DESCRIPTION
REAL COMPETENCE

WAVE XTABLE
128 Voices Xtended Wavetable

TERRATEC PRODUCER WAVE XTABLE

English Manual

Version 1.0, from: June 2005

CE Declaration

We:

TerraTec Electronic GmbH, Herrenpfad 38, D-41334 Nettetal, Germany

hereby declare that the product:

WAVE XTABLE,

to which this declaration refers is in compliance with the following standards or standardizing documents:

EN 50022, EN 50024

The following are the stipulated operating and environmental conditions for said compliance:

residential, business and commercial environments and small-company environments.

This declaration is based on:

Test report(s) of the EMC testing laboratory

Contents

Welcome!

We're pleased that you've chosen a TerraTec Producer product for your musical endeavors and would like to congratulate you on your decision. With the WAVE XTABLE, you've purchased a sophisticated product representing the state of the art of studio technology—and we're convinced this innovative development will prove extremely useful to you in the coming years and, above all, provide you with a great deal of entertainment.

We hope that this brochure is helpful to you while using the product. It is designed to illustrate technical relationships based on practical examples from the studio environment. This brochure is not only designed to help beginners with this complicated subject—advanced musicians will also find the occasional bit of useful information.

We hope you find this manual both informative and entertaining to read, and hope you find lots of pleasure in the WAVE XTABLE.

Sincerely,
Your TerraTec Producer Team

Congratulations...

…on your purchase of the WAVE XTABLE. This TerraTec Producer wavetable board lets you make the most of your sound card—500 additional sounds in professional audio quality, sorted according to GM and XG modes, open a whole new range of possibilities for both musicians and gamers. The board features 16MB of memory for instant access without latency, conserving your PC memory. Up to 128 voices are available simultaneously—more than enough for full orchestral arrangements as well as current electro and rock sounds.

With regard to sounds—over 500 additional sounds leave nothing to be desired. Sophisticated electronic sounds, ten complete drum kits and an on-board SFX kit are available in addition to the full range of orchestral and additional acoustic instruments, all carefully digitized from actual instruments and burned onto the ROM of the WAVE XTABLE. Just a few simple steps will turn your sound card into a high-performance audio source. Compatibility is assured, as the sounds of the WAVE XTABLE are fully compliant with the major MIDI standards GM and XG.

Scope of delivery.

Start by making sure that the contents of the package are complete.

The WAVE XTABLE package should contain at least the following items:

- 1 WAVE XTABLE

- 1 service request form

- 1 registration card with the serial number

- this manual

Please fill out and return the registration card enclosed in the package to us at your earliest convenience or register online at **www.terratec.net/register.htm**. This is important for support and hotline services.

Installation

Please do not rush the installation, even though it can be completed relatively quickly and easily. As with any installation or modification work on an open PC, hurrying or carelessness may lead to malfunctions, or in the worst case, irreparable hardware damage. Simply relax and take it one step at a time:

■ Shut your PC down, but do not unplug the power cable—that will ensure that the computer is grounded. Also remove all of the cables connected to the sound card.

■ Remove the cover from the case of your PC.

■ Flying sparks may be exciting in interpersonal relationships, but they can be deadly for computer hardware. Before touching any PC components, you should therefore touch the metal plate on the back of your PC's case to discharge any static electricity that may have built up.

■ Under the most favorable circumstances—if the slots next to the sound card are empty—you could theoretically insert the wavetable board in its slot without removing the sound card from your computer. We do not recommend that, however. When applied to the PCI slot, the gentle pressure of inserting the card may in the worst case result in hairline cracks on your mainboard. So, please take the sound card out. (Don't forget to remove the screw—and never use force).

■ Carefully remove the WAVE XTABLE from its packaging and pick it up by the edges with one hand while your other hand is touching a metal part of the PC. This will ensure that any static charge your body may have can be discharged via the PC without damaging any components.

■ Carefully pick up the WAVE XTABLE by the edges and press it into the 24-pin slot on your sound card. It should fit into the slot without applying undue pressure.

