

EASERA First Aid

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EASERA First Aid	1
I. What to do if there are general problems: First Aid	1
II. EASERA playback and recording does not work. What to do?	2
III. EASERA crashes after the start, it starts with error messages or it does not start at all. What to do?	2
IV. EASERA licencing failed or the licence disappeared. What to do?	3
V. Frequently Asked Questions	3

I. What to do if there are general problems: First Aid

1. Make sure you have the latest version of EASERA installed (1.0... see EASERA main window's caption)
2. Make sure that your audio device has full-duplex capabilities. To check this use a third-party tool like for instance RightMark Audio Analyzer (freeware, downloadable from <http://audio.rightmark.org/download.shtml>)
3. Make sure that your audio device is installed correctly. To verify, use the following steps:
 - (a) Click the right mouse button on the <My Computer> desktop icon.
 - (b) Select <Properties>.
 - (c) Select <Hardware> and then the <Device Manager> button in <Device Manager>.
4. Make sure you have the latest drivers installed. To verify, use the following steps:
 - (a) As in 3.
 - (b) In the hardware list of the Device Manager click the right mouse button on your audio device.
 - (c) Select <Properties>.
 - (d) The following window will show you all available information about your drivers.
 - (e) Search the internet for the manufacturer of your device or use a common site to search for a driver update (www.software.drivers.com).
 - (f) Compare the version and the date of the drivers in use and of the drivers available.
 - (g) If there are newer drivers available download and install them.
5. Make sure that you have at least DirectX 8.0 installed. To verify, use the following steps:
 - (a) Start <System Information> under <Accessories/System Tools> in the <Start> Menu.
 - (b) Choose from the <Tools> menu <DirectX diagnosis tool> or execute DxDiag.exe in the command line.
You can download the latest DirectX version from <http://www.microsoft.com/windows/directx/default.aspx>
6. Make sure you have at least 128 MB of RAM physically available. To verify, use the following steps:
 - (a) See 3.
7. Run CheckEASERA.exe in the EASERA100 path to make sure you are not using older components than required by EASERA (see the CheckEaseraComp.log file). If necessary reinstall EASERA from the CD.
8. Reset all customized settings and start EASERA in default audio mode.
To do that:
 - (a) Select <EASERA (use default audio and settings)> under Programs/EASERA in the <Start> Menu or execute EASERA using "/d" in the command line.
9. To receive further help you can also contact the EASERA support team by sending a support request from the EASERA support website.

In some cases it is helpful for support to have access to the EASERA log files, describing the failure in more detail. To create a log file, switch on the debug mode of EASERA and try to reproduce the problem. Use the following steps to switch on debug mode:

- (a) Open the <Options> window (F9) in EASERA.
- (b) Select <Advanced / Debug> from the left tree.
- (c) Under <Debug> check all marks at the right side.
- (d) Try to recreate the error or crash.
- (e) Make sure you switch off the log file creation later on.

To contact the support team, do the following:

- (a) Open the <Start> tab.
- (b) Go to the <Help> menu and left click <Technical Support>.
- (c) This will start the EASERA support wizard.
- (d) Follow the instructions to connect to the EASERA support website.

To contact the support team if EASERA does not start up at all, do the following:

- (a) Open the folder \\.\Program Files\SDA\EASERA 1.0\Easerapath\.
- (b) Run the executable EASERASupWiz.exe.
- (c) This will start the EASERA support wizard.
- (d) Follow the instructions to connect to the EASERA support website.

II. EASERA playback and recording does not work. What to do?

1. Check if the input and output device (loudspeaker, microphone) are working at all. Check the connections to and from the computer.
2. Check if your audio device is installed correctly and the latest drivers are available (see I. 3. + 4.)
3. Check if the playback and record capabilities of your audio device are available at all. To do that, use the Windows Sound Recorder and the Windows Media Player.

Check playback:

Select <Windows Media Player> under <Programs/Accessories/Entertainment> in the <Start> Menu. Load an arbitrary audio file and play it (e.g. from the folder \\.\EASERA10DATA\SoundSamples\).

