Touchpads

User Guide

F147 Rev. 201407

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Part Number F147, Rev. 201407

Table of Contents

1 Introduction

Thank you for purchasing Colorado Time Systems touchpads.

Following are guidelines for easy installation, operation, care and storage of your touchpads. Please read this manual carefully and share it with all parties responsible for the operation and care of your touchpads. Make a copy of this manual and store it in a dry, safe place.

Save the boxes in which your touchpads were shipped for transporting them to other meet facilities or in case they need to be returned to the factory.

Before installing your touchpads, take a moment to inspect the pads for any possible damage incurred during shipping. If damages are visible, save the original shipping box and contact the responsible freight company immediately. If your pads are free of any damage, proceed to the installation instructions.

Note Never handle your touchpads by the cable! This includes when adding air to or releasing air from the pads.

Pressure to activate

The force required to activate the touchpad will vary depending on the amount of air in the touchpad. A typical pad setup for competition requires a force of approximately 25 psi (metric 172.369 kPa or .172 MPa) to activate.

Because of this, the mass to activate the pad increases with the increase in area. A finger tip touch (small area) is a much better and easier way to trigger the pad than the flat palm (larger area).

Scope of This Manual

This manual covers all aspects of normal touchpad installation and care. This manual also includes a Care and Maintenance section and a Troubleshooting section which cover the most common user-correctable problems and maintenance issues.

Two items may be helpful to you in maintaining your touchpads. These are available from Colorado Time Systems.

-touchpad test meter
-vacuum pump and needle

To find specific information quickly, refer to the Table of Contents at the front of this manual. For answers to installation questions or problems not covered here, contact Colorado Time Systems' Customer Service Department by email at support@coloradotime.com, or by telephone at 970-667-1000 or toll free at 800-287-0653.

2
Do's and Don'ts

DO's

□ **DO** treat your touchpads as valuable pieces of electronic equipment -- they are! With proper care and handling, your pads will last indefinitely. Without proper care, they can be destroyed in a matter of months. (Your Warranty is voided if it is found that your touchpads have been abused through improper care and handling.)

□ **DO** remove your touchpads from the water when not in use for extended periods of time. This is especially important when the pool is a multi-use facility and persons not familiar with the use of touchpads will be swimming.

□ **DO** check out your touchpads in advance of a meet. This should be done to allow plenty of time to correct any possible malfunction and have the touchpads in perfect shape for the meet.

□ **DO** assign a trustworthy person to be in charge of the touchpads. By having a student, assistant coach or aide responsible for the equipment, you can assure yourself that the equipment will be ready for use when it is needed.

DON'TS

□ **DO NOT** pick up a touchpad by its cable. The cable is not as physically strong as it size indicates.

□ **DO NOT** let your touchpads jam against the lane line hardware if they are gutter mounted. Check periodically to make sure the touch pads cannot shift into the line of the hardware.

□ **DO NOT** allow temperatures to exceed 110° F or fall below 50° F while storing or transporting touchpads.

□ **DO NOT** place touchpads in direct sunlight while out of the water (warpage will occur).

□ **DO NOT** allow touchpads to be bumped, scraped or twisted.

□ **DO NOT** puncture the touchpad. Even a tiny hole in the front of the touchpad will allow water to enter and destroy the touchpad. Use venting needle ONLY in orange plug, NEVER in the touchpad front.

3
Installing Your Touchpads

Gutter Mount Installation

Using Mounting Holes

If mounting your touchpads using the mounting hole in the top of the touchpad, follow instructions that came with your touchpad brackets. You can also find the instructions on our website.

Using Velcro Brackets

No tools are required for gutter mount installation with velcro brackets.

1) Prop up the touchpads at each starting block. Do not allow the front of the pad (black with white target) to rest against the starting block.

2) Beginning with the outside lane, lay a link bracket on the gutter, Velcro® side up, equidistant between lanes one and two (see Figure 1).

