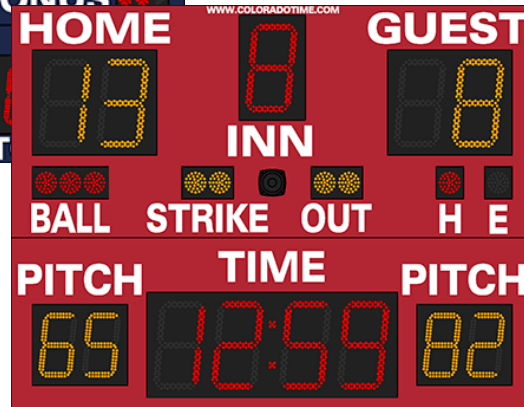
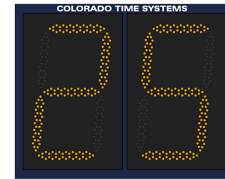
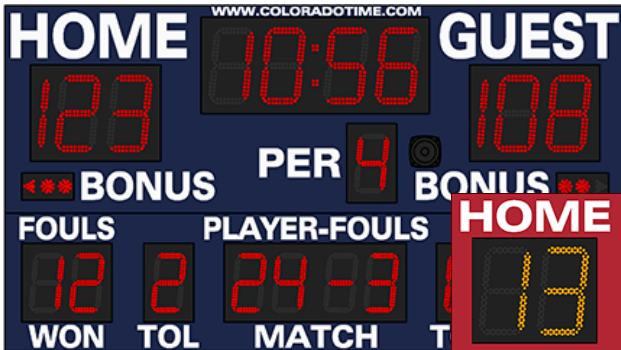


Multisport Scoreboards



Installation and User Guide



**Colorado
TIME SYSTEMS**

A PLAYCORE Company

F984 Rev. 202007

Manufacturer:

Everlast Climbing Industries, Inc.
DBA Colorado Time Systems
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Loveland, CO 80537 USA

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Service Fax: +1 970-667-1032

Web: www.coloradotime.com
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Product Identification

Product: Multisport Scoreboards

Model Numbers:

MS-0001 through MS-0027
MS-0041, MS-0042
MS-0046 through MS-0054
MS-0091 through MS-0099
MS-0129 through MS-0133
MS-0135, MS-0136
MS-0143, MS-0144

Power Specification

320W power supply: 100-240V, 50/60Hz, max 4A

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.

Part Number F984, Rev. 202007

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Contents

Product Overview	1
Scoreboard Installation	1
Physical mounting	
Wall Mount Details	
Pole Mount Details	
Electrical Installation and Setting Module, Channel, PAN	
Operating Instructions	9
Standards followed	11

Product Overview

The Multisport scoreboards are a family of numeric scoreboards for a variety of sports. They can be used indoors or outdoors.

The unit is controlled by a certified radio with an internal patch antenna which is protected from damage. Wired data connection is optional. The scoreboards feature an indoor/outdoor metal enclosure and a plastic weather covers over the digits.

For scoreboards with horns, the internal, protected horn creates multiple customizable sounds with different tones and volumes selectable through the tabletop controller. This allows the same physical horn to serve multiple functions (e.g., both game horn and shot clock horn) and have different sounds for each function.

Scoreboard Installation

When a board is used outdoors, the power connection will be run in conduits, or the power cord can be used in conjunction with an outdoor-rated receptacle. When a board is used indoors, the power connection can be either run in conduits or with a power cord. When used with a power cord, typically it is more convenient to complete the electrical connection and module, channel and PAN settings on the ground and then physically mount the board. When used with power from a conduit, complete the physical installation and then connect the power and set the module, channel and PAN.

It is the owner's responsibility to follow all applicable electrical and structural codes. It is the owner's responsibility to follow all applicable building codes.

Required documentation:

- This manual, which includes installation drawings, board dimensions, attachment points and weight. Drawing versions of this information for wall mount and pole mount are also available on www.coloradotime.com.
- A scoreboard diagram showing location of internal power termination and digit location was shipped with the scoreboard. It is also available on www.coloradotime.com.

Physical mounting

Determine the location for the scoreboard. It is the owner's responsibility to choose a location which can support the weight of the scoreboard(s), which are listed in the installation drawing and the chart below. The scoreboard is mounted to a wall of suitable composition or to a suitable structure at the four attachment slots on the top and bottom, and bolted or welded in place. Use appropriate mounting hardware for the weight of the scoreboard and its environment.

