



AvengeAngel 10.2 inch

Dual 5.8G receivers 1000lux FPV Monitor, DVR, HDMI

- ✓ Support X band
- ✓ -99db high sensitivity
- ✓ Auto channel search

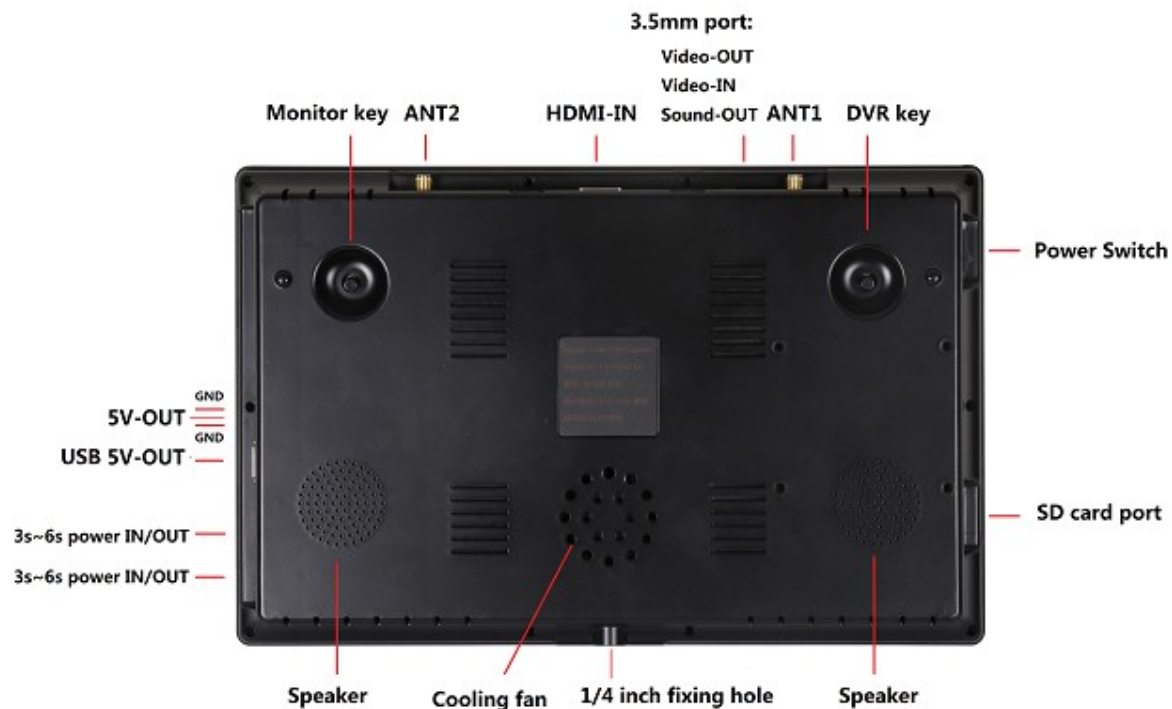


V1.0

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Specifications and Features:



Note: the location of the cooling fan should not be covered by debris, otherwise the cooling effect will be affected.

LED Screen	Display resolution	1024×600
	Backlight	LED
	Brightness	1000 Lux
	Aspect ratio	16: 9
	Response time	10ms
	Color system	PAL/NTSC
Power Supply	Working voltage	DC: 3S-6S battery
	Current	1.0A @3S; 550MA @6S;
Input	Signal	Video (PAL/NTSC), HDMI
Output	Signal	Video
	5V(input power >12V)	1A
DVR	Resolution	D1/VGA/QVGA
	TF card supported	Max 64G
Specification	Packing size	300mm×200mm×60mm
	Monitor size	265mm×170mm×31mm
	Gross weight	1.13kg
	5.8G Sensitivity	-99dB
Matching antenna interface	interface	SMA

