

Daktronics Tuff Sport[®] Basketball LED Scoreboards

Display Manual

ED-13110

Rev 17 – 15 January 2013

DAKTRONICS

Models			
	BB-2101		BB-2144
	BB-2103		BB-2152
	BB-2105		BB-2153
	BB-2107		BB-2155
	BB-2109	*	PN-2101
	BB-2111	*	SD-2101
	BB-2114		SD-2102
	BB-2115		SD-2103
	BB-2116		SD-2104
	BB-2117	*	SD-2106
	BB-2119		SD-2107
*	BB-2120		

* Discontinued

Please fill in the information below for your display; use it for reference when calling Daktronics for assistance.

Scoreboard Serial No. _____

Scoreboard Model No. _____

Date Installed _____

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Section 1: Introduction

This manual explains the installation and maintenance of Daktronics Tuff Sport® Indoor Basketball LED Scoreboards, Game/Shot Clocks, and Statistics Panels. For additional information regarding the safety, installation, operation, or service of these displays, refer to the telephone numbers listed in **Section 5.8**. This manual is not specific to a particular installation.

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.

Project-specific information takes precedence over any other general information found in this manual.

1.1 Scoreboard Controllers

Daktronics Tuff Sport 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 Operational Overview (ED-15133)**

These control console manuals are available online at www.daktronics.com/manuals.

1.2 Scoreboard Label

Serial and model numbers of a Daktronics scoreboard can be found on the ID label on the display, similar to that shown in **Figure 1**.



Figure 1: Display ID Label

Please list the model number, display serial number, and the date this display became operational in the blanks provided on the second page of this manual. When calling Daktronics customer service, please have this information available to ensure the request is serviced as quickly as possible.

1.3 Model Number

Daktronics scoreboards are differentiated by their model numbers and two-letter prefixes for each sport. Most Daktronics scoreboards also carry a two-number suffix that refers to indoor-outdoor status, power supply, and digit color.

BB	Basketball
SD	Statistics Display
PN	Player Name panel

-13	indoor scoreboards, 120 V, PanaView® digits
-14	indoor scoreboards, 230 V, PanaView® digits
-15	indoor scoreboards, 120 V, UniView® digits
-16	indoor scoreboards, 230 V, UniView® digits

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**.

THE CONCEPTS EXPRESSED AND DETAILS SHOWN IN THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY, WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2008 DAKTRONICS, INC.			
DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: DAKTRONICS UNIVERSITY			
TITLE: SYSTEM RISER DIAGRAM			
DES. BY: AORMESH		DRAWN BY: AORMESH	
DATE: 15 JAN 08			
REVISION	APPR BY-	14963-R01	
00	SCALE: NONE	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 **ED-13110**.

1.5 Daktronics Nomenclature

Most components within this display carry a white label that lists the part number of the unit. If a component is not found in the Replacement Parts List in **Section 5.7**, use the label to order a replacement. **Figure 3** illustrates a typical label. The part number is in bold.

Main Component Labels	
Part Type	Part Number
Individual circuit board	0P-XXXX-XXXX
Assembly; a collection of circuit boards	0A-XXXX-XXXX
Wire or cable	W-XXXX
Fuse	F-XXXX
Transformer	T-XXXX
Metal part	M-XXX
Fabricated metal assembly	0S-XXXXXX
Specially ordered part	PR-XXXXX-X

Accessory Labels	
Component	Label
Termination block for power or signal cable	TBXX
Grounding point	EXX
Power or signal jack	JXX
Power or signal plug for the opposite jack	PXX

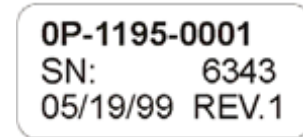


Figure 3: Typical Label

Following the Replacement Parts List is the Daktronics Exchange Policy and the Repair & Return Program. Refer to these instructions if replacing or repairing any display component.

1.6 Product Safety Approval

Daktronics Tuff Sport scoreboards are ETL-listed, tested to CSA standards and CE-labeled for indoor use. Contact Daktronics with any questions regarding the testing procedures.

Section 2: Specifications

The chart on the following pages details all of the mechanical specifications, circuit specifications, and power requirements for each display in this manual. Models are listed in alphanumeric order.

Notes:

- 1) All displays require a 120 VAC, 15 A circuit. Displays with a 230 VAC power requirement are also available.
- 2) Values in [Brackets] indicate scoreboards with Team Name Message Centers (TNMCs) or statistic displays with electronic captions (All Sport 5000 console required).

Model	Dimensions: Height, Width, Depth	Uncrated Weight	Watts	Amps 120/230 VAC	Driver # & Address
BB-2101	4'-0" H, 8'-0" W, 6" D (1219 mm, 2438 mm, 152 mm)	120 lb 55 kg [135 lb 61 kg]	200 W [300 W]	1.7/0.9 A [2.5/1.3 A]	A1 17
BB-2103	6'-0" H, 8'-0" W, 6" D (1829 mm, 2438 mm, 152 mm)	180 lb 82 kg [195 lb 88 kg]	200 W [300 W]	1.7/0.9 A [2.5/1.3 A]	A1 17
BB-2105	4'-0" H, 10'-0" W, 6" D (1219 mm, 3048 mm, 152 mm)	150 lb 68 kg [165 lb 75 kg]	200 W [300 W]	1.7/0.9 A [2.5/1.3 A]	A1 17
BB-2107	6'-0" H, 10'-0" W, 6" D (1829 mm, 3048 mm, 152 mm)	260 lb 118 kg [275 lb 125 kg]	200 W [300 W]	1.7/0.9 A [2.5/1.3 A]	A1 17
BB-2109	2'-4" H, 2'-5" W, 7" D (711 mm, 737 mm, 152 mm)	45 lb 20 kg	250 W	2.1/1.1 A	A1 1
BB-2111	2'-4" H, 2'-9" W, 2'-5" D (711 mm, 838 mm, 737 mm)	65 lb 29 kg	300 W	2.5/1.3	A1 1
BB-2114	1'-7" H, 1'-10" W, 6" D (483 mm, 559 mm, 152 mm)	15 lb 7 kg	40 W	0.3/0.2 A	A1 1
BB-2115	2'-4" H, 2'-5" W, 6" D (711 mm, 737 mm, 152 mm)	30 lb 14 kg	200 W	1.7/0.9 A	A1 1

Model	Dimensions: Height, Width, Depth	Uncrated Weight	Watts	Amps 120/230 VAC	Driver # & Address
BB-2116	4'-0" H, 14'-0" W, 6" D (1219 mm, 4267 mm, 152 mm)	210 lb 154 kg [225 lb 102 kg]	200 W [300 W]	1.7/0.9 A [2.5/1.3 A]	A1 17
BB-2117	3' 0" H, 14' 0" W, 6" D (914 mm, 4267 mm, 152 mm)	160 lb 73 kg	200 W	1.7/0.9 A	A1 14
BB-2119	3'-0" H, 14' 0" W, 6" D (914 mm, 4267 mm, 152 mm)	160 lb 73 kg	200 W	1.7/0.9 A	A1 17
BB-2120	3'-0" H, 14'-0" W, 6" D (914 mm, 4267 mm, 152 mm)	160 lb 73 kg	200 W	1.7/0.9 A	A1 14
BB-2121	2'-6" H, 10'-0" W, 6" D (762 mm, 3048 mm, 152 mm)	95 lb 43 kg [110 lb 50 kg]	200 W [300 W]	1.7/0.9 A [2.5/1.3 A]	A1 17
BB-2122	2'-0" H, 4'-0" W, 6" D (610 mm, 1219 mm, 152 mm)	30 lb 14 kg	200 W	1.7/0.9 A	A1 17
BB-2123	6'-0" H, 10'-0" W, 6" D (1829 mm, 3048 mm, 152 mm)	230 lb 104 kg [245 lb 111 kg]	400 W [500 W]	3.3/1.7 A [4.2/2.2 A]	A1 17 A2 14
BB-2125	4'-0" H, 10'-0" W, 6" D (1219 mm, 3048 mm, 152 mm)	150 lb 68 kg [165 lb 75 kg]	200 W [300 W]	1.7/0.9 A [2.5/1.3 A]	A1 17
BB-2127	2'0" H, 10'0" W, 6" D (610 mm, 3048 mm, 152 mm)	80 lb 36 kg	200 W	1.7/0.9 A	A1 14
BB-2128	2'-6" H, 3'-11" W, 3'-2" D (762 mm, 1189 mm, 953 mm)	125 lb 57 kg	500 W	4.2/2.2 A	A1 1 A2 1
BB-2130	2'-4" H, 2'-5" W, 6" D (711 mm, 737 mm, 152 mm)	35 lb 16 kg	300 W	2.4/1.3 A	A1 1
BB-2131	2'-4" H, 2'-5" W, 7" D (711 mm, 737 mm, 178 mm)	50 lb 23 kg	200 W	1.7/0.9 A	A1 1

Model	Dimensions: Height, Width, Depth	Uncrated Weight	Watts	Amps 120/230 VAC	Driver # & Address
BB-2132	2'-4" H, 2'-9" W, 2'-5" D (711 mm, 838 mm, 737 mm)	75 lb 34 kg	300 W	2.5/1.3 A	A1 1
BB-2137	2'-2.5" H, 8'-0" W, 6" D (673 mm, 2438 mm, 152 mm)	70 lb 32 kg	Connects directly to existing scoreboard; No additional power is required		A1 1
BB-2142	3'-0" H, 6'-6" W, 6" D (914 mm, 1981 mm, 152 mm)	90 lb 41 kg	200 W	1.7/0.9 A	A1 17
BB-2143	2'-0" H, 4'-0" W, 6" D (610 mm, 1219 mm, 152 mm)	35 lb 16 kg	200 W	0.9 A (230VAC only)	A1 17
BB-2144	3'-0" H, 6'-6" W, 6" D (914 mm, 1981 mm, 152 mm)	75 lb 34 kg	200 W	0.9 A (230VAC only)	A1 17
BB-2152 (NBA only)	2'-4" H, 2'-5" W, 6" D (711 mm, 737 mm, 152 mm)	30 lb 14 kg	200 W	1.7/0.9 A	A1 1
BB-2153	6'-0" H, 8'-0" W, 6" D (1829 mm, 2438 mm, 152 mm)	195 lb 89 kg [210 lb 96 kg]	350 W [450 W]	2.9 A / 1.5 A 3.75 A / 2 A	A1 17
BB-2155	6'-0" H, 10'-0" W, 6" D (1829 mm, 3048 mm, 152 mm)	275 lb 125 kg [290 lb 132 kg]	350 W [450 W]	2.9 A / 1.5 A 3.75 A / 2 A	A1 17
PN-2101*	6'-0" H, 3'-0" W, 6" D (1829 mm, 914 mm, 152 mm)	NA			
SD-2101*	6'-0" H, 3'-6" W, 6" D (1829 mm, 1067 mm, 152 mm)	80 lb 36 kg [88 lb 40 kg]	400 W [500 W]	3.3/1.7 A [4.2/2.2 A]	<i>Left Display:</i> A1 23 A2 24 <i>Right Display:</i> A1 25 A2 26

Model	Dimensions: Height, Width, Depth	Uncrated Weight	Watts	Amps 120/230 VAC	Driver # & Address
SD-2102*	6'-0" H, 3'-6" W, 6" D (1829 mm, 1067 mm, 152 mm)	90 lb 41 kg [98 lb 45 kg]	400 W [500 W]	3.3/1.7 A [4.2/2.2 A]	<i>Left Display:</i> A1 23 A2 24 <i>Right Display:</i> A1 25 A2 26
SD-2103*	6'-0" H, 4'-0" W, 6" D (1829 mm, 1219 mm, 152 mm)	100 lb 45 kg [108 lb 49 kg]	600 W [700 W]	5/2.6 A [5.8/3 A]	<i>Left Display:</i> A1 23 A2 24 A3 27 <i>Right Display:</i> A1 25 A2 26 A3 28
SD-2104*	9'-0" H, 5'-0" W, 6" D (2743 mm, 1524 mm, 152 mm)	170 lb 77 kg [178 lb 81 kg]	600 W [700 W]	5/2.6 A [5.8/3 A]	<i>Left Display:</i> A1 23 A2 24 A3 27 <i>Right Display:</i> A1 25 A2 26 A3 28
SD-2106	2'-0" H, 10'-0" W, 6" D (610 mm, 1829 mm, 152 mm)	75 lb 34 kg	200 W	1.7/0.9 A	A1 15
SD-2107	2'-0" H, 14' 0" W, 6" D (610 mm, 4267 mm, 152 mm)	105 lb 48 kg	200 W	1.7/0.9 A	A1 15

* All dimensions, weight, and power specifications are for one statistic display only.

Section 3: Mechanical Installation

Mechanical installation consists of lifting and permanently mounting the scoreboard, statistics panels, and game/shot clocks. The mechanical specification drawings listed in **Appendix A** show the recommended number and spacing of wall anchors for specific scoreboard models.

Be sure that the installation complies with local building codes.

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.

3.1 Lifting the Scoreboard

Most Daktronics Tuff Sport scoreboards and statistics panels are shipped equipped with at least one eyebolt for lifting, as well as pre-drilled holes along the top and bottom of each cabinet for wall attachment. Eyebolts are located along the top of the cabinet for each scoreboard or scoreboard section. (The smaller game/shot clocks do not require eyebolts and are not equipped with them.) Daktronics indoor scoreboards use $\frac{3}{8}$ " eyebolts.

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.

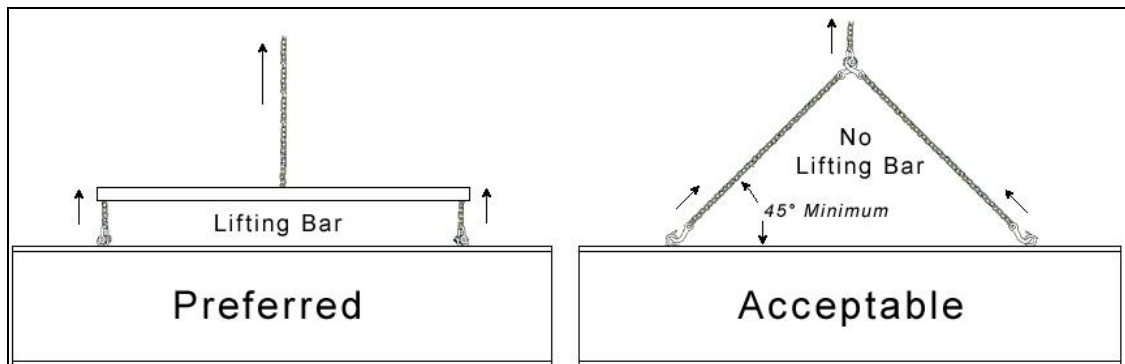


Figure 4: Lifting Methods

Figure 4 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 4**, 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 5**.

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 without the suspension mounting kit (see **Section 3.3**).

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.

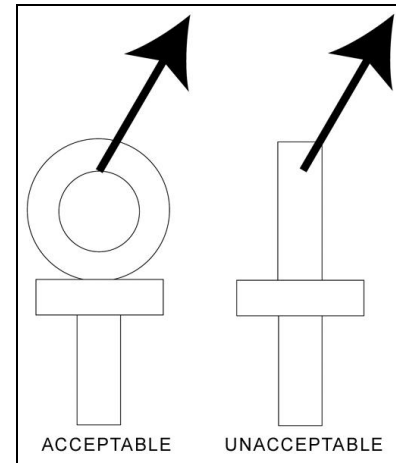


Figure 5: Eyebolt Plane Load

3.2 Scoreboard & Statistics Display Mounting

1. Use the eyebolt(s) at the top of the scoreboard frame to lift the display into position for mounting.

Note: For statistic displays, verify the correct HOME or GUEST display by looking at the label on top of the cabinet to determine whether it should be mounted to the left or right of the scoreboard.

2. Secure the display to the wall by attaching mounting hardware through all holes on the top and bottom rear flanges of the display to a pre-drilled hole in the wall (**Figure 6**).

For mounting locations, weights and hardware suggestions, refer to the model-specific mechanical specification drawings listed in **Appendix A**.

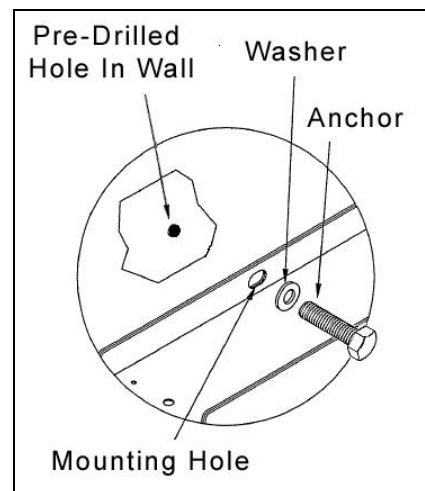


Figure 6: Wall Mounting

Due to the variety of wall materials used in sports facilities, Daktronics cannot anticipate a user's individual installation needs or provide mounting hardware suitable for every installation. Choose a method of installation that will safely support the weight of the display.

3.3 Suspension Mounting Kit

One of several mounting options with the Tuff Sport scoreboards is a suspension lift eye installation, which requires a special mounting kit (part # 0A-1237-0016). Contact Daktronics about any installation that involves permanently suspending the scoreboard.

1. Secure the mounting angle with the $\frac{3}{8}$ " nut to each side of the scoreboard with the included screws. Install the eyebolts into the nut on the mounting angle.
2. Attach suspension cables to the eyebolt using a shackle and pin (all of this equipment is provided by others).

Notes:

- 1) Daktronics recommends that two cables be used at each end of the scoreboard.
- 2) Cables and hardware must be specified by a licensed engineer.
- 3) Do not attach suspension hardware to ad panels – attach to top of scoreboard.
- 4) This installation method must not be used to support scoreboard with message centers and/or backlit ad panels attached.
- 5) The total weight of scoreboard and accessories must not exceed 500 lb (223 kg).

Similar to the eyebolts used to lift the scoreboard, the suspension eyebolts have a maximum angle at which they can safely support the display. The ideal angle is perpendicular to the top of the scoreboard, but this angle may extend up to 30° out to either side of the display.

Refer to **Drawing A-148644** in **Appendix C** for more information.

3.4 Shot Clock Mounting

Single-sided shot clocks may be mounted to a wall in the same manner as a scoreboard or statistics display. Multi-sided shot clocks are frequently mounted to vertical backstop supports. Refer to **Drawing A-91230** in **Appendix C** for game/shot clock mounting information.

Note: Daktronics does not supply the hardware or brackets to mount shot clocks to backstops and is not responsible for the integrity of suitability of mounting systems manufactured and installed by others.

3.5 Corner Mounting

Certain scoreboard models may be mounted in a corner, rather than flat against the wall, using a special mounting bracket kit. For more information on the corner mounting option, refer to **Drawing A-150831** in **Appendix C**.

3.6 Ad Panel Mounting

Refer to **Drawing A-147668** in **Appendix C** for typical ad panel mounting (similar to **Scoreboard & Statistics Display Mounting** shown above) or **Drawing A-156134** for instructions on mounting ad panels to the top or bottom of a scoreboard.

3.7 Scoreboard Protective Devices

Daktronics Tuff Sport displays have been designed so that a normal basketball or volleyball impact will not damage the LEDs or display cabinet, reducing the need for protective devices. Some users, however, may still wish to have additional protection from other projectiles, and in these cases, Daktronics provides optional protective devices. Refer to the **Protective Screen Installation Instructions (ED-5423)**, available online at www.daktronics.com/manuals for more information about installing protective devices.

Note: 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.

Section 4: Electrical Installation

CAUTION: Only qualified individuals should 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.

4.1 Installation Overview

The diagram shown in **Figure 7** illustrates a typical wired setup between a scoreboard and the control system. Daktronics part numbers are shown in parentheses. **Drawings A-124686, A-124688, A-125415, and A-125417** in **Appendix E** also show power and signal layouts.

Note: Control signal cable and some junction boxes are not provided as part of this system and can be purchased locally or from Daktronics.

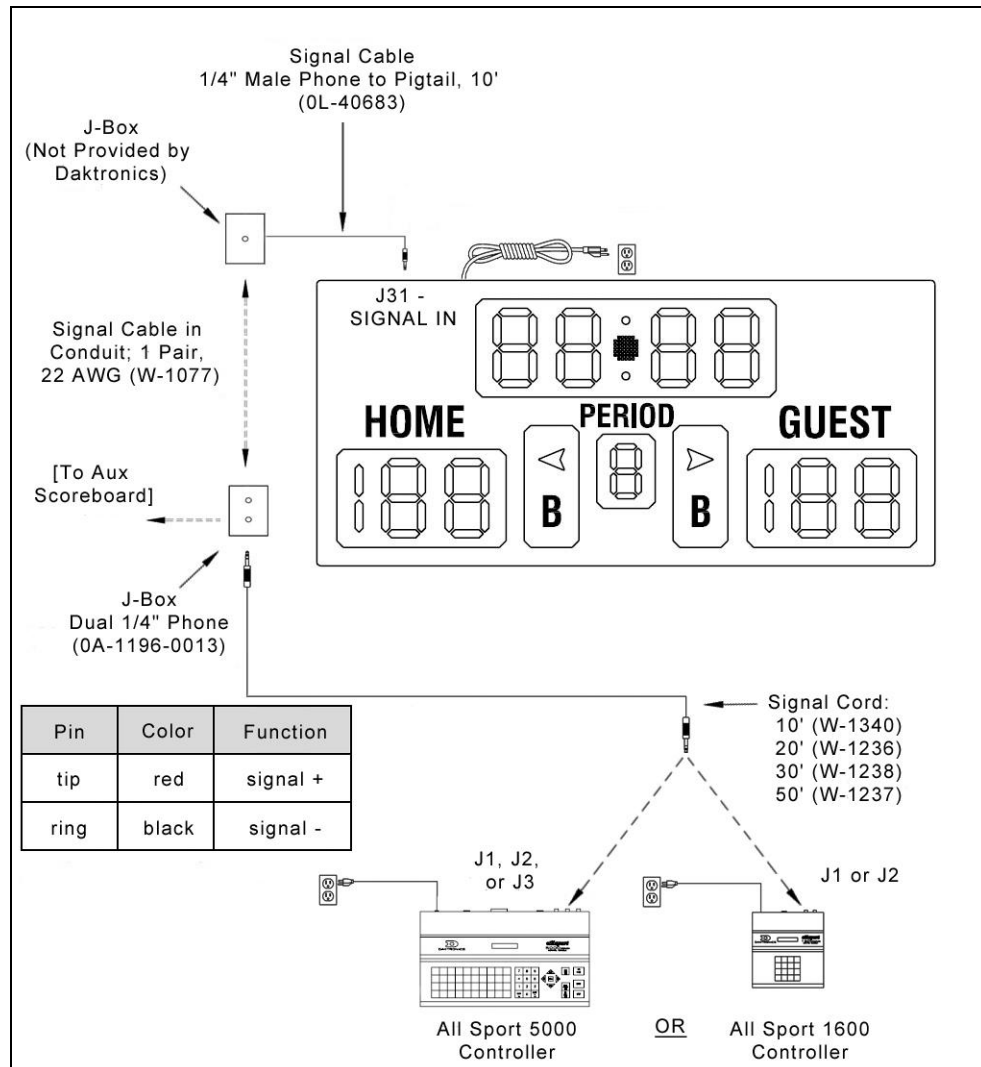


Figure 7: Wired Installation

The diagram shown in **Figure 8** illustrates a typical wireless setup between a scoreboard and the control system. Refer to **Section 6.2** for more information about the wireless radio option.

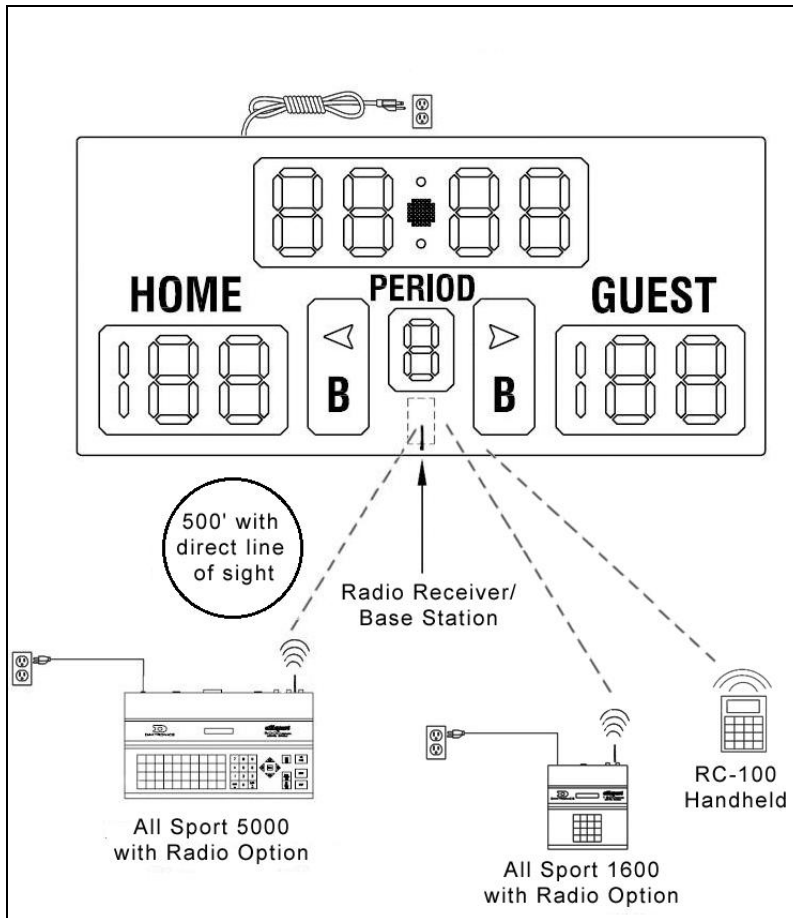


Figure 8: Wireless Installation

4.2 Power

Each scoreboard features a 120 VAC power cord with a three-prong plug. Install a grounded receptacle near the equipment so that the power cord can easily reach it. The control console requires a 120 VAC receptacle and uses less than 1 A of power.

Displays operating on 230 VAC are also available, and they are shipped equipped with a universal power plug.

Grounding

Connect the scoreboard to earth ground. Proper grounding assures reliable equipment operation and protects the equipment against damaging electrical 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 grounding connection on the power cord's three-prong plug connects to the shell of the scoreboard.

Note: The customer must properly ground the outlet according to local and national codes. Failure to ground the outlet voids the warranty for the scoreboard.

4.3 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 9** shows an example of the LED bar test pattern that each digit performs.

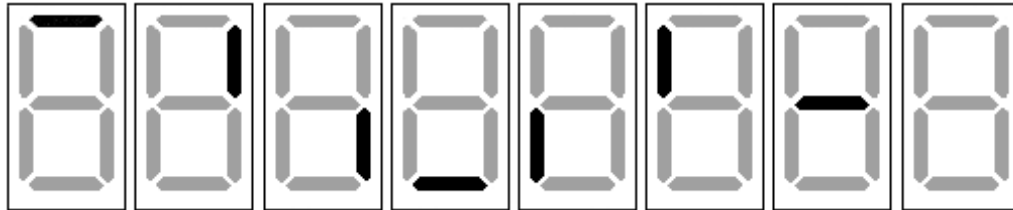


Figure 9: Digit Segment POST

Radio Settings

If a radio receiver is installed (see **Section 6.2**), the radio broadcast settings (“b1”) and the channel settings (“C1”) will be displayed in the Home and Guest or clock digits (**Figure 10**) during the POST. These values must match the settings in the control console (refer to the appropriate control console manual listed in **Section 1.1**).



Figure 10: Radio Settings in Clock Digits

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

4.4 Scoreboard Signal Connection

Signal installation (for systems without radio control) requires routing control cable from the scoreboard control console to a signal junction box (J-box) near the display. Refer to **Drawing A-28124** and **Drawing A-125316** in **Appendix E** for signal wire connection.

1. At a minimum, use a paired, 22 AWG shielded cable (Daktronics part # W-1077) and connect the cable to a dual 1/4" J-box at the control console end.

Using a dual J-box for separate Main and Auxiliary scoreboards lets operators control several displays with one controller, and they can also switch jacks to control individual boards using multiple controllers.

2. Route the cable from the J-box on the control console end to a J-box near the display.
3. Install the 1/4" phone plug (Daktronics part # 0L-40683) to the scoreboard end of the cable. Be sure to connect the cable shielding only in the J-box on this end.
4. Insert the plug into the J31 – SIGNAL IN jack located on the top of the scoreboard.
5. Connect a signal cable from the J-box to the J1, J2, or J3 jack on the back of the All Sport 5000 console or J1/J2 on the All Sport 1600 console.

If using a Main Clock Start/Stop Switch (0A-1166-0003), connect it to the J4 jack on the All Sport 5000 console.

4.5 Statistics Display Signal Connection

Figure 11 shows the connections required between a wired scoreboard and two statistics displays. Refer to Figure 7 for more information about connecting the signal wiring that runs from the scoreboard to the controller. See also Drawing A-124688 in Appendix E.

1. At a minimum, use a paired, 22 AWG shielded cable (Daktronics part # W-1077) and connect the cable to a dual 1/4" J-box at the control console end.
2. Route the cable from the J-box on the control console end to a J-box near the display.
3. Install the 1/4" phone plug (Daktronics part # 0L-40683) to the display end of the cable. Be sure to connect the cable shielding only in the J-box on this end.

Note: DO NOT connect cable shielding at the J-box near the control console.

4. Route the 1/4" phone plug from the J-box near the display to the scoreboard.
5. Insert the plug into the J31 - SIGNAL IN jack located on the top of the scoreboard.
6. Connect a 1/4" phone plug between the J32 - SIGNAL OUT jack on top of the scoreboard to the J31 - SIGNAL IN jack on top of the right (GUEST) stat panel.
7. Connect another 1/4" phone plug between the Signal Out (J32) jack on top of the right (GUEST) stat panel to the J31 - SIGNAL IN jack on top of the left (HOME) stat panel.

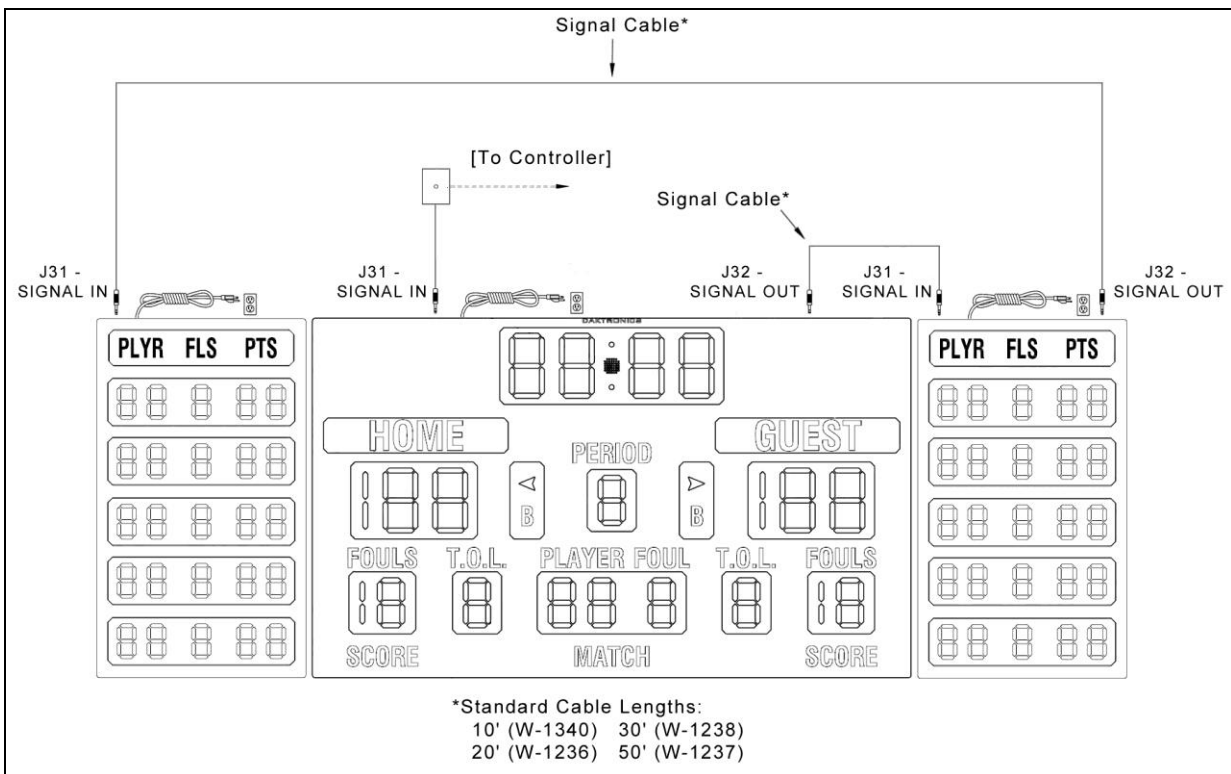


Figure 11: Statistic Display Installation

4.6 Shot Clock Signal Connection

For permanent shot/game clock installations (**Figure 12**), signal wiring may be routed from a J-box at the control console end and terminated at another J-box by the display, similar to the method used for scoreboards and stat displays. See also **Drawings A-124688** and **A-125415** in **Appendix E**.

1. At a minimum, use a paired, 22 AWG shielded cable (Daktronics part # W-1077) and connect the cable to a dual 1/4" J-box at the control console end.
2. Route the cable from the J-box on the control console end to a J-box near the display.
3. Install the 1/4" phone plug (Daktronics part # 0L-40683) to the shot clock end of the cable. Be sure to connect the cable shielding only in the J-box on this end.

Note: DO NOT connect cable shielding at the J-box near the control console.

4. Route the 1/4" phone plug from the J-box near the display to the first shot clock.
5. Insert the plug into the J31 - SIGNAL IN jack located on the side of the shot clock.
6. Repeat steps 1-5 for the other shot clock.
7. Connect a signal cable from the J-box to the J1, J2, or J3 jack on the back of the All Sport 5000 console or J1/J2 on the All Sport 1600 console.

If using an optional Shot Clock Start/Stop Switch (Daktronics part # 0A-1196-0031), connect it to the J7 jack on the All Sport 5000 or J3 on the All Sport 1600.

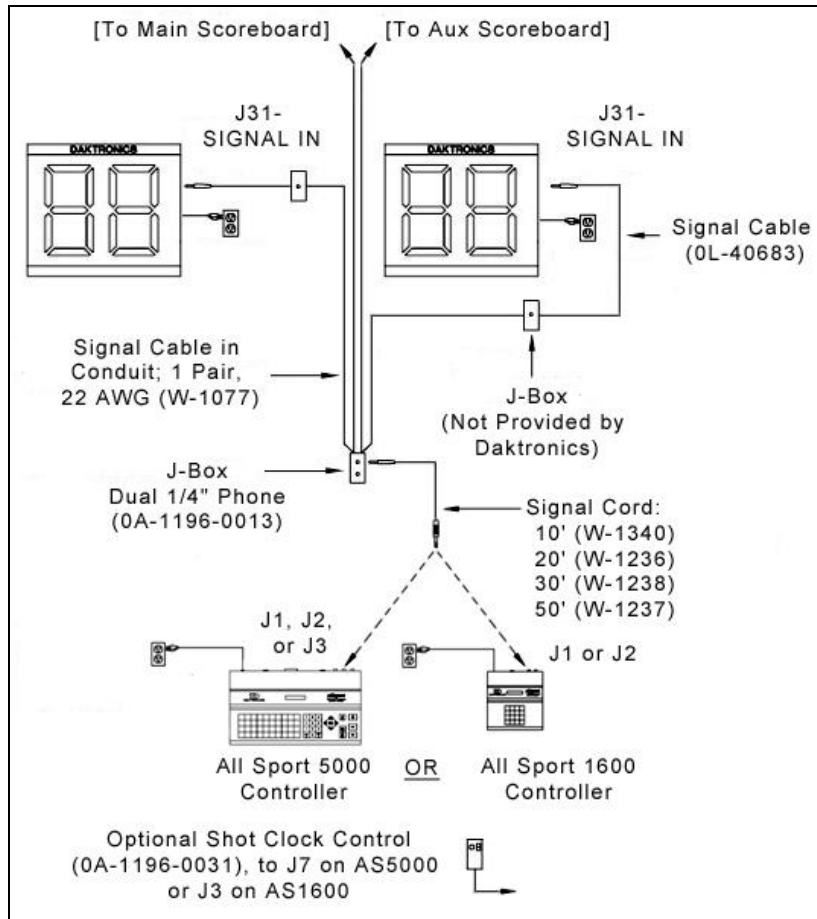


Figure 12: Shot Clock Installation

Portable Shot Clock Installations

Drawing A-98293 in **Appendix C** shows a typical installation for a shot clock mounted to a portable backstop structure. **Drawing A-124688** in **Appendix E** shows signal wiring to control console for portable shot clocks.

Portable shot clock models BB-2109, BB-2111, BB-2115, BB-2128, BB-2130, BB-2131, and BB-2132 come prewired with a twistlock male power inlet. A female plug is provided by Daktronics that must be attached to a power cord by the customer.

Note: Model BB-2114 comes equipped with a standard 12' (3.7 m) power cord and plug.

For installations that use LED backstop light strips, refer to the **LED End-of-Period Basketball Lighting Display Manual (ED-13652)**, available online at www.daktronics.com/manuals.

Section 5: Scoreboard Troubleshooting

IMPORTANT NOTES:

1. Disconnect power before doing any repair work on the scoreboard.
2. Allow only qualified service personnel access to internal display electronics.
3. Disconnect power when not using the scoreboard.

5.1 Troubleshooting Table

The table below lists potential problems with the scoreboard and indicates possible causes and corrective actions. This list does not include every symptom that may be encountered, but it does present several of the most common situations that may occur.

Many of the solutions offered below provide references to other sections within this manual or to supplemental product manuals with further detail on how to fix the problem.

If a problem occurs that is not listed or that cannot be resolved using the solutions in the following table, contact Daktronics using the information provided in **Section 5.8**.

Problem	Possible Cause	Solution/Items to Check
Scoreboard doesn't light and console doesn't work	No power to the scoreboard	Check that the main circuit breaker for the scoreboard is on.
		Check that the scoreboard is receiving 120 (or 230) VAC power.
	No power to console	Ensure the console is plugged into a 120 (or 230) VAC power supply.
		Swap the console with one known to work correctly, and enter the proper sport code to test. Replace console if necessary.
Scoreboard digits don't light, but console works	No wired signal from console	Check that the scoreboard is receiving 120 (or 230) VAC power.
		Check that the red DS2 LED on the driver lights up when sending commands from the control console (see Section 5.4).
	No radio signal from console	Cycle power to the scoreboard and watch for radio receiver broadcast/channel settings (see Section 4.3).
		Check that the green POWER and amber RADIO IN RANGE indicators on the radio receiver in the scoreboard light up when the control console is powered on. Keep the console between 20 to 500 feet from the scoreboard.

Problem	Possible Cause	Solution/Items to Check
		Move the console 20-30 feet from the scoreboard and test again. Verify that both the console and scoreboard antennae are securely tightened and in a vertical position.
		Replace the radio receiver.
	No signal to driver	Check that the scoreboard is receiving 120 (or 230) VAC power.
		Check that the red DS2 LED on the driver lights up when sending commands from the control console (see Section 5.4). Swap the driver with one known to work correctly and with the same part number to verify the problem. Replace if necessary (see Section 5.4).
No power to driver	Check that the green DS1 LED on the driver is always lit up when the scoreboard is powered on (see Section 5.4).	
Scoreboard digits light, but not in the correct order	Incorrect sport code	Ensure the correct sport code is being used for the scoreboard model. Refer to the control console operation manual (see Section 1.1).
	Incorrect driver address	Check that the scoreboard driver(s) are set to the correct address(es) (see Section 5.4).
Scoreboard digits light, console works, but no display on scoreboard	No wired signal from console	(See solution on previous page)
	No radio signal from console	(See solution on previous page)
	Bad/damaged wiring	Check that the red DS2 LED on the driver lights up when sending commands from the control console (see Section 5.4).
Scoreboard works, but some LEDs always stay on	Short in digit or indicator circuit	Swap the digit/indicator with one known to work correctly to verify the problem. Replace if necessary (see Section 5.3).
Scoreboard works, but some LEDs do not light or they blink	Bad connection	Verify the power/signal connector on the back of the digit circuit board is secure (see Section 5.3).
	Bad digit or driver	Swap the digit/driver with one known to work correctly to verify the problem. Replace if necessary (see Section 5.3 for digits or Section 5.4 for drivers).

Problem	Possible Cause	Solution/Items to Check
Scoreboard works, but some digits do not light	Bad digit or driver	(see solution on previous page)
	Incorrect sport code	(see solution on previous page)
	Incorrect driver address	(see solution on previous page)
	Wrong console controlling scoreboard	Another console's radio signal could be transmitting to the scoreboard.
	Radio interference	There may be other radio transmissions in the area that overpower the console. If it is not possible to disable the interfering device, It may be necessary to run a wired signal connection instead.

5.2 Component Location & Access

All Tuff Sport indoor basketball displays are front-access scoreboards, meaning that internal electronic components and digits are reached by opening a face panel, an access door, or a digit panel on the front of the display.

Digit panels are typically held in place on the scoreboard face by two screws. To remove a digit, simply unfasten the screws and carefully lift it from the cabinet. The power/signal plug can then be removed from the connector on the back of the digit to completely free the digit and access internal components.

Remove non-digit access panels by unfastening the top, side or bottom screws holding it in place. Some panels are hinged and swing open when the screws are removed or loosened.

Component location varies with each scoreboard model, but drivers and power and signal components are typically mounted inside the scoreboard behind a digit panel. To locate the driver(s), look for a warning label similar to that shown in **Figure 13**.

Refer to the electrical and signal specification drawings in **Appendix B** for model-specific component layouts and access locations.



Figure 13: Power Warning Label

5.3 Replacing Digits

LEDs are embedded in a circuit board that is mounted to the back of the digit panel. Do not attempt to remove individual LEDs. In the case of a malfunctioning LED or digit segment, replace the entire digit circuit board.

The process of replacing digits varies by whether it is a PanaView® digit or UniView® digit (**Figure 14**).

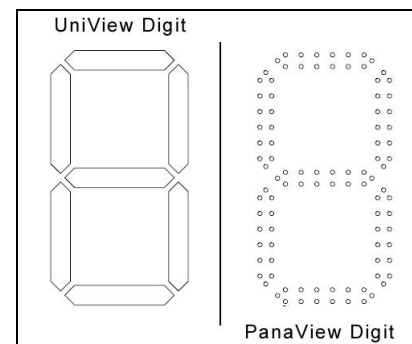


Figure 14: Digit Types

PanaView

To replace a PanaView digit circuit board (**Figure 15**):

1. Open the digit panel as described in **Section 5.2**.
2. Disconnect the power/signal connector from the back of the digit by squeezing together the locking tabs and pulling the connector free.
3. Use a $\frac{9}{32}$ " nut driver to remove the nuts securing the digits to the inside of the panel, and then lift the digit off the stud inserts.
4. Position a new digit over the studs (making sure the small plastic spacers are still in place) and tighten the nuts.
5. Reconnect the power/signal connector.

Note: This is a keyed connector and it will attach in one way only. Do not attempt to force the connection.

6. Secure the digit panel to the display with the two screws, then power up and test the display to see if changing the digit has resolved the problem.

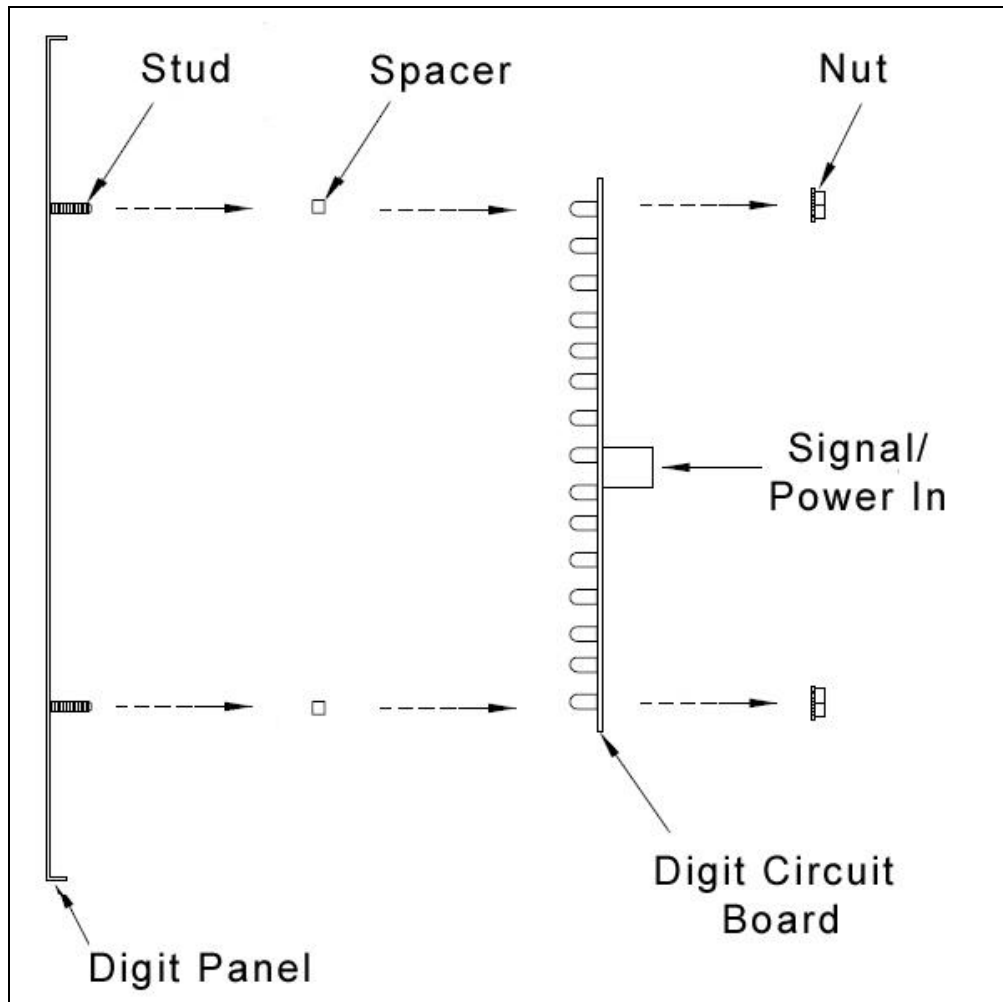


Figure 15: PanaView Digit Assembly

UniView

To replace a UniView digit circuit board (**Figure 16**):

1. Open the digit panel as described in **Section 5.2**.
2. Disconnect the power/signal connector from the back of the digit by squeezing together the locking tabs and pulling the connector free.
3. Use a $\frac{9}{32}$ " nut driver to remove the nuts securing the digits to the aluminum standoffs, and then lift the digit off the standoff/diffuser assembly.
4. Position a new digit over the standoffs, and tighten the nuts. It may be necessary to also tighten the standoffs if they became loose while removing the nuts.
5. Reconnect the power/signal connector.

Note: This is a keyed connector and it will attach in one way only. Do not attempt to force the connection.

6. Secure the digit panel to the display with the two screws, then power up and test the display to see if changing the digit has resolved the problem.

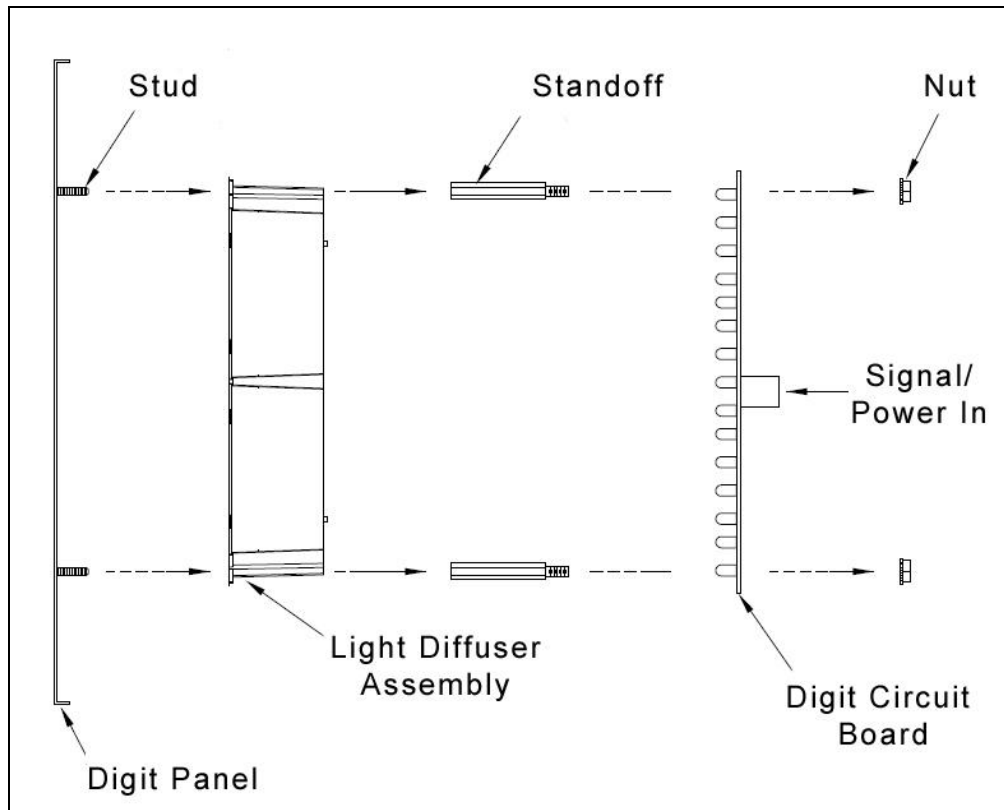


Figure 16: UniView Digit Assembly

5.4 LED Drivers

In each scoreboard, one or more LED drivers perform the task of switching LEDs on and off. LED drivers are located inside of a driver enclosure. Refer to **Figure 17** to view the location and components of a Tuff Sport driver enclosure.

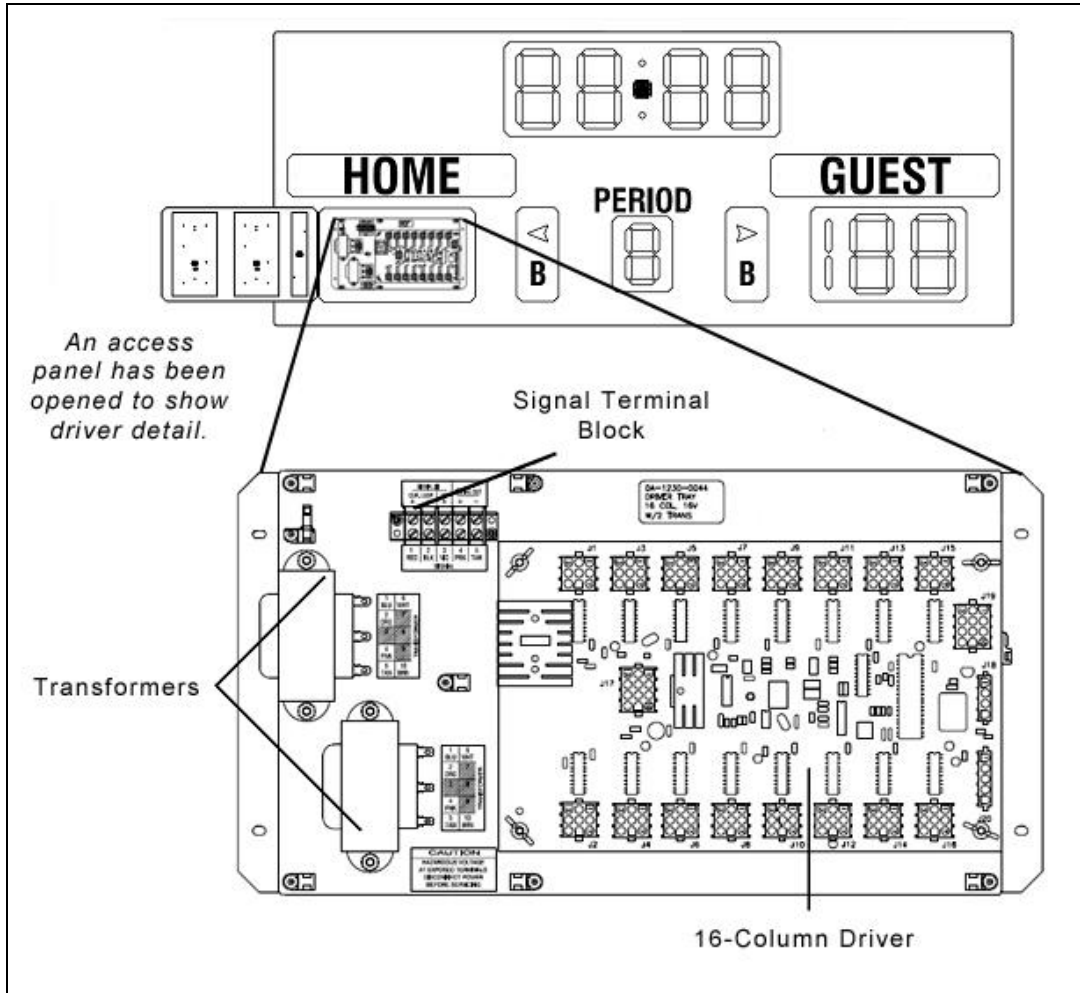


Figure 17: Driver Enclosure Location & Components

All Tuff Sport scoreboards and statistics displays use 16-column drivers (**Figure 17**), while smaller shot/game clocks use 4-column LED drivers. Several scoreboard models contain more than one driver to accommodate all of the digits and indicators. Refer to the electrical and signal specifications in **Appendix B** to determine the type and number of drivers for a particular scoreboard model.

Each driver has numerous connectors providing power and signal inputs and outputs to the scoreboard digits and indicators. The table on the following page shows the function of these connectors for a 16-column driver:

Connector #	Function
1-16	Output to digits and indicators
17	Control signal
18	Control for horn
19	Address

Refer to **Drawing A-126174** in **Appendix E** for detailed driver pin out/switch specifications.

The table below shows the function of the primary connectors for a 4-column driver:

Connector #	Function
1-4	Output to digits and indicators
17	Main power & signal
19	Address plug
6-7	Horn Relay

Refer to **Drawing A-123783** in **Appendix E** for detailed driver pin out/switch specifications.

When troubleshooting driver problems, three LEDs labeled **DS1**, **DS2**, and **DS3**, provide the following diagnostic information:

LED	Color	Function	Operation	Summary
DS1	Green	Power	Steady on	DS1 will be on and steady to indicate the driver has power.
DS2	Red	Signal RX	Steady on or blinking	DS2 will be on or blinking when the driver is receiving a signal and off when there is no signal.
DS3	Amber	Status	Blinking	DS3 will be blinking at one second intervals to indicate the driver is running (not available on 4-column LED driver).

Note: While it is necessary to have the scoreboard powered on to check the LED driver status indicators, always disconnect scoreboard power before servicing.

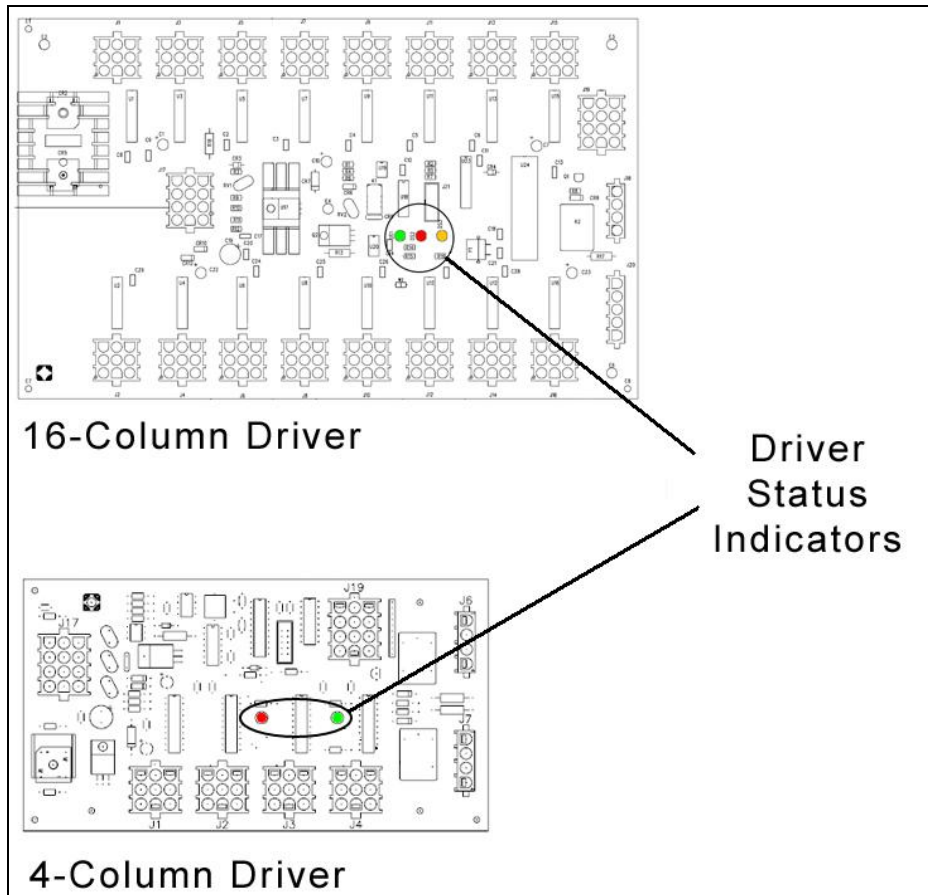


Figure 18: Driver Status Indicators

Replacing a Driver

If the driver status indicators do not appear to be working correctly, it may be necessary to replace the driver.

1. Open the digit panel or scoreboard face panel as described in **Section 5.2**.
2. Disconnect all connectors from the driver by squeezing together the locking tabs and pulling the connectors free.

Note: It may be helpful to label the cables to know which cable goes to which connector when reattaching the driver.

3. Remove the wing nuts securing the driver to the driver tray.
4. Carefully lift the driver from the display and place it on a clean, flat surface.
5. Position a new driver over the screws and tighten the nuts.
6. Reconnect all power/signal connectors.

Note: The connectors are keyed and will attach in one way only. Do not attempt to force the connections.

7. Ensure the driver is set to the correct address (refer to **Setting the Driver Address**).
8. Close and secure the access panel, then power up and test the scoreboard to see if changing the driver has resolved the problem.

Setting the Driver Address

Since the same LED drivers can be used for many scoreboard models, each driver must be set to receive the correct signal input, or address, for the model being used. This address is set with jumper wires in a 12-pin plug which mates with jack J19 on the driver (**Figure 19**).

It may be possible to reuse the same address plug from the driver that was replaced. If not, first refer to the specifications table in **Section 2** to find the correct driver address(es) for a particular scoreboard model. Then refer to **Drawing A-115078** in **Appendix E** for a listing of the wire/pin connections for driver addresses 1 - 128 or refer to **Drawing A-115078** for 4-column LED drivers.

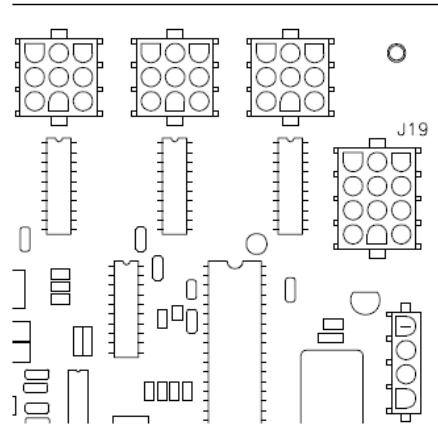


Figure 19: Address Jack J19

Multiple Drivers

Scoreboards that require multiple drivers operate using a master/slave driver configuration. Master and slave drivers function identically, but slave units lack the power/signal termination blocks. 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.

If it appears as though only a certain group of digits on the scoreboard is not functioning, there may be a problem with the slave driver(s) or the power/signal connection from the other driver(s).

5.5 Segmentation and Digit Designation

In each digit, certain LEDs always go on and off together. These groupings of LEDs are called segments. **Drawing A-38532** in **Appendix E** details which connector pin is wired to each digit segment and the wiring color code used throughout the display.

The electrical and signal specification drawings in **Appendix B** specify the driver connectors controlling the digits. Numbers shown in hexagons in the upper half of each digit indicate which connector is wired to that digit.

5.6 Schematics

For advanced scoreboard troubleshooting and repair, it may be necessary to consult the schematic drawings. Located in **Appendix D**, schematic drawings show detailed power and signal wiring diagrams of internal display components such as drivers, horn interface cards, and transformers as well as optional components like TNMCs, radio receivers, and end of period (EOP) lighting.

5.7 Replacement Parts List

Refer to the following table for Daktronics scoreboard replacement parts.

Description	Daktronics Part #
Horn, 120V with capacitor	0A-1152-0332
Main clock, start/stop switch	0A-1166-0003
Shot clock, start/stop switch	0A-1196-0031
LED driver, 16-column	0P-1150-0126
LED driver, 4-column	0P-1150-0130
PanaView Digit, 7" red LED, 7-seg	0P-1230-0048
PanaView Digit, 7" amber LED, 7-seg	0P-1230-0049
PanaView Digit, 7" red LED, 2-seg	0P-1230-0058
PanaView Digit, 7" amber LED, 2-seg	0P-1230-0059
PanaView Digit, 10" red LED, 7-seg	0P-1230-0050
PanaView Digit, 10" amber LED, 7-seg	0P-1230-0051
PanaView Digit, 10" red LED, 2-seg	0P-1230-0060
PanaView Digit, 10" amber LED, 2-seg	0P-1230-0061
PanaView Digit, 13" red LED, 7-seg	0P-1230-0052
PanaView Digit, 13" amber LED, 7-seg	0P-1230-0053
PanaView Digit, 13" red LED, 2-seg	0P-1230-0062
PanaView Digit, 13" amber LED, 2-seg	0P-1230-0063
PanaView Digit, 15" red LED, 7-seg (prior to 8/30/10)	0P-1230-0054
PanaView Digit, 15" amber LED, 7-seg (prior to 8/30/10)	0P-1230-0055
PanaView Digit, 15" red LED, 2-seg (prior to 8/30/10)	0P-1230-0064
PanaView Digit, 15" amber LED, 2-seg (prior to 8/30/10)	0P-1230-0065
PanaView Digit, 18" red LED, 7-seg	0P-1230-0056
PanaView Digit, 18" amber LED, 7-seg	0P-1230-0057
PanaView Digit, 18" red LED, 2-seg	0P-1230-0066
PanaView Digit, 18" amber LED, 2-seg	0P-1230-0067
PanaView B-Bonus Indicator, Amber	0P-1150-0217
PanaView Arrow, Red, 3"	0P-1150-0185
PanaView Arrow, Amber, 3" (prior to 4/15/11)	0P-1150-0164
PanaView Colon, Red	0P-1230-0070
PanaView Colon, Amber	0P-1230-0071
UniView Digit, 7" Red LED, 7-seg	0P-1230-0023
UniView Digit, 7" Amber LED, 7-seg	0P-1230-0024
UniView Digit, 7" Red LED, 2-seg	0P-1230-0031
UniView Digit, 7" Amber LED, 2-seg	0P-1230-0032
UniView Digit, 10" Red LED, 7-seg	0P-1230-0025
UniView Digit, 10" Amber LED, 7-seg	0P-1230-0026
UniView Digit, 10" Red LED, 2-seg	0P-1230-0033
UniView Digit, 10" Amber LED, 2-seg	0P-1230-0034
UniView Digit, 13" Red LED, 7-seg	0P-1230-0027
UniView Digit, 13" Amber LED, 7-seg	0P-1230-0028
UniView Digit, 13" Red LED, 2-seg	0P-1230-0035
UniView Digit, 13" Amber LED, 2-seg	0P-1230-0036
UniView Digit, 15" Red LED, 7-seg (prior to 8/30/10)	0P-1230-0029
UniView Digit, 15" Amber LED, 7-seg (prior to 8/30/10)	0P-1230-0030
UniView Digit, 15" Red LED, 2-seg (prior to 8/30/10)	0P-1230-0042

Description	Daktronics Part #
UniView Digit, 15" Amber LED, 2-seg (prior to 8/30/10)	0P-1230-0043
UniView Digit, 18" Red LED, 7-seg	0P-1230-0040
UniView Digit, 18" Amber LED, 7-seg	0P-1230-0041
UniView Digit, 18" Red LED, 2-seg	0P-1230-0044
UniView Digit, 18" Amber LED, 2-seg	0P-1230-0045
UniView 1 Position Indicator, Red	0P-1230-0037
UniView 3 Position Indicator, Red & Amber	0P-1230-0038
UniView 1 Position Indicator, Amber	0P-1230-0039
UniView Colon, Red	0P-1230-0068
UniView Colon, Amber	0P-1230-0069
Digit, 13" Red LED, 7-seg w/ tenths, NBA	0P-1230-0143
2" Decimal, Red LED, NBA	0P-1230-0144
Power supply, 12V, 85-264VAC, 150W	A-2855
Transformer, 115/230 V @ 2 A	T-1063
Transformer, 115/230 V @ 6.25 A	T-1066
Transformer, 115/230 V @ 3 A (prior to 12/12)	T-1082
Cable, 20' phone plug	W-1236
Cable, 50' phone plug	W-1237
Cable, 30' phone plug	W-1238
Cable, 10' phone plug	W-1340

5.8 Daktronics Exchange and Repair & Return Programs

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 new 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.

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 number in the chart listed 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

Daktronics Warranty and Limitation of Liability

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

Section 6: Scoreboard Options

6.1 Horns

Daktronics Tuff Sport scoreboards are equipped with a 120 VAC vibrating horn mounted behind the scoreboard face. The horn sounds automatically when the period clock counts down to zero, or when manually triggered by the operator using the control console.

Installation of an optional 12 VDC horn is detailed in **Drawing A-148960** in **Appendix C**. Louder trumpet horns are also available. Contact Daktronics for information and pricing.

Adjusting Horn Volume

CAUTION: The scoreboard horn is a 120 VAC device. Turn off the power to the scoreboard before adjusting the horn.

The volume for the electronic, buzzer-type horn is set at its maximum level at the factory. If the horn is too loud, reduce its volume by adjusting the setscrew mounted in the front of the horn. A plastic tip on the screw touches the horn's diaphragm, reducing the volume. Turn the screw clockwise and test the volume by operating the horn from the scoreboard control console. Continue adjusting and testing until the desired volume level is obtained.

Note that with the noise of spectators, the horn will not seem as loud as when it is being tested in an empty area, so be sure to set the volume according to the acoustics of the facility.

6.2 Radio Control

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

The radio transmitter and receiver are not standard equipment. This setup requires a control console equipped with a radio transmitter as well as a radio receiver plugged into the driver/power enclosure 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.

6.3 Visual Horn Indicator (VHI)

In addition to the horn, Daktronics offers a visual horn indicator (VHI) that lights up when the buzzer sounds. To install a VHI, users must tap into the existing horn wiring to provide power and signal. For more information about installing the VHI option, including details on the inputs, outputs, and switches of a shot clock relay board that controls when the VHI should be turned on, refer to the **VHI (ED-13397)** or **BB-2133 (ED-13806) Installation Instructions**, both available online at www.daktronics.com/manuals.

6.4 Changeable Captions

Team name and statistics 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 standard captions. If these retainers are not already present, attach the retainers included with the caption kit.

Caption kits are also available for certain statistics display models to switch between basketball, volleyball, wrestling, and hockey modes.

Refer to **Drawing A-150021** in **Appendix C** for changeable caption installation instructions.

6.5 Time Outs Left (TOL) Digits

Certain scoreboards have the option to add a time outs left (TOL) digit for both the home and guest teams. These digits are installed by simply unscrewing the blank face panel, connecting and securing the digit, and manually applying the "T.O.L." caption. Refer to **Drawing A-149030** in **Appendix C** for more information.

6.6 Double Bonus Indicators

All of the clock/score basketball scoreboards in this manual have the option to include double-bonus indicators, which are factory installed. This option is illustrated in the electrical and signal specification drawings in **Appendix B** for each scoreboard model.

6.7 Team Name Message Centers & Electronic Captions

Refer to **Section 7** for more information about Team Name Message Centers and electronic captions.

Section 7: TNMC & Electronic Caption Troubleshooting & Maintenance

IMPORTANT NOTES:

1. Always disconnect scoreboard power before doing any repair/maintenance work on the message centers.
2. Permit only qualified service personnel to access internal display electronics.
3. Disconnect power when not using the scoreboard.

7.1 Display Overview

Team Name Message Centers (TNMCs) are programmable LED displays that allow users to show custom Home and Guest names or messages of ~15 characters on the scoreboard in place of static vinyl captions. TNMCs are typically ordered factory-installed, but they may also be field-mounted after the scoreboard is in place. Characters are shown on one line using single- or double-stroke fonts.

Electronic captions, on the other hand, are pre-programmed to only show specific labels to match the captions for a particular sport mode, making it much simpler to switch between sports. Characters are shown on one line using single-stroke fonts.

Primary matrix size is 8x48 with 0.75" pixel spacing. **Figure 20** shows examples of both TNMCs and electronic captions.



Figure 20: Basketball Scoreboard with TNMCs and Electronic Captions

Matrix Size	Number of Modules	Pixel Spacing	Active Display Area	Weight*
8x48	3	19 mm (0.75")	6" x 36" (152 mm x 914 mm)	15 lb (7 kg)
		25 mm (1")**	8" x 48" (203 mm x 1219 mm)	20 lb (9 kg)
8x16***	1	19 mm (0.75")	6" x 12" (152 mm x 305 mm)	15 lb (7 kg)

* Weight shown is for a pair of displays.

** Only used on BB-2116.

*** Only used on BB-2153 & BB-2155.

7.2 Initialization Information at Startup

Every time the display is powered up and there is no All Sport[®] signal present, the display will run through an initialization process, during which it will test all LEDs and addresses. First, the message center will display the proper address number.

If the entire display fails at startup, power may not be properly connected, or the address setting may not be correct on the display driver. Check both in the event of a failure.

7.3 Display Troubleshooting Table

The table below lists potential problems with the display and indicates possible causes and corrective actions. This list does not include every symptom that may be encountered, but it does present several of the most common situations that may occur.

Many of the solutions offered below provide references to other sections within this manual with further detail on how to fix the problem.

If a problem occurs that is not listed or that cannot be resolved using the solutions in the following table, contact Daktronics using the information provided in **Section 5.8**.

Symptom/Condition	Possible Remedy
One or more LEDs on a single module fails to light	Check/replace the ribbon cables on the module.
	Replace the module (see Section 7.7).
One or more LEDs on a single module fails to turn off	Check/replace the ribbon cables on module.
	Replace the module (see Section 7.7).
A section of the display not working; section extends all the way to the right side of the display	Check/replace the ribbon cables running to the first module that is not working.
	Replace the first module on the left side of the first module that is not working (see Section 7.7).
	Replace the second module that is not working (see Section 7.7).
	Replace the power supply assembly on the first module that is not working (see Section 7.8).
One row of modules does not work or is garbled	Replace the first module (see Section 7.7).
	Replace the display driver (see Section 7.6).
A group of modules that share the same power supply assembly fails to work	Replace the power supply assembly (see Section 7.8).
Entire display fails to work	Check for proper line voltage into the power termination panel.
	Check/replace the ribbon cable from the display driver to the modules.
	Check the voltage settings on the power supplies.
	Check/replace the signal cable to the driver.
	Repair/replace the driver (see Section 7.6).

7.4 Power & Signal Summary

Reference Drawings:

Schematic: 3/4" and 1" DC TNMC's	Drawing B-146975
Schematic, Electronic Caption, BB-2153	Drawing A-1102510

Refer to **Drawing B-146975** in **Appendix D** for detailed schematics about display power and signal routing. Refer to **Drawing A-1102510** for BB-2153 and BB-2155 scoreboards.

Display signal routing can be summarized as follows:

1. Data from the All Sport[®] controller travels via signal cable (or radio) into the scoreboard.
2. The signal then travels through the driver, typically re-driven from the driver TB-31 to the current loop interface (CLI) cards located on the right-hand module of each display.
3. A ribbon cable harness carries the signal to the first LED module, and the signal relays from module to module via ribbon cable in daisy-chain style until it reaches the last module in the display.

Display power routing can be summarized as follows:

1. Incoming power from the power cord terminates at the main scoreboard LED driver tray.
2. Using interconnect harnesses, the power for TNMCs is passed from the driver tray to the Home display power supply, and then to the Guest display power supply. In stat display electronic captions, each power supply receives power from a separate driver.
3. Power from the power supplies is relayed to all display modules.
4. The modules draw their power directly from the power supply assemblies; the display driver receives power out from the first module via ribbon cable.

7.5 Component Locations & Access

Reference Drawings:

Installation, 6" Amber 8x48 TNMC.....	Drawing A-148701
Installation- Programmable Caption- 0.75" 8x48	Drawing A-291200
Installation, Electronic Caption, BB-2153.....	Drawing A-1102462

To access the internal components of the display, simply remove the two screws on either side of the face panel that secure it to the scoreboard. Carefully remove the face panel from the scoreboard, as there will be several cables connected to it. **Drawings A-148701, A-291200, and A-1102462** in **Appendix C** provide a detailed view of each display component and the connections between them.

7.6 Display Drivers

Reference Drawings:

A/S 5000 Capable TNMC Shift Card; Specifications	Drawing A-123794
--	-------------------------

Display drivers, also known as controllers or shift cards, use a 12-pin plug that mates with jack J4 to set the address. For TNMCs, the address plug is set to 1 (221). A typical Player-Foul-Points electronic caption for statistics displays uses address 3 (223). Pin 11 on the address plug selects whether the display shows Guest (default) or Home data. Refer to **Drawing A-123794** in **Appendix E** for addressing information.

Figure 21 illustrates some of the primary jacks and indicators of a display driver.

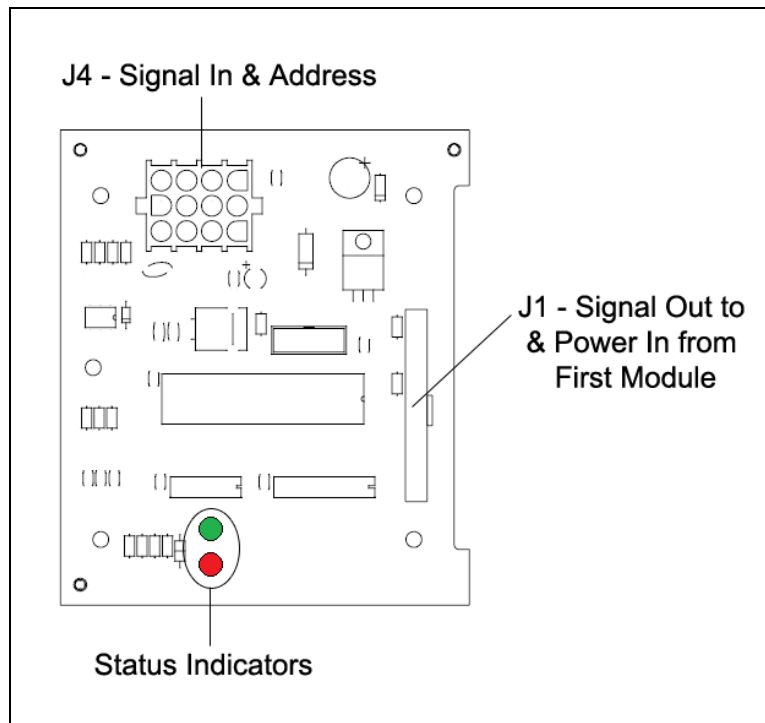


Figure 21: Display Driver

Diagnostic LEDs

The following table explains the functions of the primary diagnostic LEDs on the drivers:

LED Name	Color	Illumination Summary
DS1 PWR	Green	Steady on or blinking when the driver has power
DS2 RX	Red	Steady on or blinking when the driver is receiving and off when there is no current loop (CL) signal

Replacing a Driver

1. Access the internal components as described in **Section 7.5**.
2. Disconnect all power and signal connectors from the driver by squeezing together the locking tabs and pulling the connectors free.

Note: It may be helpful to label the cables to know which cable goes to which connector when reattaching a driver.

3. Remove the four screws securing the driver to the module. This will be the right-most module, when viewing the display from the front.
4. Position a new driver over the standoffs on the module and tighten the screws.
5. Reconnect all power/signal connectors.
6. Power up and test the scoreboard/display to see if the problem has been resolved.

Refer to **Figure 22** for an overview of driver (and module) replacement.

7.7 Modules

Display modules consist of LEDs embedded in a circuit board. One or more circuit boards are mounted to the back of a display face panel. Do not attempt to remove individual LEDs. In the case of malfunctioning LEDs, replace the entire module circuit board.

Replacing Modules

1. Access the internal components as described in **Section 7.5**.
2. Carefully disconnect all ribbon cables from the driver by squeezing together the locking tabs and pulling the connectors free.

Note: It may be helpful to label the cables to know which cable goes to which connector when reattaching.

3. Remove the nuts securing the module circuit board to the face panel. If a display driver is attached to the module, remove it along with the screws and standoffs.
4. Position a new module on the front of the face panel and reconnect all ribbon cables.
5. Reattach the module to the face panel. If a display driver was previously removed from the module, reattach it at this time too.
6. Power up and test the scoreboard/display to see if the problem has been resolved.

Refer to **Figure 22** for an overview of module (and driver) replacement.

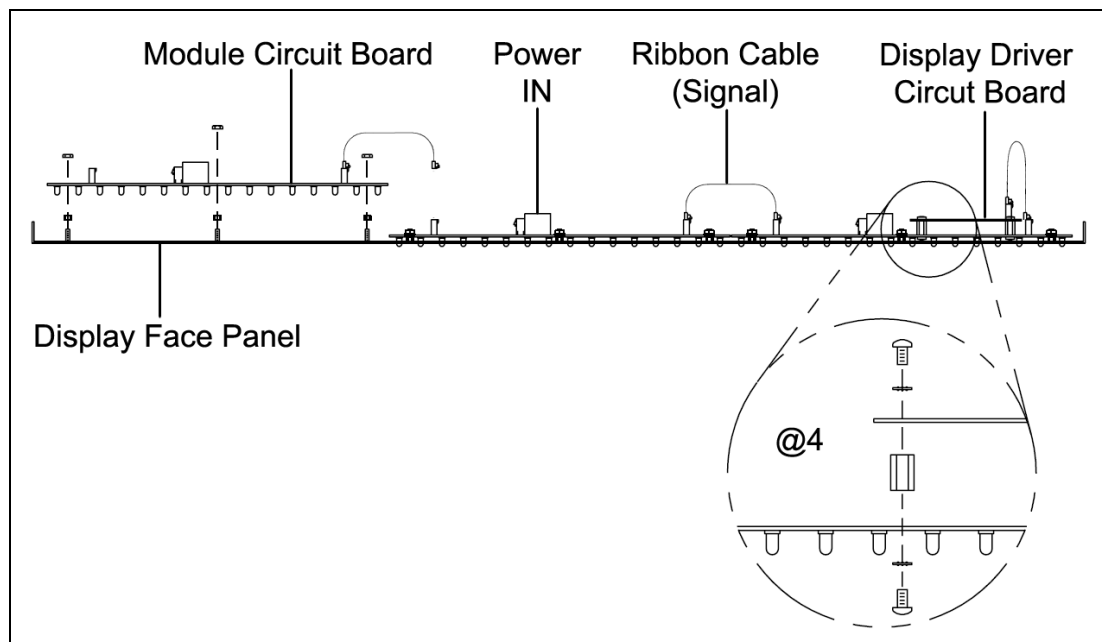


Figure 22: Replacing a Module or Driver, Top View (0.75" Mods Shown)

7.8 Power Supplies

Replacing a Power Supply

1. Access the internal components as described in **Section 7.5**.
2. Remove the two screws securing the power supply bracket, and remove it from the display cabinet.
3. Disconnect all the wires connected to the power supply.

Note: It may be helpful to label the cables to know which cable goes to which connector when reattaching.

4. Remove the three screws securing the power supply to the bracket, and attach the new power supply to it.
5. Reconnect all wires, and mount the power supply bracket inside the display cabinet.

7.9 Display Maintenance

Complete a yearly inspection to maintain safe and dependable display operation. This inspection should address the following issues:

- **Loose Hardware:** Verify that fasteners, such as bolts and rivets, have not come loose. Check and tighten or replace fasteners as required.
- **Excessive Dust Buildup:** It may be necessary to occasionally vacuum the inside of the display cabinet to remove dust/dirt buildup that may interfere with airflow.
- **Corrosion:** Check the paint, and look for possible corrosion

Note: If any of the preceding conditions are discovered, make the necessary repairs or take corrective action immediately.

7.10 Replacement Parts List

The following table contains display components that may have to be replaced. Many of the components within the display itself have attached part number labels.

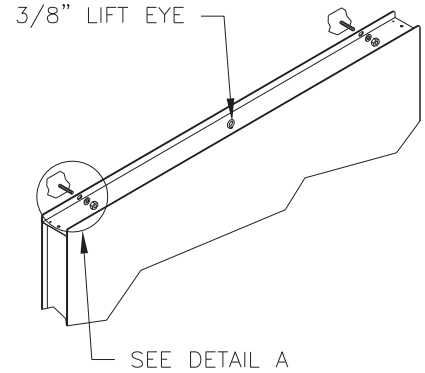
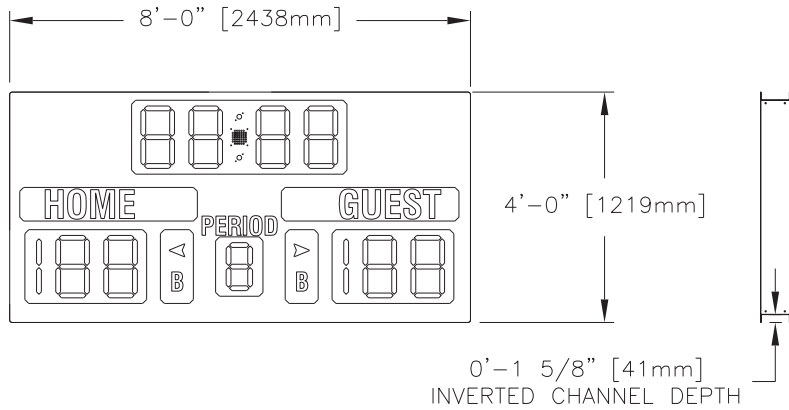
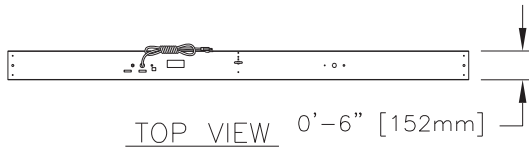
Part Description	Part Number
Indoor TNMC Card	0P-1150-0206
Module; 8x16, Amber (1")	0P-1186-0104
Module; 8x16, Amber (0.75")	0P-1186-0112
Power Supply; 12V @ 8.5A, 85-264VAC (for 1" mods)	A-1555
Power Supply; 5V @ 10A, 85-264VAC (for 0.75" mods)	A-1568
Cable; 18 pos, Ribbon, 6"	W-1320

See **Section 5.8** for information on Daktronics Exchange and Repair and Return program.

