



PictureTel LiveLAN™

International Update

for Windows 95® and Windows 98®

Version 3.01

Release Notes

Last Updated: October 29, 1998 for Build 000

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Overview

The LiveLAN 3.01 International Update is an enhancement to LiveLAN version 3.0 software. This update was created to integrate the improved LiveLAN 3.1 driver and system software with your existing LiveLAN 3.0 localized user interface. The update must be installed over an existing version of LiveLAN 3.0 software. If you wish to install the latest non-localized software, please download and install the PictureTel LiveLAN 3.1 English-only software.

IMPORTANT: Please be aware that you must have a correctly installed and configured LiveLAN 3.0 system before you can install this update.

Please review the following information before installing the PictureTel LiveLAN 3.01 International Update for Windows 95/98 operating systems. The LiveLAN 3.01 International Update for Windows 95/98 software runs on the PictureTel Live200 hardware.

The Release Notes information includes the following topics:

1. New Features in This Release
2. Hardware and Software Requirements
3. Installing, Deinstalling, and Upgrading LiveLAN
4. Interoperability
5. Fixed Problems
6. Troubleshooting
7. Known Limitations

For the very latest information about this product, software updates, and the updates to these release notes, check the PictureTel web site at www.picturetel.com.

1.0 New Features in This Release

This release of LiveLAN supports several new features. Key features include:

- Improved Video performance, with lower CPU utilization and better support for high-end DirectDraw Hardware
- Improved interoperability with Multipoint Conferencing Units (MCUs) and other H.323 terminals
- A helper application that allow you to place calls directly from ILS and Notes address books

2.0 Hardware and Software Requirements

To install and run PictureTel LiveLAN for Windows, your computer must meet the following requirements:

- Running Windows 95 (OSR2 or later with USB Supplement installed is recommended) or Windows 98 operating system.
- A Network Interface card running the Microsoft TCP/IP stack (Winsock 1.1 or greater).
- Pentium, Pentium Pro, or Pentium II single processor or equivalent running at 133 MHz or faster.
- 30 MB of available hard disk space for installation.
- 32 MB of RAM - 256 KB of cache.
- SVGA monitor.
- 32-bit PCI graphics board with 16-bit high color depth and 2 MB of video memory minimum. Boards with 2D video acceleration and fast video memory (such as VRAM) are recommended.
- One available Bus Master enabled PCI slot located on the primary PCI bus for the Live200 board.

You also need:

- A Live200 hardware kit. This is the hardware sold as part of a LiveLAN kit, or used in PictureTel's Live200 1.5 for Windows 95 or Live200 for Windows NT. Only the PCI version (Live200p) is supported.

DirectDraw Support

LiveLAN 3.01 for Windows 95 works best when using Direct Draw. The product should work with ANY DirectDraw compatible hardware and driver, but works better with certain types of hardware technology. In some instances, only a limited subset of DirectDraw features will be available. The following is a list of full featured cards that have been tested at this time. The best cards provide extremely high quality video with low CPU overhead and represent PictureTel's recommendation for use with LiveLAN.

ATI Video Xpression+	Best Overall Performance (low CPU utilization, High Quality)
ATI 3D Rage Pro	Best Overall Performance (low CPU utilization, High Quality)
ATI Xpert@Play	Best Overall Performance (low CPU utilization, High Quality)
ATI Xpert@Work	Best Overall Performance (low CPU utilization, High Quality)
Diamond Viper S330	Good Overall Performance (medium CPU utilization, High Quality)
Matrox Millenium II	Good Overall Performance (medium CPU utilization, High Quality)

Matrox Mystique 220	Good Overall Performance (medium CPU utilization, High Quality)
Matrox Mystique	Good Overall Performance (medium CPU utilization, High Quality)
Diamond 3D 2000	Fair Overall Performance (medium CPU utilization, Good Quality)
Diamond 3D 2000 Pro	Fair Overall Performance (medium CPU utilization, Good Quality)
Diamond 3D 3000	Fair Overall Performance (medium CPU utilization, Good Quality)
Hercules Dynamite 3D/GL	Good Overall Performance (medium CPU utilization, High Quality)
Number 9 Imagine 128	Good Overall Performance (medium CPU utilization, High Quality)

Note: The cards listed above support a DirectDraw mode using YUV instead of RGB for the video window. These cards produce a superior image that makes these cards the best choice for use with the LiveLAN application. In addition, the ATI cards, Diamond Viper S330, Hercules Dynamite 3D/GL, and Number 9 Imagine 128 support anti-aliasing scaling that allows the video windows to be expanded to full screen with a smooth appearance. The ATI cards perform this function with no performance penalty when running at full screen.

