

# **BLACK PEARL** RC801 with DVR

7"HD Screen FPV Diversity RX Monitor with DVR  
Instruction Manual



Before operating the unit, please read this manual thoroughly, and retain it for future reference.

<b>Safety Notice</b> .....	1
Warning .....	1
Battery .....	1
Caution .....	1
<b>Packing List</b> .....	2
<b>Battery</b> .....	3
Battery Installation .....	3
Recharge the Battery .....	3
<b>Sun-shadow</b> .....	3
Install the Sun-shadow .....	3
<b>Icons</b> .....	4
Function Icons .....	4
Screen Icons .....	4
<b>Operation Instruction</b> .....	5
Power on/off .....	5
Working Mode .....	5
Diversity Mode .....	5
RX1 and RX2 Mode .....	5
AV IN Mode .....	5
HDMI Mode .....	5
<b>Function Instruction</b> .....	6
ZOOM Function .....	6
Display Scale .....	6
DNR .....	7
Display Direction .....	7
DVR Function .....	7
<b>Menu</b> .....	8
Color .....	8
Sound .....	8
Function .....	8
Wireless .....	8
<b>Specification</b> .....	9

## Warning

- In order to reduce the damage of fire, electric shock or product hazard, do not expose the unit to rain or moisture.
- Please use only the recommended accessories.
- Do not disassemble this product, it should be repaired by the professional people.

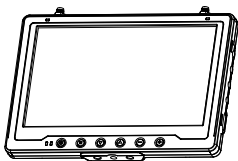
## Battery

- DO NOT dismantle the battery.
- DO NOT make the battery short or its terminals in touch with metal objects, there is explosion danger.
- DO NOT use any damaged or leaking battery.
- DO NOT throw the battery into fire
- DO NOT put the battery in the place over 65°C.
- DO NOT expose the battery to strike, fall, etc..
- Be sure to keep the battery out of children's reach.
- Please replace the battery immediately if its working life becomes short significantly.
- Replace the battery with the same one or the equivalent recommended by the manufacturer.
- This device uses Li battery, which is recyclable resources, to deal with the waste battery, please send it to the resource recycling.

## Caution

- The magnetic field with certain frequency may affect the image and sound of this device.
- DO NOT install or store this device in book cabinet, closet or other closed spaces to avoid such risks as electronic shock, fire and so on due to overheat.
- DO NOT place this device near open fire.
- This device is not dustproof, waterproof, please note when using.

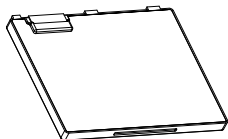
# Packing List



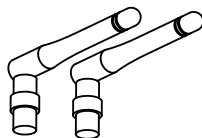
① Main Body



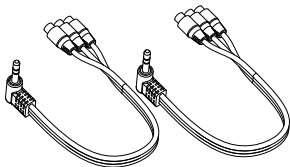
② Sun Shadow



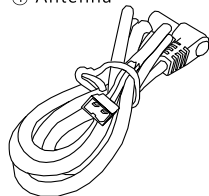
③ Battery



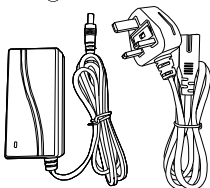
④ Antenna



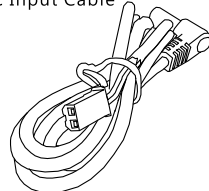
⑤ AV Cable



⑥ DC Input Cable



⑦ Power Supply

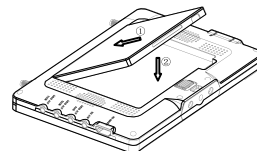


⑧ DC Output Cable

# Battery

## Battery Installation

- Push the battery socket with gold contacts toward the gold contacts of the battery compartment of the device, and press the battery down; when battery reaches the bottom of the battery compartment, the battery lock will fix the battery automatically.
- If you don't install the battery, you can use 7 ~ 28V power supply.



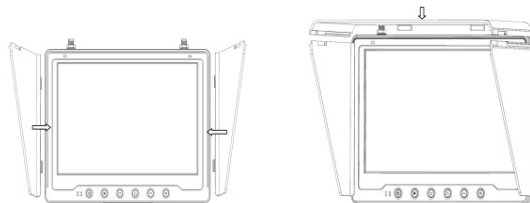
## Recharge the Battery

- Please use power supply with 15V/2A at least
- Please recharge the battery fully at the first time
- During recharging, the red indicated light is on; after recharging, the green indicated light is on.

