

Startone★

MK-200
keyboard



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1 General information

This manual contains important instructions for the safe operation of the unit. Read and follow the safety instructions and all other instructions. Keep the manual for future reference. Make sure that it is available to all those using the device. If you sell the unit please make sure that the buyer also receives this manual.

Our products are subject to a process of continuous development. Thus, they are subject to change.

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.



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

The keyboard is characterized by the following features:

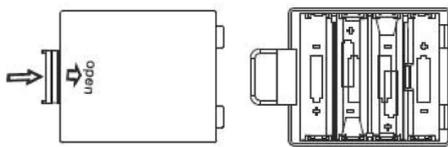
- Keyboard: 61 keys with adjustable touch velocity
- 32-voice polyphony
- 320 Voices
- 110 Styles
- 100 rehearsal songs
- 100 demo songs
- Dual voice
- Record and playback function
- Modulation effect
- Split mode
- Metronome
- Transpose function
- Speaker: 2 × 3 W
- Connections: Headphones output, sustain pedal, USB, operating voltage
- Operation via power adapter (supplied) or batteries
- Automatic shutoff

4 Assembly instructions

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device 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.

Voltage supply



The device can be powered by batteries or with the included AC adapter.

Batteries

1. ➤ Make sure that the device is turned off before you connect it to the power supply, or disconnect it, or connect it to other devices. This is to protect the speakers from damage.
2. ➤ Take off the battery compartment cover on the underside of the keyboard.
3. ➤ Insert six AA/R6 size batteries. Pay attention to the correct polarity according to the marks.



NOTICE!

Possible damage by leaking batteries

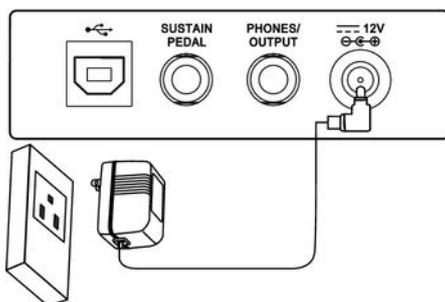
Leaking batteries can cause permanent damage to the device.

Take batteries out of the device if it is not going to be used for a longer period.

Always use batteries of the same type and do not use new and used batteries at the same time.

4. ➤ Reattach the battery compartment cover and snap it into place.

Power adapter



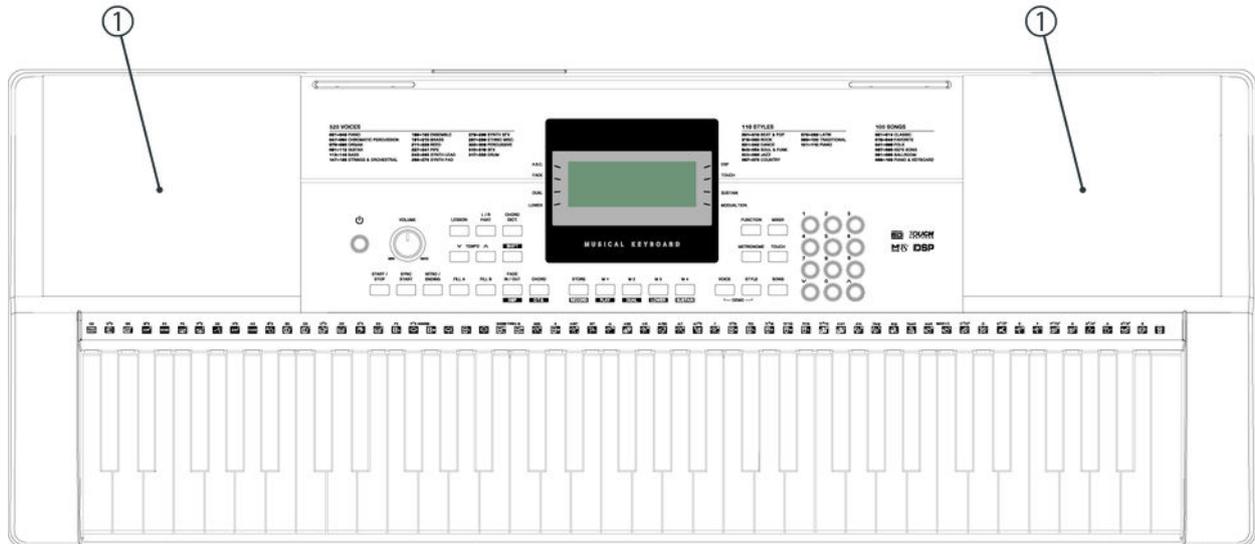
1. ➤ Make sure that the device is turned off before you connect it to the power supply, or disconnect it, or connect it to other devices. This is to protect the speakers from damage.

2. ➤ Connect the cable from the power adapter outlet to the [12V] socket on the rear panel of the keyboard.

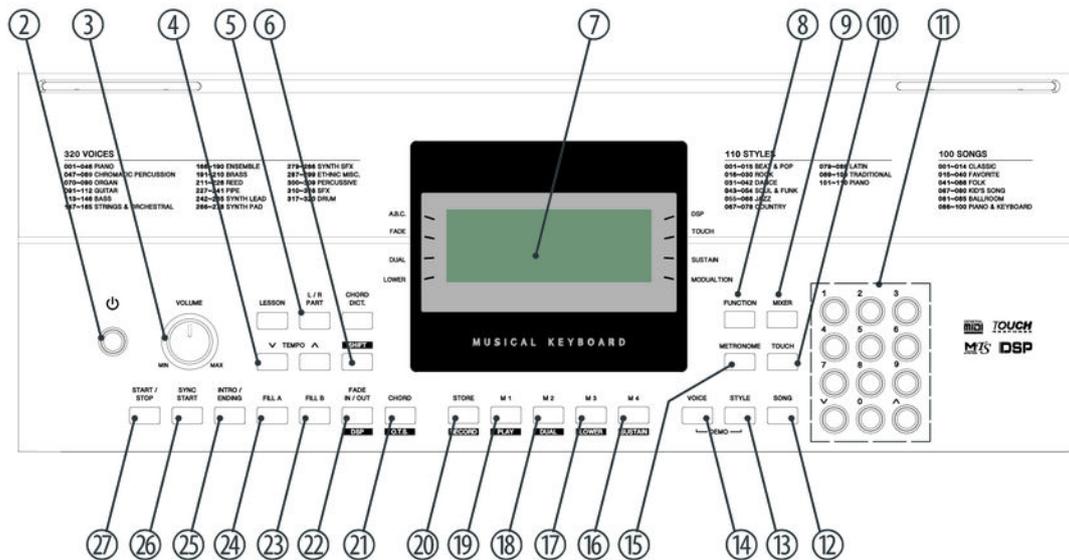
Plug the power adapter into a properly wired mains wall outlet.

