

KB-150

Owner's Manual

Congratulations and thank you for purchasing the Yamaha KB-150 PortaTone. The KB-150 is an advanced yet easy-to-use portable keyboard featuring exceptionally natural sound and a wide variety of convenient functions. Its features include the following:

Realistic, High-quality AWM Sound

The KB-150 provides 40 different natural-sounding instrumental voices, all recorded using state-of-the-art sampling techniques and processed with Yamaha's patented AWM sound generation technology.

Authentic Touch Response

A Touch Response function lets you play the realistic voices with true dynamic control, just as if you were playing the actual instrument itself. The degree of Touch Response is also adjustable for maximum flexibility.

Dynamic Accompaniment Styles

The KB-150 offers 10 different rhythm/accompaniment styles, each with its own variation, introduction, fill in and ending patterns.

Sophisticated Auto Bass Chord Function

The advanced Auto Bass Chord function provides completely automatic bass and chord accompaniment to perfectly match the accompaniment styles you select. Moreover, it follows your "direction," changing chords as you play them from the keyboard.

Transpose and Tune Controls

The KB-150 features convenient Transpose and Tuning controls that allow you to easily change the pitch of the instrument to match another instrumentalist, vocalist, or recorded music source.

Demonstration Songs

The KB-150 also provides seven Demonstration songs, showcasing the advanced sounds and sophisticated features of this fine instrument.

Precautions

Your KB-150 PortaTone is a sophisticated digital musical instrument and has been precision crafted according to Yamaha's strict manufacturing standards. To ensure long-term reliability and long-term performance, observe the following precautions and handling instructions.

Location

- Do not use the KB-150 in locations where it will be exposed to direct sunlight, extremes of temperature or humidity, or excessive dust or vibration.
- Also avoid using the KB-150 near televisions, radios, or other equipment that generates electromagnetic fields. Doing so may adversely affect the sound or operation of the KB-150, and may cause interference in the other device as well.

Handling

Treat your KB-150 gently. Do not drop it, hit it, or subject it to shock, since doing so may damage the delicate internal circuitry. Also, do not place heavy objects on it or apply excessive force to the controls and terminals. When moving the KB-150, first disconnect the AC adaptor and all other connected cables to prevent damage to the cords and jacks. When disconnecting any cord or cable, always grip the plug end directly rather than pulling on the cord.

Cleaning

Use a slightly damp cloth to clean the panel or keys of the KB-150. Do not use alcohol, thinner, solvents, or chemically treated cloths, since these may damage the finish and surface.

Power

- Your KB-150 can operate either on battery power or household current (by using the included PA-41 AC adaptor).
- When using batteries, be careful never to mix batteries of different types (for example, alkaline and manganese). When the batteries run down, replace them with a complete set of six new batteries; never mix old and new batteries. To prevent possible damage from battery leakage, remove the batteries from the KB-150 when not using it for an extended period of time.
- The power requirement of the included PA-41 AC adaptor has been set to match the power supply of your locale. If you have any doubts about voltage compatibility or plan to use your KB-150 and PA-41 AC adaptor in a different area, please consult your local Yamaha dealer. When not using the KB-150, disconnect the AC adaptor from the power source, since the adaptor continues to drain power even when the instrument is turned off. Also, disconnecting the adaptor eliminates the possibility of damage to the KB-150's circuitry from power surges.

Service and Modification

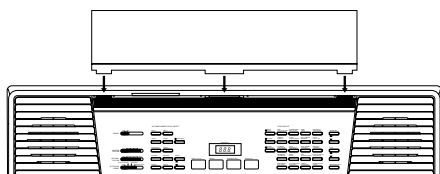
The KB-150 contains no user serviceable parts. Never open the case or tamper with it in any way, since doing so may result in electrical shock or damage to the KB-150. Refer all servicing to qualified Yamaha service personnel.

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Setting Up the Music Stand

Insert the three tabs on the bottom of the included music stand into the corresponding slots on the top of the KB-150.



Before You Begin

Even though you are probably eager to try out your new KB-150, we recommend that you read through the brief instructions below in setting up the instrument.

Power Supply

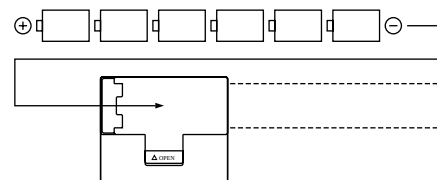
Your KB-150 can operate either on battery power or household current (by using the included PA-41 AC adaptor).

Installing Batteries

1 Open the battery compartment cover on the underside of the instrument.

2 Insert six "D" size, R-20, SUM-1 or equivalent batteries.

3 Securely replace the compartment cover.

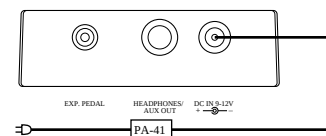


Note

If the battery voltage drops too low, the sound of the KB-150 will become deteriorated or distorted. When this happens, install a complete set of six new batteries.

Using the AC Adaptor

Insert the standard two-prong plug of the included PA-41 AC adaptor into an AC outlet, and the other plug into the DC IN 9-12V jack on the rear panel of the KB-150.



CAUTION!

Use only the included PA-41 AC adaptor. Damage caused by use of an improper adaptor is not covered in the warranty.

