Mobile NVR Series Quick Start Guide

V1.0.0

Table of Contents

1 INSTALLATION AND CONNECTIONS 1

1.1 Device Cable Connection 1

1.1.1 Power Cable Connection 1
1.1.2 Alarm Connection 3
1.1.3 Isolating Installation 5

1.2 Install Device Antenna 7

1.2.1 Mobile Network Antenna 7
1.2.2 GPS Antenna Installation 8

2 BOOT UP SHUT DOWN 11

3 DEVICE INITIALIZATION 12

4 LOGIN 15

5 OPERATIONS 17

5.1 Adjust Device Antenna 17

5.1.1 Adjust Mobile Network Antenna 17
5.1.2 Adjust GPS Antenna 17

5.2 Local Alarm 18

5.3 Auto Register 19

5.4 Set Plate Number 20

5.5 Reset Password 21

6 FAQ 26

6.1 About Boot up 26

6.2 No Record File 26

6.3 Positioning Module 26

6.4 Network 27

Welcome

Thank you for purchasing our NVR!

This quick start guide is designed to be a reference tool for the installation and operation of your system.

Before installation and operation please read the following safeguards and warnings carefully!

Please keep it for future reference!

Important Safeguards and Warnings

1．Electrical safety

All installation and operation here should conform to your local electrical safety codes.
The product must be grounded to reduce the risk of electric shock.
We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

2．Transportation security

Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

3．Installation

Keep upwards. Handle with care.
Do not apply power to the device before completing installation.
Do not place objects on the device.

4．Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers.
We are not liable for any problems caused by unauthorized modifications or attempted repair.

5．Environment

The device should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

6. Accessories

Be sure to use all the accessories recommended by manufacturer.
Before installation, please open the package and check all the components are included.
Contact your local retailer ASAP if something is broken in your package.

Safety Instruction

Icon	Note
DANGER	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.
CAUTION	Indicates a potentially hazardous situation, which if not avoided, could result in device damage, data loss, performance degradation, or unexpected results.
Tips	It is intended to help you to fix a problem or save your time.
Note	Provides additional information to emphasize or supplement important points of the main text.

1 Installation and Connections

1.1 Device Cable Connection

1.1.1 Power Cable Connection

Caution

- Before connect the power cable, make sure the input voltage ranges from DC 6V to DC 36V. The improper voltage may result in device damage.
- Make sure the positive end and negative end connection is right. The improper cable connection may result in device damage.
- The cable diameter shall be 1.0mm² or higher. Always use the cable brand recommended by the device manufacturer.
- Close the power main on-off button on the vehicle and make sure the vehicle key is on the OFF position before the power cable connection.

1.1.1.1 About Power Cable

The device power cable has three types. See Figure 1-1.

Connect one end of the power cable to the device power port (The port on the left) or just pull the power cable through the device, connect the other end of the power cable to the storage battery (The port on the right). Among which, red cable with the fuse is the power positive end (Live), black cable is the ground (GND), orange cable is the ACC signal (use key to start.)

Note

Some series products support this kind of cable connection. Refer to the product user's manual for detailed information.

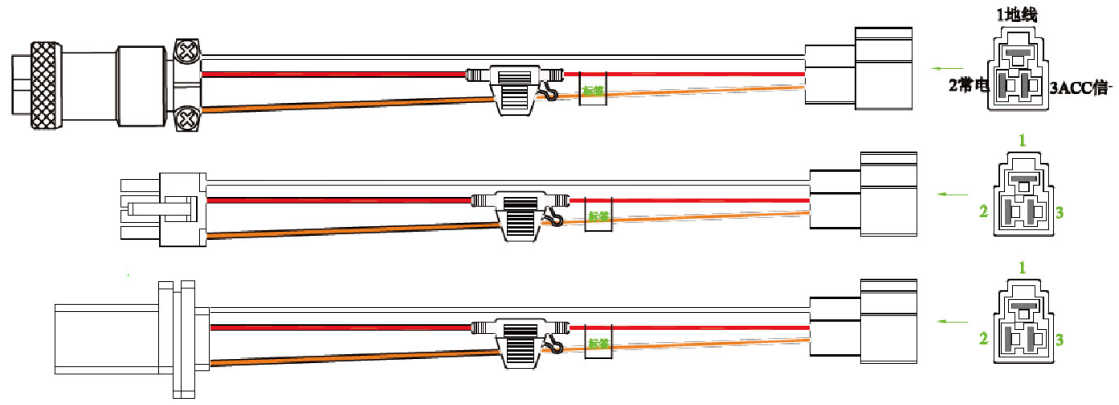

Figure 1-1

1.1.1.2 Get the Power Main On-Off Button Connection Mode

To properly connect the cable, please get to know the power main on-off connection mode. That is to say, you need to know the power main on-off button is at the positive end or at the negative

end.

- Contact the vehicle manufacturer to get the power main on-off connection mode.
- Use multimeter to check: Turn the power main on-off button off and check the voltage between the vehicle and the storage battery. If the voltage is 12V/24V, that is to say, the main on-off button has disconnected the positive end. If the voltage is 0V, that is to say, the main on-off button has disconnected the negative end.
- Use your eyes to check: Check the power on-off button near the storage battery is connecting to the positive end or the negative end.

1.1.1.3 Connection

The mobile NVR shall connect to the ground cable, ACC signal, and constant electric.

Step 1 Turn the vehicle main power on-off button to the ON, and the vehicle key is on the OFF. If the multimeter can check the voltage, it is the vehicle constant electric. Usually the large vehicle is DC 24V, the small vehicle is DC 12V. It may vary depending on different situations.

Step 2 Put the vehicle key on the ACC status or on the ON and then check vehicle ACC signal. Use the multimeter to check the DC voltage on fuse voltage. When the multimeter can check the voltage, remove the vehicle key. It is the vehicle ACC signal if the voltage becomes 0V.

Step 3 Close the vehicle power main on-off button, and the vehicle key is on the OFF.

Step 4 Connect power cable according to vehicle power main on-off mode. See Figure 1-2 and Figure 1-3.

Caution

- Before connecting the power cable, please select proper fuse. For the constant electric DC 24V vehicle, the recommended fuse is 7.5A. For the constant electric DC 12V vehicle, the recommended fuse is 20A.
- For the power positive end and negative end, please use necessary security measures such as installing protective tube.
- If vehicle power main on-off button is on the negative end, please isolate the installation. Refer to chapter 1.1.1.3 for detailed information.