To enable DirectDraw, be certain that you are running in 16-bit display mode (32768 or 65536 colors). The LiveLAN application will automatically choose direct draw if it is available. Make certain that your machine has DirectDraw loaded. We recommend DirectDraw 6 or better.

In general, you should use the video manufacturer's latest drivers with LiveLAN. Please check the manufacturer's web page for the latest drivers to ensure proper performance:

ATI - www.atitech.com

Diamond - www.diamondmm.com

Hercules - www.hercules.com

Matrox - www.matrox.com

Number Nine - www.nine.com

If you have trouble with DirectDraw drivers, you can turn off direct draw by executing the registry file ***ddraw_off*** installed in the LiveLAN directory selected during the installation process. To turn DirectDraw back on, choose the registry file ***ddraw_on***. LiveLAN installs with DirectDraw turned on by default.

3.0 Installing, Deinstalling, and Upgrading PictureTel LiveLAN

This section contains information about installing and deinstalling the LiveLAN for Windows 95 hardware and software. Your system must be configured correctly for TCP/IP operation on your network. You must also have either the IP address or host name of your LiveManager or other H.323 GateKeeper before you begin the installation. You will be prompted for this information during the installation process.

3.1 Downloading the LiveLAN 3.01 Software

You can currently obtain the LiveLAN 3.01 International Update software at the following URL:
<http://support.picturetel.com/products/livelan/software.htm>

LiveLAN 3.01 currently can only be obtained by download. There is no CD version of this software.

LiveLAN 3.01 has been divided into nine separate files for ease of downloading.

All nine files are necessary for proper installation. Download each file into a common directory and then double-click on each of the nine self-extracting executables. The result will be a new directory called LLCD that contains all the files required for installation. Start the installation by double-clicking on the autorun.exe file in the LLCD directory and follow the directions in the remainder of this section.

3.2 Upgrading from PictureTel LiveLAN 2.0

If you are currently running LiveLAN 2.0, you must remove the old software and hardware completely, before installing LiveLAN on the system. You must then install LiveLAN 3.0 hardware and software. A complete document on how to upgrade from LiveLAN 2.0 to LiveLAN 3.0 can be found in the \English\Docs directory on the LiveLAN 3.01 LLCD directory.

3.3 Upgrading from PictureTel LiveLAN 3.0

The LiveLAN 3.01 International Update MUST be installed over your existing LiveLAN 3.0 system. To complete the upgrade, follow the instructions below.

1. Double-click on the autorun.exe file in the LLCD directory.
2. Open the Release Notes (this file) if you have not done so already and review any last minute changes.
3. Select **Driver Software Install** and follow the directions. You will be returned to the LiveLAN Installation Autorun Window after the drivers are installed (the system will need to reboot twice).
4. Select **Application Software Install** and follow the directions. The application software will install with the preferences indicated in your 3.0 installation as the defaults.
5. For more information about the LiveLAN for Windows 95 product, click the **On-Line Product Guide** button.

You can start the LiveLAN application and place calls as soon as the application software installation completes.

3.4 Installing the PictureTel Live200 Hardware

You may install the Live200p hardware at any time. Since Windows 95 supports Plug-and-Play, you will be notified about the new hardware during system boot. Enter the location of your LLCD directory and Windows will locate the appropriate drivers for installation. Once the drivers are installed, the Live200p card shows as the **PictureTel LiveLAN Media Accelerator** in the system control panel under **Desktop Video Conferencing**. It is assumed that this step was completed with the installation of LiveLAN 3.0.

