## RGBA Light Emitting Diode Retrofit for the Source Four fixture

### General

#### The fixture shall be an RGBA high-intensity LED illuminator with DMX control of intensity. The fixture shall be a Source 4WRD-Color LED as manufactured by Electronics Theatre Controls, Inc. or approved equal.

#### All LED fixtures shall be provided by a single manufacturer to ensure compatibility

#### The fixture shall be UL 1573 (full fixture) or UL 1598C (retrofit kit) listed.

#### The fixture shall comply with the USITT DMX-512A standard

#### The fixture shall carry a 3-year warranty

### Physical

#### The unit shall be constructed of rugged, die cast aluminum, free of burrs and pits, finished in black.

#### The following shall be provided (with full Source Four assembly):

##### Shutter assembly shall allow for +/-25° rotation\*

##### 20 gauge stainless steel shutters\*

##### Interchangeable lens tubes for different field angles with Teflon guides for smooth tube movement\*

##### Sturdy integral die cast gel frame holders with two accessory slots, and a top-mounted, quick release gel frame retainer\*

##### Rugged steel yoke with two mounting positions allowing 300°+ rotation of the fixture within the yoke\*

##### Positive locking, hand operated yoke clutch\*

##### Slot with sliding cover for motorized pattern devices or optional iris\*

#### The housing shall have a rugged black powder coat finish

##### White or silver/gray powder coat finishes shall be available as color options

##### Other powder coat color options shall be available on request

#### Power supply, cooling and electronics shall be integral to each unit.

#### The retrofit shall utilize all existing components of the Source Four except for the HPL burner assembly

###### Retrofit shall also be compatible with S4WRD PAR and PARNel fixture body accessories

#### The unit shall ship with:

##### Theatrical-style hanging yoke as standard\*

##### Bare end power cable (1m) attached with option for choice of connector

###### Edison

###### Stage pin

###### Twist

##### A-size pattern holder\*

### Optical

#### The unit shall provide, but not be limited to:

##### Molded borosilicate reflector with multiple dichroic layers\*

##### Low gate and beam temperature

##### Sharp imaging through a three-plane shutter design\*

#### The unit shall provide, but not be limited to:

##### 5, 10, 14, 19, 26, 36, 50, 70 and 90 degree field angles\*

##### High-quality pattern imaging\*

##### Sharp shutter cuts without halation\*

##### Shutter warping and burnout in normal use shall be unacceptable\*

##### Adjustable hard and soft beam edges\*

#### 19, 26, 36, and 50 degree units shall have optional lens tubes available for precision, high-contrast imaging.\*

#### The fixture shall allow for tool-free field adjustment (z-knob adjustment)

\* These items refer to the full fixture assembly

### Environmental and Agency Compliance

#### The fixture shall be ETL and cETL LISTED, and shall be so labeled when delivered to the job site.

#### The fixture shall be UL LISTED to the UL1573 or UL 1598C standard.

#### The fixture shall be rated for IP-20 dry location use.

### Thermal

#### Fixture shall be equipped with a cooling fan.

#### The fixture shall utilize advanced thermal management systems to maintain LED life to an average of 70% intensity after an estimated >45,000 hours of use at full

##### Thermal management shall include a temperature sensor within the housing.

#### The fixture shall operate in an ambient temperature range of 5°C (41°F) minimum, to 50C (122F) maximum ambient temperature.

### Electrical

#### The fixture shall be equipped with a 100V to 240V (50-60Hz) internal power supply

#### The fixture shall be dimmable via DMX-512

### LED Emitters

#### All LEDs used in the fixture shall be high brightness and proven quality from established and reputable LED manufacturers.

##### Fixture shall utilize Nichia LED emitters

#### Manufacturer of LED emitters shall utilize an advanced production LED binning process to maintain color consistency.

#### LED emitters should be rated for an estimated >45,000-hour LED life to 70% intensity

#### LED system shall comply with all relevant patents

#### Flicker-free mode (20,000hz) shall be accessible via RDM

### Color

##### The fixtures shall utilize an RGBA, color mixing array

###### Colors used shall be

Red

Green

Blue

Amber

### Dimming

#### The LED system shall be dimmable via DMX-512A or local control

### Control and User interface

#### The fixture shall be USITT DMX 512A-compatible via In and Thru RJ-45 connectors

#### The fixture shall be compatible with the ANSI RDM E1.20 standard

##### All fixture functions shall accessible via RDM protocol for modification from suitably equipped control console

##### Fixtures not offering RDM compatibility shall not be compatible

#### The fixture shall be equipped with a two-button user-interface (UI)

#### The fixture shall be equipped with a 7-segment display

#### The fixture shall have 12 presets and 5 sequences that are accessible from the UI or RDM