Using Headphones

A set of stereo headphones (such as the Yamaha HPE-3 or HPE-150) can be connected to the HEADPHONES/AUX. OUT jack on the rear panel. This automatically turns off the built-in speaker system of the KB-150, making headphone use ideal for private practice or late-night playing.

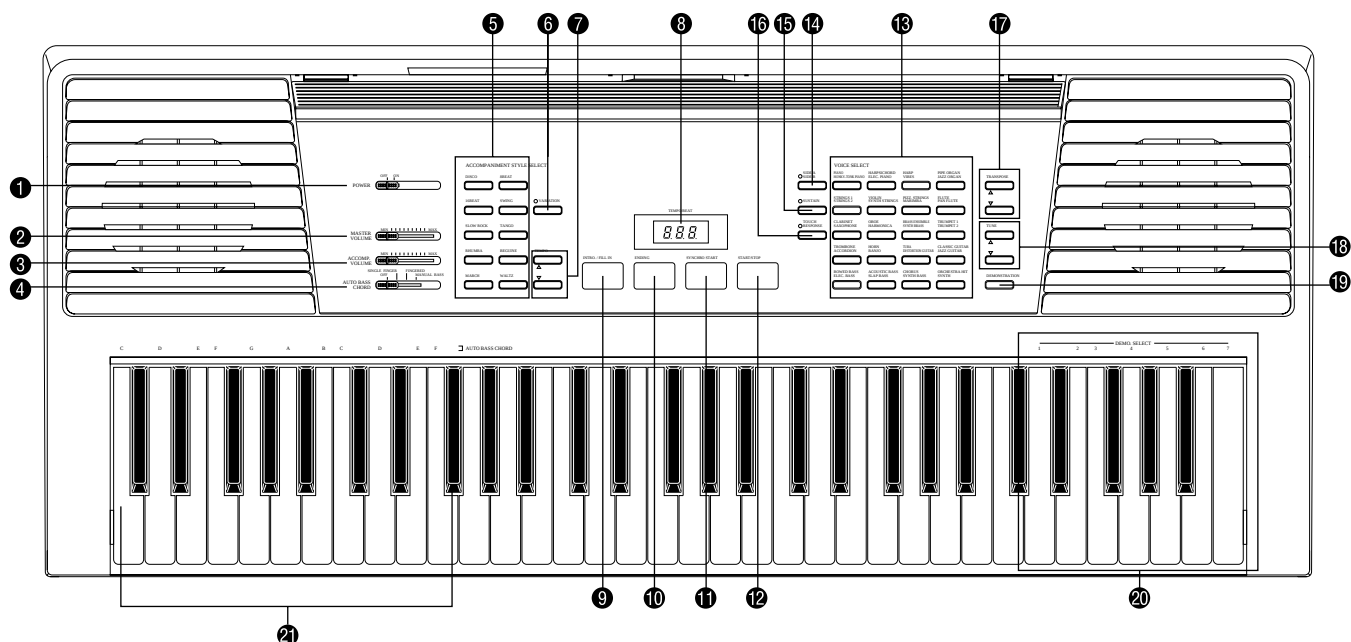
Using an External Amplifier or Stereo System

The KB-150 can also be connected to a keyboard amplifier, stereo system, mixing console or tape recorder. Using a Y-connector audio cable, plug one end (stereo 1/4" phone jack) into the HEADPHONES/AUX. OUT jack on the rear panel and the other end (two RCA pins or 1/4" phone jacks) into the appropriate input jacks on the other device. Use the MASTER VOLUME control on the KB-150 to adjust the volume.

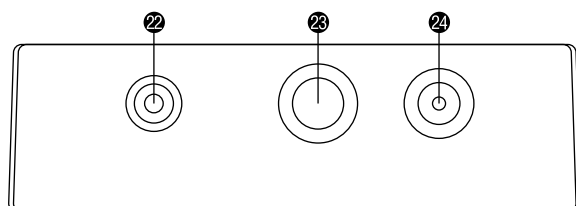
Using the EP-1 Expression Pedal

When the included EP-1 Expression Pedal is connected to the EXP. PEDAL jack on the rear panel, you can adjust the volume from the Expression Pedal without having to take your hands from the keyboard. The maximum volume (when the pedal is fully depressed) is determined by the MASTER VOLUME control.

Panel Controls and Terminals



- | | |
|--------------------------------------|---------------------------------|
| ① POWER Switch | ⑫ START/STOP Button |
| ② MASTER VOLUME Control | ⑬ VOICE SELECT Buttons |
| ③ ACCOMPANIMENT VOLUME Control | ⑭ SIDE A/B Select Button |
| ④ AUTO BASS CHORD Selector | ⑮ SUSTAIN Button |
| ⑤ ACCOMPANIMENT STYLE SELECT Buttons | ⑯ TOUCH RESPONSE Button |
| ⑥ VARIATION Button | ⑰ TRANSPOSE Up and Down Buttons |
| ⑦ TEMPO Up and Down Buttons | ⑱ TUNE Up and Down Buttons |
| ⑧ TEMPO/BEAT Display | ⑲ DEMONSTRATION Button |
| ⑨ INTRO./FILL IN Button | ⑳ DEMONSTRATION Select Keys |
| ⑩ ENDING Button | ㉑ AUTO BASS CHORD Keys |
| ⑪ SYNCHRO START Button | |



