

# Single-Section Outdoor LED Scoreboards

## Installation Manual

DD1755790

Rev 8 – 11 February 2014

# DAKTRONICS

| Models  |         |         |         |
|---------|---------|---------|---------|
| BA-618  | BA-2515 | MS-2002 | SO-2918 |
| BA-624  | BA-2518 | MS-2004 | TI-218  |
| BA-2003 | BA-2618 | MS-2006 | TI-2003 |
| BA-2005 | BA-2715 | MS-2012 | TI-2010 |
| BA-2010 | BA-2718 | MS-2025 | TI-2012 |
| BA-2014 | CR-2002 | MS-3918 | TI-2015 |
| BA-2017 | CR-2003 | RO-2010 | TI-2019 |
| BA-2019 | FB-824  | RO-2011 | TI-2024 |
| BA-2022 | FB-4005 | SO-918  | TI-2032 |
| BA-2023 | MS-915  | SO-2008 |         |
| BA-2024 | MS-918  | SO-2013 |         |



**DD1755790**  
**Product 1162, 1192, 1407 & 1753**  
**Rev 8 – 11 February 2014**

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# Section 1: Introduction

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This manual explains the installation of Daktronics single-section outdoor LED scoreboards. For additional information regarding the safety, installation, operation, or service of this system, refer to the telephone numbers listed in **Section 4**. This manual is not specific to a particular installation. Project-specific information takes precedence over any other general information found in this manual.

## **IMPORTANT SAFEGUARDS:**

- Please read and understand all instructions before beginning the installation process.
- Do not drop control equipment or allow it to get wet.
- Do not disassemble control equipment or electronic controls of the display; failure to follow this safeguard will make the warranty null and void.
- Disconnect display power when not in use or when servicing.
- Disconnect display power before servicing power supplies to avoid electrical shock. Power supplies run on high voltage and may cause physical injury if touched while powered.
- Do not modify the scoreboard structure or attach any panels or coverings to the scoreboard without the express written consent of Daktronics, Inc.

## 1.1 Scoreboard Controllers

Daktronics outdoor scoreboards are designed for use with the All Sport® 1600 and 5000 series control consoles, and certain models may also be controlled with the RC-100 handheld controller. All controllers use keyboard overlays (sport inserts) to control numerous sports and scoreboard models. Refer to the following manuals for operating instructions:

- **All Sport 1600 Series Control Console Operation Manual (ED-12462)**
- **All Sport 5000 Series Control Console Operation Manual (ED-11976)**
- **Remote Control System RC-100 All Sport Operation Manual (ED-15133)**

The scoreboard controller manuals are available online at [www.daktronics.com/manuals](http://www.daktronics.com/manuals).

### Sport Codes

Below is a table of common sport codes. Note that many scoreboards are capable of scoring multiple sports. Refer to the Operation Manuals for a complete listing of sport codes.

| Sport                     | Common Code(s)        |                       |                    |
|---------------------------|-----------------------|-----------------------|--------------------|
|                           | <i>All Sport 5000</i> | <i>All Sport 1600</i> | <i>RC-100</i>      |
| Baseball                  | 5501                  | 03 (w/ clock = 23)    | 03 (w/ clock = 23) |
| Pitch & Speed             | 5500                  | N/A                   | N/A                |
| Football                  | 6601                  | 01                    | 61                 |
| Lacrosse/<br>Field Hockey | 4601                  | 01                    | 01                 |
| Soccer                    | 7701                  | 01                    | 01                 |

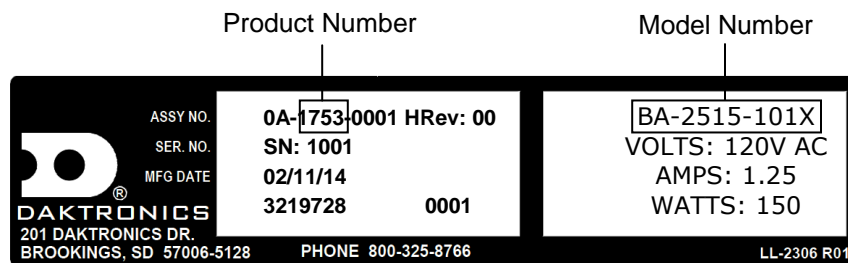
## 1.2 Troubleshooting

For an extensive troubleshooting guide, refer to the following manuals available online at <http://www.daktronics.com/manuals>:

- **Outdoor LED Scoreboards Service Manual (DD2124597)**  
All Product #1753, 1162 & CR-2002
- **Single-Section Outdoor LED Scoreboards Service Manual (DD1552971)**  
All Product #1192, 1407 & CR-2003

## 1.3 Specifications Label

Power specifications as well as serial and model number information can be found on an ID label on the display, similar to the one shown in **Figure 1**.

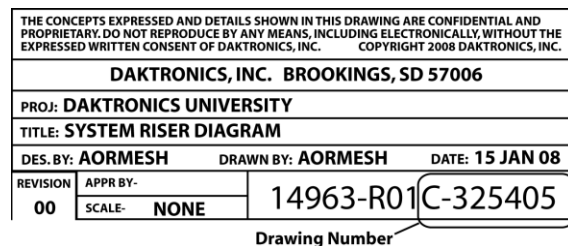


**Figure 1:** Specifications Label

Please have the assembly number, model number, and the date manufactured on hand when calling Daktronics customer service to ensure the request is serviced as quickly as possible. Knowing the facility name and/or job number will also be helpful. Note that the Product Number(s) are sometimes used to distinguish different generations of the scoreboards having the same model number.

## 1.4 Resources

**Figure 2** illustrates a Daktronics drawing label. The drawing number is located in the lower-right corner of a drawing. This manual refers to drawings by listing the last set of digits and the letter preceding them. In the example, the drawing would be referred to as **Drawing C-325405**.



**Figure 2:** Daktronics Drawing Label

### Reference Drawing:

System Riser Diagram.....**Drawing C-325405**

Daktronics identifies manuals by the DD or ED number located on the cover page of each manual. For example, this manual would be referred to as **DD1755790**.

## 1.5 Product Safety Approval

Daktronics outdoor scoreboards are ETL listed and tested to CSA standard for outdoor use. Contact Daktronics with any questions regarding testing procedures.



## Section 2: Mechanical Installation

Mechanical installation consists of installing concrete footing and steel beams and mounting the scoreboard and accompanying ad panels to the beams. The product specification sheets listed in **Appendix A** include installation specification drawings that show the recommended number of beams and spacing between them. The drawings also indicate the size of beams required to support the scoreboard at different heights and at various wind speeds.

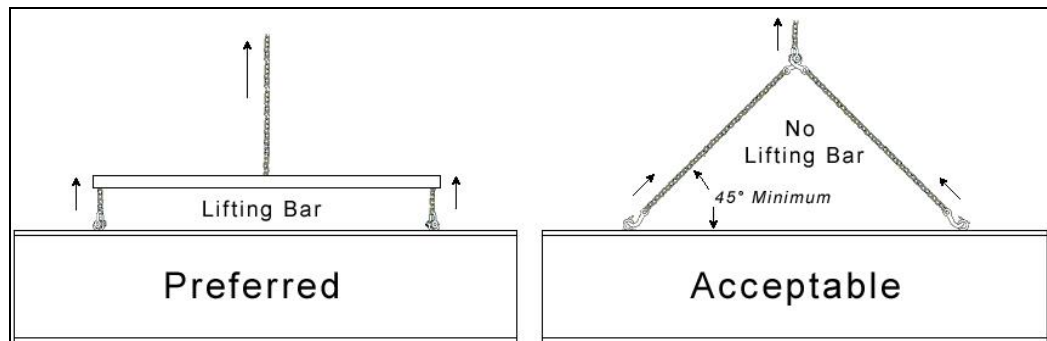
The column and footing size dimensions are to assist with estimating installation costs. They are estimates only and are not intended for actual construction purposes. Be sure that the installation complies with local building codes and is suitable for the particular soil and wind conditions. The columns, footings, and all connection details must be designed and certified by a professional engineer licensed to practice in the state of the scoreboard installation.

**Note:** Daktronics does not assume any liability for any installation derived from the information provided in this manual or installations designed and installed by others.

### 2.1 Lifting the Scoreboard

Larger scoreboard sections and message centers are shipped equipped with eyebolts used to lift them. The eyebolts are located along the top of the cabinet for each scoreboard or scoreboard section. Daktronics scoreboards use  $\frac{1}{2}$ " and  $\frac{5}{8}$ " shoulder-type eyebolts mounted to the top of each scoreboard section.

**Daktronics strongly recommends using a spreader bar, or lifting bar, to lift the display.** Spreader bars ensure the force on the eyebolts remains straight up, minimizing lifting stress.



**Figure 3:** Lifting Methods

**Figure 3** illustrates the preferred scoreboard lifting method on the left and an acceptable alternative lifting method on the right. When lifting the display:

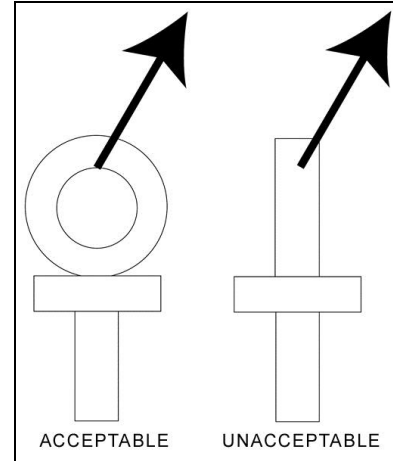
- Use a spreader bar if possible.
- Use every lifting point provided.

Cables and chains attached to the eyebolts and directly to a center lifting point, as shown in the right-hand example in **Figure 3**, can create a dangerous lateral force on the eyebolts and may cause the eyebolts to fail. The smaller the angle between the cable and the top of the display, the lighter the sign must be to safely lift it. If this method must be used, ensure a minimum angle between the chain and scoreboard of at least 45°.

Do NOT attempt to lift the display if the angle is less than 45°. Exceeding load angles or weight limits could cause the bolts in the scoreboard cabinet to buckle, resulting in serious damage to the scoreboard or injury to personnel. Also, loads should be applied directly in the plane of the eyebolt as shown in **Figure 4**.

**Note:** Daktronics assumes no liability for damages resulting from incorrect setup or lifting methods. Eyebolts are intended for lifting only. Do not attempt to permanently support the display by the eyebolts.

If installers remove the eyebolts, plug the holes with bolts and the rubber washers that are used with the eyebolts. Apply silicone or another waterproof sealant to the eyebolt openings. Also inspect the top and sides of the display for any other holes or openings that may allow moisture to enter the display and plug and seal those openings.



**Figure 4:** Eyebolt Plane Load

Small Daktronics scoreboards are not equipped with eyebolts, and instead use two lifting straps that encircle the scoreboard. It is recommended to use a spreader bar with the straps.

## 2.2 Scoreboard Mounting

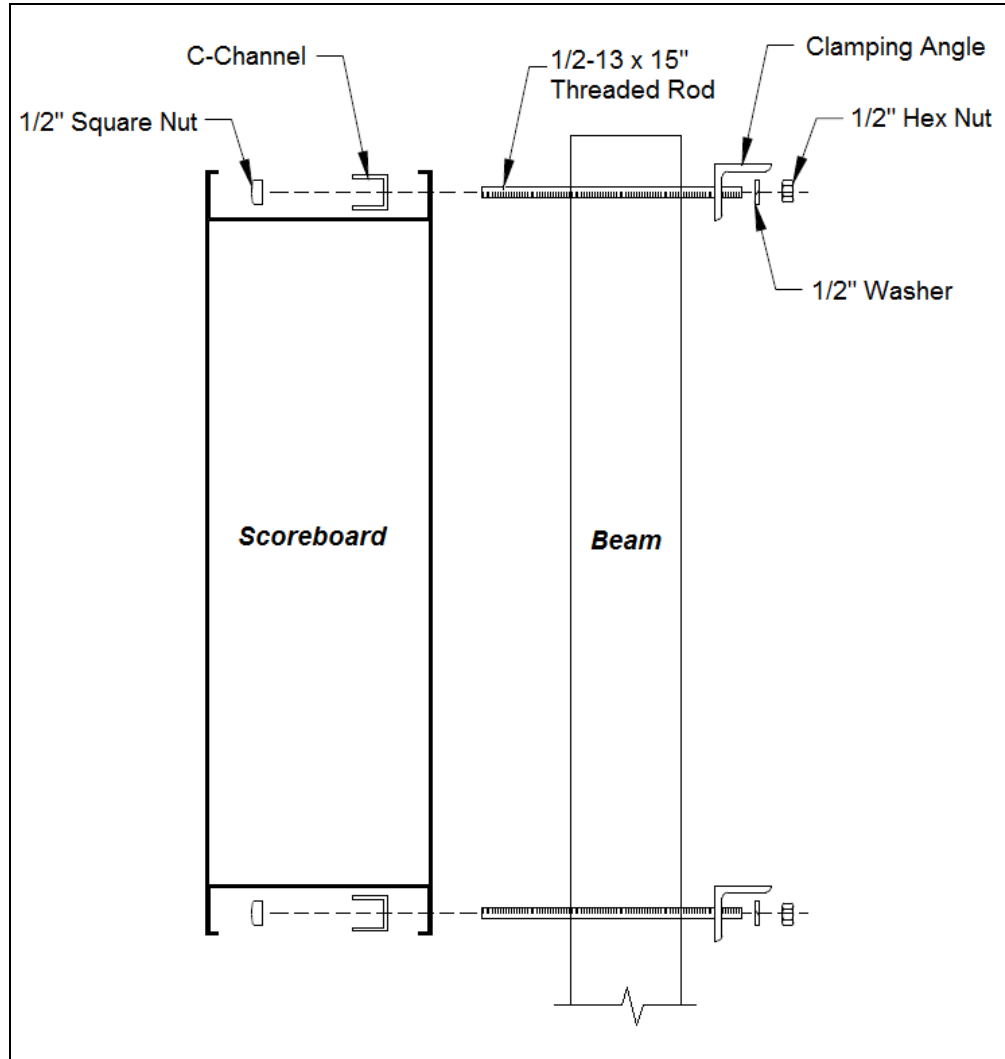
There are three mounting styles for Daktronics single-section outdoor scoreboards. Use the tables below to determine the mounting methods available for each scoreboard model.

