The TSL Tally and
UMD Configuring Program

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

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Under Monitor Displays

1.0   Introduction

TSL makes a range of UMDs, all of which are compatible with TallyMan.

All 17mm displays are tri-colour (green, red and amber) for both the display blocks and the tally blocks. The triple and quad displays are only available with green display blocks and twin, non separately addressable red tallies.

Each UMD will have a unique address assigned to it by the TallyMan program and this address must be manually transferred to the actual hardware by pressing the recessed buttons to gain access to the set up menu in the UMD.

Many of the menu items, such as those setting the colour, will be found in the 17mm displays via the front panel recessed buttons also in the TallyMan program.

It will be seen that the User screen may be used to build the monitor stack or wall. If the program is on-line it will be seen that the desktop view is interactive and will show the mnemonic and tally state of all the UMDs in the system.

UMDs may be associated with routers to show the desired mnemonic and sophisticated tally control may be set to the UMDs.

Mnemonics and Names may be copied and pasted into other TallyMan lists or programs such as Microsoft Excel for easy editing.

For each UMD the configuring engineer may or may not allow user access by suitably checking the **Allow user configuration box**.

- A UMD driver may address up to a maximum of 126 addresses. More addresses will require that another UMD Driver, with its own Port will be required.

Important

When building the monitor stack it is <u>essential</u> that the correct UMD type is entered as the build progresses. It is possible to alter UMD types later but it will be come very confusing where this is done on a large system.

For example, if a Single Display is changed to a Triple, some following Displays will be subsumed into the Triple Display.

For example, consider the following:

A monitor stack consists of the following Displays; a D8C, D16C, D8C, and D8C. If the first D8C Display is changed to a Triple Display, the following D16C and D8C (Display numbers 2 and 3) will turn into the Triple Display. The Mnemonics that were for the D16C (Display number 2) are still at Display number 2 but this is now the second 8 character display of the Triple Display.

The actual hardware of the original second Display is still a D16C. This is now at program address 002.   Before the changes it was at address 001.

If changes are done in the middle of a large number of mixed display types, extensive re-addressing of the Monitor Stack will be necessary.

**Display Assignment Terminology**

This is a key feature of the UMD system:

♦ **Fixed Mnemonic** means Displays do not change their messages (mnemonics) when matrix (router) changes are made. The have no association with a matrix for their mnemonics.

♦ **Follow Matrix Destination** means Displays are assigned to a router destination / bus (output) and they will show the selected router <u>source</u> mnemonic.

♦ **Follow Matrix Source** means Displays are assigned to a router source (input) and they will show the router <u>destination</u> / <u>bus</u> mnemonic.

♦ **Fixed Matrix Destination** means displays are assigned to the router outputs and show the dynamic tally states but they do not change their message (mnemonics) on router changes. <u>They will always show the router destination (output) mnemonic</u>.

♦ **Fixed Matrix Source** means displays are assigned to the router inputs and show the dynamic tally states but they do not change their message (mnemonics) on router changes. <u>They will always show the router source (input) mnemonic</u>.


Note:

At startup, all UMD's are updated. Thereafter, a background update goes through each display address, one every 200mS, refreshing the information. A full set of 126 addresses is refreshed after around 26 seconds when there are no other changes occurring. If any system event (e.g. tally change, crosspoint change) results in a change in UMD information, the UMD gets an immediate update.

2.0   Entering UMDs into TallyMan

To add UMDs to the system, click on the New System Icon and then **Add New System Component**. A driver will be added to the tree. The UMD driver name shown here is TSL UMD.
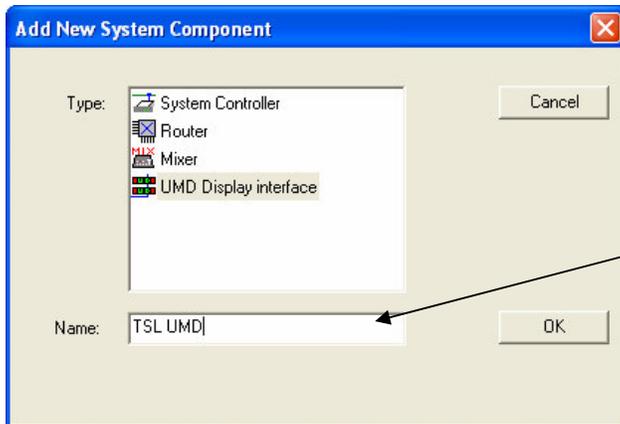
Type in a Name for the selected Driver. This name will show on the system tree.
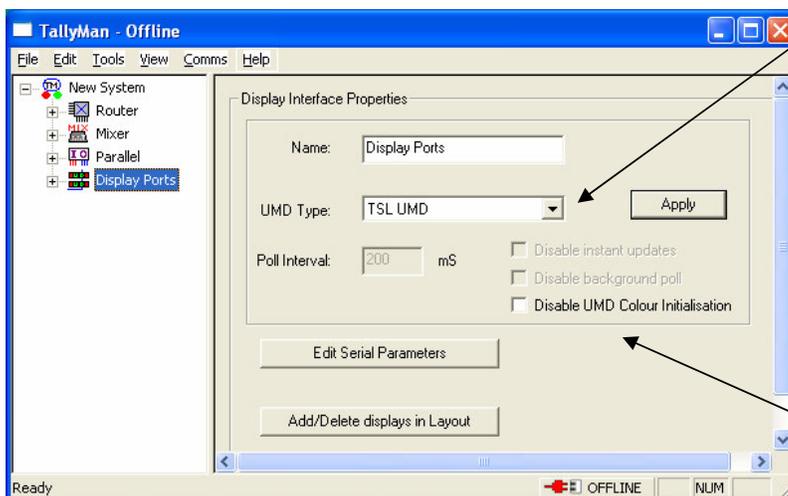
Select the UMD driver type from the drop-down list – **UMD Type**.

Multiviewer displays will require their own Driver and will need to added separately. Most multiviewer types use TSL UMD protocol.

Click on Add/Delete displays in Layout.

Disable UMD Colour Initialisation allows legacy UMD's to be used without problems

Add as many drivers to the system as there are UMD types in the system. A driver can drive a maximum of 126 addresses.

In the **Display Interface Properties** box select the UMD Type from the drop down list.

Then press **Apply**.

If there are other drivers, such as a Zandar multiviewer, select the appropriate entry from the drop down list.


Note about Disable instant updates for Multiviewers

In the normal mode of operation, "Disable instant updates" should not checked, and the background refresh rate is 200mS. If any displays need updating as a result of a tally change, or a router change, a message is sent immediately to those displays, with no gaps between

the messages. If nothing is changing, a background "refresh" message is sent, to one display at a time, with the specified gap between messages (in this case, 200mS). With nothing changing, this means a complete background refresh every 7.2 Seconds for 36 displays, for example.

If "Disable Instant Updates" is checked, all messages from the system to the displays are kept (200mS) apart. So if, for example, 5 displays need to be updated after a change in status, the last display will be updated 2 seconds later than the event occurred. This is **only** used for some multiviewers that cannot show instant updates. Do NOT use for most display types.

3.0 Serial Parameters for the Drivers

Edit the **Serial Parameters** for the driver in use. The common drivers will be auto-filled.
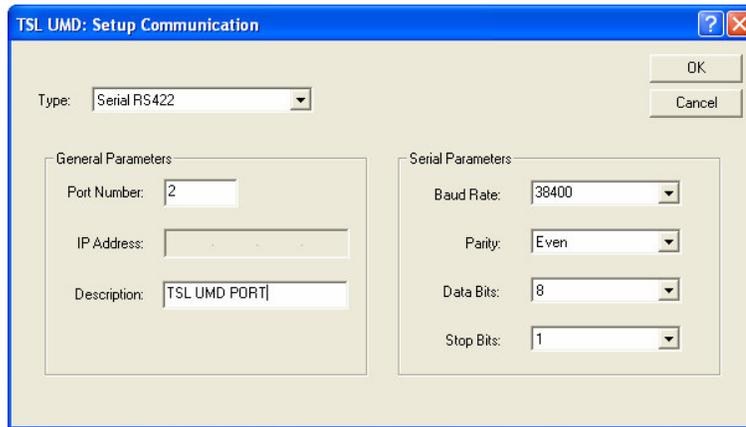
This shows a TSL UMD protocol Driver

This might be used when a different driver is need for a multiviewer other than taking the data feed from one of the standard UMD ports. Normally, all TSL UMD will be driven directly or via a PSU-22 from one of the standard UMD RJ45 ports.

