

**YAMAHA**  
**PORTATONE**  
**KB-110**



**使用説明書**  
*OWNER'S MANUAL*

# PRECAUTIONS

## PLEASE READ CAREFULLY BEFORE PROCEEDING

\* Please keep these precautions in a safe place for future reference.



### WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

- Do not open the instrument or attempt to disassemble the internal parts or modify them in any way. The instrument contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.
- Do not expose the instrument to rain, use it near water or in damp or wet conditions, or place containers containing liquids which might spill into any openings.
- If the AC adaptor cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the instrument, or if any unusual smells or smoke should appear to be caused by it, immediately turn off the power switch, disconnect the adaptor plug from the outlet, and have the instrument inspected by qualified Yamaha service personnel.
- Use the specified adaptor (PA-31) only. Using the wrong adaptor can result in damage to the instrument or overheating.
- Before cleaning the instrument, always remove the electric plug from the outlet. Never insert or remove an electric plug with wet hands.
- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.



### CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the instrument or other property. These precautions include, but are not limited to, the following:

- Do not place the AC adaptor cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.
- When removing the electric plug from an outlet, always hold the plug itself and not the cord.
- Do not connect the instrument to an electrical outlet using a multiple-connector. Doing so can result in lower sound quality, or possibly cause overheating in the outlet.
- Remove the adaptor plug from the outlet when the instrument is not to be used for extended periods of time, or during electrical storms.
- All batteries should be inserted in conformity with the +/- polarity markings. Failure to do so might result in overheating, fire, or battery fluid leakage.
- Always replace all batteries at the same time. Do not use new batteries together with old ones. Also, do not mix battery types, such as alkaline batteries with manganese batteries, or batteries from different makers, or different types of batteries from the same maker, since this can cause overheating, fire, or battery fluid leakage.
- If the instrument is not to be in use for an extended period of time, remove the batteries from it, in order to prevent possible fluid leakage from the battery.
- Before reconnecting the instrument to other electronic components, turn off the power for all components. Before turning the power on or off for all components, set all volume levels to minimum.
- Do not expose the instrument to excessive dust or vibrations, or extreme cold or heat (such as indirect sunlight, near a heater, or in a car during the day) to prevent the possibility of panel discoloration or damage to the internal components.
- Do not use the instrument near other electrical products such as televisions, radios, or speakers, since this might cause interference which can affect proper operation of the other products.
- Do not place the instrument in an unstable position where it might accidentally fall over.
- Before removing the instrument, remove all connected adaptor and other cables.
- When cleaning the instrument, use a soft, dry cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths. Also, do not place vinyl or plastic objects on the instrument, since this might discolor the panel or keyboard.
- Do not rest your weight on, or place heavy objects on the instrument, and do not use excessive force on the buttons, switches or connectors.
- Use only the stand/rack specified for the instrument. When attaching the stand or rack, use the provided screw only. Failure to do so could cause damage to the internal components or result in the instrument falling over.
- Do not place objects in front of the instrument's air vent, since this may prevent adequate ventilation of the internal components, and possibly result in the instrument overheating.
- Do not operate the instrument for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.

Yamaha cannot be held responsible for damage caused by improper use or modification to the instrument, or data that is lost or destroyed.

Always turn the power off when the instrument is not in use.

## ***Congratulations on your purchase of the Yamaha PortaTone!***

*You now own a portable keyboard that combines advanced functions, great sound and exceptional ease-of-use in a highly compact package. Its outstanding features also make it an expressive and versatile musical instrument. Read this Owner's Manual carefully while playing your new PortaTone in order to take full advantage of its various features.*

# Contents

Main Features .....	2
Panel Controls and Terminals .....	3
Before You Begin .....	4
Power Supply .....	4
Connecting to Audio Equipment .....	5
Setting Up a Keyboard Stand .....	5
Setting Up the Music Stand .....	5
Using an EP-1 Expression Pedal .....	5
Playing Your PortaTone .....	6
Getting Started .....	6
Demo Songs .....	6
Voices .....	7
Sustain .....	7
Pitch Bend Wheel .....	8
Keyboard Percussion .....	8
Octave Up .....	8
Accompaniment Styles .....	9
Selecting and Playing Accompaniment Styles .....	9
Adjusting the Accompaniment Volume .....	10
Adjusting the Tempo .....	10
Fill In .....	11
Ending .....	11
Auto Bass Chord .....	11
Single Finger and Fingered Modes .....	11
Single Finger Chords .....	12
Fingered Chords .....	13
Stopped Accompaniment .....	13
Appendix .....	14
Keyboard Percussion Assignments .....	14
Troubleshooting .....	14
Specifications .....	15
Fingered Chords .....	16

