HGLRC Draco
HD VTX Manual

Draco HD VTX features high-definition quality, low latency, and long-range transmission. The video transmission power can reach up to dual 1W. The air unit features a fully enclosed CNC housing, offering a compact size and excellent heat dissipation. Two camera versions are available: the standard A1 camera, with a 14mm width, is lightweight and compact, making it ideal for small drones; the enhanced night vision version A2 features a standard 19mm lens, allowing you to fly fearlessly even in pitch-black conditions

Specification

Parameter table for different versions of the Air Unit

Model	Draco A1 LITE+	Draco A1 PRO	Draco A2 PRO
Power	< 30dBm（FCC）	< 33dBm（FCC）	< 33dBm（FCC）
Air Unit Power Supply	5-25V	8-30V	8-30V
Air Unit Mounting Hole Spacing	20mm/25.5mm	20mm/25.5mm	20mm/25.5mm
Air Unit Dimensions	32X32X10mm	32X32X10mm	32X32X10mm
Camera Mounting Hole Spacing	14mm/20mm	14mm/20mm	19mm
Antenna	Dual antenna	Dual antenna	Dual antenna
Air Unit Weight	≈26g(With antenna)	≈26g(Without antenna)	≈36g(Without antenna)
FOV	170°	170°	160°
Coax length	≈160mm	≈160mm	≈140mm
Resolution	1080P	1080P	1080P
Frame Rate	60fps	60fps	60fps
Aspect Ratio	4:3/16:9	4:3/16:9	4:3/16:9
OSD Data	BF/INAV（MSP）	BF/INAV（MSP）	BF/INAV（MSP）
Air Unit	SH1.0-6pin	SH1.0-6pin	SH1.0-6pin

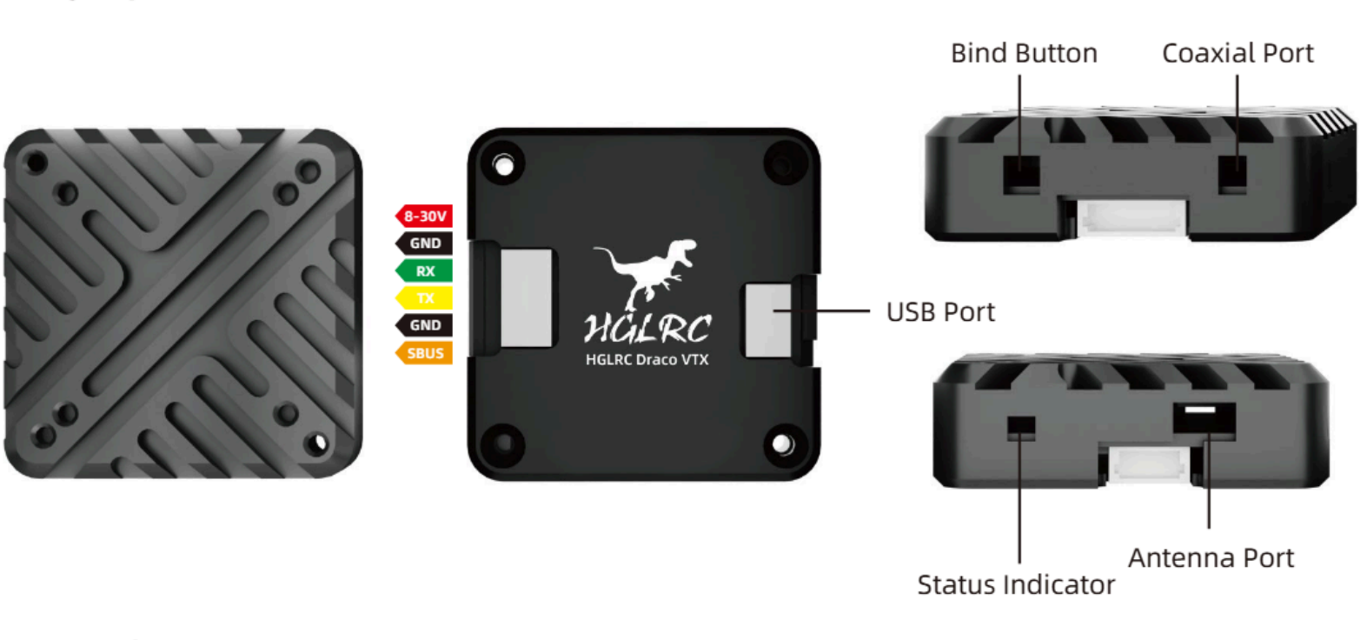
Parameter table for different versions of the Ground Unit

Model	Draco Ground Unit	Power Supply	DC Interface 8-36V
Dimensions	70X100X20mm	Weight	≈78g
Ground Unit Video Output	HDMI Interface	Antenna connector	Dual SMA female connector
Mounting method	1/4 Nut	Slot	TF Slot

