

# DAKTRONICS T-7000 SERIES TOUCHPADS

## INSTALLATION & MAINTENANCE MANUAL

P1198

DD1953274  
Rev 03  
08 August 2018

Models	
T-7060	FT-7150
T-7078	FT-7190
T-7096	FT-7190T
	FT-7240T

Please fill in the information below to use for reference when calling Daktronics for assistance.

**Touchpad 1**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 11**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 2**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 12**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 3**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 13**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 4**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 14**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 5**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 15**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 6**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 16**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 7**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 17**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 8**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 18**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 9**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 19**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 10**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_

**Touchpad 20**

Date \_\_\_\_\_  
Serial # \_\_\_\_\_



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# Table of Contents

<b>1</b>	<b>Introduction</b> .....	<b>1</b>
	Touchpad Identification .....	1
	Controllers.....	1
	Specifications .....	2
<b>2</b>	<b>Mechanical Installation</b> .....	<b>3</b>
	Touchpad Installation .....	3
<b>3</b>	<b>Connections</b> .....	<b>5</b>
	Deck Cabling and Lane Modules .....	5
	Functional Test .....	6
<b>4</b>	<b>Maintenance &amp; Troubleshooting</b> .....	<b>7</b>
	Basic Maintenance of Timing System.....	7
	Touchpad Cleaning .....	7
	Inspection Procedure.....	8
	Advanced Touchpad Troubleshooting .....	8
	Side & Bottom Vinyl Edge Cover Replacement .....	10
	Cable Replacement .....	13
	Replacement Parts.....	17
	Aquatics Systems Warranty & Limitation of Liability.....	17
	Contact Information .....	17
<b>A</b>	<b>Aquatics Systems Warranty &amp; Limitation of Liability</b> .....	<b>19</b>

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# 1 Introduction

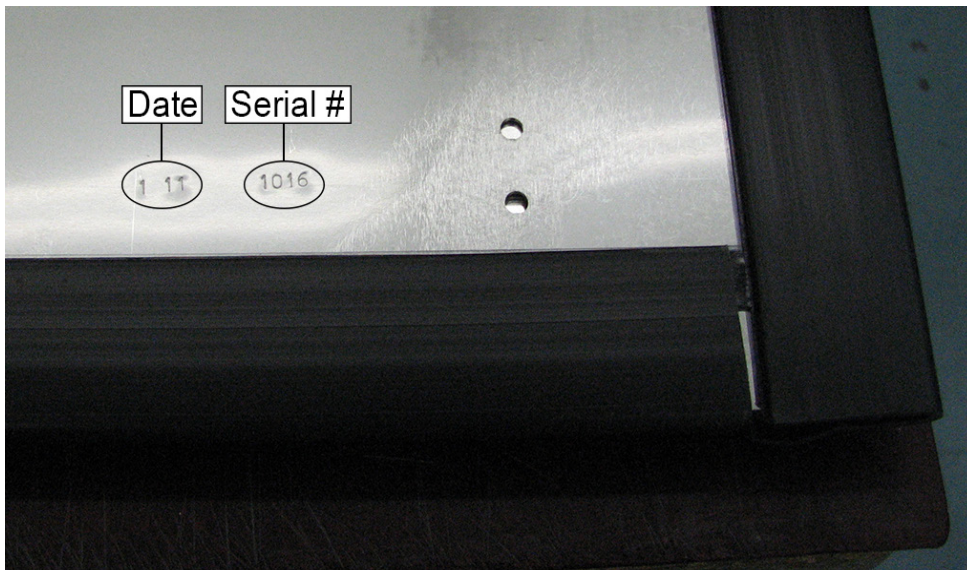
This manual explains the installation and maintenance of Daktronics T-7000 series touchpads. For additional information regarding safety, installation, operation, or service, refer to **Contact Information (p.17)**.

This manual is not specific to a particular installation. Project-specific information takes precedence over general information found in this manual. Ensure all applicable materials have been gathered before beginning the installation. Contact a Daktronics sales coordinator or project manager.

Read and understand all instructions before beginning the installation process.

## Touchpad Identification

A date (month/year) and serial number can be found stamped in the lower-right corner of the rear of the touchpad as shown in **Figure 1**.



**Figure 1:** ID Stamp

List the date and serial number for each touchpad in the system 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.