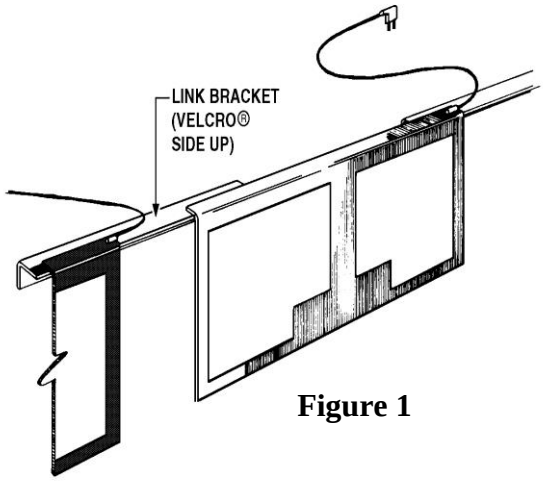

Figure 1

3) Ease the pad for lane one alongside the pool wall and into place. Press the pad down firmly to bond the Velcro® material (see Figure 2).

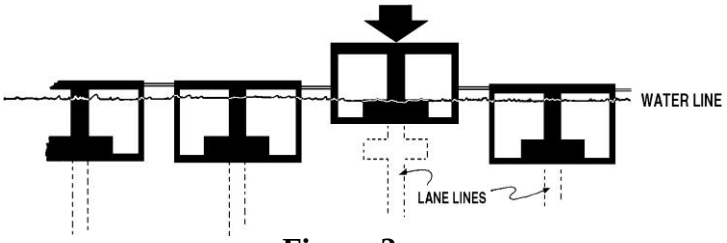

Figure 2

4) Repeat steps 2-3 for the remaining lanes.

5) Lift the outside end of the two outside lanes' pads and place a link bracket on the gutter, completely extending to the corner of the pool. Lower the pad and bond the Velcro®.

Note It is very important that you install all applicable link brackets. Failure to place brackets between the outside two touchpads and their respective walls will result in an objectionable lateral movement of the pads during a meet.

6) Repeat steps 1-5 for the opposite end of the pool if necessary.

Tools & Materials Required for <u>Flat Wall Mount Installation</u>

The following parts are supplied by Colorado Time Systems:

□ 2 Stainless steel flat wall mounting brackets for each touchpad
□ 2 Stainless steel expansion bolts and 2 expansion anchors with expansion wedges for each touchpad to fit ½" holes
□ 6 Stainless steel ¼ - 20 x ½" mounting bolts

The following tools will be required:

□ 9/16" socket or open end wrench for supplied ¼" x 20 bolts
□ Socket or open end wrench for bolts
□ Drill motor with ½" masonry bit to fit anchors
□ Hammer

To Install Your Wall Mounted Touchpads

1) Mount two wall brackets to each touchpad, one on each end, using the supplied ¼" – 20 x ½" stainless steel mounting bolts. The mounting brackets are pre-drilled and tapped.

2) Place one touchpad in the pool with the pad flush against the pool wall and centered in the swimming lane.

3) Once the pad is aligned, mark and drill a hole 1 ½" deep in the pool deck at each bracket hole location.

4) Insert narrow end of expansion wedge into the bottom (serrated end) of the expansion anchor as far as you can easily push it.

5) Place expansion anchor in the drilled holes wedge first. The anchor should protrude ½" above the level of the pool deck. Pound the anchor into the hole until it is even with the pool deck. The expansion wedge will force the anchor to expand into the deck to secure the bolt.

6) Bolt the touchpad mounting brackets to the pool deck using the supplied ¼ - 20 x 1" stainless steel bolts.

7) Put a number on the back side of each touchpad and always use that touchpad in that lane number to facilitate mounting.

8) Repeat steps 2-5 for the remaining touchpads.

Note Replacement touchpad brackets are not included with touchpad orders and must be purchased separately.

4
In-Water Check List

After you have properly installed your touchpads, ensure they are operating properly by following these steps:

1) After you have mounted your touchpads in the water, test each touchpad with your touchpad meter. Working with one touchpad at a time, insert the touchpad plug into the test meter.

