Slim Pace Clock

User Guide
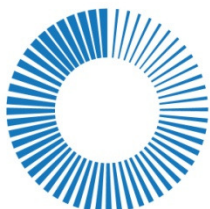
F972 Rev. 201412

Manufacturer:
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Product Identification
Product: Slim Pace Clocks
Model Numbers: MS-0037 through MS-0040

Power Specification
150W power supply: 100-240V, 50/60Hz, max 2A

Information in this manual is subject to change without notice. Pictures and illustrations may not accurately depict your version. Please check our website for the most current information; our user manuals are available online in the customer service section of our website.

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Product Description

Slim Pace Clocks display time for time of day and pacing purposes. Clocks set to the same channel and PAN ID will automatically synchronize with each other. Six-digit clocks display hours, minutes and seconds. Four-digit clocks can display either hours and minutes, or minutes and seconds. Synchronization is controlled by an internal certified radio with an internal patch antenna which is protected from damage. The clocks feature an indoor/outdoor metal enclosure with a slim profile and a plastic weather cover over the digits. Clocks can also receive scoreboard data from a wireless tabletop controller or a wireless handheld controller.

# Mounting and Power Connection

Setting Channel and PAN

Slim pace clocks set to the same channel, PAN and address will automatically synchronize with each other. In order to receive data from a wireless controller, a clock must be set to the same Channel and PAN as the controller. Additionally, the clock's Module number must be selected as active in the appropriate menu of the controller (see controller manual for more information.)

The default factory settings are channel 4, PAN 0 and module address 1. To change these use the clock's push button, as described on page 3. You can also set them by changing the switch settings on the clock's control board, as described on page 4.

Physical Installation
Determine the location for your pace clock. It is your responsibility to choose a location where the wall composition or mounting structure can support the weight of the slim pace clock. Use appropriate mounting hardware for the weight of the clock and its environment. The keyhole slots in the back of the clock are .359 inches at the bottom to accommodate the head of the screw, and .172 inches at the top, to accommodate the shank of the screw. Installation must meet all national and local codes. The 6-digit slim pace clock is pictured below.

Model	Weight	Distance between keyhole slots
6-digit	28 pounds (12.7 Kg)	48 inches
4-digit	20 pounds (9 Kg)	36.75 inches

48.000

2X KEY HOLE SLOTS FOR MOUNTING
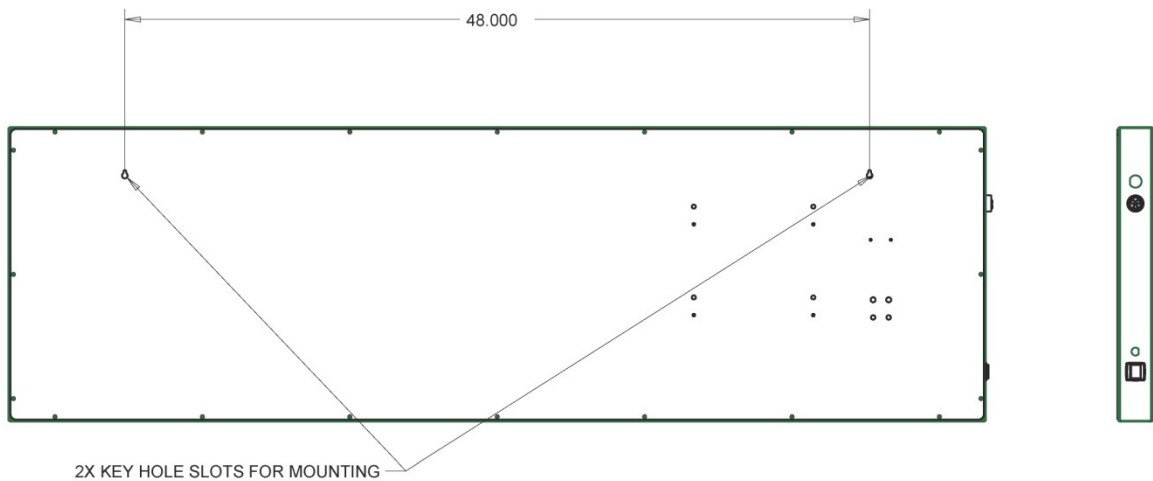
Electrical Installation
Connect to standard outlet (120V or 230V) no further than 6 feet from left end of clock with the supplied power cord. The pace clock is grounded through the power connection. For outdoor installation, the clock can only be used with an outdoor rated receptacle.

