Technical Note

Serial Integration - ASCII Syntax

TN015 rev1

Introduction

These pre-defined ASCII control messages enable bi-directional serial control between iLight and third-party systems, post-commissioning. It is not possible to configure iLight system devices using these messages.

Relevant Products

This guide details the pre-defined ASCII syntax applicable to the following iLight products:

- **SI-2-D** System Integrator - RS232 wired serial connection.
- **SI-2** System Integrator *(legacy)** - RS232 wired serial connection.
- **TSI-1 / EN1-TSI1** Touch Screen Interface - ASCII over IP
- **EG2 / EG2-NA** *(legacy)* – ASCII over IP

**Legacy SI-2 type (non-DIN rail) must be running firmware v2.04P for this model to enable full range of Area and Channel values (0-65535). Update via Flash Tool. Refer to current SI-2-D Programming Guide for details.*

Contents

1. ASCII Message Syntax 3

1.1. Overview 3

1.2. Message Structure 3

1.3. Leading Zeros 3

1.4. Invalid Messages 3

2. ASCII Virtual Control Messages 4

Command SS (Select Scene) 4

Command SA (Save Scene) 4

Command RS (Request Current Scene) 4

Report RE (Report Current Scene) 4

Command SC (Set Channel Level) 4

Command RC (Request Channel Level) 5

Command RL (Report Channel Level) 5

Command RT Request Channel Target Level 5

Report TL Report Channel Target Level 5

Command CR (Raise Channel Level) 5

Command CL (Lower Channel Level) 5

Command SF (Stop Fade) 6

iLight
A brand of Signify
Usk House, Llantarnam Park, Lakeside, Cwmbran, NP44 3HD, UK.
t: +44 (0)844 324 9100 e: cctechsupport@signify.com www.ilight.co.uk

3. ASCII Virtual Sequence Control Messages 6

Command QS (Start Sequence)..... 6

Command QP (Pause Sequence)..... 6

Command QT (Stop Sequence)..... 6

Disclaimer

Efforts have been made to ensure that the information presented in this document is accurate at the time of publication.

This document may be subject to revision to reflect changes to product features or system development. Check the version against the current published copy, available online at www.ilight.co.uk/support, to ensure that the most up-to-date version is being referenced.

1. ASCII Message Syntax

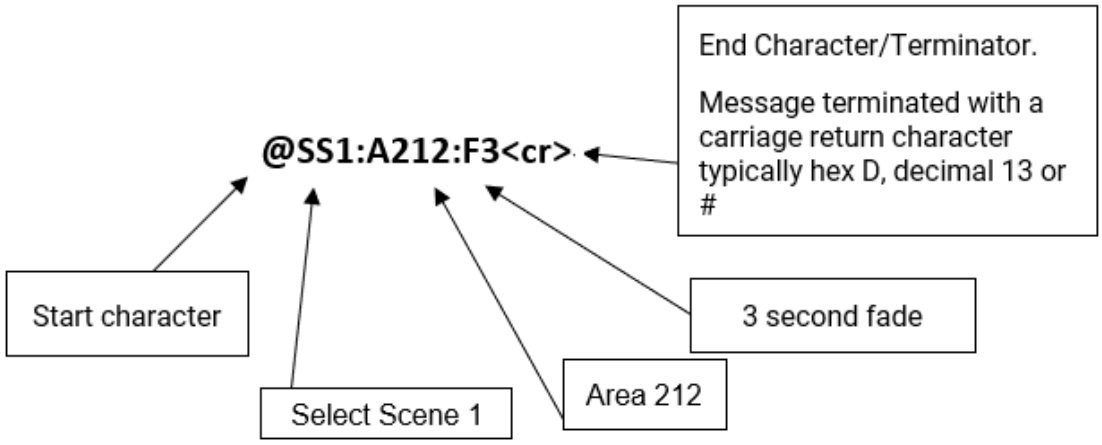
1.1. Overview

The general form of the message is:

Start Character	Each message starts with the '@' character. If a command is incomplete when a new '@' is received, the old command is discarded.
Command	The start character is followed by a two character command, e.g. 'SS' (select scene). These characters can be upper or lower case. ASCII strings are always sent as upper-case characters.
Parameters	After the command characters more characters defining the parameters, such as the scene number, area number, and fade time. A colon delimits the values. If a colon is received after only 1 digit then a single digit value is assumed.
Terminator / End Character	The command is ended with a carriage return, <cr> (13 dec). The # character can also be used. *For TSI-1 this can be configured in the webserver pages.*

1.2. Message Structure

A typical message would be:



The full range of Areas numbers (1 to 65535) is available, as well as all scenes (0 – 128) and fade times up to 999 seconds. *Legacy SI-2 also supports this with firmware v2.04P.*

1.3. Leading Zeros

All ASCII strings sent from the iLight serial interface will have no leading zeros.

Messages sent to the iLight serial interface can have leading zero if required. Therefore, the message **@SS1:A2:F3<cr>** and **@SS001:A00002:F03<cr>** are both valid and will be understood by the device. In this case it is to select scene 1 in Area 2 with a fade time of 3 seconds.

1.4. Invalid Messages

Any message with a greater number of characters than those shown in the syntax below will be ignored by the interface.

2. ASCII Virtual Control Messages

Virtual control messages are used to control the system and not messages to individual devices. Once sent to the iLight serial interface it will be decoded and broadcast to iCANnet™ which allows this to be visible to all other devices.

