4-Camera H.264 Security System
Installation and Setup Guide

Products: SYRF04, SYRF04LCD

PLEASE READ THIS MANUAL BEFORE USING YOUR SYSTEM, and always follow the instructions for safety and proper use. Save this manual for future reference.
CAUTION
Operate this device only in environments where the temperature or humidity is within the recommended range. Operation at extreme temperatures or in very high or low humidity levels may cause electric shock and shorten the life of the product.

CAUTION
Installation and servicing should be performed by qualified and experienced personnel only. DVR should always remain OFF during any installation process.

CAUTION
Do not use the camera if fumes, smoke or a strange odor is emitted from the unit, or if it seems to function incorrectly. Disconnect the power source immediately, and consult your dealer.

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The recording, transmission, or broadcast of any person's voice without their consent or a court order is strictly prohibited by law.

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SECTION 1: SYSTEM OVERVIEW

SECTION 1
Systems Overview

Congratulations on purchasing your 4-Camera H.264 Security System! Your system includes:

- 4-camera networkable digital video recorder (DVR) with a pre-installed 500GB hard drive. The DVR can be configured and controlled locally, using the operator control panel and mouse or remote control, or across the Internet through the Microsoft® Internet Explorer® (IE) browse.

  The DVR uses state-of-the-art H.264 compression technology to maximize your recording time and optimize your video quality. H.264 compression saves hard drive space and supports faster data transfer. Data stored in the DVR can easily be off-loaded via USB or across your network. (See the User Manual for more information.)

- Up to 4 cameras. Features of these cameras depend on the models selected.

- Apple® iPhone®, iPad®, and iPod Touch®, Google Android™, Symbian™, Windows® Mobile, and Blackberry® smartphones apps that let you monitor your home or business on the go from anywhere

- Supercircuits LCD 17-5 monitor (with SYRF04LCD systems only)

1.1 About this document

This document is a simplified guide to setting up a basic system. For detailed information about your DVR and camera system, refer to the DVR User Manual.
SECTION 2
Getting Started: Unpacking the Equipment

Your system includes:

- 4 channel H.264 networkable DVR w/ 500GB HD and power adapter (SYRF04-KIT)
- Cameras
- 4 – 60’ video/power extension cables
- Power adapter with 5-way splitter
- User guides for the DVR, cameras, smartphone applications (on CD), and monitor (if included)
- USB mouse
- LCD Monitor (LCD17-5, with SYRF04LCD only, not shown)
- Mini-CD with smart phone applications
- This manual

Remove the equipment from its packaging and place it on a flat, clean surface. Inspect each item. If any visible damage is present, contact your supplier or Supercircuits for a replacement. Verify that your order is complete.
What you need

Although each security system installation is different, most require the following items not included with your system components:

- Tools to install the cameras and route power and video cables
- Fasteners to attach the cameras to the mounting surfaces
- A display device and cabling to connect to monitor the DVR. The DVR will connect directly to a VGA video monitor, or to a TV with a BNC to RCA adapter and RCA cable. The display device is usually needed only for system setup. It can be disconnected when the DVR is networked for access across a LAN or Internet.
- Uninterruptible power supply (UPS). This device is used to ensure system stability during voltage surges, sags, and outages. If a UPS is not available, a power strip with strong surge protection is highly recommended.
SECTION 3
Installing Your System

This section includes an installation procedure for the CD33-2 dome camera. If you purchased a system with other camera models, use the documentation included with those cameras for installation setup.

3.1 Camera installation

Your CD33-2 camera is a precision instrument that will provide years of quality service when used properly. Included with each camera is a 60’ video and power cable.

3.1.1 Camera placement

Plan your camera installation carefully. Identify the locations where cameras will provide the best coverage, considering:

- **Field of view** – Cameras must be positioned so they can effectively view the entire area that must be monitored, and in a location that makes tampering with it difficult.
- **Lighting** – Direct sunlight shining on the camera lens or bright reflections from shiny objects in the field of view can diminish video quality and camera performance. Mount the camera in shaded areas, if possible, or where these influences can be minimized.
- **Ease of installation** – Must be able to install the camera at the location, considering mounting hardware requirements, temperature, dust, moisture, etc.
About weatherproof cameras

Weatherproof cameras can be mounted in any open area, such as on a telephone pole or on the side of a building. However, for best results, we recommend you mount your cameras in a sheltered area, such as under the eave or roof of a building. Point the camera in the direction you wish to observe. When routing cable near the camera, allow enough slack to form a U-shaped “drip loop” if it is exposed to moisture or rain water. A drip loop helps to direct water, that accumulates on the cable, away from the camera.

![Drip Loop Diagram](image)

**NOTE**  
Cable connections are not weatherproof.

Video/power cables can be run almost anywhere, and are frequently routed through attics or above drop/acoustic ceilings because of the ease of installation. For added security, we recommend you run your cables in areas with limited access to prevent tampering. Avoid running the cable near high voltage appliances such as fluorescent lighting. Electrical noise and magnetic fields produced by these devices may affect video signal quality.

A 60’ video/power cable is shipped with every camera in your system. 100’ and custom-length cables are also available from Supercircuits.

### 3.1.2 Mounting

1. Separate the base from the rest of the camera assembly by unscrewing the housing bezel.
2. Determine where the camera will be mounted.

