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MODEL: DVR16E(PACK)

### Professional Surveillance Pack

# Digital Video Recorder with 16 Security Cameras 'QUICK INSTALLATION GUIDE'





#### Digital Video Recorder

- Advanced H.264 Video Compression Technology
- Multiplex Operation
- Long Recording Duration
- Intelligent Video Motion Detection Recording
- Remote Network Surveillance & Backup Functions
- Easy to operate with remote or USB mouse.
- System Auto recovery after power loss (blackout)

#### 16 x 15m IR Day/Night Cameras

- High Quality Image sensor
- IR Night view range of 15 metres
- 650TVL Resolution





#### 1 x 16ch Digital Video Recorder with 2TB Hard Disk Drive

- Advanced H.264 Video Compression Technology for High Quality Images
- Easy to Operate
- Can be Connected to a PC Network for Remote Viewing & Backup (Software on Disc)



#### 1 x USB Mouse

To operate the DVR

#### 1 x IR Remote Control with batteries

• To operate the DVR

#### 1 x HDMI Connection Cable

Connect the DVR to a HDMI ready TV or Monitor



#### 3 x Switch Mode Low Voltage Power Supplies

- 1 x 12v Power Supply for use with the DVR16E
- 1 x 12v Power Supply for use with the Power Split Cable to Power All Cameras (Pack)

#### Additional DVR16E(PACK) Contents (Only included when purchased as with the DVR16EPACK)



#### 16 x Day/Night Weatherproof Colour Cameras with Infrared LEDs - 20m Range

- IR LEDs for Viewing in Total Darkness up to 20m (B&W Mode)
- 650TVL Resolution
- Ideal for use Indoors and Out



#### 16 x Camera Connection Cables

- Combined DC Power and Video Leads
- Pre-terminated Allowing Simple Plug-in Connection No Tools Required
- 8 x 10m, 4x 20m, 4 x 30m Leads Supplied



#### 2 x Power Split Cable

• Allows You to Connect All 8 Cameras to 1 Power Supply

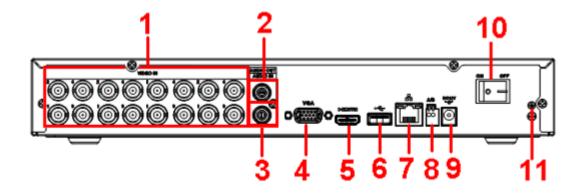
#### 1 x Network Cable

 Allows You to Connect the LAN Port on the DVR to Your PC or Network to Facilitate Remote Viewing or Backup Functions

#### Before installing this unit, please read through the following points:

- Do not place cords from the AC adapter where they can be pinched or stepped on.
- Leave at least 50mm of space between the DVR16E and other objects to allow air circulation.
- Do not expose the DVR16E or Cameras to excessive heat, cold, or moisture.
- Never immerse any component in water, and do not spray cleaners of solvents on the unit. Unplug units before cleaning. When cleaning, use a damp, lint-free cloth only.
- Do not place heavy objects on cords, or cover cords with rugs or carpet.
- Service should be handled only by qualified technicians.

#### **Rear Panel**



#### **WARNING**

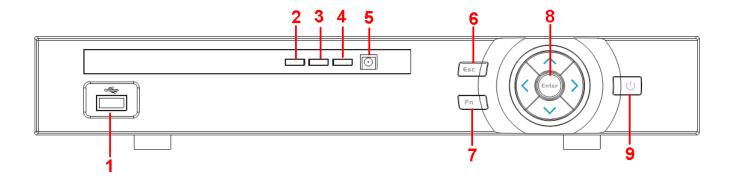
Please ensure you use the correct power supply for each component. Plugging either Power supply into the wrong deice cause damage to it.

1	VIDEO IN	Connect to analog camera, video input signal.
2	AUDIO OUT	Connect to video output device such as sound box.
3	AUDIO IN	Connect to audio input device such as speaker.
4	VGA	Connect to monitor using VGA cable.
5	НОМІ	Connect to Digital Monitor with supplied HDMI cable.
6	USB	Connect to USB storage device, mouse, or DVD-RW.
7	Network port	Connect to LAN.
8	RS485	For RS485 PTZ Control.
9	DC12V	Connect to 12V power supply.
10	Power button	Powers on/off the DVR16E.
11	GROUND	Ground point.

