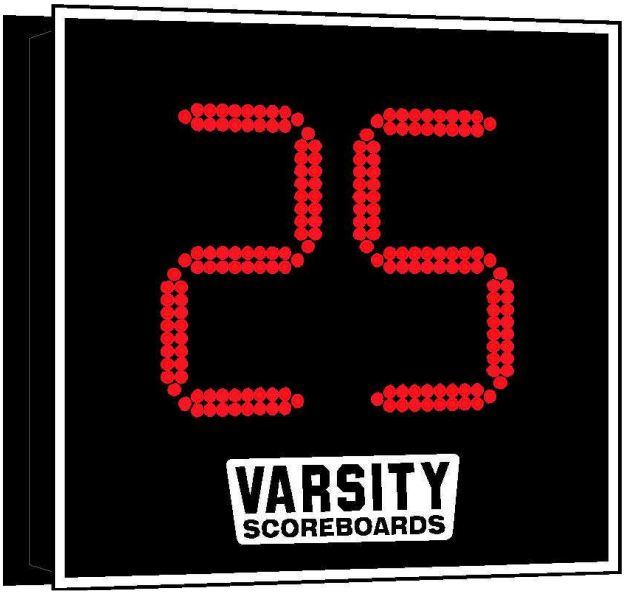
INSTALLATION INSTRUCTIONS
FOR



Model VSBX-700LED
DELAY-OF-GAME CLOCK
www.varsityscoreboards.com

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4’ X 4’ DELAY-OF-GAME TIMERS

NOTE TO INSTALLERS: PLEASE RETURN THIS MANUAL TO THE INDIVIDUAL IN CHARGE OF THE SCOREBOARD UPON COMPLETION OF INSTALLATION. The scoreboard and all accompanying accessories have been carefully inspected and tested before leaving the factory. However, it is possible for damage to have occurred during shipping so we ask that you inspect all shipping containers upon arrival for damage and ensure that you have all of the parts listed below. If you find that damage has occurred during shipping: 1) accept the shipment from the carrier…**DO NOT** refuse the shipment, 2) follow the instructions for filing a freight damage claim found below, and 3) notify the manufacturer immediately.

THE SCOREBOARD SYSTEM SHOULD INCLUDE THE FOLLOWING PARTS:

ITEMS IN LARGE PACKAGE(S)
(2) 4’ x 4’ delay-of-game timers; shipped in one (1) section each

ITEMS IN BOX
- (1) 5-socket signal splitter box
- (1) Handheld delay-of-game start/stop/reset switch
- (1) Instruction Manual

Cable-controlled systems (standard):
- (1) 20-ft. control cable
- (1) customer-specified length of control cable (unless purchased form a separate vendor)

Wireless systems (optional):
- (1) Wireless transmitter with interface cable attached

INSTRUCTIONS FOR REPORTING SHIPPING DAMAGE

Shipping damage must be noted at the time of delivery. Consignee must note on the “Delivery Receipt” form DAMAGED. Please make notations of the type of damage to the freight and to the packaging. Ask the delivery driver to call the local terminal and report immediately. The shipper is not responsible for the shipments that are not signed for as damaged upon arrival. Please contact the manufacturer immediately to report. The shipper is responsible for filing the claim, unless shipped 3rd party.

If damage is discovered after delivery, call the delivery company to report the concealed damage and please call the manufacturer immediately to report. Concealed damage must be reported within 5 days after the delivery date. If the damages are found after this time, the manufacturer will not be responsible.

INSTALLATION OVERVIEW

This manual will walk you through the installation of the delay-of-game clocks. While care has been taken to consider the many scenarios for installation, some general information applies to all. Use this guide as closely as possible to ensure proper installation, as follows:

1. Review the product specifications below to determine your specific installation hardware.
2. Determine the delay-of-game clock's location and orientation.
3. Install the mounting poles/I Beams (supplied by the customer).
4. Mount the delay-of-game clocks to the poles/I Beams.
5. Install the control cable for cable-controlled systems (**not necessary for Wireless Remote Control systems).**
6. Install the electrical service for the delay-of-game clocks and the controller.
7. Test the installed system.
8. Fax/return warranty activation sheet to Scoreboard Service Company at (270) 753-3773.

