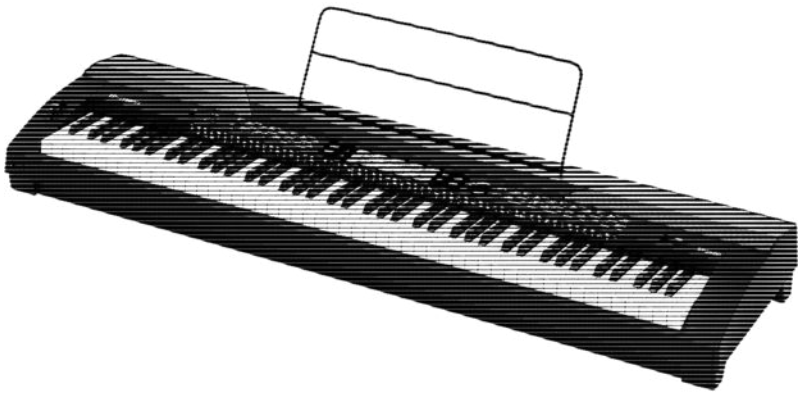
th•mann

SP 5600

portable grand keyboard



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MUSIC IS OUR PASSION

user manual

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1 General information

This user manual contains important information on the safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under *www.thomann.de*.

1.1 Further information

On our website (*www.thomann.de)* you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

1.2 Notational conventions

This manual uses the following notational conventions:

Letterings

The letterings for connectors and controls are marked by square brackets and italics.

Examples: *[VOLUME]* control, *[Mono]* button.

Displays

Texts and values displayed on the device are marked by quotation marks and italics.

Examples: *'24ch'*, *'OFF'*.

Instructions

The individual steps of an instruction are numbered consecutively. The result of a step is indented and highlighted by an arrow.

Example:

1. Switch on the device.
2. Press *[Auto]*.
   ⇨ Automatic operation is started.
3. Switch off the device.

Cross-references

References to other locations in this manual are identified by an arrow and the specified page number. In the electronic version of the manual, you can click the cross-reference to jump to the specified location.

Example: See *'Cross-references' on page 6*.

1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning signs	Type of danger
	Warning – high-voltage.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended to be used for electronic sound generation using a piano keyboard. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety

DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.

DANGER!

Electric shock caused by high voltages inside

Within the device there are areas where high voltages may be present. Never remove any covers.

There are no user-serviceable parts inside.

Do not use the device if covers, protectors or optical components are missing or damaged.

CAUTION!

Possible hearing damage

With loudspeakers or headphones connected, the device can produce volume levels that may cause temporary or permanent hearing impairment.

Do not operate the device permanently at a high volume level. Decrease the volume level immediately if you experience ringing in your ears or hearing impairment.

NOTICE!

Operating conditions

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.

NOTICE!

External power supply

The device is powered by an external power supply. Before connecting the external power supply, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly the user.

Unplug the external power supply before electrical storms occur and when the device is unused for long periods of time to reduce the risk of electric shock or fire.

3 Features

- 88 keys with hammer action
- Multifunction LED display
- Pitch bend wheel
- 128-voice polyphony
- 600 voices
- 230 programmed styles, 10 user styles
- 120 programmed songs, 5 user songs
- 5 demo songs
- Reverb, Chorus and Sustain effects
- Master EQ
- Sequencer
- Accompaniment and recording function
- Learning function and chord library
- Split and duo mode
- Metronome
- Transpose function
- Built-in speakers
- USB port
- Automatic shutoff
- Sustain pedal, music stand and 12 V power adapter included

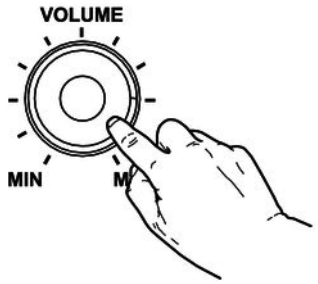
4 Assembly instructions

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

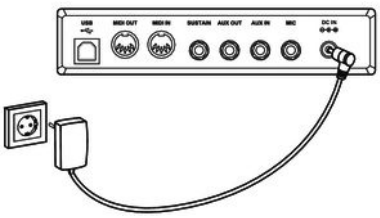
Set up the device in the desired location.

Power supply

The unit is powered by the included 12 V power supply. Make sure that the device is turned off before you connect it to the power supply or disconnect it.



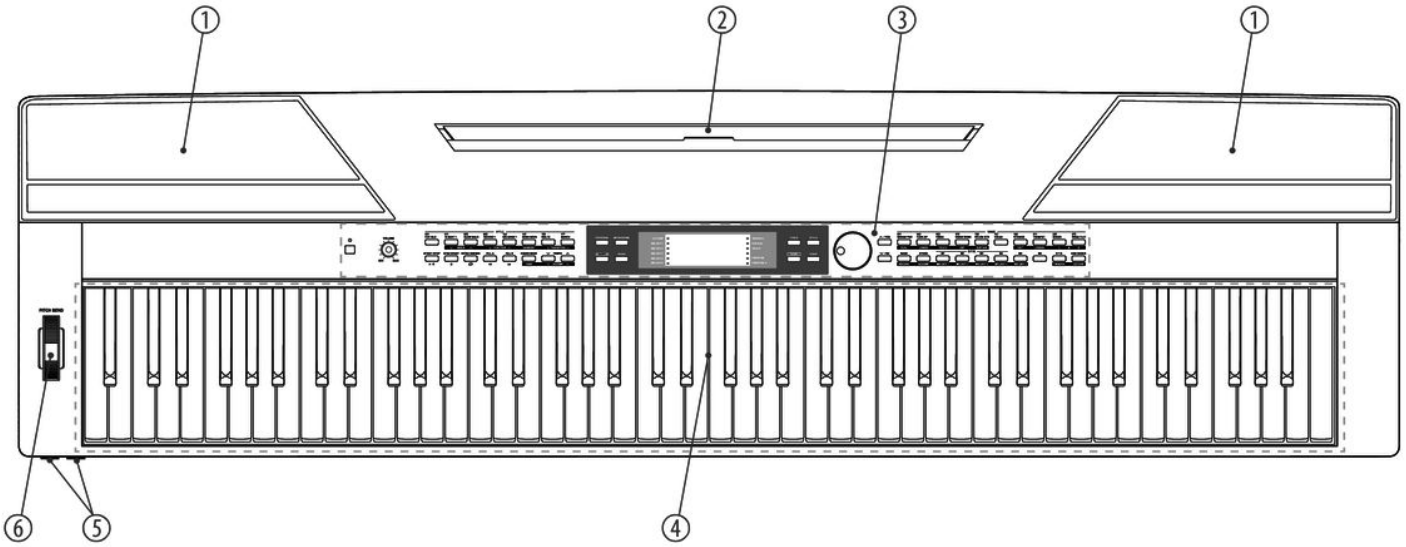
Turn the volume control counter-clockwise to minimum before connecting the device to the power supply or to other devices. This is to protect the speakers from damage.



Connect the cable from the power adapter outlet to the input socket *[DC IN]* on the rear panel of the device. Plug the plug of the power cord into a properly wired and earthed mains wall outlet.

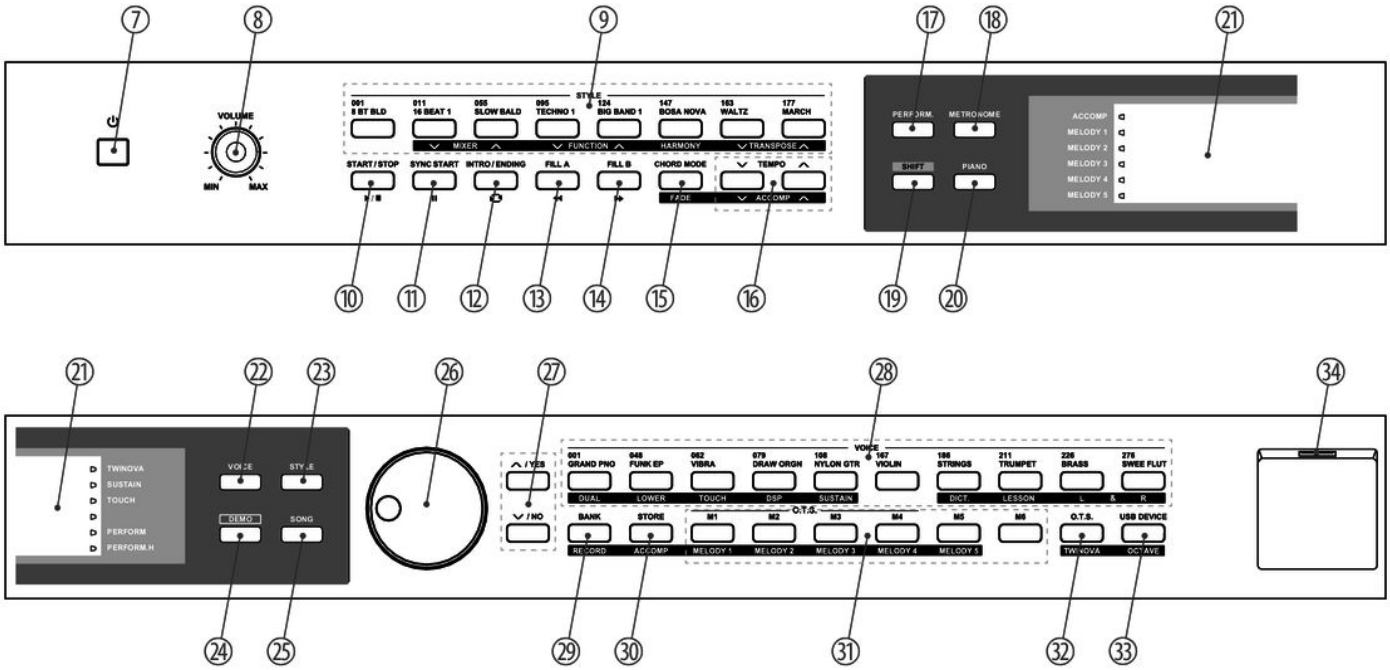
5 Connections and controls

Overview



1	Built-in speakers.
2	Music stand holder.
3	Control panel with function keys and display.
4	Claviature with 88 keys.
5	2 × connection sockets for headphones.
6	Pitch bend wheel for changing the pitch.

Operating panel

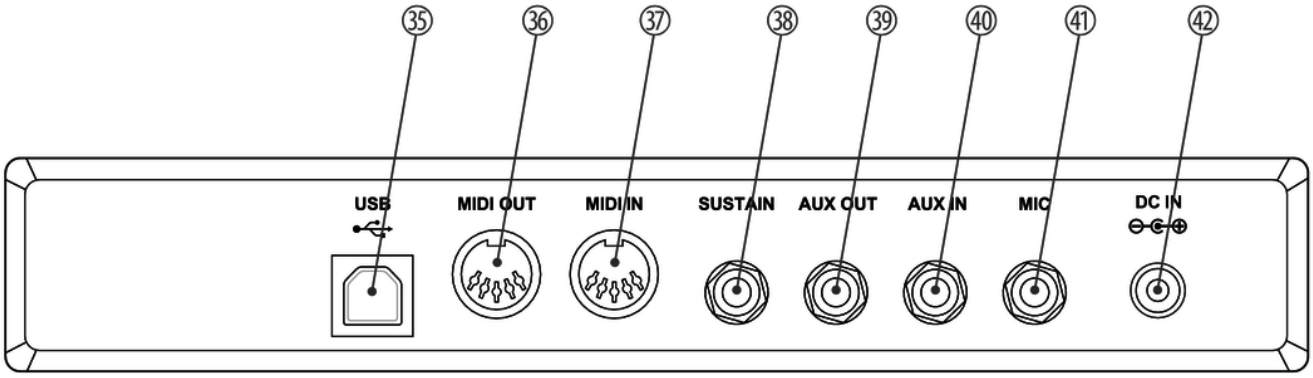


7	Button to turn the device on and off.
8	*[VOLUME]* Rotary volume control.
9	*[STYLE]* Single button function: direct Style selection. Button function while pressing the *[SHIFT]* button: ■ *[MIXER]* To open the Mixer menu. ■ *[FUNCTION]* To open the Function menu. ■ *[HARMONY]* Enabling / disabling the Harmony mode. ■ *[TRANSPOSE]* Transposing the piano keys in semitone steps.
10	*[START / STOP]* To start / stop the playback of demo songs or styles.
11	*[SYNC START]* Enabling / disabling the Sync start function in accompaniment and recording mode.
12	*[INTRO/ENDING]* Inserting an intro / ending in accompaniment mode.

13	*[FILL A]* Inserting Fills in accompaniment mode.
14	*[FILL B]* Inserting Fills in accompaniment mode.
15	*[CHORD MODE]* | *[FADE]* Single button function: Enabling / disabling the Chord mode. Button function while pressing the *[SHIFT]* button: Enabling / disabling the Fade function in accompaniment mode.
16	*[TEMPO]* | *[ACCOMP]* Single button function: Increasing / decreasing playback tempo. Button function while pressing the *[SHIFT]* button: Setting the accompaniment track volume.
17	*[PERFORM]* Enabling / disabling the Performance assistant.
18	*[METRONOME]* Enabling / disabling the Metronome.
19	*[SHIFT]* Enabling the second function of dual function buttons.
20	*[PIANO]* Calling Piano mode.
21	Display.
22	*[VOICE]* Calling Voice mode.
23	*[STYLE]* Calling Style mode.
24	*[DEMO]* Calling Demo mode.
25	*[SONG]* Calling Song mode.
26	Jog dial for selecting functions, parameters and values.
27	▲ | *[YES]*: Increasing parameter selection and displayed value by one. ▼ | *[NO]*: Decreasing parameter selection and displayed value by one.

28	*[VOICES]* Single button function: direct Voice selection. Button function while pressing the *[SHIFT]* button: ■ *[DUAL]* Enabling / disabling Dual mode (Layer function). ■ *[LOWER]* Enabling / disabling Lower mode (Split function). ■ *[TOUCH]* Opening the menu to adjust the touch sensitivity of the keyboard. ■ *[DSP]* Turning digital effects on and off. ■ *[SUSTAIN]* Enabling / disabling the Sustain function. ■ *[DICT]* Opening chord dictionary. ■ *[LESSON]* Enabling / disabling the Lesson mode. ■ *[L]* Selecting the left hand in Lesson mode. ■ *[R]* Selecting the right hand in Lesson mode.
29	*[BANK]* | *[RECORD]* Single button function: Selecting memory bank. Button function while pressing the *[SHIFT]* button: Enabling / disabling the Recording mode.
30	*[STORE]* | *[ACCOMP]* Single button function: Saving current values as user setting. Button function while pressing the *[SHIFT]* button: Record enabling accompaniment track.
31	*[M1] … [M6]* | *[MELODY 1] … [MELODY 5]* Single button function: Calling up user settings M1 … M5 (in O.T.S. mode M1 … M4). Button function while pressing the *[SHIFT]* button: Record enabling melody tracks 1 … 5.
32	*[O.T.S.]* | *[TWINOVA]* Single button function: Enabling / disabling Single-finger mode (One Touch Setting). Button function while pressing the *[SHIFT]* button: Enabling / disabling the TWINOVA mode.
33	*[USB DEVICE]* | *[OCTAVE]* Single button function: Opening the menu for adjusting the USB functions. Button function while pressing the *[SHIFT]* button: Octaving the keyboard in TWINOVA mode.
34	USB interface for connecting a USB device.

