



## **WIRING AND CONFIGURING HIKVISION CAMERA FOR 2 WAY AUDIO APPLICATION**

**PRODUCTS:** HIKISION CAMERA -EXTERNAL MICROPHONE- EXTERNAL SPEAKERS

**TOPICS COVERED IN THIS KBA:** How to connect and configure a standalone camera to be used for two-way audio applications – How to Configure the Camera Parameter to record Video/Audio on the NVR

### **Requirements**

- Laptop/PC
- 12V 250mA (To Power the MIC)
- HIK-2FP2020 (no need if the camera has Built in MIC)
- 3.5mm Stereo audio plug
- Hikvision camera that supports an external MIC or has built in MIC
- External Speaker

### **Note:**

- Two-way Audio application is only supported on stand-alone cameras application

### **Steps:**

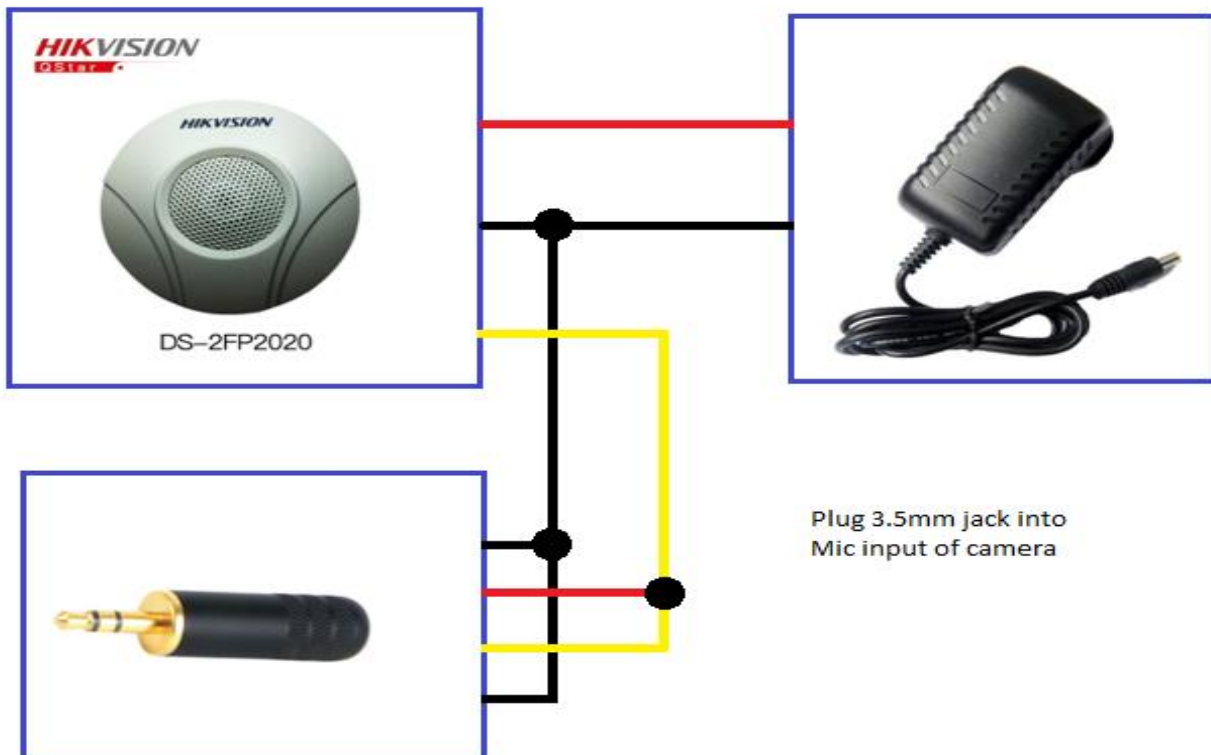
- A- Wiring-up the External MIC and Speaker
- B- Configuring the Camera (to be used as stand-alone 2-way Audio Device)
- C- (Optional – not required for the 2-way Audio Application)  
Configuring the Camera Parameter to record Video/Audio on the NVR:



### A- Wiring the MIC and the Speaker:

#### Step 1 - Wiring up the external microphone:

- I. The 3.5mm stereo plug has four wires, two are for audio (red = left and white = right), and the other two are grounds.
- II. Connect the two grounds together.
- III. From the 12v power supply, you will need to connect the positive to the red wire on the HIK-2FP2020.
- IV. Connect the ground wires that you connected earlier to the negative of the power supply, and the ground of the HIK-2FP2020.
- V. Connect both the white and red wires from the 3.5mm plug together and connect those to the white wire of the HIK-2FP2020.
- VI. Connect the 3.5MM plug to the input marked 'IN' on the camera.
- VII. Please see the wiring diagram below (Yellow = White)





