Roland®

MUSIC PLAYER MT90s

Thank you, and congratulations on your choice of the Roland MT 90s Music Player.

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

Main Features

■ Easy operation

You can enjoy music files as easily as on a CD player.

■ Convenient functions for practicing

You can adjust the tempo and use features such as the metronome, count-in, and repeat playback to efficiently practice your musical instrument.

■ Compact design includes built-in speaker

Since the speaker is built in, troublesome connections are not required.

■ Play or mute specific individual tracks

For example you might use this to learn just the piano part by listening to it by itself. Alternatively, you could mute just the piano part and play along with the orchestra part.

■ Compatible with SMF (Standard MIDI Files)

Since the MT 90s is compatible with Standard MIDI Files, you can enjoy a wide selection of music files.

■ Sound generator supports both General MIDI System 2 and GS Format

Music files bearing either the General MIDI, General MIDI 2 or GS logo can be reliably played back.
Standard MIDI File music files you created on your personal computer for GM/GM2/GS sound module can also be played.

■ Connect a microphone and sing along with music files

An echo processor is built-in—enhancing the excitement of "karaoke" sing-alongs accompanied by music files.

02342501

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

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

USING THE UNIT SAFELY

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

About ⚠ WARNING and ⚠ CAUTION Notices

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

About the Symbols

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

-------------------------------- **ALWAYS OBSERVE THE FOLLOWING** --------------------------------

⚠ WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.
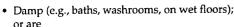
- Do not open (or modify in any way) the unit or its AC adaptor.

- 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 use or store the unit in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

⚠ WARNING

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

- 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.

- 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.
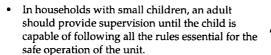
⚠ WARNING

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

....

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

....

- 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.

....

⚠ 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.

....

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

....

- 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.

....

- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.

....

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

....

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

....

IMPORTANT NOTES

In addition to the items listed under "USING THE UNIT SAFELY" on page 2 and 3, please read and observe the following:

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).

- 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.

- Observe the following when using the unit's floppy disk drive. For further details, refer to "Before Using Floppy Disks" (p. 5).
  - Do not place the unit near devices that produce a strong magnetic field (e.g., loudspeakers).
  - Install the unit on a solid, level surface.
  - Do not move the unit or subject it to vibration while the drive is operating.

- 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. Excessive heat can deform or discolor the unit.

- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.

- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Additional Precautions

- Unfortunately, it may be impossible to restore the contents of data that was stored on a floppy disk 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.

- Never strike or apply strong pressure to the display.

- A small amount of noise may be heard from the display during normal operation.

- 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, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

- Use a cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.
  - Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

Before Using Floppy Disks

Handling the Floppy Disk Drive

- Install the unit on a solid, level surface in an area free from vibration. If the unit must be installed at an angle, be sure the installation does not exceed the permissible range: upward, 25°; downward, 35°.

- Avoid using the unit immediately after it has been moved to a location with a level of humidity that is greatly different than its former location. Rapid changes in the environment can cause condensation to form inside the drive, which will adversely affect the operation of the drive and/or damage floppy disks. When the unit has been moved, allow it to become accustomed to the new environment (allow a few hours) before operating it.

- To insert a disk, push it gently but firmly into the drive— it will click into place. To remove a disk, press the EJECT button firmly. Do not use excessive force to remove a disk which is lodged in the drive.

- Never eject a disk while reading or writing is in progress, since that can damage the magnetic surface of the disk, rendering it unusable. (The disk drive's indicator will light up at full brightness when the drive is busy reading or writing data. Ordinarily, the indicator will be less brightly lighted, or be extinguished.)

- Remove any disk from the drive before powering up or down.

- To prevent damage to the disk drive's heads, always try to hold the floppy disk in a level position (not tilted in any direction) while inserting it into the drive. Push it in firmly, but gently. Never use excessive force.

- To avoid the risk of malfunction and/or damage, insert only floppy disks into the disk drive. Never insert any other type of disk. Avoid getting paper clips, coins, or any other foreign objects inside the drive.

Handling Floppy Disks

- 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° C (50 to 122° 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.

Rear side of the disk

Write Protect Tab

Write (can write new data onto disk)

Protect (prevents writing to 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 dust-ridden disk, you risk damaging the disk, as well as causing the disk drive to malfunction.

