BELL✛HOWELL

BHNV**10**

About this Manual
Congratulations on purchasing the Bell+Howell BHNV10 Digital Night Vision Monocular!
The contents of this manual are subject to change without notice. Note that the example screens and product illustrations shown in this User's Guide may differ somewhat from the screens and configuration of the actual monocular.

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FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

CAUTION:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1)   This device may not cause harmful interference and
(2)   This device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Warning
This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated in

accordance with provided instructions and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

FCC: SAR standard Value: 1.6 W/Kg, Maximal Measure: 0.4 W/kg

CE Mark Warning
This is a Class B product, in a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Safety and Handling Precautions

Monocular Information
- Do not disassemble or attempt to service the monocular yourself.
- Do not expose the monocular to moisture, or extreme temperatures.
- Allow the monocular to warm up when moving from cold to warm temperatures.
- Do not touch and put pressure on the monocular lens.
- Do not expose the lens to direct sunlight for extended periods.
- Do not use abrasive chemicals, cleaning solvents or strong detergents to clean the product. Wipe the product with a slightly damp soft cloth.
- Do not use the flash, IR LED or LED Light near a person's eyes to prevent possible eye injury.
- To prevent you from falling over or resulting in traffic accident, please do not use the monocular while you are walking, driving or riding a vehicle.
- Please handle the monocular strap with care, and never place the strap around the neck of an infant or child. Wrapping the strap around a neck may cause suffocation.
- Do not subject the LCD screen to impact.
- To prevent the risk of fire or electric shock, do not expose this appliance to rain or moisture.
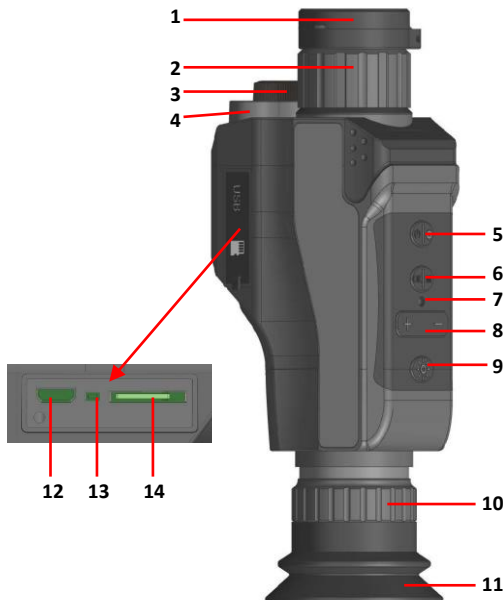
Battery Information
- Turn off the monocular before installing or removing the battery.
- Use only the provided batteries or type of battery and charger that came with your monocular. Using other types of battery or charger may damage the device and invalidate the warranty.
- Inserting the battery upside down can cause damage to the product and possibly an explosion.
- When the monocular is used for an extended period of time, it is normal for the monocular body to feel warm.
- Download all pictures and remove the battery from the monocular if you are going to store the monocular for a long period of time.

- The type of battery and the battery power level may cause the lens to be stuck up. Ensure you use the correct battery type and use a fully charged battery.
- Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
- Please keep the batteries out of the reach of children to prevent from swallowing batteries, which might cause poisoning.
- Once the battery's color changes or its shape is twisted, please stop using it.

USB adapter Information
- Do not expose the adapter to high temperatures or moisture places. Otherwise, it may cause fire or electric shock.
- Do not attempt to repair, disassemble, change or transform the adapter.
- Avoid sudden changes in temperature, which may cause condensation on the adapter's internal surfaces. Please do not use it immediately in this situation.
- Do not touch the plug with wet hands. Otherwise, it may cause electric shock.
- Do not use the travel voltage converter or AC/DC power inverter. Otherwise, it may cause damage, overheating, malfunction or fire to the monocular.