**Step 2 - Wiring up the External Speaker:**

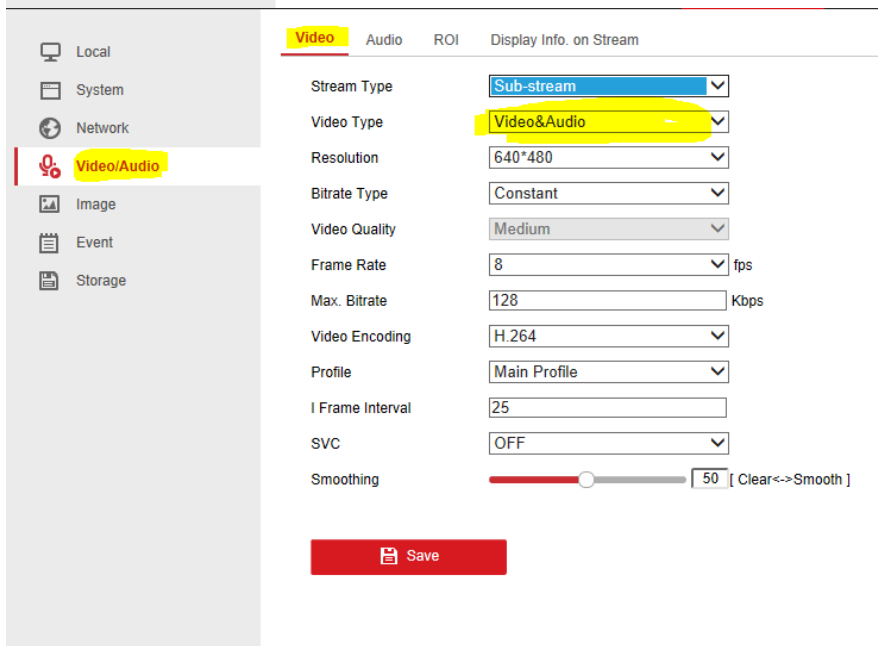
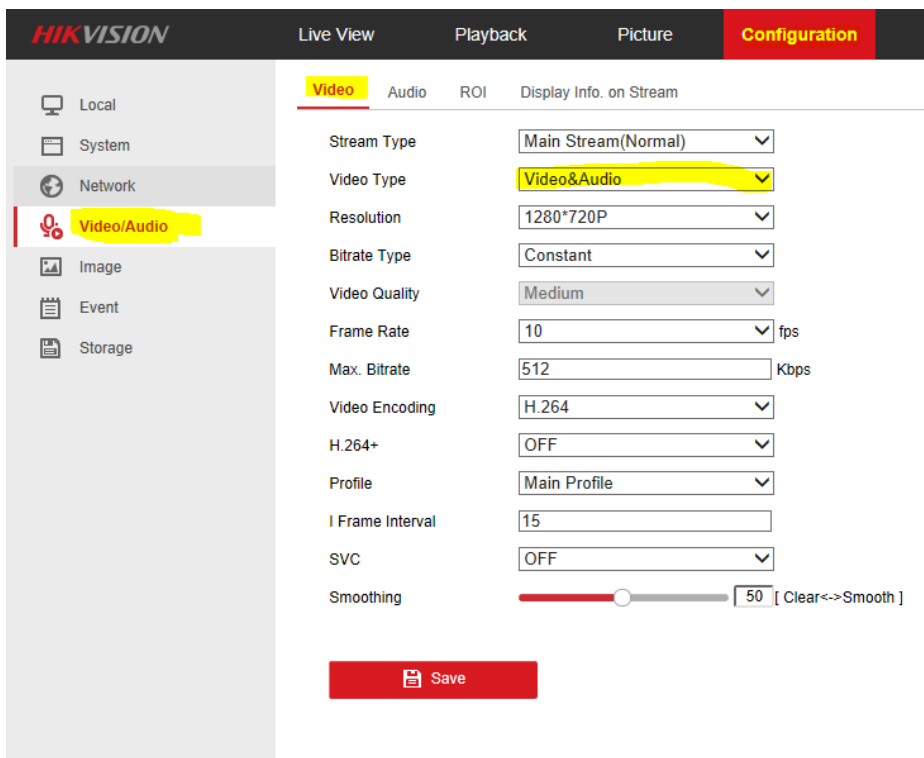
1. Power-up the speaker using External power source.
2. Connect the 3.5mm plug to the input marked 'OUT' on the bottom of the camera.

