

Generation IV Multi-Section Outdoor LED Scoreboards

Display Manual

ED-16960

Rev 2 – 19 November 2008

DAKTRONICS

| Models | | | | |
|---------|----------|----------|----------|---------|
| BA-1518 | FB-1424 | FB-1830L | MS-2118 | SO-2014 |
| BA-1524 | FB-1430 | FB-2001 | MS-2918 | SO-2030 |
| BA-2006 | FB-1524 | FB-2002 | | |
| BA-2007 | FB-1530 | FB-2003 | SO-1424 | |
| BA-2012 | FB-1624 | FB-2004 | SO-1624 | |
| BA-2013 | FB-1630 | FB-2007 | SO-1830 | |
| BA-2020 | FB-1630L | | SO-1830L | |
| BA-3718 | FB-1730 | MS-2009 | SO-1930 | |
| BA-3724 | FB-1830 | MS-2020 | SO-2011 | |

ED-16960
Product 1192
Rev 1 – 04 April 2008

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

Display Serial No. _____

Display Model No. _____

Date Installed _____

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Table of Contents

| | | |
|-------------------|---|------------|
| Section 1: | Introduction..... | 1-1 |
| 1.1 | How to use this manual | 1-1 |
| 1.2 | Daktronics Nomenclature | 1-2 |
| 1.3 | Product Overview | 1-3 |
| 1.4 | Model Names..... | 1-4 |
| 1.5 | Product Safety Approval | 1-4 |
| Section 2: | Model Identification..... | 2-3 |
| Section 3: | Specifications | 3-1 |
| Section 4: | Component Locations..... | 4-1 |
| Section 5: | Schematics..... | 5-1 |
| Section 6: | Mechanical Installation | 6-1 |
| 6.1 | Scoreboard Protective Devices | 6-1 |
| 6.2 | Footings and Beams..... | 6-1 |
| 6.3 | Lifting the Scoreboard | 6-4 |
| 6.4 | Scoreboard Mounting | 6-5 |
| | Scoreboard Mounting Using Spacers | 6-6 |
| 6.5 | Ad Panel Mounting..... | 6-7 |
| Section 7: | Electrical Installation..... | 7-1 |
| 7.1 | Power..... | 7-1 |
| | Grounding..... | 7-2 |
| | Power Installation..... | 7-2 |
| 7.2 | Power and Signal Connection..... | 7-3 |
| | Fiber Optic..... | 7-4 |
| | Interconnect Harness Connections | 7-5 |
| | Multiple Driver Connections | 7-6 |
| Section 8: | Scoreboard Maintenance and Troubleshooting..... | 8-1 |
| 8.1 | Cabinet Specifications | 8-1 |
| 8.2 | Component Location and Access | 8-1 |
| | Replacing a Digit..... | 8-2 |
| | Replacing a Digit Segment..... | 8-3 |
| | Replacing a Driver..... | 8-4 |
| 8.3 | Schematic | 8-4 |
| 8.4 | LED Drivers | 8-5 |
| 8.5 | Segmentation and Digit Designation | 8-5 |
| 8.6 | Lightning Protection | 8-6 |
| 8.7 | Troubleshooting..... | 8-7 |
| 8.8 | Replacement Parts | 8-8 |
| 8.9 | Daktronics Exchange and Repair and Return Programs..... | 8-10 |

| | | |
|--------------------|---|-------------|
| | Exchange Program..... | 8-10 |
| | Repair and Return Program | 8-11 |
| | How to reach us | 8-11 |
| Section 9: | Team Name Message Center Maintenance | 9-1 |
| 9.1 | Team Name Message Center System Overview | 9-1 |
| 9.2 | Maintenance and Troubleshooting Overview | 9-2 |
| 9.3 | Signal Summary..... | 9-2 |
| 9.4 | Power Summary..... | 9-2 |
| 9.5 | Service and Diagnostics..... | 9-3 |
| | TNMC Controller | 9-3 |
| | Diagnostic LEDs..... | 9-4 |
| | Removing/Changing the Controller..... | 9-5 |
| | Modules and Drivers | 9-7 |
| | Power Supplies | 9-8 |
| | Weatherstripping | 9-9 |
| | TNMC Display Maintenance..... | 9-9 |
| | Troubleshooting..... | 9-9 |
| | Initialization Information at Startup | 9-10 |
| | Replacement Parts List | 9-10 |
| Section 10: | Scoreboard Options | 10-1 |
| 10.1 | Changeable Team Name Captions..... | 10-1 |
| 10.2 | Trumpet Horn | 10-2 |
| | Trumpet Horn Part Numbers | 10-2 |
| 10.3 | Radio Control | 10-2 |
| 10.4 | Portable Power Pack..... | 10-3 |
| Appendix A: | Reference Drawings | 1 |
| Appendix B: | Eyebolts | 1 |

Section 1: Introduction

This manual explains the installation of *Daktronics Multi-Section Outdoor LED Scoreboards* and provides details for display maintenance. For other questions regarding the safety, installation, operation or service of these systems, contact Daktronics Customer Service at 1-877-605-1115. Customer Service information is listed in **Section 8.9** of this manual.

1.1 How to use this manual

Important Safeguards:

- Read and understand these instructions before installing the display.
- Do not drop the control console or allow it to get wet.
- Properly ground the scoreboard with a grounding electrode at the scoreboard location.
- **Disconnect power when the scoreboard is not in use.**
- **Disconnect power when servicing the scoreboard.**
- Do not modify the scoreboard structure or attach any panels or coverings to the scoreboard without the express written consent of Daktronics, Inc.

Figure 1 illustrates the Daktronics drawing numbering system. Daktronics identifies individual engineering drawings by their drawing number (7087-P08A-69945 in the example), which is located in the lower right corner of the drawing. This manual refers to drawings by their last set of numbers and the letter preceding them. The example would be **Drawing A-69945**.

| | | |
|---|--|-----------------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | |
| PROJ: BASKETBALL | | |
| TITLE: SEGMENTATION, 7 SEG BAR DIGIT | | |
| DES. BY: BPETERSON DRAWN BY: TNELSON DATE: 8 JUL 02 | | |
| APPR. BY: AVB | | 7087-P08A-69945 |
| SCALE: 1 = 4 | | |

Figure 1: Daktronics Drawing Label

Reference drawings are grouped and inserted in alphanumeric order in **Appendix A** and **Appendix B**.

Listed below are a number of drawing types commonly used by Daktronics, along with the information that each is likely to provide.

- **System riser diagrams:** overall system layout from control room to display, power and phase requirements.

- **Shop drawings:** fan locations, transformer locations, mounting information, power and signal entrance points and access method (front or rear).
- **Schematics:** power wiring, signal wiring, panelboard or power termination panel assignments, signal termination panel assignments and transformer assignments.
- **Final assembly:** component locations, part numbers, display dimensions and assembly/disassembly instructions.

All references to drawing numbers, appendices, figures, or other manuals are presented in **bold** typeface, as in this example: “Refer to **Drawing A-69945** for the location of the driver enclosure.” Additionally, any drawings referenced within a particular subsection are listed at the beginning of that subsection in the following manner:

Reference Drawing:
Segmentation, 7 Seg Bar Digits..... **Drawing A-69945**

Daktronics identifies manuals by their engineering document (ED) number, which is located on the cover page of the manual. For example, this manual would be referred to as **ED-16960**.

The serial and model numbers of a Daktronics scoreboard can be found on the ID label on the display. The label will be similar to the one shown in **Figure 2**. When calling Daktronics Customer Service, please have this information available to ensure that your request is serviced as quickly as possible. For future reference, note your scoreboard model number, serial number and installation date on the second page of this manual.

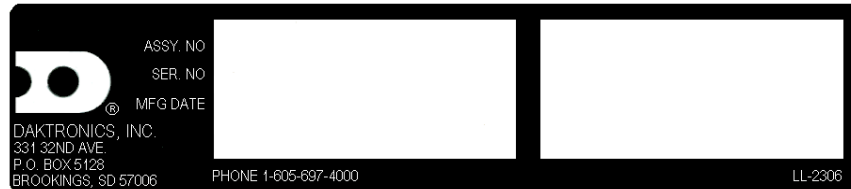


Figure 2: Scoreboard ID Label

Daktronics displays are built for long life and require little maintenance. However, from time to time, certain display components will have to be replaced. The Replacement Parts List in **Section 8.8** provides the names and part numbers of components that may require replacement during the life of this display.

Following the Replacement Parts List is an explanation of Daktronics exchange and replacement programs. Refer to these instructions if repaired or replacement parts are needed.

1.2 Daktronics Nomenclature

To fully understand some Daktronics drawings, such as schematics, it is necessary to know how various components are labeled in those drawings. This information is useful when trying to communicate maintenance or troubleshooting efforts.

The label “A” on a drawing item typically denotes an assembly. An assembly can be

a single circuit board or a collection of components that function together, usually mounted on a single plate or in a single enclosure.

In addition, the following labeling formats might be found on various Daktronics drawings:

- “TB __” denotes a termination block for power or signal cable.
- “F __” denotes a fuse.
- “E __” denotes a grounding point.
- “J __” denotes a power or signal jack.
- “P __” denotes a power or signal plug for the opposite jack.

Finally, Daktronics part numbers are commonly found on drawings. Those part numbers can be used when requesting replacement parts from Daktronics Customer Service. Take note of the following part number formats. (Not all possible formats are listed here.)

- “OP- _____- _____” denotes an individual circuit board, such as a driver board.
- “OA- _____ - _____” denotes an assembly, such as a circuit board and the plate or bracket to which it is mounted. A collection of circuit boards working as a single unit may also carry an assembly label.
- “W- _____” denotes a wire or cable. Cables may also carry the assembly numbering format in certain circumstances. This is especially true for ribbon cables.
- “F- _____” denotes a *fuse*.
- “T- _____” denotes a transformer.
- “PR- _____ - _” denotes a specially ordered part.
- “M- _____” denotes a metal part, and “OS- _____” typically denotes a fabricated metal assembly.

1.3 Product Overview

The Daktronics outdoor LED scoreboards are part of a family of scoring and timing displays designed to offer easy installation, readability, and reliability. Microprocessor control assures consistent operation and accuracy.

Featuring large, highly visible PanaView[®] digits 15, 18, 24, and 30" tall, the scoreboards use light emitting diodes, or LEDs, to illuminate the display. LEDs are tiny, solid-state components that use a semiconductor chip to transform electrical current into light; they are high-intensity, low-energy lighting units. Scoreboards in this series typically use red or amber LEDs for optimum outdoor readability.

Because of their LED technology, the scoreboards consume little power – barely more than a single household lamp. Power usage for displays in this series ranges from 300 W to a maximum of 1500 W.

Each of the sections in this manual contains model-specific information, including physical dimensions, digit configuration, and power requirements. The scoreboard engineering drawings, located in **Appendix A**, also list dimensions, weight and mounting instructions for each display. Additionally, scoreboard model numbers and electrical requirements can be found on a label on the scoreboard entrance panel.

The outdoor LED displays are modular in construction, typically with a top and a bottom section, but some are comprised of as many as four different sections. The units are shipped separately and joined at installation. Unpowered sections, connected to the internal power and signal enclosure with cabling, are referred to as “slave” sections, while those housing the electronic control components are “masters.”

Cabinets for the displays, available in more than 150 colors, are constructed of heavy-gauge aluminum. Digit and indicator faceplates are black, and they are set directly into the scoreboard surface. Permanent captions and optional striping are white vinyl.

Note: Some drawings and text in this manual refer to *team name message centers* or TNMCs.

Team name message centers are scoreboard-mounted, matrix LED units, which electronically display home and guest team names. TNMCs are available as a standard new scoreboard option with several of the models in this series, and the message centers are also available for retrofit on existing scoreboards. **Section 9** of this manual offers step-by-step information on TNMC maintenance and troubleshooting.

The outdoor LED scoreboards are designed for use with an All Sport® 5000 Series control console. The console uses All Sport keyboard overlays (sport inserts) for game control, and the boards operate without modification on All Sport 5000 signal protocol. Refer to the following controller manual for operating instructions:

- **ED-11976:** All Sport 5000 Series Control Console Operation Manual

1.4 Model Names

Daktronics scoreboards are differentiated by their model numbers: *BA-1518*, for example, designates a specific baseball scoreboard. The two-letter prefixes for scoreboards in this manual include the following: **BA** – baseball; **CR** – cricket; **FB** – football; **MS** – multisport; and **SO** – soccer.

Most Daktronics scoreboards carry a two-number suffix that refers to indoor-outdoor status and digit color: *-11* are outdoor scoreboards, 120 V and they feature red digits; *-21* are outdoor scoreboards, 120 V and feature amber digits.

1.5 Product Safety Approval

Daktronics outdoor scoreboards are ETL listed and tested to CSA standards for outdoor use. Contact Daktronics for information regarding testing procedures.

Section 2: Model Identification

Use the following drawings to determine the model number of your scoreboard. The drawings listed here are located in **Appendix A: Reference Drawings**; where they are inserted in alphanumeric order by drawing number. Individual scoreboard drawings may also be found in the **Appendix**.

Reference Drawings:

| | |
|---|-------------------------|
| Multiple Section Football SCBD Models..... | Drawing A-42148 |
| Multiple Section Football SCBD Models, w/TNMC | Drawing A-84233 |
| Multiple Section Soccer SCBD Models | Drawing A-98161 |
| Multiple Section Baseball Scoreboard Models..... | Drawing A-126086 |
| Multiple Section Baseball SCBD Models, w/TNMC | Drawing A-126362 |
| Multiple Section Soccer SCBD Models, w/TNMC | Drawing A-128172 |

Note: Not all models are listed in these drawings.

Section 3: Specifications

The table on the following pages shows all of the mechanical specifications, circuit specifications and maximum power requirements for each model in this manual. Models are listed in alphanumeric order.

Notes: Driver address settings can be configured using the J19 address plug **or** by using the new S1 dip switch found on all GEN IV drivers. See Section 8.4 for more details.

Signal wires must be a minimum of 22 AWG with shield. Daktronics recommends using W-1614. Models with an -11 or -12 suffix feature red digits and indicators; suffixes -21 and -22 indicate amber digits.

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------|--|--------------------------|---|----------------------|----------|------------------------------|---------------------------|
| BA-1518 | 2 Total | H8'-0", W16'-0", D6" (2438 mm, 4877 mm, 152 mm) | 400 lb (182 kg) | <ul style="list-style-type: none"> ▪ Indicators 2" (51 mm) ▪ All Others 18" (457 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 63 |
| | Top | H3'-0", W16'-0", D6" (914 mm, 4877 mm, 152 mm) | 845 lb (383 kg) | | | | | |
| | Bottom | H5'-0", W16'-0", D6" (1524 mm, 4877 mm, 152 mm) | | | | | | |
| BA-1518 w/TNMC | 2 Total | H8'-0", W16'-0", D6" (2438 mm, 4877 mm, 152 mm) | 480 lb (218 kg) | <ul style="list-style-type: none"> ▪ Indicators 2" (51 mm) ▪ All Others 18" (457 mm) -11: red -21: amber | 600 W (w/red TNMC) | 120 V AC | 5.0 A | A1 63 |
| | Top | H3'-0", W16'-0", D6" (914 mm, 4877 mm, 152 mm) | 912 lb (414 kg) | | 600 W (w/amber TNMC) | | 5.0 | |
| | Bottom | H5'-0", W16'-0", D6" (1524 mm, 4877 mm, 152 mm) | | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------|--|--------------------------|---|--|----------|------------------------------|---------------------------|
| BA-1524 | 2 Total | H9'-0", W16'-0", D6" (2743 mm, 4877 mm, 152 mm) | 480 lb (218 kg) | <ul style="list-style-type: none"> ▪ Indicators 2" (51 mm) ▪ Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 63 |
| | Top | H4'-0", W16'-0", D6" (1219 mm, 4877 mm, 152 mm) | 912 lb (414 kg) | | | | | |
| | Bottom | H5'-0", W16'-0", D6" (1524 mm, 4877 mm, 152 mm) | | | | | | |
| BA-1524 w/TNMC | 2 Total | H9'-0", W16'-0", D6" (2743 mm, 4877 mm, 152 mm) | 600 lb (273 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W (w/red TNMC) 600 W (w/amber TNMC) | 120 V AC | 5.0 A | A1 64 A2 65 A3 66 |
| | Top | H4'-0", W16'-0", D6" (1219 mm, 4877 mm, 152 mm) | 1140 lb (517 kg) | | | | | |
| | Bottom | H5'-0", W16'-0", D6" (1524 mm, 4877 mm, 152 mm) | | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------|--|--------------------------------|--|------------------------|----------|------------------------------|---------------------------|
| BA-2006 | 2 Total | H7'-0", W28'-0", D6" (2134 mm, 8534 mm, 152 mm) | 640 lb (290 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 15" (9381 mm) ▪ All Others 18" (457 mm) -11: red -21: amber | 1200 W | 120 V AC | 10 A | A1 64 |
| | Top | H3'-0", W14'-0", D6" (914 mm, 4267 mm, 152 mm) | 2 Crates 825 lb (374 kg) | | | | | A2 65 |
| | Bottom | H4'-0", W14'-0", D6" (1219 mm, 4267 mm, 152 mm) | 525 lb (238 kg) | | | | | A3 66 |
| BA-2006 w/TNMC | 4 Total | H7'-0", W28'-0", D6" (2134 mm, 8534 mm, 152 mm) | 720 lb (327 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 1500 W (w/red TNMC) | 120 V AC | 12.5 A | A1 64 |
| | 2 Top | H3'-0", W14'-0", D6" (914 mm, 4267 mm, 152 mm) | 2 crates 700 lb (318 kg) | | | | | 1500 W (w/amber TNMC) |
| | 2 Bottom | H4'-0", W14'-0", D6" (1219 mm, 4267 mm, 152 mm) | 1125 lb (510 kg) | | | | | A3 66 |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------------------------|---|---|--|--|----------|------------------------------|----------------------------------|
| BA-2007 | 2 Total Top Bottom | H9'-4", W36'-0", D8" (2845 mm, 10973 mm, 203 mm) H4'-0", W18'-0", D8" (1219 mm, 5486 mm, 203 mm) H5'-4", W18'-0", D8" (1626 mm, 5486 mm, 203 mm) | 840 lb (381 kg) 2 crates 700 lb (318 kg) 1125 lb (510 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 1200 W | 120 V AC | 10.0 A | A1 64 A2 65 A3 66 A4 11 |
| BA-2007 w/TNMC | 4 Total 2 Top 2 Bottom | H9'-4", W36'-0", D8" (2845 mm, 10973 mm, 203 mm) H4'-0", W18'-0", D8" (1219 mm, 5486 mm, 203 mm) H5'-4", W18'-0", D8" (1626 mm, 5486 mm, 203 mm) | 960 lb (435 kg) 2 crates 700 lb (318 kg) 1125 lb (510 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 1500 W (w/red TNMC) 1500 W (w/amber TNMC) | 120 V AC | 12.5 A 12.5 A | A1 64 A2 65 A3 66 A4 11 |
| BA-2012 | 2 Total Top and Bottom | H8'0", W16'-0", D6" (2438 mm, 4877 mm, 152 mm) H4'0", W16'-0", D6" (1219 mm, 4877 mm, 152 mm) | 350 lb (159 kg) 820 lb (372 kg) | <ul style="list-style-type: none"> ▪ All Digits 24" (610 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 61 |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------------------------|---|---|--|--|----------|------------------------------|--|
| BA-2013 | 2 Total Top Bottom | H9'4", W36'-0", D6" (2845 mm, 10973 mm, 152 mm) H3'0", W18'-0", D6" (914 mm, 5486 mm, 152 mm) H5'4", W18'-0", D6" (1626 mm, 5486 mm, 152 mm) | 840 lb (382 kg) 2 Crates 825 lb (374 kg) 1125 lb (510 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 1500 W | 120 V AC | 12.5 A | A1 64 A2 65 A3 66 A4 4 A5 11 |
| BA-2013 w/TNMC | 4 Total 2 Top 2 Bottom | H9'4", W36'-0", D6" (2845 mm, 10973 mm, 152 mm) H3'0", W18'-0", D6" (914 mm, 5486 mm, 152 mm) H5'4", W18'-0", D6" (1626 mm, 5486 mm, 152 mm) | 960 lb (434 kg) 2 Crates 985 lb (447 kg) 1125 lb (510 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 1800 W (w/red TNMC) 1800 W (w/amber TNMC) | 120 V AC | 15.0 A 15.0 A | A1 64 A2 65 A3 66 A4 4 A5 11 |
| BA-2020 | 2 Total Top and Bottom | H8'0", W16'-0", D6" (2438 mm, 4877 mm, 152 mm) H4'0", W16'-0", D6" (1219 mm, 4877 mm, 152 mm) | 350 lb (159 kg) 820 lb (372 kg) | <ul style="list-style-type: none"> ▪ All Digits 24" (610 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 12 |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------|--|--------------------------------|--|--------------------------|----------|------------------------------|---------------------------|
| BA-3718 | 4 Total | H7'-0", W28'-0", D6" (2134 mm, 8534 mm, 152 mm) | 640 lb (290 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 15" (9381 mm) ▪ All Others 18" (457 mm) -11: red -21: amber | 900 W | 120 V AC | 7.5 A | A1 64 A2 65 A3 66 |
| | 2 Top | H3'-0", W14'-0", D6" (2134 mm, 4267 mm, 152 mm) | 2 Crates 825 lb (374 kg) | | | | | |
| | 2 Bottom | H4'-0", W14'-0", D6" (1219 mm, 4267 mm, 152 mm) | 525 lb (238 kg) | | | | | |
| BA-3718 w/TNMC | 4 Total | H7'-0", W28'-0", D6" (2134 mm, 8534 mm, 152 mm) | 720 lb (327 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 1200 W (w/red TNMC) | 120 V AC | 10.0 A | A1 64 A2 65 A3 66 |
| | 2 Top | H3'-0", W14'-0", D6" (914 mm, 4267 mm, 152 mm) | 2 Crates 746 lb (338 kg) | | 1200 W (w/amber TNMC) | | | 10.0 A |
| | 2 Bottom | H4'-0", W14'-0", D6" (1219 mm, 4267 mm, 152 mm) | 468 lb (212 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------|---|--------------------------------|---|------------------------|----------|------------------------------|---------------------------|
| BA-3724 | 4 Total | H9'-4", W36'-0", D6" (2845 mm, 10973 mm, 152 mm) | 840 lb (381 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 900 W | 120 V AC | 7.5 A | A1 64 |
| | 2 Top | H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 2 Crates 700 lb (318 kg) | | | | | A2 65 |
| | 2 Bottom | H5'-4", W18'-0", D6" (1626 mm, 5486 mm, 152 mm) | 1125 lb (510 kg) | | | | | A3 66 |
| BA-3724 w/TNMC | 4 Total | H9'-4", W36'-0", D6" (2845 mm, 10973 mm, 152 mm) | 960 lb (435 kg) | <ul style="list-style-type: none"> ▪ Innings, Runs, Hits and Errors 18" (457 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 1200 W (w/red TNMC) | 120 V AC | 10.0 A | A1 64 |
| | 2 Top | H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 2 Crates 856 lb (388 kg) | | | | | 1200 W (w/amber TNMC) |
| | 2 Bottom | H5'-4", W18'-0", D6" (1626 mm, 5486 mm, 152 mm) | 1112 lb (504 kg) | | | A3 66 | | |
| FB-1424 | 2 Total | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) | 400 lb (182 kg) | <ul style="list-style-type: none"> ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 12 |
| | Top and Bottom | H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 805 lb (365 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|-------------------------|----------|------------------------------|---------------------------|
| FB-1424 w/TNMC | 2 Total | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) | 520 lb (236 kg) | <ul style="list-style-type: none"> ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W (w/red TNMC) | 120 V AC | 5.0 A | A1 12 |
| | Top and Bottom | H4'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) | 988 lb (448 kg) | | 600 W (w/amber TNMC) | | 50. A | |
| FB-1430 | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 560 lb (254 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ All Others 24" (610 mm) ▪ Indicators 8" (203 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 12 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1064 lb (483 kg) | | | | | |
| FB-1430 w/TNMC | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 680 (308 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ All Others 24" (610 mm) ▪ Indicators 8" (203 mm) -11: red -21: amber | 600 W (w/red TNMC) | 120 V AC | 5.0 A | A1 12 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1292 lb (586 kg) | | 600 W (w/amber TNMC) | | 5.0 A | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------|--|--------------------------|--|-------------------------|----------|------------------------------|---------------------------|
| FB-1524 | 2 Total | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) | 400 lb (181 kg) | <ul style="list-style-type: none"> ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 12 |
| | Top and Bottom | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) | 805 lb (365 kg) | | | | | |
| FB-1524 w/TNMC | 2 Total | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) | 520 lb (236 kg) | <ul style="list-style-type: none"> ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W (w/red TNMC) | 120 V AC | 5.0 A | A1 12 |
| | Top and Bottom | H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 988 lb (448 kg) | | 600 W (w/amber TNMC) | | 5.0 A | |
| FB-1530 | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 580 lb (263 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ All Others 24" (610 mm) ▪ Indicators 8" (203 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 12 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1102 lb (500 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|-----------------------|----------|------------------------------|---------------------------|
| FB-1530 w/TMNC | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 700 lb (318 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (457 mm) ▪ All Others 24" (610 mm) ▪ Indicators 8" (203 mm) -11: red -21: amber | 600 W (w/red TNMC) | 120 V AC | 5.0 A | A1 12 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1330 lb (603 kg) | | | | | 600 W (w/amber TNMC) |
| FB-1624 | 2 Total | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) | 440 lb (200 kg) | <ul style="list-style-type: none"> ▪ Indicators 8" (203 mm) ▪ All others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 |
| | Top and Bottom | H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 836 lb (379 kg) | | | | | A2 16 |
| FB-1630 | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 600 lb (272 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1140 lb (517 kg) | | | | | A2 16 |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|-----------------------|----------|------------------------------|---------------------------|
| FB-1630 w/TNMC | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 720 lb (327 kg) | <ul style="list-style-type: none"> ▪ Clock 30 (762 mm) ▪ TOL 8" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 4" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | 1368 lb (621 kg) | | | | | 900 W (w/amber TNMC) |
| FB-1630L | 2 Total | H8'-0", W32'-0", D6" (2438 mm, 9754 mm, 152 mm) | 840 lb (381 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 8" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 4" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | 1596 lb (724 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|--------------------|--------------------|--|--------------------------|--|-----------------------|----------|------------------------------|---------------------------|
| FB-1630L w/TNMC | 2 Total | H8'-0", W32'-0", D6" (2438 mm, 9754 mm, 152 mm) | 840 lb (381 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | 1596 lb (724 kg) | | | | | 900 W (w/amber TNMC) |
| FB-1730 | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 620 lb (281 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1178 lb (534 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|-----------------------|----------|------------------------------|---------------------------|
| FB-1730 w/TNMC | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 740 lb (336 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1406 lb (638 kg) | | | | | 900 W (w/amber TNMC) |
| FB-1830 | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 640 lb (290 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1216 lb (552 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|-------------------------|----------|------------------------------|---------------------------|
| FB-1830 w/TNMC | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 760 lb (345 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) TOL 18" (457 mm) | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1444 lb (655 kg) | <ul style="list-style-type: none"> ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) <p>-11: red</p> <ul style="list-style-type: none"> ▪ -21: amber | 900 W (w/amber TNMC) | | 7.5 A | |
| FB-1830L | 2 Total | H8'-0", W32'-0", D6" (2438 mm, 9754 mm, 152 mm) | 780 lb (354 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | 1482 lb (672 kg) | <ul style="list-style-type: none"> ▪ Indicators 8" (203 mm) ▪ TOL 18" (457 mm) ▪ All Others 24" (610 mm) <p>-11: red</p> <p>-21: amber</p> | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-----------------|--------------------|---|--------------------------|--|-------------------------|----------|------------------------------|---------------------------|
| FB-1830L w/TNMC | 2 Total | H8'-0", W32'-0", D6" (2438 mm, 9754 mm, 152 mm) | 900 lb (408 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | 1710 lb (777 kg) | | 900 W (w/amber TNMC) | 7.5 A | | |
| FB-2001 | 2 Total | H10'-0", W32'-0", D6" (3048 mm, 9754 mm, 152 mm) | 940 lb (426 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top | H6'-0", W32'-0", D6" (1829 mm, 9754 mm, 152 mm) | 1786 lb (810 kg) | | | | | |
| | Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|----------------------|----------|------------------------------|---------------------------|
| FB-2001 w/TNMC | 2 Total | H10'-0", W32'-0", D6" (3048 mm, 9754 mm, 152 mm) | 1060 lb (481 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top | H6'-0", W32'-0", D6" (1829 mm, 9754 mm, 152 mm) | 2014 lb (914 kg) | | 900 W (w/amber TNMC) | 7.5 A | | |
| | Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | | | | | | |
| FB-2002 | 2 Total | H8'-0", W20'-0", D6" (2438 mm, 6096 mm, 152 mm) | 520 lb (236 kg) | <ul style="list-style-type: none"> ▪ TOL 15" (381 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W20'-0", D6" (1219 mm, 6096 mm, 152 mm) | 988 lb (448 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|-------------------------|----------|------------------------------|---------------------------|
| FB-2002 w/TNMC | 2 Total | H8'-0", W20'-0", D6" (2438 mm, 6096 mm, 152 mm) | 640 lb (290 kg) | <ul style="list-style-type: none"> ▪ TOL 15" (381 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W20'-0", D6" (1219 mm, 6096 mm, 152 mm) | 1234 lb (569 kg) | | 900 W (w/amber TNMC) | 7.5 A | | |
| FB-2003 | 2 Total | H8'-0", W20'-0", D6" (2438 mm, 6096 mm, 152 mm) | 540 lb (245 kg) | <ul style="list-style-type: none"> ▪ TOL 15" (381 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W20'-0", D6" (1219 mm, 6096 mm, 152 mm) | 1026 lb (445 kg) | | | | | |
| FB-2003 w/TNMC | 2 Total | H8'-0", W20'-0", D6" (2438 mm, 6096 mm, 152 mm) | 660 lb (299 kg) | <ul style="list-style-type: none"> ▪ TOL 15" (381 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W20'-0", D6" (1219 mm, 6096 mm, 152 mm) | 1254 lb (569 kg) | | 900 W (w/amber TNMC) | 7.5 A | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------|--|--------------------------|--|--------------------|----------|------------------------------|---------------------------|
| FB-2004 | 2 Total | H10'-0", W32'-0", D6" (3048 mm, 9754 mm, 152 mm) | 880lb (399 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top | H6'-0", W32'-0", D6" (1829 mm, 9754 mm, 152 mm) | 1716 lb (778 kg) | | | | | |
| | Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | | | | | | |
| FB-2004 w/TNMC | 2 Total | H10'-0", W32'-0", D6" (3048 mm, 9754 mm, 152 mm) | 1060 lb (481 kg) | <ul style="list-style-type: none"> ▪ Clock 30" (762 mm) ▪ TOL 18" (457 mm) ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top | H6'-0", W32'-0", D6" (1829 mm, 9754 mm, 152 mm) | 2014 lb (914 kg) | | | | | 900 W (w/amber TNMC) |
| | Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|--------------------|---|--------------------------|---|-----------------------|----------|------------------------------|---------------------------|
| FB-2007 | 2 Total | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) | 560 lb (254 kg) | <ul style="list-style-type: none"> ▪ Indicators 8" (203 mm) ▪ All Others 24" (610 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 12 |
| | Top and Bottom | H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 980 lb (445 kg) | | | | | |
| MS-2009 | 2 Total | H10'-0", W25'-0", D6" (3048 mm, 7620 mm, 152 mm) | 700 lb (318 kg) | <ul style="list-style-type: none"> ▪ Clock, Score 24" (610 mm) ▪ All Others 18" (457 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 71 A2 72 |
| | Top and Bottom | H5'-0", W25'-0", D6" (1524 mm, 7620 mm, 152 mm) | 1330 lb (603 kg) | | | | | |
| MS-2009 w/TNMC | 2 Total | H10'-0", W25'-0", D6" (3048 mm, 7620 mm, 152 mm) | 820 lb (372 kg) | <ul style="list-style-type: none"> ▪ Clock, Score 24" (610 mm) ▪ All Others 18" (457 mm) -11: red -21: amber | 900 W (w/ red TNMC) | 120 V AC | 7.5 A | A1 71 A2 72 |
| | Top and Bottom | H5'-0", W25'-0", D6" (1524 mm, 7620 mm, 152 mm) | 1558 lb (707 kg) | | 900 W (w/ amber TNMC) | | 7.5 A | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|---------|--------------------|--|--------------------------|--|-----------------|----------|------------------------------|---------------------------|
| MS-2020 | 2 Total | H9'-0", W18'-0", D6" (2743 mm, 5486 mm, 152 mm) | 450 lb (204 kg) | <ul style="list-style-type: none"> ▪ Clock, Score 30" (762 mm) ▪ PERIOD 24" (610 mm) -11: red -21: amber | 300 W | 120 V AC | 2.5 A | A1 11 |
| | Top | H3'-6", W18'-0", D6" (1067 mm, 5486 mm, 152 mm) | 855 lb (388 kg) | | | | | |
| | Bottom | H5'-6", W18'-0", D6" (1676 mm, 5486 mm, 152 mm) | | | | | | |
| MS-2118 | 2 Total | H8'-0", W12'-0", D6" (2438 mm, 3658 mm, 152 mm) | 220 lb (100 kg) | <ul style="list-style-type: none"> ▪ Clock, Score, Period 18" (457 mm) ▪ Penalty 15" (381 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 71 A2 72 |
| | Top and Bottom | H4'-0", W12'-0", D6" (1219 mm, 3658 mm, 152 mm) | 418 lb (190 kg) | | | | | |
| MS-2918 | 2 Total | H8'-0", W16'-0", D6" (2438 mm, 4877 mm, 152 mm) | 480 lb (218 kg) | <ul style="list-style-type: none"> • Clock, Score, Period 18" (457 mm) • Player, Penalty 15" (381 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 71 A2 72 |
| | Top and Bottom | H4'-0", W16'-0", D6" (1219 mm, 4877 mm, 152 mm) | 912 lb (414 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|----------------|-------------------------------|--|--|---|--|----------|------------------------------|---------------------------|
| SO-1424 | 2 Total Top and Bottom | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 400 lb (181 kg) 805 lb (365 kg) | <ul style="list-style-type: none"> Indicators 8" (203 mm) All Others 24" (610 mm) -11: red -21: amber • | 300 W | 120 V AC | 2.5 A | A1 12 |
| SO-1424 w/TNMC | 2 Total Top and Bottom | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 520 lb (236 kg) 988 lb (448 kg) | <ul style="list-style-type: none"> Indicators 8" (203 mm) All Others 24" (610 mm) -11: red -21: amber | 600 W (w/red TNMC) 600 W (w/amber TNMC) | 120 V AC | 5.0 A | A1 12 |
| SO-1624 | 2 Total Top and Bottom | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 440 lb (200 kg) 900 lb (408 kg) | <ul style="list-style-type: none"> Indicators 8" (203 mm) All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 13 A2 14 |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|----------------------|----------|------------------------------|---------------------------|
| SO-1624 w/TNMC | 2 Total | H8'-0", W18'-0", D6" (2438 mm, 5486 mm, 152 mm) | 520 lb (236 kg) | <ul style="list-style-type: none"> Indicators 8" (203 mm) All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 13 A2 14 |
| | Top and Bottom | H4'-0", W18'-0", D6" (1219 mm, 5486 mm, 152 mm) | 988 lb (448 kg) | | 900 W (w/amber TNMC) | | 7.5 A | |
| SO-1830 | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 560 lb (254 kg) | <ul style="list-style-type: none"> Clock 30" (762 mm) TOL 18" (457 mm) Indicators 8" (203 mm) All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1064 lb (483 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|-----------------------|----------|------------------------------|---------------------------|
| SO-1830 w/TNMC | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 680 lb (309 kg) | <ul style="list-style-type: none"> • Clock 30" (762 mm) • TOL 18" (457 mm) • Indicators 8" (203 mm) • All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1292 lb (586 kg) | | | | | 900 W (w/amber TNMC) |
| SO-1830L | 2 Total | H8'-0", W32'-0", D6" (2438 mm, 9754 mm, 152 mm) | 780 lb (354 kg) | <ul style="list-style-type: none"> • Clock 30" (762 mm) • TOL 18" (457 mm) • Indicators 8" (203 mm) • All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | 1482 lb (672 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|------------------|-------------------------------|--|---|--|--|----------|------------------------------|---------------------------|
| SO-1830 L w/TNMC | 2 Total Top and Bottom | H8'-0", W32'-0", D6" (2438 mm, 9754 mm, 152 mm) H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | 900 lb (408 kg) 1710 lb (776 kg) | <ul style="list-style-type: none"> Clock 30" (762 mm) TOL 18" (457 mm) Indicators 8" (203 mm) All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) 900 W (w/amber TNMC) | 120 V AC | 7.5 A 7.5 A | A1 15 A2 16 |
| SO-1930 | 2 Total Top and Bottom | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 560 lb (254 kg) 1064 lb (483 kg) | <ul style="list-style-type: none"> Clock 30" (762 mm) TOL 18" (457 mm) Indicators 8" (203 mm) All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|-----------------------|----------|------------------------------|---------------------------|
| SO-1930 w/TNMC | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 760 lb (344 kg) | <ul style="list-style-type: none"> Clock 30" (762 mm) TOL 18" (457 mm) Indicators 8" (203 mm) All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1444 lb (655 kg) | | | | | 900 W (w/amber TNMC) |
| SO-2011 | 2 Total | H7'-6", W20'-0", D6" (2286 mm, 6096 mm, 152 mm) | 450 lb (204 kg) | <ul style="list-style-type: none"> Clock, Home and Guest 24" (610 mm) All Other 18" (457 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 17 A2 11 |
| | Top | H4'-6", W20'-0", D6" (1372 mm, 6096 mm, 152 mm) | 855 lb (388 kg) | | | | | |
| | Bottom | H3'-0", W20'-0", D6" (914 mm, 6096 mm, 152 mm) | | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|---------|--------------------|---|--------------------------|--|-----------------|----------|------------------------------|---------------------------|
| SO-2014 | 2 Total | H10'-0", W32'-0", D6" (3048 mm, 9754 mm, 152 mm) | 880 lb (399 kg) | <ul style="list-style-type: none"> • Clock 30" (762 mm) • Score/Stats 24" (610 mm) • Penalty 18" (457 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top | H6'-0", W32'-0", D6" (1829 mm, 9754 mm, 152 mm) | 1672 lb (758 kg) | | | | | |
| | Bottom | H4'-0", W32'-0", D6" (1219 mm, 9754 mm, 152 mm) | | | | | | |
| SO-2030 | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 750 lb (340 kg) | <ul style="list-style-type: none"> • Clock 30" (762 mm) • Penalty 18" (457 mm) • Indicators 8" (203 mm) • All Others 24" (610 mm) -11: red -21: amber | 600 W | 120 V AC | 5.0 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1425 lb (646 kg) | | | | | |

| Model | Number of Sections | Dimensions (Height, Width, Depth) | Weight Uncrated (Crated) | Digit Size Digit Color | Maximum Wattage | Power | Amps per Line (Single Phase) | Driver Number and Address |
|-------------------|--------------------|--|--------------------------|--|-------------------------|----------|------------------------------|---------------------------|
| S0-2030 w/TNMC | 2 Total | H8'-0", W25'-0", D6" (2438 mm, 7620 mm, 152 mm) | 900 lb (408 kg) | <ul style="list-style-type: none"> • Clock 30" (762 mm) • Penalty 18" (457 mm) • Indicators 8" (203 mm) • All Others 24" (610 mm) -11: red -21: amber | 900 W (w/red TNMC) | 120 V AC | 7.5 A | A1 15 A2 16 |
| | Top and Bottom | H4'-0", W25'-0", D6" (1219 mm, 7620 mm, 152 mm) | 1710 lb (776 kg) | | 900 W (w/amber TNMC) | | 7.5 A | |

Section 4: Component Locations

Use the following drawings to determine the location of scoreboard components. The drawings are listed below by model number; they are located in **Appendix A: Reference Drawings**, where they are inserted in alphanumeric order by drawing number. Drawings for models that offer optional team name message centers typically include views with and without the TNMC components.

| Model | Drawing Title | Drawing |
|---------------------------------------|--|-----------------|
| BA-1518 | Component Locations; BA-1518-11/-21, G3 | A-229343 |
| BA-1518 TNMC | Component Locations; BA-1518-11/-21, G3 | A-179745 |
| BA-1524 | Component Locations; BA-1524-11/-21, G3 | A-229211 |
| BA-1524 TNMC | Component Locations; BA-1524-11/-21, G3 | A-179869 |
| BA-2006 | Component Locations; BA-2006-11/-21, G4 | A-292345 |
| BA-2007 | Components Locations; BA-2007-11/-21, G3 | A-234661 |
| BA-2007 TNMC | Component Locations; BA-2007 w/TNMC | A-234593 |
| BA-2012 | Component Locations; BA-2012-11/-21, G3 | A-202673 |
| BA-2013 | Component Locations, BA-2013-11/-21, G3 | A-260862 |
| BA-2013 (shipped after 10/01/08) | Component Locations; BA-2013-11/-21, FD, G4 | A-757382 |
| BA-2013 TNMC | Component Locations, BA-2013-11/-21 w/TNMC, G4 | A-260830 |
| BA-2013 TNMC (shipped after 10/01/08) | Component Locations; BA-2013-11/-21 w/TNMC, FD, G4 | A-757381 |
| BA-2020 | Component Locations; BA-2020-11/-21, G3 | A-234140 |
| BA-3718 | Component Locations; BA-3718-11/-21, G4 | A-292341 |
| BA-3718 TNMC | Component Locations; BA-3718-11/-21, G4 | A-292341 |
| BA-3724 | Component Locations; BA-3724-11/-21, G3 | A-228330 |
| BA-3724 TNMC | Component Locations; BA-3724-11/-21 w/TNMC, G3 | A-229073 |

| | | |
|--------------|---|-----------------|
| FB-1424 | Component Locations; FB-1424-11/-21, G3 | A-180606 |
| FB-1424 TNMC | Component Locations; FB-1424-11/-21, G3 | A-180606 |
| FB-1430 | Component Locations; FB-1430-11/-21, G3 | A-185439 |

| Model | Drawing Title | Drawing |
|---------------|--|-----------------|
| FB-1430 TNMC | Component Locations; FB-1430-11/-21, G3 | A-185439 |
| FB-1524 TNMC | Component Locations; FB-1524-11/-21, G3 | A-181757 |
| FB-1530 | Component Locations; FB-1530-11/-21, G3 | A-182405 |
| FB-1530 TNMC | Component Locations; FB-1530-11/-21, G3 | A-182405 |
| FB-1624 | Component Locations; FB-1624-11/-21, G3 | A-183010 |
| FB-1630 | Component Locations; FB-1630-11/-21, G3 | A-181807 |
| FB-1630 TNMC | Component Locations; FB-1630-11/-21, G3 | A-181807 |
| FB-1630L | Component Locations; FB-1630L-11/-21, G3 | A-188581 |
| FB-1630L TNMC | Component Locations; FB-1630L-11/-21, G3 | A-188581 |
| FB-1730 | Component Locations; FB-1730-11/-21, G3 | A-185446 |
| FB-1730 TNMC | Component Locations; FB-1730-11/-21, G3 | A-185446 |
| FB-1830 | Component Locations; FB-1830-11/-21, G3 | A-181940 |
| FB-1830 TNMC | Component Locations; FB-1830-11/-21, G3 | A-181940 |
| FB-1830L | Component Locations; FB-1830L-11/-21, G3 | A-180441 |
| FB-1830L TNMC | Component Locations; FB-1830L-11/-21, G3 | A-180441 |
| FB-2001 | Component Locations; FB-2001-11/-21, G3 | A-189150 |
| FB-2001 TNMC | Component Locations; FB-2001-11/-21 w/TNMC | A-184837 |
| FB-2002 | Component Locations; FB-2002-11/-21, G3 | A-188811 |
| FB-2003 | Component Locations; FB-2003-11/-21, G3 | A-187933 |
| FB-2003 TNMC | Component Locations; FB-2003-11/-21, G3 | A-187933 |
| FB-2004 | Component Locations; FB-2004-11/-21, G3 | A-189160 |
| FB-2004 TNMC | Component Locations; FB-2004-11/-21 w/TNMC, G3 | A-194436 |
| FB-2007 | Component Locations; FB-2007-11/21, G3 | A-211011 |

| | | |
|--------------|---|-----------------|
| MS-2009 | Component Locations; MS-2009-11/-21, G3 | A-234590 |
| MS-2009 TNMC | Component Locations; MS-2009-11/-21, w/TNMC, G3 | A-234590 |
| MS-2020 | Component Locations; MS-2020-11/21, G3 | A-241550 |

| Model | Drawing Title | Drawing |
|--------------|---|-----------------|
| MS-2118 | Component Locations; MS-2118-11/-21, G3 | A-182031 |
| MS-2918 | Component Locations; MS-2918-11/-21, G3 | A-183029 |

| | | |
|---------------|--|-----------------|
| SO-1424 | Component Locations; SO-1424-11/-21, G3 | A-188778 |
| SO-1424 TNMC | Component Locations; SO-1424-11/-21, G3 | A-188778 |
| SO-1624 | Component Locations; SO-1624-11/-21, G3 | A-188178 |
| SO-1624 TNMC | Component Locations; SO-1624-11/-21, G3 | A-188178 |
| SO-1830 | Component Locations; SO-1830-11/-21, G3 | A-188831 |
| SO-1830 TNMC | Component Locations; SO-1830-11/-21, G3 | A-188831 |
| SO-1830L | Component Locations; SO-1830L-11/-21, G3 | A-188988 |
| SO-1830L TNMC | Component Locations; SO-1830L-11/-21, G3 | A-188988 |
| SO-1930 | Component Locations, SO-1930-11/-21 | A-180366 |
| SO-1930 TNMC | Component Locations, SO-1930-11/-21 | A-180366 |
| SO-2011 | Component Locations; SO-2011-11/-21, G3 | A-186096 |
| SO-2014 | Component Locations, SO-2014-11/-21, G3 | A-219727 |
| SO-2030 | Component Locations, SO-2030-11/-21 | A-184900 |
| SO-2030 TNMC | Component Locations, SO-2030-11/-21 | A-184900 |

Section 5: Schematics

Reference Drawings:

| | |
|--|-------------------------|
| Schematic; Gen III, OD LED, 3 Drvr Display | Drawing A-179541 |
| Schematic; Gen III, OD LED, 1 Drv w/TNMC | Drawing A-179790 |
| Schematic; Gen III, OD LED, 3 Drv w/TNMC | Drawing A-180081 |
| Schematic; Gen III, O.D. LED, 2 Drvr Display | Drawing A-180637 |
| Schematic; Gen III, OD LED, 2 Drv Multi-Sec w/TNMC | Drawing A-180688 |
| Schematic; Gen III, OD LED, 2 Drv | Drawing A-285418 |
| Schematic; Gen IV Outdoor LED, 16 Column Drvr..... | Drawing A-285779 |
| Driver Enclosure Reference, GEN IV..... | Drawing A-293354 |
| Schematic; Baseball w/S.O.P. GEN IV, optional TNMC..... | Drawing B-204725 |
| Schematic; BA-2013 Gen III & IV optional TNMC | Drawing B-260324 |

Use the following table to determine the schematic for your scoreboard. The drawings are listed below by model number; they have been grouped in the **Appendix** in alphanumeric order by drawing number.

Note: All scoreboards listed in this manual are equipped with 16-column drivers. Wiring diagrams for the 16-column drivers, in both master and slave configurations, are shown on the single-driver schematic **Drawing A-293354**.

| Models | Schematic Name | Drawing |
|---------------|---|-----------------|
| BA-1518 | Schematic; Gen IV Outdoor LED, 16 Column Drvr | A-285779 |
| BA-1518 TNMC | Schematic; Gen III & IV, OD LED, 1 Drv w/TNMC | A-179790 |
| BA-1524 | Schematic; Gen III & IV Outdoor LED, 16 Column Drvr | A-285779 |
| BA-1524 TNMC | Schematic; Gen III & IV, OD LED, 1 Drv w/TNMC | A-179790 |
| BA-2006 | Schematic; Baseball w/ S.O.P, GEN IV, Optional TNMC | B-204725 |
| BA-2007 TNMC | Schematic; Baseball w/ S.O.P, GEN IV, Optional TNMC | B-204725 |
| BA-2012 | Schematic; Gen IV Outdoor LED, 16 Column Drvr | A-285779 |
| BA-2013 | Schematic; BA-2013 Gen III & GEN IV, Optional TNMC | B-260324 |
| BA-2013 TNMC | Schematic; BA-2013 Gen III & GEN IV, Optional TNMC | B-260324 |
| BA-2020 | Schematic; Gen IV Outdoor, LED, 16 Column Drvr | A-285779 |

| Models | Schematic Name | Drawing |
|---------------|--|-----------------|
| BA-3718 | Schematic; Gen III & IV, OD LED, 3 Drvr Display | A-179541 |
| BA-3718 TNMC | Schematic; Gen III & IV, OD LED, 3 Drv w/TNMC | A-180081 |
| BA-3724 | Schematic; Gen III & IV, OD LED, 3 Drvr Display | A-179541 |
| BA-3724 TNMC | Schematic; Gen III & IV, OD LED, 3 Drv, Multi-Sec w/TNMC | A-180081 |
| FB-1424 | Schematic; Gen IV Outdoor LED, 16 Column Drvr | A-285779 |
| FB-1424 TNMC | Schematic; Gen III & IV, OD LED, 1 Drv w/TNMC | A-179790 |
| FB-1430 | Schematic; Gen III & IV Outdoor LED, 16 Column Drvr | A-285779 |
| FB-1430 TNMC | Schematic; Gen III & IV, OD LED, 1 Drv w/TNMC | A-179790 |
| FB-1524 | Schematic; Gen III & IV Outdoor LED, 16 Column Drvr | A-285779 |
| FB-1524 TNMC | Schematic; Gen III & IV, OD LED, 1 Drv w/TNMC | A-179790 |
| FB-1530 | Schematic; Gen III & IV Outdoor LED, 16 Column Drvr | A-285779 |
| FB-1530 TNMC | Schematic; Gen III & IV, OD LED, 1 Drv w/TNMC | A-179790 |
| FB-1624 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| FB-1630 | Schematic; Gen III & IV, OD LED, 2 Drv | A-285418 |
| FB-1630 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | A-285418 |
| FB-1630L | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| FB-1630L TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | A-180688 |
| FB-1730 | Schematic; Gen III & IV, OD LED, 2 Drv | A-285418 |
| FB-1730 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | A-285418 |
| FB-1830 | Schematic; Gen III & IV, OD LED, 2 Drv | A-285418 |

| Models | Schematic Name | Drawing |
|---------------|---|-----------------|
| FB-1830 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | A-285418 |
| FB-1830L | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| FB-1830L TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | A-180688 |
| FB-2001 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| FB-2001 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | A-180688 |
| FB-2002 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| FB-2002 TNMC | Schematic, Gen III & IV OD LED, 2 Drv Multi-Sec w/TNMC | A-180688 |
| FB-2003 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| FB-2003 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | A-180688 |
| FB-2004 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| FB-2004 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi Sec w/TNMC | A-180688 |
| FB-2007-11/21 | Schematic; Gen III & IV, OD LED, 2 Drv | A-211011 |

| | | |
|---------|--|-----------------|
| MS-2009 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| MS-2020 | Schematic; GEN III & IV, OD LED, 16 Column Drv | A-285779 |
| MS-2118 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| MS-2918 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |

| | | |
|--------------|---|-----------------|
| SO-1424 | Schematic; Gen IV Outdoor LED, 16 Column Drvr | A-285779 |
| SO-1424 TNMC | Schematic; Gen III & IV, OD LED, 1 Drv w/TNMC | A-179790 |
| SO-1624 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | A-180688 |
| SO-1830 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| SO-1830 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi- | A-180688 |

| Models | Schematic Name | Drawing |
|------------------|---|-----------------|
| | Sec w/TNMC | |
| SO-1830L | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| SO-1830L TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi- Sec w/TNMC | A-180688 |
| SO-1930 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| SO-1930 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi- Sec w/TNMC | A-180688 |
| SO-2011 | Schematic, Gen III & IV, OD LED, 2 Drv | A-180637 |
| SO-2014 | Schematic, Gen III & IV, OD LED, 2Drv | A-180637 |
| SO-2030 | Schematic; Gen III & IV, OD LED, 2 Drv | A-180637 |
| SO-2030 TNMC | Schematic; Gen III & IV, OD LED, 2 Drv Multi- Sec w/TNMC | A-180688 |

Section 6: Mechanical Installation

Mechanical installation consists of installing concrete footings and steel beams and mounting the scoreboard and accompanying ad panels to the beams.

6.1 Scoreboard Protective Devices

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

Daktronics makes available optional devices, including screens and netting, to help protect the scoreboard from damage due to normal ball impacts.

6.2 Footings and Beams

Reference Drawings:

- Installation Specifications, BA-1518..... **Drawing A-55008**
- Installation Specifications, BA-1524..... **Drawing A-120972**
- Installation Specifications, BA-2012 & BA-2020 **Drawing A-202766**
- Installation Specifications, BA-3718..... **Drawing A-126455**
- Installation Specifications, BA-3724..... **Drawing A-126445**
- Installation Specifications, MS-2009..... **Drawing A-144415**
- Installation Specifications, MS-2118..... **Drawing A-128206**
- Installation Specifications, MS-2918..... **Drawing A-172188**
- Installation Specifications, SO-2011 **Drawing A-187149**
- Installation Specifications, FB-2002 & FB-2003 **Drawing A-128044**
- Beam & Footing Recommendations, FB-XX24 **Drawing A-44514**
- Beam & Footing Recommendations, FB-XX30 **Drawing A-44515**
- Beam and Footing Recommendations, FB-200X **Drawing A-160931**
- Structure Football..... **Drawing A-44556**
- Beam and Footing Recommendations, FB-XX30L..... **Drawing A-158779**
- Beam and Footing Recommendations, FB-XX30..... **Drawing A-207019**
- Beam and Footing; 8'X32' Scoreboard, 3-pole..... **Drawing A-220526**
- Installation Specifications, MS-2020..... **Drawing A-241622**

Use the following tables to determine which drawings provide the installation specifications for each model. The drawings are listed below by model number; they are located in **Appendix A: Reference Drawings**, where they are inserted in alphanumeric order by drawing number.

| Model | Drawing Title | Number |
|---------|--------------------------------------|----------|
| BA-1518 | Installation Specifications, BA-1518 | A-55008 |
| BA-1524 | Installation Specifications, BA-1524 | A-120972 |
| BA-2006 | Installation Specifications, BA-3718 | A-126455 |

| Model | Drawing Title | Number |
|------------------|--------------------------------------|----------|
| BA-2007 | Installation Specifications, BA-3724 | A-126445 |
| BA-2012, BA-2020 | Installation Specifications, BA-2012 | A-202766 |
| BA-2013 | Installation Specification, BA-3724 | A-126445 |
| BA-3718 | Installation Specifications, BA-3718 | A-126455 |
| BA-3724 | Installation Specifications, BA-3724 | A-126445 |

| | | |
|---------|--------------------------------------|----------|
| MS-2009 | Installation Specifications, MS-2009 | A-144415 |
| MS-2020 | Installation Specifications, MS-2020 | A-241622 |
| MS-2118 | Installation Specifications, MS-2118 | A-128206 |
| MS-2918 | Installation Specifications, MS-2918 | A-172188 |

| | | |
|---------|--------------------------------------|----------|
| SO-2011 | Installation Specifications, SO-2011 | A-187149 |
|---------|--------------------------------------|----------|

| Models without TNMC | Drawing Titles | Number |
|---|---|---------------------|
| FB-1424, FB-1524, FB-1624, FB-2007, SO-1424, SO-1624 | Beam & Footing Recommendations, FB-XX24 Structure, Football | A-44514 A-44556 |
| 3 Beam FB-1430, FB-1530, FB-1630, FB-1730, FB-1830, SO-1830, SO 1930, SO-2030 | Beam and Footing Recommendations, FB-XX30 (3 Beam) Structure, Football | A-44514 A-207019 |
| 2 Beam FB-1430, FB-1530, FB-1630, FB-1730, FB-1830, SO-1830, SO 1930, SO-2030 | Beam and Footing Recommendations, FB-XX30 (2 Beam) | A-207019 |
| 4 Beam FB-1630L, FB-1830L, SO-1830L | Beam & Footing Recommendations, FB-XX30L (4 Beams) Structure, Football | A-158779 A-44556 |
| 3 Beam FB-1630L, FB-1830L, SO-1830L | Beam and Footing Recommendations, FB-XX30L (3 Beam) | A-220526 |
| SO-1930, SO-2030 | Beam & Footing Recommendations, FB-XX30 | A-44515 |

| Models without TNMC | Drawing Titles | Number |
|----------------------------|---|---------------------|
| | Structure, Football | A-44556 |
| FB-2001, FB-2004, SO-2014 | Beam and Footing Recommendations, FB-200X Structure, Football | A-160931 A-44556 |
| FB-2002, FB-2003 | Installation Specifications, FB-2002 & FB-2003 Structure, Football | A-128044 A-44556 |

| Models with TNMC | Drawing Titles | Number |
|--|---|---------------------|
| FB-1424, FB-1524, SO-1424, SO-1624 | Beam & Footing Recommendations, FB-XX24 Structure, Football | A-44514 A-44556 |
| FB-1430, FB-1530, FB-1630, FB-1730, FB-1830, SO-1830, SO-1930, SO-2030 | Beam & Footing Recommendations, FB-XX30 Structure, Football | A-44515 A-44556 |
| FB-2001, FB-2004 | Beam and Footing Recommendations, FB-200X Structure, Football | A-160931 A-44556 |
| FB-1630L, FB-1830L, SO-1830L | Beam & Footing Recommendations, FB-XX30L Structure, Football | A-158779 A-44556 |
| FB-2003 | Installation Specifications, FB-2002 & FB-2003 Structure, Football | A-128044 A-44556 |
| SO-1930, SO-2030 | Beam & Footing Recommendations, FB-XX30 Structure, Football | A-44515 A-44556 |

Refer to the installation specification drawings listed in the preceding tables for the rear view of each of the models. These drawings specify the number of beams and the recommended spacing between them. The drawings also indicate the size of beams required to support the scoreboard at different heights under various wind speed conditions. All of the beam specifications illustrate W-shape steel beams (wide-flange I-beams). The first number indicates the front-to-rear depth of the beam, and the second number indicates the weight in pounds per foot of length.

Column and footing size dimensions provided with the drawings can help in estimating installation costs.

Note: They are estimates only and are not intended for construction purposes. Be sure that your installation complies with local building codes and is suitable for your particular soil and wind conditions.

The columns and footings and all connection details must be designed and certified by a professional engineer licensed to practice in the state in which scoreboard will be installed.

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

6.3 Lifting the Scoreboard

Reference Drawing:

Lifting Scoreboard **Drawing A-44548**

Large scoreboard sections and message centers are shipped equipped with eyebolts that are used to lift the displays. The eyebolts are located along the top of the cabinet for each scoreboard or scoreboard section.

Note: Daktronics strongly recommends using a spreader bar, or lifting bar, to lift the display.

Using a spreader bar ensures that the force on the eyebolts is straight up, minimizing lifting stress. Lifting methods are shown in **Figure 3** and in **Drawing A-44548**.

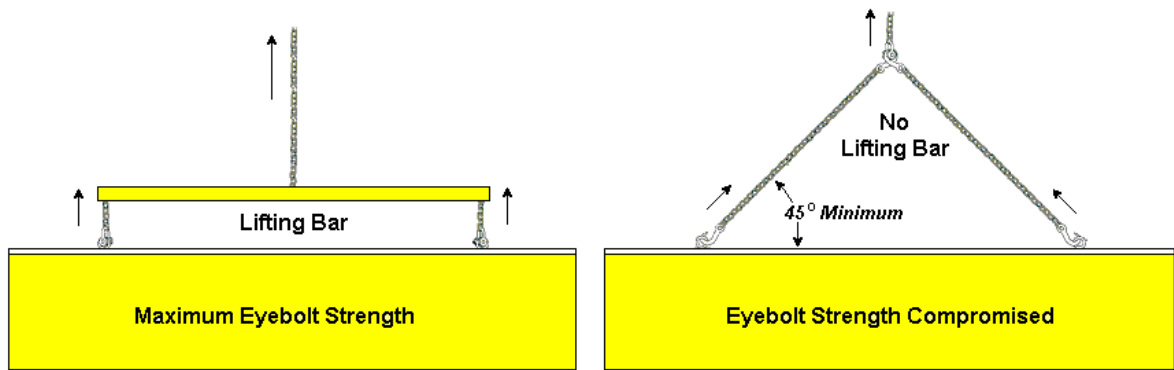


Figure 3: Lifting the Display

Figure 3 illustrates both the preferred method (left example) and an alternative method (right example) for lifting a scoreboard. When lifting the display:

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

Take special care not to exceed the rated load of the eyebolts. Refer to **ED-7244, Eyebolts**, to determine allowable loads and load angles for the lifting hardware. **ED-7244** is located in **Appendix B** of this manual.

Avoid using other lifting methods. Cables and chains attached to the eyebolts and directly to a center lifting point, as shown in the right-hand example in **Figure 3**, can create a dangerous lateral force on the eyebolts and may cause the eyebolts to fail.

Daktronics scoreboards use 1/2" and 5/8" shoulder-type eyebolts mounted to a 1/8" aluminum plate or steel nut plate, but exceeding load angles or weight limits could cause the bolts to pull out or the scoreboard cabinet to buckle. In either circumstance, there could be serious damage to the scoreboard. If you must use this method, ensure a minimum angle between the chain and scoreboard of at least 45degrees.

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

In typical multi-section installations, the lower scoreboard is installed first and secured to the support beams. The upper section is then placed atop or above the lower section and attached to the beams. There may be cables extending from the top of the lower section. Guide these cables into the hole in the bottom of the upper section for later connection.

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

6.4 Scoreboard Mounting

Reference Drawings:

| | |
|---------------------------------------|-------------------------|
| Display Mounting..... | Drawing A-44412 |
| Display Mounting Straps, BA-3718..... | Drawing A-114415 |

Scoreboards can be mounted on two, three, or four poles. Refer to **Section 6.2** to determine the center-to-center distance of the poles and other installation specifications for each model.

Drawing A-44412 shows the hardware used for mounting the scoreboard to the beams. Each section of the scoreboard attaches at the top and the bottom to all the beams. The drawing also shows top and side views of the scoreboard secured to the beams. Note that the threaded rods *do not* pass through the flanges of the beams, but instead run along both sides of each beam.

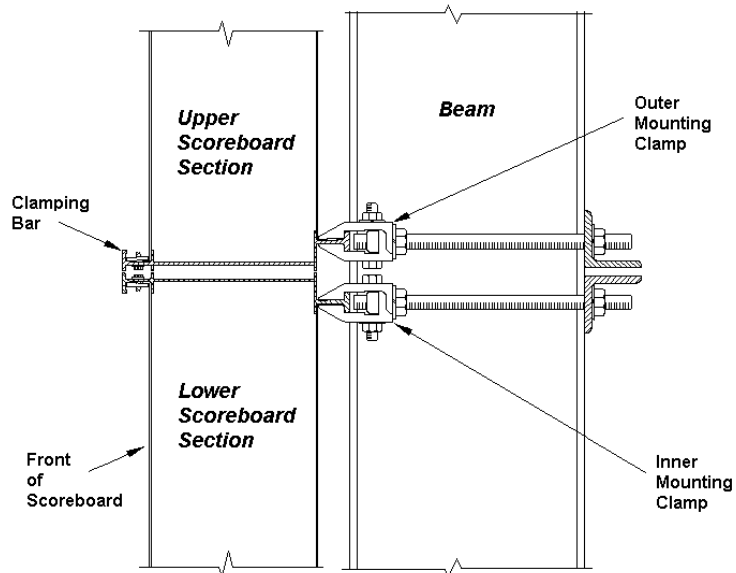


Figure 4: Multi-Section Scoreboard Mounting (Side View)

Review the illustrations of the mounting hardware in **Drawing A-44412**, and then follow this procedure for each section:

1. Using the $\frac{3}{8}$ " bolts, loosely attach the inner and outer mounting clamps to the rear flanges of the scoreboard's horizontal frame members. Measure the beam spacing and position the clamps to fit on either side of the beams.
2. Insert a $\frac{1}{2}$ " square nut into each mounting clamp. From the rear, screw a threaded rod into each of the nuts, as shown in **Figure 4**.
3. Position the scoreboard in front of the beams with the threaded rods extending from the rear of the clamps, straddling the beams. Raise the scoreboard section to the desired height.
4. Slide clamping angles over the ends of the rods and loosely install the washers and nuts.
5. Make final adjustments in the positioning of the scoreboard. Tighten the $\frac{3}{8}$ " bolts in the mounting clamps.
6. Make sure that the threaded rods are perpendicular to the scoreboard and tighten all of the $\frac{1}{2}$ " nuts.
7. Model BA-3718-11 requires the use of mounting straps. Refer to Drawing **A-114415** for installation instructions.

Scoreboard Mounting Using Spacers

Reference Drawing:

Scoreboard Mtg; Scoreboard with Spacers **Drawing A-182909**

Many Daktronics customers add message centers or advertising panels to the top or bottom of their scoreboards, and in some cases the depth of the add-on component may not match the depth of the scoreboard. (Scoreboards in this series are typically 6" or 11" deep.)

To create a uniform appearance for the overall display, Daktronics recommends using spacers behind the scoreboard so that the front face of the

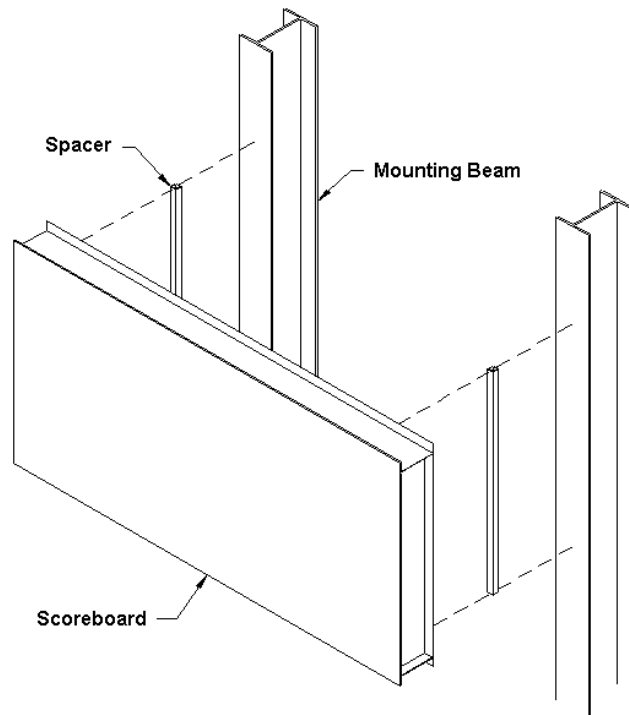


Figure 5: Mounting with Spacers

display lines up evenly with the front face of the added component. The concept is illustrated in **Figure 5**.

Drawing A-182909 provides complete details for inserting spacers. At installation, spacers are placed between the mounting beams and the back of the scoreboard cabinet. Spacer size is determined by the height and the extra depth required for the front surface of the scoreboard to match that of the optional message center or ad panel. Daktronics does not provide these spacers.

6.5 Ad Panel Mounting

Reference Drawing:

Ad Panel Mounting.....**Drawing A-52187**

Drawing A-52187 shows the mounting of advertising or identification panels. The installation requires mounting channel (C-channel), mounting angles, and 1/2" threaded rods (15"), square nuts, hex nuts, and washers.

Mount the ad panel or ad panels in the following manner:

1. Use the mounting channel to determine which hole combination to use. Be sure to keep the bolts as close to the beam as possible.
2. Using the mounting channel as a template, drill 9/16" holes in the upper and lower rear flange of the ad panel where the supports will go.
3. Place the 1/2" square nuts inside the channel and thread the long rods through.
4. Lift the ad panel into position with the threaded rods still in place.
5. Place mounting angles over each pair of rods and secure with lock washers and hex nuts.
6. When the panel is adjusted to the final desired position, tighten the hex nuts firmly.

When mounting ad panels with back sheets, remove the back sheets above and below the upper and lower rear flanges of the ad panel where the holes have been drilled. Be sure to replace the back sheets after placing the square nuts inside the channel and threading the rods through the holes.

Section 7: Electrical Installation

Electrical installation consists of the following processes:

- Providing power and ground to a disconnect near the scoreboard.
- Routing power and ground from the main disconnect to the scoreboard driver/power enclosure.
- Connecting the scoreboard ground to a grounding electrode at the scoreboard location.
- Routing the control signal cable from the control location to the scoreboard location.

Note: Only qualified individuals should perform power routing and termination to the display. It is the responsibility of the electrical contractor to ensure that all electrical work meets or exceeds local and national codes.

7.1 Power

Reference Drawing:

Schematic; Gen IV Outdoor LED, 16 Column Drvr **Drawing A-285779**

Daktronics outdoor LED scoreboards have been designed for easy access to components, and the power and control signal hookup has been simplified. Front panels are removable to allow access to the digits, cabling, and other electronic components.

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

Improper installation could result in serious damage to the equipment and could be hazardous to personnel.

The multi-section outdoor scoreboards require a dedicated, 120 V circuit for incoming power. The display itself has no breakers or fuses.

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

All power conductors are 14 AWG, except where 18 AWG wiring is called out on the schematic. All signal conductors are 18 AWG.

Refer to the outdoor scoreboard schematic listed above and to the chart in **Section 5** to determine circuit specifications and maximum power requirements for the models described in this manual.

Grounding

Reference Drawing:

Schematic; Gen IV Outdoor LED, 16 Column Drvr **Drawing A-285779**

Note: Displays **MUST** be grounded according to the provisions outlined in Article 250 of the National Electrical Code and according to the specifications in this manual. Daktronics recommends a resistance-to-ground of 10 ohms or less.

The contractor performing the electrical installation can verify ground resistance. Daktronics Sales and Service personnel can also provide this service.

The display system *must* be connected to an earth electrode installed at the display. Proper grounding is necessary for reliable equipment operation. It also protects the equipment from damaging electrical disturbances and lightning.

Note: The display must be properly grounded, or the warranty will be void. Refer to the schematic, **Drawing A-285779**, for information on connecting the grounding wire. The connection is illustrated in the “Pwr In” detail of the *Master Configuration* portion of the schematic.

The material for an earth-ground electrode differs from region to region and may vary according to conditions present at the site. Consult the National Electrical Code and any local electrical codes that may apply. The support structure of the display cannot be used as an earth-ground electrode. The support is generally embedded in concrete, and if it is in earth, the steel is usually primed or it corrodes, making it a poor ground in either case.

Power Installation

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

Installation with Ground and Neutral Conductors Provided

For this type of installation, the power circuit *must* contain an isolated earth-ground conductor. Under this circumstance, *do not* connect neutral to ground at the disconnect or at the display.

Note: This would violate electrical codes and void the warranty.

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

Installation with Only a Neutral Conductor Provided

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

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

7.2 Power and Signal Connection

Reference Drawings:

| | |
|--|-------------------------|
| Schematic; Gen III & IV, OD LED, 3 Drvr Display | Drawing A-179541 |
| Schematic; Gen III & IV, OD LED, 1 Drv w/TNMC | Drawing A-179790 |
| Schematic; Gen III & IV OD LED, 3Dr w/TNMC | Drawing A-180081 |
| Schematic; Gen III & IV, OD LED, 2 Drv | Drawing A-180637 |
| Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | Drawing A-180688 |
| Schematic; GEN IV Outdoor LED, 16 Col Driver | Drawing A-285779 |
| Driver Enclosure Reference, GEN IV | Drawing A-293354 |
| Schematic; Baseball w/S.O.P., Gen IV optional TNMC | Drawing B-204725 |
| Schematic; BA-2013 GEN III, Optional TNMC | Drawing B-260324 |

Route power and signal cables into the scoreboard from the rear. There are two plastic plugs for conduit connection in the back. All power and signal wiring terminates at the driver enclosure. **Drawing A-293354** illustrates the 16-column driver used in Daktronics outdoor LED scoreboards.

To gain access to the driver enclosure, open the access door or digit panel and remove the cover from the enclosure. Refer to the component locations drawings for the access location for your scoreboard.

Connect power and signal cables at the appropriate locations on the driver enclosure panel, shown in **Drawing A-293354**.

The conventional power termination panel has been eliminated from Daktronics outdoor scoreboards; the power feeder circuit connects directly to a terminal block in the driver enclosure, as shown in **Figure 6** above.

The terminal block is located in the lower right corner of the enclosure. Connect the power wires as shown in the illustration. Refer to the driver engineering drawings and the schematics listed at the beginning of this section for additional wiring details. The schematics include a detailed illustration of the power termination.

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

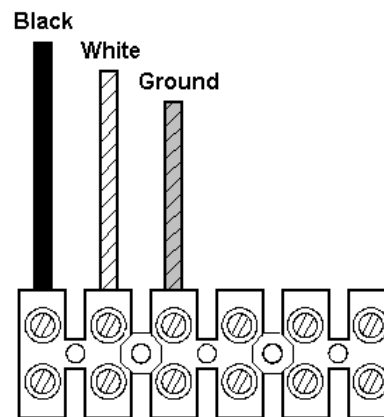


Figure 6: Power Terminal Block

Route signal cabling to the signal surge arrestor card in the upper left corner of the driver enclosure. The connections are labeled to permit easy installation. At the Signal In terminal block on the PCB, connect the red signal wire to the positive terminal, the black to the negative terminal, and the shield (silver) wire to the shield terminal.

Note: It is important that the shield wire is properly connected to the shield terminal on the signal surge arrestor card.

Figure 7 (on the previous page) illustrates the printed circuit board and the terminal blocks.

For signal cable, Daktronics recommends, as a minimum, single-pair, shielded cable, 22 AWG (Daktronics part number W-1077). Two-pair shielded cable (Daktronics part W-1614) is preferred.

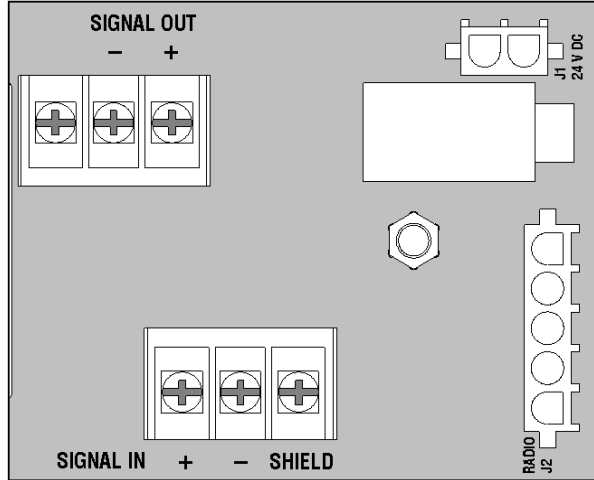


Figure 7: Signal Surge Arrestor Card

Fiber Optic

Another common signal communication method is using fiber optic cabling. A minimum cabling of multi-mode; 62.5/125 um; and 2-core fiber cable is recommended. (Daktronics part number is W-1242.) See **Figure 8** for the location of fiber connector on the LED driver. (See **Drawing A-288137** for the complete image of the LED driver.)

For additional information on signal connection, refer to the All Sport 5000 Series control console operation manual **ED-11976**.

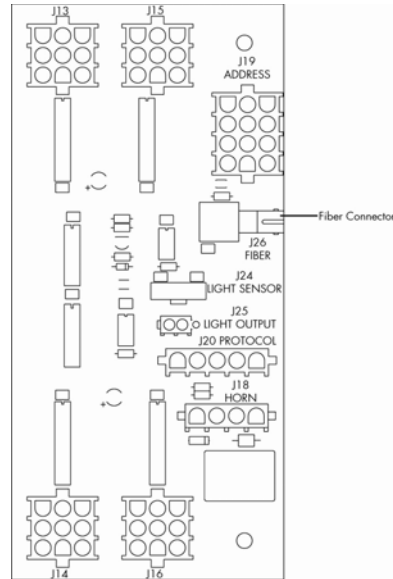


Figure 8: Driver Fiber Connection Location

Interconnect Harness Connections

All multi-section football and soccer scoreboards use an interconnect harness as a connection between the digits of the top section and their corresponding driver in the lower section. Typically, one driver runs the top section of the board, while the other driver runs the bottom section, but only the top section digits use the interconnect harness. Cabling runs from the individual digits to a common point in the upper scoreboard section, and the harness drops through the bottom of the scoreboard cabinet to connect to the driver in the lower section. (At shipping, the interconnect

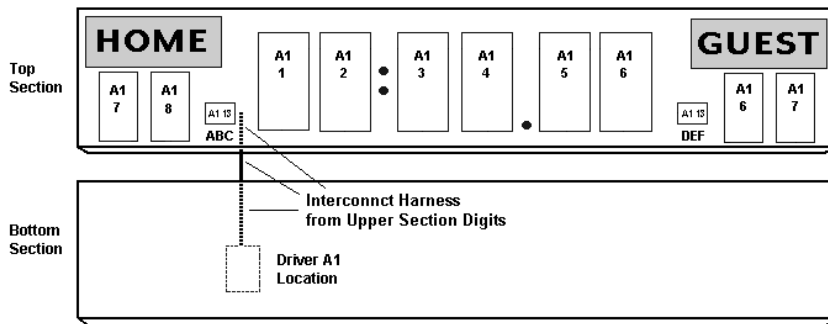


Figure 9: Interconnect Harness Connections with Digit Designation

harness will extend approximately 7' from the bottom of the upper section. Open the access panel to the lower driver, pull the interconnect harness through the hole in the top of the lower cabinet, and plug the harness into the appropriate driver connection.)

Figure 9 illustrates the interconnect harness connection.

On some larger four-section scoreboards, BA-2006, BA-2007, BA-3718 and BA-3724 the digit interconnect harnesses plug directly into drivers in the upper left section of the scoreboard.

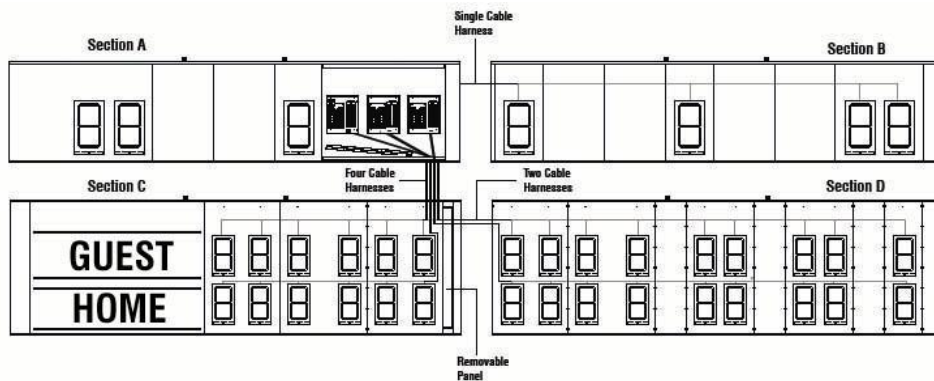


Figure 10: Scoreboard Interconnect Harnessing

Because the four sections of these scoreboards are shipped separately and joined onsite, care must be taken to properly route the interconnect cables. Refer to **Figure 10** and follow this general procedure to connect the digit harnesses.

1. When the scoreboard sections are uncrated, you should see cables protruding from the tops or sides of *Sections B, C, and D*. These are the digit interconnect

harnesses, and each harness may contain as many as nine individual digit connectors. They will be routed through 2¹/₂" holes in the scoreboard cabinets and into *Section A*, where the connectors will plug into the appropriate driver connections. (Digits in all sections have been connected and tested at the factory; the only installation that must be completed onsite is the attachment of the cables to the driver connections.)

2. Begin the installation by first connecting the harnesses in the lower scoreboard sections, *C* and *D*. There is a removable panel on the face of *Section C*, immediately to the right of the digits. Unfasten the two screws to remove the panel; this will provide access for routing the cable harness from *Section D*.
3. Harnesses should be protruding through a pair of 2¹/₂" holes on the left end of *Section D*. Refer to **Figure 9**. Run these cables into the mating holes on the right side of *Section C*, and then continue to route the cabling up and through the two end holes in the top of *Section C*. There are four holes on the upper right side of the *Section C* cabinet. The first two holes are occupied by the digit interconnect cabling from *Section C*, and these two cables should already be routed up and through the top of the scoreboard cabinet.
4. Open the right access panel in *Section A*. The panel is hinged at the top and fastened with three screws at the bottom; it also contains a brace to prop open the door.
5. On the left side of the *Section B* cabinet is the interconnect harness – a single cable with multiple connectors. Run the cable into and through the single mating hole on the right side of the *Section A* scoreboard.
6. Plug the connectors from all the cables into corresponding connection on the appropriate driver. Each plug is clearly marked.

Multiple Driver Connections

All of the large, multi-section LED scoreboards require multiple drivers, and those models have been configured to operate with a master/slave driver system. Master and slave drivers function identically, but slave units lack the power termination block and signal surge suppression card. The two drivers have been designed to simply plug into one another via an interconnect harness. The slave receives power and redriven signal from the master driver enclosure. Larger boards can add as many driver slaves as they require.

All driver interconnect harnesses are factory-installed. No additional connection is necessary. (The harness emerges from the bottom of the master driver enclosure, and the J42 jack from the master is connected to the slave's P43 plug.) Likewise, signal cables from drivers to digit also have been factory-installed, and no additional connection is necessary.

Refer to your scoreboard drawings to determine driver location and other model-specific information.

Section 8: Scoreboard Maintenance and Troubleshooting

IMPORTANT NOTES:

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

Note: For assistance in the maintenance of team name message centers or other optional scoreboard message centers, refer to **Section 9** or the service manual that accompanies those units.

8.1 Cabinet Specifications

Cabinets for the Daktronics outdoor LED scoreboards are constructed of heavy-gauge aluminum. Exact dimensions and weights for each model are listed in the chart in **Section 3**. Removable panels for digits, indicators, and component access are detailed in each model's component locations drawing, listed in **Section 4**.

8.2 Component Location and Access

For front-access scoreboards, all internal electronic components and digits can be reached by opening a face panel, an access door, or a digit panel on the front of the display.

Digit panels have been simplified on the outdoor LED scoreboards. They are held in place on the scoreboard face by an offset flange across the top and by three screws at the bottom, as shown in **Figure 11** (very large digits may have additional screws across the bottom.)

Note: Open the scoreboard with care.

Hold the digit panel in place by putting hand pressure on it while removing the screws, and carefully lift it from the board, sliding it out and down. If the panel is not held in place, it could drop immediately when the screw is removed, possibly damaging LEDs or the digit harness. (A stud insert on the back of the digit panel is designed to minimize damage from dropping.)

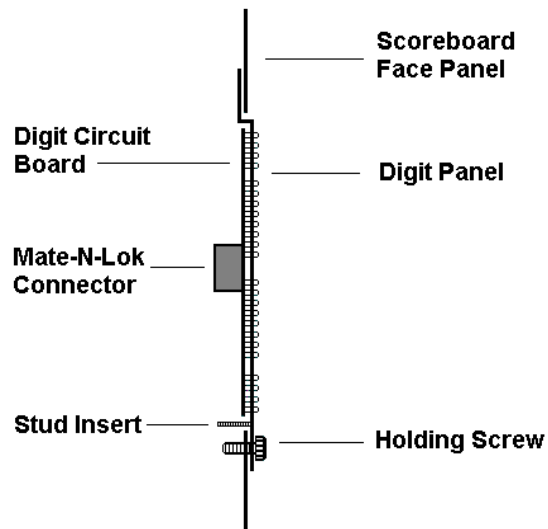


Figure 11: LED Digit Panel (Not to Scale)

Component location varies with each scoreboard model, but drivers and power and signal components are typically mounted inside the scoreboard behind an access panel or a digit.