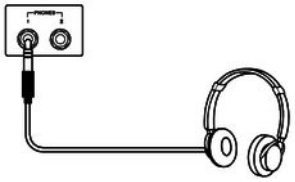
Rear panel connections



35	*[USB]* USB interface to connect a computer.
36	*[MIDI OUT]* MIDI out for connecting an external MIDI device.
37	*[MIDI IN]* MIDI in for connecting an external MIDI device.
38	*[SUSTAIN]* Pedal connecting socket (1/4" phone jack).
39	*[AUX OUT]* Output socket for connecting the device to an amplifier, stereo system, mixer or recording device (1/4" phone jack).
40	*[AUX IN]* Input socket for connecting an external audio device (e.g. MP3 or CD player) (1/4" phone jack).
41	*[MIC]* Input socket for connecting a microphone.
42	*[DC IN]* Connection for the power adapter.

6 Connection options

Headphones

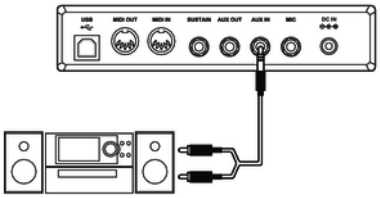


To the left beneath the keyboard you find the headphones outlets 1 and 2.

Connecting headphones (not supplied) to outlet 2 mutes the speakers.

When using output 1 You hear the sound through headphones and speakers.

External audio devices via AUX OUT

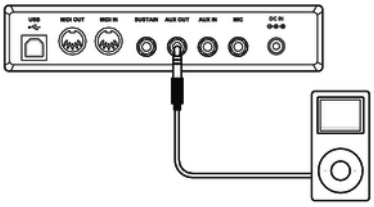


Use the *[AUX OUT]* socket to connect the keyboard to an amplifier, stereo device, mixing console or recording device. Plug one end of the audio cable into the *[AUX OUT]* socket on the rear panel of the keyboard and the other end into the input of the respective audio device.

NOTICE!

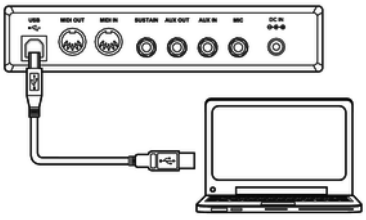
To prevent damage to the speakers, turn the volume down to 'Minimum' before you connect other devices to the keyboard.

External audio devices via AUX IN



Use the *[AUX IN]* socket to connect a, for example, CD or MP3 player to the keyboard. So you can playback music through the internal speakers of the keyboard and simultaneously play along to it. Plug one end of the audio cable into the *[AUX IN]* socket on the rear panel of the keyboard and the other end into the output of the respective audio device.

Computer via USB

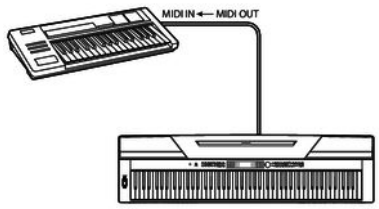


You can connect the keyboard to exchange data with a PC via the USB port. This also allows the transfer of MIDI files.

NOTICE!

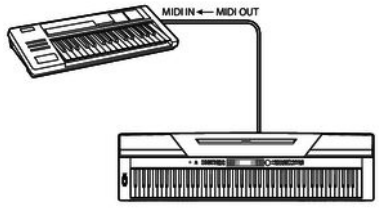
Do not set the USB interface as the in and output at the same time in the computer software. Otherwise, there will be overlap when playing the keyboard.

MIDI device via MIDI IN



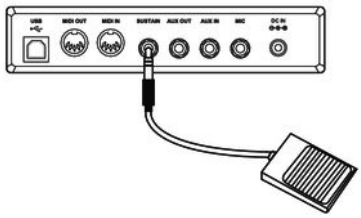
Use the MIDI interface *[MIDI IN]* to receive MIDI data from an external MIDI device.

MIDI device via MIDI OUT



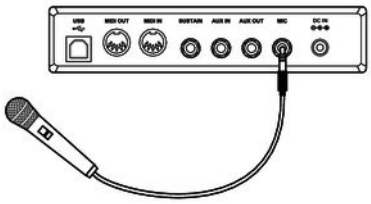
Use the MIDI interface *[MIDI OUT]* to send MIDI data to an external MIDI device.

Sustain pedal



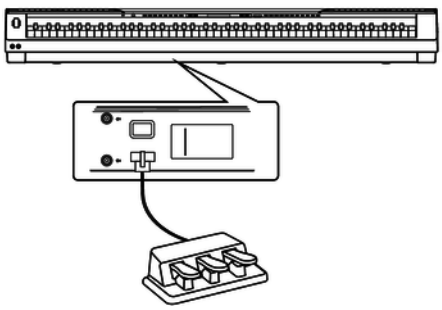
Use the connection socket *[SUSTAIN]* to connect a sustain pedal to the keyboard.

Microphone



Use the connection socket *[MIC]* to connect a dynamic microphone (1/4" jack) to the device.

Pedal box



Use the connection socket on the bottom of the keyboard to connect the pedal of the optional SP-5600 wooden stand.

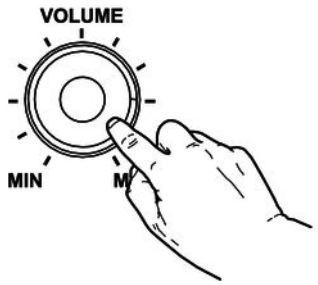
7 Quick start guide

In order to provide you with a quick introduction, the main functions of the keyboard are described in brief in this chapter. A detailed description of the setting options can be found in the chapters *Chapter 9 'Operating' on page 30* and *Chapter 8 'Turning the keyboard on / off, setup' on page 20*.

Turning the keyboard on / off

Press the power button on the left of the operating panel to turn the device on and off. The display shows *'Loading!'*. The keyboard is immediately operational.

Adjusting the volume



Adjust the rotary control *[VOLUME]* for a pleasant volume for playback and practising. Turn this control clockwise to increase the volume. Turn it counter-clockwise to reduce volume.

Playing demo sequences

The demo sequences stored in the device show the sound and the pitch range of the keyboard.

1. Press *[DEMO]* to start playing the demo sequences in a continuous loop.
2. Use *[YES]* and *[NO]* to toggle between the five demo sequences (see *Chapter 13.4 'Demo list' on page 72*).
3. Press *[DEMO]* again or *[START/STOP]* to stop playing the demo sequences.

Playing voices

The keyboard features a selection of 600 authentic voices, see *Chapter 13.3 'Voice list' on page 63*.

1. Press *[VOICE]* or one of the direct selection buttons to activate the last set or a desired voice directly.

   ⇨ The display shows the name and number of the first right hand voice (main voice), e.g. *'VOICE R1'*, *'001'*, *'GrandPno'*.

2. Use the buttons *[YES]* and *[NO]*, the jog dial or a direct select button to assign another voice.

   Press the *[VOICE]* button repeatedly to toggle between the upper and lower voice of a direct selection button.

In dual and split mode, you toggle between the first and second right hand voice and the left hand voice by repeatedly pressing the *[VOICE]* button: *'VOICE R1'*, *'VOICE R2'* and *'VOICE L'*, see the following chapters for Dual and Split mode.

Style playing

The styles stored in the keyboard are used to support your own playing at performances, while practising and recording.

1. Press *[STYLE]* to activate the Style mode.
2. Use the buttons *[YES]* and *[NO]*, the jog wheel or a direct select button to enable the desired style directly (see *Chapter 13.2 'Styles list' on page 58*).
3. Press *[START/STOP]* to start or stop style playback.

Playing songs

The keyboard offers a choice of 120 songs to accompany your playing at performances, while practising and recording. In addition, five tracks for your own recordings are available.

1. Press *[SONG]* to start playing the songs in a continuous loop.
2. Use *[YES]* and *[NO]* to toggle between the stored songs (see *Chapter 13.1 'Song list' on page 56*).
3. Press *[START/STOP]* to start or stop song playback.
4. Press *[STYLE]* or *[VOICE]* to exit the song mode.

Recording songs

You can record up to five own tracks with the keyboard and store them in the internal memory.

1. Press *[SHIFT]* and *[RECORD]* simultaneously to enable the recording mode.
2. Use *[YES]* and *[NO]* or the jog dial to select a free memory location for the recording.
3. Press *[SHIFT]* and *[RECORD]* simultaneously again to record-enable the keyboard.
4. The recording starts as soon as you play the first tone or chord or press *[START/STOP]*.
5. Press again *[SHIFT]* and *[RECORD]* simultaneously, to end the recording and to play the recorded sequence in an endless loop.
6. Use *[SHIFT]* and *[RECORD]* to end the recording mode.

8 Turning the keyboard on / off, setup

8.1 Turning the keyboard on / off

Press the power button on the left of the operating panel to turn the device on and off. The display shows *'Loading!'*. The keyboard is immediately operational.

If the display does not light up after switching on the keyboard, check the power supply.

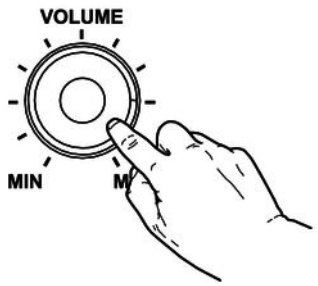
If you hear nothing coming from the speakers, the volume may be set to 'minimum'.

8.2 Automatic shutdown

If the keyboard is not in use, it shuts off automatically after 30 minutes. To adjust or deactivate the automatic shutdown, press *[SHIFT]* and *[FUNCTION]* twice. The time window can then be set via *[YES]* and *[NO]*.

To turn the device on again after an automatic shutdown, press the on / off switch to the left of the panel.

8.3 Adjusting the volume



Adjust the rotary control *[VOLUME]* for a pleasant volume for playback and practising. Turn this control clockwise to increase the volume. Turn it counter-clockwise to reduce volume.

8.4 Setting the touch sensitivity

With this function you can adjust the touch response of the keyboard at four levels.

1. Press the buttons *[SHIFT]* and *[TOUCH]* simultaneously to open the menu for adjusting the touch sensitivity.
2. Adjust the touch sensitivity with the buttons *[YES]* and *[NO]* or with the jog dial.
3. Press *[YES]* and *[NO]* simultaneously to restore the default setting *'002'*.

Parameter	Meaning
'OFF'	Touch sensitivity is off.
'001'	Soft In this setting, the volume is lower than usual even when playing with a soft touch.
'002'	Normal This setting corresponds to the usual touch response of a clavia-ture.
'003'	Hard In this setting, the volume is higher than usual even when playing with a hard touch.

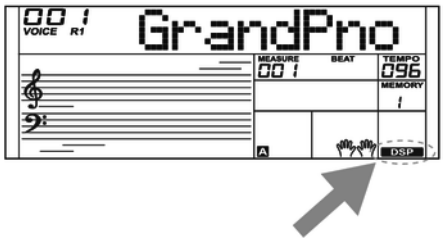
8.5 Sustain effect

This feature allows you to assign a general Sustain to the keyboard. When the Sustain function is turned on, all tones played on the keyboard linger.

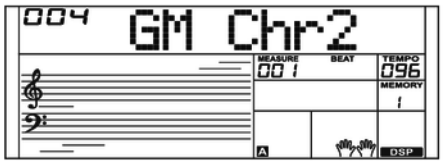
1. Press *[SHIFT]* and *[SUSTAIN]* simultaneously to add the effect.
2. Press *[SHIFT]* and *[SUSTAIN]* again simultaneously to turn the effect off again.

8.6 Digital effects

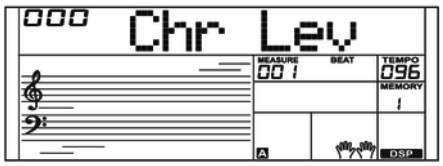
The DSP functions let you simulate the acoustic effects under different environmental conditions.



1. Press *[SHIFT]* and *[DSP]* simultaneously to turn the function on.
   ⇨ The icon *'DSP'* appears on the display.



2. Keep *[SHIFT]* pressed and press *[FUNCTION]* ▲ or *[FUNCTION]* ▼ until the display shows *'GM Chr2'*.
3. Turn the jog dial within 3 seconds to select the desired effect.



4. Keep *[SHIFT]* pressed and press *[FUNCTION]* ▲ or *[FUNCTION]* ▼ until the display shows *'Chr Lev'*.
5. Select with the jog dial the desired effect strength between 000…127.
6. Press *[SHIFT]* and *[DSP]* simultaneously to turn the function off again.

   ⇨ The *'DSP'* icon goes out.

8.7 Setting up the keyboard, Function menu

Press the buttons *[SHIFT]* and *[FUNCTION]* ▲ simultaneously or *[FUNCTION]* ▼ to call up the Function menu. Select the desired sub menu using the buttons *[FUNCTION]* ▲ or *[FUNCTION]* ▼. You can then change the following parameters using the jog dial or the buttons *[YES]* and *[NO]*.

Option	LCD	Control range	Default value
Fine tuning	*'Tune'*	–50 … 50	000
Time signature	*'Beat'*	0, 2 … 9	004
Split point	*'Split Pt'*	1 … 88	034
Pedal function	*'SPd'*	SUST, SOFT, St/T, MEM	SUST
	'UPd'	SOFT, St/T, MEM	SOFT
Selection Harmony setting	*'HAR TYPE'*	Duet, Standard Trio, Full Chord, Rock Duet, Country Duet, Country Trio, Block, 4 Close 1, 4 Close 2, 4 Open, 1+5, Octave1, Octave2, Strum, Echo1, Echo2, Echo3, Echo4, Tremolo1, Tremolo2, Tremolo3, Tremolo4, Trill1, Trill2, Trill3, Trill4	Duet
Equalizer	*'EQ TYPE'*	Pop, Rock, Class, Jazz, Dance, Reset	Reset
Reverb effect	*'Rev TYPE'*	Room1, Room2, Room3, Hall1, Hall2, Hall3, Chr1, Chr2, Del, PanD	Hall1
Reverb volume	*'Rev Lev'*	0 … 127	depending on the selected voice
Chorus effect	*'Chr TYPE'*	Chorus1, Chorus2, GM Chr1, GM Chr2, Flanger1, Flanger2, Rotary2	GM Chr2
Chorus volume	*'Chr Lev'*	0 … 127	depending on the selected voice
MIDI receive channel	*'Midi In'*	1 … 16, ALL	ALL
MIDI send channel	*'Midi Out'*	1 … 16	001
Automatic shutoff	*'POWER OFF'*	030, 060, OFF	030

If you don't press any key within five seconds after entering the function menu, the menu is automatically closed.