As below: this should be how it looks after wiring up the MIC and the speaker:



**B- Configuring the Camera to be used as two-way Audio device:**

- I. Login to the camera’s web interface using **Internet Explorer**. Make sure that you install the Web-plugins if you are prompted.
- II. **Configuration -> Video/Audio -> Video**. Here we need to change the **Video Type** from **Video Stream** to **Video/Audio** for both the **Main Stream** and **Sub Stream**.





- III. Click on the **Audio** tab. We have found that it works best on the **G.711ulaw** audio encoding method. Adjust the input volume of the microphone depending on the environment and use the environmental noise filter if it is required.

The screenshot displays the Hikvision web interface configuration page. The top navigation bar includes 'Live View', 'Playback', 'Picture', and 'Configuration' (highlighted in red). A left sidebar contains menu items: 'Local', 'System', 'Network', 'Video/Audio' (highlighted in yellow), 'Image', 'Event', and 'Storage'. The main content area has tabs for 'Video', 'Audio' (highlighted in yellow), 'ROI', and 'Display Info. on Stream'. Under the 'Audio' tab, the following settings are visible: 'Audio Encoding' is set to 'G.711ulaw', 'Audio Input' is set to 'LineIn', 'Input Volume' is a slider set to 80, and 'Environmental Noise Filter' is set to 'ON'. A red 'Save' button is located at the bottom of the configuration area.

- IV. Configure the Network settings and add the camera on the Hik-Connect app or IVMS-4200

