

# Tallies

## this section is intended to be read in conjunction with the Introduction

### Television Systems Limited. Vanwall Road, Maidenhead, Berkshire, SL6 4UB Telephone +44 (0)1628 676200, FAX +44 (0)1628 676299

### Tallies

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#### 1.0 Introduction.

Tallies may be connected to the TM1 or to a ESP-1R that is under control of the TM1.

Tallies for the cameras and UMDs etc. may therefore be derived from external inputs from a Parallel Input/Output (I/O) interface such as the ESP-1R or may be created within the TallyMan program.

Tallies from a vision mixer might not used directly but rather as information with TallyMan i.e. mixer status or it may well be possible to use the **Tally In** interface provided with several of the router modules

TallyMan offers Tally Channels (16) to give a tally a second crucial identity in addition to its actual tally number.

Previous programs / systems have often provided only two tally channels such as red and green.

In some circumstances, both a red and a green tally might have been linked to a router source via the tallied router buses – one bus has a red tally as it goes to air and another bus has a green tally assigned to it as it feeds a VTR for, say, behind-the-goal-action – Iso recording.

In TallyMan, this idea is extended from two to sixteen channels.

In addition, TallyMan uses System Tallies. These are tallies that may be made from other tallies, possibly using logical operators such as AND, OR etc. to define how the tally inputs to the System Tally behave.

In addition, several tallies may be assigned to a System Tally that "belong" to different Tally Channels. In effect, a System Tally may be considered as a "multicore cable" which can carry several tallies and tally channels. In this analogy, these tallies are the individual wires of the multicore cable. A cable with several red cores would have several tallies all belonging to the "red" family and it may also have different colour cores, which in this analogy, would be tallies belonging to different channels or families.

An output mask is available whereby channels are selected to determine which input tallies are actually carried in the System Tally output. This could vary on a show by show basis.

It is important to remember that when mapping tallies to objects, (router destination or sources) tallies as a rule travel to an earlier source. So, a tally set to a router destination will tally the selected router source which may then be mapped to an output pin. In addition, tallies mapped to a router source will be shown on a destination display because that display is showing the status of that router source.

#### BUT:

If tallies are mapped to a router source, the destination that selects that tallied source is not itself tallied and therefore that destination cannot be used to set a tally to an output pin or used as a control to drive a virtual tally 2 x 1 router across.

In this latter case, if a Direct Tally is set to the destination, the destination is itself tallied and may then be used as the controlling object.

#### 2.0 Tally Channels

The TallyMan Program has 16 tally channels.

Any tally in the system must be labelled as belonging to one of these channels. This is comparable to that found in other systems (e.g. Winsoft); some tallies might be Red with some uniquely specified as Green for Iso-recording.

In TallyMan this is equivalent to Red tallies being labelled as **Program** (a default name which may be user changed) and Green which is equivalent to the label **Iso 1**. This is important so that groups or Channels of a tally type may subsequently be mapped to UMD LEDs or to physical output pins, perhaps via a router destination and hence source.

These individual channels may need to be extracted to unique physical pins for external triggering of tally lights on cameras, for example.

It will be seen that each dialog box for routers and UMDs has all the configuring information for that item in that box.

🔲 TallyMan - Offline.tms	3	
<u>F</u> ile <u>E</u> dit <u>T</u> ools ⊻iew <u>C</u> om	ms <u>H</u> elp	
<ul> <li>P P Simple System</li> <li>P 2 SC11</li> </ul>	System Properties         Name:       Simple System         Platform:       Windows PC         System Interfaces       Image: System Interface "System: V1.00         Delete       Configure         Add New Component       Name tally channels         Delete Component I       Configure	Name Tally Channels
Ready		1

#### 2.1 Naming the Tally Channels.

Click on **Name Tally Channels.** Colours may also be assigned but note that only a Tally Out Lamp and the Tally Mimic will show these colours.

This screen will now be shown.

Edit Tally	Channels				? 🔀		
Channe	Name	Tally Colour					The tally channels may be re-named in these
1:	Program		9:	150 8	Off		dialog boxes. Key in the new text.
2:	Green		10:	Iso 9	Off	· ·	
3:	lso 2	Off	11:	Iso 10	Off		
4:	lso 3	Off	12:	lso 11	Off		
5:	Iso 4	Off	13:	Iso 12	Off		
6:	lso 5	Off	14:	lso 13	Off		
7:	lso 6	Off	15:	Iso 14	Off		
8:	lso 7	Off	16:	Iso 15	Off		
					OK Cancel		

#### 3.0 Tally Inputs – Parallel Interface

A TM1 or TM2 selected platform will set a parallel interface as standard with the Logic Level set as the Tally Input type and Open Collector set as the Tally output type.

In general, Tally Outputs will match the Tally Input type selected.

Note: Additional parallel interfaces are available via the ESP-1/R.

Other types for input for the Parallel Interface.

Tallies from other sources are available – e.g. tallies from other networked TallyMan systems or from, say, an Omnibus engine as serially provided GPIs

Please see Appendix 1 for Omnibus details.

Set the number of tally ins and outs that you need by changing the numbers in the Number box and then press Configure I/O.

For a TM1 keep the total tally numbers to 64 and for the TM2 keep the tally numbers to a total of 128.

The units are sent out from the factory configured for either 32 in / 32 out (TM1) or 64 in / 64 out (TM2)

For a TM2

TallyMan - Untitled	×
<u>File Edit T</u> ools <u>V</u> iew <u>C</u> omms <u>H</u> elp	
New System     Display Ports     Tally I/O Properties     Name:     Parallel     Tally Inputs     Tally Outputs     Hardware:     Open Collector     Number:     64     Clear Eorced Outputs     Set Serial Parameters     Configure 1/0	
Ready	1

Changed to 32 in and 96 out.