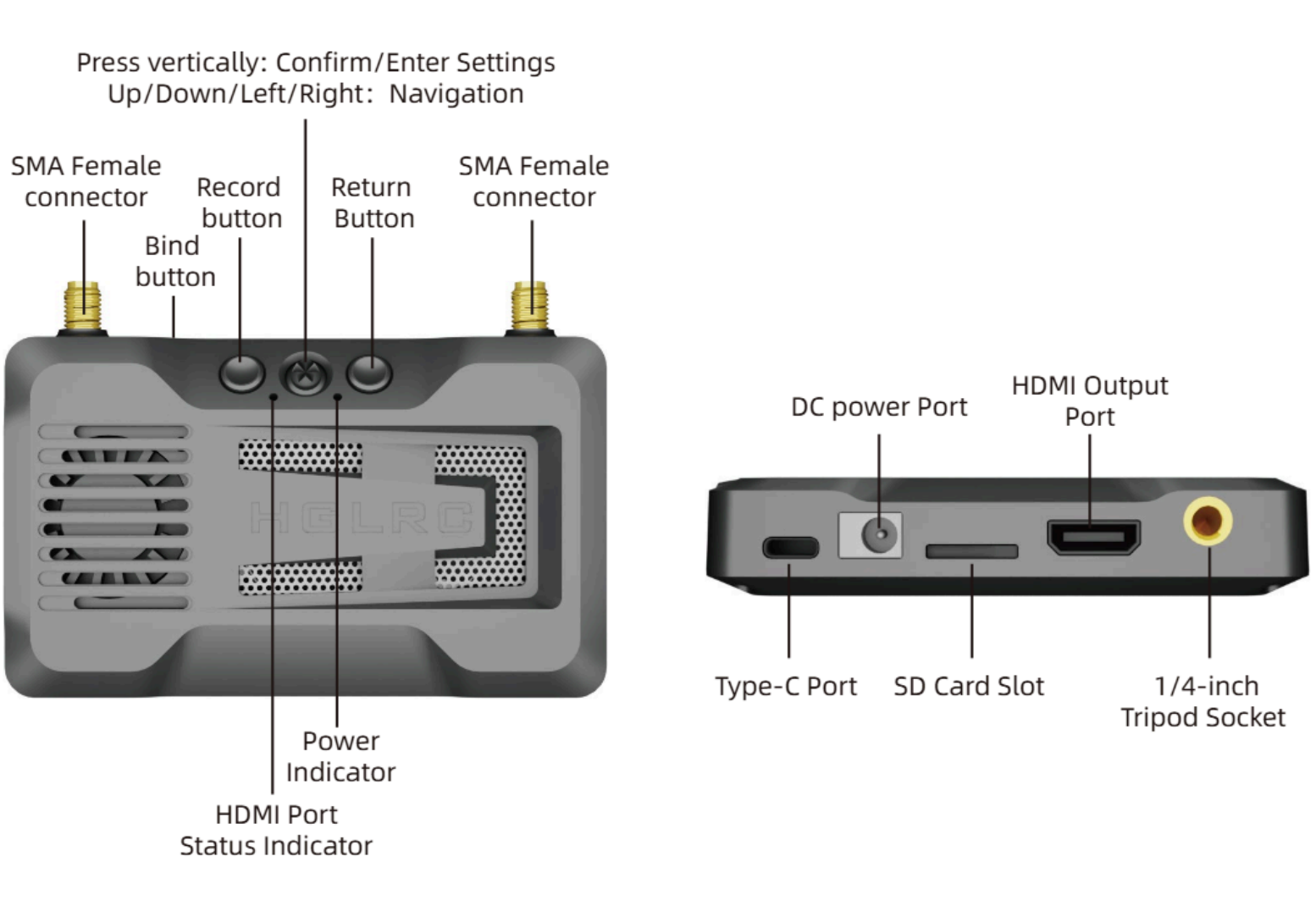
User Guide

Button & Pin Definitions

Air unit


8-30V
GND
RX
TX
GND
SBUS
Bind Button
Coaxial Port
USB Port
Status Indicator
Antenna Port

Ground unit

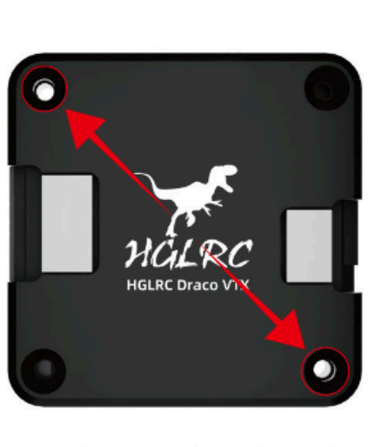

Press vertically: Confirm/Enter Settings
Up/Down/Left/Right: Navigation
SMA Female connector
Record button
Bind button
Return Button
SMA Female connector
Power Indicator
HDMI Port Status Indicator
DC power Port
HDMI Output Port
Type-C Port
SD Card Slot
1/4-inch Tripod Socket

VTX Channel / Band Frequency Table

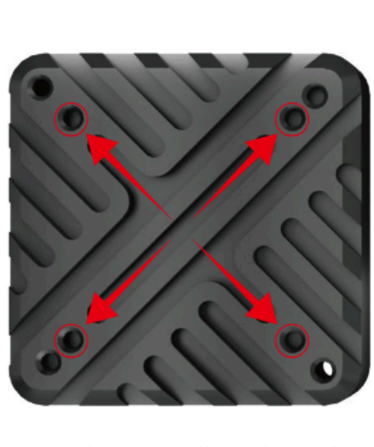
	Name	Frequency band	Scope
Standard Mode	CH 1	5.758GHz	5.748-5.768GHz
	CH 2	5.788GHz	5.778-5.798GHz
	CH 3	5.828GHz	5.818-5.838GHz
Race Mode	CH 1	5.658GHz	5.648-5.668GHz
	CH 2	5.695GHz	5.685-5.705GHz
	CH 3	5.732GHz	5.722-5.742GHz
	CH 4	5.769GHz	5.759-5.779GHz
	CH 5	5.806GHz	5.796-5.816GHz
	CH 6	5.843GHz	5.833-5.853GHz
	CH 7	5.880GHz	5.870-5.890GHz
	CH 8	5.917GHz	5.907-5.927GHz
	CH 9	5. 620GHz	5.610-5.630GHz
	CH 10	5.580GHz	5.570-5.590GHz
	CH 11	5.540GHz	5.530-5.550GHz
	CH 12	5.500GHz	5.490-5.510GHz
	CH 13	5.460GHz	5.450-5.470GHz
	CH 14	5.420GHz	5.410-5.430GHz
	CH 15	5.380GHz	5.370-5.390GHz
	CH 16	5.340GHz	5.330-5.350GHz

Product Installation Guide

A1 LITE+、A1 PRO、A2 PRO Air unit



When installing this side,
you need to secure it using the 25.5×25.5mm
mounting hole pattern.
Remove the diagonal screws shown in the diagram,
then replace them with the two
long screws to fasten it in place



When installing this side,
you need to secure it using either
the 20×20mm or 25.5×25.5mm
mounting hole pattern.
Use four short screws to fasten it into
the holes as shown in the diagram

Binding

1.Connect the power supply of the Air Unit and the Ground Unit

2.Briefly press the bind button on both the Air Unit and the Ground Unit. When they enter binding mode, the bi-color LED will flash rapidly

3.When binding is successful, the green LED on both the Air Unit and Ground Unit will stay solid

LED Status Indicators

1.Unpaired Status:The red LED on both the Air Unit and the Ground Unit stays solid

2.Binding in Progress:The bi-color LED on both the Air Unit and the Ground Unit flashes rapidly

3.Binding Successful:The green LED on both the Air Unit and the Ground Unit stays solid

Firmware Update

1.Copy the firmware update files for the Air Unit and Ground Unit to the root directory of an SD card. The SD card must be formatted using the Ground Unit's internal formatting tool to ensure proper recognition. Ensure the firmware file names are exactly "A1_SKY-_v1.0.0_20251231.img" and "A1_GND_v1.0.0_20251231.img"

2.Keep the Air Unit and Ground Unit connected. Insert the SD card into the Ground Unit and verify it is recognized correctly (the SD card icon in the bottom right corner will turn blue and display the card's capacity)

3.In the menu, navigate to Settings >> System >> Upgrade. In the pop-up menu, select confirm to start the update

4.up notification will remind you to restart the drone and remote controller. The new firmware will take effect after the restart, and re-pairing is required

5.The firmware for the Air Unit and the Ground Unit can be updated independently. The system will update the device for which a corresponding firmware file is placed on the SD card. The device without a matching firmware file will not be updated

6.After the update, you can view the current firmware version information by navigating to Settings -> System -> DeviceInfo in the menu

Firmware General Instructions

1.To ensure stable video transmission during use, the air unit and the ground unit must use the same firmware version

2.To ensure seamless compatibility with third-party ArtLynk protocol devices (such as Beta P1), please confirm that your Draco device has been updated to firmware version V2.0 or higher

Firmware Version	V1.0 B01	V1.0 B02	V2.0 B02	V2.0 B03	To be updated

Firmware Compatibility Operation

Air Unit	Ground Unit	Operation Required
V1.0	V1.0	Available
V2.0	V2.0	Available
V1.0	V2.0	Upgrade the air unit to V2.0, or downgrade the ground unit to V1.0
V2.0	V1.0	Downgrade the air unit to V1.0, or upgrade the ground unit to V2.0

