A tally display system is an essential part of any broadcast or production environment. It must tell you where signals come from, where they go, and how they are being used.

In a typical multi-production environment, signals arriving at the facility’s main router are checked for quality, possibly converted, then routed to each studio that needs them. The studio uses these and other local signals in production. A basic tally system must:

- Track down the origin of a signal that reaches a specific monitoring point
- Distinctively identify signals which contribute to the on-air path
- Return information back to the signals origin describing its usage

The IMAGE VIDEO Tally System goes beyond this level of functionality, providing these standard features:

- Distinct identification of signals in use by other productions in same facility to avoid equipment sharing problems
- Alternate names for any signal, like a more descriptive name for a remote signal, or an abbreviated name to save display space
- Provide more than just source names in the same display (combine a source name with the name of the tie line or signal converter that carries the source, for example)
- Interactive editing of display contents to place messages on infrequently changed displays
- Indicate on-air, next to air, or any useful condition with a different color or message
- Interface to various manufacturers’ equipment through their serial or Ethernet ports
- General purpose inputs track other non-serial equipment or control display functions
- General purpose contact outputs provide tally or control of other equipment
- TSI-1000 Tally System Interface coordinates all tally system operations
- Ethernet port combines multiple independent tally systems into one facility wide system
- Change any aspect of tally system from a Windows PC, even while tally system is in use
- Save any number of tally system configuration files to disk and recall later for different productions or operator preferences
- Monitor tally system from PC with on-screen display of multiple monitor walls

The IMAGE VIDEO Tally System quickly identifies originating sources carried to any point in your signal switching system. It traces a signal's path through various types of routing and processing equipment including routing switchers, production switchers, and master control switchers. The tally system can interface to equipment from all major manufacturers including popular multi-image video display systems.

The IMAGE VIDEO Tally System is extremely configurable. It can be configured to monitor signal routing and processing equipment in virtually any arrangement. The tally system can even monitor signals that re-enter the same equipment or signals that go to many destinations.

To configure the tally system, model your unique system by identifying the equipment you wish to monitor and the signal interconnections between that equipment. Add remote displays to the tally system and choose the type of information you wish to appear in each display. Add general purpose outputs and specify their functions. You can connect equipment from different manufacturers in the same tally system.
TSI-1000

At the heart of the IMAGE VIDEO Tally System is the TSI-1000 Tally System Interface. The TSI-1000 collects information from signal routing and processing equipment to operate displays and tallies as directed by its internal configuration information. The TSI-1000 is configured from a Windows PC running the Tally System Console program. Once configured, the TSI-1000 continues to operate the tally system with or without the PC connected. Other TSI-1000 features include:

- All electronics housed in two rack unit frame
- Wide range input power supply removable from front of unit
- Six RS-422 / RS-485 ports
- Four RJ11 remote display ports
- Two high speed coaxial BNC ports
- Two RS-232 ports
- Ethernet port
- One longitudinal time code port
- Optional redundant power supply plugs in to same frame
- Front-mounted tri-color LED's indicate status of TSI-1000 ports and power supplies
- Two or more TSI-1000 units connected together through their Ethernet ports can extend system capacity or make independent local tally systems while still sharing remote information.

GENERAL PURPOSE INTERFACE

In most tally systems, there are cameras, tape machines, or other equipment that needs a control signal to indicate on-air, next-to-air, isolation, or some other useful condition. In some cases, there is signal switching equipment that, rather than having a serial port for interrogation and control, provides only parallel control signals to indicate switching activity. In either of these situations, the IMAGE VIDEO 4211 Interface Unit provides general purpose outputs and inputs between this equipment and the rest of the tally system. Each unit provides up to 40 inputs and 40 outputs. Outputs can be relay contacts or open collector type. Inputs can be optically-isolated, voltage-sensing, or pull-to-ground type. Cascade many 4211 Interface Units to extend system capacity up to 512 inputs and 512 outputs per TSI-1000 unit.
**UNDER MONITOR DISPLAYS**

Under monitor displays are the most visible part of any tally system. IMAGE VIDEO Under Monitor Displays provide clear and accurate information for studio & network control rooms, OB trucks, on-air facilities, alarm systems and any other special purpose applications.

