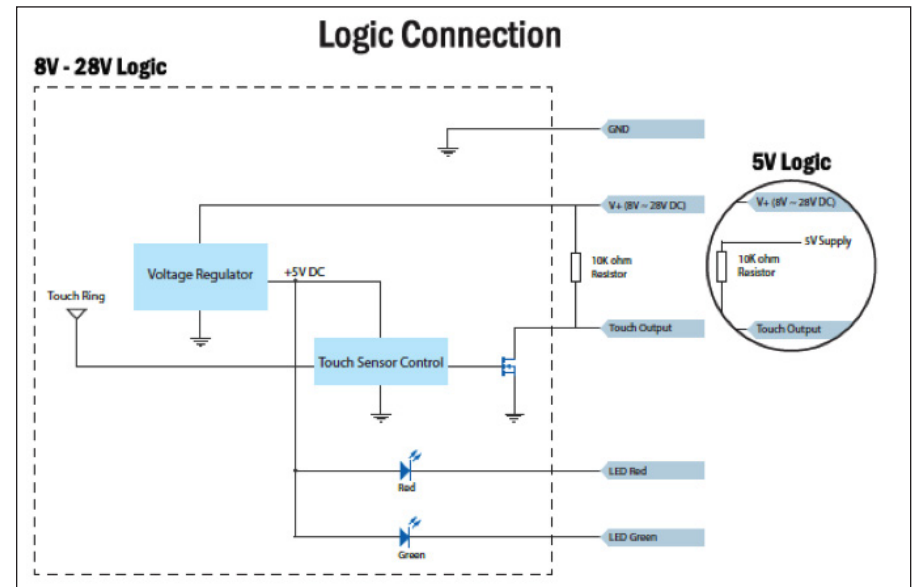
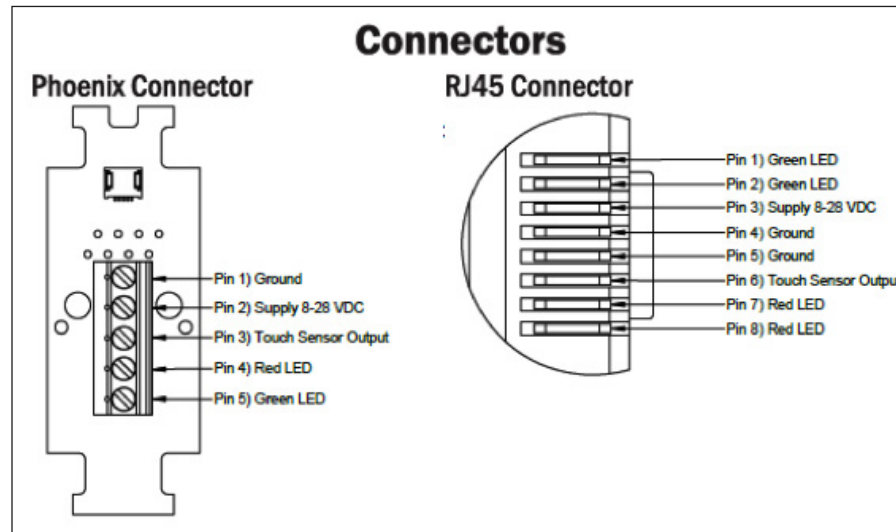


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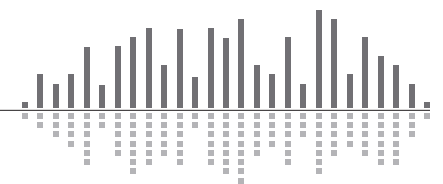
## Integrating the Earthworks IML & IMBL Microphones and the LumiComm Touch Ring with a Symetrix DSP

The purpose of this Tech Tip is to explain how to integrate the Earthworks IML & IMBL Microphone and LumiComm Touch Ring with a Symetrix DSP. The Earthworks LumiComm Touch Ring features a dual-color LED light ring and a touch sensor output. The light diffuser houses 10 LEDs providing side illumination (5 Green, 5 Red). The logic controlled LumiComm Touch Ring provides system integrators complete freedom to assign functions and LED color.

