

THE ONLY TALLY SYSTEM YOU'LL EVER NEED

# The TSL Tally and UMD Configuring Program

# **Multiviewer Information**

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#### Notes

Much of the material in this section has kindly been provided by the multiviewer manufacturers.

Always use the manual supplied with the multiviewer for the latest information and to check pin functions.

- Almost all current units accept TSL UMD protocol.
- The cable details in the boxes refer to the <u>cable</u> connectors.

# 1 Barco Vivaldi

Set the RS485/RS422 Vivaldi II port to MPK protocol and the address to match that show in TallyMan for the quad-split display. The port must be configured as 1 x 4.

The address field at the bottom of the list of four fields in the Vivaldi set-up is the one that must match TallyMan first address for that particular Vivaldi's address - decimal or hex.

All other ports must be set to a different protocol, and are not used.

#### Remote 1 Socket

TM1 / TM2 RS-232				VIVALDI RS-232
D9 Socket				D9 Plug
2	$\rightarrow$	RX	$\rightarrow$	8
3	$\leftarrow$	TX	$\leftarrow$	7
5		GND		6

# RS 422 Cable Connections

TM1 / TM2		VIVALDI RCDS BUS D9M
		Control Port
(D9 Plug)		(D9 plug)
3	$\leftarrow$	4
8	$\leftarrow$	2
7	$\rightarrow$	5
2	$\rightarrow$	3
6,4	GND	7

#### TM1 / TM2 RS 422 Control Port Details

CONTROL RS 422 / RS485 CONNECTORS D9 SOCKETS			
1	0v	6	0v
2	TX-	7	TX+
3	RX+	8	RX-
4	0v	9	0v
5	-		

**Communication Parameters** 

- 38K4 baud
- 8 data bits
- Even parity
- 1 start bit
- 2 stop bits

# 2 Evertz MVP Maestro

#### <u>Notes</u>

- The cable details in the boxes refer to the <u>cable</u> connectors.
- The multiviewer is plugged into any UMD display port on the TM1 / TM2 or PSU-22.
- If the TCP/IP UDP link is used the IP settings must all be in the same group for all units (TMx, Mixer and Evertz).
- The appropriate software may have to be loaded into the multiviewer if it has not already been delivered with the software installed.

The Evertz manual covers this procedure.

#### **Evertz MVP**

These multiviewers are treated exactly like a D16C UMD as far as cabling and TallyMan configuration is concerned. However, to make the on-screen graphics look right, a Multiviewer box should be selected from the TallyMan list and Multiviewer PIPs added into the box.

Interface cable between the System Controller RJ45 connector and the Evertz input connector.

TM1 / TM2 Or PSU-22	EVERTZ MULTIVIEWER BREAKOUT CONNECTOR
RJ45 Plug	Screw Terminals
1	4
2	4
3	
4 (TX+)	8 (CTS / RX+)
5 (TX-)	6 (RX / RX-)
6	
7	
8	

# RJ45 pin details

View from the back. Cable entry.



RJ45 Connector on the cable

Set jumpers J34 and J33 on the PPV module(s) to RS422.

Use HyperTerminal to set the PPV port to TSL UMD parameters:

Terminal Program settings:

- Baud: 115200
- Data Bits: 8
- Parity: None
- Stop Bits: 2
- Flow Control: None

Use Menu 4 to set the UMD protocol to TSL and menu 5 to set the TSL UMD data rate etc:

- Baud 38k4
- Data Bits: 8
- Stop Bits: 1
- Parity: Even
- Comms: RS 422/ RS 485

#### Mnemonics

The MVP can have up to three sets of mnemonic boxes per PIP. TallyMan can have only one with the associated tallies.

Set the PIP to have the matching Address (called Protocol in the Evertz lists) as show in TallyMan by viewing View > Show Display Address. Sixteen characters may be displayed and the MVP has the capability of displaying various fonts.

#### Tallies

Tally boxes may be added in the MVP set up screen and these should normally have the same address as the mnemonics box. It will be seen that the two tallies (two tallies max per PIP) are entered as Tally A and Tally B for the left and right tallies.

# 3 Evertz VIP

These multiviewers are treated exactly like a D16C UMD as far as cabling and TallyMan configuration is concerned. However, to make the on-screen graphics look right, a Multiviewer box should be selected from the TallyMan list and Multiviewer PIPs added into the box.

Interface cable between the System Controller RJ45 connector and the Evertz input connector.

TM1 / TM2 OR PSU-22	EVERTZ MULTIVIEWER BREAKOUT CONNECTOR
RJ45 Plug	Screw Terminals
1	6
2	6
3	
4 (TX+)	5 (RX+)
5 (TX-)	4 (RX-)
6	
7	
8	

# RJ45 pin details

View from the back. Cable entry.



RJ45 Connector on the cable

Use HyperTerminal to set the PPV port to TSL UMD parameters:

Terminal Program settings:

- Baud: 115200
- Data Bits: 8
- Parity: None
- Stop Bits: 2
- Flow Control: None

Use Menu 4 to set the UMD protocol to TSL and menu 5 to set the TSL UMD data rate etc:

- Baud 38k4
- Data Bits: 8
- Stop Bits: 1
- Parity: Even
- Comms: RS 422/ RS 485

# 4 Evertz Quattro

# Notes

- The cable details in the boxes refer to the <u>cable</u> connectors.
- The multiviewer is plugged into any UMD display port on the System Controller or PSU-22.

• The appropriate software may have to be loaded into the multiviewer if it has not already been delivered with the software installed.

The Evertz manual covers this procedure.

These multiviewers are treated exactly like a D16C UMD as far as cabling and TallyMan configuration is concerned.

Interface cable between the System Controller RJ45 connector and the Evertz input Aux I/O D25 connector.

TM1 / TM2 Or PSU-22	EVERTZ MULTIVIEWER AUX I/O PLUG
RJ45 Plug	D25 Plug
1	21
2	21
3	
4 (TX+)	17 (RX+)
5 (TX-)	18 (RX-)
6	
7	
8	

# RJ45 pin details

View from the back. Cable entry.

RJ45 Connector on the cable



#### Notes:

The UMD must be entered into TallyMan as a 16 character display.

