

O.C. White Mic-Lite™

Instructions for Use

*****CAUTION*****

WHEN USING THE MIC-LITE™ WITHOUT THE O.C. WHITE CONTROLLER, DO NOT CONNECT THE MIC LITE DIRECTLY TO A VOLTAGE SOURCE WITHOUT PROVIDING APPROPRIATE CURRENT-LIMITING RESISTORS. (SEE BELOW FOR DETAILED INSTRUCTIONS).

CONNECTING THE MIC-LITE™ DIRECTLY TO A VOLTAGE SOURCE WILL DAMAGE THE DEVICE.

General Information

The Mic-Lite™ assembly provides a bi-color LED array consisting of 12 red LEDs and 12 white LEDs in a common anode configuration. The array requires a nominal operating current of 80 mA per color.

The unit is designed to operate with the companion O.C.White Mic-Lite™ Controller. The Controller provides a complete and convenient solution to interfacing the Mic-Lite™ with a broadcast system console, including:

- optically isolated electronics to interface with console tally output signals
- built-in current limiting
- +12 VDC power supply
- optional dimming via pulse-width modulation

For application without the O.C. White Controller, any voltage greater than 10 VDC can be used to energize the array. In this case, suitable current limiting resistors must be selected based on the operating voltage and the user's system must separately provide a means of switching between each color.

Installation of the Mic-Lite™ with and without the O.C. White Controller is described in the following sections.

Use Without O.C. White Mic-Lite™ Controller

The Mic-Lite™ LED arrays are designed to operate at 80 mA. A minimum voltage of 10V is required to account for the internal diode drops internal to the array. Only one color at a time should be illuminated, thus at any given time, the operating current should nominally be 80 mA.

Any power supply with an available output of 10V or more at a load current of at least 80 mA can therefore be employed to energize the Mic-Lite™.

The Mic-Lite™ may be operated at voltages less than 10V and currents less than 80 mA, however, the reduced power will result in less light intensity.

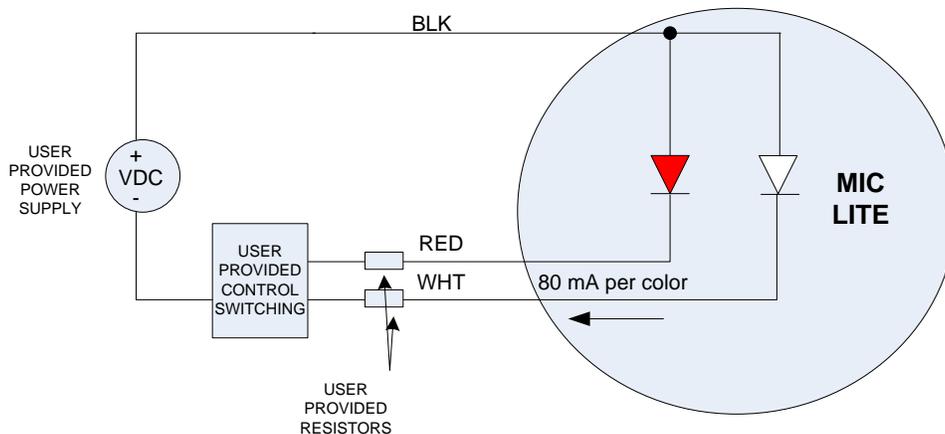
Any circuit that can provide an approximately constant average current to the array can be used. The simplest approach is a fixed-voltage DC source connected to the array through current limiting resistors – this method is described here.

CAUTION: Ensure the proper current limiting resistor is selected to avoid possible damage to the LEDs in the Mic-Lite™ Array.

1. Determine current limiting resistor requirements based on the available DC voltage. Be sure the resistors selected have an adequate power rating.

Voltage VDC	Red Array Resistor	White Array Resistor
10V	43 Ohms 1/2W	Not required – 0 Ohms
12V	68 Ohms 1/2W	22 Ohms 1/4W
15V	100 Ohms 1W	62 Ohms 1/2W
24V	220 Ohms 2W	180 Ohms 2W

2. Wire the respective resistor in series with each conductor of the Mic-Lite™ as shown, with the user-provided control switching configured to complete the circuit between the LED cathode and the negative terminal of the power supply.



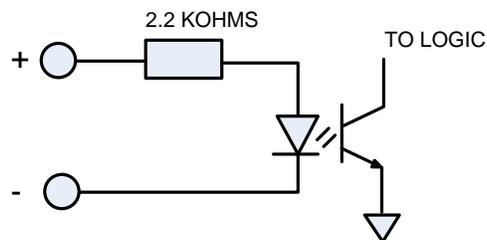
Use with O.C. White Mic-Lite™ Controller

1. Assemble the Mic-Lite™ to the microphone arm and route the cable as desired to the Controller.
2. Locate and secure the Controller so the terminal blocks on each end can be accessed by the cables from both the microphone arm and the console's tally output.
3. Connect the 3 conductors at the end of the Mic-Lite™ cable to the control box terminal block labeled **J2 OUTPUT** per the table below. Check to ensure the connection is firmly secured.

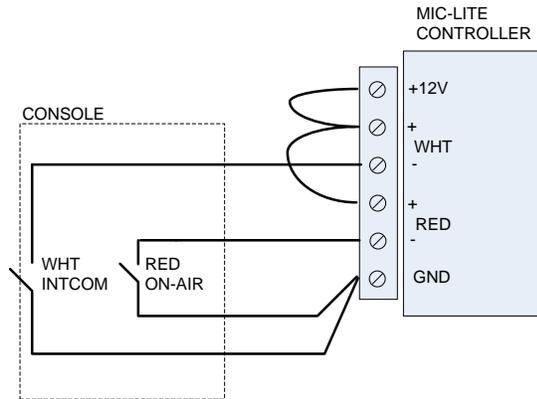
Mic-Lite™ Conductor	Controller J2 Terminal	Function
BLACK	COM	Common Anode +VLED
WHITE	W	White array cathode
RED	R	Red array cathode
SHIELD	GND (Do not connect)	None

4. Connect the tally output(s) from the console to the Controller **J1 CONTROL** terminal block. The controller supports a pair of tally signals called "RED" and "WHT". Typically, RED is used as an ON-AIR indication, and WHT for an intercom indication. The RED input overrides the WHT input if both are active.

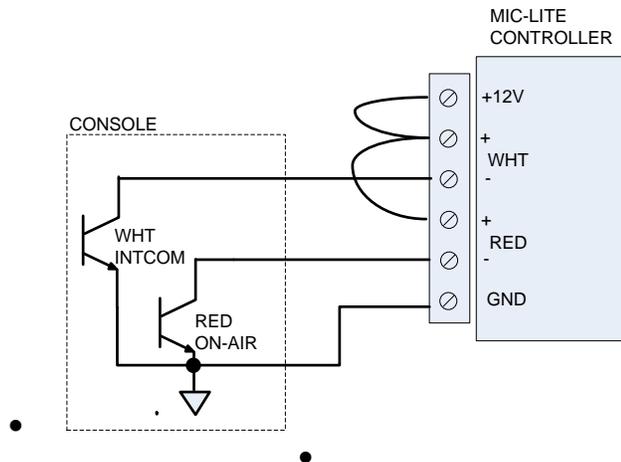
The interface can be used with normally open contact closures, open-collector or logic-level tally outputs. The equivalent circuit of each input is shown below. To make an input active, apply between 3 and 12 VDC at the terminals in the polarity indicated. Example configurations are shown below.



- **Normally open contact closures**



- **Open collector**



- **Logic levels**

