# SMART HJC 10A

# **APPLICATION MANUAL**

PREMIUM MOTORCYCLE ACTION CAMERA FOR HJC HELMETS





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### **Precautions for use - General**

1. This device features home-use (class B) electromagnetic compatibility and is suitable for use in any location, including homes.

2. Using third-party components with the authentic parts enclosed in the product may lead to faults or accidents. Damages caused by such components will invalidate the free warranty service, and the manufacturer will not take any responsibility for the damages.

3. Do not arbitrarily dismantle, repair, or modify the product as it may lead to electric shocks, product damages, or loss of recorded videos and data. If any anomalies are found, please contact our customer center before taking action.

4. After purchasing the product, ensure that it operates and records videos properly.

5. Please maintain the camera lens' condition by regularly cleaning it with a soft cloth. Contamination of the lens with foreign objects may lead to degraded image-recording quality.

6. The product utilizes a camera. Abrupt changes in brightness (e.g., when passing through tunnels, when the backlight is strong, or if no light source is available at night) may lead to degraded image-recording quality.

7. Please check recorded images regularly to ensure the product's normal operation and the SD card's good condition. If any anomaly occurs, stop using the product and contact our customer center.

### **Precautions for use - General**

1. Using the product while driving may lead to accidents; stop the vehicle at a safe place before use.

2. For the stable use of the product, ensure that it is operated at the following temperature.

- SMART HJC 10A operating temperature : -10℃ 50℃
- Battery charging temperature : 0℃ 45℃

3. Use this product outdoors only when riding a motorcycle. Keep it indoors when not in use.

# **Precautions for use - Battery**

1. The battery is a consumable and has a six-month warranty period.

2. Using a third-party battery may lead to explosions or fire, make sure to use an authentic battery.

3. Plugging or unplugging the charging cable with wet hands may lead to fire or electric shock accidents; make sure to do so with dry hands.



### Precautions for use - SD Card

1. Please regularly maintain the SD card as it is **consumable**\*, and its service life will be shortened with continued recording. However, using the card with regular formatting may extend its service life. Before formatting, make sure to back up important image files. If the SD card is not recognized, please replace (purchase) it with a new one.

(\*consumable : The SD card has a six-month warranty provided by the manufacturer.)

2. In replacing (purchasing) an SD card, ensure its authenticity (class 10 or higher).

3. Before removing the SD card, ensure that the product is turned off.

Removal of SD card with the power on may lead to the loss of data or damages to the product.

4. If the SD card needs to be stored in a separate place, ensure that it is not exposed to moisture, dust, or high heat as these may lead to a deformed or malfunctioning SD card.

5. Please back up and store important data in a separate storage medium (HDD, CD, etc.) if it is needed to be stored for a long time.

### Precautions for use - GPS

1. The GPS system is affected by weather, satellite conditions, and the surrounding geography. Because the GPS functions through the communication of the product's receiving antenna and dedicated artificial satellites, various weather conditions (cloudy/rainy/snowy weather, etc.) or changes in the surrounding geography (around tall buildings, under land bridges, in tunnels/underpasses/parking lots, or around other interferences) may make the reception unstable.

2. The GPS signal reception does not affect video recording. When the GPS signal is lost, only the location coordinates and the driving speed will not be recorded.

3. GPS connection may be slow on the first use after purchase or a long period of no use, taking 5 to 30 min at most to check the satellite location and receive GPS signals.

4. In the hot summer or cold winter, GPS reception may become unstable or take a longer time.

#### \* What is GPS?

GPS is a state-of-the-art satellite navigation system that measures accurate time and distance through three or more dedicated satellites above the earth. Moreover, the current location is calculated through triangulation. Through GPS technology, the product records vehicle location and driving speed at the time of video recording and provides additional situational information on the recorded videos. In addition, it also has a function that enables the viewing of the driving route on an Internet map service interface with the stored locational information.



### **Precautions for use - Waterproof**

#### 1. Precautions for mounting the rubber cap to the body

As shown in the figure, insert the protruding part of the rubber cap tightly into the body's hole, and press down the rubber cap to ensure that there is no gap between the cap and body.

#### 2. Precautions for opening/closing the battery-holder cover

If the battery-holder cover is not tightly closed, rainwater may seep into it. Therefore, after closing, check if the cover is closed to match the point indicated on the corresponding part.