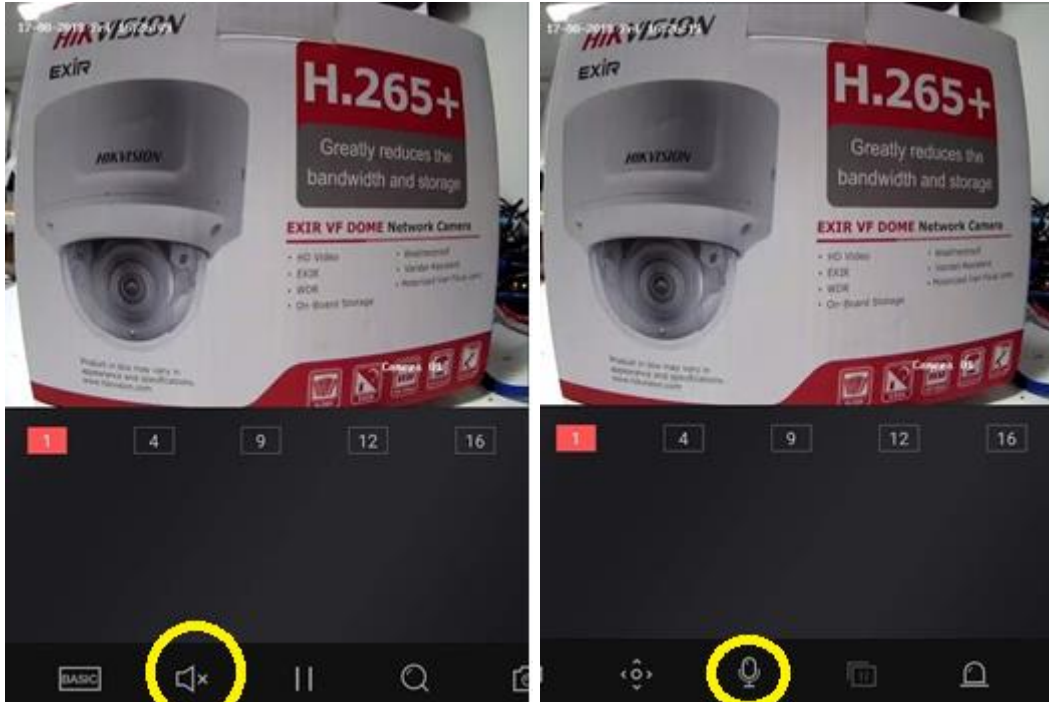


Below are the methods of **testing the Two-Way Audio:**

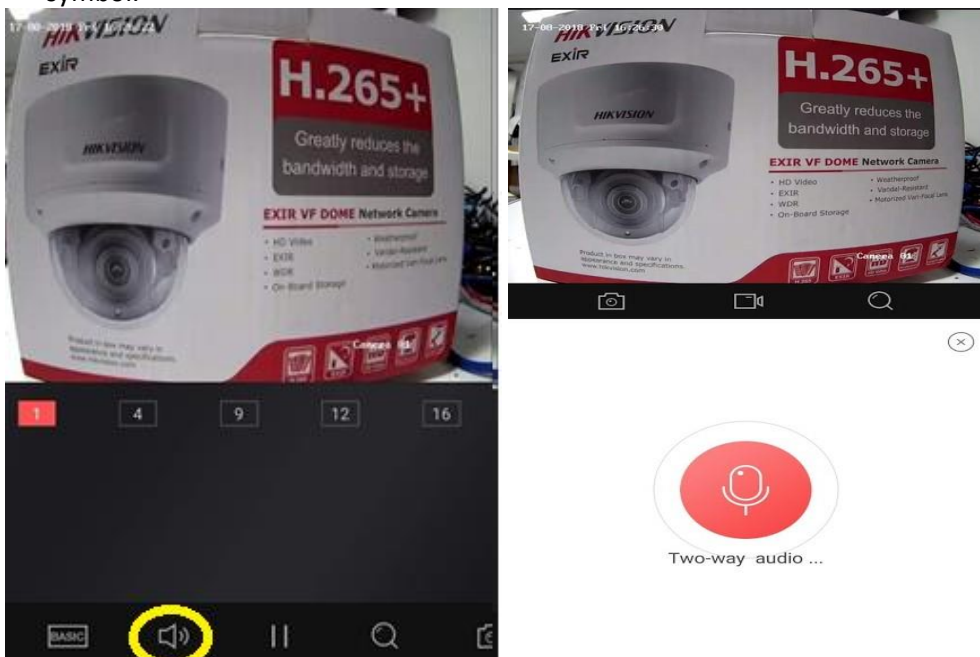
**Method 1: Using Hik-Connect:**

After adding the camera on the Hik-Connect app

- 1- By default, the audio is muted, and the microphone is disabled.



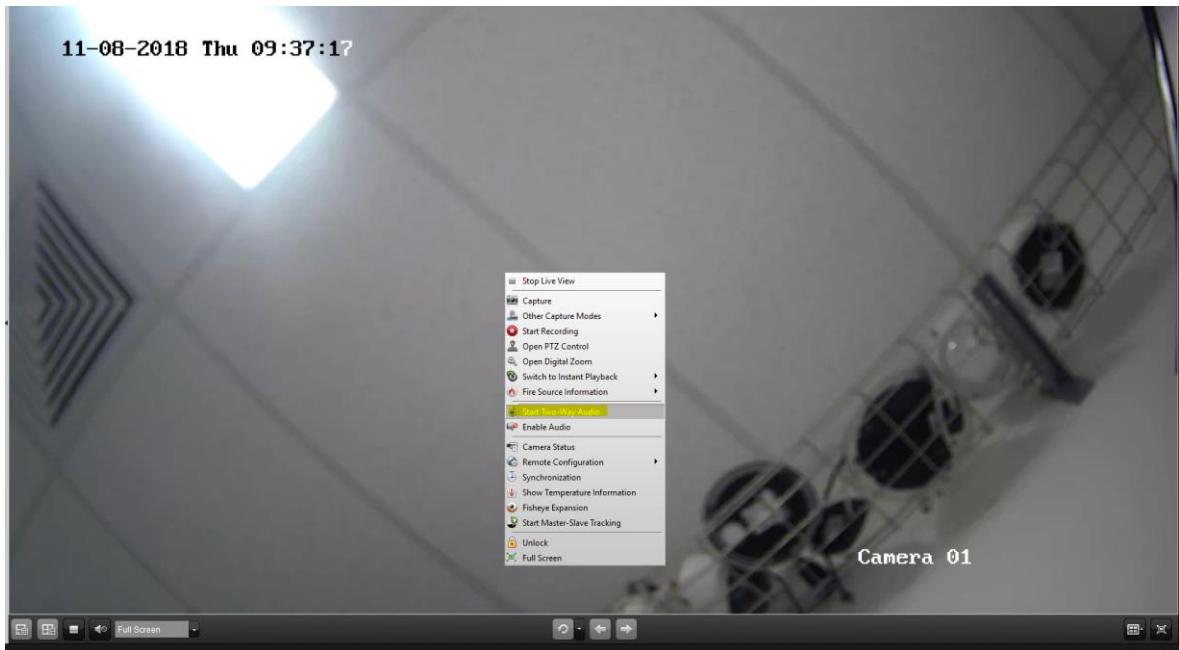
- 2- Toggle the audio on by clicking the **Audio** symbol and toggle the Microphone on by clicking the **Microphone** symbol. You will need to scroll across the bottom toolbar to see the microphone symbol.