# Main Features

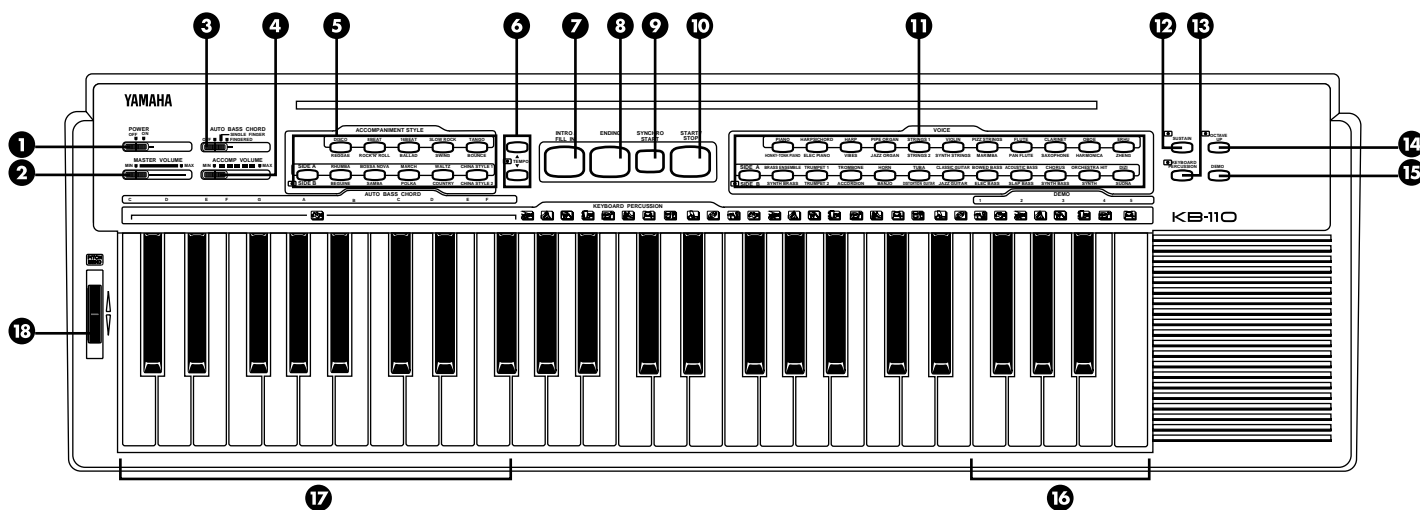
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The PortaTone is a sophisticated yet easy-to-use keyboard with the following features and functions:

- *Exceptionally realistic sounds with 44 AWM (Advanced Wave Memory) Voices, featuring digital recordings of actual instruments.*
- *Keyboard Percussion function that lets you play 49 realistic drum and percussion sounds from the keyboard.*
- *Sustain effect for adding a naturally slow decay to the Voices.*
- *Convenient Pitch Bend wheel for controlling the pitch as you play.*
- *20 dynamic Accompaniment Styles, each with different Intro, Main, Fill In, and Ending patterns.*
- *Sophisticated Auto Bass Chord function that provides automatic bass and chord accompaniment to perfectly match the Accompaniment Styles.*
- *Convenient control over Accompaniment Styles — including tempo and accompaniment volume.*
- *Optionally available EP-1 Expression Pedal can be connected to rear panel jack, letting adjust the volume with your foot as you play.*
- *High-quality built-in amplifier/speaker system.*

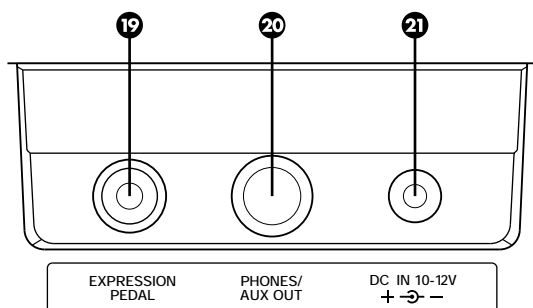
# Panel Controls and Terminals

## Top Panel



- ❶ POWER switch (page 6)
- ❷ MASTER VOLUME control (page 6)
- ❸ AUTO BASS CHORD selector (page 11)
- ❹ ACCOMP VOLUME control (page 10)
- ❺ ACCOMPANIMENT STYLE buttons (page 9)
- ❻ TEMPO Up and Down buttons (page 10)
- ❼ INTRO/FILL IN button (pages 9, 10, 11)
- ❽ ENDING button (page 11)
- ❾ SYNCHRO START button (page 9)
- ❿ START/STOP button (page 9)
- ⓫ VOICE buttons (page 7)
- ⓬ SUSTAIN button (page 7)
- ⓭ KEYBOARD PERCUSSION button (page 8)
- ⓮ OCTAVE UP button (page 8)
- ⓯ DEMO button (page 6)
- ⓰ DEMO SELECT keys (page 6)
- ⓱ AUTO BASS CHORD keys (page 11)
- ⓲ PITCH BEND wheel (page 8)

## Rear Panel



- ❶⁹ EXPRESSION PEDAL jack (page 5)
- ❷⁰ PHONES/AUX OUT jack (page 5)
- ❷¹ DC IN 10-12V jack (page 4)

# Before You Begin

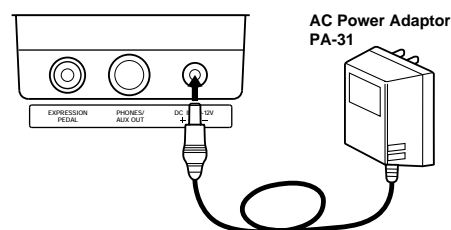
Although you are probably eager to try out your new PortaTone, we recommend that you read through the brief instructions below on setting up the instrument.

