HiDes   **Easy HD Expressway!**
PC2TV User Guide

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1. Introduction

PC2TV is an application to broadcast the video and audio source from a PC or Notebook by DVB-T. The video source can be either the screen contents of PC/NB or a video capture source, like web camera. PC2TV can capture the video and audio, encoding it to an H.264/MPEG2 stream, and then modulating the DVB-T RF signal. User can receive it from any DVB-T receiver, such as TV, STB, or PC-TV devices.

Note: Only Windows 7 32bit & 64bit have been tested, while Windows XP and Vista may not run well.
This tool is in alpha release stage and only for trial and demonstration; the compatibility, correctness and function are not guaranteed at all.

2. Minimum system requirements

System Component	Requirement
Processor	Intel® Core™ i5 or above
Graphics	Intel® HD Graphics
OS	Windows 7 64-bit*, Home Premium, Ultimate or Professional Windows 7 32-bit*, Home Premium, Ultimate, Professional or Basic
Memory	2 GB RAM

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3. Installation Guide

3.1 Following UT-100 QIG to install device and driver.

Please double check if the driver is installed well,

"Control Panel" -> "Device Manager", there should be a device named "IT9507 TX Device" in "Sound, video and game controllers" category, as shown below,
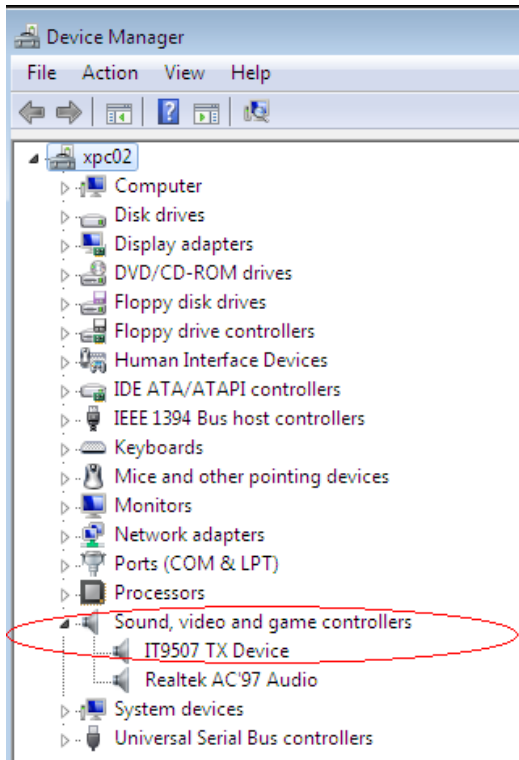
3.2 Install PC2TV

a. Copy the folder "\PC2TV" on the CD to your local hard disk, say C: , D: , E: or F:...

The following instructions assume D: drive is used.

b. Double click on install.exe in \PC2TV to finish the installation.

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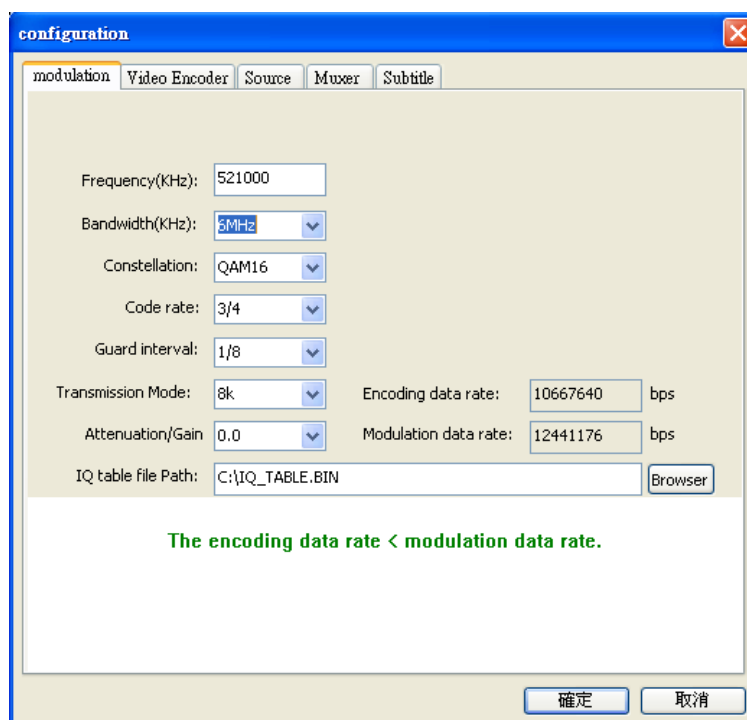
4. Operation Guide

4.1 Configuration:

Click on "Configuration" button on PC2TV control panel.

