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Instruction Manual

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TimeView 400 Display Clock

Model 8177

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Time of Day Product

Five Year Warranty

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Extended warranties can be purchased for additional periods beyond the standard five year warranty. Contact Spectracom during the last year of the standard five year warranty for extended coverage.

6/1/98

Table of Contents

SECTION 3 OPERATION

LIST OF TABLES AND ILLUSTRATIONS

GENERAL INFORMATION

1.0 INTRODUCTION

The Spectracom® Model 8177 TimeView 400, shown in Figure 1-1, is a synchronized display clock. TimeView 400 features 4.0 inch LED digits which can be viewed from 150 feet away. The clock displays traceable time when connected to a Spectracom NetClock® Master Clock. The display is configurable for 12- or 24-hour time format and time zone offsets.

TimeView 400 displays may also synchronize to a host computer running a network timekeeping system, or manually set for stand-alone operation.

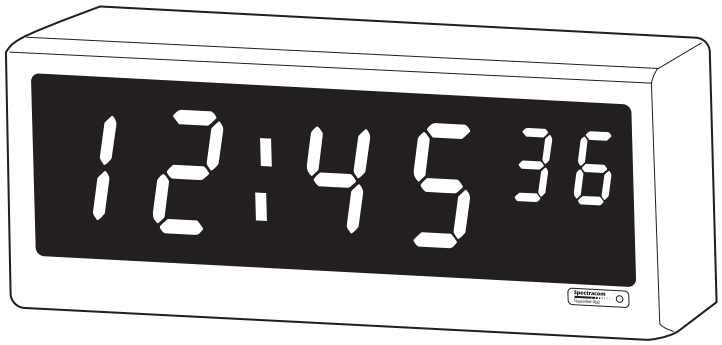

FIGURE 1-1 MODEL 8177 TIMEVIEW 400

1.1 FEATURES

The Spectracom TimeView 400 offers these features:

- **Displays traceable time when connected to a NetClock Master Clock. Clocks may also be synchronized from a computer or set manually.**
- **Automatic data format and baud rate detection makes set up and installation easy.**
- **Configurable display for 12- or 24-hour format and time zone offsets.**
- **Large 4.0 inch display digits offer exceptional visibility.**

1.2 WARRANTY INFORMATION AND PRODUCT SUPPORT

Find warranty information on the inside cover of this manual. Should it become necessary to exercise the warranty, contact Spectracom Corporation to obtain a replacement or service.

Spectracom continuously strives to improve its products and greatly appreciates any customer feedback. Direct any comments or questions regarding application, operation, or service to Spectracom's Customer Service Department. Customer service is available Monday through Friday from 8:00 AM to 5:00 PM Eastern time at 585-381-4827.

Product support is also available by e-mail. Questions on equipment operation and applications may be e-mailed to Spectracom at:

techsupport@spectracomcorp.com

Visit our web page for Spectracom product information at:

http://www.spectracomcorp.com

In addition, please contact customer service to obtain a Return Material Authorization Number (RMA#) before returning any device to Spectracom Corporation. Please provide the serial number and failure symptoms.

Transportation to the factory is to be prepaid by the customer.

1.3 MANUAL ERRATA AND SPECIAL DOCUMENTATION

Information concerning manual corrections or changes made to the TimeView are found on the errata sheet located at the rear of this manual. Please review and incorporate changes into this manual whenever an errata sheet is included.

Spectracom will make equipment modifications upon special request. The documentation associated with any modification is also located in the back of this manual.

1.4 UNPACKING

Upon receipt, carefully examine the carton and its contents. If there is damage to the carton which results in damage to the unit, contact the carrier immediately. Retain the carton and packing material in the event the carrier wishes to witness the shipping damage. Failure to report shipping damage immediately may forfeit any claim against the carrier. In addition, notify Spectracom of shipping damage or shortages to obtain a replacement or repair services.

Each Model 8177 is shipped with an instruction manual and an ancillary kit. Table 1-1 lists the items included in the ancillary kit. Check that all items have been received.

Quantity	Part Number	Description
1	T00058	AC Adapter 12 VDC, 1A
1	P13006	6-position Terminal Block
2	HD0001	Plastic Anchor
2	H100-1000-0016	Screw, #10 x 1", Sheet Metal
1	072008	TimeView Mounting Instructions
1	MP00719	Cable Clamp
1	H04060	4-32 Screw, 3/8"
1	H04001	#4 Split Lockwasher
1	H04002	#4 Flatwasher

TABLE 1-1 ANCILLARY KIT

1.5 SPECIFICATIONS

This section lists the specifications for the Model 8177 TimeView 400.

1.5.1 RS-485 Input

Connector: **6-position removable terminal block (supplied).**

Input Signal: **RS-485 ASCII data stream in Format 0 or 1 from NetClock Master Clock or Computer.**

Baud Rate: **300 to 9600; automatic bit rate detection with NetClock operation. 9600 baud with computer set operation.**

Max. Cable Length:	**4000 ft. using shielded twisted pair.**
Input Impedance:	**Switch selectable, 120 ohm termination or high impedance.**
Transient Protection:	**Protected by transient voltage suppressors.**

1.5.2 RS-485 Repeater

Output Signal:	**Regenerated RS-485 signal of applied input data stream.**
Max Loading:	**32 devices.**

1.5.3 User Selectable Options

TimeView 400 switches and controls select the following options: 12- or 24-hour display format, time zone offsets, display intensity, time set from NetClock Master Clock, computer, or manually entered, and RS-485 termination.

