

# Digital Eyewitness® Family



Kustom Signals offers a variety of in-car video systems to suit any department's needs. Following this brief recap are detailed product pages. To compare the features of all the systems at a glance, see the chart on pages 42 & 43.

## **DIGITAL EYEWITNESS ION ECLIPSE**

The ION Eclipse is a versatile system preferred by law enforcement agencies everywhere. Along with the standard features offered by the Digital Eyewitness ION, the ION Eclipse also includes automated file transfer, Compact Flash recording media and additional software features. The open architecture allows you to configure the system to meet your needs today, while offering the flexibility to support your needs for many years to come.

## **DIGITAL EYEWITNESS ION**

The ION is a great choice if you want a simple, hard-working digital system that your officers can operate similar to a VHS system. This system offers MPEG1, MPEG2, or MPEG4 compression, manual file transfer and your choice of recording to hard drives, DVD-RAM discs, or DVD+R discs that can be immediately played in a regular DVD player.

## **DIGITAL EYEWITNESS DEW**

The original, and still the only system on the market that offers maximum security vault evidence protection. The vault mounts in the trunk and protects your recorded evidence against environmental and physical damage from bullets and fire. This system offers MPEG1 compression, manual file transfer, and your choice of recording to DVD-RAM discs or hard drives.

## **DIGITAL EYEWITNESS ROAD BOSS**

The Road Boss is our most compact system. The monitor and controller are combined into one "friendly" package that can mount almost anywhere. Operation is intuitive. This system offers high resolution MPEG4 compression, manual file transfer and records to a solid state Compact Flash card.

### **Features**

#### **Compact Zoom Camera**

All Digital Eyewitness in-car systems incorporate a zoom camera with a 40:1 zoom ratio (zoom camera is optional on Road Boss). This camera offers the sharpest images and exceptional color with the highest resistance to headlight blooming and smearing for superior night-time recording. When activated, the backlight compensation provides better visibility in poor lighting conditions.

#### **Pre-event Recording**

This user-selectable feature can be set to automatically capture up to three minutes of video prior to record activation. ION pre-event recording is fixed at 60 seconds. Road Boss pre-event can be set to record up to 30 seconds.

#### **ClearComm DSS (Digital Spread Spectrum)**

ClearComm DSS activates automatically whenever the system starts to record. When you stop recording, it automatically returns to standby. With ClearComm you'll record excellent quality audio with little or no effort.

Transmitter status is provided by an internal vibrator that buzzes to let you know when you start transmitting or return to standby. LEDs on the transmitter provide additional status, or select the LED Blackout mode to prevent illumination when you're working outside the car at night.

ClearComm features diversity receivers and digital error forward correction to reduce data errors, improve the accuracy of the transmission and to achieve better range.

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## Controller/Monitor Configuration

To accommodate a variety of vehicle configurations and departmental needs, all Digital Eyewitness systems (except Road Boss) can be configured with an integrated overhead console (controller and monitor) that mounts to the headliner between the sun visors, or with a separate controller and monitor that can mount virtually anywhere in the vehicle. The *ION* and *ION Eclipse* also allow you to use your mobile data computer as the system's controller/monitor. See pages 34 & 35 for additional flexible mounting alternatives.

## Metadata

All Digital Eyewitness systems collect data (i.e. time/date/record triggers) to help identify the file in a subsequent search. *ION*, *ION Eclipse*, and *Road Boss* systems also collect Stop Classification data and allow officers in the car to place a "hold" status on their important files before transferring them to the back-office video database.

## Back Office Media Manager

Add a Digital Eyewitness Media Manager (DEMM) to your system for a Total Video Solution. See pages 44 and 45.

## Security and Evidence Admissibility

Our in-car video software records a digital watermark simultaneously with the video. Our file verification program allows scrutinized files to be authenticated as valid, unaltered files.

Video evidence recorded by any Kustom Signals' video system is admissible under the Federal Rules of Evidence and meets both Frye and Daubert requirements. A white paper addressing admissibility issues is available.

## Options

### Automatic Crash Record Activation

If the system detects a patrol car collision, the video recorder (including the pre-event memory) is automatically activated so that if the impact occurred in the view of the active camera, the collision and a segment of video leading up to the collision will be recorded. With this feature, forensic investigators can view the events leading up to a collision. Crash Activation is not available on *Road Boss* or *Road Warrior*.

### GPS

This feature allows you to display GPS coordinates full time or only when you press a "marking" button, to indicate the location of a particular incident (i.e. something tossed from a vehicle you're pursuing). The *ION* and *ION Eclipse* GPS option also controls the video system's clock to help ensure recordings from multiple cars at the same scene will display the same time. If ordered with the *ION Eclipse*, the GPS option also gives you the ability to display the speed of the patrol car, the direction the patrol car is traveling, and allows you to set a threshold patrol speed for record activation.

