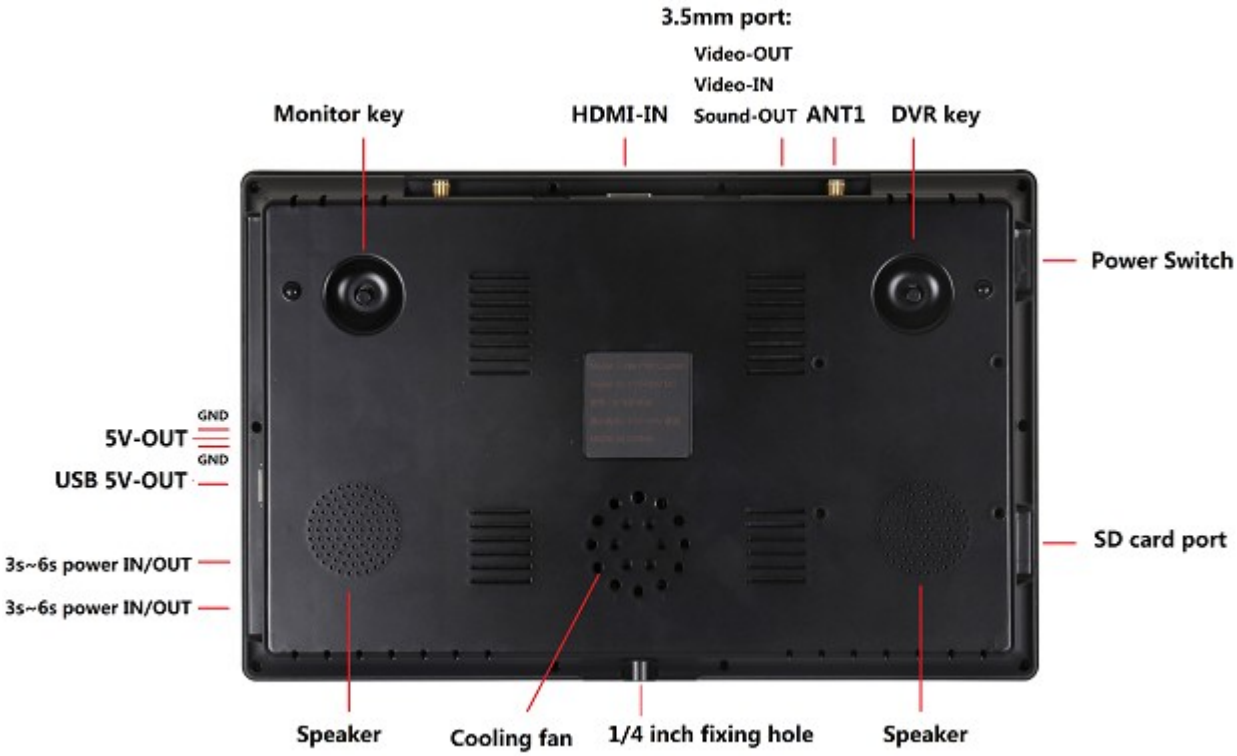
Hawkeye **1.2G 3.3G 4.9-5.8GHZ -99DB**

10.2 inch 1000LUX FPV Monitor, DVR, HDMI

Auto search, DIY channels

User Manual

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	1A @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
	Sensitivity	-99dB
Matching antenna interface	interface	SMA

