



**Television  
Systems Limited**

**TallyMan**

THE ONLY TALLY SYSTEM YOU'LL EVER NEED

## ***TallyMan Controllers Introduction***

TM1, TM2 and TM2 PLUS

*Software version V1.6x on.*

The TSL Tally and  
UMD Configuring Program

**Television Systems Limited.**  
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These manuals have been formatted for on-screen viewing rather than printing.

Not all systems will use all the components listed above

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## **Features**

TallyMan offers a very flexible method of controlling tally and mnemonic data to be shown on a monitor wall or on plasma displays, via a multiviewers such as those used in a control room facility.

### **Interfacing.**

TallyMan interfaces to all known switchers, routers and multiviewers. TallyMan can read tally and router crosspoint status data from a wide range of equipments.

The following list of manufacturers is not definitive. The right hand column list the protocol type in use.

<b>Grass Valley</b>	NP - Native (SMS7000) GVG200 GVG2100 GVG4000 Kalypso Zodiac Kayenne mixer
<b>Thomson</b>	BTS ASCII 9000 series DD10/20/30 Kayak DD Series Multicast tally contribution DD35 ACOS
<b>Harris / Leitch</b>	X-Y Passthrough
<b>Network/ Nevion</b>	Router Protocols Nevion (MIDI) -> Nevion (NCB) Nevion (VikinX) -> Nevion (MRP)
<b>Pesa</b>	USP
<b>ProVideo</b>	RS1616
<b>Evertz / Quartz</b>	Type 1/Native
<b>Snell &amp; Wilcox /</b>	Tally Protocol Kahuna – GVG Kalypso Protocol
<b>ProBel</b>	SWP02 SWP08
<b>Prosan</b>	Router protocol
<b>Sierra</b>	Serial Xpt
<b>Sony</b>	DVS/MVS Serial Tally Router RS422 ROT16 Cart ++
<b>Talia</b>	ProSan
<b>Utah</b>	RCP-1 router protocol

Parallel I/O units are available, connected via TCP/IP, offering convenient physical location and cabling.

For configuration purposes, the program is provided on a CD ROM and is designed to run on an IBM compatible PC. About 6.5 Mb of hard disk space is required.

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## Programming Facilities

### Tally Control

- Sixteen tally channels or “tally families” allow easy and logical tally assignments to UMDs, router destination/sources and output pins for the cameras.
- Provision for System Tallies consisting of internal “Boolean” tallies. These are defined combinations of other ordinary tallies (in or out)
- Ability to use independent three colour control of the TSL UMDs
- Ability to inhibit the left or right tally on any UMD.
- Ability to map tallies to router sources.
- Ability to map tallied router sources to a tally o/p pins for the cameras.
- Ability to map tallies to router buses.
- Ability to map tallied router buses to a tally o/p pins for cameras or other external tally lights etc.
- Isolated relay-contacts for the parallel tally outputs by using TM2 PLUS or the ESP-1R .

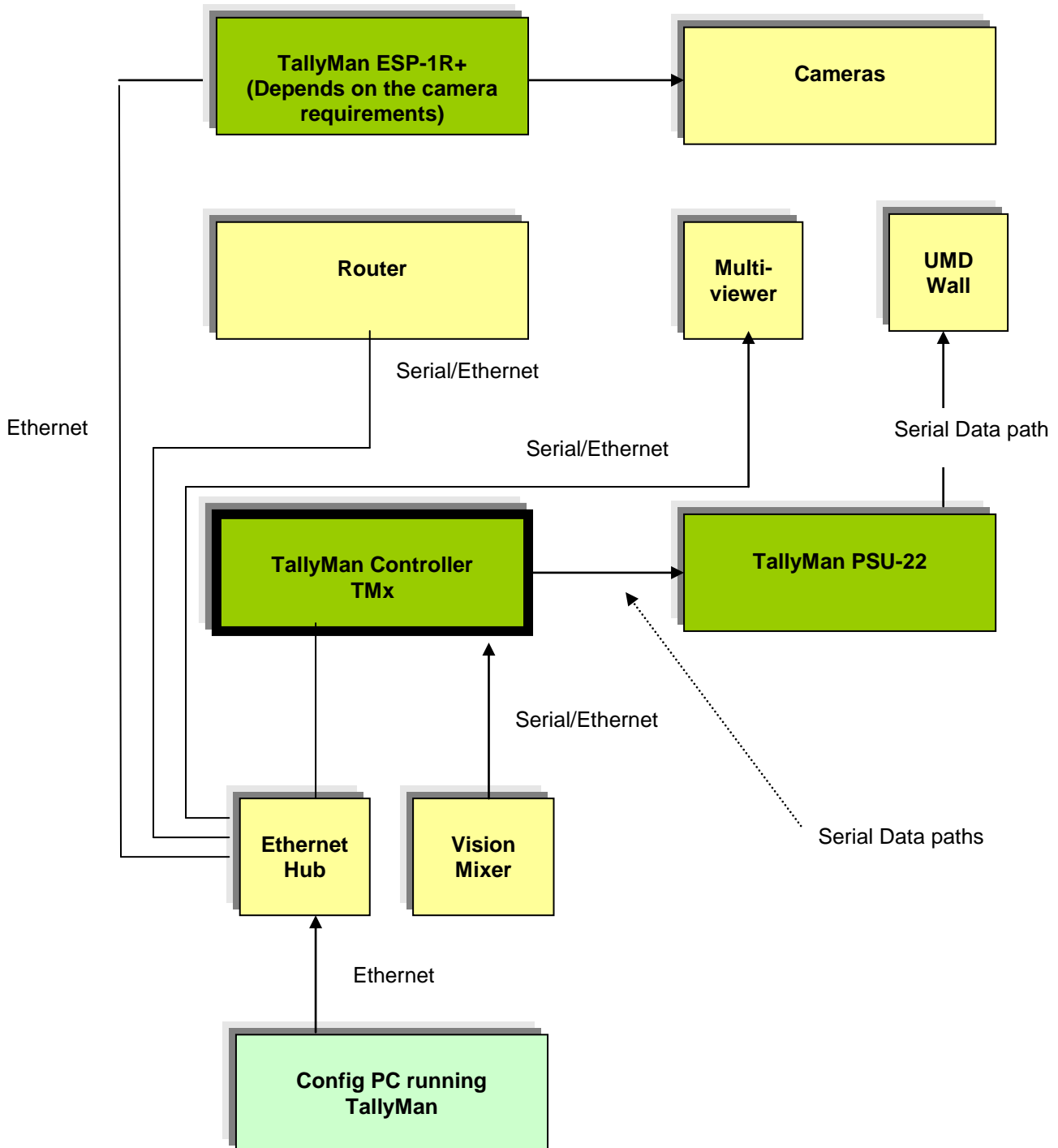
### Mnemonic Control

- All mnemonics can be of variable length.
- Easy mnemonic control of the dynamic UMDs.
- Drag and drop from mnemonic lists.
- Ability to import mnemonics lists (e.g. from Excel) for router sources and destinations (buses).
- Provides individual display control over tie-line recursion depth where routers are cascaded.
- Control of individual UMD mnemonic and tally LED colour and mnemonic justification, either singly or as groups.
- Ability to map cascaded routers so the o/p UMD shows the correct source mnemonic.
- Router source to source and source to bus mapping possible.
- Multiviewer support.
- External router control from TallyMan.
- Snapshot of router status may be taken and saved in a file
- Downloading the names lists from some routers into TallyMan for display on the UMDs - where supported by the router manufacturer.
- Uploading of UMD mnemonics from TallyMan into the router’s names lists – where supported by the router manufacturer.
- Uploading of mnemonics from TallyMan into the switcher’s / mixer’s panel – where supported by the mixer manufacturer.

### General

- Password control is offered allowing the configuring engineer to offer a fine level of control to less experienced users on a day to day basis.
- TallyMan is configured by a standard PC running Windows 95, 98, NT4, 2000 or XP,
- Configuration of system components can be done “live” on the system.
- Router sources and destinations may be sorted according to type (OS lines, Cameras, VTRs etc)
- All current interfaces for various routers, mixers etc. will be available and updateable via the TSL web site
- All system objects can be named for easy reference.
- GUI on the computer monitor gives a representation of the actual monitor stack or wall.
- There is the ability to save and open different configurations (Tally, Mnemonics and router mapping details). All parameters are saved in one file.
- Names lists may be entered for tallies, routers and Controllers as “aide-memoirs”.

## Overview of the TSL TallyMan System



Note – The Ethernet connections will require a hub or switch for the connections - one Ethernet connection only is provided on the TMx

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# Safety

## Installation.

Unless otherwise stated TSL equipment may be installed at any angle or position within an operating temperature range of 5° ~ 25° C .

The RJ45 connectors are for use only with TSL UMD equipment.

All TSL equipment conforms to the EC Low Voltage Directive:

EC Low Voltage Directive (73/23/EEC)(OJ L76 26.3.73)(LVD). Amendment: (93/68/EEC) (OJ L220 30.8.93).
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## Earthing/Grounding

In all cases, the frame of the equipment should be earthed on installation. Connection to an earthed strip running the length of the frame is ideal.

The earth pin on the IEC mains inlet connector is connected to the metal frame of the equipment, to 0 volts on the internal DC PSU and to signal ground, unless otherwise stated. All metal panels are bonded together. Rack mounted equipment must be earthed (grounded).

## Mounting

Careful consideration of the of equipment location and mounting in racks must be made. In particular, consideration must be given to the stability of free-standing racks by mounting heavy equipment low in the rack. The rear of the unit should be supported in the rack.

## Power

For pluggable equipment, the socket outlet shall be installed near the equipment and shall be easily accessible.

Consideration must be given to the supply circuit loading and switch on/fault surges that will affect over current protection trips and switches etc.

Check that the fuse rating is correct for the local power (mains) supply. Replacement fuses must be of the same rating and type for continued protection against fire risk.

The equipment rating is shown on the rear panel.

No power supply cord is provided with this equipment.

***Do not switch on until all connections are made.***

## Ventilation

Due consideration for cooling requirements must be given when mounting the equipment.

If the equipment is installed in a closed unit, consideration must be given to providing forced air cooling in order that the maximum recommended temperature is not exceeded.



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## **Warranty, Maintenance And Repair**

All TSL equipment is guaranteed for one year from the date of delivery to the customer's premises. If the equipment is to be stored for a significant period, please contact TSL concerning a possible extended warranty period.

### **Failure during warranty**

If any TSL product should fail or become faulty within the warranty period, first please check the PSU fuses.

All maintenance work must be carried out by trained and competent personnel.

### **Technical support information**

E-Mail address: support@televisionssystemsltd.uk

Telephone Support Number for the UK and Europe: +44 (0) 1628 676200

Telephone Support Number for the USA only: 1 877 591 2108

If equipment has to be returned to TSL for repair or re-alignment, please observe the following:

### **TSL Returns Procedure**

Please telephone +44 (0)1628 676200 (Fax: +44 (0)1682 676299) and ask for Sales who will provide a Returns Number (RMA). This will enable us to track the unit effectively and will provide some information prior to the unit arriving.

For each item, this unique Returns Number must be included with the Fault Report sent with the unit.

A contact name and telephone number are also required with the Fault Report sent with the unit.

### **Fault report details required.**

- Company:
- Name:
- Address:
- Contact Name:
- Telephone No:
- Returns Number:
- Symptoms of the fault (to include switch setting positions, input signals etc):

### **Packing**

Please ensure that the unit is well packed as all mechanical damage is chargeable. TSL recommends that you insure your equipment for transit damage.

The original packaging, when available, should always be used when returning equipment..

**If returned equipment is received in a damaged condition, the damage should be reported both to TSL and the carrier immediately.**



**EC DECLARATION OF CONFORMITY**

Application of Council Directives Nos:  
EC Low Voltage Directive (73/23/EEC)(OJ L76 26.3.73)(LVD).  
Amendment: (93/68/EEC) (OJ L220 30.8.93).  
Conformity Standards Declared:  
EN 60950

EMC Directive: 89/336/EEC, Amended 92/31/EEC.  
Conformity Standards Declared:  
EN 50081-1, EN 50082-1

Manufacturer's Name: Television Systems Ltd  
Manufacturer's Address: Vanwall Road  
Maidenhead SL6 4UB  
England  
United Kingdom

Type of Equipment: UMD System Controller  
Model No: UMD TM1 / TM2 / TM2 PLUS  
Part Number: TSLP- UMD TM1 / TM2 / TM2 PLUS  
Date CE Mark Affixed: 2006/2009

I, the undersigned, declare that the equipment specified above conforms to the quoted Directives and Standards.

Place: Maidenhead, England

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Print: J F PINNIGER

Position: PRODUCT MANAGER

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Section A

## TSL TallyMan Controller TM1



### **WARNING**

Disconnect power before  
removing the covers

There are no user  
adjustable parts inside the  
unit

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## 1.0 Introduction

The TSL tally system consists of a number of displays, either discrete modules or Multiviewers / IMD (In-Picture-Display), controlled by a 19" 1RU remotely located TallyMan Controller, TM1.

The TallyMan Controller distributes power and provides the control for the displays. It also carries user-defined interfaces for routing matrices, vision mixers and output drivers for cue lights and additional tally control for cameras etc..

All operational set-ups such as the router assignments, mnemonics and tally routing are programmed with a set-up computer running another version of TallyMan, normally connected to the Ethernet Port on the TallyMan Controller. The TM1 default IP parameters are:

IP Address: 192.168.0.220  
Subnet Mask: 255. 0 .0. 0

Connection for configuring purposes is via a PC running TallyMan.

- Use the appropriate file contained on the supplied CD ROM for initial connection. Be sure to use the TM1 config file. If you should ever lock up the system with an incorrect/corrupt file delete this config using the RS232 connection as described in Section 7.

All parameters are automatically saved in non-volatile memory.

The TallyMan TM1 is capable of powering a maximum of 38 eight character UMDs.

An auxiliary 2RU power supply, the PSU-22, is required for systems with more than about 38 displays. This would be driven from any of the TM1 Display Ports.

The display modules are connected to the TallyMan Controller by RJ45 overall screened cable. RJ45 splitter units are available to drive more than one display from an output port.

There are 64 parallel tally circuits for connection to vision mixer / GPIs / GPOs

Inputs and outputs may be individually assigned to each other. Where a tally is assigned as an input tally a contact to 0V is required for activation. The outputs are open collector.

The front panel LEDs indicate the health of the 24V internal PSU and of the regulated +12V supply to the operating system.

## 2.0 Installation

The TallyMan Controller should be installed in a standard 19" rack allowing good ventilation. No other special precautions need be taken.