5 Control panel and connections

Overview



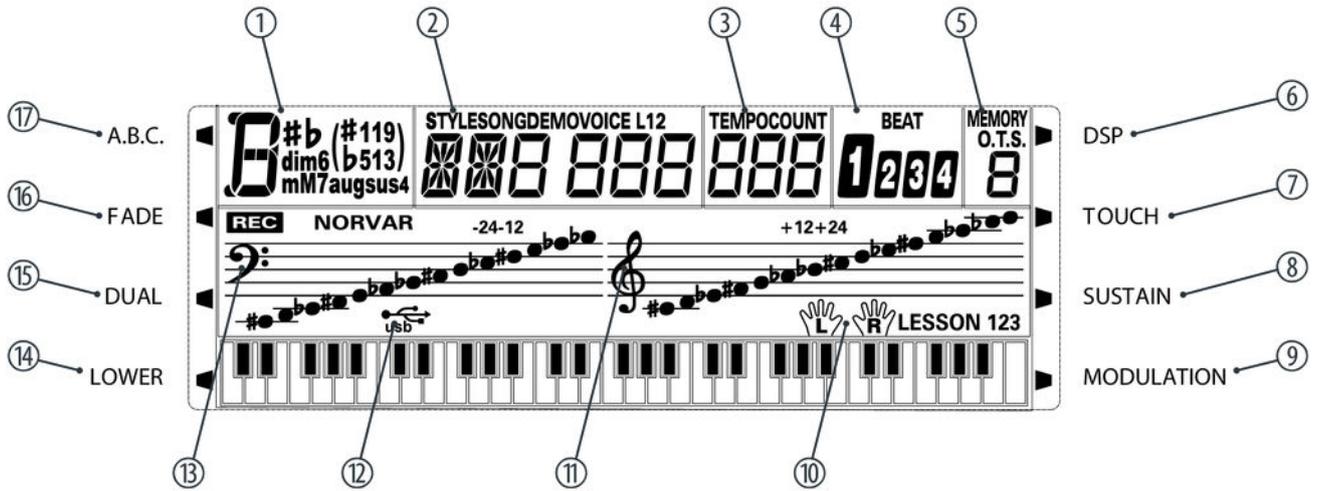
Operating panel



- | | |
|---|---|
| 1 | Speaker. |
| 2 | Button to turn the keyboard on and off. |
| 3 | Rotary control [VOLUME] to set the volume. |
| 4 | [TEMPO] ▲/[TEMPO] ▼ buttons to increase / decrease the tempo. |

5	[LESSON/L-R PART/CHORD DICT.] buttons to adjust the lesson mode and to call the chord dictionary.
6	[SHIFT] button to call the second allocation of a button.
7	Display.
8	[FUNCTION] button to enter the function menu and fine tuning of parameters.
9	[MIXER] button to adjust the volume of each component.
10	[TOUCH] button to adjust the touch sensitivity.
11	Numeric buttons to enter a number or a parameter setting.
12	[SONG] button to call up the [SONG] mode.
13	[STYLE] button to call up the [STYLE] mode. Pressing both [STYLE] and [VOICE] buttons simultaneously will start the automatic playback of the demo songs.
14	[VOICE] button to call up the [VOICE] mode. Pressing both [VOICE] and [STYLE] buttons simultaneously will start the automatic playback of the demo songs.
15	[METRONOME] button to turn the Metronome function on and off.
16	[M4] / [SUSTAIN] button to call settings from memory location 4 or to turn the Sustain effect on or of.
17	[M3] / [LOWER] button to call settings from memory location 3 or to turn an additionally generated bass note for the left hand area on or off.
18	[M2] / [DUAL] button to call settings from memory location 2 or to turn the Dual mode on or off.
19	[M1] / [PLAY] button to call settings from memory location 1 or to play the recorded user song.
20	[STORE] / [RECORD] button to store the settings to one of the memory locations M1 – M4 or to begin or end a recording in real time.
21	[CHORD] / [O.T.S.] button to activate the chord recognition mode (A.B.C.) or for One-Touch-Settings.
22	[FADE IN/OUT] / [DSP] button to fade the currently playing Style in or out or to activate the DSP effect.
23	[FILL B] button to select rhythm variation B.
24	[FILL A] button to select rhythm variation A.
25	[INTRO/ENDING] button selecting an Intro or Ending.
26	[SYNC START] to enable / disable the synchronous start of the auto accompaniment.
27	[START/STOP] button to play the rehearsal songs in [SONG] mode and to start and stop styles in [STYLE] mode.

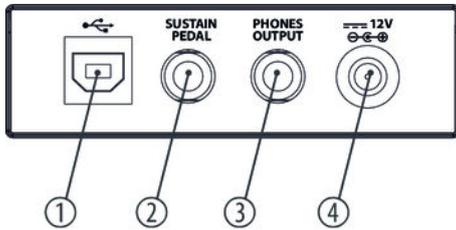
Display



1	Display area for chords.
2	'STYLE/SONG/DEMO/VOICE' Voice, Style, Demo and Song number display.
3	'TEMPOCOUNT' Tempo display.
4	'BEAT' Beat display within the bar.
5	'MEMORY / O.T.S.' Active memory location display 1 to 4 and O.T.S. 1 to 4
6	LCD symbol 'DSP' Lights when the DSP effect is active.
7	LCD symbol 'TOUCH' Lights on activated TOUCH function to affect the touch sensitivity.
8	LCD symbol 'SUSTAIN' Lights when the SUSTAIN function is active.
9	LCD symbol 'MODULATION' Lights when the MODULATION effect is active.
10	'LESSON 123 / L/R' Learning mode display for left and right hand.
11	Treble clef. To the right of it, the display shows the notes played in the right hand area.
12	USB symbol. Lights on USB connection of the device to a computer or the like.

13	Bass clef. To the right of it, the display shows the notes played in the left hand area.
14	LCD symbol 'LOWER' Lights when the LOWER function is active.
15	LCD symbol 'DUAL' Display for Dual mode, left hand assignment and DSP.
16	LCD symbol 'FADE' Lights when the FADE IN / OUT function is active.
17	LCD symbol 'A.B.C.' Lights when the A.B.C. function (Auto Bass Chord) is active.