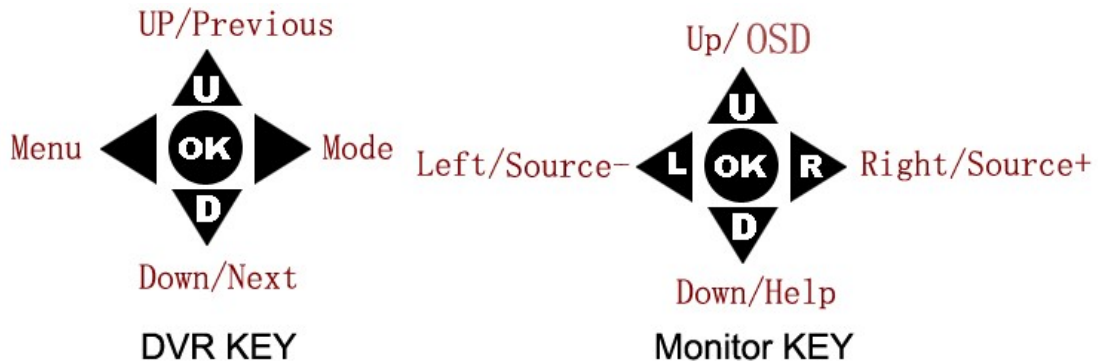
Features:

Specially designed for aerial photography system, CAPTAIN all-in-one monitor has the following features:

- ✓ **High brightness:** 1000 Lux.
- ✓ **Dual receiver:** built-in dual receivers.
- ✓ **DVR :** integrated DVR black box can run in the background for recording.
- ✓ **No delay/anti blue screen/anti black screen:** the built-in DVR system won't cause any delay in receiving signal; blue screen or black screen will definitely not occur.
- ✓ **Auto/manual channel scan:** no need for DIP switch.
- ✓ **HDMI input.**

Button Functions:

At the back of the monitor, there are 2 groups of buttons, one for DVR control and the other for display control.



DVR Control Buttons:

	Functions
UP	Move cursor up
DOWN	Move cursor down
MENU (left button)	Pop up/exit menu/sub menu
MODE (right button)	Enter/exit video playback mode
OK	Confirm selection /play/stop

Display Control Buttons:

	Functions	Shortcut key
UP	Move cursor up	Hiding OSD/ Press 2 seconds for Auto channel search in FPV
DOWN	Move cursor down	Popping up HELP menu
LEFT/ -	Adjustment key(-)	Popping up former interface
Right/+	Adjustment key(+)	Popping up next interface
OK	Po pup menu/confirm selections	

Note: Four display resource types of this monitor are: **FPV interface**, **DVR interface**, **External video input interface** and **HDMI interface**. Use LETF key(shortcut key) to switch the interface.

FPV Interface Descriptions

FPV interface is the default boot interface.

Voltage	Time	RSSI/Channel in use		
11.5	00:30	25	20	1

Voltage indicator: input voltage value is displayed; Display from 10V to 26 V. When the battery is low, the menu turns red and starts flashing. When the battery is too low, the blue light flashes faster and faster in the lower left corner and the buzzer alarms. Please replace the battery immediately to avoid damage to the battery.

Recording indicator: a red “R” flashes and the blue light flashes when DVR is working in the background.

Time indicator: monitor running time is displayed.

Signal strength indicator: the strength of both the signals received by ANT1 and ANT2 is displayed.

DVR Interface :



External video input Interface:



HDMI Interface:



HDMI input :480i/p, 576i/p, 720p, 1080i/p.

Display Interface Setting:

Press OK button to popup menu setting:

FRQA	SCAN
FRQB	A1 5645
FRQADJ	OFF
FORMAT	AUTO
BRI	20
CON	20
SAT	20
SHARP	07
GAMA	C0
SPEAKER	20
LIGHT	20
ZOOM	16:9
VOLADJ	+0.0V
LED	ON
LAN	EN
RESET	
EXIT	

Frequency Group Selection:

You can manually select the desired frequency from 7 groups: A, B, C, D, R, F and X or select SCAN option to start auto search.