### 2.1 Recommendations

- Consideration must be given to power losses incurred on long cable runs (in excess of 50 meters) between the displays and the System Controller. It is recommended that the loop resistance of the power circuit should not exceed 1 ohm.
- Cables to the UMDs should be screened CAT5 cable in order to conform with the European CE requirements. It is recommended that Category 5E FTP (foil screened twisted pair) cable is used. The individual cores are rated at 1A.

- The displays should be distributed evenly between the eight display drive outputs on the TallyMan Controller.
- To conform to CE requirements the cases should be bonded to ground using, ideally, braiding connecting straps.

Each RJ45 connector on the Controller is fused (re-settable thermal fuses) at about 1.3Amps. (The fuse will open after a short time at loadings greater than about 1.3A.).  
Do not exceed the maximum loading of the unit ~ 38 PLU or 95W.

Notes.

PLU. Power Loading Unit  $\equiv$  2.5Watts

LEDs are provided for confidence checking of both the power and data to the UMDs and the return data from the legacy AMU1 series.

If more than one PSU-22 is to be driven from the Display Outlets, each PSU-22 must be fed from a separate block. I.e. PSU-22 No 1 is fed from any outlets in the range 1 – 4 and PSU-22 No 2 is fed from any outlets in the range 5 – 8.

If the Controller is some distance from the monitor stack, ideally a Power Supply Unit, PSU-22, should be located in the bottom of the stack.

- Tally 1** This is for the parallel tallies. 1 - 32
- Tally 2** This is for the parallel tallies. 33 – 64
- Control 1** RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
- Control 2** RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
- Control 3** RS232 – User Assignable. May be changed to a RS422 module on request.  
Used for Mixer/Router/Multiviewer connection
- Control 4** This includes all the RJ45 UMD Display Ports. Power and serial data is available from these ports.

**Notes**

- The RS232 Port/ Control 3 is also used to re-configure the IP address of the unit and to carry out an effective “hard reset” of the system. This will delete any previously saved configuration. Config. files may be deleted in the unusual case of system lockup.  
Please see Section A Part 7.
- Note that in the TallyMan program the Control Ports on the hardware are called Port Number in the Tallyman configuration boxes.
- The following Tally In / Out arrangements are possible between the Tally 1 and Tally 2 connectors.

Inputs	Outputs
0	64
8	56
16	48
24	40
32	32
40	24
48	16
56	8
64	0

### 3.0 Tally Inputs

Serial tallies from the vision mixer or GPIs should be connected to the configured D9F RS422 connector.

Parallel (GPI) tallies are connected directly to the Tally 1 and Tally 2 connectors on the TallyMan Controller.

These are freely assignable in groups of eight. Tally inputs will occupy the lowest numbered pins starting with the Tally 1 connector. The output parallel tallies (if there are any assigned) will start from the next available pin on the D37 connector.

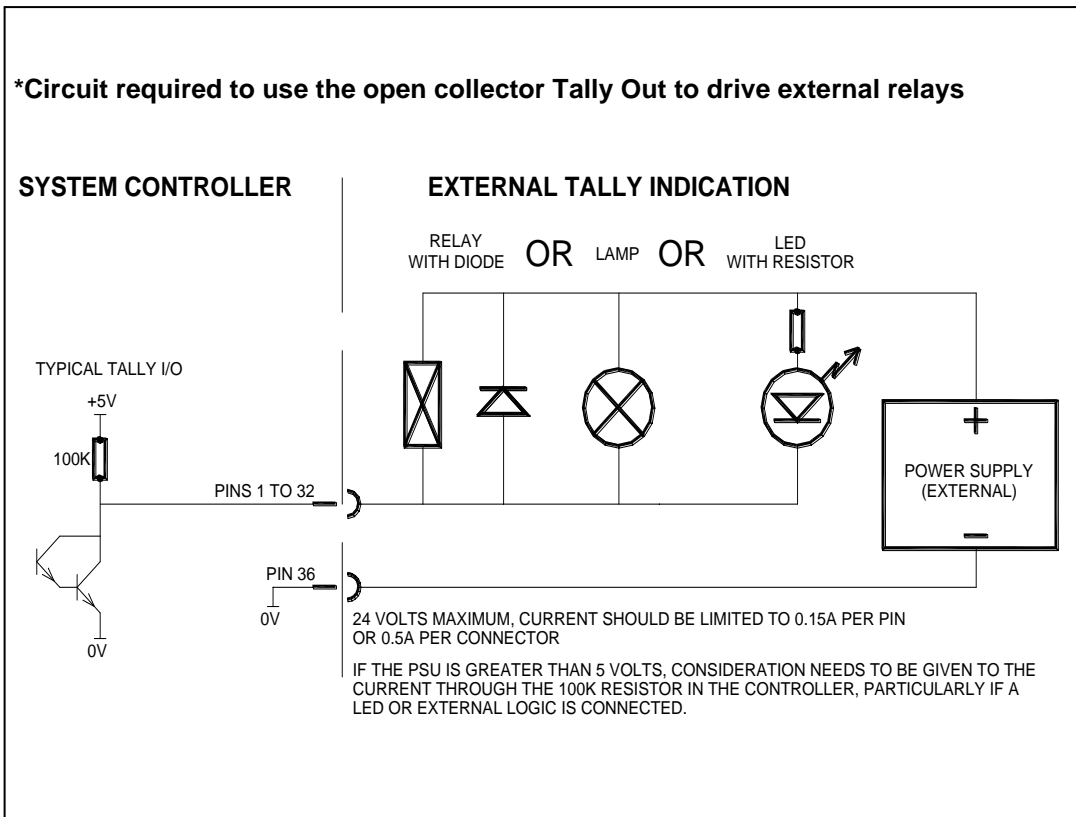
A ground or 0V in the pin is required to operate the tallies. The common or ground connection is connected to Pin 36.

### 4.0 Tally outputs.

Tally outputs consist of open collector driver circuits. Common (ground) appears Pin 36. The circuit is capable of sinking approx. 150mA to ground to activate relays etc.

These tally outputs are intended to control cue lights on camera heads, VTRs, Telecine machines etc. as well as directly any static under-monitor displays in the system. External drivers are needed for high current applications. Please see the note about relay use at the end of this section.

For situations where multiple relay closures are needed, a TSL Cue/Tally Distribution Unit, a ESP-1R+ should be installed. This will provide 64 relay closures on the D37 connectors.



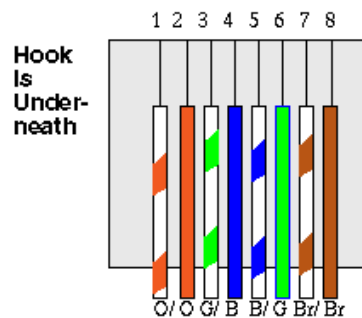
## 5.0 Pin-out Details

The cable required to connect the TM1 controller with the configuring computer is as follows:

### Ethernet Connections

Signal Name	RJ-45 Ethernet Pin Numbers	Crossover Cable Pinouts
TX +	1	3
TX -	2	6
RX +	3	1
EPWR + Power	4	4
EPWR + Power	5	5
RX -	6	2
EPWR - Power	7	7
EPWR - Power	8	8

For a hub connection, use a straight-through cable.



For a hub connection, use a straight-through cable. For TallyMan Controller to Computer, use a crossover cable

### RS422 Connector

CONTROL 1 AND 2 D9 SOCKET			
Pin Numbers	Signal	Pin Numbers	Signal
1	0v/Chassis	6	0v
2	TX-	7	TX+
3	RX+	8	RX-
4	0v	9	0v
5	-		

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RS232 Connector

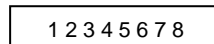
RS 232 D9 PLUG			
Pin Numbers	Signal	Pin Numbers	Signal
1	-	6	-
2	RX	7	RTS
3	TX	8	CTS
4	DTR	9	-
5	0v		

Display Ports – Control 4

The displays are wired pin to pin.

RJ45 DISPLAY CONNECTORS	
1	0v
2	0v
3	RX-
4	TX+
5	TX-
6	RX+
7	+24v
8	+24v

View from the back.  
RJ45 Connector on the cable





Tally 1 and Tally 2 D37 connectors

TALLY 1 & 2 INPUT/OUTPUT CONNECTORS D37 SOCKET			
1	TALLY 1	20	TALLY 20
2	TALLY 2	21	TALLY 21
3	TALLY 3	22	TALLY 22
4	TALLY 4	23	TALLY 23
5	TALLY 5	24	TALLY 24
6	TALLY 6	25	TALLY 25
7	TALLY 7	26	TALLY 26
8	TALLY 8	27	TALLY 27
9	TALLY 9	28	TALLY 28
10	TALLY 10	29	TALLY 29
11	TALLY 11	30	TALLY 30
12	TALLY 12	31	TALLY 31
13	TALLY 13	32	TALLY 32
14	TALLY 14	33	0v
15	TALLY 15	34	+12 / +24V see note below
16	TALLY 16	35	Ext Voltage Ref Pin
17	TALLY 17	36	0v
18	TALLY 18	37	-
19	TALLY 19		

As the tally i/ps and tally o/ps are freely assignable in 8 tally blocks, this is shown for 32 in and 32 out. See the Tallies section, if required for instructions on how to alter this.

**You could have:**

TALLY 1 INPUT CONNECTORS D37 SOCKET			
1	TALLY in 1	20	<b>TALLY out 12</b>
2	TALLY in 2	21	<b>TALLY out 13</b>
3	TALLY in 3	22	
4	TALLY in 4	23	
5	TALLY in 5	24	
6	TALLY in 6	25	
7	TALLY in 7	26	
8	TALLY in 8	27	
9	<b>TALLY out 1</b>	28	
10	<b>TALLY out 2</b>	29	
11	<b>TALLY out 3</b>	30	
12	<b>TALLY out 4</b>	31	
13	<b>TALLY out 5</b>	32	
14	<b>TALLY out 6</b>	33	0v
15	<b>TALLY out 7</b>	34	+12V / +24V see note below
16	<b>TALLY out 8</b>	35	Ext Voltage Ref Pin
17	<b>TALLY out 9</b>	36	0v
18	<b>TALLY out 10</b>	37	-
19	<b>TALLY out 11</b>		

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**Notes:**

- 1) Pin 34 carries a +12 V, or from Serial Number: 66200 +24V supply rated at 0.5A.
- 2) Pin 35

LK1 on the internal EAB2 cards is set for the pull-up resistors to be referenced to normally + 5V or, by changing the link to positions Centre/Ext, an external voltage reference applied to Pin 35 on the D37 connector.

Do not use this internal +12V for relay coil supply.

If using an external voltage above 5V, the link on the card should be set for external pull-up (position 2-3, labelled EXT, away from the D37), and the external voltage should be applied to Pin 35.

Putting the link to EXT and applying the voltage to Pin 35 also enables the onboard spike suppression diodes.

## **6.0 The Internal Power Supply Specification**

In the event of a failure the faulty item should be returned to TSL for replacement.

The user should not attempt any repairs as this voids the PSU manufacturer's three year warranty.

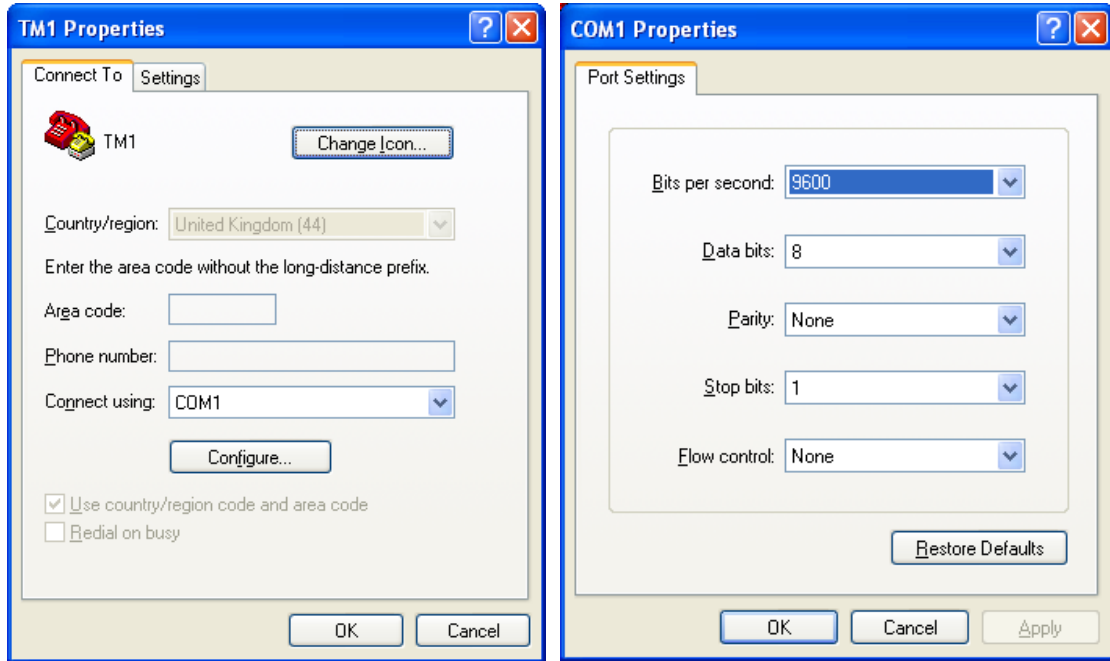
### Specifications

Model.....	SUU120-180
Input Voltage.....	90~264 VAC, 47~63 Hz
Input Current.....	1.0 A @ 230 VAC, 1.7 A @ 115 VAC
Output Voltage.....	See table below (plus +/-5% adjustment range on O/P 1)
Over Load Protection.....	110~150% of rated current (auto-recovery)
Over Voltage Protection.....	112~132% of output voltage (crowbar)
Efficiency.....	70-88% (dependent on unit)
Line Regulation.....	0.5% typically
Load Regulation.....	+/-3% typical on single output units @ 230 VAC input
Hold Up Time.....	16 ms @ 110 VAC input
Switching Frequency.....	80 kHz typical
Leakage Current.....	0.4mA (0.75 mA max.) @ 240 VAC input and full load
Isolation Voltage.....	I/P-O/P: 3 kVAC, I/P-FG: 1.5 kVAC
Operating Temperature.....	0 °C to +70 °C (derating by 2.5% /°C above 50 °C)
Safety Standards.....	UL60950-1, TUV EN60950-1
EMC Standard.....	EN55022 Class B, EN55024, EN61000-3-2, 3, 4, 5, 6, 8, 11
MTBF.....	>100 khrs (MIL-HDBK-217F) @ 25 °C
Weight.....	Approx 0.5 kg each
Dimensions.....	127(L) x 81.4(W) x 39.2(H)

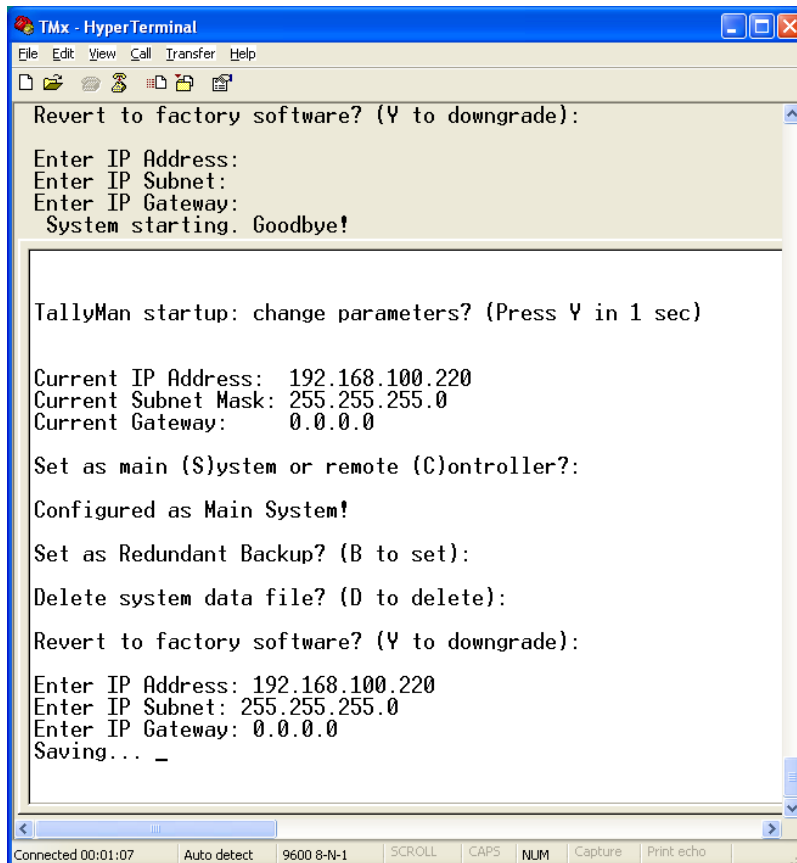
## 7.0 Changing the IP address and erasing the set up file.