EXP. PEDAL

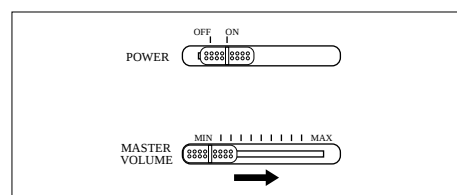
HEADPHONES/
AUX OUT

DC IN 9-12V
+ —

- | |
|----------------------------|
| ㉒ EXP. PEDAL Jack |
| ㉓ HEADPHONES/AUX. OUT Jack |
| ㉔ DC IN 9-12V Jack |

Playing and Operating Your KB-150

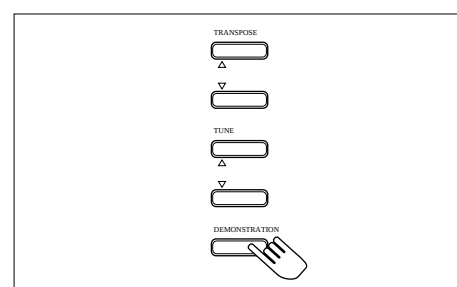
First, turn the KB-150 on and set the MASTER VOLUME control to an appropriate level.



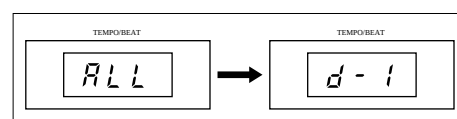
Demonstration Songs

To give you an idea of what the KB-150 is capable of, seven Demonstration songs have been included, demonstrating some of the instrument voices and accompaniment styles.

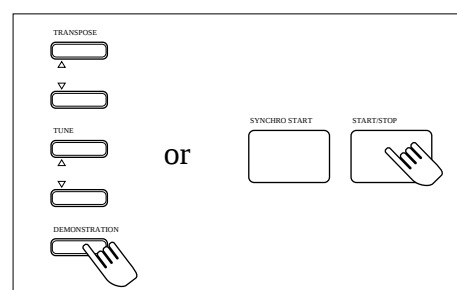
To listen to all the Demonstration songs:
Press the Demonstration button.



The seven Demonstration songs will begin playing in order when the button is released. While each song is being played, its number appears in the TEMPO/BEAT display.

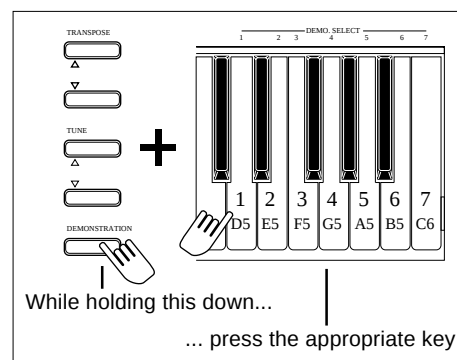


The songs will play continuously from beginning to end and repeat indefinitely until stopped. To stop the Demonstration songs at any point, press either the DEMONSTRATION or START/STOP button.



To listen to a specific Demonstration song:

Simultaneously hold down the DEMONSTRATION button and press the appropriate DEMONSTRATION select key (the white keys in the top octave of the keyboard). The song will play once to the end, unless you stop it with either the DEMONSTRATION or START/STOP button.



The chart at right lists the Demonstration songs with their corresponding select keys.

Song Number	Key	Song Name
1	D5	Radetzky March (J. Strauss)
2	E5	Waltz of the Flowers (Tchaikovsky)
3	F5	William Tell Overture (Rossini)
4	G5	Little Brown Jug (American folk song)
5	A5	Sabre Dance (Khachaturian)
6	B5	Troika (Russian folk song)
7	C6	Michael, Row the Boat Ashore (American folk song)

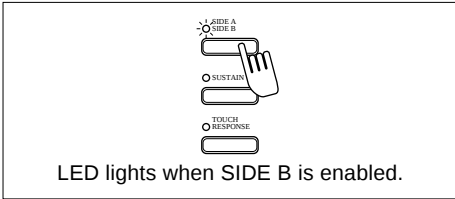
Note	With the exception of the START/STOP button, the MASTER VOLUME control and the connected Expression Pedal, none of the controls, buttons or keys have any effect while a Demonstration song is playing. After the Demonstration song or songs are finished playing, the KB-150 returns automatically to the PIANO voice and DISCO style.
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Voices

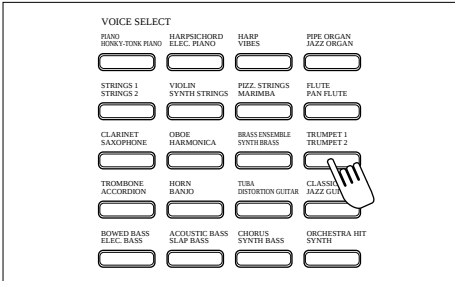
The KB-150 has a total of 40 different voices in two banks of 20 each, SIDE A and SIDE B. SIDE A voices are listed in the upper row above the VOICE SELECT buttons, and SIDE B voices are listed in the bottom.

To select a voice:

1 Press the SIDE A/B select button to select the desired bank of voices. The button toggles between the two banks; SIDE B voices can be selected when the LED is lit.