#### **Connection Guide**

- 1. Mount the 16 Cameras as required and connect the supplied combination DC Power and Video leads.
- 2. Connect the 16 corresponding camera Video leads (Yellow) into the camera inputs at the rear of the DVR. Be sure to take note of the Camera input 1 16, as this will determine the camera channels.
- 3. Connect the 16 x camera Power leads (RED) into the Power Splitter Cable. Ensure your camera power supply is connected to each of the cameras power cables.
- 4. Connect the 12V Power Supply to the DVR16E.
- 5. Plug power adaptor into a Power-point.
- 6. Switch DVR16E on from back of device. Then hold front Power button for 3 seconds.
- 7. The power LED at the front of the DVR16E should now be illuminated and the unit will make a loud beep sound to indicate it is powered.
- 8. Connect the included mouse to the USB port on the front or back..
- 9. Connecting your local network or modem to the DVR16E (we recommend doing this last step after all the cameras have been configured).

#### Front Panel



1	٠٠	USB	USB port. Connect to USB storage device, mouse etc.
2	Alarm	Alarm indicator light	When an alarm occurs, the light becomes red to alert you.
3		Network status indicator light	The blue light becomes on when the network connection is abnormal or offline.
4	8	HDD status indictor light	The red light becomes on when HDD is abnormal or HDD space is below the threshold.
5	IR	IR Receiver	Receives the signal from the remote control.
6	ESC	ESC	Go to previous menu, or cancel current operation.
7	FN	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image colour.
8	Enter	Enter	Confirm current operation
9	G	Power	The blue light becomes on when the power connection is OK.

#### Main Screen

Once booted, you will be presented with the screen below (camera may only be black if not yet set up).. Each camera view will have one or more symbols from below:

1	<u>oo</u>	Currently Recording	3	?	Video Loss
2		Motion Detected	4		Camera Lock



DVR8E only supports four cameras on screen.

#### **System Menu**

- Right Clicking will bring up the System Login screen and the onscreen keyboard.
- Once Logged In, right clicking again will bring up a menu.
- Selecting "MAIN MENU" will show the system menu.
- Right click or press the ESC button to return to previous menus, click on the icon to enter menus.

#### **Channel View Menu**

Moving the mouse to the top of each channel in the live view screen will show a menu. From left to right:

Playback: Show, in live view, the past few minutes of footage.

Search tag: Turn on search tag.

Save: Save the currently displayed file to USB device.

• Close: Close the channel view menu.

#### Default:

The default username is **admin**, the password is also **admin**.

On the DVR8E physically, you may also use username of **888888**, and the password **888888**. (Users can alter the password later. Please refer to the Advanced set up guide CD)

#### Set the Time and Date

When using your DVR for the first time, you will have to set the SYSTEM TIME.

- Right clicking anywhere on the screen will bring up the password menu.
   Use the mouse to enter the DVR16E admin password with the on-screen keypad.
- Then Right click to open the menu and select "MAIN MENU".
- Select "SETTING"
- Select "GENERAL"
- Set System Time, Date Format and DST (Daylight Saving Time) for your region.
- Click Save before clicking OK

#### Important:

If you change the date or time on your DVR8E after the recording function is activated, the recorded data may be deleted. After setting the date and time, it's recommended to clear all HDD data, and start recording again.



#### To Set Up Recording Rates

#### **Record Times:**

The DVR8E system is capable of storing up to 4 weeks of recorded footage based on 1Tb of storage and the 4 included Cameras set to D1 @ 10fps and CBR @ 512kb/s

Right click to open the menu and select MAIN MENU, then select CAMERA followed by ENCODE.



Here you may set individual encoding options for **Regular**, **Motion Detect** and **Alarm** Recording. While any of the cameras may be set higher, please be aware that it will reduce the total recording time to less than 2 weeks. We recommend:

Analogue cameras: Set to H.264 with a D1 resolution, 10fps, Bit Rate CBR of 512kbps.

**Important:** The EXTRA STREAM MUST be enabled if you wish to remote access the DVR16E system. We recommend that it is always set to **CIF** resolution, **10fps**, Bit Rate CBR of **320**kbps

#### To Begin Recording

Once you have successfully set up the cameras, exit the Menu by right clicking or pressing the CLOSE button. By default, the DVR16E will begin recording when it is properly connected to the cameras and

has an installed HDD. If it is recording, the recording icon " will be displayed on screen.

#### Automatic Overwriting:

When the system is in full, the oldest recorded data will be overwritten automatically. **This DVR8E**System is set to Overwrite by factory default but this can be changed in the "GENERAL" Menu.

