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RM-3358W-2C

3RU, 3-Widescreen, 5.8″ Display Analog Video Monitor with Optional SDI Inputs

User Guide

Part Number 821681, Revision B

panorama®

the video division of **Wohler**

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RM-3358W-2C
User Guide

Introduction

Overview

The RM-3358W-2C is a color video monitor with a 3RU front panel containing three 5.8″ widescreen active matrix TFT LCD displays with either 16:9 or 4:3 aspect ratio. Each LCD is back-lit with a cold cathode fluorescent tube. The LCDs The LCDs are mounted in a rotatable cylinder, which allows the operator to rotate the display array ±55° in the vertical plane to provide optimum operator viewing angles. Each LCD display has separate front panel controls for tint, color, and brightness.

Topics

Safety Instructions

1. Read, keep, and follow all of these instructions; heed all warnings.

2. Do not use this equipment near water.

3. Use only a dry cloth to clean the equipment.

4. Do not block any ventilation openings. Install only in accordance with the instructions in the section entitled, "Installation Recommendations" on page 6.

5. Do not install near any heat source such as a radiator, heat register, amplifier, or stove.

6. Do not expose the equipment to rain or moisture.

7. Do not attempt to plug the unit into a two-blade outlet (with only two prongs of equal width).

IMPORTANT: By design, these monitors will only plug into a three-prong outlet for your safety. If the plug does not fit into your outlet, contact an electrician to replace the obsolete outlet.

8. Protect the power cord from being walked on or pinched, particularly at plug's source on the equipment and at the socket.

9. Use only the attachments/accessories specified by the manufacturer.

10. Unplug the equipment during lightning storms or when unused for long periods of time.

11. Refer all servicing to qualified service personnel. Servicing will be required under all of the following conditions:

    • The equipment has been damaged in any way, such as when the power-supply cord or plug is damaged.

    • Liquid had been spilled or objects have fallen onto the equipment.

    • The equipment has been exposed to rain or moisture.

    • The equipment does not operate normally.

    • The equipment has been dropped.

Installation Recommendations

Unpacking

Unpack the unit from the shipping container and inspect all articles for shipping damage. If you fi nd any damage, notify the shipping carrier immediately for claims adjustments. Compare the shipping box contents to the packing slip. Contact our PANORAMAd sales representative if there are any unexplained shortages.

Cooling and Airflow

No special physical mounting considerations are necessary regarding unit heat dissipation except under adverse conditions. Provided the ambient temperature inside the mounting enclosure does not exceed 40 degrees Celsius (104 degrees Fahrenheit), adjacent devices can be rack mounted (or stacked) in proximity to the unit. If the above temperature is exceeded, allow a 1RU (1.75"/25mm) space above and below the unit for air circulation.

Mounting

The unit is designed to install into a standard 19" rack mounted at eye level for best visual observation of the monitor screens.

Heat Dissipation

The ambient temperature inside the mounting enclosure should not exceed 40° Celsius (104° Fahrenheit). Adjacent devices can be rack mounted (or stacked) in proximity to the unit if the above temperature is not exceeded. Allow a 1RU (1.75"/44.45mm) space above and below the unit for air circulation.

Important: To reduce noise, the monitor have any fans. As a result, the heat generated by the class D power amplifiers, power supplies, and other components is vented by slots in the side of the unit. Therefore, as a safety precaution, we advise you to be sure to allow proper ventilation on both sides of the unit.

Power

The unit comes with a standard 24VDC/3.0A internal power supply and connects an A/C mains power source (65W, 100 to 240 VAC, 50/60Hz) to the IEC connector provided on the rear panel of the unit.

Cable Recommendations

Wohler recommends you use Belden 1694A (or equivalent) cables for composite (analog) or SDI video signals.

Features

The standard RM-3358W-2C unit features two composite analog (CVBS) video inputs per LCD display for a total of six inputs. One of the two inputs (per display) is selected using a front panel A/B toggle switch. Each of the six CVBS video inputs has a passive loop-through on a BNC connector and a 75 Ohm/Hi-Z termination select switch.

SDI signals may be monitored with installation of a field installable option (one per display) which replaces the "B" CVBS inputs. There are two models of optional SDI Input Module; the RMSDI-1 and RMSDI-2. The RMSDI-2 features an SDI input, reclocked SDI output, CVBS output (from SDI In), and SDI Lock LED. The RMSDI-1 offers a somewhat reduced feature set for cost savings and is identical except that it lacks the SDI Output and requires manually setting a switch for NTSC/PAL formatting. Selection of the SDI Input Module(s) is accomplished using the appropriate front panel A/B switch.