Dual 5.8G receivers channels:

	A	B	C	D	R	F	X	Z
1	5.645G	5.740G	5.725G	5.733G	5.658G	5.362G	4.990G	6.002
2	5.665G	5.760G	5.745G	5.752G	5.695G	5.399G	5.020G	6.028
3	5.865G	5.780G	5.765G	5.771G	5.732G	5.436G	5.050G	6.054
4	5.705G	5.800G	5.785G	5.790G	5.769G	5.473G	5.080G	6.080
5	5.885G	5.820G	5.805G	5.809G	5.806G	5.510G	5.110G	6.106
6	5.905G	5.840G	5.825G	5.828G	5.843G	5.547G	5.140G	6.132
7	5.925G	5.860G	5.845G	5.847G	5.880G	5.584G	5.170G	6.158
8	5.945G	5.880G	5.865G	5.866G	5.917G	5.621G	5.200G	6.184

(Note: Currently, only data between 4.990G and 6.080G is supported)

1.2 You can manually input the frequency, The specific operation steps are as follows:

FRQA	INPUT	
FRQB	5645	BETWEEN 4990 AND 6080
FRQADJ	OFF	
FORMAT	AUTO	
BRI	20	
CON	20	
SAT	20	
SHARP	07	
GAMA	C0	
SPEAKER	20	
LIGHT	20	
ZOOM	16:9	
VOLADJ	+0.0V	
LED	ON	
LAN	EN	
RESET		
EXIT		

Firstly, select " INPUT " in the FRQA option, then select the FRQB option, and confirm with "OK" to enter the frequency point input mode.

if the current displayed frequency is 5645 and you are preparing to change it to 5665, you can use the buttons "OK", "UP", and "DOWM" to select the desired frequency. Press "OK" to select the frequency position, and press "UP" and "DOWM" to select the desired value. After all inputs are completed, press "OK" to confirm.

Note: Currently, only frequencies between 4.990G and 6.080G are supported. If not within this range, the prompt bar will turn red and the setting will not be successful. Please re-enter.

Frequency fine-tuning:

FRQ	RSSI
5635	03
5637	03
5639	03
5641	03
5643	03
5645	90
5647	95
5649	03
5651	50
5653	30
5655	03

Control buttons: LEFT (-), RIGHT (+).Range, At this time, the frequency points that are similar to the current frequency are displayed. According to the signal strength, you can use the up and down keys to select, and the menu key to confirm the selection.

FORMAT:

Press LEFT or RIGHT button to enter system setting, 3 options are provided: AUTO/ PAL/NTSC. If AUTO selected, the input video system will be automatically identified. System setting will cause display failure.

Brightness:

Control buttons: LEFT (-), RIGHT (+).Range: 1-40.

Contrast:

Control buttons: LEFT (-), RIGHT (+).Range: 1-40.

Saturation:

Control buttons: LEFT (-), RIGHT (+).Range: 1-40.

Sharp:

Control buttons: LEFT (-), RIGHT (+).Range: 1-15.

Latitude:

Control buttons: LEFT (-), RIGHT (+).Range: C1-C3.

SPEAKER:

Control buttons: LEFT (-), RIGHT (+).Range: 1 to 40.

Black light:

Adjust LED light brightness, Auto, High, Low.

ZOOM:

Press LEFT or RIGHT button to enter system setting, 16:9 / 4:3

VOLADJ:

Control buttons: LEFT (-), RIGHT (+).Range: -5 to +5

LED:

Adjust the power indicator light, ON/ OFF.

Language:

Control buttons: LEFT (-), RIGHT (+).Options: Chinese/English.

Reset:

Reset values to default.

DVR Interface Descriptions:

Note: Please back up your data in TF card; when the TF card is used for the first time, it will be auto formatted .

Pressing RIGHT button can switch FPV interface to DVR interface and pressing LEFT button can switch back to FPV interface.

Video Playback

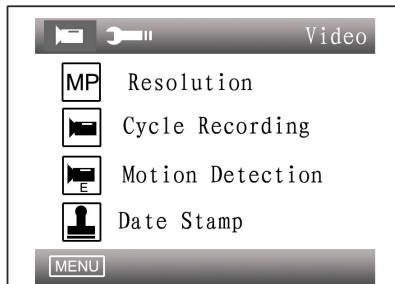
First, switch to the DVR interface, pressing MODE (RIGHT) button can start video playback. Press UP or DOWN button to select a desired file, then press OK button to start playing it.

