



# **MOBILE DIGITAL VIDEO RECORDER OPERATING MANUAL**

**EYE COMMUNICATION SYSTEMS, INC.**

**455 E. INDUSTRIAL DRIVE**

**P.O. BOX 620**

**HARTLAND, WI 53029**

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EC Part#	Part Description	Reference Letter for installation
<b>Mobile DVR Components</b>		
340480	DVR Case	(A)
351030	Monitor w/ Video Input	(B)
360395	Thumb Mouse	(C)
580540	Camera Mount	(D)
580750	Camera	(E)
580755	Wireless Microphone w/cradle	(F)
291485	Transmitter	(G)
580770	Manual Recording Switch	(H)
580765	12V Light Bar Relay	(I)
580835	Backseat Camera	(J)
580845	Backseat Microphone	(H)
7950	Complete Wiring Harness	Reference Breakdown below
<b>Wiring Harness Breakdown</b>		
580781	Power Harness	(a)
580782	Power Lead w/Heat Sensor	(b)
580783	Monitor Power	(c)
580784	Camera Input/Power Cable	(d)
580785	Light Bar Relay Wiring	(e)
580786	Manual Recording Switch Wiring	(f)
410105	6 ft. USB Cable	(g)
	Microphone Dongle	(h)

## RECON Mobile DVR Wiring Contents

This unit comes complete with components and wires/cables to complete the plug and play installation. Below you will find images and reference letters of all the wiring components needed for installation, to serve as your visual guide through the installation process.



(a)  
Power Harness



(b)  
Power Lead w/ Heat Sensor



(c)  
Monitor Power



(g)  
USB Extension



(h)  
Dongle



(I) (e)  
Light Bar Relay w/Wiring



(H) (f)  
Manual Recording Switch w/Wiring



(d)  
Camera Input/Power Cable



(F)  
Wireless Microphone Cable/Cradle

**Please use this page of the manual as reference to the lettering of components.**

# Monitor Installation EXAMPLE

Install the **Monitor(B)** first. Below you will find images that will guide you through the mounting of the Monitor. Suggested monitor placement is on the center console floor.

## Step 1:

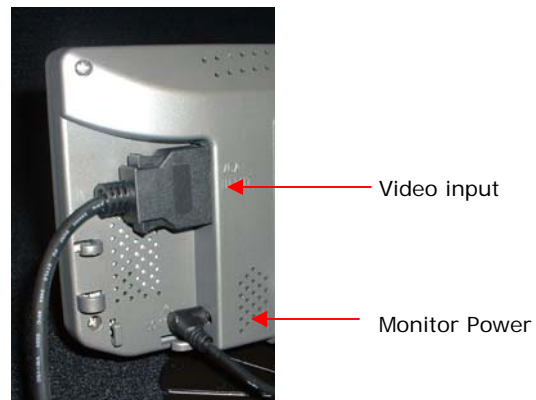
Mount Monitor to base and position as desired on console floor, as shown below.



## Step 2:

Connect power and video cord to back of monitor as shown below.

**Note:** Two tabs on video input need to be squeezed/pinched in order to connect to monitor.



## Step 3:

Connect all wiring to the monitor. There is a detailed guide to the wiring connections into the **DVR(A)**, for now let the wires hang until connections to the **DVR (A)** are ready to be made.

# Camera Installation

The **Camera Mount (D)** is installed on the passanger side of the vehicle. Remove the visor to complete the mount installation.

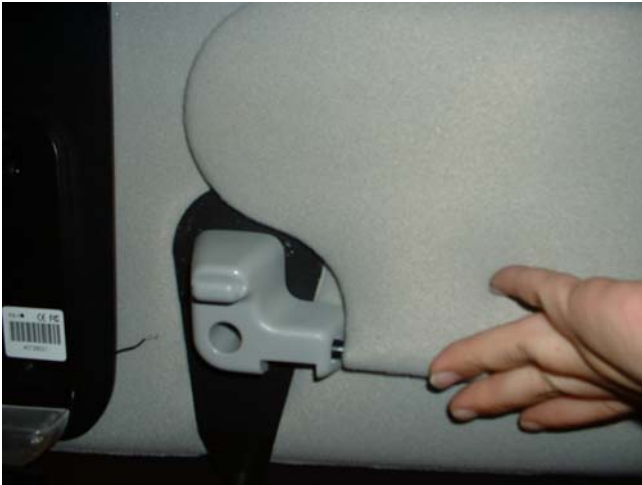
## Step 1:

Place mount bracket over the visor peg and hold in place as in the image below.



