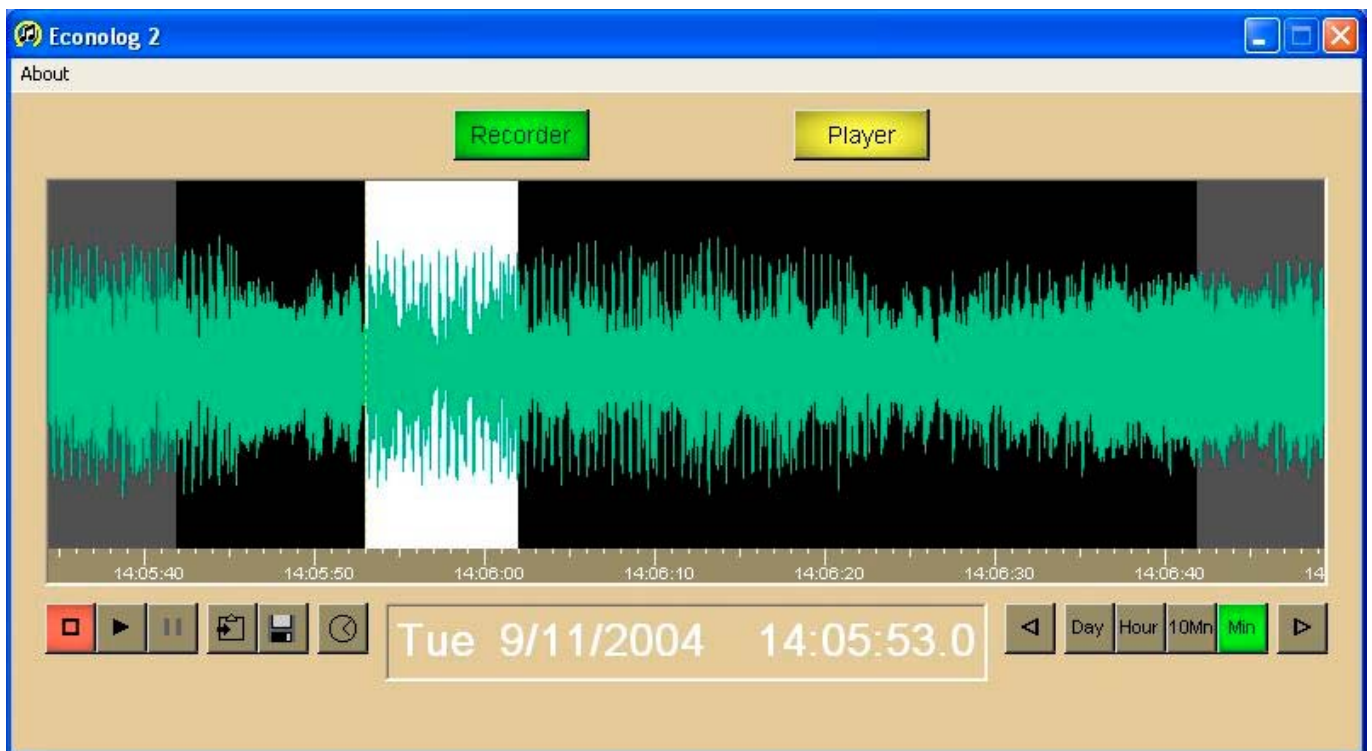


Econolog 2



Manual

Overview

Econolog 2 is a low-cost single channel audio logger, offering 42 days of high quality mono recording using Windows Media 9 encoding. A graphical playback screen allows easy access to any part of the log, and the user can copy a portion of the log to the Windows clipboard or to a wave (.wav) or Windows Media (.wma) file.

The recorder component of **Econolog 2** operates as a Windows service and thus runs whether a user is logged in or not. As well as providing automatic restart of the recorder following a power interruption or reboot, this also offers enhanced security by allowing the logger to run unattended with no user logged in.

Econolog 2 can be trialed for up to fourteen days, after which an activation code must be obtained to allow the recording to continue.

System Requirements

The workstation that is to be used for running **Econolog 2** must meet or exceed the following requirements.

