# Backlit & Non-Backlit Scorer's Tables

**Display Manual** 

DD1709675

Rev 2 - 1 April 2011

# DAKTRONICS

Models							
ST-2002 ST-2003					ST-2004		ST-2005



DD1709675 P1313 Rev 2 – 1 April 2011

Please fill in the information below to use for reference when calling Daktronics for assistance
Display Serial No
Display Model No
Date Installed

## DAKTRONICS, INC.

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## **Section 1: Introduction**

This manual explains the technology, operation, and maintenance of Daktronics backlit and non-backlit scorer's tables. For additional information regarding safety, installation, operation, or service, refer to the telephone numbers listed in **Section 3.7**. This manual is not specific to a particular installation.

#### **Important Safeguards:**

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

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

#### 1.1 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 and the letter preceding them. In the example, the drawing would be referred to as **Drawing C-325405**.

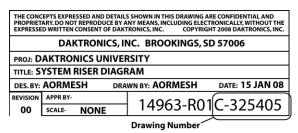


Figure 1: Daktronics Drawing Label

#### Reference Drawing:

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

Daktronics identifies manuals by the DD or ED number located on the cover page of each manual. For example, this manual would be referred to as **DD1709675**.

Introduction 1

#### 1.2 Daktronics Nomenclature

Serial and model numbers can be found on the ID label on the display as shown in Figure 2.



Figure 2: Display ID Label

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

Most components within this display carry a white label that lists the part number of the unit. If a component is not found in the Replacement Parts List in **Section 3.6**, use the label to order a replacement. **Figure 3** illustrates a typical label. The part number is in bold.

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

Accessory Labels				
Component	Label			
Termination block for power	TB <u>XX</u>			
or signal cable				
Grounding point	E <u>XX</u>			
Power or signal jack	J <u>XX</u>			
Power or signal plug for the	P <u>XX</u>			
opposite jack				

**OP-1195-0001** SN: 6343 05/19/99 REV.1

Figure 3: Typical Label

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

2 Introduction

# Section 2: Display Specifications & Setup

# 2.1 Specifications

The table below shows all of the mechanical specifications, circuit specifications, and maximum power requirements for each model in this manual.

Model	Dimensions: Height, Width (including padding), & Depth	Weight	Watts	Volts	Amps
ST-2002	H 3'0" x W 8'5" x D 3'4"	185 lb	1440 W	120 V AC*	12 A
	(914mm, 2565mm, 1016mm)	(84 kg)			
ST-2003	H 3'0" x W 8'5" x D 3'4"	235 lb	1440 W	120 V AC	12 A
	(914mm, 2565mm, 1016mm)	(107 kg)			
ST-2004	H 3'0" x W 4'5" x D 3'4"	90 lb	1440 W	120 V AC*	12 A
	(914mm, 1346mm, 1016mm)	(41 kg)			
ST-2005	H 3'0" x W 4'5" x D 3'4"	115 lb	1440 W	120 V AC	12 A
	(914mm, 1346mm, 1016mm)	(52 kg)			

<sup>\*</sup> These are non-backlit displays. Power requirements are for convenience outlets only.

#### **Notes:**

- **1.** Power shown includes max load placed on table including convenience outlets. Refer to **Drawing A-210619** for details.
- **2.** Table counter top capacity is rated at 150 lbs max.

# 2.2 Setup

To set up a scorer's table:

**1.** Move the scorer's table to the desired location.

If more than one scorer's table is to be used as part of a single display face, line the tables up side by side and use the three metal latches (one above the counter top, one next to the rear castors, and one on the lower-front of the frame) to link the tables together.

The tension of the latches used to connect multiple scorer's tables is not set at the factory. When engaged, the latches should create a snug fit. If there is a noticeable gap between tables, or it is difficult to clasp the latches shut, the tension can be adjusted as follows:

**a.** Use a 5/16" wrench to loosen the nut that is holding the metal hook in place.

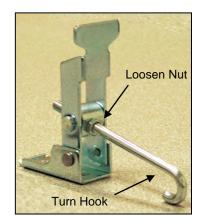


Figure 4: Adjusting Latch Tension

- **b.** Turn the metal hook clockwise to give the latch a tighter fit, or turn the metal hook counterclockwise to give the latch a looser fit.
- **c.** Make sure the metal hook is pointing downward and then tighten the nut.
- **2.** Lift the table surface approximately 90 degrees and swing the side legs out and into place underneath. Use the locking slots to secure.

