



soundart

**GETTING STARTED**

*DEVELOPERS*



24 bit **programmable audio DSP** engine

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# Product Warranty

Thank you for buying a Soundart product. We believe in quality, and we expect you to enjoy many years of trouble-free operation. But in case something should go wrong, we back up our manufacturing with quality after-sales service. This is our warranty to you. Please read it carefully, it is not very long and is designed to help you.

Electronic devices may suffer from defects in either material or workmanship. Soundart guarantees that if your product stops working properly for either of these reasons, we will repair or replace the product without any charge for material or labour, for a period of one year after purchase. Beyond that, we cannot be sure that the problem is not caused by normal wear and tear and may charge you.

Before returning your product, you should contact us directly at [support@soundart-hot.com](mailto:support@soundart-hot.com). This will allow us to:

- confirm the fault
- arrange for it to be shipped back to us
- prepare for the units arrival and repair
- return the repaired product to you earlier

We can not be responsible for delays or extra shipping costs incurred if you send a product back to us without prior arrangement. It will not get processed in the normal way and the whole process will just take longer.

It is important that you ship it in the original packaging which we know to be adequate for average shipping conditions. Packing a product incorrectly can easily cause damage during transit, and if we receive such an incorrectly packed product we will not repair it for free. Please include with the unit a detailed description of the faulty behaviour. This will save repair time.

When you ship us a product for repair, we will contact you to tell you when it has been received and give an estimate for the time needed to repair it and return it to you. We will send it back in the same functional condition as a new unused model. This may entail replacing components or upgrading the system software, so don't expect that the machine will still be configured the way it was when you sent it to us.

We are not responsible for defects caused by:

- abuse
- accident
- inadequate packaging
- modifications to the product
- operation under unsuitable conditions
- attempts at repair by unauthorised technicians

If we find that the fault is clearly due to one of these causes, we will not repair it for free. You may choose to pay for the repair or have the product returned to you in the state in which we received it. This warranty only applies to faults that develop under normal operating conditions.

**IMPORTANT:** Warranty doesn't cover defaults on the supplied AC/DC adapter.

**SERVICING:** To reduce the risk of fire or electric shock, the user should not attempt to service the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and contact Soundart.

## Package Contents

You should find the following items inside the box:

- The Chameleon itself (standard 19" 1U rack case unit)
- A power adapter suitable for your country (EUROPE, EEUU, UK)
- A CD-ROM containing Chameleon Applications
- An RS-232 (9-pin) serial cable
- A CD-ROM containing the Chameleon SDK

The package does *NOT* include cables for audio or MIDI transfer. You will have to supply the cables to connect the Chameleon to the rest of your studio equipment.

## Connections

In the rear panel of the Chameleon you will find the following connections:



**9V DC/1.2A:** Mains power connector for the supplied transformer.

**MIDI in/out:** Standard MIDI interface input/output of the Chameleon. Connect a 5-pin DIN cable between the Chameleon and other MIDI devices.

**INPUT right/left:** Right/left channel audio inputs. These Jacks provide two inputs, right and left, for interfacing to mixers, other processors or preamplifiers with Line level signals outputs. Connectors are 1/4" mono Jacks.

**OUTPUT right/left:** Right/left channel audio outputs. These Jacks provide two outputs, right and left, for interfacing to mixers, other processors or power amplifiers with Line level signals inputs. Connectors are 1/4" mono Jacks.

**RS-232 LINK:** the RS-232 connector on the rear panel allows the Chameleon to be managed by a PC for debugging purposes. This is essential if you want to program the unit yourself. Connect the supplied serial cable from the Chameleon to an available serial port on your PC.

**NOTE:** Most serial ports also have a 9-pin connection and the Chameleon should plug right in. Some older PCs may also have a 25-pin serial connection: if you wish to use this, you will need an adapter. You can easily find this at a computer supply store. Ask for a female 9-pin to male 25-pin serial adapter.

Once you have made all these connections, the Chameleon is ready for use. Switch it on from the front panel and you are ready to begin using it.

## Installing the SDK

The Chameleon SDK CD-ROM contains a complete installation of the software development kit (SDK). We try to ensure that the CD-ROM always has the latest version, but many files and individual components are updated frequently. You can find the latest version of all SDK components, listed by version, at [www.soundart-hot.com](http://www.soundart-hot.com). You should check the website periodically to see if there have been any updates to the content.

Please note that the SDK currently runs only on a PC running Microsoft Windows 98 or later. It will not run on any other kind of computer or under any other operating system. We have tested it extensively for compatibility, but if you are running new or untested system software you may experience problems. Please advise of any compatibility issues that arise.