8.7.1 Fine tuning

With this function you can fine tune the entire claviature in cent steps.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'Tune'* menu. The current setting appears on the display.
2. Adjust the pitch using the buttons *[YES]* and *[NO]* or the jog dial in a range from –50 to +50 cents. Each time a key is pressed, the value changes by 1 cent.
3. Press *[YES]* and *[NO]* simultaneously to restore the default pitch.

8.7.2 Time signature

With this function you can set the time signature in a range from 0 to 9.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'Beat'* menu. The current setting appears on the display.
2. Adjust the time signature with the buttons *[YES]* and *[NO]* or with the jog dial.
3. Press *[YES]* and *[NO]* simultaneously to restore the time signature standard value *'004'*.

8.7.3 Split point

Using this function you can select a point to split the whole claviature into two areas.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'Split Pt'* menu. The display shows the current setting.
2. Specify the desired split point using the buttons *[YES]* and *[NO]* or the jog dial. The keys to the right of this point are the right hand area, the keys of the other sides are the left hand area (chord area).
3. Press *[YES]* and *[NO]* simultaneously to restore the split point standard value *'F#3'*.

In TWINOVA mode, the default split point is E3 (32) and can only be determined by the user between C3 and C6 (28 to 64).

8.7.4 Pedal function

With this function you can assign the pedal function.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into one of the menus *'SPd'* (Sustain) or *'UPd'* (Soft). The current setting appears on the display.
2. Use the buttons *[YES]* and *[NO]* or the jog dial to assign the desired pedal function:

Sustain pedal (enclosed)	**Display**		**Soft pedal (left pedal of the optional SP-5600 stand)**	**Display**
Sustain pedal	*'SPd Sust'*		Soft pedal	*'UPd Soft'*
Soft pedal	*'SPd Soft'*		Enabling / disabling the accompaniment track	*'UPd St/T'*
Enabling / disabling the accompaniment track	*'SPd St/T'*		Controlling the memory function	*'UPd Mem'*
Controlling the memory function	*'SPd Mem'*			

3. Press *[YES]* and *[NO]* simultaneously to restore the pedal function standard value *'Soft'* or *'Sust'*.

8.7.5 Selection Harmony setting

With this function you can pre-select a harmony setting.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'HAR TYPE'* menu. The current setting appears on the display.
2. Use the buttons *[YES]* and *[NO]* or the jog dial to assign the desired function:
   - *'Duet'*
   - *'Standard Trio'*
   - *'Full Chord'*
   - *'Rock Duet'*
   - *'Country Duet'*
   - *'Country Trio'*
   - *'Block'*
   - *'4 Close 1'*
   - *'4 Close 2'*
   - *'4 Open'*
   - *'1+5'*
   - *'Octave1'*
   - *'Octave2'*
   - *'Strum'*
   - *'Echo1'*
   - *'Echo2'*
   - *'Echo3'*
   - *'Echo4'*
   - *'Tremolo1'*
   - *'Tremolo2'*
   - *'Tremolo3'*
   - *'Tremolo4'*
   - *'Trill1'*
   - *'Trill2'*
   - *'Trill3'*
   - *'Trill4'*
3. Press *[YES]* and *[NO]* simultaneously to load the standard value *'Duet'*.

8.7.6 Equalizer

With this function you can pre-select a certain tone colour.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *[EQ TYPE]* menu. The current setting appears on the display.
2. Use the buttons *[YES]* and *[NO]* or the jog dial to assign the desired presetting:
   - *'Pop'*
   - *'Rock'*
   - *'Class'*
   - *'Jazz'*
   - *'Dance'*
   - *'Reset'*
3. Press *[YES]* and *[NO]* simultaneously to load the standard value *'Reset'* (EQ off).

8.7.7 Reverb effect

With this function you can turn on the Reverb effect and select the effect type.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'Rev TYPE'* menu. The current setting appears on the display.
2. Use the buttons *[YES]* and *[NO]* or the jog dial to assign the desired function:
   - *'Room1'*
   - *'Room2'*
   - *'Room3'*
   - *'Hall1'*
   - *'Hall2'*
   - *'Hall3'*
   - *'Chr1'*
   - *'Chr2'*
   - *'Del'*
   - *'PanD'*
3. Press *[YES]* and *[NO]* simultaneously to load the standard value *'Hall1'*.

8.7.8 Reverb volume

With this function you can set the Reverb effects volume in a range from 0 to 127.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'RevLev'* menu. The current setting appears on the display.
2. Adjust the effects ratio with the buttons *[YES]* and *[NO]* or with the jog dial.
3. Press *[YES]* and *[NO]* simultaneously to reset the effects ratio to the standard value (depending on the selected voice).

8.7.9 Chorus effect

With this function you can turn on the Chorus effect and select the effect type.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'Chr TYPE'* menu. The current setting appears on the display.
2. Use the buttons *[YES]* and *[NO]* or the jog dial to assign the desired function:
   - *'Chorus1'*
   - *'Chorus2'*
   - *'GM Chorus1'*
   - *'GM Chorus2'*
   - *'Flanger1'*
   - *'Flanger2'*
   - *'Rotary1'*
   - *'Rotary2'*
3. Press *[YES]* and *[NO]* simultaneously to load the standard value *'GM Chorus2'*.

8.7.10 Chorus volume

With this function you can set the Chorus effects volume in a range from 0 to 127.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'ChrLev'* menu. The current setting appears on the display.
2. Adjust the effects ratio with the buttons *[YES]* and *[NO]* or with the jog dial.
3. Press *[YES]* and *[NO]* simultaneously to reset the effects ratio to the standard value (depending on the selected voice).

8.7.11 MIDI receive channel

With this function you can determine on which channel the keyboard receives MIDI information from other devices.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'Midi In'* menu. The current setting appears on the display.
2. Specify the desired MIDI receive channel using the buttons *[YES]* and *[NO]* or the jog dial.
3. Press *[YES]* and *[NO]* simultaneously to reset channel selection to the standard value *'ALL'*.

8.7.12 MIDI send channel

With this function you can determine on which channel the keyboard sends MIDI information to other devices.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'Midi Out'* menu. The current setting appears on the display.
2. Specify the desired MIDI send channel using the buttons *[YES]* and *[NO]* or the jog dial.
3. Press *[YES]* and *[NO]* simultaneously to reset channel selection to the standard value *'001'*.

8.7.13 Automatic shutdown

With this function you can specify whether and after what time the automatic shutdown of the keyboard is carried out.

1. Use *[FUNCTION]* ▲ or *[FUNCTION]* ▼ to change into the *'Power Off'* menu. The current setting appears on the display.
2. Use the buttons *[YES]* and *[NO]* or the jog dial to assign one of the following options:
   - *'030'* (automatic shutdown after 30 minutes)
   - *'060'* (automatic shutdown after 60 minutes)
   - *'OFF'* (automatic shutdown off).
3. Press *[YES]* and *[NO]* simultaneously to activate the presetting *'030'*.

8.8 Loading / saving user settings

1. Press the *[BANK]* button. The display shows the last selected memory bank.
2. Press *[BANK]* again and specify the desired memory bank 1 … 8.
3. Keep the *[STORE]* button pressed and simultaneously press one of the *[M1]* to *[M4]* buttons. The current settings are then stored in the respective memory location (M1 to M6). Please note that any data previously stored there will be deleted.
4. Press one of the *[M1]* to *[M6]* buttons. The saved settings are then loaded from the corresponding memory and replace the current settings thereby.

In O.T.S. mode, no settings can be loaded from the device memory.

8.9 Resetting user settings

Proceed as follows to reset the user settings:

1. Turn off the keyboard.
2. When turning it back on again, keep the buttons *[STORE]* and *[M1]* pressed.
   ⇨ All user settings will be reset without further confirmation prompt.

8.10 Deleting stored recordings

Deleting all recordings

Proceed as follows to clear the recording memory:

1. Turn off the keyboard.
2. When turning it back on again, keep the buttons *[SONG]* and *[RECORD]* pressed.
   ⇨ All recordings will be deleted without further confirmation prompt.

Deleting certain tracks

Proceed as follows to delete certain tracks:

1. Press *[SHIFT]* and *[RECORD]* simultaneously to enable the recording mode.
2. Use *[YES]* and *[NO]* or the jog dial to select the track you want to delete (accompaniment track *[ACCOMP]* or melody tracks *[MELODY 1]* … *[MELODY 5]*).
3. Confirm with *[YES]* or cancel the procedure with *[NO]*.
   ⇨ All highlighted recordings will be deleted without further confirmation prompt.

9 Operating

9.1 Piano mode

Press *[PIANO]* to activate the Piano mode. The whole keyboard sounds with normal piano voice.

9.2 Transposing

With this function you can adjust the pitch of the claviature in 12 semitone steps up or down.

1. Press *[SHIFT]* and one of the *[TRANSPOSE]* buttons simultaneously.
   ⇨ The display shows *'Transpos'*.
2. Use the *[TRANSPOSE]* buttons or the jog dial to adjust the keyboard pitch.
3. Press the *[TRANSPOSE]* buttons or the buttons *[YES]* and *[NO]* to restore the pre-setting (no transposing).

9.3 Playing demo sequences

The demo sequences stored in the device show the sound and the pitch range of the keyboard.

1. Press *[DEMO]* to start playing the demo sequences in a continuous loop.
2. Use *[YES]* and *[NO]* to toggle between the five demo sequences (see *Chapter 13.4 'Demo list' on page 72*).
3. Press *[DEMO]* again or *[START/STOP]* to stop playing the demo sequences.

9.4 Style playing

The styles stored in the keyboard are used to support your own playing at performances, while practising and recording.

1. Press *[STYLE]* to activate the Style mode.
2. Use the buttons *[YES]* and *[NO]*, the jog wheel or a direct select button to enable the desired style directly (see *Chapter 13.2 'Styles list' on page 58*).
3. Press *[START/STOP]* to start or stop style playback.

For playing also with chord recognition, enable the function 'Auto Bass Chord' (A.B.C.), see *Chapter 9.14 'Chord detection' on page 35*.

9.5 Playing songs

The keyboard offers a choice of 120 songs to accompany your playing at performances, while practising and recording. In addition, five tracks for your own recordings are available.

1. Press *[SONG]* to start playing the songs in a continuous loop.
2. Use *[YES]* and *[NO]* or the jog dial to toggle between the stored songs (see *Chapter 13.1 'Song list' on page 56*). If the selected file is empty, the display shows the message *'NoFile!'* and the song playback will be stopped.
3. Press *[START/STOP]* to start or stop song playback.
4. Press *[STYLE]* or *[VOICE]* to exit the song mode.

9.6 Metronome

1. Press the function button *[METRONOME]* to turn the Metronome on or off.
2. Set the desired tempo with the two function buttons *[TEMPO]* or the jog dial, *Chapter 9.7 'Tempo' on page 31*.
3. Set the desired time signature via the functions menu, see *Chapter 8.7.2 'Time signature' on page 23*.

The metronome is always synchronized with the currently playing style.

9.7 Tempo

All preprogrammed songs, styles and voices, and the metronome function are stored with certain tempo information. These presets can be adjusted at any time.

1. Press the two function buttons *[TEMPO]* or turn the jog dial during playback or with running metronome to adjust the desired tempo in a range from *'30'* … *'280'*.
2. Press the function buttons *[TEMPO]* simultaneously to reset the tempo to the respective standard value.

9.8 Mixer

This menu is used to adjust the volume of the various style elements.

1. Press *[SHIFT]* and one of the two function buttons *[MIXER]* simultaneously to open the Mixer menu. The display shows the last selected option, e.g. *'Rhythm_s'* and the last setting.
2. Use the buttons *[YES]* and *[NO]* or the jog dial to adjust the volume in a range from *'0'* … *'127'*.
3. Press the button *[SHIFT]* repeatedly along with one of the two function buttons *[MIXER]* to call up and adjust the following options in succession:
   - *'Rhythm_s'*
   - *'Rhythm_m'*
   - *'Bass'*
   - *'Chord1'*
   - *'Chord2'*
   - *'Chord3'*
   - *'Phrase1'*
   - *'Phrase2'*
   - *'Upper1'*
   - *'Upper2'*
   - *'LOWER'*
   - *'U-Disk'*

9.9 Selecting voices

The keyboard features a selection of 600 authentic voices, see *Chapter 13.3 'Voice list' on page 63*.

1. Press *[VOICE]* or one of the direct selection buttons to activate the last set or a desired voice directly.
   ⇨ The display shows the name and number of the first right hand voice (main voice), e.g. *'VOICE R1'*, *'001'*, *'GrandPno'*.
2. Use the buttons *[YES]* and *[NO]*, the jog dial or a direct select button to assign another voice.

   Press the *[VOICE]* button repeatedly to toggle between the upper and lower voice of a direct selection button.

In dual and split mode, you toggle between the first and second right hand voice and the left hand voice by repeatedly pressing the *[VOICE]* button: *'VOICE R1'*, *'VOICE R2'* and *'VOICE L'*, see the following chapters for Dual and Split mode.

9.10 Dual mode

In Dual mode, you can play two voices simultaneously.

1. First, select the first voice as described in section *Chapter 9.9 'Selecting voices' on page 32*.
2. Press *[SHIFT]* and *[DUAL]* simultaneously to enter the dual mode.
   ⇨ The display shows the number and description of the second right hand voice, e.g. *'VOICE R2'*, *'186'*, *'Strings'*.
3. Use the buttons *[YES]* and *[NO]*, the jog dial or a direct select button to assign another voice.

   Press the *[VOICE]* button repeatedly to toggle between the upper and lower voice of a direct selection button.
   ⇨ The currently set second voice appears in the display (*'Voice R2'*). If you now press a key, both voices sound simultaneously.
4. Press *[SHIFT]* and *[DUAL]* again to exit DUAL mode.

When the keyboard is split, the Dual mode affects only the keys to the right of the keyboard split point.

9.11 Split mode

With this function you can split the claviature into two areas and assign different voices. By default, the bass voice is left of the split point.

1. If desired, individually specify the split point as described at *Chapter 8.7.3 'Split point' on page 23*.
2. Assign the right hand voice as described in section *Chapter 9.9 'Selecting voices' on page 32*.
3. Press *[SHIFT]* and *[LOWER]* simultaneously to enter the Split mode.
4. Use the buttons *[YES]* and *[NO]*, the jog dial or a direct select button to assign a voice for the area to the left of the split point (second voice).
   ⇨ The currently set second voice appears in the display (*'Voice L'*). You now have the opportunity to play the keyboard with two different voices.
5. Press the *[LOWER]* button again to exit Split mode.

9.12 TWINOVA

In TWINOVA mode, the keyboard is divided into two areas with the same voice and the same pitch.

1. Select the desired voice, see *Chapter 9.9 'Selecting voices' on page 32*.
2. Press *[SHIFT]* and *[TWINOVA]* simultaneously to enter the TWINOVA mode.
3. If necessary, specify a split point, see *Chapter 8.7.3 'Split point' on page 23*.
4. If necessary, adapt the Octave area. Press *[SHIFT]* and *[OCTAVE]* simultaneously.
   ⇨ The display shows *'Octave'*.
5. Use the buttons *[YES]* and *[NO]* or the jog dial to move the octave area by one octave up or down (*'–01'* … *'+01'*).
   Press *[YES]* and *[NO]* simultaneously to restore the standard setting *'000'*.
6. Press *[SHIFT]* and *[TWINOVA]* simultaneously again to quit the TWINOVA mode.