Operating Instructions

Synchronizing clocks
To set multiple clocks to the same time, they must be set to the same channel and PAN (see **Setting Channel and PAN**, page 3).

Turn on all of the clocks. They will synchronize with each other within two minutes.

To change their time, turn all of the clocks on, and set one as described below. As soon as time is changed on that clock and you have exited the menu, it will send the selected settings to the other clocks.

Setting time, intensity, channel, PAN and module address
Other settings including clock format, time shifting, intensity (brightness of the digits), module, channel and PAN must be set individually for each clock to accommodate clocks in different environments (shade and sun, for example).

Use the push button on the right side of the clock to set these characteristics.

Hold the button for 2 seconds and release to cause the clock to enter the menu. The clock enters Menu 1, as described below. Once in the menu, hold for one second to advance to the next menu item. If you continue to hold, the clock will step through the menu options every second. Release the button when you are in the menu option you wish to set.

Menu 1: 12 or 24 hour clock format
Displays __ 12 and alternates to __ 24 with each button click. This must be set individually for each clock. When the choice you want is displayed, press and hold the button for one second to advance to the next menu.

Menu 2: Hours
With each button click the clock will increment through the hours 1-12 or 1-24, depending on the previous menu setting. For the 12 hour format, at 12 the decimal of the fourth digit from the left will light or go out. Lit indicates p.m. and unlit indicates a.m. When the choice you want is displayed, press and hold the button for one second to advance to the next menu.

Menu 3: Minutes
Displays __:28. Each click increments by one minute. When the choice you want is displayed, press and hold the button for one second to advance to the next menu.

Menu 4: Time shifting
Set a 4-digit clock to display hours and minutes or minutes and seconds. With each button click, displays HH:__ and alternates to __:SS (which looks like __:55). HH will display hours and minutes (HH:MM), and MM will display minutes and seconds (MM:SS). This must be set individually for each clock. *Note: __:SS is not practical on a 6-digit clock; if used, the display will show MM:SS:__* When the choice you want is displayed, press and hold the button for one second to advance to the next menu.

Menu 5: Digit intensity
Displays _int. Intensity switches from low to medium to high to AL (ambient light) with each button click. This must be set individually for each clock. When the choice you want is displayed, press and hold the button for one second to to advance to the next menu.

Menu 6: Set Channel
C and the channel number are displayed; 0 – 11 are available. Advancing past 11 will show "--" which indicates that the wireless is turned off. Advance one more to 0. This

must be set individually for each clock. When the choice you want is displayed, press and hold the button for one second to advance to the next menu.

Menu 7: Set PAN
P and the PAN are displayed; 0 – 15 are available. Advancing past 15 will cycle around to 0. This must be set individually for each clock. When the choice you want is displayed, press and hold the button for one second to advance to the next menu.

Menu 8: Set Module (Address)
A and the module address are displayed; 1 – 6 are available. Advancing past 6 will cycle around to 0. This must be set individually for each clock. When the choice you want is displayed, press and hold the button for one second to exit the menu.

Exit the menu holding the push button for one second after the address option is set. The clock will display the time of day that you have set. The settings you have chosen are not saved until you exit the menu.

Displaying Data on the Clock
The clock can display time of day, synchronized with other scoreboards and clocks set to the same wireless channel and PAN. It can also display game time it receives from a tabletop controller or a handheld controller.

