SPORTSOUND® 500HD AUDIO SYSTEM

INSTALLATION MANUAL

P1561

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DAKTRONICS

FCC Statement

Supplier Declaration of Conformity (SDoC)

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Warning: The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

Industry Canada Regulatory Information

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Inquiries

Contact Daktronics with any questions regarding our product compliance.

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1 Introduction

This manual explains the installation, maintenance, and troubleshooting of a Sportsound® 500HD Audio System. For additional information regarding safety, installation, operation, or service, refer to the telephone numbers listed in **Section 7: Daktronics Exchange and Repair & Return Programs (p.25)**. This manual is not specific to a particular installation.

Important Safeguards

- **Read and understand all instructions before beginning the installation process.**
- **Disconnect system power when not in use or when servicing.**
- **Disconnect system power before servicing power supplies to avoid electrical shock. Power supplies run on high voltage and may cause physical injury if touched while powered. Several disconnect switches may be required to de-energize the equipment.**
- **Do not modify the cabinet structure or attach any panels or coverings without the express written consent of Daktronics.**
- **Do not disassemble control equipment or electronic controls of the system; failure to follow this safeguard will make the warranty null and void.**
- **Do not drop the control equipment or allow it to get wet.**
- **Always turn off and/or unplug the control equipment when it is not in use. This keeps equipment protected from power spikes and lightning.**
- **Inspect equipment for shipping damage such as rattles and dents, and verify that all equipment is included as itemized on the packing slip. Immediately report any problems to Daktronics; save all packing materials if exchange is necessary.**

Resources

Figure 1 illustrates a Daktronics drawing label. The drawing number is located in the lower-right corner of a drawing. This manual refers to drawings by listing the last set of digits. 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 particular section are listed at the beginning of it as shown below:

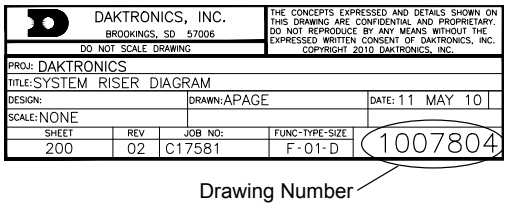

Figure 1: *Drawing Label*

Reference Drawing:

System Riser Diagram **DWG-1007804**

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

Daktronics has a searchable knowledgebase of common questions and troubleshooting tips: www.daktronics.com/support.

Visit the Daktronics Support YouTube channel to learn how to properly operate Sportsound systems: www.youtube.com/DaktronicsSupport.

Project-specific information takes precedence over any other general information found in this manual. Such information may include:

- **Schematic Drawings:** describe internal power and signal wiring
- **Shop Drawings:** describe mounting methods to structural elements, access method (front or rear), and power and signal entrance points
- **System Riser Diagrams:** describe power and signal connections between system components and the control location; may also include control room layout and schematic
- **Final Assembly Drawings:** describe internal component locations and detailed product appearance with part numbers and quantities

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

Daktronics Nomenclature

Most components have a white label that lists the part number (**Figure 2**). Part numbers will also appear on certain drawings. If a component is not found in the **Replacement Parts (p.23)**, use the label to order a replacement. Refer to **Section 7: Daktronics Exchange and Repair & Return Programs (p.25)** if replacing or repairing any component.

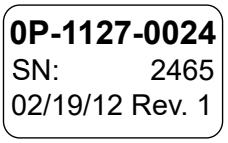

Figure 2: *Part Label*

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

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

2 Sound System Components

Equipment Overview

The Sportsound 500HD audio system consists of the following elements:

- Sound Cabinet
- Control Enclosure
- Fiber Conversion Box
- Audio Control Rack
- Signal Cables

> **Note:** All products in this system are tested individually for product safety approval.

Sound Cabinet

The Sportsound 500HD sound system cabinet (**Figure 3**) is 3'-0" (914 mm) high, 8'-0" (2438 mm) wide, and 3'-6" (1067 mm) deep. It is composed of a steel skeleton sheeted in custom aluminum paneling with two rear access doors. The cabinet is powder coat black with a wrinkle finish.

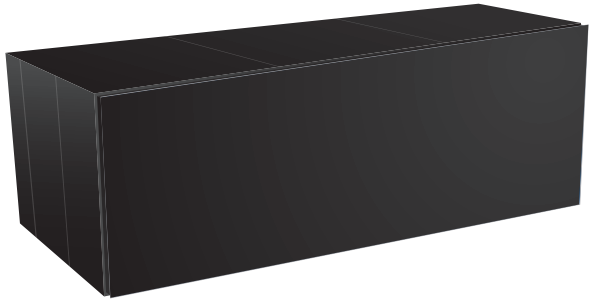

Figure 3: *500HD Sound Cabinet with Grille*

Grille

Reference Drawing:

Mesh Layout; SS500HD **DWG-983398**

The grille of the cabinet consists of a woven flame resistant acoustical mesh. The mesh can be printed in a variety of colors to display advertising, sponsors, or logo designs. The printable area is 2'-9" (838 mm) high by 8'-0" (2438 mm) wide.

Drivers

The number of drivers (also known as speakers) will vary based on whether the cabinet is a dual- (500HD-D) or single-sided (500HD-SL/-SR) model. Three different types of drivers are used in the sound cabinet (**Figure 4**):

- 15" (381 mm) low frequency drivers: Daktronics part # A-1903
- 8" (203 mm) mid-range drivers: Daktronics part # A-2305
- 1.4" (36 mm) high frequency drivers: Daktronics part # A-2302

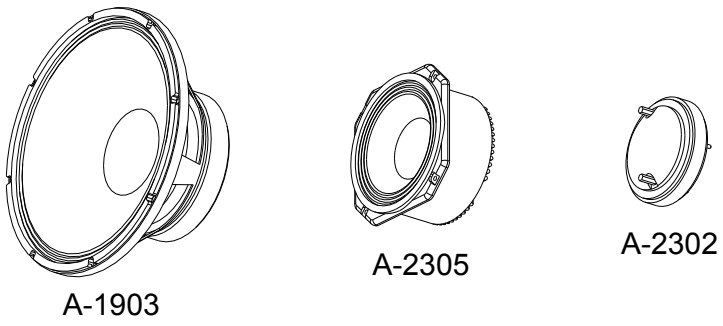

Figure 4: *500HD Drivers*

Control Enclosure

A thermostatically controlled and NEMA3R control enclosure (**Figure 5**) houses the amplifiers. In sound systems, the amplifier is the last component before the drivers. It receives a signal from the source equipment and amplifies it to power the drivers. The Sportsound 500HD sound system utilizes 1 or 2 power amplifiers (depending on the cabinet model) with built-in Digital Signal Processor (DSP), which manages equalization, limiting, compression, and crossover functions.

The DSP program is set at the factory and is not user-adjustable.

Refer to **Mounting the Control Enclosure (p.7)** and **Power/ Signal Connections (p.8)** for more information about the control enclosure.

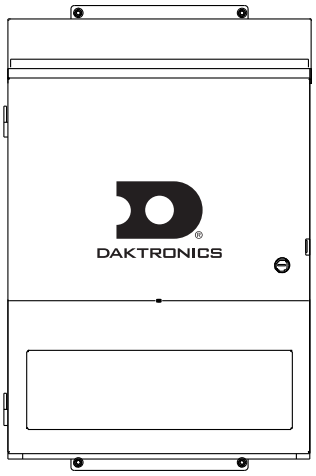

Figure 5: *Control Enclosure*

Fiber Conversion Box

> **Note:** A fiber conversion box is not always provided. In those systems, analog signal goes directly to the audio cabinet.

The fiber conversion box (**Figure 6**) converts the analog audio signal from the audio control rack into fiber optic signal that goes out to the control enclosure. The box is typically permanently wall-mounted near the source equipment location.

The fiber conversion box includes an analog backup signal. This provides a redundant safety, in case the fiber link to the sound cabinet is lost. To go into analog backup mode, simply turn the switch to the **ANALOG** position.

Figure 6: *Fiber Conversion Box*

Refer to **Fiber Conversion Box Connections (p.10)** for more information about the fiber conversion box.

Audio Control Rack

The Sportsound 500HD audio system is compatible with all Daktronics standard control racks. Refer to the manual provided with the control rack for proper operation.

Signal Cables

Cable specifications are as follows:

- Minimum 2-core, multimode 50-micron fiber optic cable from fiber conversion box to control enclosure. If included with a Daktronics scoreboard or display, the sound system may share a fiber optic cable run, requiring additional cores.
- 1 pair, 22 AWG audio cable from fiber conversion box to control enclosure for analog backup (part # W-1615)
- 50' (15.2 m) speaker cable (located inside audio cabinet) that routes to the control enclosure (part # W-2317)

3 Mechanical Installation

A qualified technician must install the Sportsound 500HD cabinet and control enclosure. It is the customer's responsibility to ensure that a qualified structural engineer approves the mounting structure and any additional hardware needed to secure the cabinet.

The cabinet must be installed no farther than 50' (15.2 m) behind the goal post and 40' (12.2 m) above grade for optimal audio coverage.

Note: Daktronics assumes no responsibility for the structure's integrity. The engineer responsible for the attached-to base structure shall evaluate the adequacy of their structure to support the gravity loads imparted by the cabinet at each attachment point in combination with other associated loading conditions. Daktronics assumes no responsibility for system damage or injury resulting from installation methods that deviate from attachment details specified on shop drawings. Daktronics also assumes no liability for system damage or injury resulting from incorrect setup or lifting methods performed by non-Daktronics employees.

Cabinet Installation

Mechanical installation consists of lifting and mounting the Sportsound 500HD cabinet onto an existing support structure.

Lift the Cabinet

The Sportsound 500HD cabinet may be shipped with two shipping brackets attached to the top (**Figure 7**).

Figure 7: *Shipping Bracket*

Each bracket is attached to the cabinet with two 1/2" lift eyes (**Figure 8**). Remove the shipping brackets, and reinstall all four 1/2" lift eyes in the holes prior to installing the cabinet.

Figure 8: *Lift Eyes*

Whenever possible, use a spreader bar, or lifting bar, to lift the cabinet. Spreader bars ensure the force on the eyebolts remains straight up, minimizing lifting stress.

Figure 9 illustrates the preferred lifting method on the left and an acceptable alternative lifting method on the right. When lifting the cabinet:

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

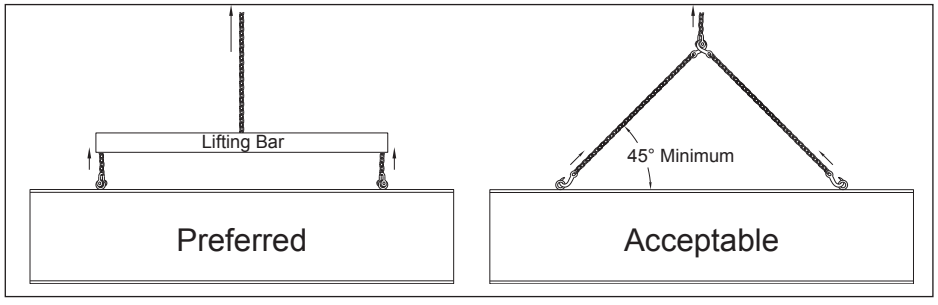

Figure 9: *Lifting Methods*

Cables and chains attached to the eyebolts and directly to a center lifting point, as shown in the "Acceptable" example in **Figure 9**, can create a dangerous lateral force on the eyebolts and may cause the eyebolts to fail. The smaller the angle between the cable and the top of the cabinet, the lighter the cabinet must be to safely lift it. If this method must be used, ensure a minimum angle between the chain and cabinet of at least 45°.

Do NOT attempt to lift the cabinet if the angle is less than 45°. Exceeding load angles or weight limits could cause the bolts in the cabinet to buckle, resulting in serious damage to the equipment or injury to personnel. Also, loads should be applied directly in the plane of the eyebolt as shown in **Figure 10**.

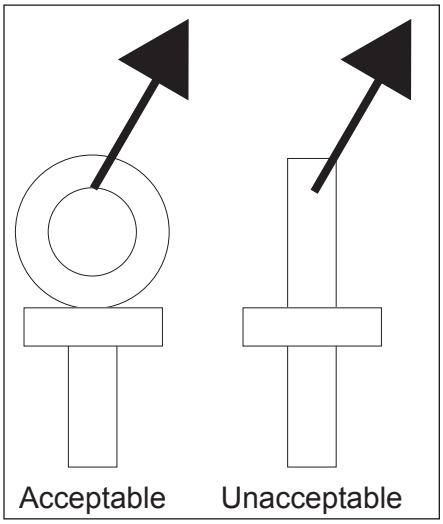

Figure 10: *Eyebolt Plane Load*

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

If installers remove the eyebolts, use 1/2" bolts to plug the holes.

Mount the Cabinet

Reference Drawings:

SS500HD Mounting; w/ Stringer Mounted Displays **DWG-992093**
Engineering Specification; Sportsound 500HD **DWG-969776**
Side Panel Mounting Details w/ SS500HD **DWG-992088**
SS500HD Mounting w/ Pole Clamp Displays **DWG-982267**
Single Column Install Specs; SS500HD **DWG-1005534**

The sound cabinet will be mounted atop a frame that must be certified by a structural engineer. To mount the system in place, position the cabinet on the structure where it is to be mounted. Several mounting methods are available. Weld the cabinet's bottom members to the structure at the locations indicated on the appropriate drawing listed above.

Aim the Speakers

Reference Drawings:

Mid/High Speaker Adjustment Chart; 500HD **DWG-1108053**

Tools Required: 9/16" wrench/socket

Once the cabinet has been mounted in place, it may be necessary to adjust the direction of the speakers for the individual facility. **DWG-1108053** in **Appendix A** provides speaker aiming instructions as well as recommended angles to position the speakers, based on the cabinet's location in relation to the seating area(s).

Mounting the Control Enclosure

Reference Drawings:

Mtg Detail; 500HD Ctrl Encl Beam Clamp **DWG-1131068**

Tools Required: 1/2" & wrench/socket, 3/4" wrench/socket

> **Note:** Installation described below requires I-beams with 3/16" to 3/4" thick beam flanges. If an alternate mounting option for control enclosure is preferred, it is the responsibility of the installer to adequately secure the enclosure to the base structure.

The Sportsound 500HD control enclosure (**Figure 5**) mounts toward the base of the display structure. The enclosure typically mounts on the backside of the support column(s) within 50' (15.2 m) of the sound cabinet. Refer to the drawings listed under **Mount the Cabinet (p.6)** for suggested control enclosure mounting locations.

Attach horizontal Unistrut pieces to the top and bottom rear flanges of the control enclosure with provided 5/16" hardware through the existing holes. Raise the enclosure to the desired height, using side lift eyes or lifting straps if necessary, and then secure with provided spring nuts and 1/2" hardware. Refer to **DWG-1131068** in **Appendix A** for complete hardware assembly and mounting instructions.

4 Electrical Installation

CAUTION – RISK OF ELECTRIC SHOCK: Only qualified individuals should perform power routing and termination to the system. It is the responsibility of the electrical contractors to ensure that all electrical work meets or exceeds local and national codes. Failure to follow installation guidelines will result in audible noise on the sound system and possible damage to internal components.

> **Note:** This product is not provided with mains disconnect. Customer shall provide disconnect at base of sound system location that meets or exceeds local and national electrical codes.

Power/Signal Connections

Reference Drawings:

System Riser; 500HD **DWG-980598**
System Riser; Electrical & Audio Notes **DWG-985713**
Schematic; Control Enclosure 500HD-Dual 120VAC **DWG-1115742**
Schematic; Control Enclosure 500HD-Single 120VAC **DWG-1115872**
Schematic; Control Enclosure 500HD-Dual 230VAC **DWG-1115891**
Schematic; Control Enclosure 500HD-Single 230VAC **DWG-1115896**
System Riser; 500HD, Copper Signal Only **DWG-4137275**

DWG-980598 in **Appendix A** details power and signal connections between the fiber box, control enclosure, and sound cabinet of the Sportsound 500HD sound system. For installations without a fiber box, refer instead to **DWG-4137275**. Refer to **Figure 11** for component and connection locations within the control enclosure and **DWG-1115742**, **DWG-1115872**, **DWG-1115891**, or **DWG-1115896** for detailed wiring schematics.

> **Note:** Use a flathead screwdriver to unlock the latch on the enclosure door. A padlock is provided with the control enclosure that may need to be removed.

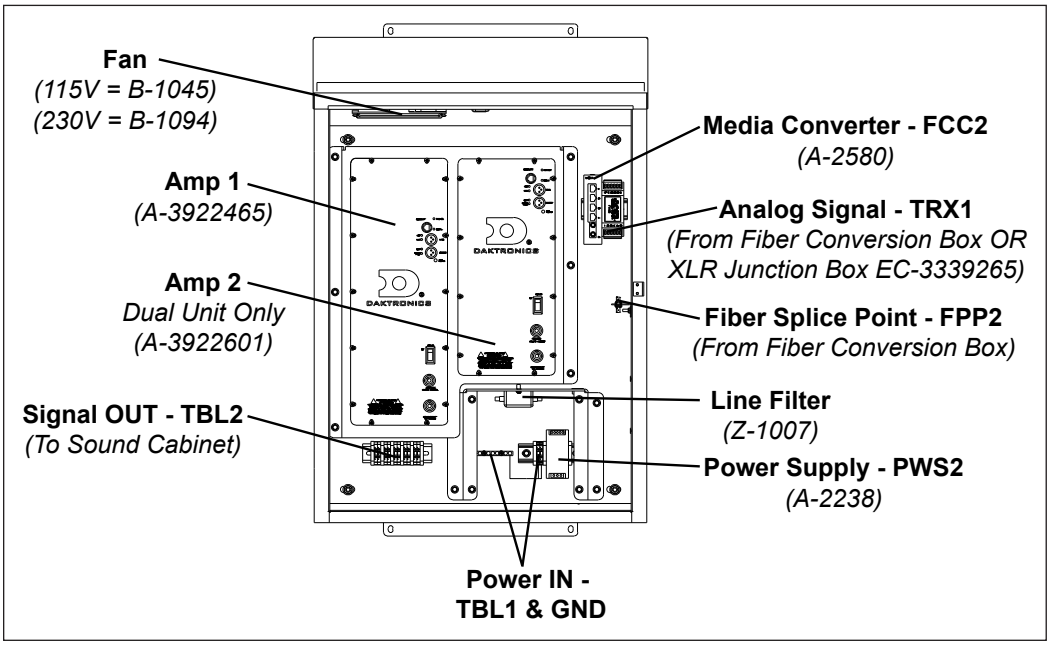

Figure 11: *Control Enclosure Components & Connections (Covers Removed)*

> **Note:** Power/signal connections should not be drilled through the top of the enclosure. If this is unavoidable, a weather-sealed connection is required.

Power IN

The system requires one (1) 20 amp, 120 VAC, 60 Hz circuit; 2W + GND (or 208/230/240 VAC, 50 Hz for connection to international voltages). Power wiring must be run in conduit up into the bottom of the control enclosure and terminated at TBL1. Refer to Detail "A" of **DWG-980598** or **DWG-4137275**.

A voltage surge protector (part # A-1129) is provided (shipped inside the control enclosure) for additional protection at the main breaker panel. Refer to **Figure 12** and Detail "B" of **DWG-980598** or **DWG-4137275**.

Figure 12: *Surge Protector*

Signal IN (Fiber)

A minimum of 2-core, multimode 50-micron fiber optic cable must be run in conduit from the fiber conversion box location to the sound cabinet control enclosure (FPP2). Refer to Detail "D" of **DWG-980598**. If included with a Daktronics scoreboard or display, the sound system may share a fiber optic cable run, requiring additional cores.

For analog backup signal, route 1 pair, 22 AWG cable (part # W-1615) in conduit from the fiber conversion box location to the control enclosure, and terminate to TRX1. Refer to Detail "E" of **DWG-980598**.

Signal IN (Analog Only)

Route 1 pair, 22 AWG cable (part # W-1615) in conduit from the XLR junction box location to the control enclosure, and terminate to TRX1. For XLR junction box termination, refer to Detail "C" of **DWG-4137275**; for TRX1 termination, refer to Detail "D".

Speaker OUT

IMPORTANT: Improper wiring will result in damage to the internal circuitry of the product, and pose a potential fire hazard!

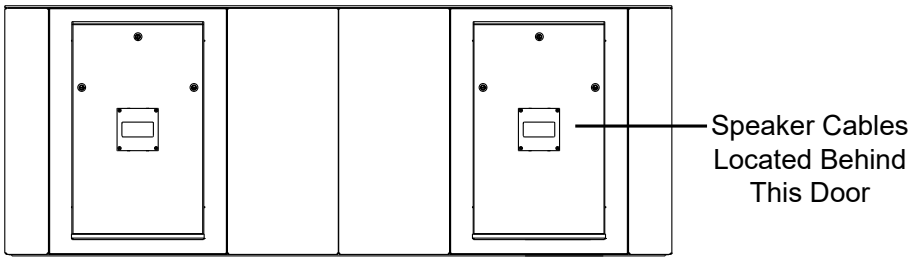

Figure 13: *Sound Cabinet Access Doors, Rear View*

1. Open the far right rear access door (**Figure 13**) of the sound cabinet. Turn all latches a 1/4 turn using a flathead screwdriver (older latches can be turned with fingers). Tilt the top of the door away from the cabinet. With the door tilted, use the handle to lift it up and out of the door frame.
2. Inside the sound cabinet is a coiled 50' (15.2 m) speaker cable. Run this cable in conduit out the bottom of the sound cabinet and up into the bottom of the control enclosure.
3. Connect each speaker cable to its designated terminal on TBL2, noting the proper polarity when wiring them. Confirm the proper connections by referring to Detail "A" of **DWG-980598**.

> **Note:** To prevent the possibility of short circuits, strip each wire 8 mm and tighten the screw connection terminal to a minimum torque of 0.6 Nm.

Grounding

All components of an audio system – including but not limited to 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 sound system may void the warranty, disrupt operation, damage equipment, and cause bodily harm or death.

Lightning Protection

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

Fiber Conversion Box Connections

Reference Drawings:

System Riser; 500HD **DWG-980598**
Audio; Sportsound, Fiber Box Schematic **DWG-1095894**

IMPORTANT NOTES:

- The fiber box shall not be exposed to dripping or splashing, and no objects filled with liquid shall be placed on the fiber box.
- The fiber box consists of Class 1 construction and shall be connected to a mains socket outlet with a protective earth-ground connection.
- The fiber box utilizes a power cord with wiring inlet as a means for disconnection from power. This means of disconnection shall remain readily operable in all cases.

Refer to **Figure 14** for external fiber conversion box connections and **Figure 15** for internal connections and component locations. Note that the fiber box is not included in analog-only systems.

Refer to Detail "C" in **DWG-980598** for analog backup connection and Detail "D" for fiber connection. **DWG-1095894** provides a detailed wiring schematic.

