





# F-90 Digital Piano

## Owner's Manual

Congratulations on your choice of the Roland Digital Piano F-90.

Before using this unit, carefully read the sections entitled: **“USING THE UNIT SAFELY”** and **“IMPORTANT NOTES”** (p. 2; p. 4). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

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Listening to the Demo Songs		page 12
Playing the Keyboard		page 13
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**IMPORTANT:** THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL  
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:  
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.  
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.  
Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.

## USING THE UNIT SAFELY

### INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

#### About ⚠ WARNING and ⚠ CAUTION Notices

<b>⚠ WARNING</b>	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
<b>⚠ CAUTION</b>	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly.  * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

#### About the Symbols

	The ⚠ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The ⚡ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The Ⓜ symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

### ALWAYS OBSERVE THE FOLLOWING

#### ⚠ WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.

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- Do not open (or modify in any way) the unit or its AC adaptor.

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- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

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- Never use or store the unit in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

#### ⚠ WARNING

- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.

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- Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.


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- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!


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- This unit, either alone or in combination with an amplifier and headphones or speakers, 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 immediately stop using the unit, and consult an audiologist.


## WARNING

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. 


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- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the “Information” page when:
  - The AC adaptor, the power-supply cord, or the plug has been damaged; or
  - Objects have fallen into, or liquid has been spilled onto the unit; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.


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- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit. 


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- Protect the unit from strong impact. (Do not drop it!) 


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- Do not force the unit’s power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord’s outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through. 


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- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the “Information” page. 


## CAUTION

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation. 


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- Always grasp only the plug on the AC adaptor cord when plugging into, or unplugging from, an outlet or this unit. 


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- Whenever the unit is to remain unused for an extended period of time, disconnect the AC adaptor. 


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- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children. 

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- Never climb on top of, nor place heavy objects on the unit. 


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- Never handle the AC adaptor or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit. 


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- If you need to move the instrument, take note of the precautions listed below. At least two persons are required to safely lift and move the unit. It should be handled carefully, all the while keeping it level. Make sure to have a firm grip, to protect yourself from injury and the instrument from damage.
  - Check to make sure the screws securing the unit to the stand have not become loose. Fasten them again securely whenever you notice any loosening.
  - Disconnect the power cord.
  - Disconnect all cords coming from external devices.
  - Remove the music stand.


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- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (page 10). 

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- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet. 

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- Should you remove the caps and screws, make sure to put them in a safe place out of children’s reach, so there is no chance of them being swallowed accidentally. 

# IMPORTANT NOTES

In addition to the items listed under “USING THE UNIT SAFELY” on page 2, please read and observe the following:

## Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- When the AC adaptor is used for extended periods, both the adaptor itself, and the area around the F-90's DC In connector will become somewhat warm; however, this does not indicate a malfunction.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

## Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Also, do not allow lighting devices that normally are used while their light source is very close to the unit (such as a piano light), or powerful spotlights to shine upon the same area of the unit for extended periods of time. Excessive heat can deform or discolor the unit.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.
- Do not allow rubber, vinyl, or similar materials to remain on the piano for long periods of time. Such objects can discolor or otherwise harmfully affect the finish.
- Do not put anything that contains water (e.g., flower vases) on the piano. Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the unit. Swiftly wipe away any liquid that spills on the unit using a dry, soft cloth.
- Do not allow objects to remain on top of the keyboard. This can be the cause of malfunction, such as keys ceasing to produce sound.
- Do not paste stickers, decals, or the like to this instrument. Peeling these off, particularly when strong adhesives have been used, can damage the instrument's exterior finish (the stickers provided with this instrument feature a weak adhesive).

## Maintenance

- To clean the unit, use a dry, soft cloth; or one that is slightly dampened. Try to wipe the entire surface using an equal amount of strength, moving the cloth along with the grain of the wood. Rubbing too hard in the same area can damage the finish.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

## Additional Precautions

- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- A small amount of heat will radiate from the unit during normal operation.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.
- Use a cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.
  - Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

# Introduction

Congratulations on your choice of the Roland Digital Piano F-90.

In order to enjoy reliable performance of your new keyboard for many years to come, please take the time to read through this manual in its entirety.

## Main Features

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### Refined Wood Grain, Compact Design

The simple design and light wood grain finish is at home both in the living room as well as in the children's room.

And at a compact about 300 millimeters deep, it fits in perfectly with other furniture.

### Authentic Piano Performances

High-quality concert grand piano tones, along with the Progressive Hammer Action keyboard, which gives more realistic piano touch by providing a heavier feel in the low end and a lighter feel in the upper notes, let you enjoy truly authentic piano performances.

### High-Performance Two-Box Speaker Construction

The lateral speaker box features two independent left and right speaker boxes, providing unexpectedly superior volume and sonic quality.

The speakers can also be directed rearward if conditions require.

### Ten Tones For Use in a Wide Variety of Musical Genres

The F-90 offers 10 different onboard tones, including piano, which can be used for almost every conceivable style of music.

### Includes High-Quality Reverb

The Reverb effect can duplicate the ambience of a concert hall.

### Numerous Internal Songs

The F-90 features sixty internal piano songs.

### Metronome Function

The F-90 comes equipped with a metronome that is convenient for practice. You can adjust tempo, beat, and volume.

### Keyboard Touch Can Be Set to Match Finger Strength

You can change the keyboard touch so it better suits the finger strength of the person playing the keyboard.

### Two Headphone Jacks Provided

The F-90 comes equipped with two headphone jacks, allowing two people to use headphones simultaneously.

This is a convenient feature for use in lessons, or when playing pieces for four hands.

### Includes Input/Output Jacks

By connecting external audio equipment to the F-90's Line Output jacks you can play sounds from the F-90 through your audio setup, and with a CD player or other such device connected to the Input jacks, you can then play internal sounds along with F-90 performances.

## Checking the Included Items

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Check to see if you have all of the items that normally are supplied with the F-90.

If any items are missing, please contact the dealer where you purchased this unit.

- F-90 (For installing the F-90, refer to p. 6)
  - Side Panel right
  - Side Panel left
  - Speaker Box
  - Screw x 8
  - Cap x 8 (and additional spare caps)
- AC Adaptor (DC 9V), AC Cord
- Cover
- Music Stand
- Pedal Switch
- Owner's manual (this document)
  - Tempo Setting Sheet

# Assembling the F-90



Make sure that another person is on hand to help with the assembly and setup.

To move the piano, lift it carefully—all the while keeping it level. Be very careful, when you assemble and move the piano, to make sure that you do not drop it on your hands or feet.

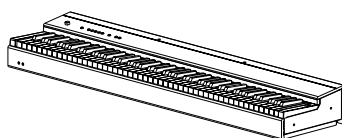
Always carry out this procedure with the F-90 lying horizontally, with the rear panel facing down.

## Check the Parts

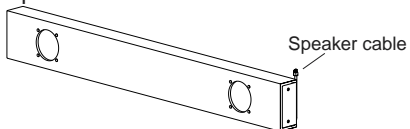
Before you begin assembling the stand, check that all the parts were supplied.

You will also need to have a Phillips screwdriver.

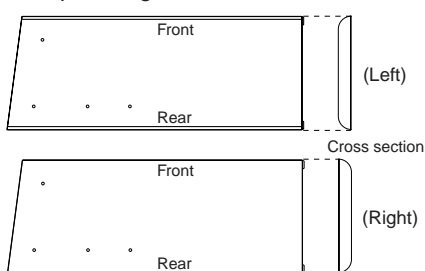
① F-90



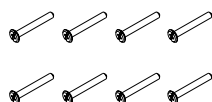
② Speaker box



③ Side panel right and left



④ Screws x 8



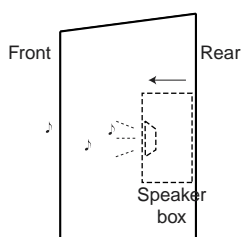
⑤ Cap x 8 (and some spare caps)



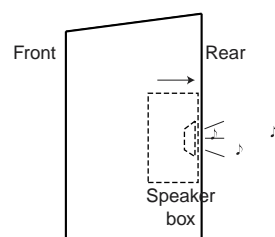
### MEMO

The speaker box can also be installed so that it faces toward the rear instead of toward the front. Having the speaker box face out the rear of the instrument allows the speakers to be directed toward listeners when the back of the instrument faces the audience.

Normal direction



When facing to the rear



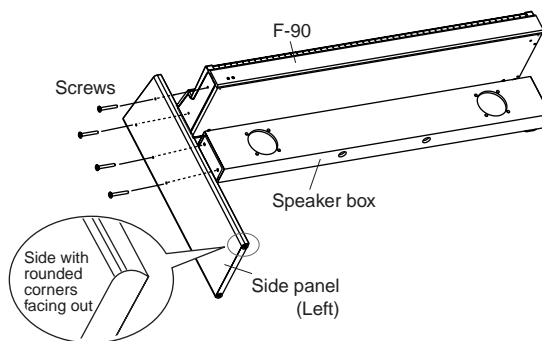
## Assembly Procedure

- At first, assemble the entire stand in a temporary fashion, without really tightening the screws. Then, after checking the overall alignment of the boards (and gently shifting certain parts where necessary), go around and tightly fasten each of the screws.
- Be careful when assembling the F-90, so as to avoid scratching the side panels.

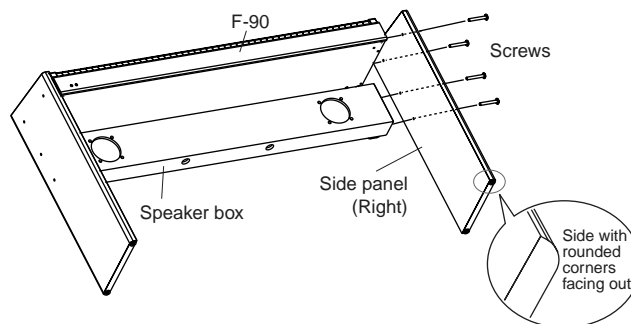
When securing the screws, lay the entire unit sideways with the rear side of the F-90 at the bottom.