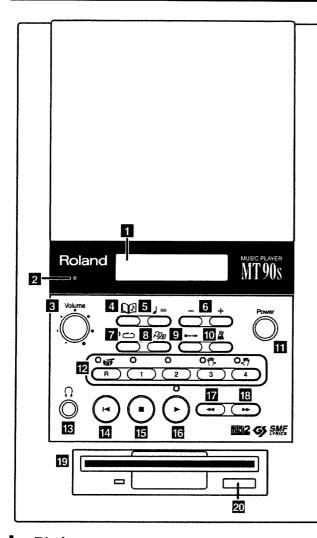---

* GS (✦) is a registered trademark of Roland Corporation.

Contents

Panel Descriptions

Front Panel

1 Display
This displays information regarding the operation you are performing (p. 9).

2 Beat Indicator
Flashes in time with the beat of the song or metronome.

3 [Volume] Knob
You can adjust the overall volume level (p. 11).

4 [📖 (Song)] Button
This is used to select a song (p. 14).
Pressing this displays the Basic screen (p. 9).

5 [♩= (Tempo)] Button
Adjusts the tempo (p. 18).

6 [-]/[+] Buttons
These change the value of the selected parameter or setting.
Pressing both the [-] and [+] buttons simultaneously returns the setting of a particular item to its original value.

7 [🗁 (Repeat)] Button
Repeats playback of the specified song or section (p. 16, p. 25).

8 [🏳 (Mark)] Button
Places a marker within a song (p. 23).
Pressing this displays the Marker screen (p. 9).

9 [•⋯► (Count-in)] Button
Plays the Count-In sound before a song is played back, or at the end of the intro (p. 22).

10 [🎼 (Metronome)] Button
Activates the built-in metronome (p. 19).

11 [Power] Button
This is used to switch the power on and off (p. 10).

12 Track Buttons
The five buttons below are called Track buttons.
You can use these buttons to select and play back a song's performance parts (tracks) (p. 21).
[R] Button
[1] Button
[2] Button
[3] Button
[4] Button

13 Phones Jack
Headphones (sold separately) are connected here (p. 11).

14 [|◄ (Reset)] Button
Returns to the beginning of the song.

15 [■ (Stop)] Button
Stops playback.

16 [► (Play)] Button
Start playback.

17 [◄◄ (Bwd)] Button
Rewinds the song.

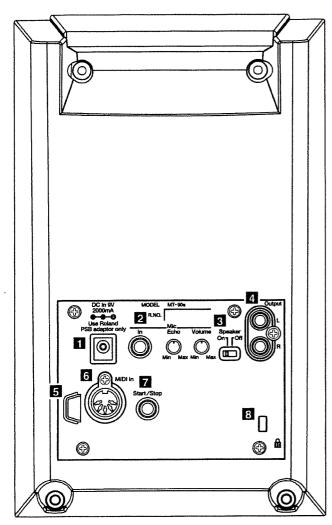### 18 [►► (Fwd)] Button
Fast-forwards the song.

19 Disk Drive
Insert a floppy disk here (p. 14).

20 Eject Button
Ejects a floppy disk from the disk drive.

Rear Panel

1   DC In jack

Connect the included AC adaptor to this jack (p. 10).

2   Mic

Mic In jack

Microphone (sold separately) are connected here (p. 11).

Mic Echo Knob

Adjusts the amount of echo applied to the sound from the microphone (p. 11).

Mic Volume Knob

Adjusts the volume of the microphone (p. 11).

3   Speaker Switch

Switches the sound from the MT 90s's speaker on and off (p. 37).

4   Output R/L Jacks

Using optional audio cables, you can connect external instruments such as digital pianos here (p. 37).

5   Cord Hook

Hook the cord of the included AC adapter (p. 10).
This will prevent problems such as unintentional loss of power due to the power cord being accidentally unplugged, and will keep the DC In jack from being damaged.

6   MIDI In Connector

Using an optional MIDI cable, you can connect MIDI devices here (p. 37).

7   Start/Stop Jack

By connecting a pedal switch (optional) here, you can then use the pedal to start and stop performances (p. 36).
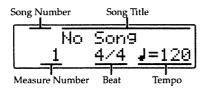
8   MicroSaver Security Slot ( )

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 Web:www.kensington.com
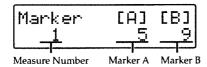
About the Screen

■ Basic Screen

When you turn on the power to the MT 90s, the following screen appears.

