

TRANSPARENT SHOT CLOCKS

DISPLAY MANUAL

P2345

DD4932144
Rev 01
13 February 2024

Models	
BB-2160	BB-2161



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1 Introduction

This manual explains the installation and maintenance of Daktronics Transparent Shot Clocks. For additional information regarding safety, installation, operation, or service, refer to the telephone numbers listed in **Section 5: Daktronics Exchange and Repair & Return Programs (p.12)**. This manual is not specific to a particular installation. Project-specific information takes precedence over general information found in this manual.

Important Safety Instructions

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

Specifications Label

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



Figure 1: Specifications Label

Please have the assembly number, model number, and the date manufactured on hand when calling Daktronics customer service to ensure the request is serviced as quickly as possible. Also provide the facility name and/or job number if known.

Resources

Figure 2 illustrates a Daktronics drawing label. This manual refers to drawings by listing the last set of digits. In the example, the drawing would be referred to as **DWG-1007804**. All references to drawing numbers, appendices, figures, or other manuals are presented in bold typeface. Any drawings referenced in a section are listed at the beginning of it as shown below:

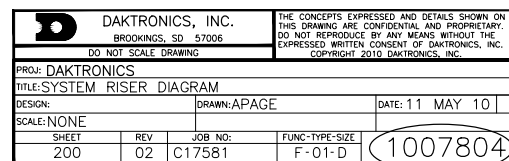


Figure 2: Drawing Label

Reference Drawing:

System Riser Diagram **DWG-1007804**

Daktronics identifies manuals by the DD or ED number located on the cover page.

Ensure all applicable materials have been gathered before beginning the installation. Contact a Daktronics sales coordinator or project manager.

Daktronics Nomenclature

Most display components have a white label that lists the part number. Refer to **Figure 3**. Part numbers will also appear on certain drawings. If a component is not found in the **Replacement Parts (p.11)**, use the label to order a replacement. Refer to **Section 5: Daktronics Exchange and Repair & Return Programs (p.12)** if replacing or repairing any display component.

0P-1127-0024
SN: 2465
02/19/12 Rev. 1

Figure 3: Part Label

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

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

Control Console

Daktronics transparent shot clocks are typically controlled by the same All Sport® 5000 control console as the scoreboard(s) in the facility. Refer to the following manual for operation:

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

This manual is provided on a CD with the control console and it is also available online at www.daktronics.com/manuals.

Specifications

The chart below details all of the mechanical specifications, power requirements, and address settings for each display in this manual.

Note: All devices require a 120 VAC, 15 A circuit. Displays with a 240 VAC power requirement are also available.

Model/ Component	Dimensions: Height, Width, Depth	Weight	Power (120/240 V)	Driver # & Address
BB-2160	2'-6" H x 2'-6" W x 3.5" D (762 mm, 762 mm, 89 mm)	75 lb (34 kg)	N/A	N/A
BB-2161	1'-9.5" H x 1'-9.5" W x 3.5" D (544 mm, 544 mm, 89 mm)	50 lb (23 kg)	N/A	N/A
Control Enclosure	1'-2.25" H x 1'-2" W x 3.75" D (362 mm, 356 mm, 95 mm)	25 lb (11 kg)	228 Watts, 1.9/0.95 Amps	A1 1
Horn Enclosure	5.5" H x 5.5" W x 3.5" D (140 mm, 140 mm, 89 mm)	5 lb (2.3 kg)	N/A	N/A

2 Mechanical Installation

Mechanical installation consists of lifting and permanently mounting the shot clocks, control enclosure, and remote horn enclosure. Be sure that the installation complies with local building codes.

Note: Daktronics assumes no liability for any installation derived from the information provided in this manual or installations designed and installed by others.

Lifting the Display

Small Daktronics displays use two lifting straps that encircle the cabinet. It is recommended to use a spreader bar with the straps.

Note: Daktronics assumes no liability for damages resulting from incorrect setup or lifting methods.

Shot Clock Mounting

Reference Drawings:

Court View, BB-2160 & BB-2161 **DWG-4935896**

Refer to **DWG-4935896** for the approximate location to mount both shot clocks sizes on the backstop.

- BB-2160 shot clocks are mounted behind and above the top center of the backboard with included hardware. Due to game play, these shot clocks will be exposed to a lot of movement and vibration. The brackets need to be designed to minimize vibration and shot clock movement.
- BB-2161 shot clocks are mounted on the rear of the backstop, perpendicular to the backboard, with included hardware.

Control Enclosure Mounting

IMPORTANT: The control enclosure must be located within 30' (9.1 m) of the shot clock.

Mount on the base of the backstop with four #10 self-drilling screws. Power and signal from the control console will be routed to the enclosure.

Remote Horn Enclosure Mounting

Use two #10 self-drilling screws to mount the remote horn enclosure in an open location so that sound is able to radiate. A 20' (6.1 m) pre-attached cable is included, but this cable may be extended to mount the horn enclosure further away from the control enclosure if needed.

Camera Mounting

Reference Drawings:

Assy; Camera Cable Holder..... **DWG-1172138**

If a camera is to be added (BB-2160), camera mounts accepting 2" (51 mm) pipe are available; only one may be used at a time. A cable tray can be used to route camera wiring down either side of the shot clock. Refer to **DWG-1172138**.

Note: Total weight of camera and mounting arm cannot exceed 50 lb (23 kg). Design mounting brackets to accommodate both the shot clock and the camera.

3 Electrical Installation

Warnings and Disclaimers

- Ensure that all electrical work meets or exceeds all local or national electrical codes.
- Provide the required power to the display as listed on the product labels, specifications, or site-specific riser drawings. The conductor size may vary based on the length of the power run.
- Consider implementing a separate circuit for the display using an isolation transformer or dedicated transformer.
- Daktronics assumes no liability for any issues caused by line voltage fluctuations or other improper power conditions.

Installation Overview

Electrical installation involves routing power and control signal wiring through separate conduit or wire ways.

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

Power

Only qualified individuals should complete the electrical installation; untrained personnel should not attempt to install these displays or any of the electrical components. Improper installation can seriously damage the equipment and be hazardous to personnel.

Install a grounded receptacle near the equipment so that the power cord can easily reach it.

Each shot clock control enclosure comes with a 120 or 240 VAC twist lock power plug that must be attached to a 120 or 240 VAC power cord (by the customer) as follows:

- **120 VAC wiring:** Connect black wire to copper terminal, white wire to nickel terminal, and green wire to green terminal.
- **240 VAC wiring:** Connect black wire to copper terminal, red wire to copper terminal, and green wire to green terminal.

Grounding

All components of a display system – including but not limited to displays, control equipment, and connected peripheral equipment – must be electrically grounded. Only qualified individuals may perform electrical work, including verification of ground resistance. Daktronics is not responsible for improper grounding or damage incurred as a result of improper grounding.

Grounding methods must meet the provisions of all applicable local and national codes. Inspect and verify all grounding methods meet the provisions of all applicable local and national codes.

Proper grounding is necessary for reliable equipment operation and general electrical safety. Failure to properly ground the display system may void the warranty, disrupt operation, damage equipment, and cause bodily harm or death.

Power-On Self-Test (POST)

The display performs a self-test each time that power is turned on and the control console is powered off or not connected. If the control console is connected and powered on, the self-test does not run, and data from the control console is shown on the display after a few seconds. Each self-test pattern will vary depending on the model, the number of drivers, and types of digits.

Radio Settings

If a radio receiver is installed, the radio broadcast settings ("b1") and the channel settings ("C1") are displayed in the game clock digits during the POST. These values must match the settings in the control console. Refer to **Radio Control (p.5)** and **Control Console (p.2)**.

Signal Connection

Reference Drawings:

Connection Diagram; BB-21X0 & BB-21X1 **DWG-4930529**

Signal installation requires routing control cable from the control console to a signal junction box (J-box) near the display, routing cable from the J-box to the control enclosure, and routing the appropriate cables from the system components to the control enclosure. At a minimum, use a paired, 22 AWG shielded cable (Daktronics part # W-1077).

1. Connect the cable to a 1/4" J-box at the control console end.
2. Route the cable in conduit from the J-box on the control console end to a J-box near the display.
3. Install the 1/4" phone plug (part # 0L-40683) to the display end of the cable. Be sure to connect the cable shielding only in the J-box on this end. DO NOT connect cable shielding at the J-box near the control console.
4. Insert the plug into the **J31 SIGNAL IN** jack on the front of the control enclosure.
5. Connect the shot clock(s), remote horn enclosure, and any optional light strip kits to the appropriate jacks on the control enclosure as shown in **DWG-4930529**.
6. Connect a signal cable from the J-box to the **J1**, **J2**, or **J3** jack on the back of the All Sport 5000 console.

Also connect the shot clock start/stop switch (part # 0A-1196-0031) to the **J7** jack on the All Sport 5000.

Radio Control

Reference Drawings:

Schematic: 120V Control Enclosure **DWG-4910448**

Schematic: 240V Control Enclosure **DWG-4910665**

An optional radio system provides wireless control via 2.4 GHz signal. The radio transmitter and receiver are not standard equipment. This setup requires a control console equipped with radio transmitter as well as a radio receiver plugged into the **J30** jack in the control enclosure wiring harness using a 5-pin to 6-pin adaptor (part # W-2913). Refer to the appropriate schematic drawing. The receiver unit is mounted internally to the front panel of the enclosure.

For additional information about this option, contact a Daktronics representative. For complete instructions on setting up radio control, refer to the **Gen VI Radio Installation Manual (DD2362277)**, available online at www.daktronics.com/manuals.

Backboard Light Strips

For installations that use LED backboard light strips, refer to the **LTS-BB Backboard LED Light Strips Display Manual (DD4692853)** available online at www.daktronics.com/manuals.

Refer to **Switch Settings (p.10)** for information on proper settings to make the backboard light strips illuminate when desired.

Tenth-Second Shot Time

Displaying tenths of a second on the shot time digits is not enabled by default in the All Sport 5000 console. To enable this, press **<MENU>**, arrow down to **EDIT SETTINGS?**, and press **<ENTER>**. Arrow down to **SHOT CLOCK-MODE TENTH SECOND?** and press **<ENTER>**. A prompt will ask to enter a value for when to **SHOW TENTHS**. The tenths digit and a period will display when the shot time is below the set value. Enter a value of **<0>** to **<9>** and press **<ENTER>** (use "0" for 10 seconds).