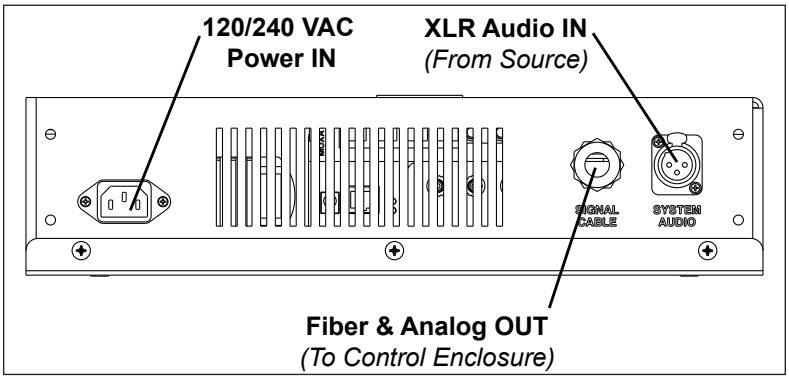

Figure 14: *External Fiber Conversion Box Connections*

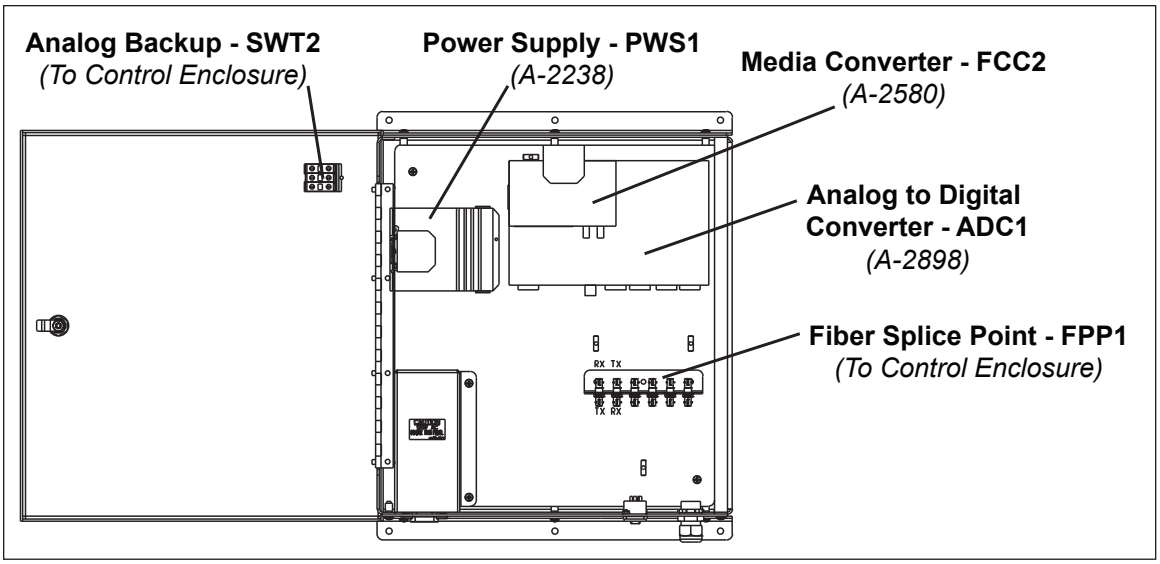

Figure 15: *Internal Fiber Conversion Box Connections & Components (Cover Open)*

5 Maintenance

Grille Maintenance and Cleaning

To allow maximum acoustic transparency, the front of the cabinet contains a PVC mesh grille. Do not apply anything to the surface that may obstruct the holes in the material. To maintain the brightness of the colors and prolong the life of the grille, periodic cleaning is necessary. Failure to clean periodically may result in permanent discoloration or staining. When cleaning, use a mild soapy solution (Dove®, Ivory®, etc.) and a very soft brush, moving in a circular motion. Rinse with clean water using normal faucet pressure.
Do not use a power washer.

Grille Mesh Replacement

Reference Drawings:

Mesh Layout; SS500HD **DWG-983398**

If the grille mesh fades or tears over time, or if new graphics/logos are desired, it may be replaced. Only qualified sign companies should be used to replace the grille mesh. Refer to **DWG-983398** for mesh layout. Contact Daktronics for mesh reordering.

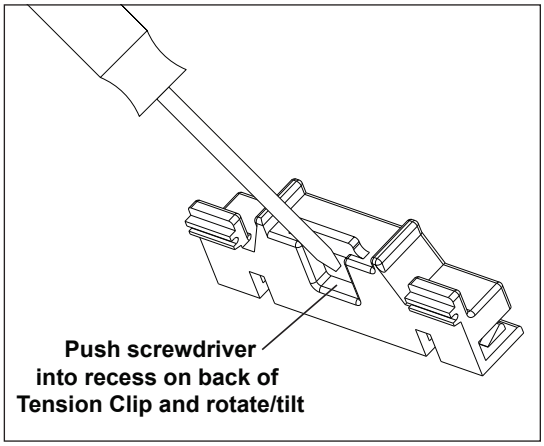

Figure 16: *Removing Tension Clips*

1. Remove Mesh Frame

The front of the sound cabinet has a removable aluminum frame that secures the grille mesh. This frame is attached to the sound cabinet with a total of eight (8) 3/8" hardware sets, with four (4) sets at both the top and bottom of the frame.

a. Carefully remove all mounting hardware and safely lower mesh frame to the ground. Set the frame on a level surface large enough so that the weight is supported by the aluminum frame and not on the mesh.

b. Loosen the cover screws using a square driver and remove the cover.

Figure 17: *Tick Marks on Mesh*

2. Remove Tension Clips

Insert the tip of a standard flathead screwdriver into the recess located at the backside of the tension clip (**Figure 16**). Rotate or tilt the screwdriver to separate the tension clip teeth away from the frame. This will allow the tension clip to be removed from the frame by prying or pulling it up and out.

Slide the mandrel out of the tension clip to release the mesh.

3. Attach New Mesh

When ordered through Daktronics, the mesh has a line with a series of tick marks printed on the front (**Figure 17**). These tick marks indicate the location of the tension clips and mandrels.

a. Place a mandrel, smooth side up, centered on the tick mark.

b. Fold the mesh around the mandrel. Ensure the groove in the mandrel is towards the inside of the mesh (**Figure 18**).

c. Snap a tension clip over the mandrel and mesh (**Figure 19**). Do not try to drive both ends of the clip down onto the mandrel and fabric at the same time; snap one end down and then the other.

d. Continue to place a mandrel and tension clip on every tick mark.

e. Lay the mesh across the frame and snap each clip into the tension channels (**Figure 20**).

f. Pull on the corners of the mesh to remove any wrinkles. When pulling on the fabric, do not pull directly on the fabric flap or tension clip, or the clip may pop off. When pulling on the face, grasp the fold and pull the face into place.

g. Use the tensioning tool provided with the mesh replacement kit (part # 0A-1561-0028) to drive the tension clips into the tension channels (**Figure 21**). Start with one or two clicks.

h. Work around the frame, tightening down all the tension clips until all the wrinkles are removed and the mesh is properly taut. **Do not over-tension!** This may cause damage to mesh graphics. Apply just enough tension to achieve a smooth, flat surface.

i. Place the radius covers on the end of the mesh frame and tighten the set screws on the radius cover.

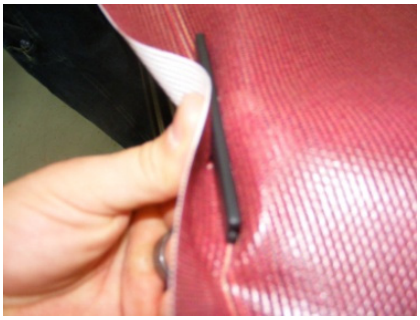

Figure 18: *Folding Mesh*

Figure 19: *Attach Tension Clip*

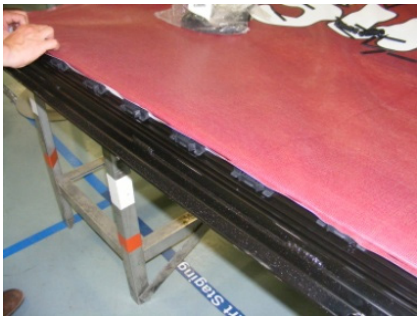

Figure 20: *Clips in Channels*

4. Reattach Mesh Frame

Safely lift mesh frame back in place on the front of the sound cabinet and attach with the eight (8) 3/8" hardware sets. Ensure the frame is snug tight against the cabinet.

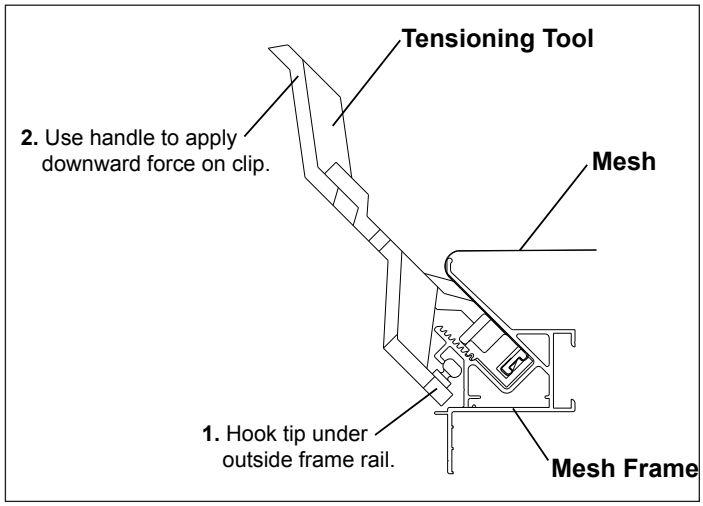

Figure 21: *How to Use Tensioning Tool*

Control Enclosure Maintenance

Performing preventative maintenance will ensure proper air circulation to internal components. How much maintenance is required depends on the surrounding environment.

Filters

One filter is located on the inside bottom door panel (**Figure 22**) and another is located in the hood above the door panel. Remove the filters and clean with warm, soapy water and dry gently. Check the filters for signs of damage such as tears, cuts, and excessive wear from the environment. If necessary, order a new filter (Hoffman® part number WFF1 – visit www.hoffmanonline.com).

Figure 22: *Filter inside Door Panel*

Fan

A fan is located inside the top of the enclosure (**Figure 23**). When checking the filters, clean the fan blades with compressed air. If the fan is making excessive noise or squealing after cleaning, replace it.

Thermostat

A thermostat next to the fan controls when to turn it on (**Figure 23**). To test the thermostat, rotate the temperature dial to the current air temperature and verify the fan starts. If the fan does not start, replace it and the thermostat. After checking/ replacing the thermostat, be sure to set the temperature dial back to 85–95° F (29–35° C).

Figure 23: *Fan & Thermostat*

6 Troubleshooting

This section lists potential problems with the system, 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.

> **Note:** Be sure to power on the audio control rack, fiber conversion box, and cabinet breakers. Make sure all connections from source to the cabinet are intact.

Symptom/Condition	Possible Cause	Solution/Items to Check
No power to audio cabinet; green indicator light is off on bottom of control enclosure	Breaker is off at sign	Turn breaker ON.
	Bad power supply	Order a new power supply (part # A-2238).
No audio from cabinet, but signal can be heard through headphones or a monitor speaker	No power at cabinet	Turn breaker ON.
	Fiber conversion box is unplugged from wall outlet or cable to audio control rack	Plug in fiber conversion box power/signal.
	Analog signal out of the mixer is not being correctly converted to a digital signal	Set the fiber box ANALOG BACKUP switch (**Figure 35**) to ANALOG and see if problem goes away.
	No fiber connection to cabinet; fiber link down	Verify the Port 1 (100M) LED on the media converter is solid green (**Figure 33-2**).
		Swap TX-RX fibers to fix link.
		Replace fiber splice, repair fiber termination/cable.
	Isolation transformer failure (ANALOG BACKUP enabled)	Check the isolation transformer in the control enclosure. Refer to the **Isolation Transformer Troubleshooting Guide (DD3417357)**, located online at www.daktronics.com/manuals.
Muffled audio from cabinet (but clear though headphones or a monitor speaker)	Bad digital connection	Open CobraNet Discovery and check for errors. Refer to **System Testing (p.17)**.
	Bad driver or amplifier	Perform a system check via Monitor Application. Refer to **System Testing (p.17)**.

Symptom/Condition	Possible Cause	Solution/Items to Check
Weak (low level) audio from cabinet	Low level source	Ensure output from the mixer is professional line level.
	Analog signal out of the mixer is not being correctly converted to a digital signal	Set the fiber box ANALOG BACKUP switch (**Figure 35**) to ANALOG and see if problem goes away.
	Improper gain at Analog to Digital Converter (in fiber box)	Adjust gain according to **Biamp Audia Input & Output Expanders Operation Manual** in **Appendix B**.
Poor sound quality from audio cabinet (distortion)	Poor source material (CD or MP3 with heavy compression or distorted material)	Use high quality audio files (.wav).
	Clipping audio at source (audio control rack) output	Bring source level down below clip.
	Bad driver or amplifier	Perform a system check via Monitor Application. Refer to **System Testing (p.17)**.
Intermittent audio from audio cabinet	Bad fiber connection	Set the fiber box ANALOG BACKUP switch (**Figure 35**) to ANALOG and see if problem goes away.
	Amplifier modules are over driven into protect mode	Reduce source output level.
	Bad amplifier module	Open CobraNet Discovery and check for errors. Refer to **System Testing (p.17)**.
	Analog to Digital Converter (in fiber box) failure	Refer to **Input/Output Expander (p.22)**.
	Low level (-20dB) (ANALOG BACKUP enabled)	Increase source output level above -20dB.
Humming/buzzing from audio cabinet	Ground loop	Disconnect ground at isolation transformer in the control enclosure. Refer to **Audio System Humming Troubleshooting (DD3448287)**, located online at www.daktronics.com/manuals.

For more troubleshooting steps, refer to the appropriate audio control rack manual.

Indicator Lights

Control Enclosure

There is a green LED power indicator on the bottom of the control enclosure (**Figure 24**). This indicates whether there is power feeding the control enclosure properly. The indicator stays lit when there is power; otherwise, it will be off.

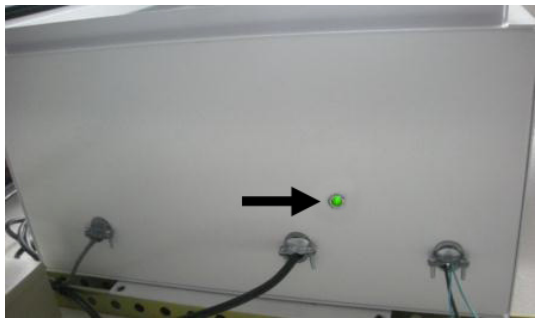

Figure 24: *Control Enclosure Power Indicator*

Audio Control Rack

Refer to the troubleshooting section of a specific audio control rack manual for more information about the indicator lights that show signal output to the audio cabinet.

Fiber Conversion Box

Within the fiber conversion box, if included, indicator lights on the equipment help verify proper connection with the sound cabinet. Refer to **Media Converters (p.21)** and **Input/Output Expander (p.22)**.

System Testing

Use the audio system's Monitor Application to verify all channels of amplifiers and drivers are functioning correctly. Refer to the **Sportsound Amplifier Field Guide (DD3318172)**, available online at www.daktronics.com/manuals, for more information.

1. With a full-range audio source (music) playing at a moderate level through the system, click the **Start Monitoring** button.
2. Click the **Standby Protect** button next to each channel to mute them.
3. After muting every channel, un-mute one channel at a time and listen for audio.
4. Un-mute all channels, and stop all source audio from the control rack.
5. Click the **Test Tone** button for **AMP1** and compare the **Impedance** value (in ohms Ω) to the reference ranges shown beneath the Channel #.
6. Repeat Step 5 for all remaining amplifiers. If any impedance values are out of the reference ranges by half or double, test the individual drivers connected to the suspect amplifier(s). Refer to **Driver Troubleshooting (p.17)**.

Driver Troubleshooting

Tools Required: flathead screwdriver, Multi-meter, 9V battery

Remove the rear access door on the side of the cabinet being serviced using the flathead screwdriver.

Before removing the driver, verify correct DC resistance of the driver using a multi-meter (**Figure 25**). Check the DC resistance of each driver separately, or check the DC resistance at the harness. Connect each lead of the multi-meter to the terminals of the driver (or proper pins on the harness), and make sure the multi-meter is set to measure the DC resistance.

Figure 25: *Mid-Frequency Driver & Meter*

Driver Part Number	Resistance
A-2302 (High Frequency)	8.5 Ω
A-2305 (Mid Frequency)	6.6 Ω
A-1903 (Low Frequency)	6.5 Ω

Depending on site conditions, the measurements may fluctuate up and down slightly so don't be alarmed; figure out an average. If the resistance is showing near 0 or open, this indicates the coil of the driver is bad and needs to be replaced.

It's possible that the coil is perfectly fine on cone drivers (mids and lows), but the spider, diaphragm, or surround is damaged, eliminating or restricting the cone from moving in and out. Visually check the surround and make sure it is in good condition. It may be necessary to remove the driver from the speaker assembly. Carefully push on the diaphragm and see if it can move in and out to verify the driver is not seized. Apply a 9V battery to the driver terminals and listen for any rubbing or stuck coils.

If the driver checks out fine, further troubleshooting of the system is required.

Note: Daktronics speaker assemblies have drivers wired in parallel. Use the following chart when measuring the DC resistance of a harness. Refer to **Figure 26** for harness connector pinout. Be sure to disconnect any field-terminated wires from the speaker cable terminal block, located in the lower-left corner of the control enclosure (**Figure 27**) before measuring the resistance.

Harness	Channel 1	Channel 2	Channel 3
Amp 1	Pins 1-2 / WHT/BLK = 3.2 Ω	Pins 3-4 / RED/BLK = 3.2 Ω	Pins 5-6 / BLU/BLK = 4.2 Ω
*Amp 2	Pins 7-8 / ORG/BLK = 3.2 Ω	Pins 9-10 / GRN/BLK = 4.2 Ω	-

*Amplifier 2 harness will only read values in dual-sided systems, where there are two amplifiers in the control enclosure.

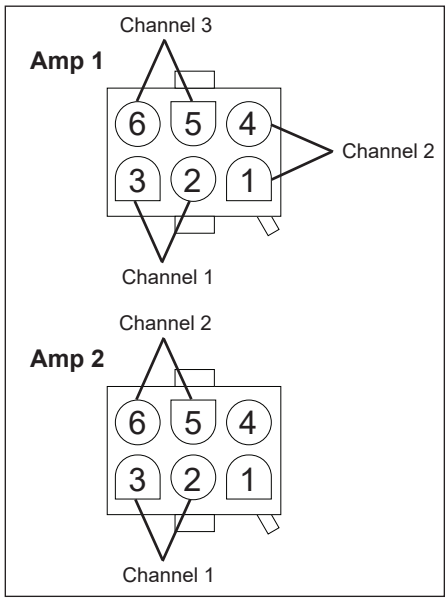

Figure 26: *Harness Connector Pinout*

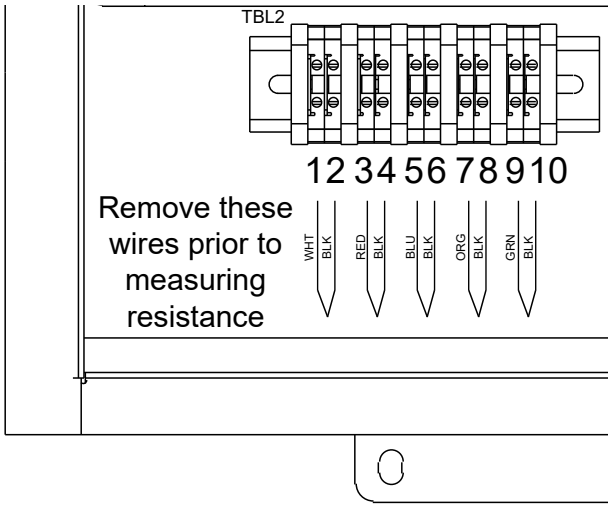

Figure 27: *Speaker Cable Terminal Block*

Driver Replacement

High-Frequency Driver (A-2302)

Tools Required: flathead screwdriver, 10mm wrench, silicone

1. Remove the rear access door on the side of the cabinet being serviced using the flathead screwdriver.
2. Identify bad driver(s) by following **Driver Troubleshooting (p.17)**.
3. Remove the bad driver(s):
   a. Disconnect wires, if not already done.
   b. Remove 4 threaded studs with the 10mm wrench.
   c. Pull off the bad driver (**Figure 28**).
4. Install replacement driver:
   a. Hand tighten shorter threaded end of studs into the driver.
   b. Align driver with screw holes.
   c. Fasten nuts to 4 threaded studs with 10mm wrench.
   d. Reconnect wires, making sure positive and negative go to correct terminals. Apply silicone to terminals.
5. Reinstall rear access door.
6. Test the system to verify it is operating correctly per **System Testing (p.17)**.

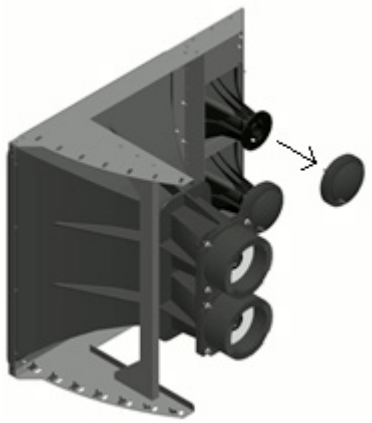

Figure 28: *A-2302 Removal*

Mid-Frequency Driver (A-2305)

Tools Required: flathead screwdriver, 7/16 wrench (@2), silicone

1. Remove the rear access door on the side of the cabinet being serviced using the flathead screwdriver.
2. Identify bad driver(s) by following **Driver Troubleshooting (p.17)**.
3. Remove bad driver(s):
   a. Disconnect wires, if not already done, taking note of positive and negative wire location.
   b. Remove 4 bolts with 7/16 wrenches.
   c. Pull off bad driver (**Figure 29**).
4. Install replacement driver:
   a. Align driver with screw holes.
   b. Fasten 4 bolts with 7/16 wrenches.
   c. Reconnect wires, making sure positive and negative go to correct terminals. Apply silicone to terminals.
5. Reinstall rear access door.
6. Test the system to verify it is operating correctly per **System Testing (p.17)**.

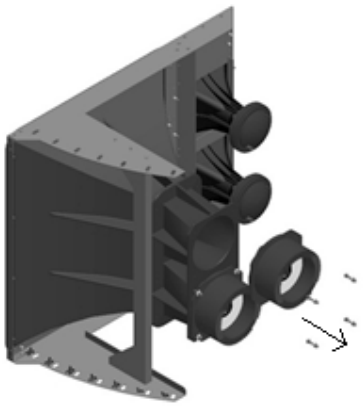

Figure 29: *A-2305 Removal*

Low-Frequency Driver (A-1903)

Tools Required: 9/16 wrench, #2 Phillips screwdriver, 3/16 Allen wrench, silicone

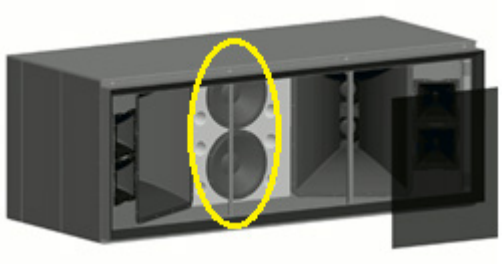

Figure 30: *A-1903 Removal*

1. Remove the front mesh assembly (45 lb [20 kg]):
   a. Remove 8 bolts (4 top, 4 bottom) with 9/16 wrench.
   b. Pull the mesh assembly off.
2. Remove suspected bad driver(s):
   a. Remove 8 screws with 3/16 Allen wrench.
   b. Pull off driver, taking note of positive and negative wire location.
   c. Test the driver(s) by following **Driver Troubleshooting (p.17)**.
   d. If bad, remove driver (**Figure 30**).
3. Install replacement driver:
   a. Reconnect wires, making sure positive and negative go to correct terminals. Apply silicone to terminals.
   b. Align driver with screw holes.
   c. Fasten 8 screws with 3/16 Allen wrench.
4. Reinstall the front mesh assembly.
5. Test the system to verify it is operating correctly per **System Testing (p.17)**.

Amplifier Troubleshooting and Replacement

Tools Required: #2 Phillips screwdriver, flathead screwdriver

1. Open the control enclosure (**Figure 11**). Note that it may require a key to access.
2. Locate the defective amplifier:
   a. Refer to **System Testing (p.17)** for basic amplifier troubleshooting, or refer to the **Sportsound Amplifier Field Guide (DD3318172)**, available online at www.daktronics.com/manuals, for more detailed troubleshooting procedures.
   b. Once it has been determined that there is a defective amplifier, contact Daktronics to order a replacement.
3. Verify the new amplifier is the correct replacement for the defective amplifier. Check the label (**Figure 31**) on the new amplifier to verify that the **Part Number** matches the table below and that the **Config** matches the label on the defective amplifier.

