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# Appendix

## Driver Dialog (PC Version Win 9x / ME)

Open the driver setup dialog via Start -> Settings -> Control Panel -> System -> Device Manager -> Sound, video and game controllers -> [DSP Board ]. Select the Settings tab.

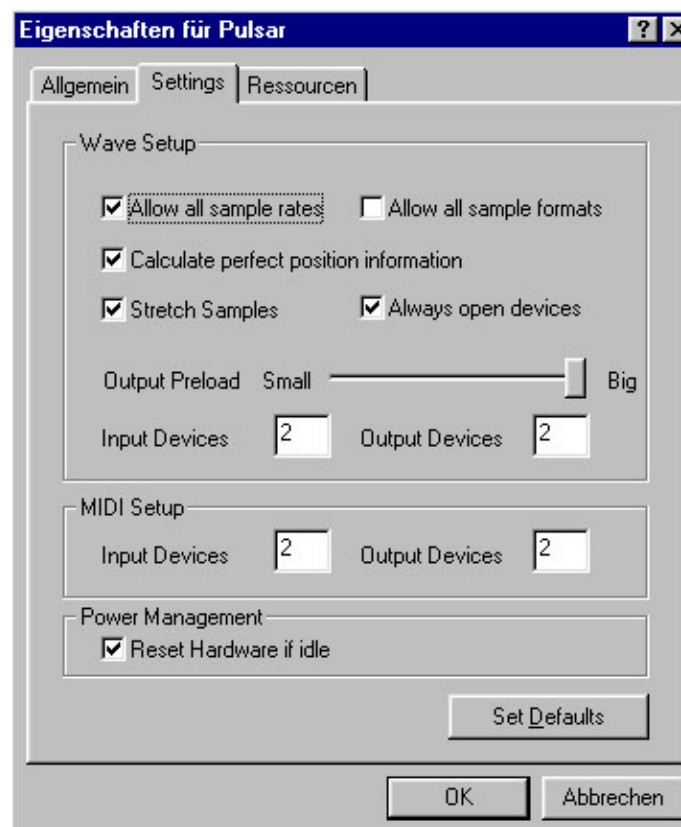
## Wave Setup

### Allow all sample rates

If this option is enabled, samples with any sample rate can be played from your Windows audio application via SFP. Otherwise, only samples with the same sample rate as the loaded SFP Project can be played (the invisible background project uses a 44.1 kHz sample rate).

### Allow all sample formats

When this option is enabled audio data in arbitrary formats can be transmitted over the Wave interface into the SFP software. In practice this setting is rarely useful.



### Stretch Samples

If this option is enabled, samples whose sample rate is different from that of the loaded SFP Projects are played at their original sample rate. If not, they are played at the current sample rate of the Project (and thus possibly with an incorrect pitch). This option is only of importance if “Allow all sample rates” is also enabled.

### Calculate perfect position information

This option can improve playback sync. However, under certain circumstances you may find that monitored and recorded tracks are not perfectly synchronized to one another. If such problems arise, this option should be switched off.

## Output Preload

The slider Output Preload allows you to adjust the buffer size of the audio output and thus the latency of the Windows driver (MME).

Setting the slider hard right results in optimum stability but higher latency. When it is positioned hard left, latency is lowest, but the overall demands upon the system are higher. Thus, you can decrease this setting to improve performance – if you run into problems, raise the value slightly again.

## Always open Device

This option determines whether audio applications are allowed to access the wave drivers when our software has not been started or when the project does not include the Wave source / dest modules.

**It should be enabled for Cubase and disabled for Logic Audio. Otherwise the system might hang when starting the audio application.**

## Input Devices and Output Devices

Here you can specify the number of stereo WAVE ports (individually for both inputs and outputs) that will appear in your audio programs. You can choose between 1 to 16 for a total of 2 to 32 audio channels.

## MIDI Setup

### Input Devices and Output Devices

Here you can specify the number of MIDI ports (individually for both inputs and outputs) that will appear in your MIDI programs. The possible range is from 1-8.

### Set Defaults

With this button all settings are reset to the default values (“Allow all sample rates“, “Stretch Samples” and “Calculate perfect position information” enabled, two input devices and two output devices for both Wave and MIDI).

### Power Management: Reset Hardware if idle

Sometimes (especially in live situations) switching this option off can permit a device, such as a synthesizer, to remain playable even after a Windows crash. Usually, though, this option should remain enabled to reduce current usage.

## The Driver Dialog (PC version, Win 2000 / XP)

The driver dialog for Windows 2000 or XP differs from the Windows 9x / ME version in the following ways:

### Wave Setup

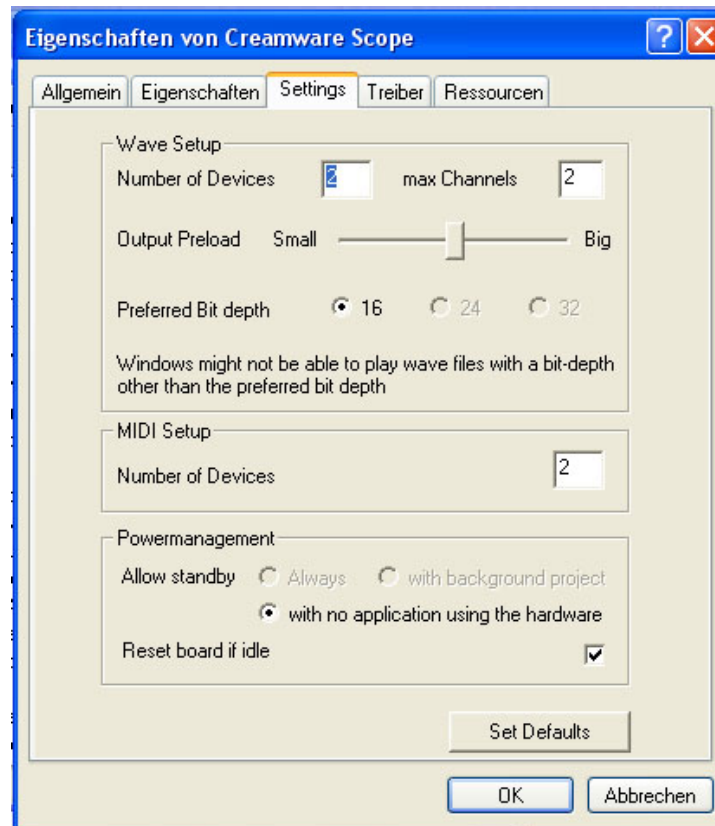
**Number of Devices:** The value indicated applies to both Wave inputs and outputs (default 2).

**max Channels:** The value here indicates the maximum number of channels for each wave device (default 2)

**Preferred Bit depth:** Indicates the bit rate you want to use to play samples with the wave driver. You may have to change this value manually to resolve certain problems that can arise.

### MIDI Setup

**Number of Devices:** The value showing here applies to both MIDI inputs and outputs (default 2)



## Power Management

### Allow standby

These options let you control under which conditions Windows will be able to switch your computer to standby mode.

**Always:** Windows can switch to standby mode according to the configured Windows options even if the SFP software is running.

**with Background project:** Windows can switch to standby mode according to the configured Windows options only when the background project is running and the Live Bar is closed.

**with no application using the hardware:** Windows can switch to standby mode according to the configured Windows options only when there is no other program using the DSP card resources.

## Key Commands (Hotkeys)

**F9:** Opens / closes the Routing Window

**F10:** Opens / closes the File Browser

## Key Commands for Surface Controls

First click on the desired control (fader, poti) to select it. Now you can change the value with your computer keyboard.

**End:** Minimum of the control range

**Home:** Maximum of the control range

**Page up:** Increasing the current value about 1/128 of the control range

**Page down :** Decreasing the current value about 1/128 of the control range

**Arrow right:** Increasing the current value about 1/1280 of the control range

**Arrow left:** Decreasing the current value about 1/1280 of the control range

**Arrow up:** Center position of the control range

**Arrow down:** last value

**Return:** Switches between center position and last value (same as double-click)

**1:** Minimum of the control range

**2:** 11% of the control range

**3:** 22% of the control range

...

**9:** 88% of the control range

**0:** Maximum of the control range

It is also possible to copy the current control value into the clipboard. So you can exactly restore the previous value after trying other settings.

