

DigiLite UDP v2.50 Setup – v20

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Overview

This is a beta release. It appears stable enough to be useful, although there may still be some bugs. It has been tested extensively only with Windows XP 32 bit.

Development of this version is continuing, so check the DigiLite pages on the G8AJN site or the BATC forum occasionally to see if there have been any updates or bug fixes.

Please report any bugs, however minor, including mistakes in this document.

All the functionality of DigiLite v1 is contained in DigiLite v2.

If DigiLite v1 is doing what you want and you do not need UDP data input, then there is no need to upgrade, although the multiple configuration profile facility may be useful.

DigiLite v2 PC software will work with all versions of serialiser software in the dsPIC. DigiLite Serialiser v2.5x is required for SD card operation and for a few minor features of DigiLite v2.

DigiLite Transmit v1.xx (DLTv1) reads MPEG-2 Program Stream (PS) data, which has been written to hard disk by GBPVR or WinTV. This is the only possible method of sending live MPEG-2 data to DLTv1.

DigiLite Transmit v2 (DLTv2) can accept data for transmission using the UDP network protocol.

This has the following advantages:

- MPEG-2 program stream data can be transferred from the PVR-150 to DLTv2 over UDP, without using GBPVR or WinTV or writing it to disk first. A free utility called GraphEdit is used instead. For single PC use, there does not need to be a network card in the PC.
- DLTv2 can accept data over UDP in Transport Stream (TS) format. Some MPEG-2 utilities can output data in this format over UDP.
- Video capture / conversion can be located on one PC and DLTv2 and the DigiLite board can be located on another PC in a more convenient location. The two PCs could be on your home network, or in theory, anywhere on the internet. It remains to be seen how it might work over the internet, with its unknown delays.

Notes:

For PS input over UDP, the bit rate of the capture source should be set so that DLTv2 will use 5-10% padding. Resyncs may occur if higher values of padding are required at lower symbol rates, depending on the block size of the incoming UDP data.

When preparing files for SD card use, DigiLite TS Generator v1-46 always uses the first profile in DigiLite Config v2.

Screen shots refer to version 2.10beta. The release version is 2.50beta.

Windows Requirements

When running DigiLite Config v2, it is possible that Windows may complain about a missing MSCOMCTL.OCX file. It can be downloaded from here:

<http://activex.microsoft.com/controls/vb6/mscomctl.cab>

Extract MSCOMCTL.OCX and move it to c:\windows\system32 (if C: is your Windows drive)

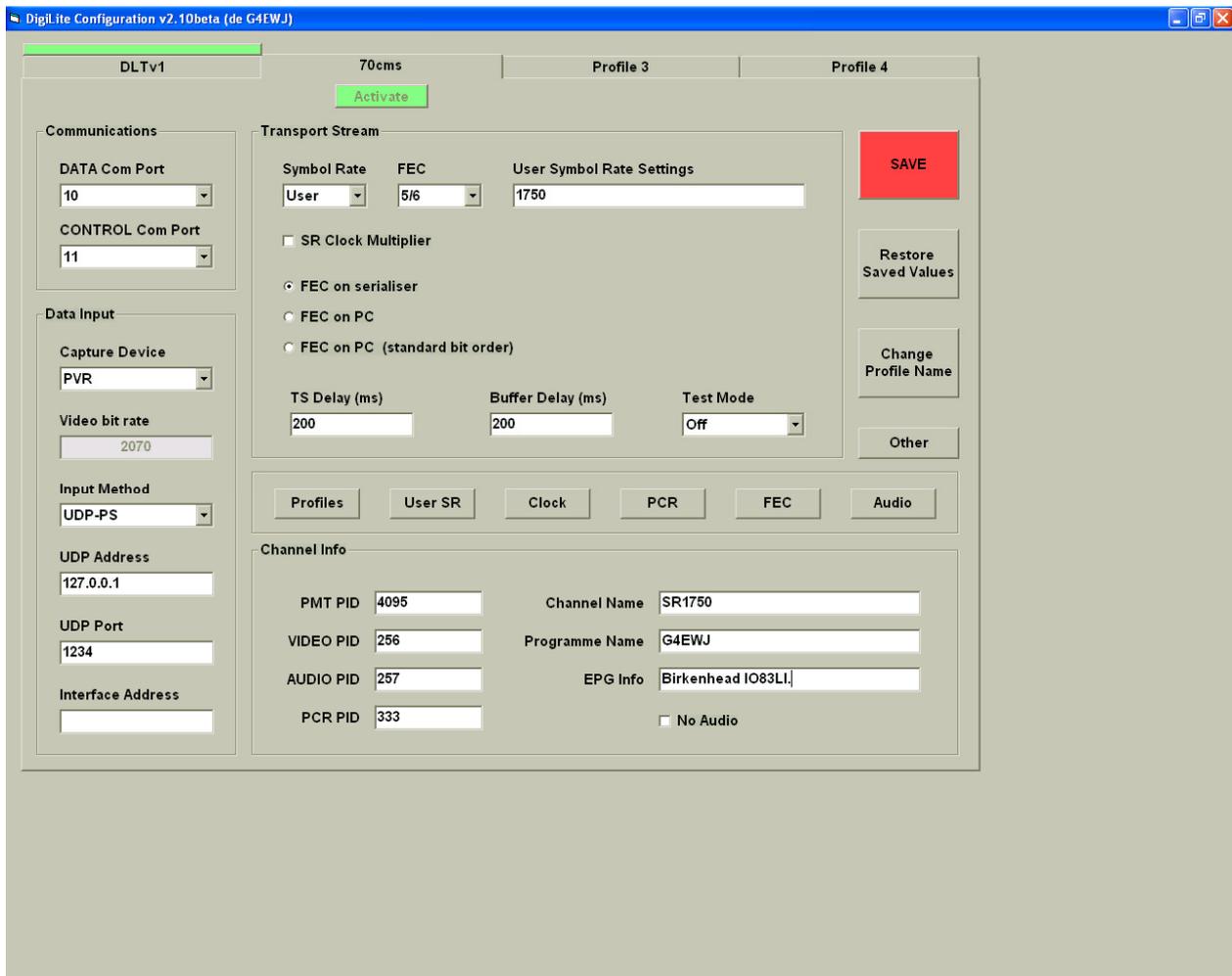
Click 'Start' and then click 'Run'

Type: `regsvr32 c:\windows\system32\mscomctl.ocx` and then click 'OK'

MSCOMCTL.OCX should now be registered.

DigiLite Config v2 (DLCv2)

DigiLite v2 has several new features.



Several configuration profiles may be set and selected according to the required operation.

The green bar above the profile name shows the profile that DLTv2 is currently using.

Selecting a different profile and clicking the 'Activate' button below the profile name will cause DLTv2 to restart and use that profile. Activation occurs immediately. It is not necessary to click 'SAVE'

When replaying a .MPG file, DLTv2 uses the currently active profile.

Symbol rates of 500, 667, 750 and 9000 have been added to the menu. These require both DLTv2 and DigiLite Serialiser v2.xx to operate. Further development of DLTv2 is required for these low symbol rates, so performance is likely to be variable.

Other symbol rates not on the list are possible.

Clicking 'Other' displays a box of six options which may be set. The screen shot above has all options displayed. Click 'Other' again to hide the box.

Clicking the option button hides or displays that option. When an option is not displayed, it is turned off.

Profiles: The number of profiles can be set from 1-12.

User SR: A SR not on the menu may be entered. Only certain SRs are valid.

Clock: SR clock multiplier – for future use.

PCR: The Program Clock Reference PID may be entered. It normally defaults to be the same as the Video PID.

FEC: FEC on PC (standard bit order) is only relevant for non DigiLite systems.

Audio: For low symbol rates, it may be an advantage to turn off the audio and use the space for video. The 'Video bit rate' figure shown will reflect this.

Input Method:

UDP-PS: Program Stream over UDP. Used with the GraphEdit examples below.

UDP-TS: Transport Stream over UDP. 188 or 204 byte packets. Used with other MPEG-2 utilities.

UDP-RAW: Free format data input. For future development.

UDP Settings:

UDP Address: The IP address of the PC sending the UDP data that DLTv2 should listen for. This can be left blank to receive UDP data from anywhere, but it may cause confusion if more than one PC is sending UDP data on the same port number.

UDP Port: The port number that DLTv2 should listen on.

Interface Address: If the PC has more than one network card, the IP address of the card that DLTv2 should use is entered here.

Test Modes:

ALT1, ALT2 and ALT4 toggle between USB and LSB output that many times per second, for setting up carrier suppression. This requires DigiLite Serialiser v2.5x to be installed in the dsPIC on the DigiLite board.

Compatibility with DigiLite v1:

In general use DLCv1 with DLTv1, or DLCv2 with DLTv2.

DLTv1 will always use the first profile of DLCv2, so it is recommended that the first profile is left unchanged so that DLTv1 may still be used if required. DigiLite TS Generator v1-46, for the SD card, always uses the first profile.

IP Addresses and Port Numbers

Any PC connected to a network has an IP address to uniquely identify the connection. If it has more than one network card, it will have more than one IP address.

On a home network, this is usually in the special range 192.168.xxx.xxx which is reserved for private networks. For data going out onto the internet, the router handles the translation between these addresses and the address that the internet has assigned to the router.

The IP address 127.0.0.1 is a special address that means 'this PC'. It can be used for network communication within a single PC, without needing to know the real IP address of the PC. It is also known as LOCALHOST.

Graphs and Filters

In Windows audio/video parlance, a FILTER is a software module that performs some task. It may read from a capture card, convert data to another format, display the video on screen, etc.

A GRAPH is an interconnection of several filters to perform a particular function.

Filters are used by programs such as Windows Media Player, but they remain unseen in the background. GraphEdit is a free Microsoft utility to experiment with filters and join them together visually to produce a graph.

There are several clones of GraphEdit available. The examples below are based on this version of the original:

<http://www.digital-digest.com/software/download.php?sid=82&ssid=0&did=1>

A graph is very specific to the configuration of your PC. It cannot be simply copied to another PC that has a PVR-150. It will stop working if a PVR-USB2 is moved to another USB socket on the same PC. It will probably stop working if the PVR-150 is moved to another slot in the same PC.

GraphEdit is very good at forgetting its settings (usually only video and audio parameters). Check them each time the graph is loaded.

More information on graphs and filters from F6DZP can be found on the BATC forum and also on:

<http://www.vivadatv.org/> (mostly in French, but some English)

UDP Sender Filter

This free filter is used in the examples below to send the Program Stream from the PVR-150 to DLTv2.

<http://www.majority.nl/files/majorudpsend.zip>

Extract the files from the ZIP and double click REGISTER.BAT.

Windows utility REGSVR32 first tries to unregister the filter and will display an error if it is not there.

Just click OK and it should work the second time.