3.5 Installing the PictureTel LiveLAN for Windows 95 Software from the LLCD directory

Follow these steps to install the LiveLAN for Windows 95 software:

1. Double-click on the autorun.exe file in the LLCD directory.
2. Open the Release Notes (this file) if you have not done so already and review any last minute changes.
3. If the drivers are not installed, or an older set of drivers is installed Select **Driver Software Install** and follow the directions. Note, on some systems, you may be prompted for the location of Disk1 of 4 and PTDRMV.EXE. On these systems, simply enter the location of your LLCD directory. After the drivers are installed, you'll be prompted to reboot your system.
4. You will be returned to the LiveLAN Installation Autorun Window after the drivers are installed and the system reboots. If that doesn't happen, then open the LLCD directory in Windows Explorer and double-click on autorun.exe
5. Select **Application Software Install** and follow the directions.
6. For more information about the LiveLAN for Windows 95 product, click the **On-Line Product Guide** button.

You can start the LiveLAN application and place calls as soon as the application software installation completes.

3.6

Installing the PictureTel LiveLAN for Windows 95 Software from Diskettes

If you are installing the LiveLAN software on a computer that is not connected to the Internet or a LAN, you can create the driver and application diskettes on another computer from the LLCD directory.

To create diskettes from the LLCD directory, open the LLCD directory from Windows Explorer. Navigate to the **DriverDisks** folder and then copy the contents of disk1 through disk"n" onto diskettes and label them LiveLAN for Windows 95 Drivers Disk<n>. Repeat this procedure for the disk images in the **EnglishLiveLAN** folder to create the LiveLAN for Windows 95 Application Disk<n> disks.

1. Insert the Drivers disk1 diskette into the drive on the target machine, open the diskette (typically a: or b:), and run ptrmdrv.exe. This will remove any old LiveLAN drivers. Restart your machine and then insert the driver disks as prompted by the Windows "Plug-and-Play" driver system. The system will reboot one more time before the drivers are enabled.
2. Insert the Application disk1 diskette into the drive on the target computer and run setup.exe. You will be prompted for each of the other Application diskettes in turn.

You can start the LiveLAN application and place calls as soon as the application software installation completes.

3.7

Removing the PictureTel LiveLAN for Windows 95 / 98 Software and Hardware

To remove the PictureTel LiveLAN for Windows 95 product from your system, follow these steps:

1. Close the LiveLAN application if it is running.
2. Open the **Control Panel Folder** and start the **Add/Remove Programs** control panel applet.
3. Select the **PictureTel LiveLAN 3.01 Int'l Update** line in the **Add/Remove Programs** control panel applet and press Remove.
4. Open the **Control Panel Folder** and start the **System** control panel applet and select the **Device Manager** tab.
5. Open the **Desktop Video Conferencing** device type and delete the **PictureTel LiveLAN Media Accelerator** entry.
6. Restart (or shutdown) your machine so these changes can take effect.

You can power off your machine and remove the hardware once Windows 95 is shutdown.

3.8 Reinstalling the PictureTel LiveLAN for Windows 95 Software

To reinstall the software, simply install the software as described above. It is assumed that you will install LiveLAN 3.0 prior to installing this Update.

3.9 Important operational considerations for systems with Winsock Version 2

Winsock 2 is an updated release of the Windows Socket (Winsock) interface. This new implementation is shipped as a separate update for Windows 95 and is a fully integrated component of Windows 98. Winsock 2 provides several new features, particularly with respect to Quality of Service (QOS) capabilities and Native ATM transports.

Our testing has uncovered an apparent defect in the operating system when running the Winsock 2 update for Windows 95. This defect does NOT occur in Windows 98 systems. If you are running Windows 98, you can ignore the remainder of this section.

When a failure in Winsock 2 occurs, the system will either stop responding with no apparent indication of a failure or you will see the defect as a full blue screen indicating:

"An exception 0E has occurred at 0028:xxxxxxx in VXD WSOCK2(01)+00000c3b. This was called from 0028:xxxxxxx in VXD WSOCK2(01)+00001119."

If you experience this error on a Windows 95B (OSR2) or 95C (OSR2.5) system you can correct the problem by installing the USB Supplement which is either on your Windows 95 CD or can be downloaded from the Microsoft website. You do not need to have USB hardware on your PC to install the update. The USB Supplement modifies the Kernel (**KERNEL32.DLL**) and the Virtual Memory Manager (**VMM32.VxD**) and several associated files improving overall system performance.