| Method 1 & Method 2 |         |         |         |
|---------------------|---------|---------|---------|
| BA-2003             | BA-2715 | RO-2010 | TI-2012 |
| BA-2515             | CR-2002 | RO-2011 | TI-2015 |
| BA-2518             | FB-4005 | SO-2031 | TI-2019 |
| BA-2618             | MS-915  | SO-2918 | TI-2024 |
| BA-2718             | MS-2006 | TI-218  | TI-2032 |
| BA-2023             | MS-2025 | TI-2003 |         |
| BA-2024             | MS-3918 | TI-2010 |         |

| Method 3 |         |
|----------|---------|
| BA-624   | FB-824  |
| BA-2005  | MS-918  |
| BA-2010  | MS-2002 |
| BA-2014  | MS-2004 |
| BA-2017  | MS-2012 |
| BA-2019  | SO-918  |
| BA-2022  | SO-2008 |
| CR-2003  | SO-2013 |

## Mounting Method 1 – Clamping Angles

Mounting hardware includes C-channels; rear clamping angles; 1/2-13 x 15" threaded rods; and 1/2" square nuts, hex nuts, and lock washers. Refer to **Figure 5** and **Drawing A-1130246** in **Appendix B**.



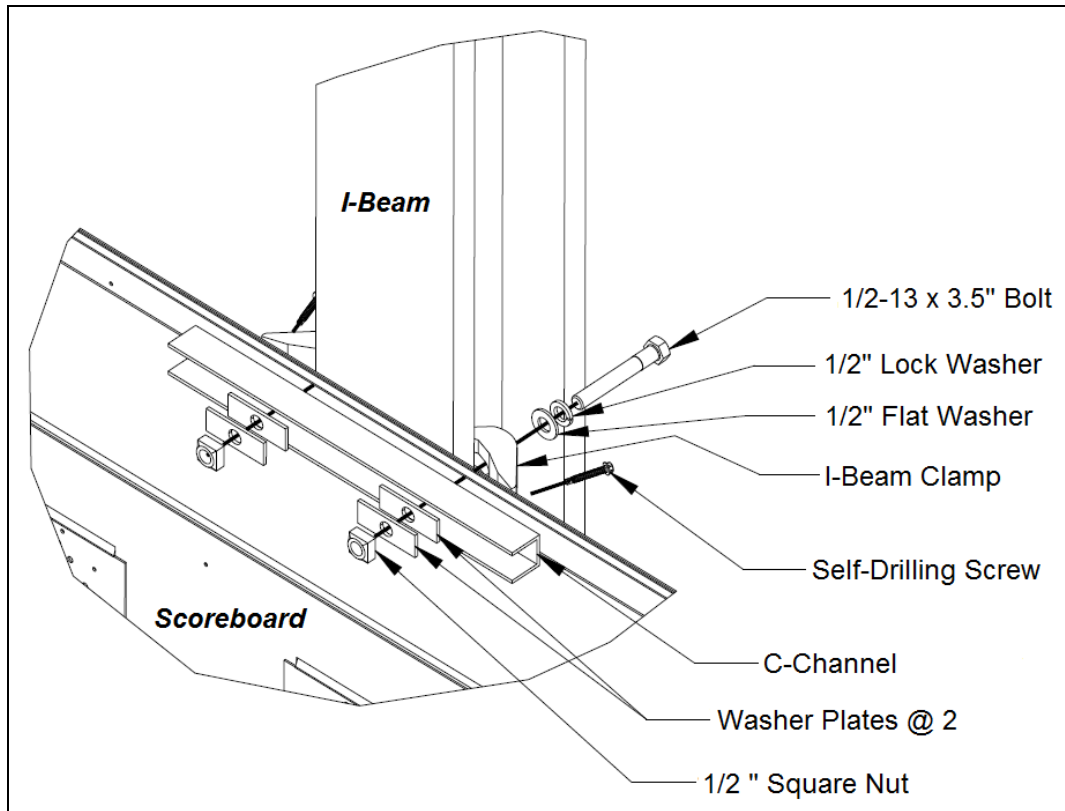
**Figure 5:** C-channel Mounting Method, Side View

1. Position the scoreboard at the front of the beams, and lift it to the desired height.
2. Place a C-channel against the upper rear flange of the scoreboard next to each beam.
3. With the C-channel as a template, use a  $\frac{9}{16}$ " bit to drill holes in the upper rear flange of the scoreboard cabinet where the rods will pass through. The rods should be as close to the beam as possible.
4. Push the rods through the holes in the rear flange of the scoreboard cabinet and into the C-channel, and then thread 1/2" square nuts onto the rods inside the C-channel.
5. Place clamping angles over each pair of rods and secure with 1/2" lock washers and hex nuts.
6. Make final adjustments in the positioning of the scoreboard to ensure it is flush and level, and then firmly tighten all of the 1/2" hex nuts.
7. Repeat steps 2-6 for the lower rear flange of the scoreboard for every beam.

## Mounting Method 2 – I-Beam Clamps

Mounting hardware includes C-channels; washer plates; I-beam clamps;  $\frac{1}{2}$ -13 x 3.5" bolts; self-drilling screws; and  $\frac{1}{2}$ " square nuts, hex nuts, flat washers, and lock washers. Refer to **Figure 6** and **Drawing A-1129110** in **Appendix B**.

**Note:** I-beams must have a flange thickness of  $\frac{3}{16}$ " –  $\frac{3}{4}$ ". If flange thickness is greater than  $\frac{3}{4}$ ", longer bolts will be required at added expense.



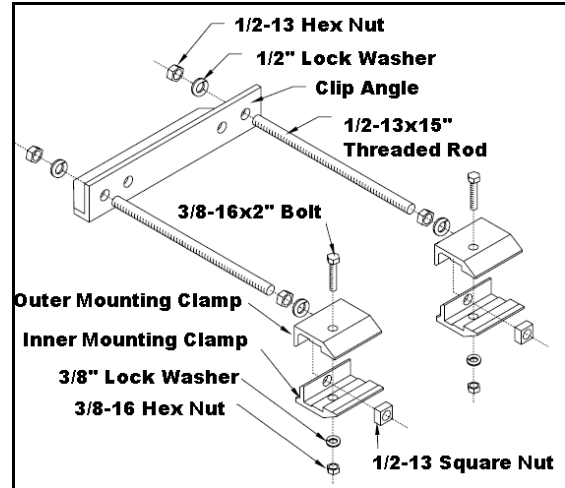
**Figure 6:** I-Beam Clamp Mounting Method, Front Rotated View

1. Position the scoreboard at the front of the beams, and lift it to the desired height.
2. Place a C-channel against the upper rear flange of the scoreboard next to each beam.
3. With the C-channel as a template, use a  $\frac{9}{16}$ " bit to drill holes in the upper rear flange of the scoreboard cabinet where the bolts will pass through. The bolts should be as close to the beam as possible.
4. Slide a lock washer, flat washer, and I-beam clamp onto each bolt, then push the bolts through the holes in the rear flange of the scoreboard cabinet and into the C-channel.
5. Place the 2 washer plates and  $\frac{1}{2}$ " square nuts inside the C-channel, and loosely tighten the square nut onto the bolts.
6. Make final adjustments in the positioning of the scoreboard to ensure it is flush and level, and then firmly tighten all of the bolts to 40 ft-lb torque.
7. Screw the self-drilling screws into the rear flange, snug up against the I-beam clamps.
8. Repeat steps 2-7 for the lower rear flange of the scoreboard for every beam.

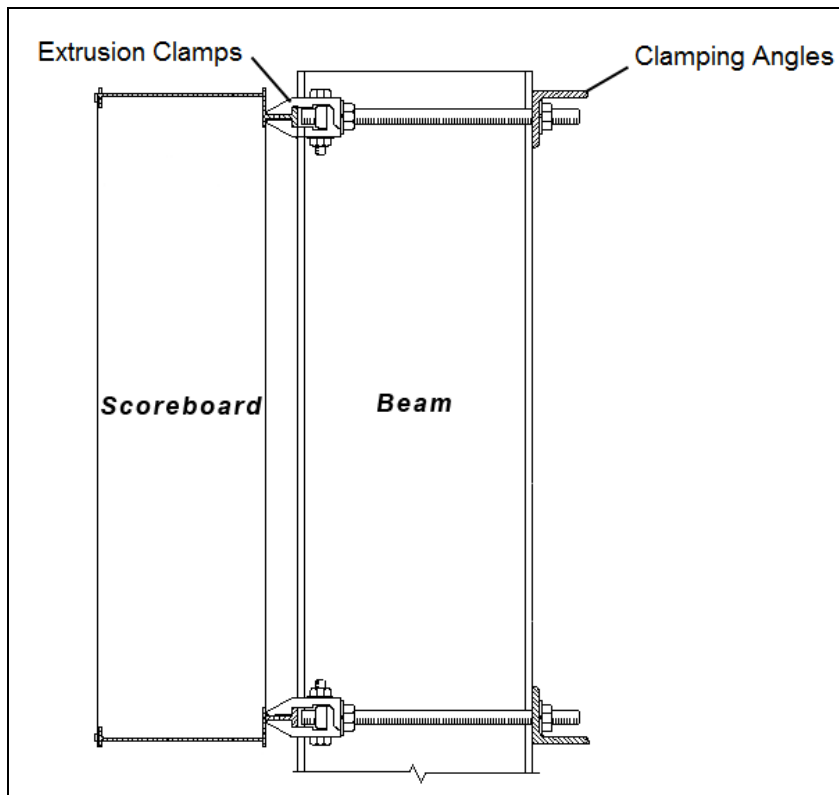
### Mounting Method 3 – Clamping Angles (with Extrusion)

Mounting hardware includes inner and outer extrusion mounting clamps; rear clamping angles;  $1/2$ -13 x 15" threaded rods;  $3/8$ -16 x 2" bolts, hex nuts and lock washers; and  $1/2$ " square nuts, hex nuts, and lock washers. Refer to **Figure 7** or **Drawing A-308051** in **Appendix B**.

1. Using  $3/8$ " bolts, loosely attach the inner and outer mounting clamps to the upper and lower rear extrusion flanges of the scoreboard cabinet. Measure the beam spacing and position the clamps to fit on either side of the beams.
2. Insert a  $1/2$ " square nut into each mounting clamp assembly. Screw a threaded rod into each of the nuts from the rear.
3. Position the scoreboard at the front of the beams with the threaded rods extending from the rear of the clamps, straddling the beams.
4. Raise the scoreboard section to the desired height.
5. Slide clamping angles over the ends of the rods and loosely install the washers and nuts.
6. Make final adjustments in the positioning of the scoreboard. Tighten the  $3/8$ " bolts in the mounting clamps.
7. Make sure that the threaded rods are perpendicular to the scoreboard, and tighten all of the  $1/2$ " hex nuts (**Figure 8**).



**Figure 7: Mounting Hardware**

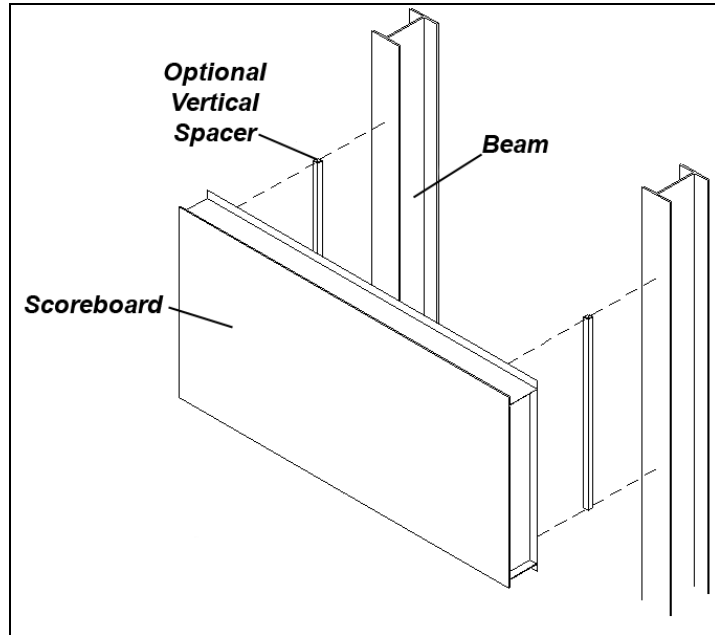


**Figure 8: Clamp Mounting Method, Side View**

## Scoreboard Mounting Using Vertical Spacers

Many customers add message centers or advertising panels to the top or bottom of their scoreboards, and in some cases the depth of the add-on component may not match the depth of the scoreboard.