Constructing a Graph

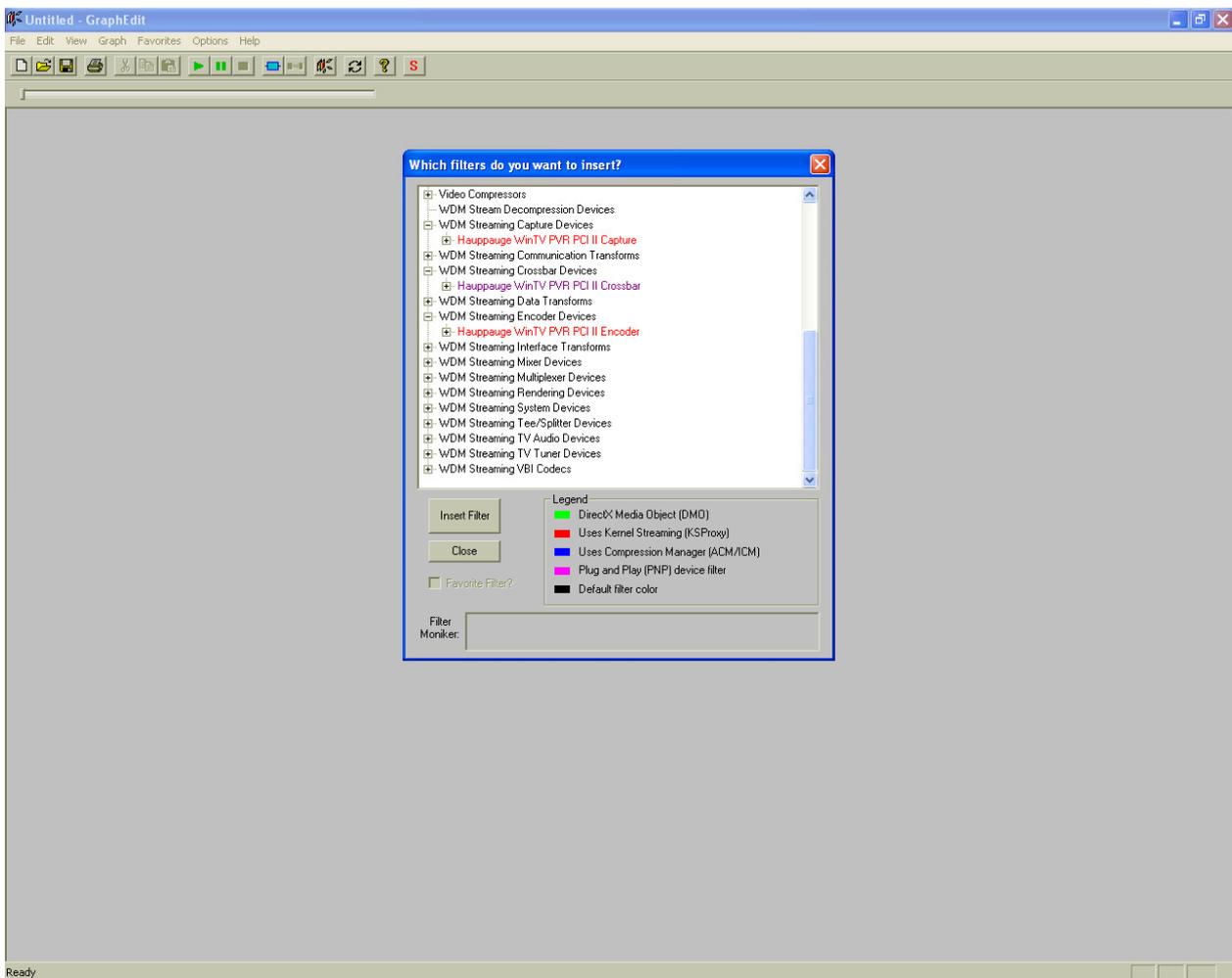
PVR-150, GraphEdit and the Major UDP Sender filter should be installed.

See page 31 for the slightly different graphs for PVR-250 / 350 / USB2.

See page 33 for running GraphEdit at higher priority.

- Run **graphedt.exe** (sometimes it immediately minimises itself on the Task Bar)
- Click 'Graph'
- Click 'Insert Filter'
- Click the + sign next to 'WDM Streaming Capture Devices'
- Click the + sign next to 'WDM Crossbar Devices'
- Click the + sign next to 'WDM Streaming Encoder Devices'

This should give the display below.

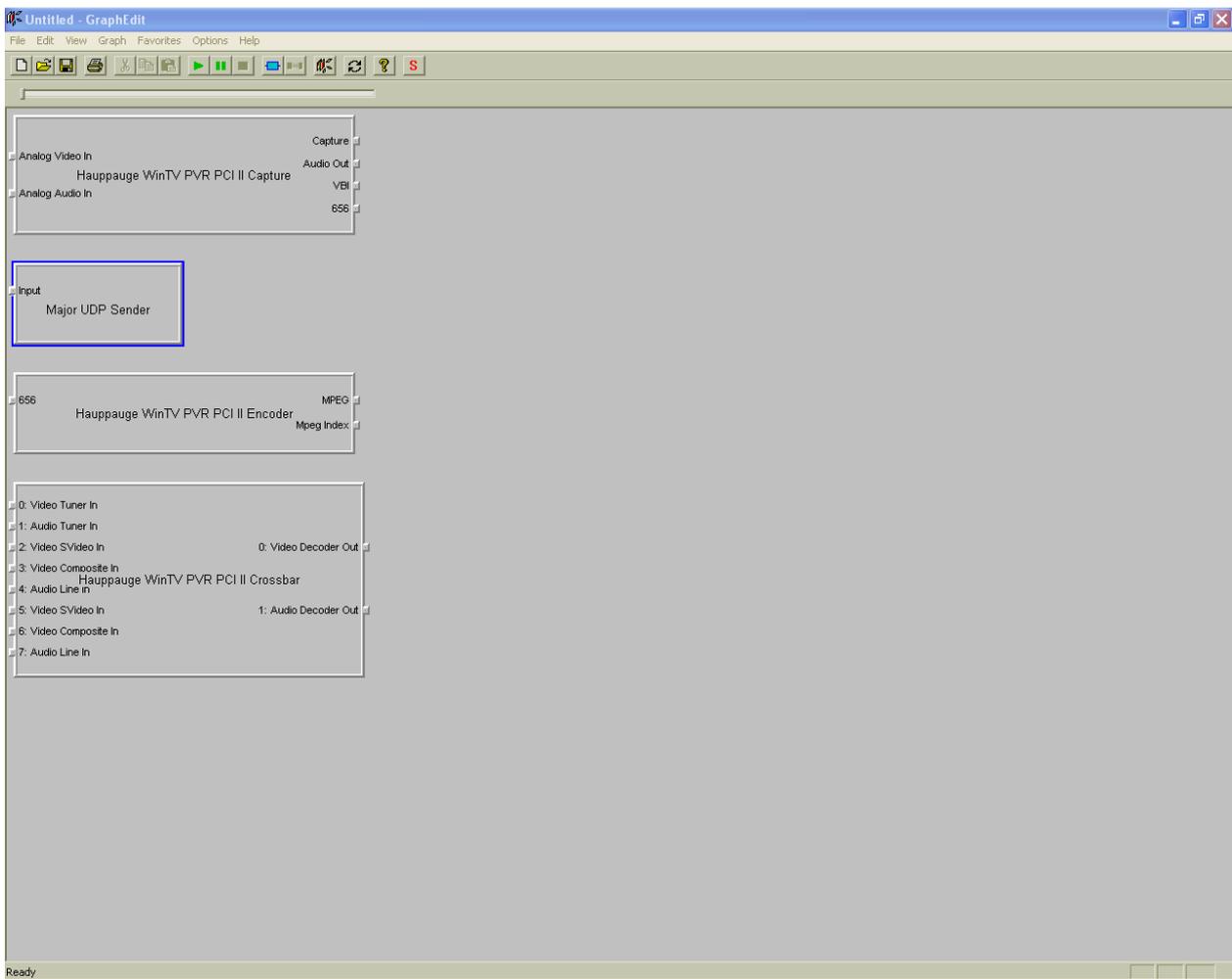


- Click 'Hauppauge WinTV PVR PCI II Capture' (not the + sign) and then click 'Insert Filter'
- Click 'Hauppauge WinTV PVR PCI II Crossbar' and then click 'Insert Filter'
- Click 'Hauppauge WinTV PVR PCI II Encoder' and then click 'Insert Filter'

Scroll back up the list of filters and find 'DirectShow Filters'

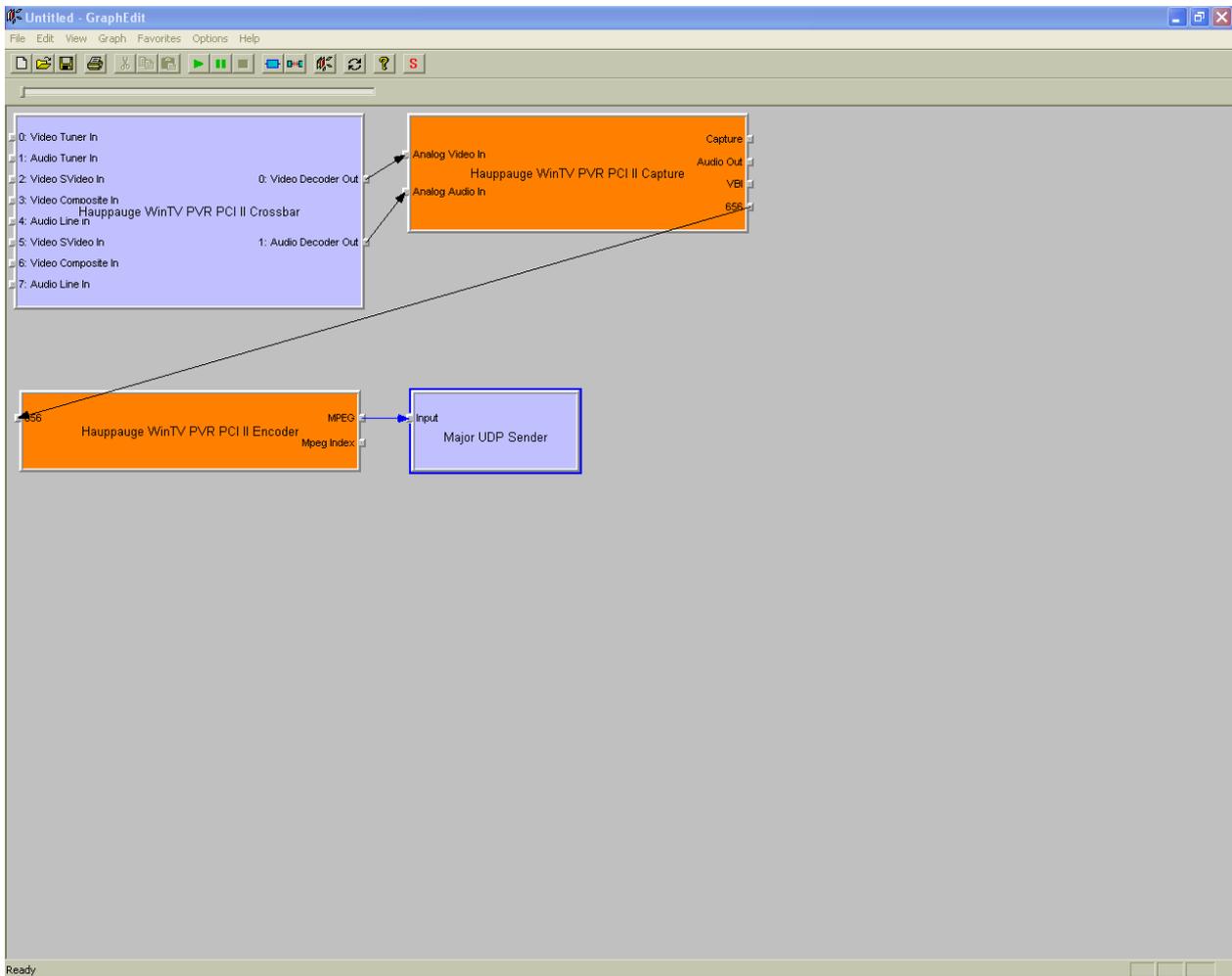
- Click the + sign next to 'DirectShow Filters' and scroll down to find 'Major UDP Sender'
- Click 'Major UDP Sender' and then click 'Insert Filter'

Close the filters box and you should have the display below.



With the mouse, draw lines between the pins on the filters as shown below.

The filters will move and change colour as this is done. Drag the filters with the mouse to move them around the screen.



Generally, the graph should not be running when settings are changed. If the graph is running, (the stop button just below 'Help' is red), click the red stop button.