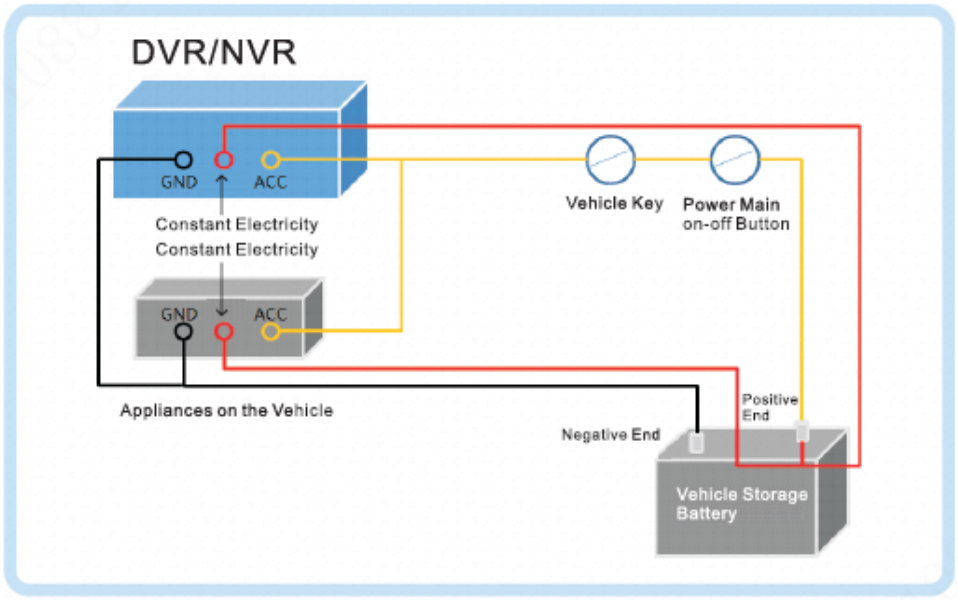

Figure 1-2

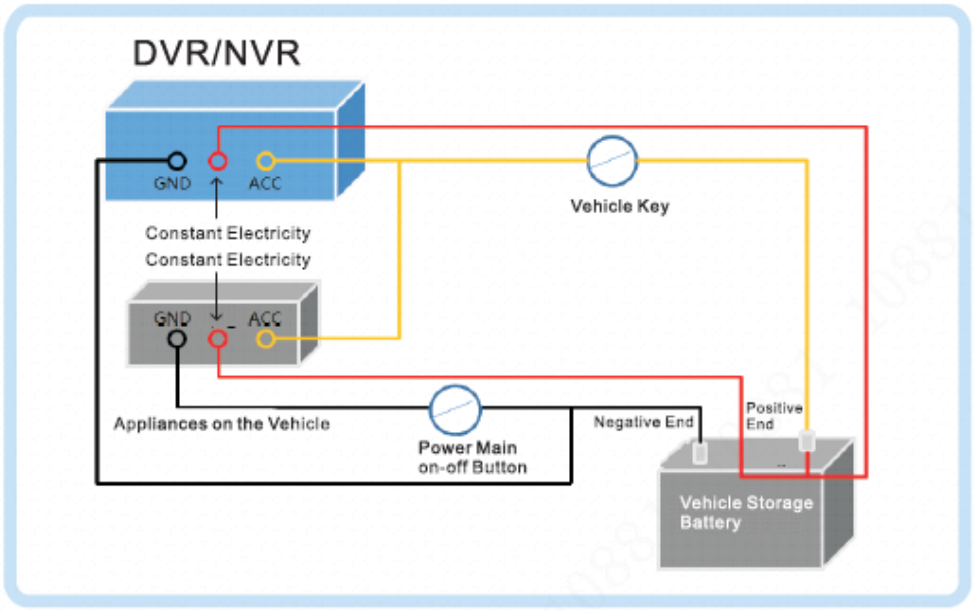

Figure 1-3

1.1.2 Alarm Connection

Refer to the following contents for alarm connection information if you want to view emergency alarm, left-turn, right-turn, reverse, brake, open/close door alarm signal.

1.1.2.1 Alarm Input Mode

Alarm input mode supports high level/low level.

- The low level supports DC 0V-DC 1.5V.
- The high level supports DC 4V-DC 36V.

1.1.2.2 Connecting Emergency Alarm

The emergency button shall connect to the alarm port. See Figure 1-4. The trigger mode shall be low level, the device type is NO. Refer to chapter 5.2 for detailed information.

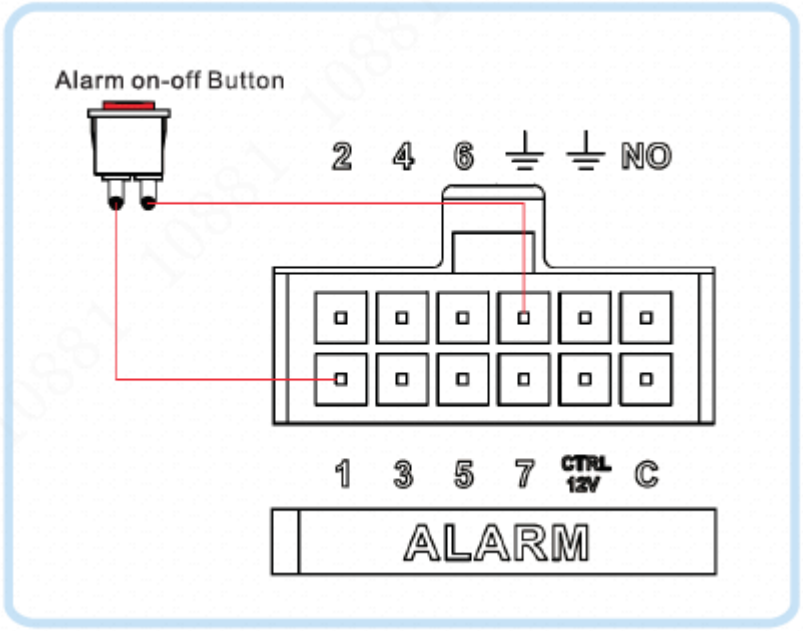

Figure 1-4

1.1.2.3 Connect to other alarm types

Here we use reverse and vehicle signal as an example to introduce other alarm types.

The reverse signal and vehicle door signal can be used as alarm input signal to connect to the device.

- **Connecting reverse alarm signal**
  - ✧ For the vehicle of reverse indicator light (R): Connecting to the reverse indicator light. The cable of +12V or the +24V is the reverse signal cable when the vehicle is in the reverse mode.
  - ✧ For the vehicle of no reverse indicator light: Connect to the reverse on-off button from the gearbox. The cable of +12V or the +24V is the reverse signal cable when the vehicle is in the reverse mode.
- **Connecting vehicle door alarm signal**
  - ✧ For the vehicle of door status indicator light: Connecting to the door status indicator light. The cable of +12V or the +24V is the door status cable when the vehicle door is open.
  - ✧ For the vehicle of no door status indicator light: Connect to vehicle door on-off button. The signal is the high level or the low level pulse signal.

Refer to Figure 1-5 for reverse and door signal alarm connection information. The reverse is corresponding to alarm input 2, vehicle door is corresponding to alarm input 3. The trigger mode of reverse and door signal alarm is high level, device type is NO. Refer to chapter 5.2 for detailed information.

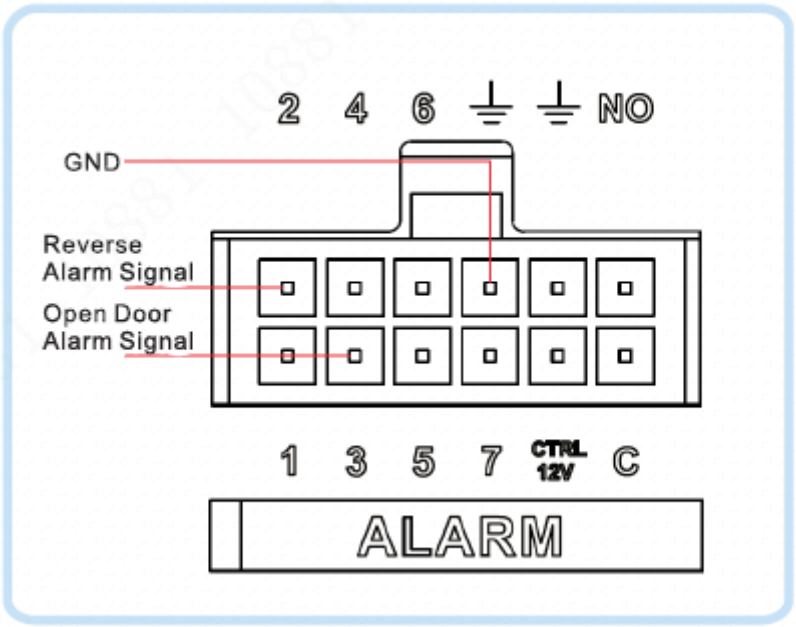

Figure 1-5

1.1.3 Isolating Installation

For the power main on-off button is on the negative end of the storage battery, the appliances on the vehicle can use the NVR case, vehicle body or the storage battery to generate a circuit if the vehicle power main on-off button is OFF. It may result in the following problems. Please isolate the vehicle installation.

- When there are appliances of high power consumption, the negative end temperature becomes hot and then burn down.
- The appliances on the vehicle cannot be turned off.
- The NVR on the vehicle cannot be shut down.

The isolation here refers to isolate the whole system case and vehicle body. It mainly refers to isolate the device and the camera.

1.1.3.1 Isolating the Installation Device

The installation device isolation includes case isolation installation and NVR isolation installation. Please select one type according to your actual situation.

1.1.3.1.1 Isolate Installation Rack

Use the fastening screws to secure the isolation pad on the case. See Figure 1-6.

Note

Refer to Figure 1-6 for recommended case information. The isolation pad is the default accessory.

