Film-Tech

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WATCHDOG
CINEMA STATUS PANEL

INSTALLATION AND
OPERATION MANUAL

- Cinema Status Monitor for up to 32 cinemas

- Easy-to-see LED indication of cinema status

- Serial Data Buss for simple wiring

- Multiple units from same data buss.

- Works with SMART Showmation and Panalogic Automation Systems

- Audible and Visual film break alarms

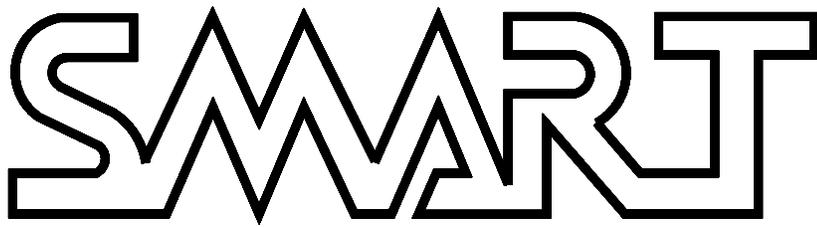- UL Approved power pack and electrical mounting box

SMART
Devices, Inc.

watchdog manual D.p65

SMART Devices, Inc.

CONTACT

SMART can be reached by telephone from 8:00 AM to 5:00 PM Monday - Friday if you have questions or need technical support regarding this or any other SMART product. The phone number is toll free, 1-800-45-SMART (1-800-457-6278). The FAX number is 1-770-449-6728.

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service@smartdev.com for service questions or tech support
sales@smartdev.com for sales questions
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INTRODUCTION

The SMART Watchdog Cinema Status Panel is the perfect complement to the SMART Showmation Cinema Automation System. It provides a visual as well as an audible indication of the show status in up to thirty two cinemas. Multiple Status Panels can be used in a multiplex, mounted in the booth, at the concession stand, in the manager's office, and anywhere else status information is
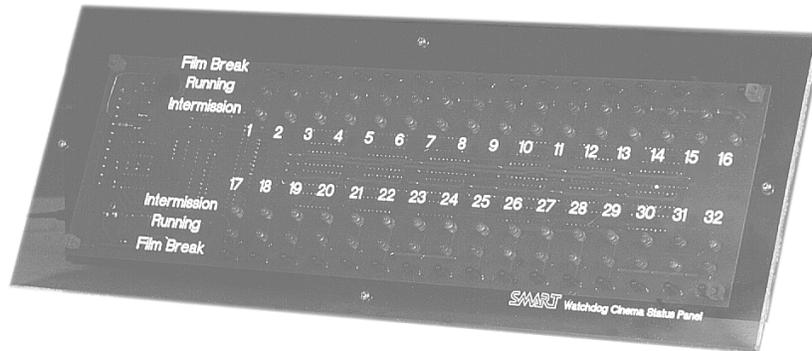
desired. The front panel is smoked acrylic through which a series of LED's light to indicate either INTERMISSION, RUNNING, or FILM BREAK.   The front panel is available in either a horizontal or vertical mounting configuration. A UL listed power pack and UL listed flush mount metal enclosure is provided for the Status Panel. During a film break, a Red LED flashes and an audible alarm sounds to alert the cinema staff to the break. The LED continues to flash until the film is repaired and re-started. The audible alarm sounds for either 5 seconds or 10 seconds (alarm time is set by the installer). The wiring interface is extremely simple consisting of only a 4 conductor + shield cable (such as Belden 8723).

Specifications

The Watchdog Cinema Status Panel is a micro-controller based indicator panel which monitors the show status of multiple cinemas.

Number of Cinemas	32 Screens max
Refresh Rate	3 Seconds max
Intermission Indication	Orange LED
Running Indication	Green LED
Film Break Indication	Flashing Red LED and Audible Alarm
Alarm Time	5 or 10 Seconds

Serial Data	Showmation Format or Panalogic Format
Configuration	Master or Slave
Mounting	Horizontal or Vertical
Power Requirements	12 VDC to 16 VDC 300 mA
AC Line *	120 VAC, 0.5 Amps max

* Power is supplied through a 120 VAC to 12 VDC Power Pack. For 220 VAC to 240 VAC

INSTALLATION
Initial

The first step in the installation process is to determine the locations where the Status Panels will be mounted. After this has been done, remove the 4 thumbscrews that attach the front panels to the metal enclosures, and set the front panels aside. The metal enclosures must be placed into cutouts in the wall using standard practices for mounting electrical enclosures, and an electrician must provide 120 VAC service to the duplex outlets located inside the metal enclosures. The current requirement is less than 1/2 Ampere per Status Panel. The box may also be surface mounted if desired, but this does not provide very good cosmetics and should be avoided if possible.