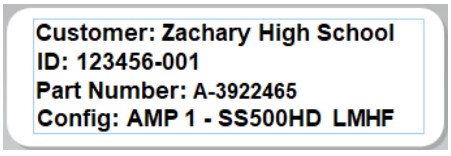

Figure 31: *Amp Label*

Product	Legacy Amp Part #	New Amp Part #	Amplifier Label	Quantity
500HD-SL/SR	A-2611*, A-3636*	A-3922465	AMP1 LMHF	1
500HD-Dual	A-2611*, A-3636*	A-3922465	AMP1 LMHF	1
	A-2216*, A-2538*	A-3922601	AMP2 MHF	1

* These amplifiers will be replaced by the corresponding new amplifier part number.

4. Remove the defective amplifier:
   a. Use a #2 screwdriver to remove the machine screws securing the amplifier.
   b. Carefully pull out on the amplifier, taking care not to break any cables inside the cabinet. A flathead screwdriver may be needed to pry the amplifier loose.
   c. Unplug all power and signal cables.
   d. Unplug the 6-pin connector from the rear of the amplifier.
5. Install the new amplifier:
   a. Verify existing weather stripping is present. If not, install new weather stripping.
   b. Verify all wires are still connected to the 6-pin connector and plug it into the rear of the amplifier.
   c. Reconnect all power and signal cables.
   d. Position the amplifier and use a #2 screwdriver to reinstall the machine screws.
6. Follow the **Sportsound Amplifier Field Guide (DD3318172)** to verify that the correct firmware has been loaded by Daktronics Customer Service. All amplifiers present should have the firmware verified and updated to the most current version available.
7. Refer to **System Testing (p.17)** to verify replacement amplifier is working correctly.

Media Converters

In standard audio systems, there are two media converter/network switches, one in the fiber box and one in the control enclosure, that transfer digital audio signal. Looking at the connections and LED indicators on these devices help with system troubleshooting.

Note: These devices are not used in analog-only systems.

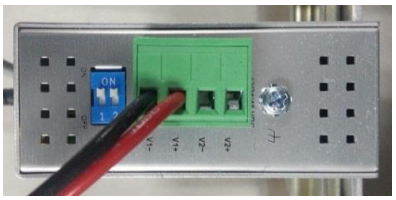

Figure 32: *Power & BSP Switches*

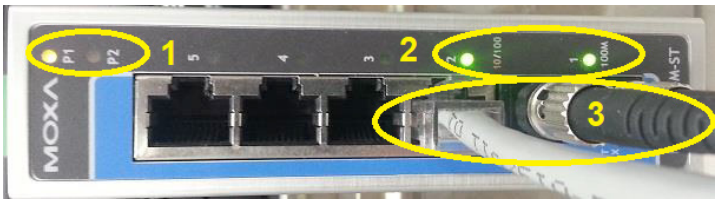

Figure 33: *LED Indicators & Signal Connections*

Typical Component Settings

- Ensure power is connected to green terminal block (Red to V1+, Black to V1-) and the two BSP DIP switches are both set to ON. Refer to **Figure 32**.
- Verify fiber cables are connected to RX and TX. Refer to **Figure 33-3**.
- Verify Ethernet cable connection(s) from other equipment. Typical connections for standard systems are as follows:
  - Fiber Conversion Box: 1 connection to ADC1; see **Input/Output Expander (p.22)**
  - Control Enclosure: 1 or 2 connections for amplifiers (varies per audio system)

Verifying Network Activity

- **P1** LED will light amber to indicate the switch has power. Refer to **Figure 33-1**. If this LED does not light:
  - Verify proper connections to power supply (Red to V1+, Black to V1-).
  - Verify power supply is supplying 24 VDC.
  - Try connecting power to V2 inputs (Red to V2+, Black to V2-), and verify P2 lights.
- **Port 1 (100M)** LED will light solid green to indicate a functional connection between the fiber box and control enclosure (switch to switch). Refer to **Figure 33-2**. If this LED does not light:
  - Switch fiber pairs at the fiber conversion box.
  - Test fiber cable, and terminate as necessary.
  - Remove fiber jumpers.
  - Verify power and connectivity at the other end of the switch.
  - If still not lighting, replace the switch.
- Each Ethernet jack also has an LED that will light green when a cable to other equipment is connected. Refer to **Figure 33-2**. If these LEDs are not lighting:
  - Check Ethernet cable/connections.
  - Verify connection on opposite end of Cat5e cable.
  - Connect known working cable and equipment (such as a diagnostic laptop).
  - If still not lighting, replace the switch.

Input/Output Expander

The fiber box (if included in the system) features an input/output expander that converts the analog audio signal from the control rack into a digital audio signal that can be sent over a local network. Looking at the connections and LED indicators on these devices help with system troubleshooting.

Figure 34: *Network Activity & Analog Input*

Typical Component Settings

Use the rotary dial and LCD screen to verify the following settings:

- Bundle # TX = 00001
- Bundle # RX = 00000 (default)
- CobraNet Latency = 5.33ms
- Input Gain CH1 & CH2 = (+12 dBu)
- Phantom Power = OFF (default)
- Output Gain CH1 & CH2 = 0 dBu (default)

- Password Protect = UNLOCK (default) – **If accidently password locked:** power down, hold in rotary dial button, power on, wait for screen to display Audia, let go of button; this resets the settings to factory defaults
- Title Display = AUDIA EXPI/O 2 (default)

Verifying Network Activity

Look at the bottom left corner of the Ethernet port for LED identification (**Figure 34-1**).

- Consistent flashing about 6 times a second = Device has a CobraNet connection to amplifiers. This is proper working state.
- Intermittent flashing about 1 time per second, or solid green light = Connected to a switch, but no CobraNet connection to amplifiers. There must be a connection to continue troubleshooting!
- No lights = Not connected to a switch.

Checking for Input Signal

Caution! Ensure sound cabinet is OFF during this test or damage to drivers will occur!

Output a 1 kHz sine wave between 0.5 VAC–1 VAC from the mixer (go to http://dakfiles.daktronics.com/downloads/Audio/CD Test Tones/1kHz Sine Wave.wav). Measure the AC Voltage with a digital multi-meter placed between the positive and negative terminals of the male XLR connector. If the level is above or below the listed range, adjust it using the mixer's channel and master faders. Next, measure the AC Voltage at the input of the terminal block between the positive and negative terminals (**Figure 34-2**). If it reads the same, the device is getting proper signal; if it reads different, there is a wiring issue.

Checking for Output Signal

Ensure the fiber box **ANALOG BACKUP** switch is set to **DIGITAL** (**Figure 35**), and then refer to **System Testing (p.17)**. If proper signal is being received at the amplifier input, the unit is functioning properly and should not need to be replaced.

Figure 35: *Analog Backup Switch*

Replacement Parts

Sound Cabinet

Description	Part Number
15" 600 W Low Frequency Driver	A-1903
1.4" Compression Driver	A-2302
8" Midrange Driver	A-2305
500HD Mesh Replacement Kit	0A-1561-0028
Tension Clip w/ Mandrel	HS-1613
Tensioning Tool	TH-1175

Control Enclosure

Description	Part Number
Voltage Surge Protector	A-1129
24 VDC Power Supply	A-2238
Industrial Media Converter / Ethernet Switch, 5 Port	A-2580
Power Amplifier, SP3-1200-1200-400	A-3922465

Description	Part Number
Power Amplifier, SP2-1200-1200	A-3922601
Fan (115 VAC)	B-1045
Fan (230 VAC)	B-1094
Padlock (order if keys are lost)	HS-1701
Thermostat	S-1247
Transformer; Audio Input, 1 Channel	T-1130
RFI Line Filter, 20 Amp	Z-1007

Fiber Conversion Box

Description	Part Number
24 VDC Power Supply	A-2238
Industrial Media Converter / Ethernet Switch, 5 Port	A-2580
Converter; Analog to Digital with CobraNet	A-2898

Refer to **Section 7: Daktronics Exchange and Repair & Return Programs (p.25)** for information on exchanging or returning parts.

7 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:

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 operation.

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:

- Engineering Specification; Sportsound 500HD **DWG-969776**
- System Riser; 500HD **DWG-980598**
- SS500HD Mounting w/ Pole Clamp Displays **DWG-982267**
- Mesh Layout; SS500HD **DWG-983398**
- System Riser; Electrical & Audio Notes **DWG-985713**
- Side Panel Mounting Details w/ SS500HD **DWG-992088**
- SS500HD Mounting; w/ Stringer Mounted Displays **DWG-992093**
- Single Column Install Specs; SS500HD **DWG-1005534**
- Audio; Sportsound, Fiber Box Schematic **DWG-1095894**
- Mid/High Speaker Adjustment Chart; 500HD **DWG-1108053**
- Schematic; Control Enclosure 500HD-Dual 120VAC **DWG-1115742**
- Schematic; Control Enclosure 500HD-Single 120VAC **DWG-1115872**
- Schematic; Control Enclosure 500HD-Dual 230VAC **DWG-1115891**
- Schematic; Control Enclosure 500HD-Single 230VAC **DWG-1115896**
- Mtg Detail; 500HD Ctrl Encl Beam Clamp **DWG-1131068**
- System Riser; 500HD, Copper Signal Only **DWG-4137275**

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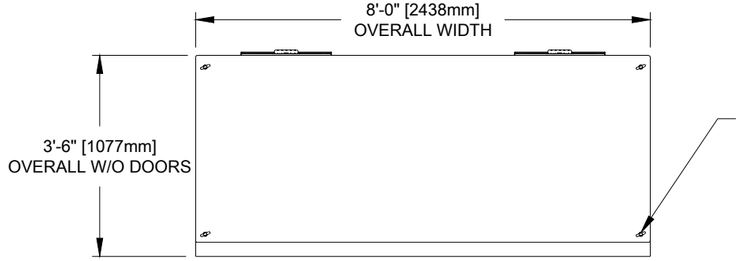
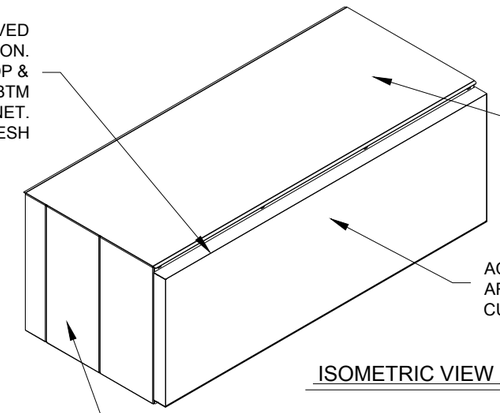


(4) 1/2" REMOVEABLE LIFT EYES.
DESIGNED FOR MAX. 45° SLING ANGLE.
WHEN POSSIBLE
USE A PROPERLY SIZED SPREADER BEAM
WHEN LIFTING SOUND SYSTEM.
ALIGN LIFT EYES TO BE INLINE WITH
CABLES.

TOP VIEW

FRONT "GRILLE" FRAME CAN BE REMOVED
FOR SPEAKER MESH RE-INSTALLATION.
(4) 3/8" HARDWARE SETS ON TOP &
(4) 3/8" HARDWARE SETS ON BTM
SECURE FRAME TO STEEL CABINET.
"GRILLE" FRAME 45 LBS. W/ MESH

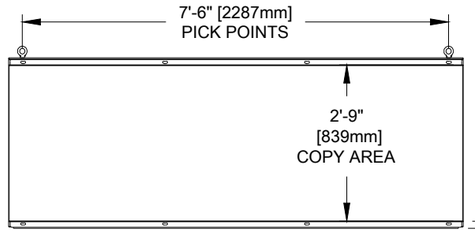


0.125" ALUMINUM
PANELS ATTACHED TO
TOP OF CABINET.

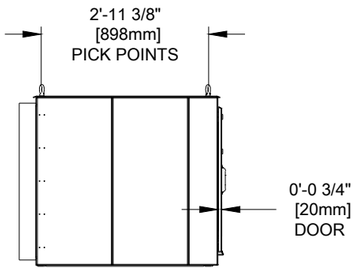
ACOUSTICAL MESH "GRILLE"
ARTWORK TO BE APPROVED BY
CUSTOMER.

ISOMETRIC VIEW

CONCEALED FASTENER 0.063"
ALUMINUM PANELS ATTACHED
ON SIDES AND BACK.

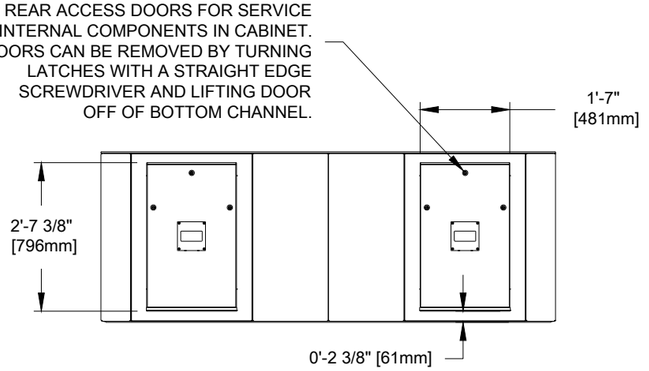


FRONT VIEW



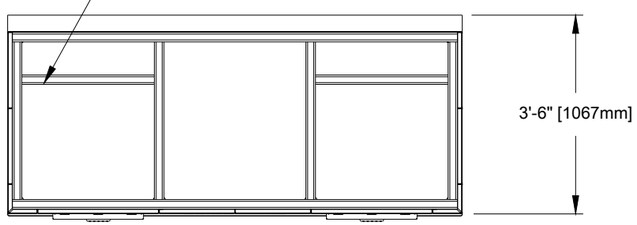
RIGHT SIDE

(2) REAR ACCESS DOORS FOR SERVICE
OF INTERNAL COMPONENTS IN CABINET.
DOORS CAN BE REMOVED BY TURNING
LATCHES WITH A STRAIGHT EDGE
SCREWDRIVER AND LIFTING DOOR
OFF OF BOTTOM CHANNEL.



REAR VIEW

REFER TO DETAILED MOUNTING
DRAWING FOR MOUNTING AND
WELDING SPECIFICATIONS.



BOTTOM VIEW

WEIGHTS:

SS500HD-D:	850 LBS
SS500HD-SL:	775 LBS
SS500HD-SR:	775 LBS

NOTES:

1.0 REFERENCE

1.1 REFER TO DAKTRONICS DRAWING: 1561-E10C-982267 FOR SPORTSOUND 500HD MOUNTING W/ POLE CLAMPED DISPLAYS.
1.2 REFER TO DAKTRONICS DRAWING:
1561-E10B-992088 FOR SIDE PANEL MOUNTING
DETAILS W/ SS500HD.
1.3 REFER TO DAKTRONICS DRAWING: 1561-E10B-992093 FOR SPORTSOUND 500HD MOUNTING W/ STRINGER MOUNTED DISPLAYS.
1.4 REFER TO DAKTRONICS RISER DIAGRAM FOR ALL ELECTRICAL POWER AND DATA SPECIFICATIONS.

2.0 GENERAL NOTES

2.1 ALL DIMENSIONS ARE IN FEET AND INCHES.
2.2 REFER TO INSTALLATION AND MAINTENANCE MANUAL FOR COMPLETE INSTALLATION INSTRUCTIONS.

3.0 SOUND CABINET NOTES

3.1 DAKTRONICS SOUND CABINET IS STEEL CONSTRUCTED SKELETON WITH ALUMINUM PANELING FASTENED TO ITS EXTERIOR.
3.2 LIFTING POINTS ARE PROVIDED BY DAKTRONICS. WHEN LIFTING USE 45° OR GREATER, FROM THE HORIZON, CABLE SYSTEM.
3.3 PAINT COLOR:
SPEAKER CABINET COLOR: POWDER COAT BLACK.

4.0 STRUCTURAL NOTES

4.1 THE SPORTSOUND 500HD CABINET WILL WITHSTAND A 150 MPH (3-SEC GUST) DESIGN WIND SPEED WITH OVERALL DESIGN PRESSURE OF 78 PSF ACCORDING TO ASCE 7-05 (EXPOSURE C).
4.2 THE DESIGN WIND PRESSURES WERE SHIFTED AND ADJUSTED TO ACCOUNT FOR ASCE 7 PRESCRIBED OFFSET EFFECTS.
4.3 THE SPORTSOUND CABINET HAS BEEN DESIGNED TO SUPPORT A DESIGN ROOF SNOW LOAD OF 60 PSF.
4.4 ALL STRUCTURAL STEEL SHALL BE ASTM A36 (36 KSI) EXCEPT:
- WIDE FLANGE SHALL BE A992 (50 KSI) STEEL
- TUBING SHALL BE A500-B (46 KSI)
4.5 THE SPORTSOUND CABINET HAS BEEN DESIGNED TO SUPPORT LATERAL SEISMIC LOADING EQAUL TO 2.0 TIMES GRAVITY.

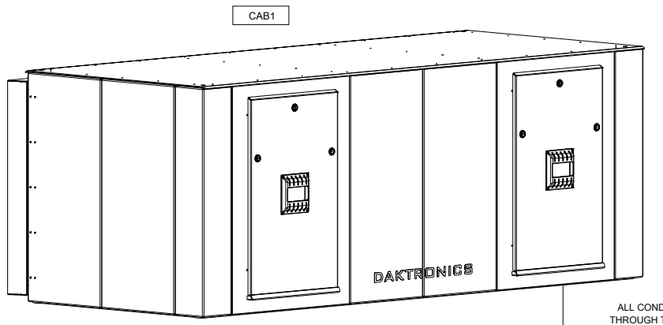
REV	DATE:		BY:
03	12 JUL 13	UPDATED 500HD VIEWS WITH NEW LATCHES AND HANDEL	KCS
02	7 JUN 11	UPDATED TOP,FRONT,BOTTOM & RIGHT VIEWS	MBJ
01	12 JAN 10	UPDATED DRAWING PER REAR ACCESS DOOR UPDATE	JLR

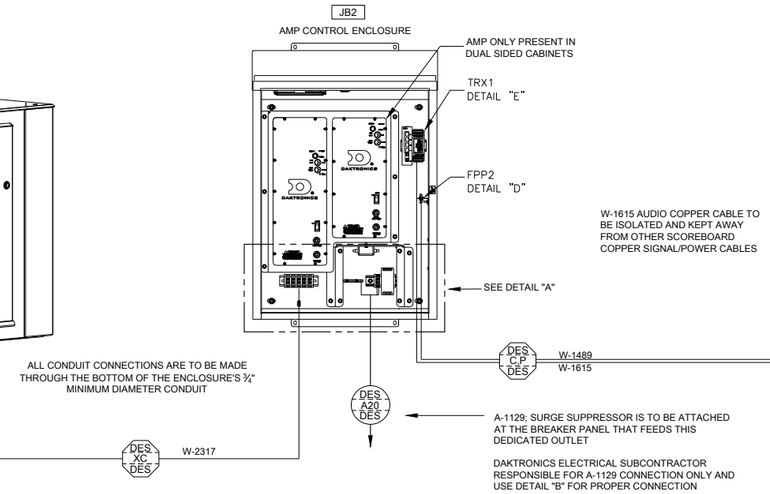
DAKTRONICS, INC.
BROOKINGS, SD 57006
DO NOT SCALE DRAWING

PROJ: DAKTRONICS AUDIO SYSTEMS - SPORTSOUND 500HD
TITLE: ENGINEERING SPECIFICATION; SPORTSOUND 500HD
DESIGN: DTREML | DRAWN: DTREML | DATE: 22 MAR 10
SCALE: 3/8" = 1'

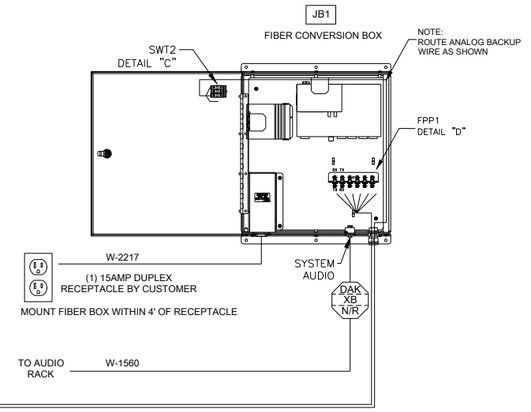
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	
001	03	P1561	E - 10 - B	969776

SIGN LOCATION DETAILS





ANNOUNCER LOCATION DETAILS



COMPONENT IDENTIFICATION LEGEND				
COMPONENT	DESCRIPTION	MANUFACTURE'S #	PROVIDED BY	INSTALLED BY
JB1	STANDARD FIBER BOX, ANNCR'S ROOM	0A-1534-0060	DAKTRONICS	OTHERS
CAB1	500HD SERIES CABINET	0A-1561-0003	DAKTRONICS	OTHERS
JB2*	CONTROL ENCLOSURE, SINGLE 120V	0A-1561-0008	DAKTRONICS	OTHERS
JB2*	CONTROL ENCLOSURE, DUAL 120V	0A-1561-0001	DAKTRONICS	OTHERS
JB2*	CONTROL ENCLOSURE, SINGLE 230V	0A-1561-0045	DAKTRONICS	OTHERS
JB2*	CONTROL ENCLOSURE, DUAL 230V	0A-1561-0044	DAKTRONICS	OTHERS
WIRE TAGS	DETAILS FOR WIRE TAGS	DWG-985713	DAKTRONICS	-

*NOTE: ONLY ONE ASSEMBLIE WILL BE PRESENT

0A-1561-0001
CIRCUIT 1
TOTAL POWER REQUIREMENTS:

SYSTEM VOLTAGE 120 2 WIRES + GND	
NUMBER OF POLES	1
MAXIMUM WATTS	1800W
AMPERES PER LINE	15A

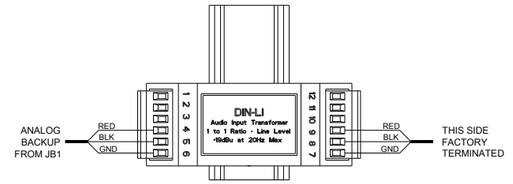
0A-1561-0008
CIRCUIT 1
TOTAL POWER REQUIREMENTS:

SYSTEM VOLTAGE 120 2 WIRES + GND	
NUMBER OF POLES	1
MAXIMUM WATTS	1200W
AMPERES PER LINE	11A

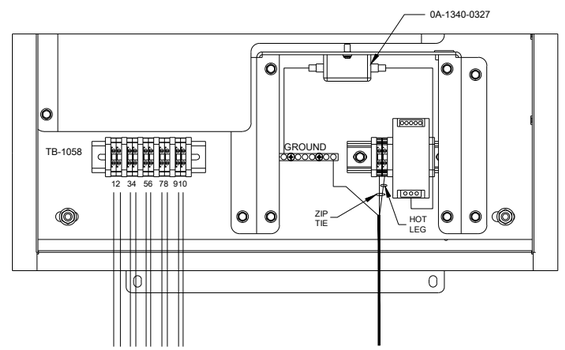
0A-1561-0044, 0A-1561-0045
CIRCUIT 1
TOTAL POWER REQUIREMENTS:

SYSTEM VOLTAGE 230 2 WIRES + GND	
NUMBER OF POLES	1
MAXIMUM WATTS	1800W
AMPERES PER LINE	7.5A

DETAIL "E"
T-1130
ANALOG BACKUP TRANSFORMER



DETAIL "A"
CONTROL ENCLOSURE

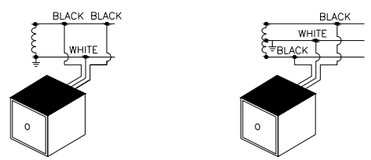


THESE ARE 12AWG WIRES
1: AMP1 LF+ WHT A310
2: AMP1 LF- BLK A310
3: AMP1 MF+ RED A311
4: AMP1 MF- BLK A311
5: AMP1 HF+ BLU A312
6: AMP1 HF- BLK A312
7: AMP2 MF+ ORG A313
8: AMP2 MF- BLK A313
9: AMP2 HF+ GRN A314
10: AMP2 HF- BLK A314