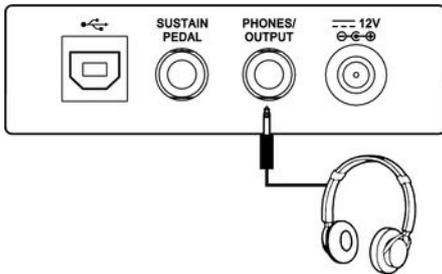
Rear panel connections



1	<i>[USB]</i> USB/MIDI interface to connect a computer.
2	<i>[SUSTAIN PEDAL]</i> Sustain pedal connection.
3	<i>[PHONES OUTPUT]</i> Output for headphones or external audio devices like active speakers or amplifiers.
4	<i>[12V]</i> Connection for the power adapter.

6 Connectivity options

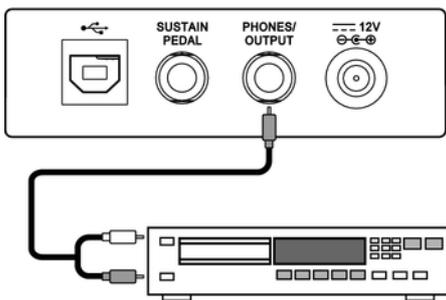
Headphones



On the rear panel of the keyboard, you can connect headphones to the *[PHONES]* output socket.

When you connect headphones, the internal speakers of the keyboard are automatically disconnected.

External audio devices



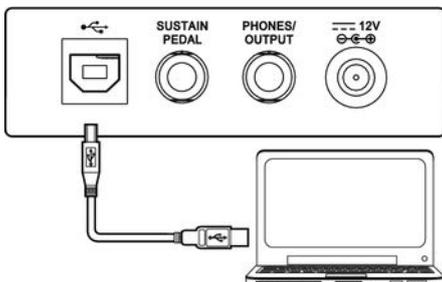
Use the *[PHONES OUTPUT]* socket to connect the keyboard to an amplifier, stereo device, mixing console or recording device. Plug one end of the audio cable into the *[PHONES OUTPUT]* socket on the rear panel of the keyboard and the other end into the input of the respective audio device.



NOTICE!

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

Computer



The USB port allows the exchange of MIDI data with a computer.

7 Switching on / off and basic operation

7.1 Powering up the keyboard

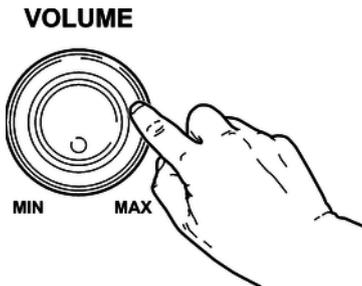
7.1.1 Normal switching on / off

Press the power button on the far left of the operating panel to turn the keyboard on or off.

7.1.2 Automatic shutoff

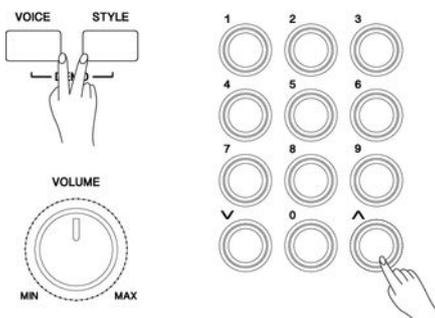
On delivery, the auto shutoff setting will turn the keyboard automatically off after 30 minutes without use. To turn it then on again, press the power button.

7.2 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.

7.3 Demo songs

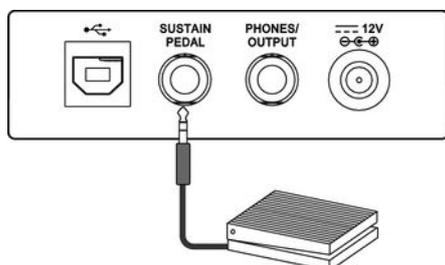


The 100 demo songs of the keyboard demonstrate the sound and the pitch range of the instrument.

1. ➤ Press the *[STYLE]* and *[VOICE]* buttons simultaneously to enter the DEMO mode. The DEMO indicator lights up.
2. ➤ Select a demo song with the numeric buttons or the \wedge | \vee buttons.
The first demo song starts after four precount bars. Then, all other demo songs are being played successively in an endless loop.
3. ➤ Simultaneously press the buttons *[STYLE]* and *[VOICE]* again to stop playback and exit the DEMO mode.

8 Functions

8.1 Using the Sustain pedal

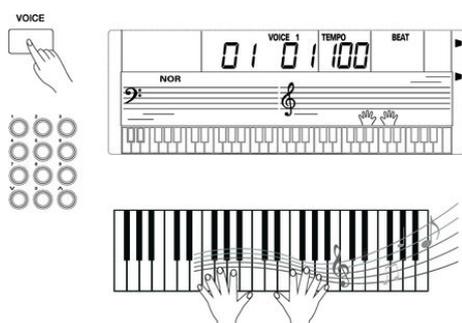


By using a Sustain pedal, you can make your playing more expressive and let tones linger after you lift your fingers from the keys of the keyboard. The sustain effect is activated when you step on the pedal and deactivated when you release it.

8.2 Voices and effects

8.2.1 Selecting Voices

The instrument offers 320 exceptionally realistic voices including piano, woodwind, saxophone, drum kits and other sounds. Orient yourself with the selection of voices by the list of the Voice groups on the housing left of the display.



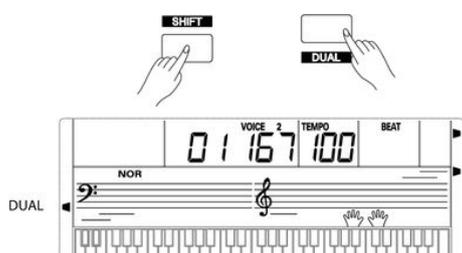
1. ➤ The preset and displayed 'VOICE 1' is number '001'.
2. ➤ To select another voice, press buttons **▲** | **▼** or the numeric buttons.



If Dual mode is active, repeatedly press the [VOICE] button to let the display show the first voice 'VOICE 1' and the second Voice 'VOICE R2' alternating.

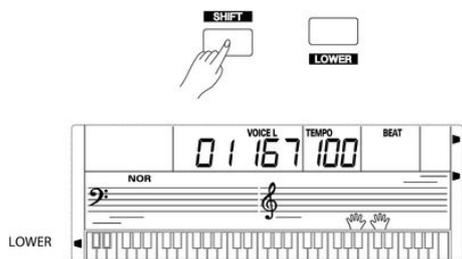
8.2.2 Dual mode

In Dual mode, you can play two voices simultaneously.



