisting of black aluminum rackmount ears.

5.) The following data input/output connectors shall be provided on the rear panel:
    a) 2 x DMX-512 Out via 5-pin XLR – Female
    b) 1 x DMX-512 In via 5-pin XLR – Male
    c) 1 x USB 3.0 Type B Port on the rear-facing panel.
    d) 2 x USB 2.0 Type A Ports on the front-facing panel.
    e) Universal K-Slot security lock on the rear-facing panel.

6.) A neatly tailored, fitted black polished polyurethane dust cover shall be provided.

1.03   CAPABILITIES

1.) The control surface shall support a limitless number of multi-attribute LED, conventional and generic luminaires, that shall be loaded from the console Fixture Library.

2.) Intensity attributes shall be controlled on a Highest Takes Precedence (HTP) basis while each attribute shall be controlled on a Last Takes Precedence (LTP) basis.

3.) Cues shall be stored as cue lists and assigned as required to be played back via one of the faders. Each cue list shall allow a limitless number of Cues to be stored. Timing parameters, effects, groups, shortcuts and text narrative for each cue may be individually edited and added.

4.) A show file may contain an almost unlimited number of Cue lists, Groups, Effects, Palettes, Shortcuts, Macros and Submasters with 10 submaster pages and a fully proportional patch. The show fixture library may also be stored on the host PCs storage drive and archived to standard USB memory key drives. The total storage capacity shall be governed by the limits of memory and system address space.

5.) Multiple show files shall be stored on the host PCs hard drive and the system shall have the ability to load the show files into active memory via a selection browser function.

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> 6.) The control surface shall provide output capacity for direct control for up to 1,024 DMX-512 channels (2-universe) via the two (2) output ports of DMX 5-Pin XLR. DMX-512 output via the control surface shall be enabled using a fully licensed version of NEO PC software running on a Windows PC and connected to the control surface via the USB data cable. Additional output capacity is supported via the network interface card of the host PC.

1.04   DOCUMENTATION

> 1.) A User Manual shall be available for download from the support section of the manufacturer's website. In addition, a User Manual is provided with the NEO PC installation software and shall be stored locally on the PC in the relevant subfolder on the hard drive.

> 2.) A Quick Start Guide shall be included with the console at purchase and be available from the support section of the manufacturer's website.

1.05   ENVIRONMENTAL

> 1.) The acceptable ambient operating temperature shall be 0 to 40° Celsius (32° to 104° Fahrenheit).

> 2.) The acceptable operation location shall be the equivalent of a good office environment, without excessive dust.

> 3.) Acceptable relative humidity levels for operation shall be 0% - 95%, non-condensing.

> 4.) The control surface shall be convection cooled.

1.06   STANDARDS COMPLIANCE

> 1.) The console shall comply with the following standards:
>   a)   Canadian safety: CSA C22.2 No. 62368-1
>   b)   EU safety: EN 62368-0
>   c)   US safety: UL 62368-1

2.   NEO LIGHTING CONTROL SOFTWARE

2.01   FIXTURE CONTROL

A)   Selection:

> 1.) Fixtures shall be selected via key tile entry of the fixture number, or by selecting the fixture via the internal touchscreen from the graphic display. The selection may then be extended using the industry standard +, -, Thru syntax.

> 2.) The system shall register the order in which lights are selected, facilitating the use of 'Next' and 'Last' commands as well as logical fan functions to be performed on the required attributes

B)   Intensity Control:

> 1.) Intensity levels shall be set either using the '@' key and inputting a numerical level or adjusted using the level control encoder.

2.) Ten (10) Short Cut or User buttons shall provide the capability of assigning multiple views or functionality to a button for easy recall.

3.) Level change shall also be available via the main level encoder when the fixture is selected.

C) Attribute Control:

1.) Attributes shall be controlled via each of the four encoders and the appropriate Attribute Family selection keys, Preset, Position, Color, Beam.

D) Effects

1.) The system shall have access to all the FXs that the NEO system platform currently has, via the host PCs display. Access to the library FXs shall be provided via the internal touchscreen display.

2.02 DISPLAYS

A) Overview

A selection of available displays shall be provided on the internal touchscreen by making the appropriate selection using the 'Display Menu' button on the control surface. The display selection shall display information relating to the following areas:

1.) Live
Providing information about the live output of each Channel and Fixture or Group of Fixtures, including intensity and all attributes.

2.) Blind
Providing the same information and functionality as the Live display, without affecting the live output.

3.) Patch
Providing information about the Fixtures configured for the active showfile, allowing them to be added to the patch, modified, deleted, or cloned. It shall be possible to configure any fixture patch for pan invert, tilt invert and/or pan/tilt swap. A range of standard as well as custom-defined dimming curves may also be selected for each channel.

4.) System Setup
Providing access to the System and Show Default Settings for the control console, as well as for individual preference configurations, backup and network settings to be changed.