Scoreboard support structures are the responsibility of the facility, and must be designed by a qualified structural engineer to meet all national and local codes. Refer to the following information, and to the scoreboard installation drawing, showing the boards' dimensions, attachment points and weight. To facilitate mounting, it can be suspended from the eye bolts at the top of the enclosure. Use equipment suitable for lifting the scoreboard's weight. Do not permanently attach with eyebolts.

The board must not be connected to live AC power during installation.

DISPLAY	MODEL NUMBERS	A	B	C	D	E	F	HANGING WEIGHT	MAX POWER CONSUMPTION
BB-1100	MS-0016,MS-0017,MS-0018	108.00" 2.743m	84.00" 2.134m	48.00" 1.219m	86.00" 2.184m	87.60" 2.225m	4.25" 0.108m	160 LBS 82 KG	275 W
BB-1101	MS-0010,MS-0011,MS-0012	108.00" 2.743m	48.00" 1.219m	48.00" 1.219m	50.00" 1.270m	51.60" 1.311m	4.25" 0.108m	120 LBS 54 KG	175 W
BB-1102	MS-0022,MS-0023,MS-0024	132.00" 3.353m	36.00" 0.914m	60.00" 1.524m	38.00" 0.965m	39.60" 1.006m	4.25" 0.108m	110 LBS 50 KG	90 W
BB-1103	MS-0049,MS-0050,MS-0051	108.00" 2.743m	76.00" 1.930m	48.00" 1.219m	78.00" 1.981m	79.60" 2.022m	4.25" 0.108m	170 LBS 77 KG	231 W
BB-1104	MS-0052,MS-0053,MS-0054	108.00" 2.743m	76.00" 1.930m	48.00" 1.219m	78.00" 1.981m	79.60" 2.022m	4.25" 0.108m	170 LBS 77 KG	231 W
BK-1300	MS-0007,MS-0008,MS-0009	108.00" 2.743m	60.00" 1.524m	48.00" 1.219m	62.00" 1.575m	63.60" 1.615m	4.25" 0.108m	150 LBS 68 KG	230 W
BK-1301	MS-0001,MS-0002,MS-0003	108.00" 2.743m	36.00" 0.914m	48.00" 1.219m	38.00" 0.965m	39.60" 1.006m	4.25" 0.108m	90 LBS 41 KG	150 W
BK-1302	MS-0046	42.00" 1.067m	60.00" 1.524m	36.10" 0.917m	62.00" 1.575m	63.60" 1.615m	4.25" 0.108m	120 LBS 54 KG	110 W
CM-1403	MS-0004,MS-0005,MS-0006	108.00" 2.743m	24.00" 0.610m	48.00" 1.219m	26.00" 0.660m	27.60" 0.701m	4.25" 0.108m	75 LBS 34 KG	80 W
CM-1404	MS-0013,MS-0014,MS-0015	108.00" 2.743m	36.00" 0.914m	48.00" 1.219m	38.00" 0.965m	39.60" 1.006m	4.25" 0.108m	120 LBS 54 KG	130 W
CM-1405	MS-0047,MS-0048	108.00" 2.743m	28.00" 0.711m	48.00" 1.219m	30.00" 0.762m	31.60" 0.803m	4.25" 0.108m	85 LBS 39 KG	85 W
FB-1200	MS-0025,MS-0026,MS-0027	132.00" 3.353m	86.00" 2.184m	60.00" 1.524m	88.00" 2.235m	89.60" 2.276m	4.25" 0.108m	220 LBS 100 KG	330 W
FB-1201	MS-0019,MS-0020,MS-0021	132.00" 3.353m	50.00" 1.270m	60.00" 1.524m	52.00" 1.321m	53.60" 1.361m	4.25" 0.108m	140 LBS 64 KG	245 W
HK-1600	MS-0091-93 & MS-0094-96	108.00" 2.743m	73.50" 1.867m	48.00" 1.219m	38.00" 0.965m	77.10" 1.958m	4.25" 0.108m	195 LBS 88 KG	160 W
HK-1601	MS-0091,MS-0092,MS-0093	108.00" 2.743m	36.00" 0.914m	48.00" 1.219m	38.00" 0.965m	39.60" 1.006m	4.25" 0.108m	90 LBS 41 KG	115 W
HK-1602	MS-0094,MS-0095,MS-0096	108.00" 2.743m	37.50" 0.953m	48.00" 1.219m	38.00" 0.965m	41.10" 1.044m	4.25" 0.108m	105 LBS 48 KG	145 W
LX-1800	MS-0019-21 & MS-0097-98	132.00" 3.353m	98.00" 2.489m	60.00" 1.524m	100.00" 2.540m	101.60" 2.581m	4.25" 0.108m	140 LBS 64 KG	400 W
LX-1801	MS-0097,MS-0098,MS-0099	132.00" 3.353m	48.00" 1.219m	60.00" 1.524m	50.00" 1.270m	51.60" 1.311m	4.25" 0.108m	150 LBS 68 KG	150 W
CR-1700	MS-0085-86 & MS-0089-90	108.00" 2.743m	74.00" 1.880m	48.00" 1.219m	76.00" 1.930m	77.60" 1.971m	4.25" 0.108m	200 LBS 91 KG	175 W
CR-1701	MS-0087,MS-0088	108.00" 2.743m	48.00" 1.219m	48.00" 1.219m	50.00" 1.270m	51.60" 1.311m	4.25" 0.108m	130 LBS 59 KG	120 W
BB-1106	MS-0135,MS-0136	132.00" 3.353m	72.00" 1.829m	60.00" 1.524m	74.00" 1.880m	75.60" 1.920m	4.25" 0.108m	210 LBS 95 KG	200 W
BB-1107, BB-1108	MS-0129,MS-0130,MS-0131	108.00" 2.743m	84.00" 2.134m	48.00" 1.219m	86.00" 2.184m	87.60" 2.225m	4.25" 0.108m	160 LBS 82 KG	275 W