Each display also features a tri-color (red/green/yellow) tally LED indicator. A DB25 connector on the rear panel is used to interface the unit with your facilities' tally system. An optional field-installable audio indication module (AIM-1) can be plugged into the tally connector in order to use the tally LEDs for indication of audio presence and loss.
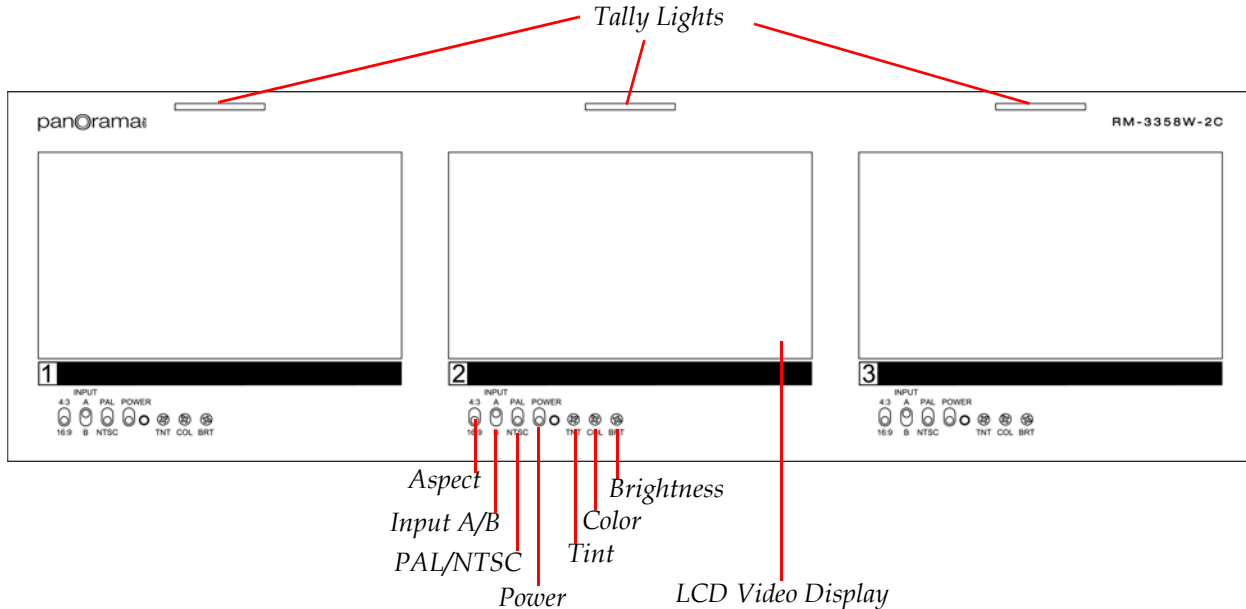
Specifications

Table 1—1   Specifications

Specification	Value
Video Input	Six composite (CVBS) video inputs (two per screen) with A/B select. Each screen has optional input module as the "B" input.
Video Input Termination	Selectable 75 ohm termination
Video Output	Six loop-through composite video outputs (two per screen)
Screen Type / Size	Active matrix TFT-LCD / 5.8" diagonal
Source Selection	A/B Selection of 2x CVBS IN (or 1x CVBS & 1x SDI module) per screen
Display Modes	NTSC/PAL, switchable
Aspect Ratio	16:9 and 4:3, switchable
Picture Controls	Tint, Color, and Brightness
Resolution (dots x lines)	1200 x 234
Dot Pitch	0.106 x 0.307 mm
Color Configuration	RGB stripe
Viewing Angle	top = 30 degrees, bottom = 60 degrees, left = 60 degrees, right = 60 degrees
Contrast Ratio	400 (typical)
Brightness	350 NITs (cd/m^2)
LCD Lamp Life	At 50% of life: 10,000 hours (average)
Power Consumption	30 watt (typical), 48 watt (max)
Power Supply	110/220 VAC-9VDC, external power supply (included)
Chassis Type	3U, 19" rack mounting (EIA-310D)
Dimensions	18.8"W x 3.7"D x 5.2" (483 x 94 x 132 mm)
Weight	6 pounds (2.72 kg)

Front Panel Controls

Figure 1–1 on page 6 illustrates the front control panel of the
RM-3358W-2C.