It is important to know that minimal configuration is required to facilitate the sending and receiving of the standard ASCII protocol. As an example, all 129 scenes in all 65535 areas can be sent and received without restriction.

Command SS (Select Scene)

This message selects a scene in an area. The syntax is: **@SSxxx:Axxxxx:Fxxx<cr>**

- SSxxx defines the scene number, where xxx is valid from 000 to 128. Scene 000 is OFF.
- Axxxxx defines the Area Number, valid for 1 to 65535.
- Fxxx defines the Fade Time, valid for 000 to 999 for seconds.

Examples:-

1. *@SS003:A61000:F09<CR> = Select Scene 3 Area 61000 with a fade time of 9 seconds.*
2. *@ss2:a45:f5<CR> = Select Scene 2 in Area 45 with a fade time of 5 seconds.*

Command SA (Save Scene)

This message saves the current levels to a scene in an area. The syntax is: **@SAxxx:Axxxxx<cr>**

- SAxxx defines the scene number, where xxx is valid from 0 to 128 - Scene 0 saves to the current scene selected in the Area.
- Axxxxx defines the Area Number, valid for 1 to 65535.

Command RS (Request Current Scene)

This message requests the current scene number in an area. The syntax is: **@RSxxx<cr>**

- RSxxx defines the Area Number, valid for 1 to 65535.

Report RE (Report Current Scene)

This message reports the current scene number in an area. The syntax is: **@RExxx:Axxxxx<cr>**

- RExxx defines the Scene Number, valid for 0 to 128.
- Axxxxx defines the Area Number, valid for 1 to 65535.

Command SC (Set Channel Level)

This message sets the level of a channel in an area. The syntax is: **@SCxxx:Axxxxx:Lxxx:Fxx<cr>**
SCxxx defines the channel number, where xx is valid from 0 to 65535. Channel 0 affects ALL channels in an area.

- Axxxxx defines the Area Number, valid for 1 to 65535.
- Lxxx defines the Level, valid for 0 to 100 in %.
- Fxxx defines the Fade Time, valid for 0 to 999 for seconds.

Command RC (Request Channel Level)

This message requests the level of a channel in an area. The syntax is: **@RCxxxxx:Axxxxx<cr>**

- RCxxxxx defines the channel number, where xxx is valid from 1 to 65535. Channel 0 is not valid in an area.
- Axxxxx defines the Area Number, valid for 1 to 65535.

Command RL (Report Channel Level)

This message reports the current level of a channel in an area. The syntax is:
@RLxxxxx:Axxxxx:Lxxx<cr>

- RLxxxxx defines the Channel Number, valid for 1 to 65535.
- Axxxxx defines the Area Number, valid for 1 to 65535.
- Lxxx defines the Level, valid for 000 to 100 in %.

Command RT Request Channel Target Level

This message requests the Target level of a channel in an area. Reply is TL message.

The syntax is: **@RTxxxxx:Axxxxx<cr>**

- RTxxx defines the channel number, where x is valid from 1 to 65534.
- Axxxxx defines the Area Number, valid for 0 to 65534.

Report TL Report Channel Target Level

This message reports the Target level of a channel in an area. This is the reply to RT.

The syntax is: **@TLxxxxx:Axxxxx:Lxxx:Txxx<cr>**

- TLxxxxx defines the Channel Number, valid for 1 to 65534.
- Axxxxx defines the Area Number, valid for 0 to 65534.
- Lxxx defines the Current Level, valid for 0 to 100 in %
- Txxx defines the Target Level, valid for 0 to 100 in %

Command CR (Raise Channel Level)

This message increments the area by 1% level. The syntax is: **@CRxxxxx:Axxxxx<cr>**

- CRxxx defines the channel number, where xx is valid from 0 to 999. Channel 0 affects ALL channels in an area.
- Axxxxx defines the Area Number, valid for 1 to 65535.

Command CL (Lower Channel Level)

This message decrements the area by 1% level. The syntax is: **@CLxxxxx:Axxxxx<cr>**

- CLxxxxx defines the channel number, where xx is valid from 000 to 65535. Channel 0 affects ALL channels in an area.
- Axxxxx defines the Area Number, valid for 1 to 65535.

Command SF (Stop Fade)

This message stops fading in an area. The syntax is: **@SFxxxxx:Axxxxx<cr>**

- SFxxxxx defines the channel number, where xxxxx is valid from 0 to 65535. Channel 0 affects ALL channels in an area.
- Axxxxx defines the Area Number, valid for 1 to 65535.

3. ASCII Virtual Sequence Control Messages

Command QS (Start Sequence)

This message initiates a selected sequence. The syntax is: **@QSxx:Sxxx:Nxxx:Axxx<cr>**

- QSxx defines the sequence number, where xx is 1 to 16.
- Sxxx defines the segment number where xxx is 1 to 255.
- Nxxx defines the node number where xxx is 1 to 255.
- Axxx defines the action (step) number where xxx is 0 to 128.

Command QP (Pause Sequence)

This message pauses a selected sequence. The syntax is: **@QPxx:Sxxx:Nxxx<cr>**

- QPxx defines the sequence number, where xx is 1 to 16.
- Sxxx defines the segment number where xxx is 1 to 255.
- Nxxx defines the node number where xxx is 1 to 255.

Command QT (Stop Sequence)

This message halts a selected sequence. The syntax is: **@QTxx:Sxxx:Nxxx<cr>**

- QTxx defines the sequence number, where xx is 1 to 16.
- Sxxx defines the segment number where xxx is 1 to 255.
- Nxxx defines the node number where xxx is 1 to 255.