Song Number   Song Title

```
┌─────────────────────┐
│     No  Song        │
│   1    4/4  ♩=120   │
└─────────────────────┘
```

Measure Number   Beat   Tempo

If a different screen appears, pressing the [📖 (Song)] button once or a number of times returns you to the basic screen.

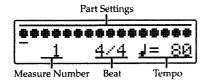## ■ Marker Screen (p. 23–p. 26)

This screen appears by pressing the [A/B (Mark)] Button. You can then set the markers.

```
┌─────────────────────┐
│ Marker   [A]  [B]   │
│    1      5    9    │
└─────────────────────┘
```

Measure Number   Marker A   Marker B

■ 16-track Screen (p. 30–p. 31)
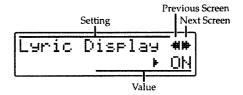
This screen appears by pressing the [2] button while holding down the [📖 (Song)] button.
You can then work on each Part individually.
Settings made in this screen become ineffective once you return to the Basic screen.

Part Settings

```
┌─────────────────────┐
│ ●●●●●●●●●●●●●●●●    │
│ ─  1    4/4  ♩= 80  │
└─────────────────────┘
```

Measure Number   Beat   Tempo

■ Setting Screen (p. 32–p. 36 and other pages)

Make the various settings in this screen.
Arrows appear in the upper right of the display with settings containing more than one parameter that can be changed.
Press [◄◄ (Bwd)] or [►► (Fwd)] button to switch the screen. Change the value with the [-] and [+] buttons.

                 Previous Screen
     Setting   │ Next Screen

```
┌─────────────────────┐
│ Lyric Display  ◄►   │
│              ► ON   │
└─────────────────────┘
```

Value

MEMO

If "E.00" or another number prefixed with an E appears on screen, take a look at "Error Messages/Other Messages" (p. 41).

■ Connecting the AC Adaptor

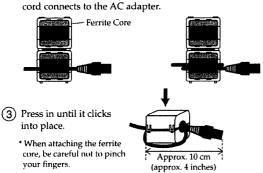**1.** Attach the ferrite core to the included AC power cord.

Be sure to attach the ferrite core before using this product.

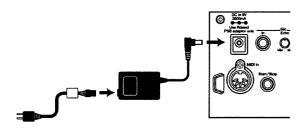① Attach it to the AC power cord close to where the AC power cord connects to the AC adapter.

— Ferrite Core

② Wind the cord around one turn.

③ Press in until it clicks into place.

* When attaching the ferrite core, be careful not to pinch your fingers.

Approx. 10 cm
(approx. 4 inches)

⚠ When closing the ferrite core, do not squeeze the cord excessively. Damaged cords can easily become a shock or fire hazard.

2. Connect the AC cord to the AC adaptor provided with the MT 90s.

3. Connect the AC adaptor to the DC In connector on the rear panel.

4. As shown in the diagram, loop the AC cord around the cord hook to fasten it in place.

This will prevent problems such as unintentional loss of power due to the power cord being accidentally unplugged, and will keep the AC adaptor jack from being damaged.

5. Plug the AC cord into a power outlet.

NOTE

Use only the ferrite core, AC adaptor and AC cord that are supplied with the MT 90s.

■ Turning the Power On and Off

Be sure to follow the steps below when turning the power on or off. Carrying out this procedure incorrectly may result in malfunctioning or in damage to the speakers and other parts.

Turning On the Power

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

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.

Volume

2. Press the MT 90s's [Power] button to turn on the power.

Power

Adjust the volume at appropriate levels.

NOTE

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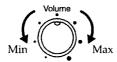
Turning Off the Power

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

Volume

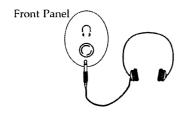**2.** Turn off the MT 90s by pressing the [Power] button.

■ Adjusting the Volume

1. **Adjust the volume with the [Volume] knob.**
Rotating the knob toward the right will increase the volume, and rotating it toward the left will decrease the volume.

■ Connecting a Headphones

1. **Connect your headphones to the Phones jack.**

The sound from the built-in speaker stops. Now, sound is heard only through the headphones.

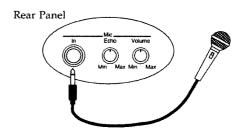Use the [Volume] knob on the MT 90s to adjust the volume of the headphones.

MEMO

Use Stereo headphones.

Some Notes on Using Headphones

• To prevent damage to the cord, handle the headphones only by the headset or the plug.

