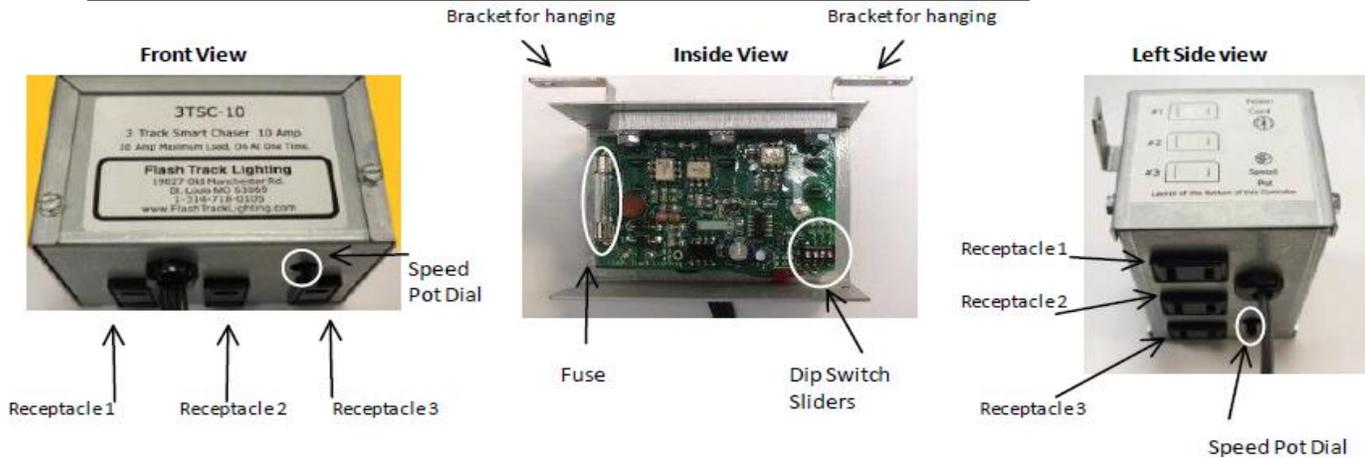


Instructions for Your 3TSC-10

Call Flash Track Lighting at (636) 391-1161 with any questions or issues.

1. The Basics of the 3 Track Smart Chaser 10 amp Light Controller (3TSC-10)



2. Testing your Lights First

Always test your lights for shorts before plugging them into the controller. To do this, plug each set of lights into a power source other than the controller. If any lights cause the breaker to pop or produce significant sparks, make the necessary replacements and adjustments, then test the lights again. Once there are no breaker issues or sparks, the lights may be plugged into the controller.

This step is necessary to protect the controller. Although the controller is protected by a fuse, it can be damaged by a severe short under the right conditions. Damages caused by shorts within a light bulb are not covered under the controller's warranty.

If, while testing your lights, you are experiencing significant sparking at the plugs OR you are having a difficult time finding the cause of a short, look for the following possible causes:

(Note: Having empty light sockets will NOT cause a short.)

- ✓ Are you experiencing a lot of sparking when plugging in the lights?
 - Excessive sparking at the plug that occurs when plugging lights into a power source can be caused by having too many bulbs on the line. When this is the cause, there will NOT be a short as a result.
 - If you have not exceeded your amperage by having too many bulbs on the line, then a short is the most likely cause of the sparking and can be corrected by reviewing the following questions.
- ✓ Are any of the glass bulbs broken?
 - If so, remove all broken bulbs from the sockets and install new bulbs while the lights are NOT plugged in.
- ✓ Have any of the glass bulbs loosened from their bulb bases?
 - Glass bulbs that have loosened from the base are the most common cause of shorts. Bulbs can loosen from the base while they are being removed, while they are being installed, or simply as a result of time. If you notice a bulb has loosened from its base, EVEN IF the bulb is still working, you MUST turn off the power IMMEDIATELY and then you MUST replace the loosened bulb.
 - Loose bulbs that are still working must be replaced immediately because if the bulb is loose already, it is inevitable that the bulb will short out eventually.
 - Turning off the power before attempting to turn, loosen or in any way move a loose bulb is critical. If you do not turn off the power first, then when you go to turn the bulb, the two wires inside the base will touch each other while electricity is running through them, causing a dead short.

3. How to Set Your Chase Pattern

To set your chase pattern, simply adjust the 4 sliders on the dip switch to an up-on-1 position or a down-off-0 position. To locate the dip switch, open the front cover of the box. The dip switch has 4 sliders located in the bottom right corner inside the box. Anytime that you change the sequence you MUST unplug the controller box and then plug it back in with the new sequence code for the change to take effect. The following is a description of the chase patterns available. Each chase pattern can be selected to run on a 2 track chase or a 3 track chase mode.

1. **Chase:** Sequentially turns 1 track on and 2 tracks off from 1/10th to 2 seconds per step
2. **Wave:** Turns lights on and off in a back and forth movement from 1/10th to 2 seconds per step
3. **Slow Chase:** Chase pattern with speed range up to 6 seconds per step
4. **Slow Wave:** Wave pattern with speed range up to 6 seconds per step
5. **Chase with Delay:** Chase with a 3 times longer delay on step 1
6. **Wave with Delays:** Wave with a 3 times longer delay on steps 1 and 3
7. **Negative Chase:** Reverse of the chase pattern; sequentially turns 2 tracks on and 1 track off
8. **Build Up:** Sequentially turns each track on, keeping it on until all tracks are on, then turns all tracks off together
9. **Speller:** Build up that ends with all tracks flashing on and off together 3 times
10. **Multi-Sequence:** A 20 second loop combining 7 different 3 second long chase patterns

Use dip switch on circuit board to select chase seq.
Move slides to match setting. 1=On/Up 0=Off/Dn
Un-plug the controller box before changing setting.

