

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" (p. 8), and "IMPORTANT NOTES" (p. 11). 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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# Lessons at home!

# Play together with your family

Dividing the keyboard for two-person performance (Twin Piano) • • • p. 29

# Check your own performance

Recording your performance ••• p. 40

# Play along with a metronome

Performing with the metronome • • • p. 23

# Select and listen to the song you want to play!

Listening to songs ••• p. 36

Playing back songs on external media • • • p. 61



Playing parts individually • • • p. 37

# Night-time or early morning lessons Using the Headphones ··· p. 21 Play using different sounds Performing with various sounds ··· p. 22

Slow down the tempo for difficult passages

Changing the song's tempo ••• p. 39

# Contents

USING THE UNIT SAFELY 8
IMPORTANT NOTES 11
Names of Things and What They Do 14
Before You Play 16
Getting Ready to Play16
Connecting the Pedal Cord16
Connecting the AC Adaptor16
Opening/Closing the Lid17
Turning the Power On/Off18
Turning the Power On18
Turning the Power Off18
Adjusting the Sound's Volume19
Using the Pedals20
Using the Headphones21
Connecting the Headphones21
Using the Headphone Hook21
Performing 22
Performing with Various Sounds22
Performing with the Metronome23
Changing the Metronome's Tempo 23
Changing the Metronome's Time
Signature24
Adjusting the Metronome's Volume 25
Adding a Count-in to Synchronize Your
Performance (Count-in)25
Adding Reverberation to the Sound (Reverb) 26
Adjusting the Depth of the Reverb Effect 26
Adjusting the Keyboard Sensitivity (Key Touch) 27
Performing with Two Layered Tones (Dual Play) 28
Dividing the Keyboard for Two-person
Performance (Twin Piano)29
Changing the Way in Which the Sound is
Heard (Twin Piano Mode)30
Playing Different Tones in the Left and Right
Sides of the Keyboard (Split Play)31
Changing the Tones of the Left and Right
Zones32
Changing the Keyboard's Split Point 33
Transposing the Keyboard (Transpose)34
Disabling the Ruttons (Panel Lock) 35

Listening to Songs	36
Playing Back Songs	36
Playing Parts Individually	
Playing All Songs Consecutively (All Songs Play)	
Adjusting the Volume of the Song Playback	
Changing the Song's Tempo	39
Changing the Pitch of the Song (Playback	
Transpose)	39
Recording Your Performance	40
Recording Your Keyboard Performance	
Erasing Your Recorded Performance	
Saving Your Recorded Performance	43
Deleting a Saved Song	45
Advanced Recording Methods	
Recording Each Hand Separately	
Recording a Performance You Play Alond	
with a Song	50

Basic Operation in Function Mode52	Connecting to Other Devices  Connecting a Media
Sounds Settings54	Installing the CD Drive
Adjusting the Sound's Brilliance	Installing the Floppy Disk Drive
(Brilliance)54	Connecting USB Memory
Performing Settings54	Initializing the Memory
Specifying What the Key Transpose will	Changing the External Memory Settin
Affect (Transpose Mode)54	(External Memory Mode)
Changing the Pitch of the Tone in Octave	Playing Back Songs on External Medi
Steps (Octave Shift)54	Adjusting the Volume of an Audio Fil
Adjusting the Dual Play Volume Balance	Music CD
(Dual Balance)55	Changing the Tempo of an Audio File
Tuning Settings55	Music CD
Matching the Pitch with Other Instruments	Changing the Playback Pitch of a Sor
(Master Tuning)55	(Playback Transpose)
Using a Piano's Unique Tuning	Minimizing the Sounds in the Center
(Stretch Tuning)55	(Center Cancel)
Adjusting the Tuning (Temperament) 55	Switching VIMA TUNES Recommende
Specifying the Temperament Key 56	Tones (Recommended Tone)
Piano Sound Settings56	Saving Your Recorded Performance of
Producing Sympathetic Resonance When	External Memory
You Press the Damper Pedal	Deleting a Song from External Memo
(Damper Resonance)56	Connecting to Audio Equipment
Producing the Resonance of the Strings	Having Audio from an External Devic
When the Keys Are Played	Sounded Through the DP990F
(String Resonance)56	Connecting Speakers to the DP990F
Playing Sounds When the Keys Are	Outputting Sounds
Released (Key Off Resonance)56	Connecting to MIDI Devices
	Connecting a MIDI Sequencer to the
Pedal Settings56	
Changing How the Pedal Effects Are	DP990F
Applied (Damper Pedal Part)56	Producing Sounds from a MIDI Sound
Changing How the Pedals Work	Module by Playing the DP990F
(Center/Left Pedal Function)57	Preventing Doubled Notes When
Other Settings57	Connected to a Sequencer
Playing Back at a Fixed Tempo	(Local Control)
(Tempo Mute)57	MIDI Transmit Channel Settings
Changing the Parts Assigned to the Track	(MIDI Transmit Channel)
Buttons During SMF Playback	Sending Recorded Performance Data
(Track Assign) 57	MIDI Device (Composer MIDI Out)
Using the Sound of a Specific Part as a	Connecting a Computer
"Guide" (Mute Volume)57	Using the V-LINK Function
Setting the Type of CD To be Played Back	Specifying the V-LINK Transmit Chan
(CD/Audio Type)58	
Storing Your Settings	Appendices
(Memory Backup) 58	Troubleshooting
Restoring the Factory Settings (Factory Reset) 58	Error Messages
5 ,	Tone List
	Internal Song List
	Parameters Stored in Memory Backup
	Music Files That the DD000E Can Use
	Music Files That the DP990F Can Use Main Specifications

# **USING THE UNIT SAFELY**

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

### About **A WARNING** and **A CAUTION** Notices

⚠WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly.
<b>⚠</b> CAUTION	* 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 \( \triangle \)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**

### **<b>∴**WARNING

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



 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.



- Never install the unit in any of the following locations.
  - 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
  - · Exposed to steam or smoke; or are
  - · Subject to salt exposure; or are
  - · Humid: or are
  - Exposed to rain; or are
  - · Dusty or sandy; or are
  - · Subject to high levels of vibration and shakiness.
- 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.



 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.



### **AWARNING**

 Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device.



 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!



 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.



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





### **⚠WARNING**

 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
- · If smoke or unusual odor occurs
- 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.
- 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.



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



 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.



 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.



 DO NOT play a CD-ROM disc on a conventional audio CD player. The resulting sound may be of a level that could cause permanent hearing loss. Damage to speakers or other system components may result.



### **A** CAUTION

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



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



At regular intervals, you should unplug the AC adaptor and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.



 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.



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



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



 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.
- · Fold down the music rest.
- Spread a piece of cloth between the keyboard and the lid (music rest) before you close the lid.
- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (p. 18).



### **A** CAUTION

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



 Be careful when opening/closing the lid so you do not get your fingers pinched (p. 17). Adult supervision is recommended whenever small children use the unit.



When using the stool (sold separately), please observe the following points:



- Do not use the stool as a toy, or as a stepping stool.
  Do not allow two or more persons to sit on the
- (R)
- stool.Do not adjust the height while sitting on the stool.
- Do not sit on the stool if the bolts holding the stool legs are loose. (If the bolts are loose, immediately re-tighten them using the supplied tool.)
- Never insert your hand into the gap (the metal height adjustment mechanism) under the seat lid.
   Doing so may cause your hand to be pinched or injured.
- Always keep the following small parts that may be removed out of the reach of small children to avoid accidental ingestion of these parts.



- Screws for assembling the stand you may remove
- · Included wing nut for headphone hook
- Included stereo 1/4" plug adaptor (if a stereo 1/4" plug adaptor is included with your headphones)
- The area around the DC In jack on the rear panel may become hot, so take care to avoid burns.



# **IMPORTANT NOTES**

### **Power Supply**

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- 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.

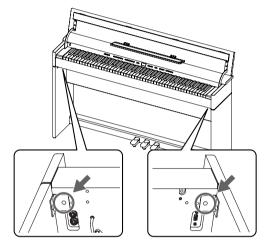
### **Placement**

- 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.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off
- 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.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.
- Do not allow rubber, vinyl, or similar materials to remain on the unit for long periods of time. Such objects can discolor or otherwise harmfully affect the finish.
- 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 such matter off the instrument may damage the exterior finish.
- Depending on the material and temperature of the surface on which
  you place the unit, its rubber feet may discolor or mar the surface.
   You can place a piece of felt or cloth under the rubber feet to prevent
  this from happening. If you do so, please make sure that the unit will
  not slip or move accidentally.

### 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.
- Since wood will expand and contract depending on how it is used and the environment in which it is located, products made of wood may experience a gradual loosening of the screws over time.

  To ensure that your piano remains in safe, optimal condition, you should regularly check the tightness of the screws in the locations shown in the illustration. If you find that any screws are loose, use a screwdriver to tighten them.



### Maintenance (Polished-finish pianos)

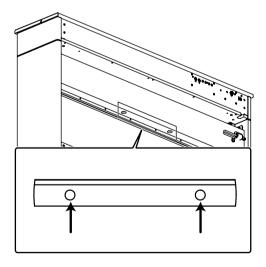
- Since your piano has a polished finish that is as delicate as that found on finely crafted wooden furniture, it needs careful, periodic care.
  - For regular dusting, use a soft, clean cloth and/or a piano-use feather duster. Be sure to wipe gently. Even tiny granules of grit can damage the surface of the unit if you use too much pressure when wiping.
  - If the cabinet gets dirty, wipe it with a soft cloth that has been soaked with water, then squeezed dry. Afterwards, wipe it again with a soft dry cloth. Do not use any cleaners or detergents, since they might deteriorate the surface of the cabinet, and produce cracks. Do not use dusting cloths that contain chemicals.
  - If the cabinet's surface loses its luster, wipe it thoroughly with a soft cloth dampened with a little of the piano polishing liquid.
- About piano polishing liquid
  - Use polishing liquid as directed by the instructions for the product
  - Use only polishing liquid that is intended for use on polishedfinish pianos. Using any other polishing liquid may cause scratches, deformation, or discoloration. To purchase polishing liquid, contact your nearby musical instrument dealer.
  - Use the polishing liquid only on the polished surfaces of the cabinet. Always wipe the surface with the grain using straight, even strokes. Do not repeatedly wipe the same places using too much pressure, since that might result in the loss of luster.
  - Be sure to keep the polishing liquid out of the reach of small children. If the polishing liquid is accidentally swallowed, first get them to vomit, then take them to a doctor.

### **Repairs and Data**

 Please be aware that all data contained in the unit's memory may be lost when the unit is sent for repairs. Important data should always be backed up on a USB memory, or written down on paper (when possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and Roland assumes no liability concerning such loss of data.

### **Additional Precautions**

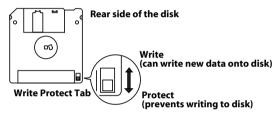
- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory on a USB memory.
- Unfortunately, it may be impossible to restore the contents of data that was stored on an internal memory, a USB memory or an external memory once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- 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.
- 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, pack it in shock-absorbent material. Transporting the unit without doing so can cause it to become scratched or damaged, and could lead to malfunction.
- Do not apply undue force to the music rest while it is in use.
- 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.
- Be careful not to allow foreign objects, pets, etc., to enter the bass reflex ports.



### **Handling the Floppy Disk Drive**

(Using Optional Floppy Disk Drive)

- Never attempt to remove a floppy disk from the drive while the drive is operating (the indicator is lit); damage could result to both the disk and the drive.
- Floppy disks contain a plastic disk with a thin coating of magnetic storage medium. Microscopic precision is required to enable storage of large amounts of data on such a small surface area. To preserve their integrity, please observe the following when handling floppy disks:
  - · Never touch the magnetic medium inside the disk.
  - · Do not use or store floppy disks in dirty or dusty areas.
  - Do not subject floppy disks to temperature extremes (e.g., direct sunlight in an enclosed vehicle). Recommended temperature range: 10 to 50 degree C (50 to 122 degree F).
  - Do not expose floppy disks to strong magnetic fields, such as those generated by loudspeakers.
- Floppy disks have a "write protect" tab which can protect the disk from accidental erasure. It is recommended that the tab be kept in the PROTECT position, and moved to the WRITE position only when you wish to write new data onto the disk.



- The identification label should be firmly affixed to the disk. Should the label come loose while the disk is in the drive, it may be difficult to remove the disk.
- Store all disks in a safe place to avoid damaging them, and to protect them from dust, dirt, and other hazards. By using a dirty or dustridden disk, you risk damaging the disk, as well as causing the disk drive to malfunction.

### **Handling Using USB memory**

(Using Optional USB memory)

- Do not connect or disconnect USB memory while it is being read from, or written to (i.e., while the USB memory access indicator will blink)
- Carefully insert the USB memory all the way in—until it is firmly in place
- Never touch the External Memory connector. Also, avoid getting the terminals dirty.
- USB memories are constructed using precision components; handle the USB memories carefully, paying particular note to the following.
  - To prevent damage to the USB memories from static electricity, be sure to discharge any static electricity from your own body before handling the USB memories.
  - Do not touch or allow metal to come into contact with the contact portion of the USB memories.
  - Do not bend, drop, or subject USB memories to strong shock or vibration.
  - Do not keep USB memories in direct sunlight, in closed vehicles, or other such locations.
  - · Do not allow USB memories to become wet.
  - Do not disassemble or modify the USB memories.

### **Handling CD-ROMs**

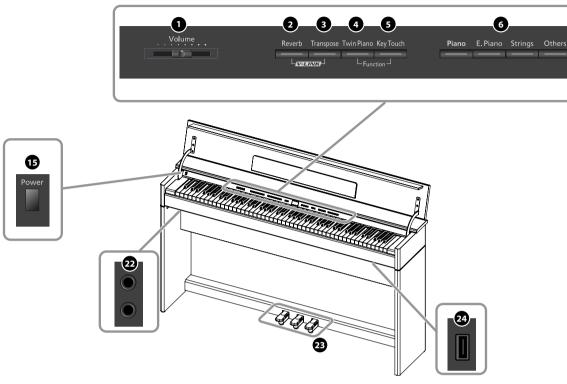
(Using Optional CD-ROMs)

 Avoid touching or scratching the shiny underside (encoded surface) of the disc. Damaged or dirty CD-ROM discs may not be read properly. Keep your discs clean using a commercially available CD cleaner.

- \* GS ( ) is a registered trademark of Roland Corporation.
- \* XGlite (XGlite) is a registered trademark of Yamaha Corporation.
- \* MMP (Moore Microprocessor Portfolio) refers to a patent portfolio concerned with microprocessor architecture, which was developed by Technology Properties Limited (TPL). Roland has licensed this technology from the TPL Group.
- \* All product names mentioned in this document are trademarks or registered trademarks of their respective owners.



# Names of Things and What They Do



### 1 [Volume] slider

Adjusts the overall volume of the DP990F (p. 19).

### 2 [Reverb] button

Adds reverberation similar to what you would hear when performing in a concert hall (p. 26).

### 3 [Transpose] button

Transposes the keyboard and/or song.

- Transposing the keyboard (p. 34).
- Transposing the song playback (p. 39).

### 4 [Twin Piano] button

- Divides the keyboard into two separate sections, allowing two people to perform in the same registers (p. 29).
- Allows you to perform with a split keyboard (p. 31).

### 5 [Key Touch] button

- Used to adjust the touch sensitivity of the keyboard (p. 27).
- Additionally, if you hold down this button while you press the [Twin Piano] button, you will enter Function mode, where you can make settings for the sounds and make changes in a variety of the instrument's functions (p. 52).

### **6** Tone buttons

Here you can select the sound you'll hear when you play the keyboard (p. 22).

### [Display] button

- Switches the content of the display.
- Displays the song number, the metronome's tempo or time signature (p. 23).

### 8 Indicators

These indicate the content shown in the display.

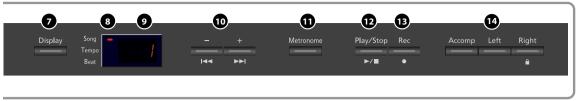
- Song indicator: The display shows the song number.
- Tempo indicator: The display shows the tempo.
- Beat indicator: The display shows the time signature.

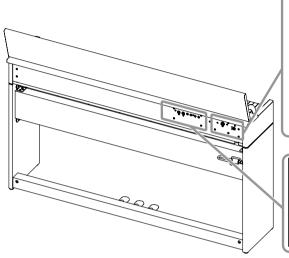
### 9 Display

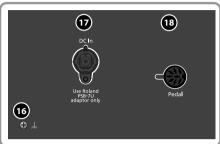
This shows the sound number, song number, tempo, time signature, and the value of various settings.

