streichfett

STRING SYNTHESIZER

User Manual

English



waldorf

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Foreword

Thank you for purchasing the Streichfett String Synthesizer.

By choosing a Waldorf product, you know this device has been crafted and produced carefully, in Germany, for the most exigeant musicians. We hope you will have great fun and many creative / innovative ideas using it.

Reading this user manual, you will discover all the device features, learn its basic use in real situations, and benefits of tips & tricks we gathered during product development / quality checks.

Your Waldorf-team

Hint

Waldorf Music is not liable for any erroneous information contained in this manual. The contents of this manual may be updated at any time without prior notice. We made every effort to ensure the information herein is accurate and that the manual contains no contradictory information. Waldorf Music extends no liabilities in regard to this manual other than those required by local law.

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Please visit our website **www.waldorfmusic.com** for more information about Streichfett!

We would like to thank

Christian Bacaj, Karsten Dubsch, Willie Eckl, Joachim Flor, Michael von Garnier, Daniel Krawietz, Kurt "Lu" Wangard, 吴海彬, and anyone we have forgotten.

Control Features and Connections

Front Panel



① Volume Dial
② Strings Section
③ Solo Section
④ Effect Section
⑤ Memory Section

Connections



1. MIDI Out Jack
2. MIDI In Jack
3. USB Port for power supply and MIDI connection to a suited computer
4. Right/Mono Audio Output Jack
5. Left/Stereo Audio Output Jack
6. Stereo Headphone Jack

Introduction

About this Manual

This manual was written to help you getting familiar with the Streichfett. It will also aid experienced users with routine tasks.

Important terms are highlighted in bold letters.

Symbols

⚠ **Caution – The comments that follow this symbol will help you avoid errors and malfunctions.**

Info – Additional information on a given topic.

☞ **Instruction – Follow these guidelines to execute a desired function.**

✻ **Example –** Real-world examples to try out.

Highlighted Control Features

All of the Streichfett´s controls are highlighted in **bold** letters throughout the manual.

Example:

- Press the **Ensemble** button.
- Move the **Tremolo** knob.

General Safety Guidelines

⚠ **Please read the following safety tips carefully! They include several precautions you should always observe when dealing with electronic equipment. Read all of the instructions before operating your device**

Suitable Operating Conditions

- Use the device indoors only. Outside it could be rainy or humid as well as too hot or too cold.
- Never use the device under damp conditions such as in bathrooms, washrooms or around indoor swimming pools.
- Do not use the device in extremely dusty or dirty environments in order maintain the surface finishing of the Streichfett.
- Make sure that adequate ventilation is available on all sides of the device. Do not place the device near heat sources such as radiators.
- Do not expose the device to direct sunlight, even if you have a suitable sunscreen.
- Do not expose the device to extreme vibrations.

Power Supply

- Unplug the device when you are not using it for longer periods.
- Always pull the plug when unplugging the device, never the cable.

Operation

- Never place objects containing liquids on or near the device.
- Always place the device on a stable base only.
- Make sure no foreign objects find their way into the chassis. If for some reason this should occur, switch the power off, unplug the device and consult a qualified repair center.
- This device, used on its own or with amplifiers, speakers or headphones, can generate volume levels that may result in irreparable damage to your hearing and/or speakers and amplifiers. For this reason you should keep the volume at appropriate levels at all times.

Maintenance

- Do not open the device or remove the cover. Refer all service and repair tasks to qualified personnel. There are no user serviceable parts inside the chassis.
- Use only a dry, soft cloth or brush to clean the device. Never use alcohol, cleaning solutions or similar chemicals. They will damage the surface of the chassis.

Proper Use

This device is designed exclusively to process low-frequency audio signals for the purpose of generating sound. Any other use is prohibited and voids the warranty extended by Waldorf Music. Waldorf Music is not liable for damages due to incorrect use.

⚠ **Do not leave your Streichfett near children, mothers-in-law or pets. This could lead to critical interactions.**

Setup and Connection

Package Contents

The Waldorf Streichfett package comes complete with:

- the Waldorf Streichfett module
- an external USB power supply (DC 5V / 1A)
- a printed quick start guide

You can also download additional material and software here: **www.waldorfmusic.com**

Please ensure all the items above are included. If something is missing, contact your local dealer.

We recommend that you keep the original packing material for future transport.

