

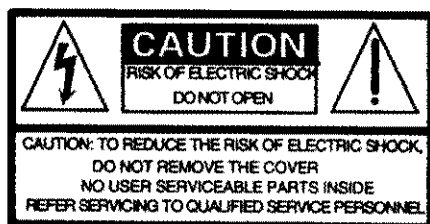
Kurzweil Troubadór

Musician's Guide

K U R Z W E I L
Music Systems

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Part Number: 910347 Rev. A



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 mark 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 & 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 which 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 which 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. **WARNING:** This product is equipped with an AC input voltage selector. The voltage selector has been factory set for the mains supply voltage in the country where this unit was sold. Changing the voltage selector may require the use of a different power supply cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified maintenance personnel.
4. Do not use this product near water - for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
5. This product should only be used with a stand or cart that is recommended by the manufacturer.
6. 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.

7. The product should be located so that its location or position does not interfere with its proper ventilation.
8. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
9. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
10. 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.
11. 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.
12. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
13. The product should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged;
 - B. Objects have fallen, or liquid has been spilled into the product;
 - C. The product has been exposed to rain;
 - D. The product does not appear to be operating normally or exhibits a marked change in performance;
 - E. The product has been dropped, or the enclosure damaged.
14. 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.
15. **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.

RADIO AND TELEVISION INTERFERENCE

WARNING: Changes or modifications to this instrument not expressly approved by Young Chang could void your authority to operate the instrument.

IMPORTANT: When connecting this product to accessories and/or other equipment use only high quality shielded cables.

NOTE: This instrument has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This instrument generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this instrument does cause harmful interference to radio or television reception, which can be determined by turning the instrument off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the instrument and the receiver.
- Connect the instrument into an outlet on a circuit other than the one to which the receiver is connected.
- If necessary consult your dealer or an experienced radio/television technician for additional suggestions.

NOTICE

This apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

AVIS

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

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The Kurzweil Troubadór

Introduction

Thanks for buying a Kurzweil Troubadór, an easy-to-use and affordable instrument providing the high-quality sound of Kurzweil technology. The Troubadór digitally reproduces the finest detail of several musical instrument sounds: grand piano, electric piano, strings, and pipe organ.

With the touch of a button, you can add effects like reverberation (which makes the Troubadór sound like it's in a large room) and chorus (which makes the sound "thicker" or "fuller," as if you were hearing more notes).

There's a duet feature that makes it easy for two people to play at the same time (see page 9). There's also a recorder that lets you record a song, then play it back and play along with it (also on page 9).

The Troubadór is MIDI-compatible, so you can use it to control other instruments, or use it with a computer-based sequencing or composition program (see page 5).

There are audio inputs and outputs on the rear panel of the Troubadór, enabling you to play another instrument through the Troubadór's speakers, or to play the Troubadór through a stereo or sound system.

With its interface to the Kurzweil KCL-16 Teaching Lab, the Troubadór is an excellent choice for musical education settings. The teaching lab enables an instructor to monitor multiple Troubadórs, and communicate with students individually.

In This Manual

There are four main sections to the remainder of this manual:

- Setting Up2
- Playing the Troubadór7
- More Features9
- Additional Information14

Setting Up tells you everything you need to know to get ready to play your Troubadór: assembling the stand, connecting cables, turning the Troubadór on, and making sure that everything works.

Playing the Troubadór describes the basic performance features of the Troubadór: adjusting the volume, changing sounds, and adding effects like reverb and chorus.

In *More Features*, you'll learn about performance features like duet mode, recording, and MIDI—as well as general functions like tuning and transposition.

Additional Information contains useful facts about service and maintenance, as well as product specifications.

Setting Up

Assembling the Stand (Optional)

If you've purchased the optional stand for your Troubadór, you'll need to assemble it, as shown in Figure 1. You'll need a #2 (medium) Phillips screwdriver. If you don't have the stand, you can skip this section.

Step 1: With the leg standing on end, align the two holes in the foot with the two pilot holes in the bottom of the leg. Use two M5 x 50 mm wood screws to attach the foot to the leg. Repeat this for the other leg.

Step 2: With the leg still standing on end place the pedal crossmember (with pedals up) onto the bracket near the foot. Put two M6 machine screws through the bracket and into the threaded inserts on the underside of the pedal crossmember. Repeat this for the other leg.

Step 3: Align the bracket on the upper crossmember up with the two threaded inserts. When properly aligned, the top edge of the upper crossmember should be approximately level with the top bracket. Put two M6 machine screws through the bracket and into the threaded inserts in the leg. Repeat this for the other leg.