Connect a PC running HyperTerminal (for example) to the Mtce / Port 3 on the TMx.

HyperTerminal Settings.



Start HyperTerminal and then power up the TMx and wait for about 10 secs. Press Y on the keyboard within 1 sec of the message appearing. Follow the on-screen instructions



- 
- Pressing **S** or Enter on the PC's keyboard will set the TallyMan units as the Main Unit
  - Pressing **C** will set it as a Controller so that it may be an Object in the system tree under a Main Controller.
  - Pressing **B** will set the unit as a Redundant Backup unit. See the section on Backup for information on how to use this facility.
  - Pressing **D** will delete the current setup file; pressing any other key will allow access to the IP settings.
  - Pressing **Y** will revert the unit to factory software and will downgrade the unit to the previous version of the TallyMan Program provided that an upgrade has taken place in the field.
  - IP Addresses are set as shown. If no entry is made and Enter in the PC's keyboard is pressed the original settings will be kept.

When all settings are correct remove the RS232 cable and re-power the unit.

**Notes.**

When using a TMx with a RS232 card fitted in the Control 3 position, use the following cable:

PC - TMx  
Pin 2 – Pin 3  
Pin 3 – Pin 2  
Pin 5 – Pin 5

When using a TMx with a RS422 card fitted in the Control 3 position, use the following cable:

PC - TMx  
Pin 2 – Pin 2  
Pin 3 – Pin 8  
Pin 5 – Pin 4

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## **Section B**

### **TSL TallyMan Controller TM2**

- 1.0 Introduction**
- 2.0 Installation**
- 3.0 Tally Inputs**
- 4.0 Tally outputs.**
- 5.0 Pin-out Details**
- 6.0 The Internal Power Supply Specification**
- 7.0 Changing the IP address and erasing the set up file.**

## **TSL TallyMan Controller TM2**



---

## 1.0 Introduction

The TSL tally system consists of a number of displays, either discrete modules or Multiviewers / IMD (In-Monitor-Display), controlled by a 19" 1RU remotely located TallyMan Controller, TM2.

The TallyMan Controller distributes power and provides the control for the displays. It also carries user-defined interfaces for routing matrices, vision mixers and output drivers for cue lights and additional tally control for cameras etc..

All operational set-ups such as the router assignments, mnemonics and tally routing are programmed with a set-up computer running another version of TallyMan, connected to the Ethernet Port on the TallyMan Controller. The TM2 default IP parameters are:

IP Address:                    192.168. 0 .220  
Subnet Mask:                255. 0 . 0 . 0

Connection for configuring purposes is via a PC running TallyMan.

- Use the appropriate file contained on the supplied CD ROM for initial connection. Be sure to use the TM2 config file. If you should ever lock up the system with an incorrect file delete this config using the RS232 connection as described in Section 7.

All parameters are automatically saved in non-volatile memory.

The TallyMan Controller is capable of powering about 70 eight character UMDs.

The actual number for UMDs can be several hundred using several drivers or TSL UMD Protocol V5.0.

An auxiliary 2RU power supply, the PSU-22, is required for systems with more than about 70 displays. This would be driven from any of the TM2 Display Ports.

The display modules are connected to the TallyMan Controller by RJ45 overall screened cable. RJ45 splitter units are available to drive more than one display from an output port.

There are 128 parallel tally circuits for connection to vision mixer/ GPIs/GPOs

Inputs and outputs may be individually assigned to each other. Where a tally is assigned as an input tally a contact to 0V is required for activation. The outputs are open collector.

The front panel LEDs indicate the health of the 24V internal PSU and of the regulated +12V supply to the operating system.

## 2.0 Installation

The TallyMan Controller should be installed in a standard 19" rack allowing good ventilation. No other special precautions need be taken.

### 2.1 Recommendations

- Consideration must be given to power losses incurred on long cable runs (in excess of 50 meters) between the displays and the System Controller. It is recommended that the loop resistance of the power circuit should not exceed 1 ohm.
- Cables to the UMDs should be screened CAT5 cable in order to conform with the European CE requirements. It is recommended that Category 5E FTP (foil screened twisted pair) cable is used. The individual cores are rated at 1A.

- UMD wiring is Pin to Pin.
- The displays should be distributed evenly between the sixteen display outputs on the TallyMan Controller.
- To conform to CE requirements the cases should be bonded to ground using, ideally, braiding connecting straps.

Each RJ45 connector on the Controller is fused (re-settable thermal fuses) at about 1.3Amps. (The fuse will open after a short time at loadings greater than about 1.3A.).  
Do not exceed the maximum loading of the unit ~ 70 PLU or 175W.

**Notes.**

PLU. Power Loading Unit ≡ 2.5Watts

If more than one PSU-22 is to be driven from the Display Outlets, each PSU-22 must be fed from a separate block. I.e. PSU-22 No 1 is fed from any outlets in the range 1 – 4 and PSU-22 No 2 is fed from any outlets in the range 5 – 8 etc.

If the Controller is some distance from the monitor stack, a Power Supply Unit, PSU-22, should be located in the bottom of the stack.

<b>Tally 1</b>	This is for the parallel tallies.	1 - 32
<b>Tally 2</b>	This is for the parallel tallies.	33 - 64
<b>Tally 3</b>	This is for the parallel tallies.	65 - 96
<b>Tally 4</b>	This is for the parallel tallies.	97 - 128

<b>Control 1.</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
<b>Control 2.</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
<b>Control 3.</b>	RS232 – User Assignable. Used for Mixer/Router/Multiviewer connection RS422 card may be fitted on request
<b>Control 4.</b>	RS422 – This is for all of the RJ45 UMD Ports
<b>Control 5.</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
<b>Control 6.</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
<b>Control 7</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection

- The RS232 Port is also used to re-configure the IP address of the unit and to carry out an effective “hard reset” of the system. This will remove any previously saved configuration.  
Please see Section A Part 7.
- Note that in the TallyMan program the Control Ports on the hardware are called Port Number in the Tallyman configuration boxes.

---

The following Tally In / Out arrangements are possible between the Tally 1, 2, 3 and 4 connectors.

<b>Inputs</b>	<b>Outputs</b>
0	128
8	120
16	112
24	104
32	96
40	88
48	80
56	72
64	64
72	56
80	48
88	40
96	32
104	24
112	16
120	8
128	0



### 3.0 Tally Inputs

Serial tallies from the vision mixer or GPIs should be connected to the configured D9F RS422 connector.

Parallel (GPI) tallies are connected directly to the Tally D37 connectors on the TallyMan Controller.

These are freely assignable in groups of eight. Tally inputs will occupy the lowest numbered pins starting with the Tally 1 connector. The output parallel tallies (if there are any assigned) will start from the next available pin on the D37 connector.

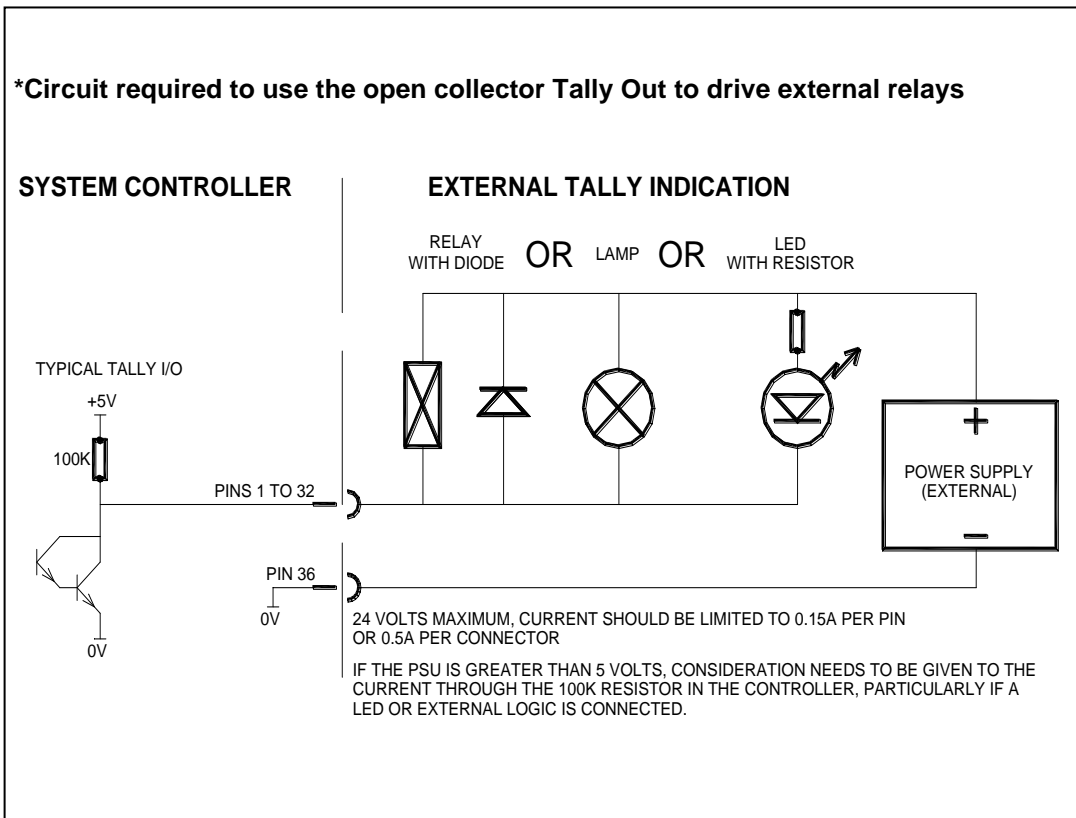
A ground or 0V in the pin is required to operate the tallies. The common or ground connection is Pin 36.

### 4.0 Tally outputs.

Tally outputs consist of open collector driver circuits. Common (ground) appears on Pin 36. The circuit is capable of sinking approx. 150mA to ground to activate relays etc.

These tally outputs are intended to \*control cue lights on camera heads, VTRs, Telecine machines etc. as well as directly any static under-monitor displays in the system. External drivers are needed for high current applications. Please see the note at the end of this section for external relay use.

For situations where multiple relay closures are needed, an ESP-1R+ should be installed. This will provide 64 relay closures from the D37 connectors.

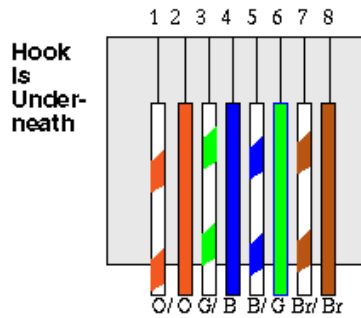


## 5.0 Pin-out Details

The cable required to connect the TM2 controller with the configuring computer is as follows:

### Ethernet Connections

Signal Name	RJ-45 Ethernet Pin Numbers	Crossover Cable Pinouts
TX +	1	3
TX -	2	6
RX +	3	1
EPWR + Power	4	4
EPWR + Power	5	5
RX -	6	2
EPWR - Power	7	7
EPWR - Power	8	8



For a hub connection, use a straight-through cable. For TallyMan Controller to Computer, use a crossover cable

### RS422 Connectors

CONTROL 1, 2, 5, 6 & 7 D9 SOCKETS			
Pin Numbers	Signal	Pin Numbers	Signal
1	0v/Chassis	6	0v
2	TX-	7	TX+
3	RX+	8	RX-
4	0v	9	0v
5	-		

---

RS232 Connector

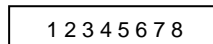
<b>CONTROL 3 RS 232 D9 PLUG</b>			
<b>Pin Numbers</b>	<b>Signal</b>	<b>Pin Numbers</b>	<b>Signal</b>
1	-	6	-
2	RX	7	RTS
3	TX	8	CTS
4	DTR	9	-
5	0v		

Display Ports – Control 4

The displays are wired pin to pin.

<b>RJ45 DISPLAY CONNECTORS</b>	
1	0v
2	0v
3	RX-
4	TX+
5	TX-
6	RX+
7	+24v
8	+24v

View from the back.  
RJ45 Connector on the cable



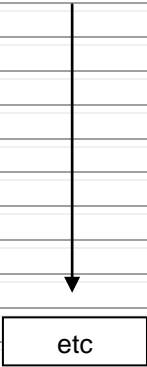
## Tally 1, 2, 3 & 4 D37 Connectors

TALLY INPUT/OUTPUT CONNECTORS D37 SOCKET			
1	TALLY 1	20	TALLY 20
2	TALLY 2	21	TALLY 21
3	TALLY 3	22	TALLY 22
4	TALLY 4	23	TALLY 23
5	TALLY 5	24	TALLY 24
6	TALLY 6	25	TALLY 25
7	TALLY 7	26	TALLY 26
8	TALLY 8	27	TALLY 27
9	TALLY 9	28	TALLY 28
10	TALLY 10	29	TALLY 29
11	TALLY 11	30	TALLY 30
12	TALLY 12	31	TALLY 31
13	TALLY 13	32	TALLY 32
14	TALLY 14	33	0v
15	TALLY 15	34	+12V/+24V – see note below.
16	TALLY 16	35	Ext Voltage Ref Pin
17	TALLY 17	36	0v
18	TALLY 18	37	-
19	TALLY 19		

As the tally i/ps and tally o/ps are freely assignable in 8 tally blocks. See the Tallies section, if required for instructions on how to alter this.