	<u>Sequence Label</u>		<u>Max.</u>
Seq Code	Abbrev.	Description	Amps per Receptacle
1	1000 2TC	2Track Chase	10
2	0000 3TC	3Track Chase	10
3	1100 3TW	3Track Wave	10
4	0001 2TCS	2T Chase Slow	10
5	0010 3TCS	3T Chase Slow	10
6	0011 3TWS	3T Wave Slow	10
7	0100 2TCD	2T Chase w/Delay	10
8	0101 3TCD	3T Chase w/Delay	10
9	0110 3TWD	3T Wave w/Delays	10
10	0111 3TCB	3T Chase w/Blank	10
11	1001 3TNC	3T Negative Chase	5
12	1010 2TBU	2Track Build Up	5
13	1011 3TBU	3Track Build Up	3
14	1101 3TS	3Track Speller	3
15	1110 2TM	2T Multi-Sequence	5
16	1111 3TM	3T Multi-Sequence	3

A 10 Amp 32 V ¼ by 1 ¼ fuse is located on the circuit board.

Use the sequence label to the left to select the chase sequence you would like to run. When looking at the code setting, 1 represents up/on and 0 represents down/off. Be sure to select not only the pattern you want, but also the right pattern with the right number of tracks, 2 track mode or 3 track mode. Remember to un-plug and re-plug-in the controller box whenever you change the sequence. This Sequence Label is also printed on the top of the controller box.

Example: To select Sequence #1, the 2 Track Chase abbreviated 2TC with the setting 1000, use the dip switch inside your controller box and adjust the sliders going from left to right. Move the first slide into an upward position as indicated by the “1” and leave the rest of the slides (the last 3) in a downward position as indicated by the last three “0”s in the code setting. This will program the lights to move in a 2 track chase sequence.

4. Maximum Load

The maximum load for the 3TSC-10 is 10 amps. To see the maximum loads per receptacle, refer to the last column of the above Sequence Label, also located on top of the control box. The sequence label lists the “Max Amps per Receptacle” for each possible chase sequence that the controller can execute. The maximum amps per receptacle can vary depending on the sequence you choose because different sequences have different maximum numbers of receptacles that are turned on at any one time.

To calculate the number of bulbs that may be turned on per amp (amperage load) for any given receptacle, see the chart on the next page.

Amperage Load Chart (based on amps per receptacle)

Type of Light	# = 1 amp	# = 3 amp	# = 5 amp	# = 10 amp
C9 Incandescent 9 watt	14 bulbs	42 bulbs	70 bulbs	140 bulbs
C7 Incandescent 7 watt	18 bulbs	54 bulbs	90 bulbs	180 bulbs
C7 Incandescent 5 watt	21 bulbs	63 bulbs	105 bulbs	210 bulbs
Rope Light, Incandescent	21 feet	63 feet	105 feet	210 feet
C9 LED	50 bulbs	150 bulbs	250 bulbs	500 bulbs
C7 LED	70 bulbs	210 bulbs	350 bulbs	700 bulbs
Mini Lights Incandescent	300 bulbs	900 bulbs	1,500 bulbs	3,000 bulbs
Mini Lights LEDs	1,200 bulbs	3,600 bulbs	6,000 bulbs	12,000 bulbs

5. Plugging your Lights in

Always plug in your lights first to test them, THEN, once you are sure that there are no shorts, connect the controller to a power source. Next, plug the lights into the receptacles on the bottom of the controller box. This controller has no power on/off switch, so if your lights are plugged in, then after a short delay, they should turn on. (Do not be alarmed if there is a slight delay before the lights start chasing as this is normal.)

Once you plug your lights into the controller receptacles, if you are looking inside the controller box, you should see a few red lights turn on inside the box. Each light indicates that the associated track has power and is turned on. Each receptacle is one track. If you would like your lights to chase in the same pattern but in the opposite direction, simply reverse the plug in order of your lights.

6. How to Adjust Your Chase Pattern's Speed

For most chase patterns, the speed range can be adjusted from 1/10 of a second to 2 seconds per step. Slow patterns on a 3 chase mode such as the 3TCS and 3TWS can be adjusted to range in speed 1 to 6 seconds.

To adjust the speed, twist the speed pot dial, located at the bottom right front corner, outside of the box. Twisting the dial left will slow the speed down while twisting the dial right will make your lights chase faster. If you lift the cover of your controller, you will see red speed indicator lights flashing inside the box. The speed at which the red lights flash on and off is the speed at which your chase lights are currently set.

7. Mounting the Controller

- When mounting the controller, the controller must be in an upright position. The receptacles should be facing downward and the Sequence Label should be on top. The controller must be mounted off of the ground. While the controller can withstand rain or snow, it cannot continually sit in a puddle of water. You have two options for how to mount the controller. You may want to use zip ties to secure it.
 - 1: Mount the controller to the display itself, at least 12 inches off the ground.
 - 2: Drive 2 stakes into the ground and mount the controller to the stakes.

8. Troubleshooting

- What to do if you short out your controller:
 - If you test your lights prior to plugging them into the controller, it is extremely unlikely that you will short out your controller. If you do short out your controller, we can make the necessary repairs for a small fee.
- What to do if you need to replace your fuse:
 - The fuse is a common ¼ inch by 1 ¼ inch round glass fuse that can be replaced with any 10 amp or less, 32 volt fuse available for a few dollars at almost any automotive store or gas station.
- Other Issues
 - A short or blown fuse is usually the only problem that these controllers will experience. If you are having any other problems with your controller or if you need assistance, please do not hesitate to call us, Flash Track Lighting, at (314) 781-0105. We want you to have a wonderful lighting experience and are happy to help you in any way we can.