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4G LTE CELLULAR

HyperFire 4K Cellular Surveillance User Manual

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Getting Started

Contents of this package:

- HyperFire 4K™ Cellular Surveillance Camera
- Adjustable Webbing Strap for mounting camera

Quick Start

1. If you already have an existing RECONYX Connect™ account with HyperFire2™ cameras, you should add your new HyperFire 4K™ cameras to the same account.
   If you do not have an existing account, then install the RECONYX Connect™ App from your App store, and create a new account.

2. Install 12 AA batteries in the camera.
   NOTE: NiMH rechargeable batteries or Energizer® AA Ultimate Lithium™ are the only battery types recommended in RECONYX® Cameras.
   Alkaline batteries are not an approved power source and any damage caused by their use will not be covered under warranty.

3. Install a Secure Digital® (SD, SDHC, SDXC, SDUC)
   a. Camera SD card capacity is up to 1TB.
   b. Minimum recommended speed is Class 10, 120MB/s

4. Power up your camera and go through the camera setup wizard.
   It will walk you through the entire setup, activation, and pairing to the RECONYX® CONNECT™ App.

***NOTE*: For more detailed programming options refer to the "Setup & Programming" section.**
If you have any additional questions, you can contact our Technical Support Department by email at support@reconyx.com or by calling 1-608-781-6064.

HyperFire HS4K™ Specifications

	Security Mode	License Mode
Operation Mode	General Surveillance	License Plate Capture
Illumination Range at night	No-glow Covert Infrared up to 150 feet	No-glow Covert Infrared up to 40 feet for License Plates
Images	4K or 1080p HD color images by day; monochrome by night	1080p HD color images by day; monochrome by night
Video with Audio	4K or 1080p 30 fps	n/a
Trigger Speed	0.25 second	
Image Burst Rate	Up to 1 frame per second	Up to 4 frames per second
Loop Recording	Available settings option: Continuous recording. Older pictures/videos are overwritten by new ones.	
SD Card Capacity	Up to 1TB	
Time-Lapse Surveillance	Included	
Time-Lapse and Motion Sensor Scheduling	Clock based (Fixed) and Solar schedules are available. Schedules can also be assigned to different days of the week. (i.e. different weekday schedule from weekend schedule).	
External Power Connection	Included *(Connector Dimensions:* *4.75mm OD, 1.7mm ID, 9.5mm Barrel length)*	
Warranty	5 years	

RECONYX® Cellular Plan

RECONYX® is your one-stop shop for your camera and cell plan.

There is no need to contact a cell carrier for activation or billing and no need to guess which plan option is best for you. Everything is handled directly through the RECONYX® Connect™ App. From there you can manage your cameras, view your media and monitor your bill all from the same place!

NOTE: For the most current cellular plan pricing and options go to www.reconyx.com or check for options in the RECONYX® Connect App.

RECONYX® Cellular Plans include Cloud Storage for media, Remote Access to your camera for Live Stream and to change settings, as well as the ability to Hibernate your camera.

Cloud Storage

Images and videos are stored in your secure cloud account and accessed with the RECONYX® Connect™ App.

Remote Access

Manage your camera remotely from the RECONYX® App:

- View and manage images and videos.
- Check camera status
- Change camera settings
- Request Full Resolution images and videos
- Initiate Live Stream video

Hibernation

You do not have to pay for cellular access when your camera is not in use. With the RECONYX® plan, you can hibernate your camera 1 time in a 12-month cycle, for up to 6 months with no cancellation or re-activation fees.

Your saved media is still accessible in the RECONYX® Connect™ App.

NOTE: *When you wish to reactivate your camera, you will need to have your camera in hand and follow the onscreen instructions.*

App Install and Setup

Initial Setup

Before you power your camera on for the first time, it is helpful to have the RECONYX® Connect™ App installed on your mobile device. In the RECONYX® Connect™ App, touch "Add Camera", and follow the on-screen instructions for adding a camera.

If this is the first time you've used your camera, it will take you through a setup wizard to help you with the initial setup. It will start by asking you to enter the date, time, location etc. Proceed through the setup wizard until setup is complete. At the end of the setup wizard, you will be able to "Pair" the camera with your App.

Install the RECONYX® Connect™ App from Google Play for Android or the Apple App Store for iOS.

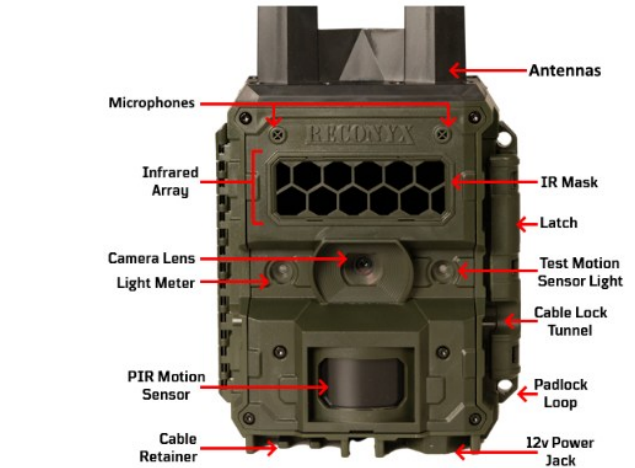


Once the App is installed you will be prompted to:

1. Setup your account
2. Add your camera(s) to your account
3. Add your billing information
4. Set up optional image or data cost caps

Once you have gone through these steps your camera is ready to be deployed and start sending you images and videos.

Controls & Parts Diagram





Powering your Camera

Accessing Batteries, Memory Card & Camera Controls



To install the batteries and memory card, open the latch on the right side of the camera by grasping behind the latch and flipping it toward the front. The camera will open like a book, allowing access to the batteries, memory card and settings.