1. ➤ Keep the [SHIFT] button pressed while pressing the [M2] / [DUAL] button to enable the Dual mode. The symbol next to 'DUAL' and 'VOICE 2' appear in the display. Underneath, the currently set second voice is displayed. If you now press a key, both voices sound simultaneously.
2. ➤ Press the **▲** | **▼** buttons or the numeric buttons to select the desired voice.
3. ➤ Keep the [SHIFT] button pressed again while pressing the [M2] / [DUAL] button to disable the Dual mode. 'VOICE 2' and the symbol next to 'DUAL' go out and you only hear the voice set for 'VOICE 1'.

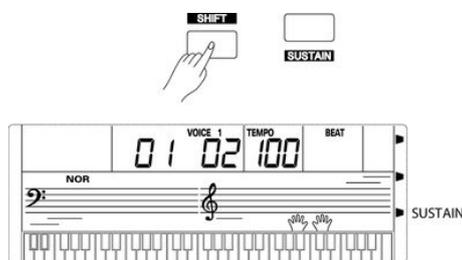
8.2.3 Split mode



This function lets you assign an individual voice for the left hand area.

1. ➤ Keep the *[SHIFT]* button pressed while pressing the *[M3]* / *[LOWER]* button to enable the Split mode. The LCD symbol next to 'LOWER' and 'VOICE L' appear in the display. Underneath, the currently set voice for the left hand is displayed.
2. ➤ Press the \wedge | \vee buttons or the numeric buttons to select the desired voice.
3. ➤ Keep the *[SHIFT]* button pressed again while pressing the *[M3]* / *[LOWER]* button to disable the Split mode. 'VOICE L' and the symbol next to 'LOWER' go out and you play the same voice with both hands again.

8.2.4 Sustain



When the Sustain function is turned on, all tones played on the keyboard linger.

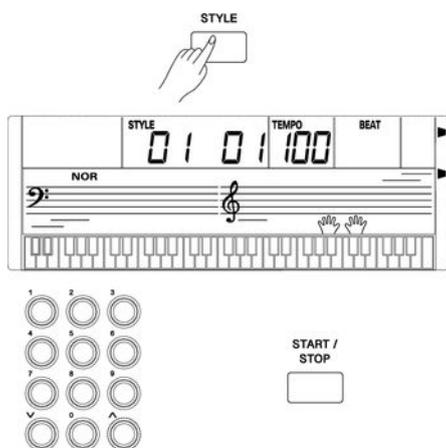
Keep the *[SHIFT]* button pressed while pressing the *[M4]* / *[SUSTAIN]* button to enable or disable the Sustain function.

8.3 Style operation and automatic accompaniment

The keyboard offers a total of 110 different styles from a variety of different musical genres. Orient yourself with the selection of styles by the list of the Style groups on the housing right of the display.

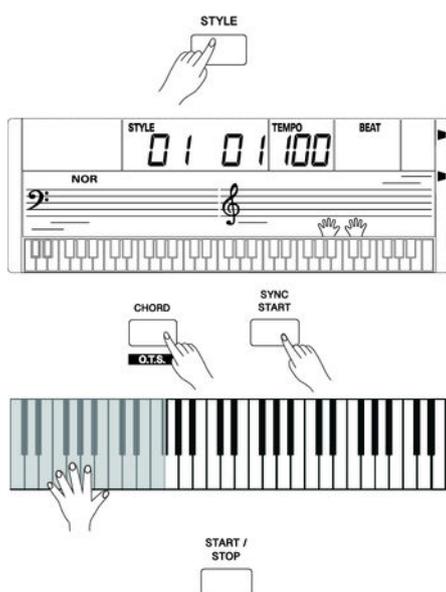
The Auto Accompaniment feature gives you a full backing band. To use it, you only need to play single notes or chords with the left hand while playing the melody with the right hand.

8.3.1 Starting Auto Accompaniment (rhythm track only)



1. ➤ Press the *[STYLE]* button to enter *[STYLE]* mode. The display shows 'STYLE' and beneath the number of the currently selected style.
2. ➤ Select the desired Style with the buttons \wedge | \vee or the numeric buttons.
3. ➤ Press the *[START/STOP]* button to start the Auto Accompaniment's rhythm track.

8.3.2 Starting Auto Accompaniment (all tracks)



1. ➤ Press the *[STYLE]* button to enter *[STYLE]* mode. The display shows 'STYLE' and beneath the number of the currently selected style.
2. ➤ Select the desired Style with the buttons \wedge | \vee or the numeric buttons.
3. ➤ Press the *[CHORD]* / *[O.T.S.]* button to enter Chord Generation mode. The LCD symbol next to 'A.B.C.' appears. The area set for the left hand becomes the accompaniment area. Chords matching the notes played in this area are automatically generated and are used as a base for the accompaniment with the selected Style.
4. ➤ Press the *[SYNC START]* button to turn on the Synchronous Start function. The bar indicator is flashing in the display according to the set tempo. Once you play a note with the left hand, all accompaniment tracks start playing.
5. ➤ Try playing other notes with the left hand to create a pleasant chord sequence.
6. ➤ Press the *[START/STOP]* button again to stop the Auto Accompaniment.

8.3.3 Auto Accompaniment patterns



Auto Accompaniment is controlled via several patterns: Intro, Fill (A & B), Fade In / Out and Ending.

1. ➤ INTRO

Before you start playing, press the *[INTRO/ENDING]* button to insert an Intro. 'NOR' or 'VAR' is flashing in the display. Depending on the selected Style the Intro consists of two to four bars, followed by the main part.

2. MAIN

This is the main pattern that is being repeated until a button is pressed to call another pattern of the Auto Accompaniment.

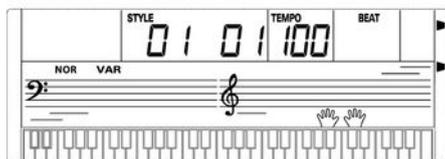
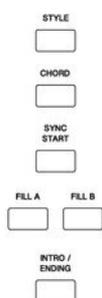
3. FILL

Press the [FILL A] or [FILL B] button to insert a rhythm variation until the end of the bar.

4. ENDING

If you press the [INTRO/ENDING] button while playing, an ending pattern suitable to the accompaniment is being inserted at the beginning of the next bar and closes the song.

8.3.4 Varying with different Accompaniment patterns



1. Press the [STYLE] button and select a Style.

2. Press the [CHORD] / [O.T.S.] button to enable the chord generation and press the [SYNC START] button.

3. Press the [FILL A] or [FILL B] button.

4. Press the [INTRO/ENDING] button. Depending on the previously pressed FILL button, 'NOR' or 'VAR' flashes in the display. This indicates that the normal Intro or a variation is ready to start.

5. Once you press a key with your left hand, Auto Accompaniment will start. When the Intro is finished, the Auto Accompaniment continues seamlessly with the main part.