Connections

In order to get started with your Streichfett you will need an power outlet or a suitable computer with an USB port. For the connection of the audio output you will need either a mixing console or an audio interface. You can also use a suitable headphone. Last but not least you will most likely need a MIDI master keyboard.

To connect the devices:

1. Turn all units off.
2. Connect the Streichfett´s audio output ❹ + ❺ to your mixing console or your computer audio interface. Optionally connect a suited stereo headphone to the Streichfett´s headphone output ❻ .
3. To play the Streichfett you need a MIDI master keyboard. Connect its MIDI Out to the Streichfett´s MIDI In ❷.
4. If you want to use a computer with a MIDI interface, connect your interface´s MIDI Out to the Streichfett´s MIDI In ❷.
5. Optionally you can connect the Streichfett´s USB port ❸ with a USB cable to your computer. After

that, the Streichfett is automatically available as a MIDI device and will also receive power via the USB connection.

6. Without a computer, you need to connect the USB power supply that came with the Streichfett to the USB port ❸. After that, the Streichfett is ready for work!

7. Then switch on the computer (if connected), the mixing console and finally the amplifier or active monitor speakers.

If you do not choose to connect a mixing console, you can patch the Streichfett's output signals directly to an amplifier or an audio interface. Use an input usually called Line, Aux or Tape input.

Before connecting and disconnecting the Streichfett from a power supply source, turn your amplifier's volume control all the way down to avoid damage due to on / off switching noise. The Streichfett produces a high level output signal. Please take care that the connected playback device is suitable for the high level of an electronic instrument. Never use the mic or phono input of the connected amp!

The USB Connection

Using a USB cable you can connect the Streichfett to your computer observing the following system requirements:

- Windows PC: Windows XP or newer is recommended, a USB port
- Linux PC, a USB port
- Apple: Intel Mac with Mac OS X 10.6 or newer, a USB port

The USB connection of the Streichfett allows:

- Power supply via USB when connected to a suitable computer
- Power supply via the USB power supply
- Transmitting and receiving MIDI data
- Dumping of firmware updates to the Streichfett
- Data exchange with suitable computer software or another Streichfett

Make sure to use a fullspeed USB port on your computer as well as a USB compatible cable to avoid problems with data transmission.

Basic Operation

Powering On / Off

The Streichfett is ready-to-operate after the connection to the USB power supply or via USB cable to a suitable computer.

Editing

In spite of the Streichfett's compactness, it uses a sophisticated user interface allowing fast editing of any control.

Turning a dial clockwise increases the corresponding value; turning it counterclockwise decreases it. Move a switch to its desired position. Keep in mind that most of the switches offer more than two states.

The Streichfett Controls

The Waldorf Streichfett consists of numerous sound-shaping components.

Volume



The **Volume** knob controls the Streichfett's audio and headphone volume. The audio output always delivers a line level signal.

Strings Section



Registration

This is the oscillator bank, equalizer and formants setting for the sound of the Strings section. Moving this knob morphs smoothly through Violin, Viola, Cello, Brass, Organ, Choir as well as combinations of the registrations.

Octaves Selector

This is the octave setting for the Strings. Three positions are available:

- ***8va***: One octave higher than Base octave.
- **Both**: Base octave mixed with the *8va* octave.
- **Base**: The normal octave setting.

Crescendo

This is the attack rate for the Strings envelope.

Release

The release rate for the Strings envelope. Sustain is always at 100%, so there is no need for a decay setting.

Ensemble Switch

Switches the Ensemble effect for Strings on or off. This effect adds more depth and width to the sound. We recommend to always activate it for strings and choir sounds.

The ensemble effect is an advanced chorus effect which consists of three delay lines with different modulation speeds and phase shiftings.

Ensemble Selector

Three modes for the Ensemble effect can be selected here:

- **String** (left position): the classic string machine ensemble effect.
- **String + Chorus** (middle position): Combination of string and chorus for maximum depth and width of the sound.
- **Chorus** (right position): The classic chorus effect.

Balance

Mixes the signals of the Strings and Solo section. The leftmost position selects Strings only, while on the far right only the Solo section is audible. In the middle position, both Strings and Solo are mixed with full scale.

Solo Section



Tone

This is the sound setting for the Solo section. Moving this knob blends smoothly through sounds named Bass, E-Piano, Clavi, Synth and Pluto. Note that sounds only have a faint resemblance to their names, which is common for the genre of String synthesizers.