	Functions
UP	Move cursor up
DOWN	Move cursor down
MENU (LEFT)	Po pup/exit menu/sub menu
MODE (RIGHT)	Enter/exit video playback mode
OK	Confirm selection /play/stop

DVR can run front-end or back-end. In any interface except DVR setting and video playback mode, pressing OK button (middle one of DVR control group) can start recording in the background, without affecting FPV use.

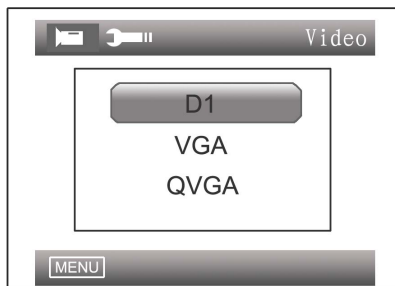
Recording Settings:

Press MENU button to select sub menu:



Resolution:

D1(720×576 (PAL)), 720×480 (NTSC), VGA(640×480) QVGA (320×240) .

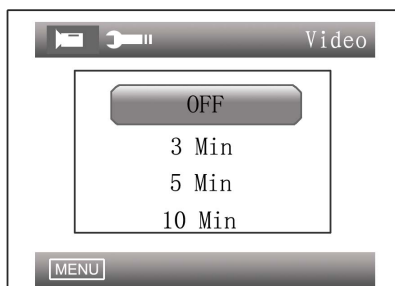


Cycle Recording:

If Cycle Recording is selected, the latest videos recorded will cover the earliest ones when the TF card is full.

“OFF”: if Cycle Recording function is closed, video files will not be cut into small segments;

If you select 3 min to 10 min, Cycle Recording function is open then; the length of each video segment is corresponding to the selected value.



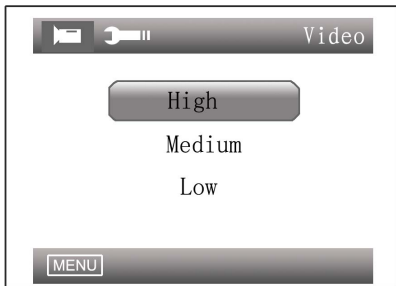
Motion Detection:

If Motion Detection is selected, the DVR will automatically start recording according to its internal algorithm when any motion is detected.



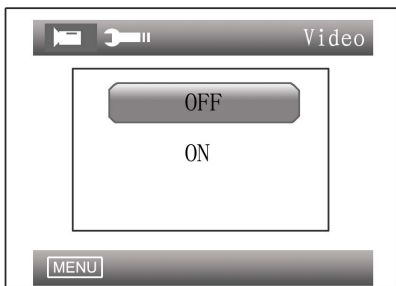
Motion Detection Sensitivity:

Motion Detection Sensitivity can be adjusted by 3 levels: High/Medium/Low; the higher level is selected, the more easily the DVR is triggered to record.



Date Stamp:

Select ON/OFF to decide whether date and time will be showed at the bottom of the video images.



Audio Acquisition:

Select ON/Off to decide whether sounds can be recorded real-time into video files.



Image Quality:

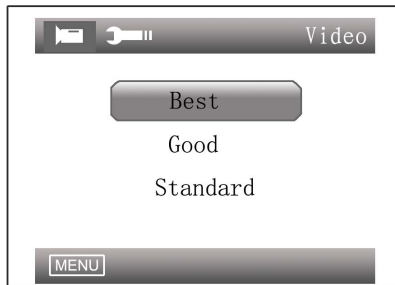
Image definition and video file size can be adjusted by 3 levels. Higher image quality results in higher image definition and larger video file;

When resolution D1(720×576 (PAL)) is selected, the file sizes of videos recorded at different Image Quality options are as follows:

Best: 1.7G/h

Good: 1.2G/h

Standard: 800M/h

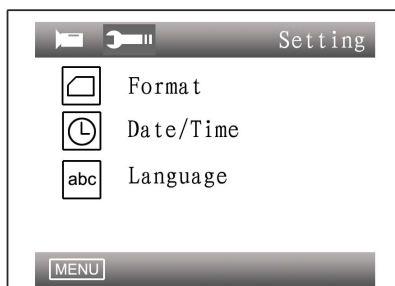


Auto power up recording:

Select YES/ON to decide whether videos need to be auto recorded when power up.