• Connecting the headphones when the volume of connected equipment is turned up may result in damage to the headphones. Lower the volume on the MT 90s before plugging in the headphones.

• Listening at excessively high volume levels will not only damage the headphones, but may also cause hearing loss. Use the headphones at a moderate volume level.

■ Connecting the Microphone

You can connect a microphone into the Mic In jack, and enjoy karaoke with the MT 90s.

1. **Connect a microphone to the Mic In jack on the rear panel.**

2. **Use the Mic Volume knob to adjust the volume level for the microphone.**

3. **Use the Mic Echo knob to adjust the amount of echo for the microphone.**

NOTE

The mic volume cannot be adjusted with the [Volume] knob on the front panel.

MEMO

Consult your Roland dealer when purchasing a microphone for use with the MT 90s.

Some Notes on Using a Microphone

• Be careful of high volume levels when using mikes late at night or early in the morning.

• When connecting a microphone to the MT 90s, be sure to lower the volume. If the volume control is too high when the microphone is plugged in, noise may be produced by the speaker.

• Howling could be produced depending on the location of microphones relative to speakers. This can be remedied by:

- Changing the orientation of the microphone.

- Relocating microphone at a greater distance from speakers.
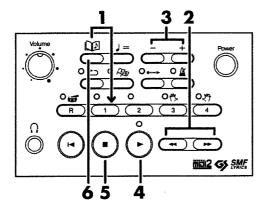
- Lowering volume levels.

■ Adjusting the pitch to other instruments (Tuning)

Here's how to tune your instrument to the MT 90s's reference pitch, allowing you to enjoy the rich sonorities of the music you play.

Matching these standard pitches is called "tuning."

What is the standard pitch?

In general, the pitch at Middle A on the piano is what is referred to as the standard pitch.

1. Hold down the [📖 (Song)] button and press the [1] button.

A Tuning Screen like the one shown below appears.


```
Tune                    ►
  Tune      ►440.0Hz
```

2. Press the [◄◄ (Bwd)] or [►► (Fwd)] button to select the parameter you want to set.

Parameter names appear at the bottom left of the display.

Display	Description	Value
Tune	Changes the standard pitch.	415.3 Hz–466.2 Hz Set to "440.0 Hz" when the power is turned on.
Key	Changes the key of the tuning reference sound.	A3–A5 Set to "A4" when the power is turned on.
Sound	Selection for the sound used for tuning.	Sine, Oboe.

3. Use the [+] and [-] buttons to change the value.

Pressing both the [-] and [+] buttons simultaneously returns the setting to its original value.

4. Press the [▶ (Play)] button to play the tuning sound.

When playing back a song, first press the [■ (Stop)] button to stop the song, then press the [▶ (Play)] button to play the tuning sound.

Play your instrument to see if it is in tune with the MT 90s.

5. To stop the tuning sound, press the [■ (Stop)] button.

The tuning sound stops.

6. When you've finished tuning, press the [📖 (Song)] button.

The Basic Screen appears.

This setting is remembered, and will still be in effect the next time the MT 90s is switched on. Please refer to "Restoring the Factory Settings (Factory Reset)" (p. 36) if you wish to restore the original settings.

The standard pitch can also be adjusted by the following method.

1. While holding down the [📖 (Song)] button, press the [-] or [+] button.

The Tuning screen is displayed while the [📖 (Song)] button is held down.
Pressing the [-] button lowers the pitch. To raise the pitch, press the [+] button.

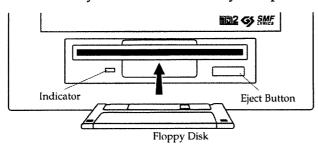When you release the button, the previous screen reappears.

Listening to the Music

Using the MT 90s's internal disk drive, try listening to some of the songs on the Music Files Disk included with the unit.

The Music Files Disk contains recordings of piano songs and other performance data.

■ Inserting and Ejecting a Floppy Disk

1. **With the label side facing up, insert the floppy disk into the disk drive until you hear it click firmly into place.**
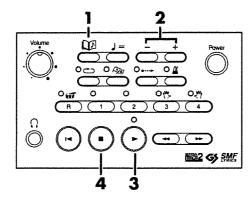

Indicator   Eject Button

Floppy Disk

2. **To remove a disk, press the EJECT button.**

The end of the floppy disk comes out of the slot. Gently grasp the end of the floppy disk and pull it out.