FROM ELECTRICAL SERVICE

NOTE:
IF OTHER SURGE SUPPRESSION IS PROTECTING THE NECESSARY CIRCUITS, THE A-1129 IS OPTIONAL

DETAIL "B"
A-1129
SURGE SUPPRESSOR

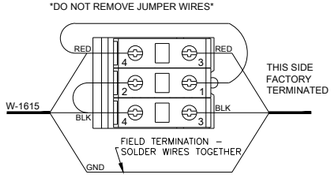


TWO-WIRE
SERVICE UP TO 175 VAC

SINGLE-PHASE
THREE-WIRE 120/240 VAC

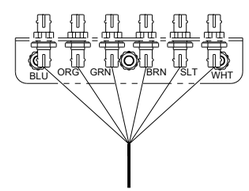
DETAIL "C"
ANALOG BACKUP SWITCH TERMINATION

DO NOT REMOVE JUMPER WIRES



DETAIL "D"
FIBER PATCH PANEL TERMINATION

THIS SIDE FACTORY TERMINATED

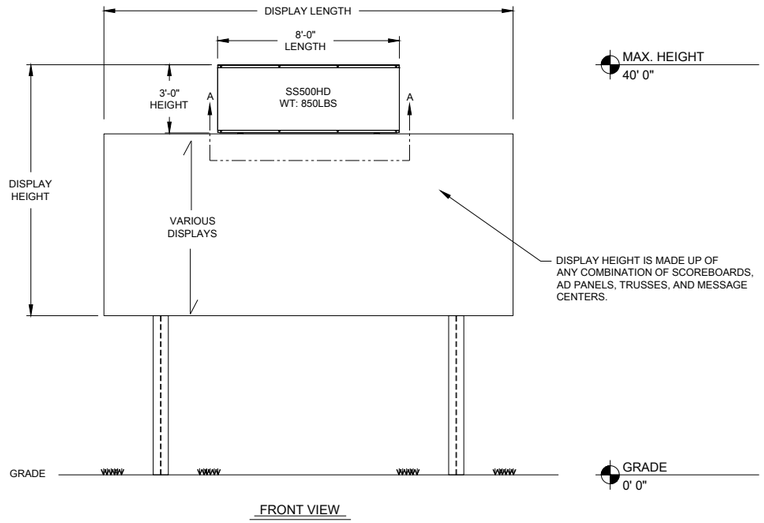


FIBER CONNECTIONS TYPICAL OF BOTH FPP1 AND FPP2

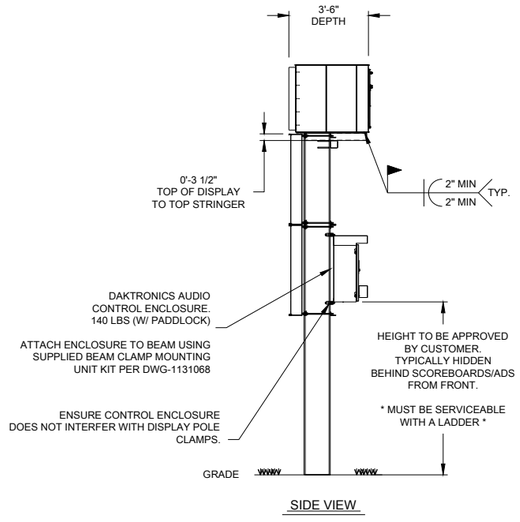
REV	DATE:		BY:
12	21 AUG 18	UPDATE AMPLIFIER VIEW SEE REV10 FOR ENTIRE REVISION HISTORY	CJB
11	1 APR 15	ADDED W-1615 NOTE UPDATED CABINET VIEW UPDATED CONDUIT CONNECTION NOTE	BJG
10	5 FEB 13	UPDATED POWER REQUIREMENTS ADDED NOTE TO DETAIL "B"	CJB
09	24 OCT 12	ADDED 0A-1340-0327 ADDED SINGLE PHASE UNDER DETAIL B	CJB

THIRD ANGLE PROJECTION

PROJECT:	SPORTSOUND SYSTEMS			
TITLE:	SYSTEM RISER; 500HD			
DATE:	01 MAR 10	DIM UNITS:	INCHES [MILLIMETERS]	SHEET / REV
SCALE:	NONE		DO NOT SCALE DRAWING	12
DESIGN:	ALICHT	JOB NO.	FUNC - TYPE - SIZE	
DRAWN:	ALICHT	P1561	F - 03 - C	980598



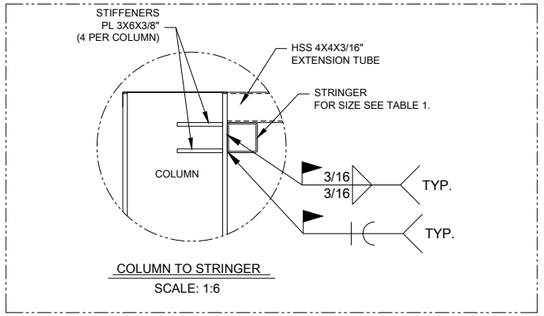
FRONT VIEW



SIDE VIEW

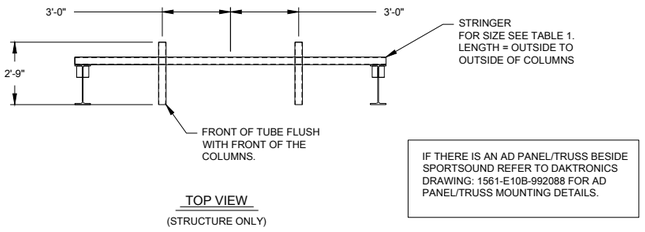
TABLE 1

DISPLAY LENGTH (FT.)	NUMBER OF COLUMNS	COLUMN SPACING (FT.)	STRINGER SIZE			
			DESIGN WIND VELOCITY			
			90 MPH	110 MPH	130 MPH	150 MPH
14	2	9'-0"-11'-0"	HSS4X4X3/16	HSS4X4X3/16	HSS4X4X3/16	HSS4X4X3/16
16	2	8'-0"-10'-0"	HSS4X4X3/16	HSS4X4X3/16	HSS4X4X3/16	HSS4X4X3/16
18	2	11'-0"-13'-0"	HSS4X4X3/16	HSS4X4X3/16	HSS5X5X3/16	HSS5X5X3/16
20	2	12'-0"-14'-0"	HSS4X4X3/16	HSS5X5X3/16	HSS5X5X3/16	HSS5X5X3/16
25	2	14'-0"-16'-0"	HSS4X4X3/16	HSS5X5X3/16	HSS5X5X3/16	HSS5X5X3/16
27	2	14'-6"-16'-6"	HSS4X4X3/16	HSS5X5X3/16	HSS5X5X3/16	HSS6X6X3/16
28	3	9'-6"-11'-6"	HSS4X4X3/16	HSS4X4X3/16	HSS5X5X3/16	HSS5X5X3/16
32	3	10'-6"-12'-6"	HSS4X4X3/16	HSS4X4X3/16	HSS5X5X3/16	HSS5X5X3/16
36	3	12'-0"-14'-0"	HSS4X4X3/16	HSS4X4X3/16	HSS5X5X3/16	HSS6X6X3/16



COLUMN TO STRINGER

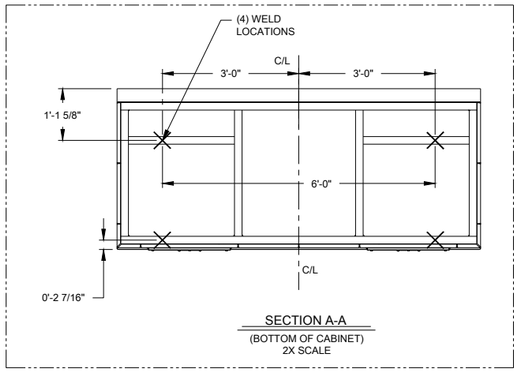
SCALE: 1:6



TOP VIEW

(STRUCTURE ONLY)

IF THERE IS AN AD PANEL/TRUSS BESIDE SPORTSOUND REFER TO DAKTRONICS DRAWING: 1561-E10B-992088 FOR AD PANEL/TRUSS MOUNTING DETAILS.



SECTION A-A

(BOTTOM OF CABINET)
2X SCALE

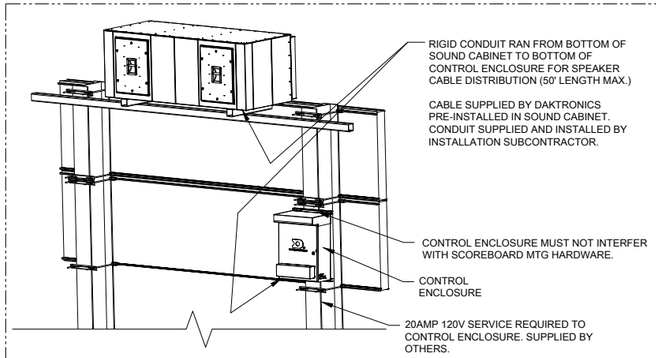
NOTES:

1.0 REFERENCE
1.1 REFER TO DAKTRONICS DRAWING: 1561-E10B-969776 FOR SPORTSOUND 500HD ENGINEERING SPECIFICATIONS.
1.2 REFER TO DAKTRONICS DRAWING: 1561-E10B-992088 FOR SIDE PANEL/TRUSS MOUNTING DETAILS.
1.3 REFER TO DAKTRONICS RISER DIAGRAM FOR ALL ELECTRICAL POWER AND DATA SPECIFICATIONS.
1.4 THE SHOWN SYSTEM IS PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES. THE DESIGN MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE INSTALLATION BEFORE THEY CAN BE USED FOR FABRICATION OR ERECTION.

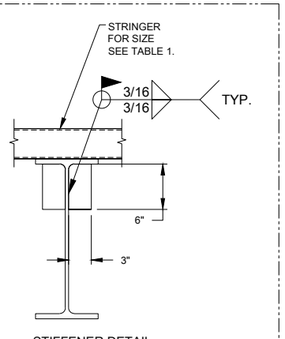
2.0 GENERAL NOTES
2.1 ALL DIMENSIONS ARE IN FEET AND INCHES.
2.2 REFER TO INSTALLATION AND MAINTENANCE MANUAL FOR COMPLETE INSTALLATION INSTRUCTIONS.

3.0 SOUND CABINET NOTES
3.1 DAKTRONICS SOUND CABINET IS STEEL CONSTRUCTED SKELETON WITH ALUMINUM PANELING FASTENED TO ITS EXTERIOR.
3.2 LIFTING POINTS ARE PROVIDED BY DAKTRONICS. WHEN LIFTING USE 45° OR GREATER, FROM THE HORIZON, CABLE SYSTEM. ALIGN LIFT EYES WITH CABLES.
3.3 REMOVE SHIPPING BRACKETS FROM TOP OF CABINET.
3.4 PAINT COLOR:
SPEAKER CABINET COLOR: POWDER COAT BLACK.

4.0 STRUCTURAL NOTES
4.1 FABRICATION AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF AISC SPECIFCATIONS.
4.2 ALL WELDING (SHOP AND FIELD) SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.1-LATEST EDITION SPECIFICATIONS BY A CERTIFIED WELDER USING E70XX ELECTRODES.
4.3 INTERNATIONAL BUILDING CODE 2006 USED IN DESIGN OF SPORTSOUND CABINET SUPPORT MEMBERS WITH, IMPORTANCE FACTOR=1, Kzt=1.0, Kd=0.85, G=0.85, Cf=1.8, z=40ft AND EXPOSURE C. SEISMIC DESIGN WAS NOT CONSIDERED.
4.4 THE DESIGN WIND PRESSURES WERE SHIFTED AND ADJUSTED TO ACCOUNT FOR ASCE 7 PRESCRIBED OFFSET EFFECTS.
4.5 ALL STRUCTURAL STEEL SHALL BE ASTM A36 (36 KSI) EXCEPT:
- WIDE FLANGE SHALL BE A992 (50 KSI) STEEL
- TUBING SHALL BE A500-B (46 KSI)
4.6 ALL OPEN TUBE ENDS SHALL BE CAPPED AND WELDED ALL AROUND.



ISOMETRIC REAR VIEW



STIFFENER DETAIL

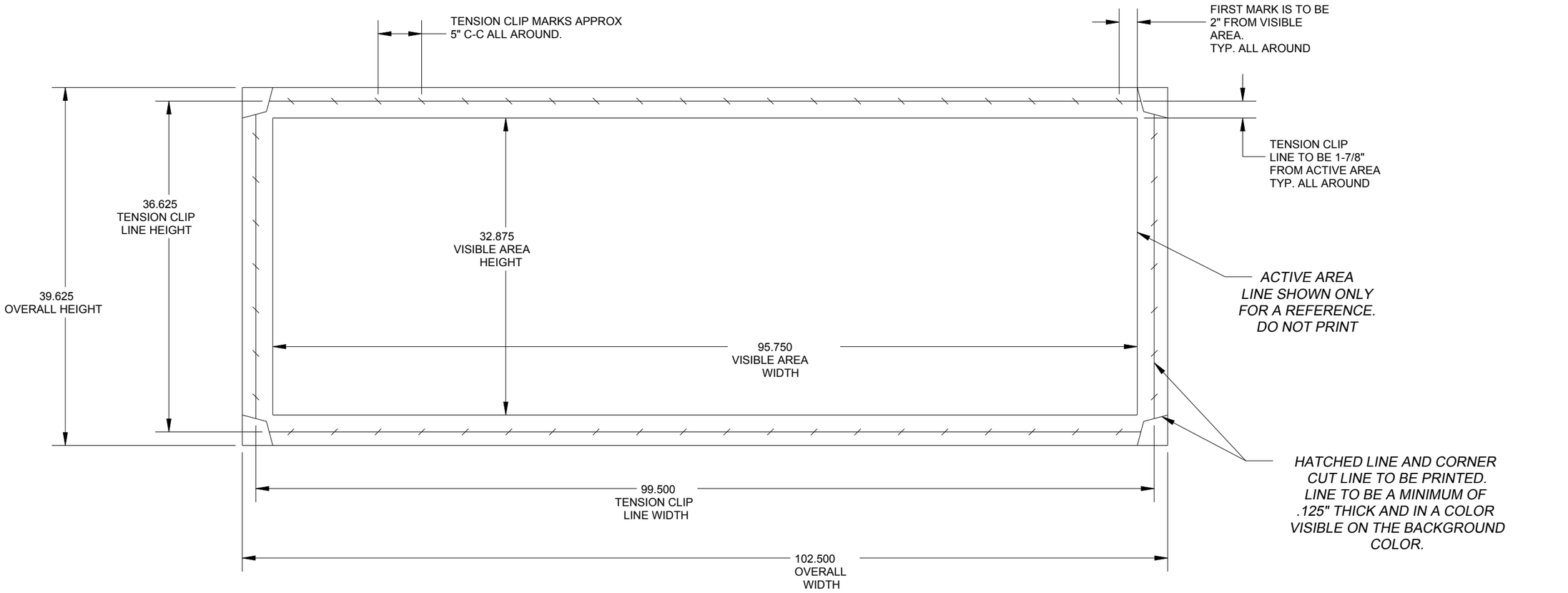
SCALE: 1:6

REV	DATE:	
04	10 APR 13	UPDATED VIEWS WITH CONTROL ENCLOSURE TO SHOW UPDATED MOUNTING — BY: LMG
03	12 MAR 12	ADDED 27" DISPLAY TO TABLE 1 — BY: KCS
02	7 JUN 11	UPDATED SIDE VIEW — BY: MBJ
01	21 DEC 10	CHANGED 2 STRAND FIBER TO 6 STRAND FIBER — BY: CJB

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

PROJ: DAKTRONICS AUDIO SYSTEMS - SPORTSOUND 500HD
TITLE: SS500HD MOUNTING W/POLE CLAMP DISPLAYS
DESIGN: MSHRESTHA | DRAWN: DTREML | DATE: 22 MAR 10
SCALE: 1/4"=1'

SHEET	REV	JOB NO:	FUNC • TYPE • SIZE	
	04	P1561	E - 10 - C	982267



FRONT LAYOUT VIEW

NOTES:

1. OVERALL DIMENSIONS ARE CRITICAL TO +/- 1/8"
2. ALL DIMENSIONS ARE IN INCHES.
3. ACOUSTICAL MESH SHALL BE SEATTLE TEXTILE 5071, ULTRAFLEX ULTRAMESH SUPREME, OR APPROVED.
4. ACOUSTICAL MESH TO BE SEAMLESS
5. PROTECTIVE UV CLEAR COAT TO BE APPLIED TO MESH
6. BACKGROUND COLOR SHALL BE PRINTED ON ENTIRE MESH LENGTH AND HEIGHT.
7. ACOUSTICAL MESH TO BE SHIPPED IN TUBE. (DO NOT FOLD MESH)

REV	DATE:		BY:	
05	11 JUNE 13	MOVED HATCH LINES 1.125" CLOSER TO THE CORNERS PER EC-10967	KCS	
04	20 SEP 12	UPDATED NOTES WITH UV COATING AND SEAMLESS REQUIRMENTS.	KCS	
03	4 JUN 12	ADDED MESH PART NUMBER AND REV TO DRAWING CHANGED MESH SPEC TO ULTRAMESH SUPREME	KCS	
02	27 SEP 10	ADDED CORN ER CUT LINES. INCREASED CORNER TICK MARK START DISTANCE FROM 3" TO 5". cHANGED HATCH SPACING TO 5" C-C.	KCS	
01	19 APR 10	CHANGED ACTIVE AREA TO HATCH LINE. DISTANCE FROM 1.5 TO 1.25. DECREASED OVERALL SIZE .5" ALL AROUND.	KCS	

DAK PART NUMBER: EN-2689

DAKTRONICS, INC.
BROOKINGS, SD 57006

DO NOT SCALE DRAWING

PROJ:	DAKTRONICS AUDIO SYSTEMS				
TITLE:	MESH LAYOUT; SS500HD				
DESIGN:	KSCHNABEL	DRAWN:	KSCHNABEL	DATE:	10-JUN-13
SCALE:	1/12				

SHEET:	REV	JOB NO:	FUNC-TYPE-SIZE	
1 OF 2	05	P 1561	E - 10 - B	983398

POWER DISTRIBUTION SYSTEM LEGEND

FEEDER TABLE – 2 CONDUCTORS+GND
(SEE SPECIFICATIONS FOR INSULATION TYPE)

OVER CURRENT PROTECTION AMPACITY	2 WIRES			
	FDR REF	COPPER WIRE AWG–KCMIL	COPPER GND WIRE AWG	MIN. CONDUIT SIZE
15	A15	(2)14	14	1/2"
20	A20	(2)12	12	1/2"
25	A25	(2)10	10	1/2"
30	A30	(2)10	10	1/2"
35	A35	(2)8	10	1/2"
40	A40	(2)8	10	1/2"
45	A45	(2)8	10	1/2"
50	A50	(2)8	10	1/2"
60	A60	(2)6	10	3/4"
70	A70	(2)4	8	3/4"
80	A80	(2)4	8	3/4"
90	A90	(2)3	8	1"
100	A100	(2)3	8	1"
110	A110	(2)2	6	1"
125	A125	(2)1	6	1 1/4"
150	A150	(2)1/0	6	1 1/4"
175	A175	(2)2/0	6	1 1/4"
200	A200	(2)3/0	6	1 1/2"

NOTES:

A. CONDUIT SIZES ARE MINIMUM; INCREASE FOR LONG OR DIFFICULT RUNS.

B. ABOVE 86 F AMBIENT INCREASE WIRE SIZE PER NEC.

C. CONDUIT AND CONDUCTOR SIZES ARE BASED ON 90° TYPE THHN COPPER CURRENT CARRYING CONDUCTORS IN RIGID PVC (SCH. 40) CONDUIT, TERMINATING TO 75°C TERMINALS. CONDUIT AND CONDUCTOR SIZES MAY NEED TO BE INCREASED PER LOCAL AND NATIONAL ELECTRIC CODES IF OTHER CONDUCTOR OR CONDUIT TYPES ARE USED.

D. IF WIRE OR CONDUIT SIZES OTHER THAN THOSE SHOWN IN THESE CHARTS ARE TO BE USED, CONTACT A DAKTRONICS ELECTRICAL ENGINEERING REPRESENTATIVE.

FEEDER TABLE – 3 CONDUCTORS+GND
(SEE SPECIFICATIONS FOR INSULATION TYPE)

OVER CURRENT PROTECTION AMPACITY	3 WIRES			
	FDR REF	COPPER WIRE AWG–KCMIL	COPPER GND WIRE AWG	MIN. CONDUIT SIZE
15	B15	(3)14	14	1/2"
20	B20	(3)12	12	1/2"
25	B25	(3)10	10	1/2"
30	B30	(3)10	10	1/2"
35	B35	(3)8	10	3/4"
40	B40	(3)8	10	3/4"
45	B45	(3)8	10	3/4"
50	B50	(3)8	10	3/4"
60	B60	(3)6	10	3/4"
70	B70	(3)4	8	1"
80	B80	(3)4	8	1"
90	B90	(3)3	8	1"
100	B100	(3)3	8	1"
110	B110	(3)2	6	1 1/4"
125	B125	(3)1	6	1 1/4"
150	B150	(3)1/0	6	1 1/2"
175	B175	(3)2/0	6	1 1/2"
200	B200	(3)3/0	6	2"
225	B225	(3)4/0	4	2"
250	B250	(3)250	4	2"
300	B300	(3)350	4	2 1/2"
350	B350	(3)400	3	2 1/2"
400	B400	(3)600	3	3"

FEEDER TABLE – 4 CONDUCTORS+GND
(SEE SPECIFICATIONS FOR INSULATION TYPE)

OVER CURRENT PROTECTION AMPACITY	4 WIRES			
	FDR REF	COPPER WIRE AWG–KCMIL	COPPER GND WIRE AWG	MIN. CONDUIT SIZE
15	C15	(4)14	14	1/2"
20	C20	(4)12	12	1/2"
25	C25	(4)10	10	1/2"
30	C30	(4)10	10	1/2"
35	C35	(4)8	10	3/4"
40	C40	(4)8	10	3/4"
45	C45	(4)8	10	3/4"
50	C50	(4)8	10	3/4"
60	C60	(4)6	10	1"
70	C70	(4)4	8	1 1/4"
80	C80	(4)4	8	1 1/4"
90	C90	(4)3	8	1 1/4"
100	C100	(4)3	8	1 1/4"
110	C110	(4)2	6	1 1/4"
125	C125	(4)1	6	1 1/2"
150	C150	(4)1/0	6	1 1/2"
175	C175	(4)2/0	6	2"
200	C200	(4)3/0	6	2"
225	C225	(4)4/0	4	2 1/2"
250	C250	(4)250	4	2 1/2"
300	C300	(4)350	4	3"
350	C350	(4)400	3	3"
400	C400	(4)600	3	3 1/2"
450	C450	(8)4/0	(2)2	(2) 2 1/2"
500	C500	(8)250	(2)2	(2) 2 1/2"
600	C600	(8)350	(2)1	(2) 3"
800	C800	(8)600	(2)1/0	(2) 3 1/2"
1000	C1000	(16)250	(4)2/0	(4) 2 1/2"
1200	C1200	(12)600	(3)3/0	(3) 3 1/2"
1600	C1600	(16)600	(4)4/0	(4) 3 1/2"
2000	C2000	(20)600	(5)250	(5) 3 1/2"
2500	C2500	(40)250	(10)350	(10)3"
3000	C3000	(48)250	(12)400	(12)3"
4000	C4000	(40)600	(10)500	(10) 4"

SIGNAL DISTRIBUTION SYSTEM LEGEND

ID TAG	CABLE TYPE	SIZE (O.D.)	DAKTRONICS PART NUMBER	CONDUIT PROVIDED & INSTALLED BY	CABLE			USED ON
					PROVIDED BY	INSTALLED BY	TERMINATED BY	
A	12 STRAND, 50µm DX FIBER	0.26"	W–1490	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
B	12 STRAND, 50µm DX PLEN FBR	0.29"	W–2033	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
C	6 STRAND, 50µm DX FIBER	0.22"	W–1489	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
D	6 STRAND, 50µm PLEN DX FBR	0.24"	W–2032	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
E	4 STRAND, 50µm DX FIBER	0.20"	W–2121	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
F	4 STRAND, 50µm BX FIBER	0.31"	W–1494	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
G	2 STRAND, 50µm DX FIBER	0.18"	W–2120	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
H	6 STRAND, 62.5µm DX FIBER	0.22"	W–1456	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
J	6 PAIR, 22 AWG W/SHIELD	0.362"	W–1245	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
K	6 PAIR, 22 AWG PLENUM	0.30"	W–2035	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
L	2 PAIR, 22 AWG W/SHIELD	0.168"	W–1234	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
M	2 PAIR, 22 AWG PLENUM	0.14"	W–2034	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
N	AUDIO; 2 PAIR, 22 AWG	0.22"	W–1614	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
P	AUDIO; 1 PAIR, 22 AWG	0.17"	W–1615	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
R	2 PAIR, 18 AWG W/SHIELD	0.38"	W–1852	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
S	4 PAIR, 24 AWG CAT5E	0.21"	W–1384	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
T	4 PAIR, 24 AWG CAT5	0.26"	W–1467	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
U	1 PAIR 22 AWG W/SHIELD	0.138"	W–1077	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
XA	RG59 LOW LOSS ANT CABLE	–	W–2476	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	NOT USED
XB	25' MICROPHONE CABLE	–	W–1560	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	
XC	500HD SPEAKER HARNESS	–	W–2317	SEE TAG	DAKTRONICS	SEE TAG	DES	
XD	25' MIXER HARNESS	–	W–1950	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	
XE	50' MIXER HARNESS	–	W–1951	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	
XF	50' FIBER PATCH CORD	–	W–1512	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	
XG	6' 1/4" TRS TO MALE XLR	–	W–2296	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	
XA–Z	OTHER W OR PR CABLES	–	W OR PR	SEE TAG	DAKTRONICS	SEE TAG	DAKTRONICS	

NOTES:

THE FOLLOWING 200 SERIES ARE NOT SCALED DRAWINGS AND SHOULD BE USED FOR POWER AND SIGNAL REQUIREMENTS ONLY.