TIP: *Each time you open your camera:*

- *Make sure the main gasket is seated properly and is clear of debris.*
- *Be sure that the windows on the front of your camera are clean.*
- *Be sure the latch is fully seated to ensure a weather-tight seal.*

Battery Specifications and Installation

The RECONYX® HyperFire 4K™ Cellular camera uses 12 AA-cell batteries. We highly recommend using either Energizer® Ultimate Lithium™ batteries or high-quality NiMH Rechargeable batteries in your camera.

NiMH will operate at temperatures up to 120°F and down to 0°F;
Lithium batteries up to 140°F and down to -40°F.
NOTE: *Alkaline batteries are not recommended. They do not provide as much power as Lithium or NiMH batteries and are adversely affected by both hot and cold weather.*

Alkaline batteries are not approved for use in RECONYX® Cameras. Any damage caused by leaking alkaline batteries will void the manufacturer's warranty.



NOTE: Be sure to load batteries in the proper orientation (alternating positive/negative, six in each battery bay).

Warning! Do not mix battery types! Damage to the camera can result and your warranty will be voided if you mix battery types.

Battery Performance

Because camera settings, motion activity, individual battery performance and temperature all vary, there is no way to precisely predict a camera's run time, the total number of images or video that can be taken or the temperature at which the camera will operate on any given set of batteries. Therefore, the following table shows *approximate values* and should be used as a guide in determining what type of batteries will best suit your needs.

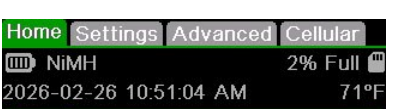
***NOTE*:** The values in the chart below were based on tests using 12 batteries; taking 50% daytime photos and 50% nighttime photos at 70ºF. Use of video will greatly affect these estimates.

Battery Type	**Operating Temperature**	**Number of Images** *(taken and transmitted)*
AA Energizer® Ultimate Lithium™ (1.5V)	-40º F (-40ºC) and above	3,000 to 5,000
AA Rechargeable Nickel-Metal Hydride (1.2V, 2600MaH)	0º F (-18ºC) and above	2,000 to 4,000

**** High temperatures can reduce run time with NiMH batteries by 50% or more.***

TIP: *You can purchase 1.5V Lithium batteries as well as RECONYX® certified NiMH rechargeable batteries and chargers at www.reconyx.com.*

Your camera will display the status based upon battery type. Be sure that the display shows the same type of battery that you are using. You can change the battery type in the main menu or in the RECONYX® Connect™ App.



Using External Power

Input power supply should be able to deliver 2 amps of current at 12 volts.

Connecting anything higher than 15 volts could damage your camera and will void the warranty.

The external power connector is located on the bottom of your camera. This connector is watertight. You will need to have clearance on the bottom of your camera to plug in the power cable (RECONYX® mounting systems and security enclosures are perfect for this).

We highly recommend having a fresh set of Energizer Ultimate Lithium batteries installed in the camera even when running with external power. By having both internal and external power sources available, the camera will decide which power source to use based on which has the greater voltage; thereby avoiding a camera shutdown due to an external power failure.



Cables can be purchased from: www.reconyx.com

External Power Plug Dimensions:
4.75mm OD, 1.7mm ID, 9.5mm Barrel length.



Using the RECONYX® SC10 Solar Charger

The RECONYX® **SC10 Solar Charger** will power your RECONYX® Camera utilizing the **External Power Connection**.

The 10-Watt Solar Panel utilizes a built-in Charge Controller to charge an internal 12 Volt, 9 Amp Hour, Sealed Lead Acid Battery (included), providing enough energy to power your RECONYX® camera indefinitely in most situations. In extremely high use applications such as monitoring highways or other high traffic areas, multiple units can be connected together to increase capacity.



Memory Cards

Secure Digital® (SD, SDHC, SDXC, SDUX) Card Specifications

A Secure Digital (SD, SDHC, SDXC, SDUC) card is required to store the photos and videos your camera captures. They can be transferred to your computer using standard image viewing software.

The maximum SD Card size is 1 TB. However, if you are only taking pictures 64GB is recommended. If you are taking 4K Ultra HD videos, then a high speed (Class 10, 120MB/s) 128GB or 256GB is recommended.

Insertion and Removal of the memory card

Make sure the orientation is correct and that the card is aligned properly. Push gently on the memory card until it clicks into place.



Warning! Inserting the memory card upside down or backwards could damage the camera or the memory card. **Damage resulting from inserting the card incorrectly is not covered under warranty.**

To remove memory cards:

1) Press <OK> to disarm the camera (the number of pictures and videos taken since last armed will be displayed on the screen).
2) Switch the power OFF.
3) Press and release the card to partially eject the memory card.
4) The card can then be removed by grasping it with your fingers.

***NOTE*:** Always disarm the camera (by pressing OK) and switch the power off before removing or inserting the memory card.

Troubleshooting your memory card

If you have a memory card that does not seem to work or you have used the card in another device, you may need to re-format your memory card. This can be done with any computer running a Windows® Operating System.

TIP: *We recommend that you purchase two memory cards per camera so that you can swap cards in the field.*

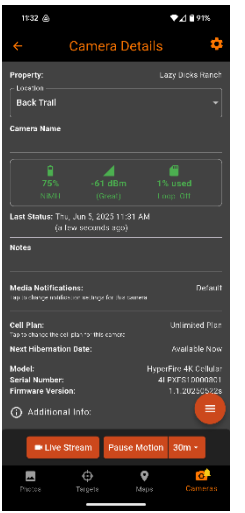
RECONYX® Connect™ App Options

Now that you have set up your account and paired your camera, it's time to set up the camera the way you would like to use it. You have many options for programming your camera's behavior with the RECONYX® Connect™ App.