## To set the Evertz address etc:

- 1. On the appropriate video card (e.g. 7765 AVM-4-\*\*) press the white button to call up the on-screen menu.
- 2. Use the toggle switch to select Serial port.
- 3. Press the white button again.
- 4. Select Serial port configuration and using the toggle switch select TSL protocol
- 5. Step up the menu to **TSL protocol**
- 6. Select using the white button
- 7. Select the **Video source A address** and set the address using the toggle switch shown on the TallyMan desktop for that particular "D16C" position.
- 8. Set the other three address as required.
- 9. Ensure that the centre and right link is made for RS422 working on the 3 pin link adjacent to TP8 on the upper left of the top board.

# <u>Tallies</u>

If the tallies come up in incorrect colours, the background colour can be set using the white button and toggle switch as above.

- 1. Select On-screen display configuration
- 2. Select Text Burn-in properties
- 3. Select Source ID Colour 1 =Red
- 4. Select Source ID Colour 2 = Green
- 5. Select Source ID Colour 3 =Orange

The tallies are normally as follows.

A Red (left) tally will set the background to Red. A Green (right) tally will set the background to Green. Both tallies will set the background to Amber/Orange.

Upgrading the Evertz software for TSL protocol – please see the Evertz Manual for details:

Briefly:

- 1. Set jumper J15 on the appropriate card to **Upgrade**
- 2. Attach the Evertz supplied cable to the 3 pin plug adjacent to the upgrd/run connector
- 3. Run HyperTerminal
- 4. Push in the card to the frame and the opening screen will be shown if all is OK.
- 5. Run the upgrade program from the transfer File routine in HyperTerminal use Modem X setting.
- 6. Withdraw the card and set the link, J15, to Run.

# 5 Leitch NeoSuite

Note: Leitch multiviewers read TSL UMD Protocol directly.

6

7 8

Please consult the Leitch Manuals for appropriate pin connections and functions. Use Com 23 on the Leitch unit which must be set to read TSL UMD protocol

PIN	FUNCTION	DIRECTION
1	0V	GND
2	0V	GND
3	RX-	IN
4	TX+	OUT
5	TX-	OUT

RX+

+24V

+24V

IN

OUT

OUT

RJ45 Connections from TSL equipment.

# Interconnecting cable required

PIN	FUNCTION	DIRECTION	LEITCH D9S KT	FUNCTION
1	0V	GND	5	0V
2	0V	GND	-	
3	RX-	IN	2	TX-
4	TX+	OUT	3	RX+
5	TX-	OUT	8	RX-
6	RX+	IN	7	TX+
7	+24V	OUT	-	
8	+24V	OUT		

# 6 Miranda K2 / Alto

# <u>Notes</u>

- The cable details in the boxes refer to the <u>cable</u> connectors.
- The multiviewer is plugged into any UMD display port on the System Controller or PSU-22.
- A RS422 to RS232 converter is required for each Miranda K2 unit for easy configuration.
- The appropriate software may have to be loaded into the multiviewer if it has not already been delivered with the software installed.
- Build the TallyMan / TallyMan desktop display using Multiviewer from the UMD list.

# Miranda K2

These multiviewers are treated exactly like a D16C UMD (Dynamic 16 in TallyMan) as far as cabling and TallyMan / TallyMan configuration is concerned. Select **Insert** > **Display** and then select **Multiviewer** in the TSL program from the Displays list.

Set the address in the Miranda unit to match the Address shown in TallyMan / TallyMan for the UMDs in the multiviewer list for that particular K2 multiviewer.

#### Cable Requirements

For Miranda RS232 connections.

To avoid reconfiguration of the Miranda unit it is recommended that a RS422 to RS232 converter box be used for each Miranda K2, such as the K2 ADE made by KK Systems and that the Miranda RS232 port is used.

Note that this unit must be powered. If it is plugged in directly to the Miranda K2 it will pick up power from Miranda Pin 4 (DTR line).

The DIP switch settings are:

1	2	3	4	5	6
OFF	ON	OFF	ON	ON	ON

URL: http://www.kksystems.com/



KK SYSTEMS LTD P.O. Box 2770 Brighton West Sussex BN45 7ED United Kingdom
<b>Tel:</b> +44 1273 857185 <b>Fax:</b> +44 1273 857186
Please check the KK web site

# The Miranda RS232 connections are:

Pin	Function
1	DCD
2	RX
3	TX
4	DTR
5	Gnd
6	DSR
7	RTS
8	CTS
9	RI

# TSL TM1 / TM2 RJ45 or PSU-22 RJ45 Connector

Pin	Function
1	0V
2	0V
3	RX-
4	TX+
5	TX-
6	RX+
7	+24V
8	+24V

# TallyMan TMC-1 only RS422 Connector - non standard pin out.

Pin	Function	Pin	Function
1	TX-	6	RTS-
2	TX+	7	RTS+
3	RX+	8	CTS+
4	RX-	9	CTS-
5	0v		

# Miranda RS422 connections.

TM1 / TM2 Or PSU-22	Miranda Unit RS422 UMD Port
RJ45 Plug	D9 Plug
1 (0V)	4 (0V)
2 (0V)	6 (0V)
3 (RX-)	8 (TX-)
4 (TX+)	7 (RX+)
5 (TX-)	2 (RX-)
6 (RX+)	3 (TX+)
7 (+24V)	
8 (+24V)	

Only the TSL TX+ and TX- pair are relevant in this application. <u>TSL UMD Data Specification.</u>

- RS 422
- 8 bit data
- 1 stop bit
- even parity
- 38.4k baud

RJ45 pin details on the System Controller or PSU-22.

View from the back. Cable entry.

RJ45 Connector on the cable

12345678



Dynamic UMD and Tally for Kaleido K2 using TSL's UMD controller

Diagram courtesy of Image Technics.

The following is courtesy of Miranda.

# TSL, Andromeda, Encoda and Kalypso

TSL, Andromeda, Encoda and Kalypso are third-party devices that supply Kaleido with tally information and dynamic text for UMDs, Text Labels and Tallies.

The interface between Kaleido and third-party devices is managed using Miranda's iControl system. Each such device is addressed by Kaleido using its MirandaLongID, which is an address within the iControl protocol. This address must be installed manually on the Kaleido by the user.

The address can be found using the iNavigator application, which is part of iControl, once the device is installed on the network.

All components in a Kaleido layout that obtain information from a third-party device require the Service ID of that device to be entered at their configuration panel. The Service ID is either the Miranda LongID, or an alias that points to the LongID. An alias is a user-selected term that is easier to remember and enter than the LongID.