#### **Motion Detection**

Should you wish to use Motion detect recording, it can be set per camera, per time period and to detect in certain portions of the screen.

- Right click to open the menu and select "MAIN MENU".
- Select "EVENT"
- Select "DETECT"
- Select 'Motion Detect' from Event Type
- Select channel from Channel drop down
- Check the Enable box
- Ensure Record Channel is checked, and a Region has been selected.
- Click Save.

#### **More Settings:**

	<del>-</del>
Latch	Time to wait after motion is detected, before checking for motion again.
Region Select	Select region of feed within which motion detection will occur.  Click and drag with the mouse to arm/disarm areas of the feed.  Motion detected in red areas will cause recording, motion will not be detected in grey areas. Press "ENTER" to save.
Sensitivity	Select from 1 to 6 the sensitivity of the recording, 6 being the most sensitive to movement.

- Right click to open the menu and select "MAIN MENU".
- Select "STORAGE"
- Select "SCHEDULE"
- Select a channel.
- Choose a period and set the time options to the period you wish to motion record, bearing in mind system uses **24 hour time**.
- Check MD for this period.
- Click **OK** to save.



#### How to Playback Video Footage on your DVR16E

- 1. Right click anywhere on the screen to bring up the menu and log on. Use the mouse to enter the DVR16Es admin password "888888" with the on-screen keypad.
- 2. Once logged in you can left click to open the menu and select SEARCH.
- 3. You will now see the DVR16E search screen. On the right hand side there is a calendar in which you can select the month and day you wish to playback. Any date that is highlighted blue has video available to playback.
- 4. Once you have selected the day, you can choose which cameras you wish to playback, and the mode in which they will be displayed (1ch, 4ch, 8ch, 16ch at a time).
- 5. Finally you can select the time from the time bar at the bottom of the screen. You will notice that the hours are listed from 00:00 to 24:00. Simply clicking on the bar will display the video footage from that time. A green bar will indicate that there is video available at that time.



#### How to Backup Video Footage on your DVR16E

- 1. Right click anywhere on the screen to bring up the menu and log on. Use the mouse to enter the DVR16Es admin password "888888" with the on-screen keypad.
- 2. Once logged in, you can now left click to open the menu, select MAIN MENU then BACKUP.
- 3. You will now see the DVR16E Backup Devices where you can choose the device you wish to backup to. Choose your device and click BACKUP to continue.
- 4. You will see the DVR16E Backup screen where you can choose the Camera Channel, followed by the Start and End times for the section of video you wish to backup. Click ADD to save your selection, and repeat process for any addition video footage you wish to back up.



5. Once you have selected all the video to be backed up, press Start to begin the transfer process.

In order to backup Video Footage from your DVR16E you will first require a USB Stick or USB Hard Drive (we strongly recommend having a FAT32 file system).

#### Using a PC to find available IP Addresses

Before setting up your DVR16E you will first need to find it an IP address. This process is to help you find what IP Addresses are currently in use on your computer network, and in turn which ones are still available. If you are not connecting the DVR16E to a computer network (or internet connection) then any default IP address range may be used. *e.g.192.168.0.100* to 192.168.0.130.

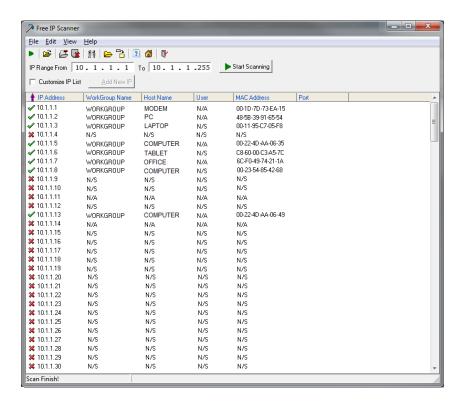
Before starting you must first have a copy of the "Free IP Scanner" Tool which can be downloaded here: http://downloads.rhinoco.com.au/dvr/Free IP Scanner.zip

- 1. Open the Free IP Scanner Tool (if it asks for registration just press skip as it is free to use).
- 2. Begin the scan by clicking or
- 3. The "Free IP Scanner" will automatically detect all IP Addresses on your Computer network and display which ones are in use by listing with a Green tick beside them.

√ 10.1.1.2 WORKGROUP PC N/A 48-5B-39-91-65-54

Those which have a red cross beside them are not currently in use and may be available.

Note: Even though lower numbered address may be free (such as "?.?..8") we recommend using higher number which are unlikely to be used in the immediate future such as "?.?...100" onwards.