2 Press the VOICE SELECT button corresponding to the desired voice.



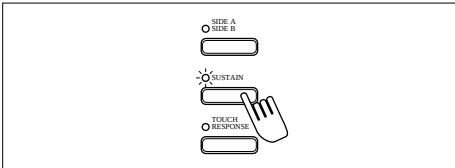
Note	When the power is turned on, the PIANO voice is automatically selected.
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Sustain

Sustain adds a slow, natural-sounding decay to most of the voices. It is particularly effective on the piano and strings voices, making the sound richer and more authentic on slowly played passages.

To turn on Sustain:

Press the SUSTAIN button. (The LED lights.)



To turn Sustain off, press the button again when the LED is lit.

Note	The duration of the Sustain effect differs depending on the selected voice. Also, Sustain does not affect the voices in the accompaniment styles (chord, bass and rhythm).
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Touch Response

The Touch Response feature gives you authentic dynamic control over the voices, letting you control the volume according to how hard or softly you play the keys. Moreover, three different sensitivity settings are available for maximum performance flexibility.

To turn on Touch Response:

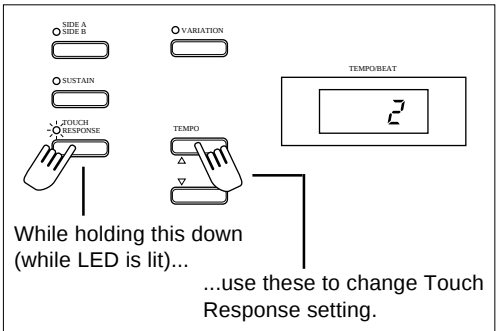
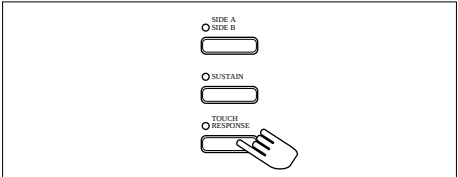
Press the TOUCH RESPONSE button. (The LED lights.)

To turn Touch Response off, press the button again when the LED is lit.

To adjust the Touch Response sensitivity:

Simultaneously hold down the TOUCH RESPONSE button and use the TEMPO up/down buttons to change the value. (The LED should be lit while you are holding it down; you may have to press the TOUCH RESPONSE button more than once.) The value is shown in the TEMPO/BEAT display.

Touch Response has three sensitivity settings: 1 (narrow), 2 (normal), and 3 (wide). Play the keyboard to test the settings as you change them.



Note	The actual sensitivity range differs depending on the selected voice. This has been done for the sake of authenticity, making the Touch Response more realistic for each individual instrument. When the power is turned on, Touch Response is automatically enabled and the sensitivity is automatically set to "2" (normal).
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Transpose and Tune

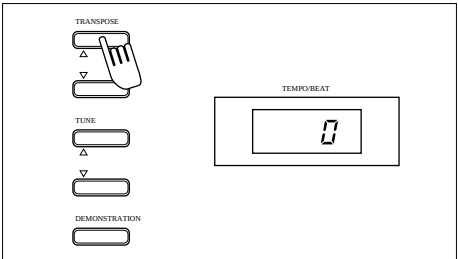
Transpose and Tuning are two extremely convenient functions that allow you to easily change the pitch of your KB-150 to accommodate a vocalist's range or to precisely match the tuning of another instrument or recorded music source.

Transpose

The Transpose function allows you to change the key of the KB-150, in half-step or semitone increments. The range is one octave, six half-steps up or down.

To adjust the Transpose setting, use the TRANSPOSE up/down buttons.

The value is shown in the TEMPO/BEAT display.



To restore the normal Transpose setting of "0," press both TRANSPOSE buttons simultaneously.

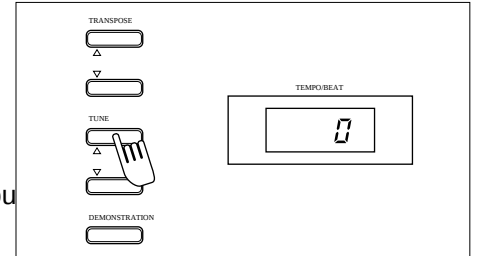
Note	Make sure to lift your fingers from the keyboard while changing values; changes in the Transpose setting cannot be heard while keys are held down. Once the Transpose value has been set, it remains at that value until the power is turned off or a Demonstration song is played.
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Tune

The Tune function allows you to adjust the fine tuning of the KB-150, in increments of about 1.2 cents. (100 cents equals one half-step or semitone.) The range is from -50 to 50 (approximately +/- 60 cents).

To adjust the Tune setting, use the TUNE up/down buttons. Hold down either button to move rapidly through the values. The value is shown in the TEMPO/BEAT display.

To restore the normal Tune setting of "0," press both TUNE buttons simultaneously.