To install a device's LongID (and preferably an alias) on the Kaleido-K2, proceed as follows:

- 1. First, get the service's Long ID:
  - From your Kaleido-K2's desktop, double click on the icon "My Computer".
  - Navigate to "C:\iControl\Startup\" and open the file "Kaleido.log" using the Notepad (right click on the "Kaleido.log" file and select "Notepad" from the "Open With" menu).
  - Within Notepad, press "Ctrl-F" or select "Find..." from the Edit menu and in the "Find What" section enter "*serviceAdded called for ID:*".

Each entry found will give you the Miranda Long ID of an iControl service found on the network. Continue looking through the file until you find the Long ID of your TSL, Andromeda or Encoda.

The Long ID of a TSL should have the following form: 10.9.8.7\_COM1\_TSL The Long ID of an Andromeda should have the following form: 10.9.8.7\_COM1\_UMD\_00\_SLOTXX\_MODULEIDXXXX The Long ID of an Encoda should have the following form: 10.9.8.7\_COM1\_ENCODA The Long ID of a Kalypso should have the following form: 10.9.8.7\_COM1\_KALYPSO

 Find the file C:\lcontrol\Startup\KG2Config.xml on the Kaleido frame and open it in Notepad. The service for the third-party device will be added in the section <OtherServices>, which will look like this:

<OtherServices>

<!-- Use the same syntax as above to find services other than Kaleido Services --> <!-- AlphaNumeric Label is permitted here, example below:--> <Service ServiceLabel="service1" id="xxx.xxx.xxx" /> --> </OtherServices>

3. Supported third-party devices will then be added into this section as per the indicated format. See the Installation Guide for more detailed instructions on installing and connecting to third-party devices.

# TSL (supplies dynamic text for UMDs and Text Labels, and Tally statuses)

<Service ServiceLabel="TSL" id="192.168.1.2\_COMX\_TSL" /> Where:

- **TSL** (within the quotes) is the alias (and could be any user-selected name);
- **192.168.1.2** is the IP address of the TSL (as found using iNavigator);
- X in COMX\_TSL is the COM port number assigned to the TSL service during the installation.

# Andromeda (Phillips) (supplies dynamic text for UMDs and Text Labels, and Tally status).

<Service ServiceLabel="PHIL" id="10.3.4.9\_COM1\_UMD\_00\_SLOTXX\_MODULEIDXXXX" /> Where:

- **PHIL** (within the quotes) is the alias (and could be any user-selected name);
- 10.3.4.9 is the IP address of the Kaleido (use the actual IP address of your Kaleido),
- **COM1** must be replaced by **COM2** if you have configured the system to use the COM2 port,
- The remainder of the text is exactly as shown

# Encoda (supplies dynamic text for UMDs and Text Labels)

<Service ServiceLabel="ENC" id="192.145.10.2\_COMX\_ENCODA" /> Where:

- ENC (within the quotes) is the alias (and could be any user-selected name);
- 192.145.10.2 is the IP address of the Encoda (as found using iNavigator);
- X in COMX\_ENCODA is the COM port number assigned to the Encoda service during the installation.

# Kalypso (supplies dynamic text for UMDs and Text Labels, and Tally statuses).

<Service ServiceLabel="KAL" id="10.5.4.8\_COM1\_KALYPSO" /> Where:

- KAL (within the quotes) is the alias (and could be any user-selected name);
- 10.5.4.8 is the IP address of the Kalypso (as found using iNavigator);
- COM1 must be replaced by COM2 if you have configured the system to use the COM2 port,
- The remainder of the text is exactly as shown

If all four of these services are installed (as an example), the "Other Services" section becomes:

<OtherServices>

<!-- Use the same syntax as above to find services other than Kaleido Services -->
<!-- AlphaNumeric Label is permitted here, example below:-->
<Service ServiceLabel="service1" id="xxx.xxx.xxx" /> -->
<Service ServiceLabel="TSL" id="192.168.1.2\_COM4\_TSL" />
<Service ServiceLabel="PHIL"
id="10.3.4.9\_COM1\_UMD\_00\_SLOTXX\_MODULEIDXXXX" />
<Service ServiceLabel="ENC" id="192.145.10.2\_COMX\_ENCODA" />
<Service ServiceLabel="KAL" id="10.5.4.8\_COM1\_KALYPSO" />
</OtherServices>

Now, you may enter the alias **TSL**, **PHIL**, **ENC** or **KAL** as the ServiceID in configuration panels for UMDs and Text Labels to identify one of these third-party devices as the source of their dynamic text.

You may choose any convenient name for the alias; for example, the Philips alias could be **Dyn**:

# <Service ServiceLabel="Dyn" id="10.3.4.9\_COM1\_UMD\_00\_SLOTXX\_MODULEIDXXXX" />

#### And: Install the TSL service using the installer (Kaleido-K2 CD-ROM)

#### **TSL and Andromeda Installation**

TSL and Andromeda are third-party devices that supply Kaleido-K2 with dynamic text for UMDs and Text Labels.

The interface between Kaleido and third-party devices is managed using Miranda's iControl system. Each such device is addressed by Kaleido using its MirandaLongID, which is an address within the iControl protocol. This address must be installed manually on the Kaleido by the user.

The address can be found using the iNavigator application, which is part of iControl, once the device is installed on the network.

All components in a Kaleido layout that obtain information from a third-party device require the Service ID of that device to be entered at their configuration panel. The Service ID is either the Miranda LongID, or an alias that points to the LongID. An alias is a user-selected term that is easier to remember and enter than the LongID.

To install a device's LongID (and preferably an alias) on the Kaleido, proceed as follows:

1. Use iNavigator to locate the device on the network, and note its address (see the iNavigator manual for more details).

\*\*\* Please note, if iControl is not available to obtain the LongID use the format shown below:

For TSL protocol: 192.168.1.2\_COMX\_TSL For Philips protocol: 10.3.4.9\_COM1\_UMD\_00\_SLOTXX\_MODULEIDXXXX

2. Supported third-party devices will then be added into this section as per the indicated format. See the Installation Guide for more detailed instructions on installing and connecting to third-party devices.

#### TSL (supplies dynamic text for UMDs and Text Labels)

<Service ServiceLabel="TSL" id="192.168.1.2\_COMX\_TSL" />

Where: **TSL** (within the quotes) is the alias (and could be any user-selected name); **192.168.1.2** is the IP address of the Kaleido that you are trying to add

dynamic UMDs to by using a TSL UMD System Controller (as found using iNavigator); X in COMX\_TSL is the COM port number assigned to the TSL service during the

installation. (COM1 is RS-232C and COM2 is RS-422).