1.5.4 Power

Power Source:	**UL listed AC wall adapter (supplied).**
Input:	**115 VAC ±10%, 60 Hz, 22 watts.**
Output:	**12 VDC, 1 A.**
Connector:	**Barrel, 5.5 mm O.D., 2.1 mm I.D., positive shell, negative center.**
Optional Power:	**International Power Supply allows operation from a 90-240 VAC, 47-63 Hz power source. Specify part number PS00142.**

1.5.5 Physical and Environmental

Digit Size:	**4.0" hours and minutes** **2.3" seconds.**
Overall Size:	**7.5" H x 21"W x 3.375" D.**
Wall Mount:	**16" centers.**
Weight:	**8.5 lbs.**
Temperature:	**0° to 50° C operating range.**

INSTALLATION

2.0 INTRODUCTION

This section describes the TimeView 400 mounting, switch setup, connection to a NetClock or computer synchronization source and manual set operation.

2.1 MOUNTING INSTRUCTIONS

The ancillary kit includes screws and plastic anchors for wall mounting the clock. Tools needed for mounting are a Phillips screwdriver, a ruler, and a 1/4" drill.

TimeView is designed to mount over a duplex outlet to conceal the power adapter and data cables. For installations where this is not possible, notches are provided along the top and bottom edges for routing power and data cables.

To install TimeView over a duplex outlet, lay a reference line over the cover plate as shown in Figure 2-1.

To provide clearance for the PS00142 International Power Supply, locate the left mounting hole 12 inches from the center of the outlet. Locate the right mounting hole 4 inches from the center of the outlet.

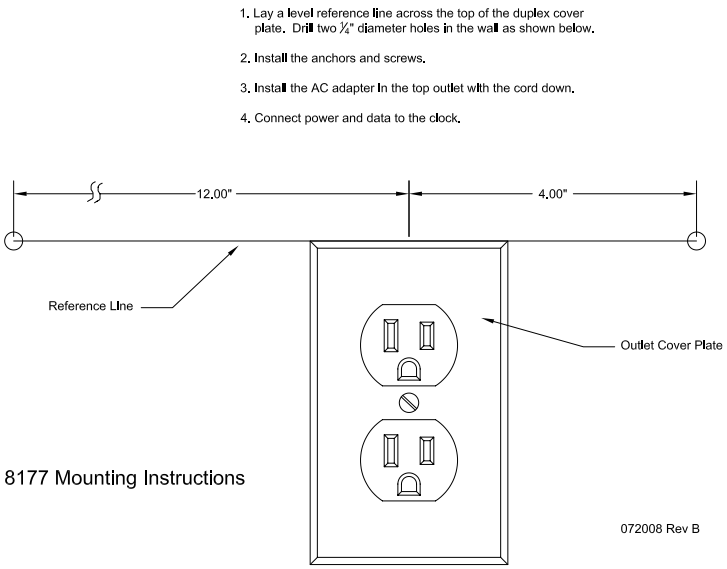

FIGURE 2-1 DUPLEX MOUNTING HOLES

NOTE: When hanging the clock, use the outer two cover screws as a guide for locating the mounting holes.

2.2 PREPARATION FOR USE

This section describes the configuration selections for the Model 8177 TimeView 400. The rear panel 10-position DIP switch selects the clock options. The TimeView 400 is factory-shipped for 24-hour display; no time zone offsets, NetClock synchronization, and RS-485 termination off.

2.2.1 Time Zone Offset

The time zone offset feature allows clocks synchronized to a NetClock or computer to display time in alternate time zones. The selected time zone offset value is subtracted from the applied input data stream. DIP switches 1 through 5 enter the binary equivalent of the offset value of 0 to 23. Table 2-1 lists common offset values from a Greenwich Mean Time (GMT) or Coordinated Universal Time (UTC) source during periods of Standard time and Daylight Saving Time. Table 2-2 lists the DIP switch settings for the offset values shown in Table 2-1. See Section 3.2.4 for a complete list of offset and switch settings.

TIME ZONE	STANDARD TIME (October-April)	DAYLIGHT SAVING TIME (April-October)
Atlantic	4	3
Eastern	5	4
Central	6	5
Mountain	7	6
Pacific	8	7

TABLE 2-1 COMMON OFFSET VALUES

NOTE: Typically the Spectracom Master Clock is configured to provide localtime. This eliminates the need to enter additional time zone offsets into the TimeView 400. Place DIP switches 1 through 5 in the OFF position when time zone offsets are not required.

OFFSET VALUE	DIP SWITCH NUMBER / SETTING				
	1	2	3	4	5
0	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF
5	ON	OFF	ON	OFF	OFF
6	OFF	ON	ON	OFF	OFF
7	ON	ON	ON	OFF	OFF
8	OFF	OFF	OFF	ON	OFF

TABLE 2-2 TIME ZONE SWITCH SETTINGS

2.2.2 12- or 24-Hour Display

The TimeView 400 can display time in a 12- or 24-hour format. Place DIP switch 6 in the ON position for 12-hour display format and OFF for 24-hour time display.

2.2.3 Synchronization Source

DIP switch number 7 selects the source of the synchronizing data stream. Place switch 7 in the OFF position when the TimeView is connected to a NetClock Master Clock or Model 8186 TimeBridge. Place switch 7 in the ON position for computer set applications.

