



# PC sound card

## User manual

# Content

<b>Content</b> .....	<b>2</b>
<b>1 Important information</b> .....	<b>3</b>
1.1 Liability, Warranty, Copyright, License agreement.....	3
1.1.1 Limitation of liability .....	3
1.1.2 Warranty.....	3
1.1.3 Copyright and Duplication .....	3
1.1.4 Software license agreement.....	3
<b>2 General information</b> .....	<b>5</b>
2.1 About this manual .....	5
2.2 Version.....	5
2.2.1 Manual PC sound card.....	5
2.2.2 IPEmotion M.A.L.-PlugIn Sound.....	5
2.2.3 IPEmotion .....	5
2.3 Legend of the used icons.....	5
2.4 Support .....	6
2.5 Related documentations .....	6
2.5.1 IPEmotion .....	6
2.6 Documentation feedback.....	6
<b>3 Introduction</b> .....	<b>7</b>
<b>4 Setting up and removing</b> .....	<b>8</b>
4.1 System requirements.....	8
4.1.1 Hardware .....	8
4.1.2 Platforms .....	8
4.1.3 Software .....	8
4.2 Installing the Sound-PlugIn.....	9
4.3 Uninstalling the Sound-PlugIn .....	13
<b>5 Working with the Sound-PlugIn</b> .....	<b>14</b>
5.1 Configuring the system and channel .....	14

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## 2 General information

### 2.1 About this manual

The manual *PC sound card* describes the structure of the M.A.L.-PlugIn and how to use the features for recording audio signals in IPEmotion.

Please read the manual *PC sound card* carefully to get to know the operating and to learn more about the functions and special features. This manual also contains information for installing and removing the software.

### 2.2 Version

#### 2.2.1 Manual PC sound card

This manual has the version number 01.00.

#### 2.2.2 IPEmotion M.A.L.-PlugIn Sound

The descriptions in this documentation refer to the current release with the version number 01.00.

#### 2.2.3 IPEmotion

The descriptions in this documentation refer to the current release with the version number 01.01.



*For being able to run the M.A.L.-PlugIn, at least IPEmotion V01.00 must be installed on your computer.*

### 2.3 Legend of the used icons



*Tip*

*This icon indicates a useful tip that facilitates the application of the software.*



*Information*

*This icon indicates additional information for a better understanding.*



*Attention!*

*This icon indicates important information to avoid potential error messages.*

## 2.4 Support

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### Technical support and product information

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## 2.5 Related documentations






### 2.5.1 IPEmotion

The documentation IPEmotion.pdf provides you with a description and useful information related to IPEmotion. This documentation is stored in the following language dependent standard directory: C:\Programs\IPETRONIK\IPEmotion Vxx.xx.xx\Help.

## 2.6 Documentation feedback

At IPETRONIK, the technical publications team strives to produce documentations of the highest quality and values your feedback as a reader and user. If you have any comments or suggestions regarding our product manuals, contact us under support@ipetronik.com.

Please inform us about the following points:




-  Version number (Select *Options* → *Add-Ins* to display the version number.),
-  Name of the guide,
-  Page number or section title,
-  Brief description of the content (e.g. inaccurate instructions, grammatical errors, or information that require clarification),
-  Any suggestions for a general documentation improvement.

## 3 Introduction

The Sound M.A.L.-PlugIn offers you the ability to record audio signals within IPEmotion.

The default recording source is the Windows standard recording device, which is automatically detected at initializing the Sound PlugIn. You have the ability to select the desired device for recording. For configuring the sound source settings you can use the *Windows Sound – Mixer* or the configuration user interface of the installed sound card.

The current version has the following restrictions:

-  You can only use the Windows standard recording device for recording audio signals.
-  There are no multi-channel records possible.
-  The recorded file cannot be played in IPEmotion.

## 4 Setting up and removing

### 4.1 System requirements

The minimum hardware and software requirements for the application of the Sound M.A.L.-PlugIn are outlined below.

#### 4.1.1 Hardware



The minimum hardware requirements correspond to those of IPEmotion.

In addition, the following hardware is required:

-  Sound card

#### 4.1.2 Platforms

The Sound M.A.L.-PlugIn can be run under the following operating systems:

-  Windows XP,
-  Windows Vista (32 Bit).

#### 4.1.3 Software

The Sound M.A.L.-PlugIn requires the following software:

-  minimum DirectX 8.1

## 4.2 Installing the Sound-PlugIn

The following chapter guides you through the installation process of the Sound M.A.L.-PlugIn.





*The Sound M.A.L.-PlugIn needs administrator rights during the installation. Working with the PlugIn requires that you need at least limited user's or default user's rights (Vista).*


The installation of the Sound-PlugIn is based on an installation wizard that guides you through the setup process step by step. You can start the installation wizard from the USB flash drive, the product CD or, if you have downloaded the setup program, from the setup file itself.

