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Auto-Trax™ Photo LIDAR Equipment and Software Supplied With The Two Camera System

This is a new and exciting product that will increase the safety of our roads, save lives and is simple and easy to use. Photo Lidar is a set of equipment and software that allows a police officer to record speeding violations while parked along the side of the road and issue citations or warnings. It also collects information about all the vehicles surveyed, for vehicular demographic information, which can be used by traffic engineers to create safer roadways. No more chases or potentially dangerous stops are required. Tickets can also be issued to every speeder surveyed, not just one vehicle at a time. The Safety benefits to motorists and police officers alike, are overwhelming. Because potentially everyone is capable of receiving a citation, motorists slow down knowing that their chances of being caught are improved significantly over the older chase and pull-over method.

Photo Radar has been used in Europe and elsewhere in the world, with a large amount of success. Photo LIDAR is an improvement on an older technology that pinpoints speeders without the chance of accidentally capturing the wrong vehicle as is possible with radar. The laser beam can be gated so only a measured space can be surveyed, as in a school zone. All information needed to support the citation in court is captured along with an image of the front and rear of the vehicle. The images will include the driver for positive identification and the license plate(s).

Base Computer:

Pentium II, 350+ Mhz, w/128M DRAM, Supports to 256M DRAM; SparQ or similar Drive with 3 - 1Gig Removable Media,1Gig ; 24X - CD ROM Player: 3.5 Inch Floppy Disk Drive; 4.3 G IDE Hard Drive ;4 - Bus Master Ultra DMA/33 IDE Ports; 2 - RS 232 Serial Ports, 1 - Parallel Port; On Board SiS5582/5598 SVGA Chipset; Reset SW; Keyboard Lock; Disk Activity LED; Power On LED; Reset SW; On/Off SW; Message LED, Internal Cabinet Fan; CPU Fan; Wake on LAN Activity Connector; Second IrDA Compliant Infrared Connector, Speaker; Dual AT/ATX AC Power Supply; Level Two 512KB Pipeline Cache, Programmable Flash ROM; Three PCI Slots; Two ISA Slots (One used); One Shared ISA/PCI Slot; Infrared, Cordless Keyboard and Mouse; 120VAC; Dim: 8" X 16" X 17.5"; FCC Rules, Part 15 Compliance; Y2K Compliant; 15 Minute UPS.

Mobile Computer:

Pentium II, 233+ M, w/32M DRAM, Supports to 256M DRAM; SparQ or similar Drive with 3 - 1Gig Removable Media; 24X - CD ROM Player; 4.3 G IDE Hard Drive ;4 - Bus Master Ultra DMA/33 IDE Ports; 2 - RS 232 Serial Ports, 1 - Parallel Port; Two Camera Input Image Capture Board; Dual AT/ATX AC Power Supply; Level Two 512KB Pipeline Cache, Programmable Flash ROM; Three PCI Slots; Two ISA Slots (One used); One Shared ISA/PCI Slot; Infrared, Cordless Keyboard; Dim: 6" X 9" X 17.5"; FCC Rules, Part 15 Compliance; Y2K Compliant.

Mobile Monitor:

Cascade 1000 NIT, 10.4" Horizontal, Wide Angle View, TFT, Flat Screen Display, SVGA or VGA Mode, Front Panel Brightness, Contrast and Positioning Controls. This extremely bright Display is easily readable even in full, bright sunlight

Mobile Screen Mount:

Aluminum 1/8th Inch Channel With 2.5 Inch Ball Swivel Mount and 4" Square Any Angle Base; Two 10-32 Mounting Knobs. Adjustable swivel and locking mechanism for monitor positioning. One knob adjustment and removal.

Base Monitor:

17", .26 or Better Pitch Color SVGA NEC or Similar, Swivel Base, Power Conservation, Remote ON/OFF. Front Panel Brightness, Contrast & Positioning, Controls, Anti - Glare, Flat Screen surface.

Front Color Camera:

Trinus KCC 310-ND or similar, 470,000 Pixel, 450 Line Resolution, C - Mount, 12 VDC,

Automatic Gain Control, Auto Iris Control, Auto-Iris Lenses, Fixed or Auto/Fixed Electronic Shutter Control, On Screen Color, Tint, Contrast, Brightness, Sharpness Controls, Auto Camera Switching, Remote Zoom Control, 1/4-20 Threaded Mounting Holes

Front Color Camera Mount:

Panavise Dual Ball, Any Angle, Camera Mount, With 1/4"-20 Mounting Stub. Trinus camera with 12.5 to 75mm lens shown. There are a wide variety of cameras that can be used with the Auto-Trax™ System. These include RGB, Digital, Svideo, Composite and PALversions of the proceeding.

Rear Color Camera:

Trinus KCC 310-ND or similar(Cohu shown), 470,000 or Greater Pixels, 450 Line Resolution, C - Mount, 12 VDC, Automatic Gain Control, Auto Iris Control, Auto-Iris Lenses, Fixed or Auto/Fixed Electronic Shutter Control, On Screen Color, Tint, Contrast, Brightness, Sharpness Controls, Auto Camera Switching, Remote Zoom Control, 1/4-20 Threaded Mounting Holes There are a wide variety of cameras that can be used with the Auto-Trax™ System. These include RGB, Digital, Svideo, Composite and PALversions of the proceeding.

Lenses:

There are a variety of lenses from which to choose. There are lenses available capable of recording a license plate up to 500 meters away. Two, F:1.2, 12.5 ~ 75mm Glass, Infrared and Visible light Coated, C-Mount, Remote Zoom, Auto Iris/Manual Iris come as priced with system. These lenses cover from ~20 Meters to ~90 meters. Prices vary for other lenses.