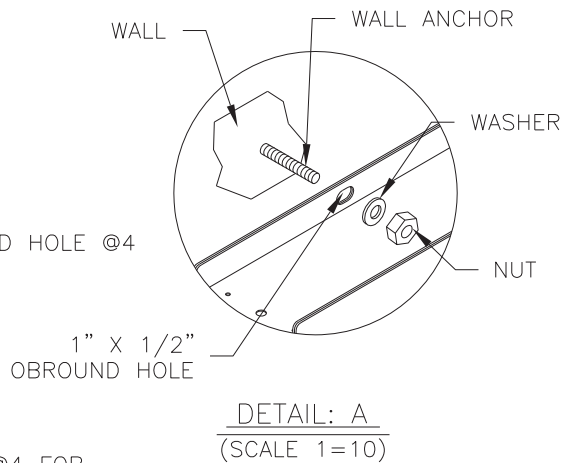
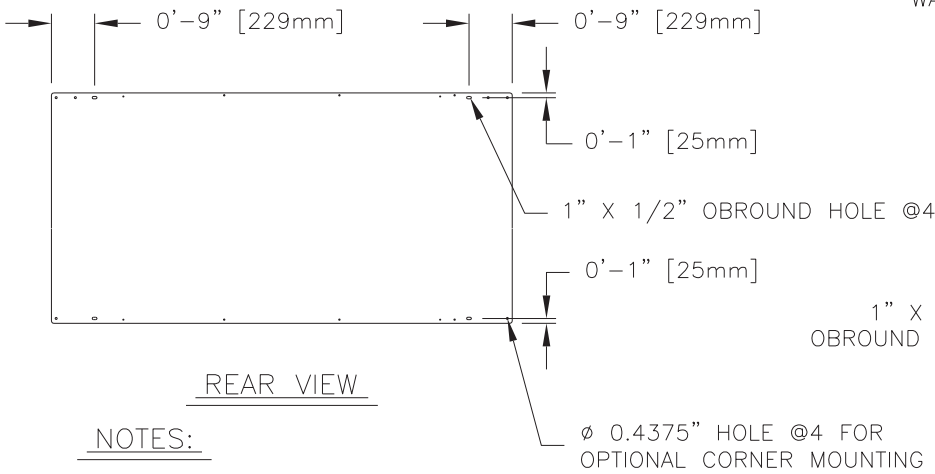
Appendix A: Mechanical Specification Drawings

<i>Drawing Title</i>	<i>Drawing Number</i>
Mechanical Spec, BB-2101	A-144651
Mechanical Spec, BB-2105	A-144741
Mechanical Spec, BB-2107	A-144817
Mechanical Spec, BB-2103	A-149234
Mechanical Spec, PN-2101	A-162230
Mechanical Specs, SD-2106	A-163544
Mechanical Spec, BB-2116	A-164590
Mechanical Spec- BB-2123	A-165428
Mechanical Spec, BB-2125	A-167239
Mechanical Spec, BB-2121	A-167241
Mechanical Spec, BB-2122	A-167243
Mechanical Specs, BB-2127	A-167614
Mechanical Spec- BB-2117	A-168620
Mechanical Spec, BB-2119	A-168633
Mechanical Spec, BB-2120	A-168668
Mechanical Spec, BB-2111	A-222782
Mechanical Spec, BB-2114	A-222797
Mechanical Spec, BB-2115	A-222877
Mechanical Spec, BB-2109	A-222884
Mechanical Spec, BB-2130	A-223355
Mechanical Spec, BB-2131	A-223541
Mechanical Spec, BB-2132	A-223543
Mechanical Spec, BB-2128	A-224353
Mechanical Spec, BB-2137	A-226061
Mechanical Spec, SD-2107	A-226078
Mechanical Spec- BB-2142	A-230393
Mechanical Spec, SD-2101	A-233092
Mechanical Spec, SD-2102	A-233146
Mechanical Spec, SD-2103	A-233220
Mechanical Spec, SD-2104	A-235386
Mechanical Spec, BB-2143	A-252740
Mechanical Spec, BB-2144	A-252743
Mechanical Spec, BB-2152	A-1059504
Mechanical Spec, BB-2153	A-1104956
Mechanical Spec BB-2155	A-1124198

BB-2101



SIDE VIEW



NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
192 LBS (87 KG)	120 LBS (55 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2101

DES. BY: BPETERSON

DRAWN BY: JJSYRSTAD

DATE: 29 MAY 01

REVISION

APPR. BY:

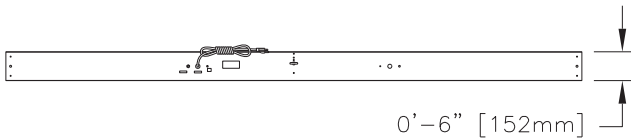
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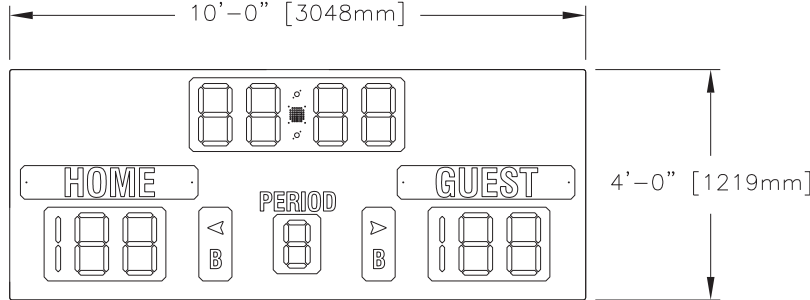
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BB-2105

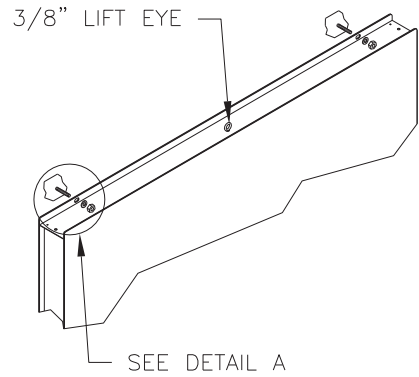


TOP VIEW



FRONT VIEW

0'-1 5/8" [41mm]
INVERTED CHANNEL DEPTH

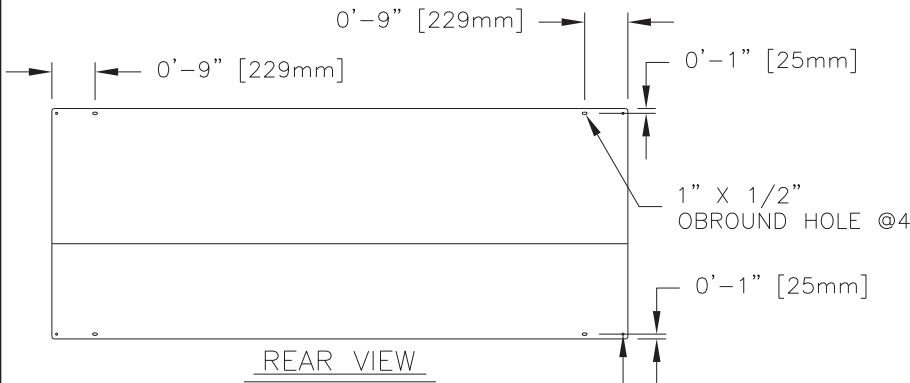


WALL MOUNTING DETAIL

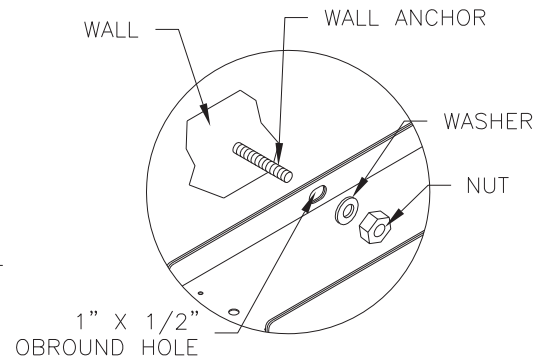
SIDE VIEW



BOTTOM VIEW



REAR VIEW



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS™

WEIGHTS

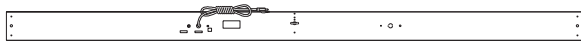
SHIPPING WEIGHT	MOUNTING WEIGHT
240 LBS (109 KG)	150 LBS (68 KG)

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03	29 MAY 02	ADDED BOTTOM VIEW.	ALG	
02	22 MAY 02	REMOVED EXTRA HOLES FROM REAR VIEW	ALG	
01	12 NOV 01	CHANGED DIGITS TO UNIVIEW.	ALG	

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DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ: TUFF SPORT™ SCOREBOARDS	
TITLE: MECHANICAL SPEC, BB-2105	
DES. BY: BPETERSON	DRAWN BY: JJSYRSTAD
DATE: 29 MAY 01	
REVISION	APPR. BY:
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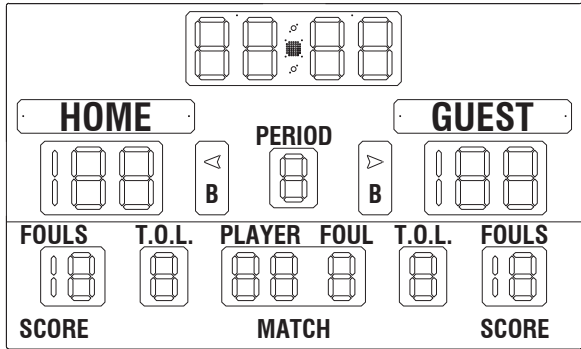
BB-2107



0'-6" [152mm]

TOP VIEW

10'-0" [3048mm]

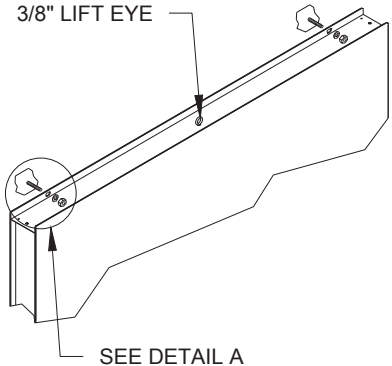


FRONT VIEW

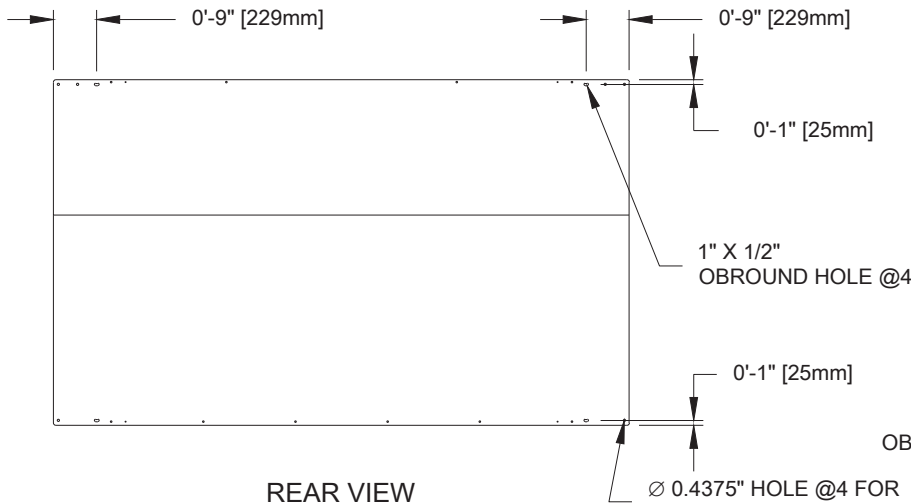
6'-0" [1829mm]

0'-1 5/8" [41mm]
INVERTED CHANNEL DEPTH

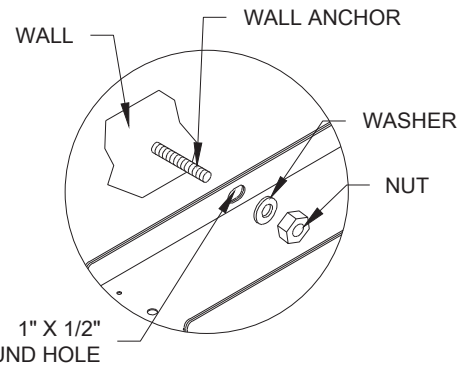
SIDE VIEW



WALL MOUNTING DETAIL



REAR VIEW



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS

SHIPPING WEIGHT	MOUNTING WEIGHT
395 LBS (179 KG)	260 LBS (118 KG)

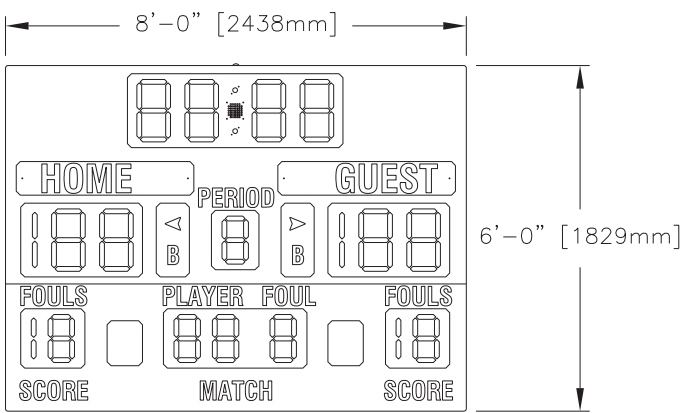
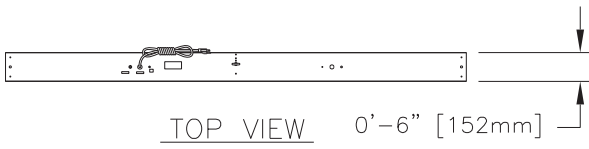
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	<p>DO NOT SCALE DRAWING</p>

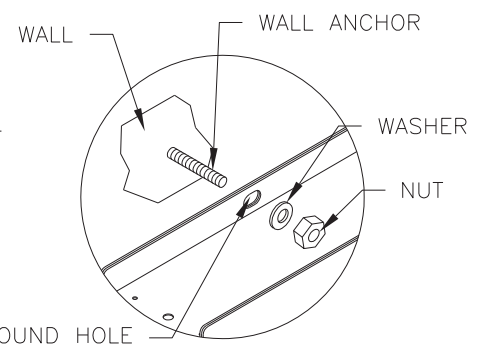
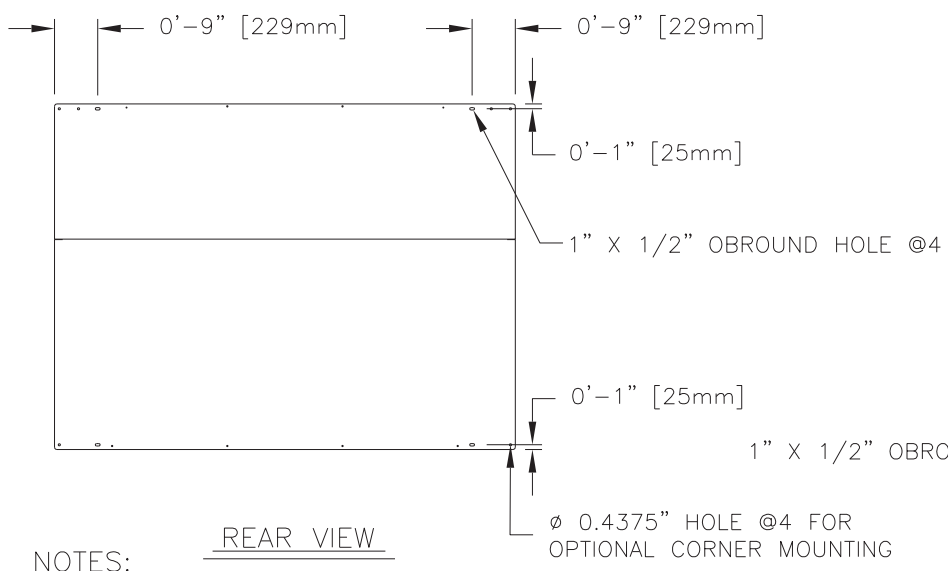
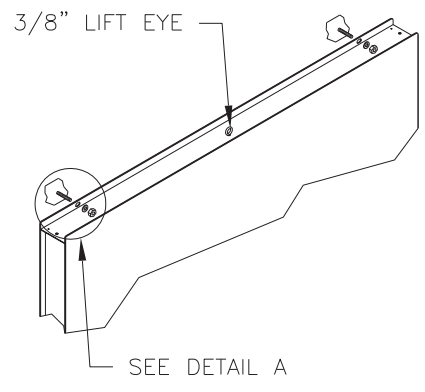
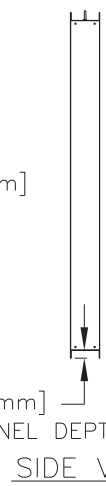
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<p>TITLE: MECHANICAL SPEC- BB-2107</p>			
<p>DESIGN: BPETERSON</p>		<p>DRAWN: JJSYRSTAD</p>	
<p>SCALE: 1=40</p>		<p>DATE: 29 MAY 01</p>	
<p>SHEET</p>	<p>REV</p>	<p>JOB NO:</p>	<p>FUNC -TYPE-SIZE</p>
	<p>03</p>	<p>P 1237</p>	<p>E - 10 - A</p>
			<p>144817</p>

REV 03	DATE: 14 JAN 13	UPDATED WEIGHTS	BY: KDD
REV 02	DATE: 20 JUN 06	UPDATED CLOCK LAYOUT.	BY: JLF
REV 01	DATE: 12 NOV 01	CHANGED DIGITS TO UNIVIEW.	BY: ALG

BB-2103



0'-1 5/8" [41mm] INVERTED CHANNEL DEPTH



NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
290 LBS (132 KG)	180 LBS (82 KG)

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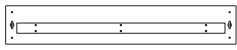
DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS
TITLE: MECHANICAL SPEC, BB-2103
DES. BY: BPETERSON DRAWN BY: BPETERSON DATE: 21 MAY 01

REVISION	APPR. BY:	1237-E10A-149234
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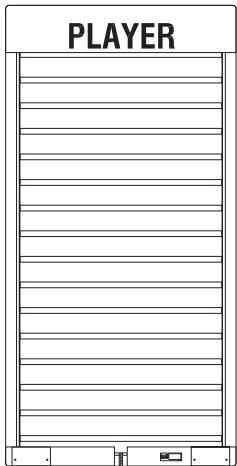
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01	12 NOV 01	CHANGED DIGITS TO UNIVIEW.	ALG	

PN-2101

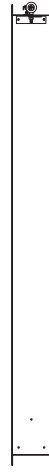


TOP VIEW

3'-0" [914mm]

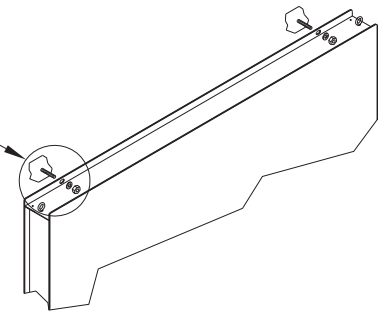


FRONT VIEW

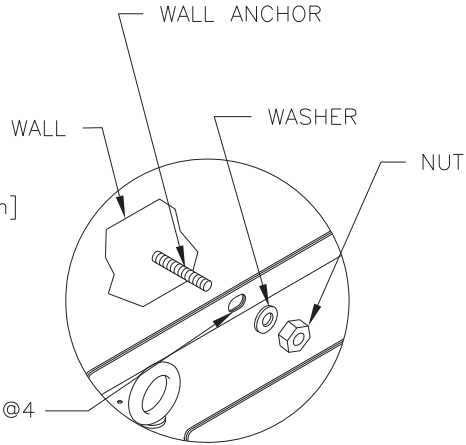


SIDE VIEW

SEE DETAIL A



WALL MOUNTING DETAIL

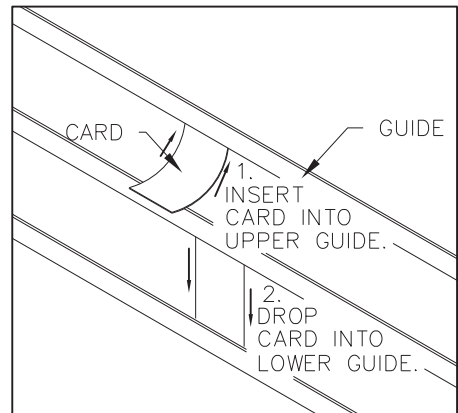


DETAIL: A
(SCALE 1=15)

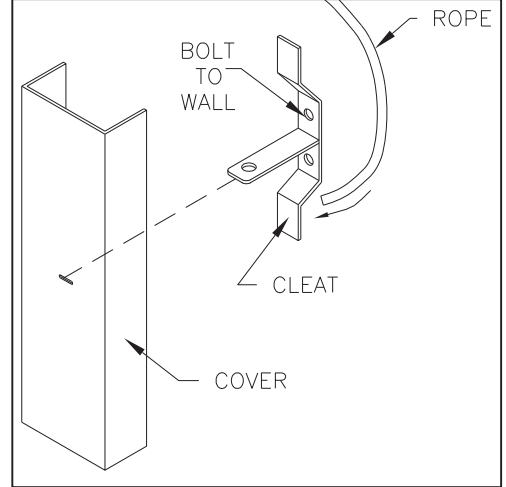
0'-6" [152mm] 0'-1" [25mm] 1" X 1/2" OBROUND HOLE @4
1.000 X 0.500 OBROUND @4



REAR VIEW



DETAIL: CARD INSERTION



DETAIL: ROPE/CLEAT MOUNTING

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYES CAN BE USED FOR LIFTING SCOREBOARDS DURING INSTALLATION OR FOR PERMANENT SUSPENSION.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
110 LBS (50 KG)	70 LBS (32 KG)

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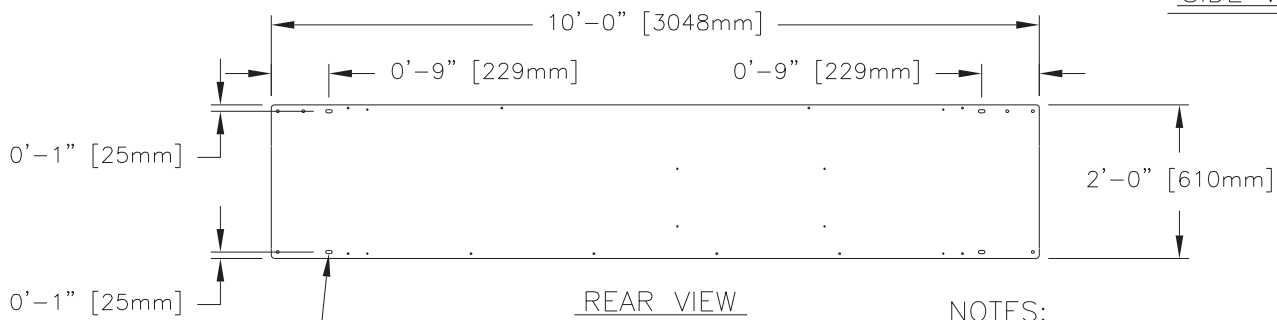
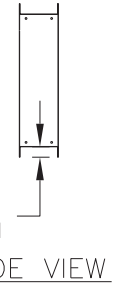
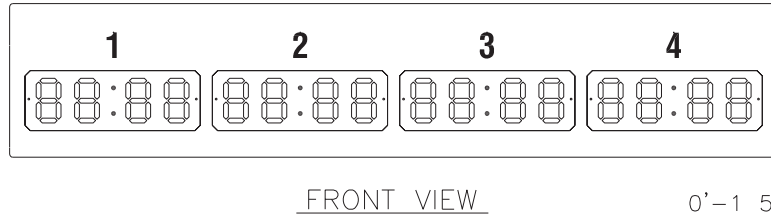
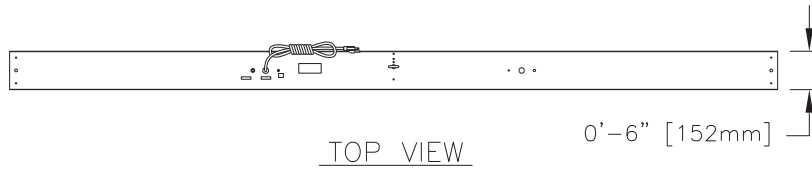
DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS
TITLE: MECHANICAL SPEC, PN-2101
DES. BY: B PETERSON DRAWN BY: DTREML DATE: 01 FEB 02

REV.	DATE	DESCRIPTION	BY	APPR.
03	26 JUL 02	ADDED ROPE TO BOTTOM OF FRONT VIEW.	BDP	
02	26 APR 02	ADDED "ROPE/CLEAT MOUNTING DETAIL" AND "CARD INSERTION DETAIL"	DMT	
01	27 MAR 02	ADJUSTED SHIPPING WEIGHT	BDP	

REVISION 03 APPR. BY: SCALE: 1=30 1237-E10A-162230

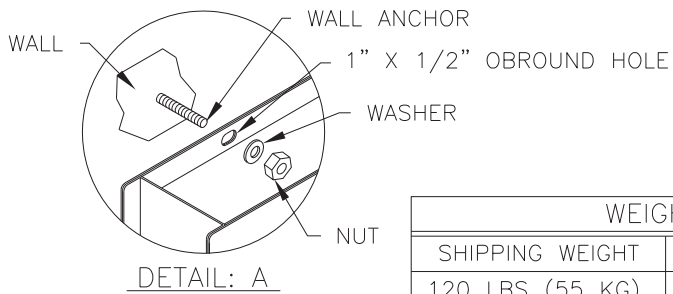
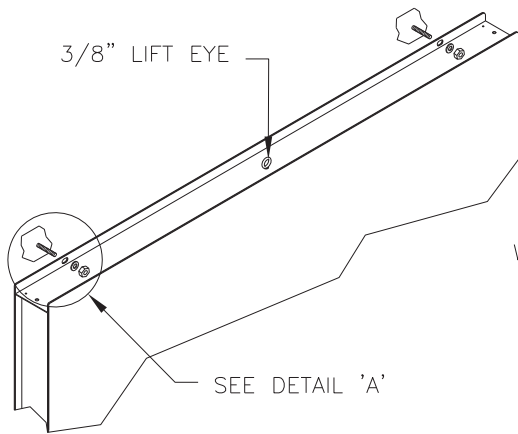
SD-2106



1" X 1/2" OBOUNDRD HOLE @4

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
120 LBS (55 KG)	80 LBS (36 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: MECHANICAL SPECS, SD-2106

DES. BY: E REBHANN

DRAWN BY: E REBHANN

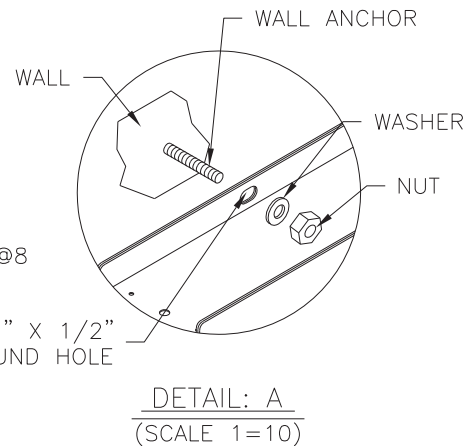
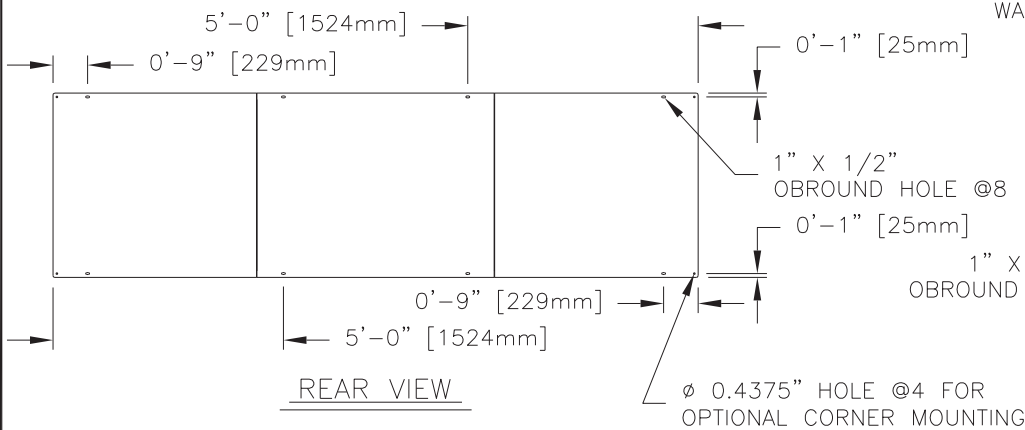
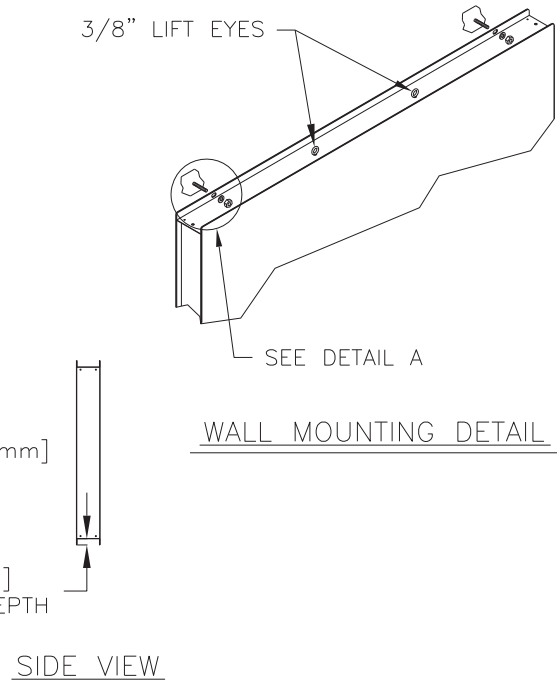
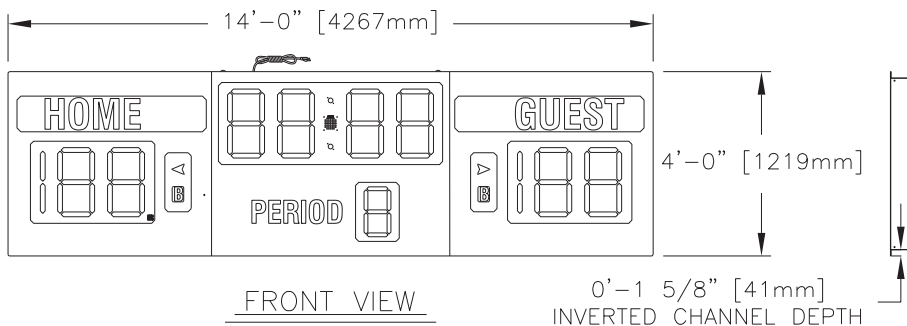
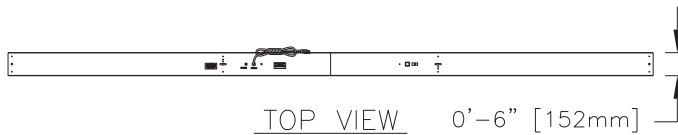
DATE: 03 MAR 02

REV.	DATE	DESCRIPTION	BY	APPR.
01	22 APR 02	REMOVED "-13, -15" FROM TITLE.	DMT	

REVISION	APPR. BY:
01	SCALE: 1=30

1237-E10A-163544

BB-2116



NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
340 LBS (154 KG)	210 LBS (95 KG)

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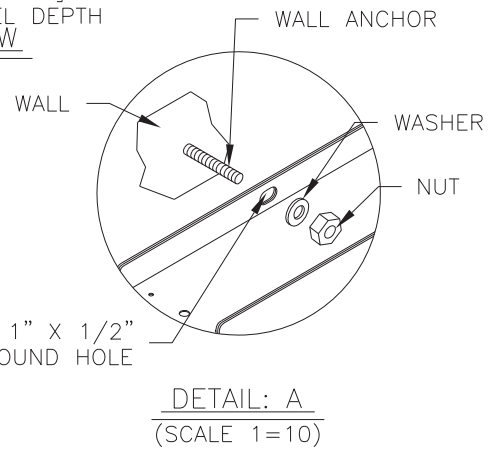
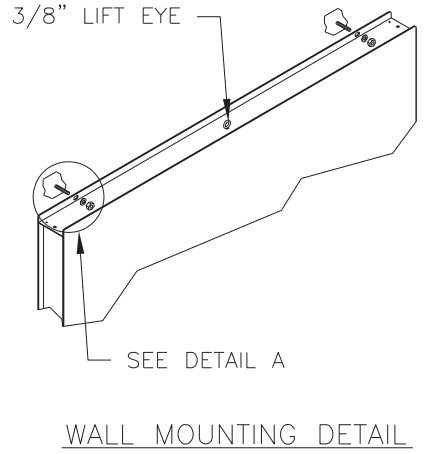
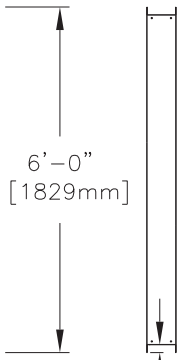
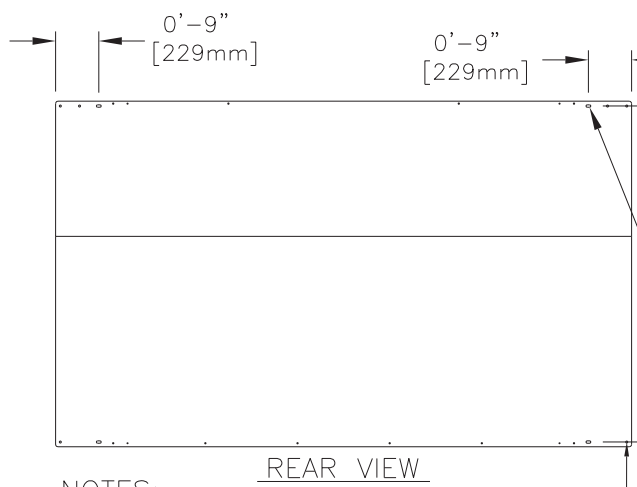
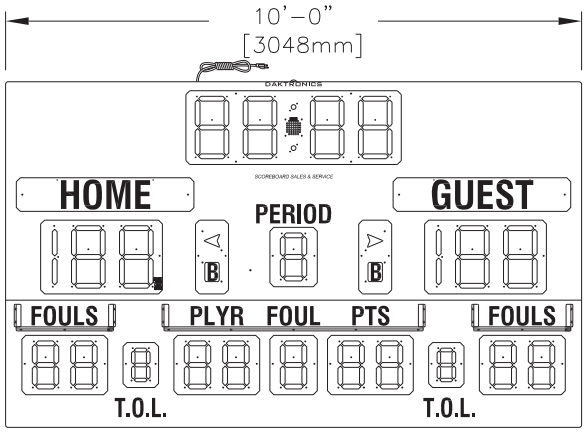
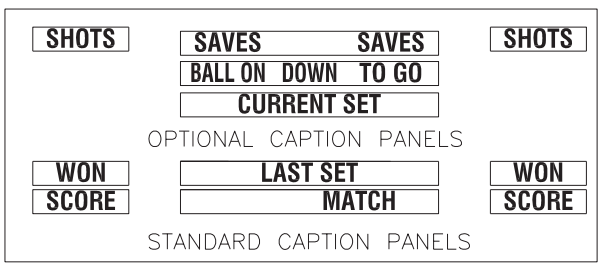
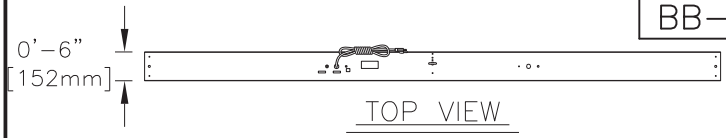
DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS	
TITLE: MECHANICAL SPEC, BB-2116	
DES. BY: AVANBEMMEL	DRAWN BY: RNIELSEN
DATE: 25 MAR 02	
REVISION	APPR. BY:
02	SCALE: 1=50

1237-E10A-164590

02	20 JUN 06	UPDATED CLOCK LAYOUT.	JLF	CW
01	06 JUN 02	UPDATED REAR VIEW. ADDED PROPRIETARY NOTE.	JJS	
REV.	DATE	DESCRIPTION	BY	APPR.

BB-2123



- NOTES:**
1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
 2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
 3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
 4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™, DIGIT TECHNOLOGY. SEE DRAWING™ A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
370 LBS (168 KG)	230 LBS (104 KG)

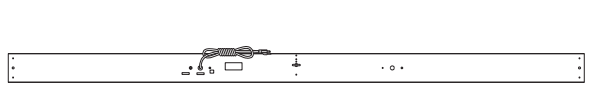
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REV.	DATE	DESCRIPTION	BY	APPR.
03	30 MAR 10	CHANGED "LST GM" CAPTIONS TO "LAST SET"	SAG	
02	20 JUN 06	UPDATED CLOCK LAYOUT.	JLF	CW
01	09 SEP 02	ADDED CAPTION OPTIONS	ALG	

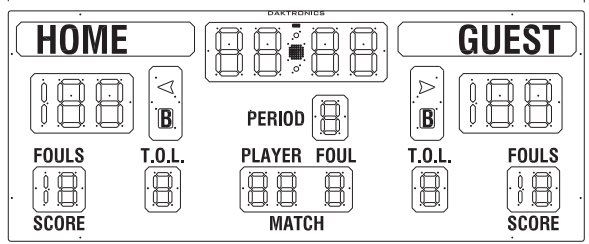
DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ: TUFF SPORT™ SCOREBOARDS	
TITLE: MECHANICAL SPEC- BB-2123	
DES. BY: BPETERSON	DRAWN BY: DTREML
DATE: 12 APR 02	
REVISION	APPR. BY:
03	SCALE: 1=40
1237-E10A-165428	

BB-2125



TOP VIEW

10'-0" [3048mm]

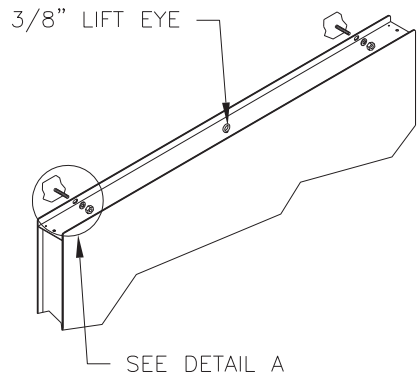


FRONT VIEW

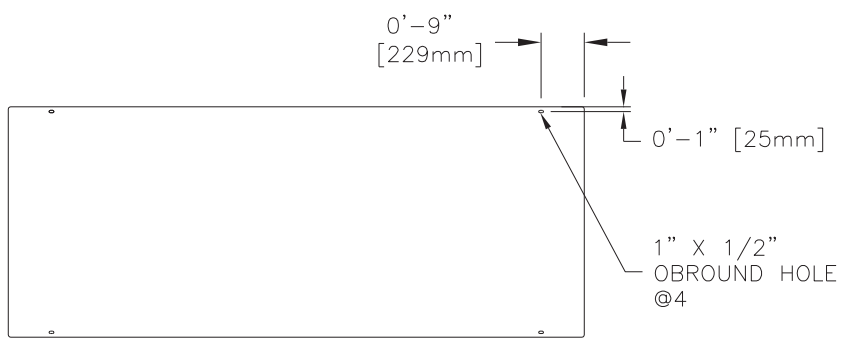
4'-0" [1219mm]

0'-1 5/8" [41mm]
INVERTED CHANNEL DEPTH

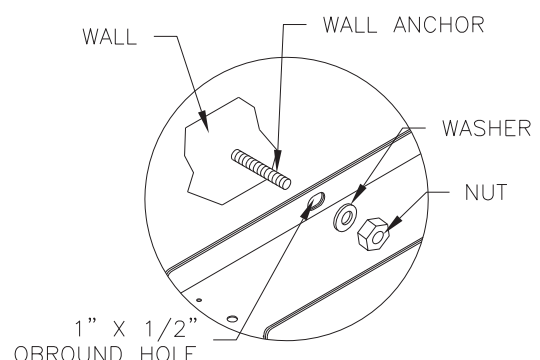
SIDE VIEW



WALL MOUNTING DETAIL



REAR VIEW



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
240 LBS (109 KG)	150 LBS (68 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2125

DES. BY: B PETERSON

DRAWN BY: AGIBSON

DATE: 16 MAY 02

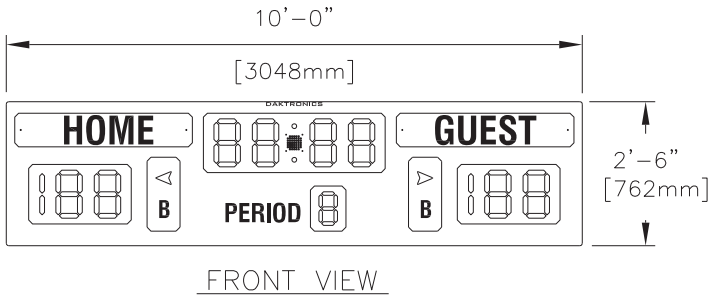
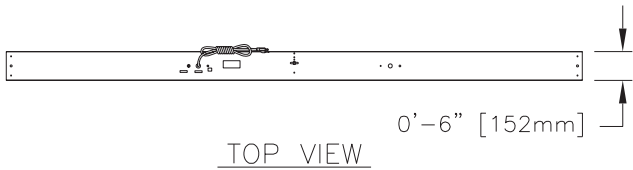
REVISION
00

APPR. BY:
SCALE: 1=30

1237-E10A-167239

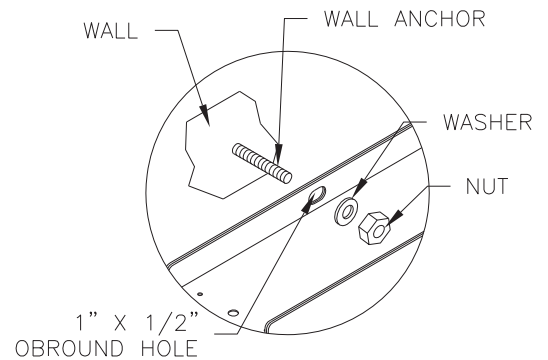
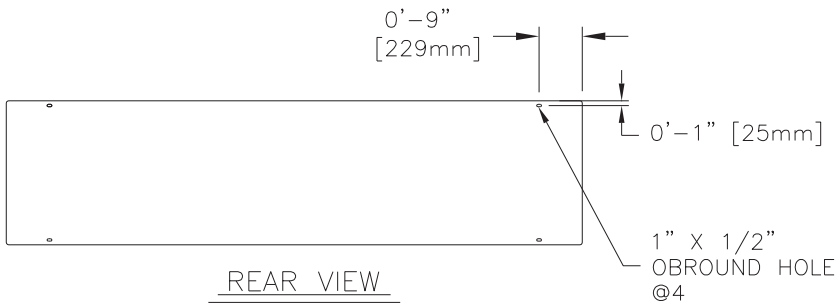
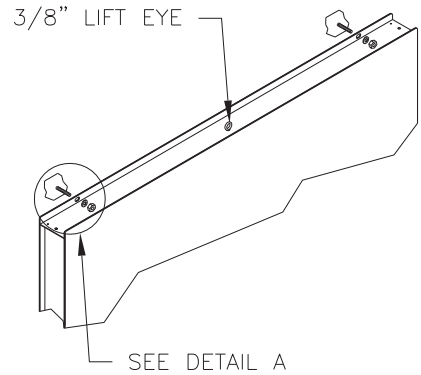
REV.	DATE	DESCRIPTION	BY	APPR.

BB-2121



0'-1 5/8" [41mm]
INVERTED CHANNEL DEPTH

SIDE VIEW



NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS

SHIPPING WEIGHT	MOUNTING WEIGHT
152 LBS (70 KG)	92 LBS (43 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2121

DES. BY: B PETERSON

DRAWN BY: AGIBSON

DATE: 16 MAY 02

REVISION

APPR. BY:

SCALE: 1=30

1237-E10A-167241

REV.	DATE	DESCRIPTION	BY	APPR.
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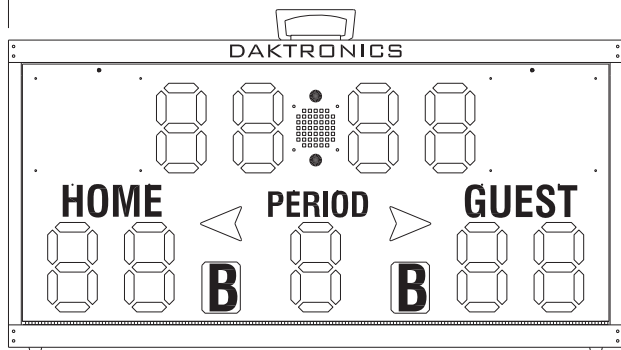
BB-2122

4'-0"

0'-6"
[152mm]

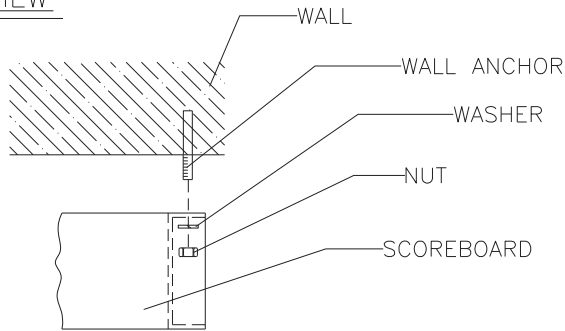
[1219mm]

2'-0"
[610mm]

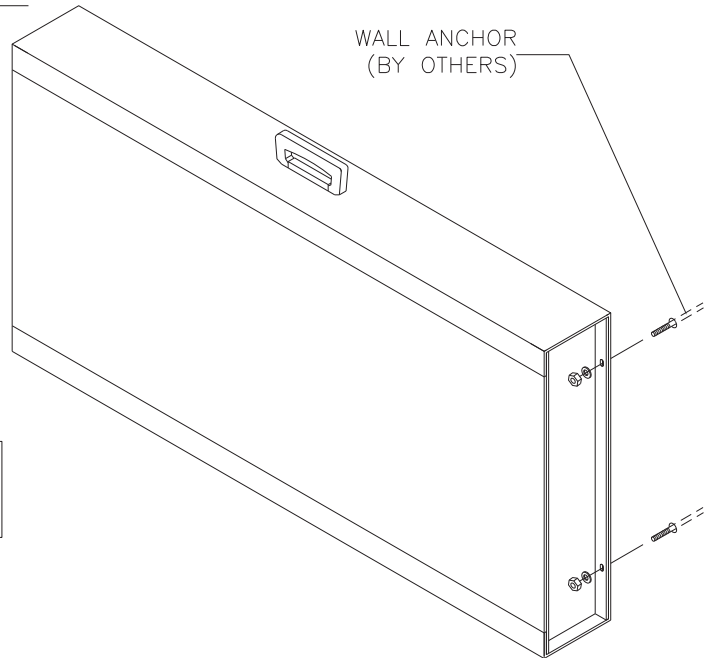


FRONT VIEW

SIDE VIEW



ATTACH THE SCOREBOARD TO THE WALL AT ALL MOUNTING LOCATIONS INDICATED. USE THE APPROPRIATE ANCHORS FOR THE TYPE OF WALL.



WALL ANCHOR
(BY OTHERS)

0'-4"
[102mm]

0'-0 1/2"
[10mm]

1/2" X 1/4"
OVBROUND HOLE
@4



REAR VIEW

NOTES:

THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS

SHIPPING WEIGHT	MOUNTING WEIGHT
48 LBS (23 KG)	30 LBS (14 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2122

DES. BY: B PETERSON

DRAWN BY: AGIBSON

DATE: 16 MAY 02

REVISION

APPR. BY:

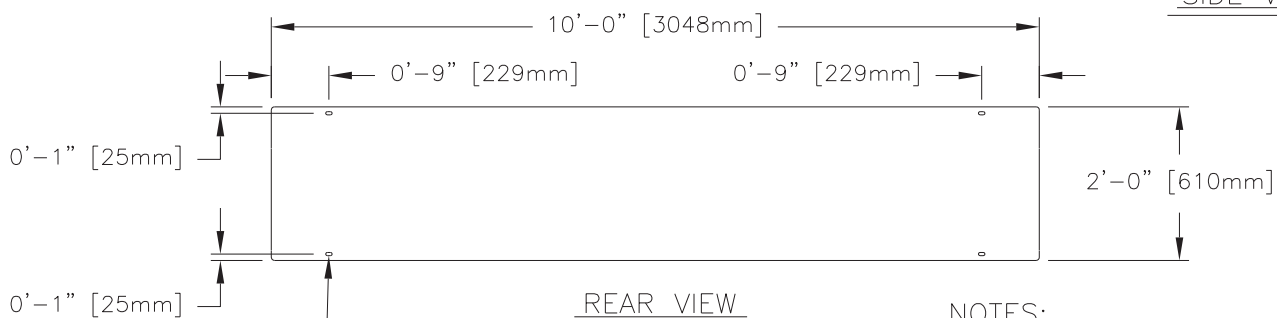
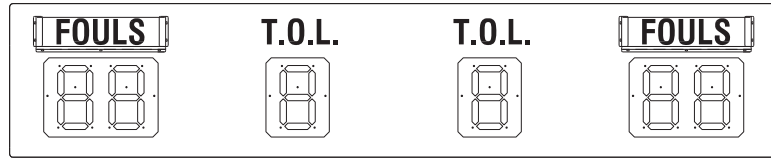
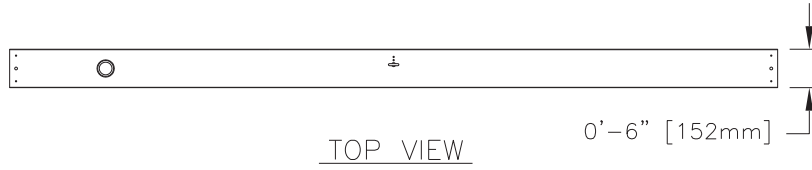
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SCALE: 1=15

1237-E10A-167243

REV.	DATE	DESCRIPTION	BY	APPR.

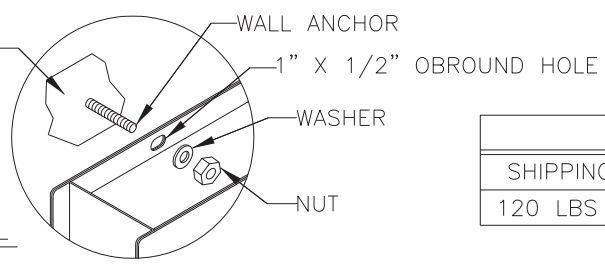
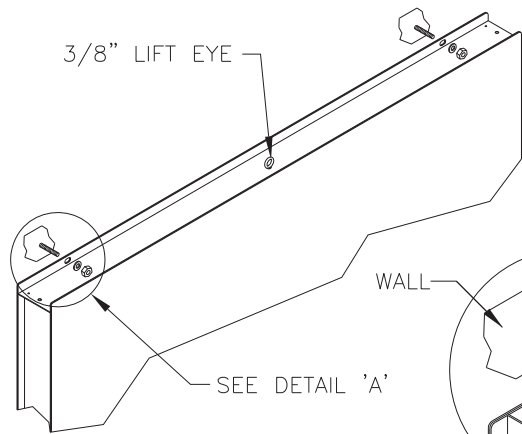
BB-2127



1" X 1/2" OBOUNDRD HOLE @4

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
120 LBS (55 KG)	80 LBS (36 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: MECHANICAL SPECS, BB-2127

DES. BY: BPETERSON

DRAWN BY: AGIBSON

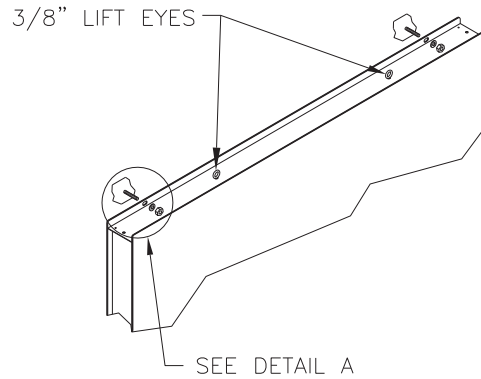
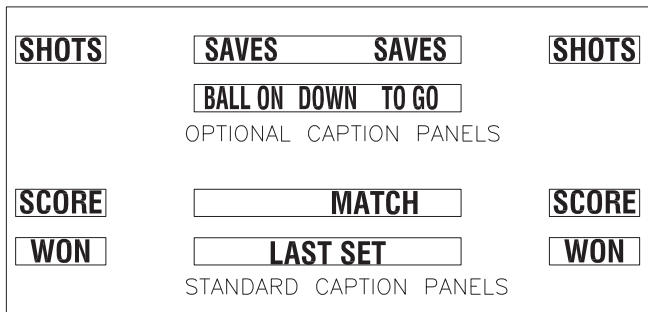
DATE: 22 MAY 02

REVISION	APPR. BY:
00	SCALE: 1=30

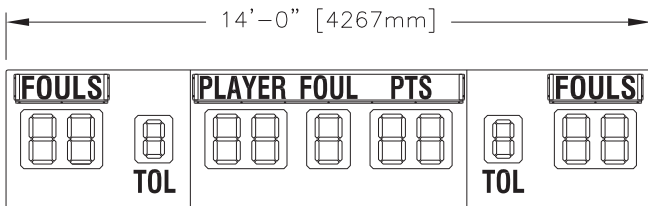
1237-E10A-167614

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2117



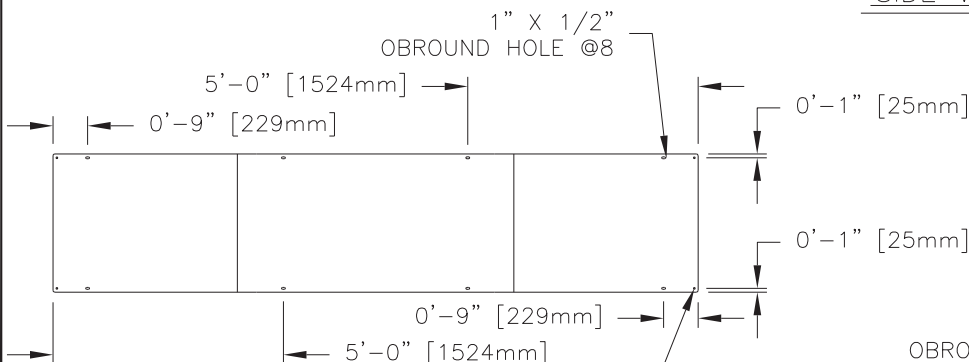
WALL MOUNTING DETAIL



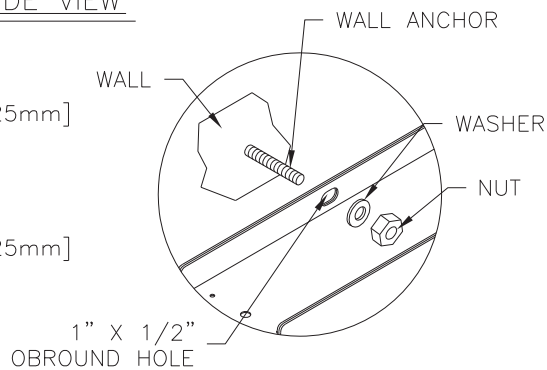
FRONT VIEW

0'-1 5/8" [41mm]
 INVERTED CHANNEL DEPTH

SIDE VIEW



REAR VIEW



DETAIL: A
 (SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
255 LBS (116 KG)	160 LBS (73 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: MECHANICAL SPEC- BB-2117

DES. BY: BPETERSON

DRAWN BY: AGIBSON

DATE: 10 JUN 02

REVISION

APPR. BY:

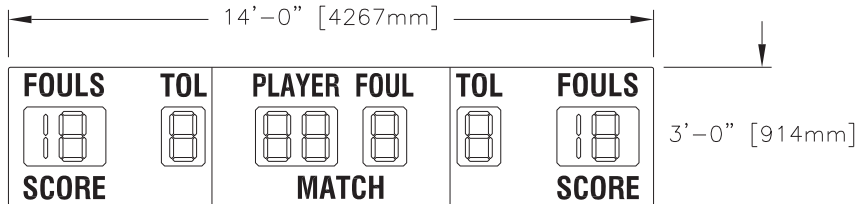
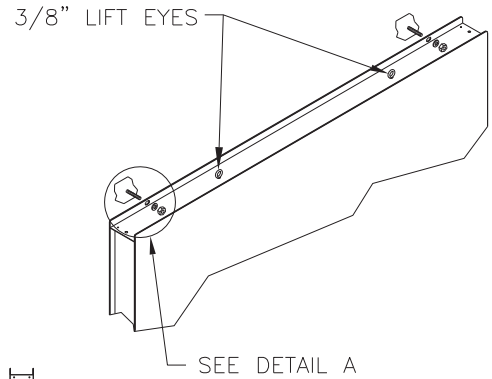
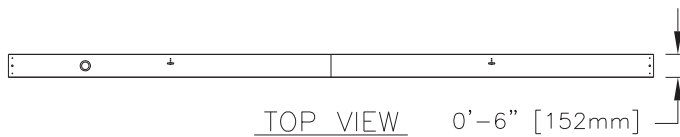
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SCALE: 1=50

1237-E10A-168620

REV.	DATE	DESCRIPTION	BY	APPR.
01	30 MAR 10	REPLACED "LST GM" CAPTIONS WITH "LAST SET"	SAG	

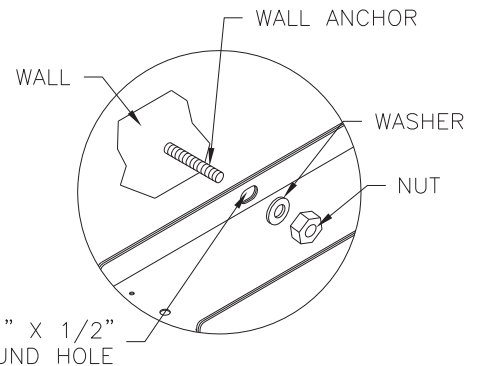
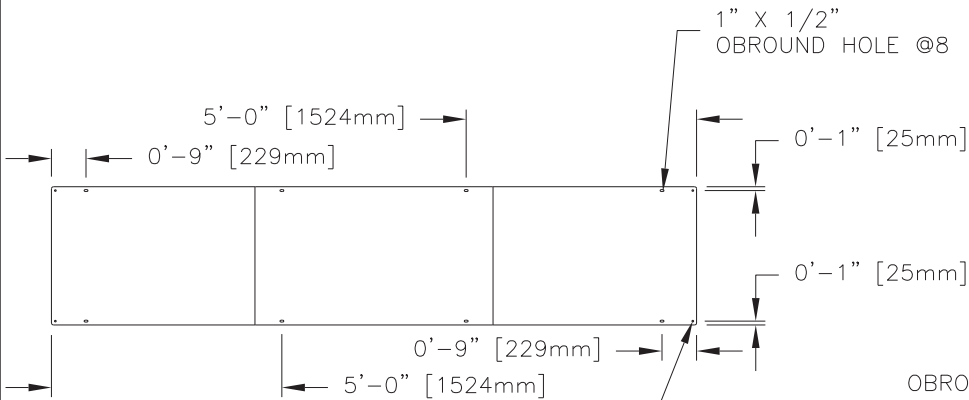
BB-2119



WALL MOUNTING DETAIL

0'-1 5/8" [41mm]
INVERTED CHANNEL DEPTH

SIDE VIEW



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS

SHIPPING WEIGHT	MOUNTING WEIGHT
255 LBS (116 KG)	160 LBS (73 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2119

DES. BY: BPETERSON

DRAWN BY: AGIBSON

DATE: 10 JUN 02

REVISION

APPR. BY:

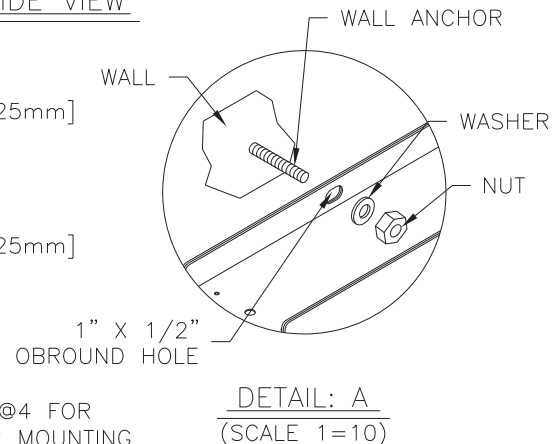
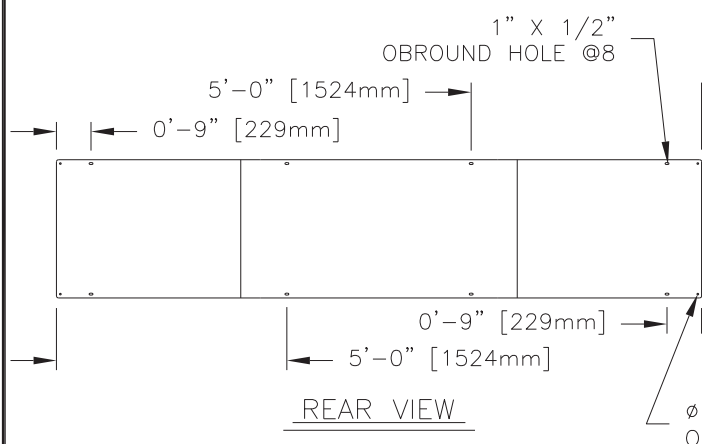
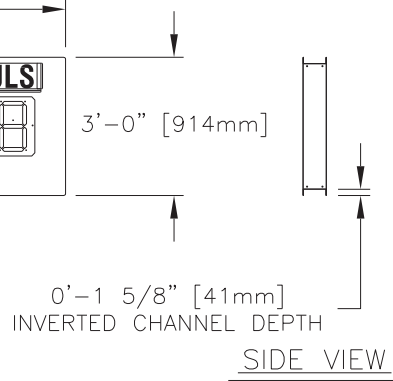
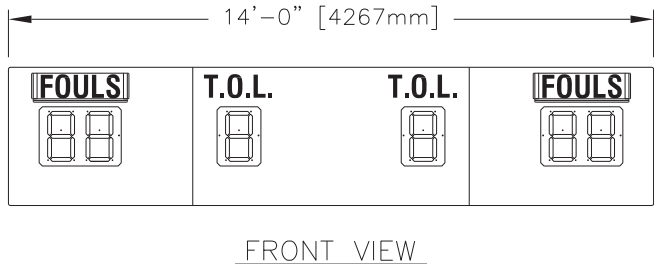
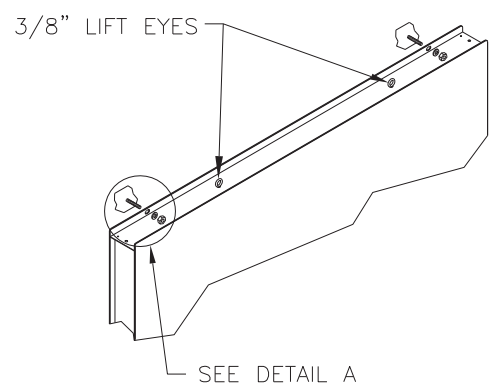
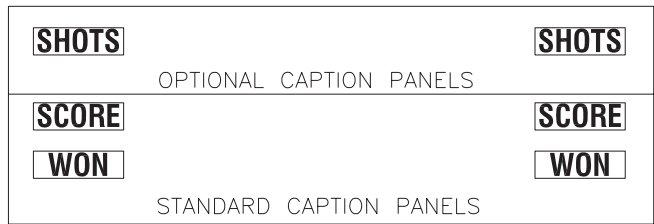
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SCALE: 1=50

1237-E10A-168633

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2120



NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

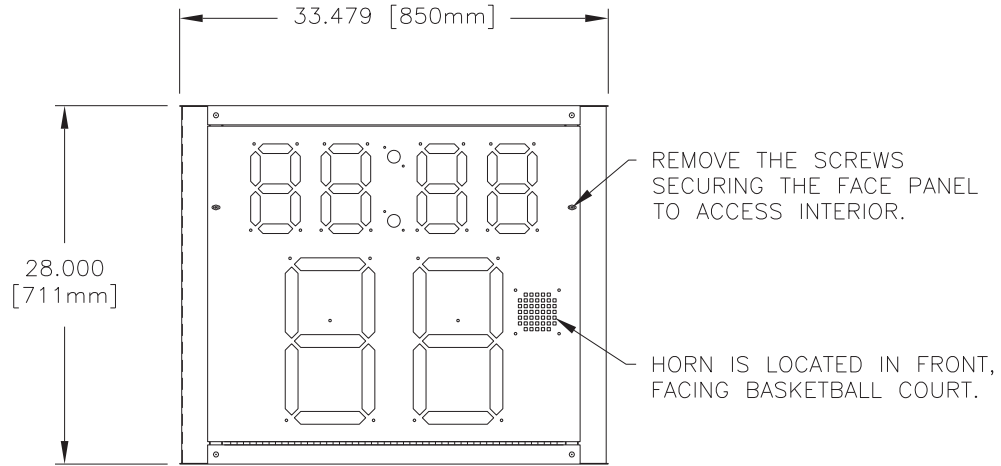
WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
255 LBS (116 KG)	160 LBS (73 KG)

TUFF SPORT™ & UNIVIEW™ ARE TRADEMARKS OF DAKTRONICS

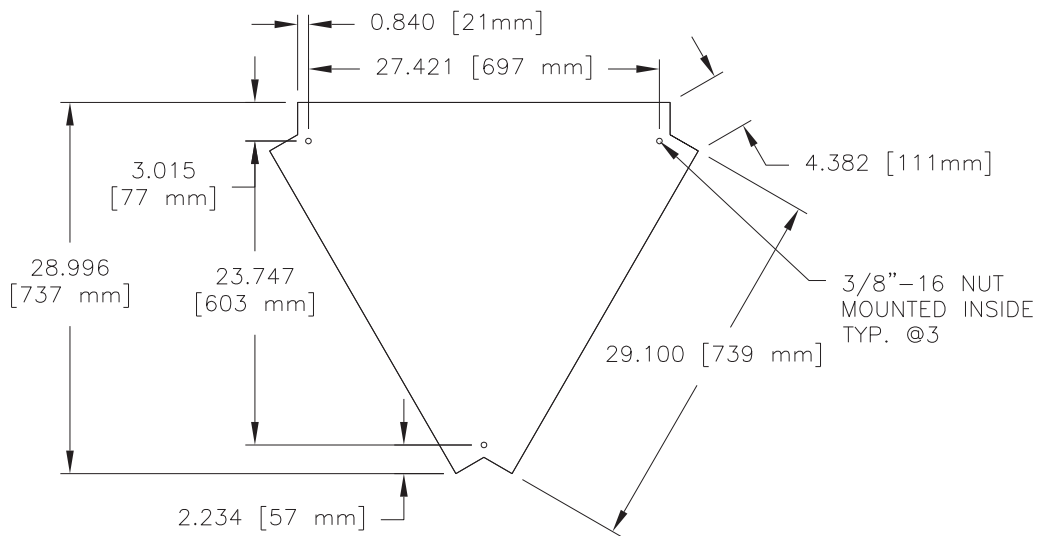
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DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ: TUFF SPORT™ SCOREBOARDS	
TITLE: MECHANICAL SPEC, BB-2120	
DES. BY: BPETERSON	DRAWN BY: AGIBSON
DATE: 10 JUN 02	
REVISION 00	APPR. BY: _____ SCALE: 1=50
1237-E10A-168668	

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2111



FRONT VIEW



BOTTOM VIEW

NOTES:

1. MOUNTING HARDWARE IS NOT PROVIDED.
2. FOR PORTABLE BACKSTOPS, CONTACT THE BACKSTOP MANUFACTURER FOR MOUNTING HARDWARE.
3. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
105 LBS (48 KG)	65 LBS (30 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2111

DES. BY: EREBHANN

DRAWN BY: JBANNWA

DATE: 02 SEP 04

REVISION

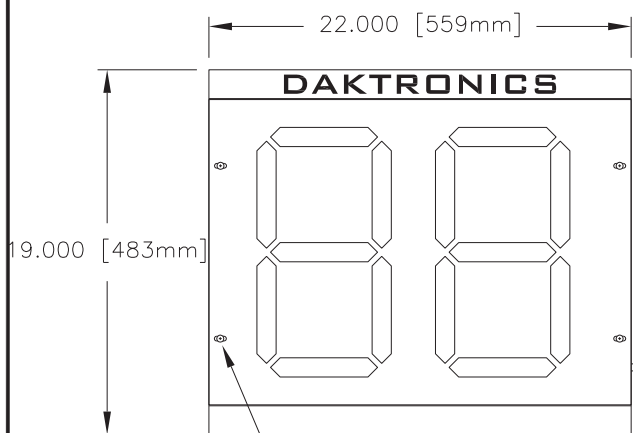
APPR. BY:

SCALE: 1=15

1237-E10A-222782

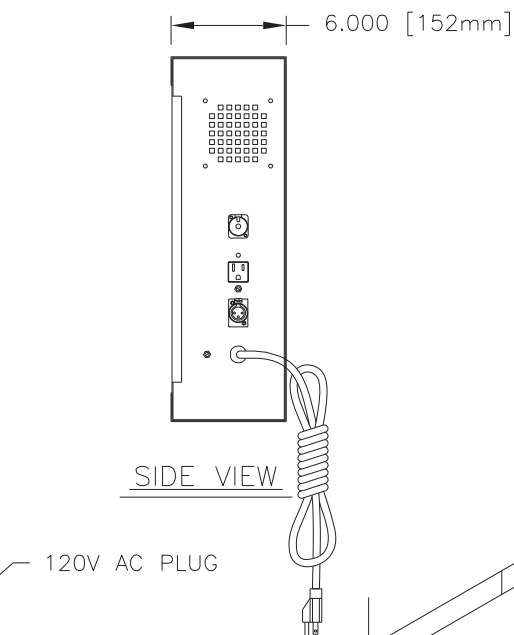
REV.	DATE	DESCRIPTION	BY	APPR.

BB-2114

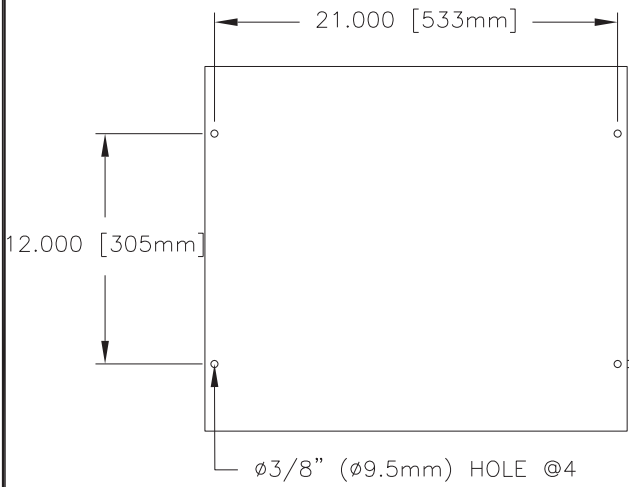


FRONT VIEW

REMOVE THESE FOUR SCREWS TO ACCESS COMPONENTS INSIDE THE DISPLAY.

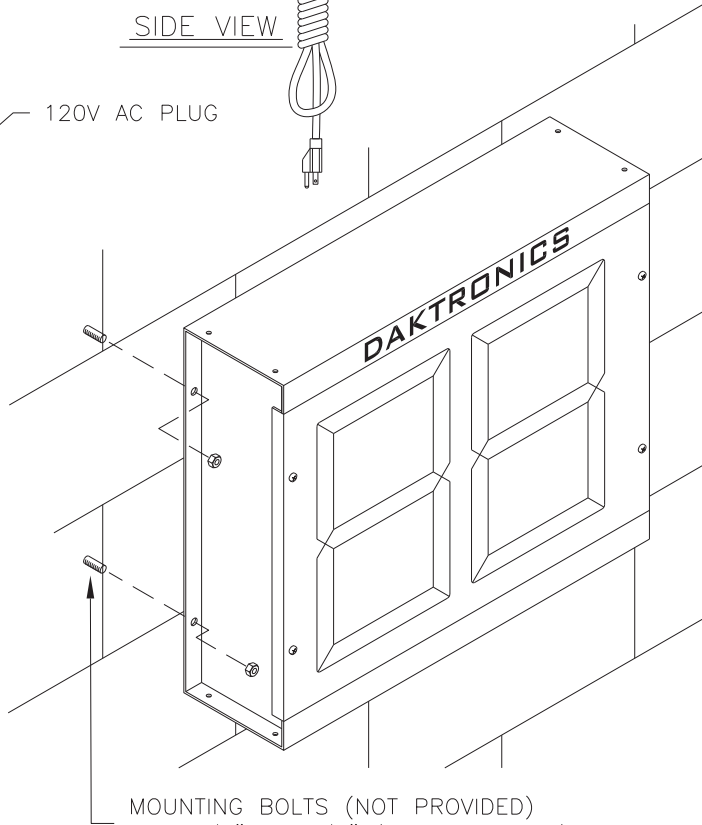


SIDE VIEW



REAR VIEW

ø3/8" (ø9.5mm) HOLE @4



WALL MOUNTING DETAIL

MOUNTING BOLTS (NOT PROVIDED)
USE 1/4" TO 3/8" (7mm TO 9mm) BOLTS

NOTES:

1. MOUNTING HARDWARE IS NOT PROVIDED.
2. SEE DRAWING NO. 1009-R10A-91230 FOR SUGGESTIONS ON MOUNTING TO CEILING-SUSPENDED BACKSTOPS.
3. FOR PORTABLE BACKSTOPS, CONTACT THE BACKSTOP MANUFACTURER FOR MOUNTING HARDWARE.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
20 LBS (10 KG)	15 LBS (7 KG)

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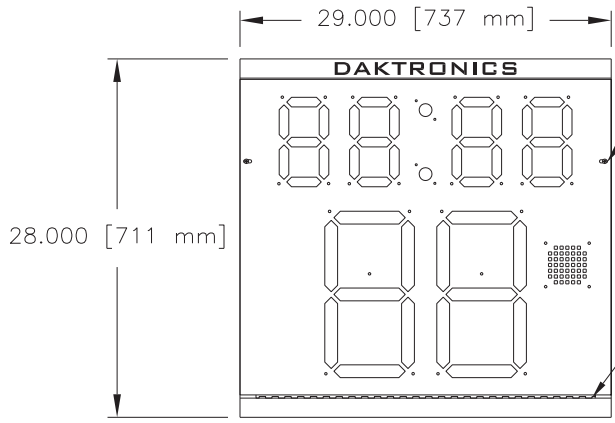
DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS
 TITLE: MECHANICAL SPEC, BB-2114
 DES. BY: EREBHANN DRAWN BY: JBANNWA DATE: 02 SEP 04

REVISION	APPR. BY:	1237-E10A-222797
00	SCALE: 1=10	

REV.	DATE	DESCRIPTION	BY	APPR.

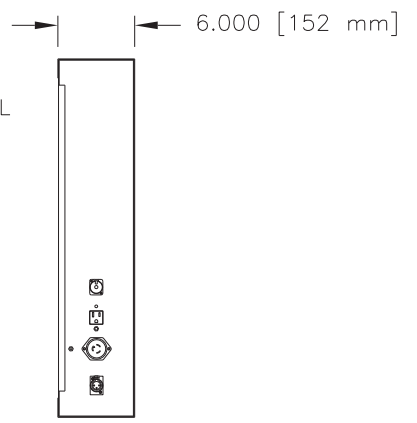
BB-2115



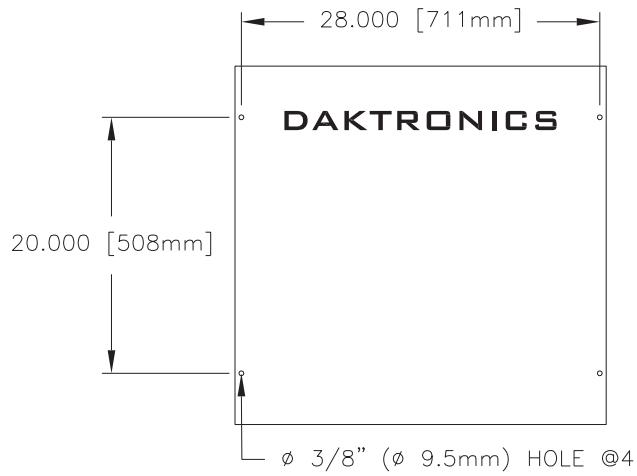
FRONT VIEW

REMOVE THE SCREWS SECURING THE FACE PANEL TO ACCESS INTERIOR

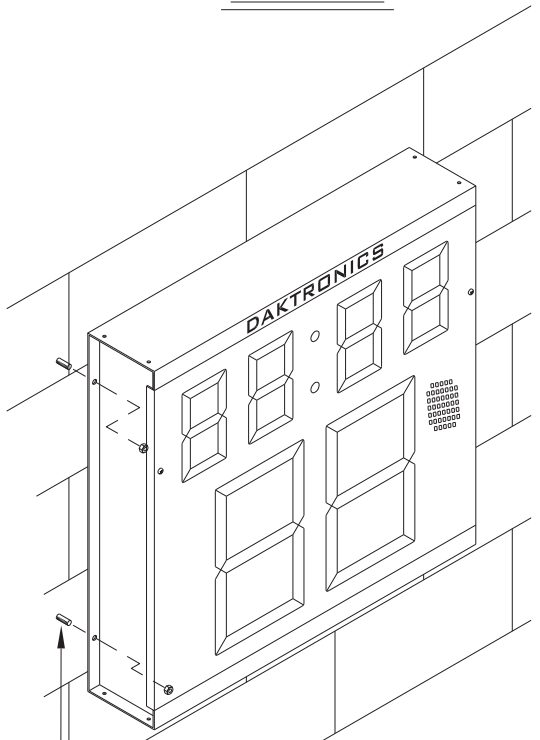
FACE PANEL IS MOUNTED WITH A HINGE



SIDE VIEW



REAR VIEW



MOUNTING BOLTS (NOT PROVIDED)
USE 1/4" TO 3/8" (7mm TO 9mm) BOLTS

WALL MOUNTING DETAIL

NOTES:

1. MOUNTING HARDWARE IS NOT PROVIDED.
2. SEE DRAWING NO. 1009-R10A-91230 FOR SUGGESTIONS ON MOUNTING TO CEILING-SUSPENDED BACKSTOPS.
3. FOR PORTABLE BACKSTOPS, CONTACT THE BACKSTOP MANUFACTURER FOR MOUNTING HARDWARE.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DWG A-158550 FOR MORE DETAILS.

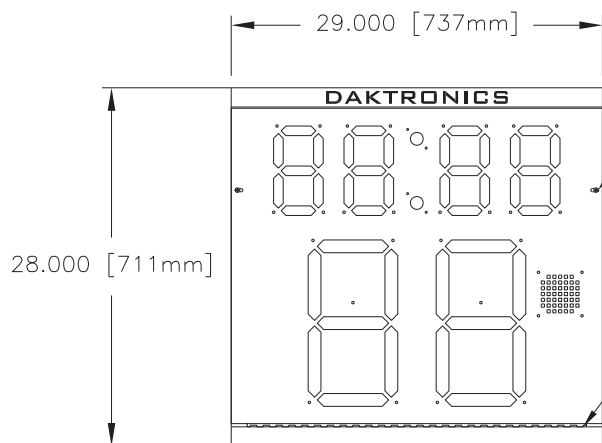
WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
40 LBS (18 KG)	30 LBS (14 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: TUFF SPORT SCOREBOARDS			
TITLE: MECHANICAL SPEC, BB-2115			
DES. BY: EREBHAH		DRAWN BY: JBANNWA	DATE: 07 SEP 04
REVISION	APPR. BY:	1237-E10A-222877	
00	SCALE: 1=15		

REV.	DATE	DESCRIPTION	BY	APPR.