### 1. Tighten the screws on one of the side panels to secure that side panel the F-90 and speaker box (four screws).

Install so that the speaker cable at the rear of the speaker box extends to the right side (the side where the F-90's [Power] Switch is located).

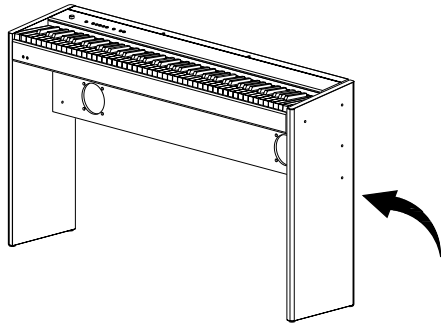


### 2. Tighten the screws on the other side panel to secure it the F-90 and speaker box (four screws).



### 3. Firmly tighten all of the screws and stand the instrument back up.

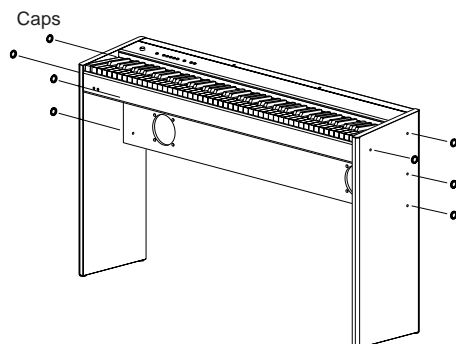
When lifting the instrument back up, grasp near the center of the speaker box and the F-90, and gently raise the instrument.



### If the Stand is Uneven

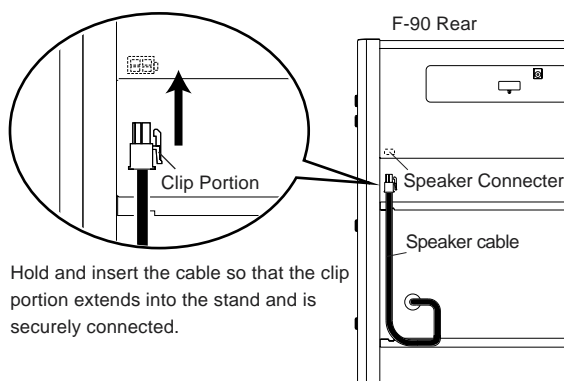
If after lifting the F-90 back up you find that stand is crooked, try loosening the screws and then securing them again. When retightening, start with the top screws, then work your way down. When doing this, slightly loosen the screws before firmly tightening them.

### 4. Place the caps over the heads of the screws (four on each side).



### 5. Connect the speaker cable extending from the rear of the speaker box to the F-90's speaker connector.

Press the speaker cable completely into the connector so that it is securely fastened.



### When Moving the Instrument

Disconnect the AC cord, cables and the music stand from the F-90.

Then lift the piano while keeping it level, and move it with care, so that you do not drop it on your feet, or get your hands caught.

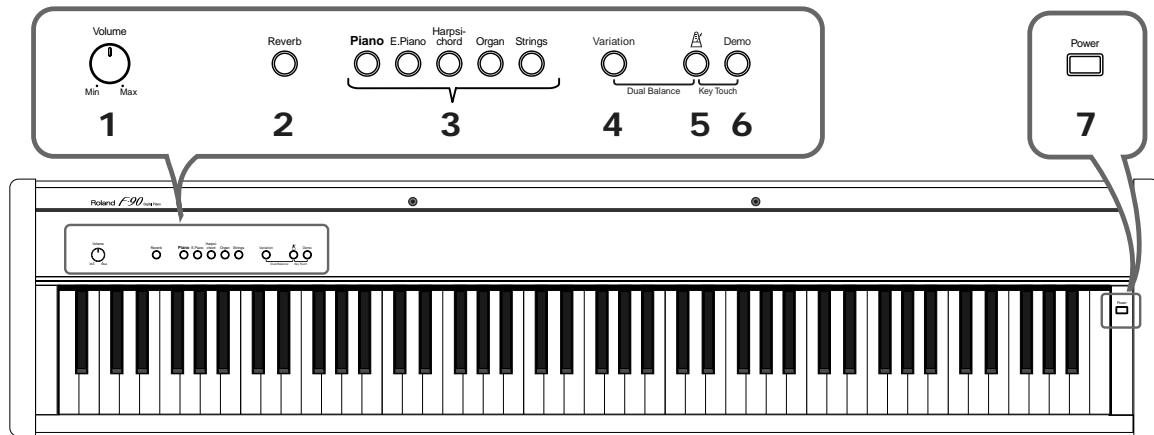
### When Disassembling

Disassemble the unit by carrying out assembly Steps 1-5 in reverse order.

### When Changing the Orientation of the Speaker Box

Be sure to completely disassemble the unit, change the speaker box orientation, then reassemble it.

## Panel Descriptions



### 1. [Volume] Knob

Adjusts the volume (p. 11).

### 2. [Reverb] Button

Used to add reverberation to the sound (p. 15).

### 3. Tone Buttons

The following five buttons are collectively referred to as the Tone buttons. These are used to select the tone to be played via the keyboard (p. 13).

[Piano] Button

[E.Piano] Button

[Harpichord] Button

[Organ] Button

[Strings] Button

### 4. [Variation] Button

This is used in combination with the tone buttons to select the instrument sounds to be played with the keyboard (p. 13).

### 5. [Metronome] Button

Activates the built-in metronome (p. 15).

### 6. [Demo] Button

This plays the internal piano songs (p. 12).

### 7. [Power] Switch

This switch turns the unit on/off (p. 11).

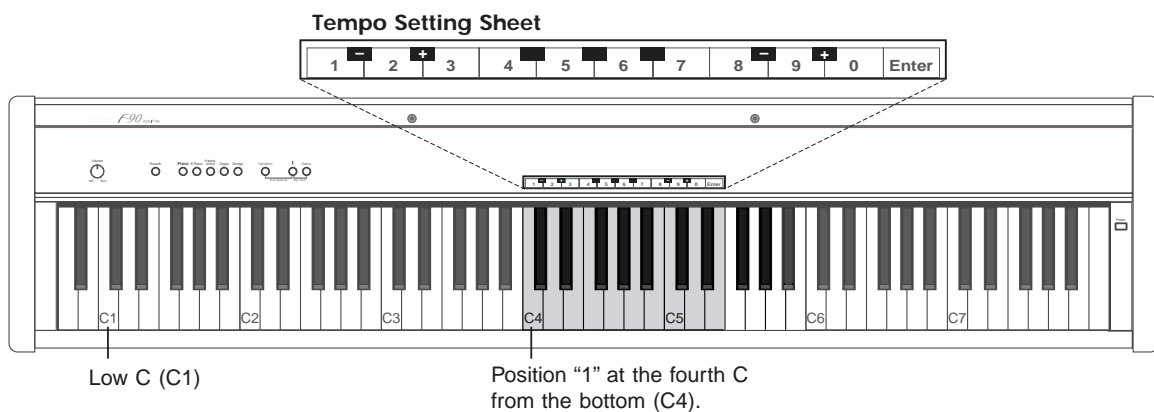
## Applying the Tempo Setting Sheet

If desired, you can affix the included tempo setting sheet to the instrument.

Use the tempo setting sheet when setting the metronome tempo.

### 1. Position and apply the tempo setting sheet as shown in the figure.

For more details, refer to “Changing the Metronome Tempo” (p. 16).





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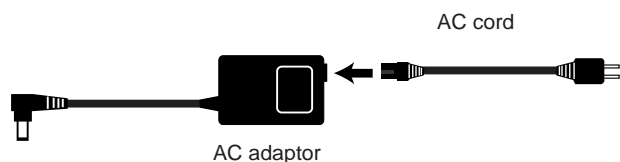
# Before You Play

## Connecting the AC Adaptor

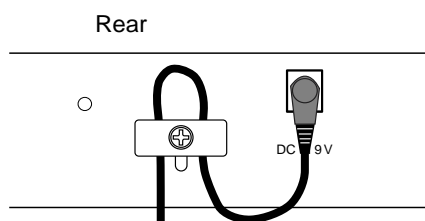
### NOTE

To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

1. Connect the supplied AC adaptor and AC cord.



2. Connect the AC adaptor to the DC In connector on the rear panel.
3. As shown in the diagram, loop the AC adaptor cord around the cord stay to fasten it in place.



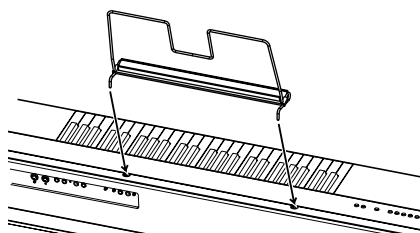
4. Plug the AC cord into a power outlet.

### NOTE

To prevent the inadvertent disruption of power to your unit (should the plug be pulled out accidentally), to avoid applying undue stress to the DC In connector, anchor the power cord using the cord hook, as shown in the diagram. Even if the cord is fastened, strong tension applied to the cord may cause it to be damaged or broken. Be careful not to pull the cord accidentally, or to apply strong pressure to it.

## Installing the Music Stand

1. Assemble the music stand as shown in the diagram.

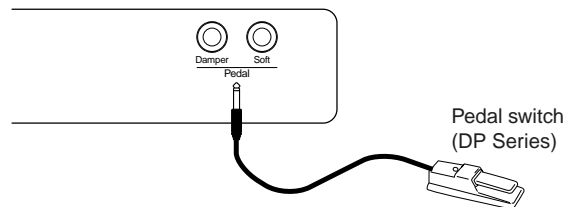


### NOTE

When moving the piano, be sure to remove the music stand as a safety precaution.

## Connecting Pedals

1. Connect the supplied pedals to one of the pedal jacks.



When connected to the Damper jack, the pedal can be used as a damper pedal.

When connected to Soft, the pedal can be used as a soft pedal.

### NOTE

Unplugging a pedal cord from the unit while the power is on may cause the pedal's effect to be applied without stopping. The power of the F-90 must be turned off before inserting or removing a pedal cord.

## Damper Pedal

Use this pedal to sustain the sound.

While the pedal is depressed, long lingering reverberations continue to be added to the sound after you release from the keys. This is the same function as the right pedal of an acoustic piano.