To create a uniform appearance for the overall display, Daktronics recommends using vertical spacers behind the scoreboard so that the front face of the display lines up evenly with the front face of the added component. The concept is illustrated in **Figure 9** and **Drawing A-182909** in **Appendix B**.



**Figure 9:** Mounting with Vertical Spacers

During the installation, spacers are placed between the mounting beams and the back of the scoreboard cabinet. Spacer size is determined by the height and the extra depth required for the front surface of the scoreboard to match that of the optional message center or ad panel.

**Note:** Daktronics does not provide these spacers.

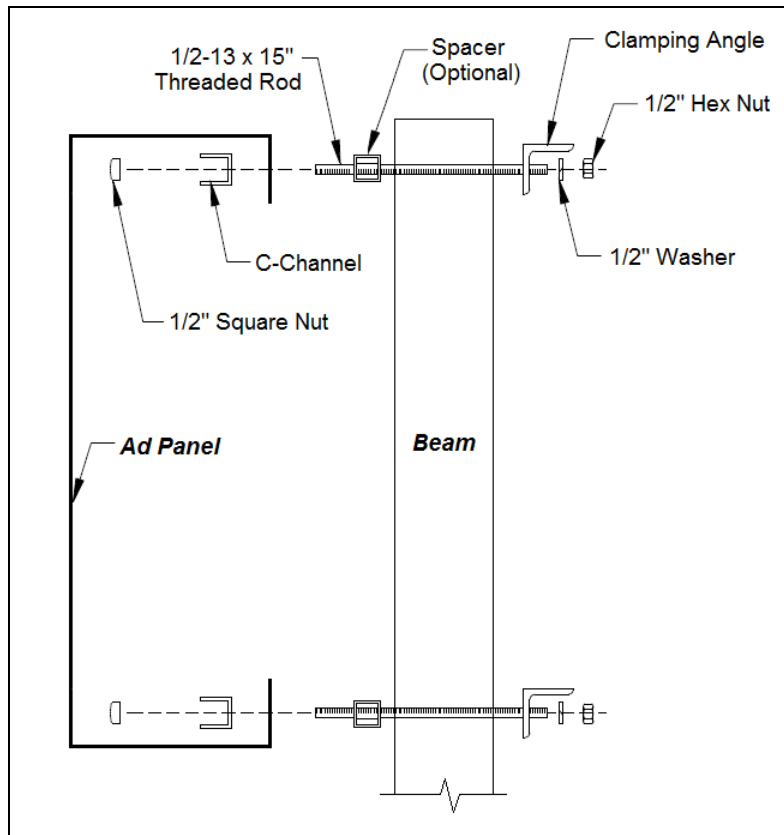
## 2.3 Scoreboard Protective Devices

Daktronics makes optional protective devices, including screens and netting, to help prevent damage to the scoreboard due to normal ball impacts.

**Note:** Some users install devices to protect the scoreboard from projectiles. Scoreboard protection devices not provided by Daktronics must be approved by Daktronics prior to installation. Failure to follow this approval procedure will void the scoreboard warranty.

## 2.4 Ad Panel Mounting

Mounting hardware includes C-channels; rear clamping angles; 1/2-13 x 15" threaded rods; and 1/2" square nuts, hex nuts, lock washers, and optional spacers. Refer to **Figure 10** and **Drawing A-52187** in **Appendix B**.



**Figure 10:** Ad Panel Mounting with C-channel, Side View

1. Position the ad panel at the front of the beams, and lift it to the desired height.
2. Place a C-channel against the upper and lower rear flanges of the ad panel next to each beam.
3. With the C-channel as a template, use a  $\frac{9}{16}$ " bit to drill holes in the upper and lower rear flanges of the ad panel where the rods will pass through. The rods should be as close to the beam as possible.
4. If the ad panel has backsheets, remove them as needed to access the ad panel interior.
5. Position a C-channel *inside* the ad panel cabinet along the upper and lower rear flanges as shown in **Figure 10**.
6. Push the rods through the holes in the rear flange of the ad panel and into the C-channel, and then thread 1/2" square nuts onto the rods inside the C-channel.

**Note:** If using spacers, slide them on the rods before performing the step above.

7. If any backsheets were removed, put them back on at this time.
8. Place clamping angles over each pair of rods and secure with 1/2" lock washers and hex nuts.
9. Make final adjustments in the positioning of the ad panel to ensure it is flush and level, and then firmly tighten all of the 1/2" hex nuts.





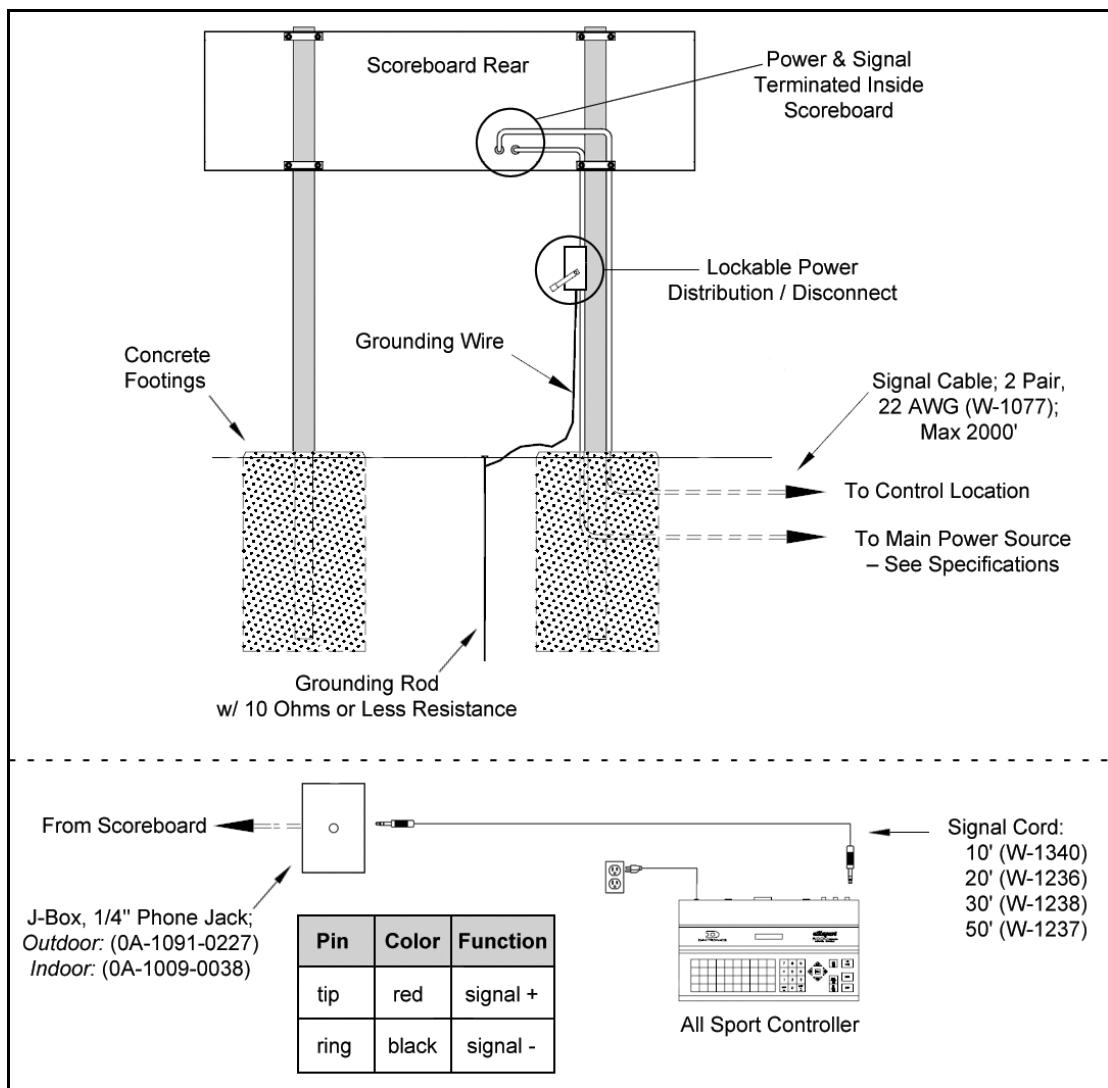
## Section 3: Electrical Installation

**CAUTION:** Only qualified individuals should terminate power and signal cable and access the electrical components of the display and its associated equipment. It is the responsibility of the electrical contractor to ensure that all electrical work meets or exceeds local and national codes.

Daktronics engineering staff must approve all changes or the warranty will be void.

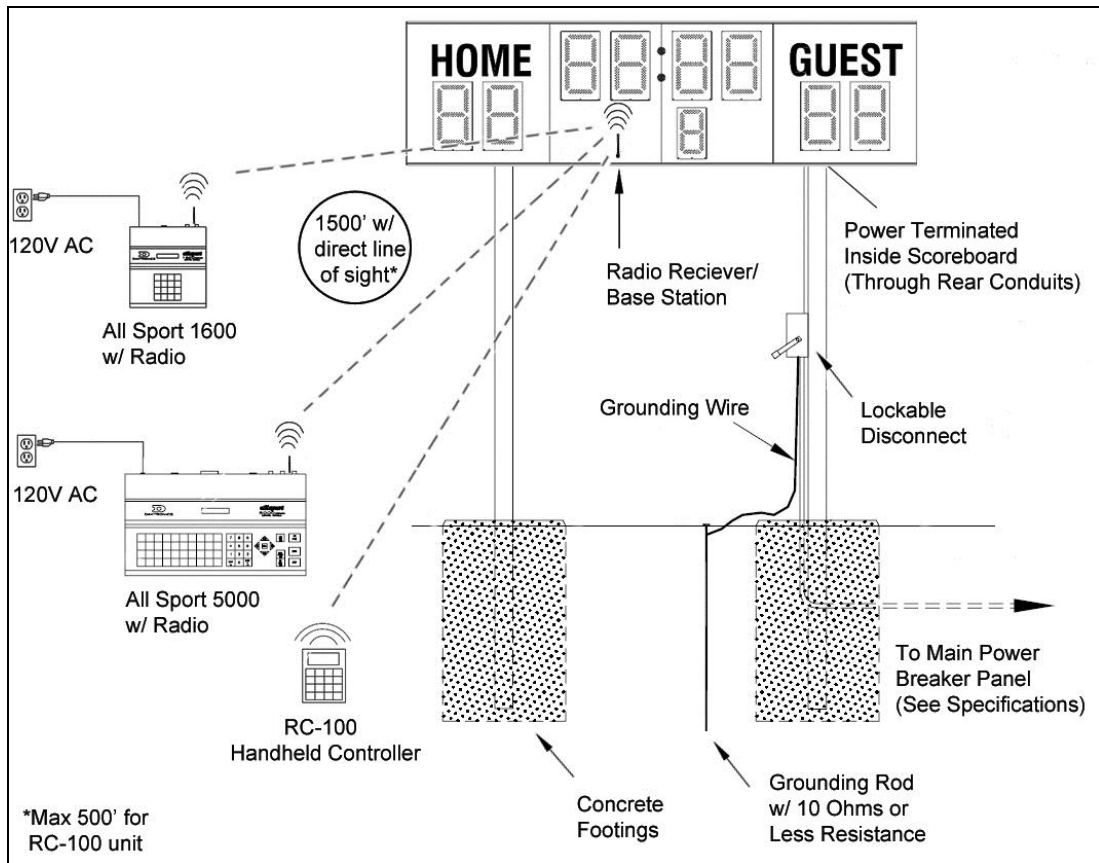
### 3.1 Installation Overview

The diagram shown in **Figure 11** illustrates a typical wired setup between a single-section outdoor scoreboard and controller. Daktronics part numbers are shown in parentheses.



**Figure 11:** Wired Installation

The diagram shown in **Figure 12** illustrates a typical wireless setup between a single-section outdoor scoreboard and controller. Daktronics part numbers are shown in parentheses.



**Figure 12:** Wireless Installation

## 3.2 Power

Correct power installation is imperative for proper display operation. The subsections that follow give details of display power installation. Only qualified individuals should attempt to complete the electrical installation; untrained personnel should not attempt to install these displays or any of the electrical components. Improper installation could result in serious damage to the equipment or injury to personnel.

Single-section outdoor scoreboards require a dedicated 120 V or 240 V circuit for incoming power (refer to product specs in **Appendix A**). The display itself has no breakers or fuses.

**WARNING:** It is critical that the scoreboard circuit be fused at 15 A and that all conductors used must be designed to pass a 15 A current in normal operation. Failure to meet wiring and overcurrent protection device requirements will void the scoreboard warranty.

### Grounding

The display must be properly grounded according to local and national codes or the warranty will be void. Proper grounding is necessary for reliable equipment operation and protects the equipment from damaging destructive disturbances and lightning.

Daktronics recommends a resistance-to-ground of 10 ohms or less. The electrical contractor performing the electrical installation can verify ground resistance. Daktronics Sales and Service personnel can also provide this service.

The display system must be earth-ground. The material for an earth-ground electrode differs from region to region and may vary according to conditions present at the site. Consult local and national electrical codes.

Daktronics does not recommend using the support structure as an earth-ground electrode; concrete, primer, corrosion, and other factors make the support structure a poor ground.

**Note:** The support structure may be used as an earth-ground electrode only if designed to do so. A qualified inspector must approve the support structure and grounding methods.