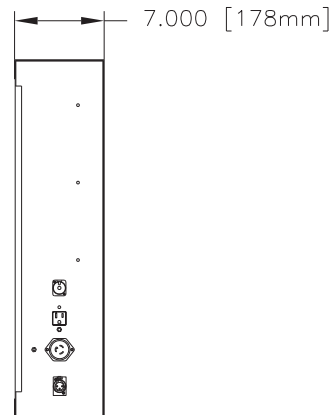
BB-2109



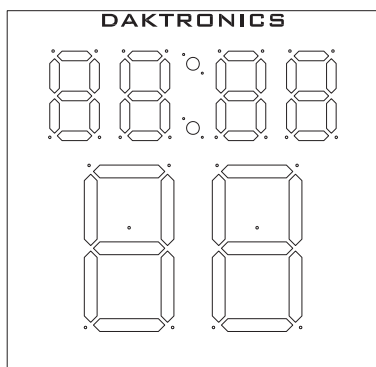
FRONT VIEW

REMOVE THE SCREWS
SECURING THE FACE PANEL
TO ACCESS INTERIOR

FACE PANEL IS MOUNTED
WITH A HINGE



SIDE VIEW



REAR VIEW

WEIGHTS

SHIPPING WEIGHT	MOUNTING WEIGHT
55LBS (25 KG)	45LBS (21 KG)

NOTES:

1. MOUNTING HARDWARE IS NOT PROVIDED.
2. FOR PORTABLE BACKSTOPS, CONTACT THE BACKSTOP MANUFACTURER FOR MOUNTING HARDWARE.
3. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2109

DES. BY: EREBHAH

DRAWN BY: JBANNWA

DATE: 07 SEP 04

REVISION

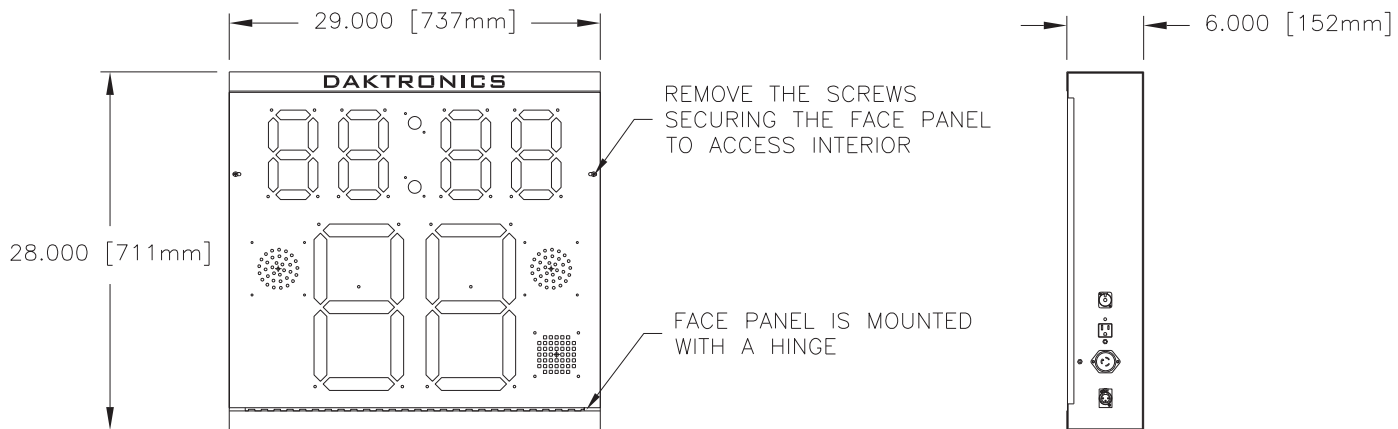
APPR. BY:

SCALE: 1=15

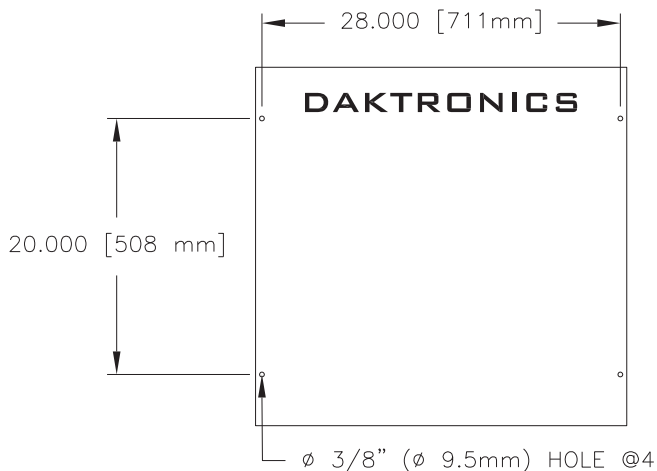
1237-E10A-222884

REV.	DATE	DESCRIPTION	BY	APPR.
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BB-2130



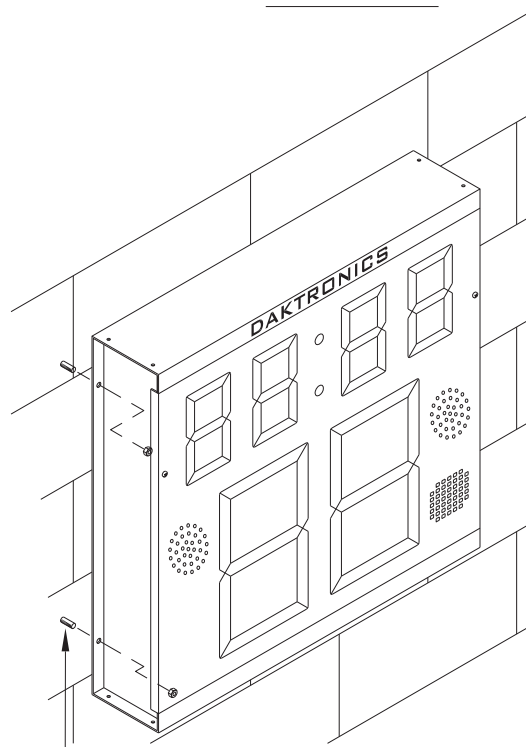
SIDE VIEW



REAR VIEW

NOTES:

1. MOUNTING HARDWARE IS NOT PROVIDED.
2. SEE DRAWING NO. 1009-R10A-91230 FOR SUGESTIONS ON MOUNTING TO CEILING-SUSPENDED BACKSTOPS.
3. FOR PORTABLE BACKSTOPS, CONTACT THE BACKSTOP MANUFACTURER FOR MOUNTING HARDWARE.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



MOUNTING BOLTS (NOT PROVIDED)
USE 1/4" TO 3/8" (7mm TO 9mm) BOLTS

WALL MOUNTING DETAIL

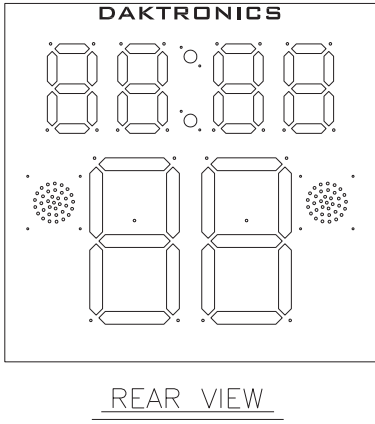
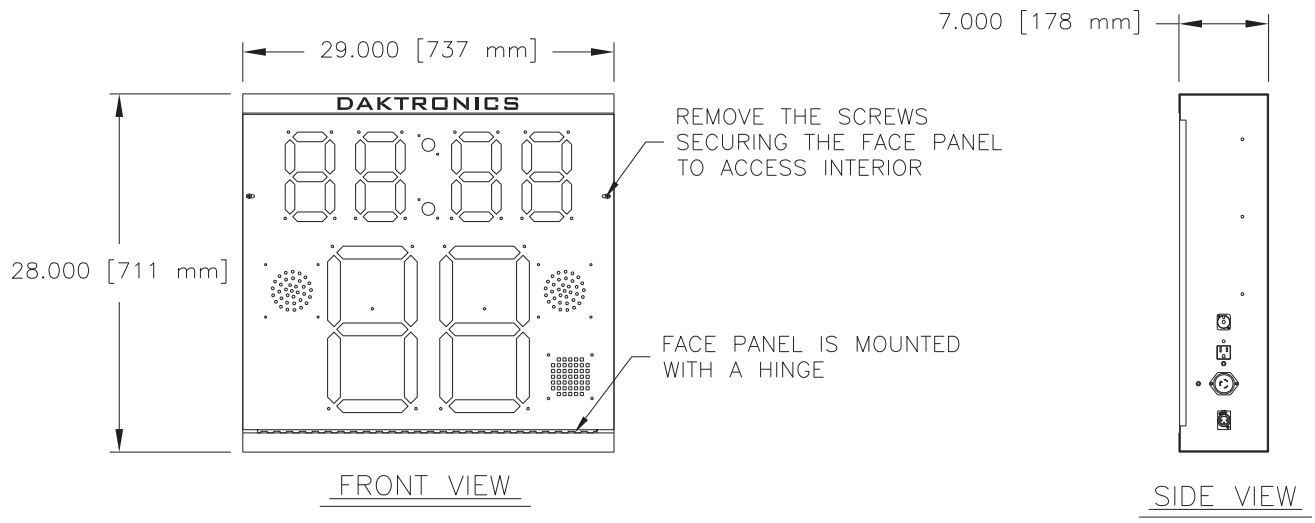
WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
45 LBS (21 KG)	35 LBS (16 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: TUFF SPORT SCOREBOARDS			
TITLE: MECHANICAL SPEC, BB-2130			
DES. BY: EREBHAH		DRAWN BY: JBANNWA	DATE: 14 SEP 04
REVISION	APPR. BY:	1237-E07A-223355	
00	SCALE: 1=15		

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2131



NOTES:

1. MOUNTING HARDWARE IS NOT PROVIDED.
2. FOR PORTABLE BACKSTOPS, CONTACT THE BACKSTOP MANUFACTURER FOR MOUNTING HARDWARE.
3. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
60LBS (27 KG)	50LBS (23 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

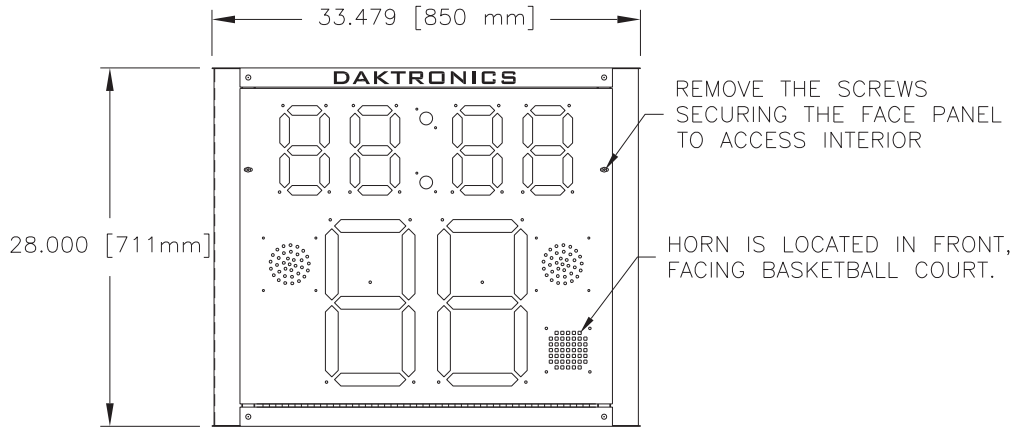
TITLE: MECHANICAL SPEC, BB-2131

DES. BY: EREBHAH DRAWN BY: JBANNWA DATE: 16 SEP 04

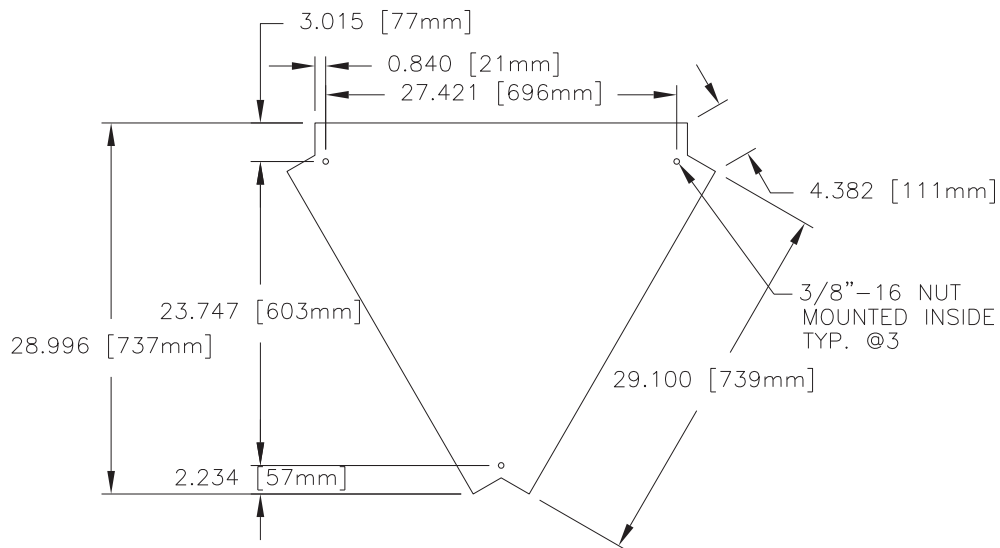
REVISION	APPR. BY:	1237-E10A-223541
00	SCALE: 1=15	

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2132



FRONT VIEW



BOTTOM VIEW

NOTES:

1. MOUNTING HARDWARE IS NOT PROVIDED.
2. FOR PORTABLE BACKSTOPS, CONTACT THE BACKSTOP MANUFACTURER FOR MOUNTING HARDWARE.
3. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS

SHIPPING WEIGHT	MOUNTING WEIGHT
115 LBS (52 KG)	75 LBS (34 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2132

DES. BY: EREBHAH

DRAWN BY: JBANNWA

DATE: 16 SEP 04

REVISION

APPR. BY:

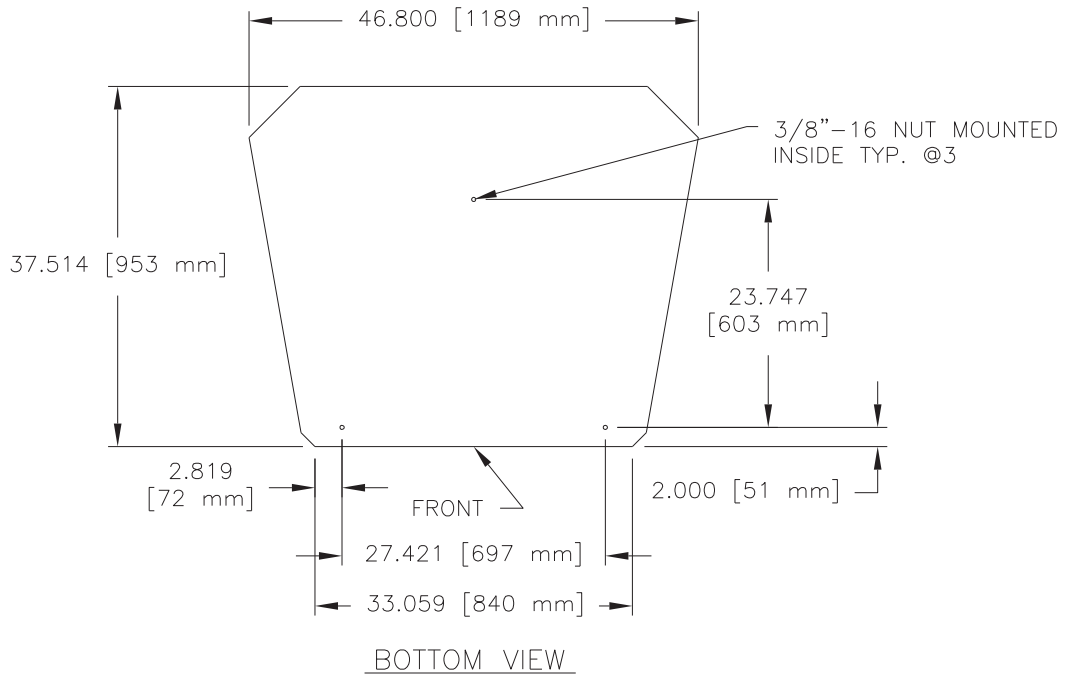
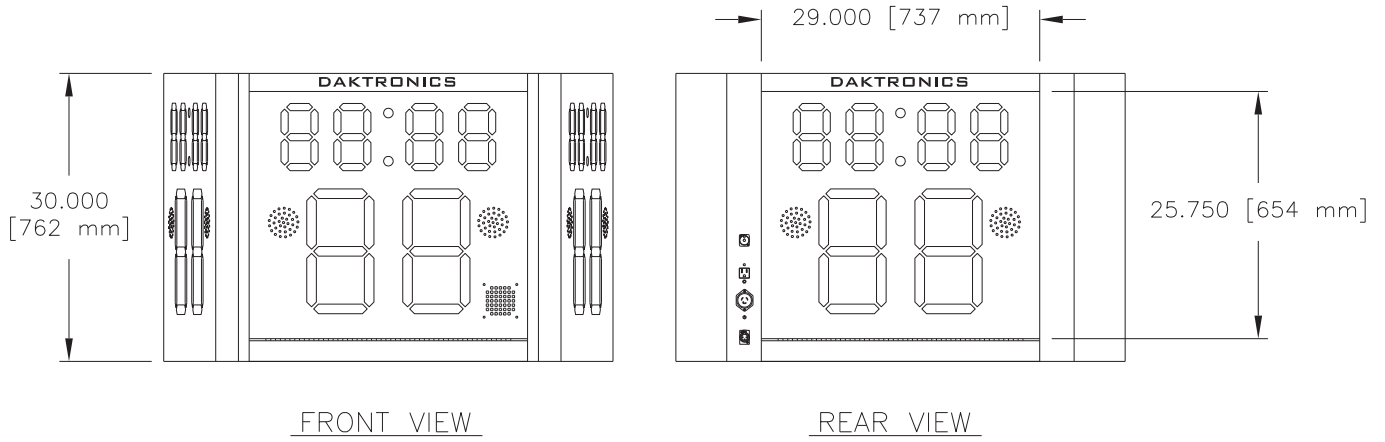
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SCALE: 1=15

1237-E10A-223543

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2128



NOTES:

1. MOUNTING HARDWARE IS NOT PROVIDED.
2. FOR PORTABLE BACKSTOPS, CONTACT THE BACKSTOP MANUFACTURER FOR MOUNTING HARDWARE.
3. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.
4. THE HOLE PATTERN ABOVE WILL MATCH THE HOLE PATTERN FOR DAKTRONICS 3-SIDED GAME/SHOT CLOCKS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
190 LBS (86 KG)	125 LBS (57 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

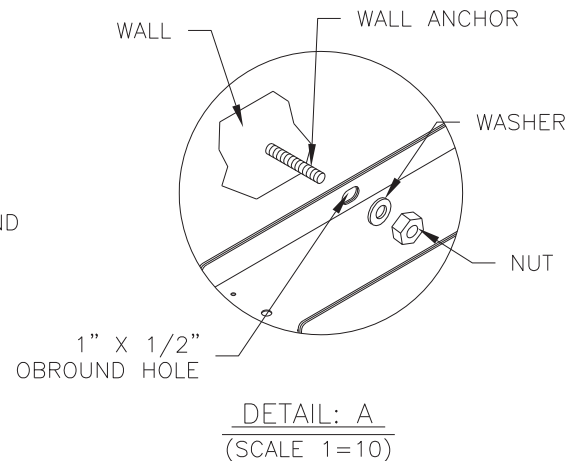
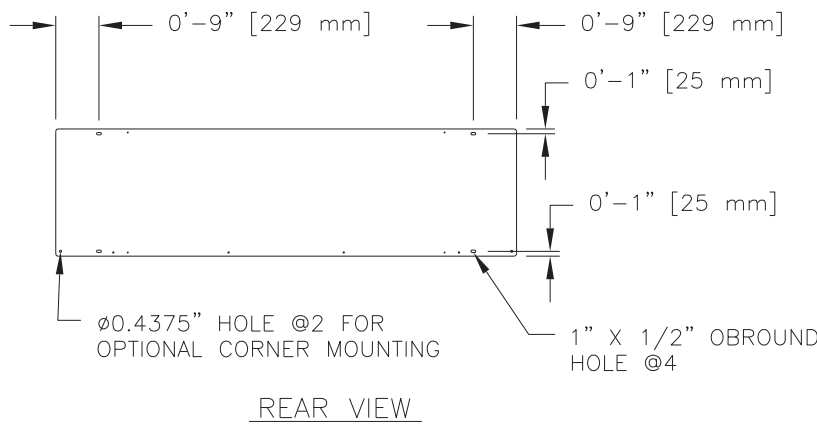
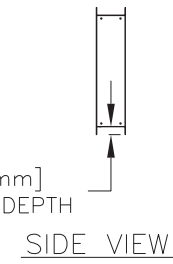
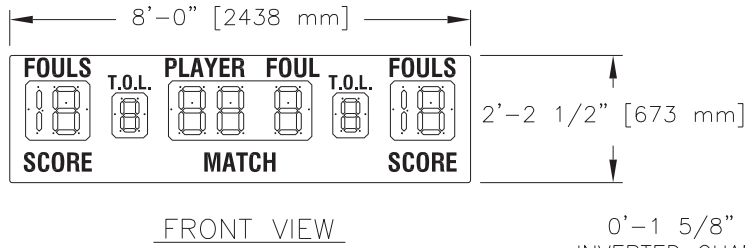
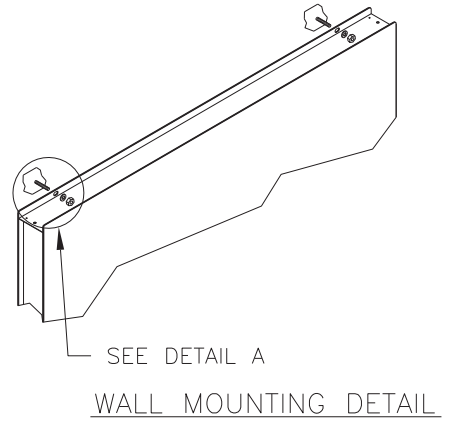
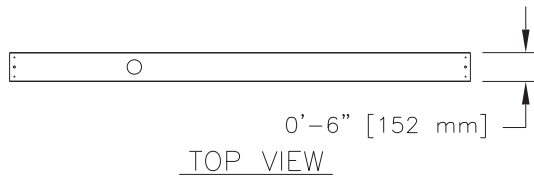
TITLE: MECHANICAL SPEC, BB-2128

DES. BY: EREBHAH DRAWN BY: JBANNWA DATE: 28 SEP 04

REVISION	APPR. BY:	1237-E10A-224353
00	SCALE: 1=20	

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2137



NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
LBS (KG)	LBS (KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2137

DES. BY: CBRECZI

DRAWN BY: JBANNWA

DATE: 21 OCT 04

REVISION

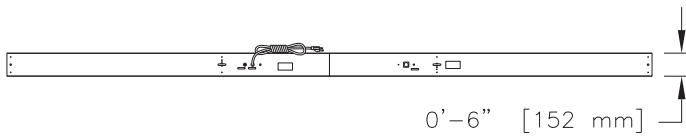
APPR. BY:

SCALE: 1=40

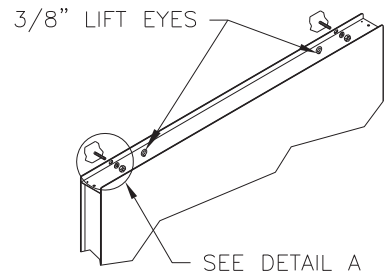
1237-E10A-226061

REV.	DATE	DESCRIPTION	BY	APPR.
00				

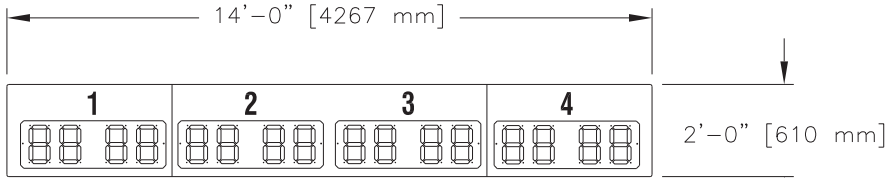
SD-2107



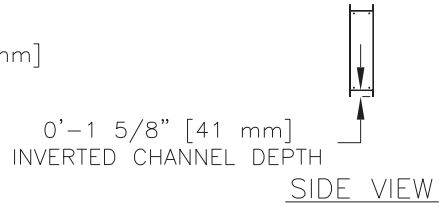
TOP VIEW



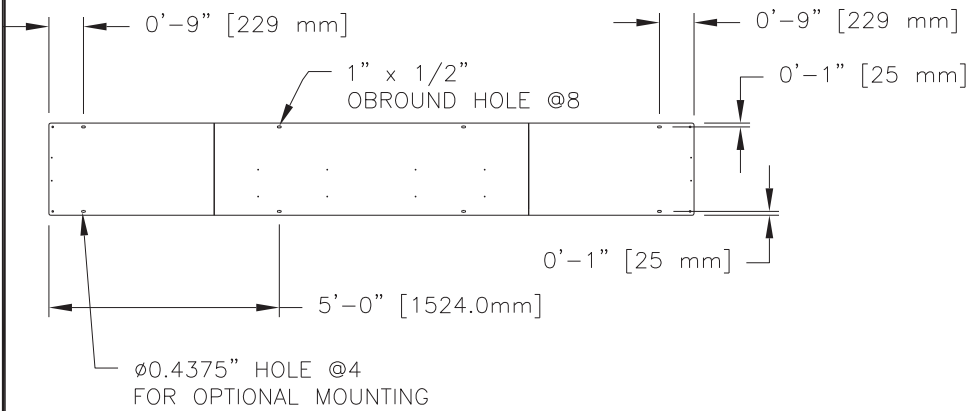
WALL MOUNTING DETAIL



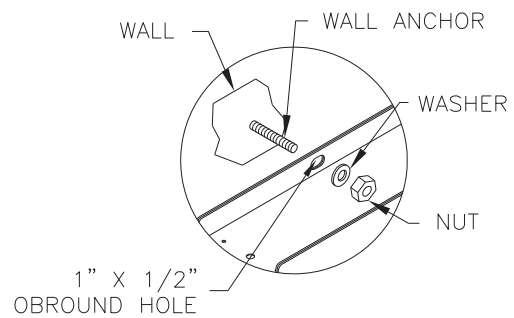
FRONT VIEW



SIDE VIEW



REAR VIEW



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
LBS (KG)	LBS (KG)

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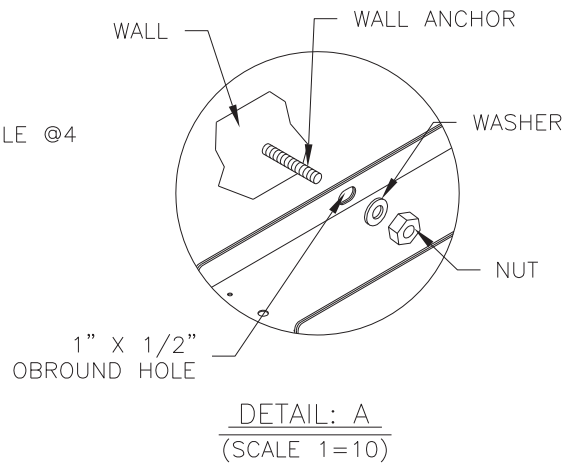
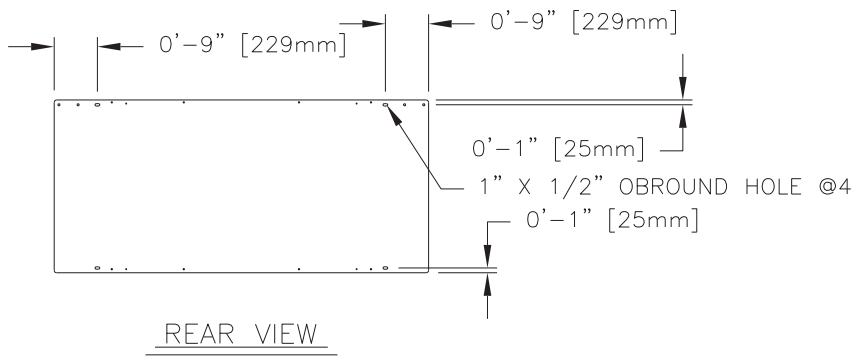
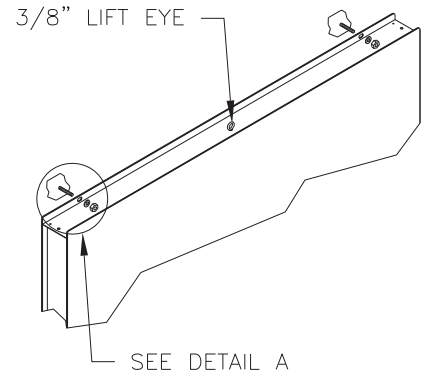
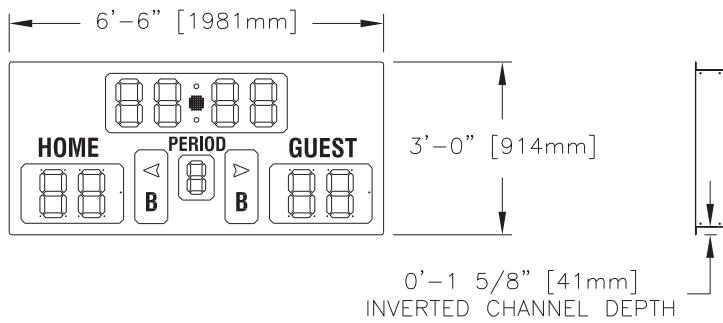
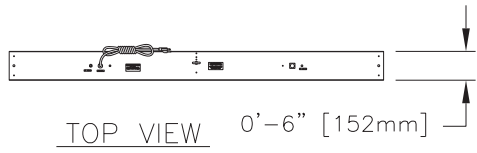
DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS
 TITLE: MECHANICAL SPEC, SD-2107
 DES. BY: CBRECZI DRAWN BY: JBANNWA DATE: 21 OCT 04

REVISION	APPR. BY:	1237-E10A-226078
00	SCALE: 1=50	

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2142



NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
120 LBS (55 KG)	80 LBS (36 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: MECHANICAL SPEC- BB-2142

DES. BY: CBRECZI

DRAWN BY: CBRECZI

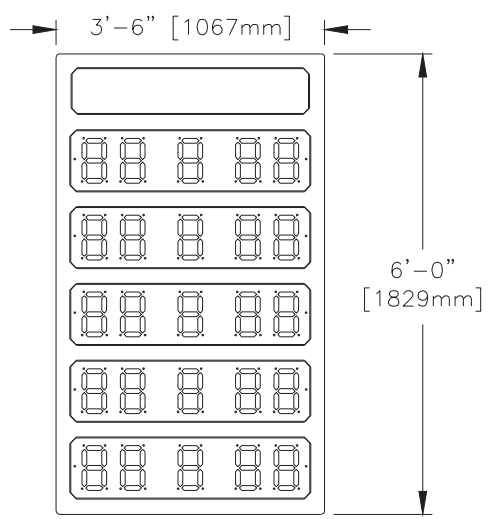
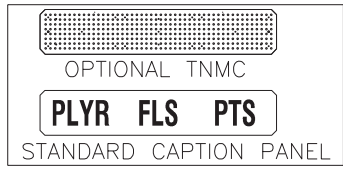
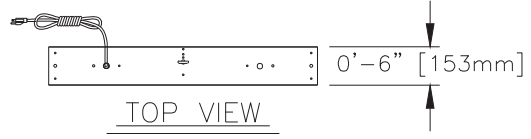
DATE: 28 DEC 04

REV.	DATE	DESCRIPTION	BY	APPR.
01	03 FEB 10	CHANGED TO 14-SEGMENT DIGITS	JLR	

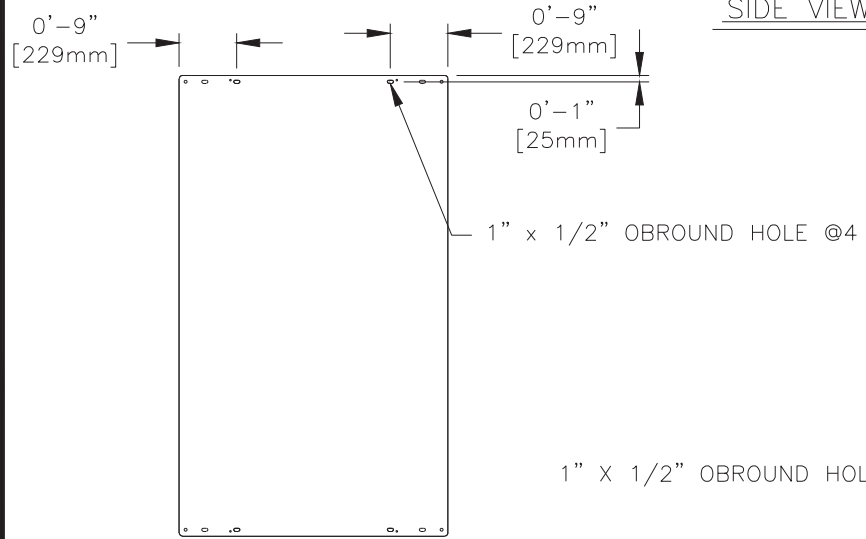
REVISION	APPR. BY:
01	SCALE: 1=40

1237-E10A-230393

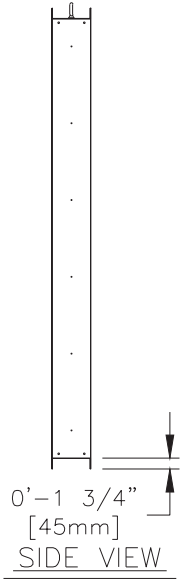
SD-2101



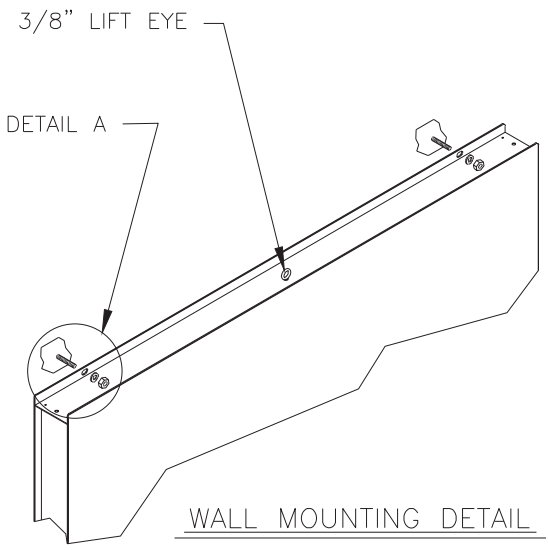
FRONT VIEW



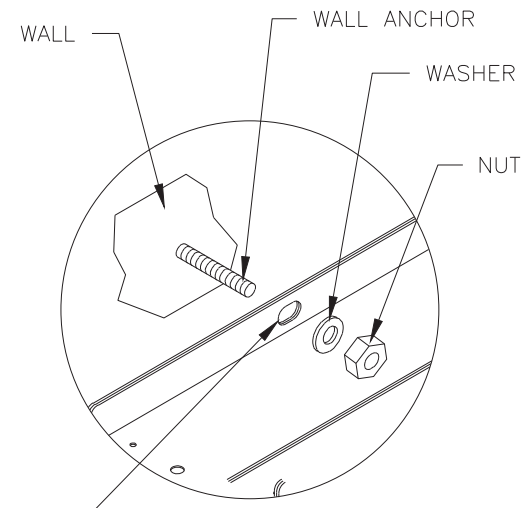
REAR VIEW



SIDE VIEW



WALL MOUNTING DETAIL



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARDS DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

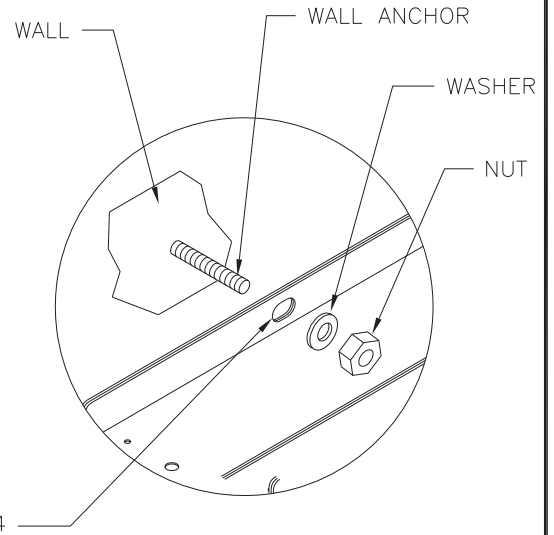
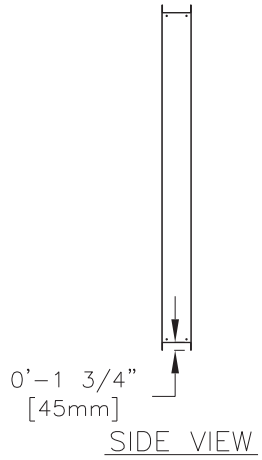
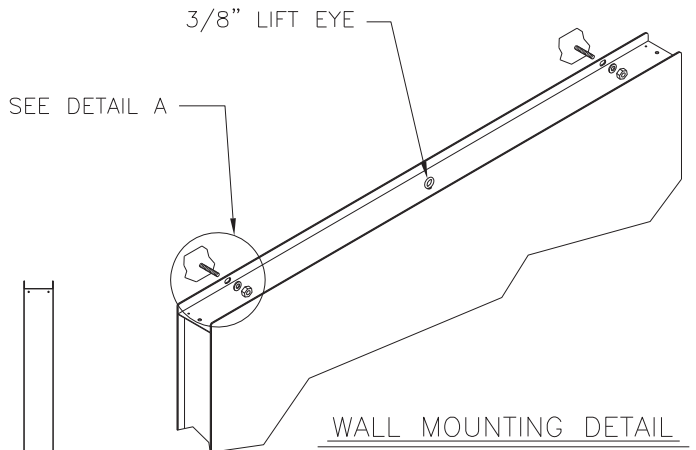
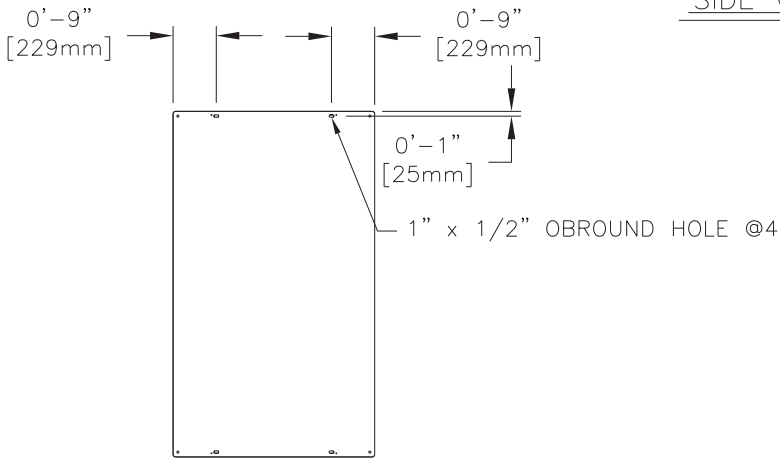
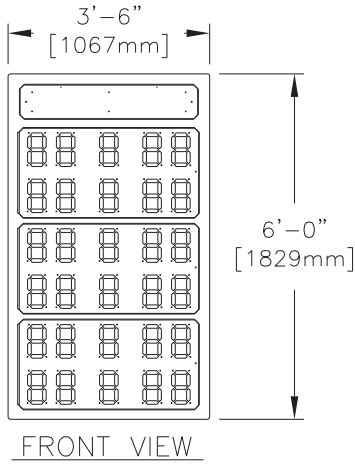
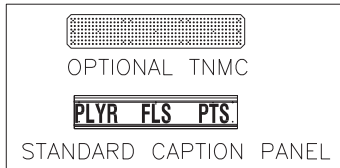
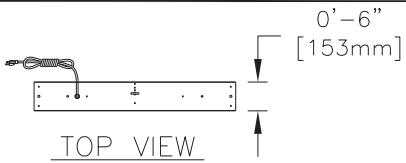
WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
130 LBS (59 KG)	80 LBS (36 KG)

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<p>DAKTRONICS, INC. BROOKINGS, SD 57006</p>	<p>DO NOT SCALE DRAWING</p>		<p>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.</p>
	<p>PROJ: TUFF SPORT SCOREBOARDS TITLE: MECHANICAL SPEC- SD-2101</p>		
<p>DESIGN: EREBHAH</p>	<p>DRAWN: JBANNA</p>	<p>DATE: 01 FEB 05</p>	
<p>SCALE: 1=30</p>			
<p>SHEET</p>	<p>REV</p>	<p>JOB NO:</p>	<p>FUNC-TYPE-SIZE</p>
<p>01</p>	<p>01</p>	<p>P1237</p>	<p>E-10-A</p>
			<p>233092</p>

REV	DATE:	ADDED SECOND SETS OF OBROUNDS ON BACK OF DISPLAY.	BY:
01	12 OCT 11		KDD

SD-2102



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARDS DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
155 LBS (70 KG)	90 LBS (41 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: MECHANICAL SPEC, SD-2102

DES. BY: EREBHAH

DRAWN BY: JBANNA

DATE: 02 FEB 05

REVISION

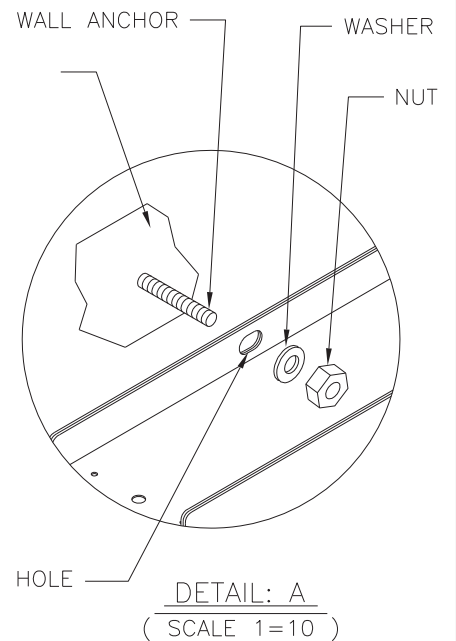
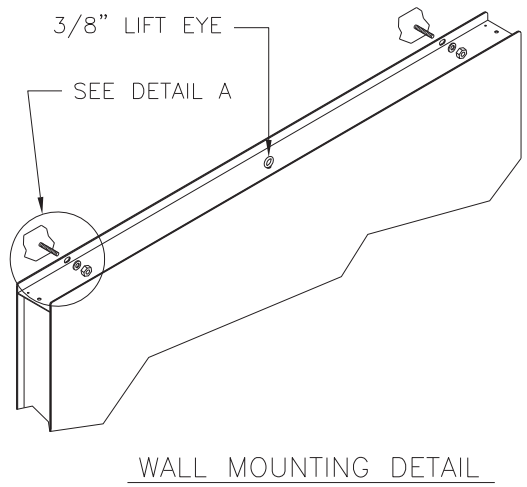
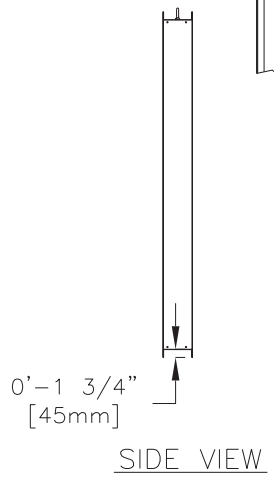
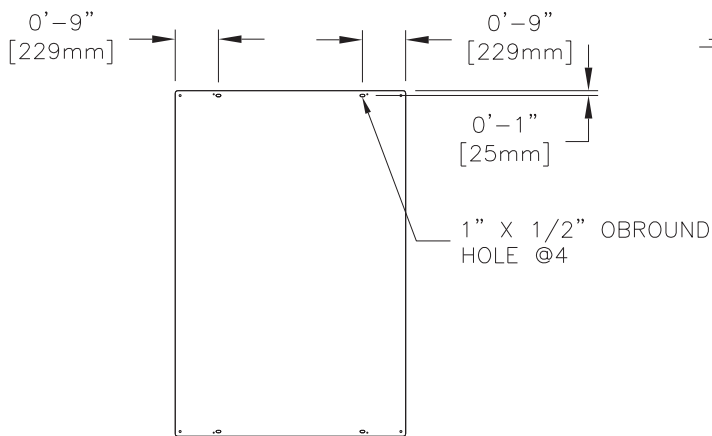
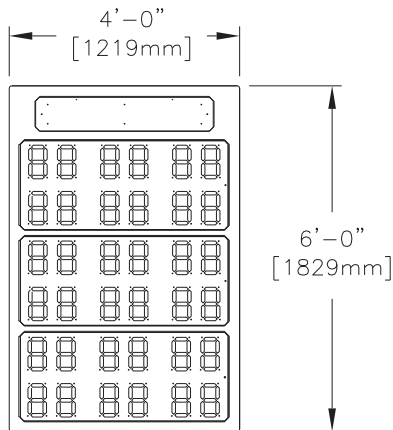
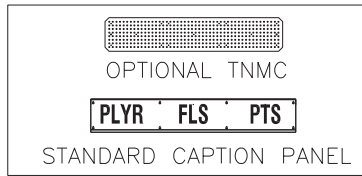
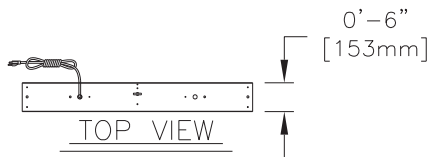
APPR. BY:

SCALE: 1=40

1237-E10A-233146

REV.	DATE	DESCRIPTION	BY	APPR.
00				

SD-2103



NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARDS DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS

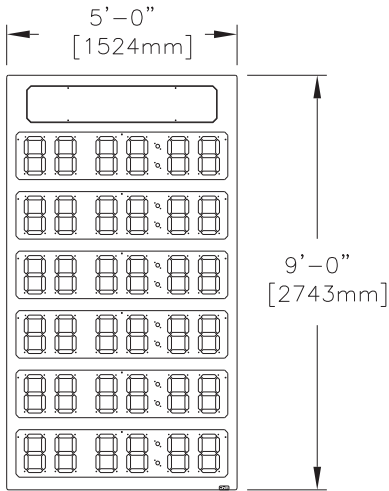
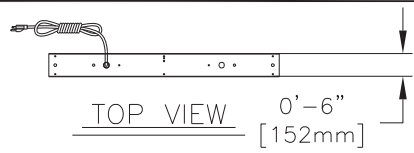
SHIPPING WEIGHT	MOUNTING WEIGHT
165 LBS (75 KG)	100 LBS (45 KG)

TUFF SPORT™ & UNIVIEW™ ARE TRADEMARKS OF DAKTRONICS

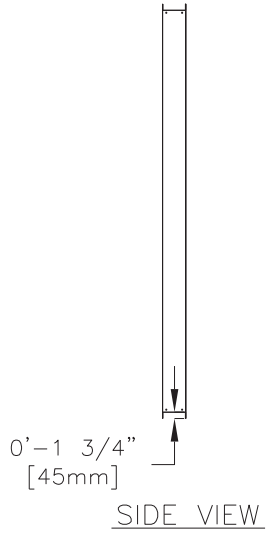
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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: TUFF SPORT SCOREBOARDS			
TITLE: MECHANICAL SPEC, SD-2103			
DES. BY: EREBHAH		DRAWN BY: JBANNWA	DATE: 02 FEB 05
REVISION	APPR. BY:	1237-E10A-233220	
00	SCALE: 1=40		

REV.	DATE	DESCRIPTION	BY	APPR.

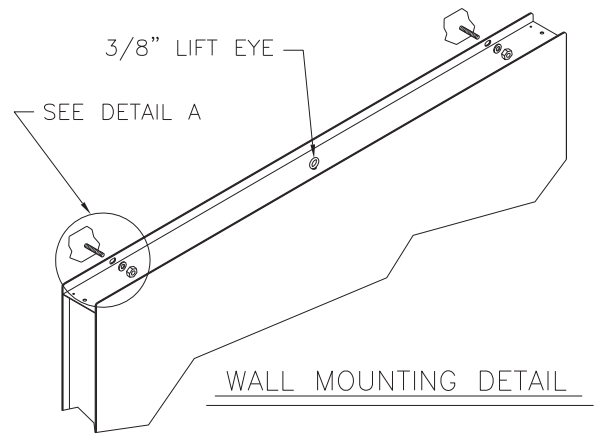
SD-2104



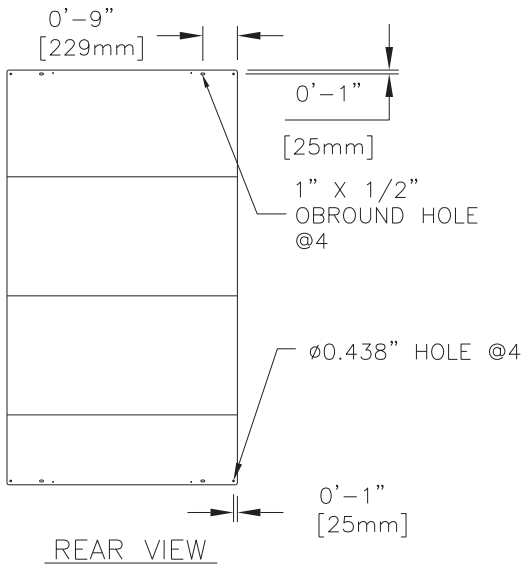
FRONT VIEW



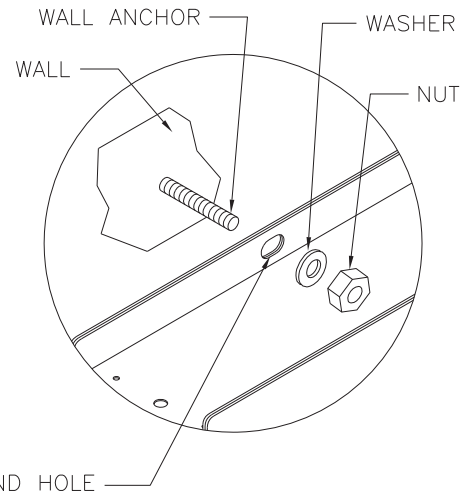
SIDE VIEW



WALL MOUNTING DETAIL



REAR VIEW



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARDS DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
270 LBS (122 KG)	170 LBS (77 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: MECHANICAL SPEC, SD-2104

DES. BY: EREBHAH

DRAWN BY: JBANNWA

DATE: 28 FEB 05

REVISION

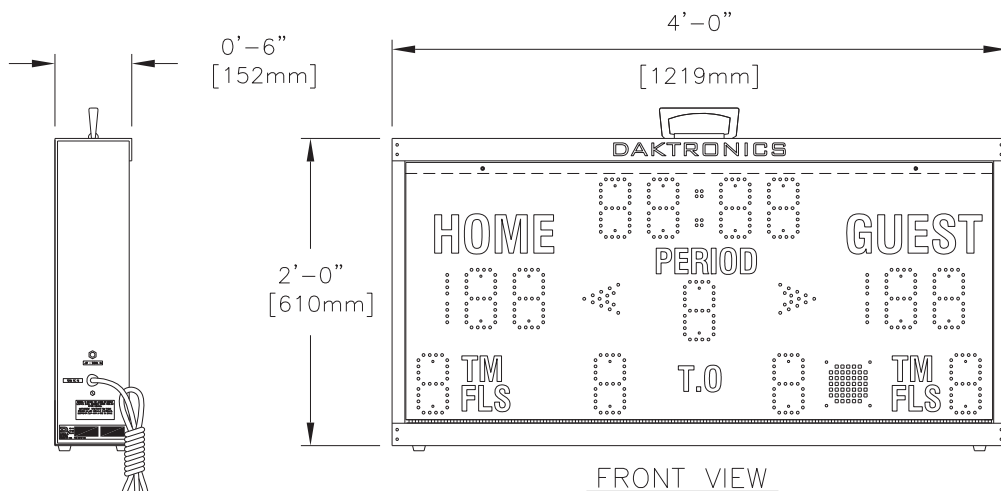
APPR. BY:

SCALE: 1=50

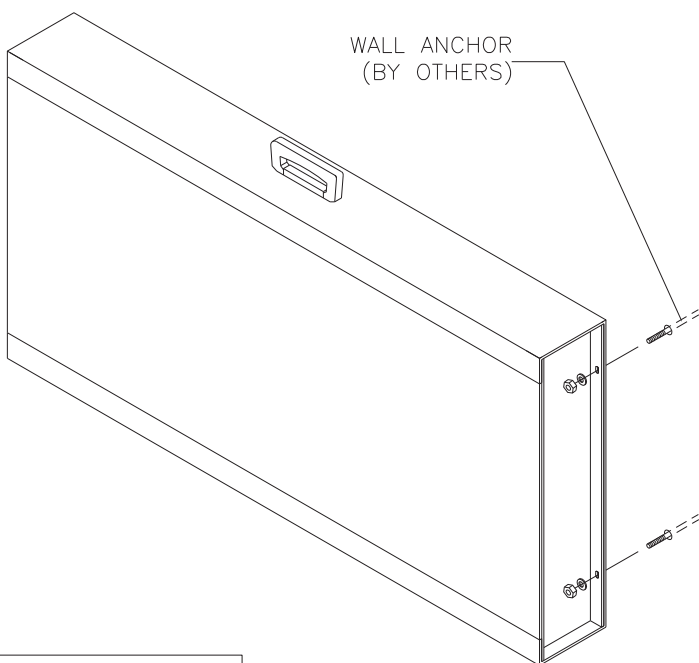
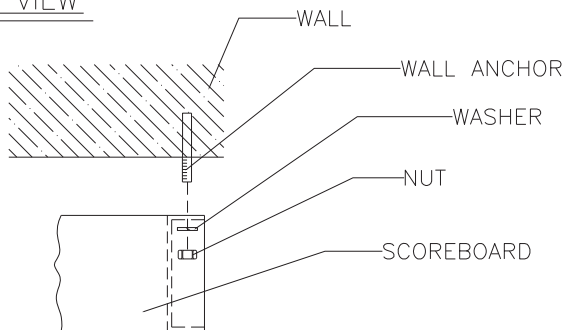
1237-E10A-235386

REV.	DATE	DESCRIPTION	BY	APPR.
00				

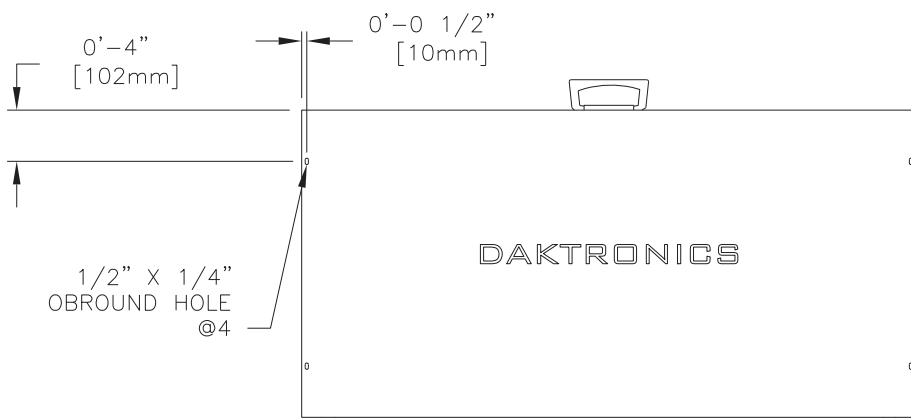
BB-2143



SIDE VIEW



ATTACH THE SCOREBOARD TO THE WALL AT ALL MOUNTING LOCATIONS INDICATED. USE THE APPROPRIATE ANCHORS FOR THE TYPE OF WALL.



NOTES:

THE SCOREBOARD IS SHOWN WITH PANAVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS

SHIPPING WEIGHT	MOUNTING WEIGHT
53 LBS (25.4 KG)	35 LBS (15.9 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: MECHANICAL SPEC, BB-2143

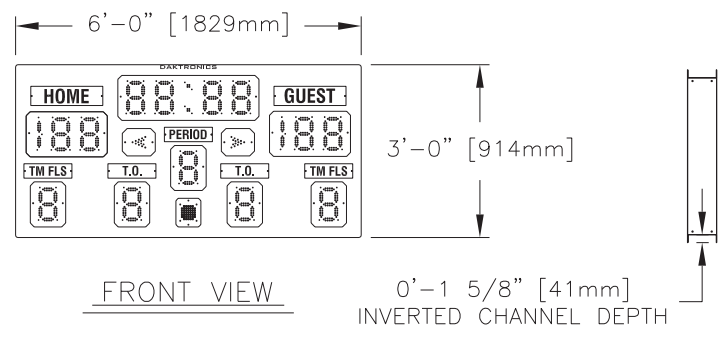
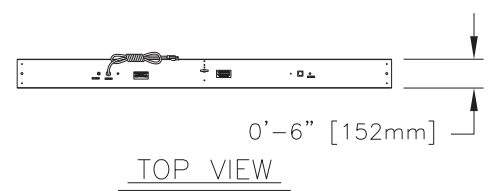
DES. BY: EREBAHN DRAWN BY: JFELDHA DATE: 01 SEP 05

REV.	DATE	DESCRIPTION	BY	APPR.
01	19 JUN 06	ADDED HORN DETAIL TO DRAWING.	JLF	CW

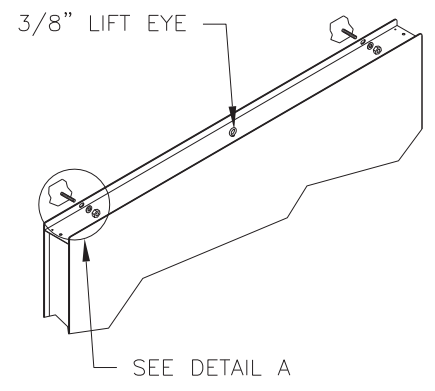
REVISION	APPR. BY:
01	SCALE: 1=15

1237-E10A-252740

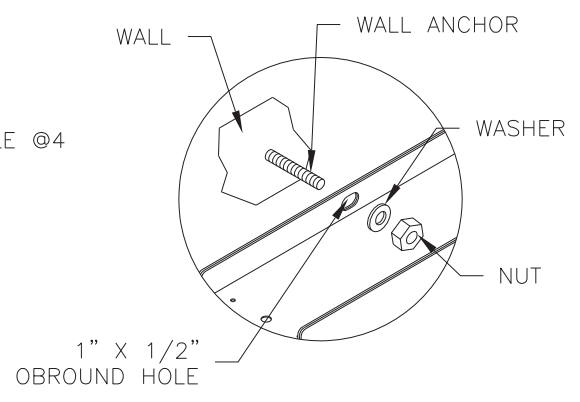
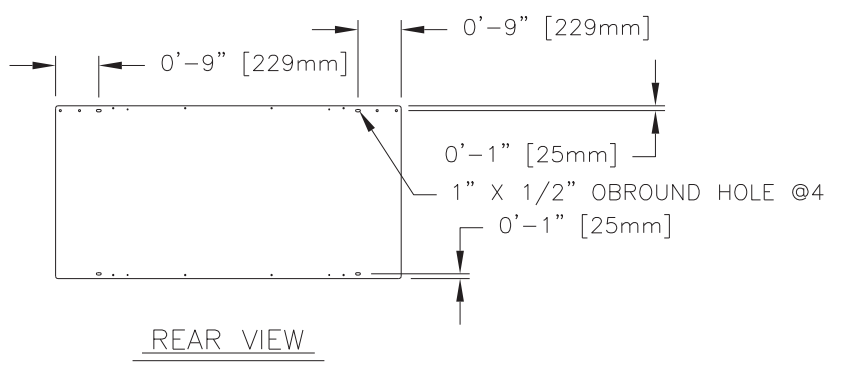
BB-2144



SIDE VIEW



WALL MOUNTING DETAIL



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
120 LBS (55 KG)	75 LBS (33.75 KG)

TUFF SPORT™ & UNIVIEW™ ARE TRADEMARKS OF DAKTRONICS

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

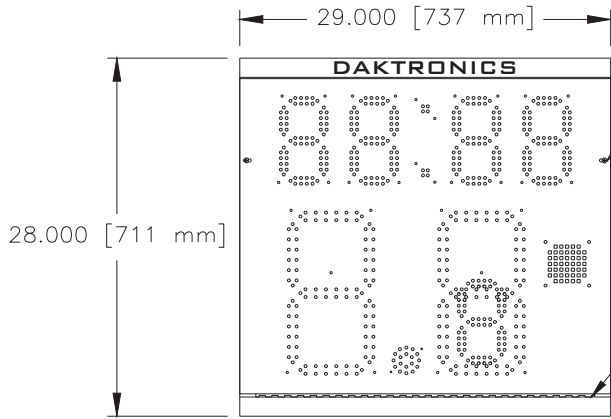
TITLE: MECHANICAL SPEC, BB-2144

DES. BY: EREBHANN DRAWN BY: JFELDHA DATE: 01 SEP 05

REVISION	APPR. BY:	1237-E10A-252743
00	SCALE: 1=40	

REV.	DATE	DESCRIPTION	BY	APPR.

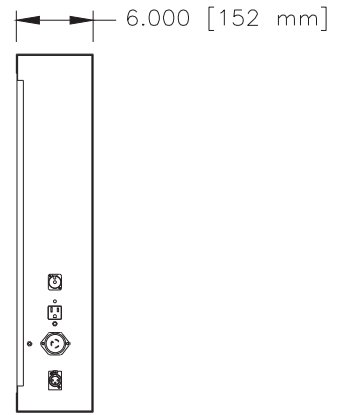
BB-2152



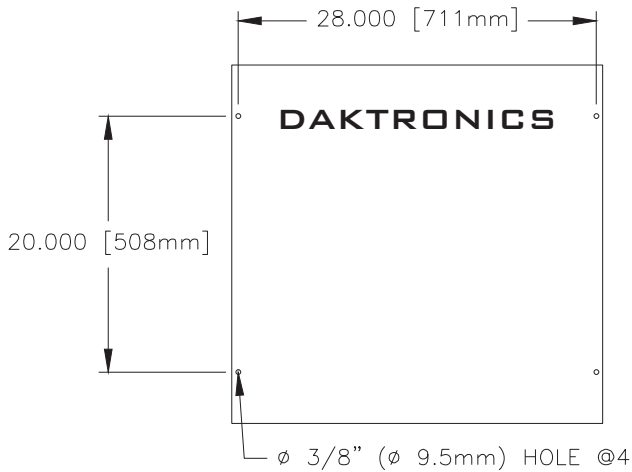
FRONT VIEW

REMOVE THE SCREWS
SECURING THE FACE PANEL
TO ACCESS INTERIOR

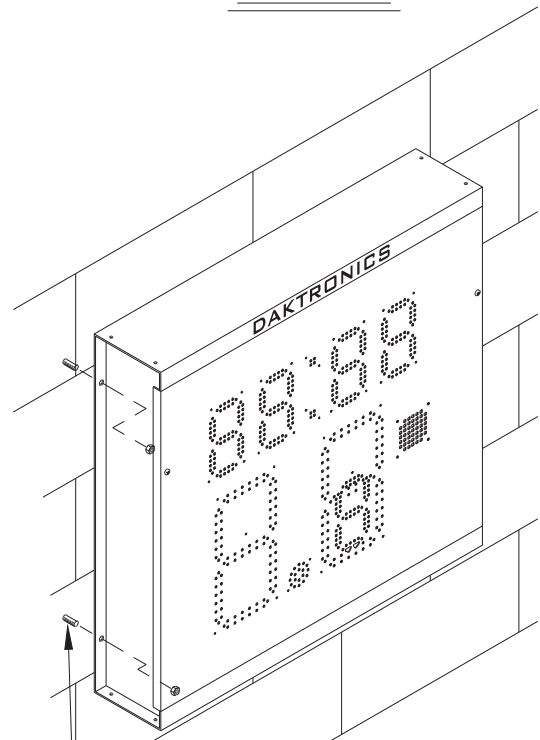
FACE PANEL IS MOUNTED
WITH A HINGE



SIDE VIEW



REAR VIEW



MOUNTING BOLTS (NOT PROVIDED)
USE 1/4" TO 3/8" (7mm TO 9mm) BOLTS

WALL MOUNTING DETAIL


NOTES:

1. MOUNTING HARDWARE IS NOT PROVIDED.
2. SEE DRAWING NO. 1009-R10A-91230 FOR SUGGESTIONS ON MOUNTING TO CEILING-SUSPENDED BACKSTOPS.
3. FOR PORTABLE BACKSTOPS, CONTACT THE BACKSTOP MANUFACTURER FOR MOUNTING HARDWARE.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DWG A-158550 FOR MORE DETAILS.

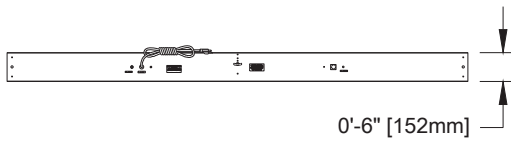
WEIGHTS

SHIPPING WEIGHT	MOUNTING WEIGHT
40 LBS (18 KG)	30 LBS (14 KG)

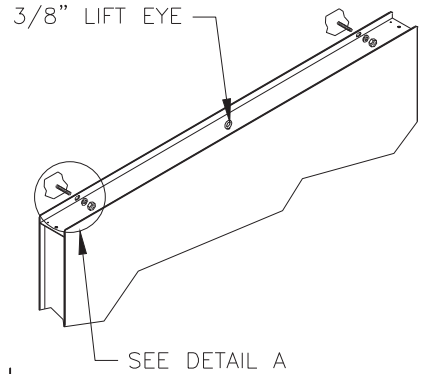
TUFF SPORT™ & UNIVIEW™ ARE TRADEMARKS OF DAKTRONICS

 DAKTRONICS, INC. BROOKINGS, SD 57006 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.		
	PROJ: TUFF SPORT SCOREBOARDS TITLE: MECHANICAL SPEC, BB-2152		
DESIGN: MCARSRU	DRAWN: MCARSRU		DATE: 24 JUN 11
SCALE: 1/15			
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
	00	P1237	E-10-A
			1059504

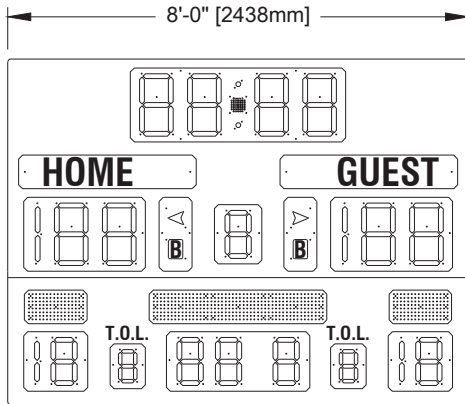
BB-2153



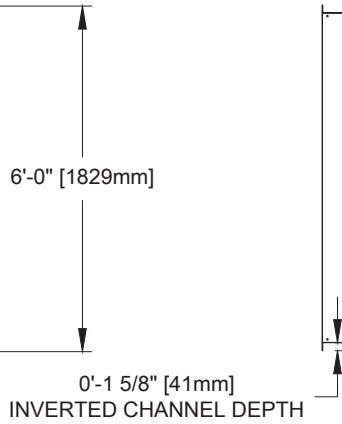
TOP VIEW



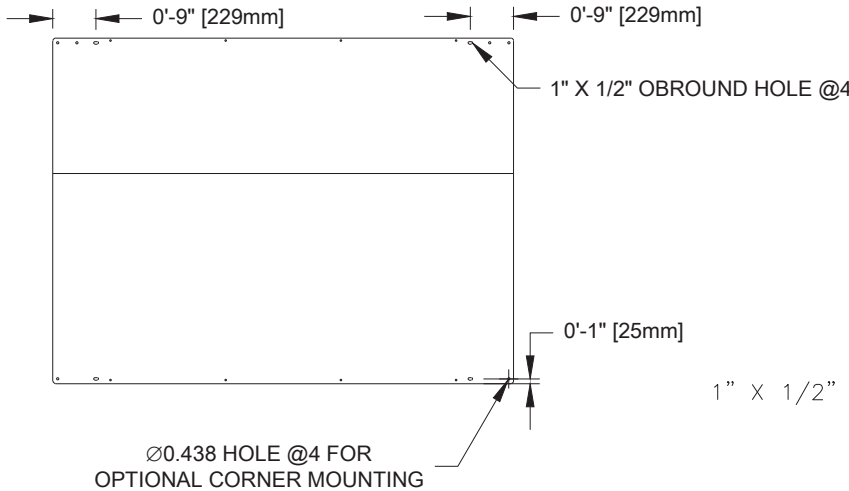
WALL MOUNTING DETAIL



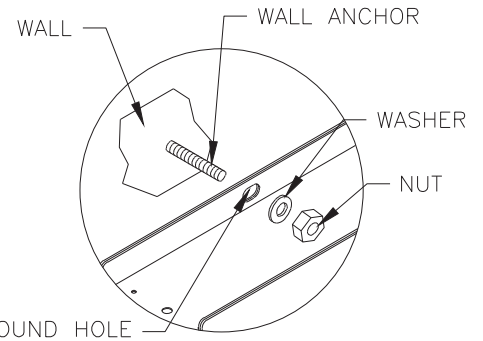
FRONT VIEW



SIDE VIEW



REAR VIEW



DETAIL: A
(SCALE 1=10)

NOTES:

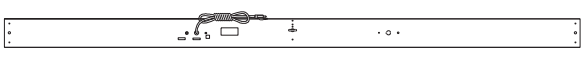
1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
305 LBS (139 KG)	195 LBS (89 KG)

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	<p>DO NOT SCALE DRAWING</p>		
<p>PROJ: TUFF SPORT SCOREBOARDS</p>			
<p>TITLE: MECHANICAL SPEC-BB-2153</p>			
<p>DESIGN: JVANAAR</p>		<p>DRAWN: MJOHNSO</p>	<p>DATE: 9 JUL 12</p>
<p>SCALE: 1=40</p>			
<p>SHEET</p>	<p>REV</p>	<p>JOB NO:</p>	<p>FUNC-TYPE-SIZE</p>
	<p>00</p>	<p>P 1237</p>	<p>E - 10 - A</p>
			<p>1104956</p>

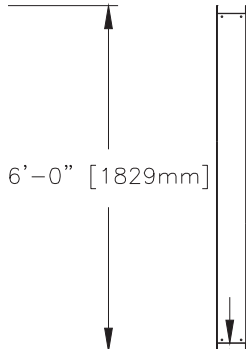
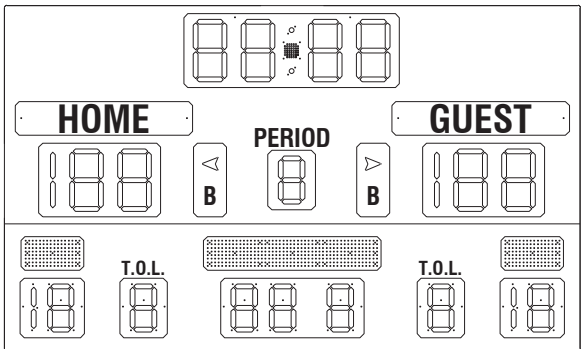
BB-2155



0'-6" [152mm]

TOP VIEW

10'-0" [3048mm]

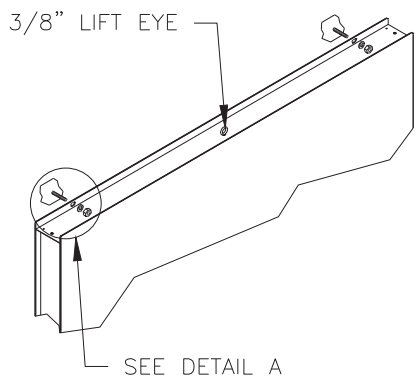


6'-0" [1829mm]

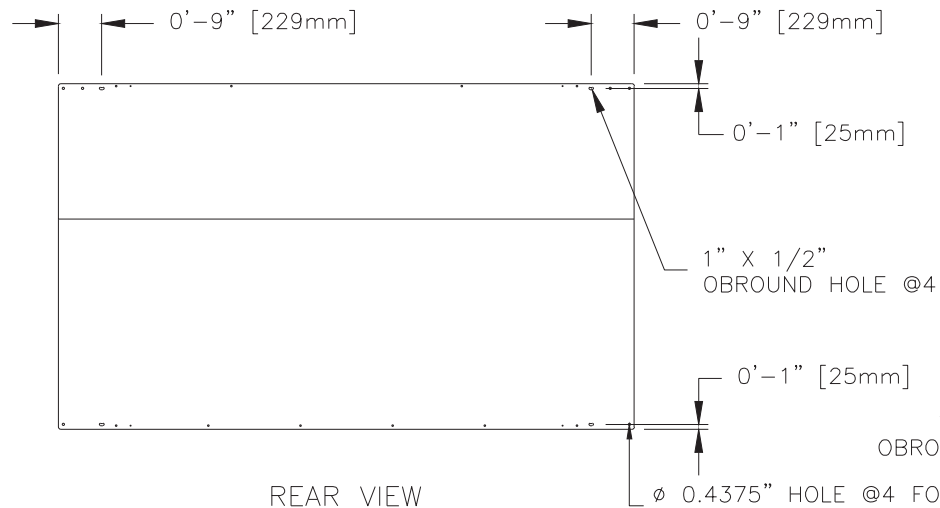
0'-1 5/8" [41mm]
INVERTED CHANNEL DEPTH

FRONT VIEW

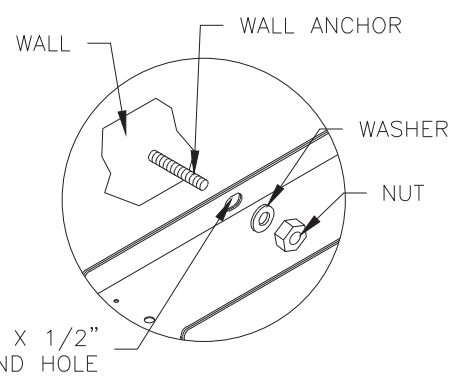
SIDE VIEW



WALL MOUNTING DETAIL



REAR VIEW



DETAIL: A
(SCALE 1=10)

NOTES:

1. USE APPROPRIATE WALL ANCHORS FOR TYPE OF WALL.
2. LIFT EYE IS FOR TEMPORARY USE WHILE LIFTING SCOREBOARD DURING INSTALLATION. DO NOT USE LIFT EYE FOR PERMANENT SUSPENSION.
3. SEE DRAWING 1237-R10A-148644 FOR OPTIONAL PERMANENT SUSPENSION OF THE SCOREBOARD.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

WEIGHTS

SHIPPING WEIGHT	MOUNTING WEIGHT
410 LBS (186 KG)	275 LBS (124 KG)

TUFF SPORT™ & UNIVIEW™ ARE TRADEMARKS OF DAKTRONICS

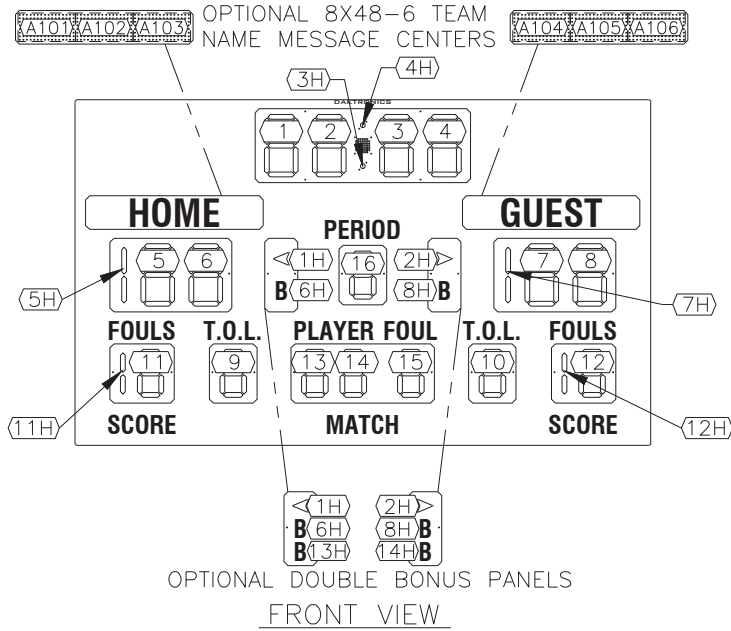
<p>DAKTRONICS, INC. BROOKINGS, SD 57006</p>	<p>THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2013 DAKTRONICS, INC.</p>		
	<p>DO NOT SCALE DRAWING</p>		
<p>PROJ: TUFF SPORT SCOREBOARDS</p>			
<p>TITLE: MECHANICAL SPEC BB-2155</p>			
<p>DESIGN: KDRAGT</p>		<p>DRAWN: KDRAGT</p>	
<p>SCALE: 1=40</p>		<p>DATE: 14 JAN 13</p>	
<p>SHEET</p>	<p>REV</p>	<p>JOB NO:</p>	<p>FUNC-TYPE-SIZE</p>
	<p>00</p>	<p>P 1237</p>	<p>E - 10 - A</p>
			<p>1124198</p>

Appendix B: Electrical Specification Drawings

<i>Drawing Title</i>	<i>Drawing Number</i>
Electrical and Signal Spec- BB-2107 and BB-2108.....	A-158571
Electrical and Signal Spec- BB-2101 and BB-2102.....	A-158845
Electrical and Signal Spec- BB-2103 and BB-2104.....	A-158848
Electrical and Signal Spec- BB-2105 and BB-2106.....	A-158849
Electrical & Signal Spec, SD-2106-13, -15.....	A-163555
Electrical and Signal Spec- BB-2116.....	A-164591
Electrical and Signal Spec- BB-2123 and BB-2124.....	A-165429
Electrical and Signal Spec- BB-2125 and BB-2126.....	A-167240
Electrical and Signal Spec- BB-2121.....	A-167242
Electrical & Signal Spec, BB-2122.....	A-167244
Electrical & Signal Spec, BB-2127.....	A-167616
Electrical & Signal Spec, BB-2117.....	A-168627
Electrical & Signal Spec, BB-2119.....	A-168667
Electrical & Signal Spec, BB-2120.....	A-168669
Electrical and Signal Spec- BB-2109 (prior to Nov 2011).....	A-223340
Electrical & Signal Spec, BB-2131 (prior to Nov 2011).....	A-224361
Electrical and Signal Spec- BB-2115 (prior to Nov 2011).....	A-224479
Electrical and Signal Spec- BB-2130 (prior to Nov 2011).....	A-224481
Electrical and Signal Spec- BB-2111 (prior to Nov 2011).....	A-224482
Electrical & Signal Spec, BB-2128.....	A-224713
Electrical & Signal Spec, BB-2114 (prior to Nov 2011).....	A-224714
Electrical and Signal Spec- BB-2132 (prior to Nov 2011).....	A-224715
Electrical & Signal Spec, SD-2107.....	A-226305
Electrical & Signal Spec, BB-2137.....	A-226321
Electrical and Signal Spec- SD-2101.....	A-233097
Electrical & Signal Spec, SD-2102.....	A-233206
Electrical & Signal Spec, SD-2103.....	A-233225
Electrical and Signal Spec- BB-2142.....	A-234517
Electrical & Signal Spec, SD-2104.....	A-235393
Electrical & Signal Spec, BB-2143.....	A-252742
Electrical & Signal Spec, BB-2144.....	A-252744
Electrical and Signal Spec, BB-2152.....	A-1059565
Electrical and Signal Spec; BB-2109.....	A-1066474
Electrical and Signal Spec; BB-2111.....	A-1066476
Electrical and Signal Spec; BB-2114.....	A-1066481
Electrical and Signal Spec; BB-2115.....	A-1066704
Electrical and Signal Spec; BB-2130.....	A-1066714
Electrical and Signal Spec; BB-2131.....	A-1066721
Electrical and Signal Spec; BB-2132.....	A-1066726
Electrical and Signal Spec; BB-2153 and BB-2154.....	A-1104976
Electrical and Signal Spec, BB-2155 and BB-2156.....	A-1124199

BB-2107 & BB-2108 FACE

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

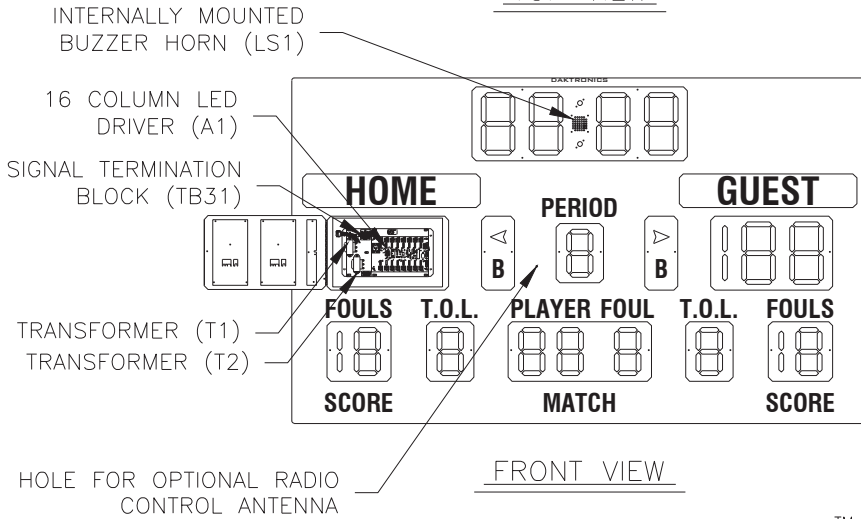
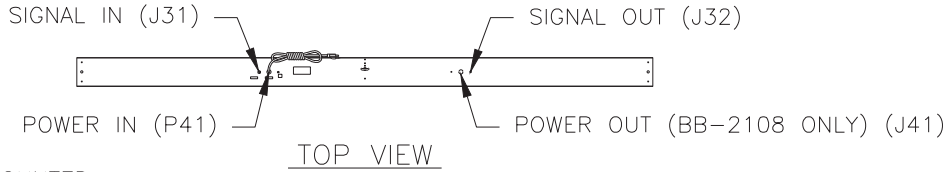


NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

COMPONENT LOCATIONS:



DIGITS:

- CLOCK: 13" AMBER
- SCORE: 13" RED
- PERIOD: 10" AMBER
- TEAM FOULS: 10" RED
- TIME OUTS LEFT: 7" AMBER
- PLAYER/FOUL: 10" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW

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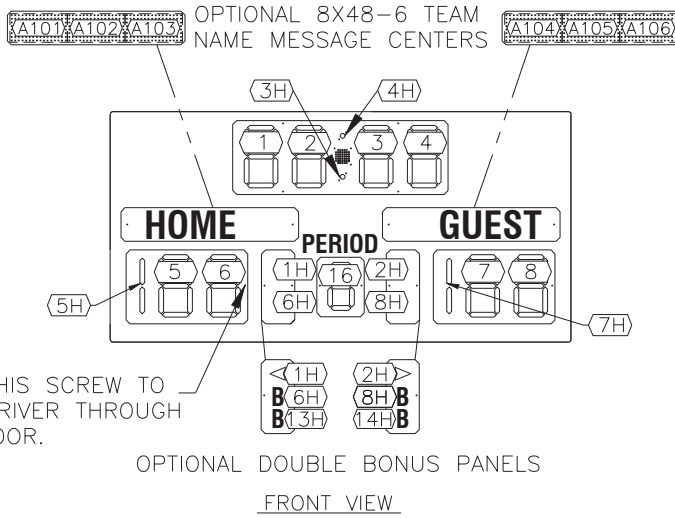
REV 05	DATE: 08 APR 11	UPDATED DOUBLE BONUS OPTION	BY: KDD	DAKTRONICS, INC. BROOKINGS, SD 57006 DO NOT SCALE DRAWING	THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2011 DAKTRONICS, INC.
REV 04	DATE: 20 JUN 06	UPDATED CLOCK LAYOUT.	BY: JLF		
REV 03	DATE: 12 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	BY: APN	PROJ: TUFF SPORT™ SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2107 AND BB-2108	
REV 02	DATE: 18 OCT 02	ADDED COLON DESIGNATION.	BY: JJS	DESIGN: BPETERSON SCALE: 1 = 40	DRAWN: BPETERSON DATE: 07 JUN 01
REV 01	DATE: 06 MAR 02	UPDATED SIGNAL OUT NOTE, AND REMOVED POWER SPECIFICATION NOTES.	BY: BDP	SHEET: 05 REV: P1237	JOB NO: E-10-A FUNC-TYPE-SIZE: 158571

BB-2101 & BB-2102 FACE

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:

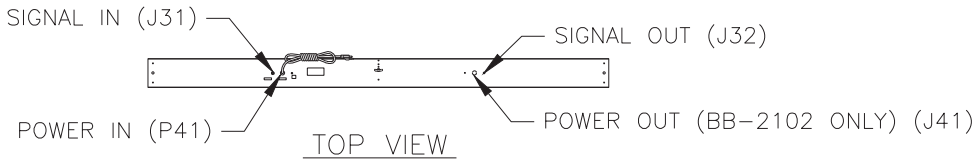
1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



REMOVE THIS SCREW TO ACCESS DRIVER THROUGH HINGED DOOR.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

COMPONENT LOCATIONS:



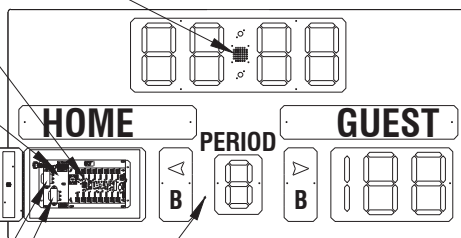
INTERNALLY MOUNTED BUZZER HORN (LS1)

16 COLUMN LED DRIVER (A1)

SIGNAL TERMINATION BLOCK (TB31)

TRANSFORMER (T1)
TRANSFORMER (T2)

HOLE FOR OPTIONAL RADIO CONTROL ANTENNA



DIGITS:

- CLOCK: 13" AMBER
- SCORE: 13" RED
- PERIOD: 10" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW

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REV 04	DATE: 08 APR 11	UPDATED DOUBLE BONUS OPTIONS	BY: KDD
REV 03	DATE: 20 JUN 06	UPDATED CLOCK LAYOUT.	BY: JLF
REV 02	DATE: 12 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	BY: APN
REV 01	DATE: 06 MAR 02	UPDATED SIGNAL OUT NOTE, AND REMOVED POWER SPECIFICATION NOTES.	BY: BDP

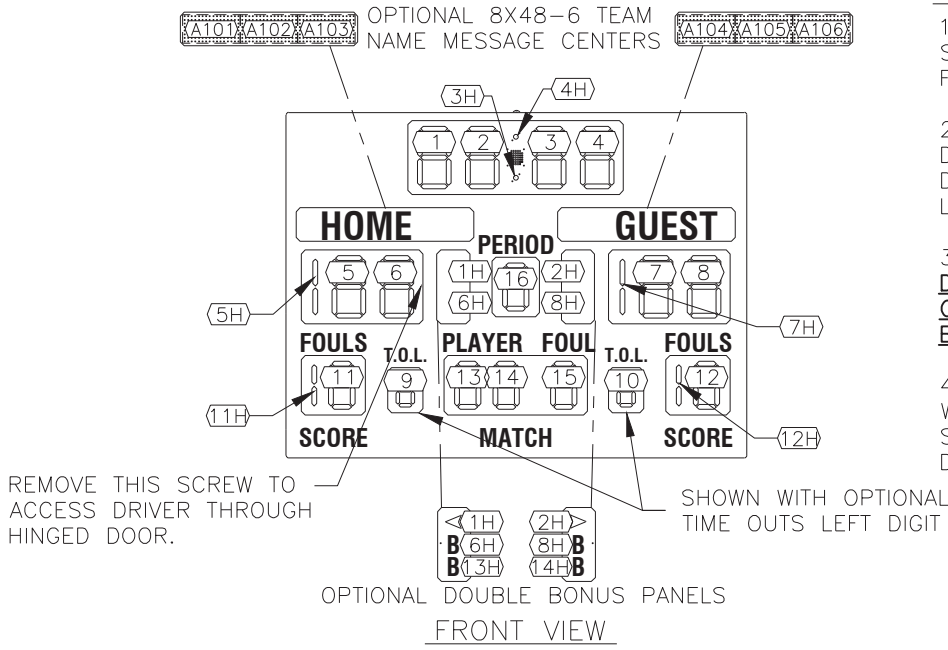
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DO NOT SCALE DRAWING				
PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2101 AND BB-2102				
DESIGN: BPETERSON	DRAWN: AGIBSON	DATE: 12 NOV 01		
SCALE: 1=40				
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	
	04	P1237	E-10-A	158845

BB-2103 & BB-2104 FACE

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

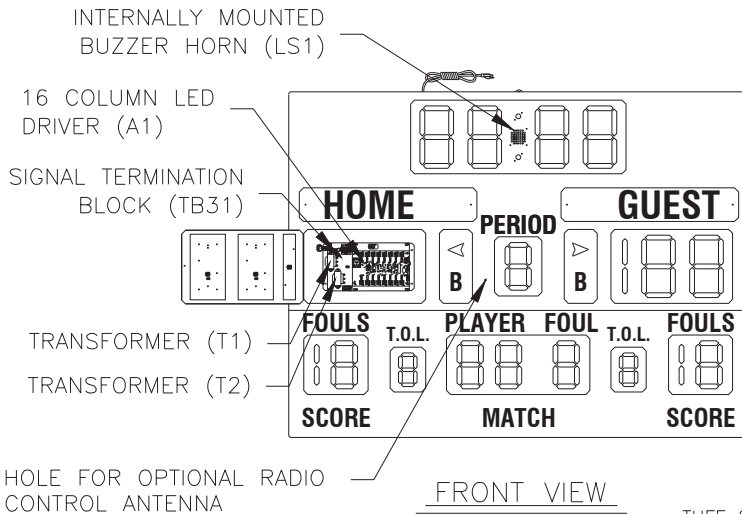
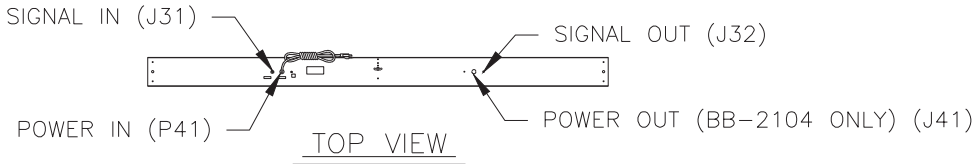
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

COMPONENT LOCATIONS:



DIGITS:

- CLOCK: 13" AMBER
- SCORE: 13" RED
- PERIOD: 10" AMBER
- TEAM FOULS: 10" RED
- TIME OUTS LEFT: 7" AMBER
- PLAYER/FOUL: 10" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW

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	DO NOT SCALE DRAWING		
PROJ.: TUFF SPORT™ SCOREBOARDS			
TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2103 AND BB-2104			
DESIGN: BPETERSON		DRAWN: AGIBSON	DATE: 12 NOV 01
SCALE: 1 = 40			
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
04	P1237	E-10-A	158848

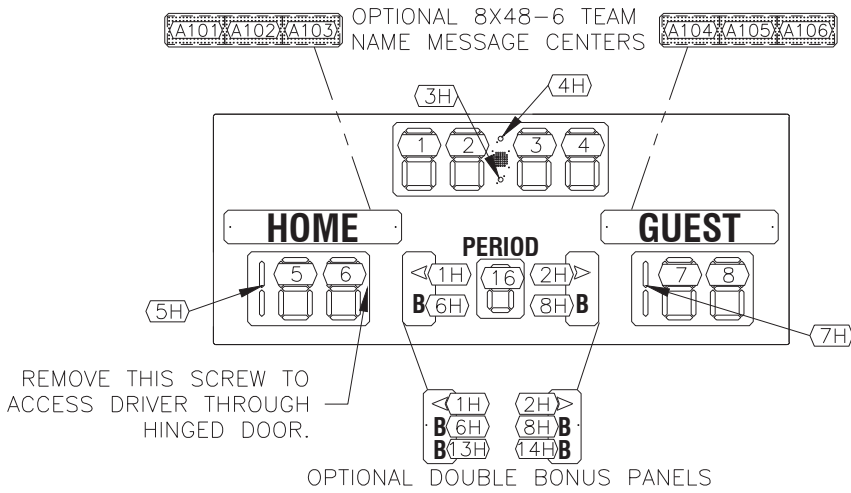
REV 04	DATE: 08 APR 11	UPDATED DOUBLE BONUS OPTIONS	BY: KDD
REV 03	DATE: 20 JUN 06	UPDATED CLOCK LAYOUT.	BY: JLF
REV 02	DATE: 12 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	BY: APN
REV 01	DATE: 06 MAR 02	UPDATED SIGNAL OUT NOTE, AND REMOVED POWER SPECIFICATION NOTES.	BY: BDP

BB-2105 & BB-2106 FACE

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

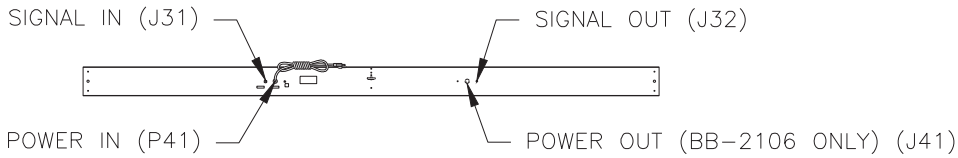


REMOVE THIS SCREW TO ACCESS DRIVER THROUGH HINGED DOOR.

