



# ADVANCED CONTROL SYSTEMS

## **FUNCTIONALITY DEEP-DIVE SERIES**

*Issue Five (b): String Transmit Commands*

## INTRODUCTION

Every customer has their own workflows and challenges to address; users should be able to leverage the full capabilities of their systems. In this series of How-To Guides, we will help engineers understand how to configure systems with added-value functionality to help solve issues in existing and future projects. Customers will be able to use a control platform as a simple unified system to deliver professional output and make simple day-to-day modifications without the need for expensive support calls.

**This How-To Guide showcases TSL's String Driver capabilities.**

### WHAT ARE STRING COMMANDS?

String commands in TallyMan allow users to configure defined ASCII and Hexadecimal strings to be transmitted and/or received by TallyMan via IP or Serial connections.

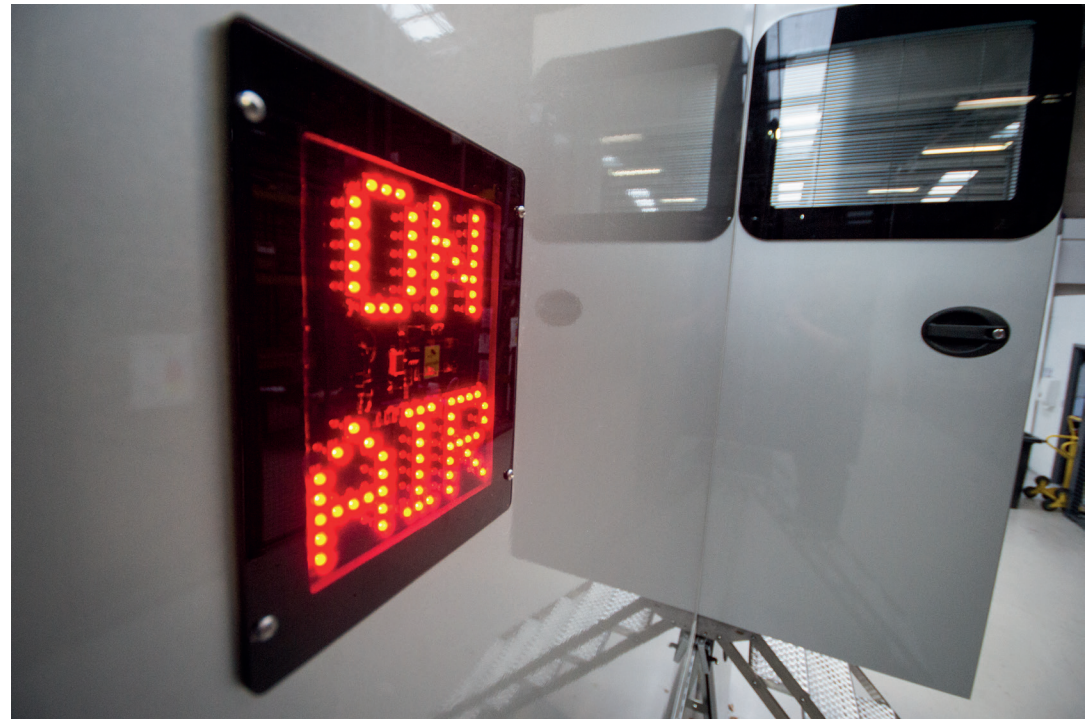
The strings provide an interface to a wide range of third-party devices and software that communicate over their own proprietary protocol or through means other than the standard switcher/router protocols, Ember+ or SNMP. Users have utilised string commands to recall scene presets in audio mixing consoles, control and monitor changeovers, video servers and interface with logging software along with many more applications.

## SCENARIOS

This guide provides in-depth instructions on how to:

- String Transmit: TallyMan is configured to send 'Play' and 'Stop' commands to a Blackmagic Design media player.

To learn how to set up String Receive Commands see Issue Five (a).



# 1. ADDING AN EVENT MONITOR

## SETTING UP A STRING TRANSMIT COMMAND

In this example, we will setup Tallyman to control a Blackmagic Design Hyperdeck using the following strings:

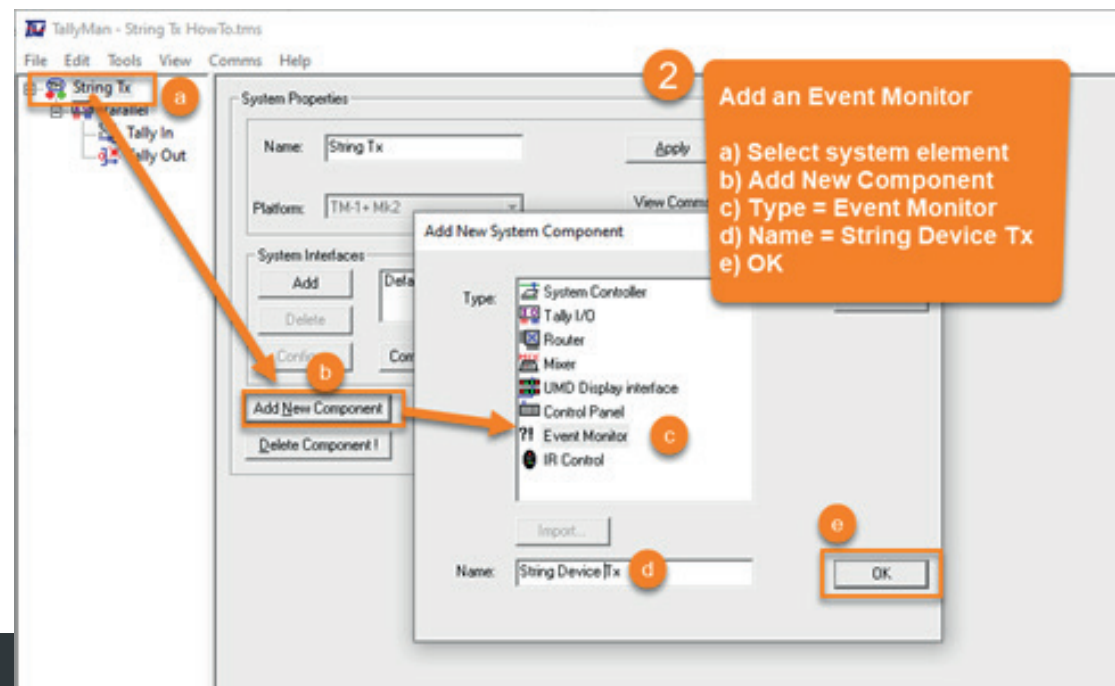
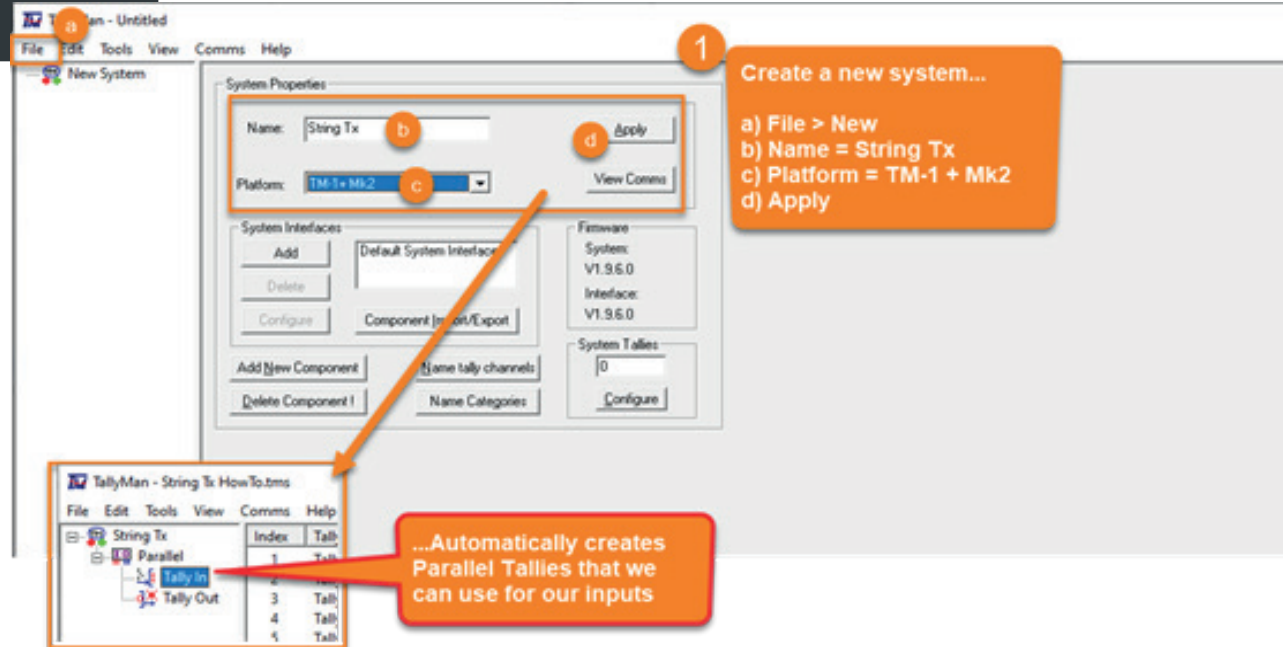
- “play\n\r”
- “stop\n\r”

You can use the same method to control functions of other equipment as long as they can receive ASCII/Hex commands.