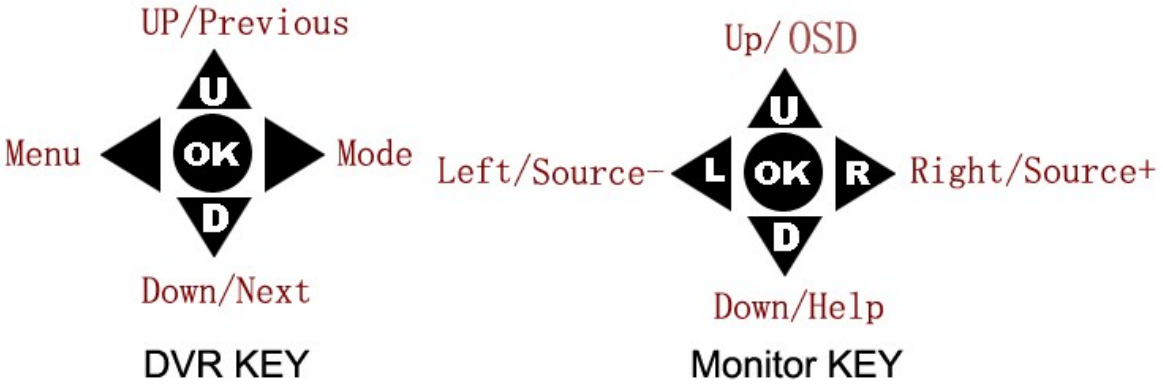
Features:

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

- ✓ **High brightness**: 1000 Lux.
- ✓ **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)	Po pup/exit menu/sub menu
MODE (right button)	Enter/exit video playback mode
OK	Confirm selection /play/stop

Display Control Buttons:

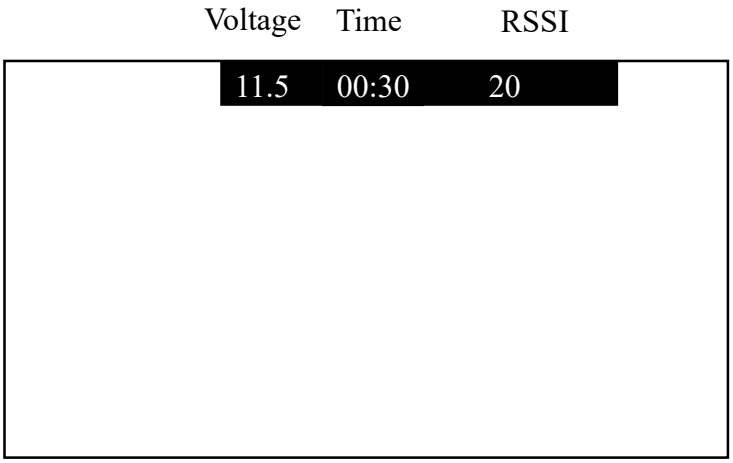
	Functions	Shortcut key
UP	Move cursor up	Hiding OSD/ Press 2 seconds for Auto channel search in FPV
DOWN	Move cursor down	Popping up HELP menu
LEFT/ -	Adjustment key(-)	Popping up former interface
Right/+	Adjustment key(+)	Popping up next interface
OK	Po pup menu/confirm selections	

Note: Four display resource types of this monitor are: **FPV interface**, **DVR interface** ,

External video input interface and HDMI interface , Track mode interface.Use LETF key(shortcut key) to switch the interface.

FPV Interface Descriptions

FPV interface is the default boot interface.

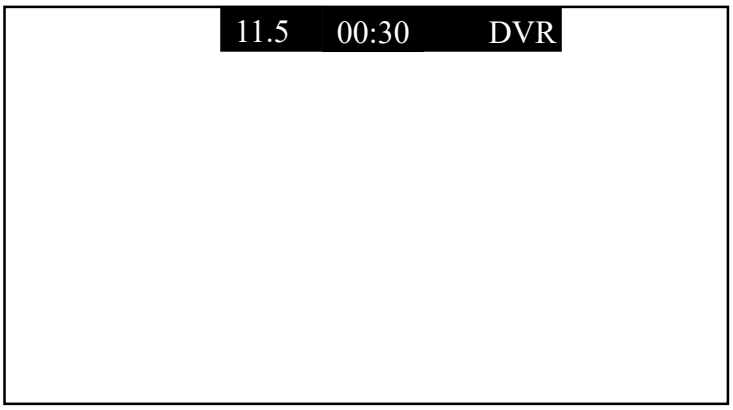


Voltage indicator: input voltage value is displayed; Display from 10V to 26 V. When the battery is low, the menu turns red and starts flashing. When the battery is too low, the blue light flashes faster and faster in the lower left corner and the buzzer alarms. Please replace the battery immediately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