After upgrading the firmware to version V2.0 on both the sky and ground terminals,
firmware versions with different suffixes (B01、B02、B03) are compatible.
However, for optimal flight performance, it is recommended to
update the firmware to a version with the same suffix

1.V1.0 firmware is not compatible with other products of the ArtLynk system

2. When flashing the firmware, the air unit and the ground unit must remain connected

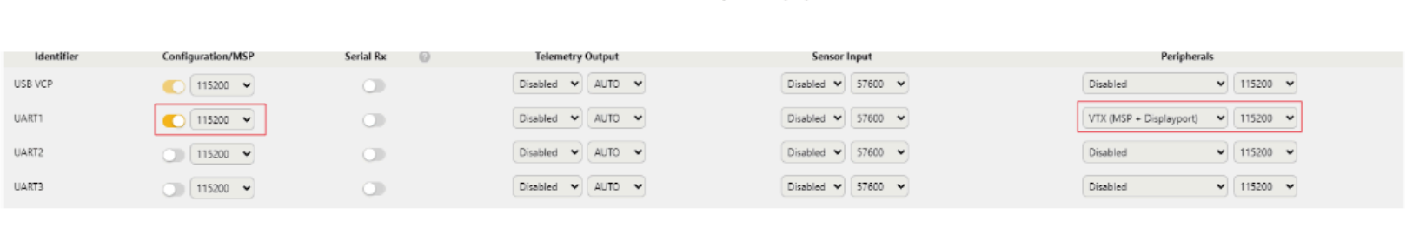
Ground Station Setup (Example:Betafligh t)

1.Connect the Air Unit to the flight controller according to the flight controller wiring diagram

2.Configure the flight controller using the Betaflight Ground Station

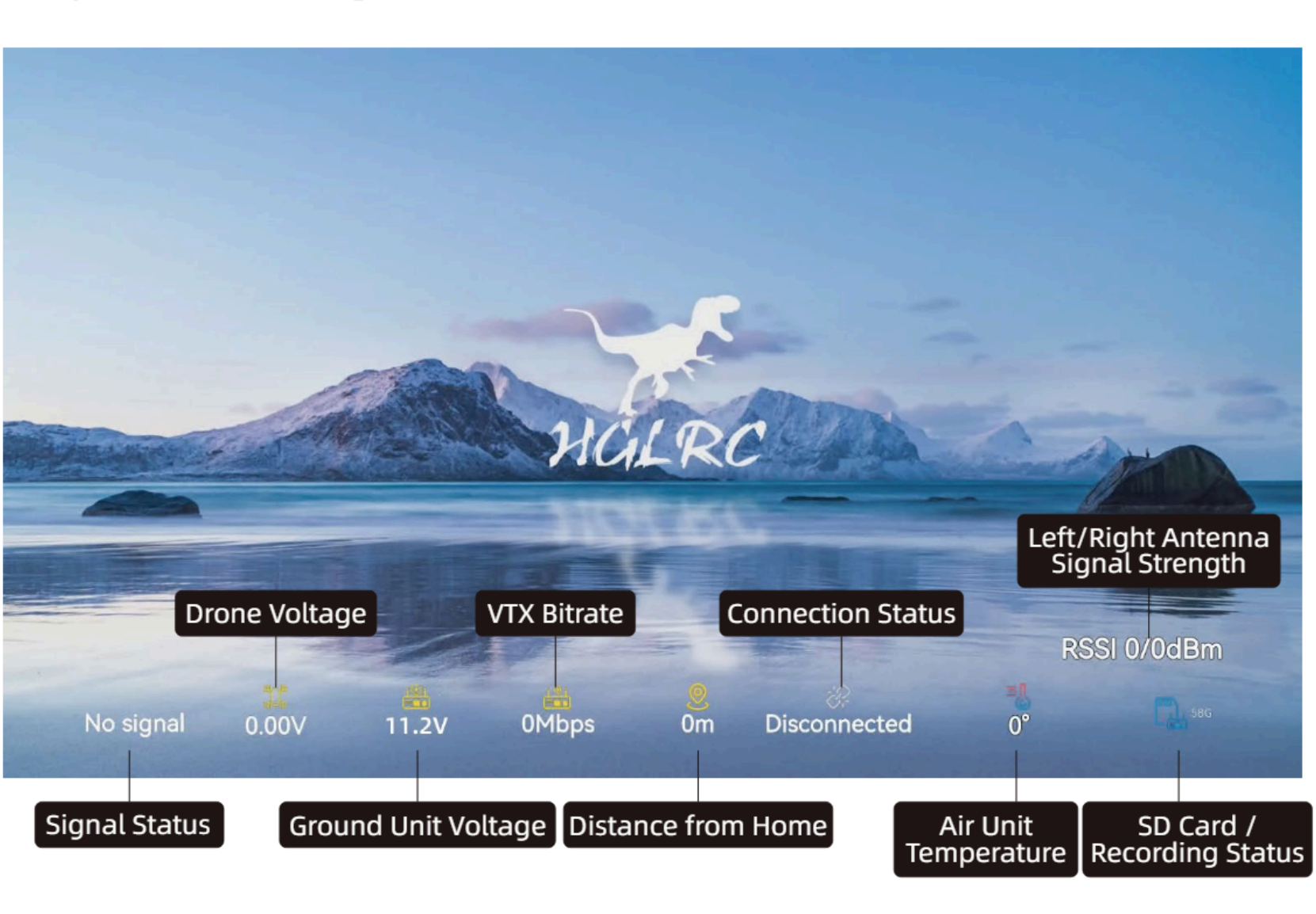
3.Use the Betaflight Ground Station to connect to the flight controller. Set the actual serial port connected to the Air Unit as the MSP display interface

4.Save and reboot the flight controller. The MSP OSD output setup is now complete. Please note that the current interface fonts only support HD video formats

