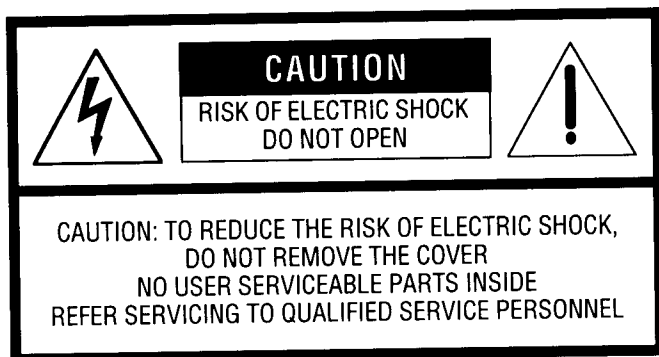


INTRODUCTION TO THE KURZWELL

KHP-101

Hybrid Piano





EXPLANATION OF GRAPHIC SYMBOLS:



The lightning flash with the arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

IMPORTANT SAFETY AND INSTALLATION INSTRUCTIONS

INSTRUCTIONS PERTAINING TO THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

WARNING—When using electric products, basic precautions should always be followed, including the following:

1. Read all of the Safety and Installation Instructions and Explanation of Graphic Symbols before using the product.
2. This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current, to reduce the risk of electric shock. This product is equipped with a power supply cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.
DANGER—Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Do not modify the plug provided with the product—if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Do not use an adaptor that defeats the function of the equipment-grounding conductor. If you are in doubt as to whether the product is properly grounded, check with a qualified serviceman or electrician.
3. Do not use this product near water—for example, near a bathtub, wash-bowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
4. This product, either alone or in combination with an amplifier and speakers or headphones, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
5. The product should be located so that its location or position does not interfere with its proper ventilation.
6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
7. The product should be connected to a power supply cord only of the type described in the operating instructions or as marked on the product.
8. This product may be equipped with a polarized line plug (one blade wider than the other). This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.
9. The power supply cord of the product should be unplugged from the outlet when left unused for a long period of time. When unplugging the power supply cord, do not pull on the cord, but grasp it by the plug.
10. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
11. The products should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled, into the product; or
 - C. The product has been exposed to rain; or
 - D. The product does not appear to be operating normally or exhibits a marked change in performance; or
 - E. The product has been dropped, or the enclosure damaged.
12. Do not attempt to service the product beyond that described in the user maintenance instructions. All other servicing should be referred to qualified service personnel.
13. **WARNING**—Do not place objects on the product's power supply cord, or place the product in a position where anyone could trip over, walk on, or roll anything over cords of any type. Do not allow the product to rest on or be installed over cords of any type. Improper installations of this type create the possibility of a fire hazard and/or personal injury.

SAVE THESE INSTRUCTIONS

INTRODUCTION TO THE **KURZWEIL™**

Music Systems

KHP-101

Electro-Acoustic Hybrid Piano

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Young Chang Distributors
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Kurzweil is a product line of
Young Chang Co., Ltd.
Seoul, Korea

About the KHP-101

Introduction

Welcome to the Kurzweil KHP-101 Hybrid Piano! The KHP-101 gives you simple, affordable access to Kurzweil's high-quality sound technology and a quality, accurate real piano action. The authentic digital representations of musical instrument sounds in the KHP-101 reproduce the finest details of the original sounds—from bass to treble and from soft to loud.

This manual serves as both a guided tour of the KHP-101 for the new owner and a reference for later use. The features of the instrument are discussed one at a time, and the songs included give you an opportunity to play the KHP-101 right away.

Setting Up the Instrument

See the "Important Safety and Installation Instructions," on page 2, for information regarding the installation of the KHP-101. For the best sound, you should position the instrument two feet or more from a corner. Make sure nothing obstructs the speakers; don't cover them with anything.

Key Cover and Music Rack

The hinged key cover helps to keep dust and dirt off of the keyboard when the instrument is not in use. Use two hands to open and close it. The music rack is integral with the key cover, and is used by folding down the small hinged shelf when the key cover is open.