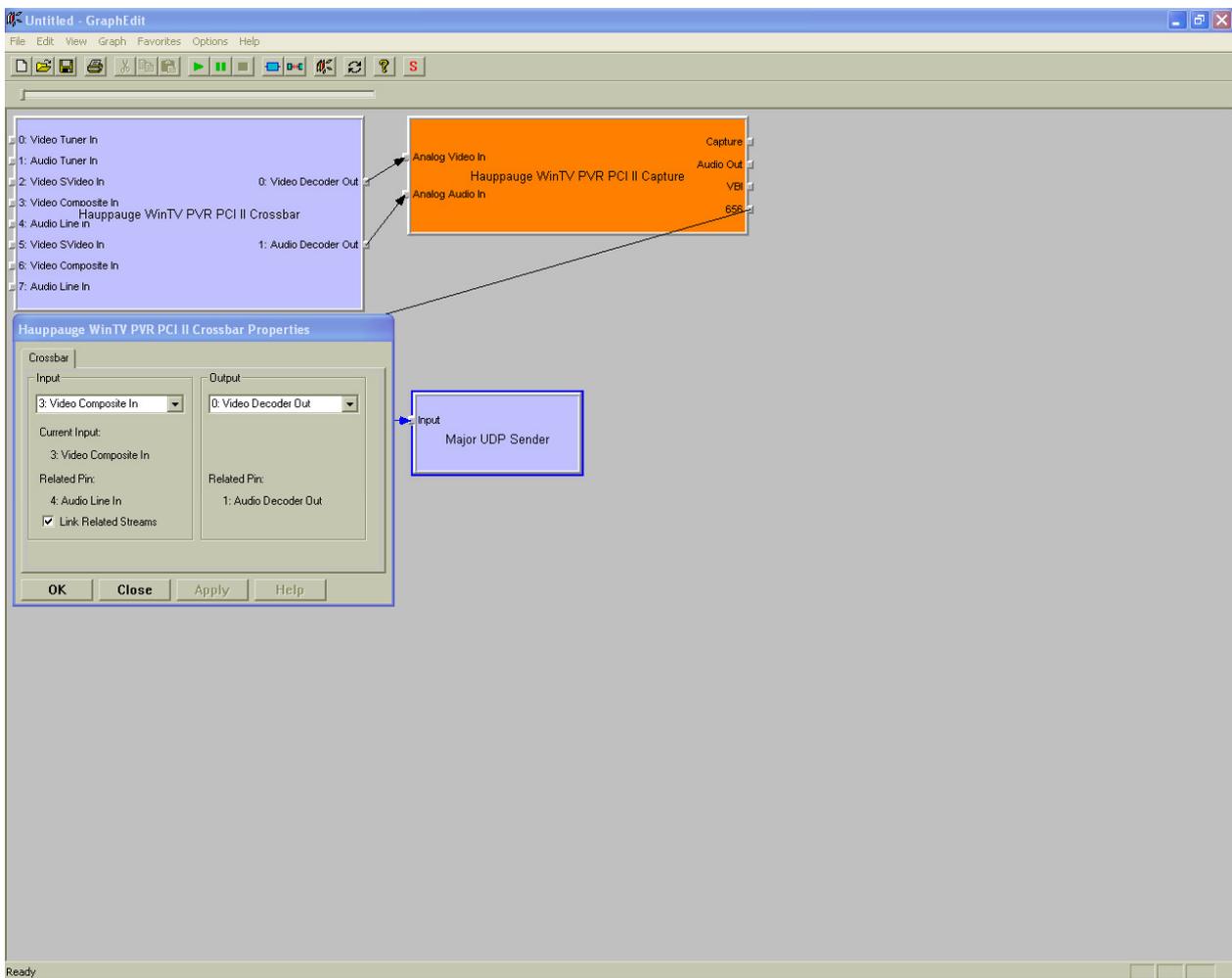
- Right click the Crossbar filter and click 'Filter Properties'

Select the input connection on the PVR-150. This is usually 'Composite' for phono input.

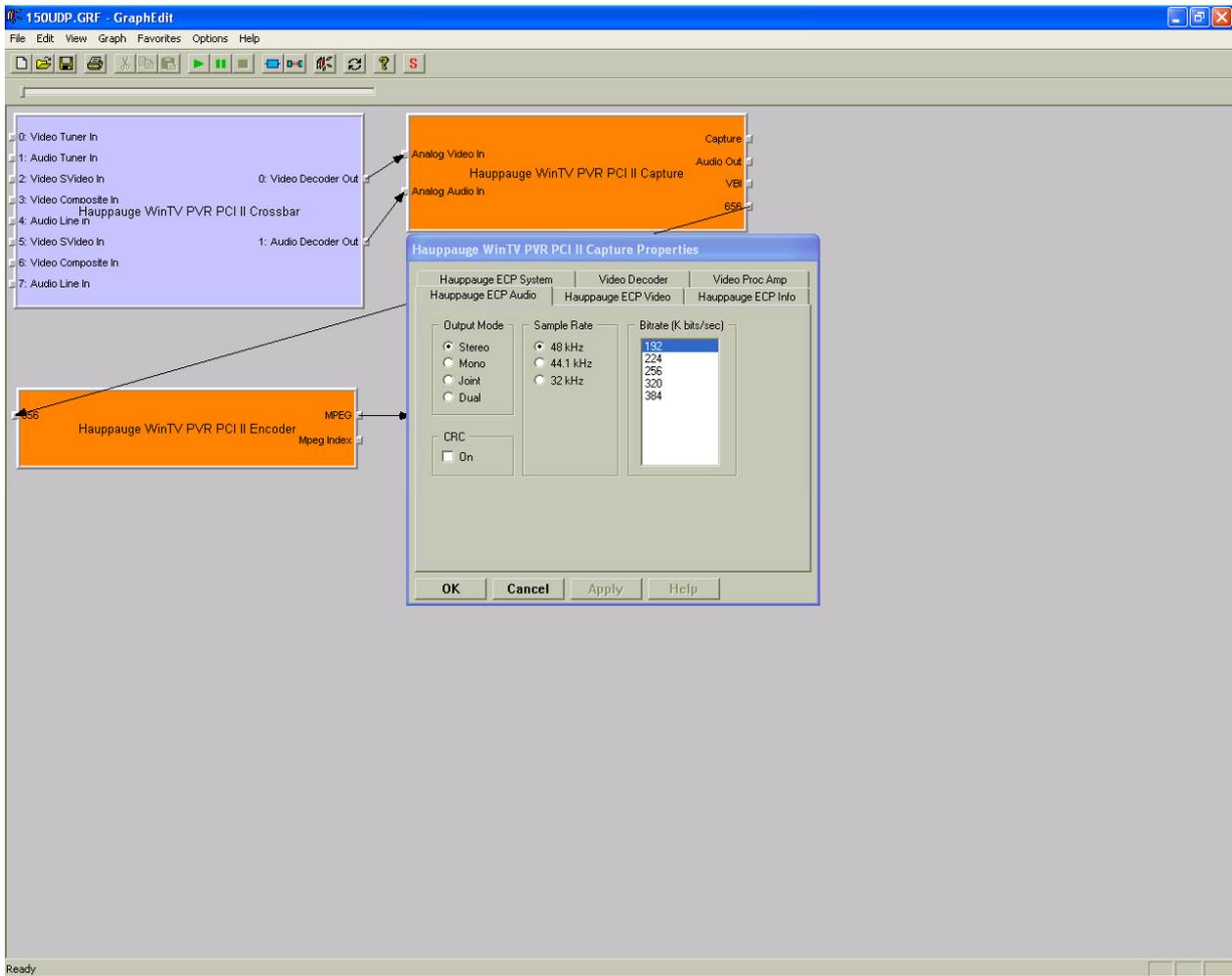
There may be more than one composite option. Normally select the first one.

- Tick 'Link Related Streams'
- Click 'OK'

If the audio is found not to be working later, change the input selection, click APPLY and then change it back again. 'Link Related Streams' should be ticked both times.



- Right click the Capture filter and click 'Filter Properties'
- Click 'Hauppauge ECP Audio' tab, select the options as shown below and click 'Apply'



- Click 'Hauppauge ECP Video' tab and select the options as show below.

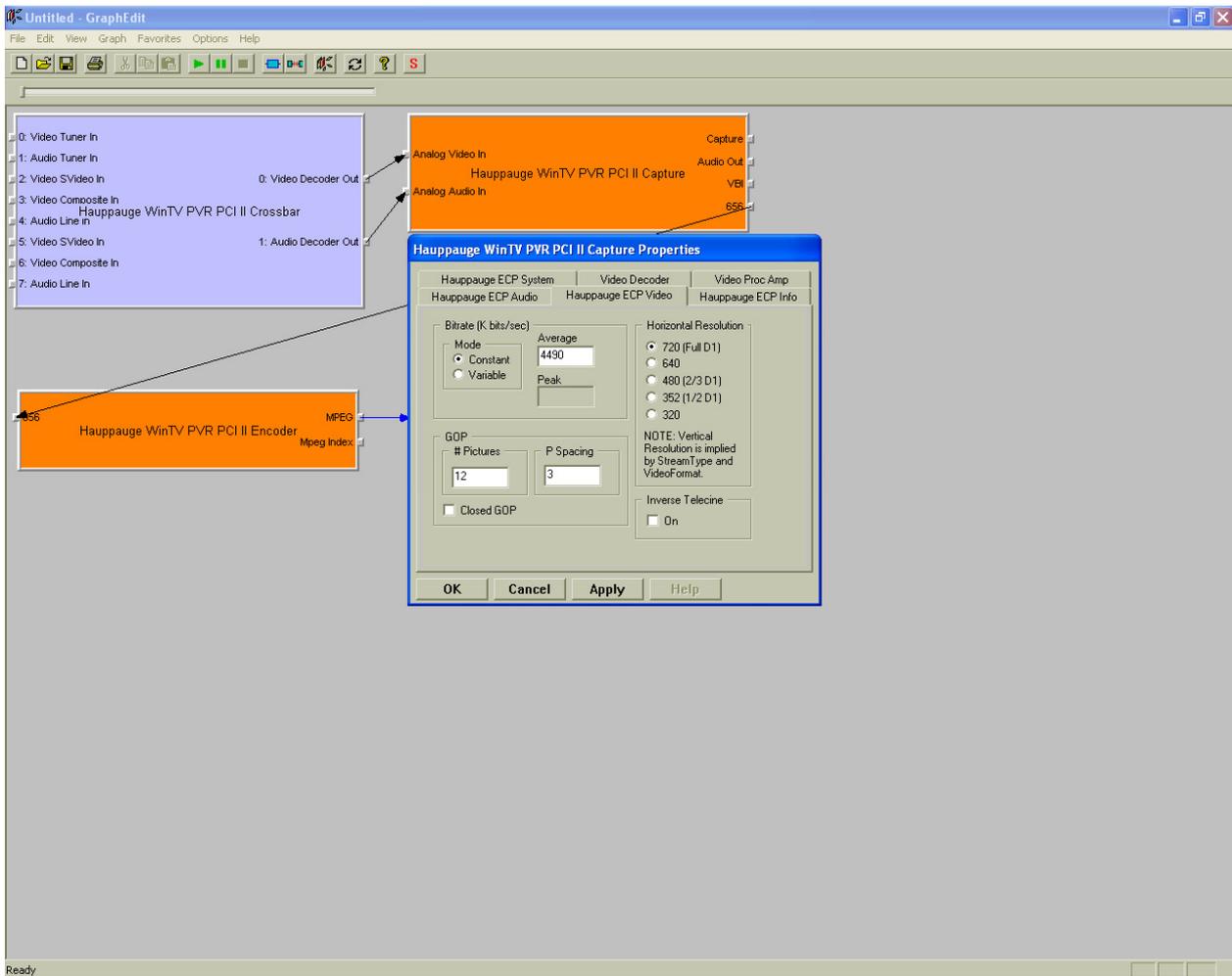
GOP #Pictures is usually already set to 12 or 15. If so, leave it at whichever it is set to.

The 'Average' value is the one given in the Video Bit Rate box in DigiLite Config.

Horizontal Resolution of 352 instead of 720 may be set. This reduces the video quality, but also reduces artefacts during fast motion.

Generally use 720 for SR4000 and 352 for SR2000 and below, but for 'talking head' and 'shack' shots that amateurs mostly send, 720 at SR2000 may well be acceptable.