4.1.1 Modulation page:

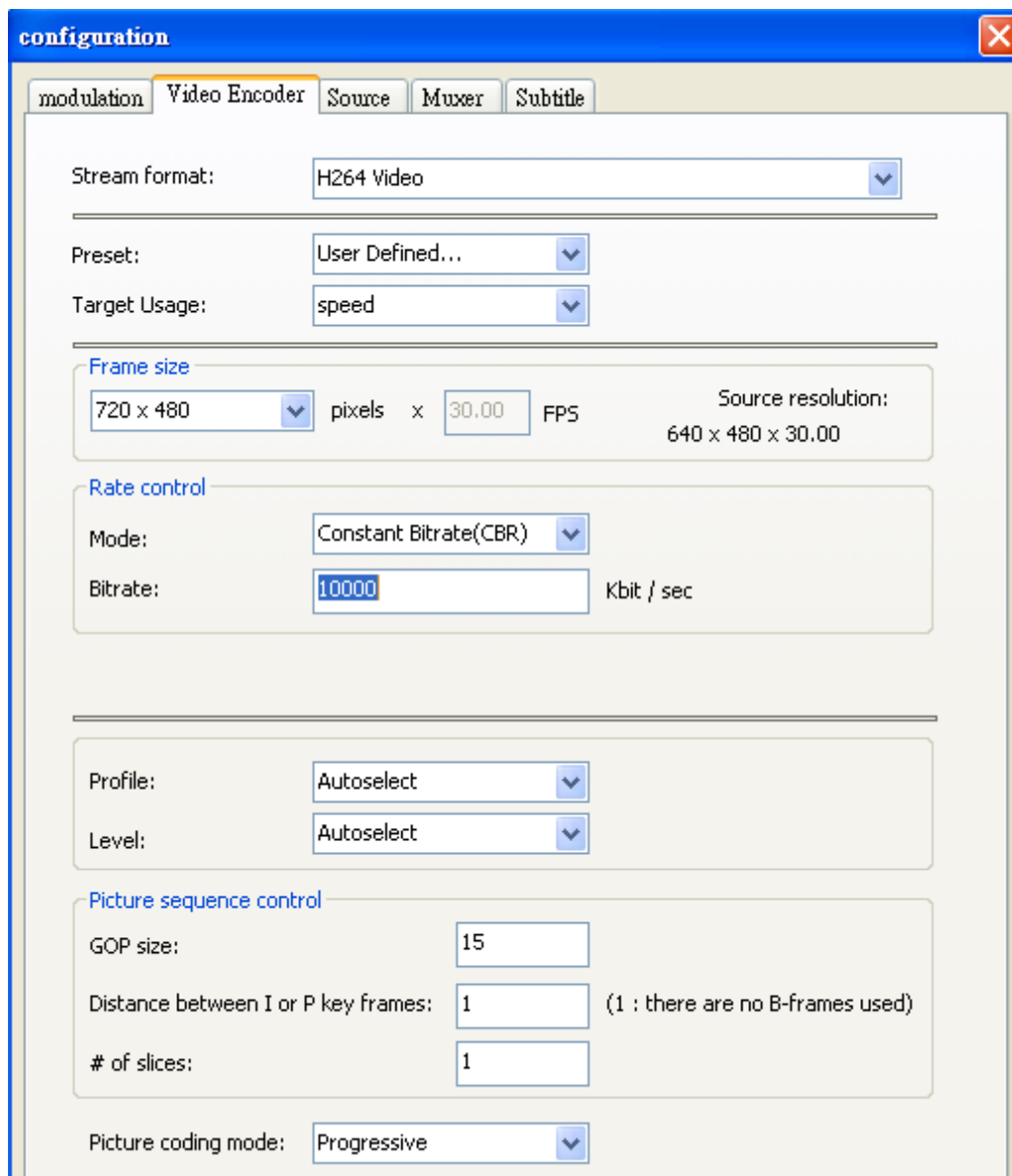All transmission related settings can found on this page.

The channel capacity is determined by the Bandwidth, Constellation, Code rate, and Guard interval. When the settings are changed, the new channel capacity is shown in "**Modulation data rate**". Please note that the "Modulation data rate" should be >= "**Encoding Data rate**".

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The RF output power can be adjusted by setting "Attenuation/Gain".

The RF MER (signal quality) can be further optimized if an I/Q calibration table is available for the board you are testing with. I/Q calibration table will be loaded from selected I/Q table file path. By default, IQ_table.bin will be loaded if it can be found in the same folder of PC2TV.EXE.

4.1.2   Video Encoder page:

Video encoder related settings,

4.1.3 Source page:

Audio/Video source related settings,

Select the video source. The video source can be either the PC desktop or a capture device.