Step 4: Place the Troubadór onto the two horizontal metal brackets near the top of the legs. Have someone hold the unit in place while you insert two thumbscrews through the bracket and into the two threaded holes in the bottom of the keyboard sheet metal. Repeat for other leg.

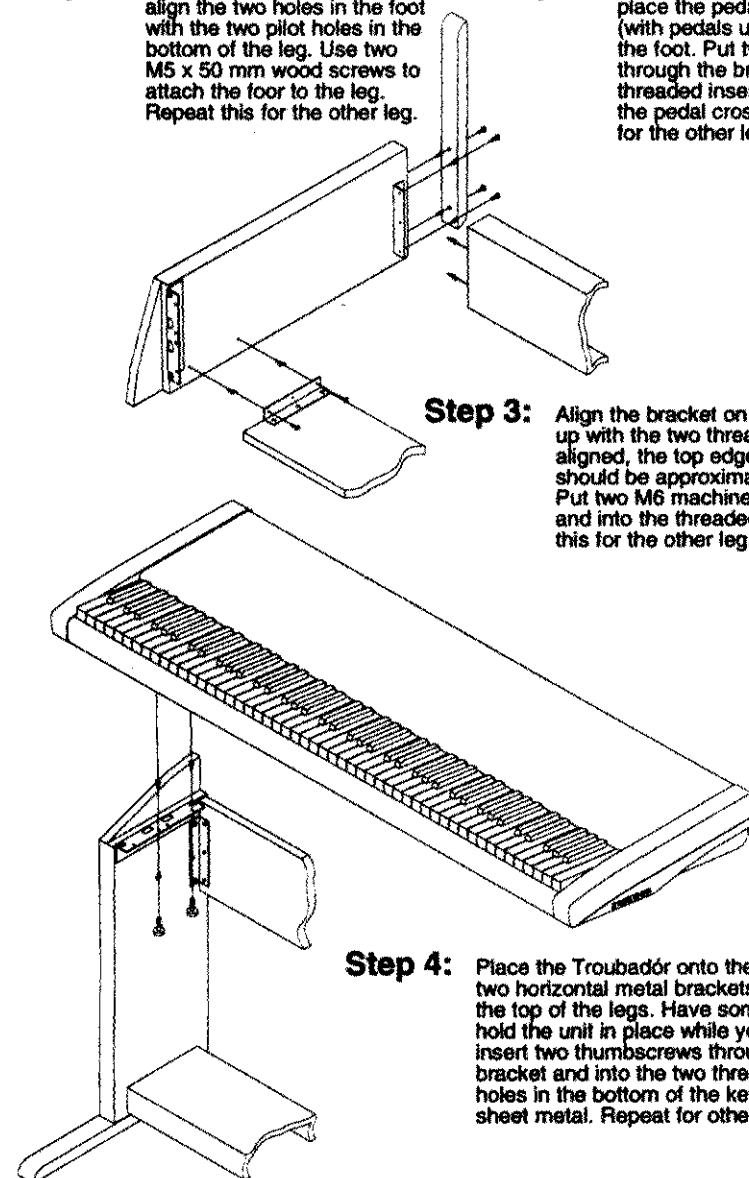


Figure 1 Assembling the Troubadór stand

Place your Troubadór on its stand, or on a firm level surface. Leave enough room to reach behind the instrument to connect cables. At the least, you'll need to connect the power cable. Depending on how you'll be using your Troubadór, you may also need to connect audio and MIDI cables. Let's start with the power connection.

Connecting the Pedals

The crossmember for the Troubadór's optional stand includes with a pair of pedals: sustain and soft. They connect to the Troubadór with a cable. Connect the 1/4-inch plug on the end of this cable into the Pedals jack on the Troubadór's rear panel (see Figure 2 on page 3). See *The Keyboard And Pedals* on page 7 to learn how the pedals work.

If you don't have the optional Troubadór stand, you can get a two-pedal box (KFP-2S) from your Kurzweil/Young Chang dealer, and connect it the same way.