#### Andromeda (Philips) (supplies dynamic text for UMDs and Text Labels)

<Service ServiceLabel="PHIL" id="10.3.4.9\_COM1\_UMD\_00\_SLOTXX\_MODULEIDXXXX" />

- Where:PHIL (within the quotes) is the alias (and could be any user-selected name);10.3.4.9 is the IP address of the Kaleido (use the actual IP address of your
- Kaleido), COM1 must be replaced by COM2 if you have configured the system to use the COM2 port.
  - The remainder of the text is exactly as shown

If both of these services are installed (as an example), the "Other Services" section becomes:

#### <OtherServices>

<!-- Use the same syntax as above to find services other than Kaleido Services --> <!-- AlphaNumeric Label is permitted here, example below:--> <Service ServiceLabel="service1" id="xxx.xxx.xxx"/> --> <Service ServiceLabel="TSL" id="192.168.1.2\_COM4\_TSL" /> <Service ServiceLabel="PHIL" id="10.3.4.9\_COM1\_UMD\_00\_SLOTXX\_MODULEIDXXXX" /> </OtherServices>

Now, you may enter the alias **TSL** as the ServiceID in configuration panels for UMDs and Text Labels that receive their dynamic text from this TSL decoder. You may enter the alias **PHIL** as the service ID in configuration panels for CC text, CC status indicators, and VChip status indicators that receive their information from this Andromeda (Phillips) decoder.

You may choose any convenient name for the alias; for example, the Phillips alias could be **CC**:

# <Service ServiceLabel="CC" id="10.3.4.9\_COM1\_UMD\_00\_SLOTXX\_MODULEIDXXXX" />

3. Find the file C:\lcontrol\Startup\KG2Config.xml on the Kaleido frame and open it in Notepad. The service for the third-party device will be added in the section <OtherServices>, which will look like this:

#### <OtherServices>

<!-- Use the same syntax as above to find services other than Kaleido Services -->

<!-- AlphaNumeric Label is permitted here, example below:-->

<Service ServiceLabel="service1" id="xxx.xxx.xxx.xxx" /> --> replace xxx.xxx.xxx with the long ID alias created above </OtherServices>

# Configuring the UMD for dynamic text:

The attributes of a UMD are adjustable using its configuration panel in KEdit. To access the panel for a UMD within a Monitor:

1. Double-click on the Monitor in which the UMD is located. The Monitor's border will turn yellow, indicating it may be edited.

2. Click on the UMD. Control points will appear at the corners and the center of the long side, showing it is selected.

NOTE: at this point the UMD may be positioned (click on the UMD and drag) and scaled (click and drag a control point) within the Monitor. It cannot be moved outside the Monitor boundary

3. Open the configuration panel for the UMD by **pushing F5**, or from the Configuration Panel item in the View menu after having selected the source window in the Kaleido-K2.

Three tabs are available to set different parameters for the UMD.

# UMD Dynamic Text:

Click the selection button to select Dynamic Text See XXXXXXXXX (Gateway, TSL and Andromeda dynamic data sources) for an explanation of this portion of the panel.

The KEdit window will show the ID, Address and Link order of the source text. The Monitor Wall output of the Kaleido will show the text originating at that source.

	C UMD     Assignment Alarm Action     C UMD Static Text     Text     C UMD Dynamic Text     ServiceID: 10.3.4.9_COM1_UMD     Text Address: 45	00_SLOTXX_MOD Levet 1	Enter the TSL Long ID or if you have created a Alias in the <u>config</u> file, enter the Alias.
The text address entry with th TSL is "0" based. This corresponds to the TSL addre directly.	Transparency e que 0 % ss ennel INPUT 09 ext Link Order 1 Apply	I I I Transparent	The Level Indicates: 0 = 16 characters from TSL 1 = first 8 characters from TSL 2 = second 8 characters from TSL

# Configuring the Tallies:

# **Explanation:**

To assign a TSL tally to a Kaleido-K2 Tally indicator, you must create an alarm monitor first.

#### **Alarm Browser**

Access Kaleido-K2's alarm resources by opening the Alarm Browser from the View menu, or by using F7. The browser shows a list of existing Alarm Monitors, and the Alarm Inhibition group to which each alarm monitor is associated, if any. Click on the header of either column to sort the table in ascending order according to that column.

New: Click New to add a new alarm	EDIT Alar	m Browser			×
monitor to this list. A blank Alarm		Alarm Name	Ala	rm Inhibition Group	
Monitor control panel will open.	Video	04	Montr	real	-
	Video	11	Montr	real	
Edit: Click on an existing alarm monitor to	Video	01	< NO	NE >	
select it, then click Edit (or, double-	Video	12	< NO	NE >	
click on the existing alarm monitor)		Video 08		< NONE >	
to modify it. The Alarm Monitor	Video	21	< NO	NE >	
control panel will open, containing	Video	28	< NO	NE >	
the current definition of the selected	Video	19	< NO	NE >	-
Alarm Monitor.					
<b>Remove:</b> Click on an existing alarm monitor to select it, then click Remove to delete it		New	Edit	Remove	

#### **Alarm Monitor**

The Alarm Monitor control panel provides all the necessary resources to create and manage alarms on the Kaleido-K2.

Alarm Monitor Name: Type a name for this Alarm Monitor in the box.	Set the Alarm Monitor Name Name : Video 11
Tally type.	Select or Enter an Alarm Group:       Montreal         Alarms List         Type       Assignment         Video       11         new       Edit         Remove         Assign Actions to trigger         Disabled state:       None         OK state:       None         Warning state:       None         Error state:       Action 1         Save       Cancel
Alarm Setting –Tally Service ID: Enter either the Miranda LongID or the Alia for the service that will be monitored by this	Assign a Tally to a Service

Text Addres... 0

Both Tallys OFF : Alarm Disabled

**Tallys States** 

Both Tallys ON

LeftTally ON

RightTally ON

Level: 0

Alarm Monitor State

: Alarm OK

: Alarm Error

Note: if "Disable" state is transmitted, it may also means that the service is not assigned or active.

Ok

: Alarm Warning

Cancel

USO RESTRITC

alarm.

information.

Sources of dynamic text (TSL and Andromeda)

to transmit error status information. Consult their

incorporate Tallies in their data streams which are used

manual for instructions on how to set up this aspect of

their system, and to determine what values to enter in

the Text Address and Level data entry boxes in this

panel so that Kaleido can recover the error status

Then you need to assign the Tally to a status video border, a UMD or a tally component.