The audio capture source is only supported in WIN7 or higher. Check the proper one to be used.
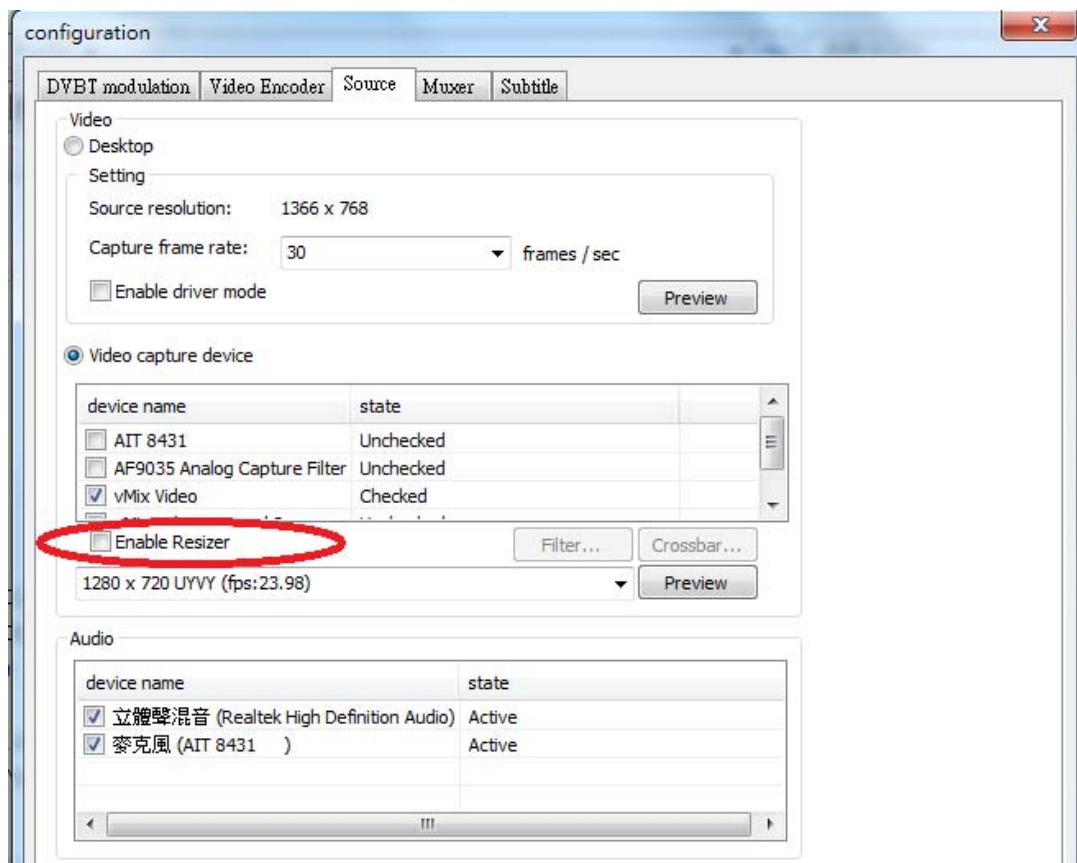
Note:If the video source is a capture device, it's optional to check "Enable Resize". Default is disabled.

When PC2TV runs well, but channel cannot be scanned, you may try to enable "Resizer".   For example, the vMix video source, "Resize" should be enabled if the horizontal video frame lines are not 32-multiples.

For video capture device, if PC2TV ""init failed!", you may also try to enable "Resizer".

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4.1.4 Muxer page: Muxer related settings

4.2 Running PC2TV

4.2.1 Live Transmitting

Transmitting the video/audio from your PC.
- Make sure "Live Transmitting" button is checked.
- Click "Run" button, and then PC2TV will start capture, encoding and broadcasting the stream. If it starts the transmission, you can see the message "Tx is Running".
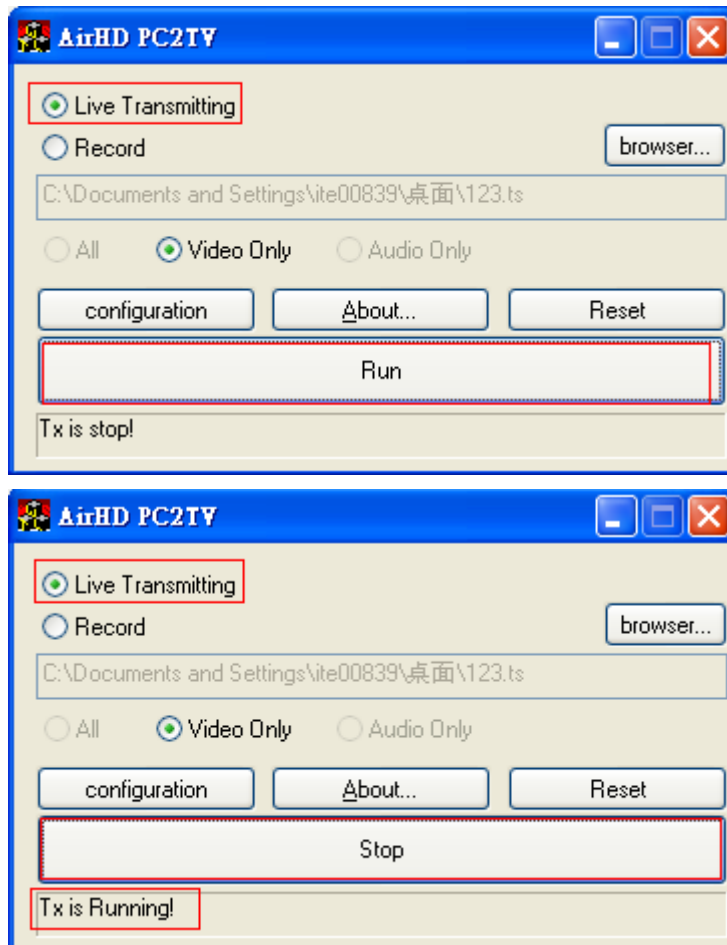
4.2.2 Record

Record video/audio as a DVB-T transport stream file.
- Make sure "Record" button is checked.
- Click on browse button to specify the recorded file path and name.
- Click "Run" button, and then PC2TV will start capture, encoding and recording the stream on a disk. If it starts the recording, "Record to …" will be shown.

4.2.3 Video and Audio capture options:

- All – Capture and encode both audio and video source.
- Video only – Capture and encode only the video source.
- Audio only – Capture and encode only the audio source

Note 1: In case no audio capture device detected, "All" and "Audio only" options will be grayed.

