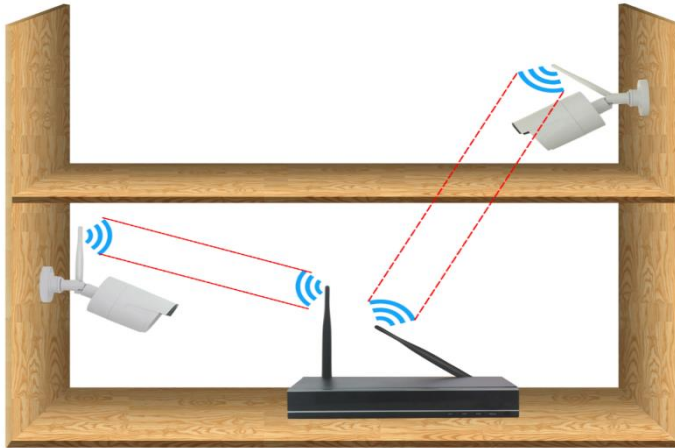


## There are 5 ways to get a stronger signal:

### 1. Adjust NVR's antenna to make it parallel with camera antenna

If you place the camera and NVR in the same floor, please have cameras and NVR's antenna stand upright as the left picture; If your cameras and NVR are not in the same floor, please adjust NVR's antenna to make it parallel with camera antenna as the right picture:



**Notice:** system setup---> network setup ---> wireless setup, you can see the camera's signal value at this interface. The larger the "signal" value, the stronger the signal is. Look at this value to adjust the antenna direction to get the strongest signal.

Channel	MAC Address	Signal
GH2	9c:a3:a9:43:bc:3b	45:53
GH1	9c:a3:a9:43:bc:56	46:47
GH3	9c:a3:a9:43:bc:4f	85:93
GH4	08:3a:2f:07:14:a3	85:84

### 2. How to booster camera signal via Ethernet cable?

If the camera is too far away from the NVR, or too many obstacles in between, and the camera signal is too weak, please wire the camera with router to get stable signal.

- 1 Plug the whole system and home router to power socket.

2 Connect the WAN port of NVR to LAN port of home router, and also connect camera to LAN port of home router via Ethernet cable.

3 Right click mouse to enter menu "Video Manage".

The upper box shows information of your camera, and lower box shows channel information of your NVR.

4 At lower box, choose which channel/camera that you want to hard wire with home router, click "Delete", and then the status of that channel will be "No Video Source".

5 Click "Search" in the upper box and new IP address will pop up.

The screenshot shows the "Video Manage" interface. At the top, there is a "Protocol" dropdown menu set to "default". Below it is a table with columns: ID, Device Name, IP Address, Port, and Protocol. The first row contains: 1, IPCAM, 192.168.1.88, 80, N1. To the right of this table are buttons: Search, Match Code, Add One, Modify IP, and Advanced. Below the first table is a navigation bar with "< 1 / 1 >". The second table has columns: Channel, Device Name, IP Address, and Status. It contains four rows: Channel 1 (IPCAM, 172.20.14.184, Connect Failed), Channel 2 (IPCAM, 172.20.14.51, Connect Failed), Channel 3 (IPCAM, 172.20.14.143, Connect Failed), and Channel 4 (IPCAM, 192.168.1.88, No Video Source). To the right of this table are buttons: Delete, Delete All, Manual Edit, Channel Setup, Wireless Setup, and Repeater. At the bottom are "Ok" and "Cancel" buttons.

6 Select an unoccupied channel (No video source) in lower box, and click "Add One". Seconds later, it will show "Connect Success" and video will pop up and the channel IP will be 192.168.1.xx

This screenshot is similar to the previous one, but the status for Channel 4 has changed to "Connect Success" and its IP address is now 192.168.1.88. The "Add One" button from the previous screenshot is no longer visible.