The Chameleon Software Development Kit (SDK) contains all the tools you need to create your own applications for the Chameleon. It is possible to download existing applications over a MIDI cable using sequencing software on your computer. It also contains a very useful Toolkit application, which makes it easier to download applications into the Chameleon.

The SDK contents are listed in the file contents.txt included in the root folder of the supplied CD-ROM.

### 4.1 Startup and Code Downloading

The first time you turn on the Chameleon, it starts in "waiting" mode. You will notice this mode because the words "Chameleon #01" appear on the upper line of the LCD display, and the words "(WAITING)" blink on the second line of the display (*"#01" is the current model of the Chameleon*).

In this mode, the device is actually waiting for an application to be downloaded, and, at this time, no user code is being executed in the DSP or the ColdFire. You can then download any application via MIDI using any MIDI sequencer, or via the RS-232 link using the Toolkit application. Pressing the "Edit" key under the "waiting" mode, the LCD will display the software build number, and pressing the "Shift" key the LCD will display the device's serial number (this number is exactly the same that appears on the rear panel S/N label).

When you download applications for debugging using the Toolkit, the device is first reset, then the new code is stored in the device's DRAM volatile memory

and finally it is executed. If you turn off the device and then turn it on again, the Chameleon will start in “waiting” mode again, since it doesn’t “remember” the last application that was downloaded to the DRAM.

When you download an application to the Flash non-volatile memory, either using the “Flash” button in the Toolkit or via MIDI, the application is actually stored permanently into the device. Now each time you turn on the Chameleon it will immediately execute the last application you stored in the device Flash memory. If you attempt to download any new application to the device (no matter if you do it to DRAM or Flash), the Toolkit will again reset the device and then download and execute your new code.

Once an application has being stored in the Flash memory, the device won’t boot in “waiting” mode anymore, since it will start the stored application. Anyway, you can still force the device to boot into the “waiting” mode by pressing the “Shift” key while turning the power switch on. This is useful when some wrong application was stored and causes the device to hang or simply when you want to know the software build version or the device’s serial number.

If you cancel any code downloading procedure while it is being performed, the Chameleon will remain in “waiting” mode. Cancelling download is done either from the Toolkit (in the download dialog box) or by pressing any device’s key while downloading is being performed.

# Application Downloading

Downloading a new application inside the Chameleon is very easy. Before explaining how to do this, here are some explanations about the hardware needed and the terminology used in this Chapter.

## Hardware required

A MIDI sequencer capable of playing standard MIDI files is needed in order to download the applications inside the Chameleon and to store the Presets. This MIDI sequencer can be either a computer with a MIDI interface and a MIDI sequencing software (i.e. Steinberg Cubase, Emagic Logic...) or a standalone hardware sequencer (i.e. Yamaha RMX-1...)

## Terminology

**Application MIDI file:** You can find the files in the CD provided with the Chameleon (CD labeled as "Chameleon"). If you explore this CD, you'll find a folder named Chameleon/THEAPPLICATION, where "THEAPPLICATION" is the name of the folder for each available application (for example, the Chameleon/Australis folder contains the files related to the Australis Synthesizer application, the Chameleon/Chromasonic folder contains the files related to the Chromasonic Multieffects application...).

The application's MIDI files are named as "xxxxxyyyyApp.MID", where "xxxxx" is the name of the application, "yyyy" is the version number and "App" specifies that this is the MIDI file of the "App-lication".

### Examples:

CDROM: Chameleon/Australis/Australis09App.MID

CDROM: Chameleon/Chromasonic/Chromasonic09App.MID

**Presets MIDI file:** In the same folder where you have found the Application MIDI file, you'll find another MIDI file named as "xxxxxxxxxyyyyFactory.MID" where "xxxxx" is the name of the application, "yyyy" is the version number and "Factory" specifies that this is the MIDI file containing the "Factory Presets" of the application.

### Examples:

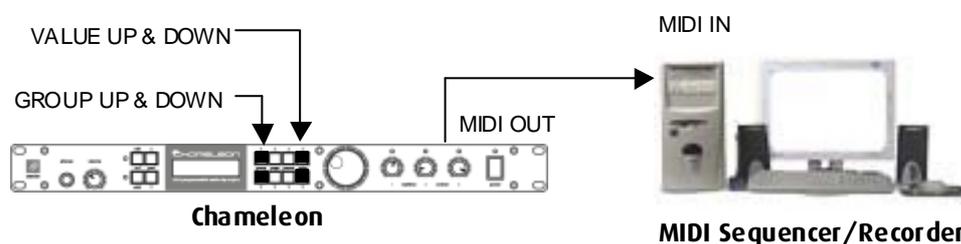
CDROM: Chameleon/Australis/Australis09Factory.MID

CDROM: Chameleon/Chromasonic/Chromasonic09Factory.MID

## 5.1 Before Downloading the New Application

Chameleon applications are stored in the internal FLASH memory together with the application Presets. When changing the operative application or updating the existing one we recommend to follow the instructions below to ensure a safe swap between different Chameleon applications or version updates without losing any user data

If there's no application loaded inside your Chameleon or you don't mind about losing the stored Presets of the application currently loaded, go to the next page.