2.2.4 Termination

The ends of an RS-485 transmission line must be terminated to preserve the signal waveform and prevent reflections. The TimeView 400 termination switch, DIP switch 10, terminates the RS-485 data bus into 120 ohms. Place switch 10 in the ON position when the clock is installed at the end of the RS-485 data bus. Otherwise, place this switch in the OFF position. Refer to Section 2.4 for additional information on termination.

2.2.5 Power Connection

The standard clock is provided with a 115 VAC 50/60 Hz wall mount adapter. Units ordered with PS00142, International Power Supply, are equipped with a 90 to 240 VAC, 47/63 Hz power adapter mounted to the rear panel. The international power adapter is shipped with a line cord compatible with AC receptacles (NEMA 5-15R) commonly found in the United States and Canada.

Both adapters are terminated with a barrel type connector which plugs into the rear panel DC power jack. Secure the power connector by installing the cable clamp included in the ancillary kit as shown in Figure 2-2. Secure the PS00142 power adapter ground lead to the clock chassis using the supplied hardware.

NOTE: The PS00142 Power Adapter may be equipped with a safety ground lead on the DC connector end. Secure this lead to the clock chassis using the hardware supplied in the ancillary kit.

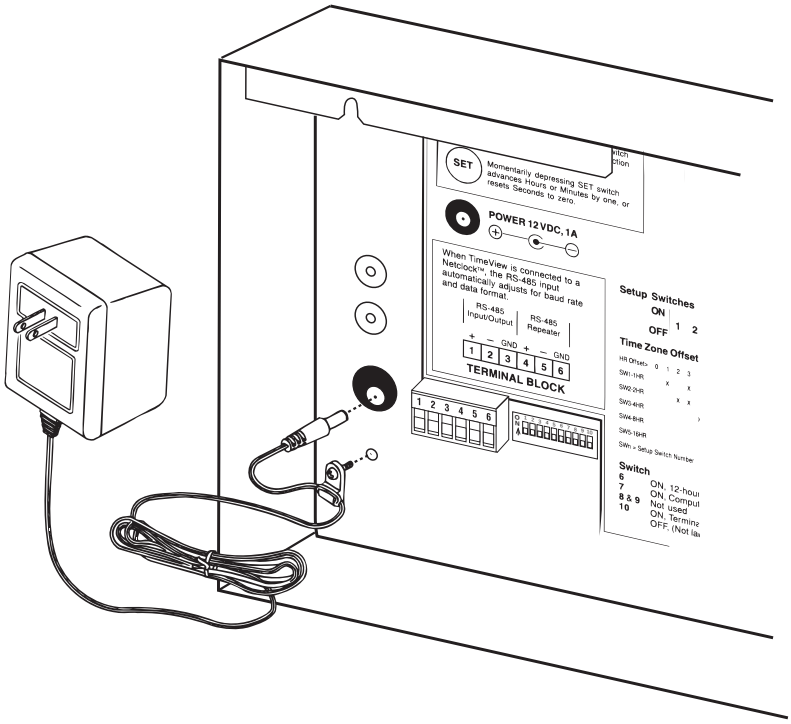

FIGURE 2-2 CABLE CLAMP INSTALLATION

2.2.6 Brightness Adjust

The display brightness is adjustable to suit various lighting conditions. The brightness potentiometer is accessed through the hole in the lower right corner of the display. A small flat-bladed screw driver is required.

2.3 SYNCHRONIZATION CONNECTION

The TimeView 400 can be synchronized by the following Spectracom products:

Model 8182, NetClock/2, WWVB Master Clock
Model 8183, NetClock/GPS, GPS Master Clock
Model 8183A, NetClock/GTP, GPS Global Time Provider
Model 8186, TimeBridge, Wireless Time Link
Model 8189, NetClock/NTP, GPS Network Time Provider

The TimeView 400 connects to the RS-485 output port found on the NetClock Master Clocks and TimeBridge. These ports provide a continuous once-per-second time data stream. The TimeView 400 automatically detects the data format and baud rate of the synchronizing data stream.

2.3.1 Connection to NetClock/2

The Model 8182 NetClock/2, provides the RS-485 time data stream on the Remote Output connector. The Remote Output is a DB9 female connector. Refer to Figure 2-3 for connector pin numbering.

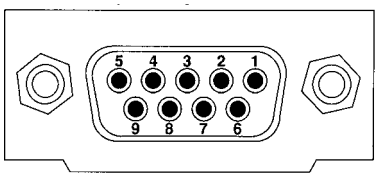

FIGURE 2-3 NETCLOCK/2 REMOTE OUTPUT CONNECTOR

Connect the TimeView 400 to the NetClock/2 RS-485 data bus as shown in Figure 2-4. The mating 6-pin terminal block is furnished in the TimeView 400 ancillary kit.

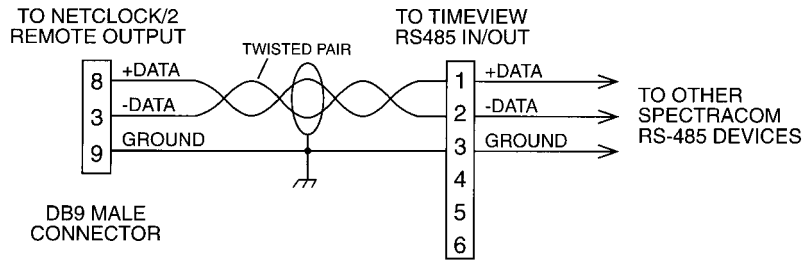

FIGURE 2-4 CONNECTION TO NETCLOCK/2

To simplify installation, Spectracom offers a NetClock/2 RS-485 interface cable. This cable has the mating RS-485 DB9 male connector on one end and prepped leads on the other end. Specify part number CA14xxx, where xxx equals the length in feet.