Care of Your Instrument

It isn't difficult to keep your KHP-101 looking great. The most important things are to keep the piano clean and out of direct sunlight. You should also avoid subjecting the piano to extremes of temperature and humidity; these could eventually affect the hammer action, too. Lastly, we suggest that you don't put drinks, plants, or ashtrays on the piano. If you do place any items on the piano, be sure to put a piece of felt or soft cloth under them.

Cleaning and Polishing: If your piano requires cleaning and has a simulated wood or high-gloss finish, use a soft cloth slightly dampened with a mild soap solution. Do not, however, use soap or water to clean a natural wood finish. Be gentle when cleaning your piano so that you don't scratch the finish.

Polishing is never required for a simulated wood finish, and is not usually needed for a high-gloss finish. A natural wood finish should have a "satin" look to it, so you should avoid using gloss-producing polishes on it. Two polishes you may wish to consider using for a natural wood finish are Guardsman Furniture Polish and OZ Cream Polish.

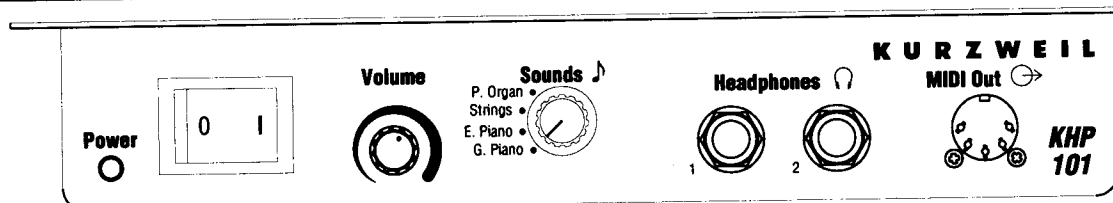
Use a feather duster when dusting your KHP-101 so you won't scratch the finish. To clean the keys, use a soft cloth slightly dampened with a mild soap solution.

Opening the Cabinet

You or a technician may occasionally need to open the top of the KHP-101 cabinet to access its hammer action for service or adjustment. You can easily open the cabinet without any tools, but you must pay special attention to the cables connecting the tweeters (small speakers) to the front of the cabinet. Also, you should remove power from the piano before opening the cabinet.

To open the cabinet, first lift the hinged top open by putting the tips of your fingers beneath the front edge of the top, then pulling upwards. The top is held in place by clips, but will open without much effort. Then, you can carefully pull the front panel away from the piano to expose the hammer action. Disconnect the tweeter cables at the small connectors (two on each side) before you remove the front panel.

Power



The KHP-101 operates on AC power, and has been manufactured specifically for the main supply voltages used in your area. A power cord is included with the instrument to connect it to an AC outlet. If you should move to another country, or if you should have any doubts about voltages, see your local Kurzweil dealer.

Before connecting the power cord, make sure the Power switch, located on the front of the control box under the right-hand portion of the keyboard, is OFF. The power cord is made so that one end of it plugs into the power socket on the rear of the unit, and the other end plugs into an AC outlet. Connect the cord to the instrument first, then the AC outlet. Once the power cord is connected, you can turn the Power switch ON. (NOTE: Make sure you do not step on any of the pedals when you power-up the KHP-101; if you do, the self-demonstration may start. To correct this, turn the instrument off, then back on.) After a brief self-check on power-up, the instrument is ready to play.

To make sure you can hear the instrument, turn the Volume knob (next to the Power switch) to the middle of its range. This should provide a comfortable level of volume, which you can adjust if you wish the sound to be louder or softer.

WARNING: To avoid possible injury or electrocution, do not remove any screws or panels. There are no user-serviceable parts inside the KHP-101.

Demo

The KHP-101 contains a built-in demonstration to acquaint you with the sounds and capabilities it possesses. To access this demonstration, turn the unit off if it is not already off. Then press and hold both of the pedals while turning the unit on; continue to hold the pedals down one full second, then release. The demo song will start two seconds later.

The demonstration will stop automatically when it is finished. To stop it before it is finished, turn the unit off. You can play along with the demo but cannot change the sound selection.