## Sun-shadow

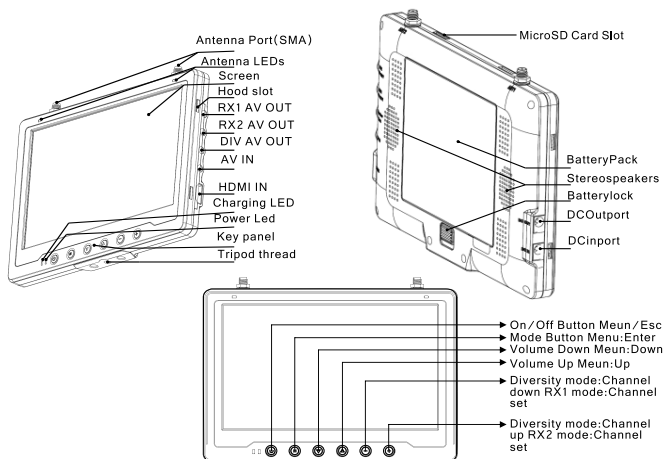
Install The Sun-shadow

- 3 pieces of baffles make up the sun-shadow, first install 2 pieces of baffles on the both sides of main body, then install
- The top baffle toward the card slot of the main body according to the icon as below, and make sure they are fixed well.
- When you disassemble the sun-shadow, please take off the top baffle, then the right and left one.




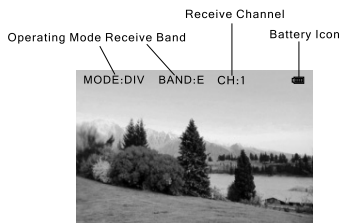
# Icons

## Function Icons



## Screen Icons

- There are different icons in different working modes.
- When battery icons shows as  it means the batter need be recharged or changed



# Operation Instruction

## Power on/off

- Press the power button until the device is on, the red indicated light will be on.

## Working Mode

- Press mode button can set up: DIV、RX1、RX2、AV IN、HDMI IN model.
- Video TV system set-up(except HDMI mode): Press menu button to enter 'function', then 'Video sys' to choose PAL or NTSC.
- Under DIV、RX1、RX2 modes, you need press menu button first to enter RF to set up the frequency band to make sure, the device Work with the transmitter in the same band.

## Diversity Mode

- The due antenna diversity receiver is made up of ANT1、ANT2 and receiving circuit, according to their RSSI output, the device can keep receive the strongest signal all the time. and maximize image display stability.
- Antenna LED will show the current stronger one.
- < - > and < + > button controls the channel change.
- DIV AV OUT outputs diversity receiving signal for video recorder and external display purposes.  
DIV AV OUT ONLY works under the diversity mode.

## Diversity Mode

- Under this mode, the channel of RX1 and RX2 can be set up separately; can set up the current shown video signal of RX1 or RX2 by mode button.
- < - > button controls RX1 channel, < + > button controls RX2 channel.
- Rx1 AV OUT and RX2 AV OUT output the corresponding channel of themselves, the device can receive the video signals from 2 different transmitters at the same time. If there is only one transmitter working, there is no different to use RX1 and RX2. If there are two transmitters working, Please pay attention to adjust the bang and the channel, let each other dose not affect the image effect.

## AV IN Mode

- For inputting external video and audio signal.
- In AV IN mode, wireless receiving circuit automatically shut down to save battery life.

## HDMI Mode

- HDMI can input HD video to show much clearer image, and automatically adapt to the resolution (the maximum input 1920X1080/60Hz).  
In HDMI mode, wireless receiving circuit automatically shut down to save battery life.
- Press the mode button in the HDMI mode, may slow response, this is a normal phenomenon, because HDMI mode requires multiple attempts to connect with an external device, after success connecting, the device can quickly display.

# Function Instruction

## ZOOM Function

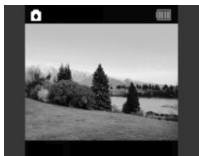
### ●Vertical Scaling

Use this function, can make vertical scaling, only show 16:9 moving image region of 4:3 picture on the screen.

Support shortcut keys: Long press <+> button to ZOOM IN , long press <-> button to ZOOM OUT(back to original scale)

Attention: NOT Support HDMI video vertical scaling.

For example: original scale



ZOOM IN



### ●Horizontal Scaling

Use this function, can make horizontal scaling, change input 4:3 image into 16:9 image displayed on the screen.

The default in 16:9 mode (ZOOM IN full screen display), to change settings, please enter the menu->Function-> Display Ratio to choose 4 : 3 or 16 : 9 displaying.

For example: original scale



16:9 (ZOOM IN)



Through these functions can realize image full screen easily display, in order to obtain the best display effect,enable the above functions at the same time can also obtain the following display effect:



# Function Instruction

## DNR

When external signal is input,due to various reasons,for example: signal source is interference transmission line caused by EMI,which may cause more image noise and more serious picture ripples;set up DNR function can improve these phenomenas.When you set DNR to “High”,you Will reduce the noise to the maximum extent to improve the display effect.