2.3.2 *Connection to GPS Master Clocks or TimeBridge*

All Spectracom GPS synchronized clocks and Model 8186 TimeBridge provide the RS-485 synchronizing data stream on a 3-position terminal block. Connect the TimeView 400 to the time source as shown in Figure 2-5.

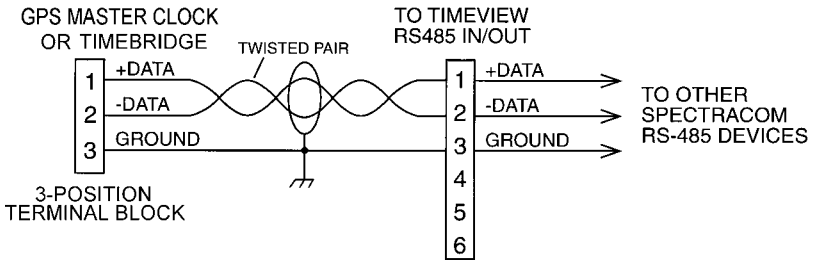

FIGURE 2-5 GPS MASTER CLOCK AND TIMEBRIDGE CONNECTION

The mating terminal blocks are provided in the equipment ancillary kits.

NOTE: The TimeView 400 accepts only Format 0 or Format 1 data streams. Configure the RS-485 output port on the NetClock or TimeBridge to provide Format 0 or Format 1.

2.4 INTERCONNECTION INFORMATION

Figures 2-6 and 2-7 illustrate typical RS-485 time data bus interconnections. Follow the RS-485 guidelines listed below when constructing the RS-485 time data bus.

2.4.1 RS-485 Guidelines

Background: RS-485 is a balanced differential transmission that offers exceptional noise immunity and cable lengths up to 4000 feet using twisted pair cable.

Cable selection: Low capacitance, shielded twisted pair cable is recommended in installations where the RS-485 cable length is expected to exceed 1500 feet. Table 2-3 suggests some manufacturers and part numbers for extended distance cables. These cables are specifically designed for RS-422 or RS-485 applications; they have a braided copper shield, nominal impedance of 120 ohms, and a capacitance of 12 to 16 picofarads per foot.

RS-485 cable may be purchased from Spectracom. Specify part number CW04xxx, where xxx equals the length in feet.

MANUFACTURER	PART NUMBER
Belden Wire and Cable Company 1-800-BELDEN-1	9841
Carol Cable Company 606-572-8000	C0841
National Wire and Cable Corp. 232-225-5611	D-210-1

TABLE 2-3 CABLE SOURCES FOR RS-485 LINES OVER 1500 FEET

For cable runs less than 1500 feet, a lower-cost twisted pair cable may be used. Refer to Table 2-4 for possible sources.

NOTE: Cat 5 network cable may also be used for cable runs less than 1500 feet.

MANUFACTURER	PART NUMBER
Alpha Wire Corporation 1-800-52ALPHA	5471
Belden Wire and Cable Company 1-800-BELDEN-1	9501
Carol Cable Company 606-572-8000	C0600

TABLE 2-4 CABLE SOURCES FOR RS-485 LINES UNDER 1500 FEET

Termination: Terminate the end devices on the RS-485 time data bus. For a one-way bus installation (as shown in Figure 2-6), terminate the last device on the bus. In a split bus installation (Figure 2-7) terminate the devices installed on the extreme ends of the bus.

The TimeView 400 includes a built-in termination switch that places a 120-ohm termination resistor across the RS-485 line. Place DIP switch number 10 in the ON position when the TimeView 400 is located at the end of the time data bus.

Connection method: The RS-485 transmission line must be connected in a daisy-chain configuration as shown in Figures 2-6 and 2-7. A branched or star configuration is not recommended.

Taps into the main transmission line (stubs) should be kept as short as possible. Long stub lengths affect the bus impedance and capacitive loading that could result in reflections and signal distortion.

Loading: Each NetClock or TimeBridge RS-485 output can drive up to 32 RS-485 devices, including the Spectracom products described below:

> The Model 8175 TimeView 230, is a display clock with 2.3-inch high green LED digits. The TimeView 230 terminal block input connects directly to the RS-485 data bus.
>
> The Spectracom Model 8179T TimeTap® is an RS-485 to RS-232 converter. The Model 8179T has a DB9 RS-232 interface which receives operational power from the RS-232 flow control pins RTS or DTR. The Model 8179T terminal block input connects directly to the RS-485 data bus.

The Model 8180 TimeTalk™ provides an audio time of day announcement to time stamp voice recorders or for broadcast over radio transmitters. The TimeTalk connects to the RS-485 data bus using DB9 connectors.

The Spectracom Model 8185 TimeBurst™ provides a digital time-of-day data burst to a radio transmitter. The TimeBurst, when used with the Spectracom Model 8186 TimeBridge, provides community-wide time synchronization to a single NetClock Master Clock. The Model 8185 terminal block input connects directly to the RS-485 data bus.