Accompaniment Styles

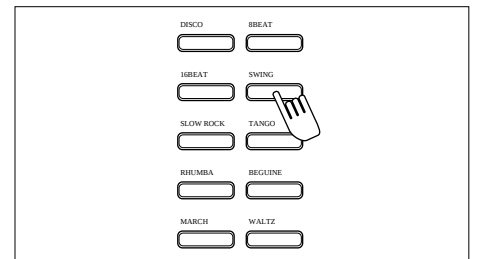
The KB-150 has a total of 20 accompaniment patterns (10 fundamental accompaniment styles, each with a normal pattern and a Variation), plus Introduction, Fill In and Ending patterns for each of these. Each style also has its own preset tempo, which is automatically set (and displayed in the TEMPO/BEAT display) when the style is selected (in the stopped condition).

Since the accompaniment style features work in combination with the Auto Bass Chord function, also refer to the Auto Bass Chord section on page 11.

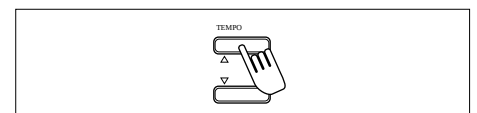
To select and play an accompaniment style:

- 1 Press the ACCOMPANIMENT STYLE SELECT button corresponding to the desired style.

Note You can also play a variation pattern by pressing the VARIATION button. (See "Variation" on page 9 for more information.)



- 2 Change the tempo setting if desired by using the TEMPO up/down buttons. Press one of the buttons once to select the next value, or hold it down to rapidly move through the values. The tempo range is from 40 to 280.

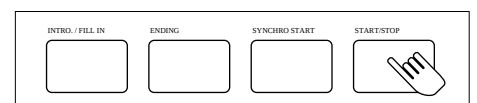


To restore the original preset setting for the selected style, press both TEMPO buttons simultaneously.

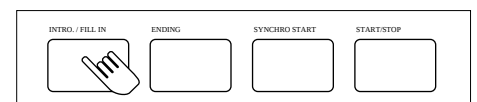
- 3 Start the rhythm.

You can do this in one of three ways: a) by pressing the START/STOP button, b) by pressing the INTRO./FILL IN button, or c) by pressing the SYNCHRO START button and playing a note or chord in the AUTO BASS CHORD section of the keyboard.

- a. Press the START/STOP button. The rhythm starts immediately.



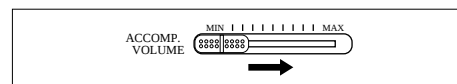
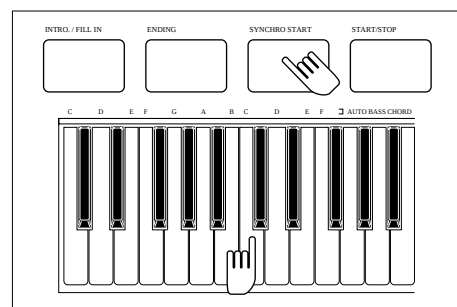
- b. Press the INTRO./FILL IN button. The rhythm starts following a short Intro pattern.



- c. Press the SYNCHRO START button and play a note or chord from the AUTO BASS CHORD section of the keyboard. The rhythm and bass/chord accompaniment start as soon as you play the keyboard.

You can also use SYNCHRO START with an Intro pattern. To do this, first press SYNCHRO START, then INTRO./FILL IN, and play a note or chord in the AUTO BASS CHORD keys to start the rhythm and accompaniment with an intro pattern. The chord that you play is used in the Intro accompaniment.

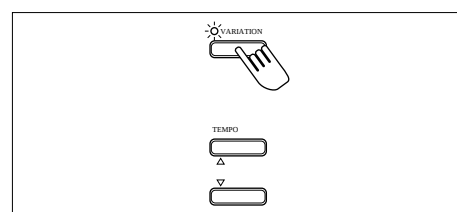
- 4 Adjust the volume of the rhythm accompaniment with the ACCOMP. VOLUME control. Play along on the keyboard, adjusting the control until the desired voice/rhythm balance is set.



Note	When the power is turned on, the DISCO accompaniment style is automatically selected and the tempo is automatically set to 124.
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Variation

Press the VARIATION button to select the Variation pattern for the current style. (The LED lights.)

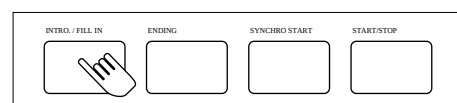


The Variation pattern is, as its name suggests, an alternate and slightly more complex rhythm based on the basic pattern. Pressing the button while the rhythm is playing switches between the basic and Variation patterns. (The patterns change as soon as the button is pressed.)

Hint	Try using the basic pattern for the verse or "A" part of a song, and switch to the Variation for the chorus or "B" part.
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Intro

Before starting the selected style, press the INTRO./FILL IN button to enable an Introduction pattern. When the rhythm is started, the Intro pattern plays once and directly leads into the main pattern.



The Intro pattern can also be used with the Synchro Start function. (See "Synchro Start" Page 10.)

Hint	Two different Intro patterns are available for each style: one for the basic pattern, the other for the Variation. Press the VARIATION button before starting the pattern to use the alternate Intro pattern. (The VARIATION LED lights.)
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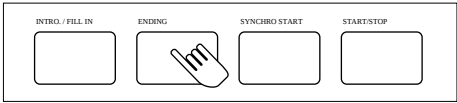
Fill In

While the selected style is playing, press the INTRO./FILL IN button to play the Fill In pattern. The Fill In pattern plays once and then returns to the original pattern.