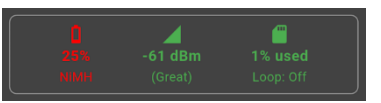
Camera Details

Selecting "Cameras" in the App will give you additional information regarding the status of your camera. Including:

- Battery Life
- Cellular Signal
- SD Card Percentage Used
- Last Status, Date and Time
- Model
- Serial Number
- Firmware Version



If there is a potential problem with the camera, you may notice a red or yellow icon on the "Cameras" screen.
There are different icons to alert you to Battery strength, Cellular Signal, SD Card Used, or other issues.



Signal Strength Explained

Once a connection to the network is established the RECONYX® Connect™ App will display the cameras signal strength.

Great	= 4 Bars
Good	= 3 Bars
Marginal	= 2 Bars - Camera should send media, may take longer
Weak	= 1 Bar - Camera will attempt to send
No Service	= No Bars - Camera will not attempt to send

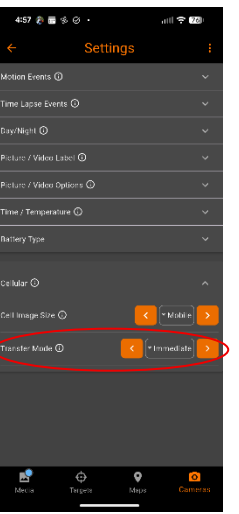
Sending Media

When the camera is triggered, it will take the number of photos specified in the camera settings. The camera will then send the photos according to the "Transfer Mode" setting (Immediate or Batch).

Mobile Optimized media will be transmitted to the RECONYX® Connect™ App. If you would like the HD/full resolution media you can request them within the App.

- Mobile
- Original (1080, 4K)

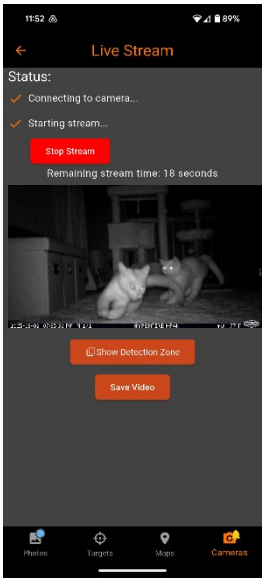
***NOTE*:**
Full resolution photos are always saved to the SD card.



Transfer Mode:

- Immediate
  - Keeps modem connected to network at all times
- Batch
  - Modem powers on and sends photos at specified intervals
  - Non-urgent data transfer
- Status Only
  - Modem powers on once per day to send camera status.
  - Camera takes and saves pics to SD card, but does not send them.

RECONYX® Connect™ App Live Stream



Live Stream is a real-time video and audio feed from your camera.

You can also use it to setup or adjust your camera's placement to be sure it is aimed correctly by using the "Show Detection Zone" feature to see approximately where motion will trigger the camera.

***NOTE*:** If you are using Live Stream to aim the camera, be sure to turn the volume down on your phone or mobile device to prevent audio feedback.

The camera will select the bitrate and resolution based on actual network conditions of both camera and the mobile device you are streaming to.

***NOTE*:** To use the Live-Stream feature the Cellular Transfer Mode must be set to "Immediate".

***NOTE*:** These videos will only be saved to your Media for viewing later if you click the "Save Video" button.

With the SD card inserted in the camera, turn the camera on using the **On/Off** switch. If this is the first time you've used your camera, it will go through initial programming for the Date, Time Format, Time, and whether to adjust for Daylight Savings.

Use the up and down buttons to scroll through the settings and the right and left buttons to change the selections on each setting. Once complete click "Next".

When going through the initial setup, you will be given the option of entering your location Latitude and Longitude. You can skip this step during initial setup and enter it later if you don't know the exact location where you will be deploying your camera. Once complete click "Next"

You will then be asked to select your Battery Type and Temp format. Once complete click "Done".

Default Settings

NOTE: Throughout this manual, default camera settings are shown in **red letters.**

Your RECONYX® HyperFire 4K™ Cellular Surveillance camera comes pre-programmed with the following factory default settings.

- Number of Pictures: General Security: 3, License: 5
- Time Between Pictures: General: 1 second, License: Burst
- Take Videos: Off
- Pause After Motion: Off

If you wish to change your camera's settings, you can do so easily in the field at any time. Changes are easily made using the control buttons and the TFT display. Once you make selections, they are retained by the camera – even when the camera is off, and the batteries are removed – so that you don't need to make selections again unless you want to make any changes.

HyperFire 4K™ Programming Menu

Your camera display has four “tabs” of options for programming your camera:

TAB 1: Home

TAB 2: Settings

TAB 3: Advanced

TAB 4: Cellular



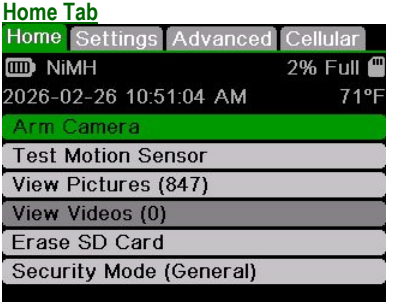
The programming tabs are set up so that the most used items are on the first tab. Other camera settings that are not as frequently accessed are on the Settings or Advanced tabs.

NOTE: As with the date and time, you can move through and select any of the menu options by pressing the directional buttons to scroll and the **OK** button when the menu or option you want to select is displayed.