Keep in mind that the Bass tone is played one octave lower than the other tones.

Split Selector

This switch allows to set a key split for the Solo section. Three positions are available:

- **Low** (left position): Only keys lower than the split key will sound. Holding down one key when "Low" is selected sets the split key to the current note being held.
- **Layer** (middle position): Solo plays on all keys.
- **High** (right position): Only keys higher or equal to the split key will sound. Set the split key by holding down desired key while switching to "High".

Tremolo

This adjusts both the rate and depth of the stereo tremolo effect.

Attack

In addition to set the attack rate of the envelope, settings from leftmost to 10 o´clock position control how much of

a percussive click sound is added, each time a key is pressed.

Envelope Selector

This switch controls Envelope operation for the Solo section:

- In the left position, the envelope has no sustain and decays immediately after the initial attack. This is perfect for clavinet or bass sounds.
- In the right position, notes are held at full sustain level until keys are released.

Decay / Release

Decay or release rate for the envelope.

Effect Section



Depth

Controls the selected effect parameters depending on the **Effect** selector setting.

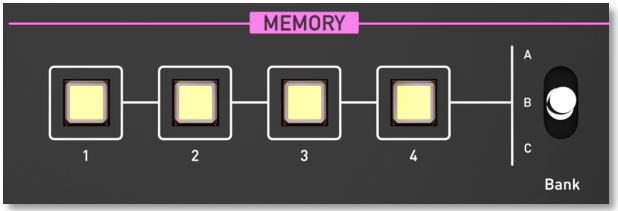
Effect Selector

This switch selects which effect can be adjusted by the **Depth** potentiometer. Note that all three effects can be combined simultaneously.

- **Animate:** A Low Frequency Oscillator (LFO) modulates the Strings registration. Both depth and rate are controlled by the **Depth** potentiometer.

- **Phaser**: Classic phase shifter effect. Feedback, depth and rate are adjustable with **Depth** according to the most pleasing settings we could find.
- **Reverb**: Reverberation with adjustment of mix, size and dampening of the ambient room according to useful settings.

Memory Section



The Memory section offers twelve patches for accessing and storing sound settings. Three banks of four sounds each are available.

For selecting a sound, switch to the desired **Bank** [A, B or C] and press one of the buttons labeled 1 to 4 in order to access e.g. sound C4.

For storing a sound, press and hold one of the four buttons 1..4 until it blinks, select the desired **Bank** and then release the button.

Additional Functions

Modulation Wheel

The Modulation wheel sets the vibrato level and speed of Strings and Solo sections.

The state of the Modulation wheel is stored with the sound program. When you recall a sound program, the vibrato settings are also restored. As soon as you move the Modulation wheel, this replaces the stored setting.

If you select the Pluto tone in the Solo section, which contains an additional vibrato, this is synchronized to the vibrato of the Modulation wheel.

Panic

In case your want immediate silence, press all four **Memory** buttons 1..4 simultaneously. It works like receiving an "All Notes Off" MIDI message.

MIDI Channel Setting

Press and hold all four **Memory** buttons, then play a MIDI note through USB or MIDI. Streichfett sets the MIDI channel for receiving and transmitting according to the channel of the received note on message.

For Omni mode (receiving MIDI data on all MIDI channels), press all four **Memory** buttons when powering on Streichfett.

If switched to Omni mode, the MIDI data from Streichfett is sent via the last selected MIDI channel (before switching to Omni mode).

In case any MIDI channel from 1 to 14 is selected, the Solo section can be triggered independently of the Strings section on the next channel, with split settings being ignored. So in order to e.g. play Strings on MIDI channel 1 and Solo on MIDI channel 2, proceed as follows:

- Press and hold all four **Memory** buttons and play any key on your master keyboard on MIDI channel 1 to set the MIDI channel.
- Set **Balance** to the middle position so you can hear both Strings and Solo.
- Press and hold the lowest key on your MIDI master keyboard and select "Low" with the **Split** switch. This sets the split key very low and prevents Solo to be heard, if you play Strings on MIDI channel 1.

Now you can play Strings on MIDI channel 1 and Solo on MIDI channel 2.