NOTES:

Conduits:

- Power and data cables must be routed in separate conduit.
- CTS suggests 1/2" conduit for data and 1/2" conduit for power
- CTS suggests 3/4" conduit for all buried cable

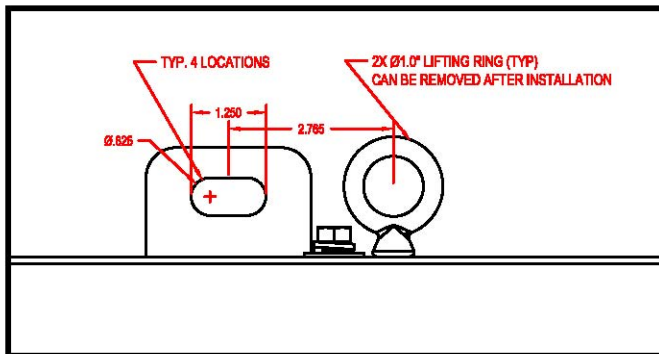
Power: CTS provides 15' power cable with a NEMA 5-15R plug. The cable must be terminated inside display according to the installation instructions. If power wires are hardwired directly to display, discard and recycle this power cable. This cable is only to be used in either indoor applications or outdoor applications in conjunction with an outdoor rated receptacle.

Data: All data conduits, junctions, and wires are optional. Wireless is standard on all displays. Wired option equipment must be ordered separately.

Mounting:

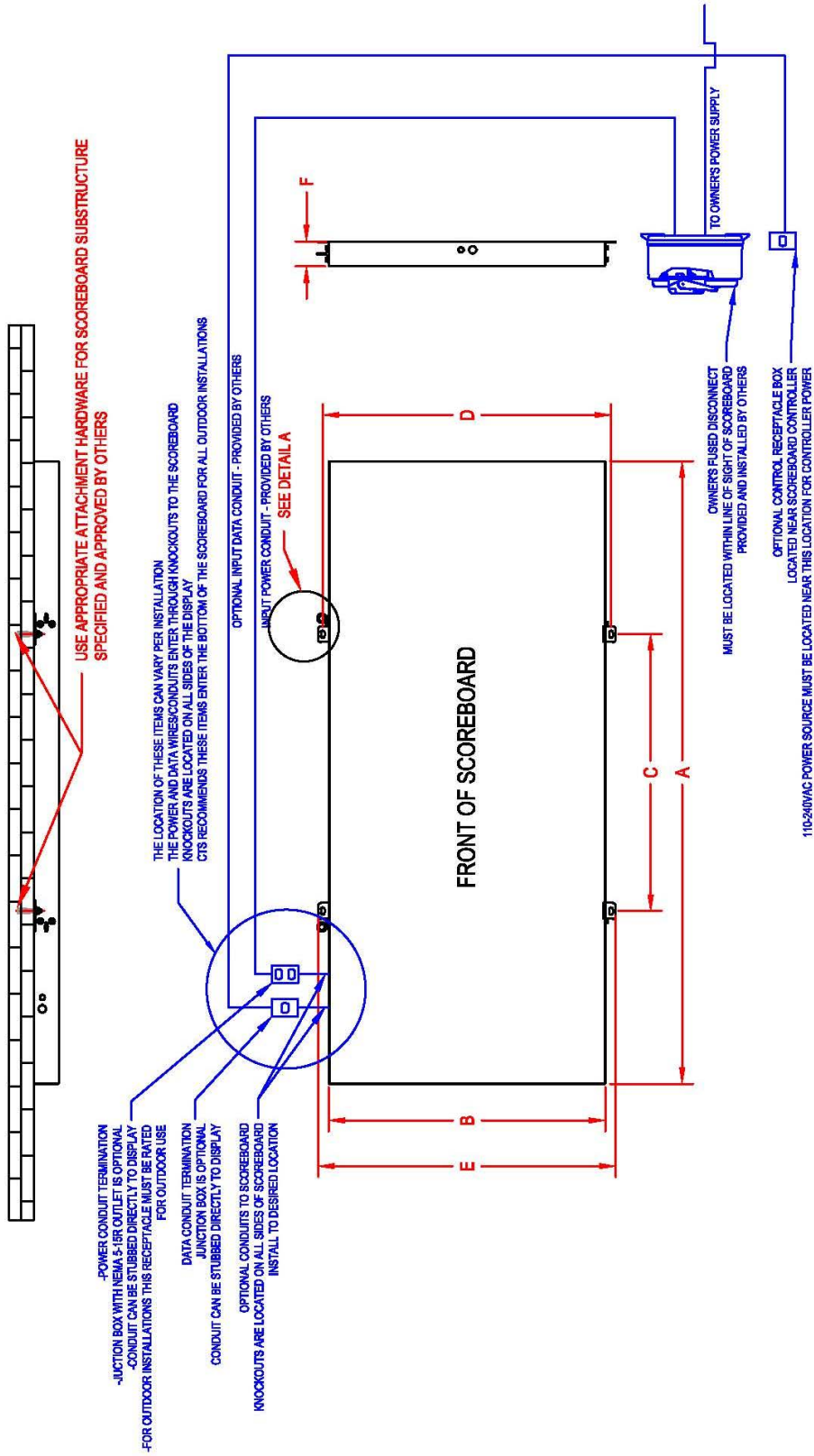
- All attachment hardware to be provided by others
- Lifting rings to be used during installation only – not for permanent mounting
- CTS assumes no responsibility for installations done by others
- This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electric Code and/or other applicable codes. This includes proper grounding and bonding of the scoreboard

Detail A for drawings on next pages:



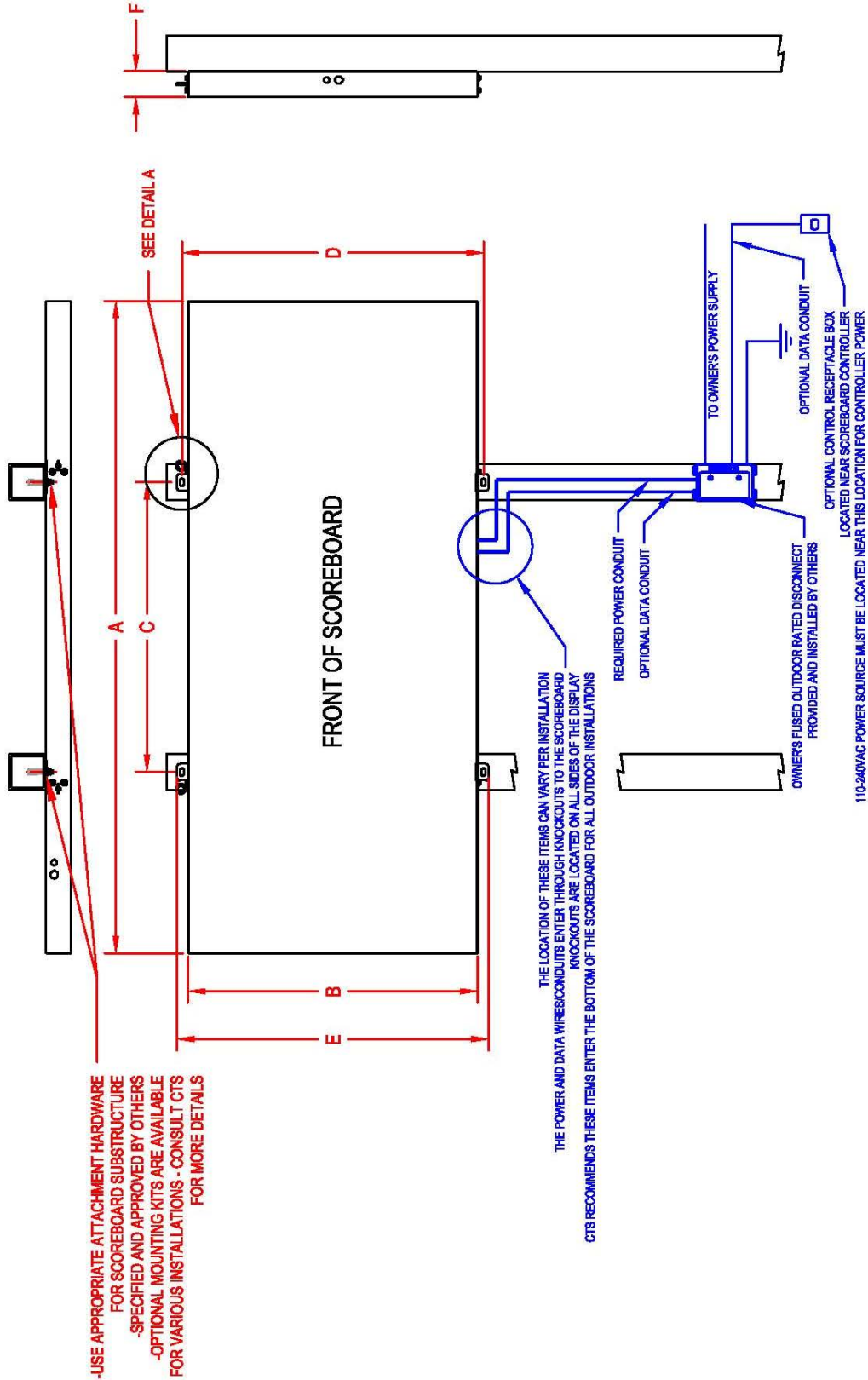
DETAIL A
NTS

Wall Mount Details



Pole Mount Details

All column and footing details to be specified by others.



Electrical Installation and Setting Module, Channel, PAN

Tools required:

Flat head screwdriver

Phillips head screwdriver

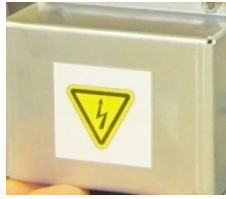
5/16" nut driver

Scoreboard diagram shipped with scoreboard. Also available on www.coloradotime.com.

Electrical Installation

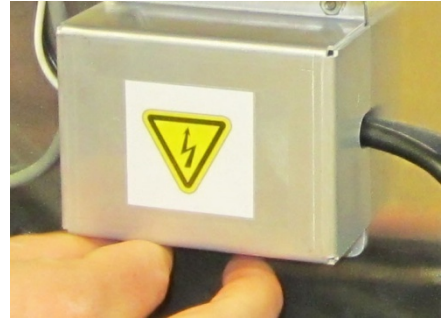
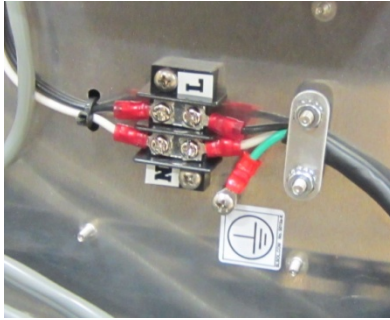
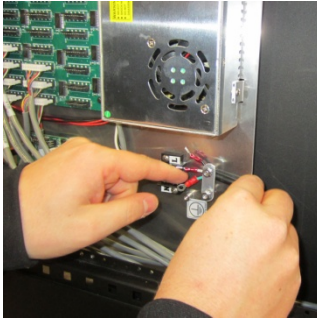
Note: this step must be done by a qualified electrician.