Hint	The Fill In pattern is ideal for adding rhythmic "spice" at regular points in a song. For example, play a Fill In at exactly the halfway point in a verse, or try playing it every four measures.
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Ending

While the selected style is playing, press the ENDING button. An Ending pattern appropriate to the selected style will play, and then automatically turn off the style.



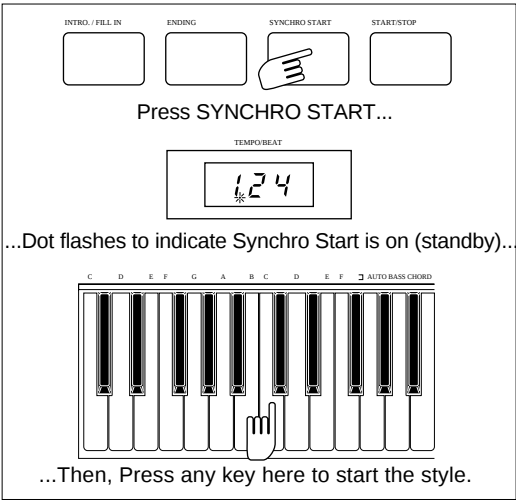
Hint	An alternate slower Ending pattern (one played ritardando) is also available. To play this slower pattern, press the ENDING button twice quickly.
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Note	An Ending cannot be played immediately following an Intro. If the INTRO./FILL IN button is pressed while the Ending pattern is playing, a Fill In pattern will follow the Ending and the accompaniment will continue as before.
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Synchro Start

Synchro Start allows you to start the style as soon as you press one of the AUTO BASS CHORD keys on the keyboard (F 2 or below).

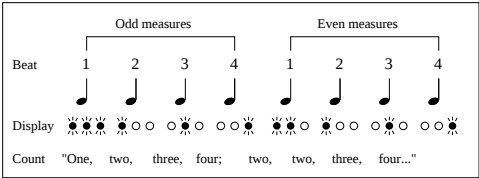
Before starting the selected style, press the SYNCHRO START button. (The leftmost dot on the TEMPO/BEAT display flashes to indicate Synchro Start is ready.)



You can also use SYNCHRO START with an Intro pattern. To do this, first press SYNCHRO START, then INTRO./FILL IN, and play a note or chord in the AUTO BASS CHORD keys to start the rhythm and accompaniment with an Intro pattern. The chord that you play is used in the Intro accompaniment.

About the TEMPO/BEAT Display

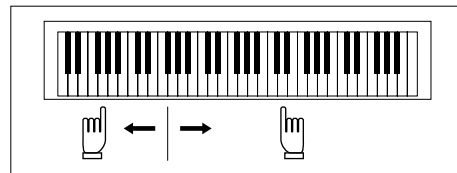
While an accompaniment style is playing, the dots of the TEMPO/BEAT display flash in time with the rhythm to indicate the measure and beat (as shown at right).



Manual Bass

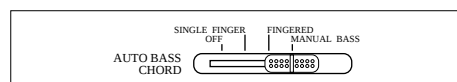
The Manual Bass feature allows you to play two voices at once: a bass voice with your left hand, and the normally selected voice with your right hand. The type of bass voice used is determined by the selected accompaniment style.

The bass voice can be played in the lower part of the keyboard, from the AUTO BASS CHORD keys (F 2 and below).



To use the Manual Bass feature:

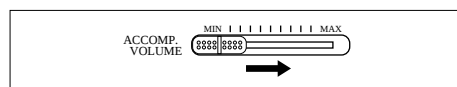
1 Set the AUTO BASS CHORD control to MANUAL BASS.



2 Select an accompaniment style from the ACCOMPANIMENT STYLE SELECT buttons. The style you select determines the both the type of bass voice used as well as its relative volume.

3 Select the voice to be played in the upper part of the keyboard from the VOICE SELECT buttons.

4 Use the ACCOMP. VOLUME control to adjust the volume balance between the bass voice (and rhythm, if a style is playing) and the normal voice.



Auto Bass Chord

The KB-150 features a sophisticated accompaniment function. Auto Bass Chord provides completely automatic bass and chord accompaniment to perfectly match the selected accompaniment style. Moreover, it changes chords as you do, letting you "direct" the accompaniment from the keyboard with your left hand.

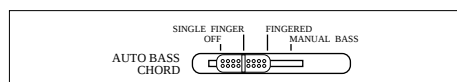
The KB-150 has two Auto Bass Chord modes: Single Finger and Fingered.

Single Finger Mode

The Single Finger mode makes it exceptionally easy to produce many different chord/bass combinations, by simply using one, or at most, two or three fingers to play the chords.

To use the Single Finger mode:

1 Set the AUTO BASS CHORD control to SINGLE FINGER.



2 Select an accompaniment style from the ACCOMPANIMENT STYLE SELECT buttons.

3 Start the accompaniment by pressing START/STOP, INTRO./FILL IN, or by using the Synchro Start function (see page 10).

Hint

Using Synchro Start allows you to start the accompaniment with the chord that you play with your left hand. In other words, you can have the bass and chord accompaniment start automatically as soon as you touch the keyboard. Remember that this also applies to the Intro pattern, if you are using one.

4 Using the Single Finger Chords chart below (and on page 15) for reference, play a chord in the AUTO BASS CHORD keys. Appropriate bass and chord accompaniment will start as soon as you play the chord.