The GPS option is not available on *Road Boss* In-Car Video Systems.



# Digital Eyewitness®

| Control Features                                          | ION ECLIPSE | ION | DEW | Road Boss | Road Warrior |
|-----------------------------------------------------------|-------------|-----|-----|-----------|--------------|
| Manual Record On/Off                                      | ✓           | ✓   | ✓   | ✓         | ✓            |
| Auto Record On via emergency lights or siren              | ✓           | ✓   | ✓   | ✓         | ✓            |
| Remote Record On via wireless mic                         | ✓           | ✓   | ✓   | ✓         | ✓            |
| In-car rewind/playback/fast forward/fast search           | ✓           | ✓   | ✓   | ✓         | ✓            |
| Interface to compatible radar                             | ✓           | ✓   | ✓   | ✓         | ✓            |
| Easy to follow menu for setting/displaying:               | ✓           | ✓   | ✓   | ✓         | ✓            |
| Time and date (and on-screen position)                    | ✓           | ✓   | ✓   | ✓         | ✓            |
| Auto daylight savings—on/off                              | ✓           | ✓   | ✓   | ✓         | ✓            |
| Auto zoom settings (on camera - RW/B)                     | ✓           | ✓   | ✓   | ✓         | ✓            |
| 60-character ID                                           | ✓           | ✓   | ✓   | ✓         | ✓            |
| User selectable compression                               | ✓           |     |     |           |              |
| Auto-record critical menu changes                         | ✓           | ✓   | ✓   |           |              |
| User data                                                 | ✓           | ✓   | ✓   | ✓         | ✓            |
| Recording rate select                                     | ✓           |     | ✓   | ✓         | ✓            |
| Data flash preference—on/off                              | ✓           | ✓   | ✓   |           |              |
| Audible feedback—on/off                                   | ✓           | ✓   | ✓   |           |              |
| Mic playback select—wireless/in-car/both                  | ✓           | ✓   | ✓   |           |              |
| Stop & Hold Classifications                               | ✓           | ✓   |     | ✓         | ✓            |
| User List for Officer Log-In                              | ✓           | ✓   |     | ✓         | ✓            |
| Self-charging battery back-up to store settings           | ✓           | ✓   | ✓   | ✓         | ✓            |
| Easy-to-see LEDs:                                         | ✓           | ✓   | ✓   | ✓         | ✓            |
| Time-left-display (on monitor - RW/B)                     | ✓           | ✓   | ✓   | ✓         | ✓            |
| Media full (on monitor - RW/B)                            | ✓           | ✓   | ✓   | ✓         | ✓            |
| Record On with audible confirmation (on monitor - RW/B)   | ✓           | ✓   | ✓   | ✓         | ✓            |
| Microphone reception (on monitor - RW/B)                  | ✓           | ✓   | ✓   | ✓         | ✓            |
| Low voltage condition with audible alert                  | ✓           | ✓   | ✓   |           |              |
| Backlit controls for night operation                      | ✓           | ✓   | ✓   | ✓         | ✓            |
| Courtesy lights for interior illumination (overhead only) | ✓           | ✓   | ✓   |           |              |
| Photocell adjusts LED display intensity                   | ✓           | ✓   | ✓   |           |              |

| Monitor                                                                                                                                        | ION ECLIPSE | ION | DEW | Road Boss | Road Warrior |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----|-----|-----------|--------------|
| 3.5" Color Active Matrix LCD                                                                                                                   | ✓           | ✓   | ✓   | ✓         | ✓            |
| Adjustable (moves side-to-side and up-and-down)                                                                                                | ✓           | ✓   | ✓   | ✓         | ✓            |
| Audio control                                                                                                                                  | ✓           | ✓   | ✓   | ✓         | ✓            |
| Brightness control                                                                                                                             | ✓           | ✓   | ✓   | ✓         | ✓            |
| Video review (rewind/fast forward/playback)                                                                                                    | ✓           | ✓   | ✓   | ✓         | ✓            |
| Time and date                                                                                                                                  | ✓           | ✓   | ✓   | ✓         | ✓            |
| When activated, displays: officer microphone(M*)<br>siren (S*), emergency lights (L*), brakes (B*), radar<br>data (requires compatible radar)* | ✓           | ✓   | ✓   | ✓         | ✓            |
| Up to 60-character ID generator*<br>(*seen on monitor & recorded with video)                                                                   | ✓           | ✓   | ✓   | ✓         | ✓            |

| Wireless Audio System                             | ION ECLIPSE | ION | DEW | Road Boss | Road Warrior |
|---------------------------------------------------|-------------|-----|-----|-----------|--------------|
| ClearComm 900 MHz Digital Spread Spectrum         | ✓           | ✓   | ✓   | ✓         | ✓            |
| Frequency hopper                                  | ✓           | ✓   | ✓   | ✓         | ✓            |
| Automatic transmitter activation upon record      | ✓           | ✓   | ✓   | ✓         | ✓            |
| True diversity receivers                          | ✓           | ✓   | ✓   | ✓         | ✓            |
| Lithium Ion rechargeable battery                  | ✓           | ✓   | ✓   | ✓         | ✓            |
| Transmitter works with any ClearComm base station | ✓           | ✓   | ✓   | ✓         | ✓            |
| LED black-out for covert nighttime operation      | ✓           | ✓   | ✓   | ✓         | ✓            |