If you have an older version of Windows 95 you can either upgrade to (OSR2) or limit LiveLAN's Maximum Audio/Video Transmit Bandwidth to 384Kbps. To make this change, choose **Tools/Preferences** on the LiveLAN menu, select the **Network** tab in the Preferences dialog, select the **384Kbps** radio button, and choose **OK**.

Also, it is recommended that you reinstall the Winsock 2 update whenever you change your NIC card or update your NIC drivers to ensure that the appropriate Winsock 2 files are not overwritten by the NIC install.

3.10 Installing the LiveLAN Helper App and DDE Interface Support

LiveLAN includes a powerful DDE interface that allows you to initiate LiveLAN calls from an ILS Server, a Lotus Notes application, or any other application that can initiate Dynamic Data Exchange requests. The software for this is contained in the English/HelpApp directory. View the LiveLAN documentation for details on using this facility.

4.0 Interoperability

4.1 H.323 Standards

PictureTel LiveLAN for Windows 95 supports videoconferences with other desktop and room videoconferencing

Systems" and with systems that comply with the ITU-T H.320 (Px64) recommendation for "Narrow-band Visual Telephone Systems and Terminal Equipment." when communicating through an ITU-T H.323V2 compliant gateway. The product also operates in conjunction with gatekeeper systems that comply with the ITU-T H.323V2 specification.

- General - H.323
- Audio - G.711, and G.722
- Video - H.261
- Data - T.120 including
- Communications - TCP/IP over Winsock 1.1 and Winsock 2.0, native ATM network conformance in accordance with ITU-T H.323V2 Annex C

Various videoconferencing manufacturers might not include all of these choices in product designs, or they might add their own proprietary choices. If you experience video or audio problems while interoperating with an H.323 system not produced by PictureTel, verify that the other manufacturer's system is configured as recommended for H.323 operation.

PictureTel LiveLAN can operate with an H.323V2-compliant multipoint bridge or an H.243-compliant multipoint bridge through a gateway when configured in a voice-activated conference.

4.2 Microsoft Windows 95 and Windows 98

LiveLAN is compatible with all versions of Microsoft Windows 95 and Windows 98. Although the product will operate on systems without DirectDraw, DirectDraw version 6 is highly recommended.

5.0 Fixed Problems

This release of the LiveLAN for Windows 95 product fixes several problems found since the 3.0 product shipped. They include:

- Several rare application GPF errors and system level crashes have been corrected.
- A problem which caused certain Pentium processors to run sluggish with very high CPU utilization has been fixed.
- A problem where the Video codec would stop processing video when heavily loaded has been fixed.
- Interoperability with other workstations running Microsoft NetMeeting has been greatly improved.
- Application hangs during hangup processing have been fixed.

6.0 Troubleshooting

6.1 Optimizing your video quality

Video quality is affected by the size of the video image being displayed. If you are displaying video at full screen size, choosing 640x480 will yield better results than choosing 1024x768. The 1024x768 configuration requires that three times as much video data be copied for no gain in image quality. DirectDraw can improve this by doing the scaling on the video display card. Not all cards provide this feature on Windows 95, however, and selecting DirectDraw on some cards can reduce video quality. A list of supported cards is identified in Section 1.0 (DirectDraw).

If you are not using the local video window, either close the window, minimize it (iconify it), or reduce its size.

When using direct draw, setting your video display to 32768 or 65536 colors per pixel produces the optimal video

million, or "24 bits/pixel" all refer to a very high quality mode that does NOT produce better results, but does cause an extra step in the video display to take place and will reduce performance for no improvement in quality.

6.2 Sluggish video

Verify that the display is set to either 32768 or 65536 (high-color) and not 256 or 16 million color mode. The render times will be much longer due to the conversion needed to render in 256 or 16 million color formats.

6.3 Video driver problems

LiveLAN places a heavy demand on video display hardware. The video display in the LiveLAN application is fairly typical of the kind of video display used by many multimedia applications with the exception that it may be running at 30 frames per second with rapid screen updates. These requirements are actually quite basic but can aggravate some display cards.

If you have video related trouble please verify that you have the latest drivers from your card's manufacturer.