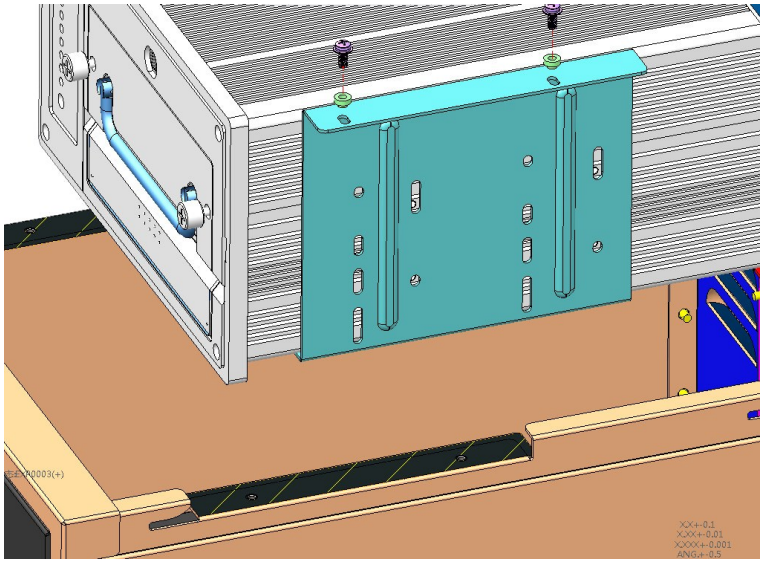

Figure 1-6

1.1.3.1.2 Isolate the NVR

The different NVR has different isolation modes. Please select according to your actual requirements.

Use the fastening screws to secure the bracket on the case. See Figure 1-7 and Figure 1-8.

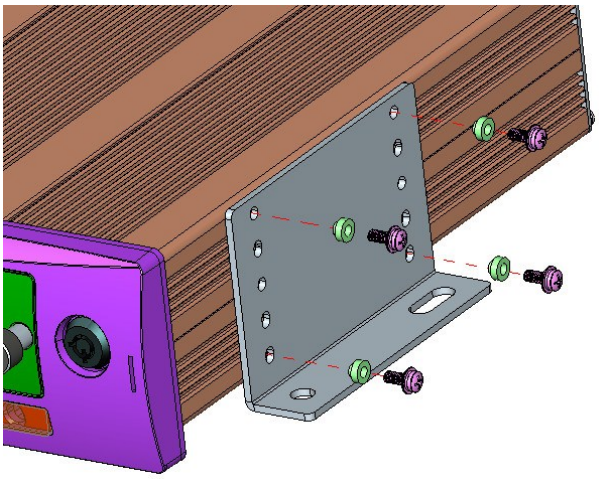

Figure 1-7

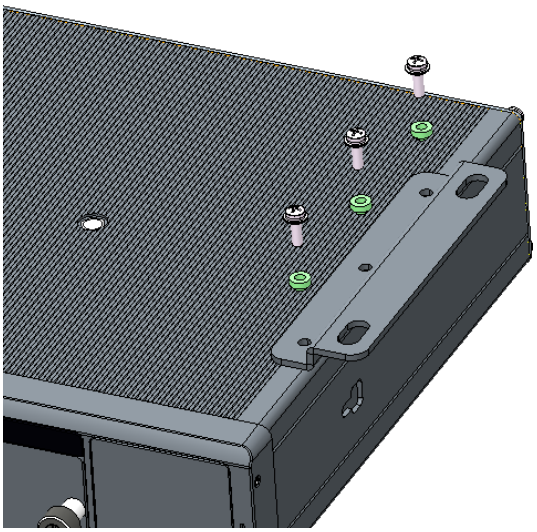

Figure 1-8

1.1.3.2 Isolating Camera

For our own camera brand, the case and the negative end of the power has been isolated. There is no need to isolate the camera. If you are using the camera from the third party, please check it needs to be isolated or not.

Step 1 Check whether it needs to isolate the camera or not.

Use multimeter to check there is current between camera case and the power negative end or not. If there is current, please isolate the camera.

Step 2 How to isolate the camera.

- Install on the insulating decorative pane. The decorative pane is on the vehicle.
- Install camera on the insulation pane and then secure the insulation pane on the vehicle.

1.2 Install Device Antenna

It is to connect device to the network so that to pin point vehicle position.

1.2.1 Mobile Network Antenna

Caution

- If you want to paste the antenna, make sure the bottom material cannot be metal.
- For the antenna of large chuck, please make sure it is straight up and is sucking on the metal. In some special circumstance, if the sucking material is not the metal, you can use two-sided 3M paste or using the glue to secure.

Refer to Figure 1-9 to install the mobile antenna in the vehicle. For the big flat antenna or the antenna of large chuck, please make it is straight up near the window shield (on the instrument pane, at the bottom of the window shield). Or you can install inside of the instrument pane.

Refer to Figure 1-10 to install the mobile antenna outside of the vehicle. The antenna of large chuck is at the top of the vehicle or the trunk.

Figure 1-9

Figure 1-10

1.2.2 GPS Antenna Installation

Right now, the popular positioning module includes GPS, Beidou, GLONASS and etc. The corresponding antenna includes GPS antenna, Beidou antenna, and GLONASS antenna.

The following contents are based on the GPS antenna. For the other types, the installation steps are generally the same.

1.2.2.1 Outside Installation

Step 1 Install the GPS antenna at the left front of the top. See Figure 1-11.

The GPS antenna is magnetic and can be installed on the top cover. To guarantee reliability, you can paste glue around the antenna.

Note

To guarantee positioning sensitivity and accuracy, make sure there are no appliances of high power consumption, electronic interference source (fan or air-conditioning compressor) or obstacle within 1 meter radius around the GPS antenna.

Step 2 Pull GPS antenna through the antenna hole at the top of the vehicle to the inside of the vehicle, and connect the GPS antenna.

The GPS antenna cable exit hole shall meet the following requirements:

- The inner hole cannot be more than Ø10mm.
- Waterproof.
- Easy to replace and maintain the antenna.

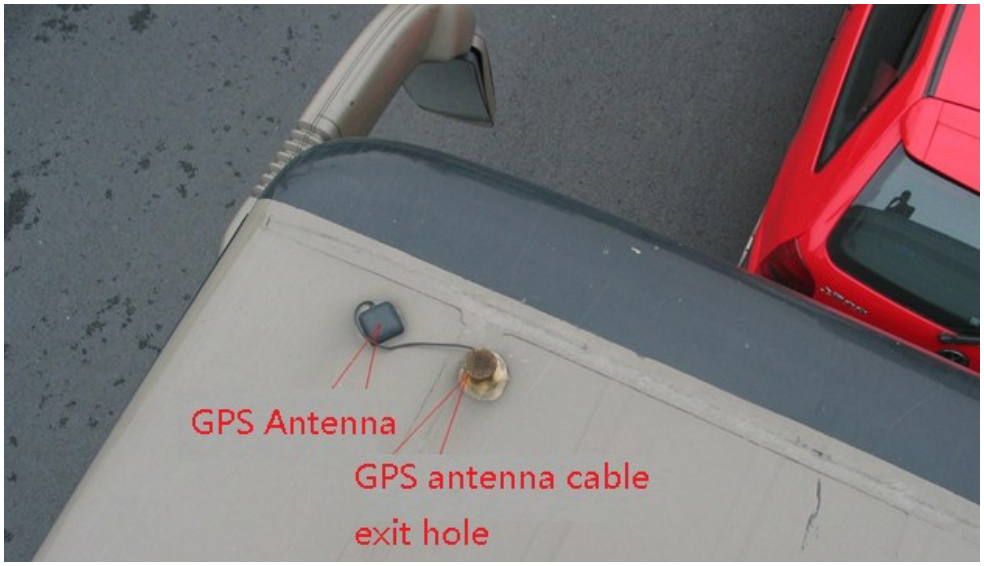

Figure 1-11

1.2.2.2 Inside Installation

If it is difficult to do the waterproof job or the cabling, you can install the antenna inside of the vehicle.

Please select the installation position. Usually we recommend the antenna is at the instrument pane near the window shield and the GPS antenna is facing to the air to enhance signal intensity. See Figure 1-12.

Figure 1-12

2 Boot up Shut Down

Different series products may have different boot up/shut down operations. Please refer to the user's manual for detailed information.

- Boot up: Turn the device key to the and the vehicle key to the ACC. The power indicator light becomes on and the NVR boots up. The boot up process may take a little bit long. The device displays initialization interface after it first boots up.
- Shut down: When vehicle ACC is off, the device automatically shuts down or shuts down according to the settings on the auto maintain interface.

3 Device Initialization

If it is your first time to use the device or device has restored factory default settings, please set a login password of **admin** (system default user). You can select to use unlock pattern to login or not at your own choosing.

Here we use local interface to continue. Refer to User's manual for detailed WEB information.