Spectracom Model 8188 NetClock/ETS is an Ethernet Time Server that supports NTP, SNTP and UDP/Time protocols. The Model 8188 accepts Formats 0 or 2 at 9600 Baud. The Model 8188 terminal block input connects directly to the RS-485 data bus.

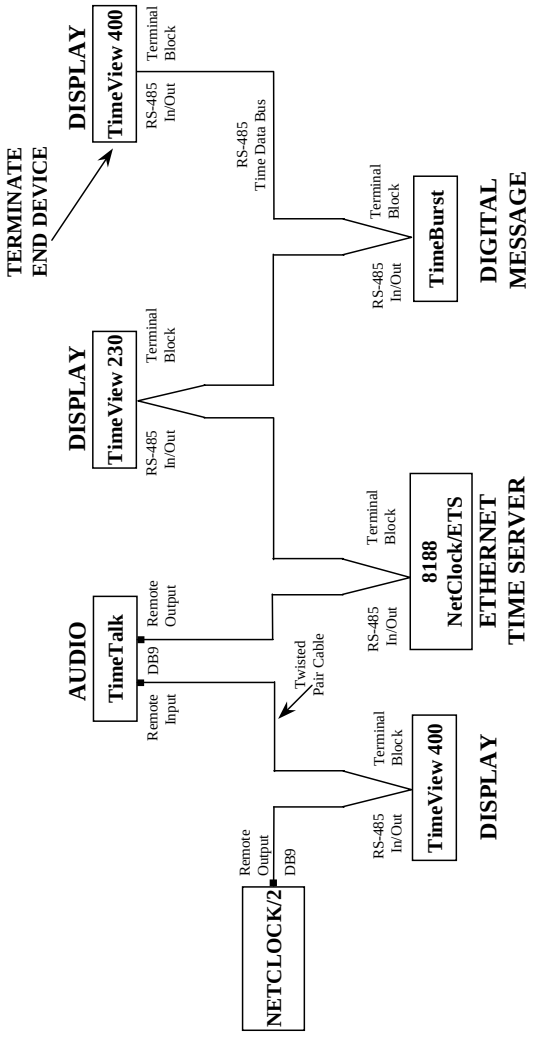

FIGURE 2-6 ONE-WAY BUS

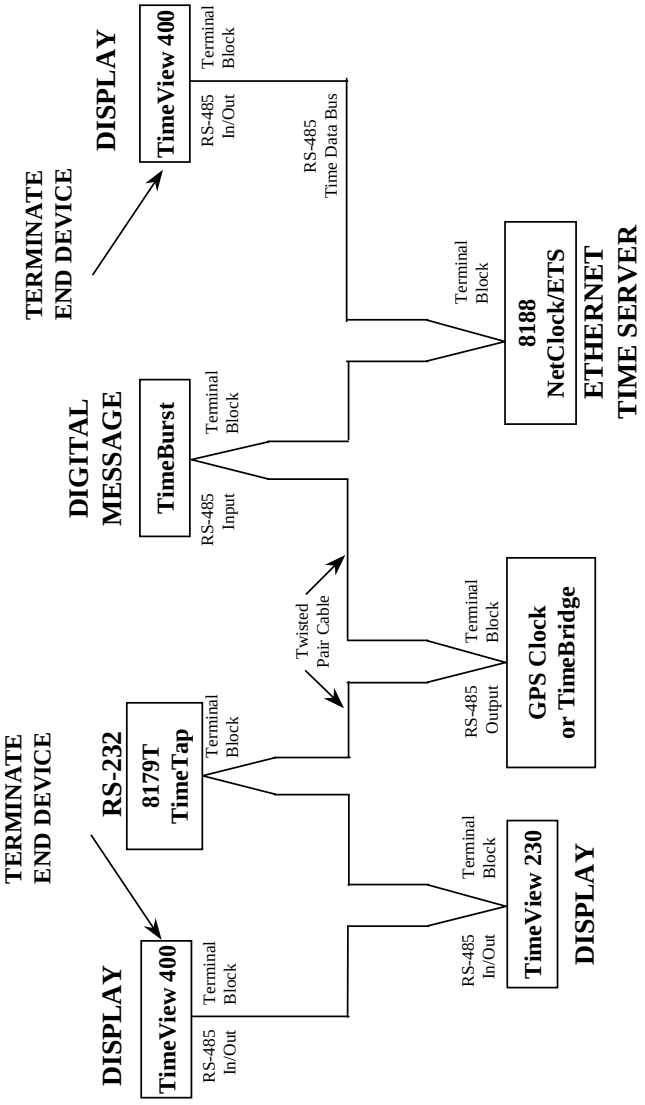

FIGURE 2-7 SPLIT BUS INSTALLATION

2.4.2 *RS-485 Repeater*

As stated in the previous section, RS-485 Guidelines, a NetClock or TimeBridge can drive up to 32 devices over a maximum cable length of 4000 feet. The guidelines also recommend the RS-485 transmission line be connected in a continuous daisy-chain configuration. A branched or star configuration is not recommended, as well as long stub lengths to the main transmission line. If these guidelines present an installation problem, the RS-485 Repeater output can be used. The Repeater output regenerates the synchronizing data stream applied to the RS-485 Input/Output terminal block connections. The Repeater output can drive an additional 32 devices over cable lengths up to 4000 feet.

The Repeater output may be used to reduce and simplify cable runs to devices located in different portions of the building. Figure 2-8 shows an installation where the backup dispatch consoles located in the basement requires synchronized time.