#### 3. Precautions for mounting/demounting the battery holder to/from the body

The battery holder can be mounted/demounted to/from the body. Mount/demount the battery holder in a place free from rainwater. If the vehicle was exposed to rain, mount/demount the battery holder after the rainwater is fully dried.



# **Product components**

The components of the product are subject to changes without notice to improve product performance. Besides the basic components, additional accessories are sold separately.





### **Components and descriptions**

1. SMART HJC 10A components



### **Component names and description**

#### 2. Micro SD card slot and micro USB port

- Micro SD card slot : Insert the included (or purchased) SD card into the slot. Please use an SD card that supports SD High Capacity (SDHC), Class 10, or higher.

- Micro USB port : For battery charging

 $\cdot\,$  If a PC USB port is connected to the product's USB port through a USB cable, the SD card of the product will be recognized as external storage.



Portable media device (2)

DVD RW

	10A (F:)
Ś	



### **Components and descriptions**

#### 3. Battery

- Lithium polymer 2000 mA battery
- Charging time : It takes 2.5 hr from total discharge to full charge.
- Duration of use : The fully charged battery can be used for approximately 2.5 hr (in continued video shooting).
- Charging method : Use the dedicated charging cradle (see Figure 1 in the right). Use the micro USB port of the product (see Figure 2 on the right).

#### 4. Battery charging cradle

- Charge the battery by mounting it on the charging cradle, as shown in the following figure. The battery should be mounted so that its back faces upward.
- LED :  $\cdot$  Charging = RED
  - $\cdot$  Full charge or empty cradle = GREEN



### How to assemble the product - General

1. Insert the included micro SD card into the body.

- Insert the micro SD card with the printed surface facing upward.

2. Insert the battery into the battery holder.

- To open the cover, turn it counterclockwise.
- Insert the battery with the SMART HJC facing upward.
- Insert the battery, and place the cover, as shown in Figure 2. Then, close the cover by turning it to match the marking, as shown in Figure 3.

\* Connect the battery holder to the camera holder to open or close the battery cover more easily.





### How to assemble the product - F70

3. Connect the camera, with the three connection grooves of the cam holder (sold separately), as shown in the Figure 1.

- To fix the camera part to the cam holder, connect the two guide pins of the camera part first, as shown in Figure 2, and fix the other guide pin by pushing it into the groove, as shown in Figure 3.

4. Firmly connect the camera holder (sold separately) and the camera by fastening the five enclosed bolts with a screwdriver, as shown in Figure 4 on the right.



### How to assemble the product - F70

5. Mount the components jointed in 4 to the shield and the helmet.

- Connect the camera part to the shield by inserting the cam holder's guide spurs (at two points) to the shield's holes (see Figure 7), as shown in Figure 6.

- Mount the fixed product to the shield and helmet with the washers and bolts provided, and make sure to insert a washer before fastening a bolt.

6. Insert the body unit and the battery holder into the lever grooves of the camera holder, and mount them onto the helmet.Connect the body and the battery holder until a clicking sound is heard.





### How to assemble the product - i90 & RPHA 90, RPHA 90S, RPHA 90S CARBON

3. Connect the camera, with the three connection grooves of the cam holder (sold separately), as shown in the Figure 1.

- To fix the camera part to the cam holder, connect the two guide pins of the camera part first, as shown in Figure 2, and fix the other guide pin by pushing it into the groove, as shown in Figure 3.

4. Firmly connect the camera holder (sold separately) and the camera by fastening the five enclosed bolts with a screwdriver, as shown in Figure 4 on the right.



### How to assemble the product - i90 & RPHA 90, RPHA 90S, RPHA 90S CARBON

5. Mount the components jointed in 4 to the shield and the helmet.

- Connect the camera part to the shield by inserting the cam holder's guide spurs (at two points) to the shield's holes (see Figure 7), as shown in Figure 6.

- Joint the cam holder to the shield with the washers and bolts provided, and mount the shield jointed by the cam holder to the helmet.

6. Insert the body unit and the battery holder into the lever grooves of the camera holder, and mount them onto the helmet.Connect the body and the battery holder until a clicking sound is heard.