1.1 Monocular Interface

1. Lens Cap	8. Zoom In / Out – Up / Down
2. Focus Ring	9. Night Vision
3. Battery Compartment	10. Eyepiece
4. IR LED Light	11. Eye-Cup
5. Power	Mode	12. USB Port
6. Ok	Shutter	Record	Menu	13. Reset
7. Status LED	14. Memory Card Slot

1.2 Button Function Description

Function	Description
**Power	Mode**	Press once to power on and press and hold for 3 seconds to power off. Press to cycle between Video, Photo and Playback modes. **In Video Playback:** Press to stop a playing video.
**Ok	Shutter	Record	Menu**	Press and hold to access the Menu. OK button in menus. Tap to confirm a setting. **In Photo:** Press to capture a photo. **In Video:** Tap to start recording, tap again to stop recording. **In Playback:** Tap to start playing a recorded video. Press and hold to access delete menu.
Menu	Tap to access and exit all menus and submenus.
**Zoom	Up	Down**	**In Video and Photo:** Press and hold the right side to zoom-in. Press and hold the left side to zoom-out. Tap to change the screen brightness. **In Menu:** Press to go to the previous or next setting option. **In Playback:** Press to go to the previous or next video or image.
**Photo	OK**	**In Photo:** Press hard to capture a photo. **In Video:** Tap to pause a recording, tap again to resume recording. **In Playback:** While playing a recorded video, tap to pause and tap again to resume. OK button in menus. Tap to confirm a setting.
Night Vision	**In Video and Photo:** Press to enter starlight mode, press again to activate the IR LEDs.
Sun-shield	Used to protect the lens when using the monocular in daylight. Open the sun-shield when used at night or in dark settings.

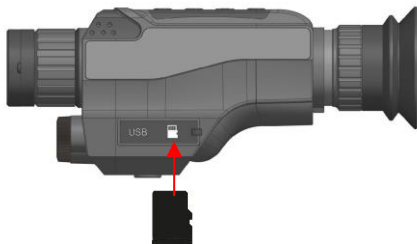|	
IR LED Light	LED light to aid with vision and recording in darkness.
Tripod Mount	Mount port for attaching to a tripod nut located on the bottom of the
Focus Ring	Rotate left or right to focus the image on the screen.
Reset	Button for power cycling your monocular if it freezes or becomes unresponsive.

2. First Use

2.1 Inserting the Memory Card

Insert the included MicroSD memory card to record and store your videos and photos. When the battery is low, media stored on the memory card will not be erased. Please insert the MicroSD memory card by following the steps below:

1. Open the rubber jack door to access the memory card slot.
2. Insert the memory card. Ensure that the metal contacts are inserted first. Push the memory card down until you hear an audible click.
   The memory card can only be inserted in one way. Do not force the card in if it will not go in smoothly.
3. Close the rubber jack door.
4. To remove the memory card, simply push in and the card will eject out.

NOTE:
- Please format the memory card before using the monocular (Caution, this will erase all data on the card).
- Do not remove or insert the memory card when recording. It may damage the card or cause data loss.
- Memory card rating must be Class 10 or above.

2.2 Installing the Battery

Insert the lithium-ion battery into the battery compartment with the negative side first.

1. Open the battery door by rotating the battery door counter clockwise until it comes off the monocular.

1. Insert the battery. Ensure that the negative side of the battery is inserted first.
2. Close the battery door by rotating it clockwise until it is tight.
   Note: Do not overtighten the battery door, this may cause the battery door to get stuck and make it difficult to open again.

2.3 Charging the Battery
Connect your monocular to the included AC adaptor with the USB cable provided for charging. Open the rubber jack door on the side of the monocular to access the charging port. Insert the small end of the USB plug into the monocular's port, and the larger end into the included AC adaptor. The LED indicator light will light up red while charging and will light up green when charging is complete.

2.4 Powering the Monocular On/Off
Press and hold the POWER/MODE button for three seconds to power the monocular on. To power the monocular off, press and hold the POWER/MODE button for three seconds. If the monocular's battery is low, a "Low Power" message will display on the screen and it will automatically shut down within a few seconds to prevent memory corruption or loss.

2.5 Switching Modes
Press the POWER/MODE button to cycle between Photo, Video and Playback modes.

2.6 Connecting to a Computer

Your monocular can connect to a computer to transfer photo and video files for viewing and editing. To connect the monocular to your computer, open the rubber jack door on the side of the monocular to access the USB port. Insert the small end of the USB plug into the monocular's port, and the larger end into the USB port on your computer. Once connected and powered on, the monocular will automatically enter mass storage mode and screen will show an image of a USB stick.