## Controllers

Daktronics touchpads are typically used with an OmniSport® 2000 timing console. This controller uses keyboard overlays (sport inserts) to control numerous sports and display models. Refer to the following manual for operating instructions:

- **OmniSport 2000 Timing Console Operations Manual (ED-13312)**

The above manual is shipped on a CD with the control console and is also available online at [www.daktronics.com/manuals](http://www.daktronics.com/manuals).

## Specifications

<b>Model</b>	<b>Dimensions: Height, Width, Depth*</b>	<b>Weight</b>
T-7060	1'-10" H, 5'-0" W, 2.8" D (559 mm, 1524 mm, 71 mm)	28.25 lb (12.8 kg)
T-7078	1'-10" H, 6'-6" W, 2.8" D (559 mm, 1981 mm, 71 mm)	37.5 lb (17 kg)
T-7096	2'-0" H, 8'-0" W, 2.8" D (610 mm, 2438 mm, 71 mm)	50 lb (22.7 kg)
FT-7150	3'-0" H, 5'-0" W, 2" D (914 mm, 1524 mm, 51 mm)	44.7 lb (20.3 kg)
FT-7190	3'-0" H, 6'-3" W, 2" D (914 mm, 1905 mm, 51 mm)	56.8 lb (25.8 kg)
FT-7190T	3'-0" H, 6'-3" W, 3.9" D (914 mm, 1905 mm, 99 mm)	57 lb (25.9 kg)
FT-7240T	3'-0" H, 7'-11" W, 3.9" D (914 mm, 2413 mm, 99 mm)	72.5 lb (32.9 kg)

\*Depth shown is for top flange; touchpad thickness is 0.3" (8 mm) for all models.

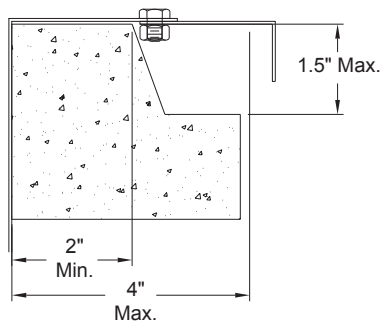
## 2 Mechanical Installation

### Touchpad Installation

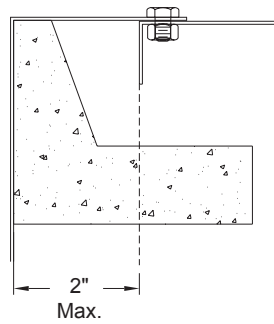
Install the touchpads in the pool before the meet.

**Note: Do not allow the use of paddles, fins, or kick boards with touchpads in the pool!**

1. With one person on each end of the touchpad, carefully lower it into the pool, ensuring it is centered in the lane.
2. Secure the supplied adjustable bracket to the pool gutter. The universal bracket adjusts to both shallow and narrow lip gutters (**Figure 2** and **Figure 3**).



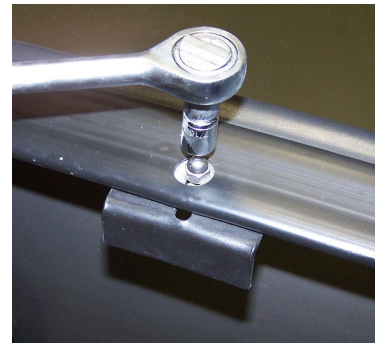
**Figure 2:** Universal Bracket for "Shallow" Gutter



**Figure 3:** Universal Bracket for "Narrow Lip" Gutter

**Note:** If the pool does not have a gutter, secure the touchpad by running a rope through the holes on top of the touchpad and tying it to the starting block.

3. Use a 7/16" socket wrench to secure the brackets on the touchpad (**Figure 4**).
4. A Daktronics touchpad is designed to fill with water to aid in its stabilization. When properly installed, the touchpad should "hug" the pool wall (**Figure 5**).
5. Connect the touchpads to the lane modules or deck plates. Follow the instructions in **Section 3: Connections (p.5)**.



**Figure 4:** Securing the Bracket

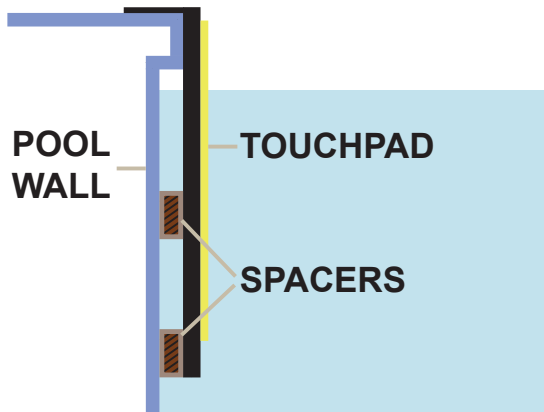


**Figure 5:** Touchpad Next to Wall

If the pool wall has obstructions or the gutter protrudes from the wall, use spacers (PVC board may be cut in strips) to create a stable support for the touchpad (**Figure 6**). Spacer size is determined by the height and the extra depth required. Use 3M™ VHB™ Tape 5930 (Daktronics part # AT-1089 [3/4"]) to adhere the spacers to the touchpad.