Wavetable Connector
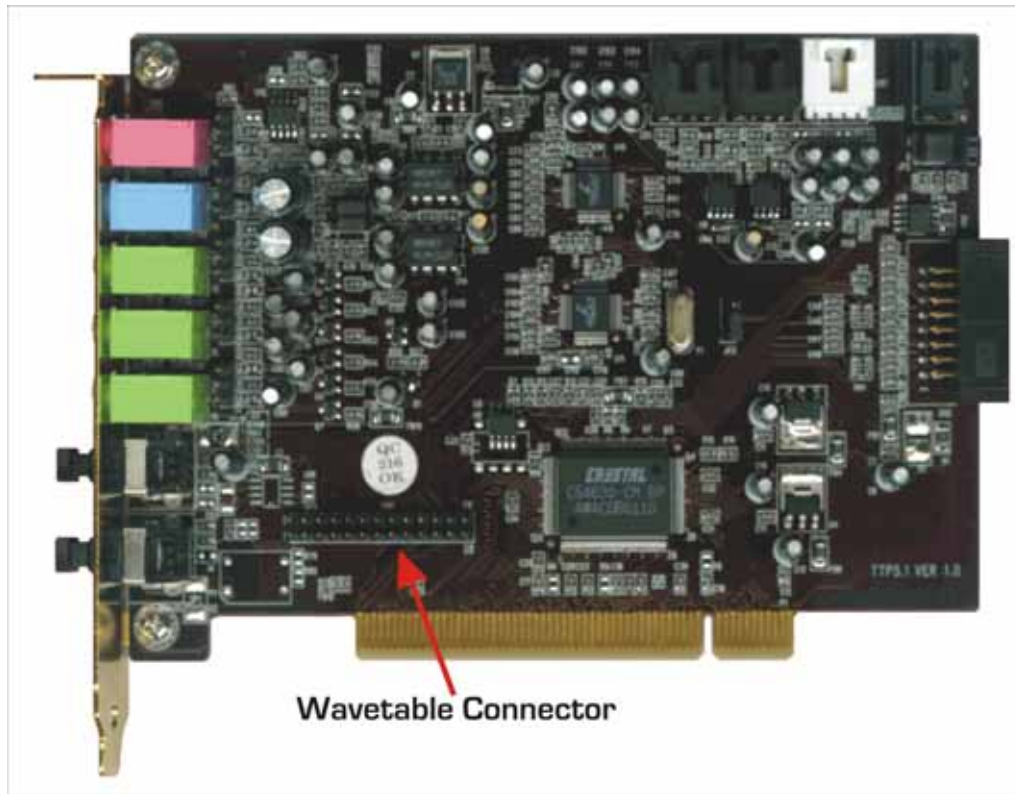
- Replace the sound card in its slot on the mainboard. This may require a certain amount of pressure; you should not have to apply force, however. Please take care to align the contacts precisely to prevent damage to your sound card or the mainboard. Despite the compact dimensions of the expansion board (90 x 89mm), the sound card will now require more space than before. The slot above the sound card should therefore also be free.

- Reinstall the retaining screw of sound card (the one you stored in a safe place, remember?).

- Reinstall the cover of your PC case.

- Reconnect the external cables of your sound card.

- Your computer doesn't work? Right—you pulled the AC power cable. So, plug it back in.

- Before booting your PC, please check that any connected speakers or stereo equipment is set to a low volume for the sake of your speakers and your ears.

The patches

For a complete listing of all 492 sounds (patches), 11 drumkits and the SFX kit of the WAVE XTABLE, please see the following patch list. This table contains all of the information you need to call up the sounds in your sequencer. Before taking a closer look at the sound list, here is a bit of additional information on it.

PRG

Designates the program number of the sound. The sounds are numbered 0-127 according to the MIDI specification. Since the introduction of the GS standard, however, it has been possible to assign multiple sounds to a single number, providing support for more than 128 sounds. The sounds are then addressed via an additional Bank Select command in the sequencer.

BNK

The value required for the bank command in order to call up the sound in the sequencer. The following section explains this in detail:

Choosing sounds with Bank Select

If you only have to manage 128 sounds, they can be addressed in the sequencer via the Program Change command followed by a value from 0 to 127—provided they have been manually entered in a list editor. Things become more complicated if multiple instruments have been assigned to the patch number. In such cases, you must select the required instrument bank first, followed by the program change. This is realized via so-called MIDI controllers. These range from 00 (Bank Select) to 127 (Poly Mode On/Off) and signal changes to the audio parameters from the instrument to the sequencer and vice versa. Controllers 00-31 are set up as pairs and correlate to the controllers 32-63—this includes the Bank Select command: the relevant bank is addressed via the MIDI controller values 00 (MSB) and/or 32 (LSB). (MSB stand for "Most Significant Byte", LSB for "Least Significant Byte"). For some synthesizers (Korg, for example) it is necessary to enter the value in the MSB, for others in the LSB controller. For more information, please check your synthesizer's manual.This may sound daunting, but it isn't really.

Example: If you would like to select the WAVE XTABLE "Nylon Guitar 3" sound, enter the following values in a list editor:

1:01:001 – Controller 00 (BnkSel MSB) = 25

1:01:002 – Controller 32 (BnkSel LSB) = 0

1:01:003 – PrgChange = 24

It's important to maintain exactly this sequence.

This is all quite a bit easier with Cubase SX; there you can simply use the mouse to select the bank and program in the Inspector for the track.

In this case, the problem with MSB or LSB is bypassed by selecting the devices to be routed to specific MIDI channels in the MIDI Device Manager. For more information, please look up "Bank Select" in your Cubase manual.
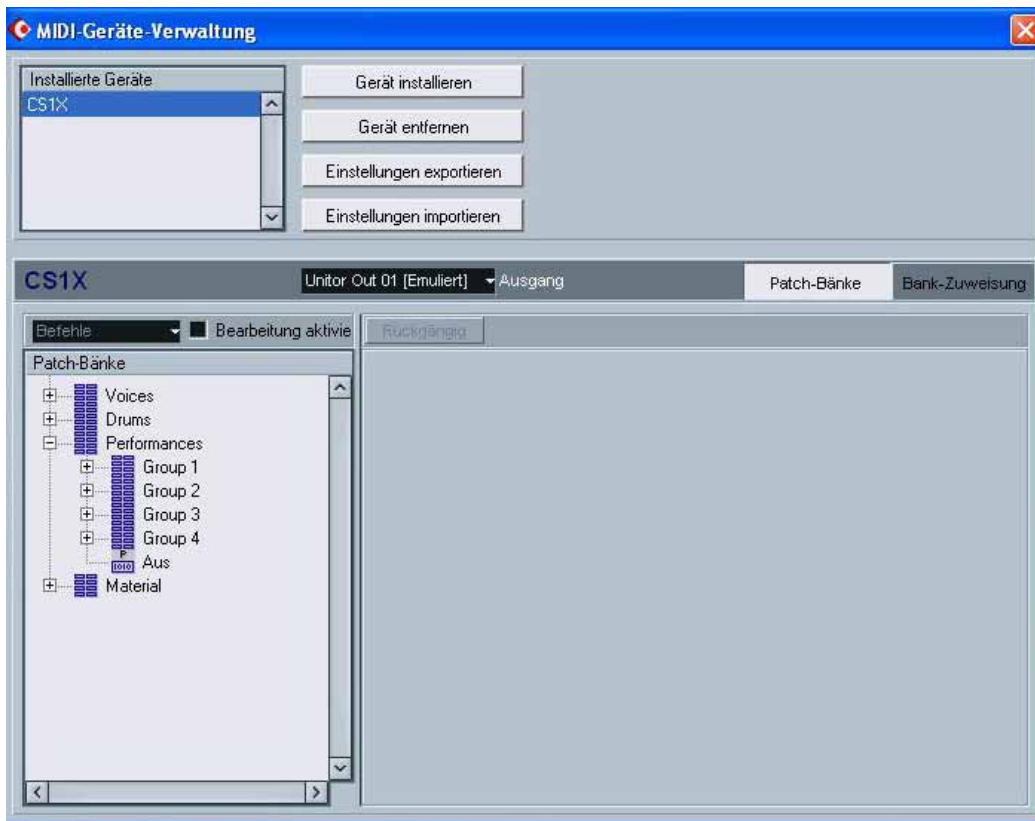
Name

The name of the sound. The first name of each program corresponds to the commonly used GM standard, all others to the XG standard. Those with the designation TT are additional creations by TerraTec Producer.

Voices

The number of voices used. The WAVE XTABLE has 128 voices, which does mean that you can always use 128 different voices at any given time. A glance at the table shows that some sounds are hungrier than others, requiring up to four voices for themselves at the same time.

Type

These abbreviations, which may seem cryptic to the layman, stand for different MIDI standards. These standards specify the number of MIDI channels, voices and sounds that can be used and whether internal effects are available. The following is a brief overview of the available formats:

MIDI formats

The GM standard

GM stands for "General MIDI". This MIDI standard was developed to ensure the standardized organization of presets. In the original MIDI, manufacturers could put instruments wherever they saw fit. As a result, one and the same song could sound very different on different cards. GM ensured that a piano would be assigned to preset 1, soft strings to 49 and a tuba to 58. The GM standard was later superseded by the GM 2.0 standard (see below).

The GS standard

The GS standard is a further development of General MIDI that was presented by Roland in 1991. Unlike the GM standard, GS supports the Bank Select command, permitting the use of up to 16,384 sounds (128^2) instead of only 128. GS also supports effects and a greater number of MIDI controllers. GS is downward compatible to the GM standard.

The XG standard

XG was Yamaha's answer to the GS standard in 1993. 32 instead of 16 MIDI channels, 32 instead of 24 voices, no less than 2,097,152 possible sounds (128^3) and even more MIDI controllers are its advantages. And while drums were always on channel 10 in GS and GM, in XG they can be freely assigned to channels 1 to 16.

The GM 2.0 standard

This is an enhancement of the original GM mode, initiated in 1998 by the IMA (International MIDI Association). The specifications: at least 256 sounds, 9 drumkits, 32x polyphony, additional MIDI controllers for the real-time audio parameter control, downward compatibility to GM-1. GM-2 is therefore the current lowest common denominator among MIDI standards.

The TT format

These sounds do not occur in the GM/GS/XG lists, but were specially produced by TerraTec Producer.