To install the Sound-PlugIn:

1. Start the installation wizard from the USB flash drive, the product CD or from the setup file.

 *USB flash drive:* Connect the USB flash drive to the USB port of your computer and follow the instructions of the installation wizard.

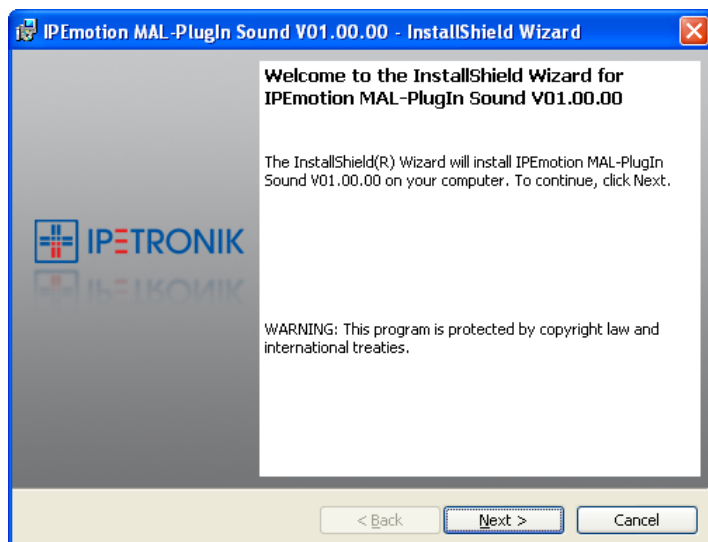
 *Product CD:* Launch the product CD and click **Install Software** on the Welcome screen. On the **Install Software** screen, click **Install IPemotion MAL-PlugIn Sound** to start the installation wizard.

 *Setup file:* Browse the location of the setup file and double-click **IPemotion MAL-PlugIn Sound.exe** to start the installation wizard.



*Depending on the PC operating system, a security warning appears. Click **Run** to start the installation wizard.*

**2. Welcome screen:** This is the first screen in the Sound-PlugIn installation wizard.



Click **Next** to continue.

### 3. Destination folder:

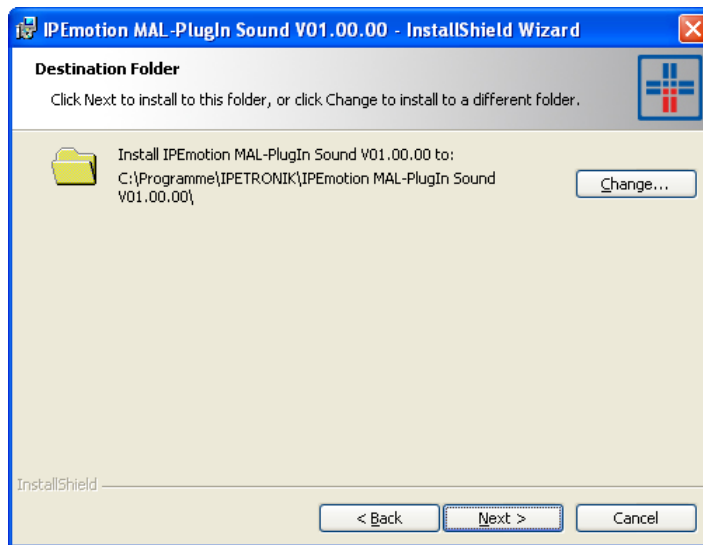


*Due to the security model of Microsoft Corporation related to .NET applications, the installation of the Sound-PlugIn on a local drive is recommended.*



*According to the Microsoft conformance guidelines for Windows applications the files are installed to the default locations that are specific to the operating system and language.*

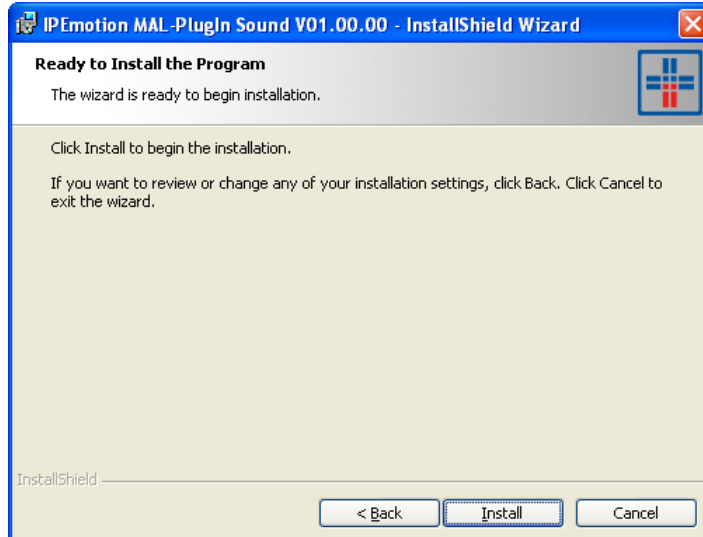
Accept the default installation location for the Sound-PlugIn. To select another location click **Change**.