Note 2: Audio capture devices can only be well detected in Win7.

Note 3: If transmission fails with audio, please try to select another audio capture device in the source page of the configuration menu.

4.2.4 Reset: Reset to default settings.

5. FAQ

Whenever PC2TV fails to run, it's recommended to reset the system to default by clicking on the "Reset" button on the main dashboard. It will bring all setting to factory default, so you can isolate the root cause of failure.

5.1. Error message: "init failed!"

UT-100 driver is not installed properly or the dongle is not attached.

5.2. Error message: "Transmitter init failed!"

1   Run Install.exe again

    1.1   If your OS is WIN7 or WIN8 , please refer to chapter <u>5.8.   Set WIN7/WIN8 User Account Control to "Never Notify"</u>. Follow the steps in 5.8 to disable "Notify", and reboot Windows

    1.2   Please run "install.exe" again to make sure all filters are installed well.

    1.3   Try to run PC2TV to check if it works now

    1.4   If not working, continue trying with the following steps
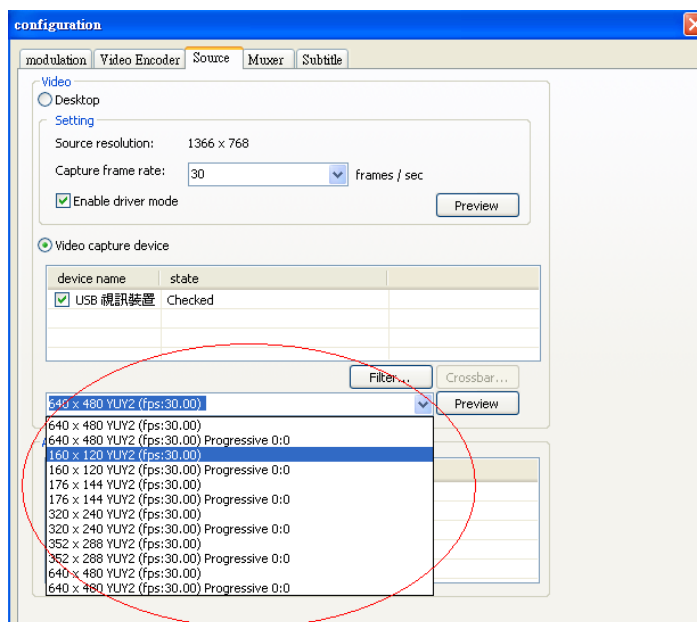
2   Click on "Reset" to reset to system default.

3   Try with "Video only", instead of "All".

    3.1   If it still fails, please run "install.exe" again.

    3.2   If the source is "Video Capture Device", instead of Desktop please try with other configurations.

    3.3   For "Video Capture Device", avoid RGB video format; please select YUY2 or MJPG video format if possible.

4   Try with "All", video + audio

   Audio is only supported for Win7 or above.

5.3. How to report failure in details?

1.   Create a folder in c:\WD, after running PC2TV, there will be some log files
2.   Capture the screen snapshots of all configuration pages and the main console menu.
3.   Send the log files and screen snapshots to Hides

5.4. Why "Subtitle" is not shown after setting in Configuration?

Subtitle and Text are not enabled in current release. It's for internal test only.
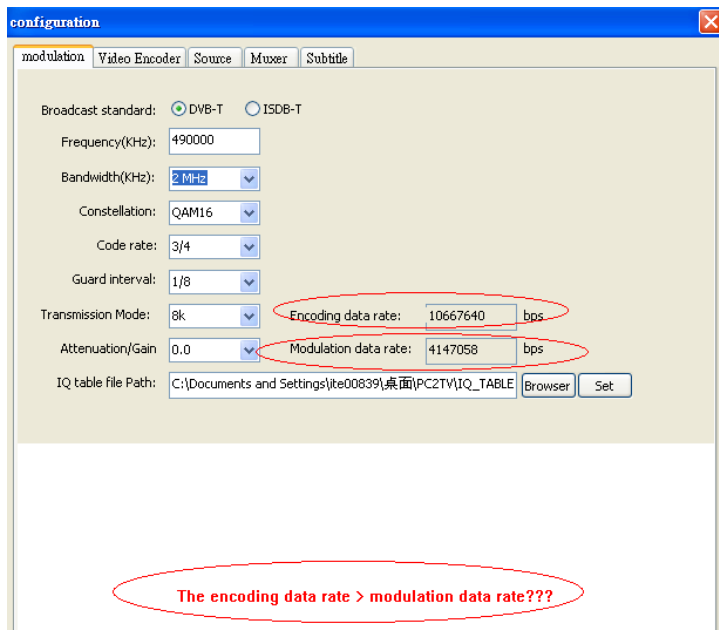
5.5. Can aspect ratio be changed?

Currently, only 1:1 square pel mode is supported.