## Power Supply

Your PortaTone can run either on normal household current by using the included Yamaha PA-31 Power Adaptor, or on batteries (sold separately).

### ■ Using the AC Power Adaptor

Insert the standard two-prong plug of the included PA-31 adaptor into a convenient AC outlet, and the other plug into the DC 10-12V IN jack on the back of your PortaTone.



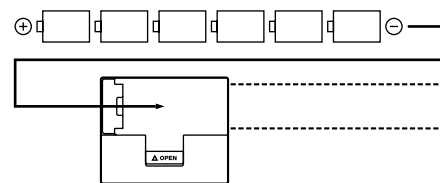
**WARNING:** Use only the PA-31 Power Adaptor. Use of the wrong adaptor can result in overheating or damage to the PortaTone.



**CAUTION:** Remove the adaptor from the outlet when not using the PortaTone for extended periods of time or during electrical storms.

### ■ Installing Batteries

1. Open the battery compartment on the underside of the instrument.
2. Insert six 1.5-volt size “D” batteries as shown in the illustration. Make sure that the positive (+) and negative (-) terminals are properly aligned with the markings in the compartment.
3. Securely replace the compartment cover.



**CAUTION:** When replacing batteries, never mix old and new batteries or different types of batteries (e.g., alkaline and manganese). Also, to prevent possible damage from battery leakage or overheating, remove the batteries from the instrument if it is not to be used for an extended period of time.

#### NOTE

When the batteries run low and the battery voltage drops below a certain level, the PortaTone may not sound or function properly. As soon as this happens, replace them with a complete set of six new batteries.

## ***Connecting to Audio Equipment***

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Although the PortaTone is equipped with a built-in amplifier/speaker system, it can also be connected to external audio equipment, such as a set of headphones or an amplifier.

### **■ Using Headphones**

For private practicing and playing without disturbing others, connect a set of stereo headphones to the rear panel PHONES/AUX OUT jack. Sound from the built-in speaker system is automatically cut off when you insert a headphone plug into this jack.

### **■ Using an External Amplifier or Stereo System**

You can also connect your PortaTone to a keyboard amplifier, stereo system, mixing console, or tape recorder. First, make sure the PortaTone and any external devices are turned off, then connect one end of a stereo audio cable to the LINE IN or AUX. IN jack(s) of the other device and the other end to the rear panel PHONES/AUX OUT jack on the PortaTone.

## ***Setting Up a Keyboard Stand***

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If you intend to set the PortaTone on a keyboard stand, Yamaha recommends that you use only the optionally available keyboard stand. (Setup instructions are included with the stand.)

## ***Setting Up the Music Stand***

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Insert the bottom edge of the included music stand into the slot located at the top rear of the PortaTone control panel.

## ***Using an EP-1 Expression Pedal***

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When an optionally available EP-1 Expression Pedal is connected to the EXPRESSION PEDAL jack on the rear panel, you can adjust the volume from the pedal as you play, without having to take your hands from the keyboard. Press the pedal down (with your toes) to increase the volume. (The maximum volume is determined by the MASTER VOLUME control.)

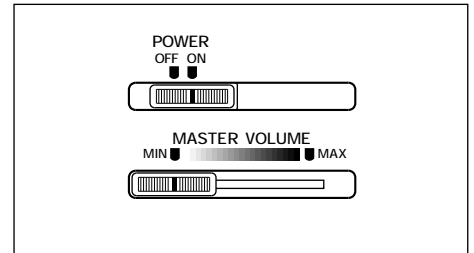
# Playing Your PortaTone

## Getting Started

First, turn on the power and set the volume.

Set the POWER switch to ON and adjust the MASTER VOLUME control to a suitable level.

Whenever the power is turned on, the PortaTone is automatically set to play the PIANO Voice and the DISCO Accompaniment Style.



## Demo Songs

The PortaTone has five different Demo Songs, specially recorded to showcase the dynamic sounds and rhythms, and give you an idea of what you can do with the instrument.

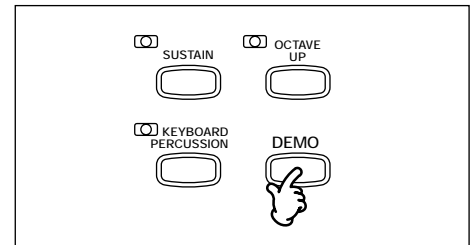
### ■ Playing All Demo Songs

To play all Demo Songs in order, press the DEMO button.

The five Demo Songs begin playing in order and repeat indefinitely. You can stop playback at any point by pressing the DEMO or START/STOP button.