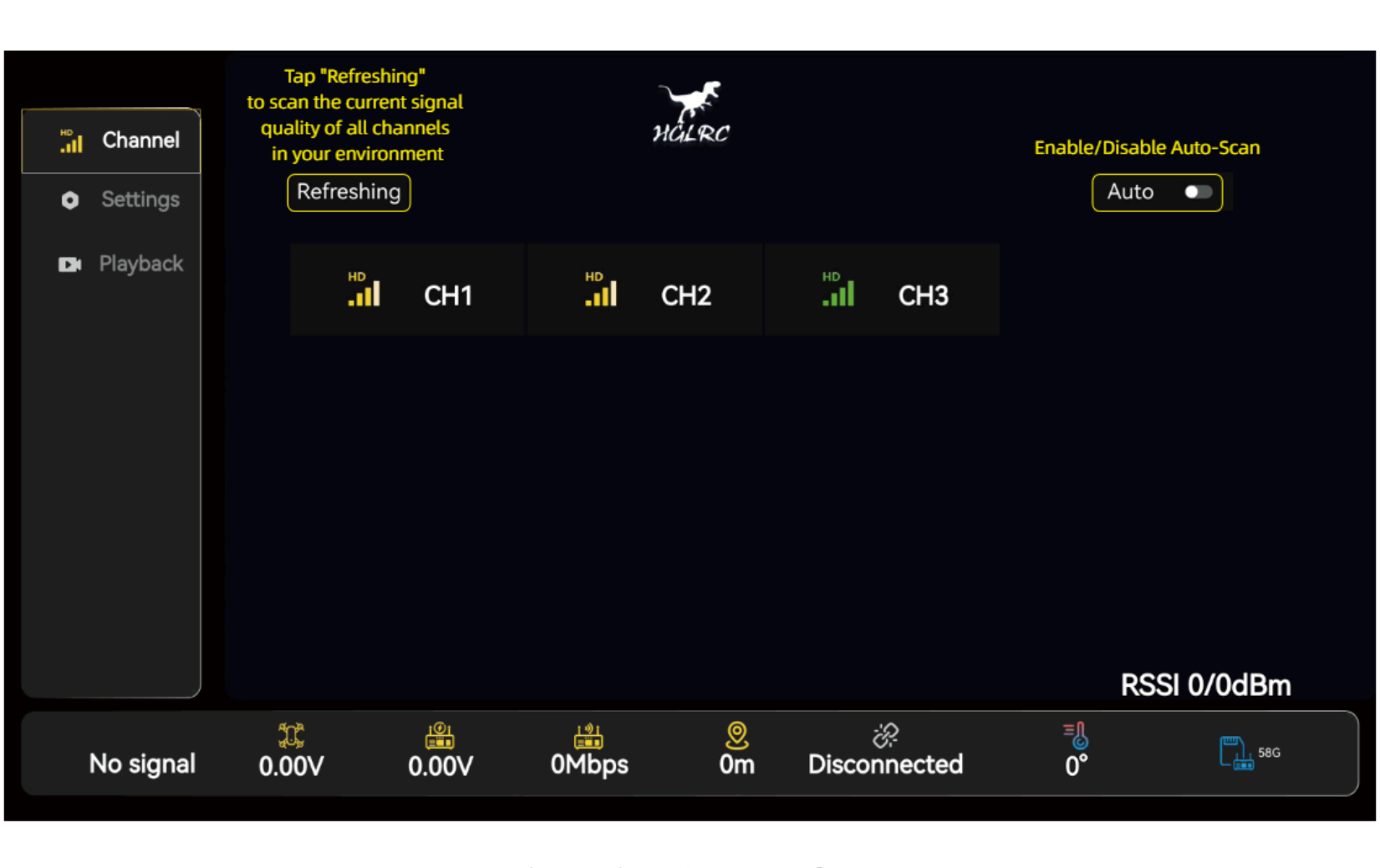


Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200		Disabled AUTO	Disabled 57600	Disabled 115200
UART1	115200		Disabled AUTO	Disabled 57600	VTX (MSP + Displayport) 115200
UART2	115200		Disabled AUTO	Disabled 57600	Disabled 115200
UART3	115200		Disabled AUTO	Disabled 57600	Disabled 115200

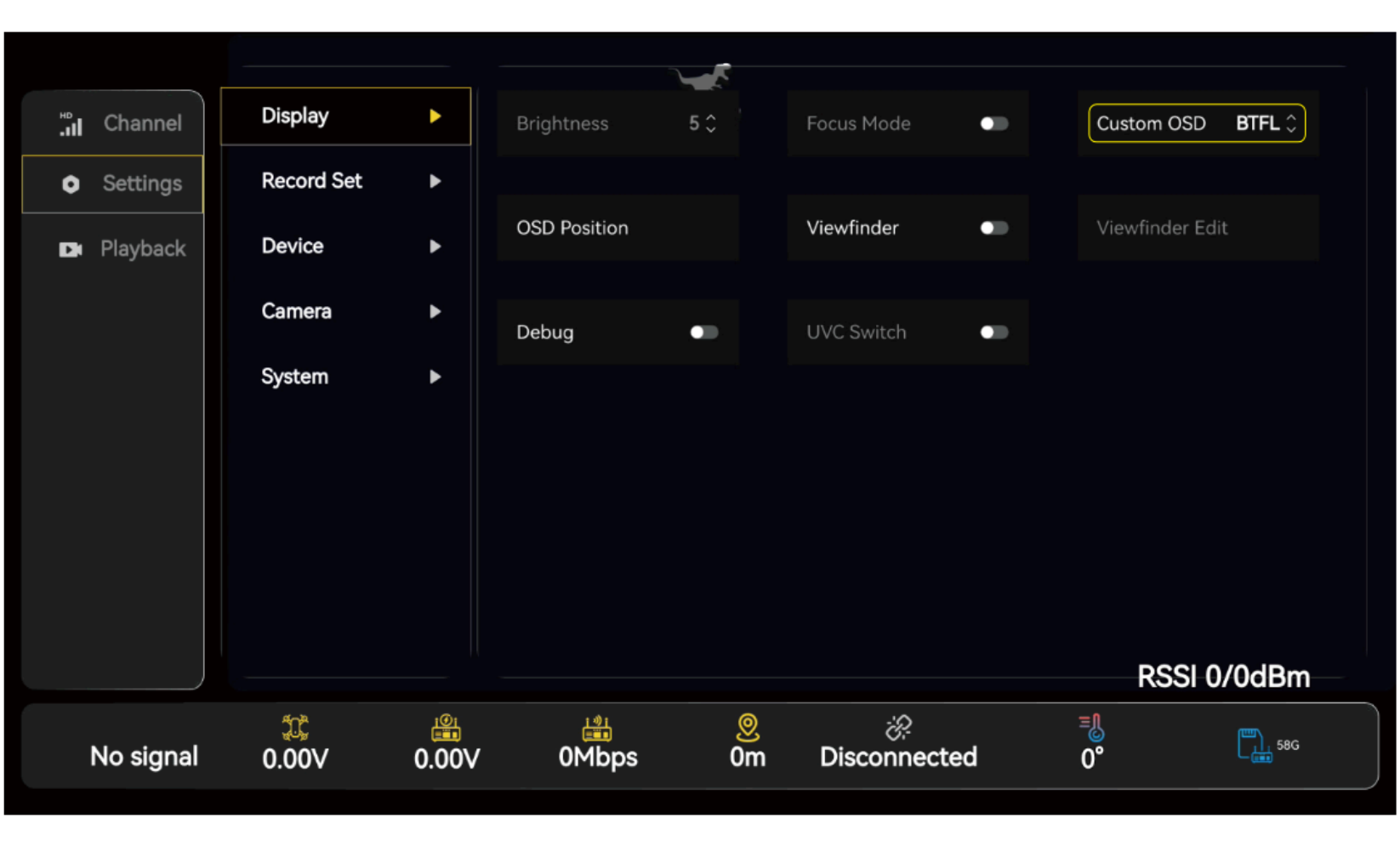
System Operation Guide


Drone Voltage
VTX Bitrate
Connection Status
Left/Right Antenna Signal Strength
RSSI 0/0dBm
No signal
0.00V
11.2V
0Mbps
0m
Disconnected
0°
Signal Status
Ground Unit Voltage
Distance from Home
Air Unit Temperature
SD Card / Recording Status