## Soft Pedal

This pedal is used to make the sound softer.

Playing with the soft pedal depressed produces a sound that is not as strong as when otherwise played with the equivalent strength. This is the same function as the left pedal of an acoustic piano.

Some tones are affected less than others.

### NOTE

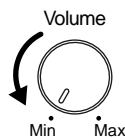
By obtaining a second pedal, you can then use two pedals simultaneously. If you wish to purchase the optional pedal (DP Series), please contact the dealer where you purchased the F-90.

## Turning On the Power

### NOTE

Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

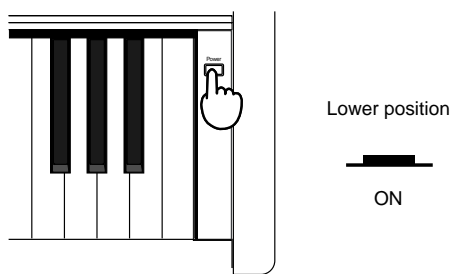
1. Turn the [Volume] knob completely to the left to lower the volume to the minimum level.



2. Push the [Power] switch to turn on the F-90.

After a few seconds, the unit becomes operable and playing the keyboard produces sound.

Adjust the volume to obtain the proper volume level.

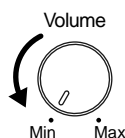


### NOTE

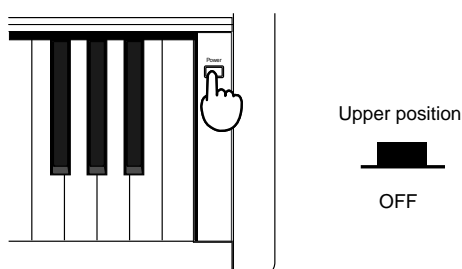
This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.

## Turning Off the Power

1. Turn the [Volume] knob completely to the left to lower the volume to the minimum level.

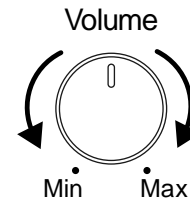


2. Push the [Power] switch to turn off the F-90.



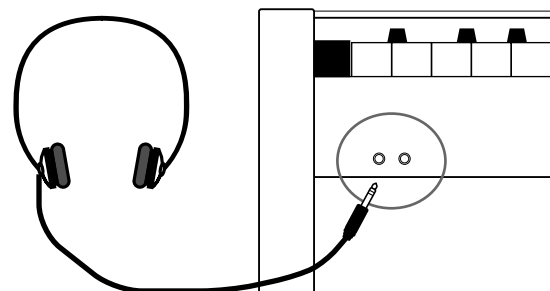
## Adjusting the Volume

1. Use the [Volume] knob to adjust the overall volume level.



## Connecting Headphones (Sold Separately)

The F-90 features two headphone jacks. This allows two people to listen through headphones simultaneously, making it very useful for lessons and when performing piano pieces for four hands. Additionally, this allows you to play without having to worry about bothering others around you, even at night.



1. Turn the [Volume] knob to lower the volume to the minimum level.
2. Connect the headphones to either of the headphone jacks.
3. Use the [Volume] knob to adjust the overall volume level.

The sound from the built-in speakers stops. Sound will be heard only through the headphones.

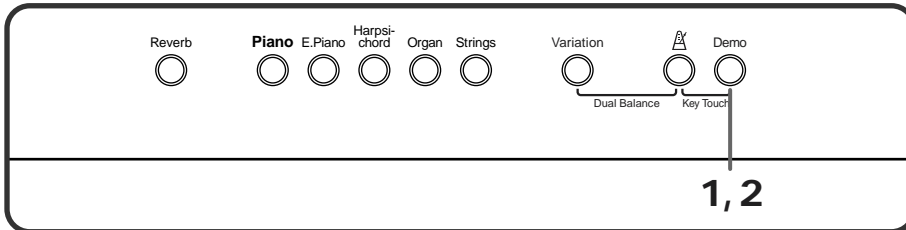


Use Stereo headphones (stereo miniature phone type).

# Listening to the Demo Songs

The F-90 comes with sixty demo songs.

## Playing/Stopping the Demo Songs



### 1. Press the [Demo] button, getting its indicator to light.

The demo songs will play back in succession, starting with the first song. When the last song has been played, playback will return to the first song and begin again.

### 2. To stop the demo song playback, press the [Demo] button to make the indicator go out.

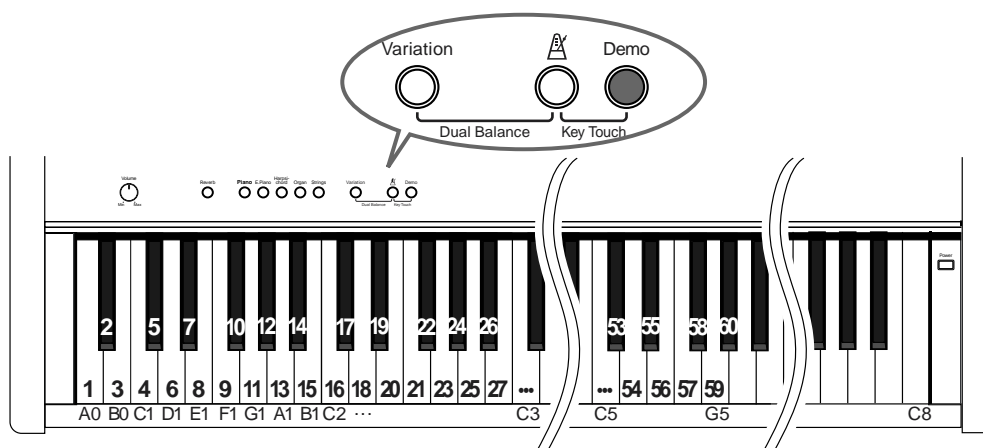
The demo song playback will stop.

## ■ Selecting a Song for Playback

Here's how you can select and play a desired demo song.

### 1. While holding down the [Demo] button, and press the key that corresponds to the demo song you wish to hear.

The demo songs are assigned to the white keys in sequential order, starting with the leftmost key.



The indicator of the [Demo] button will light. When the last song has been played, playback will return to the first song and resume.

### 2. To stop the demo song playback, press the [Demo] button to make the indicator go out.

The demo song playback will stop.

## MEMO

For more on song list, please refer to "Demo Song List" (p. 26).

## NOTE

It is not possible to change the tempo of a demo song.

## NOTE

If you press the [Demo] button while the metronome is sounding (p. 15), the metronome will stop sounding. It is not possible to sound the metronome while a demo song is playing.

## MEMO

When you start playback of the demo songs by pressing the [Demo] button, playback always starts with the first demo song.

# Playing the Keyboard

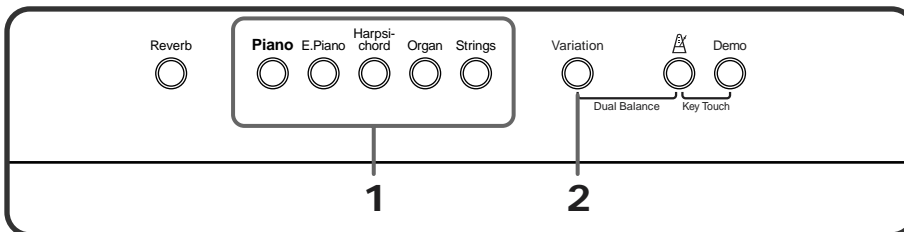
## Selecting the Instrument Sound You Wish to Play

The F-90 allows you to play using ten different sound including piano.

You can select the tones using the five tone buttons; two tones are assigned to each button. You can switch the two tones assigned to each button by pressing the [Variation] button to switch this on and off.

Tone button	[Variation] button OFF (dark)	[Variation] button ON (lit)
Piano	Grand Piano	Bright Piano
E.Piano	Stage Rhodes	Electric Piano
Harpichord	Harpichord	Organ Flute
Organ	Pipe Organ	Rotary Organ
Strings	Strings	Choir

When the F-90 is turned on, the tone is reset to Grand Piano.



### 1. Press any Tone button.

The indicator on the selected button lights up.

### 2. You can select tones by switching the [Variation] button on (indicator lit) and off (indicator off).

The Tone you've selected is heard when you finger the keyboard.

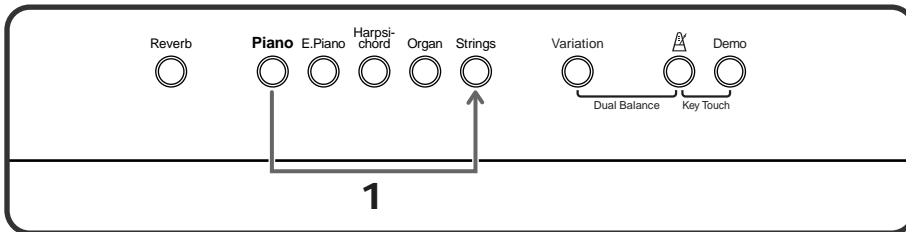
The next time you choose this Tone button, the tone you've selected here is played.

# Layering Two Instrument Sounds (Dual Play)

You can hold down one Tone button and press another Tone button to layer two sounds for playing together.

This function is called “Dual Play.”

### Example: Combining Piano and Strings



- 1. While pressing the [Piano] button, also press the [Strings] button.**

The indicators for both buttons light.

When you then play the keyboard, the layered sounds of the piano and strings will play.

The [Variation] button indicator now indicates the selected tone button's right tone.

Switching the [Variation] button on and off switches the right tone button tone.

- 2. To exit Dual Play, press either Tone button.**

When you play the keyboard, only the sound of the button you pressed will be heard.

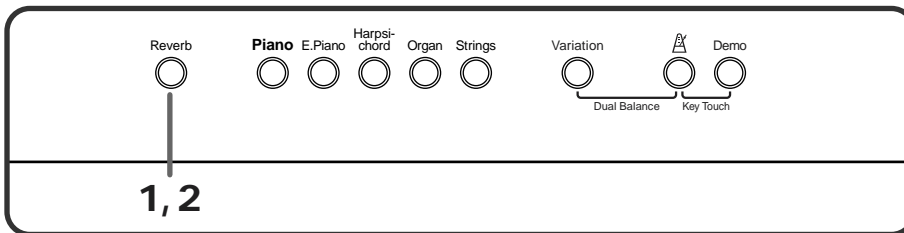
### MEMO

You can adjust the volume balance between the two selected tones in Dual Play. For details, refer to “**Changing the Volume Balance in Dual Play**” (p. 20).