**Ctrl + C:** store value (PC),

**Apple + C:** store value (Mac).

**Strg + V:** restore value (PC),

**Apple + V:** restore value (Mac).

### Further Key Commands:

**Del/NumLock:** deletes the selected module/file/connection/text etc.

**Strg/Apple + Tab:** jumps to the next opened window/surface

### In the Routing Window:

**Arrow up/down/right/left:** moves the selected module

**N:** Create or delete the next connection (after an initial connection has been created or deleted between two modules with the mouse)

**Shift + N:** Creates or deletes the next sequence of connections(after an initial connection has been created or deleted between two modules with the mouse)

**Ctrl:** Allows multiple module selection (by pressing the key while clicking)

### In the Live Bar:

**Ctrl/Apple:** When opening a device surface, all other device surfaces are closed.

### In the File Browser:

**F2:** Text editing mode

**Ctrl + C, Apple + C:** Copies the selected file (or folder) into the clipboard (sample programs are copied including all corresponding samples)

**Ctrl + V, Apple + V:** Pastes in the file or folder that was copied into the clipboard

### In the Modular:

**Ctrl + C, Apple + C:** Copies the selected module into the clipboard

**Ctrl + V, Apple + V:** Pastes in a module that was copied into the clipboard

**Ctrl + D, Apple + D:** Duplicates a module (a copy of the selected module is pasted in with a mouse click)

## Mouse Cursors

The mouse cursors indicate the current program state or whether a procedure is possible or not.

These SFP cursors are displayed only if the *Standard Cursor* option is **not** enabled in the Settings dialog.

normal:



click to connect:



left mouse button (selecting):



connection possible:



drop & drag is possible:



connection not possible:



drag & drop is not possible:



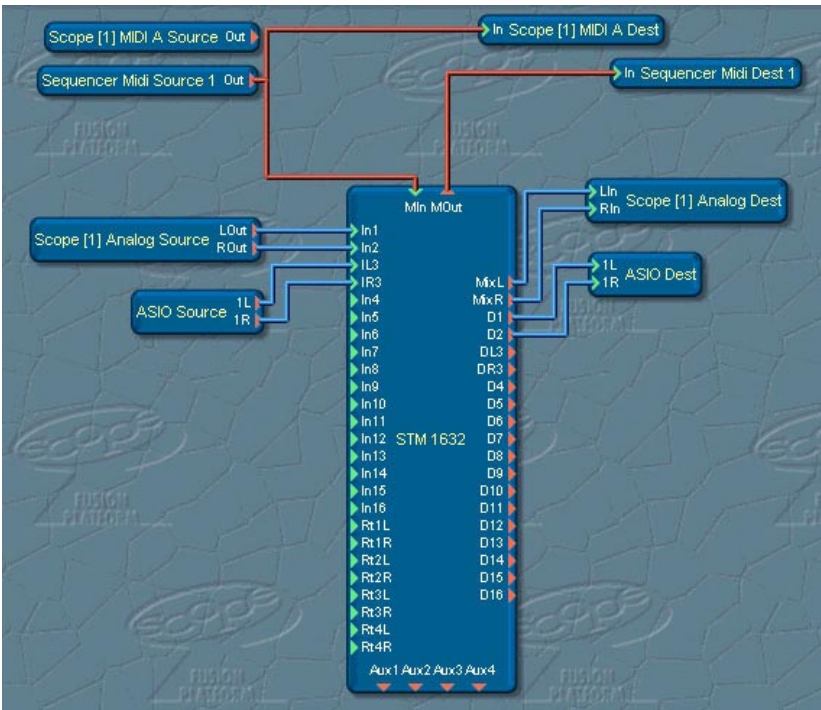
delete connection:



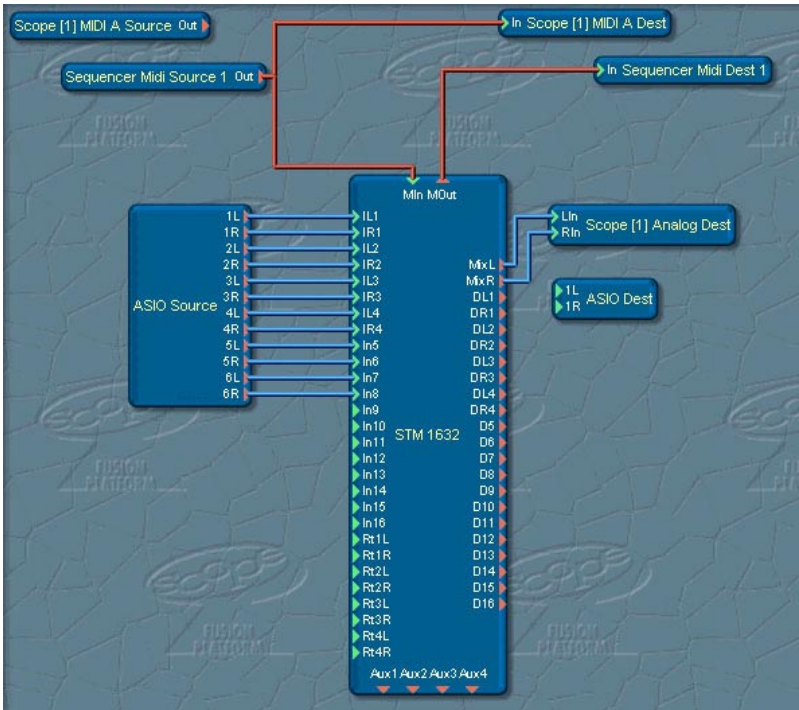


# Example Projects

A variety of pre-configured projects have been included with the SFP software in the directory ../Sfp/Projects. Details of these projects follow.

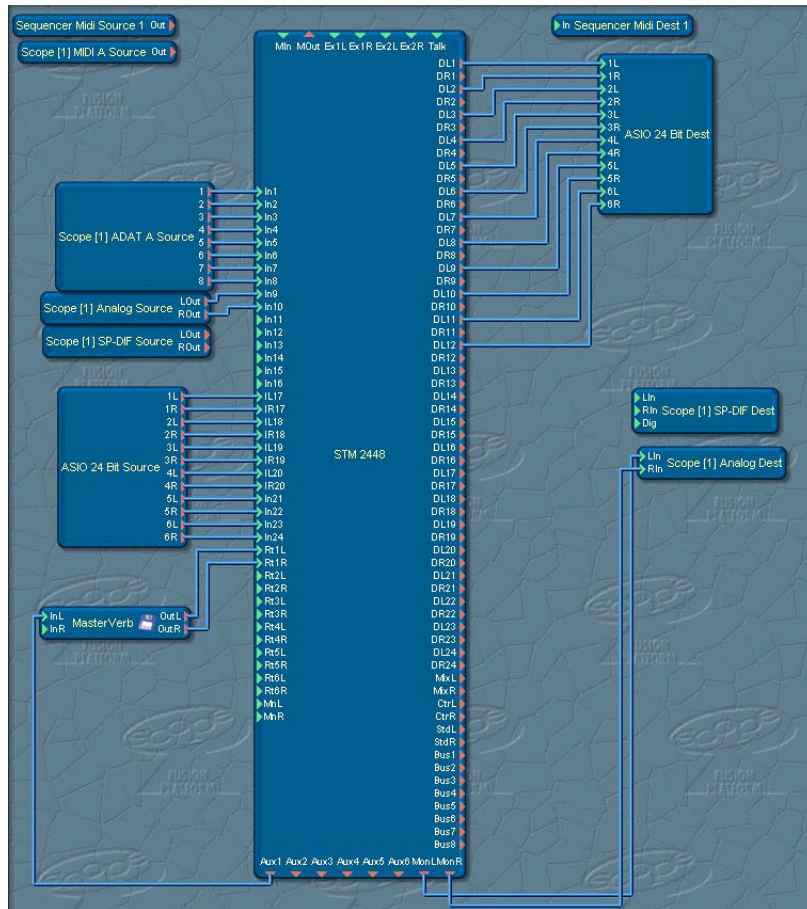


**File name:** ASIO EZ Recording.pro  
**Description:** Recording using the analog inputs in an ASIO sequencer  
**Devices:** STM 1632  
**Keys:** -  
**For audio programs:** Cubase VST, Logic Audio, Nuendo, Ableton Live  
**Min. number of DSPs:** 3



**File name:** ASIO EZ Playback.pro  
**Description:** Playback of 8 tracks from an ASIO sequencer  
**Devices:** STM 1632  
**Keys:** -  
**For audio programs:** Cubase VST, Logic Audio, Nuendo, Ableton Live  
**Min. number of DSPs:** 3





**File name:**

Description:

Devices:

Keys:

For audio programs:

Min. number of DSPs:

**ASIO Pro Recording.pro**

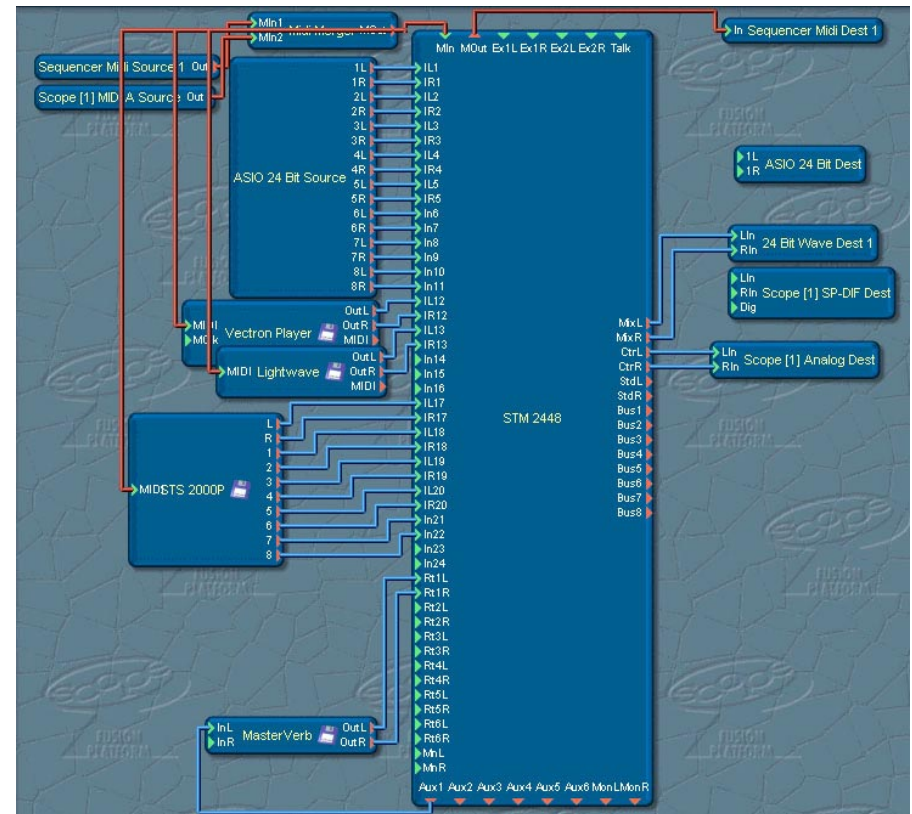
Complex recording project incorporating external sources and playback of pre-recorded tracks

STM 2448

Mixer Package I

Cubase VST, Logic Audio, Nuendo, Ableton Live

6



**File name:**

Description:

Devices:

Keys:

For audio programs:

Min. number of DSPs:

**ASIO Pro Playback.pro**

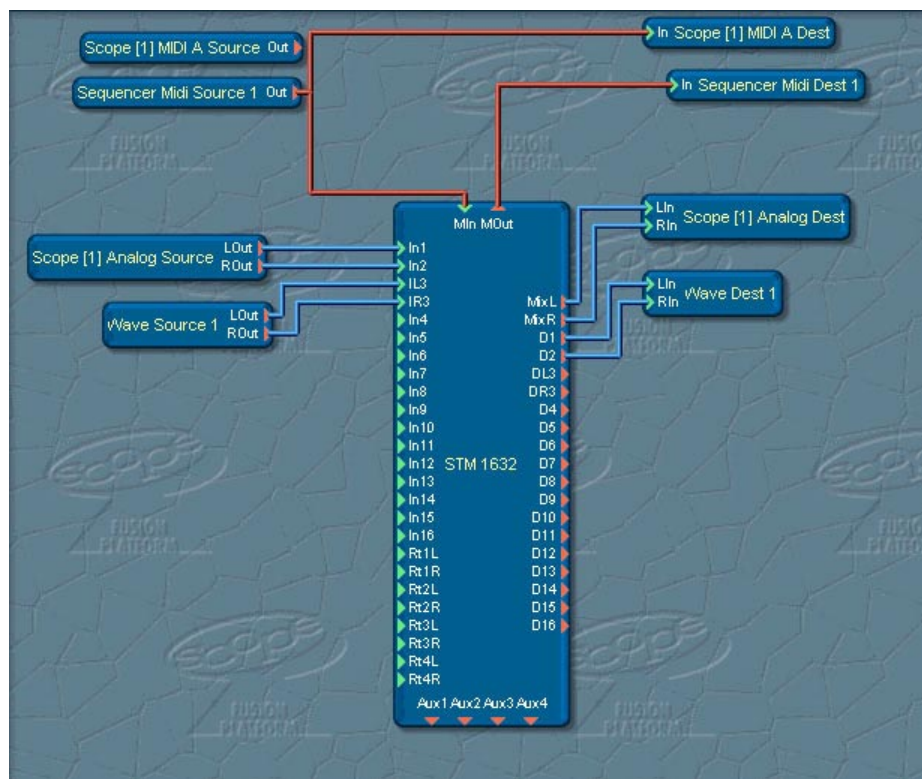
Complex project mixing audio and MIDI tracks

STM 2448, Vectron Player, Lightwave, STS 2000p

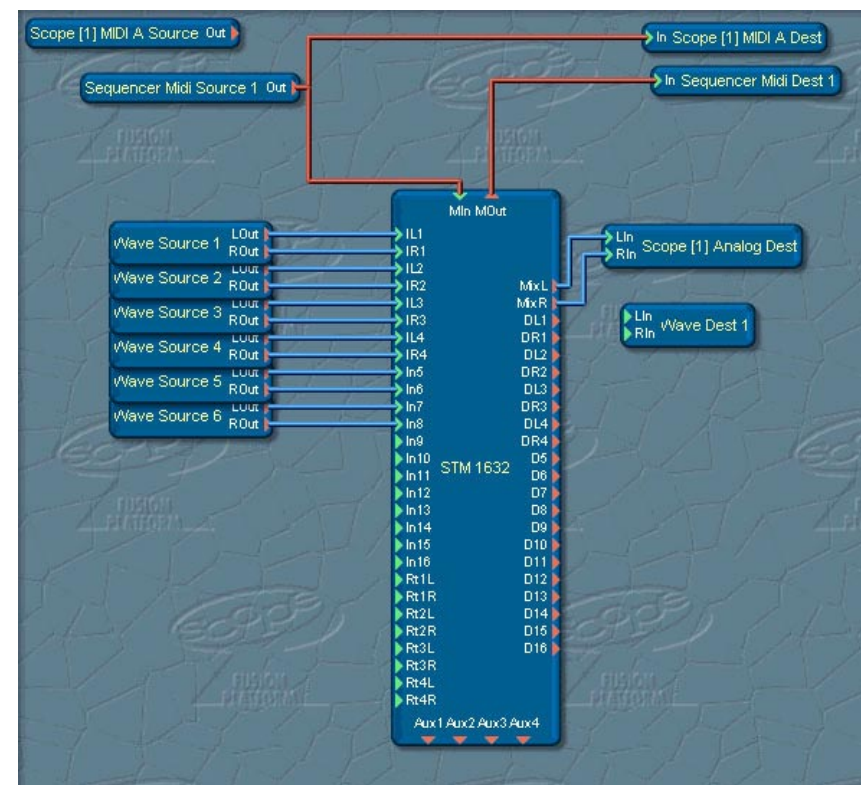
Mixer Package I, Synth Package I + II

Cubase VST, Logic Audio, Nuendo, Ableton Live

6

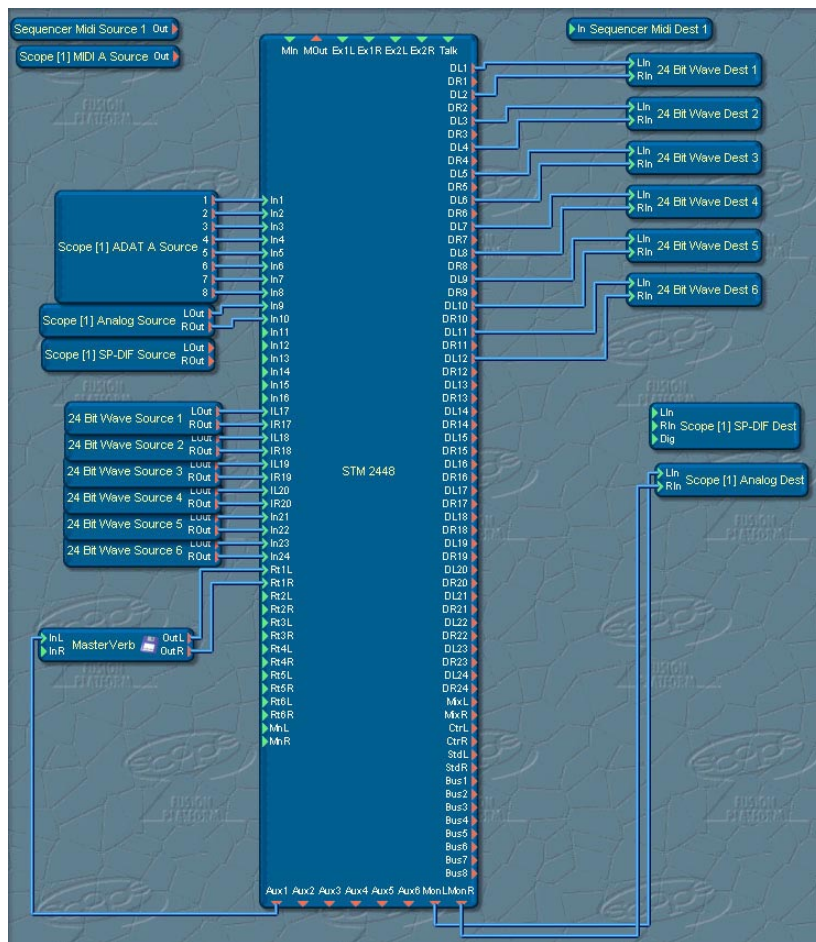


**File name:** Wave EZ Recording.pro  
**Description:** Recording using the analog inputs in an ASIO sequencer  
**Devices:** STM 1632  
**Keys:** -  
**For audio programs:** Sonar, Samplitude, Vegas, ACID  
**Min. number of DSPs:** 3