After you have specified the location for the installation, click **OK** to return to the **Destination folder** screen.

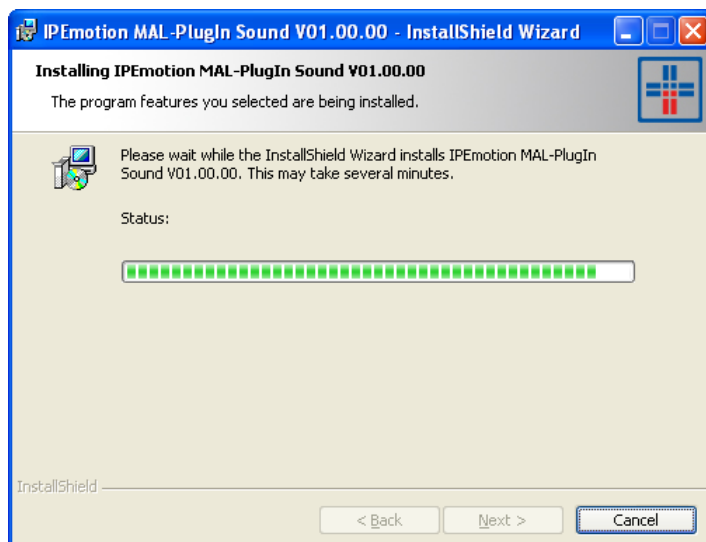
Click **Next** to continue.

**4. Ready to install the program:** This screen indicates that the Sound-PlugIn is ready to install.

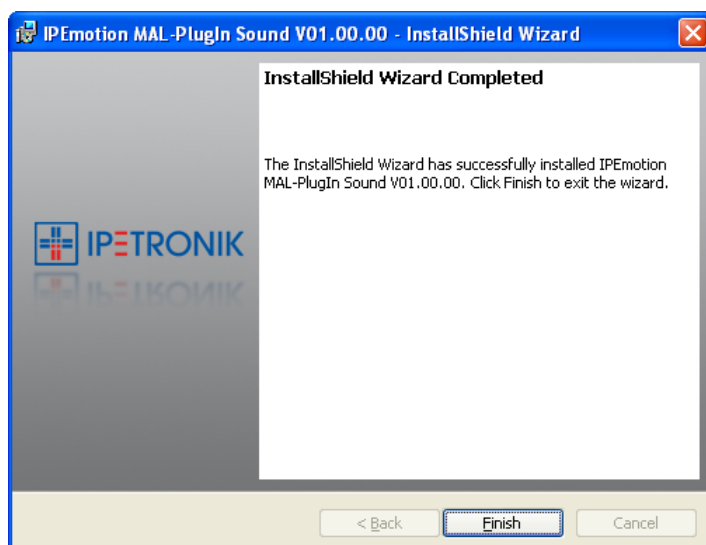


Click **Install** to start the installation.

**5. Installing:** A progress bar is shown during the installation process.



**6. InstallShield Wizard Completed:** After the successful installation, the following screen is shown.

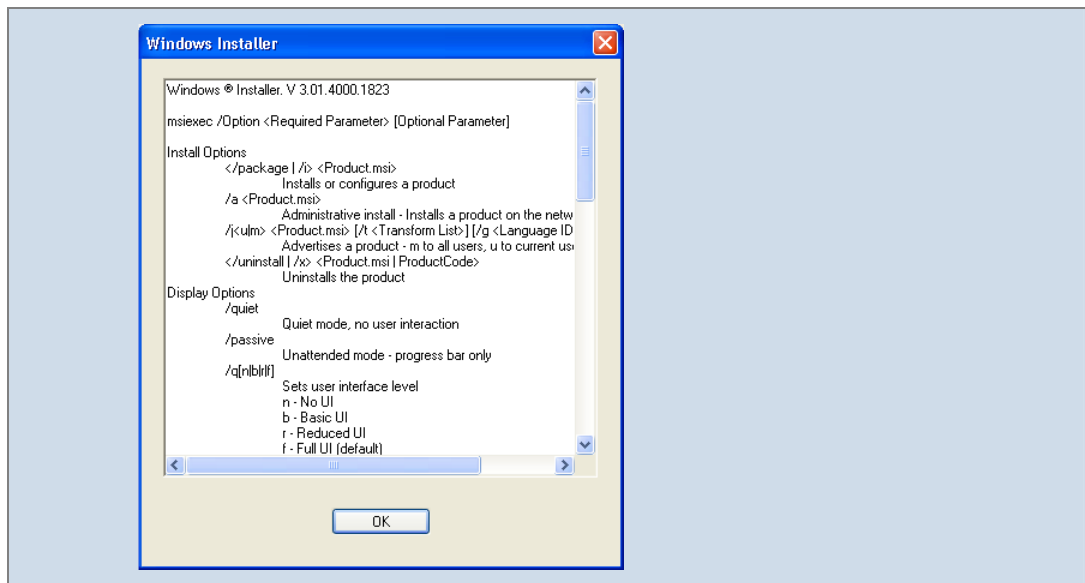


Click **Finish** to exit the installation wizard.