There are two types of power installation: installation with ground and neutral conductors provided, and installation with only a neutral conductor provided. These two power installations differ slightly, as described in the following paragraphs:

#### *Installation with Ground and Neutral Conductors Provided*

For this type of installation, the power circuit must contain an isolated earth-ground conductor. In this circumstance, do not connect neutral to ground at the disconnect or at the display as this would violate electrical codes and void the warranty.

Use a disconnect so that all ungrounded lines can be disconnected. The National Electrical Code requires the use of a lockable power disconnect within sight of or at the display.

#### *Installation with Only a Neutral Conductor Provided*

Installations where no grounding conductor is provided must comply with Article 250-32 of the National Electrical Code. If the installation in question meets all of the requirements of Article 250-32, the following guidelines must be observed:

- Connect the grounding electrode cable at the local disconnect, never at the display driver/power enclosure.
- Use a disconnect that opens all of the ungrounded phase conductors.

### **Connection**

Both power and signal cables are routed into the scoreboard from the rear via conduit. All power and signal wiring terminates at the master driver enclosure. Note that systems with radio control do not require external signal wiring.

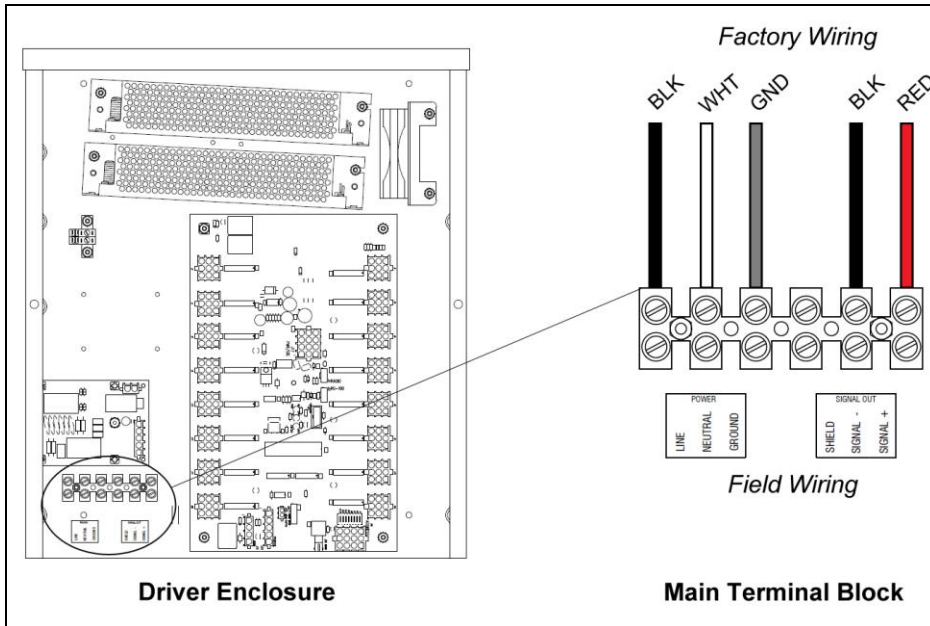
Look for a warning label similar to **Figure 13** to locate the front access panel to the driver enclosure. Remove the screws or loosen the latches to open the access door panel. Remove the metal cover of the driver enclosure to expose the driver components (**Figure 14**).

Refer to product specs in **Appendix A** for precise power/signal termination location for each model.



*Figure 13: Power Warning Label*

Connect the appropriate wires coming through the rear of the scoreboard to the power terminal block, as shown in **Figure 14**. Note that SIGNAL OUT connects here as well.

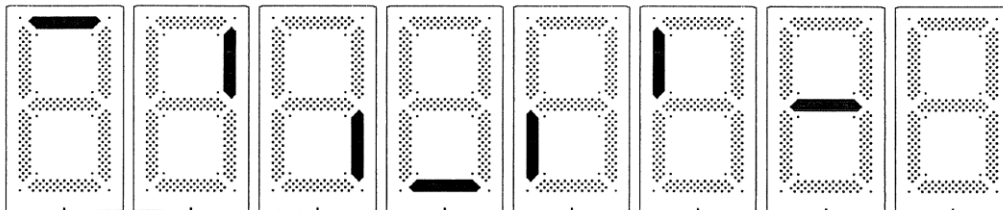


**Figure 14:** Driver Enclosure & Power Terminal Block

**Note:** If a power receptacle is needed to operate the control console at the scoreboard for troubleshooting, Daktronics recommends that an installation electrician provides a 120 V outlet close to the disconnect box specifically for this purpose.

### 3.3 Power-On Self-Test (POST)

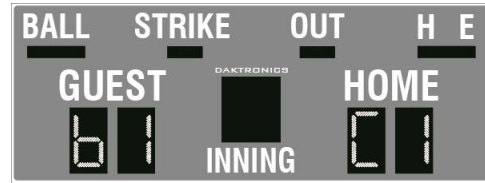
The scoreboard performs a self-test each time that power is turned on and the control console is powered off or not attached to the scoreboard. If the control console is attached and powered on, the self-test does not run, and data from the control console is displayed on the scoreboard after a brief period of time. Each scoreboard self-test pattern will vary depending on the scoreboard model, the number of drivers and types of digits. **Figure 15** shows an example of the LED bar test pattern that each digit performs.



**Figure 15:** Digit Segment POST

## Radio Settings

If a radio receiver is installed (see **Section 5.3**), the radio Broadcast settings (“b1”) and the Channel settings (“C1”) will be displayed in the Home and Guest scores or clock digits during the POST (**Figure 16**). These values must match the settings in the control console (refer to **Figure 17** and the manual listed in **Section 1.1**).



**Figure 16:** Radio Settings (Home/Guest)

**Note:** Scoreboards using the RC-100 controller will only display the channel settings.



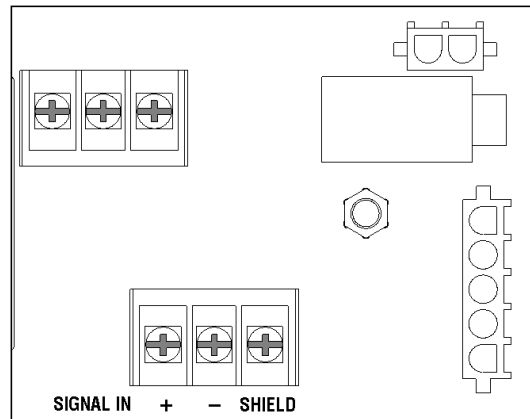
**Figure 17:** Radio Settings (Console)

## 3.4 Signal Connection

For wired setups, route signal cable through the conduit knockout on the rear of the scoreboard to the signal surge arrestor card (**Figure 18**), located just above the power termination block in the driver enclosure.

At the SIGNAL IN terminal block, connect red signal wire to positive (+) and black signal wire to negative (-).

**Note:** Be sure to properly connect the shield (silver) wire to the SHIELD terminal.

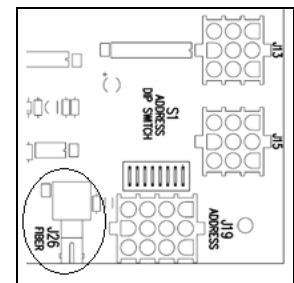


**Figure 18:** Signal Surge Arrestor Card

For signal cable, Daktronics recommends, as a minimum, single-pair, shielded cable, 22 AWG (Daktronics part number W-1077). Two-pair shielded cable (part W-1234) is preferred.

## Fiber Optic

Another common signal communication method is fiber optic cabling. A minimum cabling of multi-mode, 62.5/125  $\mu\text{m}$ , and 2-core fiber cable is recommended (part # W-1242). The fiber optic cable is terminated to a male ST-type connector and plugged into the mating J26 FIBER jack on the driver (**Figure 19**). This method requires a signal converter between the All Sport console’s scoreboard output and the fiber optic cable (not provided by Daktronics).



**Figure 19:** Driver Fiber Connection Location

## Multiple Driver Connections

Some models in the single-section outdoor scoreboard line require multiple drivers, and those models have been configured to operate with a master/slave driver system. Master and slave drivers function identically, but slave units lack the power termination block and signal surge suppression card. The two drivers have been designed to simply plug into one another, and this is done at the factory, so no additional on-site connection is necessary.

### **3.5 Lightning Protection**

The use of a disconnect near the scoreboard to completely cut all current-carrying lines significantly protects the circuits against lightning damage. In order for this system to provide protection, the power must be disconnected when the scoreboard is not in use.

The control console should also be disconnected from power and from the signal junction box when the system is not in use. The same surges that may damage the scoreboard's driver can also damage the console's circuitry.

# Section 4: Daktronics Exchange and Repair & Return Programs

---

## 4.1 Exchange Program

The Daktronics Exchange Program is a service for quickly replacing key components in need of repair. If a component fails, Daktronics sends a replacement part to the customer who, in turn, returns the failed component to Daktronics. This decreases equipment downtime. Customers who follow the program guidelines explained below will receive this service.

### Before Contacting Daktronics

Identify these important numbers:

Display Serial Number: \_\_\_\_\_  
Display Model Number: \_\_\_\_\_  
Job/Contract Number: \_\_\_\_\_  
Date Installed: \_\_\_\_\_  
Daktronics Customer ID Number: \_\_\_\_\_

To participate in the Exchange Program, follow these steps:

**1. Call Daktronics Customer Service.**

| Market Description  | Customer Service Number |
|---|-------------------------|
| Schools (including community/junior colleges), religious organizations, municipal clubs and community centers | 877-605-1115            |
| Universities and professional sporting events, live events for auditoriums and arenas                         | 866-343-6018            |

**2. When the exchange part is received, mail the old part to Daktronics.**

If the replacement part fixes the problem, send in the problem part being replaced.

- a. Package the old part in the same shipping materials in which the replacement part arrived.
- b. Fill out and attach the enclosed UPS shipping document.
- c. Ship the part to Daktronics.

**3. The defective or unused parts must be returned to Daktronics within 5 weeks of initial order shipment.**

If any part is not returned within five (5) weeks, a non-refundable invoice will be presented to the customer for the costs of replenishing the exchange parts inventory with a new part.

Daktronics reserves the right to refuse parts that have been damaged due to acts of nature or causes other than normal wear and tear.

## 4.2 Repair & Return Program

For items not subject to exchange, Daktronics offers a Repair & Return Program. To send a part for repair, follow these steps:

1. **Call or fax Daktronics Customer Service:**  
Refer to the appropriate market phone number in the chart on the previous page.  
**Fax:** 605-697-4444
2. **Receive a case number before shipping.**  
This expedites repair of the part.
3. **Package and pad the item carefully to prevent damage during shipment.**  
Electronic components, such as printed circuit boards, should be placed in an antistatic bag before boxing. Daktronics does not recommend using packing 'peanuts' when shipping.
4. **Enclose:**
  - name
  - address
  - phone number
  - the case number
  - a clear description of symptoms

### Shipping Address

Daktronics Customer Service  
[Case #]  
201 Daktronics Drive, Dock E  
Brookings, SD 57006

## 4.3 Daktronics Warranty and Limitation of Liability

The Daktronics Warranty and Limitation of Liability is located in **Appendix C**. The Warranty is independent of Extended Service agreements and is the authority in matters of service, repair, and display operation.



## Section 5: Scoreboard Options

---

### 5.1 Team Name Message Centers (TNMCs)

Team Name Message Centers (TNMCs) are programmable LED displays available for certain scoreboard models that allow users to show custom Home and Guest names. TNMCs are typically ordered factory-installed but can be field-mounted after the scoreboard is in place.

For more information about TNMCs, contact a Daktronics representative or refer to the service manual listed in **Section 1.2**.

### 5.2 Trumpet Horns

Trumpet horn options are available for installation only on scoreboards that have clocks. There are two types of optional trumpet horns:

- Internally mounted 120 V trumpet horn
- Externally mounted 12 V DC trumpet horn

A 120 V trumpet horn cannot be installed on a 240 V model scoreboard. For more information about trumpet horns, contact a Daktronics representative or refer to the **Trumpet Horn Installation Manual (ED-10006)**, available online at [www.daktronics.com/manuals](http://www.daktronics.com/manuals).

### 5.3 Radio Control

Radio control is an option for all Daktronics outdoor LED scoreboards. The system provides scoreboard control via a 2.4 GHz, extra-high frequency FM signal.

The radio transmitter and receiver are not standard. This setup requires a control console equipped with radio output as well as a radio receiver plugged into the primary driver and mounted internally to the front panel of the scoreboard.

For additional information about this option, contact a Daktronics representative; for complete information on setting up radio communication control, refer to the **Gen V Radio Installation Manual (ED-13831)** or the **Gen VI Radio Installation Manual (DD2362277)**, both available online at [www.daktronics.com/manuals](http://www.daktronics.com/manuals).

Certain scoreboards also have the option of using a hand-held RC-100 wireless radio controller, which requires a radio base station installed in the scoreboard cabinet. For more information, refer to the **Remote Control System RC-100 All Sport Operation Manual (ED-15133)**, available online at [www.daktronics.com/manuals](http://www.daktronics.com/manuals).

## 5.4 Changeable Team Name Captions

Team name caption kits contain hardware for one caption only and consist of an upper caption retainer, a lower caption retainer, a changeable caption panel and screws. The standard HOME and GUEST captions are applied directly to the face of the scoreboard. Team name captions are on changeable panels that fit into retainers mounted above and below the HOME and GUEST captions. If these retainers are not already present, attach the retainers included with the caption kit.

To install a changeable panel:

1. Insert the screws on the caption changing pole (Daktronics part # 0F-1091-0099) into the keyholes on the panel.
2. Lift the panel all the way up into the upper retainer and then insert the bottom of the panel into the lower retainer (**Figure 20**).
3. Take the screws on the caption changing pole out of the keyholes.