The example uses the string transmit trigger actions to send commands triggered by GPIO inputs.

**Note:** The commands are specified by the third-party device that Tallyman is communicating with. For commands used by a specific device, please contact the manufacturer for a list of available commands for that device.

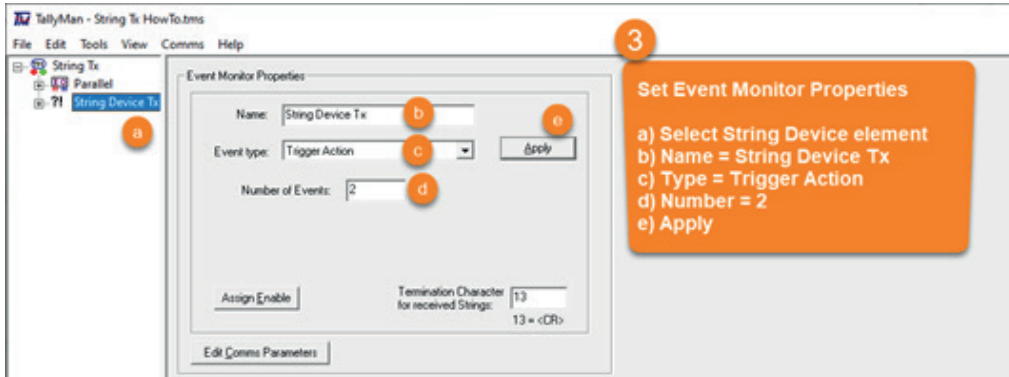
For this example, we are creating a new project however these same steps can be used to add this functionality to an existing configuration.



