Please contact an DEFENDER® customer support representative regarding any additional information on product features, specifications or if you need any help with set-up, we are available 24/7!

Please contact us via one of the methods below:

Email:
support@Defender-usa.com

Online live web chat:
Visit www.Defender-usa.com

Telephone:
1.866.946.7828

Fax:
1.888.771.1701

For more product information visit www.Defender-usa.com
Product Warranty Information

Please visit our website at www.Defender-usa.com for information about your product’s warranty.

We take quality very seriously. This is why all of our products come with a one year warranty from the original purchase date against defects in workmanship and materials. If you have warranty or support issues please contact us using any of the following methods:

**Phone:** 1.866.946.7828  
**Fax:** 1.888.771.1701  
**Email:** support@Defender-usa.com  
**Website:** www.Defender-usa.com

Defender USA  
60 Industrial Parkway #Z64  
Cheektowaga NY  
USA 14227

Defender CANADA  
4080 Montrose Road  
Niagara Falls, ON  
Canada L2H 1J9

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**Warranty Terms**

1. Defender products are guaranteed for a period of one year from the date of purchase against defects in workmanship and materials. This warranty is limited to the repair, replacement or refund of the purchase price at Defender’s option.

2. This warranty becomes void if the product shows evidence of having been misused, mishandled or tampered with contrary to the applicable instruction manual.

3. Routine cleaning, normal cosmetic and mechanical wear and tear are not covered under the terms of this warranty.

4. The warranty expressly provided for herein is the sole warranty provided in connection with the product itself and no other warranty, expressed or implied is provided. Defender assumes no responsibilities for any other claims not specifically mentioned in this warranty.

5. This warranty does not cover shipping costs, insurance, or any other incidental charges.

6. You MUST call Defender before sending any product back for repair. You will be sent a Return Authorization form with return instructions. When returning the product for warranty service, please pack it carefully in the original box with all supplied accessories, and enclose your original receipt or copy, and a brief explanation of the problem (include RA #).

7. This warranty is valid only in Canada and the continental U.S.

8. This warranty cannot be re-issued.

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**CAUTION**

RISK OF ELECTRIC SHOCK, DO NOT OPEN MONITOR

To reduce the risk of electric shock, do not remove the cover (back). No user serviceable parts inside. Refer servicing to qualified service personnel.
WHAT IS INCLUDED

1 Indoor/Outdoor Night Vision Color Camera
2 Window Warning Stickers
4 PIN DIN to RCA (male)
60ft Video/Power Wire
• BNC to RCA Connector
• 1 Power Adapter for Camera
• 1 Year Warranty
• Instruction Manual
• Lifetime Live Customer Support
• Mounting Hardware
• Allen Key

INTRODUCTION

Congratulations on your purchase of the SP500-C enhanced night vision, CCD camera! This camera has 420 lines of resolution, which work to provide you with a full color and incredibly clear picture. This allows for a farther viewing distance and better facial recognition. The automatic night vision kicks in whenever it gets dark around the camera. When this happens, the 24 built-in LEDs on the camera allow you to see in the dark up to 50ft away, even in pitch black settings. You can also monitor your home or business inside or outside as these cameras are built with aluminum housing that can sustain many weather conditions. So feel secure in knowing you picked a top of the line camera that will not miss a thing when monitoring your property.
THINGS TO CONSIDER BEFORE INSTALLATION

• The camera should be installed between 8 and 13ft above the area to be monitored.
• Ensure that the camera is installed NO MORE then 60ft away from the DVR/monitor unless you have purchased additional wiring or wire extensions.
• Before securing in the mount and camera, ensure there are no obstructions in the camera’s view.
• Place camera in the most strategic place where it can provide detailed, recorded video of every visitor.
• Having the camera in the open for people to see can help deter criminals.
• To cover large, dark areas such as backyards, garages, and driveways, place camera in strategic location, such as on the roof or deck, this way more area is covered by the camera.
• Although, the camera's 24 LEDs can view up to 50ft in the dark, it must have objects for the LEDs to reflect off of in order to see them. So ensure that the camera is pointed at actual objects within range and not at open areas.
• Ensure that the sunshade is positioned to avoid glare, also be sure to position the camera away from direct sunlight or indoor lighting.
• For best results, the light in front of the camera should be about the same brightness as the light around the area or object being monitored.
• We recommend that the mount is secured using the included screws and hardware for all installations.

FEATURES

SP500-C Camera

1. **Sun Shade**: Adjustable sun shade helps prevent glare from bright lights.
2. **Infrared (IR) LEDs**: The 24 LEDs allow the camera to see in the dark up to 50ft away.
3. **CDS Sensor**: Automatically turns on the infrared LEDs when it gets dark.
4. **Camera Mount**: Can be adjusted to many viewing angles.
5. **Camera Housing**: Made of anodized aluminum to prevent rust.
6. **4 PIN DIN Connection**: Connects to 60ft cable.

INSTALLATION
While this camera is weather resistant, it is not waterproof. Please do not install it in areas that receive direct rain or under eaves trough draining spots. Do not cut the DC power cable of this camera to fit with another power source. Do not cut the video connection wire to fit with a different video connection type. Any unauthorized modifications will void your warranty.

**MOUNTING**

1. Select a location to place your camera then, using the provided drilling template (see back of manual), drill the proper holes and place the provided wall anchors into each hole.

2. Mount the camera in the selected location by screwing the provided screws into the camera mount and each of the wall anchors.

3. Adjust camera mount to view the desired area then, using the provided Allen Key, tighten the screws to lock the camera into place.

