



New 4-Channel Remote Dimming Unit With Easy Balance™

AN EASY WAY TO BALANCE LED AND INCANDESCENT LIGHTING CIRCUITS

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Balancing Light Output Made Easy

By Blue Wolf

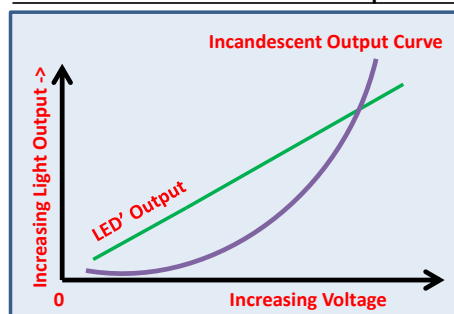
The new Remote Dimming Unit (RDU) by Blue Wolf eases balancing issues when utilizing mixed LED and incandescent bulb-type lighting circuits. Existing dimmer technology normally has one output channel that supplies both an LED and incandescent lighting circuit with the same output voltage, but these two types of lighting bulbs do not produce the same amount of lumens when increased proportionally.

Generally LEDs produce a linear light output as the dimmer voltage is turned from 0% to 100%. Incandescent lights, on the other hand, do not produce light at lower voltages. First, the filament has to heat up, and then after doing so, the filament starts producing light at a more exponential rate, with an increasing voltage. This incandescent lighting has more of an increasing curve rather than a linear output, like an LED, as the voltage or pulse modulation is increased.

This new RDU allows system designers to skew the voltage outputs between four different channels (eight channels with an optional expansion pack).

With Easy Balance™ each channel has four moveable lighting curve points and can be assigned to any dimmer input. This allows for an adjustable uniform light output between all channels as a "single dimmer" is rotated from 0% to 100%. In retrofit or new designs mixing incandescent and LED lights is especially an issue. One bulky solution is to add multiple dimmers to each of the lighting circuits but that now leaves several full-sized power dimmers that require constant individualized adjustments. This new RDU provides a simple, space saving, and single unit system for easy balancing of dissimilar lighting zones.

LED versus Incandescent Lumen Output Level



RDU Quick Specifications

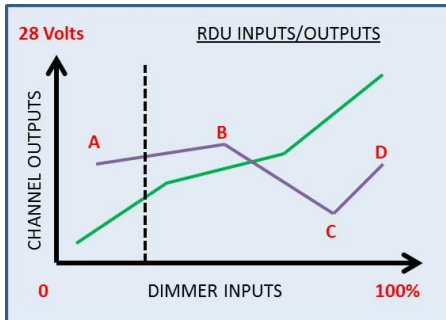
- ➔ Small Size: 2.13" x 1.15" x 4.63"
- ➔ Blackout Mode options available
- ➔ 2.5Amps per channel
- ➔ Weighs only 7 ounces
- ➔ 28 Vdc
- ➔ Operating Temp -40 to 55C
- ➔ 4 configurable line segment for each channel (adjustable slope/channel)
- ➔ 3 Dimmer Inputs plus 6 virtual dimmers with optional Encoder Module
- ➔ Short Circuit & Overload protection on all channels.
- ➔ Each Channel can be set at a Fixed maximum output Voltage

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Configurable Channel Outputs

The RDU is configured using a built in USB port that connects to a computer or laptop running any standard VT100 Terminal program for communication. This allows for easy setup, and once the RDU is configured with Easy Balance™, everything is permanently stored in memory.