**Method 2: Using IVMS-4200**

- 1- After adding the camera to the IVMS-4200 software, right click and click on “start Two Way Audio” as below:



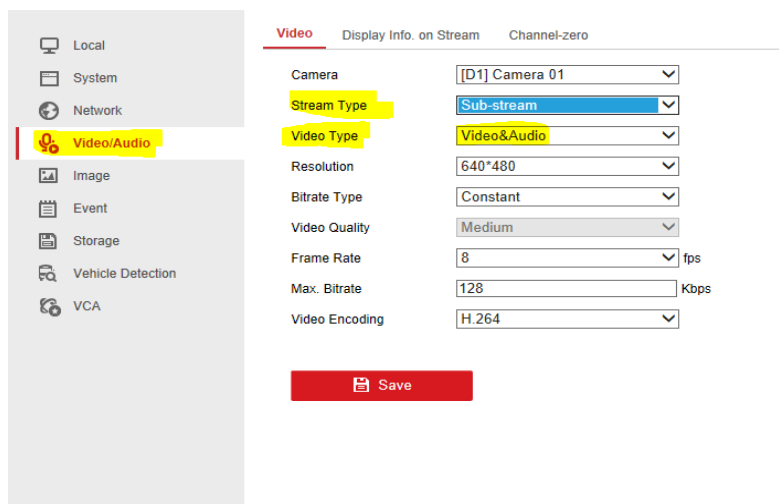
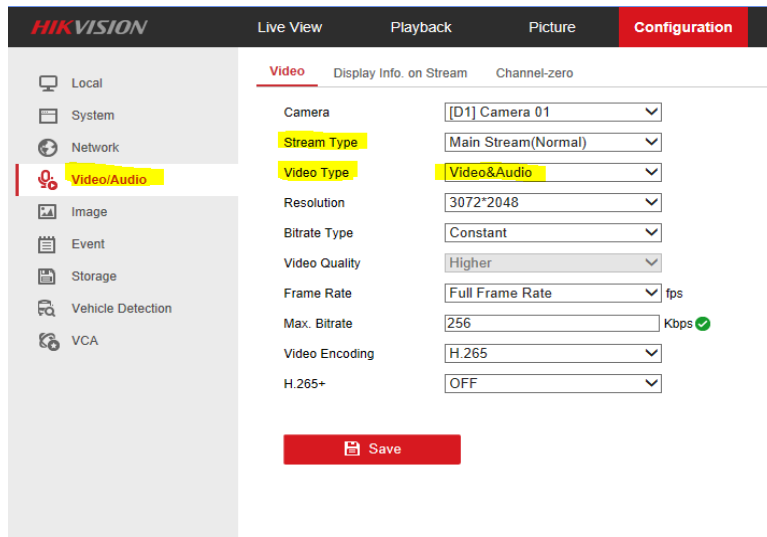


**C- (Optional – not required for the 2-way Audio Application)  
Configuring the Camera Parameter to record Video/Audio on the NVR:**

- Method 1) Web-Interface of the NVR
- Method 2a) Local-GUI of the NVR V3.X
- Method 2b) Local-GUI of the NVR V4.X

**Method 1) Web-Interface of the NVR:**

- I. Login to the NVR’s web interface using Internet Explorer and make sure that the plugins are installed.
- II. Add the camera to the NVR using the local IP-address
- III. Select **Configuration** on the top toolbar, and then **Video/Audio** on the left side toolbar. Change the **Video Type** from **Video** to **Video & Audio** for both the **Main Stream** and **Sub Stream**, then click **Save**.

