

## **Understanding DALI - A Programmer's Tool**

This document outlines the definitives of a DALI network and the most efficient methods to program a DALI lighting control system.

The Digital Addressable Lighting Interface provided with each Brightline System has the following components: DALI Busmaster, 18VAC Adapter, Null Modem Cable, IOGear/ATEN USB to Serial Adapter, Brightline Software Disk.

The disk contains two system programming software components: WinDIM and DALItool. Depending on the size of the installation, either can be installed (WinDIM works for installations of 10 fixtures or less and is simpler to use).

When connecting the USB to serial interface, drivers will load automatically. THIS IS IMPORTANT: These drivers must be updated on the ATEN website at:

[http://www.aten.com/download/download\\_dv.php](http://www.aten.com/download/download_dv.php)

Without this firmware upgrade, either an "Unrecognized Device" or "Undefined Device" will appear without these drivers.

Once the drivers are installed, disconnect power from the Busmaster, wait 5 seconds, and reconnect.

At this point, open the program of choice. Both programs are Graphical User Interfaces (GUI), and have simple tabbed menus. Step through the tabs to establish communication with the bus. Tab 1 will ping the interface. "DALI Busmaster" should be clearly visible on one of the COM ports. The USB interface should also be visible in WinDIM, deselect ALL ports except the Busmaster port. This will speed up communication. The only COM ports that are available are 1-4. In DALITool, the non-connected ports will be greyed-out, so no deselection is necessary.

Once the COM port is established, click on it and set the parameters for communication as follows:

9600 Baud

8 Bit

1 stop Bit

No Parity

### **TALKING TO DALI DEVICES**

Unlike programming scenes via global commands (setting multiple levels and positions and saving as a single preset), DALI devices are “local save”. Each device is capable of storing 16 presets, but they’re all saved locally. When setting a light level, either in a ballast or driver, the level is set as a percentage (1-100) and saved to a scene number (1-16) and stored in the fixture.

When setting a level for scene one in fixture one, record it directly to the fixture. In both programs, save the level as set it in the fixture by selecting the “SAVE” button while in the fixture screen. This is the most common error: If each individual ballast or driver setting is not saved, the level will default to “mask”, which is a 30% level, and the “OFF” command will never shut the lights off.

Here’s an example: The command tree gives Preset 1. In the right hand window, all of the fixtures in the installation can be seen by address. Double-click on fixture “0”, and set the level via the fader tool. Once the level is correct, click the “Save” button on the lower right of the GUI, and repeat that for every fixture in scene 1.

By selecting the fader, the up and down arrows on a laptop can be used to set all levels precisely. Save every setting individually. Each system comes with two factory presets. Preset 1 is ALL ON AT FULL LEVEL and preset 8 is ALL OFF

## **DALI Advantages**

DALI is a very stable protocol. DALI is not reliant on front-end control, so if a processor or controller goes down, it's basically plug-and-play; re-programming a replacement processor is a simple task. Once programmed, the system is a series of "go-to" commands. This makes it a seamless connection between Hexadecimal and ASCII command systems. When a CD-250 entry station is included in the system, simple recall of scenes 1-8 is available.

## **Programming Issues**

If, during the programming of a Brightline System, any issues occur, please call 412-206-0106 x210.

Factory Commissioning is an option. Contact your Sales Representative for further information.