Figure 1–1 Front Panel Controls

Tally Lights

Aspect
Input A/B
PAL/NTSC
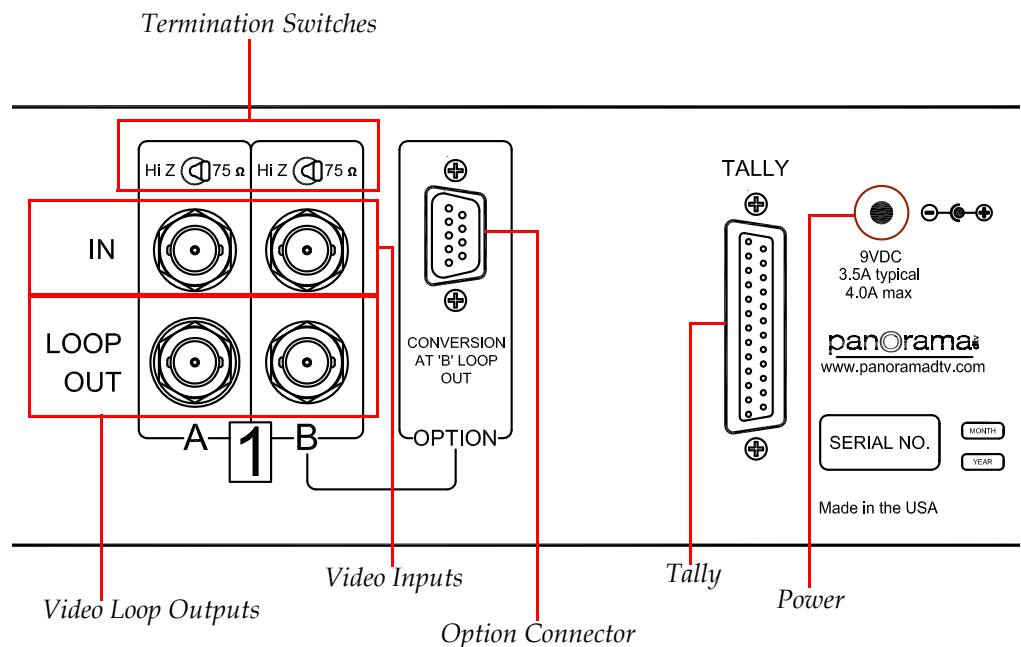*Power*

Brightness
Color
Tint

LCD Video Display

- **Tally Lights:** This two-circuit tally (red and green) interfaces with rear panel DB25 connector. See Figure 1–3 on page 8 for details. These lights may be used to indicate audio presence with the installation of the optional AIM-1 module.

- **Power:** Each of the four **Power** buttons turn the associated LCD screen on and off; the LED glows green to indicate on. When the indicator above the power switch is green then the unit is receiving power. When the indicator is off, the screen is in stand-by mode.

- **Aspect:** This button toggles the aspect ratio between 4:3 and 16:9 for the associated LCD screen when the input signal is SD-SDI. HD-SDI images are always 16:9 and will be affected by the Aspect switch.

- **Input A/B Source Select**: This toggle switch selects between Input A or B video source for the associated LCD display.

- **PAL/NTSC Select**: This toggle switch selects between NTSC and PAL format type to match video source for the associated LCDdisplay.

- **Tint:** This potentiometer adjusts the lightness/darkness of the display.

- **Color:** This potentiometer adjusts the color hue of the display.

- **Brightness**: This potentiometer adjusts the brightness of the display.

- **LCD Video Display**: View the selected video input source (A or B) on the LCD display.