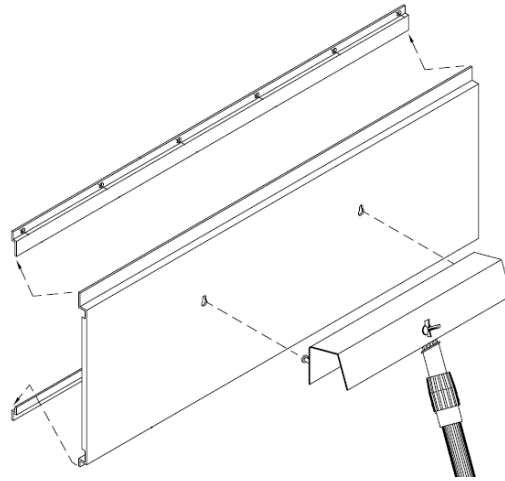
Reverse this procedure to remove the caption panel.

The caption changer pole is extendable. Loosen the ring tightener and extend the pole to the desired length, and then tighten the ring before lifting the caption.

**CAUTION:** The aluminum caption changer can conduct electricity. Do not use it within 20-feet of power lines. Also be careful when using the caption changer in high or gusting winds. Wind may catch the panel and unhook it from the changer or make it difficult to maintain a grip on the pole. Hold the pole tightly in windy conditions.

## 5.5 Portable Power Pack Hookup Option

A portable power pack permits operation of a scoreboard via battery power. The power pack is provided by customer and should include batteries, a charger, and a 120 V AC power inverter. Daktronics has a hookup kit available (part number 0A-1192-0349) for a customer-provided battery pack. Refer to Drawing **A-1039104** in **Appendix B** for installation procedures.



**Figure 20:** Changing Scoreboard Captions

# Appendix A: Specifications

All of the product specification sheets for the scoreboards in this manual are listed below. Product-specific installation and component location drawings are included with each spec sheet.

**Note:** Refer to **Figure 1** to determine a scoreboard's model number.

| Model   | Spec Sheet                | Model   | Spec Sheet                | Model   | Spec Sheet                |
|---------|---------------------------|---------|---------------------------|---------|---------------------------|
| BA-618  | <a href="#">SL02667</a>   | BA-2718 | <a href="#">DD1734740</a> | SO-918  | <a href="#">SL02669</a>   |
| BA-624  | <a href="#">SL02673</a>   | CR-2002 | <a href="#">DD1756601</a> | SO-2008 | <a href="#">SL04282</a>   |
| BA-2003 | <a href="#">SL04286</a>   | CR-2003 | <a href="#">SL07609</a>   | SO-2013 | <a href="#">SL06870</a>   |
| BA-2005 | <a href="#">SL04479</a>   | FB-824  | <a href="#">SL02234</a>   | SO-2918 | <a href="#">DD1734747</a> |
| BA-2010 | <a href="#">SL04693</a>   | FB-4005 | <a href="#">DD1734755</a> | TI-218  | <a href="#">DD1757007</a> |
| BA-2014 | <a href="#">SL06871</a>   | MS-915  | <a href="#">DD1756705</a> | TI-2003 | <a href="#">DD1757027</a> |
| BA-2017 | <a href="#">SL07594</a>   | MS-918  | <a href="#">SL02671</a>   | TI-2010 | <a href="#">DD1757109</a> |
| BA-2019 | <a href="#">SL07438</a>   | MS-2002 | <a href="#">SL04066</a>   | TI-2012 | <a href="#">DD1757303</a> |
| BA-2022 | <a href="#">SL08404</a>   | MS-2004 | <a href="#">SL04093</a>   | TI-2015 | <a href="#">DD1757334</a> |
| BA-2023 | <a href="#">DD1756390</a> | MS-2006 | <a href="#">SL04266</a>   | TI-2019 | <a href="#">DD1757391</a> |
| BA-2024 | <a href="#">DD1756390</a> | MS-2012 | <a href="#">SL04694</a>   | TI-2024 | <a href="#">SL07530</a>   |
| BA-2515 | <a href="#">DD1734711</a> | MS-2025 | <a href="#">DD1745311</a> | TI-2032 | <a href="#">DD1893381</a> |
| BA-2518 | <a href="#">DD1739303</a> | MS-3918 | <a href="#">DD1734766</a> |         |                           |
| BA-2618 | <a href="#">DD1734727</a> | RO-2010 | <a href="#">DD1756861</a> |         |                           |
| BA-2715 | <a href="#">DD1734734</a> | RO-2011 | <a href="#">DD1756894</a> |         |                           |

## Viewing Product Specifications Online

If a specification sheet is incorrect or missing, they are all available for download online.

- When viewing the digital version of this manual, simply click a link above to open it.
- When referencing the printed version of this manual, open an Internet browser and go to <http://www.daktronics.com/Web%20Documents/HSPR-Documents/#####.pdf> (replace "#####" with one of the Spec Sheet numbers shown above).

Note that the following scoreboards have different power specifications with white digits.

| <b>Model &amp; Options</b>   | <b>Watts</b> | <b>Amps<br/>120 / 240 V AC</b> | <b>Model &amp; Options</b>  | <b>Watts</b> | <b>Amps<br/>120 / 240 V AC</b> |
|--|--------------|--------------------------------|---|--------------|--------------------------------|
| <b>BA-618</b><br><b>BA-624</b><br><b>BA-2515</b><br><b>BA-2518</b><br><b>BA-2618</b><br><b>BA-2715</b><br><b>BA-2718</b> | 300 W        | 2.5 A / 1.25 A                 | <b>TI-218</b><br><b>TI-2003</b><br><b>TI-2010</b><br><b>TI-2012</b><br><b>TI-2015</b><br><b>TI-2019</b><br><b>TI-2024</b><br><b>TI-2032</b> | 300 W        | 2.5 A / 1.25 A                 |
| <b>FB-824</b>  | 400 W        | 3.3 A / 1.7 A                  | <b>SO-2008</b>  | 600 W        | 5 A / 2.5 A                    |
|  |              |                                | w/TNMC  | 700 W        | 5.8 A / 2.9 A                  |
| <b>FB-4005</b>   | 600 W        | 5 A / 2.5 A                    |   |              |                                |

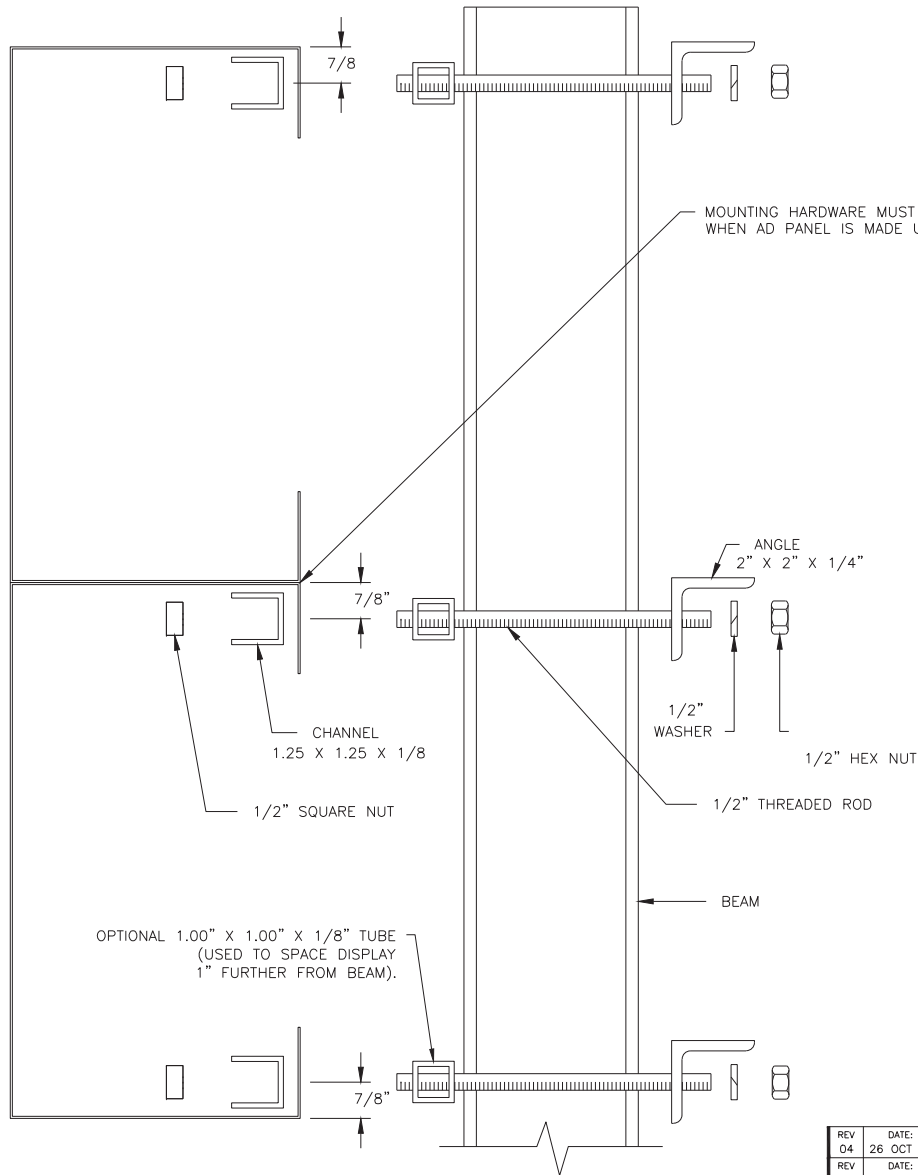
## Appendix B: Reference Drawings

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| <i>Drawing Title</i>                                | <i>Drawing Number</i> |
|---|-----------------------|
| Ad Panel Mounting.....                              | A-52187               |
| Scoreboard Mtg; Scoreboard with Spacers .....       | A-182909              |
| Display Mounting; Outdoor Sports Extrusion .....    | A-308051              |
| Installation, Portable Powered Scoreboards.....     | A-1039104             |
| I-Beam Clamp Mounting, Sheet Metal Attachment ..... | B-1129110             |
| Scoreboard Mounting .....                           | A-1130246             |

**Note: Site-specific system diagrams take precedence over any general setup drawings listed.**





**MOUNTING INSTRUCTIONS:**

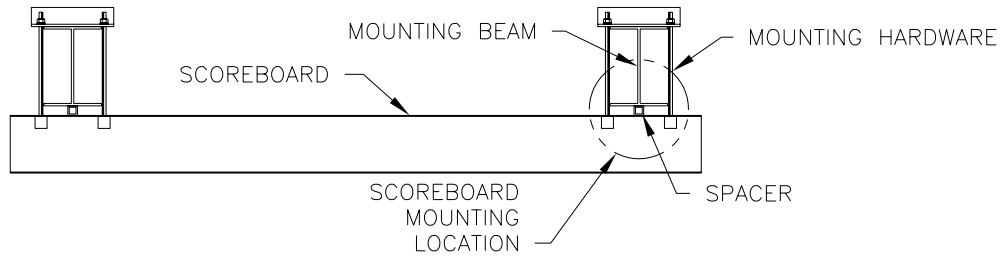
1. USE THE MOUNTING CHANNEL TO DETERMINE WHICH HOLE COMBINATION SHOULD BE USED. BE SURE TO KEEP THE BOLTS AS CLOSE TO THE BEAM AS POSSIBLE.
2. USING THE MOUNTING CHANNEL AS A TEMPLATE, DRILL 9/16" HOLES IN THE UPPER AND LOWER REAR FLANGE OF AD PANEL WHERE THE SUPPORTS WILL GO.
3. PLACE SQUARE NUTS INSIDE CHANNEL AND THREAD BOLTS THROUGH.
4. LIFT AD PANEL INTO POSITION WITH BOLTS STILL IN PLACE.
5. PLACE MOUNTING ANGLES OVER EACH PAIR OF BOLTS AND SECURE WITH LOCK WASHERS AND HEX NUTS.
6. WHEN PANEL IS ADJUSTED TO FINAL DESIRED POSITION, TIGHTEN HEX NUTS FIRMLY.

**MOUNTING INSTRUCTIONS: FOR AD PANELS WITH BACKSHEETS.**

1. USE THE MOUNTING CHANNEL TO DETERMINE WHICH HOLE COMBINATION SHOULD BE USED. BE SURE TO KEEP THE BOLTS AS CLOSE TO THE BEAM AS POSSIBLE.
2. USING THE MOUNTING CHANNEL AS A TEMPLATE, DRILL 9/16" HOLES IN THE UPPER AND LOWER REAR FLANGE OF AD PANEL WHERE THE SUPPORTS WILL GO.
3. REMOVE BACKSHEETS IN AREAS ABOVE AND BELOW HOLES DRILLED IN STEP 2.
4. PLACE SQUARE NUTS INSIDE CHANNEL AND THREAD BOLTS THROUGH.
5. REPLACE BACKSHEETS REMOVED IN STEP 3.
6. LIFT AD PANEL INTO POSITION WITH BOLTS STILL IN PLACE.
7. PLACE MOUNTING ANGLES OVER EACH PAIR OF BOLTS AND SECURE WITH LOCK WASHERS AND HEX NUTS.
8. WHEN PANEL IS ADJUSTED TO FINAL DESIRED POSITION, TIGHTEN HEX NUTS FIRMLY.