## Step 2:

Screw visor back into place.





### Step 3:

Finished **Camera Mount (D)** should look like the image below.



**Camera Mount (D)**

### Step 4:

To install **Camera (E)** remove the thumb screw from the top of the camera and then screw into the bracket. Now you are ready to make the power connections to the camera, as shown below. The black cable with connector goes to camera video output. The open black and white wires are connected into the negative and positive connections on the camera.

Black goes to (+) positive and white goes to (-)negative.



**Camera (E)**

### Step 5:

Run the camera cable along the top edge of the windshield with the monitor wiring. Remove plastic trim from pillar and run excess cable behind the trim. There is a detailed guide to the wiring connections into the **DVR(A)**, for now let the wires hang until connections to the **DVR (A)** are ready to be made.

**Note:** May use Wire Channel.

### Step 6: Optional Backseat Camera

To install Backseat **Camera (J)** plug camera into 'Camera Input 2' on the back of the DVR unit to enable video. For power plug camera power cable into 'Y Power Connector' on **Power Harness (a)** .

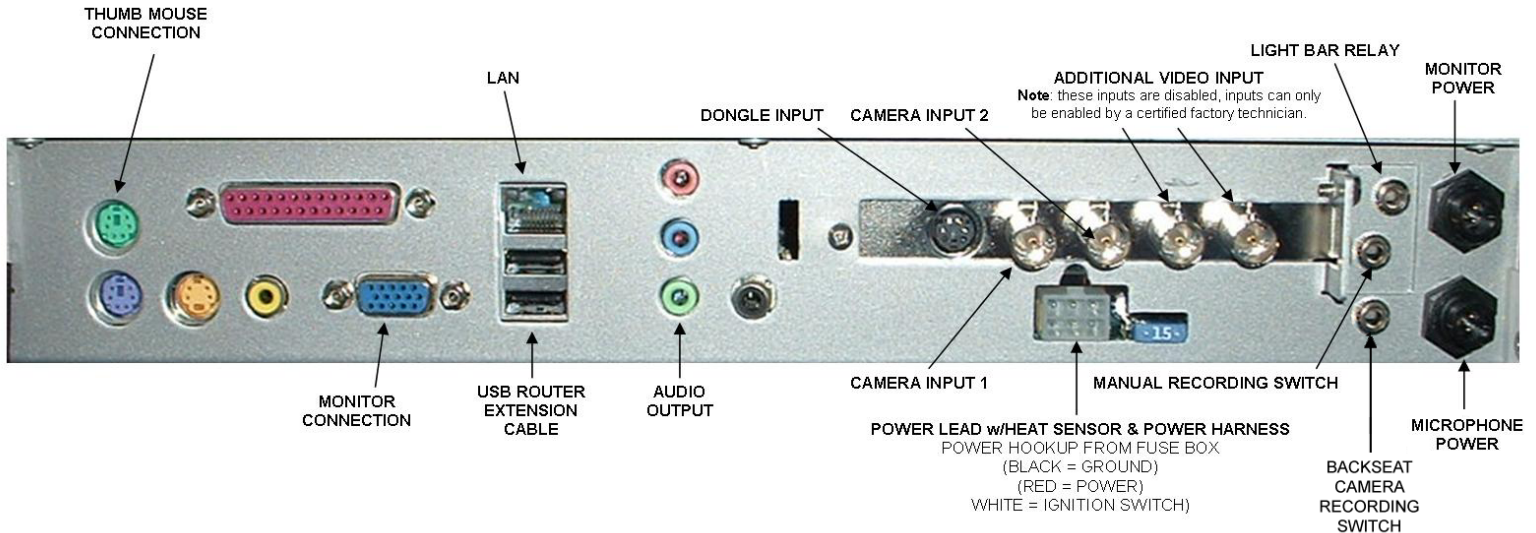
The backseat camera can be turned on and off by a switch on the back of the DVR located underneath the manual recording switch called the 'Backseat Camera Recording Switch' (see next page for location).