**Ensure the spacers do not cover the drainage holes on the back of the touchpad!**

**Note:** Daktronics does not provide these spacers.



**Figure 6:** Touchpad with Spacers

For more information on the care and maintenance of touchpads, refer to **Section 4: Maintenance & Troubleshooting (p.7)**.

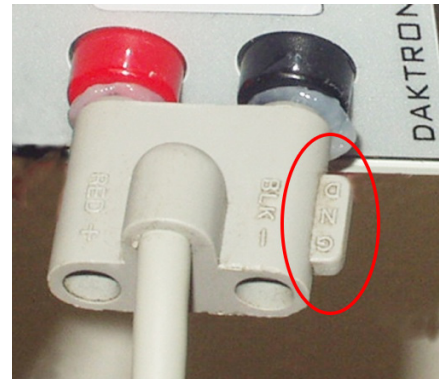


### 3 Connections

#### Deck Cabling and Lane Modules

Always place cables and equipment in areas of minimal traffic. Cover wires and cables with a mat to prevent accidents. **Figure 7** illustrates an important detail to always remember when plugging dual banana connectors. **The GND (ground) tab on the plug must line up with the black female jack for the timing system to work.**

If some touchpads are connected backwards and some connected correctly, it may cause touchpads to register times when the pad has not been touched.



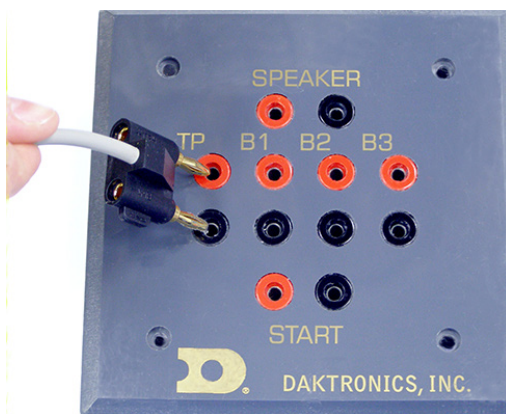
**Figure 7:** GND to Black Female Jack

- For an **On-Deck System**, connect the plug from the touchpad to the **TOUCHPAD** jack on a lane module (**Figure 8**). After the system has been completely set up, test each touchpad. Refer to **Functional Test (p.6)**.



**Figure 8:** Daktronics Lane Module

- For an **In-Deck System**, connect the plug from the touchpad into the **TP** jack on the lane deck plate (**Figure 9**). After the system has been completely set up, test each touchpad. Refer to **Functional Test (p.6)**.



**Figure 9:** Individual Lane Deck Plate

For more information about any additional input device connections and connecting to the OmniSport 2000 timer, refer to the **OmniSport 2000 Timing Console Operations Manual (ED-13312)**, available online at [www.daktronics.com/manuals](http://www.daktronics.com/manuals).

## Functional Test

1. Plug the touchpad into the **TOUCHPAD** input on the lane module (or **TP** input on the deck plate). Ensure the **GND** tab on the touchpad connector is lined up with the black jack on the touchpad input.
2. Verify the lane modules (or deck plates) are connected to the OmniSport 2000 console and that the console is powered on.
3. Enter the swimming mode of the OmniSport 2000 console, and press **[MENU] > [5] > [2]** to display the lane module test menu. When the touchpad is pressed, "TP" should flash for 2 seconds in the lane corresponding to the touchpad.
4. With the touchpad hanging in place on the pool wall, bend down and touch the touchpad with just finger tips. Do this by bringing the hand in with the same amount of energy a swimmer in the water would have. If this is done too lightly, or too slowly, expect that a touch may not register. Also, because the touchpad needs to charge back up, count "1001, 1002, 1003" before touching again.
5. Watching the lane data test screen, repeat this test across the entire touchpad surface, from left to right and top to bottom. This will ensure that there are no dead spots in the touchpad.

## 4 Maintenance & Troubleshooting

Always disconnect the touchpad, remove it from the water, and allow it to dry before doing any repair work. Disconnect touchpad and remove it from water when not in use.