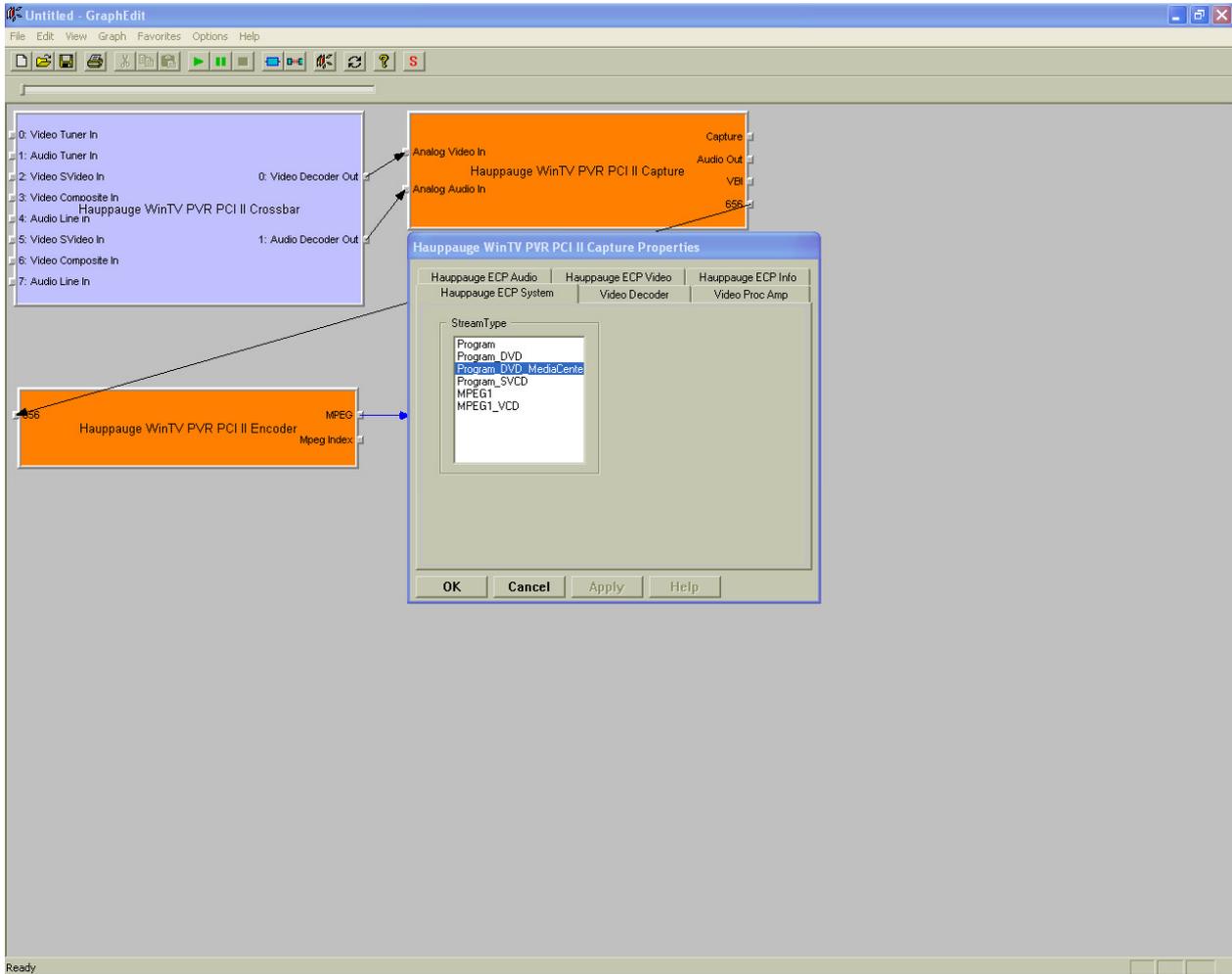
- Click 'Apply'



- Click 'Hauppauge ECP System' tab and select the options as show below.

Program_DVD or Program_DVD_MediaCenter will probably be set already. If so, leave it at whichever it is set to.

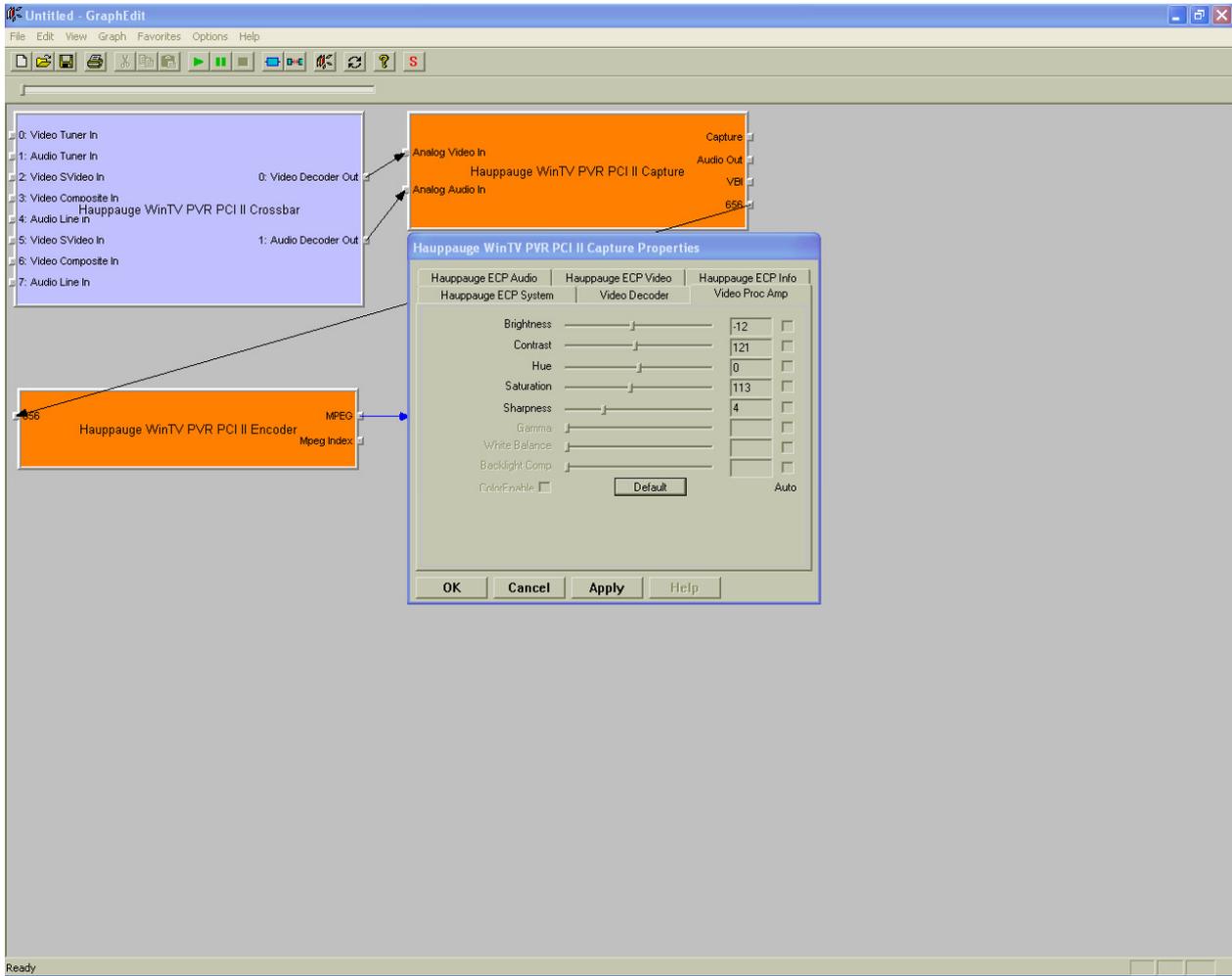
- Click 'Apply'



Clicking the 'Video Proc Amp' tab gives a control panel where video parameters may be changed.

This can be done while the graph is running or while GBPVR is using the PVR-150.

Click 'OK' to finish.



- Right click on the Major UDP Sender filter
- Set 'Host' to 127.0.0.1 and click 'Set'
- Set 'Port' to 1234 and click 'Set'

The UDP data will be sent to port 1234 on IP address 127.0.0.1 (this PC).

- Click 'File' and 'Save As Graph' to save the graph for future use.

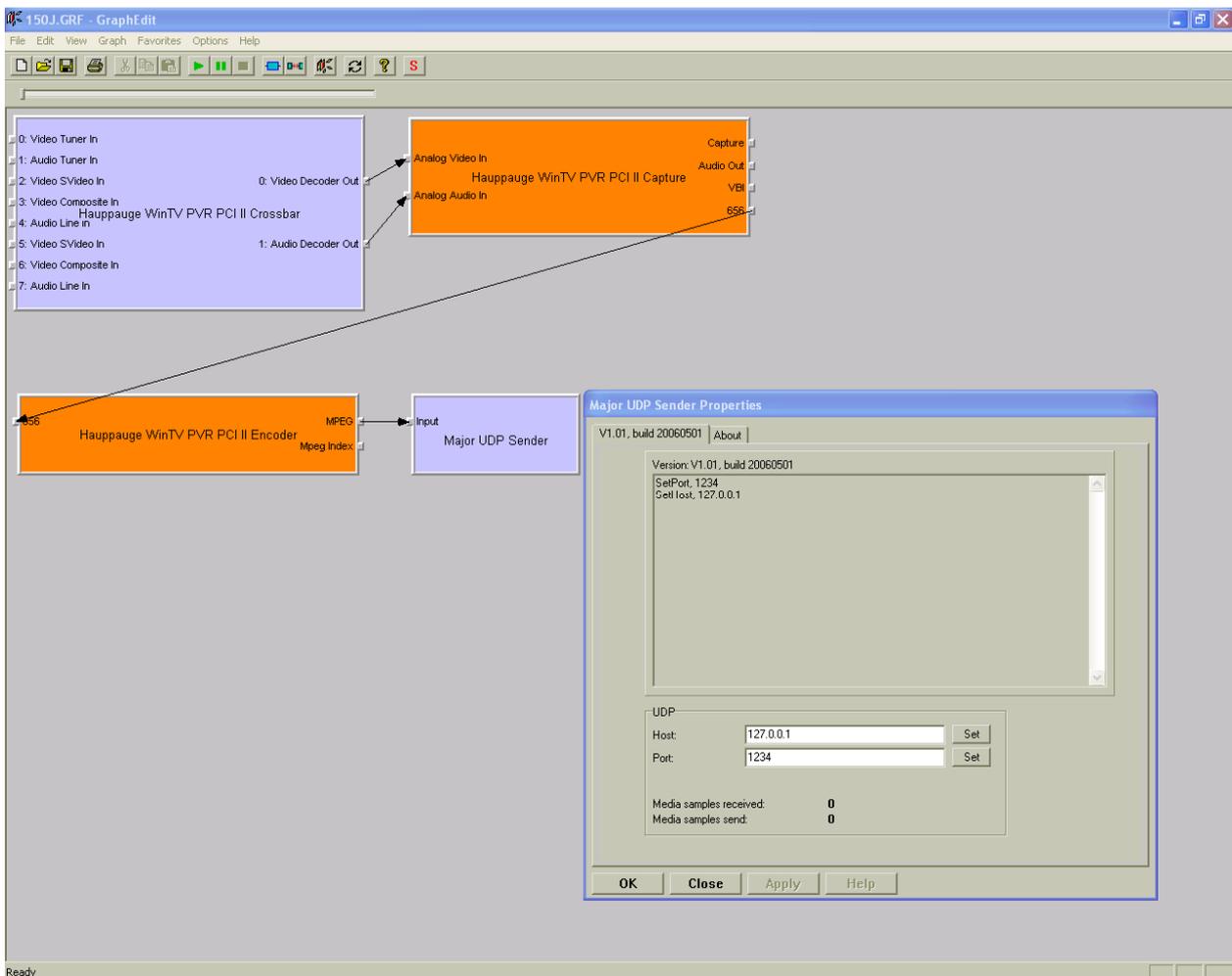
GraphEdit is very good at forgetting its settings (usually only video and audio parameters). Check them each time the graph is loaded.

GBPVR or WinTV must not be using the PVR-150, or the graph will not run.

- Click on the green arrow to start the graph.

The Media samples counts should increase to show that data is being received from the preceding filter and sent out over UDP.

If no program is running to receive the UDP data, it will just harmlessly 'evaporate' and not go anywhere.



UDP Operation with GraphEdit and DigiLite on the same PC

Set the Data Input parameters as below to agree with those set in the graph. GraphEdit will send to port 1234 and DLTV2 will listen on port 1234 for UDP data from IP address 127.0.0.1 (this PC).