5.) Groups
Providing access to store groups and their data.

6.) Palettes
Providing access to the configuration of standard and virtual palettes that may be used with individual as well as groups of fixtures. Palettes may be stored as part of a showfile.

7.) Cuelists

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Providing a detailed list of the current cues in a showfile, from which the cues may be selected and run as a cue sequence. The display shall also provide GO, STOP and RESET function buttons to action the cue sequence as a playback.

8.) File Manager

Providing access to file storage and operational functions, such as remote connections, configuring file saving functions, starting a new show, saving, and closing a show.

B) Programming Views

1.) A display on the internal touchscreen shall provide information about the currently selected fixtures and the values held in the programmer for the various attributes. It shall also provide tools for color picking for fixtures with RGB and CMY color control, via either a Color Picker tool or Swatch book color list.

2.) It shall be possible to work in Live mode, where the information appears on the output of the console or Blind mode, allowing information to be set without it affecting the current output of the console.

3.) It shall be possible to record information from the either the Live or Blind views into Cue Lists, or Presets, including but not limited to presets for Groups, Intensities, Colors, Position and Beam.

4.) It shall be possible to program the console using the function keypad tiles. The sequence of commands shall appear in the syntax bar on the internal touchscreen, from where it shall also be possible to edit the commands.

2.03   KEYPAD

A)   Keypad Tiles

The Keypad Tiles / backlit buttons shall be neatly arranged in operational groups below the built-in touchscreen, providing keys for the following purposes:

1.) Command Keys
   (a) Cue
   (b) Record
   (c) Group
   (d) Update
   (e) Submaster
   (f) Goto
   (g) Step
   (h) Shift

2.) Action Keys
   (a) Release
   (b) Back
   (c) Delete
   (d) Copy
   (e) Time
   (f) Edit Text

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      3.)   Main Keypad

         (a) Backspace

         (b) -

         (c) +

         (d) 0 thru 9

         (e) Thru

         (f)   @

         (g) .

         (h) Enter

         (i)   Preset

         (j)   Position

         (k) Color

         (l)   Beam

         (m) User

         (n) On

B)   Soft Key Tiles

Below the built-in touchscreen there shall be six (6) soft-key buttons presented, which shall relate directly to the relevant tab displayed for each view in the touchscreen.

2.04   RECORDABLE ELEMENTS

A)   Cue Lists

1.)   Cue Lists shall be built by a fast action process, using the Record button and either the Play button of a Fader, or by double-clicking on a specific cue from the Cue List view. It shall be possible to assign a Cue / Cue List to a specific fader for playback.

2.)   Pressing RECORD ENTER or RECORD RECORD shall store a new cue in the current cue list. Pressing RECORD and entering a cue number shall allow the user to overwrite an existing cue or create a new cue if it currently does not exist.

3.)   It shall be possible to Edit the properties of a cue list using a fly-out properties dialog window associated with each cue.

4.)   Cue lists shall be capable of an unlimited number of Cues, each cue having an overall cue time, separate fade up/down times, attribute family timing, fixture timing and individual attribute timing per cue.

5.)   Each Cue shall have the tracking properties of Tracking, Cue Only, Block, SmartBlock, or Cue Only (Int)/Tracking (Atts).

6.)   Each Cue list shall have chosen behaviors of LTP, Build, HTP, Exclusive, Subtract or Intensity HTP / Attributes LTP.

7.)   Each Cue List shall have the ability to set a GO/Stop/Back/Reset Shortcut and an Executable/Inhibit/Rate Fader.

8.)   Each Cue List shall have the ability to turn on/off playback tracking.

2.05   INCLUDED ITEMS

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Each control surface shall be supplied with the following:

a) NEO Compact 10 PC Wing

b) Power supply, 12 VDC, 5 A, 5' (1.5 m) lead

c) Power input cable, EU, IEC C13, CEE 7/4, 6 ft. (1.83 m)

d) Power input cable, US, IEC C13, NEMA 5-15P, 6 ft. (1.83 m)

e) Power input cable, UK, IEC C13, BS-1363-1, 6 ft. (1.83 m)

f) USB 3.0 Cable, Type A, Type B, 6.6 ft. (2 m)

g) Quick Start Guide

h) Dust cover

2.06   ACCESSORIES

The following shall be available as accessories:

a) 91012 - Neo PC Lighting Control, 1 Universe

b) 91013 - NEO PC USB to DMX Cable

c) 54101-001 - NEO 4 Universe License

d) 54101-002 - NEO 10 Universe License

e) 54101-003 - NEO Unlimited Universe License

f) 54104-901 - NEO Compact 10 Replacement Power Supply

g) 54104-910 - NEO Compact 10 Rack Mount Kit

h) 54104-911 NEO Compact 10 Replacement Dust Cover

END OF SPECIFICATION.