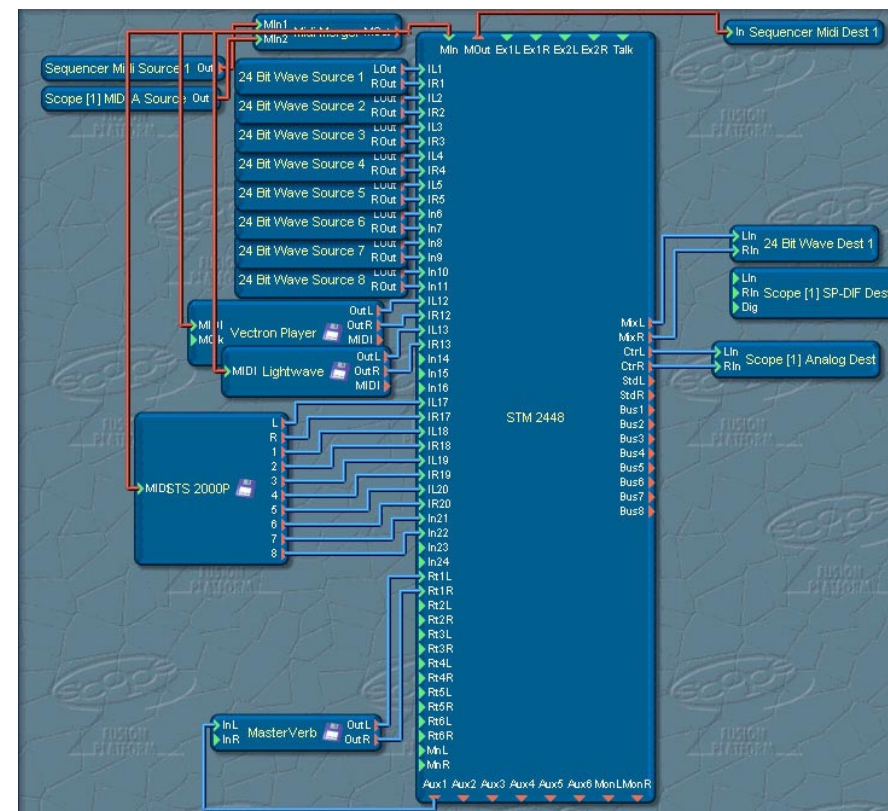


**File name:** Wave EZ Playback.pro  
**Description:** Playback of 8 audio tracks from an ASIO sequencer  
**Devices:** STM 1632  
**Keys:** -  
**For audio programs:** Sonar, Samplitude, Vegas, ACID  
**Min. number of DSPs:** 3

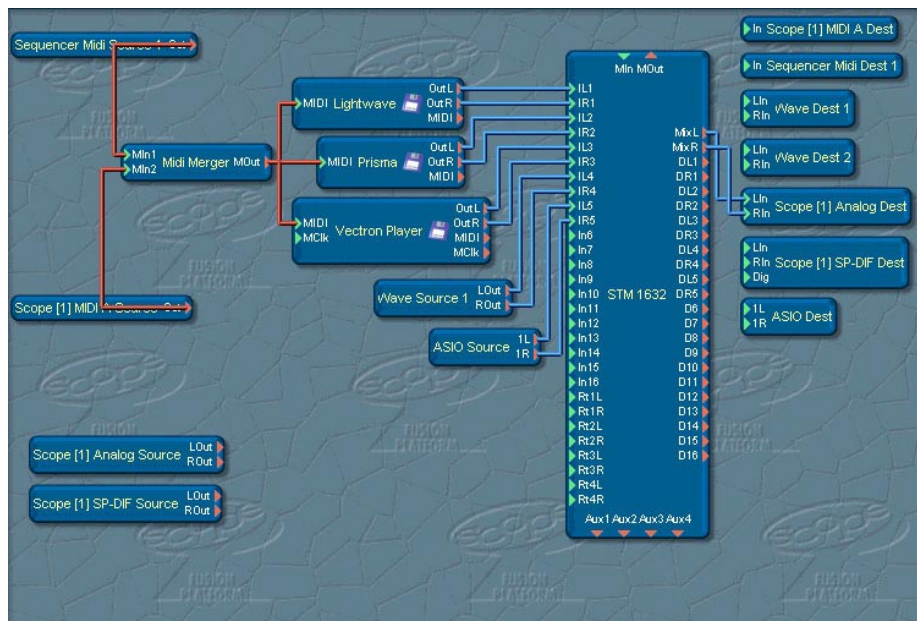




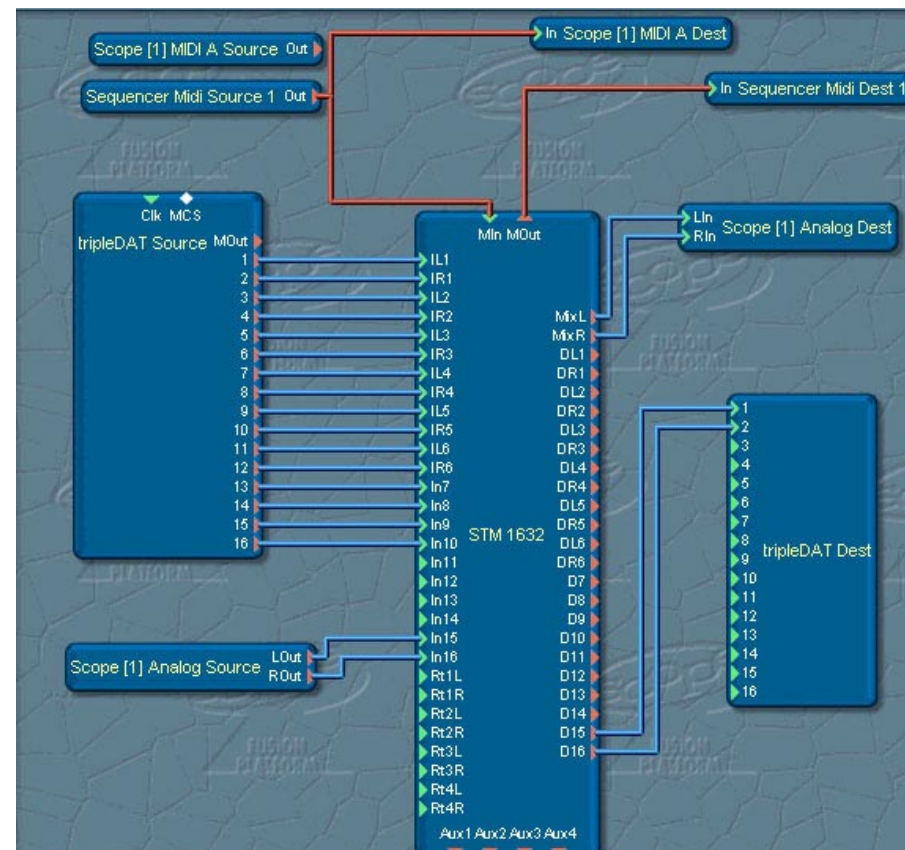
**File name:** Wave Pro Recording.pro  
**Description:** Complex recording project incorporating external sources and playback of pre-recorded tracks  
**Devices:** STM 2448  
**Keys:** Mixer Package I  
**For audio programs:** Sonar, Samplitude, Vegas, ACID  
**Min. number of DSPs:** 6



**File name:** Wave Pro Playback.pro  
**Description:** Complex project mixing audio and MIDI tracks  
**Devices:** STM 2448, Vectron Player, Lightwave, STS 2000p  
**Keys:** Mixer Package I, Synth Package I + II  
**For audio programs:** Sonar, Samplitude, Vegas, ACID  
**Min. number of DSPs:** 6