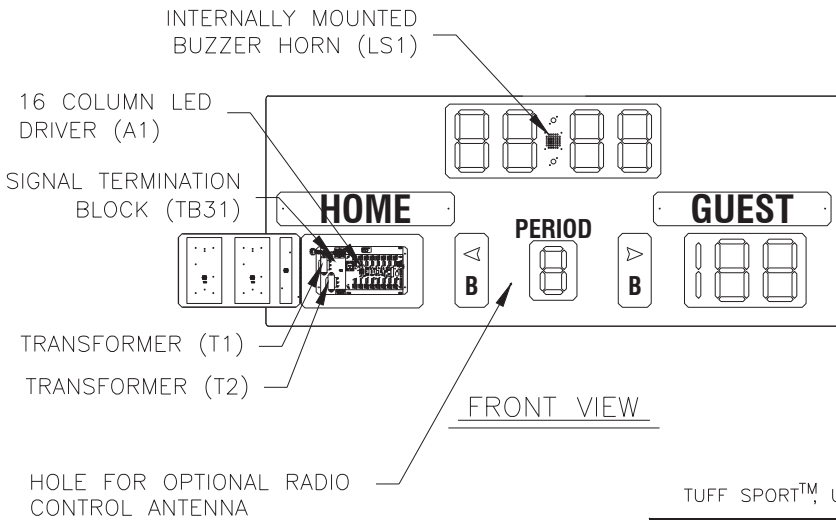
FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

COMPONENT LOCATIONS:



TOP VIEW



DIGITS:

- CLOCK: 13" AMBER
- SCORE: 13" RED
- PERIOD: 10" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW

TUFF SPORT™, UNIVIEW™ & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

REV 04	DATE: 08 APR 11	UPDATED DOUBLE BONUS OPTIONS	BY: KDD
REV 03	DATE: 20 JUN 06	UPDATED CLOCK LAYOUT.	BY: JLF
REV 02	DATE: 12 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	BY: APN
REV 01	DATE: 06 MAR 02	UPDATED SIGNAL OUT NOTE, AND REMOVED POWER SPECIFICATION NOTES.	BY: BDP

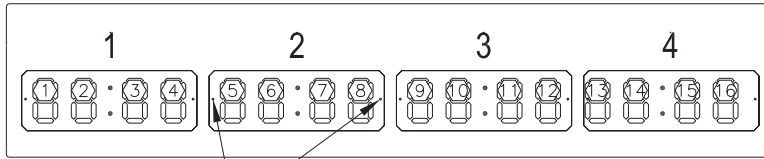
DAKTRONICS, INC. BROOKINGS, SD 57006	THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2011 DAKTRONICS, INC.			
DO NOT SCALE DRAWING				
PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2105 AND BB-2106				
DESIGN: BPETERSON	DRAWN: AGIBSON	DATE: 12 NOV 01		
SCALE: 1 = 40				
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	
	04	P1237	E-10-A	158849

SD-2106

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

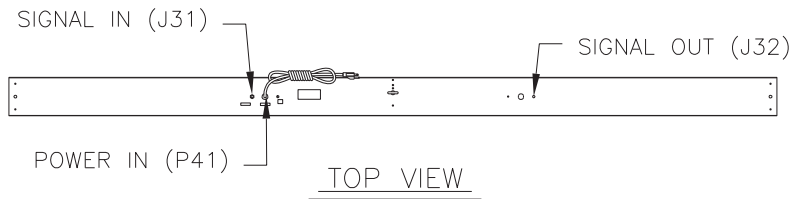


REMOVE THESE SCREWS TO ACCESS DRIVER

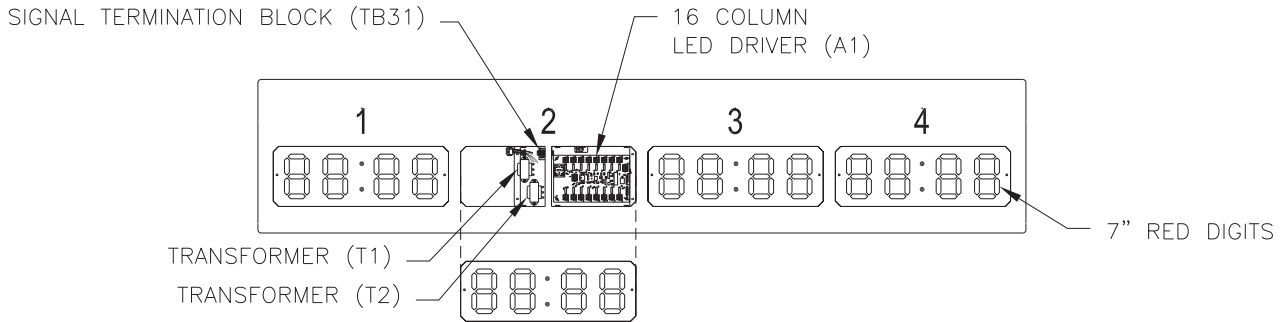
FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	15

COMPONENT LOCATIONS:



TOP VIEW



FRONT VIEW

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, SD-2106-13, -15

DES. BY: E REBHANN

DRAWN BY: E REBHANN

DATE: 03 MAR 02

REVISION

APPR. BY:

SCALE: 1=30

1237-E10A-163555

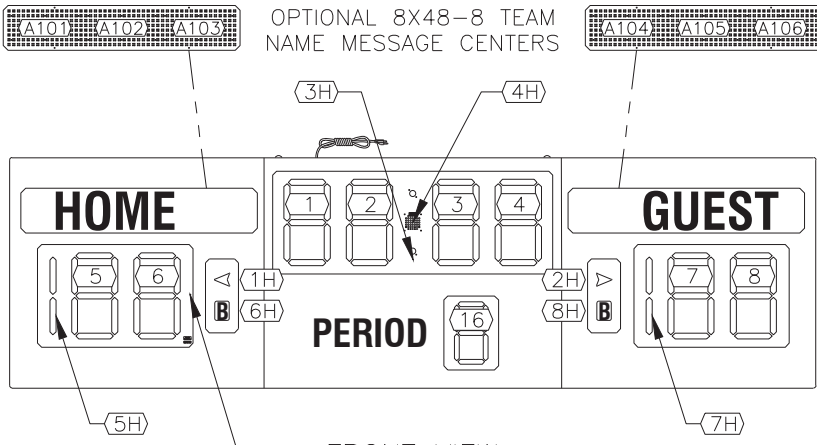
REV.	DATE	DESCRIPTION	BY	APPR.
02	13 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	APN	
01	19 JUN 02	CHANGED TITLE TO ELECTRICAL & SIGNAL SPEC, SD-2106-13, -15	ALG	

BB-2116

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



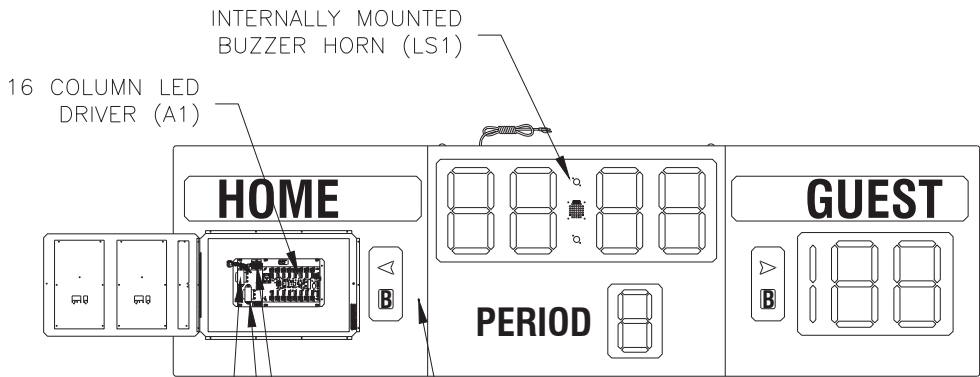
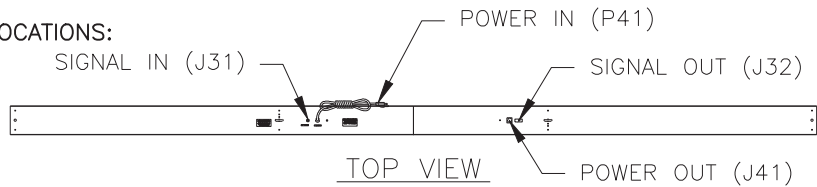
REMOVE THIS SCREW TO ACCESS DRIVER THROUGH HINGED DOOR.

FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17



COMPONENT LOCATIONS:



TRANSFORMER (T1)

TRANSFORMER (T2)

SIGNAL TERMINATION BLOCK (TB31)

FRONT VIEW

DIGITS:

- CLOCK: 18" AMBER
- SCORE: 18" RED
- PERIOD: 13" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B 7 3 " ARROW

TUFF SPORT™ & UNIVIEW™ ARE TRADEMARKS OF DAKTRONICS

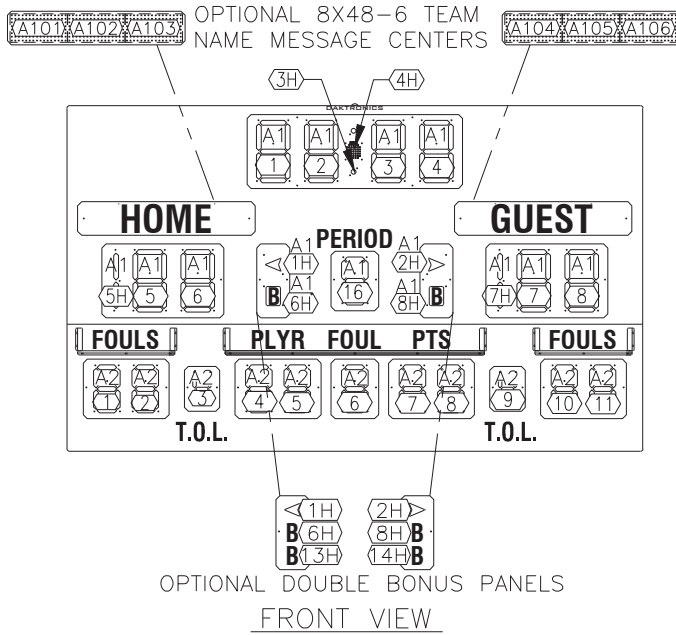
<p>DAKTRONICS, INC. BROOKINGS, SD 57006</p>	<p>THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2011 DAKTRONICS, INC.</p>		
	<p>DO NOT SCALE DRAWING</p>		
<p>PROJ: TUFF SPORT™ SCOREBOARDS</p>			
<p>TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2116</p>			
<p>DESIGN: AVANBEMMEL</p>		<p>DRAWN: RNIELSEN</p>	
<p>DATE: 25 MAR 02</p>			
<p>SCALE: 1 = 40</p>			
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
	04	P1237	E-10-A
			164591

REV	DATE	DESCRIPTION	BY
04	08 APR 11	UPDATED DOUBLE BONUS OPTIONS	KDD
03	20 JUN 06	UPDATED CLOCK LAYOUT.	JLF
02	19 DEC 05	REMOVED 9H CABLE REFERENCE FOR HORN.	JLF
01	13 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	APN

BB-2123 & BB-2124 FACE

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:

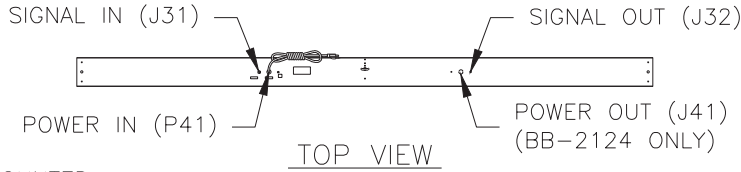


1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

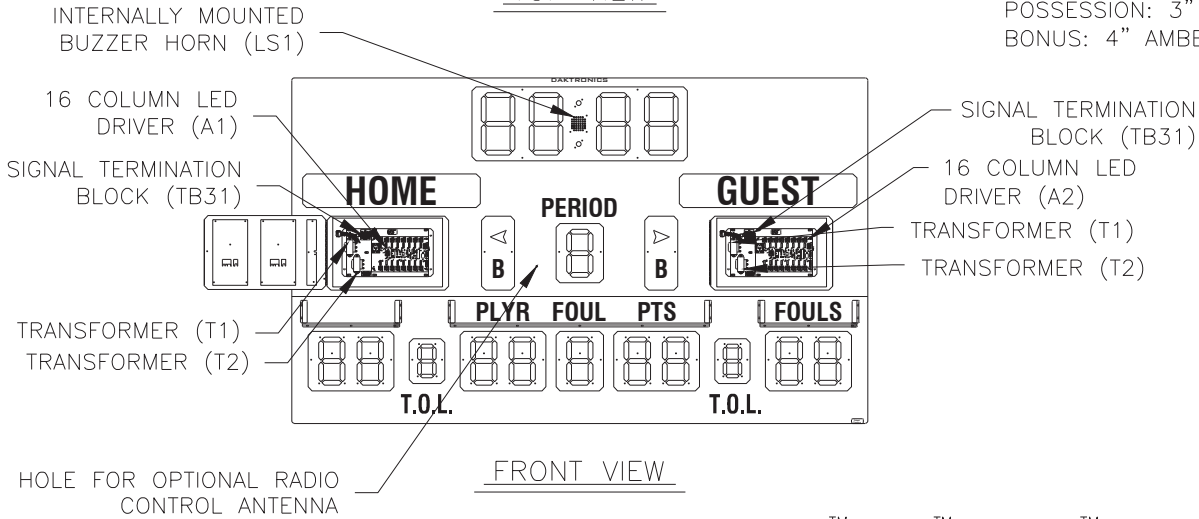
ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17
ADDRESS INFORMATION	
DRIVER:	A2
ADDRESS:	14

COMPONENT LOCATIONS:

DIGITS:



- CLOCK: 13" AMBER
- FOULS: 10" AMBER
- SCORE: 13" RED
- PERIOD: 10" AMBER
- TOL: 7" AMBER
- PLYR/FOUL/PTS: 10" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW



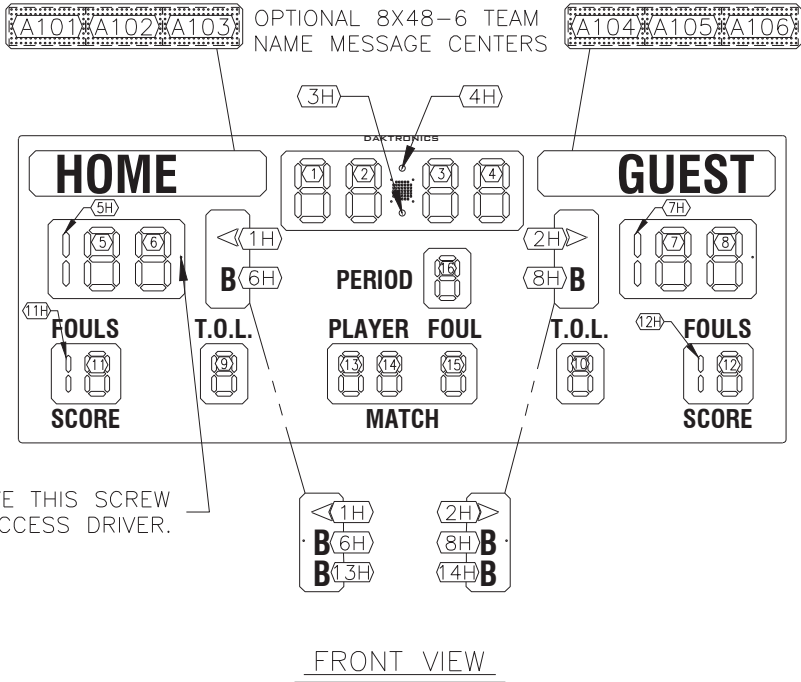
TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

REV 05	DATE: 08 APR 11	UPDATED DOUBLE BONUS OPTION	BY: KDD
REV 04	DATE: 20 JUN 06	UPDATED CLOCK LAYOUT.	BY: JLF
REV 03	DATE: 13 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	BY: APN
REV 02	DATE: 18 OCT 02	ADDED COLON DESIGNATION.	BY: JJS
REV 01	DATE: 24 JUL 02	ADDED SCORE DIGIT SIZE & COLOR	BY: DMT

DAKTRONICS, INC. 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 2011 DAKTRONICS, INC.		
	DO NOT SCALE DRAWING		
PROJ: TUFF SPORT™ SCOREBOARDS			
TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2123 AND BB-2124			
DESIGN: BPETERSON		DRAWN: DTREML	
SCALE: 1=40		DATE: 12 APR 02	
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
	05	P1237	E-10-A
			165429

BB-2125 & BB-2126 FACE SECTION

DIGIT, SIGNAL AND POWER SPECIFICATIONS:



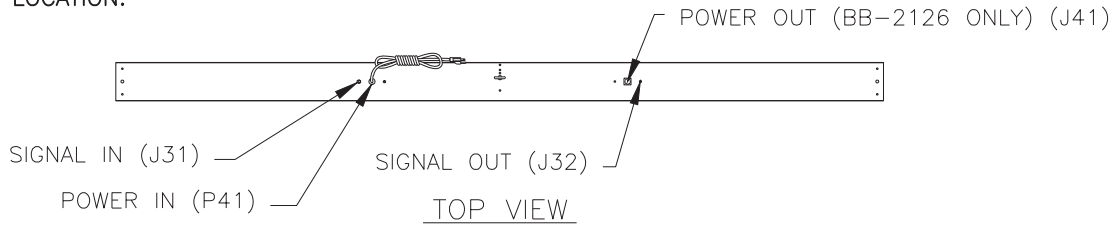
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE LED DRIVER AND DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

REMOVE THIS SCREW TO ACCESS DRIVER.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

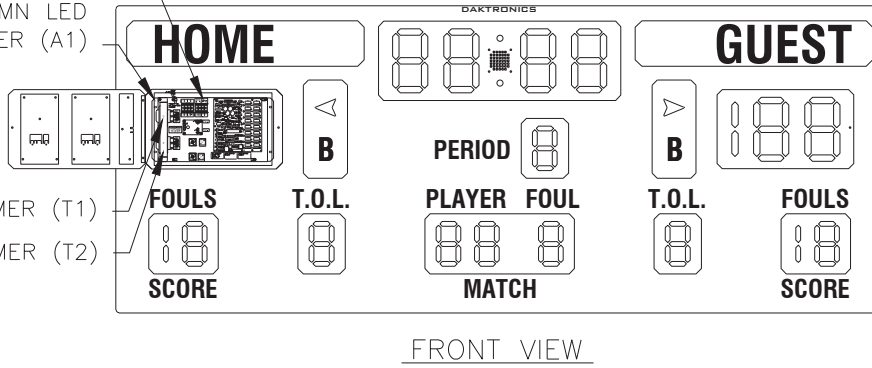
COMPONENT LOCATION:



SIGNAL TERMINATION BLOCK (TB31)

16 COLUMN LED DRIVER (A1)

TRANSFORMER (T1)
TRANSFORMER (T2)



DIGITS:

- CLOCK: 10" AMBER
- SCORE: 10" RED
- PERIOD: 7" AMBER
- TEAM FOULS: 7" RED
- TIME OUTS LEFT: 7" AMBER
- PLAYER/FOUL: 7" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW

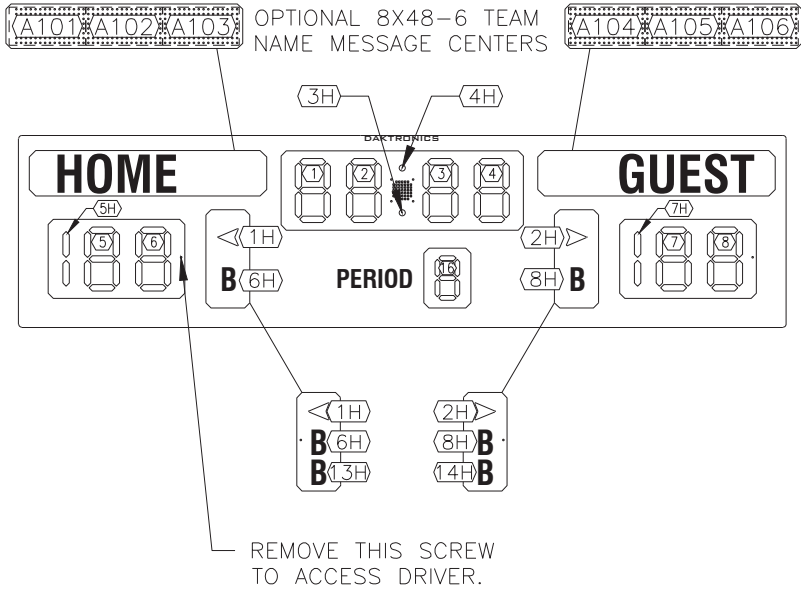
REV 06	DATE: 08 APR 11	UPDATED DOUBLE BONUS OPTIONS	BY: KDD
REV 05	DATE: 03 DEC 09	UPDATED DRIVER	BY: JLR
REV 04	DATE: 13 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	BY: APN
REV 03	DATE: 16 OCT 02	ADDED COLON DESIGNATION.	BY: JJS
REV 02	DATE: 24 JUL 02	ADDED OPTIONAL TNMC.	BY: JJS
REV 01	DATE: 19 JUN 02	CHANGED TITLE TO ELECTRICAL & SIGNAL SPEC, BB-2125	BY: ALG

TUFF SPORT™, & UNIVIEW™ ARE TRADEMARKS OF DAKTRONICS

DAKTRONICS, INC. BROOKINGS, SD 57006 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.			
	PROJ: TUFF SPORT™ SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2125 AND BB-2126			
DESIGN: B PETERSON		DRAWN: AGIBSON		DATE: 16 MAY 02 X
SCALE: 1 = 30				
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	167240
	06	P1237	E-10-A	

BB-2121

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

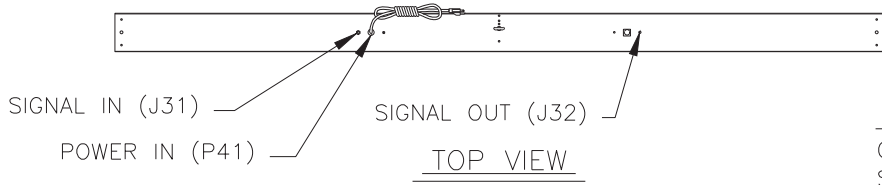


NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE LED DRIVER AND DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

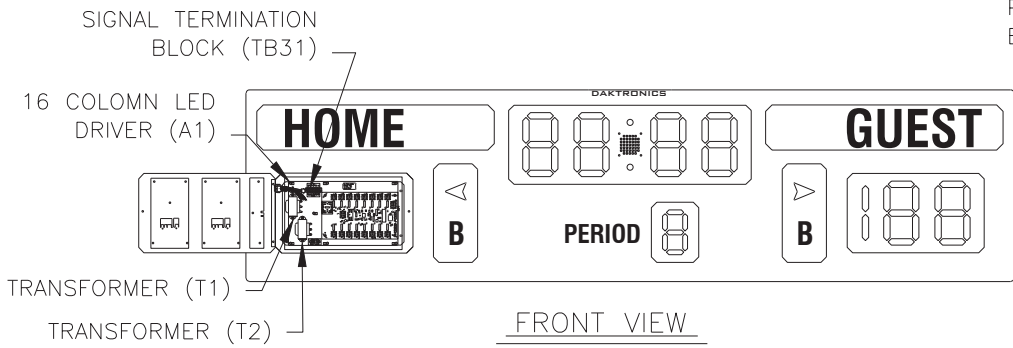
ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

COMPONENT LOCATION:



DIGITS:

- CLOCK: 10" AMBER
- SCORE: 10" RED
- PERIOD: 7" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW



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	PROJ: TUFF SPORT™ SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2121		
DESIGN: B PETERSON SCALE: 1 = 30	DRAWN: AGIBSON	DATE: 16 MAY 02	
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
	04	P1237	E-10-A
			167242

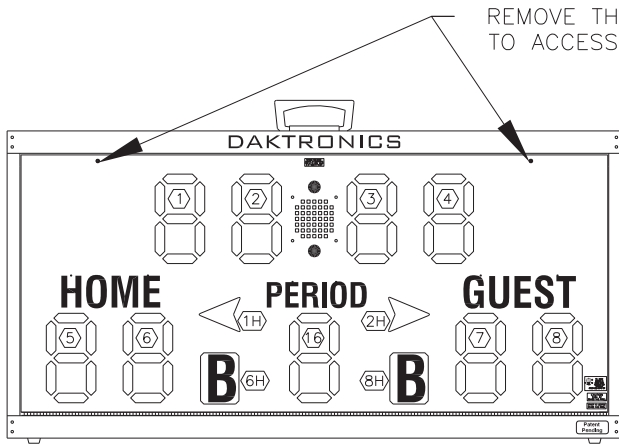
REV	DATE:	DESCRIPTION	BY:
04	08 APR 11	UPDATED DOUBLE BONUS OPTIONS	KDD
03	13 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	APN
02	18 OCT 02	ADDED OPTIONAL TNMC AND COLON DESIGNATION.	JJS
01	19 JUN 02	CHANGED TITLE TO ELECTRICAL & SIGNAL SPEC, BB-2121	ALG

BB-2122

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

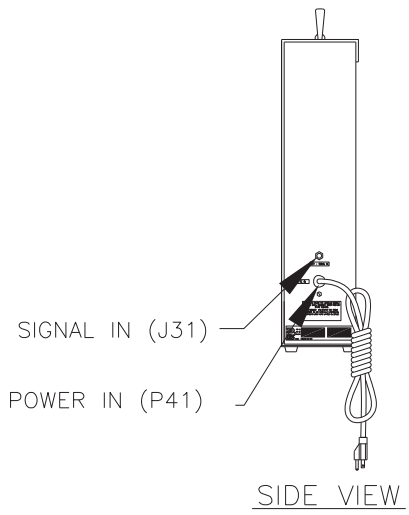
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE LED DRIVER AND DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



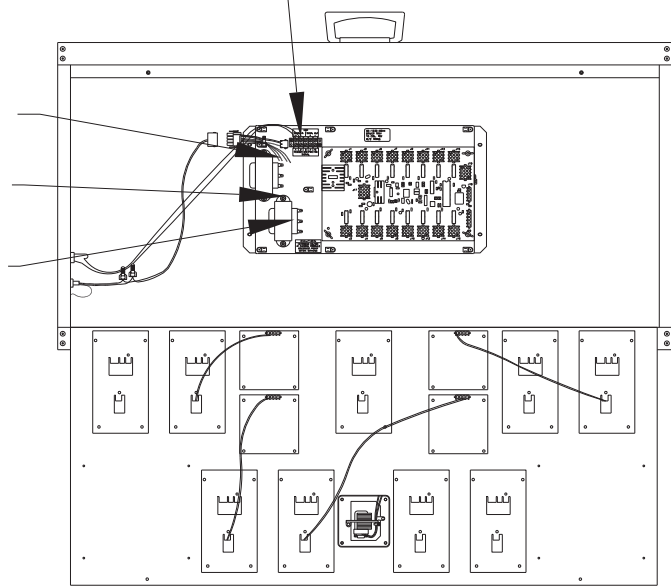
ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

COMPONENT LOCATION:



SIGNAL TERMINATION BLOCK (TB31)

- 16 COLUMN LED DRIVER (A1)
- TRANSFORMER (T1)
- TRANSFORMER (T2)



DIGITS:

- CLOCK: 7" AMBER
- SCORE: 7" RED
- PERIOD: 7" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2122

DES. BY: B PETERSON

DRAWN BY: AGIBSON

DATE: 16 MAY 02

REVISION

APPR. BY:

SCALE: 1=15

1237-E10A-167244

REV.	DATE	DESCRIPTION	BY	APPR.
02	13 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	APN	
01	18 JUN 02	CHANGED TITLE TO ELECTRICAL & SIGNAL SPEC, BB-2122	ALG	

BB-2127

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

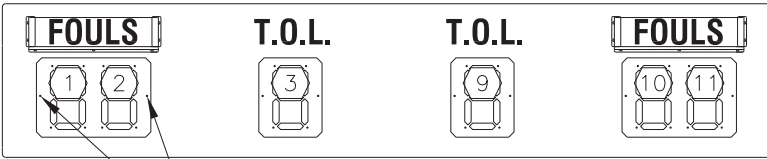
NOTES:

1. USE MINIMUM OF 24AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**

4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



REMOVE THESE SCREWS TO ACCESS DRIVER

FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	14

COMPONENT LOCATIONS:

POWER AND SIGNAL HARNESS ROUTES THROUGH 2 1/2" BUSHING.



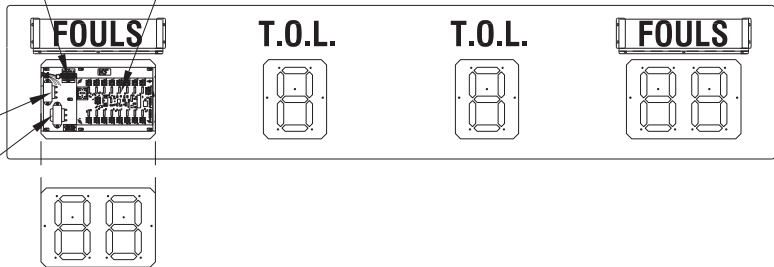
TOP VIEW

SIGNAL TERMINATION BLOCK (TB1)

16 COLUMN LED DRIVER (A1)

TRANSFORMER (T1)

TRANSFORMER (T2)



FRONT VIEW

DIGITS

FOULS: 10" RED
T.O.L.: 10" AMBER

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2127

DES. BY: BPETERSON

DRAWN BY: AGIBSON

DATE: 22 MAY 02

REVISION

APPR. BY:

02

SCALE: 1=30

1237-E10A-167616

02	12 FEB 03	ADDED DIGIT DESIGNATIONS.	JJS
01	19 JUN 02	CHANGED TITLE TO ELECTRICAL & SIGNAL SPEC, BB-2127	ALG
REV.	DATE	DESCRIPTION	BY APPR.

BB-2117

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

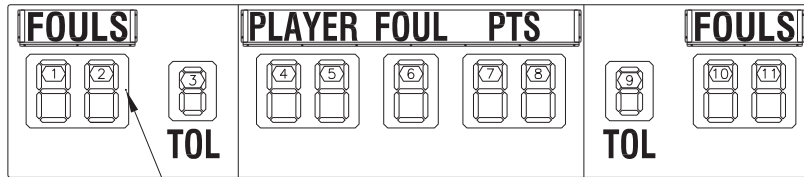
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.

4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



REMOVE THIS SCREW TO ACCESS DRIVER.

FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	14

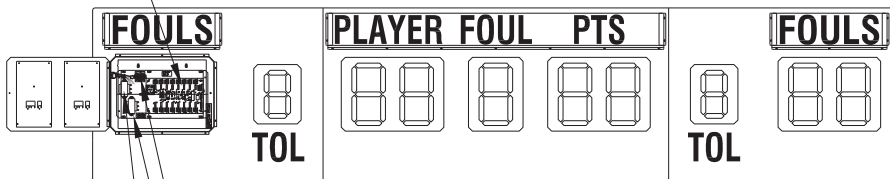
COMPONENT LOCATIONS:



TOP VIEW

POWER AND SIGNAL HARNESS ROUTES THROUGH 2 1/2" BUSHING

16 COLUMN LED DRIVER (A1)



TRANSFORMER (T1)

TRANSFORMER (T2)

SIGNAL TERMINATION BLOCK (TB31)

FRONT VIEW

DIGITS:

- PLAYER: 13" AMBER
- FOUL: 13" AMBER
- PTS: 13" AMBER
- TOL: 10" AMBER
- FOULS: 13" RED

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2117

DES. BY: BPETERSON

DRAWN BY: AGIBSON

DATE: 10 JUN 02

01	13 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	APN	
REV.	DATE	DESCRIPTION	BY	APPR.

REVISION	APPR. BY:	1237-E10A-168627
01	SCALE: 1=40	

BB-2119

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

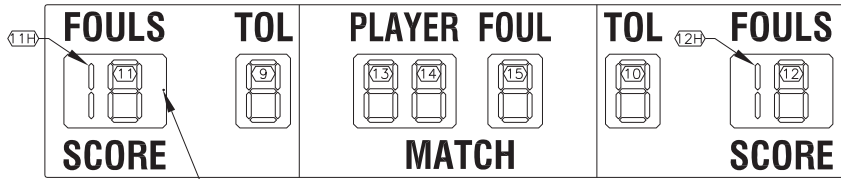
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.

4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



REMOVE THIS SCREW TO ACCESS DRIVER.

FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

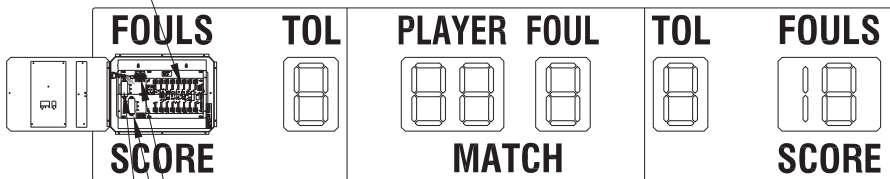
COMPONENT LOCATIONS:



TOP VIEW

POWER AND SIGNAL HARNESS ROUTES THROUGH 2 1/2" BUSHING

16 COLUMN LED DRIVER (A1)



TRANSFORMER (T1)
TRANSFORMER (T2)
SIGNAL TERMINATION BLOCK (TB31)

FRONT VIEW

DIGITS:

PLAYER: 13" AMBER
FOUL: 13" AMBER
TOL: 13" AMBER
FOULS: 13" RED

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2119

DES. BY: BPETERSON

DRAWN BY: AGIBSON

DATE: 10 JUN 02

01	13 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	APN	
REV.	DATE	DESCRIPTION	BY	APPR.

REVISION	APPR. BY:	1237-E10A-168667
01	SCALE: 1=40	

BB-2120

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

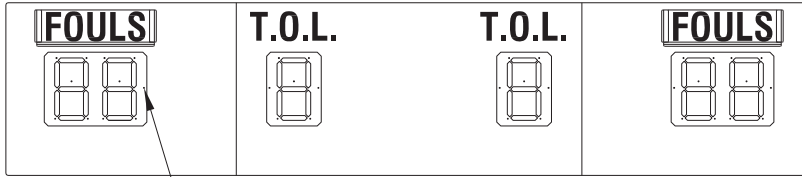
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.

4. THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



REMOVE THIS SCREW TO ACCESS DRIVER.

FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	14

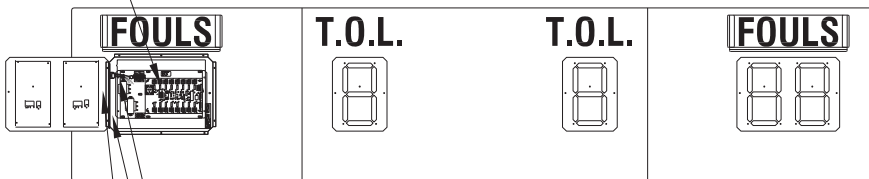
COMPONENT LOCATIONS:



TOP VIEW

POWER AND SIGNAL HARNESS ROUTES THROUGH 2 1/2" BUSHING

16 COLUMN LED DRIVER (A1)



TRANSFORMER (T1)
TRANSFORMER (T2)
SIGNAL TERMINATION BLOCK (TB31)

FRONT VIEW

DIGITS:

TOL: 13" AMBER
FOULS: 13" RED

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2120

DES. BY: BPETERSON

DRAWN BY: AGIBSON

DATE: 10 JUN 02

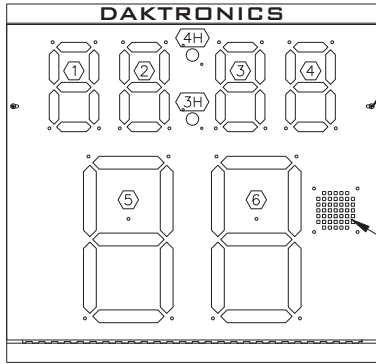
01	13 NOV 02	NOTE 1 24AWG CHANGED TO 22AWG	APN	
REV.	DATE	DESCRIPTION	BY	APPR.

REVISION	APPR. BY:
01	SCALE: 1=40

1237-E10A-168669

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:



TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

LS1 (HORN) DEFAULT SETTING: GAME HORN & SHOT HORN

FRONT VIEW

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

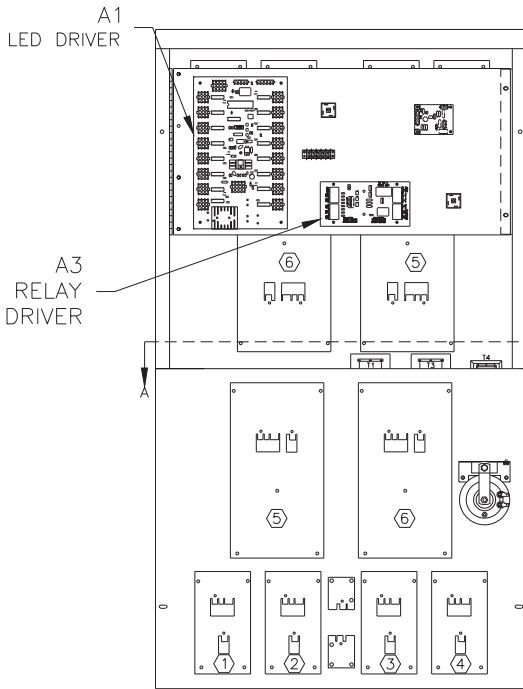
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**

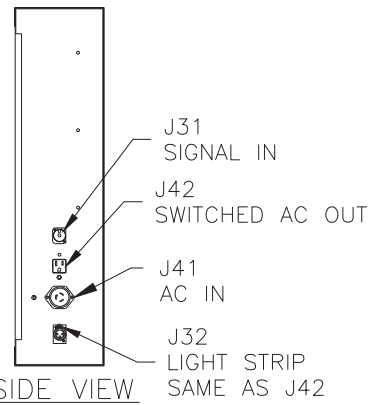
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

COMPONENT LOCATIONS:



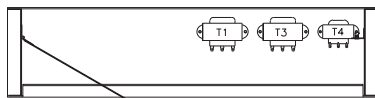
FRONT VIEW



SIDE VIEW

NOTES:

- A3 BOARD CAPABILITIES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & LS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
- LS1 IS CONNECTED TO J18 ON THE A1 DRVR. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES ON A3 TO A DIFFERENT VALUE.
- TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
- LIGHT STRIP OPTION ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
- SEE DRAWING A-159074 FOR COMPONENT LOCATIONS PRIOR TO THE RELAY BOARD BEING ADDED TO THIS ASSEMBLY.



SECTION: A-A

TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS
DAKTRONICS, INC.
 BROOKINGS, SD 57006
 DO NOT SCALE DRAWING

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PROJ: TUFF SPORT SCOREBOARDS			
TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2109			
DESIGN: EREBHAH	DRAWN: JBANNA	DATE: 14 SEP 04	
SCALE: 1 = 15			

REV 01	DATE: 08 DEC 10	CHANGED J42 FROM 120V TO SWITCHED AC OUT; ALSO CHANGED J41 FROM 120V TO JUST AC IN	BY: JJD
--------	-----------------	--	---------

SHEET	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A	223340

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

BB-2131

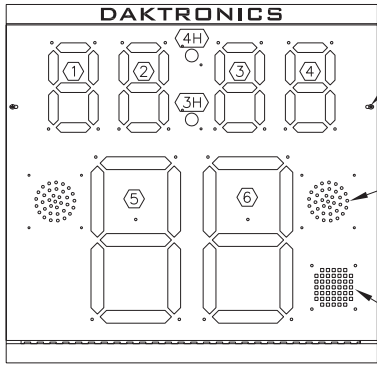
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**

4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

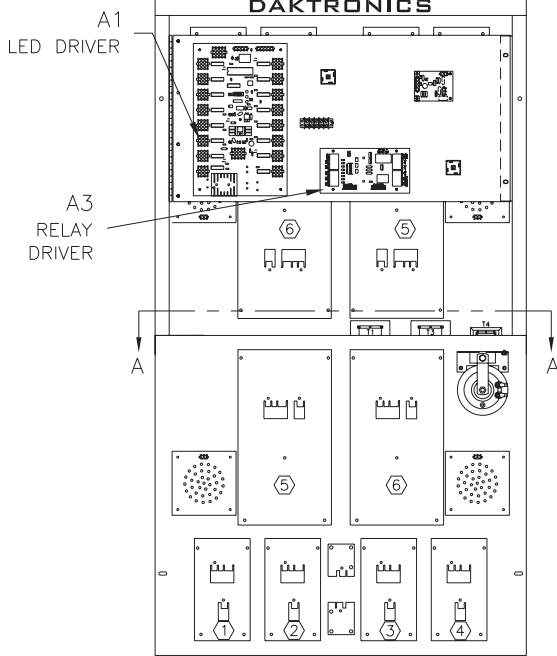
(A3) V.H.I. INDICATORS
DEFAULT SETTINGS:
CLK = 0

LS1 (HORN) DEFAULT SETTING:
GAME HORN & SHOT HORN

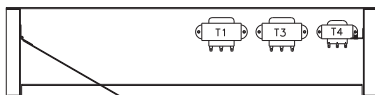
FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

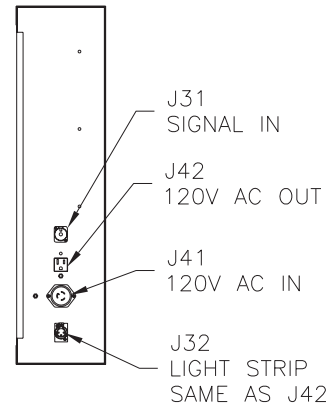
COMPONENT LOCATIONS:



FRONT VIEW



SECTION: A-A



SIDE VIEW

NOTES:

1. A3 BOARD CAPABILITES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & LS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
2. LS1 IS CONNECTED TO J18 ON THE A1 DRVR. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES ON A3 TO A DIFFERENT VALUE.
3. TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
4. LIGHT STRIP OPTION AND VHI LED CLUSTER ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2131

DES. BY: EREBHAH

DRAWN BY: JBANNWA

DATE: 28 SEP 04

REVISION

APPR. BY:

SCALE: 1=15

1237-E10A-224361

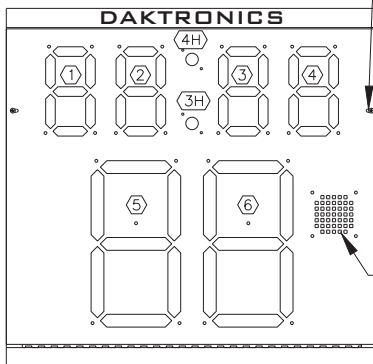
REV.	DATE	DESCRIPTION	BY	APPR.
00				

BB-2115

NOTES:

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.



LS1 (HORN) DEFAULT SETTING:
GAME HORN & SHOT HORN

FRONT VIEW

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

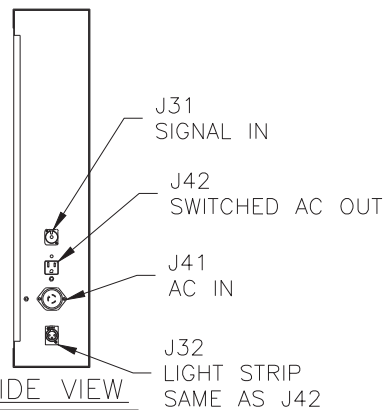
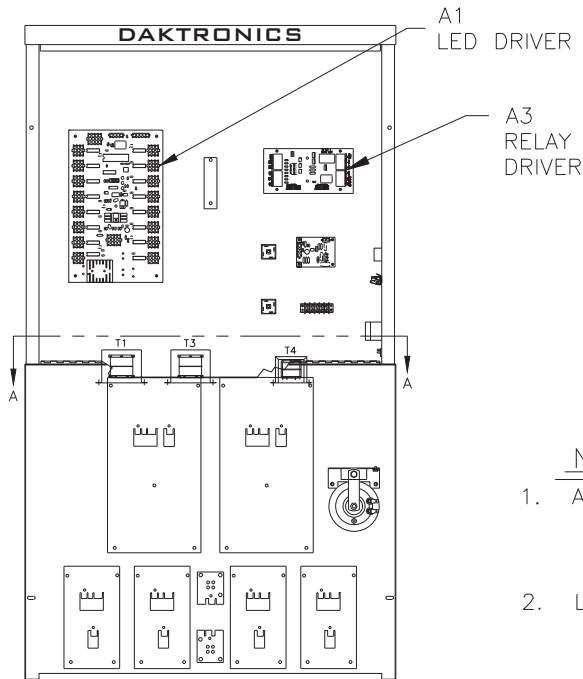
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**

4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

COMPONENT LOCATIONS:

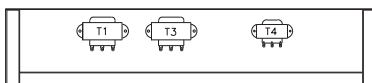


SIDE VIEW

NOTES:


- A3 BOARD CAPABILITIES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & LS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
- LS1 IS CONNECTED TO J18 ON THE A1 DRVR. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES ON A3 TO A DIFFERENT VALUE.
- TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
- LIGHT STRIP OPTION ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
- SEE DRAWING A-159072 FOR COMPONENT LOCATIONS PRIOR TO THE RELAY BOARD BEING ADDED TO THIS ASSEMBLY.

FRONT VIEW



SECTION: A-A

TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

 DAKTRONICS, INC. BROOKINGS, SD 57006 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 2010 DAKTRONICS, INC.			
	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2115 DESIGN: EREBHAH DRAWN: JBANNA DATE: 29 SEP 04 SCALE: 1 = 15			
SHEET 01	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A	224479

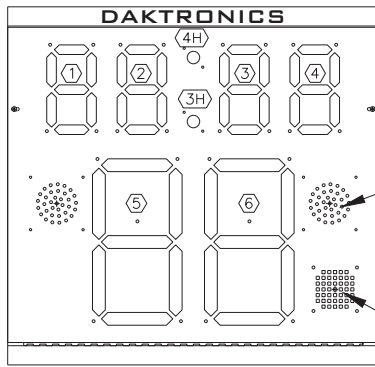
REV	DATE:	CHANGED J42 FROM 120V TO SWITCHED AC OUT; ALSO CHANGED J41 FROM 120V TO JUST AC IN	BY:
01	08 DEC 10		JJD

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

BB-2130

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



FRONT VIEW

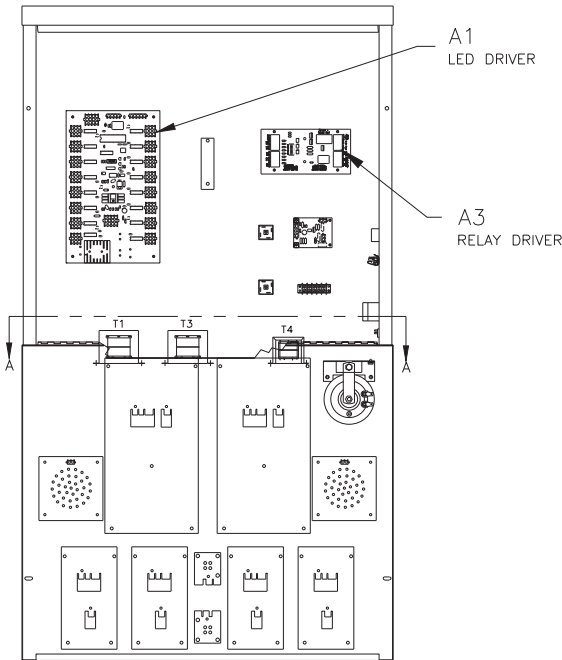
TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

(A3) V.H.I. INDICATORS DEFAULT SETTINGS: CLK = 0

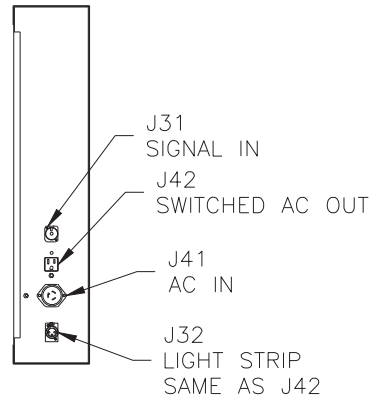
LS1 (HORN) DEFAULT SETTING: GAME HORN & SHOT HORN

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

COMPONENT LOCATIONS:



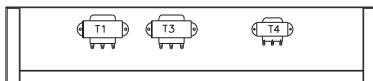
FRONT VIEW



SIDE VIEW

NOTES:

1. A3 BOARD CAPABILITIES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & LS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
2. LS1 IS CONNECTED TO J18 ON THE A1 DRVR. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES ON A3 TO A DIFFERENT VALUE.
3. TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
4. LIGHT STRIP OPTION AND VHI LED CLUSTER ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.



SECTION: A-A

TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

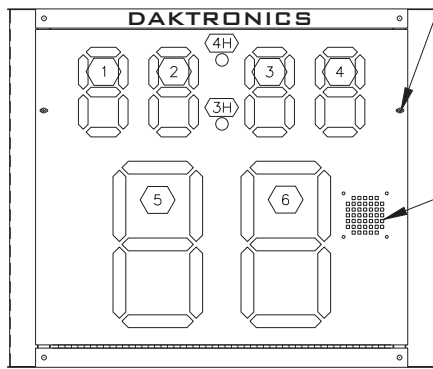
DAKTRONICS, INC. BROOKINGS, SD 57006 DO NOT SCALE DRAWING	THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2010 DAKTRONICS, INC.		
	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2130 DESIGN: EREBHAH DRAWN: JBANNA DATE: 29 SEP 04 SCALE: 1 = 15		
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
01	01	P1237	E-10-A

REV	DATE:	CHANGED J42 FROM 120V TO SWITCHED AC OUT; ALSO CHANGED J41 FROM 120V TO JUST AC IN	BY:
01	08 DEC 10		JJD

224481

BB-2111

DIGIT, SIGNAL AND POWER SPECIFICATIONS:



FRONT VIEW
(FACE A)

TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

LS1 (HORN) DEFAULT SETTING: GAME HORN & SHOT HORN

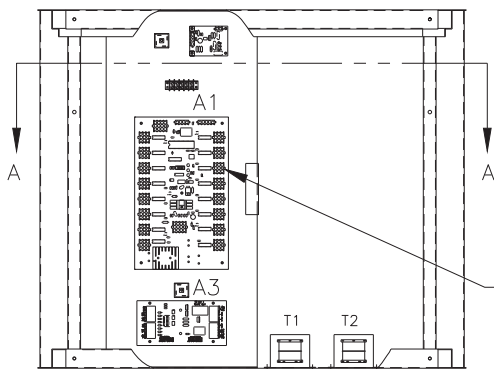
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

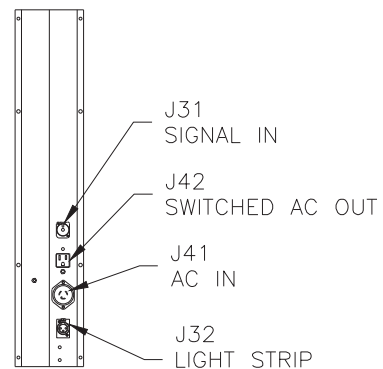
ADDRESS INFORMATION	
DRIVER:	A2
ADDRESS:	1

COMPONENT LOCATIONS:



FRONT VIEW
WITH FACE PANEL REMOVED

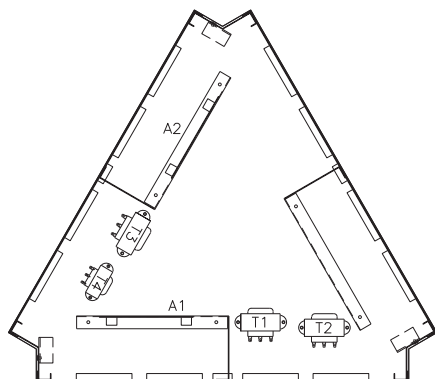
LED DRIVER



REAR VIEW

NOTES:

1. A3 BOARD CAPABILITIES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & LS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
2. LS1 IS CONNECTED TO J18 ON THE A1 DRVR. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES ON A3 TO A DIFFERENT VALUE.
3. TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
4. LIGHT STRIP OPTION ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
5. SEE DRAWING A-159075 FOR COMPONENT LOCATIONS PRIOR TO THE RELAY BOARD BEING ADDED TO THIS ASSEMBLY.



SECTION: A-A

TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

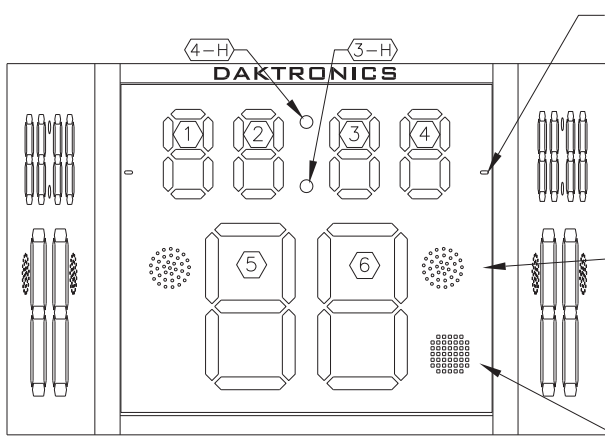
DAKTRONICS, INC. BROOKINGS, SD 57006 DO NOT SCALE DRAWING	THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2010 DAKTRONICS, INC.		
	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2111 DESIGN: EREBHAH DRAWN: JBANNA DATE: 29 SEP 04 SCALE: 1 = 15		
SHEET 01	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A
			224482

REV	DATE:	CHANGED J42 FROM 120V TO SWITCHED AC OUT; ALSO CHANGED J41 FROM 120V TO JUST AC IN	BY:
01	08 DEC 10		JJD

BB-2128

NOTES:

DIGIT, SIGNAL AND POWER SPECIFICATIONS:



TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

V.H.I. INDICATORS
DEFAULT SETTING:
CLK = 0

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

FRONT VIEW

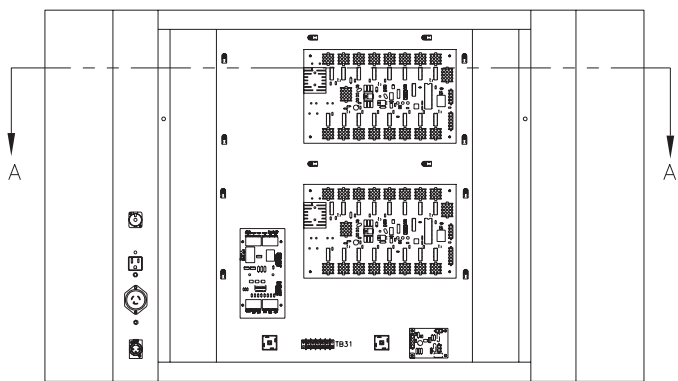
LS1 (HORN) DEFAULT SETTING:
GAME HORN & SHOT HORN

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

ADDRESS INFORMATION	
DRIVER:	A2
ADDRESS:	1

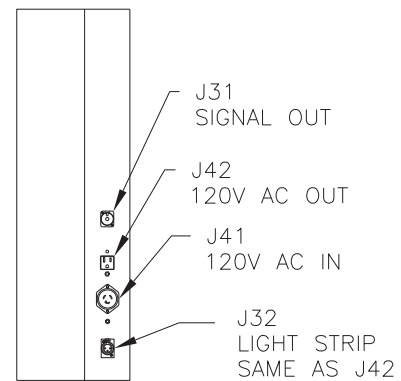
SEE SECTION VIEW A-A FOR WHICH DRIVERS RUN WHICH FACES.

COMPONENT LOCATIONS:



REAR VIEW

(WITH FACE PANEL REMOVED)

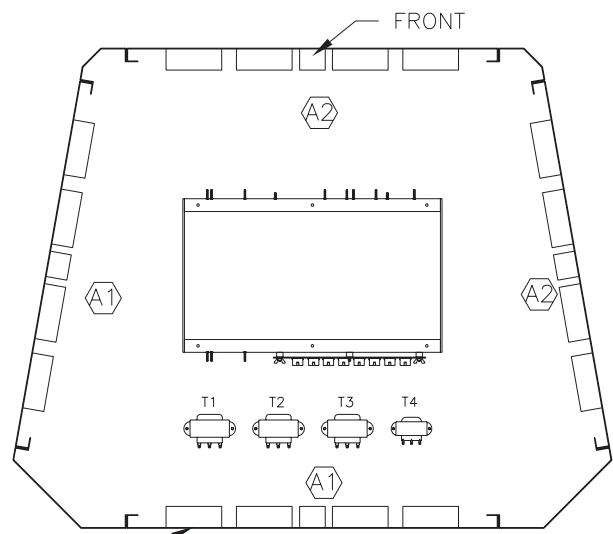


REAR CORNER VIEW

NOTES:

1. A3 BOARD CAPABILITIES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & LS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
2. LS1 IS CONNECTED TO J18 ON THE A1 DRV. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES ON A3 TO A DIFFERENT VALUE.
3. TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
4. LIGHT STRIP OPTION AND VHI LED CLUSTER ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.

TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS



SECTION: A-A

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2128

DES. BY: EREBAH DRAWN BY: JBANNWA DATE: 04 OCT 04

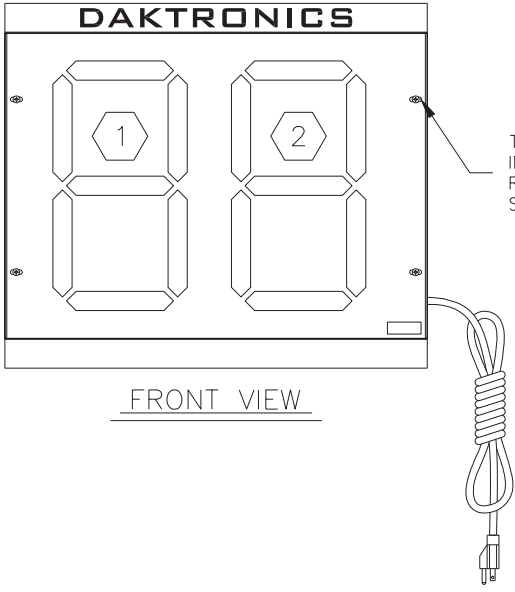
REVISION	APPR. BY:	1237-E10A-224713
00	SCALE: 1=15	

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2114

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:



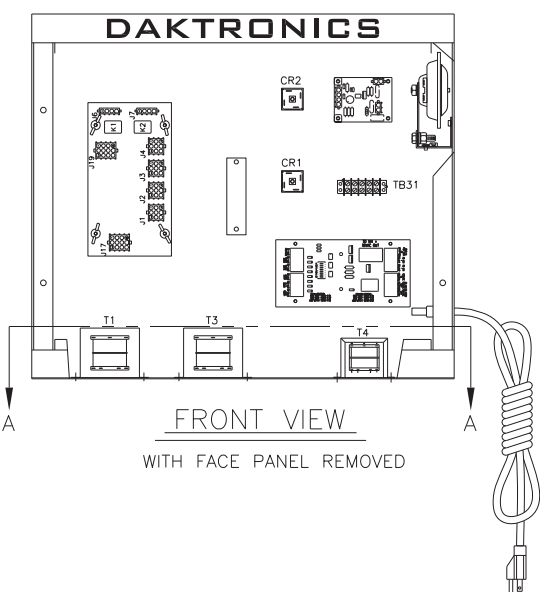
TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE FOUR SCREWS SECURING THE FACE PANEL.

FRONT VIEW

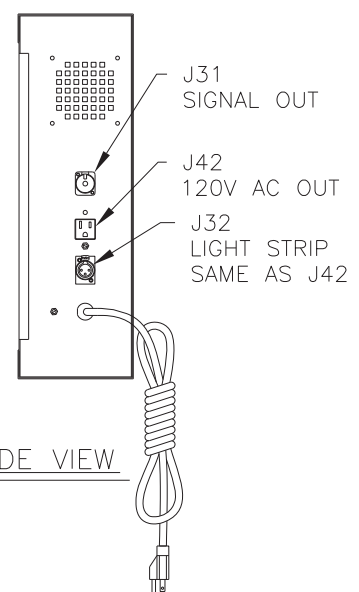
1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

COMPONENT LOCATIONS:



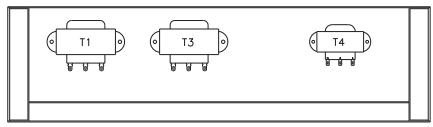
FRONT VIEW
WITH FACE PANEL REMOVED



SIDE VIEW

NOTES:

1. LS1 IS CONNECTED TO THE SHOT CLOCK HORN SEGMENT.
2. J41 IS CONNECTED TO THE GAME CLOCK=0 SEGMENT.
3. TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, RECONNECT AT TB1.



SECTION: A-A

TUFF SPORT™, UNIVIEW™ & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

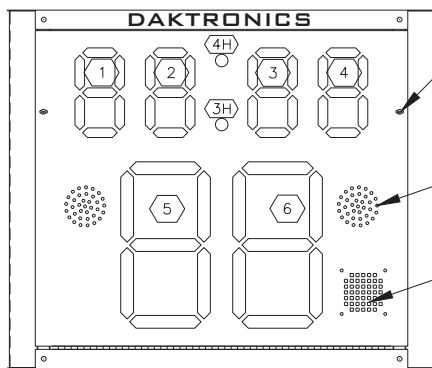
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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: TUFF SPORT SCOREBOARD			
TITLE: ELECTRICAL & SIGNAL SPEC, BB-2114			
DES. BY: EREBHAH		DRAWN BY: JBANNWA	DATE: 04 OCT 04
REVISION	APPR. BY:	1237-E10A-224714	
00	SCALE: 1=10		

REV.	DATE	DESCRIPTION	BY	APPR.

BB-2132

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:



TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

(A3) V.H.I. INDICATORS
DEFAULT SETTING: CLK = 0

LS1 (HORN) DEFAULT SETTING:
GAME HORN & SHOT HORN

FRONT VIEW
(FACE A)

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

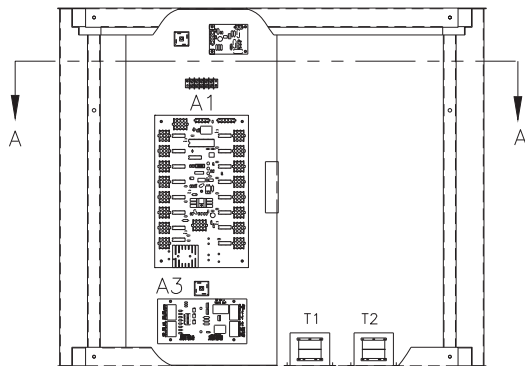
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**

4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

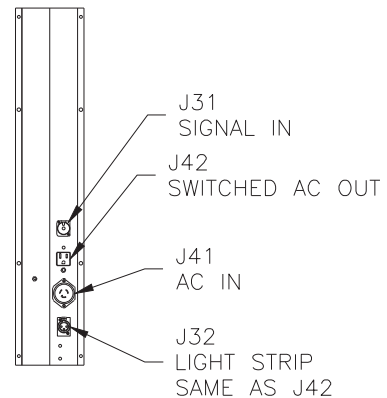
ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

ADDRESS INFORMATION	
DRIVER:	A2
ADDRESS:	1

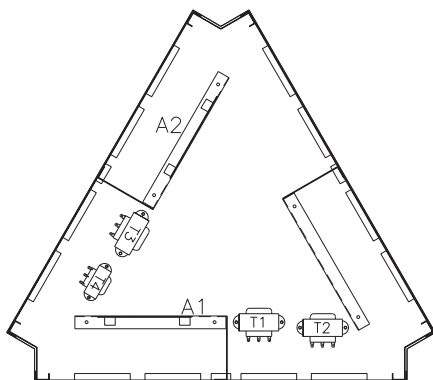
COMPONENT LOCATIONS:



FRONT VIEW
WITH FACE PANEL REMOVED



REAR VIEW



SECTION: A-A

NOTES:

- A3 BOARD CAPABILITIES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & LS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
- LS1 IS CONNECTED TO J18 ON THE A1 DRVR. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRAY PIGTAIL WIRES ON A3 TO A DIFFERENT VALUE.
- TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
- LIGHT STRIP OPTION AND VHI LED CLUSTER ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.

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DAKTRONICS, INC. BROOKINGS, SD 57006 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 2010 DAKTRONICS, INC.			
	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2132 DESIGN: EREBHAA DRAWN: JBANNA DATE: 04 OCT 04 SCALE: 1 = 15			
SHEET 01	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A	224715

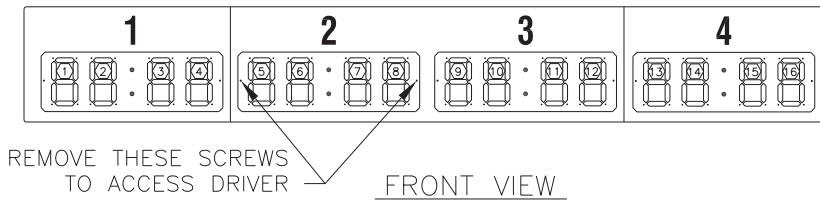
REV	DATE:	CHANGED J42 FROM 120V TO SWITCHED AC OUT; ALSO CHANGED J41 FROM 120V TO JUST AC IN	BY:
01	08 DEC 10		JJD

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

SD-2107

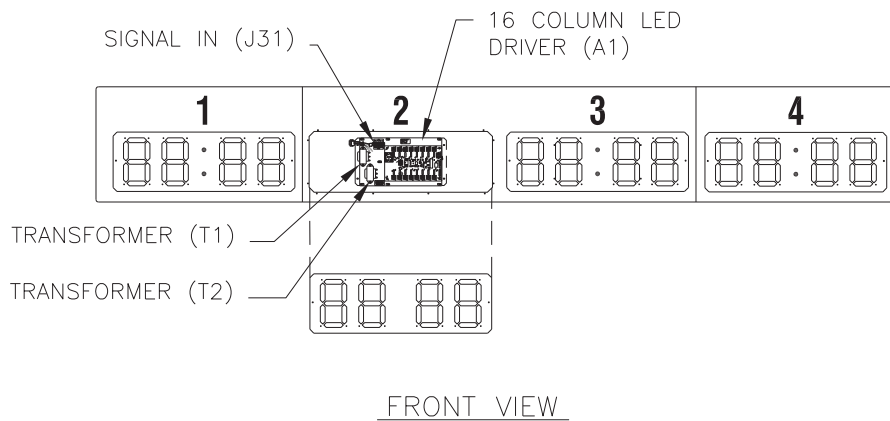
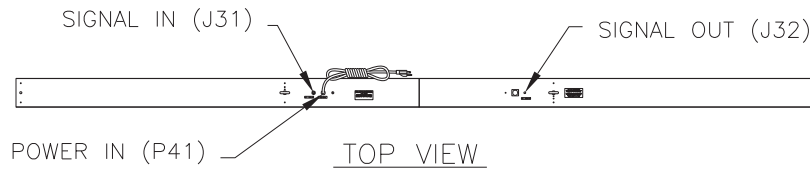
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	15

COMPONENT LOCATIONS:



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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, SD-2107

DES. BY: CBRECZI

DRAWN BY: JBANNWA

DATE: 26 OCT 04

REVISION

APPR. BY:

SCALE: 1=40

1237-E10A-226305

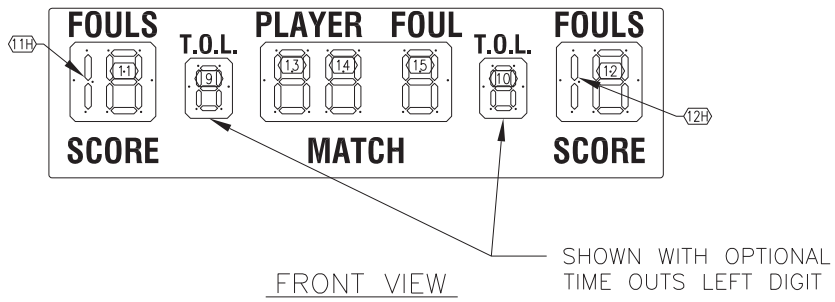
REV.	DATE	DESCRIPTION	BY	APPR.
00				

DIGIT SPECIFICATIONS:

BB-2137



TOP VIEW



FRONT VIEW

DIGITS

FOULS: 10" RED
 PLAYER FOUL: 10" RED
 T.O.L.: 7" RED

NOTES:

1. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
2. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.
3. THIS MODEL IS A SLAVE UNIT. THERE IS NO DRIVER AND NO PRIMARY WIRING. THERE IS NO 120V OR 230V MODEL. THE ONLY VARIATION IS PANAVIEW OR UNIVIEW.

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2137

DES. BY: CBRECZI

DRAWN BY: JBANNWA

DATE: 26 OCT 04

REVISION

APPR. BY:

SCALE: 1=30

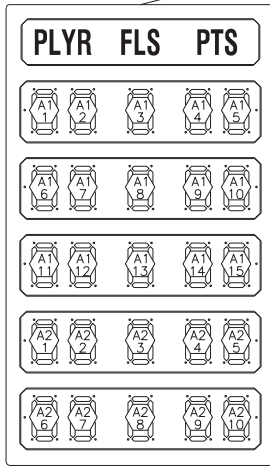
1237-E10A-226321

REV.	DATE	DESCRIPTION	BY	APPR.
00				

SD-2101

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

OPTIONAL 8 X 48 TNMC



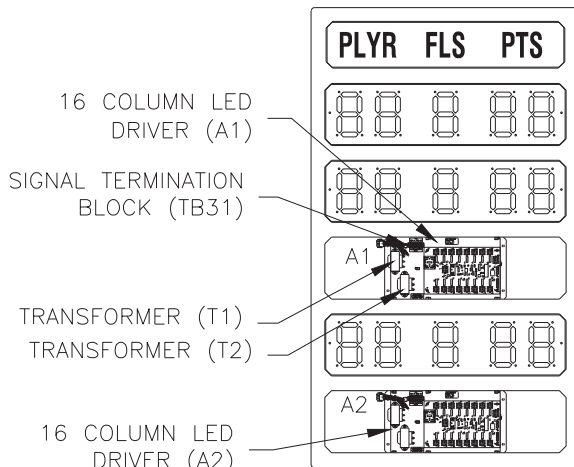
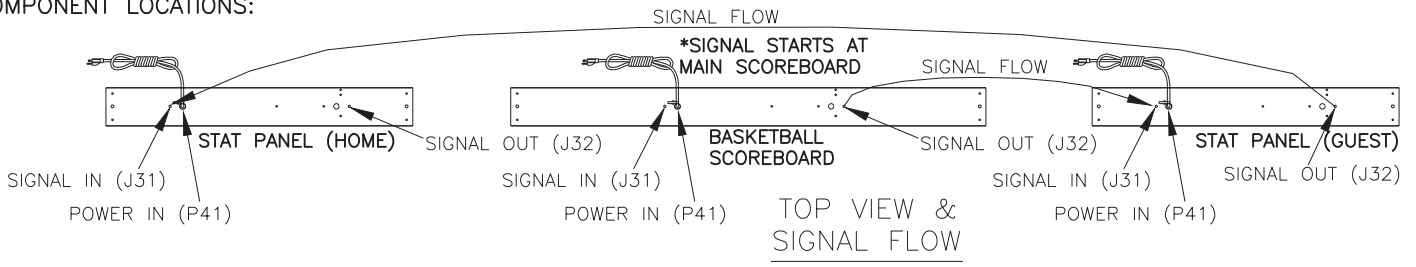
FRONT VIEW

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION			
LEFT STATS SECTION		RIGHT STATS SECTION	
DRIVER:	A1	DRIVER:	A1
ADDRESS:	23	ADDRESS:	25
DRIVER:	A2	DRIVER:	A2
ADDRESS:	24	ADDRESS:	26

COMPONENT LOCATIONS:



FRONT VIEW

*SIGNAL INSTRUCTIONS:

- SIGNAL FROM SOURCE LANDS TO MAIN BASKETBALL SCOREBOARD FIRST.
- THEN OUT FROM SCOREBOARD TO IN ON STATS PANEL.
- AND OUT FROM STATS PANEL TO IN ON OTHER STATS PANEL.

DIGITS

PLYR: 7" AMBER
 FLS: 7" RED
 PTS: 7" RED

TUFF SPORT™ & UNIVIEW™ ARE TRADEMARKS OF DAKTRONICS

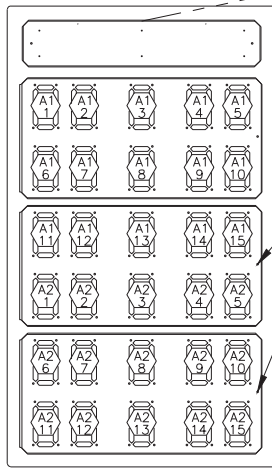
	DAKTRONICS, INC. BROOKINGS, SD 57006	THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2012 DAKTRONICS, INC.
	DO NOT SCALE DRAWING	
PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- SD-2101		
DESIGN: EREBHAH	DRAWN: JBANNAWA	DATE: 01 FEB 05
SCALE: 1=30		
SHEET	REV	JOB NO:
	02	1237
FUNC - TYPE - SIZE		E - 10 - A
		233097

REV 02	DATE: 02 MAR 12	ADDED SCBD AND SIGNAL ROUTING.	BY: SMB
REV 01	DATE: 20 APR 10	UPDATED DIGIT DESIGNATION TO MATCH F. ASSY DWG-230979.	BY: JDG

SD-2102

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

OPTIONAL 8 X 48 TNMC



FRONT VIEW

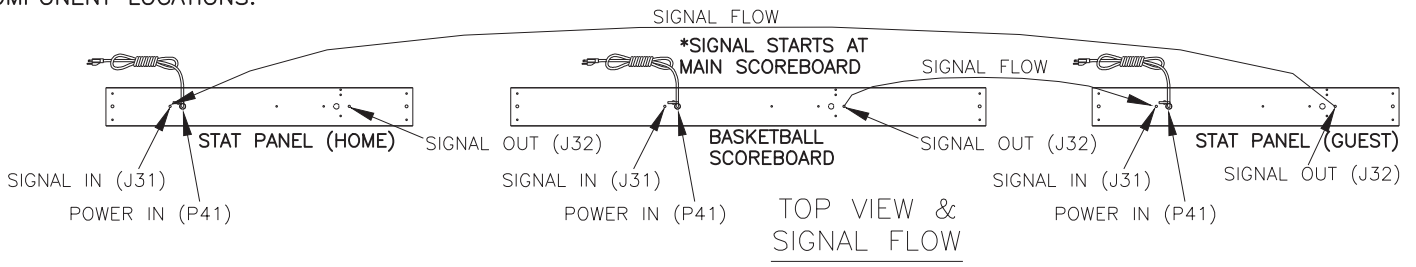
REMOVE THESE SCREWS TO ACCESS DRIVER THROUGH HINGED DOOR.

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION			
LEFT STATS SECTION		RIGHT STATS SECTION	
DRIVER:	A1	DRIVER:	A1
ADDRESS:	23	ADDRESS:	25
DRIVER:	A2	DRIVER:	A2
ADDRESS:	24	ADDRESS:	26

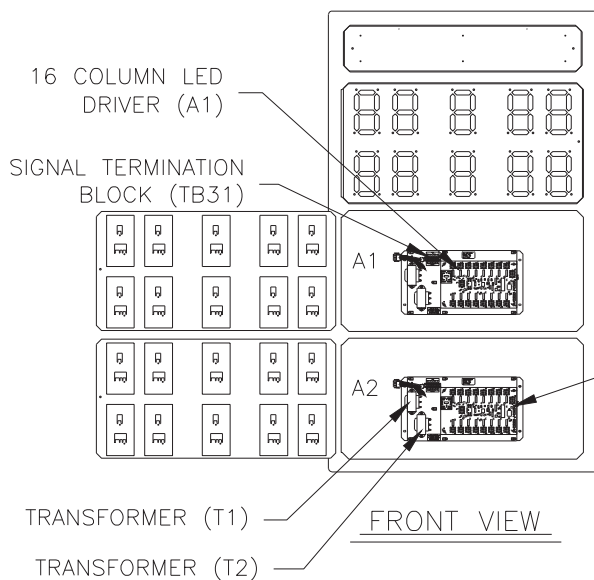
COMPONENT LOCATIONS:



TOP VIEW & SIGNAL FLOW

***SIGNAL INSTRUCTIONS:**

- SIGNAL FROM SOURCE LANDS TO MAIN BASKETBALL SCOREBOARD FIRST.
- THEN OUT FROM SCOREBOARD TO IN ON STATS PANEL.
- AND OUT FROM STATS PANEL TO IN ON OTHER STATS PANEL.