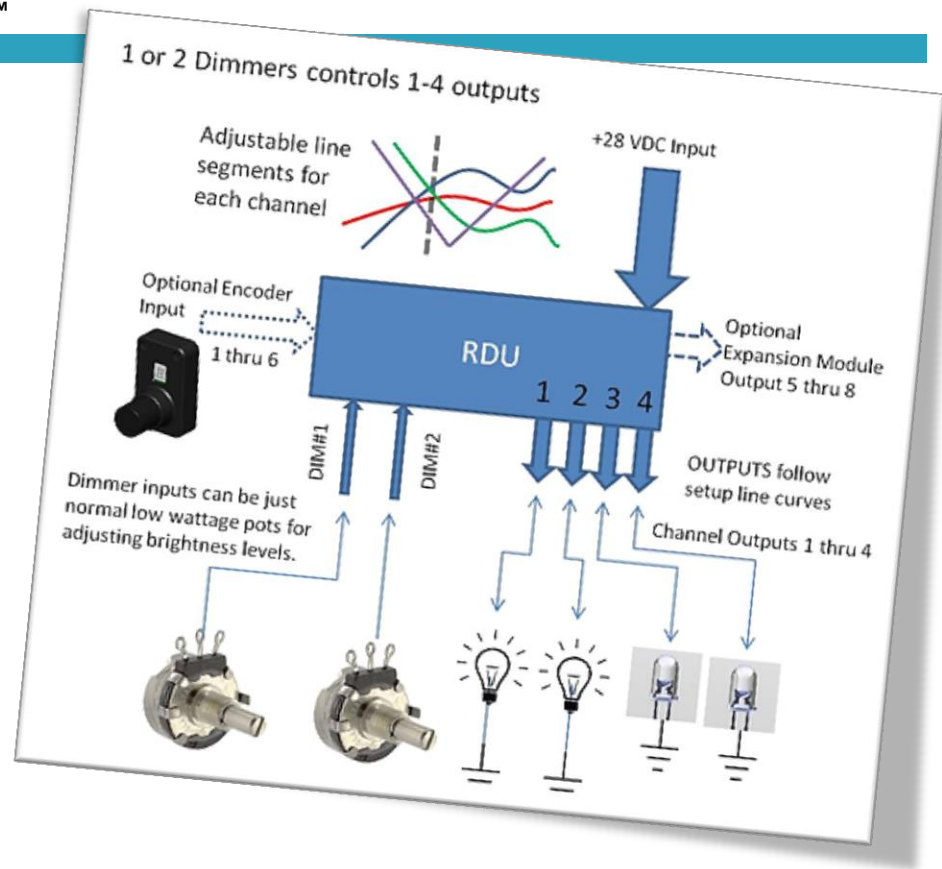
Besides having many other options in the RDU, every channel output has four line-segment points that can be adjusted for defining specific lighting slopes.

Utilizing these variable line segments, individual slopes for each channel can be customized to deliver an output voltage based on an assigned dimmer input signal. This is how LED and incandescent lighting circuits can be “balanced” to provide the same light output for a specific dimmer input signal. The other benefit of the RDU is that no heavy gauge wire has to be used when connecting to the dimmers. Instead, the RDU uses each dimmer input as a “control” signal but takes care of any heavy output currents at each channel directly (2.5Amps/channel).

Output Channels can also be set for a maximum output value too. For example, one channel can be set to provide 28Vdc when a dimmer input reaches 70%. Another channel can be set to only reach 5Vdc for the same corresponding dimmer input.

Optional Expansion Module

An optional expansion module is available that provides four additional Channel outputs, giving a maximum of eight configurable outputs with Easy Balance™.



Basic Setup Concept

This is a very basic configuration option with four output zones being controlled by either one or two dimmers. Channel outputs are independent and can be wired to anything designated for that channel (typically LED or Incandescent). The outputs are NOT device-type specific, and even small heated seat pads or blower motor fans can be controlled by the RDU. With Blackout Mode, Auto Level Start and more, this RDU provides a multitude of configurable options.

Optional Encoder Module

By adding an optional encoder module to the RDU, a user can have up to six virtual encoders that can be assigned as dimmer inputs from 0% to 100%.

By pressing down on the shaft, the next virtual encoder is selected and displayed on the numeric display.

This feature can save valuable instrument or cabin space, because one encoder module can represent one to six different configurable lighting ZONES. It can also be used as a GLOBAL Dimmer by tying multiple output channels to one virtual encoder input.



FOR MORE INFORMATION

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