4. If you wish to Export the list, you can do this by going to FILE and choosing EXPORT. It can then be saved as text file and even emailed.

#### Set Up the DVR's Networking

Right click to open the menu and select MAIN MENU, then select SETTINGS followed by NETWORK.

The device comes pre-configured to DHCP (which means it will automatically receive an IP Address). If you wish to manually give it an IP Address, un-tick DHCP and then enter the IP Address, Subnet mask, and Gateway.

In this example we have used 192.168.0.100



#### Simple Configuration of your DVR for Remote Access by QR code

#### To be able to set your NVR up for Remote Access, you will first require:

- ☐ An ADSL internet connection of 512/512 minimum (ADSL2 or NBN recommended).
- ☐ A network cable between your DVR and your Modem.
- ☐ An iPhone with the iDMSS App or an Android smartphone with the gDMSS App.

#### Once you have these you can proceed to set up the Remote Access by:

- 1. Connect your NVR to your Modem by a network cable.
- Under Main Menu > Settings > Network.
   Enable DHCP or enter your local network address information.
- 3. Exit to save.
- 4. Now go to Main Menu > Settings > Network > Network Settings. Tick the box for P2P.

Then Click P2P to open up the sub menu.



- 5. Ensure "Enable" is ticked. Then Click Save to exit.
- 6. You can now set up the DMSS Mobile App by QR Code.

#### **DMSS Mobile App by QR Code**

#### App available for Android, iOS, Blackberry, Symbian, Windows Mobile and Windows 7 mobile

From your compatible Smartphone, access the App Marketplace and download the free App. This may also be listed as:

iDMSS lite for Apple iOS gDMSS lite for Android DMSS lite for others iDMSS plus for Apple iOS gDMSS plus for Android



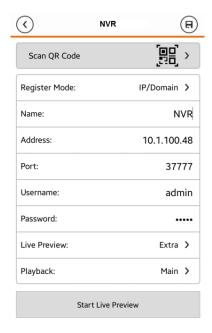
#### **Configuration:**

- 1. On your NVR go to **Main Menu > Settings > Network > Network Settings.**Tick the box for P2P. Then double Click P2P to open up the sub menu.
- 2. On your Smartphone go to "MENU" 

  then "Device manager" and select "ADD" ⊕.
- 3. Set "Register Mode" to "P2P"
- 4. You can now click "Scan QR Code" and use your phone to scan the code on your NVR.



- **5.** Enter in your devices **NAME**.
- 6. Enter your Username / Password and the set Live Preview and Playback to "Extra".
- 7. You can now select "Start Live Preview" to save and test the connection to the NVR.
- 8. In the future, you can connect to your system directly from the main screen by tapping the "DEVICE LIST" 📵 then ticking your NVR and selecting the "Start Live Preview" to connect.





#### Advanced Configuration of your DVR for Remote Access (optional)

**Important:** Before Setting up remote access for your DVR, you will need a good understanding of computer networks. If you do not, please seek the assistance of a qualified I.T. professional.

#### To be able to set your DVR up for Remote Access, you will first require:

An ADSL connection of 512/512 minimum (ADSL2 recommended).
An ADSL Modem which supports Port Forwarding (such as Sapido, D-link or Netgear).
An "External static IP address" from your Internet Service Provider.
An "Internal Static IP address" from your Modem.
A network cable between your DVR16E and your Modem.
A windows PC on your network to configure your modem.

#### Once you have these you can proceed to set up the Remote Access by:

- 7. Give your DVR the internal IP Address.
- 8. On the DVR change port 80 to port 88.
- 9. Ping the DVR from a local computer to ensure it is reachable on your network.
- 10. Port forward ports 88, 37777, 37778, 554 in the modem, to the "Internal IP address" of DVR16E.
- 11. You should then be able to test the connection to the DVR16E over the internet from a different internet connection (or mobile on 3G).

#### Test your Remote Access by connecting to the DVR:

When you are in the same building as the DVR you will be able to connect via WIFI and use the "Internal IP address" of the DVR. However when you are not where the DVR is and wish to connect via the internet or 3G, you would use the "External static IP address" given to you by your Internet Service Provider.

#### Port forwarding support:

There are many different brands and models of ADSL Modems which makes them difficult to set up, this is why we must recommend an IT professional. Some manufacturers offer guides on their websites or alternatively we can recommend Third-party assistance on configuring port forwarding from sites such as: <a href="https://www.portforward.com">www.portforward.com</a>

#### When using more than one DVR on a site:

Should you have more than one DVR on site it may be necessary to set the second machine to a different set of port. For example set DVR (1) to port 88 and then DVR (2) to port 89.