For Multiviewers select UDP if IP connections are available. For UDP connections the number of UMD addresses available is 126 per IP/PORT combination. So, any single IP address can have as many drivers as necessary

4.0 Adding displays to the layout
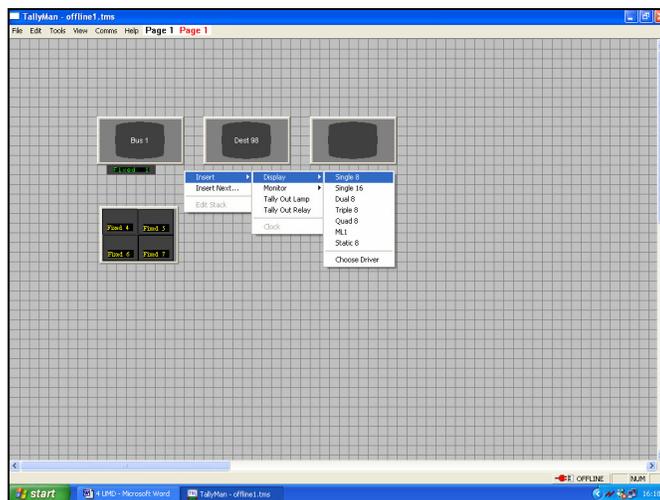
A RH mouse click on the desktop will allow displays to be added along with the monitor type.

A drop down box allows the correct type of display (D8C / DD8C etc) to be entered into the desktop.

It is essential that the correct display is entered as the monitor stack is "built" on the desktop.

When the display driver has to be changed, for example entering a multiviewer, select **Change Driver** form the list. The drivers shown will only be those that have been entered into the system.
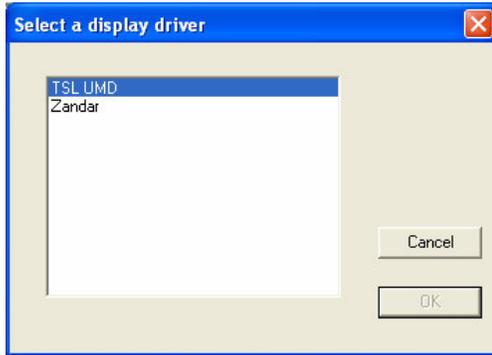
Some multiviewers use TSL UMD protocol. These are entered in the program as Multiviewer.

This shows a Zandar unit that uses its proprietary protocol – later units use TSL UMD protocol.

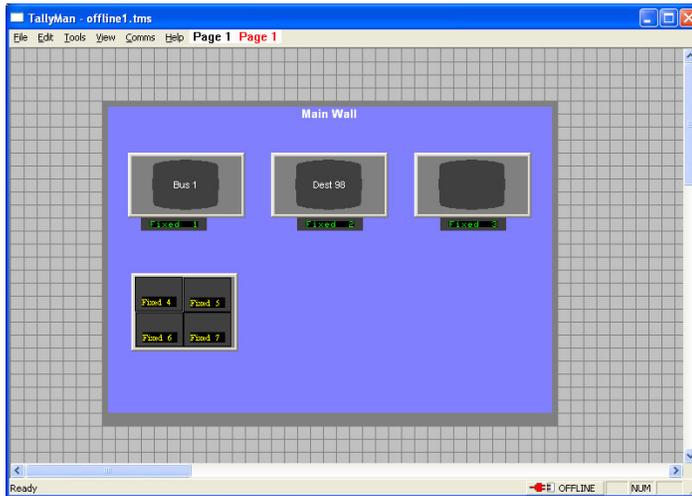## It is crucial that the correct UMD is entered in the program.

Hardware Type		*TallyMan Type*
D8C/D8	**–**	**Single 8**
D16C/D16	**–**	**Single 16**
DD8C	**-**	**Dual 8**
TD8	**–**	**Triple 8**
QD8	**–**	**Quad 8**
ML1	**–**	**ML1**
S8C	**–**	**Static 8**

Build up the entire monitor stack/wall inserting the correct UMD type and driver as you go.

A frame may be made around the stack by selecting the top LH edge and whilst holding down the mouse button, drag to the lower RH corner.

A RH mouse click on the stack will allow colour and Naming changes to be made via the **Edit Stack** option.

The box around the stack may be made by clicking and dragging from the top L.H. corner to the lower R.H. corner.
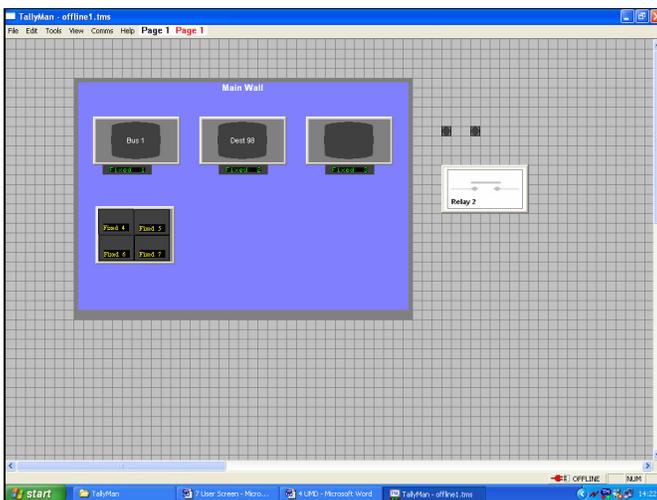Descriptive text may be added an subsequently edited using a R.H. mouse click and selecting **Edit Stack**.

4.1 Tally Out Lamps and Tally Out Relays.

A R.H. mouse click will allow these icons to be added.
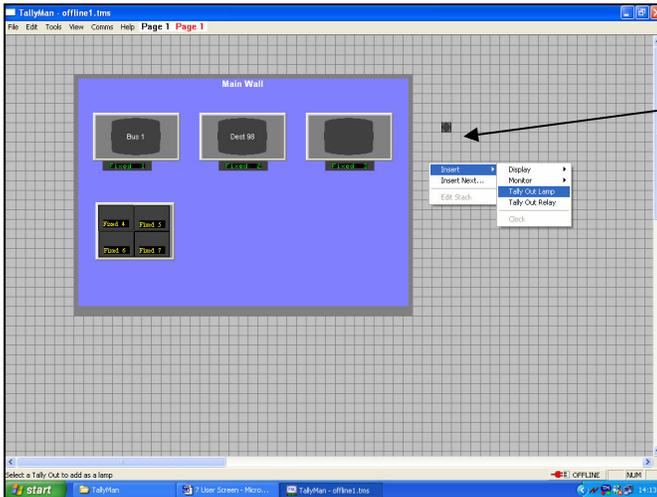

A Tally Out Lamp

Select either a tally lamp or tally relay from the list.

A Name may be set for the relays via a R.H. mouse click on the icon.

These icons provide very simple indication of tally out status and might be useful as an indication of which tallies are active at the tail-board of an outside broadcast truck, for example.

A R.H. mouse click and select the item, or a double click on the icon will allow editing and access to the assignment dialog box.
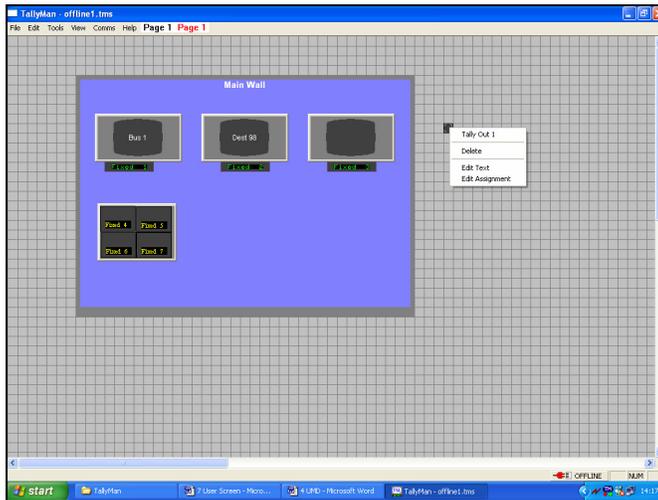
Edit Assignment will, for example, allow editing of the tallies to the Tally Out pin.
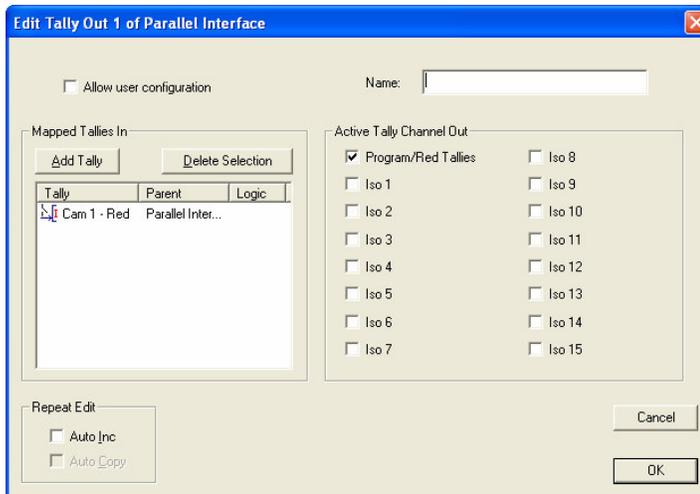
Use the View menu to get back to Set up to edit the UMD functions.