#### NOTE

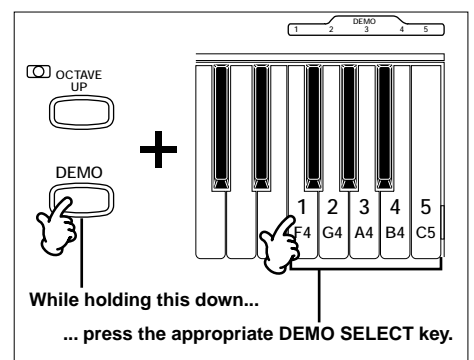
The demonstration songs have been specially programmed for demonstration purposes – it is not possible to reproduce the demonstration songs 100% using the KB-110.



### ■ Playing Individual Demo Songs

To play an individual Demo Song, simultaneously hold down the DEMO button and press the appropriate DEMO SELECT key.

Each of the five highest white keys on the keyboard corresponds to a different Demo Song (as shown in the chart below). Though playback stops automatically after the song is finished, you can stop playback at any point by pressing the DEMO or START/STOP button.



## ■ Demo Songs / DEMO SELECT Keys

Song Number	Key	Song Name
1	F4	China Song
2	G4	Waltz of the Flowers (Tchaikovsky)
3	A4	American Patrol (F. Meacham)
4	B4	Farandole (L'Arlesienne) (Bizet)
5	C5	Oh! Susanna (S. Foster)

### NOTE

- You can play the keyboard while a Demo Song is playing. However, if the maximum polyphony of the PortaTone is exceeded, some of the played notes may be cut off.
- The Pitch Bend wheel can also be used while a Demo Song is playing. However, it only affects the Voices played from the keyboard.

## Voices

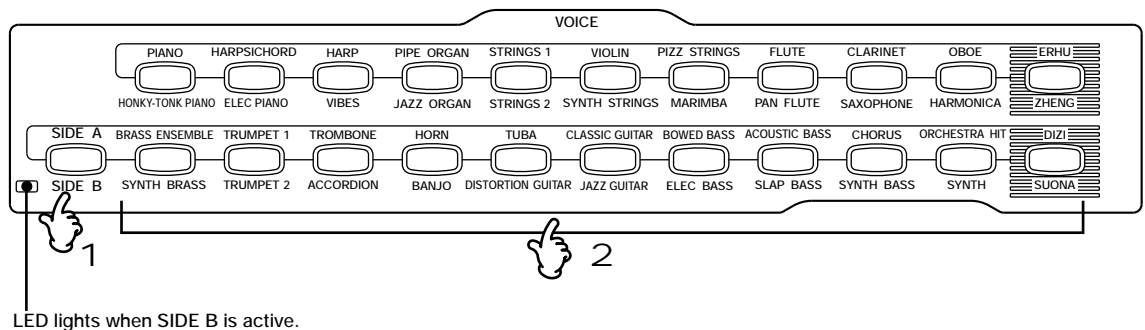
The PortaTone features 44 high-quality Voices in two banks of 22 each, SIDE A and SIDE B. The SIDE A Voices are printed in white above each VOICE button, and SIDE B Voices are printed in red below.

### ■ Selecting Voices

1. Press the SIDE A/B select button to select the desired bank of Voices.

The button toggles between the two banks; when the LED is lit, SIDE B Voices can be selected.

2. Press the VOICE button corresponding to the desired Voice.



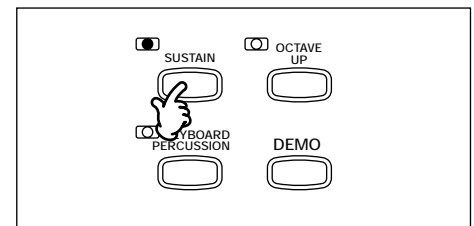
## Sustain

Sustain adds a slow, natural decay to the Voices. It is particularly effective on piano and stringed instrument Voices, making the sound richer and more authentic on slowly played passages.

### ■ Turning on Sustain

Press the SUSTAIN button. (The LED lights.)

To turn Sustain off, press the SUSTAIN button again so that the LED turns off.



### NOTE

The length of the Sustain effect differs depending on the selected Voice. Also, Sustain does not affect the ORCHESTRA HIT VOICE, Accompaniment Styles, or Keyboard Percussion.

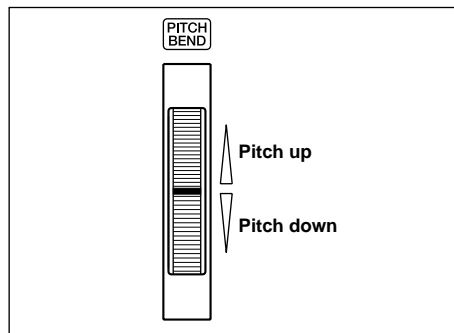
## Pitch Bend Wheel

The Pitch Bend wheel lets adjust the pitch of the Voices up or down as you play. This allows you to play certain Voices (such as guitar) more authentically, and recreate the pitch bending techniques used in various styles of music.