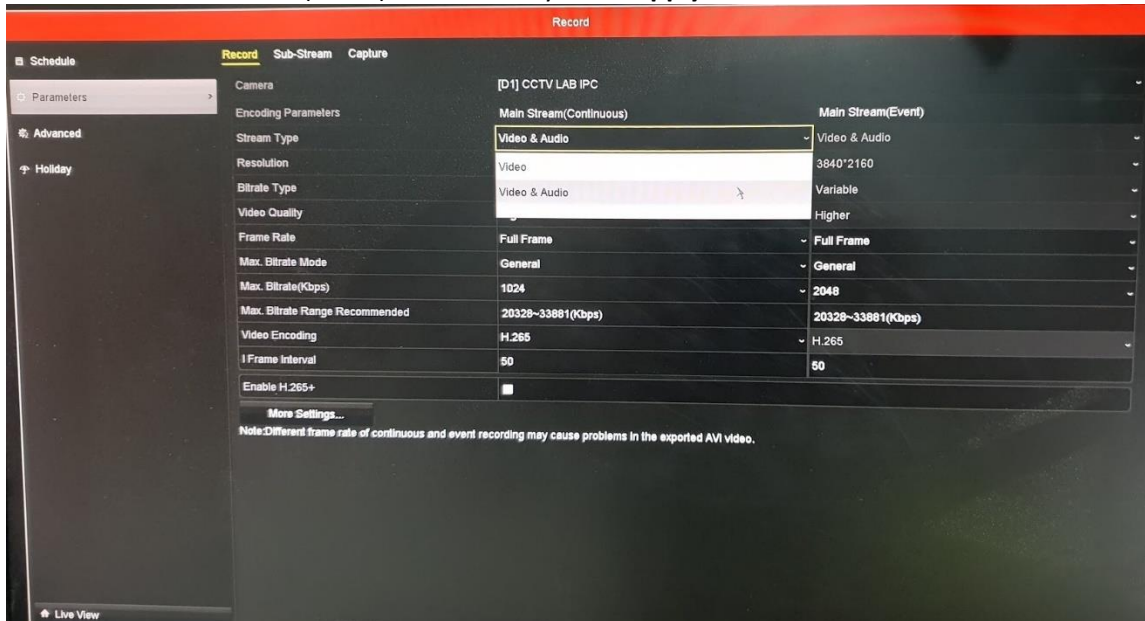




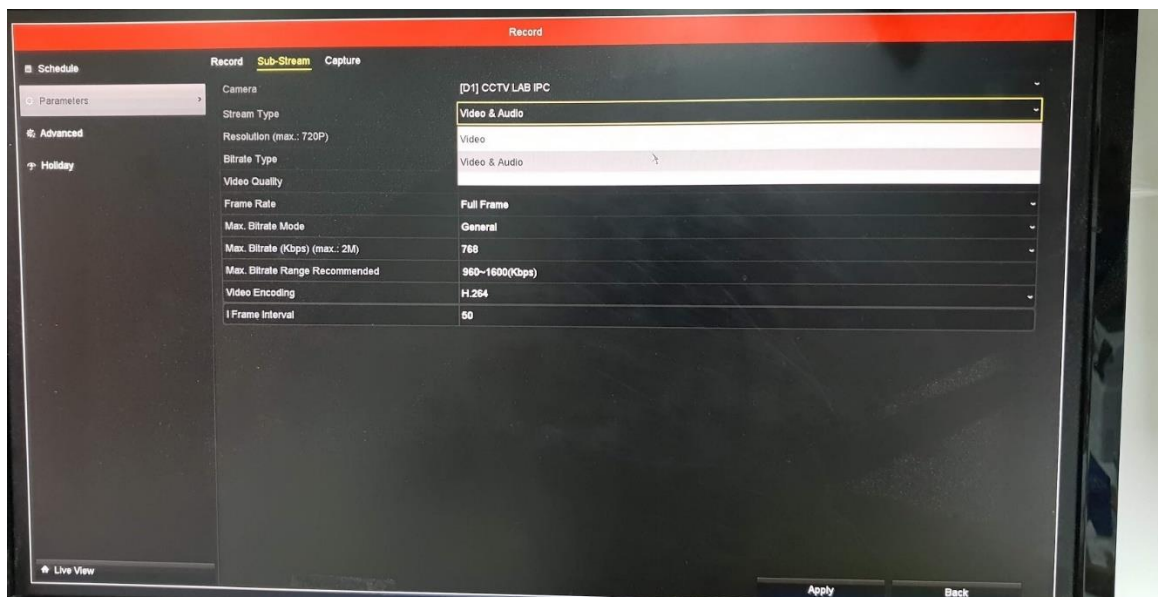


**Method 2a) Local-GUI of the NVR V3.X:**

- I. Right click with the mouse -> **Menu** -> **Record** -> **Parameters** -> **Record**. Change the **Stream Type** from **Video** to **Video & Audio** for the **Main Stream (Continuous)** which will change the Main Stream (Event) automatically. Click **Apply**.