3. Using the base as a template, mark the location of the four mounting screw holes.
SECTION 3: INSTALLING YOUR SYSTEM

4. Drill mounting screw holes into the mounting surface.
   a. If the mounting surface is a soft material, such as a drywall, use a 3/16” bit to drill the mounting holes. Use a hammer to tap the wall inserts provided into each hole until they are flush with the surface.

   OR

   b. If the mounting surface is a very soft material, such as ceiling tile, place a wood block behind the tile. Screws longer than 1” may be required. Drill holes for the mounting screws through the surface and into the wood block.

   OR

   c. If mounting the camera on a harder surface, such as wood, drill the mounting screw holes with a 3/32” bit.

5. Determine the cable routing. If the cable is to be routed through a hole in the mounting location within the coverage of the base, perform the following steps. If the cable will be routed through a cable guide in the base, skip to step 9.

   Cable Guide in Base

6. Drill a 3/4” hole through the mounting surface at the center of the base.

7. Use a #2 Phillips screwdriver to mount the base with the provided screws.

8. With the camera in the camera housing, route the drop cable through the 3/4” hole until the camera housing is fitted onto the base. Place the housing bezel over the camera housing and screw it onto the base until the camera and camera housing are held in place. Skip to step 12.

9. Set the camera on the base with the camera cable pressed into one of the cable guides of the base. Allow some slack in the cable within the base to allow for camera positioning later.

10. Use a #2 Phillips screwdriver to mount the base with the provided screws.
Tighten housing bezel

11. Without allowing the camera to hang by the drop cable, place the camera housing with the housing bezel over the camera and fit it onto the base. Screw the housing bezel onto the base until the camera and camera housing are held in place.

12. Attach the BNC video/power cable to the camera cable as required.

CAUTION

Notice that power connectors on the BNC video/power cable are different at each end!
3.2 **Install and setup the monitor (SYRF04LCD systems only)**

The SYRF04LCD system includes the LCD17-5 monitor. If you did not purchase this monitor, setup your system monitor at this time, then continue at subsection 3.3.

1. Find the monitor assembly and base. Use the screw provided to attach the base to the monitor support bracket. The screw may be attached to the underside of the monitor support bracket or in the base.

![Diagram of monitor assembly and base](image)

2. Attach the VGA cable provided with the monitor to the VGA input connector on the lower back side of the monitor.

![Inputs on the lower back side of monitor](image)

3. Attach the other end of the VGA cable to the Main OUT (VGA) connector on the back of the DVR.

4. Attach the power cable to the monitor and plug it into a grounded power outlet.

5. Press the **Power** button to power on the monitor. The **Power** button is located in the control panel on the right side of the monitor.
6. Press the **SOURCE** button on the monitor control panel to open the video source menu. Use the ▲ and ▼ buttons on the control panel to highlight **PC**, and then press the **MENU** button to select that interface. An indication will appear on the screen confirming your selection.

7. Power off the monitor using the Power button on the control panel.

### 3.3 DVR installation

Your DVR is an advanced network video recorder that includes many features not covered in this guide. Please refer to the DVR User Manual for additional information.
3.3.1 Controls and connectors

DVR Front Panel

<table>
<thead>
<tr>
<th>Button</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ / ■</td>
<td>Toggles between single camera, multi-camera display.</td>
</tr>
<tr>
<td>CH1 .. CH4</td>
<td>Used to select the camera on channel 1, 2, 3, or 4.</td>
</tr>
<tr>
<td>Enter</td>
<td>Press to confirm a menu choice.</td>
</tr>
<tr>
<td>Infrared Sensor</td>
<td>Sensor for the remote control.</td>
</tr>
<tr>
<td>MENU</td>
<td>Opens the main menu window</td>
</tr>
<tr>
<td>ESC</td>
<td>Press to exit any active window.</td>
</tr>
<tr>
<td>REC</td>
<td>Use to start and stop manual recording.</td>
</tr>
<tr>
<td>BACKUP</td>
<td>Opens a video search and playback menu.</td>
</tr>
<tr>
<td>▶ / ■■</td>
<td>When a recorded file is selected, press this button to play; then press it again to pause playback.</td>
</tr>
<tr>
<td>PTZ</td>
<td>Used for pan/tilt/zoom control of cameras with this feature.</td>
</tr>
<tr>
<td>▲ ▼ ▶ ▷</td>
<td>Use these buttons to navigate through the menu system. Generally, use the ▶ ▷ buttons to move to selection boxes, and use the ▲ ▼ to select submenu parameters.</td>
</tr>
</tbody>
</table>
**DVR Backpanel**

<table>
<thead>
<tr>
<th>Connector</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB - MOUSE</td>
<td>Use these USB ports to connect a mouse, or a backup device such as a flash drive or DVD recorder.</td>
</tr>
<tr>
<td>AUDIO OUT</td>
<td>Audio output from channel AUDIO IN channels 1, 2, 3, or 4.</td>
</tr>
<tr>
<td>IN1 .. IN4 AUDIO IN</td>
<td>RCA audio input to audio channels 1, 2, 3, and 4.</td>
</tr>
<tr>
<td>CH1 .. CH4 VIDEO IN</td>
<td>BNC video input to video channels 1, 2, 3, and 4.</td>
</tr>
<tr>
<td>MAIN OUT</td>
<td>BNC composite video output to display device (75Ω, 1V p-p).</td>
</tr>
<tr>
<td>MAIN OUT VGA</td>
<td>Standard VGA output to a display device, such as a computer monitor.</td>
</tr>
<tr>
<td>LAN</td>
<td>Standard RJ45 Ethernet 10BaseT, 100BaseT port with auto detect.</td>
</tr>
<tr>
<td>ALARM IN, ALARM OUT, RS422 RS485</td>
<td>Use these connectors to attach external sensor devices, alarm reporting devices, and devices with an RS422 or RS485 control interface, such as PTZ cameras. See the DVR User Manual for more information.</td>
</tr>
<tr>
<td>DC 12V</td>
<td>Connect to 12 VDC power adapter.</td>
</tr>
<tr>
<td>POWER</td>
<td>Power switch to turn the unit on and off.</td>
</tr>
</tbody>
</table>

