

SHAKE-METER™

DISCLAIMER	3
INTRODUCTION.....	4
HOW DOES IT WORK?.....	5
INSTALLATION.....	6
TESTING	8
TUNING	9

DISCLAIMER

This product is sold "as is." No warranties express or implied, including any implied warranty of merchantability and any implied warranties of fitness, are made with respect to any products manufactured, sold or supplied by xBase Computing ("xBase"). xBase shall not in any event be liable for incidental, consequential or punitive damages of any nature whatsoever, including personal injury and lost profits. It is acknowledged that participation in any motor sport may result in serious injury or death, and that any person who uses any products assumes the risk of such personal injury or death manufactured, sold or supplied by xBase.

INTRODUCTION

We would first like to thank you for your purchase of our system. We believe it is the best system available to you on the market today. This system balances effectiveness with ease of installation, broad field of uses, and cost.

As with all technical devices such as engines, shocks, carburetors, clutches etc., the product's performance is based largely on your ability to use it properly. Testing in controlled circumstances will help you determine the proper settings for your application and your situation. Testing is very important since it will help you utilize this product to its full potential.

Please read all of the instructions and information thoroughly before attempting to install or use this product.

HOW DOES IT WORK?

The Shake-Meter™ is designed to give racers a means to identify tire-shake in real time and correct it. After studying and comparing data from a clean run and a run where the car encountered tire shake, it became evident that when a car goes into tire shake the rear shock movement consistently looked the same.

With that in mind, xBase developed a device that will monitor the shock signal and when tire shake is detected a signal is outputted. Once the tire shake is eliminated, the output is turned off.

However, there are limits to the unit. It is not a "Fix-All." It will not fix a bad tune up or poor driving. It will however help a good driver in a good car get the power to the ground better and make more full passes. This allows the user to collect data to use to determine how to make adjustment to the car to get a better setup. A full pass, even if it is a few hundredths slow is very valuable compared to shaking the tires 100 feet out.

For example, if tire shake is experienced around 100', the system will detect this and send a signal to the ignition to retard the timing. This will reduce the amount of torque delivered to the drive wheels and help to regain grip much faster than the driver can "pedal" the throttle.

With a little practice the system is easy to configure and use. Typically after only a few test

runs the proper settings can be reached. Most drivers adapt quickly to a car that does a little of the driving for them. The driver simply has to accept the fact that the microprocessor in the system is much faster than his/her reflexes. In fact the system 'looks' for tire shake 250 times a second, and the microprocessor used can process 3 million commands a second!!

INSTALLATION

Installation of the system is very simple. It is very important to *make all connections correctly*. Improper installation could result in poor system performance or damage to the unit.

Keep all wires away from any spark plug wires and coils or other sources of electrical noise and heat.

The unit should be mounted away from any sources of electrical noise or high heat. It can be easily mounted with Velcro to allow for easy removal.

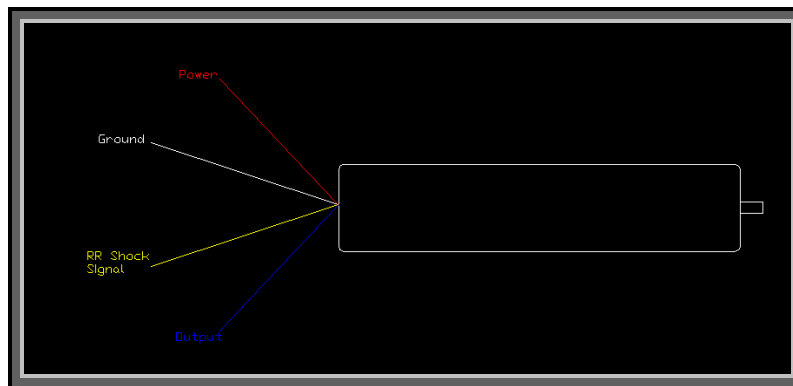
- Power (Red)
- Ground (Black)
- RR Shock Signal (Yellow)
- Output (Blue)

The Power can be must be at least 9v and 16v systems are acceptable.

Connect the Ground to any solid chassis ground.

Included with the unit is a Y-loom. This loom splits the RR Shock Signal. Place the Y-loom between the data acquisition harness and the RR Shock linear sensor. Then connect the other branch of the Y-loom to the Shake-Meter™.

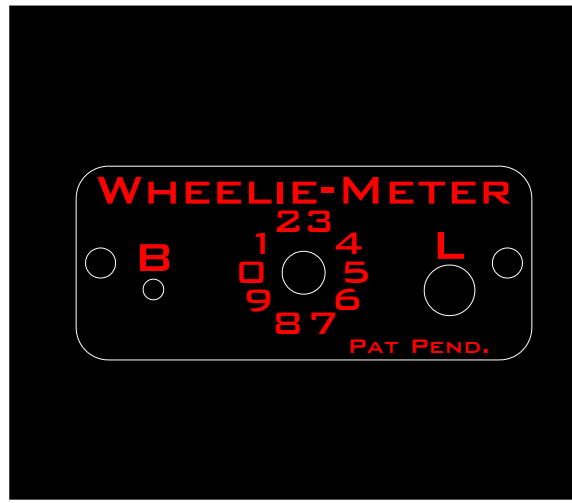
The Output signal is 12 volts. When tire shake is detected, this line will have 12 volts. This needs to be connected to an analogue channel of the data acquisition system. Also connect to a retard stage of the ignition system, and/or any other function that is triggered by a 12-volt signal.



TESTING

After installation it is recommended that you test the system. To do so please follow these instructions step by step.

- 1 Turn the knob to the '0' position
- 2 Power up the unit
- 3 Watch for the light to blink twice.
- 4 Turn on the data acquisition system
- 5 Put the data acquisition system into log mode
- 6 Wait twenty seconds and power off the unit
- 7 Download the data
- 8 The output trace will show the signal high for five seconds and then off for five. It will continue to repeat until power is removed from the unit.



TUNING

After completing the installation and unit test procedure, the unit is ready for racetrack time. Position the selector knob to a value between 1-9, then power up the unit. The higher the number selected, the higher degree of tire shake will be needed to trigger the output. The light will again flash twice. This indicates the unit is in proper working order.

Once a run is completed, compare the right rear shock with the output of the unit. Increase the sensitivity of the unit if tire shake is noted on the shock trace before the unit outputs a signal. After the threshold is set, then connect the output to the function of the car you would like to turn on in the event of tire shake.