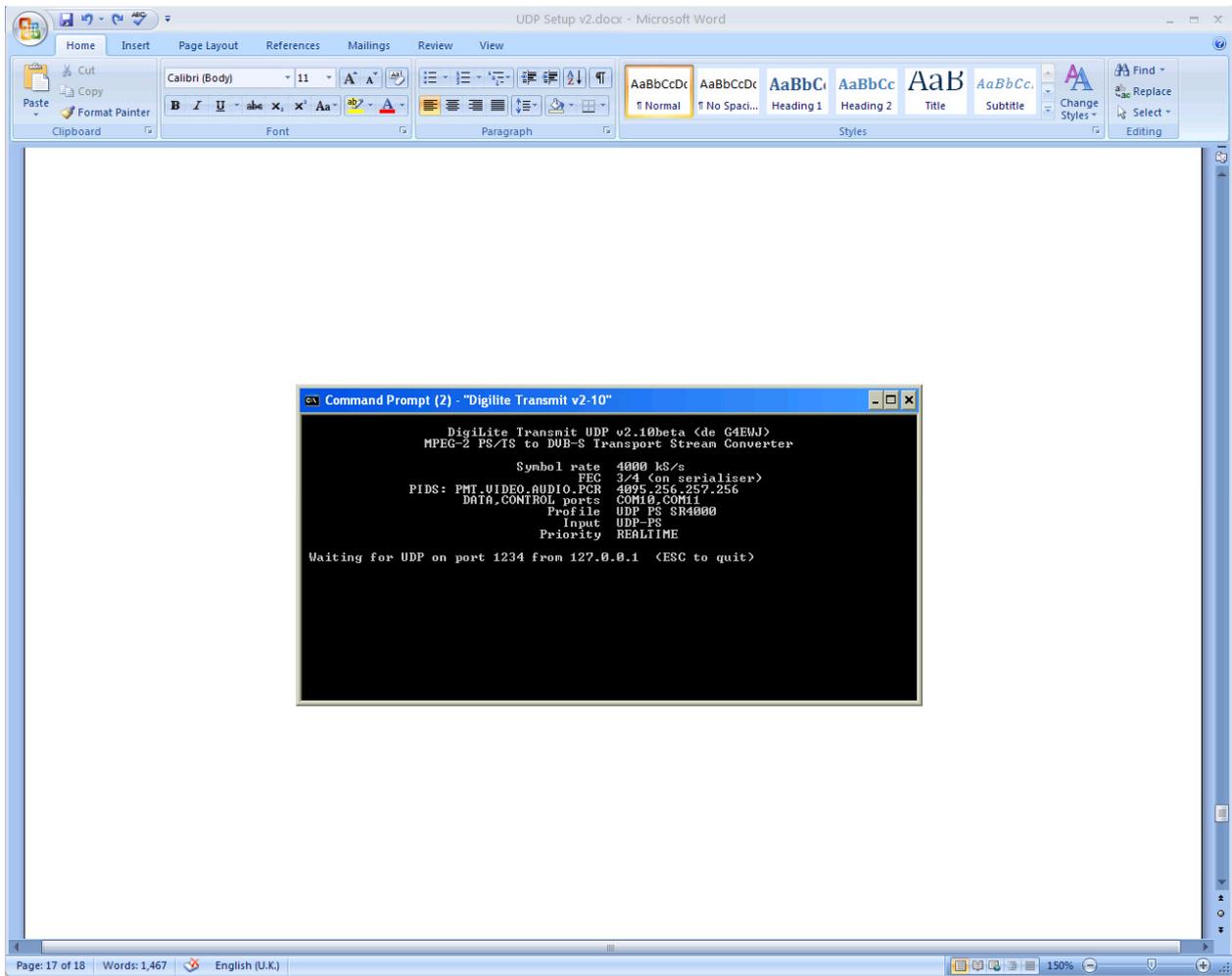
The port settings in GraphEdit and DLTV2 should always be the same as each other, for all modes of operation.

If this profile is not the active one that DLTV2 is using, click 'Activate'.

Activation occurs immediately. It is not necessary to click 'SAVE'.

The image shows two software windows. The top window is GraphEdit, displaying a signal flow graph with components like Video Tuner, Video Decoder, Hauppauge WinTV PVR PCI II Capture, and Hauppauge WinTV PVR PCI II Encoder. A 'Major UDP Sender' block is connected to the encoder. A 'Major UDP Sender Properties' dialog box is open, showing settings for Host (127.0.0.1) and Port (1234). The bottom window is DigiLite Configuration v2.10beta, showing the 'UDP PS SR4000' profile. The 'Data Input' section is configured with 'Capture Device' set to 'PVR', 'Input Method' set to 'UDP-PS', and 'UDP Address' set to '127.0.0.1'. The 'UDP Port' is set to '1234'. The 'Transport Stream' section shows 'Symbol Rate' at 4000 and 'FEC' at 3/4. The 'Channel Info' section shows 'Channel Name' as 'SR4000', 'Programme Name' as 'G4EWJ', and 'EPG Info' as 'Birkenhead I083LI'.

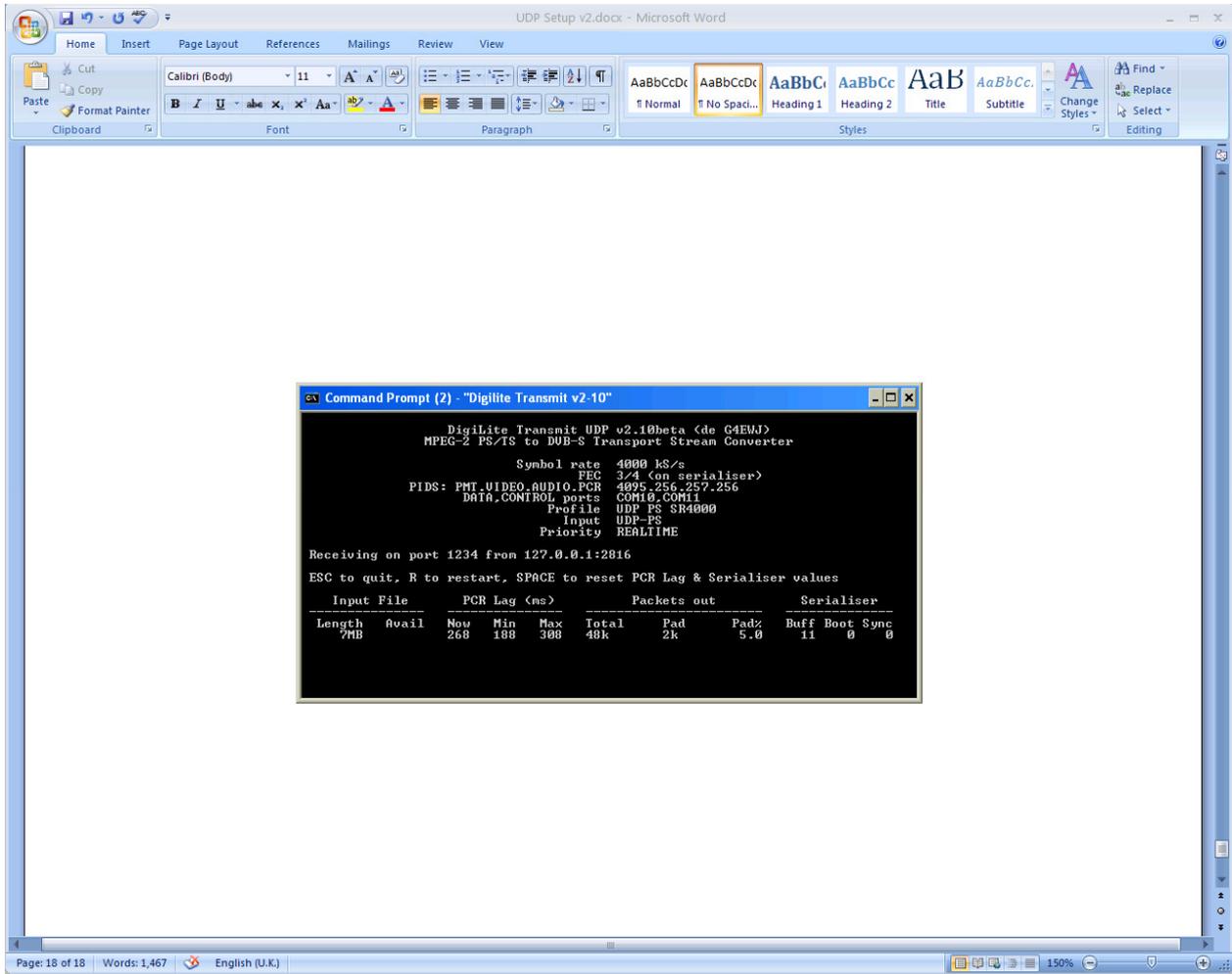
While DLTv2 is waiting for UDP data, it will repeatedly show the screen below.



When DLTv2 is receiving UDP data, it will show the screen below.

2816 is the port that GraphEdit is transmitting from. It has no particular significance. It is likely to change each time the graph is started.

The 'Buff' figure shows how many output buffers are in use by DLTv2. If it falls to zero for long, there will likely be a resync as the serialiser runs out of data.



Using the PC's Real IP Address

When sending UDP data from utilities other than GraphEdit, they may not allow sending to 127.0.0.1. In this case, use the IP address of a network card in the PC. E.g. 192.168.99.236

To find the PC's IP address on XP:

Start

Right click My Network Places

Properties

Right click the network connection icon (usually called Local Area Connection)

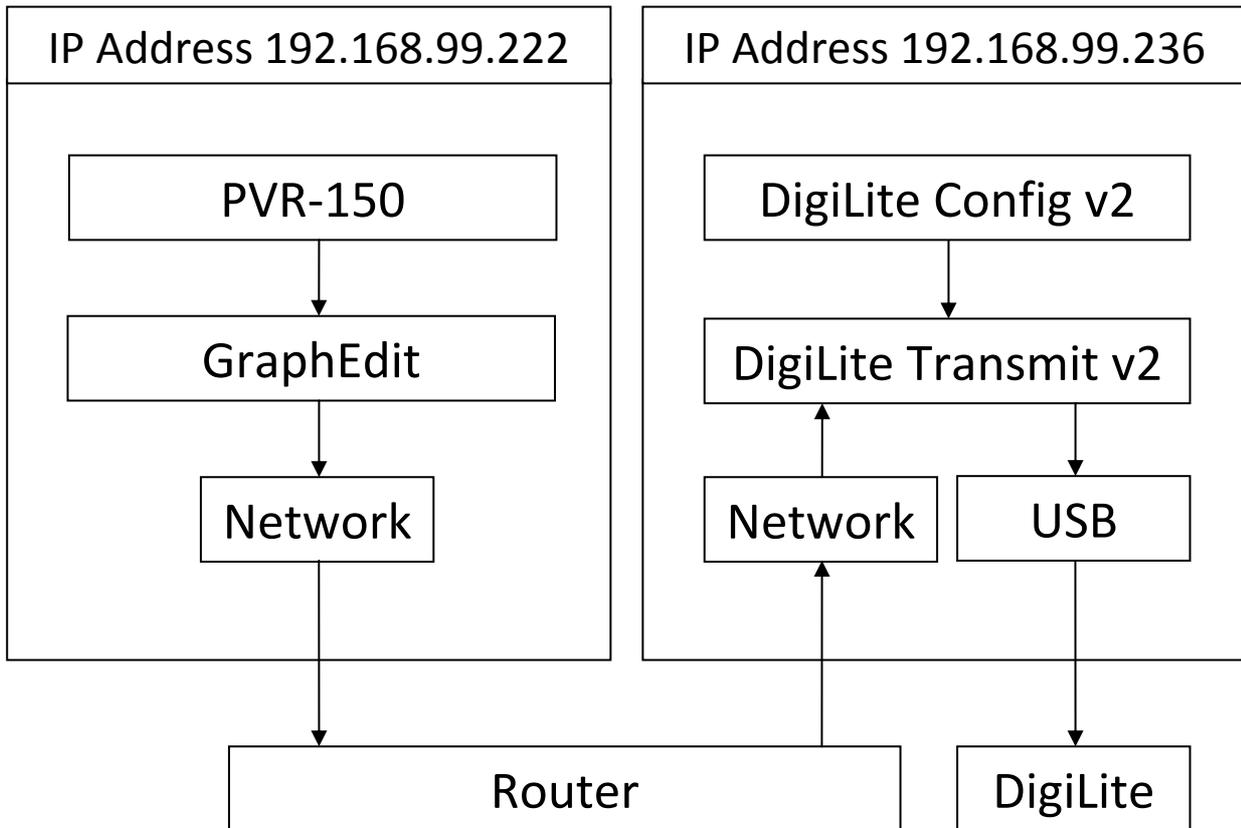
Status

Support

Use this IP address in the Major UDP Sender filter and in DigiLite Config instead of 127.0.0.1.