### How to assemble the product - Precautions (standard)

In mounting the body/battery holder to the lever groove, firmly push down the body/battery holder, as shown in the following figure, until a clicking sound is heard.

#### \* Firmly push down the red part of the body/battery holder (Figure 1).

\* After completely mounting the product, check if the product works properly before using it. If it doesn't, remove the body and battery parts, and remount them according to the instructions written in the manual. Then, check if the problem is fixed.

#### Normal operation

Click the "multi" button. ► The "Hello" audio is heard. ► The camera part's LED turns on successively. ► The LED on the body- and battery-mounted parts light up consecutively. ► A sound effect is heard twice.



# How to operate SMART HJC 10A

1. Multifunction button

① One short click : ▶ (while power is off) Power on

▶ (while power is on) Photo is taken

② Two short clicks : Video recording on/off

③ Long click : ► 3–5 sec : Power off

▶ 10 sec or longer : Reset to factory settings

#### 2. LED

① Camera RED LED (on the camera) :

▶ Off : Battery level above 15%

▶ On : Battery level 5–15%

▶ Blinking : Battery level below 5% (GPS, Wi-Fi power off)

② Battery RED LED (on the battery holder) : ► Off : Charging complete

► On : Charging

③ WHITE LED : ► Upon power ON / OFF, all the LED will turn on in sequence, and then turned off.

▶ The LED can be set in the app settings menu.

④ BLUE LED : The LED will turn on when the product is on.

3. Product boot confirmation

After pressing the power button, a voice saying "hello" will be heard, and the white LED will turn on in a sequence.

② Then, the LED will turn off, and a sound effect will be heard, indicating that the product functions can be used normally.

4. Firmware upgrade (You can download the firmware from <u>www.smarthjc.com</u>)
 ① Copy the latest firmware to the 10A SD card. Insert the SD card into the 10A, and turn it on.

② A voice saying "firmware upgrade will start" will be heard, and the upgrade will proceed automatically.

③ A voice saying "firmware upgrade is completed" will be heard, and the system will reboot automatically.

④ The system may reboot two or more times, which is normal. After rebooting, the product can be used normally.



# **SMART HJC 10A - App installation**

1. Android phones : In the Google Play Store, search and install the SMART HJC 10A app.

2. iPhones : In the App Store, search and install the SMART HJC 10A app.

3. Supported versions

- Android phones : Android 6.0 or later (may vary for different devices)
- iPhones: iOS 12.0 or later

4. Installation completed icon :



# SMART HJC 10A - Smartphone connection (Wi-Fi)

In the Wi-Fi settings menu of the smartphone, select the network ID (SSID) of SMART HJC 10A, and enter the password (PW) to connect SMART HJC 10A to the smartphone through Wi-Fi.

<Default network ID (SSID), password (PW)>

- Network ID (SSID) : SMART HJC 10A
- Password (PW) : 12345678

% If other users' smartphones are connected to the default network ID (SSID) through Wi-Fi, they may decrease the performance of the Live View and Preview functions. Therefore, make sure to change the default SSID to a unique one for personal use after purchasing the product.





# SMART HJC 10A - Before app connection

This is the menu that can be used before the SMART HJC 10A app is connected.

For connecting the SMART HJC 10A app, click image  $oldsymbol{0}$ 

For the menu setting after app connection, see page "SMART HJC 10A - After app connection."

2 Setting : See page "Application - Setting."

**③** Gallery : This stores image files downloaded in the smartphone.



# Application - Settings (Android)

1 YouTube or Facebook log-in : Enter log-in account information.

Automatic Wi-Fi connection : If you register the network ID (SSID) and password (PW) of SMART HJC 10A, app execution will automatically connect to SMART HJC 10A.

(\*) After the power of SMART HJC 10A is turned on, it takes approximately 10 sec before Wi-Fi booting. If you want to automatically connect, run the app after 10 sec.

(\*) Automatic connection may not be supported on some smartphone models.

3 Wi-Fi hot spot settings : Set the ID and password of the smartphone's hot spot for SNS video streaming.

**4** User's manual : A link to the user's manual of the app is available.

**5** Version : The version of the app currently in use

Company information





# Application - Settings (iOS)

1 YouTube or Facebook log-in : Enter log-in account information.

**2** User's manual : A link to the user's manual of the app is available.

3 Version : The version of the app currently in use

Company information

\* Automatic connection is not supported for iPhones. Only manual connection may be made.