FRONT VIEW

DIGITS

PLYR: 7" AMBER
 FLS: 7" RED
 PTS: 7" RED

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	DO NOT SCALE DRAWING	
PROJ: TUFF SPORT SCOREBOARDS		
TITLE: ELECTRICAL AND SIGNAL SPEC- SD-2102		
DESIGN: EREBHAH	DRAWN: JBANNWA	DATE: 02 FEB 05
SCALE: 1=30		
SHEET	REV 01	JOB NO: 1237
FUNC-TYPE-SIZE E-10-A		233206

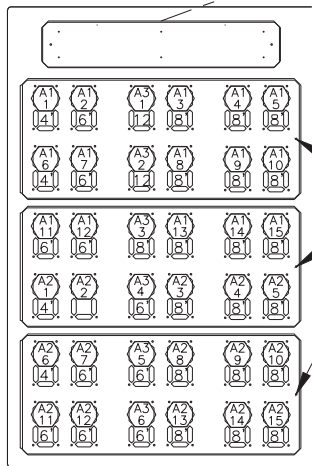
REV 01	DATE: 02 MAR 12	ADDED SCBD AND SIGNAL ROUTING.	BY: SMB
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SD-2103

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:

OPTIONAL 8 X 48 TNMC



FRONT VIEW

REMOVE THESE SCREWS TO ACCESS DRIVER THROUGH HINGED DOOR.

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

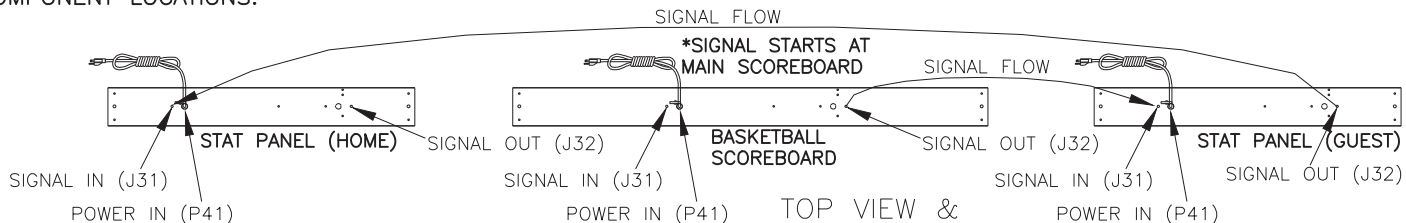
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**

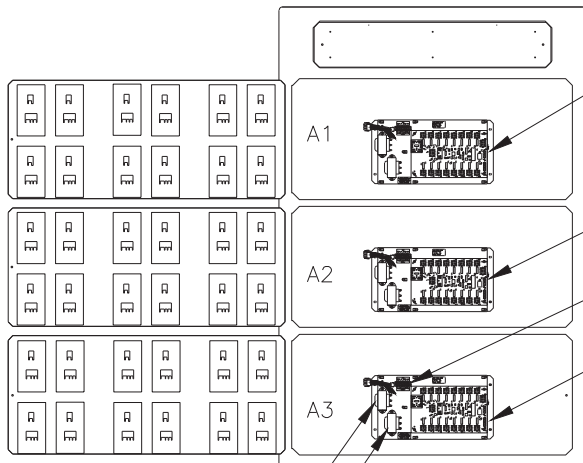
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION			
LEFT STATS SECTION		RIGHT STATS SECTION	
DRIVER:	A1	DRIVER:	A1
ADDRESS:	23	ADDRESS:	25
DRIVER:	A2	DRIVER:	A2
ADDRESS:	24	ADDRESS:	26
DRIVER:	A3	DRIVER:	A3
ADDRESS:	27	ADDRESS:	28

COMPONENT LOCATIONS:



TOP VIEW & SIGNAL FLOW



TRANSFORMER (T1)
TRANSFORMER (T2)

FRONT VIEW

- 16 COLUMN LED DRIVER (A1)
- 16 COLUMN LED DRIVER (A2)
- SIGNAL TERMINATION BLOCK (TB31)
- 16 COLUMN LED DRIVER (A3)

*SIGNAL INSTRUCTIONS:

- SIGNAL FROM SOURCE LANDS TO MAIN BASKETBALL SCOREBOARD FIRST.
- THEN OUT FROM SCOREBOARD TO IN ON STATS PANEL.
- AND OUT FROM STATS PANEL TO IN ON OTHER STATS PANEL.

DIGITS

PLYR: 7" AMBER
FLS: 7" RED
PTS: 7" RED

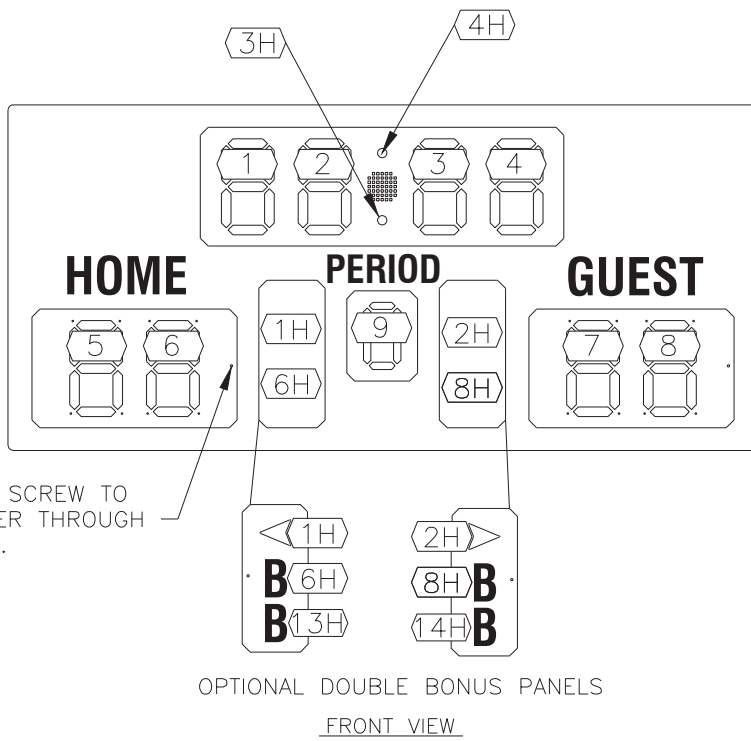
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	DO NOT SCALE DRAWING	
PROJ: TUFF SPORT SCOREBOARDS		
TITLE: ELECTRICAL AND SIGNAL SPEC- SD-2103		
DESIGN: EREBHAH	DRAWN: JBANNAWA	DATE: 02 FEB 05
SCALE: 1=30		
SHEET	REV	JOB NO:
01	01	1237
FUNC - TYPE - SIZE		E - 10 - A
		233225

REV	DATE:	ADDED SCBD AND SIGNAL ROUTING.	BY:	SMB
01	02 MAR 12			

BB-2142

DIGIT, SIGNAL AND POWER SPECIFICATIONS:



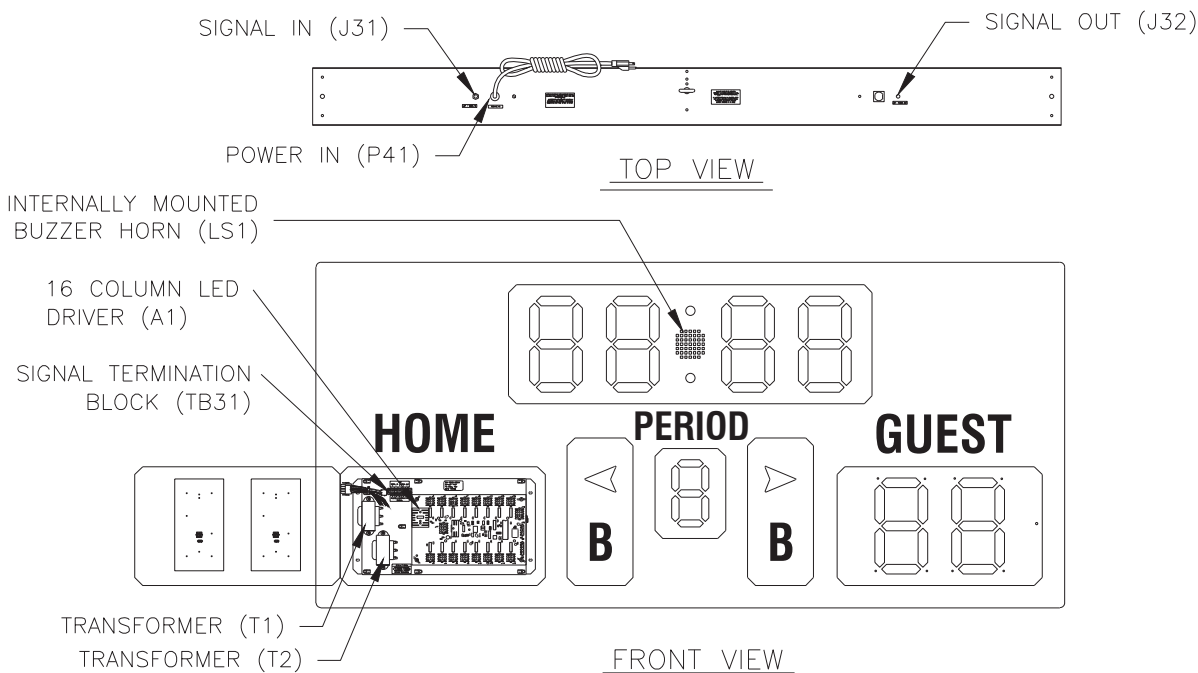
REMOVE THIS SCREW TO ACCESS DRIVER THROUGH HINGED DOOR.

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

COMPONENT LOCATIONS:



DIGITS:

- CLOCK: 10" AMBER
- SCORE: 10" RED
- PERIOD: 7" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW

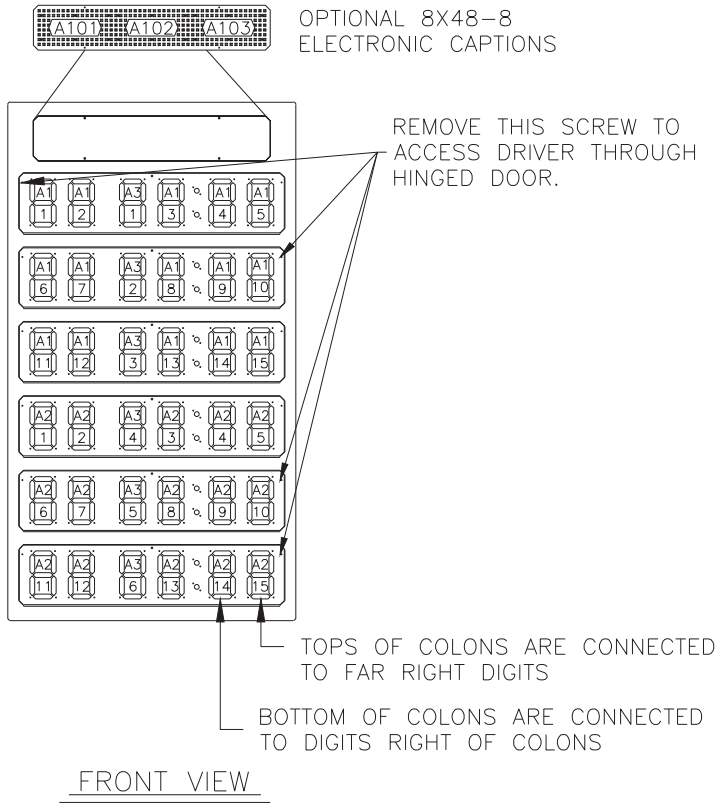
TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

DAKTRONICS, INC. BROOKINGS, SD 57006 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.	
	PROJ: TUFF SPORT™ SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- BB-2142	
DESIGN: CBRECZI SCALE: 1=20	DRAWN: CBRECZI	DATE: 16 FEB 05 X
SHEET	REV 02	JOB NO: P1237 FUNC-TYPE-SIZE: E-10-A
		234517

REV 02	DATE: 08 APR 11	UPDATED DOUBLE BONUS OPTIONS	BY: KDD
REV 01	DATE: 26 JAN 10	CHANGED TO 14 SEG DIGITS CHANGED SCALE FROM 1=40 TO 1=20	BY: JLR

DIGIT, SIGNAL AND POWER SPECIFICATIONS: **SD-2104**

NOTES:

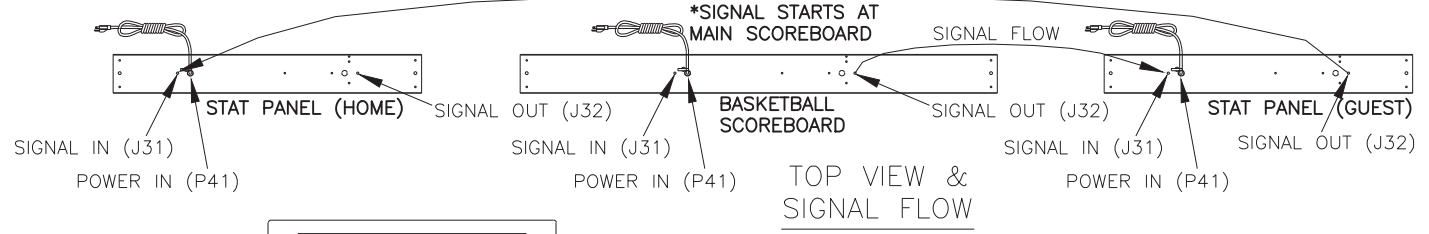


1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE LED DRIVER AND DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCORBOARD IS SHOWN WITH UNIVIEW™ TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION			
LEFT STATS SECTION		RIGHT STATS SECTION	
DRIVER:	A1	DRIVER:	A1
ADDRESS:	23	ADDRESS:	25
DRIVER:	A2	DRIVER:	A2
ADDRESS:	24	ADDRESS:	26
DRIVER:	A3	DRIVER:	A3
ADDRESS:	27	ADDRESS:	28
OPTIONAL ELEC CAPT		OPTIONAL ELEC CAPT	
ADDRESS:	223	ADDRESS:	223

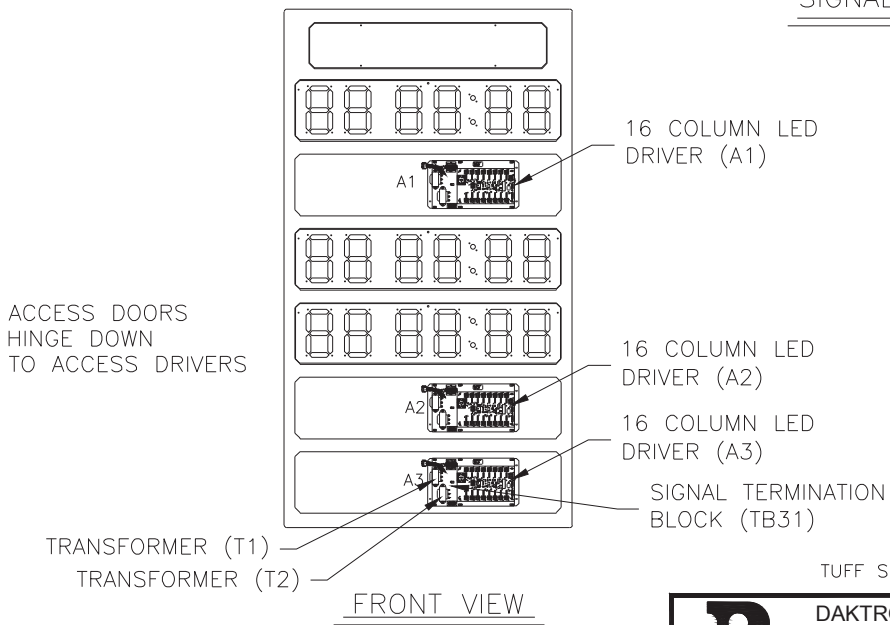
COMPONENT LOCATIONS:

SIGNAL FLOW



*SIGNAL INSTRUCTIONS:

- SIGNAL FROM SOURCE LANDS TO MAIN BASKETBALL SCOREBOARD FIRST.
- THEN OUT FROM SCOREBOARD TO IN ON STATS PANEL.
- AND OUT FROM STATS PANEL TO IN ON OTHER STATS PANEL.



DIGITS

- PLYR: 10" AMBER
- FLS: 10" RED
- PTS: 10" RED

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	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC- SD-2104 DESIGN: EREBHAH DRAWN: JBANNAWA DATE: 28 FEB 05 SCALE: 1=40		
SHEET 01	REV 01	JOB NO: 1237	FUNC-TYPE-SIZE E-10-A
			235393

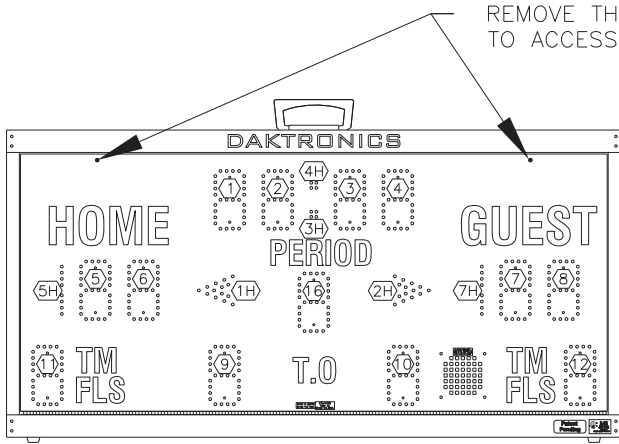
REV 01	DATE: 02 MAR 12	ADDED SCBD AND SIGNAL ROUTING.	BY: SMB
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BB-2143

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE LED DRIVER AND DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

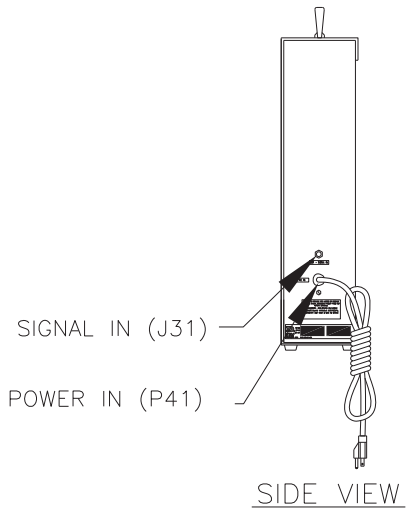


FRONT VIEW

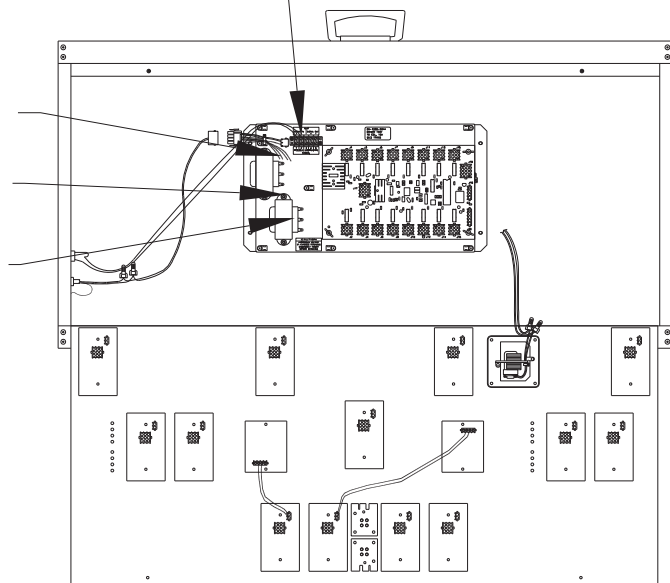
ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

COMPONENT LOCATION:

SIGNAL TERMINATION BLOCK (TB31)



SIDE VIEW



FRONT VIEW
WITH DOOR OPEN

DIGITS:

- CLOCK: 5" AMBER
- SCORE: 5" RED
- PERIOD: 5" AMBER
- TM FLS: 5" AMBER
- T.O.: 5" AMBER
- POSSESSION: 3" RED ARROW

TUFF SPORT™ & UNIVIEW™ ARE TRADEMARKS OF DAKTRONICS

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2143

DES. BY: EREBAHN DRAWN BY: JFELDHA DATE: 01 SEP 05

REV.	DATE	DESCRIPTION	BY	APPR.
01	19 JUN 06	ADDED HORN DETAIL TO DRAWING.	JLF	CW

REVISION	APPR. BY:	1237-E10A-252742
01	SCALE: 1=15	

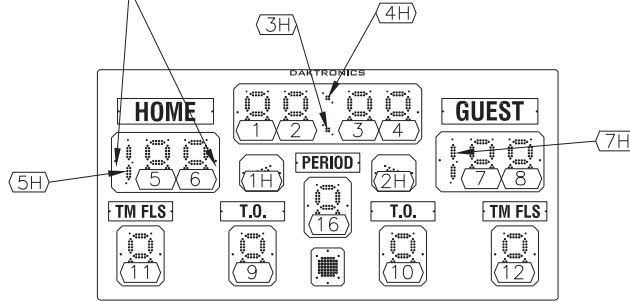
DIGIT, SIGNAL AND POWER SPECIFICATIONS:

BB-2144

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

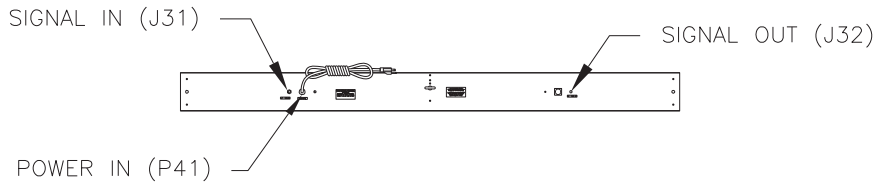
REMOVE THESE SCREWS TO ACCESS DRIVER BEHIND REMOVEABLE PANEL



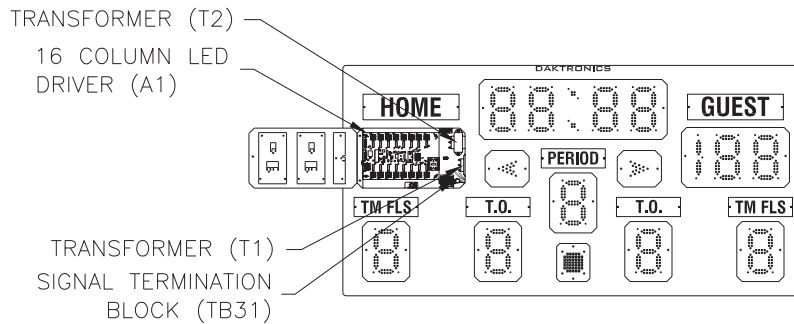
FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	17

COMPONENT LOCATIONS:



TOP VIEW



FRONT VIEW

DIGITS:

- CLOCK: 7" AMBER
- SCORE: 7" RED
- PERIOD: 7" AMBER
- TM FLS: 7" RED
- T.O.: 7" AMBER
- POSSESSION: 3" RED ARROW

TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT SCOREBOARDS

TITLE: ELECTRICAL & SIGNAL SPEC, BB-2144

DES. BY: EREBHAWN

DRAWN BY: JFELDHA

DATE: 01 SEP 05

REVISION

APPR. BY:

00

SCALE: 1=30

1237-E10A-252744

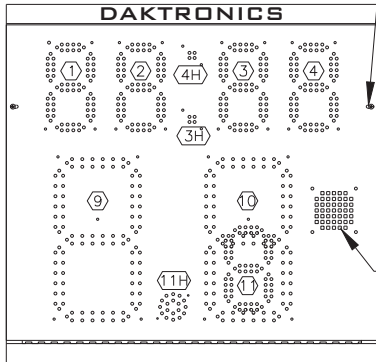
REV.	DATE	DESCRIPTION	BY	APPR.

BB-2152

NOTES:

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.



DS1 (HORN) DEFAULT SETTING:
GAME HORN & SHOT HORN

FRONT VIEW

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

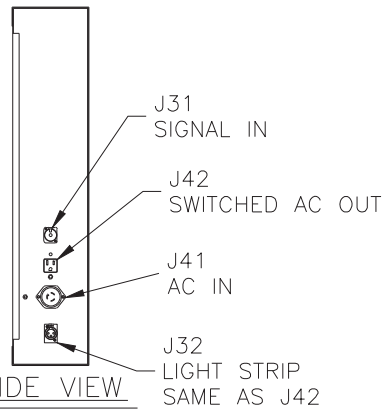
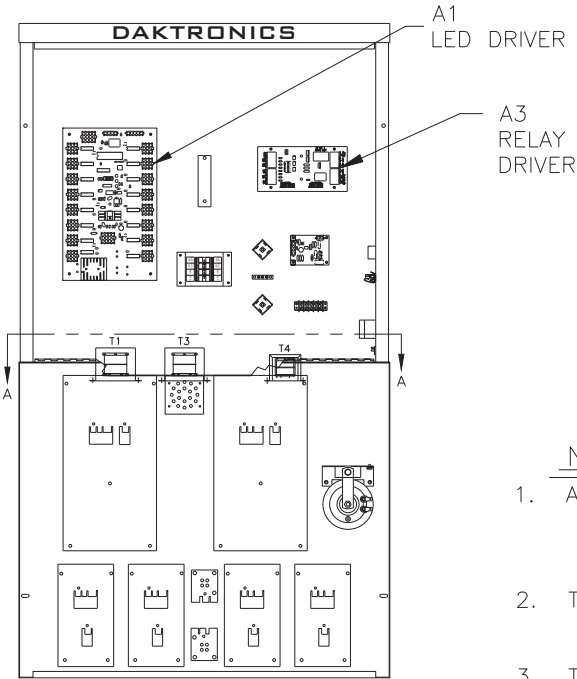
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.

4. THE SCOREBOARD IS SHOWN WITH PANAVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

COMPONENT LOCATIONS:

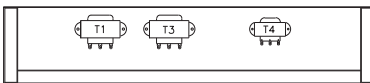


SIDE VIEW

NOTES:

- A3 BOARD CAPABILITES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & DS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
- TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRAY PIGTAIL WIRES AT TB1 ON A3 TO A DIFFERENT VALUE.
- TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
- LIGHT STRIP OPTION ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
- *5. IN DECEMBER 2012, TRANSFORMER (T4) WAS REPLACED WITH A POWER SUPPLY. REFER TO FINAL ASSEMBLY DRAWING FOR CURRENT COMPONENT LOCATIONS. DWG-1075296.

FRONT VIEW



SECTION: A-A

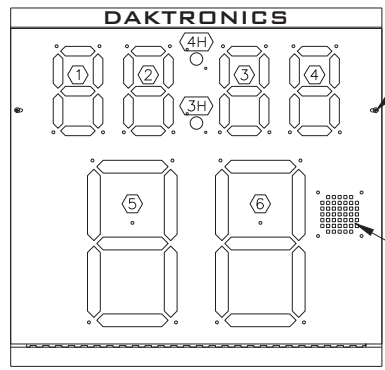
TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

DAKTRONICS, INC. BROOKINGS, SD 57006 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.		
	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC, BB-2152		
DESIGN: MCARSRU SCALE: 1/15	DRAWN: MCARSRU	DATE: 27 JUN 11	
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
	02	P1237	E-10-A
			1059565

REV 02	DATE: 4 JAN 13	ADDED NOTE #5	BY: MBJ
REV 01	DATE: 23 AUG 11	UPDATED LAYOUT OF ELECTRICAL COMPONENTS. CHANGED LS1 TO DS1. REMOVED REFERENCE TO J18 ON A1. REMOVED NOTES #5.	BY: CJH

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:



TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

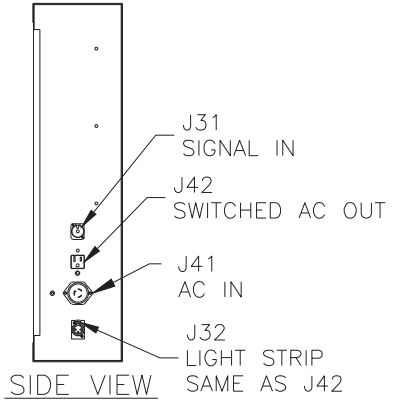
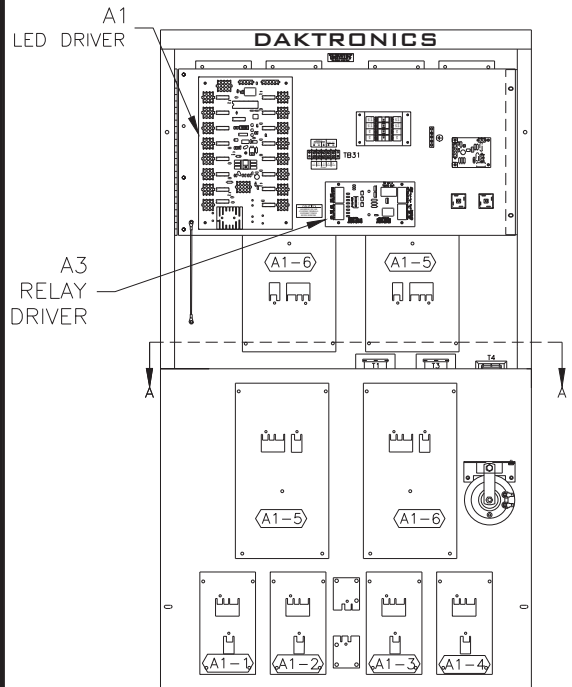
DS1 (HORN) DEFAULT SETTING: GAME HORN & SHOT HORN

FRONT VIEW

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

COMPONENT LOCATIONS:

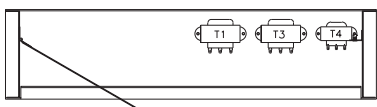


SIDE VIEW

NOTES:

1. A3 BOARD CAPABILITES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & DS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
2. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES AT TB1 ON A3 TO A DIFFERENT VALUE.
3. TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
4. LIGHT STRIP OPTION ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
5. SEE DRAWING A-223340 FOR PRIOR COMPONENT LOCATIONS.
- *6. IN DECEMBER 2012, TRANSFORMER (T4) WAS REPLACED WITH A POWER SUPPLY. REFER TO FINAL ASSEMBLY DRAWINGS FOR CURRENT COMPONENT LOCATIONS. DWG-1048494 & DWG-1059806.

FRONT VIEW



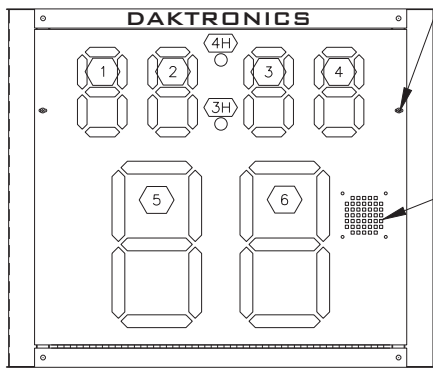
SECTION: A-A

DAKTRONICS, INC. BROOKINGS, SD 57006 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.		
	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC; BB-2109 DESIGN: CHAMILT DRAWN: CHAMILT DATE: 23 AUG 11 SCALE: 1:15		
SHEET 01	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A
			1066474

REV	DATE:	ADDED NOTE #6	BY:
01	4 JAN 13		MBJ

BB-2111

DIGIT, SIGNAL AND POWER SPECIFICATIONS:



FRONT VIEW
(FACE A)

TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

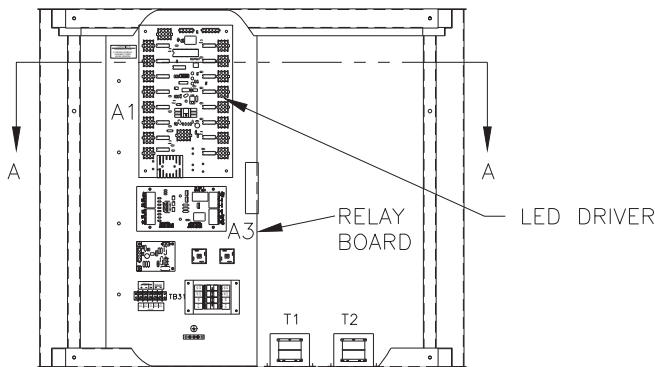
DS1 (HORN) DEFAULT SETTING: GAME HORN & SHOT HORN

NOTES:

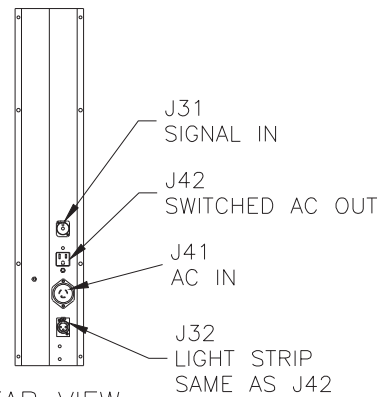
1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION		ADDRESS INFORMATION	
DRIVER:	A1	DRIVER:	A2
ADDRESS:	1	ADDRESS:	1

COMPONENT LOCATIONS:



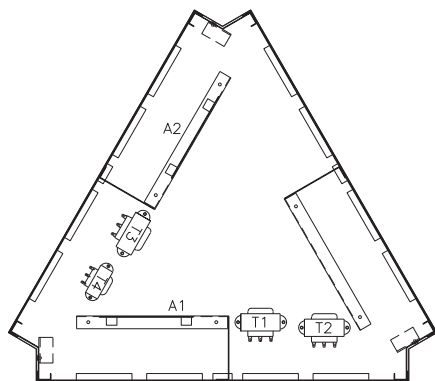
FRONT VIEW
WITH FACE PANEL REMOVED



REAR VIEW

NOTES:

1. A3 BOARD CAPABILITES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & DS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
2. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES AT TB1 ON A3 TO A DIFFERENT VALUE.
3. TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
4. LIGHT STRIP OPTION ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
5. SEE DRAWING A-224482 FOR PRIOR COMPONENT LOCATIONS.
- *6. IN DECEMBER 2012, TRANSFORMER (T4) WAS REPLACED WITH A POWER SUPPLY. REFER TO FINAL ASSEMBLY DRAWINGS FOR CURRENT COMPONENT LOCATIONS. DWG-1048495 & DWG-1061106



SECTION: A-A

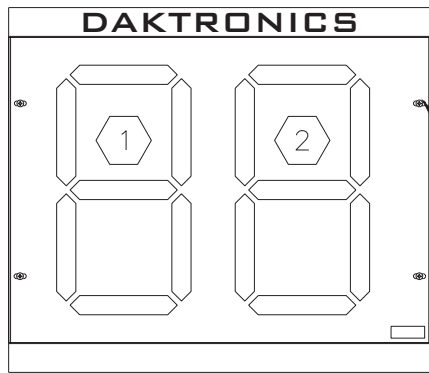
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DAKTRONICS, INC. BROOKINGS, SD 57006 DO NOT SCALE DRAWING	THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2011 DAKTRONICS, INC.		
	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC; BB-2111 DESIGN: CHAMILT DRAWN: CHAMILT DATE: 23 AUG 11 SCALE: 1:15		
SHEET 01	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A
			1066476

REV	DATE:	ADDED NOTE #6	BY:
01	4 JAN 13		MBJ

BB-2114

DIGIT, SIGNAL AND POWER SPECIFICATIONS:



FRONT VIEW

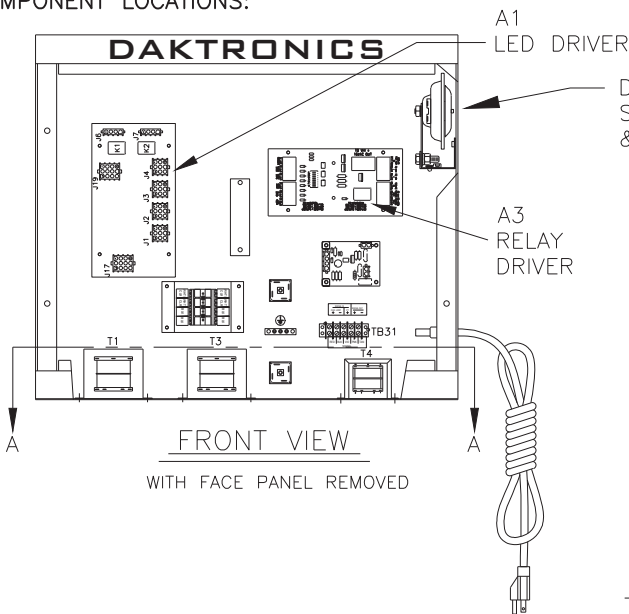
TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE FOUR SCREWS SECURING THE FACE PANEL.

NOTES:

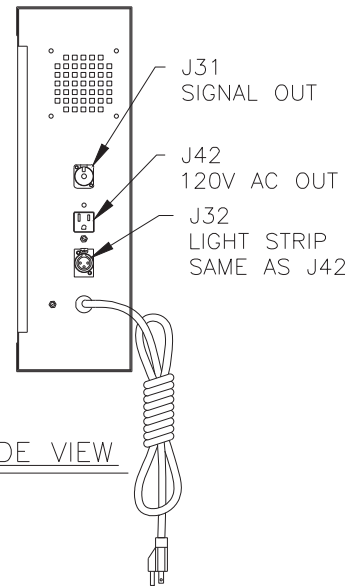
1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

COMPONENT LOCATIONS:



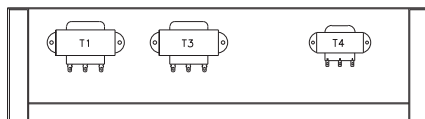
FRONT VIEW WITH FACE PANEL REMOVED



SIDE VIEW

NOTES:

1. DS1 IS CONNECTED TO THE SHOT CLOCK HORN SEGMENT.
2. J42 IS CONNECTED TO THE GAME CLOCK=O SEGMENT.
3. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES AT TB1 ON A3 TO A DIFFERENT VALUE.
- *4. IN DECEMBER 2012, TRANSFORMER (T4) WAS REPLACED WITH A POWER SUPPLY. REFER TO FINAL ASSEMBLY DRAWINGS FOR CURRENT COMPONENT LOCATIONS. DWG-1059340 & DWG-1059341.



SECTION: A-A

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	PROJ: TUFF SPORT SCOREBOARD TITLE: ELECTRICAL AND SIGNAL SPEC; BB-2114 DESIGN: CHAMILT DRAWN: CHAMILT DATE: 23 AUG 11 SCALE: 1:10		
SHEET 01	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A
			1066481

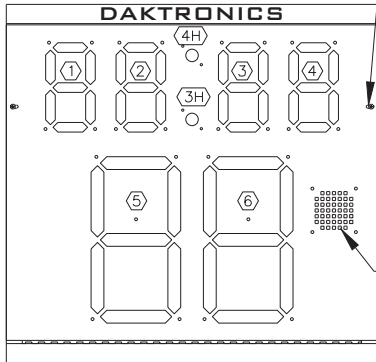
REV	DATE:	ADDED NOTE #4	BY:
01	4 JAN 13		MBJ

BB-2115

NOTES:

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.



DS1 (HORN) DEFAULT SETTING:
GAME HORN & SHOT HORN

FRONT VIEW

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

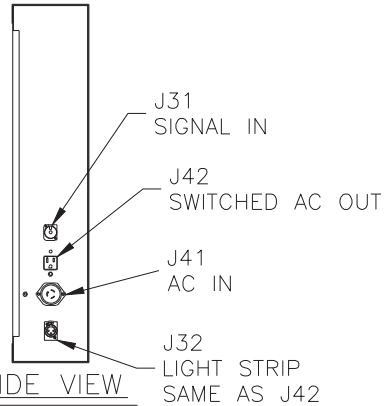
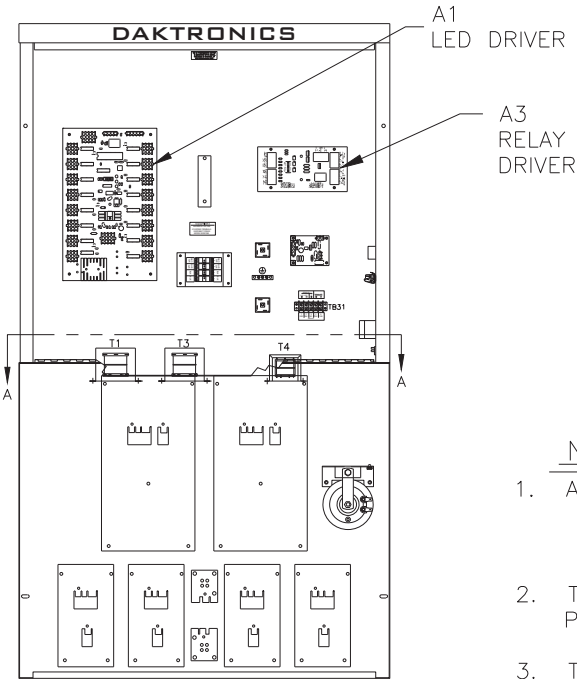
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**

4. THE SCOREBOARD IS SHOWN WITH UNVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

COMPONENT LOCATIONS:

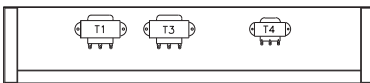


SIDE VIEW

NOTES:


- A3 BOARD CAPABILITES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & DS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
- TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES AT TB1 ON A3 TO A DIFFERENT VALUE.
- TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
- LIGHT STRIP OPTION ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
- SEE DRAWING A-224479 FOR PRIOR COMPONENT LOCATIONS.
- *6. IN DECEMBER 2012, TRANSFORMER (T4) WAS REPLACED WITH A POWER SUPPLY. REFER TO FINAL ASSEMBLY DRAWINGS FOR CURRENT COMPONENT LOCATIONS. DWG-1048496 & DWG-1060433.

FRONT VIEW



SECTION: A-A

TUFF SPORT™, UNVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

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	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC; BB-2115 DESIGN: CHAMILT DRAWN: CHAMILT DATE: 23 AUG 11 SCALE: 1:15		
SHEET 01	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A 1066704

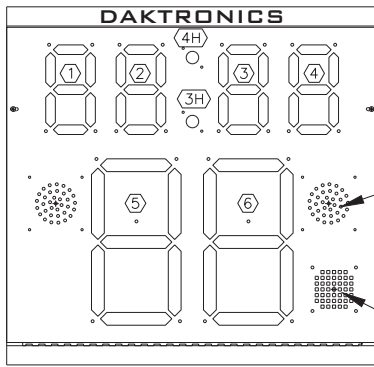
REV	DATE:	ADDED NOTE #6	BY:
01	4 JAN 13		MBJ

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

BB-2130

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

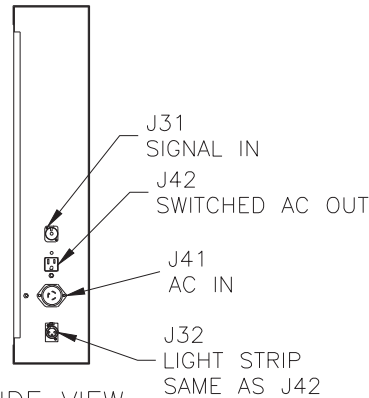
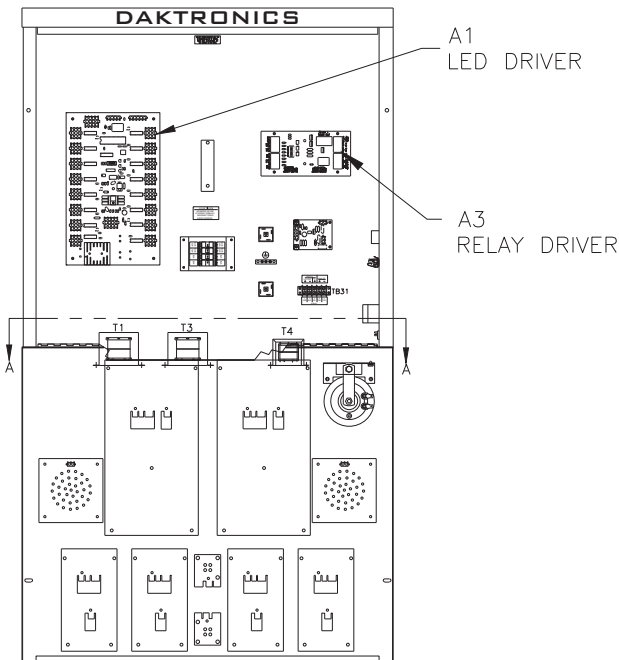
(A3) V.H.I. INDICATORS DEFAULT SETTINGS: CLK = 0

DS1 (HORN) DEFAULT SETTING: GAME HORN & SHOT HORN

FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

COMPONENT LOCATIONS:

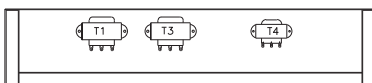


SIDE VIEW

NOTES:

1. A3 BOARD CAPABILITES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & DS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
2. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES AT TB1 ON A3 TO A DIFFERENT VALUE.
3. TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
4. LIGHT STRIP OPTION AND VHI LED CLUSTER ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
- *5. IN DECEMBER 2012, TRANSFORMER (T4) WAS REPLACED WITH A POWER SUPPLY. REFER TO FINAL ASSEMBLY DRAWINGS FOR CURRENT COMPONENT LOCATIONS. DWG-1061243 & DWG-1061247.

FRONT VIEW



SECTION: A-A

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	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC; BB-2130 DESIGN: CHAMILT DRAWN: CHAMILT DATE: 23 AUG 11 SCALE: 1:15		
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
01	01	P1237	E-10-A
			1066714

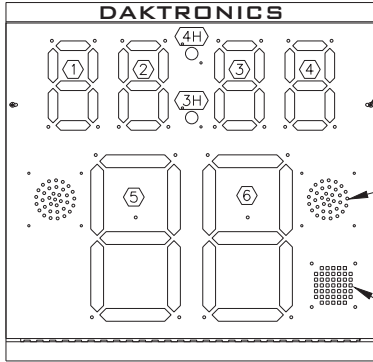
REV	DATE:	ADDED NOTE #6	BY:
01	4 JAN 13		MBJ

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

BB-2131

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

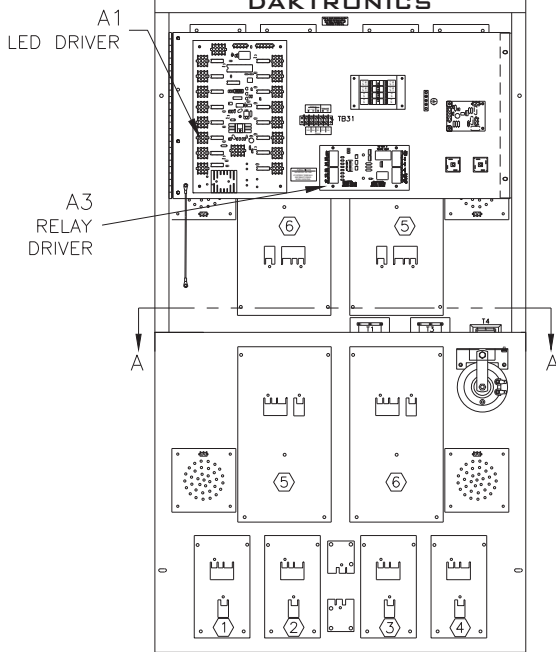
(A3) V.H.I. INDICATORS
DEFAULT SETTINGS:
CLK = 0

DS1 (HORN) DEFAULT SETTING:
GAME HORN & SHOT HORN

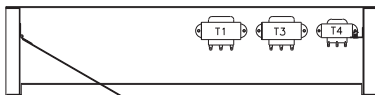
FRONT VIEW

ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

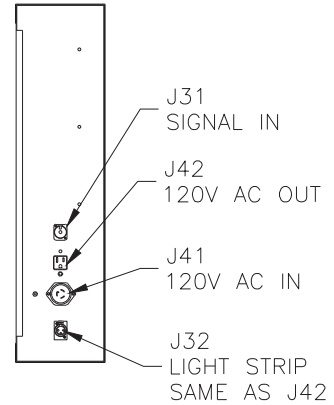
COMPONENT LOCATIONS:



FRONT VIEW



SECTION: A-A



SIDE VIEW

NOTES:

1. A3 BOARD CAPABILITIES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & DS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
2. TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRAY PIGTAIL WIRES AT TB1 ON A3 TO A DIFFERENT VALUE.
3. TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
4. LIGHT STRIP OPTION AND VHI LED CLUSTER ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
- *5. IN DECEMBER 2012, TRANSFORMER (T4) WAS REPLACED WITH A POWER SUPPLY. REFER TO FINAL ASSEMBLY DRAWING FOR CURRENT COMPONENT LOCATIONS. DWG-1061399.

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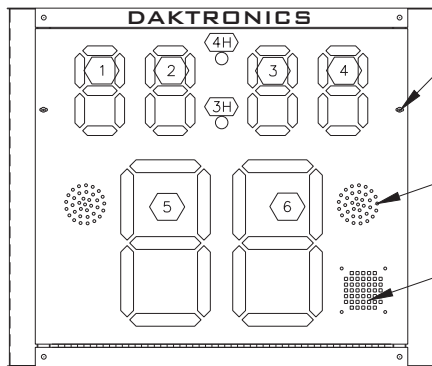
DAKTRONICS, INC. BROOKINGS, SD 57006 DO NOT SCALE DRAWING	THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2011 DAKTRONICS, INC.		
	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC; BB-2131 DESIGN: CHAMILT DRAWN: CHAMILT DATE: 23 AUG 11 SCALE: 1:15		
SHEET 01	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A
			1066721

REV	DATE:	ADDED NOTE #	BY:
01	4 JAN 13		MBJ

BB-2132

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:



TO GAIN ACCESS TO THE INTERIOR COMPONENTS, REMOVE THE SCREWS SECURING THE FACE PANEL. DOOR SWINGS DOWN ON HINGE.

(A3) V.H.I. INDICATORS
DEFAULT SETTING: CLK = 0

DS1 (HORN) DEFAULT SETTING:
GAME HORN & SHOT HORN

FRONT VIEW

(FACE A)

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.

2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.

3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**

4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

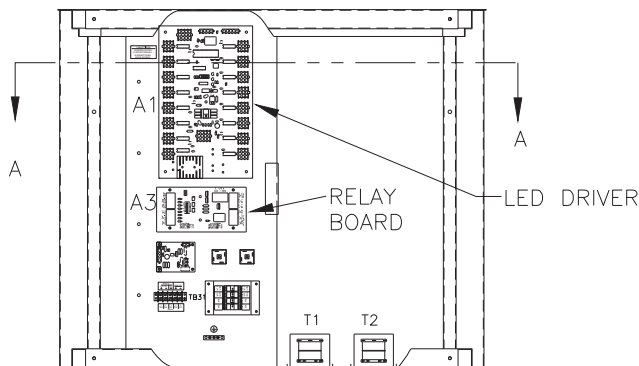
ADDRESS INFORMATION

DRIVER:	A1
ADDRESS:	1

ADDRESS INFORMATION

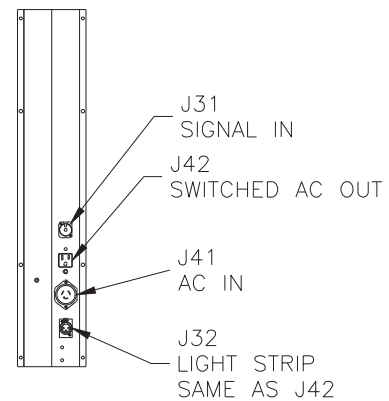
DRIVER:	A2
ADDRESS:	1

COMPONENT LOCATIONS:



FRONT VIEW

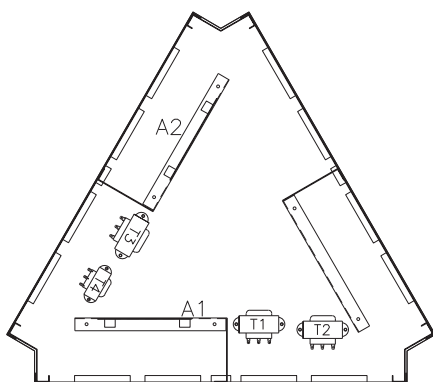
WITH FACE PANEL REMOVED



REAR VIEW

NOTES:

- A3 BOARD CAPABILITIES ARE GAME HORN, SHOT HORN, CLK = STOP, CLK = 0. J32/J42 (TOGETHER), & DS1 CAN BE SET TO DIFFERENT VALUES IF REQUIRED.
- TO CHANGE DEFAULT FUNCTION OF HORN, RECONNECT GRY PIGTAIL WIRES AT TB1 ON A3 TO A DIFFERENT VALUE.
- TO ENABLE OTHER SEGMENTS, OR TO MAKE OTHER CHANGES, REFER TO A3 RELAY BOARD PER DWG-179151.
- LIGHT STRIP OPTION AND VHI LED CLUSTER ON ALL FACE PANELS ARE CONNECTED TO A3 RELAY BOARD. SEE DWG-179151.
- *5. IN DECEMBER 2012, TRANSFORMER (T4) WAS REPLACED WITH A POWER SUPPLY. REFER TO FINAL ASSEMBLY DRAWINGS FOR CURRENT COMPONENT LOCATIONS. DWG-1061522 & DWG-1061523.



SECTION: A-A

TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

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	PROJ: TUFF SPORT SCOREBOARDS TITLE: ELECTRICAL AND SIGNAL SPEC; BB-2132 DESIGN: CHAMILT DRAWN: CHAMILT DATE: 23 AUG 11 SCALE: 1:15		
SHEET 01	REV 01	JOB NO: P1237	FUNC-TYPE-SIZE E-10-A 1066726

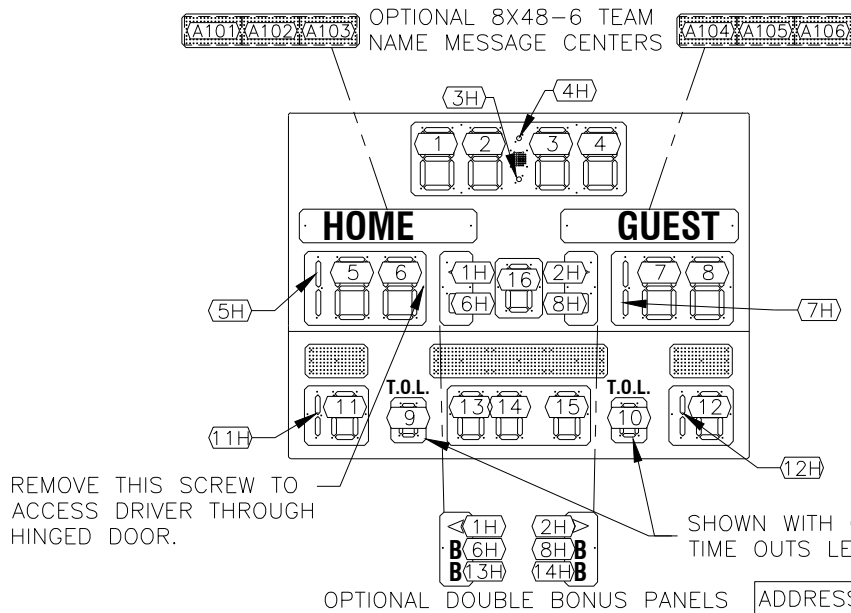
REV	DATE:	ADDED NOTE #	BY:
01	4 JAN 13		MBJ

BB-2153 & BB-2154 FACE

DIGIT, SIGNAL AND POWER SPECIFICATIONS:

NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.



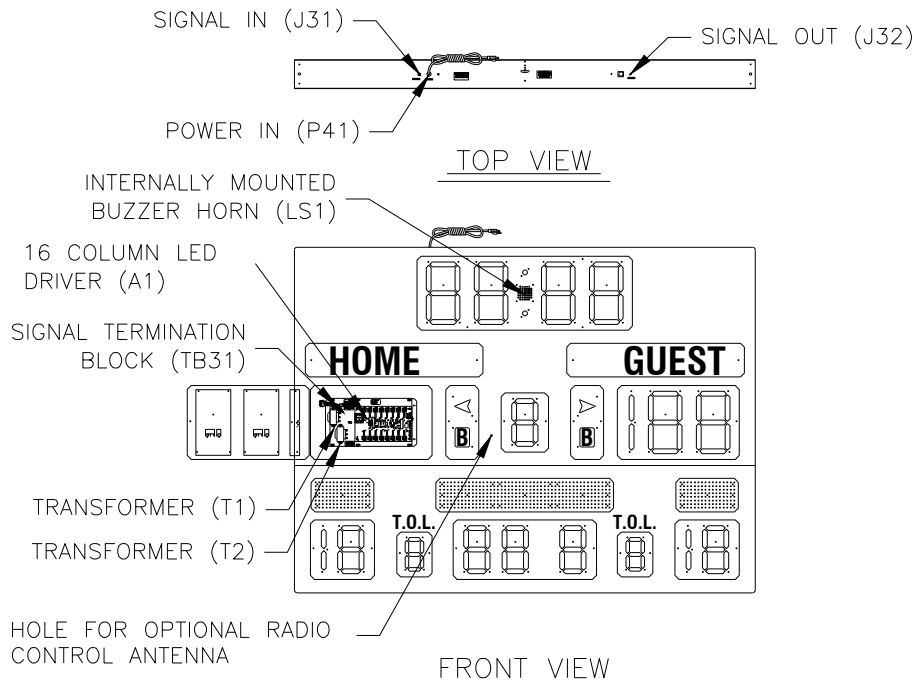
REMOVE THIS SCREW TO ACCESS DRIVER THROUGH HINGED DOOR.

OPTIONAL DOUBLE BONUS PANELS

ADDRESS INFORMATION	ADDRESS INFORMATION
BTM ELEC CAPTION	DRIVER: A1
ADDRESS: 228 HOME SIDE SELECT	ADDRESS: 17
	OPTIONAL TNMC, ADDRESS 221.

FRONT VIEW

COMPONENT LOCATIONS:



DIGITS:

- CLOCK: 13" AMBER
- SCORE: 13" RED
- PERIOD: 10" AMBER
- TEAM FOULS: 10" RED
- TIME OUTS LEFT: 7" AMBER
- PLAYER/FOUL: 10" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW

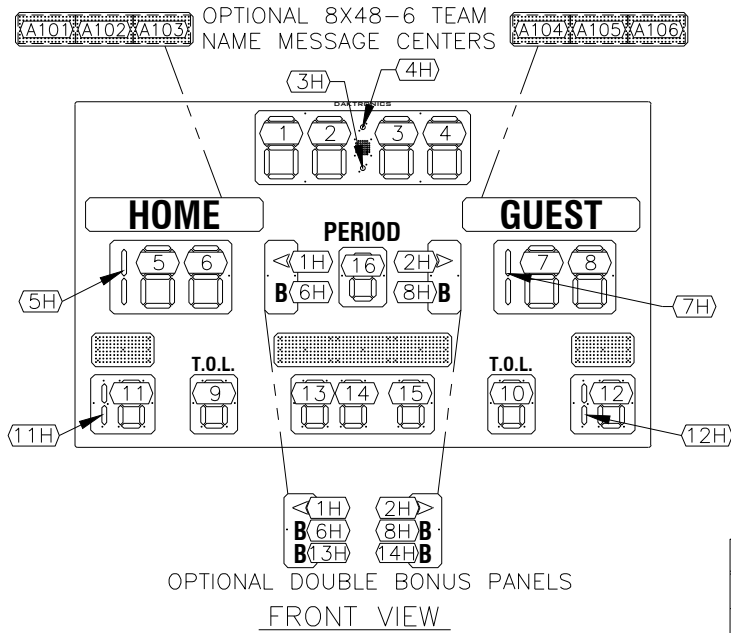
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	DO NOT SCALE DRAWING	
PROJ: TUFF SPORT SCOREBOARDS		
TITLE: ELECTRICAL AND SIGNAL SPEC; BB-2153 AND BB-2154		
DESIGN: Jvanaar	DRAWN: MJohnso	DATE: 9 JUL 12
SCALE: 1=40		
SHEET	REV	JOB NO:
01	01	P1237
FUNC -TYPE-SIZE	1104976	
E - 10 - A		

REV	DATE:	ADDED BB-2154 TO DWG	BY:	KDD
01	07 FEB 13			

BB-2155 & BB-2156 FACE

DIGIT, SIGNAL AND POWER SPECIFICATIONS:



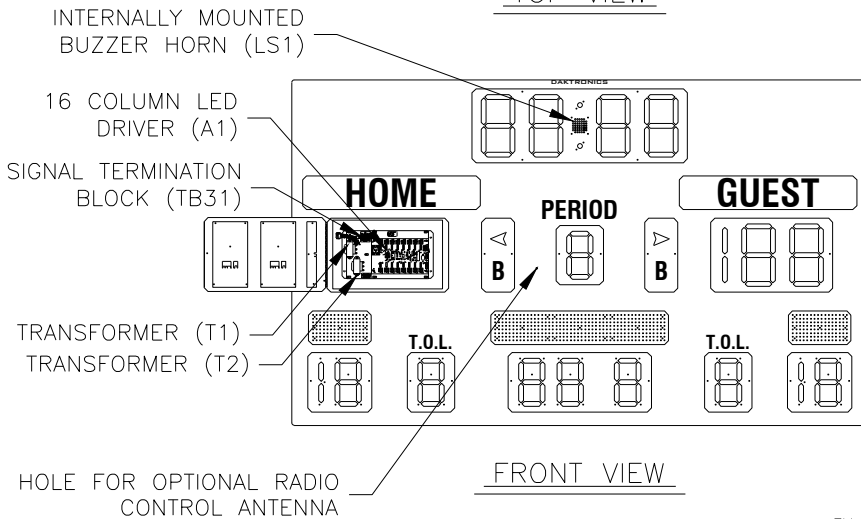
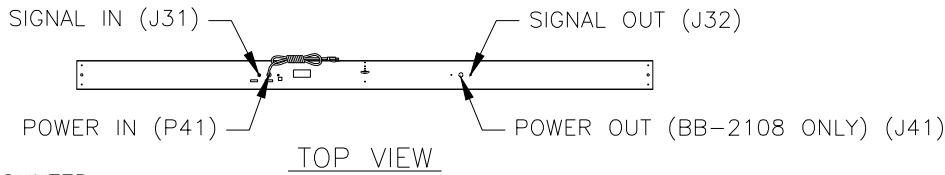
NOTES:

1. USE MINIMUM OF 22AWG, SHIELDED, TWO CONDUCTOR CABLE FOR SIGNAL TERMINATION.
2. THE NUMBER LISTED BY EACH DIGIT INDICATES THE DIGIT DESIGNATION IN RELATION TO THE LED DRIVER.
3. **DO NOT WORK ON ENERGIZED DISPLAY UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.**
4. THE SCOREBOARD IS SHOWN WITH UNIVIEW DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

ADDRESS INFORMATION
BTM ELEC CAPTION
ADDRESS: 228
HOME SIDE SELECT

ADDRESS INFORMATION
DRIVER: A1
ADDRESS: 17
OPTIONAL TNMC ADDRESS: 221

COMPONENT LOCATIONS:



DIGITS:

- CLOCK: 13" AMBER
- SCORE: 13" RED
- PERIOD: 10" AMBER
- TEAM FOULS: 10" RED
- TIME OUTS LEFT: 7" AMBER
- PLAYER/FOUL: 10" AMBER
- POSSESSION: 3" RED ARROW
- BONUS: 4" AMBER B & 3" ARROW

TUFF SPORT™, UNIVIEW™, & PANAVIEW™ ARE TRADEMARKS OF DAKTRONICS

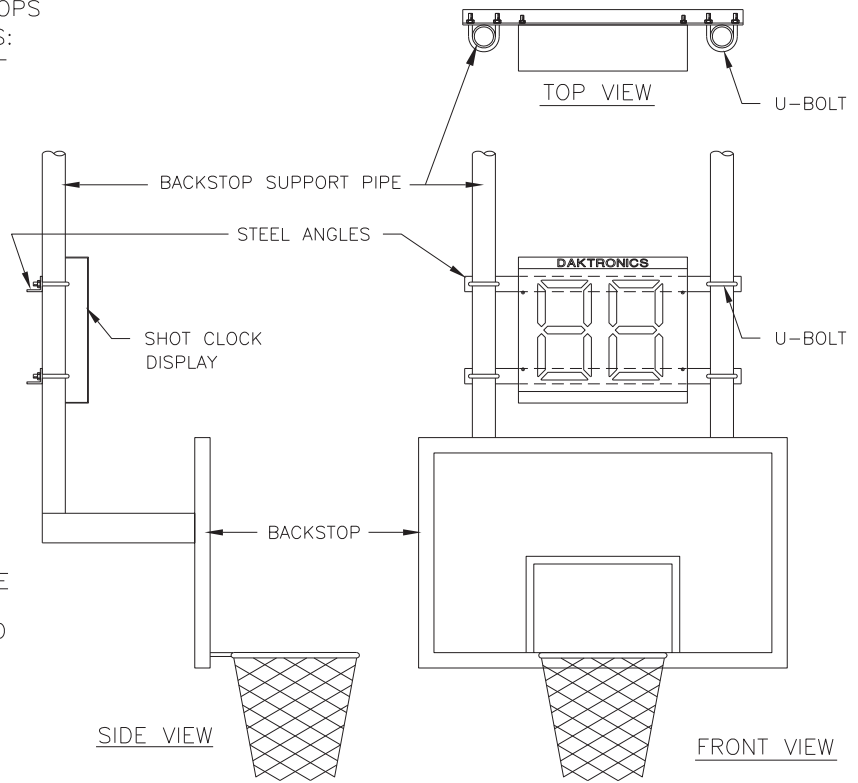
	DAKTRONICS, INC. BROOKINGS, SD 57006	THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2013 DAKTRONICS, INC.
	DO NOT SCALE DRAWING	
PROJ: TUFF SPORT SCOREBOARDS		
TITLE: ELECTRICAL AND SIGNAL SPEC, BB-2155 AND BB-2156		
DESIGN: KDRAGT	DRAWN: KDRAGT	DATE: 14 JAN 13
SCALE: 1=40		
SHEET	REV	JOB NO:
01	01	P1237
FUNC-TYPE-SIZE		1124199
E-10-A		

REV	DATE:	ADDED BB-2156 TO DWG	BY:
01	07 FEB 13		KDD

Appendix C: Scoreboard Options

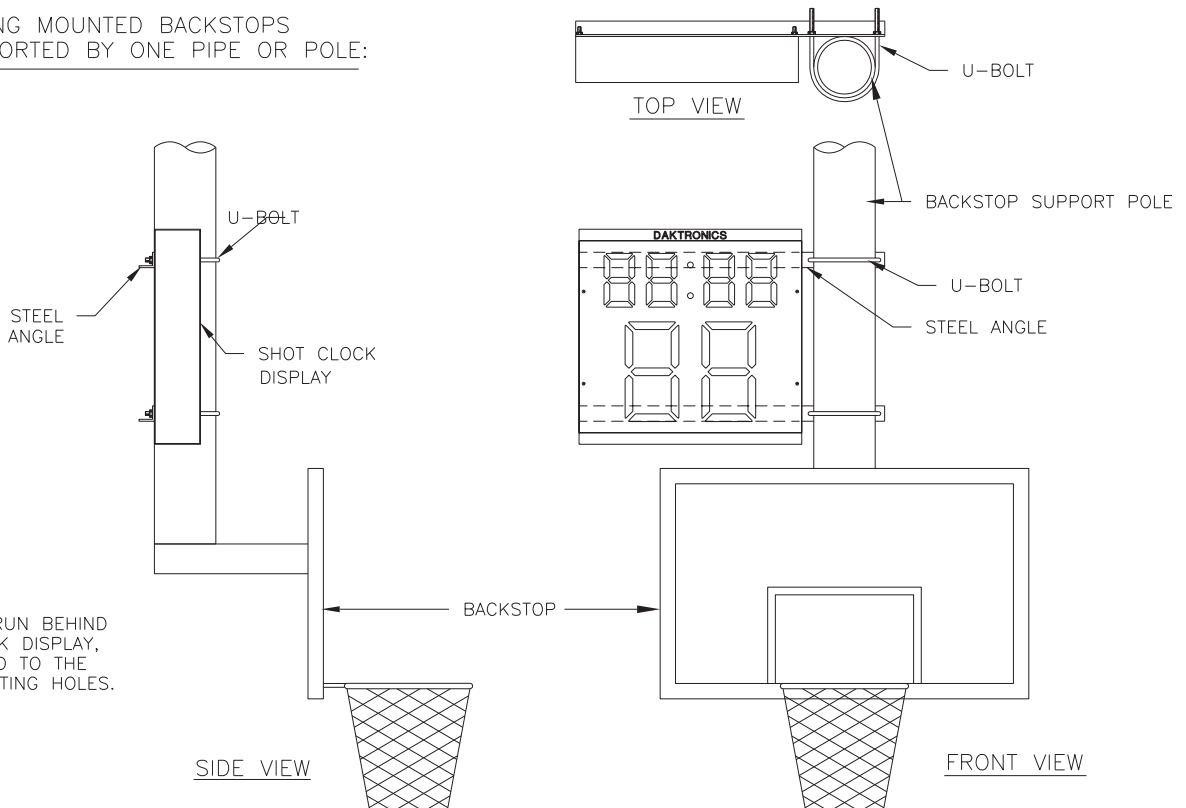
<i>Drawing Title</i>	<i>Drawing Number</i>
Backstop Mounting Suggestions	A-91230
Wiring for Shot Clock on Portable Backstop	A-98293
Advertising/Identification Display Mounting	A-147668
Suspension Lift Eye Installation	A-148644
12V DC Horn Option Installation.....	A-148960
T.O.L. Option Installation	A-149030
Changeable Team Name Caption Installation	A-150021
Corner Mounting	A-150831
ID or Ad Panel Mounting to Scoreboard	A-156134
Installation, 6" Amber 8x48 TNMC	A-148701
Installation- Programmable Caption- 0.75" 8x48	A-291200
Installation, Electronic Caption, BB-2153.....	A-1102462

CEILING MOUNTED BACKSTOPS
SUPPORTED BY TWO PIPES:



DAKTRONICS DOES NOT SUPPLY THE HARDWARE OR BRACKETS TO MOUNT SHOT CLOCK DISPLAYS TO BACKSTOPS. THE METHODS SHOWN ARE SUGGESTIONS FOR TWO COMMON BACKSTOP TYPES. DAKTRONICS, INC. IS NOT RESPONSIBLE FOR THE INTEGRITY OR SUITABILITY OF MOUNTING SYSTEMS MANUFACTURED AND INSTALLED BY OTHERS.

CEILING MOUNTED BACKSTOPS
SUPPORTED BY ONE PIPE OR POLE:



STEEL ANGLES RUN BEHIND THE SHOT CLOCK DISPLAY, AND ARE BOLTED TO THE DISPLAY'S MOUNTING HOLES.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: BACKSTOP MOUNTING SUGGESTIONS

DES. BY:

DRAWN BY: A VANBEMMEL

DATE: 13 MAR 97

REVISION

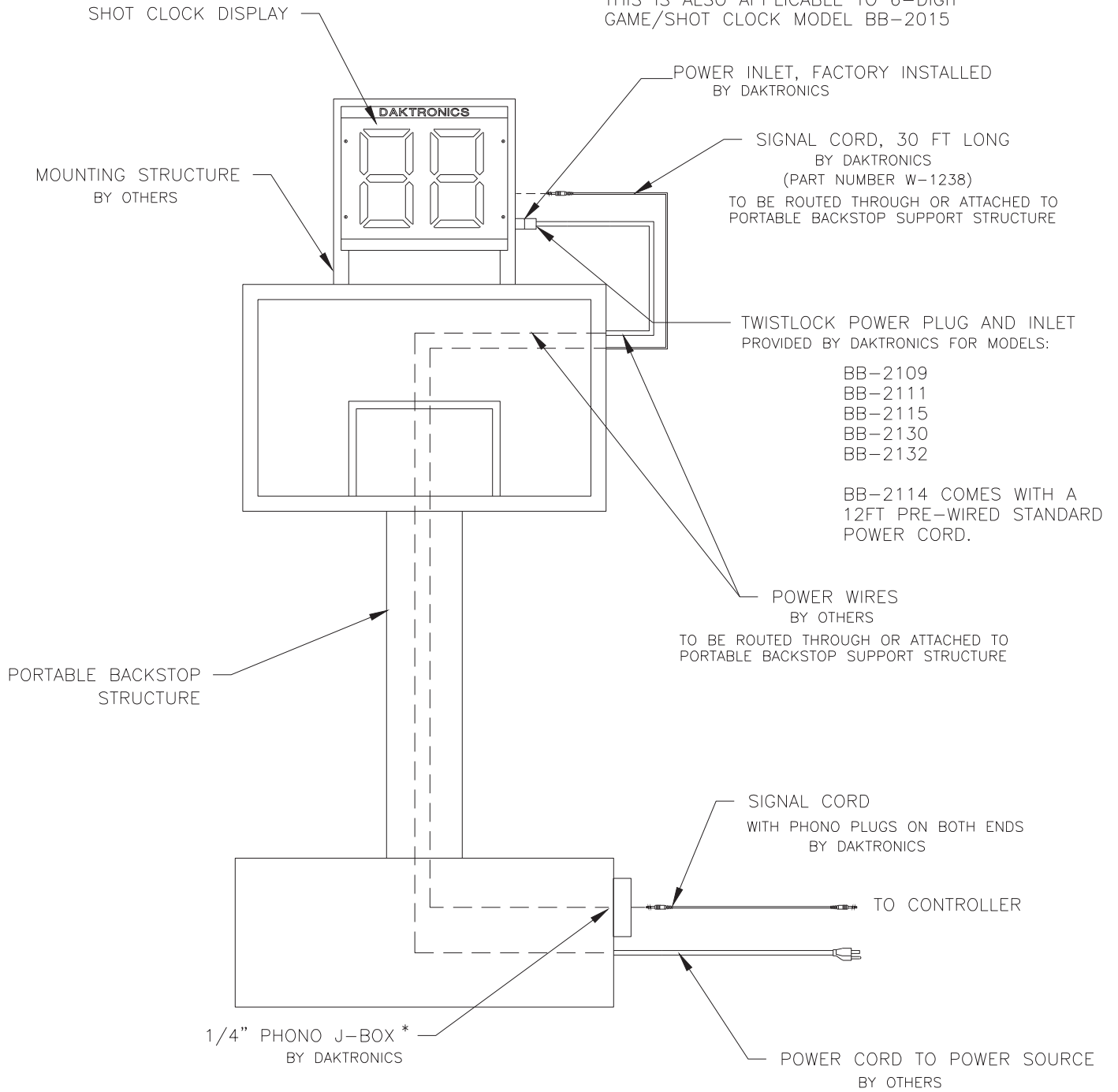
APPR. BY:

SCALE: NONE


1009-R10A-91230

REV.	DATE	DESCRIPTION	BY	APPR.

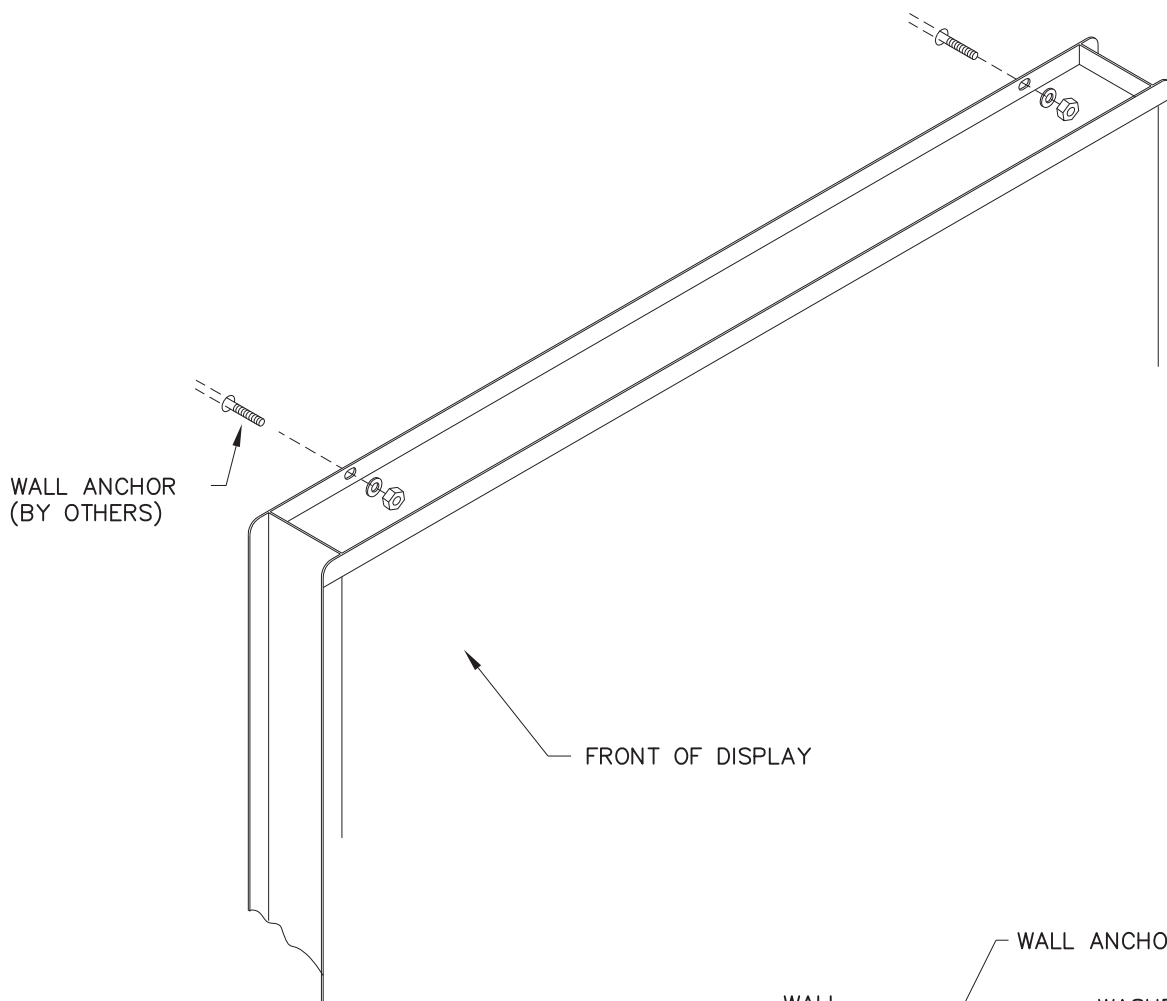
TWO-DIGIT SHOT CLOCK IS SHOWN.
THIS IS ALSO APPLICABLE TO 6-DIGIT
GAME/SHOT CLOCK MODEL BB-2015



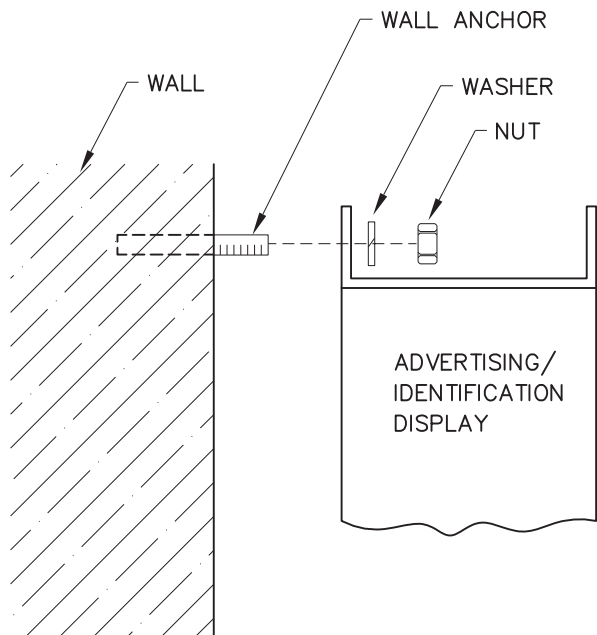
* SIGNAL CONNECTORS ARE 1/4" PHONO PLUGS.

 DAKTRONICS, INC. BROOKINGS, SD 57006 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 2010 DAKTRONICS, INC.
PROJ: BASKETBALL SCOREBOARDS TITLE: WIRING FOR SHOT CLOCK ON PORTABLE BACKSTOP		
DESIGN: AVB SCALE: NONE	DRAWN: A VANBEMMEL	DATE: 07 NOV 97
SHEET	REV 03	JOB NO: P1009
FUNC-TYPE-SIZE R-04-A		98293

REV 03	DATE: 09 DEC 10	CHANGED WIRING FORMAT	BY: JJD
REV 2	DATE: 29 JUN 99	DELETED TABLE. ADDED NOTE ABOUT BB-2015	BY: AVB
REV 1	DATE: 10 FEB 98	ADDED NEW MODELS TO THE TABLE	BY: DDL



ATTACH THE DISPLAY TO THE WALL USING MOUNTING LOCATIONS PROVIDED. QUANTITY AND POSITION OF MOUNTING LOCATIONS WILL VARY WITH MODEL. USE THE APPROPRIATE ANCHORS FOR THE TYPE OF WALL.



DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ:	
TITLE:	ADVERTISING/IDENTIFICATION DISPLAY MOUNTING
DES. BY:	JANDRE
DRAWN BY:	JANDRE
DATE:	16APR01
REVISION	APPR. BY:
	SCALE: NONE
1009-R10A-147668	

REV.	DATE	DESCRIPTION	BY	APPR.

MOUNT THE ANGLE (WITH 3/8" NUT) UNDER THE OVERHANG AT THE TOP OF THE SCOREBOARD. USE ONE ANGLE AT EACH END OF THE SCOREBOARD. SECURE WITH SCREWS INTO THE THREADED INSERTS MOUNTED IN THE SIDE OF THE SCOREBOARD.

INSTALL THE EYEBOLTS IN THE NUTS MOUNTED IN THE ANGLES.