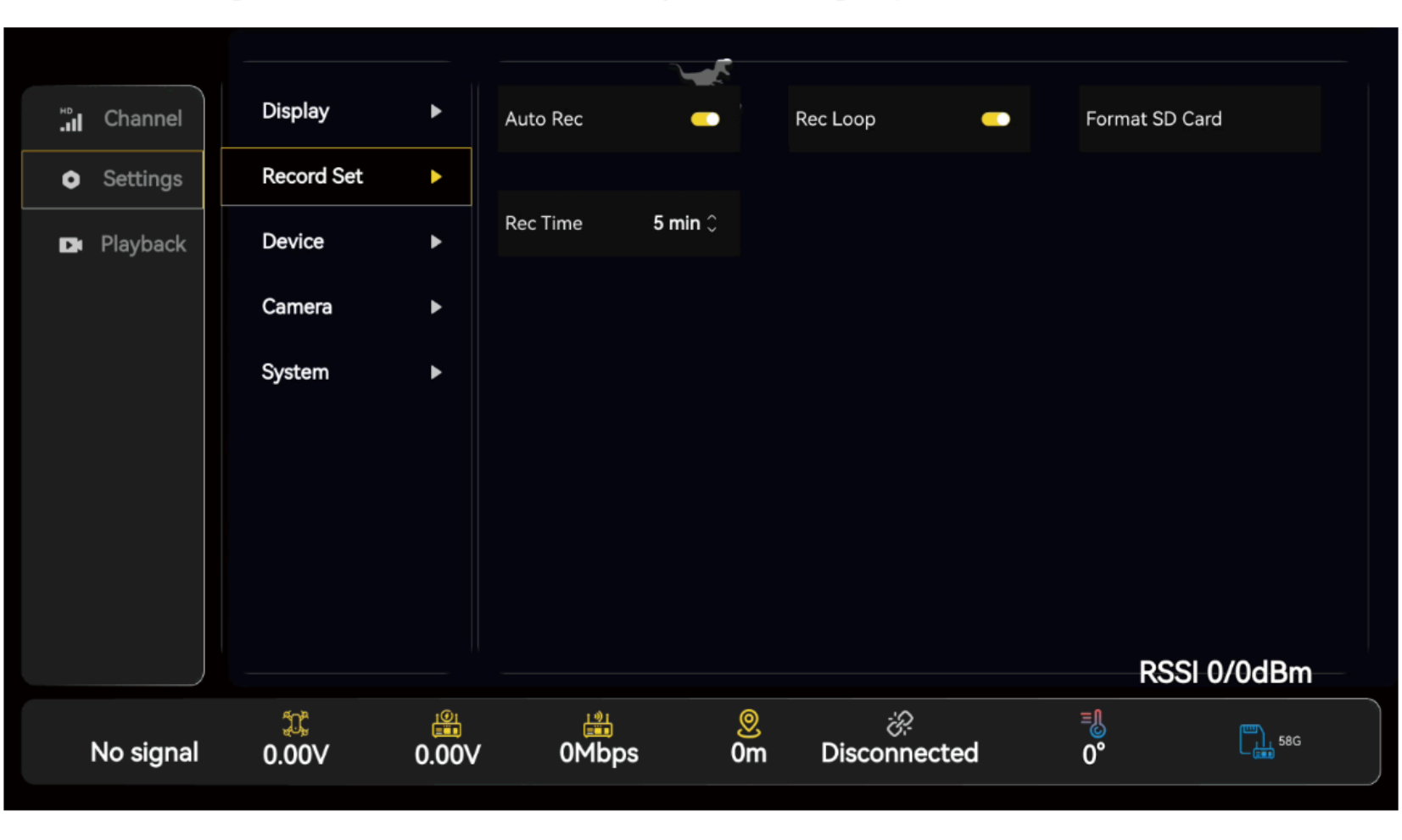
Main Interface
(The following key status information can be viewed via the
system OSD data at the bottom of the screen)


Tap "Refreshing"
to scan the current signal
quality of all channels
in your environment
Refreshing
Enable/Disable Auto-Scan
Auto
Channel
Settings
Playback
CH1
CH2
CH3
RSSI 0/0dBm
No signal
0.00V
0.00V
0Mbps
0m
Disconnected
0°

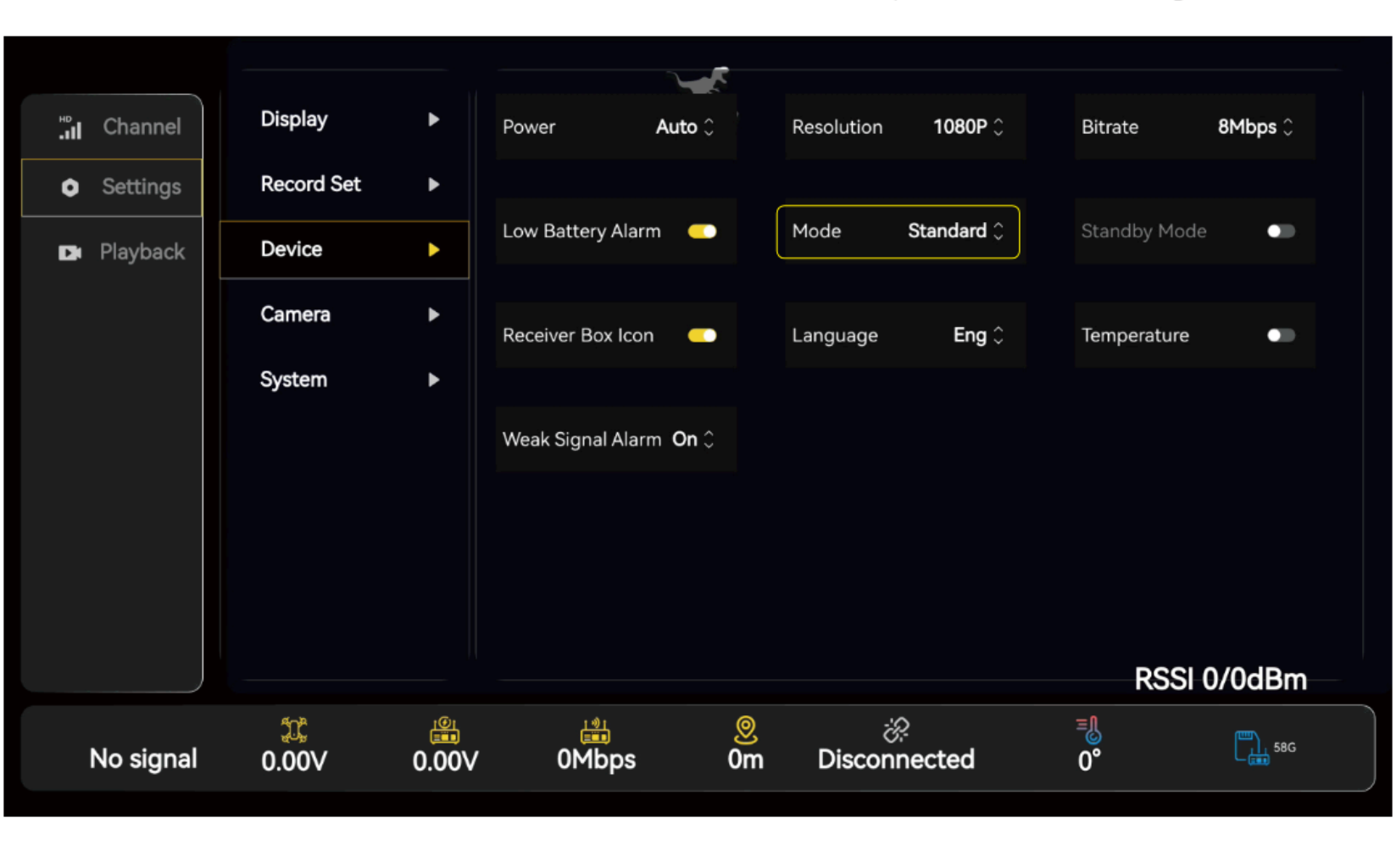
Channel Settings Interface
(In this interface,you can enable Auto-Scan or manually select a channel)
When Auto-Scan is enabled,the module will automatically switch to the
channel with the best signal based on current conditions.
To manually select a channel,disable the Auto-Scan option and choose your desired channel