Check recording:

Select <Sound Recorder> under <Programs/Accessories/Entertainment> in the <Start> Menu and record sound from the microphone or another external device.

4. If the playback and/or recording does not work, check that:
 - (a) The right audio device for playback and recording is selected as the Default Device.
To do that:
Select <Audio Properties> from the Sound Recorders <Edit> menu.
 - (b) The line and volume settings are adjusted properly.
To do that:
Select <Volume> under <Sound Playback> and <Sound Recording> from the Audio Properties window.

III. EASERA crashes after the start, it starts with error messages or it does not start at all. What to do?

First reset all customized settings and start EASERA in default audio mode.

To do that, use the following steps::

- (a) Go to the Windows <Start> Menu.
- (b) Open the submenu <Programs>, then <EASERA>.
- (c) Select <EASERA (use default audio and settings)>.

If the problem persists try to start EASERA again in debug mode using the "EASERA /l" option. To do that, use the following steps::

- (a) Go to the Windows <Start> Menu.
- (b) Select the menu item <Run>.
- (c) Enter "EASERA /l" (small L) into the <Open> field.
- (d) Press <OK> to start EASERA in debug mode.

This option creates a log-file right from the beginning of EASERA.

After that, you can create a "Status Report" by:

- (e) Browse to the folder \...\EASERA 1.0\Easerapath\.
- (f) Run the executable EASERA10InfoSampler.exe.
- (g) This will create an EASERA Status Report as a zip-archive file labelled EASERA10Info.zip.

Then, use the EASERA Support Wizard to submit a report to the support team (see I.9).

IV. EASERA licencing failed or the licence disappeared. What to do?

1. Create an EASERA Status Report.
To do that, use the following steps::
 - (a) Go to the EASERA <Start> Tab.
 - (b) Select <Create Status Report> from the <Help> menu.
 - (c) This will create an EASERA Status Report as a zip-archive file labeled EASERA10Info.zip.
2. Send the status report as an attachment to the EASERA licence support team (licence@sda-software-design.de). Please also add a short description of your problem. You may also use the EASERA Support Wizard to submit a report to the support team (see I.9).

V. Frequently Asked Questions

1. Where can I find information about the applicability of my audio device for use with EASERA?

SDA provides an online database with the information.

To download and browse the database:

- (a) Go to the EASERA <Start> Tab.
- (b) Select < SDA Audio Device Information > from the <Help> menu.
- (c) This will start the EASERA Audio Device Information Viewer tool EASERAADIV.exe.
- (d) If you have internet access press the <Check For Updates And Download> button to download the latest database.

In the left window section you can now see a list of devices sorted by manufacturers. To view the device information click on one of the items in the tree. This will open a report at the right side displaying more information about the results of tests at SDA.

2. Why does my external sound device not work?

There are plenty of external devices and even more drivers. Not all of them work as one would expect. Sometimes it is advisable to connect the device to the computer before you boot your computer. But for other devices, you have to do the connection after the operating system has booted completely.

3. Why is the Direct Sound driver not visible in EASERA after the installation of the drivers for the sound device?

EASERA reads only the first 30 Windows Direct Sound drivers. If your hardware supports a lot of emulation drivers you may reach this limit occasionally. In this case you can disconnect some external devices and start EASERA again. Then you should see the

device in the list. If the device is still not visible, then please select your preferred device as the standard (default) device in Windows:

Under Windows 98, use the following steps:

- (a) Go to the Windows <Start> menu.
- (b) Select <Settings>, then <Control Panel>.
- (c) Use <Multimedia> to open the window <Multimedia Properties>.
- (d) Make sure you look at the <Audio> sheet.
- (e) Select the preferred Playback and Recording device.
- (f) Press <Apply> to confirm the changes.

Under Windows XP and 2000, use the following steps:

- (a) Go to the Windows <Start> menu.
- (b) Select <Settings>, then <Control Panel>.
- (c) Use <Sounds and Audio Devices> to open the window <Sounds and Audio Devices Properties>.
- (d) Make sure you look at the <Audio> sheet.
- (e) Select the preferred devices as <Default Device> in the <Sound Playback> and the <Sound Recording> areas.
- (f) Press <OK> to confirm the changes.