### ■ Using the Pitch Bend Wheel

While playing the keyboard with your right hand, move the Pitch Bend wheel up or down with your left hand.

The range of pitch change is +/- 200 cents (2 semitones).



#### NOTE

Pitch Bend does not affect the pitch of the Auto Bass Chord accompaniment and keyboard percussion.

## Keyboard Percussion

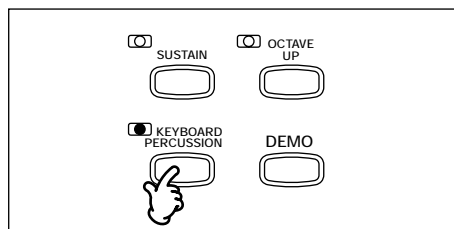
The Keyboard Percussion function lets you play 49 different realistic drum and percussion sounds of the PortaTone directly from the keyboard.

### ■ Using Keyboard Percussion

Press the KEYBOARD PERCUSSION button. (The LED lights.)

Play the desired drum and percussion sounds from the keyboard. The available sounds and their corresponding keys are indicated by the small icons above each key. (For a complete list of percussion/key assignments, see page 14.)

The normal Voice is automatically canceled when Keyboard Percussion is on. Similarly, selecting a Voice with the VOICE buttons automatically cancels Keyboard Percussion.



## Octave Up

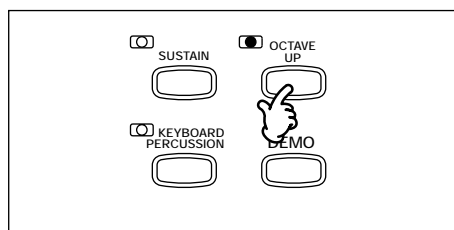
The Octave Up function allows you to raise the pitch of the selected Voice by one octave. This is useful when you want to play Voices in a higher octave range.

### ■ Using Octave Up

Press the OCTAVE UP button. (The LED lights.)

The selected Voice sounds one octave higher than normal.

To restore normal pitch, press the OCTAVE UP button again so that the LED turns off.



#### NOTE

Octave Up does not affect the Keyboard Percussion function or the pitch of the Auto Bass Chord accompaniment.

# Accompaniment Styles

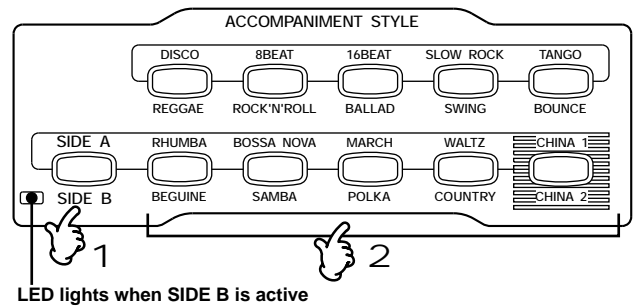
The Accompaniment Style section features 20 specially programmed rhythm and accompaniment patterns — in a variety of musical styles. With the Auto Bass Chord function (page 11), the Accompaniment Styles give you full and exciting instrumental backing that automatically changes bass and chords according to the chords you play.

## ■ Selecting and Playing Accompaniment Styles

1. Press the SIDE A/B select button to select the desired bank of Styles.

The button toggles between the two banks; when the LED is lit, SIDE B Styles can be selected.

2. Press the ACCOMPANIMENT SELECT button corresponding to the desired Style.



3. Start the Style.

You can start the Style in one of three ways:

- a) Straight Start, b) Start with an Intro, or c) Synchro Start.

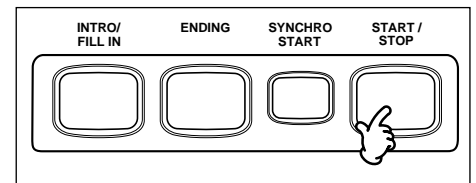
### a) Straight Start:

This is the normal way of starting a Style.

Press the START/STOP button.

The selected Style begins playing immediately.

To stop the Style, press START/STOP again.



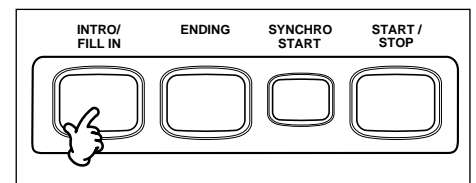
### b) Straight Start with an Intro:

This lets you start the Style with a special Intro pattern.

Press the INTRO/FILL IN button.

The Intro pattern plays, followed by the selected Style.

To stop the Style, press START/STOP again.

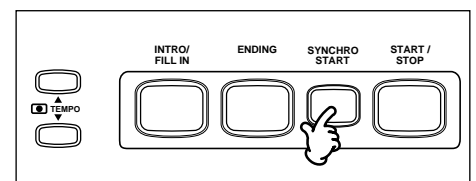


### c) Synchro Start:

Synchro Start puts the Style in standby and lets you start the Style simply by playing the keyboard.

1. Press the SYNCHRO START button.

The TEMPO LED flashes in time with the currently set tempo.