### Basic Maintenance of Timing System

After each meet, it is crucial to follow these basic maintenance procedures to ensure the longevity of the timing equipment.

- Turn off the power to all equipment associated with the system.
- When the system is set up for a long event, touchpads should be removed from the water every 48 hours, inspected, and allowed to dry for 6 hours.
  - Inspect the cable and connector for nicks, cuts, and corrosion. Use the brush provided in the maintenance kit to remove any corrosion from the banana connections. After cleaning, apply silicone grease to the connectors. Replace cable if necessary. Refer to **Cable Replacement (p.13)**.
  - Verify that all edge protectors are securely in place. Replace edge protectors if necessary. Refer to **Side & Bottom Vinyl Edge Cover Replacement (p.10)**.
  - Verify the boot along the top front bend is not cut.
  - Refer also to **Inspection Procedure (p.8)**.
- At the end of each meet, remove the touchpads from the pool, place them onto their storage cart (**Figure 10**). Store touchpads in a room outside of the pool environment and chemicals. Recommended temperatures in storage area should range between 32°F and 90° F (0° C and 32.2° C) with adequate fresh air circulation.



**Figure 10:** Touchpad Cart

### Touchpad Cleaning

After each meet, rinse the touchpad with non-chlorinated tap water. If possible the touchpad should be submerged in a tank of fresh water, otherwise use a hose or pour buckets of water onto the touchpad.

- **DO NOT** use a pressure washer.
- **DO NOT** use treated pool water.

## Inspection Procedure

Visually inspect:

- Banana plug for corrosion – if corrosion is found, refer to **Cable Replacement (p.13)**
- Cable for cuts – if cuts are found, refer to **Cable Replacement (p.13)**
- All edge protectors are securely in place
- Rubber boot across the top of the touchpad is not ripped/torn and is adhered in place
- Non-slip surface on the face of the touchpad is not cut, torn, or peeling
- The touchpad is not delaminating – this will be evident if the face of the touchpad looks like it is ballooning, with big bubbles (6"+ in diameter) or when pressed, it is loose
- For sharp edges – remove any sharp edges with a file
- Touchpad brackets are adjusted correctly for the gutter type
- Touchpad is flat against the pool wall, with no water inlets or other obstructions between the touchpad and the wall

## Advanced Touchpad Troubleshooting

1. Plug the touchpad into the **TOUCHPAD** input on the lane module (or **TP** input on the deck plate). Ensure the **GND** tab on the touchpad connector is lined up with the black jack on the touchpad input.
2. Verify the lane modules (or deck plates) are connected to the OmniSport 2000 console and that the console is powered on and in swimming mode.
3. Using a DC voltmeter, connect the red probe to the positive connector of the touchpad, and connect the black probe to the **GND** connector of the touchpad.
  - With the touchpad installed and not being pressed, 0.25 VDC should be measured.
  - When the touchpad is pressed, the voltage should drop to approximately 0 VDC.
  - When the press is released, the voltage should start climbing for approximately 1.5 - 3 seconds and level out at 0.25 VDC again.

If the readings are different from those described above, use the table on the following page to determine the possible cause and solution. If a problem occurs that is not listed or that cannot be resolved, refer to **Contact Information (p.17)**.