9.13 Harmony mode

In harmony mode, suitable tones (harmonized) are automatically added to the notes played to create polyphony.

1. Press *[SHIFT]* and *[HARMONY]* simultaneously to enter the Harmony mode.
   ⇨ The *[HARMONY]* symbol appears on the display and the last selected Harmony type is displayed, e.g. *'Duet'*.

2. Select one of the following harmony settings as described in chapter *Chapter 8.7.5 'Selection Harmony setting' on page 25*:

- *'Duet'*
- *'Standard Trio'*
- *'Full Chord'*
- *'Rock Duet'*
- *'Country Duet'*
- *'Country Trio'*
- *'Block'*
- *'4 Close 1'*
- *'4 Close 2'*
- *'4 Open'*
- *'1+5'*
- *'Octave1'*
- *'Octave2'*
- *'Strum'*
- *'Echo1'*
- *'Echo2'*
- *'Echo3'*
- *'Echo4'*
- *'Tremolo1'*
- *'Tremolo2'*
- *'Tremolo3'*
- *'Tremolo4'*
- *'Trill1'*
- *'Trill2'*
- *'Trill3'*
- *'Trill4'*

3. Press *[SHIFT]* and *[HARMONY]* again to disable the Harmony mode.

The Harmony settings Duet, Standard Trio, Full Chord, Rock Duet, Country Duet, Octave, Echo, Tremolo and Trill can be activated at any time. The other settings are only available when the chord recognition is turned on.

9.14 Chord detection

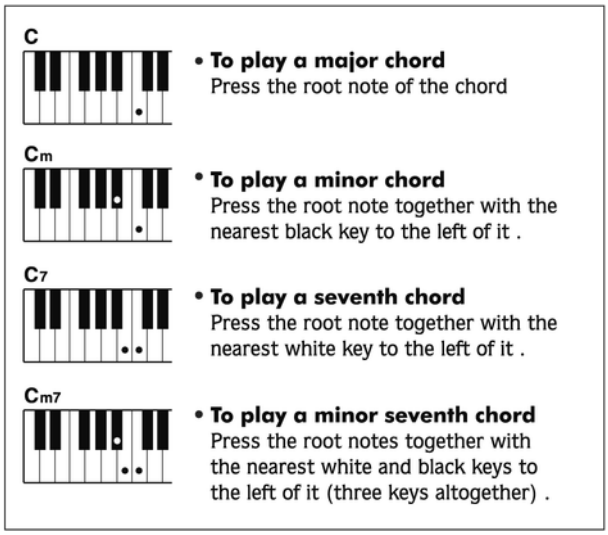
By default, the 'Auto Bass Chord' (A.B.C.) is disabled. Press the button *[CHORD MODE]* to activate the function. The area to the left of the split point is already known as the chord area. When you now play a chord, both bass and chord voices will sound together.

As the A.B.C. chord detection is based on the root note of the chord, some chords that could be played according to the chord dictionary can not be detected by A.B.C., such as B6, B_b6, B_b6(9), B6(9), Baug, $B_b$aug, B_bm6, Bm6, Adim7, $B_b$dim7.

Single and multi-finger mode.

If the chord is played on base of the illustration for multi-finger chords below, it will be detected as a 'multi-fingered' chord. If not, it will be detected as a 'single-finger' chord.

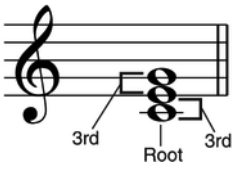
- Single-finger chords
  With this method, you can play chords with only one, two or three fingers within the capabilities of the auto accompaniment. Here we show you some examples of single finger chords (C, Cm, C7 and Cm7).

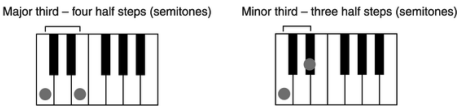


When the A.B.C. function is activated, press the keys to the left of the split point. The chords are detected as single-finger chords.

- Multi-finger chords
  With this method, you can play chords with normal fingering within the capabilities of the auto accompaniment. Here we show you 32 chords using the example of C chords.

0 C	1 C_6	2 CM_7	3 $CM_7(\#11)$	4 CM(9)	5 $CM_7^{(9)}$
6 $C_6^{(9)}$	7 Caug	**8** Cm	**9** Cm_6	**10** Cm_7	**11** $Cm_7^{(\flat5)}$
12 Cm(9)	**13** $Cm_7^{(9)}$	**14** $Cm_7^{(11)}$	**15** CmM_7	16 $CmM_7^{(9)}$	17 Cdim
18 $Cdim_7$	19 C_7	20 C_{7sus4}	21 $C_7^{(\flat5)}$	22 $C_7^{(9)}$	23 $C_7^{(\#11)}$
24 $C_7^{(\flat13)}$	25 $C_7^{(\flat9)}$	26 $C_7^{(13)}$	27 $C_7^{(\#9)}$	28 CM_{7aug}	29 C_{7aug}
30 $Csus_4$	31 C_{1+2+5}	The notes in brackets are optional; the chords will also be recognised without them.			





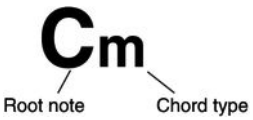
- Chord basics

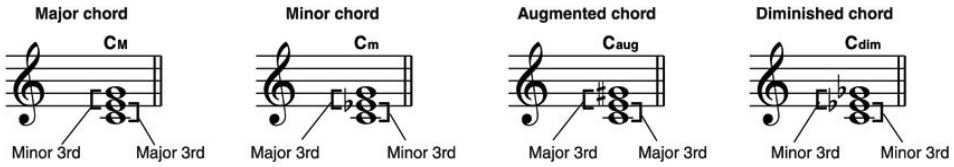
  A chord consists of three or more notes played together. The most commonly used chord is the triad consisting of three notes: Root, third and fifth of the corresponding scale. The C major chord for example is formed from the notes C (root), E (the third note of the C major scale), and G (the fifth note of the C major scale). In the C major chord shown, the lowest note is the root (this is the basic form of the chord - if you play other notes of the chord as the lowest note, this is called 'chord inversion'). The root is the central sound of the chord on which the other chord notes are built upon. The interval between adjacent notes and the root determines whether the result is a major or minor third.

- Chord structure

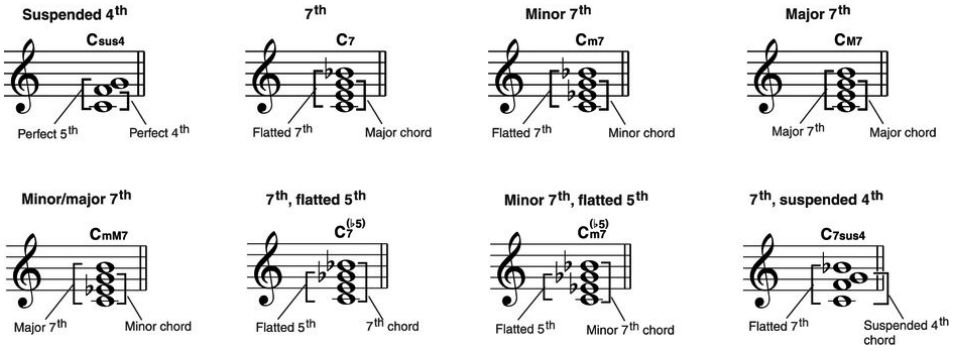
  The lower interval in our triad (between root and third) determines whether the result is a major or minor triad. In addition, we can shift the highest note by a half step up or down to produce two additional chords.

  The basic characteristic of the triad remains even if we change the order of the notes to create different inversions. Consecutive chords can be softly connected in a chord progression, e.g. by choosing suitable chord inversions (also called 'voicings').





- Chord names
  Chord names will tell you everything you need to know about a chord. Through the chord name, you know the root, whether it is a major, minor, or diminished chord, whether a large or flatted seventh is needed and what changes or tensions are used - all at a glance.
- Some chord types



9.15 Chord dictionary

The Chord dictionary is basically a built-in 'Chord book' assisting you to find the right tones of a chord if you e.g. know only the chord name, but not how to play it.

1. DICT 1 (chord learning mode)

Press the buttons *[SHIFT]* and *[DICT.]* simultaneously to call up the *'DICT.1'* mode. In this mode, the keys from C4 on are used to assign the chord type, and the keys from C6 to assign the root note. If you have pressed the keys for chord type and root note, the display shows the chord name and the individual notes in the notation system.

For example, If you want to play a Cm7 chord, press the C6 key (root note C in the Cm7 chord). You will hear no sound, but the root note is displayed.

Press the A4 key (chord type for minor-seventh chord, 'm7'). You will hear no sound, but the chord name and the notes you should play for the specified chord appear in the display.

2. DICT 2 (chord testing mode)

Press the buttons *[SHIFT]* and *[DICT.]* simultaneously again to call up the *'DICT.2'* mode. The display shows a randomly generated chord name, but not its individual notes in the notation system. If you play the right chord within three seconds, the next randomly generated chord name appears. If this does not happen, the individual notes of the chord in the notation system appear automatically in the display.

In the chord dictionary, the 12 root notes and 24 chord types are presented as follows:

Key names	Root note	Key names	Root note
C6	C	F#6	F#/Gb
C#6	C#/Db	G6	G
D6	D	Ab6	G#/Ab
Eb6	D#/Eb6	A6	A
E6	E	Bb6	A#/Bb
F6	F	B6	B

Key names	Chord type	Key names	Chord type
C4	M	C5	7b9
C#4	M(9)	C#5	7(9)
D4	6	D5	7(#9)
Eb4	mM7	Eb5	7b13
E4	M7	E5	7(13)
F4	m	F5	7(#11)
F#4	m(9)	F#5	dim7
G4	m6	G5	dim
Ab4	m7(9)	Ab5	7aug
A4	m7	A5	aug
Bb4	m7b5	Bb5	7sus4
B4	7	B5	sus4

9.16 Auto Accompaniment

Auto accompaniment functions

The accompaniment function is controlled via four parameters: INTRO, MAIN (A, B), FILL (A, B) and ENDING.

1. **INTRO**

   To insert an intro, press the *[INTRO/ENDING]* button before beginning to play. Depending on the selected Style the rhythm starts with two to four bars, followed by the main part.

2. **MAIN (A, B)**

   The main part consists of an accompaniment pattern with different sections and is repeated until you enter a new song section (FILL or ENDING). The individual sections of the main part are selected via the buttons *[A]* and *[B]*.

3. **FILL (A, B)**

   Use the buttons *[A]* and *[B]* to insert two different fill bars. Each fill measure will be repeated until you release the button.

4. **ENDING**

   If you press the *[INTRO/ENDING]* button while Auto Accompaniment is activated, an ending part suitable for the Accompaniment is started, finishing the song.

Playing with auto accompaniment

1. Select the desired style (*Chapter 9.4 'Style playing' on page 30*).
2. Use *[CHORD MODE]* to enable chord recognition.
3. Use *[SYNC START]* to enable Sync Start operation.
4. Press *[INTRO/ENDING]* to start the song with an Intro.

   ⇨ The character *'A'* is flashing on the display.

5. The accompaniment starts as soon as you press a key in the chord area.
6. If desired, you can use *[FILL B]* to insert fill measures as transition into main part B.

   ⇨ The character *'B'* is flashing on the display.

7. Press *[INTRO/ENDING]* again to conclude the song with an Ending.

9.17 Accompaniment track volume, muting

This function allows you to adjust the volume of the accompaniment track to the volume of the claviature or to mute the accompaniment track.

1. **Setting the accompaniment track volume**

   Keep the *[SHIFT]* button pressed.

   Use the function buttons *[ACCOMP]* to adjust the accompaniment track volume in a range from 0 … 127.

2. **Muting the accompaniment track**

   Keep the *[SHIFT]* button pressed.

   Press the two function buttons *[ACCOMP]* simultaneously to mute the accompaniment track. The display shows *'oFF'*.

3. **Re-enabling the accompaniment track**

   Press *[SHIFT]* and the two function buttons *[ACCOMP]* simultaneously to re-enable the accompaniment track.

   ⇨ The display returns to the set volume level of the accompaniment track, e.g. *'100'*.

9.18 Fade in, Fade out

With this function you can increase the volume of the accompaniment track gradually to the preset volume of the selected Style (Fade in) and decrease it again at the end of the piece (Fade Out).

1. Press *[SHIFT]* and *[FADE]* simultaneously before starting the Style.

   ⇨ The volume of the Style is raised within ten seconds from zero to the preset value.

2. Press *[SHIFT]* and *[FADE]* simultaneously at the end of the piece.

   ⇨ The volume of the Style is lowered within ten seconds to zero.

9.19 One Touch Setting

One Touch Setting (O.T.S. or one-key operation) is a convenient function that allows you to immediately reconfigure all settings with just one single key press. This is about rhythm-based compilations of keyboard voices. With this function, four parameter types (M1 to M4) can be loaded.

1. Press *[O.T.S.]* to activate the function. The display shows *'OTS'*. Press one of the keys *[M1]* to *[M4]*, then the keyboard loads the corresponding parameter types that match the current Style. Chord recognition will automatically be switched on.

2. Press one of the *[M1]* to *[M4]* buttons to load one of the available presets.

3. Press the *[O.T.S.]* button again to deactivate O.T.S. mode.

4. The default parameters stored in O.T.S. are:
   - Track on / off
   - Change voice R1, R2, L
   - Volume R1, R2, L
   - Chorus level voice R1, R2, L
   - Reverb level voice R1, R2, L

9.20 Performance Assistant

The 'Performance Assistant' is a playing aid, which allows you to simulate different keyboards on the claviature.

1. Press *[PERFORM]* to activate the playing aid.

   GUITAR mode is enabled by default. Use the jog dial to select a file.

2. Adjust the Tempo using the *[TEMPO]* buttons.
3. Adjust the time signature with the *[YES]* and *[NO]* buttons.

9.20.1 GUITAR mode

In this mode, you can simulate a guitar sound on the claviature. The table shows the various play areas.

Chord area A

This area includes the keys A0 to B3 of the claviature.

The chord type appears in the display. The root of the guitar chord sounds.

Area B1

This area includes the white keys C4 to B4 of the claviature.

Once the chord type is displayed, you can play several figures of broken chords with the white keys in this area. While playing, you also have the possibility to vary the chord played in the chord area.

Area B2

This area includes the white keys C5 to A6 of the claviature.

Once the chord type is displayed, you can play a solo track with the white keys in this area. While playing, you also have the possibility to vary the chord played in the chord area.

Rhythm area C

This area includes the white keys C6 to G6 of the claviature.

Once the chord type is displayed, you can play a rhythm track with the white keys in this area. While playing, you also have the possibility to vary the chord played in the chord area.

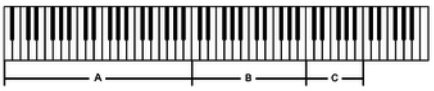
Shift D

Key C7. Press this button to shift upwards.