5.6. Is AAC audio encoding supported?
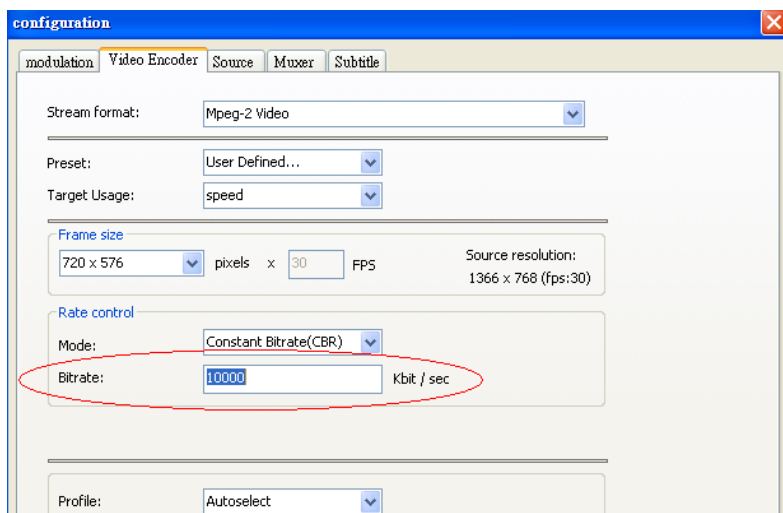
Only MPEG audio supported now.

5.7. "The encoding data rate > modulation data rate???"

The encoded video stream data rate is larger than the channel capacity.

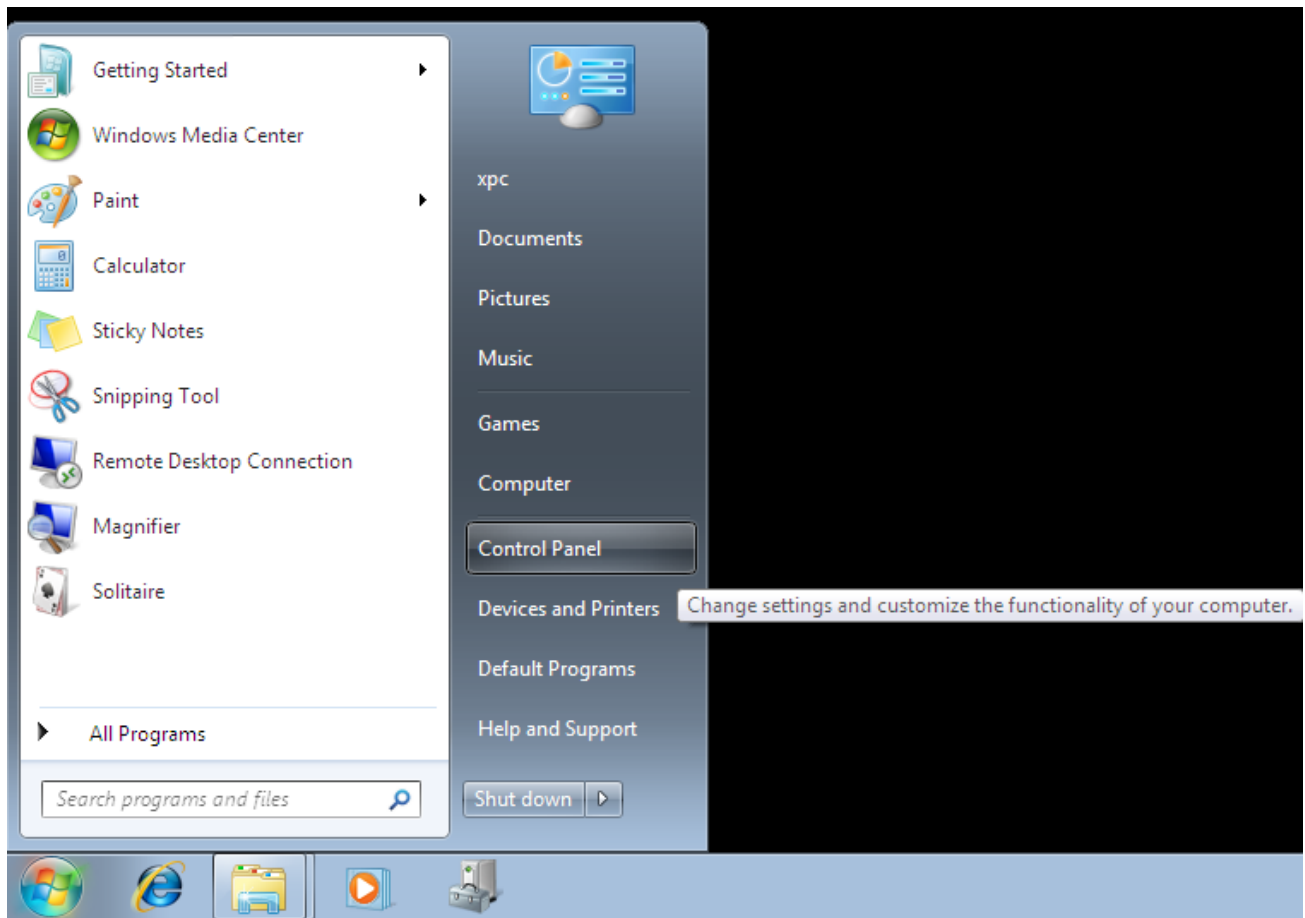It will cause long latency, and frame drops, audio/video glitches.

Please try to decrease the Bitrate in "Video Encoder" configuration page,a s shown below.