### ***Using Intro with Synchro Start***

*If you wish, you can use an Intro pattern with Synchro Start. To do this, press the INTRO/FILL IN button (after pressing SYNCHRO START above).*

## **2. Play a note on the keyboard.**

The selected Style begins playing immediately. If the Auto Bass Chord function is off, any key on the keyboard will start the Style. If the Auto Bass Chord function is on, only keys in the AUTO BASS CHORD section will start the Style. Playing a note or chord in the AUTO BASS CHORD section also starts bass and chord accompaniment. (For more information on Auto Bass Chord, see page 11.)

To stop the Style, press the START/STOP or SYNCHRO START button.

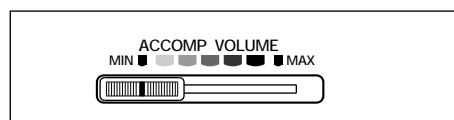
### **HINT**

The accompaniment style returns to Synchro Start standby when it is stopped by pressing the SYNCHRO START button.

## **■ Adjusting the Accompaniment Volume**

Use the ACCOMP VOLUME control to adjust the volume of the Style.

Play along on the keyboard, adjusting the control until the desired Voice/Style balance is set.

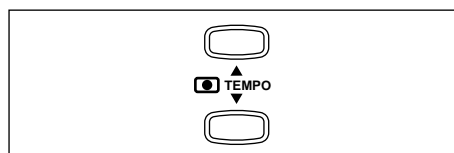


## **■ Adjusting the Tempo**

Use the TEMPO up/down buttons to adjust the speed (tempo) of the Style.

Press the ▲ (up) button to increase the tempo, and press the ▼ (down) button to decrease it. Holding down either button rapidly changes the tempo. The tempo range is from 40 to 280 bpm (beats per minute).

The TEMPO LED flashes on the first beat of every measure to indicate the tempo.



### ***Restoring Preset Tempo***

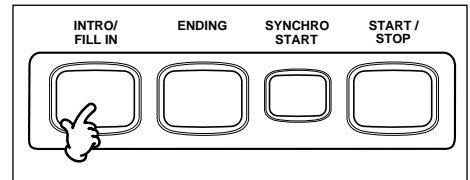
*The original preset tempo for the Style is automatically restored when you select the Style from the stopped condition. (Selecting different Styles while the Style is running does not restore the preset tempo.) However, you can also restore the original preset tempo for the Style at anytime by pressing both TEMPO buttons simultaneously.*

## ■ Fill In

Each Style has its own Fill In pattern, a one-measure rhythmic “break.” Fill In patterns are designed to be played occasionally during a repeating rhythm (for example, every four, eight, or sixteen measures), or they can be used to lead into a new section of a song (for example, from the verse to the chorus).

To play a Fill In, press the INTRO/FILL IN button while a Style is playing.

Generally you should be careful to press the INTRO/FILL IN button precisely on (or just slightly before) the beat that you want the Fill In pattern to begin. You can play partial Fill In patterns by pressing the button on the second or third beat of the measure. You can also repeat the Fill In pattern indefinitely by holding down the INTRO/FILL IN button.



## ■ Ending

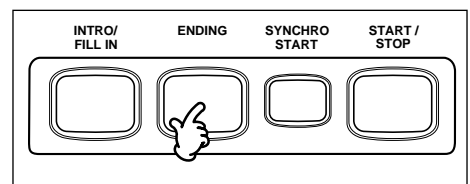
Each Style has its own Ending, a short pattern that can be played to end a song or performance.

To play an Ending, press the ENDING button while a Style is playing.

An Ending pattern is automatically played and the Style is stopped.

Each Style also has a slower Ending pattern (played ritardando). To play this pattern, press the ENDING button twice quickly.

Although the Style normally stops after an Ending, you can have it continue. To do this, press the INTRO/FILL IN button while the Ending is playing. A Fill In pattern immediately follows the Ending, and the Style continues.



### NOTE

An Ending cannot be played immediately following an Intro.

## ***Auto Bass Chord***

The Auto Bass Chord function works with the Accompaniment Style section to automatically produce chord and bass accompaniment as you play. The accompaniment patterns perfectly match the selected Style. Also, special Voices are used for the various parts (bass, chord, and obbligato). Moreover, the accompaniment automatically changes chords as you do, letting you “direct” the accompaniment from the keyboard with your left hand.

The PortaTone has two Auto Bass Chord modes: Single Finger and Fingered.

## ■ Single Finger and Fingered Modes

### Single Finger

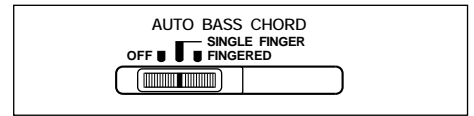
The Single Finger mode makes it exceptionally easy to “play” chords and produce automatic accompaniment, by simply using one, or at most, two or three fingers.

### Fingered

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 appropriate accompaniment based on the full chords you play.