2.7 Focusing

When viewing objects or scenes at varying distances, the image may be out of focus and appear blurry. To focus the monocular, hold the monocular to your eye and while viewing the subject or scene, slowly rotate the focus ring left or right until the image is in focus.

2.8 Lens Cap

The monocular's night starlight image sensor is designed to be used in low-to-no light environments. While using the monocular in sunlight or bright environments, the lens cap should be in the closed position. If the lens cap is open, the captured images and videos will be overexposed.

2.9 Exposure

The monocular's frame brightness can be adjusted to your liking. The recommended exposure value setting is A, for auto exposure. The auto exposure setting will automatically adjust the exposure based on the external environment. To decrease the exposure value manually, press the ZOOM-OUT button. The available exposure levels range from 1-9 with 1 being the highest and 9 being the lowest. If you decreased the exposure manually, press the ZOOM-IN button to increase the exposure and to enter auto exposure.

2.10 Video Mode

Press the POWER/MODE button to switch to Video Mode. The meaning of each icon within Video Mode is explained in the table below:

1. Video Mode	6. Zoom Level
2. Memory Card Inserted	7. Battery Level
3. Starlight Mode	8. Current Time
4. Night Vision Mode	9. Current Date
5. Recording Time Remaining	10. Exposure Level

2.11 Photo Mode

Press the POWER/MODE button to switch to Photo Mode. The meaning of each icon within Photo Mode is explained in the table below:

1. Photo Mode	6. Zoom Level
2. Memory Card Inserted	7. Battery Level
3. Starlight Mode	8. Current Time
4. Night Vision Mode	9. Current Date
5. Photos Remaining	10. Exposure Level

2.12 Using the Zoom Function

This monocular has a digital zoom function. To operate the zoom function, press the left side of the ZOOM button to zoom in closer to the subject, and press the right side of the ZOOM button to zoom away from the subject.

2.13 Using the IR Night Vision Mode

This monocular has built-in infrared (IR) LEDs for night vision recording - giving you the ability to capture photos and videos in a dark environment.

In Photo or Video mode, press the NIGHT VISION button once to enable Starlight mode. In Starlight mode the monocular can detect infrared light below 1200nm, but does not emit any infrared light. Press the NIGHT VISION button again to activate the IR LED light. When the IR LED light is enabled, the IR LED light indicator on the top of the screen will be displayed. To disable the IR light, press the NIGHT VISION button again. You will notice that the IR light indicator on the screen is no longer showing.

> **Note:**
> **The photos and videos taken while the IR LED is enabled will be recorded in black and white.**
>
> **The IR LED can also be enabled or disabled during a recording.**

3. Using the Monocular

3.1 Photo Shooting
Power the monocular on and it will be ready to capture photos right away. A camera icon will appear in the top left corner of the screen. Press the POWER/MODE button to switch to a different mode.

1. Line up your shot by looking at the LCD screen to see what is in the shot.
2. Hold the monocular steady and press the PHOTO button to capture a photo.
3. The number of photos that can be captured at a particular resolution will be displayed in the top right corner of the screen.
4. The number of remaining photos is determined by the selected photo resolution. The higher the photo resolution, the lower the number of photos you are able to be save to the memory card. Before capturing any photos, you can select a preferred photo resolution.

3.2 Video Recording
A camcorder icon will appear in the top left corner of the screen when you are in Video mode. You may press the POWER/MODE button to switch to another mode.

1. Line up your shot by looking at the LCD screen to see what is in view.
2. Hold the monocular steady and press the RECORD button to begin recording.
3. When recording begins, a rolling timer will display in red in the top right corner of the screen. This indicates the recorded video time elapsed.
4. Press the RECORD button to stop recording.
5. The recorded video files will automatically save onto the inserted memory card.

3.3 Settings

Your monocular has a number of settings that can be changed to your preferences. The monocular settings can be found below.