When the power is turned on, the sound of the left tone button is set to be louder.

## Adding Reverberation to Sounds (Reverb Effect)

You can apply a reverb effect to the notes you play on the keyboard. Applying reverb adds pleasing reverberation to what you play, so it sounds almost as if you were playing in a concert hall. When the power is turned on, the reverb effect will be cancelled.



1. Press the [Reverb] button, and confirm that its indicator has lit.

The reverb effect is applied to the sound.

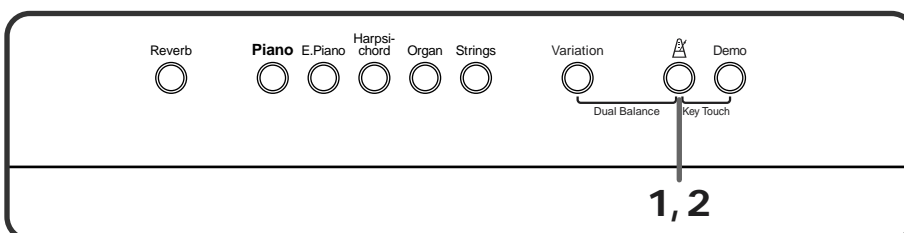
2. Pressing the [Reverb] button once more turns off the button's indicator and cancels the reverb effect.


### MEMO


You can select the depth of reverb effect. For details, refer to "Changing the Depth of the Reverb" (p. 20).


## Sounding the Metronome

Here's how you can make use of the metronome.



1. Pressing the [  (Metronome) ] button starts the metronome's sound.

The [  (Metronome) ] button's indicator flashes in time with the tempo selected at that time.

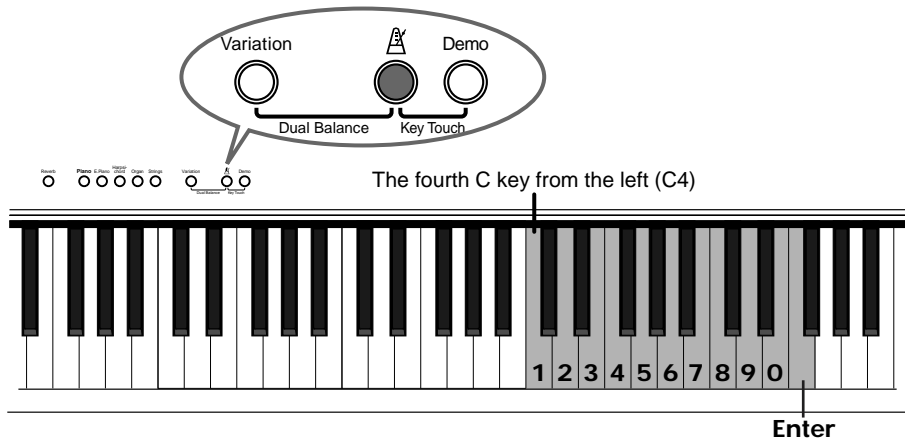
2. To stop the metronome, press the [  (Metronome) ] button, extinguishing its indicator.

## ■ Changing the Metronome Tempo

To change the tempo, specify the numerical values by pressing the keys to which the numbers 0–9 or +/- are assigned.

You can set a tempo in the range of 20–250.

### Example: Specifying a Tempo of 96



### MEMO

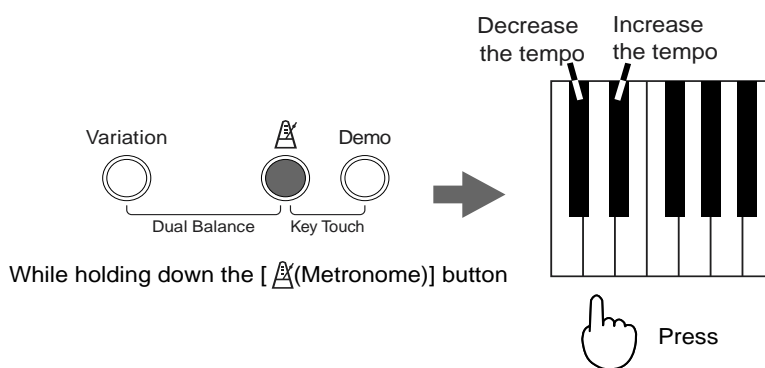
Using the “tempo setting sheet” included with the F-90 makes it easier to grasp the values assigned to each key. For details, refer to “Applying the Tempo Setting Sheet” (p. 8).

1. Hold down the [ (Metronome)] button and press the “9” and “6” keys in that order, then press the “Enter” key.

The metronome tempo switches to 96.

You can use this method of holding down the [ (Metronome)] button and pressing the keys to which the numerical values are assigned (C4–E5) and “Enter” key (F5) to use numerals to specify the tempo.

### Increasing and Decreasing the Tempo One Count at a Time



1. While holding down the [ (Metronome)] button, press C # to decrease the tempo by one count, or press D # to increase the tempo by one count.

While holding down the [ (Metronome)] button, also hold down C # or D # to change the tempo continuously.

You can change the tempo by pressing any C # or D # key.

### MEMO

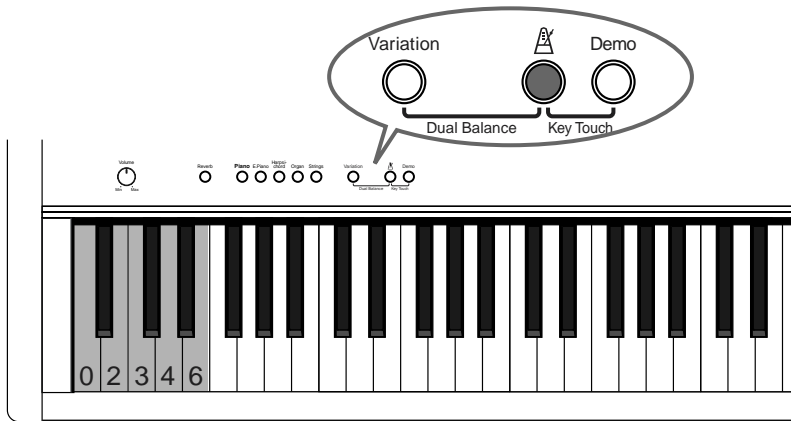
The tempo can be set to any value from 20 through 250. If a value less than 20 is specified, the tempo is set to 20. If a value greater than 250 is specified, the tempo is set to 250.



## ■ Changing the Beat of the Metronome

To change the beat, specify the beat by pressing the key (A0–E1) to which the beat is assigned.

You can select from the following five types: 0 (only upbeat sounds), 2 (2-beat), 3 (3-beat), 4 (4-beat), 6 (6-beat).

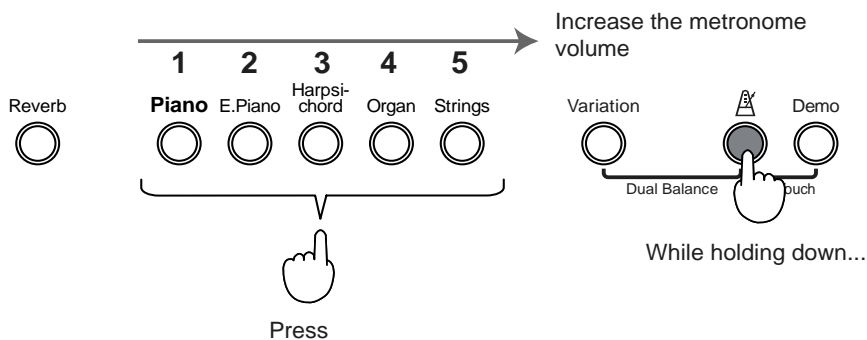


1. Hold down the [ (Metronome)] button and press the key to which the beat is assigned.

## ■ Adjusting the Volume

You can adjust the volume of the metronome to any of five possible levels.

The setting is at “3” when the power is turned on.



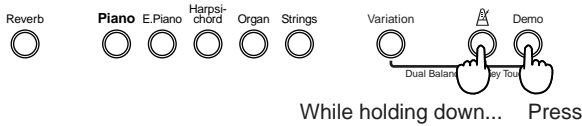
1. Hold down the [ (Metronome)] button and press one of the Tone buttons.

The Tone button indicator will blink to indicate the current volume, when press and hold the [ (Metronome)] button.


# Some Handy Functions

## Changing the Keyboard's Touch

You can change the touch sensitivity, or response of the keys. The setting is at "Medium" when the F-90 is powered up.



1. Hold down the [  (Metronome)] button and press the [Demo] button.

The [  (Metronome)] button, [Demo] button and the tone button for the currently selected value flash.

2. Press any Tone button.

The pressed button's indicator blinks.

Tone button	Touch Sensitivity	Descriptions
Piano	Fixed	Notes are sounded at an unchanging volume level, regardless of how lightly or forcefully you finger the keyboard.
E.Piano	Light	Fortissimo (ff) can be obtained with weaker touch than usual, so, you will feel that the keyboard is lighter. This setting makes it easy to play, even for children.
Harpsi-chord	Medium	This is the most natural touch for the keyboard. This is the closest to the touch of an acoustic piano.
Organ	Heavy	Fortissimo (ff) can be obtained only with forceful playing, so you will feel that the keyboard is heavier. Dynamic fingering adds even more feeling to what you play.

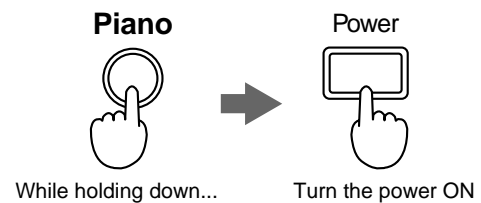
\* The [Strings] button cannot be used in this operation.

3. Press the [  (Metronome)] button or the [Demo] button.

The button's indicator returns to its previous state.