### You could have on the Tally 1 connector:

TALLY 1 INPUT CONNECTORS D37 SOCKET			
1	TALLY in 1	20	<b>TALLY out 12</b>
2	TALLY in 2	21	<b>TALLY out 13</b>
3	TALLY in 3	22	
4	TALLY in 4	23	
5	TALLY in 5	24	
6	TALLY in 6	25	
7	TALLY in 7	26	
8	TALLY in 8	27	
9	<b>TALLY out 1</b>	28	
10	<b>TALLY out 2</b>	29	
11	<b>TALLY out 3</b>	30	
12	<b>TALLY out 4</b>	31	
13	<b>TALLY out 5</b>	32	
14	<b>TALLY out 6</b>	33	0v
15	<b>TALLY out 7</b>	34	+12V/+24V – see note below.
16	<b>TALLY out 8</b>	35	Ext. Voltage Ref – see note below
17	<b>TALLY out 9</b>	36	0v
18	<b>TALLY out 10</b>	37	-
19	<b>TALLY out 11</b>		



Pin 34: Note that as from Serial No: 66200 the voltage on this pin is +24V.

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**Notes:**

- 1) The actual tally numbers shown in TallyMan will depend on when other tally modules have been entered.
- 2) Pin 34 carries a +12 V, or from Serial Number: 66200, +24V supply rated at 0.5A.
- 3) Pin 35

LK1 on the internal EAB2 cards is set for the pull-up resistors to be referenced to normally + 5V or, by changing the link to positions Centre/Ext, an external voltage reference applied to Pin 35 on the D37 connector.

Do not use this internal +12V for relay coil supply.

If using an external voltage above 5V, the link on the card should be set for external pull-up (position 2-3, labelled EXT, away from the D37), and the external voltage should be applied to Pin 35.

Putting the link to EXT and applying the voltage to Pin 35 also enables the onboard spike suppression diodes.

## 6.0 The Internal Power Supply Specification

This is a MeanWell SP-300 Series unit. In the event of a failure the faulty item should be returned to TSL for replacement.

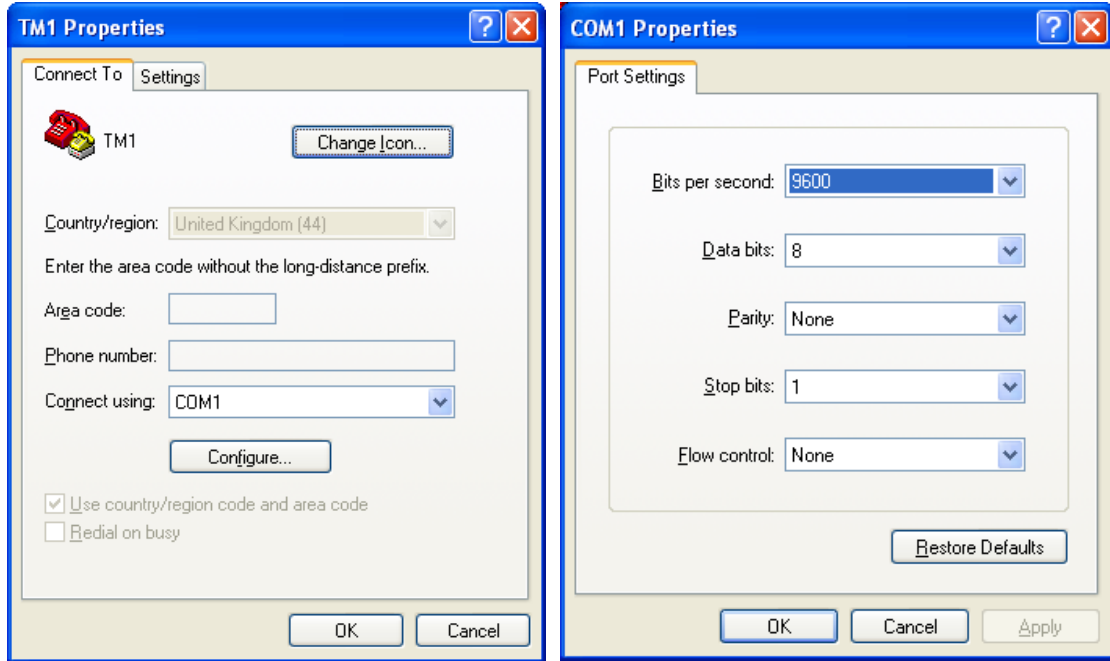
The user should not attempt any repairs as this voids the PSU manufacturer's warranty.

Manufacturer's Specification	Model SP- 300-24
DC Output Voltage	24V
Output Voltage Tolerance	61%
Output Rated Current	12.5A
Output Current Range	0 – 12.5A
Ripple and Noise	150mV pk-pk
Line Regulation	60.2%
Load Regulation	60.5%
DC Output Power	300W
Efficiency	86%
DC Voltage Adjustment	20 ~ 26.4V
Input Voltage Range	88~264VAC 47~63Hz; 124~370VDC
AC Current	4A/115V, 2A/230V
Power Factor	0.9/100~240VAC
Inrush Current	18A/115V 36A/230V
Leakage Current	1mA/240VAC
Overload Protection	105~135% Type: Pulsing Hiccup Shutdown Reset: Auto Recovery
Over Voltage Protection	27.6-32.4V
Fan Control Over Temp Protect.	RTH1 or RTH2 $\geq$ 50 $\circ$ C Fan On, 45 $\circ$ C Fan Off $\geq$ 70 $\circ$ C Output Shutdown
Temp. Coefficient	60.03%/ $\circ$ C (0~50 $\circ$ C)
Setup, Rise, Hold up Time	1.5s, 50ms, 20ms
Vibration	10~500Hz, 2G 10min./1cycle, Period for 60min each axis
Withstand Voltage	I/P-O/P:3KVAC I/P-FG: 1.5KVAC O/P-FG:0.5KVAC
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:500VDC / 100Mohms
Working Temp. Humidity	-10 $\circ$ C~+50 $\circ$ C (Refer to O/P de-rating Curve), 20%~90% RH
Storage Temp. Humidity	-20 $\circ$ C~+85 $\circ$ C, 10%~95% RH
Dimensions	215*115*50mm Case 912
Module weight	1.2Kgs
Safety Standards	UL1950, TUV EN90950 Approved
EMC Standards	CISPR22 (EN55022), IEC1000-4-2,3,4,5,6,8,11 IEC1000-3-2 Verification
<p>Notes:</p> <ol style="list-style-type: none"> <li>All parameters are specified at 230V I/P, rated load, 25<math>\circ</math>C, 70% RH ambient</li> <li>Ripple and noise are measured at 20MHz using a 12" twisted pair terminated with a 0.1uF and 47uF capacitor.</li> <li>Line regulation is measured from low line to high line at rated load.</li> <li>Load regulation is measured for 0% to 100% rated load.</li> </ol>	

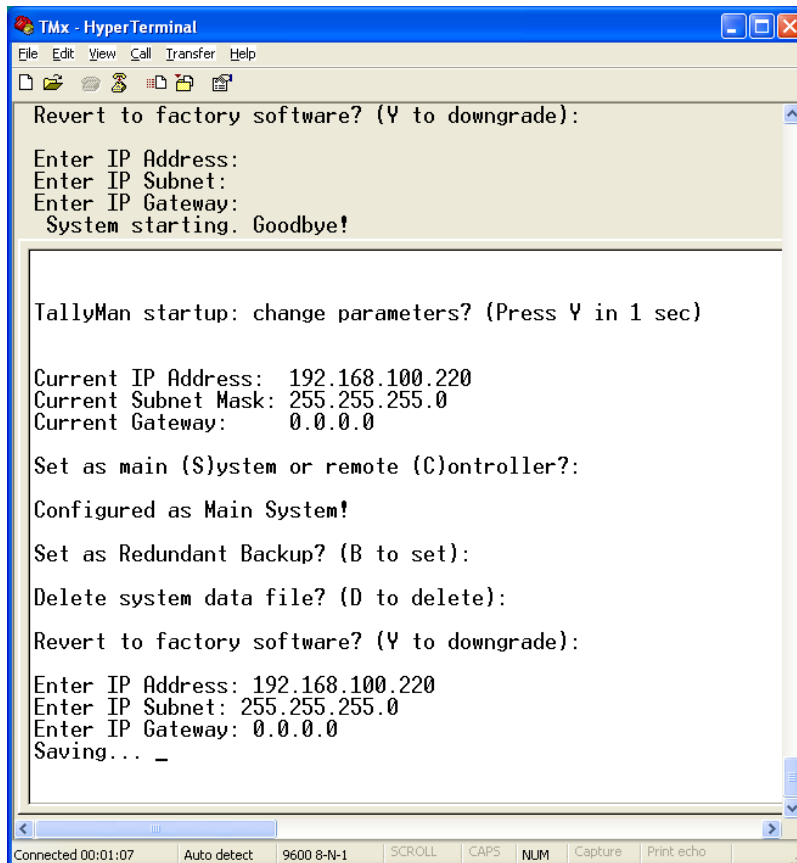
## 7.0 Changing the IP address and erasing the set up file.

Connect a PC running HyperTerminal (for example) to the Mtce / Port 3 on the TMx.

HyperTerminal Settings.



Start HyperTerminal and then power up the TMx and wait for about 10 secs. Press Y on the keyboard within 1 sec of the message appearing. Follow the on-screen instructions



- 
- Pressing **S** or Enter on the PC's keyboard will set the TallyMan units as the Main Unit
  - Pressing **C** will set it as a Controller so that it may be an Object in the system tree under a Main Controller.
  - Pressing **B** will set the unit as a Redundant Backup unit. See the section on Backup for information on how to use this facility.
  - Pressing **D** will delete the current setup file; pressing any other key will allow access to the IP settings.
  - Pressing **Y** will revert the unit to factory software and will downgrade the unit to the previous version of the TallyMan Program provided that an upgrade has taken place in the field.
  - IP Addresses are set as shown. If no entry is made and Enter in the PC's keyboard is pressed the original settings will be kept.

When all settings are correct remove the RS232 cable and re-power the unit.

**Notes.**

When using a TMx with a RS232 card fitted in the Control 3 position, use the following cable:

PC - TMx  
Pin 2 – Pin 3  
Pin 3 – Pin 2  
Pin 5 – Pin 5

When using a TMx with a RS422 card fitted in the Control 3 position, use the following cable:

PC - TMx  
Pin 2 – Pin 2  
Pin 3 – Pin 8  
Pin 5 – Pin 4



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## Section C

### TSL TallyMan Controller TM2 PLUS

- 1.0 Introduction
- 2.0 Installation
- 3.0 Tally Inputs
- 4.0 Tally outputs.
- 5.0 Pin-out Details
- 6.0 The Internal Power Supply Specification
- 7.0 Changing the IP address and erasing the set up file.

### TSL TallyMan Controller TM2 PLUS



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## 1.0 Introduction

The TSL tally system consists of a number of displays, either discrete modules or Multiviewers / IMD (In-Monitor-Display), controlled by a 19" 1RU remotely located TallyMan Controller, TM2.

The TallyMan Controller distributes power and provides the control for the displays. It also carries user-defined interfaces for routing matrices, vision mixers and output drivers for cue lights and additional tally control for cameras etc..

All operational set-ups such as the router assignments, mnemonics and tally routing are programmed with a set-up computer running another version of TallyMan, connected to the Ethernet Port on the TallyMan Controller. The TM2 default IP parameters are:

IP Address:                    192.168. 0 .220  
Subnet Mask:                255. 0 . 0 . 0

Connection for configuring purposes is via a PC running TallyMan.

- Use the appropriate file contained on the supplied CD ROM for initial connection. Be sure to use the TM2 PLUS config file. If you should ever lock up the system with an incorrect file delete this config using the RS232 connection as described in Section 7.

All parameters are automatically saved in non-volatile memory.

The TallyMan Controller is capable of powering about 70 eight character UMD units and addressing up to 126 per UMD Driver. The actual number for UMDs can be several hundred.

An auxiliary 2RU power supply, the PSU-22 or PSU 22/2, is required for systems with more than about 70 displays. This would be driven from any of the TM2 Display Ports.

The display modules are connected to the TallyMan Controller by RJ45 overall screened cable. RJ45 splitter units are available to drive more than one display from an output port.

There are 32 parallel input tally circuits for connection to vision mixer/ GPIs and 48 isolated relay output pairs.

Inputs and outputs may be individually assigned to each other. Where a tally is assigned as an input tally a contact to 0V is required for activation.

The front panel LEDs indicate the health of the two 24V internal PSUs and of the regulated +12V supply to the operating system.

## 2.0 Installation

The TallyMan Controller should be installed in a standard 19" rack allowing good ventilation. No other special precautions need be taken.

### 2.1 Recommendations

- Consideration must be given to power losses incurred on long cable runs (in excess of 50 meters) between the displays and the System Controller. It is recommended that the loop resistance of the power circuit should not exceed 1 ohm.
- Cables to the UMDs should be screened CAT5 cable in order to conform with the European CE requirements. It is recommended that Category 5E FTP (foil screened twisted pair) cable is used. The individual cores are rated at 1A.

- UMD wiring is Pin to Pin.
- The displays should be distributed evenly between the sixteen display outputs on the TallyMan Controller.
- To conform to CE requirements the cases should be bonded to ground using, ideally, braiding connecting straps.

Each RJ45 connector on the Controller is fused (re-settable thermal fuses) at about 1.3Amps. (The fuse will open after a short time at loadings greater than about 1.3A.). Do not exceed the maximum loading of the unit ~ 70 PLU or 175W.

**Notes.**

PLU. Power Loading Unit ≡ 2.5Watts

If more than one PSU-22 is to be driven from the Display Outlets, each PSU-22 must be fed from a separate block. I.e. PSU-22 No 1 is fed from any outlets in the range 1 – 4 and PSU-22 No 2 is fed from any outlets in the range 5 – 8 etc.