# DVR Installation

The **Mobile DVR (A)** was designed for easy installation. There are two options for DVR installation. The first option is the use of the "L" brackets on the DVR case (A) and mount it where ever you choose. The second choice would be to purchase custom brackets for select vehicles that will come complete with an installation and mounting instruction sheet.

## Unit Wiring Installation

The Mobile DVR (A) was designed for plug-and-play installation. Follow the diagram and the images below and your system will be up and running in a short time.



### Step 1:

Plug in **Monitor Power Cable (c)** and **Monitor Extension (h)** to **DVR unit (A)**. There are four connections that need to be made with for the Monitor, order of connections for the monitor does not matter.

**WARNING: MONITOR MUST BE CONNECTED BEFORE POWERING UP THE DVR.**



(h) Monitor Extension



Video input (B)

Monitor Power (c)



Monitor Power (c) to DVR (A)

### Step 2:

Plug in **Power Lead w/ Heat Sensor (b)** in next to the 15amp fuse on the **DVR unit (A)**.



### Step 3:

Plug in **Camera Input/Power Cable (d)** to **DVR (A)** and to **Power Lead w/Heat Sensor (a)** as in image below.



(d) to (A)

Camera input to DVR from Cable



Black to (+) positive    White to (-) negative

d) to (a)

Camera Input/Power cable to Power Lead

### Step 4:

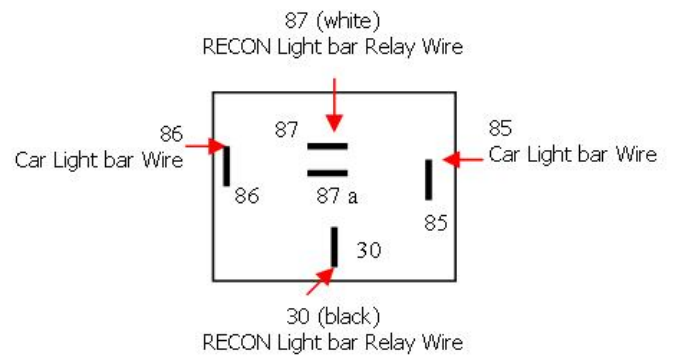
Plug in **Light Bar Relay (I)(e)** to **DVR (A)** as show in image below.



(I)(e)  
Light Bar Relay w/Wiring



(I)  
Light Bar Relay



### Step 5:

Plug in **Manual Recording Switch (H)(f)** as shown below.



(H)(f)Manual Recording Switch w/Wiring



## Step 6:

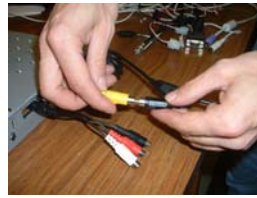
Plug in **Wireless Microphone Dongle (g)** to **DVR (A)** and to **Microphone Power (f)** as shown below.



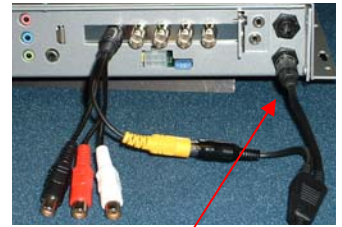
(g)  
Dongle



(g) to (A)  
Dongle to DVR



(g) to (F)  
Dongle to Microphone



Microphone Power (f) to DVR(A)

Yellow—Microphone #1

Black— Microphone #2

## Step 7:

Connect **Thumb Mouse (C)** to **DVR (A)** as shown below.