7 Please keep the camera and NVR connected to router. Or you will lose video if you disconnect the Ethernet cable.

**Note:**

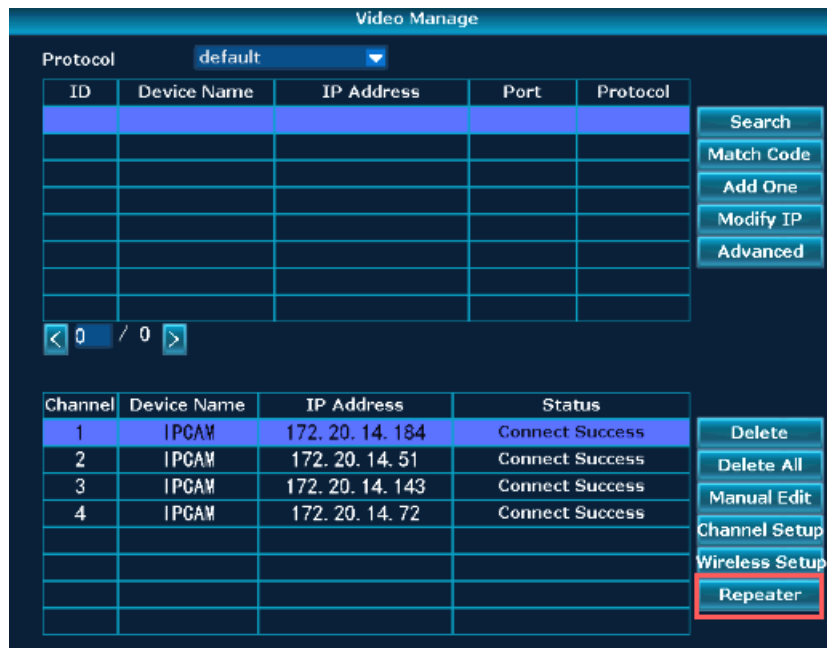
A When you choose hard wire function by "Auto Add", the camera IP address will be: 192.168.xx.xx(wire mode, keep Ethernet cable);

B If you choose wireless connection by "Match Code", the camera IP address will be: 172.20.14.xx.(wireless mode, no need Ethernet cable);

### 3. How to booster camera signal via camera's repeater function?

The main function of repeater is to increase the distance of signal transmission by resending or forwarding the data signal. Both camera and IPC repeater can work as transmitter to strengthen camera's poor signal caused by long distance or physical obstacles as walls.

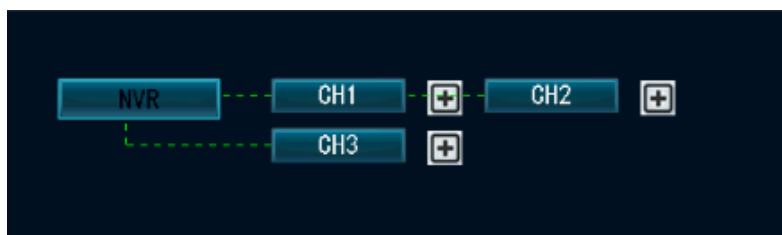
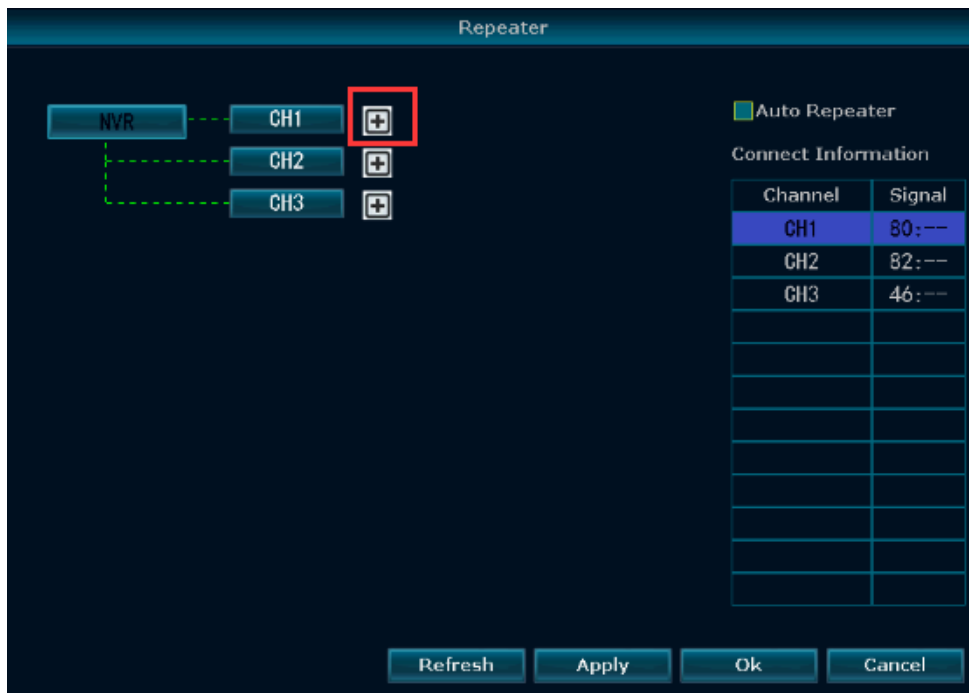
- 1 Take cameras near the NVR recorder, and confirm that both cameras with full Wi-Fi rate when near NVR recorder.
- 2 Right click the mouse to enter menu "Video Manage "> click "Repeater" icon in the lower box.