6.4 Blocky or poor quality video and audio

Blocky or poor quality video and audio are usually caused by network or system performance issues. Some of the causes can include:

- Poor NIC card throughput from:
 - a low performance non-DMA NIC card,general overload of your host CPU, or
too much network traffic through your system.
- Network Congestion from:
 - too much traffic on the network, oran overloaded network hub, switch, or router.

You may be able to mitigate the problem by choosing a lower bandwidth for your calls. For example, 384Kbps calls on a busy 10Mbps non-switched Ethernet networks or poorly performing machines tend to have more video and audio performance problems. Reduce your bandwidth settings to 174Kbps and see if quality improves.

If lower bandwidth calls show blockyness, consult your network administrator who may be able to characterize your network performance or improve your network access.

Network hits (lost or late packets) **WILL** cause video blockyness. If your overall network performance is good, these problems will clear up in 15-30 seconds. If you are running other network intensive operations on your PC while in a videoconference, blockyness **will NOT clean up** until that operation is complete. This may include file transfers using LiveShare Plus.

Blockyness CAN occur even in video loopback calls. If your system is slow or has other network traffic, packets will

H.323 systems.

6.5 Video window is always on top and clips menus and dialogs

Some older video drivers have poor direct draw compatibility and actually cause the LiveLAN video window to remain always on top, clipping menus and hiding dialogs. If you see this problem, you can either find the latest drivers from your video card vendor or turn off direct draw.

You may see this in upgrading from LiveLAN 3.0 to LiveLAN 3.01, since LiveLAN 3.01 supports a broader range of video cards with its direct draw capability.

6.6 Hardware diagnostics

A comprehensive diagnostics section is contained in the Installation Guide.

7.0 Known Limitations

7.1 No data interoperability with non-T.120 systems

The LiveLAN for Windows 95 system supports T.120 data sharing *only* via LiveShare Plus. This version of LiveShare Plus interoperates with systems running NetMeeting version 2.1 or greater. No support is provided for the PictureTel MultiBoard and GroupBoard room system products.

7.2 No file transfer interoperability with T.127 compliant systems.

When installing PictureTel LiveLAN 3.01 International Update, you are retaining your existing localized LiveShare Plus application from LiveLAN 3.0. This version does not support file transfer using the recent T.127 file transfer protocol. As such, you will not be able to perform T.127 file transfer with PictureTel LiveLAN version 3.1.

7.3 When another H.323 system crashes while in a call, you may receive a timeout error

If a Gateway or other H.323 system crashes while in a call, you may receive the error message "LiveLAN may be in an unstable state." To be safe, you should restart LiveLAN before making or receiving additional calls.

7.4 Video may stop in 1x64 or 1x56 calls through a gateway

LiveLAN 3.01 will turn off its video transmitter at rates below 8Kbits per second. As a result, video transmission may stop when calling in 1x64 or 1x56Kbit calls to H.320 systems, particularly when data is in use. With dynamic data rate changes, you may have video dropouts during file transfers, which can leave less than 8Kbit per second bandwidth available for video.

7.5 On systems with video overlays, it is possible to get video in non-video windows

When you are running a DirectDraw card that supports overlays, it is rare but possible to have video show incorrectly in non-video windows on your screen. This is because overlays are supported using a facility called a "color key". LiveLAN uses a specific green color as its color key. The video card uses this color to overlay live video in the correct location on your screen. If another application displays a window with that SAME color, it is possible for the video control to get confused and overlay video in the wrong window.

Unfortunately, this is a limitation of the overlay mechanism used in video cards, and cannot be fixed. This can only be avoided by moving to lower performance video without direct draw.

7.6 Call transfer does NOT transfer data sessions

When in a call with an H.320 (ISDN) videoconferencing system (via an H.323/H.320 gateway), transferring a call will not behave as expected. The audio and video portions of the call will transfer, however data collaboration will be lost. This is a limitation of the current T.120 standard.

7.7 Data collaboration issues

Data collaboration (sharing/remote control) is highly CPU intensive, and can negatively affect the performance of your system. You may find that the response time is very slow, and/or the quality of the received video is poor.

When controlling the remote terminal, any screen area occupied by the LiveLAN main window or the LiveShare Plus main toolbar, whiteboard, and message applications is filled with gray hash marks. This is due to the fact that, LiveLAN and LiveShare Plus are themselves un-sharable applications.

