

User Manual for Monarch Android APP

Document Details

Purpose	User Manual for Monarch Android APP
Scope	UNS Monarch - UNS53000 Multispectral Camera
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1). Prerequisites

- 1.1). Make sure that the camera is upgraded with the latest FW version (v23)
- 1.2). Recommend Mobile Phone Models

Mobile Phone Model	Android OS version	USB OTG version
Samsung Galaxy S20 5G	Android 11	USB 3.0 OTG
OnePlus 9 Pro	Android 11	USB 3.0 OTG
OPPO Find X3	Android 11	USB 3.0 OTG
HUAWEI P30	Android 10	USB 3.0 OTG
Samsung Galaxy A51	Android 11	USB 2.0 OTG
OPPO A32	Android 10	USB 2.0 OTG
XiaoMi Mi 11	Android 11	USB 2.0 OTG

Note:

Only the USB3.0 phone can save both 10-bit raw image and PNG image, and the USB2.0 phone can only save the PNG images.

- 1.3). USB 3.0 cable

Please do make sure to use a USB3.0 cable to connect monarch camera with your Android phone.



Note:

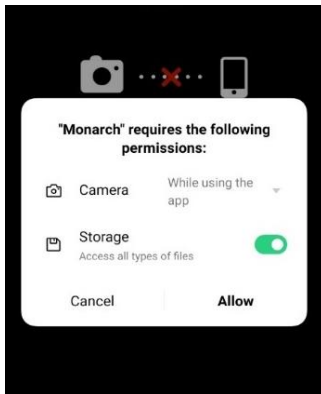
To make the connection between Monarch camera and Android phone more stable, we recommend that you use a dual USB-C cable instead of the USB adapter.

2). Installation

- 2.1). Uninstall any previous version from your Android Phone
- 2.2). Download the APK file from the link below:

[Monarch Android APP](#)

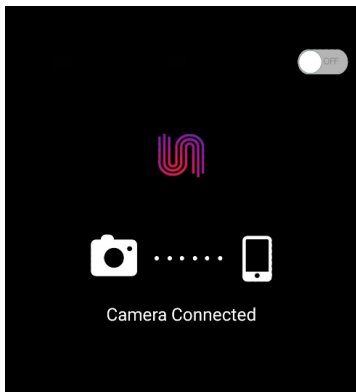
2.3). Install the APK file If the below box appears - press "Allow".



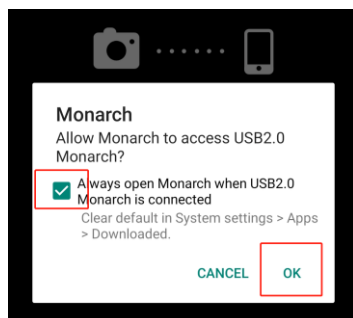
After installation, the following page will be opened



2.4). Connect the camera to your Android Phone by using a USB3.0 cable



2.5). Turn on the camera at the upper right button and allow Monarch to access when Monarch is connected.



2.6). Then you can enter the homepage and see the preview.



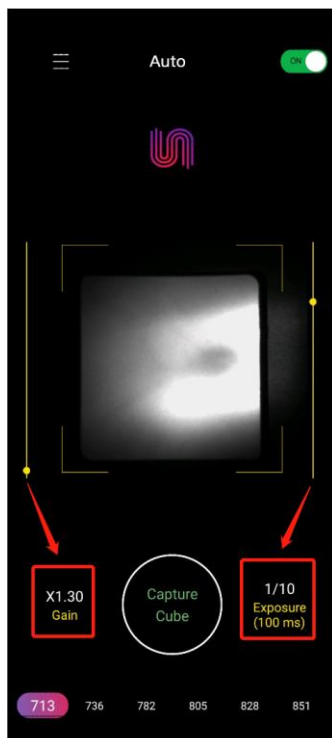
Note:

If the preview image appears dark, try to use an external NIR source of light. i.e., you may let Monarch camera shoot your mobile phone LED.