## Disabling Buttons (Panel Lock)

Making the setting for the panel lock enables a state where only piano play is possible, and all buttons are disabled. As the settings are not changed, this is convenient for piano performances.



1. Before you switch on the power, turn the volume down all the way by rotating the [Volume] knob.
2. While holding down the [Piano] button, press the [Power] switch to turn on the power.
3. Adjust the volume.  
Fingering the keyboard now produces a grand piano sound. It will be not possible to switch to another sound.
4. By turning the power off and then on once again, the keyboard returns to its normal status with Panel Lock cancelled.

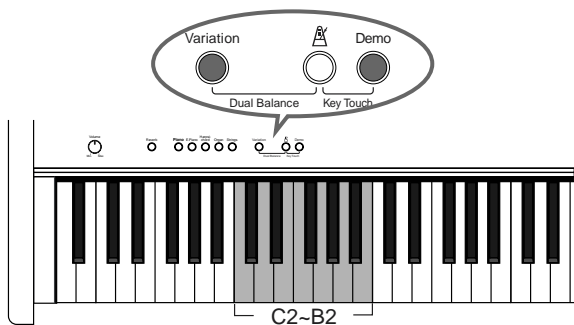
## Transposing without Changing Your Keyboard Fingering (Key Transpose)

You can transpose the key of a performance without having to shift the position of your fingers on the keyboard.

This feature is called “Key Transpose.”

In situations such as when providing accompaniment to a song, using the Key Transpose function to match the singer’s vocal register lets you easily transpose the sounds without changing the score.

These settings remains in effect until you turn off the power.



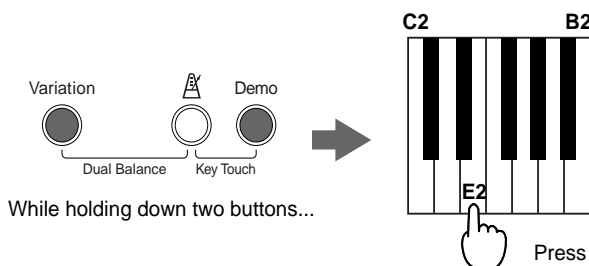
1. While holding down the [Variation] button and [Demo] button, press the tonic (root) of the key to which you want to transpose.

Use the C2-B2 notes to select the tonic.

2. To return to the normal pitch, while holding down the [Variation] button and [Demo] button, press the C2 key.

### <Ex.>

For example if you want the E pitch to sound when you play the C key, you would hold down the [Variation] button and [Demo] button and press the E2 key.



### NOTE

The transposition setting is effective only on sounds performed on the F-90’s keyboard. This setting is not effective on tones from external MIDI messages played on the F-90.

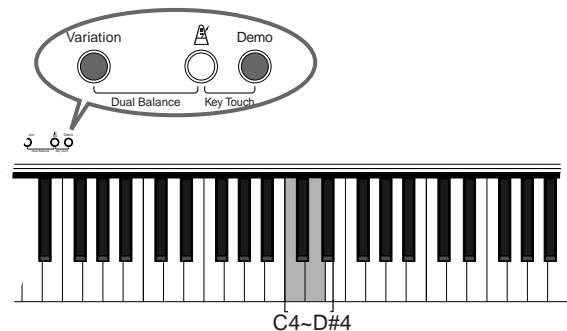
## Adjusting the Pitch of the Sound (Master Tuning)

In situations such as when playing ensemble with other instruments, you can tune the F-90’s reference pitch to the pitch of another instrument. The reference pitch generally refers to the pitch of the note that’s played when you finger the middle A key.

For a cleaner ensemble sound while performing with one or more other instruments, ensure that each instrument’s reference pitch is in tune with that of the other instruments.

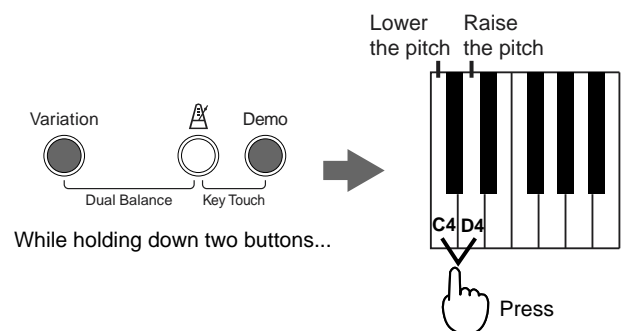
This tuning of all the instruments to a reference pitch is called “master tuning.” You can set the reference pitch anywhere in a range of 415.3 Hz to 466.2 Hz.

When the instrument is turned on, the reference pitch is set to “440.0 Hz.”



## Lowering/ raising the Reference Pitch

1. While holding down the [Variation] button and [Demo] button, press the “C4” note to lower the reference pitch, or the “D4” note to raise it.



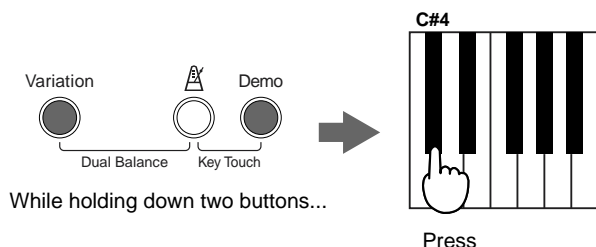
Each time you press the “C4” key, the pitch will fall by 0.1 Hz. If you continue holding the key, the pitch will continue falling.

Each time you press the “D4” key, the pitch will rise by 0.1 Hz. If you continue holding the key, the pitch will continue rising.

## Some Handy Functions

### ■ Setting the Reference Pitch to 440.0 Hz

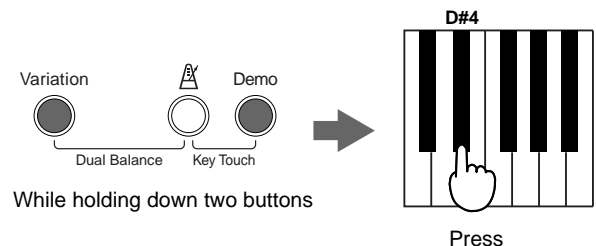
1. While holding down the [Variation] button and [Demo] button, press the “C # 4” key on the keyboard.



The reference pitch will be set to 440.0 Hz. This is the most commonly used setting. The A4 (Middle A) key will sound at 440.0 Hz.

### ■ Setting the Reference Pitch to 442.0 Hz

1. While holding down the [Variation] button and [Demo] button, press the “D # 4” key on the keyboard.



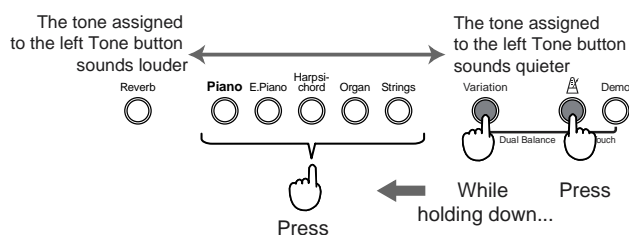
The reference pitch will be set to 442.0 Hz. This setting is often used for concert pianos. The A4 (Middle A) key will sound at 442.0 Hz.

## Changing the Volume Balance in Dual Play

You can change the volume balance between the two layered sounds in Dual Play (p. 14).

When the keyboard is turned on, the volume balance is set to that the tone assigned to the left Tone button sounds louder of the two selected tones.

This setting remains in effect until the keyboard's power is turned off.



1. While holding down the [Variation] button, press the [ (Metronome) ] button.

The [Variation] button, [ (Metronome) ] button and the tone button for the currently selected value flash.

2. Press any Tone button.

The pressed button's indicator blinks.

Tone button	Description
Piano	Of the two selected tones, the tone assigned to the left Tone button sounds louder.
E. Piano	Of the two selected tones, the tone assigned to the left Tone button sounds somewhat louder.
Harpsichord	The two selected tones are played at the same volume.
Organ	Of the two selected tones, the tone assigned to the left Tone button sounds somewhat quieter.
Strings	Of the two selected tones, the tone assigned to the left Tone button sounds quieter.

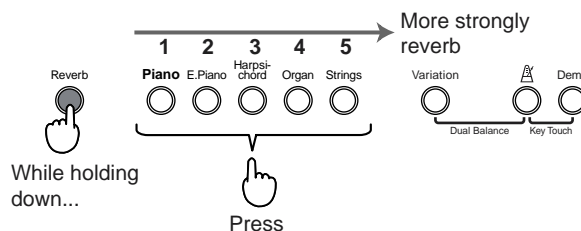
3. Press the [ (Metronome) ] button or the [Variation] button.

The button's indicator returns to its previous state.

You can also return to the previous state by pressing the [Demo] button.

## Changing the Depth of the Reverb

The depth of the reverb effect (p. 15) can be adjusted. There are five levels of depth from which to choose. This is set to “3” when the power is turned on.



1. Holding down the [Reverb] button, press any Tone button.

### ■ Checking the depth of the Reverb Effect

1. Press and hold the [Reverb] button.

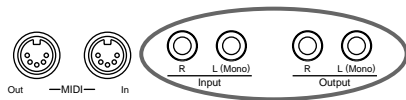
The Tone button indicators will blink to indicate the selected depth.

# Connecting to Audio Equipment

Read this chapter if you wish to connect the F-90 to an audio device.

By connecting the F-90 with an audio device, you can listen to the sound of the F-90 through the speakers of the audio device, or record your performance onto a cassette tape or other recording media.

## About the Jacks



### Output Jacks

Use audio cables (sold separately) to connect the F-90 to an audio device so that the sound of the F-90 can be heard from the speakers of the audio device, or so that your performance can be recorded on a cassette tape or other recording media.

### Input Jacks

You can use audio cables (sold separately) to connect another audio producing device to the F-90, and hear its sound through the speakers of the F-90.

## Making the Connections

### NOTE

To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

1. Turn the volume down completely on all equipment.
2. Turn off the F-90 and any other devices to be connected.
3. Use audio cables (sold separately) to connect the other device to the F-90.

### NOTE

If the device you are connecting is monaural, connect it to the L (Mono) jack. In this case, do not connect the R jack of the F-90.