9.20.2 PIANO mode

After enabling the playing aid, use the jog dial to change to the PIANO mode.

In this mode, the entire claviature sounds with the piano voice. The table shows the various play areas.



Play basic chords in area A and an accompanying melody in areas B and C an.

Keys A6, B6 and C7 give you the opportunity to complete a phrase with a suitable ending.

9.21 Practising songs

The keyboard offers 120 practising songs, where you can mute the right hand voice and play this part yourself.

1. Playing and stopping practising songs

Press the *[SONG]* button to enter the playback mode for practising songs. *'SONG'* appears on the display and all practising songs are being played in an endless loop.

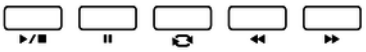
Press the *[START/STOP]* button, to stop the currently playing practising song. This will not quit the mode for practising song playback *'SONG'*.

2. Single loop

If you press the *[START/STOP]* button again the current song is repeated in an endless loop until you press the *[START/STOP]* button again.

3. Selecting a practising song

Use the jog dial or the *[YES]* and *[NO]* buttons to select the desired practising song. If you select a new practising song, the display shows first the title in running text, then the abbreviation.



4. Playback control

Pre-count

An Intro of different length will be played before playback begins. The bar display starts with a negative value. The practising song starts with bar 1.

Fast-forward, rewind, pause

Keep the ►► button pressed during playback to fast-forward the practising song. Use the ◄◄ button to rewind bar by bar. Press the button ▮▮ to pause playback and again the button ▮▮ to continue the playback at the same position. Press the *[START/STOP]* button to start the currently playing practising song from the beginning.

Repeat function

While the practising song is playing you can set two loop marks with the ⟲ button. Press the button at the desired start point of the loop and again at the end point.

5. To exit practising song playback press any direct select or function button.

Lesson mode

When practising, it is mainly important to play the right **notes** at the right **time**. In this mode you can check your progress. Press the *[LESSON]* button in SONG mode to activate the Lesson mode. There are three training stages. Use the buttons *[R]* and *[L]* to specify which hand you want to practise. If you don't select a hand, the right hand will automatically be selected.

Lesson 1 - playing in time

Press the *[LESSON]* button to enter the Lesson mode. *'LESSON 1'* appears on the display. In this mode, it is only rated whether you play the notes at the right time, but not whether you hit the right notes.

1. Press the *[START/STOP]* button, to start practising.

2. If you have selected *'R'* the right hand voice is muted and you have to play the right hand yourself. As long as you are in time, you will hear the right hand voice. If you have selected *'L'* the left hand voice is muted and you have to play the left hand yourself. As long as you are in time, you will hear the left hand voice. Are both *'L'* and *'R'* selected the voices for both hands are muted. You then have to play in time with both hands.

3. After completing the exercise, you will learn the result.

Lesson 2 - hitting the right notes

Press the *[LESSON]* button again to enter the Lesson mode 2. *'LESSON 2'* appears on the display. In this mode, it is only rated whether you hit the right notes, but not whether you play them at the right time. The practising song continues only when you play the right note.

1. Press the *[START/STOP]* button, to start practising.

2. After completing the exercise, you will learn the result.

Lesson 3 - hitting the right notes at the right time.

Press the *[LESSON]* button again to enter the Lesson mode 3. *'LESSON 3'* appears on the display. In this mode, it is rated whether you play the right notes at the right time. The practising song continues only when both is correct.

1. Press the *[START/STOP]* button, to start practising.
2. After completing the exercise, you will learn the result.

9.22 Recording function

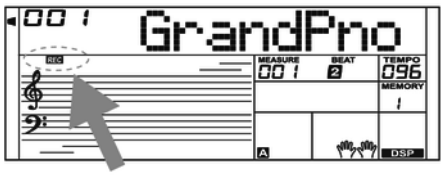
You can record your own songs with the keyboard and save up to five recordings as user songs in the internal memory. Unsaved recordings are retained in the clipboard memory after switching the keyboard off.

The recording are stored in the memory register 121 – 125.

9.22.1 Recording preparation

Before starting the recording, you have to select a user song for saving the recording.

1. Press *[SHIFT]* and *[RECORD]* simultaneously to enable the recording mode.
   ⇨ The display shows the standard name of the first user song *'RecSong1'* and the sequence number.
2. Press *[YES]* and *[NO]* or turn the jog dial to select a user song you want to record.



3. Press *[SHIFT]* and *[RECORD]* simultaneously to record-enable the keyboard.
   ⇨ The *'REC'* icon appears on the display.
4. The recording starts as soon as you play the first tone or chord or press *[START/STOP]*.

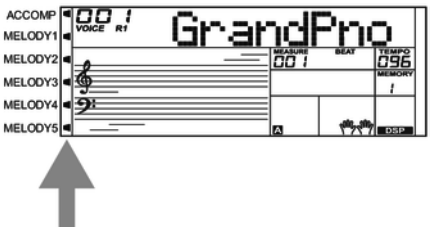
   If you select the accompaniment track and A.B.C. (see *Chapter 9.14 'Chord detection' on page 35*) is open, play an effective chord in the left area. Press *[CHORD MODE]* again with open A.B.C. to enable the chord recognition for the entire keyboard or press *[START/STOP]* to start recording.

9.22.1.1 Setting accompaniment/metronome, voice, tempo and tracks

1. If desired, select an accompaniment/metronome or voice and set the recording tempo.
2. Keep *[SHIFT]* pressed and press *[ACCOMP]* (accompaniment track) or *[MELODY1]* … *[MELODY5]* (melody tracks) to set the desired recording track. Preset is *'Melody1'*.

> *You have the option to record the accompaniment track along with a melody track. If you want to record with accompaniment function or a style, select again the desired chord recognition after setting the recording mode.*
>
> *If you want to use a metronome for recording, enable previously the metronome and set the desired tempo.*

9.22.2 Recording



1. The availability of the tracks is indicated by the icons on the left edge of the display:
   - Icon flashing: selected track, existing data can always be overwritten.
   - Icon lights permanently: Track contains data and can play along to the recording.
   - Icon off: Track contains no data and cannot be played.
2. Use the corresponding buttons to select the track *[ACCOMP]* or *[MELODY1]* … *[MELODY5]*.

> *During recording the device selects automatically the next empty track next to the data containing track. If all tracks contain data, select 'Melody 1' to save your recording.*

9.22.3 Stopping recording

To stop recording, hold down *[SHIFT]* and press *[RECORD]*. The display shows *'Wait…'* (depending on the length of the recording) until the recording is saved.

When the full memory capacity has been reached, the recording is terminated automatically and the recorded data is saved. While storing, the indicator flashes quickly. The display shows *'Rec_Full'*.

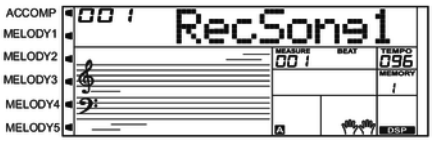
After saving the device plays the recording in endless loop. Press *[START/STOP]* to stop recording.

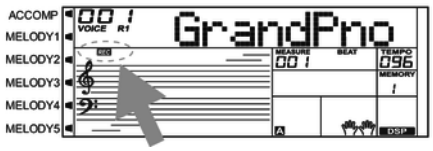
9.22.4 Playing a recording

Use *[SONG]* to change to normal playback mode and select the recording for playback (*Chapter 9.5 'Playing songs' on page 31*).

9.22.5 Delete recording

Deleting certain tracks





1. Press *[SHIFT]* and *[RECORD]* simultaneously.
2. Use the jog dial to select one of the five user songs from which you want to delete one or more tracks.
3. Press *[SHIFT]* and *[RECORD]* simultaneously.
   ⇨ The *'REC'* icon appears on the display.
4. Hold down *[SHIFT]* and *[RECORD]* simultaneously for two seconds.
   ⇨ The display shows *'Delete?'*.
5. Release *[SHIFT]* and *[RECORD]*. Keep *[SHIFT]* pressed and press *[ACCOMP]* (accompaniment track) or *[MELODY1]* … *[MELODY5]* (melody tracks) to select the desired recording track you want to keep.

   The Icons on the left edge of the display indicate which tracks should be kept or deleted:

   - Icon on: Track will be deleted.
   - Icon off: Track will be kept.
6. Confirm with *[YES]* to delete the track.
   ⇨ All data on the selected track will be deleted.
7. To cancel the process press *[NO]*.
   ⇨ The device returns to state Recording preparation without deleting data.

Deletes all user songs

First switch off the device to delete all user songs.

Press *[RECORD]* snd *[SONG]* simultaneously and switch on the device.
⇨ All user songs will be deleted without further confirmation prompt.

9.23 MIDI function

MIDI stands for 'Musical Instrument Digital Interface' and represents the standard interface between a computer and electronic instruments.

You can exchange MIDI data with other MIDI devices via the MIDI and USB interfaces of the keyboard.

The exchange of MIDI data via the USB interface is only possible with WIN 32-bit systems.

9.24 USB storage medium

The keyboard supports USB flash drives with a capacity from 16 MB to 32 GB that are formatted using the FAT 16/32 file system.

Connect a suitable USB stick with the keyboard and press the *[USB DEVICE]* button to enter the USB menu. If the stick could be correctly initialized the display shows *'Play'*. If an error occurs the display shows *'DiskErr!'*.

In Memory mode, the 'MMKD' folder is automatically created for all user data.

On MIDI playback, you can adjust the volume using the [MIXER] and [YES]/ [NO] buttons.

9.24.1 USB stick playback

1. Connect the USB stick with the keyboard and open the USB menu.

   Use the jog dial to highlight the *'Play'* option.

2. Confirm with *[YES]*.

   ⇨ The display shows the available directories.

3. Use the jog dial to highlight the desired directory and confirm for opening with *[YES]*.

4. Use the jog dial to highlight the desired MIDI file and start or stop playback with *[START/STOP]*.

9.24.2 Loading data from USB stick

1. Connect the USB stick with the keyboard and open the USB menu.

   Use the jog dial to highlight the *'Load'* option.

2. Confirm with *[YES]*.

   ⇨ The display shows the available options: Loading a song (*'LoadSong'*), loading a style (*'LoadSty'*) and loading user settings (*'LoadMem'*).

3. Use the jog dial to highlight the desired option and confirm with *[YES]*.

4. Use the jog dial to highlight the song, style or user setting to be loaded and start the procedure with *[YES]*.
5. You can cancel the process at any time with *[NO]*.

9.24.3 Save data to USB stick

1. Connect the USB stick with the keyboard and open the USB menu.

   Use the jog dial to highlight the *'Save'* option.
2. Confirm with *[YES]*.

   ⇨ The display shows the available options: Saving a song (*'SaveSong'*), saving a style (*'SaveSty'*) and saving user settings (*'SaveMem'*).
3. Use the jog dial to highlight the desired option and confirm with *[YES]*.
4. Use the jog dial to highlight the desired file (i.e. user song) and confirm with *[YES]*.
5. Use the keyboard of the device to enter a file name and confirm again with *[YES]*.
6. You can cancel the process at any time with *[NO]*.

9.24.4 Deleting all data on a USB stick

1. Connect the USB stick with the keyboard and open the USB menu.

   Use the jog dial to highlight the *'Delete'* option.
2. Confirm with *[YES]*.

   ⇨ The display shows the available options: Deleting a song (*'UserSong'*), deleting a style (*'UserSty'*) and deleting user settings (*'UserMem'*).
3. Use the jog dial to highlight the desired option and confirm with *[YES]*.
4. Use the jog dial to highlight the desired file and confirm with *[YES]*.
5. Confirm the confirmation prompt with *[YES]* to delete the data.
6. You can cancel the process at any time with *[NO]*.

9.25 Reset to factory defaults

Proceed as follows to restore the factory default settings:

1. Turn off the keyboard.
2. When turning it back on again, keep the buttons *[YES]* and *[NO]* pressed.

   ⇨ All user songs and settings are reset or deleted without further confirmation prompt. The display shows *'Loading!'* .

If you only want to delete the stored user settings but want to keep your own recordings in the memory, proceed as follows:

1. Turn off the keyboard.
2. When turning it back on again, keep the buttons *[STORE]* and *[M1]* pressed.
   ⇨ All user settings will be deleted without further confirmation prompt.

If you only want to delete your own recordings but want to keep your changed user settings in the memory, proceed as follows:

1. Turn off the keyboard.
2. When turning it back on again, keep the buttons *[SONG]* and *[RECORD]* pressed.
   ⇨ All recordings will be deleted without further confirmation prompt.

10 Technical specifications

Input connections	Power supply	Connector for power adapter
	USB port	USB type B
	MIDI port	DIN socket, 5-pin
	AUX in	1/4" jack socket
	Microphone	1/4" jack socket
	Pedal box	1/4" jack socket
Output connections	MIDI port	DIN plug, 5-pin
	AUX out	1/4" jack socket
Display	Multi-functional LCD	
Keyboard	88 weighted keys with hammer action Touch sensitivity adjustable in four steps (off, soft, normal, hard)	
Tonal colours	Number	600
	Polyphony	128-voice
	Layer	Left, right 1, right 2
	Functions	Split, duo (Twinova)
Styles	Number	230
	Control	*[START/STOP], [SYNC START], [INTRO/ENDING], [MAIN A], [MAIN B], [FILL IN A], [FILL IN B], [A.B.C.], [FADE IN], [FADE OUT], [ACCOMP VOLUME]*
	O.T.S.	built-in
	Chord types	32
Effects	DSP	on / off
	Master EQ	6 presettings
	Reverb	10 types, 128 levels
	Chorus	8 types, 128 levels
Accompaniment function	built-in	
Harmony mode	26 types	
Pitch adjustment	Transposing	–12 … +12
	Octave transposing	–1 … +1
	Voices	–50 … +50
Functions	Mixer	12 tracks
	Memory for user settings	8 banks, each with 6 memory locations

	Pedal support	Sustain
	Pitch bend wheel	built-in
	Metronome	0, 2 … 9
	Tempo	30 … 280
	Chord dictionary	built-in
Pedals	Sustain	
Demo and practice songs	Practising songs	120
	Sequencer	5 user songs (5 melody tracks, 1 accompaniment track)
	Demo pieces	5
Amp	2 × 10 W	
Speaker	2 × 10 W	
	2 × 20 W	
Power supply	Power adapter (12 V ⎓ / 2000 mA, centre positive)	
Dimensions (W × H × D)	1365 mm × 137 mm × 366 mm	
Weight	13.8 kg	
Colour	Black	
Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	50 %, non-condensing

Further information

Design	Black
Surface	Matt
Wooden keyboard	No
Ivory-feel keyboard	No
Auto Accompaniment	Yes
Number of rhythms	230
Polyphony	128
Sounds	600
Storage medium	USB MIDI

11 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment in such a way that a perfect sound experience is ensured.

Please note these advices, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into the socket, an incorrect connection may result in a destroyed power amp, a short circuit or 'just' in poor transmission quality!

Balanced and unbalanced transmission

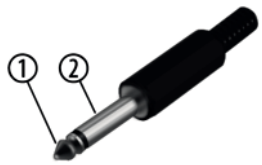
Unbalanced transmission is mainly used in semi-professional environment and in hifi use. Instrument cables with two conductors (one core plus shielding) are typical representatives of the unbalanced transmission. One conductor is ground and shielding while the signal is transmitted through the core.