6. Press the [FILL A] or [FILL B] button.

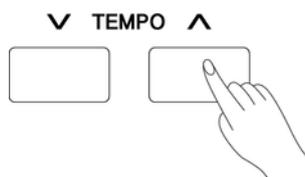
A rhythm variation is being inserted until the end of the bar, followed by the main part again.

7. Press the [INTRO/ENDING] button to conclude the song with an Ending. The style stops after the ending.



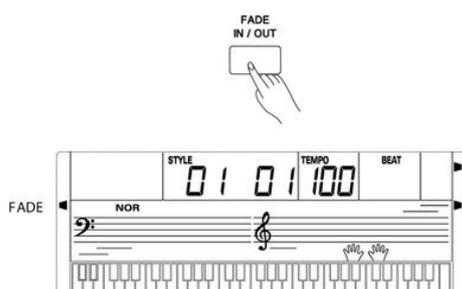
Hold the [FILL A] or [FILL B] button pressed while a Style is being played, so the selected fill pattern is played until you release the key.

8.3.5 Tempo



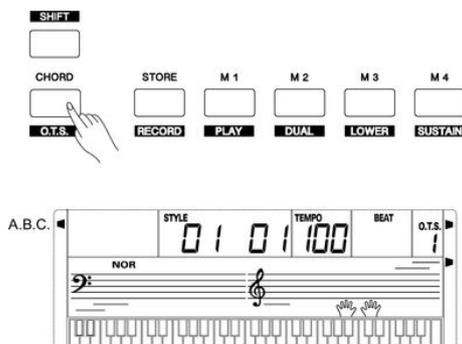
1. ➤ Each style of the instrument is programmed with a preset default tempo, but you can change it using the [TEMPO] ^ and [TEMPO] v buttons.
2. ➤ Press the [TEMPO] ^/[TEMPO] v buttons simultaneously to reset the tempo to the factory default value.

8.3.6 Fade



1. ➤ **FADE IN**
Press the [FADE IN/OUT] button before you start the Style.
When the Style begins to play, the Style volume is increased slowly from 0 to normal volume. When the FADE function is enabled, the LCD symbol next to 'FADE' appears in the display.
2. ➤ **FADE OUT**
Press the [FADE IN/OUT] button while you play the Style. The Style volume is slowly decreased from normal volume to 0. Then the Style playback is stopped.

8.3.7 One Touch Setting

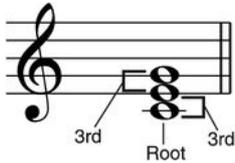


One Touch Setting (O.T.S. or one-key operation) is a convenient function that allows you to immediately reconfigure all settings with just one single key press. This is about rhythm-based compilations of instrument voices. With this function, four parameter types (M1 to M4) can be loaded.

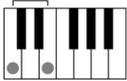
1. ➤ Keep the [SHIFT] button pressed while pressing the [CHORD] / [O.T.S.] button to enable the O.T.S. mode. 'O.T.S.' appears in the display. The ABC mode is automatically turned on at that.
2. ➤ Press one of the keys [M1] to [M4] that provides the desired settings suitable to the current Style.
3. ➤ Press the [O.T.S.] button again to exit O.T.S. mode.

8.3.8 Chord recognition and fingering techniques

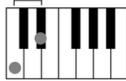
How the chords are played or displayed for the left hand in the auto accompaniment on your keyboard is called chord fingering. A distinction is made between single and multi-finger chords on one hand and the chord detection over the entire keyboard range.



Major third – four half steps (semitones)



Minor third – three half steps (semitones)



- 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.

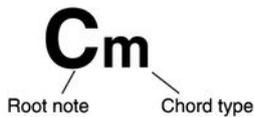
- Chord structure

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.

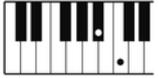


Chord recognition modes

With the chord recognition mode you can determine how the fingered chords are interpreted within the auto accompaniment.

■ 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).

<p>C</p> 	<p>• To play a major chord Press the root note of the chord</p>
<p>C_m</p> 	<p>• To play a minor chord Press the root note together with the nearest black key to the left of it .</p>
<p>C₇</p> 	<p>• To play a seventh chord Press the root note together with the nearest white key to the left of it .</p>
<p>C_{m7}</p> 	<p>• To play a minor seventh chord Press the root notes together with the nearest white and black keys to the left of it (three keys altogether) .</p>

■ 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 C _{M7} 	3 C _{M7} (#11) 	4 C _M (9) 	5 C _{M7} (9) 
6 C ₆ (9) 	7 C _{aug} 	8 C _m 	9 C _{m6} 	10 C _{m7} 	11 C _{m7} (b5) 
12 C _m (9) 	13 C _{m7} (9) 	14 C _{m7} (11) 	15 C _m M ₇ 	16 C _m M ₇ (9) 	17 C _{dim} 
18 C _{dim7} 	19 C ₇ 	20 C _{7sus4} 	21 C ₇ (b5) 	22 C ₇ (9) 	23 C ₇ (#11) 
24 C ₇ (b13) 	25 C ₇ (b9) 	26 C ₇ (13) 	27 C ₇ (#9) 	28 C _{M7aug} 	29 C _{7aug} 
30 C _{sus4} 	31 C ₁₊₂₊₅ 	The notes in brackets are optional; the chords will also be recognised without them.			

- Chord recognition throughout the entire keyboard range
The name of the recognized chords throughout the entire range of the keyboard appears on the display. Split Point setting for Auto Accompaniment will be ignored.

8.4 Function menu

Press the [FUNCTION] button to enter the function menu. The first function to appear after activation is 'Transpose'. Press the [FUNCTION] button repeatedly to select the desired option. If you don't press any key within five seconds after entering the function menu, the menu is automatically closed. Use the \wedge | \vee buttons to change the values listed below:

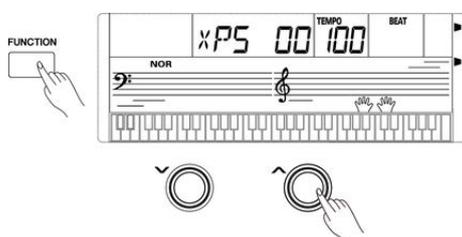
Option	LCD	Control range	Default value
Transposing	'XPS 00'	-12 to +12	0
Octave shift	'OCt 00'	-1 to +1	0
Modulation	'MOD oFF'	ON/OFF	OFF
Time signature	'bEt 04'	0 to 9	4
Fine tuning	'TUE 00'	-50 to +50	0
Split point	'SPt 19'	1 to 61	19

Option	LCD	Control range	Default value
MIDI receive channel	'CHI ALL'	1 to 16, all	ALL
MIDI send channel	'CHo 01'	1 to 16	1
Automatic shutoff	'PWF 030'	030, 060, OFF	030



– Press the buttons **▲** and **▼** simultaneously to restore the preset for the respective function according to the following table.