Rear Panel Connectors

While the complete rear panel has three sets of connectors (one for each display) Figure 1–2 illustrates the rear panel connectors on one side of the RM-3358W-2C.
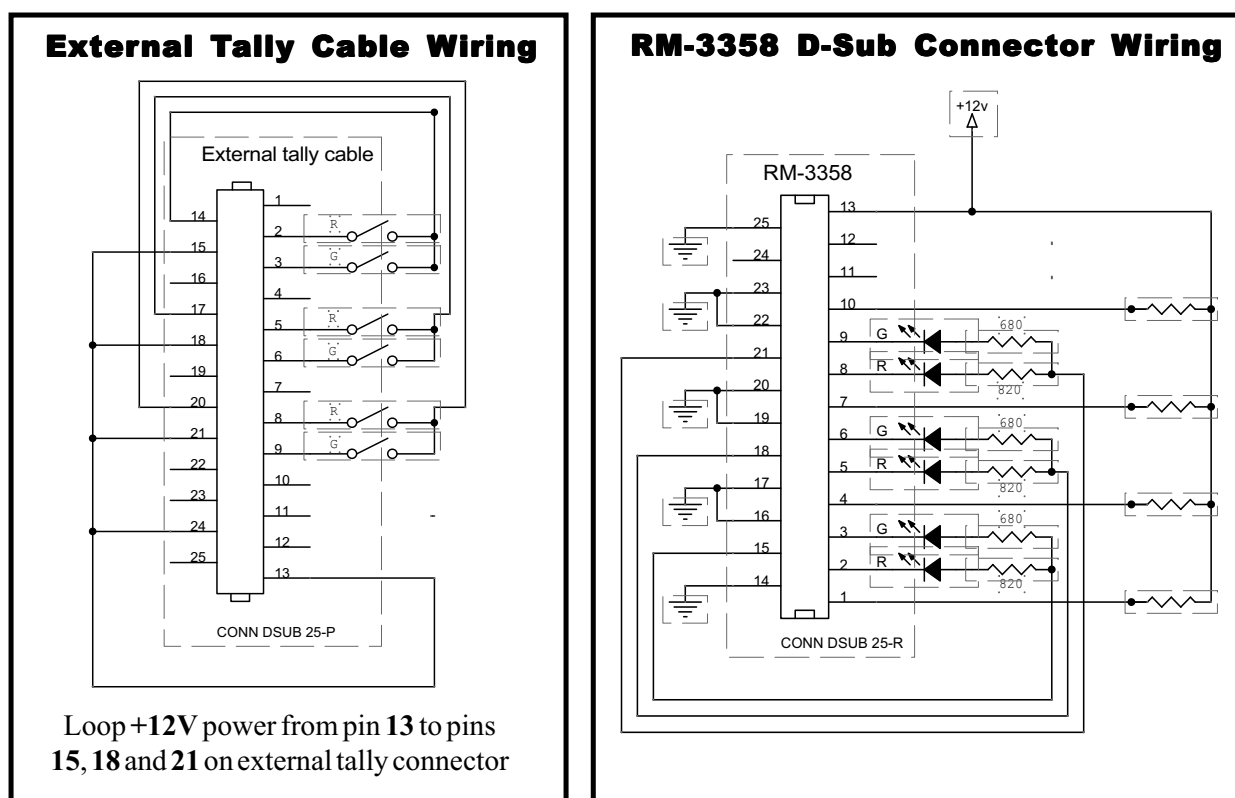
Figure 1–2   Rear Panel Connectors (Right Side)

- **Termination Switches**: Sets termination for the CVBS input as required by your configuration (Terminate = 75 Ohm or Unterminate = Hi-Z).

- **Video Loop Outputs (on BNCs)**: These connectors provide a loop output of the signal entering the associated input.

  Note: If you install the optional SDI Input Module in the B input, this connector outputs a CVBS signal as converted from the SDI Input Connector.

- **CVBS Inputs (on BNCs)**: Composite (CVBS) video signals are accepted at these BNC connectors. Set NTSC/PAL switch to appropriate format. Set A/B Source Select Switch to A or B.

  Note: If you install the optional SDI Input Module in the B input, you cannot use the input B CVBS connector.

- **Option Connector (on DB9)**: This DB9 (9-pin) female connector allows you to easily install an optional SDI Input Module. An SDI Input Module (RMSDI-1 or RMSDI-2) attaches to this connector with two screws to hold the module in place.

- **Tally Interface (on DB25)**: The tally indicator lights interface with this connector.

Figure 1–3   Tally Connector Wiring

CAUTION: If a TTL drive or open collector drive is used, the driving device must be able to withstand **12 volts DC** on the drive device output.

Optional SDI Input Modules

The RMSDI-1 and the RMSDI-2 optional SDI input modules are identical except the RMSDI-1 does not have an SDI output and uses a manual switch for the NTSC/PAL selection. Refer to Figure 1–4 below and Figure 1–5 on page 10.

Installation

To install the RMSDI-1 or the RMSDI-2 optional SDI input module, follow the instructions below.

1. Power off RM-3358W-2C.

2. Attach the DB-9(M) connector on the module to the DB-9(F) option connector on the rear panel as shown Figure 1–2 on page 7 and secure the SDI Input Module to the panel with the two screws supplied.