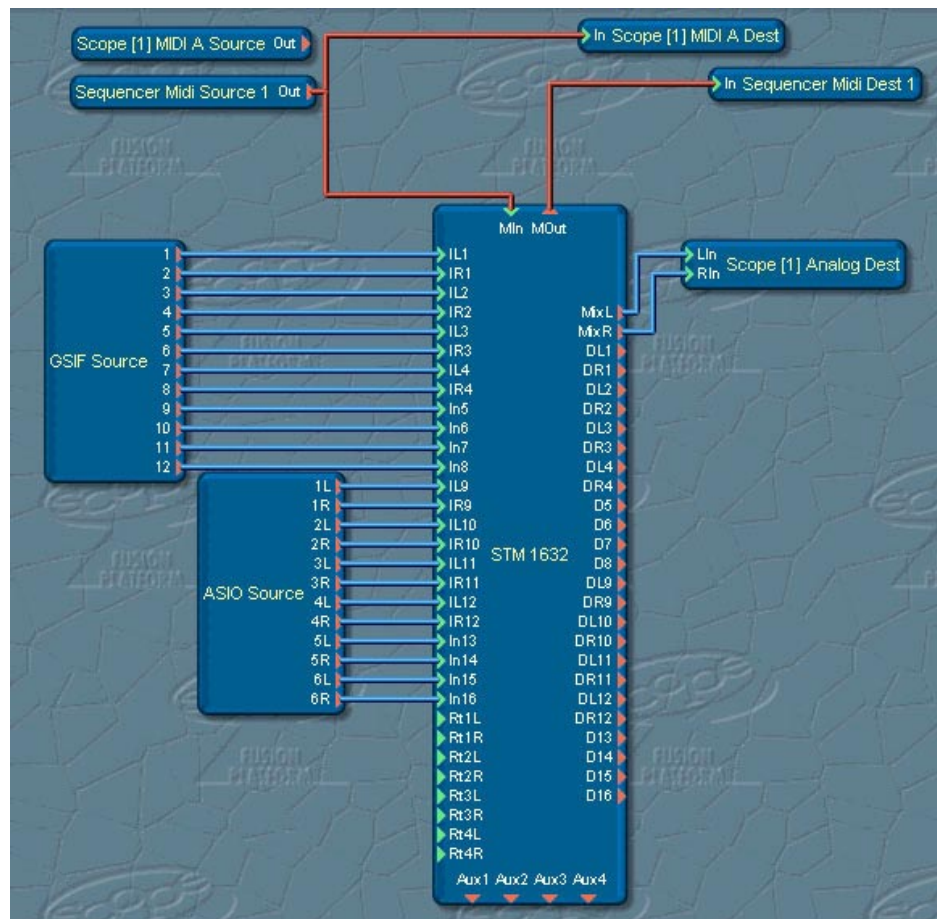


**File name:** Synths.pro  
**Description:** Playing three synthesizers with a sequencer or MIDI keyboard  
**Devices:** STM 1632, Lightwave, Prisma, Vectron Player  
**Keys:** Synth Package I + II  
**For audio programs:** MIDI sequencer  
**Min. number of DSPs:** 6



**File name:** tripleDAT.pro  
**Description:** Standard project for the CreamWare HDR program  
**Devices:** STM 1632  
**Keys:** tripleDAT Plug-In  
**For audio programs:** tripleDAT  
**Min. number of DSPs:** 3

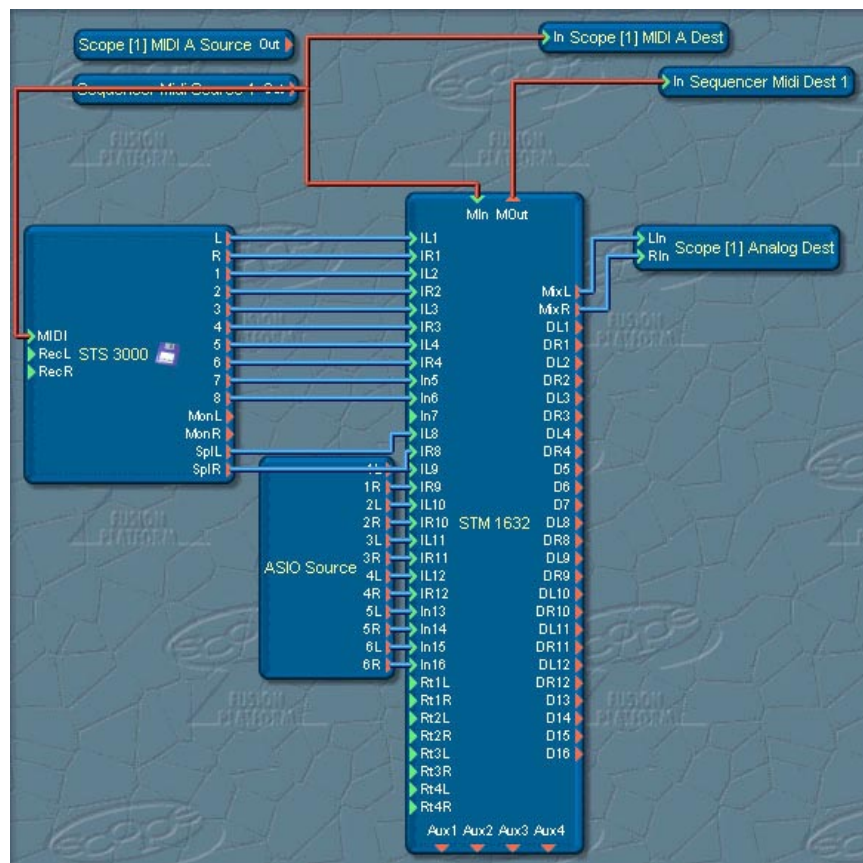




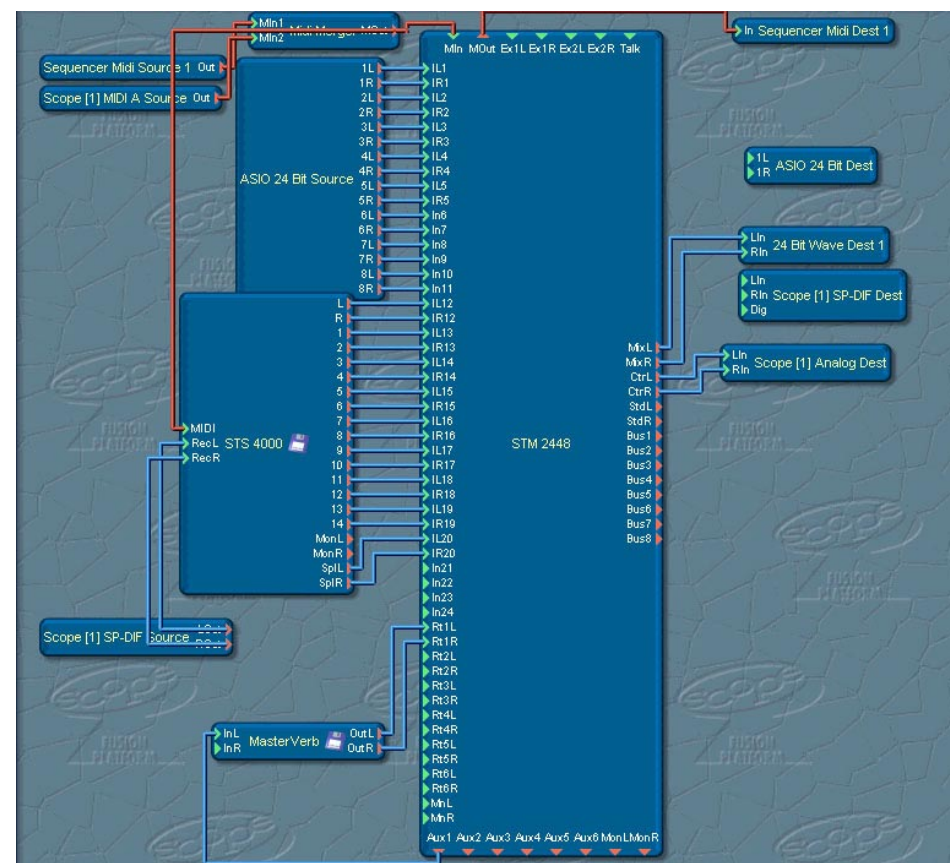
**File name:** Gigasampler.pro  
**Description:** Mixing Gigastudio instruments to ASIO audio tracks  
**Devices:** STM 1632  
**Keys:** -  
**For audio programs:** Gigastudio, ASIO sequencer  
**Min. number of DSPs:** 3



**File name:** Mastering.pro  
**Description:** Setup for mastering  
**Devices:** PSY Q, OptiMaster  
**Keys:** PSY Q, OptiMaster  
**For audio programs:** Wave editor  
**Min. number of DSPs:** 6