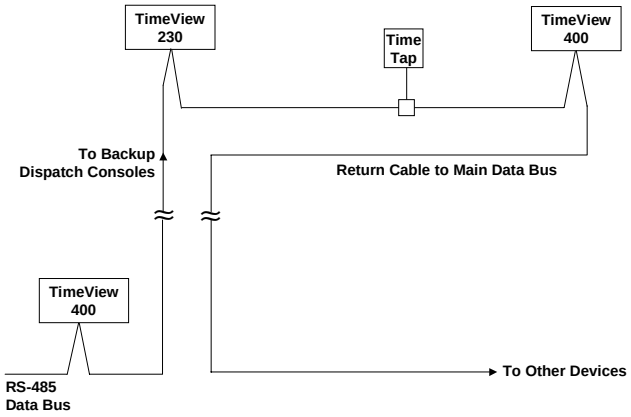

FIGURE 2-8 INSTALLATION NOT USING REPEATER OUTPUT

Figure 2-9 shows the same installation using the Repeater output. Note that the return cable to the main data bus is eliminated.

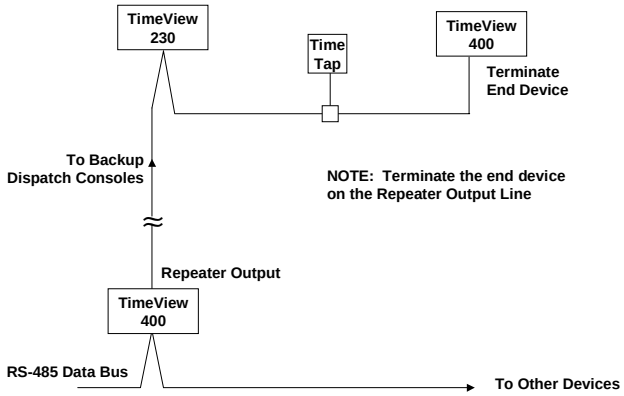

FIGURE 2-9 REPEATER OUTPUT USAGE

2.5 CONNECTION TO A COMPUTER

The TimeView 400 is configurable for computer set operation. The computer must have an RS-422/485 interface card installed, or an external RS-232 to RS-422/485 adapter to communicate with the clock. The computer can resynchronize the display as often as every second or a minimum of every four hours.

Spectracom offers the TS-1Win program to set the TimeView 230 and TimeView 400 display clocks from a Windows 95, 98, NT, ME or 2000 computer.

To enable computer set operation, place DIP switch number 7 in the ON position. Connect the clock terminal block to the RS-485 adapter or interface board as shown in Figure 2-10. If only one clock is connected to the computer terminal, terminate the RS-485 data bus by placing DIP switch 10 in the ON position.

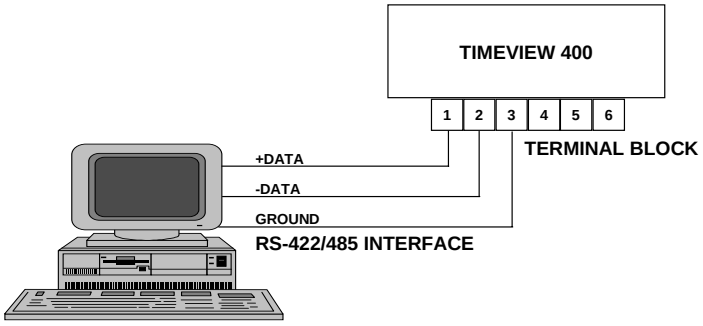

FIGURE 2-10 COMPUTER CONNECTION

Multiple TimeView 400 clocks can be synchronized by a single computer when connected as shown in Figure 2-11. Each clock must have DIP switch 7 ON to enable computer set operation. Terminate the last clock in the line by placing DIP switch 10 in the ON position.

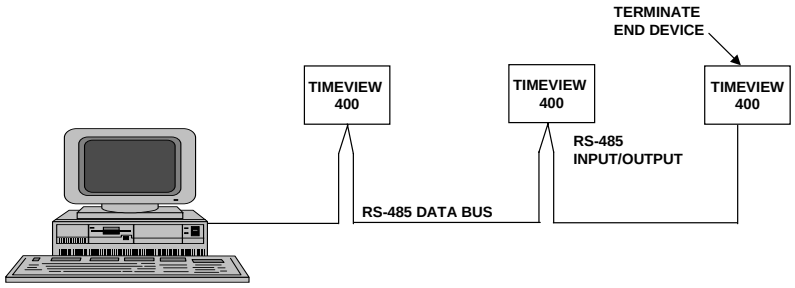

FIGURE 2-11 MULTIPLE CLOCK CONNECTION

The computer can synchronize up to 32 clocks over a total cable length of 4000 feet.

2.6 MANUAL SET PROCEDURE

The TimeView 400 can be manually set for operation as a stand-alone display clock. Time is entered using the rear panel MODE and SET switches. The MODE switch advances the clock through the setting process and the SET switch selects the time variables. Depressing and releasing the SET switch causes the clock to increment through the time variables. Depressing and holding this button causes the display to scroll through the time variables. The setting process sets the hours and minutes. Seconds are reset to zero at the end of the setting process.

TimeView 400 cannot be manually set when connected to an RS-485 data bus. The presence of the RS-485 data stream disables the MODE and SET switches.