### **10** [-] ( |◄◄ ) [+]( ▶► ) button

- Change the value of settings such as sounds or functions.
- Select the sound to be played from the keyboard (p. 22).
- Select a song (p. 36).
- Fast-forward/rewind a song (p. 36)









### **Ⅲ** [Metronome] button

Turns the internal metronome on/off (p. 23).

### [►/■] (Play/Stop) button

- Stops/starts playback of an internal song or a recorded performance (p. 36).
- Starts/stops recording of your performance (p. 40).

### **1** [ • ] (Rec) button

This lets you record your own performance into the DP990F (p. 40).

### Track buttons

- Allows you to play back your performance separately for each hand (p. 37).
- Records your performance separately for each hand (p. 47).
- Holding down the [Right] button will disable all button operations (Panel Lock) (p. 35).

### 15 [Power] switch

Turns the power on/off (p. 18).

### 6 Ground terminal

For added safety, you can connect this screw to a grounding rod or a grounded earth wire (p. 16).

### **17** DC In jack (DC Inlet)

Connect the supplied AC adaptor here (p. 16).

### **1**B Pedal connector

Connect the pedal cord of the dedicated stand to this connector (p. 16).

### MIDI Out/In connectors

You can connect these to external MIDI devices to transfer performance data (p. 67).

### 20 Input jacks (L/Mono, R)

Here you can connect an audio device or another electronic musical instrument, and listen to the connected device through the DP990F's speakers (p. 65).

### **20** Output jacks (L/Mono, R)

You can connect an audio device or external powered speakers here to reproduce the DP990F's sound (p. 65).

### Phones jacks

Here you can connect headphones (p. 21).

### Pedal

- These are used mainly when playing piano (p. 20).
- You can assign a variety of functions to the pedals (p. 56).

### External Memory connector

Here you can connect USB memory, a CD drive, or a floppy disk drive, and use it to play or save songs (p. 59).



# **Before You Play**

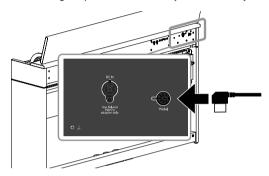
# Getting Ready to Play

### Connecting the Pedal Cord

Connect the pedal cord to the Pedal jack on the rear panel of DP990F, at the rear.

### NOTE

Plug the pedal cord all the way into the Pedal jack.



### Connecting the AC Adaptor

### Check before you connect the AC Adaptor.

- Make sure that the [Power] switch is off (p. 18).
- Make sure that the [Volume] slider is minimized (p. 19).

# Connect the supplied AC adaptor and power cord.



### NOTE

Place the AC adaptor so the side with the indicator (see illustration) faces upwards and the side with textual information faces downwards.

The indicator will light when you plug the AC adaptor into an AC outlet.

# 2. Connect the AC adaptor to the DC In jack on the rear panel.

### NOTE

Take care not to pull the cord with excessive force, or strain it. Doing so may damage or break the cord.

### 3. Plug the Power cord into a power outlet.

If necessary, secure the AC adaptor cord with the cord clamps (leaflet: Assembling the DP990F).

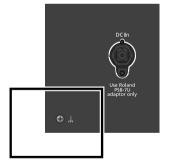
### NOTE

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.

\* Depending on the circumstances of a particular setup, you may experience a discomforting sensation, or perceive that the surface feels gritty to the touch when you touch this device or the metal portions of other equipment connected to it. This is due to an infinitesimal electrical charge, which is absolutely harmless. However, if you are concerned about this, connect the ground terminal (see figure) with an external ground. When the unit is grounded, a slight hum may occur, depending on the particulars of your installation. If you are unsure of the connection method, contact the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

Unsuitable places for connection

- Water pipes (may result in shock or electrocution)
- · Gas pipes (may result in fire or explosion)
- Telephone-line ground or lightning rod (may be dangerous in the event of lightning)



### Opening/Closing the Lid

### NOTE

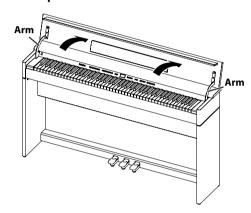
Always use two hands to open and close the lid. Although the DP990F's lid is designed to close slowly and gently when it is released, the lid immediately closes if it has been opened only slightly. Take care not to allow your fingers to become pinched by the lid.

### NOTE

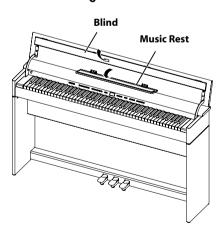
Never insert your fingers into the opening behind the arms of the lid. Doing so may cause injury.

### **Opening the Lid**

Grasp and lift the lid with both hands.

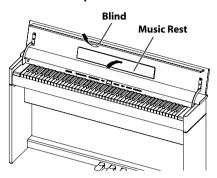


2. Close the blind and open the music rest as shown in the figure.

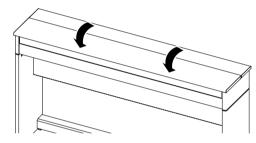


### **Closing the Lid**

1. When closing the lid, be sure to close the music rest and open the blind.



2. Grasp and gently lower the lid with both hands.



NOTE

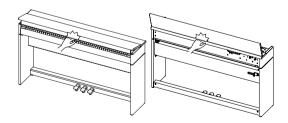
Adult supervision is recommended whenever small children use the unit.

### NOTE

If you need to move the piano, make sure the lid is closed first to prevent accidents. In addition, do not hold onto the lid when moving or setting up the instrument.

### NOTE

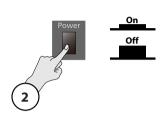
When opening and closing the lid, take care not to allow your fingers to become pinched in the gap.



# Turning the Power On/Off

### NOTE

Once the connections have been completed (p. 16), 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.



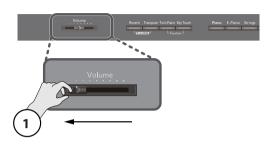
### Turning the Power On

- Move the [Volume] slider all the way to the left to minimize the volume.
- 2. Press the [Power] switch.

The power will turn on, and [Piano] button and [Reverb] button will light.

After a brief interval, you'll be able to produce sounds by playing the keyboard.

- \* 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.
- \* Always make sure to have the volume level turned down before switching on power. Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction.
- Use the [Volume] slider to adjust the volume (p. 19).



### Turning the Power Off

- Move the [Volume] slider all the way to the left to minimize the volume.
- 2. Press the [Power] switch.

The screen goes blank and the power is turned off.

# Adjusting the Sound's Volume

Here's how to adjust the volume of your keyboard playing or the playback volume of an internal song or USB memory song.

If headphones are connected, use the [Volume] slider to adjust the headphone volume.



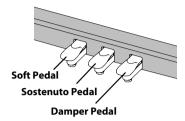
### 1. Turn the [Volume] slider to adjust the overall volume.

Adjust the volume while you play the keyboard to produce sound.

Turning the knob toward the right will increase the volume, and turning it toward the left will decrease the volume.

# Using the Pedals

The pedals perform the following operations. You'll use them mainly when playing piano.



### **Damper Pedal (right pedal)**

Use this pedal to sustain the sound.

While this pedal is held down, notes will be sustained for an extended time even if you release your fingers from the keyboard.

The length of sustain will change subtly depending on how deeply you press the pedal.

On an acoustic piano, holding down the damper pedal will cause the strings for notes other than the ones you actually play to vibrate in sympathy with what you've played, producing a rich resonance. The DP990F simulates this sympathetic vibration (damper resonance).



You can modify the sound of the sympathetic vibration (p. 56).

### Sostenuto Pedal (center pedal)

The notes you are pressing when this pedal is depressed will be sustained.

### Soft Pedal (left 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.

The softness of the tone can be varied subtly by the depth to which you press the pedal.



You can switch the function of the sostenuto pedal and the soft pedal (p. 57).

### NOTE

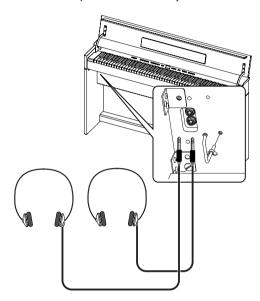
If you disconnect the pedal cord from the DP990F while the power is turned on, the pedal effect will remain applied. You must connect or disconnect the pedal cord while the DP990F's power is switched off.

# Using the Headphones

You can use headphones to enjoy the DP990F without disturbing those around you, such as at night.

### Connecting the Headphones

The DP990F has two headphone jacks, two people can also use headphones simultaneously.



### 1. Plug the headphones into the Phone jack.

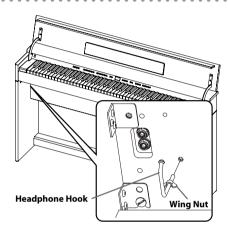
If headphones are connected, no sound will be output from the DP990F's speakers.

2. Use the DP990F's [Volume] slider to adjust the headphone volume (p. 19).

### Using the Headphone Hook

Whenever you are not using the headphones, you can hang them on the headphone hook of the DP990F.

### **Attaching the Headphone Hook**



- Press and twist the headphone hook included with the DP990F into the hole in the bottom left of the DP990F (refer to the figure above).
- Turn the headphone hook wing nut to secure the headphone hook.

### NOTE

Do not hang anything other than headphones on the headphone hook. Doing so may damage the instrument or the hook.

### **Cautions when Using Headphones**

- To prevent damage to the cord's internal conductors, avoid rough handling. When using headphones, mainly try to handle either the plug or the headset.
- Your headphones may be damaged if the volume of a device is already turned up when you plug them in. Minimize the volume before you plug in the headphones.
- Excessive input will not only damage your hearing, but may also strain the headphones. Please enjoy music at an appropriate volume.
- Use headphones that have a stereo 1/4" phone plug.

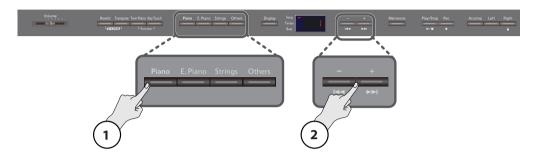
# Performing with Various Sounds

In addition to piano sounds, the DP990F lets you enjoy performing with many other sounds (over 300 types).

These sounds are called "Tones." The Tones are divided into four groups, each of which is assigned to a different Tone button.

Let's start by performing with a piano tone.

When you turn on the power, the "Grand Piano1" Tone is selected.



### 1. Press the [Piano] button.

The currently selected tone number is shown.



### 2. Press the [-] or [+] button.

A different tone is selected.





If you don't perform any operation for a while, the indication in the display will change to the following.



### About the tones you can select

Button	Description	
[Piano] button	Selects a variety of instruments, including grand pianos, honky-tonk pianos, and historical instruments.	
[E. Piano] button	Selects various electric piano sounds used in pop or rock, as well as the sound of instruments played using mallets.	
[Strings] button	button Selects the sounds of string instruments such as violins, as well as other instruments used in orchestras, which are appropriate when used for Dual play with a piano sound.	
[Others] button  Selects a variety of sounds such as organ, bass, and GM2 sounds (p. 80).  * If you select a tone number from 35 through 42, the keyboard will act as a drum set  * If you've selected a tone to which the Rotary effect is applied, pressing the [Others]  will change the modulation speed of the Rotary effect.		

- \* For some tones, there are keys that do not produce sound.
- \* For details on the tones, refer to "Tone List" (p. 75).

# Performing with the Metronome

You can sound the metronome while you perform.

The DP990F contains a versatile metronome feature. You can also change the metronome's volume and time signature.

While the song plays, the metronome will sound at the tempo and time signature of the song.



### 1. Press the [Metronome] button.

The [Metronome] button will blink, and the display will indicate "Tempo."



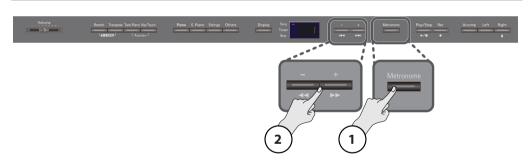
The metronome will sound.

The [Metronome] button will blink red and green according to the currently selected time signature; red indicates the strong beats, and green indicates the weak beats.



You can press the [Metronome] button once again to stop the metronome.

### Changing the Metronome's Tempo



### 1. Press the [Metronome] button.

The metronome will sound.

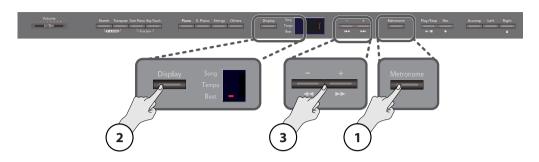


### 2. Press the [-] or [+] button.

### Correspondence between beat and tempo display

Beat	2/2	0/4, 2/4, 3/4, 4/4, 5/4, 6/4, 7/4	3/8	6/8, 9/8, 12/8
Tempo	=5-250	=10-500	=20-999	J. =7-333

### Changing the Metronome's Time Signature



### 1. Press the [Metronome] button.

The metronome will sound.

### 2. Press the [Display] button.

The Beat indicator will light, and the display will indicate the time signature.



### 3. Press the [-] or [+] button.

If you specify "0/4" only the weak beats will sound.

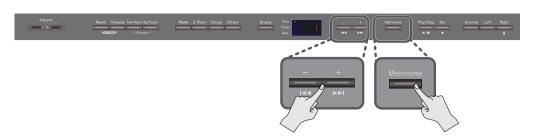
If you record your performance, it will be recorded with the time signature you specify here.

When you play back a song, the metronome's time signature will be set to the time signature of that song.

Indicate	Beat	Indicate	Beat
8.8.8	2/2	868	6/4
[888]	0/4 (Only weak beats will be sounded.)	888	7/4
8.8	2/4	888	3/8
8.8.8	3/4	86.8	6/8
888	4/4	888	9/8
8.5.8	5/4	H2.8	12/8

 $<sup>^{\</sup>ast}~$  You can't change the metronome's time signature while a song is playing.

# Adjusting the Metronome's Volume



### 1. While holding down the [Metronome] button, press the [-] or [+] button.

The display will indicate the metronome's volume.

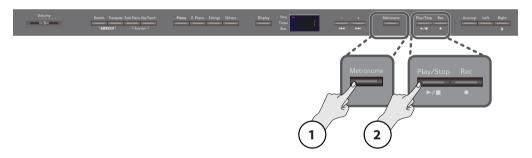
If you set the metronome's volume to "0" the metronome will not sound.





### Adding a Count-in to Synchronize Your Performance (Count-in)

A series of sounds rhythmically played to indicate the tempo before a song starts is called a "count-in." If you sound a count-in, it will be easier for you to synchronize your own performance to the tempo of the playback.



### 1. Press the [Metronome] button.

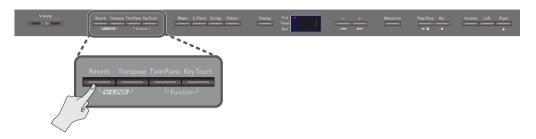
The metronome will sound.

### 2. Press the [ ►/■ ] button.

A two-measure count sound will be produced before the song starts playing.

# Adding Reverberation to the Sound (Reverb)

You can add a pleasant reverberation to the sounds you play from the keyboard, producing the impression that you are performing in a concert hall. This effect is called "Reverb."



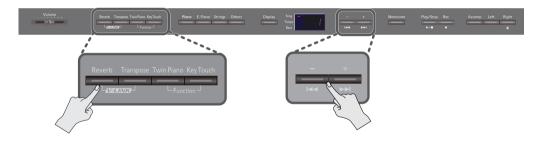
### 1. Press the [Reverb] button.

The [Reverb] button will light.



If you press the [Reverb] button once again, the button will go out and the reverb effect will be eliminated.

### Adjusting the Depth of the Reverb Effect



### 1. While holding down the [Reverb] button, press the [-] or [+] button.

The display will indicate the depth of the reverb effect values.

Reverb depth range 1 –10
--------------------------

Higher values apply deeper reverb.



The adjusted setting will return to its previous value when you turn off the power. If you wish, you can have this setting be retained even while the power is turned off (p. 18).

- \* You can't specify the depth of the reverb effect independently for each sound. Reverb is applied at the same depth for each sound.
- \* The depth of the reverb effect for the song that's playing will not change.
- \* The reverb effect is not applied if Twin Piano mode (p. 30) is set to Individual.

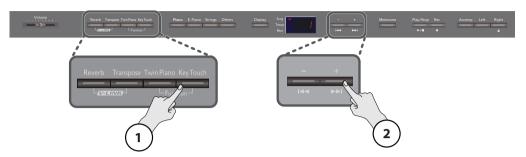
### What are Effects?

In addition to reverb, the DP990F provides a wide variety of other "effects" that can modify the sound in various ways. An appropriate effect is selected for each different tone.

\* Some tones do not have an effect.

# Adjusting the Keyboard Sensitivity (Key Touch)

You can change the touch sensitivity, or response of the keys. You can adjust the keyboard touch as appropriate for the playing strength of the person who is performing.