• **To use the Single Finger or Fingered mode:**

1. Set the AUTO BASS CHORD control to the desired mode: SINGLE FINGER or FINGERED.
2. Select a Style from the ACCOMPANIMENT SELECT buttons.
3. Start the Style.  
Use one of the three methods described on page 9.
4. Play a Single Finger or Fingered chord in the AUTO BASS CHORD section of the keyboard.  
Refer to the Single Finger Chords chart below or the Fingered Chords charts (on pages 16 and 19). Appropriate bass and chord accompaniment starts as soon as you play the chord.
5. Adjust the accompaniment volume and tempo, if desired.  
See page 10 for information on accompaniment volume and tempo.



**HINT**

Using Synchro Start allows you to instantly start the bass and chord accompaniment with the chord you play with your left hand. Remember that this also applies to the Intro pattern, if you are using one. (See "Using Intro with Synchro Start" on page 9.)

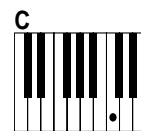
To stop the accompaniment, press the START/STOP or ENDING button.

■ **Single Finger Chords**

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

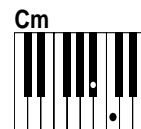
• **Major chords:**

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



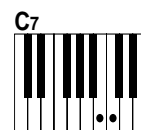
• **Minor chords:**

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



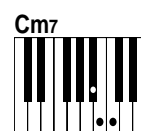
• **7th chords:**

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



• **Minor 7th chords:**

Simultaneously press the root and both a white and black key to its left (three keys altogether).

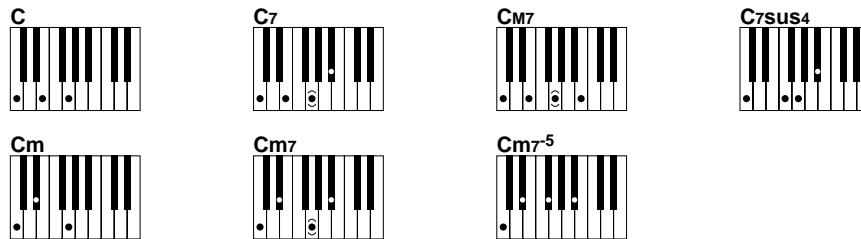


## ■ Fingered Chords

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

Major, Minor, 7th, Major 7th, Minor 7th, Minor 7th flatted 5th, 7th suspended 4th, Suspended 4th, 7th flatted 5th, Augmented 7th (Augmented), Diminished 7th (Diminished), Minor major 7th, Minor 6th, 1+2+5

The fingering examples below are shown for the key of C.



Keys indicated with a dot in parentheses can be omitted.

## ■ Stopped Accompaniment

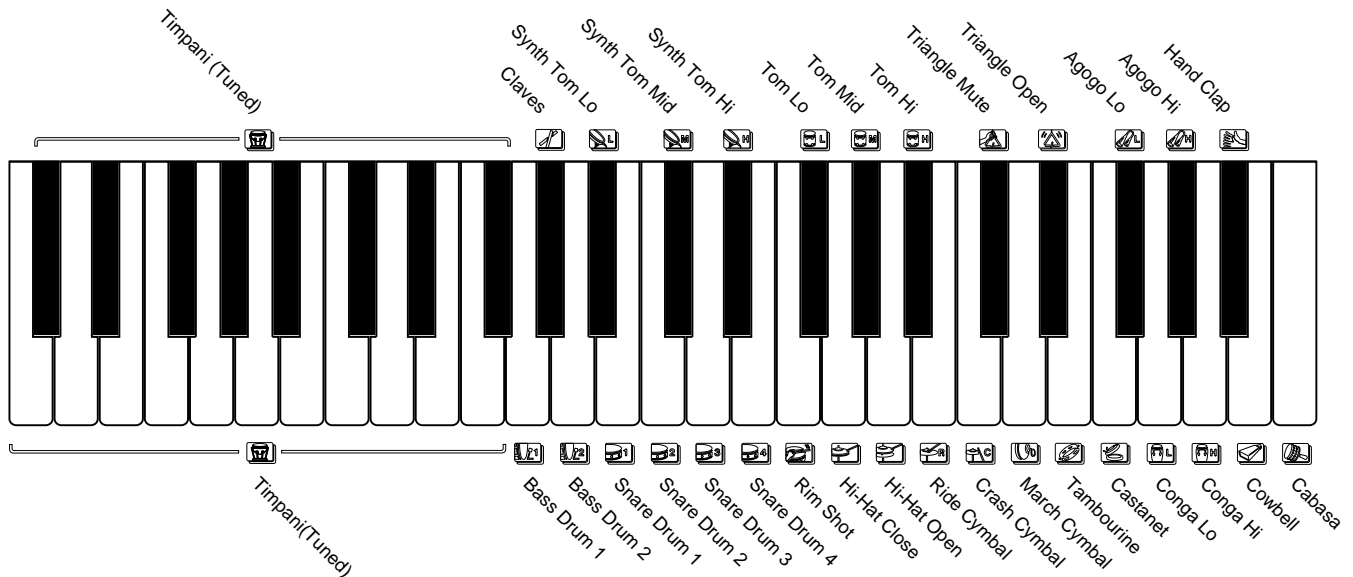
The Stopped Accompaniment function allows you to produce bass and chords (using the special accompaniment Voices of the Style) without the rhythm. The bass and chords are held as long as you hold down the chord.