### 3.3.2 DVR placement

Your monitoring and recording equipment is central to constant surveillance and the reliable capture of video evidence. Supercircuits strongly suggests that it be installed in a secure location with access limited to authorized personnel.

DVRs generate heat and should be placed in a ventilated area. A high temperature environment will reduce the life span and reliability of the equipment. Additionally, the DVR is not weatherproof, so avoid exposure to liquids and excessive dust. Do not place objects along the sides or behind the DVR that will block airflow through the unit.
**Uninterruptible power supplies**

It is strongly suggested that power to the system be routed through an uninterruptible power supply (UPS). These devices will keep your security system running through most power outages, in addition to providing excellent surge and sag protection. The UPS should support your video recorder and all cameras to ensure normal operation during abnormal power conditions.

### 3.4 Connecting the system together

All connections to the DVR are made on the back of the unit.
*NOTE:* Power cabling shown in the previous diagram is recommended for systems with CD33-2 cameras. If you are not installing CD33-2 cameras, power requirements for your cameras may be different. Refer to the documentation provided with your camera for specific recommendations.

1. Connect the system mouse to the USB connector labeled MOUSE.

2. Connect the camera video signal cables (BNC connectors) to the VIDEO IN CH1 to CH4 connectors.

3. Connect a display device to the DVR. If using a VGA monitor for a display, connect it to the VGA MAIN OUT connector. If using the BNC MAIN OUT connector to drive a display such as a TV, attach the appropriate cables between the BNC MAIN OUT and your display device.

4. Connect the 5-way power splitter to the power adapter, then:

   a. Connect the lead marked **DVR POWER** to the **DC 12V** connector on the DVR backpanel. Ensure that the **POWER** switch on the DVR is off.

   b. Connect the other leads of the splitter to the mating connectors on the video/power extension cables routed to the cameras.

5. Connect the power cord to the power adapter and plug it into a standard grounded 120 VAC power source through a UPS or surge protector.

6. Power on your system monitor.

7. Power on the DVR using the **POWER** switch on the backpanel. A startup “Loading” screen will appear on the display. After a few seconds, the screen will change to the camera view screen.

*Note:* The images you see from your cameras may be different from those shown here.
3.5 Adjusting the camera

Adjust your camera to produce the best performance:

- While observing video from your camera, use the documentation provided to aim the camera at the surveillance target.
- Depending on the features of your cameras, other adjustments, such as focus, zoom, aperture, IR level, etc. may also be available. Make these adjustments under various lighting conditions, if necessary, to yield the best video image overall.
SECTION 4
DVR Setup

Setting up your DVR includes setting the clock, setting administrator and user account passwords, and setting up scheduled and automated motion recording.

4.1 Login to the DVR

Initially, two access accounts are provided in your system: Admin and User. With the Admin login, you can make configuration changes to the system, create user accounts and passwords, and control the privileges assigned to each account. With the factory default User account login you cannot make configuration changes or create accounts, but can change your own password. The factory default Admin and User account passwords are:

- Admin: 888888
- User: 666666

To log into the system:

1. Power on the DVR and wait until it advances to the camera view screen. A typical camera view screen is shown below.

2. Right-click the mouse anywhere on the screen except for on the Status bar. An Input Password window will appear.
Click the < or > icons next to the Admin box to display the account you want to log into. To make configuration changes to the system, you must login to the Admin account.

Using the mouse, click the number buttons to enter the account password. For example, to enter the default Admin password, 888888, click the “8” button six times.

Click OK.

4.2 Setting system time

All recorded data is time stamped using the DVR system clock. Therefore, an exact system clock is essential for recording data that may be used as evidence of a crime. To check and set the system clock:

1. Power on the DVR and wait until it completes initialization.

2. When the camera view screen appears, login to the DVR Admin account.

3. Compare the DVR system date and time shown on the Status Bar with an accurate clock.

Note: To see an accurate clock, access a reliable Internet time server, such as tf.nist.gov

4. Right-click the mouse anywhere on the screen except on the Status bar. The Status bar will change to a Tools Bar.
5. Click the **Settings** button on the Tool Bar.

6. In the Settings window System tab, move the mouse to highlight the **TIME FORMAT** option.

7. On the TIME FORMAT line, click the ◀ or ► buttons to display (choose) either a **12-Hours** or **24-Hours** format.

8. Move the mouse to highlight the **TIME SETTING** line and click the date and time field on the right to open the TIME SETTING window.
9. For each field in the TIME SETTING window, click the ▲ or ▼ icons to increment or decrement the value in the field. When the current date and time are shown, click OK to reset the clock and close the window.

10. If you are not making additional configuration changes at this time, click the Save icon in the upper right corner of the screen, then click the Save & Exit button.