Take Camera 1 and camera as example.

If camera 1 is installed near NVR recorder with full Wi-Fi signal, and camera 2 is installed far away from NVR recorder with poor signal.

- 3 Click "+" behind CH1 and choose to add CH2, click "Apply" and "Ok" to save the settings. In this way, camera 1 can work as signal transmitter for camera2's signal.



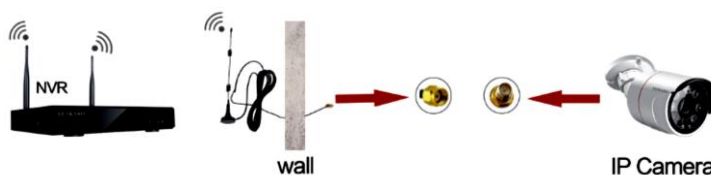
**Note:**

- A Before setting up repeater function, please confirm the camera which work as repeater with strong signal, if not, the setup will fail.
- B If the line between NVR and CH1 is red, it implies you can't use this camera on CH1 can't work as repeater.
- C If the line between CH1 and CH2 is red, it implies the repeater setup is failed.

## 4 How to booster camera signal via extension antenna?

In case that wifi signal weaken by obstacles as walls, you can take the white antenna off and replace it with wifi booster antenahole needed to drill on the wall to get cable through)

- 1 Mount IP camera outside;
- 2 Drill hole to across the extension cable;
- 3 Mount wifi antenna closer to NVR recorder.

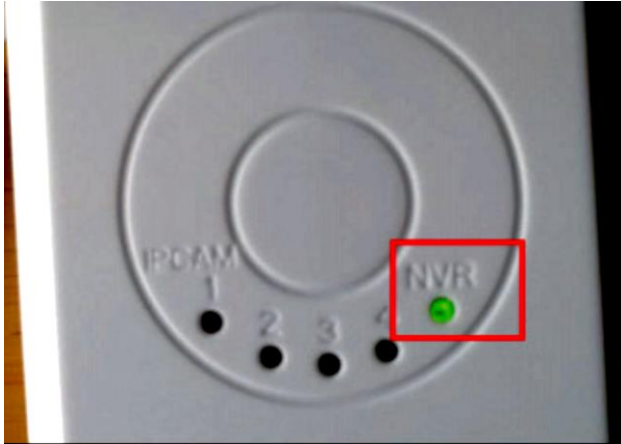


**NOTE:**

If you need to buy an extension antenna, please pay attention to the interface type (you need to buy SMA male antenna, the inner is hole).