## 1. ADDING AN EVENT MONITOR

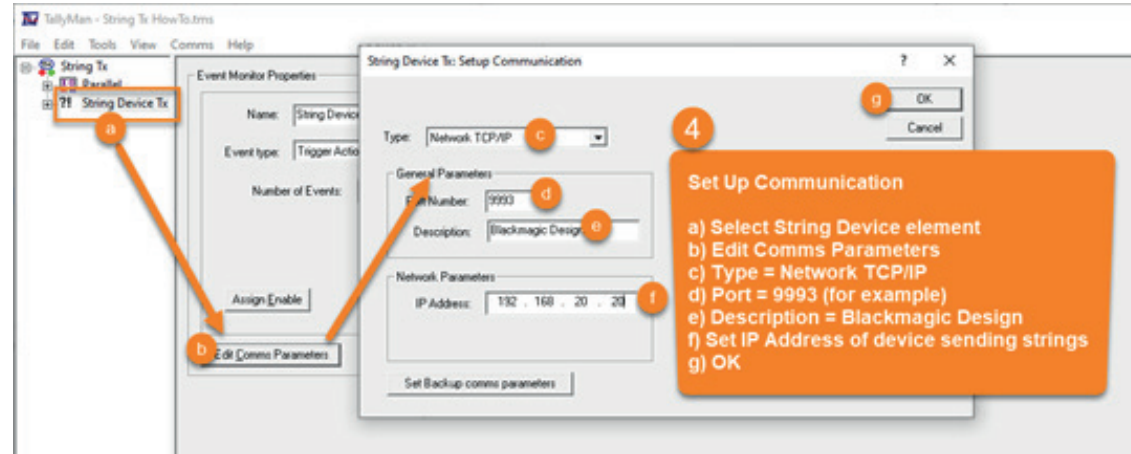


## 2. SETTING UP THE EVENT MONITOR



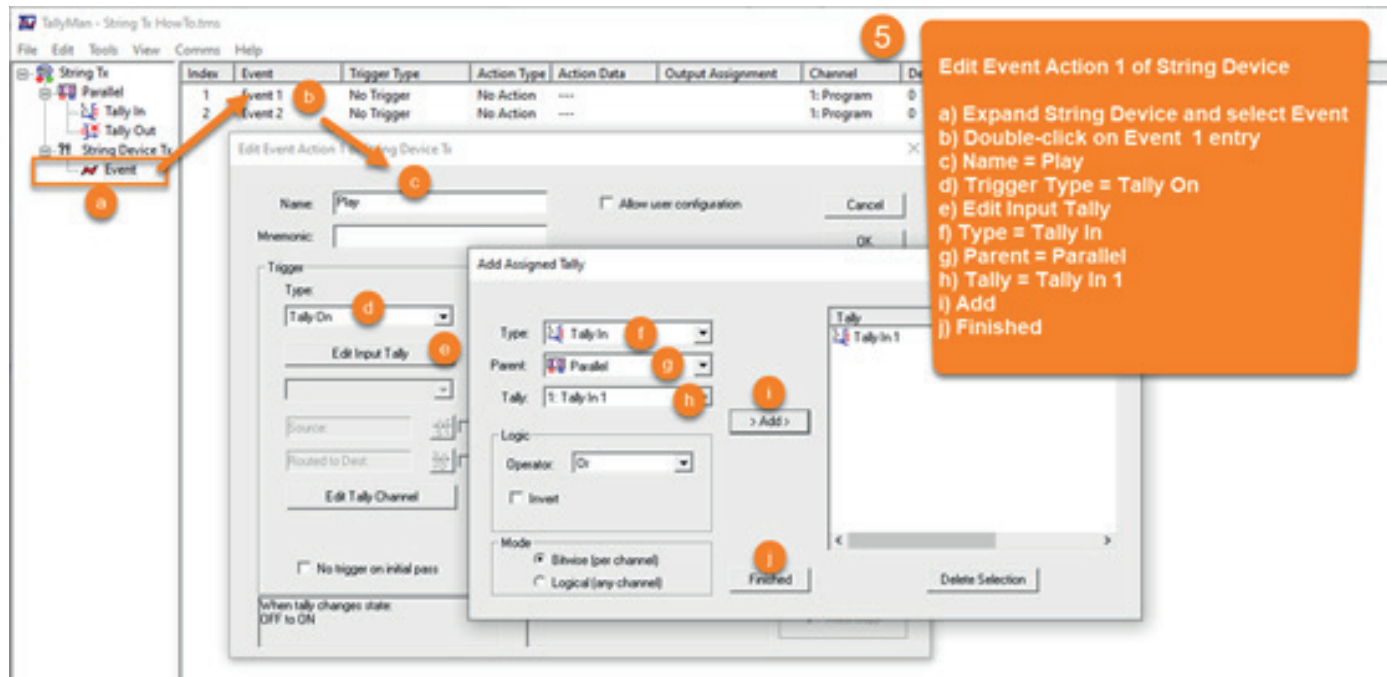
**3 Set Event Monitor Properties**

- a) Select String Device element
- b) Name = String Device Tx
- c) Type = Trigger Action
- d) Number = 2
- e) Apply



**4 Set Up Communication**

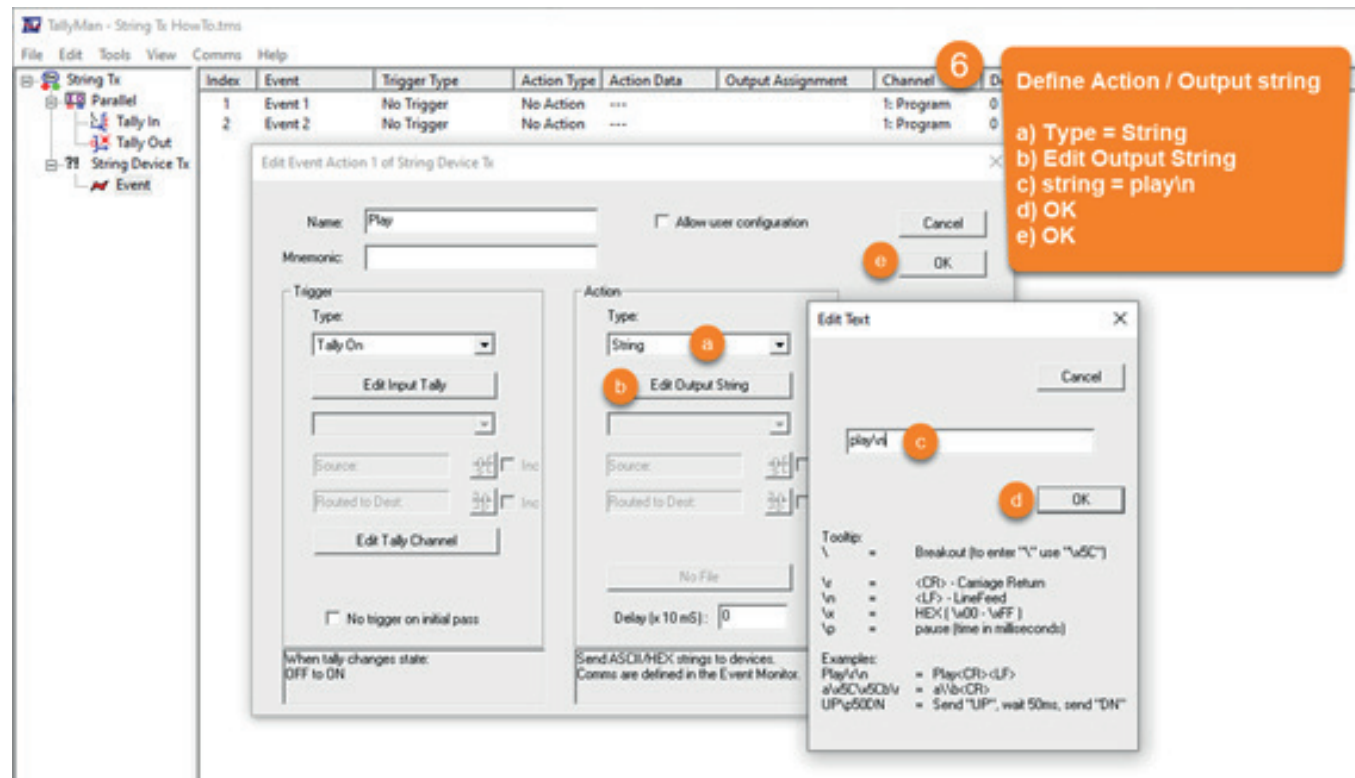
- a) Select String Device element
- b) Edit Comms Parameters
- c) Type = Network TCP/IP
- d) Port = 9993 (for example)
- e) Description = Blackmagic Design
- f) Set IP Address of device sending strings
- g) OK