2.6.1 Manual Set Procedure

To prepare the clock for Manual Set operation, place the termination switch, Switch 10, in the ON position. Switch 7 may be placed in either the COMPUTER SET position ON, or OFF for the NetClock SET mode. Apply power to the clock. Observe that the hours, minutes, and seconds digits light up sequentially.

2.6.1.1 Set Hours

Hours are entered in a 24-hour format, even if the 12-hour display format is selected. For example, when setting the TimeView 400 for 2:00 PM, enter 14 for the hours value. To set hours, depress and release the MODE switch. The hours digits blink and show the current hours value. If the displayed value is appropriate, depress the MODE switch to advance to the Set Minutes routine. To change the hours value, depress and release or hold down the SET button to advance through the hours variables. When the desired hour value is displayed, release the SET button and depress the MODE button to advance to the Set Minutes routine.

2.6.1.2 Set Minutes

The minutes digits blink and display the current minutes value. If the value is appropriate, depress the MODE switch to advance to the Set Seconds routine. To change the minutes value, depress and release or hold down the SET button to advance through the minutes variables. When the desired minutes value is displayed, release the SET button and depress the MODE button to advance to the Set Seconds routine.

2.6.1.3 Set Seconds

The seconds digits blink and display the current seconds value. If the value is appropriate, depress the MODE switch to exit from the Manual Set procedure. Seconds are not selected like the hours and minutes values. Depressing the SET button resets the seconds to "00" and exits the clock from the Manual Set procedure.

The clock will now run on its internal crystal timebase. Typical accuracy is within ±2 seconds per day.

OPERATION

3.0 INTRODUCTION

This section describes the TimeView 400 display, rear panel functions, and computer setting information.

3.1 DISPLAY

TimeView 400 Display, shown in Figure 3-1, features green 4.0 inch digits for the hours and minutes, and 2.3 inch digits for the seconds. Display brightness is adjustable to suit various lighting conditions. The brightness potentiometer is accessed through the hole located on the lower right corner of the clock. A small, flat-bladed screwdriver is required.

The time displayed can be derived from a NetClock Master Clock, computer, or manually set. The display is configurable for 12- or 24-hour time format and time zone offsets. Refer to Section 3.2.4 for switch configuration information.

FIGURE 3-1 MODEL 8177 DISPLAY

3.1.1 Fault Indications

The display communicates faults by flashing the seconds digits or sequentially flashing hours, minutes and seconds digits. This alerts the user that the time display is either not synchronized or not connected to its time source.

NetClock and TimeBridge Fault Indications

The TimeView 400 seconds flash when the NetClock Master Clock or TimeBridge TIME SYNC lamp is red. This failure could be due to a power failure or the time source is unable to receive its synchronization signal. The seconds digits will remain flashing until the time source reacquires time synchronization.

Sequentially flashing hours, minutes and seconds indicate that the TimeView 400 is no longer receiving the synchronizing data stream from the NetClock or TimeBridge. This condition could be caused by a broken or loose RS-485 connection or RS-485 driver/receiver failure. The display will continue to flash until the data stream is restored.

Computer Fault Indications

The display seconds flash when the TimeView 400 has not received a synchronizing data stream from the computer within four hours. The seconds remain flashing until the computer updates the clock.

3.2 REAR PANEL FUNCTIONS

Refer to Figure 3-3 Model 8177 Rear Panel, and the following paragraphs for information on the TimeView 400 rear panel functions.

3.2.1 RS-485 Interface

The RS-485 interface connector, shown in Figure 3-2, is a removable six-position terminal strip. The RS-485 data stream from a NetClock or computer are connected to Pins 1, 2 and 3 of the terminal block. Connect the non-inverted RS-485 data line to Pin 1, the inverted data line to Pin 2, and the cable shield to Pin 3. TimeView 400 accepts either Data Format 0 or 1 at baud rates from 300 to 9600 from a NetClock or 9600 baud from a computer. Refer to Section 2.3 for NetClock connection information and Section 2.5 for computer connection information.