## 5. How to booster camera signal via IPC repeater?

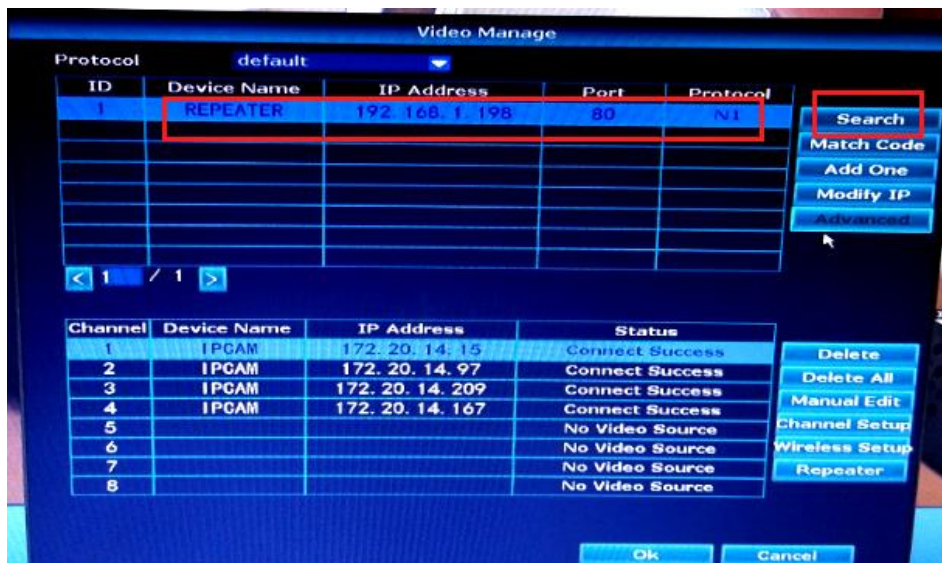
- 1 Plug the whole system to power outlet via the provided power adapter, make sure the camera video is displayed on the monitor. You will fail to add camera to IPC repeater if camera video doesn't display on the monitor.
- 2 Plug IPC repeater to power outlet via the provided power adapter, the indicator light (NVR) at front panel of IPC repeater will turn on.



- 3 Use Ethernet cable to connect IPC repeater with NVR recorder.

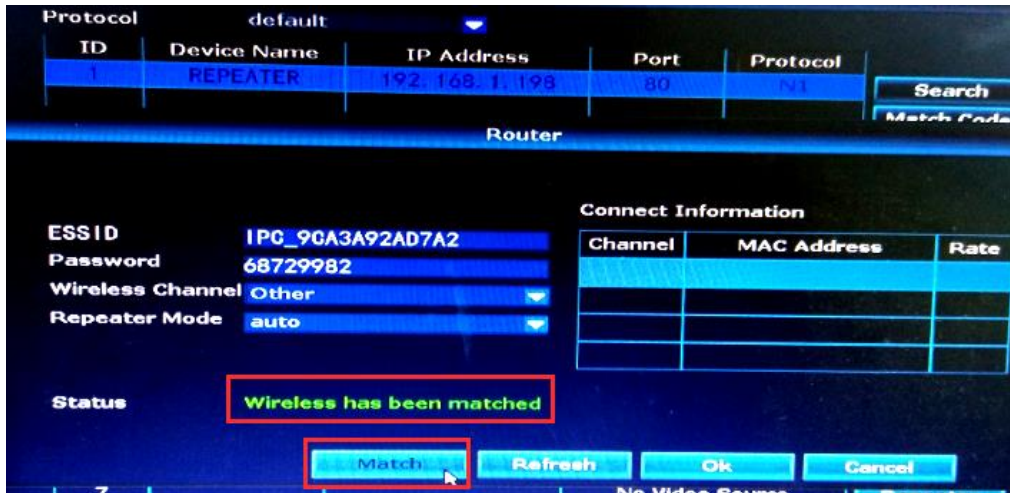


- 4 Right click mouse to enter menu "Video Manage" > click "Search" > the information of repeater pop up in the upper box.