- 1. Press the [Key Touch] button so it's flash.
- 2. Press the [-] or [+] button to select the keyboard touch.



Indicate	Description		
Fixed	The sound plays at one set volume, regardless of the force used to play the keys.		
Extra Light	This setting produces the lightest keyboard touch.		
Light	You can achieve fortissimo (ff) play with a less forceful touch than "medium," so the keyboard feels lighter. This setting makes it easy to play, even for children.		
Medium -     -	This sets the standard keyboard touch. You can play with the most natural touch. This is the closest to the touch of an acoustic piano.		
Heavy	You have to finger the keyboard more forcefully than "medium" in order to play fortissimo (ff), so the keyboard touch feels heavier. Dynamic fingering adds even more feeling to what you play.		
Extra Heavy	This setting produces the heaviest keyboard touch.		

### 3. Press the [Key Touch] button to return to selection of tones.

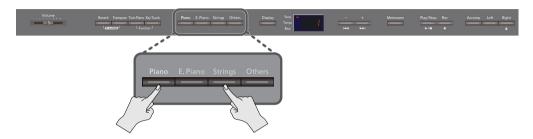
If a setting other than "-M-(Medium)" is selected, the [Key Touch] button will be lit.



You can use the Memory Backup function to store this setting in internal memory (p. 58).

# Performing with Two Layered Tones (Dual Play)

You can play two tones simultaneously from each note of the keyboard. This feature is called "Dual Play." As an example, here's how to layer piano and strings tones.



### 1. Hold down the [Piano] button and press the [Strings] button.

Both buttons will light.

When you play the keyboard, you'll hear both the piano and the strings tones.

### **About the tones**

Tone name	Corresponding button	How to select tones
Tone 1	Left tone button	Press the [-] or [+] button.
Tone 2	Right tone button	Hold down the Tone button for Tone 2 (the rightmost of the lit Tone buttons), and press the [-] or [+] button.

(MEMO)

When you press any tone button, Dual play will be cancelled; you'll hear only the tone of the button you pressed.

MEMO

You can change the pitch of tone 2 in steps of an octave (p. 54).

MEMO

When you press a damper pedal while using Dual play, the effect will apply to both tone 1 and tone 2, but you may change this so that the effect applies to only one tone (p. 56).

(MEMO)

You can change the volume balance of the two tones (p. 55).

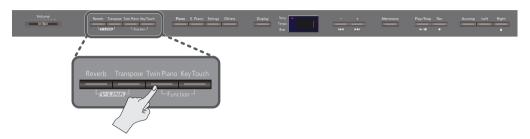
- \* Dual play is not available if Split play or Twin Piano are turned on.
- \* For some combinations of sounds, the effect is not applied to tone 2, and this may affect how the tone sounds.

# Dividing the Keyboard for Two-person Performance (Twin Piano)

You can divide the keyboard into left and right zones so that two people can play the same range of pitches, just as though there were two pianos.

This function is called "Twin Piano."

For example, you could use Twin Piano to allow a student to play along with their teacher.

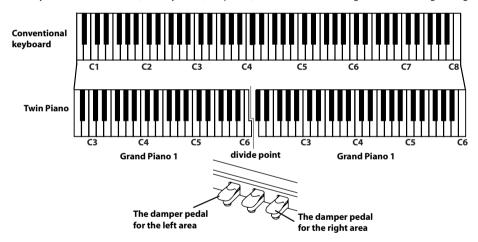


### 1. Press the [Twin Piano] button.

The [Twin Piano] button will light.



When you turn Twin Piano on, the keyboard, the pedals, and the tone will change to the following settings.

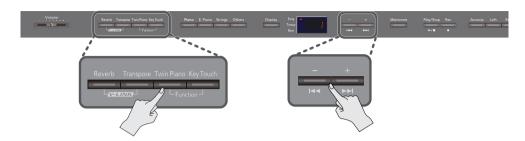


(MEMO)

When you press the [Twin Piano] button a number of times, the Twin Piano function will turn off and the [Twin Piano] button will go out.

<sup>\*</sup> Since some effects (p. 26) will no longer be applied if Twin Piano is turned on, this may change the sound of the tone.

# Changing the Way in Which the Sound is Heard (Twin Piano Mode)



### 1. Hold down the [Twin Piano] button and press the [-] or [+] button.



Value	Description
1 (Pair)	The sound of the right-hand keyboard zone will be heard more loudly from the right speaker than from the left speaker.  The sound of the left-hand keyboard zone will be heard more loudly from the left speaker than from the right speaker.
2 (Individual)	The sound of the right-hand keyboard zone will be heard only from the right speaker. The sound of the left-hand keyboard zone will be heard only from the left speaker.  * The reverb effect will be turned off.  * For some tones, the sound may not be split between left and right.  * If you play in the left-hand keyboard zone, the sound will not be heard in the headphones connected to the rear Phones jack. Similarly, if you play in the right-hand keyboard zone, the sound will not be heard in the headphones connected to the front Phones jack.

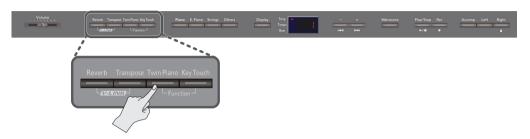


The settings you change will return to their original values when you turn off the power. If you wish, you can have this setting be remembered even while the power is turned off (p. 58).

# Playing Different Tones in the Left and Right Sides of the Keyboard (Split Play)

You can play different tones in the left and right sides of the keyboard, divided at a certain key.

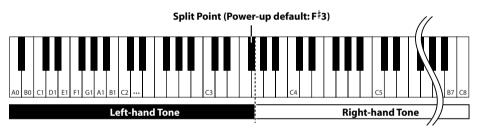
This feature is called "Split Play," and the key at which the keyboard is divided is called the "Split Point."



1. Press the [Twin Piano] button a number of times so the Split screen will appear.



When Split is turned on, the keyboard settings will be as follows.

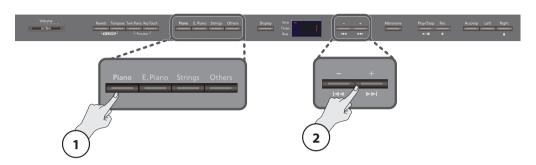


(MEMO)

Press the [Twin Piano] button a number of times to turn off Split play; the [Twin Piano] button will go out

# Changing the Tones of the Left and Right Zones

### Changing the right-hand tone



### 1. Press a tone button.

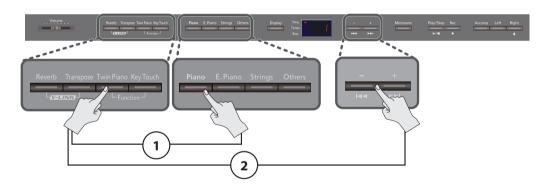
The number of the currently selected for the right-hand zone are shown.



### 2. Press the [-] or [+] button.

A different tone is selected.

### Changing the left-hand tone



1. Hold down the [Twin Piano] button and press a tone button.

The number of the tone currently selected for the left-hand zone are shown.



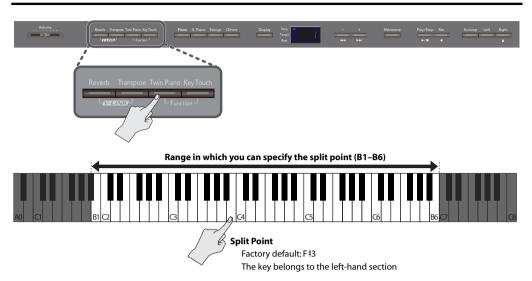
2. While holding down the [Twin Piano] button, press the [-] or [+] button.

A different tone is selected.



You can change the pitch of the left-hand sounds in steps of an octave (p. 54).

# Changing the Keyboard's Split Point



 Hold down the [Twin Piano] button and press the key that you want to be the new split point.



The key you pressed becomes the new split point, and that key will be shown in the display.

When you release the [Twin Piano] button, the display will return to its previous indication.

### How the Split Point is shown

When indicating the key that is the split point, the display shows the note name followed by a number that signifies the octave.

Display	Note name	Display	Note name
8.8.8	С	888	F#
8.8.8	C‡	888	G
888	D	888	A
888	E♭	888	A
888	E	888	В♭
8.8.8	F	888	В



MEMO

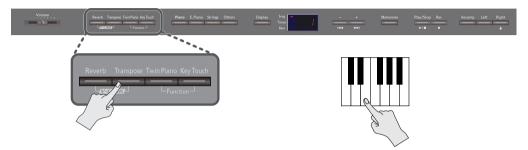
The changed setting will revert to its original state when you turn off the power. If you wish, you can have this setting be remembered even while the power is turned off (p. 58).

# Transposing the Keyboard (Transpose)

"Transpose" means to shift the pitches produced by the keyboard.

The Transpose function makes it easy to do the following.

- The pitch of your accompaniment can be adjusted to a singer's vocal range without changing your fingering (i.e., without changing the keys you play).
- A song written in a difficult key with numerous sharps (\$) or flats (\$) can be performed in a key that's easier for you to play.



 Hold down the [Transpose] button and play the key that's the tonic of the key into which you want to transpose.



The current transposition setting is shown while you hold down the [Transpose] button.



You can also change the transposition setting by using the [-] or [+] buttons while holding down the [Transpose] button.

Transposition range	-6-0-5 (semitone units)
	(

If a setting other than 0 is selected, the [Transpose] button will be lit.



To return to the original value (0), hold down the [Transpose] button and press both of the [-] or [+] buttons simultaneously.



You can use the [Transpose] button to turn the Transpose function on/off (if the transposition setting is other than "0").

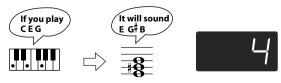


The DP990F allows you to transpose both the keyboard and the song, or just the keyboard, or just the song (p. 54). With the factory settings, the keyboard and the song will be transposed together.

\* If the Transpose Mode (p. 54) is set to "SnG" (the song playback), the Transpose function will not affect the pitches of the keyboard.

### Example: Use C major fingering to play a song written in E major

Hold down the [Transpose] button and press the E note (the tonic note for the key of E major).
 Counting from C as a reference point, the tonic note for the key of E major is four chromatic steps higher, so the display indicates "4."



MEMO

The transposition value will return to "0" when you switch songs or turn off the power.

# Disabling the Buttons (Panel Lock)

The Panel Lock setting lets you disable all of the DP990F's buttons. In this state, the settings will not change even if you inadvertently press a button while performing.



1. Hold down the [Right] button for a while.

Panel Lock will be activated.



(MEMO)

To cancel Panel Lock, once again hold down the [Right] button for a while. Panel Lock will also be cancelled when you turn off the power.

- \* If you activate Panel Lock while a song is playing or being recorded, playback or recording will stop.
- \* You can't activate Panel Lock while in Function mode (p. 52).



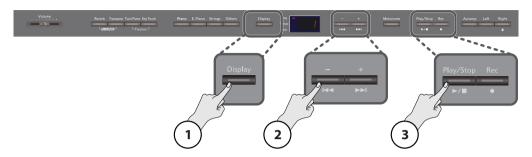
# Listening to Songs

# Playing Back Songs

Here's how to listen to the built-in songs. The DP990F provides 72 built-in piano songs.



You can also play back songs from a separately sold floppy disk drive, CD drive, or USB memory (p. 61).



- 1. Press the [Display] button a number of times so the Song indicator will light.
- 2. Press the [-] or [+] button to select a song.



3. Press the [ ▶/■ ] button.

When the song has played to its end, playback will stop.

To pause the playback, press the [ ▶/■ ] button once again.

The next time you press the [ ▶/■ ] button, playback will resume from where you paused.

### **Fast-forward and rewind**

Operation	Button
To beginning of next song	Press the [
To beginning of current song	Press the [ ◄◀ ] button
Fast-forward the song	Hold down the [
Rewind the song	Hold down the [ ► ] button while the song is playing



For details on the names of the internal songs, refer to "Internal Song List" (p. 78).

### Playing Parts Individually

The parts of an internal song can be selected and played individually. This allows you to practice playing the left or right-hand part of a song while listening to the other hand played automatically.

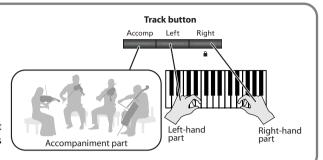
### Performance parts and tracks

Each part is assigned to the track buttons as shown in the illustration.

### Muting

You can "mute" a specific part so that it will not be heard.

\* The [Accomp] button will not light if you've selected a song that does not contain an accompaniment.





1. Play back a song (p. 36).

### 2. Press the track button for the part that you don't want to be played.

The light for the button you pressed will go out, and the selected part will not be heard. When you press the track button once again so it's lit, the part will be heard again.

(MEMO)

You can change the volume of the muted part (p. 57).

MEMO

By playing back a song with the accompaniment part muted, you can skip the introduction.

MEMO

The mute setting will be cancelled when you switch songs.

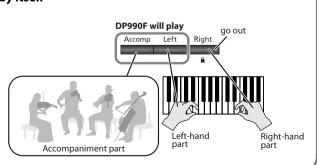
### Practicing the right-hand part by itself

1. Press the [Right] button.

The button will go out.

### 2. Press the [ ▶/■ ] button.

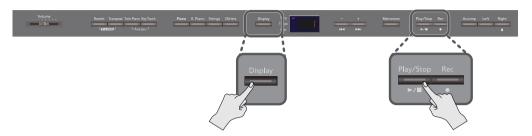
The DP990F will play the lefthand part and accompaniment part, allowing you to practice the right-hand part separately.



### Playing All Songs Consecutively (All Songs Play)

You can have the DP990F play all internal songs (or all songs in internal memory, or all songs in USB memory) repeatedly in succession.

This function is called "All Songs Play."



Hold down the [Display] button and press the [ ▶/■ ] button.

All Songs Play will be selected, and the display will indicate "ALL."

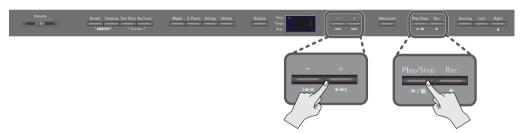


\* The All Songs Play function will turn off when you stop playback or turn off the power.

### Adjusting the Volume of the Song Playback

You can adjust the volume at which the song plays.

This is helpful when you want to adjust the volume balance between your keyboard playing and the song playback; for example, when you're practicing along with a song.



1. Hold down the [ ▶/■ ] button and press the [-] or [+] button.

The volume of song playback is shown while you hold down the [ ▶/■ ] button.



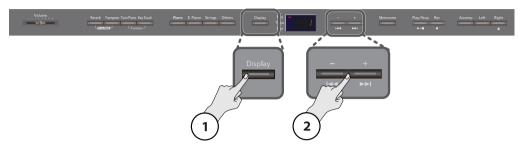
Song volume range 0-10

\* The song playback volume is reset to "10" when you turn off the power.

### Changing the Song's Tempo

You can change the tempo at which a song plays back.

When you're practicing along with an internal song, this allows you to slow down the tempo of a difficult song in order to play it more comfortably.



Press the [Display] button a number of times so the Tempo indicator will light.
 The Tempo indicator will light.



2. Press the [-] or [+] button.

The tempo will change.



If desired, you can make the song play back at a fixed tempo without allowing its tempo to change (p. 57).

### Changing the Pitch of the Song (Playback Transpose)

You can change the key of a song's playback. This is called the "Playback Transpose" function.



- 1. Play back the song (p. 36).
- 2. Hold down the [Transpose] button and press the [-] or [+] button.

The song's key will change in semitone steps.



**Transposition range** -6-0-5 (semitone units)

While you hold down the [Transpose] button, the Playback Transpose setting is displayed.

If the value is anything other than 0, the [Transpose] button will be lit.

The transposition setting will return to "0" when you select a different song.

MEMO

If you hold down the [Transpose] button and press both of the [-] [+] buttons simultaneously, the setting will return to its original value (0).

MEMO

You can use the [Transpose] button to turn the Playback Transpose function on/off (if the transposition setting is other than "0").

**MEMO** 

The DP990F allows you to transpose both the keyboard and the song, or just the keyboard, or just the song (p. 54). With the factory settings, the keyboard and the song will be transposed together.

\* The Playback Transpose function will not apply if "Transpose Mode" (p. 54) is set to "Kbd (Keyboard notes)."

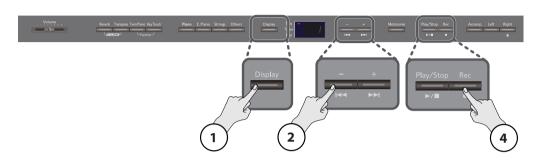
## Recording Your Performance

### Recording Your Keyboard Performance

It's easy to record your own performances.

