R E F E R E N C E   M A N U A L
Pixelwix Pixelnet Software v2.5

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Welcome to Pixelwix Pixelnet

Installing Pixelwix Pixelnet Software

1. **Double-click on the installation file.**
This will launch the Install-shield Wizard.
2. **Follow the on-screen instructions**.
3. **If you already have some of the support software installed, just exit the individual installer**
4. **Once the installation is complete, click "Finish"**. Pixelwix PixelNet software is now ready to be used.
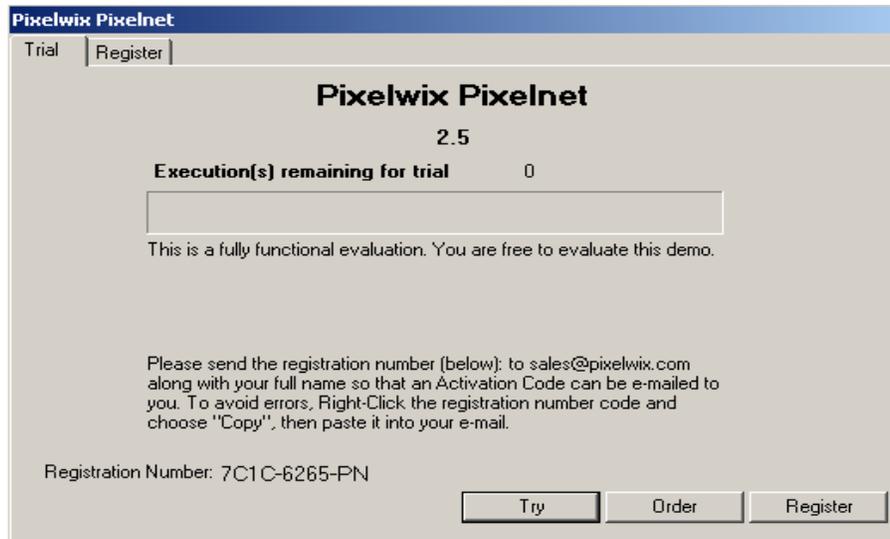5 **Run PixelNet**

Notes
If you get an exemption from your **anti-virus** program, you will have to add the software title to your safe program list or disable your ant-virus software (recommended for non internet production server).

If asked to allow PixelNet to connect to the internet, select **unblock** if you intend to use network features of the software.

Firewalls may block PixelNet's ability to connect. If no unblock notice was displayed by windows, switch off windows firewall or allow UDP packets through port 7474 (the default firewall in Windows blocks this port). You can change this in the Network Connections control panel under the properties of your connection, using the Settings button in the advanced tab.)

Registration

When you start PixelNet for the first time the registration box below will appear

Pixelwix Pixelnet

Trial | Register

Pixelwix Pixelnet

2.5

Execution(s) remaining for trial   0

This is a fully functional evaluation. You are free to evaluate this demo.

Please send the registration number (below): to sales@pixelwix.com along with your full name so that an Activation Code can be e-mailed to you. To avoid errors, Right-Click the registration number code and choose "Copy", then paste it into your e-mail.

Registration Number: 7C1C-6265-PN

Try | Order | Register

If you are just evaluating Pixelnet , click **try**. At the top, you will see how many executions remaining on the demo version.
If you have purchased PixelNet, install it on the PC you wish to register and right click the registration number and select copy.
This is your machine registration number for your PC. This number needs to be sent to Pixelwix.

After we have sent the UserName and unlock code, paste them in the boxes shown above and select OK.
PixelNet is now registered

Overview
Pixelwix PixelNet is a software tool for for sending media to Pixelwarp or Pixelwix Studio over a local network via cat5 or fast wireless

Numeric boxes
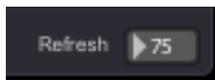
All numeric input boxes allow direct input of numbers. Just click with a mouse and type using numeric keys to enter data.
You can also change the data by clicking on the box and, while holding the left mouse button, drag mouse up or down.
The box also responds to location click. For example, if you click the right side of the box while dragging the mouse, this will cause the data to move in small amounts. The left side of the box will cause the data to move in large amounts.