TallyMan - Untitled		
<u>File E</u> dit <u>T</u> ools <u>V</u> iew <u>C</u> omms	Help	
Image: System         Image: Parallel         Image: Display Ports	Tally I/O Properties         Name:       Parallel         Apply         Tally Inputs         Hardware:       Logic Level         Number:       32         Assign Enable       Invert Enable	
	Cardinary 1/0	
Ready		

#### TallyMan system tallies in

This is not the same as a **System Tally**.

It is possible to export tallies from another TallyMan system serially via Ethernet and receive them locally by setting a Tally I/O module to read the remote TallyMan tallies.

TallyMan - Offline	
<u>File E</u> dit <u>T</u> ools <u>V</u> iew <u>C</u> omms <u>H</u> elp	
Image: Weight of the system         ST System Tally         Image: ST System Tally         Image: ST System Tally In         Image: ST System Tally Out         Image: St Tally Out         Image: St Tally In         Image: Tally In         Image: Tally Out         Image: Tally Out <td>erties          Itallies from another system       Apply         TallyMan System I       Tally Outputs         Hardware:       TallyMan System (         Number:       8         I       Image: Set Serial Parameters         Configure I/D       Image: Set Serial Parameters</td>	erties          Itallies from another system       Apply         TallyMan System I       Tally Outputs         Hardware:       TallyMan System (         Number:       8         I       Image: Set Serial Parameters         Configure I/D       Image: Set Serial Parameters
Ready	

The TallyMan System ID that is sending the tallies.

 $\mathbf{i}$ 

The Component Import/Export box must be enabled in the main config screen

TallyMan - Offline		
<u>File E</u> dit <u>T</u> ools <u>V</u> iew <u>C</u> omms <u>H</u> elp		
Mew System     ST System Tally     ST System Tally     G    Parallel     G    Parallel     G    Parallel     Display Ports	System Properties           Name:         New System           Platform:         TM-1	
	System Interfaces         Add         Delete         Configure         Component         Add New Component         Name taily channels         Delete Component !	Firmware System: V1.41 Interface: V1.41 System Tallies
Ready	- <b></b> =1 (	OFFLINE NUM

Component Import/Export Configuration	
	ОК
Enable Import/Export	Cancel
System ID: 🛛 🖊	
/	

Local system ID.

Setting up the Tally Ins.

Select the Tally In list.

🔲 TallyMan - Offline.tms	5				_	
<u>File E</u> dit <u>T</u> ools <u>V</u> iew <u>C</u> om	ms <u>H</u> elp					
🖃 🕎 Simple System	Index	Tally Input	Channel			~
🖻 🖅 SC11	1	Tally In 1	1: Program			
🗄 📲 Router 1	2	Tally In 2	1: Program			
🖃 耳 Unit Tallies	3	Tally In 3	1: Program			
Li Tally In	4	Tally In 4	1: Program			
Tally Out	5	Tally In 5	1: Program			
E Bisplay Ports	6	Tally In 6	1: Program			
	7	Tally In 7	1: Program			
	8	Tally In 8	1: Program			
	9	Tally In 9	1: Program			
	10	Tally In 10	1: Program			
	11	Tally In 11	1: Program			
	12	Tally In 12	1: Program			
	13	Tally In 13	1: Program			
	14	Tally In 14	1: Program			
	15	Tally In 15	1: Program			
	16	Tally In 16	1: Program			
	17	Tally In 17	1: Program			
	18	Tally In 18	1: Program			
< >	19	Tally In 19	1: Program			~
Ready				-== OFFL	INE NUM	

A double-click on a tally input will show this dialog box.

Edit Tally In 1	of Unit Tallies		
Name: Tally Channel:	Camera 1 Red       1: Program       1: Program	•	 The drop-down box will allow the tally to be assigned to a particular Tally channel.
Repeat Edit	2: Iso I 3: Iso 2 4: Iso 3 5: Iso 4 6: Iso 5 c 7: Iso 6 8: Iso 7 y 9: Iso 8	Cancel OK	

This shows Tally 1 in from a Parallel I/O interface as having the user-defined **Name** as **Camera 1 Red.** It has been set to the **Program** Tally Channel.

#### All incoming tallies may be set to any of the tally channels.

Note: Camera tallies will more normally be derived from information from the Mixer-generated tallies. Please see the section - 6.5 Tallies and Vision Mixers.

The tallies may be assigned to either the left or the right side UMD LEDs as a Direct Tally or output to a unique pin on a Parallel I/O interface unit for tallies out to the camera(s).

#### 4.0 Tally Outputs – Parallel Interface

Select the Tally Out list.

🔲 TallyMan - Offline.tms						K	
<u>Eile Edit Iools View Comms Help</u>							
🖃 🕎 Simple System	Index	Tally Output	Channel			^	
🖻 – 🔁 SC11	1	Tally Out 1	1: Program				
🗄 📲 Router 1	2	Tally Out 2	1: Program				
Unit Tallies	3	Tally Out 3	1: Program				
- 🔤 Tally In	4	Tally Out 4	1: Program				
Tally Out	5	Tally Out 5	1: Program				
+ Display Ports	6	Tally Out 6	1: Program				
	7	Tally Out 7	1: Program				
	8	Tally Out 8	1: Program				
	9	Tally Out 9	1: Program				
	10	Tally Out 10	1: Program				
	11	Tally Out 11	1: Program				
	12	Tally Out 12	1: Program				
	13	Tally Out 13	1: Program				
	14	Tally Out 14	1: Program				
	15	Tally Out 15	1: Program				
	16	Tally Out 16	1: Program				
	17	Tally Out 17	1: Program				
	18	Tally Out 18	1: Program				
< >	19	Tally Out 19	1: Program			~	
Ready				-E OFFL	INE NUM	1	

#### Double click on an output

Edit Tally Out 1 of Unit Tallies			
Allow user configuration	Name:		
Mapped Tallies In	Active Tally Channel Out		
Add Tally Delete Selection	Program	🗔 Iso 8	
Tally Parent Logic	🗖 Iso 1	🗔 Iso 9	
	🗖 Iso 2	🔲 Iso 10	
	🗖 Iso 3	🔲 Iso 11	
	🗖 Iso 4	🔲 Iso 12	
	🗖 Iso 5	🔲 Iso 13	
	🗖 Iso 6	🔲 Iso 14	
	🔲 Iso 7	🔲 Iso 15	
Repeat Edit			Cancel

Add a tally to the output.