-When there is some serious noise interference, the DNR features may not function.

## Display Direction

In the menu,Flip Horizontal、 Flip Vertical can control video display direction, Flip Horizontal is for image mirror display,Flip Vertical is for image upside down display.

-This feature helps CAMERA inverted installation,the reversed image display on the screen; open the two functions at the same time can make sure the image displayed in normal correct direction for ever.

-Attention: this function starts, the screen icon will also change the display direction

## DVR function

(Note: DVR can only work under DIV RX1 and RX2 modes)

Long press “-”button for 3 seconds, start/stop DVR recording. After starting DVR function, there is a green triangle icon shown on the right of the status information bar, long press again to stop DVR recording function, there is a red square icon shown on the right of the status information bar.

Long press “+”button for 3 seconds, enter playback mode, short press “△” or “▽”button to choose playback file, shore press “M”button to play current files and videos. When playing files and videos, you can press “△” or “▽”to enter fast forward or fast back.

# Menu

(Works in black for explaining the menu function)

Press **⏏** button into menu setup; these menu consists of 4 directories:

Color, Audio, Function, Wireless; Press **M** button to enter settings, press **▲** or **▼** button to browse options and adjust value.

## Color

- Picture Mode
  - Contrast
  - Brightness
  - Color
  - Sharpness
  - Red
  - Green
  - Blue
- Color Temperature
  - Auto
  - 4:3
  - 16:9
  - Zoom1
  - Zoom2
  - Panorama
  - Point To Point
- Aspect Ratio

## Function

- OSD Language
  - Deutsch
  - English
  - Español
  - Français
  - Italiano
  - Nederlands
  - Polski
  - Português
  - русский
- Restore Factory Default
  - Are you sure? Yes/No

## Wireless

- Flip Vertical
- Flip Horizontal
- OSD Duration
  - 5 Sec. 10 Sec. 20Sec. 30Sec. 60 Sec. ON
- Icon
  - 5 Sec. 10 Sec. 20Sec. 30Sec. 60 Sec. ON
- Diversity mode
  - A, B, E, F, R
- RX1 band
  - A, B, E, F, R
- RX2 band
  - A, B, E, F, R

# Specification

## DVR playback menu interface :

Long press **+** button more than 3 seconds, enter playback mode; then press **⏏** button, enter DVR playback menu setup, can do file deleting and protection setup.

- Delete
  - Single
  - All
  - Select
- Protect
  - Single
  - All
  - Select

Display Screen	Diagonal	7 inch								
	Resolution	1024X600								
	Contrast	700:1								
	Luminance	300cd/m <sup>2</sup>								
Wireless Receiving	Working frequency	ISM 5.8GHz								
		Band	CH 1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
	Sensitivity	A	5865M	5845M	5825M	5805M	5785M	5765M	5745M	5725M
		B	5733M	5752M	5771M	5790M	5809M	5828M	5847M	5866M
	Channel	F	5740M	5760M	5780M	5800M	5820M	5840M	5860M	5880M
		R	5658M	5695M	5732M	5769M	5806M	5843M	5880M	5917M
	Channel	40Channel(5 Band X 8 Channel)								
	Antenna Port	2 X SMA, 50ohm								
	Diversity receiving TV System	Antenna diversity NTSC/PAL								
	Video output level	1.0Vp-p Typ. 75ohm								
Audio output level	1.0Vp-p Typ. 10Kohm									
DVR signal source	DIV, Rx1, RX2									
DVR Function	MicroSD storage	Max support 64Gb								
	DVR rate	6Mbps (MJPEG compress, 30 fps, AVI)								
AV Port	File display	(local recording not support codec), support fast forward and fast back.								
	RX1 AV OUT	Video, Audio output								
	RX2 AV OUT	Video, Audio output								
	DIV AV OUT	Diversity receiving, Video, Audio output								
	AV IN	Video, Stereo Audio input								
	HDMI IN(A type)	Support HDMI 1.3 Digital Input, Support HDMI Audio in								
Power Supply	Built-in Microphone	80/1W X 2								
	DC IN	7 ~ 28V/ 2A								
	DC OUT	Output Voltage : DC IN or battery voltage								
	Battery	Output Current : 1A								
Dimensions	Battery	11.1V/1000mAh(3 series LiPo cells)								
	Main Body	12V input: 7.8W								
	Battery	183X126X19.5mm(not include sun shadow)								
Weight	Main body	105X87.5X6.7 mm(not include prominent part)								
	Battery	350 g								
Tripod connector	95 g									
Working Temperature	General 1/4 "thread									
	-10°C ~ +65°C									