## Step 8:

Input the LAN and **Transmitter (G)** power to **DVR (A)**. Make power connections to the **Transmitter (G)** as shown below.



(G) to (A)  
Transmitter to DVR



(G)  
Transmitter connection

## Step 9:

Connect the **Power Harness (a)** to the **Power Lead w/ Heat Sensor (b)** as shown below.



Red to Ignition Switch  
Black to Ground  
White to Constant Power



## Step 10:

Mount **DVR (A)** and secure all wires.

## Camera Operation

The only operation the user should perform with the camera is zooming in and out. Use the button labeled "T" to zoom in, and the button labeled "W" to zoom out. The current zoom factor will be temporarily displayed on the screen. For normal operation the zoom should be set at "2X."



2. If other camera settings are required refer to the individual camera manual.

## Microphone Operation

Placing the microphone in its base serves two purposes.

- Charging the transmitter's battery.
- The transmitter "synchronizes" with the receiver.

**Note:** This allows an officer to change vehicles and continue to use his own microphone, or two officers may ride together after "synchronizing" both transmitters in the same cradle.

To turn on the transmitter, press the "In-Use" button once. The "In-Use" light will come on indicating that the microphone is transmitting. Press the button again to turn the transmitter off.



The "EMG" or "Panic" button is not functional on base model.

## Optional Backseat Microphone

Plug in **Backseat Microphone (H)** to black connector on the **dongle (h)** to connect audio input to DVR system. For power plug the backseat microphone into the 'Y Connector' on **Power Harness (a)**.

# DVR Operation

Virtually no user intervention is required for the Recon unit to function, it is fully automatic. When the vehicle's Light Bar or Manual Recording Switch is activated, recording will start. The recorded clip will begin 25 seconds prior to the activation of the Light Bar or Manual Recording Switch.

Approximately 5 seconds after the vehicles ignition is turned on, the DVR will power up.

Turn the Monitor on using the power switch. You should see the DVR boot process on the LCD screen.

**Note:** If not, press the monitor power button momentarily and observe the upper left corner of the screen. If the letters VGA are not visible, continue pressing the power button to cycle video modes until VGA appears.

The DVR will boot and log in automatically in approximately 90 seconds. The unit is ready for use once the on-screen DVR controls are visible.



## Playback Icon Functions



### **Stop**

This is used to stop playback.



### **Play**

Functions the same as the Play button of a traditional video player. When pressing this icon during fast or slow playback, the playback speed returns to normal.



### **Pause**

Functions the same as the Pause button of a traditional video player. By pressing this icon during playback, the playback pauses. To continue the playback, re-click this icon or the play icon.



### **Backward Search**

Functions similar to the Rewind button of a traditional video player. Press this icon, and the video will skip backward for a number of frames (160 frames).



### **Forward Search**

Functions similar to the Fast Forward button of a traditional video player. Press this icon, and the video skips forward for a number of frames (160 frames).



### **Forward with Single Image**

When pressed, the video will move forward a single frame each time. The video will be paused until the



play icon is pressed.



### **Backward with Single Image**

When pressed, the video will move backward a single frame each time. The video will be paused until



play icon is pressed. Then the playback speed will be back to normal.



## Playback Speed

Below is an enlarged image of the control panel for playback speeds. The middle setting plays at a speed of 1x. Pressing to each point to the right of 1x will increase the speed from x2, x4, High Speed and Extra High Speed. Pressing each point to the left of 1x will reduce the speed from 1/2, 1/4, 1/6, and 1/8.



## Snapshot

By pressing this icon, you may capture still images during playback. If there is caption text on the video, the captured images will contain the caption text information. The captured image is stored in a BMP or JPG format.

## Start Video Clip

Pressing this icon during video playback will mark the start of a video clip (event). This time marker shows what would be the start of the video clip.



## End Video Clip

Pressing this icon during video playback will mark the end of a video clip. This time marker shows what would be the end of the video clip.



## Save the Video Clip

Pressing on this icon will save the current video clip.



## Playback Clip

After the video clip has been saved pressing this icon will replay the clip.



