



## Rako Control of Systemline 7

Rev 1.0  
15<sup>th</sup> July 2015

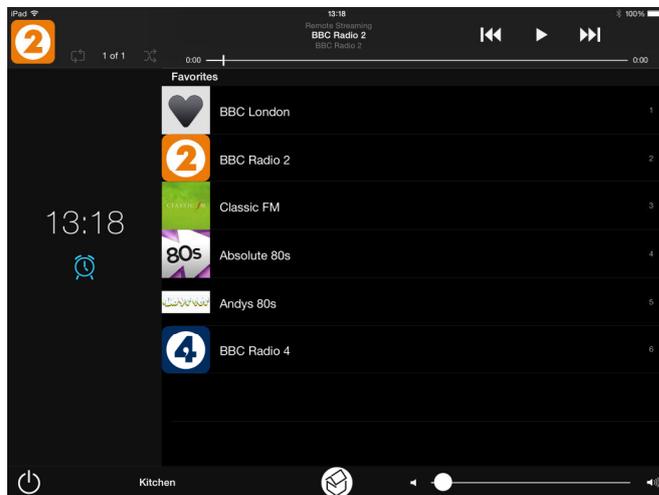
### 1.0 Introduction

The Rako 232 Bridge allows a Rako system to control S7 using a network connection. It is possible to configure the Bridge to map button presses from Rako keypads to output S7 TCP/IP commands.

S7 has been designed so that other control systems such as Rako can connect to S7 and send some commands. All the control protocol to achieve this is published on the Systemline7 web page

<http://www.systemline.co.uk/systemline/s7.htm>

It is important to configure the appropriate type of control at each device to give a simple and reliable end user experience. Rako control panels usually have from 6 to 12 buttons that can be labelled with its function, such as 'Scene 1' or 'Off' for lighting control. The ideal audio function on these hard button keypads is to simply select a radio station or playlist and adjust the volume. Radio stations can be stored as Favourites on an S7 system with a server using the S7 App, and these are listed numerically on the App as shown below.



In order for the Rako system to select a favourite in a zone, it only needs to communicate with the Netamp controlling the zone, as long as it has software 0004-0011 or 0003-0008 or higher. Netamps with this software have commands to select stored favourites on the server. If the Netamp has lower software, then you should perform a software update from the internet.

Favourites can also be playlists of music as stored by the end user, in which case you may also consider adding in play, stop, pause, and skip commands as button functions.

Once the Rako system has been configured to include custom strings for the Netamp, the commands to select favourites, sources and volume mapped to button presses, the end user

will be able to use Rako keypads to select favourites and adjust the volume without the need to open up an App.

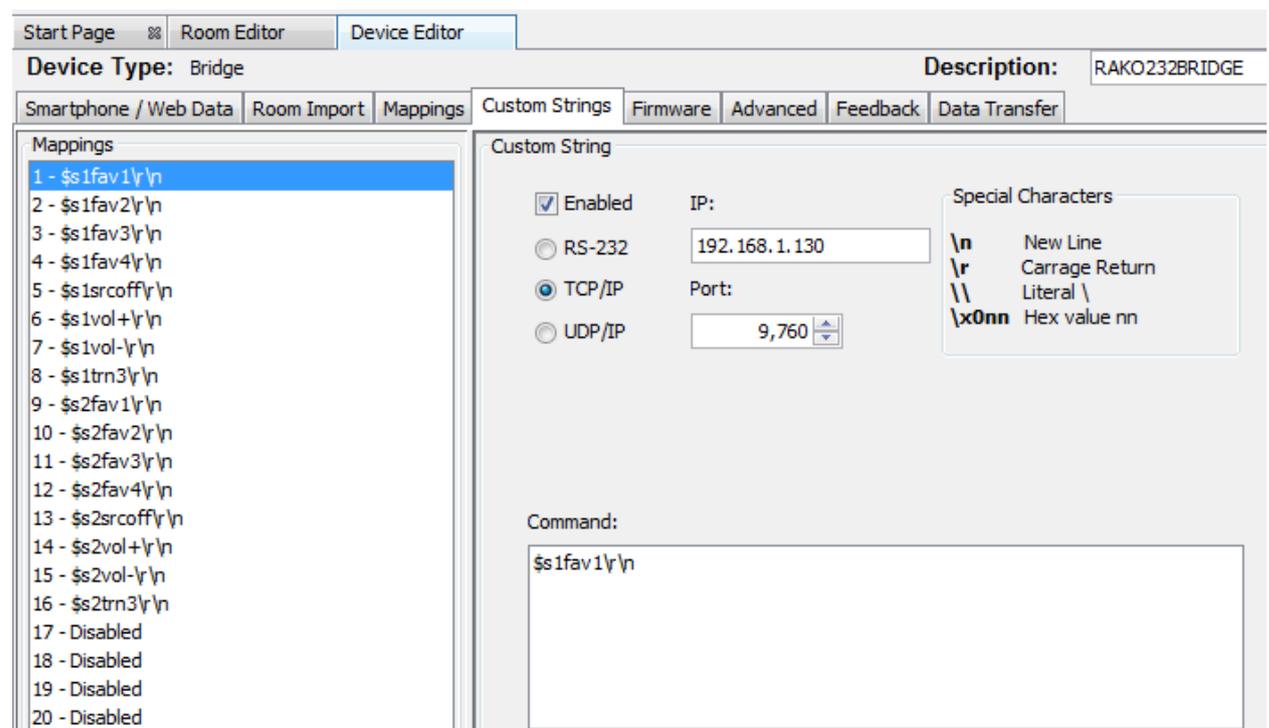
*A Rako project titled Systemline S7 Control" is available to download from the Systemline7 website downloads section. This already has a Netamp with the custom strings entered for two zones. These custom strings are then mapped to a keypad.*