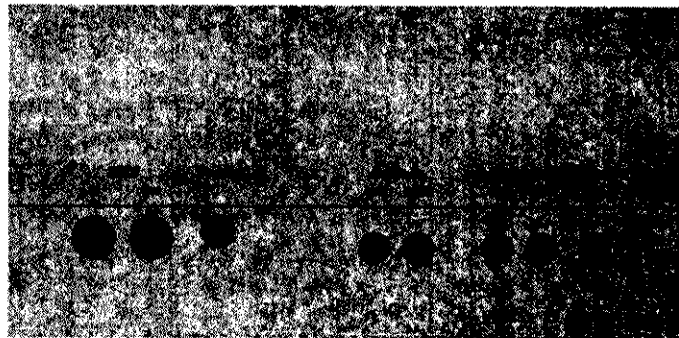


Figure 2 Troubadór Rear Panel

Connecting the Power Cable

The Troubadór operates on 13.5-volt DC power, and comes with a DC power adaptor for connection to an AC outlet. If you're uncertain about your local AC voltage level, or if you plan to visit or move to another country, contact your local Young Chang/Kurzweil dealer.



Warning: Make sure the DC power adaptor is labeled PP135-17. Using any other power adaptor can damage your Troubadór or seriously degrade its performance.

The power switch is at the left end of the control panel. Make sure it's in the off position before connecting the power adaptor (the circle indicates Off, and the line indicates On). Plug one end of the power adaptor into an AC outlet and plug the other end into the Power jack on the rear panel of the Troubadór (see Figure 2).

Setting Up the Music Rack

The detachable two-piece music rack is handy for practice or performance, but is easily disassembled for when you're moving the instrument.

1. Place the metal base of the rack between the speakers on the Troubadór's front panel, with the grooved part of the rack toward you. The magnets on the bottom of the rack hold it in place.
2. Fit the plastic rack into the slot on the top of the base.

Connecting Audio Cables (Optional)

You can skip this part unless you'll be doing one or both of the following things:

- Playing an instrument or stereo through the Troubadór's speakers
- Playing the Troubadór through a stereo or other sound system

Playing Through the Troubadór's Speakers

The Troubadór can receive line-level audio input from a CD player, tape deck, or other external sound source. You'll need two audio cables, one for the left side, and one for the right. Each cable should have an RCA connector on one end. The other end of each cable should have connectors that match the output jacks of your instrument or stereo equipment.



Warning: The Troubadór has no control over the volume of sounds that it receives at its Audio In jacks. If you want to change the volume of these external sounds, adjust the volume of the instrument or sound system that's sending the sounds to the Troubadór.

1. Turn the Troubadór's power off.
2. Plug the RCA ends of each cable into the Audio In jacks (Left and Right) on the Troubadór's rear panel (see the diagram below).
3. Plug the other end of each cable into the output jacks of your instrument or stereo equipment. Make sure to match the left and right sides.
4. Turn the Troubadór's power on.

Now when you play your instrument or stereo equipment, its audio output plays through the Troubadór's speakers.

Playing the Troubadór Through a Sound System

You can send the Troubadór's line-level audio output to a PA system, tape deck, home stereo, or other external device. You'll need two audio cables, one for the left side, and one for the right. Each cable should have an RCA connector on one end. The other end of each cable should have connectors that match the input jacks of your stereo or sound system.

Plug the RCA ends of each cable into the Audio Out jacks (Left and Right) on the Troubadór's rear panel. Plug the other end of each cable into the input jacks of your stereo or sound system. Make sure to match the left and right sides.



Note: For best results, use either the Troubadór's speakers exclusively, or an external sound system exclusively. The sound won't be as clear if part of the Troubadór's output is going through one of its own speakers and the other part of the sound is going through an external system.

Connecting Headphones (Optional)

You can connect headphones to the Troubadór, enabling you to play without disturbing those around you. The 1/4-inch Headphone jack is at the front left corner of the instrument. If you connect a pair of headphones, the Troubadór's speakers are shut off, but the audio output still goes to the Audio Out jacks.

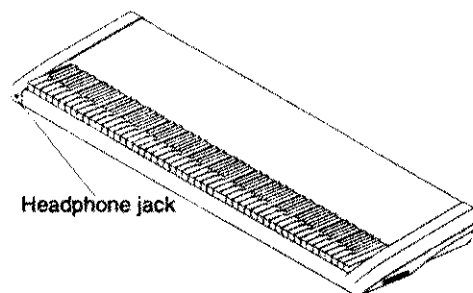


Figure 3 **Location of Headphone jack**

Connecting MIDI Cables (Optional)

You can skip this part unless you're going to be doing one or both of the following things:

- Using the Troubadór to control another MIDI device (or vice versa)
- Using a computer to record and/or play back music

MIDI stands for Musical Instrument Digital Interface. It's how computers and musical instruments communicate with each other. MIDI consists of a set of computer instructions that all MIDI instruments interpret in the same way. The Troubadór sends the following information using MIDI: playing notes, pressing the sustain or soft pedal, selecting reverb or chorus, and selecting sounds.