With a non-digit access panel, simply remove the top, side and bottom screws holding it in place. Some panels are hinged and swing open when the screws are removed or loosened.

Note: Disconnect power before servicing the display!

Replacing a Digit

The digit circuit board, the platform for the LEDs, is mounted to the back of the digit panel. See **Figure 12** below. Do not attempt to remove individual LEDs. In the case of a malfunctioning board, replace the entire digit panel.

To remove a scoreboard digit, follow these steps:

1. Open the digit panel as described in the preceding section.
2. Disconnect the power/signal connector from the back of the digit. Release the connector by squeezing together the locking tabs as you pull the connector free.
3. The digits are secured to the inside of the panel with fixed machine screws, spacers, and push nuts. Remove the nuts and lift the digit off the standoff screws. The push nuts can be removed in several ways, but Daktronics recommends using a $\frac{9}{32}$ " nut driver.
4. Position a new digit over the screws and tighten the nuts.
5. Reconnect the power/signal connector.

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

6. Close and secure the digit panel and test the scoreboard.

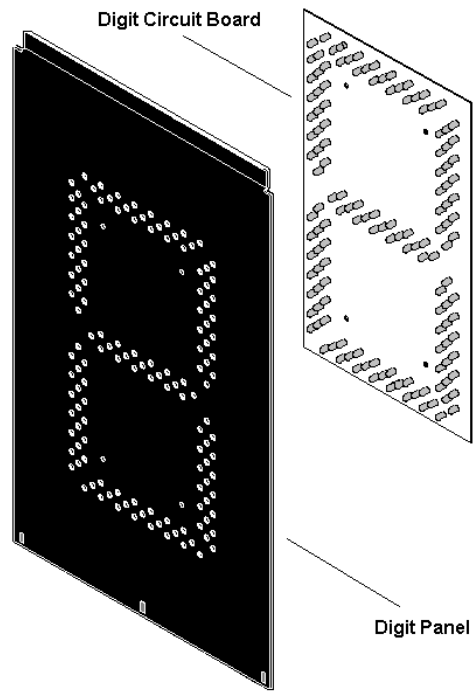


Figure 12: Digit Assembly

Replacing a Digit Segment

Reference Drawing:

Digit Assemblies; Gen III & IV LED Digits **Drawing B-177679**

When a digit malfunctions, in most cases it is necessary to replace the entire digit circuit board. Some larger digits (24", 30", 36"), however, are constructed in segments, as shown in **Figure 13**, and it may be possible to make repairs by removing only the defective segment.

As with smaller digits, the digit segment circuit boards are mounted to the back of the digit panel.

Note: Do not attempt to remove individual LEDs.

Refer to **Drawing B-177679**. To remove a digit segment, follow these steps:

1. Open the digit panel as described above in the previous section.
2. Disconnect the 2-pin power/signal connector from the back of the individual segment. Release the connector by squeezing together the locking tabs as you pull the connector free.
3. The individual segments are secured to the inside of the panel with fixed machine screws, spacers, and push nuts. Remove the nuts and lift the segment off the standoff screws.
4. Position a new segment over the screws and tighten the nuts.
5. Reconnect the power/signal connector.

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

6. Close and secure the digit panel and test the scoreboard.

Note: Replace a malfunctioning colon, decimal, or indicator assembly in the same manner.

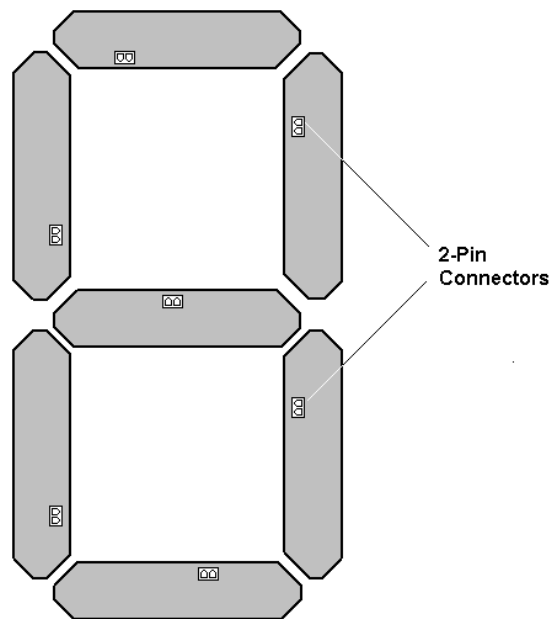


Figure 13: Segmented Digit Panel
(Rear View)

Replacing a Driver

Drivers are typically mounted inside the scoreboard and immediately behind a digit, but location and mounting varies with the model of the scoreboard. Refer to the component locations drawings in **Section 4** for the location of your scoreboard driver.

All scoreboards in this manual are front-accessible. Each driver is enclosed with a power supply and signal terminal block.

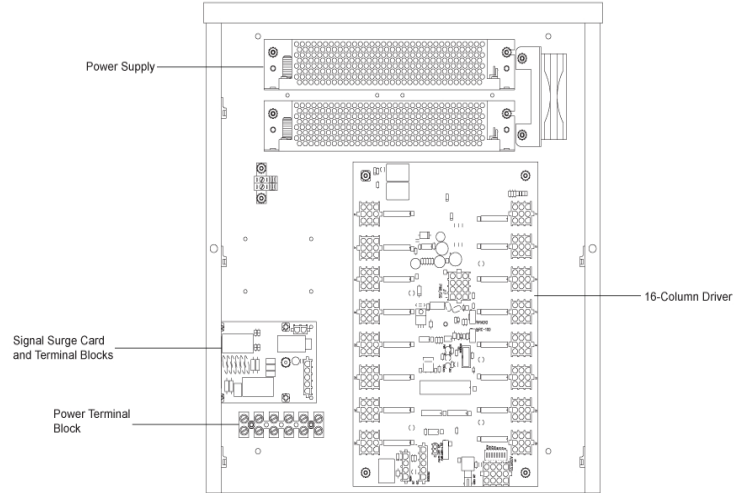


Figure 14: 16-Column Driver Enclosure

Before a failed driver can be reached, the enclosure must be accessed. Follow these steps:

1. Open the digit panel or scoreboard face panel as described in **Section 8.2**.
2. Remove the cover from the driver enclosure.
3. Disconnect all connectors from the driver. Release each connector by squeezing together the locking tabs as you pull the connector free.

Note: This is a keyed connector and will attach in one way only. Do not attempt to force the connections!
4. Remove the screws, nuts, or wing nuts securing the driver to the inside of the enclosure. Refer to **Figure 14**.
5. Carefully lift the driver from the display and place it on a clean, flat surface.
6. Follow steps 1 through 5 in reverse order to attach a new driver.

8.3 Schematic

Reference Drawings:

| | |
|--|-------------------------|
| Schematic; Gen III & IV, OD LED, 3 Drvr Display | Drawing A-179541 |
| Schematic; Gen III & IV, OD LED, 1 Drv w/TNMC | Drawing A-179790 |
| Schematic; Gen III & IV, OD LED, 3Drv w/TNMC | Drawing A-180081 |
| Schematic; Gen III & IV, OD LED, 2 Drv | Drawing A-180637 |
| Schematic; Gen III & IV, OD LED, 2 Drv Multi-Sec w/TNMC | Drawing A-180688 |
| Schematic; Gen IV Outdoor LED, 16 Column Drvr | Drawing A-285779 |

Drawings A-179541, A-179790, A-180081, A-180637, A-180688 and A-285779 are the schematic diagrams for the Daktronics multi-section scoreboards and the 16-column drivers used in them. The schematics include power and signal inputs and all

wiring for the models described in this manual. Refer to **Section 5** for a complete listing of scoreboards and the appropriate schematic.

8.4 LED Drivers

Reference Drawings:

- Address Table, 1 Through 128.....**Drawing A-115078**
- Specifications; LED Driver III, 16 Col**Drawing A-288137**
- Address Table 1; GEN IV Driver Address DIP Switch**Drawing A-290261**
- Driver Enclosure Reference, GEN IV**Drawing A-293354**

In the scoreboard, the LED drivers perform the task of switching digits on and off.

Refer to **Drawing A-293354**. Each driver has up to 19 connectors providing power and signal inputs to the circuit and outputs to the digits and indicators. The connectors function as follows:

| 16-Column LED Driver | |
|-----------------------------|---------------------------------|
| <i>Connector No.</i> | <i>Function</i> |
| 1-16 | Output to digits and indicators |
| 17 | Power and signal input |
| 18 | Relay |
| 19 or S1 | Address |
| 20 | Protocol |

Output connectors 1 through 16 each have nine pins. Pin 7 provides power (hot) to the digit or indicators wired to that connector. The other eight pins provide switching connections.

For the scoreboard to receive signal and function properly, the driver must be set to the correct address. This address is set with jumper wires in a 12-pin plug which mates with a jack on the driver. **Drawing A-288137** details the specifications for 16-column drivers.

Address settings can be configured by using the SI dip switch. See **Drawing A-290261** for more information. The older method using the J19 address plug is still available. Refer to **Drawing A-115078** for a listing of the wire/pin connections for driver addresses 1 – 128.

8.5 Segmentation and Digit Designation

Reference Drawing:

- Segmentation, 7 Segment Bar Digit.....**Drawing A-38532**

In each digit, certain LEDs always go on and off together. These groupings of LEDs are referred to as *segments*. **Drawing A-38532** illustrates digit segmentation. It also details which connector pin is wired to each digit segment and the wiring color code used throughout the display.

The component locations drawings in **Section 4** specify the driver connectors controlling the digits. Numbers displayed in hexagons in the upper half of each digit, as shown in **Figure 15**, indicate which connector is wired to that digit. The lower number in the square indicates nominal digit size.

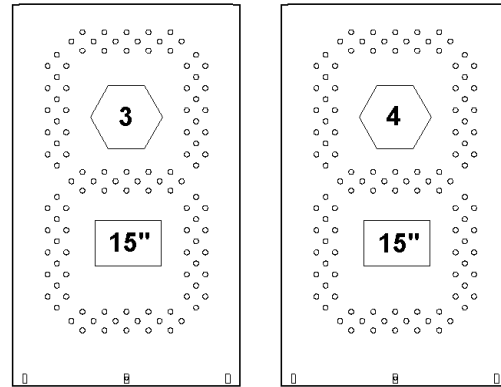


Figure 15: Digit Designation

8.6 Lightning Protection

The use of a disconnect near the scoreboard to completely cut all current-carrying lines significantly protects the circuits against lightning damage. The National Electrical Code also requires the disconnect. In order for this system to provide protection, the power *must* be disconnected when the scoreboard is not in use. The control console should also be disconnected from power and from the signal junction box when the system is not in use. The same surges that may damage the scoreboard's driver can also damage the console's circuit.

8.7 Troubleshooting

This section lists potential problems with the scoreboard and indicates possible causes and corrective actions. This list does not include every possible problem, but does represent some of the more common situations that may occur.

| Symptom/Condition | Possible Cause |
|---|---|
| Scoreboard will not light | <ul style="list-style-type: none"> ▪ Console not connected or poor connection ▪ No power to control console ▪ No power to the scoreboard |
| Garbled display | <ul style="list-style-type: none"> ▪ Internal driver logic malfunction ▪ Control console malfunction |
| Digit will not light | <ul style="list-style-type: none"> ▪ Black wire to digit broken ▪ Poor contact at driver connection. ▪ Driver malfunction |
| Scoreboard will not light | <ul style="list-style-type: none"> ▪ Console not connected or poor connection ▪ No power to control console ▪ No power to the scoreboard |
| Digit will not light | <ul style="list-style-type: none"> ▪ Black wire to digit broken ▪ Poor contact at driver connection. ▪ Driver malfunction |
| Segment will not light | <ul style="list-style-type: none"> ▪ Broken LED or connection ▪ Driver shift register failure ▪ Broken wire between driver and digit ▪ Poor contact at driver connector |
| Segment stays lit | <ul style="list-style-type: none"> ▪ Driver shift register failure ▪ Short circuit on digit |
| Date appears in the wrong place on the scoreboard | <ul style="list-style-type: none"> ▪ Incorrect address settings on drivers (consult tables and set correct addresses) |

8.8 Replacement Parts

Refer to the following table for Daktronics scoreboard replacement parts.

| Description | Location | Daktronics Part No. |
|---|------------------|---------------------|
| Driver, 16 col, outdoor, LED | Driver enclosure | 0P-1192-0383 |
| Power supply, 24 V, 150W, 86-132 V input | Driver enclosure | A-1720 |
| Signal surge arrestor | Driver enclosure | 0P-1110-0011 |
| Fan, 32 cfm, 24 V DC, 3.15 sq. in | Driver enclosure | B-1030 |
| Plug, 1/4" phone | Signal | P-1003 |
| J-Box, 1/4" phone, Indoor | Signal | 0A-1009-0038 |
| J-Box, 1/4" Phone, outdoor | Signal | 0A-1091-0227 |
| 12V DC trumpet horn asm. | Scoreboard | 0A-1091-1213 |
| Signal cord; 1/4" phone 20' | Signal | W-1236 |
| Signal cord; 1/4" phone 30' | Signal | W-1238 |
| Signal cord; 1/4" phone 50' | Signal | W-1237 |
| Digit, 15", 7-seg outdoor LED, red | Scoreboard | 0P-1192-0200 |
| Digit, 15", 7-seg outdoor LED, amber | Scoreboard | 0P-1192-0214 |
| Digit, 18", 7-seg outdoor LED, red | Scoreboard | 0P-1192-0202 |
| Digit, 18", 7-seg outdoor LED, amber | Scoreboard | 0P-1192-0216 |
| Digit, 18" ones, 7-seg outdoor LED, red | Scoreboard | 0P-1192-0203 |
| Digit, 18" ones, 7-seg outdoor LED, amber | Scoreboard | 0P-1192-0217 |

| Description | Location | Daktronics Part No. |
|---|-----------------|----------------------------|
| Digit segment, 24" outdoor LED, red (horizontal) | Scoreboard | 0P-1192-0205 |
| Digit segment, 24" outdoor LED, red (vertical) | Scoreboard | 0P-1192-0204 |
| Digit segment, 24" outdoor LED, amber (horizontal) | Scoreboard | 0P-1192-0219 |
| Digit segment, 24" outdoor LED, amber (vertical) | Scoreboard | 0P-1192-0218 |
| Digit segment, 30" outdoor LED, red (horizontal) | Scoreboard | 0P-1192-0207 |
| Digit segment, 30" outdoor LED, red (vertical) | Scoreboard | 0P-1192-0206 |
| Digit segment, 30" outdoor LED, amber (horizontal) | Scoreboard | 0P-1192-0221 |
| Digit segment, 30" outdoor LED, amber (vertical) | Scoreboard | 0P-1192-0220 |
| Digit segment, 36" outdoor LED, red (horizontal) | Scoreboard | 0P-1192-0209 |
| Digit segment, 36" outdoor LED, red (vertical) | Scoreboard | 0P-1192-0208 |
| Digit segment, 36" outdoor LED, amber (horizontal) | Scoreboard | 0P-1192-0223 |
| Digit segment, 36" outdoor LED, amber (vertical) | Scoreboard | 0P-1192-0222 |
| Indicator, 2" circular, outdoor LED, red | Scoreboard | 0P-1192-0228 |
| Indicator, 2" circular, outdoor LED, amber | Scoreboard | 0P-1192-0229 |
| Indicator, possession (football), outdoor LED, red | Scoreboard | 0P-1192-0230 |
| Indicator, possession (football) outdoor LED, amber | Scoreboard | 0P-1192-0231 |
| Indicator, soccer, outdoor LED, red | Scoreboard | 0P-1192-0240 |

| Description | Location | Daktronics Part No. |
|---------------------------------------|------------|---------------------|
| Indicator, soccer, outdoor LED, amber | Scoreboard | 0P-1192-0241 |

8.9 Daktronics Exchange and Repair and Return Programs

To serve customers' repair and maintenance needs, Daktronics offers both an Exchange Program and a Repair and Return Program.

Exchange Program

Daktronics unique Exchange Program is a quick, economical service for replacing key parts in need of repair. If a part requires repair or replacement, Daktronics sends the customer a replacement, and the customer sends the problem part to Daktronics. This not only saves money, but also decreases display downtime. To participate in the Exchange Program, follow these steps:

1. **Call Daktronics Customer Service:** at 877-605-1115 (toll-free) or 605-697-4036
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, which is 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. **You will be billed for the replacement part immediately, unless you have a qualifying service agreement in place.**
 In most circumstances, you will be invoiced for the replacement part at the time it is shipped. This bill, which represents the exchange price, is due when you receive it.
4. **You must send the problem part to Daktronics within 30 days.**
 If you do not ship it to Daktronics within 30 working days from the invoice date, Daktronics assumes you are purchasing the replacement part outright with no exchange. You will therefore be invoiced for the replacement part at the full purchase price, with the balance due upon receipt. The second invoice represents the difference between the exchange price (billed previously) and the full purchase price of the part. If you return the exchange equipment after 30 working days from the invoice date, you will be credited for the amount on the second invoice, minus a restocking fee.

Note: Second invoice policies also apply to customers with qualifying service agreements in place. **To avoid a restocking charge, return the part, which has been replaced within 30 days of the invoice date.**
5. **If the replacement part does not solve the problem, return the part within 30 working days or you will be billed for it at full purchase price.**

If, after you make the exchange, the equipment still causes problems, please contact our Customer Service immediately. Daktronics expects *immediate return* of an exchange part if it does not solve the problem. The company also reserves the right to refuse parts that have been damaged due to acts of nature or causes other than normal wear and tear.

Repair and Return Program

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

1. **Call Daktronics Customer Service:** at 877-605-1115 (toll-free) or 605-697-4036.
2. **Receive a Return Materials Authorization (RMA) number before shipping.**
This expedites repair of your 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.
4. **Enclose:**
 - your name
 - address
 - phone number
 - the RMA number
 - a clear description of symptoms

How to reach us

Mail: Customer Service, Daktronics Inc.
PO Box 5128
331 32nd Ave
Brookings, SD 57006

Phone: Daktronics Customer Service:
877-605-1115 (toll-free) or 605-697-4036

Daktronics Warranty and Limitation of Liability

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

Section 9: Team Name Message Center Maintenance

IMPORTANT NOTES:

1. Disconnect power before doing any repair or maintenance work on the message centers.
2. Permit only qualified service personnel to access the internal electronics of the display.
3. Disconnect power when the scoreboard is not in use.

9.1 Team Name Message Center System Overview

Team name message centers (TNMCs) are available in two sizes: an 8x32 matrix model with four 8x8-pixel modules, and an 8x48 model comprised of six 8x8 modules. **Figure 16**, below, illustrates the larger unit. Light emitting diodes (LEDs) – tiny, solid-state lighting units – illuminate the displays.

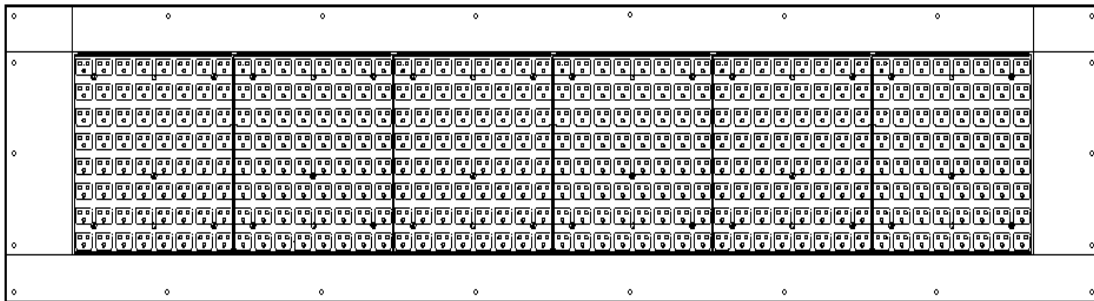


Figure 16: 8x48 Team Name Message Center

The message centers feature an array of red or amber LEDs, and are capable of displaying characters up to 10" high. Pixels in the red TNMC consist of a three-LED cluster, while amber TNMCs use four-LEDs per pixel.

The four-module TNMC measures approximately 1'-4" tall by 4' wide, while the six-module TNMC measures approximately 1'-4" by 6' wide; both have an in-cabinet depth of about 5". The smaller units weigh about 80 pounds per pair, and the larger TNMC sets add about 120 pounds to scoreboard weight.

TNMCs are typically installed in pairs. Although the message centers customarily are used for team names (home and guest), they are programmable and can display any type of caption. Characters are shown on a single line and either single- or double-stroke fonts may be used for the caption or name.

9.2 Maintenance and Troubleshooting Overview

Standard Daktronics outdoor LED scoreboards typically are front-accessible, but some models may be ordered with rear service access. For that reason, Daktronics team name message centers have been designed so that they may be accessed from both the front *and* rear for easy maintenance and repair of internal components.

This section provides the following TNMC information:

- **Signal routing summary:** provides a basic explanation of signal travel through the TNMC display.
- **Power routing summary:** provides a basic explanation of power travel through the display.
- **Service and diagnostics:** provides instructions for removing various display components and explains the functions of circuit board connectors as well as the meanings of diagnostic LEDs.
- **Maintenance:** lists a number of steps to take to keep the team name message centers in safe, working order.
- **Troubleshooting:** lists possible display malfunctions and suggests a number of causes and corrections for each malfunction.
- **Replacement parts list:** includes the part description and number of display components that may have to be replaced during the life of this display.

9.3 Signal Summary

Reference Drawings:

| | |
|---|-------------------------|
| Schematic, Amber TNMC, Gen IV | Drawing A-252645 |
| Schematic, Red TNMC, Gen IV | Drawing A-252681 |
| Component Locations; 832/848 Red/Amb Led TNMC, G-4 | Drawing A-257029 |

Refer to your schematic, **Drawings A-252645 or A-252681**, for complete information on TNMC signal routing. **Drawing A-257029** indicates the locations of the internal electronic components. From signal input from the All Sport controller, routing can be summarized as follows:

1. Data from the display controller travels via cable harness into the scoreboard.
2. The signal then travels through the driver/power enclosure to the J1 connector on the current loop interface card.
3. Data exits at J42 via current loop harness, and connects with P43 at the TNMC controller assembly. An interconnect harness carries the signal to the first module, and the signal relays from module to module, in daisy-chain style, until it reaches the last module on the message center.

9.4 Power Summary

Reference Drawings:

| | |
|-------------------------------------|-------------------------|
| Schematic, Amber TNMC, GEN IV | Drawing A-252645 |
| Schematic, Red TNMC, Gen IV | Drawing A-252681 |
| Component Locations; 832/848 | |
| Red/Amb Led TNMC, G-4 | Drawing A-257029 |

Refer to your schematic, **Drawings A-252645 or A-252681**, for complete information on TNMC power routing. **Drawing A-257029** indicates the location of the internal electronic components. Note that amber TNMCs always contain two power supplies, while red TNMCs require only a single power supply.

Power routing for the display can be summarized as follows:

1. Incoming power terminates at the terminal block in the scoreboard driver enclosure. Using the same harness and J42-P43 connections as signal, power is then routed to the TNMC controller where it then travels to both the power supply assembly and to a transformer on the controller tray.
2. From the power supply assembly, power is relayed to the first module, and then from module to module.
3. While the modules draw their power directly from the power supply assemblies (6.5 V for red LED modules, 9 V for amber), the TNMC controller itself receives 16 V power from the transformer.

9.5 Service and Diagnostics

The following subsections address servicing of these display components:

- TNMC Controller
- Modules and Drivers
- Power Supplies

The subsections also address diagnostic LEDs and signal/power connectors found on the TNMC controller.

Remember: Disconnect power before servicing internal components!

TNMC Controller

Reference Drawings:

| | |
|--|-------------------------|
| 4 Column MASC LED Driver Specifications..... | Drawing A-166216 |
| Component Locations; 832/848 | |
| Red/Amb LED TNMC, G4..... | Drawing A-257029 |

The TNMC controller, located on the rear-access panel, receives signal directly from the control console and sends data to the modules. Refer to the signal summary in **Section 9.3** for more information and to **Drawing A-257029** for the location of the controller board in the TNMC. The controller itself is detailed in **Drawing A-166216**, and **Figure 17** below illustrates a typical controller assembly. The card and transformer are mounted to a tray, which in turn is mounted to the back panel of the TNMC cabinet.

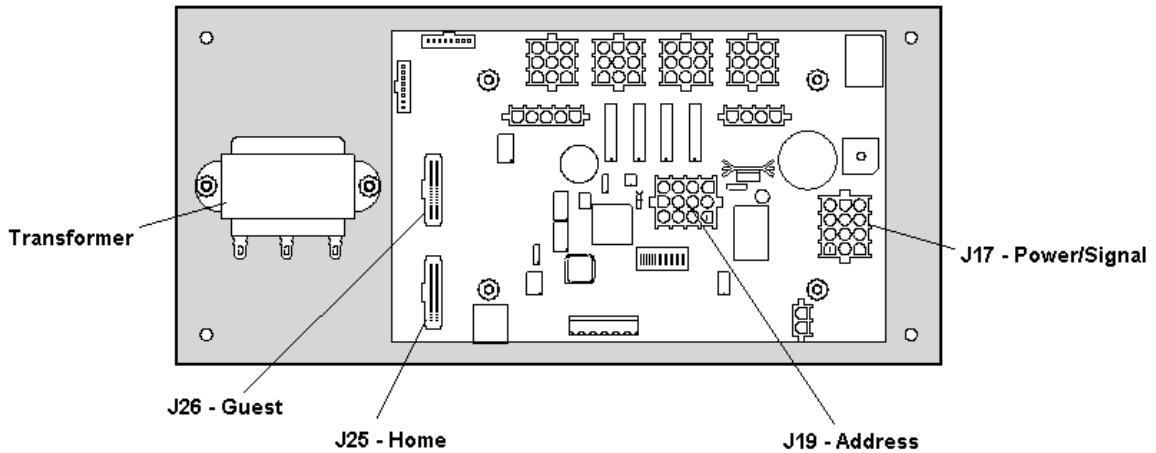


Figure 17: TNMC Controller Assembly

Note that connectors J25 and J26 control Home and Guest display. When the ribbon cable is plugged into J25, the TNMC sends home team information to the matrix display. In the opposite message center, the signal cable would be plugged into the J26 connector, and guest information would be displayed. (Switching the cables reverses the information each message center receives.)

J19 is the connector for the address plug. The address setting for TNMCs will always be 221. (There may be other settings if the TNMCs are used to display messages other than team names.)

Diagnostic LEDs

Reference Drawing:

4 Column MASC LED Driver Specifications.....**Drawing A-166216**

There are seven diagnostic LEDs located on the TNMC controller, six indicating when the controller is receiving signal, and the seventh indicating power status. Four of the LEDs, those indicating CAN and RS-232 signal functions, are not used with the TNMC controller. The following table explains the operation and functions of each of the diagnostic LEDs.

Removing/Changing the Controller

| LED | Color | Function | Operation | Summary |
|---|-------|------------------|--------------------------|--|
| DS1 | Red | CL signal RX | Steady on or blinking | DS1 will be on or blinking when the driver is receiving signal and off when there is no signal. |
| DS2 | Green | CL signal TX | Steady on or blinking | DS2 will be on or blinking when the driver is receiving signal and off when there is no signal. |
| DS3 (Not used with TNMC functions) | Red | CAN signal | Steady on or blinking | DS3 will be blinking when the driver is receiving signal and on when there is no signal with CAN (controller area network). If there is no CAN device connected to TB1, both DS3 and DS4 will be on and steady. |
| DS4 (Not used with TNMC functions) | Green | CAN signal | Steady on or blinking | DS4 will be blinking when the driver is receiving signal and on when there is no signal with CAN (controller area network). If there is no CAN device connected to TB1, both DS3 and DS4 will be on and steady. |
| DS5 (Not used with TNMC functions) | Red | RS-232 signal | Steady on or blinking | DS5 will be on or blinking when the driver is receiving signal and off when there is no signal with RS-232. |
| DS6 (Not used with TNMC functions) | Green | RS-232 signal | Steady on or blinking | DS6 will be on or blinking when the driver is receiving signal and off when there is no signal with RS-232. |
| DS7 | Green | Power | Steady on | DS7 will be on and steady indicating the driver has power. |

Reference Drawings:

- Exploded Front View; Single Panel Module **Drawing B-126111**
- Exploded Rear View; Single Panel Module **Drawing B-126112**
- Component Locations; 832/848
Red/Amb LED, TNMC, G4 **Drawing A-257029**

Drawing A-257029 indicates the location of the TNMC controller for each of the TNMC models. **Figure 18** below illustrates a typical TNMC layout. Complete the following steps to remove the controller from the display.

1. To access the controller from the front, unlatch the latch fasteners on the front face the LED module. Refer to **Drawings B-126111** and **B-126112**. (The fasteners are referred to as “latch plugs” on the drawings). One latch fastener is centered below the top row of pixels and one is centered above the bottom row. They may be slightly hidden by the louvers.

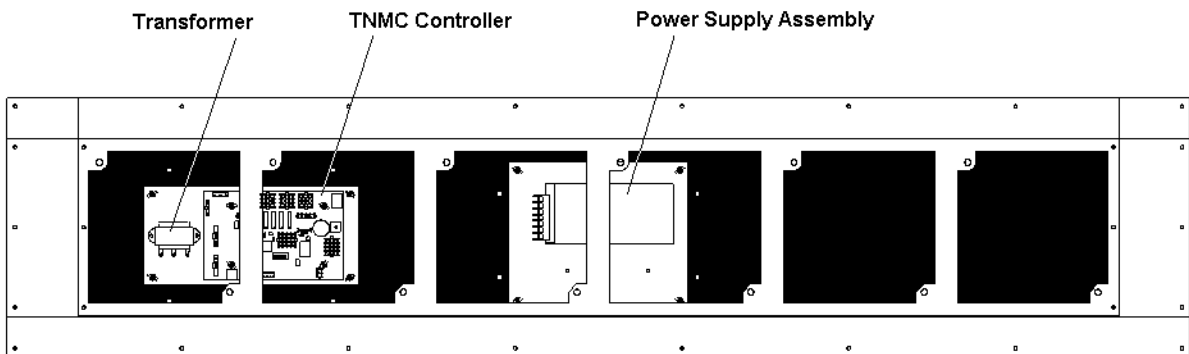


Figure 18: TNMC Internal Components (Modules Removed)

2. Using a $\frac{7}{32}$ " nut driver, turn each fastener a quarter-turn. Turn the top latch clockwise and the bottom latch counterclockwise. Carefully remove the module and detach the ribbon cables. It may be helpful to label the cables so you will know which cable goes to which connector when reattaching.

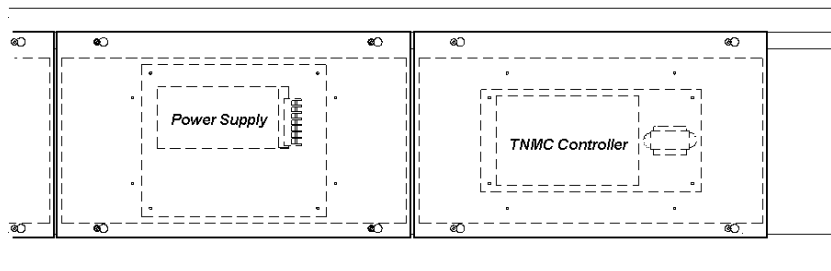


Figure 19: TNMC Rear Access

Note: To access the controller from the rear of the TNMC, as shown in **Figure 19** (on previous page), remove the appropriate rear-access panel from the TNMC by loosening all four of the screws. Slide the access panel sideways to the larger part of the keyhole and carefully lift it off the TNMC. Take care not to drop the panel, and remember that the module controller is attached to the panel.

3. Disconnect power from J17

4. Remove all power and signal connections from the board. Release “locked” connectors by squeezing together the tabs, and then carefully pulling them from the jack. Label the cables, indicating which cable was removed from which connector; the labeling will be helpful when you replace the board.
5. Remove the four nuts holding the board in place.
6. Follow the previous steps in reverse order to install a new controller board.

Modules and Drivers

Reference Drawings: (for displays installed Prior to 11/29/05)

Exploded Front View; Single Panel Module **Drawing B-126111**

Exploded Rear View; Single Panel Module **Drawing B-126112**

The module and driver board are a single, functional unit. To remove a module, complete the following steps:

1. The modules are attached to an internal frame called the module mounting panel. Find the latch-access fasteners (referred to as “latch plugs” on the drawings) on the front of the module. One is centered below the top row of pixels and one is centered above the bottom row. (They may be slightly hidden by the louvers.)
2. Unlatch the latch fasteners, illustrated in **Figure 20**, by turning them a quarter-turn using a $\frac{7}{32}$ " nut driver. Turn the top latch clockwise and the bottom latch counterclockwise. Carefully remove the module and detach the ribbon cables. Label the cables, indicating which cable was removed from which connector; the labeling will be helpful when you replace the board.

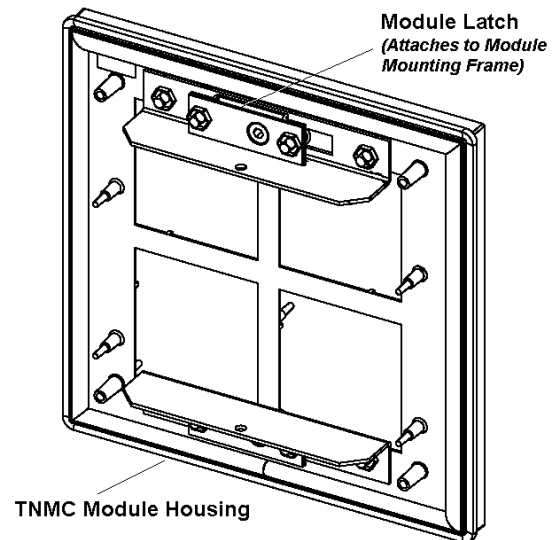


Figure 20: TNMC Module (Rear View)

Note: If you are accessing the unit from the rear, follow this procedure: First, remove the rear access panel (explained in preceding subsection.): While holding onto the module, push it out and turn it in such a manner (generally a sideways, diagonal turn) that it will fit through the frame opening; then pull the module back through the opening in the frame. Carefully disconnect the ribbon cables. Once again, label the cables, indicating which cable was removed from which connector; the labeling will be helpful when reconnecting.

When installing a module, reverse the previous steps and take note of the following points:

- Weatherstripping on the back edge of the module must be intact and in good condition to prevent water from seeping into the display.

- Module latches must be fully engaged to create a watertight seal around the edge of the module. The module should be firmly seated against the display when the latches are fully engaged.

Each module assembly contains a module housing (containing LEDs and the driver board) and a louver assembly. **Drawings B-126111** and **B-126112** illustrate the various module components.

Individual components such as louvers can be removed for service, but Daktronics recommends that the module be kept intact and that the entire assembly be sent in for repair or replacement.

The module and driver are a single functional unit. Each module assembly is made up of a module housing (containing LEDs and the driver) and a louver assembly.

1. Locate the latch access fasteners on the module (one is centered below the second row of pixels and one is centered above the bottom two rows)
2. With a $\frac{1}{8}$ " hex wrench, turn both latch access fasteners a quarter turn counter-clockwise to open as shown in **Figure 21** – and the clockwise to close.
3. Gently pull the module far enough forward to reach behind the back and disconnect the power and ribbon cables

When installing a module, reverse the previous steps and take note of the following points.

- The weather-stripping on the back edge of the module must be intact and in good condition if it is to prevent water from seeping into the display.
- The module latches must be fully engaged to create a watertight seal around the edge of the module. The module should be firmly seated against the display when the latches are fully engaged.

Power Supplies

Reference Drawings:

Schematic, Amber TNMC, GEN IV **Drawing A-252645**

Schematic, Red TNMC, GEN IV **Drawing A-252681**

The red-LED TNMC uses a single power supply assembly to power all modules in the 8x32 and 8x48 models. The amber TNMC uses a dual power supply assembly to power all modules in the 8x32 or 8x48 models. Refer to **Drawings A-252645** or **A-252681**.

Removing/Changing a Power Supply

Complete the following steps to remove a power supply from the display:

1. See the directions in the preceding **Module and Drivers** subsection for information on how to access the component from the front or rear.
2. Disconnect all the wires connected to the power supply.
3. Remove the hardware holding the power supply in place to free the unit.



Figure 21: Removing a Module

4. Follow these steps in reverse order to install a new power supply.

Weatherstripping

To ensure that the display is waterproof, weatherstripping has been installed around the entire display and around each module. It is important that the weatherstripping is attached properly at all times, or water may leak into the display and damage the components.

TNMC 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**
Occasionally, it may be necessary to vacuum the inside of the display cabinet to remove dust/dirt buildup that may interfere with airflow.
- **Water Intrusion – Water stain marks**
Water can enter the display where weatherstripping has come loose or deteriorated; where fasteners have come loose, allowing gaps in the panels; or where moisture may be entering around hardware. Check electronic components for corrosion.
- **Corrosion**
Check the paint, and look for possible corrosion, especially at footings, structural tie points, and ground rods and other types of grounding electrodes.

Note: If you notice any of the preceding conditions, make repairs or take corrective action immediately.

Troubleshooting

This subsection contains some symptoms that may be encountered in the displays. This list does not include every possible symptom, but does represent common situations that may occur.

| Symptom/Condition | Possible Cause/Remedy |
|--|--|
| One or more LEDs on a single module fails to light. | <ul style="list-style-type: none"> ■ Check/replace the ribbon cables on the module. ■ Replace the module. |
| One or more LEDs on a single module fails to turn off. | <ul style="list-style-type: none"> ■ Check/replace the ribbon cables on module. ■ Replace the module. |
| A section of the display is not working; the section extends all the way to the right side of the display. | <ul style="list-style-type: none"> ■ Replace the first module/driver on the left side of the first module that is not working. ■ Replace the second module that is not |

| Symptom/Condition | Possible Cause/Remedy |
|---|--|
| | working. <ul style="list-style-type: none"> ▪ Replace the power supply assembly on the first module that is not working. ▪ Replace the ribbon cable. |
| One row of modules does not work or is garbled. | <ul style="list-style-type: none"> ▪ Replace the first module. ▪ Replace the controller. |
| A group of modules that share the same power supply assembly fails to work. | <ul style="list-style-type: none"> ▪ Replace the power supply assembly. |
| Entire display fails to work. | <ul style="list-style-type: none"> ▪ Check for proper line voltage into the power termination panel. ▪ Check/replace the ribbon cable from the controller to the modules. ▪ Check the voltage settings on the power supplies. ▪ Check/replace the signal cable to the controller. ▪ Replace the controller. |

Initialization Information at Startup

Every time the display is powered up, the display will run through an initialization during which it will test all LEDs and addresses. First, the message center will display the proper address number. When completed, the initialization test will display Home and Guest in the appropriate location. If the entire TNMC display fails at startup, signal may not be properly connected, or the address plug may not be connected to the J17 jack on the TNMC controller card. Check both connections in the event of a failure.

Replacement Parts List

The following table contains some of the TNMC components that may have to be replaced over the life of a display. Many of the components within the display itself also have attached part number labels.

| Part Description | Part Number |
|--|---------------|
| Controller assy; 832/848, LED TNMC, G3 | 0A-1152-2549 |
| ▪ Driver (only); MASC, 4-col, LED, coated | 0A-1192-0068 |
| ▪ Transformer; 115/230 V pri, 16 V sec @ 2 A | T-1063 |
| Module, TNMC; amber LED (4A, 8x8, coated, Type 2) | 0A-1208-4001 |
| Module, TNMC; red LED (3R, 8x8, coated, Type 2) | 0A-1208-4000 |
| Power supply assy; amber LED TNMC | 0A-1192-3161 |
| Power supply (only); amber LED TNMC | A-1591 |
| Power supply assy; red LED TNMC | 0A-1192-3160 |
| ▪ Power supply (only); red LED TNMC | 0A-1192-3160 |
| Cable assy; 20-pos ribbon, 18", dual row (module to module) | 0A-1192-3160 |
| Cable assy; 20-pos ribbon, 30" (TNMC controller to first module) | 0A-1192-3160 |
| Electrical contact cleaner/lubricant (CaiLube®) | 0A-1192-3160h |

*Effective in Fall 2003, Daktronics Part Number 0A-1208-3005 was replaced with Part Number 0A-1208-3018. Contact Daktronics Customer Service for specific replacement part numbers.

Part numbers for each complete team name message center assembly are as follows:

| Assembly | Part Number |
|---------------------|--------------|
| Amber LED TNMC, 832 | 0A-1192-3165 |
| Red LED TNMC, 832 | 0A-1192-3164 |
| Amber LED TNMC, 848 | 0A-1192-3167 |
| Red LED TNMC, 848 | 0A-1192-3166 |

To prevent theft, Daktronics recommends purchasing a lockable cabinet to store manuals and replacement and spare parts.

Refer to **Section 8.9** for information on the Daktronics Exchange and Repair and Return programs.

Section 10: Scoreboard Options

The following options are available for the Daktronics single-section scoreboards to make them more adaptable to individual scoring and timing needs:

- Team name caption kits for certain models
- Trumpet horn for football and soccer
- Radio control
- Portable power pack

10.1 Changeable Team Name Captions

Reference Drawing:

Caption Changing **Drawing A-44549**

The team name caption kit contains hardware for one caption only and consists of an upper caption retainer, a lower caption retainer, a changeable caption panel and screws. The standard HOME and GUEST captions are applied directly to the face of the scoreboard. Team name captions are on changeable panels that fit into retainers mounted above and below the HOME and GUEST captions. If retainers are not already present on your scoreboard, attach the retainers included with the caption kit as shown on **Drawing A-44549**.

To install a changeable panel:

1. Insert the top of the panel into the upper retainer.
2. Lift the panel all the way up into the retainer.
3. Insert the bottom of the panel into the lower retainer.

Reverse this procedure to remove the caption panel.

An optional caption changer is available for installing and removing panels from the ground. Each caption panel is punched with keyholes. Screw heads on the crossbar of the caption changer fit into the keyholes. The caption changer pole is extendable, with a ring tightener to adjust the length. Loosen the ring to extend the pole to the desired length; tighten the ring for pole use.

| |
|----------------|
| CAUTION |
|----------------|

| |
|--|
| <p>Note: The aluminum caption changer can conduct electricity. Do not use it within 20-feet of power lines.</p> |
|--|

| |
|--|
| <p>Be careful when using the caption changer in high or gusting winds. Wind may catch the panel and unhook it from the changer. The surface area of the caption panel could also act as a sail, making it difficult to maintain a grip on the pole. Hold the pole tightly, and be careful to maintain your balance when using the caption changer in windy situations.</p> |
|--|

10.2 Trumpet Horn

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

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

For additional information on the Trumpet Horn please refer to the **Trumpet Horn: Installation Manual, ED-10006**.

Reference Drawings:

Schematic, Outdoor Scbd

12 V DC Trumpet Horn AS5K **Drawing A-128938**

Schematic; 120 V AC Trumpet Horn..... **Drawing A-132173**

120 V DC Horn Mounting..... **Drawing A-162100**

F.Assy; LED, 12V DC Horn Mounting..... **Drawing B-242731**

Trumpet Horn Part Numbers

| Part Description | Part Number | Typical Model Usage |
|--|--------------|--|
| 120 V AC Trumpet Horn Bottom Extrusion Mounting, See Drawing A-162100 Left most illustration | 0A-1091-0469 | MS-2009, MS-2020, SO-2011 |
| 12 V DC Trumpet Horn, AS5000; Outdoor See Drawing A-162100 Right most illustration | 0A-1092-1112 | FB-1424, FB-1430, FB-1530, FB-1624, FB-1630, FB-1630L, FB-1730, FB-1830, FB-1830L, FB-2001, FB-2002, FB-2003, FB-2004, FB-2007, MS-2118, MS2918, SO-1424, SO-1624, SO-1830L, SO-1930, SO-2014, SO-2030 |
| 12 V DC Trumpet, AS5000 | 0A-1191-1213 | FB-1424, FB-1430, FB-1530, FB-1624, FB-1630, FB-1630L, FB-1730, FB-1830, FB-1830L, FB-2001, FB-2002, FB-2003, FB-2004, FB-2007, MS-2118, MS2918, SO-1424, SO-1624, SO-1830L, SO-1930, SO-2014, SO-2030 |

10.3 Radio Control

Radio control is an option with all Daktronics outdoor LED scoreboards, the system providing 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 such as the All Sport, equipped with radio output. The display receives control signal via a radio receiver mounted internally to the front panel. The receiver plugs into the power terminal block in the driver/power enclosure.

For additional information about this option, contact your Daktronics representative; for complete information on radio communications, refer to the All Sport 5000 Series control console Operation Manual **ED-11976**.

10.4 Portable Power Pack

Reference Drawing:

Installation, Portable Powered Scoreboards.....**Drawing A-166787**

Another option is the portable power pack, which permits operation of the scoreboard via battery. The power pack, self-contained and mounted on a wheeled cart, includes batteries, charger, and a 120 V AC power inverter. Refer to Drawing **A-166787** for information on installation procedures.

Appendix A: Reference Drawings

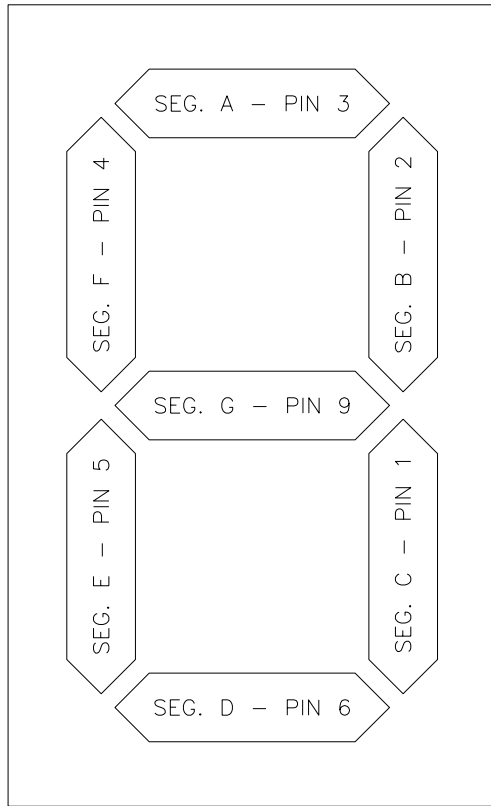
A Drawings

| | |
|---|------------------|
| Segmentation, 7 Segment Bar Digit | Drawing A-38532 |
| Multiple Section Football Scbd Models | Drawing A-42148 |
| Display Mounting | Drawing A-44412 |
| Caption Options, Baseball & Softball..... | Drawing A-44431 |
| Caption Options, Track..... | Drawing A-44432 |
| Beam & Footing Recommendations, FB-XX24 | Drawing A-44514 |
| Beam & Footing Recommendations, FB-XX30 | Drawing A-44515 |
| Lifting Scoreboard | Drawing A-44548 |
| Caption Changing | Drawing A-44549 |
| Structure, Football | Drawing A-44556 |
| Ad Panel Mounting | Drawing A-52187 |
| Installation Specifications, BA-1518 | Drawing A-55008 |
| Multiple Section Football Scbd Models w/TNMC | Drawing A-84233 |
| Multiple Section Soccer Scbd Models | Drawing A-98161 |
| Caption Options, Soccer..... | Drawing A-101442 |
| Display Mounting Straps, BA-3718..... | Drawing A-114415 |
| Address Table, 1 Through 128..... | Drawing A-115078 |
| Installation Specifications, BA-1524 | Drawing A-120972 |
| Multiple Section Baseball Scoreboard Models | Drawing A-126086 |
| Multiple Section Baseball Scbd Models w/TNMC | Drawing A-126362 |
| Installation Specifications, BA-3724 | Drawing A-126445 |
| Installation Specifications, BA-3718 | Drawing A-126455 |
| Installation Specifications, FB-2002 & FB-2003..... | Drawing A-128044 |
| Multiple Section Soccer Scbd Models w/TNMC..... | Drawing A-128172 |
| Installation Specifications, MS-2118..... | Drawing A-128206 |
| Caption Options, Football | Drawing A-128281 |
| Schematic, Outdoor Scbd 12VDC Trumpet Horn AS5K | Drawing A-128938 |
| Schematic; 120VAC Trumpet Horn | Drawing A-132173 |
| Installation Specifications, MS-2009..... | Drawing A-144415 |
| Beam and Footing Recommendations, FB-XX30L | Drawing A-158779 |
| Beam and Footing Recommendations, FB-200X..... | Drawing A-160931 |
| Horn Installation; 120 V DC | Drawing A-162100 |
| Horn Installation; 12 V DC | Drawing A-162102 |
| 4 Column MASC LED Driver Specifications | Drawing A-166216 |
| Installation, Portable Powered Scoreboards | Drawing A-166787 |
| Installation Specifications, MS-2918..... | Drawing A-172188 |
| Schematic; Gen III, OD LED, 3 Drvr Display | Drawing A-179541 |
| Component Locations, BA-1518-11/-21, G3 | Drawing A-179745 |
| Schematic; Gen III, OD LED, 1 Drv w/TNMC..... | Drawing A-179790 |
| Component Locations, BA-1524-11/-21, G3 | Drawing A-179869 |
| Schematic; Gen III, OD LED, 3 Drv w/TNMC..... | Drawing A-180081 |
| Component Locations, SO-1930-11/-21..... | Drawing A-180366 |
| Component Locations; FB-1830L-11/-21, G3 | Drawing A-180441 |
| Component Locations; FB-1424-11/-21, G3 | Drawing A-180606 |
| Schematic; Gen III, OD LED, 2 Drv | Drawing A-180637 |
| Schematic; Gen III, OD LED, 3 Drv Multi-Sec w/TNMC..... | Drawing A-180688 |
| Component Locations; FB-1524-11/-21, G3 | Drawing A-181757 |
| Component Locations; FB-1630-11/-21, G3 | Drawing A-181807 |
| Component Locations; FB-1830-11/-21, G3 | Drawing A-181940 |
| Component Locations; MS-2118-11/-21, G3..... | Drawing A-182031 |

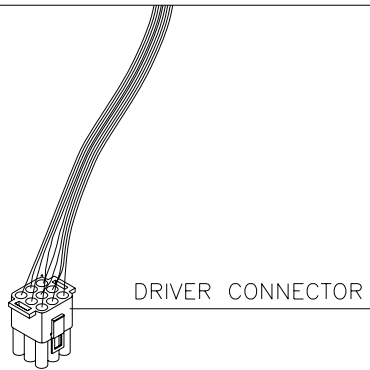
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| Component Locations; FB-1530-11/-21, G3 | Drawing A-182405 |
| Scoreboard Mtg; Scoreboard with Spacers..... | Drawing A-182909 |
| Component Locations; FB-1624-11/-21, G3 | Drawing A-183010 |
| Component Locations; MS-2918-11/-21, G3..... | Drawing A-183029 |
| Component Locations; FB-2001-11/-21 w/TNMC | Drawing A-184837 |
| Component Locations, SO-2030-11/-21..... | Drawing A-184900 |
| Component Locations; FB-1430-11/-21, G3 | Drawing A-185439 |
| Component Locations; FB-1730-11/-21, G3 | Drawing A-185446 |
| Component Locations; SO-2011-11/-21, G3..... | Drawing A-186096 |
| Installation Specifications, SO-2011..... | Drawing A-187149 |
| Component Locations; FB-2003-11/-21, G3 | Drawing A-187933 |
| Component Locations; SO-1624-11/-21, G3..... | Drawing A-188178 |
| Component Locations; FB-1630L-11/-21, G3 | Drawing A-188581 |
| Component Locations; SO-1424-11/-21, G3..... | Drawing A-188778 |
| Component Locations; FB-2002-11/-21, G3 | Drawing A-188811 |
| Component Locations; SO-1830-11/-21, G3..... | Drawing A-188831 |
| Component Locations; SO-1830L-11/-21, G3..... | Drawing A-188988 |
| Component Locations; FB-2001-11/-21, G3 | Drawing A-189150 |
| Component Locations; FB-2004-11/-21, G3 | Drawing A-189160 |
| Component Locations; FB-2004-11/-21 w/TNMC, G3 | Drawing A-194436 |
| Component Locations; BA-2012-11/-21, G3 | Drawing A-202673 |
| Installation Specifications, BA-2012, BA-2020 | Drawing A-202766 |
| Beam and Footing Recommendations, FB-XX30, 2 pole | Drawing A-207019 |
| Component Locations, FB-2007-11/21, G3..... | Drawing A-211011 |
| Component Locations, SO-2014 | Drawing A-219727 |
| Beam & Footing; 8'X32' Scoreboards, 3-pole | Drawing A-220526 |
| Component Locations; BA-3724-11/-21, G3 | Drawing A-228330 |
| Component Locations; BA-3724-11/-21 w/TNMC, G3 | Drawing A-229073 |
| Component Locations; BA-1524-11/-21, G3 | Drawing A-229211 |
| Component Locations; BA-1518-11/-21, G3 | Drawing A-229343 |
| Component Locations; BA-2020-11/-21, G3 | Drawing A-234140 |
| Component Locations; MS-2009-11/-21, G3..... | Drawing A-234590 |
| Component Locations; BA-2007-11/-21 w/TNMC, G3 | Drawing A-234593 |
| Component Locations; BA-2007-11/-21, G3 | Drawing A-234661 |
| Component Locations; MS-2020-11/21, FD, G3..... | Drawing A-241550 |
| Installation Specifications; MS-2020..... | Drawing A-241622 |
| Schematic; Amber TNMC GEN IV..... | Drawing A-252645 |
| Schematic; Red TNMC GEN IV..... | Drawing A-252681 |
| Components Locations; 832/842 Red/Amb LED TNMC, G4 | Drawing A-257029 |
| Comp. Location; BA-2013-11/-21 w/TNMC, FD, G4 | Drawing A-260830 |
| Component Locations; BA-2013-11/-21, FD, G4 | Drawing A-260862 |
| Schematic; Gen III, OD LED, 2 Drv | Drawing A-285418 |
| Schematic; GEN IV Outdoor LED, 16 COL Driver | Drawing A-285779 |
| Specifications; LED Driver III, 16 Col | Drawing A-288137 |
| Address Table 1; GEN IV Driver Address Dip Switch | Drawing A-290261 |
| Component Locations; BA-3718-11/-21, G3 | Drawing A-292341 |
| Component Locations, BA-2006-11/-21, G4 | Drawing A-292345 |
| Driver Enclosure Reference, GEN IV | Drawing A-293354 |
| Component Locations; BA-2013-11/-21 W/TNMC, FD, G4 | Drawing A-757381 |
| Component Locations; BA-2013-11/-21, FD, G4 | Drawing A-757382 |

B Drawings

| | |
|---|-------------------------|
| Exploded Front, Module | Drawing B-126111 |
| Exploded Rear, Module | Drawing B-126112 |
| Digit Assemblies; Gen III LED Digits | Drawing B-177679 |
| Schematic, Baseball W/S.O.P. GEN IV, Optional TNMC..... | Drawing B-204725 |
| F.Assy; LED 12V DC Horn Mounting | Drawing B-242731 |
| Schematic; BA-2013 GEN III, Optional TNMC | Drawing B-260324 |

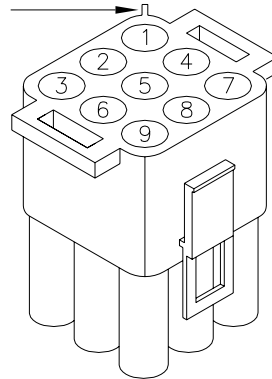


7 SEGMENT BAR DIGIT
FRONT VIEW



| 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.

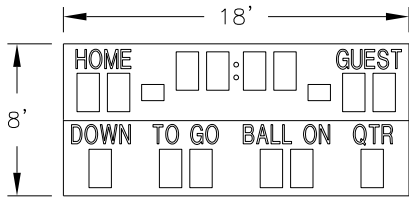
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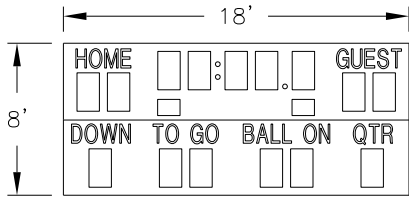
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TITLE: SEGMENTATION, 7 SEGMENT BAR DIGIT
DES. BY: HEIDERSCHIEDT DATE: 5 JUN 89

REVISION 02 APPR. BY: AVB SCALE: 1=4 1009-R04A-38532

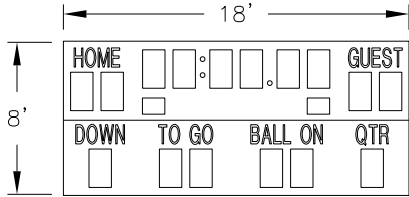
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|------|-----------|---|--------|-------|
| 2 | 30 APR 97 | ADDED SEGMENT DESIGNATIONS TO DIGIT FIGURE. | AVB | AVB |
| 1 | 2 JAN 92 | CHANGED FROM B-SIZE TO A-SIZE DWG. | C FICK | |



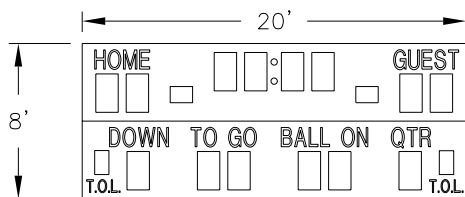
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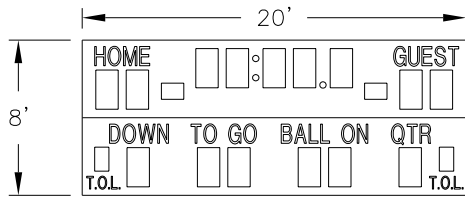
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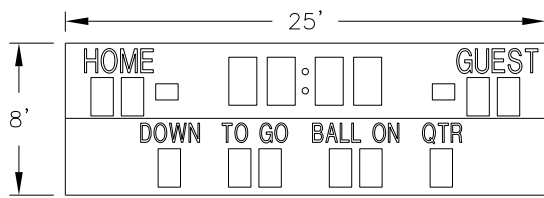
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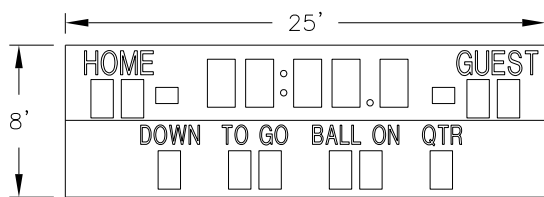
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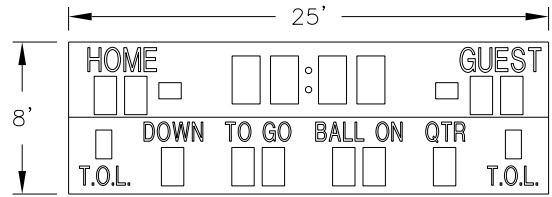
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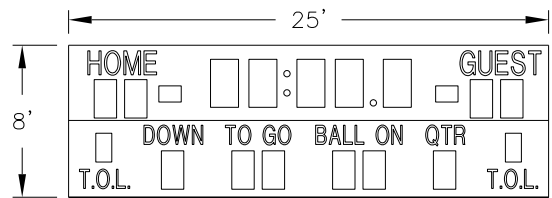
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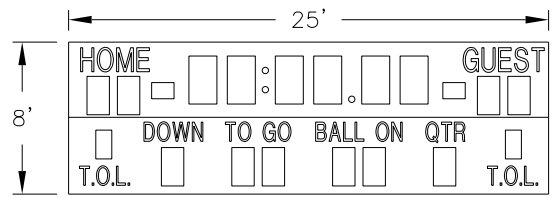
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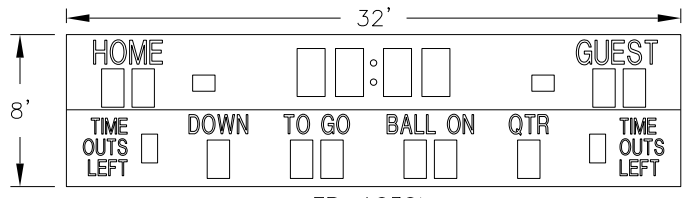
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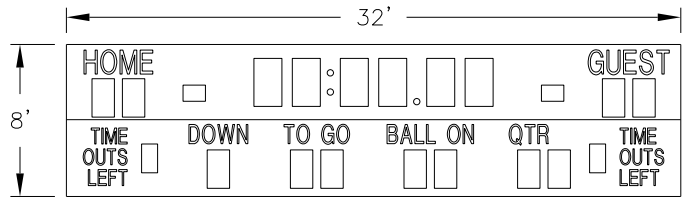
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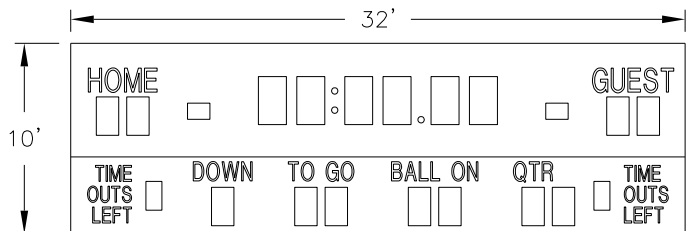
FB-1830



FB-1630L



FB-1830L

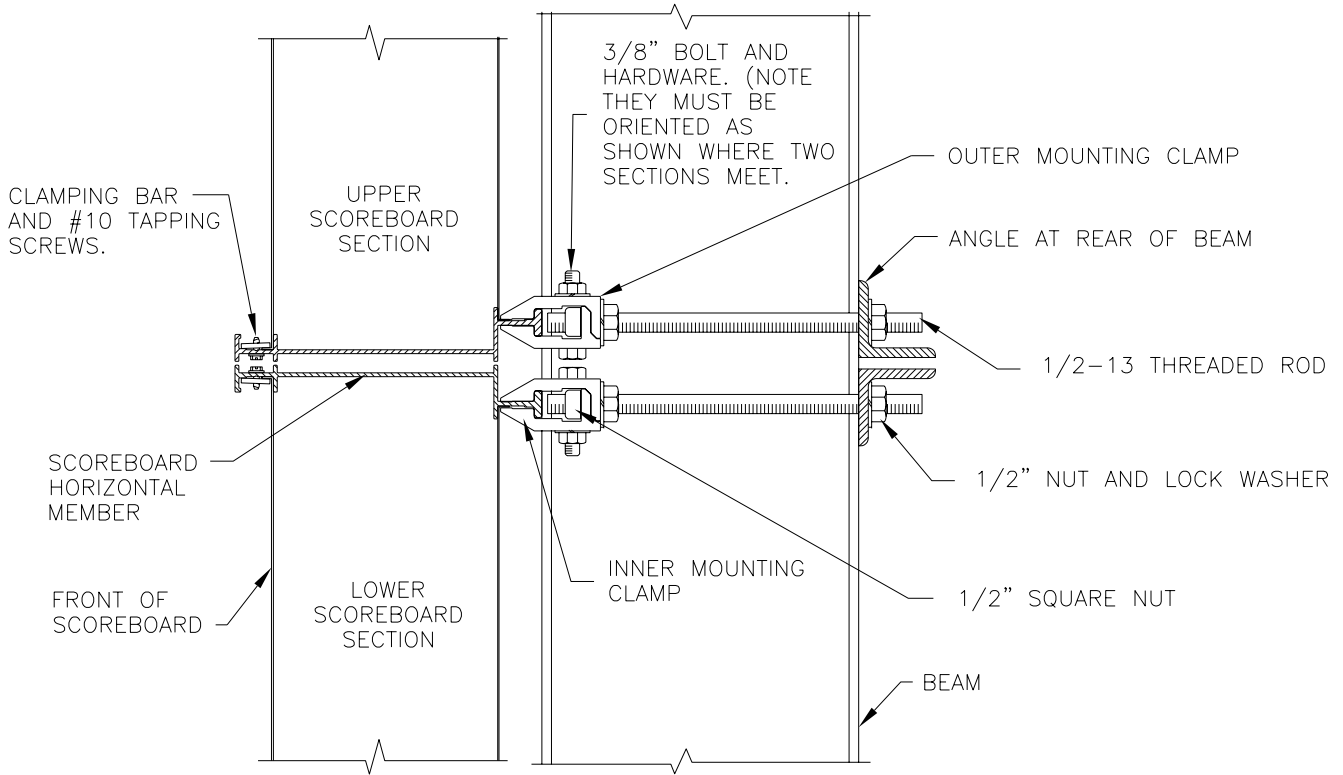


FB-2001

| | | | | |
|---|-----------|---|-------|-----|
| 5 | 06APR98 | CHANGED INDICATORS ON FB-1524 | BDP | |
| 4 | 03 NOV 97 | REMOVED MODELS SO-824, SO-1424, AND SO-1624. | MWJ | |
| 3 | 12APR95 | ADDED MODELS SO-824, SO-1424, AND SO-1624. | AVB | AVB |
| 2 | 23FEB94 | ADDED FB-1624. | CFICK | |
| 1 | 23AUG90 | CHANGED POSS INDICATOR ON FB-1524 TO THREE LAMPS EACH. CHANGED ALL POSS INDICATORS TO SHOW LAMPS. | AVB | |

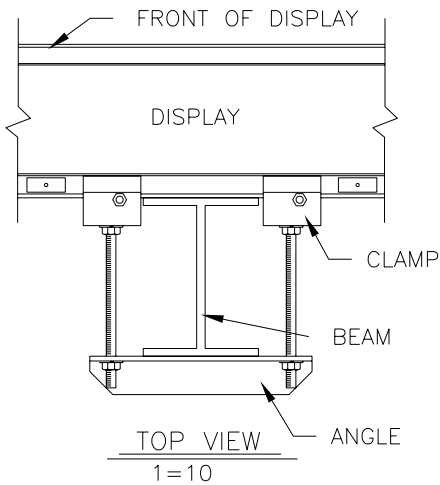
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|------|---------|---------------------------|-------|-------|
| 8 | 16MAR00 | ADDED FB-2002 AND FB-2003 | GBREE | |
| 7 | 22FEB00 | REMOVED FB-824 | BDP | |
| 6 | 16JUL98 | ADDED FB-2001 | JLK | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

| | | | | |
|--|--------------|------------------------|--|---------------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | | |
| PROJ: OUTDOOR INCANDESCENT SCOREBOARDS | | | | |
| TITLE: MULTIPLE SECTION FOOTBALL SCBD MODELS | | | | |
| DES. BY: | | DRAWN BY: AVB | | DATE: 06AUG90 |
| REVISION | APPR. BY: | 1091-R08A-42148 | | |
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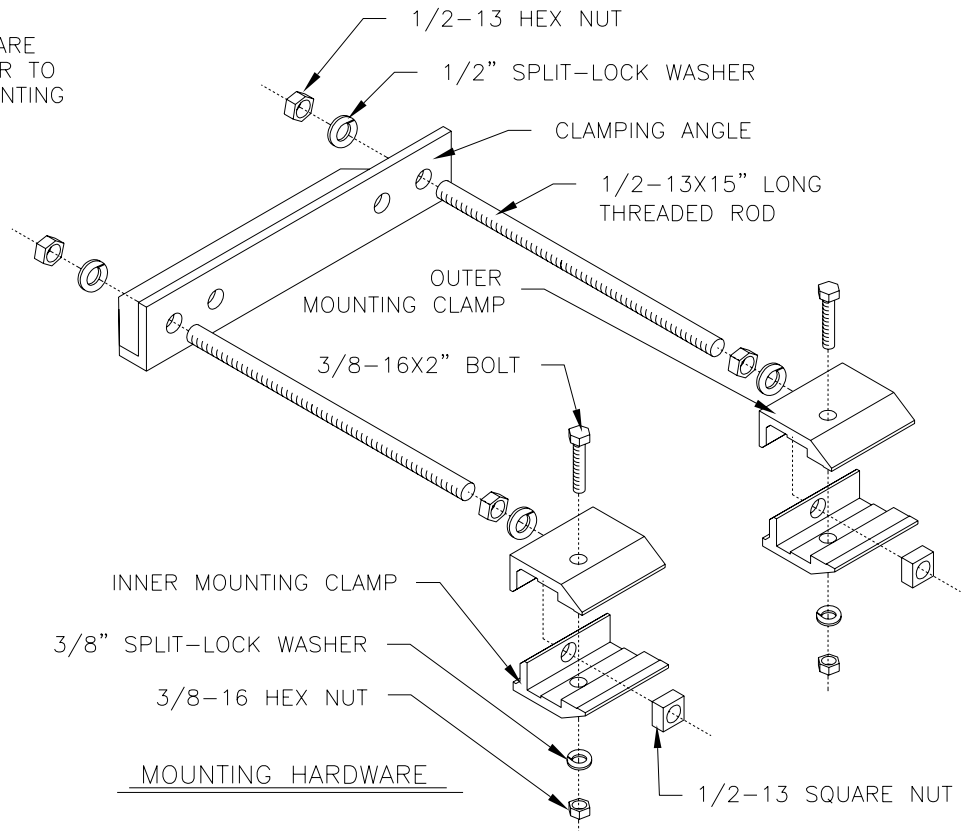


SIDE VIEW

NOTE: CLAMPING BARS AND HARDWARE MAY HAVE TO BE REMOVED IN ORDER TO INSTALL THE INNER AND OUTER MOUNTING CLAMPS.



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



DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR SCOREBOARDS

TITLE: DISPLAY MOUNTING

DES. BY: JHEIDER

DRAWN BY: JHEIDER

DATE: 29 AUG 90

REVISION

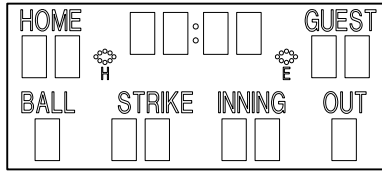
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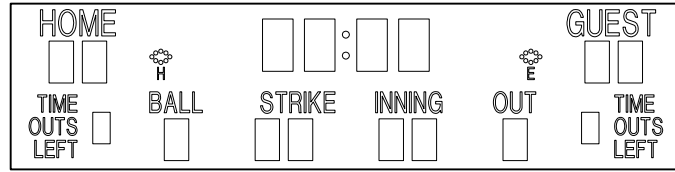
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1091-R10A-44412

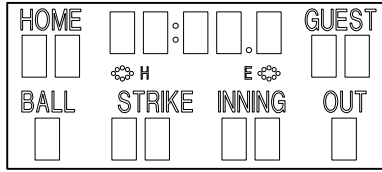
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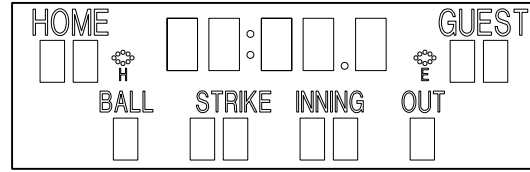
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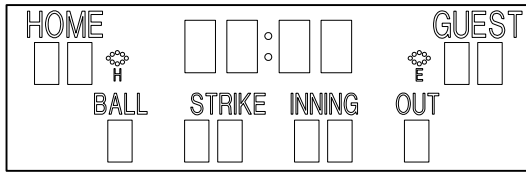
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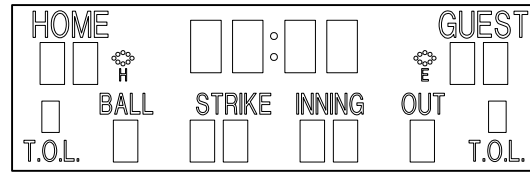
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FB-1530

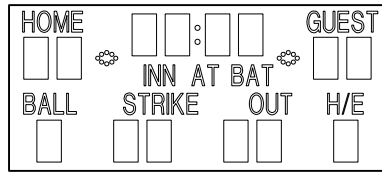


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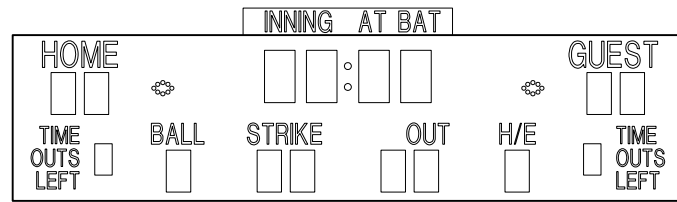


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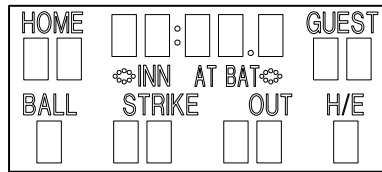
DISPLAYS SHOWN WITH BASEBALL/SOFTBALL CAPTIONS WITH CLOCK OPTION



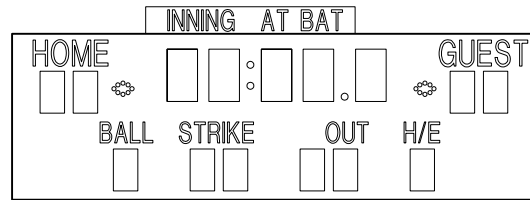
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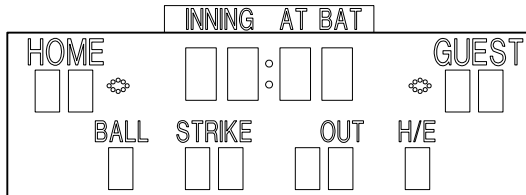
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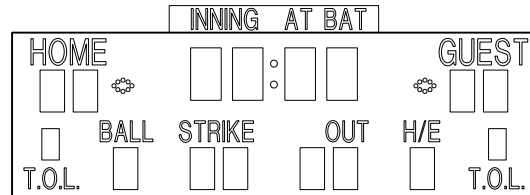
FB-1524



FB-1530



FB-1430



FB-1630

DISPLAYS SHOWN WITH BASEBALL/SOFTBALL CAPTIONS WITHOUT CLOCK

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|------|---------|---|-------|-------|
| 05 | 28OCT04 | MOVED H AND E CAPTION BELOW INDICATOR | MCOPL | |
| 4 | 21FEB00 | REMOVED CODES. | BDP | |
| 3 | 06APR98 | CHANGED FB-1524 INDICATORS | BDP | |
| 2 | 30DEC92 | SWAPPED "INNING" AND "OUT" CAPTIONS ON CODE 30 AND 32. | AVB | AVB |
| 1 | 18SEP90 | CENTERED "STRIKE" CAPTION OVER DIGITS OF CODE 33/39 DISPLAYS. | JLH | AVB |

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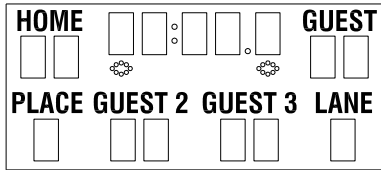
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TITLE: CAPTION OPTIONS, BASEBALL & SOFTBALL

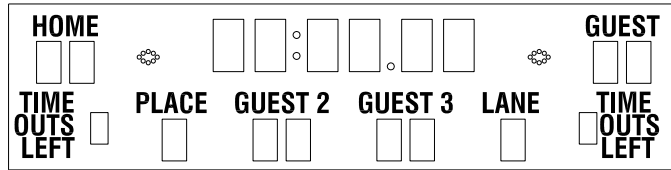
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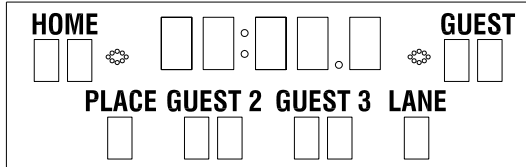
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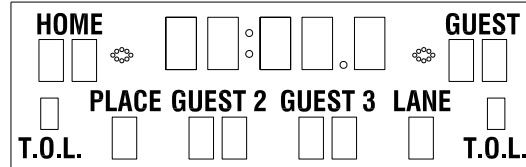
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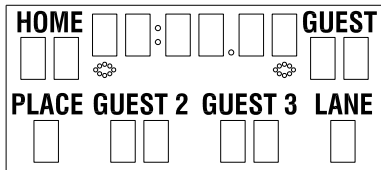
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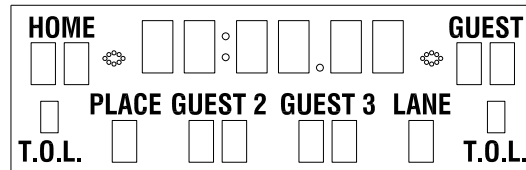
FB-1530



FB-1730 AND FB-2003

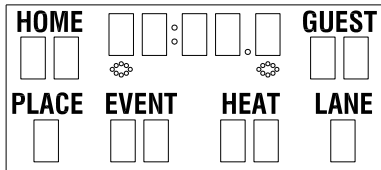


FB-1624

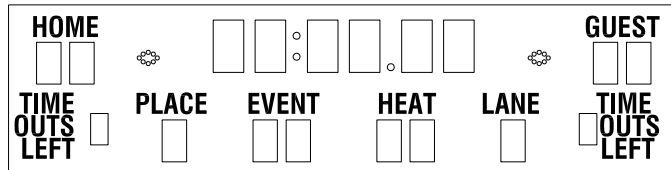


FB-1830

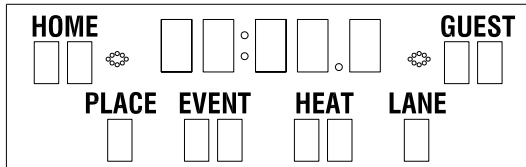
DISPLAYS SHOWN WITH GUEST 2/GUEST 3 TRACK CAPTIONS



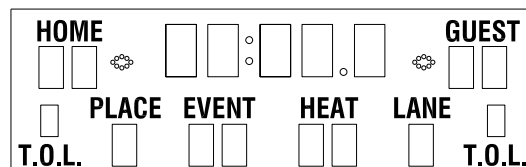
FB-1524



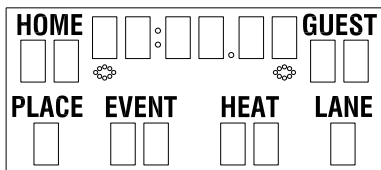
FB-1830L



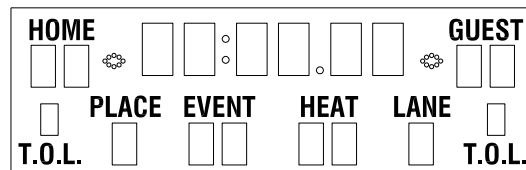
FB-1530



FB-1730 AND FB-2003



FB-1624



FB-1830

DISPLAYS SHOWN WITH EVENT/HEAT TRACK CAPTIONS

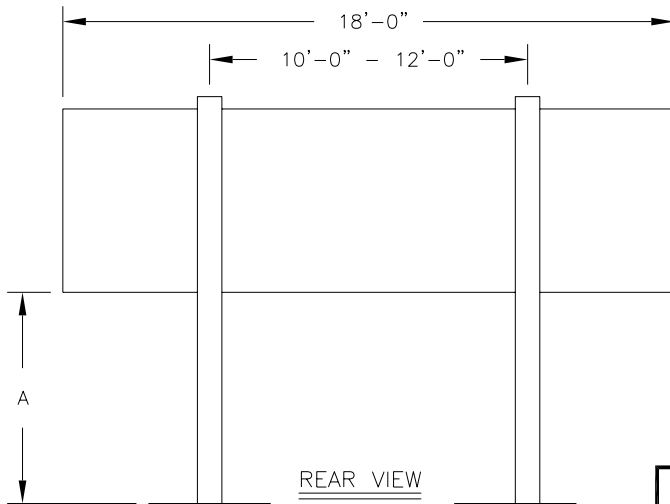
| | | | | |
|------|-----------|--|-------|-------|
| 06 | 12 JAN 05 | CHANGED CAPTION TEXT, ADDED PROPRIETARY NOTE | MDW | |
| 5 | 17MAR00 | ADDED FB-2003 | GBREE | |
| 4 | 21FEB00 | REMOVED CODES. | BDP | |
| 3 | 22OCT98 | UPDATED FB-1524 INDICATORS | BDP | |
| 2 | 19APR96 | CORRECTED "HEAT" CAPTION ON FB-1624. | AVB | AVB |
| 1 | 25 MAY 94 | ADDED MODEL FB-1624. | AVB | AVB |
| REV. | DATE | DESCRIPTION | BY | APPR. |

| | | | |
|--|-------------------|-----------------|--|
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| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR INCANDESCENT SCOREBOARDS | | | |
| TITLE: CAPTION OPTIONS, TRACK | | | |
| DES. BY: | DRAWN BY: JHEIDER | DATE: 30AUG90 | |
| REVISION | APPR. BY: | 1091-R08A-44432 | |
| 06 | SCALE: 1=110 | | |

MODELS FB-1424/1524/1624/2007

| DISTANCE TO BOTTOM OF SCOREBOARD (FT) | DOES SCOREBOARD HAVE ATTACHED AD PANEL? | DESIGN WIND VELOCITY (MPH) | | | |
|---------------------------------------|---|----------------------------|-----------------------|-----------------------|------------------------|
| | | 70 | 80 | 90 | 100 |
| A | | | | | |
| 10 | NO | W8x28 3.00 X 5.60 | W8x31 3.00 X 6.20 | W10x33 3.00 X 6.80 | W8x35 3.00 X 7.30 |
| | YES | W10x39 3.00 X 6.80 | W12x45 3.00 X 7.50 | W8x48 3.00 X 8.20 | W12x53 3.00 X 8.80 |
| 12 | NO | W8x31 3.00 X 5.90 | W10x33 3.00 X 6.50 | W10x39 3.00 X 7.10 | W8x40 3.00 X 7.60 |
| | YES | W12x45 3.00 X 7.10 | W8x48 3.00 X 7.80 | W12x53 3.00 X 8.50 | W12x58 3.00 X 9.20 |
| 14 | NO | W8x35 3.00 X 6.20 | W10x39 3.00 X 6.80 | W12x45 3.00 X 7.40 | W8x48 3.00 X 8.00 |
| | YES | W8x48 3.00 X 7.4 | W12x53 3.00 X 8.10 | W12x58 3.00 X 8.80 | W12x65 3.00 X 9.60 |
| 16 | NO | W10x39 3.00 X 6.40 | W12x45 3.00 X 7.10 | W8x48 3.00 X 7.70 | W12x53 3.00 X 8.30 |
| | YES | W10x49 3.00 X 7.60 | W12x58 3.00 X 8.40 | W12x65 3.00 X 9.10 | W12x72 3.00 X 9.80 |
| 18 | NO | W12x45 3.00 X 6.60 | W8x48 3.00 X 7.30 | W12x53 3.00 X 8.00 | W12x58 3.00 X 8.60 |
| | YES | W10x54 3.00 X 7.80 | W12x65 3.00 X 8.60 | W12x72 3.00 X 9.40 | W10x77 3.00 X 10.10 |
| 20 | NO | W8x48 3.00 X 6.90 | W10x49 3.00 X 7.60 | W12x58 3.00 X 8.30 | W12x65 3.00 X 8.90 |
| | YES | W10x60 3.00 X 8.10 | W10x68 3.00 X 8.90 | W10x77 3.00 X 9.70 | W12x87 3.00 X 10.50 |

W6x12 ← RECOMMENDED BEAM SECTION FOR MOUNTING SCOREBOARD
2.00 X 4.25 ← RECOMMENDED FOOTINGS IN FEET (DIAMETER X DEPTH)



NOTE:
RECOMMENDATIONS FOR A DISPLAY WITH AN ATTACHED AD PANEL WERE CALCULATED USING A 48" TALL AD PANEL.