**Figure 11:** *Bowing Banana Plug Pins*

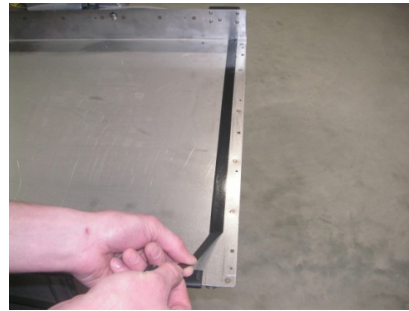
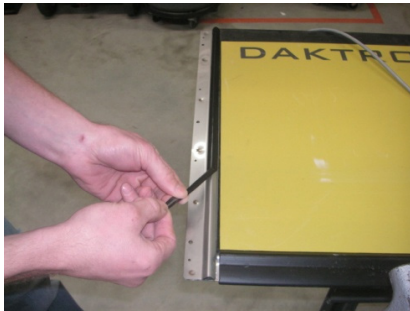
Problem	Possible Cause	Solution / Items to Check
Voltage measured on the banana plug of the touchpad cable when it is plugged into the lane module or deck plate is <b>0 VDC</b> or close to it.	Bad connection between the banana plug and the lane module (on-deck system) or deck plate (in-deck system).	<ol style="list-style-type: none"> <li>1. Clean both the male banana plug on the touchpad cable and the female jack on the lane module or deck plate.</li> <li>2. Using a small straight screw driver, bow out the center of each of the 4 leafs on the male banana pin so that it provides more pressure on the contact when the banana plug is inserted into the lane module or deck plate jack (see <b>Figure 11</b>).</li> <li>3. If cleaning the connections doesn't resolve the problem, check the next Possible Cause.</li> </ol>
	<p><b>On-deck System:</b> Bad lane module input.</p>	<ol style="list-style-type: none"> <li>1. Disconnect the touchpad from the lane module and clean the connections if this has not already been performed.</li> <li>2. Measure the voltage between the red and black connectors on the <b>TOUCHPAD</b> input: <ul style="list-style-type: none"> <li>• If the voltage is <b>0 VDC</b>, the touchpad input on the lane module is probably bad. Swap the module with one known to work correctly to verify. Contact Daktronics to order a replacement lane module if needed.</li> <li>• If the voltage is <b>0.25 VDC</b>, it is probably a shorted touchpad. Refer to Possible Cause: Shorted Touchpad.</li> </ul> </li> </ol>
	<p><b>In-deck System:</b> High resistance in the cable between the deck plate and lane interface, the termination of the cable to the green phoenix connector, the mating of the green phoenix connector onto the lane interface, or a bad touchpad input on the lane interface.</p>	<ul style="list-style-type: none"> <li>• With the touchpad <i>connected</i>, use a voltmeter to measure VDC on pins 1 and 5 of the green phoenix connector. If the reading is <b>0.25 VDC</b> at the lane interface and <b>0 VDC</b> at the deck plate, there is a break or high resistance in the cabling or termination of the cable to the phoenix connector.</li> <li>• With the touchpad <i>disconnected</i>, use a voltmeter to measure VDC on pins 1 and 5 of the green phoenix connector. If the reading is <b>0 VDC</b> or close to it, it is probably corrosion between the green phoenix connector and the lane interface, or a bad touchpad input on the lane interface.</li> <li>• In either instance, refer to <b>Contact Information (p.17)</b>.</li> </ul>
	Shorted touchpad.	Contact Daktronics; refer to <b>Contact Information (p.17)</b> .

Problem	Possible Cause	Solution / Items to Check
<p>Touchpad is not registering a touch, and the voltage stays at <b>0.25 VDC</b> when the touchpad is pressed.</p>	<p>Bad touchpad cable.</p>	<ol style="list-style-type: none"> <li>1. Unplug the touchpad from the lane module/deck plate.</li> <li>2. Set the meter to continuity.</li> <li>3. Touch the red probe of the meter to the <b>GND</b> tab of the touchpad connector, and touch the black probe of the meter to the back sheet of the touchpad. The meter should read <b>0 ohms</b>. If it is open, the cable is bad.</li> <li>4. Next touch the red probe against the positive connector of the touchpad and touch the black probe to the center sheet of the touchpad (accessed through one of the drain holes on the back side of the touchpad). The meter should read <b>0 ohms</b>. If there is no continuity, the cable is bad.</li> <li>5. Refer to <b>Cable Replacement (p.13)</b> to replace the bad touchpad cable.</li> </ol>

## Side & Bottom Vinyl Edge Cover Replacement

1. Remove any remaining tape/adhesive residue from front and rear surfaces of touchpad.

**Note:** Stretch the tape along its length to easily remove (**Figure 12**).



**Figure 12:** Removing Old Tape (Front & Rear)

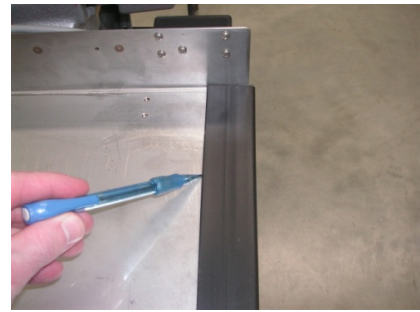
2. Clean areas where tape was removed with 70/30 Isopropyl alcohol (**Figure 13**).