4.3 Change Admin and User passwords

Changing the default Admin and User account passwords from their initial (default) value adds security to your system. The factory default account names and their passwords are:

Admin: 888888
User: 666666

To change these passwords:

1. Log into the system as the Admin, then open the Settings menu.

2. In the Settings menu System tab, move the mouse pointer to highlight the Password Setting option.
3. To change the **Admin** password, click option field to the right of the **PASSWORD SETTING** label. The **Input old Password** window will open.

4. On the **Input old Password** window, enter the current **Admin** password by clicking the number buttons. For instance, to enter the default **Admin** password, click the “8” button six times. After entering the password, click **OK** to continue. The **New Password** window will open.

5. In the **New Password** window, enter a new password using the number buttons. Click **OK**, then enter the same number in the **Confirm Password** window.

6. Click **OK** again. When the password change is successful, a **Change Password successful** message will appear. Click **OK** again to return to the **System** tab.
7. To change the **User** default password, click option field to the right of the **PASSWORD SETTING** label as before.

8. In the **Input old Password** window, click the ◀ or ▶ icons next to the Admin box until **User** appears. Notice that the window title will change to **New Password**.

9. Click the number buttons as before to enter a new **User** password, then click **OK**.

10. In the **Confirm Password** window, reenter the password, then click **OK**.

11. When the **Change Password successful** message appears, click **OK** again to return to **System** tab.

**NOTE**  
For procedures to add or delete a user account, or change the permissions assigned to a user account, refer to the DVR User Manual.

12. If you are not making additional configuration changes at this time, click the **Save** icon in the upper right corner of the screen, then click the **Save & Exit** button.

### 4.4 Adjusting the video image

If necessary, you can adjust the brightness, contrast, hue and saturation traits of the image from your camera using the **Video** tab **COLOR SETTING** controls:

1. Login to the DVR using the **Admin** account, then open the **Settings** window.

2. Click the **Video** tab.
3. Highlight the **CAMERA CH** line, then click the << or >> icons to display the channel of the camera whose image you want to adjust.

4. Move the mouse pointer to highlight the **COLOR SETTING** line.

5. Click the >> icon at the right end of the **COLOR SETTING** line to open the video adjustment screen.

6. For each of the four traits, click the << or >> icons to increase or decrease the strength of the trait until the best result is achieved.
In the example above, the brightness and contrast was adjusted to produce a crisper image. This setting will be seen as “5/7/8/8” on the COLOR SETTING line.

7. Right click the mouse to return to the Video tab.

8. If necessary, repeat this procedure for the other cameras in the system.

4.5 Setting up scheduled and automated recording

The default (factory) setting for scheduled and automated recording is to record all camera channels, all of the time. Although this approach ensures that no information is missed, it may consume more hard drive space than is necessary, and make it more difficult to find data for specific events.

Your DVR includes four recording modes:

- **Common record**: Recording is started and stopped in accordance with a preset schedule.
- **Motion record**: Recording is started when motion is detected.
- **Alarm record**: Recording is started when an alarm condition is detected. Refer to the User Manual for detailed information about connecting alarm sensors to your DVR.
- **Motion and alarm record**: Recording is started when either a motion or an alarm condition is detected.

Your cameras are configured individually for recording mode, quality, frame rate, and whether or not to include audio. To setup the recording schedule:
1. Login to the system Admin account, then open the Settings window.

2. Click the Record tab.

3. Move the mouse pointer to highlight the VIDEO CH line. Click the ◀ and ▶ icons to select the channel recording schedule you want to setup, or select ALL channels.

4. Next, highlight the RECORD QUALITY line. Click the ◀ and ▶ icons to select the channel recording quality you want. The options are Best (768 kbps), High (640 kbps), Mid (512 kbps), Low (384 kbps), or User-defined with which you can enter your preferred bitrate.

5. Highlight the RECORD FRAME RATE line. Click the ◀ and ▶ icons to select either Full (maximum fps), 15, 7, 3, 1, or User-defined with which you can enter your preferred frame rate.

6. Highlight the RECORD SOURCE line. Click the ◀ and ▶ icons to select either Video or, if your camera supports audio and you want to record it, Video & Audio. (Note: The cameras included with the standard SYRF04 system do not support audio recording.)

7. Highlight the OSD SETTING line. The OSD (on-screen display) setting defines which information is recorded onto video. Click the ◀ and ▶ icons to select either Camera Name and TimeStamp, Camera Name, TimeStamp, or None.
SECTION 4: DVR SETUP

8. Highlight the RECORD RESOLUTION line. The record resolution allows you to define the pixel size of each video frame. Options include CIF (352 x 288), D1 (720 x 480), Half D1 (720 x 240).

9. Highlight the RECORD SCHEDULE line, then click on the white space to the right to open the Record Schedule screen.

The Record Schedule screen includes an array of 24 (hours) x 7 (days) blocks, one for each hour of the week. The color of each block represents the recording mode configured for the camera during that hour.

10. To change the recording mode applied to a one-hour block, click the record mode option (or Not Record) at the bottom of the window that you want to apply, then click the block (hour) you want to apply it to. The selected mode option shows a black diamond in the color block.

