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## Real Time Clocks

**Model: 1220, 1230**

### **Introduction**

Congratulations on the purchase of your new electronic Time of Day (TOD) / Timer Clock. Your clock is state of the art and designed for easy installation. This instruction booklet will provide you with information on installing and operating your clock. If further information is required please contact your OES sales representative or the OES service department at (519) 652-5833.

### **Service and Customer Information**

In the event service is required for your clock or if you wish to order replacement parts please contact your OES sales representative or the OES service department at (519)-652-5833.

To aid in your discussions, we suggest that you record the following information for reference:

MODEL NUMBER: \_\_\_\_\_

INSTALLATION DATE: \_\_\_\_\_

OES SALES REP: \_\_\_\_\_

CONTACT INFORMATION: \_\_\_\_\_

PRODUCT SERIAL NUMBERS: \_\_\_\_\_

### **Installation**

Your clock will require a 100-240 VAC, 1 AMP, 50-60 Hz, grounded receptacle located within 5 feet of the top-centre of the scoreboard.

Wall mounting is the preferred method of installation. When determining the installation location, ensure the clock is NOT hung from a non-rigid support. The clock is shipped with mounting brackets which are located on the upper backside of the enclosure. The brackets are rotated to prevent damage during shipping. Remove and re-install the brackets so that the mounting holes are exposed past the edge of the clock. Using appropriate equipment, lift and secure the clock to the wall. The type of fasteners selected should be suitable for the type of wall construction and have sufficient capacity to support the clock.

### **Operation**

The OES TOD/Timer Clocks versatility allow for flexible operation of the units. Your clock comes pre-configured at the factory per your requirements stated at time of order. This allows for plug and play operation. The settings can be adjusted though to allow the timer functions to fit future requirements, if the clock you purchased and received is just a TOD clock, these options will not be available. The rest of this manual will show how to set up and use your clock.

### **Options**

On the next page is the Options Matrix, it consists of the options and their possible choices available. Following the table is a detailed explanation of each option. To access the options setup, keep the mode button pressed while turning on the clock. Let go of mode button when "o1-0" appears. The options display is "o1-0", where "o" is for options, the second digit is the option number, and the fourth digit is the option value.





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# INSTRUCTIONS

Option	Description	Choices	Value	Default	Note
1	Master/ Slave			0	Available anytime
		Standalone	0		No other clocks attached
		Slave	1		Attached to another clock or scoreboard - accepts standard scoreboard message
		Master	2		Transmits display
		Comm Start Controlled	3		Accepts timer start messages
2	Address			0	Available only if Master/Slave Clock option is set to Comm Start Controlled
		Address Setting	0-9		
3	Clock Function			0	
		TOD Only	0		TOD - time of day
		TOD & Timer	1		
		Timer Only	2		
4	Timer Description			0	Not available if clock function is TOD Only
		Down	0		
		Up	1		
		User Choice	2		
5	Timer Display			0	Not available if clock function is TOD Only
		hh:mm:ss	0		
		hh:mm:ss.tt	1		
		mm:ss	2		
		mm:ss.tt	3		
		hh:mm -> mm:ss	4		
6	Start Horn				Not available if clock function is TOD Only, Horn on Mode button in this case
		Disable	0		
		Enable	1		
7	Warning Horn			0	Not available if clock function is TOD Only, Horn on Mode button in this case
		Minute Setting	0-99		0 = no warning horn
8	End Horn			1	Not available if clock function is TOD Only, Horn on Mode button in this case
		Disable	0		
		Enable	1		
9	Rental repeat			0	Not available if clock function is TOD Only
		Disable	0		
		Enable	1		Time will continually count down, reset, and count down in a loop until stopped by user

## OPTION 1 – Master / Slave Clock

The clocks can be used by themselves or part of a larger system. Uses and notes of each setting:

### Standalone

- Use if only clock in system.
- Use if one of many clocks, but only attached to controller that sends TOD updates.