UDP Operation with Separate PCs

PVR-150 and GraphEdit are on one PC and the DigiLite board is connected to another PC running DLTv2.



The Major UDP Sender is set to send TO 192.168.99.236 and DLTv2 is set to receive FROM 192.168.99.222

Setup for UDP Operation with GraphEdit and DigiLite on Different PCs

The image shows two software windows used for configuring a video capture and streaming setup.

GraphEdit (150J.GRF): This window displays a signal flow graph. On the left, a purple box contains input components: 0: Video Tuner In, 1: Audio Tuner In, 2: Video SVideo In, 3: Video Composite In, 4: Audio Line In, 5: Video SVideo In, 6: Video Composite In, and 7: Audio Line In. On the right, an orange box contains output components: Analog Video In, Hauppauge WinTV PVR PCI II Capture, Analog Audio In, and Hauppauge WinTV PVR PCI II Encoder. A 'Major UDP Sender' block is connected to the encoder's output. A 'Major UDP Sender Properties' dialog box is open, showing version V1.01, build 20060501, and UDP settings: Host: 192.168.99.236, Port: 1234. It also shows 0 media samples received and 0 sent.

DigiLite Configuration v2.10beta (de G4EWJ): This window shows the configuration for the UDP stream. The 'UDP PS SR4000' profile is selected. Under 'Communications', the DATA Com Port is 10 and CONTROL Com Port is 11. Under 'Data Input', the Capture Device is PVR, Video bit rate is 4490, and Input Method is UDP-PS. The UDP Address is 192.168.99.222 and the UDP Port is 1234. Under 'Transport Stream', the Symbol Rate is 4000 and FEC is 3/4. The 'FEC on serialiser' option is selected. TS Delay (ms) is 200, Buffer Delay (ms) is 200, and Test Mode is Off. Under 'Channel Info', PMT PID is 4095, VIDEO PID is 256, AUDIO PID is 257, Channel Name is SR4000, Programme Name is G4EWJ, and EPG Info is Birkenhead IO83LI.

Firewall Issues

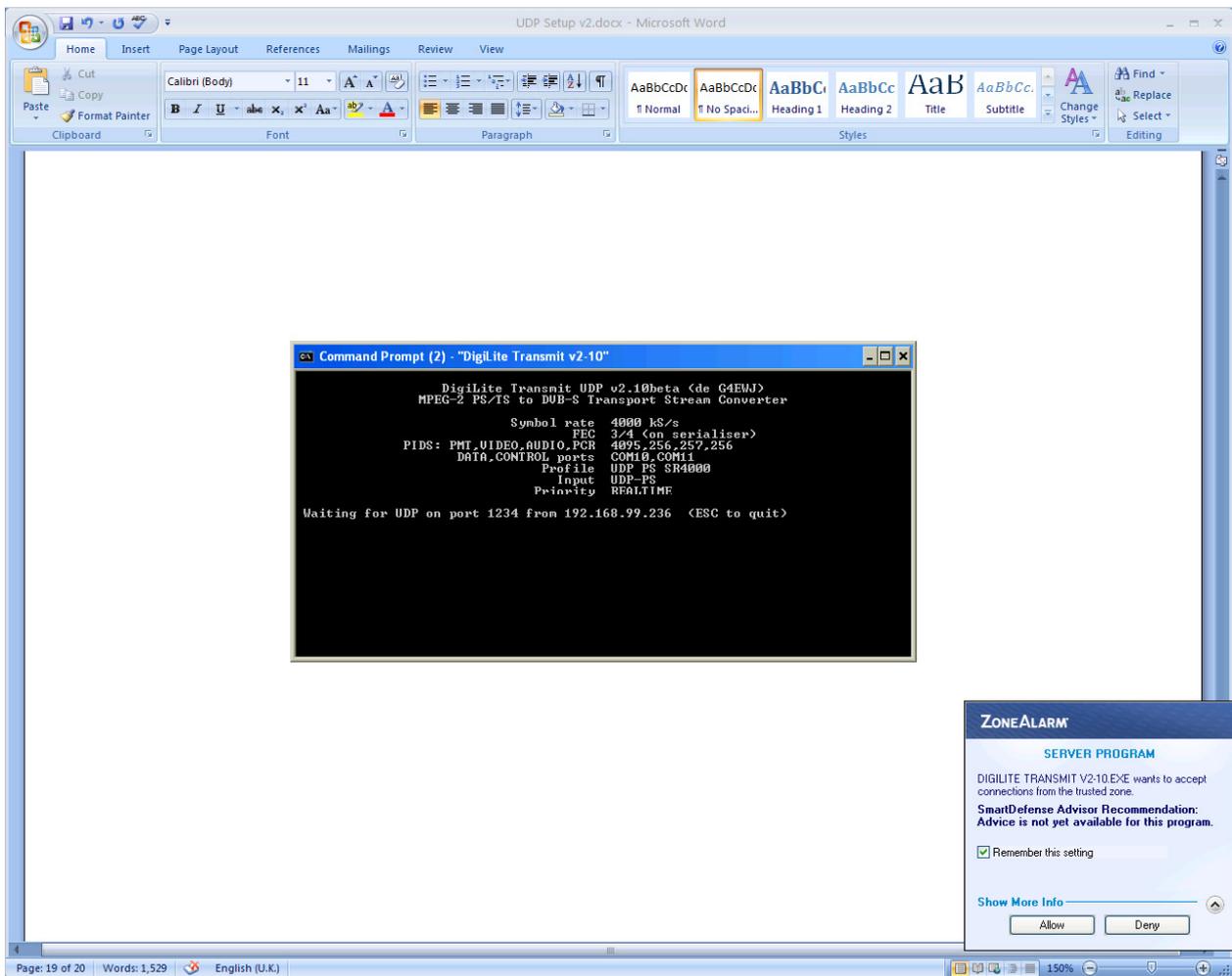
When DLTv2 sees incoming UDP data on the port it is listening to, it attempts to act as a server for the data.

A firewall program is likely to intercept this, as this is a method by which trojans and other undesirable programs can gain access to your PC.

This firewall issue does not happen when using the 127.0.0.1 IP address. (I think!).

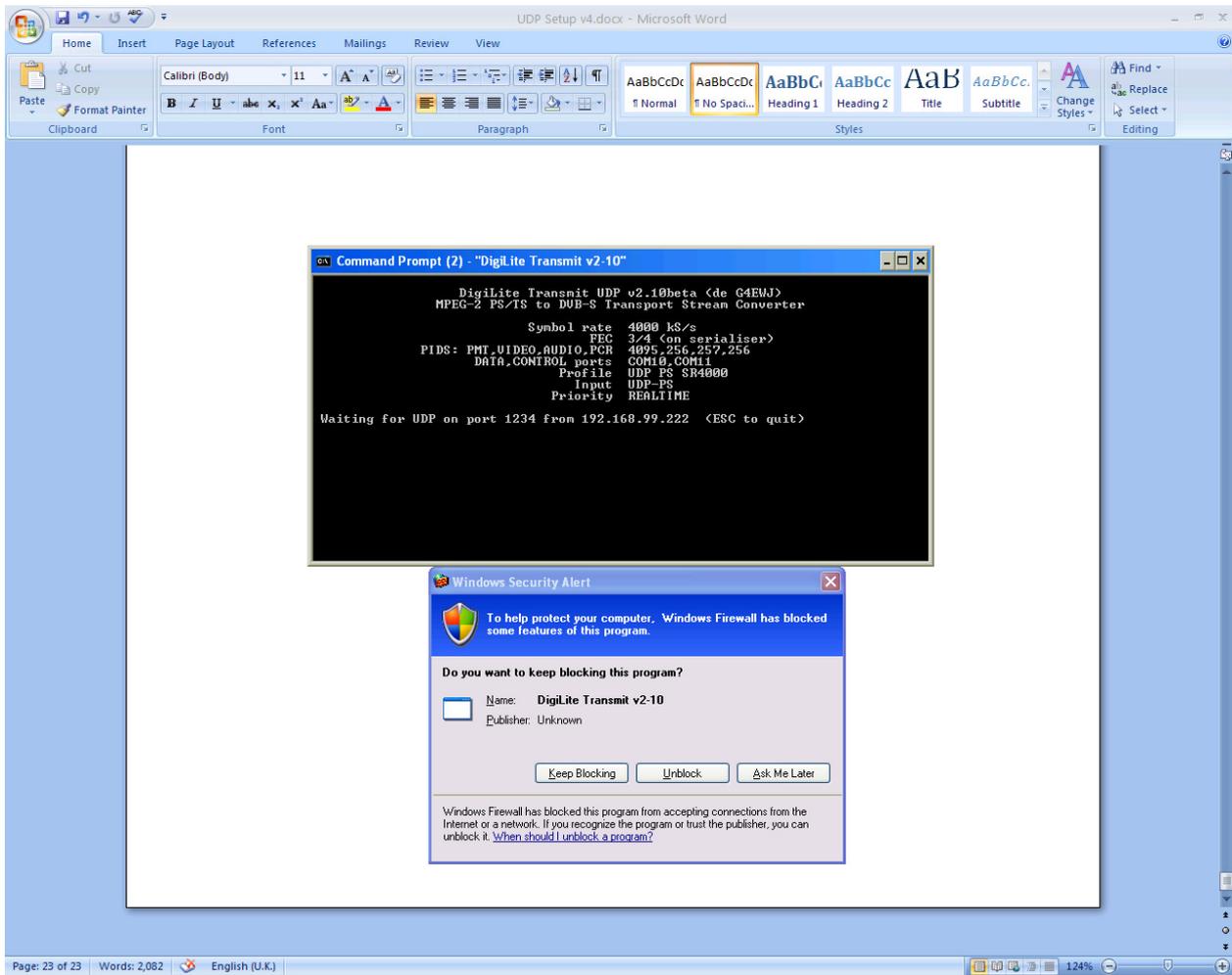
It is recommended to stop and restart DLTv2 after a firewall intervention.

For the ZoneAlarm example below, click 'Remember this setting' and 'Allow' so that this does not happen again.



The Windows firewall may also intercept the connection.

Click 'Unblock' so that this does not happen again.



Broadcasting to a SubNet

It is possible for GraphEdit to send UDP data to more than one PC at once.

When you check the IP address of your PC (say 192.168.99.222) there will also be a parameter called 'Subnet Mask', usually 255.255.255.0

This tells the router that all IP addresses it sees which start 192.168.99 are on your private network and the data will not be sent out to the internet.

If the last part of the Major UDP Sender Host IP address is set to 255, GraphEdit will send the UDP data to all PCs connected to the router. E.g. Set it to 192.168.99.255

DLCv2 should still use the real IP address of the sending PC. E.g. 192.168.99.222

Setup for Broadcasting to a SubNet

The image shows two windows from the DigiLite software suite. The top window is GraphEdit, displaying a signal flow diagram. On the left, a purple box contains a list of input sources: 0. Video Tuner In, 1. Audio Tuner In, 2. Video SVideo In, 3. Video Composite In, 4. Audio Line In, 5. Video SVideo In, 6. Video Composite In, and 7. Audio Line In. These feed into a central box labeled '0. Video Decoder Out' and '1. Audio Decoder Out'. The outputs of these decoders feed into an orange box labeled 'Hauppauge WinTV PVR PCI II Capture', which has inputs for 'Analog Video In' and 'Analog Audio In'. The capture box has outputs for 'Capture', 'Audio Out', 'VBI', and '656'. An arrow points from the '656' output to another orange box labeled 'Hauppauge WinTV PVR PCI II Encoder', which has 'MPEG' and 'Mpeg Index' outputs. The encoder's output feeds into a blue box labeled 'Major UDP Sender'. A 'Major UDP Sender Properties' dialog box is open, showing version information (V1.01, build 20060501), self-port (1234), and self-host (192.168.99.236). The UDP settings are Host: 192.168.99.255 and Port: 1234. Media statistics show 0 samples received and 0 sent.