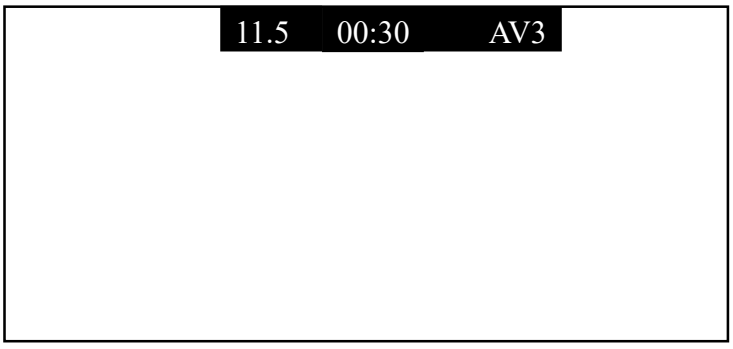
Recording indicator: a red “R” flashes and the blue light flashes when DVR is working in the background.

Time indicator: monitor running time is displayed.

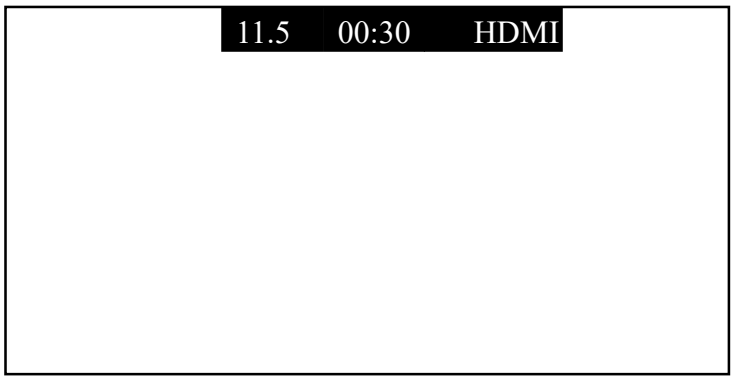
DVR Interface :



External video input Interface:



HDMI Interface:



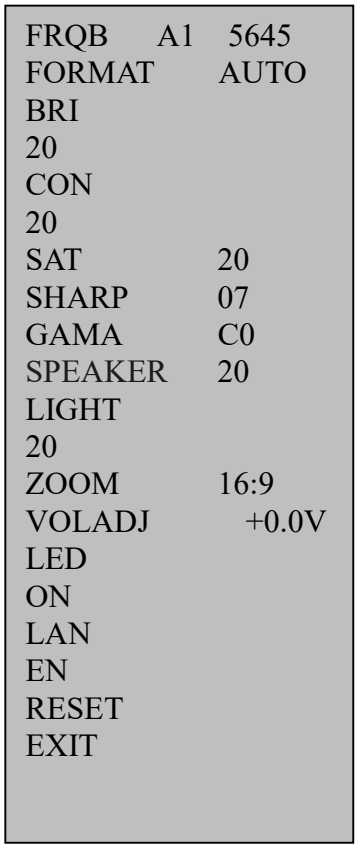
HDMI input :480i/p, 576i/p, 720p, 1080i/p.

Track mode Interface:

In track mode, the monitor will loop searching all the channels. When the RSSI value > than the setting value, it will pause for 5 seconds until button pressed.