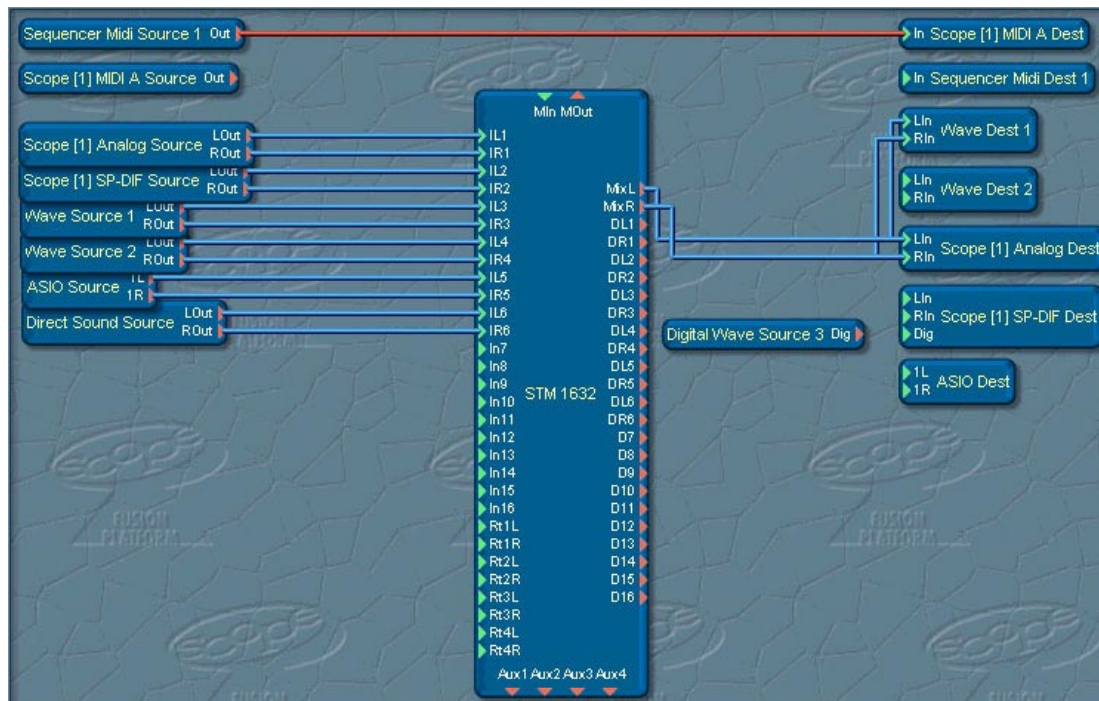


**File name:** EZ Sampler.pro  
**Description:** Sampler and ASIO tracks in the STM 1632  
**Devices:** STM 1632, STS 3000  
**Keys:** STS 3000  
**For audio programs:** ASIO sequencer  
**Min. number of DSPs:** 6



**File name:** Pro Sampler.pro  
**Description:** Sampler and ASIO tracks in the STM 2448  
**Devices:** STM 2448, STS 4000  
**Keys:** Mixer Package I, STS 4000  
**For audio programs:** ASIO sequencer  
**Min. number of DSPs:** 6





**File name:** Multimedia.pro (nur PC)  
**Description:** MediaPlayer (or similar) playback  
**Devices:** STM 1632  
**Keys:** -  
**For audio programs:** multimedia program  
**Min. number of DSPs:** 3

## Devices from our Online Shop

In order to purchase items at our Online Shop, you must first register at our website (follow the Registration link from the main page). After registering you will have access to your personal CreamWare download page. From there you can download the most recent versions of your DSP platform devices whenever you wish. To open your personal page, click My Page from the Home or Service areas. To log in you must supply the user name and password you specified when you registered.

*There are several devices available in our Online Shop...*

Grenzen sprengen.  
Neue Maßstäbe setzen.  
**SCOPE/SP**

# creamw@re

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**Terms**

Deutsche Version

## Products

[Vocoder](#) | [OptiMaster](#) | [PSY Q](#) | [Luna Software v3](#) | [Luna Software v3 CD-ROM](#) | [Pulsar ProPack](#) | [Pulsar ProPack CD-ROM](#) | [tripleDAT Plug-In](#) | [tripleDAT Plug-In Upgrade](#) | [STS-5000 v3.0](#) | [STS-4000 v3.0](#) | [STS-3000 v3.0](#) | [Upgrade STS-3000 to STS-4000](#) | [Upgrade STS-3000 to STS-5000](#) | [Upgrade STS-4000 to STS-5000](#) | [Vectron v3.0](#) | [Volkszähler](#) | [SB-404 Synthesizer](#) | [SM 166](#) | [RM 242](#) | [Modular Synthesizer V2](#) | [Poison v3.0](#) | [EDS 16i v3.0](#) | [Arpeq 01](#) | [Arpeq 02](#) | [GraphEQ/s v3.0](#)



**Vocoder** Art.No. MOP-33E1  
22-band Vocoder with Synthesizer

Thanks to its freely configurable filter bank, the Vocoder can emulate almost all common Vocoder. A sophisticated internal synthesizer and many creative features, along with intuitive operation and spectacular sound quality make the Vocoder one of the most flexible and powerful Vocoder ever built.

System requirements: [Luna II](#) version 3.0 or higher, [Pulsar](#) version 3.0 or higher, [SCOPE /SP](#) version 3.0 or higher, PC or Mac

[Further information](#)  
[Product Demo \(free for 60 minutes\)](#), for PC only  
[To top of page](#)

**149.00 EUR**  
136.50 USD





**OptiMaster** Art.No. MOP-31E1  
Intelligent Mastering Processor

All the tools you need for professional mastering! Normalizer, multiband expander, compressor and limiter in a single extremely capable unit. The Wizard function can even analyze the audio signal and set the important parameters automatically. With the OptiMaster, your mix gains enormous penetrating power and volume in the wink of an eye.

System requirements: [Luna II](#) version 3.01 or higher, [Pulsar](#) version 3.01 or higher, [SCOPE /SP](#) version 3.0 or higher, PC or Mac

[Further information](#)  
[Product Demo \(free for 60 minutes\)](#), for PC only  
[To top of page](#)

**249.00 EUR**  
228.11 USD





**PSY Q** Art.No. MOP-32E1  
Psycho Acoustic Processor

If you own two or more DSP cards when you purchase a new device from the Online Shop, and you have registered the cards, you can choose which one to associate with the new device when you confirm the purchase.

**Note that the card you select will be coupled to the new device you purchased, and that you'll only be able to use the device if the card you selected at the time of purchase is installed in your system.**

After purchasing a new device you can immediately download a corresponding \*.OXE file for it. This file contains both the device itself, and the activation key to enable it for the board you selected.

To install the new device, double-click on its OXE file in your computer's file manager. If you have installed several CreamWare DSP systems in your

machine, a dialog appears asking you to specify for which of these installations the device is to be made available.

The next time you start the SFP software a message will appear to inform you that the new device has been initialized. You'll then find the device in the Plug Ins subdirectory of the **Device** directory.

## Download

The ProPack is already included in the Pulsar version 3 installation. Start the installation and enter all your keys into the appropriate fields. You can also run the setup over an existing Pulsar v3 installation without deinstalling before.

| Board     | Product  | Download  |
|-----------|--|---|
| TE04B0G03 | Zarg Red Dwarf v1.0<br><i>must be generated</i>    | <a href="#">for PC</a>  |
| TE04B0G03 | Zarg Ambient v2.0<br><i>must be generated</i>      | <a href="#">for PC</a> , <a href="#">for Mac-Pulsar 2.x</a> , <a href="#">for Mac-Scope/SP 2.x</a> , <a href="#">for Mac-Pulsar 3.x</a> |
| TE04B0G03 | Zarg Dark Star v1.6<br><i>must be generated</i>    | <a href="#">for PC</a> , <a href="#">for Mac-Pulsar 2.x</a> , <a href="#">for Mac-Scope/SP 2.x</a> , <a href="#">for Mac-Pulsar 3.x</a> |
| TE04B0G03 | Zarg Comb Pro v2.3<br><i>must be generated</i>     | <a href="#">for PC</a> , <a href="#">for Mac-Pulsar 2.x</a> , <a href="#">for Mac-Scope/SP 2.x</a> , <a href="#">for Mac-Pulsar 3.x</a> |
| TE04B0G03 | Zarg Orion Custom v2.3<br><i>must be generated</i> | <a href="#">for PC</a> , <a href="#">for Mac-Pulsar 2.x</a> , <a href="#">for Mac-Scope/SP 2.x</a> , <a href="#">for Mac-Pulsar 3.x</a> |

...which you can download directly from your personal download page after purchase.  
On this page you'll also find the latest versions of all your other devices.

[To the Online Shop](#)  
[My profile](#)  
[Change Password](#)  
[Download](#)  
[Registered Hardware](#)  
[Activation Keys](#)  
[Registration](#)

## Devices purchased from your dealer

If you purchase a new device from your dealer you will find a license with a software serial number indicated included in the package.

In this case, go to your personal page on our website as described in the previous section. Click the Registration link, and then click Activate Software Serial Number.

You are first requested to enter your personal registration information if necessary. After that, a page appears with a form for entering the software serial number, and, if you have registered multiple DSP cards, the card to select for which you want to enable the software.

**Note that the card you select will be coupled to the new device you purchased, and that you'll only be able to use the device if the card you selected is installed in your system.**

From this point on things proceed as described for the Online Shop. An \*.OXE file is created and made available for you at your personal download page. Installation is as described above.



