

"Where your Dreams become Reality."

Scenario Dreams Ion T-Board Manual



Congratulations on purchasing the Scenario Dream Ion T-Board. This upgrade board for your Smart Parts Ion™ or SP-8[™] will elevate your markers performance to a whole new level. Unlimited rate of fire, 8 fire modes, tournament settings and full adjustability are just some of the many features of the T-Board.

Installation

1) Remove the two screws and open the grip.

- 2) Remove the battery.
- 3) Remove the three screws holding the firing assembly to the trigger frame.
- 4) Lift the firing assembly slightly (you may have to push up on the bottom of the old board) and unscrew the front banjo from the trigger frame.
- 5) Remove the firing assembly and board from the trigger frame.
- 6) Unscrew the remaining two banjos from the firing assembly.
- 7) Unplug the eye cable from the old board.
- 8) Remove the banjos from all three hoses and install on to the T-Board in the same order.
- 9) Attach the T-Board to the firing assembly by screwing in the middle and rear banjos.
- 10) Connect the eye cable to the socket on the T-Board.
- 11) Slide the T-Board half-way into the trigger frame and connect the front banjo. Be cautious of anything that may snag as the board is sliding in. Do not force it.
- 12) Close it up and replace the three screws that hold the firing assembly to the trigger frame. Make sure not to pinch the eve cable.
- 13) Reinstall the battery and test out your new T-Board!

Note:

A) Some aftermarket triggers that use a set-screw to activate the switch require a 6/32 nylon nut on the end of the setscrew to work properly

Installing the Membrane Pad

- 1) Remove your grips completely
- 2) Remove the backing on the membrane pad.
- 3) Clean the frame well. Any oils or dust on the frame will lessen the membrane pads adhesion.
- 4) Stick the membrane pad to the desired position on your frame. Make sure that the membrane pad connector does not interfere with the frame inside the battery compartment.
- 5) Plug the membrane pad adapter into the connector.
- 6) Plug the adapter into the connector at the bottom of the T-Board. It will only plug in one way. Do not force it.
- 7) If the POWER button and EYE button are reversed, simply flip the adapter connector where it plugs into the membrane pad.
- 8) Reinstall the grips

Power

To turn on the marker, tap the POWER button (on the side of the marker or the top button on the membrane pad). As soon as the button is pushed, the LED will light up with the appropriate color for the mode you are in (see Fire Modes). The marker is now on and live

To put the marker in Safety, tap the POWER button while live. The LED will flicker green. To return to live state, tap the POWER button again.

To turn off the marker, depress and hold the POWER button for 2 sec.

ON

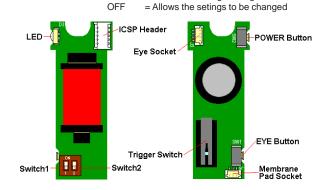
On-board Switches

There are two switches located at the bottom of the T-Board. They are only accessable when the grips are open.

- Switch1 is a 15bps Lock.
- ON = All modes are restricted to 15bps. OFF = Rate of fire is determined by the settings

Switch2 is the Tournament Lock.

= Locks out settings changes = Allows the setings to be changed



Fire Modes

- To change fire modes, follow these steps.
- 1) Turn off the marker.
- 2) Hold down the trigger.
- 3) Tap the POWER button to turn on the marker while still holding the trigger.
- 4) The LED will cycle through colors very quickly (Disco).
- 5) Let go of the trigger after the LED cycles through the colors.
- 6) Pull the trigger to change to the next mode.
- 7) Once you are on your desired mode, push the POWER button.
- 8) The LED should indicate the mode you selected and the marker is now ready to fire.

RED GREEN BLUE	NPPL Semi Reactive 3 Round Burst	One shot per trigger pull. One shot per trigger pull, one shot pre trigger release. 3 shots per trigger pull.
WHITE	Full Auto	Continuously fires as long as the trigger is pulled.
RED	CFOA Semi	One shot per trigger pull. Capped at ???
PURPLE	Nitro	First pull is full auto. Second pull is the mode selected in the "After Nitro" setting. You must cycle the power to start in full auto again.
YELLOW	PSP Ramping	Fires at the max rate of fire if you pull the trigger at the "Activation Speed" setting after the number of trigger pulls specified in the "Activation Pulls" setting. It will stay in ramping mode as long as you maintain the "Activation Speed"
TEAL	NXLAuto	When you pull the trigger at the "Activation Speed" setting for the number of trigger pulls specified in the "Activation Pulls", it goes into full auto mode. It will stay in full auto mode as long as you maintain the "Activation Speed"



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Eye Mode

The EYE button is on the lower side of the T-Board. It is only accessable with the grips open. If you have installed a membrane pad, the EYE button is the lower button on the membrane pad. When the marker is in live mode, tapping the EYE button cycles through the available eye modes. The LED will flash the eye mode color once(see below), then return to the fire mode color.

RED	Eyes Off Rate of fire capped at 13bps regardless of settings
BLUE	Eyes Off Rate of fire determined by settings
GREEN	Eyes On Rate of fire determined by settings

Settings

With your ION T-Board, you have full control over how your marker shoots. Below are the instructions for changing your settings. Please refer to the chart and examples for a better understanding.

1) Turn Off marker.

2) Press and hold the EYE button.

3) While still holding the EYE button, tap the POWER button.

4) Continue to hold the EYE button, the LED will flash red once, pause, then flash once again. At this time you can let go of the EYE button and you are now in Setup1. If you continue to hold the EYE button after the first LED blink, and the second LED blink, it will then blink twice together. If you let go now, this will bypass Setup1 and shortcut you straight to Setup2. If you hold the EYE button until the LED blinks 3 times together and then release the EYE button, this will restore the default settings. If you hold the EYE button until the LED blinks 4 times together and then release the EYE button, this will start the eye alignment tool.