**Figure 13:** Cleaning Edge Protector

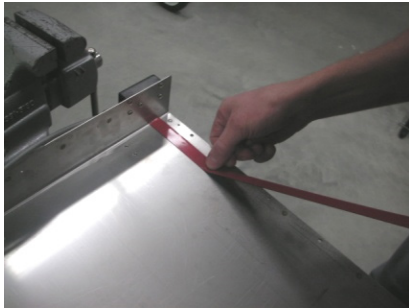


3. Snap a new vinyl edge cover onto the touchpad.
  - a. Using the new vinyl edge cover as a guide, use a pencil to make a reference mark along the entire length of the rear of the touchpad (**Figure 14**). This will be used as a reference for applying new tape on the rear surface.
  - b. Remove the new vinyl edge cover from the touchpad for now.



**Figure 14:** Marking Touchpad

4. Apply supplied double-sided tape to the rear surface of the touchpad, along the pencil line that was just made, and cut the tape to length. **Ensure the tape is lined up between the pencil line and the outside edge of the touchpad** (**Figure 15**).



**Figure 15:** Applying & Cutting New Tape (Rear)

5. Apply supplied double-sided tape to the front surface of the touchpad, on the raised portion of the stainless steel edge protector, and cut the tape to length (**Figure 16**).



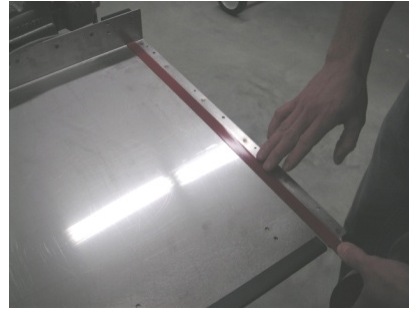
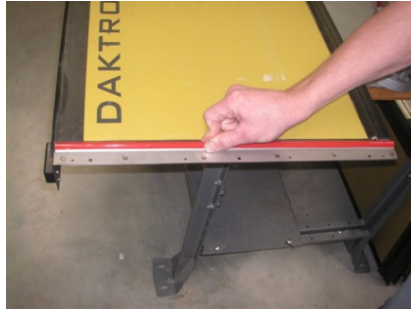
**Figure 16:** Applying & Cutting New Tape (Front)

6. Fold tape over the raised portion of stainless steel edge protector (**Figure 17**).



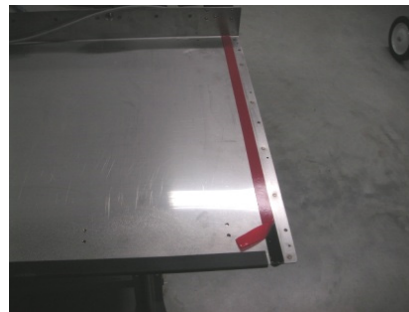
**Figure 17:** Folding Tape Over Edge Protector

7. Apply firm finger pressure to the tape on both front and rear surfaces across entire length to ensure proper adhesion (**Figure 18**).



**Figure 18:** Securing Tape (Front & Rear)

8. Partially peel back tape liner on front and rear surfaces and fold over toward the center of the touchpad (**Figure 19**).



**Figure 19:** Partially-Peeled Tape Liner (Front & Rear)

9. Clean the inside of the new vinyl edge cover with 70/30 Isopropyl alcohol (**Figure 20**). Allow the vinyl edge cover to dry completely before proceeding.



**Figure 20:** Cleaning Vinyl Edge Cover

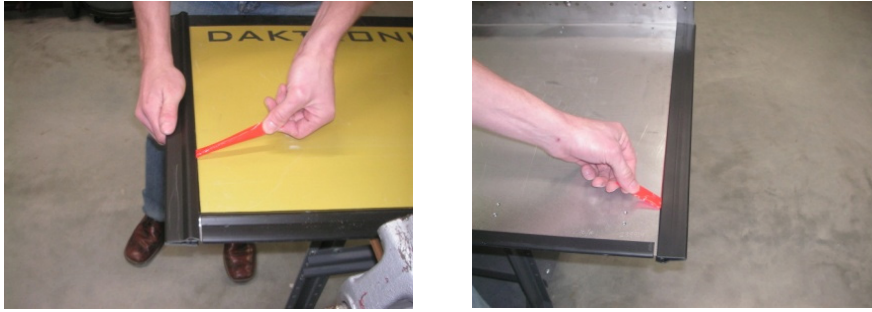
10. Place the new vinyl edge cover back on the touchpad by first inserting the corner on the touchpad, and then continue pushing along its length (**Figure 21**).



