

#### Research

A division of Netmax Technologies Pvt. Ltd. dedicated to R&D and Defence projects



#### **COMPANY PROFILE**

Netmax Technologies is a leader in R&D projects, Network support, Embedded systems, and Web Development services.

#### R&D

Our expertise covers several micro-controllers architectures and their development tool chains. In addition we focus on time to market, Quality improvement, complete PCB Designing and Embedded applications.

#### **Network Security**

We provide consultancy to Implement firewalls and security solutions. After implementing Firewalls penetration testing performed on the client network by simulating an attack from malicious outsiders.

#### **Netmax Websolutions**

Netmax Web Solutions, is the Web Development and software development unit of Netmax Technologies. We provide services from design and multimedia to custom programming and database integration.



#### **India's Most Advanced**

# VELOCITY MEASUREMENT SYSTEM

#### **Features**

Auto Setup, Touch Screen, Optical Sensors, Fault Reporting



#### VMS100

Measure velocity of the projectiles accurately & store results on Tablet PC, E-Mail or Smartphones.



#### **Projectile Velocity Measurement System**

#### **VMS100**

It is accurate system to measure velocity of projectile. Setup consists of Optical sensors and Chronograph and Monitoring softwares.

Multiple types of sensors are developed according to requirement which contains contact based and non-contact optical sensors. This system can record velocities with accuracy better than 1%.

Sensor data is fed to Chronograph to calculate the velocity. Velocity from few meter per second to 1500 meter per second can be recorded with system.

Product Details

The system comes with software that also enables it to be easily stored. Data is also transferred to Computer which can be sent as email, stored in files. System also able to announce the velocity using the speakers.

#### **COMPONENTS**



#### **VELOCITY MEASUREMENT**

#### VMS100

Velocity measurement system accurately measure projectile velocity, uploads data to computer and internet

#### **SOFTWARE**

#### VMF100

Announce results through speakers, save results to file and E-mail if required. It also display graph of tests.

## **FEATURES**









#### **Velocity measurement System Unique Features**

#### **Touch Screen Tablets or Phones**

Get all Velocity reading & controls on SmartPhone or Tablet.

#### **Bluetooth Connectivity**

Control the measurement unit without wires with the help of BlueTooth Control.

#### **USB Connectivity**

Option to use USB where bluetooth is not feasible or more reliable wired Connectivity is required

#### **Web Records**

The system can be made to upload records on a strongly protected cloud or lab internal server.

#### **Optical System**

System is accurate and optical so that no chances of error. Even there is no need to make mechanical screens as there are no replacement parts.

#### **Battery Powered**

The system is battery powered and provides 6 hours of continuous operation. The charger is included with the System

#### **Portable System**

The system is light-weight, portable and easy to move.

Depending upon user requirement, a more strong chassis may be designed.

#### InDoor / OutDoor operation

Can be operated outdoor or Indoor with Lights

#### **Sensor Choice**

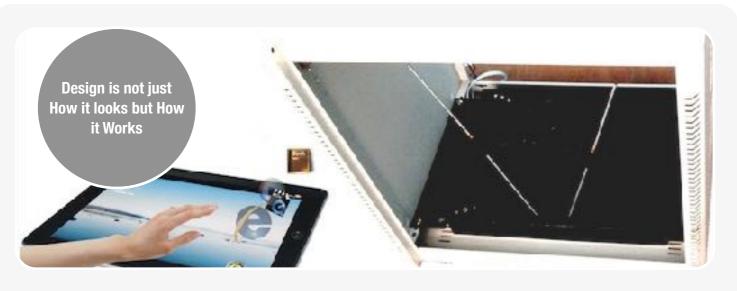
Choose optical or Mechanical sensor as per requirement.

#### **Speech Mode**

The system Will announce velocity on speakers.

Call For DEMO 9872938883





#### **DESIGN & OPERATION**

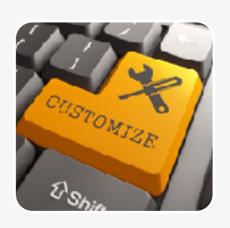
While designing velocity measurement system we look at how complex and time consuming is the current methods of measurements. So we have designed a system which is easy to operate with absolutely no equipment setup time.

#### **Simple Operation**

- 1. Power on Device
- 2. Connect the Tablet using Bluetooth or USB
- 3. Fire and see velocity on Tablet/Mobile.