**5 Edit Event Action 1 of String Device**

- a) Expand String Device and select Event
- b) Double-click on Event 1 entry
- c) Name = Play
- d) Trigger Type = Tally On
- e) Edit Input Tally
- f) Type = Tally In
- g) Parent = Parallel
- h) Tally = Tally In 1
- i) Add
- j) Finished

## 2. SETTING UP THE EVENT MONITOR



### NOTE

The command used must include any termination characters such as `\r` (<CR> or Carrage Return) or `\n` (<LF> or Line Feed). The correct termination character is defined by the device receiving the command so be sure to check the manual carefully.

## 2. SETTING UP THE EVENT MONITOR

**7** Edit Event Action 2 of String Device (exactly like step 5)

- Expand String Device and select Event
- Double-click on Event 2 entry
- Name = Stop
- Trigger Type = Tally On
- Edit Input Tally
- Type = Tally In
- Parent = Parallel
- Tally = Tally In 2
- Add
- Finished

**8** Define Action / Output string

- Type = String
- Edit Output String
- string = stop\n
- OK
- OK

**9** End of String Tx

| Index | Event   | Trigger Type | Action Type | Action Data | Output Assignment | Channel    | Delay |
|-------|---------|--------------|-------------|-------------|-------------------|------------|-------|
| 1     | Play    | Tally On     | String      | play\n      |                   | 1: Program | 0     |
| 2     | Event 2 | No Trigger   | No Action   | ---         |                   | 1: Program | 0     |

| Index | Event | Trigger Type | Action Type | Action Data | Output Assignment | Channel    | Delay |
|-------|-------|--------------|-------------|-------------|-------------------|------------|-------|
| 1     | Play  | Tally On     | String      | play\n      |                   | 1: Program | 0     |
| 2     | Stop  | Tally On     | String      | stop\n      |                   | 1: Program | 0     |

## 2. SETTING UP THE EVENT MONITOR

## 3. WRITE THE CONFIGURATION

### WRITE THE CONFIGURATION

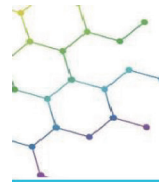
This procedure is described in the Router Control HowTo document, so follow the steps there if you need detailed instructions. Briefly; Choose Comms > Write Configuration.

### TEST

Now this configuration is complete, go ahead and test it with a Blackmagic Design Hyperdeck. Firing GPIO input 1 should start the playback on the Hyperdeck, input 2 should stop it again. There are more functions available that can be controlled on the Hyperdeck, perhaps you can experiment with adding some of them in.

Now that you have GPIO inputs controlling the Hyperdeck, adding a TMVP interface to control the Hyperdeck via touch-screen or mouse is easy. See the other HowTo guides in this series to see how to add TMVP to a Tallyman project.

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