3. Attach and SDI input source. For the RMSDI-2, you can also attach an optional output source.

4. Power up the monitor.

Functionality

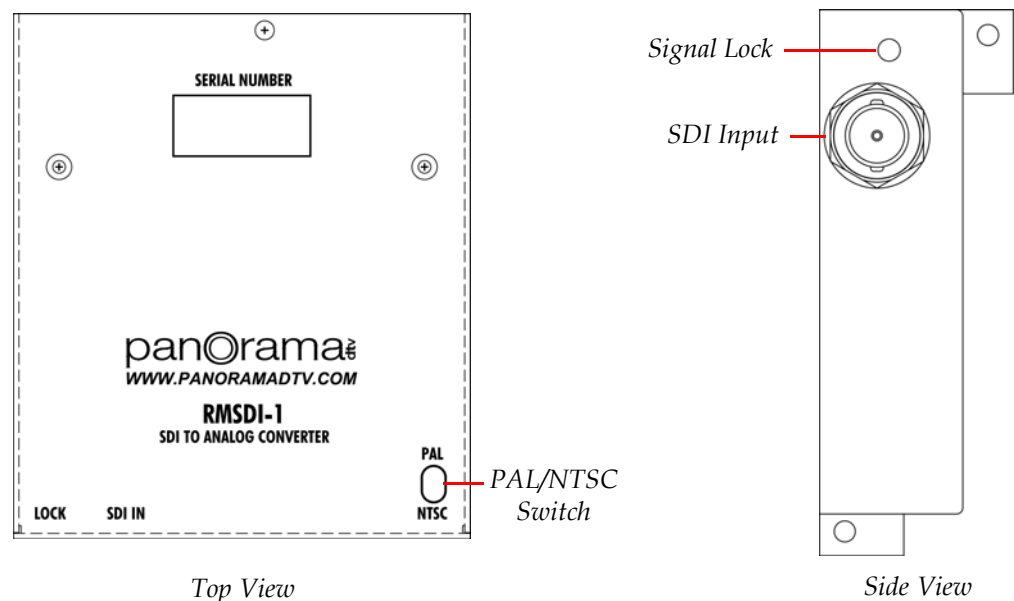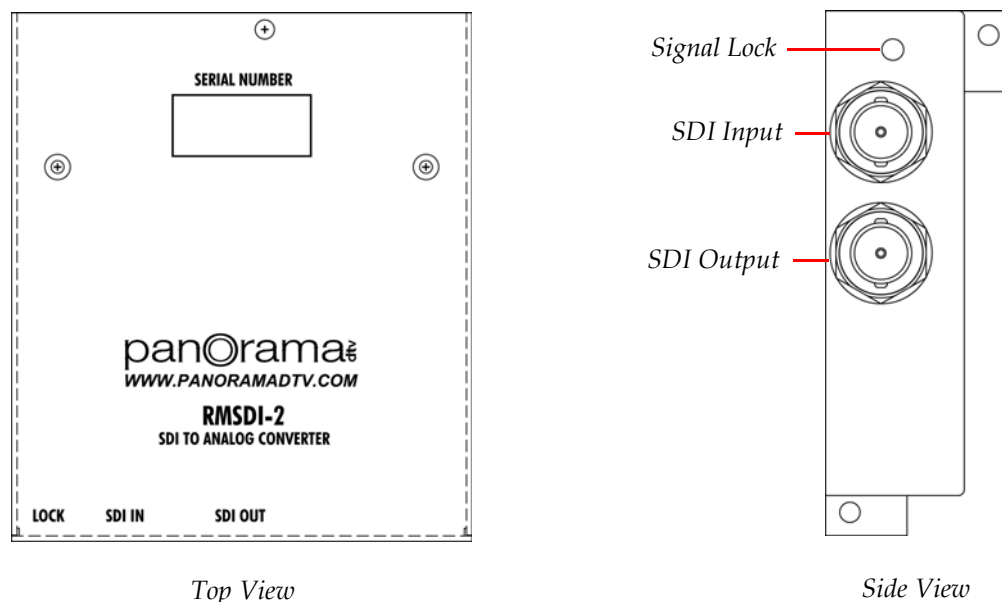**Figure 1—4   RMSDI-1 Optional SDI Input Modules**