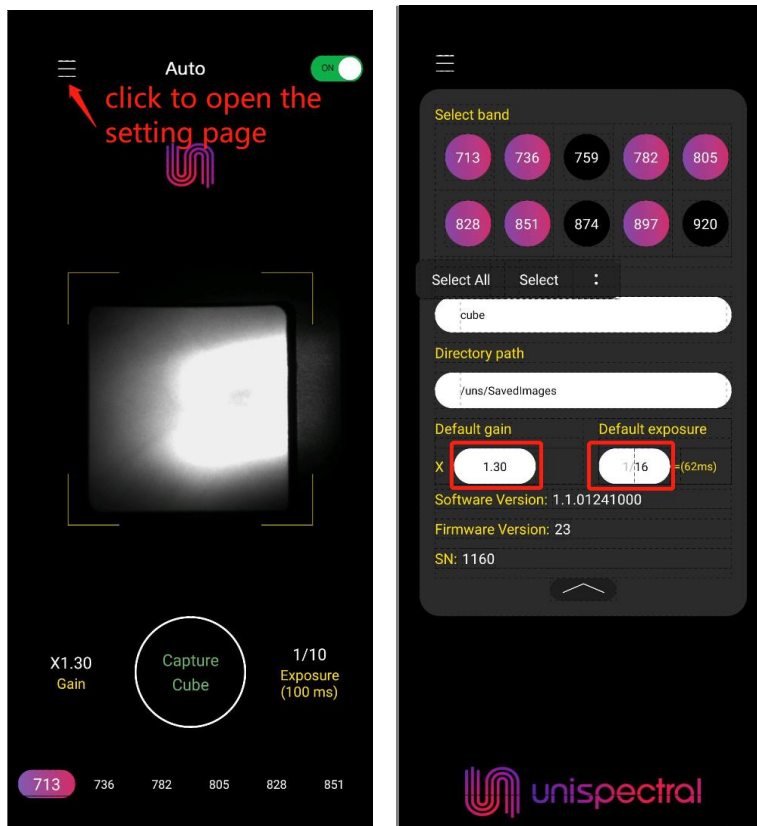
3). User Guide

3.1). Change the exposure and gain

You can click the following buttons to open the gain bar and exposure bar. Then change the value by swiping the screen or dragging the small yellow ball.

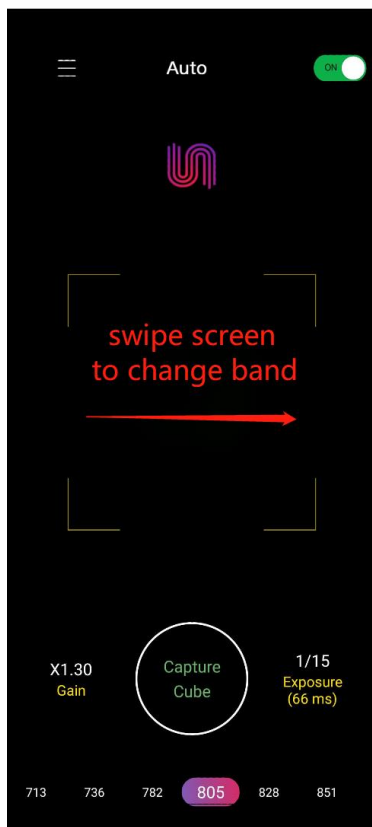


In addition, you can also change the value in the setting page.



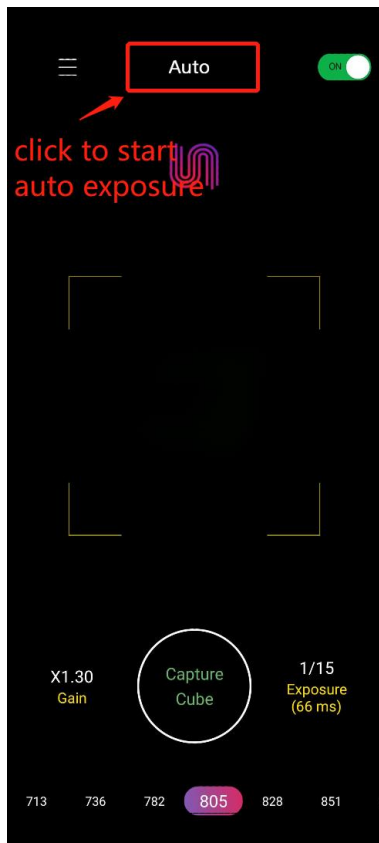
3.2). Change the preview band

You can change the preview band by clicking or swiping the screen in the preview window.