PRODUCT SPECIFICATIONS

Overall Dimensions:

4'-0" H x 4'-0" L x 8" D, shipped in one (1) section each

Weight:

Hanging weight approx. 140 lbs. each clock

Shipping weight approx. 170 lbs. each clock

Mounting Requirements:

(2) 8" steel I-beams (W8 X 31) per clock, or (2) 8" OD galvanized steel poles (schedule 40) per clock

Power Requirements:

Scoreboard (1) 120-volt, 20-amp, 60 Hz grounded AC circuit (per clock) connected to a power disconnect switch or circuit breaker Keyboard Controller (1) 120-volt, 15-amp, 60 Hz grounded AC circuit in a standard duplex outlet (optional if an external battery pack was purchased with the controller or using a handheld controller)

Cable Requirements (for cable-controlled systems only):

1)Category 5 (twisted-pair) shielded data cable; Scoreboard part number CC-41A or equivalent which requires sealed, watertight conduit

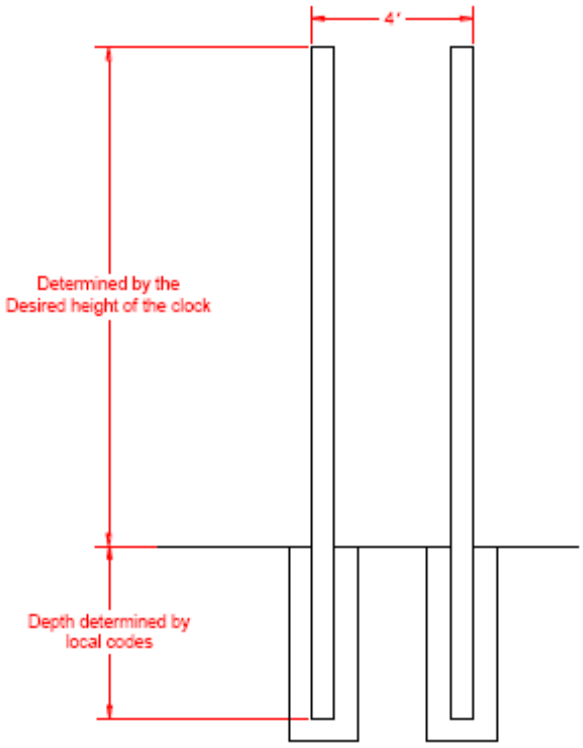
DETERMINING LOCATION AND ORIENTATION

Before installing the poles or beams to which each clock is to be mounted. Be sure to give consideration to the best orientation of the delay-of-game clocks should the system be used to score a daytime or afternoon game. The delay-of-game clocks should be positioned so that sunlight does not glare off of their face. In the U.S.A., this is usually on the South or West side of the field. Local building and sign codes may also determine where the delay-of-game clocks must be mounted and which direction it must face. Consult with the local building or zoning department before installing the delay-of-game clocks.

INSTALLING THE MOUNTING POLES/BEAMS

Install the mounting poles or beams (supplied by the customer) on the field so that the outside edges are 48” (four feet) apart. The amount of the pole/beam that extends above the ground is determined by the desired height of the clock.

The poles/beams must be set into poured, concrete footers. Make sure the poles are level, plumb, and even before the concrete footers are allowed to set. Depending on locale and soil conditions, a 5-foot deep concrete footer is generally adequate to support the weight of the poles/beams and the delay-of-game clocks. However, the required dimensions of the footers vary from city to city and from state to state depending on the building and sign codes for the area in which the scoreboard is being installed. Consult with local building officials for the required pole sizes and footer construction regarding this installation. A local architect, structural engineer, or sign installer may also be a source of assistance.



NOTE: CONSULT WITH LOCAL BUILDING CODE OFFICIALS REGARDING THE REQUIRED DIMENSIONS/CONSTRUCTION OF THE FOOTERS, POLE/BEAM SIZES, AND OTHER REQUIREMENTS AND RESTRICTIONS REGARDING THE INSTALLATION OF THE DELAY-OF-GAME CLOCKS.

IMPORTANT: DO NOT MOUNT FLAT TO A WALL. A MINIMUM OF 18" CLEARANCE MUST BE LEFT FOR ACCESS TO THE REAR OF THE UNIT, AS THE ELECTRONIC MODULE ACCESS AND ALL POWER AND SIGNAL CABLE ACCESS DOORS ARE LOCATED ON THE BACK OF THE DELAY-OF-GAME. 24" CLEARANCE IS RECOMMENDED.