To change the recording mode of several blocks in the array, select the mode you want to apply, then press and hold the left mouse button while you drag the pointer across the blocks in the array where you want to apply that recording mode.
In the example above for camera channel 1 (CH 1):
– Recording of CH 1 does not occur between 3 AM and 7 AM (white).
– Monday through Friday, the DVR records CH 1 continuously from 7 AM to 6 PM (blue).
– The rest of the time, DVR records CH 1 only when motion is detected (green).

11. When the Record Schedule is properly configured, click OK to close the window and return to the Record tab.

12. In the Record tab, click the Advanced Settings button at the bottom of the screen. Advanced Settings opens a SUB CODE parameter option through which you can control the data streaming rate to an IE browser or a mobile phone on networks where bandwidth is limited. Refer to the DVR User Manual for more information on setting the SUB CODE parameter options.
13. After changing settings in the SUB CODE window, close the window by clicking the X in the upper right corner, then click the Common Settings button to close the Advanced Settings menu.

14. Repeat this procedure for each VIDEO CH you want to configure.

### 4.5.1 Setting Motion Detection sensitivity and Mosaic (privacy mask)

When viewing an image from a surveillance camera, some regions in the image are where motion can occur, and other areas where any movement is unimportant. To improve the overall performance of the DVR, video channels are configured so that only the regions in the image where motion is relevant should be monitored to trigger a recording, and all other regions are ignored.

Additionally, a sensitivity parameter is applied to discern the magnitude of the motion detected in the detection regions of the image. The sensitivity parameter can be set to ignore small objects moving through, such as a bird, and trigger recording only on larger objects, such as a person.

The Mosaic, or privacy mask, feature allow you to block portions of the image that you don’t want to see in the recording, such as windows of an apartment building.

1. In the Settings menu, click the Video tab.

2. Move the mouse pointer to highlight the CAMERA CH line, then click the ← and → icons to display the camera channel you want to configure.
3. Move the mouse pointer to highlight the **MOTION DETECTION** line. Click the ◀ and ▶ icons to select either **Highest Sensitivity**, **Normal Sensitivity**, **Low Sensitivity**, or **Disable**. It may require some testing to determine which sensitivity level works best for your application.

4. Click the ▶ icon at the right end of the **MOTION RESOLUTION** line to open a screen where you can monitor or ignore regions for motion detection.
The motion detection screen is partitioned into an 16 x 12 array of squares. Each square area can be either monitored for motion detection or ignored. Those areas that are configured for monitoring are tinted blue, and the areas ignored are clear (not tinted). Initially, the entire image (all squares) are monitored.

To change a square from monitored (tinted blue) to ignored (not tinted), or vice-versa, left click on the square. You can change the monitoring state of several contiguous squares by pressing and holding down the left mouse down while you drag the pointer across the squares.

In the example above, only relevant areas of the image are configured for motion detection monitored.

To return to the Video tab, right click the mouse or press the ESC button on the front of the DVR.

5. To apply a Mosaic (privacy mask) to block portions of the image from appearing in recordings, move the mouse pointer to highlight the Mosaic line, then click the ◀ or ► icons to change the option from OFF to ON.
6. Click the icon at the right end of the Mosaic line to open a screen where you can set the privacy mask.

With the factory default configuration, no areas of the image are masked. To apply a privacy mask, move the mouse pointer to a corner of the area you want to mask, press and hold down the left mouse button while you form a rectangle over the mask area, then release the mouse button. The areas masked are marked by a gray rectangle.

– To delete a mask, right click anywhere within the area of the mask.
In the example above, two masks were applied.

7. To return to the Video tab, right click outside the areas that are masked.

8. In the Video tab screen, click the Advanced Setting button.

In the Advanced Setting screen, you can configure how the DVR responds to motion detection and video loss. You can also create a camera channel name. Refer to the User Manual for additional information about these features.
9. Click the Common Setting button at the bottom of the screen to return to the Video tab.

10. Repeat this procedure for each VIDEO CH you want to configure.

11. Click the Save icon in the upper right corner of the screen, then click the Save & Exit button to retain the new settings.
SECTION 5
Networking Your DVR

Your DVR supports highly flexible networking configurations including an Ethernet connection, such as to a home network with a broadband router and modem, and a PPoE connection for ADSL dial-up. In this section, only general guidelines for the setup of a DVR on a simple Ethernet broadband home network are included. For detailed procedures of Ethernet connections, or for other network configurations, refer to the User Manual. If you encounter problems you cannot resolve, contact the Supercircuits Support team at 1.800.335.9777.

Home networks

A typical home network includes router, one or more computers, and a broadband modem for access to an internet service provider (ISP) and the internet. The DVR attaches to the network like a computer, except that it has preset IP address settings that must be configured for your network.

Setting up the DVR on the home network requires configuring it with IP address settings that are compatible with your network, and connecting an Ethernet cable between the DVR and the router. Once setup, your security system can be monitored and
After the DVR is setup on your home network, usually the router can be configured so that the DVR is accessible from a computer on the Internet or from a smartphone. Although most routers perform similar functions, the specific procedures to configure them vary widely. However, the documentation provided with your router, with the general guidelines included here, should enable you to setup your DVR for web access.

5.1 Configure the DVR for access on your home network

To setup your DVR on the network without conflicting with other devices, configure the network settings of your DVR before physically connecting it to the network. Network conflicts occur when two devices on the network have the same IP address. The screens shown here were taken from a Windows XP system:

1. Determine the IP address, subnet mask, and default gateway of your home computer (PC) and record it in Table 1. To get this information, do the following at the Windows desktop:
   a. Open the Windows Start menu and click Run to open the Run dialog box.
   