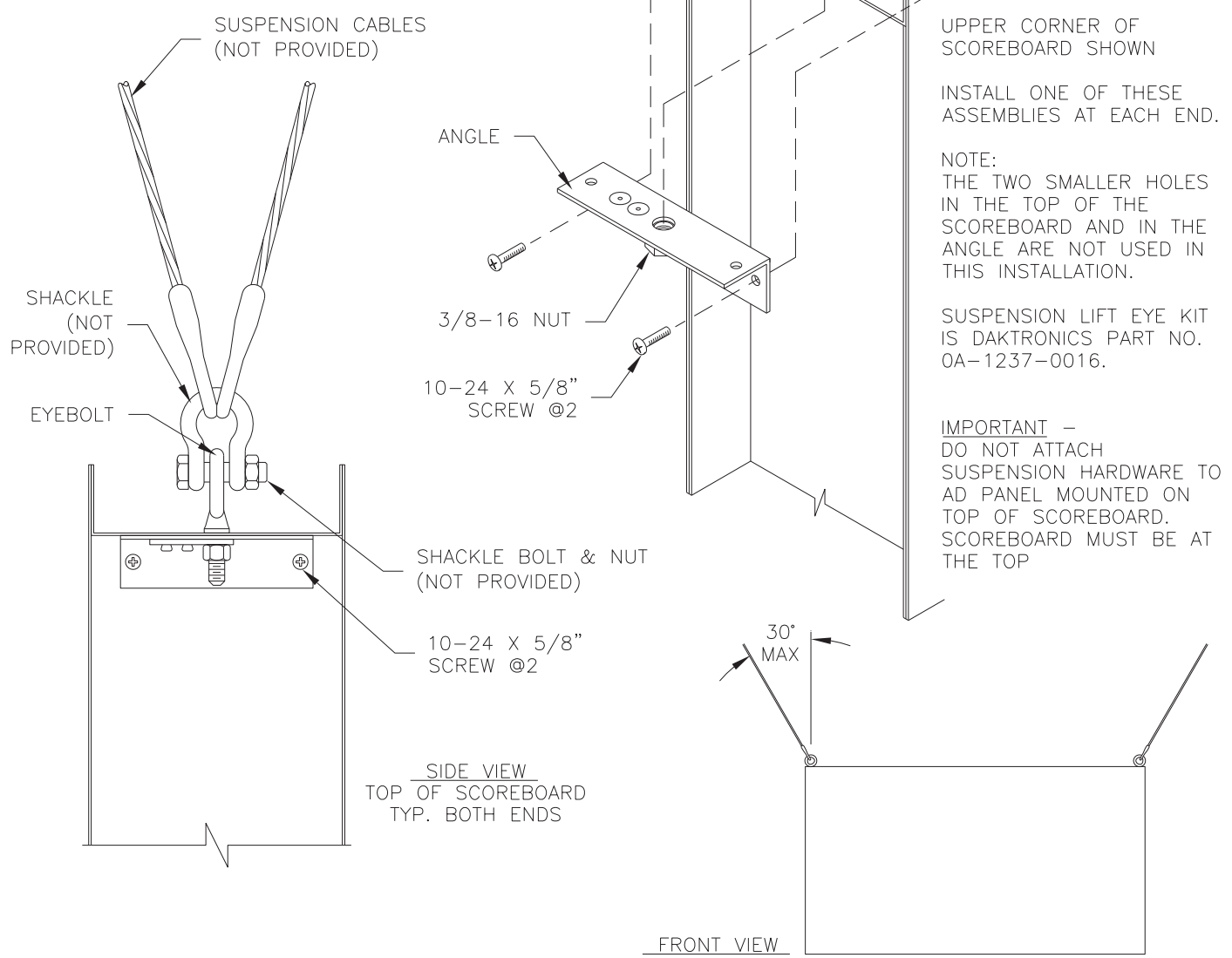
ATTACH SUSPENSION CABLES TO EACH EYEBOLT WITH A SHACKLE (CLEVIS) AND PIN.

DAKTRONICS RECOMMENDS THAT TWO CABLES BE USED AT EACH END OF THE SCOREBOARD FOR REDUNDANCY. CABLES DIVERGE TO MINIMIZE SWINGING.

CABLES AND HARDWARE MUST BE SPECIFIED BY A LICENSED ENGINEER. THIS INSTALLATION METHOD MUST NOT BE USED TO SUPPORT SCOREBOARD WITH MESSAGE CENTERS AND BACKLIT AD PANELS ATTACHED.

TOTAL WEIGHT OF SCOREBOARD AND ATTACHED ACCESSORIES MUST NOT EXCEED 500 LB.

SUSPENSION HARDWARE IS FOR THE TOP OF THE SCOREBOARD ONLY. SCOREBOARD INSTALLATION WITH AD PANEL MUST NOT BE SUSPENDED FROM THE AD PANEL. THE SCOREBOARD MUST BE AT THE TOP.

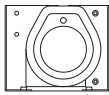


REV.	DATE	DESCRIPTION	BY	APPR.
03	23 OCT 02	REVERSED ORIENTATION OF NUT PLATE	AVB	
02	01 NOV 01	ADDED NOTES ABOUT NOT SUSPENDING FROM AN AD PANEL.	AVB	
01	27 SEP 01	ADDED KIT PART NUMBER AND NOTE THAT SHACKLE IS NOT PROVIDED.	AVB	

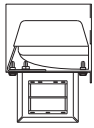
DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ:			
TITLE: SUSPENSION LIFT EYE INSTALLATION			
DES. BY: AVB		DRAWN BY: A VANBEMMEL	
		DATE: 09 MAY 01	
REVISION	APPR. BY:	1237-R10A-148644	
	SCALE: 1=4		

12V DC HORN OPTION INSTALLATION PROCEDURE

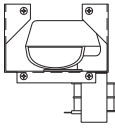
12V DC HORN
IN BRACKET:



TOP VIEW



SIDE VIEW



FRONT VIEW

REMOVE THE FOUR SCREWS SECURING THE CLOCK PANEL. DISCONNECT THE PLUGS AT THE BACK OF THE DIGITS, AND UNPLUG THE EXISTING BUZZER TYPE HORN.

REMOVE THE SCREWS THAT ATTACH THE BUZZER HORN TO THE CLOCK PANEL.

MOUNT THE 12V DC HORN TO THE CLOCK PANEL USING THE SCREWS PROVIDED WITH IT. IF MOUNTING HORN IN A UNIVIEW APPLICATION, THE TRANSFORMER WILL HIT THE DIGITS SO NOTE THE FOLLOWING. CUT THE CABLE TIE OFF THE TRANSFORMER HARNESS AND REMOVE TRANSFORMER FROM HORN ASSEMBLY (SAVE HC-1470 SCREWS AS THEY WILL BE REUSED). IN ALTERNATE TRANSFORMER LOCATION MARKED BELOW, DRILL 0.203" (13/64") HOLES @2 IN BACKSHEET FOR TRANSFORMER. USING HC-1470 @2 (SAVED FROM ABOVE) AND HC-1243 @2 (FORWARDED WITH HORN ASSEMBLY), MOUNT TRANSFORMER TO BACKSHEET. MOUNT HORN ASSEMBLY TO CLOCK PANEL AS PREVIOUSLY NOTED.

TAKE THE HORN INTERFACE CARD, WITH HARNESSES CONNECTED TO IT, AND USE THE TAPE TO SECURE IT TO THE BACKSHEET. MAKE SURE IT IS AN OPEN SPOT SO IT DOESN'T GET TOUCHED WHEN THE PANEL IS PLACED BACK ON.

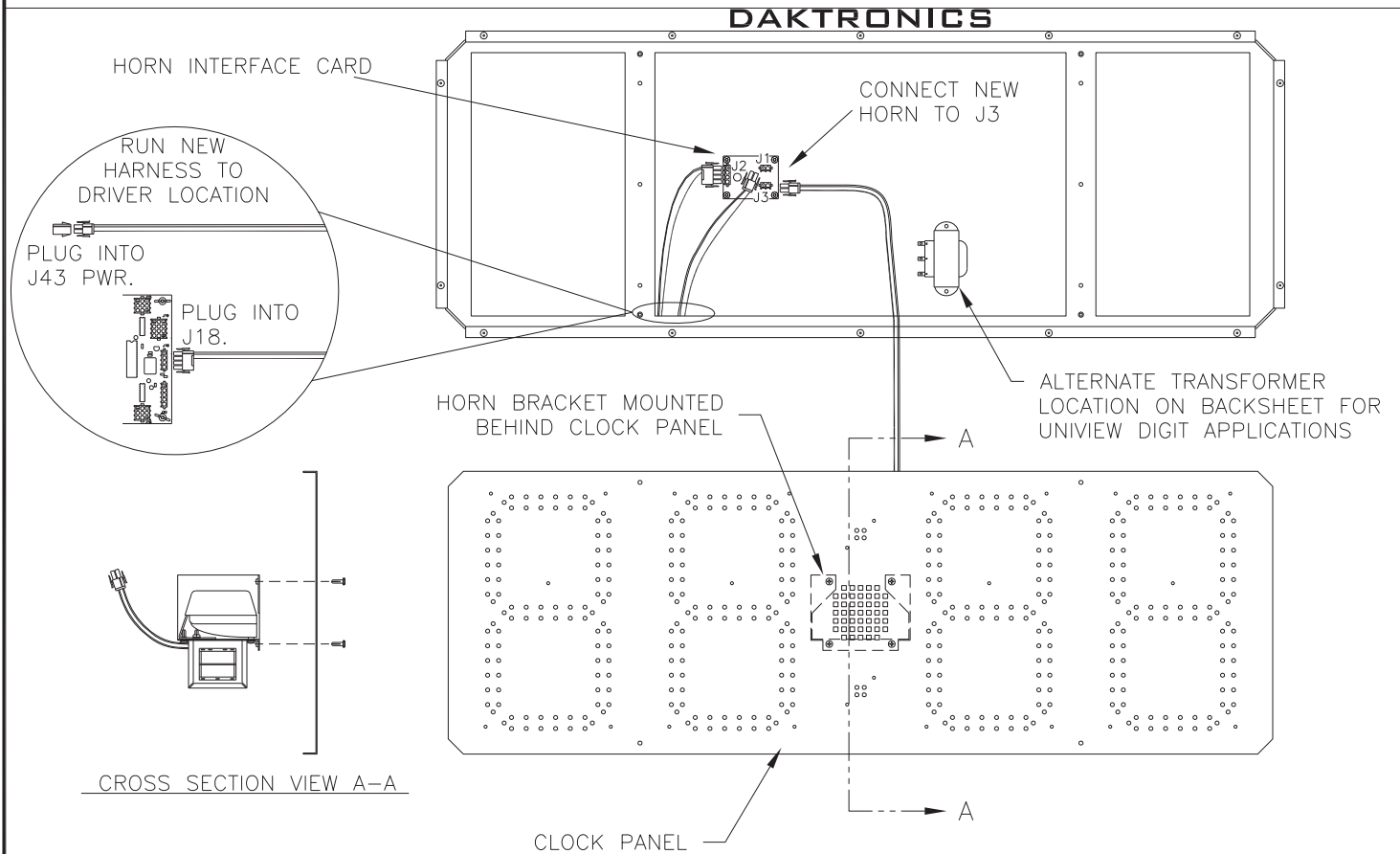
RUN THE TWO NEW HARNESSES TO THE DRIVER. DISCONNECT EXISTING PLUG IN J18 ON DRIVER. CONNECT NEW ONE. DISCONNECT EXISTING PLUG IN THE J43 POWER JACK ON DRIVER TRAY HARNESS THAT WAS FOR THE OLD HORN, AND PLUG IN THE NEW ONE.

CONNECT THE 2-PIN PLUG FROM THE HORN ASSEMBLY TO J3 ON THE HORN INTERFACE CARD.

PLUG THE DIGIT CABLES INTO THE BACKS OF THE DIGITS AND RE-INSTALL THE CLOCK PANEL.

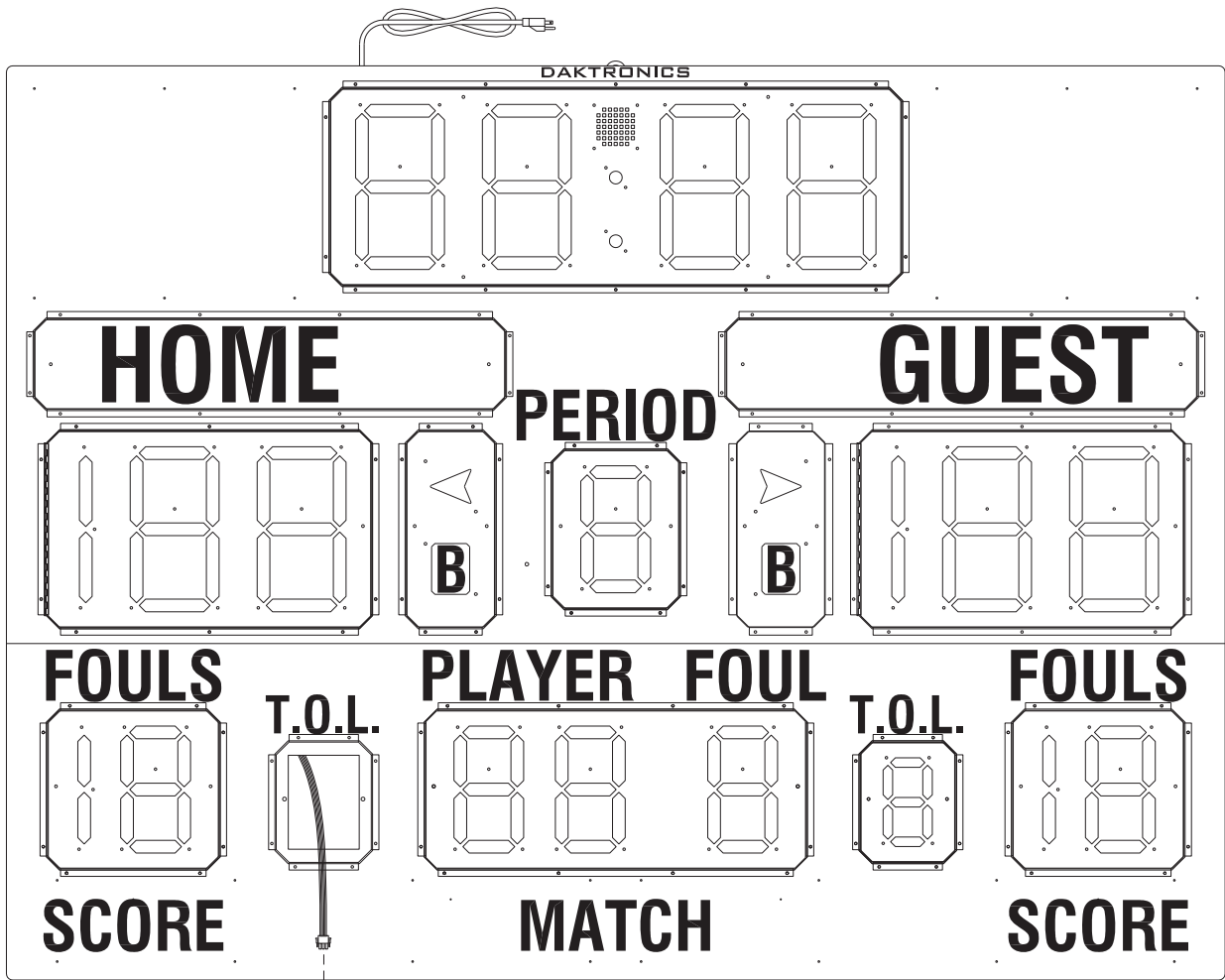
TEST THE HORN BY OPERATING THE SCOREBOARD AND PRESSING THE HORN BUTTON ON THE CONTROL CONSOLE.

FRONT OF SCOREBOARD, CLOCK AREA:



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 2002 DAKTRONICS, INC.			
DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: TUFF SPORT™ INDOOR SCOREBOARDS			
TITLE: 12V DC HORN OPTION INSTALLATION			
DES. BY: AVB		DRAWN BY: A VANBEMMEL	
		DATE: 16 MAY 01	
REVISION 03	APPR. BY:	1237-R10A-148960	
	SCALE: 1=10		

REV.	DATE	DESCRIPTION	BY	APPR.
03	07 JAN 10	UPDATED INSTALL DRAWING WITH HORN INTERFACE CARD DETAILS AND STEPS.	MWM	
02	20 JUN 06	UPDATED COLON AND HORN LAYOUT. REPLACED UNIVIEW DIGITS WITH PANAVIEW TO SHOW HORN MOUNTING. ADDED UNIVIEW HORN MTG NOTES. CHANGED DIGITS TO UNIVIEW.	JLF	CW
01	20 JUN 02		ALG	



9-PIN JACK LOCATION ON BACK OF DIGIT

T.O.L. DIGIT PANEL

1. REMOVE THE TWO BLANK PANELS CURRENTLY INSTALLED IN PLACE OF THE T.O.L. DIGITS.
2. LOCATE THE CABLES WITH 9-PIN PLUGS BEHIND THE BLANK PANELS. CONNECT THE PLUGS TO THE MATING JACK ON THE BACK OF EACH DIGIT.
3. INSTALL THE DIGITS IN THE OPENINGS AND SECURE WITH THE SCREWS THAT FORMERLY HELD THE BLANK PANELS.
4. APPLY THE "T.O.L." CAPTIONS ABOVE THE DIGITS.

NOTES:

THE SCOREBOARD IS SHOWN WITH UNIVIEW™ DIGIT TECHNOLOGY. SEE DRAWING A-158550 FOR MORE DETAILS.

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: TUFF SPORT™ SCOREBOARDS

TITLE: T.O.L. OPTION INSTALLATION

DES. BY: AVB

DRAWN BY: A VANBEMMEL

DATE: 17 MAY 01

REVISION

APPR. BY:

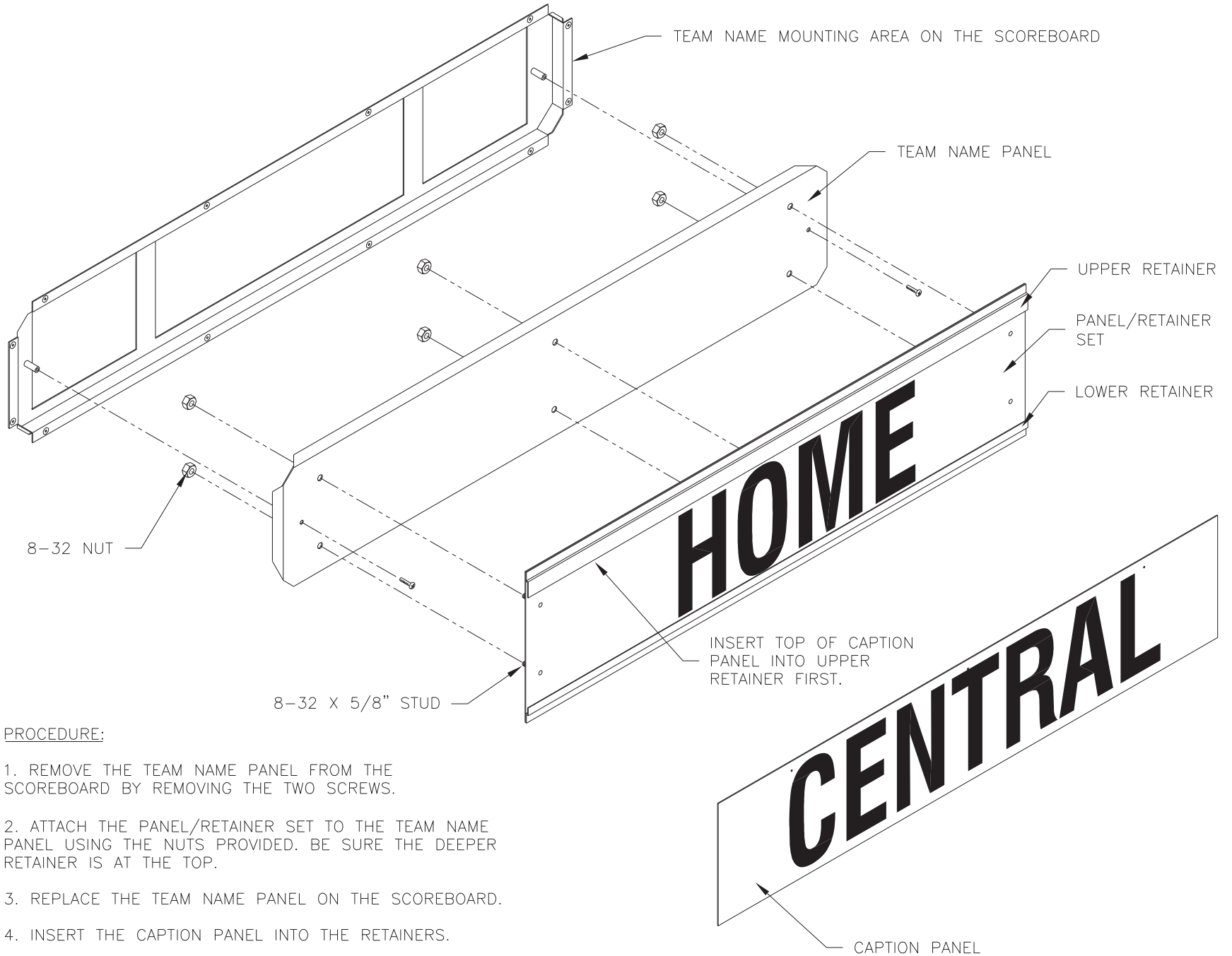
SCALE: 1=20

1237-R10A-149030

01	20 JUN 02	CHANGED DIGITS TO UNIVIEW.	ALG	
REV.	DATE	DESCRIPTION	BY	APPR.

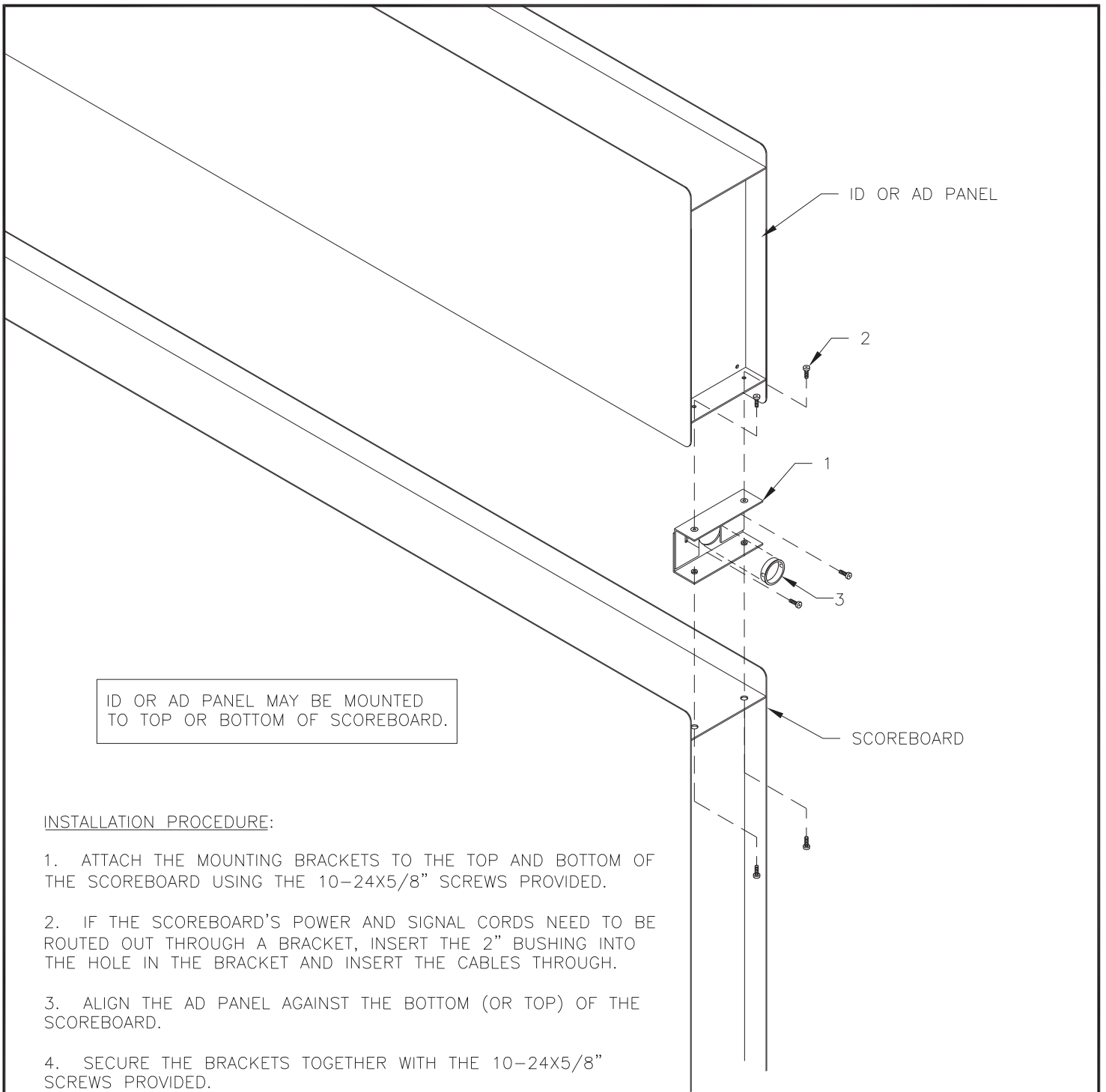
REV.	01	20 MAY 02	REPLACED THE 6-32 X 3/8" FLAT HEAD SCREW WITH 8-32 X 5/8" STUD.	DESCRIPTION	BY	JUS	APPR.
------	----	-----------	---	-------------	----	-----	-------

PROJ.: TUFF SPORT SCOREBOARDS		DAKTRONICS, INC. BROOKINGS, SD 57006	
TITLE: CHANGEABLE TEAM NAME CAPTION INSTALLATION		DRAWN BY: A VANBEMMEL DATE: 06 JUN 01	
DES. BY: AVB	APPR. BY:	SCALE: 1=8	1237-E10A-150021
REVISION	01		



PROCEDURE:

1. REMOVE THE TEAM NAME PANEL FROM THE SCOREBOARD BY REMOVING THE TWO SCREWS.
2. ATTACH THE PANEL/RETAINER SET TO THE TEAM NAME PANEL USING THE NUTS PROVIDED. BE SURE THE DEEPER RETAINER IS AT THE TOP.
3. REPLACE THE TEAM NAME PANEL ON THE SCOREBOARD.
4. INSERT THE CAPTION PANEL INTO THE RETAINERS.



ID OR AD PANEL MAY BE MOUNTED TO TOP OR BOTTOM OF SCOREBOARD.

INSTALLATION PROCEDURE:

1. ATTACH THE MOUNTING BRACKETS TO THE TOP AND BOTTOM OF THE SCOREBOARD USING THE 10-24X5/8" SCREWS PROVIDED.
2. IF THE SCOREBOARD'S POWER AND SIGNAL CORDS NEED TO BE ROUTED OUT THROUGH A BRACKET, INSERT THE 2" BUSHING INTO THE HOLE IN THE BRACKET AND INSERT THE CABLES THROUGH.
3. ALIGN THE AD PANEL AGAINST THE BOTTOM (OR TOP) OF THE SCOREBOARD.
4. SECURE THE BRACKETS TOGETHER WITH THE 10-24X5/8" SCREWS PROVIDED.

DESCRIPTION	PART NUMBER	QTY
1. MOUNTING BRACKETS	0S-1237-0058	2
2. SCREW, 10-24x5/8	HC-1022	12
3. BUSHING, 2.0 Ø	HE-1051	2

REV.	DATE	DESCRIPTION	BY	APPR.
02	18 JUL 06	REPLACED 0M-150458 BRKT WITH 0M-278266-A AND 0M-278266-B BRKTS	KAS	
01	20 JAN 03	REPLACED HC-1470 WITH HC-1022 RIVETS	RJC	

DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: TUFF SPORT SCOREBOARDS			
TITLE: ID OR AD PANEL MOUNTING TO SCOREBOARD			
DES. BY: BPETERSON		DRAWN BY: JJSYRSTAD	
		DATE: 20 SEP 01	
REVISION		APPR. BY:	
02		SCALE: NONE	
1237-R04A-156134			

TNMC INSTALLATION INSTRUCTIONS

1. REMOVE THE HOME/GUEST FACE PANELS FROM THE DISPLAY.
REFERENCE FIGURE 1
2. MOUNT THE POWER SUPPLY ASSEMBLY TO THE BACK OF THE TNMC PAN WITH HC-1470 SCREWS. THE WIRES ARE ALREADY CONNECTED TO THE POWER SUPPLY.
REFERENCE FIGURE 2
3. ROUTE THE 5V DC WIRES FROM THE POWER SUPPLY THROUGH THE OPENING TO THE TNMC LOCATIONS. ROUTE THE 120V POWER INTERCONNECT CABLE BETWEEN THE POWER SUPPLIES AND CONNECT. ROUTE THE POWER INPUT CABLE FROM THE HOME TNMC'S POWER SUPPLY TO THE 2-PIN PLUG AT THE DRIVER.
REFERENCE FIGURE 3
4. INSTALL THE SIGNAL HARNESS. ROUTE THE SIGNAL HARNESS FROM TB-31 AT THE DRIVER TO THE TNMC LOCATIONS.
REFERENCE FIGURE 3
5. CONNECT THE POWER AND SIGNAL TO THE TNMCS.
REFERENCE FIGURE 3

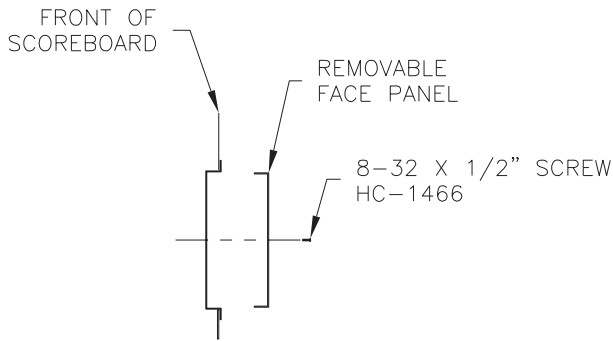


FIGURE 1

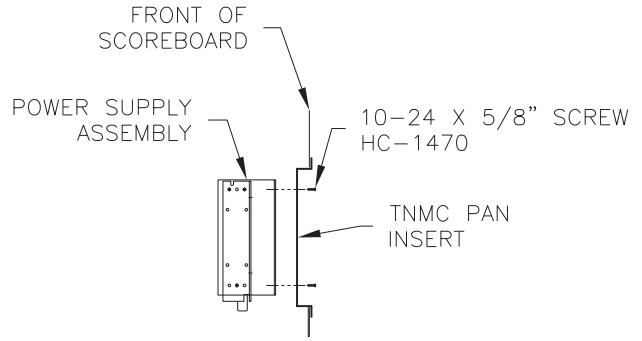


FIGURE 2

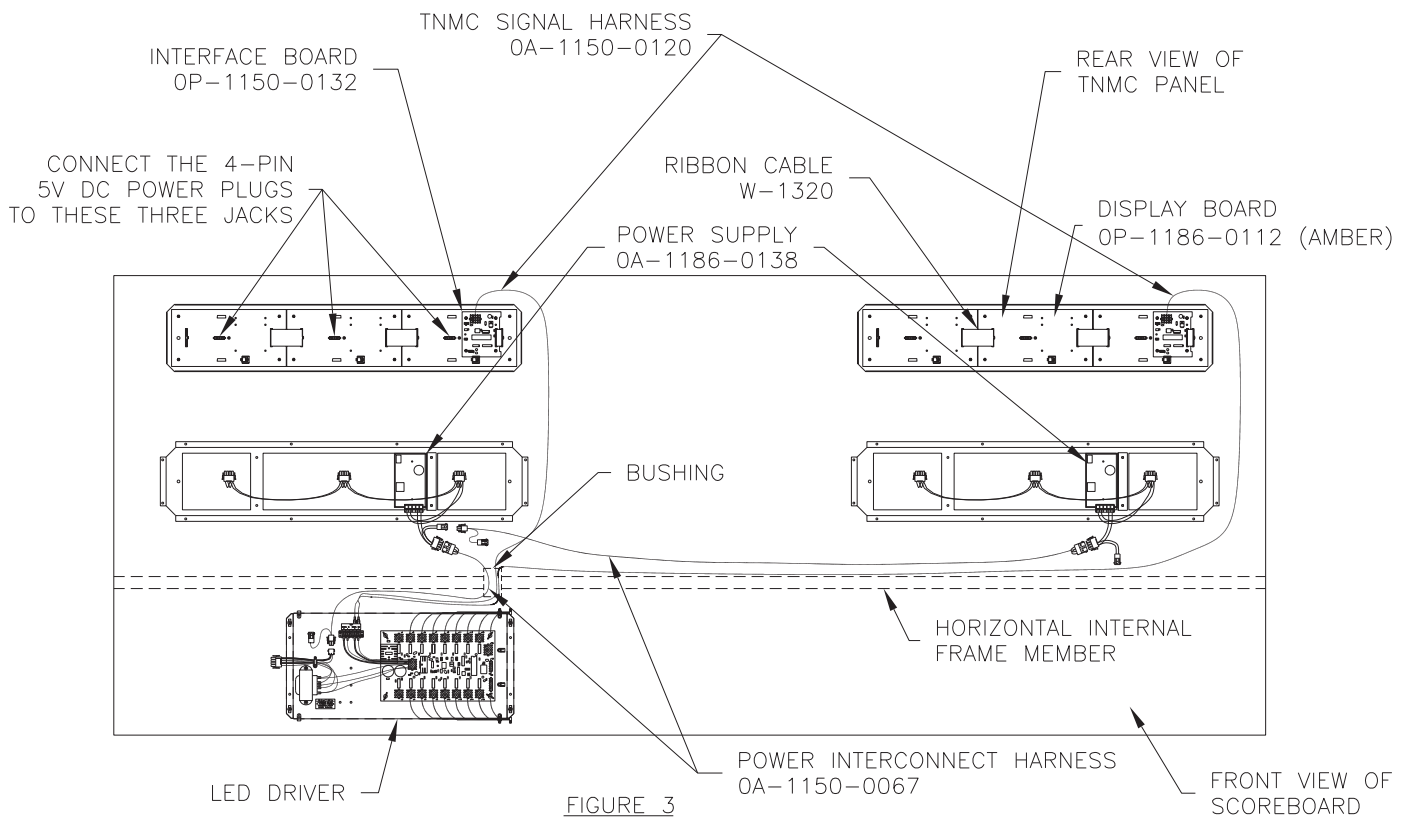


FIGURE 3

DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ: TUFF SPORT SCOREBOARDS	
TITLE: INSTALLATION, 6" AMBER 8X48 TNMC	
DES. BY: E REBHAWN	DRAWN BY: E REBHAWN
DATE: 10 MAY 01	
REVISION	APPR. BY:
	SCALE: 1=20
1237-E10A-148701	

REV.	DATE	DESCRIPTION	BY	APPR.

PROGRAMMABLE CAPTION INSTALLATION INSTRUCTIONS

1. REMOVE THE PLYR/FLS/PTS FACE PANELS FROM THE DISPLAY.
REFERENCE FIGURE 1
2. MOUNT THE POWER SUPPLY ASSEMBLY TO THE BACK OF THE CAPTION PAN WITH HC-1470 SCREWS. THE WIRES ARE ALREADY CONNECTED TO THE POWER SUPPLY. REFERENCE FIGURE 2
3. ROUTE THE 5V DC WIRES FROM THE POWER SUPPLY THROUGH THE OPENING TO THE MODULE LOCATIONS. ROUTE THE POWER INPUT CABLE FROM THE PROGRAMMABLE CAPTIONS POWER SUPPLY (0A-1186-0139) TO THE 2-PIN PLUG AT THE DRIVER. REFERENCE FIGURE 3
4. INSTALL THE SIGNAL HARNESS. ROUTE THE SIGNAL HARNESS FROM TB-31 AT THE DRIVER TO THE PROGRAMMABLE CAPTION LOCATIONS. REFERENCE FIGURE 3
5. CONNECT THE POWER AND SIGNAL TO THE PROGRAMMABLE CAPTIONS. REFERENCE FIGURE 3

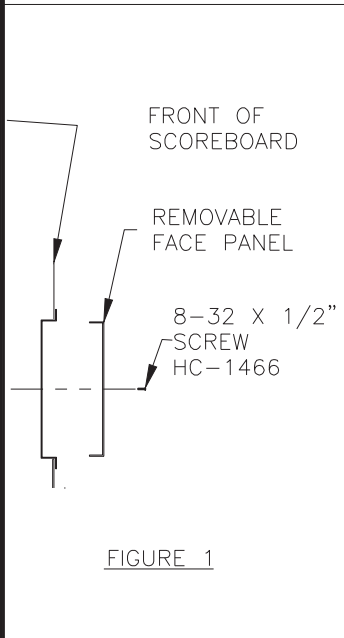


FIGURE 1

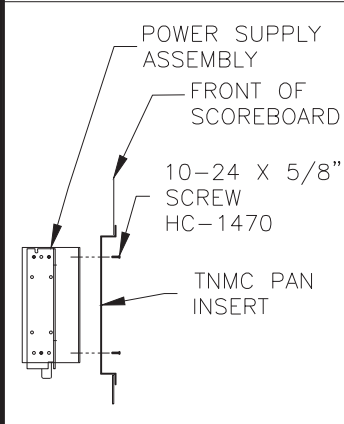
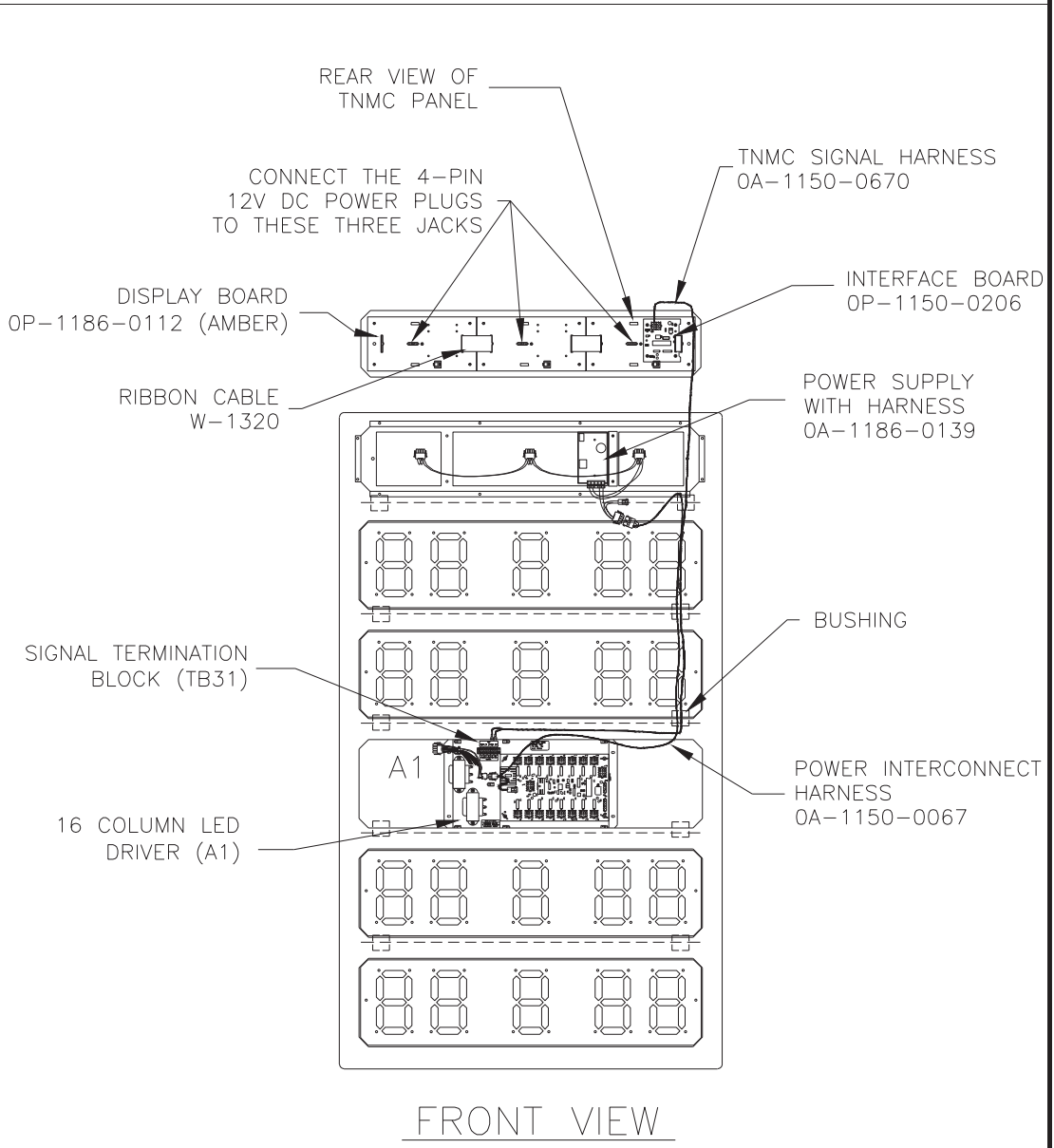


FIGURE 2



DAKTRONICS, INC. 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.		
	DO NOT SCALE DRAWING		
PROJ: TUFF SPORT SCOREBOARDS TITLE: INSTALLATION- PROGRAMMABLE CAPTION- 0.75" 8X48 DESIGN: JCARLSON DRAWN: JCARLSON DATE: 30 NOV 06			
SCALE: 1=20			
REV 01	DATE: 26 JAN 11	CHANGED INTERFACE BOARD PART NUMBER FROM OP-1150-0135 TO OP-1150-0206.	BY: SMB
SHEET	REV 01	JOB NO: 1237	FUNC-TYPE-SIZE E-10-A
			291200

INSTALLATION INSTRUCTIONS

1. THIS TNMC WILL GO INTO THE LOWER 3 OPENINGS OF A BB-2153. REFERENCE FIGURE 1
2. MOUNT THE POWER SUPPLY ASSEMBLY TO THE BACK OF THE TNMC PAN WITH HC-1470 SCREWS. THE WIRES ARE ALREADY CONNECTED TO THE POWER SUPPLY. REFERENCE FIGURE 2 DO THIS IN ALL 3 OPENINGS.
3. ROUTE THE 5V DC WIRES FROM THE POWER SUPPLY THROUGH THE OPENING TO THE TNMC LOCATIONS. ROUTE THE 120V POWER INTERCONNECT CABLE BETWEEN THE POWER SUPPLIES IN THE 3 AREAS AND CONNECT. ROUTE THE POWER INPUT CABLE FROM THE LEFT MOST TNMC'S POWER SUPPLY TO THE 2-PIN PLUG AT THE DRIVER. REFERENCE FIGURE 3
4. INSTALL THE SIGNAL HARNESS. ROUTE THE SIGNAL HARNESS FROM TB-31 AT THE DRIVER TO THE TNMC LOCATIONS. REFERENCE FIGURE 3
5. CONNECT THE POWER AND SIGNAL TO THE TNMCS. REFERENCE FIGURE 3

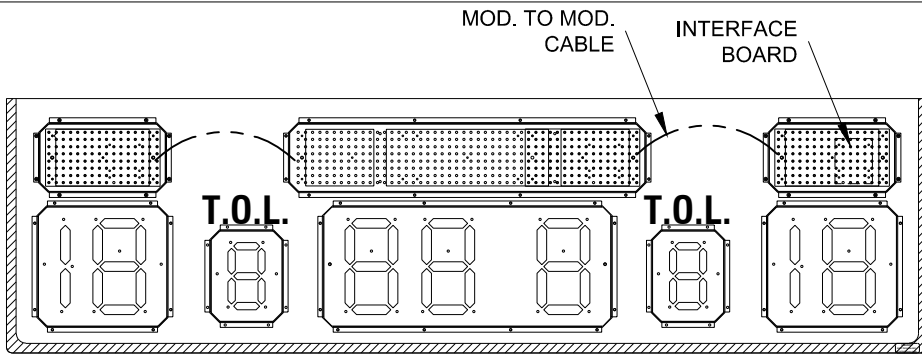


FIGURE 1

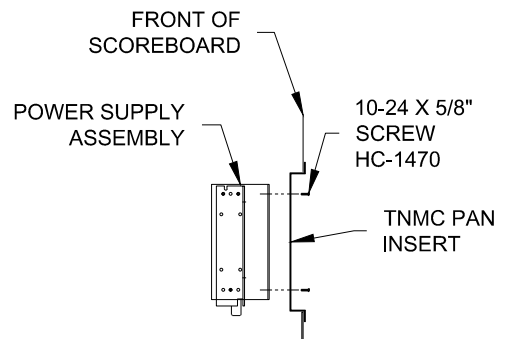


FIGURE 2

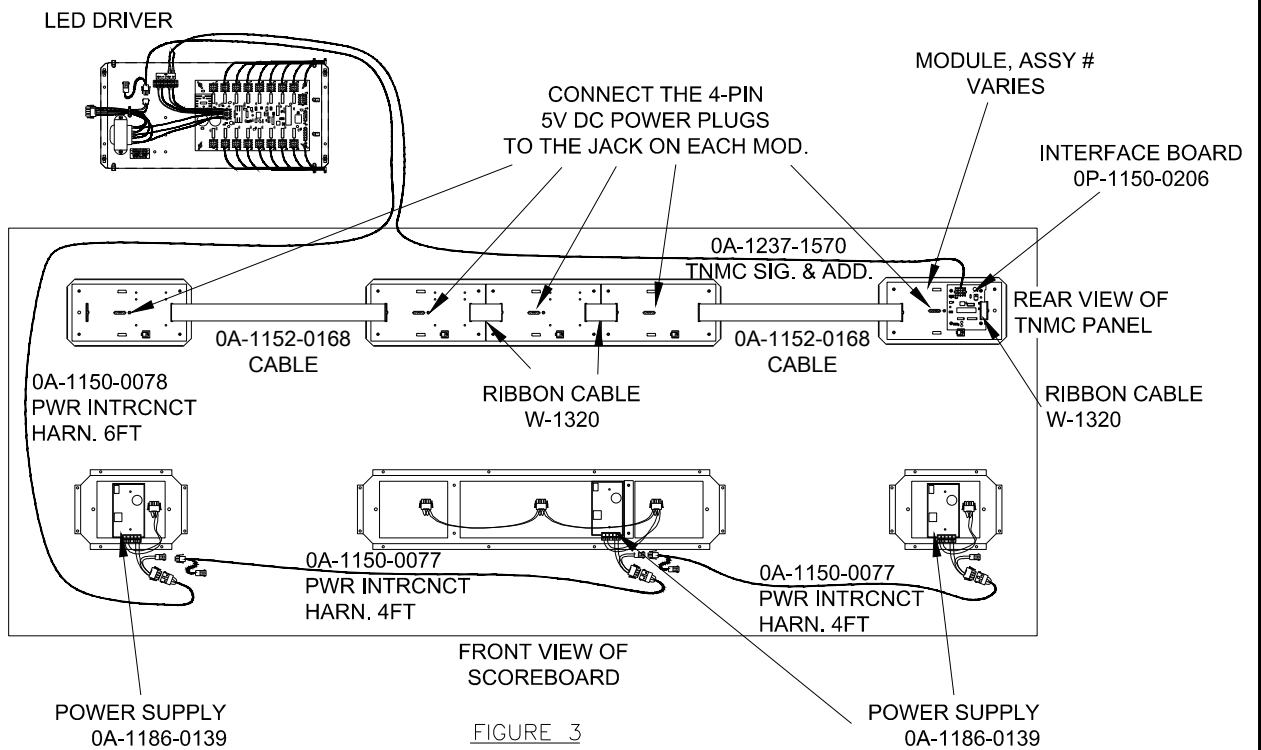



FIGURE 3

 DAKTRONICS, INC. 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 2012 DAKTRONICS, INC.	
DO NOT SCALE DRAWING			
PROJ: INDOOR LED SCOREBOARDS TITLE: INSTALLATION, ELECTRONIC CAPTION, BB-2153			
DESIGN: MMILLER		DRAWN: MMILLER	
SCALE: 1 = 20		DATE: 18 JUN 12	
SHEET	REV 00	JOB NO: P 1237	FUNC -TYPE-SIZE E - 01 - A
			1102462

Appendix D: Schematic Drawings

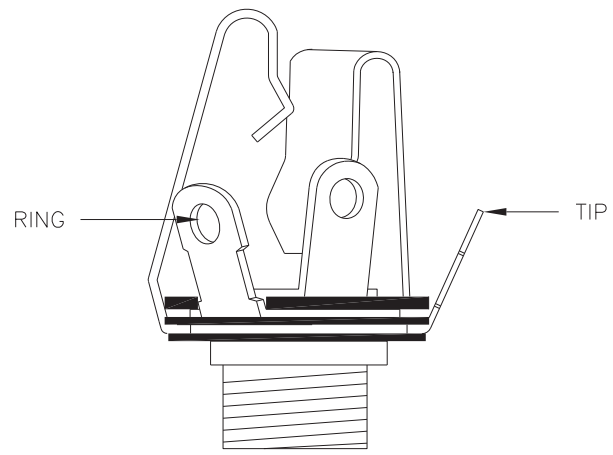
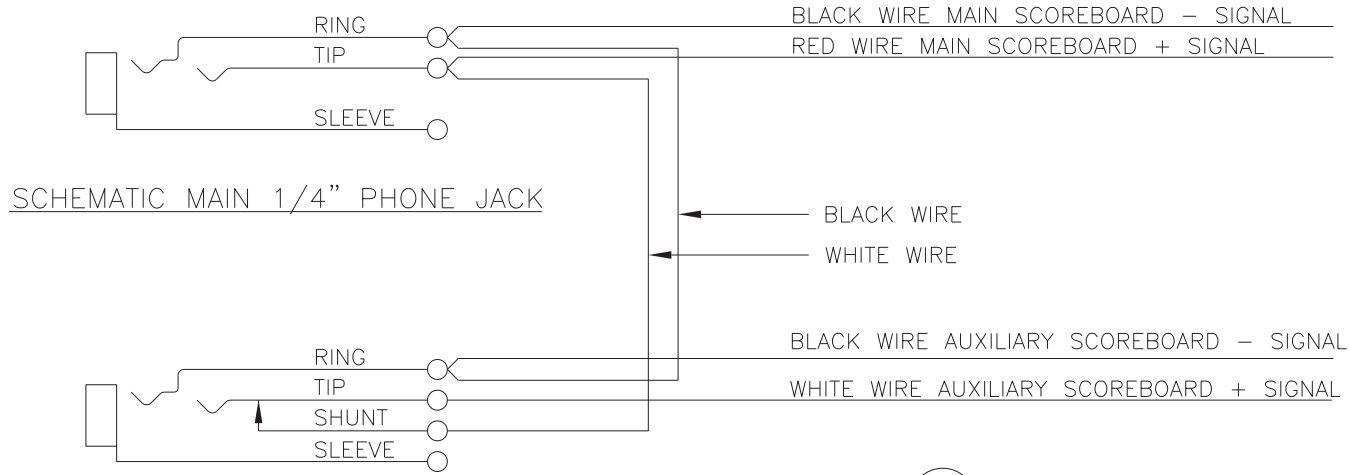
<i>Drawing Title</i>	<i>Drawing Number</i>
Schematic; Dual 1/4" Phone J-box w/ Shunt Jack.....	A-125316
Schematic; 3/4" & 1" DC TNMCs.....	B-146975
Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
Schematic, 16V 2 Driver, 120 or 230 VAC	B-158859
Schematic, 16V 3 Driver, 120 or 230 VAC	B-158894
Schematic; Mult-Section Scoreboard	A-165285
Schematic: BB-2128- 120VAC	B-202713
Schematic: BB-2114- 230 VAC (prior to Nov 2011)	B-202714
Schematic: BB-2114 / BB-3114- 120VAC (prior to Nov 2011)	B-202715
Schematic: BB-2109-BB-2131- 120VAC (prior to Nov 2011)	B-202716
Schematic: BB-2111- BB-2132- 120VAC (prior to Nov 2011)	B-202718
Schematic: BB-2115- BB-2130- 120VAC (prior to Nov 2011)	B-202720
Schematic: BB-2115- BB-2130- 230 VAC (prior to Nov 2011)	B-202721
Schematic: BB-2111- BB-2132- 230VAC (prior to Nov 2011)	B-217846
Schematic: BB-2109- BB-2131- 230 VAC (prior to Nov 2011)	B-239686
Schematic: BB-2115 - BB-2130, 120VAC	B-1045024
Schematic: BB-2115 - BB-2130, 230VAC	B-1045148
Schematic: BB-2114 / BB-3114- 120VAC	B-1045157
Schematic; BB-2114- 230VAC	B-1045160
Schematic: BB-2109 - BB-2131, 230VAC	B-1046897
Schematic: BB-2111 - BB-2132, 230VAC	B-1046898
Schematic: BB-2109 - BB-2131, 120VAC	B-1046900
Schematic: BB-2111 - BB-2132, 120VAC	B-1046901
Schematic, Electronic Caption, BB-2153	A-1102510

Model	Drawing Title	Drawing Number
BB-2101	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
BB-2103	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
BB-2105	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
BB-2107	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
BB-2109	Schematic: BB-2109 - BB-2131, 120VAC	B-1046900
	Schematic: BB-2109 - BB-2131, 230VAC	B-1046897
BB-2111	Schematic: BB-2111 - BB-2132, 120VAC	B-1046901
	Schematic: BB-2111 - BB-2132, 230VAC	B-1046898
BB-2114	Schematic: BB-2114 / BB-3114- 120VAC	B-1045157
	Schematic; BB-2114- 230VAC	B-1045160
BB-2115	Schematic: BB-2115 - BB-2130, 120VAC	B-1045024
	Schematic: BB-2115 - BB-2130, 230VAC	B-1045148
BB-2116	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
BB-2117	Schematic, Multi-section SCBD	A-165285
BB-2119	Schematic, Multi-section SCBD	A-165285

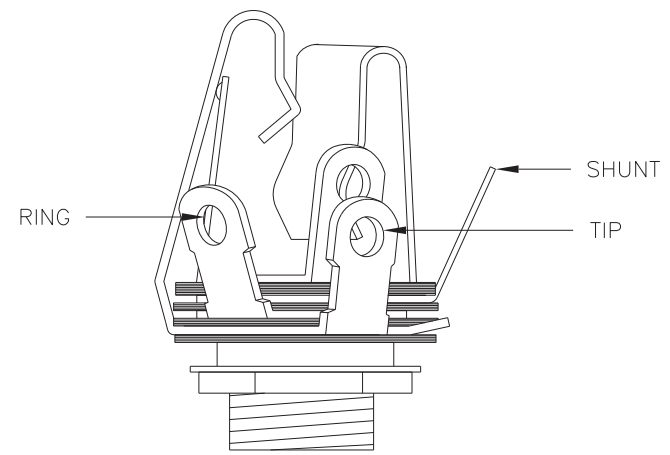
BB-2120	Schematic, Multi-section SCBD	A-165285
BB-2121	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
BB-2122	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
BB-2123	Schematic, 16V 2 Driver, 120 or 230 VAC	B-158859
BB-2125	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
BB-2128	Schematic: BB-2128- 120VAC	B-202713
BB-2130	Schematic: BB-2115 - BB-2130, 120VAC	B-1045024
	Schematic: BB-2115 - BB-2130, 230VAC	B-1045148
BB-2131	Schematic: BB-2109 - BB-2131, 120VAC	B-1046900
	Schematic: BB-2109 - BB-2131, 230VAC	B-1046897
BB-2132	Schematic: BB-2111 - BB-2132, 120VAC	B-1046901
	Schematic: BB-2111 - BB-2132, 230VAC	B-1046898
BB-2137	NA	NA
BB-2142	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
BB-2152	Schematic: BB-2115 - BB-2130, 120VAC	B-1045024
BB-2153	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348
PN-2101	NA	NA
SD-2101	Schematic, 16V 2 Driver, 120 or 230 VAC	B-158859
SD-2102	Schematic, 16V 2 Driver, 120 or 230 VAC	B-158859
SD-2103	Schematic, 16V 3 Driver, 120 or 230 VAC	B-158894
SD-2104	Schematic, 16V 3 Driver, 120 or 230 VAC	B-158894
SD-2106	Schematic- 16V 1 Driver- 120 or 230VAC	A-158348

The following schematics are for shot clocks built prior to November 2011.

Model	Drawing Title	Drawing Number
BB-2109	Schematic: BB-2109-BB-2131- 120VAC	B-202716
	Schematic: BB-2109- BB-2131- 230 VAC	B-239686
BB-2111	Schematic: BB-2111- BB-2132- 120VAC	B-202718
	Schematic: BB-2111- BB-2132- 230VAC	B-217846
BB-2114	Schematic: BB-2114 / BB-3114- 120VAC	B-202715
	Schematic: BB-2114- 230 VAC	B-202714
BB-2115	Schematic: BB-2115- BB-2130- 120VAC	B-202720
	Schematic: BB-2115- BB-2130- 230 VAC	B-202721
BB-2130	Schematic: BB-2115- BB-2130- 120VAC	B-202720
	Schematic: BB-2115- BB-2130- 230 VAC	B-202721
BB-2131	Schematic: BB-2109-BB-2131- 120VAC	B-202716
	Schematic: BB-2109- BB-2131- 230 VAC	B-239686
BB-2132	Schematic: BB-2111- BB-2132- 120VAC	B-202718
	Schematic: BB-2111- BB-2132- 230VAC	B-217846



MAIN
PHONE JACK
J-1003



AUXILIARY
PHONE JACK
J-1131

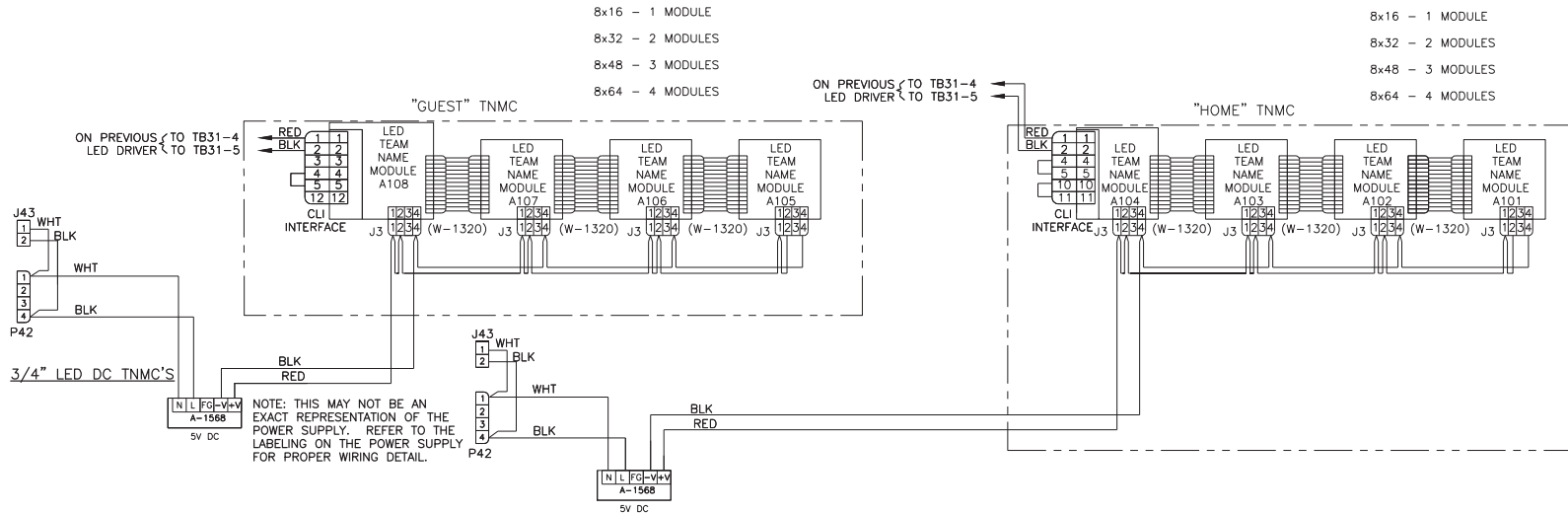


0A-1196-0013

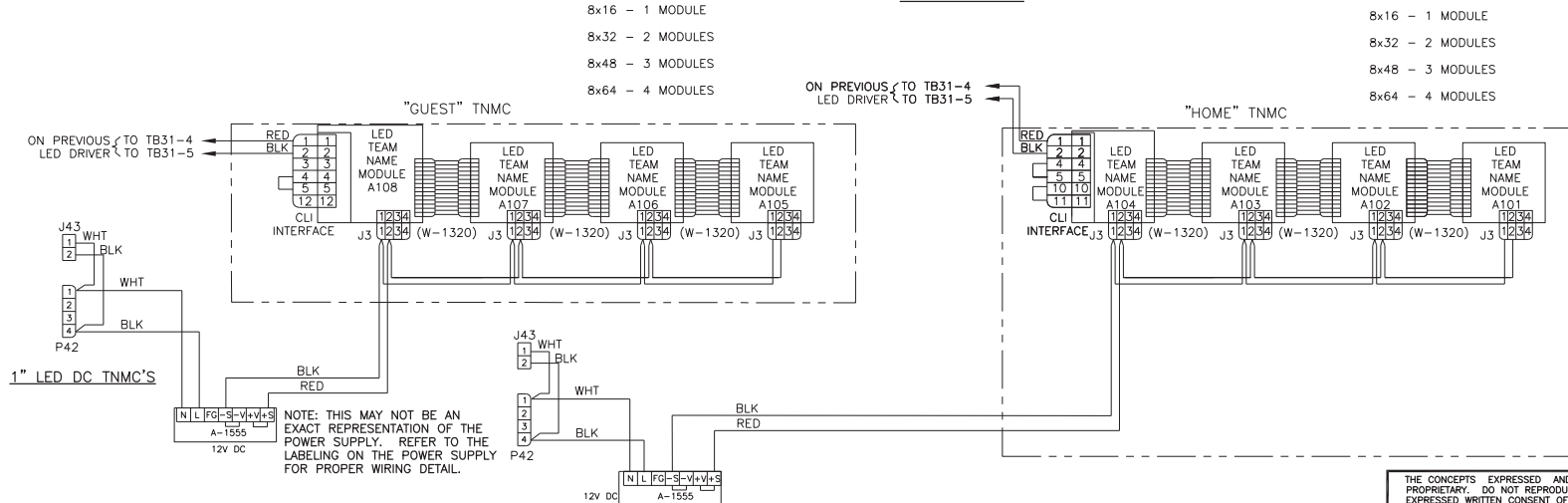
DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ:			
TITLE: SCHEMATIC; DUAL 1/4" PHONE J-BOX W/SHUNT JACK			
DES. BY: E BRAVEK		DRAWN BY: E BRAVEK	
		DATE: 15 DEC 99	
REVISION	APPR. BY:	1196-R03A-125316	
00	SCALE: NONE		

REV.	DATE	DESCRIPTION	BY	APPR.

REAR VIEW



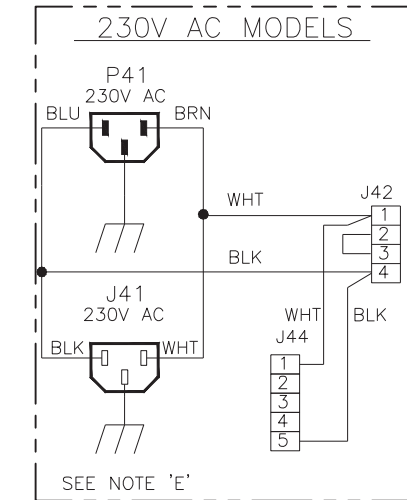
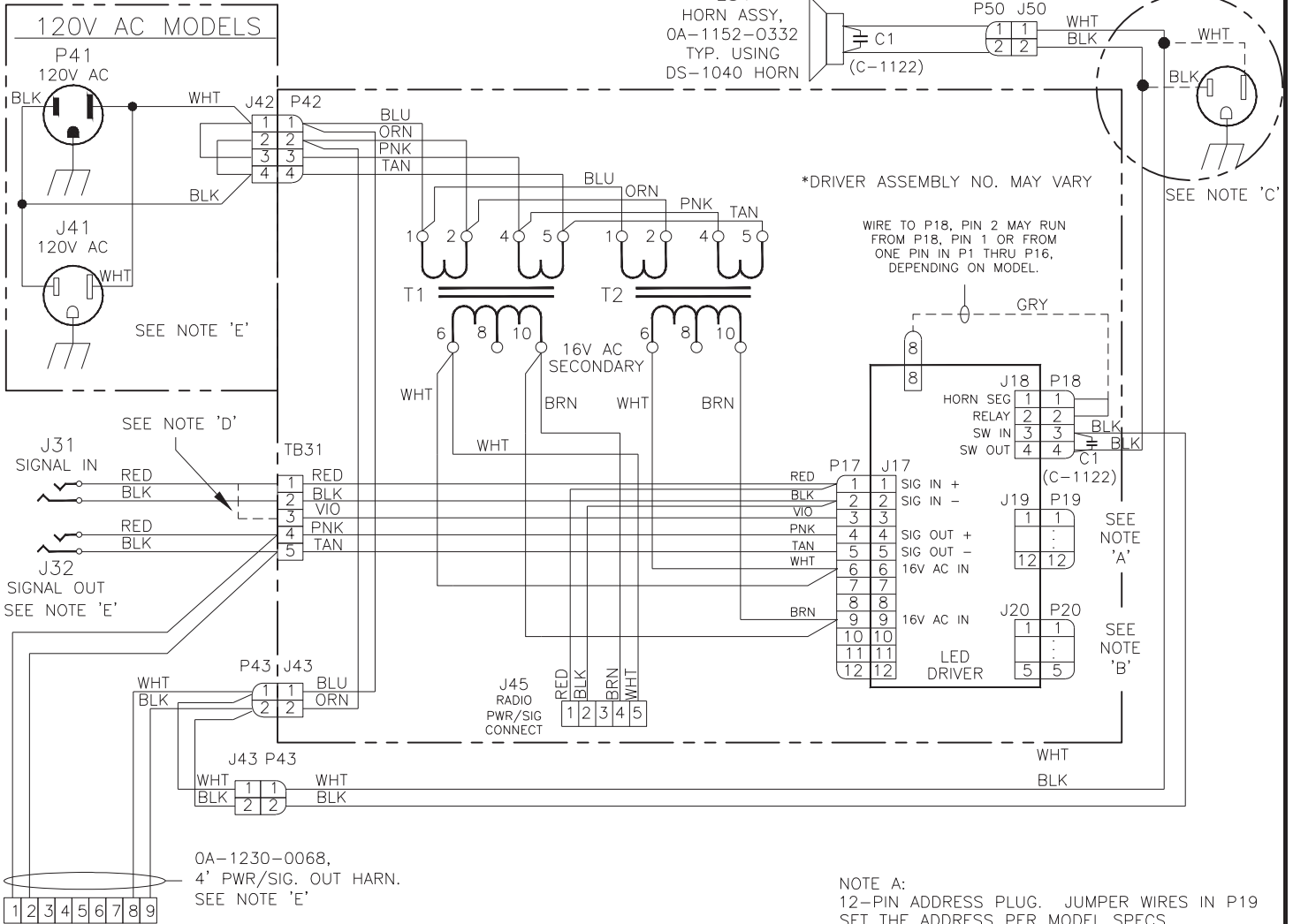
REAR VIEW



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03		29 DEC 08	REVISE DETAIL OF P42 PER ECO 65496. MOVED PIN 2 TO PIN 4. ORIGINAL CHANGE WAS MADE ON 5 OCT 04	DKD		DAKTRONICS, INC. BROOKINGS, SD 57006	
02		06 AUG 03	CHANGED TO B SIZE DWG ADDED 3RD MODULE TO SHOW 8X64 CONFIGURATION	TLH	MWM	PROJ:	
01		25 JUN 03	SWAPPED N & L ON A-1568 PER ECO #31661	RASMUS	CMC	TITLE: SCHEMATIC: 3/4" AND 1" DC TNMC'S	
REV.	DATE		DESCRIPTION	BY	APPR.	DES. BY: DRAWN BY: JSPAHR DATE: 29 MAR 01	
						REVISION APPR. BY: SCALE: NONE	1152-R03B-146975

120V AND 230VAC MODELS



120V AC MODELS

SPECIFICATION LABEL DATA

MODEL NO: (PER ORDER)
 VOLTS: 120 VAC, SINGLE PHASE
 WATTS: 200
 AMPS: 1.7

230V AC MODELS

SPECIFICATION LABEL DATA

MODEL NO: (PER ORDER)
 VOLTS: 230 VAC, SINGLE PHASE
 WATTS: 200
 AMPS: .9

NOTE A:
 12-PIN ADDRESS PLUG. JUMPER WIRES IN P19
 SET THE ADDRESS PER MODEL SPECS.

NOTE B:
 5-PIN PROTOCOL PLUG. JUMPER WIRES IN P20
 SET THE PROTOCOL PER SYSTEM SPECS.

NOTE 'C':
 J-1041 @1 & E-1047 @2, USED FOR
 EXTERNAL HORN APPLICATIONS. NOT AVAILABLE
 ON SOME MODELS.

NOTE D:
 FOR SWIM SYSTEMS CONTROLLED BY POWER
 TIME.

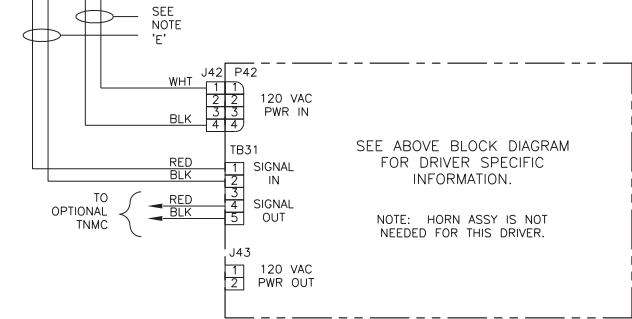
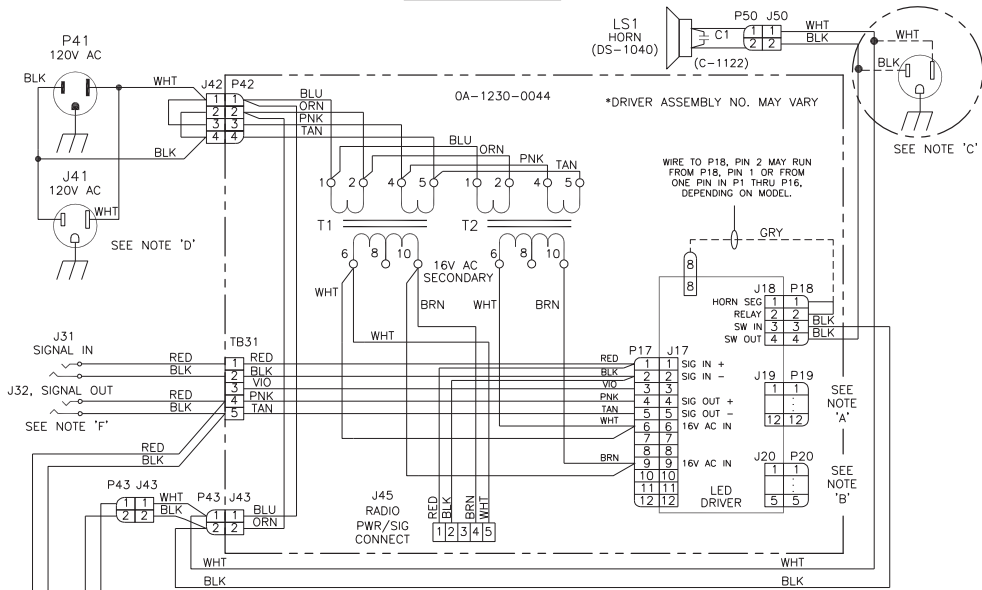
NOTE 'E':
 NOT USED IN SOME MODELS.

REV 05	DATE: 13 FEB 03	MOVED TAP 8 TO A DOUBLE CRIMP ON TAP 10 ON TRANSFORMER T1 CONNECTED TO J45. UPDATED TITLE TO SAY 230VAC ALSO	BY: CME
REV 04	DATE: 15 APR 02	ADDED 4" PWR/SIG OUT HARNS THAT IS IN SOME TUFF SPORT MODELS.	BY: MWM
REV 03	DATE: 23 JAN 02	CHANGED TITLE FROM SCHEMATIC, 16V LED DRVR TO SCHEMATIC, 16V 1 DRIVER, 120 VAC	BY: ALG
REV 02	DATE: 17 DEC 01	CHANGED DRIVER BLOCK LAYOUT.	BY: MWM
REV 01	DATE: 11 NOV 01	UPDATED NOTES AND 230V POWER BLOCK	BY: MWM

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DO NOT SCALE DRAWING			
PROJ: INDOOR UNIFORM LED DIGIT			
TITLE: SCHEMATIC- 16V 1 DRIVER- 120 OR 230VAC			
DESIGN: MMILLER		DRAWN: MMILLER	
SCALE: 1=1		DATE: 02 NOV 01	
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
	07	P1230	R-03-A
			158348

REV 07	DATE: 01 JUN 11	ADDED CAP DETAIL ON P18 AT DRIVER LOCATION FOR THE HORN HARNESS. UPDATED LS1 TEXT	BY: MWM
REV 06	DATE: 11 JAN 05	ADDED WIRE COLORS TO 230V PLUG PER ECO# 042552	BY: RT

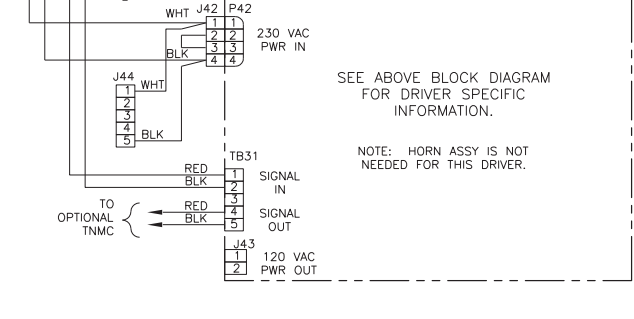
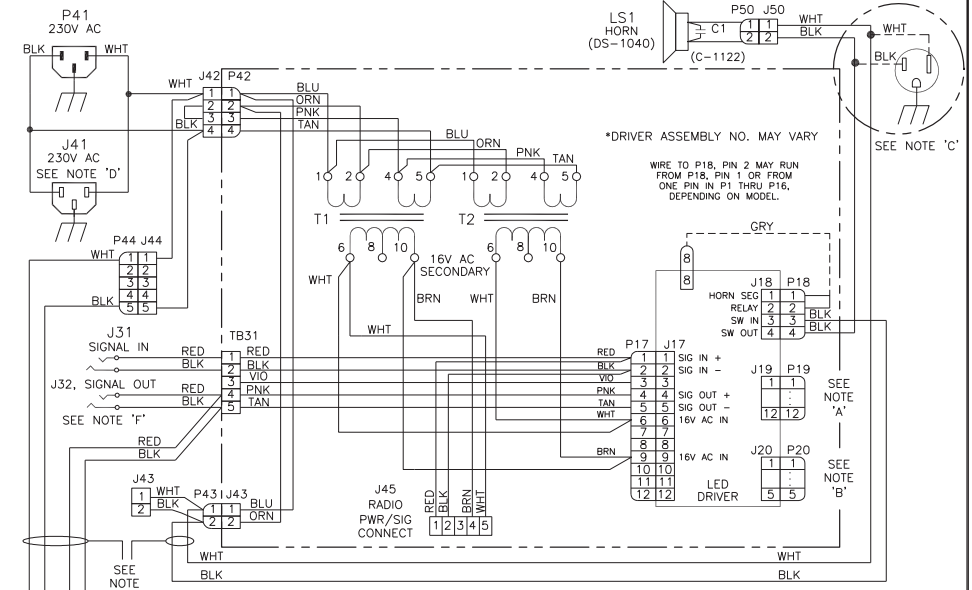
120V MODULE



- NOTE A:
12-PIN ADDRESS PLUG. JUMPER WIRES IN P19 SET THE ADDRESS PER MODEL SPECS.
- NOTE B:
5-PIN PROTOCOL PLUG. JUMPER WIRES IN P20 SET THE PROTOCOL PER SYSTEM SPECS.
- NOTE C:
J-1041 @1 & E-1047 @2, USED FOR EXTERNAL HORN APPLICATIONS. NOT AVAILABLE ON SOME MODELS.
- NOTE D:
POWER OUTLET IN 4-SIDED CONFIGURATION ONLY
- NOTE E:
THIS SCHEMATIC SHOWS THE INTERCONNECTION OF MULTIPLE DRIVERS. REFER TO THE FINAL ASSY PACKET FOR THE HARNESS PART NUMBERS.
- NOTE F:
NOT USED ON SOME MODELS.

SPECIFICATION LABEL DATA	
MODEL NO:	(PER ORDER)
VOLTS:	120 VAC, SINGLE PHASE
WATTS:	400
AMPS:	3.3

230V AC MODELS



SEE ABOVE BLOCK DIAGRAM FOR DRIVER SPECIFIC INFORMATION.

NOTE: HORN ASSY IS NOT NEEDED FOR THIS DRIVER.

- NOTE A:
12-PIN ADDRESS PLUG. JUMPER WIRES IN P19 SET THE ADDRESS PER MODEL SPECS.
- NOTE B:
5-PIN PROTOCOL PLUG. JUMPER WIRES IN P20 SET THE PROTOCOL PER SYSTEM SPECS.
- NOTE C:
J-1041 @1 & E-1047 @2, USED FOR EXTERNAL HORN APPLICATIONS. NOT AVAILABLE ON SOME MODELS.
- NOTE D:
POWER OUTLET IN 4-SIDED CONFIGURATION ONLY
- NOTE E:
THIS SCHEMATIC SHOWS THE INTERCONNECTION OF MULTIPLE DRIVERS. REFER TO THE FINAL ASSY PACKET FOR THE HARNESS PART NUMBERS.
- NOTE F:
NOT USED ON SOME MODELS.

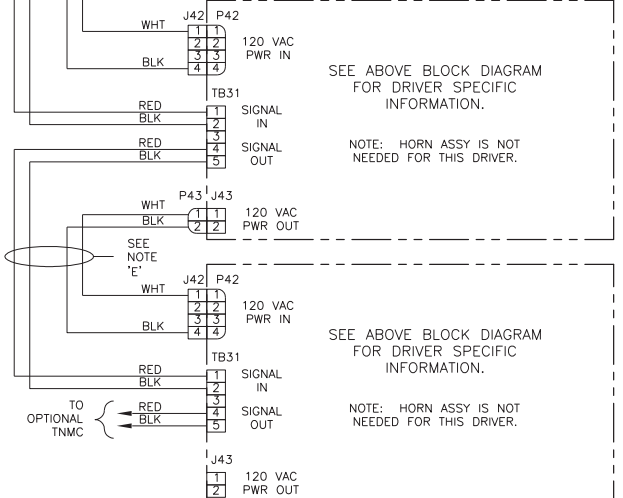
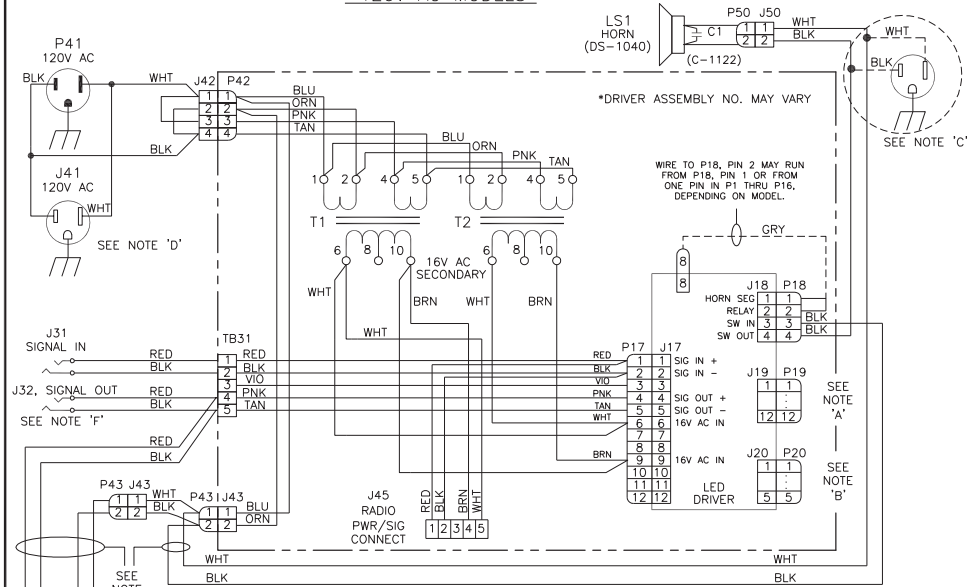
SPECIFICATION LABEL DATA	
MODEL NO:	(PER ORDER)
VOLTS:	230 VAC, SINGLE PHASE
WATTS:	400
AMPS:	1.7

REV.	DATE	DESCRIPTION	BY	APPR.
04	12 MAR 03	CHANGED FROM A TO B SIZE	RDS	MWM
03	13 FEB 03	MOVED TAP 8 TO A DOUBLE CRIMP ON TAP 10 ON TRANSFORMER T1 CONNECTED TO J45.	CME	
2	22NOV02	ADDED A SIGNAL OUT JACK FROM TB31.	NMB	
01	23 JAN 02	CHANGED TITLE FROM SCHEMATIC, 2 DRIVER TO SCHEMATIC, 16V 2 DRIVER, 120 VAC	ALG	

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DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ:	INDOOR UNIFORM LED DIGIT
TITLE:	SCHEMATIC, 16V 2 DRIVER, 120 OR 230 VAC
DES. BY:	MMILLER
DRAWN BY:	MMILLER
DATE:	20 NOV 01
REVISION	APPR. BY:
SCALE:	1=1

1230-R03B-158859

120V AC MODELS



NOTE A:
12-PIN ADDRESS PLUG. JUMPER WIRES IN P19 SET THE ADDRESS PER MODEL SPECS.

NOTE B:
5-PIN PROTOCOL PLUG. JUMPER WIRES IN P20 SET THE PROTOCOL PER SYSTEM SPECS.

NOTE C:
J-1041 @1 & E-1047 @2, USED FOR EXTERNAL HORN APPLICATIONS. NOT AVAILABLE ON SOME MODELS.

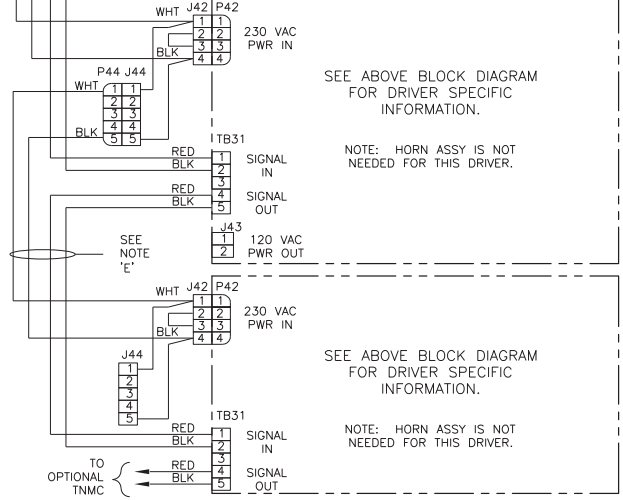
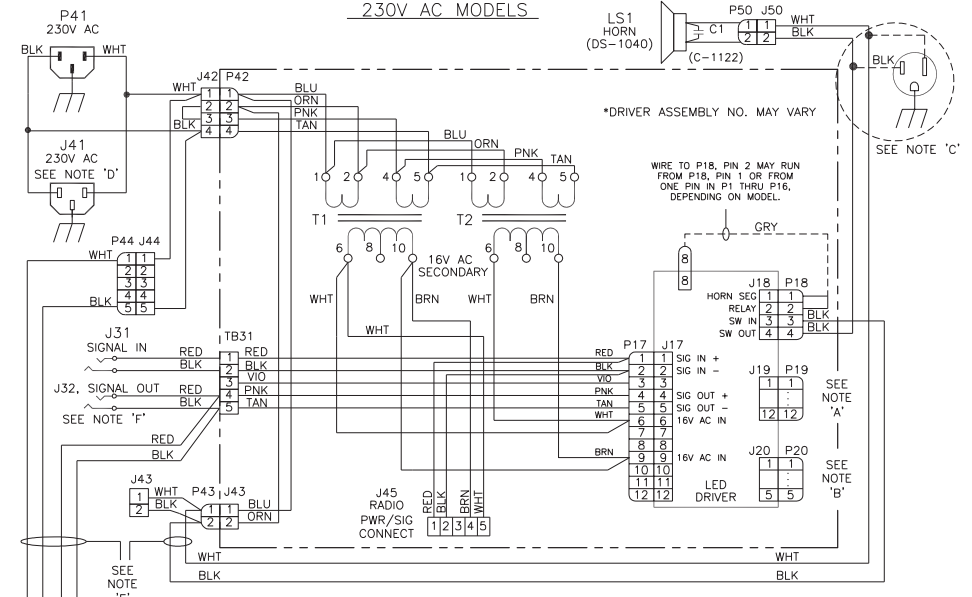
NOTE D:
POWER OUTLET IN 4-SIDED CONFIGURATION ONLY

NOTE E:
THIS SCHEMATIC SHOWS THE INTERCONNECTION OF MULTIPLE DRIVERS. REFER TO THE FINAL ASSY PACKET FOR THE HARNESS PART NUMBERS.