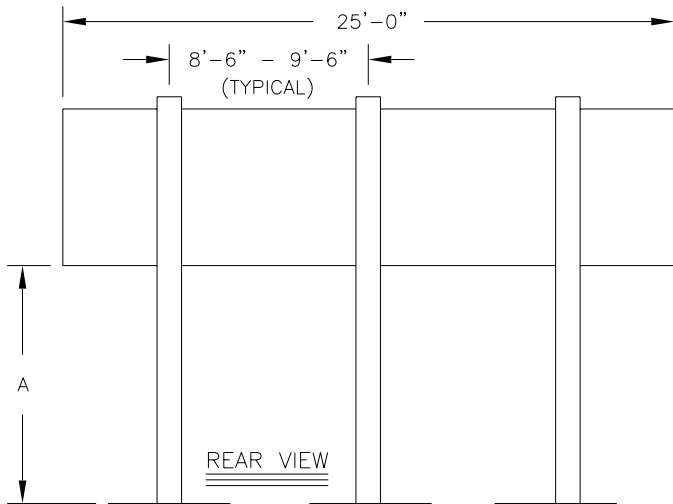
INFORMATION GIVEN IS FOR ESTIMATING PURPOSES ONLY. COLUMNS AND FOOTINGS MUST BE DESIGNED BY A STATE LICENSED ENGINEER. DAKTRONICS DOES NOT ASSUME ANY LIABILITY FOR ANY INSTALLATIONS DERIVED FROM THIS INFORMATION OR DESIGNED AND INSTALLED BY OTHERS.

| | |
|--|--------------------|
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| DAKTRONICS, INC. BROOKINGS, SD 57006 | |
| PROJ: FOOTBALL SCOREBOARDS | |
| TITLE: BEAM & FOOTING RECOMMENDATIONS, FB-XX24 | |
| DES. BY: JHEIDERSCHIEDT DRAWN BY: JHEIDERSCHIEDT DATE: 07SEP90 | |
| REVISION | APPR. BY: |
| 03 | SCALE: NONE |
| 1091-R08A-44514 | |

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|---------|--|--------|-------|
| 03 | 07MAY04 | ADDED MODEL FB-2007 | MCOPL | |
| 2 | 13JUL00 | REVISED BEAM SECTIONS & FOOTINGS. ADDED FB-1624 TO MODELS. | MVD | |
| 1 | 23MAR98 | ADDED DISCLAIMER ABOUT FOOTING AND BEAM LIABILITY. | TWEBER | |

| MODELS FB-1430, FB-1530, FB-1630, FB-1730, & FB-1830 | | | | | |
|---|--|----------------------------|-----------------------|-----------------------|------------------------|
| DISTANCE TO BOTTOM OF SCOREBOARD (FT) | DOES SCOREBOARD HAVE ATTACHED AD PANEL? | DESIGN WIND VELOCITY (MPH) | | | |
| | | 70 | 80 | 90 | 100 |
| A | | | | | |
| 10 | NO | W8x28 3.00 X 5.70 | W8x31 3.00 X 6.30 | W8x35 3.00 X 6.90 | W10x39 3.00 X 7.50 |
| | YES | W10x39 3.00 X 6.90 | W12x45 3.00 X 7.60 | W8x48 3.00 X 8.30 | W12x53 3.00 X 9.00 |
| 12 | NO | W8x31 3.00 X 6.00 | W8x35 3.00 X 6.60 | W10x39 3.00 X 7.20 | W12x45 3.00 X 7.80 |
| | YES | W12x45 3.00 X 7.20 | W8x48 3.00 X 7.90 | W10x54 3.00 X 8.70 | W10x60 3.00 X 9.30 |
| 14 | NO | W8x35 3.00 X 6.30 | W10x39 3.00 X 6.90 | W12x45 3.00 X 7.60 | W8x48 3.00 X 8.20 |
| | YES | W8x48 3.00 X 7.50 | W12x53 3.00 X 8.30 | W10x60 3.00 X 9.00 | W12x65 3.00 X 9.70 |
| 16 | NO | W10x39 3.00 X 6.60 | W12x45 3.00 X 7.20 | W8x48 3.00 X 7.90 | W12x53 3.00 X 8.50 |
| | YES | W12x53 3.00 X 7.70 | W10x60 3.00 X 8.50 | W12x65 3.00 X 9.30 | W12x72 3.00 X 10.00 |
| 18 | NO | W12x45 3.00 X 6.80 | W8x48 3.00 X 7.50 | W12x53 3.00 X 8.10 | W12x58 3.00 X 8.80 |
| | YES | W12x58 3.00 X 8.00 | W12x65 3.00 X 8.80 | W12x72 3.00 X 9.60 | W12x79 3.00 X 10.30 |
| 20 | NO | W8x48 3.00 X 7.00 | W12x53 3.00 X 7.70 | W12x58 3.00 X 8.40 | W12x65 3.00 X 9.10 |
| | YES | W12x65 3.00 X 8.30 | W12x72 3.00 X 9.10 | W12x79 3.00 X 9.90 | W12x87 3.00 X 10.70 |

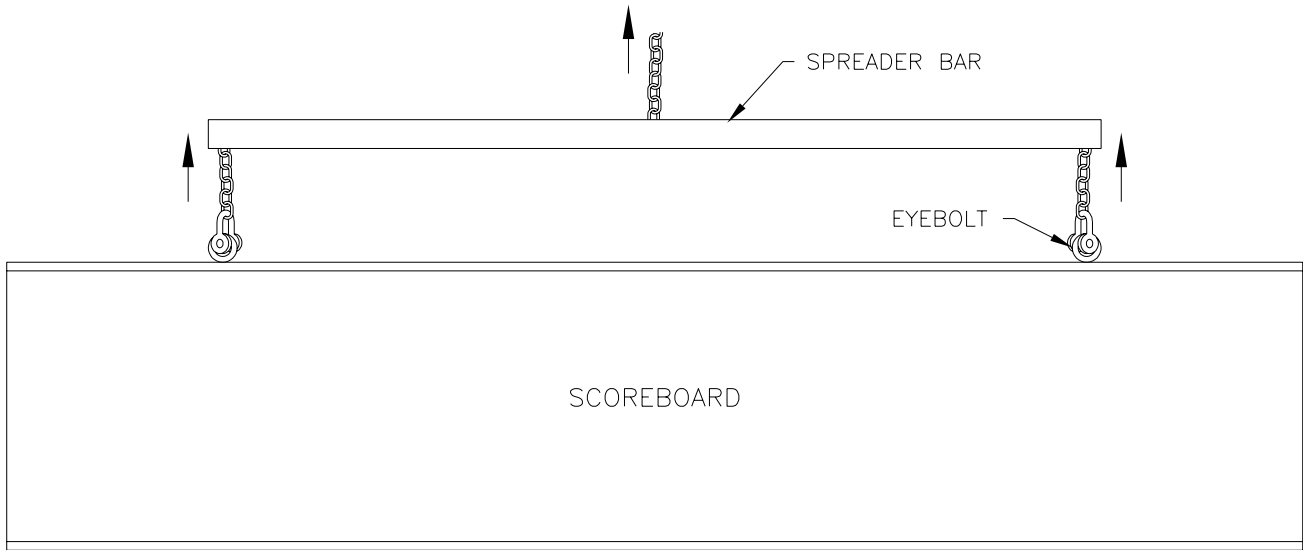
W6x12 ← RECOMMENDED BEAM SECTION FOR MOUNTING SCOREBOARD
 2.00 X 4.25 ← RECOMMENDED FOOTINGS IN FEET (DIAMETER X DEPTH)



NOTE:
 RECOMMENDATIONS FOR A DISPLAY WITH
 AN ATTACHED AD PANEL WERE CALCULATED
 USING A 48" TALL AD PANEL.

INFORMATION GIVEN IS FOR ESTIMATING
 PURPOSES ONLY. COLUMNS AND FOOTINGS
 MUST BE DESIGNED BY A STATE LICENCED
 ENGINEER. DAKTRONICS DOES NOT ASSUME
 ANY LIABILITY FOR ANY INSTALLATIONS
 DERIVED FROM THIS INFORMATION OR
 DESIGNED AND INSTALLED BY OTHERS.

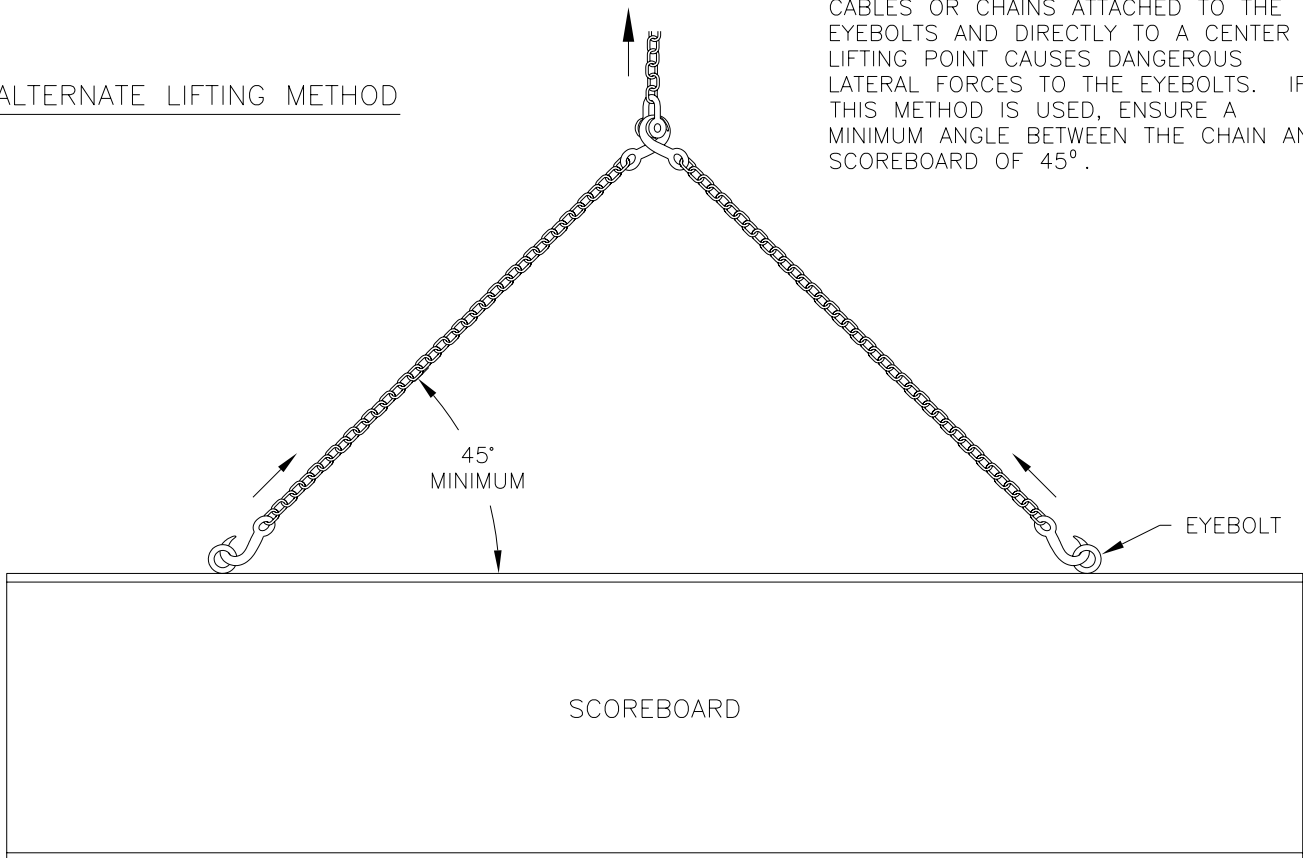
| | | | | |
|--|---------|--|-----------------|-------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | | |
| PROJ: FOOTBALL SCOREBOARDS | | | | |
| TITLE: BEAM & FOOTING RECOMMENDATIONS, FB-XX30 | | | | |
| DES. BY: JHEIDERSCHIEDT DRAWN BY: JHEIDERSCHIEDT DATE: 08SEP90 | | | | |
| 2 | 13JUL00 | REVISED BEAM SECTIONS & FOOTINGS. | MVD | |
| 1 | 23MAR98 | ADDED DISCLAIMER ABOUT FOOTING AND BEAM LIABILITY. | TWEBER | |
| REV. | DATE | DESCRIPTION | BY | APPR. |
| REVISION | | APPR. BY: | 1091-R08A-44515 | |
| | | SCALE: NONE | | |



PREFERRED LIFTING METHOD

USE A SPREADER BAR SO THAT THE FORCE ON THE EYEBOLTS IS STRAIGHT UP.

ALTERNATE LIFTING METHOD



CABLES OR CHAINS ATTACHED TO THE EYEBOLTS AND DIRECTLY TO A CENTER LIFTING POINT CAUSES DANGEROUS LATERAL FORCES TO THE EYEBOLTS. IF THIS METHOD IS USED, ENSURE A MINIMUM ANGLE BETWEEN THE CHAIN AND SCOREBOARD OF 45°.

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR SCOREBOARDS

TITLE: LIFTING SCOREBOARD

DES. BY:

DRAWN BY: AVB

DATE: 12SEP90

REVISION

APPR. BY:

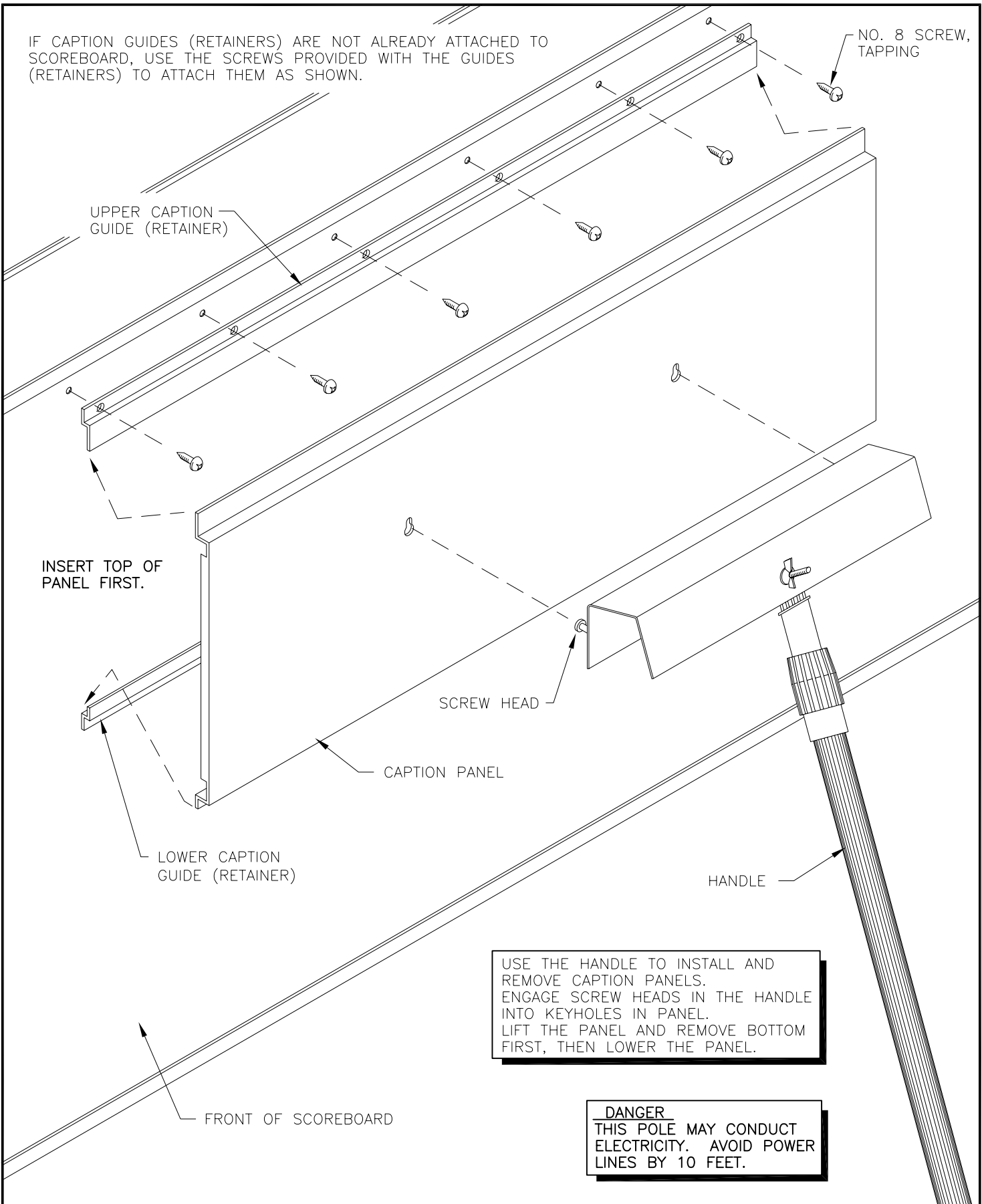
SCALE: NONE

01

1091-R10A-44548

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|-----------|--|--------|-------|
| 01 | 17 MAY 01 | ADDED MINIMUM ANGLE TO ALTERNATE LIFTING METHOD; CHANGED CORRECT TO PREFERRED METHOD AND WRONG TO ALTERNATE METHOD | TWEBER | |

IF CAPTION GUIDES (RETAINERS) ARE NOT ALREADY ATTACHED TO SCOREBOARD, USE THE SCREWS PROVIDED WITH THE GUIDES (RETAINERS) TO ATTACH THEM AS SHOWN.

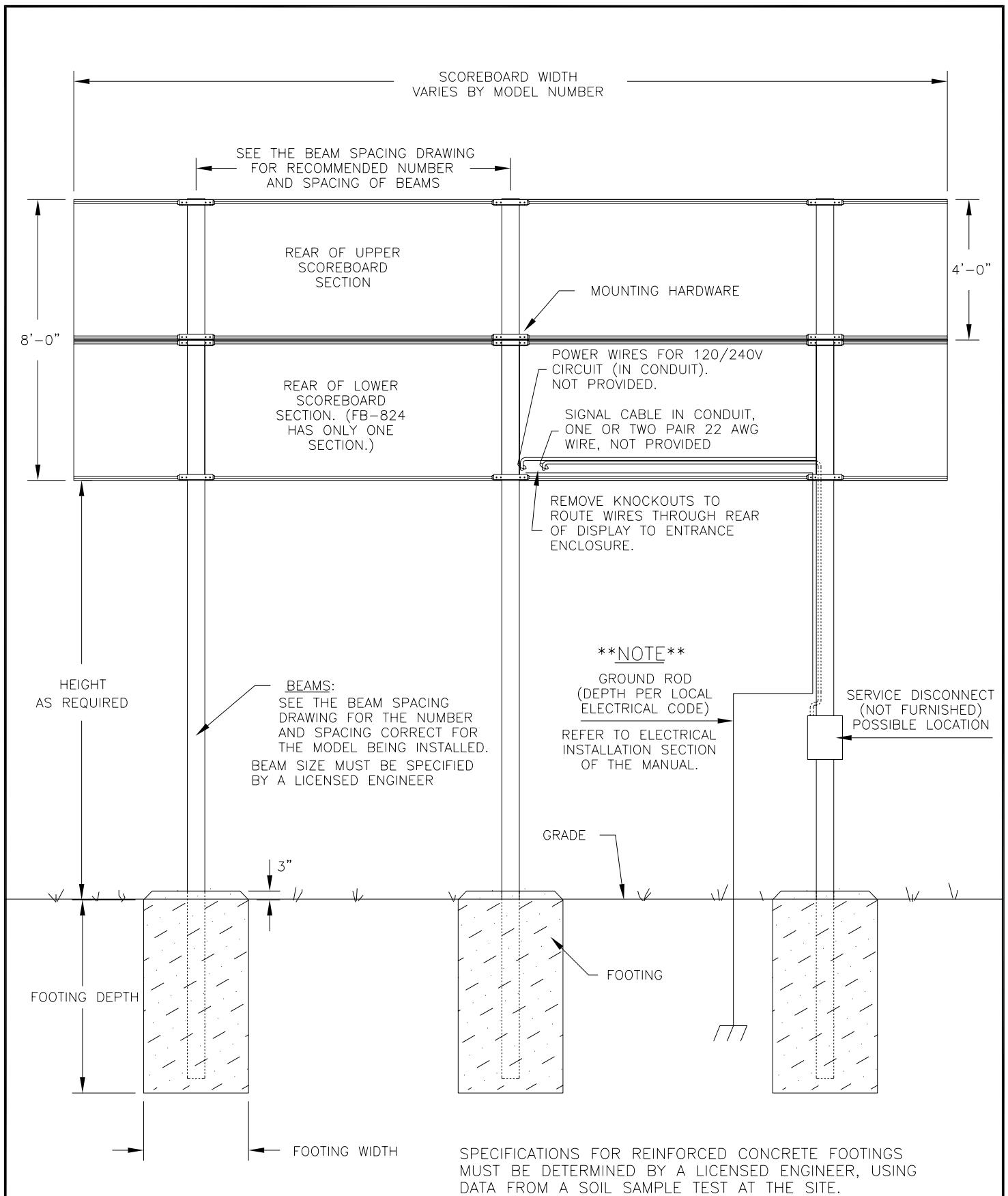


USE THE HANDLE TO INSTALL AND REMOVE CAPTION PANELS. ENGAGE SCREW HEADS IN THE HANDLE INTO KEYHOLES IN PANEL. LIFT THE PANEL AND REMOVE BOTTOM FIRST, THEN LOWER THE PANEL.

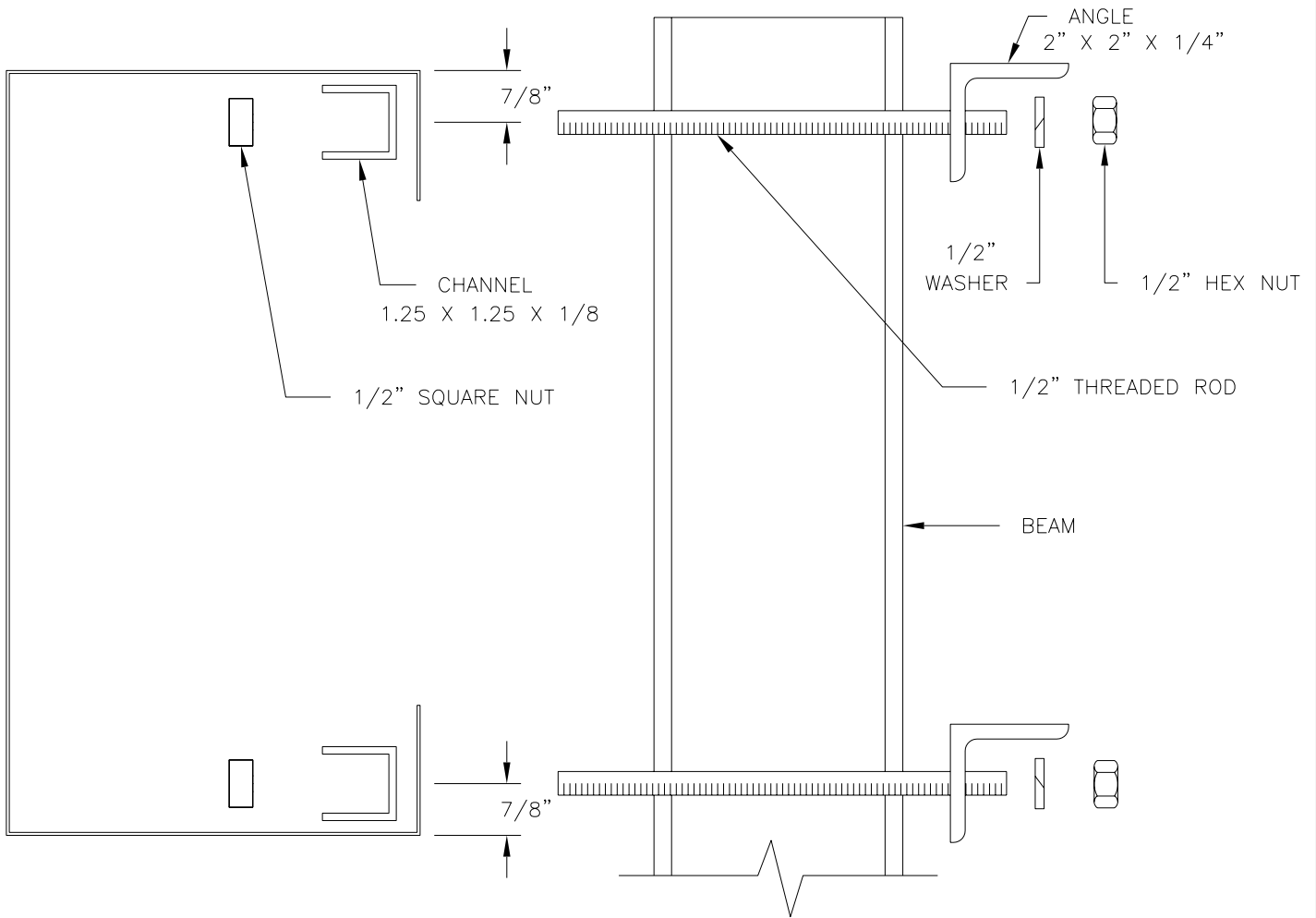
DANGER
THIS POLE MAY CONDUCT ELECTRICITY. AVOID POWER LINES BY 10 FEET.

| | | | |
|--------------------------------------|---------------|-----------------|--|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR SCOREBOARDS | | | |
| TITLE: CAPTION CHANGING | | | |
| DES. BY: | DRAWN BY: AVB | DATE: 19SEP90 | |
| REVISION | APPR. BY: | 1091-E10A-44549 | |
| SCALE: NONE | | | |

| | | | | |
|------|---------|--|-----|-------|
| 1 | 22AUG91 | CORRECTED CAPTION CHANGER ILLUSTRATION TO REFLECT ACTUAL DEVICE. | JLH | |
| REV. | DATE | DESCRIPTION | BY | APPR. |



| | | | | |
|--|---------|---|-----|-----------------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | | |
| PROJ: FOOTBALL SCOREBOARDS | | | | |
| TITLE: STRUCTURE, FOOTBALL | | | | |
| DES. BY: JHEIDERSCHIEDT DRAWN BY: JHEIDERSCHIEDT DATE: 12SEP90 | | | | |
| 2 | 28APR95 | ADDED NOTE THAT SPECIFICATIONS MUST BE MADE BY A LICENSED ENGINEER. | AVB | AVB |
| 1 | 17SEP90 | CORRECTED WIRE SPECIFICATIONS. ADDED GROUNDING ROD REFERENCE. | JLH | |
| REV. | DATE | DESCRIPTION | BY | APPR. |
| | | REVISION | | APPR. BY: |
| | | | | SCALE: 1=45 |
| | | | | 1091-R10A-44556 |



MOUNTING INSTRUCTIONS:

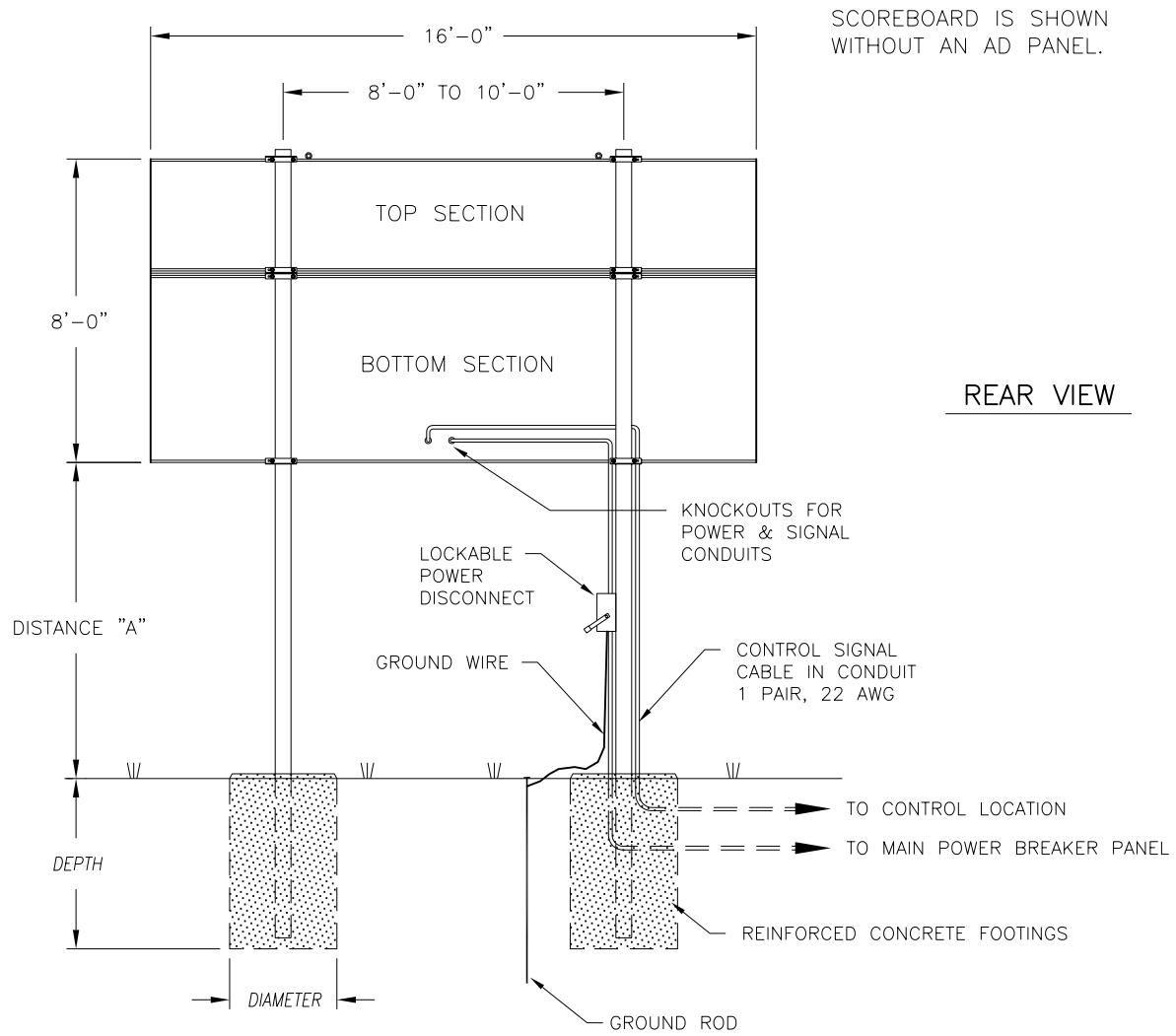
1. USE THE MOUNTING CHANNEL TO DETERMINE WHICH HOLE COMBINATION SHOULD BE USED. BE SURE TO KEEP THE BOLTS AS CLOSE TO THE BEAM AS POSSIBLE.
2. USING THE MOUNTING CHANNEL AS A TEMPLATE, DRILL 9/16" HOLES IN THE UPPER AND LOWER REAR FLANGE OF AD PANEL WHERE THE SUPPORTS WILL GO.
3. PLACE SQUARE NUTS INSIDE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

MOUNTING INSTRUCTIONS: FOR AD PANELS WITH BACKSHEETS.

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

| | | | |
|--------------------------------------|--|----------------------|-----------------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR SCOREBOARDS | | | |
| TITLE: AD PANEL MOUNTING | | | |
| DES. BY: . | | DRAWN BY: MGUNDERSON | |
| | | DATE: 09JUL92 | |
| REVISION | | APPR. BY: | 1091-R10A-52187 |
| | | SCALE: NONE | |

| | | | | |
|------|---------|--|-----|-------|
| 2 | 13AUG97 | INCLUDED INSTRUCTIONS FOR AD PANELS WITH BACKSHEETS. | JAA | |
| 1 | 26MAY93 | ADDED DESCRIPTION TEXT TO PARTS. | MGG | |
| REV. | DATE | DESCRIPTION | BY | APPR. |



| MODEL BA-1518 WITHOUT AD PANEL | | | | | |
|--------------------------------|----------------------|-----------------|----------------------|----------------------|-----------------------|
| DISTANCE "A" (SEE FIGURE) | TOTAL DISPLAY SIZE | | DESIGN WIND VELOCITY | | |
| | | | 70 MPH | 80 MPH | 100 MPH |
| 10'-0" | 16'-0" x 8'-0" | BEAM FOOTING | W8x24 3.0' x 5.4' | W8x28 3.0' x 6.0' | W8x35 3.0' x 7.0' |
| 12'-0" | 16'-0" x 8'-0" | BEAM FOOTING | W8x28 3.0' x 5.6' | W8x31 3.0' x 6.2' | W10x39 3.0' x 7.3' |
| 14'-0" | 16'-0" x 8'-0" | BEAM FOOTING | W8x31 3.0' x 5.9' | W8x35 3.0' x 6.5' | W10x45 3.0' x 7.7' |

| MODEL BA-1518 WITH 30"-HIGH AD PANEL | | | | | |
|--------------------------------------|-----------------------|-----------------|-----------------------|-----------------------|-----------------------|
| DISTANCE "A" (SEE FIGURE) | TOTAL DISPLAY SIZE | | DESIGN WIND VELOCITY | | |
| | | | 70 MPH | 80 MPH | 100 MPH |
| 10'-0" | 16'-0" x 10'-6" | BEAM FOOTING | W8x31 3.0' x 6.1' | W8x35 3.0' x 6.7' | W12x45 3.0' x 7.9' |
| 12'-0" | 16'-0" x 10'-6" | BEAM FOOTING | W8x35 3.0' x 6.4' | W8x40 3.0' x 7.0' | W8x48 3.0' x 8.3' |
| 14'-0" | 16'-0" x 10'-6" | BEAM FOOTING | W10x39 3.0' x 6.6' | W10x45 3.0' x 7.3' | W10x54 3.0' x 8.6' |

FOOTING = DIAMETER X DEPTH

FOOTING DIMENSIONS ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES.

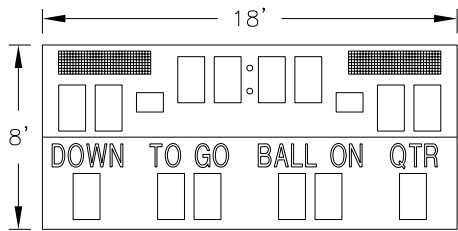
FOOTING DIMENSIONS ARE BASED ON ASSUMED SOIL BEARING PRESSURE OF 2000 LB/FT²

ACTUAL FOOTING DEPTH AND DIAMETER FOR A PARTICULAR INSTALLATION MUST BE DETERMINED BY A QUALIFIED STRUCTURAL ENGINEER, USING DATA FROM A SOIL SAMPLE TEST AT THE SITE.

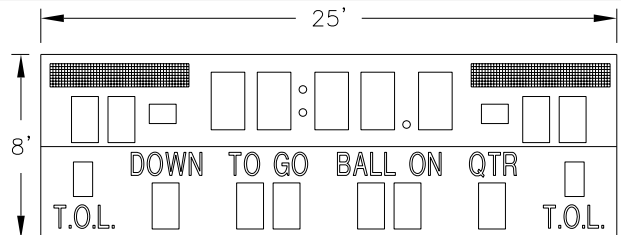
DAKTRONICS, INC. IS NOT RESPONSIBLE FOR STRUCTURES DESIGNED AND INSTALLED BY OTHERS.

| | | | |
|---|-------------|-----------------------|--|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR SCOREBOARDS | | | |
| TITLE: INSTALLATION SPECIFICATIONS, BA-1518 | | | |
| DES. BY: AVB | | DRAWN BY: A VANBEMMEL | |
| | | DATE: 04FEB93 | |
| REVISION | APPR. BY: | 1091-R10A-55008 | |
| | SCALE: 1=60 | | |

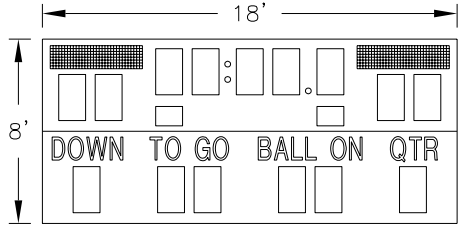
| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------------|---|--------|-------|
| 2 | 19DEC00 | REVISED COLUMN SECTIONS & FOOTINGS. | MVD | |
| 1 | 01 SEPT 99 | UPDATE FOOTING AND BEAM SPECS FOR 2000 LB/FT ² . | JNILSE | |



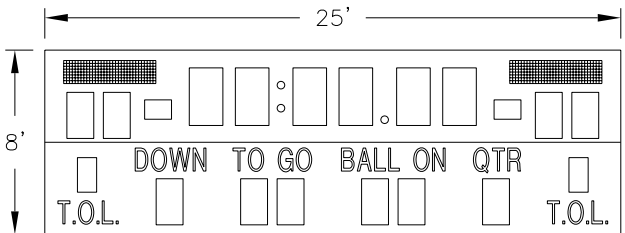
SO-1424 WITH 832-12 TNMC



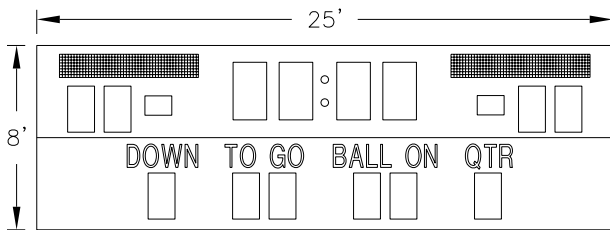
FB-1730 WITH 848-12 TNMC



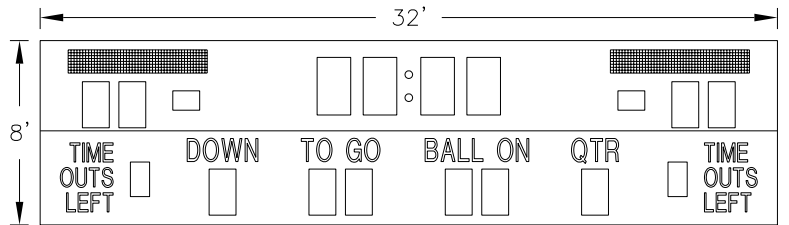
FB-1524 WITH 832-12 TNMC



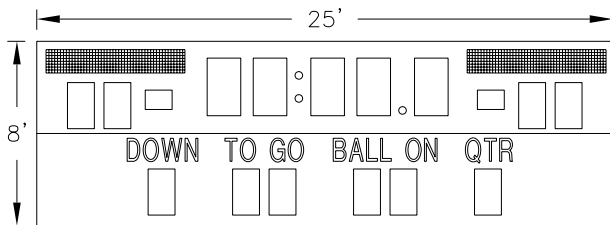
FB-1830 WITH 832-12 TNMC



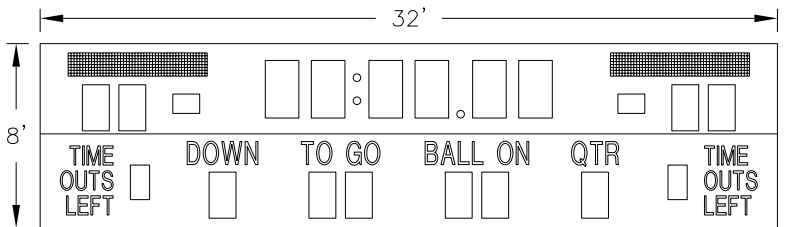
FB-1430 WITH 848-12 TNMC



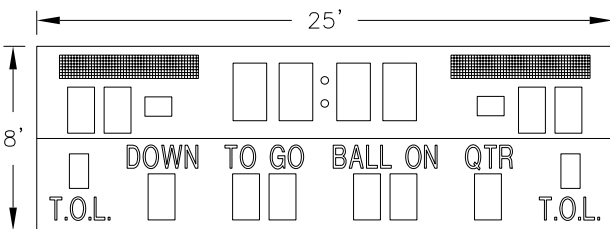
FB-1630L WITH 848-12 TNMC



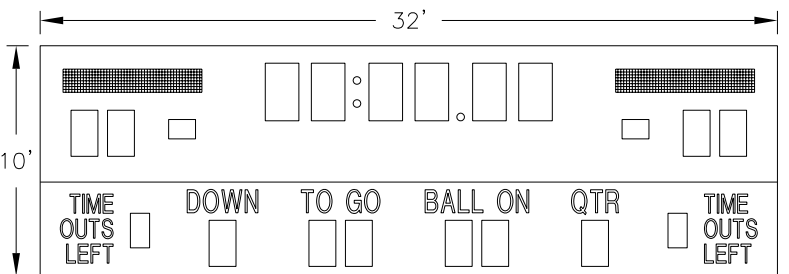
FB-1530 WITH 848-12 TNMC



FB-1830L WITH 848-12 TNMC



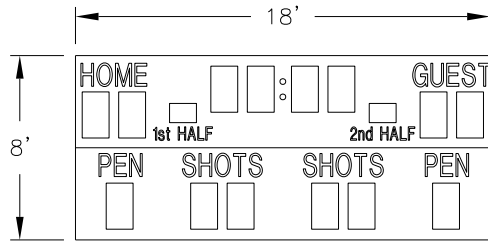
FB-1630 WITH 848-12 TNMC



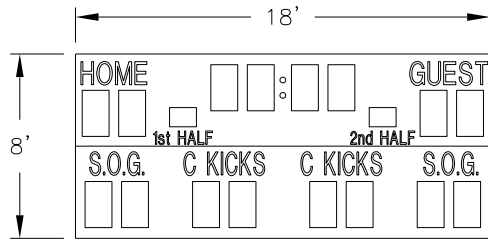
FB-2001 WITH 848-12 TNMC

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|---------|---|-------|-------|
| 08 | 13AUG02 | ADDED MODEL FB-2001 W/ TNMC | MCOPL | |
| 7 | 21FEB00 | REMOVED MODELS SO-1624 AND SO-1830 ADDED MODEL FB-1424 | BDP | |
| 6 | 28JUL99 | ADDED MODEL SO-1830. AND MODEL FB-1630 | MVD | |
| 5 | 22OCT98 | ADDED MODEL FB-1524. | BDP | |
| 4 | 16SEP98 | ADDED MODEL FB-1730. | BDP | |
| 3 | 18AUG97 | ADDED MODEL FB-1830. | REY | |

| | | | | |
|--|--------------|-----------------------------------|-----|-----|
| 2 | 05FEB97 | ADDED MODEL FB-1830L. | BDP | |
| 1 | 03OCT96 | ADDED MODELS SO-1624 AND FB-1430. | AVB | AVB |
| <p>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.</p> <p>DAKTRONICS, INC. BROOKINGS, SD 57006</p> <p>PROJ: OUTDOOR INCANDESCENT SCOREBOARDS</p> <p>TITLE: MULTIPLE SECTION FOOTBALL SCBD MODELS W/TNMC</p> <p>DES. BY: JOSBAH DRAWN BY: BYOUNG DATE: 18AUG97</p> | | | | |
| REVISION | APPR. BY: | 1091-R08A-84233 | | |
| | SCALE: 1=100 | | | |

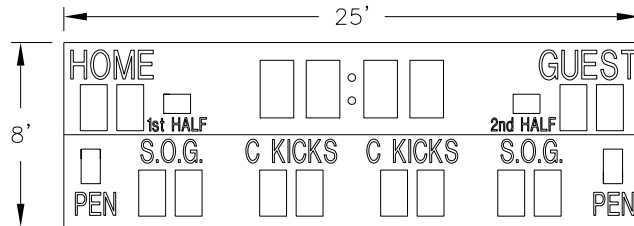


SO-1424



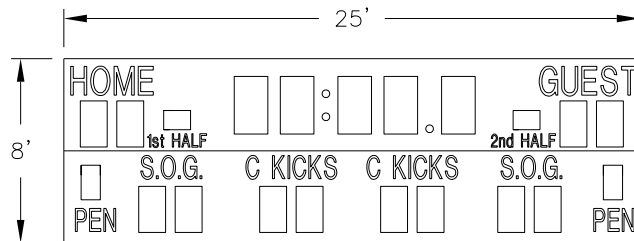
SO-1624

(OPTIONAL SAVES CAPTION CAN REPLACE C KICKS)



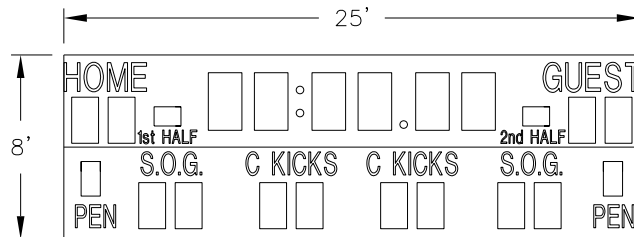
SO-1830

(OPTIONAL SAVES CAPTION CAN REPLACE C KICKS)



SO-1930

(OPTIONAL SAVES CAPTION CAN REPLACE C KICKS)



SO-2030

(OPTIONAL SAVES CAPTION CAN REPLACE C KICKS)

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR INCANDESCENT SCOREBOARDS

TITLE: MULTIPLE SECTION SOCCER SCBD MODELS

DES. BY: AVB

DRAWN BY: MJORDAN

DATE: 03 NOV 97

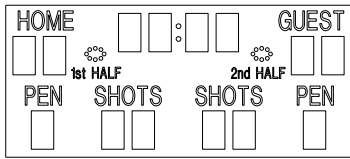
REVISION

APPR. BY:

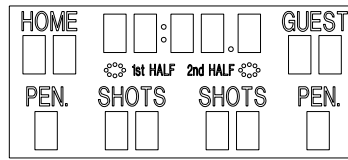
SCALE: 1=100

1091-R08A-98161

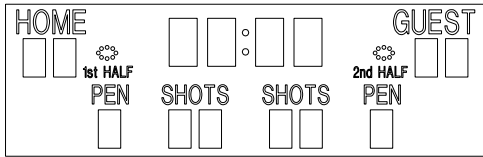
| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|---------|---|--------|-------|
| 2 | 21FEB00 | UPDATED CAPTIONS | BDP | |
| 1 | 29OCT98 | REPOSITIONED 1ST HALF AND 2ND HALF ON MODELS SO-1424, 1830, 1930 & 2030; ADDED SAVES CAPTION OPTION TO SO-1624. | TWEBER | |



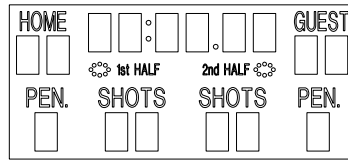
FB-1424



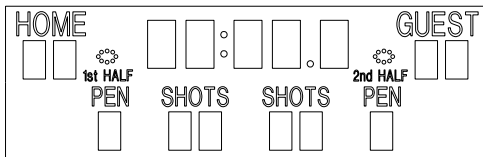
FB-1524



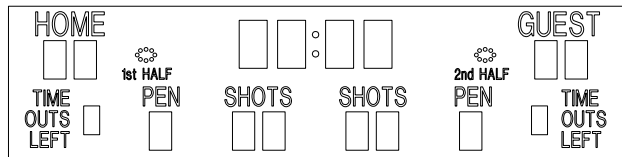
FB-1430



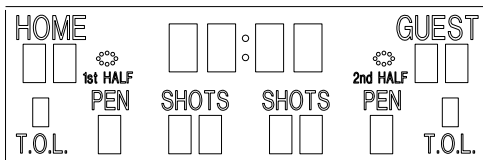
FB-1624



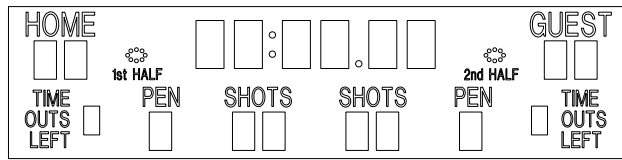
FB-1530



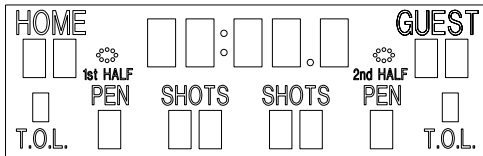
FB-1630L



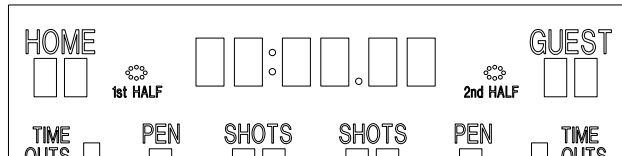
FB-1630 AND FB-2002



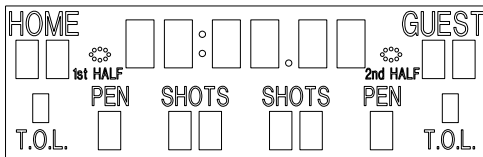
FB-1830L



FB-1730 AND FB-2003



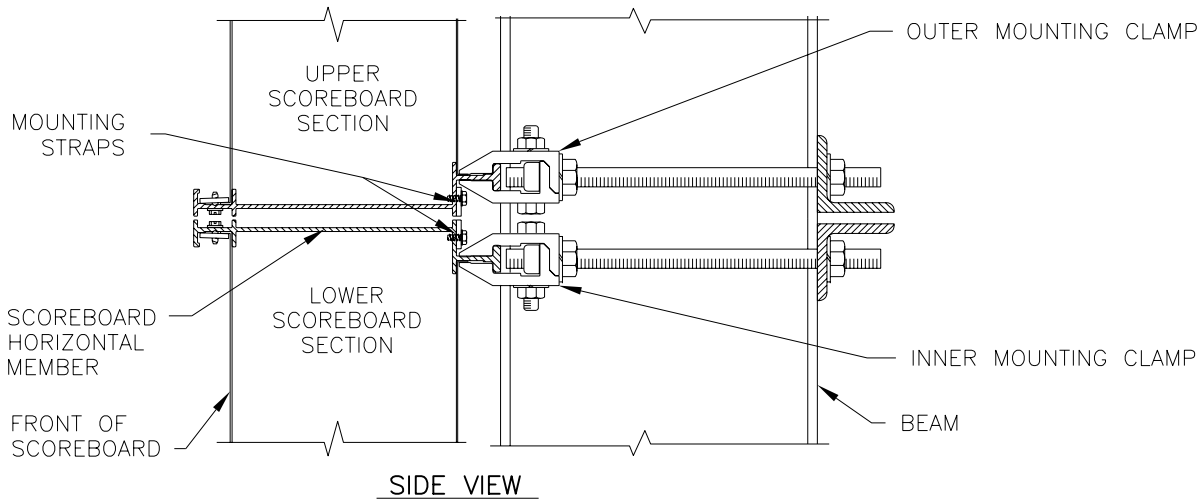
FB-2001



FB-1830

| | | | | |
|------|----------|------------------------------------|-------|-------|
| 03 | 26JULY01 | ADDED FB-1524 AND FB-1624 | MCOPL | |
| 02 | 17MAR00 | ADDED FB-2002 & FB-2003 | GBREE | |
| 01 | 21FEB00 | UPDATED TO CAPTION OPTIONS, SOCCER | BDP | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

| | |
|--|---------------------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | |
| PROJ: OUTDOOR INCANDESCENT SCOREBOARDS | |
| TITLE: CAPTION OPTIONS, SOCCER | |
| DES. BY: BPETERSON | DRAWN BY: BPETERSON |
| DATE: 09APR98 | |
| REVISION | APPR. BY: |
| | SCALE: 1=120 |
| 1091-R08A-101442 | |



SIDE VIEW

STRAP INSTALLATION PROCEDURE

AFTER CLAMPING ALL FOUR SECTIONS OF THE BA-3718 SCOREBOARD TO MOUNTING BEAMS, IT IS NECESSARY TO ATTACH THE TWO BOTTOM SECTIONS TO EACH OTHER AND THE TWO TOP SECTIONS TO EACH OTHER.

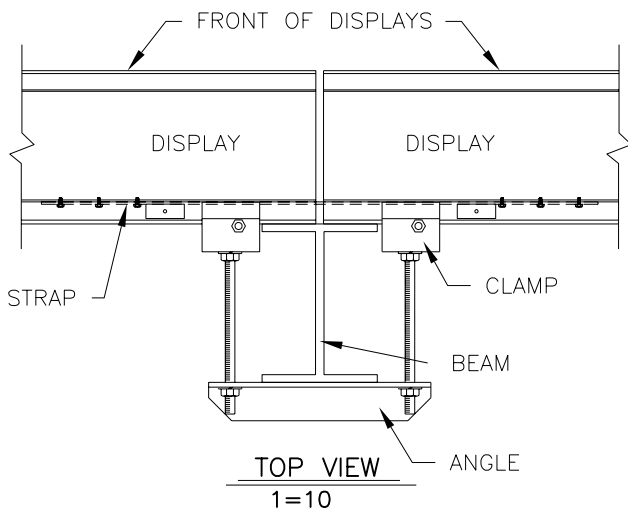
THIS IS ACHIEVED USING FOUR MOUNTING STRAPS (1/8" X 3/4" X 29" LONG) AND #10 HEX HEADED SCREWS.

POSITION THE MOUNTING STRAPS AS SHOWN ON THIS DRAWING AND DRILL 5/32" DIAMETER HOLES IN THE EXTRUSION USING THE HOLES IN THE MOUNTING STRAPS AS GUIDES.

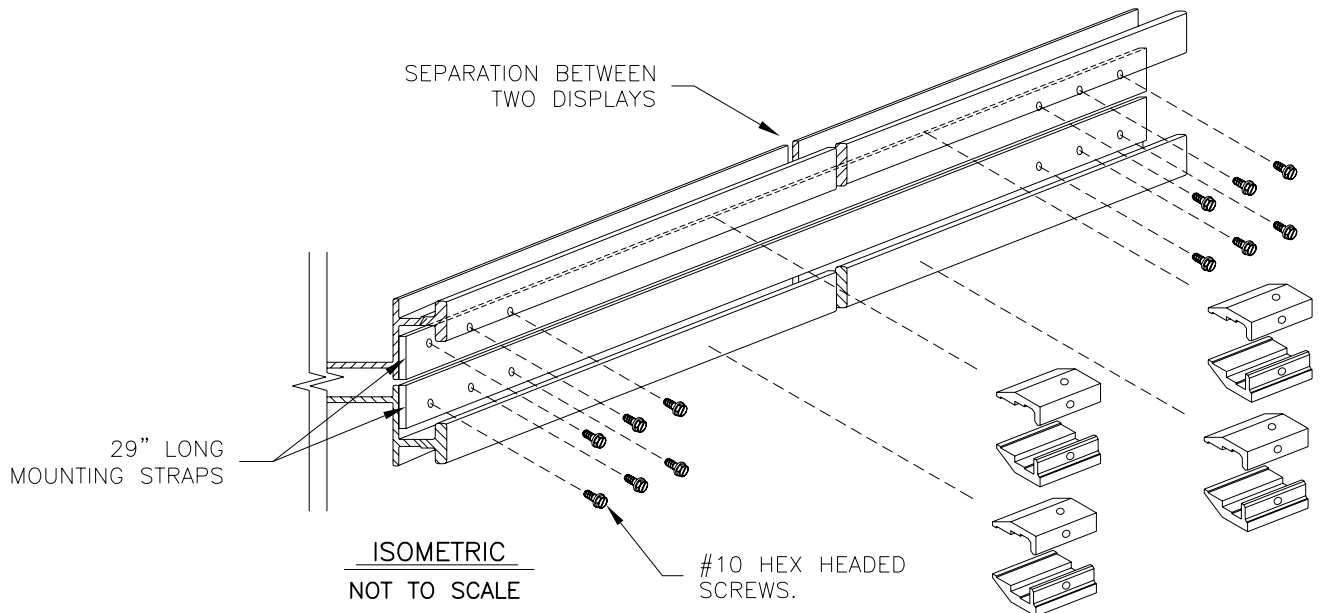
ATTACH SIX SCREWS TO EACH STRAP.

ATTACH ONE STRAP TO THE TOP & BOTTOM OF EACH LEFT & RIGHT SECTION.

FAILURE TO ATTACH THE MOUNTING STRAPS TO THESE DISPLAY SECTIONS VOIDS ALL WARRANTY.



TOP VIEW
1=10



ISOMETRIC
NOT TO SCALE

| | | | |
|---|------------|-------------------|--|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR SCOREBOARDS | | | |
| TITLE: DISPLAY MOUNTING STRAPS, BA-3718 | | | |
| DES. BY: TWEBER | | DRAWN BY: PLACHER | |
| | | DATE: 09APR99 | |
| REVISION | APPR. BY: | 1091-E10A-114415 | |
| | SCALE: 1=5 | | |

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

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 |

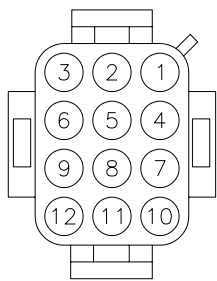
| DECIMAL ADDRESS | PIN 12 | PIN 11 | PIN 9 | PIN 8 | PIN 6 | PIN 5 | PIN 3 | PIN 2 |
|-----------------|--------|--------|-------|-------|-------|-------|-------|-------|
| 97 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 98 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 99 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| 100 | 0 | 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 |

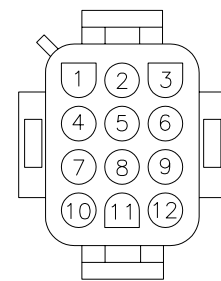
| DECIMAL ADDRESS | PIN 12 | PIN 11 | PIN 9 | PIN 8 | PIN 6 | PIN 5 | PIN 3 | PIN 2 |
|-----------------|--------|--------|-------|-------|-------|-------|-------|-------|
| 81 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 82 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 83 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 84 | 0 | 1 | 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



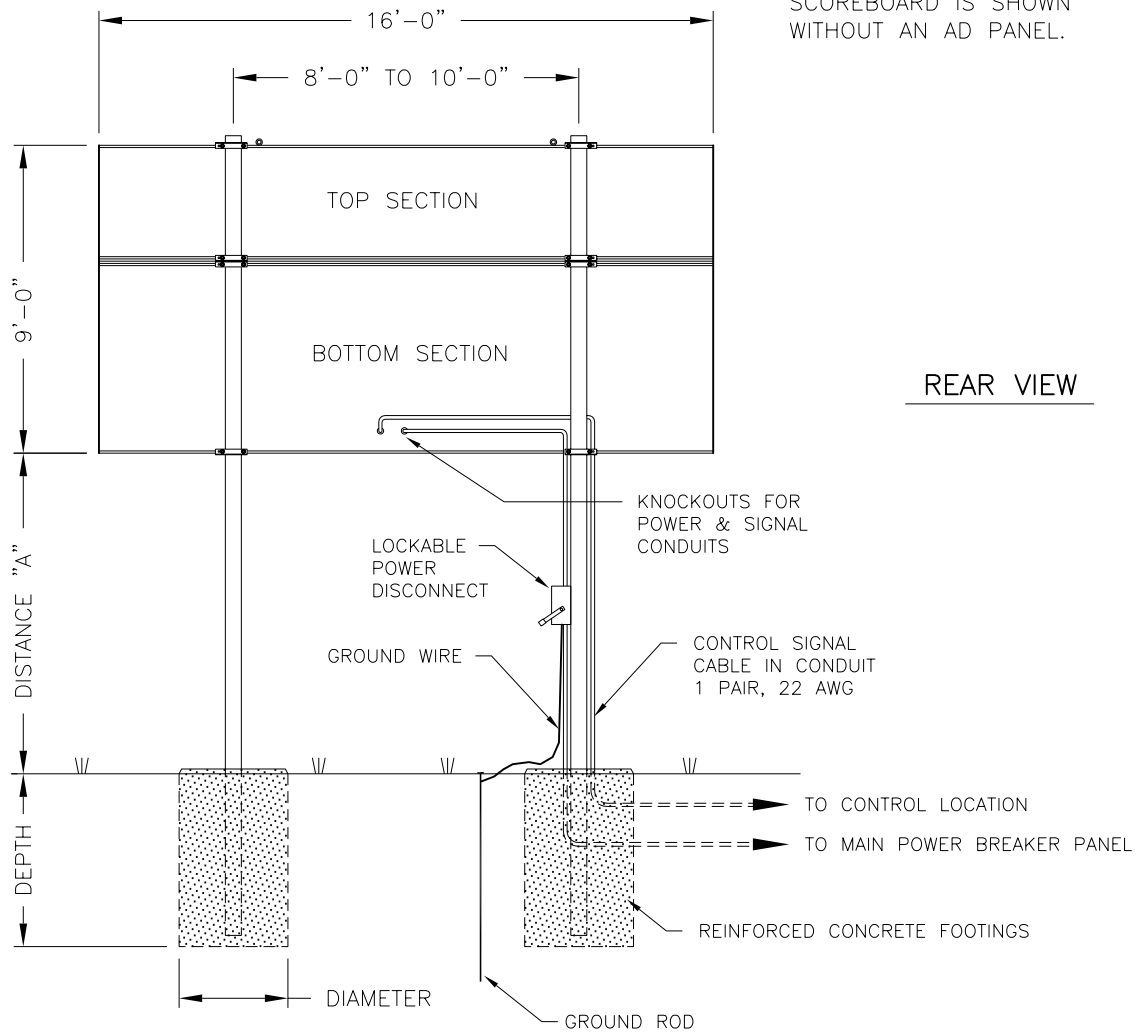
BOTTOM VIEW

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: _____
 TITLE: ADDRESS TABLE, 1 THROUGH 128
 DES. BY: AVB DRAWN BY: A VANBEMMEL DATE: 28 APR 99

REVISION 01 APPR. BY: _____ SCALE: NONE 1150-R04A-115078

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



| MODEL BA-1524 WITHOUT AD PANEL | | | | | |
|--------------------------------|----------------------|-----------------|----------------------|-----------------------|-----------------------|
| DISTANCE "A" (SEE FIGURE) | TOTAL DISPLAY SIZE | | DESIGN WIND VELOCITY | | |
| | | | 70 MPH | 80 MPH | 100 MPH |
| 10'-0" | 16'-0" x 9'-0" | BEAM FOOTING | W8x28 4.0' x 5.1' | W8x31 4.0' x 5.6' | W10x39 4.0' x 6.7' |
| 12'-0" | 16'-0" x 9'-0" | BEAM FOOTING | W8x31 4.0' x 5.4' | W8x35 4.0' x 5.9' | W12x45 4.0' x 6.9' |
| 14'-0" | 16'-0" x 9'-0" | BEAM FOOTING | W8x35 4.0' x 5.6' | W10x39 4.0' x 6.2' | W8x48 4.0' x 7.3' |

| MODEL BA-1524 WITH 30"-HIGH AD PANEL | | | | | |
|--------------------------------------|-----------------------|-----------------|-----------------------|-----------------------|-----------------------|
| DISTANCE "A" (SEE FIGURE) | TOTAL DISPLAY SIZE | | DESIGN WIND VELOCITY | | |
| | | | 70 MPH | 80 MPH | 100 MPH |
| 10'-0" | 16'-0" x 11'-6" | BEAM FOOTING | W8x35 4.0' x 5.7' | W10x39 4.0' x 6.3' | W8x48 4.0' x 7.4' |
| 12'-0" | 16'-0" x 11'-6" | BEAM FOOTING | W10x39 4.0' x 6.0' | W12x45 4.0' x 6.6' | W12x53 4.0' x 7.7' |
| 14'-0" | 16'-0" x 11'-6" | BEAM FOOTING | W12x45 4.0' x 6.2' | W8x48 4.0' x 6.9' | W10x60 4.0' x 8.1' |

FOOTING = DIAMETER X DEPTH

FOOTING DIMENSIONS ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES.

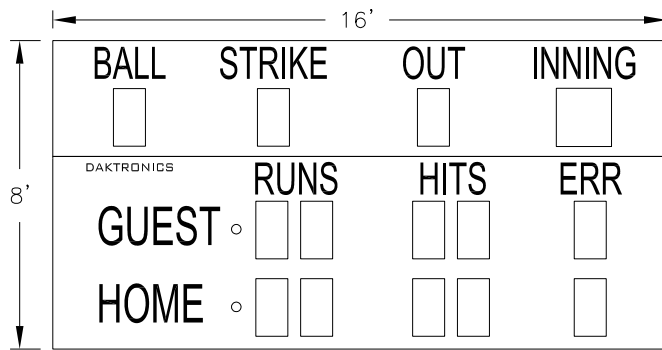
FOOTING DIMENSIONS ARE BASED ON ASSUMED SOIL BEARING PRESSURE OF 2000 LB/FT²

ACTUAL FOOTING DEPTH AND DIAMETER FOR A PARTICULAR INSTALLATION MUST BE DETERMINED BY A QUALIFIED STRUCTURAL ENGINEER, USING DATA FROM A SOIL SAMPLE TEST AT THE SITE.

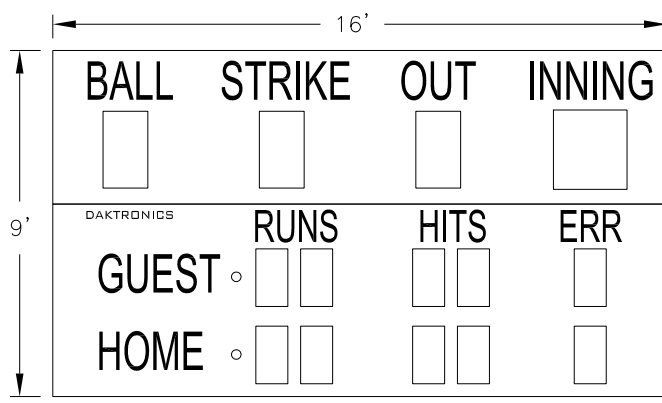
DAKTRONICS, INC. IS NOT RESPONSIBLE FOR STRUCTURES DESIGNED AND INSTALLED BY OTHERS.

| | | | |
|---|-------------|-------------------|--|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR SCOREBOARDS | | | |
| TITLE: INSTALLATION SPECIFICATIONS, BA-1524 | | | |
| DES. BY: TWEBER | | DRAWN BY: JNILSEN | |
| DATE: 26 AUG 99 | | | |
| REVISION | APPR. BY: | 1091-R10A-120972 | |
| | SCALE: 1=60 | | |

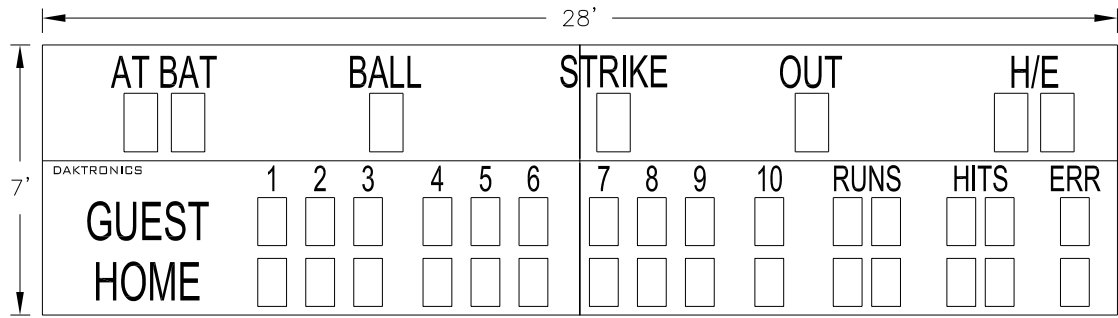
| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|---------|---|-----|-------|
| 2 | 15AUG01 | CORRECTED VERTICAL DIMENSION OF SCBD FROM 8'-0" TO 9'-0". | KJB | |
| 1 | 20DEC00 | REVISED COLUMN SECTIONS & FOOTINGS | MVD | |



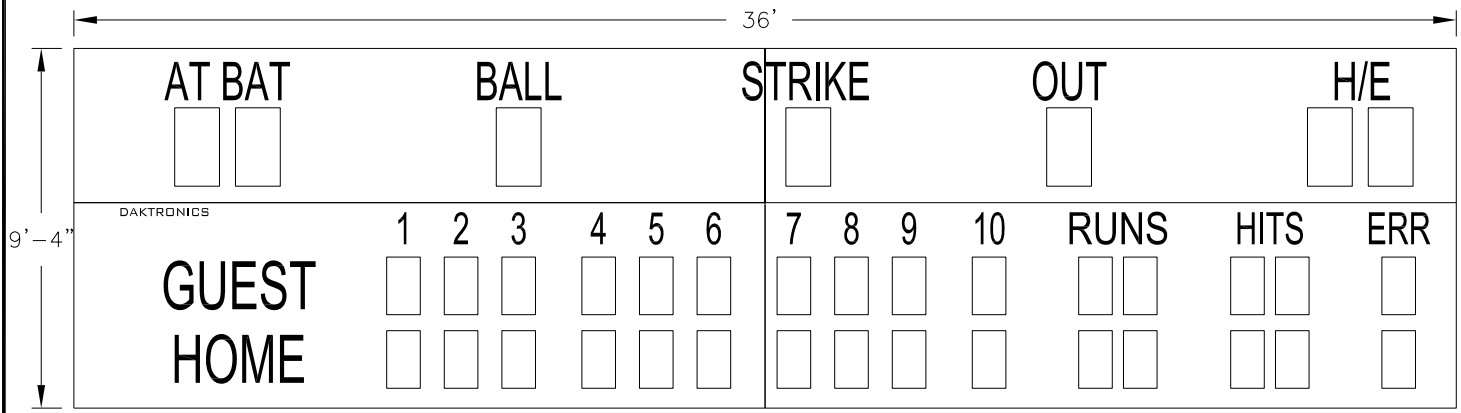
BA-1518



BA-1524



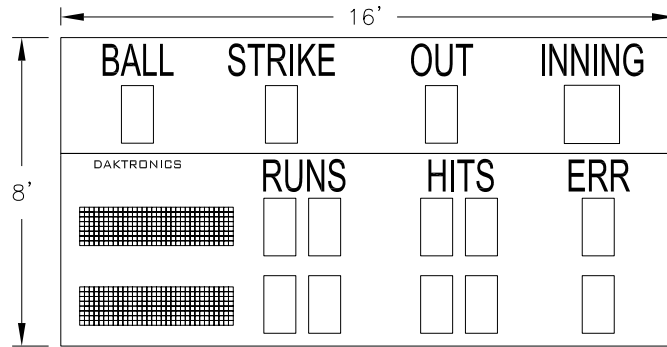
BA-3718



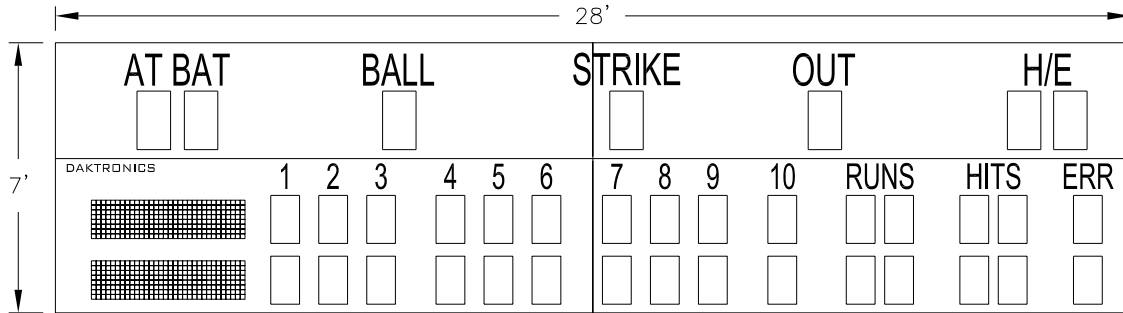
BA-3724

| | | |
|--|---------------------|------------------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | |
| PROJ: OUTDOOR INCANDESCENT SCOREBOARDS | | |
| TITLE: MULTIPLE SECTION BASEBALL SCOREBOARD MODELS | | |
| DES. BY: BPETERSON | DRAWN BY: BPETERSON | DATE: 09DEC99 |
| REVISION | APPR. BY: | 1091-E10A-126086 |
| | SCALE: 1=50 | |

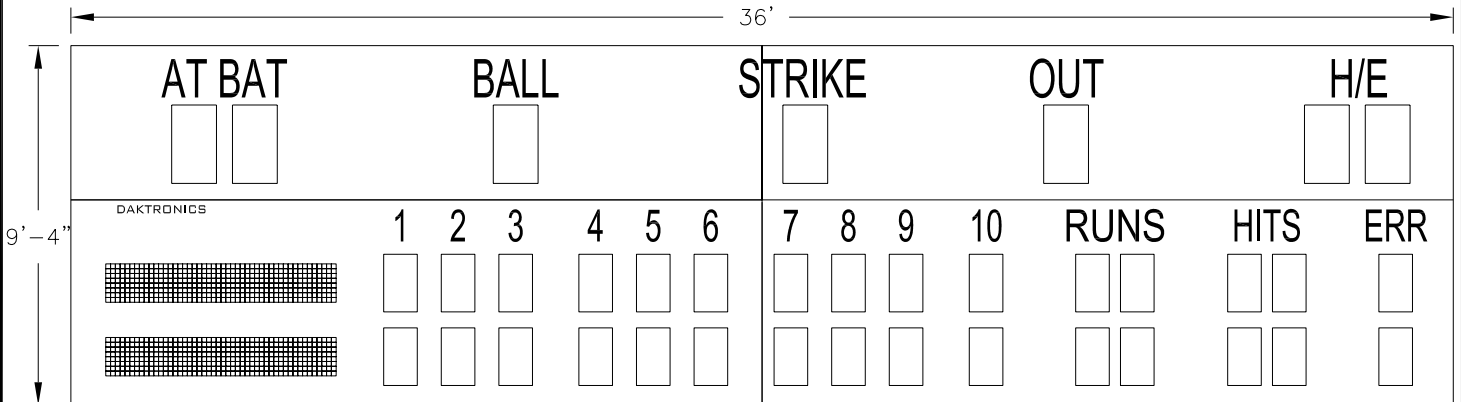
| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------|-------------|----|-------|
| | | | | |



BA-1518 WITH 832-12 TNMC



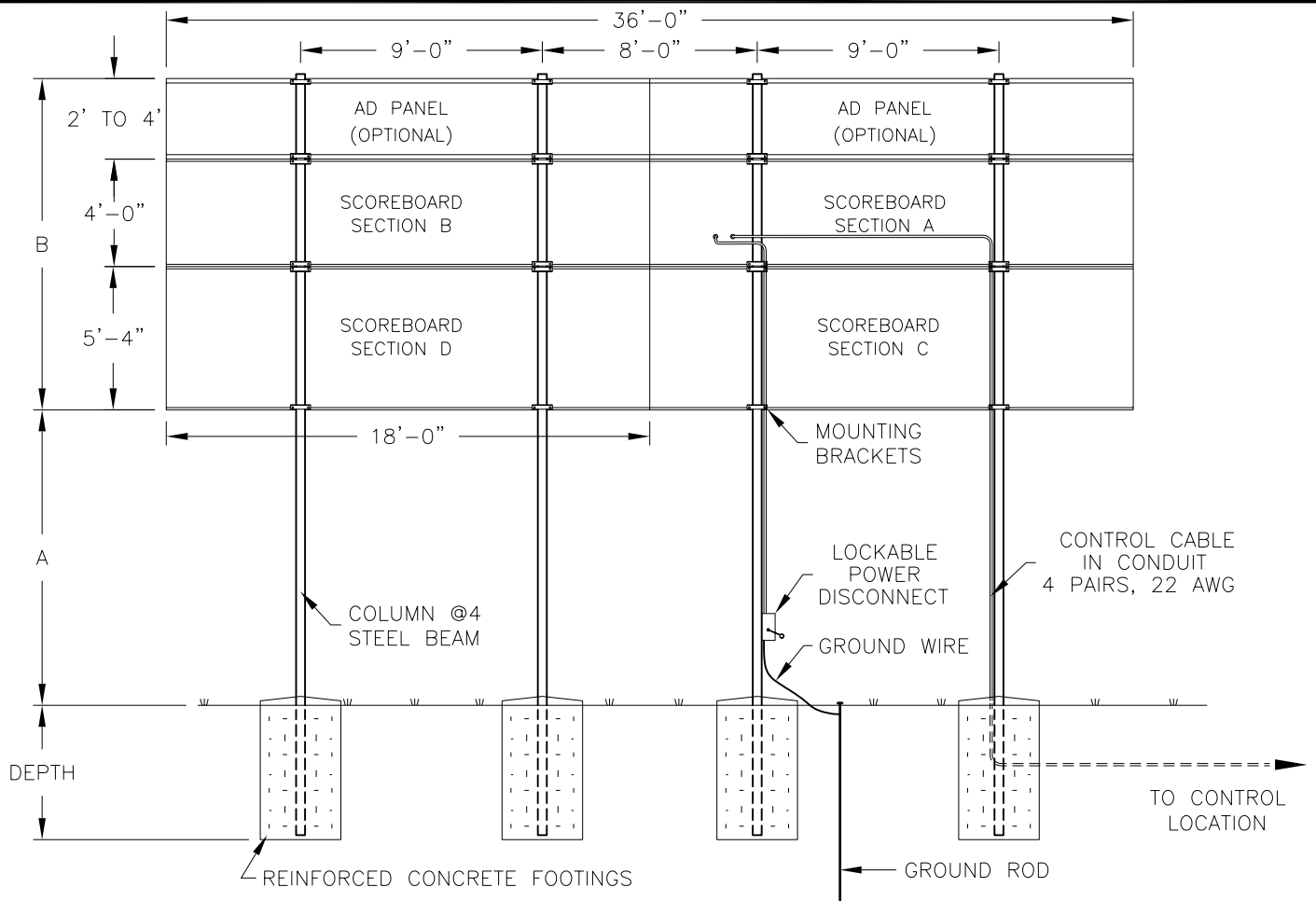
BA-3718 WITH 832-12 TNMC



BA-3724 WITH 848-12 TNMC

| | |
|---|---------------------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | |
| PROJ: OUTDOOR INCANDESCENT SCOREBOARDS | |
| TITLE: MULTIPLE SECTION BASEBALL SCBD MODELS W/TNMC | |
| DES. BY: BPETERSON | DRAWN BY: BPETERSON |
| DATE: 09DEC99 | |
| REVISION | APPR. BY: |
| | SCALE: 1=50 |
| 1091-E10A-126362 | |

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



REAR VIEW

BA-3724

ELECTRICAL

POWER CABLE MUST HAVE A SEPERATE GROUND CONDUCTOR. SCOREBOARD MUST BE CONNECTED TO A GROUND ROD AT SCOREBOARD LOCATION.

FOOTING DIMENSIONS ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS, AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES.

COLUMNS AND FOOTINGS MUST BE DESIGNED BY A STATE LICENCED ENGINEER. DAKTRONICS DOES NOT ASSUME ANY LIABILITY FOR ANY INSTALLATIONS DERIVED FROM THIS INFORMATION OR DESIGNED AND INSTALLED BY OTHERS.

A NOTE ABOUT BEAM NOMENCLATURE:

For a typical beam, W12x30 for example, "W" stands for "Wide-Flange Beam". The first number (12) is the approximate front to rear dimension of the beam in inches. The second number (30) is the weight per foot in pounds. This numbering is standard in the steel industry. Widths vary from 5 to 10 inches in this chart.

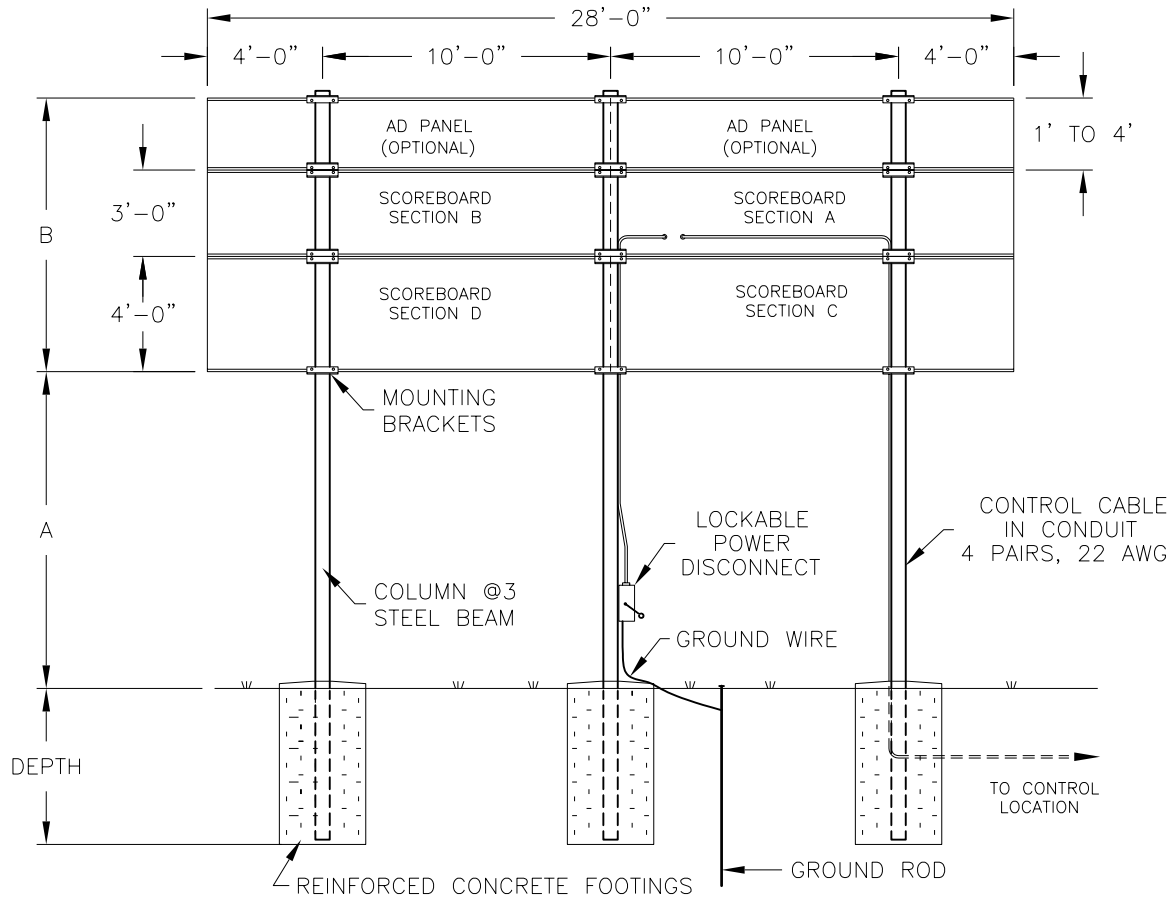
| MODEL BA-3724 | | | | | | |
|-----------------------|-----------------|---------------------|---------|----------------------|-----------|------------|
| VERTICAL DISTANCE (A) | AD PANEL HEIGHT | COMBINED HEIGHT (B) | | DESIGN WIND VELOCITY | | |
| | | | | 70 MPH | 80 MPH | 100 MPH |
| 10 FT | NONE | 9'-4" | BEAM | W8x31 | W10x33 | W8x40 |
| | | | FOOTING | 3.5'x5.6' | 3.5'x6.2' | 3.5'x7.3' |
| | 2 FT | 11'-4" | BEAM | W8x35 | W10x39 | W8x48 |
| | | | FOOTING | 3.5'x6.1' | 3.5'x6.7' | 3.5'x8.0' |
| | 4 FT | 13'-4" | BEAM | W8x40 | W8x48 | W12x58 |
| | | | FOOTING | 3.5'x6.6' | 3.5'x7.3' | 3.5'x8.6' |
| 14 FT | NONE | 9'-4" | BEAM | W10x39 | W12x45 | W10x49 |
| | | | FOOTING | 3.5'x6.1' | 3.5'x6.7' | 3.5'x7.9' |
| | 2 FT | 11'-4" | BEAM | W12x45 | W8x48 | W10x60 |
| | | | FOOTING | 3.5'x6.6' | 3.5'x7.3' | 3.5'x8.6' |
| | 4 FT | 13'-4" | BEAM | W10x49 | W12x58 | W10x68 |
| | | | FOOTING | 3.5'x7.1' | 3.5'x7.8' | 3.5'x9.2' |
| 18 FT | NONE | 9'-4" | BEAM | W10x49 | W10x54 | W10x68 |
| | | | FOOTING | 3.5'x7.1' | 3.5'x7.8' | 3.5'x9.2' |
| | 2 FT | 11'-4" | BEAM | W12x58 | W12x65 | W12x79 |
| | | | FOOTING | 3.5'x7.6' | 3.5'x8.4' | 3.5'x9.9' |
| | 4 FT | 13'-4" | BEAM | W12x65 | W12x72 | W14x90 |
| | | | FOOTING | 3.5'x8.1' | 3.5'x8.9' | 3.5'x10.5' |

FOOTING = DIAMETER X DEPTH

DAKTRONICS, INC. BROOKINGS, SD 57006

| |
|--|
| PROJ: OUTDOOR INCANDESCENT SCOREBOARDS |
| TITLE: INSTALLATION SPECIFICATIONS, BA-3724 |
| DES. BY: BPETERSON DRAWN BY: MVANDYK DATE: 12JAN00 |
| REVISION 02 APPR. BY: SCALE: 1=80 |
| 1091-R10A-126445 |

| | | | |
|------|-----------|-----------------------------------|---------------|
| 02 | 30 AUG 07 | REMOVED FAN HOODS | KDD |
| 01 | 12DEC00 | REVISED BEAM SECTIONS & FOOTINGS. | MVD |
| REV. | DATE | DESCRIPTION | BY APPR. |



REAR VIEW
BA-3718

ELECTRICAL

POWER CABLE MUST HAVE A SEPERATE GROUND CONDUCTOR. SCOREBOARD MUST BE CONNECTED TO A GROUND ROD AT SCOREBOARD LOCATION.