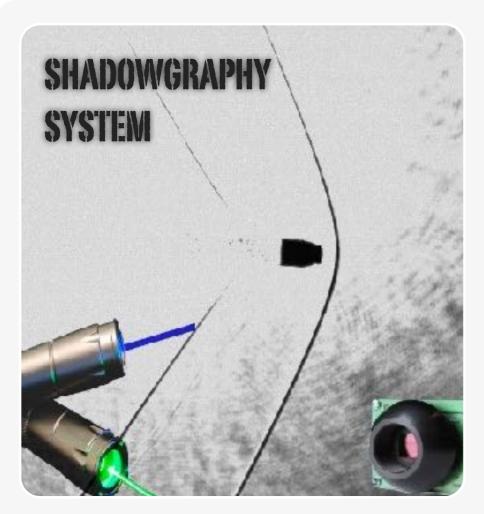
This is all we need to do to measure the velocity of bullets. Quite simple, Reading is on tablet screen if you want send reading to Email or Upload online.

If you are behind the Gun and want to know velocity, the system can speak the measured velocity if required.



#### Custom Product

All features are flexible if you do not like one, get it removed from the list. The product will be designed from scratch as per requirement



#### Watch it

See what you can't see with eyes and capture through camera at right time when needed



#### **Shadowgraphy for Detailed Information**

The Product has multiple-laser flash and high quality cameras. This shadowgraphy system has been designed to study the terminal effects of projectiles. The system has been designed based on modulated laser diodes operated at low voltage and current.

To study the ballistics effects of small arms, an exposure time of the order of a few hundreds nanosecond and a delay time of the order of a few tens of  $\mu$ s are needed.

Unit Controls the exposure and delay time pulses. The developed system has been integrated with a field lens assembly and camera assembly.

To record the shadowgraphs, a target is placed near the centre of the field lens and a bullet is fired from a fixed gun.

Product Details

#### COMPONENTS

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#### **SOFTWARE**

# VMS100 Latest Windows 7 compatible software to control all hardware and obtain images of shadowgraphy system.

#### **SHADOWGRAPHY**

#### SG300 Shadowgraphy system is the complete setup to perform shadowgraphy of high speed projectiles.

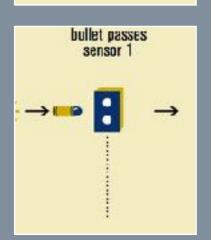
#### **PRO-TRIGGER**

#### TR458

Measure projectile velocity and accurately triggers the camera when projectiles are in front of the camera

### **HS TRIGGER**







#### **Accuracy will be on Display**

It is simple but the time frame is so small and high accuracy is required to make system reliable

#### **High Speed Photography Trigger TR-458**

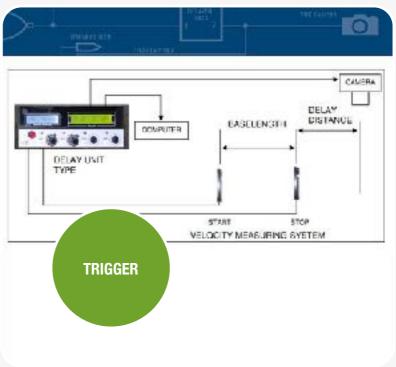
Many experiments require several processes to coincide with an event of unknown timing. Photographing a projectile in flight, for example, requires accurate coordination of the camera, sensors and flash lamps to capture a projectile of unknown speed.

In traditional system we have to decide our timing on an assumed muzzle velocity. Next, we'll determine the projectile's speed in flight and time events accordingly. So the camera will be triggered according to this time. We can statically feed this time in system but better approach is perform it dynamically. Because it takes a lot of calculations to capture the projectile. Sometimes the speed of projectiles also changes which make it more difficult to capture at right time.

With TR458 the whole experiment become a lot easier because it all calculates the speed and delays camera trigger according to the distance.

NetMax TR458 program for this experiment appears in above figure. Using dynamic timing, the camera shutter will open at the right time regardless of the bullet's actual speed. The only remaining uncertainty is the amount by which the bullet slows down in flight. If this uncertainty is too high,

The TR 458's unique timing modes and combinatorial logic allow for quick programming of complex experiments. Though this simple bullet experiment unfolds at millisecond speeds, the programming process remains the same for more complicated experiments with micro second-scale timing.



# **NETWAX SUPPORT**

We are always ready to resolve any problem that occurs. There are multiple ways to contact us.

#### **Phone**

Call us as soon as any problem and we will guide you the instant action that can be taken.

#### Chat

For detailed instructions and procedures you can chat with our executive for detailed instructions.

#### **Email**

If priority of the problem is medium then email is best way to explain.

#### **Onsite**

Onsite support is provided for all products.

**Contact Us** 

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We try to resolve problems within 24hrs.

#### **NETWAX TECHNOLOGIES**

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