*Due to the fact that the Sound-PlugIn installation file is a msi standard setup file, user-specific parameter configurations can be made with a silent installation, e.g. options for installation, indication, repair.*


*With the entry of the command msixec the following screen appears where the possible administrative installing options are listed.*



## 4.3 Uninstalling the Sound-PlugIn

The following chapter shows the deinstallation process of the Sound-PlugIn.

For removing the Sound-PlugIn you have the following possibility:

-  The **Add or Remove Programs** option for the Sound-PlugIn in the Control Panel.

With this method you can remove files, folders and registry entries from your computer, which has been created during the installation.

### Removing the Sound-PlugIn with the deinstallation function of the Control Panel

To do so, proceed as follows:

1. Click in the menu **Start** on your computer on **Settings** and then **Control Panel**.
2. Double-click in the **Control Panel** on **Add or Remove Programs**.
3. Select from the program list the entry **IPEmotion MAL-PlugIn Sound** and click **Remove** to start the installation wizard.
4. Click **Yes** to start the deinstallation.
5. A progress bar is shown during the uninstalling process.




## 5 Working with the Sound-PlugIn

The following chapter offers an overview of the available commands and their functions for the Sound-PlugIn. In addition, it is shown how to use the software IPEmotion for configuring and acquiring data, as well as, managing and analyzing the acquired data.

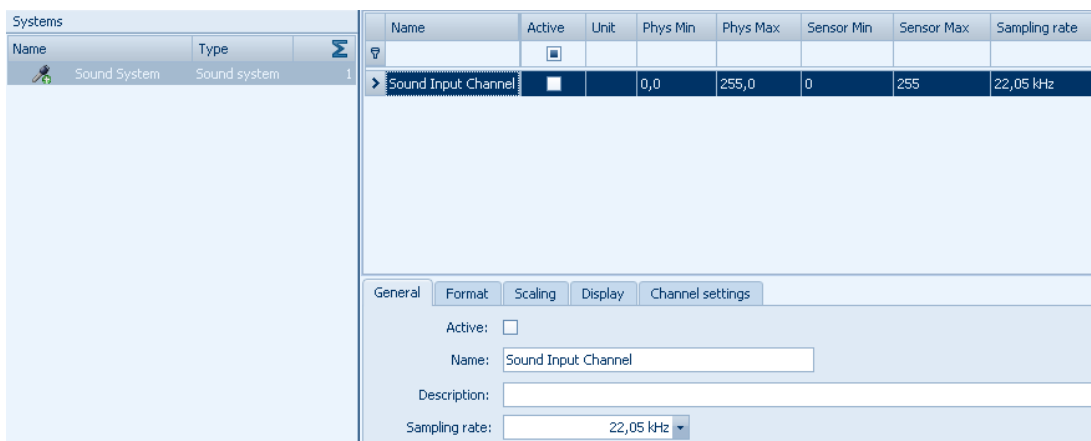
### 5.1 Configuring the system and channel

The main navigation tab **Signals** contains all available and connected systems with type description and channels.

For recording an audio signal you have to define the following required parameters:

-  Sampling rate,
-  Bit rate,
-  Channel count

The current version only supports the mono recording, i.e. the number of channels is limited to 1.



Name	Active	Unit	Phys Min	Phys Max	Sensor Min	Sensor Max	Sampling rate
Sound Input Channel	<input checked="" type="checkbox"/>		0,0	255,0	0	255	22,05 kHz

General | Format | Scaling | Display | Channel settings

Active:





Name: Sound Input Channel

Description:

Sampling rate: 22,05 kHz


To define the **sampling rate**, proceed as follows:


Select in the right window of the channel view the desired channel. You can find the **General** tab in the window of the configuration dialog. Define the desired **sampling rate**. There are the following standard sampling rates for audio signals available:

-  8 kHz
-  11.025 kHz
-  22.05 kHz
-  44.1 kHz

To define the **bit rate**, proceed as follows:

Select in the right window of the channel view the desired channel. You can find the **Format** tab in the window of the configuration dialog. Define the desired resolution within the **Data type** function. There following are the available data types for audio signals:

 8 bit

 16 bit

In the current version the **number of channels** within the **channel settings** tab is fixed and cannot be changed.