### NOTE

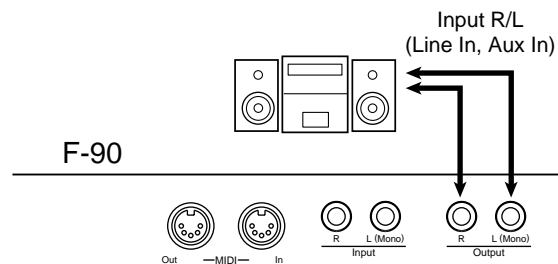
Use a cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.

Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

### NOTE

Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

- Listening to the F-90 through the speakers of an audio device, or recording a performance onto a cassette tape or other media

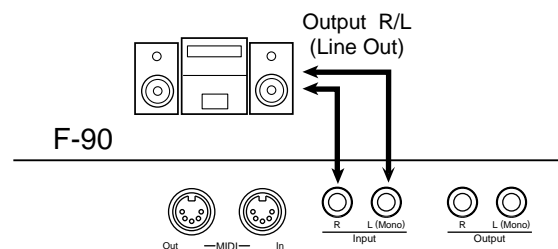


1. Turn on the power to the F-90.
2. Turn on the power to the connected equipment.
3. Adjust the volume.

### Recording procedure

1. Connect the F-90 and the audio device.
2. Start recording on the connected audio device.
3. Begin playing on the F-90.
4. When you finish playing, stop recording.

- Listening to the sound of an audio device through the speakers of the F-90



1. Turn on the power to the connected equipment.
2. Turn on the power to the F-90.
3. Adjust the volume.

### NOTE

If the volume of any device connected to the Input jacks is raised too high, you not only risk causing damage to your hearing, you could also damage the unit's speakers. It's best to always keep the sound within reasonable levels of volume.

# Connecting to MIDI Devices

Read this chapter if you wish to connect the F-90 to an external MIDI device.

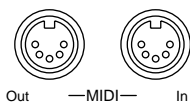
If the F-90 is connected to a MIDI sequencer, such as one from the MT series, you can record your performance on the MIDI sequencer. The rich variety of sounds built into the MT series sequencer can be played from the keyboard of the F-90.

## About MIDI

MIDI, short for “Musical Instrument Digital Interface,” was developed as a standard for the exchange of performance data between electronic instruments and computers.

The F-90 is equipped with MIDI connectors to allow such exchange of performance data with external equipment and devices. Connecting the keyboard to other devices with these connectors provides you with an even greater variety of ways to use your keyboard.

## About the MIDI Connectors



MIDI connectors on the rear panel

### MIDI In Connector

Use a MIDI cable (sold separately) to connect from here to the MIDI Out connector on the external MIDI device.

MIDI messages sent from connected external equipment will be received here. As a result, the F-90 will produce sound, change tones, or perform other operations.

### MIDI Out Connector

Use a MIDI cable (sold separately) to connect from here to the MIDI In connector on the external MIDI device.

Performance data detailing what has been played on the keyboard, and other data, such as that generated when a pedal is depressed, is sent out from here to external MIDI devices.

## Making the Connections

### NOTE

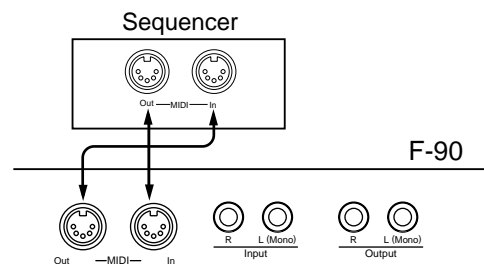
To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

1. Turn the volume down completely on all equipment.
2. Turn off the F-90 and any other devices to be connected.
3. Use the optional MIDI cable to connect the MIDI connector on the external MIDI device to the MIDI connector on the F-90.  
Take a look at the connection examples.
4. Turn on the power to all equipment.
5. Adjust the volume.
6. You should also make the following settings as needed.

For details on making MIDI-related settings for the F-90, refer to p. 23 through p. 24.

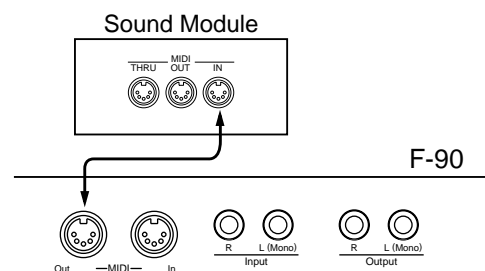
Connection Examples:

Connecting to a sequencer (The Roland MT Series)



\* The MT-80s/90s has no MIDI Out connector.

Connection Examples: Connecting to a MIDI sound module



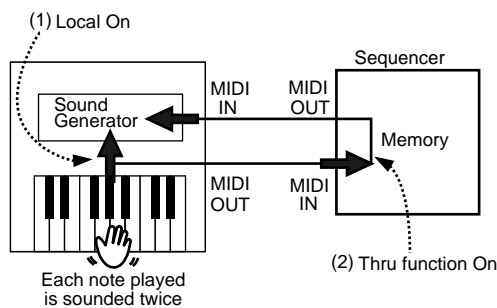
## Cautions when Connecting an External MIDI Device

Here we will explain the “Local On/Off” and “Omni On/Off” settings that you need to be aware of when connecting the F-90 to an external MIDI device.

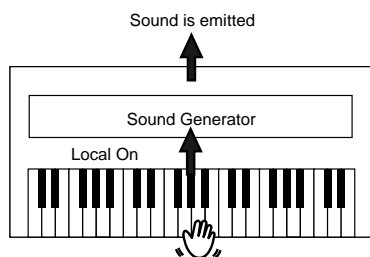
### ■ Disconnecting the F-90’s keyboard and internal sound generator (Local On/Off)

When the F-90 is connected to a MIDI sequencer or the like, set it to Local Off.

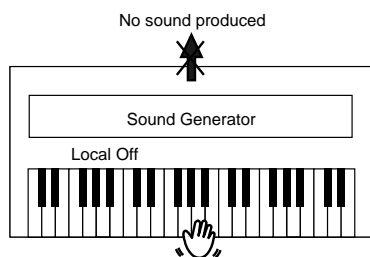
As shown in the diagram, the data that is produced when you play the keyboard will reach the sound generator by two routes, (1) and (2), causing each note to be played in duplicate. To prevent this, select the Local Off setting to cut route (1).



This sets it to Local On:



This sets it to Local Off:



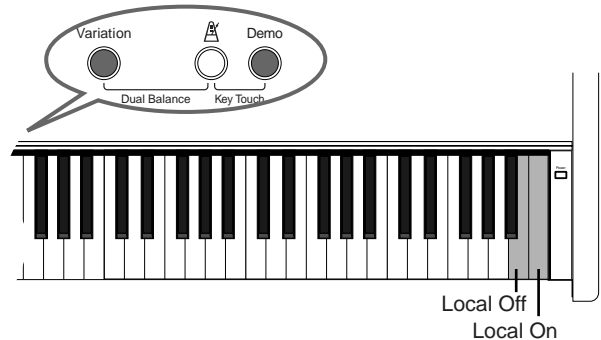
**NOTE**

Be aware that if you set your instrument to Local Off when no external MIDI device is connected, there will be no sound.

### ■ Switching Local On/Off

Local On is set when the power is switched on.

1. While holding down the [Variation] button and [Demo] button, the “C8” note to turn the setting On, or press the “B7” note to turn the setting Off.



**MEMO**

If the F-90 is connected to a Roland MT series (except MT-80s/90s), it is not necessary to make the Local Off setting. When the power is turned on, the MT series will transmit a Local Off message. If you turn the power on in the order of first the F-90 and then the MT series, the F-90 will automatically be set to Local Off.

### ■ Receiving on all MIDI channels (Omni On/Off)

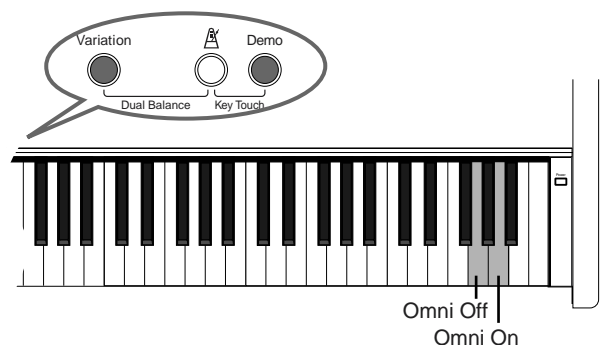
When set to Omni On, the F-90 will sound as a result of received MIDI messages, no matter which channel the messages arrive on.

When set to Omni Off, the F-90 will recognize only the messages that arrive on the MIDI channel that has been selected, as explained under “Set the MIDI Channel.”

### ■ Switching Omni On/Off

Omni On is automatically set when the power is switched on.

1. Hold down the [Variation] button and [Demo] button, and press the “A7” note to turn the setting On, or the “G7” note to turn the setting Off.



## Connecting to MIDI Devices

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### ■ Set the MIDI Channel

MIDI features sixteen MIDI channels, numbered 1–16.

The connected devices must be set to use the same MIDI channels, otherwise no sound will be produced.

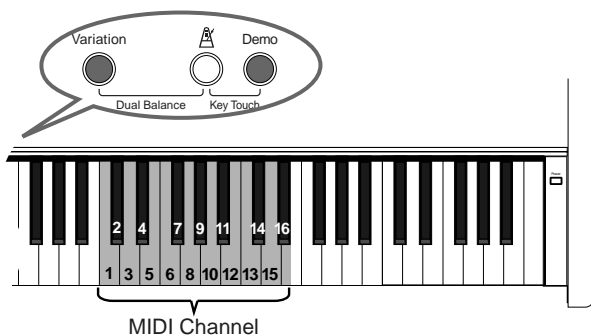
In a setup where you wish to play the F-90 and also have another MIDI-equipped instrument or sound module play the same notes, you should first set the channel used for reception on your external device to the same channel that you have the F-90 set to use for transmission.