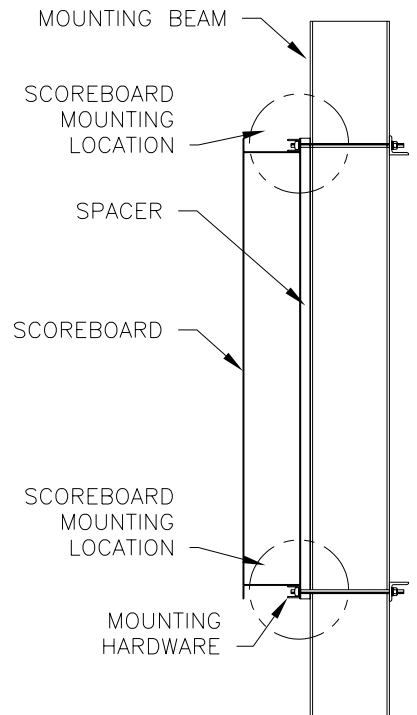
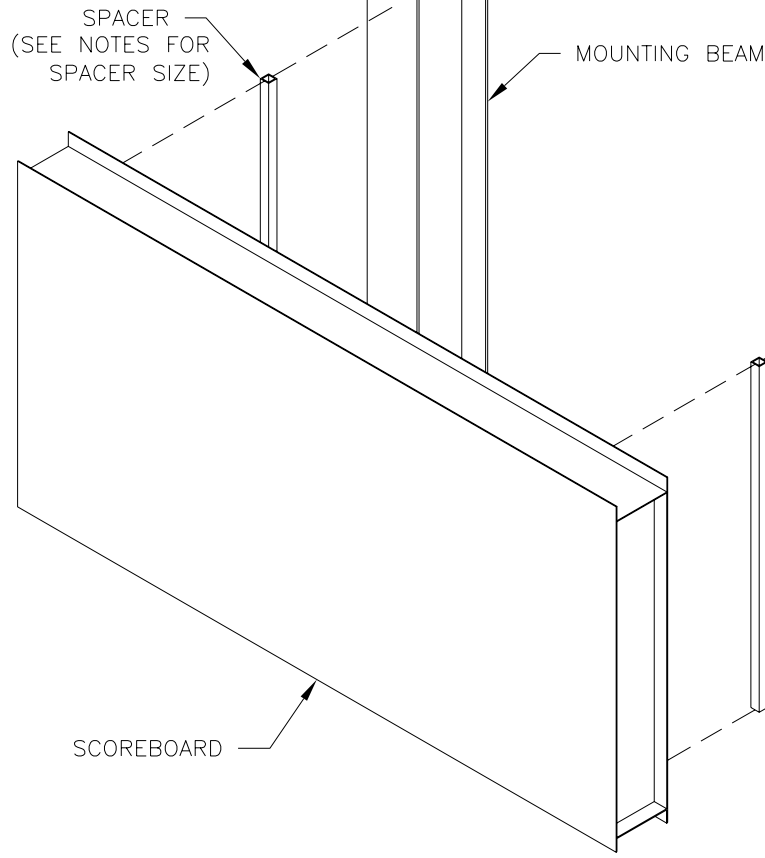
|        |                 |  |         |
|--------|-----------------|--|---------|
| REV 04 | DATE: 26 OCT 11 | ADDED NOTE FOR USING MOUNTING HARDWARE AT AD PANEL SPLICES | BY: MBC |
| REV 03 | DATE: 12 APR 10 | ADDED 1" TUBE SPACER                                       | BY: KDD |
| REV 02 | DATE: 13 AUG 97 | INCLUDED INSTRUCTIONS FOR AD PANELS WITH BACKSHEETS        | BY: JAA |
| REV 01 | DATE: 26 MAY 93 | ADDED DESCRIPTION TEXT TO PARTS.                           | BY: MGG |

|   |  |  |                  |  |                 |
|---|--|--|------------------|--|-----------------|
|   |  | <b>DAKTRONICS, INC.</b><br>BROOKINGS, SD 57006<br>DO NOT SCALE DRAWING |                  | THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2011 DAKTRONICS, INC. |                 |
| <b>PROJ: OUTDOOR INCANDESCENT SCOREBOARDS</b> |  |  |                  |  |                 |
| <b>TITLE: AD PANEL MOUNTING</b>               |  |  |                  |  |                 |
| DESIGN: MGG                                   |  |  | DRAWN: MGUNDESON |  | DATE: 09 JUL 92 |
| SCALE: NONE                                   |  |  |                  |  |                 |
| SHEET 04                                      |  | REV 04   |                  | JOB NO: P1091  |                 |
|   |  |  |                  | FLUNC-TYPE-SIZE R-10-B   |                 |
|   |  |  |                  |  | <b>52187</b>    |



TOP VIEW

SPACERS TO BE PROVIDED BY THE CUSTOMER



SIDE VIEW

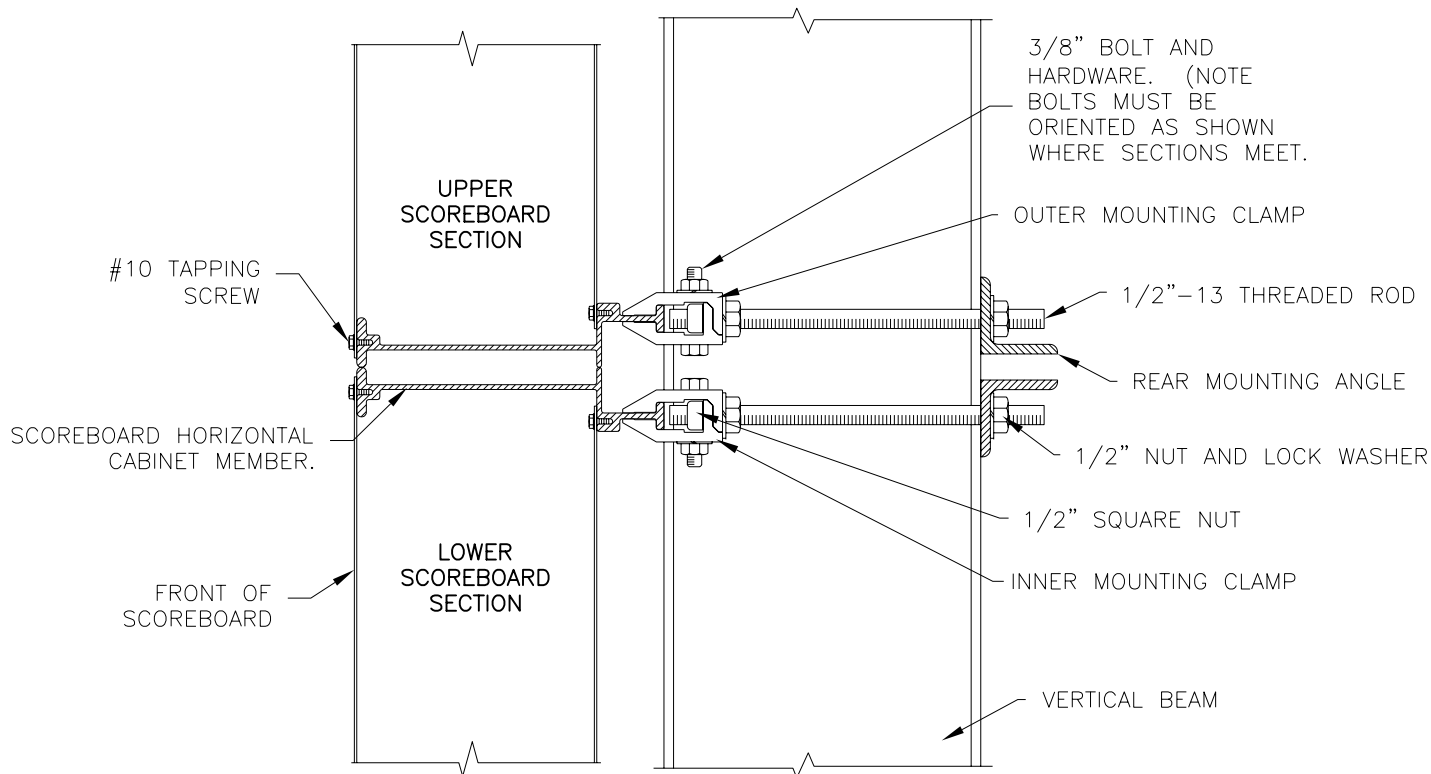
**NOTES:**

- SPACER SIZE CANNOT EXCEED THE HEIGHT OF THE SCOREBOARD BUT DOES NOT HAVE TO BE THE SAME HEIGHT AS THE SCOREBOARD. SMALLER LENGTHS OF SPACER MATERIAL MAY BE USED AS LONG AS THEY ARE USED AT THE TOP AND BOTTOM SCOREBOARD MOUNTING LOCATIONS. SPACERS SHOWN ABOVE ARE 1"X1". TYPICALLY, THE SPACER DEPTH WILL BE DETERMINED BY THE DIFFERENCE IN DEPTH OF THE SCOREBOARD AND THE AD PANEL (AD PANEL DEPTH - SCOREBOARD DEPTH = SPACER DEPTH).
- THE SPACERS ARE TO BE PROVIDED BY THE CUSTOMER.
- THE SPACERS ARE TO BE PLACED BETWEEN THE SCOREBOARD AND THE MOUNTING POLE.
- THE SPACERS DO NOT NEED TO BE MECHANICALLY ATTACHED TO THE SCOREBOARD OR THE MOUNTING BEAM. THEY WILL BE COMPRESSED BETWEEN THE SCOREBOARD AND THE MOUNTING BEAM WHEN THE SCOREBOARD IS MOUNTED.
- REFER TO THE SCOREBOARD MANUAL FOR THE SCOREBOARD MOUNTING HARDWARE AND OTHER SCOREBOARD MOUNTING DETAILS.

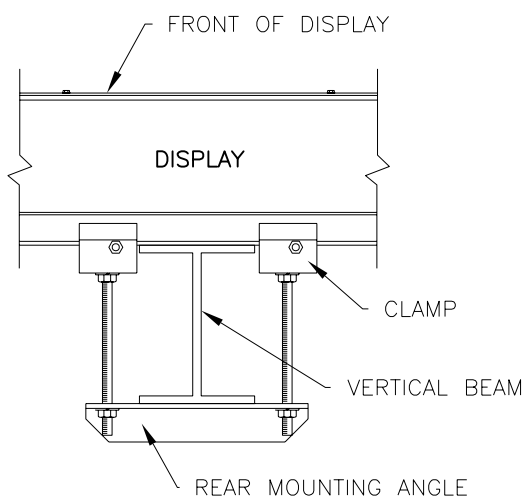
|  |                   |
|--|-------------------|
| THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC. |                   |
| DAKTRONICS, INC. BROOKINGS, SD 57006   |                   |
| PROJ: OUTDOOR SCOREBOARDS  |                   |
| TITLE: SCOREBOARD MTG; SCOREBOARD WITH SPACERS   |                   |
| DES. BY: MCOPLAN   | DRAWN BY: MCOPLAN |
|  | DATE: 07FEB03     |
| REVISION   | APPR. BY: _____   |
|  | SCALE: 1=20       |
| 1192-R08A-182909   |                   |

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------|-------------|----|-------|
|      |      |             |    |       |

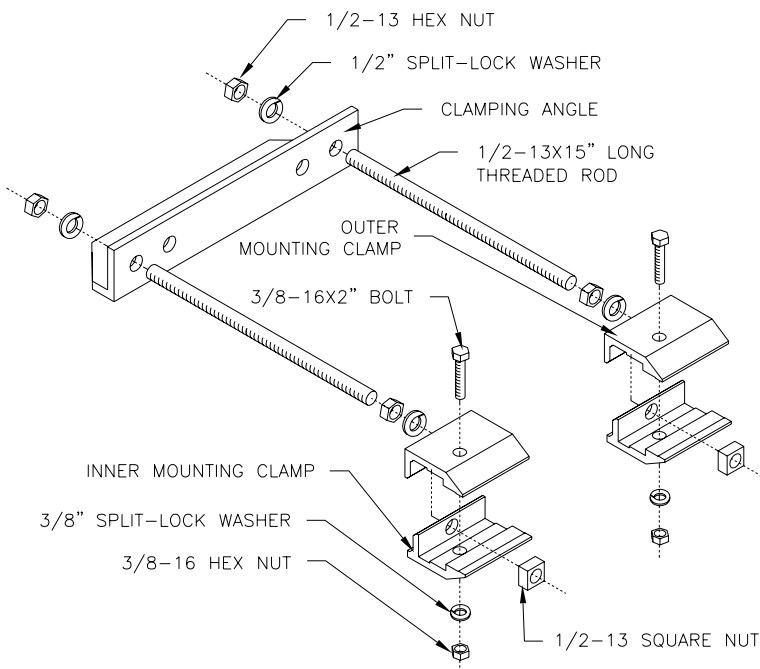




SIDE VIEW



TOP VIEW  
NOT TO SCALE



MOUNTING HARDWARE DETAIL  
NOT TO SCALE

NOTES:

- THREADED RODS RUN ALONG BOTH SIDES OF BEAM.
- RODS DO NOT PASS THROUGH THE FLANGES OF THE BEAM.
- NO DRILLING IS NECESSARY.