## Caption

Press this icon, the playback window shows the name of the board/camera, the start time, end time, and current time.



## Caption Color

Press this icon; the user can change the color of the caption.



## Zoom In

Press this icon to enlarge an image from its current size in 25% increments to the maximum of 200%.



## Zoom Out

Press the icon to reduce an image to its original size in 25% increments.



## End

Press this icon to stop playback and close the player.



# Playback Controls

The playback window consists of four parts, including:

## **Message area:**

Posts information such as Host Name, Time Zone and Operating Status.





Host Name and Time Zone  
Recording Date for Video File  
Operating Status: Includes "Playing" "Pause" "Stop" etc.

## **Video Playback:**


Posts information such as Time, Board Names and Camera Names.

Displays the Start Date/Time of the file.  
Displays the End Date/Time of the file.  
Display the Date/Time of the current display.

## **Playback Time Scroll Bar:**

Displays the relative time position of the current display in the video file. Speed up the playback by dragging the time pointer  using the mouse or use the skip previous/next icon 



**Playback Control Panel:** When pressing the  icon, the extended function Panel will appear as shown below. Press the icon again to hide this extended function panel.



# Playback Search Modes

## **Search by Date:**

Use to Search for video files by Date (year, month and day).

## **Search by Time:**

Use to Search for video files by the Start/End Date and Time (year, month, day, AM/PM, hour, minutes and seconds)

## **Search by Camera:**

Only the cameras which have saved video files can be selected. If no files are linked to a given the camera the dialog box next to that camera will be shaded.

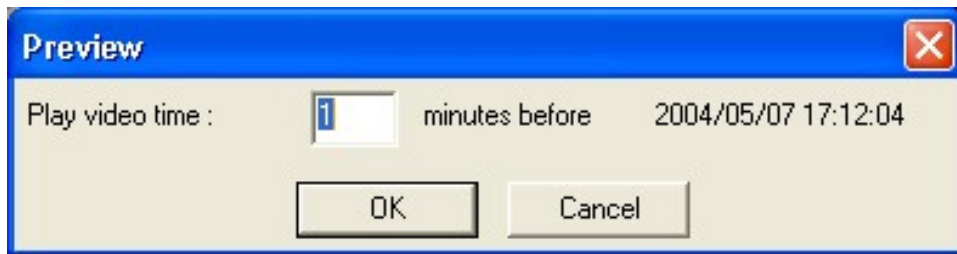
**Note:** A maximum of 4 cameras can be chosen at one time.

After selecting the searching parameters, click the  icon to play.

# Preview Playback Feature

An easy way to play back recent video is to use the preview feature. On the video window, press the right button of the mouse, and select **Preview**.

The following window will be shown:



User enters the desired amount of minutes to go back to in the text box and click OK. Time range for preview is 1~99 minutes. The system will automatically search for the earliest file for playback in the time range, if there is no corresponding recorded video for the requested time. An invalid message will be shown, when there is no valid file recorded and saved due to a short recording time or when there is no video file in the appointed time frame. While remote monitoring, the preview function will only be available if the user selects "record" as opposed to monitor only.

# Time/Date Playback

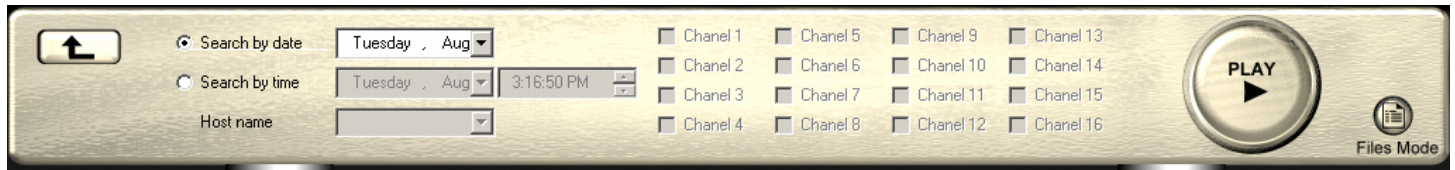
User will be able to find the saved video file and load the picture function as follows.