**Note:** It may be helpful to have two people perform this procedure: one to lift and hold the table surface and another to position and lock the legs in place.

- **3.** Press down on the leg stops to make sure the table is level on both sides. For further stability, also lock the rear table wheels.
- **4.** For backlit models (and non-backlit models using convenience outlets), connect the twist lock power cord to the power-in plug in the lower-right corner of the scorer's table, and then connect the three pin plug to a grounding-type power outlet.

# **Section 3: Maintenance & Troubleshooting**

#### **IMPORTANT NOTES:**

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

### 3.1 Display Information

Daktronics backlit scorer's tables occasionally require replacement of failed lamps or ballasts. Refer to **Drawings B-381209** and **B-381575** in **Appendix A** for detailed wiring schematics and refer to **Section 3.6** for replacement part numbers.

- Do not use higher power lamps or damage to the circuit may result.
- Obtain replacement lamps and ballasts from Daktronics or a local store.

# 3.2 Display Access

- 1. Lift an end pad off one side of the scorer's table and set aside.
- **2.** Carefully slide the face panel out of the retainer frame to expose the internal components.

Refer to **Figure 5**.

**Note:** When multiple tables are linked together, the metal latches must be disconnected and the tables separated before the face panel can be removed.

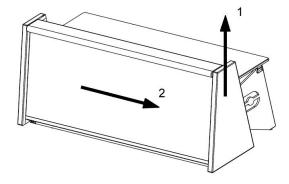


Figure 5: Front Display Access

# 3.3 Lamp Replacement

Lamps are held by "tombstone "-style fluorescent lamp sockets on each end. One socket for each lamp will be spring-loaded.

- 1. Access the display components as described in **Section 3.2**.
- **2.** To replace a lamp, grasp and push the lamp towards the spring-loaded end of the lamp holder, then pull it out.
- **3.** Replace lamps per the replacement parts list (refer to **Section 3.6**). Lamp sizes are given in inches, stamped on one end of the bulb. The size is indicated by the set of numbers following the letter "F."
- 4. Close the display and reconnect power.

# 3.4 Ballast Replacement

- **1.** Access the display as described in **Section 3.2**.
- 2. Remove every lamp from the display as described in **Section 3.3** and carefully set aside.
- 3. Loosen the screw securing the  $2^{nd}$  access door from the left and lift it off the keyhole to reveal the ballast.
- **4.** Secure the wires on the ballast side of the wire-nut connections so the same color code can be followed for the replacement ballast.
- **5.** Remove the four (4) machine screw nuts securing the ballast to the display.

**Note:** The four screws holding the ballast are stud-mounted and will remain in place after the ballast is removed.

**6.** Lift the ballast off the mounting screws and out of the display.

**Note:** Between each ballast and the display shell is an aluminum heat-sink bar. This bar must be used with the replacement ballast.

- 7. Secure the replacement ballast and heat-sink bar to the inside of display using the four (4) machine screw nuts previously removed.
- **8.** Following the wire chart on the ballast, and using the color code of the existing wires from the previous ballast (from Step 4), use the wire-nuts to connect the wires from the lamps to the ballast wires. Call Daktronics customer service before continuing if there is an inconsistency.
- 9. Slide the access door into place and reinstall the lamps.
- **10.** Perform "Hy-Pot" and continuity tests to the display before activating power to ensure all the wiring is correct and there are no shorts in the circuit.

# 3.5 Troubleshooting

This list does not include every possible problem, but does represent some of the more common situations that may occur.