Pitch Bend Range

Press and hold all **Memory** buttons and move the **Effect Selector** to the desired position:

- Animate: 2 semitones (default)
- Phaser: 7 semitones
- Reverb: 12 semitones, or rather one octave

Dumping Sounds

The dump functions let you send and receive all 12 sound programs of the Streichfett's memory via MIDI or USB MIDI. Using a suitable sequencer software or a special sound editor program, you can record and archive this data.

☞ **To dump all sounds:**

1. Press and hold all **Memory** buttons.
2. Press the **Ensemble** button to start the dump process.

To dump a single sound you need to send a MIDI dump request from e.g. a suitable software. For more informations please refer to the MIDI Implemantion chapter in the appendix of this manual.

Receiving Sound Dumps

There is no special receive mode in the Streichfett in order to receive MIDI sound dumps through MIDI or USB. You only need to send the sound data dump to the connected Streichfett.

You can also connect two Streichfett via MIDI to exchange sound data.

Appendix

Technical Data

Power Supply

Maximum current consumption:	80 mA
Input Voltage:	5V DC

Dimensions and Weight

Width:	185 mm
Depth:	185 mm
Height (including knobs):	65 mm
Total weight:	0,9 kg

Factory Settings

MIDI Receive Channel	Omni
MIDI Transmit Channel:	1
Pitch Bend Range	2 semitones

MIDI Controller Numbers

Ctrl	Controller or Sound Control	Value Range
1	Modulation Wheel	0…127
64	Sustain Pedal	0 = Off, 64 = On
70	String Registration	0 = Base, 1 = Both, 2 = 8^{va}
71	String Octaves	0…127
72	String Release	0...127
73	Crescendo	0…127
74	String Ensemble Type	0 = String, 1 = String + Chorus, 2 = Chorus
75	String Ensemble	0…127
76	Solo Tone	0...127
77	Solo Tremolo	0…127
78	Solo Split	0 = Low, 1 = Layer, 2 = High
79	Solo Sustain	0 = No sustain, 1 = Full sustain
80	Solo Attack	0...127
81	Solo Decay	0...127
82	Balance	0…127
91	FX Type	0 = Reverb, 1 = Phaser, 2 = Animate
92	FX Animate amount	0...127
93	FX Phaser amount	0…127
94	FX Reverb amount	0…127
120	All Sound Off	Immediate silence
121	Reset All Controllers	Resets Mod. Wheel, Sust. Pedal, Pitch Bend
122	Local Control	0 = Off, 127 = On
123	All Notes Off	Releases all voices

Streichfett MIDI Implementation

I) Channel Voice Messages

Note OFF Message

Release a note played
Format: *8c nn vv*
Where:

c : MIDI channel (0 - 15)
nn : Note index (0 - 127)
vv : Release velocity (0 - 127)

Note ON Message

Trigger a new note
Format : *9c nn vv*
Where :

c : MIDI channel (0 - 15)
nn : Note index (0 - 127)
vv : Key on velocity (0 - 127)

Remark: If *vv* is 0, the message is equivalent to a Note off

Pitch Bend Message

Temporarily alter the pitch
Format : *Ec ll mm*
Where :

c : MIDI channel (0 - 15)
ll : Pitch bend LSB
mm : Pitch bend MSB

Program Change Message

Set the current program
Format : *Cc pp*
Where :

c : MIDI channel (0 - 15)
pp : Program number (0 - 11)

Remark: *pp* = preset + 4 x bank

II) Control Change Messages

Generic Control Change

Format : *Bc cc vv*
Where :

c : MIDI channel (0 - 15)
cc : controller index (0 - 119)
vv : value of controller

Controller number list:

70 : String registration
71 : String octaves
72 : String release
73 : String crescendo
74 : String ensemble type
75 : String ensemble
76 : Solo tone
77 : Solo tremolo
78 : Solo split
79 : Solo sustain
80 : Solo attack

81 : Solo decay
82 : Balance
91 : FX type
92 : FX animate amount
93 : FX phaser amount
94 : FX reverb amount

Modulation Wheel
Format : *Bc 01h vv*
Where :
c : MIDI channel (0 - 15)
vv : wheel position

Damper Pedal (Sustain)
Format : *Bc 40h vv*
Where :
c : MIDI channel (0 - 15)
vv : 0 pedal is released
> 0 pedal is engaged

Channel Mode Messages

All Sound Off
The instrument sound is muted directly
Format : *Bc 78h 00h*
c : MIDI channel (0 - 15)