Upon power-up, the F-90 is set to Omni On (p. 23). This means that if you are using a MIDI keyboard or MIDI sequencer to play the F-90's tones, messages will be received on all channels, regardless of any MIDI channel settings. If you want to receive only on a specific channel that a connected MIDI device will be using, switch the F-90 to Omni Off, then set the MIDI channel.

When the F-90 is turned on, Channel "1" is selected.

- 1. While holding down the [Variation], and [Demo] buttons, press the appropriate key (C5–D#6) on the keyboard.**

The MIDI transmit channel and receive channel will switch to the number that corresponds to the note you pressed.





# Troubleshooting

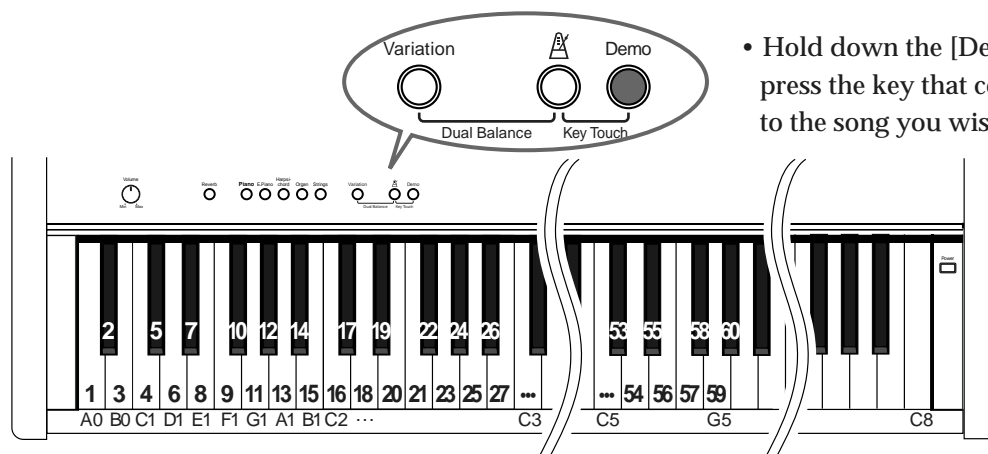
If you are encountering problems with the unit, please read the section below before assuming that there is a malfunction.

Case	Cause/What to do
The piano cannot be switched on	Is the AC adaptor properly connected? (p. 10)
No sound is produced	Is the [Volume] knob set to the minimum position? (p. 11)
	Are the headphones connected? (p. 11)
	Is Local On/Off set to "Off"? (p. 23)
	Is the speaker cable properly connected? (p. 6)
Only One Tone Plays in Dual Play	Depending on the setting for volume balance, and the particular selection of tones you make, certain tones may be difficult to hear when layered. Try adjusting volume balance (p. 20).
Demo songs do not play	Is Panel Lock on? (p. 18)
Metronome does not sound	
Buttons do not function	
Keyboard sound does not change	
Two sounds are produced when the keyboard is played	Is the keyboard in Dual Play mode? (p. 14)
The pitch of the keyboard sounds incorrect	Is the Master Tuning setting correct? (p. 19)
	Is the Key Transpose setting correct? (p. 19)
The pedals are not functioning, or function intermittently	Are the pedals connected properly? (p. 10)
Sound is distorted	Raising the volume too high may distort the sound. Adjust the volume level with the [Volume] knob. (p. 11)
In the upper range, the sound changes abruptly beyond a certain key	On an acoustic piano, notes in the upper one and a half octaves of the keyboard continue to sound until they decay naturally, regardless of the damper pedal. There is a difference in the timbre as well. Roland pianos faithfully simulate such characteristics of the acoustic piano. On the F-90, the range that is unaffected by the damper pedal will change depending on the Key Transpose setting.

Case	Cause/What to do
Bass notes sound wrong/ buzzing or vibration occurs	<p><b>If you can't hear the problem in the headphones:</b></p> <p>When playing at high volumes, resonance may occur in the piano itself or in objects near the piano. At times, other objects in the room, such as fluorescent lights or glass doors, could start vibrating. Such phenomenon becomes more prevalent when sounding the lower frequencies at high volume. To minimize such unwanted resonance, please observe the following:</p> <ul style="list-style-type: none"> <li>- Locate the instrument so it is 10-15 cm away from walls.</li> <li>- Reduce the volume.</li> <li>- Increase the distance from the object that is resonating.</li> </ul> <p><b>If you can hear the problem in the headphones:</b></p> <p>The problem may be for a different reason. Please contact your dealer.</p>
	<p><b>When the F-90 is connected to an external device</b></p>
No sound is produced	Is the power to all equipment turned on?
	Are the connections between F-90 and the MIDI sequencer or the other external devices correct? (p. 21, p. 22)
	Is the MIDI channel setting correct? (p. 24)
	Is the Omni On/Off setting correct? (p. 23)
Strange sounds (or two sounds) are produced when the F-90 is played	With the sequencer's "Thru" function on, the same notes may be sounded twice. Set the F-90 to Local off (p. 23).
The volume level of the instrument connected to the Input jack is too low.	Could you be using a connection cable that contains a resistor? Use a connection cable that does not contain a resistor.

# Demo Song List

→ “Listening to the Demo Songs” (p. 12)



- Hold down the [Demo] button and press the key that corresponding to the song you wish to hear.

No.	Key	Song Name	Composer	Copyright
1	<b>A0</b>	1ère Arabesque	C. Debussy	© 1995 Roland Corporation
2	<b>Bb0</b>	Sonate für Klavier No. 15	W. A. Mozart	© 1996 Roland Corporation
3	<b>B0</b>	1ère Gymnopédie	E. Satie	© 1997 Roland Corporation
4	<b>C1</b>	Golliwog's Cake walk	C. Debussy	© 1995 Roland Corporation
5	<b>Db1</b>	Liebesträume III	F. Liszt	© 2001 Roland Corporation
6	<b>D1</b>	Je te veux	E. Satie	© 1997 Roland Corporation
7	<b>Eb1</b>	Étude, op.10-3	F. Chopin	© 2001 Roland Corporation
8	<b>E1</b>	Clair de Lune	C. Debussy	© 1998 Roland Corporation
9	<b>F1</b>	Valse, op.64-1	F. Chopin	© 2001 Roland Corporation
10	<b>F#1</b>	Fantaisie-Impromptu	F. Chopin	© 2001 Roland Corporation
11	<b>G1</b>	An der schönen, blauen Donau	J. Strauss	© 1996 Roland Corporation
12	<b>Ab1</b>	Auf Flügeln des Gesanges	F. Mendelsshon	© 1996 Roland Corporation
13	<b>A1</b>	Mazurka No.5	F. Chopin	© 1995 Roland Corporation
14	<b>Bb1</b>	Étude, op.25-1	F. Chopin	© 1995 Roland Corporation
15	<b>B1</b>	Étude, op.10-5	F. Chopin	© 2001 Roland Corporation
16	<b>C2</b>	Doctor Gradus ad Parnassum	C. Debussy	© 1995 Roland Corporation
17	<b>Db2</b>	Grande Valse Brillante	F. Chopin	© 1995 Roland Corporation
18	<b>D2</b>	La prière d'une Vierge	T. Badarzewska	© 1996 Roland Corporation
19	<b>Eb2</b>	Course en Troïka	P. Tchaikovsky	© 1996 Roland Corporation
20	<b>E2</b>	To The Spring	E. Grieg	© 1996 Roland Corporation
21	<b>F2</b>	Valse, op.64-2	F. Chopin	© 1996 Roland Corporation
22	<b>F#2</b>	Radetzky Marsch	J. Strauss	© 1996 Roland Corporation
23	<b>G2</b>	Träumerei	R. Schumann	© 1996 Roland Corporation
24	<b>Ab2</b>	Moments Musicaux III	F. Schubert	© 1996 Roland Corporation
25	<b>A2</b>	Prélude, op.28-15	F. Chopin	© 1996 Roland Corporation
26	<b>Bb2</b>	The harmonious blacksmith	G. Handel	© 1996 Roland Corporation

## Demo Song List

No.	Key	Song Name	Composer	Copyright
27	<b>B2</b>	Ungarische Tänze V	J. Brahms	© 1996 Roland Corporation
28	<b>C3</b>	Türkischer Marsch	L. v. Beethoven	© 1996 Roland Corporation
29	<b>Db3</b>	Nocturne No.2	F. Chopin	© 1996 Roland Corporation
30	<b>D3</b>	Frühlingslied	F. Mendelsshon	© 1996 Roland Corporation
31	<b>Eb3</b>	Präludium	J. S. Bach	© 1996 Roland Corporation
32	<b>E3</b>	Jägerlied	F. Mendelsshon	© 1996 Roland Corporation
33	<b>F3</b>	Menuet Antique	M. Ravel	© 1996 Roland Corporation
34	<b>F#3</b>	Für Elise	L. v. Beethoven	© 1996 Roland Corporation
35	<b>G3</b>	Türkischer Marsch	W. A. Mozart	© 1996 Roland Corporation
36	<b>Ab3</b>	Ständchen	F. Schubert	© 1996 Roland Corporation
37	<b>A3</b>	Humoreske	A. Dvorjak	© 1996 Roland Corporation
38	<b>Bb3</b>	Blumenlied	G. Lange	© 1996 Roland Corporation
39	<b>B3</b>	Alpenglöckchen	T. Oesten	© 1996 Roland Corporation
40	<b>C4</b>	Menuett G dur	L. v. Beethoven	© 1996 Roland Corporation
41	<b>Db4</b>	Venezianisches Gondellied	F. Mendelsshon	© 1996 Roland Corporation
42	<b>D4</b>	Alpenabendröte	T. Oesten	© 1996 Roland Corporation
43	<b>Eb4</b>	Farewell to the Piano	L. v. Beethoven	© 1996 Roland Corporation
44	<b>E4</b>	Brautchor	W. Wagner	© 1996 Roland Corporation
45	<b>F4</b>	Battle of Waterloo	W. Anderson	© 1996 Roland Corporation
46	<b>F#4</b>	Wiener Marsch	C. Czerny	© 1996 Roland Corporation
47	<b>G4</b>	Le Coucou	L. C. Daquin	© 1996 Roland Corporation
48	<b>Ab4</b>	Menuett G dur	J. S. Bach	© 1992 Roland Corporation
49	<b>A4</b>	Spinnerlied	A. Ellmenreich	© 1996 Roland Corporation
50	<b>Bb4</b>	Gavotte	F. Gossec	© 1996 Roland Corporation
51	<b>B4</b>	Heidenröslein	G. Lange	© 1996 Roland Corporation
52	<b>C5</b>	Zigeuner Tanz	H. Lichner	© 1996 Roland Corporation
53	<b>Db5</b>	La Cinquantaine	G. Marie	© 1996 Roland Corporation
54	<b>D5</b>	Csikos Post	H. Necke	© 1996 Roland Corporation
55	<b>Eb5</b>	Dolly's Dreaming Awakening	T. Oesten	© 1996 Roland Corporation
56	<b>E5</b>	La Violette	L. Streabbog	© 1996 Roland Corporation
57	<b>F5</b>	Fröhlicher Landmann	R. Schumann	© 1996 Roland Corporation
58	<b>F#5</b>	Sonatine op.36-1	M. Clementi	© 1996 Roland Corporation
59	<b>G5</b>	Sonatine op.20-1	F. Kuhlau	© 1996 Roland Corporation
60	<b>Ab5</b>	Sonatine No.5	L. v. Beethoven	© 1996 Roland Corporation

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\* No data for the internal songs that is played will be output from MIDI OUT connector.