- Processor - Pentium 500MHz or faster
- Memory - 128MB minimum
- Hard Disk – minimum 16GB of free space.
- Operating System – Windows 2000, XP or later
- Multimedia audio card supporting 16 bit 44.1kHz stereo record and replay and compliant with Microsoft's PC99 audio specifications.

Installation

Please take care to follow each step precisely and in the order shown below. If an error occurs at any point either correct the cause of the error or seek assistance before continuing further with the installation.

In order to install Econolog 2 you must be logged in using an account with Administrator privileges. Once installed, it can be run from less privileged user accounts, but make sure to select the installation option to make it visible to all users.

Insert the **Econolog 2** CD into the PC. Windows Installer should start automatically, but if it doesn't click on Start - Run and type in d:\setup (where d: is the drive letter for your CD-ROM drive). Follow the installer prompts to complete the installation.

When the installation is complete, the recorder service should begin running automatically. To open the Playback screen, click on Start - Programs – **Econolog 2**. The **Recorder** button at the top left of the window should be illuminated in green, indicating that the recorder service is operational. If it is showing red the recorder service is not running – see the troubleshooting guide at the end of this manual for more assistance.

Clicking on the **Recorder** button opens the audio mixer panel for the audio device that the recorder is using – note that because the recorder runs as a service, this device is always the first one enumerated by Windows on start-up and is independent of the “default” recording device that an individual user may select in the Windows Control Panel. The mixer controls can be used to adjust the audio recording level if need be.

At the bottom of the window is a yellow bar displaying the number of days remaining in the trial period. Click on this to begin the activation process (see below).

The playback device and volume settings may be altered from the Windows Control Panel under Sound, Speech and Audio Devices. These settings are stored by Windows on a user-by-user basis.

Activation

To activate Econolog 2, you will need to contact Innes Corporation or their representative, quoting the Hardware ID number displayed in the **Econolog Activation** dialog box. In return you will receive back the Activation Key needed to complete the activation process. Once this has been done the yellow activation bar at the bottom of the main window will disappear and the recorder will continue to operate indefinitely.

Innes Corporation can be contacted by e-mail to sales@innescorp.com.au or by telephone within Australia on (02) 9987-0499 or international (+61) 2 9987-0499.

Playback Operation

Overview

To open the **Econolog 2** playback software click on Start – All Programs – Econolog 2. Operation is similar to other audio editing software products that are available in the marketplace, and is based around a visual waveform display.

At the top of the window are the **Recorder** and **Player** buttons. The Recorder button opens the audio mixer panel for the recording device while the Player button opens the log for playback beginning at a point about one minute behind the current time.

Below these buttons is the **waveform display** window. This shows the peak amplitude of the audio waveform, sampled at 100ms intervals. The initial span of the waveform display is one minute, but different spans (ten minutes, one hour or one day) may be selected using the **span select** buttons (see below). The waveform display is extended beyond the selected span so that the audio either side of the work area can be seen. These extended areas are covered with a grey translucency. For times outside of the logging range the waveform display is replaced by a red line.

There are two cursors that may appear in the waveform display. The **start cursor** is shown by a dashed yellow line and represents the start point for playback. The **play cursor** is shown by a solid white line and represents the current playback position. The play cursor is only visible when actually playing.

Immediately below the waveform display is the **ruler bar** which calibrates the time of day for the waveform display. The ruler bar may be dragged back and forth by placing the mouse over it and holding down the left button. While dragging, the mouse cursor is replaced by a pointing hand and the waveform display moves relative to the start cursor.

In the centre of the screen below the waveform display window is the **date/time display** which shows the date and time corresponding to the current playback position. The date and time shown are based on the timestamps encoded in the audio files on the logger.

To the left of the date/time display are the **transport buttons** (stop, play and pause), the **capture buttons** (save-to-clipboard and save-to-file) and the **timecall button**. The operation of these is described in more detail in later sections.

To the right of the date/time display are the **span buttons** (minute, ten minute, hour and day) which control both the waveform display span and the step size used by the forward and backward **step buttons**.

Basic Playback

To play back from a particular date and time on the logger, firstly move the start cursor to the required position using the forward and backward step buttons (in conjunction with the span buttons). The start cursor may be positioned within the waveform display by clicking in the display window, or the waveform may be moved under it by dragging on the ruler bar.