2) Have a swimmer trigger (fingertip touch) the touchpad while you observe the meter. The meter should light up completely from left to right indicating that the swimmer closed the switch contacts.

3) Repeat steps 1-2 for the remainder of the pads.

4) Once all the touchpads have been checked using the test meter, insert the touchpad plugs into their corresponding deck plate jacks (see Figure 6) or cable harness pod (see Figure 11).

5) Set your electronic swim timer for a 50-yard race. Reset the timer and start the race using any appropriate starting method. (Ensure your electronic swim timer arms all lanes for the finish).

6) Once all the lanes are armed, have a swimmer trigger the pad in lane one, then lane two and so on until all lanes have been triggered in order. If you have a printer installed, request a printout of finish results by lane order. Without a printer, request a console display of the finish results by lane.

7) Check to make sure that all times were recorded with lane one recording the fastest time. If the slowest time was recorded for lane one, check the lane reversal position on your timer.

Note Your touchpads may require an initial adjustment in their sensitivity. This adjustment can be made by either adding air or releasing air from the pad. After you have made all necessary initial adjustments, your touchpads should not require any further adjustments.

5
Troubleshooting Guide

This section will assist you in identifying any touchpad problem(s) by learning to recognize the specific condition and remedy.

Note Firm pads should feel similar to pushing your fingers into a thick magazine. Spongy pads give the sensation of pushing your fingers into a piece of foam rubber.

Condition	Appearance	Meter Readings	Problem	Correction	Remarks
Touchpad works correctly	Feels *Firm*	While touching pad entire bargraph is illuminated	No problem	Your pad is working correctly	Correctly operating pads should illuminate the bargraph
Touchpad works correctly	Feels *Firm*	When touchpad is not touched, bargraph should not illuminate	No problem	Your pad is working correctly	When the pad is not being touched the bargraph should not illuminate
	Feels *Spongy*	While touching pad entire bargraph is illuminated	Too much air in pad	If pad works take no action	See pad evacuation instructions, on page 15
	Feels *Spongy*	When touchpad is not touched, bargraph is not illuminated	Air pocket may be visible	If pad "floats" or becomes less sensitive to touch, you will need to evacuate the air	See pad evacuation instructions, on page 15
Timer shows hit for the pad's lane within 15 seconds of the start	Feels *Firm*	While touching pad entire bargraph is illuminated	Excessive vacuum in the pad, too little air	Vent the pad to let more air in	See pad venting instructions, on page 15
Timer shows hit for the pad's lane within 15 seconds of the start	Feels *Firm*	When touchpad is not touched, bargraph is not illuminated	If bargraph is illuminated when not touched, the pad is shorted.	Vent the pad to let more air in	See pad venting instructions, on page 15
Venting pad does not correct the problem	Feels *Firm*	While touching pad entire bargraph is illuminated	Cable problem	Inspect cable	Wiggle cable at connector block, plug with observing meter
Venting pad does not correct the problem	Feels *Firm*	When touchpad is not touched, bargraph is not illuminated	If bargraphs are not illuminated, there could be water in the pad.	Contact CTS	