When two or more instruments or devices are using MIDI to communicate with each other, one instrument—called the master—sends MIDI information, and the others—the slaves—receive and respond to it. Any MIDI instrument can be a master or a slave, depending on how you want to use it.

Controlling Other Instruments

Let's take a simple example: using your Troubadór to control a second Troubadór. Your instrument will be the master (sending MIDI information), and the second Troubadór will be the slave (receiving MIDI information).

You'll need at least one standard five-pin MIDI cable, available at any music store. Connect one end of the MIDI cable to the MIDI Out port on the rear panel of your Troubadór. Connect the other end of the cable to the MIDI In port of the second Troubadór. Now, as long as both Troubadórs are using the same MIDI channel, everything you play on your Troubadór will also play on the slave Troubadór. See *MIDI Channel* on page 12 to learn how to choose the MIDI channel.

If you want, you can connect a second MIDI cable from the MIDI Out port of the slave to the MIDI In port of the master. With the cables connected this way, either instrument can be the master or the slave.

If the slave instrument has line-level audio outputs, you can connect those outputs to the Troubadór's Audio In jacks to play the slave instrument through the Troubadór.

Using a Computer

People often use instruments like the Troubadór with personal computers. There are many software packages available that enable you to record or compose music, then play it back.

One of the most common types of music software is called sequencing software, which lets you record music much as you would with a tape recorder. It's easy to set things up so that you can play the Troubadór and have a computer record all the information. Then the computer can play the music back through the Troubadór.

For a setup like this, both the Troubadór and the computer have to be able to be both the master and the slave at different times—so you'll need two MIDI cables. Take the first MIDI cable, and connect one end to the Troubadór's MIDI Out port, and the other end to the computer's MIDI In port. Connect one end of the second MIDI cable to the Troubadór's MIDI In port, and the other end to the computer's MIDI Out port. Now both the Troubadór and the computer can send MIDI data to each other, and receive MIDI data from each other.

Make sure the Troubadór and the computer use the same MIDI channel (see *MIDI Channel* on page 12 to learn how to set the Troubadór's MIDI channel).

Turning On the Troubadór

Click the power switch to the on position. You should see two red lights (LEDs, or light-emitting diodes) on the front panel. You can now begin playing your Troubadór. If you can't hear the instrument, try adjusting the Master Volume slider until the volume is at a comfortable level. If you're using audio cables and a stereo or sound system, check your audio cable connections, and the volume settings on the stereo or sound system.

If you still can't hear anything, turn the instrument off, then on again. If this doesn't work, call your Young Chang/Kurzweil dealer.

Playing the Troubadór

The Keyboard And Pedals

The Troubadór features an 88-key weighted-action keyboard with velocity-sensitive keys. The weighted keys give a piano-like feel to the action, while the velocity sensitivity affects the dynamic response of the Troubadór—in other words, the Troubadór gets louder as you play harder. See *Velocity Sensitivity* on page 11 if you want to adjust the Troubadór's velocity sensitivity.



Note: The Pipe Organ sound is not velocity-sensitive, since acoustic pipe organs aren't velocity-sensitive either.

The Troubadór has a pedal box with two pedals like those on many pianos. The right pedal is a Sustain pedal, and the left pedal is a Soft pedal. Plug the cable on the pedal box into the Pedals jack on the rear panel of the Troubadór.

Sustain Press the right pedal to hold the notes that you're playing, even after you release the keys. Without the sustain pedal on, notes fade to silence (decay) much faster.

Soft Press the left pedal to get a softer, muted tone from the Troubadór.

The Control Panel

Everything you need to control the Troubadór during performance is right on the front panel, above the keys. There are three main sections to the control panel. See Figure 4 for the location of each section.