## 2.0 Adding the Netamp Custom Strings

The RS232 Bridge can store a maximum of 32 custom strings, making it ideal to control one to four s7 zones, assuming 8 commands per zone.

**2.1** Open up the Rasoft Pro software and your project, add a Rako232 Bridge and select it.

**2.2** Press the 'Custom Strings' tab and add each command with the IP address of the Netamp and TCP/IP port 9760. Use `\r\n` to denote a carriage return and line feed after each command.



A full list of commands can be found in Appendix 1.

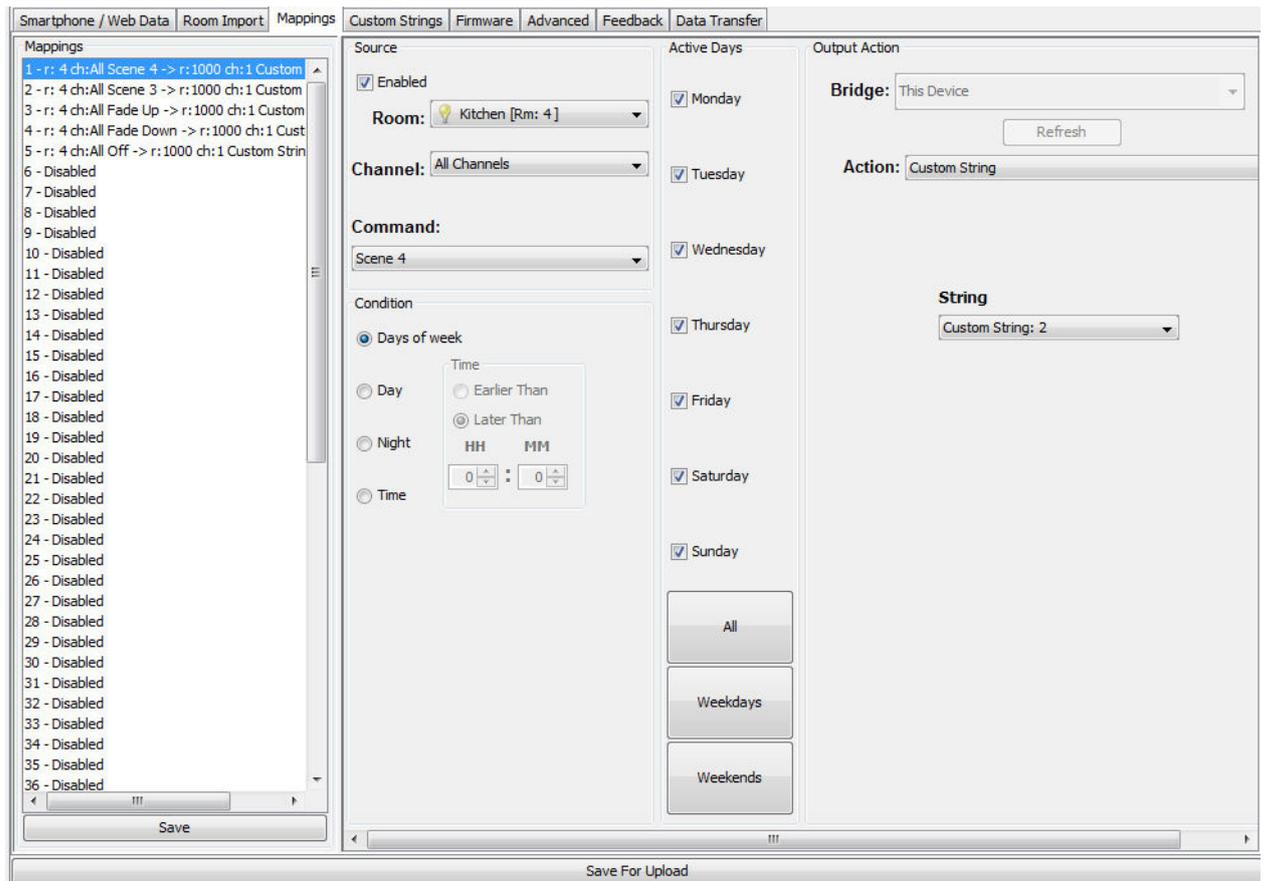
## 3.0 Mapping custom strings to button presses

You can now map a custom string to a button press on a Rako keypad

**3.1** Select the tab labelled 'Mappings', the RS232 Bridge has a maximum of 64 mappings.

**3.2** Enable the mapping and select the room containing the keypad and then the button command you wish to map, such as Scene 4.