5 Set the accompaniment to the desired volume by using the ACCOMP. VOLUME control. Also, use the TEMPO buttons to set the desired tempo if necessary.

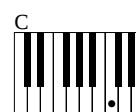
You can stop the accompaniment by pressing the START/STOP or ENDING buttons.

Single Finger Chords

Major, minor, 7th and minor 7th chords in all twelve keys can be played in the Single Finger mode. The examples below are shown for the key of C.

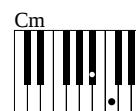
Major chords:

Press the root of the chord (the note that corresponds to the chord's name).



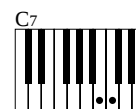
Minor chords:

Simultaneously press the root and any black key to its left.



7th chords:

Simultaneously press the root and any white key to its left.



Minor 7th chords:

Simultaneously press the root and both a white and a black key to its left.



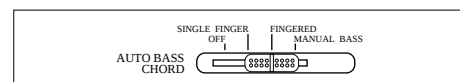
(For a complete fingering chart for all recognized chords in the Single Finger mode, see page 15.)

Fingered Mode

The Fingered mode allows you to use a wider range of chord types than in the Single Finger mode. It is ideal if you already know how to play chords on a keyboard, since it automatically produces the accompaniment based on the full chords you play.

To use the Fingered mode:

1 Set the AUTO BASS CHORD control to FINGERED.



2 Select an accompaniment style from the ACCOMPANIMENT STYLE SELECT buttons.

3 Start the accompaniment by pressing START/STOP, INTRO./FILL IN, or by using the Synchro Start function (see page 10).

- 4 Using the Fingered Chords chart below (and on pages 15 and 16) for reference, play a chord in the AUTO BASS CHORD keys. Appropriate bass and chord accompaniment will start as soon as you play the chord.
- 5 Set the accompaniment to the desired volume by using the ACCOMP. VOLUME control. Also, use the TEMPO buttons to set the desired tempo if necessary.

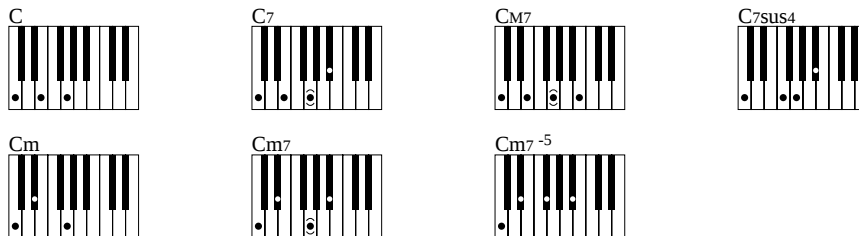
You can stop the accompaniment by pressing the START/STOP or ENDING buttons.

Fingered Chords

In the Fingered mode, the following chords can be played in all twelve keys:

Major, Minor, Major 7th, Minor 7th, Minor 7th flatted 5th, 7th, 7th suspended 4th

The examples below are shown for the key of C.



Inversions of chords can also be played.

Keys indicated with parentheses (◉) are optional.

(For a complete fingering chart for all recognized chords in the Fingered mode, see pages 15 and 16.)

Troubleshooting

The KB-150 speakers produce a "pop" or buzzing sound whenever the power is turned on or off. This is normal, and is no cause for concern.

The dynamic range of the Master Volume, Accompaniment Volume and/or Expression is limited. The various levels are interdependent. Set each control to an appropriate level.

The sound is distorted or intermittent.

In this case, your batteries are probably flat and need replacement.

The timber or tone quality of a specific voice changes slightly from note to note. This is normal and is a result of the sampling system of the KB-150.

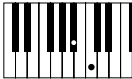
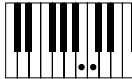
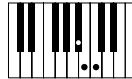
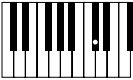
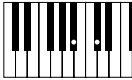
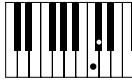
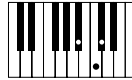
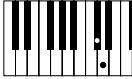
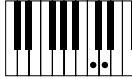
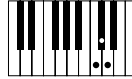
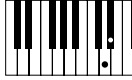
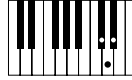
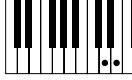
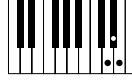
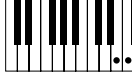
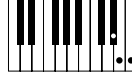
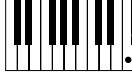
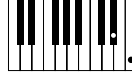
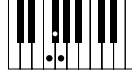
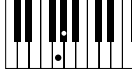
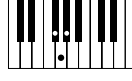
Specifications