If the Controller is some distance from the monitor stack, a Power Supply Unit, PSU-22, should be located in the bottom of the stack.

<b>Tally 1</b>	This is for the parallel tally inputs	1 - 32.
<b>Tally 2</b>	This is for the first set of isolated relay outputs.	1 - 16
<b>Tally 3</b>	This is for the second set of isolated relay outputs.	17 - 32
<b>Tally 4</b>	This is for the third set of isolated relay outputs.	33 - 48

<b>Control 1.</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
<b>Control 2.</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
<b>Control 3.</b>	RS232 – User Assignable. Used for Mixer/Router/Multiviewer connection RS422 card may be fitted on request
<b>Control 4.</b>	RS422 – This is for all of the RJ45 UMD Ports
<b>Control 5.</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
<b>Control 6.</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
<b>Control 7</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection
<b>Control 8</b>	RS422 – User Assignable. Used for Mixer/Router/Multiviewer connection

- The RS232 Port is also used to re-configure the IP address of the unit and to carry out an effective “hard reset” of the system. This will remove any previously saved configuration.  
Please see Section A Part 7.
- Note that in the TallyMan program the Control Ports on the hardware are called Port Numbers in the Tallyman configuration boxes.

### 3.0 Tally Inputs

Serial tallies from the vision mixer or GPIs should be connected to the configured D9F RS422 connector.

Parallel (GPI) tallies are connected directly to the Tally1 connector on the TM2 PLUS unit

A ground or 0V in the pin is required to operate the tallies. The common or ground connection is Pin 36.

### 4.0 Tally outputs.

The tally outputs consist of isolated relay contact pairs. Current loading is typically 2A max, non-inductive. Common (ground) appears on Pin 36.

For situations where more relay closures are needed, a TSL Cue/Tally Distribution Unit, an ESP-1R+ should be installed. This will give another 64 relay pairs.

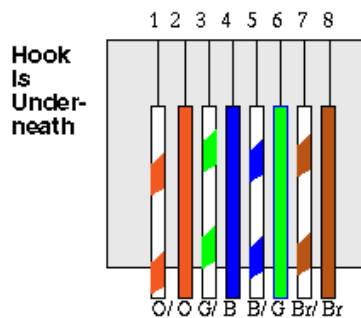
### 5.0 Pin-out Details

The cable required to connect the TM2 PLUS controller with the configuring computer is as follows:

#### Ethernet Connections

Signal Name	RJ-45 Ethernet Pin Numbers	Crossover Cable Pinouts
TX +	1	3
TX -	2	6
RX +	3	1
EPWR + Power	4	4
EPWR + Power	5	5
RX -	6	2
EPWR - Power	7	7
EPWR - Power	8	8

For a hub connection, use a straight-through cable. For TallyMan Controller to Computer, use a crossover cable.



RS422 Connector

CONTROL 1, 2, 5, 6, 7 & 8 D9 SOCKETS			
Pin Numbers	Signal	Pin Numbers	Signal
1	0v/Chassis	6	0v
2	TX-	7	TX+
3	RX+	8	RX-
4	0v	9	0v
5	-		

RS232 Connector

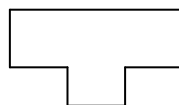
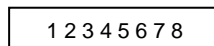
CONTROL 3 RS 232 D9 PLUG			
Pin Numbers	Signal	Pin Numbers	Signal
1	-	6	-
2	RX	7	RTS
3	TX	8	CTS
4	DTR	9	-
5	0v		

Display Ports – Control 4

The displays are wired pin to pin.

RJ45 DISPLAY CONNECTORS	
1	0v
2	0v
3	RX-
4	TX+
5	TX-
6	RX+
7	+24v
8	+24v

View from the back.  
RJ45 Connector on the cable



TALLY 1 INPUT CONNECTOR D37 SOCKET			
1	TALLY 1	20	TALLY 20
2	TALLY 2	21	TALLY 21
3	TALLY 3	22	TALLY 22
4	TALLY 4	23	TALLY 23
5	TALLY 5	24	TALLY 24
6	TALLY 6	25	TALLY 25
7	TALLY 7	26	TALLY 26
8	TALLY 8	27	TALLY 27
9	TALLY 9	28	TALLY 28
10	TALLY 10	29	TALLY 29
11	TALLY 11	30	TALLY 30
12	TALLY 12	31	TALLY 31
13	TALLY 13	32	TALLY 32
14	TALLY 14	33	0v
15	TALLY 15	34	+12V/+24V – see note below.
16	TALLY 16	35	Ext Voltage Ref Pin
17	TALLY 17	36	0v
18	TALLY 18	37	-
19	TALLY 19		

**Notes:**

- 1) An active incoming GPI or tally will be a contact to ground.
- 2) Pin 34 carries a +12 V, or from Serial Number: 66200, +24V supply rated at 0.5A.
- 3) The actual tally numbers shown in TallyMan will depend on when other tally modules have been entered.

Tally Output Connectors 2, 3 and 4. The relay output connectors.

<b>TALLY 2 CONNECTOR RELAY 1-16 OUTPUT D37 SOCKET</b>			
<b>Pin</b>		<b>Pin</b>	
1	Tally 33	19	Tally 42
2	Tally 33	20	Tally 42
3	Tally 34	21	Tally 43
4	Tally 34	22	Tally 43
5	Tally 35	23	Tally 44
6	Tally 35	24	Tally 44
7	Tally 36	25	Tally 45
8	Tally 36	26	Tally 45
9	Tally 37	27	Tally 46
10	Tally 37	28	Tally 46
11	Tally 38	29	Tally 47
12	Tally 38	30	Tally 47
13	Tally 39	31	Tally 48
14	Tally 39	32	Tally 48
15	Tally 40	33	0v
16	Tally 40	34/35	+24V
17	Tally 41	36	0v
18	Tally 41	37	GND

<b>TALLY 3 CONNECTOR RELAY 17 - 32 OUTPUT D37 SOCKET</b>			
<b>Pin</b>		<b>Pin</b>	
1	Tally 49	19	Tally 58
2	Tally 49	20	Tally 58
3	Tally 50	21	Tally 59
4	Tally 50	22	Tally 59
5	Tally 51	23	Tally 60
6	Tally51	24	Tally 60
7	Tally 52	25	Tally 61
8	Tally 52	26	Tally 61
9	Tally 53	27	Tally 62
10	Tally 53	28	Tally 62
11	Tally 54	29	Tally 63
12	Tally 54	30	Tally 63
13	Tally 55	31	Tally 64
14	Tally 55	32	Tally 64
15	Tally 56	33	0v
16	Tally 56	34/35	+24V
17	Tally 57	36	0v
18	Tally 57	37	GND

TALLY 4 CONNECTOR RELAY 33 - 48 OUTPUT D37 SOCKET			
Pin		Pin	
1	Tally 65	19	Tally 74
2	Tally 65	20	Tally 74
3	Tally 66	21	Tally 75
4	Tally 66	22	Tally 75
5	Tally 67	23	Tally 76
6	Tally 67	24	Tally 76
7	Tally 68	25	Tally 77
8	Tally 68	26	Tally 77
9	Tally 69	27	Tally 78
10	Tally 69	28	Tally 78
11	Tally 70	29	Tally 79
12	Tally 70	30	Tally 79
13	Tally 71	31	Tally 80
14	Tally 71	32	Tally 80
15	Tally 72	33	0v
16	Tally 72	34/35	+24V
17	Tally 73	36	0v
18	Tally 73	37	GND

**Note:**

The tally numbers shown in the list refer to the system number. The actual value may well be different depending on what other parallel modules have been entered into the TallyMan configuring program.



## 6.0 The Internal Power Supply Specification

These are MeanWell SP-300 Series units. In the event of a failure the faulty item should be returned to TSL for replacement.

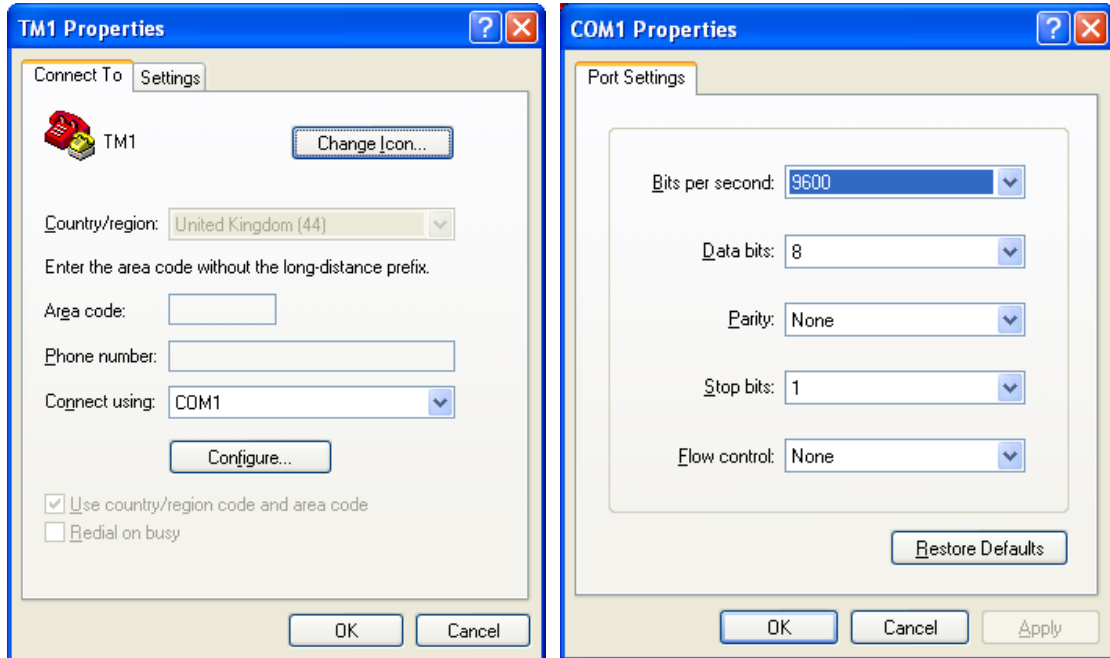
The user should not attempt any repairs as this voids the PSU manufacturer's warranty.

Manufacturer's Specification	Model SP- 300-24
DC Output Voltage	24V
Output Voltage Tolerance	61%
Output Rated Current	12.5A
Output Current Range	0 – 12.5A
Ripple and Noise	150mV pk-pk
Line Regulation	60.2%
Load Regulation	60.5%
DC Output Power	300W
Efficiency	86%
DC Voltage Adjustment	20 ~ 26.4V
Input Voltage Range	88~264VAC 47~63Hz; 124~370VDC
AC Current	4A/115V, 2A/230V
Power Factor	0.9/100~240VAC
Inrush Current	18A/115V 36A/230V
Leakage Current	1mA/240VAC
Overload Protection	105~135% Type: Pulsing Hiccup Shutdown Reset: Auto Recovery
Over Voltage Protection	27.6-32.4V
Fan Control Over Temp Protect.	RTH1 or RTH2 $\geq$ 50 $\circ$ C Fan On, 45 $\circ$ C Fan Off $\geq$ 70 $\circ$ C Output Shutdown
Temp. Coefficient	60.03%/ $\circ$ C (0~50 $\circ$ C)
Setup, Rise, Hold up Time	1.5s, 50ms, 20ms
Vibration	10~500Hz, 2G 10min./1cycle, Period for 60min each axis
Withstand Voltage	I/P-O/P:3KVAC I/P-FG: 1.5KVAC O/P-FG:0.5KVAC
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:500VDC / 100Mohms
Working Temp. Humidity	-10 $\circ$ C~+50 $\circ$ C (Refer to O/P de-rating Curve), 20%-90% RH
Storage Temp. Humidity	-20 $\circ$ C~+85 $\circ$ C, 10%~95% RH
Dimensions	215*115*50mm Case 912
Module weight	1.2Kgs
Safety Standards	UL1950, TUV EN90950 Approved
EMC Standards	CISPR22 (EN55022), IEC1000-4-2,3,4,5,6,8,11 IEC1000-3-2 Verification
Notes: 1. All parameters are specified at 230V I/P, rated load, 25 $\circ$ C, 70% RH ambient 2. Ripple and noise are measured at 20MHz using a 12" twisted pair terminated with a 0.1uF and 47uF capacitor. 3. Line regulation is measured from low line to high line at rated load. 4. Load regulation is measured for 0% to 100% rated load.	

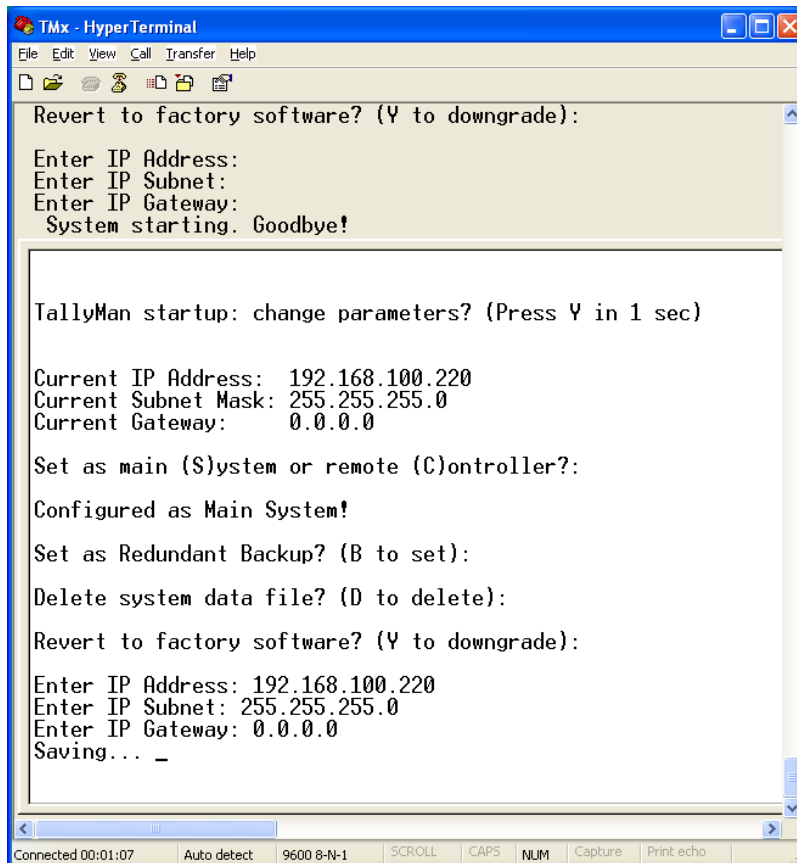
## 7.0 Changing the IP address and erasing the set up file.

Connect a PC running HyperTerminal (for example) to the Mtce / Port 3 on the TMx.