When the metal enclosure is installed, the outlet box inside the enclosure must be located to the **right** if horizontally mounted or to the **bottom** if vertically mounted. If this is not done properly, the panel will not fit in the enclosure.

Configuration

The Status Panels have several options which must be set by the installer. Setting these options consists of turning DIP switches ON or OFF. See Figure 1 for DIP switch details.

The first option is Master/Slave. Only ONE of the Status Panels can be set as Master, and the others must be set as Slaves. Setting SW1-5 down selects Slave mode. Up is Master Mode (factory setting)

The second option is the timer for the audible alarm. This can be set for 5 seconds or 10 seconds. Setting SW1-4 down selects 5 seconds. Up selects 10 seconds (factory setting).

The third option is for Horizontal or Vertical mounting. Setting SW1-3 down selects Vertical mounting. Up selects Horizontal mounting (factory setting).

The fourth option is for Showmation data or RS232 data. This option is reserved for future use with other automation systems (such as the Panalogic) or computerized theatre information systems. Setting SW1-2 down selects RS232 data. Up selects Showmation data (factory setting). If you change this factory setting, the unit will not work with the SMART Showmations.

SW1-1 is used for factory testing but may also be used as a field troubleshooting aid. If SW1-1 is down, then the LEDS will light up 8 at a time and will sequence through 12 rows and repeat. This is a good test to see if the basic hardware is operating properly. Up is normal mode (factory setting).
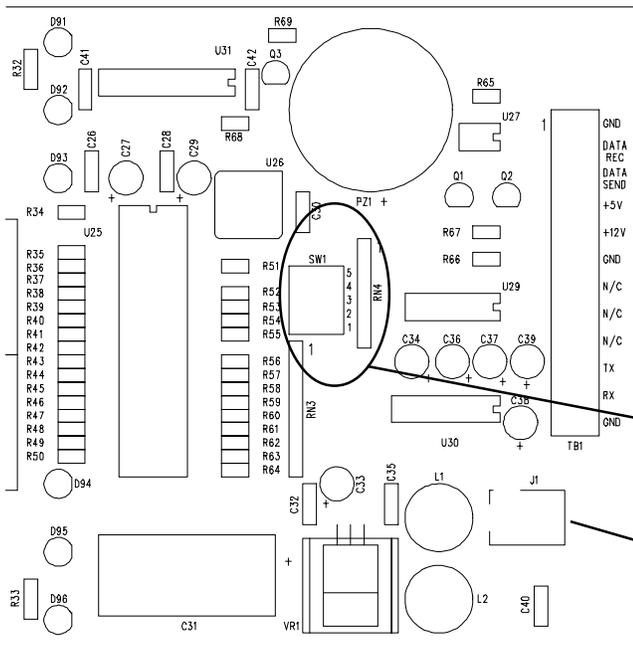
DIP Switch	Up Function	Down Function
SW1-1	Normal	Test
SW1-2	Showmation Data	RS232 Data
SW1-3	Horizontal	Vertical
SW1-4	10 Second Alarm	5 Second Alarm
SW1-5	Master	Slave

DIP Switch SW1 located near terminal strip end of printed circuit board

FIGURE 1

Power Jack

Data Cable Wiring

If the data wiring has not previously been done, then the wiring must be run from each automation system to the Status Panel(s). See the section on Page 7 titled Data Cable Routing and Connections for details. See Figure 2 on this page for the location of the Data Connection Terminals on the Watchdog printed circuit board.

RS232 Data Conncetions

If you have ordered the Watchdog Panels for use with a Panalogic Automation System, there will be a separate page enclosed with this manual detailing the connection procedures to follow for hookup.

Power Pack Connections

Connect the Power Pack plug to J1 (shown in Figure 1). Plug the Power pack into the AC outlet mounted inside the metal enclosure.

Front Panels

If you have ordered horizontal and vertical front panels, select the one which matches the mounting orientation you have chosen. The Watchdog normally ships with the horizontal panels in place if both panel types have been ordered. If vertical mounting is desired, remove the circuit board from the horizontal panel, and mount it on the vertical panel.

Be careful to not overtorque the screws which mount the pc board to the front panel as the acrylic standoffs may be sheared off if too much torque is applied.