5.8. Set WIN7/WIN8 User Account Control to "Never Notify"
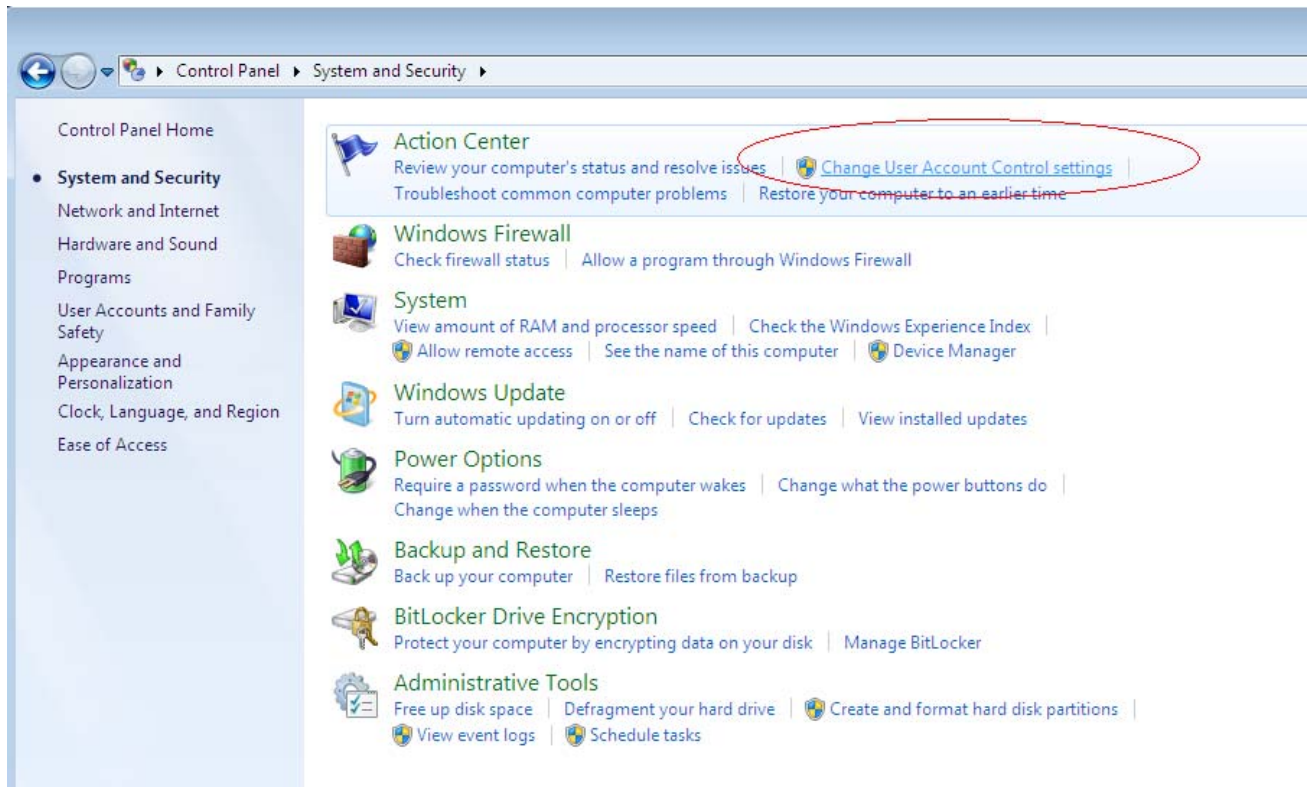
There are totally 5 steps listed below.
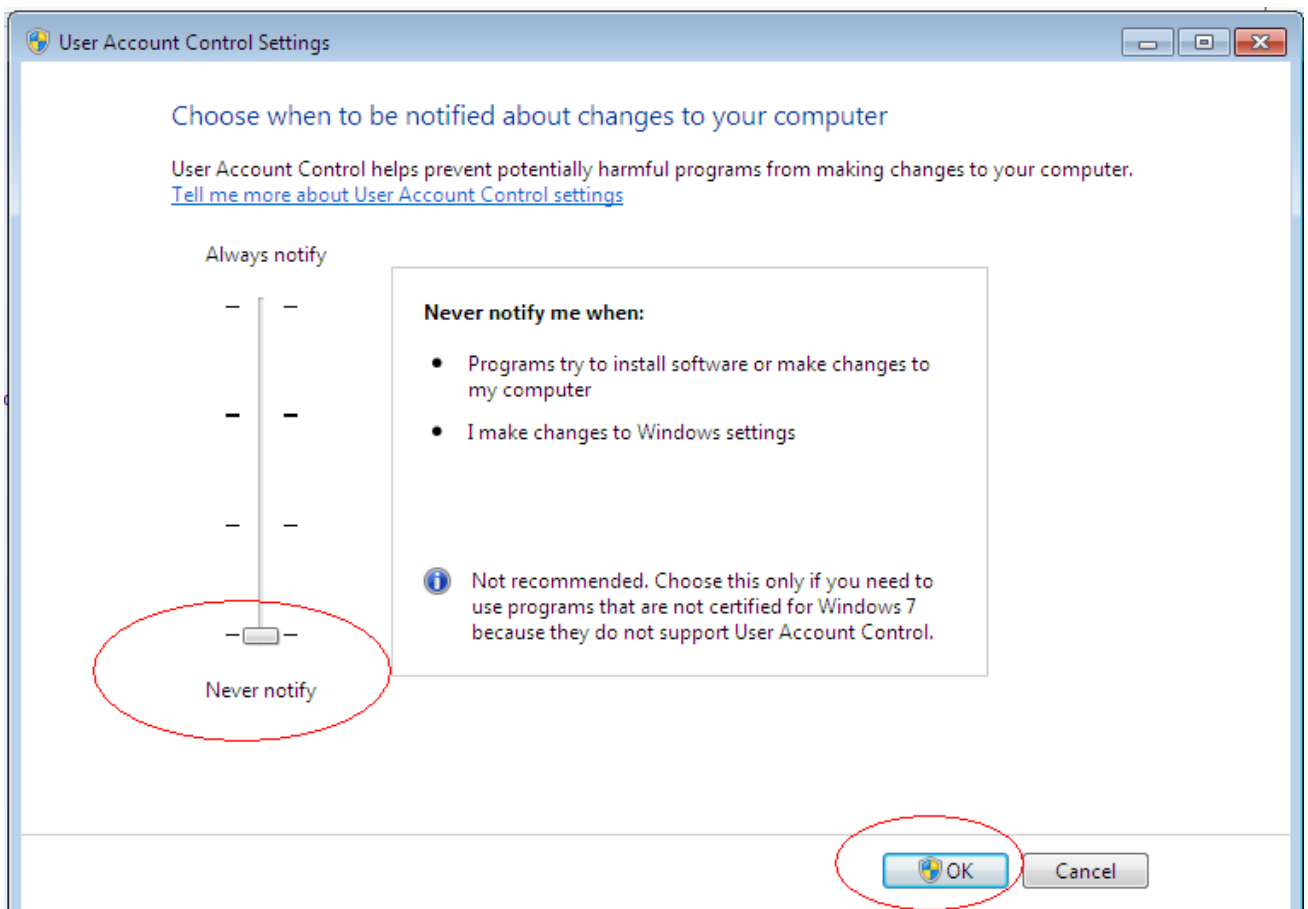
Step 1: launch Control Panel