Tabletop controller
Follow the instructions on the tabletop controller quick reference sheet to set the tabletop controller to the same channel, PAN and module as the clock(s) and scoreboard(s) you want to control with it. The clock will display game time as sent from the controller.

You can also turn off the ambient light sensor and set a specific intensity on the clock with the tabletop controller.

Handheld controller
Follow the instructions in the handheld controller manual to set the handheld controller to the same channel, PAN and module as the clock(s) and scoreboard(s) you want to control with it. The clock will display game time as sent from the controller. Follow the general instructions for all sports.

Changing Module, Channel and PAN at the control board

The most convenient way to change the clock's module, channel and PAN is with the push button (see page 3). You can also change them by changing the switch settings on the clock's control board, as described here.

1. Make certain the unit is disconnected from AC power.
2. Remove the weather cover by turning the slotted studs a quarter turn using a flathead screwdriver so that they are vertical. Remove the weather cover and set it in a safe place
3. Remove the second digit from the left. Using a Phillips head screwdriver, unscrew the retaining screws and set them in a safe place. Carefully lean the digit against the enclosure.
4. Set the channel and PAN using the dip switches on the circuit board:

   DIP switch settings (Off = 0, On = 1)

   Channels: Switches **1-4 of S2**. 0 to 11 are valid
   PAN ID: Switches **5-8 of S2**. 0 to 15 are valid

0 0 0 0	0	0 0 1 0	4	0 0 0 1	8	0 0 1 1	12
1 0 0 0	1	1 0 1 0	5	1 0 0 1	9	1 0 1 1	13
0 1 0 0	2	0 1 1 0	6	0 1 0 1	10	0 1 1 1	14
1 1 0 0	3	1 1 1 0	7	1 1 0 1	11	1 1 1 1	15

   NOTE: switches 6-8 of S1, should not be changed.
   Doing so will cause the unit to cease functioning properly.
   Switches 1-5 of S1 have no effect for Slim Pace Clocks, and do not need to be set.

5. Reattach the digit and replace the weather cover. Turn the slotted studs to horizontal. They will snap into place with moderate pressure.

Standards followed

UL 48
Issue:2011/09/02 Ed:15 Rev:2012/05/04 UL Standard for Safety Electric Signs

CAN/CSA C22.2#207
*Issue:1989/01/01 Portable and Stationary Electric Signs and Displays General
Instruction No 1: 1989/10/01 - (R2008)*

FCC 47CFR 15B clB
Issued:2011/04/21 Title 47 CFR Part 15 Subpart B Unintentional Radiators Class A Verification

ICES 003
Issue:2004/01/01 Issue No.4 Interference-Causing Equipment Standard, Digital Apparatus

European Declaration of Conformity

We,

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declare under our sole responsibility that the

Product: Multisport Scoreboard
Model numbers: MS-XXXX

to which this declaration relates is in conformity with the following European Directives:

European Council Directive 2006/95/EC (December 12, 2006) on Low Voltage
Equipment Safety.
  CENELEC EN 60950-1 *Issue:2006/04/01,* CENELEC EN 60950-22 *Issued:2006/04/01*
  CENELEC EN 60598-1 *Issued: 2008/10/01 Luminaries - Part 1: General Requirements
  and Tests; with Amendment 11 2009/05/01*
  CENELEC EN60598-2-1 *Issue:1989/01/01 Luminaires Part 2: Particular Req. Section 1:
  Fixed General Purpose Luminaires*

European Council Directive 2004/108/EC (December 15, 2004) on
Electromagnetic Compatibility.
  CISPR 22 *Issue:2008/09/24,* CISPR 24 *Issue:2010/08/24*

European Council Directive 2011/65/EU (July 21, 2011) on the Reduction of
Hazardous Substances (RoHS).

The Technical Construction File is maintained at the corporate headquarters of Colorado
Time Systems in Colorado, USA.

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