Channel
Settings
Playback
Display
Record Set
Device
Camera
System
Brightness 5
Focus Mode
Custom OSD BTFL
OSD Position
Viewfinder
Viewfinder Edit
Debug
UVC Switch
RSSI 0/0dBm
No signal
0.00V
0.00V
0Mbps
0m
Disconnected
0°

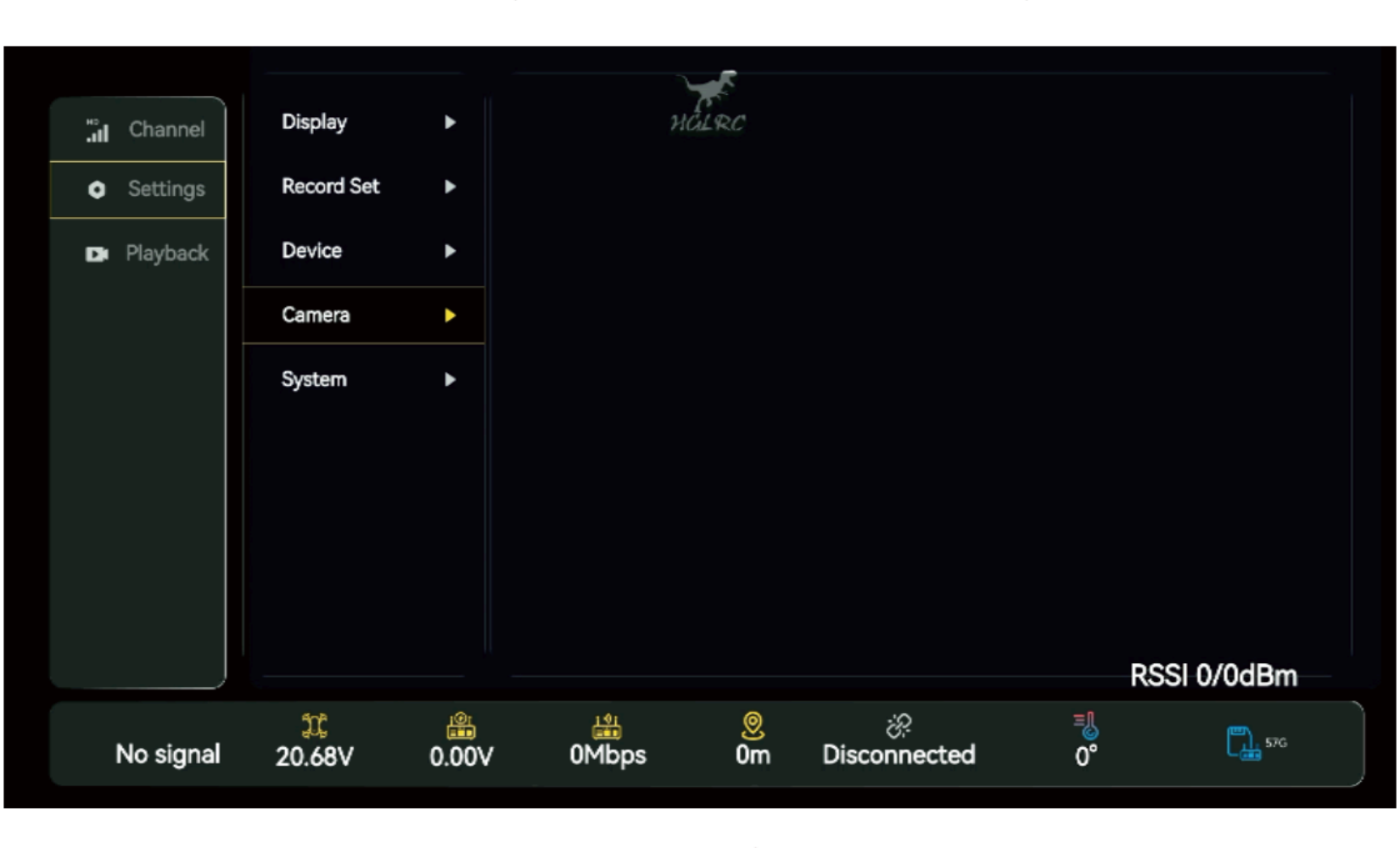
Display Settings
(This page allows you to configure the displayed image)
On this interface,you need to select the corresponding OSD Mode based
on the flight controller firmware version you are using to prevent OSD data anomalies


Channel
Settings
Playback
Display
Record Set
Device
Camera
System
Auto Rec
Rec Loop
Format SD Card
Rec Time 5 min
RSSI 0/0dBm
No signal
0.00V
0.00V
0Mbps
0m
Disconnected
0°