3.3.1 Photo Size (Resolution)

Your monocular has a number of preset resolutions.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Photo Size'* using the ZOOM button and press the OK button to enter the *'Photo Size'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to confirm your selected setting *(48MP, 30MP, 25MP, 20MP, 10MP, 8MP, 5MP, 3MP)*. A higher resolution will produce a higher quality and larger image file.
4. Press and hold the MENU button to exit the submenu.

3.3.2 Self-Timer

This function determines the time delay before a photograph is captured. This setting can be used by photographers to take photographs of themselves.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Self Timer'* using the ZOOM button and press the OK button to enter the *'Self Timer'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to confirm your selected setting *(Off, 2 Seconds, 5 Seconds, 10 Seconds)*.
4. Press and hold the MENU button to exit the submenu.

3.3.3 Photo Burst

This function allows to you capture 3 consecutive photos with one click of the PHOTO button.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Photo Burst'* using the ZOOM button and press the OK button to enter the *'Photo Burst'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to confirm your selected setting *(Off, 3 Photos)*.
4. Press and hold the MENU button to exit the submenu.

3.3.4 Video Size (Resolution)

Your monocular has a number of preset resolutions.

1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Video Size'* using the ZOOM button and press the OK button to enter the *'Video Size'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to confirm your selected setting *(2.5K UHD, 1080p FHD, 1080p, 720p).*
4. Press and hold the MENU button to exit the submenu.

3.3.5 Loop Recording
This function allows you to set a maximum duration for each video clip recorded.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Loop Recording'* using the ZOOM button and press the OK button to enter the *'Loop Recording'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to confirm your selected setting *(Off, 1 Minute, 2 Minutes, 3 Minutes, 5 Minutes, 10 Minutes).*
4. Press and hold the MENU button to exit the submenu.
Once you select an option, your monocular will record video clips in this interval only. Once this duration is reached, the monocular will seamlessly end recording and begin recording a new video file.

3.3.6 Video Frame Rate
This function allows you to set the frame rate of the recorded videos. Videos recorded in the Slow frame rate option, will playback in slow motion. Videos recorded in the Fast frame rate option, will playback in high speed.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Video Frame Rate'* using the ZOOM button and press the OK button to enter the *'Video Frame Rate'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to confirm your selected setting *(Normal, Slow, Fast).*
4. Press and hold the MENU button to exit the submenu.

3.3.7 Time Stamp
This setting allows you to imprint a date & time onto your recorded video files. Once a video file is recorded with the imprint, the imprint cannot be removed.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Time Stamp'* using the ZOOM button and press the OK button to enter the *'Time Stamp'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to

confirm your selected setting *(Off, On)*.
4. Press and hold the MENU button to exit the submenu.

3.3.8 Screen Brightness
This function allows you to set the brightness of the LCD screen.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Screen Brightness'* using the ZOOM button and press the OK
   button to enter the *'Screen Brightness'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to
   confirm your selected setting *(1, 2, 3, 4, 5, 6, 7, 8)*. 1 is the least bright and
   8 is the brightest.
4. Press and hold the MENU button to exit the submenu.

3.3.9 Screen Saver
This function sets the duration of time in which the monocular will wait with
no user input before automatically turning off the LCD screen. Note: even
while the screen is off, the monocular will still be powered on.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Screen Saver'* using the ZOOM button and press the OK button to
   enter the *'Screen Saver'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to
   confirm your selected setting *(Off, 1 Minute, 2 Minutes, 3 Minutes)*.
4. Press and hold the MENU button to exit the submenu.

3.3.10 Auto Power Off
This function sets the duration of time in which the monocular will wait with no user
input before automatically powering off.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Auto Power Off'* using the ZOOM button and press the OK
   button to enter the *'Auto Power Off'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to
   confirm your selected setting *(Off, 1 Minute, 3 Minutes, 5 Minutes)*.
4. Press and hold the MENU button to exit the submenu.

3.3.11 Language
This function allows you to set the monocular's interface language.
1. In Photo or Video Modes press and hold the MENU button
2. Select *'Language'* using the ZOOM button and press the OK button to
   enter the *'Language'* submenu.