1. Note that most connected scoreboards only require one connection to power, however some lower scoreboards require their own separate connection to power even when used with a top scoreboard. If required, this information is noted on the scoreboard diagram shipped with your scoreboard. In these cases, bring power to both termination blocks.
2. Refer to the scoreboard diagram for the location of the termination block. Detach the weather cover in this location 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 digit(s) covering the termination block. Using a Phillips head screwdriver, unscrew the retaining screws and pull the digit partially away from the board. Disconnect the digit cable. Remove the digit and set it and the retaining screws in a safe place.
4. Determine the best location for the power cord to enter the scoreboard. There are numerous knockout locations on all four sides of the board. Carefully remove the small knock out in the chosen location. Remove other weather cover(s) as necessary to reach the knock out location.
5. If plugging in, use the power cord that came with the scoreboard. If hard wiring, bring wires in.
6. Feed cord or wires from the outside through the scoreboard to the terminal block, using the strain relief provided or its equivalent. Tighten the strain relief nut inside the scoreboard, leaving the outside cable nut loose until later.



7. Remove terminal block cover. At power connection, feed wires under the wire clamp as shown. Connect the Line and Neutral wires as labeled, and connect the Ground wire to the ground screw, as shown. Tighten the wire clamp with the nut driver until just snug. Cover with the terminal block cover, with the wires exiting through the holes in the sides, taking care not to damage the sheath of the power cable or power wires.

8. Insert excess power cord into enclosure and tighten cable nut of strain relief on



the outside of the scoreboard.
9. If hard wiring data, follow instructions for the wired data kit (shipped with wired data kit or available from www.coloradotime.com).

Setting Module, Channel and PAN

In order to receive data from a controller, a scoreboard must be set to the same Channel and PAN as the controller. Additionally, the scoreboard's Module number must be selected as active in the appropriate menu of the controller (see controller manual for more information). If two or more scoreboards are set to have the same Channel, PAN, and Module, those scoreboards will show the same data. If you have power running separately to two parts of a scoreboard, you must set the two scoreboards to the same Channel, PAN and Module as each other. If two controllers are set to the same Channel, PAN, and Module, erroneous data or no data will be displayed on the scoreboards.

Main scoreboards must be set to Module 01 through 06. If you only have one scoreboard, it is your main scoreboard.

For auxiliary scoreboards, the Channel and PAN must be set the same as the main scoreboard, and the Module as follows:

- Penalty scoreboard: the Module address on the penalty scoreboard must be 6 higher than the main scoreboard. For example, a penalty scoreboard should be set to Module address 7 if the main scoreboard is set to Module address 1.
- Stats scoreboards: Home stats scoreboard to 12 higher than the main scoreboard; Guest stats to 18 higher than the main scoreboard.

If you have more than one scoreboard and are using the tabletop controller, map out your scoreboard strategy, and set the channel, PAN and module for each board accordingly. For expanded examples of how to do this, refer to our website www.coloradotime.com.

The default factory settings are Channel 4, PAN 0 and Module address 1. Default module address for penalty boards is 7, home stats is 13, and guest stats is 19.

To set the module, channel and PAN:

1. If still attached, remove the weather cover and digit over the control board. Refer to the scoreboard diagram for this location, and follow the instructions in steps 2 and 3 on page 6.
2. Set the module, channel and PAN using the dip switches on the circuit board to which the digit cables are connected:

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

Module: Switches **1-5 of S1**. 01 to 1E are valid.