Keyboard:	61 keys (C1-C6)
Voice:	(40 voices) PIANO, HONKY-TONK PIANO, HARPSICHORD, ELEC. PIANO, HARP, VIBES, PIPE ORGAN, JAZZ ORGAN, STRINGS 1, STRINGS 2, VIOLIN, SYNTH STRINGS, PIZZ. STRINGS, MARIMBA, FLUTE, PAN FLUTE, CLARINET, SAXOPHONE, OBOE, HARMONICA, BRASS ENSEMBLE, SYNTH BRASS, TRUMPET 1, TRUMPET 2, TROMBONE, ACCORDION, HORN, BANJO, TUBA, DISTORTION GUITAR, CLASSIC GUITAR, JAZZ GUITAR, BOWED BASS, ELEC. BASS, ACOUSTIC BASS, SLAP BASS, CHORUS, SYNTH BASS, ORCHESTRA HIT, SYNTH
Voice Controls:	VOICE SELECT buttons, SIDE A/B select buttons, SUSTAIN button, TOUCH RESPONSE button
Accompaniment Styles:	(10 styles) DISCO, 8 BEAT, 16 BEAT, SWING, SLOW ROCK, TANGO, RHUMBA, BEGUINE, MARCH, WALTZ
Accompaniment Controls:	ACCOMPANIMENT STYLE SELECT buttons, VARIATION button, TEMPO up/down buttons; INTRO./FILL IN, ENDING, SYNCHRO START and START/STOP buttons
Auto Bass Chord:	AUTO BASS CHORD selector (OFF, SINGLE FINGER, FINGERED, MANUAL BASS)
Demonstration Songs:	1-7
Other Controls:	POWER, MASTER VOLUME, ACCOMP. VOLUME, TRANSPOSE up/down buttons, TUNE up/down buttons, DEMONSTRATION button
Auxiliary jacks:	EXP. PEDAL, HEADPHONES/AUX. OUT, DC IN 9-12V
Main Amplifier:	5W ◇ 2
Speaker:	12 cm ◇ 2 (stereo)
Rated Power Supply:	"D" size/R-20/SUM-1 batteries (1.5V ◇ 6) DC 9-12V
Power Consumption:	12W (with AC power adaptor) 9.5W (with batteries)
Dimensions (W×D×H):	930 ◇ 387 ◇ 135 mm
Weight:	6.7 kg
Included Accessories:	EP-1 Expression Pedal, PA-41 AC Power Adaptor, Music Stand
Optional Accessories:	L-2C Keyboard Stand, HPE-3 or HPE-150 Stereo Headphones

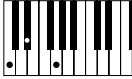
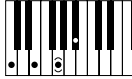
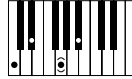
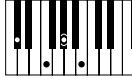
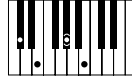
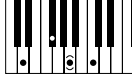
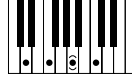
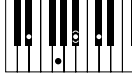
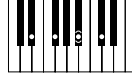
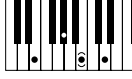
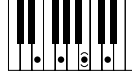
* Specifications are subject to change without notice.

Fingering Chart

Single Finger Chords

Major Chords		Minor Chords		7th Chords		Minor 7th Chords	
C		Cm		C ₇		Cm ₇	
C (D)		C m (D m)		C ₇ (D ₇)		C m ₇ (D m ₇)	
D		Dm		D ₇		Dm ₇	
D (E)		D m (E m)		D ₇ (E ₇)		D m ₇ (E m ₇)	
E		Em		E ₇		Em ₇	
F		Fm		F ₇		Fm ₇	
F (G)		F m (G m)		F ₇ (G ₇)		F m ₇ (G m ₇)	
G		Gm		G ₇		Gm ₇	
G (A)		G m (A m)		G ₇ (A ₇)		G m ₇ (A m ₇)	
A		Am		A ₇		Am ₇	
A (B)		A m (B m)		A ₇ (B ₇)		A m ₇ (B m ₇)	
B		Bm		B ₇		Bm ₇	

Fingered Chords

Major Chords		Minor Chords		7th Chords		Minor 7th Chords	
C		Cm		C ₇		Cm ₇	
C (D)		C m (D m)		C ₇ (D ₇)		C m ₇ (D m ₇)	
D		Dm		D ₇		Dm ₇	
D (E)		D m (E m)		D ₇ (E ₇)		D m ₇ (E m ₇)	
E		Em		E ₇		Em ₇	

Major Chords		Minor Chords		7th Chords		Minor 7th Chords	
F		Fm		F7		Fm7	
F (G)		F m (G m)		F 7 (G 7)		F m7 (G m7)	
G		Gm		G7		Gm7	
G (A)		G m (A m)		G 7 (A 7)		G m7 (A m7)	
A		Am		A7		Am7	
A (B)		A m (B m)		A 7 (B 7)		A m7 (B m7)	
B		Bm		B7		Bm7	

Major 7th Chords		Minor 7th Flatted 5th Chords		7th Suspended 4th Chords	
CM7		Cm7-5		C7SUS4	
C M7 (D M7)		C m7-5 (D m7-5)		C 7SUS4 (D 7SUS4)	
DM7		Dm7-5		D7SUS4	
D M7 (E M7)		D m7-5 (E m7-5)		D 7SUS4 (E 7SUS4)	
EM7		Em7-5		E7SUS4	
FM7		Fm7-5		F7SUS4	
F M7 (G M7)		F m7-5 (G m7-5)		F 7SUS4 (G 7SUS4)	
GM7		Gm7-5		G7SUS4	
G M7 (A M7)		G m7-5 (A m7-5)		G 7SUS4 (A 7SUS4)	
AM7		Am7-5		A7SUS4	
A M7 (B M7)		A m7-5 (B m7-5)		A 7SUS4 (B 7SUS4)	
Bm7		Bm7-5		B7SUS4	

Inversions of chords can also be played. Keys indicated with parentheses () are optional.