3. Press the ZOOM button to navigate the menu and press the OK button to confirm your selected language.
4. Press and hold the MENU button to exit the submenu.

3.3.12 Format Card

The format setting erases all photos, videos and data stored on your memory card.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Format Card'* using the ZOOM button and press the OK button to enter the *'Format Card'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to confirm your selected setting *(Cancel, Format)*.
4. Press and hold the MENU button to exit the submenu.
   NOTE: This will delete all of your media and cannot be undone.

3.3.13 Date/Time Set

This function allows you to set the current Date and Time on your recorded videos and captured photos.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Date/Time Set'* using the ZOOM button and press the OK button to enter the *'Date/Time Set'* submenu.
3. Press the ZOOM button to change the highlighted value.
4. Press the OK button to switch to the next value.
5. Press the OK button after setting the last value to save the entered date and time.
6. Press and hold the MENU button to exit the submenu.

3.3.14 Restore Default

Factory default settings can be restored in this menu. This function will not delete the media stored on the memory card, and will only restore all of the menu's setting back to factory default settings.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Restore Default'* using the ZOOM button and press the OK button to enter the *'Restore Default'* submenu.
3. Press the ZOOM button to navigate the menu and press the OK button to confirm your selected setting *(Cancel, OK)*.
4. Press and hold the MENU button to exit the submenu.

3.3.15 Version

This setting displays the current firmware version of your monocular.
1. In Photo or Video Modes press and hold the MENU button.
2. Select *'Version'* using the ZOOM button and press the OK button to view the monocular's current firmware.
3. Press the OK button to exit the Version menu.

3.4 Playback Mode
Videos and photos captured on your monocular can be easily played back.
Press the MODE button to enter Playback mode, a play icon will show in the
top left corner of the screen.

Follow the steps below to navigate the Video Playback Mode:

1. Press the ZOOM button to cycle through the videos and photos stored on
   the memory card.
2. Press the OK button to start playing a recorded video and press the
   MODE button to stop the video.
3. Press and hold the ZOOM IN button to zoom in on a captured photo,
   press and hold the ZOOM OUT button to zoom out of the photo.
4. While zoomed in, press the ZOOM OUT button to move the viewing box
   to the right, press the ZOOM IN button to move the viewing box to the left,
   press the OK button to move the viewing box up and press the NIGHT
   VISION button to move the viewing box down.
5. Press the MODE button to exit the zoomed in mode.
6. Press and hold the OK button to access the Delete menu, then press the
   ZOOM button to select your desired setting (OK, Cancel) and press the
   OK button to confirm your selected option.
   *NOTE: Deleted media are permanently deleted and cannot be
   recovered.*

4.1 Technical Specifications

Model Number	Bell+Howell BHNV10
Lens	Fixed Focus • F/1.4 Telephoto
Zoom	4X Magnification • 8X Digital Zoom
Image Sensor	10MP CMOS Sensor
Shutter	Electronic
Pixels (photo)	JPEG: 48MP • 30MP • 25MP • 20MP • 10MP • 8MP • 5MP • 3MP
Pixels (video)	AVI: 2.5K QHD • 1080p FHD • 1080p • 720p
LCD Monitor	1.54" IPS LCD Electronic Viewfinder
Assistive Light	850nm Infrared LED
Infrared LED Power	3 Watts
Infrared LED Range	7 ~ 650 ft.
Power Saving Mode	OFF • 1 Minute • 3 Minutes • 5 Minutes
Front Lens Coating	BK7 ED Multi-Coated Anti-Reflective
Field of View	10.4º / 544 ft @1000yds.
Exit Pupil	40mm
Observation Distance	7 ~ 1000 ft.
Ocular Range	0.5 Adjustable
Recording Media	MicroSD • MicroSDHC; Maximum: 32GB
I/O Ports	5-pin Mini USB 2.0
Power	3.7v 16340 Lithium-Ion, 700mAH, 2.59wh
Dimensions	7.1 x 1.97 x 3.1 in. • 10.1 oz.

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If you're having difficulties with your monocular, or would like further assistance, please call our toll-free technical support hotline at 800-441-1100. Please be sure to have your monocular handy when calling.