Add Assig	ned Tally						X
Type: Parent: Tally:	노토 Tally In 또한 Unit Tallies Camera 1 Red	•	Add >	Tally ∑f Camera 1 Red	Parent Unit Tallies	Logic	-
			Finished		Delete Selection		

- Select the **Type**, in this case a Tally In.
- Select the **Parent** from the allowable list shown in the drop-down box.
- Select the **Tally** number.
- Click on Add

Click on Finished.

Edit Tally Out 1 of Unit Tallies	Name: Cam	1 red D/P		
Mapped Tallies In Add Tally Delete Selection Tally Parent Logic Later Comera 1 R Unit Tallies	Active Tally Channel C Program Iso 1 Iso 2 Iso 3 Iso 4 Iso 5 Iso 6 Iso 7	Dut I Iso 8 Iso 9 Iso 10 Iso 11 Iso 12 Iso 13 Iso 14 Iso 15		The Active Ta Channel Out mask which a checked tally type through t Output.
Repeat Edit  Auto Inc  Auto Copy		_	Cancel OK	

ally area is a llows the channel to the

This shows that Tally 1 out from the Parallel I/O interface unit has been mapped to Tally 1 in from the Parallel I/O interface unit. As this input tally was flagged as Program, and Program in the Active Tally Out box has been checked, a tally is output.

Allow user configuration box has been checked in this example.

For a tally to be output the Active Tally Channel Out box must be checked to match the input tally attributes.

Repeat Edit will allow-

Auto Increment to the next Tally Output.

Auto copy will copy the input tally to the next Tally Output box.

Several Tally Ins/System Tallies may be mapped to a Tally Out.

The Active Tally Channel Out mask must be set to allow the Mapped Tallies In to be output.

These dialog boxes enable User-defined Tally Outs to be made on a show-by-show basis, if necessary.

If the **Allow user configuration** box is checked, this screen is available to all users (non passworded).

Tallies may now be mapped to anything that requires a tally; router buses, sources, UMDs or Physical o/p pins. The appropriate mapping is carried out in the respective dialog boxes

Note that a tally output may be mapped to a router destination and a check box may be set so that the O/P will show the status of the selected (tallied) source in the same way that a UMD would.

Edit Tally Out 1 of Parallel				
Allow user configuration     Bus tally shows source tally     Mapped Tallies In	Name: Active Tally Channel Out-			Check the Bus tally shows source tally box
Add Tally Delete Selection Tally Logic Channel 3⊕ Destination 1	<ul> <li>Program</li> <li>Iso 1</li> <li>Iso 2</li> <li>Iso 3</li> <li>Iso 4</li> <li>Iso 5</li> <li>Iso 6</li> <li>Iso 7</li> </ul>	☐ Iso 8 ☐ Iso 9 ☐ Iso 10 ☐ Iso 11 ☐ Iso 12 ☐ Iso 13 ☐ Iso 14 ☐ Iso 15		
Repeat Edit			Cancel OK	

Tallies also may be entered via the Tally Pin Patch found via **Tools > Tally PinPatch**.

🔀 Tally PinPa	tch												×
Source			Des	tinatio	n		₽ Para	allel Tallies	-	]	Zaam	0+	^
노 <mark>티</mark> Tally in	•		🕺 Tally	out	-	]	Tally Out	: 3	-	]	20011	Out	۳
표준 Parallel Tallies	-	1	2	3	4	5	6	7	8	9	10	11	1
Tally In 1	1	•											
Tally In 2	2												
Tally In 3	3												
Cam 3	4												
Tally In 5	5												
Tally In 6	6												
Tally In 7	7												
Tally In 8	8												
Tally In 9	9												
Tally In 10	10												
Tally In 11	11												
Tally In 12	12												
Tally In 13	13												
Tally In 14	14												
Tally In 15	15												~
												>	:

Select the Destination first.

A click on the appropriate drop down arrows on any valid tally destination will allow tallies to be mapped to the correct area.

A click on the drop down arrow in Source will allow any valid tally source to be selected.

A RH mouse click in the Destination column will show all tallies assigned to this channel.

Edit Tally Out		
Allow user configuration	Name:	
Mapped Tallies In	Active Tally Channel Out	
Add Tally Delete Selection	✓ Program	🗖 Iso 8
Tally Logic Channel	🔲 Iso 1	🔲 Iso 9
L Tally In 2 1: Program	🗐 Iso 2	🔲 Iso 10
	🗖 Iso 3	🗖 Iso 11
	🔲 Iso 4	🔲 Iso 12
	🗖 Iso 5	🗖 lso 13
	🗖 Iso 6	🔲 Iso 14
	lso 7	🗖 Iso 15
Repeat Edit		Cancel

A Shift + RH mouse click in the Source row will show the tally input channel details.