You can play back a recorded performance to check your playing, or perform along with a recorded performance.

### **Getting ready to record**



- 1. Press the [Display] button a number of times so the Song indicator will light.
- 2. Press the [-] button a number of times so the display will indicate "USr."



- 3. Select the tone that you want to use for performing (p. 22).
  - If desired, sound the metronome (p. 23).
- 4. Press the [ ] button.

The [ ● ] button will light, the [ ►/■ ] button will blink, and the DP990F will enter recording-standby mode. If you decide not to record, press the [ ● ] button once again.

### Starting/stopping recording



Press the [ ►/■ ] button or play the keyboard.

A two-measure count will be heard (the measure number will be shown as "-2" then "-1" in the display), and then recording will start.

When recording starts, the [ lacktriangle ] button and [ lacktriangle ] button will light.

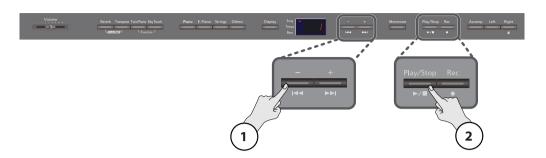
MEMO

A count sound will not sound if you initiated recording by playing the keyboard.

2. Press the [ ▶/■ ] button.

Recording will stop.

### Listening to the recorded performance



#### 1. Press the [ |◀◀ ] button.

You will return to the beginning of the recorded performance.

#### 2. Press the [ ▶/■ ] button.

The recorded performance will play.

Playback will stop when you press the [ ▶/■ ] button once again.

MEMO

If you press the [ ▶/■ ] button while the metronome is sounding, there will be a two-measure count (count-in) before playback begins.

NOTE

The recorded performance will be lost when you turn off the power. If you want to keep your recorded performance, you must save it to internal memory (p. 43) or to USB memory (p. 63).

NOTE

You won't be able to play back another song if there is an unsaved performance. You'll need to either delete (p. 42) or save (p. 43) your performance before playing another song.

### If the following indication appears

The confirmation message shown at right will appear if you attempt to select another song while the previously recorded song has not yet been saved.

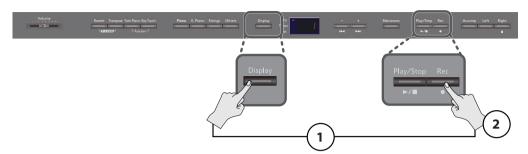


Please save your recorded performance to internal memory (p. 43) or USB memory (p. 63)

- If you decide to erase your recorded performance, press the [ ] button.
- If you don't want to erase your recorded performance, press the [ ▶/■ ] button.

### Erasing Your Recorded Performance

Here's how to erase your recorded performance.



### 1. Hold down the [Display] button and press the [●] button.

A confirmation message will appear and the [  $\blacktriangleright/\blacksquare$  ] button and [  $\bullet$  ] button will blink. If you decide not to erase the performance, press the [  $\blacktriangleright/\blacksquare$  ] button.



### 2. Press the [ ● ] button.

The recorded performance will be erased.

**MEMO** 

If you hold down the [ lacklose ] button while pressing a track button, the performance of only that track will be erased.

NOTE

A recorded performance will be erased when you turn off the power.

### Saving Your Recorded Performance

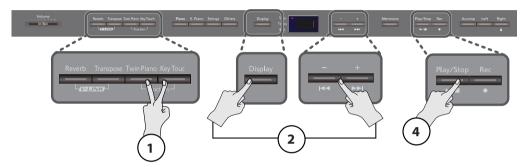
If you've recorded a performance, your recorded performance will be lost if you turn off the DP990F's power before saving the song. If you want to keep your recorded performance, it is convenient to save it in internal memory. Songs saved in internal memory will not be lost when you turn off the power.

(MEMO)

You can also save your recorded performances on USB memory (sold separately) or on a floppy disk (sold separately) (p. 63).

MEMO

If you want to save a song from internal (external) memory to external (internal) memory, select the song that you want to save.



### **Getting ready to save**

1. Hold down the [Twin Piano] button and press the [Key Touch] button.

The display will indicate "Fnc," and you'll be in Function mode (p. 52).



Hold down the [Display] button and use the [-] buttons to make the display indicate "SAv."



When you take your finger off the [Display] button, the display will indicate "Int."



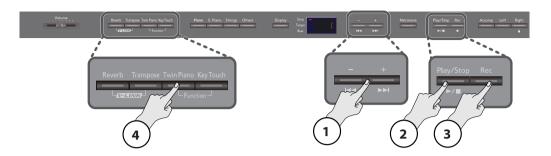
If "Int" is not displayed, press the [-] button.



Press the [ ►/■ ] button.

The screen will allow you to select the save-destination number.

### Selecting the save destination for the song



### 1. Press the [-] or [+] button to select the save destination.

If the dot in the lower right of the display is lit, a song has already been saved in that number.

Select a number at which no song has been saved.

If you want to erase an unwanted song and replace it with the newly saved song, select the number of the unwanted song.



### 2. Press the [ ▶/■ ] button.

The display will indicate "Sur," and the [  $\nearrow/\blacksquare$  ] button and [  $\bigcirc$  ] button will blink. If you decide not to save the song, press the [  $\nearrow/\blacksquare$  ] button.



### 3. Press the [ ● ] button.

The song will be saved.

### NOTE

Never turn off the power while the screen indicates "SAv."



### 4. Press the [Twin Piano] button or the [Key Touch] button.

You will exit Function mode.

\* You can't select another song if the recorded performance has not yet been saved. Either erase your recorded performance, or save it (p. 41).

### Deleting a Saved Song

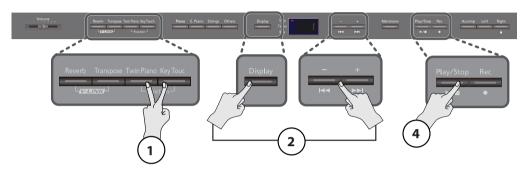
Here's how to delete a song that you saved to internal memory.

MEMO

If you want to delete all the songs that are saved in internal memory, initialize the memory (p. 60).

MEMO

You can also delete songs from USB memory (sold separately) or a floppy disk (sold separately) (p. 64).



### **Getting ready to delete**

1. Hold down the [Twin Piano] button and press the [Key Touch] button.

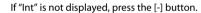
The display will indicate "Fnc," and you'll be in Function mode (p. 52).



Hold down the [Display] button and use the [-] button to make the display indicate "dEL."



3. When you take your finger off the [Display] button, the display will indicate "Int."



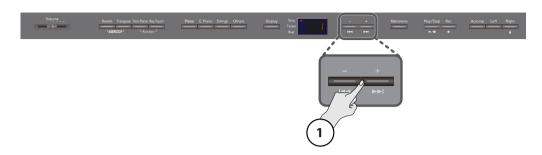


4. Press the [ ▶/■ ] button.

The screen will allow you to select the song number to be deleted.



### Choosing the song to delete



1. Press the [-] or [+] button to select the song that you want to delete.



### **Deleting the song**



Press the [►/■] button.

The display will indicate "Sur," and the [  $\blacktriangleright/\blacksquare$  ] button and [  $\bullet$  ] button will blink. If you decide not to delete the song, press the [  $\blacktriangleright/\blacksquare$  ] button.



2. Press the [ ● ] button.

The selected song will be deleted.

3. Press the [Twin Piano] button or the [Key Touch] button.

You will exit Function mode.



Never turn off the power while the screen indicates "dEL."

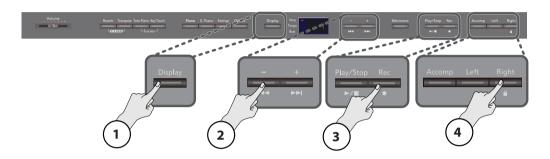


### Advanced Recording Methods

### **Recording Each Hand Separately**

You can separately record your left-hand performance to the [Left] button and your right-hand performance to the [Right] button. You can also separately re-record each hand afterward.

### **Getting ready to record**



1. Press the [Display] button a number of times so the song indicator is lit.

The display will indicate the song number.



2. Press the [-] button a number of times so the display will indicate "USr."



3. Press the [ ● ] button.

The [ lacktriangle ] button will light, the [ lacktriangle ] button and the button of the track to be recorded will blink, and the DP990F will enter recording-standby mode.

If you decide not to record, press the [ • ] button once again.

4. Press the button for any track that you don't want to record, so it's not lit.



Your performance can be recorded separately to the relevant track buttons.

### Recorded performances and the track buttons

The performances you record are assigned to the track buttons as follows.

Conventional performance (using the entire keyboard to play a single tone), Dual play

Track button	Recorded performance
Record with only a single button specified	Your performance will be recorded on the specified track.
Record with multiple buttons specified	Your performance will be recorded on only one track The priority order for recording will be: [Right] button $\rightarrow$ [Left] button $\rightarrow$ [Accomp] button.

#### Twin Piano (p. 29), Split Play (p. 31)

Track button	Recorded performance	
	Twin Piano	Split Play
[Right] button	Right	Right-hand tone
[Left] button	Left	Left-hand tone

### **Recording and stopping**



#### Press the [►/■] button.

You'll hear a two-measure count, and then recording will begin.

Alternatively, you can start recording by playing the keyboard instead of pressing the [►/■] button. In this case, there will be no count-in.

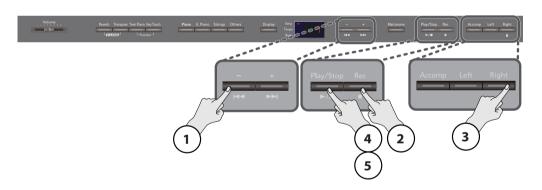
When recording begins, the [ ● ] button and [ ►/■ ] button will light.

(MEMO)

During the count, "-2" then "-1" will be shown as the measure number in the screen.

#### 2. To stop recording, press the [ ▶/■ ] button.

### **Additional recording**



#### 1. Press the [ ◄◄ ] button.

You'll return to the beginning of the recorded performance.

#### 2. Press the [●] button.

The [ ● ] button will light, the [ ▶/■ ] button and the button of the track to be recorded will blink, and the DP990F will enter recording-standby mode.

If you decide not to record, press the [ • ] button once again.

### 3. Press the button of the track that you want to record, so it's blinking.

If you decide not to record, press the [ lacktriangle ] button once again.

NOTE

If you select a previously recorded track for recording, your new performance will be overwritten onto that track, erasing the previously recorded performance.

#### 4. Press the [ ▶/■ ] button.

You'll hear a two-measure count, and then recording will begin.

Alternatively, you can start recording by playing the keyboard instead of pressing the [►/■] button. In this case, there will be no count-in.

When recording begins, the [ ● ] button and [ ►/■ ] button will light.

#### MEMO

During the count, "-2" then "-1" will be shown as the measure number in the screen.

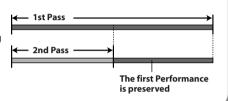
\* If you record additional material without erasing the previously recorded performance, the song's tempo and time signature will remain as they were when first recorded.

### 5. To stop recording, press the [ ▶/■ ] button.

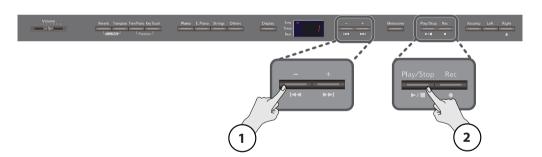
#### When you re-record

If you re-record from the beginning, the previously recorded performance will be erased as the new recording proceeds.

If you want to record an entire performance, erase the previously recorded performance first (p. 43).



### Listening to the recorded performance



### 1. Press the [ |◄◄ ] button.

You'll return to the beginning of the recorded performance.

### 2. Press the [ ▶/■ ] button.

The recorded performance will play back.

Press the [ ▶/■ ] button once again to stop playback.

### NOTE

Your recorded performance will be lost when you turn off the power. If you want to keep your recorded performance, you must save it to internal memory (p. 43) or USB memory (p. 63).

### MEMO

You can't play back another song if a recorded performance exists. Erase or save your recorded performance, and then play back the desired song (p. 41).

#### MEMO

By holding down one of the track buttons and pressing the [ 
 ] button, you can erase the performance of just that track. If you erase the performance from all tracks, the display will indicate "USr."

### Recording a Performance You Play Along with a Song

Here's how you can record a performance that you play along with an internal song or a song from internal memory. The part you select using the track buttons will be recorded, replacing the previous content of that part.

During recording, you won't hear the sound of the track whose button you selected.

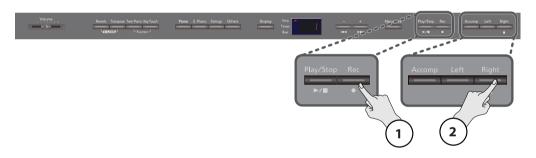
\* You can't record along with a song from a music CD, or with a song that consists of audio data.

### **Getting ready to perform**

- 1. Select the song that you want to play back (p. 36).
- 2. Select the tone that you want perform (p. 22).
- 3. Specify the tempo for recording (p. 23).
  - \* The tempo of your recorded performance will be the tempo of the song you selected for recording.

    When you record a performance that you play along with a song, it will be recorded with the time signature of that song.

### Getting ready to record



1. Press the [●] button.

The [ ● ] button will light, the [ ►/■ ] button will blink, and the DP990F will enter recording-standby mode. If you decide to cancel recording, press the [ ● ] button once again.

2. Press the track button of the part that you want to record, so it's blinking.

With this setting, you will be listening to the selected song while you record.

### Recorded performances and the track buttons

The performances you record are assigned to the track buttons as follows.

Track button	Performance part
[Right] button	Right-hand part
[Left] button Left-hand part	
[Accomp] button	Other performances

### **Recording and stopping**



#### Press the [ ►/■ ] button.

You'll hear a two-measure count, and then recording will begin.

Alternatively, you can start recording by playing the keyboard instead of pressing the [  $\blacktriangleright/\blacksquare$  ] button. In this case, there will be no count-in.

When recording begins, the [ lacktriangle ] button and [ lacktriangle ] button will light.

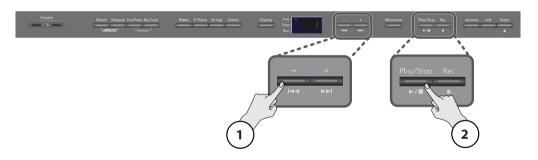
MEMO

During the count, "-2" then "-1" will be shown as the measure number in the screen.

#### 2. Press the [ ▶/■ ] button.

Recording will stop.

### Listening to the recorded performance



### Press the [ |◄◄ ] button.

You'll return to the beginning of the recorded performance.

### 2. Press the [►/■] button.

The recorded performance will play back.

Press the [ ▶/■ ] button once again to stop playback.

MEMO

Your recorded performance will be lost when you turn off the power. If you don't want to lose your recorded performance, you must save it to internal memory (p. 43) or to USB memory (p. 63).

**MEMO** 

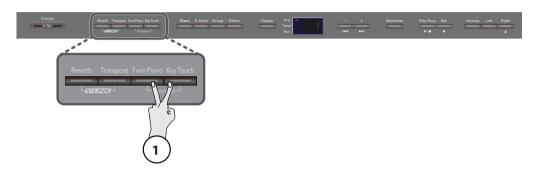
You can't play back another song if a recorded performance exists. Erase or save your recorded performance, and then play back the desired song (p. 41).

## Various Settings

### Basic Operation in Function Mode

"Function mode" lets you make various settings for playback and recording.

### **Entering Function mode**

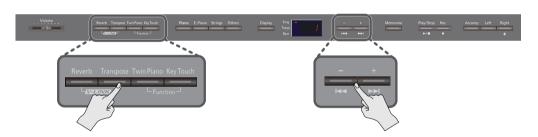


1. Hold down the [Twin Piano] button and press the [Key Touch] button.

The [Twin Piano] button and [Key Touch] button will light. The display will indicate "Fnc" and you'll be in Function mode.



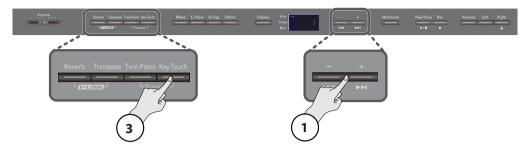
### Selecting the setting that you want to edit



1. While holding down one of the blinking buttons, press the [-] or [+] button to select the setting that you want to edit.

The name of the setting is shown in the display while you hold down the button. When you release the button, the value of the setting will be shown.

### **Editing a setting**



- 1. Press the [-] or [+] button to edit the setting.
  - By pressing the [-] [+] buttons simultaneously you can return the setting to its factory-set value.
- 2. If you wish to change other settings, refer to step 1 under "Selecting the setting that you want to edit," and select the setting you want to change.
- 3. Press the [Twin Piano] button or the [Key Touch] button to exit Function mode.