A click on the UMD driver will show this dialogue box.
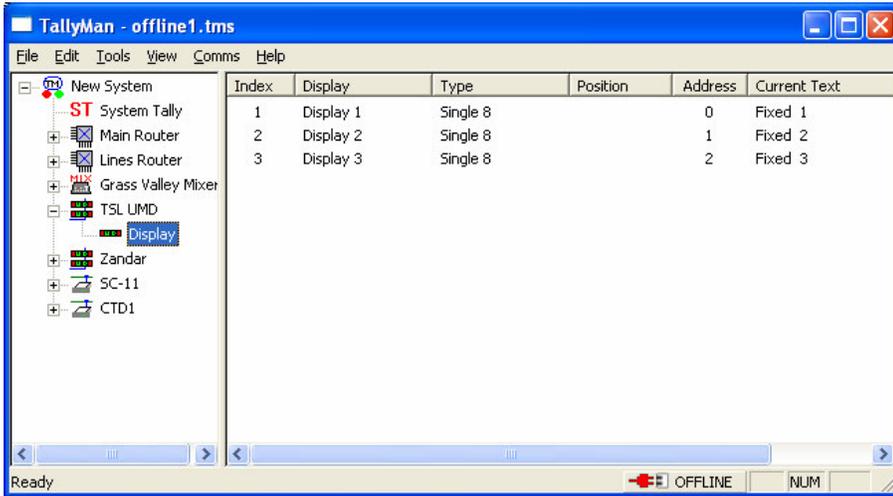
This shows that three TSL UMDs have been added to the system. The display type (Single 8), the Address and the Current Text on the UMD is shown in the list.

A double click on the Display line will show this field.

It will be seen that virtually all dialogue boxes will allow the Configurator to decide on User access by checking the box **Allow user configuration**.

Each Display may be given a **Name**

The Configuring engineer may **Allow user configuration.**
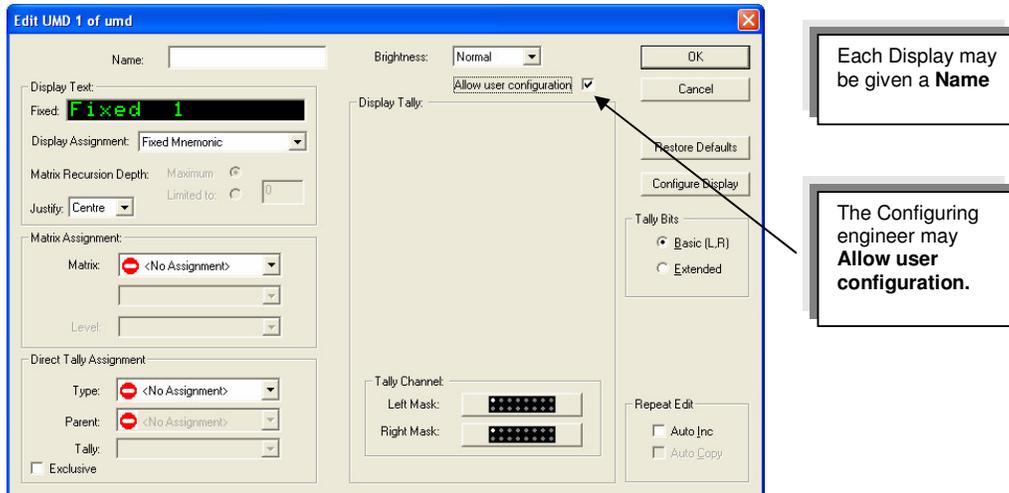
Note:

The Configure Display box allows the basic behaviour of the display to be set with incoming tallies.

5.0   Setting the Function of a UMD
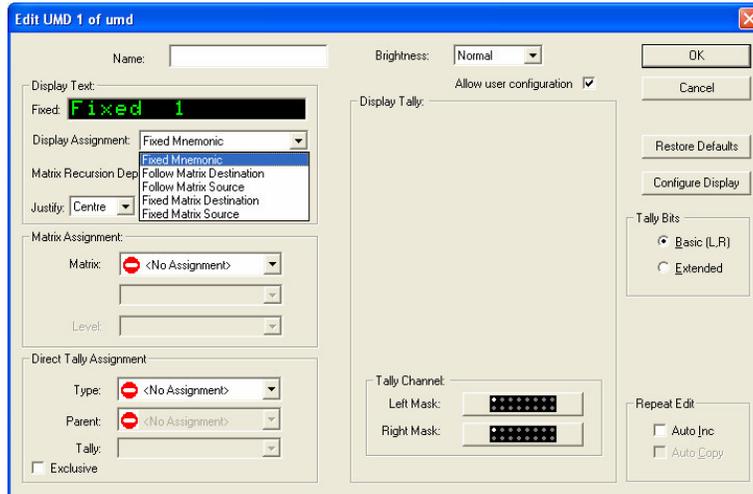
This dialogue box will allow the display assignment to be set and the tallies to be mapped to the display.

6.0   Display Text

This box determines how the UMD derives its text.
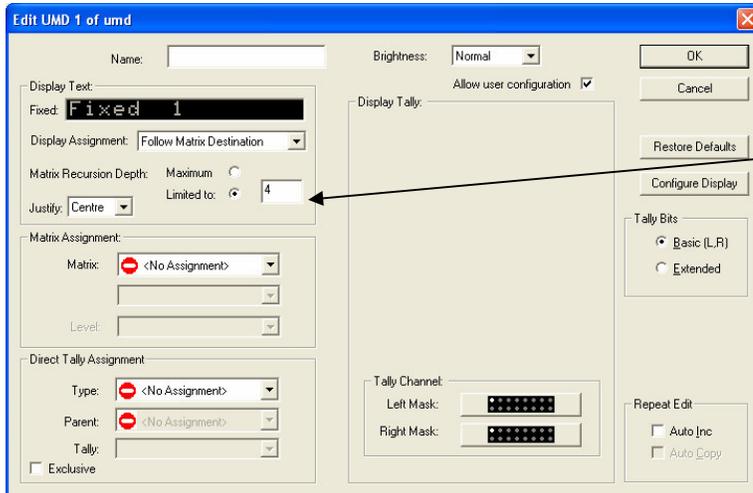
The UMD may be a:

Fixed Mnemonic display
Follow Matrix Destination display
Follow Matrix Source display
Fixed Matrix Destination display
Fixed Matrix Source display

6.1   Fixed Mnemonic

The factory default is Fixed Mnemonic with text as Fixed 1. This may be freely edited in this box up to 16 characters – assuming that the UMD can display 16 characters.

6.2   Matrix / Router associated displays

The **Matrix Recursion Depth** is set here for a UMD assigned to Matrix destinations assuming that several routers / matrices are cascaded.

Matrix Recursion Depth is set here.

Note

If the UMD is assigned as a Matrix destination display and there are several routers in the system there may be a requirement to map the final router's sources to earlier router's destinations. Please see the Router Section of this manual.

For example:

There could be, say three cascaded routers in a system.

If source-to-destination mapping is carried out on all three routers, the first router's source mnemonics will show on the third router's destination UMD. It might be a requirement that *this* destination display shows only the second router's source mnemonics and not those of the first. In this example, a figure of 2 would need to be set in the box. This figure counts back from the output.