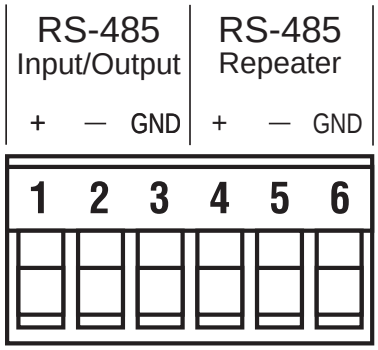

FIGURE 3-2 RS-485 TERMINAL BLOCK

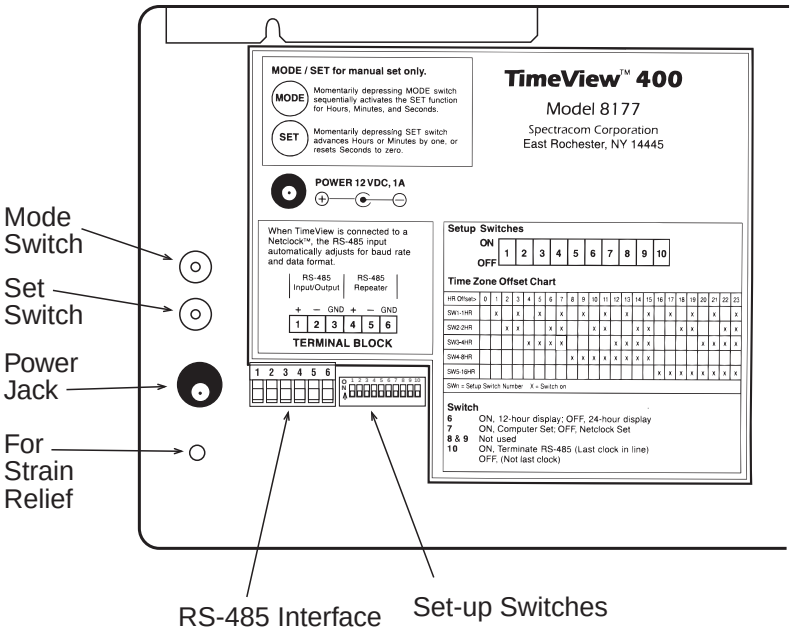

FIGURE 3-3 MODEL 8177 REAR PANEL

The Repeater output regenerates the synchronizing data stream applied to the RS-485 Input/Output connections. The Repeater output may prove useful in simplifying and reducing cable routing. Refer to Section 2.4.2 for additional information on the Repeater output usage.

3.2.2 Manual Set Switches

The MODE and SET switches manually set the TimeView 400 for operation as a stand-alone display clock. The MODE switch advances the clock through the setting process, and the SET switch selects the time variables. Refer to Section 2.6 for the Manual Set Procedure.

NOTE: The TimeView cannot be manually set when connected to a NetClock or TimeBridge. The presence of the RS-485 data stream disables the MODE and SET switches.

3.2.3 Power

The standard TimeView 400 is powered by the supplied 115 VAC to 12 VDC power adapter. The power jack accepts a barrel-type plug with a 5.5 mm O.D. and a 2.1 mm I.D. Replacement adapters are available from Spectracom. Specify Part Number T00058.

The PS00142, International Power Supply, accepts a wide voltage and line frequency range to allow operation nearly anywhere in the world. The optional power adapter is secured to the rear panel of the TimeView 400. The supplied line cord is compatible with AC receptacles (NEMA 5-15R) commonly found in the United States and Canada. Alternate type line cords or adapters may be obtained locally.

3.2.4 Configuration Switches

The TimeView 400 user-configurable options are selected using the 10-position DIP switch. The DIP switch, shown in Figure 3-4, selects the display format, time zone offset, RS-485 termination, and synchronization source.

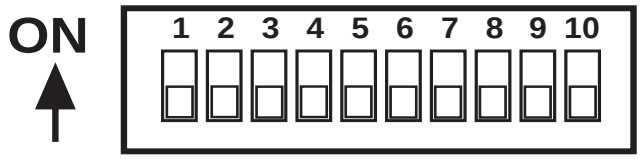

FIGURE 3-4 CONFIGURATION DIP SWITCH

The switches are continuously monitored and do not require power cycling the clock after changing switch settings. The following paragraphs describe the functions of the 10-position switch.

Switches 1 through 5 Time Zone Offset

The TimeView 400 can offset the time received from a NetClock, TimeBridge or computer to display time in other time zones. DIP switches 1 through 5 enter the binary equivalent of the offset value between 0 and 23. The selected time zone offset value is subtracted from the hours value received. Table 3-1 lists all possible offset values and their corresponding switch settings.

NOTE: Typically the Spectracom Master Clock is configured to provide local time. This eliminates the need to enter additional time zone offsets into the TimeView 400. Place DIP switches 1 through 5 in the OFF position when time zone offsets are not required.

NOTE: To assure proper operation only the Time Zone Switch settings listed in Table 3-1 may be utilized.

OFFSET HOURS VALUE	DIP SWITCH NUMBER / SETTING				
	1	2	3	4	5
0	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF
5	ON	OFF	ON	OFF	OFF
6	OFF	ON	ON	OFF	OFF
7	ON	ON	ON	OFF	OFF
8	OFF	OFF	OFF	ON	OFF
9	ON	OFF	OFF	ON	OFF
10	OFF	ON	OFF	ON	OFF
11	ON	ON	OFF	ON	OFF
12	OFF	OFF	ON	ON	OFF
13	ON	OFF	ON	ON	OFF
14	OFF	ON	ON	ON	OFF
15	ON	ON	ON	ON	OFF
16	OFF	OFF	OFF	OFF	ON
17	ON	OFF	OFF	OFF	ON
18	OFF	ON	OFF	OFF	ON
19	ON	ON	OFF	OFF	ON
20	OFF	OFF	ON	OFF	ON
21	ON	OFF	ON	OFF	ON
22	OFF	ON	ON	OFF	ON
23	ON	ON	ON	OFF	ON

TABLE 3-1 TIME ZONE OFFSETS

Switch 6 12 or 24-hour Display

This switch configures the TimeView 400 display for 12- or 24-hour time format. To display time in a 12-hour format, place this switch in the ON position.

Placing this switch in the OFF position configures the display for 24-hour time format.

Switch 7 Synchronization Source

This switch configures the clock for operation from a NetClock Master Clock or computer synchronization source. Place this switch in the OFF position when the clock is connected to a NetClock or TimeBridge.

For computer set applications, place this switch in the ON position.

Switch 8 and 9 Reserved

DIP switches 8 and 9 are reserved for test functions. To ensure proper operation, place these switches in the OFF position.

Switch 10 Termination

This switch terminates the RS-485 data bus into 120 ohms. Place this switch in the ON position when the clock is installed at the end of the RS-485 data bus. Otherwise, place this switch in the OFF position.