

### **MPS Air Throttle Stop For Mikuni Carbs Installation Instructions**

- 1) Remove your old throttle cable.
- 2) Loosen the set screw that secures the throttle cable junction on the Air Throttle/Stop. Make sure the cable junction slides freely in both directions through it's mount.
- 3) Install the Air Throttle/Stop and throttle cable in place of your original throttle cable.
- 4) Because there is no universal mounting position for all race bikes. You will need to fabricate your own mount to secure the Air Throttle/Stop in a position where it can't come in contact with anything during operation. Extend (remove cable free play) and retract (create cable free play) the Air Throttle/Stop while checking for ample clearance. Secure the Air Throttle/Stop so it cannot move from this position during a run. Check to be sure the throttle cable is properly routed, has no sharp bends or kinks. A vibration resistant mounting is highly recommended.
- 5) Locate a position to mount the Air Throttle/Stop's electric air valve. The lines to the air cylinder from the electric valve should be as short as possible. The mounting should be made as vibration resistant as possible. We recommend at least 1/2" of foam between the valve and any metal components.
- 6) Make all the air line connections as shown in the air line routing diagram.
- 7) Make all electrical connections as shown in the wiring diagram.
- 8) Fill your air tank to 150 psi. Using Windex spray on all air connections and fittings check for leaks. Refill to 150 psi.
- 9 ) (Method 1) Hold the throttle wide open. The throttle must be held to the stop in the throttle grip while performing the next adjustment. Slide the throttle cable junction backward through it's mount. The slides will rise as you are sliding the junction through the mount. Slide the throttle cable junction until the slides are just flush with the top of the carb throat and tighten the allen lock screw on the throttle cable junction mount. The slide position can be felt with your finger through the air bell of the carbs. The slides must be adjusted so that they are just flush with the top of the carb throat.
- 9 ) (Method 2) Carefully slide the throttle cable junction backward until there is no free play in the throttle cable and tighten the set screw. Adjust the Air Throttle/Stop cable for maximum free play at the carbs by turning the cable adjuster fully clockwise or toward the carbs. Now hold the throttle wide open to the stop in the throttle grip. Feel the position of the slides in the carbs with your finger. Adjust the slides with the cable adjuster until they are just flush with the top of the carb throat. Now when you turn the throttle wide open all the slides should be just flush with the top of the carb throats.
- 10) Double check that the slides are just flush with the carb throats by slowly turning the throttle grip until the grip stops. Make sure it isn't stopping due to the slides hitting the top of the carbs. It must stop from the stop in the throttle grip itself. **Important! If the throttle stops because the slides hit the top of the carb bodies before the throttle grip hits it's stop, you will break the ball chain on the Air Throttle/Stop. Make sure the throttle stops from the stop in the throttle grip before the slides hit the top of the carbs.**
- 11) Slide open and close speed is adjusted via the two small screws on the side of the electric air valve. The #2 adjustment screw adjusts the slide opening speed. The #1 adjustment screw adjusts the slide closing speed. Turning the adjustment screws clockwise will slow the slide speed. With the bike shut off experiment by watching the slides when you activate and deactivate the Air Throttle/Stop. If you don't know where to set the slide rise speed set it at the fastest setting for launch systems. For dedicated throttle stops we recommend a slow closing speed and a slow opening speed. The slow action will make a smooth transition from full throttle to stopped throttle and back to full throttle. This smooth transition helps consistency.
- 12) To use the Air Throttle/Stop for launch RPM control you must adjust the slide height for your launch RPM. This is accomplished by letting all the air out of your system and turning the throttle wide open. Note that the front cable mount will retract until it hits the slide height adjustment

nuts. The position of these adjustment nuts determines how far the carb slides come up at full throttle with the Air Throttle/Stop activated. Starting with the slides at idle, slowly raise the slides a little at a time with the adjusting nuts. When you reach the launch RPM you want. Tighten the nuts together to lock in the setting. Using a tach, shift light, or rev limiter to tell you RPM. Start the bike and check to be sure you have set the correct RPM for your launch. You can fine tune this a little at a time. Approximately the same RPM as you would use in a Launchmaster system is usually a good starting point for a Air Throttle/Stop system. You should measure the distance between the front cable mount and the slide height adjustment nuts after you find the correct launch RPM. Use this measurement as a guideline for future settings.

13) To use the Air Throttle/Stop as a throttle stop you will probably use a much higher slide height than for launching. Somewhere around 1/2 throttle is probably a good starting point. This is accomplished by letting all the air out of your system and turning the throttle wide open. Note that the front cable mount will retract until it hits the slide height adjustment nuts. The position of these adjustment nuts determines how far the carb slides fall during the Air Throttle/Stop activation cycle. Tighten the nuts together to lock in the setting. Measuring the distance between the front cable mount and the slide height adjustment nuts will give you a repeatable means of adjustment.

14) To use the Air Throttle/Stop with a Launchmaster or 2 Step to launch. A good slide height starting point is between 1/2 and 3/4 open.