Reset All Controllers
Set all controllers to their default value
Format : *Bc 79h 00h*
c : MIDI channel (0 - 15)

All Notes Off
All playing notes are released
Format : *Bc 7Bh 00h*
c : MIDI channel (0 - 15)

Omni Mode Off
The instrument responds to one MIDI channel
Format : *Bc 7Ch 00h*
c : MIDI channel (0 - 15)

Omni Mode On
The instrument responds to all MIDI channels
Format : *Bc 7Dh 00h*
c : MIDI channel (0 - 15)

Local Control
The instrument listens to its controllers
Format : *Bc 7Ah vv*
c : MIDI channel (0 - 15)
Where :
vv : 0 local control is off
127 local control is on

III) System Exclusive Messages

Sound Dump Request:

Format : *F0h 3Eh 19h DEV 00h SND F7h*

Where:

Index	Label	Value	Description
0	EXC	*F0h*	Marks start of SysEx
1	IDW	*3Eh*	Waldorf Music ID
2	IDE	*19h*	Streichfett ID
3	DEV		MIDI Device ID (00h - 7Eh | Fh disregard ID)
4	SRV	*00h*	Sound dump request
5	SND		Sound number
6	EOX	*F7h*	End of Exclusive

Remark:
Sound number can be : *00h - 0Ch* : Flash stored preset
7Eh : All presets
7Fh : Play / edit buffer

Global Parameters Dump Request:

Format : *F0h 3Eh 19h DEV 01h 00h F7h*

Where:

Index	Label	Value	Description
0	EXC	*F0h*	Marks start of SysEx
1	IDW	*3Eh*	Waldorf Music ID
2	IDE	*19h*	Streichfett ID
3	DEV		MIDI Device ID (00h - 7Eh | 7Fh disregard ID)
4	SRV	*01h*	Global parameters dump request
5	RSV	*00h*	Reserved
6	EOX	*F7h*	End of Exclusive

Sound Dump:

Format : *F0h 3Eh 19h DEV 10h SND DAT[24] XS F7h*

Where:

Index	Label	Value	Description
0	EXC	*F0h*	Marks start of SysEx
1	IDW	*3Eh*	Waldorf Music ID
2	IDE	*19h*	Streichfett ID

3	DEV		Device ID (00h - 7Eh | 7Fh disregard ID)
4	SRV	*10h*	Sound dump
5	SND		Sound number
6-29	DAT[24]		Sound data (see sound para meters table)
30	XS		Sysex checksum (7 bit bytesum)
31	EOX	*F7h*	End of Exclusive

Remarks:
Bytesum is performed from IDW (byte 1) to the end of DAT[byte 29]
Sound number can be : *00h - 0Ch* : flash stored preset
7Fh : play / edit buffer

Global Dump:

Format : *F0h 3Eh 19h DEV 11h 00h DAT[8] XS F7h*

Where:

Index	Label	Value	Description
0	EXC	*F0h*	Marks start of SysEx
1	IDW	*3Eh*	Waldorf Music ID
2	IDE	*19h*	Streichfett ID
3	DEV		MIDI Device ID
4	SRV	*11h*	Global parameters dump
5	RSV	*00h*	Reserved
6-13	DAT[8]		Global parameters data (see global parameters table)
14	XS		Sysex checksum (7 bit bytesum)
15	EOX	*F7h*	End of Exclusive

Remark:
Bytesum is performed from IDW (byte 1) to the end of DAT [byte 13]

Sound parameters :

ID	Description	Range		Default
0	Registration	0...127	Registration setting	0
1	Octave Switch	0...2	0:Base 1:Both 2:8va	0
2	Ensemble Effect	0...2	0: Strings 1: Strings+Chorus 2: Chorus	1
3	Ensemble	0/1	0:off 1:on	1
4	Crescendo	0...127	Strings envelope attack rate	32
5	Release	0...127	Strings envelope release rate	64
6	Tone	0...127	Solo Section Tone	0
7	Tremolo	0...127	Solo Section Tremolo	0
8	Split/Layer	0...2	0: Split low 1:Layer 2:Split high	1
9	Split key	0...127	Note number for Split low/high	60