Refer to **Switch Settings (p.10)** for information on proper settings to make the tenths of a second display on the large or small shot time digit.

4 Troubleshooting

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

Troubleshooting Table

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

Problem	Possible Cause	Solution/Items to Check
Display does not light, and console does not work	No power to the display	Check that the main circuit breaker for the display is on.
		Check that the control enclosure is receiving 120 or 240 VAC power.
	No power to the control console	Ensure the console is plugged into a 120 or 240 VAC power supply.
		Exchange the console with a working one, and enter the correct sport code and/or radio settings to test. Replace console if necessary.
Display digits do not light, but console works	No wired signal from control console	Check that the control enclosure is receiving 120 or 240 VAC power.
		Check that the red DS3 LED on the driver lights up when sending commands from the controller. Refer to LED Driver (p.9) .
	No radio signal from control console	Verify that both the console and display antennas are securely tightened and in a vertical position.
		Keep the console 20–500' (6–152 m) away from the display. Check that the green POWER and amber RADIO IN RANGE indicators on the radio receiver in the display light up when the control console is powered on. Move the console 20–30' (6–9 m) from the display and test again.
		Replace the radio receiver.
	No signal to driver	Check that the control enclosure is receiving 120 or 240 VAC power.
		Check that the red DS3 LED on the driver lights up when sending commands from the controller. Refer to LED Driver (p.9) .
		Exchange the driver with a working one of the same part #. Replace if necessary. Refer to LED Driver (p.9) .
	No power to driver	Check that the green DS2 LED on the driver remains lit up when the display is powered on. Refer to LED Driver (p.9) .
	Bad power supply	Exchange the power supply with a working one of the same part # to verify the problem. Replace if necessary.

Problem	Possible Cause	Solution/Items to Check
Display digits light, but not in the correct order	Incorrect sport code	Ensure the correct sport code is being used for the display model. Refer to the appropriate console operation manual in Control Console (p.2) .
	Incorrect driver address	Ensure all drivers are set to the correct address. Refer to Setting the Driver Address (p.10) .
Digits light, console works, but nothing displays	No wired signal from control console	(see solution on previous page)
	No radio signal from control console	(see solution on previous page)
	Bad/damaged field wiring	Check that the red DS3 LED on the driver lights up when sending commands from the controller. Refer to LED Driver (p.9) .
Display works, but some LEDs always stay on	Short in digit circuit	Exchange the digit with a working one of the same part # to verify the problem. Replace if necessary. Refer to Component Access and Digit Replacement (p.9) .
Display works, but some LEDs do not light or they blink	Bad connection	Verify the connector on the back of the digit circuit board is secure.
	Bad digit or driver	Exchange the digit or driver with a working one of the same part # to verify the problem. Replace if necessary. Refer to Component Access and Digit Replacement (p.9) or LED Driver (p.9) .
Display works, but some digits do not light	Bad digit or driver	(see solution above)
	Incorrect sport code	(see solution above)
	Incorrect driver address	(see solution above)
	Wrong console controlling the display	Another console's radio signal may be transmitting to the display.
	Radio interference	There may be other radio transmissions in the area that overpower the console. If it is not possible to disable the interfering device, it may be necessary to run a wired signal connection instead.
Horn does not sound when desired	Incorrect DIP switch settings on the driver	Refer to control enclosure schematic drawings for proper DIP switch settings on the driver.
Backboard light strips do not illuminate when desired		
Shot clock light strips do not illuminate when desired	Incorrect rotary switch settings on the shot clock(s)	Refer to DWG-4911300 for proper rotary switch settings on the shot clock(s).
Shot clock(s) not showing tenths of a second on the small digit		

Component Access and Digit Replacement

Reference Drawings:

Component Access; BB-216* **DWG-4934070**

Refer to **DWG-4934070** for instructions on how to open the shot clock cabinet and replace the digit panels.

Note: It can be difficult to properly replace a digit. Do so very carefully!

Schematics

Reference Drawings:

Schematic: 120V Control Enclosure **DWG-4910448**

Schematic: 240V Control Enclosure **DWG-4910665**

Digit Switch Settings..... **DWG-4911300**

For advanced display troubleshooting and repair, it may be necessary to consult the schematic drawings. **DWG-4910448** and **DWG-4910665** show detailed power and signal wiring diagrams of internal display components such as drivers, power supplies, and horns.

The schematic drawings also show the DIP switch settings on the driver that control when the horn sounds. **DWG-4911300** shows the rotary switch settings on the shot clocks that control when the LED light strips turn on as well as how tenths of a second displays on the shot time digits.

LED Driver

The LED driver performs the task of switching digits on and off. The LED driver for transparent shot clocks is located inside of a separate control enclosure. Refer to **Figure 4** to view the component locations within the control enclosure.

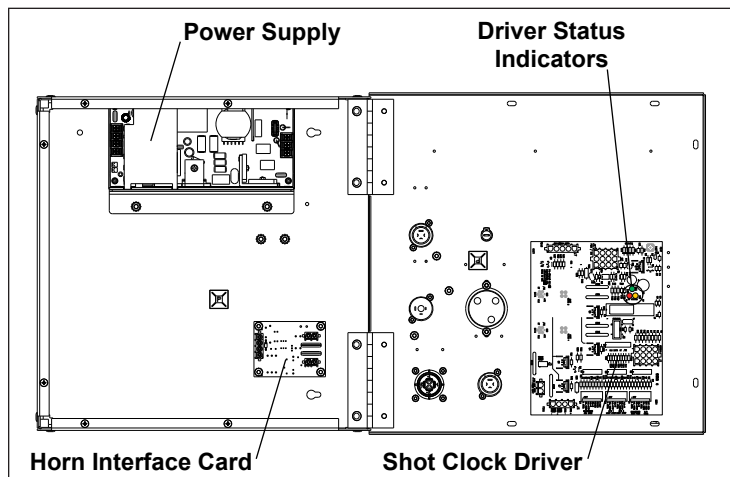


Figure 4: Driver Enclosure Components

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

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

LED	Color	Function	Operation	Summary
DS1	Amber	Status	Blinking	DS1 blinks at one second intervals to indicate the driver is running.
DS2	Green	Power	Steady on	DS2 is on and steady to indicate the driver has power.
DS3	Red	Signal RX	Steady on or Blinking	DS3 is on or blinking when the driver is receiving a signal and off when there is no signal.

Replacing a Driver

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

1. Open the control enclosure by removing the 6 screws and swinging the door open.
2. Disconnect all plugs from the driver by squeezing together the locking tabs and pulling the connectors free. It may be helpful to label the cables or take a picture to know which plug goes to which jack when connecting the replacement driver.
3. Remove the 4 nuts securing the driver to the control enclosure door.
4. Carefully lift the driver from the enclosure and place it on a clean, flat surface.
5. Position a new driver over the screws and tighten the nuts.
6. Reconnect all plugs to their mating jacks on the driver. The connectors are keyed and will attach in one way only. Do not force the connections.
7. Ensure the new driver is set to the correct address and switch settings. This will be the same as the old driver being replaced. Refer to **Setting the Driver Address (p.10)** and **Switch Settings (p.10)**.
8. Close and secure the enclosure door, then power up and test the display to verify the issue has been resolved.

Setting the Driver Address

Since the same LED drivers can be used for many display models, each driver must be set to receive the correct signal input, or address, for the model in which it is being used.

This address is set with jumper wires in a 12-pin plug which mates with jack **J1** on the driver. Refer to **Figure 5**. After replacing the driver in the control enclosure, be sure to use an Address 1 plug in jack **J1**. In most cases, the same plug can be reused from the driver that was replaced; otherwise, one may be ordered from Daktronics (part # 0A-1150-0122).

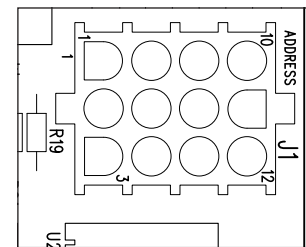


Figure 5: Address Jack J1

Switch Settings

Reference Drawings:

Schematic: 120V Control Enclosure	DWG-4910448
Schematic: 240V Control Enclosure	DWG-4910665
Digit Switch Settings.....	DWG-4911300

Refer to the schematic drawings for DIP switch settings on the driver that control when the horn sounds and when backboard light strips illuminate.

Refer to **DWG-4911300** for rotary switch settings on the shot clocks that control when the shot clock light strips illuminate and if tenths of a second displays on the large or small shot time digit.

Replacement Parts

The following table contains display components that may require replacement. Many of the other display components have attached part number labels.

Description	Part Number
Address 1 Plug	0A-1150-0122
120V Horn w/ 2-pin MNL	0A-1152-0332
Cable Holder Assembly	0A-1322-0016
240V Horn w/ 2-pin MNL	0A-2345-0060
240V Horn Interface Card	0P-1150-0255
120V Horn Interface Card	0P-1192-0399
5" Four-Digit Clock, Dual-Sided, Amber	0P-1322-0014
7" Four-Digit Clock, Dual-Sided, Amber	0P-1322-0015
Driver, Transparent Shot Clock	0P-1322-0016
7" Two-Digit plus Tenths, Dual-Sided, Red	0P-1322-0017
13" 7-Segment plus Tenths, Dual-Sided, Red	0P-1322-0018
19V Power Supply	A-4854297
LED Light Strip, 18.5625" (BB-2161)	DS-4924855
LED Light Strip, 20.5" (BB-2161)	DS-4924858
LED Light Strip, 28.25" (BB-2160)	DS-4924859
Cable; 4-pin to 4-pin, 30'	W-1823

Refer to **Section 5: Daktronics Exchange and Repair & Return Programs (p.12)** for information on exchanging or returning parts.

5 Daktronics Exchange and Repair & Return Programs

Exchange Program

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

Before contacting Daktronics, identify these important numbers:

Display Serial Number: _____

Display Model Number: _____

Job/Contract Number: _____

Date Manufactured/Installed: _____

Daktronics Customer ID Number: _____

To participate in the Exchange Program, follow these steps:

1. Call Daktronics Customer Service.

United States & Canada: 1-800-DAK-TRON (325-8766)

Outside the U.S. & Canada: +1-605-275-1040

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

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

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

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

If any part is not returned within five (5) weeks, a non-refundable invoice will be presented to the customer for the costs of replenishing the exchange parts inventory with a new part. Daktronics reserves the right to refuse parts that have been damaged due to acts of nature or causes other than normal wear and tear.