\* iPhones do not require setting up the hot spot because they can send images directly through a communication system when connected to a Wi-Fi network.



### SMART HJC 10A - After app connection

• Power OFF : Its power can be turned off remotely from a smartphone.

**2** GPS connection status

Battery status

- Charging
- Battery level
- Micro SD card information
  - Total capacity
  - Available capacity
- O App connection with SMART HJC 10A OFF
- **③** SNS steaming : Live video streaming to Facebook, YouTube, and private servers
- Camera settings : Go to the "Application Camera settings" page

B Live View

- 0 Gallery : Image files downloaded in the smartphone and the SD card
- ${\scriptstyle \textcircled{0}}$  Connection status between SMART HJC 10A and the app





1. Video

Recording resolution : QHD / FHD

- QHD : 2560x1440 / FHD : 1920x1080

Video quality : High / medium / low

3 EIS (Video stabilization) : ON / OFF

\* The angle of view (AOV) will be lowered for image stabilization if the electronic image stabilization (EIS) is on.

HDR : ON / OFF (default 30 fps / HDR mode 15 fps)

- Turn on HDR (High Dynamic Range) for clearer images when recording at night or against backlight.

- EIS (Electronic Image Stabilization) and HDR cannot be used simultaneously.

G Viewing angle (This applies only to videos.) : Wide (recording at the default viewing angle of the lens) /

Plane (recording at a reduced angle and on a plane)

**6** Video recording time : 1 / 2 / 3 / 5 min - Video recording time can be selected.

Color adjustment : The user can adjust brightness, tint, and contrast of videos to be recorded.

8 Time lapse: OFF / 1 / 2 / 5 / 10 / 30 sec

- This function is for shooting videos at shorter frame-capture intervals rather than continued shooting intervals. (e.g., 2 sec = 1 frame is stored in 2 sec) Time stamp : ON / OFF

- This selects whether to display time stamp in recorded videos.

<	Setting
🗂 Camera	Smart Phone
Video	
Video resolution	QHD >
Video quality	2 high >
Video EIS	3 🔹
HDR	6 🚥
Viewing angle	5 Wide >
Video recording time	6 1min >
Color setting	0
Brightness	3
Contrast	O •
Tint	——— •
Timelapse	B off >
Timestamp	9 🖜
Audio	

#### 2. Audio

Microphone (voice recording) : ON / OFF

2 Speaker volume : Turn the volume off or set it to level 1–5.

#### 3. SD card

OFF Content State Content S

- When the SD card is full, turning on loop recording will overwrite the older files sequentially and save newly recorded files. Turning off loop recording will not delete recorded files in the SD card, not allowing new files to be saved if it has no available space.

Format SD card : It formats the SD card.

4. White LED settings : The LED can be set at always off, always on, or blinking.

#### 5. Time

G Time settings : This sets the time display of SMART HJC 10A based on the current time of the smartphone.





6. WiFi

Reset WiFi : This resets the network ID (SSID) and password (PW) of the Wi-Fi to the default values.
 Change Wi-Fi SSID/PW : This allows changes in the SSID and PW of the Wi-Fi of SMART HJC 10A.

7. GPS

3 Set GPS : ON / OFF

- This selects whether to use GPS or not.
- 8. Find my helmet cam
- Find my helmet cam: You can easily find your helmet through the sound effect emitted by SMART HJC 10A.

< Set	tting
Camera	Smart Phone
Time setting	2020-11-02 09:28:49 >
WiFi	
WiFi initialization	$0 \rightarrow$
WiFi SSID, Password char	ngo 2 >
GPS	
GPS Setting	3 🔹
Find my helmet came	əra
Find my helmet camera	<b>4</b> >
System	
Factory default	>
System information	10.6
Auto power off	10 min $>$
Restarting SMART HJC	>

#### 9. System

**5** Factory reset : All the settings are reset to factory defaults.

#### 6 Product information

- Automatic power OFF : OFF / 3 / 5 / 10 / 20 min
  - After the set time, SMART HJC 10A is powered off automatically. (Battery life can be extended.)