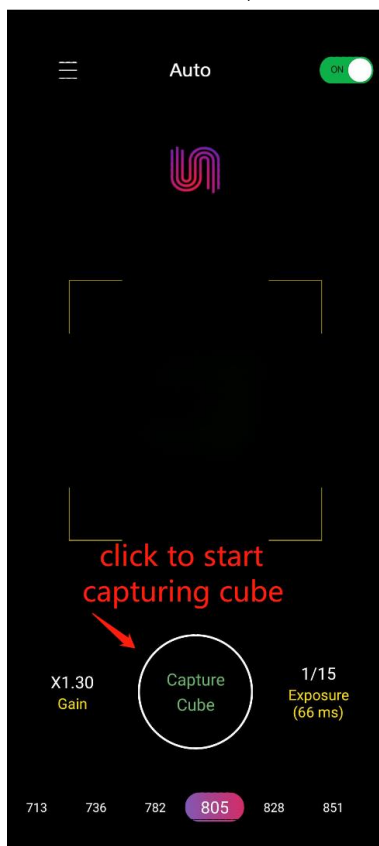
3.3). Auto exposure

You can click the "Auto" button to start auto exposure.

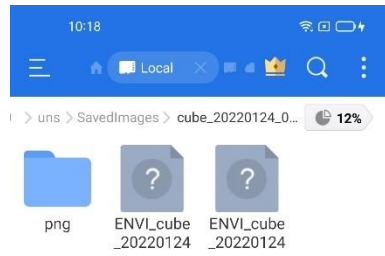


3.4). Capture cube

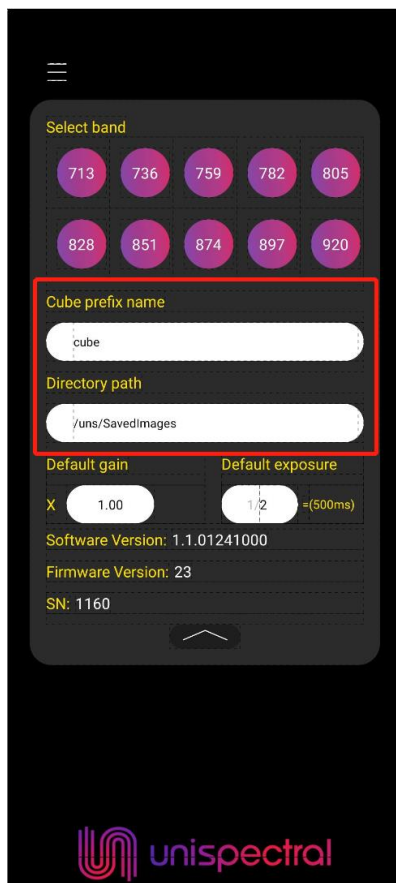
Click the button "capture cube" to start saving images.



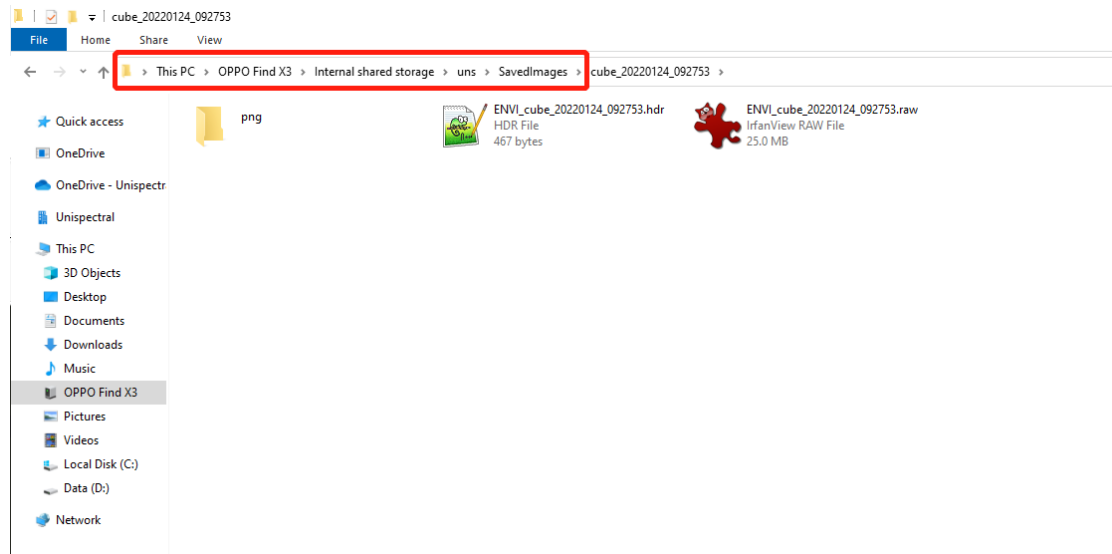
By default, you can find the saved raw image and PNG images in the following folder:



If you want to change the path of saving directory and name, you can do it on setting page.