After that the driver should appear at the top of the list in EASERA.

4. Why is the Wave/MME driver not visible in EASERA after the installation of the drivers for the sound device?

(Windows 2000 and XP only)

The list of Wave drivers in Windows can contain up to a maximum of 10 entries. Normally this list will not be reset or deleted by Windows. To reset this list you have to edit the Windows registry manually. But be aware that changing the registry may cause serious problems and even instabilities of the operating system.

To reset the list of Wave drivers:

- (a) Go to the Windows <Start> menu.
- (b) Select the menu item <Run>.
- (c) Start the registry editor by typing "regedit".
- (d) Find the registry key
'HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows
NT\CurrentVersion\Drivers32' in the tree in the left window.
Probably the entries "wave" to "wave9" have been already created in the right
window value list.

Windows creates an additional entry when a device driver is being installed again. This not only happens during the first installation, but also when a PCI card is moved to another slot or a USB device is used through a different USB port. Both real hardware and also virtual ports emulating hardware create new entries.

If you have all of the needed drivers stored externally, for example on CDs, then you can delete all entries, from "wave" to "wave9" and from "midi" to "midi9". You may also just delete all of the multiple entries. (See also <http://www.rme-audio.com/english/faq>)

5. After the installation of an ASIO driver I can see the driver in EASERA. Why does the driver not work, if I select it in the <Device Options>?

EASERA always shows all installed ASIO drivers in the list, regardless of whether they are connected and switched on or not. Make sure the device is connected before you start EASERA and do not select an ASIO device that is not connected.

If you shut down EASERA with an ASIO device active, be sure to have that device available again when you start EASERA next time. If you do not have it connected anymore and you experience problems, please start EASERA in default audio mode ("/d", see also III.).

6. Why is there no input signal visible on the <Measure> or <Live> page, when I start EASERA the first time or with the Default Audio (“/d”) option mode?

Occasionally the input line used by your soundcard is not selected in the corresponding mixer. To fix this problem, adjust the Windows Mixer:

- (a) Select the <Measure> - Tab of EASERA.
- (b) Click on <...> to the right of the Device Name.
- (c) This will open the window <Device Options>.
- (d) Click on the <System> Button in the <Input Mixer> area.

Here you will find volume controls for all the mixer lines for the input. Try to find the right input line and adjust the corresponding volume control.

Sometimes you may have to uncheck the <Mute> Button of the related output line:

- (a) Select the <Measure> - Tab of EASERA.
- (b) Click on <...> to the right of the Device Name.
- (c) This will open the window <Device Options>.
- (d) Click on the <System> Button in <Output Mixer> frame.

Furthermore, check the general recording functionality using the Windows Sound Recorder (see II.3).

7. Why is there no signal audible if I click <Play Test Signal!> on the <Measure> or <Live> page after EASERA was started the first time or in the Default Audio (“/d”) option mode?

Occasionally the output line used by your soundcard is switched to mute. To fix this problem adjust the Windows Mixer:

- (a) Select the <Measure> - Tab of EASERA.
- (b) Click on <...> to the right of the Device Name.
- (c) This will open the window <Device Options>.
- (d) Click on the <System> Button in <Output Mixer> frame.

Here you will see volume controls for all mixer lines for the output. Try to find the right output lines and adjust the corresponding volume control and <Mute> check boxes (e.g. <Main> and <Wave>)

Furthermore check the general playback functionality using the Windows Sound Recorder or Media Player (see II.3).

8. Why do the EASERA Mixer Volume Sliders or Mute Buttons not work?

In some cases EASERA may select the wrong Mixer Controls as a default. Especially for this case, there is the possibility to change the assigned mixer controls.

- (a) Select the <Measure> - Tab of EASERA.
- (b) Click on <...> to the right of the Device Name.
- (c) This will open the window <Device Options>.

Note that the following steps may lead to a configuration where input and output will not work anymore.