HyperTerminal Settings.



Start HyperTerminal and then power up the TMx and wait for about 10 secs. Press Y on the keyboard within 1 sec of the message appearing. Follow the on-screen instructions



- 
- Pressing **S** or Enter on the PC's keyboard will set the TallyMan units as the Main Unit
  - Pressing **C** will set it as a Controller so that it may be an Object in the system tree under a Main Controller.
  - Pressing **B** will set the unit as a Redundant Backup unit. See the section on Backup for information on how to use this facility.
  - Pressing **D** will delete the current setup file; pressing any other key will allow access to the IP settings.
  - Pressing **Y** will revert the unit to factory software and will downgrade the unit to the previous version of the TallyMan Program provided that an upgrade has taken place in the field.
  - IP Addresses are set as shown. If no entry is made and Enter in the PC's keyboard is pressed the original settings will be kept.

When all settings are correct remove the RS232 cable and re-power the unit.

**Notes.**

When using a TMx with a RS232 card fitted in the Control 3 position, use the following cable:

PC - TMx  
Pin 2 – Pin 3  
Pin 3 – Pin 2  
Pin 5 – Pin 5

When using a TMx with a RS422 card fitted in the Control 3 position, use the following cable:

PC - TMx  
Pin 2 – Pin 2  
Pin 3 – Pin 8  
Pin 5 – Pin 4

---

## Section D

### General Configuring Information

#### 1.0 Introduction

The screen shots for this manual were taken from a Windows XP machine. The System Components may vary across some sections in the manual, however this is only due to the way and the order that the various sections were written.

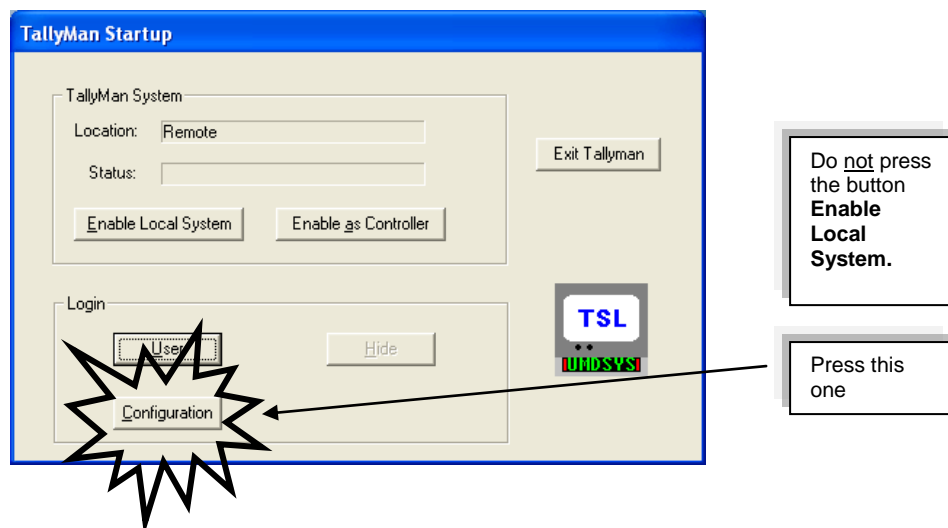
#### 2.0 Program Installation.

Note that the program is pre-installed on the TMx. **It is essential that the correct platform for the unit is selected in the TallyMan configuring program.**

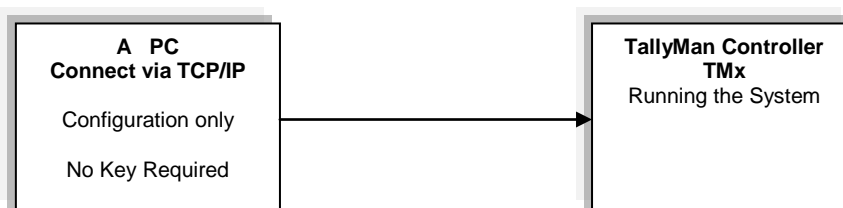
For configuring the system, use a remote PC. Place the CD in the tray and search for the TallyMan program files. Double click on either **Setup.exe** or **TallyManSetup\_V1.x.x.msi** depending what version is on your CD ROM.

- Run the program. Open the TMx Set up file once the program is running. You may now connect to the TMx as this file contains all the correct parameters. The following describes setting up the system in greater detail.

#### The TallyMan Start up Screen



As a PC is used for configuration only with the TallyMan Controller, the Key will not need to be input. You need to go straight to the **Configuration** button.



Use a cross connected cable.

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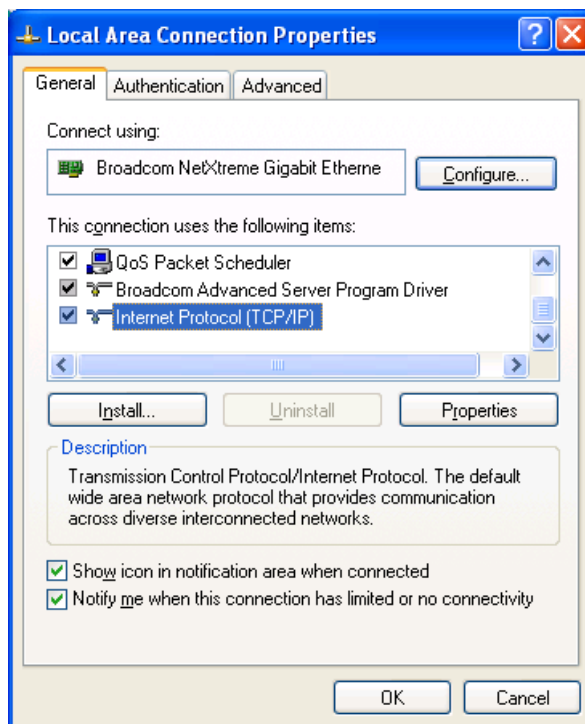
**Note:** Most laptops are set up for DHCP; they will not have a fixed IP address.

You must set a fixed address such as 192.168.100.200, with a sub net mask of 255.255.255.0 before the LAN port will operate and communicate with the TMX/2 under these conditions. Some laptops switch off the LAN port when on batteries.

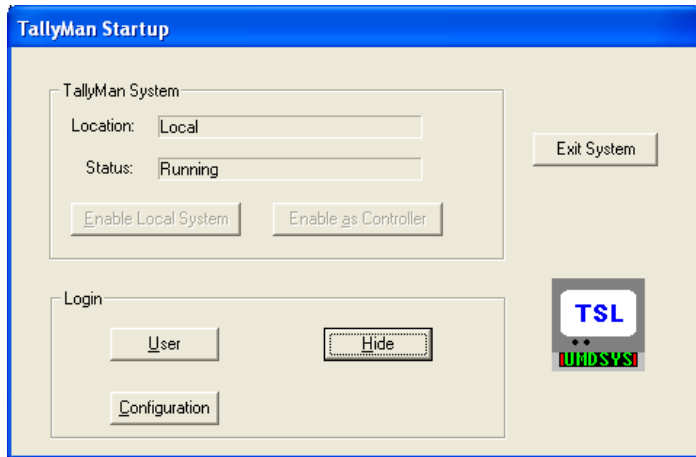
Look at the **Local Area Connection** and **Properties** box via **Control Panel > Network Connections**.

Click on the **Internet Protocol (TCP/IP)** line and observe **Properties**.

The IP address may be set via the **Alternate Configuration** tab, thereby keeping the basic DHCP configuration. Select **User Configured** and enter the numbers.



If you are in any doubt, seek the services of your IT Network Administrator or some other boffin.

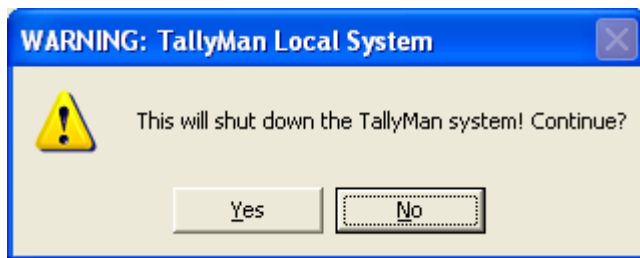


Select Configuration.

Exit System will close the entire application – TallyMan configuration and the operating System.

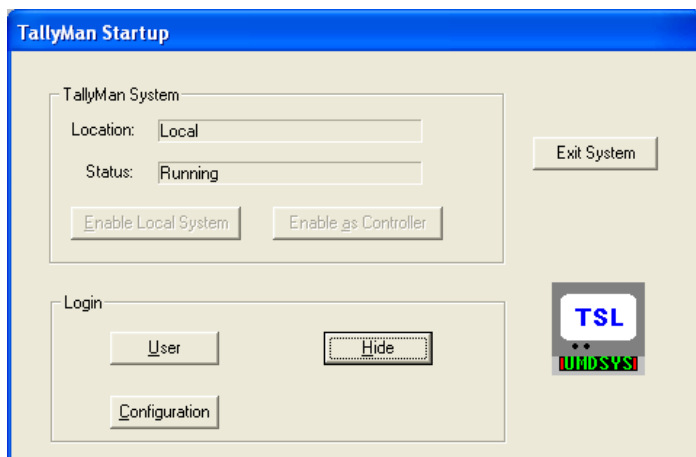
When TallyMan is run each time this start up screen will be shown. If no action is taken the screen will minimize to the Task Bar

### Exit System



Selecting **Yes** will close the entire application – TallyMan configuration and the operating System.

Beware: **Yes** stops the configuration PC TallyMan system working.



The **User** button will allow access to the screens and dialog boxes allowed by the Configurator. It will be seen that most dialog screens allow the Configurator to decide whether or not the User has access to the screen.

The **Configuration** access will require a Password to be entered **once one has been set**. To set a password, enter a space and then back space. Press **Change**. Follow the prompts to enter a password. To unlock from a lost password use **\*tsleng\***



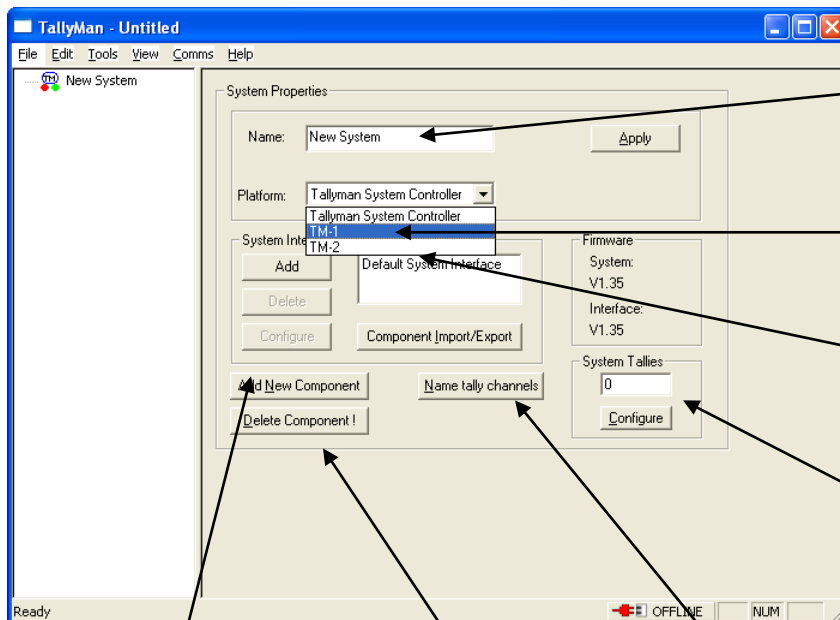
The password is blank but may be set to anything the Configurator wishes. In this case clicking on **OK** will open the next dialog box.

If the password is lost **\*tsleng\*** will unlock the system allowing a new password to be set.

Press the OK button.

### 3.0 The Opening TallyMan Screen.

This screen is seen on selecting **Configuration**.



The System is given a Name.

This shows the platform that is in use. Then press Apply.

The System Interface parameters are set here.

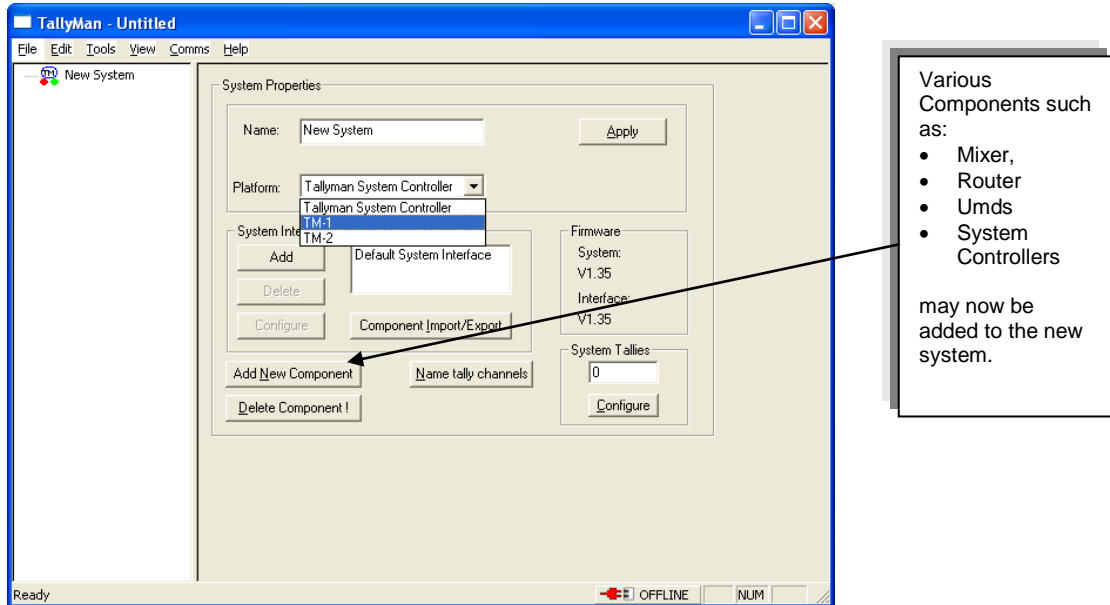
System Tallies are set here. System Tallies are tallies derived from other tallies. See the Tallies Section.

Components may be added to the System.

Components may be deleted from the System.

The sixteen tally channels may be named.