If the computer names of two terminals in a call are the same, the window list of the Sharing->Remote Control dialog box ("Select a machine to remote control") is blank and contains no options. The computers must have different names in order for the dialog box to present the correct options.

7.8 Microsoft NetMeeting interoperability

When initiating a call hang-up from either terminal during a call with a NetMeeting terminal, the NetMeeting terminal will come down immediately, but the LiveLAN phone icon will remain grayed-out for approximately 20 seconds. This is a result of non-standard behavior of NetMeeting, and may be fixed in a future NetMeeting product release.

7.9 Montage multipoint conference unit interoperability

This version of LiveLAN will NOT interoperate correctly with a Montage H.320 MCU when called through a LiveGateway system, version 3.0. If you are calling to a Montage H.320 MCU, you must place the call through a LiveGateway system, running version 3.01 or greater.

LiveLAN will NOT interoperate with early versions of the Montage H.320 MCU. Please be certain your Montage MCU is running software at release level 6.0 or greater.

7.10 Data may not always work with Live200 NT

When communicating with Live200 NT through a gateway, there are times that the Live200 NT system will NOT be able to connect in a data call. If that happens, you can retry the call again. PictureTel is working on a fix to this problem.

7.11 Data may not always work with Concord and SwiftSite

When communicating with T.120-enabled Concord and SwiftSite systems, the T.120 portion of a call may not start. This usually happens when the user has selected an inefficient audio algorithm such as G.711 on the H.320 system. Data calls are more reliable when connecting using Automatic, PT724, or G.728 audio algorithms.

7.12 Cannot transfer a NetConference call to another system

Call transfer will not work when you are in a call to a NetConference system since NetConference does not support that capability. If you attempt to transfer the call, you will lose any T.120 data conference, but remain connected to the NetConference server.

7.13 Blue Screen Warning at end of Windows 98 Upgrade

When upgrading a Windows 95 system with LiveLAN 3.01 installed to Windows 98, LiveLAN will give you a warning in whslog.cpp when the Windows 98 installer says "**Setting up hardware & finalizing settings**". Simply press any key to continue, the system will restart and the installation will complete without failure.

7.14 No data only (T.120) connection when calling from Windows 98

When making a data only (T.120) call from a Windows 98 system, the call may timeout before connecting. If this occurs, select the Preferences menu item under Tools and increase the dial timeout value.

7.15 Statistics report erroneous numbers instead of "N/A"

When running diagnostics, you will notice that statistics which used to report 'N/A' for items that are not available now report large random numbers.

7.16 Some Error Messages will now be in English

Some error messages may appear in English. This is particularly true of driver level error messages.

7.17 Known user interface issues

When installing the LiveLAN drivers, the install procedure may stop looking for the file PTDRVRM.EXE. You will then be asked to insert the disk labeled LiveLAN 3.01 CD-ROM or PnP Install Disk 1/4. If this happens, click the OK button, use the browse button to locate the root directory of the LiveLAN CD-ROM, and then press OK to continue with the install.

If you cancel a LiveLAN application installation and then immediately retry the installation, InstallShield may indicate that there is not enough space for temporary files. Simply exit the installation and try it again. It always works the second time. This is a known problem in the version of InstallShield used for LiveLAN development. You can avoid the problem entirely by simply waiting several seconds after exiting the installation.

LiveLAN may not exit properly if the network drivers are not properly installed and configured.

If you remove the LiveLAN CD-ROM and then try to close the Autorun application, the operating system may report an error stating that it cannot read the CD-ROM. To resolve this problem, return the CD-ROM to its drive, follow the instructions on screen, and then close the Autorun application.

Pressing the F1 (Help key) several times quickly from the phonebook screen will cause an error in Winhlp32. This is a problem with some versions of the Windows Help program. To prevent the problem, hit F1 once and wait for help to appear.

The default settings for file transfer do not list all files transferred during a session, it lists only the current files being transferred. To change this behavior, choose *View/All Files* from the file transfer menu.

If you select the Diagnostic menu item under Tools and select Data Statistics, you will see *NA* for the Data Transmitted, Data Received, and Errors statistics.

If you change the font size in the Windows display properties to 200%, you may encounter an invalid property error from LiveLAN.

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