*Ensure that the camera is properly and tightly secured into the wall.*

**STEP BY STEP**

1. Plug the 4 PIN DIN female connection on the camera into the 4 PIN DIN male connection on the 60ft video/power wire.

2. Match up the two arrows that are on top of both the connecting cables.
3. Plug the camera’s power supply cord into the red power jack located on the 60ft video/power wire.

4. Plug the camera’s power adapter into an AC outlet.

5. Connect the 60ft video/power wire’s RCA plug (yellow) to the VIDEO IN port of your TV/monitor/VCR/DVR.

6. If your VIDEO IN port is a BNC connection (common with DVR units), you will need to attach the BNC to RCA adapter (included) before connecting the camera.

### TROUBLESHOOTING

Before contacting technical support, please follow the troubleshooting tips below for solutions to common issues

| No picture/signal:                                                                 | • Make sure your TV/monitor is on the correct video input channel. This is NOT channel 3 Common terms for this channel is INPUT, AV CHANNEL, LINE 1, LINE 2 and AUX. Please use your TV or VCR manual to correctly identify this channel
|                                                                             | • If your camera is connected to a VCR/DVR, make sure that the VCR/DVR is properly connected to your TV/monitor
|                                                                             | • Check all connections to make sure they are secure and properly connected
|                                                                             | • Check your power supply to ensure that the camera is powered up
| Picture is too bright:                                                          | • Make sure your camera is not aimed at direct sunlight
|                                                                             | • Adjust the sunshade by sliding it forwards to block out excess light
|                                                                             | • Make sure nothing is obstructing the CDS sensor on the camera. If the CDS sensor is blocked, night vision mode will be active and may produce extra light in your camera’s picture
|                                                                             | • Move your camera to another location
| Picture is too dark:                                                            | • If using at night, make sure your camera’s subject is no more than 50ft away from area being monitored (may vary based on amount of light available)
|                                                                             | • If using during the day, your camera may not be getting enough light. Adjust the sunshade by sliding it backwards to let more light in
|                                                                             | • Check the brightness and contrast settings on your TV/monitor
|                                                                             | • If your camera is connected to a VCR/DVR, check the brightness and contrast settings on the VCR/DVR
|                                                                             | • Move your camera to another location
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera Type</td>
<td>Water Resistant Color IR CCD Camera</td>
</tr>
<tr>
<td>Image Sensor</td>
<td>1/4” Sony Color CCD</td>
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<tr>
<td>Resolution</td>
<td>420 TV Lines</td>
</tr>
<tr>
<td>Number of IR LEDs and Range</td>
<td>24, up to 50ft</td>
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<tr>
<td>Outdoor Use</td>
<td>Yes</td>
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<tr>
<td>IP Rating</td>
<td>IP65</td>
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<tr>
<td>Focal Length</td>
<td>6.0mm</td>
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<tr>
<td>Focus Type</td>
<td>Fixed</td>
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<tr>
<td>Optimal Focal Distance</td>
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<tr>
<td>Night Vision</td>
<td>Yes</td>
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<tr>
<td>IR LED Control</td>
<td>Automatic (CDS Sensor)</td>
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<tr>
<td>Min. Illumination</td>
<td>0 lux</td>
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<tr>
<td>IR Wavelength</td>
<td>850nm</td>
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<td>Video Output</td>
<td>4 PIN DIN to RCA</td>
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<td>TV System</td>
<td>NTSC</td>
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<td>Microphone</td>
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<tr>
<td>Motion Detection</td>
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<tr>
<td>Viewing Angle</td>
<td>60 Degrees</td>
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<tr>
<td>Electronic Shutter</td>
<td>1/60 ~ 1/100000 sec</td>
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<td>AGC</td>
<td>Automatic</td>
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<tr>
<td>ELC</td>
<td>Automatic</td>
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<tr>
<td>Gamma Correction</td>
<td>&gt;0.45</td>
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<td>White Balance</td>
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<tr>
<td>Sun Shield</td>
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<td>Housing Material</td>
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<td>Housing Color</td>
<td>Black</td>
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<tr>
<td>Signal/Noise Ratio</td>
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<td>Camera Bracket</td>
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<tr>
<td>Lens Mount type</td>
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<tr>
<td>Operating Temperature</td>
<td>-14°F ~ 122°F</td>
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<tr>
<td>Operating Humidity</td>
<td>98%</td>
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<tr>
<td>Camera Power Input</td>
<td>DC 12V 500mA</td>
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<td>Power Adapter Input</td>
<td>120V 60Hz</td>
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<td>LED Power Indicator</td>
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<tr>
<td>Dimensions</td>
<td>2.75”(L) x 5”(W) x 7.5”(H)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.0 lbs</td>
</tr>
</tbody>
</table>

### TROUBLESHOOTING

**Night Vision is not working:**
- The night vision turns on automatically when light levels drop. Try the camera in a pitch black setting. The area that it is in may have too much light and may not activate the sensor.
- Cup your hands around the front of the camera and look at the LEDs. They should be glowing red, if they are not, check the power supply.
- LEDs need to reflect off of an object within range for the camera to display an image.
To wall mount the camera, drill three holes using a 3/16” drill bit and the template below. Insert supplied wall anchors into holes and secure camera to wall with supplied screws.
Disclaimer
Defender does not endorse the use of any Defender products for illegal activities. Defender is not responsible or liable in any way shape or form for any damage, vandalism, theft or any other action that may occur while a Defender product is in use by the consumer.