Note

For your device safety, please keep your login password of **admin** well after the initialization steps, and change the password regularly.

Preparations

Device has connected to the monitor and the mouse.

Please follow the steps listed below.

Step 1 Boot up NVR.

Device displays device initialization interface. See Figure 3-1.

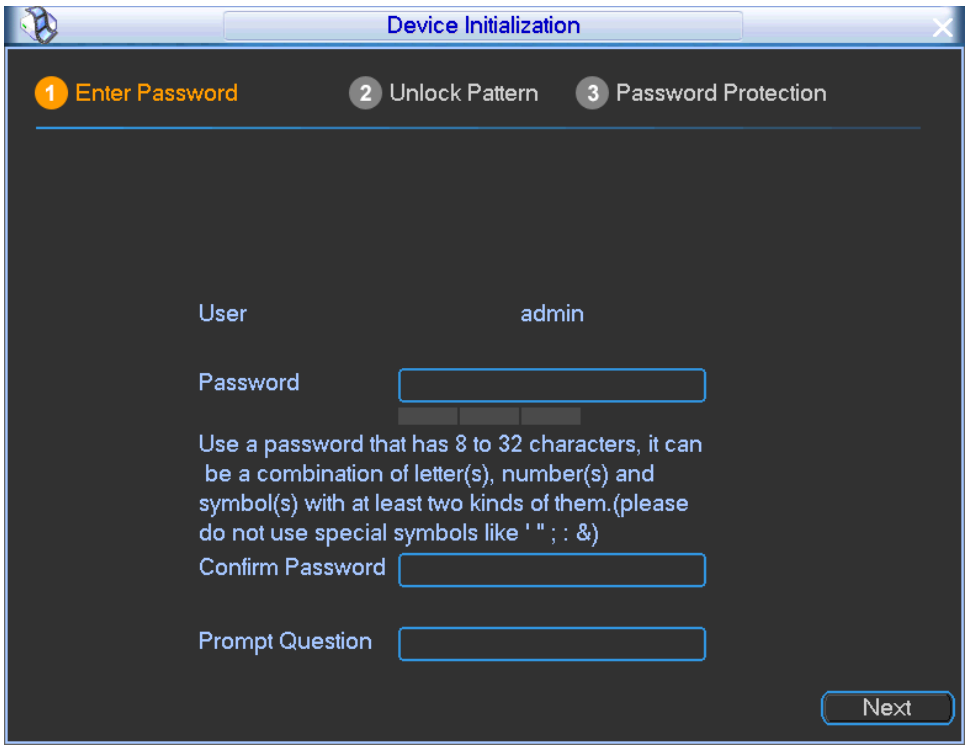

Figure 3-1

Step 2 Set login password of **admin**.

- User name: The default user name is **admin**.
- Password/confirm password: The password ranges from 8 to 32 digitals. It can contain letters, numbers and special characters (excluding "'", "", ";", ":", "&"). The password shall contain at least two categories. Usually we recommend the strong password.
- Prompt question: If you set the prompt question here. On the login interface, move your mouse on , device can display the corresponding prompt question for

you to remind the password.

WARNING

STRONG PASSWORD RECOMMENDED-For your device own safety, please create a strong password of your own choosing. We also recommend you change your password periodically especially in the high security system.

Step 3 Click Next, device goes to the following interface. See Figure 3-2.

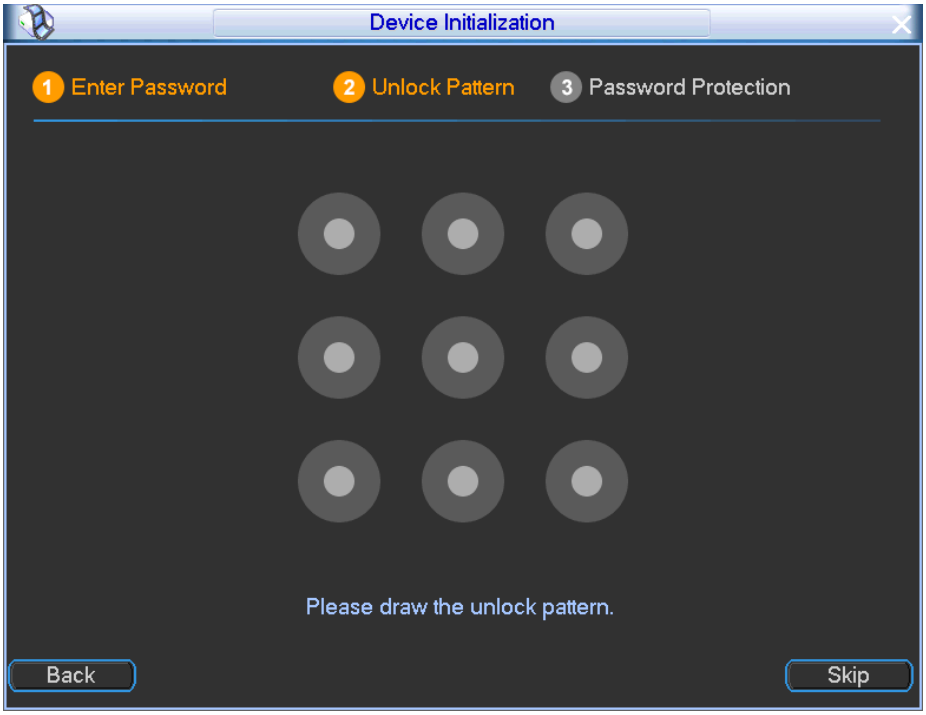

Figure 3-2

Step 4 Set unlock pattern.

After set unlock pattern, device goes to password protection interrface. See Figure 3-3.

Note

- Device adopts unlock pattern to login by default if you have set pattern here. If there is no unlock pattern, please input the password to login.
- Click Skip if there is no need to set unlock pattern.

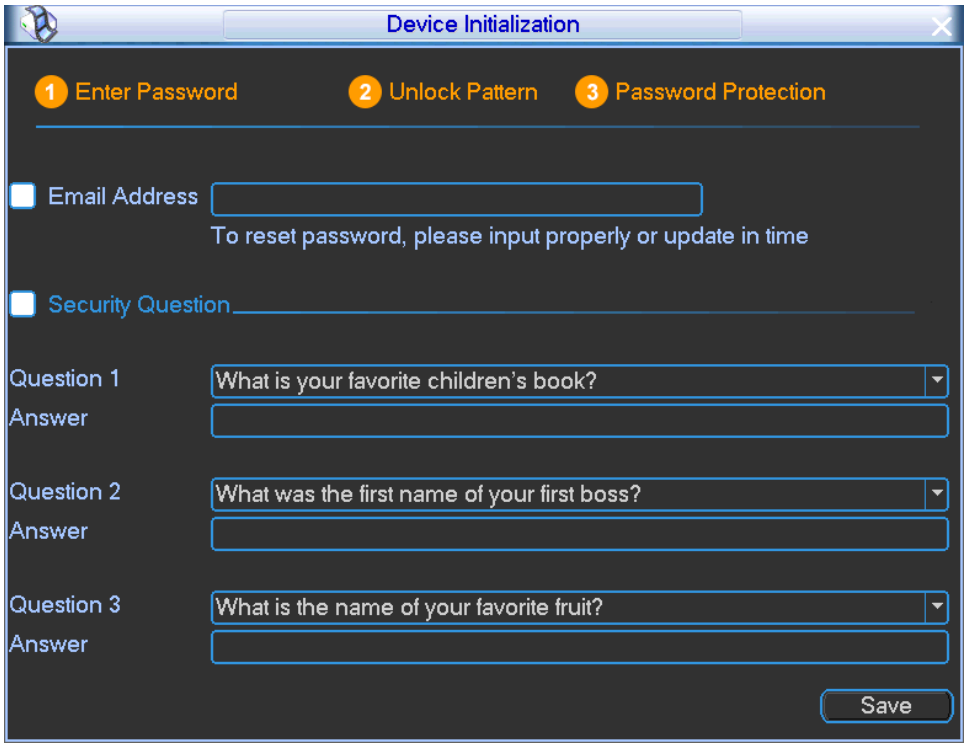

Figure 3-3

Step 5 Set security questions.