Symptom/Condition	Po	ossible Cause
Display will not light	•	Poor connection
	•	No power to the display
	•	Circuit breaker tripped at service panel
Section of the display will not light	•	Lamp(s) burned out
	•	Ballast burned out
	•	Poor contact at main power connection
	•	Circuit breaker tripped at service panel

# 3.6 Replacement Parts

Description	Daktronics Part Number	Scorer's Table Model
Ballast; 120V, 2.8A	A-1370	ST-2005
Ballast; 120V, 5.3A	A-1371	ST-2003
Fluorescent Lamp , 48", 110W	DS-1026	ST-2005
Fluorescent Lamp , 96", 110W	DS-1048	ST-2003
Replacement Leg Stop Pad	HS-1763	All

### 3.7 Daktronics Exchange and Repair & Return Programs

#### **Exchange Program**

The Daktronics Exchange Program is a quick, economical service for 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 not only saves money but also decreases equipment downtime. Customers who follow the program guidelines explained below will receive this service.

#### Before Contacting Daktronics

Identify these important numbers:

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

To participate in the Exchange Program, follow these steps.

#### 1. Call Daktronics Customer Service.

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

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

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

- **a.** Package the old part in the same shipping materials in which the replacement part arrived.
- **b.** Fill out and attach the enclosed UPS shipping document.
- **c.** Ship the part to Daktronics.
- **3.** A charge will be made for the replacement part immediately, unless a qualifying service agreement is in place. In most circumstances, the replacement part will be invoiced at the time it is shipped.

If the failed part or replacement part is not returned to Daktronics within 3 weeks of the ship date, Daktronics will assume that the customer is purchasing the replacement part and will send an invoice for the value of the new sale part. If the part or parts are returned within 2 weeks of the second invoice date, Daktronics will credit the customer for the second invoice.

If after 2 weeks Daktronics has still not received the parts back, the customer must pay the second invoice and will not be credited for the return of the failed part. Daktronics reserves the right to refuse parts that have been damaged due to acts of nature or causes other than normal wear and tear.

#### Repair & Return Program

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

#### 1. Call or fax Daktronics Customer Service:

Refer to the appropriate market number in the chart listed on the previous page.

# **2.** Receive a Return Materials Authorization (RMA) 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 RMA number
- a clear description of symptoms

#### Shipping Address

Daktronics Customer Service RMA # 201 Daktronics Drive, Dock E Brookings, SD 57006

Fax: 605-697-4444

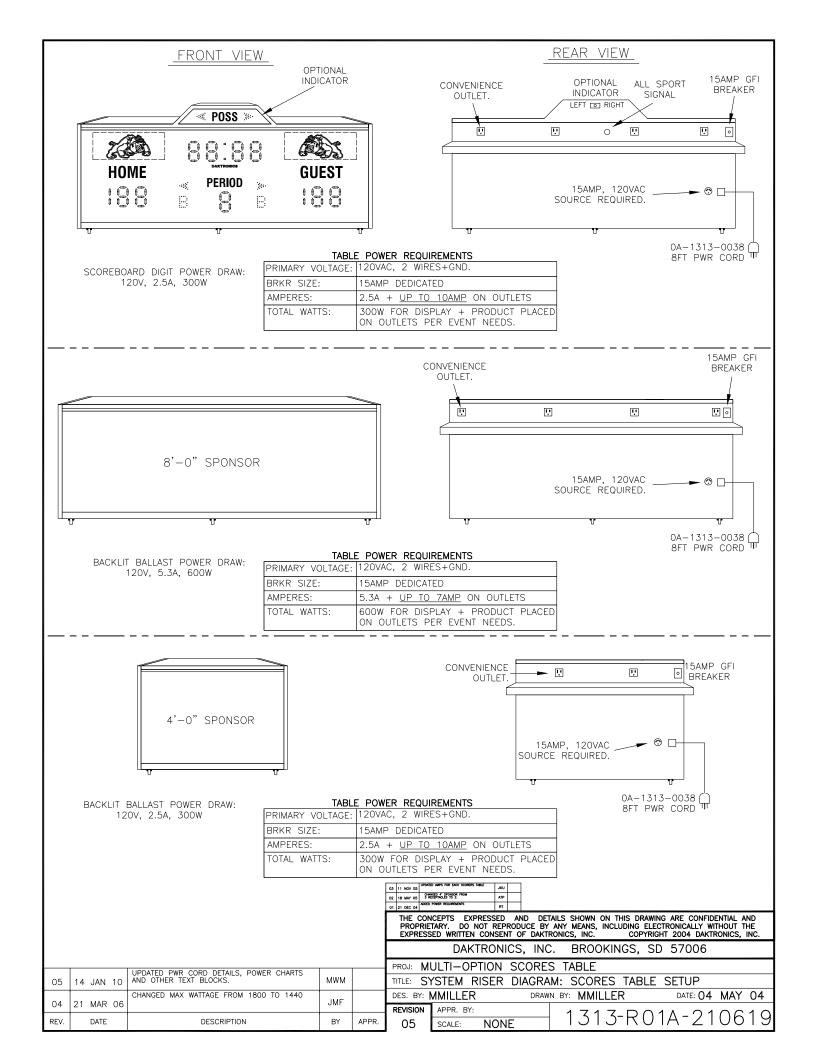
#### **Daktronics Warranty and Limitation of Liability**