Condition	Appearance	Meter Readings	Problem	Correction	Remarks
Evacuating the air does not correct the problem		While touching pad entire bargraph is illuminated	Venting was not performed after pad was evacuated	Vent pad	See pad venting instructions, on page 16
Evacuating the air does not correct the problem		When touchpad is not touched, bargraph should not illuminate	Venting was not performed after pad was evacuated	Vent pad	See pad venting instructions, on page 15
Evacuating the air does not correct the problem	Feels *Spongy*	While touching pad entire bargraph is illuminated	Vacuum pump hose connected to the wrong air inlet	Review evacuation instructions	See pad evacuation instructions, on page 15
Evacuating the air does not correct the problem	Feels *Spongy*	When touchpad is not touched, bargraph should not illuminate	Water is present in vacuum hose while evacuating	Contact CTS	Water may have entered the pad during venting
Pad never stops the timer at the finish (Split time not recorded)		While touching pad entire bargraph is illuminated	Broken wire in cable	Inspect cable	Wiggle cable at connector block and plug while checking for good meter reading
Pad never stops the time at the finish (Split time not recorded		When touchpad is not touched, bargraph is not illuminated	Dirty cable connector	Clean connector	Clean connectors See Care and Maintenance section, on page 19
Pad never stops the timer at the finish (Split time not recorded)		When touchpad is not touched, bargraph is not illuminated	Pad cable damaged	Contact CTS	
Condition	**Appearance**	**Problem**	**Correction**		
Venting pad does not correct problem	Inspect top of tape switch for visual damage or shifting of tape switch	Tape switch shorted due to physical damage	Attempt to "massage" switch back into shape using the thumbs of both hands		
Venting pad does not correct problem	Inspect top of tape switch for visual damage or shifting of tape switch	Tape switch shorted due to physical damage	An obvious dent in the switch may be able to be worked out using the massage method		
Venting pad does not correct problem	Tape switch shorted due to excessive pressure pushing the switch below the radius of the pad	Tape switch shorted due to physical damage	If the tape switch has slipped below the radius, massaging the switch back into the radius should correct the problem		

Emergency Repairs During a Race

Pad shorts showing a constant finish during the race

Only attempt if you do not have time to make the normal touchpad test listed under the Using Your Meter section, on page 11.

Take an absorbent towel and your touchpad needle to the pad. Dry off the end plug using the towel. **IMPORTANT:** Make sure the cable end of the touchpad is not splashed or doused with water while the adjustment is being made. Insert the needle into the end plug as described under the venting a touchpad, on page 15. Insert the needle in the pad and wait 10 seconds. Remove the needle.

This procedure should only be attempted if no other means are available to correct the problem during a race. DAMAGE TO THE PAD MAY RESULT. If this procedure is used, the pad should be carefully tested following the meet to insure that too much air was not allowed to enter the pad.

6
Using Your Meter

To Test Touchpad

The touchpad test is used to make sure touchpads are operating properly.

1) Plug the dual banana plug from the touchpad into the top of the test meter.
2) Press the power button (located between the two banana prongs) on the bottom of the test meter.
   - ·When the touchpad is not being pressed, only the red power light should illuminate. None of the red bar graph lights should come on; if they do, you have a shorted touchpad (a touchpad that always sends a signal). Contact CTS customer support.
   - ·When a fingertip is pressed against the surface of the touchpad, the entire red bar graph should illuminate; if it does not, you have an open touchpad (a touchpad that will not send a signal). Contact CTS customer support.

If a touchpad is not operating properly, see the Troubleshooting Guide earlier in this manual, on page 8.

Figure 3 - Touchpad Meter

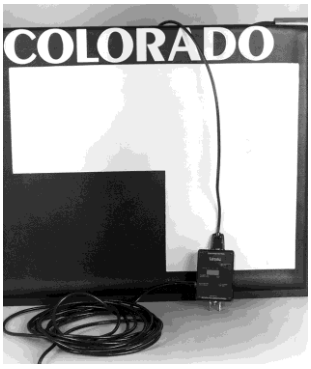

Figure 4 – Touchpad Test

To Test Cable Harness

The cable harness test is used to determine the amount of voltage reaching a touchpad, pushbutton or RJP through the cable harness.

1. Connect the cable harness to the timer and turn on the timer.
2. Insert the test meter prongs into the receptacle labeled “PRIME” on the cable harness pod. When the test meter is plugged all the way into the cable harness, the cable harness depresses the power switch on the test meter, and the test meter’s red power light will illuminate.
   ·The red bar graph lights should illuminate in the 4.5 to 5 volt range.
   ·A reading lower than 4.5 indicates a problem in the timer or cable harness, or a dirty connector. If you get a low reading, clean the cable harness connector as described in the Cleaning Deck Plates and Cable Harnesses Maintenance Sheet, on page 19, and reset. If it continues to test low, contact CTS customer support.
3. Unplug the test meter and insert into the receptacle labeled “BUTTON” on the cable harness pod. Follow the same procedure as above to test.
4. Repeat these steps for each land pod on the cable harness.