- Tri-color 0.7” LED displays are bright and easy to read
- Slim 0.9” deep design mounts below or in front of single, dual, or triple monitor bank
- Over 30 levels of LED brightness to suit most lighting conditions
- Text formatting controls including alternate character sets, centering, and flashing
- Loop-thru RJ11 connection to tally system, or any RS-485 / RS-232 serial port
- Powered by wall-mount adapter
- Optional central supply powers up to 18 displays
- Use stand-alone or with tally system
- Two external tally inputs provide message or color control for stand-alone use

**Tri-Color Displays**

IMAGE VIDEO has a wide variety of display models to suit any application. Select from three-color or single-color in 17”, 13” and 8.5” wide models. Choose rack or wall mounting, or take advantage of space in front of monitor controls with a unique front-mount mounting system.

Build a tally system from any combination of display models. Outfit an entire facility or monitor wall, or start with just a few displays and expand later. To reduce cost, any display can be loaded with fewer than the maximum LED’s so you only pay for the display space that you need.

**Single-Color Displays**

If color change is not important for displays in some locations, install single-color displays, further reducing cost. If desired, single color displays can include different colored LED end blocks to indicate on-air tally or other conditions.
**Mounting**

IMAGE VIDEO displays are available in traditional rack mounting, wall mounting, and front-mounting versions. The front-mount is unique because it makes better use of the available rack space. The display tilts down so the video monitor’s controls are always accessible. Front mounting is perfect for equipment-saturated facilities where rack space just can’t be liberated.

**Stand-Alone Operation**

All displays are capable of stand-alone operation. Displays can be configured individually or together through their RS-232 port using a simple terminal or PC communication program.

**Menu System**

A built-in, easy to use menu system provides access to all set-up, diagnostic, and message functions. Configure displays for a fixed message, or program message or color change reactions to external tally input levels. All display information is retained in non-volatile memory while the display is powered off.
**STATIC DISPLAYS**

If color change is needed but the display message changes infrequently, install static displays. Print your own labels on transparencies, then insert labels into displays as needed. Static displays provide the same 'look' as changeable display's, but at reduced cost. Connect the tally system to the display's built-in tally input to change color from green to red to indicate on-air or some other condition. The 7721 series of static displays features a plugable terminal block for tally connections, a brightness control, and a tally color mode selector.

---

**UNDER MONITOR DISPLAYS WITH AUDIO METERING**

The RDU-1518 is a single 17” under monitor display with two channels of audio metering.

The RDU-1519 is a dual 17” under monitor display with four channels of audio metering.

- Only 0.9” deep
- Dual display has 9 fixed width characters or 11 proportionally spaced characters
- Single display has 6 to 20 fixed width characters or up to 24 proportionally spaced characters
- Analog audio VU bargraph meter features 17 segments of resolution
- Adjustable 0 dB reference point
The TSI-1000ACO allows two TSI-1000 tally controllers to be interconnected providing complete redundancy. The status of each TSI-1000 is monitored for correct operation.

The TSI-1000ACO automatically switches all tally system operations to the backup TSI-1000. Change over function may also be controlled manually.

**TSI-1000PS**

For additional redundancy, a TSI-1000 can be fitted with a second hot-swappable power supply.

**RDU-1510PS / RDU-1610PS**

In addition to wall-mount power supplies, multi-output rackmount power supplies are available.

The RDU-1510PS provides 12 outputs for RDU-1510 series of under monitor displays.

The RDU-1610PS provides 18 outputs for RDU-1610 series of under monitor displays.

The RDU-1510PS and RDU-1610PS feature front mounted fuses with LED status indicators. Locking power connectors are used to prevent disconnection due to the effects of vibration common in OB vans.
**TALLY SYSTEM CONSOLE**

All aspects of tally system operation can be controlled from a Windows PC running the Tally System Console program. The program lets you construct a model of your signal switching system, initially to configure all the equipment in the tally system, or later to make changes that reflect modifications to your system.

Although the tally system can operate without a PC, the Tally System Console program has many features that provide additional capabilities to the tally system including:

- On-screen view of any monitor wall in the system containing the same information as the actual displays
- On-screen view of individual or grouped displays large enough to see from across a room
- Interactive editing of any display
- Adjustable display brightness
- Addition or removal of tally system equipment even while the tally system is in use
• Alternate source name feature that allows one or two custom names for each source to give a more descriptive name on the displays than those provided by your signal switching system

• Multiple configuration files to quickly alter display or tally functions for different applications or operator preferences

• On-screen virtual displays that function just like real displays (no actual displays are required)

• Powerful programming language that provides a high level of system-wide or individual display customization
TALLY SYSTEM ORDERING INFORMATION