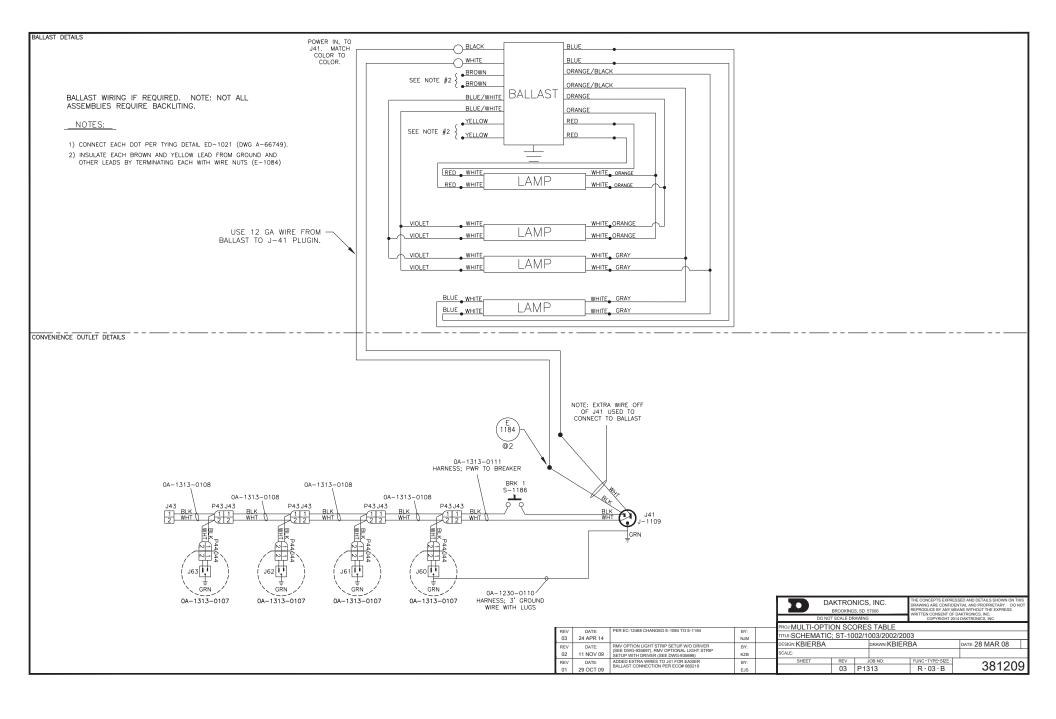
The Daktronics Warranty and Limitation of Liability is located in **Appendix B**. The Warranty is independent of Extended Service agreements and is the authority in matters of service, repair, and display operation.