Step 2: Select "System and Security"

Step 3: Select "Change User Account Control settings"

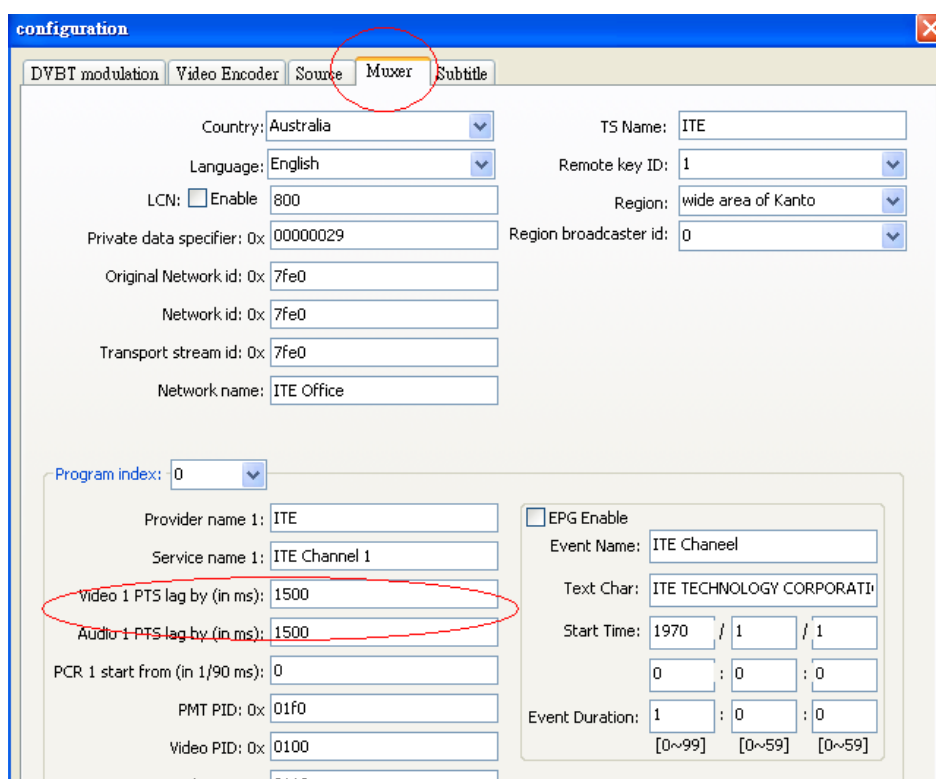Step 4: Set it to "Never Notify" and click on OK

Step5: Reboot your Windows for the new setting to take effect.

5.9. Receiver can tune the channel but fails to show the transmitted stream

In the muxer configuration page, please change the video/audio PTS lag to 1500 ms, as shown below.

If it works, then you may decrease 1500 to a smaller value, say 500.

We have found some old slower PC's can not process received stream in time, so PTS lag should be increased for a while.


5.10. Receiver can tune the channel but video stutters, freezes, slow motion or not shown

It might be related to the CPU performance. The CPU can not processing the video encoding in time.

In the Video encoder page, please select smaller frame size, say 320x240.