Tool Tip
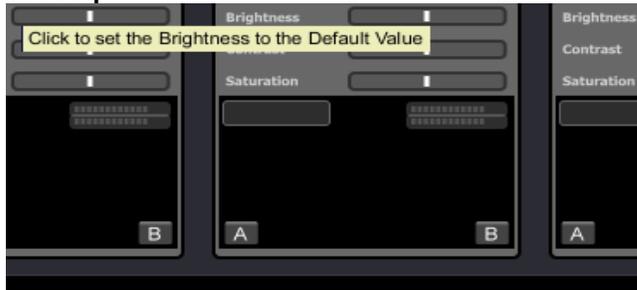
Pixelwix PixelNet has pop-up instruction information on most of it's controls. Just place your mouse over the object and a yellow box will appear with information on that item.

This section describes the different application panels and their functionality
Below is a full screen-shot of the application:

When Pixelwarp and Pixelnet are running PixelNet's panel will display "connected to server".
If no IP address is displayed, click the word IP Address. The addresses of servers that are
connected will fill the pull-down menu.
Select the IP of the server you wish to send media to.
To the right is the delay or latency you will experience with current settings and media

Pixelwarps output panel

Now select **IP-Input** on the network and screen capture panel of your Pixelwarp software.
At this point, adjust the frame offset to 0 so media is displayed as fast as it received.

Network Media Player

The media file player is responsible for playing local media files to network.

On the front panel are some quick controls for common functions.

Read a single media file from drive.

Play the loaded media file

Stop playing media file.

Load a Media Folder.

You can also load media by dragging and dropping from your file browser to the media player. Any additional media will be added to the bottom of the list menu.

You can now select the media to play by clicking on the menu and selecting the name of the file item.
Another way of selecting through your media is to use the two small < > icons on the player. A good use for this is to cycle through static images like power-point.

The current position of the media file is shown by the position slider and the position box. It can be controlled by moving the slider or by changing the number in the position box. This can be adjusted even when the player is running. (Not used for static images)

The menu box shows the current loaded file name.

For more functions press "edit" to see the panel below

At the top of the edit panel, we have the remote network media player. Just type in the ftp or HTTP address of the media and click "**Play Remote" .**

For some streaming media you may have to press the play remote a second time for all the content.

Auto Start
With this on, media will start to play as soon as it is selected from the menu or loaded.

Cue Start
This starts the media player's current selection as soon as one of the A or B selectors is pressed

Clr
This will clear the currently selected media from the menu play-list

Clr All
This removes all the media files from memory and the player.

Auto-Switch
This allows media player to automatically run through each media in your play-list menu sequentially.

Auto-Switch with mixed media content
If your media play-list also contains static images (jpg bmp) as well as movie file types, you need to tell PixelNet how to handle them. Select the picture timer's run time (up to 60 seconds). When the player finds a static image, it plays the images according to the time you have set in the picture image timer.

Audio from Media
Adjust the volume slider to your desired level. This slider adjusts all audio channels present in the media.
Audio is sent out the local PC and not sent down cat5.

Mute
Select to mute the media sound and unselect to go back to the previous volume setting.

Link
This allows PixelNet to switch audio on and off according to the on/off selection button located at the bottom of the media player preview box. If media player "on" is selected, the video from this media player is is sent to the workspace. Audio will also be playing through the selected windows device outputs.

Write
Click "write" to save your current play-list to file.

Read
Click "read" to load a play-list from file into player. This will erase the current play-list but not currently playing media.

Tip
At program start a file called "blank-playlist" is recalled into the player.
If you wish, you can save a play-list with this same name to have your files loaded at start-up

Learn

On the learn panel you will see small blue boxes showing the PixelNet control that can be controlled by an external source.
Select from the menu the control type you wish to use for the PixelNet object you wish to control.
Press "learn" and move or switch the external control. At this point, the external control is registered and will now move or switch your PixelNet control.
Now you have finished setting up media player, press **close**

Screen Capture

The network media input could also capture screen content from your PC screen or second display on the same PC .
Run your application (maybe something like power point) then select "Screen" on the Network Media panel.