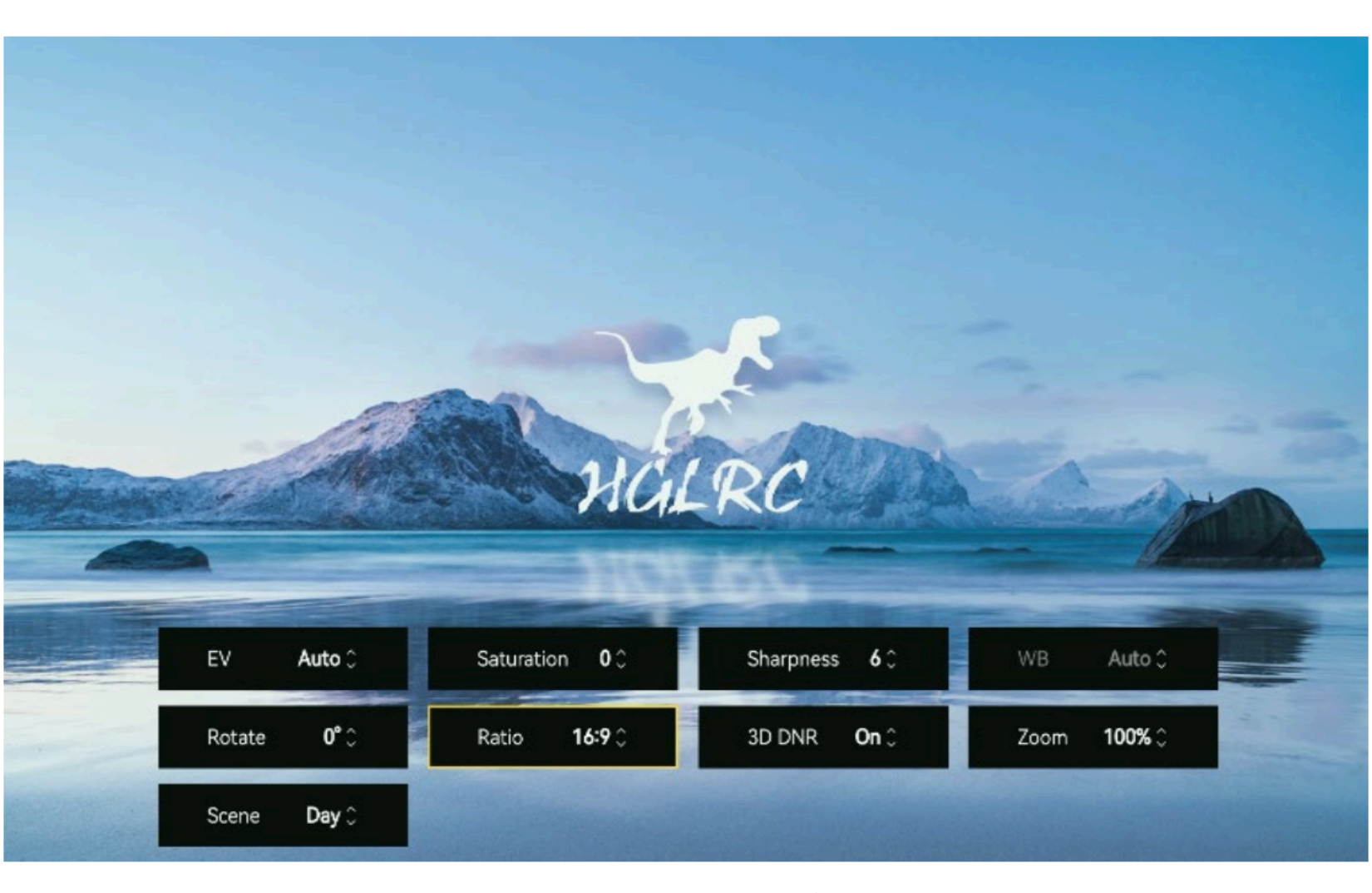
Recording Settings
(This page allows you to make changes based on your desired recording mode)
For an SD card inserted into the unit for the first time,you need to go to
this interface and use the module to format it,in order to prevent SD card usage issues


Channel
Settings
Playback
Display
Record Set
Device
Camera
System
Power Auto
Resolution 1080P
Bitrate 8Mbps
Low Battery Alarm
Mode Standard
Standby Mode
Receiver Box Icon
Language Eng
Temperature
Weak Signal Alarm On
RSSI 0/0dBm
No signal
0.00V
0.00V
0Mbps
0m
Disconnected
0°

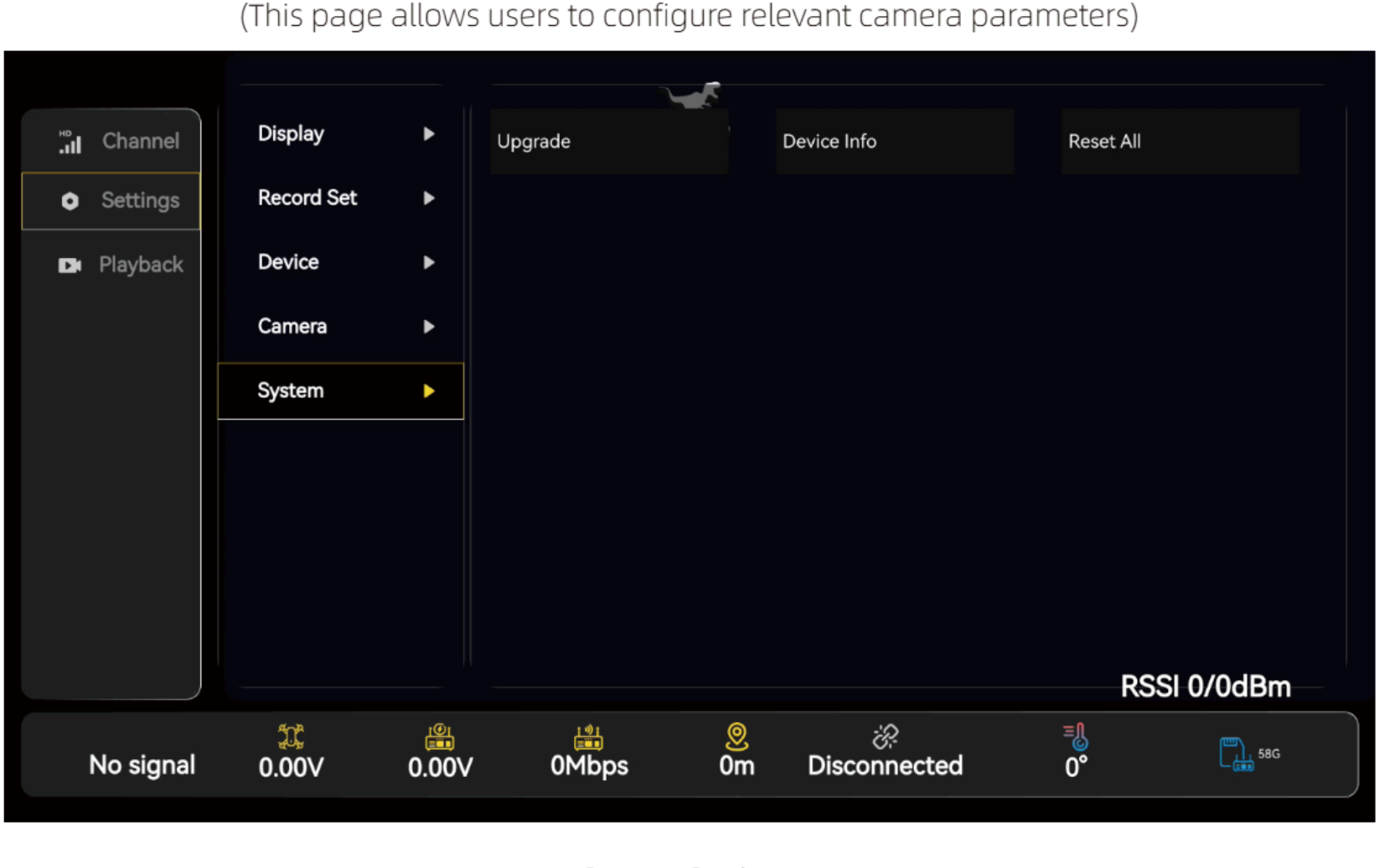
Device Settings
(This page is mainly for configuring device-related parameters.Do not change them casually.)
The Device Mode directly affects the flight video canvas.
Standard Mode corresponds to 16:9,and Race Mode corresponds to 4:3