Edit Tally In		
Name:	Cam 3	
Tally Channel:	1: Program	
Repeat Edit	c	Cancel
🗖 Auto 🖸	ру	OK

When System Tallies are in use:

🔀 Tally PinPatch											[		X		
Source		Destination 🖾 Ma					Main Router								
ST System Tally 💌		- 옷 <sup>€</sup> Source			😍 Source 🔽			Source 139 🗾			Zubin out				
🕎 New System 🛛 💌	1	2	3	4	5	6	7	8	9	10	11	12	Γ		
System Tally 1		$\Box$											$\Box$		
System Tally 2		/											Γ		
	. /	/											-		
<													>		
	/														

The orange coloured destinations show which destinations already have other tallies mapped to them.

Tip:

Select the Destination for the tallies first and then the available sources will be visible.

#### 5.0 System Tallies.

System Tallies are tallies derived from other tallies or may be permanently ON tallies.

A System Tally may be regarded as a "multicore cable" carrying, possibly, several other tallies, which may be associated with different Tally Channels (Program, Iso1, Iso2 etc.). The Active Tally Output Channel can act as either a mask or as a routing tool, depending on how the Output Logic box is set.



A double click on the System Tally out will show this dialog box.

Edit System Tally 1 of Simple System		X
Allow user configuration	Name:	
Mapped Tallies In	Active Tally Channel Mask	
Add Tally Delete Selection	✓ Program	🗐 Iso 8
Tally Parent Logic	🗖 Iso 1	□ Iso 9
	🔲 Iso 2	□ Iso 10
	🗖 Iso 3	□ Iso 11
	🔲 Iso 4	□ Iso 12
	🔲 Iso 5	🔲 Iso 13
	🗖 Iso 6	🗌 Iso 14
	🗖 Iso 7	🗌 Iso 15
Repeat Edit Output Logic	per channel)	Cancel
		OK

#### 5.1 Mapped Tallies In

#### Add Tally

Input Tallies will associated with one of the Tally Channels. It may be seen that combinations of tallies may form a System Tally.

Add Assigned Tally Type: L Tally In Parent: Duit Tallies Tally: Tally In 2 Logic Operator: Or Invert	<u>}Add&gt;</u>	Tally 노[ Camera 1 Red 노[ Tally In 2	Parent Unit Tallies Unit Tallies	Logic Or
	Finished		Delete Selection	



This shows a System Tally created form a Parallel I/O Interface associated with a System Controller. Parallel Tally In numbers 1 and 2 are OR'd together.

#### **Delete Selection**

Edit System Tally 1 of Simple System	Name:			 A Name for the System Tally may be entered here.
Mapped Tallies In	Active Tally Channel	Mask		
Add Tally Delete Selection	✓ Program	🗖 Iso 8		1
Tally Parent Logic	🗖 Iso 1	🗖 Iso 9		
Langer and the second s	🗖 Iso 2	🗖 Iso 10		
L Tally In 2 Unit Tallies Or	🗖 Iso 3	🗐 Iso 11		
스 <mark>I Tally In 3</mark> Unit Tallies Or	🔲 Iso 4	🗐 Iso 12		
	🗐 Iso 5	🗐 Iso 13		
	🗐 Iso 6	🗔 Iso 14		
	🗌 Iso 7	🗔 Iso 15		
Repeat Edit Output Logic	<b>L</b>		Cancel	
Auto Inc     Bitwise (p	er channelj 🗌 P	ermanent On		
C Logical (a	ny channel)		ОК	

Use Ctrl and click on the tallies as required to delete the tallies from the input box using **Delete Selection**.

Allow user configuration Status tally:	Name:			This shows System Tall been create
Mapped Tallies In	Active Tally Channel Ma	sk		Permanent
	✓ Program	🗔 Iso 8		is allocated
Add Tally Delete Selection	🔲 Iso 1	🗔 Iso 9		channel cal
Tally Logic Channel	🔲 Iso 2	🗔 Iso 10		Program/Re
ST System Tall ON	🗐 Iso 3	🗔 Iso 11		ralles.
	🔲 Iso 4	🗔 Iso 12		These nam
	🔲 Iso 5	🗔 Iso 13		be changed
	🗐 Iso 6	🗔 Iso 14		
	🔲 Iso 7	🔲 Iso 15		Can allow L
Repeat Edit Qutput Logic	<b>L</b>		Cancel	the box.
Auto Inc     Sitwise	per channel) 🔽 Perma	anent On		
C Logical	(any channel)	Г	04	

#### 5.2 A Permanently ON System Tally.

ally has ited and is ntly ON and d to the alled Red mes may ed freely. gurator User checking

A use of a permanently ON System Tally.

A permanently ON System Tally may be set, for example to the PGM bus of a vision mixer.

As the mixer cross point selection is known by TallyMan, the mixer sources are therefore tallied.

If the mixer source is linked to a Tally Out pin, the camera may then be tallied.

Also: A router destination feeding the mixer source will also be tallied (the assignment is done in TallyMan) which will in turn tally the selected router source.

This router source is tallied as On-Air.

If the router source is linked to a Tally Out pin, the camera may then be tallied.

#### 5.3 **Comms Status Tally**

A System Tally may be used to indicate the status of the serial comms for any object.

•	Edit System Tally 1 of New System				
	C Allow user configuration	Name:	[		
	Mapped Tallie No Assignments Add Tally Nouter C1 Add Tally Nouter C5 Tally Nouter C6 Nouter C7 Parallel Display Ports	Active Tally Channel  Construct Tally Channel	H Mask I Iso 8 I Iso 9 I Iso 10 I Iso 11 I Iso 12 I Iso 13 I Iso 14 I Iso 15		The System Tally will be active for no link and inactive for good active comms.
	Repeat Edit Output Logic Auto Inc Auto Copy	ber channel)	Permanent On	Cancel	

### 5.3 The Logic Operator

The operators, OR, AND, XOR and the inversion are allowed.