6.3   Assigning UMDs to a Matrix / Router
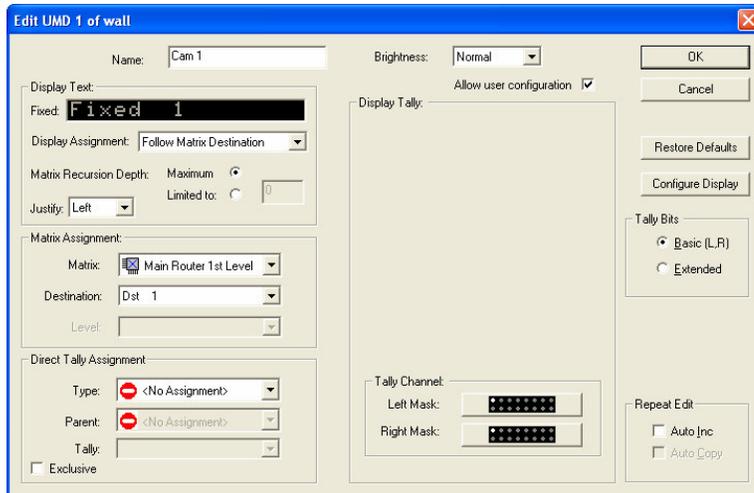
This shows the UMD has the name Cam 1 UMD and is associated with the Main Router's Destination 1.

Mnemonic information will be controlled by the router.

The **Display Assignment** box allows the UMD to be associated with a matrix destination or source.

In the **Matrix Assignment** box, from the dropdown lists for **Matrix** and **Destination** or **Source** (as appropriate) select with which Matrix and Destination or Source the UMD is to be associated.

- If the UMD is assigned to a destination as a Matrix Destination Display, the selected source mnemonics and any matrix associated tally mapping will show on the UMD.

- If the UMD is assigned to a matrix source as a Matrix Source Display, the destination mnemonics and matrix associated tally will show on the UMD.

Note:

For UMDs assigned to matrix / router sources be sure to set the Priority for the router destinations otherwise destination mnemonics will not be shown on the UMD.

Please see the description of display terminology for operation of Fixed Matrix Source and Matrix Destination Displays.

6.4 Matrix Levels

Matrices often have levels, e.g. SDI, Analogue PAL, Time Code etc. so the UMD has to be assigned to the desired video level.

Note

Very often it will be seen from the Router section that although there is one main router in the system and that it may, for example, have four levels, because of the way the router has been entered into TallyMan the UMD level should remain set to Level 1. This will allow different mnemonics to be set for the different levels.

Please see the Router section for more details.

7.0 Direct Tally Assignment

Direct tallies may be assigned to the UMD instead of, or as well, as any tallies arriving via the router associations.

If the UMD is router / matrix associated and there are tallies associated with the router these Direct Tallies do not need to be set.
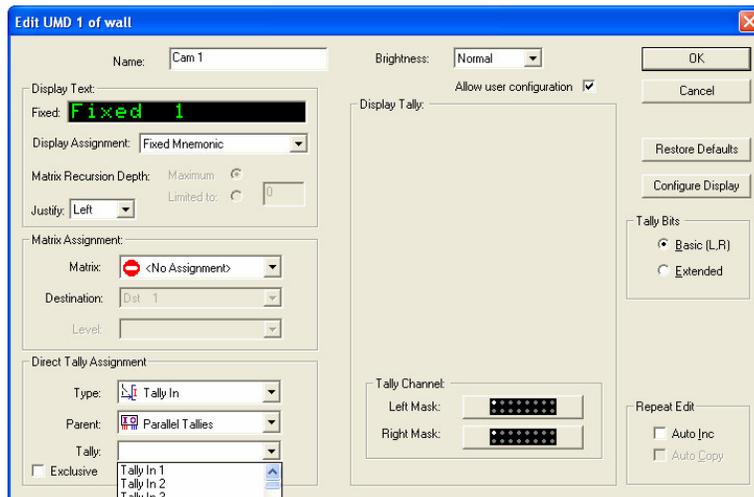
A Direct Tally may be assigned from any of the sources (that has a valid tally set to it – see the Tally Section) shown in the drop down box.

Tallies from a parallel I/O may be mapped directly to the UMD. These tallies will be flagged as Program or Iso 1 – 15, so as long as the Display Tally Mask is set to accept that Tally Channel, the UMD's LED will light. Please see section 4.6.

If the UMD is a router-associated UMD, tallies may be derived from tallies router destinations or sources, as appropriate. If it is wished that only Direct Tallies act on the UMD, the **Exclusive** box must be checked.

8.0   Display Colour and Tally Assignments

There are two ways for controlling the tally and display colour.

Tally Bits and Configure Display menus.

The Tally Bits menu is described first as an understanding of the method of mapping tallies to the display is essential.

Tally Bits – Basic (L-R)
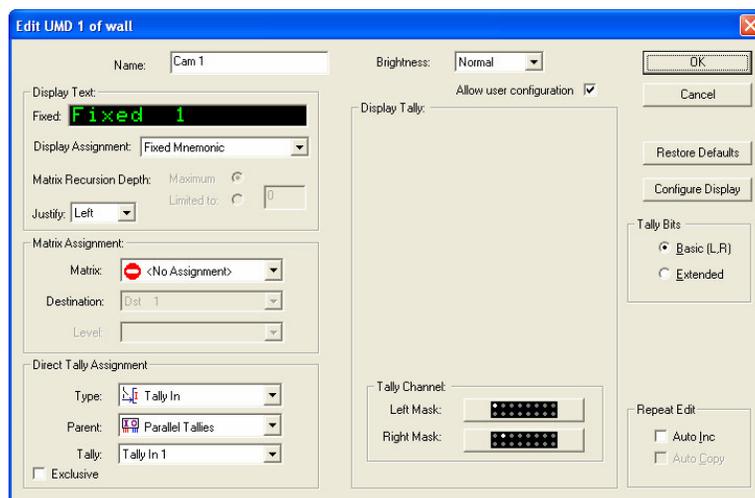
Tally Channel

The left Tally LED needs to be associated with the required Tally Channel. Tallies active in the Tally Channel will light the UMD LED.
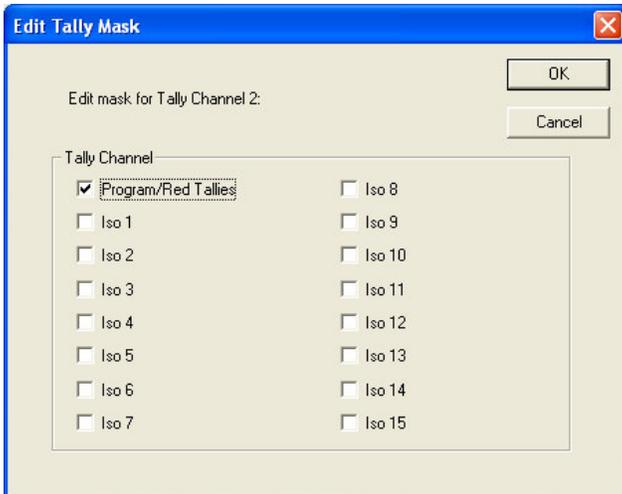
Click on the **Left Mask** button
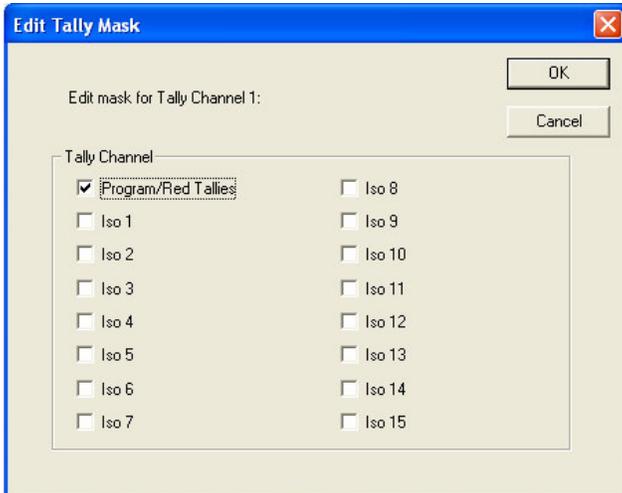
This shows that the left UMD LED will accept the following Tally Channel – Program/Red Tallies.

The Right Tally LED needs to be set.

Click on the **Right Mask** button.

This shows that the right LED will accept the following Tally Channel – Program/Red Tallies.

Both the left and right UMD tally LEDs will be lit.