LIDAR:* *Shown With Handle

Applied Concepts, Stalker™ LIDAR With Auto and Manual Self Test, HUD Red Dot Aiming. Speed and Distance Output Software, Upgradable, Speed Measurement ±1 to ±299 mph,(±1.6 kph to ±481 kph), Range 5 to 1000 Feet, .33 Sec Acquisition Time, 3 Milliradians Beam Divergence, FDA/CDRH Class 1 Laser Device (Rated Eye Safe), RS232 Output, ~110 Readings Speed/Distance Per Second After Lockup, Serial Output and Laser On/Off Control, 7.6 VDC Power Supply (From 12VDC) Mounting Bracket for Window Conversion. See attached specification sheet.

Window Mounting Fixture:

Aluminum, Stainless and PVC Construction, Supports LIDAR and Rear Camera, Ball Mount and Monopod Movement Adjustments,
The mounting bracket shown has been updated to use the ball mount, as shown in the photo on the right.

Power Inverter:

MP550ORX 300 W Continuous, 550W Intermittent, 12VDC to 120VAC, 60 Hz Modified Sine Wave, Low Battery Warning, High Efficiency, Overload Protection and Thermal Shutdown, Heat Exhaust Fan, External Fuse, Dual AC Sockets, LED ON Light, Overload/Low Battery Light, On/Off Power Switch.

Power Filter, Control and Distribution Module and Cabling:

Mobile 12VDC High Energy Multi-Frequency (10HZ to 2200HZ) 60 dB Down DC Filtering, Input Directly Wired to DC Source or Cigarette Lighter Adapter, Main Power Fuses for Negative and Positive Lines, DC Distribution 4 - 12VDC (Filtered) Outputs, 1- 7.6 VDC Regulated and Filtered Output (Fused Internally).

Mobile Software Module:

Officer location setup and operation software: This software allows the Officer to record the physical location, date (Y2K compliant), time, lighting conditions, weather and road conditions, Officer's name, precinct, school name (if any), Commander, camera serial numbers, media recording numbers, check and certify the LIDAR , check the operation of both cameras (live video), enter the type of zone (school, residential, etc.), set the posted speed limit, actuation speed , buffer speed (speed range when no ticket or warning will be issued), warning speed, citation speed, speed of the vehicle, vehicle number in session, Drop down lists are available for user preprogrammed information of all fields to help eliminate spelling mistakes and prevent different wording for locations (i.e.: Main and 1st - 1st & Main - First and Main, etc.). The second part of the software is the operation software. The Officer waits until the set limits, previously set, are surpassed and the system automatically takes and stores the digital image along with all of the pertinent information of date, time, speed of vehicle, distance from Lidar, image number, direction of travel, session number, and vehicle number. This information is stored both on the image and in the database. Then the system switches to the front camera and waits for the Officer to see the rear of the vehicle. When the vehicle is seen on the screen, the officer pushes the space bar and captures the image (and data described previously). The system then returns to the front view of the on-coming traffic and the process is repeated. At all times, the officer can monitor either camera (live video) from the computer screen and make camera adjustments just at a mouse click or keyboard stroke. At the end of the shift, the officer delivers the disk with all to the captured data to the personnel that are going to prepare the citations and warnings.

Base Station Software Module:

The underlying use for this software portion of the Auto-Trax™ System is to produce citations, warnings and reports; track all violation and non-violations and all aspects of the sessions as recorded by the mobile portion of the system. This is a complete solution to producing single and multiple citations and warnings.

The system allows the "operator" of the base station to perform all functions to produce, track and record events (like payments made). The registered owner would receive the citation/warning and either pay the fine, contest the citation, or report who the actual driver of the vehicle was at the time of the offense. Citations and warnings can be user configured to provide the municipality's wording of the citation/warning or use one of the 5 prepared versions included. Images of both the front and rear of the vehicle, (including face and plate<s>) are printed with the citation/warning. The citation/warning is able to be inserted in a window envelope and mailed to the individual. When the citation is returned for processing, the operator can use

the bar code reader to quickly pull-up the case and to process the funds and citation. The operator may also issue another citation to the "driver" if the registered owner was not the driver at the time of the incident. Images that have been stored digitally are able to be enlarged and enhanced without affecting or changing the original evidence in any way.

There are several levels of security that can be employed so that access can be limited to only those who should have access. These decisions are left up to the administration and are implemented by administration personnel. Images are stored such that if anyone tries or successfully tampers with the image, even so slightly, the image is no longer valid for evidence. Images are kept in a unique wavelet compressed format encoded with privacy algorithms that make this possible.

The citations are available in single offense format or multiple offense formats. They can either be printed on a single citation or multiple citations. Up to 4 additional offenses may be cited per recorded offense. The operator can print a list of work in progress and status. They can print a list of vehicles and plate numbers to send to DMV. They have the ability to report on all information stored in the computer in so many ways that it is impossible to describe them all here. The data is kept in a Microsoft Access format on the chance you would like to create a report we haven't thought of. Graphs and charts, court documents, DVM reports, financial and billing information, and many other features are available at a mouse click.

Even if you have only part of the data you need to search by, there is a search screen that allows you to look up any of the files. This is a powerful tool to locate multiple offenders or to service the citizen or lawyer who is in search of information about their case.

There are still many features and benefits that are not described herein. Please ask your sales representative for more details.
Prices and items included in the Auto-Trax™ hardware and software are subject to change and this document should be construed as accurate as possible at this time. We are constantly updating the hardware and software to improve our products.

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