The LumiComm Touch Rings current consumption is 85 mA with 5 LEDs lit and 170 mA with 10 LEDs lit, so an external power supply is needed. A “regulated” power supply from 8-28 VDC can be used. Always check your power supply polarity before connecting your supply to the LumiComm Touch Ring.



The Earthworks IML & IMBL Microphones and the LumiComm Touch Ring can be supplied with either a 5 pin Phoenix connector or an 8 pin R-J45 connector.



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The wiring diagram below uses the Earthworks IMBL Phoenix connector in this example. Each connection between the Phoenix connector and the Symetrix DSP is explained below.

Pin 1) Ground - This connects to both the ground (-) connection of the external power supply, as well as the ground connection of the External Control Input or the Logic Output used on the Symetrix DSP.

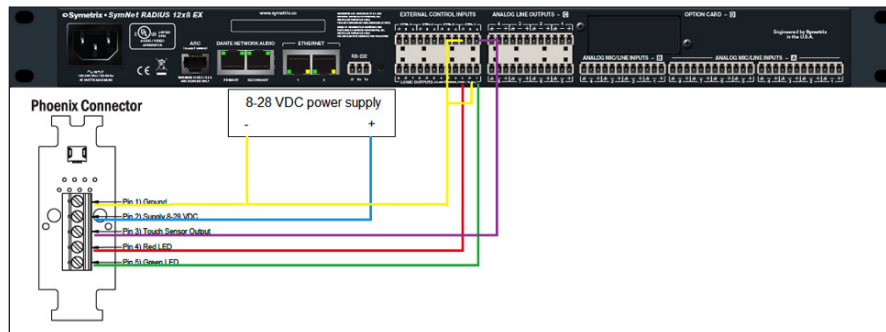
Pin 2) 8-28 VDC power supply – This connects to the (+) connection of the external power supply.

Pin 3) Touch Sensor Output – This connects to the External Control Input used on the Symetrix DSP. In this example, CTRL input 1A is used.

Pin 4) Red LED - This connects to the Logic Output on the Symetrix DSP used to activate the red LED. In this example Logic Output 2 is used.

Pin 5) Green LED - This connects to the Logic Output on the Symetrix DSP used to activate the green LED. In this example Logic Output 1 is used.

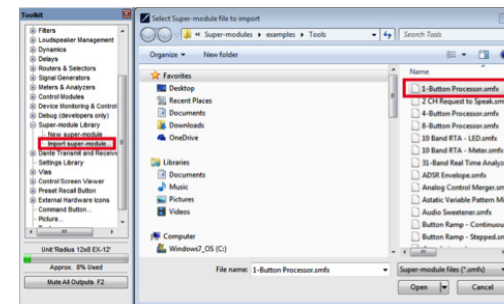
Symetrix DSP's are equipped with 3.3V pull up digital inputs, so a 10K resistor is not necessary as shown in Earthworks documentation.



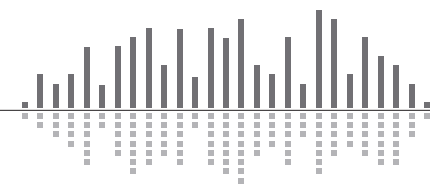
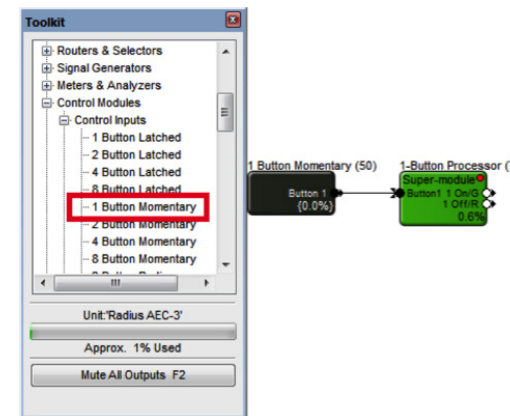
To create the programming for the LEDs we recommend using our Button Processor Super-module, which is included in Composer software. 1-button, 4-button and 8-button versions are included in Composers Super-module library.