You can change your camera settings any time you like, either prior to using the camera or in the field. Likewise, you can switch memory cards as needed and check the remaining space on your memory card as well as your remaining battery power.

NOTE: The camera will remember the settings even when shut off, you do not need to reconfigure the camera unless you want to change its behavior.

Home Tab



Arm Camera – When you select this option, your camera arms in ten seconds. You can cancel the arm sequence by pressing the “OK” button.

Test Motion Sensor – When you select this option, your camera flashes an indicator light so that you can test its aim by walking in front of it. This mode will help you identify where the camera's active motion detection zones are located. The tilt of the camera is critical, as slight changes are magnified at greater distances from the camera.

TIP: *If left in "Test Motion Sensor" mode, the camera will automatically arm itself after 2 minutes. This allows you to set the camera up, check its aim, and then just walk away.*



View Pictures – When you select this option, the display will show a slide show function. The **LEFT** and **RIGHT** directional buttons will allow you to scroll through the images on the memory card. The **UP** directional button will engage a pan/zoom feature while the **DOWN** directional button will allow you to delete the image being viewed at that time. Pressing the **OK** button will allow you to exit from the slide show and return you to the Home page.



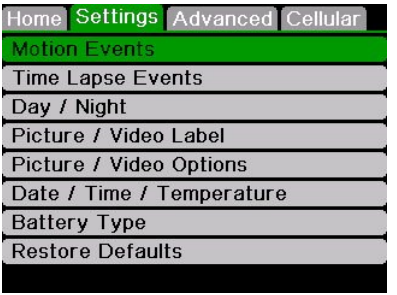
View Videos – When you select this option, the display will show a slide show function to view thumbnails of the videos on the memory card. The **LEFT** and **RIGHT** directional buttons will allow you to scroll through the thumbnails. The **UP** directional button will play the video while the **DOWN** directional button will allow you to delete the video being viewed. Pressing the **OK** button will allow you to exit from the video slide show and return you to the Home page.

Erase SD Card – When you select this option, your camera wipes the entire memory card clean, removing all media and other information from the card.

Security Mode – Use this option, to select whether you want the camera in "**License Plate**" mode or "**General**" Surveillance mode.

***NOTE*:** License Plate mode will capture vehicles out to a maximum of 40 feet, traveling at speeds up to 40mph/64kph.

Settings Tab



NOTE: *Default settings are shown in **RED CAPITAL** letters.*

Motion Events – All settings related to how your camera behaves when motion is detected are grouped under this menu item.

1) **Take Pictures** - **On**, off (1,2,**3**,4,5,6,7,8,9,10) **LIC**: (1,2,3,4,**5**)
2) **Time Between Pics** - **1s**,2s,3s,4s,5s,6s,7s,8s,9s10s **LIC**: (**Burst**,.5s,1s,2s)
3) **Take Videos** - on, **Off** (**Video Length** - 5s,**10s**,15s,30s,1m) **LIC**: n/a
4) **Pause After Motion** - **Off**,5s,10s,15s,30s,1m,2m,3m,5m
5) **Motion Sensitivity** - low,medium-low,medium,medium-high,**High**,very high
6) **Schedule** - **24 Hour,** Add Solar, Add Fixed
   Up to 5 start/stop periods can be defined. These can be assigned to different days of the week if desired (**S M T W T F S**).

Time Lapse Events – All settings related to how your camera behaves related to time-based events are grouped under this menu item.

1) **Take Pictures** - on, **Off**
2) **Take Videos** - on, **Off** (5s,**10s**,15s,30s,1m) **LIC**: n/a
3) **Interval Between Events** – 5s,15s,30s,1m,**5m**,15m,30m,1h
4) **Schedule** - **24 Hour,** Add Solar, Add Fixed
   Up to 5 start/stop periods can be defined. These can be assigned to different days of the week if desired (**S M T W T F S**).

If you want to schedule your camera's operations, there are two ways to define start and stop times for your camera. You can add Solar schedules and/or Fixed schedules.

Solar Adaptive Scheduling™



With Solar Adaptive Scheduling™ you can program your camera to start and stop taking timelapse photos at times relative to sunrise and sunset. If you are monitoring subjects whose behavior is tied more to the sun's rising and setting than it is the clock, this method of scheduling the camera makes a lot of sense. And the best part about it is that as the sunrise and sunset times change, your schedule adapts with the changing length of day.

When you add a Solar timelapse schedule, you must specify start and stop times in (number of minutes) (before or after) (sunrise or sunset). For example, you can specify that the camera will turn on 30 minutes before sunrise and turn off 90 minutes after sunrise. Or you can schedule your camera to run from an hour before sunrise, to an hour after sunset, etc.

When you add a Fixed schedule, you simply specify the start and stop times of each period you want the camera to be active.

You can define up to 5 windows of operation (schedules) to be used simultaneously. This can be a combination of fixed and solar schedules. These schedules can each be assigned to different days of the week. By default, they are on every day of the week (**S M T W T F S**).

Note: *Solar Adaptive Schedules are closely tied to, and rely on, accurate Location information being entered into your camera.*

If you are a USA user and you do not set a specific latitude and longitude for your camera, the Solar Adaptive Schedules will use the center of your specified state or territory to determine approximate sunrise and sunset times. If you set a precise latitude and longitude for your camera, then your sunrise and sunset times will be accurate to within a couple of minutes, and they will adapt on a daily basis as the sunrise and sunset times change.

If you are an international user, you must enter your latitude and longitude of where you plan on placing the camera. It is also recommended to validate the sunrise/sunset times on the day you setup your camera. This allows the camera to sync up with your local time when it determines sunrise and sunset.

If you are above 60 degrees North or below 60 degrees South, Solar Adaptive Schedules are not available, as length of day/night prohibits their effective use.