If Iso 1 was check instead, the Direct Tally would not light the UMD LED as, in this case, the Direct Tally does not belong to the Tally Channel. However, if the UMD is, say, router associated, and there are active tallies in the system with the identifying flag as Iso 1, in this case the UMD tally LED would be lit.

Example 1
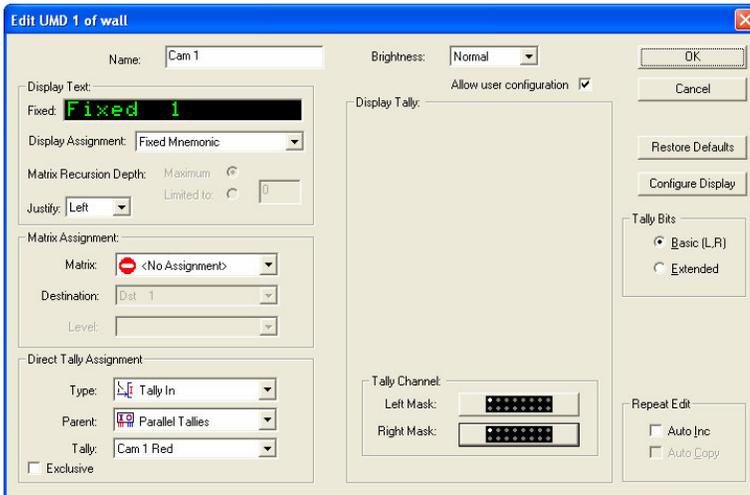
This screen shows that a Tally In is assigned from the Parallel Interface and Tally 1 which has the name Cam1 – Red, has been assigned to the UMD.

Tally 1 (Cam1 – Red), belongs to the first of the 16 channels (default name Program, but renamed here to Program/Red Tallies) and will light both the LH and RH tally lamps on the UMD. It will be seen that the UMD's Left Tally Channel Mask is set to accept the first tally channel – Program/Red Tallies.
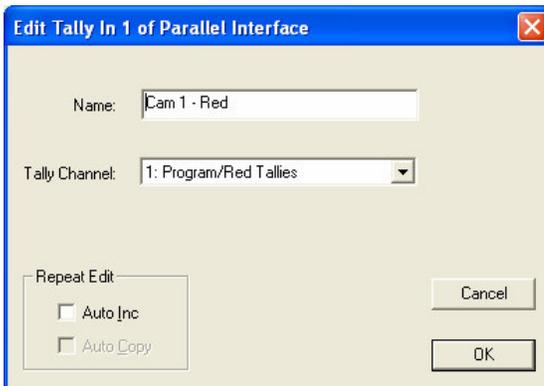
Tally 1 derived from the Parallel Interface is set to Tally Channel 1: Program/Red Tallies

The UMD Mask settings. The settings for the Right Mask are the same.

A double-click on the Left or Right Mask will show this box.

Example 2

A System Tally may consist of two input tallies, (with the Active Tally Out Channels set to, say, Iso 1 and Iso 2) from a Parallel I/O using separate Tally Channels, also flagged as Iso 1 and Iso 2. This System Tally may be assigned to the UMD and the Left and Right Masks set to accept the desired active tally channel, Iso 1 or Iso 2. This will give individual control of the left and right tally LEDs.

The tally ins are set to belong to specific Tally Channels.
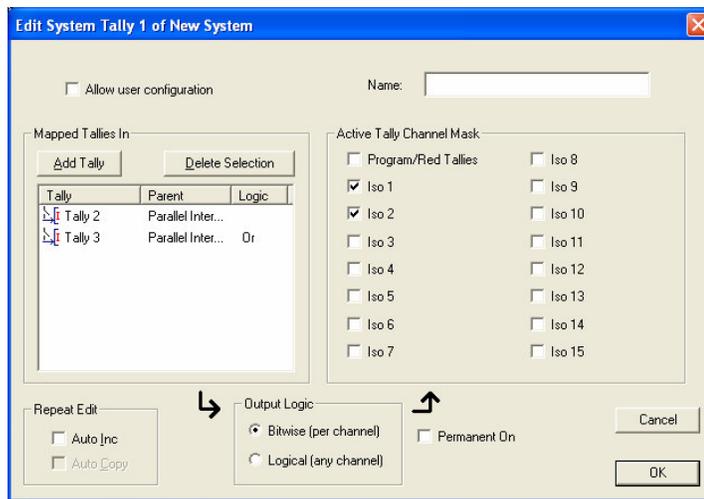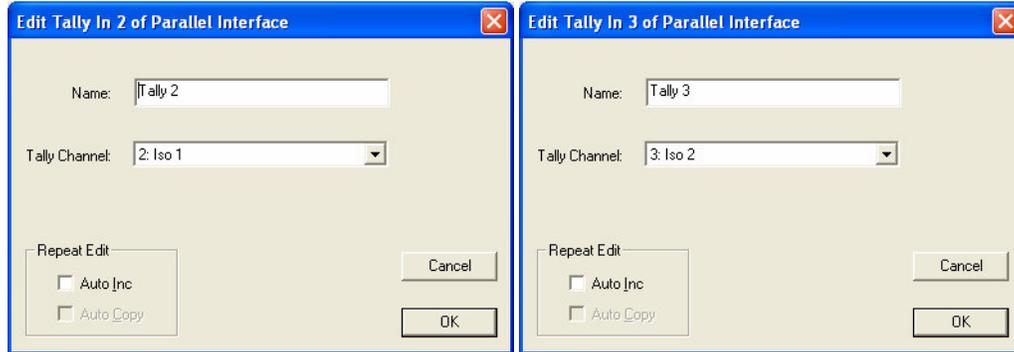
System Tally 1 is made up of two I/P tallies, Tally 2 and Tally 3, assigned to Tally Channels Iso 2 and Iso 3.

The Active Tally Channel Mask is set to allow these tallies through
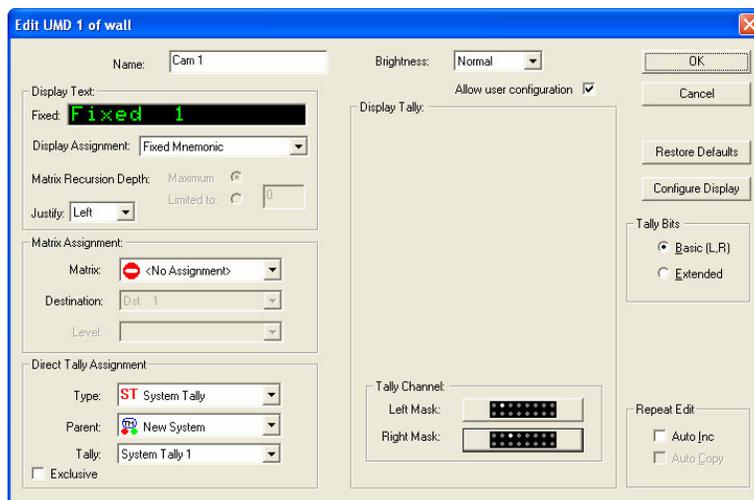
System Tally 1 is assigned to the UMD but the Mask has been set to accept Iso2 for the Left Tally and Iso3 for the Right Tally.

Separate left and right tallying is now possible via a System Tally.

Tally Channel Masks
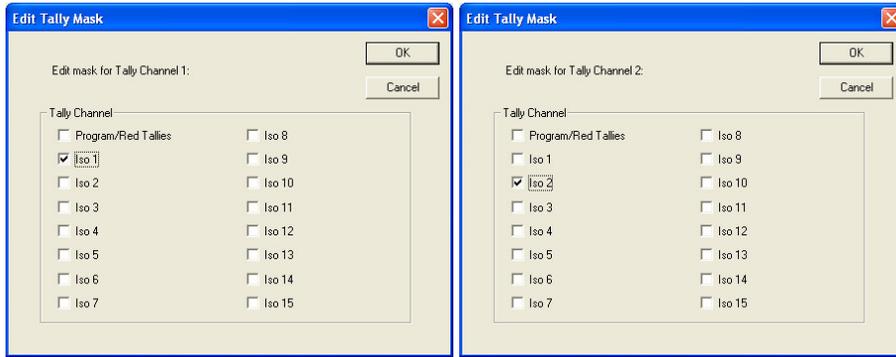
As the left and right masks are set for Iso1 and Iso2, separate tallying of the LEDs is possible via a System Tally.

Tally Bits – Extended

Note: Multiviewers should be used with the Basic settings.