Repair & Return Program

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

1. Call Daktronics Customer Service.

United States & Canada: 1-800-DAK-TRON (325-8766)

Outside the U.S. & Canada: +1-605-275-1040

2. Receive a case number before shipping.

This expedites repair of the part.

3. Package and pad the item carefully to prevent damage during shipment.

Electronic components, such as printed circuit boards, should be placed in an antistatic bag before boxing. Daktronics does not recommend using packing peanuts when shipping.

4. Enclose:

- name
- address
- phone number
- the case number
- a clear description of symptoms

5. Ship to:

Daktronics Customer Service

[Case #]

201 Daktronics Drive, Dock E

Brookings, SD 57006

Daktronics Warranty & Limitation of Liability

The Daktronics Warranty & Limitation of Liability is located at the end of this manual. The Warranty is independent of Extended Service agreements and is the authority in matters of service, repair, and display operation.

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A Reference Drawings

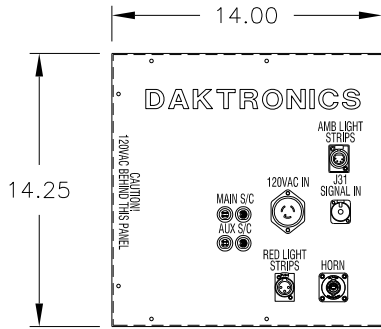
Refer to **Resources (p.1)** for information regarding how to read the drawing number. Any contract-specific drawings take precedence over the general drawings.

Reference Drawings:

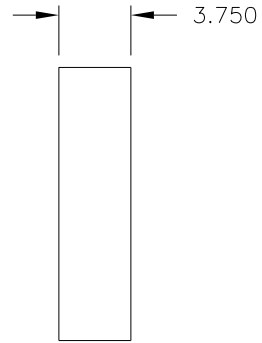
Mechanical Spec- Shot Clock Control Enclosure	DWG-225832
Mechanical Spec; Remote Horn	DWG-235683
Assy; Camera Cable Holder.....	DWG-1172138
Schematic: 120V Control Enclosure	DWG-4910448
Schematic: 240V Control Enclosure	DWG-4910665
Digit Switch Settings.....	DWG-4911300
Connection Diagram; BB-21X0 & BB-21X1	DWG-4930529
Electrical Spec: Shot Clock Control Encl.	DWG-4930974
Mechanical Spec; BB-2160.....	DWG-4934068
Mechanical Spec; BB-2161	DWG-4934069
Component Access; BB-216*	DWG-4934070
Court View, BB-2160 & BB-2161	DWG-4935896

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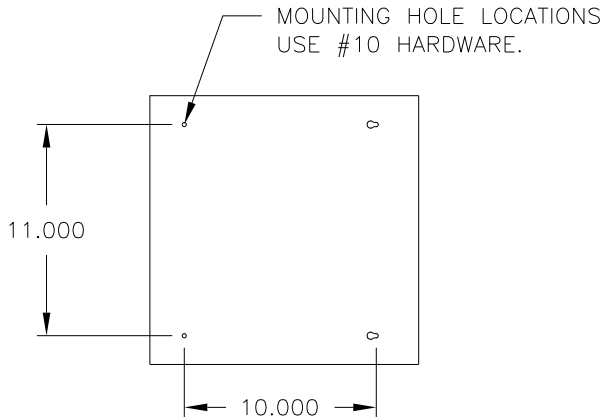
TRANSPARENT SHOT CLOCK CONTROL ENCLOSURE



TOP VIEW



SIDE VIEW



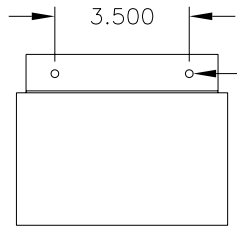
BOTTOM VIEW

WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
35 LBS (16 KG)	25 LBS (12 KG)

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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: TRANSPARENT SHOT CLOCK			
TITLE: MECHANICAL SPEC- SHOT CLOCK CONTROL ENCLOSURE			
DES. BY: CBRECZI		DRAWN BY: CBRECZI	
		DATE: 02 MAR 05	
REVISION	APPR. BY:	1322-E10A-225832	
02	SCALE: 1=10		

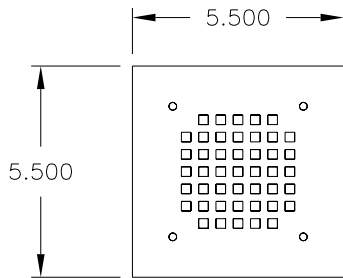
REV.	DATE	DESCRIPTION	BY	APPR.
02	06 OCT 09	UPDATE DETAIL OF ENCLOSURE TO SHOW NEW LIGHT STRIP CONNECTOR AND LABEL UPDATES	MWM	
01	12 SEP 05	CHANGED THICKNESS FROM 3.25" TO 3.75"	EPR	

REMOTE HORN ENCLOSURE

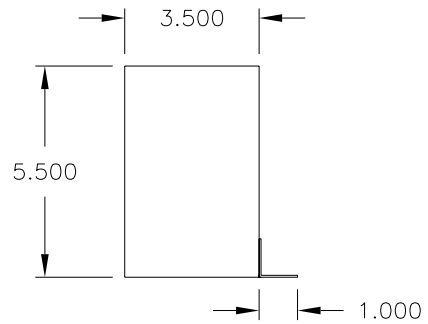


MOUNTING HOLES
USE #10 HARDWARE.

TOP VIEW



FRONT VIEW

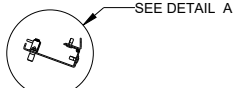


SIDE VIEW

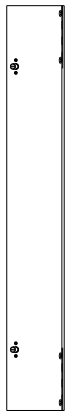
WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
7 LBS (3.2 KG)	5 LBS (2.3 KG)

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: TRANSPARENT SHOT CLOCK			
TITLE: MECHANICAL SPEC; REMOTE HORN			
DES. BY: CBRECZI		DRAWN BY: CBRECZI	
		DATE: 02 MAR 05	
REVISION	APPR. BY:	1322-E10A-235683	
00	SCALE: 1=5		

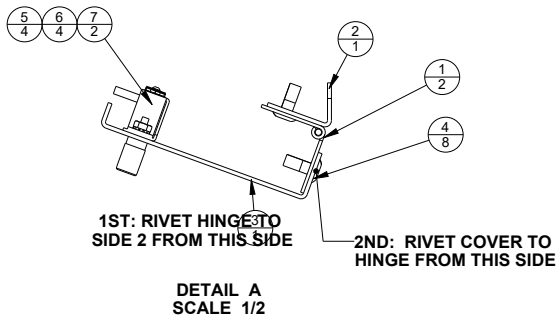
REV.	DATE	DESCRIPTION	BY	APPR.



TOP VIEW

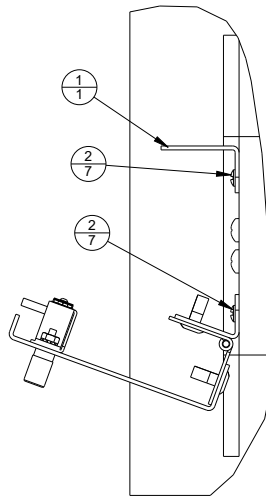


FRONT VIEW

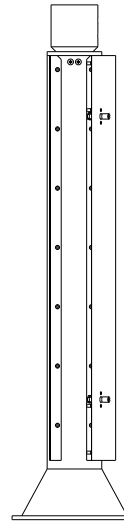


PRE-PAINT
 RIVET SIDE TO HINGE
 RIVET HINGE TO COVER
 BE SURE TO PUT RIVETS IN AS SHOWN
 ATTACH PAWL LATCHES TO COVER.
 SEND ASSEMBLY AND SIDE 1 TO PAINT

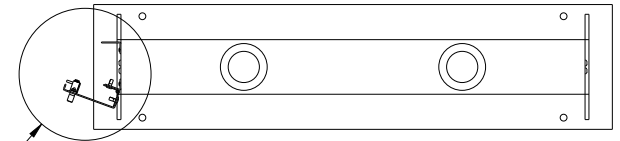
INDEX	NAME	QTY	DESCRIPTION
1	0M-156990	2	HINGE, HEX-099, 4.00", OPEN 90°
2	0M-1172135	1	CABLE HOLDER: SIDE 2
3	0M-1172136	1	CABLE HOLDER: COVER
4	HC-1125	8	RIVET, 3/16 X 0.250 AL/ST, BH, MULTI-GRIP
5	HC-1208	4	MACH SCR, #4-40 X 0.375, PHIL FLAT HEAD, ZN PLTD
6	HC-1352	4	NUT, #4-40 HEX KEPS, ZN PLTD
7	HS-1206	2	PAWL LATCH, MIDGET, KNURLED KNOB, RIGHT