# Video Border Tab

#### Border Colour:

A border around the periphery of the video screen is used to show alarms associated with the screen's video. For each of the four possible alarm states, select the colour of the border (if enabled under Video Window Frame; see below). For the Warning and Error states, border flashing can be turned on or off by clicking the box.

• The Colour Fill icon shows the colour currently selected for the border.

• Click on the down-arrow beside the Colour Fill icon to open a colour selection window and choose a different colour.

#### Assign Alarm Monitor:

Select an alarm monitor to be assigned to this video component from the pull-down list of available alarms. The status of the alarm will be shown by the border.

, Video Digital	×
Assignment Border Action Calibration	
Border Color	
Disable Color: 📈 🗸	
Normal Color: 🏒 🗸	
Warning Color: 🛛 📕 🗖 Flashing	
Error Color: 🗾 🚣 🗖 Flashing	
Assign Alarm monitor	
Alarm Video 02	
Error Latching	
No Latch	
C Latch	
C Hold Duration 10 Sec.	
Video Window Frame	
C None 🕝 Lowered Bevel	
Channel INPUT 02	
Alarm Link Order	
Annly	
мириу	

# UMD Alarm Tab

#### Display Options:

For each of the four possible alarm states, select the colour of the UMD background and the colour of the text, and whether the Transparency feature is enabled. You can also specify if the background will flash for Error and Warning states.

Select a background colour from the list in the pulldown box.

Click on the down-arrow beside the Text Colour icon to open a colour selection window to choose a different font colour.

#### Assign Alarm Monitor:

Select an alarm monitor to be assigned to this UMD from the pull-down list of available alarms.

UMD	>
Assignment Alarm Action	
Display Options	-
Background	
Disable Gray 🔽 🗛 - 🔽 Transparency	
Normal Gray 💽 🗛 🗸 🗹 Transparency	
Warning Gray 💌 🗛 👻 Transparency Flashing	
Error Gray Transparency Flashing	
Alarm Video 09	
Error Latching	
No Latch	
C Latch C Hold Duration 10 Sec.	
Channel INPUT 09	
Alarm Link Order	

# Tally Assignment Tab

#### Tally State Colours:

Click the *Select*... button beside each of the four states to select the Tally colours that will represent that state. A *Tally Colours* selection box will appear, offering eleven options (bright and dark versions of five colours, plus invisible. You can also specify if the Tally will flash for all states.

#### Tally Assignment:

The pull-down list includes all available options. These are:

- All of the available GPI inputs
- All of the defined alarms
- None (i.e. unassigned)

To configure a dynamic tally from TSL, Andromeda or other services, you must create an alarm monitor and assign the alarm monitor to the Tally. See the section on alarm monitors (XXXXXXXX).

The shape of the icon in the tally color window reflects the type of tally being configured (Left Tally in the example here), as the same configuration panel opens for all four types (top, bottom, left and right).

#### Transparency:

Use the slider to select a transparency for the tally. The transparency is only seen when the tally is overlaid on a video screen. The selected value is shown as a percentage beneath the slider. Possible values are 0, 15, 30, 45, 55, 70, 85 and 100%

ton Tally		×
Assignment Action		
Disabled 📉	Select	Flashing
Ok 📕	Select	Flashing
Warning 🔽	Select	Flashing
Error 🚺	Select	Flashing
Tally Assignment		
GPI_17	8	•
Transparency	 0%	I I I Transparent
	Apply	
Tally Colors		×
O Dark Blue		Blue
C Dark Gray		Gray
💿 Dark Green		Green



# And:

# Dynamics UMDs/Text Label & Kaleido-K2

1- On the Controller rear connector panel, there are 2 communication ports;

1)



- RS-422/485 : For connecting the Kaleido-RCP or other remote devices. \*If this communication port is used, note that you will have to stop MT\_RCP *service* on the Kaleido frame. It is recommended to set it to *manual* as well. It will be found using the *SERVICES* icon on the desktop.
- 2) RS-232 : To connect to router status information sources for tracking UMDs.

2- Use the Kaleido-K2's CD and locate the folder named "Options" Next step is to install the right service. 2 choices are available:

- 1) TSL ("TSLSetup\_2\_00.exe")
- 2) Thomson-Andromeda ("AndromedaSetup.exe")

\*During the installation you would need to select the appropriate communication port; com1 or com2. Refer to first section for detail.

3- Need to start the dedicated service.

Use the SERVICES icon found on the desktop.

Start the service (MT\_TSL or MT\_ANDROMEDA) then go to *Properties* and set it to *automatic*.

4- Take note of the Kaleido's IP address.

To locate it : right click on *My Network Places* found on the desktop, select *Properties*, right click on *Local Area Connection*, select *Properties*, choose *Internet Protocol (TCP/IP)* and select *Properties*.

5- Need to locate the KG2Config.xml file.

Found in C:\iControl\Startup Open the document then on the top menu select *View*, *Source*. On the document, you will need to edit a line. Locate the section "**OtherServices**" then this line: <Service ServiceLabel="service1" id="xxx.xxx.xxx" />

	Ţ	



Example 2 : <Service ServiceLabel="ANDROMEDA" id="10.0.3.22\_com1\_ANDROMEDA" />

Save the file then close it.

6- Kaleido Editor software (KEdit) on remote computer.

On the selected layout, click on the corresponding UMD. Select on the top menu, *View*, *Configuration panel* or *F5* 

- UMD window will open, set it to UMD Dynamic Text.
- Need to insert the Service ID: TSL or ANDROMEDA

**Text Address** : address from the converter box. **Level** : 0 =first 8 characters

1 = last 8 characters

2 = all 16 characters

👸 Kaleido Layout Editor	
Lit umd	×
Assignment Alarm	1
Text INPUT 2	
• UMD Dynamic Text	
ServiceID:	
Text Address: 0	Level: 0
Transparency	
Y I I I Opaque 0%	IIII Transparent
Channel	
Text Link Order 1	
,	
Apply	

# Alto Details – courtesy of Miranda

This is taken directly from the Miranda publication.

- Select RS422B port to be TSL protocol
- Set XP machines to have the Classic desktop setting otherwise some screens may not show correctly

#### 11 TSL and Andromeda

TSL and Andromeda are third-party devices that supply Kaleido with tally information and dynamic text for UMDs and

Text Labels. Kaleido-Alto features a built-in engine to distribute TSL or Andromeda data to pre-configured

components in a layout. Incoming data using TSL or Andromeda protocol is fed through one of the serial ports (see

section 4.2 Paremeters Settings) of the unit.