5) Once you are in your desired Setup Menu, the LED color will indicate which setting you are currently in. Pull the trigger X amount of times to set your setting. The first pull of the trigger sets the value at it's minimum, each pull after that increases the value based on the increment value in the chart.

6. Tap the EYE button to move on to the next setting. You can also ignore a setting and bypass to the next setting by not pulling the trigger, and just tap the EYE button until the LED indicates the setting you desire.

7. When finished with your settings, tap the POWER button to enter Live mode. If you cycle through all the settings, the marker will automatically exit the menu, and enter live mode.

8. The LED will cycle through colors very quickly (Disco) to indicate your settings were saved.

Shortcut	Setting	Color	Default	Minimum	Maximum	Increment
Setup1	Rate of Fire	RED	15 bps	9 bps	50 bps	1 bps
	Dwell	GREEN	34 ms	6 m s	256 ms	1 ms
	Debounce	BLUE	5 m s	Oms	256 ms	1 ms
	Eye Delay	PURPLE	15 m s	1 ms	256 ms	1 ms
	Force Semi	WHITE	2 sec	0.5 sec	none	0.5 sec
Setup2	Shot Queue	TEAL	ON	ON	OFF	toggle
	Anti Bolt-Stick	YELLOW	Oms	Oms	256 ms	1 ms
	After Nitro	PURPLE	Semi	n/a	n/a	cycle
	Activation Speed	RED	5 bps	5 bps	none	1 bps
	Activation Pulls	BLUE	4 pulls	2 pulls	256 pulls	1 pull
	Training Mode	TEAL	OFF	ON	OFF	toggle
	Training Dwell	GREEN	10 m s	1 ms	256 ms	1 ms
Setup3	Restore Default	n/a	n/a	n/a	n/a	n/a
Setup4	Eye Alignment	RED	n/a	n/a	n/a	n/a

Rate of Fire - RED

Firing speed of the marker. This applies to all modes except CFOA Semi. If Switch1 is ON or the eye mode is red, this setting does not apply. If your eyes are on and your hopper is not feeding fast enough, you may not acheive the ROF setting. The Eye Delay and Dwell directly affect your Max ROF. With Default Dwell(34ms) and eye Delay (15ms), the Max ROF is around 20bps, if you try to raise the ROF setting higher, it will cause an error and drop the ROF to 5-7bps to prevent damage to the marker. In order to get higher ROFs, you must decrease the dwell (Install a QEV) and lower the eye delay (Faster Hopper). Then you can reach 20+ ROF.

Dwell - GREEN

Defines the time that the solenoid is activated. This roughly corresponds to the time that the bolt is forward and propelling the paintball. A dwell that is too low will cause velocity inconsistancy, shoot-down and improper cycling. A dwell that is too high will be gas inefficient. You must tune your dwell over a chrono for ideal operation. Your aiming for the lowest dwell with acceptable velocity consistancy. A good starting point for markers without a QEV is 34ms. A good starting point for markers with a QEV is 16ms.

Debounce - BLUE

When the electrical contacts are closed, tiny spikes are created. The processor can read these spikes as extra trigger pulls. The debounce setting allows you to define a time period that the processor will ignore the spikes and filter out the switch bounce.

Eye Delay - PURPLE

Eye Delay adds a period of time between the moment the break-beam eyes are triggered to the start of the dwell time when the bolt closes. This delay allows enough time for the paintball to fully load in the breech. If you are experiencing chops in the breech/feedneck, you should increase this setting.

Force Semi - WHITE

If the trigger is pulled and held for the time defined in this setting, the marker is automatically set to semi fire mode, the eyes disabled, and ROF set to 13bps. This is to guarantee the marker will function if the eyes malfunction. This feature is disabled on any mode that requires you to hold the trigger (NXL Auto, Nitro, Full Auto).

Shot Queue - TEAL

If enabled, when the trigger is pulled and no ball is in the breech, the marker will wait up to 0.25 seconds for a ball to enter the breech and will AUTOMATICALLY fire. This feature prevents "lost" shots because your fingers are faster than your hopper, and is still legal on most fields since it does not add shots.

Anti Bolt-Stick - YELLOW

If enabled, the first shot will have the ABS dwell (Dwell setting + ABS setting). All other shots will have the standard dwell. If the marker is not fired for 10 sec, the first shot will have the ABS setting again.

After Nitro - PURPLE

Only applies to Nitro mode. When you navigate to this setting, the LED will flash purple, then change to the color of the mode that the board will activate after nitro. Press the trigger to cycle through the modes (see Fire Modes).

Activation Speed - RED

Only applies to PSP Ramping and NXL Auto modes. Trigger pulls per second that will cause the mode to kick in.

Activation Pulls - BLUE

Only applies to Ramping and NXL Auto modes. Number of trigger pulls at the defined Activation Speed that will cause the mode to kick in.

Training Mode - TEAL

Allows the marker to be aired up and fired without actually firing a ball provided the Training Dwell is properly set (Avail on board purchased or re-flashed after 06/10/06).

Training Dwell - GREEN

Dwell used for Training. It should only be enough to hear the marker partially cycle. Should not be able to actually fire a ball.

Restore Default - N/A

Restore factory defaults.

Eye Alignment - RED

When in the Eye Alignment Tool, the LED will light up when the eye is properly aligned. If the eye is blocked or misaligned, the LED will NOT light, this tool is used to verify that your eyes are clean and functioning.