*Video Playback*



Press icon. The system panel will switch to the playback panel as shown below:



From this panel a user can search for the video files they want to playback. User will need to input the Host ID and the search information, such as date/time.

## Files Mode



Pressing the Files Mode icon on the Playback Panel will bring up the following screen:

		Open	Download	Export	Delete	Close					
		Start time	End time	Board name	Camera name	Video size	File length				
ChateauXP Host	DVR	04/05/07,17:17:00	04/05/07,17:17:01	Board2(2)	Camera24(4)	640X480	197Bytes				
	VgDatabase(c:\)	04/05/07,17:17:00	04/05/07,17:17:01	Board2(2)	Camera23(3)	640X480	209Bytes				
	2004/05/07	04/05/07,17:17:00	04/05/07,17:17:01	Board2(2)	Camera22(2)	640X480	173Bytes				
	dvr	04/05/07,17:17:00	04/05/07,17:17:01	Board2(2)	Camera21(1)	640X480	185Bytes				
	Video	04/05/07,17:17:00	04/05/07,17:17:01	Board1(1)	Camera14(4)	640X480	26KB				
	Log	04/05/07,17:17:00	04/05/07,17:17:01	Board1(1)	Camera13(3)	640X480	26KB				
	Alarm	04/05/07,17:17:00	04/05/07,17:17:01	Board1(1)	Camera12(2)	640X480	27KB				
	2004/05/06	04/05/07,17:16:59	04/05/07,17:16:59	Board1(1)	Camera11(1)	640X480	28KB				
	notebook	04/05/07,17:16:59	04/05/07,17:16:59	Board2(2)	Camera24(4)	640X480	197Bytes				
	VgDatabase(c:\)	04/05/07,17:16:59	04/05/07,17:16:59	Board2(2)	Camera23(3)	640X480	209Bytes				
	2004/05/07	04/05/07,17:16:59	04/05/07,17:16:59	Board2(2)	Camera22(2)	640X480	173Bytes				
		04/05/07,17:16:59	04/05/07,17:16:59	Board2(2)	Camera21(1)	640X480	185Bytes				
		04/05/07,17:16:59	04/05/07,17:16:59	Board1(1)	Camera14(4)	640X480	26KB				
		04/05/07,17:16:59	04/05/07,17:16:59	Board1(1)	Camera13(3)	640X480	26KB				
		04/05/07,17:16:59	04/05/07,17:16:59	Board1(1)	Camera12(2)	640X480	27KB				

The screen is divided into two sections. The left displays the date folders. The right displays the saved video files.

In the files mode the folder levels are as follows:

**Host:** The top level is the host name.

**Database:** The second level is the database.

**Date:** The third level is the date folder.

**Host Name:** The fourth level still uses the name of the host. The host name is the location/host where the video files were saved from.

**File:** The fifth level consists of three folder names: **Video**, **Picture**, **Alarm** and **Clip**. Video files are saved continuously in the video folder. The picture folder stores the snapshots. The alarm folder stores the files created when an alarm was triggered. The Clip folder stores any clips created.

# File Management Functions

There are several functions you can use to manage the files you have successfully found in the video files.

## **Open File:**

In the file mode, 4 videos can be played simultaneously by highlighting them then clicking on the



icon.

## **Download:**

Select the video files from another host's database; by pressing the



icon, you will then be able to transmit these video files to the database on your local computer.

## **Export:**

Select the file you wish to export then press the



icon. Next select the folder / drive you wish to export the video files to, then click the OK icon.

## **Delete:**

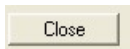
To delete a video file(s) highlight the file(s) then press the



icon.

## **Close:**

Press



to exit the files mode.

# File Transfer

With the wireless option, there is no user intervention required to transfer video. The user simply parks the car in a designated area and file transfer will begin automatically. When the vehicle's ignition is turned off, the unit will continue to run for 30 minutes to allow plenty of time for all files to be transferred. After 30 minutes the unit will properly shut itself down. If the vehicle is driven from the designated area before file transfer is complete, the transfer will resume from its previous spot upon the vehicles return. At that time only new video and video that was not previously transferred will be transmitted.