■ Playing Back Songs

Try playing a song and then stopping it. Playing a song on the MT 90s is referred to as "playback."

1. **Press the [📖 (Song)] button.**

The song number and song title appear on the upper portion of the screen. This screen is called Basic Screen.

Song Number   Song Title

Measure Number   Beat   Tempo

NOTE

If you're using the disk drive for the first time, be sure to read the important notes on p. 5.

NOTE

Don't try to eject the disk or turn off the power while reading or formatting is in progress. Attempting to do so may damage the magnetic surface of the disk, rendering it unusable. (The indicator light for the disk drive lights up at full brightness when reading or formatting a disk. Ordinary, the indicator will be less brightly lighted, or be extinguished.)
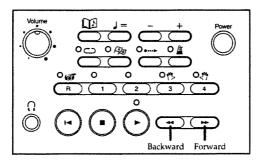
MEMO

If you press a [📖 (Song)] button while playing back music files that contains lyrics, the display will switch, and the lyrics will no longer be displayed. To re-display the lyrics, press the [▶ (Play)] button once again.

2. Press the [+] and [-] buttons to select a song.

3. Press the [▶ (Play)] button.

The song will begin playing back.

The song is played to its end, at which point it automatically stops.

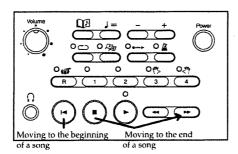**4.** To stop playback of the song, press the [■ (Stop)] button.

If a song ends at some point within a measure, instead of at the end of the measure, a "+" appears before the measure number.

```
 1: My Song
+ 10    4/4 ►J= 80
```

Forward and Backward

Backward   Forward

1. Press the [◄◄ (Bwd)] and [►► (Fwd)] buttons to move to the bar you want to hear.

Pressing the button once moves your position by one measure. Hold down the button to move forward or backward continuously.

You can also use rewind and fast-forward during playback.

Moving to the Beginning or End of a Song

Moving to the beginning   Moving to the end
of a song   of a song

1. Pressing the [I◄ (Reset)] button returns you to the beginning of the song.

2. Pressing the [►► (Fwd)] button while holding down the [■ (Stop)] button moves you to the end of the song.

MEMO

When you play a song with an upbeat (in other words, a song that starts before the first beat), the screen shows PU, 1, 2, and so on as the measure numbers.

MEMO
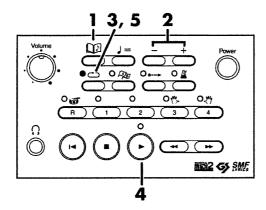
By connecting an optional pedal switch (such as Roland's model DP-2) to the MT 90s's Start/Stop jack, you can start and stop playback and recording of songs by pressing on the pedal (p. 36).

MEMO

When playback of the song begins, the measure number in the lower left of the display flashes. This flashing indicates that the MT 90s is reading performance data from the floppy disk. While this is in progress, you cannot rewind or fast forward. Wait until processing finishes.
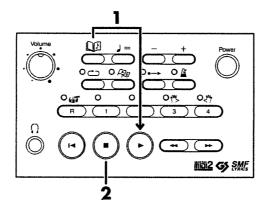
■ Repeated Listening of One Song

1. Press the [📖 (Song)] button.

2. Press the [+] and [-] buttons to select a song.

3. Press the [⊂⊃ (Repeat)] button, getting it to light up.

This sets repeat playback of the selected song.

4. Press the [▶ (Play)] button.

Repeat playback begins.

5. When you press the [⊂⊃ (Repeat)] button once more, the button's indicator turns off, and the Repeat function is removed.

■ Listening to Continuous Repeated Playback of All Songs (All Song Play)

This function will play back all songs on disk in succession. When the last song has been played, playback will continue from the first song. This function is called "All Song Play."

1. While holding down the [📖 (Song)] button, press the [▶ (Play)] button.

Playback of the selected song starts. When the last song has finished playing, playback then repeats after returning to the first song.

During All Song Play, the song number and "ALL" are alternately displayed at the top of the screen.

```
ALL:My Song
♪ 10    4/4 ♩= 80
```

2. Press the [■ (Stop)] button to stop playback.

All Song Play is exited when the performance is stopped.
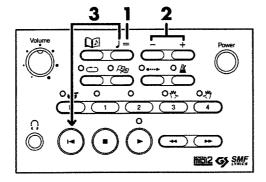
MEMO

You can have songs play in random order, regardless of the song sequence registered on the disk. For more detailed instructions, refer to "Playing Back All Songs in Random Order" (p. 35).