IT IS THE RESPONSIBILITY OF DAKTRONICS ELECTRICAL INSTALLATION CONTRACTOR TO ENSURE THAT ALL ELECTRICAL WORK PERFORMED ON SITE MEETS OR EXCEEDS ALL LOCAL AND NATIONAL ELECTRICAL CODES.

ALL SIGNAL CABLE RUNS SHOULD BE LABELED WITH THEIR ORIGIN AND DESTINATION ON EACH END.

FIBER OPTIC CABLE RUNS MUST BE CONTINUOUS WITH A MINIMUM BEND RADIUS OF 15XO.D. OF THE FIBER CABLE.

IF A SHIELDED SIGNAL CABLE IS UTILIZED IN YOUR SYSTEM, ENSURE THAT THE CABLES SHIELD IS GROUNDED ON THE DISPLAY END ONLY, AND TO THE SHIELD TERMINAL AT THE SIGNAL CABLE SURGE ARRESTER CARD WHEN AVAILABLE.

ALL DISPLAYS MUST BE GROUNDED PER ARTICLE 250 AND 600 OF THE NATIONAL ELECTRICAL CODE WITH NO MORE THAN 10 OHMS GROUND RESISTANCE.

POWER CONTROL FOR DAKTRONICS SUPPLIED EQUIPMENT IS NOT PROVIDED BY DAKTRONICS UNLESS IT IS SPECIFICALLY NOTED IN THE CONTRACTUAL AGREEMENT.

THE OVER CURRENT PROTECTION DEVICE MUST BE MATCHED TO THE FAULT CURRENT THAT IS AVAILABLE IN THE POWER DELIVERY CIRCUIT. TO DETERMINE THE AVAILABLE FAULT CURRENT OF A SITE, AN ONSITE FAULT CURRENT SURVEY MAY NEED TO BE PERFORMED BY QUALIFIED PERSONNEL. IF THE AVAILABLE FAULT CURRENT IN THE ELECTRICAL SYSTEM EXCEEDS 10,000 AMPS, A DAKTRONICS REPRESENTATIVE SHOULD BE CONTACTED.

DUE TO THE INRUSH CURRENT (MOMENTARY SURGE) CREATED BY THE DISPLAY EQUIPMENT ON STARTUP, THE OVER CURRENT PROTECTION DEVICE(S) MAY HAVE TO BE OVERSIZED.

DAKTRONICS UTILIZES BOTH STANDARD AND SUPPLEMENTARY CIRCUIT BREAKERS IN THE DISPLAY ASSEMBLY PROCESS. IT IS DAKTRONICS ELECTRICAL INSTALLATION CONTRACTORS RESPONSIBILITY TO ENSURE THAT ALL PRIMARY FEEDER CIRCUIT BREAKERS TO EACH DISPLAY/DISPLAY SECTION ARE UL 489 LISTED.

DAKTRONICS IS NOT RESPONSIBLE FOR THE QUALITY OF THE POWER DELIVERY SYSTEM TO THE DISPLAY SYSTEM.

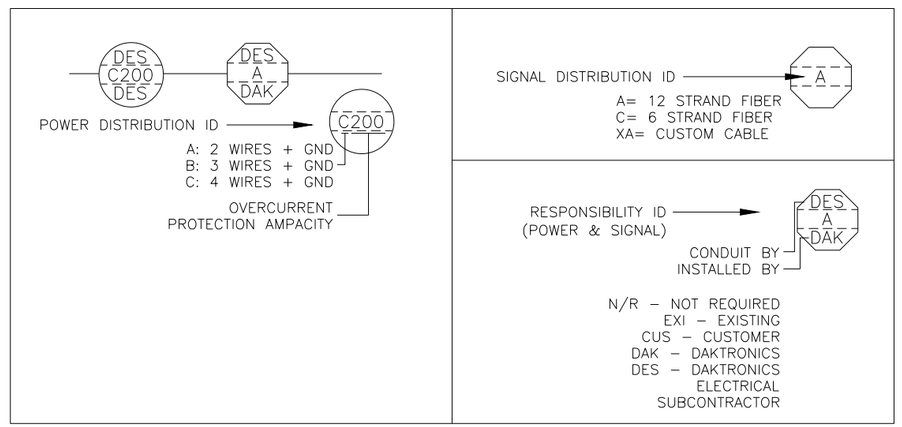
BECAUSE EACH INSTALLATION IS UNIQUE, DAKTRONICS OFFERS THESE INSTRUCTIONS AS GUIDELINES ONLY. DAKTRONICS, INC. ASSUMES NO LIABILITY IF INSTALLATION STEPS HAVE BEEN OMITTED OR OTHER NECESSARY PROCEDURES ARE NOT INCLUDED IN THIS SYSTEM RISER DIAGRAM.

POWER AND SIGNAL REQUIREMENTS ARE SPECIFIED TO THE EQUIPMENT AND SETUP SHOWN. ANY CHANGES MADE TO EQUIPMENT OR THEIR SETUP SHOULD BE DISCUSSED WITH DAKTRONICS DESIGN PERSONNEL AND WILL REQUIRE AN UPDATED RISER DIAGRAM DRAWING.

THE CONTRACTUAL AGREEMENT WILL DETERMINE THE PARTY OR PARTIES RESPONSIBLE FOR ITEMS LISTED AS FIELD INSTALLED. THIS DRAWING IS NOT INTENDED TO DETERMINE RESPONSIBILITIES AND SHOULD BE USED FOR REFERENCES ONLY.

ACTUAL PLACEMENT OF ELECTRICAL COMPONENTS, SUCH AS PANEL BOARDS, A/C'S, AND SPLICE PANELS, MAY VARY. PLEASE REFERENCE THE SYSTEM SHOP DRAWING FOR THIS DETAIL. THIS DRAWING REPRESENTS A GENERAL MOUNTING LOCATION ONLY.

EXTERNALLY MOUNTED HARDWARE
INTERNALLY MOUNTED HARDWARE

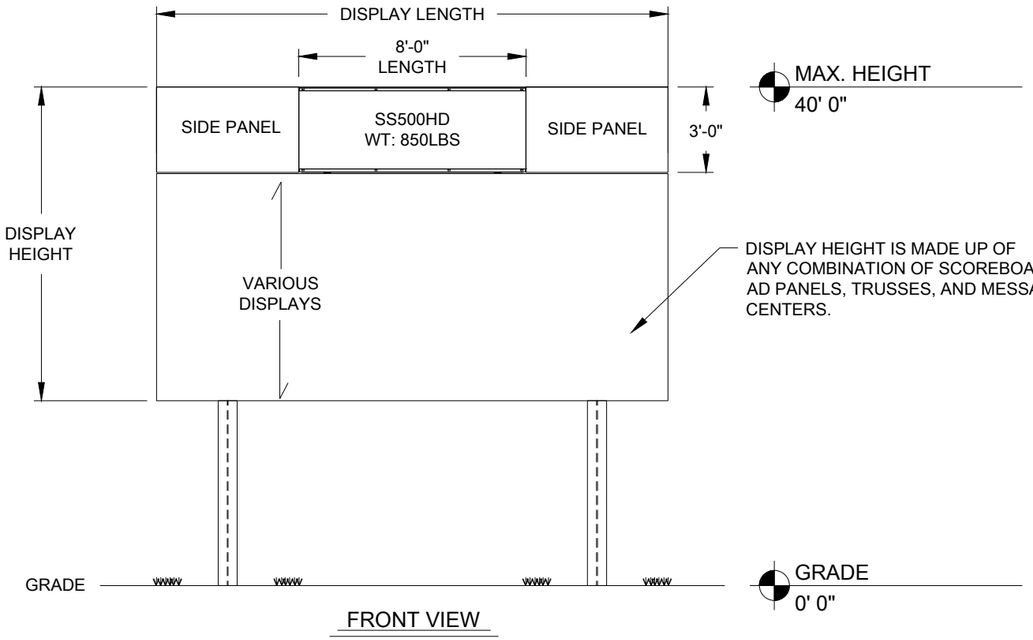


REV	DATE:		BY:
03	06 JUN 12	ADDED ID TAG XF–XG	JWC
02	28 JAN 11	UPDATE DWG TO NEW TITLE BLOCK	AMS
01	24 JAN 11	UPDATE PART NUMBER FOR 500HD HARNESS	AMS

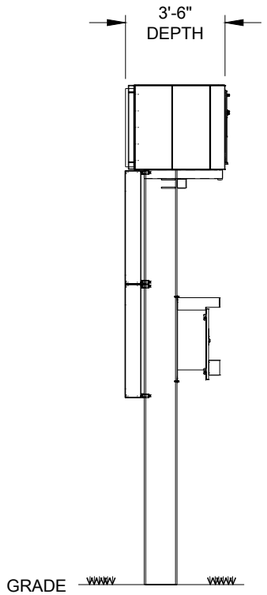
DAKTRONICS, INC.
BROOKINGS, SD 57006
DO NOT SCALE DRAWING

PROJ: SPORTSOUND SYSTEMS;
TITLE: SYSTEM RISER; ELECTRICAL & AUDIO NOTES
DESIGN: ALICHT | DRAWN: ALICHT | DATE: 10 MAR 10
SCALE: NONE

SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	
	03	P1561	F-01-B	985713

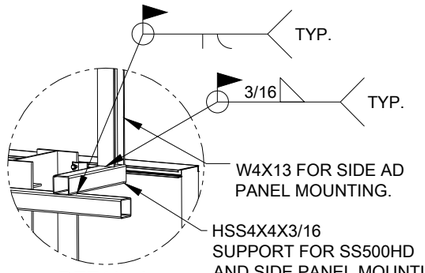


FRONT VIEW



SIDE VIEW

FOR SIDE AD/TRUSS ATTACHMENT TO TUBE REFER TO DAKTRONICS DRAWING: 1348-E10B-1111650.



DETAIL A
SCALE 1:32

TABLE 2

DISPLAY LENGTH (FT.)	A (FT)	B (FT)	STRINGER LENGTH
14	4'-9"	6'-3"	12'-11"
16	5'-0"	7'-0"	14'-5"
18	5'-3"	7'-9"	15'-11"
20	5'-6"	8'-6"	17'-5"
25	6'-10"	9'-8"	19'-9"
27	7'-2"	10'-4"	21'-1"
28	7'-4"	10'-8"	21'-9"
32	7'-0"	13'-0"	26'-5"
36	6'-10"	15'-4"	31'-1"

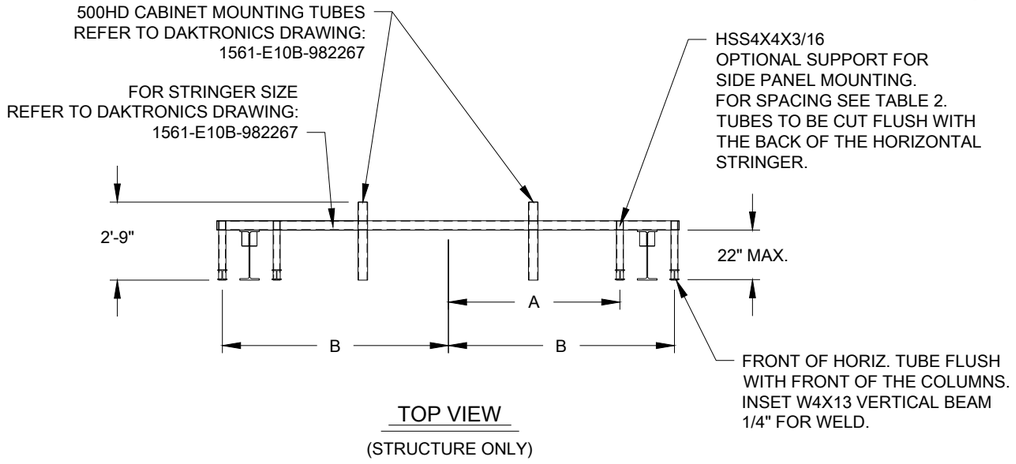
NOTES:

1.0 REFERENCE
1.1 REFER TO DAKTRONICS DRAWING: 1561-E10B-969776 FOR SPORTSOUND 500HD ENGINEERING SPECIFICATIONS.
1.2 REFER TO DAKTRONICS DRAWING: 1561-E10C-982267 FOR SPORTSOUND 500HD MOUNTING DETAILS AND RECOMMENDED STRINGER SIZE.
1.3 REFER TO DAKTRONICS RISER DIAGRAM FOR ALL ELECTRICAL POWER AND DATA SPECIFICATIONS.
1.4 THE SHOWN SYSTEM IS PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES. THE DESIGN MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE INSTALLATION BEFORE THEY CAN BE USED FOR FABRICATION OR ERECTION.

2.0 GENERAL NOTES
2.1 ALL DIMENSIONS ARE IN FEET AND INCHES.
2.2 REFER TO INSTALLATION AND MAINTENANCE MANUAL FOR COMPLETE INSTALLATION INSTRUCTIONS.

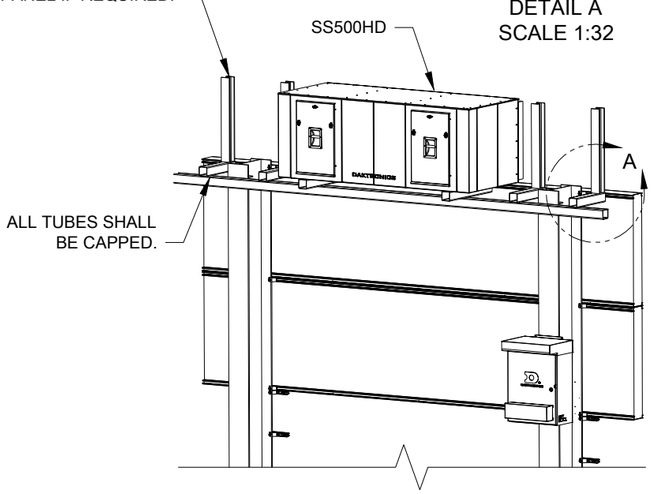
3.0 SOUND CABINET NOTES
3.1 DAKTRONICS SOUND CABINET IS STEEL CONSTRUCTED SKELETON WITH ALUMINUM PANELING FASTENED TO ITS EXTERIOR.
3.2 LIFTING POINTS ARE PROVIDED BY DAKTRONICS. WHEN LIFTING USE 45° OR GREATER, FROM THE HORIZON, CABLE SYSTEM. ALIGN LIFT EYES WITH CABLES.
3.3 REMOVE SHIPPING BRACKETS FROM TOP OF CABINET. 3.4 PAINT COLOR:
SPEAKER CABINET COLOR: POWDER COAT BLACK.

4.0 STRUCTURAL NOTES
4.1 FABRICATION AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF AISC SPECIFCATIONS.
4.2 ALL WELDING (SHOP AND FIELD) SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.1-LATEST EDITION SPECIFICATIONS BY A CERTIFIED WELDER USING E70XX ELECTRODES.
4.3 INTERNATIONAL BUILDING CODE 2006 USED IN DESIGN OF SPORTSOUND CABINET SUPPORT MEMBERS WITH, IMPORTANCE FACTOR=1, Kzt=1.0, Kd=0.85, G=0.85, Cf=1.8, z=40ft AND EXPOSURE C. SEISMIC DESIGN WAS NOT CONSIDERED.
4.4 THE DESIGN WIND PRESSURES WERE SHIFTED AND ADJUSTED TO ACCOUNT FOR ASCE 7 PRESCRIBED OFFSET EFFECTS.
4.5 ALL STRUCTURAL STEEL SHALL BE ASTM A36 (36 KSI) EXCEPT:
- WIDE FLANGE SHALL BE A992 (50 KSI) STEEL
- TUBING SHALL BE A500-B (46 KSI)
4.6 ALL OPEN TUBE ENDS SHALL BE CAPPED AND WELDED ALL AROUND.



TOP VIEW

(STRUCTURE ONLY)



ISOMETRIC REAR VIEW

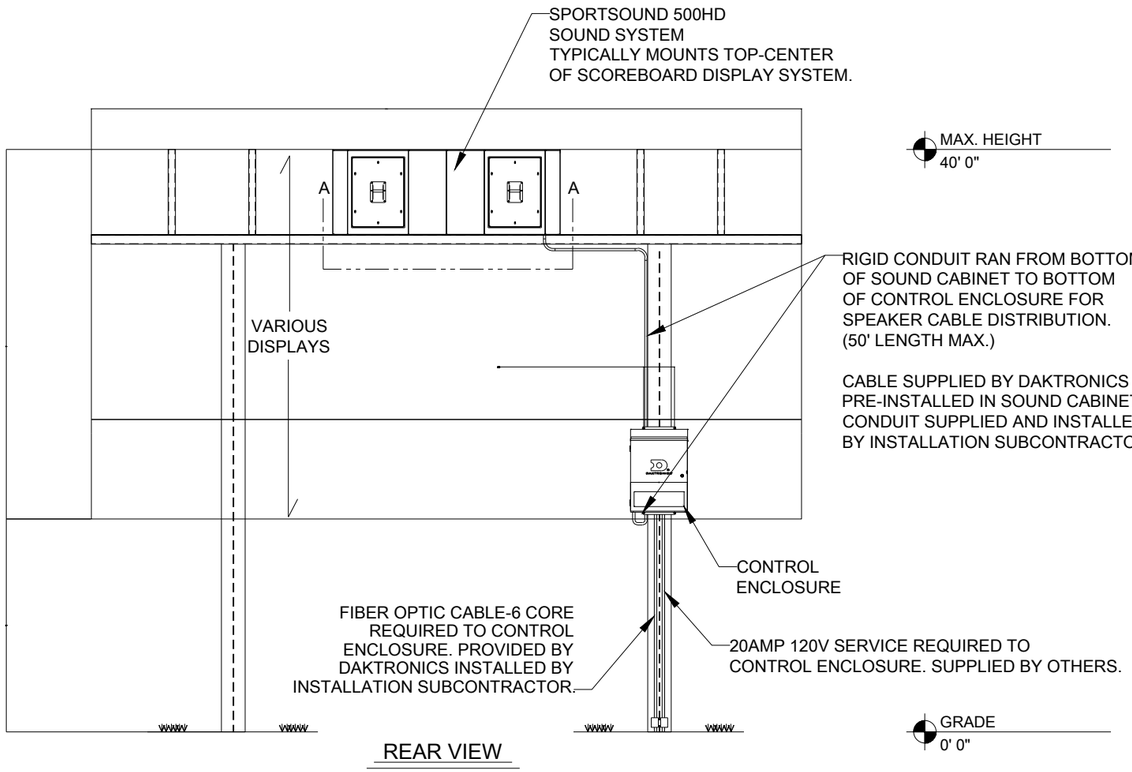
SS500HD W/ SIDE AD
MOUNTING TUBES & BEAMS

REV	DATE:		BY:
04	23 JAN 13	MADE OPTIONAL SUPPORT TUBES FOR AD PANELS FLUSH WITH THE REAR OF THE HORZ STRINGER	KCS
03	23 APR 12	REPLACED HSS VERT TUBES WITH W4X13 FOR AD PANEL MOUNTING	JLR
02	10 FEB 12	ADDED 27' DISPLAY TO TABLE	KCS
01	9 JUN 11	UPDATED SIDE VIEW	MBJ

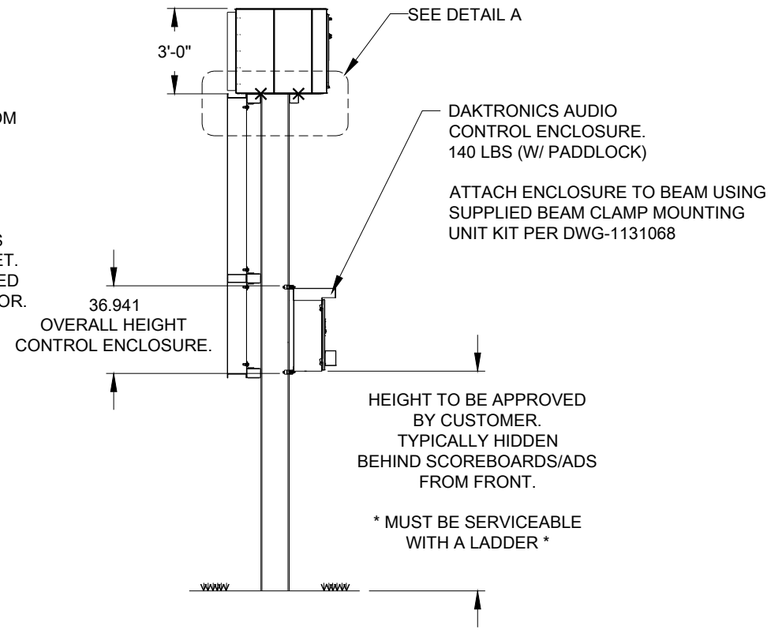
DAKTRONICS, INC.
BROOKINGS, SD 57006
DO NOT SCALE DRAWING

PROJ: DAKTRONICS AUDIO SYSTEMS - SPORTSOUND 500HD
TITLE: SIDE PANEL MOUNTING DETAILS W/ SS500HD
DESIGN: MSHRESTHA | DRAWN: DTREML | DATE: 22 MAR 10
SCALE: 3/16"=1'

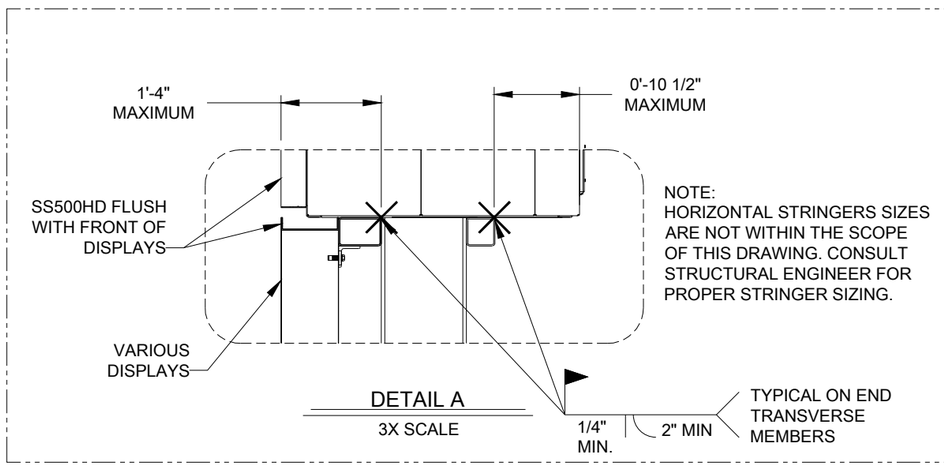
SHEET	REV	JOB NO:	FUNC - TYPE - SIZE	
	04	P1561	E - 10 - B	992088



REAR VIEW

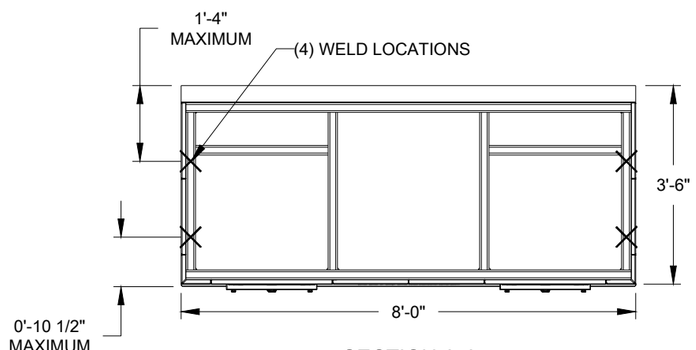


SIDE VIEW



DETAIL A

3X SCALE



SECTION A-A

(BOTTOM OF CABINET)
2X SCALE

NOTES:

1.0 REFERENCE

1.1 REFER TO DAKTRONICS DRAWING: 1561-E10B-969776 FOR SPORTSOUND 500HD ENGINEERING SPECIFICATIONS.
1.2 REFER TO DAKTRONICS RISER DIAGRAM FOR ALL ELECTRICAL POWER AND DATA SPECIFICATIONS.
1.3 THE SHOWN SYSTEM IS PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS AND ARE NOT INTENDED FOR CONSTRUCTION PURPOSES. THE DESIGN MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE INSTALLATION BEFORE THEY CAN BE USED FOR FABRICATION OR ERECTION.