Day/Night – Select options relating to the camera's functionality with regard to taking photos/videos during daytime and nighttime periods.

1) **Take Pictures** – Day Only, Night Only, **Day and Night**
2) **Take Videos** - Day Only, Night Only, **Day and Night**

Picture / Video Label - Add a label (up to 50 characters) that will be included in the data band of all photos and videos taken by your camera. (***NOTE:*** *May be truncated if it will not fit in the photo.*) You can also view, change or clear an existing label.

Picture / Video Options

1) **Picture Resolution** – **4K**, 1080 **LIC**: n/a
2) **Video Resolution** – 4K, **1080 LIC**: n/a
3) **Mute Audio Recording** – **Off**,On **LIC**: n/a
4) **Reconyx Logo** – **On**,Off
5) **Loop Recording** – **Off**,On
6) **Flash Power** – **High**, Medium, Low, Off
7) **Night Mode** – **Optimized,** Fast Shutter **LIC**: n/a
   This setting limits how slow the shutter is allowed to go. If you want to reduce motion blur, you can select 'Fast Shutter'.

Date / Time / Temperature – Set the Date, Time, Time Format, Temperature Units, and adjust for Daylight Savings.

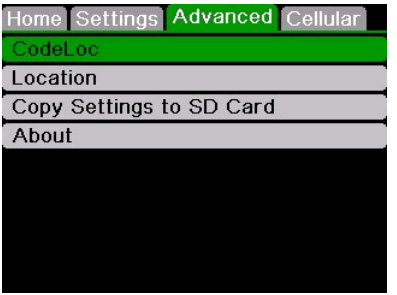
***NOTE*:** Daylight Savings will default to "ON" if "Location: USA".
If "Location: Intl" then Daylight Savings will default to: "OFF".

Battery Type – NiMH, **Lithium**, External, SC10

Restore Defaults – (**NO**, Yes). If you choose Yes, your settings will be reset to defaults (shown above in **RED CAPITAL** letters).

***NOTE*:** Defaults will not reset your date, time, battery type or location information.

Advanced Tab



CodeLoc - Use CodeLoc™ to add a four-digit security code to your camera to prevent unauthorized use of your camera in the event of tampering or theft. You can also change or remove an existing code.
TIP: *Write your four-digit CodeLoc™ code on the last page of this manual.*

Location – **USA** or Other.

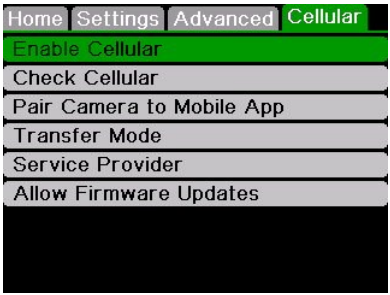
Users in the USA will be prompted for State/Territory, Time Zone (if your state crosses time zones), and whether you want the camera to Auto Adjust for Daylight Savings time. USA users will also be able to refine their location information to a specific Latitude/Longitude. This makes for more accurate Solar Adaptive Scheduling and allows the user the option of Geo-tagging their images with the specific Latitude and Longitude of the camera. By default, Geo-tagging is turned off.

International users will be prompted for Latitude/Longitude, they will be asked whether they want to Geo-tag images, and they will be asked to validate Sunrise time for the current date. This information is required to enable Solar Adaptive Scheduling to function properly.

Copy Settings to SD Card – To transfer settings to multiple HS4K cameras.

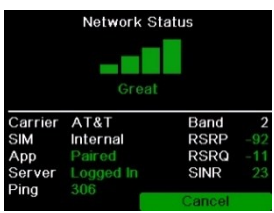
About – Displays the serial number and firmware versions of the camera.

Cellular Tab



Enable Cellular – Turn cellular modem (**On,** off).

Check Cellular – Camera will connect to the network and report signal strength.



NOTE: When you deploy your cellular camera, you will want to check the signal strength to be sure the camera has a strong enough signal to send media.

Pair Camera to Mobile App – Pair the camera to your RECONYX Connect account.

Transfer Mode – Will change when the camera connects to the network to send media, or only report status.
(**Immediate**, Batch, Status Only)

Service Provider

1) **SIM** – **RECONYX USA**, RECONYX International, User Supplied
2) **Preferred Carrier** – **Verizon**, AT&T *
3) **Auto Select SIM** – **On**, Off *
4) **Cloud Server** – **USA**

* *Selections are available for "RECONYX USA" only.*

Allow Firmware Updates – "Over the Air Updates" (**On**, off).

Mounting Your Camera

Your RECONYX® HyperFire 4K™ Cellular camera can be mounted using many different types of accessories by using the ¼ x 20 threaded inserts on the back or bottom of the camera housing.





The camera can also be mounted to a tree by using the adjustable webbing strap. You can secure the camera to a tree and lock it shut at the same time with an optional Python™ cable lock by Masterlock®. Simply thread the cable through the "Lock Tunnel" on the camera and then cinch in place around the tree or post.



We recommend that you mount your camera at the approximate height of your target subject and then aim the camera straight out for the best chance of sensing motion in the active detection zone.

NOTE: It is highly recommended that you use a theft deterrent device such as a security box and/or a Python Lock™ by Masterlock® to help secure your camera against possible theft when it is in the field.

NOTE: You can purchase HyperFire 4K™ compatible mounts, theft deterrent cable locks and security enclosures at www.reconyx.com .

Aiming Your Camera

PIR Motion Detector

The Passive Infrared Motion Detector on your HyperFire 4K™ camera is aligned with the camera lens to give you the best chance of capturing subjects that come into the field of view of the camera, while not triggering on subjects outside the view of the camera.

