# **ET Tricks of the Trade**

By Dan Rudd 1998

To win ET races you need to have a clear vision of what you want to accomplish. This is nothing more than goal setting at different levels. Break down what you want to accomplish into many attainable goals. By attaining all the smaller goals, the large goal, winning races, will take care of itself. I break the race down into individual runs and each run into segments. These include staging, reaction time, 60 footer, and the last 1260 feet.

# Staging

Your goal in staging should be to stage in the same spot. By staging in the same spot you are eliminating one important variable in your run. Your bike will take the same amount of time to break the staged beam every lap, keeping its reactions consistent. This is your bike's reaction time. The easiest way to accomplish this is to stage shallow, rolling just until the staged light comes on, and no farther.

#### **Reaction Time**

This is your reaction time. Your reaction time, plus the bikes reaction time, adds up to your total reaction time. Consistency should be your only focus. To react consistently you need to hyper-concentrate on your key light. I feel the first light is the best to use as a key light. By using the first light you narrow your window of concentration. Your window of concentration is the amount of time it takes from the completion of staging to the moment the first light comes on. The shorter you can make this window, the better off you will be. Practice with a practice tree helps consistency a lot! The biggest variable you have in keeping reaction times consistent is the amount of background light. This will affect the way you see the tree. On a bright day your reaction times will be slower than at night.

# 60 Footers

Consistency is once again the name of the game for 60 footers. Your big variable to overcome is tire spin. Tire spin is double trouble, affecting two separate segments of your run. Both the bike's reaction time and the 60 foot time will increase.

# The Last 1260

There are four big obstacles to a consistent finish. Go straight! Any deviation from this will increase your ET. Shift points must be perfect. Once again, deviation causes

variance in ET. Mother nature is back with the third and fourth obstacles, Wind and weather changes. Wind is a tough one. On a bike we have more frontal area per pound than a car. This means we are more susceptible to wind. Head wind, tail wind, or cross wind all spell trouble for a consistent final 1260. Barometric pressure, temperature, and humidity are fast changing variables that effect the way your bike performs. These three factors combine to give you an air density ratio. The higher the ADR the slower your bike will go. Divide And Conquer Now that we've defined and established our goals, we can attack each segment of a run separately. We need to eliminate as many of our obstacles and variables as possible. The next few sections offer some solutions to these problems you face in quest of a perfect lap. Each section addresses the variables, and the solutions, for overcoming those variables.

# **Staging Solutions**

I have already discussed the shallow staging technique. The only problem with this is the ability of a motorcycle to roll backwards out of the beams. This results in the dreaded red eye. To eliminate this I use a MPS Line Lock. This device lets you activate your back brake by turning the throttle. It releases when the Delay Box releases.

#### **Reaction Times**

The installation of a Crossover Delay Box , MPS Air Clutch or MTC Slider Clutch, and a MSD or Dynatek starting line RPM control system is necessary for consistent reaction times. The use of these tools lets you react to the first light whether it is yours or your opponents. A Delay Box lets you adjust your reaction times by altering the amount of delay time between the launch button release and the initiation of the launch. Setting the Delay Box requires experience. A log book is a necessity! I use a computer data base to keep track of these important settings. By understanding what effects your reactions you can compensate for different light conditions by either adding or subtracting delay time. I use and recommend the Final Round II practice tree for honing your reaction skills. It's the most fun to practice on!

#### 60 Foot Times

The key to consistent 60 footers are proper tire pressure, correct wheelie bar height , and the proper clutch set up. A softer launch is the desired result. You can use a MTC Slider with a low stall speed or utilize a MPS Deluxe Air Clutch along with light springs in a MRE Lock up style clutch seems to work well for me. This combination is nearly infinitely adjustable. It allows adjustment of clutch lever release speed, initial clutch spring pressure, and final clutch lock up pressure. A new advancement in 60 foot consistency is the MPS Air Throttle/Stop. This device is operated by timers. Shortly after leaving the starting line the first timer signals the second timer to operate the Air Throttle/Stop. The Throttle/Stop then works between the throttle and the carburetors to slowly roll off the throttle to approximately 1/3 throttle for the set amount of time then slowly roll the throttle back to wide open. All actions controlled by the Throttle/Stop are adjustable. The first adjustment is the time off the line you want to activate the stop, the speed you wish to close the carburetors' slides, the amount you want to close the carburetor slides, and the speed you want to return the carbs to wide open throttle. By using this system you can virtually eliminate wheel spin. It saves tires as a bonus!

#### The Final 1260

Going straight is obviously the easiest variable to control. Hitting your shift points can be helped by using a shift light. The MSD Shift Light or the Dynatek Shift Minder are two excellent systems. I carry this one step further for safety and consistency reasons. I use a MPS Auto Shift Control. This product automatically triggers your air shifter at the set RPM. This lets you concentrate on going straight ,(remember the first variable) and plotting your opponents' position on the race course. The weather is easy to predict with the help of a weather station and computer. I use a Computech model that monitors barometric pressure, temperature, and humidity. It predicts my estimated ET after a weather change or it can suggest a throttle stop setting to run a specific ET. The wind is measured with a new product called a Turbo Meter wind speed indicator. You simply point the Turbo Meter straight down the track and read the wind speed on the digital screen. With experience and a log book (remember that data base) you can learn to predict the amount of ET a head wind will slow you down or how much a tail wind will pick you up. These are just a few tips to help you in the bracket wars. Remember, races are won one round at a time. Rounds are won by deviating less than your opponent from a perfect run. Deviating less than your opponent is accomplished by eliminating those little variables that can happen on your run. Good luck to all you bracket racers for 1998.