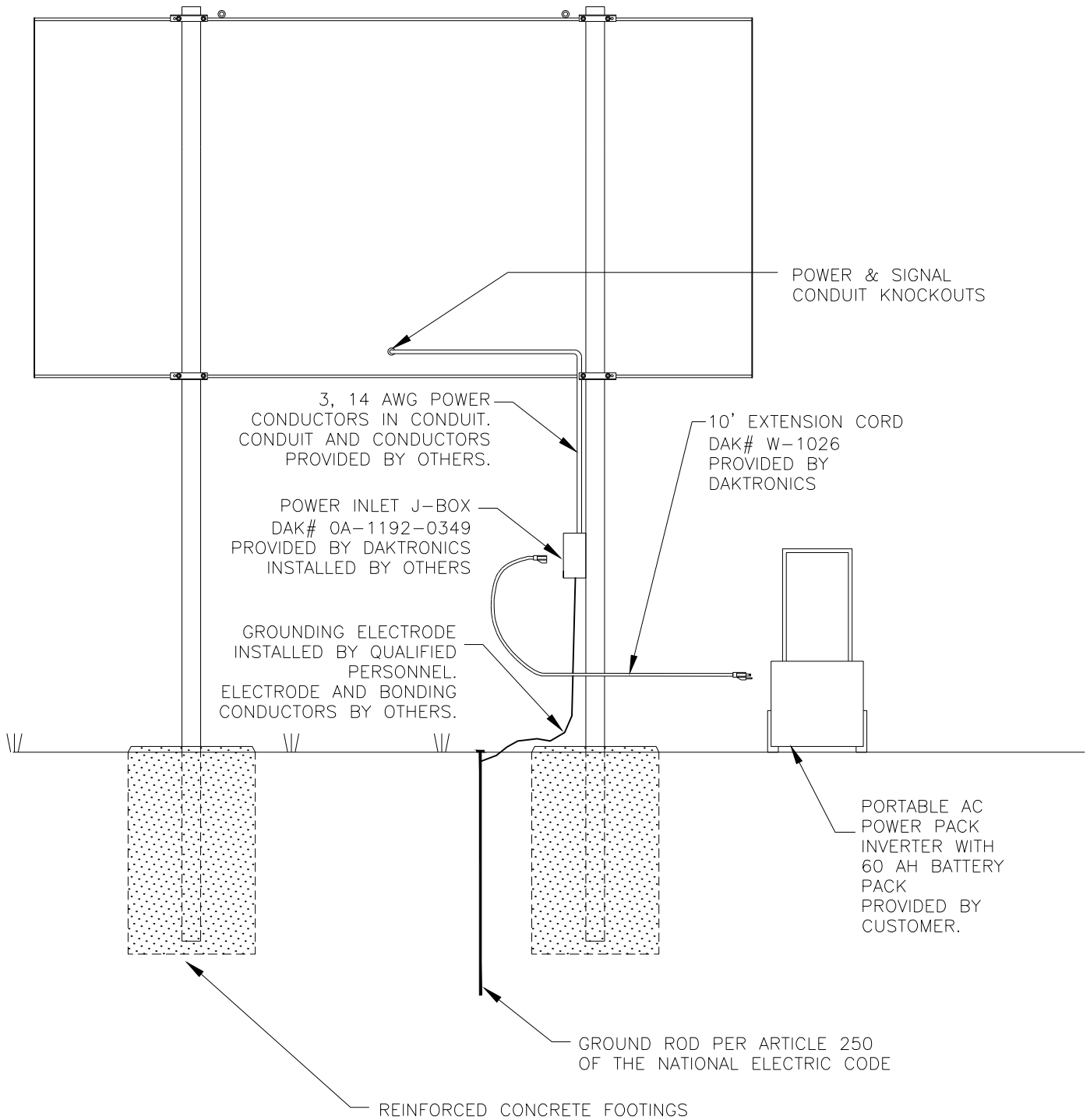
|  |            |                   |                 |
|--|------------|-------------------|-----------------|
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| DAKTRONICS, INC. BROOKINGS, SD 57006   |            |                   |                 |
| PROJ: OUTDOOR LED SCOREBOARDS  |            |                   |                 |
| TITLE: DISPLAY MOUNTING; OUTDOOR SPORTS EXTRUSION  |            |                   |                 |
| DES. BY: BCURTIS   |            | DRAWN BY: BCURTIS | DATE: 07 JUN 07 |
| REVISION   | APPR. BY:  | 1407-R10A-308051  |                 |
| 00   | SCALE: 1=5 |                   |                 |

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------|-------------|----|-------|
|      |      |             |    |       |

**\*\* NOTE \*\***

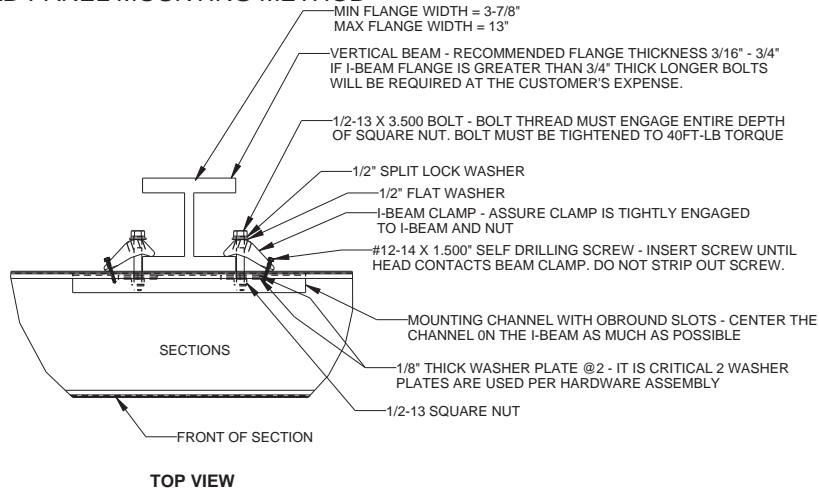
1. ALL ELECTRICAL INSTALLATIONS MUST MEET LOCAL AND NATIONAL ELECTRICAL CODES. INSTALLATION MUST BE PERFORMED BY QUALIFIED PERSONNEL.
2. CUSTOMER SUPPLIED POWER PACK INTENDED FOR TEMPORARY POWER FOR SCOREBOARDS.

**REAR VIEW**

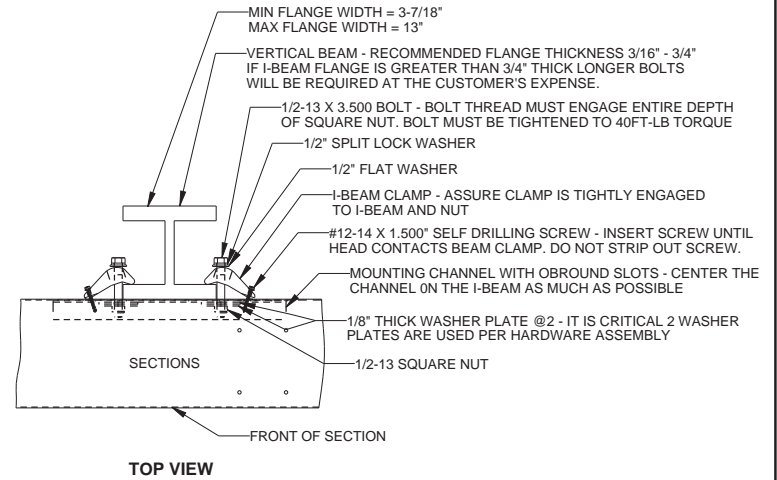


|  |     |  |                 |
|--|-----|--|-----------------|
|  <b>DAKTRONICS, INC.</b><br>BROOKINGS, SD 57006 |     | THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2010 DAKTRONICS, INC. |                 |
|  |     |  |                 |
| PROJ.: OUTDOOR SCOREBOARDS   |     |  |                 |
| TITLE: INSTALLATION, PORTABLE POWERED SCOREBOARDS  |     |  |                 |
| DESIGN: EBRAVEK  |     | DRAWN: SBRINK  | DATE: 03 DEC 10 |
| SCALE: 1 = 40  |     |  |                 |
| SHEET  | REV | JOB NO:  | FUNC-TYPE-SIZE  |
|  | 00  | 1092   | E-07-A          |
|  |     |  | <b>1039104</b>  |

**STANDARD SHEETMETAL SCOREBOARD/BACKLIT AD PANEL MOUNTING METHOD**



**STANDARD NON-BACKLIT AD PANEL MOUNTING METHOD**



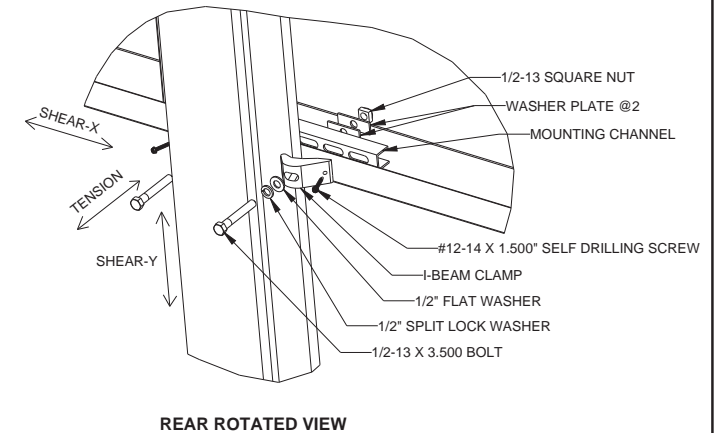
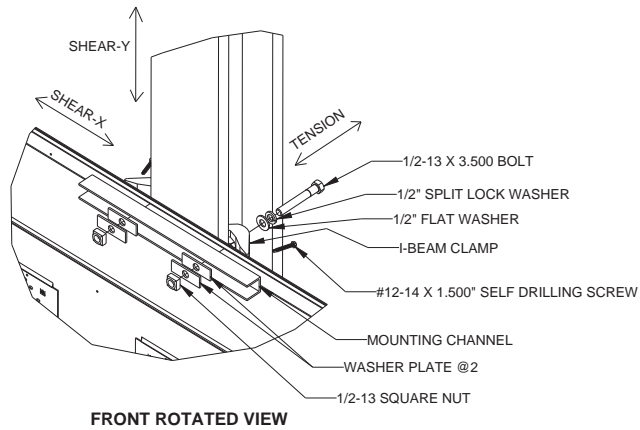
**QUALIFIED FOR SECTIONS UP TO 5' IN HEIGHT USING RECOMMENDED STRUCTURE**

ALLOWABLE CAPACITY PER EACH CLAMP:  
 SHEAR = 160 LBS  
 TENSION = 1376 LBS

SHEAR AND TENSION LOAD DIRECTION ARE AS INDICATED ON ROTATED VIEWS

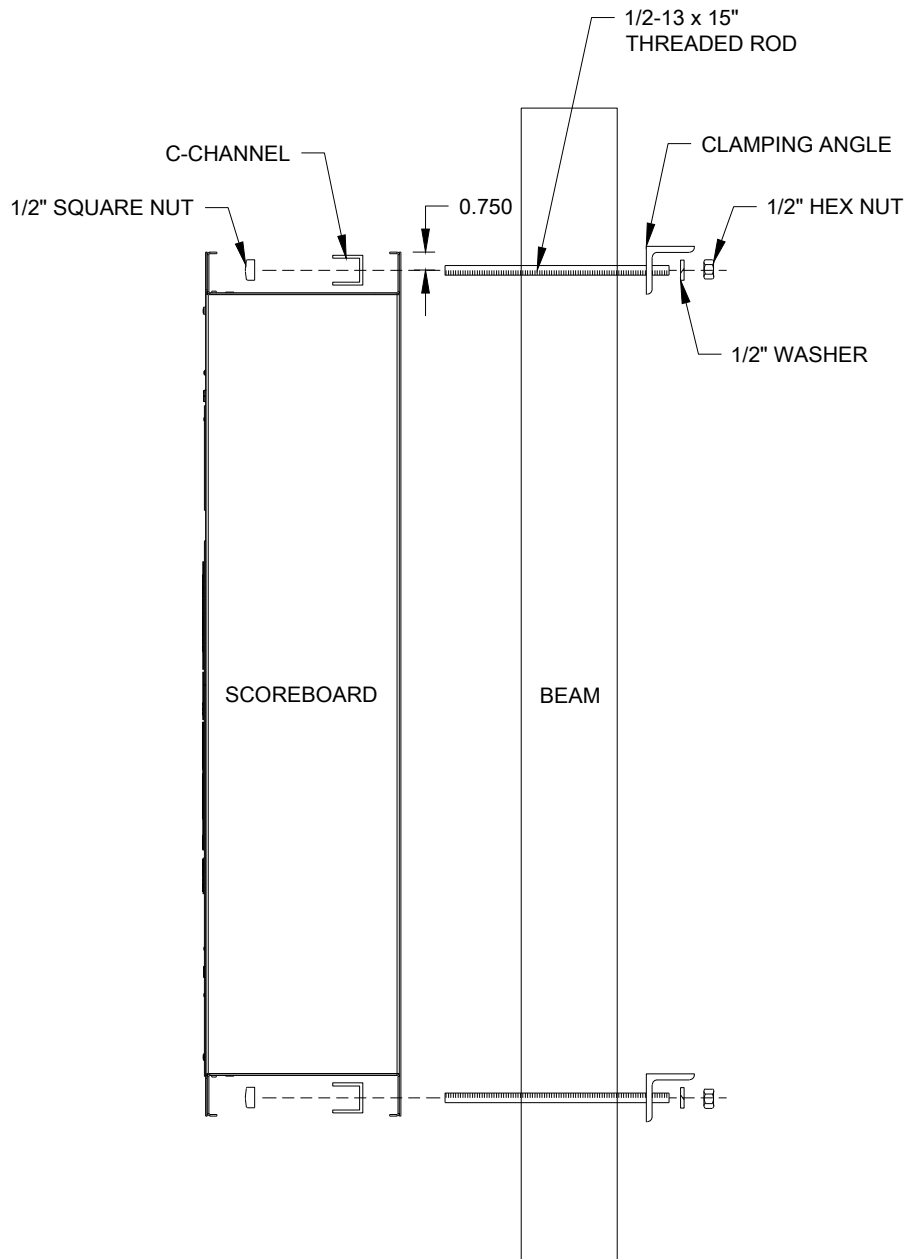
**MOUNTING INSTRUCTIONS:**

- LIFT THE FIRST SECTION OF THE DISPLAY INTO POSITION AGAINST I-BEAMS.  
NOTE: IF THE DISPLAY IS MADE UP OF MULTIPLE SECTIONS ALWAYS INSTALL THE BOTTOM SECTION FIRST AND WORK UP.
- STARTING ON THE TOP OF THE SECTION BEING INSTALLED MARK AND DRILL 9/16" HOLES IN THE CENTER OF THE TOP FLANGE OF THE SECTION. MAKE SURE THE HOLES ARE POSITIONED AS CLOSE TO THE I-BEAM FLANGES AS POSSIBLE.
- INSTALL ALL THE HARDWARE SHOWN PROVIDED AND TIGHTEN THE SECTION IN THE DESIRED LOCATION.
- ONCE THE TOP OF THE SECTION IS SECURE MOVE TO THE BOTTOM OF THE SECTION AND REPEAT THE STEPS ABOVE.
- IF THE DISPLAY IS MADE OF MULTIPLE SECTIONS REPEAT THE ENTIRE PROCEDURE ABOVE.
- ENSURE ALL 1/2" HARDWARE IS TORQUED TO THE SPECIFIED AMOUNT.