2.0 GENERAL NOTES

2.1 ALL DIMENSIONS ARE IN FEET AND INCHES.
2.2 REFER TO INSTALLATION AND MAINTENANCE MANUAL FOR COMPLETE INSTALLATION INSTRUCTIONS.

3.0 SOUND CABINET NOTES

3.1 DAKTRONICS SOUND CABINET IS STEEL CONSTRUCTED SKELETON WITH ALUMINUM PANELING FASTENED TO ITS EXTERIOR.
3.2 LIFTING POINTS ARE PROVIDED BY DAKTRONICS. WHEN LIFTING USE 45° OR GREATER, FROM THE HORIZON, CABLE SYSTEM. ALIGN LIFT EYES WITH CABLES.
3.3 REMOVE SHIPPING BRACKETS FROM TOP OF CABINET.
3.4 PAINT COLOR:
SPEAKER CABINET COLOR: POWDER COAT BLACK.

4.0 STRUCTURAL NOTES

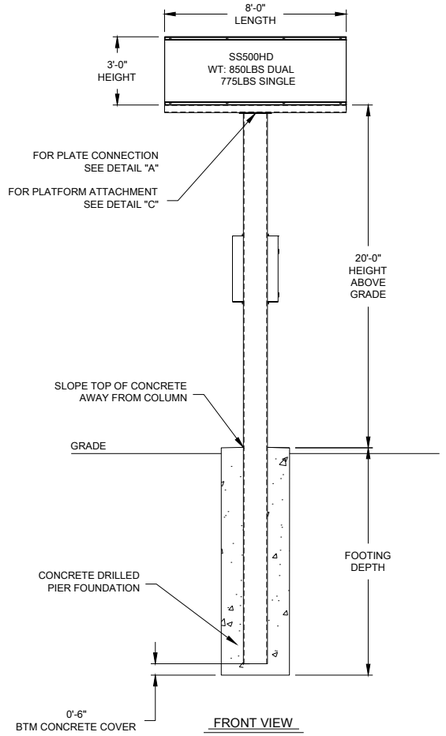
4.1 FABRICATION AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF AISC SPECIFCATIONS.
4.2 ALL WELDING (SHOP AND FIELD) SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.1-LATEST EDITION SPECIFICATIONS BY A CERTIFIED WELDER USING E70XX ELECTRODES.
4.3 ALL STRUCTURAL STEEL SHALL BE ASTM A36 (36 KSI) EXCEPT:
- WIDE FLANGE SHALL BE A992 (50 KSI) STEEL
- TUBING SHALL BE A500-B (46 KSI)
4.4 ALL OPEN TUBE ENDS SHALL BE CAPPED AND WELDED ALL AROUND.

REV	DATE:		BY:
03	10 APR 13	UPDATED VIEW WITH CONTROL ENCLOSURE TO SHOW UPDATED MOUNTING	LMG
02	9 JUN 11	UPDATED SIDE & BTM VIEWS	MBJ
01	3 JAN 11	CHANGED FIBER CORE COUNT FROM 2 TO 6	DCS

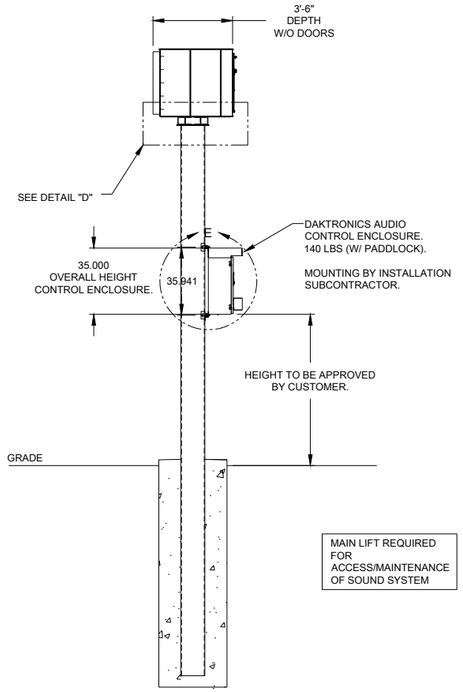
DAKTRONICS, INC.
BROOKINGS, SD 57006
DO NOT SCALE DRAWING

PROJ: DAKTRONICS AUDIO SYSTEMS - SPORTSOUND 500HD
TITLE: SS500HD MOUNTING; W/ STRINGER MOUNTED DISPLAYS
DESIGN: DTREML | DRAWN: DTREML | DATE: 22 MAR 10
SCALE: 3/16"=1'

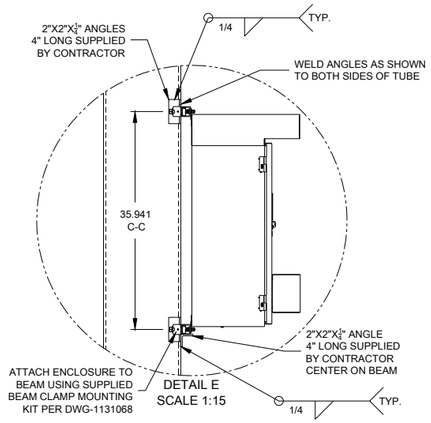
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	
	03	P1561	E - 10 - B	992093



FRONT VIEW



SIDE VIEW



DETAIL E
SCALE 1:15

FINISH:

PRIME ALL STEEL WITH EPOXY BASE PRIMER.

PAINT ALL STEEL PER PROJECT SPECIFICATION. CONTACT DAKTRONICS PROJECT MANAGER FOR PAINT SPECIFICATION.

COLUMN LENGTH CALCULATION	
HEIGHT ABOVE GRADE	+
FOOTING DEPTH	+
BTM CONCRETE COVER	- 0.5'
STEEL PLATFORM	- .33"
TOTAL COLUMN LENGTH	

NOTE:
-REFER TO NOTE 1.6 FOR EXPOSURE CATEGORY DEFINITIONS.

EXPOSURE B				
HEIGHT ABOVE GRADE (FT)	DESIGN WIND VELOCITY			
	WIND SPEED (MPH)	COLUMN (PIPE)	FOOTING SIZE (FT)	WIND PRESSURE (PSF)
20	90	STD. 8	3' X 5'-6"	17.71
	110	STD. 8	3' X 6'	26.45
	130	STD. 8	3' X 7'	36.94
	150	STD. 10	3' X 7'-6"	49.18
30	90	STD. 8	3' X 6'	19.63
	110	STD. 10	3' X 7'-6"	29.32
	130	STD. 10	3' X 8'	40.96
	150	STD. 12	3' X 9'	54.53
40	90	STD. 10	3' X 7'	21.17
	110	STD. 10	3' X 8'-6"	31.63
	130	STD. 12	3' X 9'-6"	44.17
	150	16 X 3/8"	3' X 10'-6"	58.81

EXPOSURE C				
HEIGHT ABOVE GRADE (FT)	DESIGN WIND VELOCITY			
	WIND SPEED (MPH)	COLUMN (PIPE)	FOOTING SIZE (FT)	WIND PRESSURE (PSF)
20	90	STD. 8	3' X 6'	25.3
	110	STD. 8	3' X 7'	37.8
	130	STD. 10	3' X 8'	52.8
	150	STD. 10	3' X 8'-6"	70.4
30	90	STD. 10	3' X 7'	27.3
	110	STD. 10	3' X 8'-6"	40.8
	130	STD. 12	3' X 9'-6"	57.0
	150	14 X 3/8"	3' X 10'-6"	75.9
40	90	STD. 10	3' X 8'	28.9
	110	STD. 12	3' X 9'-6"	43.2
	130	16 X 3/8	3' X 11'	60.3
	150	18 X 3/8"	3' X 12'-6"	80.3

COLUMN DIMENSIONS = DIAMETER X THICKNESS
FOOTING DIMENSIONS = DIAMETER X DEPTH

NOTES:

1.0 STRUCTURAL NOTES

1.1 FOOTING AND COLUMN SIZES ARE SUGGESTIONS ONLY, PROVIDED TO ASSIST WITH ESTIMATING INSTALLATION COSTS AND ARE NOT INTENDED FOR FINAL CONSTRUCTION PLANS. THE DESIGN MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE INSTALLATION BEFORE THEY CAN BE USED FOR FABRICATION OR ERECTION. REFER TO SCOPE OF WORK FOR SUBCONTRACTOR RESPONSIBILITIES.

1.2. INTERNATIONAL BUILDING CODE 2006 USED IN DESIGN OF COLUMNS AND FOOTINGS WITH, IMPORTANCE FACTOR=1, Kzt=1.0, Kd=0.85, G=0.85. SEISMIC DESIGN WAS NOT CONSIDERED.

1.3. FOOTING DIMENSIONS ARE BASED ON ASSUMED SOIL CLASS 4 (ALLOWABLE LATERAL BEARING PRESSURE OF 150 psf).

1.4. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (36KSI) EXCEPT:
- ROUND PIPE SHALL BE GRADE A53 (35 KSI) STEEL
- TUBING SHALL BE A500-B (46 KSI)

1.5. CONCRETE SHALL HAVE A MINNIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 psi.

1.6. LOCAL BUILDING OFFICIALS SHOULD BE CONTACTED TO DETERMINE THE WIND SPEED AND EXPOSURE CATEGORY FOR THE PROPOSED SIGN LOCATION. THE EXPOSURE CATEGORIES B AND C ARE DEFINED AS:

EXPOSURE B - URBAN AND SUBURBAN AREAS, WOODED AREAS, OR OTHER TERRAIN WITH NUMEROUS CLOSELY SPACED OBSTRUCTIONS HAVING THE SIZE OF SINGLE-FAMILY DWELLINGS OR LARGER. THESE CONDITIONS MUST PREVAIL FOR A DISTANCE FROM THE SIGN OF AT LEAST 2,600 ft OR 20 TIMES THE SIGN HEIGHT, WHICHEVER IS GREATER

EXPOSURE C - OPEN TERRAIN WITH SCATTERED OBSTRUCTIONS HAVING HEIGHTS GENERALLY LESS THAN 30 FT. THIS CATEGORY INCLUDES FLAT OPEN COUNTRY, GRASSLANDS, AND ALL WATER SURFACES IN HURRICANE PRONE REGIONS.

1.7. REFER TO THE FOLLOWING DRAWINGS FOR FUTHER DETAILS:
DWG-969776 500HD SHOP DRAWING
DWG-980598 500HD SYSTEM RISER

2.0 WELDING NOTES

2.1 ALL WELDING (SHOP AND FIELD) SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.1 - LATEST EDITIONS. WELDERS SHALL BE QUALIFIED IN ACCORDANCE WITH D1.1 - LATEST EDITIONS.

2.2 MINIMUM ELECTRODE STRENGTH IS 70 KSI.

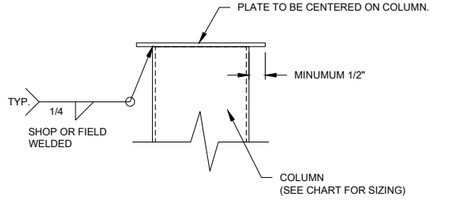
2.3 DIMENSIONS AND SQUARENESS IS CRITICAL WITH TOLERANCE OF +/- 1/16".

2.4 MAXIMUM ALLOWABLE GAP BETWEEN MATING COMPONENTS OF 1/16".

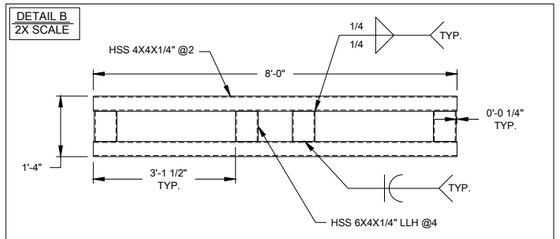
2.5 WELD ALL AROUND UNLESS OTHERWISE NOTED.

2.6 CAP ALL OPEN TUBE ENDS.

DETAIL A
4X SCALE

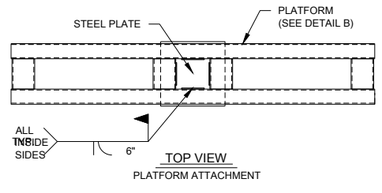


DETAIL B
2X SCALE



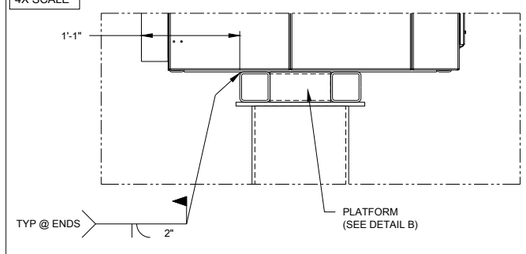
TOP VIEW
PLATFORM

DETAIL C
2X SCALE



TOP VIEW
PLATFORM ATTACHMENT

DETAIL D
4X SCALE

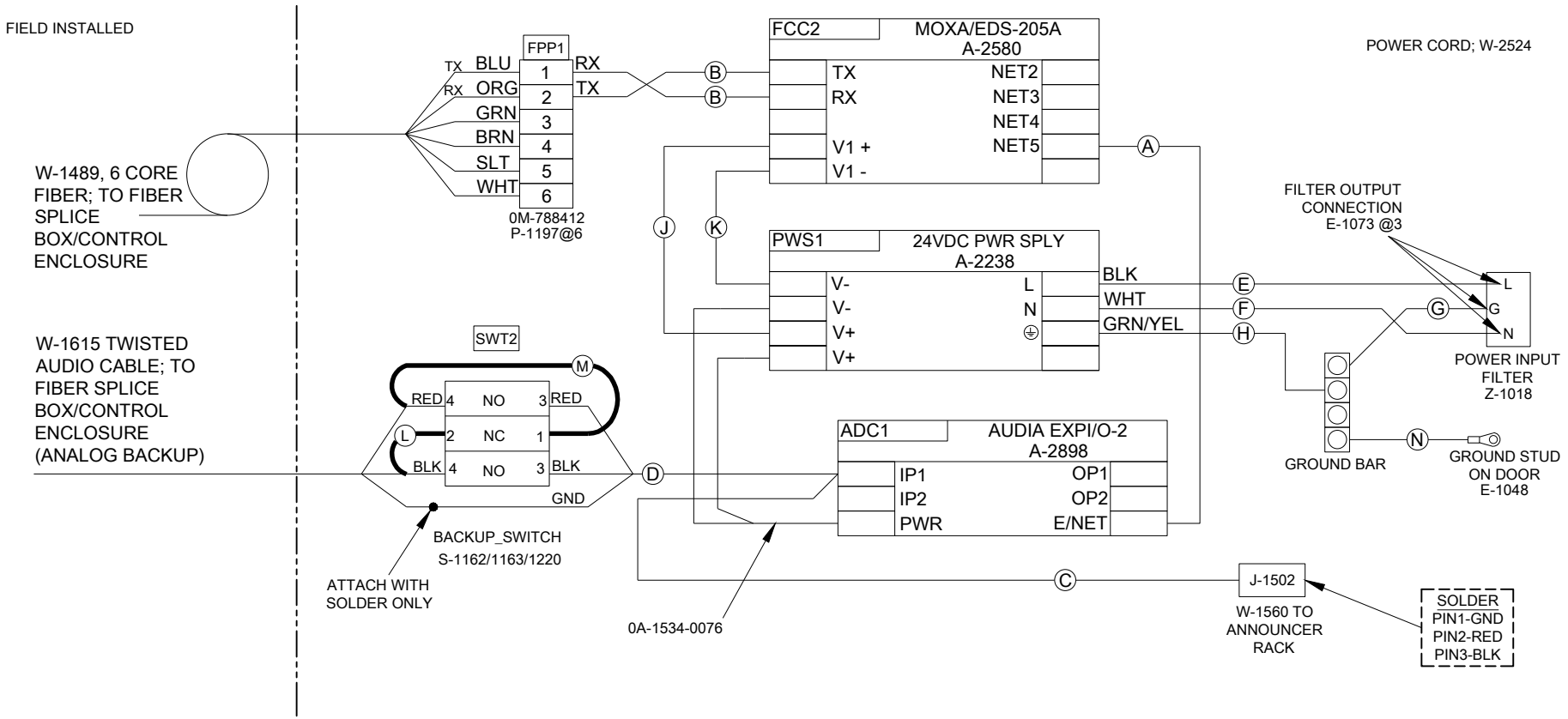


REV	DATE:		BY:
02	11 APR 13	UPDATE SIDE VIEW TO SHOW NEW MOUNTING SCHEME ADDED DETAIL VIEW E	AJH
01	9 JUN 11	UPDATED SIDE VIEW	MBJ
REV	DATE:		BY:

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

PROJ: DAKTRONICS AUDIO SYSTEMS
TITLE: SINGLE COLUMN INSTALL SPECS: SS500HD
DESIGN: DTREML | DRAWN: KSCHNAB | DATE: 3 MAY 10
SCALE: 1/4" = 1'

SHEET	REV	JOB NO:	FUNC - TYPE - SIZE	
	02	P1561	E - 10 - C	1005534



WIRE C-N INCLUDED IN 0A-1534-0077

- (A) W-1542; 1' RJ45 CAT5E PATCH CABLE
- (B) W-1509; 1' ST-ST 50UM FIBER PATCH
- (C) W-1615; 22AWG AUDIO, 1 PAIR
- (D) W-1615; 22AWG AUDIO, 1 PAIR
- (E) W-1078; 14AWG BLACK
- (F) W-1079; 14AWG WHITE
- (G) W-1080; 14AWG GREEN/YELLOW
- (H) W-1080; 14AWG GREEN/YELLOW
- (J) W-1094; 18AWG RED
- (K) W-1092; 18AWG BLACK
- (L) W-1054; 22AWG BLACK; JUMPER WIRES
- (M) W-1054; 22AWG BLACK; JUMPER WIRES
- (N) W-1080; 14AWG GREEN/YELLOW

0A-1534-0060 F ASSY; ANALOG BACKUP FIBER BOX

REV	DATE:		BY:
02	24 JUN 13	UPDATED WIRING	CJB
01	2 NOV 12	ADDED TX AND RX TO FPP1	CJB

REV	DATE:		BY:
03	07 APR 21	CN117330 REMOVED TERM BLOCK PART NUMBER CHANGED TO CURRENT DRAWING LAYOUT	JSF

THIRD ANGLE PROJECTION

PROJECT:	SPORTSOUND SYSTEMS		
TITLE:	AUDIO; SPORTSOUND, FIBER BOX SCHEMATIC		
DATE: 01 MAY 12	DIM UNITS: INCHES [MILLIMETERS]	SHEET	REV
SCALE: NTS	DO NOT SCALE DRAWING		03
DESIGN: CBRANDT	JOB NO. P1340	FUNC - TYPE - SIZE R - 01 - A	1095894
DRAWN: CBRANDT			

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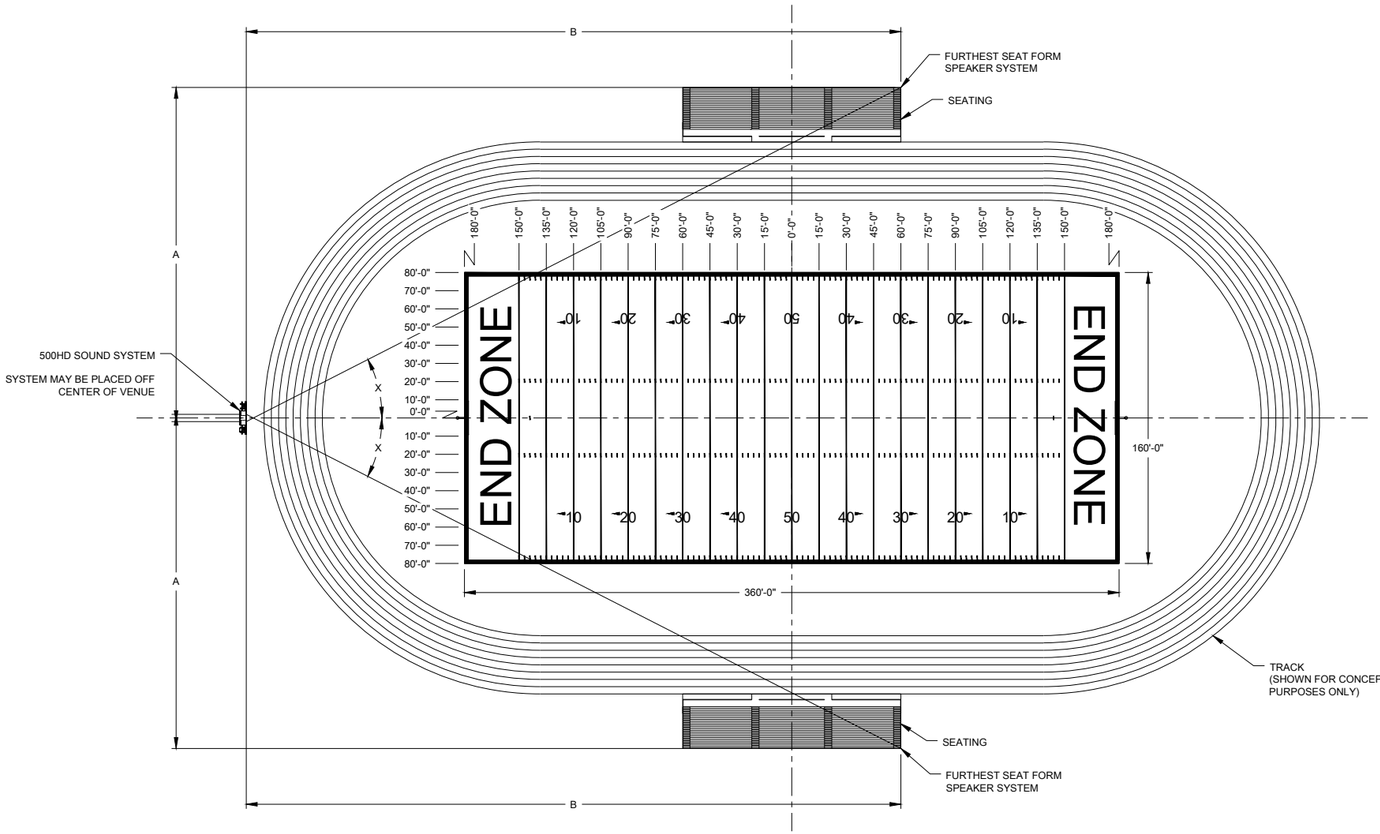
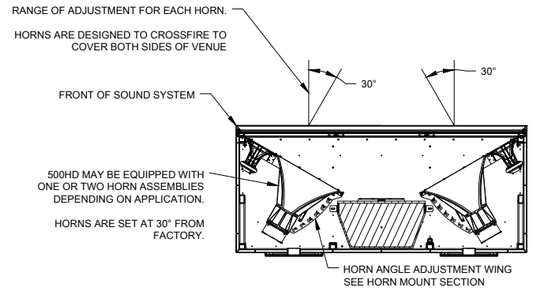
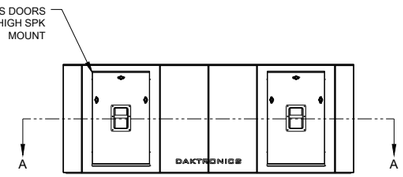


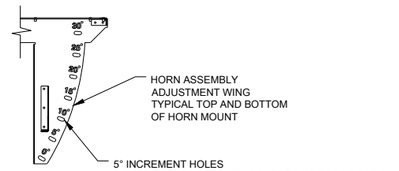
PLAN VIEW



SECTION A-A



500HD REAR VIEW
20 X SCALE



HORN MOUNT SECTION

	SPEAKER AIMING CHART											
DISTANCE A	**ANGLE X** VALUE X IS IN DEGREES											
250'												30
240'											30	30
220'										30	30	30
210'									30	30	30	30
200'								30	30	30	30	25
190'							30	30	30	30	25	25
170'						30	30	30	25	25	25	25
160'					30	30	30	25	25	25	25	20
150'					30	30	25	25	25	25	20	20
140'				30	30	25	25	25	20	20	20	20
130'			30	30	25	25	25	20	20	20	20	20
120'		30	30	25	25	25	20	20	20	20	20	15
110'	30	30	25	25	25	20	20	20	20	15	15	15
100'	30	25	25	25	20	20	20	15	15	15	15	15
90'	25	25	20	20	20	20	15	15	15	15	15	15
80'	25	20	20	20	15	15	15	15	15	15	10	10
70'	20	20	20	15	15	15	15	10	10	10	10	10
60'	20	15	15	15	15	10	10	10	10	10	10	10
50'	15	15	15	10	10	10	10	10	10	10	10	5
40'	15	10	10	10	10	10	10	5	5	5	5	5
30'	10	10	10	5	5	5	5	5	5	5	5	5
20'	5	5	5	5	5	5	5	5	5	5	5	5
10'	5	5	5	0	0	0	0	0	0	0	0	0
0'	0	0	0	0	0	0	0	0	0	0	0	0
DISTANCE B	180'	200'	220'	240'	260'	280'	300'	320'	340'	360'	380'	400'

NOTES:

-THE MID/HIGH FREQUENCY HORN MOUNT IS ADJUSTABLE FROM 0° TO 30° IN 5° INCREMENTS.

-USE THE CHART TO DETERMINE WHAT ANGLE THE INTERNAL HORN(S) SHOULD BE SET TO.

-IF THE 500HD SOUND SYSTEM IS NOT ORIENTED PERPENDICULAR TO THE FIELD THE ANGLE OF THE INTERNAL MOUNTS WILL HAVE TO BE ADJUSTED TO COMPENSATE FOR THE ANGLE THE SYSTEM IS PLACED ON THE FIELD.

-IF THE 500HD IS EQUIPPED WITH TWO HORN ASSEMBLIES TREAT EACH AS A INDEPENDENT ASSEMBLY AND AIM EACH ACCORDING TO PROVIDE THE BEST SOUND COVERAGE.

-THE SUBWOOFER REQUIRES NO ADJUSTMENT.

-ALL LINEAR DIMENSIONS ARE IN FEET AND INCHES

-ALL ANGLE DIMENSIONS ARE IN DEGREES

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

PROJ: DAKTRONICS AUDIO
TITLE: MID/HIGH SPEAKER ADJUSTMENT CHART; 500HD
DESIGN: KSCHNABEL | DRAWN: KSCHNABEL | DATE: 31 JUL 12
SCALE: 1/50" = 1'

SHEET	REV	JOB NO:	FUNC • TYPE • SIZE	
	00	P1561	F - 10 - C	1108053

W-1615 FROM ANNOUNCER RACK DWG-1095894 FIELD TERMINATION

TRX1 — JENSEN/DIN-LI T-1130

	4	+	S	7	SHLD
	5	- IN	OUT -	8	A216 BLK
	6	S	+	9	RED

TO CABINET GROUND LUG LOCATED TOP RIGHT OF CABINET — (P) A200 GND

PWS2_GND — A217

A221 FIELDWIRE

GND_BAR TB-1037

A205 — (B)

INCLUDED WITH EN-2513

THERMOSTAT, TERMINAL BLOCK (L, N, G), FAN

BLK, RED, GRN — A209 — (D)

DAK REPLACEMENT PARTS:
-FAN = B-1045
-THERMOSTAT = S-1247

AMP1 — SP3-1200-1200-400-CN A-3922465

A206	COBRA	OP1	A210
A216	XLR IN	OP2	A211
A215	XLR OUT	OP3	A212
A205	POWER IN		
A208	POWER OUT		

AMP2 — SP2-1200-1200-CN A-3922601

A207	COBRA	OP1	A213
A215	XLR IN	OP3	A214
	XLR OUT		
A208	POWER IN		
A209	POWER OUT		

(E) (E) (E) (F) (F)

TBL2 — A-3482091

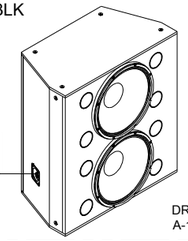
WHT	A210	TB1	A310 WHT
BLK	A210	TB2	A310 BLK
RED	A211	TB3	A311 RED
BLK	A211	TB4	A311 BLK
BLU	A212	TB5	A312 BLU
BLK	A212	TB6	A312 BLK
ORG	A213	TB7	A313 ORG
BLK	A213	TB8	A313 BLK
GRN	A214	TB9	A314 GRN
BLK	A214	TB10	A314 BLK

CONNECTIONS TO 500HD CABINET ONSITE, CABLE ASSY COILED IN LEFT SIDE OF CABINET VIEWED FROM THE FRONT

HARNESS# W-2317

LOW FREQUENCY ASSEMBLY
CONNECTION TERMINALS
WHT=RED
BLK=BLK

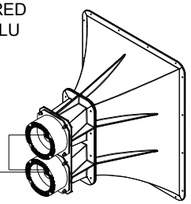
A310 — SPK5



DRIVERS: A-1903 @2

MID FREQUENCY ASSEMBLY
CONNECTION TERMINALS
RED=RED
BLK=BLU

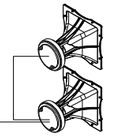
A311 — SPK3, SPK4



DRIVERS: A-2305 @2

HIGH FREQUENCY ASSEMBLY
CONNECTION TERMINALS
BLU=RED
BLK=BLK

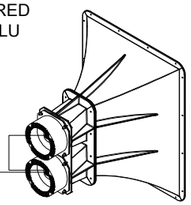
A312 — SPK1, SPK2



DRIVERS: A-2302 @2

MID FREQUENCY ASSEMBLY
CONNECTION TERMINALS
ORG=RED
BLK=BLU

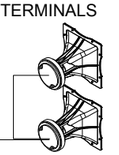
A313 — SPK6, SPK7



DRIVERS: A-2305 @2

HIGH FREQUENCY ASSEMBLY
CONNECTION TERMINALS
GRN=RED
BLK=BLK

A314 — SPK8, SPK9



DRIVERS: A-2302 @2

SET BOTH BSP DIP SWITCHES TO THE ON POSITION

FCC2 — MOXA/EDS-205A A-2580

A206	NET2	TX	A201
A207	NET3	RX	A202
	NET4		
	NET5	V1 +	A203 RED
		V1 -	A203 BLK

(A) (A)

FPP2

A201	#1	TX
A202	#2	RX
	#3	
	#4	
	#5	
	#6	

0M-788412
P-1197@6

W-1489, 6 STRAND 50uM DX FIBER

FIBER COLORS FROM FPP2
1) BLU
2) ORG
3) GRN
4) BRN
5) SLT
6) WHT

DES C DES

(K) (L)

PWS2 — 24VDC PWR SPLY A-2238

BLK	A218	L	V1+ A203 RED
RED	A219	N	V1- A203 BLK
GND_BAR W-1080	A217	G	V2+ A204 RED
			V2- A204 BLK

(M)

LED1 — PANEL MOUNT LED DS-1694

V-	A204	BLK
V+	A204	RED

TBL1 — TERM_BLK TB-1186

N2			
L2			
N1	L1		

RED (L), BLK (K)

DES A20 DES — BLK, WHT

ELECTRICIANS CONNECTIONS
2 CONDUCTS + GND
(120VAC 20A) 12AWG

0A-1340-0327

A220 BLK — BLK A223
A221 GRN/YEL
A222 RED — RED A224

Z-1007

-ASSEMBLY INCLUDES ALL CABLES CONNECTED TO Z-1007

(A) W-1509; 1' 50 MICRON FIBER JUMPER
(B) 0A-1561-0015; 2'6" POWERCON IN TO PIGTAIL
(C) 0A-1561-0066; 18" POWERCON IN/OUT CABLE
(D) 0A-1561-0021; 3' POWERCON OUT TO PIGTAIL
(E) 0A-1561-0017; HARNESS; SP-3 AMPLIFIER
(F) 0A-1561-0016; HARNESS; SP-2 AMPLIFIER
(G) W-1537; 2' RJ45 CAT5E PATCH CABLE
(J) W-1542; 1' RJ45 CAT5E PATCH CABLE
(K) W-1092; 18 AWG BLACK
(L) W-1094; 18 AWG RED
(M) 0A-1561-0018; POWER INDICATOR ASSEMBLY
(P) 0A-1561-0019; HARNESS; CONTROL CABINET GROUND
(Q) 0A-1340-0081; 2.5', XLR M TO PIGTAIL
(R) W-1917; 2' M XLR TO F XLR

SYSTEM RISER; ELECTRICAL & AUDIO NOTES - DWG-00985713
REFERENCE PACKET 0A-1561-0001
LABELS ADD-4425

REV	DATE:		BY:	
07	8 NOV 2021	CHANGED OP2 TO OP3 IN PART A3922601	TRG	
06	21 MAY 19	UPDATING INLET POWER TERMINAL BLOCK	MOL	
05	25 OCT 18	CHANGED POWERCON CABLE FROM 12" TO 18"	CJB	
04	27 JUL 18	3CH AMP A-3636 TO A-3922465 2CH AMP A-2538 TO A-3922601	CJB	
03	15 NOV 16	CHANGED 0M-943828, TB-1058, TB-1075 TO A-3482091 PER EC-22833	CJB	
02	01 APR 15	UPDATED AMPLIFIER CALLOUTS TO A-3636 AND A-2538	BJG	
01	14 OCT 13	UPDATED SPEAKER VIEWS AND SPEAKER NUMBERS	DMT	

THIRD ANGLE PROJECTION

PROJECT:	SPORTSOUND SYSTEMS			
TITLE:	SCHEMATIC; CONTROL ENCLOSURE 500HD-DUAL 120VAC			
DATE:	10 OCT 12	DIM UNITS: INCHES [MILLIMETERS]	SHEET	REV
SCALE:	NONE	DO NOT SCALE DRAWING		07
DESIGN:	CBRANDT	JOB NO. P1561	FUNC - TYPE - SIZE F - 03 - B	1115742
DRAWN:	CBRANDT			

W-1615 FROM ANNOUNCER RACK DWG-1095894 FIELD TERMINATION

TRX1 JENSEN/DIN-LI T-1130

	4	+	S	7		SHLD
	5	- IN	OUT -	8	A216	BLK
	6	S	+	9		RED

Ⓠ

TO CABINET GROUND LUG LOCATED TOP RIGHT OF CABINET — Ⓟ

PWS2_GND

GND

A200

A217

A221

FIELDWIRE

GND_BAR TB-1037

A205 — Ⓑ

INCLUDED WITH EN-2513

THERMOSTAT

TERMINAL BLOCK

L — BLK

N — RED

G — GRN

FAN

A208

DAK REPLACEMENT PARTS:
-FAN = B-1045
-THERMOSTAT = S-1247

AMP1 SP3-1200-1200-400-CN A-3922465

A206	COBRA	OP1	A210
A216	XLR IN	OP2	A211
	XLR OUT	OP3	A212
A205	POWER IN		
A208	POWER OUT		

Ⓔ Ⓔ Ⓔ

THIS HARNESS TO BE CONNECTED TO TBL2 AND LEFT DISCONNECTED INSIDE CONTROL ENCLOSURE

A213 — Ⓕ

A214 — Ⓕ

TBL2 A-3482091

WHT	A210	TB1	A310	WHT
BLK	A210	TB2	A310	BLK
RED	A211	TB3	A311	RED
BLK	A211	TB4	A311	BLK
BLU	A212	TB5	A312	BLU
BLK	A212	TB6	A312	BLK
ORG	A213	TB7	A313	ORG
BLK	A213	TB8	A313	BLK
GRN	A214	TB9	A314	GRN
BLK	A214	TB10	A314	BLK

CONNECTIONS TO 500HD CABINET ONSITE, CABLE ASSY COILED IN LEFT SIDE OF CABINET VIEWED FROM THE FRONT

HARNESS# W-2317

LOW FREQUENCY ASSEMBLY CONNECTION TERMINALS
WHT=RED
BLK=BLK

A310 — SPK5

DRIVERS: A-1903 @2

MID FREQUENCY ASSEMBLY CONNECTION TERMINALS
RED=RED
BLK=BLU

A311 — SPK3 — SPK4

DRIVERS: A-2305 @2

HIGH FREQUENCY ASSEMBLY CONNECTION TERMINALS
BLU=RED
BLK=BLK

A312 — SPK1 — SPK2

DRIVERS: A-2302 @2

A313

GRN/BLK & ORG/BLK ENDS ARE TO BE CAPPED WITH HEATSHRINK AND COILED UP FOR FUTURE USE

A314

SET BOTH BSP DIP SWITCHES TO THE ON POSITION

FCC2 MOXA/EDS-205A A-2580

A206	NET2	TX	A201	Ⓐ
	NET3	RX	A202	Ⓐ
	NET4			
	NET5	V1 +	A203	RED
		V1 -	A203	BLK

W-1489, 6 STRAND 50uM DX FIBER

FIBER COLORS FROM FPP2
1) BLU
2) ORG
3) GRN
4) BRN
5) SLT
6) WHT

FPP2

#1	TX
#2	RX
#3	
#4	
#5	
#6	

0M-788412
P-1197@6

DES C DES

Ⓚ Ⓛ

PWS2 24VDC PWR SPLY A-2238

BLK	A218	L	V1+ A203	RED
RED	A219	N	V1- A203	BLK
W-1080 GND_BAR	A217	G	V2+ A204	RED
			V2- A204	BLK

Ⓜ

LED1 PANEL MOUNT LED DS-1694

V-	A204	BLK
V+	A204	RED

TBL1 TERM_BLK TB-1186

N2 — WHT — Ⓛ

L2 — BLK — Ⓚ

DES A20 DES

BLK

WHT

L1

N1

0A-1340-0327

A220	BLK		BLK A223
A221	GRN/YEL	Z-1007	
A222	RED		RED A224

-ASSEMBLY INCLUDES ALL CABLES CONNECTED TO Z-1007

ELECTRICIANS CONNECTIONS
2 CONDUCTS + GND
(120VAC 20A) 12AWG

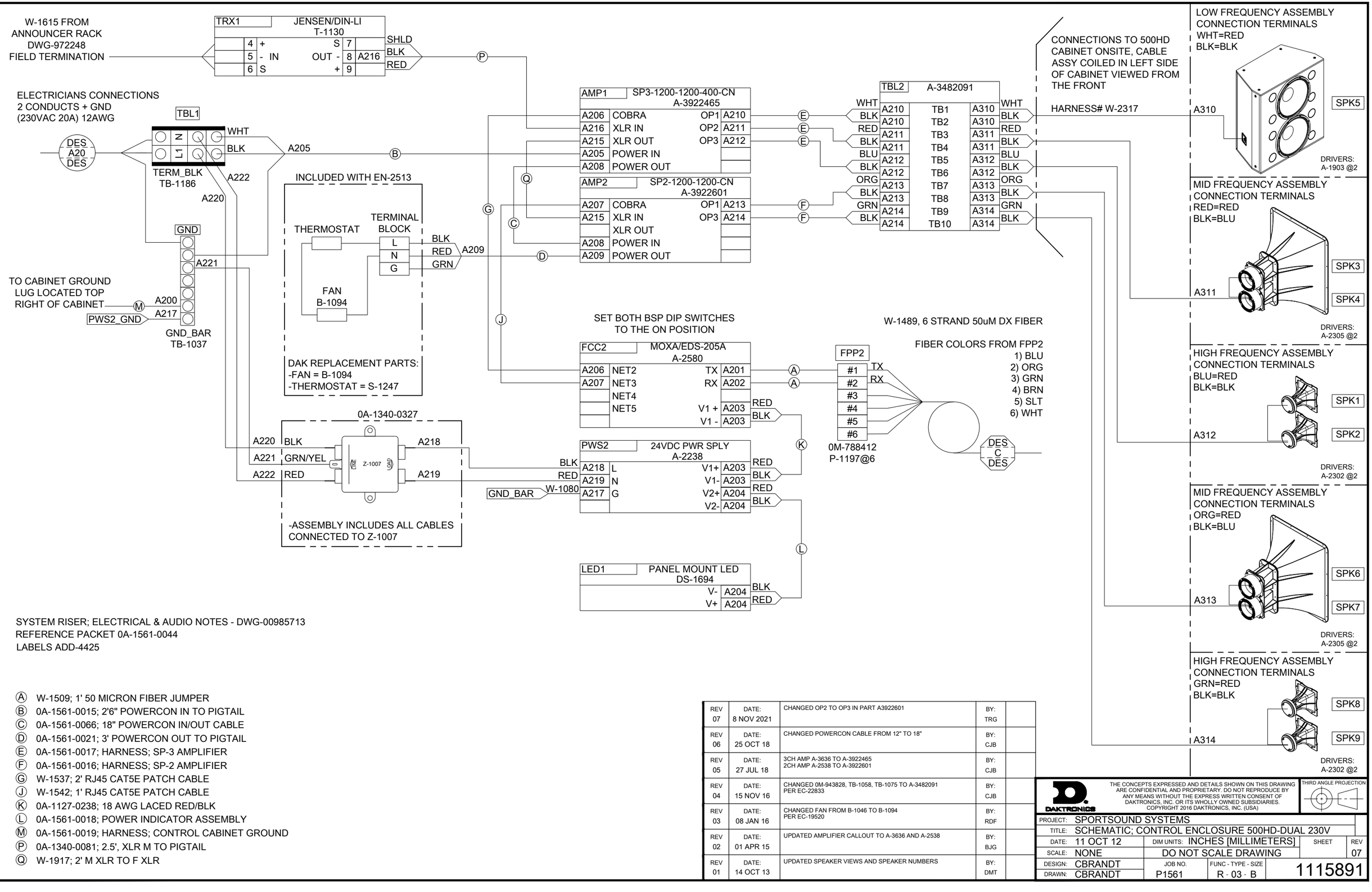
Ⓐ W-1509; 1' 50 MICRON FIBER JUMPER
Ⓑ 0A-1561-0015; 2'6" POWERCON IN TO PIGTAIL
Ⓒ 0A-1561-0066; 18" POWERCON IN/OUT CABLE
Ⓓ 0A-1561-0021; 3' POWERCON OUT TO PIGTAIL
Ⓔ 0A-1561-0017; HARNESS; SP-3 AMPLIFIER
Ⓕ 0A-1561-0016; HARNESS; SP-2 AMPLIFIER
Ⓖ W-1537; 2' RJ45 CAT5E PATCH CABLE
Ⓙ W-1542; 1' RJ45 CAT5E PATCH CABLE
Ⓚ W-1092; 18 AWG BLACK
Ⓛ W-1094; 18 AWG RED
Ⓜ 0A-1561-0018; POWER INDICATOR ASSEMBLY
Ⓟ 0A-1561-0019; HARNESS; CONTROL CABINET GROUND
Ⓠ 0A-1340-0081; 2.5', XLR M TO PIGTAIL
Ⓡ W-1917; 2' M XLR TO F XLR

SYSTEM RISER; ELECTRICAL & AUDIO NOTES - DWG-00985713
REFERENCE PACKET 0A-1561-0008
LABELS ADD-4425

REV	DATE:		BY:	
05	21 MAY 19	UPDATING INLET POWER TERMINAL BLOCK	MOL	
04	27 JUL 18	3CH AMP A-3636 TO A-3922465	CJB	
03	15 NOV 16	CHANGED 0M-943828, TB-1058, TB-1075 TO A-3482091 PER EC-22833	CJB	
02	01 APR 15	UPDATED AMPLIFIER CALLOUT TO A-3636	BJG	
01	14 OCT 13	UPDATED SPEAKER VIEWS AND SPEAKER NUMBERS	DMT	

THIRD ANGLE PROJECTION

PROJECT:	SPORTSOUND SYSTEMS			
TITLE:	SCHEMATIC; CONTROL ENCLOSURE 500HD-SINGLE 120VAC			
DATE:	DIM UNITS: INCHES [MILLIMETERS]		SHEET	REV
SCALE: NONE	DO NOT SCALE DRAWING			05
DESIGN: CBRANDT	JOB NO.	FUNC - TYPE - SIZE	1115872	
DRAWN: CBRANDT	P1561	F - 03 - B		



SYSTEM RISER; ELECTRICAL & AUDIO NOTES - DWG-00985713
REFERENCE PACKET 0A-1561-0044
LABELS ADD-4425

- Ⓐ W-1509; 1' 50 MICRON FIBER JUMPER
- Ⓑ 0A-1561-0015; 2'6" POWERCON IN TO PIGTAIL
- Ⓒ 0A-1561-0066; 18" POWERCON IN/OUT CABLE
- Ⓓ 0A-1561-0021; 3' POWERCON OUT TO PIGTAIL
- Ⓔ 0A-1561-0017; HARNESS; SP-3 AMPLIFIER
- Ⓕ 0A-1561-0016; HARNESS; SP-2 AMPLIFIER
- Ⓖ W-1537; 2' RJ45 CAT5E PATCH CABLE
- Ⓙ W-1542; 1' RJ45 CAT5E PATCH CABLE
- Ⓚ 0A-1127-0238; 18 AWG LACED RED/BLK
- Ⓛ 0A-1561-0018; POWER INDICATOR ASSEMBLY
- Ⓜ 0A-1561-0019; HARNESS; CONTROL CABINET GROUND
- Ⓟ 0A-1340-0081; 2.5', XLR M TO PIGTAIL
- Ⓠ W-1917; 2' M XLR TO F XLR