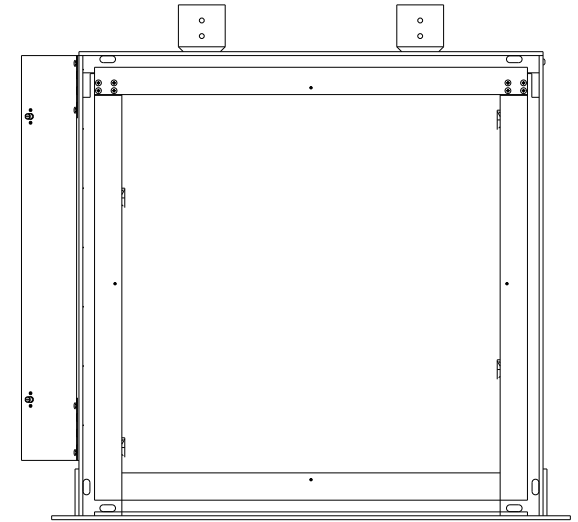
DETAIL B
SCALE 1/2



SIDE VIEW



TOP VIEW

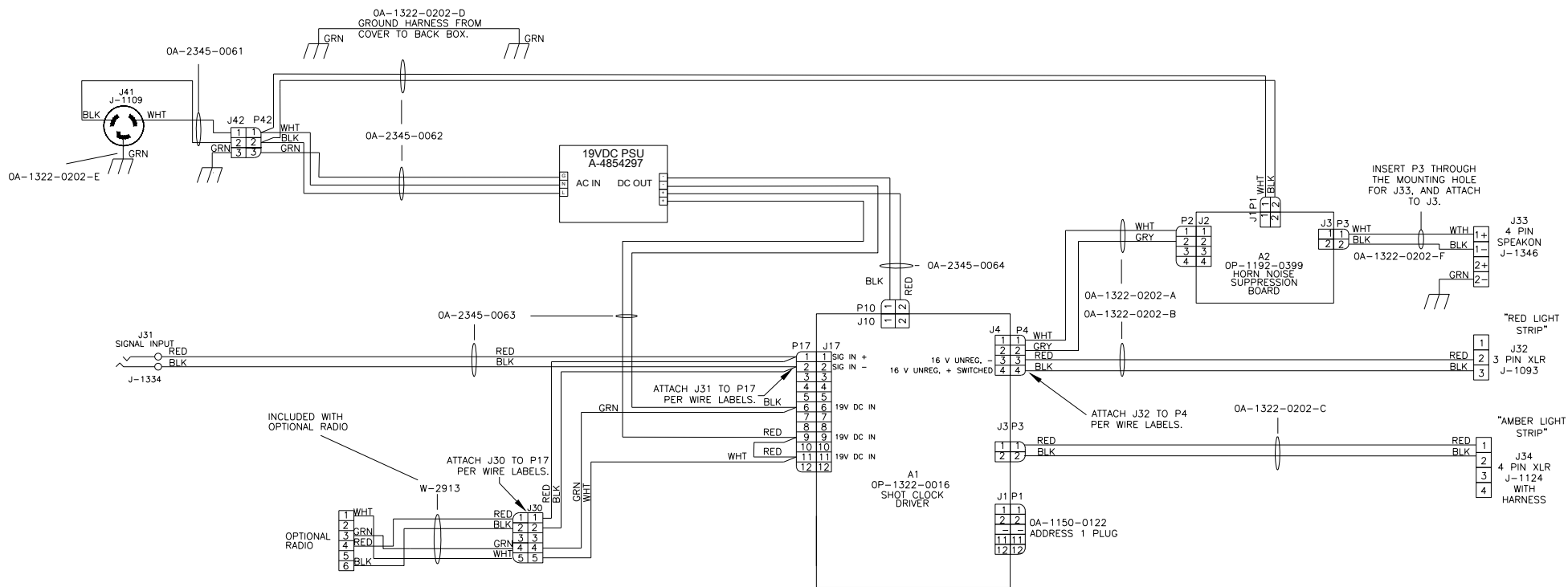


FRONT VIEW

FINAL:
 ATTACH CABLE HOLDER TO SHOT CLOCK AS SHOWN

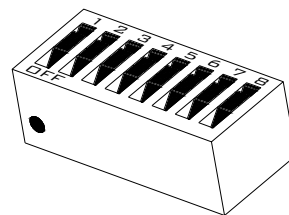
INDEX	NAME	QTY	DESCRIPTION
1	0M-1172134	1	CABLE HOLDER: SIDE 1
2	HC-1071	14	TAP SCR, #6-20 X 0.375, PHIL PAN HEAD, BLK ZN PLTD

01	03-OCT-19	PER CN-89395, CHANGED HINGE FROM 0M-1172137 @1 TO 0M-156990 @2.	CDO 19856
REV:	DATE:	DESCRIPTION:	BY:
 <small>THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2019 DAKTRONICS, INC. (USA)</small>			
PROJECT: TRANSPARENT SHOT CLOCK			
TITLE: ASSY: CAMERA CABLE HOLDER			
DATE: 26-SEP-19	DIM UNITS: INCHES [MILLIMETERS]	SHEET 1 OF 1	REV 01
SCALE: 1/8	DO NOT SCALE DRAWING		
DESIGN: DOPPELT	JOB NO: P1322	FUNC - TYPE - SIZE: E - 07 - B	1172138
DRAWN: DOPPELT			



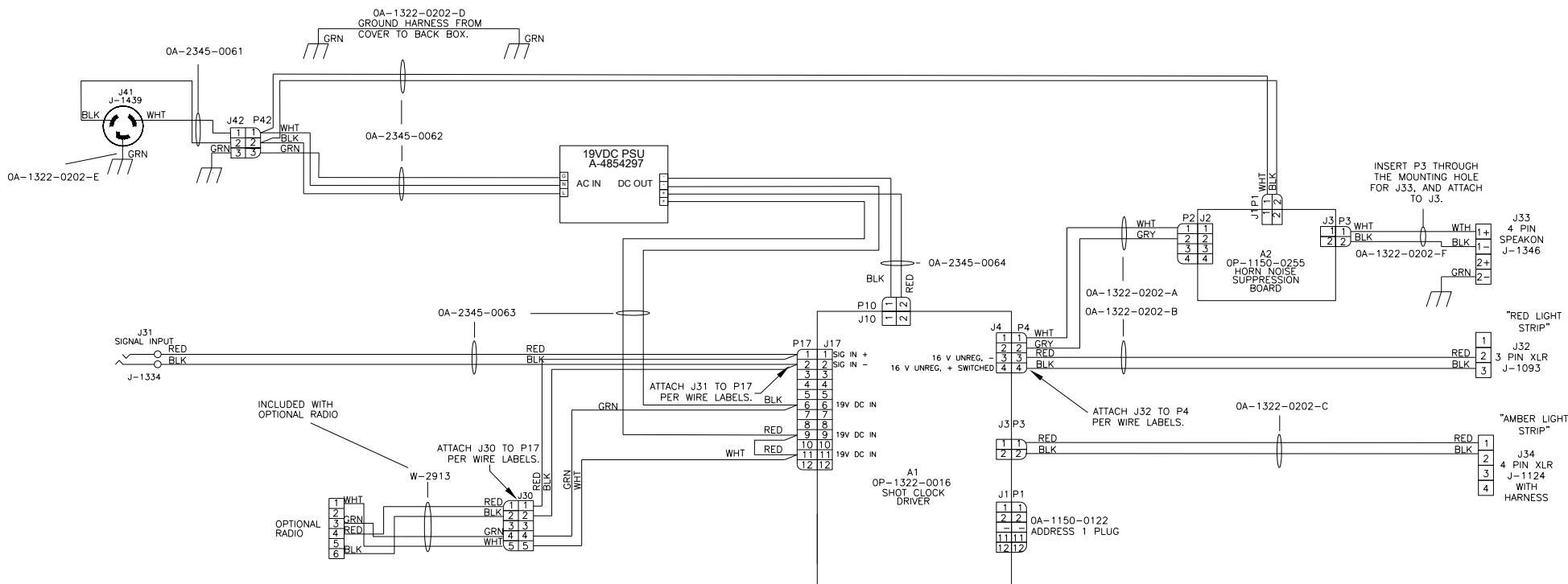
DRIVER NOTE: SET THE FOLLOWING SWITCHES ON A1:

NBA SETTINGS	NCAA (DEFAULT) SETTINGS	SWITCH FUNCTION	
S1-8 = OFF	S1-8 = OFF	S1-8 = NOT USED	SHOTCLOCK HORN
S1-7 = OFF	S1-7 = OFF	S1-7 = NOT USED	
S1-6 = ON	S1-6 = ON	S1-6 = SHOT HORN	
S1-5 = ON	S1-5 = ON	S1-5 = GAME HORN	MAIN BACKBOARD LIGHT STRIPS
S1-4 = ON	S1-4 = ON	S1-4 = GAME CLOCK=0	
S1-3 = OFF	S1-3 = OFF	S1-3 = GAME CLOCK=STOP	SHOT CLOCK #2 LIGHT STRIPS
S1-2 = OFF	S1-2 = OFF	S1-2 = SHOT CLOCK HORN	
S1-1 = OFF	S1-1 = OFF	S1-1 = GAME HORN	
3 DIGIT SHOT TIME IS SET ON THE SHOT CLOCKS VIA ROTARY SWITCHES		SEE DWG-04911300 FOR LIGHT STRIP SETTINGS	SHOT CLOCK #1 LIGHT STRIPS
3 DIGIT SHOT TIME IS SET ON THE SHOT CLOCKS VIA ROTARY SWITCHES		SEE DWG-04911300 FOR DIGIT TENTHS SETTINGS	3 DIGIT SHOT TIME
S3-8	S3-7 = OFF	S3-7 = NOT USED	SECOND BACKBOARD LIGHT STRIP
S3-6 = OFF	S3-6 = OFF	S3-6 = NOT USED	
S3-5 = ON	S3-5 = OFF	S3-5 = SHOT CLOCK = 0	
S3-4 = OFF	S3-4 = OFF	S3-4 = GAME CLOCK=0	
S3-3 = OFF	S3-3 = OFF	S3-3 = GAME CLOCK=STOP	
S3-2 = OFF	S3-2 = OFF	S3-2 = SHOT CLOCK HORN	
S3-1 = OFF	S3-1 = OFF	S3-1 = GAME HORN	



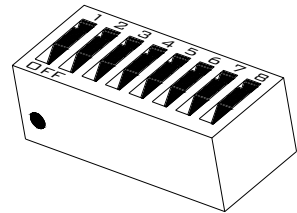
D DAKTRONICS		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2021 DAKTRONICS, INC. (USA)		THIRD ANGLE PROJECTION
PROJECT: TRANSPARENT SHOT CLOCK				
TITLE: SCHEMATIC, CONTROL ENCLOSURE, 120 VAC				
DATE: 30 JUL 21	DIM UNITS: INCHES [MILLIMETERS]		SHEET	REV
SCALE: NTS	DO NOT SCALE DRAWING			01
DESIGN: TSPRACK	JOB NO. P2345	FUNC. TYPE - SIZE R - 03 - B	4910448	
DRAWN: TSPRACK				

REV 01	DATE: 8 MAR 2023	PER CN-156069, UPDATED S3-8 FOR BB-216X CLOCKS	BY: CQF
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DRIVER NOTE: SET THE FOLLOWING SWITCHES ON A1:

NBA SETTINGS	NCAA (DEFAULT) SETTINGS	SWITCH FUNCTION	
S1-8 = OFF	S1-8 = OFF	S1-8 = NOT USED	SHOTCLOCK HORN
S1-7 = OFF	S1-7 = OFF	S1-7 = NOT USED	
S1-6 = ON	S1-6 = ON	S1-6 = SHOT HORN	
S1-5 = ON	S1-5 = ON	S1-5 = GAME HORN	MAIN BACKBOARD LIGHT STRIPS
S1-4 = ON	S1-4 = ON	S1-4 = GAME CLOCK=0	
S1-3 = OFF	S1-3 = OFF	S1-3 = GAME CLOCK=STOP	
S1-2 = OFF	S1-2 = OFF	S1-2 = SHOT CLOCK HORN	SHOT CLOCK #2 LIGHT STRIPS
S1-1 = OFF	S1-1 = OFF	S1-1 = GAME HORN	
			SHOT CLOCK #1 LIGHT STRIPS
			FOR MODELS BB-2160 & 2161
			SECOND BACKBOARD LIGHT STRIP



		<small>THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2021 DAKTRONICS, INC. (USA)</small>			
PROJECT: TRANSPARENT SHOT CLOCK					
TITLE: SCHEMATIC, CONTROL ENCLOSURE, 240 VAC					
DATE: 30 JUL 21		DIM UNITS: INCHES [MILLIMETERS]		SHEET 01	
SCALE: NTS		DO NOT SCALE DRAWING			
DESIGN: TSPRACK		JOB NO: P2345		FUNC. TYPE - SIZE: R - 03 - B	
DRAWN: TSPRACK		4910665			

Light strip and shot time settings:

After install, the switches on each clock must be set so that the shot time is displayed correctly and the light strips around each clock go off at the right time.

To set the switches, stick a small flathead screwdriver through either the left or right hole in the top extrusion of the clock. The screwdriver will fit into a slot on the switch and be rotated to change the setting. When you change a switch setting, the game time digits will display the new switch setting. The left two digits will show the left switch setting and the right two digits will show the right switch setting. For example 00:04 would mean left switch is set to 00 (0) and the right switch is set to 04 (4). The switch setting will display for about a second then the digits will go back to what they were previously displaying. The setting will take after a couple seconds.

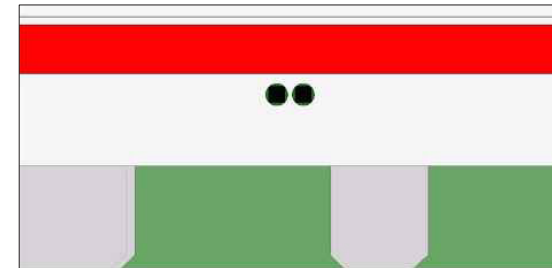
Left switch setting: If tenths are enabled on the All Sport, this switch chooses whether tenths is shown on the big digit or the little digit.

Left Switch Setting	Description
0	Tenths shows on big digit
1	Tenths shows on little digit


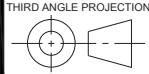
Right switch setting: Controls when the light strips around a specific clock turn on.

Light strips on when game horn on	Light strips on when shot clock horn on	Light strips on when game clock is stopped	Light strips on when game clock = 0	Right Switch Value
Off	Off	Off	Off	0
Off	Off	Off	Active	1
Off	Off	Active	Off	2
Off	Off	Active	Active	3
Off	Active	Off	Off	4
Off	Active	Off	Active	5
Off	Active	Active	Off	6
Off	Active	Active	Active	7
Active	Off	Off	Off	8
Active	Off	Off	Active	9
Active	Off	Active	Off	10
Active	Off	Active	Active	11
Active	Active	Off	Off	12
Active	Active	Off	Active	13
Active	Active	Active	Off	14
Active	Active	Active	Active	15

SWITCHES ON CLOCK TOP PERIMETER



NOTE: FACTORY DEFAULT SWITCH SETTINGS
LEFT SWITCH "0"
RIGHT SWITCH "4"

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	PROJECT: TRANSPARENT SHOT CLOCK TITLE: DIGIT SWITCH SETTINGS			
DATE: 02 AUG 21	DIM UNITS: INCHES [MILLIMETERS]		SHEET	REV 01
SCALE: DO NOT SCALE DRAWING				
DESIGN: TSPRACK	JOB NO. P2345	FUNC - TYPE - SIZE E - 10 - A	4911300	
DRAWN: TSPRACK				

REV 01	DATE: 31 OCT 22	ADDED 3 MISSING SWITCH SETTINGS	BY: TBS
--------	-----------------	---------------------------------	---------

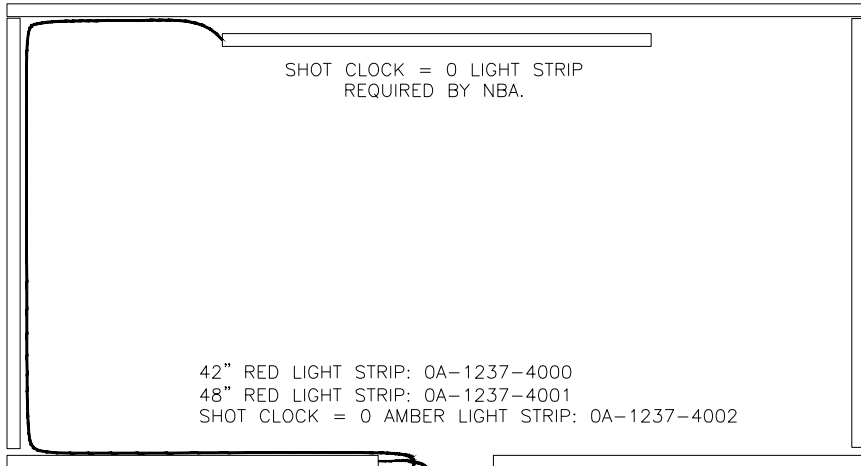
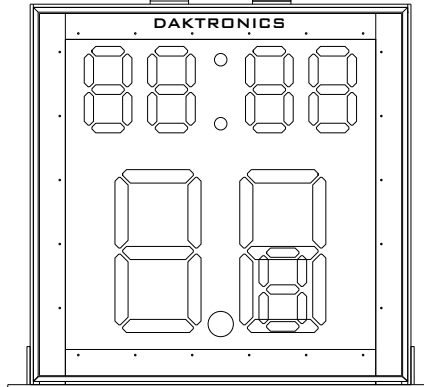
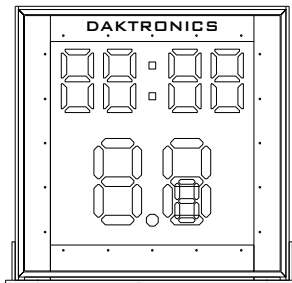
0A-2345-0004 W/O CAMERA MOUNTS
 0A-2345-0005 W/ CAMERA MOUNTS

BB-2160

BACKBOARD LED LIGHT STRIP

0A-2345-0006

BB-2161



SHOT CLOCK = 0 LIGHT STRIP
 REQUIRED BY NBA.

42" RED LIGHT STRIP: 0A-1237-4000
 48" RED LIGHT STRIP: 0A-1237-4001
 SHOT CLOCK = 0 AMBER LIGHT STRIP: 0A-1237-4002

MAX LENGTH 30FT AVAILABLE
 W-1823 4 PIN CABLE
 CABLES SUPPLIED WITH
 EACH SHOT CLOCK

0A-1237-0629: 18 29 MNL-3PIN
 XLR INTERFACE HARNESS

INSTALLERS NOTE:
 LIGHT STRIP XLR
 CABLES AND HORN
 CABLE CAN BE
 LONGER THAN 30FT
 AS REQUIRED

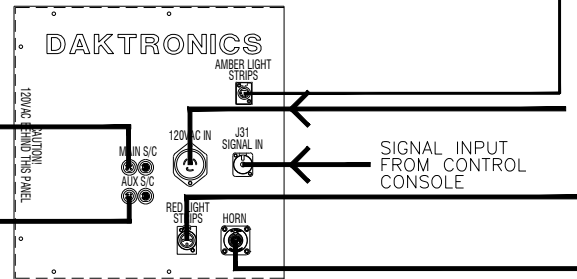
REMOTE
 HORN

0A-1166-0012, 30FT
 4PIN XLR CABLE WITH
 LIGHT STRIP KIT.

0A-1230-0090 30FT 3PIN
 XLR WITH BACKBOARD LED
 LIGHT STRIPS

0A-1322-0203
 20FT CABLE PREATTACHED
 TO REMOTE HORN.

POWER INPUT 120VAC,
 USING P-1089 INLET, OR
 240VAC, USING P-1345
 INLET, DEPENDING ON
 MODEL ORDERED.



CONTROL ENCLOSURE

0A-2345-0021 FOR 120VAC INPUT
 0A-2345-0022 FOR 240 VAC INPUT
 0A-2345-0023 FOR 19VDC INPUT, SINGLE
 LIGHT STRIP (JAPAN ONLY)
 0A-2345-0024 FOR 19VDC INPUT, DUAL LIGHT
 STRIPS (JAPAN ONLY)

NOTES:

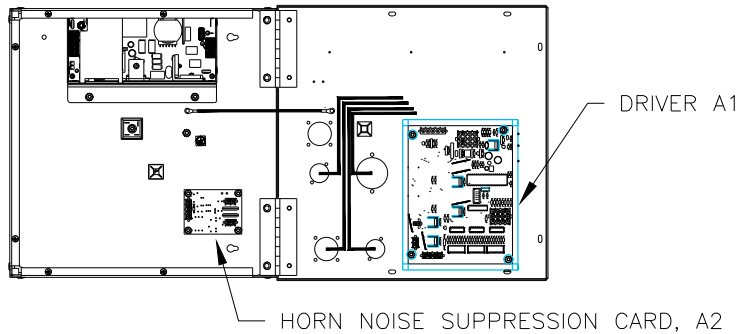
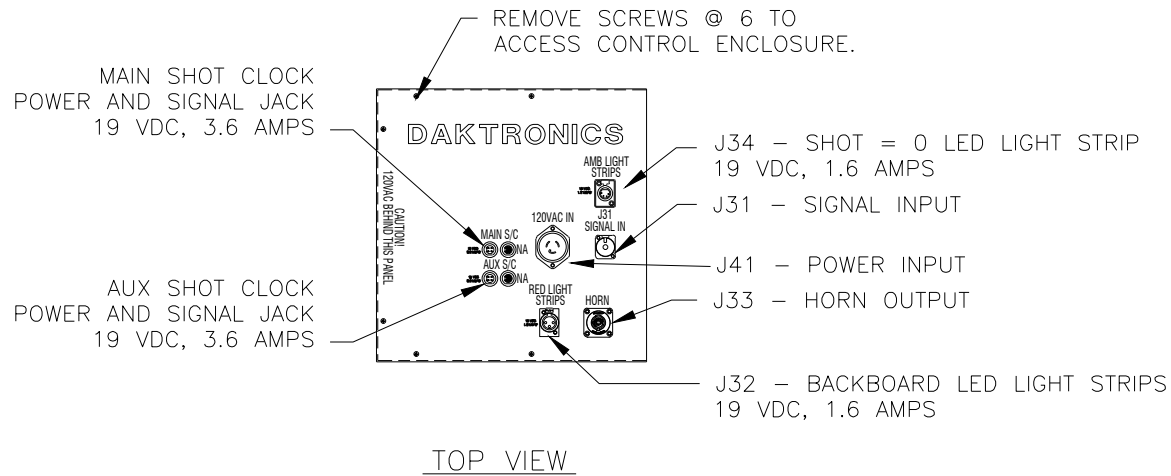
-THIS IS NOT A SCALED DRAWING AND ONLY ILLUSTRATES
 ELECTRICAL CONNECTIONS.

-PROPERLY GROUND POWER CONNECTION TO CONTROL
 ENCLOSURE.

-ACTUAL COMPONENTS USED AT SPECIFIC INSTALLATIONS MAY
 VARY FROM THIS DRAWING. SOME COMPONENTS MAY NOT BE
 INSTALLED AT EVERY LOCATION.

-ED-4932144 SHOT CLOCK MANUAL

REV 01	DATE: 21 NOV 23	ADDED PART NUMBER DETAILS	BY: NDD
<p>THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2021 DAKTRONICS, INC. (USA)</p>			<p>THIRD ANGLE PROJECTION</p>
PROJECT: TRANSPARENT SHOT CLOCKS			
TITLE: CONNECTION DIAGRAM; BB-21X0 & BB-21X1			
DATE: 20 AUG 21	DIM UNITS: INCHES [MILLIMETERS]		SHEET 01
SCALE: NONE	DO NOT SCALE DRAWING		
DESIGN: TSPRACK	JOB NO. P2345	FUNC - TYPE - SIZE E - 10 - A	4930529
DRAWN: TSPRACK			



ADDRESS INFORMATION	
DRIVER:	A1
ADDRESS:	1

OA-2345-0021 SPECIFICATION LABEL DATA	
120V AC PRIMARY	
1.9 AMP, 228W	
60 Hz	

OA-2345-0022 SPECIFICATION LABEL DATA	
240V AC PRIMARY	
.95 AMP, 228W	
60 Hz	

NOTES:

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

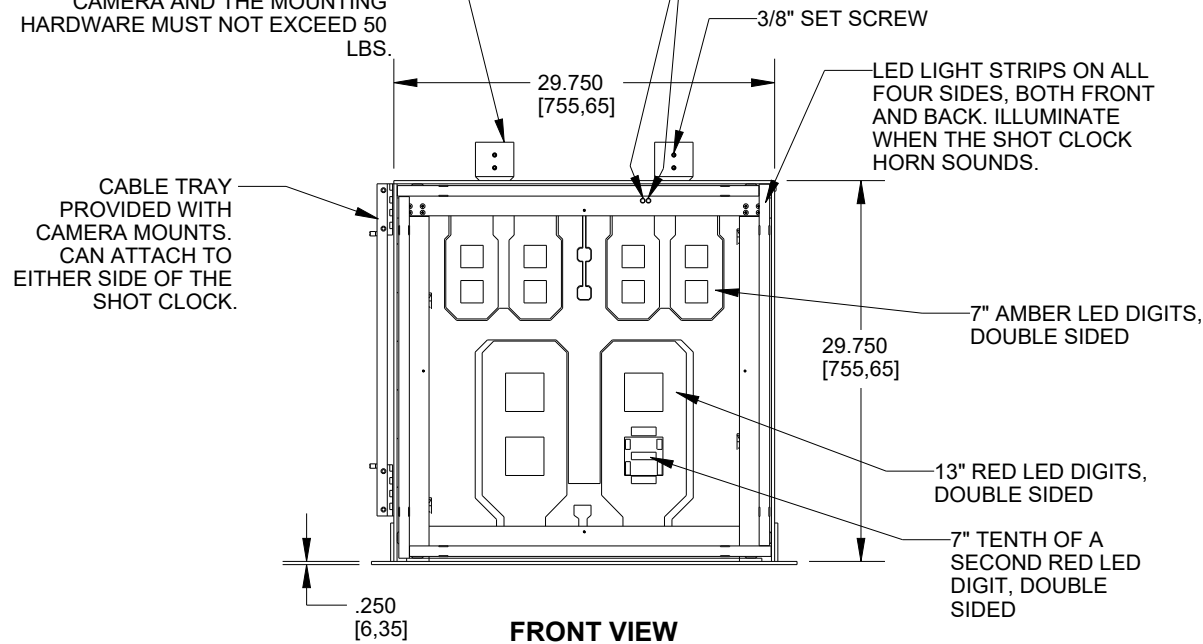
2. DO NOT WORK ON ENERGIZED CONTROL ENCLOSURE UNLESS YOU ARE A CERTIFIED ELECTRICIAN OR DIRECTED BY DAKTRONICS.

DAKTRONICS			THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2021 DAKTRONICS, INC. (USA)		THIRD ANGLE PROJECTION
PROJECT: TRANSPARENT SHOT CLOCK					
TITLE: ELECTRICAL SPEC: SHOT CLOCK CONTROL ENCL.					
DATE: 20 AUG 21	DIM UNITS: INCHES [MILLIMETERS]			SHEET	REV
SCALE: 1=10	DO NOT SCALE DRAWING				00
DESIGN: TSPRACK	JOB NO.	FUNC - TYPE - SIZE		4930974	
DRAWN: TSPRACK	P2345	E - 10 - A			

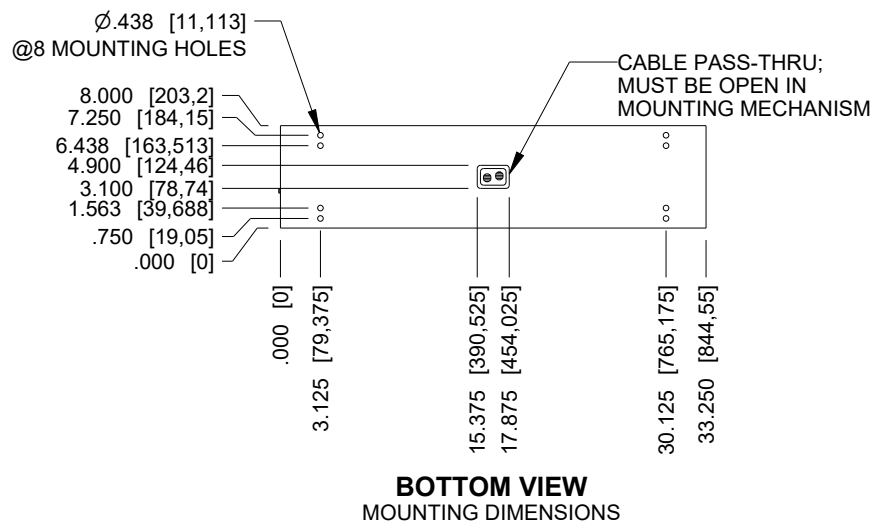
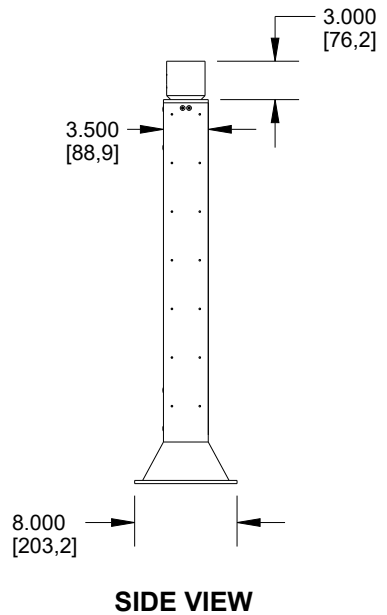
BB-2160

OPTIONAL CAMERA MOUNTS WILL ONLY ACCEPT A Ø2.00" PIPE. ONLY USE ONE MOUNT AT A TIME. THE CAMERA CAN WEIGH UP TO 40LBS. THE MAX TOTAL WEIGHT OF THE CAMERA AND THE MOUNTING HARDWARE MUST NOT EXCEED 50 LBS.

DIGIT SWITCH SETTING ACCESS HOLES. REFER TO DWG-4911300 FOR MORE INFORMATION.



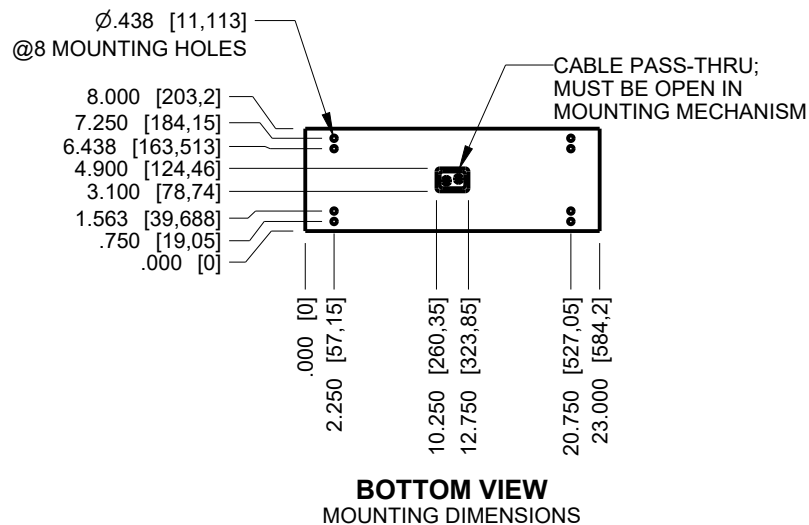
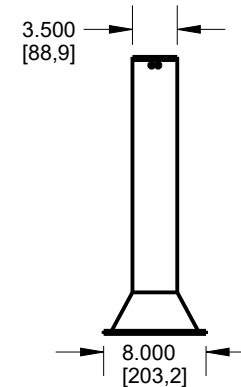
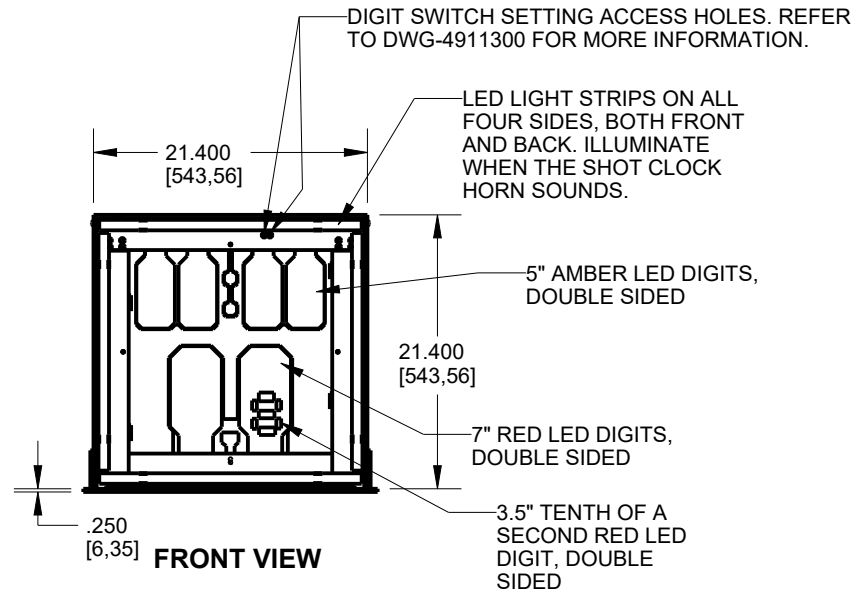
CABLE TRAY PROVIDED WITH CAMERA MOUNTS. CAN ATTACH TO EITHER SIDE OF THE SHOT CLOCK.



WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
100 LBS (46 KG)	75 LBS (34 KGS)

REV:	DATE:	DESCRIPTION:	BY:
THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2021 DAKTRONICS, INC. (USA)			THIRD ANGLE PROJECTION
PROJECT: TRANSPARENT SHOT CLOCKS			
TITLE: MECHANICAL SPEC; BB-2160			
DATE: 30-AUG-21	DIM UNITS: INCHES [MILLIMETERS]	SHEET	REV
SCALE: 1/15	DO NOT SCALE DRAWING		00
DESIGN: JCOOK	JOB NO.	FUNC - TYPE - SIZE	4934068
DRAWN: JCOOK	P2345	E - 10 - A	

BB-2161



WEIGHTS	
SHIPPING WEIGHT	MOUNTING WEIGHT
75 LBS (34 KG)	50 LBS (23 KGS)

REV:	DATE:	DESCRIPTION:	BY:
<p>THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2021 DAKTRONICS, INC. (USA)</p>			<p>THIRD ANGLE PROJECTION</p>
PROJECT: TRANSPARENT SHOT CLOCKS			
TITLE: MECHANICAL SPEC; BB-2161			
DATE: 30-AUG-21	DIM UNITS: INCHES [MILLIMETERS]	SHEET	REV
SCALE: 1/15	DO NOT SCALE DRAWING		00
DESIGN: JCOOK	JOB NO.	FUNC - TYPE - SIZE	4934069
DRAWN: JCOOK	P2345	E - 10 - A	

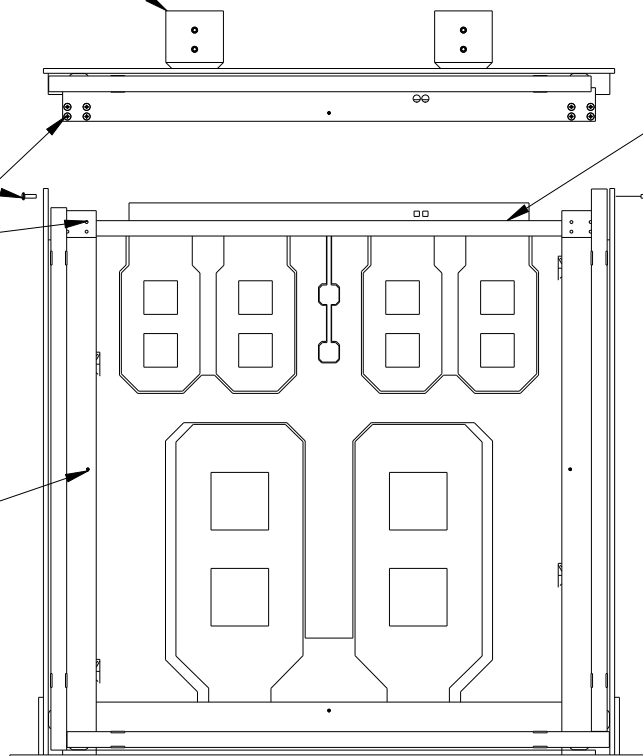
CAMERA MOUNTS NOT AVAILABLE ON BB-2161

SCREWS. STEP #3

SCREWS. STEP #2

SET SCREWS. STEP #1


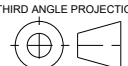
POLYCARBONATE / DIGIT STACK



FRONT VIEW

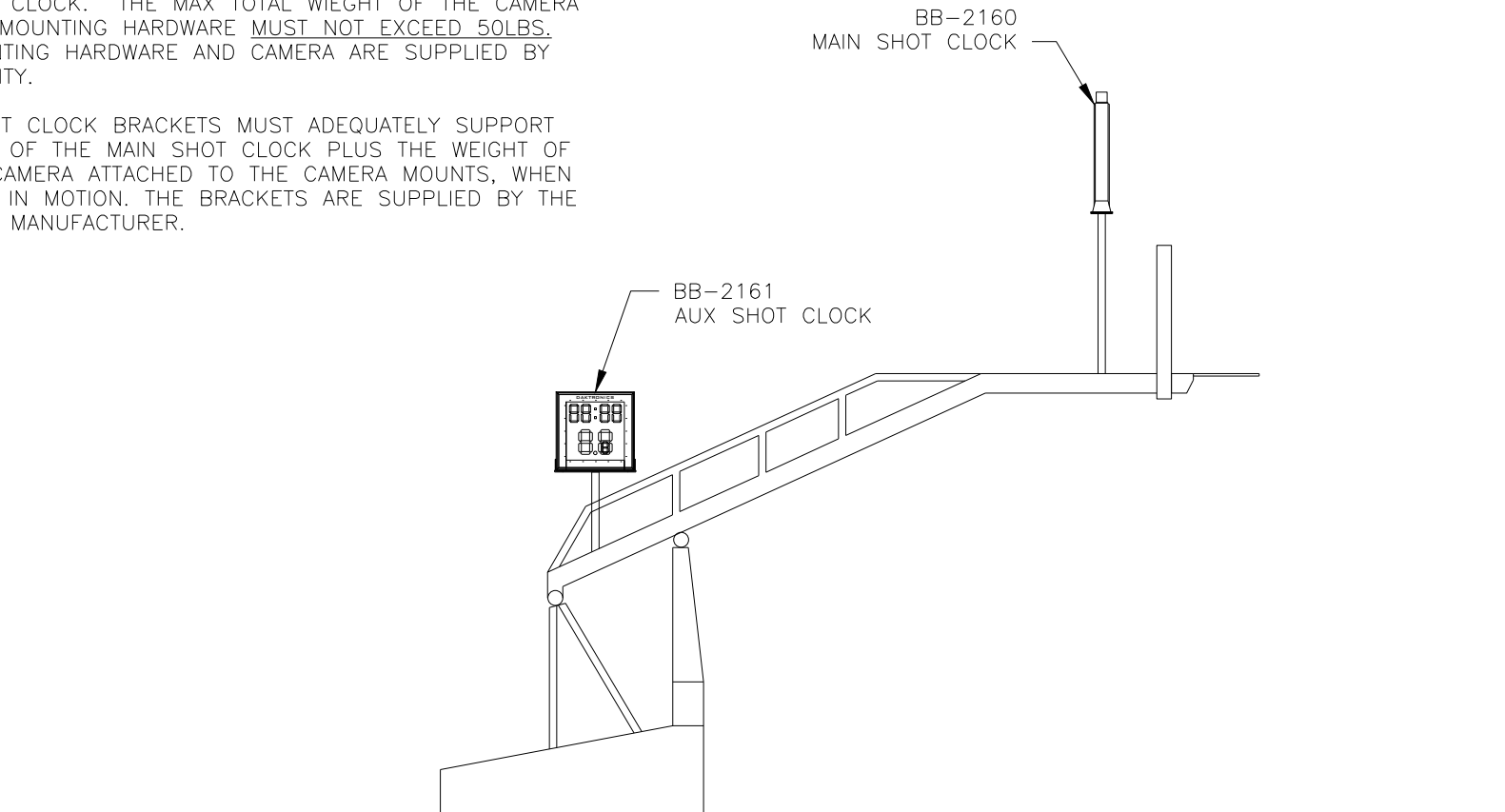
TO ACCESS THE DIGITS:

1. LOOSEN THE SET SCREWS AROUND THE PERIMETER OF THE DISPLAY, BOTH SIDES, USING 1/16" HEX WRENCH. DO NOT REMOVE THE SET SCREWS, JUST LOOSEN THEM.
2. REMOVE 16 SCREWS FROM UPPER CORNERS OF THE DISPLAY. THERE ARE 4 IN EACH CORNER, BOTH SIDES.
3. REMOVE THE 4 SCREWS FROM UPPER SIDES OF THE DISPLAY.
4. LIFT THE TOP APPROXIMATELY 6".
5. REMOVE THE SHIMS THAT ARE PLACED BETWEEN THE POLYCARBONATE AND THE FRAME.
6. DISCONNECT THE LED LIGHT STRIPS ATTACHED TO THE TOP FROM THE WIRING HARNESS INSIDE THE SHOT CLOCK FRAME.
7. SLIDE THE POLYCARBONATE / DIGIT STACK UP CAREFULLY.
8. DISCONNECT THE HARNESS FROM THE DIGITS.
9. LIFT THE POLYCARBONATE / DIGIT STACK OUT THE FRAME.
10. SEPARATE THE POLYCARBONATE STACK TO ACCESS THE DIGITS.
11. REPLACE THE DIGIT PANELS AS NECESSARY.
12. COMPLETE THE STEPS ABOVE IN REVERSE ORDER TO REASSEMBLE THE DISPLAY.


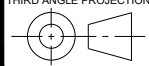
REV:	DATE:	DESCRIPTION:	BY:
		<small>THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2021 DAKTRONICS, INC. (USA)</small>	
PROJECT: TRANSPARENT SHOT CLOCKS			
TITLE: COMPONENT ACCESS; BB-216*			
DATE: 30-AUG-21	DIM UNITS: INCHES [MILLIMETERS]	SHEET	REV
SCALE: 1/10	DO NOT SCALE DRAWING		00
DESIGN: JCOOK	JOB NO.	FUNC - TYPE - SIZE	4934070
DRAWN: JCOOK	P2345	E - 10 - A	

NOTE:

- DISPLAYS ARE SHOWN IN APPROXIMATE POSITION.
- THE BB-2160 (MAIN SHOT CLOCK) WEIGHS 75LBS WITHOUT A CAMERA ATTACHED. SUPPLIED BY DAKTRONICS.
- THE CAMERA CAN WEIGHT UP TO 40LBS. THE CAMERA MUST NOT EXTEND MORE THAN 18" BEYOND THE CENTER OF THE SHOT CLOCK. THE MAX TOTAL WIEGHT OF THE CAMERA AND THE MOUNTING HARDWARE MUST NOT EXCEED 50LBS. THE MOUNTING HARDWARE AND CAMERA ARE SUPPLIED BY THE FACILITY.
- THE SHOT CLOCK BRACKETS MUST ADEQUATELY SUPPORT THE LOAD OF THE MAIN SHOT CLOCK PLUS THE WEIGHT OF A VIDEO CAMERA ATTACHED TO THE CAMERA MOUNTS, WHEN THEY ARE IN MOTION. THE BRACKETS ARE SUPPLIED BY THE BACKSTOP MANUFACTURER.



SIDE VIEW
BACKSTOP WITH
SHOT CLOCKS ATTACHED

		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESS WRITTEN CONSENT OF DAKTRONICS, INC. OR ITS WHOLLY OWNED SUBSIDIARIES. COPYRIGHT 2021 DAKTRONICS, INC. (USA)		THIRD ANGLE PROJECTION 			
		PROJECT: TRANSPARENT SHOT CLOCKS				TITLE: COURT VIEW, BB-2160 & BB-2161	
DATE: 30 AUG 21		DIM UNITS: INCHES [MILLIMETERS]		SHEET REV			
SCALE: 1/50		DO NOT SCALE DRAWING				00	
DESIGN: TSPRACK							
DRAWN: TSPRACK		4935896					

B Daktronics Warranty & Limitation of Liability

This section includes the Daktronics Warranty & Limitation of Liability statement (SL-02374).

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DAKTRONICS WARRANTY & 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 and End User agree to be bound by and accept these terms and conditions. Unless otherwise defined herein, all 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 (the "End User", which may also be the Purchaser) 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 End User 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. This Warranty does not include on-site labor charges to remove or install these components. 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 Daktronics.
- C. Daktronics shall pay ground transportation charges for the return of any defective component of the Equipment. All such items shall be shipped by End User DDP Daktronics designated facility per Incoterms® 2020. If returned Equipment is repaired or replaced under the terms of this Warranty, Daktronics will prepay ground transportation charges back to End User and shall ship such items DDP End User's designated facility per Incoterms® 2020; otherwise, End User shall pay transportation charges to return the Equipment back to the End User and such Equipment shall be shipped Ex Works Daktronics designated facility per Incoterms® 2020. All returns must be pre-approved by Daktronics before shipment. Daktronics shall not be obligated to pay freight for any unapproved return. End User 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 the 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. Unless otherwise expressly provided, this Warranty does not impose any duty or liability upon Daktronics for partial LED pixel degradation. Notwithstanding the foregoing, in no event does this Warranty include LED pixel degradation caused by UV light. This Warranty does not 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.

EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS WARRANTY, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, DAKTRONICS DISCLAIMS ANY AND ALL OTHER PROMISES, REPRESENTATIONS AND WARRANTIES APPLICABLE TO THE EQUIPMENT AND REPLACES ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ACCURACY OR QUALITY OF DATA. OTHER ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY DAKTRONICS, ITS AGENTS OR EMPLOYEES, SHALL NOT 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

This Warranty does not impose any duty or liability upon Daktronics for any:

- A. 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, End User assumes all risk of loss or damage, agrees to use any shipping containers that might be provided by Daktronics, and to ship the Equipment in the manner prescribed by Daktronics;
- B. damage caused by: (i) the improper handling, installation, adjustment, use, repair, or service of the Equipment, or (ii) any physical damage which includes, but is not limited to, missing, broken, or cracked components resulting from non-electrical causes;

DAKTRONICS WARRANTY & LIMITATION OF LIABILITY

altered, scratched, or fractured electronic traces; missing or gauged solder pads; cuts or clipped wires; crushed, cracked, punctured, or bent circuit boards; or tampering with any electronic connections, provided that such damage is not caused by 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) improper power including, without limitation, a failure or sudden surge of electrical power; (iii) improper air conditioning, humidity control, or other environmental conditions outside of the Equipment's technical specifications such as extreme temperatures, corrosives and metallic pollutants; 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. statements made about the product by any salesperson, dealer, distributor or agent, 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 End User and are not part of the contract of sale;
- G. 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;
- H. replenishment of spare parts. In the event the Equipment was purchased with a spare parts package, the parties acknowledge and agree that the spare parts package is designed to exhaust over the life of the Equipment, and as such, the replenishment of the spare parts package is not included in the scope of this Warranty;
- I. security or functionality of the End User's network or systems, or anti-virus software updates;
- J. performance of preventive maintenance;
- K. third-party systems and other ancillary equipment, including without limitation front-end video control systems, audio systems, video processors and players, HVAC equipment, batteries and LCD screens;
- L. incorporation of accessories, attachments, software or other devices not furnished by Daktronics; or
- M. paint or refinishing the Equipment or furnishing material for this purpose.

3. Limitation of Liability

- A. 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.
- B. 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 claims asserting or based on (a) loss of use of the facility or equipment; lost business, revenues, or profits; loss of goodwill; failure or increased cost of operations; loss, damage or corruption of data; loss resulting from system or service failure, malfunction, incompatibility, or breaches in system security; or (b) 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, injury to property or any damages or sums paid 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
- C. In no event shall Daktronics be liable 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. The End User'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

- A. The Warranty contained herein extends only to the 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. Governing Law; Election of Remedies

- A. 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. The parties consent to the application of the laws of the State of South Dakota to govern, interpret, and enforce each of the parties' 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.
- B. Any dispute, controversy or claim arising from or related to this Warranty, the parties shall first attempt to settle through negotiations. In the event that no resolution is reached, then such dispute, controversy, or claim shall be resolved by final and binding arbitration under the Rules of Arbitration of the International Chamber of Commerce. The language of the arbitration



DAKTRONICS WARRANTY & LIMITATION OF LIABILITY

shall be English. The place of the arbitration shall be Sioux Falls, SD. A single arbitrator selected by the parties shall preside over the proceeding. If a single arbitrator cannot be agreed upon by the parties, each party shall select an arbitrator, and those arbitrators shall confer and agree on the appointed arbitrator to adjudicate the arbitration. The arbitrator shall have the power to grant any provisional or final remedy or relief that it deems appropriate, including conservatory measures and an award of attorneys' fees. The arbitrator shall make its decisions in accordance with applicable law. By agreeing to arbitration, the Parties do not intend to deprive any court of its jurisdiction to issue a pre-arbitral injunction, pre-arbitral attachment, or other order in aid of arbitration proceedings and the enforcement of any award. Without prejudice to such provisional remedies as may be available under the jurisdiction of a court, the arbitrator shall have full authority to grant provisional remedies and to direct the Parties to request that any court modify or vacate any temporary or preliminary relief issued by such court, and to award damages for the failure of any Party to respect the arbitrator's orders to that effect.

6. Availability of Extended Service Agreement

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

Additional Terms applicable to sales outside of the United States

The following additional terms apply **only** where the installation site of the Equipment is located outside of the United States of America.

1. In the event that the installation site of the Equipment is in a country other than the U.S.A., then, notwithstanding Section 5 of the Warranty, where the selling entity is the entity listed in Column 1, then the governing law of this Warranty is the law of the jurisdiction listed in the corresponding row in Column 2 without regard to its conflict of law principles. Furthermore, if the selling entity is an entity listed in Column 1, then the place of arbitration is listed in the corresponding row in Column 3.

Column 1 (Selling Entity)	Column 2 (Governing Law)	Column 3 (Location of Arbitration)
Daktronics, Inc.	The state of Illinois	Chicago, IL, U.S.A.
Daktronics Canada, Inc.	The Province of Ontario, Canada	Toronto, Ontario, Canada
Daktronics UK Ltd.	England and Wales	Bristol, UK
Daktronics GmbH	The Federal Republic of Germany	Wiesbaden, Germany
Daktronics Hong Kong Limited	Hong Kong, Special Administrative Region of the P.R.C.	Hong Kong SAR
Daktronics Shanghai Co., Ltd.	The Peoples Republic of China	Shanghai, P.R.C.
Daktronics France, SARL	France	Paris, France
Daktronics Japan, Inc.	Japan	Tokyo, Japan
Daktronics International Limited	Macau, Special Administrative Region of the P.R.C.	Macau SAR
Daktronics Australia Pad Ltd	Australia	Sydney, Australia
Daktronics Singapore Pte. Ltd	Singapore	Singapore
Daktronics Brazil LTDA	Brazil	São Paulo, Brazil
Daktronics Spain S.L.U.	Spain	Madrid, Spain
Daktronics Belgium N. V	Belgium	Kruikeke, Belgium
Daktronics Ireland Co. Ltd.	Ireland	Dublin, Ireland

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