This is where the UMD tally/text colours are controlled.

It will be seen that the Left Tally LED, the Text and the Right Tally LED are treated slightly differently.

The dot shows which Tally Channel has been set to the Mask
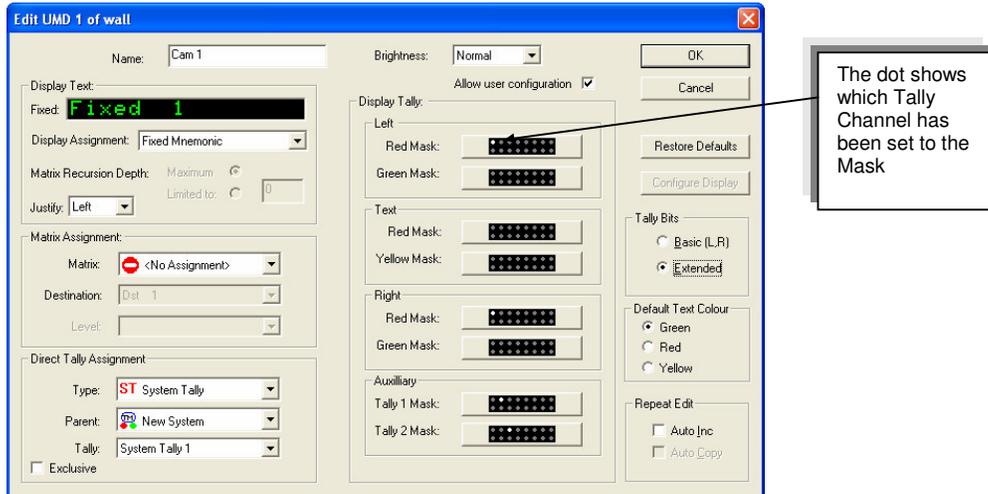
Display Tally - Left

A mouse click on the Red Mask will show the following dialog box:

Select the Tally Channel that is to light the Left UMD tally LED Red

Select the Tally Channel that is to light the Left UMD tally LED Green, if required.

With an active Tally Channel set to both the Red and Green Masks the LED will light Amber/Yellow.

Display Tally - Right

This is set in the same manner as the Left Display Tally.

Text – Colour

Default Text Colour is selected here.
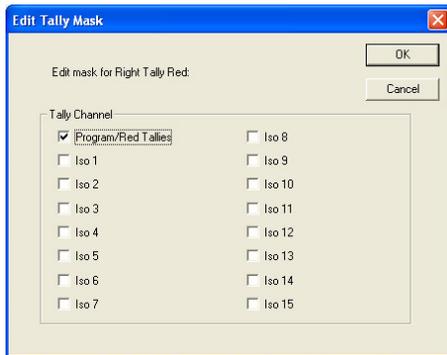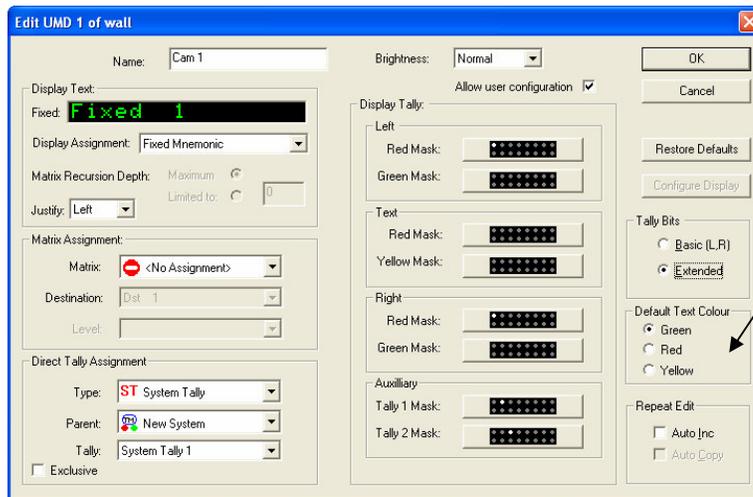
A click on the Red Mask will show the following dialogue box.

Checking an Active Tally Channel will allow any tally assigned or flagged as belonging to that channel, to turn the text Red.

It will be seen that once the default text colour has been set, the mask colour options will change to allow the incoming selected Tally Channel to make a change to the text colour.

Using Red as the text default, the mask options change to Green and Yellow.
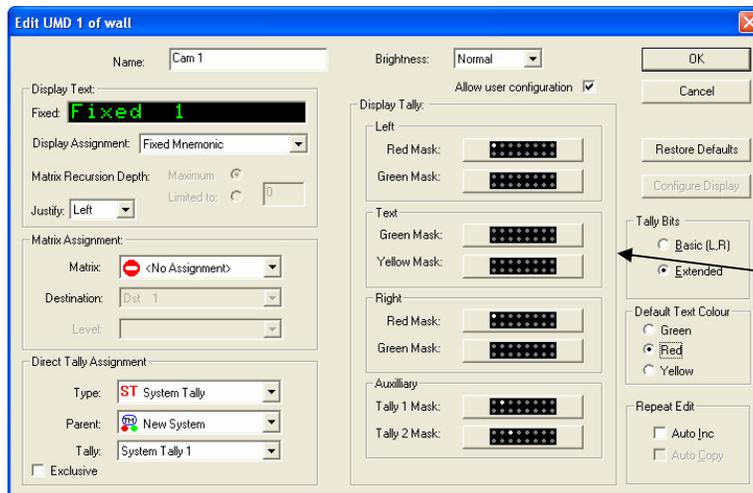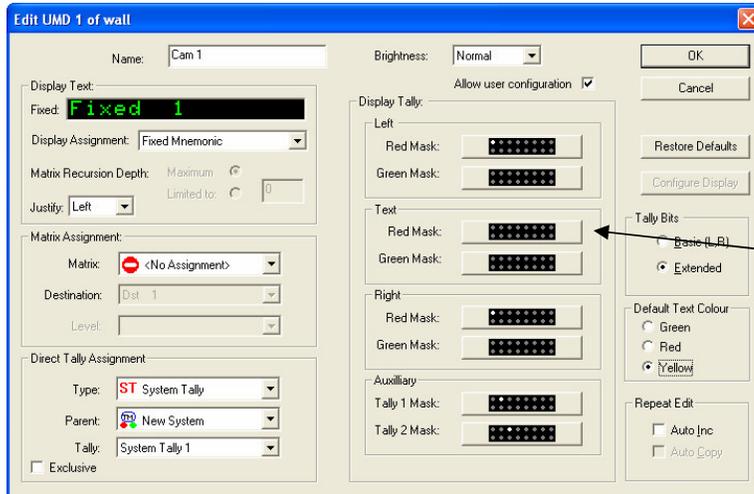
Using Yellow as the text default, the mask options change to Red and Green.

Note. When a TSL UMD has been used in the Extended mode, it will need to be de-powered and re-powered to read the Basic tally mode.

Auxiliary

For future use.
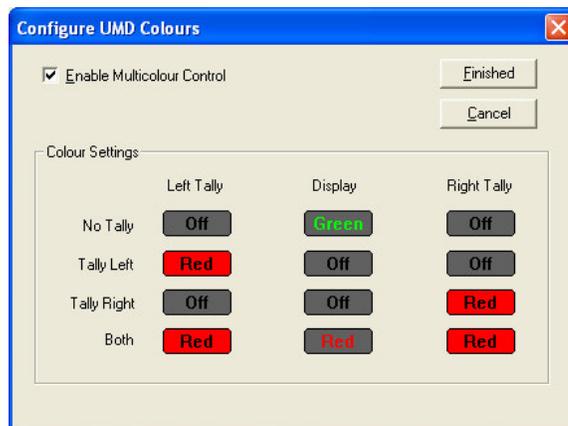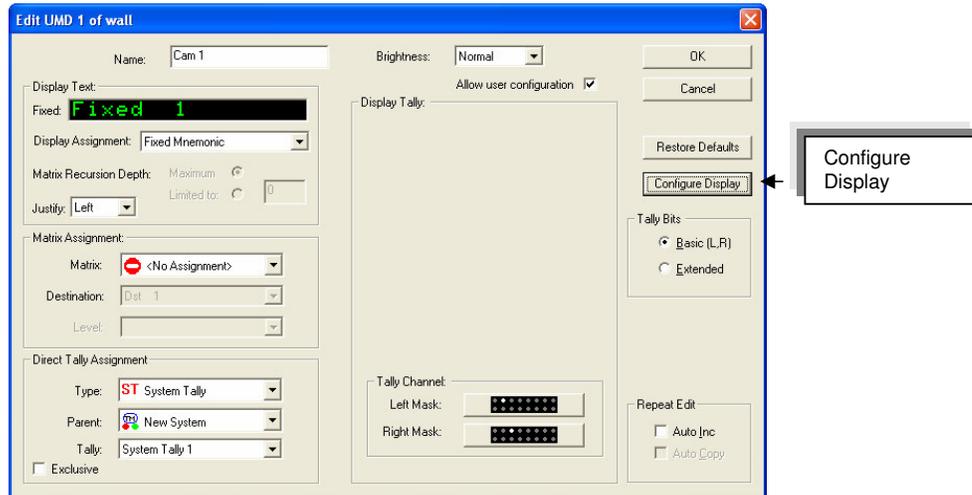
Note for Static Displays – S8Cs.