Unbalanced transmission is susceptible to electromagnetic interference, especially at low levels, such as microphone signals and when using long cables.

In a professional environment, therefore, the balanced transmission is preferred, because this enables an undisturbed transmission of signals over long distances. In addition to the conductors 'Ground' and 'Signal', in a balanced transmission a second core is added. This also transfers the signal, but phase-shifted by 180°.

Since the interference affects both cores equally, by subtracting the phase-shifted signals, the interfering signal is completely neutralized. The result is a pure signal without any noise interference.

1/4" TS phone plug (mono, unbalanced)



1	Signal
2	Ground, shielding

1/4" TRS phone plug (mono, balanced)

1	Signal (in phase, +)
2	Signal (out of phase, –)
3	Ground

12 Troubleshooting

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

Symptom	Remedy
No sound when playing the keyboard.	Check the position of the volume control. Check if headphone output 2 has a headphone connected. Check the mixer's volume setting R1 / R2 / L.
Noise when using a mobile phone.	Do not place the turned on mobile phone on the keyboard. Keep a sufficient distance from the keyboard when using a mobile phone.
Auto accompaniment does not start with sync start.	The automatic start-up of the auto accompaniment along with sync start function only works when you play a piano key in the left hand area.
Harmony mode can not be activated.	Check whether a drum kit is assigned to the R1 voice. In this case, the harmony mode can not be activated.
Keyboard is not detected by the software when connected to a computer.	Check the USB cable for correct connection. Connect the USB cable to another USB port on the computer.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at *www.thomann.de*.

13 Appendix

13.1 Song list

No.	Name	Display		No.	Name	Display
FOLK & COUNTRY				027	La Donne Mobile	DoneMble
001	Toccata	Toccata		028	Serenata	Serenata
002	Carry Me Back To Old Virginny	Virginny		029	Bridal March	Bridal
003	El Condor Pasa	ElCondor		030	Can't Help Fallin' In Love	InLove
004	Traumerei	Traumere		031	Chanson Du Toreador	Toreador
005	Aloha Oe	AlohaOe		032	Danny Boy	DannyBoy
006	Greensleeves	Sleeves		033	Ich Liebe Dich	LieDich
007	Home Sweet Home	SwetHome		034	Wiegenlied 2	Wieglid2
008	Heidenroslein	Heidenro		035	Spanish Serenade	Serenade
009	Long Long Ago	LongAgo		036	Piano Concerto	Concerto
010	Die Lorelei	Lorelei		037	Piano Concerto 2	Concrto2
011	Over The Waves	OverWave		038	Madame Butterfly	Madame
012	My Darling Clementine	Clemtine		039	Invitation To The Dance	ToDance
013	Gwine To Run All Night	Gwine		040	Wiegenlied 3	Wieglid3
014	Symphony No.6 "Pathetic"	Sympony6		041	Jingle Bells	JingBell
015	Oh! Susanna	Susanna		042	Joy To The World	JoyWorld
016	Prelude Op.28 No.15	Prelude		043	La Paloma	LaPaloma
017	The House Of The Rising Sun	RiseSun		044	My Bonnie	MyBonnie
018	Menuet	Menuet		045	La Reine De Saba	Saba
GOLDEN & POP				046	La Cucaracha	Cucarach
019	Vaslse Des Fleurs	Fleurs		047	Little Brown Jug	BrownJug
020	Fruhlingsstimmen	Fruhling		048	Battle Hymn Of The Republic	BatlHyme
021	Frohlicher Landmann	Landmann		049	Yellow Rose Of Texas	YellRose
022	Are You Lonesome Tonight?	Lonesome		050	The Wabash Cannon Ball	CannBall
023	Toy Symphony	ToySymph		051	Annie Laurie	AnnieLa
024	Auld Lang Syne	LangSyne		052	Turkish March	Turkish
025	Ave Maria	AveMaria		053	An Die Musik	Musik
026	Tales Of Hoffman	Hoffman		054	Lieder Ohne Worte Op.62 No.6	Lieder

No.	Name	Display
055	Red River Valley	RedRiver
056	Die Forelle	Forelle
057	Symphony No. 94 "Suprise"	No. 94
058	Polonaise	Polonais
059	Rondeau	Rondeau
060	Moments Musicaux	Musicaux
061	Silent Night	SltNight
062	Moldau	Moldau
063	Summertime	Summer
064	Dreaming Of Home And Mother	Dreaming
065	Ring Ring De Banjo	DeBanjo
066	Der Lindenbaum	DerLinde
067	Zigeunerweisen	Zigeuner
068	The Maiden's Prayer	Prayer
069	Fur Elise	FurElise
070	Der Freischutz	DerFreis
071	Maria! Maria!	Maria!
CLASSICAL		
072	Waves Of The Danube	Danube
073	Santa Lucia	SantaLuc
074	Solveig's Song	Solveig
075	Piano Sonatan No. 8 In C Minor (Pathetique)	Patheque
076	Brahms Waltz	BrmsWltz
077	Aida	Aida
078	Carmen-Prelude	Carmen
079	L'Arlesienne	L'Arlesi
080	Ungarische Tanz	Uungaris
081	Mazurka	Mazurka

No.	Name	Display
082	Pizzicato Polka	Polka
083	Menuett	Menuett
084	Rigoletto	Rigoletto
085	Serenade	Serenade
086	Song Without Words	SOngNoWd
087	Swan	Swan
088	The Dying Swan	DyingSwn
089	Swan Lake Valse	SwnWalse
090	The Happy Farmer	HpFarmer
091	The Sleeping Beauty	SleepBty
092	La Traviata	LaTravia
093	Wiegenlied	Wiegenli
094	Mov. 2 Adagio Non Troppo Piano Sonata No. 9 In D	Sonata9
095	Piano Sonata No. 11 In A	Sonata11
096	Prelude In C	Prelude
097	Chinese Dance	ChDance
098	Emperor Waltz	Emperor
099	March Militaire	Militair
100	Symphony No. 40	Symphony
PIANO		
101	Hanon Piano Fingering 1	Hanon1
102	Hanon Piano Fingering 2	Hanon2
103	Hanon Piano Fingering 3	Hanon3
104	Hanon Piano Fingering 4	Hanon4
105	Hanon Piano Fingering 5	Hanon5
106	Basic Tutorial Beyer Piano 12	Beyer12
107	Basic Tutorial Beyer Piano 13	Beyer13
108	Basic Tutorial Beyer Piano 14	Beyer14

No.	Name	Display		No.	Name	Display
109	Basic Tutorial Beyer Piano 15	Beyer15		115	Basic Tutorial Beyer Piano 45	Beyer45
110	Basic Tutorial Beyer Piano 18	Beyer18		116	Christmas Eve	XmasEve
111	Cuckoo	Cuckoo		117	Basic Tutorial Beyer Piano 50	Beyer50
112	Basic Tutorial Beyer Piano 21	Beyer21		118	Basic Tutorial Beyer Piano 52	Beyer52
113	Basic Tutorial Beyer Piano 29	Beyer29		119	Basic Tutorial Beyer Piano 55	Beyer55
114	Butterfly	Buterfly		120	Basic Tutorial Beyer Piano 59	Beyer59

13.2 Styles list

No.	Name	Display		No.	Name	Display
8BEAT				021	Pop 16Beat 4	Pop16Bt4
001	8Beat Ballad	8BtBld		022	Modern 16Beat	Modr16Bt
002	8Beat Piano	8BtPiano		023	16Beat Hot	16BtHot
003	8Beat 1	8Beat1		024	16Beat Modern	16BtModr
004	Guitar Pop 1	GtPop1		025	16Beat Funk 3	16BtFuk3
005	8Beat Hip Hop	8BtHiHop		026	16Beat 3	16Beat3
006	8Beat Blues Rock	8BtBluRk		027	Cool Beat	CoolBeat
007	8Beat 2	8Beat2		028	16Beat Ballad 2	16BtBld2
008	Sweet Beat	SweetBt		029	16Beat 4	16Beat4
009	8Beat 3	8Beat3		030	Pop Shuffle	PopShfl
010	Rhythm&Beat 2	Rhy&Bt2		**POP & BALLAD**		
16BEAT				031	Pop Rock 1	PopRock1
011	16Beat 1	16Beat1		032	Pop Dance 1	PopDanc1
012	16Beat Funk 1	16BtFuk1		033	Pop Fusion	PopFusn
013	16Beat Ballad 1	16BtBld1		034	Analog Night 1	AnalgNt1
014	16Beat R&B	16BtR&B		035	6/8 Pop	6/8Pop
015	Pop 16Beat 1	Pop16Bt1		036	Brit. Pop 1	BritPop1
016	16Beat Funk 2	16BtFuk2		037	Brit. Pop 2	BritPop2
017	16Beat Dance	16BtDanc		038	Pop Hit	PopHit
018	Pop 16Beat 2	Pop16Bt2		039	Fusion Shuffle	FusShufl
019	16Beat 2	16Beat2		040	Analog Night 2	AnalgNt2
020	Pop 16Beat 3	Pop16Bt3		041	Guitar Pop 3	GtPop3

No.	Name	Display
042	Pop Beat	PopBeat
043	Soft Beat	SoftBeat
044	60's Pop	60'sPop
045	Sting Latin	StigLatn
046	R&B Ballad 1	R&BBld1
047	Guitar Ballad	GtBallad
048	Ballad Rock	BaldRock
049	Piano Pop	PianoPop
050	Soft Ballad	SoftBald
051	Natural Ballad	NatulBld
052	Love Ballad	LoveBald
053	Easy Ballad	EasyBald
054	Miami Folk	MiamiBld
055	Slow Ballad	SlowBald
056	Folk Ballad	FolkBald
057	Pop Ballad 1	PopBald1
058	Pop Ballad 2	PopBald2
059	EP Ballad	EPBallad
060	New R&B Ballad	NewRBBld
ROCK		
061	Rock	Rock
062	New Wave	NewWave
063	Ska	Ska
064	Pop Rock 2	PopRock2
065	Slow Rock	SlowRock
066	70's Rock&Roll	70'sRock
067	Folk Rock	FolkRock
068	Soft Rock	SoftRock
069	Old Rock	OldRock
070	Easy Rock	EasyRock

No.	Name	Display
071	New Shuffle	NewShufl
072	Rock Hip Hop	RkHipHop
073	Rock&Roll 1	R'N'R1
074	Rock Shuffle	RockShfl
075	Rock&Roll 2	R'N'R1
BALLROOM		
076	Tango 1	Tango1
077	Spain Matador	Matador
078	Twist 1	Twist1
079	Twist 2	Twist2
080	Big Band Fox	BandFox
081	Tango 2	Tango2
082	Slow Fox	SlowFox
083	Slow Waltz 1	SlowWlz1
084	Swing Fox	SwingFox
085	Salsa 1	Salsa1
086	Cha Cha 1	ChaCha1
087	Cha Cha 2	ChaCha2
088	Beguine 1	Beguine1
089	Beguine 2	Beguine2
090	Rumba 1	Rumba1
091	Samba 1	Samba1
092	Samba 2	Samba2
093	Jive	Jive
094	Fox Trot	FoxTrot
DANCE		
095	Techno 1	Techno1
096	Hip Hop 1	HipHop1
097	House 1	House1
098	Down Beat	DownBeat

No.	Name	Display
099	Progressive	Progress
100	Rap 1	Rap1
101	Disco	Disco
102	70's Disco	70'sDisc
103	Club Dance	ClubDanc
104	Euro Dance	EuroDanc
105	Garage	Garage
SOUL & FUNK		
106	Funk 1	Funk1
107	Classic Funk	ClasFunk
108	Jay R&B	JayR&B
109	Gospel Swing	GopSwing
110	Gospel	Gospel
111	Funk 2	Funk2
112	Electric Funk	ElecFunk
113	Groove Funk	GrooveFk
114	Rubber Funk	RubberFk
115	Cool Funky	ColFunky
116	Jazz Funk	JazzFunk
117	Groove	Groove
118	Soul	Soul
119	Hip Hop Soul	HipHopSl
120	Hip Hop Beat	HipHopBt
121	R&B	R&B
122	British Soul Pop	BritSoul
123	Latin Jazz 1	LatinJz1
124	Big Band 1	BigBand1
125	Dixieland 1	Dixland1
126	Guitar Swing 1	GtSwing1
127	Broadway Big Band	BwayBand
128	Swing	Swing
129	Latin Jazz 2	LatinJz2
130	Fusion	Fusion
131	Acid Jazz	AcidJazz
132	Cool Jazz Ballad	CoolJzBd
133	Swing Shuffle	SwingSfl
134	Big Band Medium	BandMid
135	Ragtime	Ragtime
COUNTRY		
136	Country Pop 1	CntyPop1
137	Bluegrass 1	Blugras1
138	8Beat Country	8BtCnty
139	Modern Country	ModrCnty
140	Country Pop 2	CntyPop2
141	Bluegrass 2	Blugras2
142	2/4 Country	2/4Cntry
143	Country Quick Steps	QuickStp
144	Country Folk	CntyFolk
145	Country Shuffle	CnyShufl
LATIN & LATIN DANCE		
146	Samba 3	Samba3
147	Bossa Nova	BosaNova
148	Latin	Latin
149	New Reggae	NewRegga
150	Reggae Dance	DanRegga
151	Paso Doble	Pasodobl
152	Lite Bossa	LteBossa
153	Latin Rock	LatinRck
154	Beguine 3	Beguine3
155	Slow Bolero	SlBolero

No.	Name	Display
156	Disco Samba	DscSamba
157	Mambo	Mambo
158	Meneito	Meneito
159	Rumba 2	Rumba2
160	Rumba 3	Rumba3
161	Lambada	Lambada
162	Pop Cha Cha 1	PChaCha1
WALTZ & TRADITIONAL		
163	Waltz	Waltz
164	Old Waltz	OldWaltz
165	English Waltz	EngWaltz
166	German Waltz	GemWaltz
167	Italian Mazurka	ItaMazuk
168	Waltz	MexWaltz
169	Vienna Waltz	VinaWltz
170	Slow Waltz 2	SlwWltz2
171	Jazz Waltz	JazzWltz
172	Polka	Polka
173	6/8 March	6/8March
174	German Polka	GemPolka
175	Party Polka	PtyPolka
176	Army March	ArmMarch
177	March	March
178	US March	USMarch
179	French Musette	FMusette
180	Mazurka	Mazurka
WORLD		
181	Enka Ballad	EnkaBald
182	Laendler	Laendler
183	Hawaiian	Hawaiian

No.	Name	Display
184	Sirtake	Sirtake
185	Dangdut	Dangdut
186	6/8 Flipper	6/8Flipp
187	New Age	NewAge
188	Tarantella	Tarantel
189	Scottish	Scottish
190	Norteno	Norteno
PIANIST		
191	Pianist 1	Pianist1
192	Pianist 2	Pianist2
193	Pianist 3	Pianist3
194	March 1	March1
195	Italian Polka	ItaPolka
196	Slow Waltz	SlwWltz
197	Waltz 1	Waltz1
198	Waltz 2	Waltz2
199	Waltz 3	Waltz3
200	Vienna Waltz	VinaWtz
201	Latin	Latin
202	Tango	Tango
203	Lambada	Lambada
204	Samba	Samba
205	ChaCha	ChaCha
206	Beguine	Beguine
207	Salsa	Salsa
208	Pop Bossa	PopBossa
209	Jazz 1	Jazz1
210	Jazz 2	Jazz2
211	Jazz 3	Jazz3
212	Jazz 4	Jazz4

No.	Name	Display		No.	Name	Display
213	Jazz 5	Jazz5		222	Pop 1	Pop1
214	Jazz 6	Jazz6		223	Pop 2	Pop2
215	Jazz 7	Jazz7		224	Pop 3	Pop3
216	Boogie	Boogie		225	Pop 4	Pop4
217	Jive	Jive		226	Ballad 1	Ballad1
218	Dixland	Dixland		227	Ballad 2	Ballad2
219	Blues 1	Blues1		228	Ballad 3	Ballad3
220	Blues 2	Blues2		229	Ballad 4	Ballad4
221	Jazz Blues	JazBlues		230	6/8 Ballad 2	6/8Bld2

13.3 Voice list

No.	Name	Display		No.	Name	Display
PIANO				031	Detuned Electric Piano 2	DetunEP2
001	Acoustic Grand Piano	GrandPno		032	Electric Piano	E.Piano
002	Acoustic Grand Piano 2	GrandPn2		033	Electric Piano 2	E.Piano2
003	Acoustic Grand Piano 3	GrandPn3		034	Electric Piano 3	E.Piano3
004	Acoustic Grand Piano (wide)	GrandPnW		035	Electric Piano 4	E.Piano4
005	Acoustic Grand Piano (dark)	GrandPnD		036	Electric Piano 1 (velocity mix)	E.PnoV1
006	Bright Acoustic Piano	BritePno		037	Electric Piano 2 (velocity mix)	E.PnoV2
007	Bright Acoustic Piano 2	BritePn2		038	60's Electric Piano	60'sEP
008	Bright Acoustic Piano 3	BritePn3		039	EP legend	EPLegend
009	Bright Acoustic Piano (wide)	BritePnW		040	Phase EP	PhaseEP
010	Electric Grand Piano	E.Grand		041	Clavi	Clavi
011	Electric Grand Piano 2	E.Grand2		042	Clavi 2	Clavi2
012	Electric Grand Piano (wide)	E.GrandW		043	Phase Clavi	PhaseClv
013	Electric Grand Piano (dark)	E.GrandD		044	Wah Clavi	WahClv
014	Honky Tonk Piano	HnkyTonk		045	Pulse Clavi	PulseClv
015	Honky Tonk Piano 2	HnyTonk2		046	Dream EP	DreamEP
016	Honky Tonk Piano (wide)	HnyTonkW		047	Tremolo EP	TremoEP
017	Honky Tonk Piano (dark)	HnyTonkD		048	Funk EP	FunkEP
018	Harpsichord	Harpsi		049	Warm EP	WarmEP
019	Harpsichord 2	Harpsi2		050	Choir EP	ChoirEP
020	Harpsichord (octave mix)	HarpsiO		051	Wah EP	WahEP
021	Harpsichord (wide)	HarpsiW		052	Modern EP	ModernEP
022	Harpsichord (with key off)	HarpsiOf		053	EP Pad	EPPad
023	Octave Grand Piano	OctPno		054	Celesta	Celesta
024	Octave Grand Piano 2	OctPno2		055	Celesta 2	Celesta2
025	Piano & Strings	Pno&Str		056	Celesta 3	Celesta3
026	Piano & Pad	Pno&Pad		057	Glockenspiel	Glocken
027	Piano & Choir	Pno&Cho		058	Glockenspiel 2	Glocken2
028	Piano & EP	Pno&EP		059	Music Box	MusicBox
029	Piano & Vibraphone	Pno&Vib		060	Music Box 2	MusicBox2
030	Detuned Electric Piano	DetunEP		061	Music Box 3	MusicBox3

No.	Name	Display
062	Vibraphone	Vibra
063	Vibraphone 2	Vibra2
064	Vibraphone (wide)	VibraW
065	Marimba	Marimba
066	Marimba 2	Marimba2
067	Marimba (wide)	MarimbaW
068	Xylophone	Xylophon
069	Xylophone 2	Xylopho2
070	Xylophone 3	Xylopho3
071	Tubular Bells	TubulBel
072	Tubular Bells 2 Church Bell	TubulBe2
073	Church Bell	ChurBell
074	Carillon	Carillon
075	Dulcimer	Dulcimer
076	Dulcimer 2	Dulcime2
077	Santur	Santur
ORGAN		
078	Italian 60's Organ	60'sOrgn
079	Drawbar Organ	DrawOrgn
080	Drawbar Organ 2	DrawOrg2
081	Detuned Drawbar Organ	DeDraOrg
082	Drawbar Organ 3	DrawOrg3
083	Detuned Percussive Organ	DePerOrg
084	Percussive Organ	PercOrgn
085	Percussive Organ 2	PercOrg2
086	70's Percussive Organ	70'sPcOr
087	Percussive Organ 3	PercOrg3
088	Rock Organ	RockOrgn
089	Rock Organ 2	RockOrg2
090	Rock Organ 3	RockOrg3
091	Church Organ	ChurOrgn
092	Church Organ 2	ChurOrg2
093	Church Organ 3	ChurOrg3
094	Church Organ (octave mix)	ChurOrgO
095	Detuned Church Organ	DeChuOrg
096	Reed Organ	ReedOrgn
097	Reed Organ 2	ReedOrg2
098	Rotary Organ	RotyOrgn
099	Puff Organ	PuffOrgn
100	Accordion	Acordion
101	Accordion 2	Acordin2
102	Accordion 3	Acordin3
103	Harmonica	Harmnica
104	Harmonica 2	Harmnic2
105	Harmonica 3	Harmnic3
106	Tango Accordion	TangoAcd
107	Tango Accordion 2	TangAcd2
GUITAR		
108	Acoustic Guitar (nylon)	NylonGtr
109	Acoustic Guitar (nylon) 2	NylonGt2
110	Acoustic Guitar (nylon) 3	NylonGt3
111	Acoustic Guitar (nylon + key off)	NylGtrOf
112	Ukulele	Ukulele
113	Acoustic Guitar (steel)	SteelGtr
114	Acoustic Guitar (steel) 2	SteelGt2
115	12-Strings Guitar	12StrGtr
116	Mandolin	Mandolin
117	Mandolin 2	Mandoli2
118	Steel Guitar with Body Sound	SteelBdy
119	Electric Guitar (jazz)	JazzGtr
120	Electric Guitar (jazz) 2	JazzGtr2
121	Electric Guitar (pedal steel)	PedalGtr
122	Electric Guitar (clean)	CleanGtr
123	Electric Guitar (clean) 2	CleanGt2

No.	Name	Display
124	Electric Guitar (detuned clean)	DetClnGt
125	Mid Tone Guitar	MidTonGt
126	Electric Guitar (muted)	MutedGtr
127	Electric Guitar (muted) 2	MutedGt2
128	Electric Guitar (funky cutting)	FunkGt
129	Electric Guitar (muted velo-sw)	MutVelGt
130	Jazz Man	JazzMan
131	Overdriven Guitar	Ovrdrive
132	Overdriven Guitar 2	Ovrdriv2
133	Guitar Pinch	GtPinch
134	Distortion Guitar	DistGtr
135	Distortion Guitar 2	DistGtr2
136	Distortion Guitar (with feedback)	FeedbkGt
137	Guitar Feedback	GtrFedbk
138	Distorted Rhythm Guitar	DistRyth
139	Guitar Harmonics	GtrHarmo
140	Guitar Harmonics 2	GtHarmo2
141	Velocity Nylon Guitar	NylnGtVe
BASS		
142	Acoustic Bass	AcoBass
143	Acoustic Bass 2	AcoBass2
144	Wah Bass	WahBass
145	Electric Bass (finger)	FngrBass
146	Finger Slap Bass	FngrSlap
147	Electric Bass (pick)	PickBass
148	Electric Bass (pick) 2	PickBas2
149	Fretless Bass	Fretless
150	Fretless Bass 2	Fretles2
151	Slap Bass	SlapBass
152	Slap Bass 2	SlapBas2
153	Slap Bass 3	SlapBas3
154	Slap Bass 4	SlapBas4

No.	Name	Display
155	Synth Bass	SynBass
156	Synth Bass 2	SynBass2
157	Synth Bass 3	SynBass3
158	Synth Bass 4	SynBass4
159	Warm Synth Bass	WarmBass
160	Resonance SynBass	ResoBass
161	Clavi Bass	ClavBass
162	Hammer	Hammer
163	Attack Bass	AtackBas
164	Synth Bass (rubber)	RubbBass
165	Synth Bass (rubber) 2	RubbBas2
166	Attack Pulse	AtackPls
STRINGS & ORCHESTRAL		
167	Violin	Violin
168	Violin 2	Violin2
169	Violin (slow attack)	SlViolin
170	Viola	Viola
171	Viola 2	Viola2
172	Cello	Cello
173	Cello 2	Cello2
174	Contrabass	Contrabs
175	Contrabass 2	Contrbs2
176	Tremolo Strings	TremStr
177	Tremolo Strings 2	TremStr2
178	Tremolo Strings 3	TremStr3
179	Pizzicato Strings	PizzStr
180	Pizzicato Strings 2	PizzStr2
181	Orchestral Harp	Harp
182	Orchestral Harp 2	Harp2
183	Yang Chin	YangChin
184	Timpani	Timpani
185	Timpani 2	Timpani2

No.	Name	Display
186	String Ensembles	Strings
187	String Ensembles 2	Strings2
188	String Ensembles 3	Strings3
189	String Ensembles 4	Strings4
190	Strings & Brass	Str&Bras
191	60's Strings	60'sStr
192	Synth Strings	SynStrs
193	Synth Strings 2	SynStrs2
194	Synth Strings 3	SynStrs3
195	Synth Strings4	SynStrs4
196	Synth Strings5	SynStrs5
197	Choir Aahs	ChoirAah
198	Choir Aahs 2	ChorAah2
199	Choir Aahs 3	ChorAah3
200	Voice Oohs	VoiceOoh
201	Voice Oohs 2	VoicOoh2
202	Humming	Humming
203	Analog Voice	AnlVoice
204	Synth Voice	SynVoice
205	Synth Voice 2	SynVoic2
206	Orchestra Hit	OrchHit
207	Orchestra Hit 2	OrchHit2
208	Bass Hit Plus	BassHit
209	6th Hit	6thHit
210	Euro Hit	EuroHit
BRASS		
211	Trumpet	Trumpet
212	Trumpet 2	Trumpet2
213	Dark Trumpet	DarkTrp
214	Trombone	Trombone
215	Trombone 2	Trmbone2
216	Trombone 3	Trmbone3

No.	Name	Display
217	Bright Trombone	BritBone
218	Tuba	Tuba
219	Tuba 2	Tuba2
220	Muted Trumpet	MuteTrp
221	Muted Trumpet 2	MuteTrp2
222	Muted Trumpet 3	MuteTrp3
223	French Horn	FrHorn
224	French Horn 2	FrHorn2
225	French Horn 3	FrHorn3
226	Brass Section	Brass
227	Brass Section 2	Brass2
228	Brass Section 3	Brass3
229	Synth Brass	SynBrass
230	Synth Brass 2	SynBras2
231	Synth Brass 3	SynBras3
232	Synth Brass 4	SynBras4
233	Synth Brass 5	SynBras5
234	Synth Brass 6	SynBras6
235	Synth Brass 7	SynBras7
236	Synth Brass 8	SynBras8
237	Analog Synth Brass	AnaBrass
238	Analog Synth Brass 2	AnaBras2
239	Analog Synth Brass 3	AnaBras3
240	Jump Brass	JumpBras
241	Jump Brass 2	JumpBrs2
242	Funny	Funny
243	Funny 2	Funny2
BRASS		
244	Soprano Sax	SprnoSax
245	Soprano Sax 2	SprnSax2
246	Soprano Sax 3	SprnSax3
247	Alto Sax	AltoSax

No.	Name	Display
248	Alto Sax 2	AltoSax2
249	Alto Sax 3	AltoSax3
250	Tenor Sax	TenorSax
251	Tenor Sax 2	TenoSax2
252	Tenor Sax 3	TenoSax3
253	Baritone Sax	BariSax
254	Baritone Sax 2	BariSax2
255	Baritone Sax 3	BariSax3
256	Oboe	Oboe
257	Oboe 2	Oboe2
258	Oboe 3	Oboe3
259	2 Oboes	2Oboes
260	English Horn	EngHorn
261	English Horn 2	EngHorn2
262	English Horn 3	EngHorn3
263	2 English Horns	2EngHons
264	Bassoon	Bassoon
265	Bassoon 2	Bassoon2
266	Bassoon 3	Bassoon3
267	2 Bassoons	2Basoons
268	Clarinet	Clarinet
269	Clarinet 2	Clarine2
270	Clarinet 3	Clarine3
271	2 Clarinets	2Clarins
PIPE		
272	Piccolo	Piccolo
273	Piccolo 2	Piccolo2
274	Piccolo 3	Piccolo3
275	2 Piccolos	2Picolos
276	Sweet Flute	SweeFlut
277	Flute	Flute
278	Flute 2	Flute2
279	Flute 3	Flute3
280	2 Flutes	2Flutes
281	Recorder	Recorder
282	Recorder 2	Recorde2
283	2 Recorders	2Records
284	Pan Flute	PanFlute
285	Pan Flute 2	PanFlut2
286	Sweet Pan Flute	SwPanFlu
287	Blown Bottle	Bottle
288	Blown Bottle 2	Bottle2
289	Shakuhachi	Shakhchi
290	Shakuhachi 2	Shakhch2
291	Whistle	Whistle
292	Whistle 2	Whistle2
293	Ocarina	Ocarina
294	Ocarina 2	Ocarina2
SYNTH LEAD		
295	Lead 1 (square)	SquareLd
296	Lead 1a (square) 2	SquarLd2
297	Lead 1 (square) 3	SquarLd3
298	Lead 1b (sine)	SineLead
299	Lead 2 (sawtooth)	SawLead
300	Lead 2a (sawtooth) 2	SawLead2
301	Lead 2 (sawtooth) 3	SawLead3
302	Lead 2b (saw + pulse)	SawPlsLd
303	Lead 2c (double sawtooth)	DubSawLd
304	Lead 2d (sequenced analog)	SquAnaLd
305	Lead 2d (sequenced analog) 2	SqAnaLd2
306	Wavy Sawtooth	WavySaw
307	Bauble Lead	BaubleLd
308	Super Analog	SuperAna
309	Lead 3 (calliope)	CaliopLd