### • To use Stopped Accompaniment:

1. Select the desired Auto Bass Chord mode: Single Finger or Fingered.
2. Play a Single Finger or Fingered chord in the AUTO BASS CHORD section of the keyboard.

# Appendix

## Keyboard Percussion Assignments



## Troubleshooting

- The PortaTone produces a “pop” or buzzing sound whenever the power is turned on or off.  
This is normal, and is no cause for concern.
- There is no sound.  
Make sure the MASTER VOLUME control is set to an appropriate level. Also, if something is connected to the PHONES/AUX OUT jack, sound from the built-in speaker system is automatically cut off.
- The overall volume is too low, or the volume balance of the Voices and Styles isn’t right.  
Make sure that the MASTER VOLUME control, ACCOMP VOLUME control, and Expression Pedal (if connected) are all set to suitable levels.
- The sound is distorted or intermittent.  
The battery power may be too low for proper operation. Replace the batteries or use the included AC power adaptor.
- The tone quality of certain Voices changes slightly from note to note.  
This is normal and is a result of the sampling system of the PortaTone.
- When using Sustain, some Voices sustain for a long time and others only for a short time.  
This is normal. Sustain has been set to the ideal length for each of the Voices.
- Even when Synchro Start is on and a key is played, the Style doesn’t start.  
If Auto Bass Chord is set to SINGLE FINGER or FINGERED (page 11), only keys in the AUTO BASS CHORD section can be used to start the Style. (Also see page 9, 10.)

# Specifications

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## Keyboard

---

49 keys (C1-C5)

## Voices

---

SIDE A: Piano, Harpsichord, Harp, Pipe Organ, Strings 1, Violin, Pizz Strings, Flute, Clarinet, Oboe, Erhu, Brass Ensemble, Trumpet 1, Trombone, Horn, Tuba, Classic Guitar, Bowed Bass, Acoustic Bass, Chorus, Orchestra Hit, Dizi

SIDE B: Honky-tonk Piano, Elec Piano, Vibes, Jazz Organ, Strings 2, Synth Strings, Marimba, Pan Flute, Saxophone, Harmonica, Zheng, Synth Brass, Trumpet 2, Accordion, Banjo, Distortion Guitar, Jazz Guitar, Elec Bass, Slap Bass, Synth Bass, Synth, Suona

## Voice Controls

---

VOICE buttons, SIDE A/SIDE B button, SUSTAIN button, KEYBOARD PERCUSSION button, OCTAVE UP button

## Keyboard Percussion

---

49 drum/percussion sounds

## Effects

---

Sustain, Octave Up

## Accompaniment Styles

---

SIDE A: Disco, 8 Beat, 16 Beat, Slow Rock, Tango, Rhumba, Bossa Nova, March, Waltz, China 1

SIDE B: Reggae, Rock'n'Roll, Ballad, Swing, Bounce, Beguine, Samba, Polka, Country, China 2

## Accompaniment Style Controls

---

ACCOMPANIMENT SELECT buttons; SIDE A/SIDE B 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)

## Demo Songs

---

5 songs

## Other Controls

---

POWER switch, MASTER VOLUME control, ACCOMP VOLUME control, DEMO button, PITCH BEND wheel

## Auxiliary Jacks

---

EXPRESSION PEDAL, PHONES/AUX OUT, DC IN 10-12V

## Main Amplifier

---

4W

## Speaker System

---

10cm x 1

## Power Supply

---

"D" size/R-20/SUM-1 batteries (1.5V x 6)  
DC 10-12V AC power adaptor

## Dimensions (W x D x H)

---

842 x 264 x 102mm

## Weight

---

3.4kg

## Included Accessories

---

PA-31 AC Power Adaptor, Music Stand

## Optional Accessories

---

EP-1 Expression Pedal; Keyboard Stand; HPE-150 Stereo Headphones

*Specifications are subject to change without notice.*

# Fingered Chords

- Notes in parentheses ( ) can be omitted.
- Chord types marked with an asterisk (\*) can be played in any inversion (i.e. the root does not have to be the lowest note in the chord).

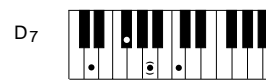
## Major\*



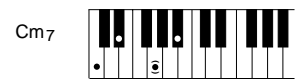
## Minor\*



## Seventh\*



## Minor seventh\*

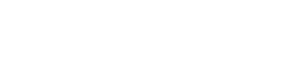


Minor seventh flatted fifth

Minor sixth

Major seventh\*

Suspended fourth

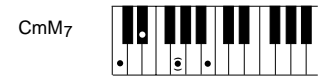


Seventh suspended fourth\*

Diminished seventh

Seventh flattened fifth

Minor major seventh\*



Seventh augmented\*

One plus two plus five