# Digital Eyewitness®

| Recorder/Computer                                         | ION ECLIPSE | ION | DEW | Road Boss | Road Warrior |
|-----------------------------------------------------------|-------------|-----|-----|-----------|--------------|
| MPEG1 compression                                         | ✓           | ✓   | ✓   |           |              |
| MPEG2 compression                                         | ✓           | ✓   |     |           |              |
| MPEG4 compression                                         | ✓           | ✓   |     | ✓         | ✓            |
| User-selectable compression                               | ✓           |     |     |           |              |
| Good/Better/Best recording rates (std/high RW/B)          | ✓           |     | ✓   | ✓         | ✓            |
| Automatic variable record rates for MPEG2 and MPEG4(RW/B) | ✓           | ✓   |     | ✓         | ✓            |
| Media - Removable HDD or DVD-RAM disc                     | ✓           | ✓   | ✓   |           |              |
| Media - DVD+R                                             | ✓           | ✓   |     |           |              |
| Media - Compact Flash                                     | ✓           |     |     | ✓         | ✓            |
| 1 Video Track and 2 Audio Tracks (1 Video/1 Audio RW/B)   | ✓           | ✓   | ✓   | ✓         | ✓            |
| Pre-Event Recording - 0-3 minutes                         | ✓           |     |     |           |              |
| Pre-Event Recording - 60 seconds(fixed)                   |             | ✓   |     |           |              |
| Pre-Event Recording - 0.5 - 3 minutes                     |             |     | ✓   |           |              |
| Pre-Event Recording - up to 30 seconds                    |             |     |     | ✓         | ✓            |
| Built-in UPS                                              | ✓           | ✓   | ✓   | ✓         | ✓            |
| Supports MDC control                                      | ✓           | ✓   |     |           |              |
| Supports 4 cameras                                        | ✓           |     |     |           |              |
| Supports front color camera and rear B&W console cameras  | ✓           | ✓   | ✓   |           |              |
| Update software by inserting media                        | ✓           | ✓   |     |           |              |
| Update software by downloading from laptop                |             |     | ✓   | ✓         | ✓            |
| Gigabit Ethernet port for automated file transfer         | ✓           |     |     |           |              |

| Camera And Zoom Lens                            | ION ECLIPSE | ION | DEW | Road Boss | Road Warrior |
|-------------------------------------------------|-------------|-----|-----|-----------|--------------|
| Compact size: 2"H x 2"W x 3.25"D                | ✓           | ✓   | ✓   | ✓         | ✓            |
| EXview HAD CCD                                  | ✓           | ✓   | ✓   | ✓         | ✓            |
| Auto iris                                       | ✓           | ✓   | ✓   | ✓         | ✓            |
| Auto/manual focus                               | ✓           | ✓   | ✓   | ✓         | ✓            |
| Auto/manual zoom (40:1 digital zoom ratio)      | ✓           | ✓   | ✓   | ✓         | ✓            |
| Resists blooming and smearing                   | ✓           | ✓   | ✓   | ✓         | ✓            |
| Programmable auto zoom (wide-telephoto-wide)    | ✓           | ✓   | ✓   | ✓         |              |
| Auto white balance for true color               | ✓           | ✓   | ✓   | ✓         | ✓            |
| Low-light capability (1 Lux)                    | ✓           | ✓   | ✓   | ✓         | ✓            |
| Backlight compensation                          | ✓           | ✓   | ✓   | ✓         | ✓            |
| Outside view record/mic light                   | ✓           | ✓   | ✓   | ✓         |              |
| Rear-direction camera kit (front/rear)-optional | ✓           | ✓*  | ✓   |           |              |

\*Available only with overhead console.

| GPS Interface Option                                      | ION ECLIPSE | ION | DEW | Road Boss | Road Warrior |
|-----------------------------------------------------------|-------------|-----|-----|-----------|--------------|
| Display GPS Coordinates                                   | ✓           | ✓   | ✓   |           |              |
| GPS switch to store coordinates of important incidents    | ✓           | ✓   | ✓   |           |              |
| Sets video system clock - consistent time for all systems | ✓           | ✓   |     |           |              |
| Patrol Speed displayed and recorded (if requested)        | ✓           |     |     |           |              |
| Threshold speed for record activation (if requested)      | ✓           |     |     |           |              |
| Displays direction vehicle is traveling (if requested)    | ✓           |     |     |           |              |