

## Universal CCTV Security Camera System Installation Guide



PLEASE READ THIS MANUAL BEFORE USING YOUR SYSTEM, and always follow the instructions for safety and proper use. Save this manual for future reference.

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## Installing Your System

### 1. Camera installation



#### 1.1. Camera placement

**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.

#### 1.2 Mounting

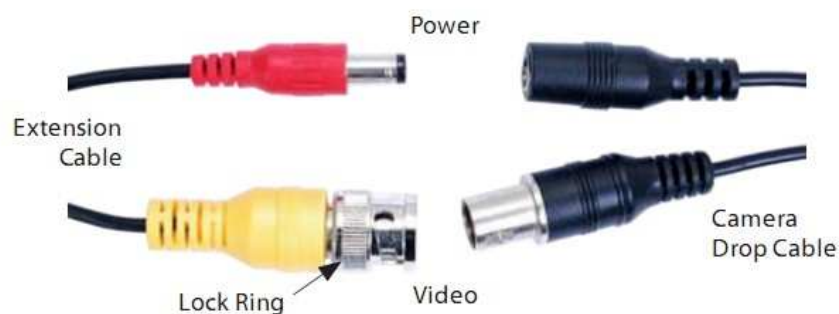
1. Using the camera bracket mounting assembly plate as a template, mark the location of the holes for the mounting screws on the mounting surface.

2. Drill holes into the mounting surface for the mounting screws, wall inserts, or other attachment hardware as needed.

3. If you are routing the video/power drop cable through the mounting surface, drill a hole

near the mounting plate for the drop cable.

4. Attach the mounting bracket to the mounting surface using appropriate fasteners.
5. Attach the camera with the mounting bracket.
6. Point the camera at your surveillance target, then tighten the lock nuts to hold it in place. (Note: The direction the camera is pointing may need correction when video from the camera is observed.)
7. Route the camera drop cable through the hole drilled for it in the mounting surface, if used. If the camera is installed where moisture may accumulate on it, leave a "drip loop" in the cable so that beads of water on the cable slide away from the camera and the drop cable connectors.
8. Attach a video/power extension cable to the camera drop cable (see diagram below). Note: When connecting the video cables, fully rotate the lock ring to hold them together.



9. Route the other end of the video/power extension cable to the DVR backpanel.
10. Repeat this procedure for all of the cameras you are installing.

## 2. Camera Cables and Connectors

When looking for a security solution for your home or business, it is important to spend time researching which type of camera is best suited for your security needs. Not all camera cables and connectors are the same.

There are three types of cables and connectors that are common in CCTV systems: BNC, DIN, and RCA. This guide will help you learn about the advantages and disadvantages of BNC connectors and cables.

### 2.1 BNC Connector

BNC is an abbreviation for Bayonet-Neil-Concelman. It is an industry standard for

transmitting a video signal over a coaxial cable. It features a unique locking mechanism to ensure the cable is firmly secured to the DVR/monitor and will not come loose.



### Advantages and Disadvantages of BNC

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• Industry standard for CCTV cameras</li> <li>• BNC cables are good for a distance of 300 ft. (depending on cable quality)</li> <li>• BNC cables lock in place, ensuring a consistent image and no unwanted disconnection</li> </ul>	<ul style="list-style-type: none"> <li>• Requires a separate power source</li> <li>• Only transmits video</li> <li>• Does not support audio</li> </ul>

### 2.2 BNC Extension Cable

Simply use the 60 ft BNC / Power Cable or the 120 ft BNC / Power Extension Cable.

#### BNC Extension Cable Connections



#### VIDEO INPUT CONNECTIONS:

Connect the BNC cable to the video input of the monitor, and connect the power adaptor to an outlet.



#### CAMERA CONNECTIONS:

Connect the BNC and Power cables to the Camera

**NOTE:** It is possible to run a single coax cable with BNC termination over longer distances.

However, a power supply will be required near the camera.

### 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.

#### 3.1 Controls and connectors

DVR Front Panel



Button	Usage
o / 田	Toggles between single camera, multi-camera display.
CH1 .. CH4	Used to select the camera on channel 1, 2, 3, or 4.
Enter	Press to confirm a menu choice.
Infrared Sensor	Sensor for the remote control.
MENU	Opens the main menu window
ESC	Press to exit any active window.
REC	Use to start and stop manual recording.
BACKUP	Opens a video search and playback menu.
u/II	When a recorded file is selected, press this button to play. then press it again to pause playback.
PTZ	Used for pan/tilt/zoom control of cameras with this feature.
t q p u	Use these buttons to navigate through the menu system. Generally, use the t u buttons to move to selection boxes, and use the q p to select submenu parameters.

## DVR Backpanel



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

### 3.2 DVR placement

Your monitoring and recording equipment is central to constant surveillance and the reliable capture of video evidence. SecurityIng 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.

#### 4. An example of connecting the system together(one of my CCTV systems)

All connections to the DVR are made on the back of the unit.



*Interconnection Diagram*

Any specific questions or problems, please contact us directly by email.