## The Registration Dialog for optional Devices

Optional devices use an Activation key as part of the protection scheme. For most devices this key will be already registered as part of the installation process, or encoded into an OXE file that you downloaded from your personal page. In a few rare cases, however, you must register the key in the dialog described below when you first attempt to load the device.



The image shows a software registration dialog box titled "Registration of STS 4000". It contains several input fields and buttons. The "Hardware Serial No." field has a list of three options: "9EC540R00 (Pulsar)", "K3L5E0M0H (Elektra)", and "X5E4WXZ01 (Scope)". The "Software Serial No." field has a placeholder "e.g. 000-2100-xxxxxx-yyyyyy". The "Request String" field contains a multi-line string: "###BEGIN\_OF\_TRANSFERSTRING###", "<>", "<V01ABNA-NNTPN2E-TEUBDNP-NPAKPN3-QN3M2N2>", and "###END\_OF\_TRANSFERSTRING#". There is a "Copy to Clipboard" button next to the Request String field. The "Activation Key" field has a placeholder "e.g. X43RT2W56NP2". There are two buttons at the bottom: "Paste from Clipboard" and "Save Activation Key".

For each CreamWare DSP hardware product there exists a unique Device Activation Key certified only for that specific board.

- The Hardware Serial Number field contains the serial number(s) of installed CreamWare boards. If you have several boards installed, select the board for which you have, or want to request, a Device Activation Key.

- If you have a software serial number for the device you want to register, type it into the appropriate field.

- If you already have the activation key, type it into the text field of the same name and click **Save** to close the dialog. (If you are a PC user, you can also use the **Paste from Clipboard** function. The dialog closes when you confirm the action).

- If you don't have an activation key you *must* enter the software serial number (see above). Write down the **Request String** that appears (the third, long line) or use the PC's **Copy to Clipboard** function to store it. E-mail the request string to support@creamware.de and we will send you the required activation key as soon as possible.

- If you receive this dialog even though you have already registered the device, send us the **Request String** anyway, and include a precise description of what happened during the attempt to load the device.

**Note:** In the activation key, 0 always means zero and not the letter „O“.

# Technical Specifications

## PULSAR II DSP Board

### Description

6 SHARC DSPs @ 60 MHz

PCI busmaster with delay line services

32 bit audio bus architecture

2 independent S/TDM expansion busses with 288 channels

Modular sandwich I/O port

Sample rate 24 kHz - 100 kHz

### Digital Input and Output

|                                     |  |
|-------------------------------------|--|
| S/TDM SCOPE bus connector           | 144 Channels, 32 Bit @ 44,1kHz             |
| SYNC Syncplate connector            | Wordclock In / Out<br>ADAT 9-Pin-Protocoll |
| Direct I/O Daughter Board connector | Multifunktions I/O port                    |

### General

|                                |   |
|--------------------------------|---|
| PCI Expansion card             | Rev. 2.1 compliant<br>33 MHz (Slot busmaster capable) |
| Vendor-ID                      | 14B5 hex, creamware                                   |
| Power consumption              | 12 W  |
| Ambient operating temperatures | 0 - 55°C (Minimum, Maximum)                           |
| Physical dimensions            | 25.7 x 10.8 x 1.6 cm<br>(excluding bracket)           |



# SCOPE DSP Board

## Description

15 SHARC DSPs @ 60 MHz  
PCI busmaster with delay line services  
32 bit audio bus architecture  
5 independent S/TDM expansion busses with 720 channels  
Modular sandwich I/O port  
Sample rate 24 kHz - 400 kHz

## Digital Input and Output

|            |                          |  |
|------------|--------------------------|--|
| S/TDM      | SCOPE bus connector      | 144 Channels,<br>32 Bit @ 44,1kHz          |
| SYNC       | Syncplate connector      | Wordclock In / Out<br>ADAT 9-Pin-Protocoll |
| Direct I/O | Daughter Board connector | Multifunktions I/O port                    |

## General

|                                |   |
|--------------------------------|---|
| PCI Expansion card             | Rev. 2.2 compliant 33 MHz<br>(Slot busmaster capable) |
| Vendor-ID                      | 14B5 hex, <b>creamware</b>                            |
| Power consumption              | 15 W  |
| Ambient operating temperatures | 0 - 55°C (Minimum, Maximum)                           |
| Physical dimensions            | 31.2 x 10.8 x 1.6 cm<br>(excluding bracket)           |

# Technical Specifications I/O Plates Pulsar II and SCOPE Boards

|  | “Classic” 20 I/O   | 24ADAT   | PLUS  | Z-Link  |
|--|--|--|---|---|
| <b><u>Number of channels</u></b><br>Analog I/Os<br>· Unbalanced<br>· Balanced<br>Digital I/Os<br>· ADAT (EIAJ connector)<br>· S/PDIF (RCA unbalanced)<br>· AES/EBU (XLR balanced)<br>· Z-Link<br>MIDI<br>· In, Out, Through<br>AD/DA converter resolution  | 20 In / 20 Out<br><br>2<br>-<br><br>16<br>2<br>-<br>-<br><br>1<br>24 Bit                                 | 24 In / 24 Out<br><br>-<br>-<br><br>24<br>-<br>-<br>-<br><br>2 (via Bracket)<br>24 Bit | 20 In / 20 Out<br><br>-<br>2<br><br>16<br>-<br>2<br>-<br><br>1<br>24 Bit                                    | 28 In / 28 Out*<br><br>2 / 18*<br>-<br><br>8<br>2<br>-<br>16**<br><br>1<br>24 Bit                           |
| <b><u>Sample rates</u></b><br>Master<br>· 96, 48, 44.1, 32 kHz<br>Slave<br>· ADAT 38 – 50 kHz<br>· AES/EBU / S/PDIF, Wordclock<br>38 – 50 kHz<br>· Z-Link 32 – 96 kHz  | +<br><br>+<br><br>+<br>-   | +<br><br>+<br><br>+<br>-   | +<br><br>+<br><br>+<br>-  | +<br><br>+<br><br>+<br>+  |
| <b><u>Audio Performance</u></b><br>Digital > Analog (20Hz-20kHz)<br>· Frequency response<br>· Dynamic range<br>· THD+N (typical)<br>· Channel separation @ 1 kHz (997Hz) (typical)<br>Analog > Digital (20Hz-20kHz)<br>· Frequency response<br>· Dynamic range<br>· THD+N (typical)<br>· Channel separation@ 1 kHz (997Hz) (typical) | +/-0.15<br>110 dB***<br>> 100 dBa<br><br>105 dB<br><br>+/- 0.05 dB<br>100 dB***<br>> 95 dBa<br>> 102 dBa | -<br>-<br>-<br><br>-<br>-<br>-<br>-  | +/-0.15 dB<br>110 dB***<br>> 100 dBa<br><br>105 dB<br><br>+/- 0.05 dB<br>100 dB***<br>> 95 dBa<br>> 102 dBa | +/-0.15 dB<br>110 dB***<br>> 100 dBa<br><br>105 dB<br><br>+/- 0.05 dB<br>100 dB***<br>> 95 dBa<br>> 102 dBa |
| * Including 16 channels via two optional Luna 2496 I/O Box units<br>** One Z-Link interface transfers eight digital channels at 24 bits / 96 kHz<br>*** These specifications are based upon technical data provided by the converter manufacturer  |  |  |   |   |

# Luna DSP Board

## Sample rates:

96 kHz, 88.2 kHz 48 kHz, 44.1 kHz and 32 kHz

## Number of channels:

### 10 inputs, 10 outputs:

S-link (8 inputs, 8 outputs)

S/P-DIF (stereo in/out)

Analog (stereo in/out)

## Analog Inputs:

Stereo phone jack (unbalanced) 6.3 mm

Input sensitivity: -10 dBV (nominal)

Maximum input level: 0 dBV (0dBFS)

Input impedance: 10 kOhm (typ.)

## Analog Outputs:

Stereo phone jack (unbalanced) 6.3 mm

Output level: -10 dBV (nominal)

Maximum output level: 0 dBV (0dBFS)

Output impedance: 300 Ohm

## Digital Inputs and Outputs:

**S/P-DIF:** stereo mini-phone jack 3.5 mm, 75 Ohm, insert capable

**MIDI:** mini-DIN 5-pin (In / Out)

**S/TDM** : SCOPE Bus connector, 128 channels, 32 bit

## Z-link:

Standard 1394 components, 8 ins, 8 outs, proprietary communication protocol

## Converter Performance:

### Analog → Digital:

24 bit / 96 kHz

Dynamic range: 98 dB

THD+N: 95 dBA (typ.)

### Digital → Analog:

24 bit / 128x oversampling / 96 kHz

Dynamic range: 105 dB

THD+N: 100 dBA (typ.)