Final Assembly

Dress the wires inside the metal enclosure, and secure the front panel/pc board assembly to the metal enclosure with the 4-40 thumb screws.

OPERATION

The Watchdog Cinema Status Panel is completely automatic in normal operation. It is only necessary to look at the panel to see the status in all cinemas. In the event of a film break, the red LED will flash and the audible alarm will sound. The alarm will stop after the time out period (5 or 10 seconds as set up by the installer). The LED will continue to flash until the break has been repaired and the projector re-started. Intermission is indicated by an orange LED and running by a green LED.

FIGURE 2

Data Connection Terminals
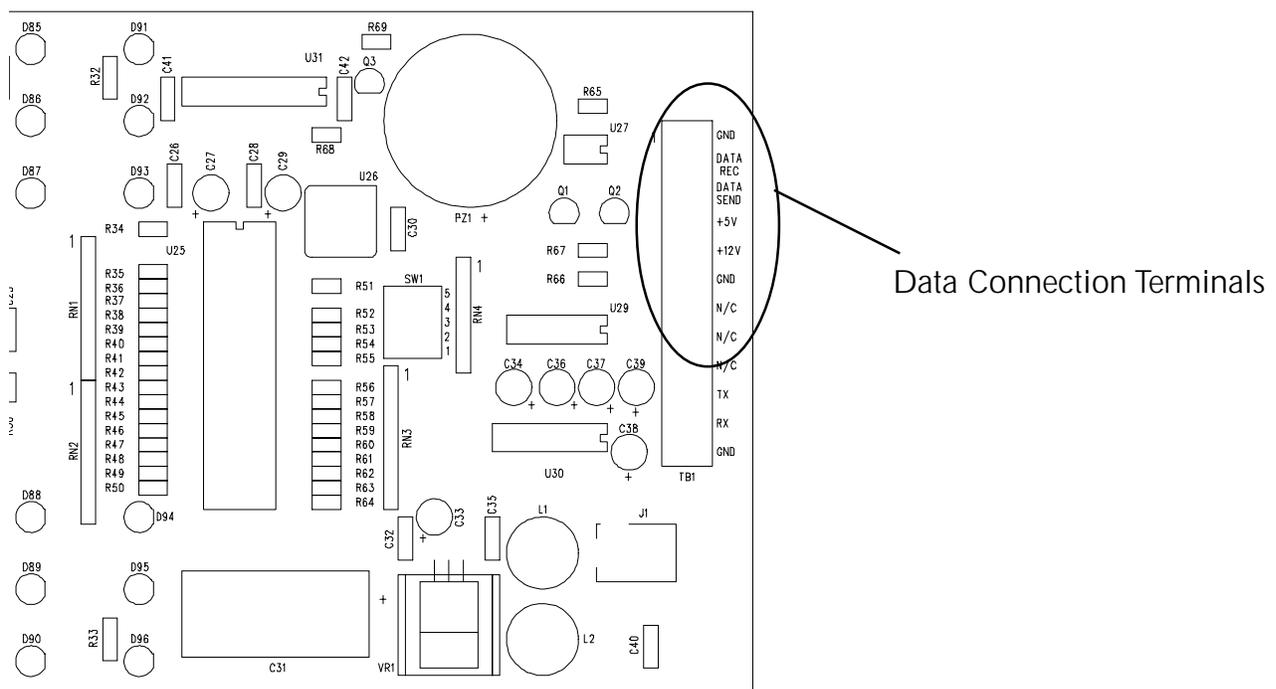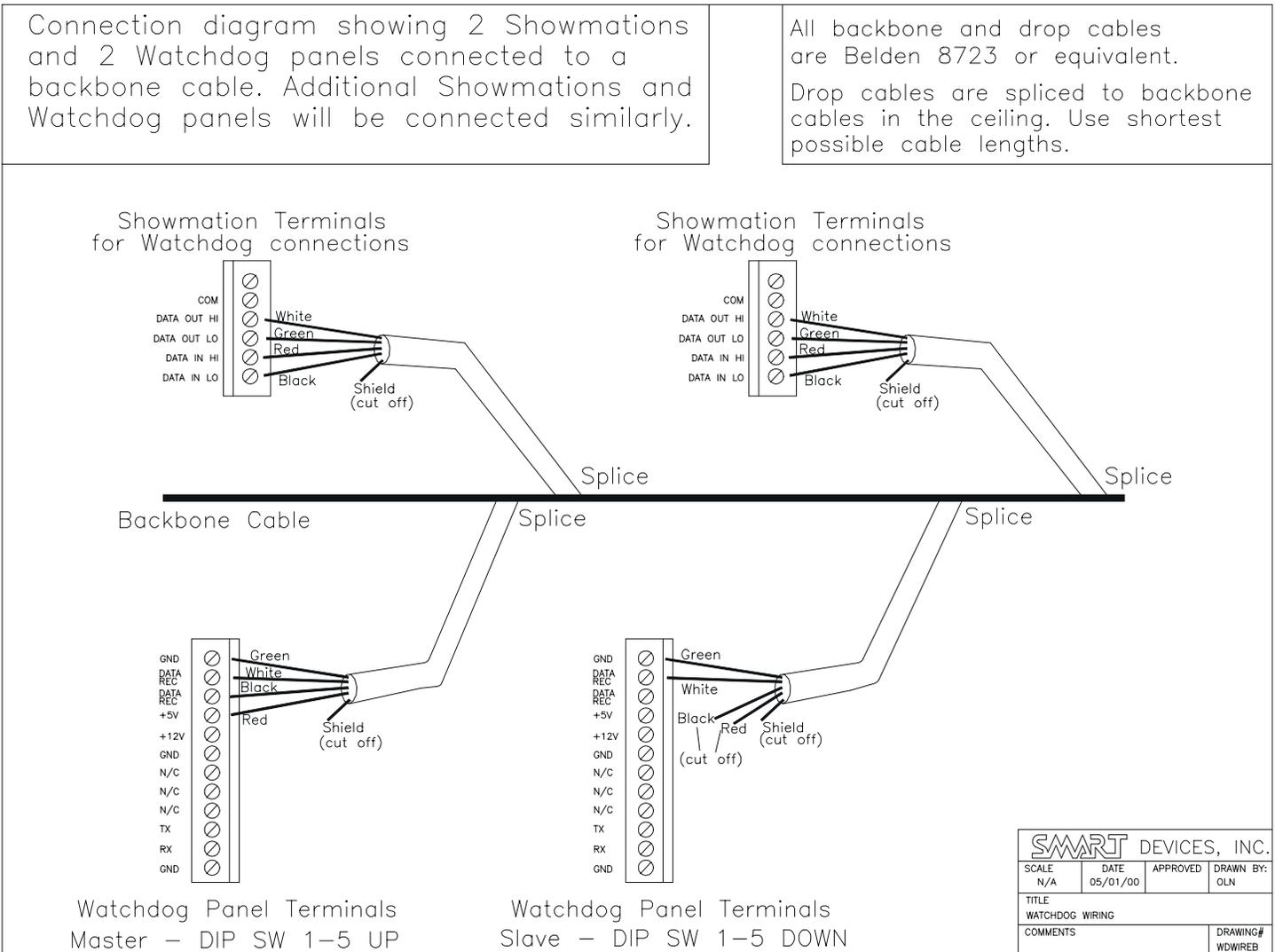
Data Cable Routing and Connections