#### OR

Tally 1	Tally 2	Output
0	0	0
0	1	1
1	0	1
1	1	1

AND

Tally 1	Tally 2	Output
0	0	0
0	1	0
1	0	0
1	1	1

XOR

Tally 1	Tally 2	Output
0	0	0
0	1	1
1	0	1
1	1	0

#### Inversion

NOR

Tally 1	Tally 2	Output
0	0	1
0	1	0
1	0	0
1	1	0

NAND

Tally 1	Tally 2	Output
0	0	1
0	1	1
1	0	1
1	1	0

#### **XNOR**

Tally 1	Tally 2	Output
0	0	1
0	1	0
1	0	0
1	1	1

The logic operator adds tallies sequentially as they are added to the list.

E.g. (Tally 1 OR Tally 2) AND Tally 3 - then [(Tally 1 OR Tally 2) AND Tally 3] OR Tally 4.

#### 5.4 Output Logic

#### <u>Bitwise</u>

In the Bitwise mode the Active Tally Channel Mask boxes act as a mask for the tallies in the System Tally.

Add Assigned Tally		Σ	3
Type: Ling Tally In ▼ Parent: Induit Tallies ▼ Tally: Tally In 2 ▼ Logic Operator: Or ▼ Invert	Taily S <sub>2</sub> [ Taily in 1 S <sub>2</sub> [ Taily in 2	Parent Logic Unit Tallies Urit Tallies Or	
	, Finished	Delete Selection	
Edit System Tally 1 of Simple System         Allow user configuration         Mapped Tallies In         Add Tally         Delete Selecti         Tally         Parent         Log         \$\bar{L}\$[ Tally In 1         Unit Tallies         \$\bar{L}\$[ Tally In 2         Unit Tallies         \$\bar{L}\$[ Tally In 2         Unit Tallies         \$\bar{L}\$[ Tally In 3         Unit Tallies         \$\bar{L}\$[ Tally In 3         Unit Tallies         \$\bar{L}\$[ Tally In 3         \$\bar{L}\$[ Tally In 3	n Name: Active Tally Channel M ✓ Program I Iso 1 I Iso 2 I Iso 3 I Iso 4 I Iso 5 I Iso 6 I Iso 7 Bitwise (per channel) Logical (any channel)	task I Iso 8 I Iso 9 I Iso 10 I Iso 11 I Iso 12 I Iso 13 I Iso 14 I Iso 15 Cancel	Output Logic. Bitwise outputs the tallies according to the logic operator. Input Tallies must be in the same Active Tally Channel. Logical If both tallies are active, then the channels ticked in the output box will be active (the input channel associations are ignored)

The new System Tally 1 consists of two tallies OR'd, with a third one AND'd, taken from the Parallel I/O unit tally inputs and remains gated as Program.

# When the **Bitwise** button is selected the **Active Tally Channel Mask** boxes must be selected to match the **Mapped Tallies In** channels.

For example consider the above: Tallies 1 and 2 are associated with the Program channel. The logic operator is set to AND Tally 3 with Tallies 1 and 2. All tallies must belong to the same tally channel for the logic operator to work. When the tallies are active an output will be available that is associated with Program. Program must be checked in the Active Tally Channel Out mask for the System Tally to be output.

If there were a fourth tally input associated with Iso 4 channel and this is to be OR'd with the result of [Tallies 1, 2 and 3], for this tally to be output, Iso 4 must be checked too in the Active Tally Channel Out mask.

#### Logical

The logical operator acts in the same way for the input tallies as described for Bitwise but the important difference is that the output may be mapped to a different **Active Tally Channel Out** from any of the input tallies, if desired.

Allow user configuration          Mapped Tallies In         Add Tally         Delete Selection         Tally         Parent         Logic         \$\overline{L}_{1}\$ Tally In 1         Unit Tallies         \$\overline{L}_{2}\$ Tally In 2         Unit Tallies         \$\overline{L}_{2}\$ Tally In 3         Unit Tallies         \$\overline{L}_{2}\$ Tally In 3	Active Tally Channel 0	ut Iso 8 Iso 9 Iso 10 Iso 11 Iso 12 Iso 13 Iso 14 Iso 15		In the Lo the Activ Channel route the to a selec channel. The char shown he
Repeat Edit Output Log Auto Inc Auto Copy © Logic	gic <b>A</b> e (per channel) al (any channel)	manent On	Cancel OK	

In the Logical mode the Active Tally Channel Out boxes route the input tallies to a selected active channel.

The channel Iso 3 is shown here.

In this example, the tallies are output in Active Tally Channel Iso3.

#### Summary

In the **Bitwise** mode the **Active Tally Channel Mask** boxes act as a mask for the tallies in the System Tally ("cable").

In the **Logical** mode the **Active Tally Channel Out** boxes route the input tallies to the selected active channel.

#### 6.0 Tallies and Vision Mixers

In TallyMan, vision mixers are treated exactly as though they are routers.

*Tallies from a mixer are not necessarily used directly.* It is possible to tally a mixer destination to have sources tallied correctly. This is a use for a System Tally set to Permanently ON and assigned to the PGM bus.

If a tally is set to a mixer / router destination, any source that the destination selects will also be tallied as long as the mixer outputs router status.

This tallied router / mixer source may be assigned to a UMD and / or to a physical output pin via a Parallel I/O unit so that cameras may be tallied.

The tally information coming from the actual mixer into TallyMan is read so that cross point information is known.

Tip: Several mixer modules do have a **Tally In** listing. Under these circumstances, as the Mixer's internal tally mapping probably needs to be use, it is advisable to map the **Tally In** inputs to the Mixer Sources as a first step.