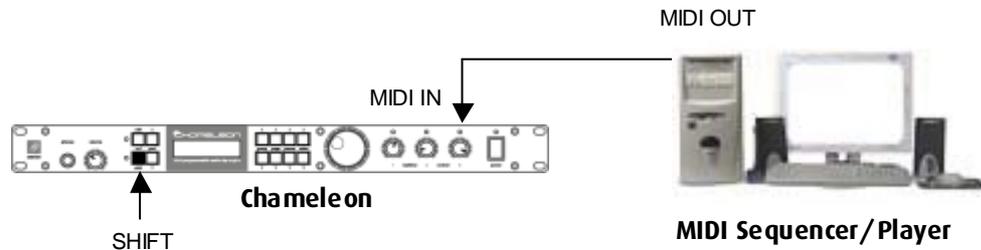
- Connect the MIDI OUT of the Chameleon to the MIDI IN of the Sequencer/Recorder machine (for example, a computer with a MIDI interface). Be sure that the MIDI Port settings are properly selected.
- Select the **MIDI DUMP** option: **Total**. This can be done in the Chameleon by pressing, in the application Preset Mode, GROUP UP or GROUP DOWN keys (read the instructions manual of each application to learn more about their specific working modes). Then select the Total option with VALUE UP and VALUE DOWN.



- Start recording MIDI data in the Sequencer/Recorder and then, send the SysEx information by pressing the EDIT key in the Chameleon. In a few seconds all the user information of the application stored inside the Chameleon will be recorded as SysEx data in the Sequencer/Recorder. When MIDI activity ends, all the data has been sent (SysEx should not be filtered).
- Stop the Sequencer/Recorder and Save the MIDI file.

## 5.2 Downloading the new application

To **load a new application or version update** inside the Chameleon follow the instructions below:



- The Chameleon must be powered ON with the SHIFT key pressed, so the following screen will be displayed.

```
Chameleon #01
(WAITING)
```

- Connect the MIDI OUT of your MIDI Sequencer/Player machine (for example, a computer with a MIDI interface) to the MIDI IN of the Chameleon and Play the Application MIDI File containing the new application or version update. It's recommended to disable the MIDI clock in the MIDI Sequencer/Player. If all is properly connected, the following screen will be displayed showing an increasing block counter.

```
Receiving MIDI
0123 of 0756
```

- When the counter arrives to the last block the Chameleon will ask you to store the application in the internal Flash memory: this must be confirmed by pressing the SHIFT key within the next 20 seconds in order to accept the received data. After pressing the SHIFT key, the application will be burned in the internal FLASH memory (**never turn off the Chameleon during this step**)

If any problem happens during the downloading process, the display will show **\*\*\*BAD DATA\*\*\*** or **\*\*\*TIME OUT\*\*\***. To solve this, try setting a lower tempo in the sequencer (i.e. 90 BPM)

```
Receiving MIDI
***TIME OUT***
```

After the process has been successfully completed, the Chameleon will power-up itself automatically, loading the new stored application, which will need a

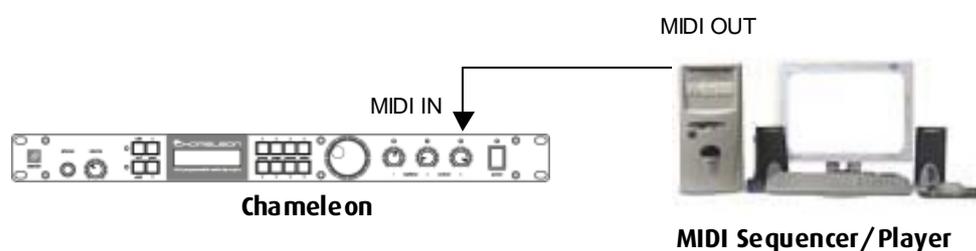
few seconds to be fully operative after reconfiguring all the internal resources to it's needs (in this stage, if the Chameleon had another application inside before loading the new one, the Presets of the old application will be erased).

**NOTE:** There's no risk to damage the Chameleon with wrong or corrupted data, as the Chameleon won't accept those data. In case of error, the old application will remain unharmed.

## 5.3 Loading the Application Presets

Each application is provided with a Presets MIDI File wich contains the Factory Presets created by Soundart for inmediate use of the Chameleon.

If you want to load these presets, follow the next steps:



- Turn ON the Chameleon (if it is powered down) which should have been loaded with the same application for which the presets that you are going to load have been designed (i.e. the Australis09Factory.MID contains the factory presets for the Australis application)

**NOTE:** Do NOT press the SHIFT key when powering-on the Chameleon to download the presets. It's not possible to download the presets in the Chameleon in the waiting state (when the Display shows "Chameleon #1 (WAITING)").

- Play the Presets MIDI File using your preferred MIDI sequencer/player with the MIDI OUT connected to the Chameleon MIDI IN. When the MIDI file stops playing, the presets must have been loaded automatically.

# A

## MIDI Implementation Chart

Function	Transmitted	Recognized	Remarks
Basic Channel Default Changed	depends <sup>1</sup> 1-16	depends <sup>1</sup> 1-16	See Notes
Mode Default Messages Altered	depends <sup>1</sup> 0 0	depends <sup>1</sup> 0 0	See Notes
Note Number	0-127	0-127	See Notes
Velocity Note ON Note OFF	0-127 0-127	0-127 0-127	See Notes
After Touch Key Channel	0 0	0 0	See Notes
Pitch Bender	0	0	See Notes
Control Change	0-127, value 0-127	0-127, value 0-127	See Notes
Program Change	0-127	0-127	See Notes
System Exclusive	0	0	See Notes
System Common Song Position Song Select Tune Request	0 0 0	0 0 0	See Notes
System Real Time Clock Commands	0 0	0 0	See Notes
Aux. Messages Local ON/OFF All Notes OFF Active Sensing Reset	0 0 0 0	0 0 0 0	See Notes
<p><b>Notes:</b> Chameleon is a fully programmable device and therefore it is capable of receiving and transmitting any type of MIDI data, at the sole discretion of the developer.</p> <p><b>depends<sup>1</sup>:</b> The application running in the Chameleon is responsible of setting the default value.</p>			

Mode 1: OMNI ON, POLY  
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO  
Mode 4: OMNI OFF, MONO

o : Yes  
x : No



## CE, FCC and Others

### DECLARATION OF CONFORMITY (EUROPE)



The following device:

#### **Soundart Chameleon**

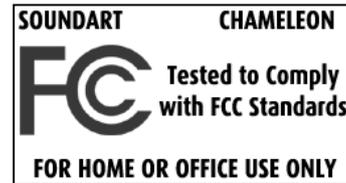
Has been designed to conform with the en-55103-1:1996 (emission) and the en-55103-2:1996 (immunity) standards.

This means that the product has been designed to conform with the emissions and immunity levels under normal use and without modifications. Improper use of the device could (or not) cause interferences in other devices.

To avoid interference problems use always shielded cables for audio connections and RS-232 when needed.

Josep-Oriol Tomas i Huynh-Quan-Chieû, Managing Director

## FCC INFORMATION (U.S.A.)



Important notice:

This device has been tested and found to comply with the limits of **FCC part 15 - Class B** for digital devices. Compliance with these limits provides a reasonable level of assurance that your use of this device in residential environment will not result in harmful interference with other electronic devices.

This device generates/uses radio frequencies and, if not installed properly according to the instructions found in the user's manual, may cause interference harmful to the operation of other electronic devices. Compliance to FCC regulations does not guarantee that interference will not occur in all installations. If this product is found as source of interference by switching it on and off, please try to eliminate the problem with the following measures:

- Reorient or reallocate the receiving antenna.
- Increase the separation between the device and the receiver.
- Connect the device into an outlet on a circuit different from that which the receiver is connected or install AC line filter/s.
- Consult dealer or experienced radio/tv technician for help.

Failure to follow instructions could void your FCC authorization to use this product in the USA.

The statements above only apply to products distributed in the USA.

## CANADA

The digital section of this apparatus does not exceed the **Class B** limits for radio noise emissions from digital apparatus set out in the radio interference regulation of the Canadian department of communications.

Le présent appareil numérique n'émet pas de bruit radioélectriques dépassant les limites applicables aux appareils de la classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministre des communications du Canada.

This only applies to products distributed in Canada.  
Ceci ne s'applique qu'aux produits distribués dans le Canada.

**OTHER STANDARDS (REST OF THE WORLD)**

This product complies with the radio interference requirements of the council directive 89/336/EC.

Cet appareil est conforme aux prescriptions de la directive communautaire 89/336/EC.

Þetta apparat overholder det gældenda ef-directiv vedroendareadiostoj.

Diese geräte entsprechen der eg-richtlinie 89/336/EC.