#### Set up DDNS on your DVR (optional)

DDNS is a service that will track your numeric IP address and allow you to attach an alphanumeric address. So for example. Instead of using "123.123.123.123" (the Google address) you would use "google.com".

#### Why use DDNS?

Remembering a numeric IP address can be complicated, where an alphanumeric address is easy to remember. The other main advantage for DDNS is If you have a dynamic IP Address, (where your address can change monthly) the DDNS service will track and update with your new IP Address automatically. So no matter what your numeric IP Address is, your alphanumeric address will work. There are free and paid services available, however a free DDNS service has been built in to these DVRs. This tutorial will go over how to set up your DVR16E to use the free DDNS service.

#### How to enable your DDNS?

In order to set up DDNS on your DVR16E, you will need to enable the DDNS service in the Network settings. MENU > SETTING > NETWORK > NETWORK SETTING > DDNS (double click).

Set DDNS Type to "Private DDNS" and Tick ENABLE

SERVER IP to www.dahuaddns.com

DOMAIN MODE to "Default Domain"

DOMAIN NAME is your unique <MAC address>.dahuaddns.com

Username is left Empty

Now when trying to connect externally you would now use the CURRENT HOST ADDRESS instead of the internal IP address.

e.g. <MAC address>.dahuaddns.com

(Note: This is also dependent on Port forwarding being set up in your ADSL modem. Please use the default unique ID not <MAC address> as it is just an example).



#### **DMSS Mobile App by IP Address (optional)**

#### App available for Android, iOS, Blackberry, Symbian, Windows Mobile and Windows 7 mobile

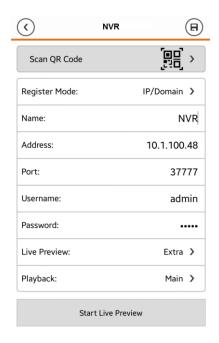
From your compatible Smartphone, access the App Marketplace and download the free App. This may also be listed as:

iDMSS lite for Apple iOS gDMSS lite for Android wDMSS lite for Windows Phone



#### **Configuration:**

- 1. Go to "MENU" (a) then "Device manager" and select "ADD" (b).
- 2. Set "Register Mode" to "IP/DOMAIN"
- 3. Enter in your devices NAME, IP Address or DDNS and TCP Port (default is 37777).
- 4. Enter your Username / Password and the set Live Preview and Playback to "Extra".
- 5. Select "SAVE" (a) in the top right corner or "Start Live Preview" to save and connect.
- 6. You be returned to your Live View screen where your camera feed will now be displayed.
- 7. In the future, you can connect to your system directly from the main screen by tapping the "DEVICE LIST" then ticking your DVR4E and selecting the "Start Live Preview" to connect.



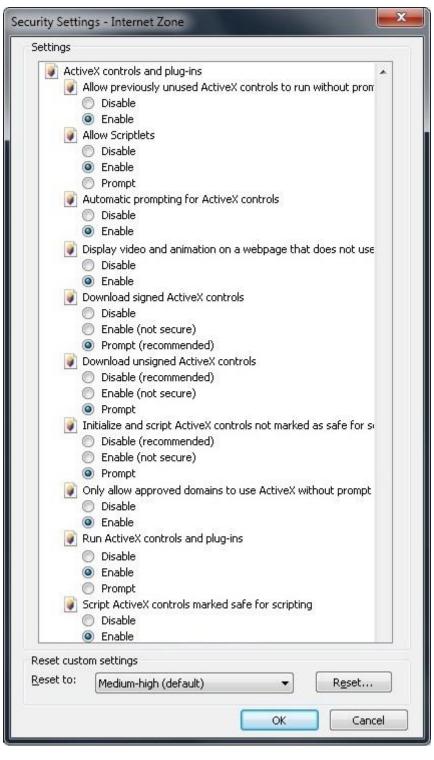


#### **How to enable ActiveX Controls**

**Important:** Before Setting up remote access for your DVR4E, you will need a good understanding of computer networks. If you do not, please seek the assistance of a qualified I.T. professional.

We can only recommend using ActiveX Internet Explorer 5.5 or above, and strongly recommend the use of IE9 as unfortunately IE10 is not compatible.