FOOTING DIMENSIONS ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS, AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES.

COLUMNS AND FOOTINGS MUST BE DESIGNED BY A STATE LICENCED ENGINEER. DAKTRONICS DOES NOT ASSUME ANY LIABILITY FOR ANY INSTALLATIONS DERIVED FROM THIS INFORMATION OR DESIGNED AND INSTALLED BY OTHERS.

A NOTE ABOUT BEAM NOMENCLATURE:

For a typical beam, W12x30 for example, "W" stands for "Wide-Flange Beam". The first number (12) is the approximate front to rear dimension of the beam in inches. The second number (30) is the weight per foot in pounds. This numbering is standard in the steel industry. Widths vary from 4 to 8 inches in this chart.

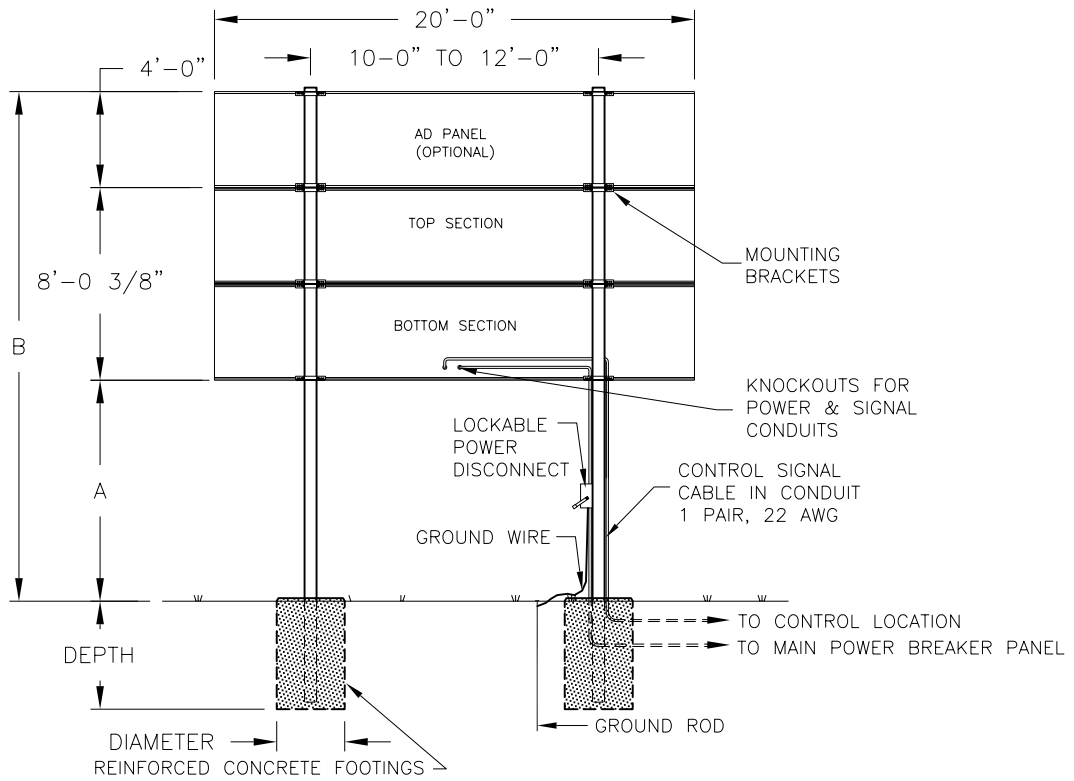
| MODEL BA-3718 | | | | | | |
|-----------------------|-----------------|---------------------|---------|----------------------|----------|---------|
| VERTICAL DISTANCE (A) | AD PANEL HEIGHT | COMBINED HEIGHT (B) | | DESIGN WIND VELOCITY | | |
| | | | | 70 MPH | 80 MPH | 100 MPH |
| 10 FT | NONE | 7 FT | BEAM | W8x24 | W8x28 | W8x35 |
| | | | FOOTING | 3'x5.5' | 3'x6.1' | 3'x7.2' |
| | 2 FT | 9 FT | BEAM | W8x31 | W8x35 | W10x45 |
| | | | FOOTING | 3'x6.2' | 3'x6.8' | 3'x8.0' |
| 4 FT | 11 FT | BEAM | W8x35 | W8x40 | W10x49 | |
| | | FOOTING | 3'x6.8' | 3'x7.5' | 3'x8.8' | |
| 14 FT | NONE | 7 FT | BEAM | W8x31 | W8x35 | W10x45 |
| | | | FOOTING | 3'x6.1' | 3'x6.7' | 3'x7.9' |
| | 2 FT | 9 FT | BEAM | W10x39 | W12x45 | W12x53 |
| | | | FOOTING | 3'x6.7' | 3'x7.4' | 3'x8.8' |
| 4 FT | 11 FT | BEAM | W10x45 | W10x49 | W12x65 | |
| | | FOOTING | 3'x7.3' | 3'x8.0' | 3'x9.5' | |
| 18 FT | NONE | 7 FT | BEAM | W10x39 | W10x45 | W10x54 |
| | | | FOOTING | 3'x6.5' | 3'x7.2' | 3'x8.4' |
| | 2 FT | 9 FT | BEAM | W8x48 | W12x53 | W12x65 |
| | | | FOOTING | 3'x7.2' | 3'x8.0' | 3'x9.4' |
| 4 FT | 11 FT | BEAM | W10x54 | W10x60 | W10x77 | |
| | | FOOTING | 3'x7.8' | 3'x8.6' | 3'x10.1' | |

FOOTING = DIAMETER X DEPTH

DAKTRONICS, INC. BROOKINGS, SD 57006

| | | | |
|----------|--------------------------------------|------------------|---------|
| PROJ: | OUTDOOR INCANDESCENT SCOREBOARDS | | |
| TITLE: | INSTALLATION SPECIFICATIONS, BA-3718 | | |
| DES. BY: | BPETERSON | DRAWN BY: | MVANDYK |
| DATE: | 12JAN00 | | |
| REVISION | APPR. BY: | 1091-R10A-126455 | |
| 02 | SCALE: | | |

| | | | | |
|------|-----------|--|-----|-------|
| 02 | 30 AUG 07 | REMOVED FAN HOODS REVISED BEAM SECTIONS & FOOTINGS. | KDD | |
| 01 | 17JUL00 | REVISED BEAM SECTIONS & FOOTINGS. | MVD | |
| REV. | DATE | DESCRIPTION | BY | APPR. |



REAR VIEW

FB-2002 & FB-2003

ELECTRICAL

POWER CABLE MUST HAVE A SEPERATE GROUND CONDUCTOR. SCOREBOARD MUST BE CONNECTED TO A GROUND ROD AT SCOREBOARD LOCATION.

FB-2002 & FB-2003

| VERTICAL DISTANCE (A) | AD PANEL HEIGHT | COMBINED HEIGHT (B) | | DESIGN WIND VELOCITY | | | |
|-----------------------|-----------------|---------------------|---------|----------------------|-----------|------------|------------|
| | | | | 70 MPH | 80 MPH | 90 MPH | 100 MPH |
| 10 FT | NONE | 18'-0" | BEAM | W8x28 | W8x31 | W8x35 | W10x39 |
| | | | FOOTING | 3.0'x5.8' | 3.0'x6.4' | 3.0'x7.0' | 3.0'x7.6' |
| 12 FT | 4 FT | 22'-0" | BEAM | W10x39 | W10x45 | W10x49 | W10x54 |
| | | | FOOTING | 3.0'x7.0' | 3.0'x7.8' | 3.0'x8.5' | 3.0'x9.2' |
| 14 FT | NONE | 20'-0" | BEAM | W8x31 | W8x35 | W10x39 | W12x45 |
| | | | FOOTING | 3.0'x6.1' | 3.0'x6.7' | 3.0'x7.7' | 3.0'x7.9' |
| 16 FT | 4 FT | 24'-0" | BEAM | W10x45 | W10x49 | 10x54 | W10x60 |
| | | | FOOTING | 3.0'x7.3' | 3.0'x8.1' | 3.0'x8.8' | 3.0'x9.5' |
| 18 FT | NONE | 22'-0" | BEAM | W8x35 | W8x40 | W10x45 | W8x48 |
| | | | FOOTING | 3.0'x6.4 | 3.0'x7.0' | 3.0'x7.7' | 3.0'x8.3' |
| 20 FT | 4 FT | 26'-0" | BEAM | W8x48 | W10x54 | W10x60 | W10x68 |
| | | | FOOTING | 3.0'x7.6' | 3.0'x8.4' | 3.0'x9.2' | 3.0'x9.9' |
| 16 FT | NONE | 24'-0" | BEAM | W10x39 | W10x45 | W10x49 | W10x54 |
| | | | FOOTING | 3.0'x6.7' | 3.0'x7.3' | 3.0'x8.0' | 3.0'x8.6' |
| 18 FT | 4 FT | 28'-0" | BEAM | W12x53 | W10x60 | W12x65 | W10x77 |
| | | | FOOTING | 3.0'x7.9' | 3.0'x8.7' | 3.0'x9.5' | 3.0'x10.2' |
| 18 FT | NONE | 26'-0" | BEAM | W12x45 | W8x48 | W10x54 | W10x60 |
| | | | FOOTING | 3.0'x6.9' | 3.0'x7.6' | 3.0'x8.2' | 3.0'x8.9' |
| 20 FT | 4 FT | 30'-0" | BEAM | W12x58 | W12x65 | W12x72 | W12x87 |
| | | | FOOTING | 3.0'x8.1' | 3.0'x8.9' | 3.0'x9.7' | 3.0'x10.5' |
| 20 FT | NONE | 28'-0" | BEAM | W8x48 | W12x53 | W10x60 | W12x65 |
| | | | FOOTING | 3.0'x7.1' | 3.0'x7.8' | 3.0'x8.5' | 3.0'x9.2' |
| 20 FT | 4 FT | 32'-0" | BEAM | W12x65 | W12x72 | W12x79 | W14x90 |
| | | | FOOTING | 3.0'x8.4' | 3.0'x9.2' | 3.0'x10.1' | 3.0'x10.9' |

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A NOTE ABOUT BEAM NOMENCLATURE:

For a typical beam, W12x30 for example, "W" stands for "Wide-Flange Beam". The first number (12) is the approximate front to rear dimension of the beam in inches. The second number (30) is the weight per foot in pounds. This numbering is standard in the steel industry. Widths vary from 8 to 14 inches in this chart.

FOOTING = DIAMETER X DEPTH

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR INCANDESCENT SCOREBOARDS

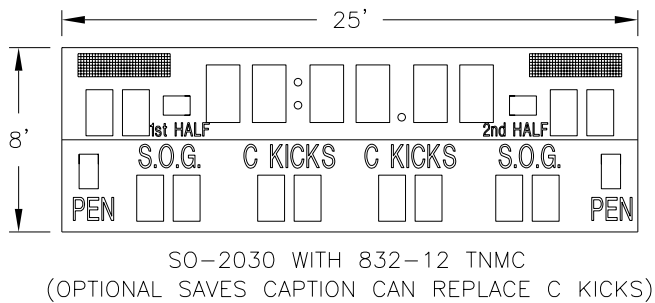
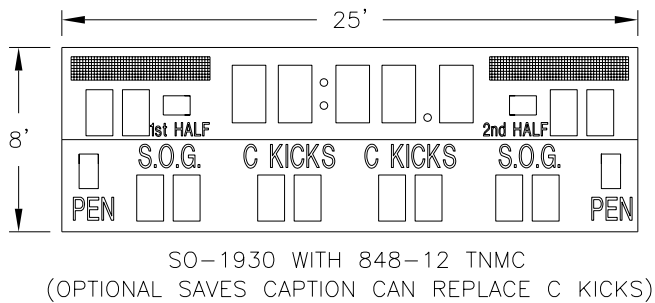
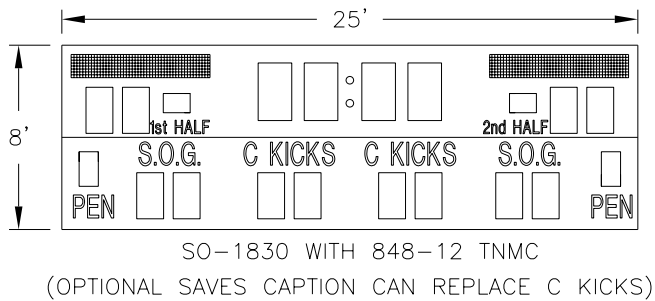
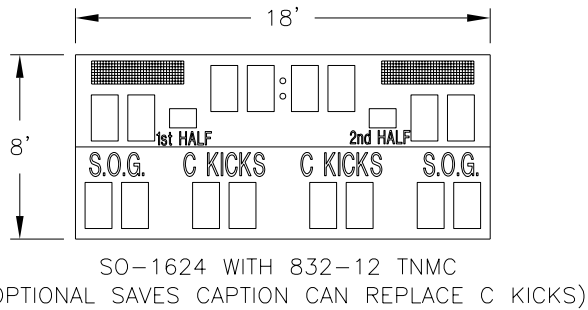
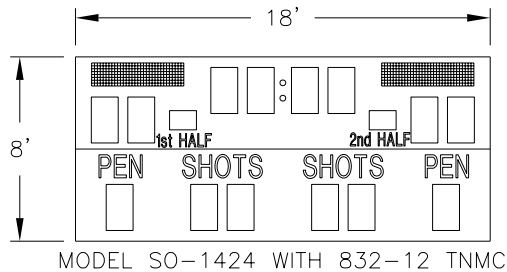
TITLE: INSTALLATION SPECIFICATIONS, FB-2002 & FB-2003

DES. BY: MVANDYK DRAWN BY: MVANDYK DATE: 15JAN01

REVISION 02 APPR. BY: SCALE: 1/8"=1'

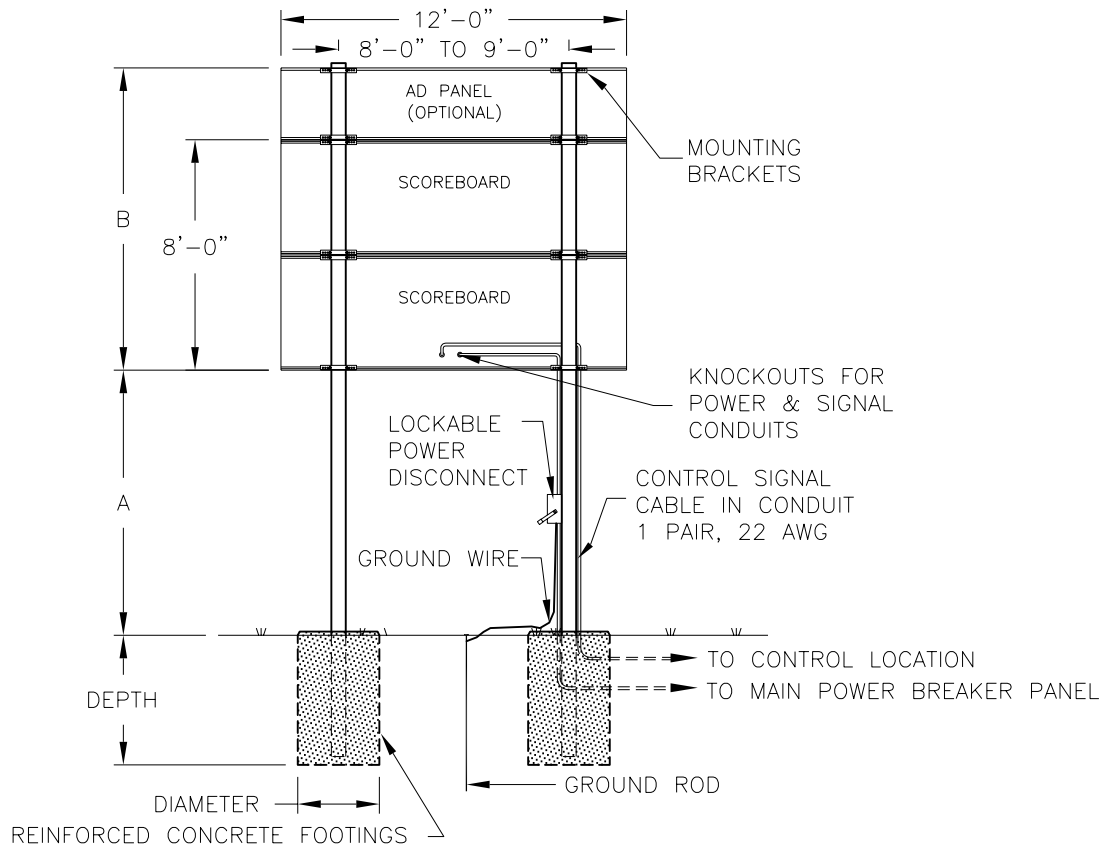
1091-E10A-128044

| | | | |
|------|----------|-----------------------------------|-------|
| 02 | 9 NOV 05 | CHANGED POLE SPACING TO 10' - 12' | JKU |
| 01 | 06AUG01 | REMOVED CONDUIT TO TOP SECTION | MCOPL |
| REV. | DATE | DESCRIPTION | BY |



| | | | |
|---|--|---------------------|--|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR INCANDESCENT SCOREBOARDS | | | |
| TITLE: MULTIPLE SECTION SOCCER SCBD MODELS W/TNMC | | | |
| DES. BY: BPETERSON | | DRAWN BY: BPETERSON | |
| | | DATE: 21FEB00 | |
| REVISION | | APPR. BY: | |
| 01 | | SCALE: 1=100 | |
| 1091-E10A-128172 | | | |

| | | | | |
|------|---------|---------------------|-------|-------|
| 01 | 13MAR03 | ADDED MODEL SO-2030 | MCOPL | |
| REV. | DATE | DESCRIPTION | BY | APPR. |



ELECTRICAL

POWER CABLE MUST HAVE A SEPERATE GROUND CONDUCTOR. SCOREBOARD MUST BE CONNECTED TO A GROUND ROD AT SCOREBOARD LOCATION.

REAR VIEW

MS-2118

FOOTING DIMENSIONS ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS, AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES.

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A NOTE ABOUT BEAM NOMENCLATURE:

For a typical beam, W12x30 for example, "W" stands for "Wide-Flange Beam". The first number (12) is the approximate front to rear dimension of the beam in inches. The second number (30) is the weight per foot in pounds. This numbering is standard in the steel industry. Widths vary from 4 to 8 inches in this chart.

MODEL MS-2118

| VERTICAL DISTANCE (A) | AD PANEL HEIGHT | COMBINED HEIGHT (B) | DESIGN WIND VELOCITY | | | |
|-----------------------|-----------------|---------------------|----------------------|-----------|-----------|-----------|
| | | | 70 MPH | 80 MPH | 100 MPH | |
| 10 FT | NONE | 8'-0" | BEAM | W8x24 | W8x24 | W8x31 |
| | | | FOOTING | 3.0'x4.9' | 3.0'x5.4' | 3.0'x6.4' |
| | 2 FT | 10'-0" | BEAM | W8x28 | W8x31 | W8x35 |
| | | | FOOTING | 3.0'x5.4' | 3.0'x5.9' | 3.0'x7.0' |
| | 4 FT | 12'-0" | BEAM | W8x31 | W8x35 | W12x45 |
| | | | FOOTING | 3.0'x5.9' | 3.0'x6.5' | 3.0'x7.6' |
| 12 FT | NONE | 8'-0" | BEAM | W8x24 | W8x28 | W8x35 |
| | | | FOOTING | 3.0'x5.1' | 3.0'x5.6' | 3.0'x6.6' |
| | 2 FT | 10'-0" | BEAM | W8x31 | W8x35 | W12x45 |
| | | | FOOTING | 3.0'x5.7' | 3.0'x6.2' | 3.0'x7.3' |
| | 4 FT | 12'-0" | BEAM | W8x35 | W10x39 | W8x48 |
| | | | FOOTING | 3.0'x6.1' | 3.0'x6.7' | 3.0'x7.9' |
| 14 FT | NONE | 8'-0" | BEAM | W8x28 | W8x31 | W10x39 |
| | | | FOOTING | 3.0'x5.4' | 3.0'x5.9' | 3.0'x7.0' |
| | 2 FT | 10'-0" | BEAM | W10x33 | W10x39 | W8x48 |
| | | | FOOTING | 3.0'x5.9' | 3.0'x6.5' | 3.0'x7.6' |
| | 4 FT | 12'-0" | BEAM | W10x39 | W10x45 | W12x53 |
| | | | FOOTING | 3.0'x6.4' | 3.0'x7.0' | 3.0'x8.3' |

FOOTING = DIAMETER X DEPTH

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR INCANDESCENT SCOREBOARDS

TITLE: INSTALLATION SPECIFICATIONS, MS-2118

DES. BY: BPETERSON

DRAWN BY: BPETERSON

DATE: 22FEB00

REVISION

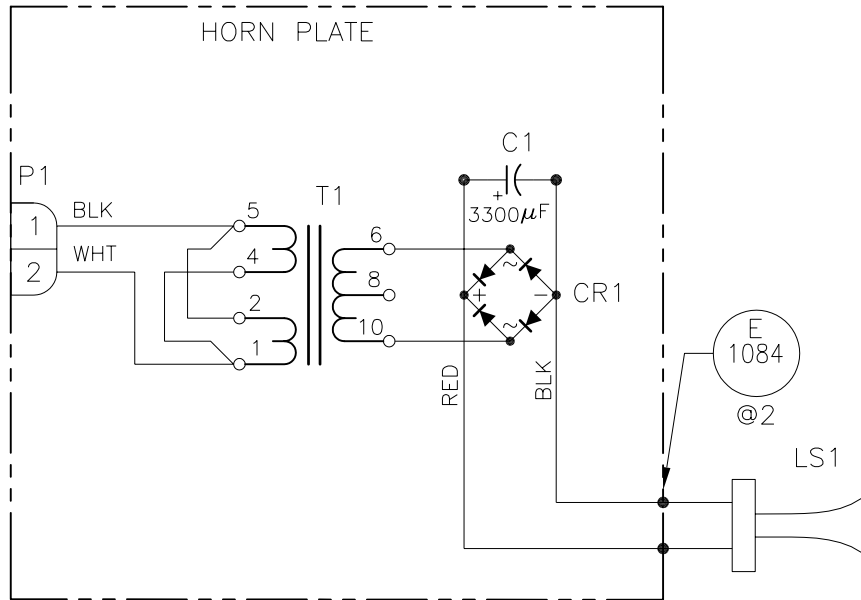
APPR. BY:

SCALE: 1=80

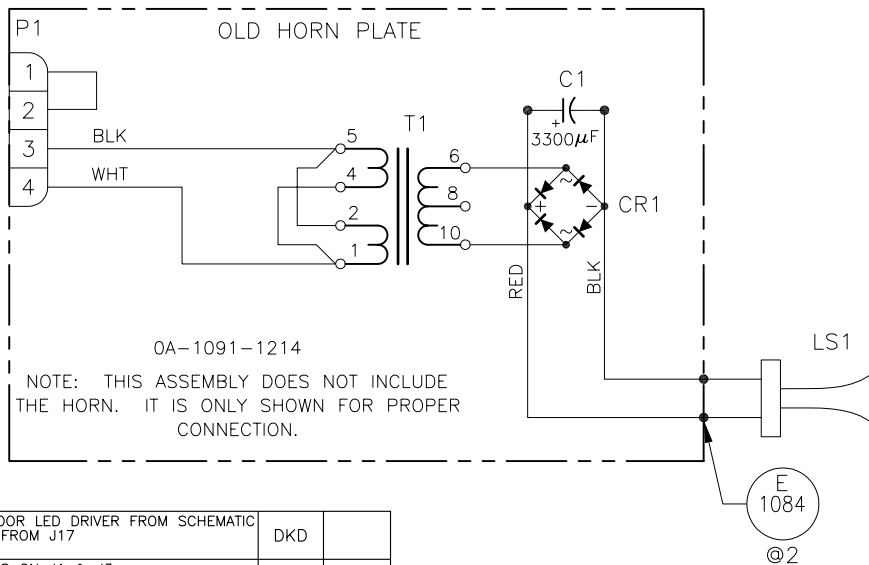
1091-R10A-128206

| | | | | |
|------|---------|------------------------------------|-----|-------|
| 1 | 21DEC00 | REVISED COLUMN SECTIONS & FOOTINGS | MVD | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

0A-1091-1214
12V TRUMPET HORN PLATE ASSY

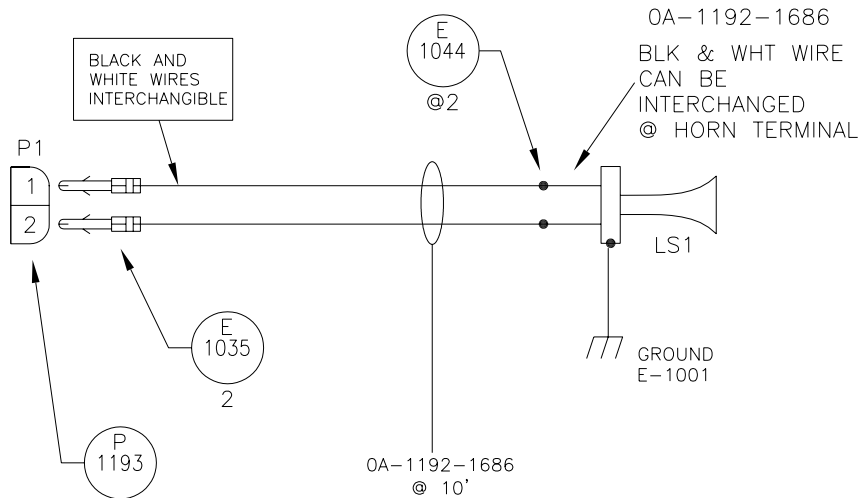


BEFORE APRIL 2006



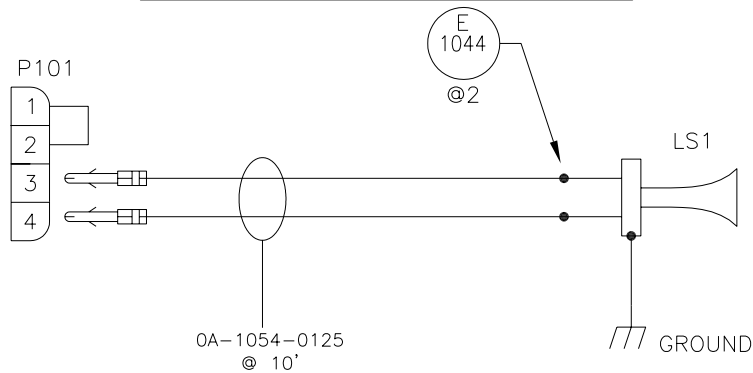
| | | | | |
|------|------------|--|-----|-------|
| 05 | 13 APR 07 | REMOVED OUTDOOR LED DRIVER FROM SCHEMATIC REMOVED WIRE FROM J17 | DKD | |
| 04 | 11 SEPT 06 | CHANGED LABELS ON J1 & J3, REMOVED WIRE FROM J17 | AMG | |
| 03 | 5/23/06 | CORRECTED CAP LABEL FROM C-1115 TO C-1158 | SJC | |
| 02 | 23 MAR 06 | ADDED SOLIDSTATE HORN RELAY ASSY TO -1214. | DMD | |
| 01 | 18 MAY 01 | PART NUMBER WAS CHANGED FROM -1213 TO -1214. | MWM | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

| | |
|--------------------------------------|--|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | |
| PROJ: | STANDARD SCOREBOARDS |
| TITLE: | SCHEMATIC, OUTDOOR SCBD 12VDC TRUMPET HORN, AS5K |
| DES. BY: | DRAWN BY: JCM |
| | DATE: 06MAR00 |
| REVISION | APPR. BY: |
| 05 | NONE |
| 1091-R03A-128938 | |



SCOREBOARDS BUILT BEFORE APRIL 2006

OA-1091-0469
OA-1192-1112



| | | | | |
|------|------------|--|-----|-------|
| 06 | 13 APR 07 | UPDATED NOTES, CHANGED LABEL ON J1 & J3, REMOVED WIRE FROM J17. | AMG | |
| 05 | 11 SEPT 06 | UPDATED NOTES, CHANGED LABEL ON J1 & J3, REMOVED WIRE FROM J17. | AMG | |
| 04 | 8/3/06 | ADDED COMMIT TO WIRE OA-1054-0125 PER ECO 046876 | BDV | |
| 03 | 30 JUN 06 | CHANGED WIRES FROM W-1100 & W-1092 TO CABLE OA-1054-0125 PER ECO 49671 | AFL | |
| 02 | 23 MAR 06 | ADDED OA-1192-1686 TO AND SOLIDSTATE HORN KIT | DMD | |
| 01 | 07SEP00 | ADDED GND WIRE TO ASSEMBLY | CMC | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

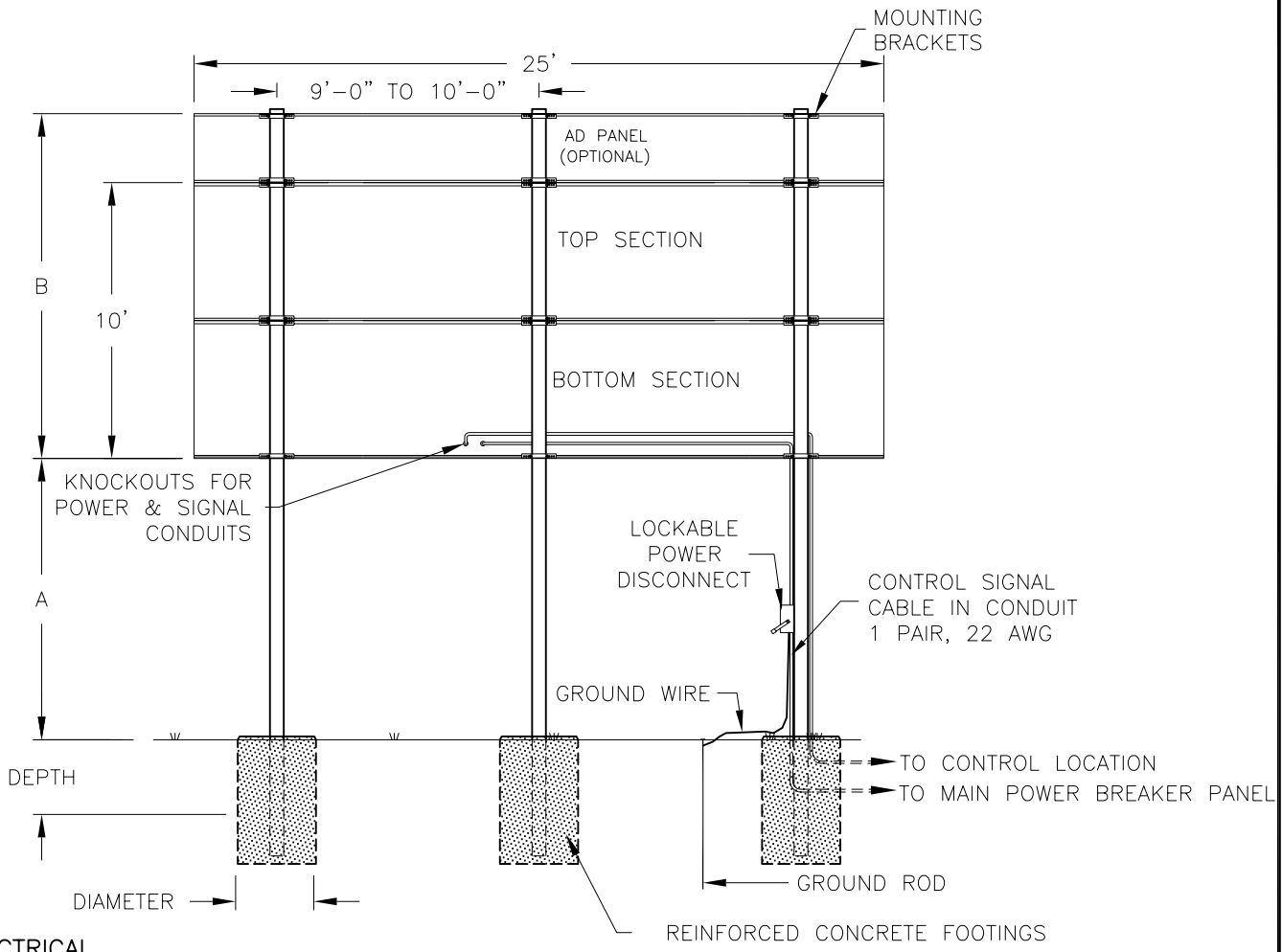
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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: STANDARD OUTDOOR SCOREBOARDS
TITLE: SCHEMATIC; 120VAC TRUMPET HORN

DES. BY: _____ DRAWN BY: RASMUS DATE: 16MAY00

| | | |
|----------|------------|------------------|
| REVISION | APPR. BY: | 1091-R03A-132173 |
| 06 | SCALE: 1=1 | |



ELECTRICAL

POWER CABLE MUST HAVE A SEPERATE GROUND CONDUCTOR. SCOREBOARD MUST BE CONNECTED TO A GROUND ROD AT SCOREBOARD LOCATION.

REAR VIEW
MS-2009

FOOTING DIMENSIONS ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS, AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES.

COLUMNS AND FOOTINGS MUST BE DESIGNED BY A STATE LICENCED ENGINEER. DAKTRONICS DOES NOT ASSUME ANY LIABILITY FOR ANY INSTALLATIONS DERIVED FROM THIS INFORMATION OR DESIGNED AND INSTALLED BY OTHERS.

| MODEL MS-2009 | | | | | | |
|-----------------------|-----------------|---------------------|---------|----------------------|----------|----------|
| VERTICAL DISTANCE (A) | AD PANEL HEIGHT | COMBINED HEIGHT (B) | | DESIGN WIND VELOCITY | | |
| | | | | 70 MPH | 80 MPH | 100 MPH |
| 10 FT | NONE | 10'-0" | BEAM | W12X26 | W12X26 | W10X33 |
| | | | FOOTING | 3'x7.5' | 3'x8.2' | 3'x9.8' |
| | 2 FT | 12'-0" | BEAM | W14X30 | W10X33 | W12X40 |
| | | | FOOTING | 3'x8.2' | 3'x9.0' | 3'x10.7' |
| | 4 FT | 14'-0" | BEAM | W10X33 | W10X39 | W12X45 |
| | | | FOOTING | 3'x8.8' | 3'x9.7' | 3'x11.5' |
| 12 FT | NONE | 10'-0" | BEAM | W14X30 | W10X33 | W12X40 |
| | | | FOOTING | 3'x7.8' | 3'x8.6' | 3'x10.2' |
| | 2 FT | 12'-0" | BEAM | W10X33 | W14X38 | W14X43 |
| | | | FOOTING | 3'x8.5' | 3'x9.4' | 3'x11.1' |
| | 4 FT | 14'-0" | BEAM | W10X39 | W12X40 | W14X53 |
| | | | FOOTING | 3'x9.1' | 3'x10.1' | 3'x11.9' |
| 14 FT | NONE | 10'-0" | BEAM | W10X33 | W10X35 | W12X40 |
| | | | FOOTING | 3'x8.1' | 3'x9.0' | 3'x10.6' |
| | 2 FT | 12'-0" | BEAM | W10X38 | W12X40 | W14X48 |
| | | | FOOTING | 3'x8.8' | 3'x9.7' | 3'x11.5' |
| | 4 FT | 14'-0" | BEAM | W12X40 | W12X45 | W14X61 |
| | | | FOOTING | 3'x9.5' | 3'x10.4' | 3'x12.4' |

FOOTING = DIAMETER X DEPTH

ASSUMPTIONS: UBC 1997 CODE
UBC SOIL CLASS 3 (2000 PSF)

A NOTE ABOUT BEAM NOMENCLATURE:

For a typical beam, W12x30 for example, "W" stands for "Wide-Flange Beam". The first number (12) is the approximate front to rear dimension of the beam in inches. The second number (30) is the weight per foot in pounds. This numbering is standard in the steel industry. Widths vary from 4 to 8 inches in this chart.

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|-----------|---|-------|-------|
| 02 | 07 APR 03 | EXTENDED 'B' DIMENSION TO TOP OF ADD PANEL. | JJS | |
| 01 | 06AUG01 | ADDED POLE TO CENTER OF SCOREBOARD | MCOPL | |

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR INCADESCENT SCOREBOARDS

TITLE: INSTALLATION SPECIFICATIONS, MS-2009

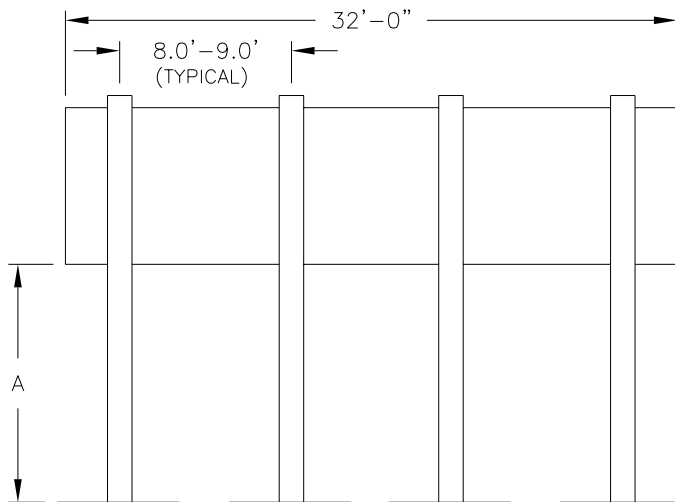
DES. BY: RNEYENS DRAWN BY: RNEYENS DATE: 9FEB01

REVISION APPR. BY: SCALE: 1=80 1091-R10A-144415

MODELS FB-1630L & FB-1830L

| DISTANCE TO BOTTOM OF SCOREBOARD (FT) | DOES SCOREBOARD HAVE ATTACHED AD PANEL? | DESIGN WIND VELOCITY (MPH) | | |
|---------------------------------------|---|----------------------------|----------------------|----------------------|
| | | 70 | 80 | 100 |
| A | | | | |
| 10 | NO | W10x22 3.0 X 6.5 | W10x22 3.0 X 7.2 | W12x26 3.0 X 8.5 |
| | YES | W14x30 3.0 X 7.9 | W10x33 3.0 X 8.7 | W16x40 3.0 X 10.3 |
| 12 | NO | W8x24 3.0 X 6.8 | W12x26 3.0 X 7.5 | W14x30 3.0 X 8.9 |
| | YES | W10x33 3.0 X 8.2 | W12x35 3.0 X 9.0 | W12x40 3.0 X 10.7 |
| 14 | NO | W12x26 3.0 X 7.5 | W10x30 3.0 X 8.3 | W14x38 3.0 X 9.8 |
| | YES | W10x33 3.0 X 8.5 | W12x40 3.0 X 9.4 | W14x48 3.0 X 11.1 |
| 16 | NO | W14x30 3.0 X 7.4 | W10x33 3.0 X 8.2 | W12x40 3.0 X 9.6 |
| | YES | W10x39 3.0 X 8.8 | W14x43 3.0 X 9.7 | W14x53 3.0 X 11.4 |
| 18 | NO | W10x33 3.0 X 7.7 | W14x38 3.0 X 8.4 | W12x40 3.0 X 9.9 |
| | YES | W12x40 3.0 X 9.0 | W14x48 3.0 X 10.0 | W14x61 3.0 X 11.7 |
| 20 | NO | W10x39 3.0 X 8.4 | W12x40 3.0 X 9.2 | W14x48 3.0 X 10.3 |
| | YES | W12x45 3.0 X 9.4 | W14x53 3.0 X 10.3 | W14x61 3.0 X 12.2 |

W6x12 ← RECOMMENDED BEAM SECTION FOR MOUNTING SCOREBOARD
 2.00 X 4.25 ← RECOMMENDED FOOTINGS IN FEET (DIAMETER X DEPTH)



REAR VIEW

NOTE:
 RECOMMENDATIONS FOR A DISPLAY WITH AN ATTACHED AD PANEL WERE CALCULATED USING A 48" TALL AD PANEL.
 UBC 97 CODE USED WITH SOIL CLASS 3.

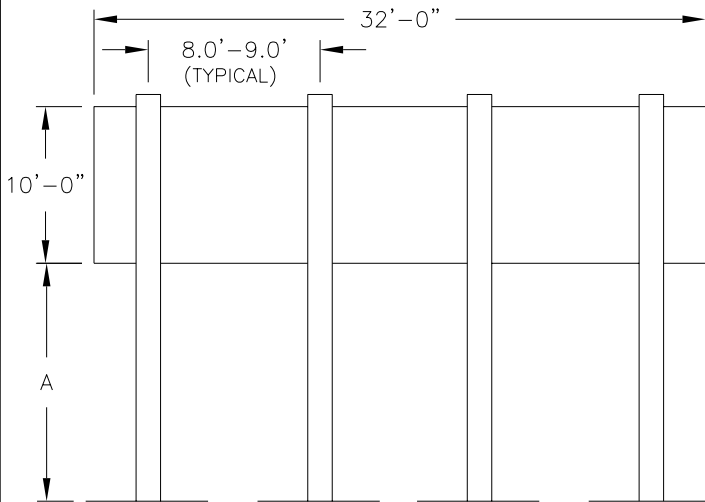
INFORMATION GIVEN IS FOR ESTIMATING PURPOSES ONLY. COLUMNS AND FOOTINGS MUST BE DESIGNED BY A STATE LICENCED ENGINEER. DAKTRONICS DOES NOT ASSUME ANY LIABILITY FOR ANY INSTALLATIONS DERIVED FROM THIS INFORMATION OR DESIGNED AND INSTALLED BY OTHERS.

| | |
|---|-------------------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | |
| PROJ: OUTDOOR SCOREBOARDS | |
| TITLE: BEAM AND FOOTING RECOMMENDATIONS, FB-XX30L | |
| DES. BY: MCOPL/RNEYEN | DRAWN BY: MCOPLAN |
| DATE: 04JAN02 | |
| REVISION | APPR. BY: |
| | SCALE: NONE |
| 1091-R08A-158779 | |

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

| MODELS FB-2001 & FB-2004 | | | | |
|--|--|----------------------------|----------------------|----------------------|
| DISTANCE TO BOTTOM OF SCOREBOARD (FT) | DOES SCOREBOARD HAVE ATTACHED AD PANEL? | DESIGN WIND VELOCITY (MPH) | | |
| | | 70 | 80 | 100 |
| A | | | | |
| 10 | NO | W8x24 3.0 X 7.2 | W12x26 3.0 X 7.9 | W10x33 3.0 X 9.4 |
| | YES | W10x33 3.0 X 8.5 | W10x39 3.0 X 9.4 | W14x43 3.0 X 11.1 |
| 12 | NO | W12x26 3.0 X 7.5 | W12x30 3.0 X 8.3 | W14x38 3.0 X 9.8 |
| | YES | W14x38 3.0 X 8.8 | W12x40 3.0 X 9.7 | W12x50 3.0 X 11.5 |
| 14 | NO | W12x30 3.0 X 7.8 | W10x33 3.0 X 8.6 | W12x40 3.0 X 10.2 |
| | YES | W12x40 3.0 X 9.1 | W12x45 3.0 X 10.0 | W12x58 3.0 X 11.9 |
| 16 | NO | W10x33 3.0 X 8.1 | W10x39 3.0 X 9.0 | W12x45 3.0 X 10.6 |
| | YES | W14x43 3.0 X 9.4 | W12x50 3.0 X 10.4 | W14x61 3.0 X 12.2 |
| 18 | NO | W10x39 3.0 X 8.4 | W12x40 3.0 X 9.2 | W12x50 3.0 X 10.9 |
| | YES | W14x48 3.0 X 9.7 | W12x53 3.0 X 10.7 | W16x67 3.0 X 12.6 |
| 20 | NO | W12x45 3.0 X 9.4 | W12x50 3.0 X 10.3 | W14x61 3.0 X 12.2 |
| | YES | W12x53 3.0 X 10.0 | W14x61 3.0 X 11.0 | W14x74 3.0 X 13.0 |

W6x12 ← RECOMMENDED BEAM SECTION FOR MOUNTING SCOREBOARD
 2.00 X 4.25 ← RECOMMENDED FOOTINGS IN FEET (DIAMETER X DEPTH)



REAR VIEW

NOTE:
 RECOMMENDATIONS FOR A DISPLAY WITH
 AN ATTACHED AD PANEL WERE CALCULATED
 USING A 48" TALL AD PANEL.

UBC 97 CODE USED WITH SOIL CLASS 3.

INFORMATION GIVEN IS FOR ESTIMATING
 PURPOSES ONLY. COLUMNS AND FOOTINGS
 MUST BE DESIGNED BY A STATE LICENCED
 ENGINEER. DAKTRONICS DOES NOT ASSUME
 ANY LIABILITY FOR ANY INSTALLATIONS
 DERIVED FROM THIS INFORMATION OR
 DESIGNED AND INSTALLED BY OTHERS.

| | |
|--|-------------------|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | |
| PROJ: OUTDOOR SCOREBOARDS | |
| TITLE: BEAM AND FOOTING RECOMMENDATIONS, FB-200X | |
| DES. BY: MCOPL/RNEYEN | DRAWN BY: MCOPLAN |
| DATE: 04JAN02 | |
| REVISION | APPR. BY: |
| | SCALE: NONE |
| 1091-R08A-160931 | |

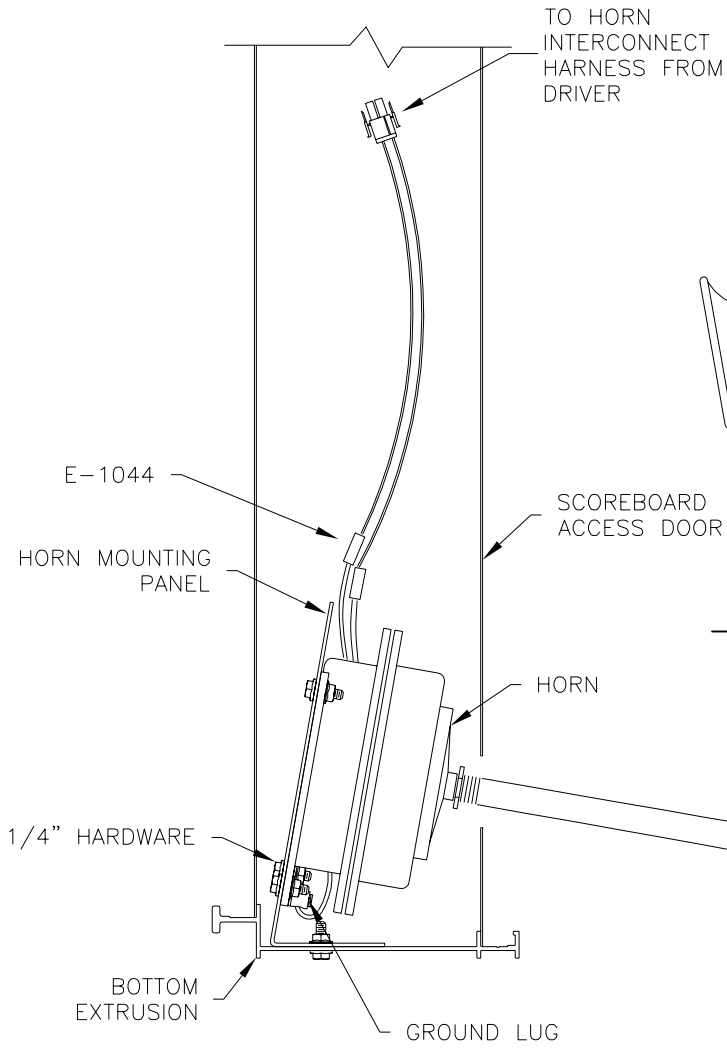
| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|-----------|---|-----|-------|
| 01 | 07 APR 03 | ADDED 10'-0" DIMENSION TO LEFT OF SCOREBOARD. | JJS | |

| | | | | |
|------|------------|---|-----|-------|
| REV. | DATE | DESCRIPTION | BY | APPR. |
| 01 | 22 DEC 04 | REPLACED E-1084 WITH E-1044 | ADH | |
| 02 | 11 SEPT 06 | CHANGED CONNECTOR FROM 4 PIN TO 2 PIN ON THE HORN HARNESS | AMG | |

| | |
|-------------------------------|------------------|
| PROJ: OUTDOOR LED SCOREBOARDS | |
| TITLE: 120V AC HORN MOUNTING | |
| DES. BY: MCOPLAN | DATE: 31 JAN 02 |
| REVISION | APPR. BY: |
| 02 | |
| SCALE: 1=5 | 1192-E10A-162100 |

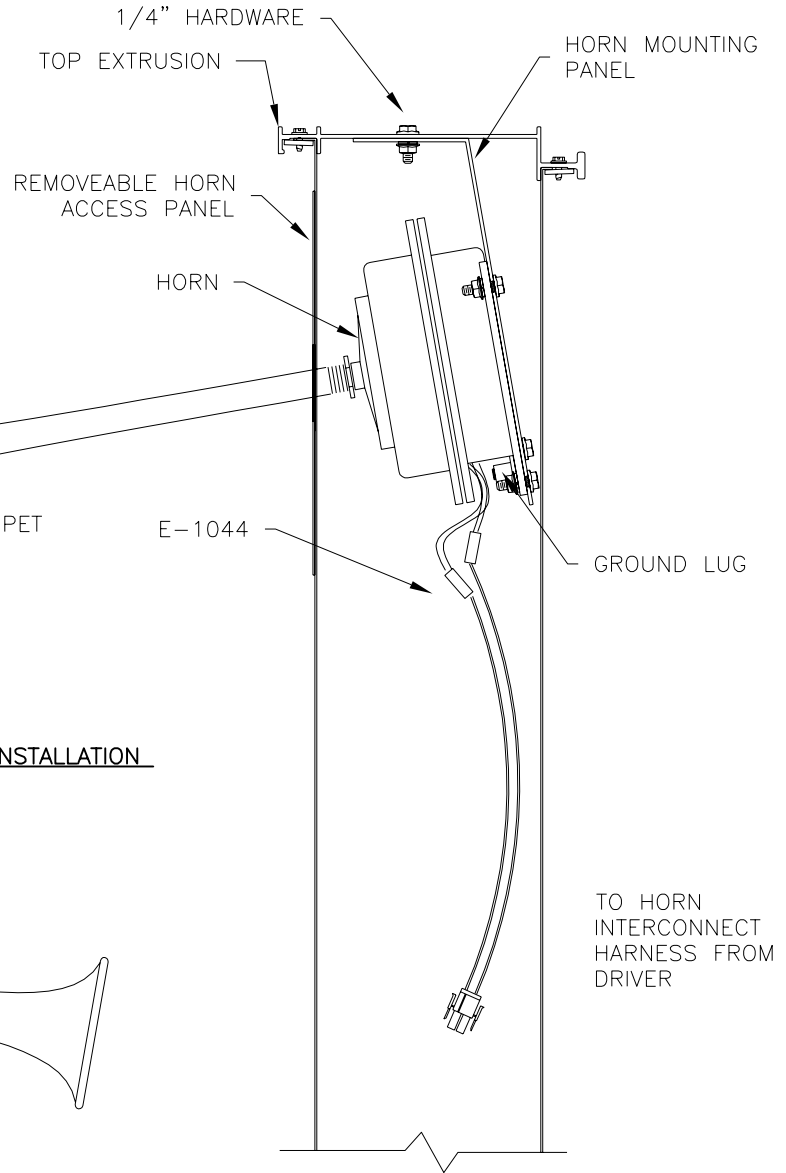
DAKTRONICS, INC. BROOKINGS, SD 57006

120V HORN MOUNTING FOR BOTTOM EXTRUSION



NOTE:
HORN IS TO BE MOUNTED BEHIND ACCESS DOOR THAT HAS 2" DIAMETER KNOCKOUT.

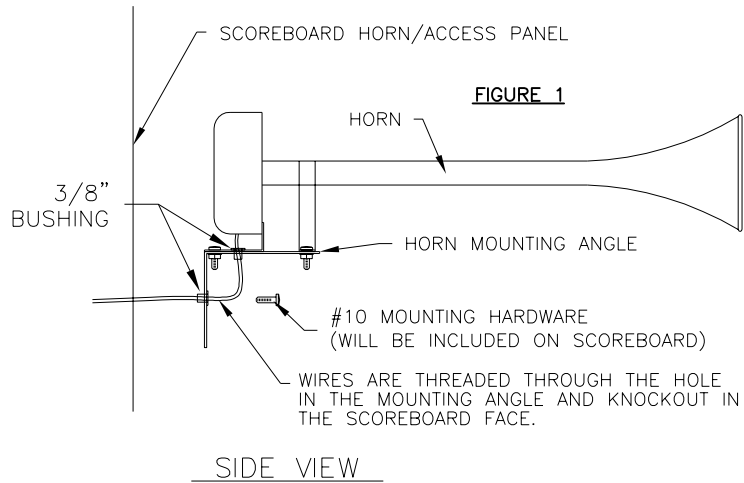
120V HORN MOUNTING FOR UPPER EXTRUSION



NOTE:
HORN IS TO BE MOUNTED BEHIND THE REMOVEABLE HORN ACCESS PANEL.

SIDE VIEW OF HORN INSTALLATION

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



- IF A HORN HAS BEEN ORDERED WITH A HORN, FOLLOW THESE INSTRUCTIONS:
 *NOTE THAT THE HORN ACCESS PANEL WILL BE A REMOVEABLE PANEL ON A TWO SECTION SCOREBOARD OR A DOOR ON A SINGLE SECTION SCOREBOARD. BEFORE PROCEEDING, REMOVE THE REMOVEABLE ACCESS PANEL OR OPEN THE DOOR. SEE FIGURE 2 AND 3.
- 1) THE KNOCKOUT ON THE SCOREBOARD HAS BEEN REMOVED AND THE HORN POWER ENCLOSURE ASSEMBLY HAS BEEN INTERNALLY MOUNTED BY DAKTRONICS. THE HORN MOUNTING ANGLE HAS BEEN ATTACHED TO THE HORN BY DAKTRONICS.
 - 2) THE HORN HAS BEEN PACKAGED IN BUBBLE WRAP AND WILL BE LOCATED INSIDE THE SCOREBOARD BEHIND THE DOOR (OR THE MIDDLE-MOST DOOR IF THERE ARE MORE THAN ONE ON THE SCOREBOARD.) REMOVE THE HORN WITH ATTACHED HORN MOUNTING ANGLE FROM THE PACKAGING.
 - 3) TO MOUNT THE HORN MOUNTING ANGLE (WITH ATTACHED HORN), LOCATE THE REMOVED KNOCKOUT AND THE TWO MOUNTING HOLES ON THE SCOREBOARD. REMOVE THE TWO #10 SCREWS FROM THE MOUNTING HOLES AND ATTACH THE HORN MOUNTING ANGLE TO THE SCOREBOARD WHILE FEEDING THE TWO GREY WIRES THROUGH THE KNOCKOUT. SEE FIGURE 2.
 - 4) LOCATE THE TWO RED AND GREY WIRES ATTACHED TO THE HORN POWER ENCLOSURE ASSEMBLY. ATTACH ONE OF THE GREY HORN WIRES TO THE RED WIRE AND ATTACH THE OTHER GREY WIRE TO THE BLACK WIRE. USE INCLUDED WIRE NUTS. SEE FIGURE 3.

- IF THE HORN IS AN ADDITION TO AN EXISTING SCOREBOARD, FOLLOW THESE INSTRUCTIONS:
- 1) THE 2" KNOCKOUT WILL HAVE TO BE REMOVED TO MOUNT THE HORN. LOCATE THE REMOVEABLE HORN ACCESS PANEL WITH THE 2" KNOCKOUT (TWO SECTION SCOREBOARDS) OR LOCATE THE DOOR WITH THE 2" KNOCKOUT (SINGLE SECTION SCOREBOARDS). REMOVE THE KNOCKOUT. SEE FIGURE 2.
 - 2) TO MOUNT THE HORN POWER ENCLOSURE ASSEMBLY, OPEN THE DOOR WITH THE 2" KNOCKOUT (SINGLE SECTION SCOREBOARDS) OR OPEN THE CENTRAL MOST DOOR (TWO SECTION SCOREBOARDS). DRILL TWO 7/32" HOLES 4" APART AND ATTACH THE HORN POWER ENCLOSURE ASSEMBLY USING RIVETS.
 - 3) ATTACH THE HORN TO THE INCLUDED HORN MOUNTING ANGLE WITH THE INCLUDED #10 HARDWARE. SEE FIGURE 1.
 - 4) REFER TO THE STEP 3 AND 4 IN THE PREVIOUS MOUNTING INSTRUCTIONS.

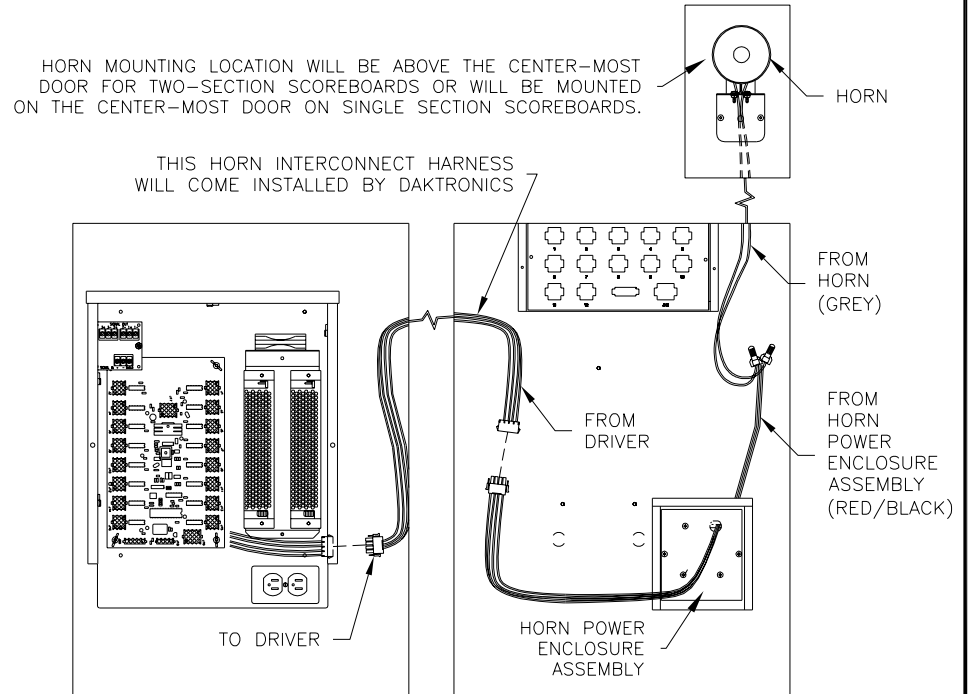
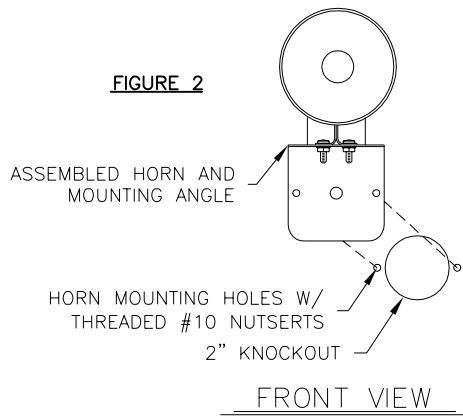


FIGURE 3



| | |
|------------------|---------------------------|
| PROJ: | OUTDOOR LED SCOREBOARDS |
| TITLE: | HORN INSTALLATION; 12V DC |
| DES. BY: | MCOPLAN |
| DRAWN BY: | MCOPLAN |
| DATE: | 31JAN02 |
| REVISION | APPR. BY: |
| 00 | SCALE: 1=12 |
| 1192-E10A-162102 | |

DAKTRONICS, INC. BROOKINGS, SD 57006

OP-1192-0067 UNCOATED OR OP-1192-0068 COATED
4 COLUMN MASC LED DRIVER

| J-27 RS232 COM | |
|----------------|----------|
| PIN | FUNCTION |
| 1 | RX-P |
| 2 | TX-P |
| 3 | GND-N |
| 4 | +12V -P |
| 5 | DCD-P |
| 6 | RESET-P |

| 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 |

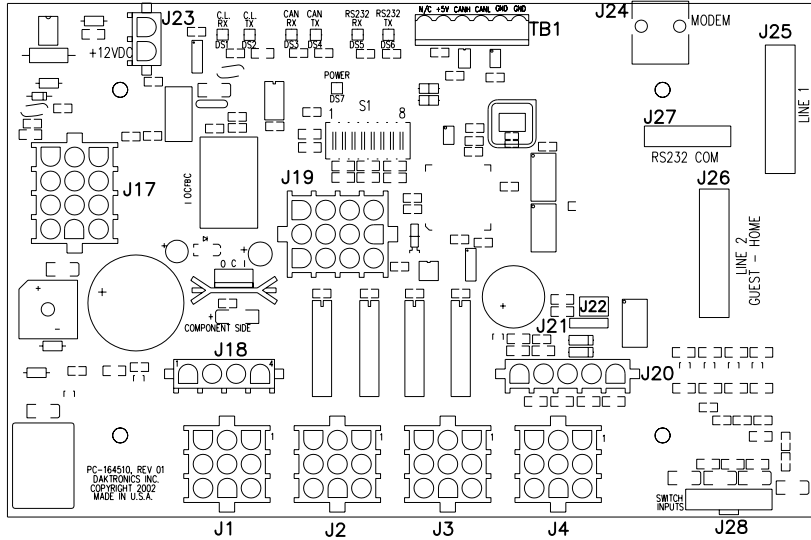
| TB1 CAN | |
|---------|----------|
| PIN | FUNCTION |
| 1 | N/C |
| 2 | +5V-P |
| 3 | CANH-P |
| 4 | CANL-P |
| 5 | GND-N |
| 6 | GND-N |

| J24 | |
|-----|---------------|
| PIN | FUNCTION |
| 1 | MODEM_RTS-P |
| 2 | MODEM_RESET-P |
| 3 | MODEM_TX-P |
| 4 | GND-N |
| 5 | MODEM_RX-P |
| 6 | MODEM_DCD-P |

| J23 +12VDC | |
|------------|----------|
| PIN | FUNCTION |
| 1 | +12VDC-P |
| 2 | GND-N |

| J17 MAIN | |
|----------|----------|
| PIN | FUNCTION |
| 1 | CLIN-P |
| 2 | CLIN-N |
| 3 | 232IN-P |
| 4 | CLOUT-P |
| 5 | CLOUT-N |
| 6 | 16VAC-P |
| 7 | GND-N |
| 8 | N/C |
| 9 | 16VAC-N |
| 10 | GND-N |
| 11 | N/C |
| 12 | +VBB-P |

| J18 RELAY | |
|-----------|-----------|
| PIN | FUNCTION |
| 1 | HORNOUT-N |
| 2 | AUXOUT2-N |
| 3 | 120SW1-N |
| 4 | 120SW1-P |



| J25 | | | |
|----------|-----|-----|------------|
| FUNCTION | PIN | PIN | FUNCTION |
| L1_ID0-P | 1 | 20 | RED1-P |
| L1_ID1-P | 2 | 19 | GRN1-P |
| GND-N | 3 | 18 | L1_LATCH-P |
| GND-N | 4 | 17 | L1_DIM-P |
| GND-N | 5 | 16 | RED2-P |
| GRN2-P | 6 | 15 | RED3-P |
| GND-N | 7 | 14 | L1_CLK-P |
| GND-N | 8 | 13 | GRN3-P |
| L1_ID2-P | 9 | 12 | RED4-P |
| L1_ID3-P | 10 | 11 | GRN4-P |

| J26 | | | |
|----------|-----|-----|------------|
| FUNCTION | PIN | PIN | FUNCTION |
| L2_ID0-P | 1 | 20 | RED1-P |
| L2_ID1-P | 2 | 19 | GRN1-P |
| GND-N | 3 | 18 | L2_LATCH-P |
| GND-N | 4 | 17 | L2_DIM-P |
| GND-N | 5 | 16 | RED2-P |
| GRN2-P | 6 | 15 | RED3-P |
| GND-N | 7 | 14 | L2_CLK-P |
| GND-N | 8 | 13 | GRN3-P |
| L2_ID2-P | 9 | 12 | RED4-P |
| L2_ID3-P | 10 | 11 | GRN4-P |

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

| J20 PROTOCOL | |
|--------------|----------|
| PIN | FUNCTION |
| 1 | GND |
| 2 | PR0-N |
| 3 | PR1-N |
| 4 | PR2-N |
| 5 | PR3-N |

| J21 ISP | |
|---------|----------|
| PIN | FUNCTION |
| 1 | VFP-P |
| 2 | BKD-P |
| 3 | GND-N |
| 4 | RESET-P |

| J28 SWITCH | |
|------------|-----------|
| PIN | FUNCTION |
| 1 | SWITCH1-P |
| 2 | SWITCH1-N |
| 3 | SWITCH2-P |
| 4 | SWITCH2-N |
| 5 | SWITCH3-P |
| 6 | SWITCH3-N |
| 7 | SWITCH4-P |
| 8 | SWITCH4-N |

| J22 ISP | |
|---------|----------|
| PIN | FUNCTION |
| 1 | BKD-P |
| 2 | GND-N |
| 3 | N/C |
| 4 | RESET-P |
| 5 | VFP-P |
| 6 | +5V-P |

NOTE:

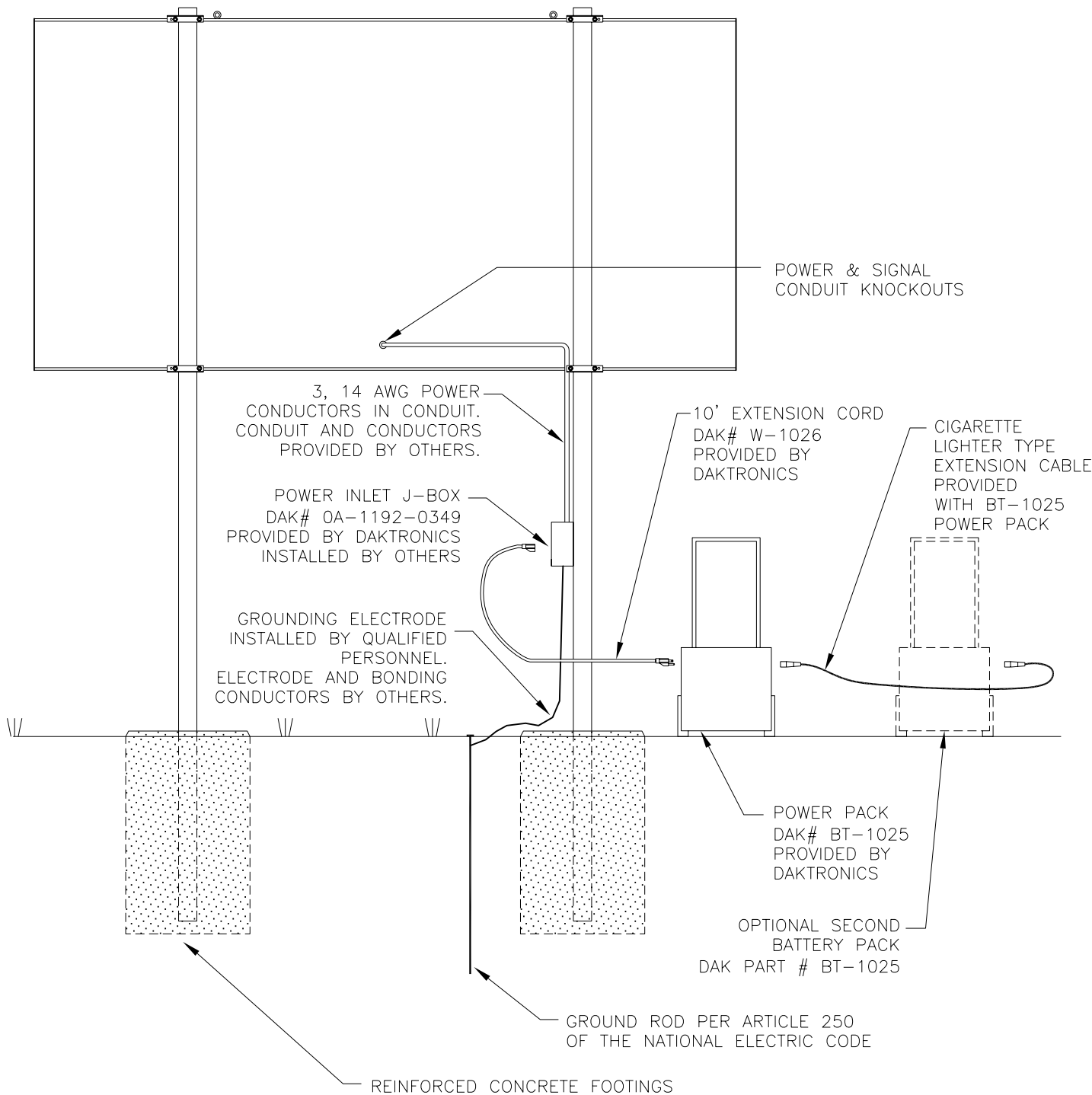
- RED LED CL RX WILL BE ON OR BLINKING WHEN THE DRIVER IS RECEIVING SIGNAL AND OFF WHEN THERE IS NO SIGNAL WITH CL
- GREEN LED CL TX WILL BE ON OR BLINKING WHEN THE DRIVER IS RECEIVING SIGNAL AND OFF WHEN THERE IS NO SIGNAL WITH CL
- RED LED CAN RX WILL BE BLINKING WHEN THE DRIVER IS RECEIVING SIGNAL AND ON WHEN THERE IS NO SIGNAL WITH CAN
- GREEN LED CAN TX WILL BE BLINKING WHEN THE DRIVER IS RECEIVING SIGNAL AND ON WHEN THERE IS NO SIGNAL WITH CAN
- IF THERE IS NOT A CAN DEVICE CONNECTED TO TB1, CAN RX AND TX LEDS WILL BE ON AND STEADY.
- RED LED RS232 RX WILL BE ON OR BLINKING WHEN THE DRIVER IS RECEIVING SIGNAL AND OFF WHEN THERE IS NO SIGNAL WITH RS232
- GREEN LED RS232 TX6 WILL BE ON OR BLINKING WHEN THE DRIVER IS RECEIVING SIGNAL AND OFF WHEN THERE IS NO SIGNAL WITH RS232
- GREEN LED POWER INDICATES THE DRIVER HAS POWER

| | | | | | |
|------|-----------|---|-----|--|--|
| 3 | 27 NOV 04 | UPDATE DRIVER J-27 FOR CORRECT PIN OUT | DMD | DAKTRONICS, INC. BROOKINGS, SD 57006 | |
| 2 | 16 MAY 03 | UPDATE DRIVER FOR LATEST REVISION OF MASC DRIVER. | CJB | PROJ: OUTDOOR LED SCOREBOARDS | |
| 1 | 06JUN02 | ADDED LED LABELS ADDED NEW NOTES | JJS | TITLE: 4 COLUMN MASC LED DRIVER SPECIFICATIONS | |
| REV. | DATE | DESCRIPTION | BY | APPR. | DES. BY: JSPAHR DRAWN BY: JSPAHR DATE: 29 APR 02 |
| | | | | REVISION: 03 | APPR. BY: 1=2 SCALE: 1=2 |
| | | | | | 1192-R07A-166216 |

**** NOTE ****

1. ALL ELECTRICAL INSTALLATIONS MUST MEET LOCAL AND NATIONAL ELECTRICAL CODES. INSTALLATION MUST BE PERFORMED BY QUALIFIED PERSONNEL
2. BE SURE TO CHARGE BATTERIES IN POWER PACK COMPLETELY BEFORE FIRST USE.
3. CHARGE BATTERY COMPLETELY AFTER EACH USE
4. POWER PACK INTENDED FOR TEMPORARY POWER FOR SCOREBOARDS, DO NOT LEAVE OUTSIDE, STORE IN A COOL, DRY AREA.

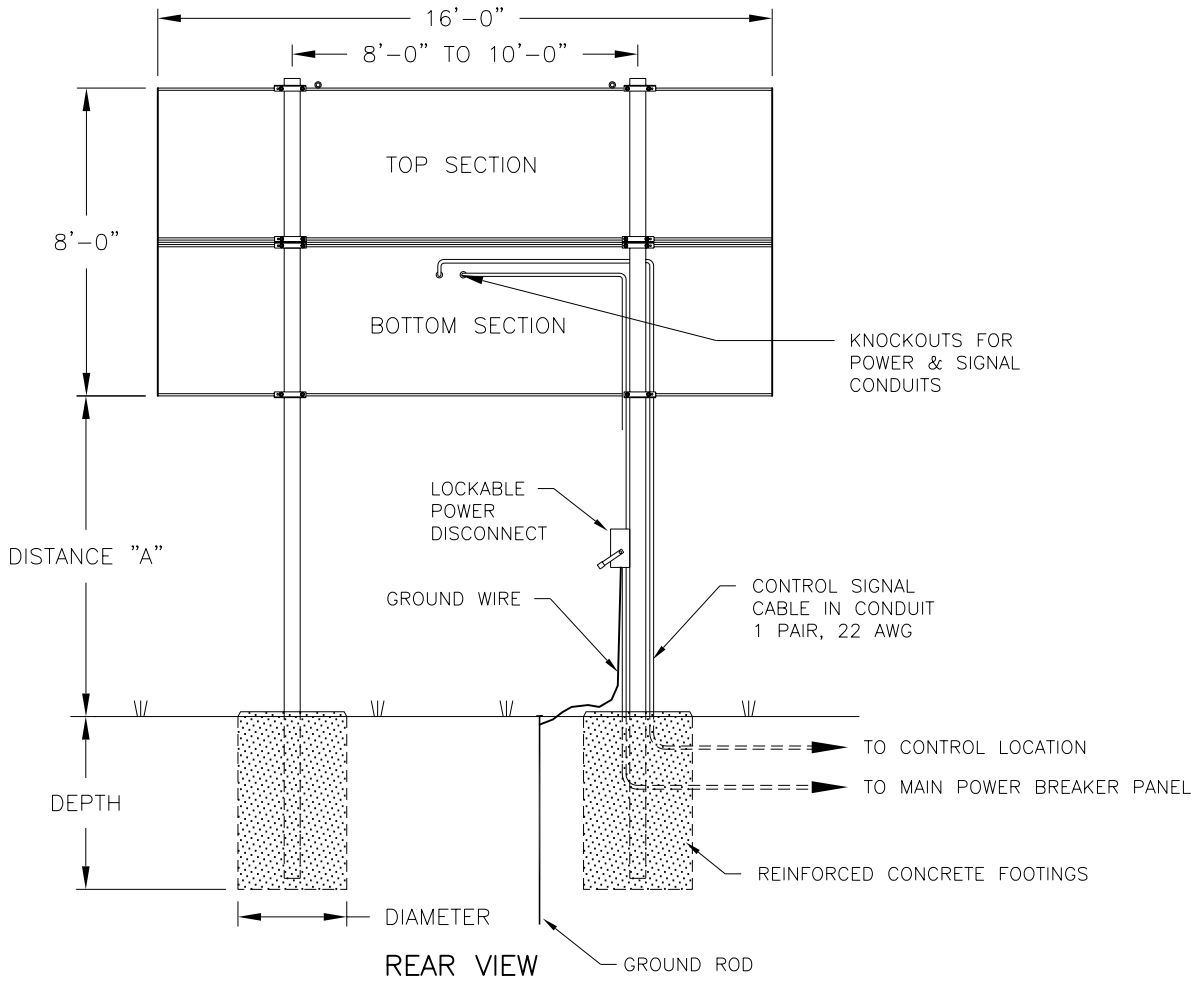
REAR VIEW



| | | | |
|--|-------------|-------------------|--|
| 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: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: INSTALLATION, PORTABLE POWERED SCOREBOARDS | | | |
| DES. BY: EBRAVEK | | DRAWN BY: EBRAVEK | |
| | | DATE: 4 JUNE 02 | |
| REVISION | APPR. BY: | 1192-E07A-166787 | |
| 00 | SCALE: 1=40 | | |

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

SCOREBOARD IS SHOWN WITHOUT AN AD PANEL.



| MODEL MS-2918 WITHOUT AD PANEL | | | | | |
|--------------------------------|----------------------|---------|----------------------|-------------|-------------|
| DISTANCE "A" (SEE FIGURE) | TOTAL DISPLAY SIZE | | DESIGN WIND VELOCITY | | |
| | | | 70 MPH | 80 MPH | 100 MPH |
| 10'-0" | 16'-0" x 8'-0" | BEAM | W8x24 | W8x28 | W8x35 |
| | | FOOTING | 3.0' x 5.4' | 3.0' x 6.0' | 3.0' x 7.0' |
| 12'-0" | 16'-0" x 8'-0" | BEAM | W8x28 | W8x31 | W10x39 |
| | | FOOTING | 3.0' x 5.6' | 3.0' x 6.2' | 3.0' x 7.3' |
| 14'-0" | 16'-0" x 8'-0" | BEAM | W8x31 | W8x35 | W10x45 |
| | | FOOTING | 3.0' x 5.9' | 3.0' x 6.5' | 3.0' x 7.7' |

| MODEL MS-2918 WITH 30"-HIGH AD PANEL | | | | | |
|--------------------------------------|-----------------------|---------|----------------------|-------------|-------------|
| DISTANCE "A" (SEE FIGURE) | TOTAL DISPLAY SIZE | | DESIGN WIND VELOCITY | | |
| | | | 70 MPH | 80 MPH | 100 MPH |
| 10'-0" | 16'-0" x 10'-6" | BEAM | W8x31 | W8x35 | W12x45 |
| | | FOOTING | 3.0' x 6.1' | 3.0' x 6.7' | 3.0' x 7.9' |
| 12'-0" | 16'-0" x 10'-6" | BEAM | W8x35 | W8x40 | W8x48 |
| | | FOOTING | 3.0' x 6.4' | 3.0' x 7.0' | 3.0' x 8.3' |
| 14'-0" | 16'-0" x 10'-6" | BEAM | W10x39 | W10x45 | W10x54 |
| | | FOOTING | 3.0' x 6.6' | 3.0' x 7.3' | 3.0' x 8.6' |

FOOTING = DIAMETER X DEPTH

FOOTING DIMENSIONS ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES.

FOOTING DIMENSIONS ARE BASED ON ASSUMED SOIL BEARING PRESSURE OF 2000 LB/FT²

ACTUAL FOOTING DEPTH AND DIAMETER FOR A PARTICULAR INSTALLATION MUST BE DETERMINED BY A QUALIFIED STRUCTURAL ENGINEER, USING DATA FROM A SOIL SAMPLE TEST AT THE SITE.

DAKTRONICS, INC. IS NOT RESPONSIBLE FOR STRUCTURES DESIGNED AND INSTALLED BY OTHERS.

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: OUTDOOR SCOREBOARDS

TITLE: INSTALLATION SPECIFICATIONS, MS-2918

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

DATE: 25JUL02

REVISION

APPR. BY:

SCALE: 1=60

1091-R10A-172188

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

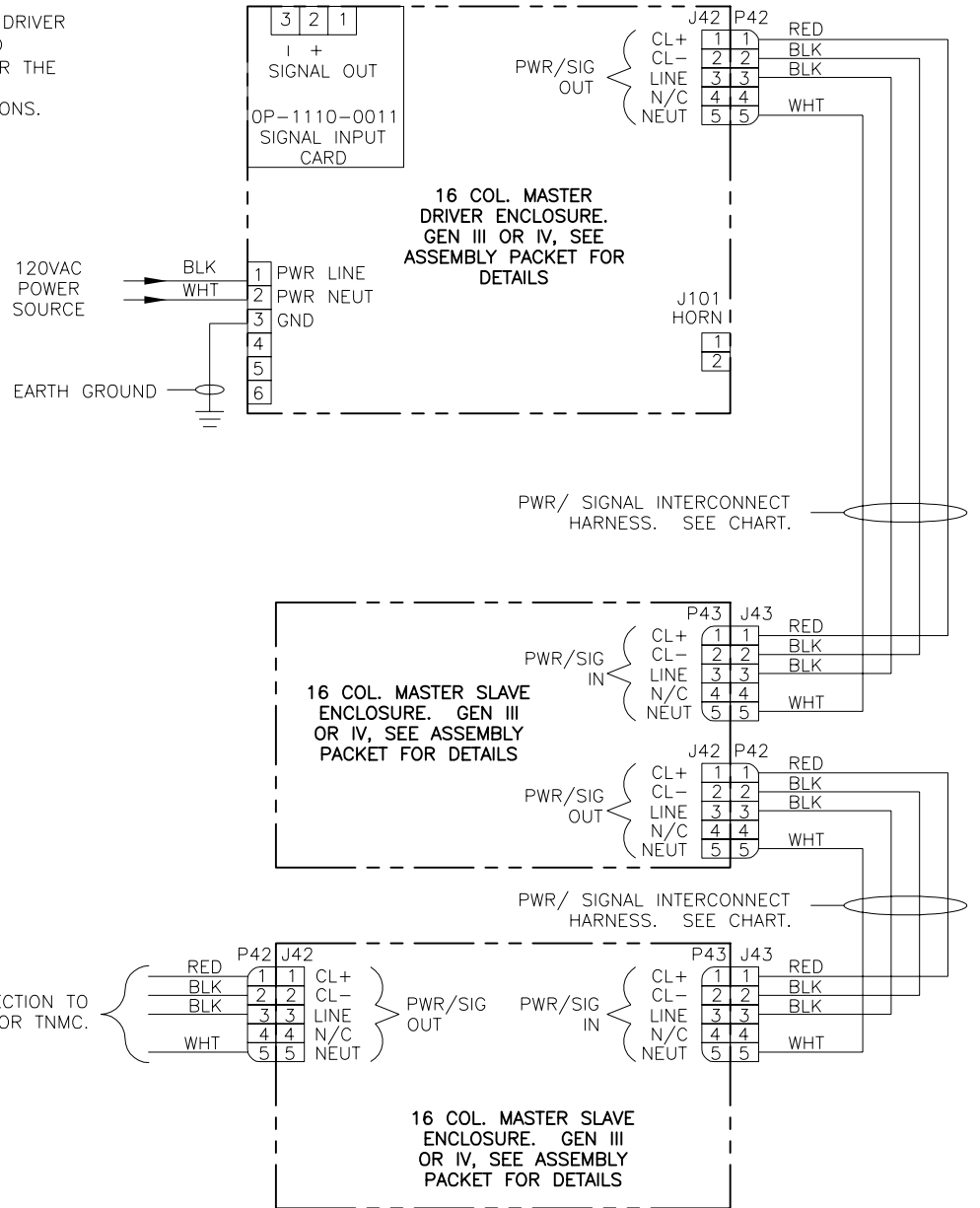
| | | | | |
|------|-----------|---|-----|-------|
| REV. | DATE | DESCRIPTION | BY | APPR. |
| 01 | 20 FEB 03 | CORRECTED SPELLING ON NEUT ADDED 16 COL. WIDE PART NUMBER | MMM | |
| 02 | 09 NOV 06 | UPDATED DRAWING TO SHOW GEN III OR IV DESIGN. | MMM | |

| | |
|-----------|---|
| PROJ: | OUTDOOR LED SCOREBOARDS |
| TITLE: | SCHEMATIC; GEN III & IV OD LED, 3 DRVYR DISPLAY |
| DES. BY: | MILLER |
| APPR. BY: | MILLER |
| DATE: | 04 DEC 02 |
| REVISION | SCALE: NONE |
| 02 | 1192-R10A-179541 |

THIS SCHEMATIC REPRESENTS THE INTERCONNECT OF THE MASTER DRIVER TO OTHER DRIVERS/TNMC'S IN A MULTI DRIVER SCOREBOARD CONFIGURATION. SEE THE PRE-PAINT ASSEMBLY DRAWING AND/OR THE FINAL ASSEMBLY DRAWING FOR THE PART NUMBERS OF THE INTERCONNECT HARNESSES NEEDED AND INSTALLATION INSTRUCTIONS.