Figure 5-Cable Harness Test

To Test Deck Plates

The deck plate test is used to determine the amount of voltage reaching a touchpad, pushbutton, or RJP through the deck plate or under-block connection hub.

1. Connect the timer to the wall plate and turn on the timer.
2. Insert the test meter prongs into the "TOUCHPAD" receptacle on the deck plate. When the test meter is plugged all the way into the deck plate, the power switch on the test meter is depressed, and the test meter's red power light will illuminate.
   ·The red bar graph lights should illuminate in the 4.5 to 5 volt range.
   ·A reading lower than 4.5 indicates a problem in the timer or deck plate, or a dirty connector. If you get a low reading, clean the deck plate connector as described in the Cleaning Deck Plates and Cable Harnesses Maintenance Sheet, on page 19, and retest. If it continues to test low, contact CTS customer support.
3. Unplug the test meter and insert into the "BUTTON A (RJP)" receptacle on the deck plate. Follow the same procedure as above to test.
4. Repeat these steps for the BUTTON B and BUTTON C receptacles.
5. Repeat for each deck plate or connection hub.

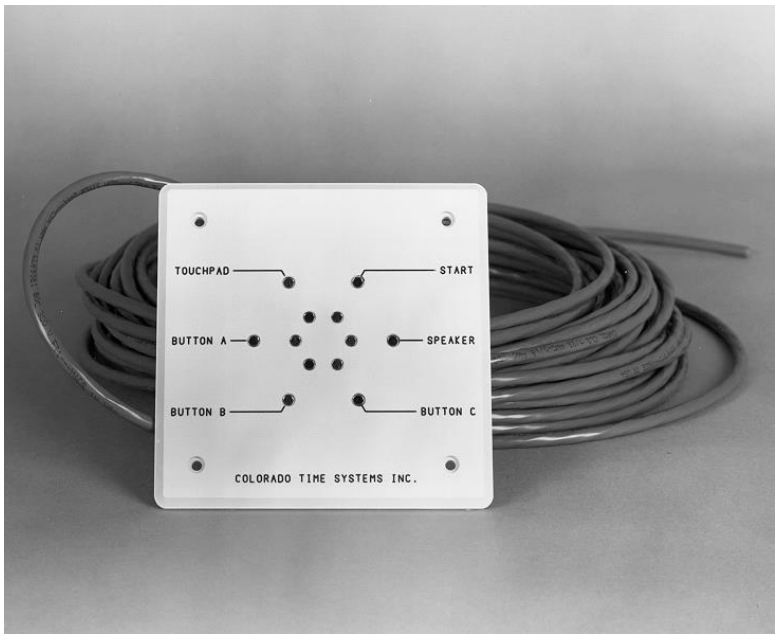

Figure 6-Deck Plate

To Test Pushbuttons

The pushbutton test is used to make sure the pushbuttons are operating properly.

1) Plug the dual banana plug from the pushbutton into the top of the test meter.
2) Press the power button (located between the two banana prongs) on the bottom of the test meter.
   ·When the pushbutton is not being pressed, only the red power light should illuminate. None of the red bar graph lights should come on.
   ·When the pushbutton is pressed, the entire red bar graph should illuminate.
3) If the pushbutton does not cause these readings in the meter, the pushbutton is faulty and should be replaced.

Figure 7 – Pushbutton Test

7
Using Your Needle/Vacuum Pump

If your touchpad always sends a signal to the swim timer, it is "shorted" and may need to have air added (**vented**) to it. Please consult the Troubleshooting Guide, on page 8, or call a Colorado Time Systems' Customer Service technician at (970) 667-1000 or toll-free at 800-287-0653. If venting is recommended, follow these steps:

1) Air must be added to a touchpad while it is out of the water. **IMPORTANT:** Make sure the cable end of the touchpad is not splashed or doused with water while the adjustment is being made.