Top View

Side View

Figure 1—5   RMSDI-2 Optional SDI Input Modules

Top View   *Side View*

SDI Lock Indicator: This LED glows green to indicate a locked and valid SDI signal.
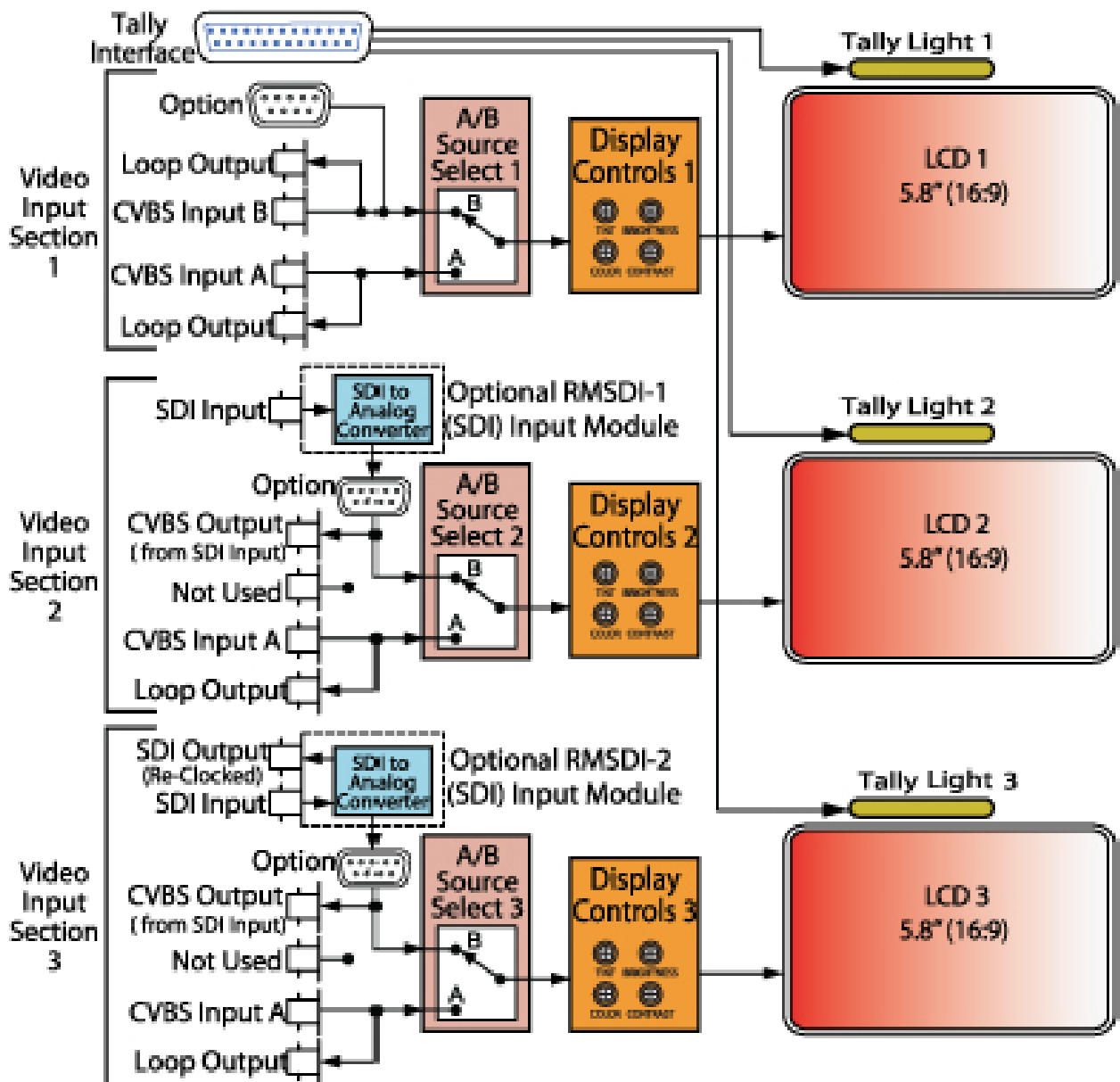
SDI Input Connector: Connect SDI signals to this female BNC connector.

SDI Output Connector: (RMSDI-2 only) Outputs a re-clocked replica of the SDI input signal.

Technical Functional Overview

illustrates the functionality of the RM-3358W-2C.

Figure 1–6   **Block Diagram of the RM-3358W-2C**

The diagram above shows an optional **RMSDI-1** SDI input module installed to the Source B option connector for Display Section 2, and an **RMSDI-2** SDI input module installed to the Source B option connector for Display Section 3.