   ![Run dialog box](image)

   b. Type cmd in the entry field and then click OK to open the DOS command window.

c. At the command prompt, enter ipconfig. The PC will display Ethernet data associated with your Ethernet adapter local area network (LAN) connection.
Example: Typical use of ipconfig in Windows XP

d. Enter the IP Address, Subnet Mask, and Default Gateway for your PC’s Ethernet adapter into Table 1.

**NOTE** The Ethernet adapter data you see by using ipconfig will probably be different from that shown in the example above. If you are using Windows Vista or Windows 7, the IP address is identified as the “IPv4 Address.”

Table 1. PC/DVR network settings

<table>
<thead>
<tr>
<th></th>
<th>Computer (PC)</th>
<th>DVR</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Address</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subnet Mask</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default Gateway</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. At your PC, find an IP address on your network that is not in use:

   a. Write down the EXACT IP address of your PC up to the third/last period. Using the example shown above in the screen capture of ipconfig, this number would be: 192.168.1.

   b. After the third period, choose any number between 1 and 255 that is different from the one in your PC’s IP address, 168. As a first try, let’s choose 100, which will form the IP address 192.168.1.100.

   c. Next, use the **ping** command in the DOS window to see if that IP address is in use on your network. The format of the ping command is:

   ```
   ping <IP address>
   ```

   For this example here, we entered: **ping 192.168.1.100**

   To test your IP address, enter **ping 192.168.1.100**. Any reply received from the **ping** indicates that a device on the network is already using this IP address and you can connect to it.
d. Examine the screen capture shown above. If the response to the ping command was “Request timed out.” like that shown above, use this IP address for your DVR, enter into Table 1, skip steps 2.e and continue at step 2.f.

If the response to the ping command was “Reply from 192.168.1.100:...” as shown below, a device exists on the network that is using this IP address. If so, continue at step 2.e.

e. Since the response to ping test returned a reply as shown above, try the ping with another number between 1 and 255 until one is found that responds with the “Request timed out.” message. Use this IP address with your DVR and enter it into Table 1.

f. In table 1, copy the PC’s Subnet Mask and Default Gateway entries into the DVR’s Subnet Mask and Default Gateway cells.

3. At your DVR, login using the Admin account, then open the Settings window.

4. Click the Net tab.
5. Examine the settings on the Net tab. Ensure that the NETWORK option is set to Static IP. If not, click the العربية أو the NETWORK line to show Static IP.

6. Examine the four numbers shown on the IP ADDRESS line. If any of those numbers are different from those in the IP address found that we can use with your DVR (see Table 1), click in the number in the line, click the number buttons in the popup window to enter the new number, then click the √ button.

7. On the Net tab, examine the entries on the SUBNET MASK and GATEWAY lines. If necessary, change these values to match the entries you made for your DVR in Table 1.
8. Click the **Save** tab, then click the **SAVE & EXIT** button.

9. Connect an Ethernet cable between the LAN port on the back of your DVR and any open port on your router.

10. At your PC, use the **ping** command with your DVR’s IP address to confirm that you can connect to your DVR from your PC. At the DOS prompt in the Command window, enter:

    ```
    ping <IP address>
    ```

    where `<IP address>` is the new DVR IP address. For example, if your DVR’s IP address is now 192.168.1.100, enter

    ```
    ping 192.168.1.100
    ```

11. Examine the response to the ping command. If the response is “**Reply from ...**” and NOT “**Request timed out.**” as before, your DVR is now configured on the network.
SECTION 5: NETWORKING YOUR DVR

5.1.1 Verify local network connectability with IE

After your DVR is setup on a local network, IE is used to verify connectability across the LAN. It also increases flexibility for monitoring and configuring your security system.

Before you can connect to the DVR with IE, the (default) security settings in IE are modified slightly and an ActiveX control is installed.

1. At your PC, load IE.

2. Open the IE Tools pull-down menu and select Internet Options. Click the Security tab.
3. Click the **Custom Level...** button. In the Settings list, change the following settings from **Disable** to **Prompt:**

- Download unsigned ActiveX controls
- Initialize and script ActiveX controls not marked as safe for scripting

Click **OK**, then click **YES** in the Warning window.

In the **Internet Options** window, click **Apply**, then click **OK** to close the window.
SECTION 5: NETWORKING YOUR DVR

NOTE
If your computer operating system is Windows Vista or Windows 7, User Account Control can interfere with the normal operation of the DVR user interface. To disable UAC, open the Control Panel > User Account > User Account window, clear the Use User Account Control (UAC) to help protect your computer check box, then click OK. A computer restart may be required.

4. In the IE URL field, enter the IP address assigned to your DVR. Using the example shown above, enter:

192.168.1.100

If a message appears to load an ActiveX control, right-click on the message, then click Run Add-on in the popup window. Follow the prompts to Install the program, even if a warning message appears that the publisher cannot be verified.

5. When the Login screen opens in the browser, enter the administrator User Name and Pass Word, then click Login. The default values for the administrator account are Admin and 888888.
6. After login, the DVR web display will appear. To see images from the cameras connected to your DVR, click the **Open All** button in the lower left corner of the screen. **Note:** The following picture shows a DVR with only one camera (on CH 1) connected.
When viewing the DVR network browser interface, if the webpage appears normal but the camera images are scrambled, check your computer’s video adapter settings, or call Supercircuits Support at 1.800.335.9777 for assistance.