The Keyboard and Pedals

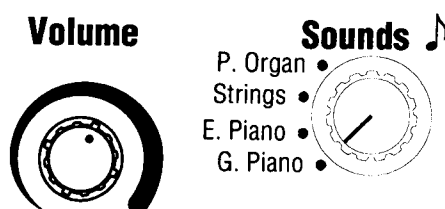
The keyboard of the KHP-101 consists of eighty-eight keys with real piano action. Just as with an acoustic piano, the KHP-101 is touch-sensitive: the harder you press the keys, the louder and brighter the resulting sound is. This makes the KHP-101 a truly expressive instrument. See page 8 for information on adjusting the touch sensitivity to suit your preference. (NOTE: The Pipe Organ sound purposely isn't touch-sensitive, because real pipe organs aren't touch-sensitive.)

In addition to the expressiveness offered by the keyboard, there are two pedals that provide you with further control over the sounds of the KHP-101. These pedals have the same functions as those on an upright piano:

- **SUSTAIN.** Pressing the right pedal causes notes to sustain even when you lift your fingers from the keys.
- **SOFT.** Pressing the left pedal causes notes to sound softer and more muted when they are played.

Sounds

You can select from four different sounds available on the KHP-101. Simply turn the Sounds knob on the control box to the name of the desired sound. Any notes still sounding at the time you select a new sound will complete playing the original sound.



Volume

The Volume knob controls the overall volume (loudness) of the KHP-101. Turn it clockwise to increase the volume, and counterclockwise to decrease the volume; when turned all the way counterclockwise, it silences the instrument.

Volume affects not only the volume produced by the internal sound system, but also the volume produced by the Headphone jacks. CAUTION: Turn the Volume down before connecting headphones.

Special Function Mode

The KHP-101 has a Special Function mode, from which you can do the following:

- tune the instrument;
- transpose the keyboard;
- adjust the touch sensitivity of the keyboard;
- change the MIDI channel on which MIDI messages are transmitted.

These functions are accessed from the keyboard and pedals.

To perform a special function, press and hold the left pedal, then press the lowest key (A0) very softly, so it doesn't make a sound. Then release the left pedal. The KHP-101 is now in Special Function mode.

Following is a description of the operations in Special Function mode.

Tuning

The KHP-101 will never go out of tune. However, when playing with recordings or other musical instruments, you may want to shift the tuning so that everything is playing at the same pitch. You can do so by as much as a quarter tone (half a half step) down or a quarter tone up.

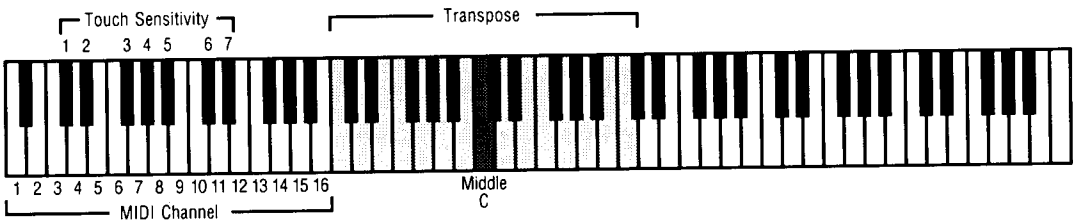
Press the left pedal (–) or right pedal (+) to shift the tuning down or up, respectively. The first pedal press causes the tuning to reset to standard concert pitch (A 440). Each subsequent pedal press lowers (–) or raises (+) the pitch by one *cent*—a hundredth of a half step—up to a maximum of 50 cents below or 50 cents above A 440.

While you are tuning, you can play the keyboard to hear the effect of the tuning change. When you are finished tuning, play the lowest key very softly WITHOUT pressing the left pedal.

To return the KHP-101 to A 440 tuning, enter Special Function mode again and press either pedal once only.

When you turn the KHP-101 on, the tuning is always reset to A 440.

Keyboard Operations (see below)



Transpose

Transpose lets you play in one key and have the notes sound in another. This is useful when accompanying singers for whom the written music is too high or low, or when playing music written for a transposing instrument, such as a clarinet.