The button indicators will return to their previous state.

### MEMO

The edited settings will revert to their original value when you turn off the power. For some settings, you can specify that they retain their edited state even when you turn off the power (p. 58).

For details on the settings that can be saved in this way, refer to "Parameters Stored in Memory Backup" (p. 79).

### Selecting the setting that you want to edit

Button	Function	Page	
Reverb	Brilliance p. 54		
Transpose	Transpose Mode	p. 54	
	Octave Shift	p. 54	
	Dual Balance	p. 55	
	Master Tuning	p. 55	
Piano	Stretch Tuning	p. 55	
riano	Temperament	p. 55	
	Temperament Key	p. 56	

Button	Function	Page
E. Piano	Damper Resonance	p. 56
	String Resonance	p. 56
	Key Off Resonance	p. 56
Strings	Damper Pedal Part	p. 56
	Center Pedal Function	p. 57
	Left Pedal Function	p. 57

Button	Function	Page
	Tempo Mute	p. 57
	Local Control	p. 68
	MIDI Transmit Channel	p. 68
	Composer MIDI Out	p. 68
Others	V-LINK Transmit Channel	p. 70
	Track Assign	p. 57
	Recommended Tone	p. 62
	Mute Volume	p. 57
	CD/Audio Type	p. 58
	Save a Song	p. 43
Display	Deleting a Song	p. 45
	Initializing the Memory	p. 60
Accomp	External Memory Mode p. 60	
Left	Memory Backup p. 58	
Right	Factory Reset p. 58	

### Sounds Settings

### Adjusting the Sound's Brilliance (Brilliance)

Here's how to adjust the brilliance of your keyboard playing or the playback brilliance of an internal song or USB memory song.

Increasing the value will make the sound brighter.

Setting	
-10 (Mellow)–10 (Bright)	

### **Performing Settings**

## Specifying What the Transpose will Affect (Transpose Mode)

This setting specifies what the transpose will affect.

You can use the transpose to change the pitch of both the song and the keyboard, the pitch of only the song, or the pitch of only the keyboard.

Setting	Description
<b>L</b> P94	Keyboard notes Transpose (p. 34)
5-6	Song playback Playback Transpose (p. 39)
ALL	Keyboard notes and song playback

## Changing the Pitch of the Tone in Octave Steps (Octave Shift)

You can change the pitch of the Tone 2 in Dual play (p. 28) and Lower tone in Split play (p. 31) an octave at a time.

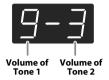
Altering the pitch in one-octave units in this way is called "Octave Shift."

For example, you can raise the pitch of the Lower Tone to the same pitch of the Upper Tone in Split play.

Setting	
-2 - 0 - +2	

## Adjusting the Dual Play Volume Balance (Dual Balance)

You can adjust the volume balance between the two tones (tone 1 and tone 2) used for Dual play.



#### Setting

9-1 (tone 1 is louder)-9-9 (same volume)-1-9 (tone 2 is louder)

### **Tuning Settings**

## Matching the Pitch with Other Instruments (Master Tuning)

When playing ensemble with other instruments and in other such instances, you can match the standard pitch to another instrument.

The standard 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 standard pitch is in tune with that of the other instruments. This tuning of all the instruments to a standard pitch is called "Tuning."

Setting	Master tuning value
15.3-40.0-66.2	415.3 Hz – 440.0 Hz – 466.2 Hz

#### (MEMO)

When the instrument is shipped from the factory, this is set to "440.0 Hz."

## Using a Piano's Unique Tuning (Stretch Tuning)

Pianos are generally tuned so that the low range is flatter and the high range is sharper than equal tempered pitches. This method of tuning is unique to the piano, and is known as "stretched tuning."

Setting	Description	
On	This tuning curve expands the bass and treble ends somewhat. It is suitable for performances such as piano solos.	
This is the standard tuning curve. This is suitable OFF for when using Dual play (p. 28) or when playing in an ensemble with other instruments.		

### Adjusting the Tuning (Temperament)

You can play classical music such as baroque pieces using their original tuning.

Most modern songs are composed and played with the assumption that equal temperament (the most common tuning in use today) will be used, but when classical music was composed, there were a wide variety of other tuning systems in existence. Playing a composition with its original tuning lets you enjoy the sonorities of the chords that the composer originally intended.



Temperament Temperament key

Setting	Temperament	Qualities
1	Equal	In this tuning, each octave is divided into twelve equal steps. Every interval produces about the same amount of slight dissonance.
2	Just (Major)	This tuning eliminates ambiguities in the fifths and thirds. It is unsuited to playing melodies and cannot be transposed, but is capable of beautiful sonorities.
3	Just (Minor)	The Just tunings differ from major and minor keys. You can get the same effect with the minor scale as with the major scale.
4	Arabic	This tuning is suitable for the music of Arabia.
5	Kirnberger	This is an improvement of the Meantone and Just tunings that provides a high degree of freedom of modulation. Performances are possible in all keys (III).
6	Meantone	This scale makes some compromises in just intonation, enabling transposition to other keys.
7	Pythagorean	This tuning, devised by the philosopher Pythagoras, eliminates dissonance in fourths and fifths. Dissonance is produced by third-interval chords, but melodies are euphonious.
8	Werckmeister	This temperament combines the Meantone and Pythagorean tunings. Performances are possible in all keys (first technique, III).

### Specifying the Temperament Key

When playing with tuning other than equal temperament, you need to specify the temperament key for tuning the song to be performed (that is, the note that corresponds to C for a major key or to A for a minor key). If you choose an equal temperament, there's no need to select a temperament key.



Temperament Temperament key

Display	С	C_	d	E_	Е	F	F -	G	A_	Α	b_	b
Key	С	C#	D	ΕÞ	E	F	F#	G	Αb	Α	ВЬ	В

\* When performing in ensemble with other instruments, be aware that depending on the key, there may be some shifting of the pitch. Tune the DP990F to the fundamental pitch of the other instruments.

### **Piano Sound Settings**

# Producing Sympathetic Resonance When You Press the Damper Pedal (Damper Resonance)

You can change the volume of the damper pedal resonance. On an acoustic piano, depressing the damper pedal makes the notes you play resonate with other strings, adding rich reverberations and fatness to the sound. The damper pedal on the DP990F recreates this resonance (Damper Resonance) when depressed.

Setting	Description	
OFF, 1–10	The resonance volume decreases as the value is lowered, while raising the value increases the volume of the Damper Resonance.  The Damper Resonance function is not active when the value is set to "OFF."	

### Producing the Resonance of the Strings When the Keys Are Played (String Resonance)

When you play the keys on an acoustic piano, the strings that are already playing resonate as well. The function that reproduces this effect is called "String Resonance."

Setting	Description	
OFF, 1–10	The resonance level decreases as the value is decreased, while increasing the value increases the amount of resonance. The String Resonance function is not active when the value is set to "OFF."	

## Playing Sounds When the Keys Are Released (Key Off Resonance)

You can play the "key off" sound (the subtle sound produced when the keys are released) obtained when playing an acoustic piano.

Setting	Description		
OFF, 1–10	The volume of the Key Off sound decreases as the value is lowered, while raising the value increases the volume of the Key Off sound. The Key Off Resonance function is not active when the value is set to "OFF."		

### **Pedal Settings**

## Changing How the Pedal Effects Are Applied (Damper Pedal Part)

When you press the Damper pedal during Dual play or Split play, the pedal effect is normally applied to both tones, but you can also select the part to which the effect is to be applied.

Setting	Description
Right & Left	All enabled
Right	Applied only to the Tone 1 (in dual mode)/ Right-hand Tone (in split mode)
Left —	Applied only to the Tone 2 (in dual mode)/ Left-hand Tone (in split mode)

## Changing How the Pedals Work (Center/Left Pedal Function)

When you turn on the power, the left pedal functions as the soft pedal, and the center pedal functions as the sostenuto pedal (p. 20). You can change the function of the pedal to a variety of other operations.

Function	Description
Sostenuto	Sets function to Sostenuto pedal.  * Selectable only for the center pedal.
Soft pedal	Sets function to soft pedal.  * Selectable only for the left pedal.
Start/stop	The pedal will have the same function as the [►/■] button.
Layer	Pressing the pedal will layer on Tone 2, used for Dual play.  *The Layer function can be applied only when using Dual play.
Octave	Pressing the pedal will layer on a sound one octave higher.  * The Octave function cannot be applied while using Twin Piano, Dual play, or Split play.

<sup>\* &</sup>quot;Lyr (Layer)" and "Oct (Octave)" cannot be specified simultaneously for the center and left pedals.

### Other Settings

## Playing Back at a Fixed Tempo (Tempo Mute)

Some of the internal songs have a tempo that varies during the song.

If desired, you can make these songs play at a fixed tempo.

Setting	Description
On	Tempo changes recorded in the song will be ignored, and the song will play at a fixed tempo.
OFF	The song will play according to the tempo changes it contains.



\* If Tempo Mute is turned on, the tempo indication in the screen will be highlighted.

### Changing the Parts Assigned to the Track Buttons During SMF Playback (Track Assign)

Ordinarily, when playing back SMF music files for Roland Piano Digital instruments (p. 80), the left-hand part is assigned to the [Left] button, and the right-hand part is assigned to the [Right] button. However, right-hand and left-hand part assignments in certain SMF music files may differ. If these are set to "Auto," and as a result you are unable to use the track buttons to control the left- and right-hand parts properly, change the setting to "2/1 Part" or "3/4 Part."

\* This setting can be used for SMF format songs other than the internal preset songs. It will not affect internal preset songs.

Setting	Description
RuE	The part assigned to each track will be determined automatically, depending on the song file.
2-1	Assigns Part 1 to the [Right] button, Part 2 to the [Left] button, and the remaining parts to the [Accomp] button.
3-4	Assigns Part 4 to the [Right] button, Part 3 to the [Left] button, and the remaining parts to the [Accomp] button.



After changing this setting, try selecting the song once again.

## Using the Sound of a Specific Part as a "Guide" (Mute Volume)

If desired, you can specify that the sound of a track will play at a reduced volume rather than going completely silent when you press a track button and turn off its indicator. This setting lets you play a specific part at a reduced volume and use it as a "guide" for your playing.

Setting	Description	
0 – 10	Increasing the value will make the sound louder.	

When you turn off the power, the track mute volume will be reset to "0."

# Setting the Type of CD To be Played Back (CD/Audio Type)

The DP990F may be unable to correctly recognize the type of CD being used. In such instances, you can specify the type of CD manually.

Setting	Description
Auto	The CD type is detected automatically
Type A	General CDs for Player Piano contain audio and MIDI data, and the data format may vary from one CD to the next. If the CD's data format does not
Type B	match the DP990F's settings, a "beep" will sound. Certain general Piano player CDs may not be playable on the DP990F.
Stereo	Commercial Audio CD (CDs other than those designed for use with the player piano)

 Note that some commercial player piano CDs cannot be played back on the DP990F.

# Storing Your Settings (Memory Backup)

The settings you edit in Function mode will return to their factory-set values when you turn off the power, but the "Memory Backup" function lets you store these settings so that they will not change even when you turn off the power.

 Enter Function mode, choose "buP" (p. 52).



To store the settings, press the [ ▶/■ ] button.



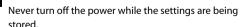
A confirmation message will appear. If you decide to cancel, press the [►/■] button.

### To execute the operation, press the [ ● ] button.



When the memory backup has been completed, the display will indicate "Fnc."

### NOTE



### **MEMO**

For details on the items that are stored, refer to "Parameters Stored in Memory Backup" (p. 79).

# Restoring the Factory Settings (Factory Reset)

When you execute the "Factory Reset" function, the settings you've edited in Function mode will be restored to their factory-set state. Execute this function when you want the settings you saved using the Memory Backup function to be restored to the state they were in when you purchased the DP990F.

### NOTE

When you execute "Factory Reset," all stored settings will be erased and returned to the factory settings.



This function will not erase the songs from internal memory or external memory such as separately sold USB memory.

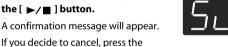
If you want to erase internal memory or external memory such as USB memory, refer to "Initializing the Memory" (p. 60).

1. Enter Function mode, choose "Fct" (p. 52).



 To execute Factory Reset, press the [ ▶/■ ] button.

[ ▶/■ ] button.



Sur

3. If you're sure you want to execute, press the [ ● ]

The factory reset will be executed.

When the Factory Reset has been completed, the following display will appear.



#### NOTE

Never turn off the power while the Factory Reset is being executed.

4. Turn the power off, and then on again (p. 18).

### Connecting to Other Devices

### Connecting a Media

You will be able to accomplish the following once you've connected external media (CD drive, floppy disk drive, or USB memory).

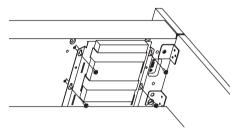
Device	What you can do	
CD drive	Play back music CDs, SMF music files, and songs from a VIMA CD-ROM (VIMA TUNES sold by Roland)	
Floppy disk drive	Play back SMF music files, and save performance data	
USB memory	Play back SMF music files, save performance data, and play back audio files	

\* If you're using new USB memory, you'll need to initialize (format) it on the DP990F. For details, refer to "Initializing the Memory" (p. 60).

### Installing the CD Drive

Attach the CD drive as shown the figure, using the mounting holes on the DP990F's bottom panel.

 For details on installation and connections, refer to the owner's manual of the CD drive.



\* Use a CD drive sold by Roland. We cannot guarantee operation if any other CD drive is used.

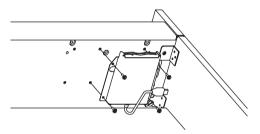
#### **Precautions Concerning Use of the CD**

- You cannot play back CD-R/RW disks to which audio tracks have been added or CDs containing both audio tracks and data (CD Extra).
- The DP990F is capable of playing back only commercial CDs that conform the official standardsthose that carry the "COMPACT DISC DIGITAL AUDIO" logo.
- The usability and sound quality of audio discs that incorporate copyright protection technology and other non-standard CDs cannot be guaranteed.
- For more detailed information on audio discs featuring copyright protection technology and other nonstandard CDs, please consult the disc vendor.
- You cannot save songs and styles to CDs, and you cannot delete songs or styles recorded to CDs.
   Furthermore, you cannot format CDs.

### Installing the Floppy Disk Drive

Attach the floppy disk drive as shown the figure, using the mounting holes on the DP990F's bottom panel.

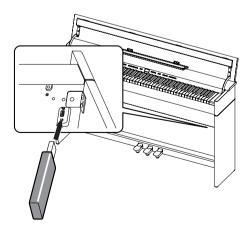
\* For details on installation and connections, refer to the owner's manual of the floppy disk drive.



\* Use a floppy disk drive sold by Roland. We cannot guarantee operation if any other floppy disk drive is used.

### **Connecting USB Memory**

Connect the USB memory to the External Memory connector as shown the figure.



- \* Carefully insert the USB memories all the way in---until it is firmly in place.
- \* Use a USB memory sold by Roland. We cannot guarantee operation if any other USB memory is used.

### Initializing the Memory

Here's how you can completely erase all songs that were saved in internal memory, USB memory (sold separately), or a floppy disk (sold separately).

### NOTE

Once an initialization is performed, all songs that have been saved in memory will be erased. The erased data cannot be recovered, so we recommend that you check the contents of memory before you proceed.

#### NOTE

If you're using new USB memory (sold separately) or floppy disk with the DP990F for the first time, you'll need to initialize (format) the USB memory or floppy disk before using it. The DP990F can't use USB memory or floppy disk that has not been initialized.

If you want to initialize USB memory or a floppy disk, make the following preparations before you proceed.

- Connect your USB memory to the external memory connector.
- Connect your floppy disk drive to the external memory connector, and insert a disk in the drive.
- 1. Enter Function mode, choose "FMt."



### 2. Press the [-] or [+] button to select the memory that you want to initialize.

Setting	Description
Internal Memory	Internal memory
External Memory	USB memory, Floppy disk

#### 3. Press the [ ▶/■ ] button.

A confirmation message will appear.



If you press the [  $\blacktriangleright/\blacksquare$  ] button, you'll return to the previous screen without initializing.

### 4. Press the [ ● ] button.

Initialization will begin.

The entire contents of the selected memory will be erased. Once the memory has been initialized, the following screen will appear.



#### **Caution when Initializing the Memory**

- Never turn off the power while "FMt" is shown in the display.
- If the screen indicates "E," please refer to "Error Messages" (p. 74).
- Initializing the DP990F's internal memory will not initialize settings other than the contents of internal memory. If you want to return settings other than the contents of internal memory to their factory-set condition, execute the Factory Reset operation (p. 58).
- Don't disconnect the USB memory until USB memory initialization has been completed.
- While a floppy disk is being initialized, do not eject the disk from the floppy disk drive or disconnect the cable of the disk drive.