If a USB drive is used, file transfer is performed from the video playback feature. Refer to the Export feature from the File Management section.



## RECON Mobile DVR Warranty Policy

### Standard Warranty

For 365 days after the delivery to the customer, Eye Communication Systems, Inc. (hereafter referred to as Eye Com) warrants that the products will be free of defects in material of workmanship, and Eye Com liability is limited solely to the replacement of such defective parts (1) which are returned, shipping and handling charges prepaid by the client to Eye Com and (2) which are proven to be defective upon Eye Com's inspection, and (3) to the labor to repair or replace such parts. The warranties contained in this agreement are in lieu of all other warranties, expressed or implied, including any regarding merchantability or fitness for a particular purpose, related to the use or performance of the products. Eye Com will not be liable for personal injury or property damage (unless caused solely by Eye Com negligence), loss of profit or other incident or consequential damages arising out of the use or inability to use the products. Nor does this warranty extend to any product which has been (a) subject to misuse, neglect or accident, or (b) repaired or altered by other than service representatives qualified by Eye Com.

### Factory Direct Support

The Mobile DVR is manufactured in the USA. The manufacturer's Warranty Protection means professional factory service and no-hassle peace of mind. Apart from your actual shipping postage, WP covers all non-consumable parts and labor, with no extra or hidden costs. Simply call the factory direct toll free technical support hotline, at 800-558-2153. If your problem cannot be solved over the phone, we will verify your coverage, assign a Return Authorization (R.A.) Number and you will be authorized to ship the product back to the factory. Your Mobile DVR will be repaired or replaced within 72 hours of receipt.

### Sign Up Now!

You can sign up anytime within the standard warranty period for the extended coverage. Select one, two, or three years of extended coverage. Extended Coverage must be purchased prior to the expiration of the standard warranty. Factory service will be available at the then prevailing rates. Contact your sales representative for price, terms, and any additional information at 800-558-2153.

### Extended Warranty Protection (EWP)

Eye Com backs up the quality, and insures the cost-effective value of your RECON Mobile DVR, with optional repair or replacement coverage well beyond the manufacturer's industry standard 1 year Warranty period. (Please keep your original packaging from shipping)

### Extended Warranty Protection Agreement

Eye Com backs up the quality, and insures the cost-effective value of your Mobile DVR, with this optional extension of the original repair or replacement coverage. If the product fails to operate properly as a direct result of any manufacturing defect, all of the terms and conditions of the original manufacturer's standard warranty coverage are extended for the duration of the additional coverage. Purchase of and Extended Warranty Policy (EWP) includes free software upgrades within the warranty period. Client is responsible for providing proof of purchase of selected coverage, when a claim is made. Coverage automatically begins on the 366th day after product purchase date on the original invoice, and extends for the number of years of coverage selected.

### Your Agreement Does Not Cover

This Agreement does not cover loss or theft of the products, pickup or delivery charges, or damage caused by product abuse or misuse, water damage, loss of data, damage resulting from natural causes such as earthquakes, tornadoes, hurricanes, or other acts of God. This warranty policy is non-transferable.

Please complete all of the required information, detach along the dotted line, place in a standard business size envelope and send to:  
**Attn: Eye Digital RECON Mobile DVR Department, Eye Communication Systems, Inc.**  
**455 E. Industrial Drive, P.O. Box 620, Hartland, WI 53029**

Name \_\_\_\_\_ Company \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ ST \_\_\_\_\_ Zip \_\_\_\_\_

E-mail Address \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_

RECON DVR Representative \_\_\_\_\_ RECON DVR Serial Number \_\_\_\_\_

**Your RECON DVR representative will have pricing for each warranty.**

Please select which warranty you would like to purchase.	
1 year Extended Warranty 15% of original cost	
2 year Extended Warranty 30% of original cost	
3 year Extended Warranty 45% of original cost	