# 11.1 Configuring a UMD or Text Label Component to be modified by a TSL Device

The following explanations will guide you through the steps to take to configure a Text Label Component so its

displayed text will be driven by a TSL device. These steps are executed from KEdit. x Select a Text Label Component.

x If the Configuration Panel is not already displayed display it by selecting "Configuration Panel" from the "View"

menu or by pressing "F5".

x In the Assignment tab, select "UMD Dynamic Text" or "Label Dynamic Text".

x In the "ServiceID" field type "TSL" in capitals.

x In the "Text Address" field enter the address to associate with this Text Label. This value must range between 1

and 127.

x In the "Level" field enter the value that represents what you want to use from the data located at the specified

address:

Х

0: you want to use the 16 characters

x 1: you want to use the first 8 characters

x 2: you want to use the last 8 characters.

x Click on the "Apply" button to apply your modifications to the Text Label Component.

The Component is now configured to take the text to display from the specified address of the TSL device and to

display a part of or all the characters found at this address. Considering that the TSL device is already available to. *User's Manual* 

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the Kaleido-Alto, all there is to do now to see the text appearing in the UMD or Text Label is to export the layout to

the Kaleido-Alto.

# 11.2 Configuring Dynamic Tallies from the TSL Device

To configure the Tallies sourced from the TSL, you must first create Alarm Monitors. These Alarm Monitors can then be assigned to any components that have alarm behavior in your layout i.e. Text Label color, UMD color, Tally, Video border or Status Indicators.

#### Creating an alarm monitor

Access Kaleido-Alto's alarm resources by opening the Alarm Browser from the View menu, or by using F7. The browser shows a list of existing Alarm Monitors, and the Alarm Inhibition group with which each alarm monitor is associated, if any. Click on the header of either column to sort the table in ascending order according to that column. Create a new Alarm: Click New to add a new alarm monitor to this list. A blank Alarm Monitor control panel will open.

# Alarm Setting – Tally

Click inside the Type column and select the Tally type. Service ID: Enter "TSL" in capitals for the service that will be monitored by this alarm. Text Address: Enter the address of the dynamic data [between 1 and 127]. Level: Enter the level of the dynamic data. The level can be 0, 1 or 2 and have a particular meaning. The TSL box has 4 Tallies per address, but the Kaleido-Alto is able to treat only 2 Tallies per address (one left and one right), so here is the rule followed to retrieve the Tally left and Tally right status: 0 16 chars T1 or T3 T2 or T4 1 First 8 chars T1 T2 2 Last 8 chars T3 T4 Create an Alarm Monitor for every Tally device to be displayed in the Kaleido-Alto layout.

# TSL Guide

#### Setting up a Miranda Alto – Software from 3.30.

Set the Desktop on an XP configuring PC to Classic. If you do not do this you may not be able to see some buttons in the Miranda KEdit Program.

#### Note:

The settings shown will allow split (Iso) tallying in TallyMan, using the Tally Bits set to Basic.

Although split tally operation is shown here, the settings are good for tallies in a single channel such as **Program**, in TallyMan.

These tests were carried out using the TallyMan Program and Iso 1 channels.

The settings below are shown for a TSL UMD address at 000.

- Unlock the UMD.
- Set the UMD to UMD Dynamic Text
- Set the Service ID to TSL
- Set the **Text Address** to +1 on the TSL TallyMan indicated Address. Miranda has a +1 offset to the TSL Address.

Kaleido Layout Editor		
	EDIT UMD	
K OFFLINE - "C:\\Alto Test 1.kg2" *  4x3	Assignment Alarm Action	<u>_8×</u>
		<u> </u>
1 No Input	Text	
	G UMD Dynamic Text	
	ServiceID: TSL	
	Text Address: 1 Level: 0	
D TSL Address 1 Level 0		
	Text Link Order 1	
	Apply	
1		
Position(12.500,6.167) % H=24.750, V=20.000, D=23.153 %		

- Unlock the left UMD
- RH mouse click
- Select **New** and give the tally setting a name for that PIP.
- Select **Tally** from the list.

Aldrin Mu	nitor		
Set the Ala	rm Monitor Name —		
	11		-
Name : juntit	lea		
	5 00.00 000		
Select or En	er an Alarm Group:	< NONE >	-
Alarms List-			
Туре	Assignment	t Se	everity
<none></none>			
<none></none>			
<none></none>	a	2	
<none></none>			
<none></none>			
ne		Remove	1
Assian Actic	ons to trigger		
hooigin Houd			2
- Colgri - Colo		- Tex	
	Disabled state: None	•	]
-ooigi - Holic	Disabled state: None OK state: None	e <u>*</u>	]
	Disabled state: None OK state: None Warning state: None		] ] ]
	Disabled state: None OK state: None Warning state: None Error state: None		] ] ]

Alarm M	onitor
Set the A	arm Monitor Name
Name : Unt	itled
Select or Er	nter an Alarm Group: < NONE > 💽
Alarms List	
Туре	Assignment Severity
Tally	Mode=Dynamic, Service ID ERROR
<none></none>	×
Video	
Audio	
GPI	
VBI/ANC -	
Tally	
GSM Dev	w Edit Remove
Gateway	
Assign Act	ions to trigger
	Disabled state: None
	OK state: None
	Warning state: None
	Error state: None
	Save Cancel

- Highlight on the tally line.
- Click Edit
- Enter the **Service ID** as TSL and give the Text address as for the UMD (TallyMan address +1)

Service ID:	
Text Address:	0 Level: 0
Tallys States	Alarm Monitor State
Both Tallys OFF	: Alarm Disabled
Both Tallys ON	: Alarm OK
LeftTally ON	: Alarm Warning
RightTally ON	: Alarm Error
Note: if "Disable mean that the se	d″state is transmitted, it may also rvice is not assigned or active.

You must end up with these settings for the LH tally in the Alto.