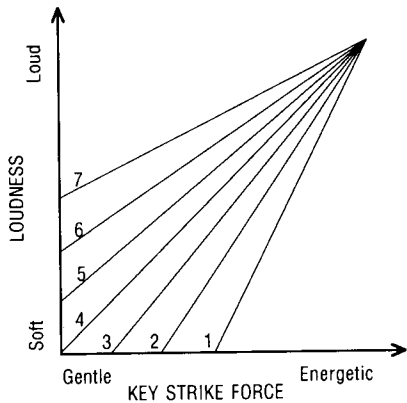
To change the transposition while in Special Function mode, strike a key on the keyboard within the octave above or the octave below Middle C. This keystroke (which does not sound a note) transposes the keyboard so that the Middle C key will now sound the note you selected, and the instrument will be transposed by the interval between Middle C and that note. (For example, to transpose up a fifth, strike G above Middle C.) The keystroke also causes the KHP-101 to exit Special Function mode and return to normal play mode.

When the KHP-101 is transposed, the transposition affects not only the sounds played from the keyboard, but also the note messages sent to another instrument or sequencer via the MIDI Out port.

NOTE: The sounds in the KHP-101 are designed to play over the full 88-note range of the keyboard. When the KHP-101 is transposed, some keys at one end of the keyboard may be silent.

To return the KHP-101 to no transposition, re-enter Special Function mode and strike Middle C. The KHP-101 is reset to no transposition when power is turned on.

Touch Sensitivity



You can adjust the touch sensitivity of the keyboard (how the dynamics of the sounds respond to the force with which the key has been struck) in Special Function mode by striking one of the seven keys that govern this setting. This keystroke (which does not sound a note), in addition to setting the touch sensitivity of the keyboard, causes the KHP-101 to exit Special Function mode and return to normal play mode.

At a setting of 4 the keyboard is optimized for the greatest dynamic range. A setting of 1 requires higher force to obtain loud notes, making it easier to play softly. A setting of 7 has a narrower dynamic range, but makes it easier to play moderately loudly

(see the graph). For example, a child beginning piano lessons may benefit from a high setting, while an experienced player may prefer a lower setting.

When power to the KHP-101 is turned on, the touch sensitivity is set to 4.

MIDI Channel

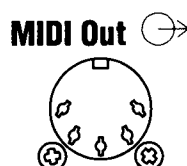
While the KHP-101 is in Special Function mode, you can select the MIDI channel on which information is transmitted by striking one of the sixteen keys that govern this setting.

The number of the key in the illustration corresponds to the number of the MIDI channel selected when that key is struck. This keystroke (which does not sound a note), in addition to setting the MIDI channel, causes the KHP-101 to exit Special Function mode and return to normal play mode.

The MIDI channel is reset to 1 every time the KHP-101 is turned on.

“MIDI” stands for “Musical Instrument Digital Interface.” It is an international specification that allows electronic musical instruments to communicate with each other, using a simple cable connection. It ensures that the KHP-101 will remain compatible with the instruments of today and tomorrow.

On the front panel of the KHP-101 is a five-pin MIDI Out port, which sends MIDI information to other equipment:



Standard MIDI cables provide the connections between the MIDI ports of one piece of equipment and those of another.

The simplest use of MIDI is to play two instruments at a time from the keyboard of one of them. Use a MIDI cable to connect the MIDI Out port of the instrument whose keyboard you'll play (called the “master”) to the MIDI In port of the other instrument (the “slave”). You will use the KHP-101 as your master keyboard.

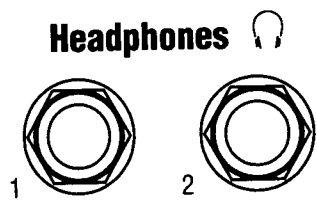
It is important to explain that what is sent over the MIDI cable is information (data), not sound. Each connected instrument produces its own sounds; this “layering” of different sounds is one of the benefits of MIDI. For the KHP-101, the information transmitted falls into three categories: playing notes, operating the pedals, and selecting sounds.

Another application of MIDI is in using a *sequencer* to record and play back your performances. The sequencer can be a special hardware unit designed for that purpose, or it can be a personal computer running special sequencing software. Music recorded from the KHP-101 by a sequencer must be played back through another device, such as a computer sound card.

A MIDI sequencer can control several instruments, each playing a different part, at the same time. To do this, it relies on MIDI *channels*. MIDI channels are like TV channels: an instrument has to be “tuned” to the correct one or it won't receive what is being transmitted. There are sixteen channels available, numbered 1–16; the KHP-101 can be set to transmit on any one of them, as explained above.