Note

- After setting the security questions here, you can use the email you input here or answer the security questions to reset admin password. Refer to chapter 5.5 Reset password for detailed information.
- Cancel the email or security questions box and then click Next button to skip this step.
- Email: Input an email address for reset password purpose. In case you forgot password in the future, input the security code you got on the assigned email to reset the password of admin. If you have not input email here or you need to update the email information, please go to the main menu->Setting->System->Account->Modify user to set. Refer to user's manual for detailed information.
- Security question: Set security questions and corresponding answers. Properly answer the questions to reset admin password. In case you have not input security question here or you need to update the security question information, please go to the main menu->Setting->System->Account->Security question to set. Refer to user's manual for detailed information.

Note

If you want to reset password by answering security questions, please go to the local menu interface.

Step 6 Click OK to complete the device initialization setup.

4 Login

After you initialized device, you can set or operate the device. Here we use local interface to continue. Refer to User's manual for detailed WEB information.

Step 1 On the preview interface, right click mouse and select Main menu,
Enter login interface. See Figure 4-1.

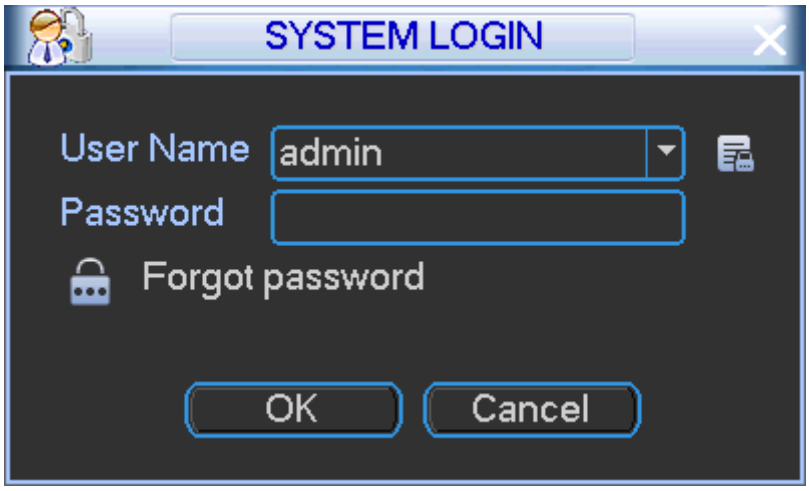

Figure 4-1

Note

- If you have set unlock pattern, device goes to unlock pattern interface to login by default.
- Click to view the prompt information to help you remember password.
- In case you forgot password, click to answer security questions or use the email to reset password. Refer to chapter 5.5 Reset password for detailed information.

Step 2 The default user is **admin**, and then input the corresponding password (the password you set during initialization process).

Step 3 Click OK.
Enter main menu interface. See Figure 4-2.

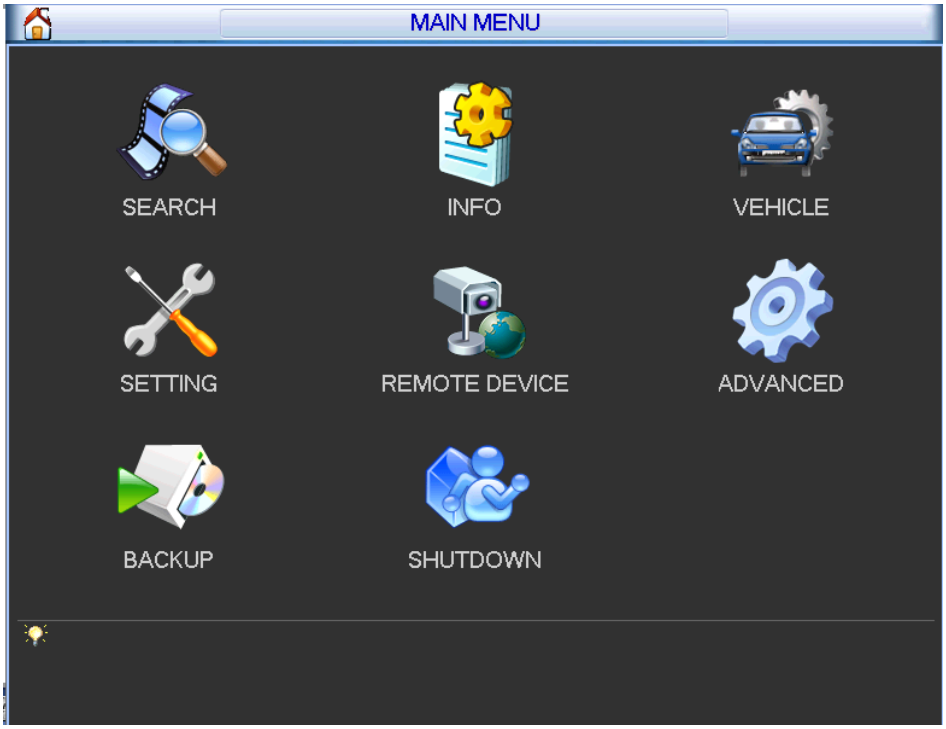
MAIN MENU
SEARCH
INFO
VEHICLE
SETTING
REMOTE DEVICE
ADVANCED
BACKUP
SHUTDOWN

Figure 4-2

5 Operations

Here we use local interface to continue. Refer to User's manual for detailed WEB information.

5.1 Adjust Device Antenna

After install the device antenna, please check antenna installation effect. If the result is not ideal please adjust the antenna to get better signal intensity.

5.1.1 Adjust Mobile Network Antenna

Go to the 3G/4G interface to check antenna effect. Refer to the signal intensity to adjust antenna. Usually the signal intensity shall be 4 grids or higher.

Step 1 On the local menu, from Vehicle->3G/4G,
Enter 3G/4G interface. See Figure 5-1.

Step 2 Check the box to enable 3G/4G function and set 3G/4G parameters.
Refer to the user's manual, VPN administrator or the 3G/4G operator to set.

Step 3 Click OK button.
The dial operation is successful if there is IP address on the IP address column.

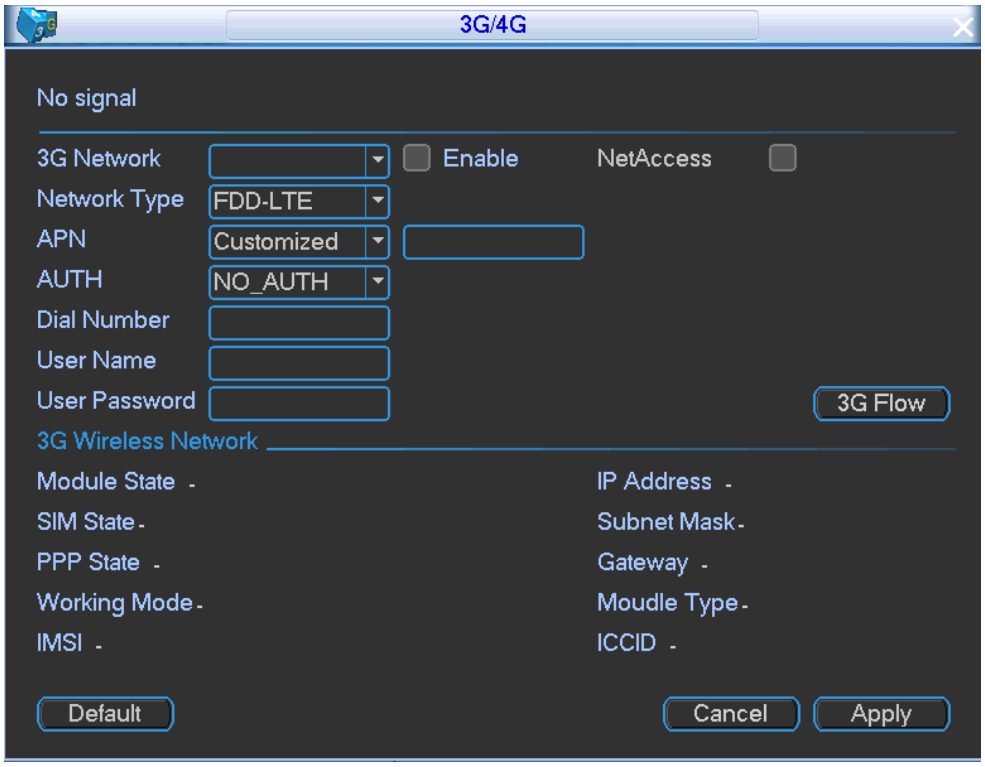

Figure 5-1

5.1.2 Adjust GPS Antenna

Close all appliances (such as air-conditioning, heater, light and etc.) on the vehicle and the open all applications to check the corresponding satellite intensity and positioning speed.