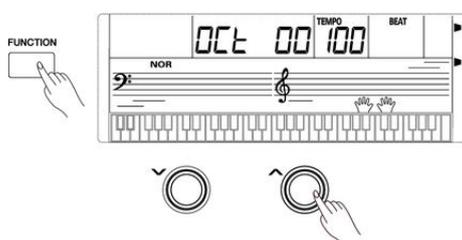
8.4.1 Transposing



With this function you can adjust the pitch of the keyboard in 12 semitone steps up to one octave up or down.

1. Press the [FUNCTION] button to open the Functions menu. The display shows 'XPS 00'.
2. Press the **▲** or **▼** button to adjust the keyboard pitch in semitone steps up or down. The display shows the pitch shift.

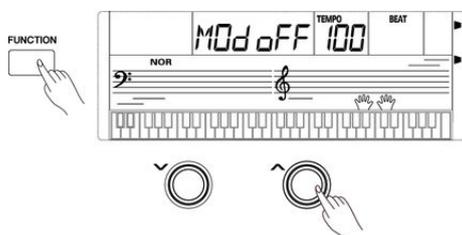
8.4.2 Octave shift



With this function you can adjust the keyboard pitch by one octave up or down.

1. Repeatedly press the [FUNCTION] button to open the Functions menu and let the display show 'OCT 00'.
2. Press the **▲** or **▼** button to adjust the keyboard pitch by one octave up or down. The display shows the octave shift.

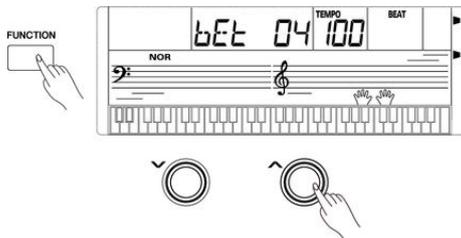
8.4.3 Modulation



With this function, you can turn the Modulation effect on or off.

1. Repeatedly press the [FUNCTION] button to open the Functions menu and let the display show 'MOD OFF'.
2. Press the **▲** or **▼** button to turn the Modulation effect on or off. When the effect is enabled, the display shows 'ON', when disabled 'OFF'.

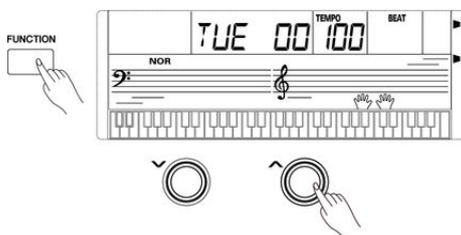
8.4.4 Time signature



Use this function to set the desired time signature for the Metronome function.

1. Repeatedly press the *[FUNCTION]* button to open the Functions menu and let the display show 'bEt 04'.
2. Use the \wedge / \vee buttons to set the time signature to 2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 8/4 or 9/4. The display shows the respective numerator. The display '00' stands for a metronome without accent.

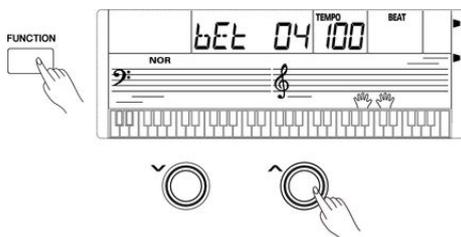
8.4.5 Fine tuning



With this function you can adjust the pitch of the keyboard in 50 cent steps up or down to match the tuning of other participating instruments.

1. Repeatedly press the *[FUNCTION]* button to open the Functions menu and let the display show 'TUE 00'.
2. Press the \wedge or \vee button to adjust the keyboard pitch in cent steps up or down. The display shows the pitch shift.

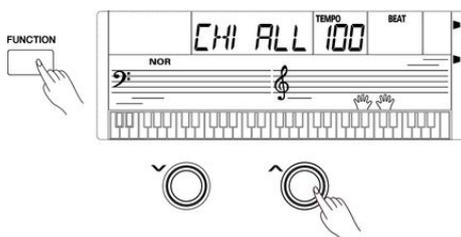
8.4.6 Split point



This function lets you adjust the point that divides the keyboard into areas for the left and right hand.

1. Repeatedly press the *[FUNCTION]* button to open the Functions menu and let the display show 'SPt 19'.
2. Press the desired piano key or set the split point with the \wedge / \vee buttons. The display shows the respective split point.

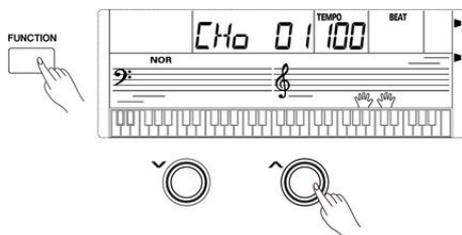
8.4.7 MIDI receive channel



Use this function to specify the channel over which the device is to receive MIDI data from other devices.

1. Repeatedly press the *[FUNCTION]* button to open the Functions menu and let the display show 'CHI ALL'.
2. Use the \wedge / \vee buttons to set the desired channel. The display shows the respective channel. The display 'ALL' stands for MIDI reception on all channels.

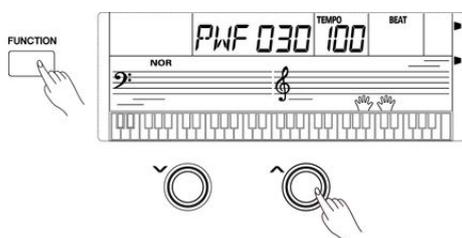
8.4.8 MIDI send channel



Use this function to specify the channel over which the device is to send MIDI data from other devices.

1. ➤ Repeatedly press the [FUNCTION] button to open the Functions menu and let the display show 'CHo 01' .
2. ➤ Use the ^ / v buttons to set the desired channel. The display shows the respective channel.

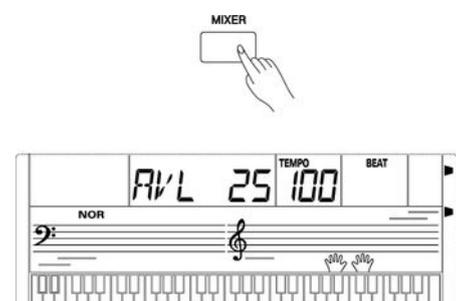
8.4.9 Automatic shutoff



With this function you can specify whether and if so, when the unit is to switch off automatically when not in use.