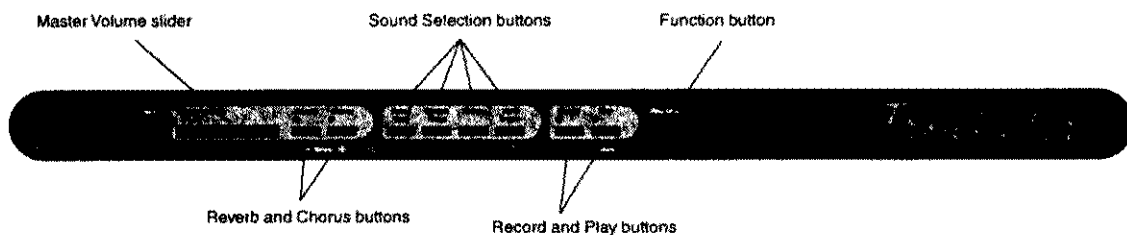


Figure 4 Troubadór Control Panel

Digital Reverb & Effects	Contains the Master Volume slider, as well as buttons for turning on the Troubadór's effects (reverb and chorus)
Sound Select	Four buttons for selecting the Troubadór's sound: Grand Piano, Electric Piano, Strings, or Pipe Organ.
Recorder	There are two buttons in this section, one to start and stop recording a song, and one to start and stop playback of the recorded song.

The Function Button

The **Function** button is a special button that you can use for operations like tuning and transposing. Pressing the **Function** button makes the other buttons do something different when you press them. See *Using the Function Button* on page 9 for more information.

Master Volume

Move the Master Volume slider to change the Troubadór's volume—all the way to the right is maximum, and all the way to the left is off.

The Master Volume slider controls the volume of the Troubadór's speakers, as well as the volume at the Audio Out jacks and the Headphone jack.



Caution: Decrease the Troubadór's volume before plugging in your headphones or connecting the Audio Out jacks.



Warning: The Troubadór has no control over the volume of sounds that it receives at its Audio In jacks. If you want to change the volume of these external sounds, adjust the volume of the instrument or sound system that's sending the sounds to the Troubadór.

The Demonstration Song

The Troubadór comes with a demonstration song (a recording technically known as a *sequence*) that shows the Troubadór's sounds and effects. To play the demo, first press the **Function** button (see Figure 4). When you press the button, the LED above it lights.

Now press the **Play** button (in the Recorder section of the control panel), and the demo begins. Note that the LED above the **Play** button is lit, and the LED above the **Function** button has gone out.

The demo lasts about two minutes, and stops automatically when it's finished. To stop the demo before it finishes, press the **Play** button. The demo stops and the LED goes out.

Selecting Sounds

When you turn on your Troubadór, it starts up with the Grand Piano sound. You can change a sound at any time by pressing one of the **Sound Select** buttons (see Figure 4.). If you're holding a note or a chord when you change sounds, the notes you're holding continue to play the old sound, but the next notes you play use the new sound.

You can change the sound while you're playing a song. The song continues playing, using the new sound.

Reverb and Chorus

The Troubadór offers reverb and chorus effects. When you turn on your Troubadór, the reverb effect is on, and the chorus effect is off.

Change the effects by pressing the **Reverb** and/or **Chorus** button. When an effect is on, the LED above the effect's button is lit.

More Features

Playing Duets

Often when two people are playing on one piano, the notes are too low for one person and too high for the other. The Troubadór has a duet mode that lets both of you play more comfortably.

To use duet mode, first press the **Function** button. Notice that the LED above the **Function** button lights. Next, press the **Record** button. The LED above the Function button goes out.

Play the keyboard, and you'll notice that the notes are different. The bottom half of the keyboard (up to the E above Middle C) gets transposed up two octaves, and the top half of the keyboard (down to the F above Middle C) gets transposed down two octaves.

All the notes from the left half of the keyboard go to the left speaker (to the Left Audio Out), and all the notes from the right half of the keyboard go to the right speaker (to the Right Audio Out).

To get back to normal playing mode, press the **Function** button, then the **Record** button. The Troubadór always starts up in normal playing mode, even if it was in duet mode when you turned it off.

Recording A Song

The Troubadór can store one song (a digital recording of the notes you play on the keyboard), which you can play back, either for listening or to play along. The recorder is easy to use.

To begin recording a song, press the **Record** button. The LED above the button lights, indicating that the Troubadór is ready to record. Start playing, and the Troubadór starts recording every note you play. The Troubadór also records changes in sounds, changes in the volume of your playing, and changes in the effects, and information from the pedals.

To stop recording, press the **Record** button again. Its LED goes out. To play the song, press the **Play** button. The LED above the button lights. Press the **Play** button again if you want to stop the song before it finishes. During the playback of a song, you can change the sounds or effects. This does not affect the changes in sounds or effects that you've recorded into the song.

When you're recording a song, it's a good idea to select a sound before you start playing notes. This ensures that your songs always start with the right sound.

The Troubadór can store only one song. When you record a new song, the new one replaces the old one. When you turn off your Troubadór, the Recorder memory is erased.