## Changing the External Memory Setting (External Memory Mode)

In some cases, when USB memory is connected to the external memory connector, it may take longer for data to be loaded, or data may fail to be loaded successfully. If this occurs, you may be able to solve the problem by changing the external memory setting

1. Enter Function mode, choose "UMd."



### 2. Press the [-] or [+] button to edit the setting.

Setting	Description
-  -	Mode1
[-2-]	Mode2

### If you change this setting, turn on the power once again.



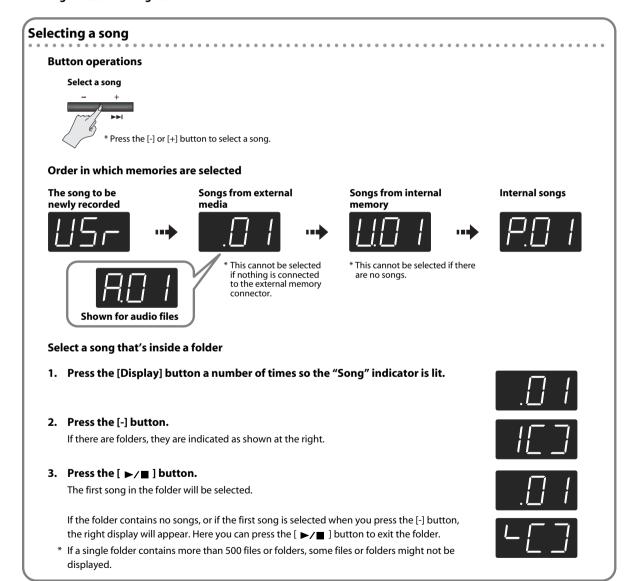
This setting is remembered even when the power is turned off.

### Playing Back Songs on External Media

You can play back songs from a CD, USB memory, or a floppy disk. You can play back songs that are music files (p. 80) or audio files (p. 73).

- Prepare the external media that contains the song you want to play.
  - Insert the floppy disk into the floppy disk drive, or the CD into the CD drive.
- 2. Press the [Display] button a number of times so the Song indicator will light.
- 3. Select the song that you want to play back.
  Refer to "Selecting a song" below.
- 4. Press the [ ▶/■ ] button.

For details on operations during playback, refer to step 3 of "Playing Back Songs" (p. 36)



### Adjusting the Volume of an Audio File or Music CD

You can adjust only the volume of an audio file or music CD.

- 1. Play back the audio file or music CD (p. 61).
- Hold down the [ ►/■ ] button and press the [-] or [+] button.

Setting	
0 – 10	

## Changing the Tempo of an Audio File or Music CD

You can change the tempo of an audio file or a song from a music CD.

- Press the [Display] button a number of times so the "Song" and "Tempo" indicator is lit.
- 2. Press the [-] or [+] button.

Setting	
75 – 100 – 125 (%)	

#### MEMO

If you select a different song or turn off the power, the tempo will revert to a setting of "100."

## Changing the Playback Pitch of a Song (Playback Transpose)

You can also change the playback pitch for a music CD song or an audio file (Playback Transpose; p. 39).

- 1. Play back the audio file or music CD (p. 61).
- 2. While holding down the [Transpose] button, press the [-] or [+] button.

Setting
-6 - 0 - 5 (semitone units)

\* If you've selected a music CD song or audio file, using Playback Transpose may affect the tonal character.

## Minimizing the Sounds in the Center (Center Cancel)

Sounds on a music CD or audio file that are heard from the center (typically the vocal or melody instrument) can be minimized in the playback.

- 1. Play back the audio file or music CD (p. 61).
- 2. Press the [Right] button so its light is turned off.

The volume of the melody or vocal will decrease.

\* For some songs, the sound heard from the center may not disappear completely.

#### MEMO

To turn off the Center Cancel function, press the [Right] button. The Center Cancel function will also be turned off when you select a different song.

\* For some songs, using Center Cancel may affect the tonal

## Switching VIMA TUNES Recommended Tones (Recommended Tone)

You can connect a commercially available USB CD drive to the DP990F, and play back separately sold CD-ROMs created for the VIMA (VIMA TUNES p. 80).

Songs on VIMA CD-ROM (VIMA TUNES) are programmed with "recommended tones" suitable for each song.

When you select a song from a VIMA CD-ROM (VIMA TUNES), recommended tones will be assigned to the DP990F's [E. Piano], [Strings], and [Others] tone buttons, and these three tone buttons will blink. When you press a flashing Tone button, the recommended tone is then selected, enabling you to perform the selected song using a tone matched to that song as it plays back.

You can set the DP990F so that the recommended tones are automatically assigned or not assigned.

1. Enter Function mode, choose "rtn" (p. 52).



#### 2. Press the [-] or [+] button to switch "On" or "OFF."

Settin	Description
g	
On	When you select a song from a VIMA CD-ROM (VIMA TUNES), recommended tones will automatically be assigned to the DP990F's [E. Piano], [Strings], and [Others] tone buttons.
OFF	The recommended tones are not used, and only the DP990F's internal tones can be selected.

This is set to "On" at the factory.

### Saving Your Recorded Performance on External Memory

Here's how to save your recorded performance to USB memory or a floppy disk.

### **Getting ready to save**

1. Enter Function mode, choose "SAv"(p. 52).



### Selecting the Save destination for the Song

- Press the [-] or [+] button to choose "EXt" (external memory).
  - \* If there is no song to save, the following screen will not appear.



2. Press the [ ▶/■ ] button.

A screen in which you can select the save-destination number will appear



Press the [-] or [+] button to select the save destination.

Select a number at which no song has been saved.

If the dot in the lower right of the display is lit, a song has already been saved in that number.

If you want to erase an unwanted song and replace it with the newly saved song, select the number of the unwanted song.



### Saving the Song

1. Press the [ ▶/■ ] button.

The display will indicate "Sur."



If you decide not to save the song, press the  $[ \blacktriangleright / \blacksquare ]$  button.

2. Press the [●] button.

The song will be saved.

NOTE

Never turn off the power while the display indicates "SAv"



\* You can't select another song if the recorded performance has not been saved. Please save the recorded performance (p. 41).

### Deleting a Song from External Memory

Here's how to delete a song that you saved on USB memory or a floppy disk.

### **Getting ready to delete**

1. Enter Function mode, choose "dEL"(p. 52).



### Selecting the song to delete

- Press the [-] or [+] button to choose "EXt" (external memory).
  - \* If there is no song to delete, the following screen will not appear.



2. Press the [ ▶/■ ] button.

A screen in which you can select the delete-destination number will appear



Press the [-] or [+] button to select the delete destination.

### Deleting the song

1. Press the [ ▶/■ ] button.

The display will indicate "Sur."



If you decide not to delete the song, press the [  $\blacktriangleright/\blacksquare$  ] button.

2. Press the [●] button.

The selected song will be deleted.

NOTE

Never turn off the power while the display indicates "dEL."



\* You can't select another song if the recorded performance has not been saved. Please save the recorded performance (p. 41).

### Connecting to Audio Equipment

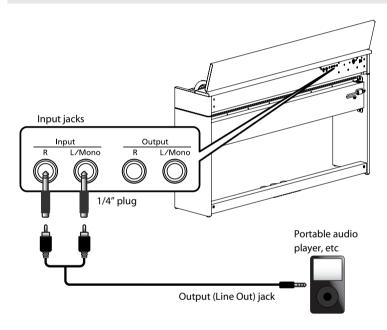
If you connect the DP990F to powered speakers or to an audio system that has line input jacks, you'll be able to hear the DP990F's sound from your powered speakers or audio system. If you connect your portable audio player or other audio playback device to the DP990F's, you'll be able to hear its sound via the DP990F. Use audio cables (sold separately) to make connections.

#### Caution when making audio connections

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.

When connection cables with resistors are used, the volume level of equipment connected to the input jacks may be low. If this happens, use connection cables that do not contain resistors.

### Having Audio from an External Device be Sounded Through the DP990F.



- 1. Turn the volume all the way down on the DP990F and on the audio device you're about to connect.
- 2. Turn off the power to the DP990F and audio device.
- Use audio cables (sold separately) to make the connection.
- 4. Switch on the connected audio device.
- 5. Switch on the DP990F.
- Adjust the volume level on the DP990F and the connected audio device.

The sounds from the connected audio device are played by the DP990F.

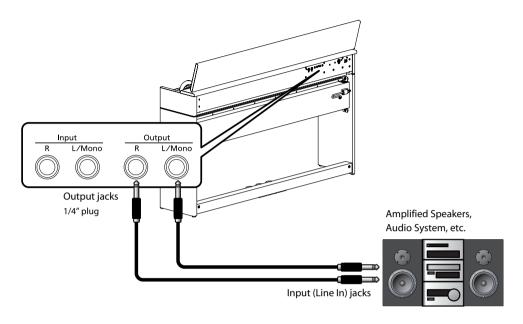


Adjust the volume by using the controls of your audio device.

### **Turning Off the Power**

- Turn the volume all the way down on the DP990F and on the audio device you're about to connect.
- 2. Turn off the DP990F.
- 3. Turn off the connected audio device.

### Connecting Speakers to the DP990F and Outputting Sounds



- Turn the volume all the way down on the DP990F and on the device you're about to connect.
- 2. Turn off the power to the DP990F and speakers.
- 3. Use audio cables (sold separately) to make the connection.
- 4. Switch on the DP990F.
- 5. Switch on the connected speakers.
- 6. Adjust the volume level on the DP990F and the connected speakers.

When you play the DP990F's keyboard, the sound is played from the connected speakers.

### **Turning Off the Power**

- Turn the volume all the way down on the DP990F and on the speakers you're about to connect.
- 2. Turn off the connected speakers.
- 3. Turn off the DP990F.

### Connecting to MIDI Devices

By connecting an external MIDI device and exchanging performance data, you can control one device from the other

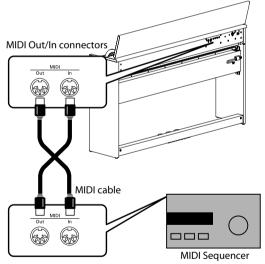
For instance, you can output sound from the other instrument or switch Tones on the other instrument.

#### What's MIDI?

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

The DP990F is equipped with MIDI connectors to let it exchange performance data with external devices. These connectors can be used to connect the DP990F to an external device for even greater versatility.

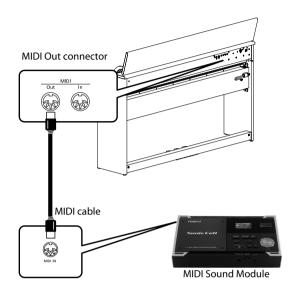
## Connecting a MIDI Sequencer to the DP990F



### NOTE

When the DP990F is connected to a MIDI sequencer, set it to "Local Off." Refer to "Preventing Doubled Notes When Connected to a Sequencer (Local Control)" (p. 68).

## Producing Sounds from a MIDI Sound Module by Playing the DP990F



### **Making the Connection**

- Turn the volume all the way down on the DP990F and on the MIDI device.
- Switch off the power to the DP990F and the MIDI device.
- Use a MIDI cables (sold separately) to connect the MIDI connectors to each other.
- Switch on the power to the DP990F and the connected MIDI device.
- Adjust the volume level on the DP990F and the connected MIDI device.
- You should also set the MIDI transmit channel as needed.

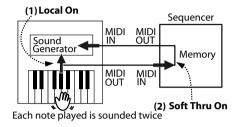


For details on the MIDI transmit channel, refer to "MIDI Transmit Channel Settings (MIDI Transmit Channel)" (p. 68).

## Preventing Doubled Notes When Connected to a Sequencer (Local Control)

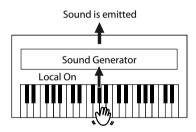
When you have a MIDI sequencer connected, set this parameter to Local Off.

Since the Thru function of your sequencer will normally be turned on, notes played on the keyboard or played back by the recorder will be transmitted to the sound generator by the two routes (1) and (2) shown in the illustration, causing notes to be sounded in duplicate or to be cut off unnaturally. To prevent this, the setting called "Local Off" is used to disconnect the route in (1).



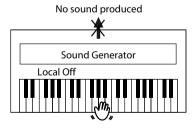
#### **Local On:**

The keyboard and recorder are connected to the internal sound generator.



### **Local Off:**

The keyboard and recorder are not connected to the internal sound generator. No sound will be produced by the keyboard when it is played.



1. Enter Function mode, choose "L. Ct"(p. 52).



#### 2. Press the [-] or [+] button to switch "On" or "OFF."

Setting	Description
On	The Local Control is set to On. The keyboard and recorder are connected to the internal sound generator.
OFF	The Local Control is set to Off. The keyboard and recorder are not connected to the internal sound generator. Playing the keyboard or playing back a song will not produce sound.

## MIDI Transmit Channel Settings (MIDI Transmit Channel)

This setting specifies the MIDI channel on which the DP990F will transmit. MIDI uses sixteen "MIDI channels," which are numbered 1 through 16. By connecting MIDI devices and specifying the appropriate MIDI channel for each device, you can play or select sounds on those devices.

The DP990F will receive all sixteen channels (1–16).

1. Enter Function mode, choose "Ch" (p. 52).



### 2. Press the [-] or [+] button to edit the setting.

Setting (Channel)	
OFF, 1–16	



When set to "OFF," none of the data describing what you play on the keyboard will be transmitted.

## Sending Recorded Performance Data to a MIDI Device (Composer MIDI Out)

When Composer MIDI Out is "On," you can send performance data recorded with the DP990F to a connected MIDI device or computer.

1. Enter Function mode, choose "Out"(p. 52).



#### 2. Press the [-] or [+] button to switch "On" or "OFF."

Setting	Description
On	Performance data is transmitted.
OFF	Performance data is not transmitted.

### Connecting a Computer

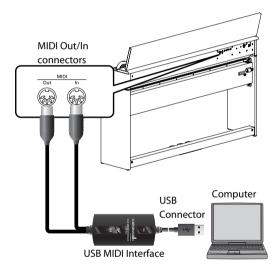
You can use a USB MIDI interface cable (sold separately) to connect the DP990F to your computer.

If the DP990F is connected to a computer in which sequencer software is installed, a song you've recorded on the DP990F can be saved on your computer.

### **Connection Examples**

- \* 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.
- \* In order to make connections to your computer, you must install "MIDI driver" software on your computer. For details, refer to the owner's manual for your MIDI interface.

Use a USB MIDI interface cable to connect the USB connector of your computer to the MIDI connectors of the DP990F.



### Using the V-LINK Function

Connecting the DP990F to a V-LINK compatible image device allows you to control the images with the DP990F.

\* 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.

### V-LINK

V-LINK (**V-LINK**) is a function that allows music and images to be performed together. By using MIDI to connect two or more V-LINK compatible devices, you can easily enjoy performing a wide range of visual effects that are linked to the expressive elements of a music performance.

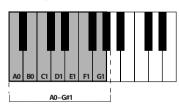


 Hold down the [Reverb] button and press the [Transpose] button.



When V-LINK is on, the bars at the bottom of the display will be lit.

You can control images using the twelve keys at the left end of the keyboard.



\* While V-LINK is switched on, no sound is produced when you press any of the twelve keys at the left end of the keyboard.

### MEMO

To cancel V-LINK, hold down the [Reverb] button and press the [Transpose] button.

### Specifying the V-LINK Transmit Channel

Here's how to specify the channel on which messages used to control video will be sent.

1. Enter Function mode, choose "vLn" (p. 52).



2. Use the [-] or [+] button to edit the setting.

Setting
1–16

## Troubleshooting

If you think there's a problem, read this first.