1. ➤ Repeatedly press the [FUNCTION] button to open the Functions menu and let the display show 'PWF 030' .
2. ➤ Use the ^ / v buttons to set the desired number of minutes. The display shows your respective selection. Select 'OFF' to deactivate the auto shutoff.

8.5 Mixer menu



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

1. ➤ Press the [MIXER] button to enter the Mixer menu. By default, when you open this menu the option 'AVL 25' .
2. ➤ Press the [MIXER] button repeatedly to select the desired option. Then you can adjust the selected parameter using the ^ and v buttons.



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

Adjustable parameters

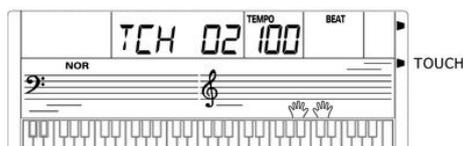
Parameter	LCD	Control range
Accompaniment volume	'AVL 25'	000 to 032
Drum volume	'RTh 31'	000 to 032
Bass volume	'bAS 31'	000 to 032
Volume polyphonic Melody 1	'CH1 31'	000 to 032

Parameter	LCD	Control range
Volume polyphonic Melody 2	'CH2 31'	000 to 032
Volume polyphonic Melody 3	'CH3 31'	000 to 032
Volume right hand voice 1	'UP1 28'	000 to 032
Volume right hand voice 2	'UP2 20'	000 to 032
Volume left hand voice	'LOE 20'	000 to 032



- When you call a parameter and then press the **▲** and **▼** buttons simultaneously, the display shows 'oFF' and the volume of this function is being set to 0. Press again the buttons **▲** and **▼** simultaneously to restore the previously set volume.

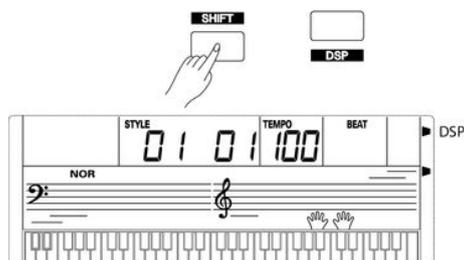
8.6 Touch sensitivity



With this function you can adjust the touch response of the keyboard at four different levels. Repeatedly press the [TOUCH] button to set this function to one of the values described here:

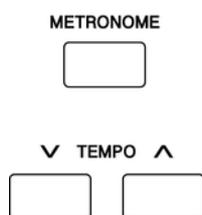
Value	Description
'OFF'	Touch sensitivity is off. This can be very recommendable when playing the organ voice.
'001'	Soft In this setting, the volume is higher than usual even when playing with a soft touch.
'002'	Normal This setting corresponds to the usual touch response of a keyboard.
'003'	Hard In this setting, the volume is lower than usual even when playing with a hard touch.

8.7 DSP effect



- ➔ Keep the [SHIFT] button pressed while pressing the [DSP] button to enable or disable the DSP effect. The DSP effect provides a more natural sound and more depth for your performance. The LCD symbol next to 'DSP' appears in the display when the effect is enabled.

8.8 Metronome

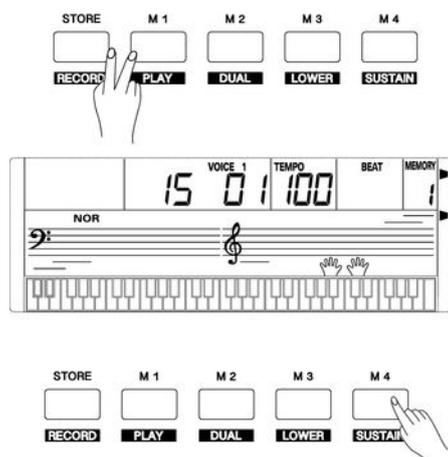


1. ➔ Press the [METRONOME] button to turn the Metronome on or off.
2. ➔ Press the [TEMPO] ^ or [TEMPO] v button to adjust the Metronome tempo.

8.9 Memory

You can store control panel configurations in the memory of the keyboard and recall them, if required.

8.9.1 Load / save parameters



1. ➔ Hold the [STORE] button pressed and simultaneously press one of the [M1] to [M4] buttons. The data are then stored in the respective memory location (M1 to M4). Please note that any data previously stored there will be deleted.
2. ➔ Press one of the [M1] to [M4] buttons. The data are then loaded from the corresponding memory and replace the current settings thereby.



Memory data can not be retrieved if the O.T.S. function is turned on. The stored data will be reset to the default values when you turn off the keyboard.

8.10 Record

The keyboard lets you record your playing along with the accompaniment. A maximum of 350 notes can be recorded.

8.12 Learning mode

When practising, it is mainly important to play the right notes at the right time. In this mode you can check your progress. There are three training stages.

Lesson 1 - playing in time

Press the *[SONG]* button. Quit the onset of playback with the *[START/STOP]* button. Then press the *[LESSON]* button to call the learning mode. 'LESSON 1' appears in 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. ➤ In the right hand symbol in the display, a 'R' appears, meaning the right hand is to be practised. Press the *[L/R Part]* button if you want to practise the left hand. Then an 'L' appears in the left hand symbol. Press the *[L/R Part]* button again if you want to practise both hands. 'L' and 'R' then appear in the display's hand symbols.
2. ➤ Press the *[START/STOP]* button, to start practising.
3. ➤ If you press '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 press '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. If 'L' and 'R' are selected the voices for both hands are muted. You then have to play in time with both hands.
4. ➤ After completing the exercise, you will learn the result.

Lesson 2 - hitting the right notes

Press the *[LESSON]* button again to enter the learning mode 2. 'LESSON 2' appears in 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 rehearsal song continues only when you play the right note.

- 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 learning mode 3. 'LESSON 3' appears in the display. In this mode, it is rated whether you play the right notes at the right time. The rehearsal song continues only when both is correct.

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

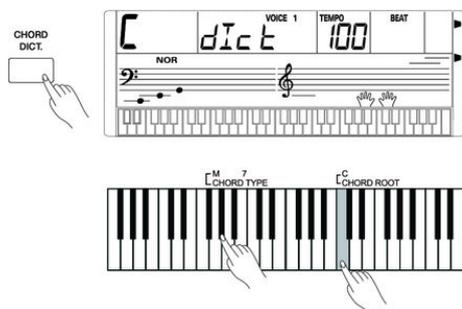
Rating

The rating is based on the level you have achieved during practising:

- Level 1: Ok (= try it again).
- Level 2: Good.
- Level 3: Very good.
- Level 4: Excellent.