### 7.0 Inhibited Tallies

There may be a requirement to inhibit or enable tallies from an object (e.g.) the parallel Sony Mixer input tallies or from the parallel tally input on the TM1, so that in an emergency, all tallies from the mixer or parallel inputs are inhibited.

This may be done by using the Assign Enable feature.

TallyMan - Offline		
File Edit Tools View Comms E New System ST System Tally Tally Tally Tally Tally Tally Tally Tally Tally Tally Tally Tally Tally Tally	Help Tally 1/D Properties          Tally 1/D Properties         Name:       Tally         Apply         Tally Inputs         Hardware:       Logic Level         Number:       8         Assign Enable       Invert Enable         Set Serial Parameters         Configure 1/0	
Connection closed OK		VUM /

Without any configuration all tallies will normally be enabled in the system.

#### Press Assign Enable.

Assign Tally		
		(COK
Object:	노 <mark>[I</mark> Tally In 💌	Cancel
Parent:	Tally	
Item:	Tally In 1	
Level:	<b></b>	

This shows that Tally 1 from the Parent called Tally has been assigned as the inhibiting tally.

When Tally In 1 is active, no tallies will be output from the object called Tally In.

#### **Invert Enable**

🔲 TallyMan - Offline		
<u>File E</u> dit <u>T</u> ools <u>V</u> iew <u>C</u> omn	ns Help	
Image: State System Tally         Image: State System Tally	Tally I/O Properties     Name:   Tally     Apply     Tally Inputs   Hardware:   Logic Level     Hardware:   Open Collector     Hardware:     Tally Outputs   Hardware:   Open Collector     Number:   8     Assign Enable     Set Serial Parameters     Configure 1/0	
Ready		

Also

Assign Tally		
		(OK)
Object:	노[I Tally In	Cancel
Parent:	Tally	
ltem:	Tally In 1 💌	
Level:	<b>_</b>	

This now means that when Tally In 1 is active, tallies will only then be output from the object called Tally In.

<u>Notes</u>

- The Tally Mimic under **Tools** > **Tally Mimic** will always show the actual incoming tally status.
- Even if an Object is inhibited, the activating tally for the inhibit function that belongs to that same object still remains active. Consider the case where there are both serial tallies (mixer) and parallel tallies (GPIs) in the same Object. The serial tallies are required to be inhibited but a parallel tally is needed for the inhibit action.

#### 8.0 Tallies and Routers

If a tally is set to a router destination / bus, any source that the destination selects will also be tallied.

This tallied router source may be assigned to a UMD or to a physical output pin via a Parallel I/O unit such as the ESP-1/R so that cameras may be tallied.

The serial information coming from the actual router into TallyMan is read so that cross point information is known.

#### 9.0 Tallies and UMDs

UMDs may receive the tallies either directly or via associations with a router destination or source. Tally Channels need to be associated with the left and right UMD LEDs etc. Please see the UMD Section for further details.

#### 10.0 The Tally Map

This is accessed via the View Menu and show how the tallies are routed.

🔲 TallyMan - 8	3598 Meridian 131004.	tms			
<u>File T</u> ools ⊻iew	Help TallyMap				
Parent	Tally	Mapped To:	Tally	Channel	<u> </u>
대한 Unit Tallies	St1 I/P 1	🔛 Aurora	🕂 Source 32	1: Studio 1	
III Unit Tallies	5t1 I/P 2	🖾 Aurora	운 Source 33	1: Studio 1	
💶 Unit Tallies	斗 St1 I/P 3	🖾 Aurora	😌 Source 34	1: Studio 1	
🔚 Unit Tallies	斗 St1 I/P 4	🔛 Aurora	🕂 Source 35	1: Studio 1	
🛺 Unit Tallies	노 <mark>1</mark> St2 I/P 1	🔛 Aurora	😌 E Source 36	2: Studio 2	
🔚 Unit Tallies	노 <mark>I</mark> St2 I/P 2	🔛 Aurora	😤 Source 37	2: Studio 2	
📮 Unit Tallies	노 <mark>I</mark> St2 I/P 3	🔛 Aurora	😌 Source 38	2: Studio 2	
📮 Unit Tallies	노 <mark>[</mark> St2 I/P 4	🔛 Aurora	😤 Source 39	2: Studio 2	
특위 Unit Tallies	L St3 I/P 1	🔛 Aurora	👷 Source 40	3: Studio 3	
특위 Unit Tallies	노 <mark>1</mark> St3 I/P 2	🔛 Aurora	Source 41	3: Studio 3	
특위 Unit Tallies	노 <mark>I</mark> St3 I/P 3	🔛 Aurora	Source 42	3: Studio 3	
📮 Unit Tallies	L St3 I/P 4	🔛 Aurora	😌 Source 43	3: Studio 3	
📮 Unit Tallies	노 <mark>I</mark> St1 I/P 14	🔛 Aurora	Source 47	1: Studio 1	
특위 Unit Tallies	노 <mark>[</mark> St1 I/P 16	🔛 Aurora	👷 Source 48	1: Studio 1	
특위 Unit Tallies	노 <mark>[</mark> St2 I/P 14	🔛 Aurora	👷 Source 49	2: Studio 2	
특위 Unit Tallies	노 <mark>1</mark> St2 I/P 16	🔛 Aurora	😌 🗄 Source 50	2: Studio 2	
📮 Unit Tallies	노 <mark>I</mark> St3 I/P 14	🔛 Aurora	😌 Source 51	3: Studio 3	
📮 Unit Tallies	노 <mark>I</mark> St3 I/P 16	🔛 Aurora	😌 Source 52	3: Studio 3	
🔚 Unit Tallies	노 <mark>[</mark> St1 I/P 18	🔛 Aurora	😤 Source 59	1: Studio 1	
🔚 Unit Tallies	노 <mark>1</mark> St2 I/P 18	🔛 Aurora	😌 Source 59	2: Studio 2	
대한 Unit Tallies	노 <mark>[</mark> 1 St3 I/P 18	🔛 Aurora	😍 Source 59	3: Studio 3	
📮 Unit Tallies	노 <mark>I</mark> St1 I/P 19	🔛 Aurora	😌 Source 60	1: Studio 1	
📮 Unit Tallies	노 <mark>I</mark> St2 I/P 19	🔛 Aurora	😌 Source 60	2: Studio 2	
📮 Unit Tallies	노 <mark>[</mark> St3 I/P 19	🔛 Aurora	Source 60	3: Studio 3	
🔚 Unit Tallies	노 <mark>1</mark> St1 I/P 20	🔛 Aurora	Source 61	1: Studio 1	
🔚 Unit Tallies	노 <mark>1</mark> St2 I/P 20	🔛 Aurora	😌 Source 61	2: Studio 2	
🛺 Unit Tallies	노 <mark>1</mark> St3 I/P 20	🔛 Aurora	😌 Source 61	3: Studio 3	
🛺 Unit Tallies	↓ St1 I/P 21	🔛 Aurora	😤 Source 62	1: Studio 1	
💶 Unit Tallies	↓ St2 I/P 21	🔛 Aurora	😤 Source 62	2: Studio 2	
🔚 Unit Tallies	└ <mark>1</mark> St3 I/P 21	🔛 Aurora	😍 Source 62	3: Studio 3	
💶 Unit Tallies	LI Sti I/P 5	📉 Aurora	争 Source 65	1: Studio 1	×
Ready					-E OFFLINE NUM