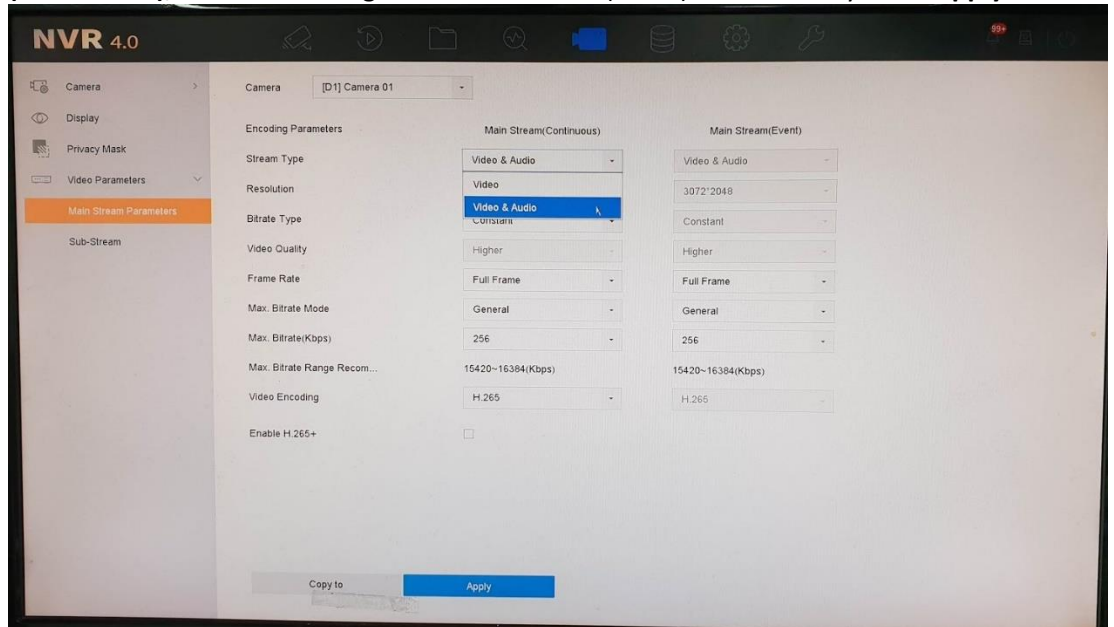


- II. Click on the **Sub-Stream** option at the top of the page. Change the **Stream Type** from **Video** to **Video & Audio** and click **Apply**.

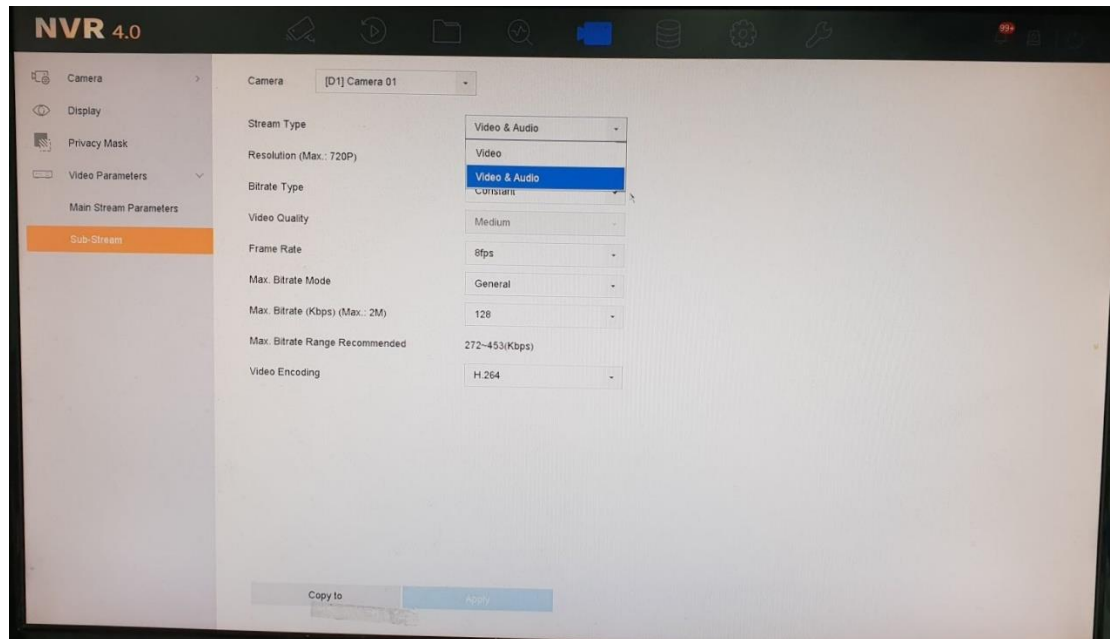


**Method 2b: Via the local NVR GUI (V4):**

- I. From the top toolbar, click the camera symbol. **Video Parameters -> Main Stream Parameters**. Change the **Stream Type** from **Video** to **Video & Audio** for **Main Stream (Continuous)**, which will change the Main Stream (Event) automatically. Click **Apply**.



- II. Click on the **Sub-Stream** option from the left-hand side and change the **Stream Type** from **Video** to **Video & Audio**.





Below are the methods of **testing the MIC**

Method 1: using IVMS-4200 Software

Method 2a: Using the Local-GUI of the NVR V3.X

Method 2b: Using the Local-GUI of the NVR V4.X

Method 3: Using the Web Interface of the NVR 3: Using IVMS-4200 software

**Method 1: Using iVMS-4200 software:**

- I. By default, the audio is turned off.
- II. Start the live feed of the camera and toggle the audio on via the bottom toolbar.