Advanced Settings:

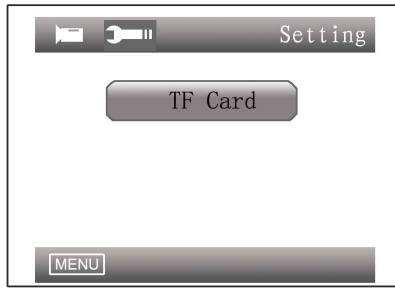
Press the MENU button twice will pop up the Advanced Setting options including Format, Date/Time and Language.



Format:

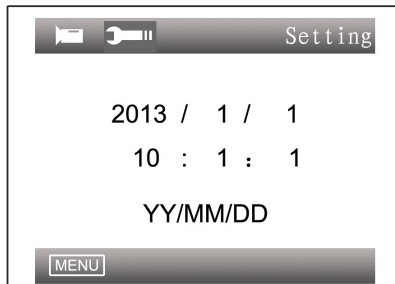
Enter Advanced Settings, and select Format option to format the TF card. In order to optimize the file system ,DVR will format the TF card, if it's used for the first time; **Please back up your data in TF Card.**

Note: all files stored in the TF card will be deleted after the card is formatted.



Date/Time:

Enter Advanced Settings → select Date/Time option → press UP/DOWN button to select a desired date/time → press MENU button to exit.



Language:

Enter Advanced Settings → select Language option → press UP/DOWN button to select a desired language from 8 languages provided → press MENU button to exit.



TV Mode:

Video output system can be selected and video input system will be automatically identified. Select the system according to which country you are in. (Keep it in PAL, do not change)



Default Settings:

This option leads back to factory default settings.



Quick Access Descriptions:

In any mode except menu setting, Monitor keys can be used as shortcuts described as follows:

Interface Switch:

Pressing RIGHT/LEFT button can switch between FPV, DVR, external video interfaces and HDMI interfaces.

Show/Hide Indication Windows:

In any interface, pressing UP button (of the display control group) once can hide the indication windows, and pressing UP again can show them again.

Show Help Menu:

In any interface, pressing DOWN button (of the display control group) can show Help menu, pressing DOWN again can make it disappear.

The power indicator light:

When the system starts, if the power indicator is on, it indicates that the power is on.

In any of the FPV, DVR and external video interfaces , When recording, the LED will flash.

When the battery is too low and the system alarms, the LED will flash.

The power indicator is very important, but for humane settings, you can enter the

menu to turn it off at night if you feel dazzling.



Packing and Accessories :

Size and Weight:

Specification	Packing size	300mm×200mm×60mm
	Gross weight (dual receiver + DVR)	1.13kg

Accessories:

Accessories	Female XT60 plug to male DC connector cable	1
	3.5mm connector cable	1
	5.8G antenna	2
	Bracket	1

3.5mm cable Interface descriptions	Yellow	Video output
	White	Video input
	Red	Audio output

FAQ:

Not able to search channels automatically:

- Auto channel scan only functions in the FPV interface. In the DVR interface, users should search channels manually.

The video displayed is black-and-white:

- Check whether the camera output is black-and-white (some cameras might automatically shift to black-and-white in low-light conditions)

Can not start after connected to power:

- First fully charge the battery, and make sure its discharge current at least reaches 1.4A. Check whether the battery power is enough. If a 3S battery is being used, try a 4S battery for testing.
- Check whether it is caused by poor contact of the DC-plug and battery cable.
- Check whether the power source is correctly connected to positive

No channel can be received:

- Install antennas, and move the monitor close to the 5.8 GHz transmitter.
- Connect video signal to the transmitter.

- Check whether the channel provided by the transmitter is one of those listed in the channels-able-to-be-received-table; check with other channels.

Volume is too low:

- Turn it to full volume.
- Check whether the microphone of the transmitter works well.