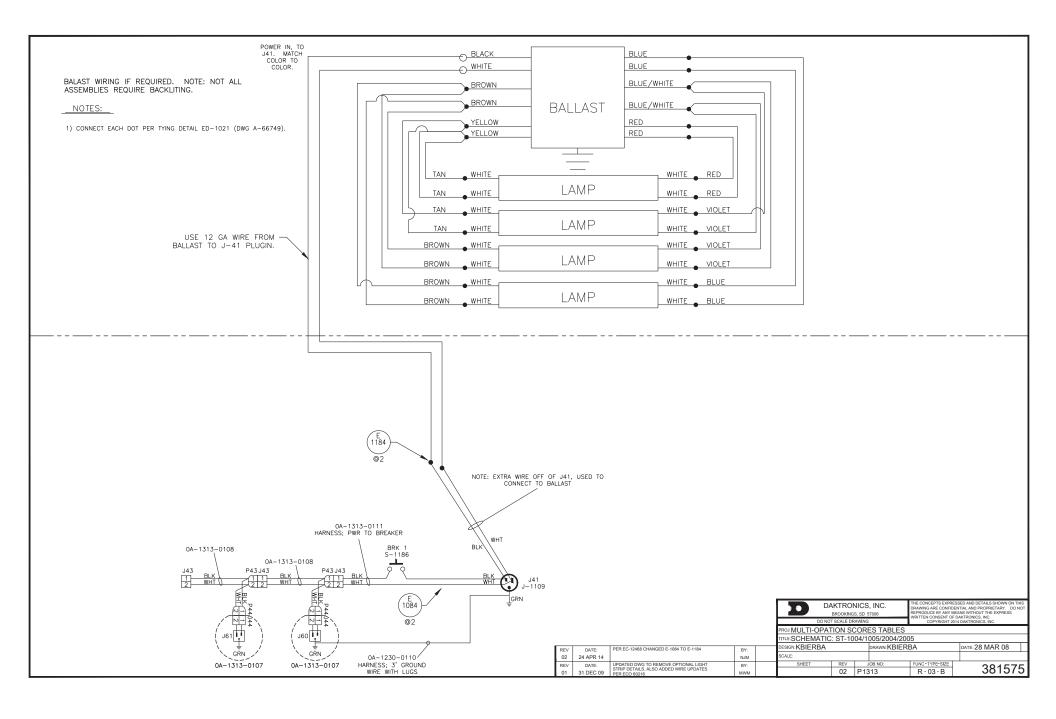
# **Appendix A: Reference Drawings**

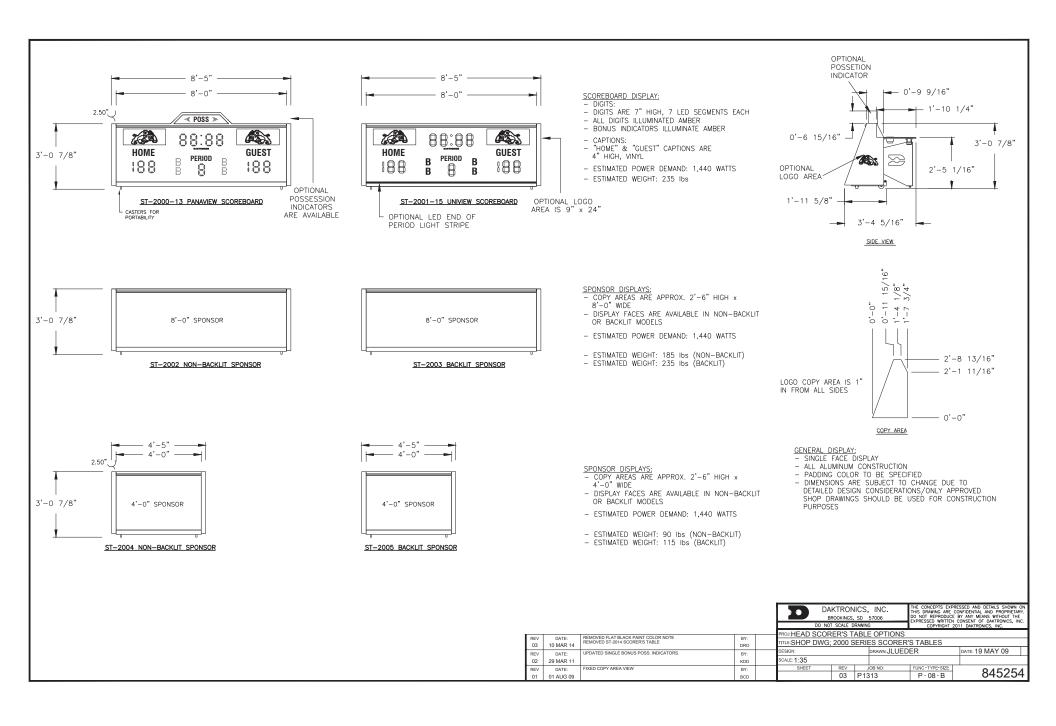
System Riser Diagram; Scores Table Setup	A-210619
Schematic; ST-1002/1003/2002/2003	
Schematic; ST-1004/1005/2004/2005	B-381575
Shop DWG; 2000 Series Scorer's Tables	B-845254