The motion detector can detect movement up to 100 feet (30 m) away. However, the detection range is dependent on the size and temperature of the subject (relative to ambient temp) as well as the speed at which the subject is moving.

The HyperFire 4K™ Motion Detector consists of two horizontal detection zones (shown in red). Camera aim is critical to maximize detection range.



For the camera to trigger two things need to happen:

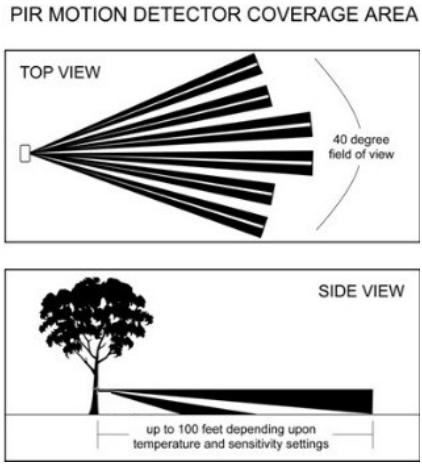
1) An object with a temperature different from the background temperature must be present within the field of view of the motion detector (shown in red) (i.e. something warmer or colder than the ambient temperature).

2) That object (with a different temperature) must move horizontally in front of the camera approximately 1/8 of the way across the field of view.

Using the "Test Motion Sensor" Mode

Learning to use the Test Motion Sensor mode is critical to being as successful as possible with your RECONYX® camera. The Test Motion Sensor mode allows you to precisely determine your camera's active motion detection zone. This ensures that your camera is aimed at exactly where you want to capture activity.

1) Secure the camera to a tree or other object, aiming the camera toward where you want it to capture pictures.
2) Put camera in "Test Motion Sensor" mode and close the camera.
3) Walk in front of the camera where you expect to capture pictures. Every time the red Test Motion Sensor light blinks it indicates that a motion event has taken place. If the Test Motion Sensor light does not blink where you expect it to, adjust the aim or location of the camera.
4) If possible, set up the camera so that no large trees or objects are in the main field of view of the camera, as they can adversely affect motion detection as well as nighttime flash range.



NOTE: All RECONYX® HyperFire 4K™ cameras will self-arm from the "Test Motion Sensor" mode after two-minutes.

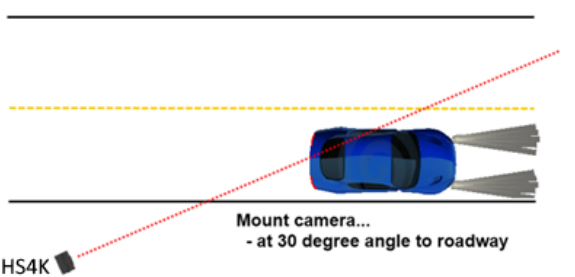
TIP: *Be sure to use the "Test Motion Sensor" mode to be sure the camera is aimed correctly.*

Aiming your Camera for License Plate Capture

The HS4K is designed to capture license plates effectively during both daytime and nighttime when run in "License" mode.

For best results…

- Position the camera approximately 5 to 10 feet from the edge of the road looking at the back end of cars passing in the close lane.
- Cars should be travelling no more than 40 miles per hour if you want to reliably capture plates.
- The camera should be mounted about 24-30 inches high and have it aimed approximately 30 degrees off of parallel. The diagram below shows how you should set up your camera.



NOTE: Maximum night time illumination range is 40 feet.

NOTE: The camera may also be mounted higher up on a pole (~10 feet) since most people do not often look up and therefore are less likely to notice the camera if it's mounted above eye level. However, wake-up time and the number of photos per vehicle may be reduced when mounted in this manner.

Plate Visibility at Various Distances

When setting up your HL4K, be aware that the further the camera is positioned from the subject, the smaller the plate will appear within the picture.

License Plate Capture Tips:

Use the "Test Motion Sensor" mode to be sure the camera is aimed correctly. After setting your camera up, it is best to drive by yourself at various speeds to see how your camera will react to a moving vehicle. You may find that you need to adjust your aim slightly after testing.



We also offer a modified Cable Box for use in camouflaging your camera in urban/suburban settings when setting up to capture license plates.

The default mode for License Plate Capture is 5 still images in Burst mode.

The illumination is set to High output as default for the License Plate mode. Under most situations, this is a perfect setting. If, however, you have very close plates and you are getting "blow-out" on the plates, you can turn the illumination down to Low output..

Image Data Information

Your RECONYX® HyperFire 4K™ camera stores Image Data along with every picture it takes. Some of this information is displayed in Image Data Band below the image.



- The **Date** and **Time** are displayed on the left
- The letter in the data band indicates:
  - "**M"** for motion
  - "**T"** for a "time-lapse" event
  - **"S"** for camera status
  - **"L"** for "Live-View" image request
- "**1/3**" indicates the first in a sequence of three pictures for that event.
- The **User Label** is in the center of the data band.
- An "**Illumination**" indicator appears in the Image Data bands, when the infrared illuminator is used.
- **Moon Phases** displayed include: (new moon), (waxing crescent), (first quarter), (waxing gibbous), (full moon), (waning gibbous), (last quarter), and (waning crescent).
- Current **Temperature** is shown in Fahrenheit or Celsius.

Cellular / App Troubleshooting

Initial Setup Pairing Issues or Poor Signal

If you have trouble pairing, or get a "No Service" error, please check the following:

- SIM Card is installed in the camera.
- Move to a different location to try to acquire better signal.