**3.3** Select 'All Days' and then select the custom string you wish to map this to.



3.4 Repeat the process for all other mappings you need for the project

## 4.0 Setting dimmers or switches to ignore audio buttons

You may want to set the lighting actuators in the room to ignore commands that are mapped to custom strings

4.1 Select the device in project and select the 'Ignore Options'

4.2 Tick the boxes of the scenes that now relate to audio only commands so that it does not also switch on the lights.

Start Page | Room Editor | **Device Editor**

**Device Type:** RDT/RDL (250/500)      **Description:** <Auto Title>

**Room:** Kitchen [Rm: 4]      **Channel:** Channel 2 [Ch: 2]

Fade Rates | Ignore Options | **Advanced Options** | Profile Editor | Change Type | Data Transfer

House Commands Room 0	Group Commands Group Master Address	Direct Commands
<input type="checkbox"/> Ignore All	<input checked="" type="checkbox"/> Ignore All	
Don't respond to:	Don't respond to:	Don't respond to:
<input type="checkbox"/> Off	<input checked="" type="checkbox"/> Off	<input type="checkbox"/> Off
<input type="checkbox"/> Scene 1	<input checked="" type="checkbox"/> Scene 1	<input type="checkbox"/> Scene 1
<input type="checkbox"/> Scene 2	<input checked="" type="checkbox"/> Scene 2	<input type="checkbox"/> Scene 2
<input type="checkbox"/> Scene 3	<input checked="" type="checkbox"/> Scene 3	<input type="checkbox"/> Scene 3
<input type="checkbox"/> Scene 4	<input checked="" type="checkbox"/> Scene 4	<input checked="" type="checkbox"/> Scene 4
<input type="checkbox"/> Fade	<input checked="" type="checkbox"/> Fade	<input type="checkbox"/> Fade
<input type="button" value="Toggle All"/>	<input type="button" value="Toggle All"/>	<input type="button" value="Toggle All"/>

Upload the project to your Rako Bridge.

## Appendix 1

Command	Zone 1	Zone 2
On	\$\$s1srcon	\$\$s2srcon
Off	\$\$s1srcoff	\$\$s2srcoff
Source 1	\$\$s1src1	\$\$s2src1
Source 2	\$\$s1src2	\$\$s2src2
Source 3	\$\$s1src3	\$\$s2src3
Source Local	\$\$s1srcloc	\$\$s2srcloc
Source Previous	\$\$s1srcpre	\$\$s2srcpre
Vol+	\$\$s1vol+	\$\$s2vol+
Vol-	\$\$s1vol-	\$\$s2vol-
Mute	\$\$s1volmute	\$\$s2volmute
Mute Off	\$\$s1volmoff	\$\$s2volmoff
Bass +	\$\$s1bas+	\$\$s2bas+
Bass -	\$\$s1bas-	\$\$s2bas-
Treble +	\$\$s1tre+	\$\$s2tre+
Treble -	\$\$s1tre-	\$\$s2tre-
Balance +	\$\$s1bal+	\$\$s2bal+
Balance -	\$\$s1bal-	\$\$s2bal-
LIM Analogue	\$\$s1lima	\$\$s2lima
LIM Digital	\$\$s1limd	\$\$s2limd
LIM Automatic	\$\$s1lim1	\$\$s2lim1
Favourite 1	\$\$s1fav1	\$\$s2fav1
Favourite 2	\$\$s1fav2	\$\$s2fav2
Favourite 3	\$\$s1fav3	\$\$s2fav3
favourite 4	\$\$s1fav4	\$\$s2fav4
Favourite 5	\$\$s1fav5	\$\$s2fav5
Favourite 6	\$\$s1fav6	\$\$s2fav6
Favourite 7	\$\$s1fav7	\$\$s2fav7
Favourite 8	\$\$s1fav8	\$\$s2fav8
Favourite 9	\$\$s1fav9	\$\$s2fav9
Favourite 10	\$\$s1fav10	\$\$s2fav10
Play	\$\$s1trn1	\$\$s2trn1
Stop	\$\$s1trn2	\$\$s2trn2
Pause	\$\$s1trn3	\$\$s2trn3
Skip >	\$\$s1trn4	\$\$s2trn4
Skip  <	\$\$s1trn5	\$\$s2trn5
Repeat On	\$\$s1trn6	\$\$s2trn6
Repeat Off	\$\$s1trn7	\$\$s2trn7
Random On	\$\$s1trn8	\$\$s2trn8
Random Off	\$\$s1trn9	\$\$s2trn9

All commands sent on port 9760, carriage return and line feed after each (0D 0A (\r\n)).