For specific instructions for using the DVR network browser interface, refer to the DVR User manual.

### 5.2 Accessing your DVR from the Internet

The remote viewing capabilities of your DVR allow you to access and control it from anywhere in the world via the Internet. Your DVR must be setup on a LAN before this capability can be enabled, and the LAN must have a high-speed connection to the Internet for efficient data transfer to occur. This procedure requires that the network router be configured to enabling port forwarding to your DVR. Only general instructions for setting up this capability are included here.

**NOTE** Supercircuits provides complete technical support for viewing your DVR within your LAN. However our support team cannot assure complete technical assistance for products from other manufacturers, such as routers and modems. Refer to your product documentation, or contact your service provider for support on setting up port forwarding.

1. Configure your router for port forwarding to the DVR using the network information included in Table 1. For instructions, refer to the user documentation for your router and/or the information and service provided at [http://portforward.com](http://portforward.com).
Port forwarded for the DVR:

**CAUTION**

By default, your DVR uses port 5050 for a Command port, 6050 for a Media port, and 7050 for a Mobile port. If any of these ports is assigned to another device on your network, configure your DVR (see Settings > Network) to use a different port. Do not assign the ports used by your DVR for Command, Media or Mobile to any other device on your network. Also, when choosing a port for port forwarding an Internet connection to your DVR, do not use any of these ports, or other ports on your network already in use.

2. Determine if your router/modem has a dynamic IP address (one that can change arbitrarily, often used by internet service providers (ISPs) for cable/DSL modems) or static IP address (unchanging). If you are unsure, contact your ISP for this information. If you use a dynamic IP address for your modem, go to step 4.

3. To find the static IP address assigned to your LAN, go to [http://www.whatismyip.com/](http://www.whatismyip.com/) from a PC on the same network (LAN) as your DVR. The IP address displayed is the IP address you will use to log in remotely. Keep this in your records. Skip to step 6.

**Static IP Address:**

4. If you have a dynamic IP address, it is convenient and recommended to use a dynamic name server service, such as [http://www.dyndns.com/](http://www.dyndns.com/) (a free service), to setup a remote connection with a fixed hostname to your DVR. If you use DynDNS, the following steps are helpful:

   a. On dyndns.com under “Resources”, select **Home DNS Solutions**.

   b. On the **Home Solutions** page, click the link for **Dynamic DNS**.

   c. Under “**Documentation**” select the link **How-To**.

   d. Follow the instructions to set-up an account. Record the DynDNS Hostname, DynDNS Username and DynDNS Password in the table below.

<table>
<thead>
<tr>
<th>DynDNS Hostname:</th>
<th>.dyndns.org</th>
</tr>
</thead>
<tbody>
<tr>
<td>DynDNS Username:</td>
<td></td>
</tr>
<tr>
<td>DynDNS Password:</td>
<td></td>
</tr>
</tbody>
</table>
5. After setting up a DynDNS account, the (dynamic) IP address specified in the account Hostname must be updated whenever it changes. Depending on your system configuration, either of two options can be used to automatically update the IP address set in your DynDNS Hostname.

   a. If you have a PC running continuously on the LAN with the DVR, do the following to download and install software that automatically updates your DynDNS account when the IP address of your router changes:

      i. Go to http://www.dyndns.com/support/clients and click on the Download link.

      ii. Install the “Updater” program. When prompted, make sure you select Install as Windows Service.

      iii. Enter your DynDNS Username and Password, and select your Hostname.

      iv. Click Apply. Your PC should now automatically update your DynDNS Hostname settings with your current IP address.

   b. If you have a DDNS-supported router (see manufacturers information), do the following to configure your router to automatically update your DynDNS with the current IP address.

      i. Login to your router (see manufacturer’s instructions).

      ii. Search for a page, tab, or configuration setting labeled “DDNS”.

      iii. Enter your DynDNS Hostname, Password and Username.

      iv. Save or Apply these settings. Your router should now automatically update your DynDNS with your current IP address.

6. Whether you have a static IP address, or you set up a DynDNS account for a dynamic IP address, the following are different ways to view your DVR from a PC on the Internet:

   a. In the URL field of your Internet browser, enter the current IP address of your modem with router port number (port forwarded for your DVR) assigned to your DVR in the format: http://<IP address:port> For example, if the IP address of your modem is 190.180.170.32 and the port forward number is 85, enter: http://190.180.170.32:85

   b. Access the DVR using your DynDNS account and hostname.
SECTION 5: NETWORKING YOUR DVR

[Image of a computer screen showing a web client for monitoring a DVR with live feeds from four channels, all showing "No Signal".]
SECTION 6
KWeye Smartphone App

KWeye is a free smartphone app for use with your Supercircuits model DMR80U, DMR81U, and DMR82U DVRs. Its features include:

- Compatible with most models of these phones: Apple iPhone, iPad, and iPod Touch, Google Android, Symbian, Windows Mobile, Blackberry
- Unlimited video on cellular and WiFi networks
- Supports multi-channel video encoders and Pan, Tilt, and Zoom (PTZ) controlled cameras
- Support for authentication
- Direct stream connection (video does not pass through a 3rd party server)
- Snapshot capability (while viewing live stream) to save to your local photo gallery
- Support for landscape and portrait views
- Ability to change IP address and port as needed for internal and remote users

This guide includes installation and use of KWeye with the Apple and Google smartphones. For more information, go to:

- iPhone, iPad, and iPod touch: http://itunes.apple.com/us/app/kweye/id412413785
- For other smartphones, contact Supercircuits Support at: 1.800.335.9777

To use this application, your DVR network must be setup to allow access from the Internet.

