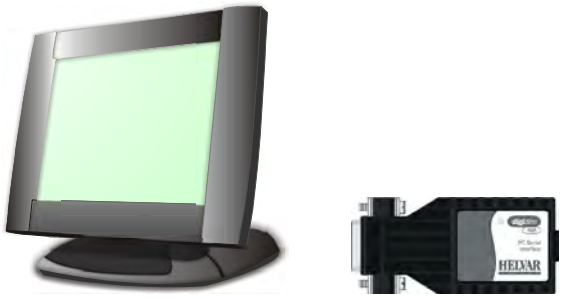
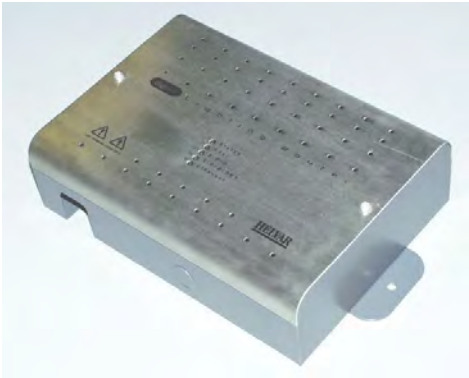
Digidim RS232 AV Interface



to Imagine 900 Lighting Router



User Guide

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1. Overview

This guide applies when a Digidim 503 RS232 AV Interface is connected to an Imagine 920 Lighting Router.

It explains how to control the 900 Lighting Router System from RS232, and how to interpret RS232 messages that result from some scene recall messages on the connected 900 Lighting Router.

Note: You must install Imagine 'Workshop' Software to configure the operation of the 900 Lighting Router system.

2. Addresses and Scenes

There are 64 individual addresses and 16 groups in a DALI system. There are also 16 scenes which can be configured for each individual address and each group.

2.1. System Scenes

There are 64 addresses and therefore 64 system scene blocks.

System scenes are sent to individual addresses. The possible number of scenes in the system is calculated as below:

64 (addresses) x **16** (scenes) = **1024** scene messages to individual addresses.

2.2. Local Scenes

There are 16 groups and therefore 16 local scene blocks.

Local scenes are sent to groups. There is a maximum of 16 scenes and there are 16 groups, therefore:

16 (groups) x **16** (scenes) = **256** scene messages that you can send to groups.

Note: Each Lighting Router can store 256 scenes.

3. Scene Messaging Information

To configure applications (e.g. Third Party touch panel screens) to generate scene recall messages, you must use Imagine 'Workshop' Software to find the scene.

3.1. Scene Message Format

Scene messages are displayed in hexadecimal format and are 4 bytes in size.

Byte no.	1	2	3	4
Byte name	Size	Interface Command	Address	DALI Command
Message display	03	52	*See Address byte formula below*	*See Command byte formula below*

3.2. Sending Scene Recall Messages

To send a scene recall message you need to send 4 bytes on the serial port:

1. The first byte is the size byte and is always 0x03 (hex) / 3 (dec).
2. The second byte is the command to the interface and is always 0x52 (hex) / 82 (dec).
3. The third byte is the address of the message (which is calculated by the Address formula below).
4. The fourth byte is calculated by the DALI Command formula below.
5. Send the message from your 503 AV Interface to the RS232 connected device.

   The interface will reply with four bytes:

   Hexadecimal: 0x03, 0x64, cc, dd

   Decimal: 3, 100, cc, dd

   (where cc and dd are the third and fourth bytes of the transmitted message respectively).

IMPORTANT: *The interface does not support the sending of more than one message at a time. When you send a message to the interface, you must wait for the reply before sending any further messages.*

Formulas for Calculating Address and Command Message Bytes

There is a formula for calculating the Address and Command bytes of the message and it is the same for both System Scenes and Local Scenes:

Address byte = (((Scene – 1) **/** 16) * 2) + 1

(**/** = integer division, rounded down)

DALI Command byte = ((Scene – 1) **%** 16) + 16

(**%** = remainder of (Scene – 1) / 16)

Example

Scene Recall 15:

Hexadecimal: 0x03, 0x52, 0x01, 0x1E

Decimal: 3, 82, 1, 30