Note If air is added to the touchpad while in the water, water may get inside the touchpad. This will ruin the touchpad.

2) Insert the touchpad plug into the test meter (see Figure 3 and 4)

3) Ensure that the orange rubber plug on the connector block is completely dry (see Figure 9, next page).

4) Remove the needle from its receptacle on top of the touchpad meter. Ensure the needle is free of all burrs (a rough edge that can be removed by drawing the needle across a stone or concrete surface, rotating the needle as you move it),

5) Insert the needle into the orange plug as far as it will go. **BE CAREFUL NOT TO PUSH THE NEEDLE TOO HARD.** Leave the needle in the orange plug until the red meter lights are off. Wait three seconds and remove the needle (See Figure 8).

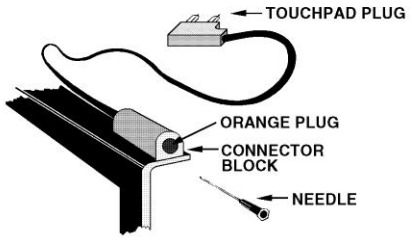

Figure 8

Figure 9 – Connector Block

7) If adding air to the touchpad does not result in the above meter reading, refer to the Care and Maintenance section on page 19.

Note Never handle your touchpads by the cable. This includes when adding air to or releasing air from the pads.

To Release Air From A Touchpad

If your touchpad will not send a signal to the electronic swim timer while fingertip touched, it is "open" and may need to have air released (**evacuated**) from it. Please consult the Troubleshooting Guide on page 8 in this manual or call a CTS Customer Service Technician at (970) 667-1000 or toll-free at (800) 287-0653 for assistance. If evacuating is recommended, follow these steps:

1) Remove the touchpad from the water.

2) Insert the touchpad plug into the touchpad test meter.

Figure 10: Vacuum and pressure ports

3) Ensure that the orange rubber plug on the connector block is completely dry.

4) Verify that the vacuum/pressure switch is pointed toward "vacuum." (see Figure 10).

5) Remove the needle from its receptacle on top of the touchpad meter.

6) Remove the needle cover, and ensure the needle is free of all burrs, or rough edges. Burrs can be removed by drawing the needle across a stone or concrete surface, rotating the needle as you move it.

7) Replace the needle cover, and firmly attach the needle to the open end of the clear plastic hose.

8) Remove the needle cover, and insert the needle into the center of the orange plug as far as it will go. **BE CAREFUL NOT TO PUSH THE NEEDLE TOO HARD.**

9) Squeeze the handles on the pump together, pumping and releasing until the test meter lights up red completely from right to left. At this point, the touchpad switch mechanism is fully closed. Stop pumping and wait until the meter lights begin to go off from right to left. Wait five seconds and remove the needle from the orange plug.

10) Replace the needle cover on the needle, and return the needle to its receptacle on top of the touchpad meter.

8
Care and Maintenance

The key to making your Colorado Time Systems equipment last and run trouble-free is regular cleaning and maintenance. The steps are quite easy; the secret is to do them consistently so that corrosion does not have a chance to begin to form.

Materials Needed

□ 100% Cotton Pipe Cleaners (available at most drug stores)
□ Isopropyl alcohol
□ Dielectric grease (Dow Corning® #111 equivalent -- available at most hardware stores)
□ Clean FRESH water (not pool water)
□ Soft cloth
□ Soft toothbrush

Cleaning Your Cable Harness and Deck Plates

Cable Harness and Deck Plate Sockets (See Figures 11 and 12)

Figure 11- Cable Harness

Figure 12- Deck Plate (Quick Connect)

Note **NEVER USE A SHARP OBJECT TO CLEAN SOCKETS OR CONNECTORS**

Before each use:

1) Make sure that you have a small amount of dielectric grease in each banana jack of the cable harness pods or the deck plate, so that when you push in the banana plug a small amount of grease pushes out of the hole.