Symptom	Cause/Action	Page
Power does not turn on	Is the power cord connected correctly?	p. 18
	Is the pedal connected correctly? Plug the cable firmly into the pedal connector.	p. 16
	If you disconnect the pedal cord from the DP990F while the power is on, the pedal effect may remain "stuck" in the On condition. You must power-off the DP990F before connecting or disconnecting the pedal cord.	_
Pedal does not work, or is "stuck"	Could you have changed how the pedal effect is applied? If the damper pedal part is set to Right, the pedal will apply only to the right tone; if it is set to Left, the pedal will apply only to the left tone.	p. 56
	Could Twin Piano be turned on? If Twin Piano is on, the right pedal will affect only the right-hand keyboard zone and the left pedal will affect only the left-hand keyboard zone.	p. 29
	Could you have changed the function of the pedal?  If you've switched the function of the soft pedal or sostenuto pedal, these pedals will not operate as the soft pedal or sostenuto pedal.	p. 57
Unable to read from/write to USB	Are you using (optional) Roland USB memory? Reliable performance cannot be guaranteed if you use non-Roland USB memory products.	_
memory	If you are unable to read or write USB memory successfully, change the External Memory setting.	p. 60
"Buzz" is heard from external devices	Are the external devices connected to more than one AC power outlet?  If you connect external devices, be sure to connect them to the same AC outlet.	_
Device connected to the Input jacks have insufficient volume	Could you be using a connection cable that contains a resistor? Use a connection cable that does not contain a resistor.	_
No sound		
	Could the DP990F's volume or the volume of the connected equipment be turned down?	p. 19
No sound	Could headphones be connected? Could there be a plug inserted in a headphone jack? The speakers will not produce sound if headphones or plug are connected to the headphone jacks.	p. 21
	Has Local Control been set to "OFF"? When Local Control is set to Off, no sound is produced by playing the keyboard. Set Local Control to On.	p. 68
	Could Twin Piano mode be set to "2 (Individual)"?  If you connect headphones when Twin Piano is "on" and the mode setting is "2 (Individual)," you might not hear any sound, depending on how the headphones are connected.	p. 30
No sound when you play back a song	Has Local Control been set to "OFF"? When Local Control is set to Off, no sound is produced by playing the song. Set Local Control to On.	p. 68
	Could the song volume be set to "0"?	p. 38
No sound from the leftmost notes of the keyboard	Is V-LINK switched on? When V-LINK is on, the lowest twelve notes of the keyboard are used to control the image, and will not produce sound.	p. 70
	Are all devices powered on?	_
No sound (when a MIDI device is connected)	Are the MIDI cables connected correctly?	p. 67
connectedy	Do the MIDI channels of the DP990F and the connected device match?	p. 67

Symptom	Cause/Action	Page
Notes don't sound right		
	Could you have made Transpose settings?	p. 34
Pitch of the keyboard or song is	Is the Master Tune setting appropriate?	p. 55
incorrect	Is the setting for the Temperament correct?	p. 55
	Is the settings for the Stretch Tuning correct?	p. 55
Not all the notes you play are sounded	The maximum simultaneous polyphony is 128 voices. If you are playing along with a song and making heavy use of the damper pedal, the number of notes the DP990F is attempting to produce may exceed the maximum polyphony, meaning that some of the notes will drop out.	_
Sounds are heard twice (doubled)	Is the DP990F in Dual play?	p. 28
Sounds are heard twice (doubled) when the keyboard is played	When the DP990F is connected to an external sequencer, set the Local Control to off. Alternatively, the sequencer could be set so its Soft Thru feature is Off.	p. 68
The wrong instrument is selected when you press the [E. Piano], [Strings], or [Others] button	Tone buttons [E. Piano] [Strings] [Others] also operate as buttons that select "Recommended Tones."  With the factory settings, connecting a commercially-available CD-ROM drive to the external memory connector and selecting a song from a CD-ROM produced for the VIMA (VIMA TUNES) will automatically cause sounds appropriate for that song to be assigned to the [E. Piano], [Strings], and [Others] Tone buttons, so that you can select "recommended" sounds by pressing one of these buttons.  You can also make settings so that "recommended" sounds are not automatically assigned.	p. 70
Effect does not apply	When you are using Dual play or Split play, and different effects are specified for the two selected tones, the effect will not be applied to Tone 2 (when using Dual play) or the left-hand tone (when using Split play).	_
Reverberation remains even if You defeat the Reverb effect	The DP990F's piano sound faithfully simulates the depth and resonance of an acoustic piano, and this may give the impression of reverberation even if you've defeated the Reverb effect.	_
The sound of the higher notes suddenly changes from a certain key	On an acoustic piano, the approximately one and a half octaves of notes at the top of the keyboard will continue sounding regardless of the damper pedal. These notes also have a somewhat different tonal character. DP990F faithfully simulate this characteristic of acoustic pianos. On the DP990F, the range that is unaffected by the damper pedal will change according to the key transpose setting.	_
High-pitched ringing is heard	If you hear this in headphones: Piano sounds that have a brilliant and crisp character contain substantial high-frequency components that may sound as though a metallic ringing has been added. This is because the character of an actual piano is being faithfully reproduced, and is not a malfunction. This ringing is more obtrusive if the reverb effect is applied heavily, so you may be able to minimize it by decreasing the reverb.  If you don't hear this in headphones: It is likely that there is some other reason (such as resonances within the unit). Please contact your dealer or a nearby Roland service center.	_
	If you set the volume to the maximum setting, the sound may be distorted depending on how you perform.  If this occurs, turn down the volume.	p. 19
Low notes sound wrong, or are buzzy	If you don't hear this in headphones: Performing at high volumes may cause the speakers or objects near the DP990F to resonate. Fluorescent lights or glass doors may also resonate sympathetically. In particular, this is more likely to occur for lower notes and higher volumes. You can take the following measures to minimize resonances.  Locate the speakers 10–15 cm away from walls or other surfaces.  Keep the volume down.  Move away from the objects that are resonating.	_
	If you hear this in headphones: It is likely that there is some other reason. Please contact your dealer or a nearby Roland service center.	

Symptom	Cause/Action	
Song does not play correctly		
Song won't play	Could the screen be indicating "dEL"? You can't play back an internal song if internal memory contains performance data you recorded. Erase the performance data you recorded before you play back the song.	
Only the sound of a particular instrument in a song does not play  Could a track be muted?  If the button indicator is out, the music on that track is not heard. Press the track button indicator is illuminated.		p. 37
Sound is heard from a muted track	Could the mute volume be set to other than "0"?  If you set this to "0," the sound of a muted track will be completely inaudible.	p. 57
Song volume is low	Could the song volume be lowered?	p. 38
Can't play back a song saved in USB memory	Could the Audio files of the format be played? Audio files of the following format can be played back.  File extension ".WAV"  16-bit linear  "44.1 kHz" sampling rate	
	Is the filename extension "MID"? Files with other filename extensions cannot be handled as song data.	_
ong tempo becomes unstable  When playing a song from USB memory, the tempo may become unstable if there is an excessive amount of performance data.		-
Can't record / play back		
Can't record	Has one of the track buttons for recording been selected?	p. 47 p. 50
	You cannot record audio files.	_
The recorded performance disappeared  Your recorded performance will disappear if you switch off the DP990F's power or select a song. There is no way to recover the lost performance. Before you turn off the power, save your recorded performance in internal Memory.		p. 43

- Reverb (p. 26)
  Saving to internal memory (p. 43)
  Playback (muting) of individual parts (p. 37)

# **Error Messages**

Indication	Meaning	
E.O 1	You can only read the music file. It can not be saved.	
[E.02]	An error occurred during writing.  The external media's protect tab may be in the "Protect" (writing prohibited) position, or the external media may not yet be initialized.	
E. 10	No external media is inserted. Insert the external media and try again.	
E. 11	There is not sufficient free memory in the save destination. Either insert other external media or delete unneeded files and try again.	
E. 14	An error occurred during reading. The external media may be corrupted.  Insert other external media and try again. Alternatively, you can initialize the external media.	
E. 15	The file is unreadable. The data format is not compatible with the DP990F.	
[E. 16]	Data was not called up in time for playback of the song. After waiting several seconds, you may be able to play back the song by pressing the [ ▶/■ ] button again.	
E. 18]	This audio format is not supported. Please use 44.1 kHz 16-bit linear WAV format audio files.	
E.30	The internal memory capacity of the DP990F is full.	
E.40	The DP990F cannot deal with the excessive MIDI data sent from the external MIDI device. Reduce the amount of MIDI data sent to the DP990F.	
E.4 1	A MIDI cable has been disconnected. Connect it properly and securely.	
E.43	A MIDI transmission error has occurred. Check the MIDI cable and connected MIDI device.	
E.5 1	There may be a problem with the system. Repeat the procedure from the beginning. If it is not solved after you have tried several times, contact the Roland service center.	
E.65	The External Memory connector was subjected to excessive current. Make sure that there is no problem with the external media, then turn the power off, then on again.	
	The Panel Lock function is on (p. 35).	
[P-P]	The Twin Piano function is on (p. 29).	
dEL	If you record a performance, then select a song before you've saved your recording, "dEL" will appear, flashing, in the display (p. 41).	

<sup>\*</sup> External Media: USB memory, Floppy Disk, CD-ROM, etc.

# Tone List

### **Piano**

No.	Name
1	Grand Piano1
2	Piano + Str.
3	Harpsichord
4	Grand Piano2
5	Piano + Pad
6	Grand Piano3
7	MagicalPiano
8	Rock Piano
9	Piano+Choir
10	Honky-tonk
11	Coupled Hps.

### E. Piano

No.	Name
1	Pop E.Piano
2	Vintage EP
3	FM E.Piano
4	Vibraphone
5	EP Belle
6	Celesta
7	'60s E.Piano
8	Clav.
9	Mallet Isle
10	Morning Lite
11	Marimba
12	Stage Phaser
13	Ballad Bells
14	′70s E.Piano
15	E.Grand

### Strings

No.	Name	
1	Rich Strings	
2	OrchestraStr	
3	Orchestra	
4	ChamberWinds	
5	Harp	
6	Violin	
7	Velo Strings	
8	Flute	
9	Cello	
10	OrchestraBrs	
11	PizzicatoStr	
12	DecayStrings *	

<sup>\*</sup> Tones indicated by "\*" are suitable for playing layered with a piano tone.

### Others

No.	Name	
1	ChurchOrgan1	
2	ChurchOrgan2	
3	Combo Jz.Org	
4	Ballad Organ	
_5	Accordion	
6	Nason flt 8'	
7	Gospel Spin	
8	Full Stops	
9	Mellow Bars	
10	Light Organ	
11	Lower Organ	
12	'60s Organ	
13	Aerial Choir	
14	Jazz Scat	
15	Harpvox	
16	Glass Pad	
17	Angels Choir	
18	Beauty Vox	
19	Soft Pad	
20	Female Aahs	
21	Male Aahs	
22	Thum Voice	
23	Lunar Strngs	
24	Decay Choir *	
25	Dcy ChoirPad *	
26	Nylon-str.Gt	
27	Steel-str.Gt	
28	Jazz Guitar	
29	AcousticBass	
30	A.Bass+Cymbl	
31	FingeredBass	
32	BrassSection	
33	Alto Sax	
34	Tenor Sax	
GM2		
35	STANDARD Set	
36	ROOM Set	
37	POWER Set	
38	ELEC.Set	
39	ANALOG Set	
40	JAZZ Set	
41	BRUSH Set	
42	ORCH.Set	
* 035	–042 are drum sets.	
43	SFX Set	
44	Piano 1	
45	Piano 1w	
46	Piano 1d	
47	Piano 2	
48	Piano 2w	
49	Piano 3	
50	Piano 3w	
51	Honky-tonk	
52	Honky-tonk w	
53	E.Piano 1	
	1	

No.	lo. Name	
54		
	Detuned EP 1	
55	Vintage EP	
56	′60s E.Piano	
57	E.Piano 2	
58	Detuned EP 2	
59	St.FM EP	
60	EP Legend	
61	EP Phase	
62	Harpsichord	
63	Coupled Hps.	
64	Harpsi.w	
65	Harpsi.o	
66	Clav.	
67	Pulse Clav.	
68	Celesta	
69	Glockenspiel	
70	Music Box	
71	Vibraphone	
72	Vibraphone w	
73	Marimba	
74	Marimba w	
75	Xylophone	
76	TubularBells	
77	Church Bell	
78	Carillon	
79		
80	Santur Organ 1	
81	Organ 1 TremoloOrgan	
82	'60s Organ	
83	Organ 2	
84	Perc.Organ 1	
85	Chorus Organ	
86	Perc.Organ 2	
87	Rock Organ	
88	Church Org.1	
89	Church Org.2	
90	Church Org.3	
91	Reed Organ	
92	Puff Organ	
93	Accordion 1	
94	Accordion 2	
95	Harmonica	
96	Bandoneon	
97	Nylon-str.Gt	
98	Ukulele	
99	Nylon Gt o	
100	Nylon Gt 2	
101	Steel-str.Gt	
102	12-str.Gt	
103	Mandolin	
104	Steel+Body	
105	Jazz Guitar	
106	Hawaiian Gt	
107	Clean Guitar	
108	Chorus Gt 1	
109	Mid Tone Gt	
110	Muted Guitar	

	T	
No.	Name	
111	Funk Guitar1	
112	Funk Guitar2	
113	Chorus Gt 2	
114	Overdrive Gt Guitar Pinch	
116	DistortionGt	
117	Gt Feedback1	
118	Dist.Rtm Gt	
119	Gt Harmonics	
120	Gt Feedback2	
121	AcousticBass	
122	FingeredBass	
123	Finger Slap	
124	Picked Bass	
125	FretlessBass	
126	Slap Bass 1	
127	Slap Bass 2	
128	Synth Bass 1	
129	WarmSyn.Bass	
130	Synth Bass 3	
131	Clav.Bass	
132	Hammer	
133	Synth Bass 2	
134	Synth Bass 4	
135	RubberSyn.Bs	
136	Attack Pulse	
137	Violin	
138	Slow Violin	
139	Viola	
140	Cello	
141	Contrabass	
142	Tremolo Str.	
143	PizzicatoStr	
144	Harp	
145	Yang Qin	
146	Timpani	
147	Strings	
148	Orchestra	
149	'60s Strings	
150	Slow Strings	
151	Syn.Strings1	
152	Syn.Strings3	
153	Syn.Strings2	
154	Choir 1	
155	Choir 2	
156	Voice	
157	Humming	
158	Synth Voice	
159	Analog Voice	
160	OrchestraHit	
161	Bass Hit	
162	6th Hit	
163	Euro Hit	
164	Trumpet	
165	Dark Trumpet	
166	Trombone 1	
167	Trombone 2	

No.	Name	
168	Bright Tb	
169	Tuba	
170	MuteTrumpet1	
171	MuteTrumpet2	
172	French Horn1	
173	French Horn2	
174	Brass 1	
175	Brass 2	
176	Synth Brass1	
177	Synth Brass3	
178	AnalogBrass1	
179	Jump Brass	
180	Synth Brass2	
181	Synth Brass4	
182	AnalogBrass2	
183	Soprano Sax	
184	Alto Sax	
185	Tenor Sax	
186	Baritone Sax	
187	Oboe	
188	English Horn	
189	Bassoon	
190	Clarinet	
191	Piccolo	
192	Flute	
193	Recorder	
194	Pan Flute	
195	Bottle Blow	
196	Shakuhachi	
197	Whistle	
198	Ocarina	
199	Square Lead1	
200	Square Lead2	
201	Sine Lead	
202	Saw Lead 1	
203	Saw Lead 2	
204	Doctor Solo	
205	Natural Lead	
206	SequencedSaw	
207	Syn.Calliope	
208	Chiffer Lead	
209	Charang	
210	Wire Lead	
211	Solo Vox	
212	5th Saw Lead	
213	Bass+Lead	
214	Delayed Lead	
215	Fantasia	
216	Warm Pad	
217	Sine Pad	
218	Polysynth	
219	Space Voice	
220	Itopia	
221	Bowed Glass	
222	Metallic Pad	
223	Halo Pad	
224	Sweep Pad	

No.	Name	
225	Ice Rain	
226	Soundtrack	
227	Crystal	
228	Synth Mallet	
229	Atmosphere	
230	· · · · · · · · · · · · · · · · · · ·	
230	Brightness Goblins	
232	Echo Drops	
233	Echo Brops	
234	Echo Pan	
235	Star Theme	
236	Sitar 1	
237	Sitar 2	
238	Banjo	
239	Shamisen	
240	Koto	
240	Taisho Koto	
	Kalimba	
242		
243	Bagpipe	
244	Fiddle Shanai	
	Tinkle Bell	
246		
247	Agogo	
248	Steel Drums	
249	Woodblock	
250 251	Castanets	
	Taiko	
252	Concert BD  Melodic Tom1	
253		
254	Melodic Tom2	
255	Synth Drum TR-808 Tom	
256 257	Elec.Perc.	
258		
259	Reverse Cym.	
	Gt FretNoise	
260 261	Gt Cut Noise	
	BsStringSlap Breath Noise	
262	Fl.Key Click	
263	Seashore	
264	Rain	
266 267	Thunder Wind	
268	Stream	
269	Bubble	
270	Bird 1	
271	Dog	
272	Horse Gallop	
273	Bird 2	
274	Telephone 1	
275	Telephone 2	
276	DoorCreaking	
277	Door	
278	Scratch	
279	Wind Chimes	
280	Helicopter	
281	Car Engine	

No.	Name
282	Car Stop
283	Car Pass
284	Car Crash
285	Siren
286	Train
287	Jetplane
288	Starship
289	Burst Noise
290	Applause
291	Laughing
292	Screaming
293	Punch
294	Heart Beat
295	Footsteps
296	Gun Shot
297	Machine Gun
298	Laser Gun
299	Explosion

<sup>\*</sup> In the tone group "Others" when you hold down the [-] or [+] button to switch tone in succession, the tones will stop changing at number 35 and number 44.