PWR/SIG INTERCONNECT HARNESS

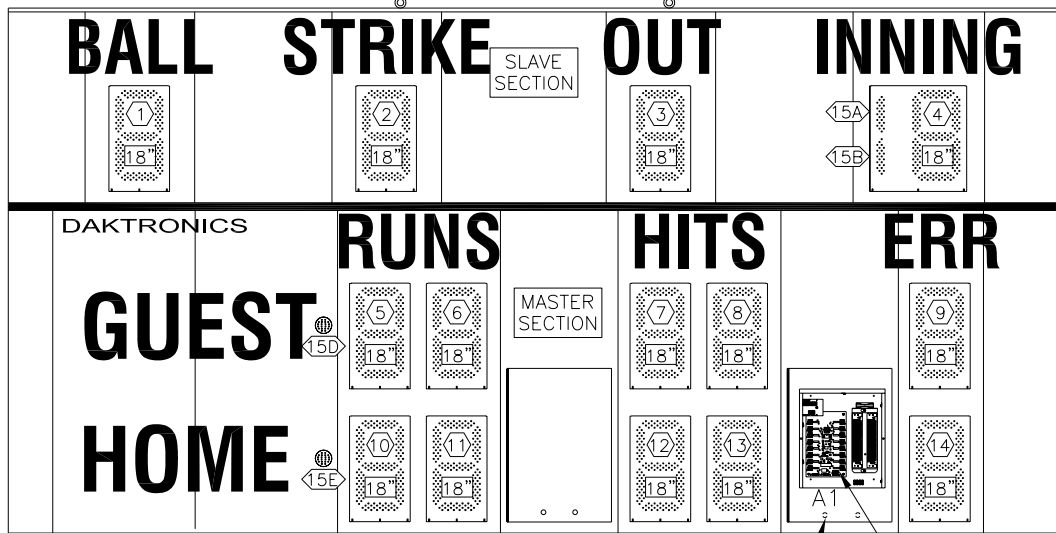
| PART NUMBER | LENGTH |
|--------------|--------|
| 0A-1192-1028 | 4' |
| 0A-1192-1029 | 8' |
| 0A-1192-1030 | 10' |
| 0A-1192-1031 | 12' |
| 0A-1192-1032 | 16' |
| 0A-1192-1033 | 22' |
| 0A-1192-1034 | 26' |
| 0A-1192-1083 | 30' |
| 0A-1192-1084 | 35' |



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

BA-1518-11/-21

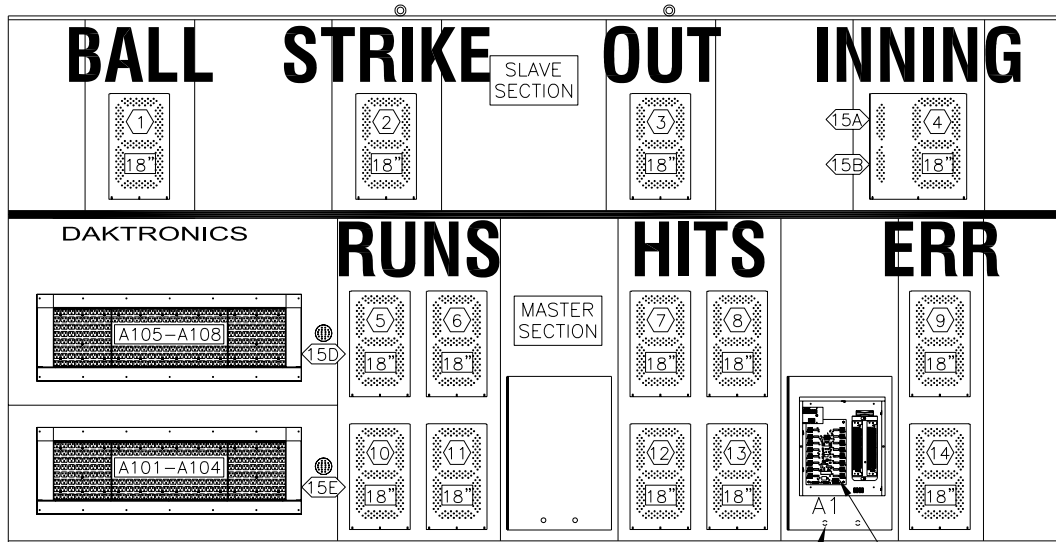


KNOCKOUTS FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

FRONT VIEW

BA-1518-11/-21 W/ LED TNMC



KNOCKOUTS FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

FRONT VIEW

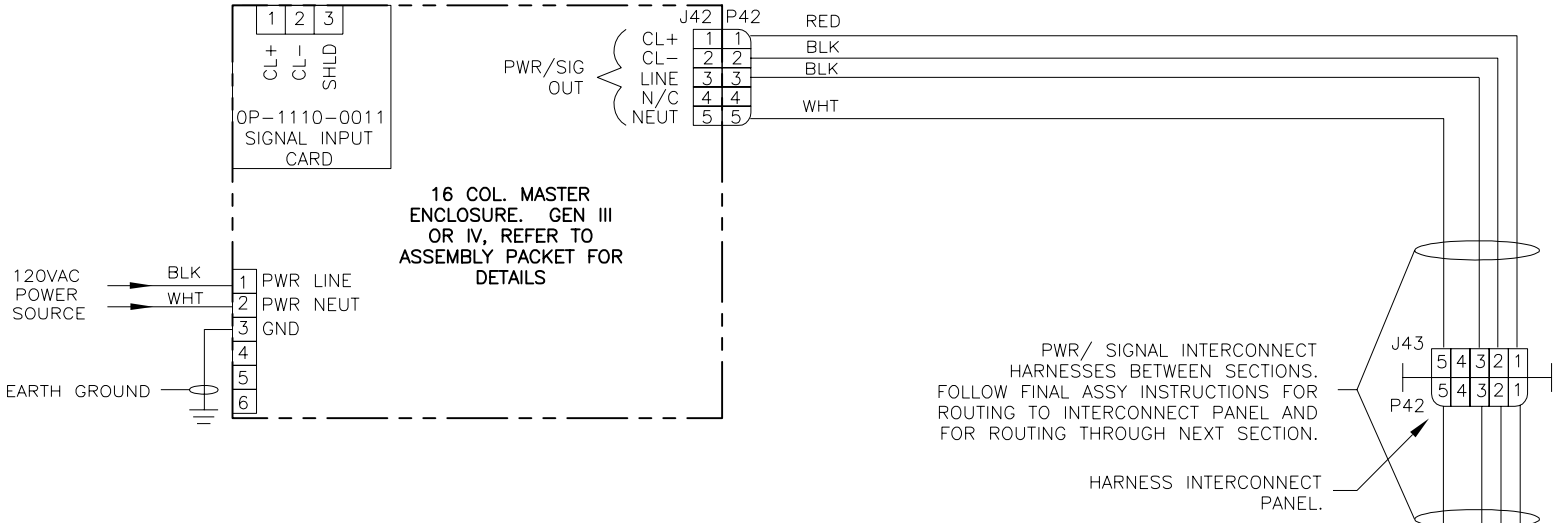
- ⑫ = LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
- ◁15A = LED DRIVER CONNECTOR AND SEGMENT (PIN) NO. WIRED TO THAT INDICATOR
- 18" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND POWER/SIGNAL ENCLOSURE.

| | | | |
|--|-------------|-------------------|--|
| 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: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: COMPONENT LOCATIONS; BA-1518-11/-21, G3 | | | |
| DES. BY: MCOPLAN | | DRAWN BY: MCOPLAN | |
| | | DATE: 09DEC02 | |
| REVISION | APPR. BY: | 1192-R08A-179745 | |
| 00 | SCALE: 1=35 | | |

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

| | | | | |
|------|-----------|---|-----|-------|
| REV. | DATE | DESCRIPTION | BY | APPR. |
| 02 | 08 MAY-03 | CHANGED TNMC TEXT TO NEW GEN 3 AND ADDED NOTE | TAS | MMM |
| 01 | 20 FEB 03 | ADDED 16 COL. WIDE PART NUMBER AND CORRECTED SPELLING ON NEUT | MMM | |



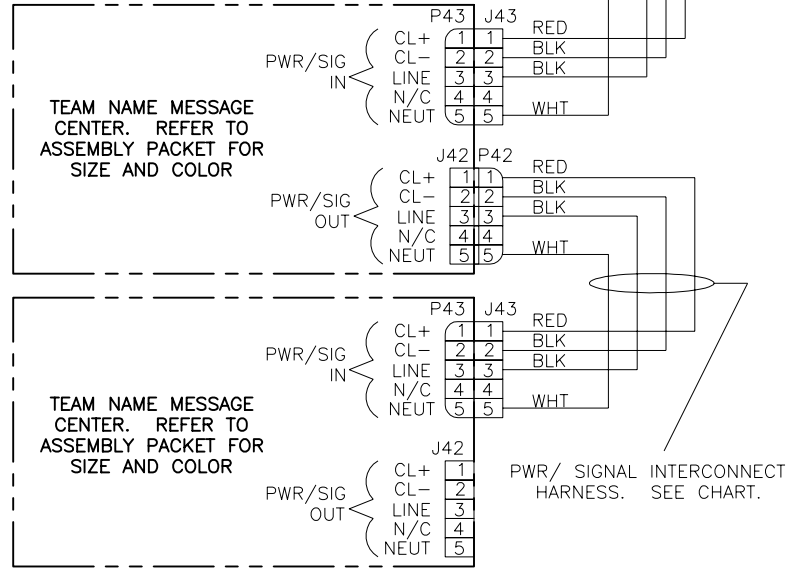
PWR/ SIGNAL INTERCONNECT HARNESES BETWEEN SECTIONS. FOLLOW FINAL ASSY INSTRUCTIONS FOR ROUTING TO INTERCONNECT PANEL AND FOR ROUTING THROUGH NEXT SECTION.

HARNESS INTERCONNECT PANEL.

THIS SCHEMATIC REPRESENTS THE INTERCONNECT OF THE MASTER DRIVER TO OTHER DRIVERS/TNMC'S IN A MULTI DRIVER SCOREBOARD CONFIGURATION. SEE THE PRE-PAINT ASSEMBLY DRAWING AND/OR THE FINAL ASSEMBLY DRAWING FOR THE PART NUMBERS OF THE INTERCONNECT HARNESES NEEDED AND INSTALLATION INSTRUCTIONS.

PWR/SIG INTERCONNECT HARNESS

| PART NUMBER | LENGTH |
|--------------|--------|
| 0A-1192-1028 | 4' |
| 0A-1192-1029 | 8' |
| 0A-1192-1030 | 10' |
| 0A-1192-1031 | 12' |
| 0A-1192-1032 | 16' |
| 0A-1192-1033 | 22' |
| 0A-1192-1034 | 26' |
| 0A-1192-1083 | 30' |
| 0A-1192-1084 | 35' |



NOTE:
CONNECT THE RIBBON CABLE TO THE TNMC DRIVER TO EITHER
J25 = HOME OR
J26 = GUEST.

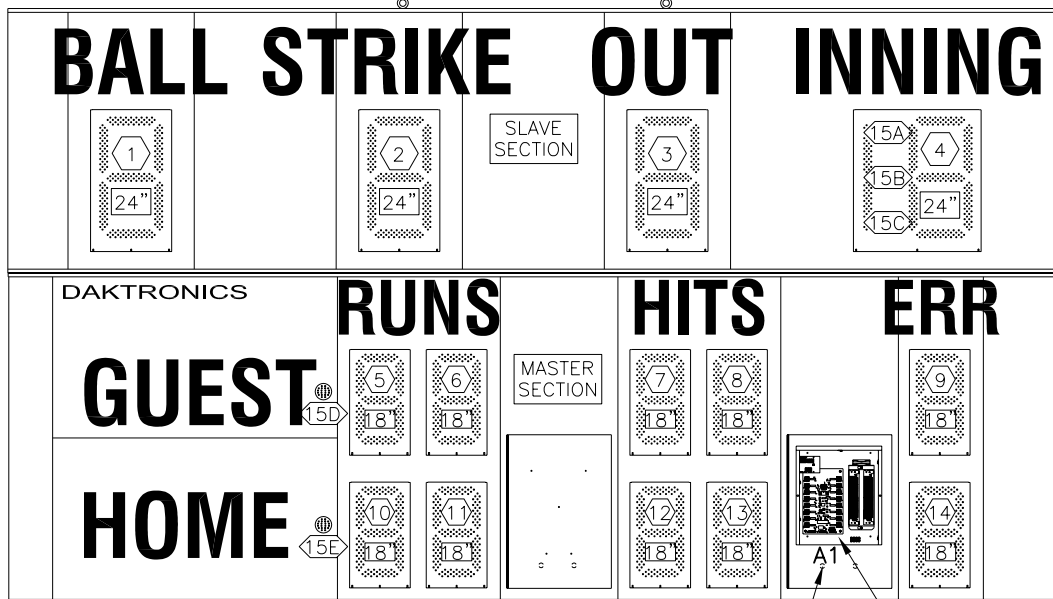
PROJ: OUTDOOR LED DIGIT SCOREBOARDS
 TITLE: SCHEMATIC; GEN III & IV OD LED, 1 DRV W/ TNMC
 DES. BY: ALINDHO DATE: 17 DEC 02
 DRAWN BY: ALINDHO

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

REVISION 02
 APPR. BY: NONE
 SCALE: NONE
 1192-R01A-179790

BA-1524-11/-21

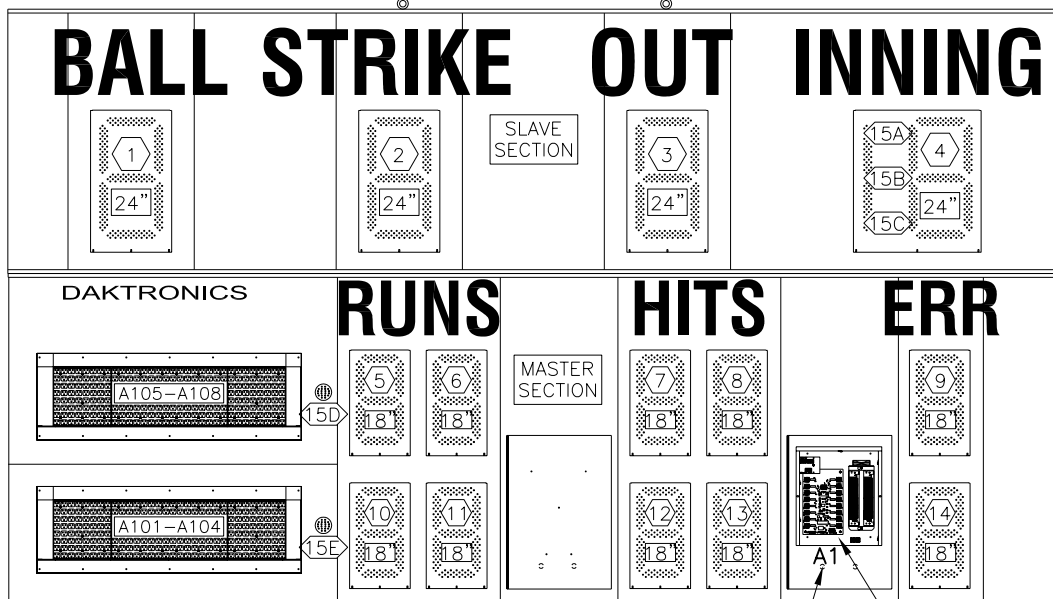


FRONT VIEW

KNOCKOUTS FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

BA-1524-11/-21 W/ LED TNMC



FRONT VIEW

KNOCKOUTS FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

⑫ = LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

⑮A = LED DRIVER CONNECTOR AND SEGMENT (PIN) NO. WIRED TO THAT INDICATOR

⑱" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND POWER/SIGNAL ENCLOSURE.

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: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; BA-1524-11/-21, G3

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

DATE: 11DEC02

REVISION

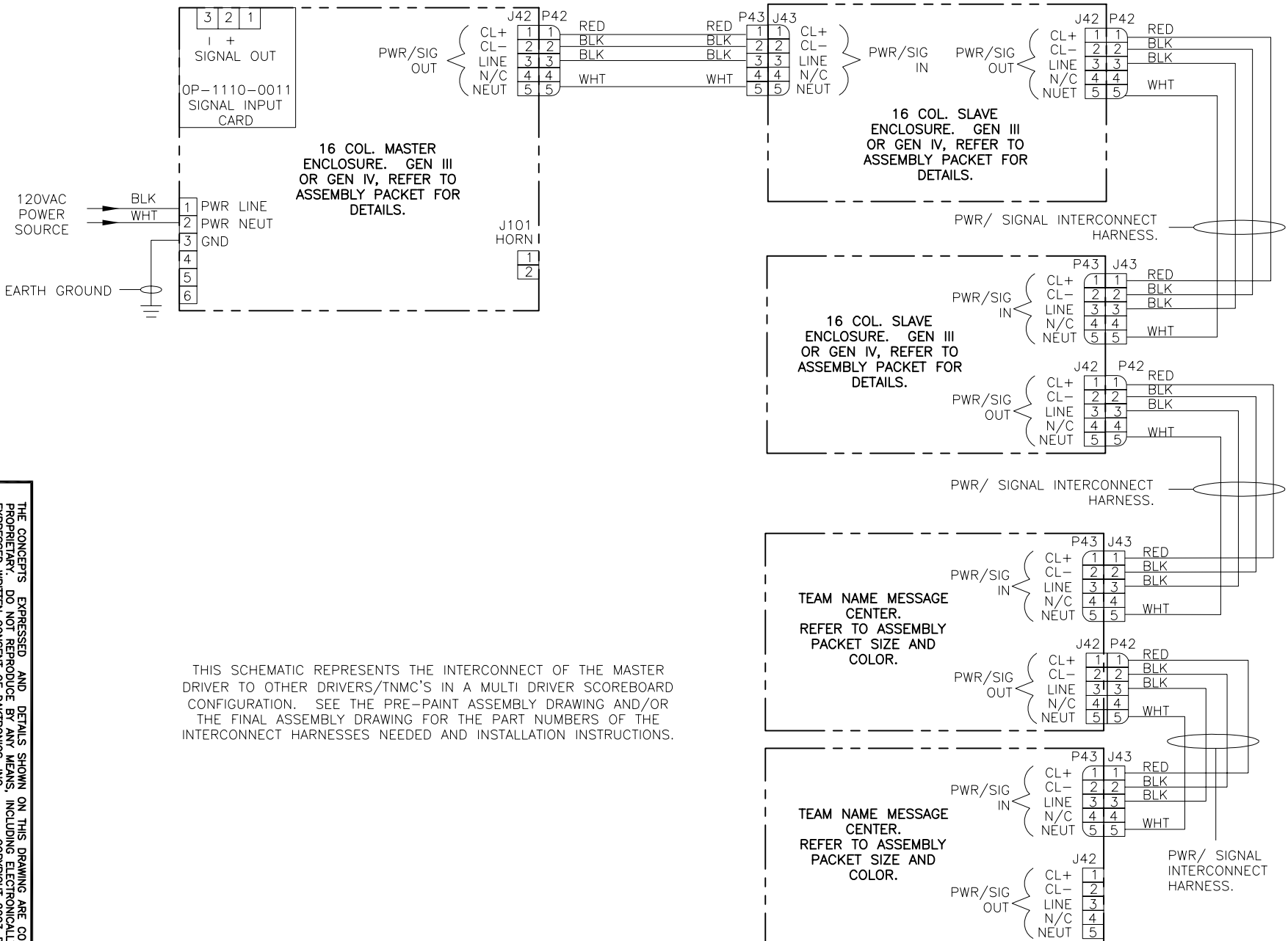
APPR. BY:

SCALE: 1=35

1192-R08A-179869

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------|-------------|----|-------|
| 00 | | | | |

| | | | | |
|------|-----------|---|-----|-------|
| REV. | DATE | DESCRIPTION | BY | APPR. |
| 01 | 20 FEB 03 | CORRECTED SPELLING ON NEUT ADDED 16 COL. WIDE PART NUMBERS. | MMM | |
| 02 | 08 MAY-03 | CHANGED TNMC TEXT TO NEW GEN 3 AND ADDED NOTE. | TAS | MMM |



THIS SCHEMATIC REPRESENTS THE INTERCONNECT OF THE MASTER DRIVER TO OTHER DRIVERS/TNMC'S IN A MULTI DRIVER SCOREBOARD CONFIGURATION. SEE THE PRE-PAINT ASSEMBLY DRAWING AND/OR THE FINAL ASSEMBLY DRAWING FOR THE PART NUMBERS OF THE INTERCONNECT HARNESSES NEEDED AND INSTALLATION INSTRUCTIONS.

NOTE:
CONNECT THE RIBBON CABLE TO THE TNMC DRIVER TO EITHER
J25 = HOME OR
J26 = GUEST.

THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC.

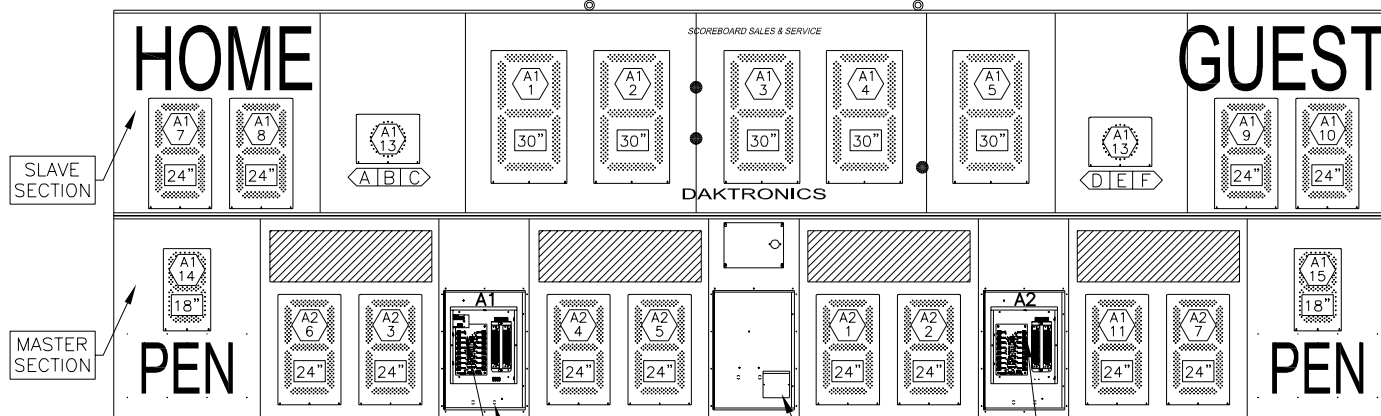
PROJ: OUTDOOR LED DIGIT SCOREBOARDS
TITLE: SCHEMATIC; GEN III & IV, 3 DRV W/ TNMC
DES. BY: ALINDHO DATE: 18 DEC 02
DRAWN BY: ALINDHO

DAKTRONICS, INC. BROOKINGS, SD 57006

| | | |
|----------|-----------|------------------|
| REVISION | APPR. BY: | SCALE: |
| 02 | NONE | 1192-R10A-180081 |

REV.
DATE
DESCRIPTION
BY
APPR.

SO-1930-11/-21



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

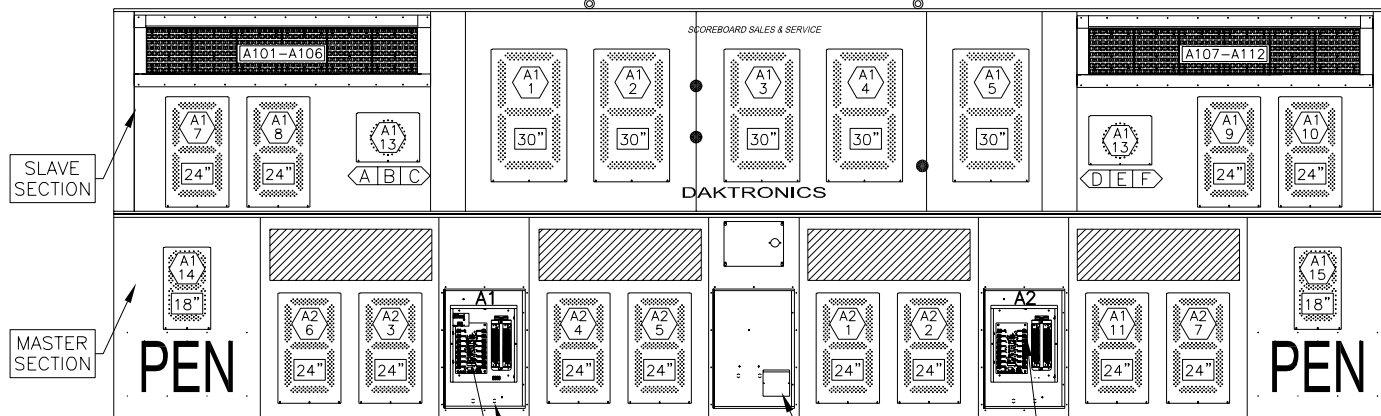
KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

REVISION 00
SCALE: 1=45
APPR. BY: MCOPLAN
DATE: 23DEC02
DRAWN BY: MCOPLAN
TITLE: COMPONENT LOCATIONS; SO-1930-11/-21
PROJ: OUTDOOR LED SCOREBOARDS
DAKTRONICS, INC. BROOKINGS, SD 57006
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.

SO-1930-11/-21 W/ LED TNMC



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

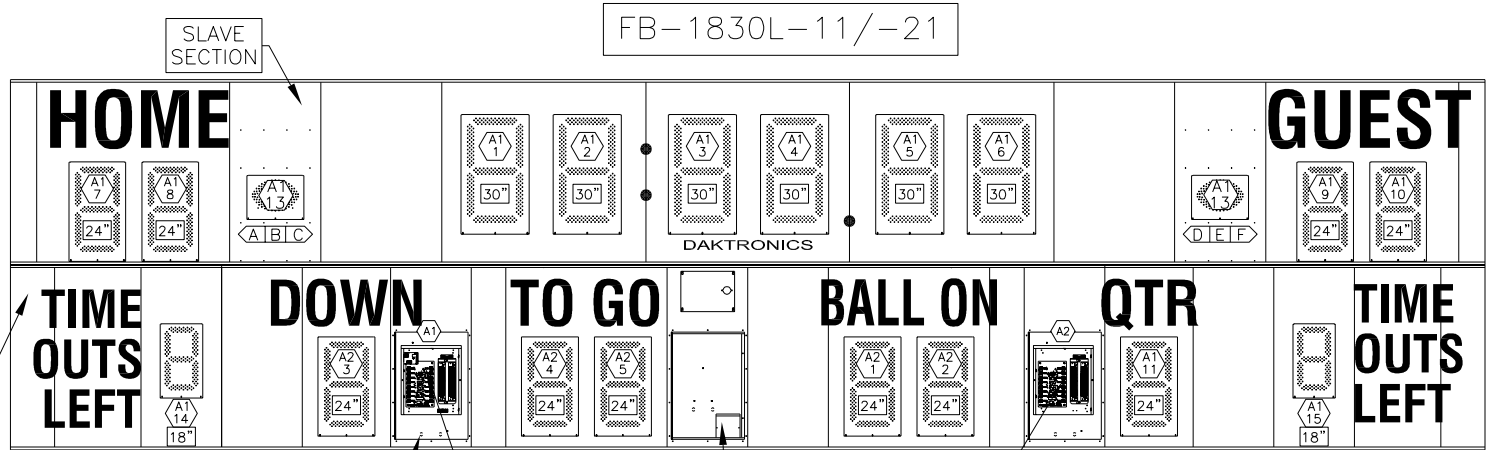
HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

A1 1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
A B C = SEGMENT DESIGNATIONS
24" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND POWER AND SIGNAL ENTRANCE.

REV. DATE DESCRIPTION BY APPR.

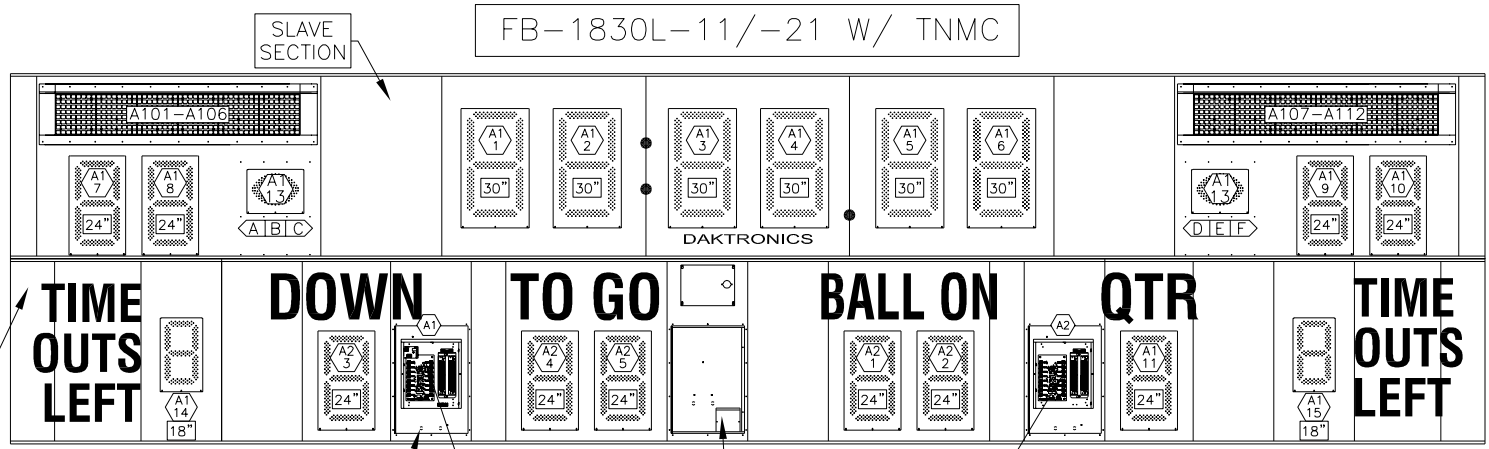


KNOCKOUT FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)



KNOCKOUT FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

A1 1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

A B C = SEGMENT DESIGNATIONS

24" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; FB-1830L-11/-21, G3

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

DATE: 10APR03

DAKTRONICS, INC. BROOKINGS, SD 57006

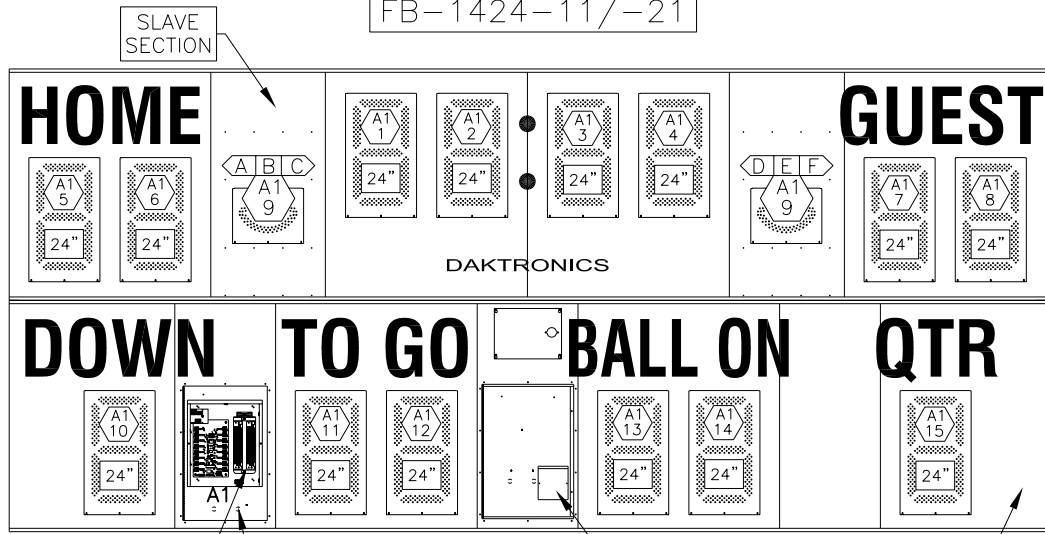
REVISION

APPR. BY: 1192-R08A-180441

SCALE: 1=50

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FB-1424-11/-21



ENCLOSED 16 COLUMN DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW COMPONENT DETAIL).

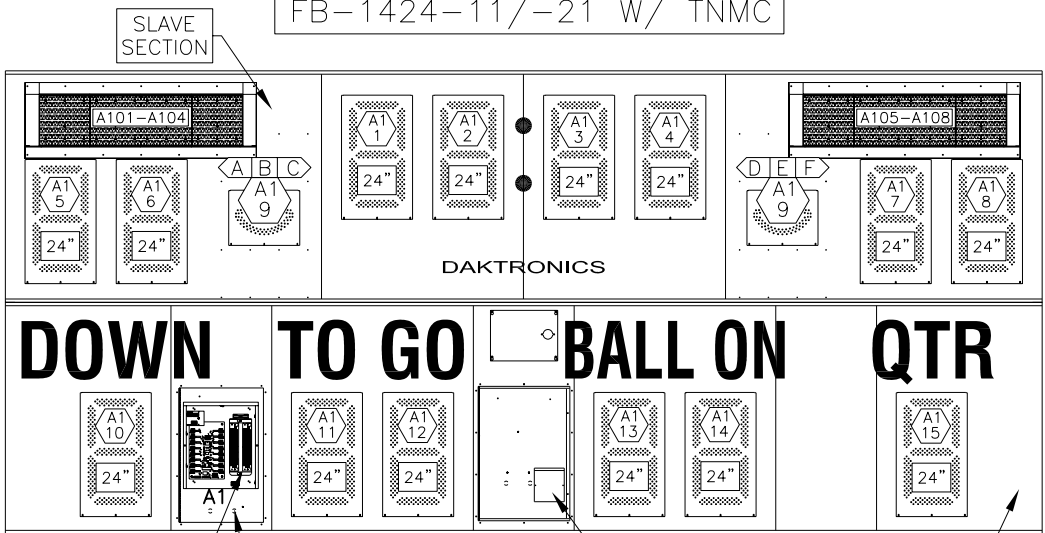
KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

MASTER SECTION

FRONT VIEW

FB-1424-11/-21 W/ TNMC



ENCLOSED 16 COLUMN DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

MASTER SECTION

FRONT VIEW

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

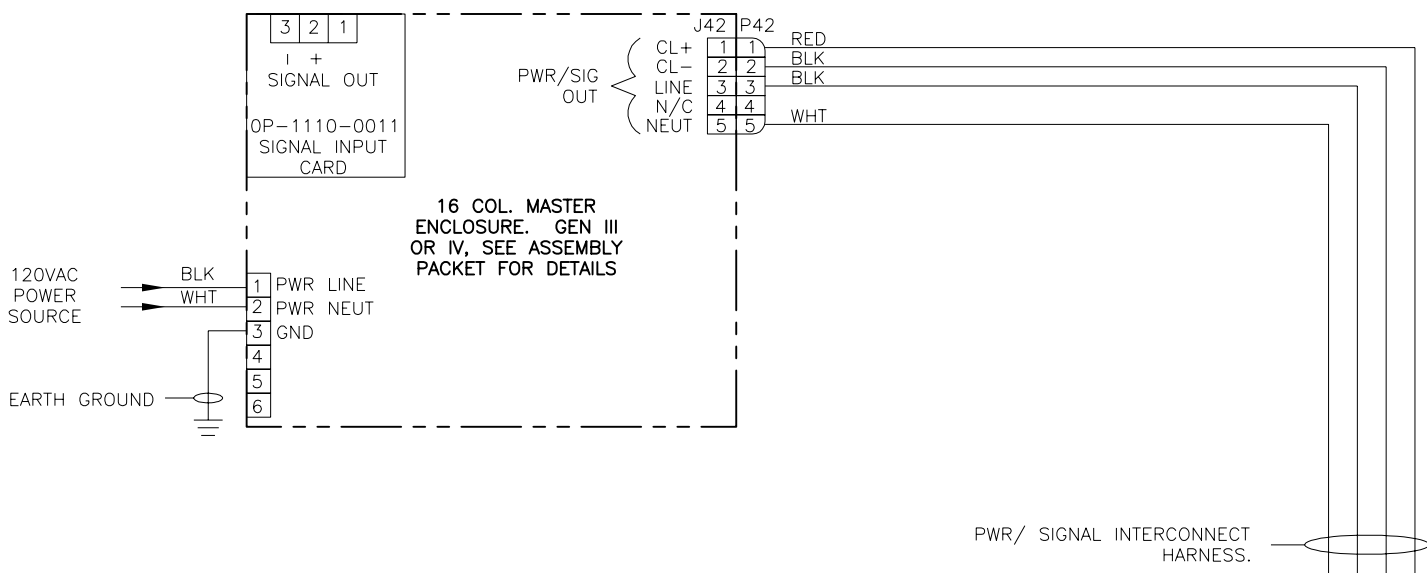
= SEGMENT DESIGNATIONS

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

| | | | |
|--|-------------|-------------------|--|
| 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: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: COMPONENT LOCATIONS; FB-1424-11/-21, G3 | | | |
| DES. BY: MCOPLAN | | DRAWN BY: MCOPLAN | |
| | | DATE: 30DEC02 | |
| REVISION | APPR. BY: | 1192-R08A-180606 | |
| 00 | SCALE: 1=40 | | |

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

| | | | | | | | |
|------|----|-----------|---|-------------|----|-----|-------|
| REV. | 01 | 20 FEB 03 | CORRECTED SPELLING ON NEUT ADDED 18 COL. WIDE PART NUMBERS. | DESCRIPTION | BY | MMM | APPR. |
|------|----|-----------|---|-------------|----|-----|-------|



PWR/SIG INTERCONNECT HARNESS

| PART NUMBER | LENGTH |
|--------------|--------|
| 0A-1192-1028 | 4' |
| 0A-1192-1029 | 8' |
| 0A-1192-1030 | 10' |
| 0A-1192-1031 | 12' |
| 0A-1192-1032 | 16' |
| 0A-1192-1033 | 22' |
| 0A-1192-1034 | 26' |
| 0A-1192-1083 | 30' |
| 0A-1192-1084 | 35' |

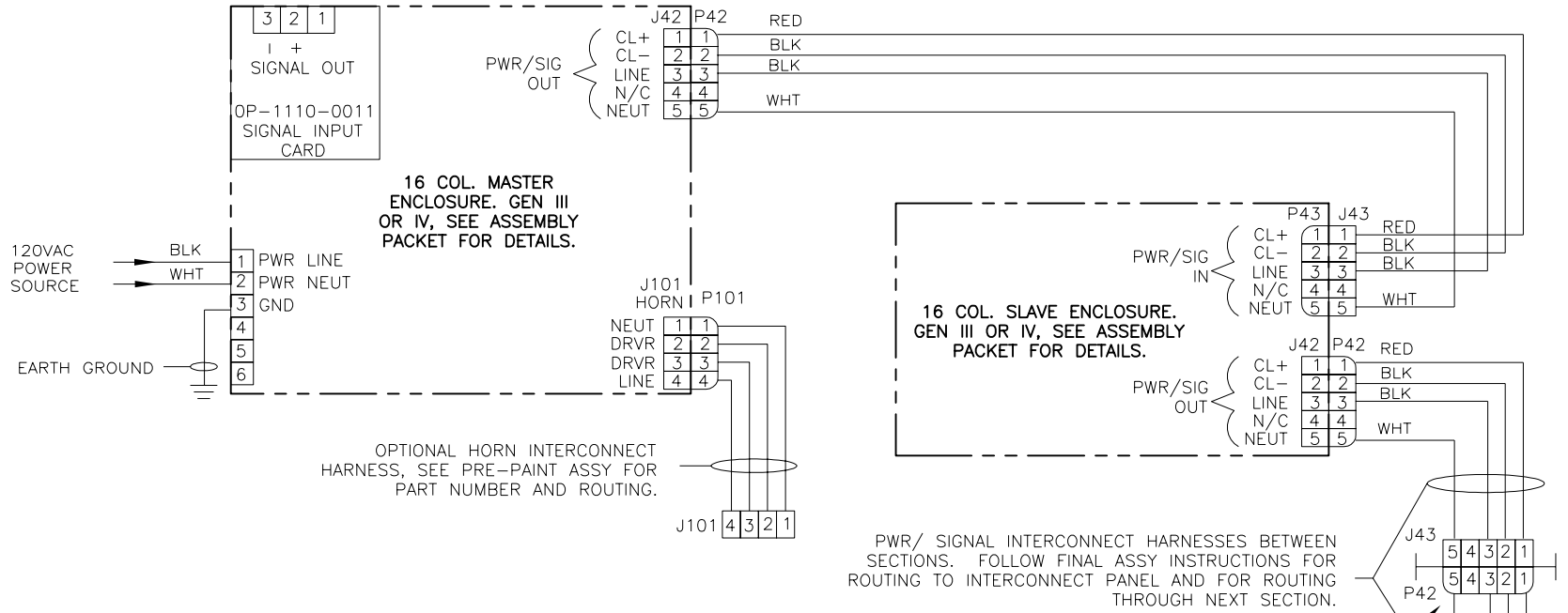
THIS SCHEMATIC REPRESENTS THE INTERCONNECT OF THE MASTER DRIVER TO OTHER DRIVERS/TNMC'S IN A MULTI DRIVER SCOREBOARD CONFIGURATION. SEE THE PRE-PAINT ASSEMBLY DRAWING AND/OR THE FINAL ASSEMBLY DRAWING FOR THE PART NUMBERS OF THE INTERCONNECT HARNESSES NEEDED AND INSTALLATION INSTRUCTIONS.

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.

PROJ: OUTDOOR LED SCOREBOARDS
 TITLE: SCHEMATIC; GEN III & IV O.D. LED, 2 DRYR DISPLAY
 DES. BY: MILLER DRAWN BY: MILLER DATE: 03 JAN 02
 REVISION 01 APPR. BY: SCALE: NONE 1192-R10A-180637

DAKTRONICS, INC. BROOKINGS, SD 57006

| | | | |
|------|-----------|---|-----|
| 04 | 13 SEP 07 | EDITED TEXT WITHIN MASTER & SLAVE DRIVERS. | AMG |
| 03 | 23 JAN 07 | ADDED GEN IV TO THE TITLE | CJG |
| 02 | 08 MAY-03 | CHANGED TNMC TEXT TO NEW GEN 3 AND ADDED NOTE | TAS |
| 01 | 20 FEB 03 | CORRECTED SPELLING ON NEUT AND ADDED 16 COL. WIRE PART NUMBERS. | MMM |
| REV. | DATE | DESCRIPTION | BY |



THIS SCHEMATIC REPRESENTS THE INTERCONNECT OF THE MASTER DRIVER TO OTHER DRIVERS/TNMC'S IN A MULTI DRIVER SCOREBOARD CONFIGURATION. SEE THE PRE-PAINT ASSEMBLY DRAWING AND/OR THE FINAL ASSEMBLY DRAWING FOR THE PART NUMBERS OF THE INTERCONNECT HARNESSES NEEDED AND INSTALLATION INSTRUCTIONS.

PWR/SIG INTERCONNECT HARNESS

| PART NUMBER | LENGTH |
|--------------|--------|
| 0A-1192-1028 | 4' |
| 0A-1192-1029 | 8' |
| 0A-1192-1030 | 10' |
| 0A-1192-1031 | 12' |
| 0A-1192-1032 | 16' |
| 0A-1192-1033 | 22' |
| 0A-1192-1034 | 26' |
| 0A-1192-1083 | 30' |
| 0A-1192-1084 | 35' |

NOTE:
CONNECT THE RIBBON CABLE TO THE TNMC DRIVER TO EITHER
J25 = HOME OR
J26 = GUEST.

PROJ: OUTDOOR LED SCOREBOARDS

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

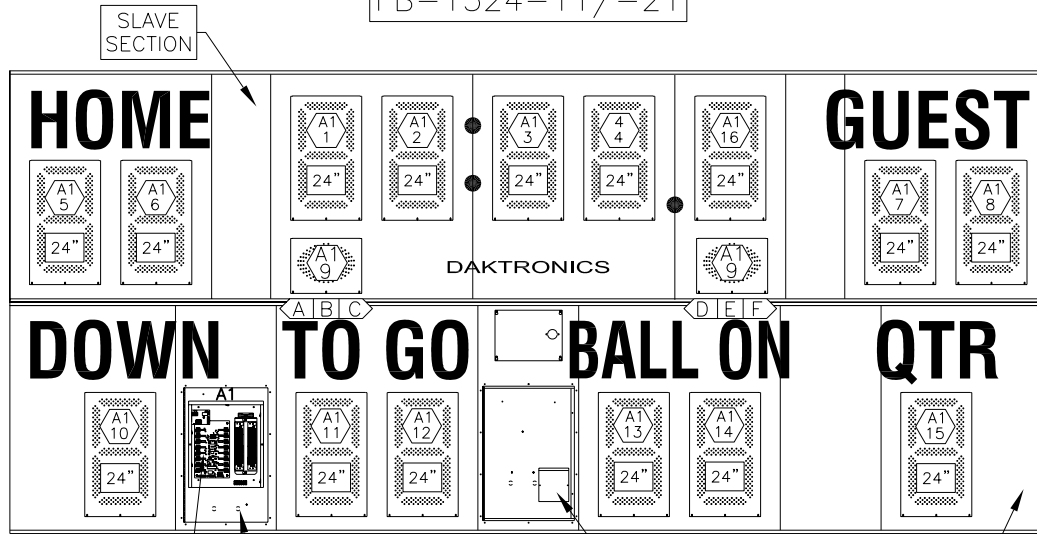
TITLE: SCHEMATIC; GEN III & GEN IV, OD LED, 2 DRV /W TNMC

DES. BY: MILLER DRAWN BY: MILLER DATE: 03 JAN 03

REVISION APPR. BY:

04 SCALE: NONE 1192-R10A-180688

FB-1524-11/-21



ENCLOSED 16 COLUMN DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

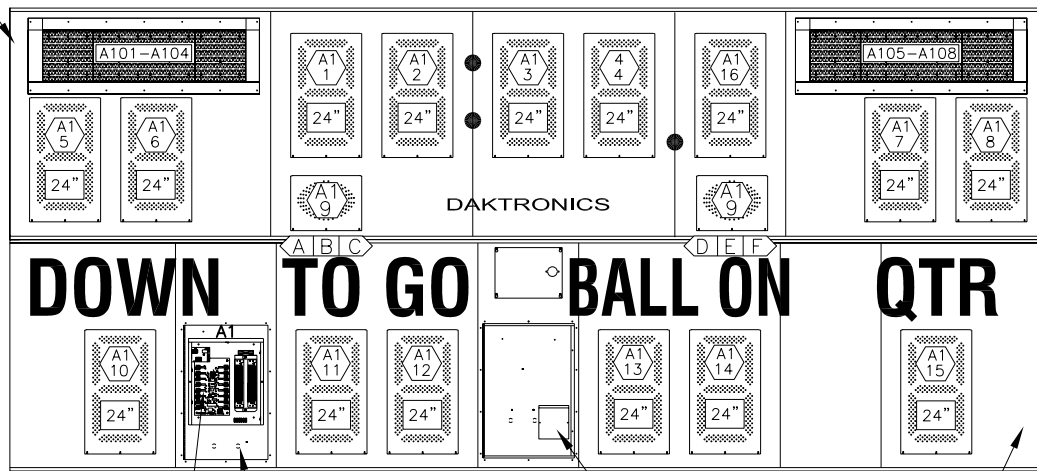
HORN (OPTIONAL)

MASTER SECTION

FRONT VIEW

FB-1524-11/-21 W/ TNMC

SLAVE SECTION



ENCLOSED 16 COLUMN DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

MASTER SECTION

FRONT VIEW

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

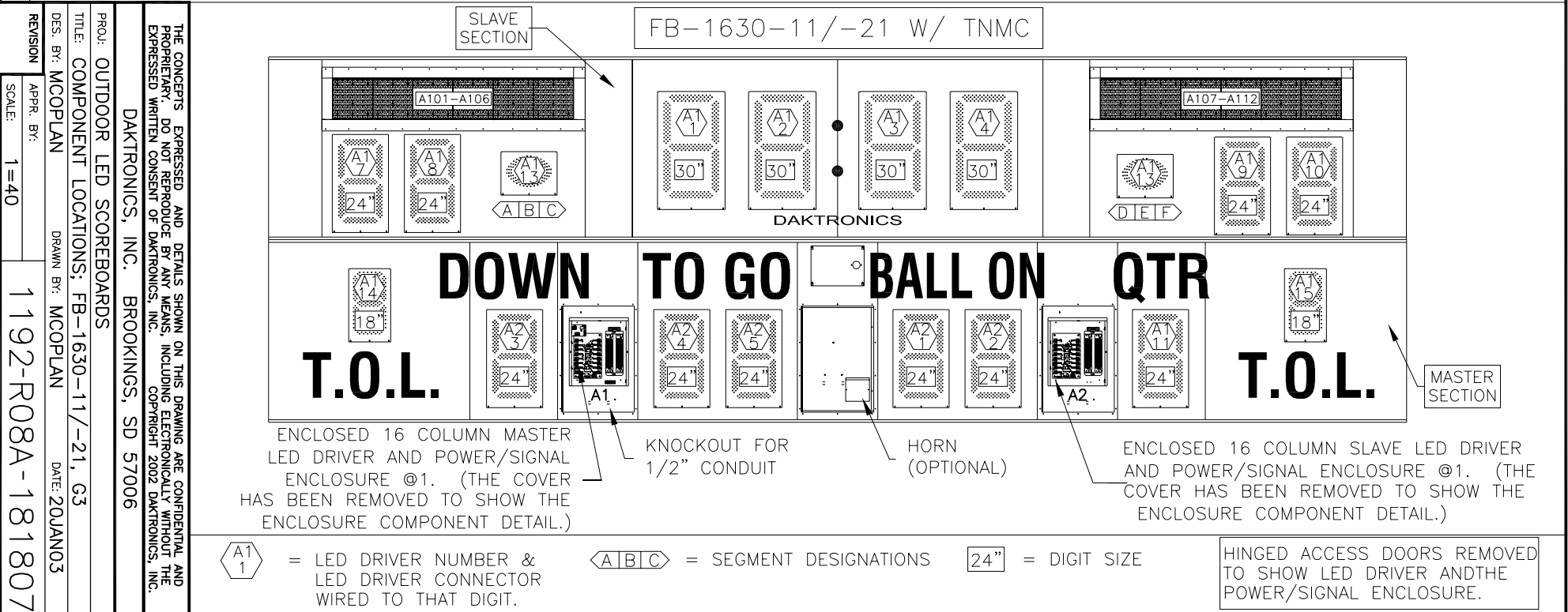
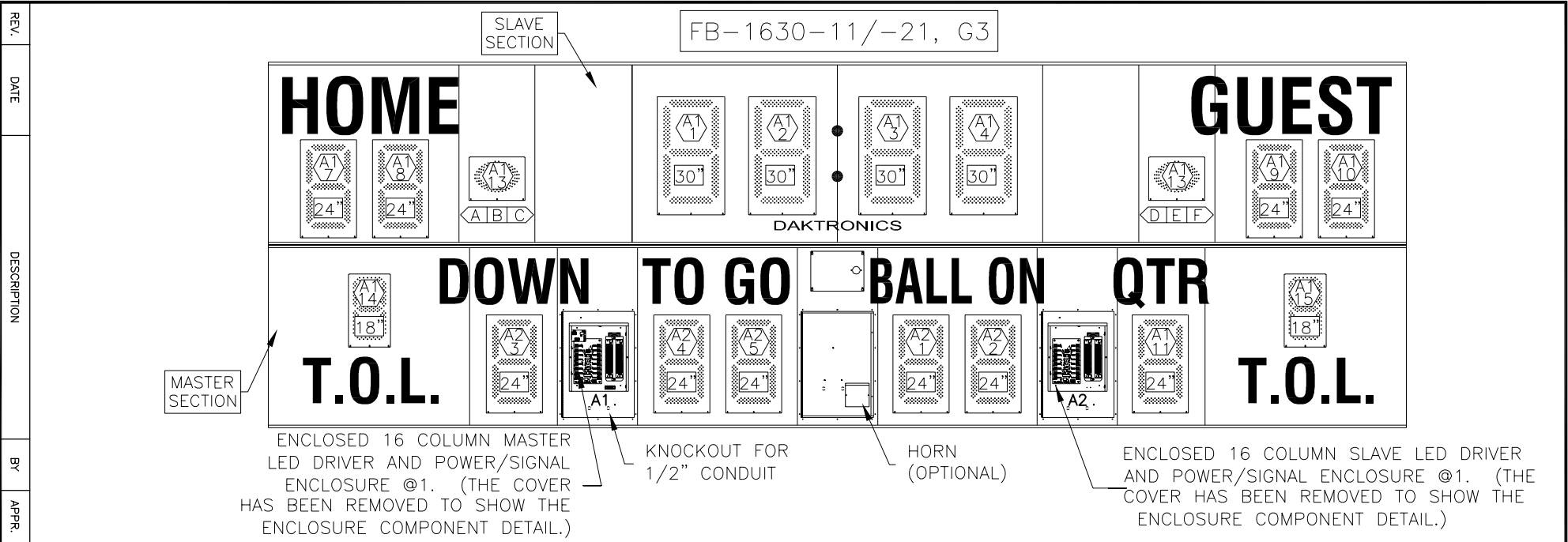
= SEGMENT DESIGNATIONS

= DIGIT SIZE

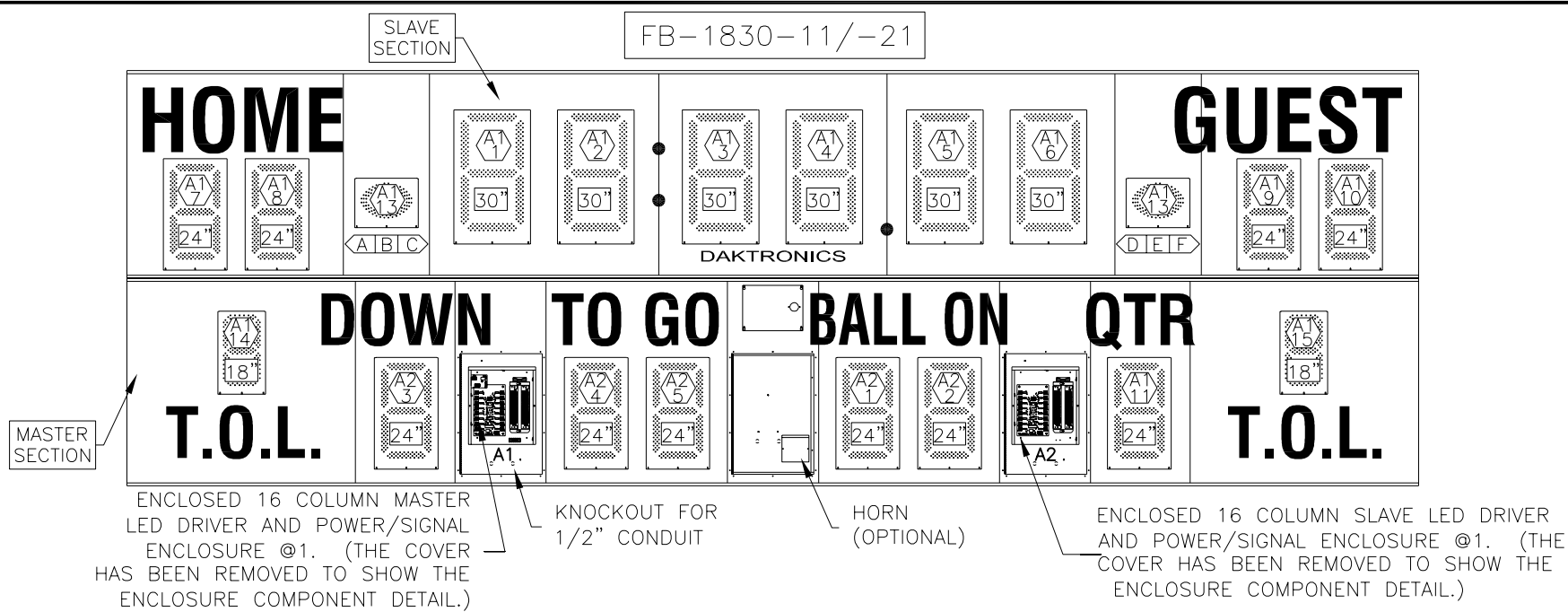
HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

| | | | |
|--|-------------|-------------------|--|
| 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: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: COMPONENT LOCATIONS; FB-1524-11/-21, G3 | | | |
| DES. BY: MCOPLAN | | DRAWN BY: MCOPLAN | |
| | | DATE: 20JAN03 | |
| REVISION | APPR. BY: | 1192-R08A-181757 | |
| | SCALE: 1=40 | | |

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



REV.
DATE
DESCRIPTION
BY
APPR.



REVISION 00

APPR. BY: MCOPLAN

SCALE: 1=40

1192-R08A-181940

DATE: 20JAN03

DRAWN BY: MCOPLAN

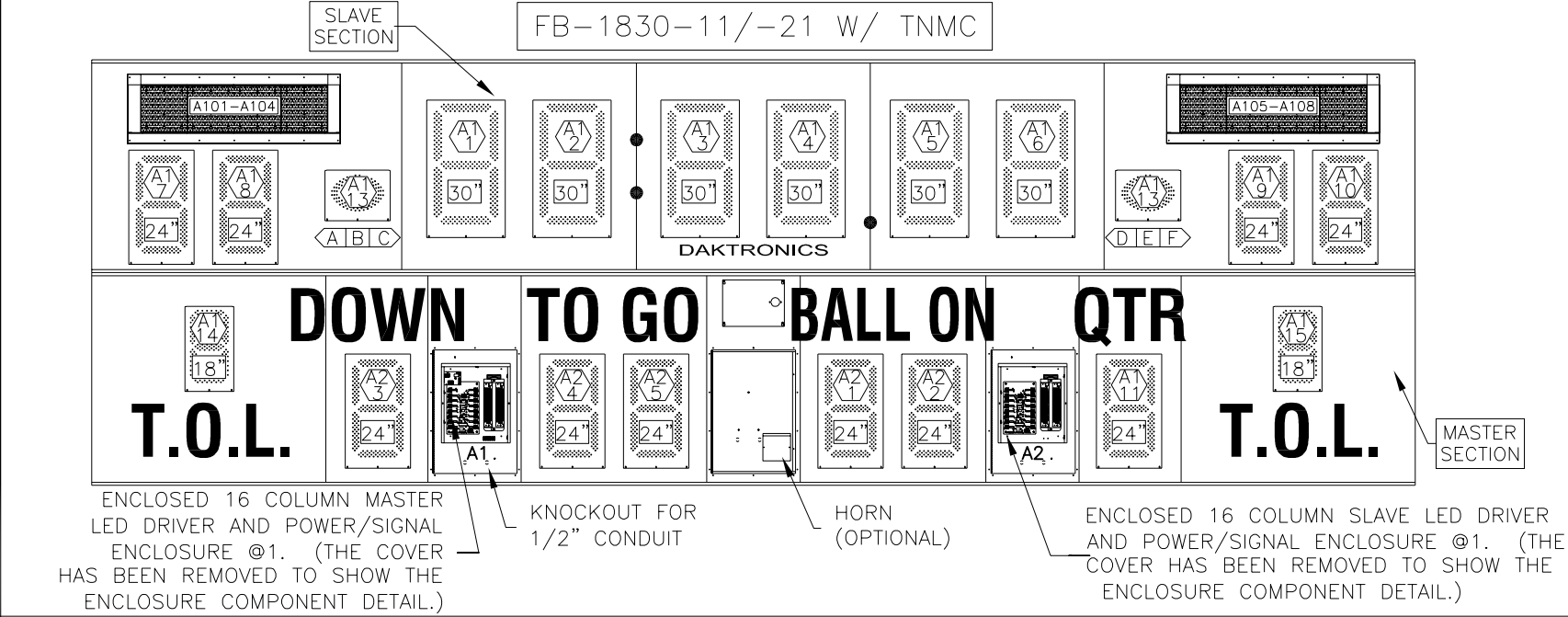
DES. BY: MCOPLAN

PROJ. OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; FB-1830-11/-21, G3

DAKTRONICS, INC. BROOKINGS, SD 57006

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A1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

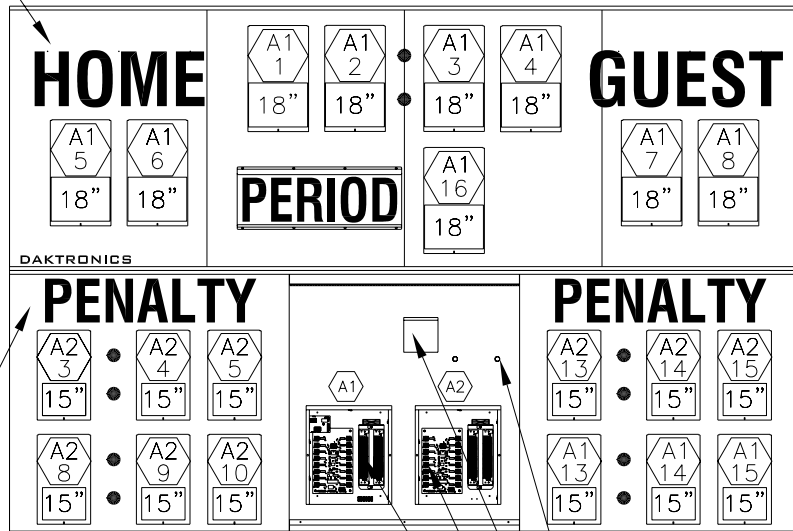
A B C = SEGMENT DESIGNATIONS

24" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

MS-2118-11/-21

SLAVE SECTION



MASTER SECTION

— KNOCKOUT FOR 1/2" CONDUIT

— HORN (OPTIONAL)

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW



= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.



= DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

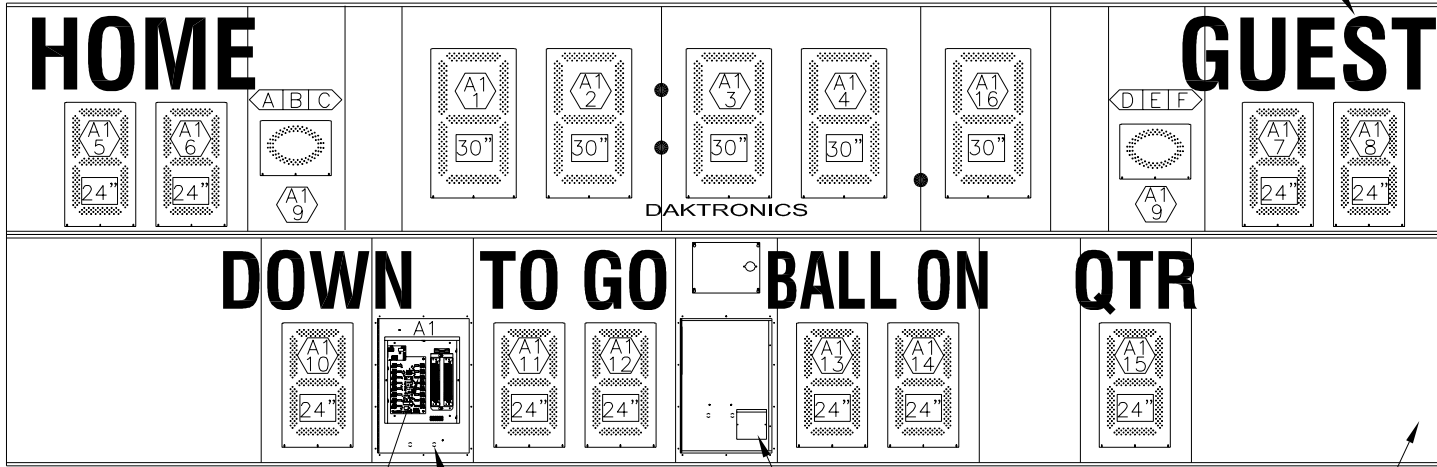
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|--|-------------|-------------------|--|
| THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2002 DAKTRONICS, INC. | | | |
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: COMPONENT LOCATIONS; MS-2118-11/-21, G3 | | | |
| DES. BY: MCOPLAN | | DRAWN BY: MCOPLAN | |
| | | DATE: 23JAN03 | |
| REVISION | APPR. BY: | 1192-R08A-182031 | |
| 00 | SCALE: 1=35 | | |

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

REV.
DATE
DESCRIPTION
BY
APPR.

FB-1530-11/-21

SLAVE SECTION



ENCLOSED 16 COLUMN LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

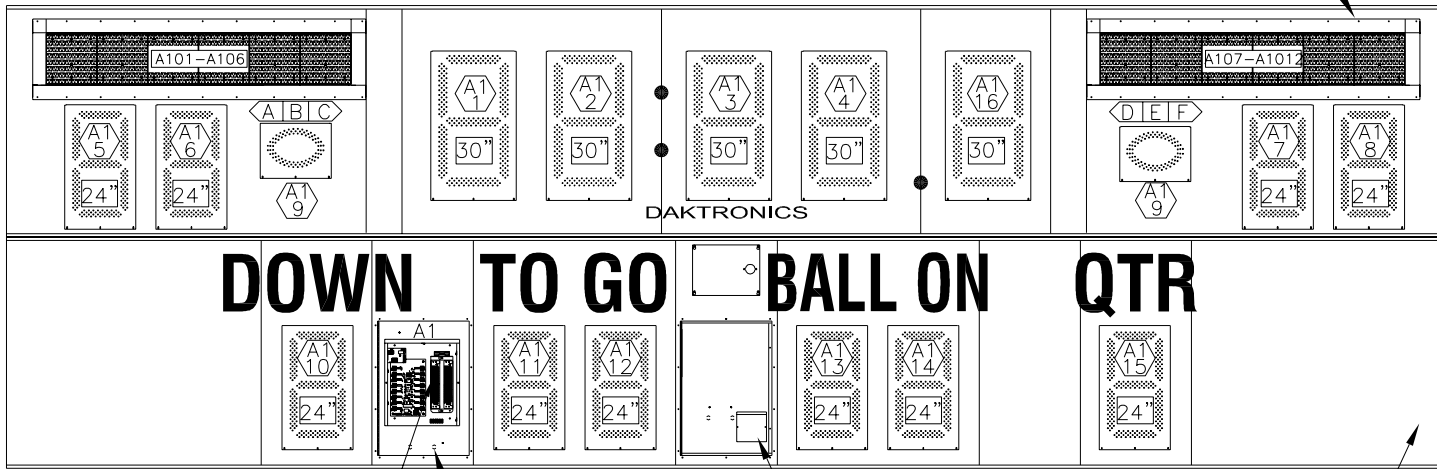
KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

MASTER SECTION

FB-1530-11/-21 W/ TNMC

SLAVE SECTION



ENCLOSED 16 COLUMN LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

MASTER SECTION

$\triangle A1$ = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

$\triangle ABC$ = SEGMENT DESIGNATIONS

$\square 24$ = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND POWER AND SIGNAL ENTRANCE.

REVISION 00
SCALE: 1=40
1192-R08A-182405

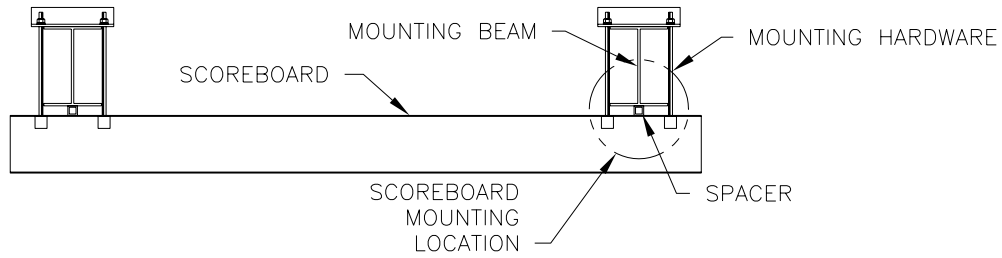
APPR. BY: MCOPLAN
DATE: 31JAN03

DRAWN BY: MCOPLAN

Proj.: OUTDOOR LED SCOREBOARDS
TITLE: COMPONENT LOCATIONS; FB-1530-11/-21, G3
DES. BY: MCOPLAN

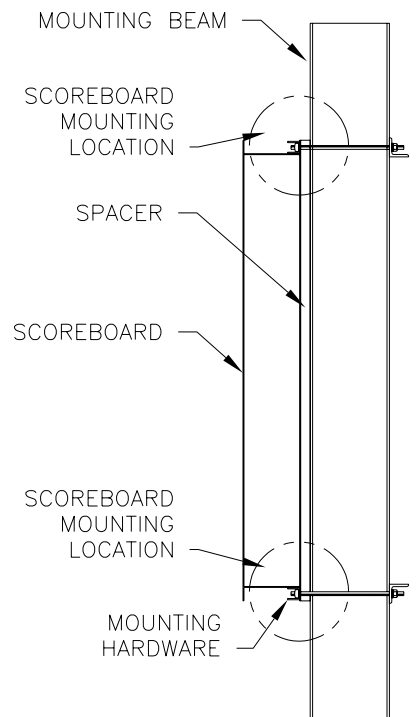
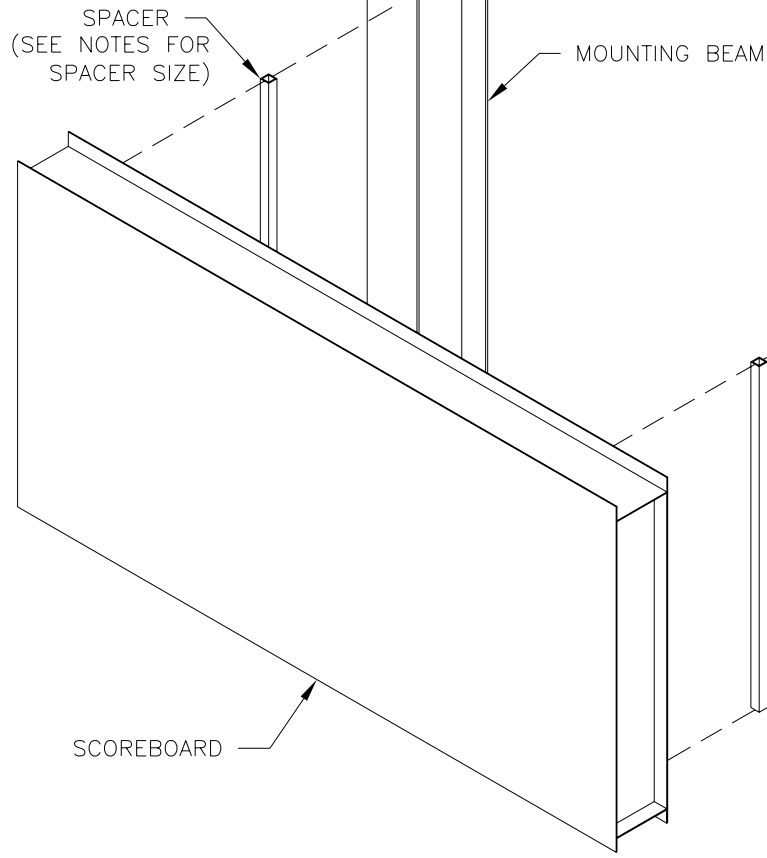
DAKTRONICS, INC. BROOKINGS, SD 57006

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TOP VIEW

SPACERS TO BE PROVIDED BY THE CUSTOMER



SIDE VIEW

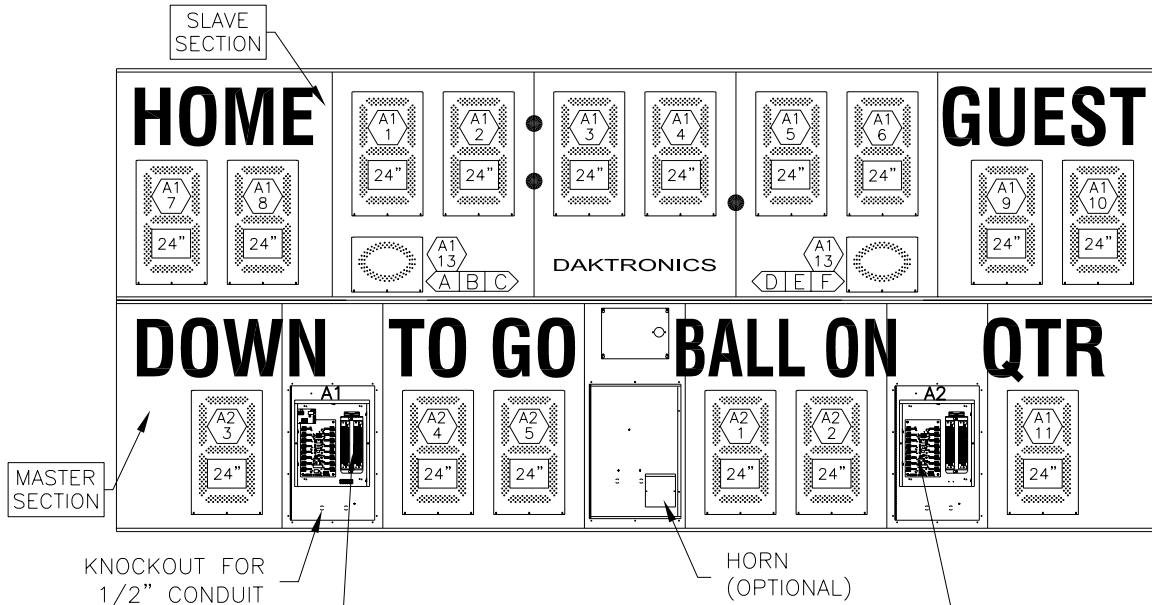
NOTES:

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

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

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

FB-1624-11/-21



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE ©1. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE ©1. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

= SEGMENT DESIGNATIONS

= DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; FB-1624-11/-21, G3

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

DATE: 10FEB03

REVISION

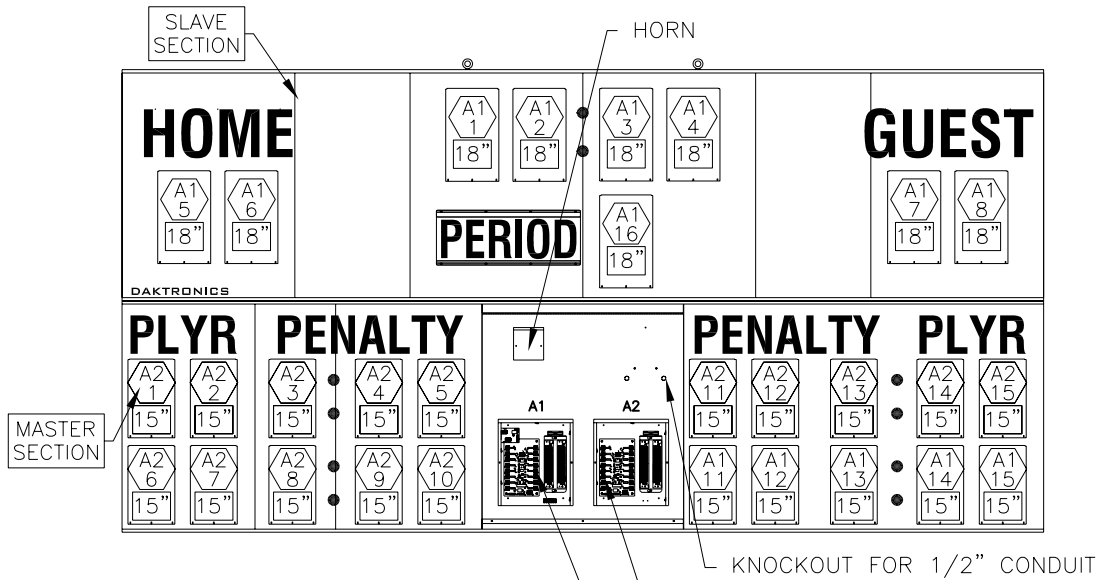
APPR. BY:

SCALE: 1=40

1192-R08A-183010

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------|-------------|----|-------|
| 00 | | | | |

MS-2918-11/-21



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW

A1
1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

24" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; MS-2918-11/-21, G3

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

DATE: 10FEB03

| | | | | |
|------|-------|---|----|-------|
| 01 | 24OCT | Moved top set of digits on bottom section down 1.000" | 03 | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

| | | |
|----------|-------------|------------------|
| REVISION | APPR. BY: | 1192-R08A-183029 |
| 01 | SCALE: 1=40 | |

| | |
|-------------|-------------------------|
| REV. | 01 |
| DATE | 07AUG03 |
| DESCRIPTION | UPDATED TNMC COMPONENTS |
| BY | MCOPL |
| APPR. | |

| | |
|-----------|---------|
| REVISION | 01 |
| APPR. BY: | |
| SCALE: | 1=45 |
| DATE: | 12MAR03 |
| DRAWN BY: | MCOPLAN |

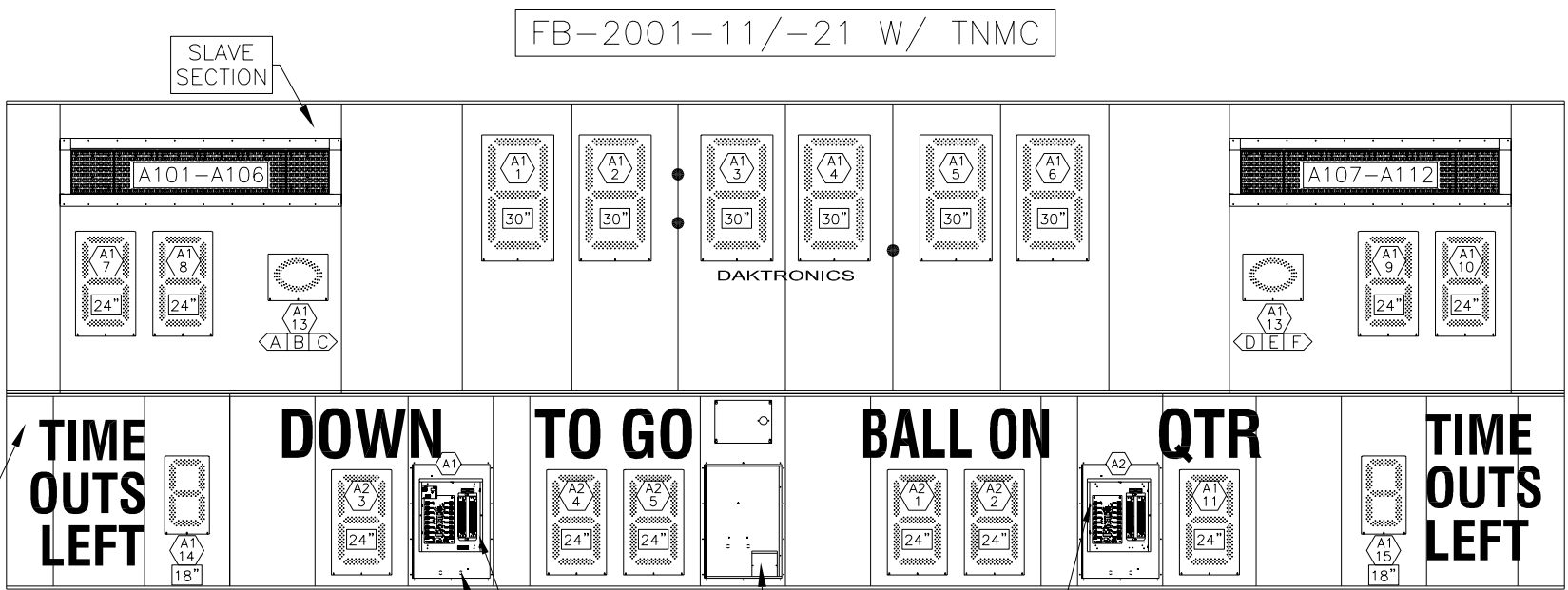
THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

Proj.: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; FB-2001-11/-21 W/ TNMC, G3

DES. BY: MCOPLAN



FB-2001-11/-21 W/ TNMC

SLAVE SECTION

MASTER SECTION

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

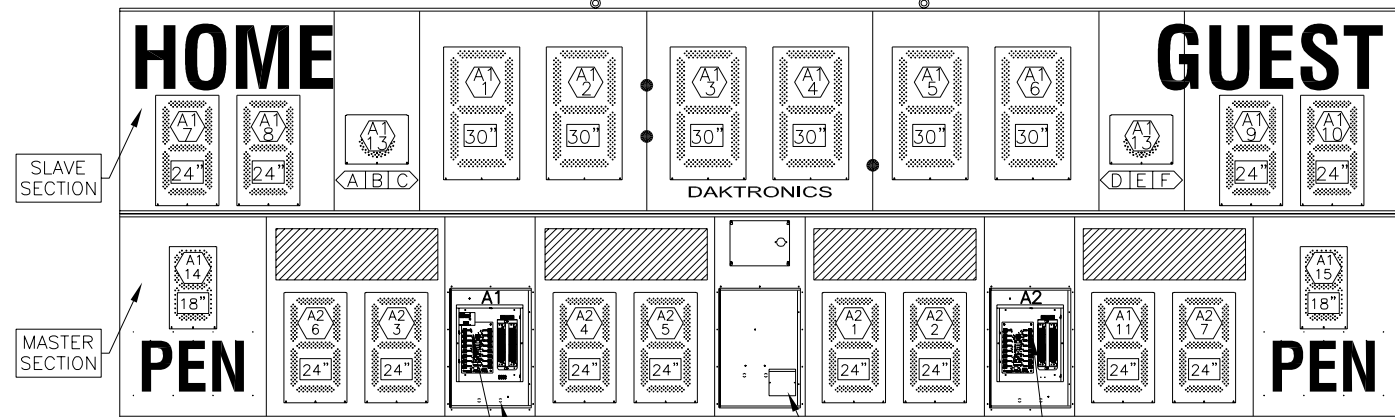
ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

- = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
 - = DIGIT SIZE
 - = SEGMENT DESIGNATIONS
- HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER AND SIGNAL ENVLOSURE.