Clicking on the play button will commence playback, causing the playback cursor to appear and move progressively to the right. When it reaches the right-hand edge of the waveform display work area, it stops moving and the waveform begins scrolling beneath it.

The pause button will suspend playback at the current playback position. Clicking on pause a second time will cause playback to resume.

Clicking on the stop button ends playback and returns the playback position to the start position.

If the ruler bar is dragged while playing back, play is suspended during the drag operation and then afterwards the start position is set to the new playback position and playback resumes. Likewise stepping backward or forward while playing moves relative to the current playback position and sets the start position to the new playback position.

Audio Capture

To copy a section of the log to either the Windows clipboard or a file, it is firstly necessary to select the audio required. This can be done in two ways, as follows:

- Click down at the starting point inside the waveform work area, then drag the mouse while holding down the left button. Release the button at the finishing point. You may also start at the finishing point and drag backwards to the starting point.
- Click in the waveform work area to set the start cursor at one end of your selection, then hold down the shift key on the keyboard at click again at the other end.

When an area of waveform is selected, the start cursor is set to the starting point but may be moved anywhere in the selected region by dragging the ruler bar. When play is pressed, only the audio from the start cursor the selected area's finishing point is played.

The starting and finishing points may be moved by holding down the shift key on the keyboard and clicking or dragging within the waveform work area. The marker closest to the mouse position is the one that is moved.

To copy the selected audio to the Windows clipboard, click on the clipboard capture button. Note that the maximum amount of audio that can be copied to the clipboard by FlashBack 5 is ten minutes, as this must be stored in memory as uncompressed audio data.

To copy the selected audio to a file, click on the file capture button. In the **Save As** dialog box that opens, choose a file name and a file type (.wav or .wma). Note that .wav files are limited in size to 2GB, which corresponds to approximately three hours of stereo audio. The .wav option in the **Save As** dialog box is not available if the size of the selected audio exceeds this limit.

Be aware that audio files, particularly those using the uncompressed wav format, can be very large and will consume considerable disk space. It is strongly recommended that any files created be moved off the Econolog machine if they are to be kept for an appreciable time. Also be aware that pressing **Delete** in Windows Explorer (and some other software) merely moves the file to the Recycling Bin – to actually delete the file from the hard disk hold the shift key down while pressing Delete.

Timecalls

When the timecall button is selected, date and time announcements are generated each minute. In this mode, the logged audio is played through the left channel while the timecalls are made on the right channel.

Timecalls may also be inserted when saving to the clipboard or to a file by clicking on the timecall button before capturing.

Troubleshooting

There are a number of conditions which can cause the FlashBack software to fail and/or report an error message. These conditions are now described.

- Recorder not running or not recording any audio – check that the PC has an appropriate sound card or motherboard soundport fitted and with the correct driver installed. Check that the source audio is connected to the Line Input connector (don't use the Microphone input!), and that the Line Input is selected on the audio mixer (click on the Recorder button on the Econolog 2 window to open the mixer window). Check that there is sufficient free space on the hard disk. If there is more than one audio input device available (for example a soundport on the motherboard and an installed sound card) the recorder will always use the first one enumerated by Windows on startup. A motherboard soundport can generally be disabled in the BIOS settings if this is not the intended audio input device.
- *Unable to open audio output device* - this may be caused by the sound card not being installed correctly in the PC. Note that the sound card must support 44.1kHz sampling rate. Make sure that the correct default playback device is selected in the Windows Control Panel if there are multiple devices available.
- No sound when playing back - check that the speakers or headphones are correctly connected and that the volume setting on the PC is set correctly. Try running other applications that generate sounds to see if the problem affects them as well. Check that the correct playback device is selected in the Windows Control Panel.
- There are occasional gaps in the replayed audio - this may be caused by other applications running on the PC that are consuming excessive processor time.
- The playback date-time display behaves erratically when playing – the playback software relies on the audio playback device accurately reporting its current position in accordance with Microsoft's specifications. Some non-compliant cards don't work correctly in this regard and cannot be used with Econolog 2.

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