Using the Function Button

The **Function** button puts the Troubadór temporarily into a special function mode, which adds the following operations to the other buttons on the control panels:

- Demo song start and stop
- Tuning in one-cent (100ths of a semitone) increments
- Duet mode
- Transposition by semitone increments
- Velocity sensitivity adjustment
- MIDI channel assignment
- Local control on and off
- Stereo/Monaural

For all of these operations, you'll start by pressing the **Function** button. Then you'll press one of the other control-panel buttons, or one of the Troubadór's keys, to execute the operation.

Playing the Demo

Press **Function**, then **Play**. Press **Play** again to stop the demo. The LED above the **Play** button remains on while the demo is playing. See *The Demonstration Song* on page 8 for more information.

Tuning

Because your Troubadór is a digital synthesizer, it will never go out of tune. If you're playing with other musicians, however, the Troubadór may sound out of tune relative to their instruments. It's easy to tune the Troubadór to other instruments.

1. Press **Function**. The LED lights.
2. Press either **Reverb** or **Chorus**. This resets the Troubadór to standard tuning (A 4 = 440 Hz). The LED above the **Function** button goes out briefly, then relights. This is tuning mode. The LED above the **Function** button blinks slowly to remind you that you're in tuning mode.
3. Press **Reverb** to lower the pitch of the Troubadór one cent, or press **Chorus** to raise it one cent. A cent is 1/100th of a semitone (a semitone is the interval between one note and its neighbor—for example, from C to C[#]). You can raise or lower the pitch by up to 50 cents. While you're tuning the Troubadór, you can play the keyboard to check the change in pitch.
4. Press **Function** again to exit tuning mode.

There are two ways to revert to standard tuning:

- Turn off the Troubadór, then turn it on again. The Troubadór always starts up at standard tuning.
- Make sure the LED above the **Function** button is off (you may have to press **Function** once if the LED is on or blinking). Press **Function** to light the LED, then press either **Reverb** or **Chorus** to reset the tuning. Press **Function** again to exit tuning mode.

Duet Mode

You can split the keyboard into two regions that make it easier to play duets. See *Playing Duets* on page 9 for a complete description.

Transposition

Transposing a piece of music means to play it in a different key. Accompanists often transpose music to match the vocal ranges of singers. Transposing isn't easy, however. Learning to play a piece of music in a different key can be almost like learning the piece all over again.

The Troubadór makes it easy to play in different keys. Instead of transposing by playing different notes, you can transpose the Troubadór itself, so that when you play a note, the Troubadór automatically adjusts its pitch by the right amount.

For example, if you transpose the Troubadór up four semitones, striking C 4 (Middle C) on the Troubadór's keyboard plays E 4, which is four semitones up from C 4.

1. Press **Function**. The LED lights.
2. Play any white key within the octave above or below Middle C, as shown in the shaded region in Figure 5 (you won't hear any sound). This transposes the Troubadór so that the note you played now plays at Middle C. All the other notes are transposed accordingly. The LED above the **Function** button goes out, and the Troubadór returns to normal playing mode.



Figure 5 **Keys for Setting Transposition**

For example, suppose that in step 2 you play F 4, the F above Middle C. This transposes the Troubadór up five semitones (there's an interval of five semitones between C 4 and F 4). Every note gets transposed up five semitones, so if you play E 4, for example, you'll hear A 4.

Transposition affects all notes that the Troubadór produces, whether you play notes from the keyboard, or play back a song. All notes sent to the MIDI Out port are also transposed.



Note: When you transpose the Troubadór, some of the notes at the high or low end of the keyboard will not sound. This is normal.

There are two ways to reset the transposition to normal:

- Turn off the Troubadór, then turn it on again. The Troubadór always starts up without transposition.
- Press the **Function** button, then play Middle C.

Velocity Sensitivity

On a piano, the harder you play the keys, the louder the resulting note. This is true for the Troubadór as well, but you can also *adjust* how the Troubadór responds to your playing, by changing the velocity sensitivity.

1. Press **Function**. The LED lights.
2. Play any of the seven black keys shown in Figure 6 (you won't hear any sound). Each key corresponds to a velocity sensitivity level. The lowest key sets the velocity sensitivity to Level 1, and the highest key sets it to Level 7. The LED above the **Function** button goes out when you play a key, and the Troubadór returns to normal playing mode.