# MIDI Implementation Chart

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1 1-16	1 1-16	
Mode Default Messages Altered	Mode 1 x *****	Mode 1 OMNI ON/OFF	
Note Number : True Voice	15-113 *****	0-127 15-113	
Velocity Note ON Note OFF	O x 8n v=64	O x	
After Touch Key's Ch's	x x	x x	
Pitch Bend	x	x	
Control Change 6, 38 7 11 64 66 67 91 100, 101	O x x O x O O O	O O *1 O *1 O *1 O *1 O *1 O O	Data entry Volume Expression Hold 1 Sostenuto Soft Effect1 depth (Reverb) RPN LSB, MSB
Prog Change : True Number	O (0...53) *****	O (0-127) 0...53	
System Exclusive	O	O	
System Common : Song Pos : Song Sel : Tune	x x x	x x x	
System Real Time : Clock : Commands	x x	x x	
Aux Message : All sound off : Reset all controllers : Local ON/OFF : All Notes OFF : Active Sense : System Reset	x x x x O x	x O O O (123-127) O O x	
Notes	*1 This message can affect only MIDI notes.		

Mode 1 : OMNI ON, POLY    Mode 2 : OMNI ON, MONO    O : Yes  
Mode 3 : OMNI OFF, POLY    Mode 4 : OMNI OFF, MONO    X : No

\* A separate publication titled "MIDI Implementation" is also available. It provides complete details concerning the way MIDI has been implemented on this unit. If you should require this publication (such as when you intend to carry out byte-level programming), please contact the nearest Roland Service Center or authorized Roland distributor.

# Main Specifications

## F-90: Roland Digital Piano

### <Keyboard>

#### Keyboard

88 keys (Progressive Hammer Action Keyboard)

#### Touch Sensitivity

Light, Medium, Heavy, Fixed

#### Keyboard Mode

Whole

Dual (adjustable volume balance)

### <Sound Generator>

#### Maximum Polyphony

64 voices

#### Tones

10 (Grand Piano, Bright Piano, Stage Rhodes, Electric Piano, Harpsichord, Pipe Organ, Rotary Organ, Organ Flute, Strings, Choir)

#### Effects

Reverb (5 levels)

Chorus (fixed for E. Piano only)

Sympathetic Resonance (fixed for Piano only)

#### Key Transposition

-6 to +5 (semitone steps)

#### Master Tuning

415.3 Hz to 466.2 Hz (0.1 Hz steps)

### <Metronome>

#### Beat

0, 2, 3, 4, 6

#### Volume

5 levels

#### Tempo

Quarter note = 20 to 250

### <Speakers>

12 cm x 2

### <Rated Power Output>

5 W x 2

### <Others>

#### Demo Songs

60

#### Connectors

Headphones Jack (Stereo miniature phone type) x 2

MIDI Connectors (In, Out)

Output Jacks (L/Mono, R)

Input Jacks (L/Mono, R)

Pedal Jacks (Damper, Soft)

#### Power Supply

DC 9 V (AC Adaptor)

#### Power Consumption

2,000 mA

#### Dimensions (without the music stand)

1,337 (W) x 295 (D) x 772 (H) mm

52-11/16 (W) x 11-5/8 (D) x 30-7/16 (H) inches

#### Weight

36 kg / 79 lbs 6 oz

#### Accessories

Owner's Manual

AC Adaptor

AC Cord

Music Stand

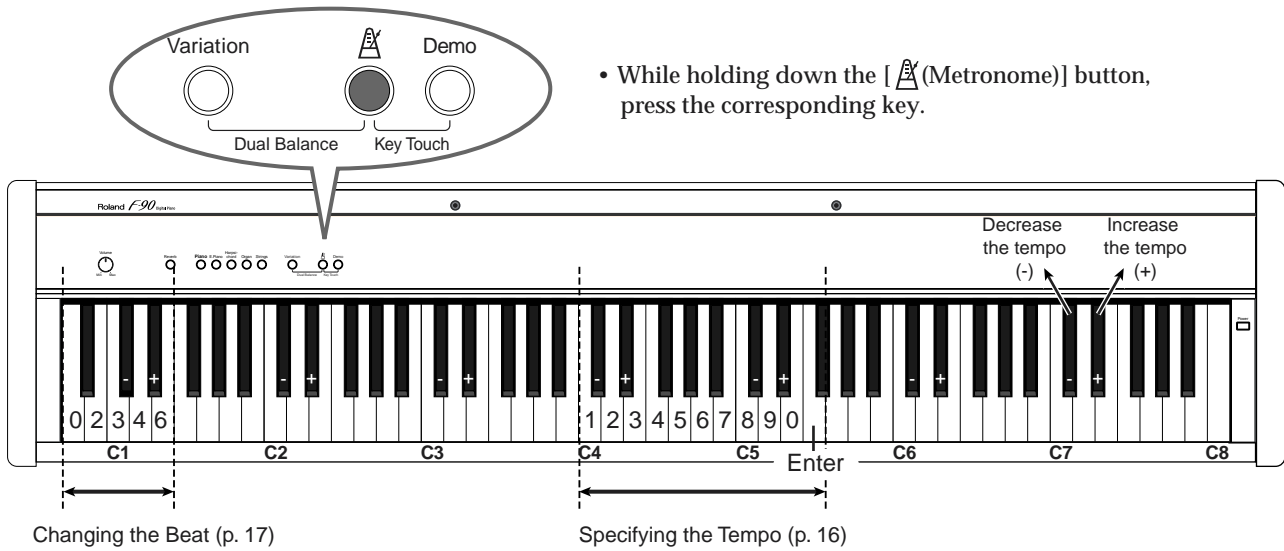
Pedal

Cover

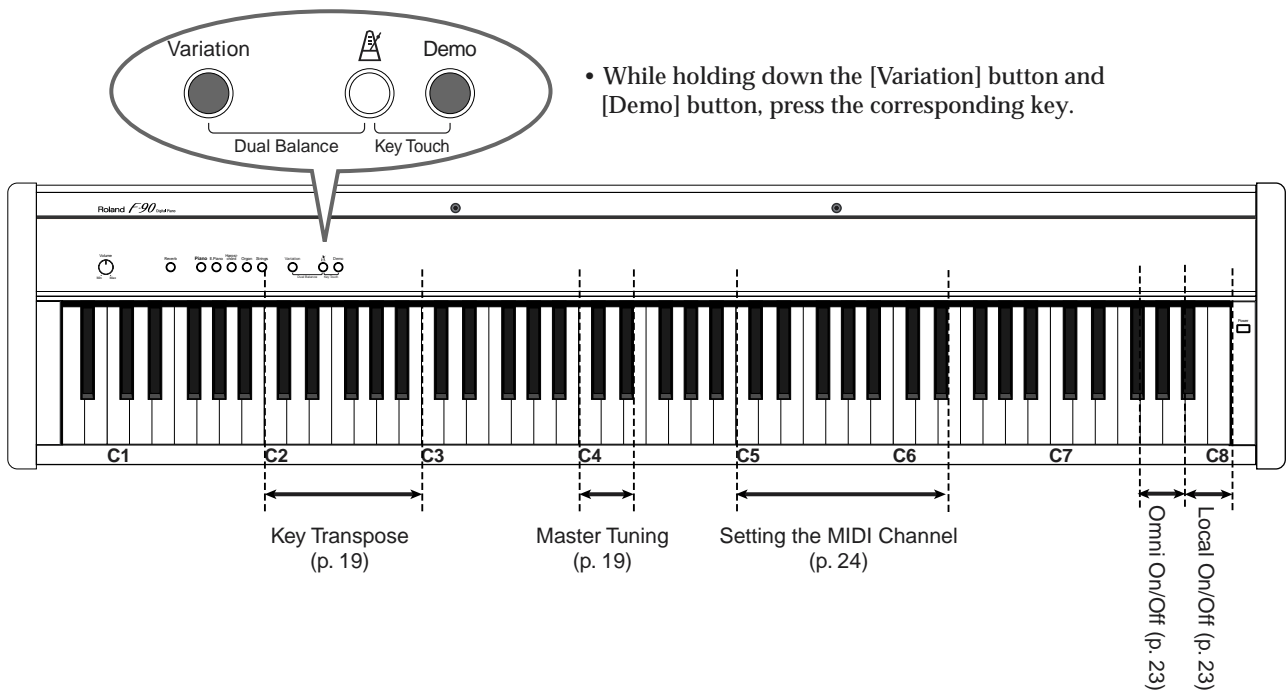
\* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

# Functions Assigned to the Keyboard


## Functions for Metronome



## Other Functions



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This product complies with the requirements of European Directive 89/336/EEC.

For EU Countries

## FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment 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 equipment 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 equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment 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 equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.  
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For the USA

## NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

## AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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### NORTH AMERICA

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