TSI-1000 TALLY SYSTEM INTERFACE
- 161-0129-0
- TSI-1000 Tally System Interface
  - 85-260 VAC 50 / 60 Hz
- 132-0182-00
- Plug-in redundant power supply for TSI-1000
  - 85-260 VAC 50 / 60 Hz
- 161-0130-01
- TSI-1000ACO Auto Changeover controller
  - c/w wallmount power supply and interconnect cables

MODEL 4211 PARALLEL INTERFACE UNITS
- 134-0046-01
- 4211 Interface Unit, no outputs, 40 isolated inputs
- 134-0046-03
- 4211 Interface Unit, no outputs, 40 pull-to-ground inputs
- 134-0046-08
- 4211 Interface Unit, 40 contact closure outputs, 40 isolated voltage inputs
- 134-0046-13
- 4211 Interface Unit, 40 contact closure outputs, 40 pull-to-ground inputs

MODEL 1610 SERIES SINGLE-COLOR DISPLAYS
- 134-0163-11
- 17” 14 Proportional / 11 fixed space characters per side
- 134-0163-08
- 17” 10 Proportional / 8 fixed space characters per side

MODEL 1618 17” SINGLE-COLOR DISPLAYS
- 134-0168-13
- 17” 12 Proportional / 10 fixed space characters
- 134-0168-08
- 17” 10 Proportional / 8 fixed space characters

MODEL 1619 17” SINGLE-COLOR DISPLAYS
- 134-0169-13
- 17” 12 Proportional / 10 fixed space characters
- 134-0169-08
- 17” 10 Proportional / 8 fixed space characters

MODEL 1510 SERIES TRI-COLOR DISPLAYS
- RDU-1513 17” DUAL DISPLAYS
  - 134-0153-13
  - 16 Proportional / 13 fixed space characters per side
  - 134-0153-08
  - 10 Proportional / 8 fixed space characters per side

- RDU-1512 17” SINGLE DISPLAYS
  - 134-0152-26
  - 32 Proportional or 26 fixed space characters
  - 134-0152-16
  - 20 Proportional or 16 fixed space characters
  - 134-0152-13
  - 16 Proportional or 13 fixed space characters
  - 134-0152-08
  - 10 Proportional or 8 fixed space characters

- RDU-1517 13” SINGLE DISPLAYS
  - 134-0157-20
  - 24 Proportional or 20 fixed space characters
  - 134-0157-13
  - 16 Proportional or 13 fixed space characters
  - 134-0157-08
  - 10 Proportional or 8 fixed space characters

- RDU-1516 8½” SINGLE DISPLAYS
  - 134-0156-13
  - 16 Proportional or 13 fixed space characters
  - 134-0156-08
  - 10 Proportional or 8 fixed space characters

MULTIPLE OUTPUT POWER SUPPLIES
- 132-0189-00
- Powers up to 12 1510 series displays 120V 60 Hz
- 132-0189-01
- Powers up to 12 1510 series displays 240V 50 Hz
- 132-0190-00
- Powers up to 18 1610 series displays 120V 60 Hz
- 132-0190-01
- Powers up to 18 1610 series displays 240V 50 Hz

WALLMOUNT POWER SUPPLIES
- 114-0316-00
- 120 VAC 60Hz / 12 VDC @ 1A / Right-Angle Plug
- 114-0242-00
- 120 VAC 60Hz / 12 VDC @ 1A / Straight Plug
- 114-0318-00
- Brick Supply 230 VAC 50Hz / 12 VDC @ 1A / Right-Angle Plug / 8’ AC cord

DISPLAYS WITH AUDIO METERING
- RDU-1518 17” SINGLE DISPLAYS
  - 134-0158-13
  - 16 Proportional / 13 fixed space characters
  - 134-0158-08
  - 10 Proportional / 8 fixed space characters

- RDU-1618 17” SINGLE DISPLAYS
  - 134-0168-13
  - 12 Proportional / 10 fixed space characters
  - 134-0168-08
  - 10 Proportional / 8 fixed space characters

- RDU-1619 17” SINGLE DISPLAYS
  - 134-0169-13
  - 12 Proportional / 10 fixed space characters
  - 134-0169-08
  - 10 Proportional / 8 fixed space characters

Other configurations available

1620 Midland Avenue, Toronto, Ontario, Canada, M1P 3C2
Tel: (416)750-8872 Fax: (416)750-8015
info@imagevideo.com www.imagevideo.com
Printed in Canada