### Slave

- Use if part of a larger system, where there is a similar clock setup as a master.
- Use if attached to a larger scoreboard package, where you would like game time displayed when a scoreboard is in use. Can display TOD when scoreboard is not in use.

### Master

- Use if part of a larger system, where there is one or more similar clocks setup as slaves.
- There can only be one master in a system, failure to comply with this will cause damage to your clock's internally circuitry.

### Comm. Start Controlled

- Similar to a standalone, but allows for a controller to send timer start commands.





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# INSTRUCTIONS

## **OPTION 2 – Address**

This is only used with when Option 1 is set to Comm. Start Controlled. The clock receives information from a controller. The address can be from 0-9, and more than one clock can have the same address, but that would cause two clocks to display the same timer information

## **OPTION 3 – Timer Function**

This sets the clock up as a TOD clock, or a timer clock, or both. The clock will operate a little differently depending on the selection, this is explained later.

## **OPTION 4 – Timer Direction**

The timer is capable of counting down or up. This option allows for always counting down or up, or allowing to choose each time.

## **OPTION 5 – Timer Display**

This options sets up the format of the timer display. This selection is dependant on the length of timer is required and the number of displays in the clock. When choosing a format, please note that when it comes time to set up the timer, only the two most significant values will be able set, the other values will be cleared. For example, if format 1 is selected, hours and minutes will be settable, seconds and tenths will be cleared. On display format 4 the display will show hours and minutes when there is more than an hour on the timer and will show minutes and seconds when the timer is less than an hour. When setting the timer on format 4, the display will show hours and minutes.

## **OPTION 6 – Start Horn**

If enabled this option allows for a short horn to sound when the timer starts.

## **OPTION 7 – Warning Horn**

If enabled this option allows for a short horn to sound in the down timer with a certain number of minutes remaining in the timer. If value is set to 0, the warning horn is disabled, if set from 1-9 the horn will sound with that many minutes left in the timer.

## **OPTION 8 – End Horn**

If enabled this option allows for a short horn to sound when the timer expires

## **OPTION 9 – Rental Repeat**

If enabled the rental time will countdown, reset, countdown - continue to loop until user stops.

## **Time of Day Operation**

The TOD is preset at the factory for your time zone, including the daylight savings time option. The daylight savings time option is a hardware setting, if you find the option is incorrectly setup, please contact your OES representative for directions on how to correct it.

If TOD is enabled through the options, the TOD will appear at power up and when the timer is not active.

To adjust TOD, turn the key switch to the left to increment hours and turn the key switch to the right to increment minutes. Holding the key will rapidly increment the value.

## **Timer Operation**

As earlier described, the timer can be setup to operate in many different configurations. Below describes the steps necessary to setup a timer:

- If TOD is enabled, press the mode button to enter timer mode.
- If TOD is disabled, the clock will always be in timer mode.
- If Timer Direction Option is set to User Choice, the first setting you need to adjust is the direction of the timer. Turn the key switch in either direction to adjust the value. Once selected push the mode button to go to the timer value setting.
- If Timer Direction Option is set to either Down or Up, you will advance directly timer value setting.
- When you enter the timer value setting, the last set time will appear
- As noted above in the options section, you will be able to adjust the two most significant values. The other values will be cleared.
- To adjust the values, use the keyswitch. Holding the key in either direction will rapidly increment the values. All values have maximum settings, once this is reached the value will reset to zero and you can continue incrementing from there.
- Once you have the timer setting you desire, pressing the mode button will start the timer
- If the timer is set to count down, the timer will start counting down and end when it reaches zero
- If the timer is set to count up, the timer will start at zero and end when it reaches the setting you entered
- When the timer is running, the colons will flash
- Pressing the mode button will start/stop the timer. Holding the mode button for approximately 2 seconds will stop the timer permanently and return you to either TOD if enabled or the start of the timer setup.
- During the timer horns will operate as setup in options