Changing the Tempo

With songs that are difficult to play because their tempo is too fast, you may find it helpful to first practice the song with the tempo slowed down. Then, after becoming more familiar with the song, you can practice it at a gradually faster tempo.

Changing the tempo has no effect on the pitch of the notes. And you can change the tempo even when the song is in progress.

1. Press the [♩ = (Tempo)] button.

The screen cursor (⊩) moves to the indication for the tempo.

```
1:My Song
    1    4/4 ⊩♩= 80
```

2. Use the [-] and [+] buttons to adjust the tempo.

Pressing the [+] button once increases the tempo by one unit. Holding down the button makes the tempo change (speed up) continuously.

Pressing the [-] button once decreases the tempo by one unit. Holding down the button makes the tempo change (slow down) continuously.

3. To restore the original tempo, hold down the [♩ = (Tempo)] button and press the [I◀ (Reset)] button.

Pressing both the [-] and [+] buttons simultaneously also restores the original tempo.

■ Changing the Tempo by Pressing the Button in Time (Tap Tempo)

You can determine the tempo by the timing with which you press the button. This feature is called "Tap Tempo."

1. Tap the [♩ = (Tempo)] button several times at the desired speed.
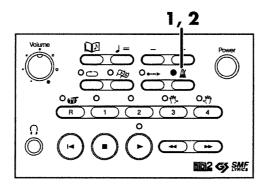
The tempo is set to the timing you used when tapping the button.

Sounding the Metronome

You can turn the metronome sound on and off with the press of a single button.

Use the metronome when you are having difficulty in getting a feel for the tempo.

You can also have the metronome play the tempo of a song while the song is played.

1, 2

MEMO

You can change the sound or the beat division pattern. For more information, see "Changing the Metronome's Settings" (p. 32).

1. **Press the [🎵 (Metronome)] button, getting it to light up.**

The metronome will sound.

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

■ Changing the Metronome Tempo

1. **Press the [♩= (Tempo)] button.**

The cursor (▶) moves to the indication for the tempo.

```
1:My Song
  1    4/4 ▶♩= 80
```

2. **Press the [-] and [+] buttons to choose a tempo.**

Pressing both the [-] and [+] buttons simultaneously restores the original tempo.

3. **Press the [🎵 (Metronome)] button, getting it to light up.**
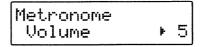
The metronome plays at the tempo you've chosen.

■ Changing the Metronome Volume

1. While holding down the [🕰 (Metronome)] button, press the [-] or [+] button.

The "Metronome Setting screen" below is displayed while the [🕰 (Metronome)] button is held down.

```
Metronome
 Volume      ▶ 5
```

Pressing the [-] button lowers the volume of the sound. To raise the volume, press the [+] button.
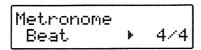When you release the button, the previous screen reappears.

■ Changing the Beat of the Metronome

1. While holding down the [🕰 (Metronome)] button, press the [◄◄ (Bwd)] button or the [►► (Fwd)] button, and select a beat.

If you currently have a song playing, first press the [■ (Stop)] button to stop the song before continuing.

The Metronome Setting screen below is displayed while the [🕰 (Metronome)] button is held down.

```
Metronome
 Beat      ▶  4/4
```

Beat selections:
2/2, 0/4 (only weak beats sound), 2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 3/8, 6/8, 9/8, 12/8

When you release the button, the previous screen reappears.

The beat of the metronome can also be changed by the following method.

1. Press the [🕰 (Metronome)] button.

If you currently have a song playing, first press the [■ (Stop)] button to stop the song before continuing.

The screen cursor (▶) moves to the indication for the beat.

```
1:My Song
 1 ▶   4/4  ♩= 80
```

2. Press the [-] and [+] buttons to choose a beat.

MEMO

The volume setting of the metronome is also applied to the volume of the count sound (p. 22).
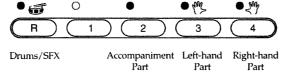
NOTE

You cannot change the beat of a song while it is being played back. In addition, the metronome sound is played at the beats of the song.

20

Practicing Along With a Song (Track Buttons)

Each part of the piano songs on the Music Files Disk included with the MT 90s can be played separately. So, whether you want to play the right-hand part, following along with the song's right hand; or play the left-hand part, following along the song's right hand, you can practice each hand's part individually.