8 SMART HJC 10A restarting : After power off, the system will restart.





# **Application - Live View**

1. In the Live View menu of SMART HJC 10A, you can turn on/off video recording and photo capturing.

2. You can adjust the shooting angle with the camera tilt and check the image with Live View before taking a video or photo.

\* The videos shown on the application will have HD quality, while the videos stored in the smartphone will have QHD quality.





### **Application - Gallery**

1. Camera : You can view the videos and photos stored in the SD card of SMART HJC 10A by dates.

2. Smartphone : You can view the videos and photos downloaded in the smartphone from the SD card of SMART HJC 10A.

3. Preview : This function enables the preview of videos stored in the micro SD card. Previewed videos will have HD quality, and downloaded videos will have QHD quality.

\* Detailed information, downloading, and deletion functions are available.





1. SNS streaming window of SMART HJC 10A

2. You can insert streaming titles, set privacy settings, set delay time, etc.

3. You can start Live View stream or take photos.

4. SNS streaming is done through networks of telecommunications companies, which may involve communications charges (data use).

\* Social media streaming videos will have HD quality.





#### Example of YouTube / Facebook social media streaming

1. Under the settings menu, log in to YouTube / Facebook.

<	Setting	
1	Camera	Smart Phone
Login		
	Youtube login	
Ð	Facebook login	
Wi-Fi au	ito connection	
Wi-Fi aut	o connection (SSID)	
Wi-fi ho	tspot setting	
Wi-fi hot:	spot setting	
Manual		
Manual		
Informa	ition	
Version		1.0.8
Compan	y information	
HJC he helmet HJC's f helmet been o popula	imets has specialized in ma s exclusively. Since it was for ocus has remained only on s with the slogan #1 in the v n a mission to make our hele r, world-wide.	nufacturing iunded in 1971, making great vorld, it has mets the most

Wife hotspot setting
 Wife hotspot setting
 Hotspot name
 Plass input hotspot name
 Hotspot name
 Plass input hotspot name
 Hotspot password
 Pesse input hotspot
 sotting
 Setting

2. In the Wi-Fi hot spot settings, enter the ID and password of the smartphone hot spot and click the settings button.



#### Example of YouTube / Facebook social media streaming

3. On the app's main window, click the "YouTube / Facebook" button.
4. The connection window is displayed.
5. Select a title and optional items, and click the "READY" button.
6. Click the "LIVE" button to start live broadcasting.





#### Example of SNS streaming on a private server

1. In the Wi-Fi hot spot settings, enter the ID and password of the smartphone hot spot, and click the settings button.

2. In the main window of the app, clicking the "RTMP" button will display the connection window.

3. Enter an address (RTMP) for streaming, and click the "LIVE" button.







#### Obtaining streaming authorization

1. Click YouTube Studio.

2. Click "Go Live"



#### Obtaining streaming authorization

3. Enter the authentication number.

YouTube <sup>*®</sup>	Search		٩
Account verification (step 1 of 2) Verifying your account by phone I Select your country	) lets you unlock additional features on YouTube, and	helps us make sure you're a real YouTuber, not a robo	f. Learn more
United States	*		
How should we deliver the verific	ation code to you?		
Call me with an automated vo	ice message		
Text me the verification code			
Which language should we use to	o send you the verification code?		
English (US) change language			
What is your phone number?			
For example: (201) 555-5555			
Important: Up to two accounts can be v	verified per phone number, per year.		
Submit			

#### 4. Enter the authentication code.





#### Obtaining streaming authorization

5. You can use it after 24 hr.





### SMART HJC 10A - PC Viewer

1. Installing the PC Viewer program for Windows and Mac

- On <u>www.smarthjc.com</u> download the SMART HJC 10A PC Viewer.
- Extract the compressed file and run the .exe file.
- 2. Supported versions
- Windows OS : Windows 7 or later
- Mac OS : Mac OS High Sierra (10.13.6) or later
- 3. "Installation complete" icon :





### SMART HJC 10A PC Viewer

• Main window : Dragging a recorded file from the micro SD card to the main window will play the file. Alternatively, you can select a recorded file in the file explorer of the main window.

Map button : Based on the location information of a video, the driving path and location are displayed on Google Maps. However, this function works only with an Internet connection.

3 Exit the current file.



### SMART HJC 10A PC Viewer

A Recorded video, driving path, and speed display

S PIP function: This function concurrently displays the map and the video playback window in PIP (Picture in Picture). Click the PIP button.