## General Specifications:

### PCI expansion card:

Rev. 2.2 compliant

33 MHz (slot bus-master capable)

Vendor-ID: 14B5 hex

Power consumption: 6 W

Board dimensions: 17.6 x 10.8 cm

### Package contents:

Luna DSP board

Luna converter unit

Software CD (including Quick-Start Guide, User's Manual, Installation Guide, driver software, program software)

# Sync Plate

## Description

Wordclock and ADAT-Timecode Synchronization  
(selectable Master und Slave)  
Mounts on PC chassis back panel (no slot used)  
Samplerate 24 kHz - 400 kHz via BNC

## Synchronisation

Wordclock 75 Ohm, BNC, Input and output

## Timecode

ADAT\* 9-Pin connector Input and output

## General

Power consumption 0.1 W  
Operating temperature 0 - 55°C (Minimum, Maximum)  
Dimensions 12.3 x 9.8 x 1.5 cm

## A16 Ultra technical specifications

|                     |  |                       |
|---------------------|--|-----------------------|
| <b>Sample rates</b> | 96 kHz, 88.2 kHz, 48 kHz, 44.1 kHz and 32 kHz (Master) |                       |
|                     | 30 kHz - 100 kHz                                       | (Word Clock - Slave)  |
|                     | 38 kHz - 50 kHz  | (ADAT - Slave)        |
|                     | 76 kHz - 100 kHz                                       | (ADAT - Slave S-MUX ) |

**Channels** 16 inputs and 16 outputs

**Analog inputs** Stereo phone jacks (6.3 mm)

|                 |                     |                   |
|-----------------|---------------------|-------------------|
| <b>Balanced</b> | Input sensitivity   | + 4 dBu (nominal) |
|                 | Maximum input level | +20 dBu (0 dBFS)  |
|                 | Input impedance     | 20 kOhm           |

**Analog outputs** Stereo phone jacks (6.3 mm)

|                 |                      |                   |
|-----------------|----------------------|-------------------|
| <b>Balanced</b> | Output level         | + 4 dBu (nominal) |
|                 | Maximum output level | + 20 dBu (0 dBFS) |
|                 | Output impedance     | 600 Ohm           |

### Converter performance

|                         |                                      |                                |
|-------------------------|--------------------------------------|--------------------------------|
| <b>Digital – Analog</b> | 24 bits / 128x oversampling / 96 kHz |                                |
|                         | Frequency response                   | < +/- 0.15 dB (20 Hz - 20 kHz) |
|                         | Dynamic range                        | 110 dBA                        |
|                         | THD+N                                | 100 dBA / 0,001% typ.          |
|                         | Channel separation                   | 105 dB @ 997 Hz typ.           |

|                         |                         |                              |
|-------------------------|-------------------------|------------------------------|
| <b>Analog – Digital</b> | <b>24 bits / 96 kHz</b> |                              |
|                         | Frequency response      | < +/- 0.1dB (20 Hz - 20 kHz) |
|                         | Dynamic range           | 99 dBA                       |
|                         | THD+N                   | 93 dBA / 0,0028% typ.        |
|                         | Channel separation      | 102 dB @ 997 Hz typ.         |

### Digital inputs and outputs

|                        |                            |                                 |
|------------------------|----------------------------|---------------------------------|
| <b>ADAT<br/>Z-Link</b> | EIAJ connector             | 8 chan, 24 bits, 2 in, 2 out    |
|                        | 2 standard 1394 connectors | 8 chan, 24 bits, 96 kHz capable |

|                        |                |             |
|------------------------|----------------|-------------|
| <b>Synchronization</b> | Word Clock In  | 75 Ohm, BNC |
|                        | Word Clock Out | 75 Ohm, BNC |

### General specifications

|                          |                              |
|--------------------------|------------------------------|
| <b>Supply voltage</b>    | 12V AC                       |
| <b>Power consumption</b> | 18.5VA                       |
| <b>Dimensions</b>        | 44.3 x 483.0 x 189.5 mm (1U) |
| <b>Weight</b>            | 3 kg                         |

## Technical Specifications 2496 Converter Box

High Performance 24 Bit ADDA - Converter with IR-Receiver  
Samplerate 96 kHz, 48 kHz, 44.1 kHz and 32 kHz  
Number of Channels 8 Input and 8 Outputs

### Analog Inputs

|                     |                   |
|---------------------|-------------------|
| Unbalanced          | RCA               |
| Input sensitivity   | -10 dBV (nominal) |
| Maximum input level | 0 dBV (0dBFs)     |
| Input impedance     | 10 kOhm (typ.)    |

### Analog Outputs

|                      |                   |
|----------------------|-------------------|
| Unbalanced           | RCA               |
| Output level         | -10 dBV (nominal) |
| Maximum output level | 0 dBV (0dBFs)     |
| Output impedance     | 300 Ohm           |

### Digital Inputs and Outputs

|        |   |
|--------|---|
| Z-link | Standard 1394 Components 8 In, 8 Out -<br>Proprietary Communication Protokoll |
|--------|---|

### Performance

Analog - Digital 24 bit / 96 kHz Advanced multibit architecture

|                    |                             |
|--------------------|-----------------------------|
| 64 x Oversampling  |                             |
| Frequency response | <+/-0.05 dB (20Hz - 20 kHz) |
| Dynamic range      | > 98 dBa @ 997Hz            |
| THD+N              | > 94 dBa @ 997Hz (typ.)     |
| Channel separation | > 102 dB @ 997Hz            |

Digital - Analog 24 bit / 96 kHz Advanced multibit architecture (SCF)

|                    |                             |
|--------------------|-----------------------------|
| 128 x Oversampling |                             |
| Frequency response | <+/-0.15 dB (20Hz - 20 kHz) |
| Dynamic range      | >104 dBa @ 997Hz            |
| THD+N              | >101 dBa @ 997Hz (typ.)     |
| Channel separation | > 105 dB @ 997Hz            |

### General

|                     |                                     |
|---------------------|-------------------------------------|
| Power consumption   | 4,5 W                               |
| Dimensions          | 21,7 x 8,9 x 4,0 cm                 |
| Weight              | 0,65 kg                             |
| Content of delivery | LUNA 2496 Box<br>Z-Link Cable (6-6) |



## The Hotline

As mentioned above, SFP works flawlessly with most computers if the issues in this document are properly attended to. In addition, via the support area of our website:

**<http://www.creamware.com>**

we will constantly publish solutions for new problems as they are discovered. If you have Internet access, please check the information which is posted there before contacting us directly. The latest information and trouble-shooting assistance will always appear there first.

If you have checked all of the information presented here and on the Web site and you are still unable to solve your problem, there are various ways to contact us directly for advice. Once again, however, we request that you recheck all of the information presented above *before* doing so! In any event, only *registered users* are entitled to direct technical support, so please register now!

If you write or email us, be sure to provide us with all required information about your system. You will find a form below to assist you with this. If you call us,

please have this information ready to give to the technical support representative. It's best to first fill out the form completely and then either send it to us or have it ready at hand when you call us.

Be sure to provide us with *all* required information about your system ...

**1. I have tried all suggestions given in this document: Yes**

## 2. CONFIGURATION

Processor:

Type:

Hard drive(s):

Graphics card (which slot / IRQ / driver version?):

RAM:

CD writer:

SCSI controller (which slot / IRQ?):

CD-ROM:

other internal devices/cards (which slot / IRQ?):

## 3. CreamWare products:

A8 / A16:

DSP Board ROM serial number (which slot / IRQ / driver version / program version?):

Other boards:

## 4. Connected Devices:

Mixers:

Synthesizers:

Synchronizers:

Samplers:

Recorders (DAT / ADAT etc..):

Other (Atari, MAC, MIDI patchbays etc..):

## 5. Installed Software

Operating system:

Sequencer software:

Audio applications:

Other:

## 6. Description of the problem

When and where does it appear?

Can it be made to recur via a specific series of actions? How?

Which parts of the program are involved (modules / devices)? *Which* devices? *How* are they connected?

## There are four ways to reach our support department:

### In the USA and Canada:

email: support@creamware.com

Fax: (604) 435-9937

Phone: (604) 435-5158

Mail: CreamWare US Inc.  
6879 Russel Avenue  
Burnaby, B.C.  
V5J 4R8  
Canada

### All other countries:

email: support@creamware.de

Fax: (++49) 22 41 - 59 58 57

Phone: (++49) 2241 - 59 58-12

Mail: CreamWare Datentechnik  
GmbH  
Support  
Wilhelm-Ostwald-Strasse 0/K1  
53721 Siegburg, Germany

But for now – enough hints about possible problems. As an experienced computer user, you are no doubt well aware that neither software nor hardware which is one-hundred percent perfect exists. We at CreamWare strive continually to improve our products, and we welcome your criticism and suggestions.

Having said that – we hope (and expect) that you won't encounter problems with SFP, and we wish you all the best in working creatively with SFP!!!

Sincerely,

Your CreamWare team!

**Before sending in your DSP card for warranty support, please call the Support office to obtain an RMA number for your card. Testing and repair of hardware which is sent to us without making prior arrangements is given a lower priority and can take correspondingly longer.**

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