No.	Name	Display		No.	Name	Display
310	Lead 3 (calliope) 2	CalipLd2		342	Fifth Lead	FifLead
311	Lead 4 (chiff)	ChiffLd		343	Corrie	Corrie
312	Lead 4 (chiff) 2	ChiffLd2		344	Quint	Quint
313	Lead 4 (chiff) 3	ChiffLd3		**SYNTH PAD**		
314	Lead 5 (charang)	CharanLd		345	Pad 1 (new age)	NewAge
315	Lead 5 (charang) 2	CharaLd2		346	Pad 1 (new age) 2	NewAge2
316	Lead 5 (charang) 3	CharaLd3		347	Pad 2 (warm)	WarmPad
317	Lead 5 (charang) 4	CharaLd4		348	Pad 2 (warm) 2	WarmPad2
318	Lead 5a (wire lead)	WireLead		349	Pad 2a (sine pad)	SinePad
319	Lead 5a (wire lead) 2	WireLd2		350	Pad 3 (polysynth)	PolySyn
320	Lead 6 (voice)	VoiceLd		351	Pad 3 (polysynth) 2	PolySyn2
321	Lead 6 (voice) 2	VoiceLd2		352	Pad 3 (polysynth) 3	PolySyn3
322	Lead 7 (fifths)	FifthsLd		353	Pad 3 (polysynth) 4	PolySyn4
323	Lead 7 (fifths) 2	FifthLd2		354	Pad 4 (choir)	ChoirPad
324	Lead 8 (bass + lead)	BassLead		355	Pad 4 (choir) 2	ChoirPd2
325	Lead 8 (bass + lead) 2	BasLead2		356	Pad 4a (itopia)	ItopiaPd
326	Lead 8 (bass + lead) 3	BasLead3		357	Pad 5 (bowed)	BowedPad
327	Lead 8a (soft wrl)	SftWrlLd		358	Pad 5 (bowed) 2	BowedPd2
328	Massiness	Massin		359	Pad 6 (metallic)	MetalPad
329	Square	Square		360	Pad 6 (metallic) 2	MetalPd2
330	Slow Square Lead	SlwSquLd		361	Pad 7 (halo)	HaloPad
331	Sine Solo	SineSolo		362	Pad 7 (halo) 2	HaloPad2
332	Square Lead 4	SquarLd4		363	Pad 8 (sweep)	SweepPad
333	Thick Square	ThickSqu		364	Pad 8 (sweep) 2	SweepPd2
334	2Oscillators Lead	2OscLd		365	Pad 8 (sweep) 3	SweepPd3
335	Wavy Sawtooth 2	WavySaw2		366	Pan Pad	PanPad
336	Analog Lead	AnaLead		367	Pan Pad 2	PanPad2
337	Big Lead	BigLead		368	Dipolar Pad	DipolPad
338	Fat Lead	FatLead		369	PWM Pad	PWMPad
339	PWM 4th	Rezz4th		370	Warmly Pad	WarmlyPd
340	Delayed Lead	DelyLead		371	Horn Pad	HornPad
341	Delayed Lead 2	DlyLead2		372	Click Pad	ClickPad

No.	Name	Display
373	Analog Pad	AnalogPd
374	80's Poly Pad	80'sPoly
375	PWM 4th Soft	Rezz4thS
376	Synth Calliope Soft	CalioLdS
377	Soft Vox	SoftVox
378	5th SawWave	5thSaw
379	5th Lead Soft	FiftLdSf
380	Slow Square	SlSquare
381	New Year Pad	NewYear
382	Space Voice	SpcVoice
383	Rising	Rising
384	Congregate	Congrega
SYNTH SFX		
385	FX 1 (rain)	FXRain
386	FX 1 (rain) 2	FXRain2
387	FX 2 (soundtrack)	Soundtrk
388	FX 2 (soundtrack) 2	Sondtrk2
389	Prelude	Prelude
390	FX 3 (crystal)	Crystal
391	FX 3 (crystal) 2	Crystal2
392	FX 3a (synth mallet)	SynMalet
393	FX 4 (atmosphere)	Atmosphr
394	FX 4 (atmosphere) 2	Atmosph2
395	Warm Air	WarmAir
396	FX 5 (brightness)	Bright
397	Smog	Smog
398	FX 6 (goblins)	Goblins
399	FX 6 (goblins) 2	Goblins2
400	Choir Bell	ChorBell
401	Choir Bell 2	ChorBel2
402	FX 7 (echoes)	Echoes
403	FX 7 (echoes) 2	Echoes2
404	FX 7b (echo pan)	EchoPan
405	FX 7a (echo bell)	EchoBell
406	FX 7a (echo bell) 2	EchoBel2
407	FX 7a (echo bell) 3	EchoBel3
408	FX 8 (sci-fi)	Sci-Fi
409	FX 8 (sci-fi) 2	Sci-Fi2
ETHNIC MISC.		
410	Sitar	Sitar
411	Sitar 2	Sitar2
412	Banjo	Banjo
413	Banjo 2	Banjo2
414	Shamisen	Shamisen
415	Shamisen 2	Shamise2
416	Koto	Koto
417	Koto 2	Koto2
418	Taisho Koto	TaishoKt
419	Kalimba	Kalimba
420	Kalimba 2	Kalimba2
421	Bag Pipe	BagPipe
422	Bag Pipe 2	BagPipe2
423	Fiddle	Fiddle
424	Fiddle 2	Fiddle2
425	Fiddle 3	Fiddle3
426	Shanai	Shanai
427	Shanai 2	Shanai2
PERCUSSIVE		
428	Tinkle Bell	TnklBell
429	Agogo	Agogo
430	Steel Drums	SteelDrm
431	Woodblock	WoodBlok
432	Castanets	Castanet
433	Taiko Drum	TaikoDrm

No.	Name	Display		No.	Name	Display
434	Concert Bass Drum	ConBasDm		466	Analog Low Conga	AnLoCnga
435	Acoustic Bass Drum	BassDrum		467	High Timbale	HiTimbal
436	Jazz Kick	JazzKick		468	Low Timbale	LoTimbal
437	Side Stick	SidStick		469	Cabasa	Cabasa
438	Analog Rim Shot	AnRiShot		470	Maracas	Maracas
439	Acoustic Snare	A.Snare		471	Analog Maracas	AnMaracas
440	Jazz Snare	JazSnare		472	Short Guiro	ShGuiro
441	Brush Tap	BrushTap		473	Long Guiro	LoGuiro
442	Concert SD	ConcetSD		474	Claves	Claves
443	Hand Clap	HandClap		475	Mute Cuica	MuCuica
444	Tom	Tom		476	Open Cuica	OpCuica
445	Brush Tom	BrushTom		477	Mute Triangle	MuTrgle
446	Closed Hi-hat	ClosedHH		478	Open Triangle	OpTrgle
447	Analog Closed Hi-hat	AnCloHH		479	Shaker	Shaker
448	Pedal Hi-hat	PedalHH		480	Mute Surdo	MuSurdo
449	Open Hi-hat	OpenHH		481	Open Surdo	OpSurdo
450	Crash Cymbal	CrashCym		482	Melodic Tom	MeloTom
451	Analog Cymbal	AnaCym		483	Melodic Tom 2	MeloTom2
452	Ride Cymbal	RideCym		484	Synth Drum	SynDrum
453	China Cymbal	ChinaCym		485	Rhythm Box Tom	RhythBox
454	Ride Bell	RideBell		486	Electric Drum	ElecDrum
455	Tambourine	Tambouri		487	Reverse Cymbal	RevCymbl
456	Splash Cymbal	SplashCy		**SFX**		
457	Cowbell	Cowbell		488	Guitar Fret Noise	FretNoiz
458	Analog Cowbell	AnaCowbl		489	Guitar Cutting Noise	GtCtNoiz
459	High Bongo	HiBongo		490	Acoustic Bass String Slap	BsStSlap
460	Low Bongo	LoBongo		491	Breath Noise	BrthNoiz
461	Mute Hi Conga	MuHiCnga		492	Flute Key Click	FlKeyClk
462	Open Hi Conga	OpHiCnga		493	Seashore	Seashore
463	Low Conga	LowConga		494	Rain	Rain
464	Analog Hi Conga	AnHiCnga		495	Thunder	Thunder
465	Analog Mid Conga	AnMiCnga		496	Wind	Wind

No.	Name	Display
497	Stream	Stream
498	Bubble	Bubble
499	Bird Tweet	Tweet
500	Bird Tweet 2	Tweet2
501	Dog	Dog
502	Horse Gallop	HouseGlp
503	Telephone Ring	Telphone
504	Telephone Ring 2	Telphon2
505	Door Creaking	DoorCrek
506	Door	Door
507	Scratch	Scratch
508	Wind Chime	WindChim
509	Helicopter	Helicptr
510	Car Engine	CarEngin
511	Car Stop	CarStop
512	Car Pass	CarPass
513	Car Crash	CarCrash
514	Siren	Siren
515	Train	Train
516	Jetplane	Jetplane
517	Starship	Starship
518	Burst Noise	BurtNois
519	Applause	Applause
520	Laughing	Laughing
521	Screaming	Scream
522	Punch	Punch
523	Heart Beat	HeartBet
524	Footsteps	Footstep
525	Gunshot	Gunshot
526	Machine Gun	MachnGun
527	Lasergun	Lasergun
528	Explosion	Explosio

No.	Name	Display
COMBINED VOICE		
529	Stereo Piano & Strings Pad	Pn&StrPd
530	Stereo Piano & Choir	Pn&Choir
531	Stereo Piano & Synth Strings	Pn&SyStr
532	Stereo Piano & Warm Pad	Pn&WrmPd
533	Stereo Piano & Soft EP	Pn&SfEP
534	FM Electric Piano	FMEP
535	Digital Piano	DigitlPn
536	E.Piano & Strings	EP&Str
537	Piano & Acoustic Guitar	EP&Str
538	E.Piano & Vibraphone	EP&Vibra
539	E.Piano 2 & Pad	EP2&Pad
540	E.Piano 2 & Strings	EP2&Str
541	Harpsichord & Stereo Strings	Hrps&Str
542	Music Box & Stereo Strings	MBox&Str
543	Vibraphone & Stereo Strings	Vib&Str
544	Vibraphone Octave	VibraOct
545	Vibraphone & Marimba & Kalimba	Vib&M&K
546	Marimba & Kalimba	Mar&Kal
547	Marimba Delay	MarDelay
578	Xylophone Octave	XylopOct
549	Organ & Stereo Strings	Orgn&Str
550	Stereo Organ & Piano	Orgn&Pno
551	Rock Organ & Strings	RkOr&Str
552	Church Organ & Choir	ChOr&Cho
553	Church Organ & Strings	ChOr&Str
554	Acoustic Guitar & Flute	Gtr&Flut
555	Acoustic Guitar & Clavi	Gtr&Clav
556	24 String Guitar	24StrGtr
557	Steel Guitar & Warm Pad	StGt&Pad
558	Stereo Strings & Horn	Str&Horn
559	Orchestra	Orchestr

No.	Name	Display		No.	Name	Display
560	Full Strings	FullStr		581	Flute Octave	FluteOct
561	Full Strings 2	FullStr2		582	Flute & Oboe Octave	Fl&ObOct
562	Symphonic	Symphon		583	Flute & Clarinet Octave	Fl&ClOct
563	Stereo Choir & Strings	Cho&Str		584	Oboe & Bassoon	Oboe&Bn
564	Stereo Choir & Steel Guitar	Cho&Gtr		585	Oboe & Clarinet	Ob&Cl
565	3 Trumpet Loose	3Trumpet		586	Oboe & Clarinet & Bassoon	Ob&Cl&Bn
566	Trombone & Stereo Strings	Tomb&Str		587	Oboe Octave	OboeOct
567	3 Trombones Loose	3Trmbone		588	Oboe & Clarinet Octave	Ob&ClOct
568	3 Muted Trumpets Loose	3MuTrump		589	Oboe & Bassoon Octave	Ob&BnOct
569	Club Brass	ClubBras		590	Clarinet & Bassoon	Cl&Bn
570	Brass & Woodwinds	Brs&Wood		591	Clarinet & Oboe Octave	Cl&ObOct
571	Woodwinds & Strings	Wood&Str		**CHINESE INSTRUMENTS**		
572	Section Woods Small	WoodSmal		592	Standard Set	StandSet
573	Pan Flute & Strings Pad	PnFl&Str		593	Room Set	RoomSet
574	Koto & Shamisen	Kto&Sham		594	Power Set	PowerSet
575	Flute & Clarinet	Flu&Clar		595	Electronic Set	ElectSet
576	Flute & Oboe	Flu&Oboe		596	Analog Set	AnalgSet
577	Flute & Bassoon	Flu&Bn		597	Jazz Set	JazzSet
578	Flute & Oboe & Clarinet	Fl&Ob&Cl		598	Brush Set	BrushSet
579	Flute & Clarinet & Bassoon	Fl&Cl&Bn		599	Orchestra Set	OrcheSet
580	Flute & Oboe & Bassoon	Fl&Ob&Bn		600	SFX Set	SFXSet

13.4 Demo list

No.	Name	Display
001	Demo1	Demo1
002	Demo2	Demo2
003	Bossa Nova	BosaNova
004	Fusion	Fusion
005	Jazz	Jazz

13.5 MIDI implementation chart

Function		Sent	Received	Notes
Basic Channel	Default	1	ALL	
	Changed	1-16	1-16	
Mode	Default	No	Mode 3	
	Messages	No	Mode 3	
	Altered	**********	No	
Note Number	Note	0 – 127	0 – 127	
	True voice	**********	0 – 127	
Velocity Note	Note ON	Yes, 9nH, v = 1 – 127	Yes, 9nH, v = 1 – 127	
	Note OFF	No, 9nH, v = 0	Yes, 9nH, v = 0 or 8nH, v = 0 – 127	
After Touch	Keys	No	No	
	Channels	No	No	
Pitch Bend		Yes	Yes	
Control Change	0	Yes	Yes	Bank Select
	1	No	Yes	Modulation
	5	No	Yes	Portamento Time
	6	Yes	Yes	Data Entry
	7	Yes	Yes	Volume
	10	No	Yes	Pan
	11	No	Yes	Expression
	64	Yes	Yes	Sustain Pedal
	65	No	Yes	Portamento ON/OFF
	66	Yes	Yes	Sostenuto Pedal
	67	Yes	Yes	Soft Pedal
	80	No	Yes	Reverb Program
	81	No	Yes	Chorus Program
	91	Yes	Yes	Reverb Level
	93	Yes	Yes	Chorus Level
	120	No	Yes	All Sound Off
	121	No	Yes	Reset All Controllers
	123	No	Yes	All Notes Off

Function		Sent	Received	Notes
Program Change	True #	Yes **********	Yes 0 – 127	
System Exclusive		No	Yes	
System Common	Song Position Pointer	No	No	
	Song Select	No	No	
	Tune Request	No	No	
System Real Time	Clock	Yes	No	
	Commands	No *1	No *1	
Aux Messages	Local ON/OFF	No	No	
	Active Sensing	No	Yes	
	System Reset	No	No	

MIDI channel modes

	POLY	MONO
OMNI ON	Mode 1	Mode 2
OMNI OFF	Mode 3	Mode 4

14 Protecting the environment

Disposal of the packaging material

For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

Disposal of your old device

This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

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