No Photos Sent

If your account is setup and the camera is armed, but no photos are received:

- Check the signal strength using the "Check Cellular" option on the camera.
- Make sure that you are logged in correctly in the RECONYX® Connect™ App.
- Check for any alerts in "Camera Details" of the RECONYX® Connect™ App indicating billing, battery, signal or SD card issues.
- If you must visit the camera to investigate issues, press "OK" to disarm the camera and to display any errors that are on the camera.

Poor Signal Strength

If you are getting inconsistent results, it's most likely due to poor signal where the camera is deployed. Try to relocate the camera. Sometimes moving the camera just a few feet can make a significant difference in signal strength. You can check the signal strength by going to "Camera Details" in the RECONYX® Connect™ App.

Notification of Photos Sent but do not appear in App

- Scroll through photos to find photos with a blue highlight frame around them. This frame highlight indicates new media that were uploaded.
- Check that the Date & Time on the camera are correct. By default, the media are organized in the application by time and date entered in the camera. If that is incorrect, the application will be putting the media in a different date group.
- Hit the Refresh button (Circle with Arrow) to load new media.

App Issues

Be sure it is not an issue with your device.

- Use the device task manager to shut down and restart the App.
- Check for updates in the App Store.
- Power cycle your phone/tablet
- Uninstall the application and reinstall.

On Camera Troubleshooting

Firmware Updates

If your cellular camera is connected to the network, your camera will automatically install firmware updates (unless you turn off “auto-update” in the App). We recommend you leave auto-update turned on.

If you choose to manually manage your firmware version, you will be notified when your firmware is out-of-date and needs to be updated.

Limited Nighttime Range

If your nighttime range is less than expected, check if you are using only recommended battery types and that they are new or fully charged.

The physical camera setup is also important in getting good nighttime images and video. If you aim the camera out over an open field where there is nothing within range to reflect the Infrared energy back toward the camera, the media will appear very dark (like shining a flashlight into outer space). The best nighttime images will be captured when you have a backdrop of some sort that will reflect energy back toward the camera (e.g. trees, tall grass, fence, building, hillside, etc).

The other issue you may encounter with setup is if you have an object near the camera that reflects a lot of IR energy back to the camera. The camera will adjust its exposure to not overexpose this close object. This can result in what appears to be limited range. The solution to this setup problem is to either move the camera or remove the close object from the field of view of the camera.

Focus Problems

If your media appears cloudy or out of focus, first consider whether there was snow or frost on the camera windows. You may wish to check your camera after a fresh snowfall to be sure the windows are not covered with snow. Next, check the windows for dirt and water spots, and gently clean them with a clean soft cloth and glass cleaner or water. Image clarity can also be adversely affected by very high temperatures, so it is a good idea to mount your camera where it will not be getting direct sunlight during the heat of the day.

False Triggers

If you seem to be getting false triggers (i.e. the camera is taking pictures of nothing); first put your camera back to the default settings and try your camera

again. This will ensure that you are running with known settings – with the motion detector ON at HIGH sensitivity and with Time-Lapse OFF.

If after going back to the default settings, you still seem to be getting false triggers, check the physical setup of your camera. The sun should not be shining directly on the face of the camera and the camera's field of view should be cleared of as much vegetation as possible. False triggers most often occur on sunny, breezy days. Vegetation will soak up the sun's energy and it will become warmer than the ambient air temperature. Then, when the wind moves the vegetation and warm air around, the camera sees this and cannot distinguish it from a warm-blooded subject moving in the scene. For this reason, careful placement and setup of your camera helps prevent false triggers.

Only as a last resort should you turn down your camera's motion sensitivity. This reduces your ability to detect the movement of warm-blooded subjects, especially during the summer.

Camera Not Triggering

First, put the camera back to Default settings. This will ensure that you are running with known settings – it will set the motion detector ON at HIGH sensitivity. This is important, especially in the warmer months, because as the background temperature approaches the temperature of the subjects, the strength of the signal decreases and the range goes down accordingly.

If you are still having trouble, please refer to the *"Mounting and Aiming Your Camera"* section, as well as using the Test Motion Sensor mode. Be sure that the Motion sensor is not only triggering on your upper torso or head and not on your legs.

Keep in mind that there are other factors that can affect the camera's ability to detect motion. Body heat from the subject can quickly disperse away on a breezy day, making it difficult for the camera to detect motion. Also, movement directly toward or away from the camera is less likely to trigger the camera than side-to-side movement. If the subject is moving very slowly, sometimes it will not produce a strong enough signal to trigger the camera.

Cold Weather Problems

If your camera shuts down in the cold, it may be too cold for the batteries. Refer to "Battery Specifications" for recommended battery types.

Memory Card Problems



If your camera won't start up properly or displays a "card error, write lock", first check to be sure your card is not "Locked". On most SD cards there is a switch on the side of the card. If the card is locked, you will not be able to save any photos. If the card is not locked, but this message persists, you can attempt to clean the contacts in the card holder by blowing canned air into the card slot. This will often resolve the issue.

If you have other issues, you may have to try a different brand of memory card. We have found that some inexpensive memory cards are very slow and do not always run well (even if they are advertised as fast). RECONYX® certified memory cards are available at www.reconyx.com

Battery Life Less than Expected

NiMH batteries have decreased life in hot weather. They will run the camera, but they will have decreased run time. It is not unusual to see battery life drop off 50% or more when daytime temperatures are near 90˚ Fahrenheit or higher. This will not damage your NiMH batteries; their charge just runs down faster.
If you notice that nighttime illumination decreases over time, you should change your batteries sooner or switch to Lithium batteries.