The Button Processor Super-module makes it extremely easy to integrate these microphone's push-to-talk switches into your SymNet DSP. Four different modes are available per mic switch; Push to talk, Push to Mute, Toggle, and Disabled.

1. Start by importing a 1-Button Processor Super-module into the design:



2. Drag in a 1-Button Momentary module from the toolkit, and wire to the "Button 1" input on the super-module.

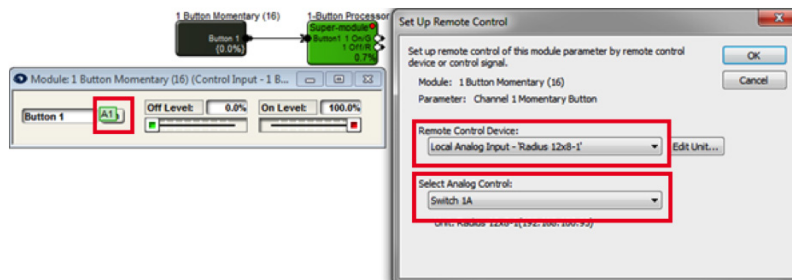


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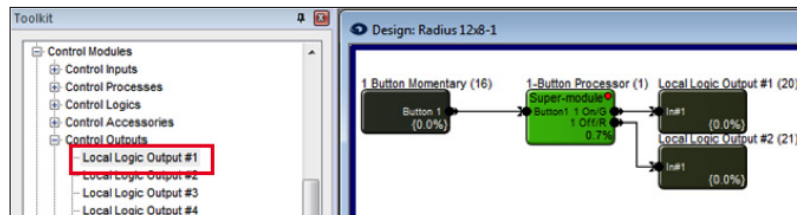


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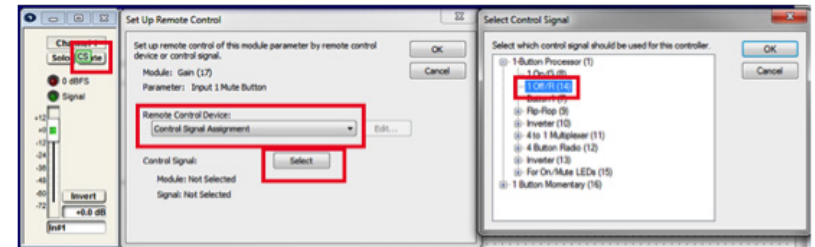
- Double-click the 1-Button Momentary module to bring up its GUI. Right-click directly on the “On” button, then click “Set Up to Remote Control” and select the Local Analog Input from the “Remote Control Device” dropdown menu. Then select which switch is being used under the “Select Analog Control” dropdown menu. Switch 1A is used in this example.



- From Control Modules->Control Outputs, drag in the “Local Logic Output #1” module. Wire the On/G output from the Button Processor Super Module into the Local Logic Output 1 module.
- From Control Modules->Control Outputs, drag in the “Local Logic Output #2” module. Wire the Off/R output from the Button Processor Super Module into the Local Logic Output 2 module.



- Navigate to the Mute button for the mic channel you’re planning to control. Right-click it, select “Set Up to Remote Control” and choose “Control Signal Assignment”. Click the “Select” button, and click the plus sign next to “1-Button Processor”. Highlight “1 Off/R”, then click OK.



- Open the Super-module user interface and select the preferred switch mode. In this example the Toggle mode is used. Go online and test the switch while watching the super-module GUI. The Input LED will light when the switch is closed, and the On/Mute LEDs will respond accordingly.