**Figure 21:** Applying Vinyl Edge Cover

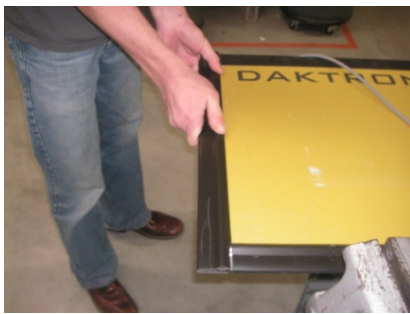


11. Once the new vinyl edge cover is fully seated on the touchpad, peel off the remaining tape liner on both front and rear surfaces (**Figure 22**).



**Figure 22:** Removing Tape Liner (Front & Rear)

12. After all tape liner has been removed, apply firm finger pressure to both the front and rear surfaces of the new vinyl edge cover to ensure proper adhesion (**Figure 23**).



**Figure 23:** Securing Vinyl Edge Cover

13. Repeat **Steps 1–12** for all vinyl edge covers that need replacing.

## Cable Replacement

If the control cable develops cuts or if troubleshooting has determined that it has gone bad, it must be replaced. Follow the steps below.

1. When viewing the touchpad from the rear, locate the black box on the right side where the input cable is connected. There are 5 screws on the underside of this box (**Figure 24**).



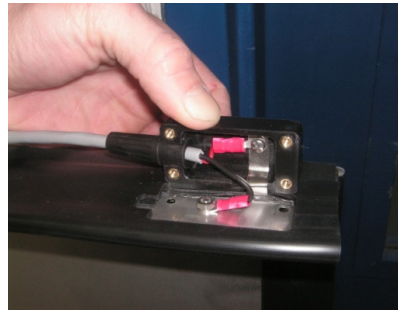
**Figure 24:** Top View & Bottom Rear View of Touchpad

2. Use a flathead screwdriver to remove the 4 corner screws only (**Figure 25**).



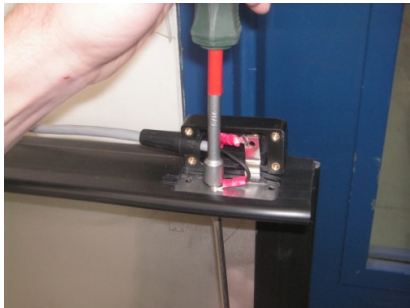
**Figure 25:** Removing Four Corner Screws

3. Carefully turn and lift the box away from the touchpad (**Figure 26**).



**Figure 26:** Lifting Box Away from Touchpad

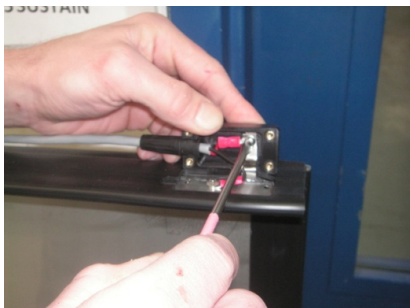
4. The remaining screw on the underside of the touchpad is securing the black (ground) wire. Remove this wire using a flathead screwdriver and 1/4" nut driver (**Figure 27**).



**Figure 27:** Removing Black (Ground) Wire

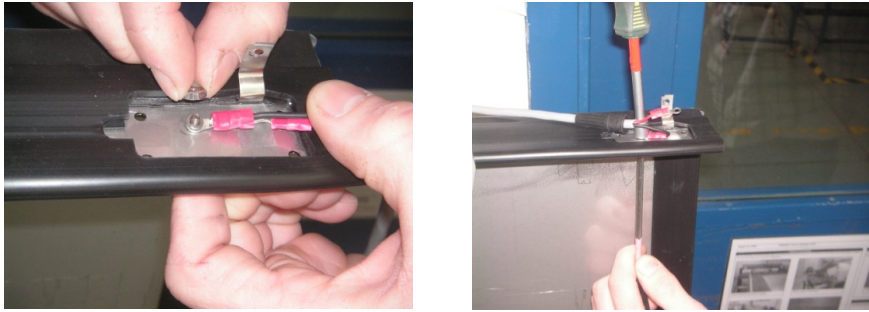
5. Remove the red (positive) wire from the metal tab with a flathead screwdriver; the box and cable will be free from the touchpad (**Figure 28**).

**Caution:** Be careful once the box is removed as the exposed stainless steel tabs can be sharp.



**Figure 28:** Removing Red (Positive) Wire

6. Attach the black (ground) wire from the replacement cable first.
  - a. Hang the cable off the right side of the touchpad.
  - b. Push the grounding screw up from the bottom side of the touchpad.
  - c. Place the black (ground) wire terminal ring over the screw, followed by the lock washer and nut.
  - d. Tighten with a flathead screwdriver and 1/4" nut driver (**Figure 29**).