To enable ActiveX controls go to: Tools > Internet Options > Security > Custom Level > Then once in the Security Settings, enable all ActiveX related options. Please see the settings below:



#### **Troubleshooting**

Please refer to the FAQ table below for easy troubleshooting. The table below describes some typical problems and their solutions. Please consult these guides before contacting your DVR16E dealer.

PROBLEM	SOLUTION
No power	- Check power cord connection Confirm that there is power from the outlet Ensure that the 12V 5A is connected to the DVR16E
Motion Detection not working	- Ensure that motion detection is enabled for that channel in the "DETECT" menu.
No live video	<ul> <li>Check the cameras cable and connections.</li> <li>Check the monitors cable and connections.</li> <li>Ensure you are not in playback mode.</li> <li>Ensure that the 48V power supply is connected to the switch and the 12V 5A is connected to the DVR16E</li> <li>Turn the DVR16E off and power on while holding the SHIFT button.</li> </ul>
No video over the network with web browser or mobile	- Make sure that Extra Stream is enabled for each camera.
No recorded video	- Check if the HDD is installed and connected properly.
DVR16E keeps rebooting	- Ensure that the 12V 5A is connected to the DVR16E
HDD detection failed	- Ensure that the <b>12V 5A</b> is connected to the DVR16E
Can't detect your USB flash drive	<ul><li>Use another USB flash drive to test.</li><li>Ensure it is formatted to FAT32.</li><li>Check Appendix B of User manual (on CD).</li></ul>
Can't view the DVR16E images over the network with web browser	- Ensure you have installed the ActiveX - Check Section 8 of User manual (on CD).

This guide is intended as a Quick Set Up and Basic use manual only, please refer to the User Manual on the included CD for all other details.

#### **Limited Warranty**

Cornick Pty Ltd (Seller) warrants its products to be in conformance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for forty eight months from the date of original purchase. Sellers obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any part which is proved not in compliance with Sellers specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than Seller.

For Warranty Service: Return transportation prepaid with a copy of your purchase receipt and contact details to:

RhinoCo Technology, 9 Hannabus Place, McGraths Hill, NSW 2756 Australia.

Seller has no obligation to attend the buyer's location to retrieve the goods or make repairs onsite.

- There are no warranties, expressed or implied, of merchant ability, or fitness for a particular purpose or otherwise, which extend beyond the description on the face hereof. In no case shall seller be liable to anyone for any consequential or incidental damages for breach of this or any other warranty, express or implied, or upon any other basis of liability whatsoever, even the loss or damage is caused by its own negligence or fault.
- Seller does not represent that the products it sells may not be compromised or circumvented; that the products will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the products will in all cases provide adequate warning or protection. Customer understands that a properly installed and maintained alarm system or video surveillance system may only reduce the risk of a burglary, robbery, or fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result.
- Consequently, seller shall have no liability for any personal injury; property damage or other loss based on a claim the
  product failed to give any warning. However, if seller is held liable, whether directly or indirectly, for any loss or damage
  arising under this limited warranty or otherwise, regard less of cause or origin, seller's maximum liability shall not in any
  case exceed the purchase price of the product, which shall be the complete and exclusive remedy against seller.
- This warranty replaces any previous warranties and is the only warranty made by the Seller on this product. No increase or alteration, written or verbal, of the obligations of this Limited Warranty is authorized.

Please refer to the website (www.rhinoco.com.au) for a full list of trading terms.



## PLEASE CUT OUT & RETURN THIS INFORMATION WITHIN 14 DAYS OF PURCHASE TO:



## RhinoCo Technology 9 Hannabus Place McGraths Hill NSW 2756 Australia

## Model: DVR16E(PACK) Professional Surveillance Pack Warranty Card Name Address Suburb State Postcode **Email** Date of Purchase Invoice Number **Daytime Phone** Where did you purchase your DVR16E(PACK)? Store Location This information will only be used by the manufacturer and will not be sold to any third parties. Dear Customer, We appreciate your confidence in our product, and you can be certain that we will do everything possible to ensure that you are happy with your decision and that you have years of satisfaction from your DVR16E(PACK). We take extreme care in the research, design and development of our products to ensure they meet your needs. Additionally, we keep in close contact with our dealers Australia wide, and should any problem occur, we will work closely with your local dealer to see that it is resolved quickly. As a leading designer and manufacturer, we are continually endeavoring to exceed the expectations of our customers. Furthermore, we appreciate your input regarding potential design improvements, issues regarding our service and support, and any other ideas you may have which could help us to serve you better. Please make any comments you have here: