SampleTank

Professional VST sound module
with top-quality multisampled sounds

Acoustic Grand Piano 1

A (Brightness):   Brightness
B (Touch1):   Velocity to volume sens.
C (Touch2):   Velocity to filter sens.
D (Tuning):   Fine Tuning

Piano: Acoustic Grand Piano 1

- Acoustic Grand Piano + Strings
- Acoustic Grand Piano 1
- Acoustic Grand Piano 2
- Acoustic Grand Piano 3
- Electric Grand Piano
- Flanging Electric Piano
- Harpsichord
- Honky Tonk Piano
- House Piano
- Electric Piano

EMPTY   OUTPUT

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

1 2 | 3 4 | 5 6 | 7 8

SampleTank
VST Sound Module

Sampletank

Professional VST sound module
with top-quality multisampled sounds

User Manual version 1.0

Contents

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I - Contents

SampleTank

up to 128 instruments can be
simultaneously opened
in one Cubase™ song

up one level

A, B, C, D
controllers
labels

Instrument
root/path

MIDI channel
selection

4 dynamic
controllers
(A, B, C, D)

16 multitimbral
instruments
simultaneously
accessible

SampleTank

Professional VST™ sound module
with top-quality multisampled sounds

hundreds of
top-quality sounds
browsable
with one click

128 notes polyphony

search function

user defined
search categories

instruments root folder

instrument's
info and copyright

up to root level

instrument
volume and pan

Effects mute ON/OFF

up to 5
effect
controllers

4 separate
effects per
instrument

built in multi effects
with more than 20
high quality DSP effects

Sampletank

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IK Multimedia Production srl - Via dell'Industria 46 - 41100 Modena - Italy

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IK Multimedia Production srl - Italy
tel +39-059-285496
fax +39-059- 2861671

e-mail ikm@ikmultimedia.com
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![SampleTank logo]

Chapter 1   SampleTank®

1.1   Introduction

![fig. 1]

fig. 1

SampleTank (fig. 1) is a new software sound module which combines a sophisticated sampler/synth engine with high quality multisampled sounds, into a VST™ instrument. A killer combination with Cubase™, Logic™ or any MIDI sequencer compatible with VST™ instruments. No other hardware or software synth/sampler lets you browse hundreds of highest-quality natural and synthesized sounds with one click, select them in a flash, and have them ready for you to play in a fraction of the usual time.

Tons of professional high-quality sounds (the same as you would find in superior hardware samplers only) are included with the software, and as such are immediately at your disposal. You have hundreds of sounds, ready to go. Superb Acoustic Grand Pianos, Guitars, Basses, Strings, Orchestral Sounds, Drums and Percussions made with the finest samples and accurately programmed. Just plug and play!

1.2   What is SampleTank®

SampleTank is a polyphonic, multitimbral, sample-based digital software synthesizer/sound module with multi-effects units and pre-loaded sound banks, all combined together into a unique VST™ instrument.

SampleTank uses samples as oscillators waveforms but the synth engine is much more flexible than conventional hardware samplers. This makes SampleTank more similar to a complex synthesizer than a traditional sampler, with 32-bit floating-point processing of superior quality.

To use SampleTank you'll need a MIDI sequencer compatible with VST™ instruments (like Cubase™ or Logic™). An adequate audio card (with ASIO drivers) and a master-keyboard are strongly recommended to play it like an hardware musical instrument.

SampleTank is the first professional software sound module ever and it's unique among other soft-synths and samplers for many reasons:

fig. 2

![fig. 2 - VST Instrument 1 - SampleTank]

- Unique sound module concept: current software samplers available on the market have been designed to emulate real hardware samplers, being on one side extremely powerful but on the other extremely time-consuming and complex. SampleTank's approach is more similar to a sound module where tons of high-quality sounds are pre-loaded and immediately at the user's disposal (fig. 2), ready to play in a fraction of the time usually needed.

- Incomparable sound organization and fast retrieval: being an instrument where the user can surf a virtually unlimited number of sounds, great attention has been put into the organization, categorization and retrieval of sounds, making SampleTank the most sophisticated unit available on the

market for keeping your sounds accessible in seconds, saving you a lot of tedious wait.

- Exclusive RAM doubling with 2 Pack™: SampleTank plays sound in RAM in order to have hardware-like performance, using an exclusive method called 2Pack™. This allows the playing of huge sample banks using only half the amount of RAM they would require on traditional hardware samplers or other soft-samplers (SampleTank plays twice the voice of any other soft-sampler with the same amount of RAM). The result is huge sound capacity. You will hear more realistic sounds, programmed using more notes and full natural decays.

- The included multi-effects unit is dedicated to sound designing: SampleTank is the first sound-module ever that contains an high-quality multieffect unit where up to 4 effects can be inserted on each sound, selectable among 20 DSP effects. You'll find unique effects totally dedicated to sound designing, in an effort to make all sound playing with a realism that simply cannot be found elsewhere. Including: Compressor, Equalizer, Reverb, Ambience, Reverb Delay, Delay, Filter, Wah-Wah, Chorus, AM and FM Modulation, Flanger, Autopan, Tremolo, Rotary Speaker, Lo-Fi, Distortion, Phonograph and Slicer. All the effects parameters are midi-controllable using CCs.

- Flexible importing: in addition to the hundreds of sounds included, SampleTank is an open module able to import and organize AKAI® sound banks (S1000/S3000) with the included external converter.

1.3 Features

Here summed up are SampleTank's main features:

- Full featured, professional software sound module with sampler engine and hundreds of ready-to-use sound banks
- Available as a VST™ 2.0 instrument it can be easily integrated with Cubase™, Logic™, and any other VST™ compatible sequencer on MacOS® and Windows®
- Outstanding 32 bit floating point sound quality
- Up to 128 notes polyphony (CPU dependent)
- Full MIDI support
- Up to 128 voices available within Cubase™ (CPU dependent)
- 8 separate outputs
- One-click selection with fast instrument loading preview
- Includes 2Pack™, a realtime compression algorithm, to load twice the amount of samples than the available RAM space would allow
- 4 dynamic sound parameters per instrument
- 4 effects per instrument
- 20 realtime high-quality DSP algorithms to choose from
- Lowest latency in the market (sequencer and ASIO compatible card dependent)
- Imports AKAI® S1000/S3000 format using included converter

SampleTank

1.4 SampleTank versions

SampleTank comes in three versions:

- SampleTank L
- SampleTank DJ
- SampleTank XL

SampleTank L and DJ version do not include the AKAI® converter and are able to open only the included sounds.

SampleTank XL includes the AKAI® converter and is able to open any sounds available in SampleTank format. Apart this differences, all versions have the same functionality.

Upgrade of SampleTank L and DJ versions to XL version can be made online at http://www.sampletank.com , by writing at sales@sampletank.com or contacting IK Multimedia, via dell'Industria 46, 41100 Modena, ITALY, tel +39-059-285496, fax +39-059-2861671.

1 - SampleTank®

Chapter 2 System Requirements

2.1 Mac

Minimal: PPC604 200MHz with MacOS 8.5 or later system software, 64 MB RAM. Screen settings: 640x480, thousands of colors, 240 MB of free hard disk space. Suggested: Power Macintosh® G3/G4 with 128MB RAM, 2GB of free hard disk space. ASIO card is recommended for low latency real time play.

2.2 PC

Minimal: Intel® Pentium® 200 MHz MMX™ with Windows® 95, Windows® 98, Winsows® ME, Windows® NT™ 4.0, Windows® 2000, 64 MB RAM and high-quality sound card. Screen settings: 800x600, high colors (16 bit), 240 MB of free hard disk space. Suggested: Intel® Pentium® III 500 MHz with 128MB RAM, 2GB of free hard disk space. ASIO card is recommended for low latency real time play. Optimized for Pentium® III.

2.3 MIDI sequencer

Macintosh® and Windows®:
To use SampleTank you need Cubase™, Logic™ Audio or any other sequencer compatible with VST™ instruments .

In Cubase™ (PC version 3.7.2 or Mac version 4.1.1, or later), you can open up to 8 SampleTank racks as separate VST instruments. Each one of them can open up to 16 instruments.

In Logic™ Audio (PC and Mac version 4.5, or later) you can open up to 16 SampleTank racks as separate VST instruments. Each one of them can open up to 16 instruments.

Any other sequencer compatible with VST™ instruments will be able to use SampleTank; but due to their diffusion and in order to be as clear as possible, we will use Cubase™ and Logic™ Audio as the main practical examples in this manual. Refer to your sequencer's documentation to learn how it does handle VST™ instruments.

SampleTank

Chapter 3   Installation / Authorization

3.1   Installation of SampleTank® VST™ Plug-in (Windows®)

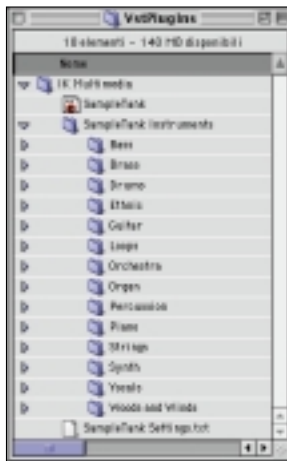#### 3.1.1   Installation of SampleTank® VST™ Plug-in on Cubase™

fig. 3

Insert the CD, the installation process starts automatically.
After accepting the license agreement, you are requested to enter your serial number (you can find it in the registration card included in the box). The installer tries to locate your Cubase™ **VstPlugIns** default folder in your system and asks you to confirm the location where to install SampleTank. You could choose to install it into the default folder for VST™ instruments in Cubase™ or, if you wish, you could specify a different location. **Remember that as a plug-in, SampleTank has to be installed in a VstPlugIns folder or it will not work.** In the destination folder, a new folder called **IK Multimedia** is created; into this folder you will find the SampleTank plugin itself and the **SampleTank Instruments** folder containing all the SampleTank instruments, grouped by category (fig. 3).

- VstPlugIns
  - -IK Multimedia (with the SampleTank plug-in)
    - -SampleTank Instruments (root folder)
      - -<Instrument category> (bass, brass, etc.)

The installation will then be complete.

3.1.2   Installation of SampleTank® VST™ Plug-in on Logic™Audio

Insert the CD, the installation process starts automatically.
After accepting the license agreement, you are requested to enter your serial number (you can find it in the registration card included in the box). The installer asks you to specify the folder where to install SampleTank. In Logic™, the default **VstPlugIns** folder is located into the Logic™Audio folder. **Remember that as a plug-in, SampleTank has to be installed in a VstPlugIns folder or it will not work.** In the destination folder, a new folder called **IK Multimedia** is created; into this folder you will find the SampleTank plugin itself and the **SampleTank Instruments** folder containing all the SampleTank instruments, grouped by category (fig. 3).

- VstPlugIns
  - -IK Multimedia (with the SampleTank plug-in)
    - -SampleTank Instruments (root folder)
      - -<Instrument category> (bass, brass, etc.)

The installation will then be complete.

3.2 Installation of SampleTank® VST™ Plug-in (MacOS®)

Insert the CD, the installation process starts automatically.
After accepting the license agreement, you are requested to enter your serial number (you can find it in the registration card included in the box).
The installer tries to locate any **VstPlugIns** folder in your system and asks you to select the one where you want to install SampleTank; or, if you wish, you could specify a different location. In the destination folder, a new folder called **IK Multimedia** is created; into this folder you will find the SampleTank plugin itself and the **SampleTank Instruments** folder containing all the SampleTank instruments, grouped by category (fig. 3).
Remember that the SampleTank plug-in must always stay in the IK Multimedia folder in a VstPlugIns folder or it will not work.

- VstPlugIns
    - IK Multimedia (with the SampleTank plug-in)
        - SampleTank Instruments (root folder)
            - <Instrument category> (bass, brass, etc.)

The installation will then be complete.

3.3 Installation of SampleTank® instruments (Windows®/MacOS®)

Insert the CD, the installation process starts automatically.
The installer tries to locate the **SampleTank Instruments** folder in your system and asks you to confirm the location where to install the SampleTank Instruments. If the installer is not able to find it, you have the option of specifying a location. The installer also asks you to select from the **Category List** which kinds of instruments you want to install. The selected SampleTank instruments will be added in the destination folder. The instruments installation will then be complete.

3.4 Manual installation of SampleTank® instruments (Windows®/MacOS)

You may want to install manually the SampleTank instruments. Just browse your system, locate your **SampleTank Instruments** folder and copy (or drag&drop) all the instruments you want to add, from the folder also named **SampleTank Instruments** in the CD; the added instruments will be automatically selectable. This is a very easy and fast way to load sounds.
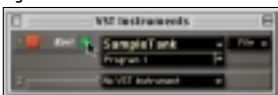
fig. 4
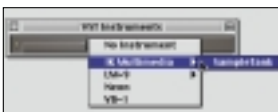
3.5 Opening SampleTank® in Cubase™

Launch Cubase™. Open the 'Panels' menu and select 'VST Instruments'. This will display the VST Instruments interface. Click on the 'No VST Instrument' text. A pop-up menu will show all available instruments. Move the selection over 'IK Multimedia' and click on the sub-menu 'SampleTank' (fig. 4).
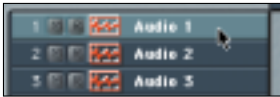
fig. 5

Switch the instrument on by clicking on the dull red button. The button will light up. Now click on the 'Edit' button (fig. 5). SampleTank will be launched.

SampleTank

fig. 6

3.6 Opening SampleTank® in Logic™ Audio

Launch Logic™ Audio. If you already utilize 'AudioInst' channels in Logic™, just load SampleTank as one of those instruments. Otherwise create a new audio object in the Logic™ Audio envinronment (fig. 6). Set the output channel as Instrument 1.

fig. 7   fig. 8

On this channel (in the mixer window) load SampleTank as a plug-in in the first 'insert' slot (fig. 7).

Double-click on the plug-in slot (blue) (fig. 8) and SampleTank will be launched.

3.7 Authorization

SampleTank needs to be authorized for full installation. Until eventually authorized, SampleTank will only work with the maximum polyphony limited to 3 notes.
Three codes are necessary to authorize SampleTank:

1- The first code is your Serial Number. Every copy of SampleTank has a unique serial number included. The serial is written on a registration card included in the package. Keep the registration card handy; you will need it.

2- The second is your Digital ID. The Digital ID is a code generated by SampleTank based on your system's characteristics; it is displayed in the authorization window, that will appear on the screen every time you launch SampleTank without a valid authorization. The Digital ID is unique to your computer. If you try to install SampleTank on another system, you will get a different Digital ID.

3- The third is the Authorization Code. The Authorization Code is generated by each user registration, and is keyed to both a specific Serial Number and a specific Digital ID. Whenever the Digital ID changes, the Authorization Code will be void and SampleTank will revert to demo mode. You will need another Authorization Code to authorize SampleTank again.

Follow this procedure to authorize your SampleTank.

1) Launch SampleTank. The authorization window will appear, including:
- a Digital ID already present
- a blank field for the Serial Number
- a blank field for the Authorization Code

2) Write down carefully your Digital ID. This must be the Digital ID of the system where you are planning to install and use SampleTank.
- Digital ID and Authorization Code have no letters 'I' and 'O'. Those you might see are actually numbers: one's and zeroes, respectively

3 - Installation / Authorization

3) Launch your browser and access the SampleTank registration page: http://www.sampletank.com/STReg.html (your browser will need to support frames and Javascript; all recent versions of Netscape Navigator and Internet Explorer will suffice).
The SampleTank registration form will be displayed.

4) Fill in all required fields, including your Serial Number and Digital ID. All codes should be entered in capital letters. Remember to include a working e-mail address: it will be used to send your Authorization Code. Press 'Submit'.

5) Open your e-mail client software and check for new mail in the address you've just inserted in the registration form. You will shortly receive a message confirming your registration and giving you an Authorization Code.

6) If you had closed your applications, **launch SampleTank again. Otherwise, just return to the authorization window.**

7) Type carefully your Serial Number in the 'Serial Number' field in the authorization window.

8) Type carefully your Authorization Code in the 'Authorization Code' field in the authorization window.

9) Press 'OK'. If all information has been entered correctly, SampleTank will now be authorized. **Remember to write down your Authorization Code.**

Sampletank

If you use a different computer for music and for the internet the procedure is essentially the same. Install SampleTank on your music computer. Once you get to the part where you should run a browser, just note down the Digital ID. Move on to your internet computer and use it to visit the registration page, fill in the registration form (with the Digital ID copied from the other system), and get the e-mail confirming your registration. Then note down the Authorization Code, get back to your music computer and complete the procedure.

If you have no access to the internet in the SampleTank CD you will find a PDF file called Authorization Code Request Form. Open the file (with Acrobat Reader), print the form, fill in the required fields and fax everything to +39-59-2861671 to receive your Authorization Code within 24 hours of your fax (standard business European time). Please write clearly: if we can't decipher the codes, we won't be able to generate a working Authorization Code.

If you have no access to a fax machine fill in the aforementioned Authorization Code Request Form and mail it to this address:

IK Multimedia Production srl
Via dell'Industria 46
41100 Modena
ITALY

You'll be given your Authorization Code by return mail within 15 workdays.

Multiple Installations.

Should you need to install SampleTank in another machine you will need a new Authorization Code. In this case contact **support@sampletank.com**. As stated in the license agreement, a single license gives right to a single installation only; to install SampleTank on more than one system requires the purchase of additional licenses on a one-to-one basis. Special multiple-license prices are available.
Ask further details from **sales@sampletank.com** .

For all other questions, and to solve problems met following this procedure, contact **support@sampletank.com**

IMPORTANT (Mac users): SampleTank creates a file named 'SampleTank Settings.txt' where your authorization information is stored. If you move, rename or delete this file, you will be asked to re-enter the Serial Number and Authorization Code.

Chapter 4 Using SampleTank®

4.1 Starting Sampletank® in Cubase™

fig. 9
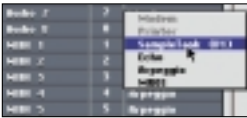
Follow instructions contained in chapter 3.5 for opening SampleTank in Cubase™.

Open the 'Structure' menu and select 'Create Track'. A new track will appear in the sequencer. Right-click on the corresponding item in the 'Out' column, and select 'SampleTank' in the pop-up menu (fig. 9).

4.2 Starting SampleTank® in Logic™ Audio

Follow instructions contained in chapter 3.6 for opening SampleTank in Logic™ Audio.

4.3 Loading and playing instruments

fig. 10

The available instruments are displayed at the center in the SampleTank interface.

If at any time you can't see an instrument list (fig. 10), this means you have to select the folder which contains the instruments to be opened in SampleTank, that is selecting the 'root' folder.

fig. 11

Click on the 'Root' button(fig. 11). You will be asked to select the folder containing the SampleTank instruments. The full path is displayed in the lower part of the SampleTank interface.

fig. 12
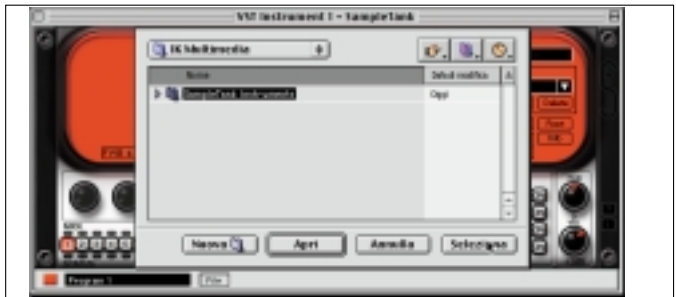
By default, all the SampleTank instruments are placed in the following directory tree (fig. 12):

- VstPlugIns
    - IK Multimedia (with the SampleTank plug-in)
        - SampleTank Instruments (root folder)
            - <Instrument category> (bass, brass, etc.)
                - <Instrument sub-category (optional)> (acoustic, electric , etc.)
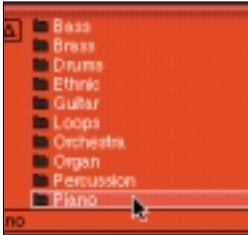
SampleTank

fig. 13

You can change this structure at leisure. In Chapter Five you will find more hints about the organization of SampleTank sounds in your system.

After selecting a root folder, you will see a list of instrument folders (fig. 13). To open an instrument folder, double-click (fig. 14) on its icon in the list or select it anc click on the load button (fig. 15).
To close a folder and step up one level (up to the root folder), just click on the 'Upper level' button (fig. 16). To return directly to the root folder, press the 'Browse' button (fig. 17).

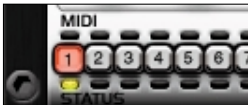fig. 14   fig. 15   fig. 16   fig. 17

fig. 18

Before loading an instrument, select the MIDI channel where you want to place it (fig. 18). You have all 16 channels at your disposal (for each of the VST™ instruments opened). You select a MIDI channel by clicking on the 1-16 MIDI buttons on the SampleTank interface.

fig. 19

Once you have a channel ready, double-click on an instrument to load it in the channel. To the same effect you can select an instrument and press the 'Load' button. Notice that the led right under the channel button, called the 'Status' led, will turn yellow while the instrument is loading (fig. 19), and will stay green when it's ready to be played (fig. 20).

fig. 20
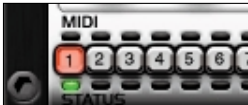
The instrument name, as well as a generic description of the available instrument knobs, will appear in the left side of the interface. One or more pre-defined effects will be loaded and displayed in the effects interface on the right. More information on each single instrument is available by pressing the 'Info' button (fig. 21).

fig. 21

fig. 22

You can now play the instrument using a master keyboard connected to the sequencer or using a MIDI sequence in the track. MIDI activity in the channels is indicated by the red led (fig. 22), called the 'MIDI' led, above

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fig. 23

fig. 24

fig. 25

fig. 26

fig. 27

fig. 28

each of the channel buttons.
To load another instrument in the same channel, just double-click (or select and load) a new instrument in the list. To change to a different channel, press its MIDI button (fig. 23).

To empty a channel, press the 'Empty' button (fig. 24). The Status and MIDI leds will immediately blank out.

4.4   Sound parameters and MIDI CC

Up to four parameters, specific to each instrument, are chosen by the sound designer to offer the user an immediate way to affect the sound and suit it to his needs. These four parameters are labeled, from left to right, 'A', 'B', 'C' and 'D' (fig. 25). Under the name of the currently loaded instruments you can read a description of the instrument's predefined parameters.

Inactive knobs (those without a linked parameter) are shaded in gray.
You can modify sound parameters immediately after loading the instrument. The immediate way to do so, of course, is clicking on a knob and dragging the mouse pointer in a circular motion, effectively 'turning' the knob. Sound parameters can also be controlled through MIDI control changes. The MIDI CCs assigned to the sound parameters are:

A - CC 12
B - CC 13
C - CC 14
D - CC 15

Below each knob is displayed the current MIDI value (0-127). Clicking on the value will also reveal the knob's CC (fig. 26).

4.5   Selecting effects

To view the list of available effects click on the arrow in the effect slot (fig. 27). A pop-up menu will appear (fig. 28). Now move the selection with the mouse and click on an effect name to load it. The selected effect name will now show in the effect slot corresponding to the arrow.

To empty an effect slot, select the 'None' item. You can also move the selection with the arrow keys in the keyboard and load the effect pressing 'Enter'.

Only one effect's regulations will be shown on the screen at a time. To view and make changes to each effect's parameters, click on the effect's name in the display. The led on the left of the effect slot selected will turn red.

Now the effect knobs will be labeled corresponding to the effect's parameters (fig. 29). Some effects have fewer than five knobs. The unused knobs will be shaded in gray.
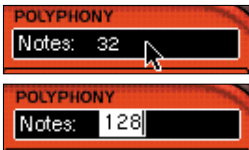
SampleTank

fig. 29

fig. 30

fig. 31

fig. 32

Above each effect knob you can read a label corresponding to its function. Below the effect knob is its current value. As usual, click on a knob and drag the mouse pointer in a circle to apply regulations.

To activate an effect, click on its 'ON' button to the right (fig. 30). The button turns red and the effect is active. All active effects are inserted in the instrument chain following a patch order from top to bottom of the effect window.

To deactivate an effect, click on the red 'ON' button. The button will turn gray (fig. 31).

As with the sound parameters, effect parameters can be controlled through MIDI control change. In Chapter 6 you can find the complete list of available effects, and the CC value for each effect parameter.

Below each effects knob is displayed the current effects parameter value. Clicking on the value will also reveal the knob's CC (fig. 32).

4.6   Polyphony

In polyphonic mode, each SampleTank module can have a maximum polyphony of up to 128 notes. The maximum polyphony is CPU-dependent (for reference, a PIII 500MHz supports more than 100 notes polyphony, a G3 350MHz supports up to 32 notes).

fig. 33

fig. 34

After installation the default maximum polyphony is set to 32 notes as displayed after the 'Notes' label under the 'Polyphony' display in the upper right part of the SampleTank interface (fig. 33).

This sets the maximum number of notes which can be played by the module. The maximum polyphony of each SampleTank module can be set by changing this number (typing a new number and clicking 'Enter') (fig. 34).

fig. 35

As the number of notes playing exceeds this number, a (!) symbol appears in the polyphony display, as well as a text indicating 'OVER' (over polyphony) (fig. 35). Every time you surpass the maximum number of polyphony notes in your performance, the oldest note will be cancelled. For example, if you set 32 as the maximum number, when you insert the 33rd note you will erase the first one. You can raise the number of notes which can be played by a SampleTank module by raising the 'Notes' number up to a maximum which depends on the CPU load you have (which cannot exceed 100%). The CPU load is displayed by opening the VST performances meter with the related menu in Cubase™ and Logic™.

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When CPU performance is close or exceeds 100% you may experience deteriorating performance and interruption of the sound.

To avoid this you can simply lower the maximum number of polyphony notes. Click on the current number of 'Notes' and type a lower number, then hit 'Enter' .

Another way to reduce CPU load is by deactivating the effects opened by default with each instrument. For instance, instead of having multiple instruments, each with its own reverb, it's preferable to switch off reverbs in SampleTank® and to use a unique effect on all instruments via the sequencer's built-in send effects. In general terms, switching off internal sound effects will reduce CPU load and allow greater poliphony to be played.

4.7   Other instrument controls

Separate Outputs

fig. 36
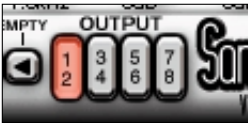
In Cubase™, instruments can be routed on four separate stereo outputs, corresponding to the '1-2', '3-4', '5-6' and '7-8' buttons (fig. 36). The default setting is the '1-2' button. For each instrument, you can select either of the four available outputs, by clicking on the appropriate button. The active output's button will be highlighted in red.

In Logic™ Audio '1-2' stereo outputs are the only supported.

fig. 37

Volume and Pan

You can set the Volume and Pan of each single instrument using the Volume and Pan knobs (fig. 37).

Octave

You can transpose each single instrument by +-2 octaves, with 1 octave increments, by clicking on the 'Oct' button (fig. 38). In the button is also displayed the current setting.

fig. 38

Poly/Mono

The 'Poly/Mono' button (fig. 38) switches the current instruments between polyphonic and monophonic.

Help (?)

fig. 39

The '?' button (fig. 39) displays the help screen, a static picture describing the main controls in the interface. Clicking anywhere on the help screen will return SampleTank to normal mode.

fig. 40

Credits (i)

The 'i' button (fig. 40) displays the credits. Clicking anywhere on the credits will return SampleTank to normal mode.

4.8   Loading and saving modules in Cubase™

fig. 41

The 'File' menu is located in the right part of the VST instruments window (in Cubase™ 5 the same menu is also present in the SampleTank window).

Click on the 'File' menu, select 'Save bank' to save the SampleTank module's sound bank (all the 16 instruments) (fig. 41). The familiar pop-up window will appear, asking for a name and folder to give to the sound bank.

Click on the 'File' menu, select 'Load bank' to load a bank you have previously saved. The pop-up window will show the banks present in the last used folder, and let you browse until you find the desired sound bank.

Saving a song in Cubase™ will also save its configuration of VST instruments, including SampleTank modules and all the instruments loaded in the various modules, so you can immediately access them next time you open the same song.

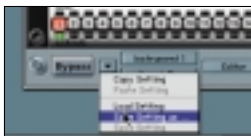**4.9   Loading and saving modules in Logic™ Audio**

fig. 42

In Logic™ Audio, the 'Save Settings' and 'Load Settings' buttons are at the bottom of the SampleTank window.

Click on the 'Save Settings' button to save the SampleTank module's sound bank (1 instrument) (fig. 42). The familiar pop-up window will appear, asking for a name and folder to give to the sound bank.

Click on the 'Load Settings' button to load a bank you have previously saved. The pop-up window will show the banks present in the last used folder, and let you browse until you find the desired sound bank.

Saving a song within Logic™ Audio will also save its configuration of VST instruments, including SampleTank modules and all the instruments loaded in the various modules, so you can immediately access them next time you open the same song.

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Chapter 5 Organizing instruments

SampleTank immediately provides hundreds of different instruments, a number that can be easily increased into the thousands using upcoming libraries or by converting AKAI® sounds. Due to the sheer quantity of sounds, organization and accessibility become essential factors for the professional user.

SampleTank answers this concern with two complementary ways of accessing files: a search function and user-defined categories.

5.1 Search function

All SampleTank native and converted instruments have a set of hidden keywords which can be used to locate any instrument directly.

To begin a search, click on the black box at the center of the Search/Select display panel. The current search, if any, will be highlighted and a cursor will appear. You can now type any string(s) of characters and hit 'Enter' (fig. 43).

Click on the 'Search' button (fig. 44) to look for that string among the keywords of the available instruments. All instruments whose set of keywords match the current search will be immediately displayed in the instruments list. You can load any of them, without further browsing.

You can use up to 32 different keywords at a time; all must be separated by spaces. Using more keywords further refines the search, meaning that only the instruments containing ALL the keywords will be displayed.

By default, SampleTank accounts for any number of characters that may precede or follow any string being searched. For example, the string: str will display all instruments whose keyword(s) starts, ends or contains 'str'.

Sometimes it may be desirable to search for a perfect match with a keyword, such as when using the string 'bass' and not wanting to display also instruments with keywords like 'bassoon' or 'drum'n'bass'. In this case, include the string between double quotation marks ("bass").

Examples of searchable keywords:

60s, 70s, 80s, accordion, acoustic, afro, agogo, alto, ambience, ambient, analog, asian, B3, bandoneon, bass, bassoon, bd, BDs, bell, berimbao, blues, bongo, bpm, brass, british, brush, cabasa, cello, choir, chord, chorus, church, clarinet, classic, classical, clavi, conga, contralto, country, cowbell , cuica, d'n'b, D'n'B , dance, darabuka, distorted, DJ, djembe, doumbek, drive, drum, drum'n'bass, dub, echo, effects, efx, electric, electronic, ethnic, female, ff, fingered, flanger, flute, FM, fretless, funky, fusion, fuzz, FX, glockenspiel, gong, groove, guiro, guitar, harmonica, harp, hi-hat, hihat, hip-hop, horn, house, indian, industrial, jazz, jungle, loop, male, natural, nylon, oboe, octave, orchestra, organ , orien-tal , pad, pandeiru, percussion, pizzicato, r'n'b, recorder, reggae, repinique, rock, sax, saxophones, shaker, slap, snare, snares, spanish, staccato, string, strings, surdo, synt, synth, tabla, tamborim, tampura, tanta, techno, tenor, timbale, timpani, trance, tremolo, trombone, trumpet, viola, violin, voice, wind, wood, woodwind.

fig. 45

fig. 46

fig. 47

fig. 48

You do not have to type your keyword searches every time: you can define a list of shortcuts, allowing you to effect a search with a single click. This is especially useful to organize your sounds in readily accessible categories perfectly tailored to your works and projects.

To create a search shortcut, do the following. Once you've effected the desired search, click on the 'Save' button (fig. 45). You'll record the currently listed keyword(s) as a new user-defined category.

Now click on the arrow on the right of the Search/Select display panel (fig. 46). The categories pop-up menu will show all user-defined categories (fig. 47). Move the selection with the mouse and click on the keyword of your choice to begin searching.

After the user-defined catogory is no longer useful, you can remove it from the list. Click on the 'Delete' button to cancel the current user-defined category (fig. 45).

While you are using search categories, the 'Upper level' button will not work. Click on the 'Browse' button to resume browsing from the root folder.

5.2   Instruments location

A SampleTank instrument is made of three essential files:

- <instrument>**.sth   containing the instrument name and description**
- <instrument>**.sti   containing the instrument program**
- <instrument>**.stw   containing the instrument waveforms**

As already said, by default all the SampleTank instruments are placed in the following directory tree (fig. 48):

- VstPlugIns
     - IK Multimedia
          - SampleTank Instruments (root folder)
               - <Instrument category> (bass, brass, etc.)
                    - <Instrument sub-category (optional)> (acoustic, electric , etc.)

During installation, all the .sth and .sti files will be placed in the aforementioned folders, while only the .stw files decided by the user will be copied on the hard disk (to save hard-disk space). In this way, the instrument list will contain all the instruments available for SampleTank, whether present on the hard disk or not (and also keyboard searches will include such instruments).

In the SampleTank interface, complete instruments (whose waveforms are immediately accessible) are displayed with a filled check box at the left of the instrument name.
Instruments whose waveforms are not present on the hard disk have an
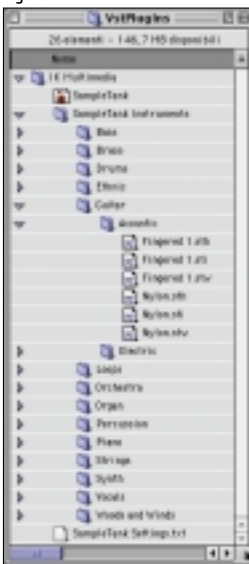
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fig. 49

fig. 50

empty check box instead (fig. 49). To load these instrument's waveforms on the hard disk, simply click on the empty check box. A dialog box will ask for the SampleTank CD where the instrument is located. Insert the CD. The .stw file will be copied with the rest of the instrument.

To remove an instrument waveforms simply click on the instrument's filled check box (fig. 50). A confirmation dialog will appear and the instrument's waveforms will be removed after you press 'OK' (fig. 51). In the instrument list, the check box will appear as emptied.

5.3 Managing sound organization

fig. 51

Knowing how SampleTank keeps track of its instruments, you can now move, duplicate and regroup them (and their folders) at will; using any file manager in your system.

Just remember, when you effect changes on an instrument, to effect them equally to all three instrument files. They should be moved together or the instrument will not work correctly.

You can also act directly on the directory path. For example you can organize your instruments outside of the default folder, or have more than one 'SampleTank Instruments' folder and switch between them.

fig. 52

In this case, remember that you need to select where the instruments folder is located, by means of the 'Root' button (fig. 52); or SampleTank won't find the instruments. As soon as you press the 'Root' button and select your new root folder (fig. 53), your personal instrument list will be displayed in the interface.

fig. 53

Even if you've changed the instruments organization of the root folder after using them on a song, these will be always loaded when you re-load the song containing those instruments associated to the song's tracks.

You can even keep the instruments folder over a network of computers in order to have different computers able to access a single instruments folder, having SampleTank loading instruments from the network.

SampleTank's instruments format is also multi-platform. Instruments can be freely shared by Macintosh® and Windows® machines.
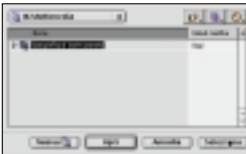
SampleTank

Chapter 6   SampleTank effects

6.1   SampleTank multi-effects unit

There are one fixed plus three customizable effect slots in SampleTank. The first slot is dedicated to EQ/COMP while in each custom slot the user can open one of the 20 DSP effects available.
Each single effect may only be used once for each instrument.

EQ/COMP

Equalization and compression are applied by default on the first slot and cannot be loaded in other slots. This effect features a semi-parametric EQ and an easy-to-use compressor. Both units feature very high quality giving an extremely well-sounding equalization and an "analog-style" compression.

- Low Gain: boosts/reduces low frequencies. This is a low shelving filter (cc17)
- Mid Freq: adjusts the center frequency (cc16)
- Mid Gain: boosts/reduces middle frequencies. This is a wide bell filter (cc 69)
- High Gain: boosts/reduces high frequencies. This is a shelving filter (cc 68)
- Comp: applies compression (cc18)

(1) Reverb
(2) Ambience
(3) Rev. Delay

The three reverbs included in SampleTank add reverberation and ambience to the sound, creating spatial depth from large halls to small rooms.

- Decay: sets the global reverberation time (cc89)
- Color: sets the reverberation tonal character, from dark to bright (cc90)
- Density: sets the number of reflections generated by the reverb (cc102)
- Size: sets the size of the virtual chamber emulated by the reverb
- Level: adjusts the mix between the dry and wet signals (cc104)

(4) Delay

Delay is an effect which adds echoes to the sound.

- Mode: you can choose from simple mono delay to sophisticated multi taps stereo delays
- Feedback: sets the number of echoes that the effect will produce (cc28)
- Delay: sets the amount of time between the echoes (cc29)
- Level: adjusts the mix between the dry and wet signals (cc105)
- Bandwidth: sets the bandwidth of the echoes, raising the knob will give a sound similar to the one of old analog or tape delay units.

(5) Filter
(6) Envelope Filter
(7) Filter MW

These effects apply various types of filters to the sound by cutting some portions of the audio spectrum. These are resonant filters, which gives the effects a character similar to that of an old synthesizer.
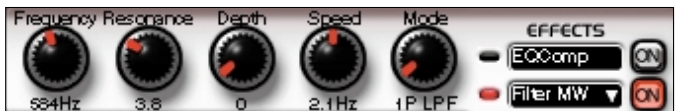
- Frequency: specifies the frequency at which the filter begins to attenuate (cc21)
- Resonance: emphasizes the overtones in the region of the cut-off frequency. This gives a particular, vintage character to the sound, especially if used with 4 poles low pass filter (cc22)
- Depth: the filter cut off frequency can be moved automatically by an LFO built into the filter. This control sets the amount of modulation (cc23)
- Speed: sets the speed of LFO modulation (cc24)
- Mode: sets the type of filter. You can choose from various types, low pass, band pass and high pass. They all are available in three different slopes, from a very natural and pleasing 1 pole to a "techno" 4 pole.

(8) Wah-Wah

This effect simulates a typical "wah-wah" guitar pedal.

- Wah: sets the cut off frequency of the wah effect. Use it (via midi controller) to manually create wah wah effects. (cc110)
- Auto: when turned up the wah effect can work as an auto-wah, moving its center frequency automatically. The movements are detected from the original signal amplitude.

(9) Chorus
(10) Multi Chorus

SampleTank comes with two different types of chorus. The first is a classic stereo chorus which adds space and depth to the sound. The second is a special type with a random pitching character. The first gives a sense of modulation, the second is designed to be less regular and noticeable.

- Depth: sets the amount of pitch shifting generated by the chorus (cc84)
- Speed: adjusts the speed of the chorus LFOs (cc85)
- Mix: adjusts the mix between the dry and wet signals (cc86)

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(11) AM Modulation
(12) FM Modulation

These are two special modulation effects, amplitude modulation (AM) and frequency modulation (FM). These effects are designed to produce a tonal character totally different from the original, when applied to a complex sound. They bring to mind the sound of a synthesis system like FM or ring modulation.

- Carr. Freq: this is the frequency of the signal that will modulate in frequency or in amplitude the original sound (cc87)
- Mod. Depth: this is the amount of modulation applied (cc88)

(13) Flanger

The Flanger creates a sharper sound by adding a metallic resonance to the sound (like a jet airplane taking off and landing).

- Speed: adjusts the speed of the modulations in the flanging effect (cc81)
- Depth: sets the depth of the flanging modulations (cc82)
- Feedback: sets the amount of signal returned to the flanger (cc83)
- Mix: adjusts the mix between the dry and wet signals (cc106)

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(14) AutoPan

Autopan automatically moves the stereo location of the sound.

- Depth: sets the amount of the effect applied to the sound (cc105)
- Speed: adjusts the speed of the movement of the sound over the stereo field (cc106)

(15) Tremolo

Tremolo cyclically modulates the volume to create tremolo.

- Depth: adjusts the amount of amplitude modulation (cc30)
- Speed: adjusts the speed of the tremolo (cc31)

(16) Rotary Speaker
(17) Rotary Speaker MW

These effects simulate the sound which can be obtained by rotary speaker cabinets. This is a must for organ tones.

- Speed: sets the speed of the rotating horns. Organ players switch often from slow to fast (cc111)
- Drive: sets the amount of distortion generated by the rotary cabinet. This overdrive is very similar to the one generated by a real tube rotary (cc108)
- Lo-Hi: this is the balance between the low and high rotor (cc109)

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(18) Lo-Fi

Lo-Fi degrades the audio-quality to simulate a "Lo-Fidelity" sound. In SampleTank this effect is designed to be used as a speaker and cabinet simulator too.

- Noise: generates a synthesized noise very similar to the one generated by old equipment (cc78)
- Bandwidth: sets the "fidelity". Increasing the value will give a better sound, decreasing it will degrade progressively the fidelity (cc79)
- Distortion: adds distortion to the sound. This distortion works on low levels too (cc80)
- Stereo: sets the stereo channels separation. From mono to stereo (cc107)

(19) Distortion

This effect simulates the distortion occurring as you raise the gain of an amplifier. Various amplifier models are provided.

- Gain: this is the amount of gain and gives more distortion as you increase it (cc19)
- Type: different types of amplifiers are emulated here. From solid-state types to guitar tube amplifiers models. This effect does not perform cabinet and speaker simulation. This is only the "electronic" part of an amplifier.

(20) Phonograph

This effect adds disk noises to simulate the sound of music played by vinyls on old record players.

- Crackle: adjust the amount of crackle from the (virtual) record (cc72)
- Fidelity: sets the frequency response of the record player, from narrow to wide (cc73)

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- Distortion: sets the amount of distortion generated by the record player. This is a kind of distortion similar to the one generated by over-used vinyls (cc74)

(21) Delay BPM
(22) Filter BPM
(23) Flanger BPM
(24) AutoPan BPM
(25) Tremolo BPM

All effects marked BPM have the same effect and parameters of the corresponding effects mentioned above, but their 'speed' parameter is linked to the BPM of the sequencer. Therefore these effects can be easily synced with the composition's BPM with repetitions ranging from 1/16 to 1/2.

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(26) Slicer BPM

The slicer works by applying successive cuts to the sound turning it similar to a backing phrase. Especially effective on sustained sounds.