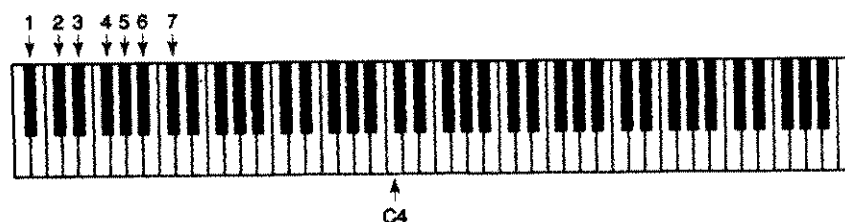


Figure 6 **Keys for Setting Velocity Sensitivity**

At Level 1, there's a wide range between soft and loud notes, and you have to play quite hard to get loud notes. At Level 7, there's less of a difference between soft and loud notes, and it's easier to play loud notes. Level 4, the middle level, is the most like an acoustic piano. When you turn on the Troubadór, it always resets to Level 4.

Beginning musicians may find it easier to play at higher levels of velocity sensitivity, while advanced musicians, with a more developed sense of touch, may enjoy using lower levels.

MIDI Channel

MIDI—which stands for Musical Instrument Digital Interface—represents music the way computers do: as bits of information. Different bits represent different parts of the music: the notes, how loud to play them, whether they should be sustained, and other characteristics. All of this information gets transmitted as electrical signals that pass through the MIDI cables connecting the master and slave instruments.

MIDI uses channels to carry this musical information—similar to the way that different TV programs are broadcast on different TV channels. If you're using your Troubadór with another MIDI instrument, or with a personal computer, they need to use the same MIDI channel to communicate with each other. If your Troubadór is the master, and it's sending its MIDI information on Channel 1, then the slave instruments must also be set to Channel 1. Likewise, if the Troubadór is the slave, it must be set to the same MIDI channel as the master. See *Connecting MIDI Cables (Optional)* on page 5 for more information about MIDI masters and MIDI slaves.

There are 16 MIDI channels. When you turn on your Troubadór, it always resets itself to use MIDI Channel 1. You can change the MIDI channel to anything from 1 to 16, depending on your requirements.

1. Press **Function**. The LED lights.
2. Play any of the 16 white keys shown in Figure 7 (you won't hear any sound). These keys correspond to the 16 MIDI channels. The LED above the **Function** button goes out when you play a key, and the Troubadór returns to normal playing mode.

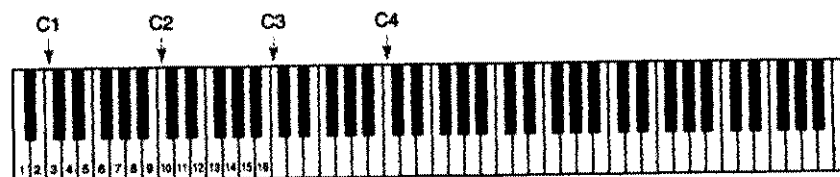


Figure 7 **Keys for Setting MIDI Channel**

Local Control

Local control is the technical name for playing the Troubadór directly from its own keyboard. When you play the Troubadór, what you're actually doing is sending MIDI information from the keyboard to the sound-producing internal circuitry. This MIDI information also goes to the MIDI Out port on the rear panel.

You might not always want to play the Troubadór directly from its keyboard, however. You might want to play it from a computer sequencer, for example. In this case, you might want to turn local control off, so that playing the Troubadór's keyboard doesn't create any sound, although it still sends MIDI information to the MIDI Out port.

1. Press **Function**. The LED lights.
2. Play D 6 (two octaves up from the D above Middle C). You won't hear any sound when you play the key, but you'll see the LED above the **Function** button go out. This turns local control off; playing the keyboard won't make any sound. The LED above the **Function** button goes out when you play a key, and the Troubadór returns to normal playing mode.

There are two ways to turn local control back on:

- Turn off the Troubadór, then turn it on again.
- Press the **Function** button, then play C 6.

Stereo/Monaural

When you turn on your Troubadór, it always sets itself to play in stereo, which means that the audio output is split into two parts. One part goes to the left speaker (or to the Left Audio Out jack), and the other part goes to the right speaker (or to the Right Audio Out jack).

Playing the Troubadór in stereo results in a more realistic sound. There may be times, however, when you don't want the Troubadór's sound to be separated into left and right parts. For example, when playing the Troubadór through a sound system, you might want to use only one audio cable from the Troubadór.

You can set the Troubadór to play in monaural (mono), in which case, the audio output doesn't get separated, and all of the audio output goes to both the left and right speakers (and to both the Left and Right Audio Out jacks).