A double mouse click on a tally line will allow direct editing of the object (e.g. router source or a Tally Out pin etc.) to which the tallies are mapped.

Name:		
Mnemonic: Studio 1 Cam 3	Direct Tallies to Sour	Delete Selection
Assignment     Source     Matrix:     C Destination	<u>Σ</u> Σ <u>μ</u> Sti I <i>I</i> P 3	Unit Tallies
Repeat Edit     Image: Allow user configuration       Image: Auto Incology     Category:       Image: Auto Copy     All Sources		Cancel OK

### 11.0 The Tally Mimic

This mimic, seen via **Tools > Tally Mimic**, will show the status on incoming tallies to the system and the colour assigned.

Tally Input Mimic	: Parallel	
Tally In 2	Tally IO: Parallel	
	8 10 12 14 16 18 20 22 00000000000000000000000000000000	

Select the appropriate Tally I./O in the drop down box.

#### 12.0 Notes on Mixer and Router tallying

Mixer Program Tally to Mixer Source Mapping

Edit Source 1 of Sony Mixer	X
Edit Source 1 of Sony Mixer         Name:       Input 1         Mnemonic:       Since 1         Mixer Button Display Assign       From Mnemonic         Maximum       Maximum         Take 2+2 characters       Level:         Level:       Imit         Destination       Source         Level:       Imit         Separate Mnemonic       Normal         Repeat Edit       Allow user configuration	Direct Tallies to Source          Add Tally       Delete Selection         Tally       Parent         Left Mixer Tally 1       Sony Program Tally
Auto Inc     Category: All Sources	

This is the linking in TallyMan. The box below indicates the TallyMan object. The video path is shown only to show that the tallies may be regarded as running in the opposite direction to the actual video.



Mixer Source to Router Destination Mapping

Name: Input 1		
Mnemonic: Src 1	Direct Tallies to Source	:e
Mixer Button Display Assign	Add Tally	Delete Selection
C From Router:	노 <mark>[</mark> Mixer Tally 1	Sony Program Tally
Assignment           C Source         Matrix:         Image: Router         Image: R		
Level: Norma		
Repeat Edit     Image: Allow user configuration       Image: Auto Inc     Category:       Image: Auto Copy     All Sources		Cance

This is the linking in TallyMan.

It will be seen that any UMDs on the router will be tallied.



Mixer Source to Router Source Mapping

This would be used where the router is a monitoring router only and is used for feeding monitor walls. For example a Camera feeds the input to a router and an input to a Mixer. Both inputs are effectively common so the Source to Source linking is done in TallyMan. It will be seen that any UMDs on the router will be tallied.

lit Source 1 of Sony Mixer		
Name:       Input 1         Mnemonic:       Strict         Mixer Button Display Assign       From Mnemonic         Fixed       From Router:         Take 2+2 characters       From Router:         Level:       Imit:         Assignment       Source         O Destination       Source:         Level:       Imit:         Normal       Imit:	Direct Tallies to Source Add Tally Delete Selection Tally Parent ∑[[ Mixer Tally 1 Sony Program Tally	Ţ
Repeat Edit     Image: Allow user configuration       Image: Auto Inc     Category:       Image: Auto Copy     All Sources	Canc OK	el

This is the linking in TallyMan.