NOTE F:
NOT USED IN SOME MODELS.

SPECIFICATION LABEL DATA	
MODEL NO: (PER ORDER)	
VOLTS: 120 VAC, SINGLE PHASE	
WATTS: 600	
AMPS: 5	

230V AC MODELS



NOTE A:
12-PIN ADDRESS PLUG. JUMPER WIRES IN P19 SET THE ADDRESS PER MODEL SPECS.

NOTE B:
5-PIN PROTOCOL PLUG. JUMPER WIRES IN P20 SET THE PROTOCOL PER SYSTEM SPECS.

NOTE C:
J-1041 @1 & E-1047 @2, USED FOR EXTERNAL HORN APPLICATIONS. NOT AVAILABLE ON SOME MODELS.

NOTE D:
POWER OUTLET IN 4-SIDED CONFIGURATION ONLY

NOTE E:
THIS SCHEMATIC SHOWS THE INTERCONNECTION OF MULTIPLE DRIVERS. REFER TO THE FINAL ASSY PACKET FOR THE HARNESS PART NUMBERS.

NOTE F:
NOT USED IN SOME MODELS.

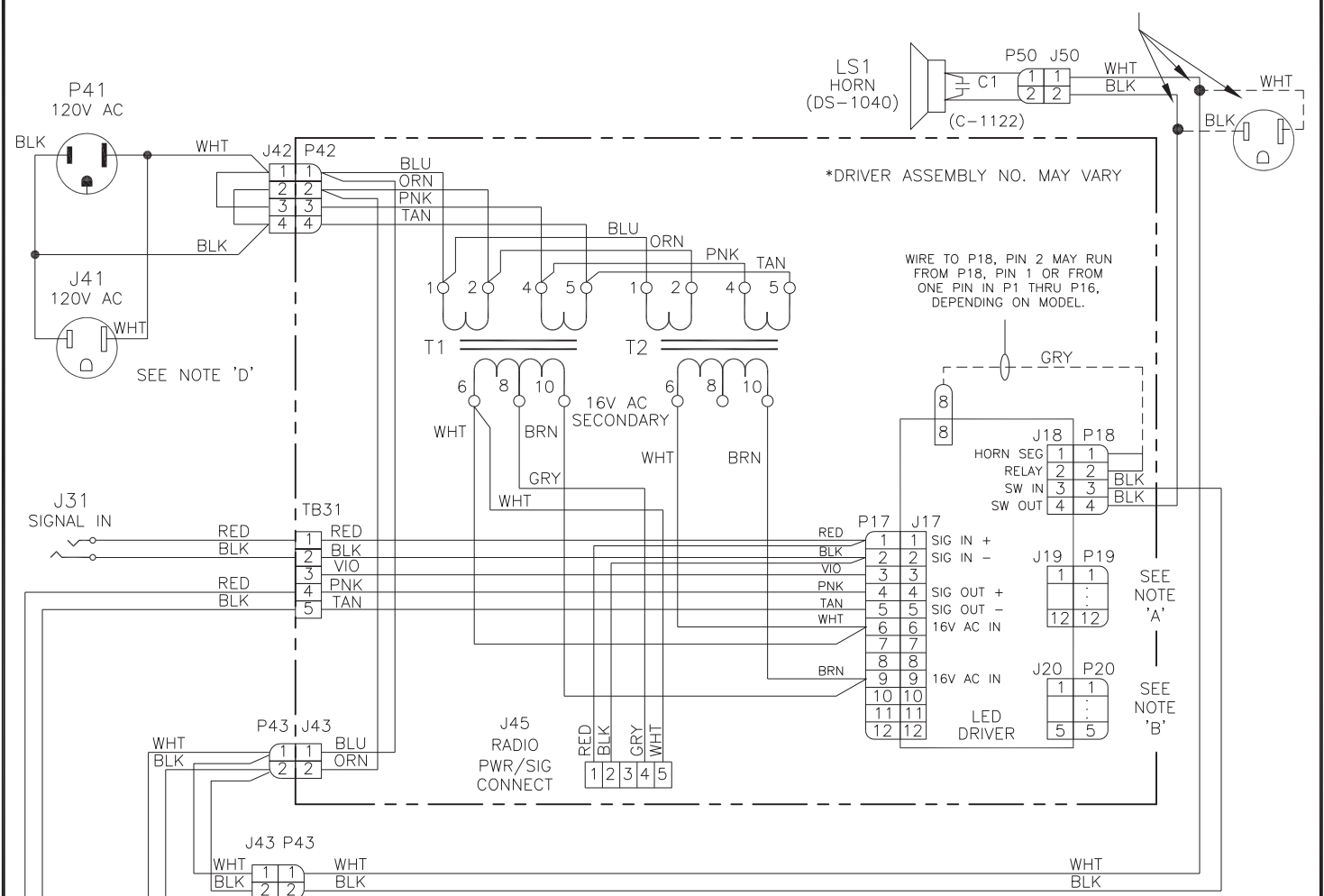
SPECIFICATION LABEL DATA	
MODEL NO: (PER ORDER)	
VOLTS: 230 VAC, SINGLE PHASE	
WATTS: 600	
AMPS: 2.6	

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03	12 MAR 03	CHANGED FROM A TO B SIZE INSERT 230 VAC SCHEMATIC	RDS	MWM	DAKTRONICS, INC. BROOKINGS, SD 57006
02	13 FEB 03	MOVED TAP 8 TO A DOUBLE CRIMP ON TAP 10 ON TRANSFORMER T1 CONNECTED TO J45.	CME		PROJ: INDOOR UNIFORM LED DIGIT
01	23 JAN 02	CHANGED TITLE FROM SCHEMATIC, 3 DRIVER TO SCHEMATIC, 16V 3 DRIVER, 120 VAC	ALG		TITLE: SCHEMATIC, 16V 3 DRIVER, 120 OR 230 VAC
REV.	DATE	DESCRIPTION	BY	APPR.	DES. BY: MMILLER DRAWN BY: MMILLER DATE: 21 NOV 01
					REVISION APPR. BY: SCALE: 1=1 1230-R03B-158894

120V MODULE

SEE NOTE 'C'



*DRIVER ASSEMBLY NO. MAY VARY

WIRE TO P18, PIN 2 MAY RUN FROM P18, PIN 1 OR FROM ONE PIN IN P1 THRU P16, DEPENDING ON MODEL.

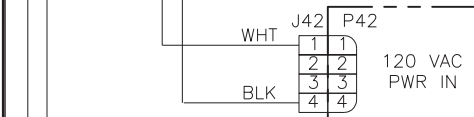
SEE NOTE 'D'

SEE NOTE 'A'

SEE NOTE 'B'

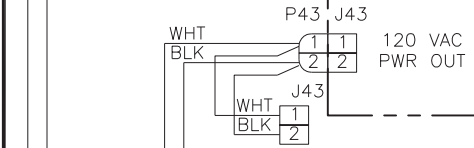
0A-1230-0068, 4' PWR/SIG. OUT HARN.

ALSO AVAILABLE
0A-1230-0069, 4' PWR/SIG. IN HARN.
0A-1230-0095 14',
0A-1230-0129 10'



SEE ABOVE BLOCK DIAGRAM FOR DRIVER SPECIFIC INFORMATION.

NOTE: HORN ASSY IS NOT NEEDED FOR THIS DRIVER.



0A-1230-0068, 4' PWR/SIG. OUT HARN.

ALSO AVAILABLE, 0A-1230-0094, 14'
0A-1230-0128 10'

NOTE A:
12-PIN ADDRESS PLUG. JUMPER WIRES IN P19 SET THE ADDRESS PER MODEL SPECS.

NOTE B:
5-PIN PROTOCOL PLUG. JUMPER WIRES IN P20 SET THE PROTOCOL PER SYSTEM SPECS.

NOTE C:
J-1041 @1 & E-1047 @2, USED FOR EXTERNAL HORN APPLICATIONS. NOT AVAILABLE ON SOME MODELS.

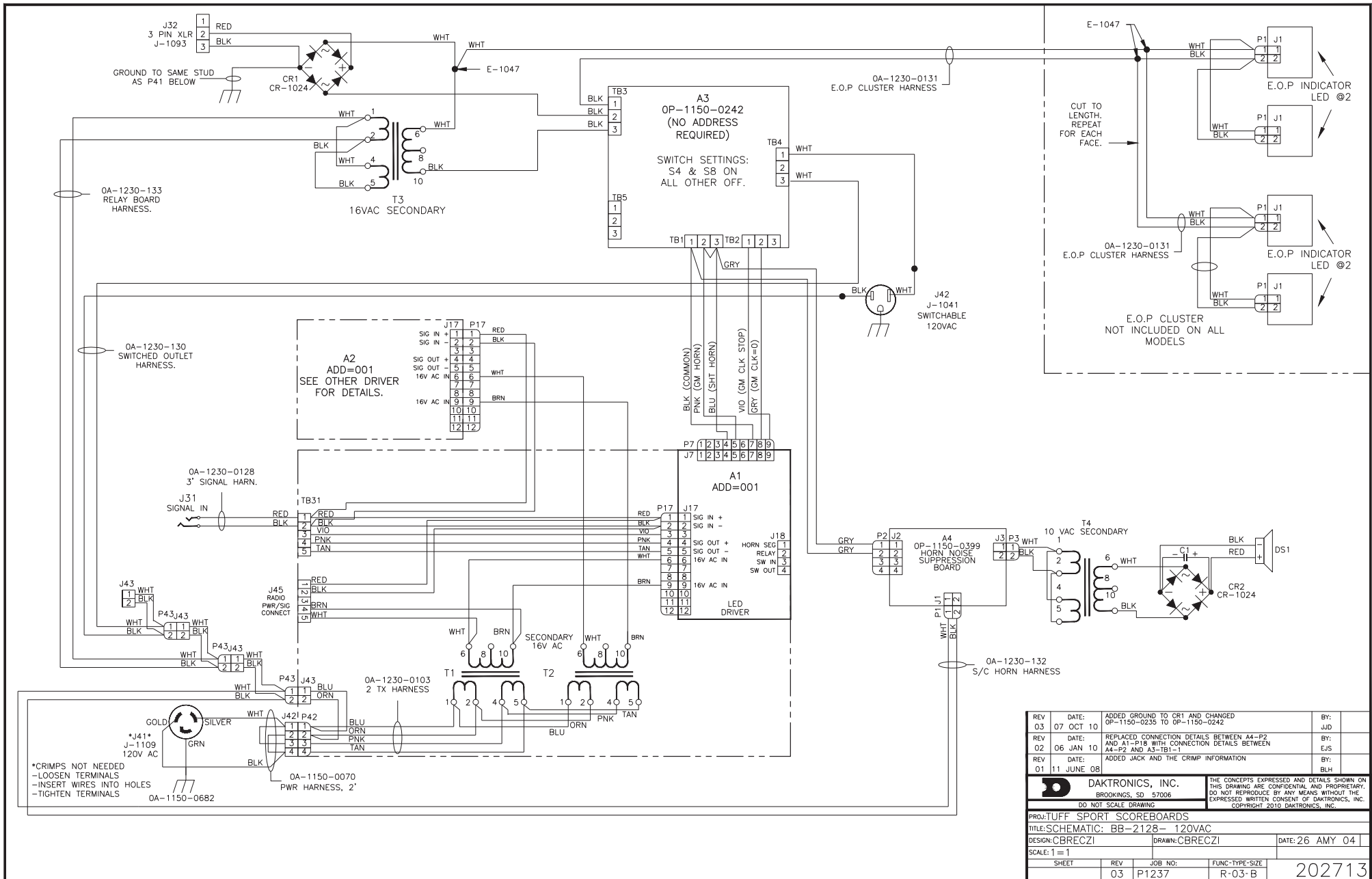
NOTE D:
POWER OUTLET IN 4-SIDED CONFIGURATION ONLY

NOTE E:
THIS SCHEMATIC SHOWS THE INTERCONNECTION OF MULTIPLE DRIVERS. REFER TO THE FINAL ASSY PACKET FOR THE HARNESS PART NUMBERS.

SPECIFICATION LABEL DATA	
MODEL NO:	(PER ORDER)
VOLTS:	120 VAC, SINGLE PHASE
WATTS:	400
AMPS:	3.3

REV.	DATE	DESCRIPTION	BY	APPR.
01	22 JUN 05	UPDATED DRAWING TO ADD ADDITIONAL SECTION INTERCONNECT HARNESS LENGTHS AVAILABLE.	MWM	

DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: INDOOR UNIFORM LED DIGIT			
TITLE: SCHEMATIC; MULT-SECTION SCOREBOARD			
DES. BY: MMILLER		DRAWN BY: MMILLER	
DATE: 10 APR 02			
REVISION	APPR. BY:	1237-R03A-165285	
01	SCALE: 1=1		



*CRIMPS NOT NEEDED
 -LOOSEN TERMINALS
 -INSERT WIRES INTO HOLES
 -TIGHTEN TERMINALS

REV 03	DATE: 07 OCT 10	ADDED GROUND TO CR1 AND CHANGED OP-1150-0235 TO OP-1150-0242	BY: JUD
REV 02	DATE: 06 JAN 10	REPLACED CONNECTION DETAILS BETWEEN A4-P2 AND A1-P18 WITH CONNECTION DETAILS BETWEEN A4-P2 AND A3-TB1-1	BY: EJS
REV 01	DATE: 11 JUNE 08	ADDED JACK AND THE CRIMP INFORMATION	BY: BLH

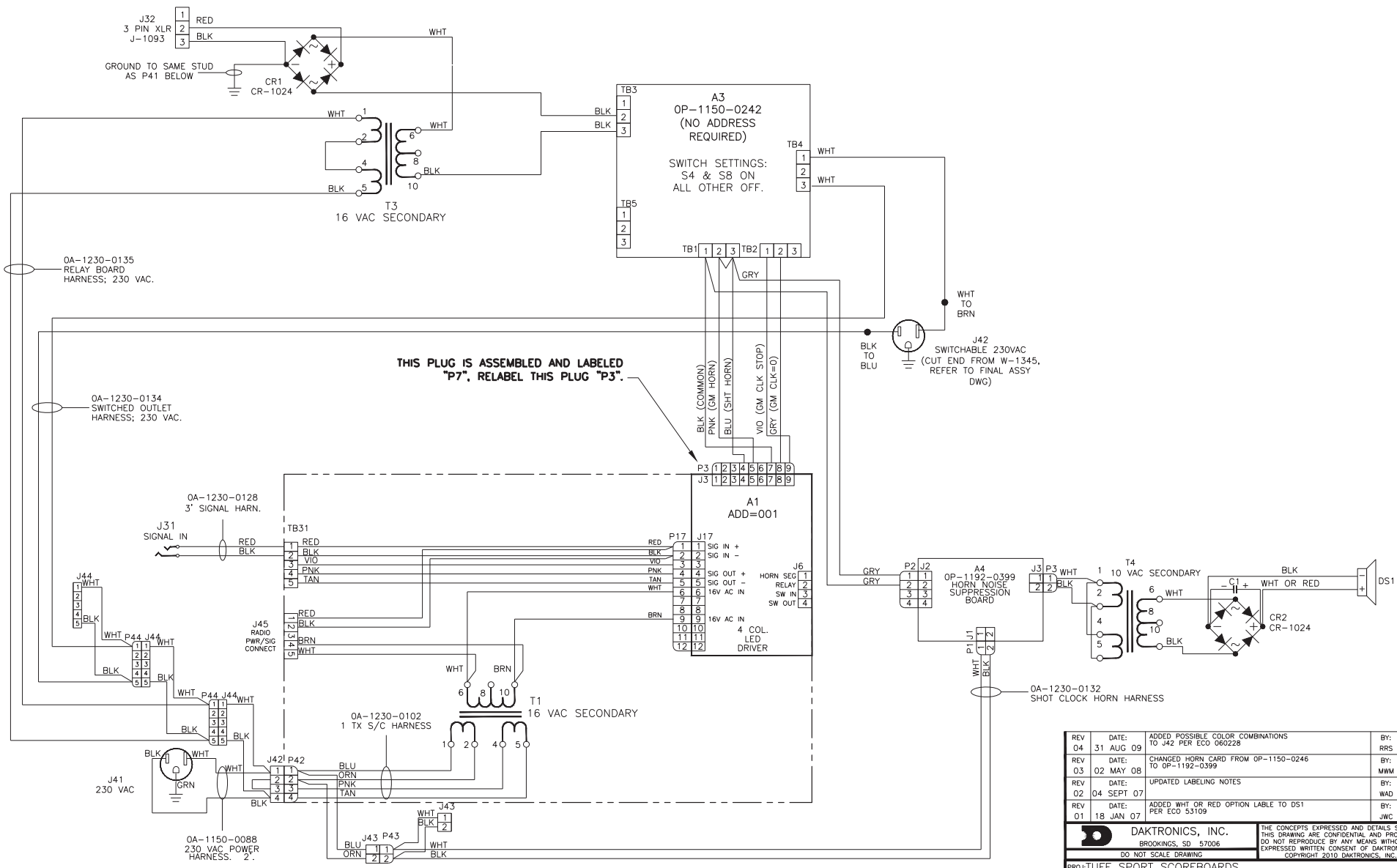
DAKTRONICS, INC.
 BROOKINGS, SD 57006

DO NOT SCALE DRAWING

PROJ: TUFF SPORT SCOREBOARDS
 TITLE: SCHEMATIC: BB-2128- 120VAC
 DESIGN: CBRECZI DRAWN: CBRECZI DATE: 26 AMY 04
 SCALE: 1=1

SHEET	REV	JOB NO:	FLUNC-TYPE-SIZE
	03	P1237	R-03-B

202713



REV 04	DATE: 31 AUG 09	ADDED POSSIBLE COLOR COMBINATIONS TO J42 PER ECO 060228	BY: RRS
REV 03	DATE: 02 MAY 08	CHANGED HORN CARD FROM OP-1150-0246 TO OP-1192-0399	BY: MWM
REV 02	DATE: 04 SEPT 07	UPDATED LABELING NOTES	BY: WAD
REV 01	DATE: 18 JAN 07	ADDED WHT OR RED OPTION LABEL TO DS1 PER ECO 53109	BY: JWC

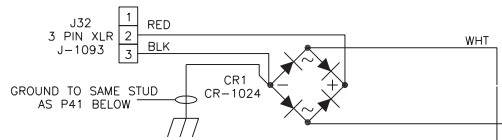
DAKTRONICS, INC.
 BROOKINGS, SD 57006
 DO NOT SCALE DRAWING

PROJ: TUFF SPORT SCOREBOARDS
 TITLE: SCHEMATIC: BB-2114- 230 VAC

REV 06	DATE: 07 OCT 10	ADDED GROUND FOR CR1 AND CHANGED OP-1150-0235 TO OP-1150-0242	BY: JJD
REV 05	DATE: 06 JAN 10	REPLACED CONNECTION DETAILS BETWEEN A4-P2 AND A1-P18 WITH CONNECTION DETAILS BETWEEN A4-P2 AND A3-TB1-1	BY: EJS

DESIGN: CBRECZI	DRAWN: CBRECZI	DATE: 26 MAY 04
SHEET	REV 06	JOB NO: P1237
		FLNC-TYPE-SIZE R-03-B

202714



OA-1230-0133
RELAY BOARD HARNESS

OA-1230-0130
SWITCHED OUTLET HARNESS

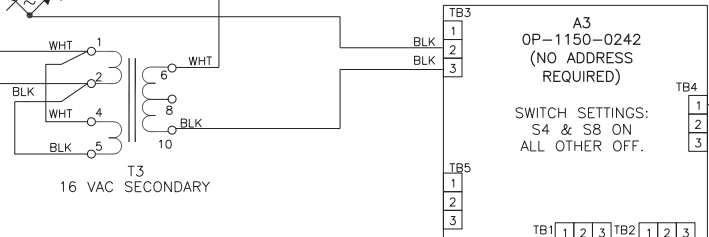
OA-1230-0128
3' SIGNAL HARN.

J43
WHT
BLK

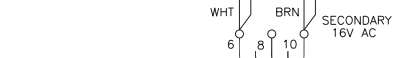
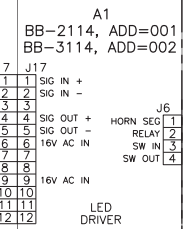
P43, J43
WHT
BLK

P43, J43
WHT
BLK

OA-1150-0070
PWR HARNESS, 2'



THIS PLUG IS ASSEMBLED AND LABELED "P7", RELABEL THIS PLUG "P3".



OA-1230-0102
1 TX S/C HARNESS

J42 P42
WHT
BLK

J42 P42
WHT
BLK

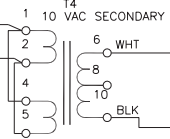
J42 P42
WHT
BLK

J-19 ADDRESS PLUG

		PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
BB-2114	01	0	0	0	0	0	0	0	1
BB-3114	02	0	0	0	0	0	0	1	0

J42
J-1041
SWITCHABLE
120VAC

A4
OP-1192-0399
HORN NOISE
SUPPRESSION
BOARD



DS1

OA-1230-0132
S/C HORN HARNESS

06	02 MAY 08	CHANGE HORN CARD FROM OP-1150-0246 TO OP-1192-0399	MWM
05	18 FEB 08	ADDED GROUND WIRE TO CR1.	AMG
04	18 JAN 07	ADDED WHT OR RED OPTION LABEL TO DS1 PER ECO 53108	JWC
04	18 JAN 07	ADDED WHT OR RED OPTION LABEL TO DS1 PER ECO 53108	JWC
03	09 NOV 06	UPDATED TITLE TO INCLUDE MODEL BB-3114	SAL
02	17 MAR 06	CORRECT RELABELING NOTES PER ECO #49711	ATP
01	04JAN05	ADDED RELABELING NOTES PER ECO 042547, 042508, AND 042548	MCOPL

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DAKTRONICS, INC. BROOKINGS, SD 57006

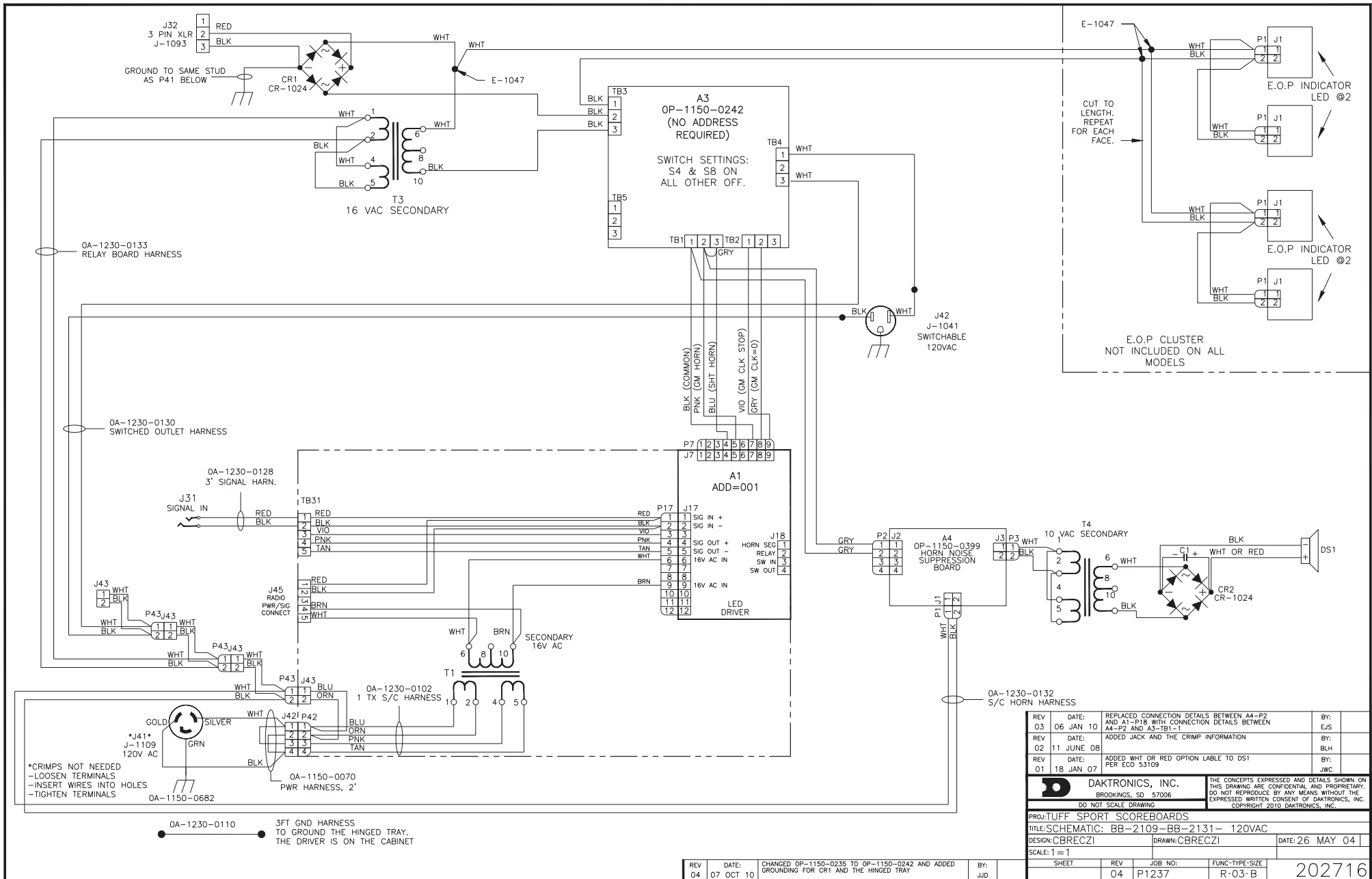
PROJ: TUFF SPORT SCOREBOARDS

TITLE: SCHEMATIC: BB-2114 / BB-3114- 120VAC

DES. BY: CBRECZI DRAWN BY: CBRECZI DATE: 26 MAY 04

REV.	DATE	DESCRIPTION	BY	APPR.
07	06 JAN 10	REMOVED DETAILS OF OBSOLETE CONNECTION BETWEEN A4 AND A1. ADDED NEW DETAILS FOR CONNECTION BETWEEN A4 AND A3.	EJS	

REVISION	SCALE	1237-R03B-202715
07	1=1	



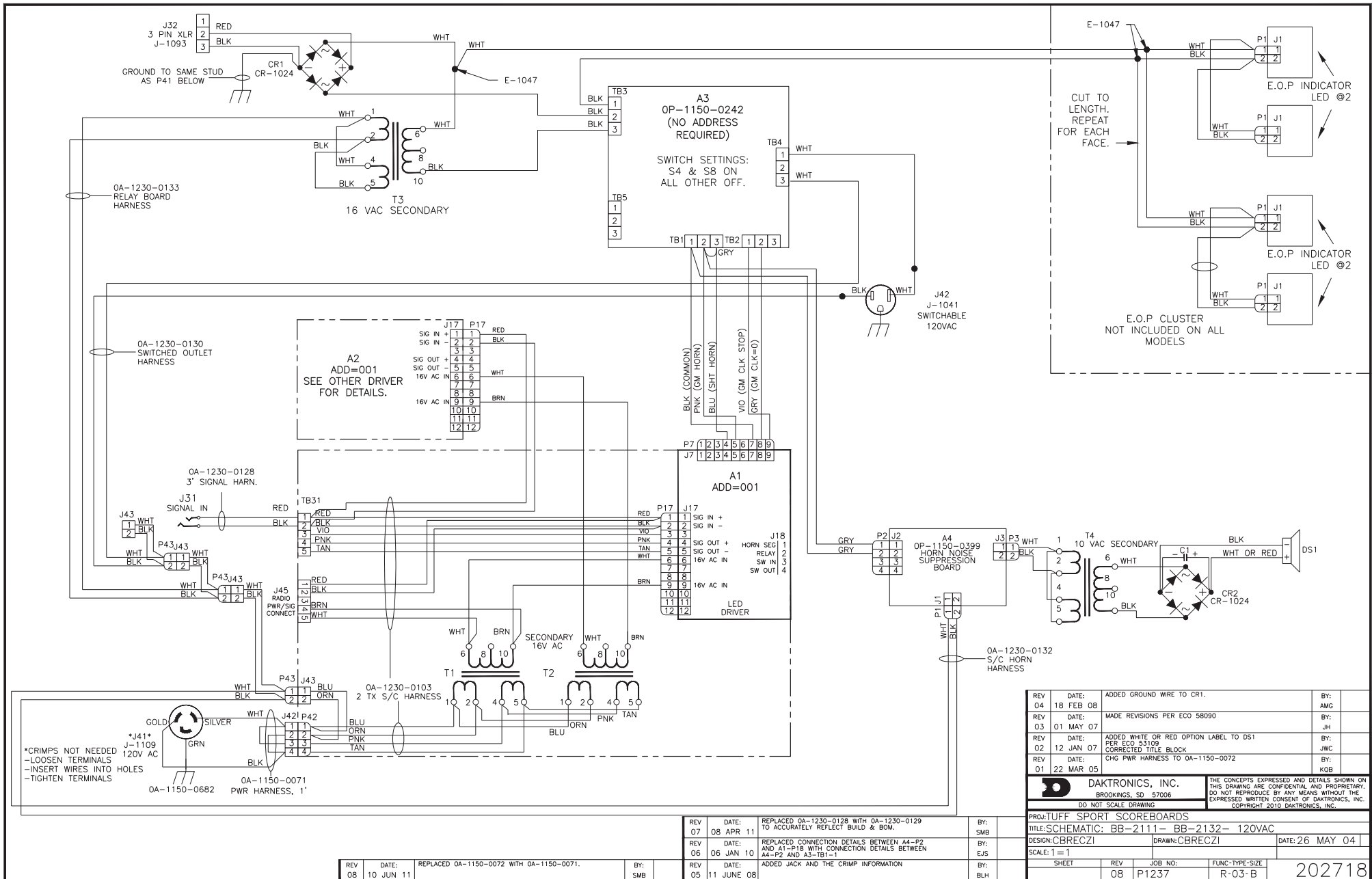
REV 03	DATE: 06 JAN 10	REPLACED CONNECTION DETAILS BETWEEN A4-P2 AND A1-P18 WITH CONNECTION DETAILS BETWEEN A4-P2 AND A3-TB1-1	BY: EJS
REV 02	DATE: 11 JUNE 08	ADDED JACK AND THE CRIMP INFORMATION	BY: BLH
REV 01	DATE: 18 JAN 07	ADDED WHT OR RED OPTION LABEL TO DS1 PER ECO 53109	BY: JWC

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PRO: TUFF SPORT SCOREBOARDS TITLE: SCHEMATIC: BB-2109-BB-2131 - 120VAC DESIGN: CBRECZI DRAWN: CBRECZI DATE: 26 MAY 04			
SCALE: 1=1 SHEET: 04		JOB NO: P1237 FLUNC-TYPE-SIZE: R-03-B 202716	

REV 04	DATE: 07 OCT 10	CHANGED OP-1150-0235 TO OP-1150-0242 AND ADDED GROUNDING FOR CR1 AND THE HINGED TRAY	BY: JUD
--------	-----------------	--	---------

*CRIMPS NOT NEEDED
 -LOOSEN TERMINALS
 -INSERT WIRES INTO HOLES
 -TIGHTEN TERMINALS

OA-1230-0110 3FT GND HARNESS TO GROUND THE HINGED TRAY. THE DRIVER IS ON THE CABINET



*CRIMPS NOT NEEDED
 -LOOSEN TERMINALS
 -INSERT WIRES INTO HOLES
 -TIGHTEN TERMINALS

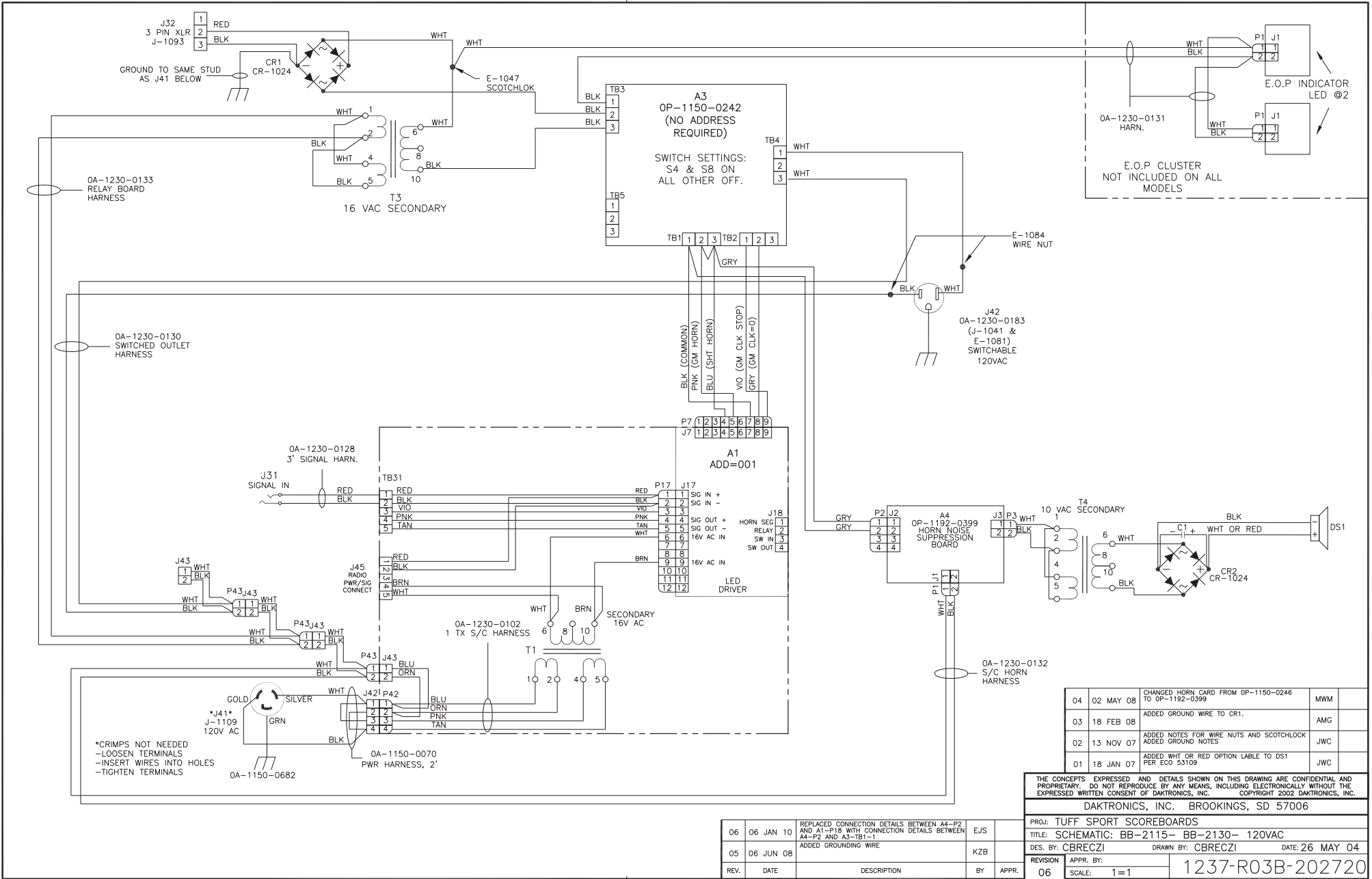
REV 04	DATE: 18 FEB 08	ADDED GROUND WIRE TO CRT.	BY: AMG
REV 03	DATE: 01 MAY 07	MADE REVISIONS PER ECO 58090	BY: JH
REV 02	DATE: 12 JAN 07	ADDED WHITE OR RED OPTION LABEL TO DS1 PER ECO 53109 CORRECTED TITLE BLOCK	BY: JWC
REV 01	DATE: 22 MAR 05	CHG PWR HARNESS TO OA-1150-0072	BY: KOB

DAKTRONICS, INC.
 BROOKINGS, SD 57006
 DO NOT SCALE DRAWING

PROJ: TUFF SPORT SCOREBOARDS		DATE: 26 MAY 04	
TITLE: SCHEMATIC: BB-2111- BB-2132- 120VAC			
DESIGN: CBRECZI	DRAWN: CBRECZI		
SCALE: 1=1			
SHEET	REV	JOB NO:	FLUNC-TYPE-SIZE
08	08	P1237	R-03-B

REV 07	DATE: 08 APR 11	REPLACED OA-1230-0128 WITH OA-1230-0129 TO ACCURATELY REFLECT BUILD & BOM.	BY: SMB
REV 06	DATE: 06 JAN 10	REPLACED CONNECTION DETAILS BETWEEN A4-P2 AND A1-P18 WITH CONNECTION DETAILS BETWEEN A4-P2 AND A3-TB1-1	BY: EJS
REV 05	DATE: 11 JUNE 08	ADDED JACK AND THE CRIMP INFORMATION	BY: BLH
REV 08	DATE: 10 JUN 11	REPLACED OA-1150-0072 WITH OA-1150-0071.	BY: SMB

202718



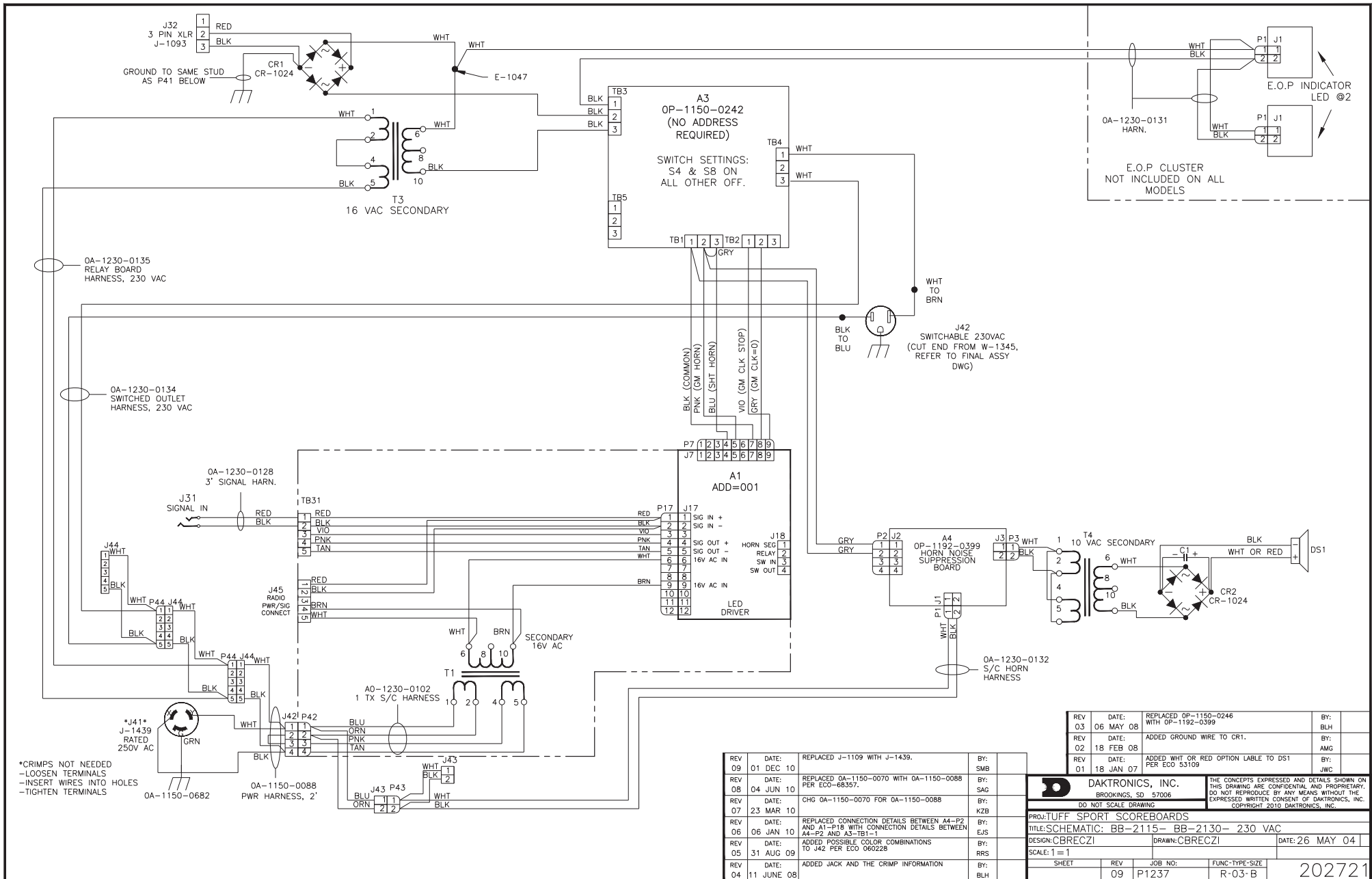
04	02 MAY 08	CHANGED HORN CARD FROM OP-1150-0246 TO OP-1192-0399	MWM
03	18 FEB 08	ADDED GROUND WIRE TO CR1.	AMG
02	13 NOV 07	ADDED NOTES FOR WIRE NUTS AND SCOTCHLOCK ADDED GROUND NOTES	JWC
01	18 JAN 07	ADDED WHT OR RED OPTION LABEL TO DS1 PER ECO 53109	JWC

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DAKTRONICS, INC. BROOKINGS, SD 57006

06		06 JAN 10	REPLACED CONNECTION DETAILS BETWEEN A4-P2 AND A1-P18 WITH CONNECTION DETAILS BETWEEN A4-P2 AND A3-TB1-1	EJS	
05		06 JUN 08	ADDED GROUNDING WIRE	KZB	
REV.	DATE	DESCRIPTION		BY	APPR.
06					

PROJ:		TUFF SPORT SCOREBOARDS			
TITLE:		SCHEMATIC: BB-2115- BB-2130- 120VAC			
DES. BY:		CBRECZI	DRAWN BY:		CBRECZI
DATE:		26 MAY 04			
REVISION	APPR. BY:				
06		SCALE: 1=1		1237-R03B-202720	



*CRIMPS NOT NEEDED
 -LOOSEN TERMINALS
 -INSERT WIRES INTO HOLES
 -TIGHTEN TERMINALS

REV 09	DATE: 01 DEC 10	REPLACED J-1109 WITH J-1439.	BY: SMB
REV 08	DATE: 04 JUN 10	REPLACED OA-1150-0070 WITH OA-1150-0088 PER ECO-68557.	BY: SAG
REV 07	DATE: 23 MAR 10	CHG OA-1150-0070 FOR OA-1150-0088	BY: KZB
REV 06	DATE: 06 JAN 10	REPLACED CONNECTION DETAILS BETWEEN A4-P2 AND A1-P18 WITH CONNECTION DETAILS BETWEEN A4-P2 AND A3-TB1-1	BY: EJS
REV 05	DATE: 31 AUG 09	ADDED POSSIBLE COLOR COMBINATIONS TO J42 PER ECO 060228	BY: RRS
REV 04	DATE: 11 JUNE 08	ADDED JACK AND THE CRIMP INFORMATION	BY: BLH
REV 03	DATE: 06 MAY 08	REPLACED OP-1150-0246 WITH OP-1192-0399	BY: BLH
REV 02	DATE: 18 FEB 08	ADDED GROUND WIRE TO CR1.	BY: AMG
REV 01	DATE: 18 JAN 07	ADDED WHT OR RED OPTION LABEL TO DS1 PER ECO 53109	BY: JWC

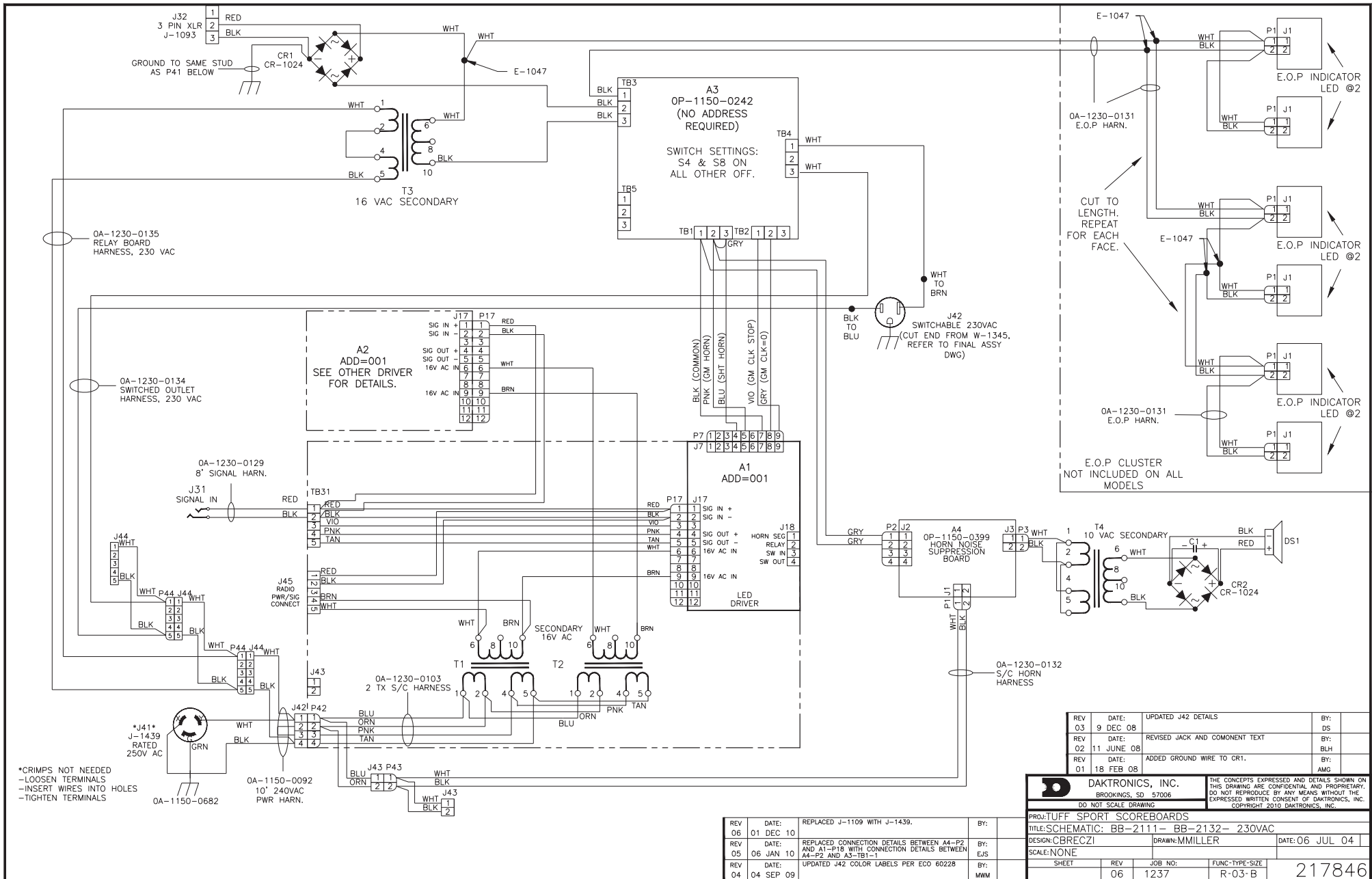
DAKTRONICS, INC.
 BROOKINGS, SD 57006

DO NOT SCALE DRAWING

PROJ: TUFF SPORT SCOREBOARDS
 TITLE: SCHEMATIC: BB-2115- BB-2130- 230 VAC
 DESIGN: CBRECZI DRAWN: CBRECZI DATE: 26 MAY 04
 SCALE: 1=1

SHEET	REV	JOB NO.	FLUNC-TYPE-SIZE
09	P1237	R-03-B	202721

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REV 03	DATE: 9 DEC 08	UPDATED J42 DETAILS	BY: DS
REV 02	DATE: 11 JUNE 08	REVISED JACK AND COMPONENT TEXT	BY: BLH
REV 01	DATE: 18 FEB 08	ADDED GROUND WIRE TO CR1.	BY: AMG

DAKTRONICS, INC.
 BROOKINGS, SD 57006
 DO NOT SCALE DRAWING

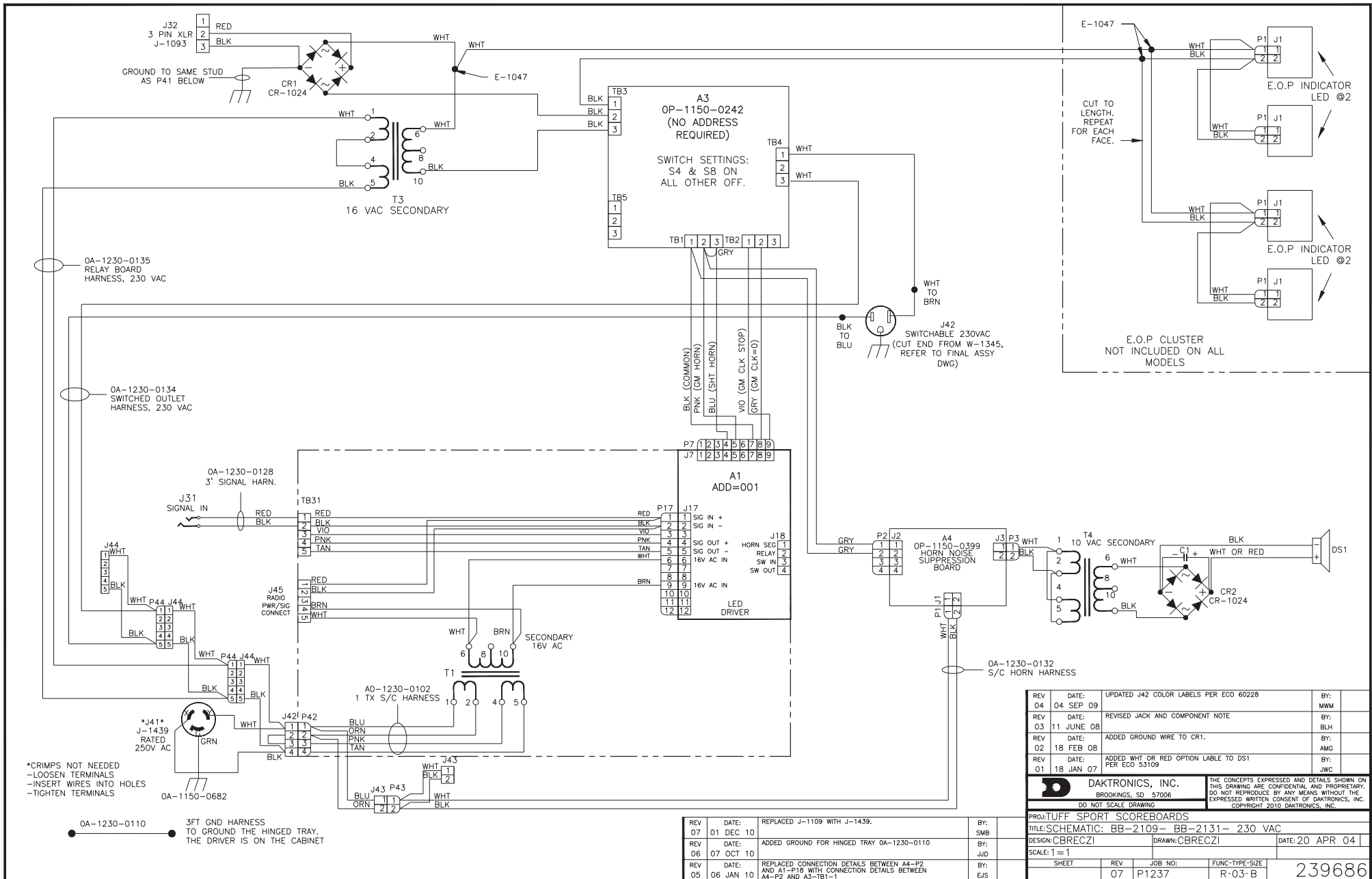
PROJ: TUFF SPORT SCOREBOARDS	DATE: 06 JUL 04
TITLE: SCHEMATIC: BB-2111- BB-2132- 230VAC	DATE: 06 JUL 04
DESIGN: CBRECZI	DRAWN: MMILLER
SCALE: NONE	
SHEET 06	JOB NO: 1237
REV 04	FLUNC-TYPE-SIZE: R-03-B

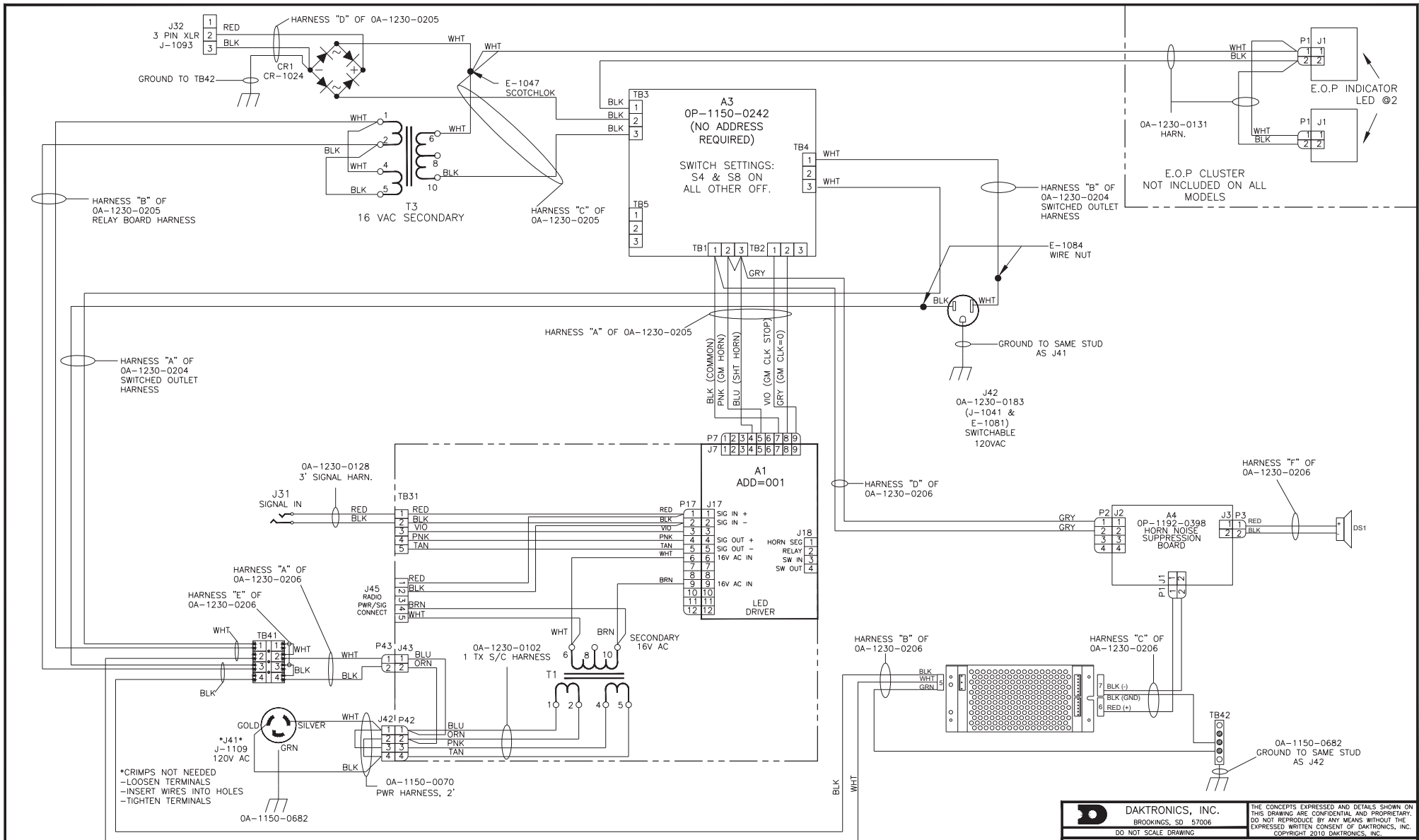
REV 06	DATE: 01 DEC 10	REPLACED J-1109 WITH J-1439.	BY:
REV 05	DATE: 06 JAN 10	REPLACED CONNECTION DETAILS BETWEEN A4-P2 AND A1-P18 WITH CONNECTION DETAILS BETWEEN A4-P2 AND A3-TB1-1	BY: EJS
REV 04	DATE: 04 SEP 09	UPDATED J42 COLOR LABELS PER ECO 60228	BY: MWM

*CRIMPS NOT NEEDED
 -LOOSEN TERMINALS
 -INSERT WIRES INTO HOLES
 -TIGHTEN TERMINALS

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217846

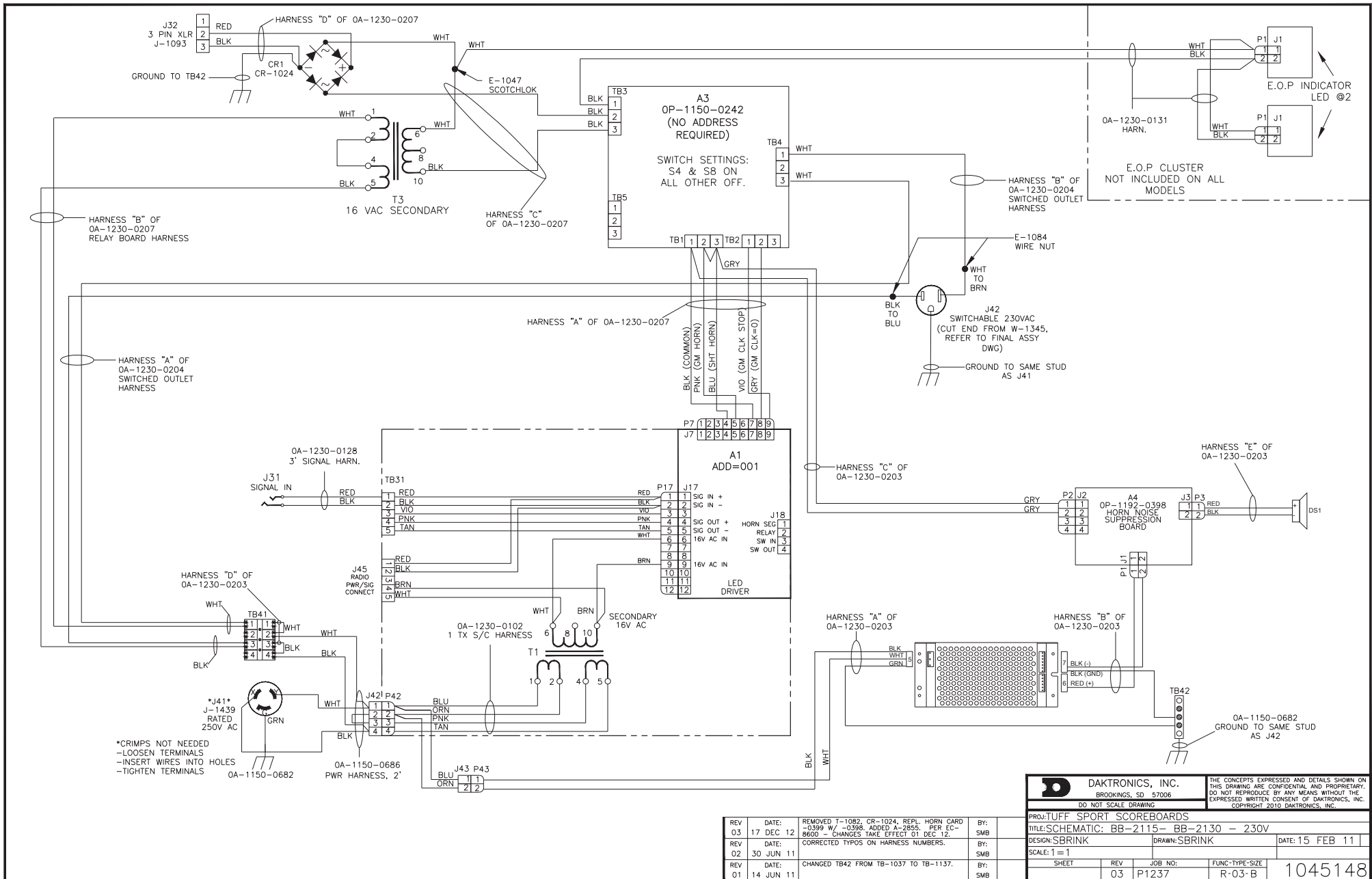




*CRIMPS NOT NEEDED
 -LOOSEN TERMINALS
 -INSERT WIRES INTO HOLES
 -TIGHTEN TERMINALS

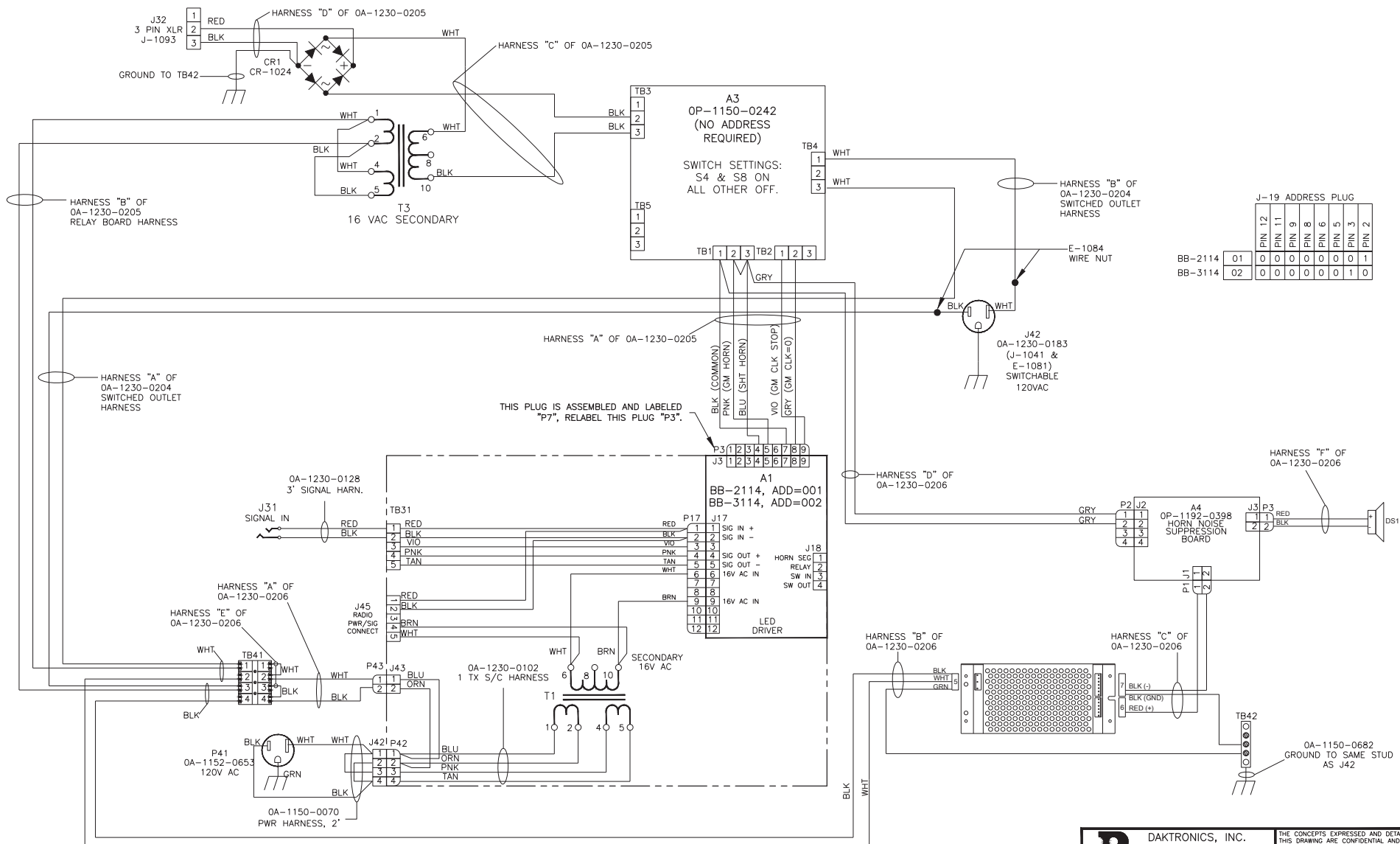
DAKTRONICS, INC. BROOKINGS, SD 57006 DO NOT SCALE DRAWING		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2010 DAKTRONICS, INC.	
		PROJECT: TUFF SPORT SCOREBOARDS TITLE: SCHEMATIC: BB-2115- BB-2130- 120VAC	
DESIGN: SBRINK	DATE: 14 FEB 11	DATE: 17 DEC 12	BY: SMB
SCALE: 1=1	REV: 01	JOB NO: 1237	FLUNC-TYPE-SIZE: R-03-B
			1045024

REV: 02	DATE: 17 DEC 12	REMOVED T-1082, CR-1024, REPL. HORN CARD -0399 W/ -0398, ADDED A-2853. PER EC-8600 - CHANGES TAKE EFFECT 01 DEC 12.	BY: SMB
REV: 01	DATE: 14 JUN 11	CHANGED TB42 FROM TB-1037 TO TB-1137.	BY: SMB



 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.	
		DO NOT SCALE DRAWING	
PROJ:TUFF SPORT SCOREBOARDS			
TITLE:SCHEMATIC: BB-2115- BB-2130 - 230V			
DESIGN:SBRINK		DRAWN:SBRINK	
SCALE:1=1		DATE:15 FEB 11	
SHEET	REV	JOB NO:	FLUNC-TYPE-SIZE
03	03	P1237	R-03-B
			1045148

REV	DATE:	REMOVED T-1082, CR-1024, REPL. HORN CARD -0399 W/ -0398, ADDED A-2855. PER EC-8600 - CHANGES TAKE EFFECT 01 DEC 12.	BY:	SMB
03	17 DEC 12			
REV	DATE:	CORRECTED TYPOS ON HARNESS NUMBERS.	BY:	SMB
02	30 JUN 11			
REV	DATE:	CHANGED TB42 FROM TB-1037 TO TB-1137.	BY:	SMB
01	14 JUN 11			



J-19 ADDRESS PLUG

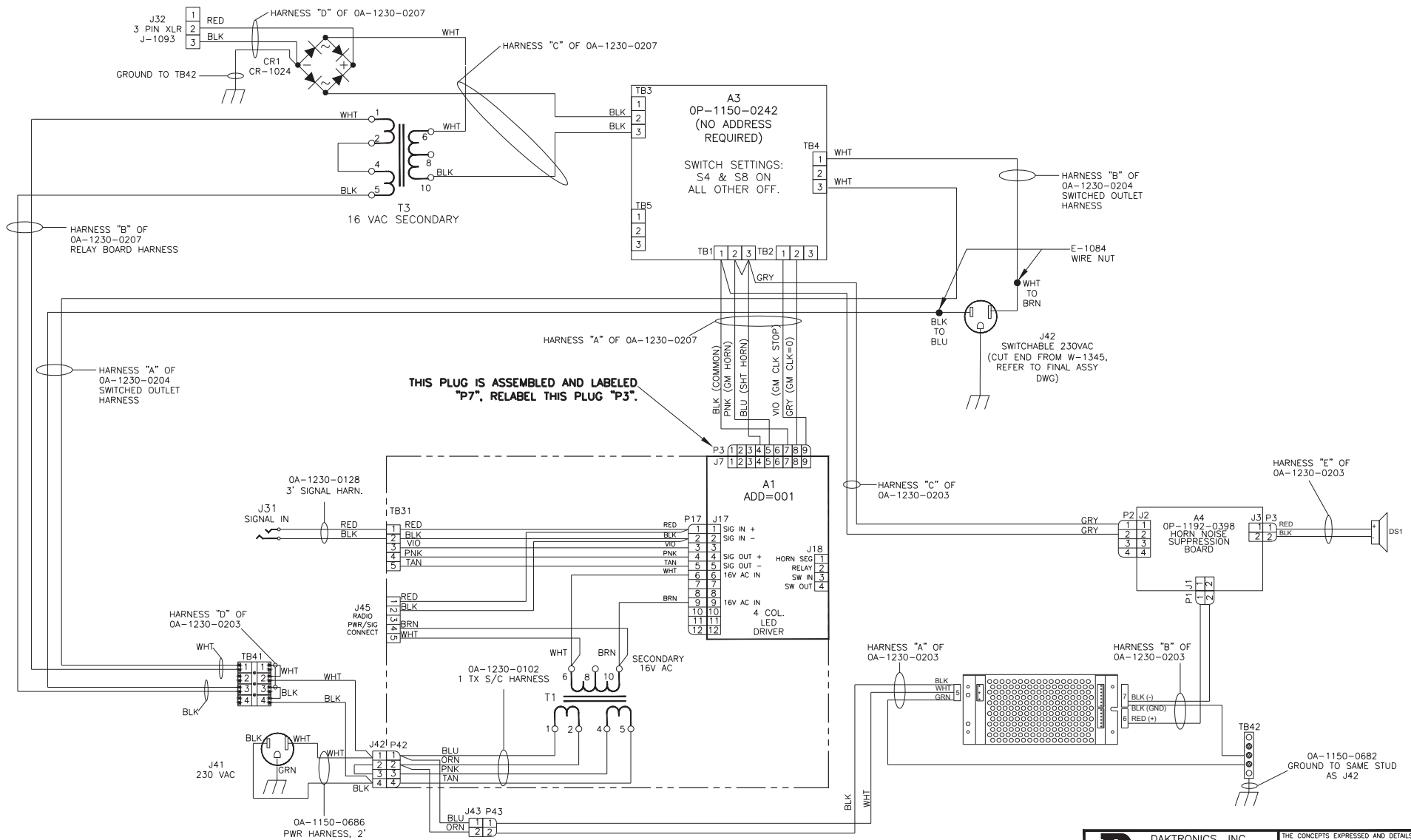
	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
BB-2114	01	0	0	0	0	0	1
BB-3114	02	0	0	0	0	0	0

DAKTRONICS, INC.
BROOKINGS, SD 57006
DO NOT SCALE DRAWING

PROJ: TUFF SPORT SCOREBOARDS
TITLE: SCHEMATIC: BB-2114 / BB-3114 - 120VAC
DESIGN: SBRINK DRAWN: SBRINK DATE: 15 FEB 11
SCALE: 1=1

REV	DATE	DESCRIPTION	BY	CHK
03	17 DEC 12	REMOVED T-1082, CR-1024, REPL. HORN CARD -0399 W/ -0398, ADDED A-2853. PER EC-8600 - CHANGES TAKE EFFECT 01 DEC 12.	SMB	
02	29 JUN 11	CHANGED J41 TO J42 ON GROUNDING NOTE AT TB42.	SMB	
01	14 JUN 11	CHANGED TB42 FROM TB-1037 TO TB-1137.	SMB	

SHEET 03 REV P1237 JOB NO. FLNC-TYPE-SIZE R-03-B 1045157



REV	DATE	DESCRIPTION	BY
04	17 DEC 12	REMOVED T-1082, CR-1024, REPL. HORN CARD -0399 W/ -0398, ADDED A-2855, PER EC-8600 - CHANGES TAKE EFFECT 01 DEC 12.	SMB
03	30 JUN 11	CORRECTED TYPOS TO HARNESS LABELS.	SMB
02	29 JUN 11	CHANGED J41 TO J42 ON GROUNDING NOTE AT TB42.	SMB
01	14 JUN 11	CHANGED TB42 FROM TB-1037 TO TB-1137.	SMB

DAKTRONICS, INC.
BROOKINGS, SD 57006

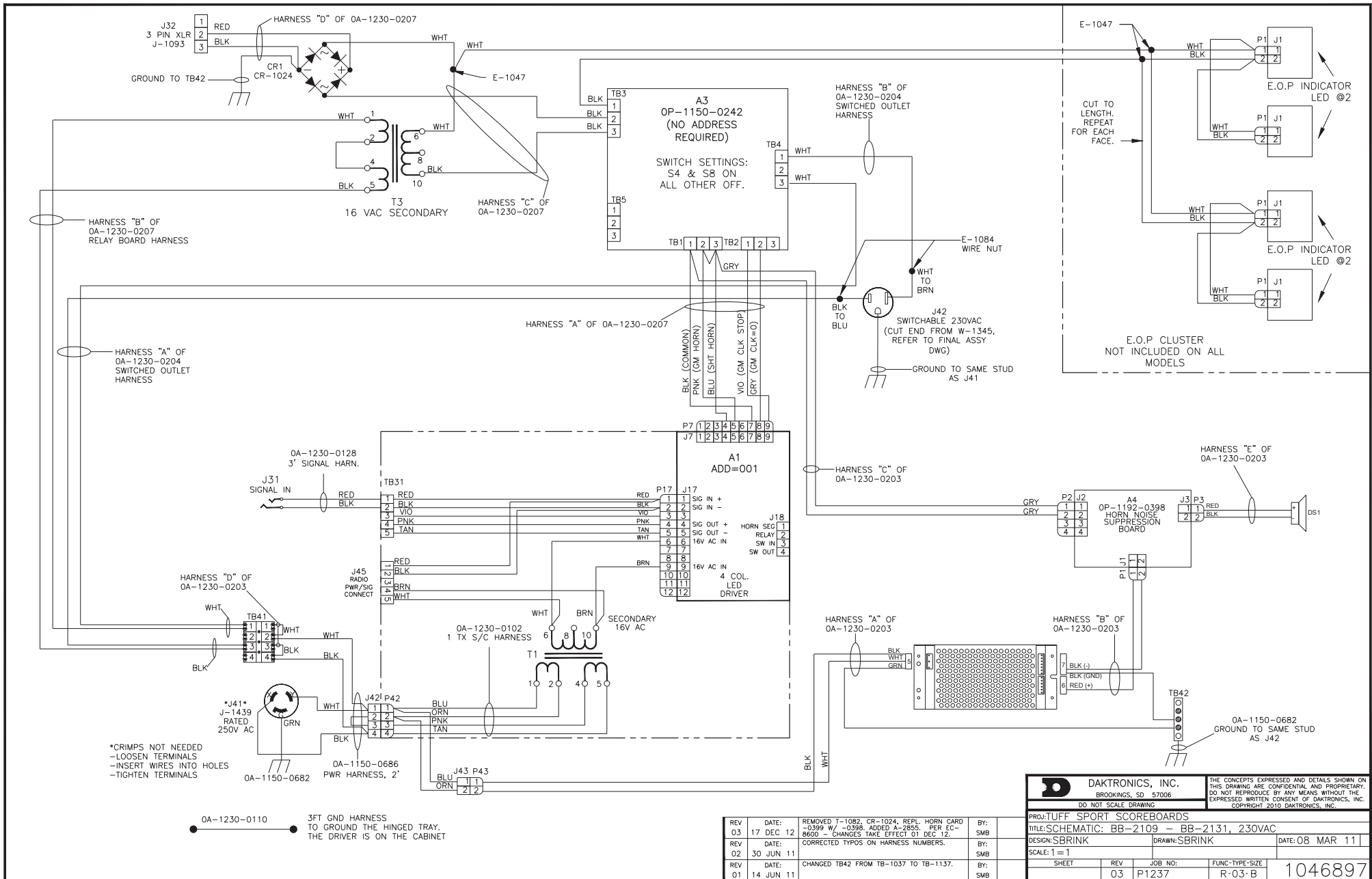
DO NOT SCALE DRAWING

PROJ: TUFF SPORT SCOREBOARDS
TITLE: SCHEMATIC: BB-2114- 230VAC
DESIGN: SBRINK DRAWN: SBRINK DATE: 15 FEB 11
SCALE: 1=1

SHEET	REV	JOB NO.	FLUNC-TYPE-SIZE
04		P1237	R-03-B

1045160

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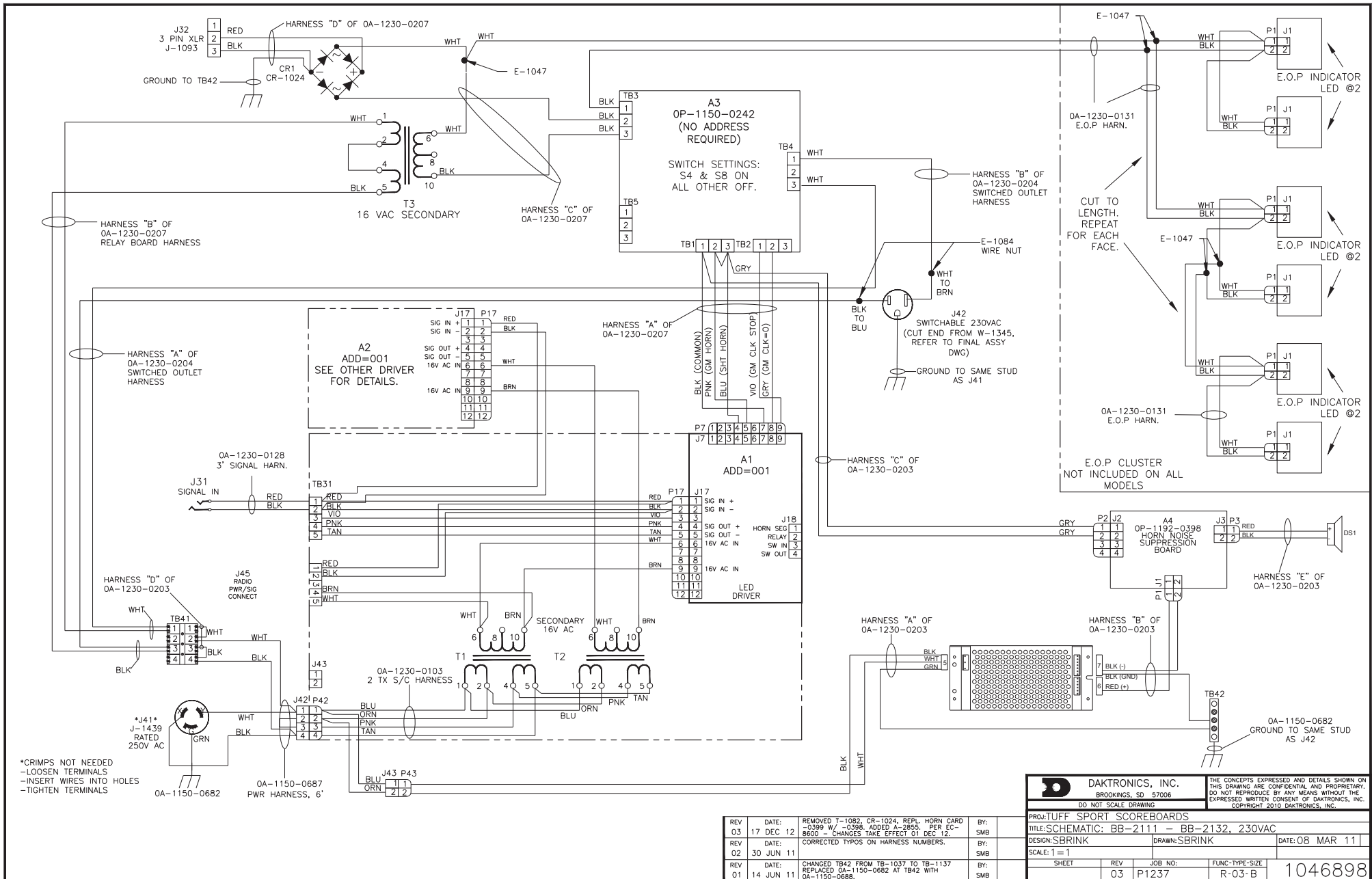


*CRIMPS NOT NEEDED
 -LOOSEN TERMINALS
 -INSERT WIRES INTO HOLES
 -TIGHTEN TERMINALS

OA-1230-0110 3FT GND HARNESS
 TO GROUND THE HINGED TRAY.
 THE DRIVER IS ON THE CABINET

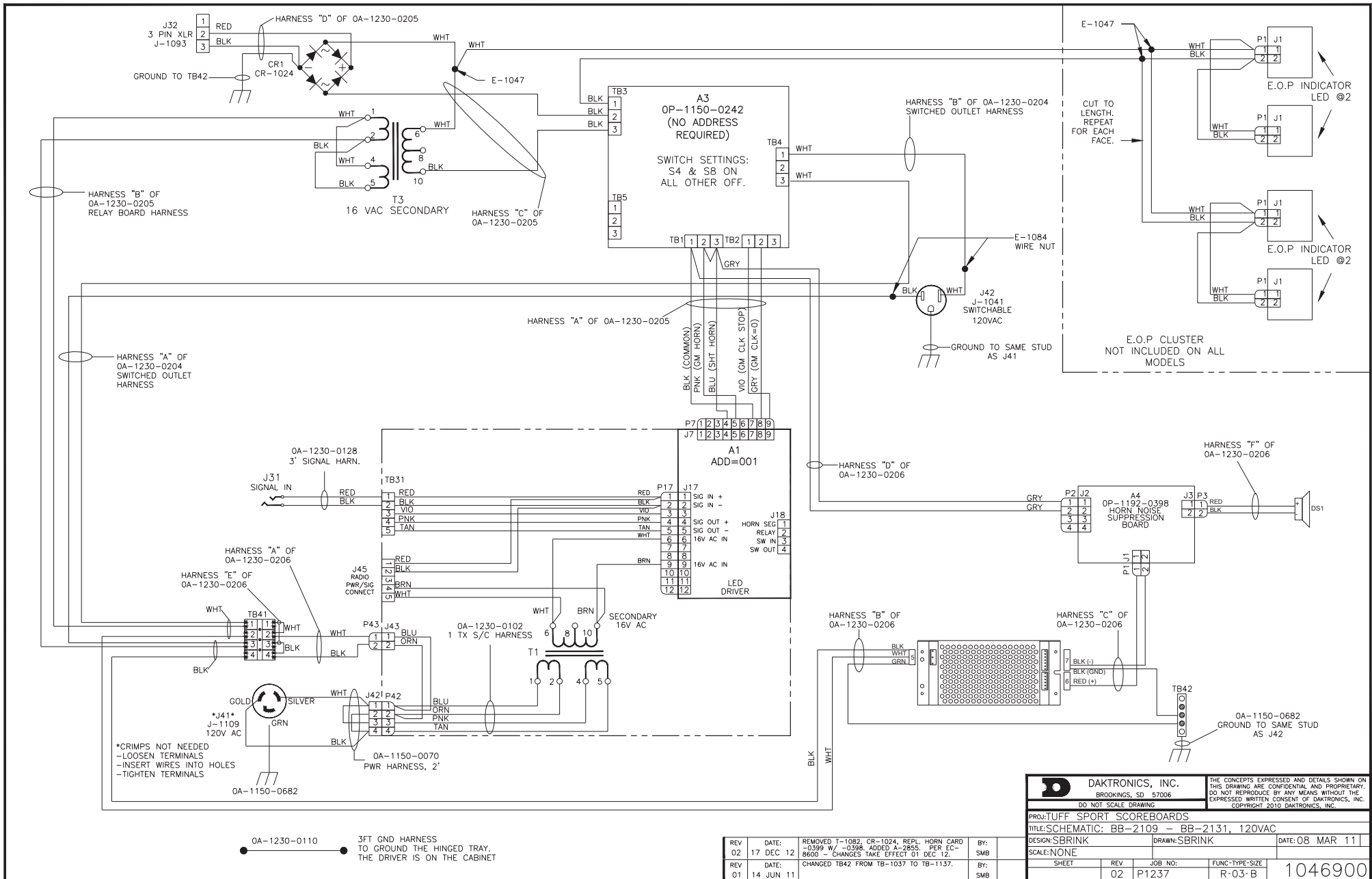
		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2010 DAKTRONICS, INC.	
BROOKINGS, SD 57006 DO NOT SCALE DRAWING			
PROJ: TUFF SPORT SCOREBOARDS			
TITLE: SCHEMATIC: BB-2109 - BB-2131, 230VAC			
DESIGN: SBRINK		DRAWN: SBRINK	
SCALE: 1=1		DATE: 08 MAR 11	
SHEET	REV	JOB NO:	FLUNC-TYPE-SIZE
03	01	P1237	R-03-B
			1046897