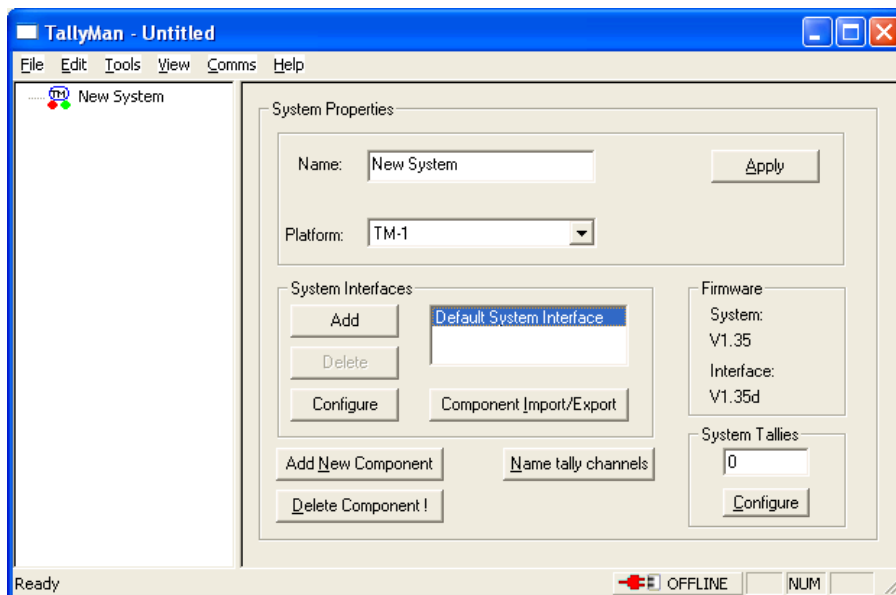
When selecting correct TMx as the platform, the key objects are automatically entered, viz: the parallel I/O and the UMD Driver.



#### 4.0 The System Interfaces

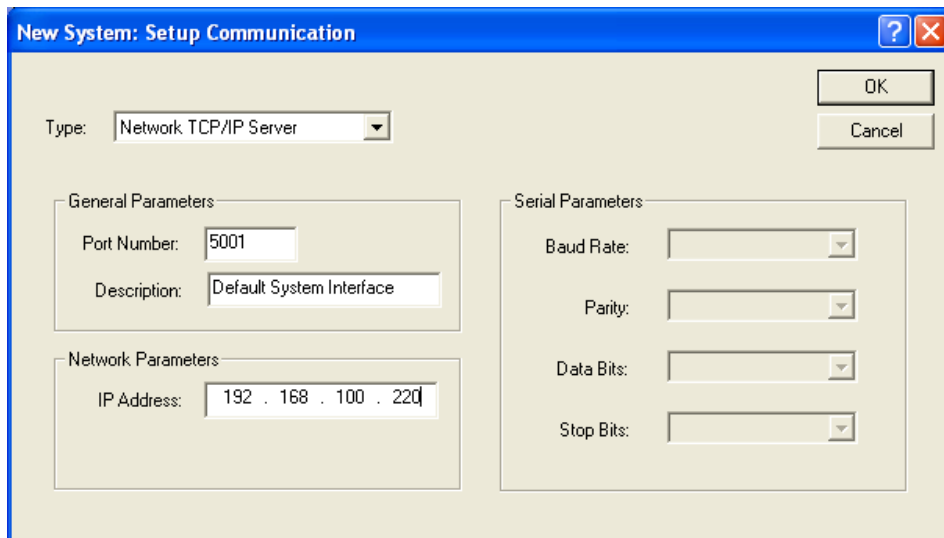
A local PC is used to communicate with the remote TallyMan Controller.

A local PC is used to communicate with a TallyMan Controller which is running the TallyMan system and the communications are set here. Effectively the two computer-based units must be networked together.



Highlight the Default System Interface and select **Configure**,





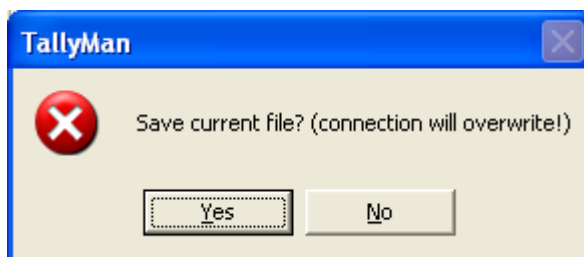
Give the communications link a brief **Description** as an aide memoir (the default is shown here) and set the computer's IP Address that which is set in the TMX as shown below.

IP Address: 192.168.100.220  
 Subnet Mask: 255.255.255.0

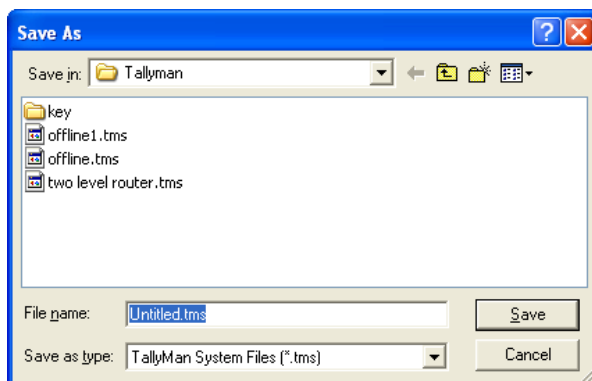
When all boxes are entered press **OK**.

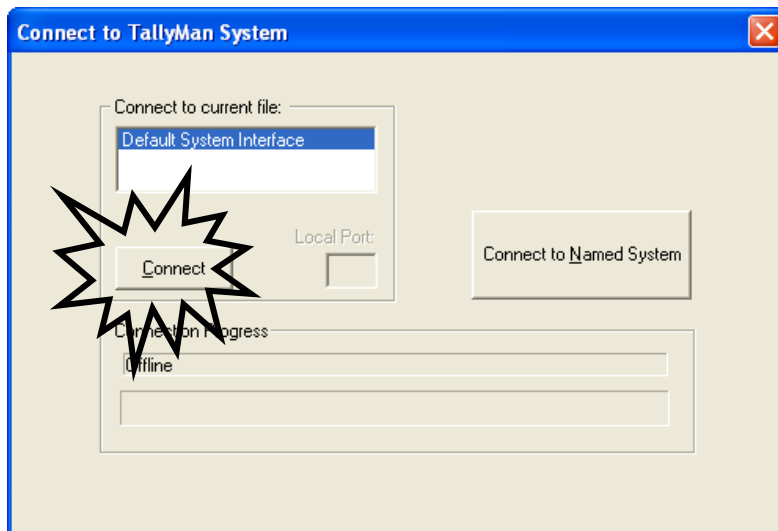
Note: A serial RS422 or RS232 link may also be set here, if required.

To go on line.



Pressing **Yes** will show this dialog screen



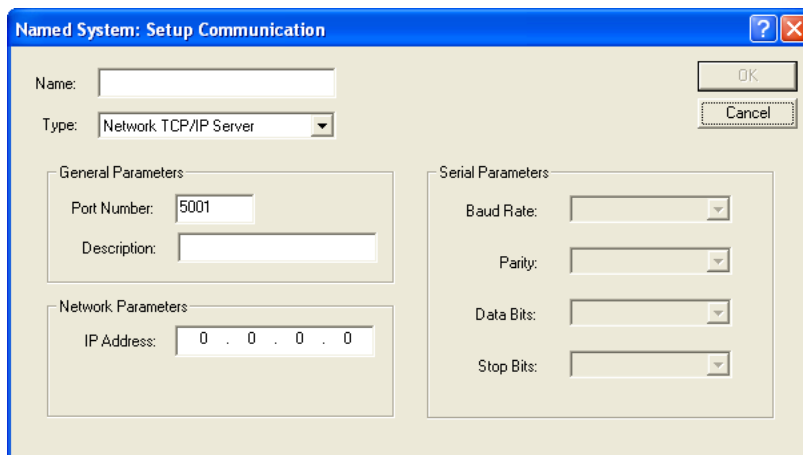
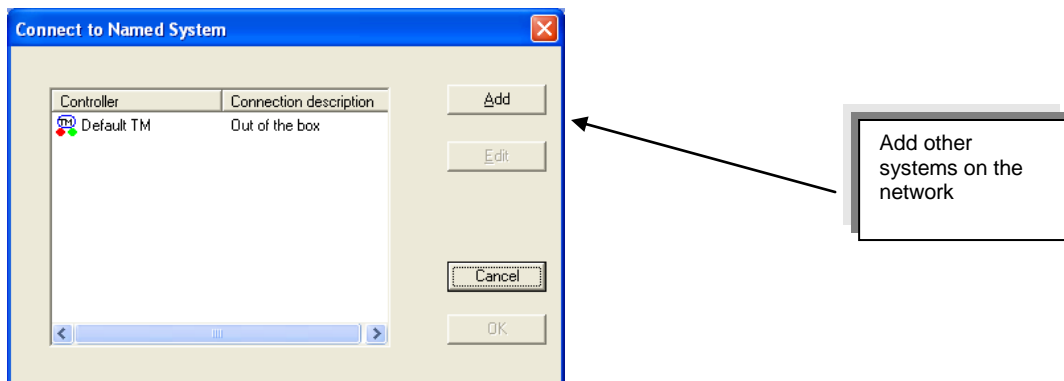


Use the **Connect** button with the **Default System Interface** highlighted.

You can only write to the system via the **Default System Interface** file. You can read other TallyMan systems by highlighting the appropriate system interface file.

**Note: Connect to Named System**

Clicking the button will show:



**This will allow quick connection to any TallyMan unit on the network.**

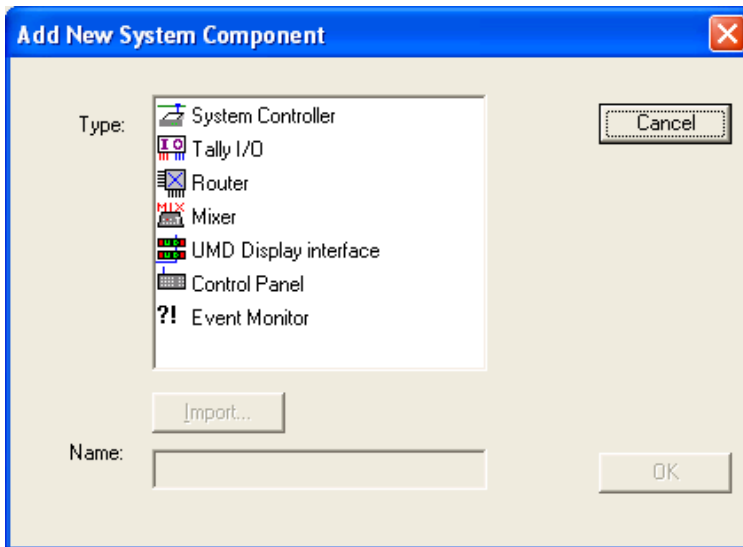
## 5.0 Setting up and entering the modules in the system

The system is built up entirely by the user. Select **Add New Components**.

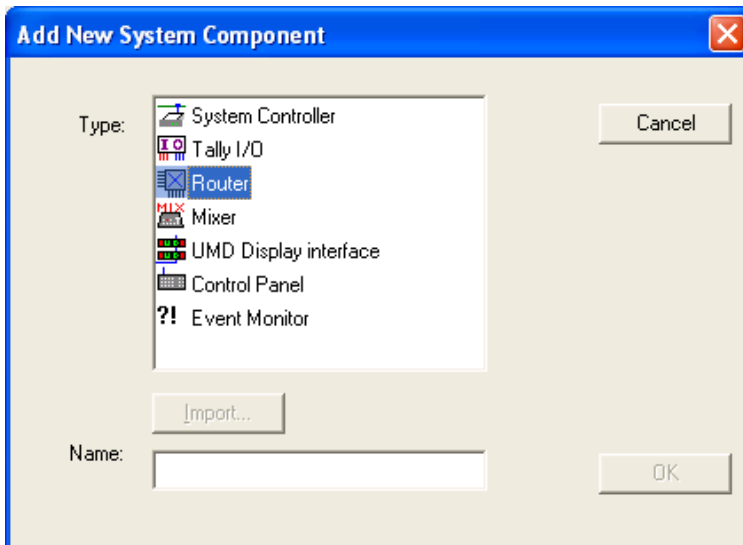
With the configuring program off-line, Components may be added or deleted from the System. Every time a component is added the user will be asked for a Name and will have to configure various options in the dialog screens.

Mixers, router, multi-viewers and UMDs can be added to the system.

Where legacy System Controllers are used the various modules within that Controller will automatically be added to the system tree once TallyMan goes on-line and recognises the System Controller.



When a new component is added to the system it must be given a Name before the OK button becomes active.



Highlight and select the modules that are to be added to the system.

Give the module a Name.

It is suggested (but is not essential) that the items are added to the System in the following order, as necessary:

- Parallel I/O (normally automatically entered by selecting the correct platform)
- Vision Mixer
- Router(s)
- UMD interface and displays
- System Tallies (if any are required).
- Control Panels
- Tallies – mapping and assignments

Enter all mnemonics (these appear on the displays) and names (these remind you what tally number, for example, is which) and then carry out all assignments for the UMDs and Tallies.

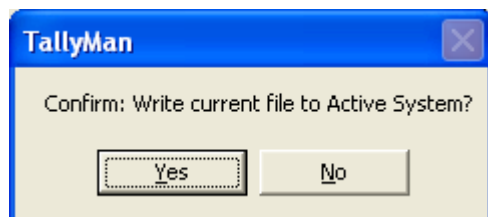
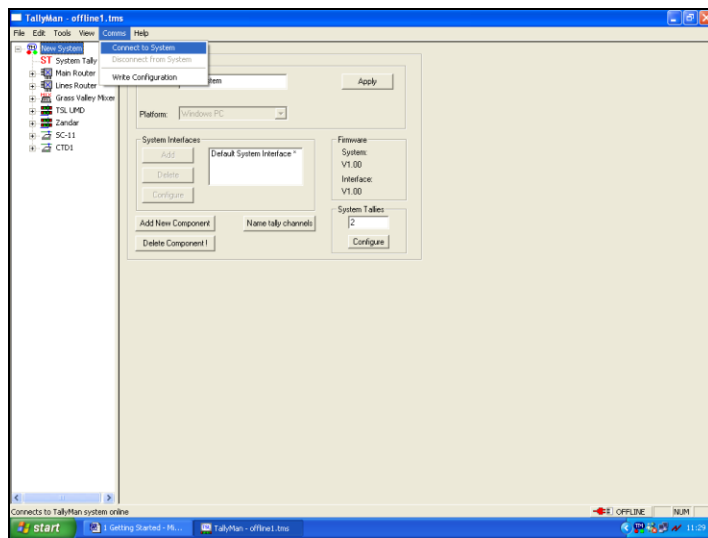
Names are very useful and it is strongly recommended that these are entered early on in the setup as an aide memoir.

It will be seen that each dialog screen contains all the assignment mapping requirements to do with the selected item. For example, a router source screen will allow the mnemonics, names tallies as assignments to the destinations or sources as required all from the one screen.

