

INSTRUCTION MANUAL

IPME Series

Internet Protocol MPEG Encoder – IPClientViewer

Model:	Stock No.	Description
IPCV	2411	Internet Protocol ClientViewer Software

Accessories:

IPME-SM	2415	Internet Protocol MPEG Encoder - Stream Manager
IPME-CH	2419	Internet Protocol MPEG Encoder Chassis
IPME-2	2420	Internet Protocol MPEG-2 Encoder Module
MPEGLA	2412	MPEG License Authority Royalty Fee



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Introduction

The Blonder Tongue IPClientViewer[™] is a custom software application used in conjunction with the Blonder Tongue IPME Stream Manager and Encoder modules. It is a MPEG decoder software application that permits the viewing of video & audio data streams on a personal computer.

The IPCV software is designed to automatically communicate with the Blonder Tongue IPME Stream Manager in order to download channel and stream data information. An easy to use and intuitive graphical user interface provides a great user experience.

Program Features

- Easy to Use and Intuitive Graphical User Interface
- Automatic Channel Guide Data Information
- Full Screen Viewing Mode as well as Channel Guide Video Preview

System Requirements

The Blonder Tongue IPClientViewer software is designed to run on the Microsoft® Windows® operating system. The minimum requirements for this application are as follows:

- Microsoft® Windows® 2000 (with Service Pack 4) or Windows XP (with Service Pack 2)
- Intel® 600 MHz processor or higher, or equivalent processor
- 256 MB RAM or higher
- Microsoft .NET framework, Version 2.0
- DirectX® 8.1 or higher
- 300 MB hard disk space (for the IPClientViewer software installation including the Microsoft .NET framework 2.0)
- Network environment that supports IGMP Snooping and IP Multicasting, (Internet Group Messaging Protocol)
- Internet / Network Connectivity (with the Stream Manager)

Software Installation

The Microsoft .NET Framework 2.0 package is required to be installed on the PC prior to the IPCV installation. Usually the .NET Framework is preinstalled with most Windows XP operating systems. The IPCV installation routine will automatically check for the .NET package and prompt a user to install if not found.



The Microsoft .NET Framework installation can be verified on the PC by accessing Control Panel, Add/Remove Programs. Check the list for the Microsoft .NET Framework 2.0 entry (as shown). If not found it is required to be installed. It is recommended to download the latest version from an approved Microsoft location (http://www.microsoft.com/downloads - Search for .NET Framework 2.0). If a connection to the Internet is not available, run the "dotnetfx.exe" application from the IPCV CD to install the .NET Framework.

4 | IPME - IPClientViewer

Instruction Manual

1. Insert the BT IPClientViewer CD into your CD-ROM drive.

In a few seconds the IPCV installer window will pop up automatically. If the window does not pop up automatically, follow steps 1.1 & 1.2 below to navigate the CD to the Setup.exe file.

- 1.1. Open the CD-ROM
- 1.2. Double Click Setup.exe file
- 2. Click the Next button on the Welcome Wizard
- 3. Choose the desired directory for the installation or accept the default as well as select usage level and click Next

/ // ■ PClientViewer		i∰ IPClientViewer	
Welcome to the IPClientViewer Setup Wizard		Select Installation Folder	
The installer will guide you through the steps required to install IPClientViewer on	your computer.	The installer will install IPClient/Viewer to the following folder. To install in this folder, click "Next". To install to a different folder, Eolder: C:\Program Files\Blonder Tongue\IPClient/Viewer\	enter it below or click " <u>Br</u> ow
WARNING: This computer program is protected by copyright law and internation. Unauthorized duplication or distribution of this program, or any portion of it, may re- or criminal penalties, and will be prosecuted to the maximum extent possible under	al treaties. sult in severe civil er the law.	Install IPCIentViewer for yourself, or for anyone who uses this of	computer:
Cancel < Back	Next >	Cancel	< Back

- 4. Read and Accept the Blonder Tongue Software License Agreement You must accept the license terms to continue the software installation Click Next
- 5. Confirm the Installation Click Next. The IPCV will now install on the PC

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6. Click Close to complete the installation



7. The Software will automatically create a shortcut icon IPClientViewer on the computer desktop, double click to launch the IPClientViewer software

Software Upgrades

If an update to the Blonder Tongue IPClientViewer software is released, it is recommended to first close the IPCV application and un-install the previous version prior to installing the upgraded version. The software can be un-installed by using the Add or Remove Programs tool that is part of the Windows operating system.

IPClientViewer Software Interface

Use the desktop icon or the Start, Programs menu to launch the IPClientViewer application

😫 Blond	der Tongu	e IPClientView	er						
🥩 File	🔍 View	🔂 Channel(s)	🕐 Help						
144									
Ξ									
53									
		1990 N21110020							
Downlo	baded Inform	mation on 2/21/200	17 11:37:45 AM	Viewer Succe	essfully Initialized	l 📃 Channel Gu	ide Updated with 2	2 Channels	

Controls

Orientation — Toggles between a vertical and horizontal layout for the controls. The default is vertical layout

Play — Plays the current video stream, upon start-up it is set to the first channel in the Channel Guide

Stop — Stops the playing of a video stream

Previous — Plays the previous video stream in the Channel Guide

Next — Plays the next video stream in the Channel Guide

Mute — Toggles between muting and un-muting of audio, default is set to un-mute

Volume Slider — Controls the audio volume level, default is set to half

Full Screen — Converts the video playback to full screen mode

Refresh — Requests a download of Stream related information to update the Channel Guide

Basic Operation

Upon startup, the IPClientViewer requests the IPME Stream Manager for stream information. If the Stream Manager receives the request it sends the stream information in the form of UDP packets (one for each stream) to the IPCV software. The software parses this information and populates its Channel Guide. The IPCV's Channel Guide is automatically updated by notifications received from the Stream Manager when stream related changes occur. A download may also be manually requested by pressing the Refresh button.