|  |                  |  |                            |
|--|------------------|--|----------------------------|
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| DO NOT SCALE DRAWING                                 |                  |  |                            |
| PROJ: OUTDOOR SCOREBOARD                             |                  |  |                            |
| TITLE: I-BEAM CLAMP MOUNTING, SHEET METAL ATTACHMENT |                  |  |                            |
| DESIGN: KSCHNABEL                                    | DRAWN: KSCHNABEL | DATE: 17-JUN-15  |                            |
| SCALE: 1/8"  |                  |  |                            |
| SHEET: 1 OF 1  | REV: 02          | JOB NO: P 1753   | FUNC-TYPE-SIZE: E - 10 - B |
|  |                  |  | <b>1129110</b>             |

|        |                 |   |          |
|--------|-----------------|---|----------|
| REV 02 | DATE: 17 JUN 15 | CHANGED TENSION CAPACITY TO 1376 LBS<br>ADDED MINIMUM AND MAXIMUM FLANGE WIDTHS   | BY: AMP  |
| REV 01 | DATE: 8 JAN 14  | ADDED ALLOWABLE TENSION AND SHEAR CAPACITY DETAILS<br>ADDED NON-BKLT AD PANEL MOUNTING DETAILS<br>CHANGED DWG TO B SIZED. | BY: JAVA |



**MOUNTING INSTRUCTIONS:**

1. USE THE MOUNTING CHANNEL TO DETERMINE WHICH HOLE COMBINATION SHOULD BE USED. BE SURE TO KEEP THE BOLT AS CLOSE TO THE BEAM AS POSSIBLE.
2. USING THE MOUNTING CHANNEL AS A TEMPLATE, DRILL 9/16" HOLES IN THE UPPER AND LOWER REAR FLANGE OF SCOREBOARDS WHERE THE SUPPORTS WILL GO.
3. PLACE SQUARE NUTS INSIDE CHANNEL AND THREAD BOLTS THROUGH.
4. LIFT SCOREBOARD INTO POSITION WITH BOLTS STILL IN PLACE.
5. PLACE MOUNTING ANGLES OVER EACH PAIR OF BOLTS AND SECURE WITH LOCK WASHERS AND HEX NUTS.
6. WHEN SCOREBOARD IS ADJUSTED TO FINAL DESIRED POSITION, TIGHTEN HEX NUTS FIRMLY.

|  |           |   |                                  |
|--|-----------|---|----------------------------------|
|  <b>DAKTRONICS, INC.</b><br>BROOKINGS, SD 57006 |           | THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC.<br>COPYRIGHT 2013 DAKTRONICS, INC. |                                  |
|  |           | DO NOT SCALE DRAWING  |                                  |
| PROJ: OUTDOOR SHEET METAL SCOREBOARDS<br>TITLE: SCOREBOARD MOUNTING  |           |   |                                  |
| DESIGN: KDRAGT   |           | DRAWN: KDRAGT   |                                  |
| SCALE: 1=8   |           | DATE: 14 MAR 13   |                                  |
| SHEET  | REV<br>00 | JOB NO:<br>P 1753   | FUNC - TYPE - SIZE<br>E - 10 - A |
|  |           |   | <b>1130246</b>                   |

## **Appendix C: Daktronics Warranty and Limitation of Liability**

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**DAKTRONICS  
WARRANTY AND LIMITATION OF LIABILITY**

This Warranty and Limitation of Liability (the "Warranty") sets forth the warranty provided by Daktronics with respect to the Equipment. By accepting delivery of the Equipment, Purchaser agrees to be bound by and accept these terms and conditions. All defined terms within the Warranty shall have the same meaning and definition as provided elsewhere in the Agreement.

DAKTRONICS WILL ONLY BE OBLIGATED TO HONOR THE WARRANTY SET FORTH IN THESE TERMS AND CONDITIONS UPON RECEIPT OF FULL PAYMENT FOR THE EQUIPMENT.

**1. Warranty Coverage**

A. Daktronics warrants to the original end-user that the Equipment will be free from Defects (as defined below) in materials and workmanship for a period of one (1) year (the "Warranty Period"). The warranty period shall commence on the earlier of: (i) four weeks from the date that the equipment leaves Daktronics' facility; or (ii) Substantial Completion as defined herein. The warranty period shall expire on the first anniversary of the commencement date.

"Substantial Completion" means the operational availability of the Equipment to the Purchaser in accordance with the Equipment's specifications, without regard to punch-list items, or other non-substantial items which do not affect the operation of the Equipment.

B. Daktronics' obligation under this Warranty is limited to, at Daktronics' option, replacing or repairing, any Equipment or part thereof that is found by Daktronics not to conform to the Equipment's specifications. Unless otherwise directed by Daktronics, any defective part or component shall be returned to Daktronics for repair or replacement. Daktronics may, at its option, provide on-site warranty service. Daktronics shall have a reasonable period of time to make such replacements or repairs and all labor associated therewith shall be performed during regular working hours. Regular working hours are Monday through Friday between 8:00 a.m. and 5:00 p.m. at the location where labor is performed, excluding any holidays observed by either Purchaser or Daktronics.

C. Daktronics shall pay ground transportation charges for the return of any defective component of the Equipment. If returned Equipment is repaired or replaced under the terms of this warranty, Daktronics will prepay ground transportation charges back to Purchaser; otherwise, Purchaser shall pay transportation charges to return the Equipment back to the Purchaser. All returns must be pre-approved by Daktronics before shipment. Daktronics shall not be obligated to pay freight for any unapproved return. Purchaser shall pay any upgraded or expedited transportation charges.

D. Any replacement parts or Equipment will be new or serviceably used, comparable in function and performance to the original part or Equipment, and warranted for the remainder of the Warranty Period. Purchasing additional parts or Equipment from the Seller does not extend this Warranty Period.

E. Defects shall be defined as follows. With regard to the Equipment (excepting LEDs), a "Defect" shall refer to a material variance from the design specifications that prohibit the Equipment from operating for its intended use. With respect to LEDs, "Defects" are defined as LED pixels that cease to emit light. The limited warranty provided by Daktronics does not impose any duty or liability upon Daktronics for partial LED pixel degradation. Nor does the limited warranty provide for the replacement or installation of communication methods including but not limited to, wire, fiber optic cable, conduit, trenching, or for the purpose of overcoming local site interference radio equipment substitutions.

THIS LIMITED WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE EQUIPMENT AND REPLACES ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SPECIFICALLY, EXCEPT AS PROVIDED HEREIN, THE SELLER UNDERTAKES NO RESPONSIBILITY FOR THE QUALITY OF THE EQUIPMENT OR THAT THE EQUIPMENT WILL BE FIT FOR ANY PARTICULAR PURPOSE FOR WHICH PURCHASER MAY BE BUYING THE EQUIPMENT. ANY IMPLIED WARRANTY IS LIMITED IN DURATION TO THE WARRANTY PERIOD. NO ORAL OR WRITTEN INFORMATION, OR ADVICE GIVEN BY THE COMPANY, ITS AGENTS OR EMPLOYEES, SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF THIS LIMITED WARRANTY.

THIS LIMITED WARRANTY IS NOT TRANSFERABLE.

**2. Exclusion from Warranty Coverage**

The limited warranty provided by Daktronics does not impose any duty or liability upon Daktronics for:

A. Any damage occurring, at any time, during shipment of Equipment unless otherwise provided for in the Agreement. When returning Equipment to Daktronics for repair or replacement, Purchaser assumes all risk of loss or damage, and agrees to use any shipping containers that might be provided by Daktronics and to ship the Equipment in the manner prescribed by Daktronics;

B. Any damage caused by the unauthorized adjustment, repair or service of the Equipment by anyone other than personnel of Daktronics or its authorized repair agents;



C. Damage caused by the failure to provide a continuously suitable environment, including, but not limited to: (i) neglect or misuse, (ii) a failure or sudden surge of electrical power, (iii) improper air conditioning or humidity control, or (iv) any other cause other than ordinary use;

D. Damage caused by fire, flood, earthquake, water, wind, lightning or other natural disaster, strike, inability to obtain materials or utilities, war, terrorism, civil disturbance or any other cause beyond Daktronics' reasonable control;

E. Failure to adjust, repair or replace any item of Equipment if it would be impractical for Daktronics personnel to do so because of connection of the Equipment by mechanical or electrical means to another device not supplied by Daktronics, or the existence of general environmental conditions at the site that pose a danger to Daktronics personnel;

F. Any statements made about the product by salesmen, dealers, distributors or agents, unless such statements are in a written document signed by an officer of Daktronics. Such statements as are not included in a signed writing do not constitute warranties, shall not be relied upon by Purchaser and are not part of the contract of sale;

G. Any damage arising from the use of Daktronics products in any application other than the commercial and industrial applications for which they are intended, unless, upon request, such use is specifically approved in writing by Daktronics; or

H. Any performance of preventive maintenance.

### **3. Limitation of Liability**

Daktronics shall be under no obligation to furnish continued service under this Warranty if alterations are made to the Equipment without the prior written approval of Daktronics.

It is specifically agreed that the price of the Equipment is based upon the following limitation of liability. In no event shall Daktronics (including its subsidiaries, affiliates, officers, directors, employees, or agents) be liable for any special, consequential, incidental or exemplary damages arising out of or in any way connected with the Equipment or otherwise, including but not limited to damages for lost profits, cost of substitute or replacement equipment, down time, lost data, injury to property or any damages or sums paid by Purchaser to third parties, even if Daktronics has been advised of the possibility of such damages. The foregoing limitation of liability shall apply whether any claim is based upon principles of contract, tort or statutory duty, principles of indemnity or contribution, or otherwise.

In no event shall Daktronics be liable to Purchaser or any other party for loss, damage, or injury of any kind or nature arising out of or in connection with this Warranty in excess of the purchase price of the Equipment actually delivered to and paid for by the Purchaser. The Purchaser's remedy in any dispute under this Warranty shall be ultimately limited to the Purchase Price of the Equipment to the extent the Purchase Price has been paid.

### **4. Assignment of Rights**

The Warranty contained herein extends only to the original end-user (which may be the Purchaser) of the Equipment and no attempt to extend the Warranty to any subsequent user-transferee of the Equipment shall be valid or enforceable without the express written consent of Daktronics.

### **5. Dispute Resolution**

Any dispute between the parties will be resolved exclusively and finally by arbitration administered by the American Arbitration Association ("AAA") and conducted under its rules, except as otherwise provided below. The arbitration will be conducted before a single arbitrator. The arbitration shall be held in Brookings, South Dakota. Any decision rendered in such arbitration proceedings will be final and binding on each of the parties, and judgment may be entered thereon in any court of competent jurisdiction. This arbitration agreement is made pursuant to a transaction involving interstate commerce, and shall be governed by the Federal Arbitration Act.

### **6. Governing Law**

The rights and obligations of the parties under this warranty shall not be governed by the provisions of the United Nations Convention on Contracts for the International Sales of Goods of 1980. Both parties consent to the application of the laws of the State of South Dakota to govern, interpret, and enforce all of Purchaser and Daktronics rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Warranty, without regard to conflict of law principles.

### **7. Availability of Extended Service Agreement**

For Purchaser's protection, in addition to that afforded by the warranties set forth herein, Purchaser may purchase extended warranty services to cover the Equipment. The Extended Service Agreement, available from Daktronics, provides for electronic parts repair and/or on-site labor for an extended period from the date of expiration of this warranty. Alternatively, an Extended Service Agreement may be purchased in conjunction with this warranty for extended additional services. For further information, contact Daktronics Customer Service at 1-800-DAKTRONics (1-800-325-8766).