Page 24 shows the complete MIDI Implementation Chart for the KHP-101.

Headphone Jacks



Two 1/4" stereo headphone jacks are located on the right front of the instrument, providing you and a friend or student with a means to play or practice at the KHP-101 in privacy. Inserting a plug into either of the jacks disables the internal speakers. You can also connect the KHP-101 to an external audio system using either Headphone jack. Be sure to use a *stereo* 1/4" phone plug and appropriate adapters.

Service

The KHP-101 contains no user-serviceable parts. In the event that you should experience a problem with the operation of the instrument, see your local Young Chang/Kurzweil dealer.

Specifications

Physical

Height:	38.75"	(98 cm)	110.5 cm
Depth:	17.50"	(44 cm)	62.7 cm
Length:	55.25"	(140 cm)	144 cm
Weight:	200 lbs.	(92 kg)	95 kg

Audio

80-Watt Amplification:	4 x 20 Watts
4 Speakers:	2 x 6.5" (16.5 cm) woofers 2 x 1.0" (2.5 cm) tweeters

Electrical

입력

Voltage:	120/240 VAC, 50/60 Hz	AC 220V
Power Consumption:	1.3/0.7 Amps nominal	0.8A.
Frequency Range:	48-65 Hz	

Environmental

Temperature (Operating):	5 to 40°C (40 to 104°F)
Temperature (Storage):	-25 to 85°C (-13 to 185°F)

Can't Help Falling In Love

Grand Piano

Words and Music by GEORGE DAVID WEISS,
HUGO PERETTI and LUIGI CREATORE

The musical score is written for Grand Piano in 12/8 time, featuring a key signature of one flat (Bb). It consists of four systems of two staves each. The first system includes a treble clef and a 12/8 time signature. The melody in the treble staff is characterized by a series of eighth notes, often beamed in pairs, and includes a long, sweeping phrase in the second measure of the first system. The bass staff provides a simple harmonic accompaniment with dotted half notes and eighth notes. The second and third systems continue the melodic and harmonic development. The fourth system concludes with a double bar line and repeat dots, preceded by the instruction 'To Coda' with a Coda symbol (a circle with a cross).

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The first system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of one flat (B-flat). It contains three measures of music, each featuring a complex melodic line with eighth and sixteenth notes, including triplets. The lower staff is in bass clef and contains three measures of music, primarily consisting of single notes and rests.

The second system of musical notation consists of two staves. The upper staff continues the melodic line from the first system, ending with a measure that has a key signature change to two flats (B-flat and E-flat). The lower staff continues with single notes and rests. The text "D.C. al Coda" is written above the end of the upper staff.

CODA

The third system of musical notation consists of two staves. The upper staff begins with a Coda symbol (a circle with a cross) and contains two measures of music. The lower staff contains two measures of music. The text "CODA" is written above the first measure of the upper staff.

The fourth system of musical notation consists of two staves. The upper staff contains three measures of music, continuing the melodic line. The lower staff contains three measures of music, primarily consisting of single notes and rests.

MIDI Implementation Chart

Manufacturer:
Young Chang

Version: 1.0

Model: Kurzweil KHP-101

Digital Piano

Function	Transmitted	Recognized	Remarks
Basic Channel			
Default	0	X	
Changed	0	X	
Mode			
Default	X	X	
Messages	X	X	
Altered	X	X	
Note Number			
	0-127	X	key range:
True Voice	12-108	X	C0-C8
Velocity			
Note ON	0	X	
Note OFF	X	X	
After Touch			
Keys	X	X	
Channel	X	X	
Pitch Bender	X	X	
Control Change			
64	0	X	Sustain Pedal
67	0	X	Soft Pedal
Program Change			
	0	X	0-3
True #	0-3	X	
System Exclusive	X	X	
System Common			
Song Pos	X	X	
Song Sel	X	X	
Tune	X	X	
System Real Time			
Clock	X	X	
Messages	X	X	
Aux Messages			
Local Control	X	X	
All Notes Off	X	X	
Active Sense	X	X	
Reset	X	X	
Notes			

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

0 = yes
X = no