10	Envelope Mode	0/1	0: Attack-Release 1:Attack-Sustain-Decay	1
11	Attack	0...127	Solo envelope attack / percussion	0
12	Decay	0...127	Solo envelope release/ decay	64
13	Balance	0...127	0: Strings.. 64: Strings+Solo 127: Solo	0
14	Animate	0...127	Animate Effect Depth	0
15	Phaser	0...127	Phaser Depth	0
16	Reverb	0...127	Reverb Depth	0
17	reserved			0
18	reserved			0
19	reserved			0
20	reserved			0
21	reserved			0
22	reserved			0
23	reserved			0

Global Parameters:

ID	Description	Range	Default
0	MIDI Channel	(0 - 31)	16
1	Tuning	(1 - 127)	64
2	Transpose	(52 - 76)	64
3	Pitch Bend Range	(0 - 12)	2
4	MIDI Device ID	(0 - 126)	0
5	Reserved		0
6	Reserved		0
7	Reserved		0

Remark: Single MIDI channel is from 0 to 15
Omni is from 16 to 31 (Transmit channel is on the lowest bits)

IV) Universal SysEx Messages

MIDI Identity Inquiry:

Format : *F0h 7Eh dev 06h 01h F7h*

Where:

Index	Label	Value	Description
0	EXC	*F0h*	Marks Start of SysEx
1	IDU	*7Eh*	Universal / non realtime sysex
2	IDE	*dev*	Device ID (00h - 7Eh | 7Fh disregard ID)
3	SI1	*06h*	General information
4	SI2	*01h*	Identity request
5	EOX	*F7h*	End of Exclusive

MIDI Identity Reply:

Format : *F0h 7Eh dev 06h 02h 3Eh 19h 00h 00h 00h MSB LSB F7h*

Where:

Index	Label	Value	Description
0	EXC	*F0h*	Marks Start of SysEx
1	IDU	*7Eh*	Universal / non realtime sysex
2	IDE	*dev*	Device ID (00h - 7Eh | 7Fh disregard ID)
3	SI1	*06h*	General information
4	SI2	*02h*	Identity reply
5	IDW	*3Eh*	Waldorf Music ID
6	DCL	*19h*	Streichfett ID
7	DCM	*00h*	Main board revision
8	DML	*00h*	Boot loader revision (MSB)
9	DMH	*00h*	Boot loader revision (LSB)
10	SFM	*MSB*	Firmware revision (MSB)
11	SFL	*LSB*	Firmware revision (LSB)
12	EOX	*F7h*	End of Exclusive

In order to find which DIN / USB port a Streichfett Synthesizer is connected to, you can use MIDI identity request and reply messages. Open all in ports and cycle through every out port sending identity requests and waiting for potential replies.

Once you get a specific Streichfett identity reply message, you also get the in / out ports combination connected to the synthesizer.

It is also possible to retrieve the internal software revision within the identity reply message.

EG Konformitätserklärung/ Declaration of Conformity

des Herstellers / *of the manufacturer:*

Waldorf Music GmbH
Lilienthalstr. 7
53424 Remagen / Germany

Verantwortliche Person / *Responsible person:*

Stefan Stenzel

erklärt hiermit, dass das Produkt / *will be hereby declared that the following named product*

Waldorf Streichfett

Gerätetyp / *Device type:* **Synthesizer**

Gerätenummer / *Device number*: **4260126380608**

in Übereinstimmung mit den Richtlinien,

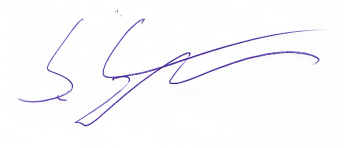
conforms to the requirements

2004/108/EG und 2006/95/EG

in Verkehr gebracht wurde. Für die Konformitätserklärung wurde nachstehende Norm angewandt:

The following standards have been used to declare conformity:

EN 55013



Remagen, 28th of June 2014

Stefan Stenzel, Geschäftsführer

Stefan Stenzel, Board Of Managment

CE

Am 15.12.2004 wurde die überarbeitete Richtlinie 2004/108/EG zur Elektromagnetischen Verträglichkeit von der Europäischen Kommission veröffentlicht (AB. L 390/2004). Sie ersetzt die bisher geltende EMV-Richtlinie 89/336/EWG.

Im Zusammenhang mit dieser Überarbeitung gelten folgende Übergangsfristen: Im Juli 2007 wird die bisher geltende Richtlinie (89/336/EWG) aufgehoben. Die Übergangsfrist zur Anwendung der neuen Richtlinie (2004/108/EG) endet am 20. Juli 2009.