	- 11							1
dd Assigned Ta	ally							
								_
Tune: 🗛 s	ource	<b>-</b>		Tally	Pare	nt	Logic	
	ource			Strami	Hou	ter		13
Parent:	outer	<b>-</b>						
Tally: Cam 1		•						
		$( \rightarrow A$	(qq >					
				<				>
		Fini	ished		Delet	e Selection		
dit Tally Out 1	of Parallel							
lit Tally Out 1	of Parallel	figuration						(
lit Tally Out 1	of Parallel	figuration		Name:				(
<b>it Tally Out 1</b> Mapped Tallies II	of Parallel	figuration	-Active T	Name: ally Channel	Out	Invert Out	put	
<b>it Tally Out 1</b> Mapped Tallies In	of Parallel	figuration	Active T	Name: ally Channel	Out	□ Invert Out	put	
iit Tally Out 1 Mapped Tallies In Add Tally	of Parallel	figuration	Active T.	Name: ally Channel ogram 1	Out	□ Invert Out □ Iso 8 □ Iso 9	put	
it Tally Out 1 Mapped Tallies I Add Tally	of Parallel	figuration	Active T. Pro Iso	Name: ally Channel ogram 1	Dut	☐ Invert Out ☐ Iso 8 ☐ Iso 9 ☐ Iso 10	put	
it Tally Out 1 Mapped Tallies I ▲dd Tally Tally ਉਏ Cam 1	of Parallel Allow user conf Delete Selec Logic Channel	figuration	Active T	Name: ally Channel ogram 1 2 3	Out	☐ Invert Dut ☐ Iso 8 ☐ Iso 9 ☐ Iso 10 ☐ Iso 11	put	
It Tally Out 1 Mapped Tallies I Add Tally Tally Stran 1	of Parallel Allow user conf Delete Selec Logic Channel	figuration	Active T	Name: ally Channel ogram 1 2 3 4	Out	<ul> <li>Invert Out</li> <li>Iso 8</li> <li>Iso 9</li> <li>Iso 10</li> <li>Iso 11</li> <li>Iso 12</li> </ul>	put	
It Tally Out 1 Mapped Tallies I Add Tally Tally Strange Cam 1	of Parallel Allow user conf Delete Selec	figuration	Active T. Pro	Name: ally Channel ogram 1 2 3 4 5	Out	Invert Out     Iso 8     Iso 9     Iso 10     Iso 11     Iso 12     Iso 13	put	
It Tally Out 1 Mapped Tallies I Add Tally Tally St Cam 1	of Parallel Allow user conf <u>D</u> elete Selec Logic Channel	figuration	Active T. Pro Iso Iso Iso Iso Iso Iso	Name: ally Channel ogram 1 2 3 4 5 5	Out	☐ Invert Out ☐ Iso 8 ☐ Iso 9 ☐ Iso 10 ☐ Iso 11 ☐ Iso 12 ☐ Iso 13 ☐ Iso 14	put	
It Tally Out 1 Mapped Tallies In Add Tally Tally St Cam 1	of Parallel Allow user conf Delete Selec Logic Channel	figuration	Active T. Pro Iso Iso Iso Iso Iso Iso Iso Is	Name: ogram 1 2 3 4 5 6 7	Out	Invert Out Iso 8 Iso 9 Iso 10 Iso 11 Iso 12 Iso 13 Iso 14 Iso 14	put	
It Tally Out 1 Mapped Tallies In Add Tally Tally St Cam 1	of Parallel Allow user conf Delete Selec Logic Channel	figuration	Active T. Pro Iso Iso Iso Iso	Name: ogram 1 2 3 4 5 6 7	Out-	Invert Out Iso 8 Iso 9 Iso 10 Iso 11 Iso 12 Iso 13 Iso 14 Iso 15	put	
Happed Tallies In Add Tally Tally Stan 1	of Parallel  Allow user conf  Delete Selec Logic Channel	figuration	Active T. Pro Iso Iso Iso Iso	Name: ally Channel ogram 1 2 3 4 5 6 7	Out	Invert Out Iso 8 Iso 9 Iso 10 Iso 11 Iso 12 Iso 13 Iso 14 Iso 15	put	
Happed Tallies In Add Tally Tally St Cam 1	of Parallel  Allow user conf  Delete Selec Logic Channel	figuration	Active T. Pro Iso Iso Iso Iso	Name: ogram 1 2 3 4 5 6 7	Out	Invert Out Iso 8 Iso 9 Iso 10 Iso 11 Iso 12 Iso 13 Iso 14 Iso 15	put	(
It Tally Out 1 Mapped Tallies In Add Tally Tally St Cam 1	of Parallel  Allow user conf  Delete Selec Logic Channel	figuration	Active T. Pro Iso Iso Iso Iso	Name: ogram 1 2 3 4 5 6 7	Out Override	Invert Out     Iso 8     Iso 9     Iso 10     Iso 11     Iso 12     Iso 13     Iso 14     Iso 15	put Car	ncel

Now map the Tally Out pin to the Router Source for the Camera CCUs

It will be seen that due to the linking within TallyMan, the Cameras will get a Tally (cue) as well as any UMDs that are driven via the router information.

#### Appendix 1

#### Tally/GPO control using Omnibus code

Omnibus GPI Mapping Details

Elle       Edit       Tools       View       Comms       Help         Image: Second Secon

Set the required serial port that is used for the Omnibus connection.

Parallel: Setup Communication		? 🔀
Type: Serial RS422		OK Cancel
General Parameters Port Number: 3 Description: Omnibus	Serial Parameters Baud Rate: 38400	
Network Parameters	Data Bits: 8	-

Setting the Tally I/O to "Omnibus" results in the physical inputs (if any) being sent to Omnibus, and the physical outputs being controllable by Omnibus (OBS).

Omnibus can switch on or off a tally output.

The inputs and outputs continue to behave as normal within Tallyman. The Tally Inputs may be assigned to objects as normal. The Tally Mimic will show the physical input status. The Tally Outputs may be mapped as is usual. The link to OBS is effectively overlaid on top of the normal I/O.

OBS can "see" the input status, and can control the output status. This is where the "force on, force off" options are used. OBS can force the state one way or another, overriding any mapping in TallyMan to that output.

The mapping procedure is as follows:

- This protocol operates on the existing hardware parallel Tally I/O module locate this module (currently set to input type "Logic Level", output type "Open Collector").
- Select "Omnibus In" and "Omnibus Out" as hardware type.
- Configure number of Tally Outputs as required.
- Set the Serial Parameters on the port used to connect to Omnibus.

The parallel tally outs are now controlled by the Omnibus GPI protocol.