



JASON™ RGB (JAS-3) & JASON™ RGBW (JAS-4) Color Changing Fluorescent User Guide

INTRODUCTION TO JASON™

The JASON™ Color Changing Fluorescent system can interconnect as many or as little individual fixtures as required. The fixtures can operate individually or be synchronized to operate together. Effects and operation characteristics can be set via the 10 Dipswitches on the top of the JASON™ housing. JASON™ can be a DMX controller to control other JASON™ fixtures, be a stand-alone unit or can act as a slave and be controlled by a wide variety of DMX controllers. Setting the Dipswitches appropriately can create a **Color Wash** effect in which all JASON™ fixtures will be synchronized and react identically. JASON™ can also perform a **Color Chase** in which each fixture is individually addressed and performs independently from each other thus can be programmed via the DMX controller to perform chases or very specific scenes.

ELECTRICAL & SIGNAL CONNECTION TO JASON™

JASON™ fixtures are voltage specific. Installer must ensure proper voltage will be connected to the fixture. Voltage appropriate for your fixtures can be found on the fixture label on the outside of the JASON™ housing as part of the fixture Cat. number.

“Warning” JASON™ fixtures require installation by a qualified electrician in accordance with all NEC and other relevant local codes.

DMX signal can be carried via CAT 5 data cable or other approved DMX cables. The yellow JASON™ interface housing has an opening on the end so that an input CAT 5 cable with an RJ 45 connector and an output data cable (for daisy chaining fixtures) can be plugged in. Alternatively connections can be made to the capped leads labeled “Data +”, “Data –”, and “Data Common” (see wiring diagram) if data cables with RJ 45 connectors are not available.

DMX signals will degrade and or will have altered characteristics as it is carried from one JASON™ fixture to the next. For installations of more than 5 fixtures, a terminator will need to be used on the last fixture of a daisy-chained configuration, to prevent signal reflections, reduce ringing, and generally provide better overall DMX performance. In some applications of 20 fixtures or more splitters will need to be installed to prevent this signal degradation and thus prevent undesirable performance. Additionally when JASON™ is utilized in outdoor or other harsh environments, special care should be taken as electrical storms, or voltage spikes may cause hazardous voltages on the signal/control cable producing undesired effects or potential damage to the electrical components of the fixture. In these applications an isolator will need to be used to prevent this corrupted signal from hitting the JASON™ electronics. Please consult factory for more specifics to your application.

GENERAL TIPS TO EFFECTIVELY UTILIZE JASON™

The JASON™ utilizes RGB color mixing to achieve a broad range of different colors. Varying the intensity of each lamp separately will allow for almost unlimited color generation. Birchwood Lighting, Inc. recommends that colored phosphor lamps be utilized with JASON™. These lamps will have a rated service life of 20,000 hours and the lamps and associated ballasts will be good for 20,000 starts. In slave mode, JASON™ receives DMX signals from an approved DMX controller and converts that signal to a 0-10V lamp intensity level. This 0-10V dimming level is then sent to a dimming ballast and dims the lamp down appropriately. There are several dimming ballast manufacturers that Birchwood Lighting, Inc. will use. Generally these are 5% dimming ballasts, thus any DMX signal less than 5% intensity will shut the ballast off. DMX light intensity levels are represented by numbers between 0 thru 255. Care should be taken when programming controls that the intensity values are not set below this 5% or 13 on the DMX intensity scale, as this will shut off the lamp.

“Caution” Excessively turning on and off a fluorescent lamp will reduce life of the lamp and or the ballast.

Lamp “burn in” is required per specifications given by the lamp manufacturer. Generally accepted practice is to operate the lamp at full power for 100 hours before dimming the lamps. Consult lamp manufacturer for more info.

White lamps with colored “gel sleeves” may also be used. Consult factory for assistance as all sleeve available on the market may not be appropriate or require additional maintenance.

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