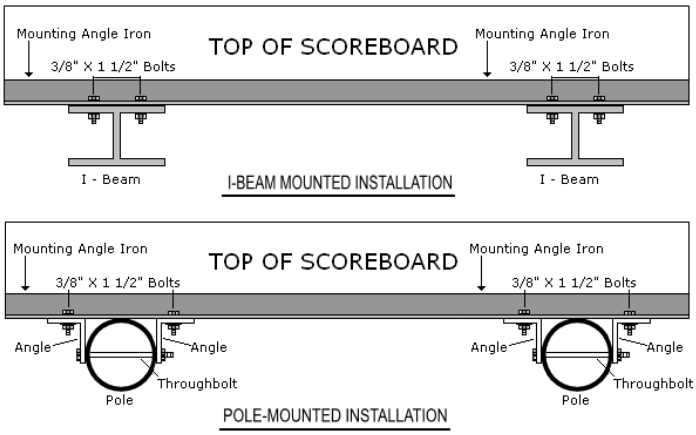
MOUNTING THE DELAY OF GAME CLOCKS

1. Carefully remove each clock from its packaging, making sure not to pry against or cut into the scoreboard. Inspect the unit for shipping damage according to the instructions on page 3.

2. Connect a lift device to the top mounting angle iron in two (2) locations that will not interfere with the mounting poles/beams.

3. Lift the scoreboard into place, ensuring that it is level.

4. Secure the scoreboard to the poles/beams using the mounting angle irons already attached to the scoreboard. The unit must be attached to each pole or beam on top *and* on bottom. If using steel I-beams, the mounting angle irons may be welded to the supports or the mounting angle irons and supports may be drilled so that a combination of bolts, washers, and nuts may be used to secure the mounting angle irons to the I-beams. If galvanized steel poles are being used, the mounting angle irons may either be bolted or welded to steel angles which can then be bolted *through* the pole. Refer to the diagram below for detailed instructions using both methods.



DELAY-OF-GAME CLOCK COMMUNICATION CONNECTION KIT (ADD-ON UNITS)

NOTE: THIS CONNECTION KIT DOES NOT APPLY TO AN "ALL WIRELESS" COMMUNICATION SYSTEM OR IF THE SCOREBOARD IS HARD-WIRED.

The connection kit contains:

1 – 4-way control cable splitter box
1 – 5-pin, 20-ft. gray control cable

Overview

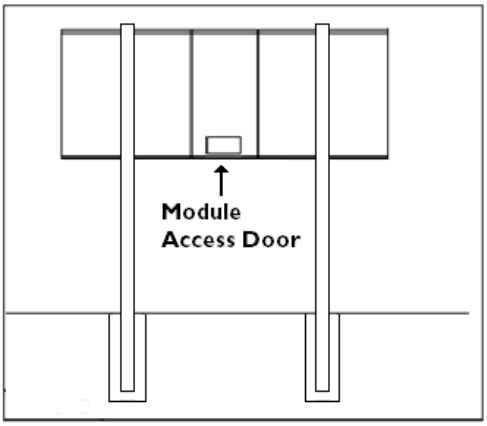
The Delay of Game connection kit allows football delay-of-game clocks to be added to the communications link of compatible scoreboards where the scoreboard uses wireless communication and hard-wiring at least one Delay of Game clock is intended. **This kit does not apply to an "all wireless" communication system or if the scoreboard is hard-wired.**

Some scoreboards have been shipped with the connection kit installed at the factory. In older scoreboards, this kit may not be pre-installed. The kit consists of a "splitter box" with 5 DIN sockets

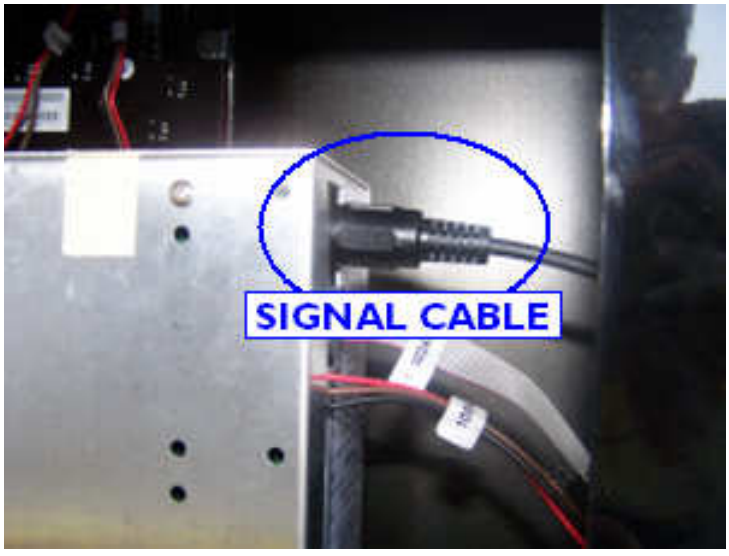
and a DIN cable, as shown in the images above. If your scoreboard was not shipped with the “splitter” box installed and your scoreboard is wireless, follow the steps below:

NOTE: The location of the module access door may vary by scoreboard model, but it will always be on the back of the scoreboard. Consult the scoreboard’s full installation manual for more information on module access door location.

1. Access the scoreboard’s control module. It is located behind a rear access panel (refer to the figure below). The module access cover is approximately 12” tall x 24” wide and is held in place by 5 (five) each ¼” hex head screws. Remove the access cover.



2. With the access cover removed, notice the connections on the end of the control module. The signal cable is the top-most connected cable. The cable is either black or gray.

3. 

4. From the control module, follow the communication cable to its other end. If it does not connect to a splitter box, disconnect it from the control module and follow the steps below:
   a. Install the splitter box by removing the protective strips on the backside of the box, exposing the adhesive strips, and press it firmly against the inside wall of the scoreboard cabinet, preferably against the back wall and within close proximity to the control module.

b. Connect one end of the supplied gray 5-pin DIN cable to any socket on the splitter box and the other end to the top-most socket on the side of the control module.
c. Connect the cable that was previously connected to the control module to any other socket on the splitter box.

CONNECTING A HARD-WIRE SYSTEM:

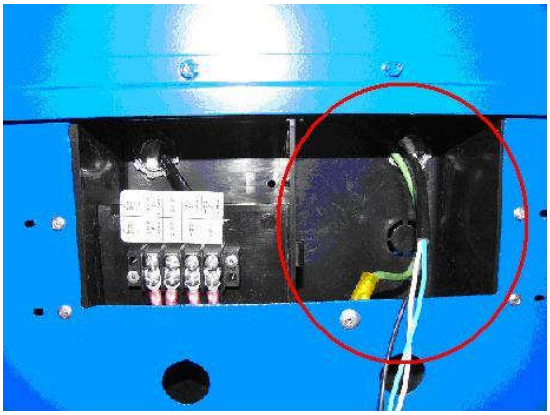
1. The scoreboard and Delay of Game clock have a service box for incoming AC power and signal cable connections. The service box has a small access cover roughly 4" tall x 9" wide and is located in the same area as the control module access cover. On the inside of the scoreboard, locate the 5 pin DIN communication cable pigtail coming from the service box. The pigtail may not be connected to anything currently if your scoreboard is wireless and there was no splitter box installed at the factory. Connect the 5 pin DIN "pigtail" coming from the service box to any open socket on the splitter box.
2. Run the 4 conductor twisted pair cable from the scoreboard to the closest Delay of Game clock in a buried, water-tight conduit.
3. Connect the hardwiring to the termination strip inside the service box at the scoreboard and Delay of Game clock as indicated in the image below:

NOTE: IF THE WIRES IN YOUR CABLE DO NOT COLOR MATCH THE LABEL AT THE TERMINATION STRIP, CONNECT TO THE TERMINALS WITH THE BLACK, GREEN, AND WHITE CONDUCTORS. DO NOT CONNECT A WIRE TO THE RED TERMINAL. MATCH THE SAME COLORS IN YOUR CABLE TO THE TERMINATION STRIP'S BLACK, GREEN, AND WHITE WIRES AT BOTH ENDS.

RUNNING & CONNECTING THE ELECTRIC SERVICE

NOTE: IT IS RECOMMENDED TO HAVE A LICENSED ELECTRICIAN. IDEALLY, THE SCOREBOARD WILL BE POWERED FROM A DEDICATED 120-VOLT / 20 AMP CIRCUIT. ADDITIONALLY, SINCE THE SCOREBOARD'S POWER SHOULD BE TURNED OFF AFTER EACH USE, THERE SHOULD BE EASY ACCESS TO THE POWER SWITCH OR CIRCUIT BREAKER. IF ACCESS TO THE CIRCUIT BREAKER IS NOT AN OPTION, INSTALL A SWITCH SOMEWHERE THAT IS ACCESSIBLE, EVEN IF UNDER THE SCOREBOARD AT AN ABOVE AVERAGE HEIGHT.

