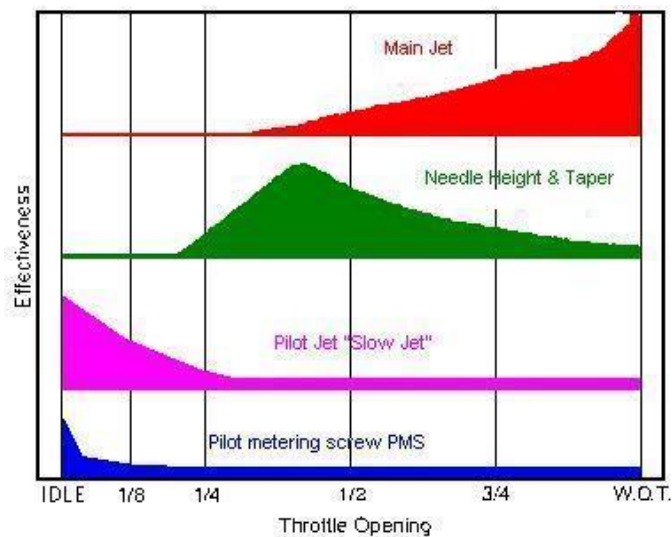




**The red screw is the air/fuel mixture screw**

**The blue screw is the idle adjustment screw**

Carb tuning worksheet (courtesy of 49ccScoot.com): [49ccScoot.com Carb Tuning Worksheet](http://49ccScoot.com)



## Idle Adjustment Process

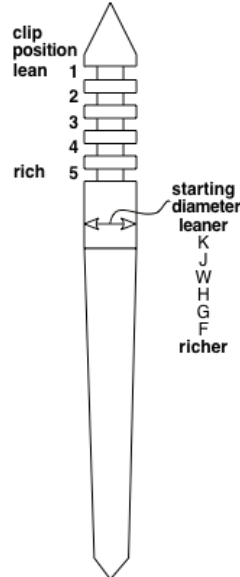
1. With the bike not running, turn the **red** screw all the way until it is just snug. Do not tighten.
2. Turn the **red** screw out 2 turns
3. Turn the **blue** screw all the way in, until it is just snug. Do not tighten.
4. Turn the **blue** screw out 2 turns
5. Now, **start the bike and make sure it is at operating temperature.**
6. Adjust the **red** screw **in**, 1/8 turn at a time, until it starts to idle roughly and wants to die.

7. Now, adjust the **red** screw **out** 1/8 turn at a time until you achieve the highest idle possible. Once you turn the **red** screw **out** and the idle decreases, turn it back **in** to the position that achieves the highest idle and leave it there. If the idle is too high and the bike begins to move at any point, turn the **blue** screw out to bring the idle down just a bit.
8. Turn the **blue** screw in or out until the idle is where you'd like it. Usually, somewhere around 1,700 RPM is ideal.
9. Repeat this process until the idle can no longer be increased by adjusting the **red** screw.

## Main Jet Tuning

1. Find a flat, safe, and open stretch of road where you can do WOT (wide open throttle) runs of at least a mile or so.
2. Start with a MJ (main jet) that is "gurgly" rich; usually this means around 10%-20% larger than stock, but can vary depending on the mods performed and carb being used.
3. Do a timed WOT run on your stretch of road.
4. Record the time, speed, RPM, engine temperature, and any other information you think may be pertinent.
5. Work your way down in MJ size until performance decreases.
6. You will almost always find two jets that produce the best and most favorable results. Choose the larger of these two jets.
7. **Repeat steps 5-9 of the idle adjustment process.**

## Needle Clip Position Tuning



1. With the needle clip in position 3, rev the bike while on its stand or on the ground from no throttle to WOT quickly. Do not let the bike take off, but allow RPM to rise.
2. Pay attention to how it revs and if there is any bogging because of a lean or rich condition.
3. If you have a lean bog, move the needle clip to position 4 and repeat steps one and two.
4. If you have a rich bog, move the needle clip to position 2 and repeat steps one and two.
5. Go for a ride and see how throttle response feels in the 1/4 - 3/4 throttle range. Pay attention to your engine temperature.
6. Adjust as necessary.
7. **Repeat steps 5-9 of the idle adjustment process.**

## Slow/Pilot Jet Tuning

1. Repeat the idle adjustment process just as you have previously, but this time, once you've set the **red** screw to its highest idle position, count the number of turns out from closed.
2. Usually, specifications for most scooter carbs will list 1.5 – 2 turns out of the **red** screw as within spec. **You should check the manual for your specific carburetor to be sure.**
3. If your ideal idle is achieved with the “**red**” or air/fuel mixture screw more than 2 turns out, you need to downsize your pilot jet until it is within spec. for your carburetor or 1.5 – 2 turns out if you cannot find a manual for your specific carburetor.
4. YOU DID IT! WOW, JUST WOW! YOU'RE AMAZING! GREAT JOB! SCOOTERS!