Refer to the following requirements to install the antenna.

- On the open environment, the positioning satellites amount shall be more than 10 and the positioning satellite signal shall be more than 40.

- The detected satellites intensity is close after close/open all appliances.

Note

If the signal is clearly weak after open all appliances, that is to say, the appliances on the vehicle may interfere the antenna. Please install the antenna again. If there is still interference after install the antenna for several times, please use the shield enclosure.

On the main menu, from Info->Satellite, enter satellite information interface. See Figure 5-2.

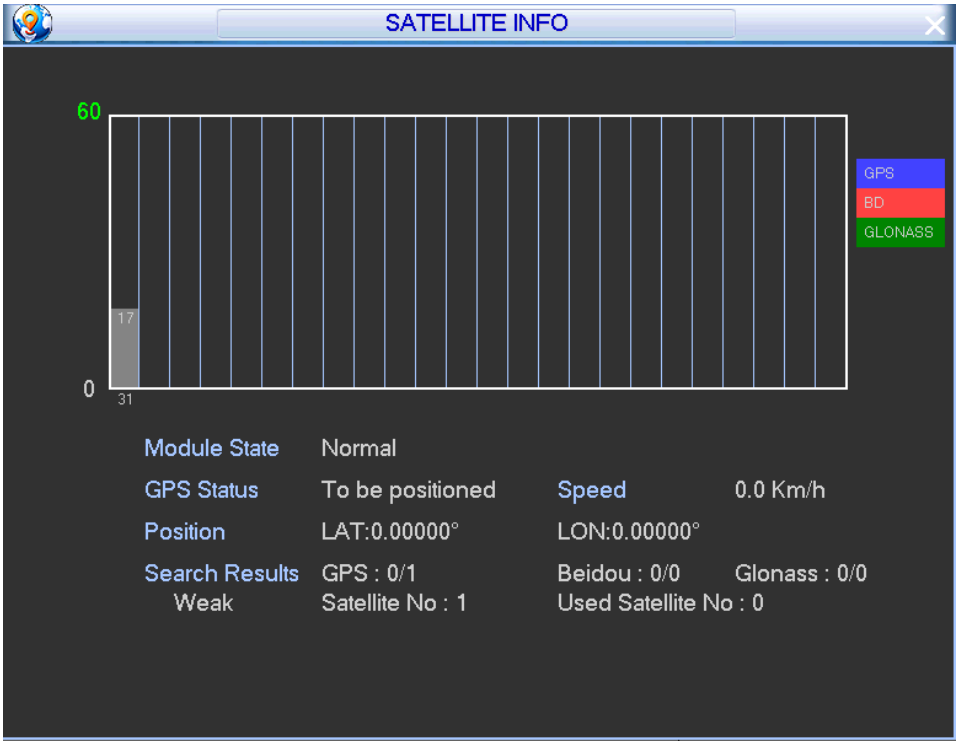

Figure 5-2

5.2 Local Alarm

It is to set local alarm trigger mode and corresponding activations. When there is a local alarm, the device can generate an alarm and trigger the corresponding actions.

Step 1 On the main menu, from Setting->Alarm,
Enter Alarm interface. See Figure 5-3.

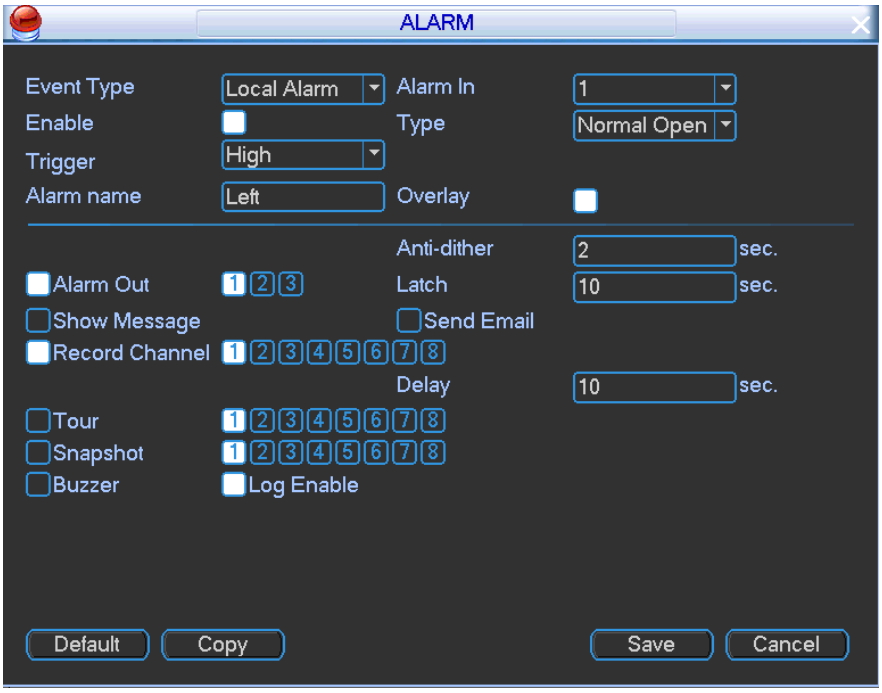

Figure 5-3

Step 2 Set event type as local alarm.

Step 3 Select alarm input channel and check the box to enable this function.

Step 4 Set trigger mode and device type. And set corresponding activation actions.

- Type: Normal open or normal close. This item is for local alarm only.
  - ✧ The normal open means the alarm signal is usually disconnect, system can generate an alarm when the alarm signal closed.
  - ✧ The normal close means the alarm signal is usually connect, system can generate an alarm when the alarm signal disconnected.
- Trigger: Here is for you to set activation mode. There are two options: High/low. Select high if the alarm signal is 12V/24V voltage. Select low if the alarm signal is the GND.

Step 5 Click Save button.

5.3 Auto Register

This function allows the device to auto register to the proxy you specified. In this way, you can use the client-end to access the device and then view the video.

Step 1 On the main menu, from Vehicle->Register,
Enter Register interface. See Figure 5-4.

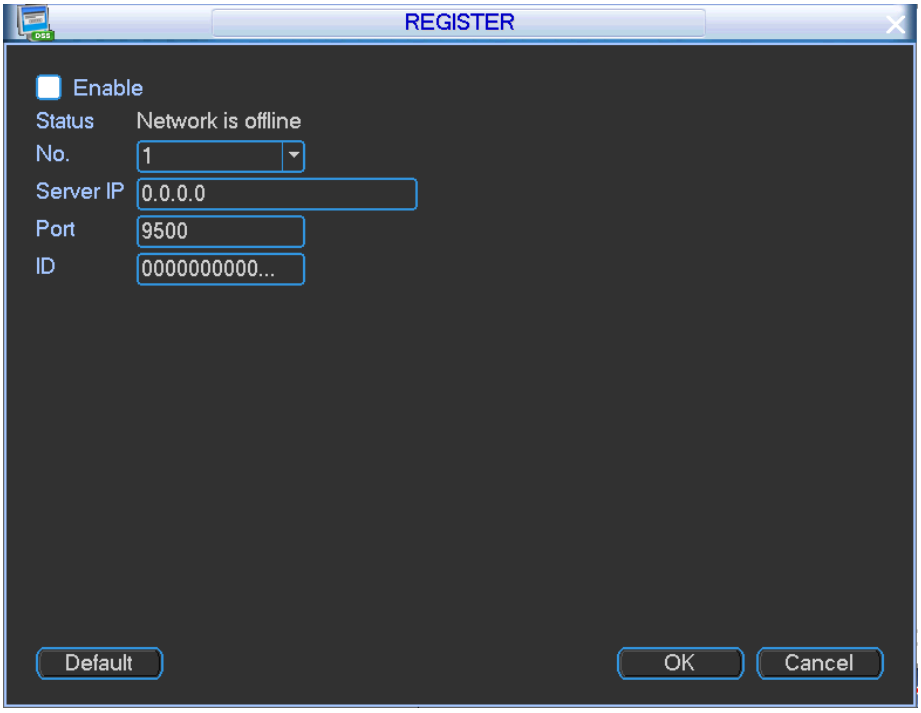

Figure 5-4

Step 2 Check the box to enable auto register function. Set server IP address, port and sub-device ID.

Step 3 Click OK button.

Status is shown as online after successfully connection.

5.4 Set Plate Number

Set vehicle plate number so that device can overlay plate number on the video. It is to recognize the vehicle.