REV	DATE:	REMOVED T-1082, CR-1024, REPL. HORN CARD -0399 W/ -0398, ADDED A-2855. PER EC-8600 - CHANGES TAKE EFFECT 01 DEC 12.	BY:
03	17 DEC 12		SMB
REV	DATE:	CORRECTED TYPOS ON HARNESS NUMBERS.	BY:
02	30 JUN 11		SMB
REV	DATE:	CHANGED TB42 FROM TB-1037 TO TB-1137.	BY:
01	14 JUN 11		SMB



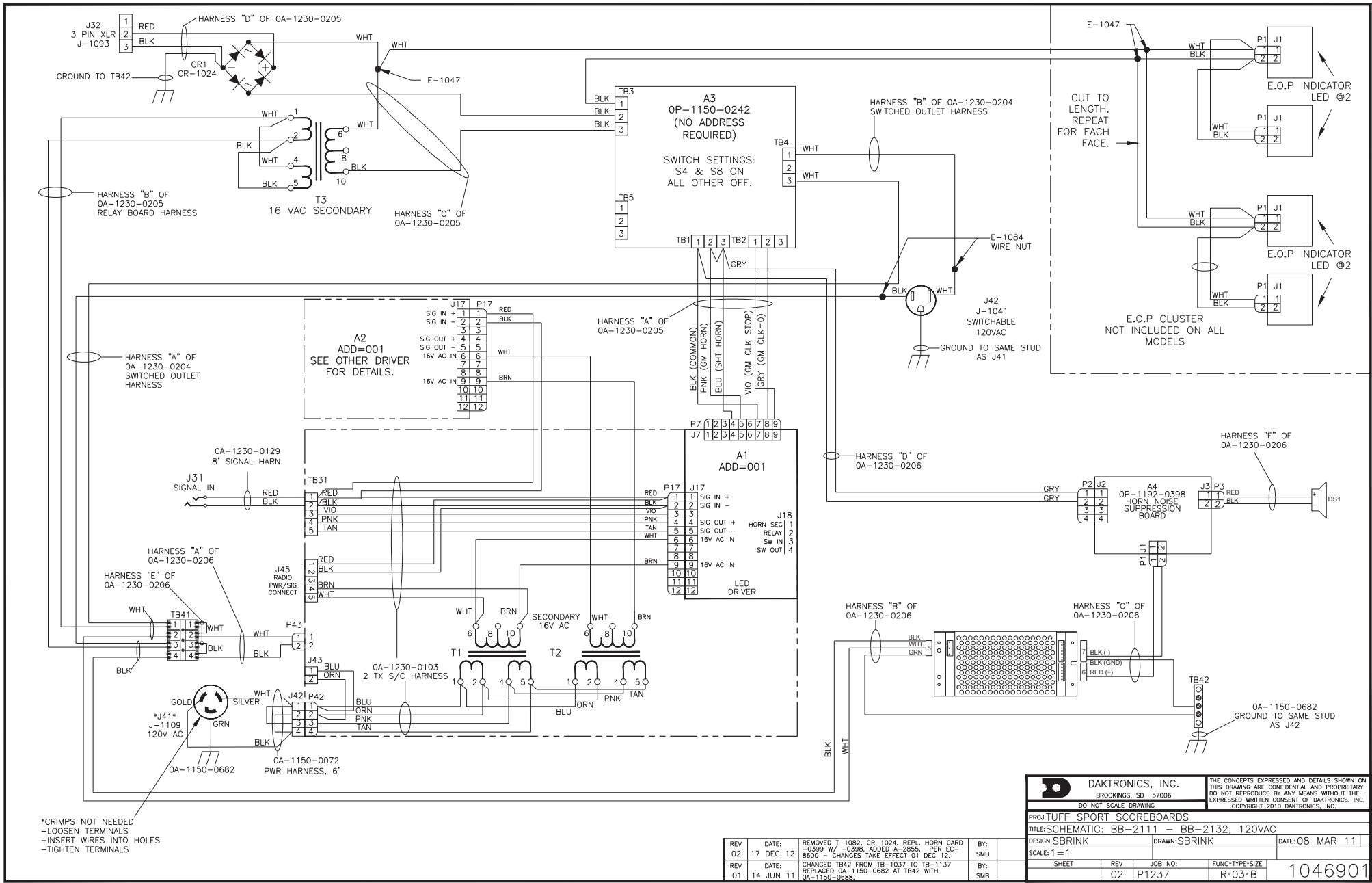
*CRIMPS NOT NEEDED
 -LOOSEN TERMINALS
 -INSERT WIRES INTO HOLES
 -TIGHTEN TERMINALS

 BROOKINGS, SD 57006 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 2010 DAKTRONICS, INC.	
		PROJECT: TUFF SPORT SCOREBOARDS TITLE: SCHEMATIC: BB-2111 - BB-2132, 230VAC DESIGN: SBRINK DRAWN: SBRINK DATE: 08 MAR 11	
REV 03	DATE: 17 DEC 12	REMOVED T-1082, CR-1024, REPL. HORN CARD -0399 W/ -0398, ADDED A-2853. PER EC-8600 - CHANGES TAKE EFFECT 01 DEC 12.	BY: SMB
REV 02	DATE: 30 JUN 11	CORRECTED TYPOS ON HARNESS NUMBERS.	BY: SMB
REV 01	DATE: 14 JUN 11	CHANGED TB42 FROM TB-1037 TO TB-1137 REPLACED OA-1150-0682 AT TB42 WITH OA-1150-0688.	BY: SMB
SHEET 03	REV 03	JOB NO: P1237	FLUNC-TYPE-SIZE R-03-B
			1046898



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		PROJECT: TUFF SPORT SCOREBOARDS TITLE: SCHEMATIC: BB-2109 - BB-2131, 120VAC	
DESIGN: SBRINK	DRAWN: SBRINK	DATE: 08 MAR 11	
SCALE: NONE	REV: 02	JOB NO: P1237	FLUNC-TYPE-SIZE: R-03-B
			1046900

REV 02	DATE: 17 DEC 12	REMOVED T-1082, CR-1024, REPL. HORN CARD -0399 W/ -0398, ADDED A-2853. PER EC-8600 - CHANGES TAKE EFFECT 01 DEC 12.	BY: SMB
REV 01	DATE: 14 JUN 11	CHANGED TB42 FROM TB-1037 TO TB-1137.	BY: SMB

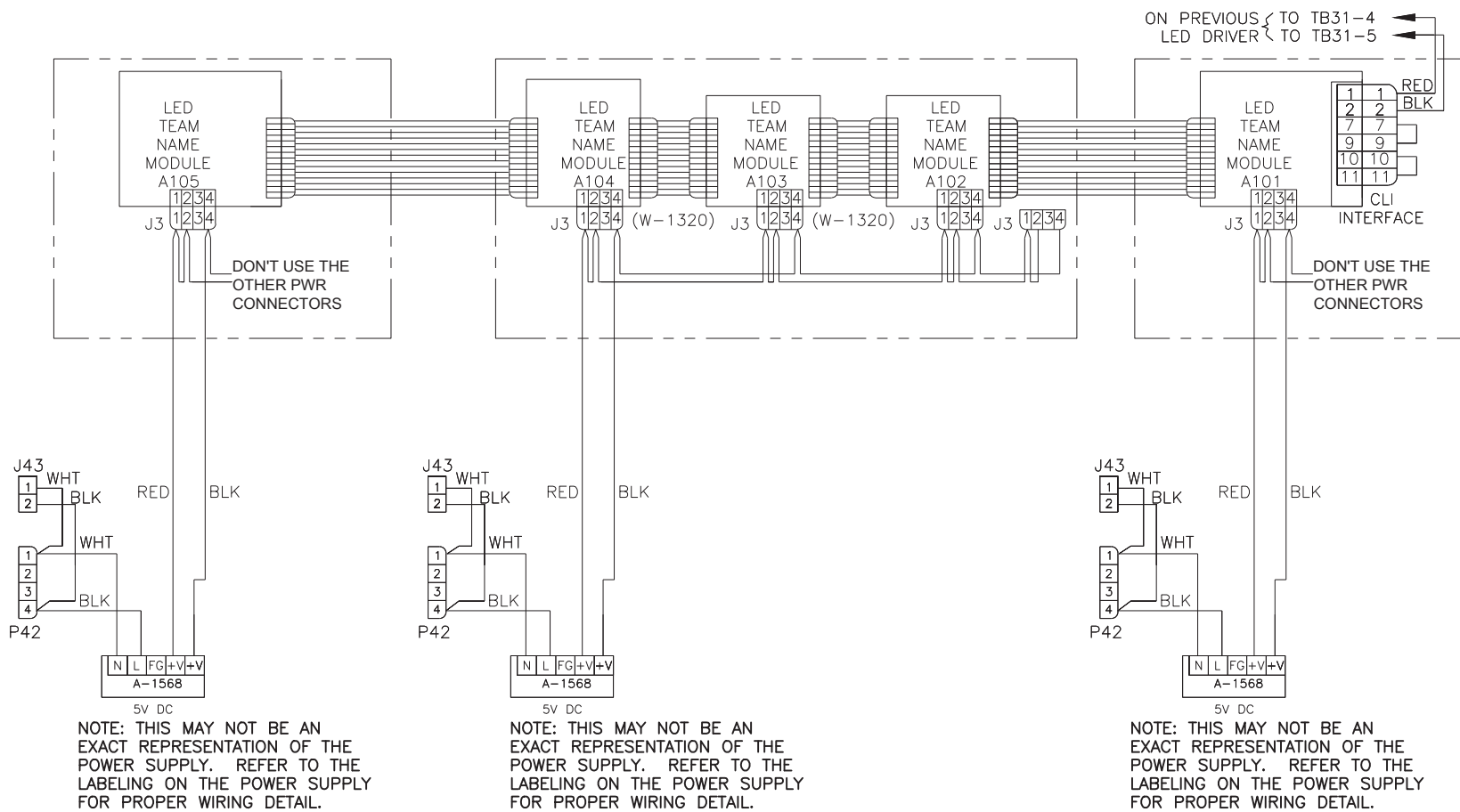


*CRIMPS NOT NEEDED
 -LOOSEN TERMINALS
 -INSERT WIRES INTO HOLES
 -TIGHTEN TERMINALS

REV 02	DATE: 17 DEC 12	REMOVED T-1082, CR-1024, REPL. HORN CARD -0399 W/ -0398, ADDED A-2855, PER EC-8600 - CHANGES TAKE EFFECT 01 DEC 12.	BY: SJB
REV 01	DATE: 14 JUN 11	CHANGED TB47 FROM TB-1037 TO TB-1137 REPLACED OA-1150-0682 AT TB42 WITH OA-1150-0688.	BY: SJB

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DO NOT SCALE DRAWING		
PROJ: TUFF SPORT SCOREBOARDS TITLE: SCHEMATIC: BB-2111 - BB-2132, 120VAC		
DESIGN: SBRINK	DATE: 08 MAR 11	
SCALE: 1 = 1	REV 02	JOB NO: P1237
		FLUNC-TYPE-SIZE: R-03-B
		1046901

FRONT VIEW
3/4" LED DC TNMC'S



DAKTRONICS, INC.
BROOKINGS, SD 57006
DO NOT SCALE DRAWING

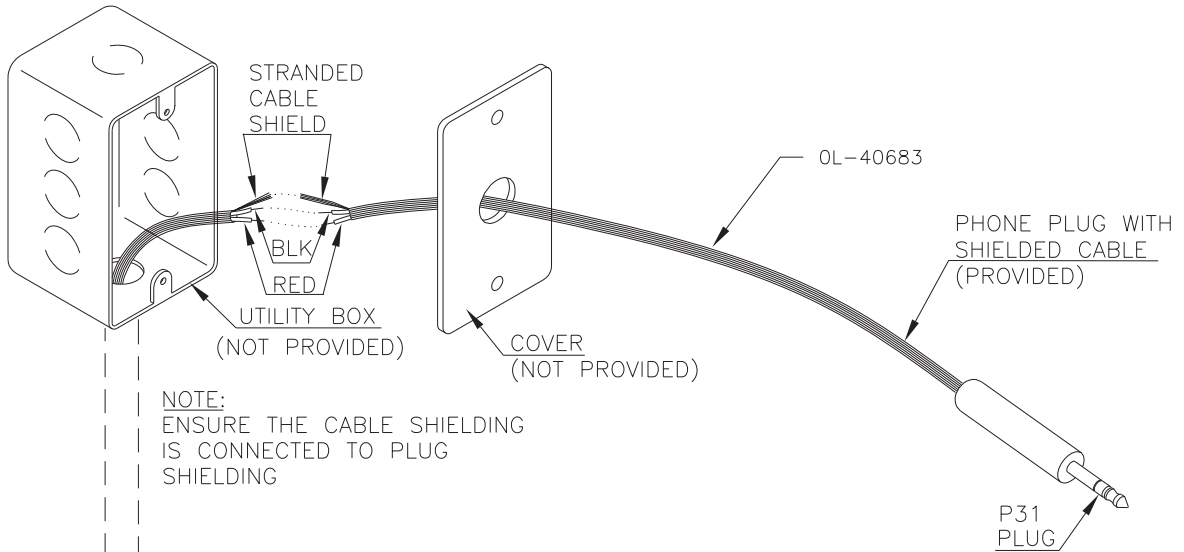
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PROJ: INDOOR LED SCOREBOARD		DATE: 18 JUN 12	
TITLE: SCHEMATIC, ELECTRONIC CAPTION, BB-2153		DRAWN: MILLER	
DESIGN: MILLER		SCALE: NONE	
SHEET		REV	
00		P1237	
JOB NO.:		FUNC-TYPE-SIZE	
E-03-A		1102510	

Appendix E: Additional Reference Drawings

<i>Drawing Title</i>	<i>Drawing Number</i>
Signal Connection; Installation.....	A-28124
Segmentation, 7 Segment Bar Digit	A-38532
Address Table, 1 Through 128	A-115078
Address Table, 129 Through 255	A-115079
Protocol Table, 1 Through 15	A-115081
4 Column LED Driver II; Specifications.....	A-123783
A/S 5000 Capable TNMC Shift Card; Specifications	A-123794
Block Diagram: AS5000 BB- VB and WR #1.....	A-124686
Block Diagram: AS5000 BB- VB and WR #3.....	A-124688
Block Diagram- A/S 3000 or 5000 BB- VB and WR #2	A-125415
Block Diagram: A/S 3000 or 5000 BB- VB and WR #4	A-125417
16 Column LED Driver II Specifications.....	A-126174

DISPLAY LOCATION



NOTE:
ENSURE THE CABLE SHIELDING
IS CONNECTED TO PLUG
SHIELDING

PROCEDURE

1. ROUTE CONDUIT BETWEEN CONTROL AND DISPLAY LOCATIONS.
2. MOUNT BOXES.
3. PULL CABLE THROUGH CONDUIT.
4. CONNECT CABLE TO J31 AND P31

J31: USE CONNECTORS PROVIDED.
INSERT WIRES INTO CONNECTOR
AND SQUEEZE CONTACT
DOWN WITH PLIERS. SNAP PLASTIC
COVER SHUT.

P31: CONNECT WIRES TO CABLE AS
FOLLOWS:

- J31 RED TO P31 RED (+)
- J31 BLK TO P31 BLK (-)
- J31 SHIELD TO P31 SHIELD

NOTE!!

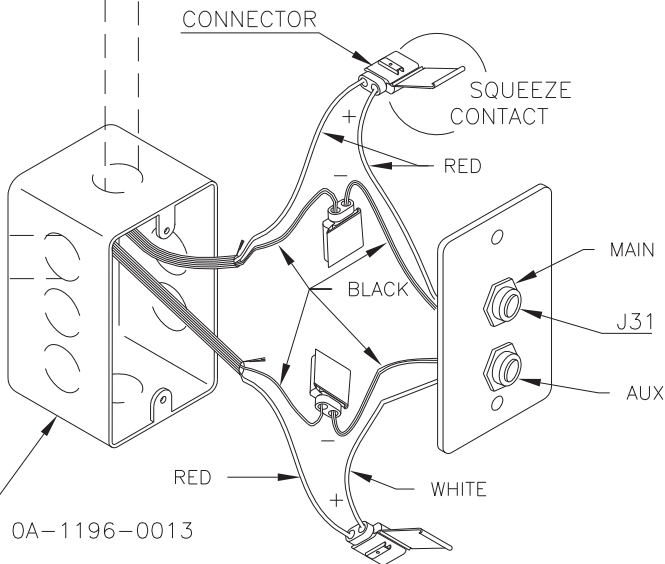
DO NOT CONNECT
CABLE SHIELD AT
CONTROL CONSOLE END

SHIELDED CABLE
IN CONDUIT
(NOT PROVIDED)

TO MAIN BOARD

TO AUX BOARD

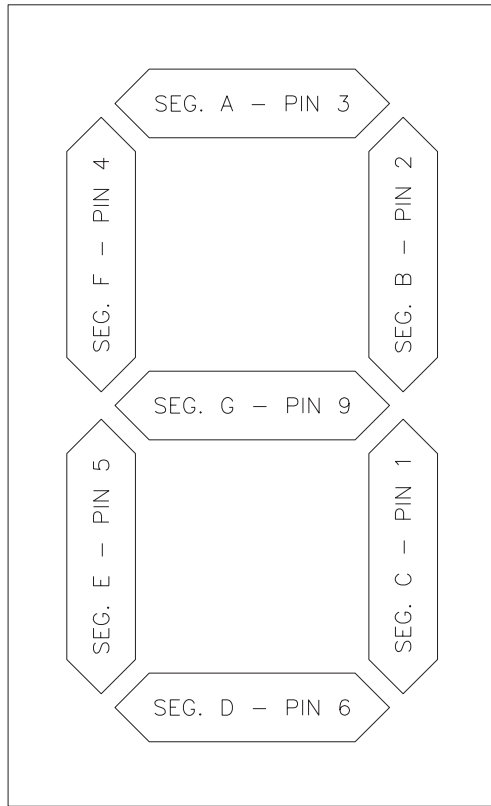
J-BOX
(PROVIDED)



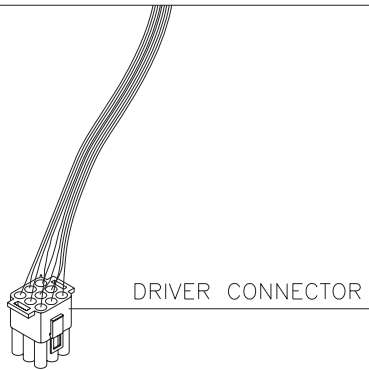
CONTROL LOCATION

REV.	DATE	DESCRIPTION	BY	APPR.
05	30 JUL 03	BOLD FACED GROUNDING NOTE	TLH	
04	17 JUN 03	CHANGED GROUNDING PROCEDURES	JJC	MWM
3	17 JAN 02	ADDED AUX TO J-BOX	JJS	
2	25 MAR 92	CHANGED WHITE TO RED	JTC	
1	05 NOV 91	REDREW ON A-SIZE ON ACAD.	JLH	

DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: BASKETBALL			
TITLE: SIGNAL CONNECTION; INSTALLATION			
DES. BY: AVB		DRAWN BY: MHART	
		DATE: 15SEP86	
REVISION	APPR. BY: AVB	1009-R10A-28124	
05	SCALE: NONE		



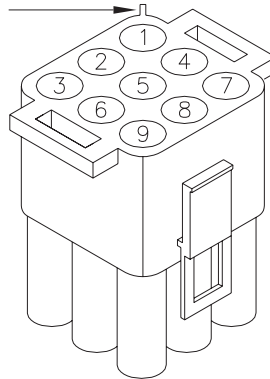
7 SEGMENT BAR DIGIT
FRONT VIEW



COLOR CODE		
PIN NO.	WIRE COLOR	DRIVER SEGMENT
1	ORN	C
2	RED	B
3	BRN	A
4	BLU	F
5	PNK	E
6	TAN	D
7	BLK	COM.
8	GRY	H
9	VIO	G

CONNECTOR PIN NUMBERING

NOTE SPLINE NEAR NO. 1



NOTE: "H" SEGMENT, GRAY WIRE IS NOT USED ON 7 SEGMENT BAR DIGIT.

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: BASKETBALL
TITLE: SEGMENTATION, 7 SEGMENT BAR DIGIT
DES. BY: _____ DRAWN BY: HEIDERSCHIEDT DATE: 5 JUN 89
REVISION 02 APPR. BY: AVB SCALE: 1=4
1009-R04A-38532

REV.	DATE	DESCRIPTION	BY	APPR.
2	30 APR 97	ADDED SEGMENT DESIGNATIONS TO DIGIT FIGURE.	AVB	AVB
1	2 JAN 92	CHANGED FROM B-SIZE TO A-SIZE DWG.	C FICK	

KEY: 0 = WIRE NOT CONNECTED 1 = WIRE IS CONNECTED

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
1	0	0	0	0	0	0	0	1
2	0	0	0	0	0	0	1	0
3	0	0	0	0	0	0	1	1
4	0	0	0	0	0	1	0	0
5	0	0	0	0	0	1	0	1
6	0	0	0	0	0	1	1	0
7	0	0	0	0	0	1	1	1
8	0	0	0	0	1	0	0	0
9	0	0	0	0	1	0	0	1
10	0	0	0	0	1	0	1	0
11	0	0	0	0	1	1	1	1
12	0	0	0	0	1	1	0	0
13	0	0	0	0	1	1	0	1
14	0	0	0	0	1	1	1	0
15	0	0	0	0	1	1	1	1
16	0	0	0	1	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
33	0	0	1	0	0	0	0	1
34	0	0	1	0	0	0	1	0
35	0	0	1	0	0	0	1	1
36	0	0	1	0	0	1	0	0
37	0	0	1	0	0	1	0	1
38	0	0	1	0	0	1	1	0
39	0	0	1	0	0	1	1	1
40	0	0	1	0	1	0	0	0
41	0	0	1	0	1	0	0	1
42	0	0	1	0	1	0	1	0
43	0	0	1	0	1	0	1	1
44	0	0	1	0	1	1	0	0
45	0	0	1	0	1	1	0	1
46	0	0	1	0	1	1	1	0
47	0	0	1	0	1	1	1	1
48	0	0	1	1	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
65	0	1	0	0	0	0	0	1
66	0	1	0	0	0	0	1	0
67	0	1	0	0	0	0	1	1
68	0	1	0	0	0	1	0	0
69	0	1	0	0	0	1	0	1
70	0	1	0	0	0	1	1	0
71	0	1	0	0	0	1	1	1
72	0	1	0	0	1	0	0	0
73	0	1	0	0	1	0	0	1
74	0	1	0	0	1	0	1	0
75	0	1	0	0	1	0	1	1
76	0	1	0	0	1	1	0	0
77	0	1	0	0	1	1	0	1
78	0	1	0	0	1	1	1	0
79	0	1	0	0	1	1	1	1
80	0	1	0	1	0	0	0	0

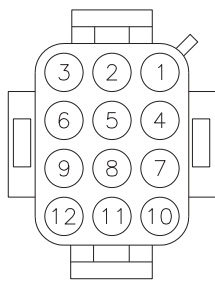
DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
97	0	1	1	0	0	0	0	1
98	0	1	1	0	0	0	1	0
99	0	1	1	0	0	0	1	1
100	0	1	1	0	0	1	0	0
101	0	1	1	0	0	1	0	1
102	0	1	1	0	0	1	1	0
103	0	1	1	0	0	1	1	1
104	0	1	1	0	1	0	0	0
105	0	1	1	0	1	0	0	1
106	0	1	1	0	1	0	1	0
107	0	1	1	0	1	0	1	1
108	0	1	1	0	1	1	0	0
109	0	1	1	0	1	1	0	1
110	0	1	1	0	1	1	1	0
111	0	1	1	0	1	1	1	1
112	0	1	1	1	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
17	0	0	0	1	0	0	0	1
18	0	0	0	1	0	0	1	0
19	0	0	0	1	0	0	1	1
20	0	0	0	1	0	1	0	0
21	0	0	0	1	0	1	0	1
22	0	0	0	1	0	1	1	0
23	0	0	0	1	0	1	1	1
24	0	0	0	1	1	0	0	0
25	0	0	0	1	1	0	0	1
26	0	0	0	1	1	0	1	0
27	0	0	0	1	1	0	1	1
28	0	0	0	1	1	1	0	0
29	0	0	0	1	1	1	0	1
30	0	0	0	1	1	1	1	0
31	0	0	0	1	1	1	1	1
32	0	0	1	0	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
49	0	0	1	1	0	0	0	1
50	0	0	1	1	0	0	1	0
51	0	0	1	1	0	0	1	1
52	0	0	1	1	0	1	0	0
53	0	0	1	1	0	1	0	1
54	0	0	1	1	0	1	1	0
55	0	0	1	1	0	1	1	1
56	0	0	1	1	1	0	0	0
57	0	0	1	1	1	0	0	1
58	0	0	1	1	1	0	1	0
59	0	0	1	1	1	0	1	1
60	0	0	1	1	1	1	0	0
61	0	0	1	1	1	1	0	1
62	0	0	1	1	1	1	1	0
63	0	0	1	1	1	1	1	1
64	0	1	0	0	0	0	0	0

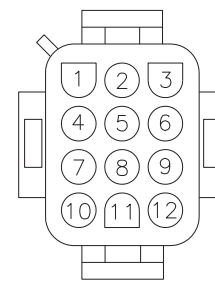
DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
81	0	1	0	1	0	0	0	1
82	0	1	0	1	0	0	1	0
83	0	1	0	1	0	0	1	1
84	0	1	0	1	0	1	0	0
85	0	1	0	1	0	1	0	1
86	0	1	0	1	0	1	1	0
87	0	1	0	1	0	1	1	1
88	0	1	0	1	1	0	0	0
89	0	1	0	1	1	0	0	1
90	0	1	0	1	1	0	1	0
91	0	1	0	1	1	0	1	1
92	0	1	0	1	1	1	0	0
93	0	1	0	1	1	1	0	1
94	0	1	0	1	1	1	1	0
95	0	1	0	1	1	1	1	1
96	0	1	1	0	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
113	0	1	1	1	0	0	0	1
114	0	1	1	1	0	0	1	0
115	0	1	1	1	0	0	1	1
116	0	1	1	1	0	1	0	0
117	0	1	1	1	0	1	0	1
118	0	1	1	1	0	1	1	0
119	0	1	1	1	0	1	1	1
120	0	1	1	1	1	0	0	0
121	0	1	1	1	1	0	0	1
122	0	1	1	1	1	0	1	0
123	0	1	1	1	1	0	1	1
124	0	1	1	1	1	1	0	0
125	0	1	1	1	1	1	0	1
126	0	1	1	1	1	1	1	0
127	0	1	1	1	1	1	1	1
128	1	0	0	0	0	0	0	0



ADDRESS PLUG
WIRE SIDE

WIRING DIAGRAM
ADDRESS PLUG
WITH ALL WIRES
CONNECTED



BOTTOM VIEW

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: ADDRESS TABLE, 1 THROUGH 128

DES. BY: AVB

DRAWN BY: A VANBEMMEL

DATE: 28 APR 99

REVISION

APPR. BY:

SCALE: NONE

01

1150-R04A-115078

REV.	DATE	DESCRIPTION	BY	APPR.
01	08 MAR 05	ADDED BOTTOM VIEW	KQB	

KEY: 0 = WIRE NOT CONNECTED 1 = WIRE IS CONNECTED

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
129	1	0	0	0	0	0	0	1
130	1	0	0	0	0	0	0	1
131	1	0	0	0	0	0	1	1
132	1	0	0	0	0	1	0	0
133	1	0	0	0	0	1	0	1
134	1	0	0	0	0	1	1	0
135	1	0	0	0	0	1	1	1
136	1	0	0	0	1	0	0	0
137	1	0	0	0	1	0	0	1
138	1	0	0	0	1	0	1	0
139	1	0	0	0	1	0	1	1
140	1	0	0	0	1	1	0	0
141	1	0	0	0	1	1	0	1
142	1	0	0	0	1	1	1	0
143	1	0	0	0	1	1	1	1
144	1	0	0	1	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
161	1	0	1	0	0	0	0	1
162	1	0	1	0	0	0	1	0
163	1	0	1	0	0	0	1	1
164	1	0	1	0	0	1	0	0
165	1	0	1	0	0	1	0	1
166	1	0	1	0	0	1	1	0
167	1	0	1	0	0	1	1	1
168	1	0	1	0	1	0	0	0
169	1	0	1	0	1	0	0	1
170	1	0	1	0	1	0	1	0
171	1	0	1	0	1	0	1	1
172	1	0	1	0	1	1	0	0
173	1	0	1	0	1	1	0	1
174	1	0	1	0	1	1	1	0
175	1	0	1	0	1	1	1	1
176	1	0	1	1	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
193	1	1	0	0	0	0	0	1
194	1	1	0	0	0	0	1	0
195	1	1	0	0	0	0	1	1
196	1	1	0	0	0	1	0	0
197	1	1	0	0	0	1	0	1
198	1	1	0	0	0	1	1	0
199	1	1	0	0	0	1	1	1
200	1	1	0	0	1	0	0	0
201	1	1	0	0	1	0	0	1
202	1	1	0	0	1	0	1	0
203	1	1	0	0	1	0	1	1
204	1	1	0	0	1	1	0	0
205	1	1	0	0	1	1	0	1
206	1	1	0	0	1	1	1	0
207	1	1	0	0	1	1	1	1
208	1	1	0	1	0	0	0	0

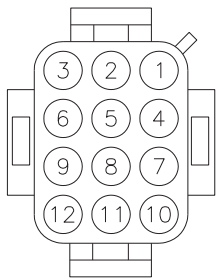
DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
225	1	1	1	0	0	0	0	1
226	1	1	1	0	0	0	1	0
227	1	1	1	0	0	0	1	1
228	1	1	1	0	0	1	0	0
229	1	1	1	0	0	1	0	1
230	1	1	1	0	0	1	1	0
231	1	1	1	0	0	1	1	1
232	1	1	1	0	1	0	0	0
233	1	1	1	0	1	0	0	1
234	1	1	1	0	1	0	1	0
235	1	1	1	0	1	0	1	1
236	1	1	1	0	1	1	0	0
237	1	1	1	0	1	1	0	1
238	1	1	1	0	1	1	1	0
239	1	1	1	0	1	1	1	1
240	1	1	1	1	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
145	1	0	0	1	0	0	0	1
146	1	0	0	1	0	0	1	0
147	1	0	0	1	0	0	1	1
148	1	0	0	1	0	1	0	0
149	1	0	0	1	0	1	0	1
150	1	0	0	1	0	1	1	0
151	1	0	0	1	0	1	1	1
152	1	0	0	1	1	0	0	0
153	1	0	0	1	1	0	0	1
154	1	0	0	1	1	0	1	0
155	1	0	0	1	1	0	1	1
156	1	0	0	1	1	1	0	0
157	1	0	0	1	1	1	0	1
158	1	0	0	1	1	1	1	0
159	1	0	0	1	1	1	1	1
160	1	0	1	0	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
177	1	0	1	1	0	0	0	1
178	1	0	1	1	0	0	1	0
179	1	0	1	1	0	0	1	1
180	1	0	1	1	0	1	0	0
181	1	0	1	1	0	1	0	1
182	1	0	1	1	0	1	1	0
183	1	0	1	1	0	1	1	1
184	1	0	1	1	1	0	0	0
185	1	0	1	1	1	0	0	1
186	1	0	1	1	1	0	1	0
187	1	0	1	1	1	0	1	1
188	1	0	1	1	1	1	0	0
189	1	0	1	1	1	1	0	1
190	1	0	1	1	1	1	1	0
191	1	0	1	1	1	1	1	1
192	1	1	0	0	0	0	0	0

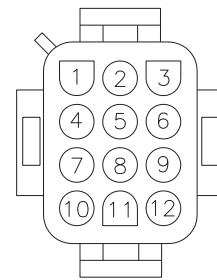
DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
209	1	1	0	1	0	0	0	1
210	1	1	0	1	0	0	1	0
211	1	1	0	1	0	0	1	1
212	1	1	0	1	0	1	0	0
213	1	1	0	1	0	1	0	1
214	1	1	0	1	0	1	1	0
215	1	1	0	1	0	1	1	1
216	1	1	0	1	1	0	0	0
217	1	1	0	1	1	0	0	1
218	1	1	0	1	1	0	1	0
219	1	1	0	1	1	0	1	1
220	1	1	0	1	1	1	0	0
221	1	1	0	1	1	1	0	1
222	1	1	0	1	1	1	1	0
223	1	1	0	1	1	1	1	1
224	1	1	1	0	0	0	0	0

DECIMAL ADDRESS	PIN 12	PIN 11	PIN 9	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
241	1	1	1	1	0	0	0	1
242	1	1	1	1	0	0	1	0
243	1	1	1	1	0	0	1	1
244	1	1	1	1	0	1	0	0
245	1	1	1	1	0	1	0	1
246	1	1	1	1	0	1	1	0
247	1	1	1	1	0	1	1	1
248	1	1	1	1	1	0	0	0
249	1	1	1	1	1	0	0	1
250	1	1	1	1	1	0	1	0
251	1	1	1	1	1	0	1	1
252	1	1	1	1	1	1	0	0
253	1	1	1	1	1	1	0	1
254	1	1	1	1	1	1	1	0
255	1	1	1	1	1	1	1	1



ADDRESS PLUG
WIRE SIDE

WIRING DIAGRAM
ADDRESS PLUG
WITH ALL WIRES
CONNECTED



BOTTOM VIEW

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: ADDRESS TABLE, 129 THROUGH 255

DES. BY: AVB

DRAWN BY: A VANBEMMEL

DATE: 28 APR 99

REVISION

APPR. BY:

SCALE: NONE

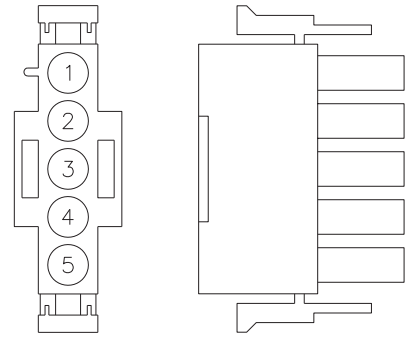
1150-R04A-115079

REV.	DATE	DESCRIPTION	BY	APPR.
01	08 MAR 05	ADDED BOTTOM VIEW	KQB	

PROTOCOL ADDRESS TABLE

	PIN 5	PIN 4	PIN 3	PIN 2
DECIMAL ADDRESS				BINARY ADDRESS
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1

KEY:
0 = WIRE NOT CONNECTED
1 = WIRE IS CONNECTED



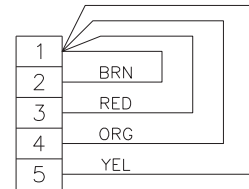
PROTOCOL PLUG
WIRE SIDE

SIDE VIEW

TIME OF DAY ENABLE

	PIN 5	PIN 4	PIN 3	PIN 2
8	1	0	0	0

WIRING DIAGRAM
 PROTOCOL PLUG
 WITH ALL WIRES
 CONNECTED



PROTOCOL ADDRESS NUMBER	PROTOL FUNCTION
1	DAKTRONICS / OMEGA MULTILINE SWIM
2	CTS MULTILINE SWIM
3-7	NOT DEFINED
8	STAND ALONE TIME OF DAY ENABLE

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: PROTOCOL TABLE, 1 THROUGH 15

DES. BY: AVB

DRAWN BY: A VANBEMMEL

DATE: 28 APR 99

REVISION

APPR. BY:

SCALE: NONE

01

1150-R04A-115081

01	29 DEC 99	ADDED TOD ENABLE ADDRESS 8	EB	
REV.	DATE	DESCRIPTION	BY	APPR.

KEY: 0 = WIRE NOT CONNECTED 1 = WIRE IS CONNECTED TO ANY GROUND PIN (1,4,7,10)
J19 ADDRESS AND COLUMN SELECT JACK

	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
1	0	0	0	0	1
2	0	0	0	1	0
3	0	0	0	1	1
4	0	0	1	0	0
5	0	0	1	0	1
6	0	0	1	1	0
7	0	0	1	1	1
8	0	1	0	0	0
9	0	1	0	0	1
10	0	1	0	1	0
11	0	1	0	1	1
12	0	1	1	0	0
13	0	1	1	0	1
14	0	1	1	1	0
15	0	1	1	1	1
16	1	0	0	0	0

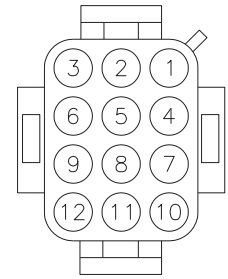
	PIN 8	PIN 6	PIN 5	PIN 3	PIN 2
17	1	0	0	0	1
18	1	0	0	1	0
19	1	0	0	1	1
20	1	0	1	0	0
21	1	0	1	0	1
22	1	0	1	1	0
23	1	0	1	1	1
24	1	1	0	0	0
25	1	1	0	0	1
26	1	1	0	1	0
27	1	1	0	1	1
28	1	1	1	0	0
29	1	1	1	0	1
30	1	1	1	1	0
31	1	1	1	1	1

TIME OF DAY SELECT

DISABLE	PIN 9
ENABLE	0

COLUMN SELECT

COLUMNS 5-8	PIN 12	PIN 11
COLUMNS 1-4	0	0
COLUMNS 9-12	0	1
COLUMNS 13-16	1	0
	1	1



ADDRESS PLUG
WIRE SIDE

WIRING DIAGRAM

ADDRESS PLUG
WITH ALL WIRES
CONNECTED



J17 MAIN	
PIN	FUNCTION
1	SIG-P
2	SIG-N
3	GND-N
4	CLOUT-P
5	CLOUT-N
6	16VAC-N
7	GND-N
8	EARTH-N
9	16VAC-P
10	GND-N
11	SWIN-P
12	SWIN-N

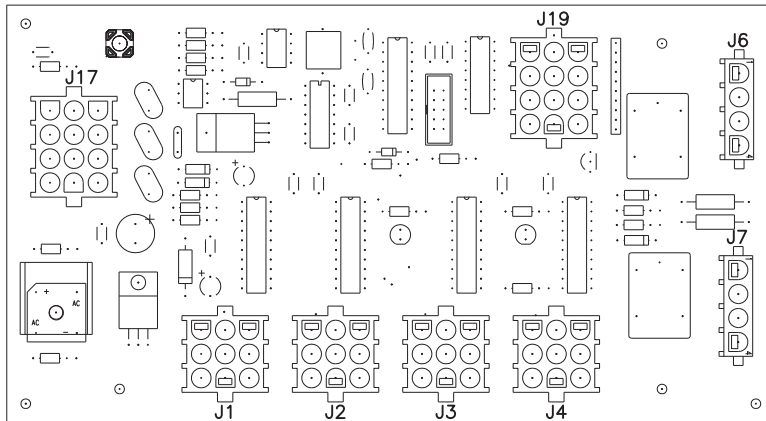
J1-4 DIGIT	
PIN	FUNCTION
1	SEGC-N
2	SEGB-N
3	SEGA-N
4	SEGF-N
5	SEGE-N
6	SEGD-N
7	+VCC-P
8	SEGH-N
9	SEGG-N

J19 ADDRESS	
PIN	FUNCTION
1	GND-N
2	ADD0-N
3	ADD1-N
4	GND-N
5	ADD2-N
6	ADD3-N
7	GND-N
8	ADD4-N
9	ADD5-N
10	GND-N
11	COLS1-N
12	COLS2-N

J6 RELAY	
PIN	FUNCTION
1	HORNOUT-N
2	AUXOUT-N
3	120SW-P
4	120SW-N

J7 RELAY	
PIN	FUNCTION
1	N/C
2	AUXOUT-N
3	120SW-P
4	120SW-N

OP-1150-0130 UNCOATED OR OP-1150-0131
COATED 4 COLUMN LED DRIVER II



NOTE

-WITH NO ADDRESS PINS SELECTED THE DRIVER WILL DEFAULT TO A/S 4000 PROTOCOL

-COLUMN SELECT PINS WORK FOR EITHER A/S 4000 OR A/S 5000 PROTOCOL

-DRIVER WILL DEFAULT TO COLUMNS 5-8

-GREEN LED INDICATES THE DRIVER HAS POWER

-RED LED WILL BE ON OR BLINKING WHEN THE DRIVER IS RECEIVING SIGNAL

-REDRIVE CIRCUIT IS PROCESSOR REFRESHED (REFER TO DWG A-128429 FOR FURTHER INFORMATION ON THE CURRENT LOOP REDRIVE CIRCUIT SPECIFICATIONS)

ALSO, COLUMN SELECT #1 MAKES THESE CHANGES:

INPUT DATA DIGIT 5, SEGMENT H IS SENT TO DIGIT OUTPUT NO. 1, SEGMENT H.
 INPUT DATA DIGIT 9, SEGMENT H IS SENT TO DIGIT OUTPUT NO. 2, SEGMENT H.

	COLUMN SELECT 0 NO JUMPER CONNECTIONS				COLUMN SELECT 1 CONNECT J19 PIN 10 TO 11				COLUMN SELECT 2 CONNECT J19 PIN 10 TO 12				COLUMN SELECT 3 CONNECT J19 PIN 10 TO 11&12			
DATA INPUT DIGIT NUMBER	5	6	7	8	1	2	3	4	9	10	11	12	13	14	15	16
DIGIT OUTPUT CONNECTOR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

REV.	DATE	DESCRIPTION	BY	APPR.
3	21 DEC 00	ADDED HORN SEGMENT INFORMATION	EB	
2	2 OCT 00	CHANGED TIME OF DAY ENABLE TO DISABLE (0) AND ENABLE (1)	NSW	
1	29 SEP 00	REMOVED "STAND ALONE" FROM WORDING FOR TIME OF DAY ENABLE.	AVB	

DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ:			
TITLE:	4 COLUMN LED DRIVER II; SPECIFICATIONS		
DES. BY:	EB	DRAWN BY:	E BRAVEK
		DATE:	08 NOV 99
REVISION	APPR. BY:	1150-R04A-123783	
03	SCALE: NONE		

KEY: 0 = WIRE NOT CONNECTED 1 = WIRE IS CONNECTED TO ANY GROUND PIN (4,7,10)

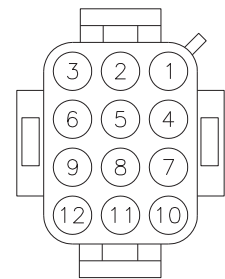
J4 ADDRESS AND NAME SWAP SELECT JACK

SEE NOTE BELOW →

DECIMAL ADDRESS	PIN 9	PIN 8	PIN 6	PIN 5
	1 (221)	0	0	0
2 (222)	0	0	1	0
3 (223)	0	0	1	1
4 (224)	0	1	0	0
5 (225)	0	1	0	1
6 (226)	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

NAME SELECT	
BOTH HOME & GUEST	0
HOME/GUEST ONLY	1

PIN 11
0
1
PIN 11



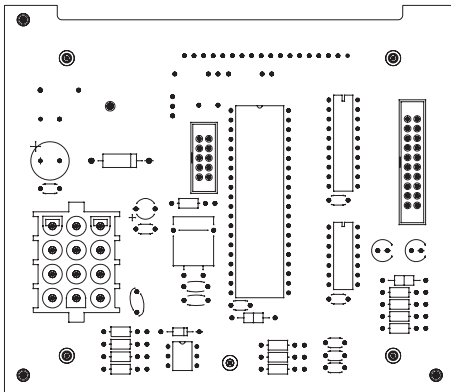
ADDRESS PLUG
WIRE SIDE

WIRING DIAGRAM
ADDRESS PLUG
WITH ALL WIRES
CONNECTED

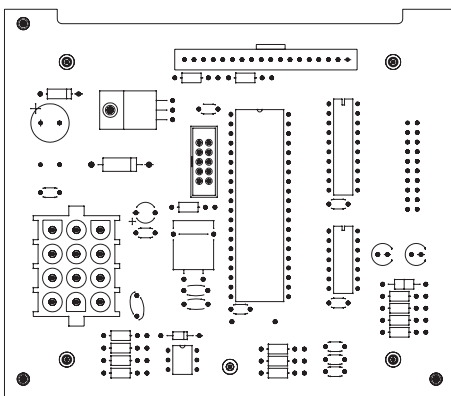


TEAM NAME SWAP PINS 10-11

OP-1176-0011; 1 1/2" & 2 1/2"
OUTDOOR TEAM NAME MESSAGE CENTER SHIFT CARD



OP-1150-0132; 1" & 3/4"
INDOOR INCANDESCENT AND LED TEAM NAME MESSAGE,
CENTER SHIFT CARD



NOTES

-WITH NO ADDRESS PINS SELECTED THE TNMC SHIFT CARD WILL DEFAULT TO A/S 4000 PROTOCOL

-NAME SWAP PIN WORKS FOR EITHER A/S 4000 OR A/S 5000 PROTOCOL

-# (###) THE NUMBER IN PARENTHESIS IS THE ADDRESS OF THE DATA RECEIVED FROM THE A/S 5000 SERIES CONSOLE

-# (###) THE NUMBER BEFORE THE PARENTHESIS IS THE PHYSICAL ADDRESS SET BY THE JUMPERS ON THE J4 ADDRESS PINS

-CARD RECEIVES POWER FROM THE MODULE THAT IT IS PLUGGED INTO.

-GREEN LED INDICATES THAT THE CARD HAS POWER

-RED LED WILL BE ON OR BLINKING WHEN THE CARD IS RECEIVING SIGNAL.

-OP-1176-0011, OUTDOOR TEAM NAME CARD SHIFTS FROM LEFT TO RIGHT (HOME SIDE TO GUEST SIDE) NAME SWAP PIN CHANGES CARD FROM DEFAULTING TO HOME TO DEFAULTING TO GUEST SIDE DATA.

-OP-1150-0132, INDOOR TEAM NAME CARD SHIFTS FROM RIGHT TO LEFT (GUEST SIDE TO HOME SIDE), NAME SWAP PIN CHANGES CARD FROM DEFAULTING TO GUEST TO DEFAULTING TO HOME SIDE DATA.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: A/S 5000 CAPABLE TNMC SHIFT CARD; SPECIFICATIONS

DES. BY: EB

DRAWN BY: E BRAVEK

DATE: 08 NOV 99

REVISION

APPR. BY:

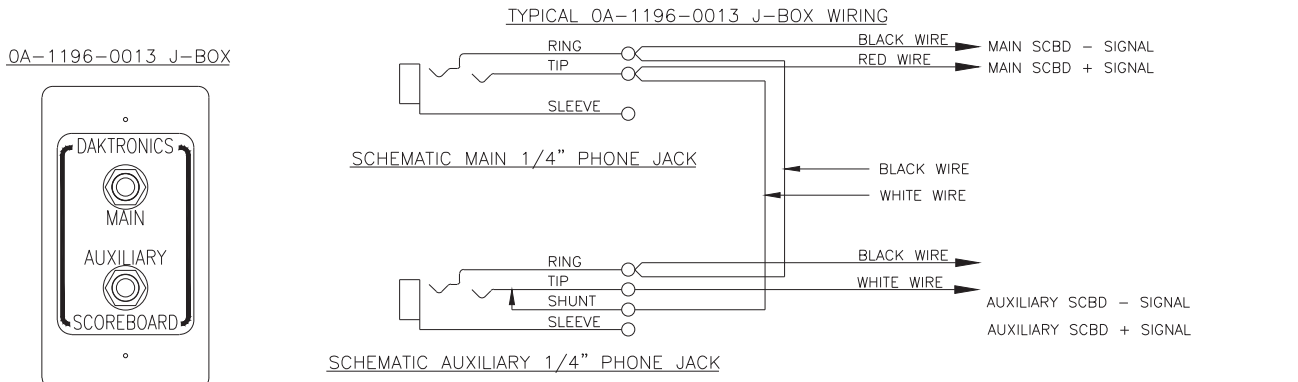
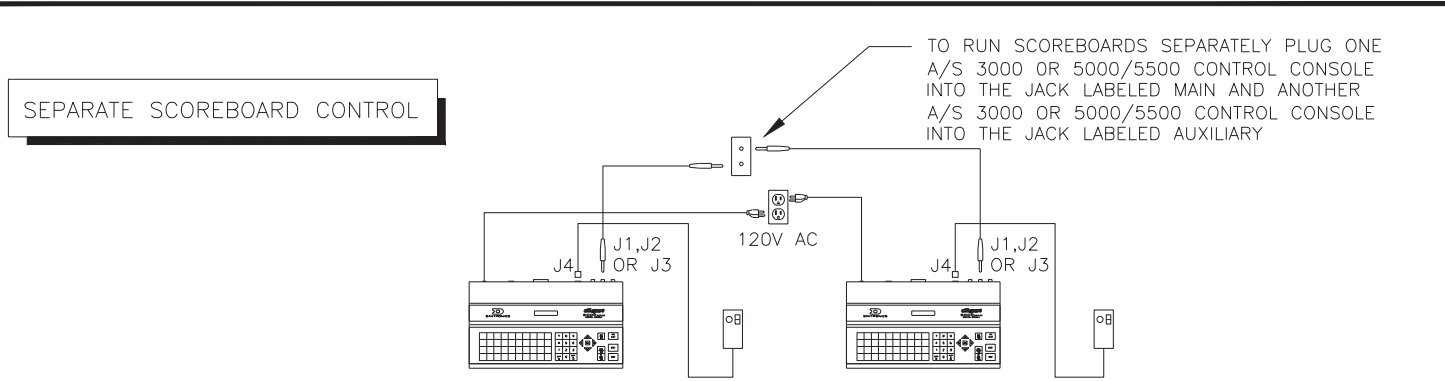
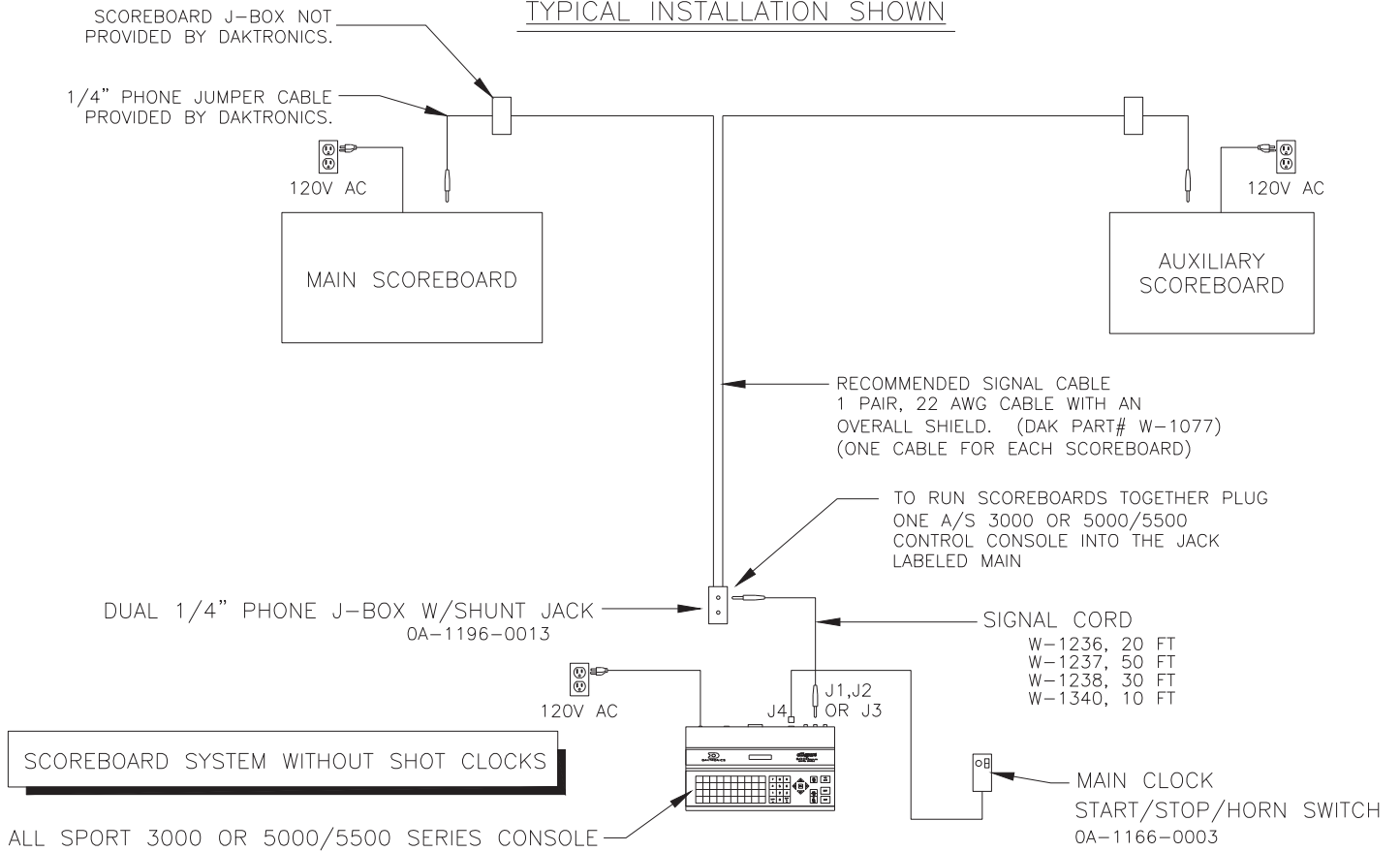
01

SCALE: NONE

1150-R04A-123794

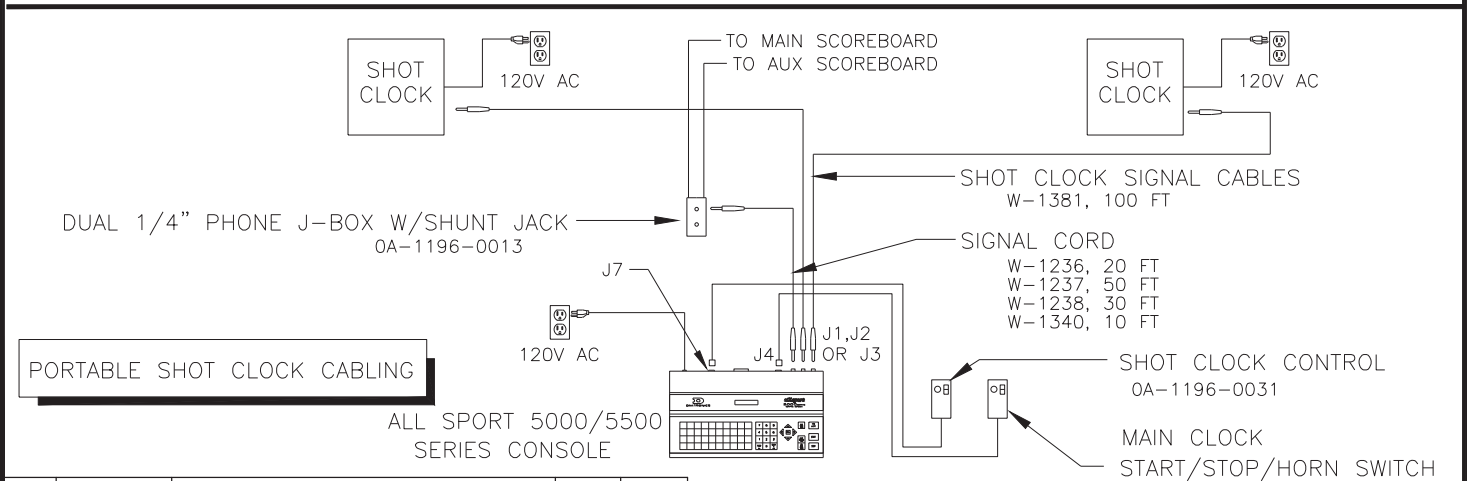
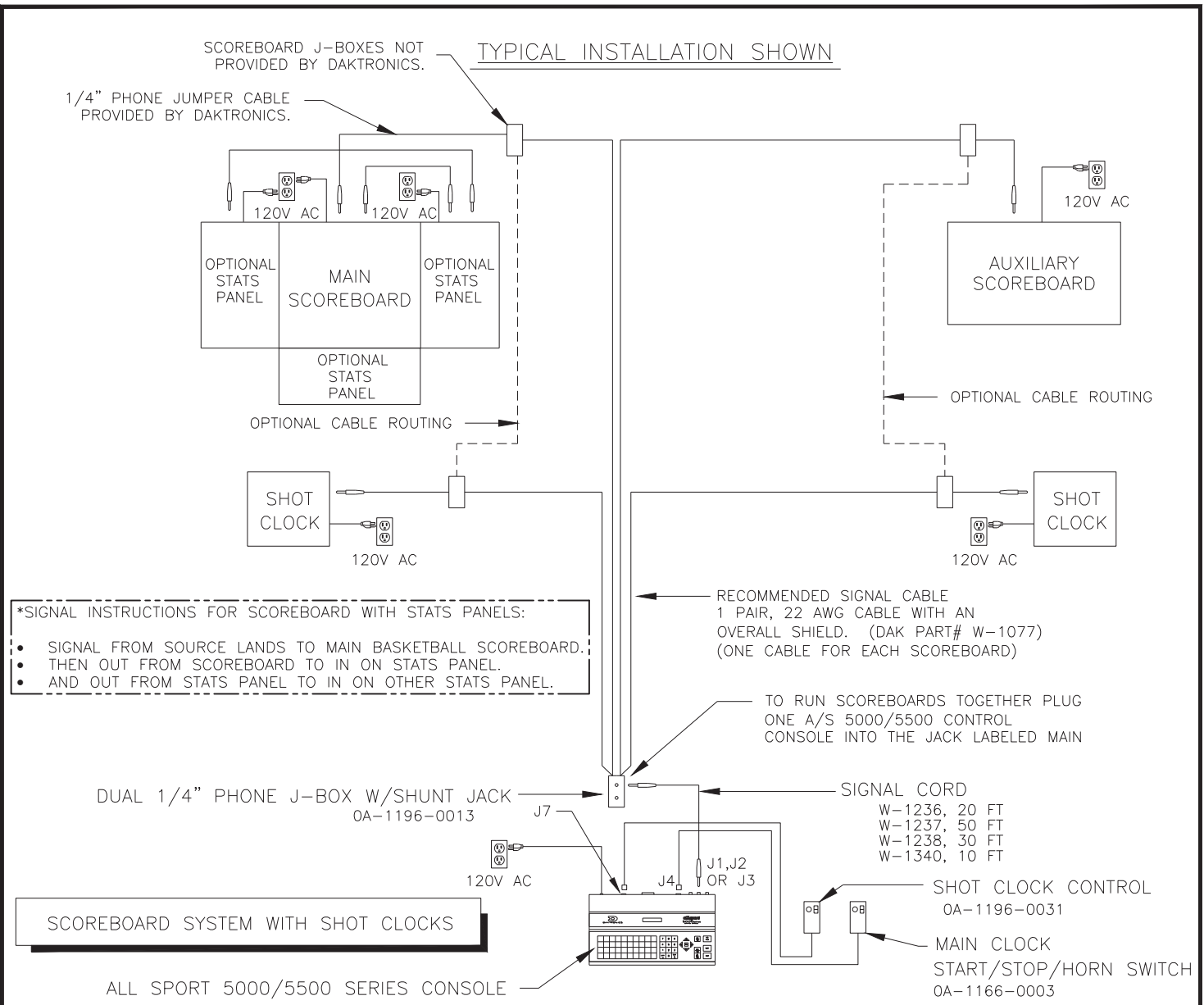
REV.	DATE	DESCRIPTION	BY	APPR.
01	2 OCT 00	EDITED TEXT "HOME ONLY" TO "HOME/GUEST ONLY"	NSW	

TYPICAL INSTALLATION SHOWN



<p>DAKTRONICS, INC. BROOKINGS, SD 57006</p>	<p>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.</p>		
	<p>DO NOT SCALE DRAWING</p>		
<p>PROJ: ALL SPORT 5000/5500</p>			
<p>TITLE: BLOCK DIAGRAM: AS5000 BB- VB AND WR #1</p>			
<p>DESIGN: _____</p>		<p>DRAWN: E BRAVEK</p>	
<p>SCALE: NONE</p>		<p>DATE: 29 NOV 99</p>	
<p>SHEET</p>	<p>REV</p>	<p>JOB NO:</p>	<p>FUNC-TYPE-SIZE</p>
<p>01</p>	<p>02</p>	<p>P1196</p>	<p>R-04-A</p>
			<p>124686</p>

REV 02	DATE: 17 AUG 11	UPDATED THE BOARDER AND TITLE BLOCK UPDATED TEXT TO INCLUDE 5500 SERIES	BY: JJL
REV 01	DATE: 26 APR 00	ADDED A/S 3000	BY: DKD



REV 06	DATE: 02 MAR 12	ADDED CORRECT SIGNAL ROUTING FOR SCBDD WITH STATS PANELS.	BY: SMB
REV 5	DATE: 17 AUG 11	UPDATED THE BOARDER AND TITLE BLOCK. UPDATED DRAWING TO INCLUDE 5500 SERIES	BY: JJJ
4	17 JAN 02	CHANGED 0A-1166-0004 TO 0A-1196-0031	JJS
3	06 SEP 01	ADDED BOTTOM OPTIONAL STATS PANEL TO MAIN BOARD, AND ADDED SIGNAL CABLES TO AND FROM OPTIONAL STATS PANELS.	NW
2	14 DEC 00	ADDED 120VAC TO SIDE BOARDS OF MAIN SCOREBOARD	NSW
1	29 DEC 99	ADDED SHOT CLOCK REMOTE START/STOP TO TOP A/S5000 CONTROLLER	EB

DAKTRONICS, INC.
BROOKINGS, SD 57006

DO NOT SCALE DRAWING

Proj: ALL SPORT 5000/5500

Title: BLOCK DIAGRAM: AS5000 BB- VB AND WR #3

DESIGN: DRAWN: E BRAVEK DATE: 29 NOV 99

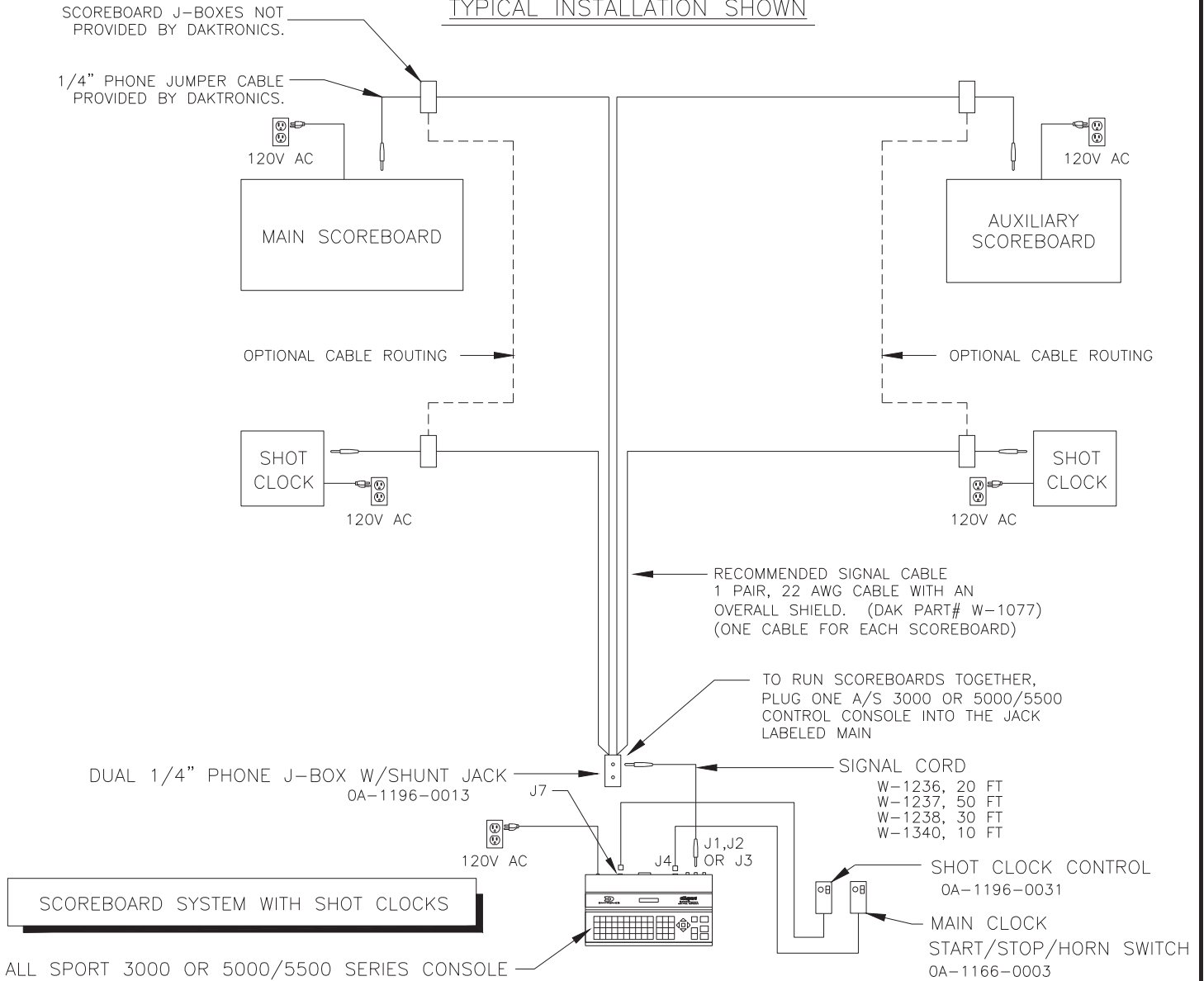
SCALE: NONE

SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
	06	P1196	R-04-A

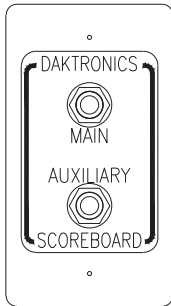
124688

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.

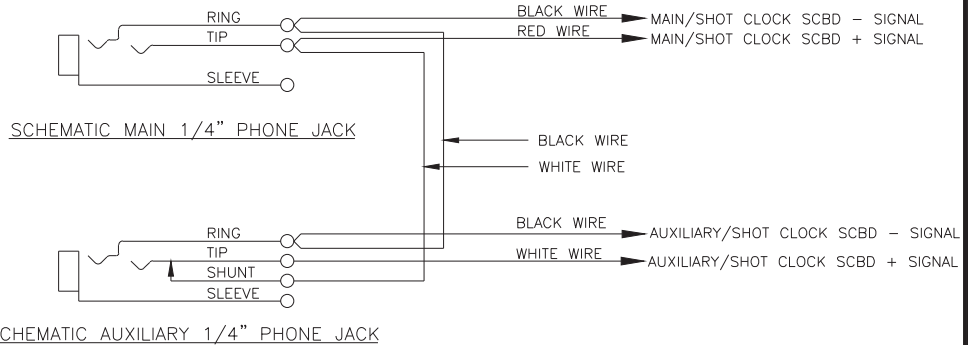
TYPICAL INSTALLATION SHOWN



0A-1196-0013 J-BOX



TYPICAL 0A-1196-0013 J-BOX WIRING



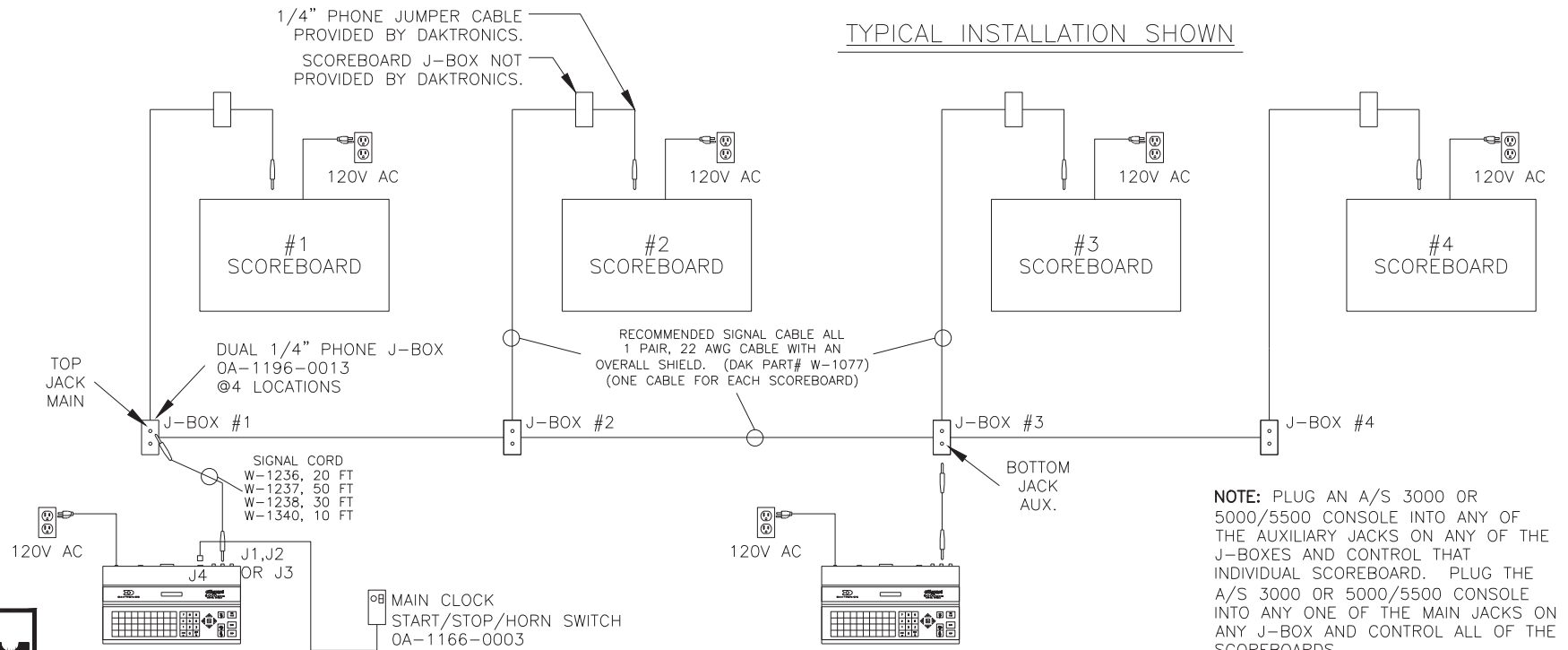
<p>DAKTRONICS, INC. BROOKINGS, SD 57006</p>		<p>THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2011 DAKTRONICS, INC.</p>	
		<p>DO NOT SCALE DRAWING</p>	
<p>Proj: ALL SPORT 5000/5500</p>			
<p>Title: BLOCK DIAGRAM- A/S 3000 OR 5000 BB- VB AND WR #2</p>			
<p>DESIGN: _____</p>		<p>DRAWN: E BRAVEK</p>	
<p>SCALE: NONE</p>		<p>DATE: 15 DEC 99</p>	
<p>SHEET</p>	<p>REV</p>	<p>JOB NO:</p>	<p>FUNC-TYPE-SIZE</p>
<p>04</p>	<p>P1196</p>	<p>R-04-A</p>	<p>125415</p>

REV 04	DATE: 24 AUG 11	UPDATED TEXT TO INCLUDE 5500 SERIES UPDATED TITLE BLOCK	BY: JJL
3	17 JAN 02	CHANGED 0A-1166-4 TO 0A-1196-31	JJS
02	26 APR 00	ADDED A/S 3000	DKD
1	29 DEC 99	ADDED SHOT CLOCK REMOTE START STOP TO A/S 5000 CONTROLLER	EB

01	26 APR 00	ADDED A/S 3000	DKD
02	31 JAN 07	UPDATED DRAWING TO SHOW SECOND ALL SPORT	MMM
03	18 DEC 08	UPDATED DRAWING WITH PROPER SHIELDING	DKD
04	24 AUG 11	UPDATED DRAWING TO INCLUDE 5500 SERIES UPDATED TITLE BLOCK	JLL

PROJ: ALL SPORT 5000/5500	DO NOT SCALE DRAWING	DAKTRONICS, INC. BROOKINGS, SD 57006
TITLE: BLOCK DIAGRAM: A/S 3000 OR 5000 BB-VB AND WR #4	DESIGN: EBRAVEK	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.
SCALE: NONE	DRAWN: EBRAVEK	DATE: 24 JAN 00
SHEET	REV 04	JOB NO: P1196
		FUNC-TYPE-SIZE: R-01-A
125417		

TYPICAL INSTALLATION SHOWN

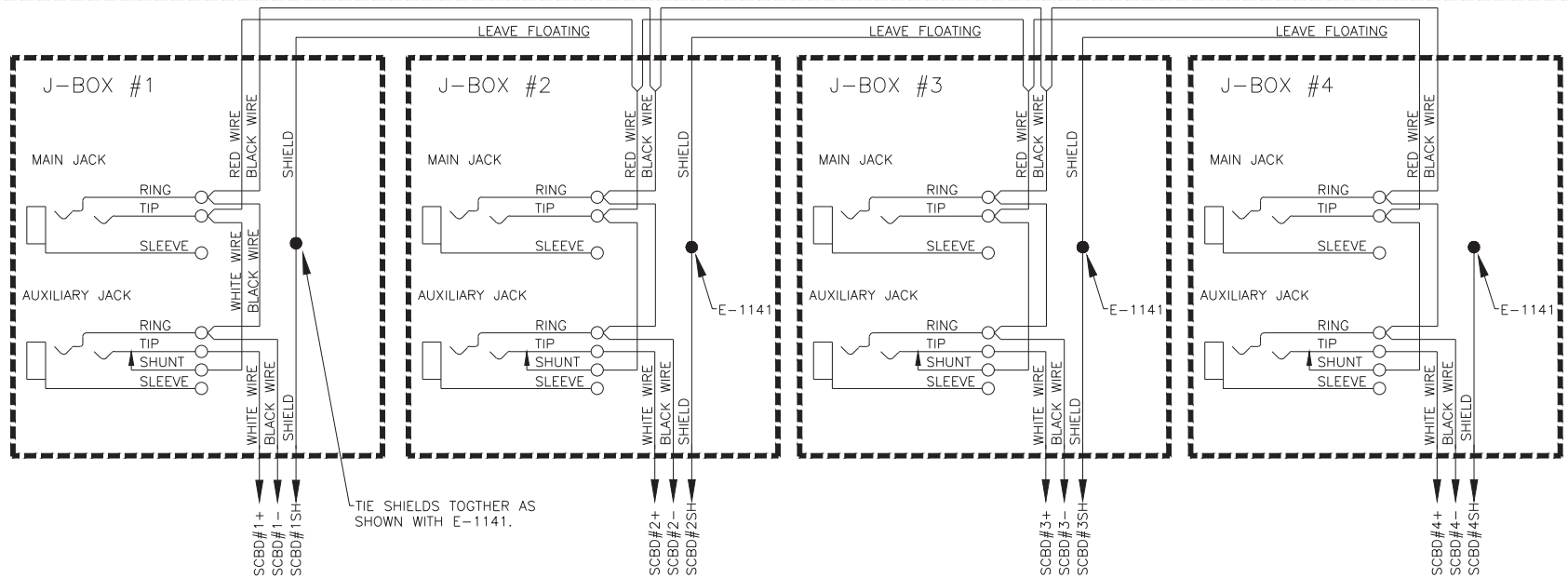


NOTE: PLUG AN A/S 3000 OR 5000/5500 CONSOLE INTO ANY OF THE AUXILIARY JACKS ON ANY OF THE J-BOXES AND CONTROL THAT INDIVIDUAL SCOREBOARD. PLUG THE A/S 3000 OR 5000/5500 CONSOLE INTO ANY ONE OF THE MAIN JACKS ON ANY J-BOX AND CONTROL ALL OF THE SCOREBOARDS.

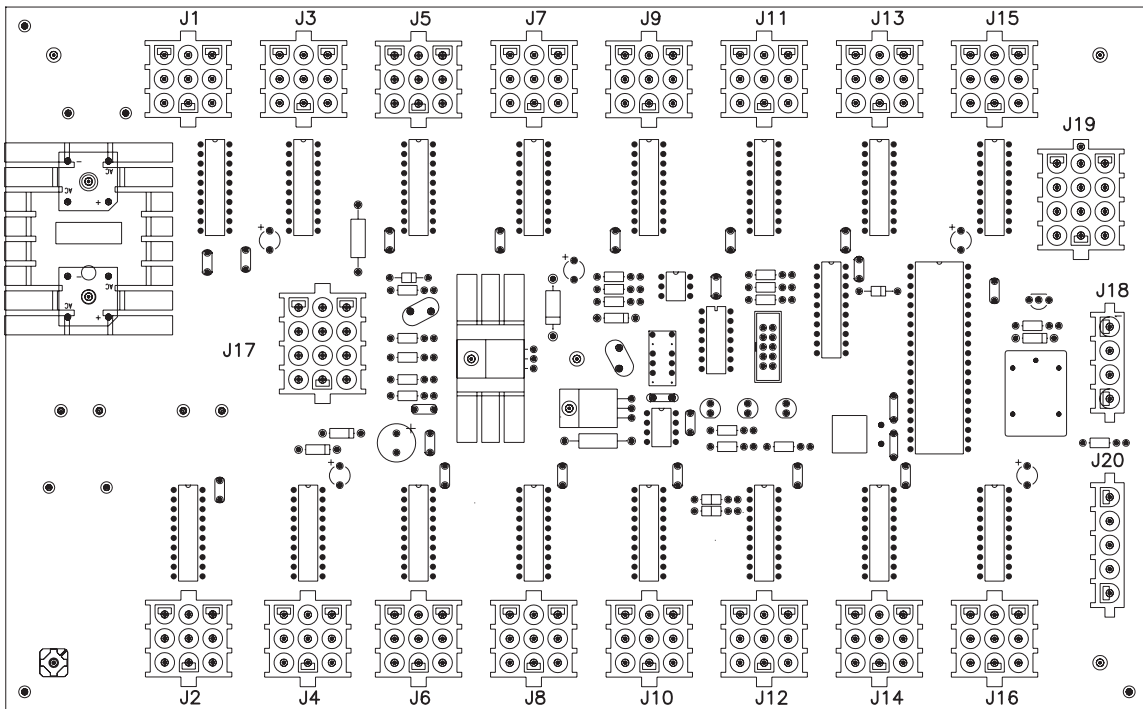
NOT ALL J-BOXES REQUIRED FOR EVERY COMBINATION, REMOVE/ADD PER YOUR SITE NEEDS.

MAIN CONTROL, ALL DISPLAYS
ALL SPORT 3000 OR ALL SPORT 5000/5500 SERIES CONTROL CONSOLE

LOCAL CONTROL, ONE DISPLAY
ALL SPORT 3000 OR ALL SPORT 5000/5500 SERIES CONTROL CONSOLE



OP-1150-0126 UNCOATED OR OP-1150-0127 COATED
16 COLUMN LED DRIVER II



J17 MAIN	
PIN	FUNCTION
1	SIG-P
2	SIG-N
3	SIG2-P
4	CLOUT-P
5	CLOUT-N
6	16VAC-N
7	GND-N
8	EARTH-N
9	16VAC-P
10	GND-N
11	+VDD-P
12	+VBB-P

J1-16 DIGIT	
PIN	FUNCTION
1	SEGC-N
2	SEGB-N
3	SEGA-N
4	SEGF-N
5	SEGE-N
6	SEGD-N
7	+VCC-P
8	SEGH-N
9	SEGG-N

J19 ADDRESS	
PIN	FUNCTION
1	GND-N
2	ADD0-N
3	ADD1-N
4	GND-N
5	ADD2-N
6	ADD3-N
7	GND-N
8	ADD4-N
9	ADD5-N
10	GND-N
11	ADD6-N
12	ADD7-N

J18 RELAY	
PIN	FUNCTION
1	HORNOUT-N
2	AUXOUT-N
3	120SW-P
4	120SW-N

J20 PROTOCOL	
PIN	FUNCTION
1	GND-N
2	PRO-N
3	PR1-N
4	PR2-N
5	TOD-N

NOTE

-WITH NO ADDRESS PINS SELECTED THE DRIVER WILL DEFAULT TO A/S 4000 PROTOCOL

-GREEN LED INDICATES THE DRIVER HAS POWER

-RED LED WILL BE ON OR BLINKING WHEN THE DRIVER IS RECEIVING SIGNAL

-AMBER LED INDICATES LED DRIVER STATUS, LED WILL BE BLINKING TO INDICATE THAT THE DRIVER IS RUNNING, IF THE LED IS OFF OR ON SOLID ALL OF THE TIME, THEN THE DRIVERS CPU IS NOT FUNCTIONING AND MAY NEED TO BE RESET OR REPLACED.

-REFER TO DRAWINGS A-115078 & A-115079 FOR J19 ADDRESS SETTINGS FOR THIS DRIVER.

-REFER TO DRAWING A-115081 FOR J20 PROTOCOL SETTINGS FOR THIS DRIVER.

-REDRIVE CIRCUIT IS PROCESSOR REFRESHED (REFER TO DWG A-128429 FOR FURTHER INFORMATION ON THE CURRENT LOOP REDRIVE CIRCUIT SPECIFICATIONS)

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: 16 COLUMN LED DRIVER II SPECIFICATIONS

DES. BY: EB

DRAWN BY: EBRAVEK

DATE: 11 JAN 00

REVISION

APPR. BY:

01

SCALE: 1=2

1150-R07A-126174

REV.	DATE	DESCRIPTION	BY	APPR.
01	2 OCT 00	UPDATED NOTES SECTION	NSW	

Appendix F: Daktronics Warranty and Limitation of Liability

**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).