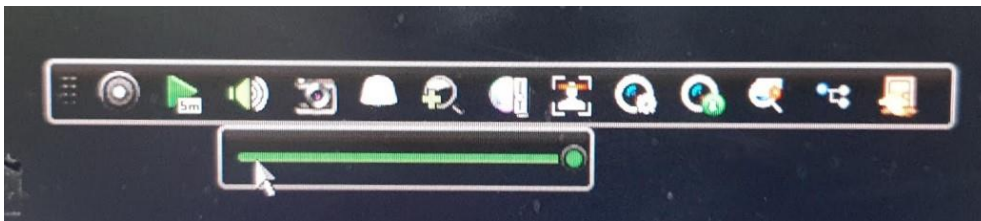
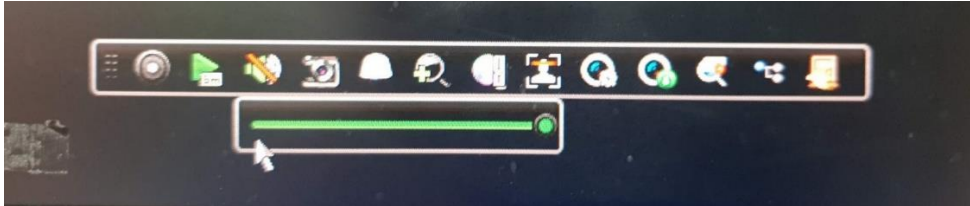




**Method 2a: Using the Local-GUI of the NVR V3.X**

(Sound will go through the HDMI if the monitor/TV has speakers).

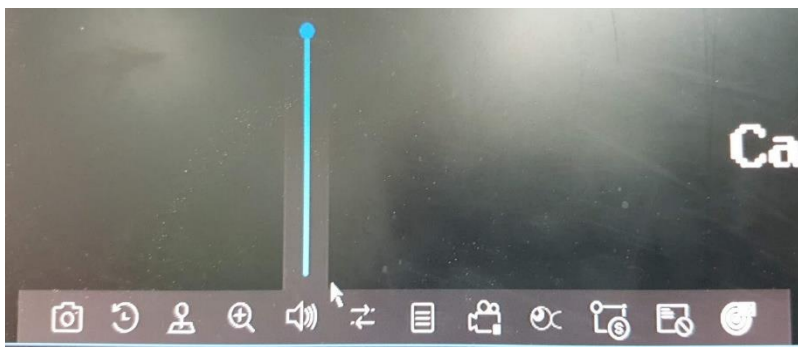
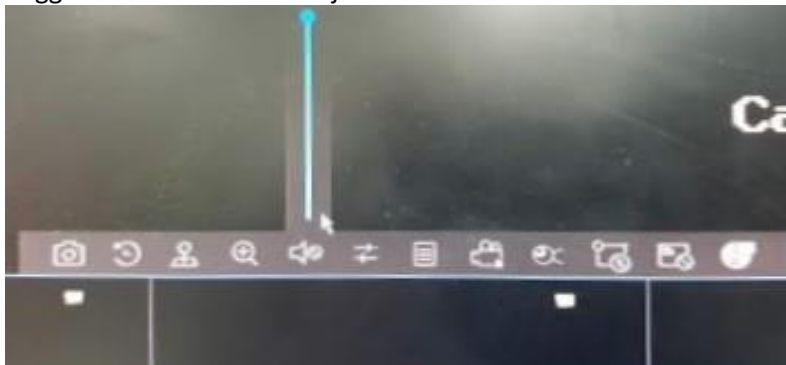
- I. Start the Live View of the camera
- II. Left click anywhere on the screen with the mouse to bring up the toolbar shown below.
- III. Toggle the audio on and adjust the volume to suit.



**Method 2b: Using the Local-GUI of the NVR V4.X**

(Sound will go through the HDMI if the monitor/TV has speakers).

- I. Start the Live View of the camera
- II. Left click anywhere on the screen with the mouse to bring up the toolbar.
- III. Toggle the **audio on** and adjust the volume to suit.





**Method 3: Using the web interface of the NVR/Camera:**

- I. Open the **Live View** of the camera through the web interface using Internet Explorer.
- II. By default, the audio is muted, and the microphone is turned off.



- III. Click on both of the icons highlighted below to enable audio/microphone.



- IV. If the microphone is wired up correctly and the settings on the camera have been configured correctly, you should now be hearing sound.