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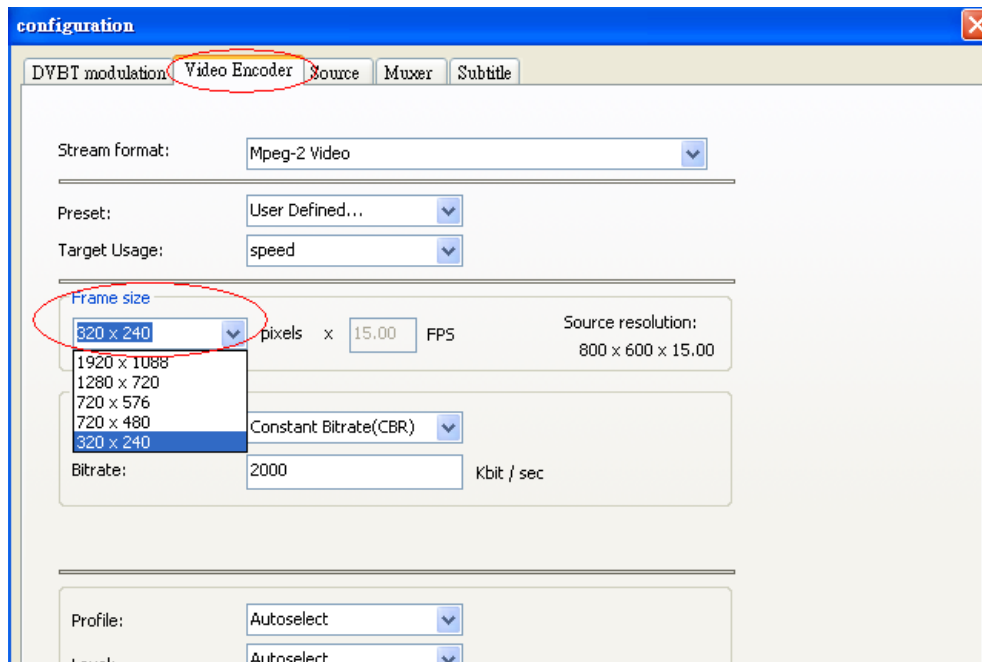
In the Source page, if the source is from "Video capture device", please select smaller frame size input, say 320x240 or 160x120.
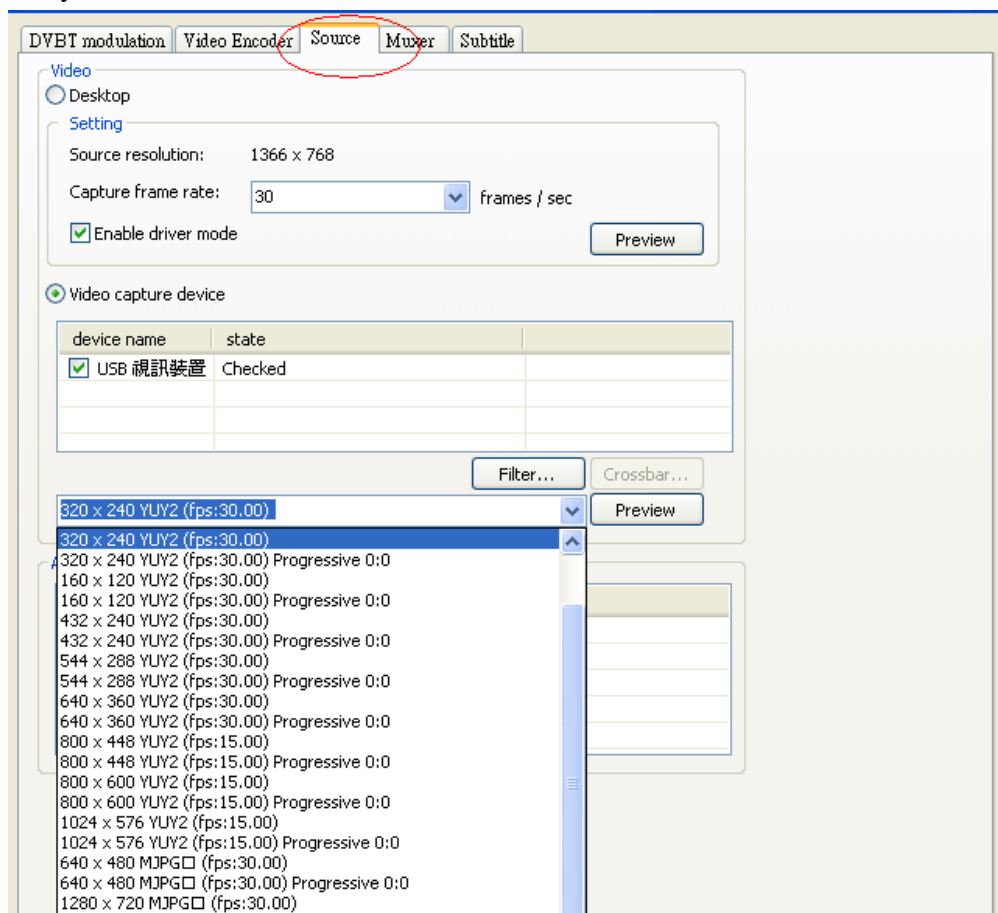
if the source is from "Desktop", please change the desktop resolution to a smaller one, say 800x600

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or 640x480. Also, select the least capture frame rate, 24 frames/sec.

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