REV. DATE DESCRIPTION BY APPR.

SO-2030-11/-21



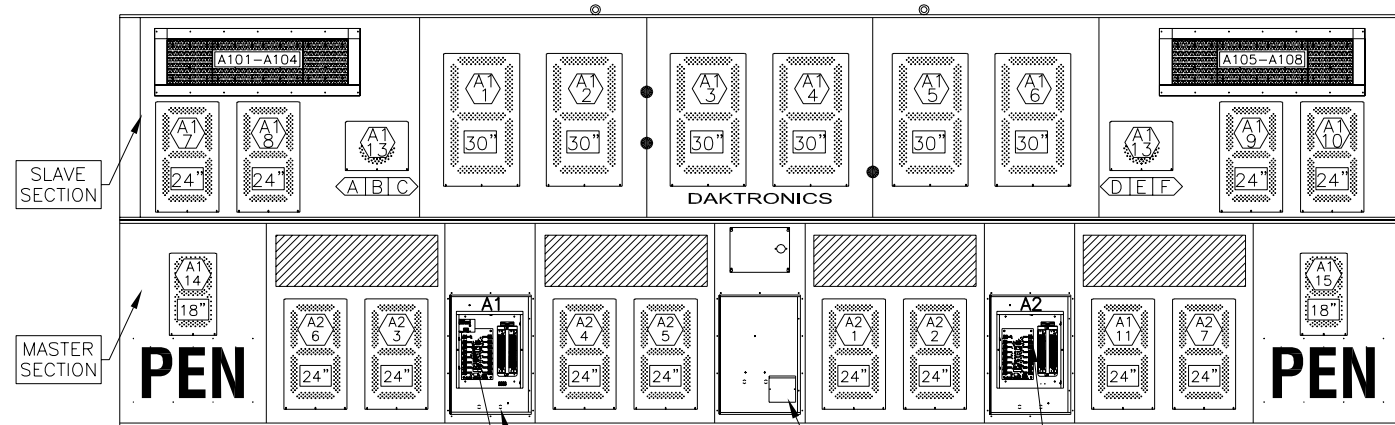
ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

SO-2030-11/-21 W/ TNMC



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

A1 1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT. A B C = SEGMENT DESIGNATIONS 24" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND POWER AND SIGNAL ENTRANCE.

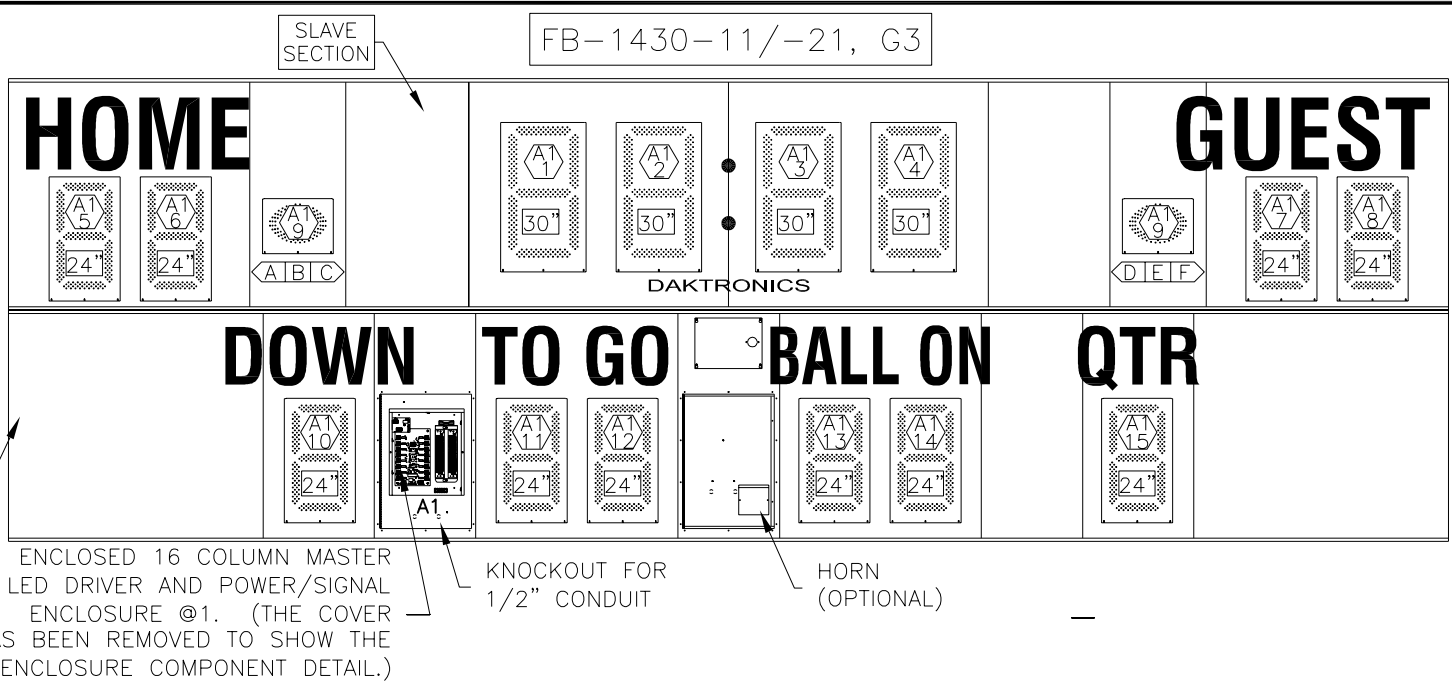
PROJ: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS; SO-2030-11/-21
 DES. BY: MCOPLAN
 DRAWN BY: MCOPLAN
 DATE: 13MAR03

REVISION 00
 APPR. BY: 1192-R08A-184900
 SCALE: 1=45

DAKTRONICS, INC. BROOKINGS, SD 57006

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REV. DATE DESCRIPTION BY APPR.

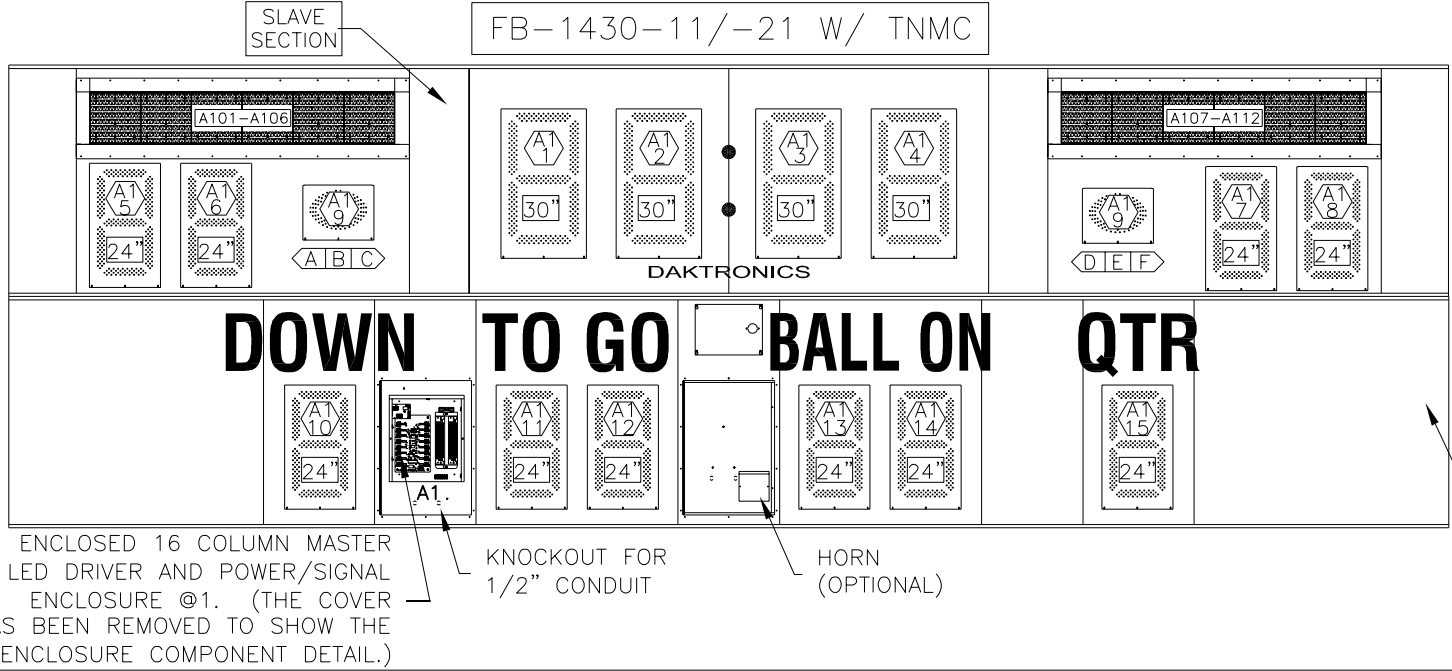


MASTER SECTION

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)



MASTER SECTION

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

A1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT. A|B|C = SEGMENT DESIGNATIONS 24" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

REVISION 00

APPR. BY: DATE: 21MAR03

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

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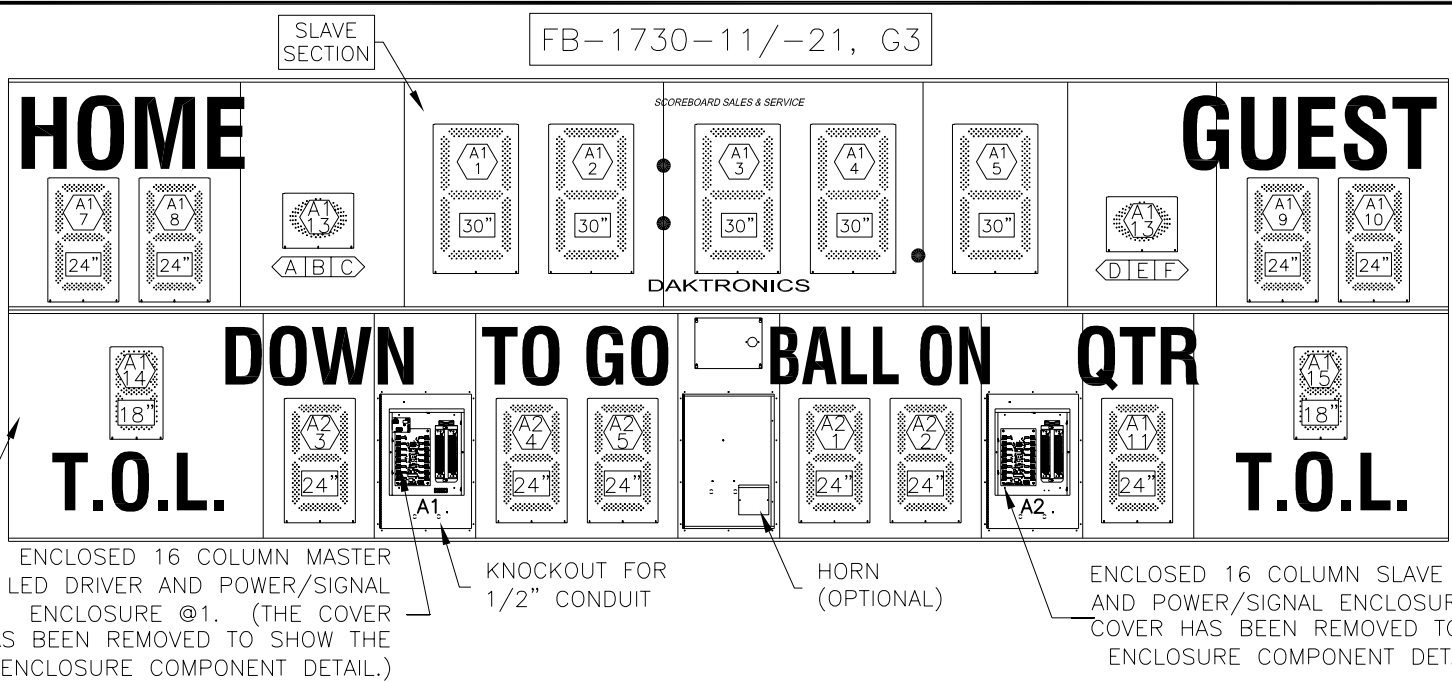
DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; FB-1430-11/-21, G3

1192-R08A-185439

REV. DATE DESCRIPTION BY APPR.



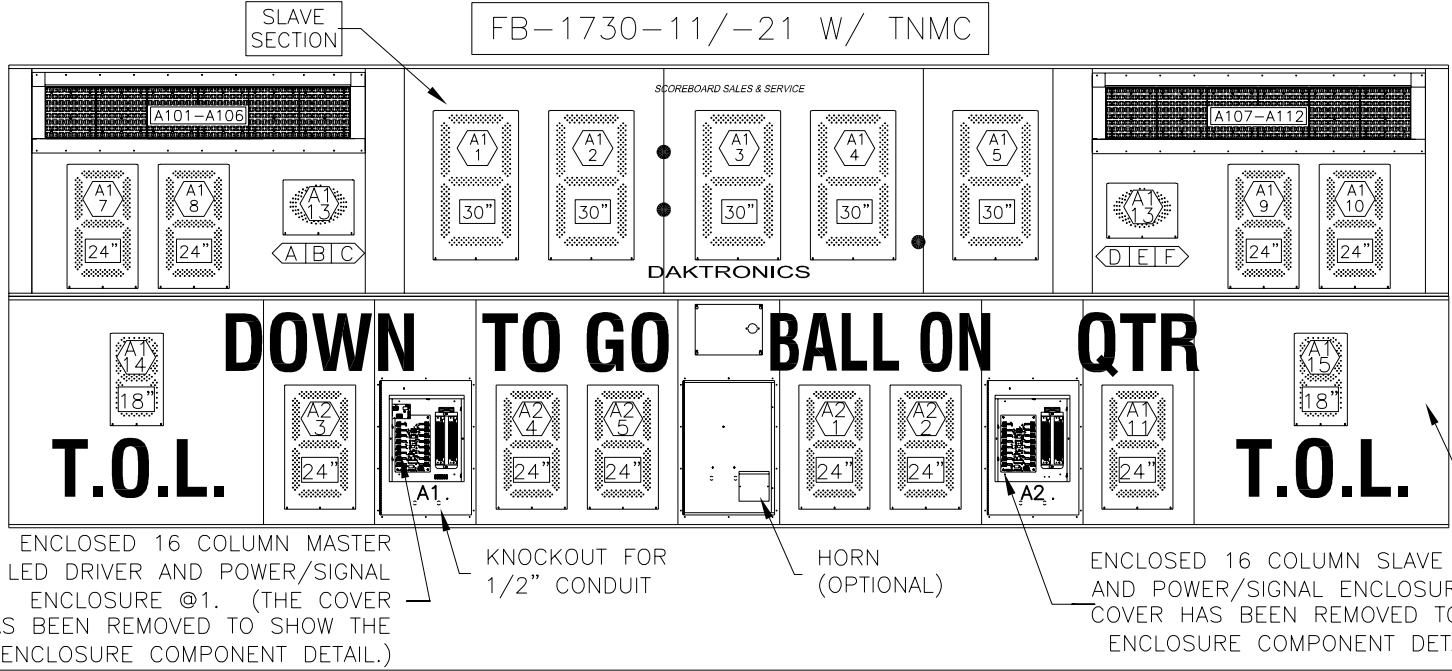
MASTER SECTION

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)



MASTER SECTION

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

A1

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

A B C

= SEGMENT DESIGNATIONS

24" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

REVISION 00 SCALE: 1=40

APPR. BY: DATE: 21MAR03

DRAWN BY: MCOPLAN

DES. BY: MCOPLAN

PROJ.: OUTDOOR LED SCOREBOARDS

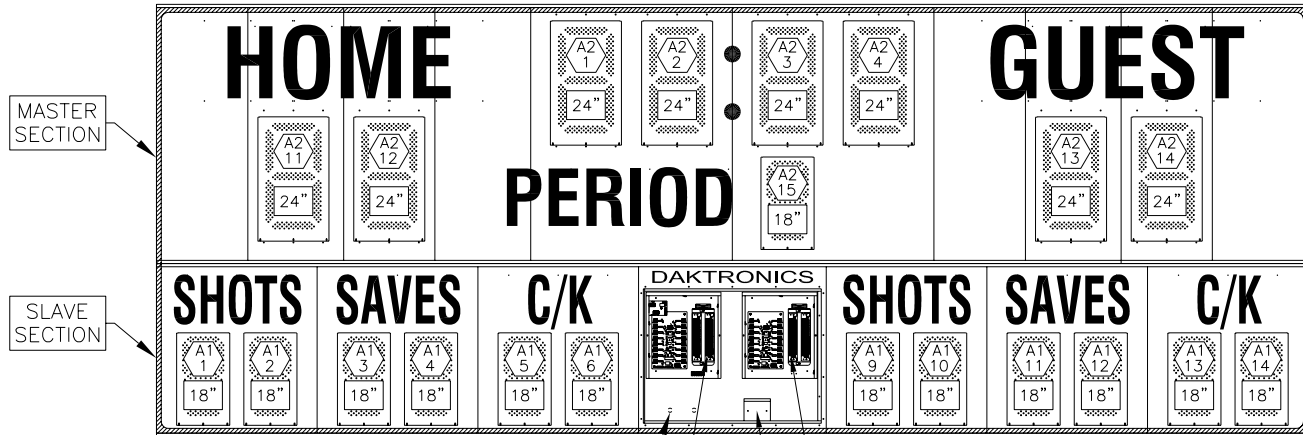
TITLE: COMPONENT LOCATIONS; FB-1730-11/-21, G3

DAKTRONICS, INC. BROOKINGS, SD 57006

1192-R08A-185446

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SO-2011-11/-21



KNOCKOUTS FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN MASTER DRIVER
 @1 AND POWER/SIGNAL ENCLOSURE.
 (THE COVER HAS BEEN REMOVED TO
 SHOW COMPONENT DETAIL).

ENCLOSED 16 COLUMN SLAVE DRIVER
 @1 AND POWER/SIGNAL ENCLOSURE.
 (THE COVER HAS BEEN REMOVED TO
 SHOW COMPONENT DETAIL).

OPTIONAL HORN

FRONT VIEW

 = LED DRIVER NUMBER &
 LED DRIVER CONNECTOR
 WIRED TO THAT DIGIT.

= DIGIT SIZE

HINGED ACCESS DOORS REMOVED
 TO SHOW THE LED DRIVER AND
 THE POWER/SIGNAL ENCLOSURE.

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; SO-2011-11/-21, G3

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

DATE: 21APR03

REVISION

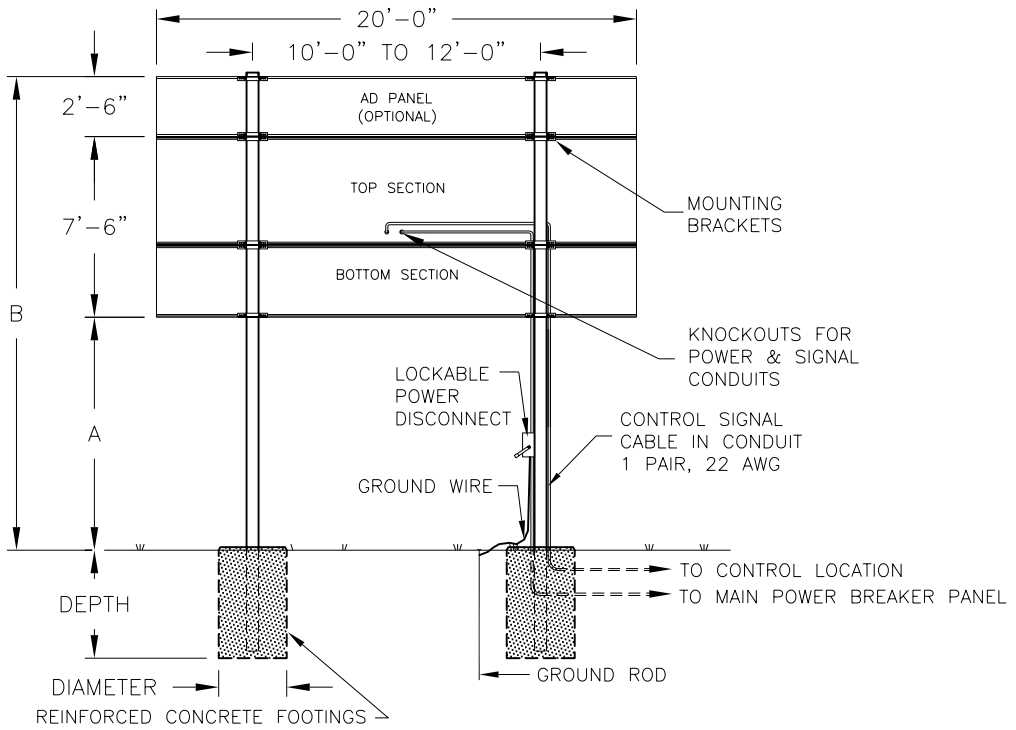
APPR. BY:

00

SCALE: 1=40

1192-R08A-186096

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



REAR VIEW

ELECTRICAL

POWER CABLE MUST HAVE A SEPERATE GROUND CONDUCTOR. SCOREBOARD MUST BE CONNECTED TO A GROUND ROD AT SCOREBOARD LOCATION.

| SO-2011 | | | | | | | |
|-----------------------|-----------------|---------------------|---------|----------------------|-----------|------------|------------|
| VERTICAL DISTANCE (A) | AD PANEL HEIGHT | COMBINED HEIGHT (B) | | DESIGN WIND VELOCITY | | | |
| | | | | 70 MPH | 80 MPH | 90 MPH | 100 MPH |
| 10 FT | NONE | 17'-6" | BEAM | W6X20 | W8X24 | W8X24 | W12X26 |
| | | | FOOTING | 2.0'X6.7' | 2.0'X8.2' | 2.0'X8.9' | 2.0'X9.7' |
| | 2'-6" | 20'-0" | BEAM | W12X26 | W14X30 | W8X31 | W10X33 |
| | | | FOOTING | 2.0'X8.4' | 2.5'X8.5' | 2.5'X9.3' | 2.5'X10.1' |
| 14 FT | NONE | 21'-6" | BEAM | W12X26 | W14X30 | W8X31 | W10X33 |
| | | | FOOTING | 2.5'X7.4' | 2.5'X8.2' | 2.5'X9.0' | 2.5'X9.7' |
| | 2'-6" | 24'-0" | BEAM | W8X31 | W14X38 | W10X39 | W14X43 |
| | | | FOOTING | 2.5'X8.4' | 2.5'X9.3' | 2.5'X10.1' | 2.5'X10.9' |
| 18FT | NONE | 25'-6" | BEAM | W10X31 | W10X39 | W10X39 | W14X47 |
| | | | FOOTING | 2.5'X8.1' | 2.5'X8.9' | 2.5'X9.7' | 2.5'X10.5' |
| | 2'-6" | 28'-0" | BEAM | W10X39 | W12X45 | W10X49 | W12X53 |
| | | | FOOTING | 2.5'X9.0' | 2.5'X9.9' | 2.5'X10.8' | 2.5'X11.7' |

FOOTING DIMENSIONS ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS, AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES.

COLUMNS AND FOOTINGS MUST BE DESIGNED BY A STATE LICENCED ENGINEER. DAKTRONICS DOES NOT ASSUME ANY LIABILITY FOR ANY INSTALLATIONS DERIVED FROM THIS INFORMATION OR DESIGNED AND INSTALLED BY OTHERS.

FOOTING = DIAMETER X DEPTH

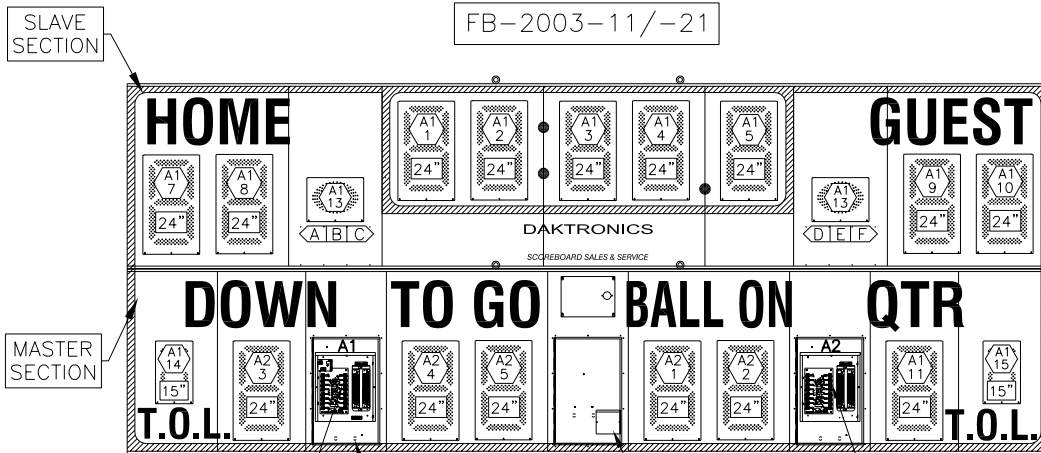
ASSUMPTIONS:
 -UBC 97 BUILDING CODE
 -SOIL CLASS 4 (200 psf X 2 ALLOWABLE LATTERAL BEARING PRESSUDE)

A NOTE ABOUT BEAM NOMENCLATURE:

For a typical beam, W12x30 for example, "W" stands for "Wide-Flange Beam". The first number (12) is the approximate front to rear dimension of the beam in inches. The second number (30) is the weight per foot in pounds. This numbering is standard in the steel industry. Widths vary from 8 to 14 inches in this chart.

| | | | |
|--|-----------------|------------------|--|
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| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR INCANDESCENT SCOREBOARDS | | | |
| TITLE: INSTALLATION SPECIFICATIONS, SO-2011 | | | |
| DES. BY: MCOPLAN | DRAWN BY: MCOPL | DATE: 16APR03 | |
| REVISION | APPR. BY: | 1091-E10A-187149 | |
| 01 | SCALE: 1/8"=1' | | |

| | | | | |
|------|----------|-----------------------------------|-----|-------|
| 01 | 9 NOV 05 | CHANGED POLE SPACING TO 10' - 12' | JKU | |
| REV. | DATE | DESCRIPTION | BY | APPR. |



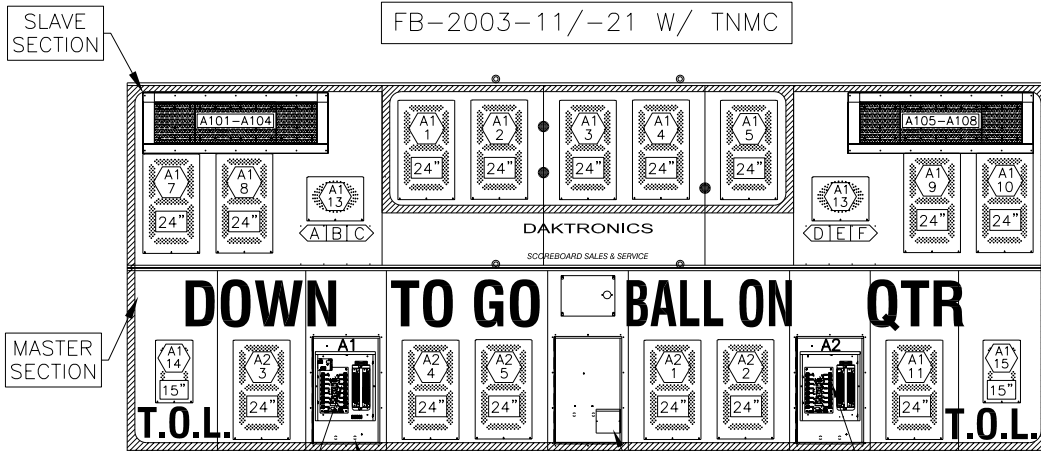
ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

FRONT VIEW



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

FRONT VIEW

A1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

24" = DIGIT SIZE

A1B1C = SEGMENT DESIGNATIONS

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; FB-2003-11/-21, G3

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

DATE: 30APR03

REVISION

APPR. BY:

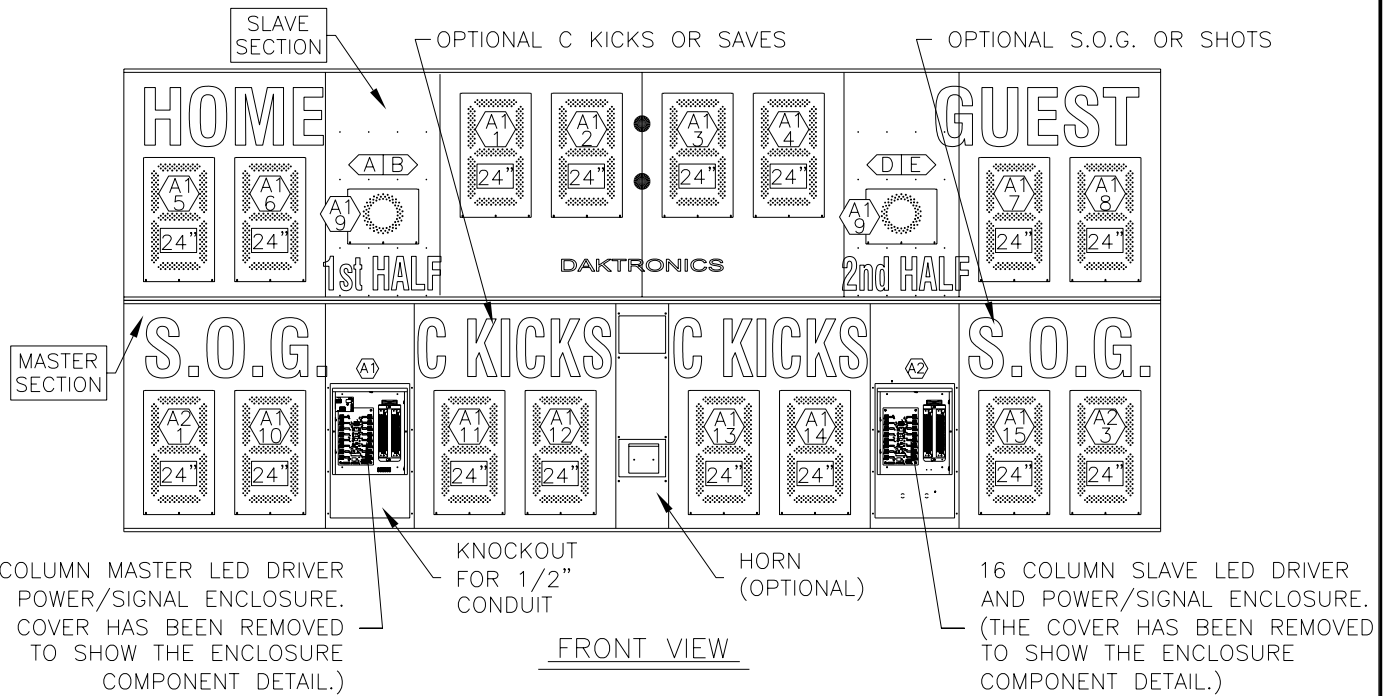
01

SCALE: 1=50

1192-R08A-187933

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|---------|---|-----|-------|
| 01 | 19MAY04 | CHANGED DOWN DIGIT ON BOTTOM FROM A1-3 TO A2-3 PER ECO# 42629 | JML | |

SO-1624-11/-21



16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

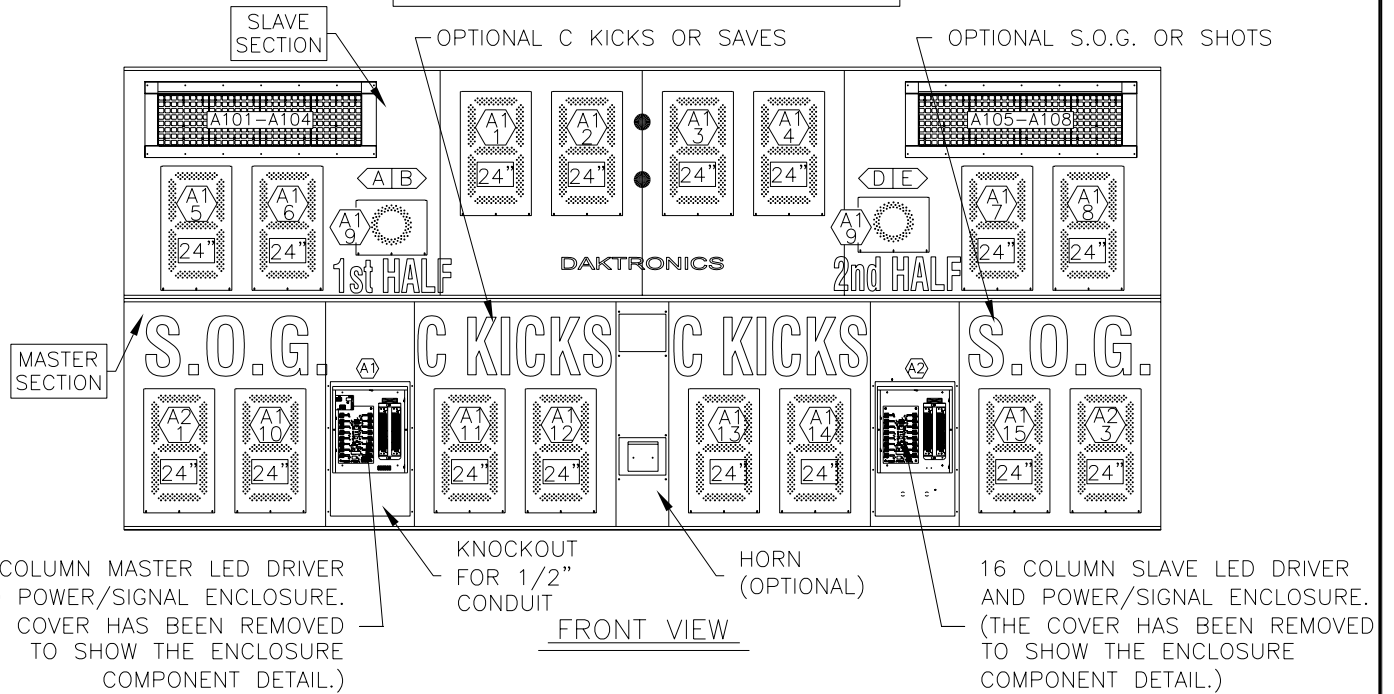
KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW

SO-1624-11/-21 W/ TNMC



16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW

$\text{A2} \begin{matrix} 1 \\ \vdots \\ 1 \end{matrix}$ = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

$\langle \text{A1B} \rangle$ = SEGMENT DESIGNATIONS

24" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND POWER AND SIGNAL ENTRANCE.

THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

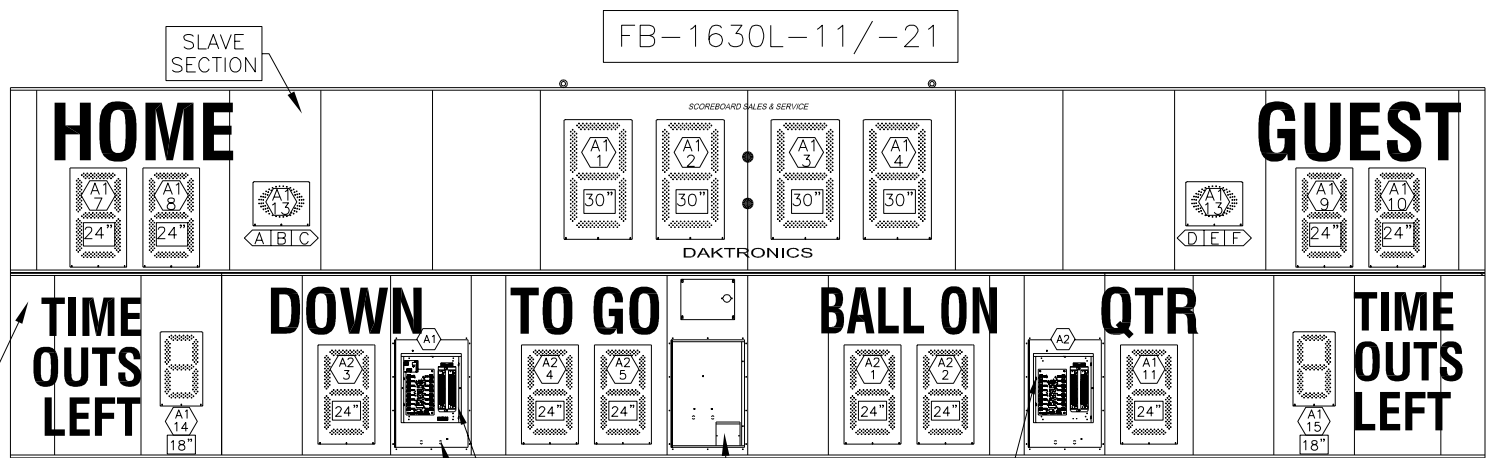
TITLE: COMPONENT LOCATIONS; SO-1624-11/-21, G3

DES. BY: MCOPLAN DRAWN BY: MCOPLAN DATE: 06MAY03

| | | |
|----------|-------------|------------------|
| REVISION | APPR. BY: | 1192-R08A-188178 |
| 01 | SCALE: 1=40 | |

| | | | | |
|------|-----------|-------------------------------------|-----|-------|
| 01 | 11 AUG 06 | UPDATED VIEW TO REFLECT NEW M-PARTS | TAJ | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

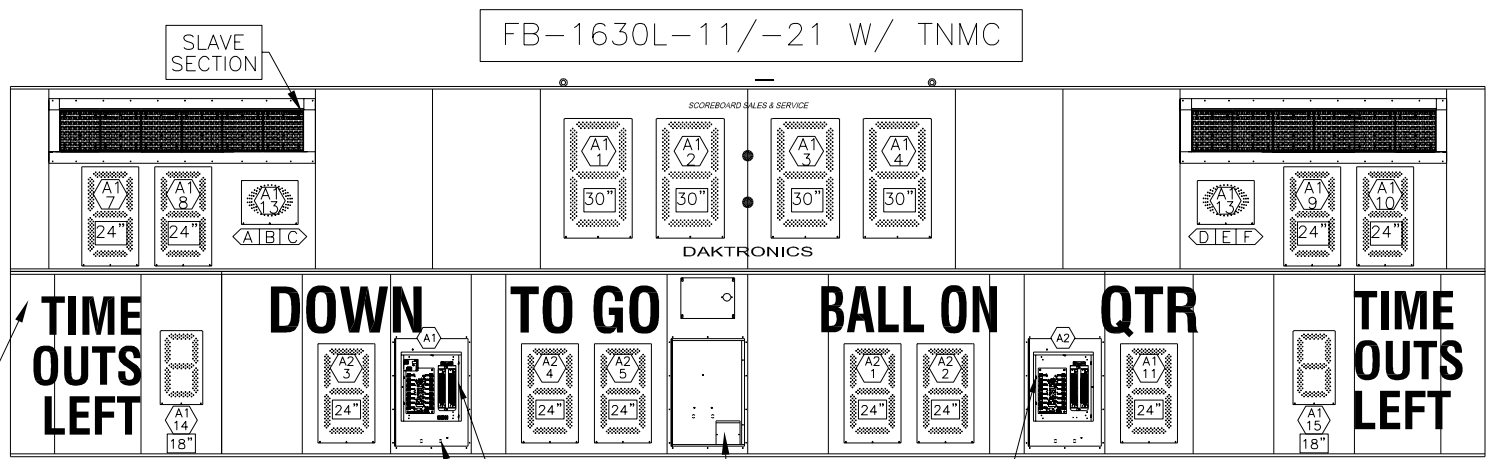
REV. DATE DESCRIPTION BY APPR.



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW

A1 1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

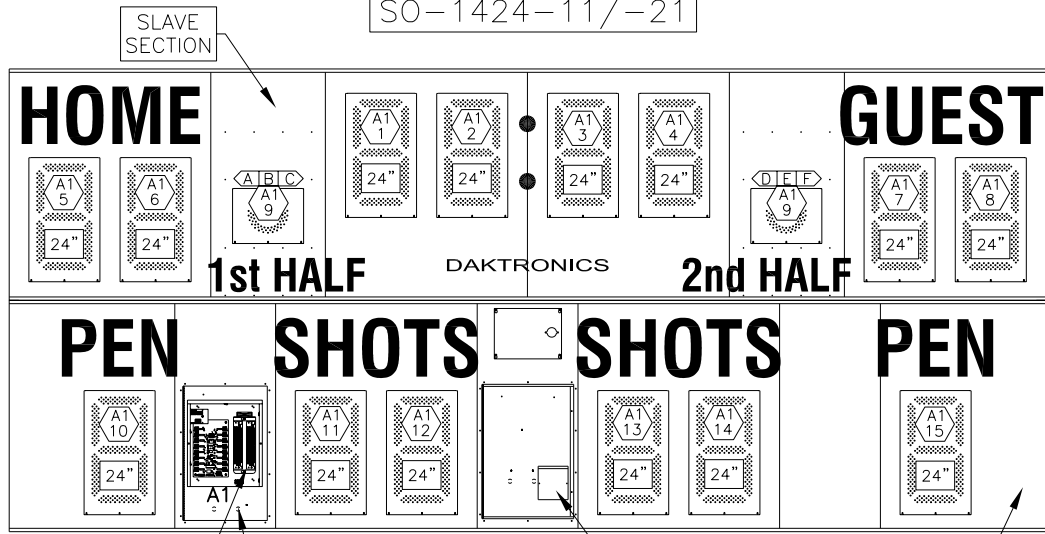
A B C = SEGMENT DESIGNATIONS

24" = DIGIT SIZE

 HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND POWER AND SIGNAL ENTRANCE.

PROJ: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS; FB-1630L-11/-21, G3
 DES. BY: MCOPLAN
 DRAWN BY: MCOPLAN
 DATE: 14MAY03
 DAKTRONICS, INC. BROOKINGS, SD 57006
 THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC.
 REVISION 00
 APPR. BY: 1192-R08A-188581
 SCALE: 1=50

SO-1424-11/-21



ENCLOSED 16 COLUMN DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW COMPONENT DETAIL).

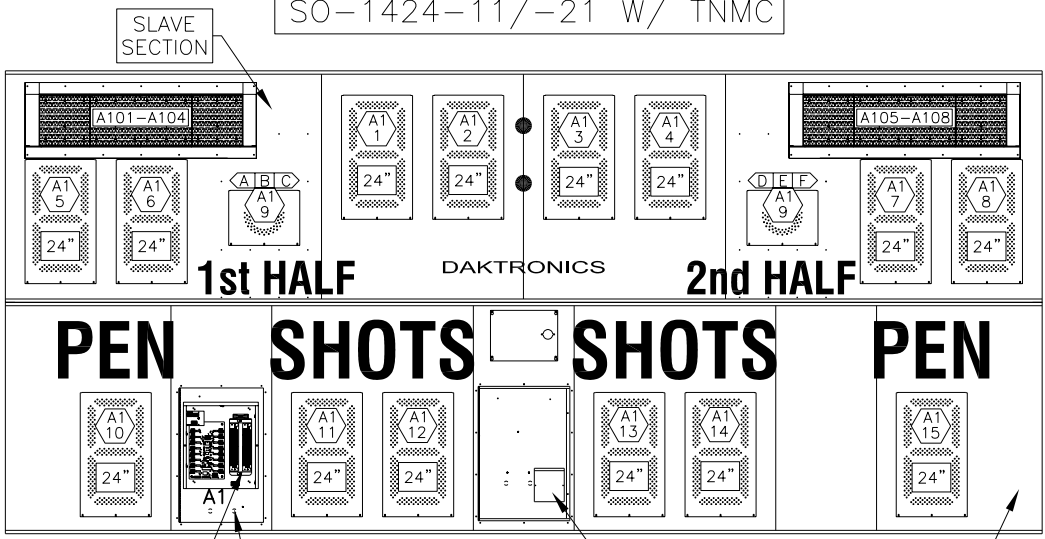
KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

MASTER SECTION

FRONT VIEW

SO-1424-11/-21 W/ TNMC



ENCLOSED 16 COLUMN DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

MASTER SECTION

FRONT VIEW

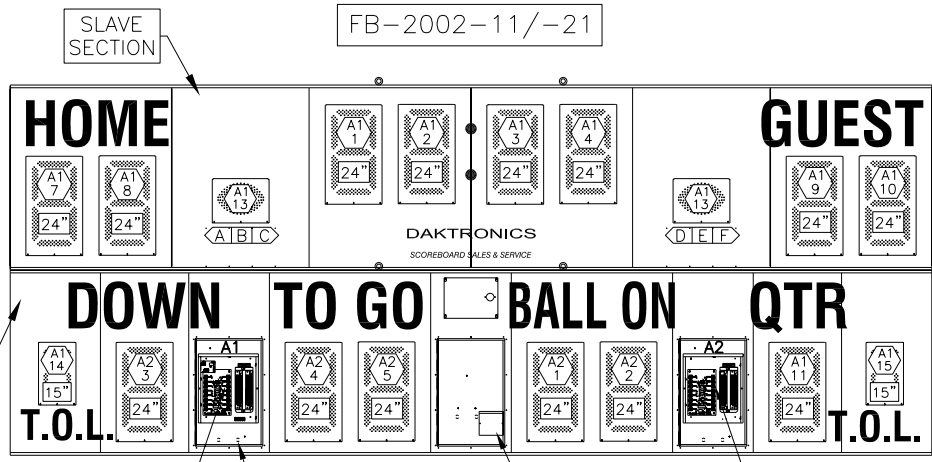
= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

= SEGMENT DESIGNATIONS

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

| | | | |
|--|-------------|-------------------|--|
| THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC. | | | |
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: COMPONENT LOCATIONS; SO-1424-11/-21, G3 | | | |
| DES. BY: MCOPLAN | | DRAWN BY: MCOPLAN | |
| | | DATE: 16MAY03 | |
| REVISION | APPR. BY: | 1192-R08A-188778 | |
| 00 | SCALE: 1=40 | | |

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



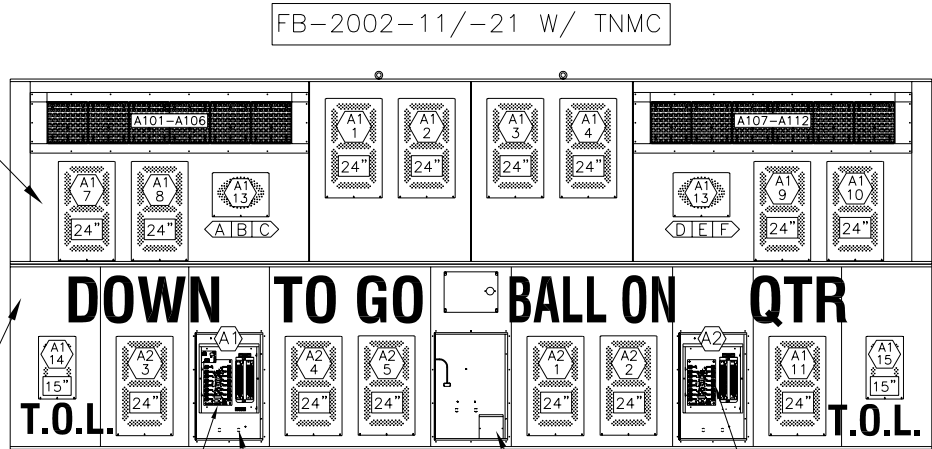
ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

FRONT VIEW



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

FRONT VIEW

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

= DIGIT SIZE

= SEGMENT DESIGNATIONS

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; FB-2020-11/-21, G3

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

DATE: 19MAY03

REVISION

APPR. BY:

02

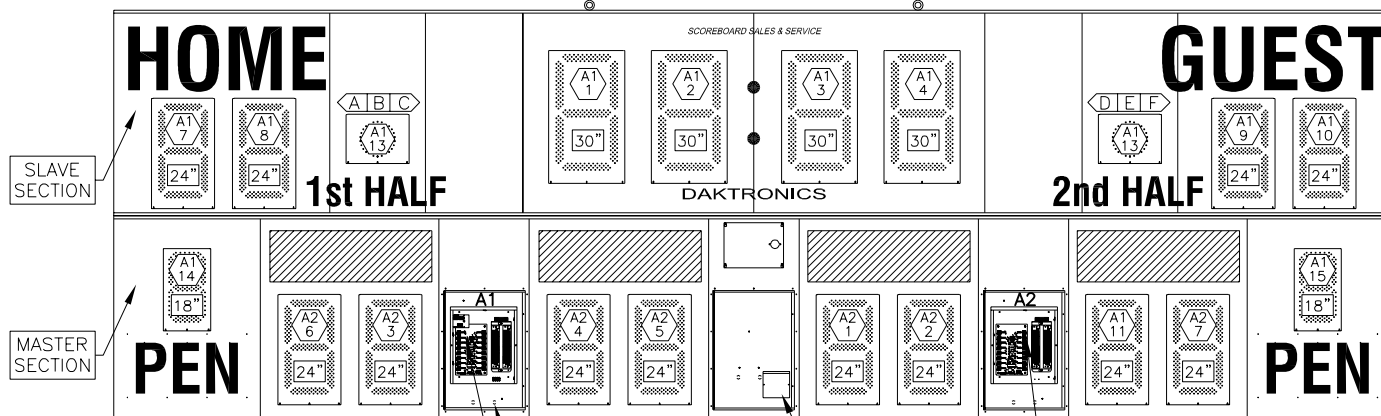
SCALE: 1=50

1192-R08A-188811

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|-----------|---|-------|-------|
| 02 | 19 APR 04 | CHANGED "DOWN" HARNESS ASSIGNMENT TO A2-3 PER ECO-42471 | RWD | TWEB |
| 01 | 04MAR04 | ADDED MODEL FB-2020 W/ TNMC | CCAIN | |

REV. DATE DESCRIPTION BY APPR.

SO-1830-11/-21



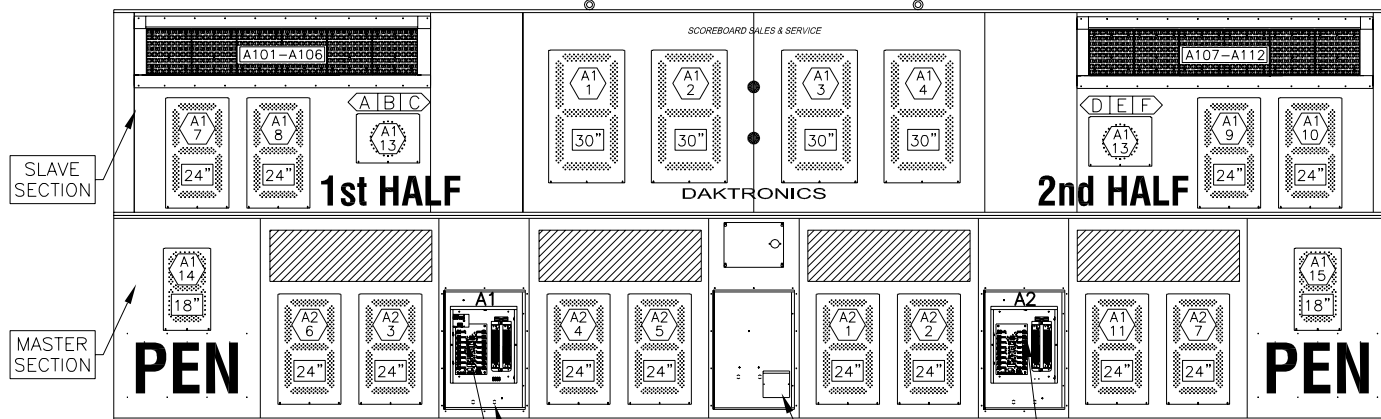
ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

SO-1830-11/-21 W/ LED TNMC



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

A1 1

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

A B C = SEGMENT DESIGNATIONS

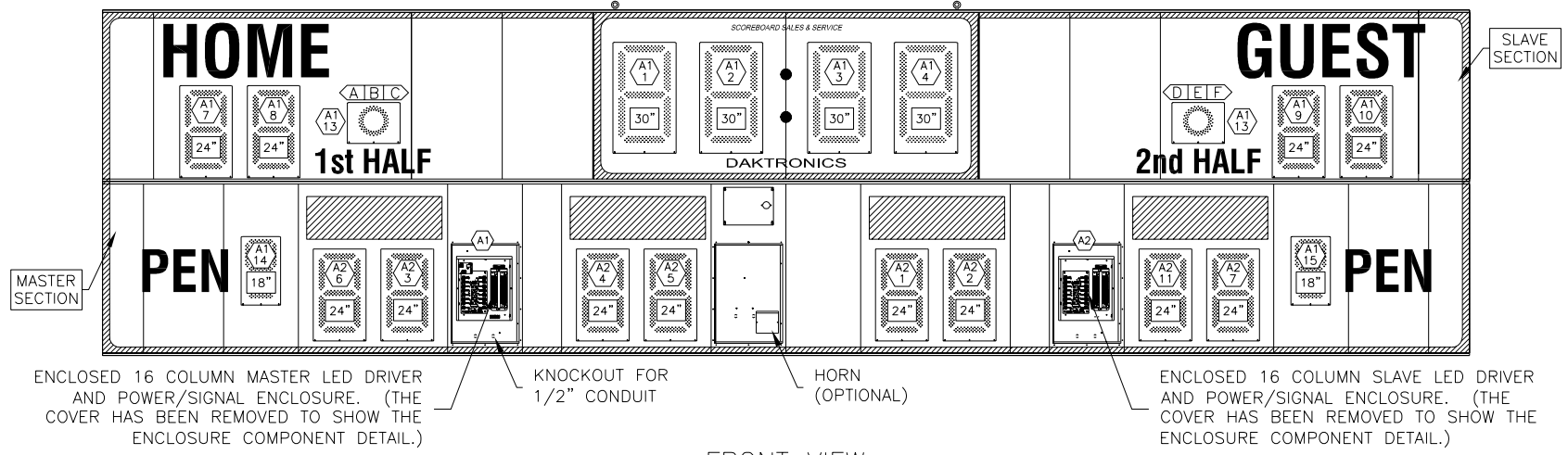
24" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND POWER AND SIGNAL ENTRANCE.

REVISION 00
 SCALE: 1=45
 1192-R08A-188831
 APPR. BY: MCOPLAN
 DATE: 19MAY03
 DRAWN BY: MCOPLAN
 TITLE: COMPONENT LOCATIONS: SO-1830-11/-21, G3
 DES. BY: MCOPLAN
 PROJ.: OUTDOOR LED SCOREBOARDS
 DAKTRONICS, INC. BROOKINGS, SD 57006
 THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC.

REV.
DATE
DESCRIPTION
BY
APPR.

SO-1830L-11/-21



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

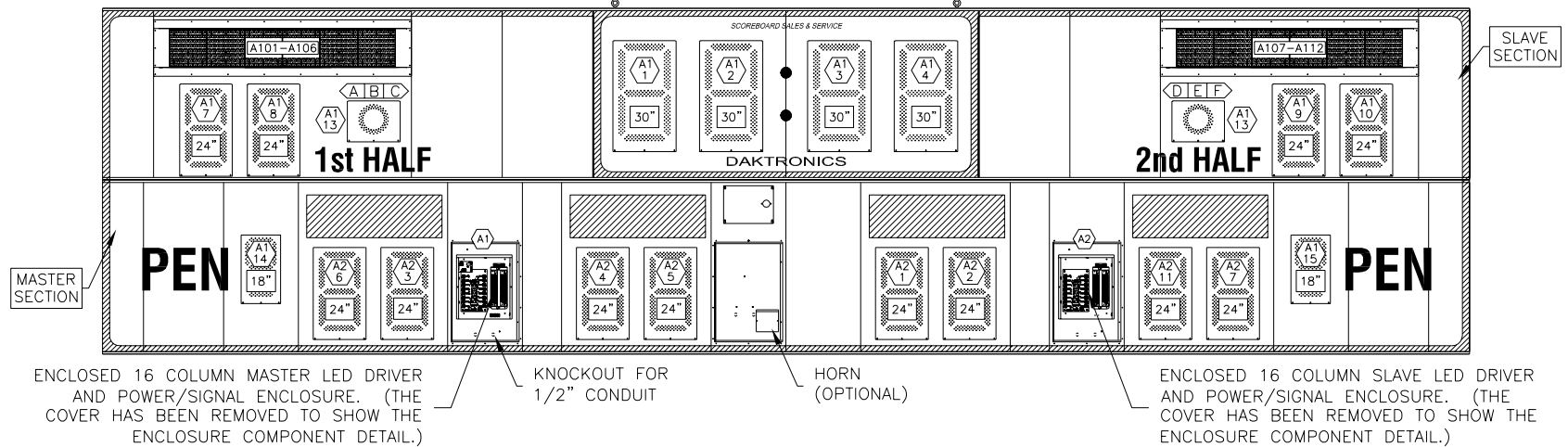
KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW

SO-1830L-11/-21 W/ TNMC



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

= SEGMENT DESIGNATIONS

= DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND POWER AND SIGNAL ENTRANCE.

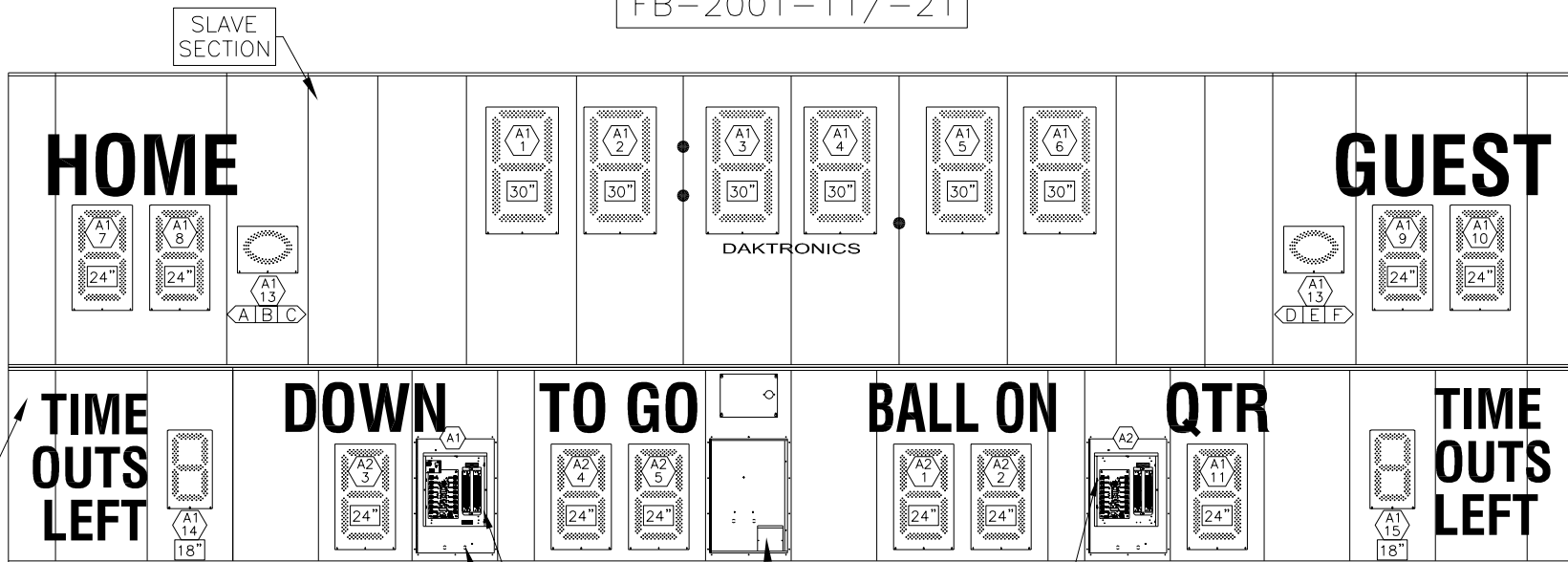
PROJ.: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS; SO-1830L-11/-21, G3
 DES. BY: MCOPLAN
 DRAWN BY: MCOPLAN
 DATE: 21MAY03
 REVISION 00
 APPR. BY: 1192-R08A-188988
 SCALE: 1=50

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DAKTRONICS, INC. BROOKINGS, SD 57006

REV. DATE DESCRIPTION BY APPR.

FB-2001-11/-21



MASTER SECTION




SLAVE SECTION

KNOCKOUT FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

-  = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
-  = DIGIT SIZE
-  = SEGMENT DESIGNATIONS

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER AND SIGNAL ENVLOSURE.

REVISION 00
 SCALE: 1=45
 1192-R08A-189150

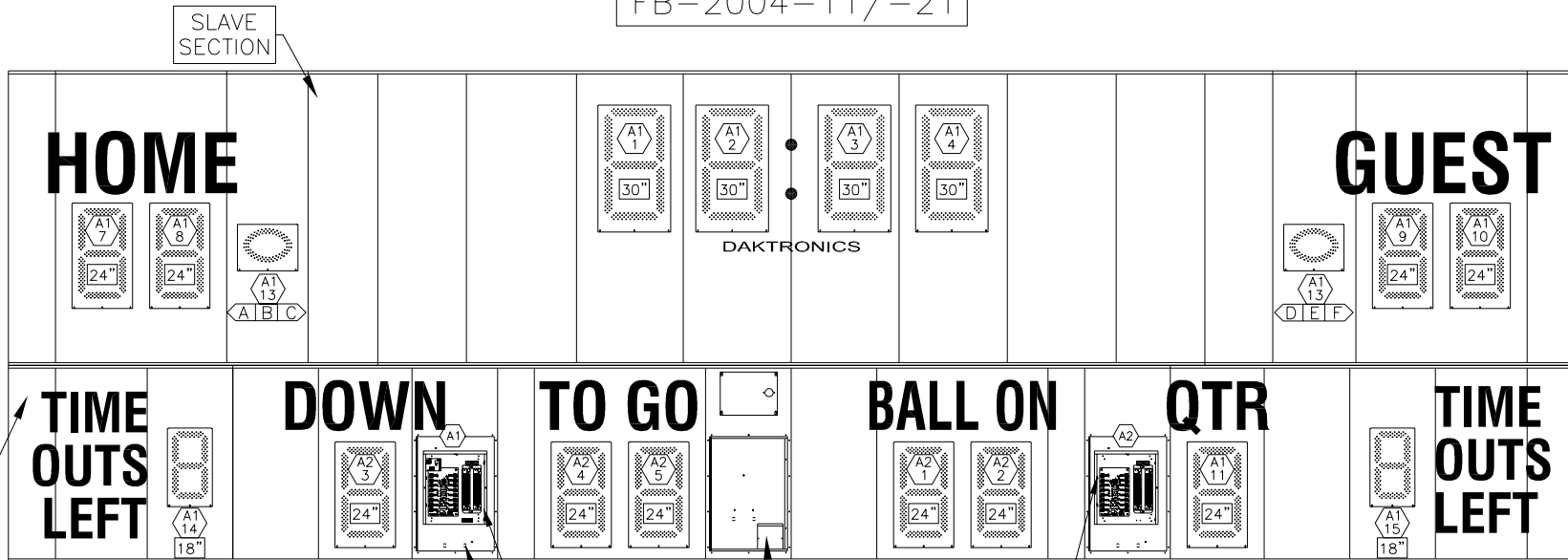
PROJ: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS, FB-2001-11/-21, G3
 DES. BY: MCOPLAN
 DRAWN BY: MCOPLAN
 DATE: 27MAY03

DAKTRONICS, INC. BROOKINGS, SD 57006

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REV. DATE DESCRIPTION BY APPR. REVISION APPR. BY: DATE: 00 SCALE: 1=45 1192-R08A-189160

FB-2004-11/-21



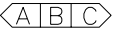


KNOCKOUT FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

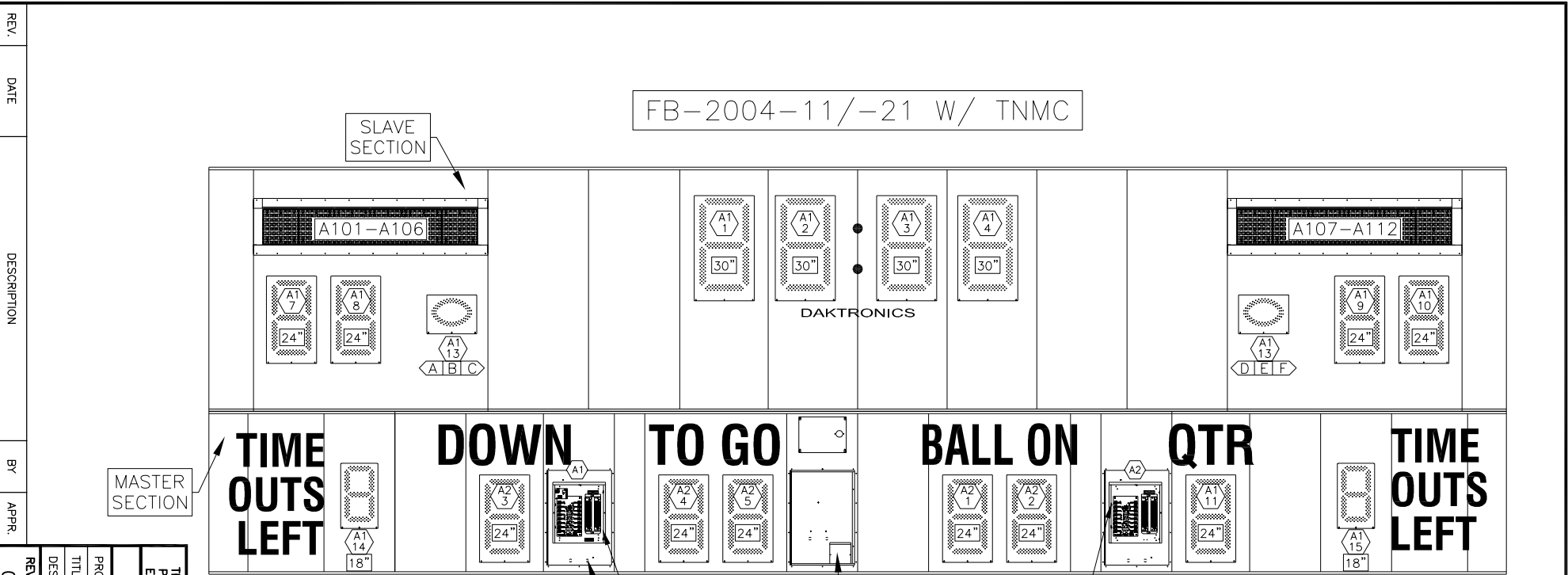
-  = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
-  = DIGIT SIZE
-  = SEGMENT DESIGNATIONS

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER AND SIGNAL ENVLOSURE.

THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2003 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS, FB-2004-11/-21, G3
 DES. BY: MCOPLAN
 DRAWN BY: MCOPLAN
 DATE: 27MAY03



FB-2004-11/-21 W/ TNMC

REV. DATE DESCRIPTION BY APPR.

REVISION 00
 SCALE: 1=45
 1192-R08A-194436

DES. BY: MCOPLAN
 DRAWN BY: MCOPLAN
 DATE: 07AUG03

ProJ: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS, FB-2004-11/-21 W/ TNMC, G3

DAKTRONICS, INC. BROOKINGS, SD 57006

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KNOCKOUT FOR 1/2" CONDUIT

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

HORN (OPTIONAL)

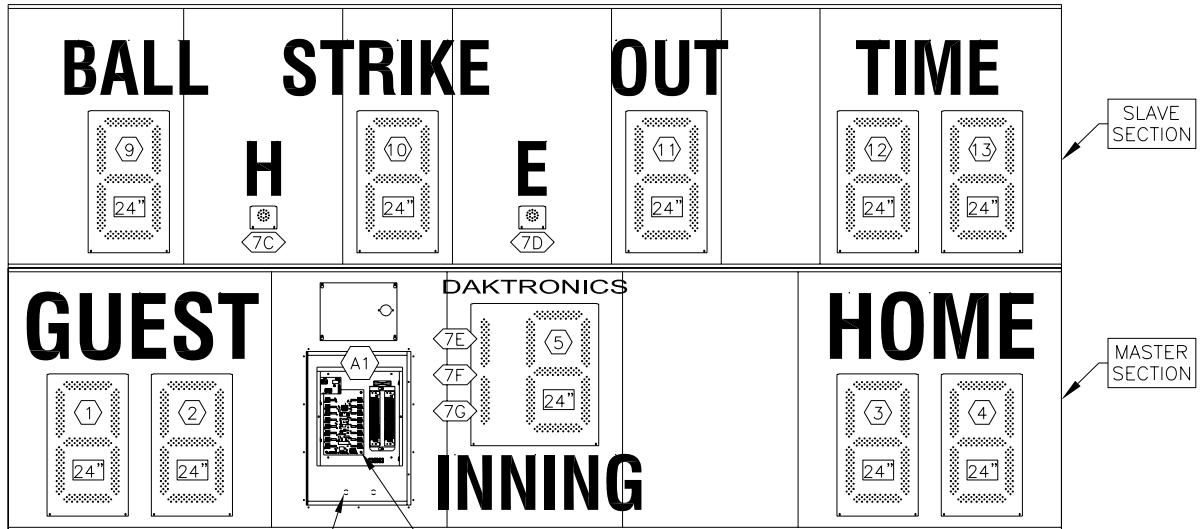
ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW

- = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
- = DIGIT SIZE
- = SEGMENT DESIGNATIONS

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER AND SIGNAL ENVLOSURE.

BA-2012-11/-21



KNOCKOUTS FOR
1/2" CONDUIT

ENCLOSED 16 COLUMN LED DRIVER
AND POWER/SIGNAL ENCLOSURE.
(THE COVER HAS BEEN REMOVED
TO SHOW THE COMPONENT DETAIL).

FRONT VIEW

- ⬡12 = LED DRIVER CONNECTOR
WIRED TO THAT DIGIT.
- ⬡15A = LED DRIVER CONNECTOR
AND SEGMENT (PIN) NO.
WIRED TO THAT INDICATOR
- ⬡18" = DIGIT SIZE

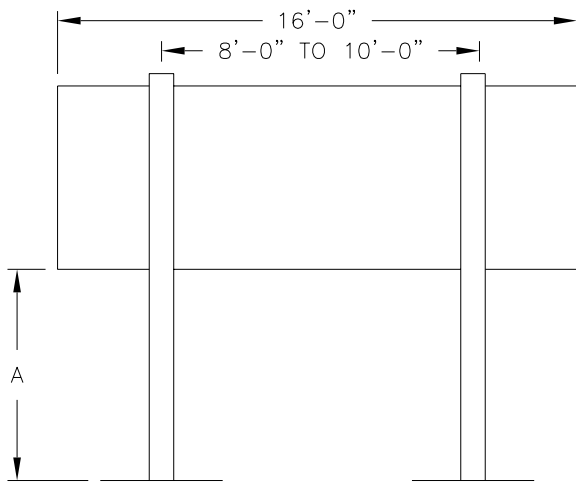
HINGED ACCESS DOORS REMOVED
TO SHOW THE LED DRIVER AND
POWER/SIGNAL ENCLOSURE.

| | | | |
|--|-------------|-------------------|--|
| 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 2004 DAKTRONICS, INC. | | | |
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: COMPONENT LOCATIONS; BA-2012-11/-21, G3 | | | |
| DES. BY: MCOPLAN | | DRAWN BY: MCOPLAN | |
| | | DATE: 15JAN04 | |
| REVISION | APPR. BY: | 1192-R08A-202673 | |
| 00 | SCALE: 1=35 | | |

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

| MODEL BA-2012, BA-2020 | | | | | |
|---------------------------------------|---|----------------------------|-----------------------|-----------------------|------------------------|
| DISTANCE TO BOTTOM OF SCOREBOARD (FT) | DOES SCOREBOARD HAVE ATTACHED AD PANEL? | DESIGN WIND VELOCITY (MPH) | | | |
| | | 70 | 80 | 90 | 100 |
| A | | | | | |
| 10 | NO | W8x28 3.00 X 5.60 | W8x31 3.00 X 6.20 | W10x33 3.00 X 6.80 | W8x35 3.00 X 7.30 |
| | YES | W10x39 3.00 X 6.80 | W12x45 3.00 X 7.50 | W8x48 3.00 X 8.20 | W12x53 3.00 X 8.80 |
| 12 | NO | W8x31 3.00 X 5.90 | W10x33 3.00 X 6.50 | W10x39 3.00 X 7.10 | W8x40 3.00 X 7.60 |
| | YES | W12x45 3.00 X 7.10 | W8x48 3.00 X 7.80 | W12x53 3.00 X 8.50 | W12x58 3.00 X 9.20 |
| 14 | NO | W8x35 3.00 X 6.20 | W10x39 3.00 X 6.80 | W12x45 3.00 X 7.40 | W8x48 3.00 X 8.00 |
| | YES | W8x48 3.00 X 7.4 | W12x53 3.00 X 8.10 | W12x58 3.00 X 8.80 | W12x65 3.00 X 9.60 |
| 16 | NO | W10x39 3.00 X 6.40 | W12x45 3.00 X 7.10 | W8x48 3.00 X 7.70 | W12x53 3.00 X 8.30 |
| | YES | W10x49 3.00 X 7.60 | W12x58 3.00 X 8.40 | W12x65 3.00 X 9.10 | W12x72 3.00 X 9.80 |
| 18 | NO | W12x45 3.00 X 6.60 | W8x48 3.00 X 7.30 | W12x53 3.00 X 8.00 | W12x58 3.00 X 8.60 |
| | YES | W10x54 3.00 X 7.80 | W12x65 3.00 X 8.60 | W12x72 3.00 X 9.40 | W10x77 3.00 X 10.10 |
| 20 | NO | W8x48 3.00 X 6.90 | W10x49 3.00 X 7.60 | W12x58 3.00 X 8.30 | W12x65 3.00 X 8.90 |
| | YES | W10x60 3.00 X 8.10 | W10x68 3.00 X 8.90 | W10x77 3.00 X 9.70 | W12x87 3.00 X 10.50 |

W6x12 ← RECOMMENDED BEAM SECTION FOR MOUNTING SCOREBOARD
2.00 X 4.25 ← RECOMMENDED FOOTINGS IN FEET (DIAMETER X DEPTH)



REAR VIEW

NOTE:
RECOMMENDATIONS FOR A DISPLAY WITH AN ATTACHED AD PANEL WERE CALCULATED USING A 48" TALL AD PANEL.

INFORMATION GIVEN IS FOR ESTIMATING PURPOSES ONLY. COLUMNS AND FOOTINGS MUST BE DESIGNED BY A STATE LICENSED ENGINEER. DAKTRONICS DOES NOT ASSUME ANY LIABILITY FOR ANY INSTALLATIONS DERIVED FROM THIS INFORMATION OR DESIGNED AND INSTALLED BY OTHERS.

| | | | |
|--|-------------|-------------------|--|
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| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: FOOTBALL SCOREBOARDS | | | |
| TITLE: INSTALLATION SPECIFICATIONS, BA-2012, BA-2020 | | | |
| DES. BY: MCOPLAN | | DRAWN BY: MCOPLAN | |
| | | DATE: 19JAN04 | |
| REVISION | APPR. BY: | 1192-R08A-202766 | |
| 01 | SCALE: NONE | | |

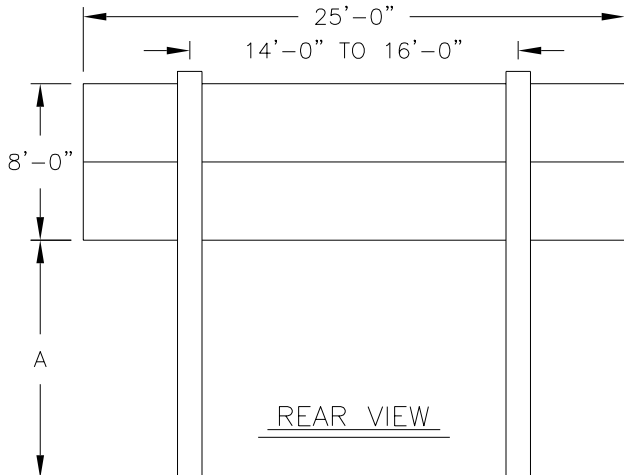
| | | | | |
|------|---------|---------------------|-----|-------|
| 01 | 23FEB05 | ADDED MODEL BA-2020 | TAJ | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

**MODELS FB-1430, FB-1530, FB-1630,
FB-1730, & FB-1830 W/ 2 POLE MOUNTING**

| DISTANCE TO BOTTOM OF SCOREBOARD (FT) | DOES SCOREBOARD HAVE ATTACHED AD PANEL? | DESIGN WIND VELOCITY (MPH) | | |
|--|--|----------------------------|------------------------|------------------------|
| | | 70 | 80 | 90 |
| A | | | | |
| 10 | NO | W12X26 3.00 X 7.10 | W14X30 3.00 X 7.80 | W10X33 3.00 X 8.50 |
| | YES | W10X39 3.00 X 8.50 | W10X39 3.00 X 9.40 | W12X45 3.00 X 10.30 |
| 12 | NO | W14X30 3.00 X 7.40 | W10X33 3.00 X 8.10 | W10X33 3.00 X 8.90 |
| | YES | W10X39 3.00 X 8.90 | W12X45 3.00 X 9.80 | W12X50 3.00 X 10.70 |
| 14 | NO | W10X33 3.00 X 7.80 | W10X39 3.00 X 8.50 | W12X40 3.00 X 9.30 |
| | YES | W12X45 3.00 X 9.20 | W12X50 3.00 X 10.20 | W12X53 3.00 X 11.10 |
| 16 | NO | W10X39 3.00 X 8.00 | W10X39 3.00 X 8.90 | W12X45 3.00 X 9.70 |
| | YES | W12X50 3.00 X 9.50 | W12X53 3.00 X 10.50 | W14X61 3.00 X 11.40 |
| 18 | NO | W10X39 3.00 X 8.30 | W12X45 3.00 X 9.10 | W12X50 3.00 X 10.00 |
| | YES | W12X53 3.00 X 9.80 | W12X58 3.00 X 10.80 | W16X67 3.00 X 11.80 |
| 20 | NO | W12X45 3.00 X 8.60 | W12X50 3.00 X 9.50 | W12X53 3.00 X 10.30 |
| | YES | W12X53 3.00 X 10.10 | W16X67 3.00 X 11.20 | W14X74 3.00 X 12.30 |

W6X12 ← RECOMMENDED BEAM SECTION FOR MOUNTING SCOREBOARD
 2.00 X 4.25 ← RECOMMENDED FOOTINGS IN FEET (DIAMETER X DEPTH)

NOTE:
 RECOMMENDATIONS FOR A DISPLAY WITH
 AN ATTACHED AD PANEL WERE CALCULATED
 USING A 48" TALL AD PANEL.



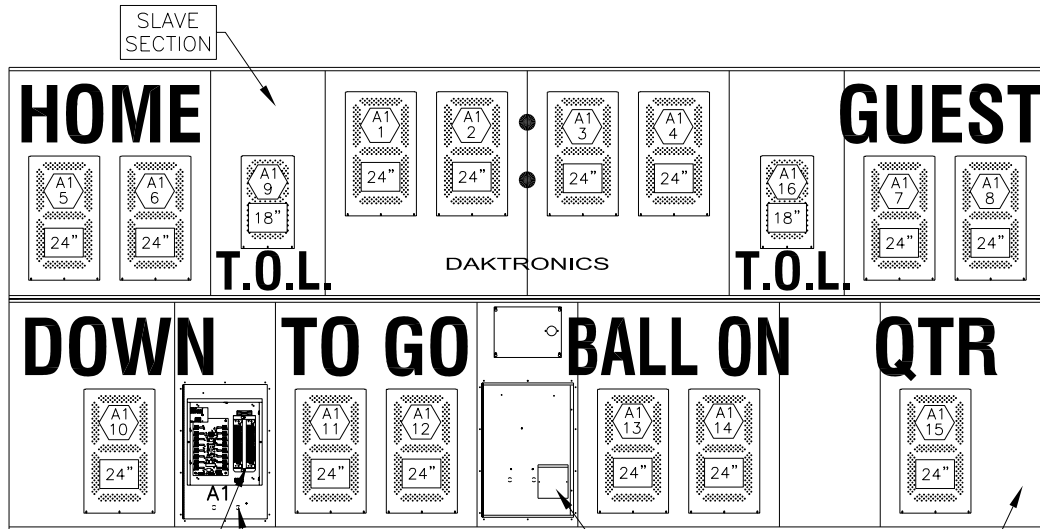
INFORMATION GIVEN IS FOR ESTIMATING PURPOSES ONLY. COLUMNS AND FOOTINGS MUST BE DESIGNED BY A STATE LICENCED ENGINEER. DAKTRONICS DOES NOT ASSUME ANY LIABILITY FOR ANY INSTALLATIONS DERIVED FROM THIS INFORMATION OR DESIGNED AND INSTALLED BY OTHERS.

2 POLE MOUNTING APPROVED FOR WIND ZONES BELOW 90mph. A GENERAL WIND SPEED CHART IS AVAILABLE. CHECK WITH LOCAL BUILDING OFFICIALS FOR BUILDING CODE REQUIREMENTS. FOR WIND SPEEDS GREATER THAN 90mph, REFER TO DRAWING A-44515

| | | | |
|--|-------------|-------------------|--|
| 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 2004 DAKTRONICS, INC. | | | |
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: FOOTBALL SCOREBOARDS | | | |
| TITLE: BEAM & FOOTING RECOMMENDATIONS, FB-XX30, 2 POLE | | | |
| DES. BY: MCOPLAN | | DRAWN BY: MCOPLAN | |
| | | DATE: 23MAR04 | |
| REVISION | APPR. BY: | 1192-R08A-207019 | |
| 01 | SCALE: NONE | | |

| | | | | |
|------|---------|---|-------|-------|
| 01 | 20MAY04 | ADDED TEXT FOR MPH ZONE, REMOVED 100MPH CALCULATIONS FROM CHART | MCOPL | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

FB-2007-11/-21



ENCLOSED 16 COLUMN DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW COMPONENT DETAIL).