2) Use a soft toothbrush and alcohol to clean the 50-pin connector that connects to the back of your Sports Timer or wall plate.

Figure 13 – 50-Pin Connectors

3) If you have the Quick Connect deck plate with speedlight connector (pictured above), use the soft toothbrush and alcohol to clean the speedlight connector.

After each use:

1) Use isopropyl alcohol and a pipe cleaner to clean out each banana jack of the cable harness pods or the deck plate. Once you have cleaned them, flush with clean water. Next, dab a small amount of dielectric grease into each hole and then work a banana plug in and out to get the grease into each banana jack.

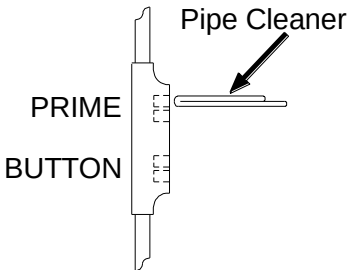

Figure 14 – Cleaning Sockets

2) Hang your cable harness on a rack (a sturdy garden hose hanger works well) so that it will not be sitting in water until you need it again. DO NOT store your cable harness in a plastic bag or bin -- it must be allowed to dry.

Touchpad banana plugs

After each use, use a soft cloth to wipe off any excess dielectric grease from the connectors. Inspect each connector. If it needs cleaning, use the isopropyl alcohol and a clean, soft cloth to clean it.

Cleaning Your Wall Plates

After each use:
Use isopropyl alcohol and a soft toothbrush to clean the wall plate (Figure 15) by gently rotating the toothbrush bristles in and over the connection sockets. There is no need to rinse with water because the alcohol will evaporate. Lubricate all the connectors with dielectric grease EXCEPT THE FIBER OPTIC (SCBD DATA) CONNECTION.

Figure 15 – Wall Plate

Last Resort Cleaning

Last Resort
If for some reason your banana plug connections, or the banana jacks of the cable harness pods or deck plates acquire any kind of lime scale or calcium build up, use a diluted (50-50) solution of Lime Away or CLR (calcium-lime-rust) cleaner and a pipe cleaner to remove the buildup:

1) Dip pipe cleaner folded in half in diluted solution of Lime Away or CLR cleaner and twist into socket
2) Clean thoroughly by rotating the pipe cleaner in the socket.
3) Flush with plenty of clean, fresh water (not pool water).
4) Use a clean, dry pipe cleaner to soak up excess water in the socket.
5) Finally, dab a small amount of dielectric grease into each hole and then work a banana plug in and out to get the grease into each banana jack.
6) Wipe the excess grease from the banana plug with a clean soft cloth.

WARNING: DO NOT use Lime Away or any CLR cleaner as a standard cleaning solution for the banana jacks. NEVER use these chemicals for wall plates, speedlight connectors or 50-pin connectors.

Failure to clean as directed will dramatically shorten the life of your equipment.

Touchpad Banana Plug Maintenance

The two pronged plug on the end of the cord coming out of the touchpad connector block needs to be kept free of corrosion for proper operation. This banana plug can be cleaned (see previous page) or replaced if necessary.

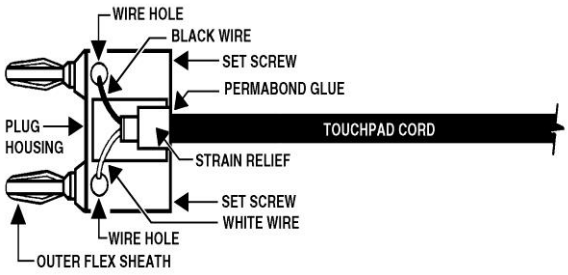

Figure 16 – Banana Plug

Replacing Banana Plug

Materials Needed
□ Banana Plug(s)
□ Wire strippers
□ Small blade screwdriver
□ Silicon sealer/ clear caulking
□ Permabond/ super glue

If the plug is badly corroded, bent or any section of the outer sheath is missing, the plug will need to be replaced. Plugs may be ordered from Colorado Time Systems (part# R-025-045).