Name : Spl	it Tally	_
elect or E	nter an Alarm Group:	• <u>•</u>
Alarms List		
Туре	Assignment	Severity
ally	Mode=Dynamic, Service ID	ERROR
		VO/0 DMINIC
ally	Mode=Dynamic, Service ID	
allyn	iew	ove
allyn n	iew Edit Remo	ove
n Assign Act	iew Edit Remo	
allyn	ions to trigger Disabled state: None OK state: None	
allyn	iew Edit Remo ions to trigger Disabled state: None OK state: None VVarning state: None	

ext Address: 1 Level: 0	
Illys States Alarm Monitor State	
th Tallys OFF :Alarm Disabled	
th Tallys ON :Alarm OK	
ftTally ON : Alarm Warning	
ghtTally ON : Alarm Error	
te: if "Disabled" state is transmitted, it may also	

# Now set the colours

Kaleido Layout Editor		
<u>File Edit Draw View Window H</u> elp		
	아 쁘 아 춤 🖫 🔁 🌺 - A	▼ ▼ 100% ▼
I 🔽 💭 🕅 - 🚥 🚦 🔍 - Iabel Text		
Bir OFFLINE - "C:\\Alto Test 1.kg2" *  4x3	Assignment   Action	
D TSLAdams. LLow 0	Taily States Colors   Disabled   Ok   Select   Flashing   Warning   Select   Flashing   Error   Select   Flashing   Taily Assignment   Split Taily   Network   Edit   Transparency   I	
	Apply	
4		
Selection Tool		

#### **RH** Tally

• Do the same for the RH tally by using the same tally type for this PIP, shown as Split Tally here but note the reversed **Severity** settings in the Boxes. Set these by clicking in the box.

×

Alarm M	1onitor	×	
Set the A	larm Monitor Name		
Name : Sp	lit Tally		K Alarm Setting
Select or E Alarms List	inter an Alarm Group: 🛛 🖛 NONI	>	Tally source Service ID: TSL
Туре	Assignment	Severity	Text Address: 1
Tally	Mode=Dynamic, Service ID.	WARNING	
r	new Edit Re	move	Both Tallys OFF : Alarm Disabled Both Tallys ON : Alarm OK LeftTally ON : Alarm Warning RightTally ON : Alarm Error Note: if "Disabled" state is transmitted, it may mean that the service is not assigned or activ
Assign Act	tions to trigger Disabled state: None	T	Ok Cancel
	OK state: None Warning state: None	<b>v</b>	
	Error state: None		

• Now set the colours



Multiviewers V8

If you have only red tallies from the Program channel, set these colours to red. Iso tallying colour is shown.

For the next PIP do the same but increment the **Text Address** and make a new tally with a new name for that monitor.

S. Kaleido Vayout Editor	- 🗆 🗵
File Edit Daw View Window Help	
□ ☞ 🖬 🖗 🛍 ⊷ ལ 井 튼 후 릐 패 ↔ ײ 👐 홈 🖫 🖫 🂁 • ▲. 🔍 🔽 🚺 🚺	<b>-</b>
	V Chip
EXT OFFLINE KIT 1 ally	<u>_ 8 ×</u>
Assignment Action	-
Tally States Colors	
Ditabled 📉 Select 🗖 Flashing	
Ok Select Flashing	
Warning 📕 Select 🗆 Flashing 🛛 🕶 🕐 0 192. Addews 2 Levil 0	
Error Select Flashing	
Tally Assignment	
PIP2 Spill Edit	
Transparency	
Opaque 0 % Transparent	
Channel INPUT 02	
Tally Link Order 1	
Apply	<b>_</b>
(Selection Tool	

Press **Apply** and then Export to the Alto.

Export To Kaleido Alto
Alto Frame lp Address : 192.168.100.223
Destination Layout Name: Alto Test 1
Export KEdit Data
Alarms 🔽 Channels 🗖 Actions 🗖 Images 🗖 Audio Scales
Export Cancel

# 7 Oxtel Presmaster 2

This information has kindly been provided by Miranda Technologies Ltd.

Please inspect the Miranda manual for further information.

The following lists the GPIs allocated on the Presmaster panel and on the PCS unit. These allocations are fixed. Tallies are available on the panel reflecting the state of the first eight sources only of the PGM and PVW buses. Note that these tallies reflect the current state shown on the panel. If a different channel is selected the state of these tallies may change.

#### Summary of GPI/O functionality in Presmaster V3.0 - Revision 2

All GPI/Os are active low, and momentary unless specified as latching.

#### Prespanel

#### Outputs (0-23)

- 0 Latching PGM bus input selection (mapped to buttons)
- 1 In a mix both should close
- 2 In black all should release
- 3 4 5
- 6
- 7
- 8 Latching PST bus input selection
- 9 In a mix both should close
- 10 In black all should release
- 11
- 12
- 13
- 14
- 15
- 16 Take momentary
- 17 DSK1 Live (latching)
- 18 DSK2 Live (latching)
- 19 DSK3 Live (latching)
- 20 DSK4 Live (latching)
- 21 VO1 Live (latching)
- 22 V02 Live (latching)
- 23 Alarm (OR of all possible alarms)

#### Inputs (24-31)

- 24 Take button parallel
- 25 Fade button parallel
- 26 Silence button parallel
- 27 VO1 button parallel
- 28 VO2 button parallel
- 29 Audio lead button parallel
- 30 Audio lag button parallel

# PCS

# Outputs (0-23)

- 0 channel changed
- 1 chan 1 selected (latching)
- 2 chan 2 selected (latching)
- 3 chan 3 selected (latching)
- 4 chan 4 selected (latching)
- 5 chan 1 automation on/off (latching)
- 6 chan 2 automation on/off (latching)
- 7 chan 3 automation on/off (latching)
- 8 chan 4 automation on/off (latching)
- 23 Alarm (OR of all possible alarms)

#### Inputs (24-31)

- 24 chan 1 automation on/off
- 25 chan 2 automation on/off
- 26 chan 3 automation on/off
- 27 chan 4 automation on/off

The appropriate pins on the Presmaster must be wired to the required System Controller Tally Connector D37 inputs.

# 8 Zandar VMX/DX/MX/Fusion Pro

Zandar Multiviewers now read TSL UMD Protocol directly. These notes are for those earlier viewers that do not.

Please consult the Zandar Manuals for appropriate pin connections and functions.