1. The scoreboard has a ½" knock-out on the lower right corner for bringing in the electrical service. It can be enlarged if the conduit size is ¾". This is where the conduit from the power source needs to terminate.



2. The connections are standard black, white, and green (ground). Replace the cover when complete.

INSTALLING THE HAND-HELD CLOCK SWITCH

The 10-242 hand-held clock switch has a 6' cord with an RS-232 jack that connects to the back of back of the LCD scoreboard controller in an RS-232, phone style port. Connect the RS-232 jack to the port as in the image below:

NOTE: FOR THE DELAY OF GAME CLOCK TO OPERATE, THE SCOREBOARD CLOCK MUST BE RUNNING. WHEN THE GAME CLOCK IS STOPPED, THE DELAY OF GAME CLOCK WILL ALSO STOP.

Wireless installations

First system installation method

1. Carefully unpack the Delay of game clocks notice one of the Delay of Game clocks has a wireless receiver installed in it (the one with the antenna).
2. The accessories will include one transmitter and one cable kit.
3. Locate the Delay of Game clock without the wireless receiver and mount near the scoreboard with the customer specified length of cable.
4. Mount the wireless Delay of Game clock at the other end of the field per the mounting instructions.
5. Connect the wired Delay of Game clock by
   a. First gain access to the scoreboard's module by opening the module access door on the back of the scoreboard.
   b. The scoreboard is shipped from the factory with the wireless receiver connected to the scoreboard's module.
   c. Locate the terminal strip near the module and connect the cable from the delay of game clock to it per the wire colors designated on the label above the terminal block.
   d. Install the hand held clock switch per the instructions above.

Second system installation method stand alone Delay of game clocks

1. Carefully unpack the Delay of Game clocks and mount them according to the instructions on page 6
2. Run and connect the electrical service to each clock with the appropriate disconnects or switches.
3. Connect the wireless transmitters to the controller using the 5-pin connector to each of the controllers jacks on the back of the controller you will still need the hand held clock switch.

TESTING THE INSTALLED SYSTEM

1. Connect the appropriate end of the 12-volt DC wall transformer to the power receptacle on the back of the controller. Plug the transformer into a live, 120-volt outlet.
2. Turn the power to the scoreboard *ON.*
3. Turn the power to the Delay of Game clock *ON* using the power disconnect switch or circuit breaker. The clock should display the default start-up time, typically 25 seconds.
4. With the controller *OFF*, press and hold the **OPTION** key while turning the controller *ON*. The controller's LCD will briefly display the controller's software version. When the display changes and reads "**SELECT DIAG MODE <SEGMENT TEST>,**"" press **ENTER**. The LCD will now read "**SEGMENT TEST – ALL SEGMENTS OFF**." Pressing the **UP** arrow (located on the far right of the controller's keypad) should turn every display on the scoreboard O*N*. Pressing the **DOWN** arrow will turn every display in the scoreboard *OFF*. To exit the diagnostic mode, press the **RESET** key.

5. When turning the controller back *ON*, press either **ENTER** or **RESET** to enter the controller's scoring mode. Thoroughly test the system by adding and subtracting points from both teams, changing the period/inning, etc. To reset the scoreboard, simply press and hold the **RESET** key.

6. **NOTE:** Always turn both the controller and the scoreboard *OFF* after each use. If the controller is turned *OFF* but the scoreboard remains *ON*, (or if the controller looses communication with the scoreboard), a digit on the scoreboard will begin to flash. This feature is intended to remind the user to turn power to the scoreboard *OFF* after each use.

IMPORTANT!
Warranty Activation/Installation & Completion Sign Off Sheet

NOTE: This sheet must be completely filled out and returned/faxed (270) 753-3773 to Scoreboard Service Company before your warranty can be activated.

Your Serial Number _____

Your Model Number _____

Date Purchased _____

Sales Agent _____

Person Authorizing Purchase (title) _____

Date Installation Completed _____

Company or Person Responsible
For Installation (address/phone number) _____

This document confirms that the installation for the Football DELAY-OF-GAME CLOCKS SCM-700 has been completed. All structural, wiring, and power requirements have been met. This unit has been tested in scoring and diagnostic modes, ensuring the functionally of the unit.

_____
Scoring/timing equipment responsible party

_____
Installer

So that we may better serve you, please have this information available in the event you need to call technical support. Customer Service: 1-800-411-3136