The Extended menu will be slightly different but the principles are exactly the same as for the dynamic displays.
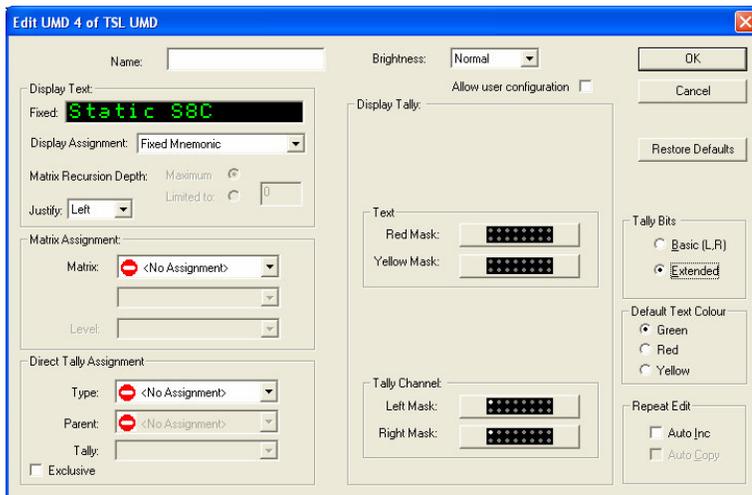
Configure Display Menu

This menu is a somewhat simpler option of setting the behaviour of the dynamic displays than using the Tally Bits menus.

Greater control of colour is offered by using the Tally Bits menu.

Set the boxes as required.

If the Extended option is subsequently selected in the Tally Bits menu the UMD may need to be re-powered to accept the changes.
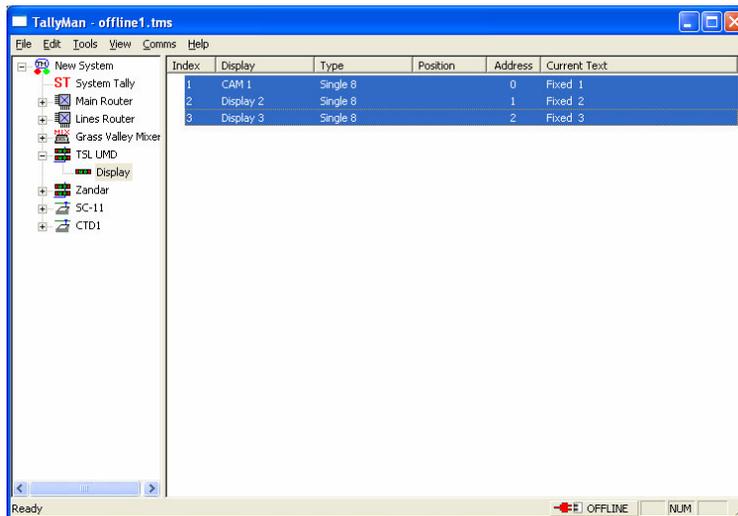
9.0   Editing Shortcuts

UMD Brightness and Justification may be done on a global basis by using **Edit Group**. This achieved by marking the list and using the RH mouse button.

Sequential UMD editing may also be carried out by using **Edit Selection**. This achieved by marking the list and using the RH mouse button.

<u>Note</u>

Edit Selection will allow a UMD by UMD edit box to be displayed to allow all parameters to be edited whilst **Edit Group** will allow only the main attributes to be edited such as justification and brightness.
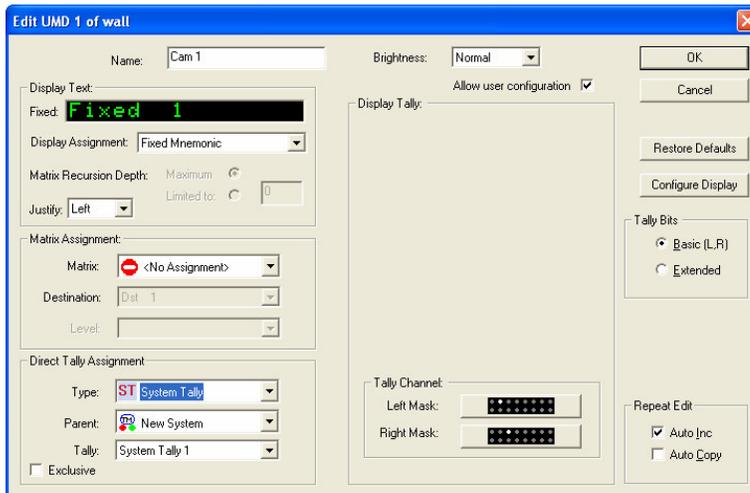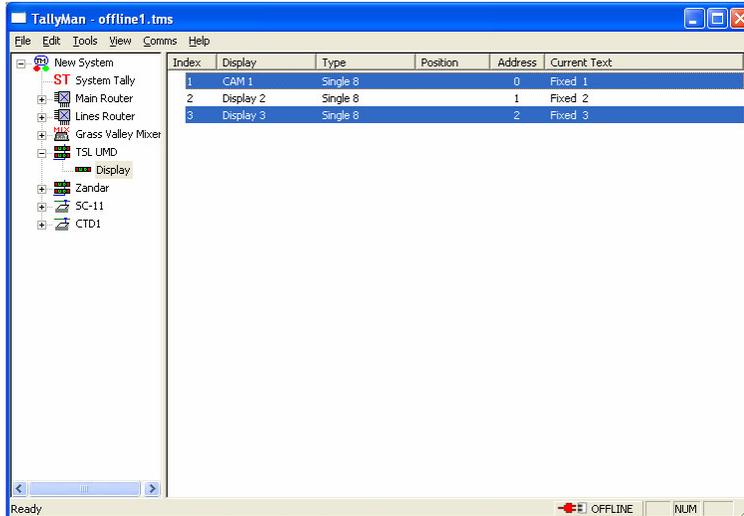
Edit Selection

Holding down Ctrl + a mouse click will allow a selection to be made in the normal Windows manner.

A RH mouse click will then allow Selection Editing.

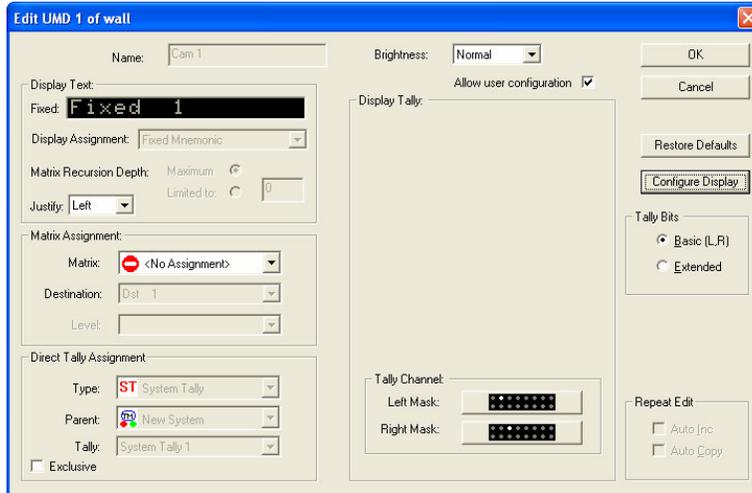Editing of only the main common parameters of all the UMDs in the list is possible.

Brightness
Justify
Tally Bits
Configure Display

Editing is carried out on a UMD by UMD basis.

Edit Group.

Holding down Ctrl + a mouse click will allow a selection to be made in the normal Windows manner.

A RH mouse click will then allow Group Editing.