- Pattern: sets the rhythmic pattern (cc75)
- Depth: adjusts the amount of attenuation (in dB) when the slicer is cutting out the sound. (cc76)
- Envelope: the cuts can be instantaneous or not. This knob sets the slope of the cuts, from instantaneous to smooth (cc77)
- Trigger: every time this knob is moved the Slicer pattern restarts. This is useful to reset and trigger the Slicer at the beginning of the song or every some bars. Write a CC114 (any vaule is valid) on the sequence where you want the Slicer to restart. (cc114)

Chapter 7 Settings File

7.1 SampleTank settings

A file called "SampleTank settings.txt" is located within the SampleTank plug-in file and generated by the software. **DO NOT REMOVE THE FILE otherwhise you will be forced to re-authorize SampleTank.**
It is a standard ascii text file used by SampleTank to store the following informations:

1. Instruments root folder
This is the last selected root folder for ST instruments.

2. Synchronous instruments loading
This field is set to "yes" by default and must not to be changed in the overall majority of cases. However it can be set to "no" (in Cubase™ only), when you have a powerful CPU, to avoid glitches while loading instruments and simultaneously playing midi and audio tracks. This setting doesn't work in Logic™.

3. Serial number and authorization code
This fields show your serial number and authorization codes; they must not be changed or edited and are present here only for reference use.

4. Saved search set
These fields contain the keywords used for searches and then saved as user-defined searches. They appear like this:
SearchPattern0 = bass
SearchPattern1 = funky
SearchPattern2 = reggae
SearchPattern... = ...
and can be edited or deleted.

5. Midi control changes remapping
This part contains a series of fields which allow flexible remapping of the control changes received by SampleTank. The first field (CCRemap) contains "yes" or "no" for remapping on/off, followed by CC numbers (within paraenthesys the source CC, after the '=' the destination CC).

7.2 Controlling SampleTank with MIDI controller

Inserting or changing remapping parameters can be used to operate SampleTank with an external custom MIDI controller.

For example here is the configuration to use Phat Boy™ MIDI controller from GMEDIA for the A, B, C, D controllers of SampleTank.

CCRemap = yes
CC(40) = 12

CC(41) = 13
CC(42) = 14
CC(43) = 15

In this case the MIDI controllers associated with the first four Phat Boy knobs (40...43) are remapped to match SampleTank A, B, C, D sound parameters controllers (12...15).

Remapping MIDI controllers is also used to make automations with Logic™ (see chapter 8.2 below).

Chapter 8 Automation

8.1 Automating sound parameters

All SampleTank knobs can be controlled (automated) using MIDI control changes. You can automate the sound parameters knobs A, B, C, D or all the multieffects section parameters knobs. Below each knob is displayed the current parameters value. Clicking on the value will also reveal the knob's CC.

For example to automate the "Wah wah" effect you use the CC n° 110 (displayed when you click the value at the bottom of the knob)..

All the automation data is handled continuously by the sequencer, as a normal controller.

You can record in realtime operating the controllers from any external MIDI device (like a master keyboard with assignable sliders, or a midi control surface) both in Cubase™ and Logic™ Audio, or you can edit manually the controllers data using the graphical editing functions. You can edit data in Cubase™ using the Edit window or the Event list, or in Logic™ using the Matrix edit, the Event list or the HyperEdit, to view and operate more controllers at once.

8.2 Effects automation in Cubase™

Click on the ST control value to know the CC number you want to automate (i.e. for Wah use CC 110). For realtime automation simply send a CC110 (i.e. with your master keyboard) to the currently selected MIDI channel (the one where it's loaded the instrument you want to automate) and record the track.

You will see the knob moving while automation data is written.
You can refine your performance using the event list, the key edit or the logical edit of Cubase™.

8.3 Effects automation in Logic™

Due to Logic™ automation (ver. 4.6 or earlier) the vast majority of CCs are filtered by the sequencer and are not available for the VST instrument, with very few exceptions. Tests on various platforms and Logic versions showed that CCs 12, 13, 14 and 15 are not filtered and so can be freely used for automation.

By default these are associated to SampleTank A, B, C, D controllers, for the automation of the four sound parameters; but they can be remapped to any of the SampleTank MIDI controllers using the SampleTank settings file.

To automate an effect in Logic™ you have to:
1. Identify the CC you want to automate (i.e. 110)
2. Open the "SampleTank settings.txt" file and put "Yes" on the "CCRemap" field.
3. Set the remapping like: "CC(12) = 110" (you can use CC 12, 13, 14, 15 alternatively) by typing
4. By doing this CC12 will work on SampleTank CC110

After that you can normally record and edit the CC data as outlined above.

Chapter 9   Tips and Tricks

9.1 Get the most out of your SampleTank

- ASIO cards are strongly recommended to achieve low-latency with nearly real-time response.

- When CPU performance is close or exceeds 100% you may experience deteriorating performance and interruptions of the sound. To avoid this you can simply lower the maximum number of polyphony notes. To get the most out of SampleTank you need a very powerful CPU that will allow you to play more instruments with more polyphony.

- Do not open multiple modules without necessity. It increases CPU load. Use an additional module only after filling all the available MIDI channels in the previous one.

- Another way to reduce CPU load is by deactivating the effects opened by default with each instrument. For instance, instead of having multiple instruments, each with its own reverb, it's preferable to switch off reverbs in SampleTank® and to use a single effect on all instruments via the sequencer's built-in send effects. In general terms, switching off internal sound effects will reduce CPU load and allow greater poliphony to be played.

- If any notes continue sounding from your SampleTank® even after the sequencer has been stopped, use the **SampleTank® Panic function.**

This function is activated by pressing the 'Empty' button while holding down the CTRL key (in Windows) or the OPTION key (in Mac). SampleTank will send a "All Notes Off" message to its engine and all the notes still hanging will be muted.

- In Mac, SampleTank® uses the sequencer's given RAM to operate. If you have difficulties loading and playing instruments, raise the amount of RAM dedicated to the sequencer.

Chapter 10   Support

For any question you may have please refer to the online FAQ at:
http://www.sampletank.com/FAQ.html
where you'll find answers to the most common questions.

For free support write at:
support@sampletank.com

SampleTank