On Camera Error Messages

When using the camera, or when selecting the "Check Cellular" option, there are a few error messages that the camera may report on the display. Including:

SIM ERROR	= Sim missing, or locked from carrier with pin
NO SERVICE	= Bad APN, Incorrect carrier, or cannot connect to a tower
NO DATA SERVICE	= Account, or APN issue, or server is down
ACCOUNT ERROR	= No security token, or picture limit reached
COULD NOT PAIR	= Account error (CANCELED, EXPIRED, TIMEOUT)
AUTH ERROR	= Login issue (Username or Password)
ERR: ##	= Modem error codes

Other Questions?
Please contact our Technical Support Department at
1-608-781-6064 or e-mail at support@reconyx.com.

RECONYX® 5 Year Limited Warranty

RECONYX® warrants this product to be free of manufacturers' defects in materials and workmanship for a period of 5 years from the date of original purchase. If during this period, through normal use, the product fails due to defects in materials or workmanship, RECONYX® will either repair or replace the product at our sole discretion. This warranty is void if a product failure results from "acts of God", leaking batteries, accident, abuse, improper use, disassembly, or unauthorized maintenance and repair.

To qualify for your 5-year warranty, you must register your camera on our web site within 90 days of purchase. Go to www.reconyx.com/warranty to register your camera(s).

***NOTE*: There is a warranty seal on your camera; if this seal is broken or tampered with, the warranty is void. Any attempt to modify the camera from its original configuration will void the warranty.**

RECONYX® Limited Software Warranty

Software products are licensed to the user under the terms of the applicable RECONYX® software license. If the user wishes to review the software license agreement, a copy of the software license is available at our website www.reconyx.com.

Repair or Replacement

Buyer must obtain a Return Authorization (RA) number from RECONYX® before returning any product(s) for repair or replacement. If RECONYX® concludes that a returned product is not defective the buyer will be notified, and the product will be returned at buyer's expense, and buyer may be charged for examination and testing of the product.

This limited warranty is the sole warranty for hardware and software products offered by RECONYX®. RECONYX® shall not be liable for any amounts for said products except in compliance with this warranty.

FCC / ISED Notices

This device complies with Part 15 of the FCC Rules and contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS standard(s).

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et
(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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.

Changes or modifications made to this equipment not expressly approved by Reconyx, Inc. may void the FCC authorization to operate this equipment.

European Declaration of Conformity

Hereby, Reconyx, Inc. declares that the radio equipment type HF4KC (HyperFire 4K™ Cellular) is in compliance with Directive 2014/53/EU.

The full text of the EU Declaration of Conformity is available at the following internet address: **[www.reconyx.com/compliance]**

Radiofrequency radiation exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Supported Bands

Supported Frequency Bands (LTE): B1, B2, B3, B4, B5, B7, B8, B8_US, B9, B12, B13, B14, B18, B19, B20, B25, B26, B28.

Fallback Technologies: WCDMA (3G) on B1, B2, B4, B5, B6, B8, B19; GSM (2G) on B2, B3, B5, B8.

Maximum RF Output Power

- LTE: up to 24 dBm
- WCDMA: up to 24.5 dBm
- GPRS/EGPRS: up to 33.5 dBm

Safety Precautions

Before using the camera, please ensure that you read and understand the following safety precautions. Always ensure that the camera is operated correctly. The safety precautions noted in this guide are intended to instruct you in the safe and correct operation of the camera and its accessories to prevent injuries or damage to yourself, other people and equipment.

Preventing Malfunction

Avoid Strong Magnetic Fields

Never place the camera near electric motors or other equipment generating strong electromagnetic fields. Exposure to strong magnetic fields may cause malfunctions or corrupt image data.

Avoid Condensation

Moving the camera rapidly between hot and cold temperatures may cause condensation (water droplets) to form on its external and internal surfaces. You can avoid this by placing the camera in an air-tight, plastic bag and letting it adjust to temperature changes slowly before removing it from the bag.

If Condensation Forms Inside the Camera

Stop using the camera immediately if you detect condensation inside the camera. Continued use may damage the camera. Remove the memory card and batteries from the camera, open the camera in a warm dry environment, and wait until the moisture evaporates completely before resuming use.

Warnings

- Store this equipment out of the reach of children and infants.
- Do not allow water or other liquids to enter the interior of the camera. The interior is not waterproof. If the exterior comes into contact with liquids or salt air, wipe it dry with a soft, absorbent cloth. If water or other foreign substances enter the interior, immediately turn the camera's power off and remove the camera batteries.
- Use of power sources not expressly recommended for this equipment may lead to overheating, fire, electrical shock or other hazards.
- Avoid using, placing or storing the equipment in places subject to strong sunlight or high temperatures, such as the dashboard or trunk (boot) of a car. Exposure to intense sunlight and heat may cause the batteries to leak, overheat or explode, resulting in fire, burns or other injuries. High temperatures may also cause deformation of the casing.

- **Be sure to check your state/local laws concerning the use of this product.**

Your Information and Camera Warranty Registration

Record Your Information

After you have familiarized yourself with this instruction manual, your camera, and software, you should record some basic information here so that you don't lose it. It is also a good idea to keep your purchase receipt in case you need warranty work done on your camera.

Date Purchased: _____

Place of Purchase: _____

Camera Model & Serial #: _____

CodeLoc™ Password: ____ ____ ____ ____

www.reconyx.com Login Info: _____

Register your Camera

Your new HyperFire 4K™ camera is covered by a 5-year warranty. For the warranty to take effect, you must register your camera online within 90 days of purchase at **www.reconyx.com/warranty**

Copyright & Trademark Information

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- Secure Digital® (SD and SDHC) are registered trademarks of the SD Association.
- Energizer® is a registered trademark of Energizer Corporation.
- Windows® is a registered trademark of Microsoft Corporation.
- Python Locks™ are a product of Master Lock

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