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

MASTER SECTION

FRONT VIEW

 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

 = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

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 2004 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; FB-2007-11/-21, G3

DES. BY: MCOPLAN

DRAWN BY: MCOPLAN

DATE: 07MAY04

REVISION

APPR. BY:

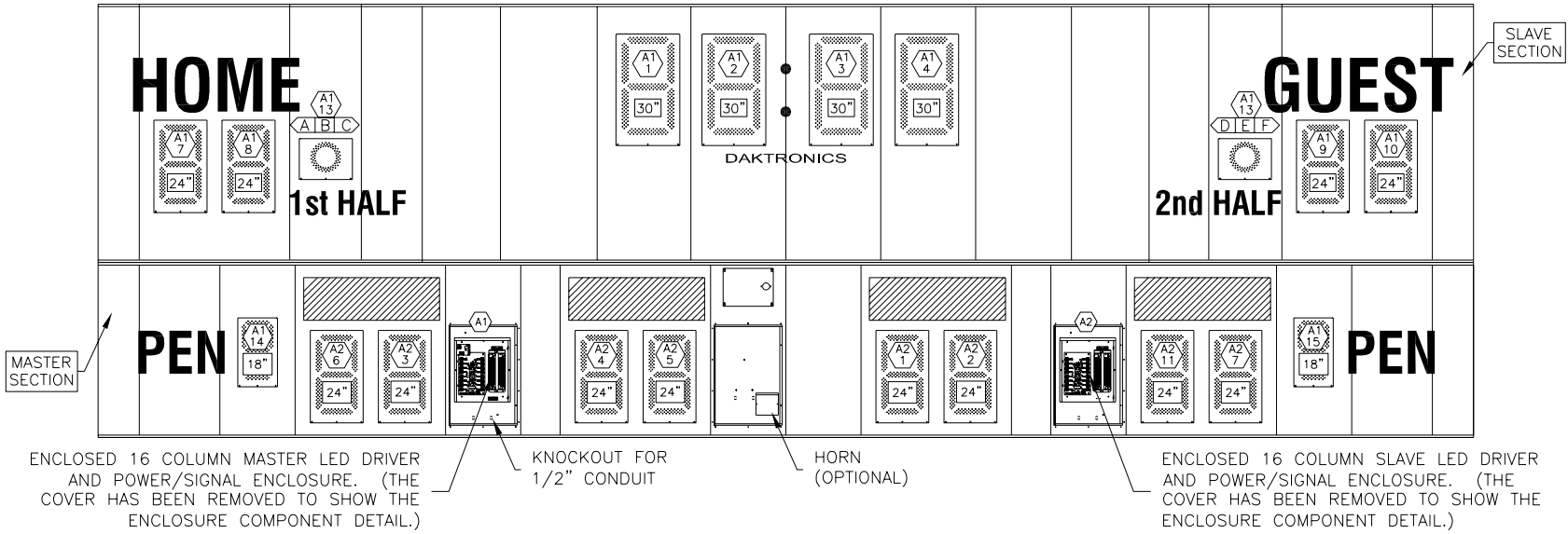
SCALE: 1=40

1192-R08A-211011

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------|-------------|----|-------|
| 00 | | | | |

REV. DATE DESCRIPTION BY APPR. REVISION SCALE: 1=50

SO-2014-11/-21



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

HORN (OPTIONAL)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

FRONT VIEW

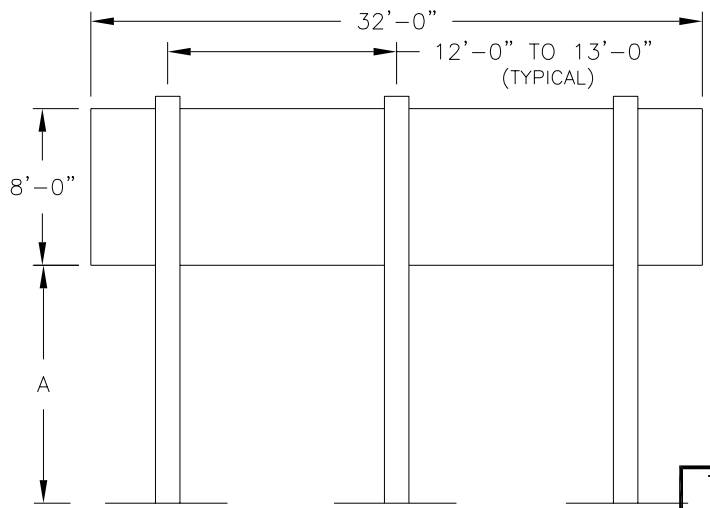
PROJ: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS, SO-2014-11/-21, G3
 DES. BY: MCOPLAN
 DRAWN BY: MCOPLAN
 DATE: 28JUL04

DAKTRONICS, INC. BROOKINGS, SD 57006

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| 8' X 32' SCOREBOARD MODELS, 3-POLE | | | | |
|---------------------------------------|---|----------------------------|---------------------|----------------------|
| DISTANCE TO BOTTOM OF SCOREBOARD (FT) | DOES SCOREBOARD HAVE ATTACHED AD PANEL? | DESIGN WIND VELOCITY (MPH) | | |
| | | 70 | 80 | 100 |
| A | | | | |
| 10 | NO | W12X26 3.0 X 6.4 | W12X26 3.0 X 7.1 | W10x33 3.0 X 8.4 |
| | YES | W14X30 3.0 X 7.3 | W10X33 3.0 X 8.0 | W10X39 3.0 X 9.5 |
| 12 | NO | W12X26 3.0 X 6.7 | W12X30 3.0 X 7.4 | W10X33 3.0 X 8.7 |
| | YES | W10X33 3.0 X 7.6 | W10X39 3.0 X 8.4 | W14X43 3.0 X 9.9 |
| 14 | NO | W8X31 3.0 X 7.0 | W10X33 3.0 X 7.8 | W10X39 3.0 X 9.2 |
| | YES | W10X39 3.0 X 7.9 | W10X39 3.0 X 8.7 | W12X50 3.0 X 10.2 |
| 16 | NO | W10X33 3.0 X 7.4 | W10X39 3.0 X 8.1 | W14X43 3.0 X 9.5 |
| | YES | W10X39 3.0 X 8.2 | W12X45 3.0 X 9.0 | W12X53 3.0 X 10.6 |
| 18 | NO | W10X39 3.0 X 7.6 | W10X39 3.0 X 8.4 | W12X50 3.0 X 9.8 |
| | YES | W14X43 3.0 X 8.4 | W12X50 3.0 X 9.3 | W12X58 3.0 X 11.0 |
| 20 | NO | W10X39 3.0 X 7.9 | W12X45 3.0 X 8.7 | W12X53 3.0 X 10.2 |
| | YES | W14X48 3.0 X 8.7 | W12X53 3.0 X 9.6 | W14X61 3.0 X 11.3 |

W6x12 ← RECOMMENDED BEAM SECTION FOR MOUNTING SCOREBOARD
 2.00 X 4.25 ← RECOMMENDED FOOTINGS IN FEET (DIAMETER X DEPTH)



NOTE:
 RECOMMENDATIONS FOR A DISPLAY WITH AN ATTACHED AD PANEL WERE CALCULATED USING A 48" TALL AD PANEL.
 UBC 97 CODE USED WITH SOIL CLASS 3.

INFORMATION GIVEN IS FOR ESTIMATING PURPOSES ONLY. COLUMNS AND FOOTINGS MUST BE DESIGNED BY A STATE LICENCED ENGINEER. DAKTRONICS DOES NOT ASSUME ANY LIABILITY FOR ANY INSTALLATIONS DERIVED FROM THIS INFORMATION OR DESIGNED AND INSTALLED BY OTHERS.

| | | | |
|--|-------------|-------------------|--|
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| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR SCOREBOARDS | | | |
| TITLE: BEAM & FOOTINGS; 8'X32' SCOREBOARDS, 3-POLE | | | |
| DES. BY: MCOPL/RNEYEN | | DRAWN BY: MCOPLAN | |
| | | DATE: 05AUG04 | |
| REVISION | APPR. BY: | 1091-R08A-220526 | |
| 00 | SCALE: NONE | | |

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

| | |
|-------------|-----------------------------|
| REV. | 01 |
| DATE | 09 DEC 04 |
| DESCRIPTION | CORRECTED DIGIT DESTINATION |
| BY | CAC |
| APPR. | |

BA-3724-11/-21

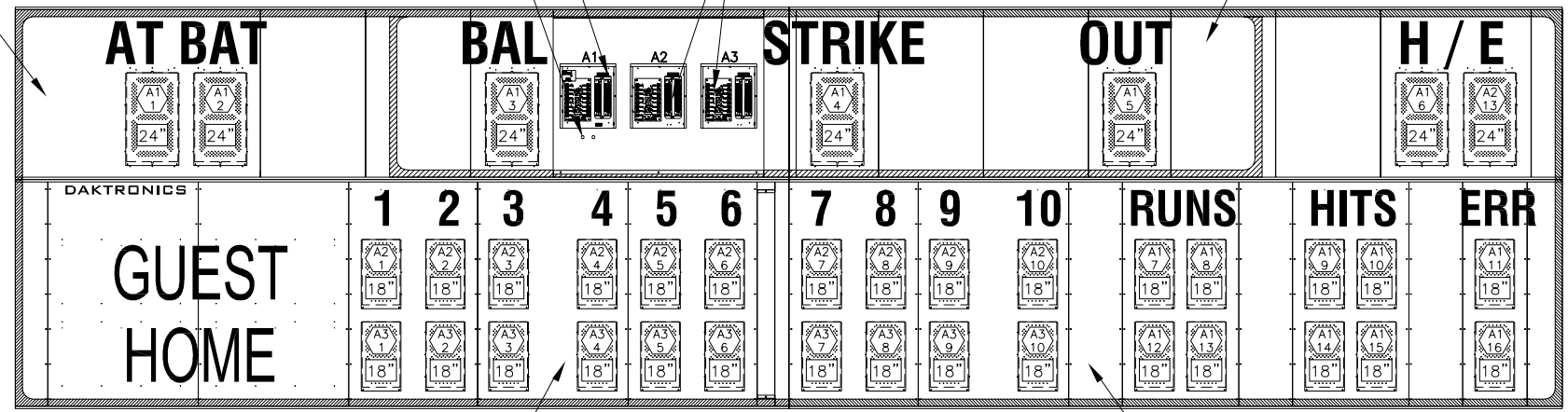
ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL).

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @2. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL).

KNOCKOUTS FOR 1/2" CONDUIT

MASTER SECTION

SLAVE SECTION




FRONT VIEW

SLAVE SECTION

SLAVE SECTION

 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

 = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

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 2004 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; BA-3724-11/-21, FD, G3

DES. BY: MCOPLAN DRAWN BY: MCOPLAN DATE: 22NOV04

REVISION 01

APPR. BY: SCALE: 1=50

1192-R08A-228330

| | |
|-------------|-----------------------------|
| REV. | 01 |
| DATE | 09 DEC 04 |
| DESCRIPTION | CORRECTED DIGIT DESIGNATION |
| BY | CAC |
| APPR. | |

BA-3724-11/-21 W/ TNMC

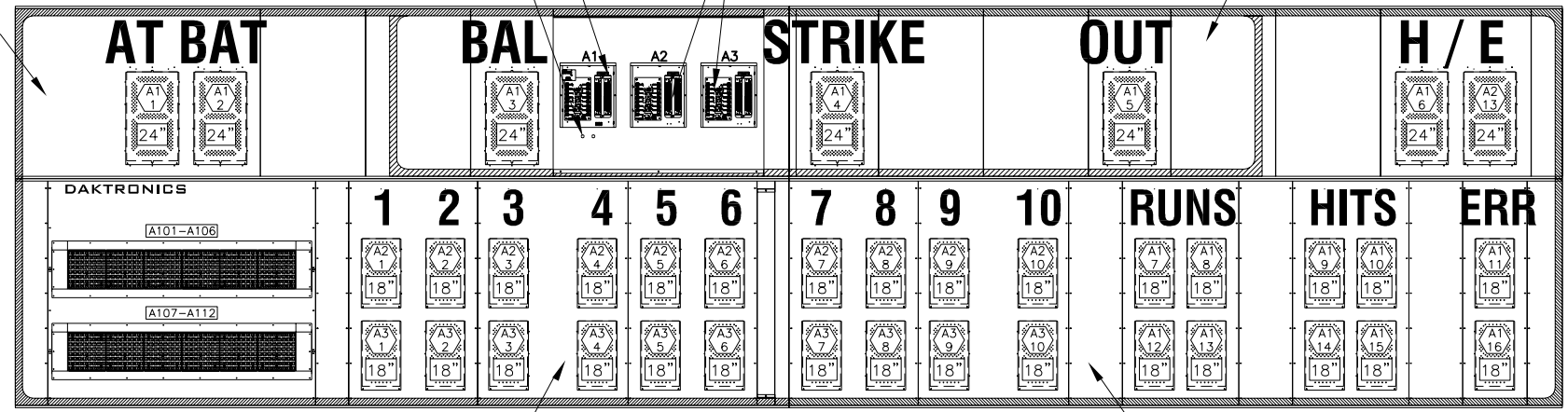
ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL).

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @2. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL).

KNOCKOUTS FOR 1/2" CONDUIT

MASTER SECTION

SLAVE SECTION



SLAVE SECTION

SLAVE SECTION

FRONT VIEW

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

= DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

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DAKTRONICS, INC. BROOKINGS, SD 57006

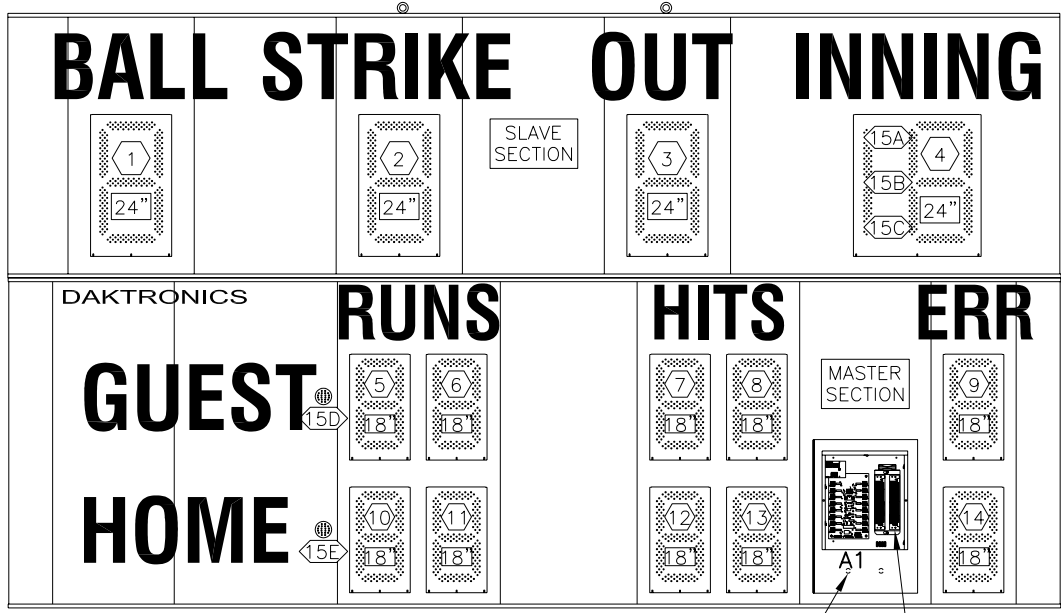
PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; BA-3724-11/-21 W/ TNMC, FD, G3

DES. BY: MCOPLAN DRAWN BY: MCOPLAN DATE: 07DEC04

REVISION 01 APPR. BY: SCALE: 1=50 1192-R08A-229073

BA-1524-11/-21



KNOCKOUTS FOR
1/2" CONDUIT

ENCLOSED 16 COLUMN LED DRIVER
AND POWER/SIGNAL ENCLOSURE.
(THE COVER HAS BEEN REMOVED
TO SHOW THE COMPONENT DETAIL).

FRONT VIEW

⑫ = LED DRIVER CONNECTOR
WIRED TO THAT DIGIT.

⑮A = LED DRIVER CONNECTOR
AND SEGMENT (PIN) NO.
WIRED TO THAT INDICATOR

⑱" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED
TO SHOW THE LED DRIVER AND
POWER/SIGNAL ENCLOSURE.

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: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; BA-1524-11/-21, FD, G3

DES. BY: KBRICKER

DRAWN BY: KBRICKER

DATE: 09DEC04

REVISION

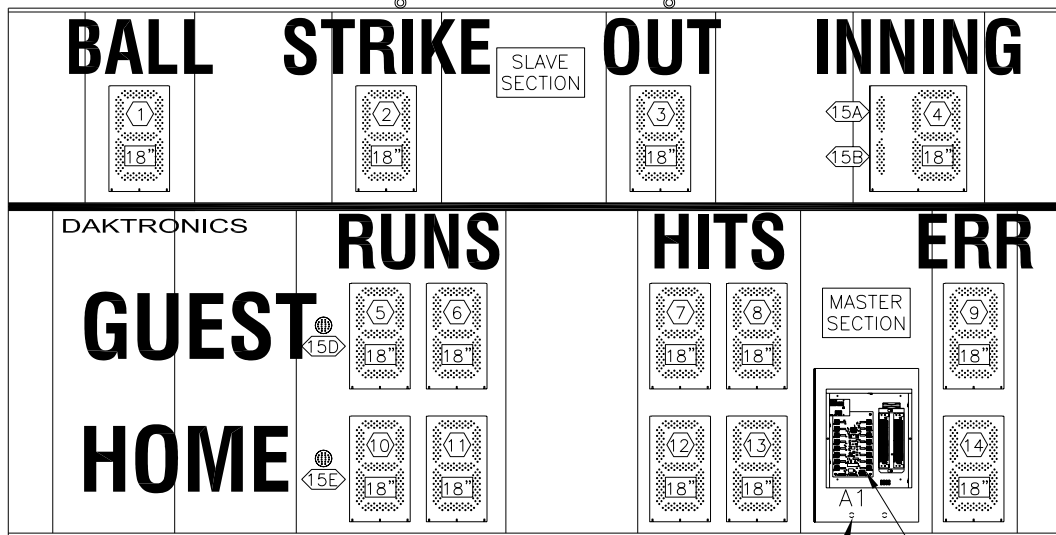
APPR. BY:

SCALE: 1=35

1192-R08A-229211

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------|-------------|----|-------|
| 00 | | | | |

BA-1518-11/-21



KNOCKOUTS FOR
1/2" CONDUIT

ENCLOSED 16 COLUMN LED DRIVER
AND POWER/SIGNAL ENCLOSURE.
(THE COVER HAS BEEN REMOVED
TO SHOW THE COMPONENT DETAIL).

FRONT VIEW

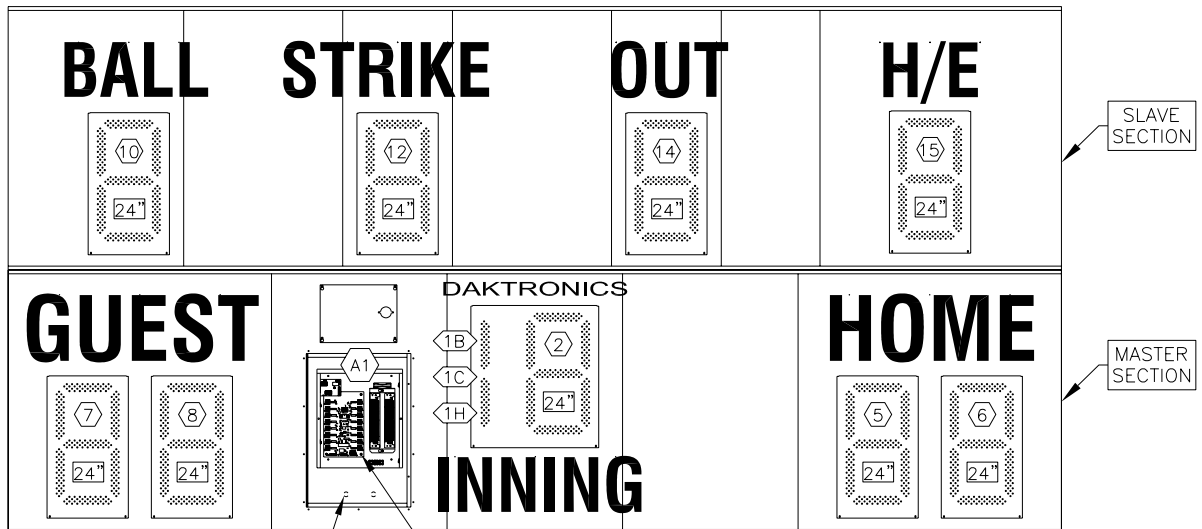
- 12 = LED DRIVER CONNECTOR
WIRED TO THAT DIGIT.
- 15A = LED DRIVER CONNECTOR
AND SEGMENT (PIN) NO.
WIRED TO THAT INDICATOR
- 18" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED
TO SHOW THE LED DRIVER AND
POWER/SIGNAL ENCLOSURE.

| | | | |
|--|-------------|--------------------|-----------------|
| 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: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: COMPONENT LOCATIONS; BA-1518-11/-21, FD, G3 | | | |
| DES. BY: KBRICKER | | DRAWN BY: KBRICKER | DATE: 13 DEC 04 |
| REVISION | APPR. BY: | 1192-R08A-229343 | |
| 00 | SCALE: 1=35 | | |

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

BA-2020-11/-21



KNOCKOUTS FOR 1/2\" CONDUIT

ENCLOSED 16 COLUMN LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).

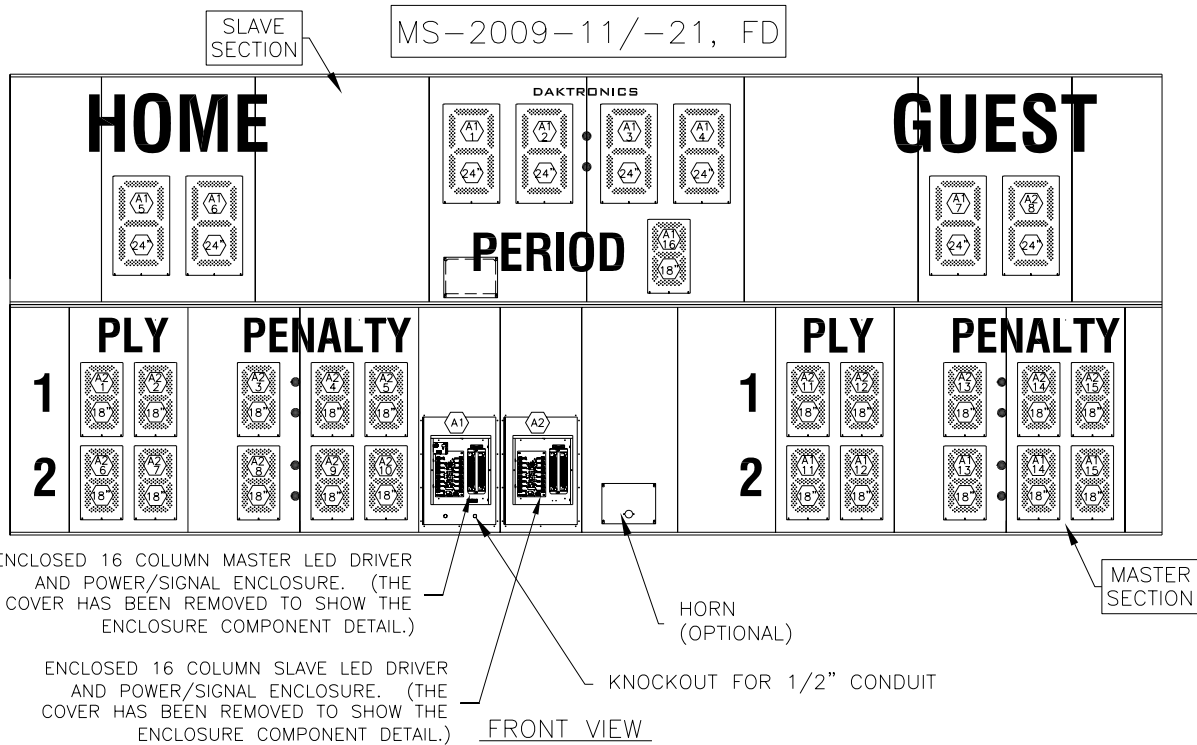
FRONT VIEW

- ⬡12 = LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
- ⬡15A = LED DRIVER CONNECTOR AND SEGMENT (PIN) NO. WIRED TO THAT INDICATOR
- ⬡18\" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND POWER/SIGNAL ENCLOSURE.

| | | | |
|--|-------------|----------------------|--|
| 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 2004 DAKTRONICS, INC. | | | |
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: COMPONENT LOCATIONS; BA-2020-11/-21, G3 | | | |
| DES. BY: TWEBER | | DRAWN BY: CSTRIPLING | |
| | | DATE: 11 FEB 05 | |
| REVISION | APPR. BY: | 1192-R08A-234140 | |
| 00 | SCALE: 1=35 | | |

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



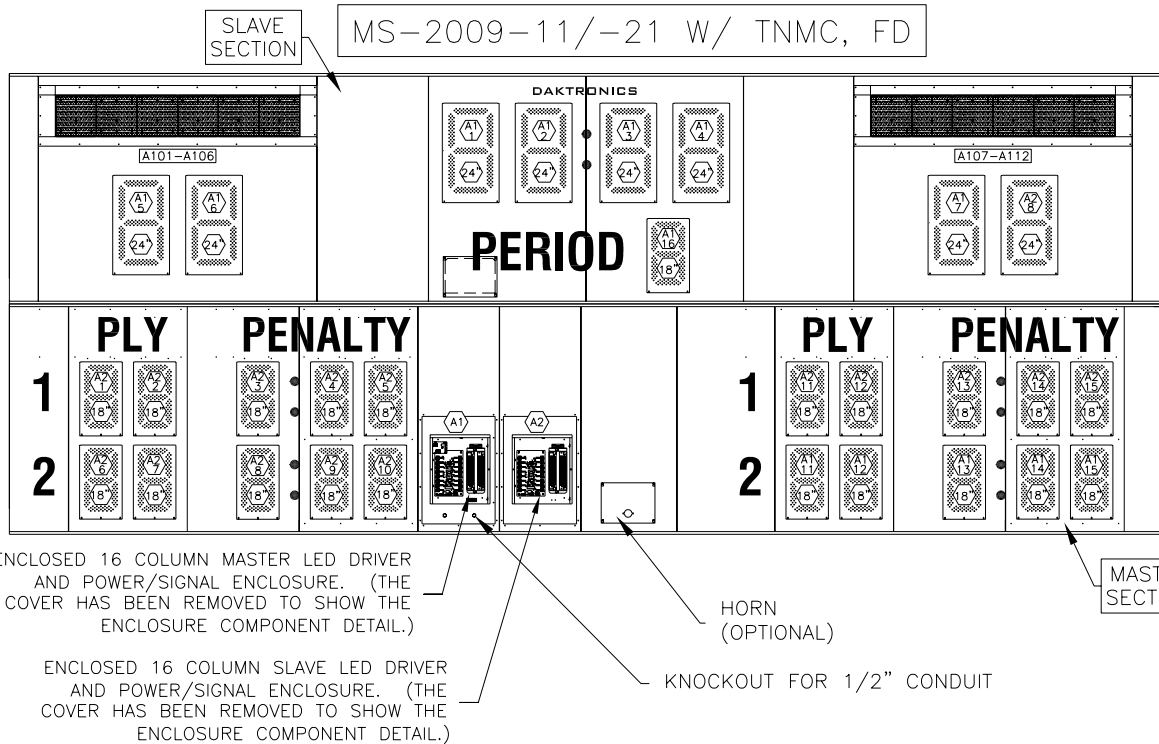
ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

HORN (OPTIONAL)

KNOCKOUT FOR 1/2" CONDUIT

FRONT VIEW



ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

HORN (OPTIONAL)

KNOCKOUT FOR 1/2" CONDUIT

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND POWER AND SIGNAL ENCLOSURE.

A1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
 8" = DIGIT SIZE

| | | | |
|--|-------------|------------------|--|
| 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 2005 DAKTRONICS, INC. | | | |
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: COMPONET LOCATIONS; MS-2009-11/-21, G3, FD | | | |
| DES. BY: CCAIN | | DRAWN BY: CCAIN | |
| | | DATE: 17 FEB 05 | |
| REVISION | APPR. BY: | 1192-R08A-234590 | |
| 02 | SCALE: 1=50 | | |

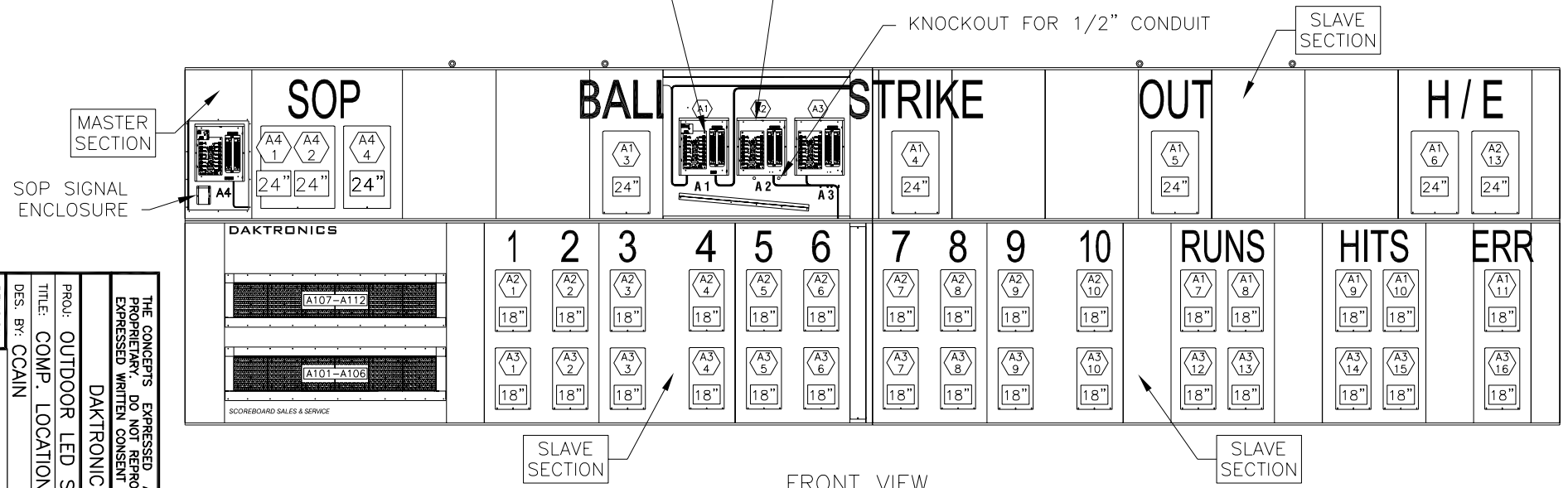
| | | | | |
|------|-----------|---|-----|-------|
| 02 | 20 FEB 06 | UPDATED FOR NEW HORN LOCATION | BJC | |
| 01 | 23 JAN 06 | UPDATED PER CHANGES TO PRE-PAINT ASSYS. | CAC | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

REV. DATE DESCRIPTION BY APPR. REVISION APPR. BY SCALE: 1=50

BA-2007-11/-21 W/ TNMC, FD

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL).

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @3. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL).



FRONT VIEW

- = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
- = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

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 2005 DAKTRONICS, INC.

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMP. LOCATIONS; BA-2007-11/-21 W/ TNMC, G3, FD

DES. BY: CCAIN DRAWN BY: CCAIN DATE: 17 FEB 05

DAKTRONICS, INC. BROOKINGS, SD 57006

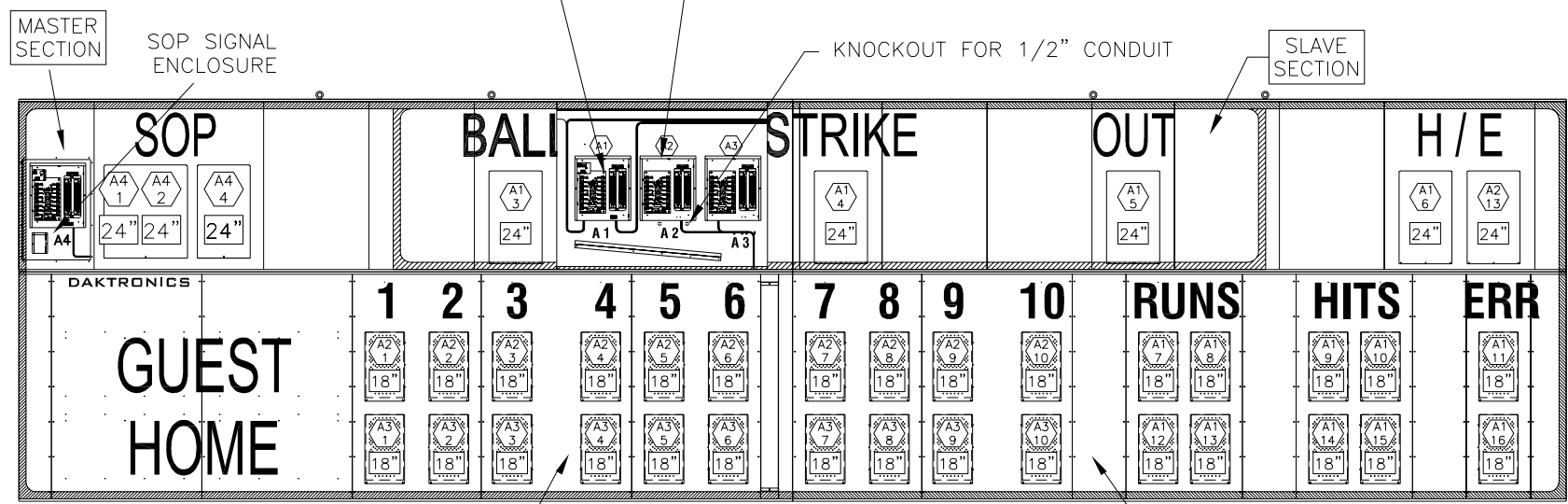
1192-R08A-234593

| | | | |
|-------------|-----|-----------|--|
| REV. | 01 | 30 MAR 07 | UPDATED ERROR DIGIT, DIGIT DESIGNATION |
| DATE | | | |
| DESCRIPTION | | | |
| BY | MMM | | |
| APPR. | | | |

BA-2007-11/-21, FD

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL).

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @3. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL).



SLAVE SECTION

FRONT VIEW

SLAVE SECTION

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

= DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

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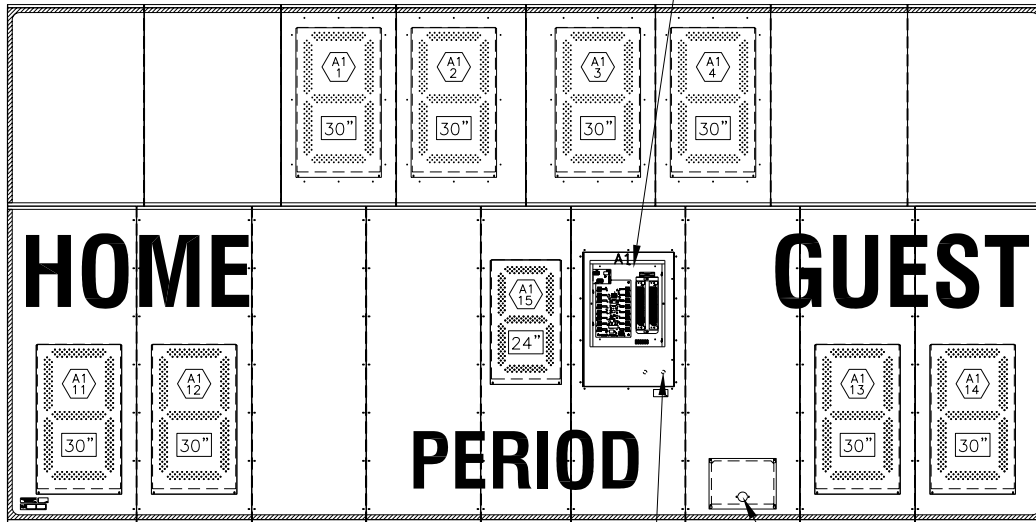
PROJ: OUTDOOR LED SCOREBOARDS
 DAKTRONICS, INC. BROOKINGS, SD 57006

TITLE: COMPONENT LOCATIONS; BA-2007, FD, G3
 DES. BY: CCAIN
 DRAWN BY: CCAIN
 DATE: 18 FEB 05

REVISION 01
 APPR. BY: CCAIN
 SCALE: 1=50
 1192-R08A-234661

MS-2020-11/-21

ENCLOSED 16 COLUMN MASTER DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE COMPONENT DETAIL).



KNOCKOUTS FOR CONDUIT PROVIDED IN REAR OF SCBD @2

OPTIONAL HORN LOCATION.

FRONT VIEW

HINGED ACCESS DOORS REMOVED TO SHOW THE LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

18" = DIGIT SIZE

5 = LED DRIVER CONNECTOR

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOCATIONS; MS-2020-11/-21, FD, G3

DES. BY: CCAIN

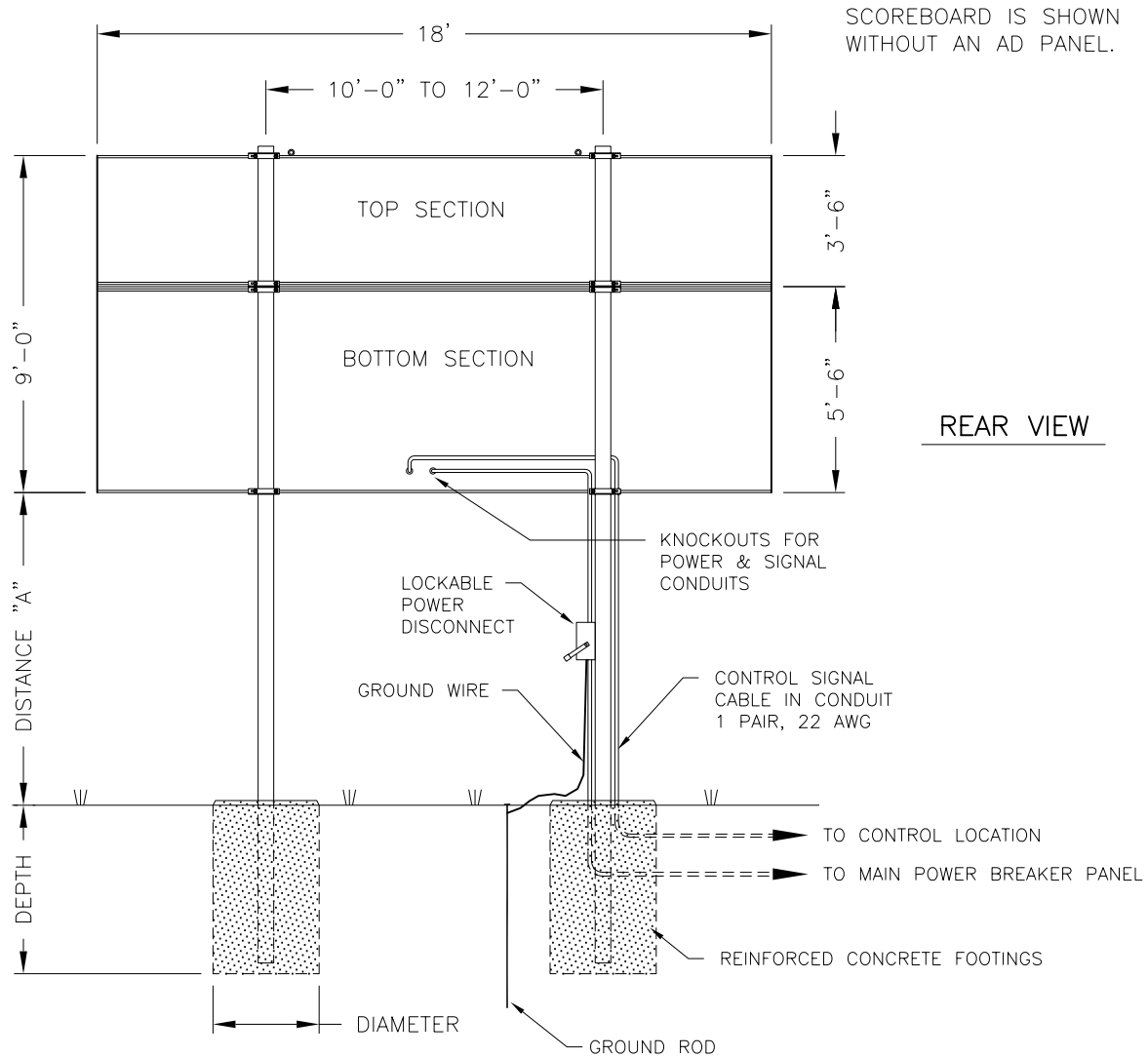
DRAWN BY: CCAIN

DATE: 11 MAY 05

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------------|------------------------------|-----|-------|
| 01 | 26 SEPT 06 | ADDED NEW HORN ACCESS PANEL. | BJC | |

| REVISION | APPR. BY: |
|----------|-----------|
| 01 | |
| | SCALE: |
| | 1=40 |

1192-R08A-241550



| MODEL MS-2020 WITHOUT AD PANEL | | | | | |
|--------------------------------|----------------------|-----------------|-----------------------|-----------------------|-----------------------|
| DISTANCE "A" (SEE FIGURE) | TOTAL DISPLAY SIZE | | DESIGN WIND VELOCITY | | |
| | | | 70 MPH | 80 MPH | 100 MPH |
| 10'-0" | 18'-0" x 9'-0" | BEAM FOOTING | W12x26 2.0' x 6.9' | W14x30 2.0' x 7.7' | W10x33 2.0' x 9.1' |
| 12'-0" | 18'-0" x 9'-0" | BEAM FOOTING | W14x30 2.0' x 7.2' | W8x31 2.0' x 8.0' | W10x39 2.0' x 9.4' |
| 14'-0" | 18'-0" x 9'-0" | BEAM FOOTING | W8x31 2.0' x 7.6' | W10x33 4.0' x 8.4' | W12x40 2.0' x 9.9' |

| MODEL MS-2020 WITH 30"-HIGH AD PANEL | | | | | |
|--------------------------------------|-----------------------|-----------------|-----------------------|-----------------------|------------------------|
| DISTANCE "A" (SEE FIGURE) | TOTAL DISPLAY SIZE | | DESIGN WIND VELOCITY | | |
| | | | 70 MPH | 80 MPH | 100 MPH |
| 10'-0" | 18'-0" x 11'-6" | BEAM FOOTING | W8x31 2.0' x 7.8' | W10x33 2.0' x 8.6' | W10x39 2.0' x 10.1' |
| 12'-0" | 18'-0" x 11'-6" | BEAM FOOTING | W10x33 2.0' x 8.1' | W10x39 2.0' x 8.9' | W12x45 2.0' x 10.5' |
| 14'-0" | 18'-0" x 11'-6" | BEAM FOOTING | W10x39 2.0' x 8.4' | W12x40 2.0' x 9.3' | W10x49 2.0' x 11.0' |

FOOTING = DIAMETER X DEPTH

FOOTING DIMENSIONS ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES.

FOOTING DIMENSIONS ARE BASED ON ASSUMED SOIL BEARING PRESSURE OF 2000 LB/FT²

ACTUAL FOOTING DEPTH AND DIAMETER FOR A PARTICULAR INSTALLATION MUST BE DETERMINED BY A QUALIFIED STRUCTURAL ENGINEER, USING DATA FROM A SOIL SAMPLE TEST AT THE SITE.

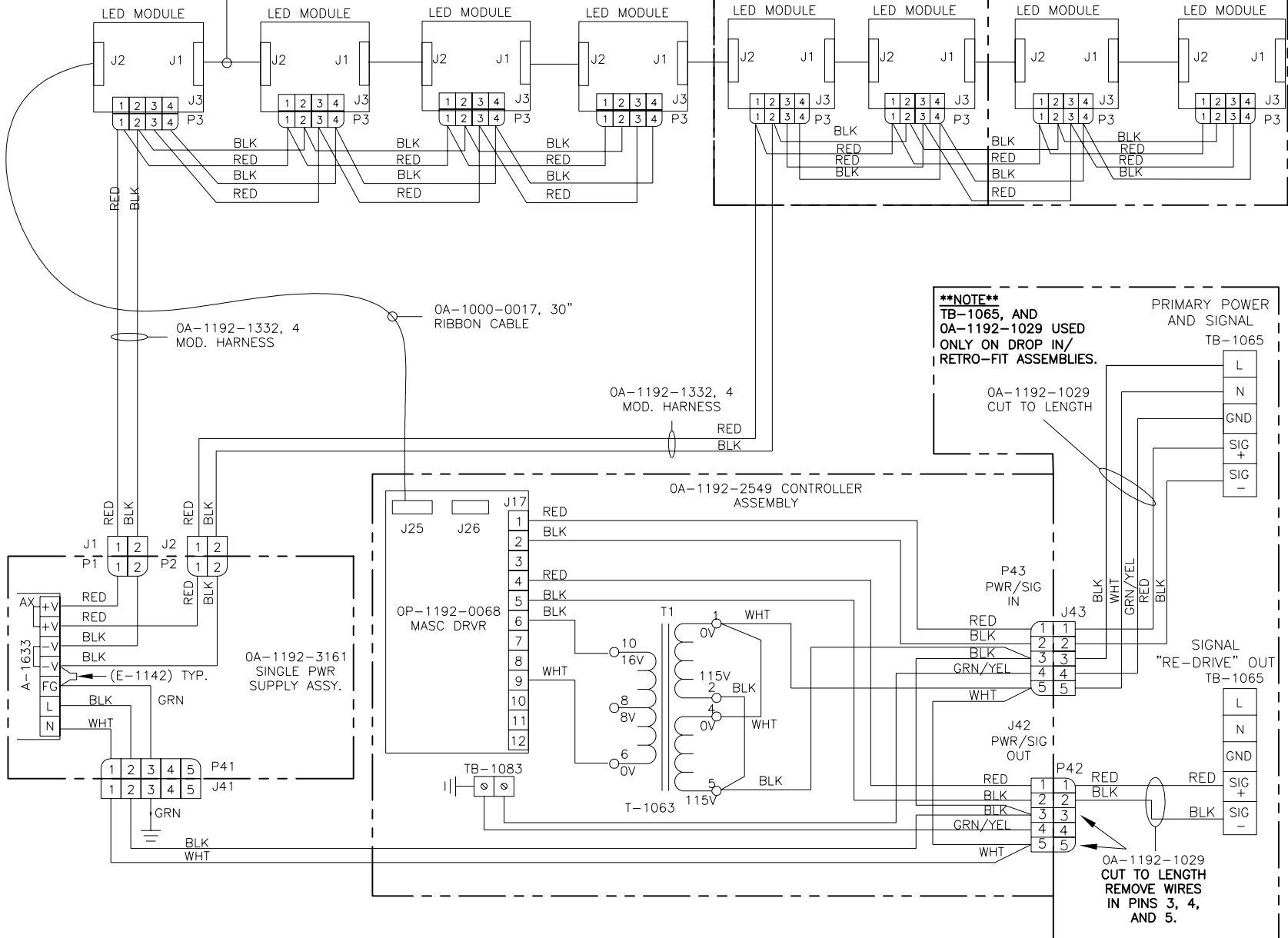
DAKTRONICS, INC. IS NOT RESPONSIBLE FOR STRUCTURES DESIGNED AND INSTALLED BY OTHERS.

| | | | |
|---|-----------------|------------------|--|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR SCOREBOARDS | | | |
| TITLE: INSTALLATION SPECIFICATIONS, MS-2020 | | | |
| DES. BY: TWEBER | DRAWN BY: CCAIN | DATE: 12 MAY 05 | |
| REVISION | APPR. BY: | 1192-R10A-241622 | |
| 01 | SCALE: 1=60 | | |

| | | | | |
|------|----------|------------------------------------|-----|-------|
| 01 | 9 NOV 05 | CHANGED POLE SPACING TO 10' - 12'. | JKU | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

0A-1192-3165 8X32 34MM AMBER TNMC G4
 0A-1192-3167 8X48 34MM AMBER TNMC G4
 0A-1192-XXX 8X64 34MM AMBER TNMC G4
 0A-1192-3229 8X32 34MM DROP IN/RETROFIT TNMC G4
 0A-1192-3231 8X48 34MM DROP IN/RETROFIT TNMC G4
 0A-1192-XXXX 8X64 34MM DROP IN/RETROFIT TNMC G4

W-1387, 18" RIBBON CABLE
 TYP. FOR ALL MODULE TO
 MODULE CONNECTIONS



****NOTE****
 TB-1065, AND
 OA-1192-1029 USED
 ONLY ON DROP IN/
 RETRO-FIT ASSEMBLIES.

OA-1192-1029
 CUT TO LENGTH
 REMOVE WIRES
 IN PINS 3, 4,
 AND 5.

| | | | | |
|------|--------|--|-----|-------|
| REV. | DATE | DESCRIPTION | BY | APPR. |
| 01 | DEC 05 | CHANGED MOD. PWR HARNESS FROM 2 PIN TO 4 PIN HARNESS | SJC | |
| 02 | FEB 06 | UPDATED PART NUMBERS AND EXPANDED DRAWING TO COVER 8X64 OPTION | MMM | |
| 03 | NOV 06 | UPDATED TITLE TO INCLUDE 34 MM | SAL | MMM |
| 04 | APR 07 | ADDED TB-1083 GND TERMINAL BLOCK AND GROUND WIRES | DMD | |

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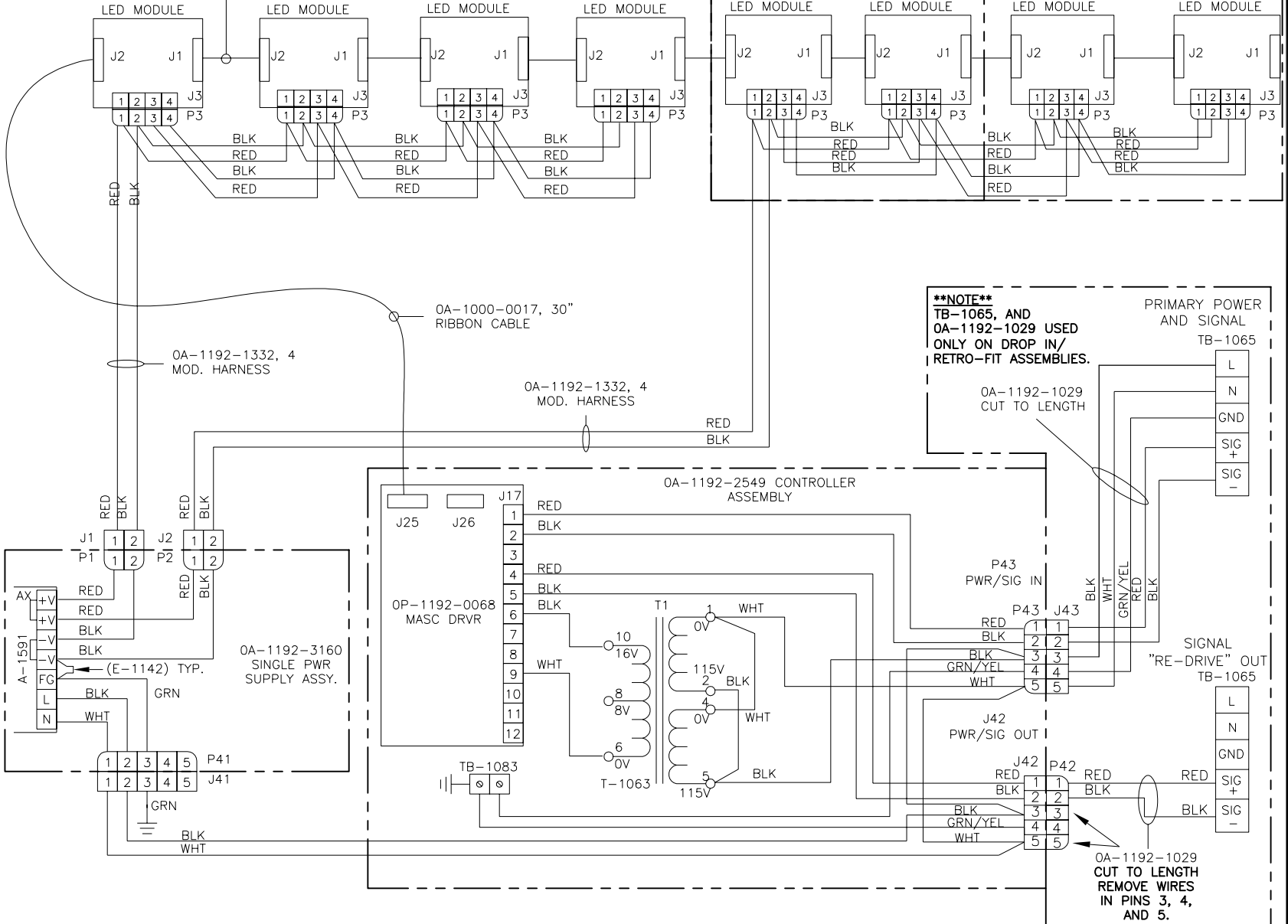
PROJ: OUTDOOR LED DIGIT SCOREBOARDS
 TITLE: SCHEMATIC; 34 MM AMBER TNMC GEN IV
 DES. BY: MILLER
 DRAWN BY: DINING
 DATE: 31 AUG 05

REVISION 04
 SCALE: NONE
 1192-R01A-252645

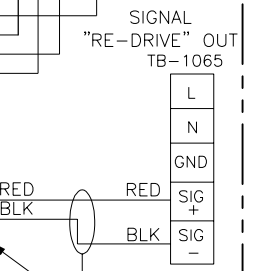
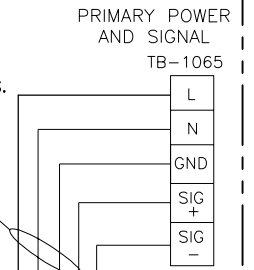
DAKTRONICS, INC. BROOKINGS, SD 57006

- 0A-1192-3164 8X32 34MM RED TNMC G4
- 0A-1192-3166 8X48 34MM RED TNMC G4
- 0A-1192-XXX 8X64 34MM RED TNMC G4
- 0A-1192-3228 8X32 34MM DROP IN/RETROFIT TNMC G4
- 0A-1192-3230 8X48 34MM DROP IN/RETROFIT TNMC G4
- 0A-1192-XXXX 8X64 34MM DROP IN TNMC G4

W-1387, 18" RIBBON CABLE
TYP. FOR ALL MODULE TO
MODULE CONNECTIONS



****NOTE****
TB-1065, AND
OA-1192-1029 USED
ONLY ON DROP IN/
RETRO-FIT ASSEMBLIES.



OA-1192-1029
CUT TO LENGTH
REMOVE WIRES
IN PINS 3, 4,
AND 5.

| | | | |
|------|-----------|---|-----|
| 04 | 09 APR 07 | ADDED TB-1083 AND GND ON J42, & P43 | DMD |
| 03 | 07 NOV 06 | UPDATED TITLE TO INCLUDE 34 MM | SAL |
| 02 | 08 MAR 06 | UPDATED DETAILS TO SHOW 64 LONG | MMM |
| 01 | 01 DEC 05 | CHANGE POWER HARNESS TO MOD FROM 2 PIN TO 4 PIN | SJC |
| REV. | DATE | DESCRIPTION | BY |

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PROJ: OUTDOOR LED SCOREBOARDS
DAKTRONICS, INC. BROOKINGS, SD 57006

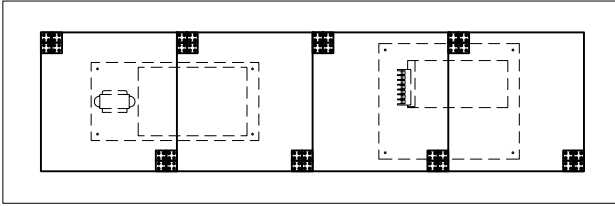
TITLE: SCHEMATIC; 34 MM RED TNMC GEN IV

DES. BY: DRAWN BY: DDINING DATE: 30 AUG 05

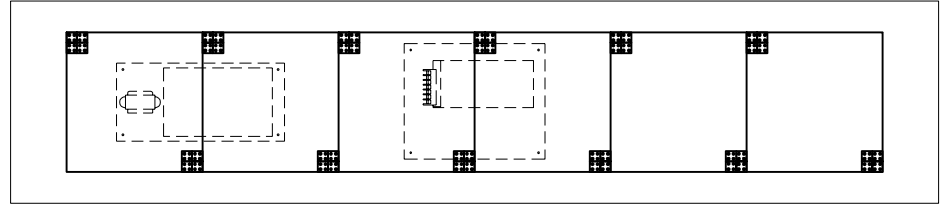
REVISION 04 APPR. BY: SCALE: 1192-R01A-252681

| | | | | | | | | |
|------|----|------|-----------|-------------|--|----|-----|-------|
| REV. | 01 | DATE | 20 DEC 07 | DESCRIPTION | UPDATED DRAWING TO SHOW 864 TNMC MODELS. | BY | MMM | APPR. |
|------|----|------|-----------|-------------|--|----|-----|-------|

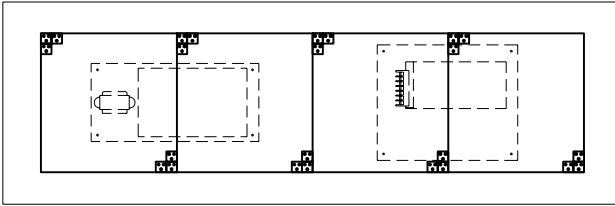
832 AMBER LED TNMC
OA-1192-3165



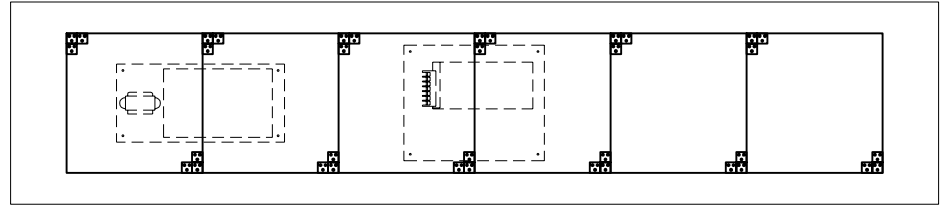
848 AMBER LED TNMC
OA-1192-3166



832 RED LED TNMC
OA-1192-3164

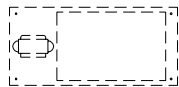
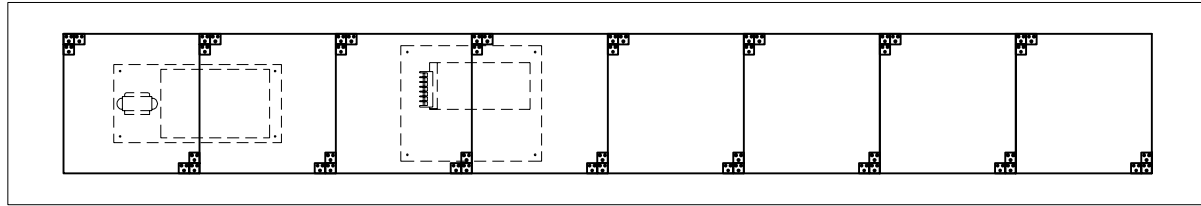


848 RED LED TNMC
OA-1192-3167



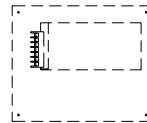
864 AMBER LED TNMC
OA-1192-3295

864 RED LED TNMC
OA-1192-3294



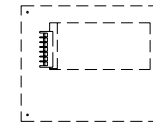
TNMC CONTROLLER
OA-1192-2549

USED IN RED & AMBER LED TNMCs



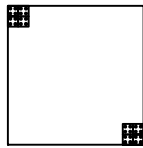
SINGLE POWER SUPPLY ASSEMBLY
OA-1192-3161

USED IN AMBER LED TNMCs

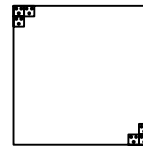


SINGLE POWER SUPPLY ASSEMBLY
OA-1192-3160

USED IN RED LED TNMCs



AMBER LED TNMC MODULE
OA-1208-4001
USED IN AMBER LED TNMCs



RED LED TNMC MODULE
OA-1208-4000
USED IN RED LED TNMCs

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ.: OUTDOOR LED SCOREBOARDS

TITLE: COMPONENT LOC.: 832/842/864 RED/AMB LED TNMC G4

DES. BY: KBRICKER DRAWN BY: KBRICKER DATE: 08NOV05

REVISION 01 APPR. BY: SCALE: 1=15 1192-R08A-257029

BA-2013-11/-21 W/ TNMC

ENCLOSED 16 COLUMN SLAVE LED DRIVER @5.
(THE COVER HAS BEEN REMOVED TO SHOW THE
ENCLOSURE COMPONENT DETAIL).

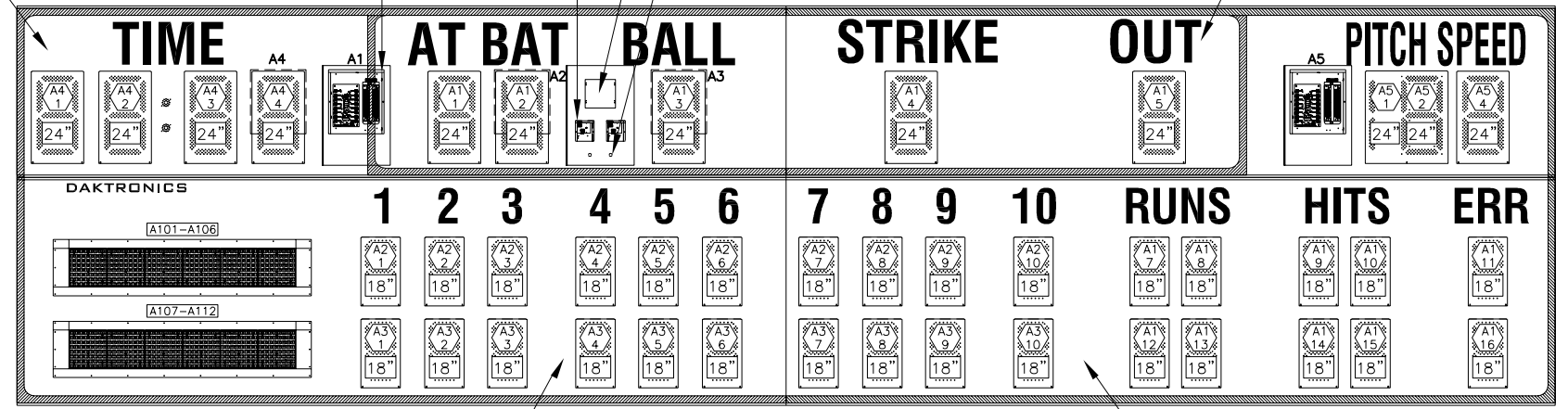
ENCLOSED SINGAL TERMINATION
PANEL @2.

ENCLOSED POWER TERMINATION
PANEL @1.

KNOCKOUTS FOR 1/2" CONDUIT

SLAVE
SECTION


MASTER
SECTION



SLAVE
SECTION

FRONT VIEW

SLAVE
SECTION

 = LED DRIVER NUMBER &
LED DRIVER CONNECTOR
WIRED TO THAT DIGIT.

 = DIGIT SIZE

HINGED ACCESS DOORS REMOVED
TO SHOW LED DRIVER AND THE
POWER/SIGNAL ENCLOSURE.

| | | | |
|-------------|-----|-----------|--|
| REV. | 01 | 03 APR 07 | CORRECT DIGIT ASSIGNMENT ERROR ON PITCH SPEED X1 |
| DATE | | | |
| DESCRIPTION | | | |
| BY | MMW | | |
| APPR. | | | |

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PROJ: OUTDOOR LED SCOREBOARDS
DAKTRONICS, INC. BROOKINGS, SD 57006

TITLE: COMP. LOCATION: BA-2013-11/-21 W/TNMC, FD, G4
DES. BY: TJOHNSON DRAWN BY: KBRICKER DATE: 30DEC05

REVISION 01
APPR. BY: SCALE: 1=50
1192-R08A-260830

BA-2013-11/-21

ENCLOSED 16 COLUMN SLAVE LED DRIVER @5.
(THE COVER HAS BEEN REMOVED TO SHOW THE
ENCLOSURE COMPONENT DETAIL).

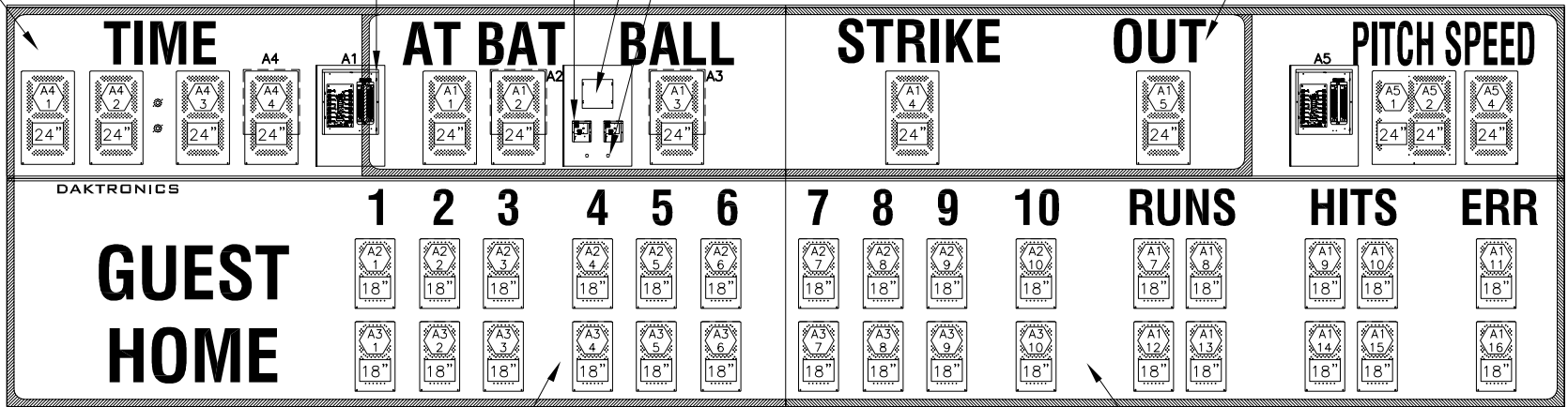
ENCLOSED SINGAL TERMINATION
PANEL @2.

ENCLOSED POWER TERMINATION
PANEL @1.

KNOCKOUTS FOR 1/2" CONDUIT

SLAVE
SECTION

MASTER
SECTION



SLAVE
SECTION

FRONT VIEW

SLAVE
SECTION



= LED DRIVER NUMBER &
LED DRIVER CONNECTOR
WIRED TO THAT DIGIT.



= DIGIT SIZE

HINGED ACCESS DOORS REMOVED
TO SHOW LED DRIVER AND THE
POWER/SIGNAL ENCLOSURE.

| | |
|-------------|---|
| REV. | 01 |
| DATE | 03 APR 07 |
| DESCRIPTION | UPDATED DIGIT DESIGNATION FOR PITCH SPEED X1 DIGIT. |
| BY | MMM |
| APPR. | |

| | |
|----------|---|
| PROJ. | OUTDOOR LED SCOREBOARDS |
| TITLE | COMPONENT LOCATIONS; BA-2013-11/-21, FD, G4 |
| DES. BY | TJOHNSON |
| DRAWN BY | KBRICKER |
| DATE | 30DEC05 |
| REVISION | 01 |
| SCALE | 1=50 |
| | 1192-R08A-260862 |

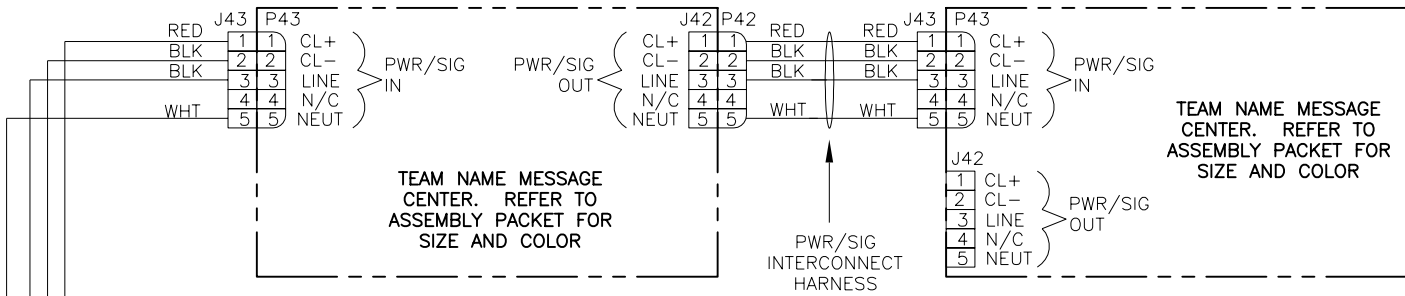
THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2004 DAKTRONICS, INC.

DAKTRONICS, INC. BROOKINGS, SD 57006

REV. DATE DESCRIPTION BY APPR.

PROJ: OUTDOOR LED SCOREBOARDS
 TITLE: SCHEMATIC; GEN III & IV, OD LED, 2 DRV R /w TNMC
 DES. BY: MILLER DRAWN BY: ALCHT DATE: 20 SEPT 06
 REVISION APPR. BY: NONE SCALE: NONE
 1192-R10A-285418

TOP SECTION

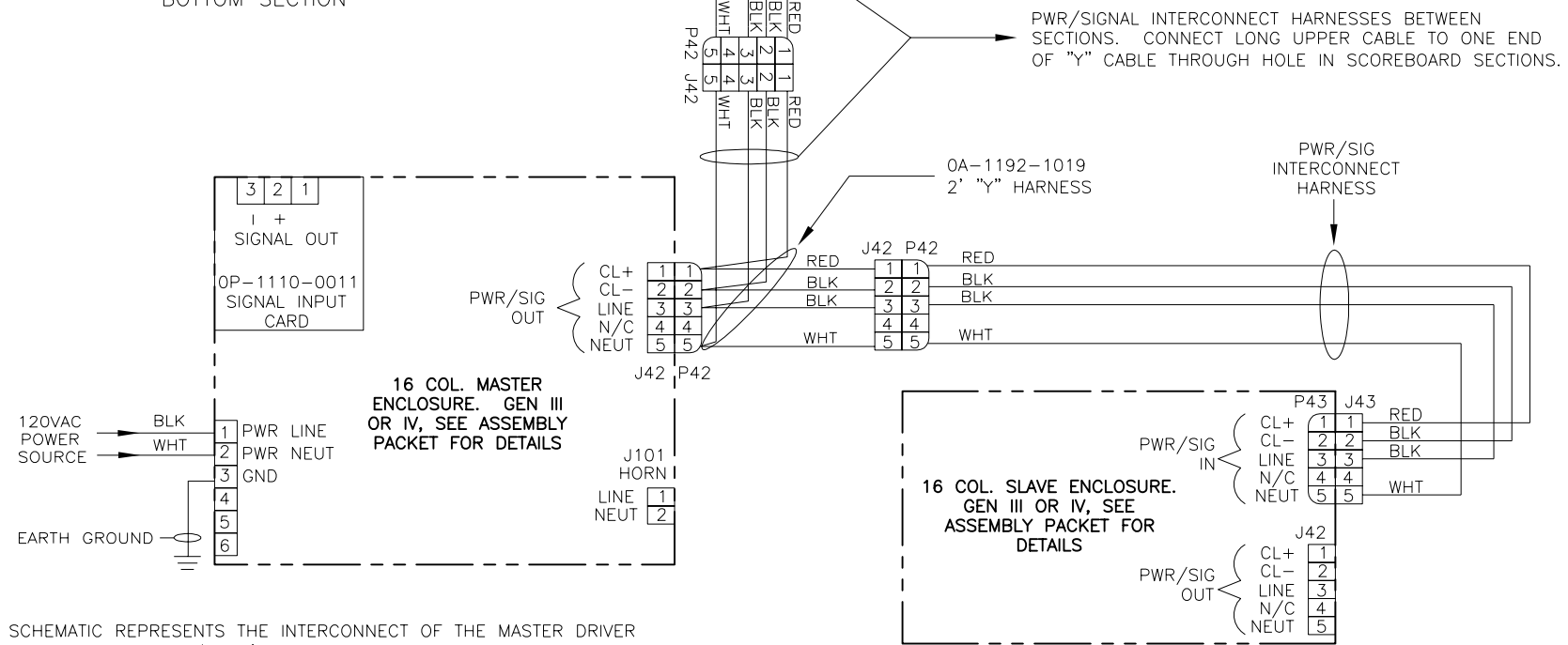


NOTE:
 CONNECT THE RIBBON CABLE OF THE TNMC DRIVER TO EITHER
 J25 = HOME OR
 J26 = GUEST.

PWR/SIG INTERCONNECT HARNESS

| PART NUMBER | LENGTH |
|--------------|--------|
| 0A-1192-1028 | 4' |
| 0A-1192-1029 | 8' |
| 0A-1192-1030 | 10' |
| 0A-1192-1031 | 12' |
| 0A-1192-1032 | 16' |
| 0A-1192-1033 | 22' |
| 0A-1192-1034 | 26' |
| 0A-1192-1083 | 30' |
| 0A-1192-1084 | 35' |

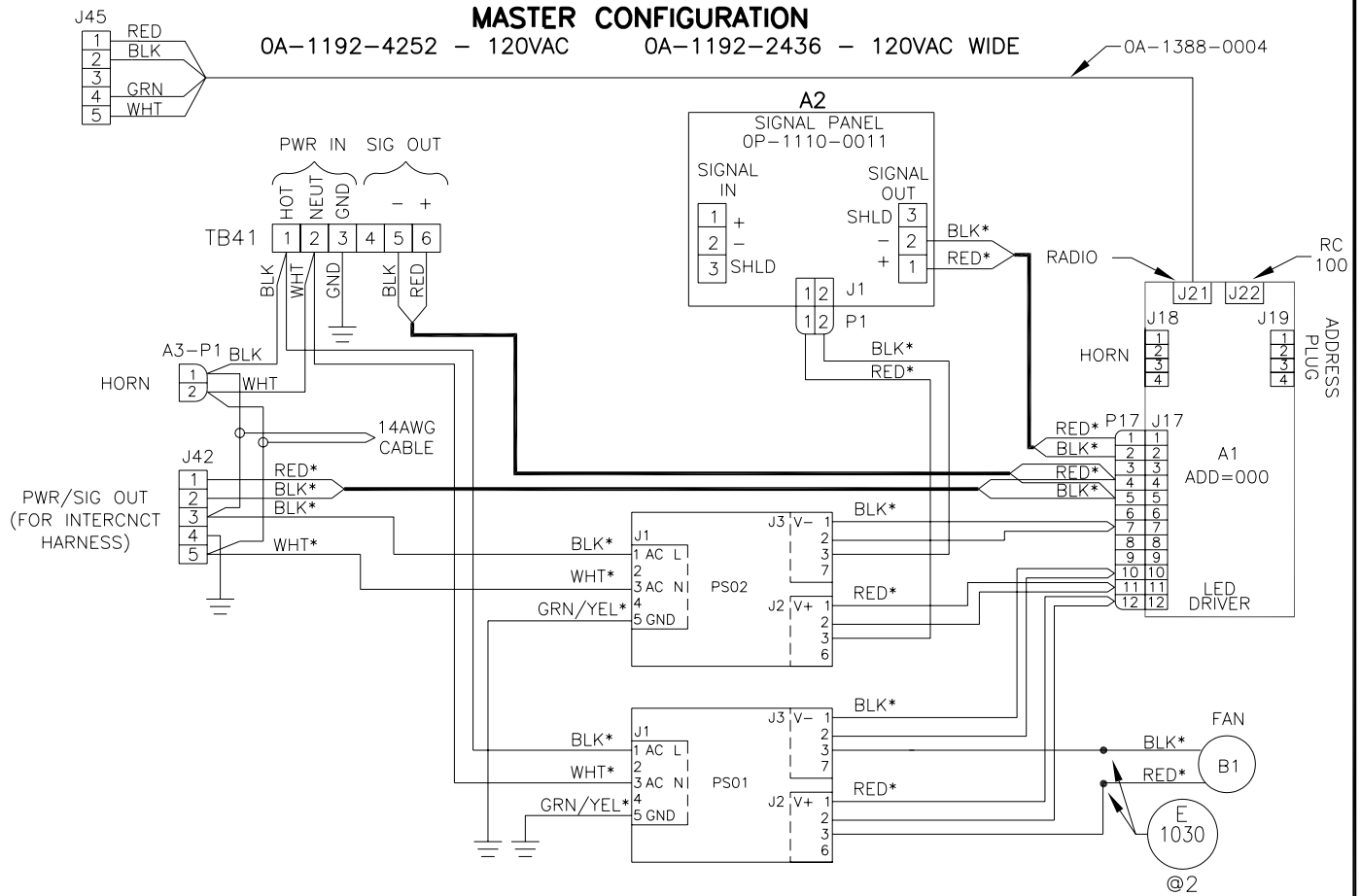
BOTTOM SECTION



THIS SCHEMATIC REPRESENTS THE INTERCONNECT OF THE MASTER DRIVER TO OTHER DRIVERS/TNMC'S IN A MULTI DRIVER SCOREBOARD CONFIGURATION. SEE THE PRE-PAINT ASSEMBLY DRAWING AND/OR THE FINAL ASSEMBLY DRAWING FOR THE PART NUMBERS OF THE INTERCONNECT HARNESSES NEEDED AND INSTALLATION INSTRUCTIONS.

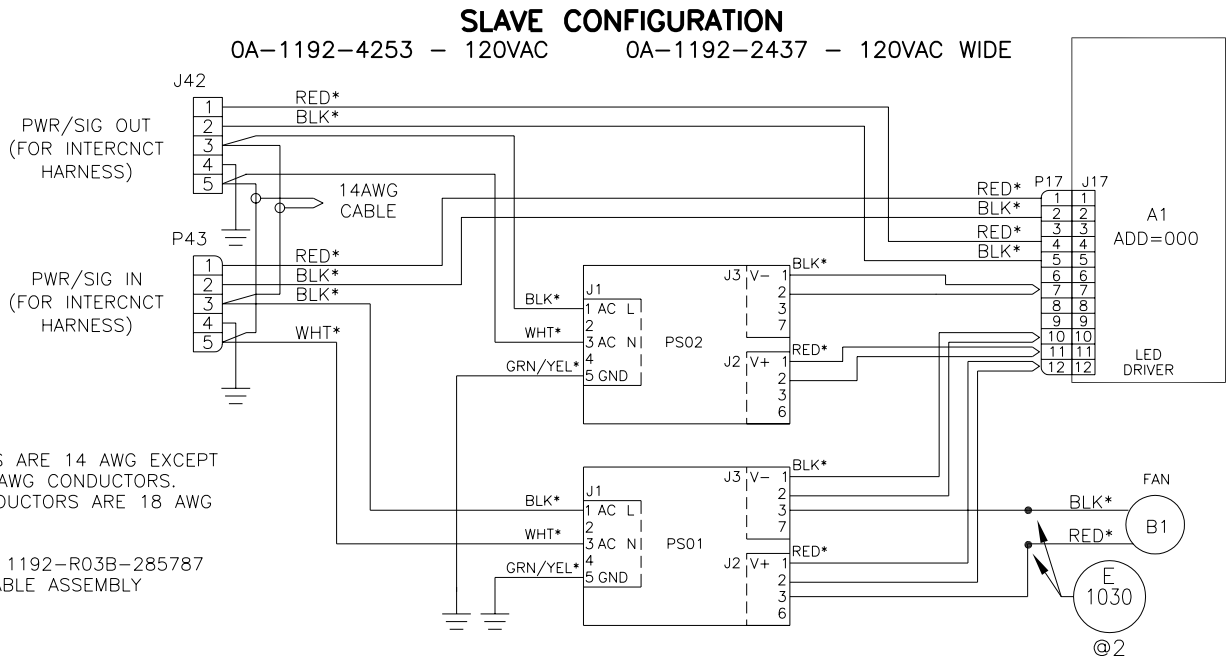
THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2002 DAKTRONICS, INC.

PROJ: OUTDOOR LED SCOREBOARDS
 DAKTRONICS, INC. BROOKINGS, SD 57006



ALL CONDUCTORS ARE 14 AWG EXCEPT * INDICATES 18AWG CONDUCTORS.
ALL SIGNAL CONDUCTORS ARE ALSO 18 AWG CONDUCTORS.

REFERENCE DWG 1192-R03C-285776 FOR DETAILED CABLE ASSEMBLY DIAGRAM.



ALL CONDUCTORS ARE 14 AWG EXCEPT * INDICATES 18 AWG CONDUCTORS.
ALL SIGNAL CONDUCTORS ARE 18 AWG CONDUCTORS.

REFERENCE DWG 1192-R03B-285787 FOR DETAILED CABLE ASSEMBLY DIAGRAM.

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|-----------|--|-----|-------|
| 05 | 05 NOV 07 | REMOVED 240V FROM THIS DWG AND MADE NEW 324504 DWG FOR 240V SETUP. | AMG | |
| 04 | 9 APR 07 | ADDED GND WIRES TO P43, & J42 | DMD | |
| 03 | 11 MAR 07 | ADDED TB41 FOR SIGNAL RE-DRIVE | DMD | |
| 02 | 11 JAN 07 | UPDATED 240V 0A PACKET INFORMATION | JDD | |

| | | | |
|--|-------------------|-------------------|--|
| 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: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: SCHEMATIC; GEN IV OUTDOOR LED, 16 COL DRIVER | | | |
| DES. BY: | | DRAWN BY: DDINING | |
| | | DATE: 25 SEP 06 | |
| REVISION | APPR. BY: MMILLER | 1192-R03A-285779 | |
| 05 | SCALE: NONE | | |

LED DRIVER IV
 OP-1192-0383, 16 COL
 OP-1192-0384, 16 COL, AC

REFER TO DWGS
 A-115078 & A-115079
 FOR ADDRESS SETTINGS

REFER TO DWGS
 A-290261 & A-290689

S1 ADDRESS
 DIP SWITCH PACKAGE

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 |

| SW # | FUNCTION |
|------|----------|
| 1 | ADD0 |
| 2 | ADD1 |
| 3 | ADD2 |
| 4 | ADD3 |
| 5 | ADD4 |
| 6 | ADD5 |
| 7 | ADD6 |
| 8 | ADD7 |

J17 PWR/SIG

| PIN | FUNCTION |
|-----|------------------|
| 1 | SIG-P |
| 2 | SIG-N (232-IN) |
| 3 | SIG 2-P(232-GND) |
| 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 |

J22 RC-100 RADIO

| PIN | FUNCTION |
|-----|------------|
| 1 | +UNREG-P |
| 2 | GND-N |
| 3 | GND-N |
| 4 | RX_INPUT-P |

J23 PROGRAM

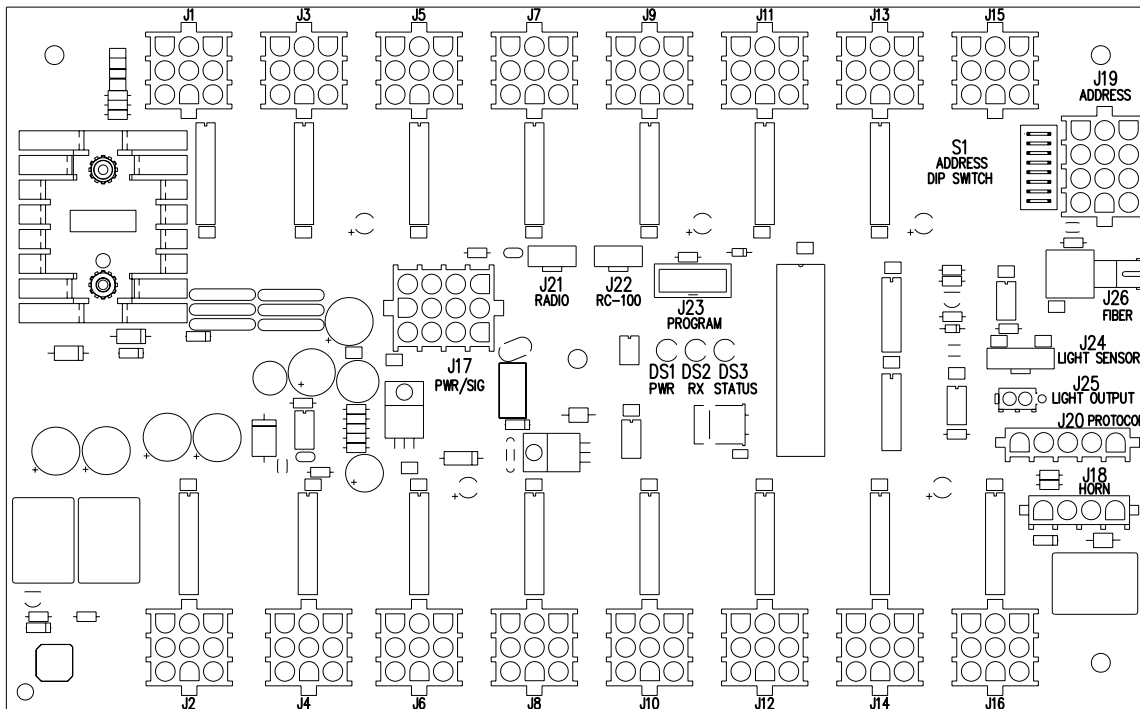
| PIN | FUNCTION |
|-----|----------|
| 1 | DATA |
| 2 | /RESET |
| 3 | N/C |
| 4 | GND-N |
| 5 | CLK |
| 6 | GND-N |
| 7 | N/C |
| 8 | +5V-P |
| 9 | N/C |
| 10 | +5V-P |

J21 2.4GHz RADIO

| PIN | FUNCTION |
|-----|------------|
| 1 | +UNREG-P |
| 2 | GND-N |
| 3 | GND-N |
| 4 | RX_INPUT-P |

J1-16 DIGIT JACKS

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



J26 FIBER RX

| PIN | FUNCTION |
|-----|------------|
| 1 | N/C |
| 2 | +5V-P |
| 3 | GND-N |
| 4 | N/C |
| 5 | N/C |
| 6 | RX_INPUT-P |
| 7 | GND-N |
| 8 | N/C |

J24 LIGHT SENSOR

| PIN | FUNCTION |
|-----|------------|
| 1 | LIGHT_IN-P |
| 2 | LIGHT_IN-N |
| 3 | +5V-P |
| 4 | GND-N |
| 5 | GND-N |
| 6 | N/C |

J25 LIGHT OUT- NEXT DRIVER

| PIN | FUNCTION |
|-----|-------------|
| 1 | LIGHT_OUT-P |
| 2 | LIGHT_OUT-N |

REFER TO DWG A-115081
 FOR PROTOCOL SETTINGS

J20 PROTOCOL

| PIN | FUNCTION |
|-----|-------------|
| 1 | GND-N |
| 2 | PRO-N |
| 3 | PR1-N |
| 4 | PR2-N |
| 5 | PR3-N (TOD) |

J18 HORN

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

NOTES:

- WITH NO ADDRESS SELECTED, DRIVER WILL DEFAULT TO A/S 4000 PROTOCOL.
- GREEN LED DS1 INDICATES THAT THE DRIVER HAS POWER.
- RED LED DS2 WILL FLICKER WHEN THE DRIVER RECEIVES SIGNAL.
- AMBER LED DS3 WILL BLINK WHEN THE DRIVER IS RUNNING.
- IF DS3 IS ON OR OFF CONTINUOUSLY THE MICROCONTROLLER IS NOT WORKING.
- REFER TO DRAWING A-128429 FOR CURRENT LOOP REDRIVE SPECIFICATIONS.
- REFER TO DRAWING A-115081 FOR J20 PROTOCOL SETTINGS.
- REFER TO DRAWINGS A-115078,115079 FOR J19 ADDRESS SETTINGS.