Input:

EASERA uses three pre-selected Input Lines; these are called Line, Microphone and Special. To each of them, an input line of the Windows mixer is assigned automatically. But this default selection may not be working in some case, so manual re-assignment is possible. To do that, use the following steps:

- (a) Select one of the radio buttons in the <Input Mixer> area below the mixer name.
- (b) Click on <Assign Controls>.
- (c) Check in this window if the selected Mixer control (for Line, Microphone or Special) is appropriate for the selected input line selected before.
- (d) Additionally, check below if the corresponding Volume and Mute controls are assigned correctly.

Output:

To manually re-assign the Output Line do the following:

- (a) Click on <Assign Controls> in the <Output Mixer> area.
- (b) Check in this window if the Mixer controls are appropriate.
- (c) Also check if the Volumes and Mute controls are correctly assigned.

9. Why do I see a high input level, although the selected input is not connected or supplied with a signal?

Some Mixers have a variety of feedback capabilities like monitoring, which feed output lines directly back to the input. For use with EASERA an input line must not be connected to the output via the Mixer.

As an Example: The “Creative Audigy 2” device has in <Audio Properties> under <Recording Control> an <Advanced> button below the <Analog Mix> slider. Here one can find a check box labeled <Recording without Monitoring>. Try to find and disable these monitoring options. If there is the capability to feed a channel of the input with a special channel of the output you can take advantage of this for Loop-Back Measurements like <Dual Channel FFT>. But we suggest using external wires for this connection.

10. Why is there no input signal visible?

One particular reason can be that for some combinations of Sample Rate and Bit Resolution the driver does not return any error to EASERA, but it does not work properly either. In that case it can help to try other configurations for input and output.

11. I am using a Linear or Logarithmic Sweep as the stimulus signal. When I play the signal, I can hear the sine sweeping up, but then at high frequencies there are noises or lower frequencies are audible. What is wrong?

Some sound cards create strong distortions at the output for high frequencies. Generally speaking, all components of the measurement setup may cause distortions, some may be audible. If you want use them for high frequency measurements, please be sure your equipment is appropriately suited.

Problems with distortions are easy to recognize for example when listening to a white sweep, but all signals that include high frequencies will show similar behaviour and problems.

12. If I run a measurement, sometimes EASERA shows a message like “Could not Record End of Signal!”. What is the reason for that?

The Windows Direct Sound and Wave drivers for the Input (Record) and the Output (Play) are independent. Normally, for a measurement the start of Record is initiated before the start of Play. The time gap depends on several factors within Windows and therefore it is not known exactly. EASERA provides two adjustable parameters to ensure that the played signal is captured completely.

- (a) Open the <Options> window (F9) in EASERA.
- (b) Select < Hardware Control Settings > from the left tree.
- (c) At the right sheet you will find the adjustments for the times “Play Delay [ms]” and “Record Extension [ms]”.

If you start a measurement, the start of the output signal (Play) is delayed additionally to the Windows delay to make sure the input signal (Record) is running when the first sample is sent out.

On the other hand, the recording time exceeds the signal length to be sure that the last output sample will be recorded as well. In some rare cases the delays used are not suitable for your computer timing. It may be helpful to experiment with changing these options.

Because the ASIO driver can start the Record and the Play synchronously, you can avoid the related problems by using this type of driver.

13. In the “Tools” menu there is a selection that opens the “Select Buffer Size” window. Why should I do that?

Normally you should leave the Buffer lengths unchanged.

The buffer length (memory block length) can influence the minimum refresh time in the <Live> tab of EASERA. For some combinations of options in the <Live> tab it is recommended to use smaller Buffers. On the other hand, for measurements using the <Measure> tab it is sometimes recommended to use longer buffers.

Especially the ASIO Buffer length has to be longer than the ASIO-Latency of your driver/hardware. This latency is directly related to the Primary Buffer Length, which can be adjusted in most ASIO drivers by the following:

- (a) Select the <Measure> tab of EASERA.
- (b) Click on <...> to the right of the Device Name.
- (c) This will open the window <Device Options>.
- (d) Click on the <ASIO> button and select one of the ASIO drivers.
- (e) Click on the <Setup> button right to the list of drivers.
- (f) This will open the dialog connected with the current ASIO driver and allow for manually adjusting the driver parameters.

In most cases there is special configuration software delivered with your hardware, it is usually installed along with the drivers.