6.1 Installing KWeye

6.1.1 Installing KWeye in iPhone

KWeye can be acquired from the iTunes App Store > Productivity group. It can be downloaded and installed directly to your iPhone, or downloaded into a computer with iTunes, then installed on your iPhone. Before downloading applications from the App Store you must create a store account.

- To download and install KWeye directly to your iPhone:
  - Connect your iPhone to a high-speed network, such as a WiFi network (to shorten download time).
  - Open the App Store application on your iPhone, then search for kweye.
  - Download and install KWeye as you would any application.
To download **KWeye** to your computer then install it on your iPhone:

- Download and Install the latest version of Apple iTunes if not already installed. You can download iTunes from [www.apple.com/itunes/](http://www.apple.com/itunes/) A computer restart may be required.
- Open iTunes.
- Click the **iTunes Store** item in the list on the left, then login to your iTunes Store account. If you don’t have an iTunes Store account, follow the on-screen instructions to create one.
- In the Search Store field in the upper right corner of the screen, enter **kweye**.

— After **KWeye** is found, click the **Free App** button, then click **Buy** in the popup window to download the application. **KWeye** will appear in your iTunes LIBRARY > Apps list.
After downloading the app, attach your iPhone to your computer, sync the application to your phone.

6.1.2 Installing KWeye in Android

For Android

To install applications using Android Market perform the following steps:

- With your Android phone, go to the Applications menu and open Android Market.
- Search for the application kweye.
- When the application is found, click on the KWeye icon to display details of the app.
- To install KWeye, click Install and follow the on-screen instructions.

6.2 Set up access to a DVR

Usage and functionality of the KWeye app is the same on both iPhone and Android phones. However, the screens vary slightly between the two systems. To use KWeye:

- Tap the KWeye icon to open the app. The KWeye splash screen will appear.
  (NOTE: The following images were captured from an Android smartphone. iPhone screens are functionally identical.)
• Tap the Settings icon. The splash screen will change to the Settings screen.

• In the Device Info fields, enter the appropriate information for your DVR:
  — Address: IP address used to connect to your DVR modem from the Internet, or the URL of the DynDNS server you use.
  — Port: Port number configured in the DVR’s network setup submenu. The default port number is 7050.
  — DeviceName: A name you use to identify your DVR.
  — UserName and Password: Enter the username and password you use to log into your DVR. NOTE: You may have to slide the screen up to display the UserName and Password fields.

• After completing the entries in the Settings menu, tap the Back button to test the settings and connect to your DVR. When connecting to your DVR, the Device Info settings will be logged in the History screen for easy retrieval.

6.3 Using KWeye

• If KWeye is not running, tap the KWeye icon to open the app. The KWeye History screen will appear.

• In the History screen, tap the entry for the DVR you want to connect to open. The Settings screen will open.

• To use the Device Info in the Settings screen to access your DVR, tap the Back button in the upper left corner.

• Tap the Play button to start watching video from the DVR.
To view a particular camera, tap the Select Channel button for the camera channel. If you are connected to an 8- and 16-channel system and the channel button is not shown, tap a Switch Channel Group icon (next group, previous group), to change the Select Channel buttons until the channel number is shown, then tap the button for the channel.

- Rotate the phone 1/4 turn for a landscape view of the channel.

- To restore the app control buttons, orient the phone for a portrait view.

- To exit the application, press the smartphone Home or Back button.
SECTION 7

Cleaning

Clean the camera lens and IR lamp shield with a mild glass cleaning solution and a lint free cloth.

- Remove all foreign particles, such as plastic or rubber materials, attached to the camera housing. These may cause damage to the surface over time.

- Dust can be removed from equipment by wiping it with a soft damp cloth. To remove stains, gently rub the surface with a soft cloth moistened with a mild detergent solution, then rinse and dry it with a soft cloth.

CAUTION

Do not use benzene, thinner or other chemical products on the camera assembly; these may dissolve the paint and promote damage of the surfaces. Before using any chemical product, read the instructions carefully.
APPENDIX A

Off-loaded Video Files

Video files can be off-loaded to a USB flash drive or downloaded using IE. For the best compatibility and performance with Windows operating systems, Supercircuits recommends that you choose MPEG4 file format for all video backups and downloads.

Backing up files to a USB flash drive

When video files are backed up to a USB flash drive in MPEG 4 format, the DVR also copies the MPEG4 CODEC to the drive. Before playing these files on a Windows operating system with an application such as Windows Media Player, the CODEC must be installed. The CODEC is provided in ZIP format.

To install the CODEC:

1. Copy the CODEC from your flash drive to your Windows computer. It is named WMP_Media_Filter.

2. Extract the CODEC to new folder.

3. Open the folder and run the InstallFilter executable.

When playing an MP4 file with Windows Media Player for the first time, you may be prompted to allow that file extension to be used. Click OK to proceed.

Downloading video files

When downloading video files with the IE web browser, the MPEG4 CODEC pack is not included. If the CODEC is not already installed on your computer, contact the Supercircuits Support team at 1.800.335.9777 to obtain it.