REV	DATE:		BY:	
07	8 NOV 2021	CHANGED OP2 TO OP3 IN PART A3922601	TRG	
06	25 OCT 18	CHANGED POWERCON CABLE FROM 12" TO 18"	CJB	
05	27 JUL 18	3CH AMP A-3636 TO A-3922465 2CH AMP A-2538 TO A-3922601	CJB	
04	15 NOV 16	CHANGED 0M-943828, TB-1058, TB-1075 TO A-3482091 PER EC-22833	CJB	
03	08 JAN 16	CHANGED FAN FROM B-1046 TO B-1094 PER EC-19520	RDF	
02	01 APR 15	UPDATED AMPLIFIER CALLOUT TO A-3636 AND A-2538	BJG	
01	14 OCT 13	UPDATED SPEAKER VIEWS AND SPEAKER NUMBERS	DMT	

THIRD ANGLE PROJECTION

PROJECT:	SPORTSOUND SYSTEMS			
TITLE:	SCHEMATIC; CONTROL ENCLOSURE 500HD-DUAL 230V			
DATE:	11 OCT 12	DIM UNITS: INCHES [MILLIMETERS]	SHEET	REV
SCALE:	NONE	DO NOT SCALE DRAWING		07
DESIGN:	CBRANDT	JOB NO.	FUNC - TYPE - SIZE	1115891
DRAWN:	CBRANDT	P1561	R - 03 - B	

W-1615 FROM ANNOUNCER RACK DWG-972248 FIELD TERMINATION

TRX1 — JENSEN/DIN-LI T-1130

	4	+	S	7		SHLD
	5	- IN	OUT -	8	A216	BLK
	6	S	+	9		RED

Ⓟ

ELECTRICIANS CONNECTIONS
2 CONDUCTS + GND
(230VAC 20A) 12AWG

DES A20 DES

TBL1

N — WHT
L1 — BLK — A205 — Ⓑ

TERM_BLK TB-1186

A220 A222

GND

A221

TO CABINET GROUND LUG LOCATED TOP RIGHT OF CABINET — Ⓜ A200

PWS2_GND — A217

GND_BAR TB-1037

INCLUDED WITH EN-2513

THERMOSTAT

TERMINAL BLOCK

L	BLK	A208
N	RED	
G	GRN	

FAN B-1094

DAK REPLACEMENT PARTS:
-FAN = B-1094
-THERMOSTAT = S-1247

Ⓖ

AMP1 — SP3-1200-1200-400-CN A-3922465

A206	COBRA	OP1	A210
A216	XLR IN	OP2	A211
	XLR OUT	OP3	A212
A205	POWER IN		
A208	POWER OUT		

Ⓔ Ⓔ Ⓔ

THIS HARNESS TO BE CONNECTED TO TBL2 AND LEFT DISCONNECTED INSIDE CONTROL ENCLOSURE

A213 Ⓕ
A214 Ⓕ

TBL2 — A-3482091

WHT	A210	TB1	A310	WHT
BLK	A210	TB2	A310	BLK
RED	A211	TB3	A311	RED
BLK	A211	TB4	A311	BLK
BLU	A212	TB5	A312	BLU
BLK	A212	TB6	A312	BLK
ORG	A213	TB7	A313	ORG
BLK	A213	TB8	A313	BLK
GRN	A214	TB9	A314	GRN
BLK	A214	TB10	A314	BLK

CONNECTIONS TO 500HD CABINET ONSITE, CABLE ASSY COILED IN LEFT SIDE OF CABINET VIEWED FROM THE FRONT

HARNESS# W-2317

LOW FREQUENCY ASSEMBLY
CONNECTION TERMINALS
WHT=RED
BLK=BLK

A310 — SPK5

DRIVERS: A-1903 @2

MID FREQUENCY ASSEMBLY
CONNECTION TERMINALS
RED=RED
BLK=BLU

A311 — SPK3 — SPK4

DRIVERS: A-2305 @2

HIGH FREQUENCY ASSEMBLY
CONNECTION TERMINALS
BLU=RED
BLK=BLK

A312 — SPK1 — SPK2

DRIVERS: A-2302 @2

A313

GRN/BLK & ORG/BLK ENDS ARE TO BE CAPPED WITH HEATSHRINK AND COILED UP FOR FUTURE USE

A314

SET BOTH BSP DIP SWITCHES TO THE ON POSITION

FCC2 — MOXA/EDS-205A A-2580

A206	NET2	TX	A201	Ⓐ
	NET3	RX	A202	Ⓐ
	NET4			
	NET5	V1 +	A203	RED
		V1 -	A203	BLK

W-1489, 6 STRAND 50uM DX FIBER

FIBER COLORS FROM FPP2
1) BLU
2) ORG
3) GRN
4) BRN
5) SLT
6) WHT

FPP2

#1	TX
#2	RX
#3	
#4	
#5	
#6	

0M-788412
P-1197@6

DES C DES

0A-1340-0327

Z-1007

A220	BLK		A218
A221	GRN/YEL		
A222	RED		A219

-ASSEMBLY INCLUDES ALL CABLES CONNECTED TO Z-1007

PWS2 — 24VDC PWR SPLY A-2238

BLK	A218	L	V1+ A203	RED
RED	A219	N	V1- A203	BLK
GND_BAR W-1080	A217	G	V2+ A204	RED
			V2- A204	BLK

Ⓚ

Ⓛ

LED1 — PANEL MOUNT LED DS-1694

V-	A204	BLK
V+	A204	RED

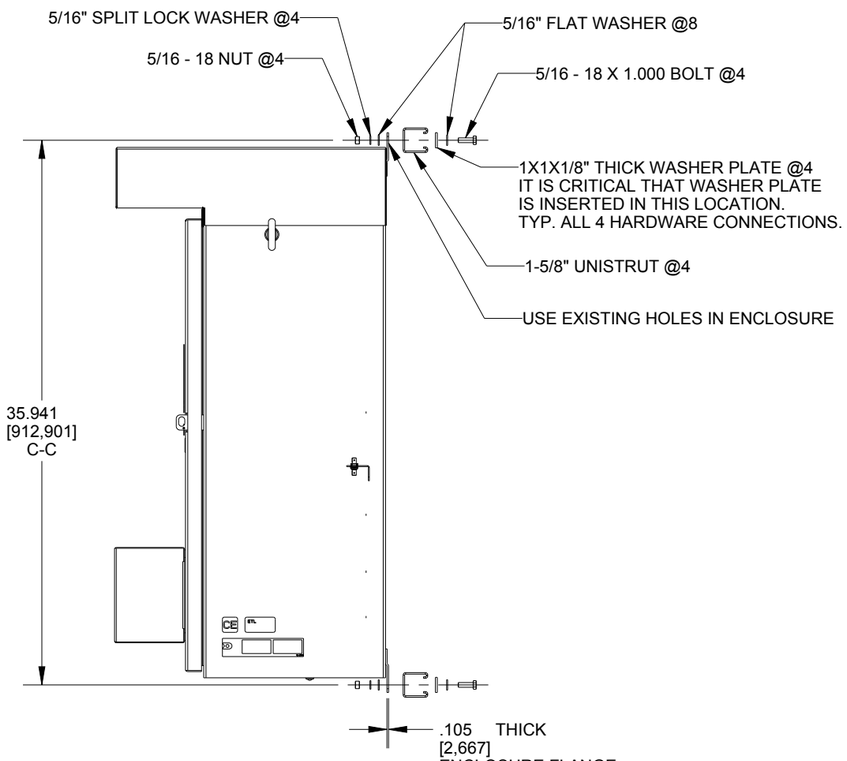
SYSTEM RISER; ELECTRICAL & AUDIO NOTES - DWG-00985713
REFERENCE PACKET 0A-1561-0045
LABELS ADD-4425

Ⓐ W-1509; 1' 50 MICRON FIBER JUMPER
Ⓑ 0A-1561-0015; 2'6" POWERCON IN TO PIGTAIL
Ⓒ 0A-1561-0013; 1' POWERCON IN/OUT CABLE
Ⓓ 0A-1561-0021; 3' POWERCON OUT TO PIGTAIL
Ⓔ 0A-1561-0017; HARNESS; SP-3 AMPLIFIER
Ⓕ 0A-1561-0016; HARNESS; SP-2 AMPLIFIER
Ⓖ W-1537; 2' RJ45 CAT5E PATCH CABLE
Ⓙ W-1542; 1' RJ45 CAT5E PATCH CABLE
Ⓚ 0A-1127-0238; 18 AWG LACED RED/BLK
Ⓛ 0A-1561-0018; POWER INDICATOR ASSEMBLY
Ⓜ 0A-1561-0019; HARNESS; CONTROL CABINET GROUND
Ⓟ 0A-1340-0081; 2.5', XLR M TO PIGTAIL
Ⓠ W-1917; 2' M XLR TO F XLR

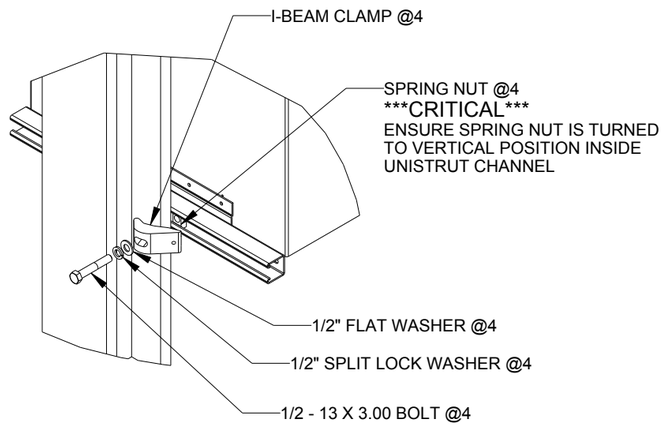
REV	DATE:		BY:	
05	27 JUL 18	3CH AMP A-3636 TO A-3922465	CJB	
04	15 NOV 16	CHANGED 0M-943828, TB-1058, TB-1075 TO A-3482091 PER EC-22833	CJB	
03	8 JAN 16	CHANGED FAN PART NUMBER FROM B-1046 TO B-1094 PER EC-19520	RDF	
02	7 AUG 15	UPDATED AMPLIFIER PART NUMBER	CJB	
01	14 OCT 13	UPDATED SPEAKER VIEWS AND SPEAKER NUMBERS	DMT	

THIRD ANGLE PROJECTION

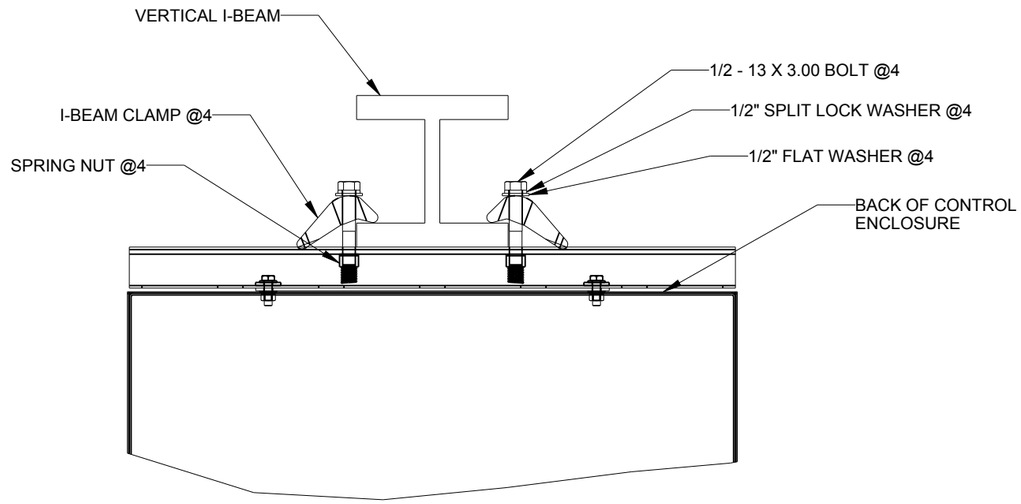
PROJECT:	SPORTSOUND SYSTEMS			
TITLE:	SCHEMATIC; CONTROL ENCLOSURE 500HD-SINGLE 230V			
DATE:	11 OCT 12	DIM UNITS: INCHES [MILLIMETERS]	SHEET	REV
SCALE:	NONE	DO NOT SCALE DRAWING		05
DESIGN:	CBRANDT	JOB NO.	FUNC - TYPE - SIZE	1115896
DRAWN:	CBRANDT	P1561	R - 03 - B	



EXPLODED SIDE VIEW
UNISTRUT ATTACHMENT



EXPLODED REAR ISOMETRIC VIEW
I-BEAM ATTACHMENT



TOP VIEW
CTRL ENCL ATTACHMENT
SCALE 1/6

STRUCTURAL NOTES:

ALLOWABLE LOADS PER CONNECTION:

CONTROL ENCLOSURE WEIGHT W/ MOUNTING HARDWARE: 145 LBS
BOLT TORQUE: 50 FT-LB
MIN-MAX I-BEAM FLANGE THICKNESS: .1875" - 0.75"

CRITICAL
DO NOT USE ANY LUBRICANT
ON ANY MOUNTING HARDWARE
OR WARRANTY WILL BE VOIDED

MOUNTING INSTRUCTIONS:

1. ATTACH UNISTRUT TO CONTROL ENCLOSURE THROUGH EXISTING HOLES IN REAR FLANGES OF CONTROL ENCLOSURE AS SHOWN IN UNISTRUT ATTACHMENT SIDE VIEW
2. PLACE SPRING NUTS INTO UNISTRUT
3. LIFT CONTROL ENCLOSURE INTO POSITION
4. ATTACH I-BEAM CLAMPS WITH 1/2" HARDWARE AS SHOWN IN TOP AND REAR ISOMETRIC VIEW CONTROL ENCLOSURE ATTACHMENT
5. MAKE SURE THE 1/2-13 BOLTS ARE AS CLOSE TO THE I-BEAM FLANGES AS POSSIBLE
6. WHEN CONTROL ENCLOSURE IS ADJUSTED TO FINAL DESIRED POSITION, TIGHTEN BOLTS FIRMLY

NOTE:

CONTROL ENCLOSURE MUST BE MOUNTED WITHIN 50' OF THE 500HD SOUND SYSTEM FOR SIGNAL CABLE TO REACH.

REFERENCE PACKET: 0A-1561-0049

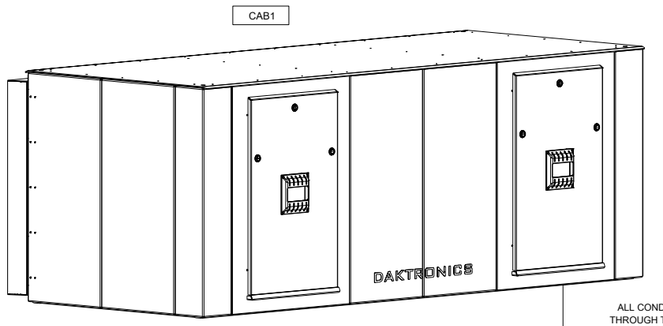
REV	DATE:		BY:	
01	22 DEC 15	PER EC-22871; ADDED LUBRICANT WARNING	PJS 18704	

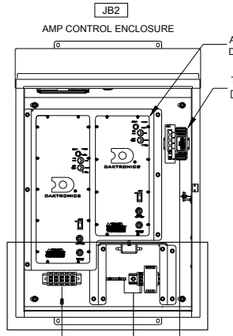
DAKTRONICS

THIRD ANGLE PROJECTION

PROJECT:	DAKTRONICS AUDIO			
TITLE:	MTG DETAIL; 500HD CTRL ENCL BEAM CLAMP			
DATE:	22-DEC-15	DIM UNITS: INCHES [MILLIMETERS]	SHEET	REV
SCALE:	1/10	DO NOT SCALE DRAWING	1 OF 1	01
DESIGN:	KSCHNABEL	JOB NO. / FUNC - TYPE - SIZE	1131068	
DRAWN:	KSCHNABEL	P1561 / F - 10 - B		

SIGN LOCATION DETAILS





W-1615 AUDIO COPPER CABLE TO BE ISOLATED AND KEPT AWAY FROM OTHER SCOREBOARD COPPER SIGNAL/POWER CABLES

ALL CONDUIT CONNECTIONS ARE TO BE MADE THROUGH THE BOTTOM OF THE ENCLOSURE'S ¾" MINIMUM DIAMETER CONDUIT

THIS CABLE WILL BE PRE-TERMINATED TO THE SPEAKERS AND COILED UP INSIDE THE REAR RIGHT SIDE OF THE CABINET WITH A 50' WHIP FOR TERMINATION TO THE CONTROL ENCLOSURE, CUT TO LENGTH AND USE DETAIL "A" FOR PROPER CONNECTION

CUS P CUS — W-1615

DES A20 DES — A-1129: SURGE SUPPRESSOR IS TO BE ATTACHED AT THE BREAKER PANEL THAT FEEDS THIS DEDICATED OUTLET

DES XC DES — W-2317

DAKTRONICS ELECTRICAL SUBCONTRACTOR RESPONSIBLE FOR A-1129 CONNECTION ONLY AND USE DETAIL "B" FOR PROPER CONNECTION

JUNCTION BOX W/ FEMALE 3-PIN XLR

COMPONENT IDENTIFICATION LEGEND				
COMPONENT	DESCRIPTION	MANUFACTURE'S #	PROVIDED BY	INSTALLED BY
JB1	JUNCTION BOX W/ FEMALE 3-PIN XLR	EC-3339265	DAKTRONICS	OTHERS
CAB1	500HD SERIES CABINET	0A-1561-0003	DAKTRONICS	OTHERS
JB2*	CONTROL ENCLOSURE, SINGLE 120V	0A-1561-0008	DAKTRONICS	OTHERS
JB2*	CONTROL ENCLOSURE, DUAL 120V	0A-1561-0001	DAKTRONICS	OTHERS
JB2*	CONTROL ENCLOSURE, SINGLE 230V	0A-1561-0045	DAKTRONICS	OTHERS
JB2*	CONTROL ENCLOSURE, DUAL 230V	0A-1561-0044	DAKTRONICS	OTHERS
WIRE TAGS	DETAILS FOR WIRE TAGS	DWG-985713	DAKTRONICS	-

*NOTE: ONLY ONE ASSEMBLIE WILL BE PRESENT

0A-1561-0001
CIRCUIT 1
TOTAL POWER REQUIREMENTS:

SYSTEM VOLTAGE 120 2 WIRES + GND	
NUMBER OF POLES	1
MAXIMUM WATTS	1800W
AMPERES PER LINE	15A

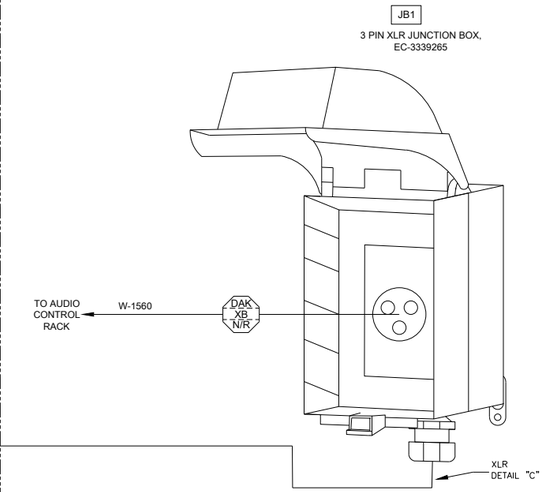
0A-1561-0008
CIRCUIT 1
TOTAL POWER REQUIREMENTS:

SYSTEM VOLTAGE 120 2 WIRES + GND	
NUMBER OF POLES	1
MAXIMUM WATTS	1200W
AMPERES PER LINE	11A

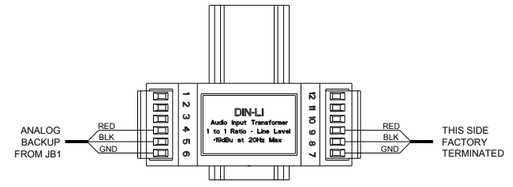
0A-1561-0044, 0A-1561-0045
CIRCUIT 1
TOTAL POWER REQUIREMENTS:

SYSTEM VOLTAGE 230 2 WIRES + GND	
NUMBER OF POLES	1
MAXIMUM WATTS	1800W
AMPERES PER LINE	7.5A

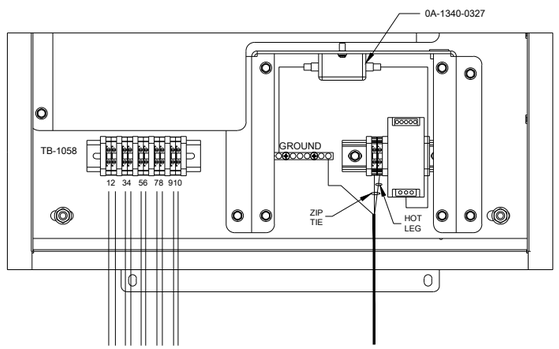
ANNOUNCER LOCATION DETAILS



DETAIL "D"
T-1130
ANALOG BACKUP TRANSFORMER



DETAIL "A"
CONTROL ENCLOSURE

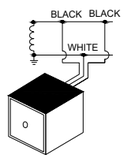


THESE ARE 12AWG WIRES
1: AMP1 LF+ WHT A310
2: AMP1 LF- BLK A310
3: AMP1 MF+ RED A311
4: AMP1 MF- BLK A311
5: AMP1 HF+ BLU A312
6: AMP1 HF- BLK A312
7: AMP2 MF+ ORG A313
8: AMP2 MF- BLK A313
9: AMP2 HF+ GRN A314
10: AMP2 HF- BLK A314

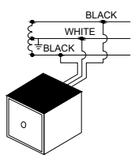
FROM ELECTRICAL SERVICE

NOTE:
IF OTHER SURGE SUPPRESSION IS PROTECTING THE NECESSARY CIRCUITS, THE A-1129 IS OPTIONAL

DETAIL "B"
A-1129
SURGE SUPPRESSOR

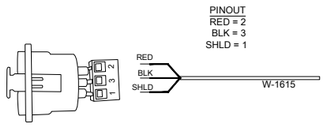


TWO-WIRE
SERVICE UP TO 175 VAC



SINGLE-PHASE
THREE-WIRE 120/240 VAC

DETAIL "C"
(J-3794845) FEMALE XLR JACK; FIELD CABLE TERMINATION DETAIL



THIRD ANGLE PROJECTION

PROJECT:	SPORTSOUND SYSTEMS			
TITLE:	SYSTEM RISER; 500HD, COPPER SIGNAL ONLY			
DATE:	09 JUL 19	DIM UNITS: INCHES [MILLIMETERS]	SHEET	REV
SCALE:	NONE	DO NOT SCALE DRAWING		00
DESIGN:	CBRANDT	JOB NO. P1561	FUNC - TYPE - SIZE F - 03 - C	4137275
DRAWN:	MLIPINSKI			

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B Supplementary Manuals

Manuals for all standard and optional components are shipped with the audio system.

- If any product manuals are missing, lost, or damaged, visit the manufacturer's website or perform a web search for the component model number.
- When viewing a digital copy of this manual from www.daktronics.com/manuals, click on the appropriate manufacturer link below to view a component's manual. If the link is broken, visit the manufacturer's website or perform a web search for the component model number.

Component	Model Number	Manufacturer	Manual(s)
Media Converter / Ethernet Switch	EDS-205A-M-ST	Moxa www.moxa.com	Installation Guide
Analog to Digital Converter	Audia EXPI/O-2	Biamp www.biamp.com	Operation Manual

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C 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

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

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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	Kruibeke, Belgium
Daktronics Ireland Co. Ltd.	Ireland	Dublin, Ireland

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