	0 0 0 1 0	0 8	0 0 0 0 1	1 0	0 0 0 1 1	1 8
	1 0 0 0 0	0 1	1 0 0 1 0	0 9	1 0 0 0 1	1 1
	0 1 0 0 0	0 2	0 1 0 1 0	0 A	0 1 0 0 1	1 2
	1 1 0 0 0	0 3	1 1 0 1 0	0 B	1 1 0 0 1	1 3
	0 0 1 0 0	0 4	0 0 1 1 0	0 C	0 0 1 0 1	1 4
	1 0 1 0 0	0 5	1 0 1 1 0	0 D	1 0 1 0 1	1 5
	0 1 1 0 0	0 6	0 1 1 1 0	0 E	0 1 1 0 1	1 6
	1 1 1 0 0	0 7	1 1 1 1 0	0 F	1 1 1 0 1	1 7
					1 1 1 1 1	1 F (this is test mode)

NOTE: switches 6-8 of S1, next to the Module switches, should not be changed. Doing so will cause the display to cease functioning properly.

Channels: Switches **1-4 of S2**. 0 to 11 are valid

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

12	0 0 0 0	0	0 0 1 0	4	0 0 0 1	8	0 0 1 1
	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
	1 1 0 0	3	1 1 1 0	7	1 1 0 1	11	1 1 1 1
							14
							15

3. Reconnect and reattach the digit(s). Replace the weather cover(s). Turn the slotted studs to horizontal. They will snap into place with moderate pressure.

Operating Instructions

Once the scoreboard is powered up it displays an initialization routine and waits for signals from either the wireless handheld controller or the wireless (or wired) tabletop controller. For more information, please see those specific manuals.

Synchronizing Time of Day

To set multiple scoreboards to the same time, they must be set to the same channel and PAN (See page 8).

Designating Leader/Follower with WTTC, WA-3 or WA-2

1. Connect a WTTC, WA-3 or WA-2 to your computer using a USB cable.
2. Make sure the Channel and PAN are set to match your scoreboards.
 - a. WA-3 or WA-2: use the dipswitches on the device
 - b. WTTC: use the on-screen menu. After checking /setting the Channel and PAN and saving any changes, turn the unit off and then on again and leave it at the Sport Selection menu.
3. From your computer, open the MultiSport Firmware Reprogramming tool.

- a. If you do not have this tool, download it from the CTS website at <https://www.coloradotime.com/support-overview/installation-methods>.
Choose the MultiSport tab and download MultiSport Display Firmware.
4. Click "Scan for Devices"
5. Select your attached W TTC or WA-3/WA-2 (WA-3 will be listed as WA2)
6. Click "Get Sub-Devices"
7. Select the scoreboard you wish to set as leader.
 - a. Click the "Enable (as Leader)" button at the bottom of the screen.
 - b. The scoreboard will display **LEAD** for a few seconds
8. One by one, select the scoreboards you wish to set as follower.
 - a. Click the "Enable (as Follower)" button at the bottom of the screen.
 - b. The scoreboard will display **FOLL** for a few seconds
9. Close the software and disconnect you W TTC, WA-3 or WA-2.

Setting Time of Day and Changing Channel with Wireless Tabletop Controller (W TTC)

For tabletop controller (W TTC), enter any sport and press the Menu button. Select "Set Time". Time of Day from W TTC will override the time on the leader and all follower clocks and scoreboards.

To change the channel and PAN, select "Scoreboard Options" in the Menu. When finished, press Clear to exit the menu.

Setting Time of Day and Changing Channel with Wireless Handheld Controller (W HC)

For handheld controller (W HC), enter the Menu and select "Time of Day". Time of Day from W HC will override the time on the leader and all follower clocks and scoreboards. To change the channel and PAN, select "Connections"

Time of Day from a Sports Console (Gen 7, System 6, System 5)

Gen7 timers will receive time of day from the attached laptop and transmit that time to leader clocks/scoreboards that are turned on and on the same channel and PAN. You can also manually send time of day from the scoreboard settings screen. The leader will update the followers.

System 6 and System 5 sports consoles will send time of day to leader clocks/scoreboards connected to them via RS-232 or wirelessly from WA-3/WA-2 on the same channel and PAN. The leader will then update the followers.

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 cIB

Issued: 2015/10/01 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,

Everlast Climbing Industries, Inc.
DBA Colorado Time Systems
1551 E 11th Street
Loveland, CO 80537, USA
++1 970 667 1000
www.coloradotime.com

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 2014/35/EU (February 26th 2014) 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 Luminaires - 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 2014/30/EU (February 26th 2014) 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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Michael Medina-Brodsky, Quality Manager



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