Step 1 On the main menu, from Setting->General,

Enter General interface. See Figure 5-5.

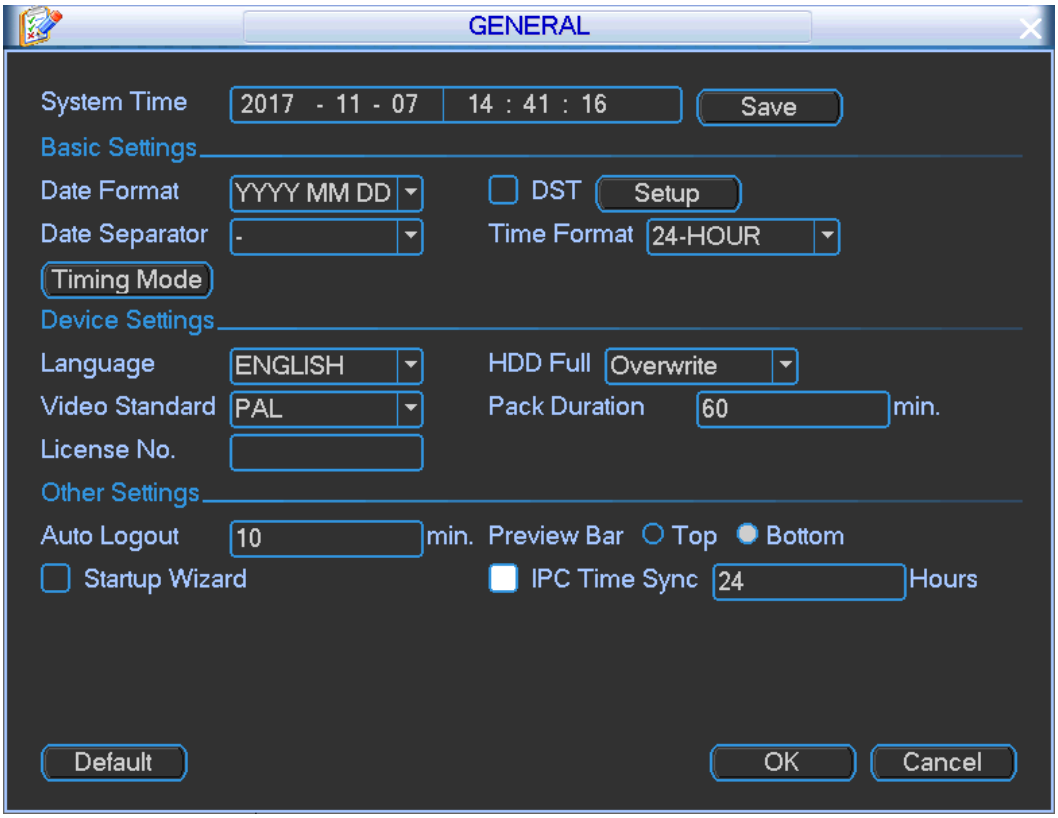

Figure 5-5

Step 2 Set plate number.

Step 3 Click OK.

5.5 Reset Password

If you forgot **admin** password, you can reset the password by email or by answering the security questions.

Please follow the steps listed below.

Step 1 Go to the device login interface. See

Step 2 Figure 5-6 or Figure 5-7.

- If you have set unlock pattern, device displays unlock pattern login interface. See
- Figure 5-6. Click “Forgot unlock pattern”, device goes to Figure 5-7.
- If you have not set unlock pattern, device displays password interface. See Figure 5-7.

Note

Click Switch user button, NVR goes to general user login interface. The default user name is **admin**. Click the user name and then select a user from the dropdown list; you can login via other account.

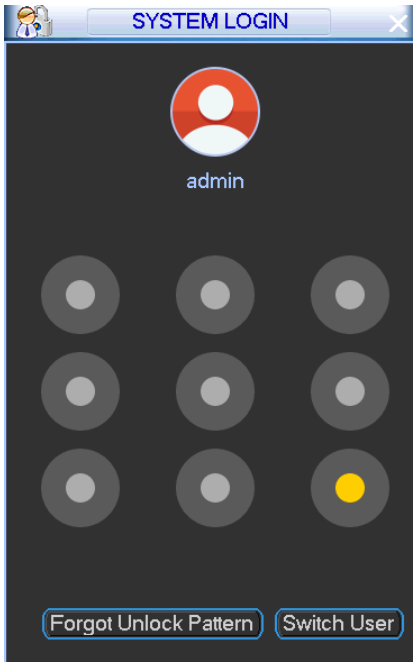

Figure 5-6

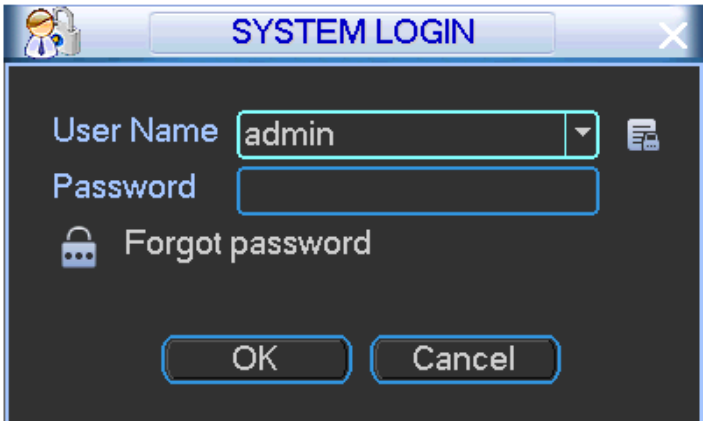

Figure 5-7

Step 3 Click .

- If you have not input email address information when you are initializing the device, the interface is shown as in Figure 5-8. Please input an email address and then click Next button, devices goes to Figure 5-9.
- If you have input email when you are initializing the device, device goes to Figure 5-9.

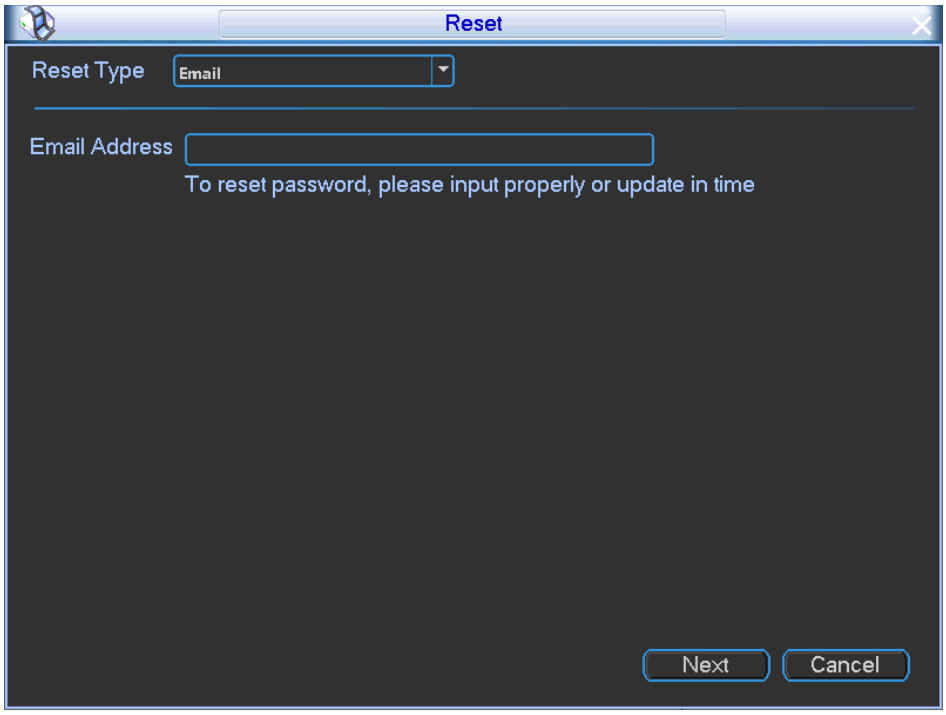

Figure 5-8

Figure 5-9

Step 4 Reset login password.

There are two ways to reset the password: Scan QR code and reset by email/security questions (local menu only)

- Email

  In Figure 5-9, follow the prompts on the interface to scan the QR code, and then

input the security code you get via the assigned email.

Warning

- ✧ For the same QR code, max scan twice to get two security codes. Refresh the QR code if you want to get security code again.
- ✧ The security code on your email is only valid for 24 hours.