PLEASE NOTE:
It is necessary to minimize the total length of wiring between all Watchdog Panels and Showmation boards. This is to keep signal degradation to a minimum. If there is too much total cable length which causes the cable capacitance to rise too high, **then the system will cease working**. Also remember that different types of cables exhibit different capacitance per foot, so a total length of one type of cable may not work while another type of cable of the same length may work properly.

We recommend the use of a four conductor cable such as Belden 8723 or its equivalent. Note that in ALL cases, the SHIELD of the cable is cut off and not connected at all. This has been found to significantly reduce cable capacitance and allow longer lengths of cable to be run.

Please refer to the typical wiring diagrams on this page and on Page 8 for a good overview of proper cable routing and connections.

FIGURE 3

Connection diagram showing 2 Showmations and 2 Watchdog panels connected to a backbone cable. Additional Showmations and Watchdog panels will be connected similarly.

All backbone and drop cables are Belden 8723 or equivalent.

Drop cables are spliced to backbone cables in the ceiling. Use shortest possible cable lengths.

Typical installation showing
5 Watchdog Panels
and 14 screens

WD

WD   WD

WD   WD

BACKBONE CABLES

Run backbone cables down the
middle of each booth, and splice
drop cables from the backbone
cables to each automation and
to each Watchdog panel.

Keep all cables as short as possible.

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TITLE WATCHDOG WIRING			
COMMENTS			DRAWING# WDWIREA

FIGURE 4

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