The bottom window is 'DigiLite Configuration v2.10beta (de G4EWJ)'. It shows a configuration for 'UDP PS SR4000' under 'Profile 3'. The 'Communications' section has 'DATA Com Port' set to 10 and 'CONTROL Com Port' set to 11. The 'Data Input' section has 'Capture Device' set to PVR and 'Video bit rate' set to 4490. The 'Input Method' is set to 'UDP-PS'. The 'UDP Address' is 192.168.99.222 and the 'UDP Port' is 1234. The 'Transport Stream' section has 'Symbol Rate' set to 4000 and 'FEC' set to 3/4. There are radio buttons for 'FEC on serialiser' and 'FEC on PC'. 'TS Delay (ms)' and 'Buffer Delay (ms)' are both set to 200. 'Test Mode' is set to 'Off'. The 'Channel Info' section has 'PMT PID' 4095, 'Channel Name' SR4000, 'VIDEO PID' 256, 'Programme Name' G4EWJ, 'AUDIO PID' 257, and 'EPG Info' Birkenhead IO83LL. Buttons for 'SAVE', 'Restore Saved Values', 'Change Profile Name', and 'Other' are visible on the right.

Broadcast IP Addresses

Another method of sending UDP data to more than one PC at the same time is to use an IP address in a special range known as broadcast addresses.

This allows several PCs to send UDP data and DigiLite can select the one it wants to receive.

The advantage is that DigiLite does not need to know the real IP address of the sending PC.

The broadcast address is not the real IP address of any PC – it is a logical address.

230.xxx.xxx.xxx is in the special broadcast address range.

E.g.

The 'BBC1' PC has its Major UDP Sender Host IP address set to 230.0.0.1

The 'BBC2' PC has its Major UDP Sender Host IP address set to 230.0.0.2

If the DigiLite PC wants to receive BBC1, 230.0.0.1 is set as the UDP address in DigiLite Config.

If the DigiLite PC wants to receive BBC2, 230.0.0.2 is set as the UDP address in DigiLite Config.

If the first BBC1 PC is switched off and another PC has its Major UDP Sender address set to 230.0.0.1, DigiLite will still receive BBC1 when its DigiLite UDP Address is set to 230.0.0.1.

As long as two PCs are not sending UDP data to 230.0.0.1 at the same time, it does not matter that it is coming from a different PC with a different real IP address.

Broadcasting to VLC

VLC (Videolan) is a useful utility that can display and convert many video formats.

By using broadcast addresses, VLC can display what DigiLite is transmitting at the same time, by opening a network stream on any PC on the network to:

udp://@230.0.0.1

This will put extra load on the PC's CPU, so may affect the DigiLite output, depending on how powerful the PC is.

Setup Using a Broadcast Address

The image shows two windows from the DigiLite software suite. The top window is GraphEdit, displaying a signal flow diagram. On the left, a purple box labeled '0. Video Tuner In' contains a list of inputs: 0. Video Tuner In, 1. Audio Tuner In, 2. Video SVideo In, 3. Video Composite In, 4. Audio Line In, 5. Video SVideo In, 6. Video Composite In, and 7. Audio Line In. Arrows from '0. Video Decoder Out' and '1. Audio Decoder Out' point to an orange box labeled 'Hauppauge WinTV PVR PCI II Capture'. This box has inputs for 'Analog Video In' and 'Analog Audio In', and outputs for 'Capture', 'Audio Out', 'VBI', and 'ESS'. An arrow from the 'ESS' output points to another orange box labeled 'Hauppauge WinTV PVR PCI II Encoder', which has an 'MPEG' output and an 'Mpeg Index' input. An arrow from the 'MPEG' output points to a blue box labeled 'Major UDP Sender'.

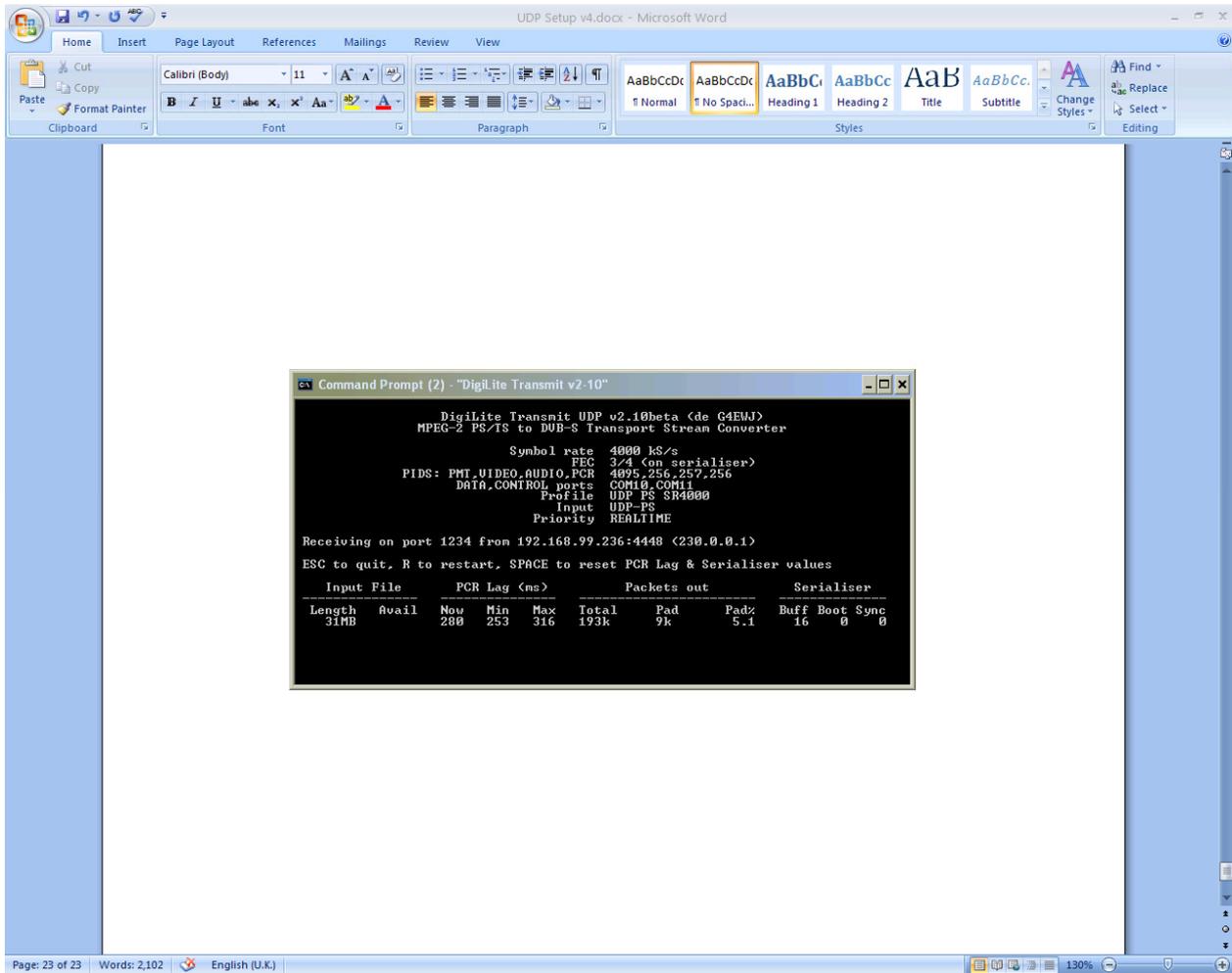
The bottom window is 'Major UDP Sender Properties'. It shows version information: 'Version: V1.01, build 20060501', 'SetPort: 1234', and 'SetHost: 192.168.99.236'. Below this, there are fields for 'UDP Host' (set to 230.0.0.1) and 'UDP Port' (set to 1234), each with a 'Set' button. At the bottom, it shows 'Media samples received: 0' and 'Media samples send: 0'. Buttons for 'OK', 'Close', 'Apply', and 'Help' are at the bottom.

The bottom window is 'DigiLite Configuration v2.10beta (de G4EWJ)'. It shows the 'UDP PS SR4000' profile selected. The 'Communications' section has 'DATA Com Port' set to 10 and 'CONTROL Com Port' set to 11. The 'Data Input' section has 'Capture Device' set to PVR, 'Video bit rate' set to 4490, and 'Input Method' set to UDP-PS. The 'UDP Address' is 230.0.0.1 and the 'UDP Port' is 1234. The 'Transport Stream' section has 'Symbol Rate' set to 4000 and 'FEC' set to 3/4. There are radio buttons for 'FEC on serialiser' and 'FEC on PC'. The 'TS Delay (ms)' is 200, 'Buffer Delay (ms)' is 200, and 'Test Mode' is Off. The 'Channel Info' section has 'PMT PID' 4095, 'Channel Name' SR4000, 'VIDEO PID' 256, 'Programme Name' G4EWJ, and 'AUDIO PID' 257. The 'EPG Info' is Birkenhead IO83LI. Buttons for 'SAVE', 'Restore Saved Values', 'Change Profile Name', and 'Other' are on the right.

DigiLite Transmit Receiving from a Broadcast Address

DLTv2 shows the actual IP address of the sending PC, with the broadcast address in brackets.

4448 is the port that the graph is transmitting from. It has no particular significance. It is likely to change each time the graph is started.



Transport Stream Input

When DLTv2 is to receive data in TS format over UDP, set UDP-TS as the input method in DLCv2.

DLTv2 will adapt to 188 or 204 bytes packets automatically.

The TS data must have been created with exactly the same settings as in DLCv2. No padding is added.

The TS packets may arrive in UDP blocks of up to 64kB. A TS packet does not need to start on a block boundary.

The channel info settings in DLCv2 are not used, as this should already be done in the incoming TS.

Connecting More Than One DigiLite to a PC

If no more than one DigiLite is ever connected to the PC at the same time, this section may be ignored.

When an FT2232H USB module has been configured, either by the FTPROG utility or by the BATC shop, it will always use the same pair of COM port numbers, no matter which USB port it is connected to.

The module has been configured to use the name 'DATV', so that Windows will recognise it in any USB port.