Normen für Audio

EN 55013 EN 55020 EN 61000-3-2 EN 61000-3-3)

EN 55013

Ton-und Fernseh-Rundfunkempfänger und verwandte Geräte der Unterhaltungselektronik -Funkstöreigenschaften -Grenzwerte und Messverfahren (IEC/ CISPR 13: 2001, modifiziert

+ A1: 2003); Deutsche Fassung EN 55013: 2001 + A1: 2003

EN 55020

Ton-und Fernseh-Rundfunkempfänger und verwandte Geräte der Unterhaltungselektronik -Störfestigkeitseigenschaften - Grenzwerte und Prüfverfahren (IEC/ CISPR 20: 2002 + A1: 2002); Deutsche Fassung EN 55020: 2002 + A1: 2003

EN 61000-3-2

Elektromagnetische Verträglichkeit (EMV) – Teil 3-2: Grenzwerte – Grenzwerte für Oberschwingungsströme (Geräte-Eingangsstrom £ 16 A je Leiter) (IEC 61000-3-2: 2000, modifiziert) Deutsche Fassung EN 61000-3-2: 2000

EN 61000-3-3

Elektromagnetische Verträglichkeit (EMV) - Teil 3-3: Grenzwerte – Begrenzung von Spannungsänderungen, Spannungsschwankungen und Flicker in öffentlichen Niederspannungs-Versorgungsnetzen für Geräte mit einem Bemessungsstrom £ 16 A je Leiter, die keiner Sonderanschlussbedingung unterliegen (IEC 61000-3-3: 1994 + A1: 2001) Deutsche Fassung EN 61000-3-3: 1995 + Corrigendum: 1997 + A1: 2001

Andere Normen unter

http://www.ce-zeichen.de/nsp.htm

2006/95/EG Elektrische Betriebsmittel (Niederspannungsrichtlinie)

FCC Information (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT! This product, when installed as indicated in the instructions contained in this Manual, meets FCC requirements. Modifications not expressly approved by Waldorf may void your authority, granted by the FCC, to use this product.

2. IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class „B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determinated by turning the unit „OFF" and „ON", please try to eliminate the problem by using one of the following measures: Relocate either this product or the device that is being affected by the interference. Utilize power outlets that are on branch (Circuit breaker or fuse) circuits or install AC line filter/s. In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable. If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distributed this type of product. The statements above apply ONLY 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 present appareil numerique n'emet pas de briut radioelectriques depassant les limites aplicables aux appareils numeriques de la „Classe B" prescrites dans la reglement sur le brouillage radioelectrique edicte par le Ministre Des Communications du Canada. Ceci ne s'applique qu'aux produits distribués dans Canada.

Other Standards (Rest of World)

This product complies with the radio frequency interference requirements of the Council Directive 89/336/EC.

Cet appareil est conforme aux prescriptions de la directive communautaire 89/336/EC.
Dette apparat overholder det gaeldenda EF-direktiv vedrørendareadiostøj.

Diese Geräte entsprechen der EG-Richtlinie 89/336/EC.

Product Warranty

Thank you for choosing this Waldorf product. It is a dependable device and is designed to last. However, the potential for defects in material or workmanship cannot be eradicated completely. This is why we provide an extended warranty for you. This warranty covers all defects in material and workmanship for a period of one year from the date of original purchase. During this time, Waldorf Music will repair or replace the product without charge for materials or labor, provided the product was first inspected and found faulty by Waldorf Music or an authorized service center. You must first contact your dealer or distributor by telephone. Products that were mailed without prior agreement cannot be exchanged or repaired free of charge. The unit must be insured and sent prepared in its original package. Please include a detailed description of the defect. Products that were not send prepared or in the original package will be returned unopened. Waldorf Music reserves the right to upgrade the unit with the latest technological advances if necessary. This warranty does not cover defects due to abuse, operation under other than specified conditions, or repair by unauthorized persons. The warranty covers only those malfunctions caused by material or work-manship defects that occur during normal operation.

Product Support

If you have any questions about your Waldorf product, feel free to contact us via one of the four options listed below:

① Send us an email message. This is the most efficient and fastest way to contact us. Your questions will be forwarded immediately to the resident expert and you will quickly receive an answer.

support@waldorfmusic.de

② Send us a letter. It will take a bit longer, but it is just as dependable as an email.

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