15) To use the Air Throttle/Stop in combination with a Launchmaster or 2 step to launch and still use it for a throttle stop down track. You will need to install a diode in the activation wires from the launch switch to the air valve on the Air Throttle/Stop. This will prevent activating the Launchmaster or 2 step when the throttle stop is activated downtrack. (more Info call MPS)

16) Activation can be through a clutch lever switch, a handlebar pushbutton, a delay box, or through timers depending on your specific application. Always remember 12 volt power to the non grounded wire on the electric air valve will activate the Air Throttle/Stop. This closes the slides to their preset position.

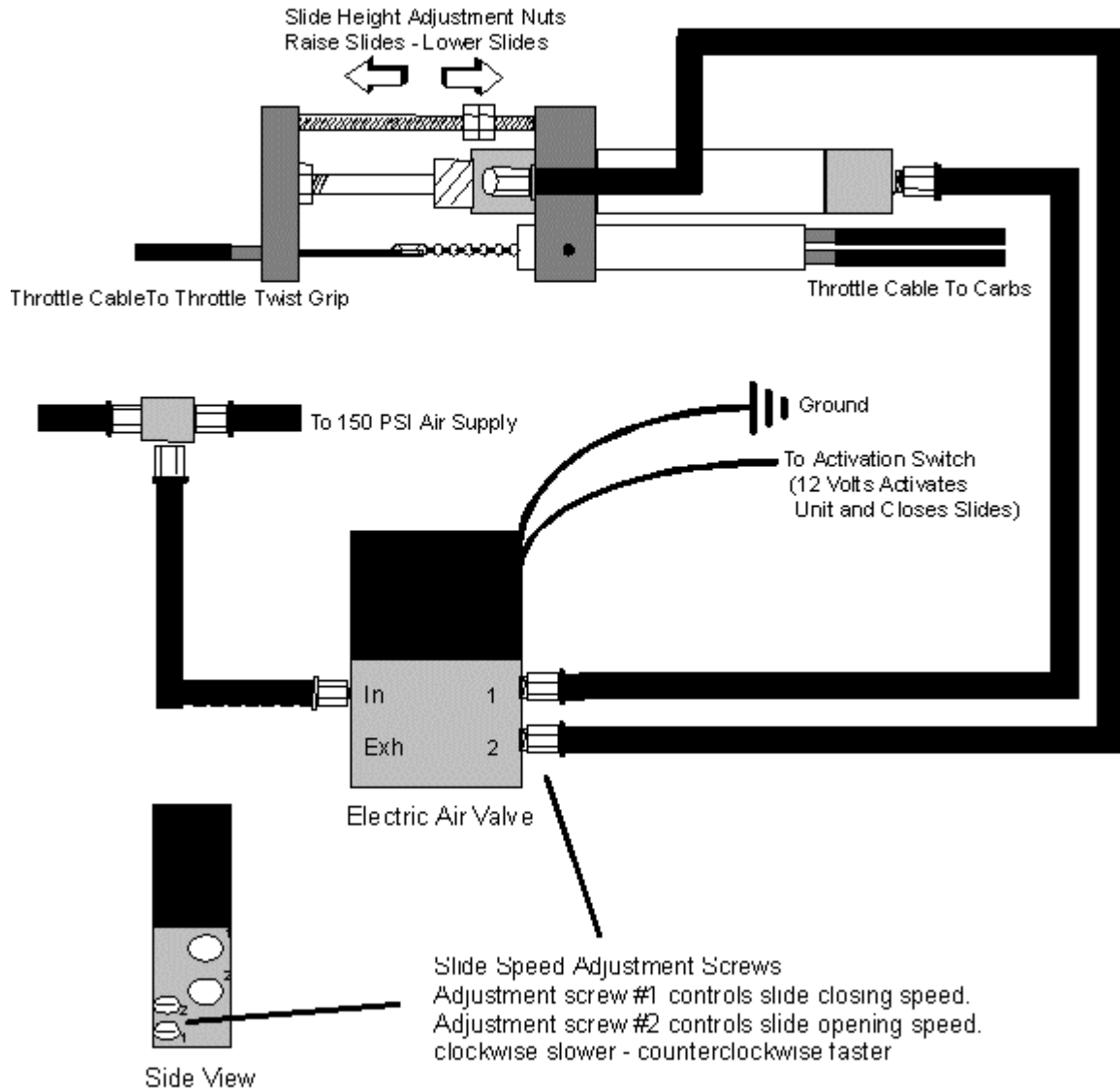
17) Help is only a phone call away at 321.972.8282.

This product is intended for racing purposes only. Use at your own risk. MPS assumes no responsibility for damages of any type resulting from the use of this product.

If you have any more questions we have a Frequently Asked Questions page at our web site as well as the telephone tech support. Thank you for your purchase of this MPS product. All products sold by MPS are for use at closed course competition events and not for use on public streets or highways.

# MPS Air Throttle/Stop

## Wiring & Plumbing Diagram



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