Display Interface Setting:

Press OK button to po pup menu setting:



1.2G Frequency Group Selection:

	A	B	C	D	E	F	G	H (DIY Channels)
1	1080	1100	1300	1740	1720	1420	1400	1080
2	1120	1130	1330	1760	1740	1460	1440	1170
3	1160	1160	1360	1780	1760	1500	1480	1260
4	1200	1190	1390	1800	1780	1540	1520	1350
5	1240	1220	1420	1820	1800	1580	1560	1440
6	1280	1250	1450	1840	1820	1620	1600	1530
7	1320	1280	1480	1860	1840	1660	1640	1620
8	1360	1310	1510	1880	1860	1700	1680	1710

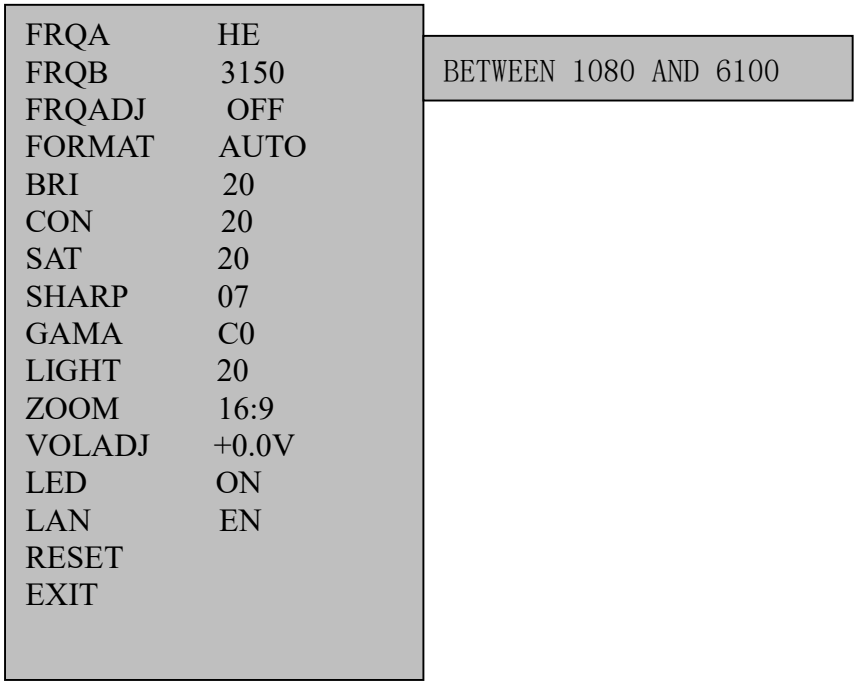
Frequency table 3.3G CH:

	A	B	C	D	E	F	G	H	HE (DIY)
1	3330	3170	3360	3200	3320	3310	3220	3060	3150
2	3350	3190	3380	3220	3345	3330	3240	3080	3230
3	3370	3210	3400	3240	3370	3355	3260	3100	3310
4	3390	3230	3420	3260	3395	3380	3280	3120	3390
5	3410	3250	3440	3280	3420	3405	3300	3140	3470
6	3430	3270	3460	3300	3445	3430	3320	3160	3550
7	3450	3290	3480	3320	3470	3455	3340	3180	3630
8	3470	3310	3500	3340	3495	3480	3360	3200	3710

Frequency table 5.8G CH:

	A	B	E	F	R	L	J	X	U	I	K	Z	H (DIY)
1	5865	5733	5705	5740	5658	5362	4867	4990	5325	5333	5960	6002	5915
2	5845	5752	5685	5760	5695	5399	4884	5020	5348	5373	5980	6028	5938
3	5825	5771	5665	5780	5732	5436	4921	5050	5366	5413	6000	6054	5958
4	5805	5790	5645	5800	5769	5473	4958	5080	5384	5453	6020	6080	5978
5	5785	5809	5885	5820	5806	5510	4995	5110	5402	5493	6040	6106	5998
6	5765	5828	5905	5840	5843	5547	5032	5140	5420	5533	6060	6132	6018
7	5745	5847	5925	5860	5880	5584	5069	5170	5438	5573	6080	6158	6038
8	5725	5866	5945	5880	5917	5621	5099	5200	5456	5613	6100	6184	6058

DIY Channels:



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 formated .