## 6.0 Comms

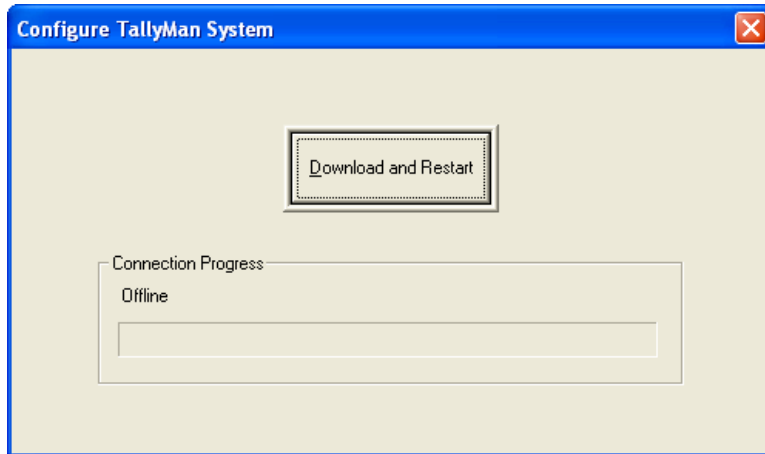
### 6.1 Writing the file to the system.

To update the active system the file must be written to the TallyMan Controller TMX. This is shown under **Comms > Write Configuration**.



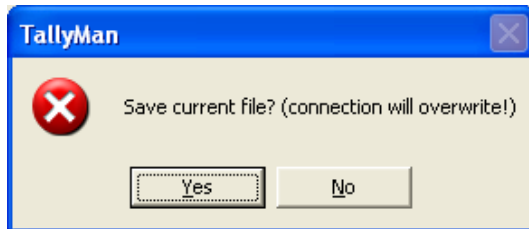
Click on **Yes**.

Then on **Download and Restart**. The desktop file is now written to the system.



The configuring system will be off-line following this action.

On connecting to the TMx the operator will be prompted to save the desktop file as it may have been edited and the act of going on-line will overwrite the currently open file.



Pressing **Yes** will save the desktop to disc under the file name indicated at the top of the dialog box.

## 7.0 Saving Routines

Important Information concerning the saving routines.

If a test file **test.tms** is created and is then written to the TallyMan unit, the file on the configuring screen will still be shown as **test.tms**

Although the **test.tms** (disk file) has been written to the system, when the TallyMan set up screen is connected to the TallyMan unit there is no link with **test.tms** file at all.

When connected to the TallyMan unit, the file will be shown as **ONLINE**. You are effectively looking at the file in the operating part of the TMx.

However, this will be the same as **test.tms** provided no changes have subsequently been made to that set-up file.

When on-line, **ONLINE** will be shown at the bottom of the window. You may make changes when on-line and save the new condition but the saved file name will default to **online.tms**.

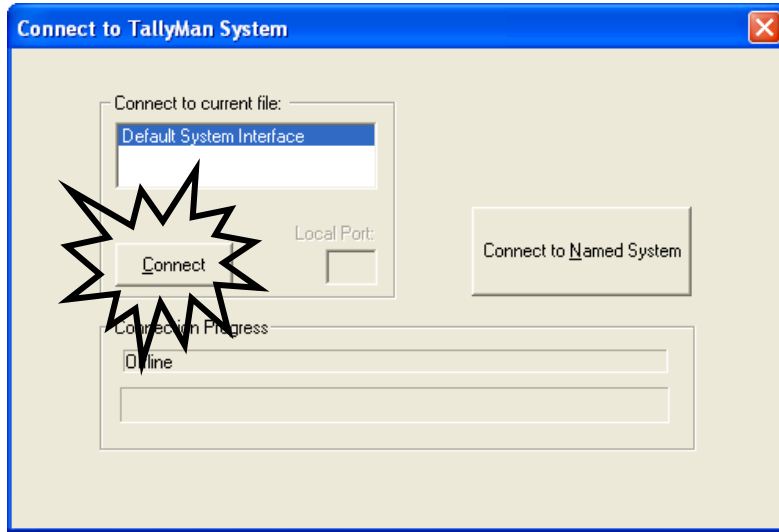
It is recommended that this is changed to something more descriptive. You can, of course, overwrite (i.e. Save As) **test.tms** to reflect the new settings.

If you now subsequently disconnect from the TallyMan unit **Offline** will be shown as the file name.

This method of file naming preserves the original set-up file from accidentally being overwritten.

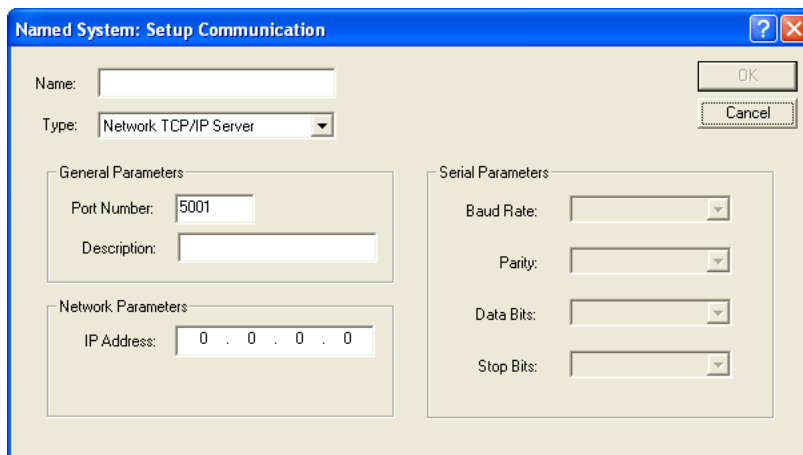
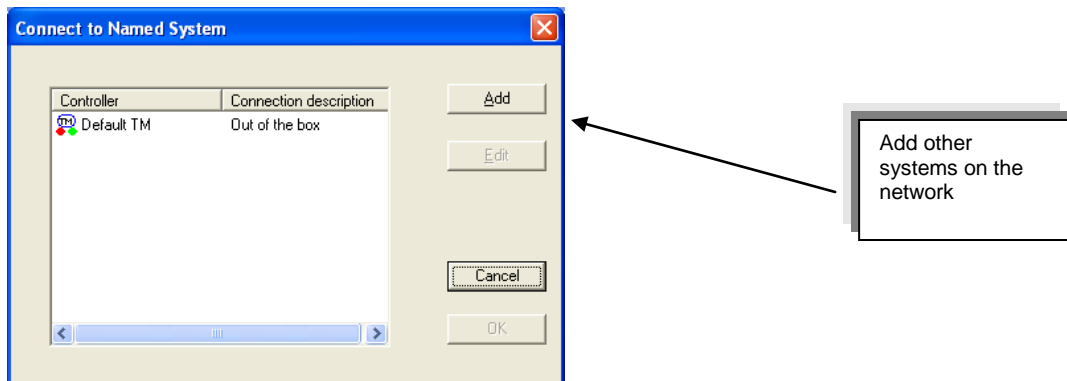
## 8.0 Connect to the TallyMan System

The connecting options.



**Note: Connect to Named System**

Clicking the button will show:



This will allow quick connection to any TallyMan unit on the network.

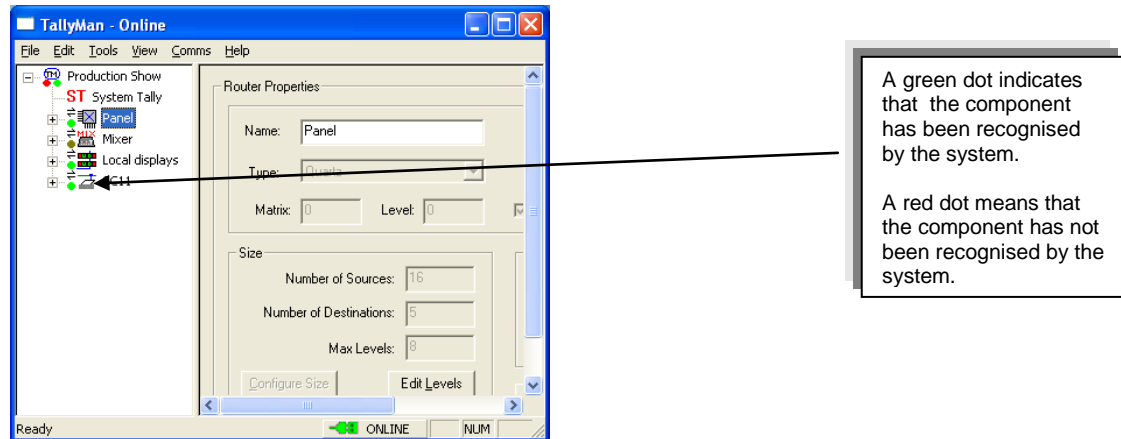
The **Connect to the Default System Interface** option connects to the TallyMan TMx system and shows you the system, not any offline file which is being edited.

---

This means that if we wish to connect to the system specified in that file, we are not using the file itself, we are using its connection parameters only. As soon as we are connected, we are looking at the system, not a file.

It will be seen that when the TallyMan system is online, the components that are recognised by the system will have a bright green dot in the directory tree.

No bright green dot means no communications



## 9.0 Tally Channels and System Tallies.

### 9.1 Tally Channels

This program has 16 tally channels. Actual tallies from an I/O interface and System Tallies must be flagged as belonging to a particular tally channel. This may be seen as giving the tallies a “family” identity. This is an extension of red and green tallies found in other UMD systems.

The **Name tally channels** button allows these channels to be given a user-defined name.

### 9.2 System Tallies

System Tallies are tallies derived from other real tallies. A System Tally may be regarded as a “multicore cable” or “pipe” in that a System Tally may carry several active tally channels (the “cable cores”) for further processing or use.

The use of tallies is explained fully in the Tallies Section.

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#### Note: Auto updating

If a newer version of TallyMan is released on the TSL web site ([www.tsl.co.uk](http://www.tsl.co.uk)) and installed on a configuring PC, when that configuring PC goes on line to the TMx a dialog screen will open that will ask if you wish to upgrade the TMx via the configuring PC.

Just follow the on screen instructions. Be careful that you do not downgrade the system. Use only later releases of the program than the one installed in the TMx.

Once the files have been written, allow 30 seconds for the internal filing system to up-date. Then re-power the TMx unit.

---

## Q & A for TallyMan

- Q: How can I be sure that my setup initial file will work?  
A: Use the supplied set-up file supplied on the CD for initial connection and build on this. This has the correct platform set for your TallyMan unit as well as the correct IP address.
- Q: My Laptop will not connect with the TallyMan Unit  
A: Be sure to check that the configuring PC has a fixed IP address set for its network connection. The address must be in the same group as the TallyMan unit. An IP address of 192.168.100.200 with a Subnet Mask of 255.255.255.0 will work. Some laptops switch off the Ethernet port by default when on battery power. This can be changed.
- Q: I get confused with the connecting and writing menus. Which should I use when?  
A: When you have made a change on the configuring PC to the tallyman layout or configuration., if you are NOT on-line you MUST **Write** the file to the TallyMan unit for it to take effect. The TallyMan unit will restart (you will see LOCAL shown on the displays for a second) and then you can **Connect** to the system.
- Q: But what if I am on-line anyway?  
A; You can re-assign existing items at will and the system will update immediately but you cannot add or delete "hardware" in the program such as a router module, for example. Do not forget to save the new file on your configuring PC so you have a copy of it outside of the TallyMan unit.
- Q: What is the most reliable way of getting a system built up?  
A: When building a system, enter each module one at a time and check for correct connectivity as shown by a bright green dot when TallyMan is On Line from the configuring computer.
- Q: How many UMDs can I drive from a TallyMan system?  
A: 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.
- Q: I have had trouble with the system locking up on writing to it and I suspect that my file may be corrupt.  
A: If the system seems not to respond to the remote configuring PC, the file in the TMx may be corrupt. With several changes and possibly a wrong/illegal port number set, this can sometimes happen. Connect the config PC to the TMx using Control 3 and HyperTerminal, as described in the manual, and delete the internal configuration file.
- Q: How do I map my mixer tallies with the Program tally module I see in the TallyMan tree?  
A: When setting up tallies from mixers / switchers it is most logical to map the Program Tally inputs (from the mixer module) to the Mixer Sources. TallyMan does not know about this association until this mapping is done in the Mixer Source lists.
- Q: There seems to be a lot of tally numbers and I forget which one is which. How can I get round this problem?  
A: Entering the Names into the TallyMan lists at an early stage will greatly assist in identifying items later on throughout the setting up. The tally numbers are system default numbers and may be changed during set-up.



- 
- Q: What is the quickest way of entering repetitive UMD functions?  
A: The drag and drop tools will allow rapid, repetitive UMD assignments for both the Fixed Router Source display assignments and for the UMD Router Destination assignments.
- Q: Do I really need to read all of the manual. It seems huge?  
A: No, not at once but it will serve as a reference guide. The manual is arranged as sections which should make it easier to find your way around it.
- Q: How can I check that my RS422 connections are wired either pin to pin or require a crossed RS422 cable?  
A: The use of a RS422 data checker, similar to the one shown below will be found to be very useful in determining correct communications for all RS422 wiring.



[http://www.canford.co.uk/commerce/item\\_25-021\\_2011729.aspx](http://www.canford.co.uk/commerce/item_25-021_2011729.aspx)

Also check carefully the manufacturer's published pin functions.

- Q: How do I update my TM1 or TM2?  
A: Go to the TSL web site and navigate to the TallyMan info in the products pages. Download the .zip or .msi file to your configuring computer. Extract the Zip file to a clean directory or install the program via the .msi file. Set the correct IP address in the program for the TallyMan units you are upgrading. Connect to the TallyMan unit. The program will then show a screen that asks if you wish to upgrade. Yes to all. Once the files have been written, allow about 30 seconds for the internal filing system to update. Then re-power the unit.
- Q: How do I overcome ESP-1R+ apparent connection stability problems when using different configuration file versions and TallyMan program versions.  
A: When using a different TallyMan platform version to the original one that the config file was created in, you should open the config file in the same TallyMan version (config program) as the actual TallyMan unit is running. This updates the file. Save and then write the file to the controller. ESP-1R+ firmware at V1.69 will allow stable connection to all software versions of TallyMan.

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Contact Details.

**TSL in the UK:**

T: +44 1628 676200  
F: +44 1628 676299

The Agents below are TSL Resellers and have a good understanding of TallyMan operation.

**Agents:**

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SAV

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F: +33 (1) 42 40 47 80

**Germany**

Logic Media

T: +49 6257 9380 18  
F: +49 6257 903 882

**Australia**

AV Group

T: +61 (0) 29764 5911  
F: +61 0 29746 3299

Please see our web site for the Agents in your area.