Channel
Settings
Playback
Display
Record Set
Device
Camera
System
RSSI 0/0dBm
No signal
20.68V
0.00V
0Mbps
0m
Disconnected
0°

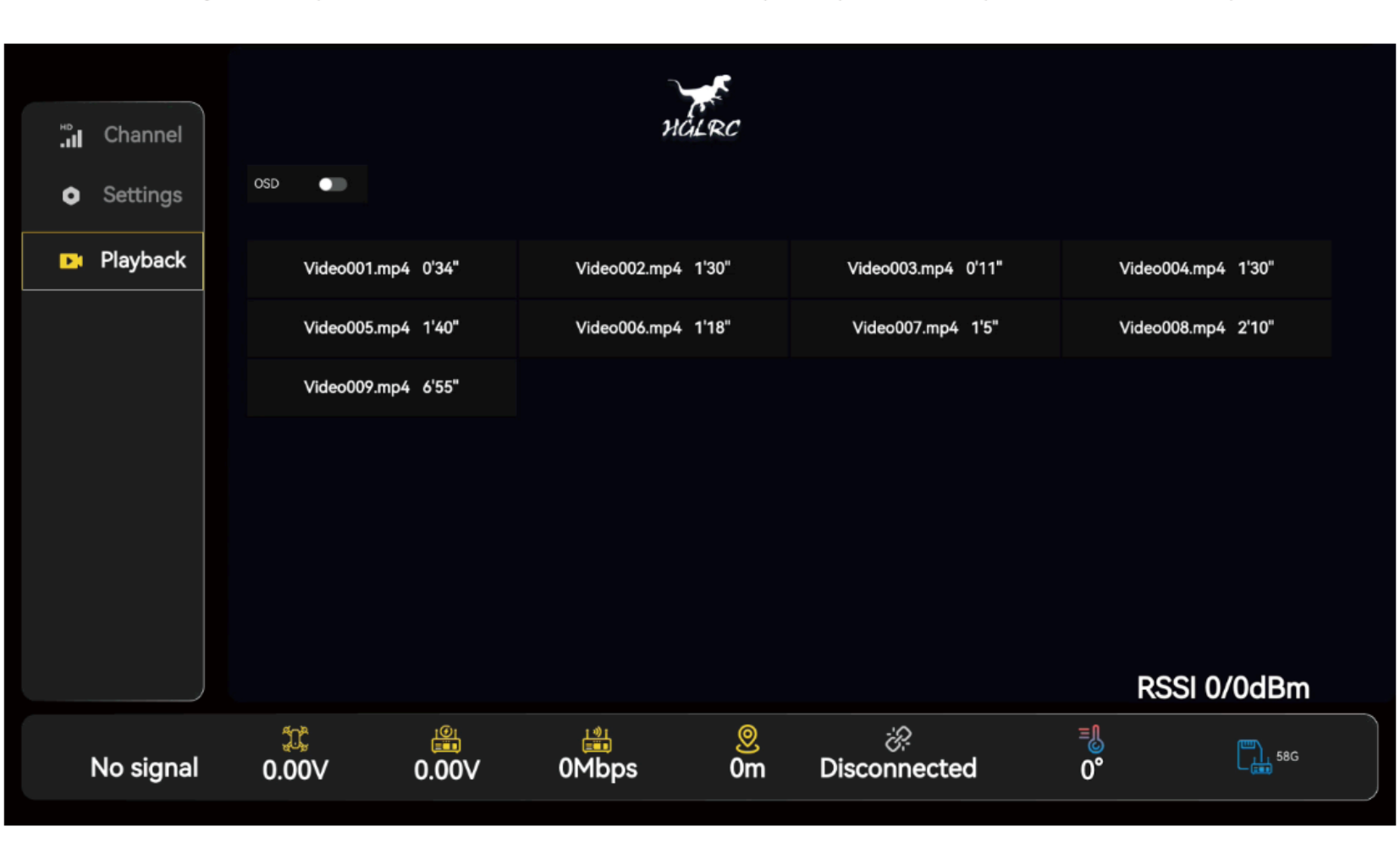
Camera settings
Pressing the five-way button to the right enters the camera parameter settings


EV Auto
Saturation 0
Sharpness 6
WB Auto
Rotate 0°
Ratio 16:9
3D DNR On
Zoom 100%
Scene Day

Camera parameter settings
(This page allows users to configure relevant camera parameters)


Channel
Settings
Playback
Display
Record Set
Device
Camera
System
Upgrade
Device Info
Reset All
RSSI 0/0dBm
No signal
0.00V
0.00V
0Mbps
0m
Disconnected
0°

System Settings
(This page is mainly for updating the device and restoring it to factory settings)
When an update is needed,first import the file to the SD card.Then navigate to this page,
select System Update,and follow the on-screen prompts to complete the device update


Channel
Settings
Playback
OSD
Video001.mp4 0'34"
Video002.mp4 1'30"
Video003.mp4 0'11"
Video004.mp4 1'30"
Video005.mp4 1'40"
Video006.mp4 1'18"
Video007.mp4 1'5"
Video008.mp4 2'10"
Video009.mp4 6'55"
RSSI 0/0dBm
No signal
0.00V
0.00V
0Mbps
0m
Disconnected
0°

Playback Interface
(In this interface,you can select and play DVR videos recorded on the SD card)

Note

1.Ensure the antennas are connected to the output ports before powering on the device to prevent damage to internal components

2.Verify that the input voltage is within the specified range and correctly connected to avoid damaging internal components

3.The outer surface of the VTX can become very hot during high-power operation. Do not touch it directly with your hands to prevent injury

4.After inserting an SD card into the device, it must be formatted using this device to prevent recording errors

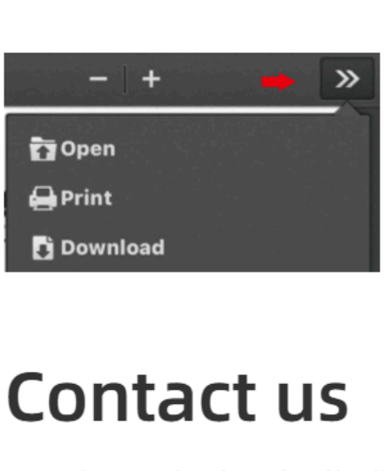
About after-sales

1. If the product cannot be used normally after receiving the product, please consult the after-sales customer service or return it to the factory for repair in time. If the product is detected to be a problem, our company will provide free repair or replacement

2. If the product is damaged due to improper operation, after inspection, if it can be repaired, maintenance service can be provided

3.please contact the after-sales service personnel

Attention


Open
Print
Download

If the manual is unclear
you can click the arrow in the upper
right corner to download the
high-definition PDF version

Contact us

We sincerely thank all pilots for your trust! Welcome to choose HGLRC's products

This product is authorized by Shenzhen Huagulong Technology Co., Ltd.
Technical phone: 18033023851 (same as WeChat)
Official website:https://www.hglrc.com
Address: Room 206,No. 12,Tongfuyu Industrial Zone,Heping Community,Fuhai Street,
Bao'an District,Shenzhen,China