1. Press **Function**. The LED lights.
2. Play G 6 (two octaves up from the F above Middle C). This switches the Troubadór to monaural. The LED goes out.

There are two ways to reset the Troubadór to play in stereo:

- Turn off the Troubadór, then turn it on again.
- Press the **Function** button, then play F 6.

Connecting the Teaching Lab (Optional)

If you plan to use the Troubadór with the optional KCL-16 Teaching Lab, read this section to learn how to connect the cables properly. Please see the Teaching Lab documentation for operational instructions.

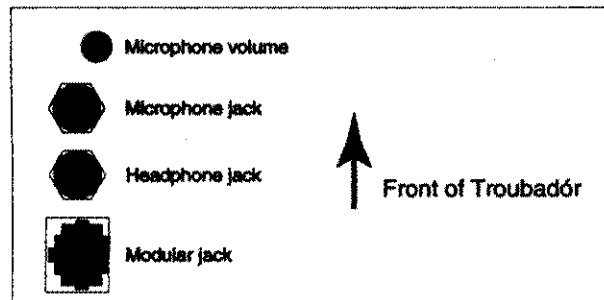


Figure 8 Teaching Lab Interface (Troubadór bottom panel)

1. Connect one end of the flat cable (like a telephone cable) that came with the Teaching Lab into the Modular Jack on the Troubadór's bottom panel (see Figure 8).
2. Connect the other end of the flat cable into the appropriate jack on the Teaching Lab unit, according to the Teaching Lab instructions.
3. Connect the microphone on the Teaching-Lab headset into the Microphone jack on the Troubadór's bottom panel.
4. Connect the headphone cable on the Teaching-Lab headset into the Headphone jack on the Troubadór's bottom panel.

With these connections in place, you should be able to use the Teaching Lab. If you have problems, please see the Teaching Lab documentation for further information.

Disconnect the Teaching-Lab headset from the Microphone and Headphone jacks to disable the Teaching Lab interface and return to normal operational mode.

Additional Information

Service

The Troubadór contains no user-serviceable parts. If you encounter any problems, contact your local Young Chang/Kurzweil dealer.

Caring For Your Instrument

Clean the exterior surfaces of your Troubadór with a soft dry cloth. To clean the keys and enclosure, use a soft damp cloth (not wet) and a mixture of gentle soap (or detergent) and water. Do not use aerosol sprays on or near the instrument, and never use solvents like benzene or alcohol, which can damage the finish on parts of your Troubadór.



Warning: Never take your Troubadór apart. The parts inside are not user-serviceable. Opening your Troubadór could result in injury or electrocution.

Specifications

Physical

Height (on stand)	31.0 in	79.0 cm
Depth	17.75 in	43.0 cm
Length	51.75 in	131.0 cm
Weight (Troubadör)	56.0 lb	25.0 kg
Weight (stand)	43.0 lb	20.0 kg
Weight (total)	99.0 lb	45.0 kg

Audio

20-Watt Amplification (2 x10 Watts)

Two 4.5-inch (110 mm) woofer/midrange speakers

Two 2.5-inch (60 mm) cone tweeters

Power Supply

AC Adaptor 13.5 Volts DC, 1.7 Amps

Power Consumption 1 Amp nominal

Model Number PP135-17

MIDI Implementation Chart

Model: Troubadór

Manufacturer:
Young Chang
Digital Piano

Date: 11/30/99
Version 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1	1	
	Changed	1-16	1-16	
Mode	Default	X	X	Always in Mode 3
	Messages	X	X	
	Altered	X	X	
Note Number		0-127	0-127	Key range C 0 - C 8
	True Voice	12-108	12-108	
Velocity	Note ON	O	O	
	Note OFF	X	X	
After Touch	Keys	X	X	
	Channels	X	X	
Pitch Bender		X	X	
	7	X	O	Volume
	64	O	O	Sustain pedal
	66	X	O	Sostenuto pedal
	67	O	O	Soft pedal
	80	O	O	Left split point
	81	O	O	Left split program
	83	O	O*	Effect select
Program Change		O	O	0-75
	True #	0-75	0-75	
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	O	O	
	Active Sense	X	X	
	Reset	X	X	
Notes	* 0 = None 3 = Chorus 6 = Symphonic 1 = Room 4 = Room, Chorus 7 = Room, Symphonic 2 = Stage 5 = Stage, Chorus 8 = Stage, Symphonic			

Mode 1: Omni On, Poly
Mode 3: Omni Off, Poly

Mode 2: Omni Off, Mono
Mode 4: Omni Off, Mono

O = yes
X = no

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