Now select Screen-Capture and the dimension of the screen you wish to capture.

Mouse Area Selection
Make sure PixelNet application software is currently selected (the bar at the top of the software is blue)
Now put the mouse over the top left of the capture area and then press and hold the "Alt" key.
Drag your mouse to the bottom right of your capture area and release the "Alt" key.
If you select smaller dimensions than the second screen resolution is set to, it will zoom that area to fit the setting in your workspace.

Manual Selection
Use the pull-down menu and the location boxes to adjust the area you wish to capture

Performance

Achieving good performance with video can be difficult because it depends on many different factors.

The most important factors are:
CPU speed
Disk speed
RAM access speed
Network Speed

Movie Compression
There is no easy way to give a definitive answer in terms of what is best for every computer.
The CPU is mainly used to decompress movie frames from the disk and send them to Pixelwarp
The faster your drives are, the faster frames will be loaded in the memory and the faster your CPU is, the faster it will decompress the frames.
PixelNet's video engine is also heavily multi-threaded. Having several cores will help decompress movie frames allowing a faster throughput.
To achieve a good frame rate with a given hardware, you can:
Use source material that is adapted to your hardware. If you have a slow disk or older generation hardware, try working with smaller video sources to minimize the impact of loading and decompressing the movie. Since all calculations are done inside the graphic card, the automatic filtering applied when the images are scaled to the final resolution will minimize aliasing effects.
It is very important to note that popular compression schemes such as mpeg, divx, DV and vobs, are very inefficient for fast switching playback. Video files using these compression schemes will behave correctly when used at nominal speed (100%). If you use these compression formats, you will get poor performance from the software.

Besides movie size, compression scheme has a huge impact both on the fluidity of the display and playability. The more complex the compression scheme, the more work the processor will have to do to recover specific frames, which often results in sluggish performance. In addition to the compression method itself, there's the issue of key frames. Most widely spread compression mechanisms work using incremental methods. Which means they construct a frame by storing the difference between the current frame and the previous one. In order to keep the process from deriving too much from the original material, they store an original frame every now and then, and start coding incremental information from that frame on. These original frames are called key frames. Using sparse key frames will mean that for PixelNet to access a given frame, it will have to find the previous key frame and process all the intermediate frame differences until it reaches the desired one. As you can imagine, this process is rather slow and prevents fast access to

frames, which is very important. That's why compression schemes like mpeg or DivX are not at all suited for video performance.

From our experience, the best compression scheme for video performance is QuickTime's Photo JPEG with a quality setting of about 80% or more. This will ensure smooth playback, effective performance and decent file size. If you want to use high definition content (HD) you can also use the H264 codec, part of Apple QuickTime 7.x.

Technical Specifications

Folder Playback
Plays a complete folder's contents (mixed format of stills and movies).
Movies playback in sequence , pictures have a timed display up to 60 seconds.
Folder content can be selected with a pull down menu or mouse click **advanced** for power point like changes.

Video Formats:
Support for MPEG-2.
. Mpg
. Mpeg
.vob
.vro
.m2v
.m2a
.m2s

Standard Formats:
Animated GIF
BMP
Cubic VR
GIF
JPEG/JFIF
MPEQuicktime 7G-1
MP3 (MPEG-1, Layer 3)
MPEG-4
MQV
M4A, M4B, M4P (iTunes 4 audio), M4V (iTunes video)
PICT
PNG
QuickTime Image File
QuickTime Movie
Avi
Audio Support
Full media playback with audio, can be individually muted and returned to it's previous position or continuously variable.
Pixelwix PixelNet Software Requirements

Minimum System
Intel atom or Amd CPU 1.6ghz fast hd 7200rpm or above for performance (Slow drives = less media fps playback)
We recommend at least 2 GB of RAM for both SD and HD for Windows XP / XP Professional.
We recommend at least 4 GB of RAM for both SD and HD for Windows Vista / Vista 64 / Windows 7.
Optimized windows system
Directx 9 or above
Quicktime 7 or above
The latest java runtime