After the rating, the rehearsal song will be played again and you can go on practising.

8.13 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 [CHORD DICT.] button to enter the 'DICT' mode. In this mode, the keys from C4 on are used to assign the chord type, and the keys from C5 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.
2. ➤ Play the chords according to the indication in the display. If the chord is correct, you will hear hand claps.
3. ➤ Press the [CHORD DICT.] button again to exit the chord dictionary.

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#/G _b
C#6	C#/D _b	G6	G
D6	D	A _b 6	A _b /G#
E _b 6	E _b 6/D#	A6	A
E6	E	B _b 6	B _b /A#
F6	F	B6	B

Key names	Chord type	Key names	Chord type
C4	M	C5	7(_b 9)
C#4	M(9)	C#5	7(9)
D4	6	D5	7(#9)
E _b 4	mM7	E _b 5	7(_b 13)
E4	M7	E5	7(13)
F4	m	F5	7(#11)
F#4	m(9)	F#5	dim7
G4	m6	G5	dim
A _b 4	m7(9)	A _b 5	7aug
A4	m7	A5	aug

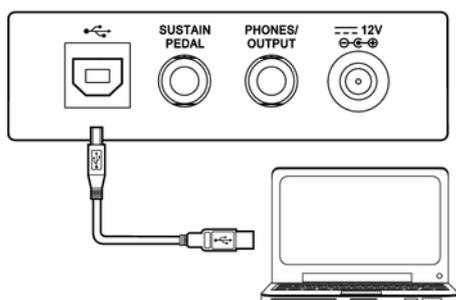
Key names	Chord type	Key names	Chord type
B _b 4	m7 _b 5	B _b 5	7sus4
B4	7	B5	sus4

8.14 MIDI functions

8.14.1 What is MIDI?

1. ➤ MIDI stands for 'Musical Instrument Digital Interface' and represents the standard interface between a computer and electronic instruments.
2. ➤ You can use the USB connection to exchange MIDI data with computers or other USB devices that support USB audio via USB cable.
3. ➤ MIDI data from computers or other USB devices can be played back by the sound generation of the keyboard.

8.14.2 USB connection



1. ➤ System requirements
 - CPU: 300 MHz, Pentium 2 or higher.
 - RAM: 64 MB min.
 - 2 MB free hard disc space.
 - Operating system: Windows® 2000/XP, Vista, Windows 7, Windows 8.
2. ➤ Connecting

Connect the USB port on the rear panel of the keyboard to the USB port on your computer using a standard USB cable (not included).
3. ➤ USB precautions

Please heed the following instructions when connecting USB instruments to computers. Otherwise, the instrument or the computer may 'crash', which can result in data loss. If a 'crash' should occur, turn off computer and instrument and restart them after a few seconds.



- If the computer is in standby or hibernation, wake the computer before connecting the USB cable.
- Establish the USB connection between computer and instrument before turning on the instrument.

8.15 Troubleshooting

Problem	Possible causes and solutions
You hear a 'pop' sound from the speakers when switching the digital piano on and off.	This is normal. No need to worry.
No sound can be heard when playing the piano.	Make sure that the volume control is set appropriately.
Malfunction occurs when using a mobile phone.	Using a mobile phone near the keyboard may cause interference. To prevent this, turn off the mobile phone or use it only at a safe distance.
The auto accompaniment does not start although the Sync Start function is enabled and a key is pressed.	Maybe you try to start the Auto Accompaniment by pressing a button in the right hand area. Auto Accompaniment with Sync Start function can only be started by pressing a key in the left hand chord area.

9 MIDI implementation chart

Function		Sent	Received	Notes
Basic Channel	Default	1	ALL	
	Changed	1-16	1-16	
Mode	Default	No	1	
	Messages	No	No	
	Altered	*****	No	
Note Number		18 – 114	0 – 127	
	True voice	*****	0 – 127	
Velocity	Note ON	Yes, 9nH, V = 1 – 127	Yes, 9nH, V = 1 – 127	
	Note OFF	No, (9nH, V = 0)	No, (9nH, V = 0; 8nH, V = 0 – 127)	
After Touch	Keys	No	No	
	Channels	No	No	
Pitch Bend		Yes	Yes	
Control Change	0	Yes	Yes	Bank Select
	1	Yes	Yes	Modulation
	5	No	No	Portamento Time
	6	No	Yes	Data Entry
	7	No	Yes	Volume
	10	No	Yes	Pan
	11	No	Yes	Expression
	64	Yes	Yes	Sustain Pedal
	65	No	No	Portamento ON/OFF
	66	No	Yes	Sostenuto Pedal
	67	No	Yes	Soft Pedal
	80	No	Yes	Reverb Program
	81	No	Yes	Chorus Program
	91	No	Yes	Reverb Level
	93	No	Yes	Chorus Level
	120	No	Yes	All Sound Off
121	No	Yes	Reset All Controllers	
123	Yes	Yes	All Notes Off	

MIDI implementation chart

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

MIDI channel modes

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

10 Technical specifications

Keyboard	61 keys with adjustable touch velocity
Display	Multifunction LCD
Polyphony	32-voice
Voices	320
Styles	110
Rehearsal songs	100
Demo songs	100
Operating elements	On / off switch, volume control, start / stop button, numeric keypad and buttons to select Learning Mode, left hand, right hand, Chord Dictionary, Tempo, Mixer, Record, Saving, Memory Locations M1 to M4, O.T.S., Playback, Voices, Styles, Demo and Rehearsal songs, Dual Mode, Split Mode, Metronome, DSP and Modulation effects, Touch Sensitivity.
Auto Accompaniment	<i>[START/STOP], [SYNC START], [INTRO]/[ENDING]/ [FILL A/B], [FADE IN/OUT], [CHORD]</i>
Recording function	Record and playback
Connections	DC IN, headphones (1/4"), Sustain pedal, USB
Speakers	2 × 3 W
Voltage supply	Power adapter: 12 V $\overline{\text{---}}$ (inner pole = plus)
Dimensions (W × H × D)	940 mm × 136 mm × 360 mm
Weight	4.5 kg

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" TRS phone plug (stereo, unbalanced)



1	Signal (left)
2	Signal (right)
3	Ground

12 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 these materials with your normal household waste, but make sure that they are fed to a recovery. Please follow the notes and markings on the packaging.

Disposal of batteries



Batteries must not be disposed of as domestic waste or thrown into fire. Dispose of the batteries according to national or local regulations regarding hazardous waste. To protect the environment, dispose of empty batteries at your retail store or at appropriate collection sites.

Disposal of your old device



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

Dispose 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.