#### RJ45 Connections from TSL equipment.

PIN	FUNCTION	DIRECTION
1	0V	GND
2	0V	GND
3	RX-	IN
4	TX+	OUT
5	TX-	OUT
6	RX+	IN
7	+24V	OUT
8	+24V	OUT

#### RS422 Connections from TSL TM1 and TM2 equipment.

RS 422/RS485 CONNECTORS D9 SOCKETS			
PIN	FUNCTION	PIN	FUNCTIO N
1	0v	6	0v
2	TX-	7	TX+
3	RX+	8	RX-
4	0v	9	0v
5	-		

#### RS232 Cable Connections from a RS422 outlet

TM1 / TM2		Zandar
D9 PLUG		D9 Com Socket
2		2
4	SCN	5
8		3

#### RS485 Cable Connections for DX units

UMD SYSTEM CONTROLLER			ZANDAR RS 422
D9 Plug			D9 socket
2	TX-	$\rightarrow$	2
7	TX+	$\rightarrow$	7
4	GND		9
8	RX-	$\leftarrow$	8
3	RX+	$\leftarrow$	3
6	GND		6

#### **Notes For DX Units**

- Enter the Menu > Remote Setup
- Press OK
- Ignore the RS232 setting
- Press OK
- Set the RS422 baud rate to 9600
- Press OK
- Set CLI Port to RS422
- Press OK
- Set System to the required ID default is 00
- Press OK

Use a 1:1 cable between the TM1 / TM2 port and the Zandar's RS422 port.

The settings in the Zandar unit will be set to:

- 9600
- No Parity
- 8 Data Bits
- 1 Stop Bit

Allow about 12 seconds for the initial update. This will occur quickly if, say, a tally is activated – otherwise background updating will occur.

#### Zandar DX Units from software version 4.06. are set to receive TSL UMD Protocol.

Later DX units are set on the Aux Port to read TSL UMD Protocol. The DX unit emulates 16 (DX16) or 4 (DX4) 8 character UMDs with a single tally each.

It is important to note that the UMD/Tally Emulator board in the Zandar units is optional for the DX units and will not be in all systems. Please contact Zandar for further information.

From System Setup, the router settings on the DX unit must be set to:

Router Use: YES Baud: 38400 Port: RS422(85) Start #: 00 (default) <set to first UMD address for the multiviewer as shown by TallyMan>. Use PIP 1: TRUE Etc for the other PIPs

Only Tally 1 is used.

Observe the following pin functions and make a cable to interface to a TSL UMD Display Port or a Power Supply PSU-22.

**Cable Requirements** 

TM1 / TM2 Or PSU-22		Zandar DX RS 422 AUX Port
RJ45		D9 AUX socket
5 (TX-)	$\rightarrow$	2 (RX-)
4 (TX+)	$\rightarrow$	7 (RX+)
2 (0V)		4
3 (RX-)	$\leftarrow$	8 (TX-)
6 (RX+)	$\leftarrow$	3 (TX+)
1 (0V)		6

#### Tally Configuration.

The tallies mapped to VMX Zandar units will provide the following colours.

Tally 1 (left)	Red
Tally 2 (right)	Green
Tally 1+2	Amber

For DX units the mnemonic will change colour from White to Red.

The tallies mapped to non TSL UMD Protocol **DX Zandar** units will provide the following colours:

Tally 1 (left)White letters, Red backgroundTally 2 (right)Black letters, Green backgroundTally 1+2Black letters, Yellow background

#### Zandar MX Units

These units are simpler in that there is no addressing to be set. The System Controller will have a RS232 interface provided.

#### **RS232 Cable Connections**

TM1 / TM2 RS-232	FUNCTION FROM THE SYSTEM CONTROLLER	ZANDAR MX MULTIVIEWER
D9 Socket		D9 RS232 Socket
2	■ RX	3
3	TX ►	2
5	GND	5

If more than one unit is to be used in a system the RX, TX and GND wires are taken to the first unit and thereafter only the TX and GND cables are carried on to subsequent units. In this arrangement updating may be somewhat sluggish.

This might be used where, for example a quad spilt was required on two units, unit one set to inputs 1, 2, 3, & 4 and unit two to inputs 5, 6, 7, & 8.

Tally colours are as follows:

Tally 1 (left)	White letters, Red background
Tally 2 (right)	Black letters, Green background
Tally 1+2	Black letters, Yellow background

# Zandar Fusion Pro

# RS422 Cable Pin out details

TM1 / TM2	FUNCTION FROM THE SYSTEM CONTROLLER	ZANDAR FUSION MULTIVIEWER	
D9 Plug		D9 RS485 Skt	
2	TX- ►	8	
7	TX+ ►	3	
8	■ RX-	7	
3		2	
4, 6	GND	5	

# Use Com 2

Set the Fusion Pro as follows:

- Select TSL Protocol for the UMD setting.
- Remote Serial
- Select Com 2 to RS485
- Select Baud to 38400

ZANDAR COM 2 PIN FUNCTIONS			
1	NC	6	NC
2	TX+	7	TX-
3	RX+	8	RX-
4	NC	9	0v
5	GND		

To set the first UMD address put in the address for the first UMD in Z Config.

- Connect to unit via Z Config. (via LAN or RS232)
- Go to system setup and then to the Com's Port Tab.

iystem Properties		? 🛛	
Display	Video	System	
Communication Ports	UMD & Tally Ca	rds Alarms GPI	
COM1: Baud Rate:	Command Inter	face	
COM2/3:	UMD & Tally	~	The first UMD address in the
Baud Rate:	38400	~	TallyMan driver
Ethernet:	Command Inter	face 💌	
			Screen picture courtesy of Zandar Technologies
ок с	ancel App	ply Help	

The Fusion Pro will accept up to 16 characters.

# 9 Vutrix Displays

Pin out information kindly supplied by Vutrix.

VUTRIX MONS GPI RJ45 PORT 1	SIGNAL/IDENT
Pin 1	TALLY GREEN SCREEN 1
Pin 2	TALLY GREEN SCREEN 1
Pin 3	TALLY GREEN SCREEN 2
Pin 4	TALLY GREEN SCREEN 2
Pin 5	TALLY GREEN SCREEN 3
Pin 6	TALLY GREEN SCREEN 3
Pin 7	TALLY GREEN SCREEN 4
Pin 8	TALLY GREEN SCREEN 4
VUTRIX MONS GPI RJ45 PORT 2	SIGNAL/IDENT
Pin 1	TALLY RED SCREEN 1
Pin 2	TALLY RED SCREEN 1
Pin 3	TALLY RED SCREEN 2
Pin 4	TALLY RED SCREEN 2
Pin 5	TALLY RED SCREEN 3
Pin 6	TALLY RED SCREEN 3
Pin 7	TALLY RED SCREEN 4
Pin 8	TALLY RED SCREEN 4
VUTRIX MONS RS442 UMD DATA "D" MALE/FEMALE 9 PIN.	SIGNAL/IDENT
Pin 1	RX-
Pin 2	RX+
Pin 3	N/C
Pin 4	N/C
Pin 5	GND
Pin 6	N/C
Pin 7	N/C
Pin 8	N/C
Pin 9	N/C