1) Clip off the old plug just above the plug housing (see Figure 16).

2) Strip the outer black insulation off the cord about one inch from the end, exposing the two smaller wires, one black, the other white.

3) Strip the insulation off the black and white wires about ¼ inch from their ends. Twist the exposed wires into a single strand on the black wire and then the white wire.

4) Insert the cord into the strain relief hole on the front of the plug.

5) Using a small blade screwdriver, loosen the two set screws recessed into the top of the plug so that the screw ends clear the wire holes.

6) Insert the end of the black wire into one hole and tighten the set screw. Insert the white wire into the other hole and tighten that set screw.

7) Place silicon sealer in wire holes.

8) Put a drop of permabond glue on the cord just above where it enters the strain relief. Allow to dry for at least one hour.

Velcro Replacement®

The Velcro® on your touchpads and brackets may become loose or worn and require replacement. The Velcro® for the touchpads (the loop) and the brackets (the hook) may be ordered from Colorado Time Systems or obtained at most hardware or craft stores.

Applying Velcro® Adhesive

1) Completely remove the old Velcro® and clean the old adhesive off the bracket or touchpad. A latex paint thinner will help loosen any old adhesive and allow you to scrape the adhesive off with a putty knife.

2) Apply the Velcro® strip to the bracket or touchpad. Rub down firmly several times or use a small roller to remove any air pockets on the Velcro® strip. (Air pockets can cause the adhesive to dry out and the Velcro® to loosen).

3) If possible, allow the adhesive to dry overnight.

Note If your touchpad brackets require replacement, please contact our Customer Service Department by email at support@coloradotime.com or by phone at 970-667-1000 or toll-free at 800-287-0653.

9
Storage

Properly storing your touchpads is very important to their longevity. By following the guidelines below, you can reduce the chance of damaging or destroying your pads.

1) Ensure your pads are stored away from heavy traffic.

2) Hard objects or other touchpads should not rest against the surface of the pad or the tape switch located on the 90° angle. Do not expose your pads to the abuse of the table corners, hand rails, door latches or other potentially harmful objects.

3) Touchpads should not be stored in temperatures lower than 50° F or higher than 110° F. If the touchpads are allowed to get too cold, let them soak in the warm pool water for 15-30 minutes before use.

4) Exposure to direct sunlight and/or temperatures over 110° F will result in irreparable damage from sun or heat warpage.

Colorado Time Systems has a variety of touchpad caddies (see Figure 17 below) available for storing your touchpads. The caddy provides safe storage and a convenient means to transport your touchpads to the pool deck. If you choose to build your own caddy, we will provide free building plans. For more information, contact your CTS Sales Representative.

Figure 17 – Touchpad Caddy

10
Servicing Your Touchpads

If you are unable to restore your malfunctioning touchpad to proper operation, please call our Customer Service Department at 970-667-1000 or toll-free at 800-287-0653. One of our technicians will help analyze your system problem and make recommendations for repair.

If it is necessary to return your touchpad(s) to the factory, the technician will provide shipping instructions and return authorization information. Make sure any package you send to CTS sufficiently protects the contents and contains your organization, customer number, name, street address and daytime phone number.

Normal transit time within the continental U.S. for most carriers is five business days each way. If you require a quicker turnaround, please inform the technician so they can suggest a faster shipping method.

SHIP TO:
Colorado Time Systems
Customer Service Department
1551 East 11th Street
Loveland, CO 80537-5056

Email: support@coloradotime.com
Phone: 970-667-1000
FAX: 970-667-1032
Customer Service: 800-287-0653

Customer Service Department
www.coloradotime.com
Email: support@coloradotime.com
Phone: 970-667-1000
Toll Free U.S. and Canada 800-287-0653
Fax: 970-667-1032