File Menu

New — Clears previously loaded settings and loads a new configuration containing default values

Open — Presents a dialog that allows the user to browse and key or select a settings file to load a configuration from

Save — Saves current settings to the currently open configuration file

Save As — Presents a dialog that allows the user to browse and key or select a settings file to load a configuration to

Exit — Shuts down and exits the application

View Menu

Channel Guide — Displays information about each stream detected on the network and allows a preview of the stream.



Status — Indicates if the IP video stream is started or stopped

Ch # — Indicates the Channel Number for the IP Video Stream

Ch Name — Indicates the Channel Name for the IP Video Stream

Res — Indicates the video resolution for the IP Video Stream

Comments — Provides a brief description of the IP Video Stream as entered in the Stream Manager

Settings — Presents the user with a dialog box that displays the current Application, Network and Server settings and permits modification of certain values

🔛 Settings				
Application	Network	Server		
Stream Doma	sin: [default		
		к (Cancel	
File Name: sett	ings.cfg Fi	le Version:	01.00	

Application	Network	Server	
Server IP Add	dress:	239,255,255,255	
Server Port:	4	49304	
Time To Live	(TTL): [1	10]
Listening Port	: 4	19305	Disconnect
Max. Retrans	missions : 🚺	r]
		K Cano	cel

Application	letwork	Server		
Server Domain:		default		
Number Of Stre	ams:	2		
Server Name:		BT Engine	ering	
Server Location	n:	Anywhere,	USA	
Download Time	estamp:	2/21/2007	' 11:37:45 AM	
	0	к) [Cancel	
ile Name: settin	s.cfg F	ile Version:	01.00	

Application Settings Tab

Stream Domain — Name of stream domain to join. By joining a stream domain, the IPClientViewer software requests the Stream Manager for channel information for that domain

Network Settings Tab

Displays the current network settings for the IPCV software to communicate with the Stream Manager

- Server IP Address There are three options for the IP Server Address however only option 1 is supported
- **Option 1** Multicast IP Address that the IPME Stream Manager is a member of, for example 239.255.255.255. (Currently this is hard coded as the default type of IP addressing supported by the IPME-SM)
- **Option 2** Broadcast IP address of the VLAN on which the IPME Stream Manager is located, for example xxx.xxx.xxx.255
- Option 3 Unicast IP Address of the IPME-SM
- **Server Port** TCP Port on the Stream Manager to connect to and send requests. This is presently hard coded for the default value for received packets on the Stream Manager
- **Time to Live (TTL)** Number of hops that an IP packet is permitted to travel before being discarded. At each hop, a network device, like a switch, decrements the TTL value by one
- **Listening Port** TCP Port on the IPCV software application that listens for responses from the Stream Manager containing stream data
- **Disconnect Button** The listening port must be disconnected before it can be changed. Connect to the listening port by pressing this button. At startup this port is connected and is listening

Instruction Manual

Max. Retransmissions — Number of times the IPCV will re-attempt to request stream information from the IPME-SM

Application

Stream Domain: default

Server Domain — Name of streaming domain managed by the Stream Manager

Number of Streams — The number of streams that the IPME-SM manages

Server Name — The name given to the Stream Manager

Server Location — The location given to the Stream Manager

Download Timestamp — The time and date on the Stream Manager when the stream information (channel guide) was last downloaded

Default User Settings

Default Settings File: settings.cfg

Settings File Version: 01.01

Default Settings File Location: C:\Program Files\Blonder Tongue\IPClientViewer

Network

- Server IP Address: 239.255.255.255
- Server Port: 49304
- Time To Live (TTL): 5
- Listening Port: 49305
- Max. Retransmissions: 1

Configuration File Structure

<string>0</string> </configuration>

Configuration settings are stored in XML format in **settings.cfg** file format.

The following is the condensed output of the contents of the settings.cfg file:

```
<?xml version="1.0" encoding="utf-8"?>
<CConfiguration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.
w3.org/2001/XMLSchema">
<configuration>
<string>01.01</file/(string>
```

<sumy>01.01</sumy>	
<string>default</string>	<streamdomain>default</streamdomain>
<string>239.255.255.255</string>	<maxretransmissions>1</maxretransmissions>
<string>49304</string>	<serveripaddress>239.255.255.255</serveripaddress>
<string>10</string>	
<string>49305</string>	<serverportnumber>49304</serverportnumber>
<string>1</string>	<timetolive>10</timetolive>
<string>0</string>	<clientportnumber>49305</clientportnumber>
<string>0</string>	
<string>0</string>	
<string>0</string>	

Instruction Manual

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