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: _____
 TITLE: SPECIFICATIONS; LED DRIVER IV, 16 COL
 DES. BY: _____ DRAWN BY: DULSCHM DATE: 09 OCT 06

REVISION 02 APPR. BY: _____ SCALE: 1 = 2

1192-R04A-288137

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|-----------|---|-----|-------|
| 02 | 30 NOV 06 | ADDED ADDRESS SWITCH S1 TO DRAWING | DJU | |
| 01 | 26 OCT 06 | RESIZED TEXT SO THAT IT WAS EASIER TO READ, AND CLARIFIED FUNCTIONS OF EACH JACK. | AFL | |

| DIP SWITCH ADDRESS SETTING | |
|----------------------------|---|
| DECIMAL ADDRESS | SW 8 SW 7 SW 6 SW 5 SW 4 SW 3 SW 2 SW 1 |
| 01 | 0 0 0 0 0 0 0 1 |
| 02 | 0 0 0 0 0 0 1 0 |
| 03 | 0 0 0 0 0 0 1 1 |
| 04 | 0 0 0 0 0 1 0 0 |
| 05 | 0 0 0 0 0 1 0 1 |
| 06 | 0 0 0 0 0 1 1 0 |
| 07 | 0 0 0 0 0 1 1 1 |
| 08 | 0 0 0 0 1 0 0 0 |
| 09 | 0 0 0 0 1 0 0 1 |
| 10 | 0 0 0 0 1 0 1 0 |
| 11 | 0 0 0 0 1 0 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 |

| DIP SWITCH ADDRESS SETTING | |
|----------------------------|---|
| DECIMAL ADDRESS | SW 8 SW 7 SW 6 SW 5 SW 4 SW 3 SW 2 SW 1 |
| 33 | 0 0 0 1 0 0 0 1 |
| 34 | 0 0 0 1 0 0 0 0 |
| 35 | 0 0 0 1 0 0 1 1 |
| 36 | 0 0 0 1 0 0 0 0 |
| 37 | 0 0 0 1 0 0 1 0 |
| 38 | 0 0 0 1 0 0 1 1 |
| 39 | 0 0 0 1 0 0 1 1 |
| 40 | 0 0 0 1 0 1 0 0 |
| 41 | 0 0 0 1 0 1 0 1 |
| 42 | 0 0 0 1 0 1 1 0 |
| 43 | 0 0 0 1 0 1 1 1 |
| 44 | 0 0 0 1 0 1 1 0 |
| 45 | 0 0 0 1 0 1 1 0 |
| 46 | 0 0 0 1 0 1 1 0 |
| 47 | 0 0 0 1 0 1 1 1 |
| 48 | 0 0 0 1 1 0 0 0 |

| DIP SWITCH ADDRESS SETTING | |
|----------------------------|---|
| DECIMAL ADDRESS | SW 8 SW 7 SW 6 SW 5 SW 4 SW 3 SW 2 SW 1 |
| 65 | 0 1 0 0 0 0 1 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 |

| DIP SWITCH ADDRESS SETTING | |
|----------------------------|---|
| DECIMAL ADDRESS | SW 8 SW 7 SW 6 SW 5 SW 4 SW 3 SW 2 SW 1 |
| 97 | 0 1 1 0 0 0 1 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 |

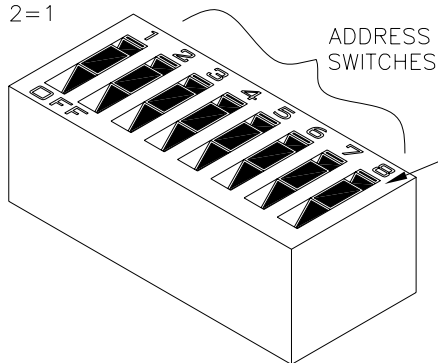
| DIP SWITCH ADDRESS SETTING | |
|----------------------------|---|
| DECIMAL ADDRESS | SW 8 SW 7 SW 6 SW 5 SW 4 SW 3 SW 2 SW 1 |
| 17 | 0 0 0 1 0 0 0 1 |
| 18 | 0 0 0 1 0 0 1 0 |
| 19 | 0 0 0 1 0 0 1 1 |
| 20 | 0 0 0 1 0 1 0 0 |
| 21 | 0 0 0 1 0 1 0 1 |
| 22 | 0 0 0 1 0 1 1 0 |
| 23 | 0 0 0 1 0 1 1 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 |

| DIP SWITCH ADDRESS SETTING | |
|----------------------------|---|
| DECIMAL ADDRESS | SW 8 SW 7 SW 6 SW 5 SW 4 SW 3 SW 2 SW 1 |
| 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 |

| DIP SWITCH ADDRESS SETTING | |
|----------------------------|---|
| DECIMAL ADDRESS | SW 8 SW 7 SW 6 SW 5 SW 4 SW 3 SW 2 SW 1 |
| 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 |

| DIP SWITCH ADDRESS SETTING | |
|----------------------------|---|
| DECIMAL ADDRESS | SW 8 SW 7 SW 6 SW 5 SW 4 SW 3 SW 2 SW 1 |
| 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 |

S1-ADDRESS DIP SWITCH
SCALE 2=1



NOTES:

0 = OFF, 1 = ON.

TO TURN SWITCH ON, PRESS DOWN ON THE TOP SIDE OF THE SWITCH ROCKING IT TO THE OTHER POSITION.

| | | | |
|--|--------------|-------------------|-----------------|
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| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR LED SCOREBOARDS | | | |
| TITLE: ADDRESS TABLE 1; GEN IV DRIVER ADDRESS DIP SWITCH | | | |
| DES. BY: MMILLER | | DRAWN BY: MMILLER | DATE: 16 NOV 06 |
| REVISION | APPR. BY: | 1192-R10A-290261 | |
| 00 | SCALE: 1 = 1 | | |

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

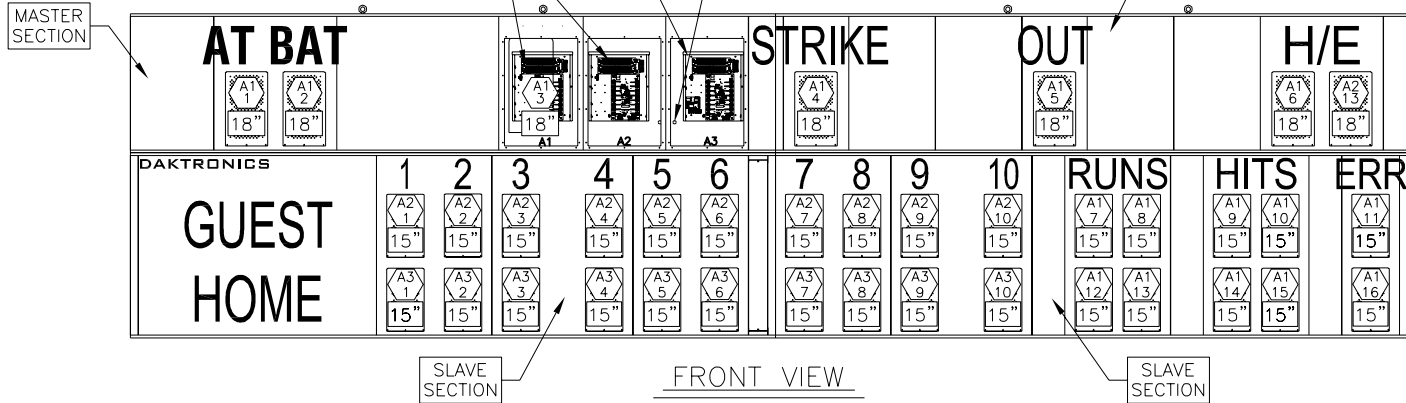
REV. DATE DESCRIPTION BY APPR.

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

BA-3718-11/-21

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @2. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT



SLAVE SECTION

MASTER SECTION

SLAVE SECTION

SLAVE SECTION

FRONT VIEW

PROJ: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS; BA-3718-11/-21, G4
 DES. BY: BCURTIS
 DRAWN BY: BCURTIS
 DATE: 13 DEC 06
 DAKTRONICS, INC. BROOKINGS, SD 57006
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 REVISION 00
 APPR. BY: SCALE: 1=50
 1192-R08A-292341

A1 1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
 18" = DIGIT SIZE

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

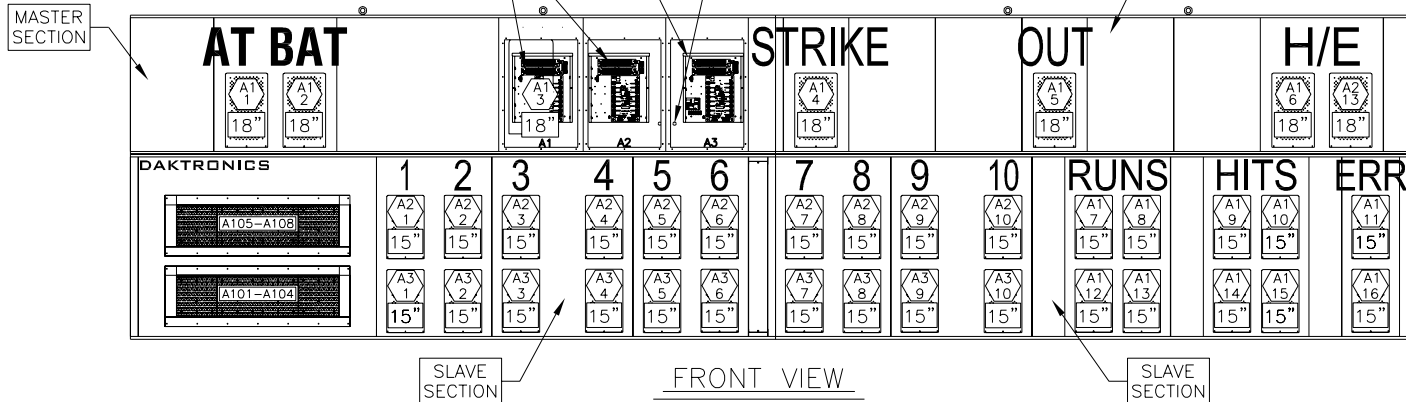
BA-3718-11/-21 W/ LED TNMC

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @1. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @2. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

CONNECTOR PANEL FOR DIGIT HARNESS.



SLAVE SECTION

MASTER SECTION

SLAVE SECTION

SLAVE SECTION

FRONT VIEW

REV. DATE DESCRIPTION BY APPR.

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @2. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

BA-2006-11/-21

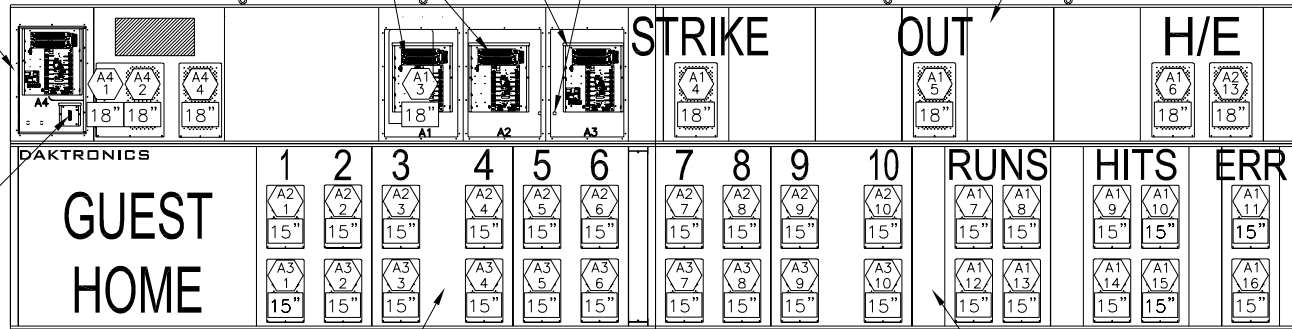
ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @2. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

MASTER SECTION

SLAVE SECTION

SOP/MPH SIGNAL AND FIBER ENCLOSURE @1.



SLAVE SECTION

FRONT VIEW

SLAVE SECTION

PROJ: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS; BA-2006-11/-21, G4
 DES. BY: BCURTIS
 DRAWN BY: BCURTIS
 DATE: 13 DEC 06
 DAKTRONICS, INC. BROOKINGS, SD 57006
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 REVISION 00
 APPR. BY: SCALE: 1=50
 1192-R08A-292345

ENCLOSED 16 COLUMN MASTER LED DRIVER AND POWER/SIGNAL ENCLOSURE @2. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

BA-2006-11/-21 W/ LED TNMC

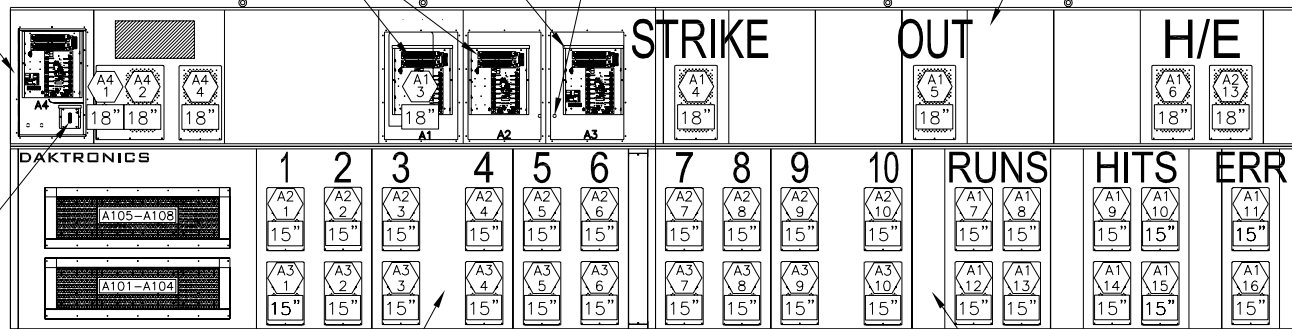
ENCLOSED 16 COLUMN SLAVE LED DRIVER AND POWER/SIGNAL ENCLOSURE @2. (THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL.)

KNOCKOUT FOR 1/2" CONDUIT

MASTER SECTION

SLAVE SECTION

SOP/MPH SIGNAL AND FIBER ENCLOSURE @1.



SLAVE SECTION

FRONT VIEW

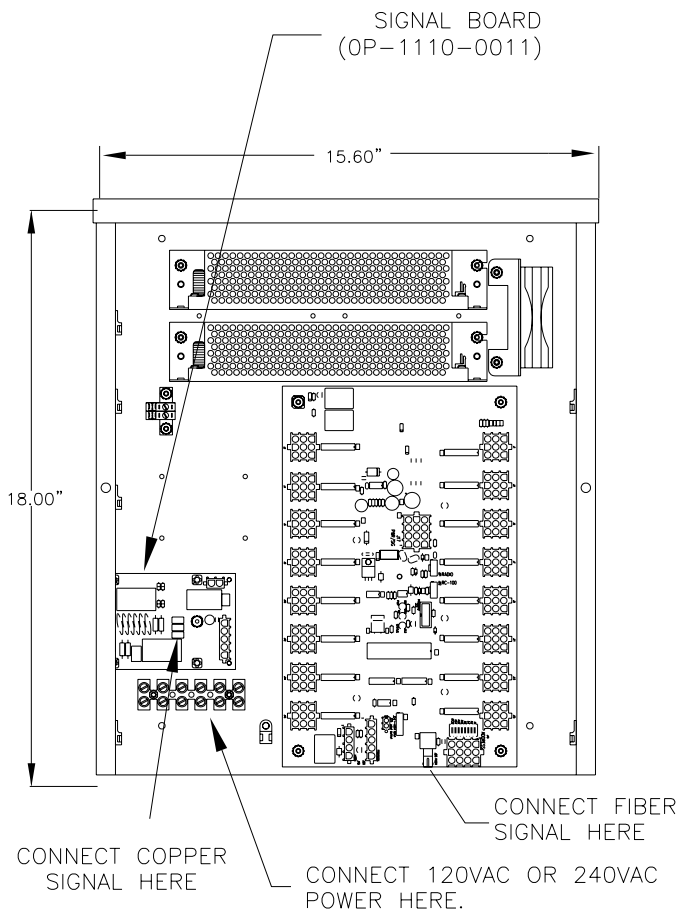
SLAVE SECTION

A1 1 = LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.
 18" = DIGIT SIZE

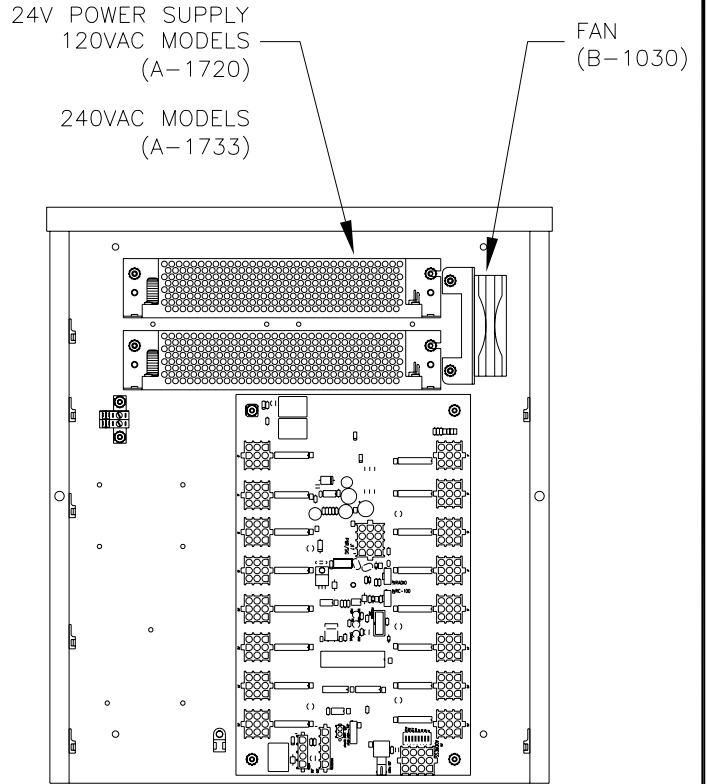
HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

SOME SYSTEMS, PRIMARILY THOSE WITH ONLY ONE DRIVER, USE ONLY THE MASTER ENCLOSURE. THE SLAVE ENCLOSURE IS USED IN SYSTEMS WITH MULTIPLE DRIVERS.

THE MASTER ENCLOSURE PROVIDES TERMINALS FOR POWER AND SIGNAL HOOKUP.



MASTER ENCLOSURE
 (0A-1192-4252, 120VAC)
 (0A-1192-4265, 240VAC)



SLAVE ENCLOSURE
 (0A-1192-4253, 120VAC)
 (0A-1192-4266, 240VAC)

| | | | |
|--|------------|-------------------|--|
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| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | |
| PROJ: OUTDOOR LED SCOREBOARD | | | |
| TITLE: DRIVER ENCLOSURE REFERENCE, GEN IV | | | |
| DES. BY: SLOWWAG | | DRAWN BY: SLOWWAG | |
| | | DATE: 03 JAN 06 | |
| REVISION | APPR. BY: | 1192-R04A-293354 | |
| 01 | SCALE: 1=6 | | |

| | | | | |
|------|-----------|---------------------------------------|-----|-------|
| 01 | 06 DEC 07 | UPDATED DETAILS TO SHOW 240VAC MODELS | MWM | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

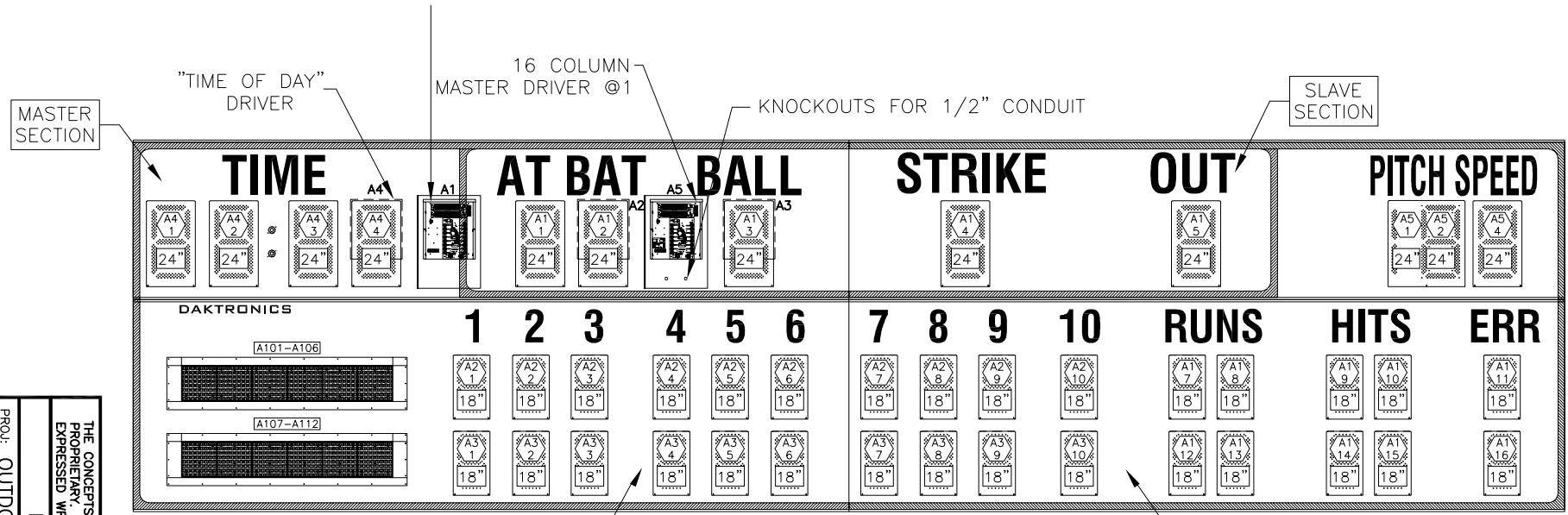
REV. DATE DESCRIPTION BY APPR. REVISION APPR. BY: SCALE: 1=50

BA-2013-11/-21 W/ TNMC

NOTES:

USE THIS DRAWING FOR BOARDS ORDERED AFTER OCTOBER 01 2008.

ENCLOSED 16 COLUMN SLAVE LED DRIVER @3.
(THE COVER HAS BEEN REMOVED TO SHOW THE ENCLOSURE COMPONENT DETAIL).



SLAVE SECTION

FRONT VIEW

SLAVE SECTION

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

NOTES:

USE THIS DRAWING FOR BOARDS ORDERED AFTER OCTOBER 01 2008.

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PROJ.: OUTDOOR LED SCOREBOARDS
DAKTRONICS, INC. BROOKINGS, SD 57006

TITLE: COMP. LOCATION: BA-2013-11/-21 W/ TNMC, FD, G4
DES. BY: KDRAGT DRAWN BY: VSHIRAL DATE: 14 NOV 08

REVISION 00 APPR. BY: 1192-R08A-757381

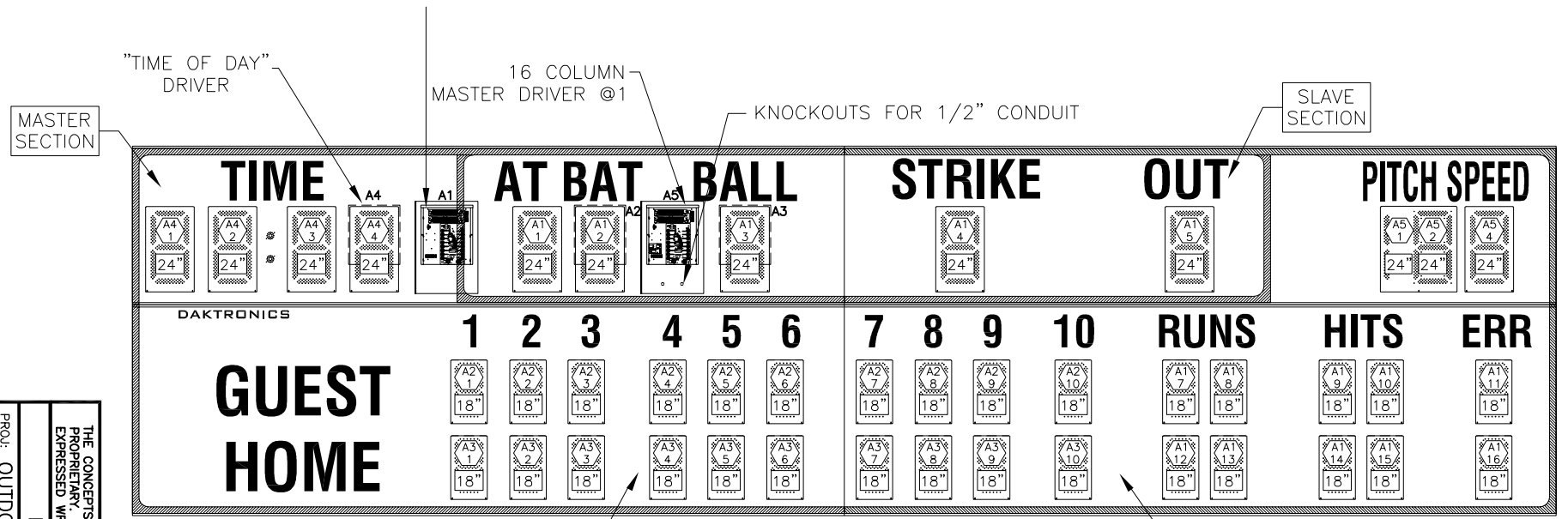
REV. DATE DESCRIPTION BY APPR. REVISION APPR. BY SCALE

BA-2013-11/-21

NOTES:

ENCLOSED 16 COLUMN SLAVE LED DRIVER @3.
(THE COVER HAS BEEN REMOVED TO SHOW THE
ENCLOSURE COMPONENT DETAIL).

**USE THIS DRAWING FOR BOARDS
ORDERED AFTER OCTOBER 01 2008.**



FRONT VIEW

= LED DRIVER NUMBER & LED DRIVER CONNECTOR WIRED TO THAT DIGIT.

= DIGIT SIZE

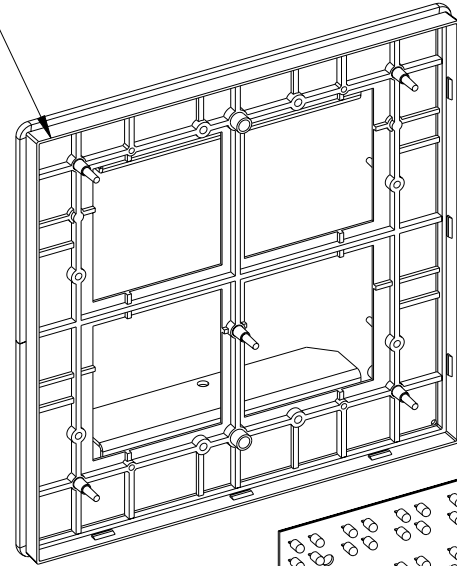
HINGED ACCESS DOORS REMOVED TO SHOW LED DRIVER AND THE POWER/SIGNAL ENCLOSURE.

NOTES:

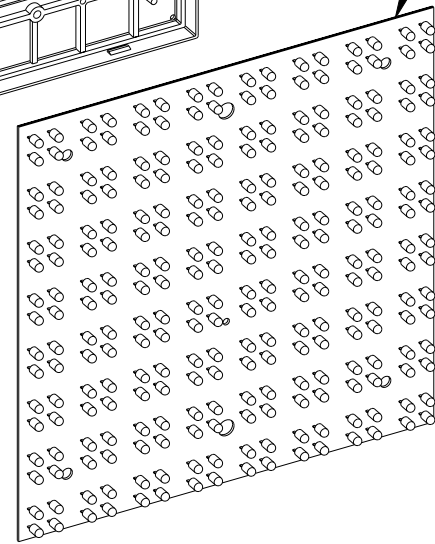
**USE THIS DRAWING FOR BOARDS
ORDERED AFTER OCTOBER 01 2008.**

PROJ.: OUTDOOR LED SCOREBOARDS
 TITLE: COMPONENT LOCATIONS; BA-2013-11/-21, FD, G4
 DES. BY: KDRAGT
 DRAWN BY: VSHIRAL
 DATE: 14 NOV 08
 DAKTRONICS, INC. BROOKINGS, SD 57006
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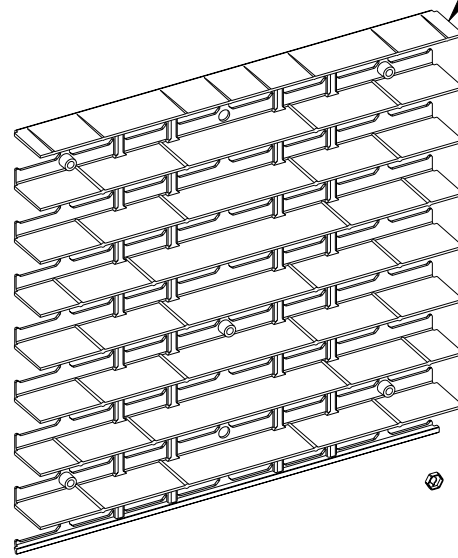
PLASTIC HOUSING WITH WEATHERSTRIPPING FOR WATERPROOFING



SINGLE LED AND DRIVER PANEL



LOUVER



LATCH ACCESS PLUG @2 FOR FRONT AND REAR MODULE ACCESS AND WATERPROOFING



TWIST ON FASTENERS @5 FOR ATTACHMENT OF LOUVER



DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: 34MM OUTDOOR GALAXY

TITLE: EXPLODED FRONT VIEW; SINGLE PANEL MODULE

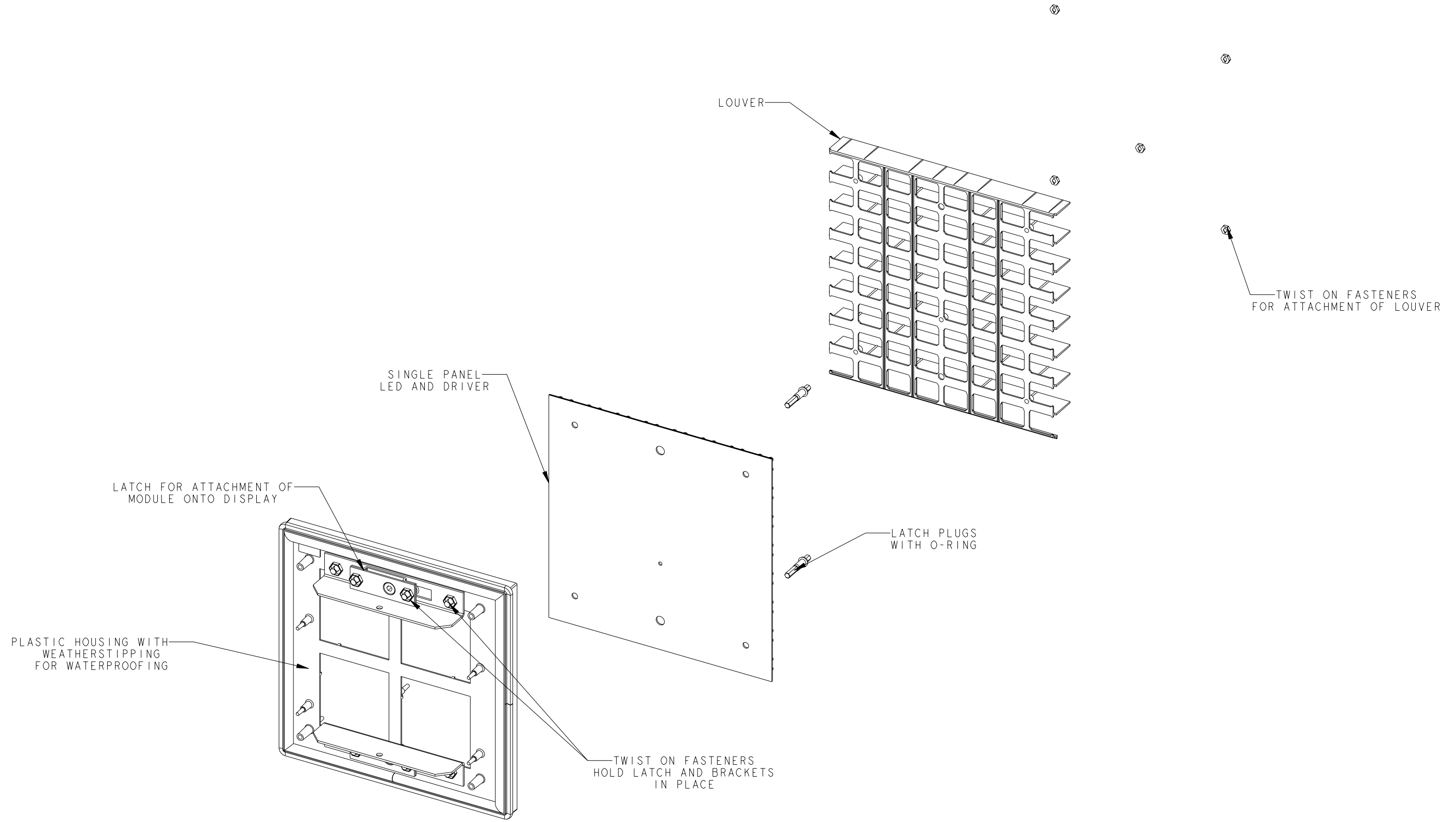
DES. BY: NANDAL DRAWN BY: DNUGTEREN DATE: 10JAN00

REVISION SHEET 1 OF DWG 126111

SCALE: 1=2

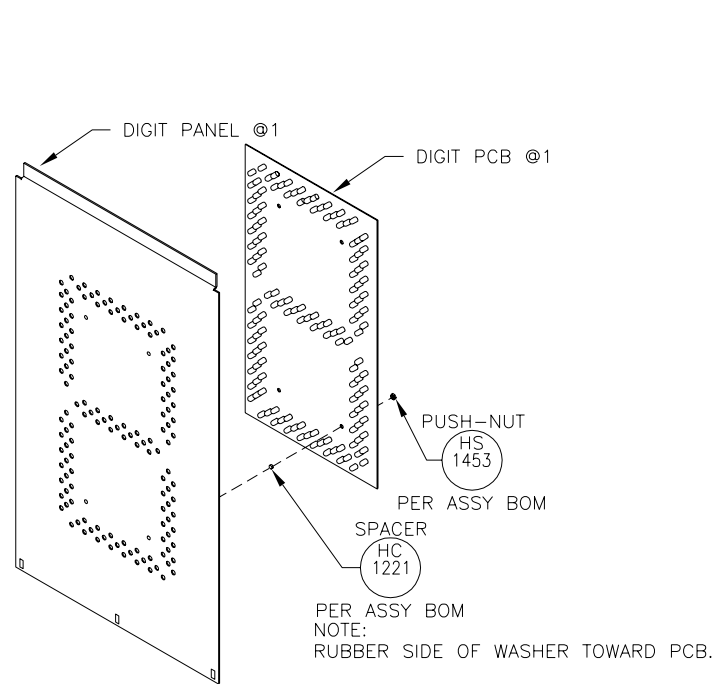
1208-E10B-126111

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



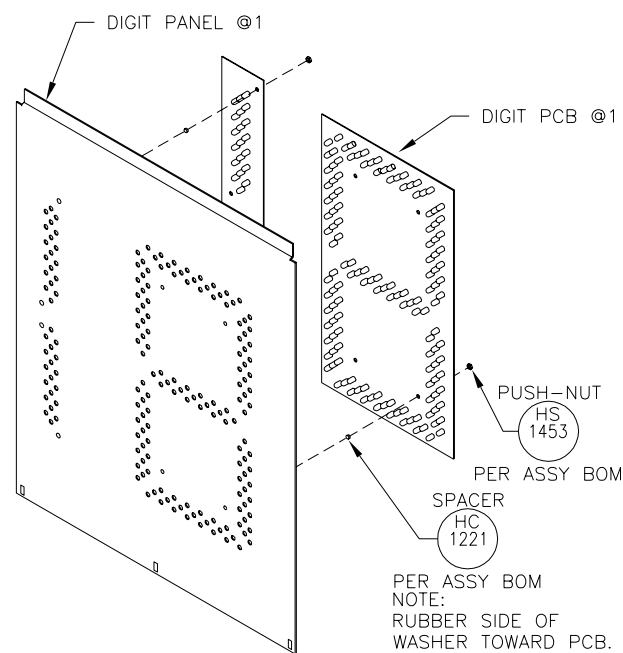
| | |
|--------------------------------------|---|
| DAKTRONICS, INC. BROOKINGS, SD 57006 | |
| PROJ: | 34MM OUTDOOR GALAXY |
| TITLE: | EXPLODED REAR VIEW; SINGLE PANEL MODULE |
| DES. BY: | NANDAL |
| DRAWN BY: | DNUGTEREN |
| DATE: | 10JAN00 |
| REVISION | SHEET 1 OF DWG 126112 |
| SCALE: | 1=2 |
| 1208 - E10B - 126112 | |

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



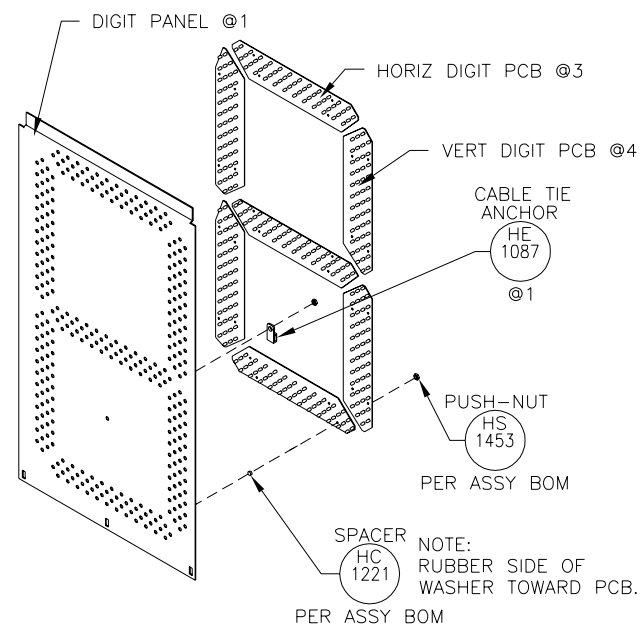
DETAIL: A

REFER TO THIS DETAIL FOR THE FOLLOWING RED, GRN, AND AMBER LED DIGIT ASSEMBLY SIZES:
 -5", 7", 10", 15", 18", SMALL FB IND, AND LARGE FB IND (NOTE THAT THE FB INDICATORS DO NOT LOOK LIKE THE DIGIT IN THE ABOVE DETAIL. THESE INDICATORS ARE ASSEMBLED WITH THE SAME METHOD AS THE DIGIT SHOWN IN THE ABOVE DETAIL.)



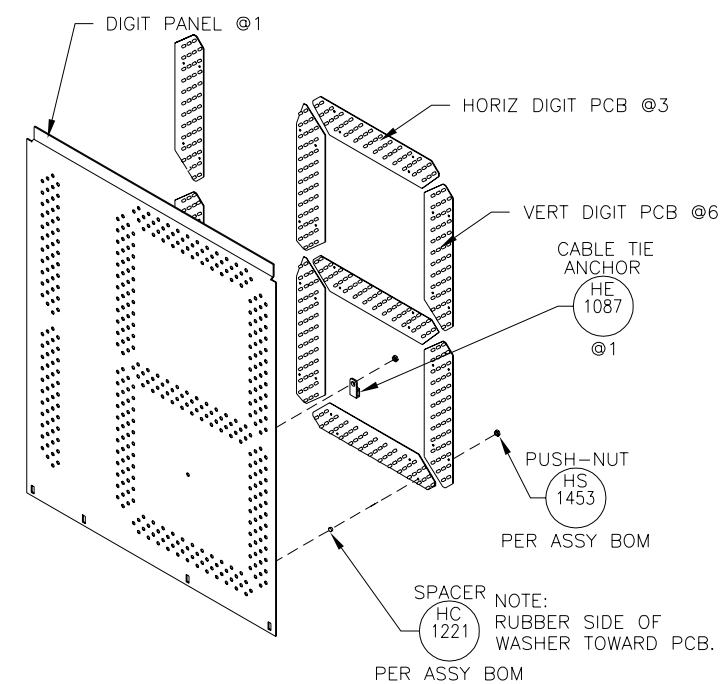
DETAIL: B

REFER TO THIS DETAIL FOR THE FOLLOWING RED, GRN, AND AMBER LED DIGIT ASSEMBLY SIZES:
 -15"+1, AND 18"+1



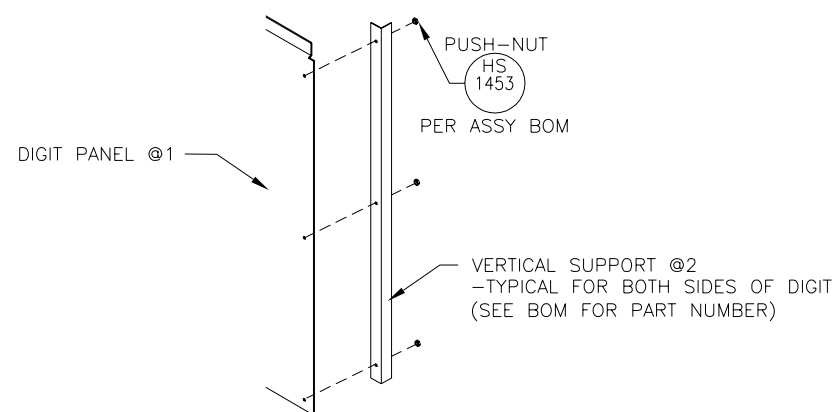
DETAIL: C

REFER TO THIS DETAIL FOR THE FOLLOWING RED, GRN, AND AMBER LED DIGIT ASSEMBLY SIZES:
 -24", 24" WIDE, 30", 30" WIDE, 36", 42", 48", 60"



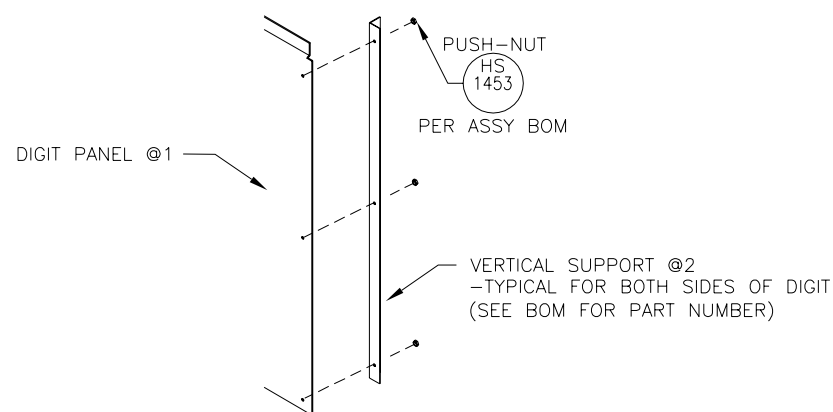
DETAIL: D

REFER TO THIS DETAIL FOR THE FOLLOWING RED, GRN, AND AMBER LED DIGIT ASSEMBLY SIZES:
 -24"+1, 30"+1, 36"+1



DETAIL: E

REFER TO THIS DETAIL FOR THE FOLLOWING RED, GRN, AND AMBER LED DIGIT ASSEMBLY SIZES:
 48", AND 48"+1



DETAIL: F

REFER TO THIS DETAIL FOR THE FOLLOWING RED, GRN, AND AMBER LED DIGIT ASSEMBLY SIZES:
 -30", 30"+1, AND 30" WIDE.

NOTE: IN SOME APPLICATIONS, THE LED DIGIT PCB MAY BE MOUNTED DIRECTLY TO THE FACE PANEL OF THE SCOREBOARD INSTEAD OF THE LED DIGIT PANEL. THE SAME HARDWARE WILL BE USED TO INSTALL THE LED DIGIT PCB. THE LED SCOREBOARD FACE PANEL CAN BE SUBSTITUTED FOR THE LED DIGIT PANEL IN ALL DETAILS.

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

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: OUTDOOR LED SCOREBOARDS

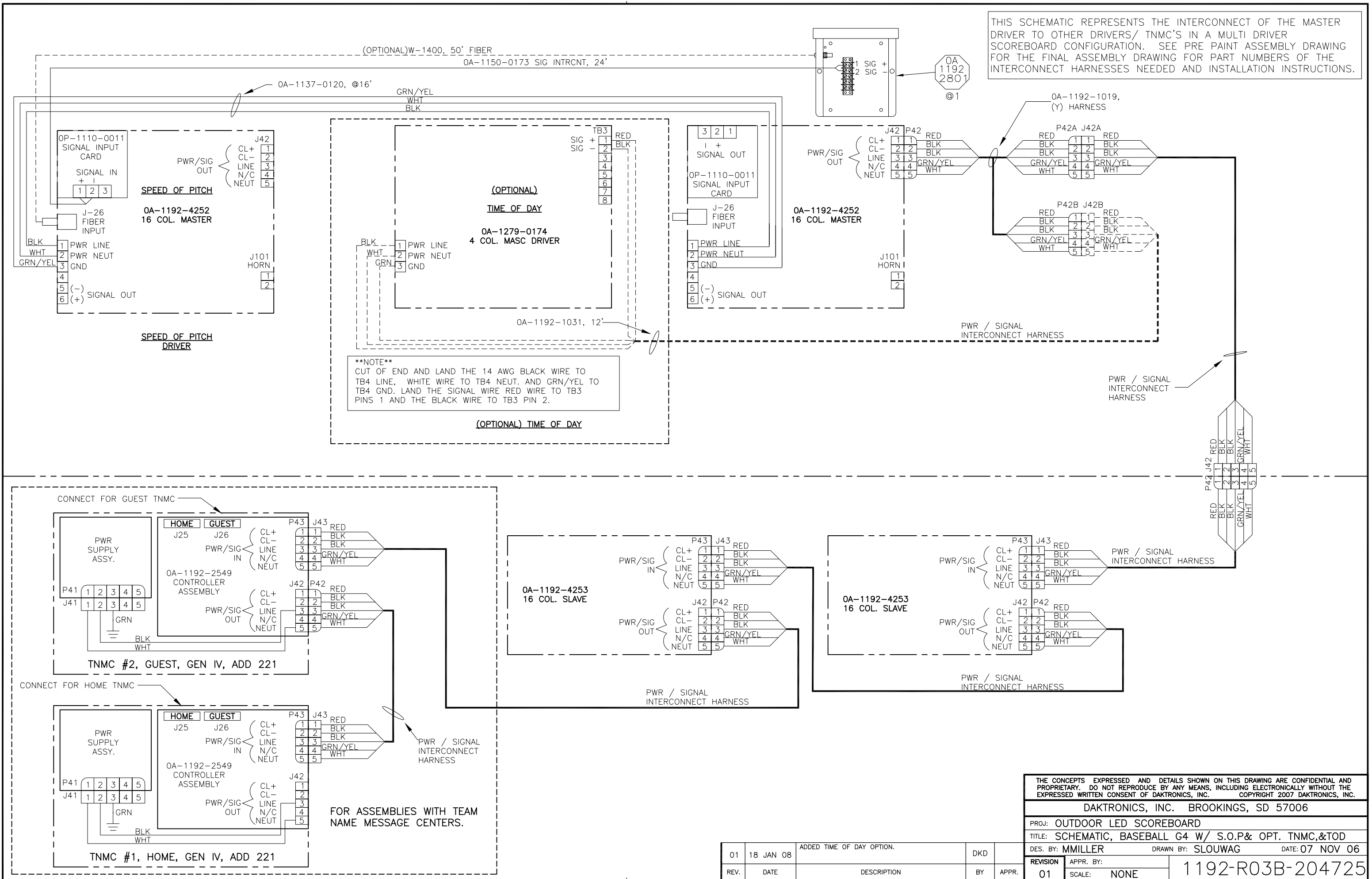
TITLE: DIGIT ASSEMBLIES: GEN III LED DIGITS

DES. BY: MCOPLAN DRAWN BY: MCOPLAN DATE: 30OCT02

| | | | | |
|------|-----------|----------------------|-----|-------|
| 06 | 16 APR 08 | REMOVE WIRING DETAIL | KZB | |
| REV. | DATE | DESCRIPTION | BY | APPR. |

REVISION 06 APPR. BY: SCALE: 1=6 1192-E10B-177679

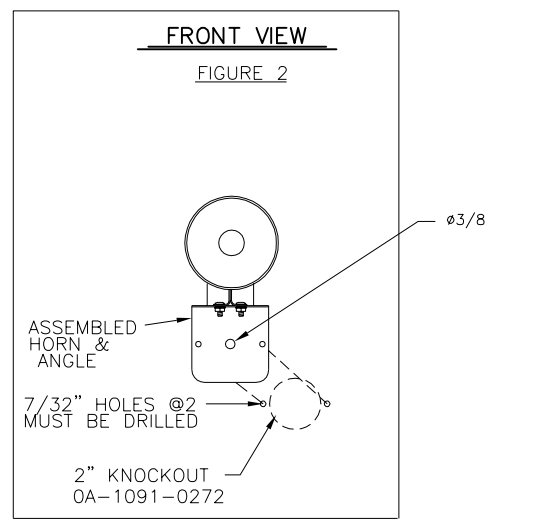
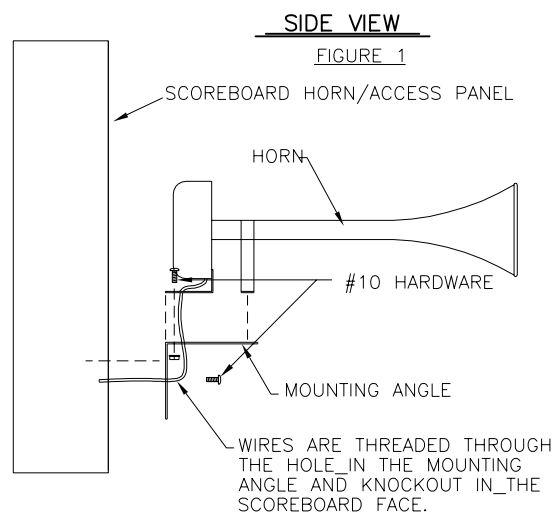
THIS SCHEMATIC REPRESENTS THE INTERCONNECT OF THE MASTER DRIVER TO OTHER DRIVERS/ TNMC'S IN A MULTI DRIVER SCOREBOARD CONFIGURATION. SEE PRE PAINT ASSEMBLY DRAWING FOR THE FINAL ASSEMBLY DRAWING FOR PART NUMBERS OF THE INTERCONNECT HARNESSES NEEDED AND INSTALLATION INSTRUCTIONS.



****NOTE****
 CUT OF END AND LAND THE 14 AWG BLACK WIRE TO TB4 LINE, WHITE WIRE TO TB4 NEUT. AND GRN/YEL TO TB4 GND. LAND THE SIGNAL WIRE RED WIRE TO TB3 PINS 1 AND THE BLACK WIRE TO TB3 PIN 2.

| | | | | |
|--|-------------|-------------------|--|-----------------|
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| DAKTRONICS, INC. BROOKINGS, SD 57006 | | | | |
| PROJ: OUTDOOR LED SCOREBOARD | | | | |
| TITLE: SCHEMATIC, BASEBALL G4 W/ S.O.P& OPT. TNMC,&TOD | | | | |
| DES. BY: MMILLER | | DRAWN BY: SLOWWAG | | DATE: 07 NOV 06 |
| REVISION | APPR. BY: | 1192-R03B-204725 | | |
| 01 | SCALE: NONE | | | |

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|-----------|---------------------------|-----|-------|
| 01 | 18 JAN 08 | ADDED TIME OF DAY OPTION. | DKD | |



**GEN IV LED DRIVERS
SYSTEM BUILT FROM
JAN 2007 TO PRESENT**

FOR COMPLETE INSTALLATION INSTRUCTIONS, REFER TO ED-10006.

MOUNTING ENCLOSURE TO INSIDE OF SCOREBOARD

1. OPEN THE HORN PANEL AND LOCATE THE ENTRANCE PLATE. DRILL TWO 5/32" HOLES 4 INCHES APART IN THE BACK OF THE SCOREBOARD NEAR THE ENTRANCE PLATE.
2. ATTACH THE ENCLOSURE TO THE INSIDE OF THE SCOREBOARD OVER THE 5/32" HOLES USING #10 TAPPING SCREWS. ATTACH THE PLATE ASSEMBLY TO THE ENCLOSURE USING #10 HARDWARE. REMOVE 2" KNOCKOUT IN THE HORN PANEL AND DRILL TWO 7/32" HOLES USING THE TEMPLATE DRAWING A-83502. IF NO KNOCKOUT EXISTS, USE THE TEMPLATE TO DRILL ONE 8/32" HOLE AND TWO 7/32" HOLES IN THE PANEL.

MOUNTING HORN TO SCOREBOARD FACE

1. THREAD THE TWO GRAY WIRES FROM THE HORN THROUGH THE TOP OF THE MOUNTING ANGLE.
2. ATTACH THE HORN TO THE MOUNTING ANGLE USING THE HARDWARE PROVIDED (FIGURE 1).
3. INSERT THE BUSHING INTO THE 3/8" HOLE IN THE MOUNTING ANGLE.
4. MOUNT HORN/ANGLE ASSEMBLY TO THE FACE OF THE SCOREBOARD OVER THE 2" KNOCKOUT AND 7/32" HOLES USING #10 HARDWARE PROVIDED.
5. OPEN THE HORN PANEL AND REMOVE THE COVER FROM THE ENCLOSURE.
6. USING THE WIRE NUTS PROVIDED CONNECT ONE GRAY WIRE FROM THE HORN TO THE BLACK WIRE FROM THE PLATE ASSEMBLY. CONNECT THE OTHER GRAY WIRE TO THE RED WIRE (FIGURE 3).

7. STEPS FOR INSTALLING THE OA-1192-1685, HORN INTERFACE KIT. (FIGURE 3)

- (A) MOUNT OP-1150-0246 HORN SWITCH CARD USING HS-1042 SPACER & HC-1238 LOCK NUT.
 - (B) PLUG SIGNAL CABLE P18 INTO J18 ON THE DRIVER AND P2 INTO J2 OF OP-1150-0246.
 - (C) PLUG POWER A3-P1 POWER HARNESS INTO A3-J1 OF THE HORN INTERFACE CARD.
 - (D) PLUG HORN CABLE P3 INTO J3 OF THE OP-1150-0246 AND THE OPPOSITE END ON TO THE HORN.
8. ATTACH THE COVER TO THE ENCLOSURE USING #10 HARDWARE.
 9. CLOSE AND SECURE THE HORN PANEL.

**GEN III LED DRIVERS
SYSTEMS BUILT FROM
MAR 2006 TO JAN 2007**

FOR COMPLETE INSTALLATION INSTRUCTIONS, REFER TO ED-10006.

MOUNTING ENCLOSURE TO INSIDE OF SCOREBOARD

1. OPEN THE HORN PANEL AND LOCATE THE ENTRANCE PLATE. DRILL TWO 5/32" HOLES 4 INCHES APART IN THE BACK OF THE SCOREBOARD NEAR THE ENTRANCE PLATE.
2. ATTACH THE ENCLOSURE TO THE INSIDE OF THE SCOREBOARD OVER THE 5/32" HOLES USING #10 TAPPING SCREWS. ATTACH THE PLATE ASSEMBLY TO THE ENCLOSURE USING #10 HARDWARE. REMOVE 2" KNOCKOUT IN THE HORN PANEL AND DRILL TWO 7/32" HOLES USING THE TEMPLATE DRAWING A-83502. IF NO KNOCKOUT EXISTS, USE THE TEMPLATE TO DRILL ONE 8/32" HOLE AND TWO 7/32" HOLES IN THE PANEL.
3. CLEAN METAL AND MOUNT OP-1150-0246 IN DRIVER ENCLOSURE WITH ADHESIVE TAPE PROVIDED.

MOUNTING HORN TO SCOREBOARD FACE

1. THREAD THE TWO GRAY WIRES FROM THE HORN THROUGH THE TOP OF THE MOUNTING ANGLE.
2. ATTACH THE HORN TO THE MOUNTING ANGLE USING THE HARDWARE PROVIDED (FIGURE 1).
3. INSERT THE BUSHING INTO THE 3/8" HOLE IN THE MOUNTING ANGLE.
4. MOUNT HORN/ANGLE ASSEMBLY TO THE FACE OF THE SCOREBOARD OVER THE 2" KNOCKOUT AND 7/32" HOLES USING #10 HARDWARE PROVIDED.
5. OPEN THE HORN PANEL AND REMOVE THE COVER FROM THE ENCLOSURE.
6. USING THE WIRE NUTS PROVIDED CONNECT ONE GRAY WIRE FROM THE HORN TO THE BLACK WIRE FROM THE PLATE ASSEMBLY. CONNECT THE OTHER GRAY WIRE TO THE RED WIRE (FIGURE 3).

7. CONNECT THE PLUG FROM THE PLATE ASSEMBLY TO THE HORN JACK ON THE HORN INTERFACE CARD.
 - CONNECT THE POWER HARNESS (P101) INTO (J101) OF THE DRIVER ENCLOSURE AND J1 ON THE HORN INTERFACE CARD.
 - PLUG THE HORN SIGNAL HARNESS IN TO J18 OF THE DRIVER & J2 OF THE HORN INTERFACE CARD.

8. ATTACH THE COVER TO THE ENCLOSURE USING #10 HARDWARE.
9. CLOSE AND SECURE THE HORN PANEL.

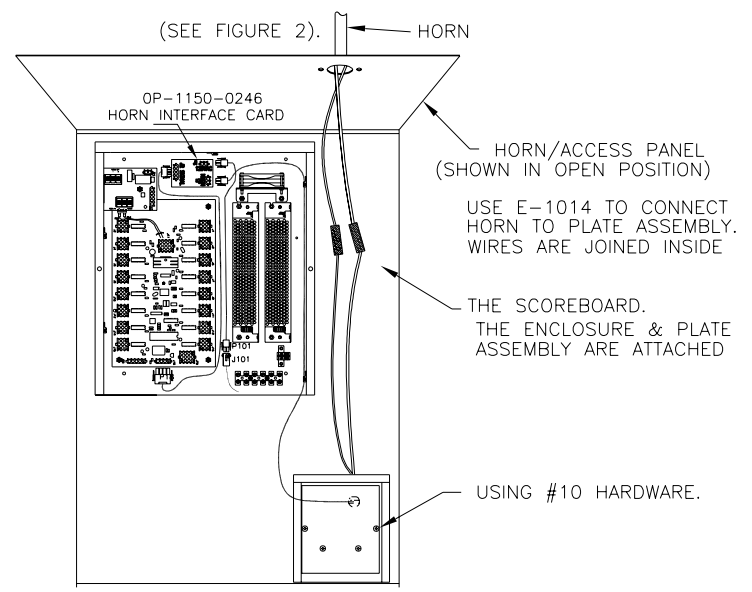


FIGURE 3
HORN CONNECTION

SEE DWG-302328 DETAIL (B) FOR MORE DETAILED VIEW OF DRIVER

**GEN I & II LED DRIVERS
SYSTEMS BUILT FROM
2001 TO MAR 2006**

FOR COMPLETE INSTALLATION INSTRUCTIONS, REFER TO ED-10006.

MOUNTING ENCLOSURE TO INSIDE OF SCOREBOARD

1. OPEN THE HORN PANEL AND LOCATE THE ENTRANCE PLATE. DRILL TWO 5/32" HOLES 4 INCHES APART IN THE BACK OF THE SCOREBOARD NEAR THE ENTRANCE PLATE.
2. ATTACH THE ENCLOSURE TO THE INSIDE OF THE SCOREBOARD OVER THE 5/32" HOLES USING #10 TAPPING SCREWS. ATTACH THE PLATE ASSEMBLY TO THE ENCLOSURE USING #10 HARDWARE. REMOVE 2" KNOCKOUT IN THE HORN PANEL AND DRILL TWO 7/32" HOLES USING THE TEMPLATE DRAWING A-83502. IF NO KNOCKOUT EXISTS, USE THE TEMPLATE TO DRILL ONE 8/32" HOLE AND TWO 7/32" HOLES IN THE PANEL.

MOUNTING HORN TO SCOREBOARD FACE

1. THREAD THE TWO GRAY WIRES FROM THE HORN THROUGH THE TOP OF THE MOUNTING ANGLE.
2. ATTACH THE HORN TO THE MOUNTING ANGLE USING THE HARDWARE PROVIDED (FIGURE 1).
3. INSERT THE BUSHING INTO THE 3/8" HOLE IN THE MOUNTING ANGLE.
4. MOUNT HORN/ANGLE ASSEMBLY TO THE FACE OF THE SCOREBOARD OVER THE 2" KNOCKOUT AND 7/32" HOLES USING #10 HARDWARE PROVIDED.
5. OPEN THE HORN PANEL AND REMOVE THE COVER FROM THE ENCLOSURE.
6. USING THE WIRE NUTS PROVIDED CONNECT ONE GRAY WIRE FROM THE HORN TO THE BLACK WIRE FROM THE PLATE ASSEMBLY. CONNECT THE OTHER GRAY WIRE TO THE RED WIRE (FIGURE 3).

7. CONNECT THE PLUG FROM THE PLATE ASSEMBLY TO THE HORN JACK (J101) HARNESS
8. ATTACH THE COVER TO THE ENCLOSURE USING #10 HARDWARE.
9. CLOSE AND SECURE THE HORN PANEL.

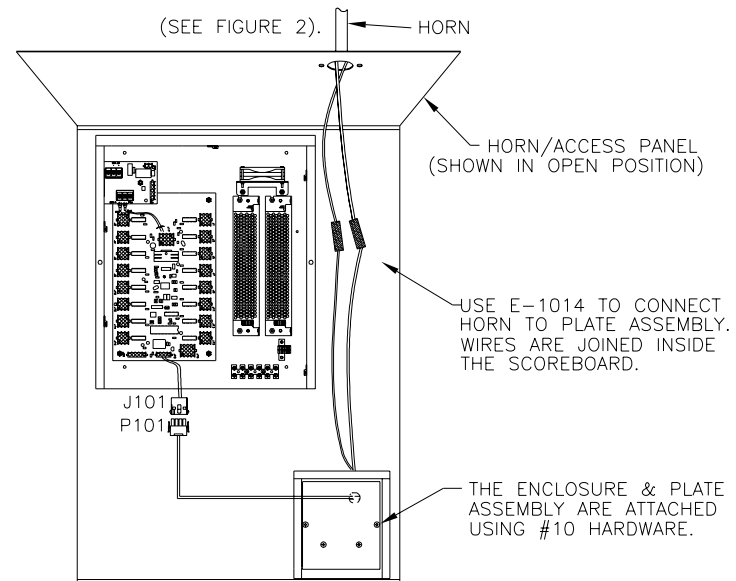
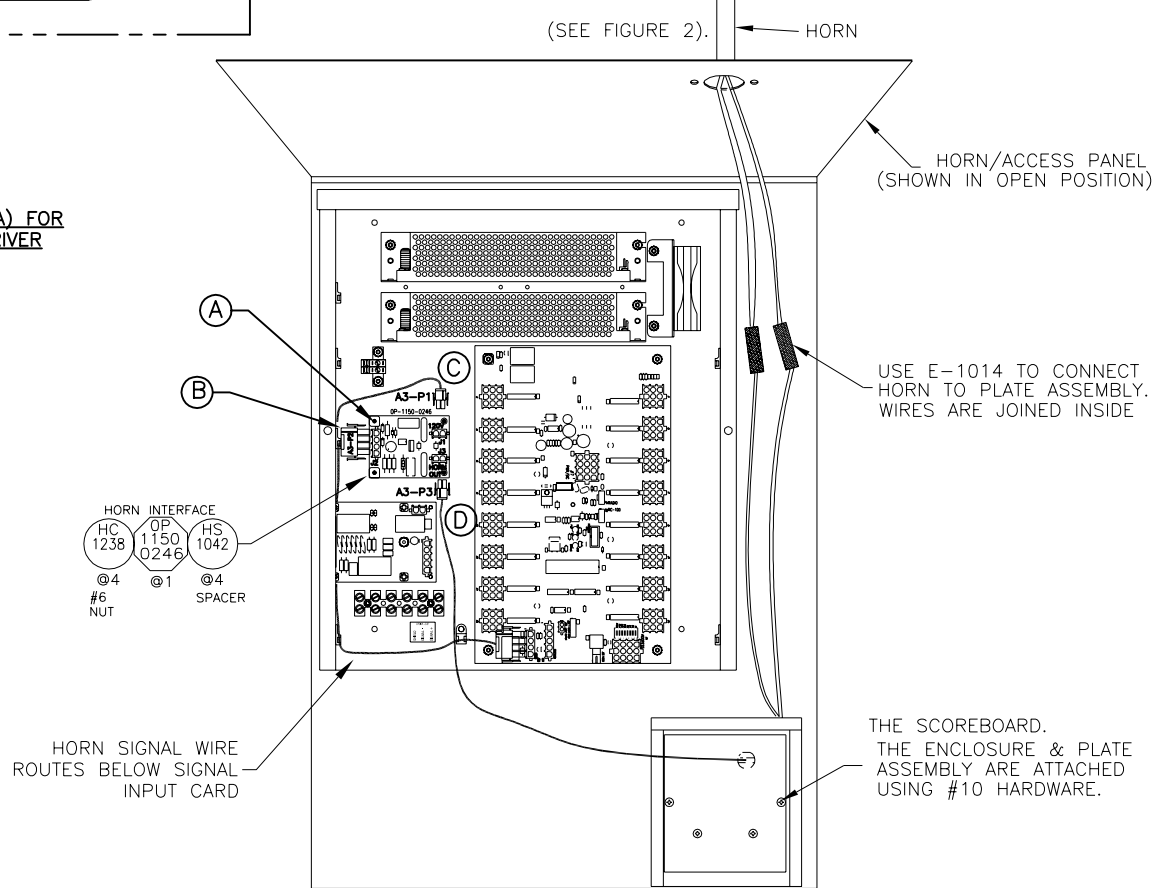


FIGURE 3
HORN CONNECTION

FIGURE 3
HORN CONNECTION
SEE DWG-302328 DETAIL (A) FOR MORE DETAILED VIEW OF DRIVER

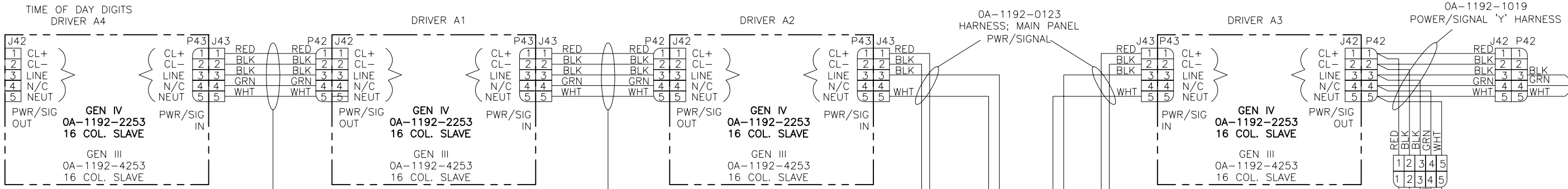


| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|-----------|---------------------------|-----|-------|
| 02 | 13 AUG 07 | ADDED GEN IV DRIVER | DMD | |
| 01 | 30 MAY 06 | ADDED HORN INTERFACE CARD | DMD | |

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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: STANDARD SCOREBOARDS
 TITLE: F.ASSY; 12V DC HORN MOUNTING, OUTDOOR LED SCBD
 DES. BY: DRAWN BY: JMOEN DATE: 20 JUN 96
 REVISION 02 APPR. BY: SCALE: NONE 1091-E10B-242731



PWR/ SIGNAL INTERCONNECT HARNESS. SEE CHART.

THIS SCHEMATIC REPRESENTS THE INTERCONNECT OF THE MASTER DRIVER TO OTHER DRIVERS/TNMC'S IN A MULTI DRIVER SCOREBOARD CONFIGURATION. SEE THE PRE-PAINT ASSEMBLY DRAWING AND/OR THE FINAL ASSEMBLY DRAWING FOR THE PART NUMBERS OF THE INTERCONNECT HARNESSES NEEDED AND INSTALLATION INSTRUCTIONS.

PWR/SIG INTERCONNECT HARNESS

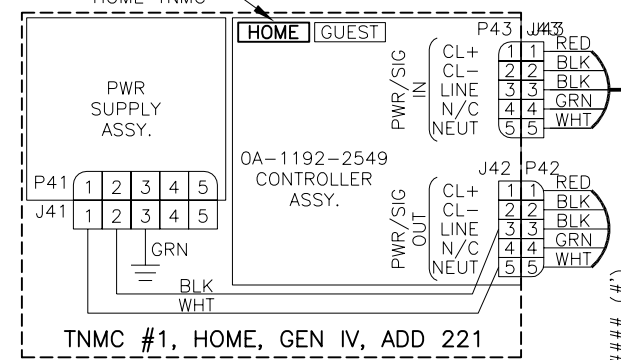
| PART NUMBER | LENGTH |
|--------------|--------|
| 0A-1192-1028 | 4' |
| 0A-1192-1029 | 8' |
| 0A-1192-1030 | 10' |
| 0A-1192-1031 | 12' |
| 0A-1192-1032 | 16' |
| 0A-1192-1033 | 22' |
| 0A-1192-1034 | 26' |
| 0A-1192-1083 | 30' |
| 0A-1192-1084 | 35' |

PWR/SIG SECTION HARNESS

| PART NUMBER | LENGTH |
|--------------|--------|
| 0A-1192-1331 | 8' |
| 0A-1192-1333 | 16' |

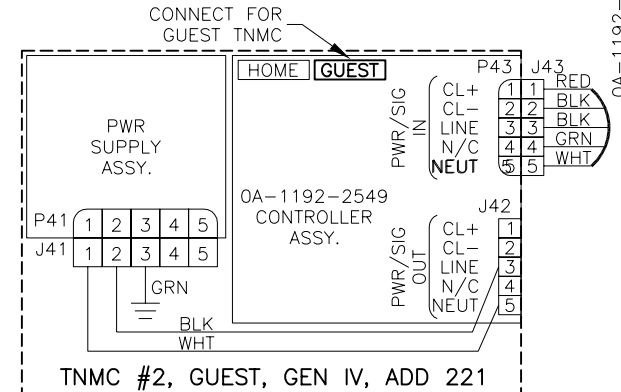
PWR/ SIGNAL INTERCONNECT HARNESSES BETWEEN SECTIONS. FOLLOW FINAL ASSY INSTRUCTIONS FOR ROUTING TO INTERCONNECT PANEL AND FOR ROUTING THROUGH NEXT SECTION.

FOR ASSEMBLIES WITH TEAM NAME MESSAGE CENTERS. CONNECT FOR HOME TNMC



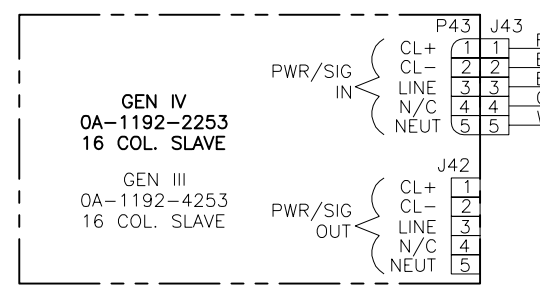
TNMC #1, HOME, GEN IV, ADD 221

0A-1192-#### (#)



TNMC #2, GUEST, GEN IV, ADD 221

S.O.P DRIVER DRIVER A5



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DAKTRONICS, INC. BROOKINGS, SD 57006

| | |
|------------------|---|
| PROJ: | OUTDOOR LED SCOREBOARDS |
| TITLE: | SCHEMATIC: BA-2013 GEN III & IV - OPTIONAL TNMC |
| DES. BY: | MMILLER |
| DRAWN BY: | MMILLER |
| DATE: | 27 DEC 05 |
| REVISION | APPR. BY: |
| 02 | SCALE: NONE |
| 1192-R03B-260324 | |

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|-----------|--|-----|-------|
| 02 | 15 APR 08 | UPDATED TO INCLUDE GEN IV INFORMATION. | DKD | |
| 01 | 21 AUG 07 | UPDATED WIRE HARN BLOCKS | KZB | |

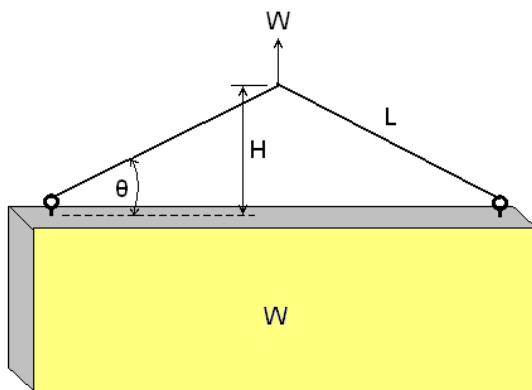
Appendix B: Eyebolts

Eyebolts ED-7244

EYEBOLTS

Almost every display that leaves Daktronics is equipped with eyebolts for lifting the display. There are two standard sizes of eyebolts: 1/2" and 5/8".

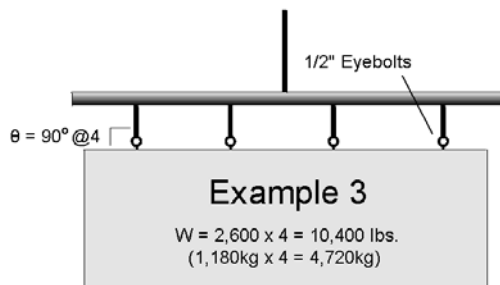
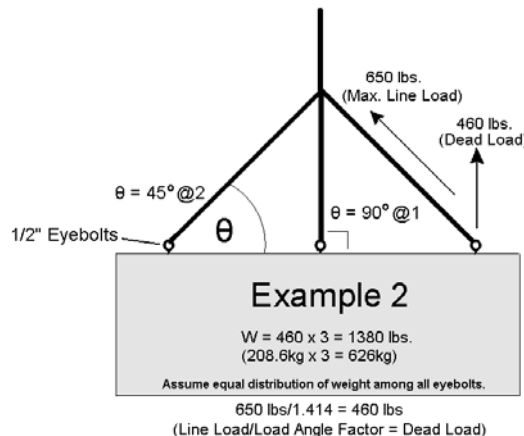
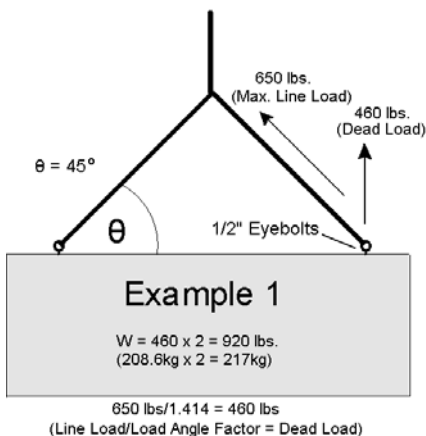
Load Increase Factor: The load increases as the lift angle (θ) decreases. The allowable load on the eyebolts also decreases with the lift angle due the bending stress on the eyebolts. In sum, the smaller the angle between the cable and the top of the display, the lighter the sign must be to safely lift it. *Do NOT attempt to lift the display when the lift angle is less than 30 degrees.*

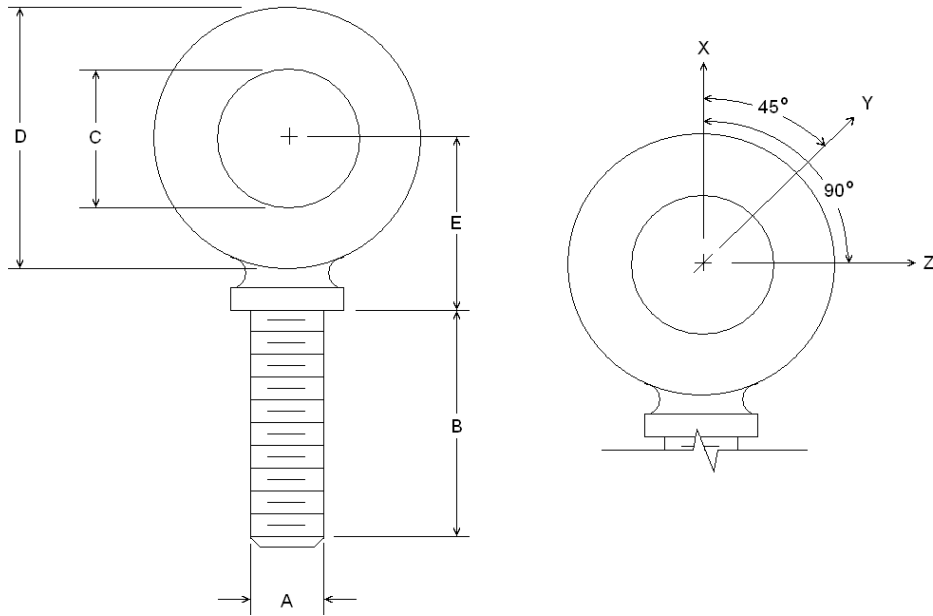


W= Weight of sign or Section
 H= Distance between top of sign and lift point
 L= Length of cable on one side
 θ = Angle between sign and cable

| Horizontal Angle | Load Angle Factor (L/H) |
|------------------|-------------------------|
| 90 | 1.00 |
| 60 | 1.155 |
| 50 | 1.305 |
| 45 | 1.414 |
| 30 | 2.00 |

| θ | 1/2" | | 5/8" | |
|----------|-----------|---------------|-----------|---------------|
| | Line Load | Weight/Anchor | Line Load | Weight/Anchor |
| 90 | 2600 | 2600 | 4000 | 4000 |
| 60 | 1500 | 1299 | 3300 | 2858 |
| 45 | 650 | 460 | 1000 | 707 |
| 30 | 520 | 260 | 800 | 400 |





| A | B | C | D | E | No. | Min. Proof Load (lbs.) | Min. Break Load (lbs.) | Stocked | Min. Eff. Thrd. Length | Line Loads | | |
|------------|--------------|---------------|---------------|----------------|-----------|------------------------|------------------------|---------------------|------------------------|--------------|--------------|------------|
| | | | | | | | | | | Wx | Wy | Wz |
| 1/4 | 1 | 3/4 | 1-3/16 | 25/32 | 21 | 600 | 2,000 | Blank 1/4-20 | 7/8 | 400 | 100 | 80 |
| 3/8 | 1-1/4 | 1 | 1-21/32 | 1-3/16 | 23 | 2,100 | 5,000 | Blank 3/8-16 | 1-1/8 | 1,400 | 350 | 250 |
| 1/2 | 1-1/2 | 1-3/16 | 2-1/16 | 1-13/32 | 25 | 3,900 | 9,200 | Blank 1/2-13 | 1-11/32 | 2,600 | 650 | 520 |
| 9/16 | 1-5/8 | 1-9/32 | 2-13/16 | 1-17/32 | 26 | 4,500 | 11,830 | Blank 9/16-12 | 1-3/8 | 3,000 | 750 | 600 |
| 5/8 | 1-3/4 | 1-3/8 | 2-1/2 | 1-11/16 | 27 | 6,000 | 14,700 | Blank 5/8-11 | 1-9/16 | 4,000 | 1,000 | 800 |
| 3/4 | 2 | 1-1/2 | 2-13/16 | 1-13/16 | 28 | 9,000 | 21,700 | Blank 3/4-10 | 1-5/8 | 6,000 | 1,500 | 1,200 |
| 7/8 | 2-1/4 | 1-11/16 | 3-1/4 | 2-1/16 | 29 | 10,000 | 30,000 | Blank 7/8-9 | 1-13/16 | 6,600 | 1,670 | 1,330 |
| 1 | 2-1/2 | 1-13/16 | 3-9/16 | 2-5/16 | 30 | 12,000 | 39,400 | Blank 1-8 | 2-1/16 | 8,000 | 2,000 | 1,600 |
| 1-1/2 | 3-1/2 | 2-9/16 | 5-1/2 | 3-5/32 | 34 | 27,000 | 91,300 | Blank 1-1/2-6 | 3 | 17,800 | 4,500 | 3,600 |

- A. Do not use eyebolts on angular lifts unless absolutely necessary. For angular lifts, the shoulder pattern eyebolt is preferred.
- B. Load should always be applied to eyebolts in the plane of the eye, not at some angle to this plane.
- C. Shoulder eyebolts must be properly seated (should bear firmly against the mating part), otherwise the working loads must be reduced to those indicated for regular eyebolts. A washer or spacer may be required to put the plane of the eye in the direction of the load when the shoulder is seated.
- D. No load greater than the safe working load listed in the data table should be used.
- E. To obtain the greatest strength from the eyebolt, it must fit reasonably tight in its mounting hole to prevent accidental unscrewing due to twist of cable.
- F. Eyebolts should never be painted or otherwise coated when used for lifting. Such coatings may cover potential flaws in the eyebolt.
- G. To attain the safe working loads listed for regular eyebolts, 90% of the thread length must be engaged.

Appendix C: 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 1-877-605-1116.