Reference Drawings 9









# Appendix B: Daktronics Warranty and Limitation of Liability



# DAKTRONICS WARRANTY AND LIMITATION OF LIABILITY

This Warranty and Limitation of Liability (the "Warranty") sets forth the warranty provided by Daktronics with respect to the Equipment. By accepting delivery of the Equipment, Purchaser agrees to be bound by and accept these terms and conditions. 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 that the Equipment will be free from Defects (as defined below) in materials and workmanship for a period of one (1) year (the "Warranty Period"). The Warranty Period shall commence on the earlier of: (i) four weeks from the date that the Equipment leaves Daktronics' facility; or (ii) Substantial Completion as defined herein. The Warranty Period shall expire on the first anniversary of the commencement date

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

- B. Daktronics' obligation under this Warranty is limited to, at Daktronics' option, replacing or repairing, any Equipment or part thereof that is found by Daktronics not to conform to the Equipment's specifications. Unless otherwise directed by Daktronics, any defective part or component shall be returned to Daktronics for repair or replacement. 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 either Purchaser or 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 Purchaser DDP Daktronics; designated facility. If returned Equipment is repaired or replaced under the terms of this warranty, Daktronics will prepay ground transportation charges back to Purchaser and shall ship such items DDP Purchaser's designated facility; otherwise, Purchaser shall pay transportation charges to return the Equipment back to the Purchaser and such Equipment shall be shipped Ex Works Daktronics designated facility. All returns must be pre-approved by Daktronics before shipment. Daktronics shall not be obligated to pay freight for any unapproved return. Purchaser shall pay any upgraded or expedited transportation charges.
- D. Any replacement parts or Equipment will be new or serviceably used, comparable in function and performance to the original part or Equipment, and warranted for the remainder of the Warranty Period. Purchasing additional parts or Equipment from the Seller does not extend 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. The limited warranty provided by Daktronics does not impose any duty or liability upon Daktronics for partial LED pixel degradation nor does the limited warranty provide for the replacement or installation of communication methods including but not limited to, wire, fiber optic cable, conduit, trenching, or for the purpose of overcoming local site interference radio equipment substitutions.

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, ACCURACTY OR QUALITY OF DATA. NO ORAL OR WRITTEN INFORMATION, OR ADVICE GIVEN BY THE COMPANY, ITS AGENTS OR EMPLOYEES, SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF THIS LIMITED WARRANTY.

THIS LIMITED WARRANTY IS NOT TRANSFERABLE.

#### 2. <u>Exclusion from Warranty Coverage</u>

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

- A. Any damage occurring, at any time, during shipment of Equipment unless otherwise provided for in the Agreement. When returning Equipment to Daktronics for repair or replacement, Purchaser assumes all risk of loss or damage, and agrees to use any shipping containers that might be provided by Daktronics and to ship the Equipment in the manner prescribed by Daktronics;
- B. Any damage caused by the improper installation, adjustment, repair or service of the Equipment by anyone other than personnel of Daktronics or its authorized repair agents;
- C. Damage caused by the failure to provide a continuously suitable environment, including, but not limited to: (i) neglect or misuse, (ii) a failure or sudden surge of electrical power, (iii) improper air conditioning, 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. Any 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 Purchaser and are not part of the contract of sale;
- G. Any damage arising from the use of Daktronics products in any application other than the commercial and industrial applications for which they are intended, unless, upon request, such use is specifically approved in writing by Daktronics;
- H. Any performance of preventive maintenance;
- J. 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;
- K. Incorporation of accessories, attachments, software or other devices not furnished by Daktronics; or
- L. Paint or refinishing the Equipment or furnishing material for this purpose.

#### 3. <u>Limitation of Liability</u>

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

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

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

#### 4. <u>Assignment of Rights</u>

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

#### 5. <u>Governing Law</u>

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

#### 6. Availability of Extended Service Agreement

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