> Editing of only the main common parameters of all the UMDs in the list is possible.
>
> Brightness
> Justify
> Tally Bits
> Configure Display

10.0   Copy and Pasting Names and Mnemonics into the Lists.

Names and Mnemonics may be cut and pasted between lists in TallyMan and Excel for easy updating and editing.

Use **Edit > Copy Mnemonics** or **Edit > Copy Names** and **Edit > Paste Mnemonic or Edit > Paste Names** as appropriate.
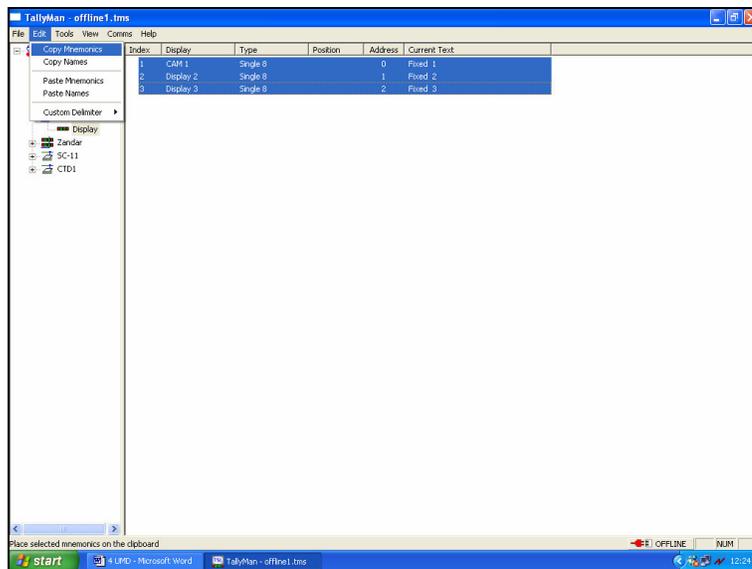
10.1 Using other programs to edit / copy the UMD Names and Mnemonics lists.

If the UMD Names or Mnemonics are selected and copied (RH mouse button or via **Edit > Copy Mnemonics** or **Edit > Copy Names**) the text may be downloaded into other applications such as Microsoft Excel.

No delimiters should be checked for vertical filling in Excel. Various delimiters are available for loading into other programs.

Open Excel and mark the first box. Click on **Paste** and the Names or Mnemonics will be entered.

Lists may be created in other programs, such as Microsoft Excel and pasted into TallyMan.

Mark the list and copy to the Clipboard. Open TallyMan and paste into the Names or Mnemonics lists as required.
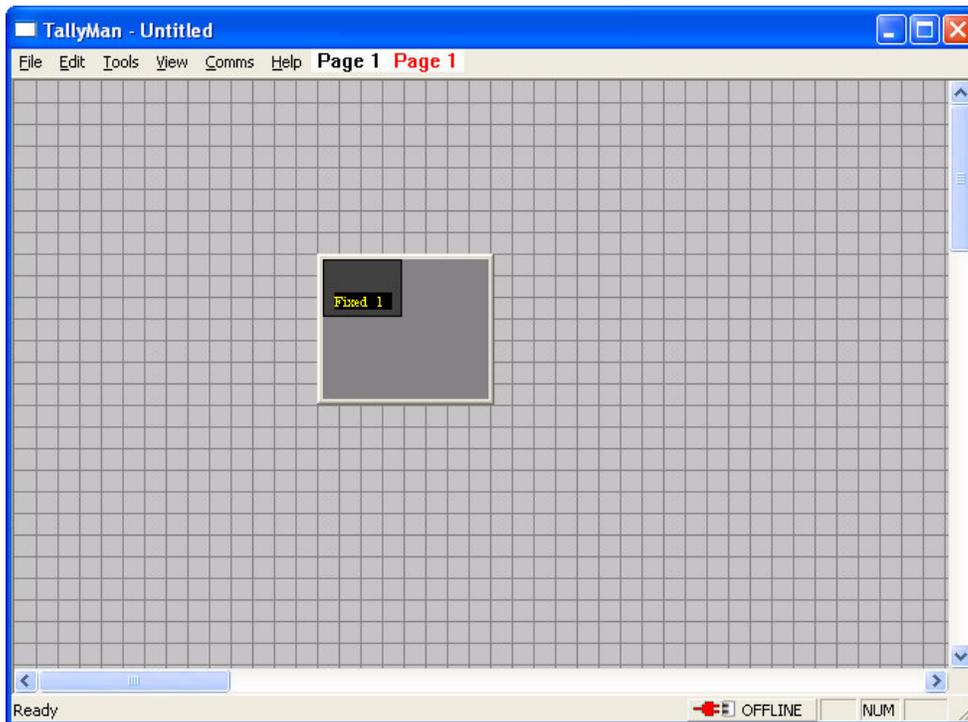

11.0 Multiviewers

Multiviewers are treated in a very similar manner to TSL displays.

They by be driven off Control 4 on a TM1/2 as long as Basic tally mapping is used or a Multiviewer module may be entered.
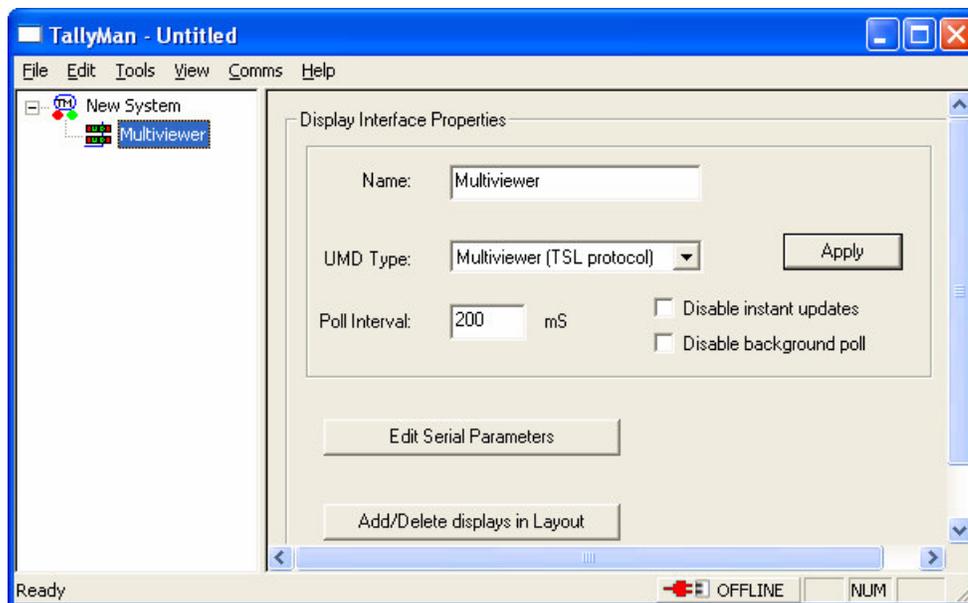
For Multiviewers select UDP if IP connections are available. For UDP connections the number of UMD addresses available is 126 per IP/PORT combination. So, any single IP address can have as many drivers as necessary
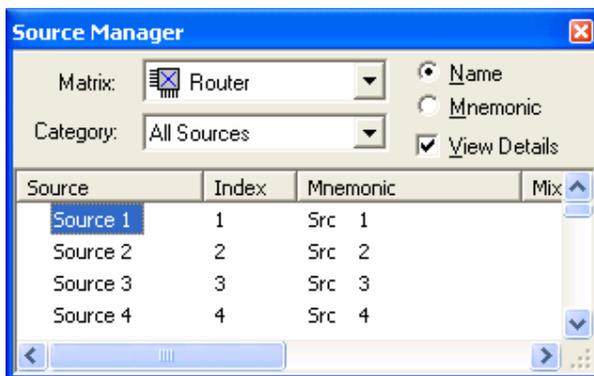
Adding displays/PIPs.

Using a RH mouse button it will be possible to auto arrange the PIPs within the frame. Due to the program operation it is not possible to use Ctrl to copy the Multiviewer screens across the desktop.

Shift and LH mouse click will delete the PIP.

Using Source Manager.

Dragging the source to the PIP will make the PIP a Fixed Router Source display.

If the PIP is assigned to a Matrix Destination it will show the source mnemonic that the actual destination selects.

However, if a Source from Source Manager is selected and Shift is held down, the actual router will be controlled instead to the PIP changing to a Fixed Router Source Display.