# Voice list

Division	Subdivision	English
	Power ON	Hello
	Power OFF	Good-bye
	Power reboot	Restarting the System.
	Recording started	Start Recording.
	Recording stopped	Stop recording.
	No SD card	Please insert SD Card.
	SD card format	Need to format SD Card
Maina	SD card format start	Starting SD Card Format
Voice	SD card format completed	SD Card format completed
	SD card format failed	SD Card format failed
	SD card error	Please Check SD Card.
	SD card full	SD Card is full.
	System initialization started	System initialize started.
	System initialization completed	System initialize completed.
	F/W upgrade starting	Starting Firmware Upgrade
	F/W upgrade completed	Firmware Upgrade completed.

# Voice list

Division	Subdivision	English
	F/W upgrade failed	Firmware Upgrade failed
	GPS reception OK	GPS Connected
	Battery low	Shut down the system due to the low bettery
Voice	Battery low	GPS and WiFi disabled due to the low bettery
	Battery low	GPS disabled due to the low bettery
	Battery low	WiFi disabled due to the low bettery
	High temperature	Shut down the system due to the device high tempture.



# Sound effects

Division	Subdivision
Sound effect	Power ON
	Power OFF
	The power can be turned off
	Recording started
	Recording finished
	Photo shooting
	Device search

### Points to check before requesting for warranty service and FAQ

1) Is recording possible even when the micro SD card is full?

► In the settings menu of the smartphone app, turning on the SD card loop recording function will delete the older files Asequentially (automatic), and record new files.

2) Where can I download the dedicated PC Viewer?

▶ You can download it at <u>www.smarthjc.com</u>

3) What should I do if I forget the network ID (SSI) and password (PW) of a changed Wi-Fi network?

Clicking the button of SMART HJC 10A button for 10 sec or longer will reset all the settings to the factory defaults.

\* Factory default settings - Network ID (SSID): SMART HJC 10A Password (PW): 12345678

4) The power will not turn on when I click the multifunction button.

► This may occur when the body and the battery holder are not properly mounted onto the helmet. Please check the connection again. If they are mounted properly, the white LED will turn on and off.



# Points to check before requesting for warranty service and FAQ

5) How can I insert the battery?

▶ Please refer to the section of the user's manual that describes how to insert the battery.

6) The body or the battery holder cannot be mounted to the camera holder.

► In some cases, the lever is displaced from the camera holder by an external force. Return the lever to its original position by pressing it and retry mounting the body or the battery holder.

7) When I run SNS streaming, the window "Switching to live window" does not disappear.

▶ This happens when no SNS hot spot is set in the settings menu. Please check if it is set correctly.

8) How much data are used for SNS streaming?

► Because SNS streaming is done through networks of telecommunications companies, it will use smartphone data. Please see the following table:

Time used	Data consumption
10 min	56 MB
30 min	168 MB
1 hr	337 MB

# Product specifications

Division	Specification	Remarks
AP	A12A series	
Resolution	QHD@30fps	
Channels	1 channel	
Image sensor	SONY IMX335	
Recording types	Video recording	in the unit of 1, 2, 3, and 5 min
	Still images (photos)	
	Real-time video transmission to SNS through live streaming	
Recording format	H.264	
Voice supported	Stereo microphone and speaker	
Voice guiding messages	In English	
Battery	2,000 mAh (lithium-ion polymer)	
GPS	UBLOX-8, embedded	



# Product specifications

Division	Specification	Remarks
Dust/waterproof	Supported	
Image stabilization	EIS	
Charging connector	Micro USB type	For safety charging, should use under 15W adapter
Image storage	Micro SD card	Max. 512 GB supportable
Button	Multifunction button - Power ON / OFF - Video recording ON / OFF - Photo shooting	
LED indication	Blue LED : Power status Red LED : Battery charging status White LED : App status (ON, OFF, blinking)	
Wireless connection	Wi-Fi (video, control)	
Gyro sensor	InvenSence MPU-6500	
Smartphone app	Android / iOS	
PC viewer	Windows / MAC	
Operating temperature	-10°C ~ 50°C	
Battery charging temperature	0℃ ~ 45℃	





www.smarthjc.com