- Security questions

  In Figure 5-8, select security question from the drop down list. Device displays security question interface. See Figure 5-10. Please input the correct answers here.

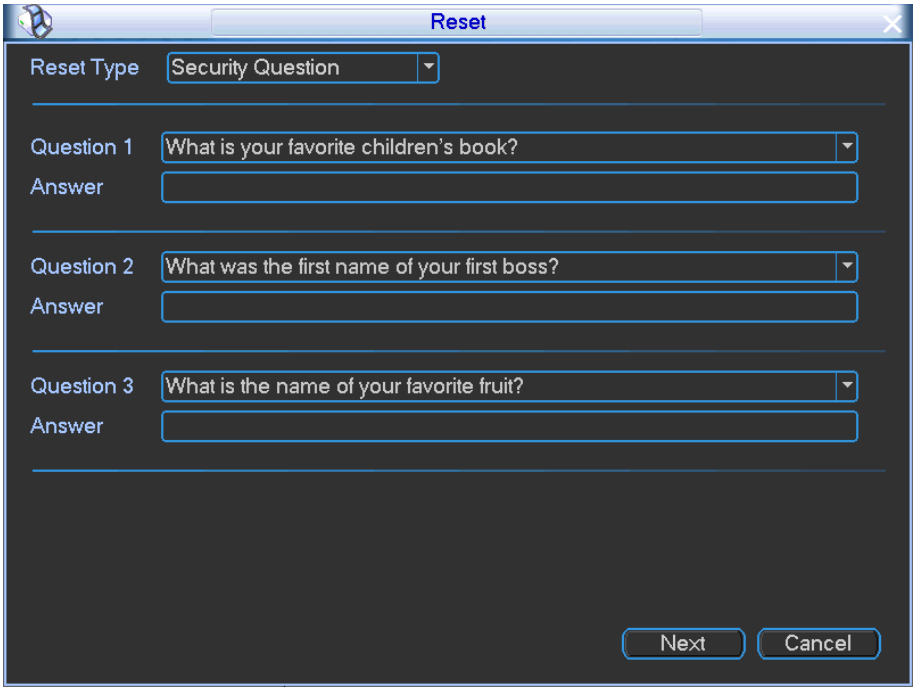

Figure 5-10

Step 5 Click Next button.

Device displays reset password interface. See Figure 5-11.

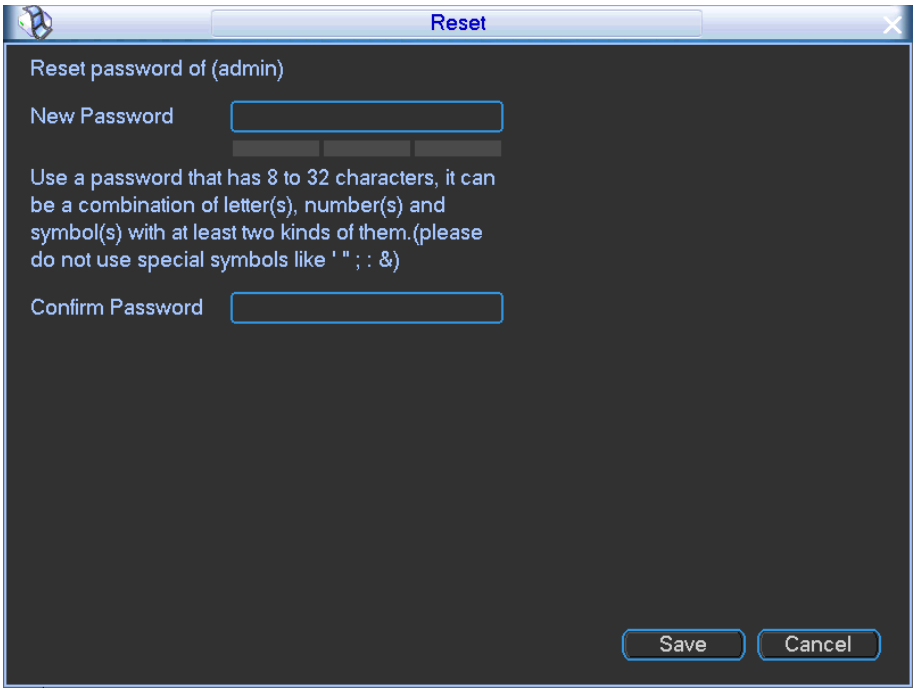

Figure 5-11

Step 6 Input new password and then confirm.

WARNING

STRONG PASSWORD RECOMMENDED-For your device own safety, please create a strong password of your own choosing. The password shall be at least 8-digit containing at least two types of the following categories: letters, numbers and symbols. We also recommend you change your password periodically especially in the high security system.

Step 7 Click Save button to complete the setup.

6 FAQ

If you have any problems, please refer to the following contents first. Contact your local retailer or service engineer if you have more questions.

6.1 About Boot up

1. Device cannot boot up.

Step 1 Check device power indicator light (PWR) is on or not.

- If the power indicator light is off, check power voltage, ACC voltage, fuse is OK or not. Use multimeter to check the device constant electricity and ACC voltage.
- Go to Step 2 if the above items are OK.

Step 2 Check HDD box/SD card slot e-lock has been secured or not.
If the e-lock has not been secured, device cannot boot up.

Step 3 Check the problem results from the peripheral devices or not.

Step 4 Disconnect connected peripheral devices (such as camera), and then check the device can boot up or not. Check the peripheral devices if device can properly boot up.

2. Device boots up repeatedly.

Step 1 Check the device has enabled no HDD reboot function or not.
Check the device has installed the HDD or not. Go to the main menu, Vehicle->Abnormal to disable this function.

Step 2 The reboot results from the HDD malfunction.
The device may reboot if it cannot detect the HDD if the surrounding temperature is too low. Please install the heat module.

6.2 No Record File

Device has no record files.

Step 1 Check device can detect HDD or not.

1. On the main menu, from Info->HDD to check HDD status is OK or not.
2. If there is no HDD, please refer to the user's manual to install the HDD. If the HDD is sleeping or has serious bad track issues. Please replace the HDD.

Step 2 Check device log. Check there is anyone has format the HDD.

Step 3 Check device record status. Change record mode as auto if necessary.

6.3 Positioning Module

GPS signal is not stable or has no signal.

Step 1 Check positioning satellite amount and signal strength can meet the requirements or not.

Step 2 Check positioning module antenna is on the antenna dock or not.

Step 3 Check antenna is malfunction or not. Replace antenna to check.

Step 4 Check there is any interference from appliances on the vehicle. On the main menu, from Info-Satellite, you can check the positioning module signal strength. If the signal

is clearly weak after open all appliances on the vehicle, that is to say, the appliances on the vehicle may interfere the antenna. Please install the antenna again. If there is still interference after install the antenna for several times, please use the shield enclosure.

6.4 Network

1. 3G/4G dial fails. Cannot get IP address.

Step 1 Check device can detect 3G/4G module or not. Contact your local retailer or service engineer for help.

Step 2 Check device can detect SIM card or no.

Step 3 Check 3G/4G module, SIM card, and operator settings.

Step 4 Refer to the antenna installation and adjustment contents; make sure antenna has been properly installed.

Step 5 Check SIM card fee is not zero or the mobile flows are OK. Contact your mobile operator for detailed information.

Step 6 Check 3G/4G parameters. Pay attention to APN, authentication mode, user name, password and etc. Contact your operator for VPN parameters.

2. Cannot connect to DSS platform.

Step 1 Make sure the 3G/4G dial has succeeded. It can connect to the DSS platform.

Step 2 Check the device auto register parameters: server IP address, port and device ID.

Step 3 Check platform parameters. Make sure the platform parameters and device parameters are the same.

3. After successfully connected to the DSS, the video is not fluent.

Step 1 The poor network signal may result in low video quality. Refer to the antenna installation and adjustment contents; make sure you have properly installed the antenna.

Step 2 Go to the DSS to make sure it is the sub stream you are watching. When you are adding the device to the platform, please check sub stream.

Step 3 Device sub stream parameters are not proper. Set parameters such as bit stream, frame rate according to the actual network environment.

Note

- **This quick start guide for reference only. Slight difference may be found on the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **All trademarks and registered trademarks mentioned are the properties of their respective owners.**
- **If there is any uncertainty or controversy, please refer to the final explanation of us.**
- **Please visit our website or contact your local retailer for more information.**