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

Video Playback

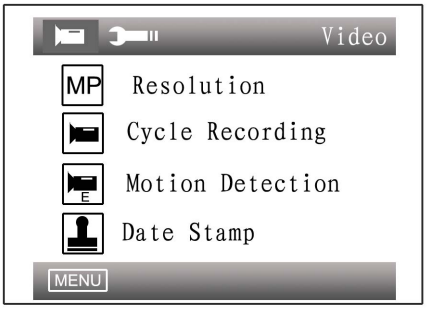
First, switch to the DVR interface, pressing MODE (RIGHT) button can start video playback. Press UP or DOWN button to select a desired file, then press OK button to start playing it.

	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:

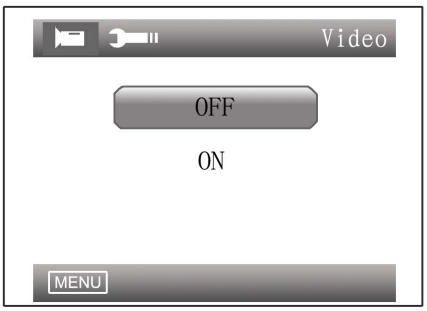
If Cycle Recording is selected, the latest videos recorded will cover the earliest ones when the TF card is full.

“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.

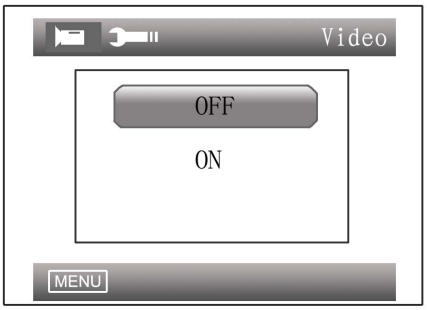


Image Quality:

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

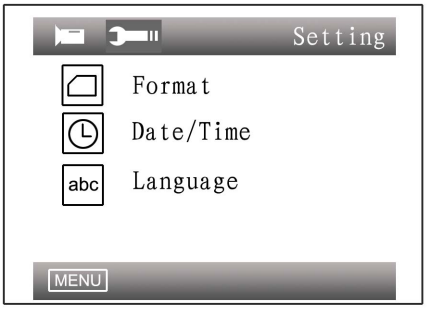
Auto power up recording:

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

power up.

Advanced Settings:

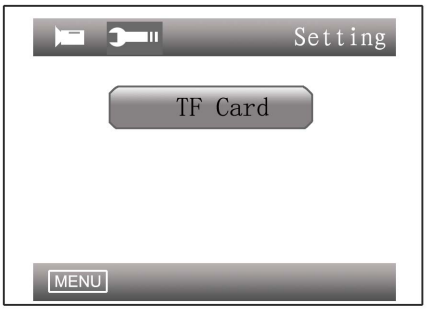
Press the MENU button twice will pop up the Advanced Setting options including Format, Date/Time and Language.



Format:

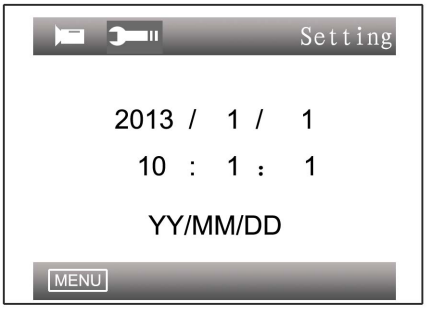
Enter Advanced Settings, and select Format option to format the TF card. In order to optimize the file system ,DVR will format the TF card, if it's used for the first time; **Please back up your data in TF Card.**

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（receiver + DVR)	1.13kg

Accessories:

Accessories	Female XT60 plug to male DC connector cable	1
	3.5mm connector cable	1
	3.3G antenna	1
	Bracket	1

3.5mm cable Interface descriptions	Yellow	Video output
	White	Video input

FAQ:

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 1.2 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.