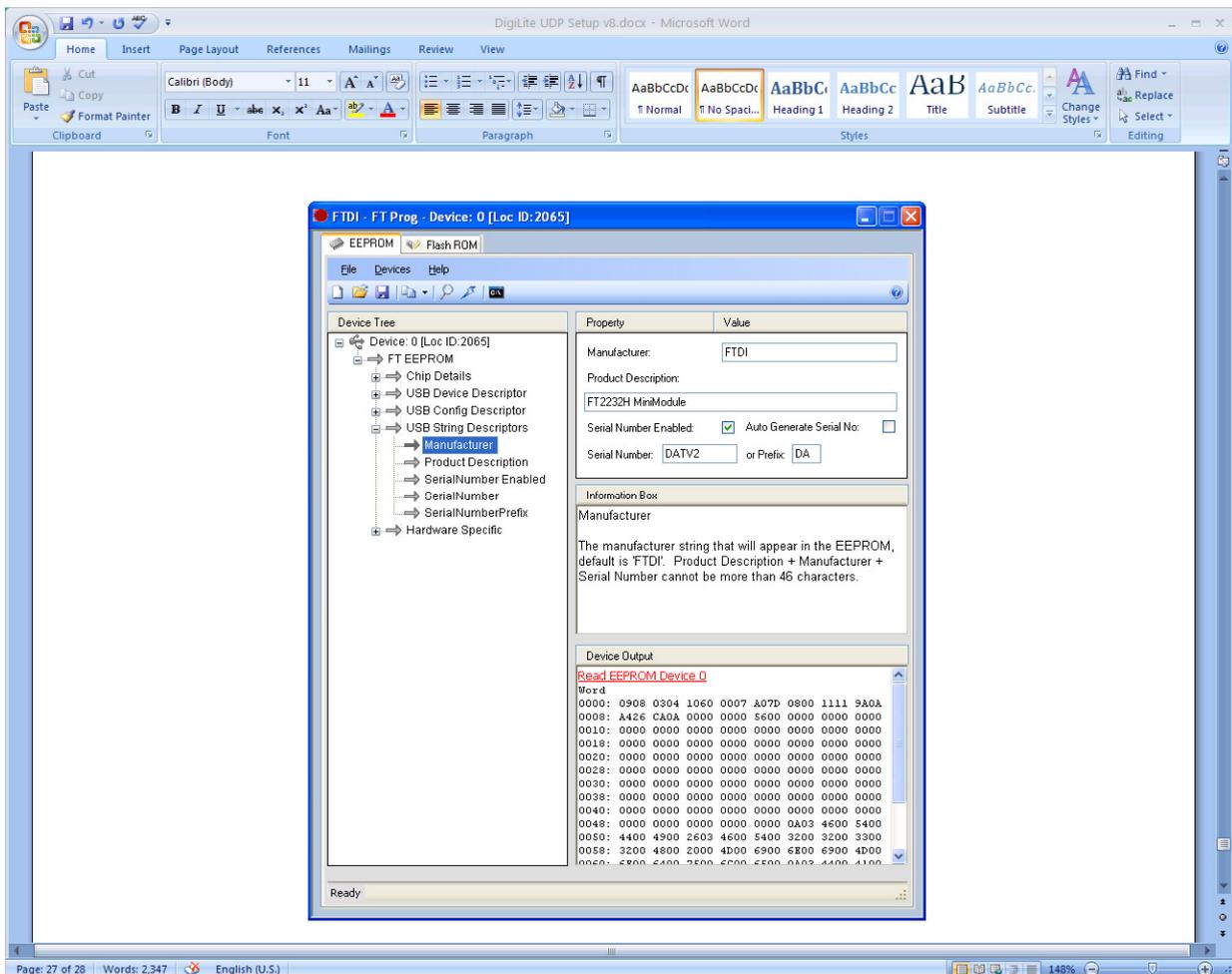
If a second DigiLite is connected to the PC at the same time as the first, it may cause a clash by trying to use the same COM port numbers, or allocate new port numbers every time it is plugged in to a different USB port.

It would be better to change the configuration of one of them, so that the PC recognises them as different devices. This requires the configuration to be changed. The process is described in this document:

<http://www.g8ajn.tv/FT2232H%20Module%20Installation%20v9.pdf>

Use DATV2 as the serial number for the second DigiLite, as shown below.

After the DigiLite has been disconnected and reconnected, it will be recognised as a new device and go through the installation process. This will assign two new COM port numbers to it.

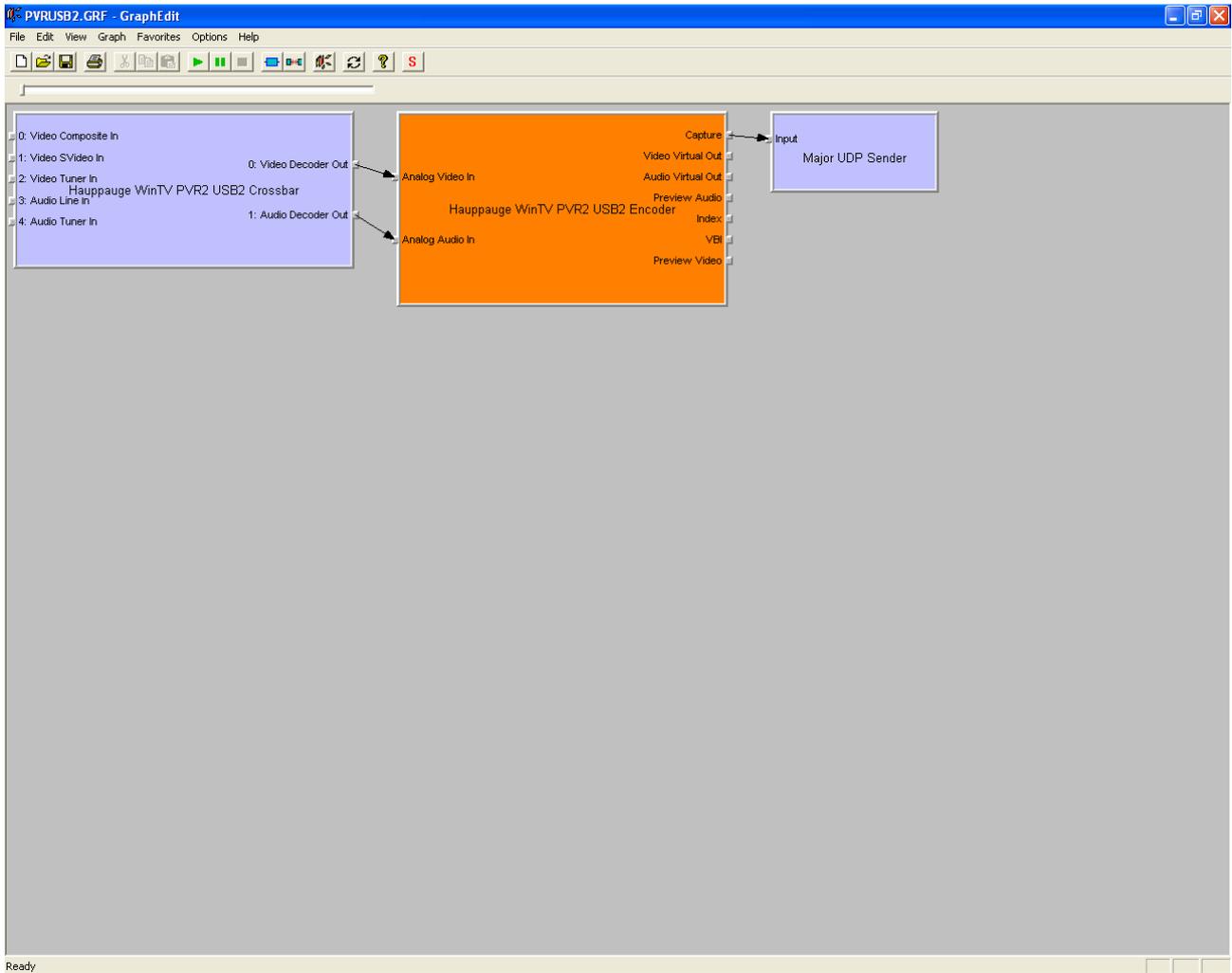


Graphs for PVR-250 / 350 / USB2

The graphs for these devices do not require both a Capture and an Encoder filter, although they tend to use the names Capture and Encoder interchangeably.

The graph shown is for the PVR USB2, but the graph is similar for the PVR250 / 350, although the filter names reflect the device name.

The filter menus may look different and there may be more of them.



Graphs With More Features

Thanks to F1CJN for this graph to monitor the transmitted video.

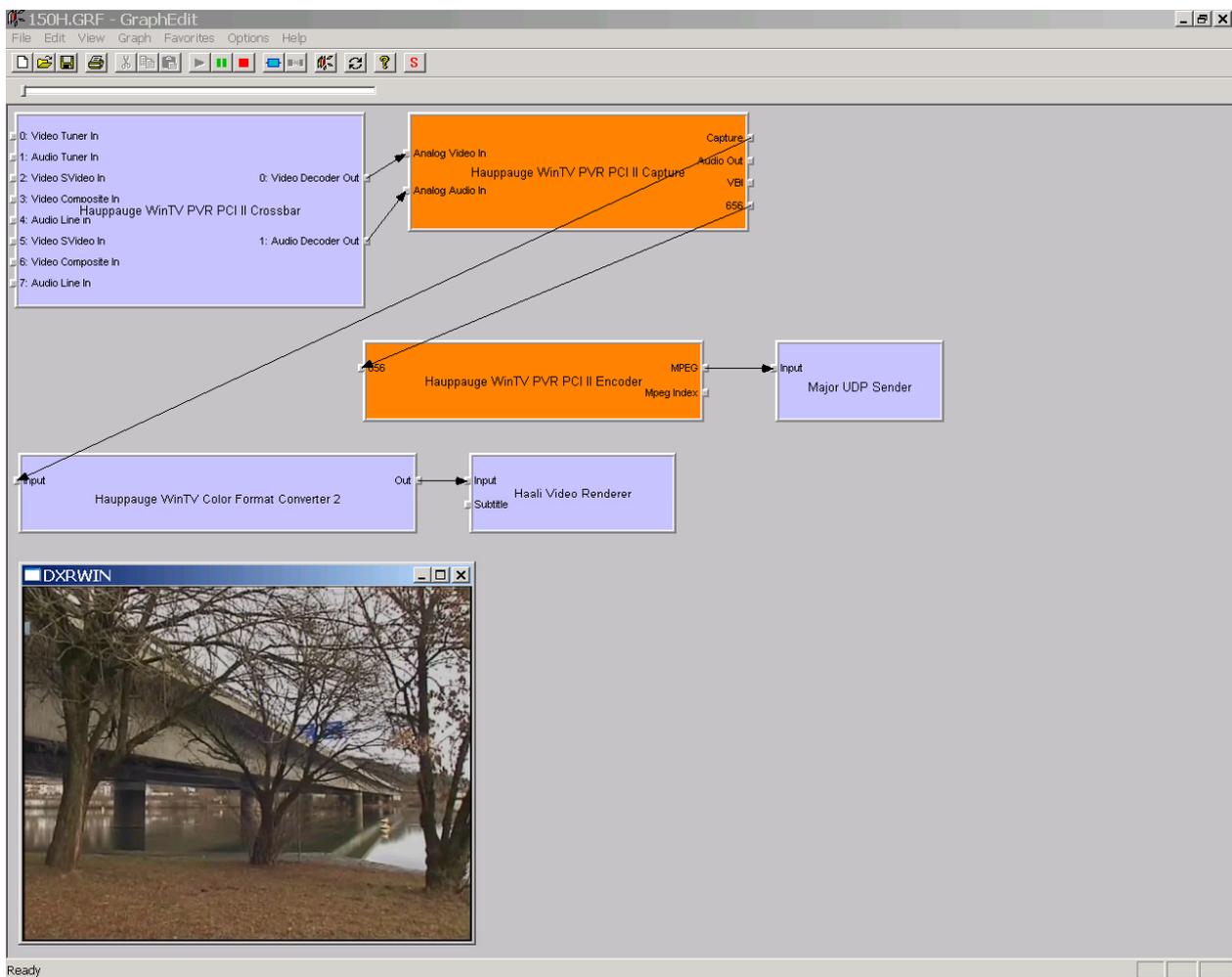
The Color Format Converter and Video Renderer filters can be found under DirectShow filters.

For the PVR-USB2, the input to the Color Format Converter filter is taken from a pin called 'Preview Video' on the Encoder filter.

DXRWIN is a separate window from GraphEdit, so it will disappear if GraphEdit or any other active window is selected full-screen.

Note that clicking the X button in the corner of DXRWIN will stop the graph running.

The monitor feature will put extra load on the PC's CPU, so may affect the DigiLite output, depending on how powerful the PC is.



Running GraphEdit at Higher Priority

It may help to run GraphEdit at a higher system priority.

This needs to be done every time GraphEdit (not the graph itself) is started.

For XP:

- Right click the clock in the system tray at the bottom right of the screen
- Click 'Task Manager'
- Click 'Processes'
- Click 'Image Name'
- Find graphedt.exe and right click it
- Click 'Set Priority'
- Click 'High'
- Close Task Manager

Functions Requiring DigiLite Serialiser v2.5x to be Installed in the dsPIC

ALT test modes.

Symbol rates 500, 667, 750, 9000. (further development probably required for reliability).

Known Issues

Data input modes DIRECT and UDP-RAW do not work.

DLTv2 should display a message when an SD card is inserted, but the message only appears after the SD card is removed, if at all.

For PS input over UDP, the bit rate of the capture source should be set so that DLTv2 will use 5-10% padding. Resyncs may occur if higher values of padding are required at lower symbol rates, depending on the block size of the incoming UDP data.

When the User Symbol Rate Settings box is empty, it is not possible to make it disappear by clicking the USER SR button. Click Other to make it disappear.