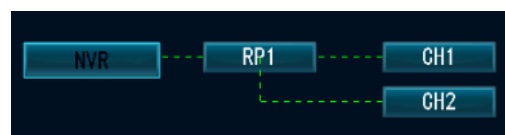
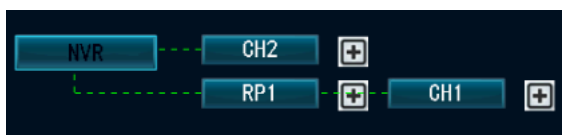
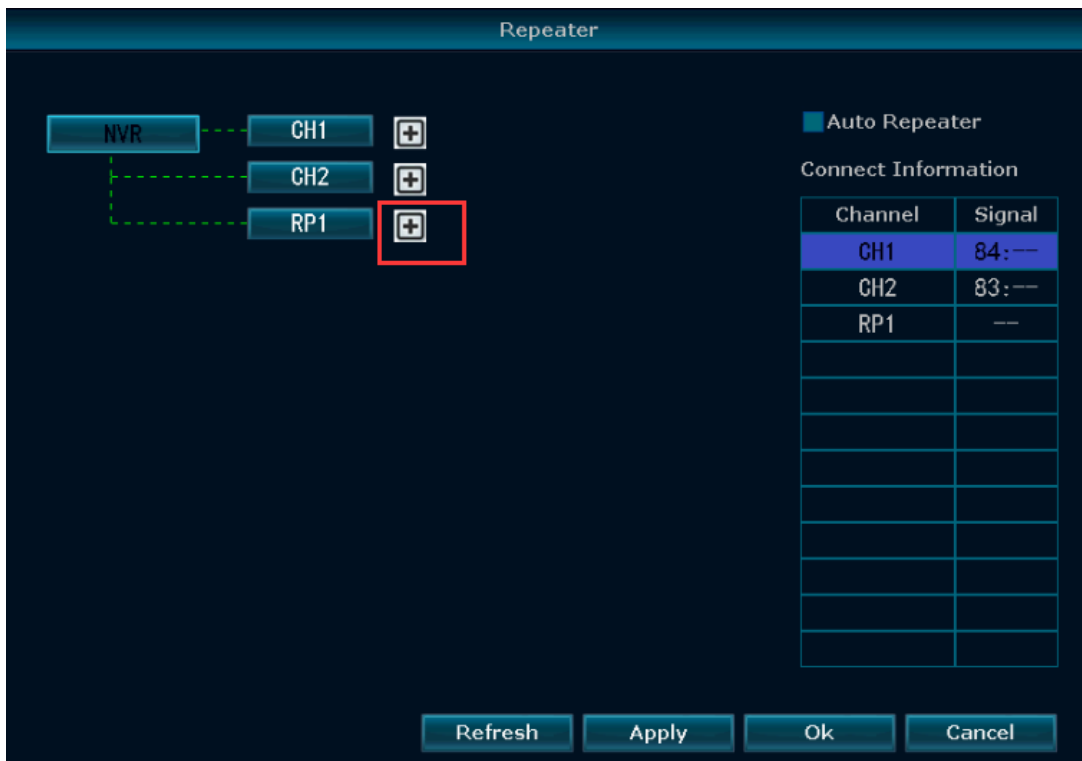


- 5 Double left click "REPEATER" in the upper box, the repeater's connect information pop up in a new box, then left click "Match" icon.

- 6 The "Status" shows "Wireless has been matched" if match succeed.



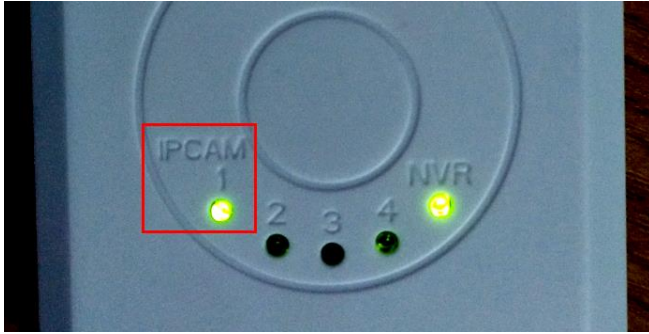
- 7 Remove the Ethernet cable between IPC repeater and NVR recorder.
- 8 Back to "Video Manage" interface, click the "Repeater" icon in the lower box.
- 9 Click the "+" behind "RP1", and then choose the channel (CH1 means channel 1/camera 1) which you want to expand signal. Then click "Apply" and "Ok" to save the setting.



**Note:**

The green line between NVR and channel (or router and channel) indicates the connection is successful. The red line indicates the connection failed.

- 10 The IPCAM indicator light at front panel will turn on. Number 1, means one camera connected



11 Now you can unplug and move the repeater and cameras. Please install the IPC repeater at an appropriate position (place the IPC repeater between camera and NVR recorder)

**Note:**

- A Only two camera channels could be added, although there are 4 channels.
- B The Connect Information shows signal rate of the repeater, not signal rate of the cameras.
- C If fail to setup repeater for the expand camera, please confirm wireless signal of the camera (right click to enter menu "Network Setup" >Wi-Fi setup), and then match code/pair the camera again (refer to camera's full manual user).
- D If you unplug and remove the repeater, the expandable camera will lose video but the video will back in minutes.