To select the next sound, release the [-] or [+] button, then press it again.

# **Internal Song List**

No.	Song Name	Composer
1	Polonaise op.53	Fryderyk Franciszek Chopin
	Valse, op.34-1	Fryderyk Franciszek Chopin
3	Nocturne No.20	Fryderyk Franciszek Chopin
4	My Pleasure (*)	Masashi Hirashita
 5	La Fille aux Cheveux de Lin	Claude Achille Debussy
6	La Campanella	Franz Liszt
7	Trio Grande (*)	John Maul
8	Scherzo No.2	Fryderyk Franciszek Chopin
9	Étude, op.10-12	Fryderyk Franciszek Chopin
10	Sonate No.15	Wolfgang Amadeus Mozart
11	Liebesträume 3	Franz Liszt
12	Étude, op.10-3	Fryderyk Franciszek Chopin
13	Je te veux	Erik Satie
14	Valse, op.64-1	Fryderyk Franciszek Chopin
15	Golliwog's Cakewalk	Claude Achille Debussy
16	Fantaisie-Impromptu	Fryderyk Franciszek Chopin
17	Arabesque 1	Claude Achille Debussy
18	An der schönen, blauen Donau	Johann Strauss, Sohn
 19	Auf Flügeln des Gesanges	Felix Mendelsshon
20	Mazurka No.5	Fryderyk Franciszek Chopin
21	Gymnopédie 1	Erik Satie
22	Étude, op.25-1	Fryderyk Franciszek Chopin
23	Clair de Lune	Claude Achille Debussy
24	Étude, op.10-5	Fryderyk Franciszek Chopin
25	Dr. Gradus ad Parnassum	Claude Achille Debussy
26	Grande Valse Brillante	Fryderyk Franciszek Chopin
27	La prière d'une Vierge	Tekla Badarzewska
28	Course en Troïka	Peter Ilyich Tchaikovsky
29	To The Spring	Edvard Hagerup Grieg
30	Valse, op.64-2	Fryderyk Franciszek Chopin
31	Radetzky Marsch	Johann Baptist Strauss
32	Träumerei	Robert Alexander Schumann
33	Moments Musicaux 3	Franz Peter Schubert
34	Prèlude, op.28-15	Fryderyk Franciszek Chopin
35	Harmonious Blacksmith	Georg Friedrich Händel
36	Ungarische Tänze 5	Johannes Brahms
37	Türkischer Marsch	Ludwig van Beethoven
38	Nocturne No.2	Fryderyk Franciszek Chopin
		Felix Mendelsshon
39 	Frühlingslied	
40	Präludium	Johann Sebastian Bach
41	Jägerlied	Felix Mendelsshon

No.	Song Name	Composer		
42	Menuet Antique	Maurice Ravel		
43	Für Elise	Ludwig van Beethoven		
44	Türkischer Marsch	Wolfgang Amadeus Mozart		
45	Ständchen	Franz Peter Schubert		
46	Humoreske	Antonín Dvořák		
47	Blumenlied	Gustav Lange		
48	Alpenglöckchen	Theodor Oesten		
49	Menuett G dur	Ludwig van Beethoven		
50	Venezianisches Gondellied	Felix Mendelsshon		
51	Alpenabendröte	Theodor Oesten		
52	Farewell to the Piano	Ludwig van Beethoven		
53	Brautchor	Wilhelm Richard Wagner		
54	Battle of Waterloo	Wilma Anderson-Gilman		
55	Wiener Marsch	Carl Czerny		
56	Le Coucou	Louis Claude Daquin		
57	Menuett G dur	Johann Sebastian Bach		
58	Spinnerlied	Albert Ellmenreich		
59	Gavotte	François Joseph Gossec		
60	Heidenröslein	Gustav Lange		
61	Zigeuner Tanz	Heinrich Lichner		
62	La Cinquantaine	Gabriel Marie		
63	Csikos Post	Hermann Necke		
64	Dolly's Dreaming Awakening	Theodor Oesten		
65	La Violette	Louis Streabbog		
66	Fröhlicher Landmann	Robert Alexander Schumann		
67	Sonatine op.36-1	Muzio Clementi		
68	Sonatine op.20-1	Friedrich Kuhlau		
69	Sonatine No.5	Ludwig van Beethoven		
70	Late Night Chopin (*)	John Maul		
71	Fly Free (*)	John Maul		
72	L'éveil de l'amour (*)	Masashi Hirashita		

- \* Songs marked by an asterisk (\*) are original songs composed for the Roland Corporation. The copyrights to these songs are owned by the Roland Corporation.
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# Parameters Stored in Memory Backup

Items	Page		
Brilliance	p. 54		
Transpose Mode	p. 54		
Dual Balance	p. 55		
Master Tuning	p. 55		
Stretch Tuning	p. 55		
Temperament (Temperament, Temperament Key)	p. 55		
Damper Resonance	p. 56		
String Resonance	p. 56		
Key Off Resonance	p. 56		
Damper Pedal Part	p. 56		
MIDI Transmit Channel	p. 68		
V-LINK Transmit Channel	p. 70		
Track Assign	p. 57		
CD/Audio Type	p. 58		
Reverb (On/Off, Depth)	p. 26		
Split Point	p. 33		
Twin Piano Mode	p. 30		
Key Touch	p. 27		
Settings stored immediately, whenever a change is made (Memory Backup procedure not needed)			
External Memory Mode	p. 60		

# Music Files That the DP990F Can Use

### What Are Music Files?

Music files contains musical information such as how long the key for a corresponding pitch is played, the force applied to the key played, and other such information. When the performance data (music file) is sent by the USB memory or CD-ROM, the song will be played exactly as specified by the data. This is different than an audio CD, since the music file does not contain a recording of the sound itself. This makes it possible to change tempos and keys freely, allowing you to use it in many different ways.

### **Regarding Copyright**

Use of the song data contained in the DP990F or any other song data supplied with it for any purpose other than private, personal enjoyment without the permission of the copyright holder is prohibited by law. Additionally, this data must not be copied, nor used in a secondary copyrighted work without the permission of the copyright holder.

Please be aware that if you create derivative works that are based on existing copyrighted material, such as commercially available SMF music files, such works may violate copyright law if used for any purpose other than personal enjoyment. Roland takes no responsibility for any copyright violation you may commit by creating such works.

### The DP990F Allows You To Use the Following Music Files

# VIMA TUNES **VIMA**

VIMA TUNES is a Roland specification for music files that contains image and lyric data, allowing you to enjoy songs with lyrics and images simultaneously. When data bearing the "VIMA TUNES" logo is played back on a device that bears the same logo, lyrics can be shown on the screen of a connected external display or television, letting you enjoy karaoke or watch a slide show.

- \* This instrument (DP990F) is not able to play back VIMA TUNES images.
- \* You can specify whether the recommended tones will be assigned automatically (p. 62).

### **SMF Music Files**

SMFs (Standard MIDI Files) use a standard format for music file that was formulated so that files containing music file could be widely compatible, regardless of the manufacturer of the listening device. An enormous variety of music is available, whether it be for listening, for practicing musical instruments, for Karaoke, etc.

### General MIDI

The General MIDI is a set of recommendations which seeks to provide a way to go beyond the limitations of proprietary designs, and standardize the MIDI capabilities of sound generating devices. Sound generating devices and music files that meets the General MIDI standard bears the General MIDI logo. Music files bearing the General MIDI logo can be played back using any General MIDI sound generating unit to produce essentially the same musical performance.

## General MIDI 2 MIDI 2

The upwardly compatible General MIDI 2 recommendations pick up where the original General MIDI left off, offering enhanced expressive capabilities, and even greater compatibility. Issues that were not covered by the original General MIDI recommendations, such as how sounds are to be edited, and how effects should be handled, have now been precisely defined. Moreover, the available sounds have been expanded. General MIDI 2 compliant sound generators are capable of reliably playing back music files that carry either the General MIDI or General MIDI 2 logo.

In some cases, the conventional form of General MIDI, which does not include the new enhancements, is referred to as "General MIDI 1" as a way of distinguishing it from General MIDI 2.

## GS Format

The GS Format is Roland's set of specifications for standardizing the performance of sound generating devices. In addition to including support for everything defined by the General MIDI, the highly compatible GS Format additionally offers an expanded number of sounds, provides for the editing of sounds, and spells out many details for a wide range of extra features, including effects such as reverb and chorus. Designed with the future in mind, the GS Format can readily include new sounds and support new hardware features when they arrive. Since it is upwardly compatible with the General MIDI, Roland's GS Format is capable of reliably playing back GM Scores equally as well as it performs GS music files (music files that have been created with the GS Format in mind).

## XGlite X

XG is a tone generator format of YAMAHA Corporation, that defines the ways in which voices are expanded or edited and the structure and type of effects, in addition to the General MIDI 1 specification. XGlite is a simplified version of XG tone generation format. You can play back any XG music files using an XGlite tone generator. However, keep in mind that some music files may play back differently compared to the original files, due to the reduced set of control parameters and effects.

# **Main Specifications**

## DP990F/DP990RF: Digital Piano

<keyboard></keyboard>				
Karkanad	DP990F: 88 keys (PHA II with Escapement)			
Keyboard	DP990RF: 88 keys (PHA II Ivory Feel Keyboard with Escapement)			
Touch Sensitivity	Touch: 5 levels, Fixed Touch			
Keyboard Mode	Whole, Dual (volume balance adjustable), Split (split point adjustable), Twin Piano			
<sound generator=""> Conforms to GM2/GS/XGlite</sound>				
Piano Sound	nd SuperNATURAL Piano Sound			
Max. Polyphony	128 voices			
Tones	337 tones (including 8 drum sets, 1 SFX set)			
Temperament	8 types, selectable temperament Key			
Stretched Tuning	On, Off			
Master Tuning	415.3–466.2 Hz (adjustable in increments of 0.1 Hz)			
Transpose	Transpose: -6-+5 (in semitones) Playback Transpose (with Audio CD/Audio File): -6-+5 (in semitones)			
	Reverb (Off, 10 levels)			
Effects	Only for Piano Tones: Damper Resonance (Off, 10 levels), String Resonance (Off, 10 levels), Key Off Resonance (Off, 10 levels)			
	Only for Organ Tones: Rotary Speaker Effect (Slow/Fast)			
<recorder></recorder>	·			
Tracks	3 tracks			
Songs	Recorder section: 1 song Internal Memory: Max. 99 songs			
Note Storage	Approx. 30,000 notes			
Control	Song Select, Play/Stop, Rec, Rewinding, Fast-forwarding, Previous song, Next song, Track Mute, Mute Volume, Tempo, Tempo Mute, All Songs Play, Count-in, Song Volume			
	Center Cancel (only for audio playback)			
Tempo	Quarter note = 10 to 500, Audio Playback Speed: 75–125%			
Resolution	120 ticks per quarter note			
Metronome	Beat: 2/2, 0/4, 2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 3/8, 6/8, 9/8, 12/8			
med Ollollle	Volume: 0–10 levels			

<internal memory=""></internal>				
Songs	Max. 99 songs			
Storage format	Standard MIDI Files (Format 0)			
<external memory=""></external>				
External Storage	USB Memory Floppy Disk (when using an optional floppy disk drive)			
Types of data that can be played	Standard MIDI Files (Format 0/1) Roland Original Format (i-Format) Audio File (WAV 44.1 kHz / 16-bit Linear Format) Audio CDs (CD-DA) (when using a CD drive)			
Storage format	Standard MIDI Files (Format 0)			
<others></others>				
Internal Songs	72 songs			
Rated Power Output	12 W x 2			
Speakers	12 cm x 2 (with Speaker box)			
Display	7 segments, 3 characters, LED			
Control	Volume			
Pedal	Damper (capable of continuous detection), Soft (capable of continuous detection, function assignable), Sostenuto (function assignable)			
Other Function	Panel Lock, V-LINK			
Connectors	DC inlet, Input jacks (L/Mono, R), Output jacks (L/Mono, R), MIDI connectors (In, Out), Phones jack (Stereo) x 2, External Memory connector			
Power Consumption	24 W			
Dimensions	1,398 (W) x 344 (D) x 781 (H) mm (with lid close) 55-1/16 (W) x 13-9/16 (D) x 30-3/4 (H) inches  1,398 (W) x 339 (D) x 974 (H) mm (with lid open) 55-1/16 (W) x 13-3/8 (D) x 38-3/8 (H) inches			
Weight	DP990F: 47.8 kg/105 lbs 7 oz			
weight	DP990RF: 48.9 kg/107 lbs 13 oz			
Accessories	Owner's Manual, AC Adaptor, Power Cord (for AC Adaptor), Headphones Hook, Cord Clamps, Stabilizer			
Options	Headphones, USB Memory, USB Floppy Disk Drive, USB CD Drive			

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

# Index

Α		K	
AC Adaptor	16	Key	53
All Songs Play		Key Off Resonance	
Audio File		Key Touch	
		[Key Touch] button	
В			
Brilliance	53–54, 79	L	
		Left pedal	20
C		Left Pedal Function	
CD Drive	59	Local Control	54, 68
CD/Audio Type	54, 58, 79	8.6	
Center Cancel	62	M	
Center Pedal		Master Tuning	
Center Pedal Function	53	Memory Backup	54, 58
Center/Left Pedal Function	57	Metronome	23
Composer MIDI Out	54	[Metronome] button	15
Computer	69	MIDI	67
Count-in	25	MIDI Out/In connector	
_		MIDI Sequencer	67
D		MIDI Sound Module	67
Damper Pedal Part	53, 56, 79	MIDI Transmit Channel	54, 68, 79
Damper Resonance	53, 56, 79	Music CD	62
DC In jack (DC Inlet)		Music Files	80
Deleting	45, 64	Music rest	17
Deleting a Song	54	Mute Volume	54, 57
Display	14	Muting	37
[Display] button	14		
Dual Balance	53, 55, 79	0	
Dual Play	28	Octave Shift	53–54
_		Output jack	15
E		_	
Ext. Memory Mode	60	Р	
External Memory connector	15	Pair	30
External Memory Mode	54, 79	Panel Lock	35
_		Parts	37
F		Pedal	15
Factory Reset	54, 58	Pedal connector	15
Floppy Disk Drive	59	Pedal jack	16
Forward button		Phones jack	15
Function Mode	52	Play/Stop button	15
_		Playback Transpose	39, 62
G		Playing Back	36, 61
General MIDI	80	[Power] switch	15
General MIDI 2	80	_	
Ground terminal	15	R	
GS Format	80	[Rec] button	15
		Recommended Tone	54, 62
Н		Recording	40
Headphone	21	Reverb	26
Headphone Hook		Reverb (On/Off, Depth)	79
· r		[Reverb] button	
I		Rewind button	14
Indicator	14		
Individual		S	
Initializing		Save a Song	54
Initializing the Memory		Saving	
Input jack		Selecting a Song	
F J		SMF Music Files	

SMF with Lyrics	
Soft Pedal	
Sostenuto Pedal	
Speakers	
Split Play	
Split Point 33,	
Stretch Tuning 53, 55,	
String Resonance 53, 56,	79
Т	
Temperament 53, 55,	79
Temperament Key 53, 56,	
Tempo Mute 54,	
Tone button	
Track Assign 54, 57,	79
Track button	15
Tracks	37
Transpose	34
[Transpose] button	14
Transpose Mode 53–54,	79
Twin Piano	29
[Twin Piano] button	14
Twin Piano Mode 30,	79
U	
USB Memory	59
,	
V	
VIMA TUNES	80
V-LINK	70
V-LINK Transmit Channel 54, 70,	79
[Volume] slider	14
x	
XG lite	ጸበ

### For EU Countries



- This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.
- Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit den Hausmüll entsorgt werden.
- Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.
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- Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como esté regulado en cada zona. Los productos con este símbolo no se deben denositar con los residuos domésticos.
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- Dette symbol angiver, at i EU-lande skal dette produkt opsamles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.
- Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall.

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- Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tällä merkinnällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana.
- Ez a szimbólum azt jelenti, hogy az Európai Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbólummal ellátott termékeket nem szabad a háztartási hulladék közé dobni.
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- Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácím odpadem.
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- For China

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外壳 (壳体)	×	0	0	0	0	0
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This product complies with the requirements of EMC Directive 2004/108/EC.

For the USA

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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.

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- For Canada

### NOTICE

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### **AVIS**

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For C.A. US (Proposition 65)

### **WARNING**

This product contains chemicals known to cause cancer, birth defects and other reproductive harm, including lead.

For the U.K.

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.

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