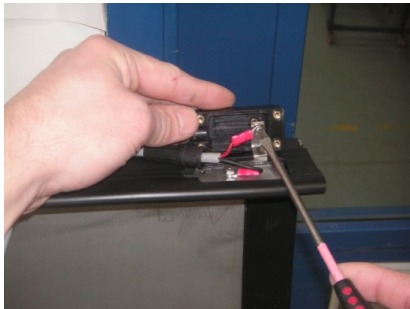
**Figure 29:** Attaching Black (Ground) Wire

- e. Swing the cable over to the left side of the touchpad so that the black (ground) wire is now bent in half (**Figure 30**).



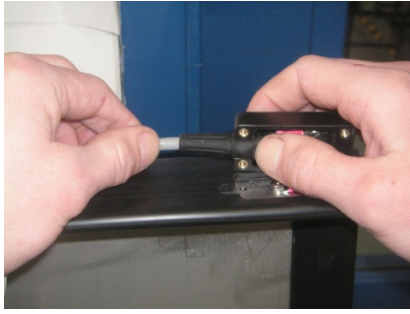
**Figure 30:** Proper Cable Position

7. Place the box back on top of the touchpad. Bring the screw through the red (positive) wire terminal ring, then the metal tabs, and secure to the box (**Figure 31**).



**Figure 31:** Attaching Red (Positive) Wire

8. Slide the rubber boot on the cable up into position, and ensure the groove in the boot is firmly seated into the rounded collar of the box (**Figure 32**).



**Figure 32:** Proper Rubber Boot Position

9. Fold the box down onto the metal surface of the touchpad (**Figure 33**).



**Figure 33:** Folding Box into Position

10. On the underside of the box, start the two left screws first, and then start the two right screws. Tighten the screws in the same order (**Figure 34**).



**Figure 34:** Securing Box to Touchpad

## Replacement Parts

The following table contains components that may require replacement.

Description	Part Number
Touchpad Cable Replacement Kit	0A-1040-0115
OmniSport 2000 Maintenance Kit	0A-1240-0003
Side/Bottom Edge Cover Replacement; T-7060	0A-1040-0117
Side/Bottom Edge Cover Replacement; T-7078	0A-1040-0118
Side/Bottom Edge Cover Replacement; T-7096	0A-1040-0119
Side/Bottom Edge Cover Replacement; FT-7150	0A-1040-0120
Side/Bottom Edge Cover Replacement; FT-7190	0A-1040-0121
Side/Bottom Edge Cover Replacement; FT-7240	0A-1040-0122
Tape, VHB, 5930, 1/4"	AT-1087
Tape, VHB, 5930, 1/2"	AT-1088
Tape, VHB, 5930, 3/4"	AT-1089

## Aquatics Systems Warranty & Limitation of Liability

The Daktronics Aquatics Systems Warranty & Limitation of Liability is located in 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.

## Contact Information

If there are any questions or concerns about the touchpad or any part of the timing system, please contact Daktronics Customer Service.

**Note:** Be sure to fill out the information on the second page of this manual for each touchpad prior to contacting Daktronics.

**Mail:** Daktronics Customer Service  
201 Daktronics Drive  
P.O. Box 5128  
Brookings, SD 57006

**Phone:** 1-800-DAKTRONICS (1-800-325-8766)

**Fax:** 1-605-697-4700

**Email:** [helpdesk@daktronics.com](mailto:helpdesk@daktronics.com)

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# **A Aquatics Systems Warranty & Limitation of Liability**

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## AQUATICS SYSTEMS - SCOREBOARDS AND TIMING EQUIPMENT

### 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. Except as otherwise provided herein, 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:

- Two (2) years for timing equipment and permanently mounted scoreboards
- One (1) year for portable scoreboards and clocks
- One (1) year for battery-packs, handheld control consoles/units, speakers and solar powered equipment

The period of time defined by the type of Equipment shall be called 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 anniversary of the commencement date.

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, ACCURACY 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. Exclusion from Warranty Coverage

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

A. Any damage occurring, at any time, during shipment of Equipment unless otherwise provided for in the Agreement. When returning Equipment to Daktronics for repair or replacement, Purchaser assumes all risk of loss or damage, and agrees to use any shipping containers that might be provided by Daktronics and to ship the Equipment in the manner prescribed by Daktronics;

B. Any damage caused by the 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. Limitation of Liability**

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

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

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

### **4. Assignment of Rights**

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

### **5. Governing Law**

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

### **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).