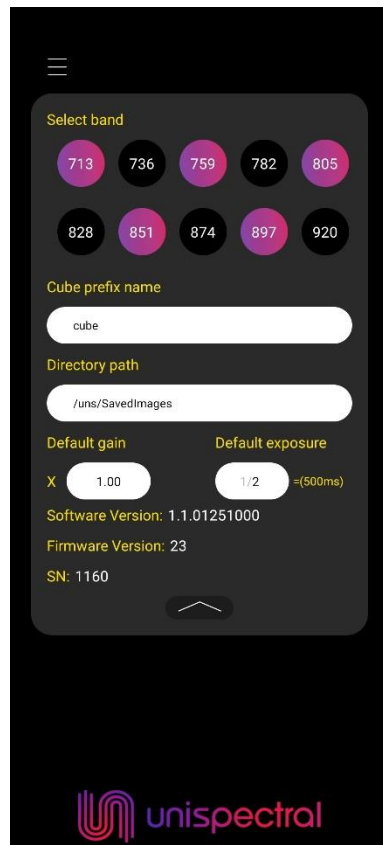


After saving successfully, you may also connect your phone to PC and find the files under the following folder:



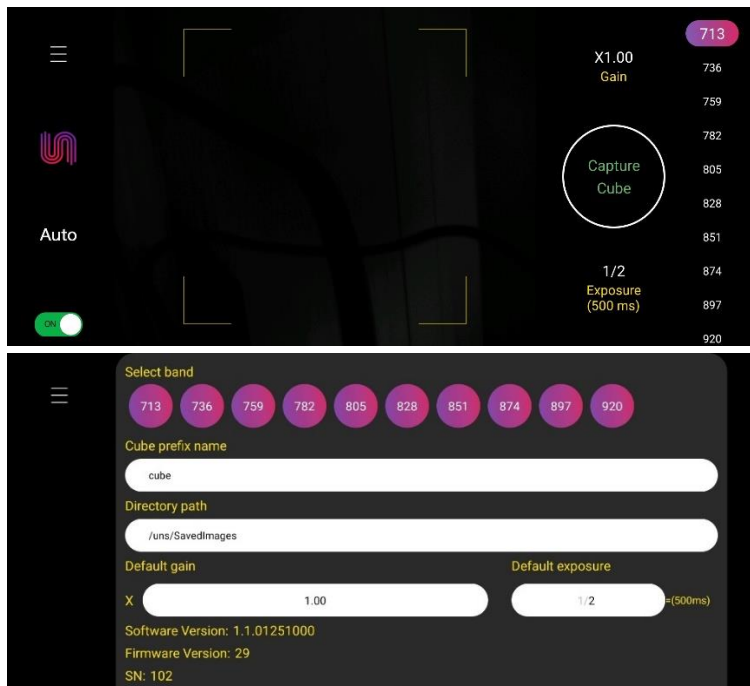
3.5). Bands selection

You can toggle on/off the specific bands in the setting page, so that you will get the spectral image with only the desired band when saving spectral cube.



3.6). Switch between landscape mode and portrait mode

You can rotate the Android phone to switch between landscape mode and portrait mode.

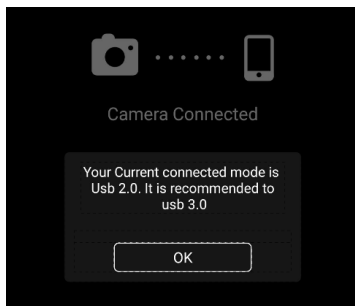


Note:

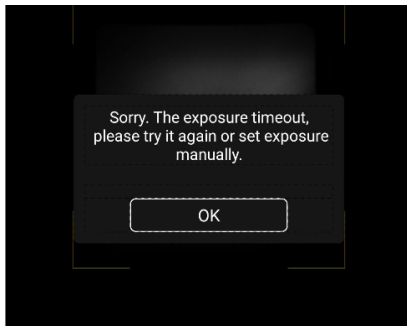
You need enable “Auto Rotate” in your phone system settings in advanced.

4). **FAQ**

- 4.1). Why I got the notification, “Your current mode is USB2.0. it is recommended to USB 3.0”?
If you see this notification, it is because your phone or cable may not support USB 3.0. After saving cube, you can only get PNG files in the folder.



- 4.2). Why I got the notification, “Sorry, the exposure timeout, please try it again or set exposure manually”?
Sometimes, when the external light is too weak, the app can't find a proper exposure automatically. You may see this notification and you can also adjust the exposure by yourself.



- 4.3). why I got the notification, "sorry, it's failed to get picture. You can close and open gain, or plug in camera or you can restart your phone and again"?

If you see this notification, it is because the Android OS may fail to open the camera. The best way to solve the issue is to restart your Android phone and try again.