The songs on the Music Files Disk included with the MT 90s are assigned to the five Track buttons as follows.

Drums/SFX   Accompaniment   Left-hand   Right-hand
                 Part   Part   Part
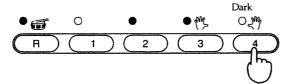
Button indicators for Track buttons to which sounds are assigned shine in green.
Indicators for buttons to which no sounds are assigned are not lit.

1. **Press any of the Track buttons, turning off the button indicator.**

Example: When practising the right-hand part...

The right-hand part
is not played back
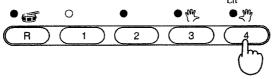
2. **Press the [▶ (Play)] button.**

The sounds for the illuminated Track buttons are played, but no notes are played for the Track button that is dark.
Temporarily preventing the sounds of a specified part from playing is called "muting."

3. **Pressing Track buttons with indicators that are not lit then turns on those indicators.**

The sound plays.

The right-hand part
is played back

4. **To stop playback of the song, press the [■ (Stop)] button.**

This feature can be used to practice one-handed parts.

MEMO

Until a song is played back once, all Track buttons are lit. When the song is played back, the Track buttons to which sounds are assigned are lit.

NOTE
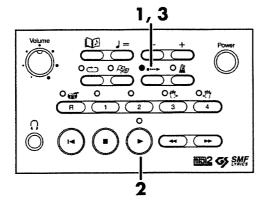
When in the 16-Track screen (p. 30) and screens other than the Basic screen, you may be unable to use the Track buttons to place mutes and carry out other operations.

Matching the Timing of the Performance

This audible count before the playback of a song is called a "Count-In."

You can also have the count sound be played at the end of a song's intro. This function is called "Intro Countdown."

When you're playing along with a song, you can make sure that your playing is in time with the song by sounding a count before the song starts playing.

1, 3

2

1. Press the [•···► (Count-In)] button, getting it to light up.

2. Press the [► (Play)] button.

After two measures of count sound, playback begins.

If the song does have an intro, then Intro Countdown is played at the end of the intro.

3. When you press the [•···► (Count-In)] button once more, the button's indicator turns off, and the count sound is removed.

MEMO

You can make the setting determining whether the Count-In or Intro Countdown is played. Take a look at "Changing the Count Sound Settings" (p. 33).

NOTE

Intro Countdown is not played if the song has no intro.

NOTE

Intro Countdown detects the beginning of the melody and then plays a count sound.
If you find that Intro Countdown is not playing correctly, change the Melody Track (or part) that is specified.
Take a look at "Changing the Count Sound Settings" (p. 33).

MEMO

You can change the number of measures counted and the sound that you hear. Please refer to "Changing the Count Sound Settings" (p. 33).
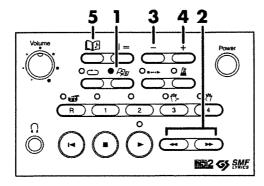
MEMO

The volume setting of the metronome (p. 20) is also applied to the volume of the count sound.

Chapter 2 More Convenient Functions

Placing Markers at the Section You Want to Practice Repeatedly
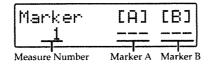
By placing markers for the section you want to practice repeatedly, you can quickly and easily go to those measures, and have the portion between the two markers repeat automatically.

You can set two markers (A and B) within a song.

1. Press the [𝄞 (Marker)] button.

A Marker Screen like the one shown below appears.

```
Marker    [A] [B]
   1       --- ---
```
Measure Number   Marker A   Marker B

2. Using the [◄◄ (Bwd)] and [►► (Fwd)] buttons, move to the location where you want to place the marker.

3. Pressing the [-] button sets Marker A at that point in the song.

4. In the same manner, move the measure, then press the [+] button to place Marker B.

You cannot place Marker B at the same point as Marker A, or at any point before Marker A.

```
Marker    [A] [B]
   1       5   9
```

You can also press the [-] or [+] button to place a marker during playback of the song.

When you place a marker, the [𝄞 (Marker)] button's indicator lights.

5. Pressing the [𝄞 (Song)] button returns you the Basic Screen.

MEMO

The management of markers is done in the Marker screen. When you have finished working with the markers, press the [𝄞 (Song)] button, and go back to the basic screen.

MEMO
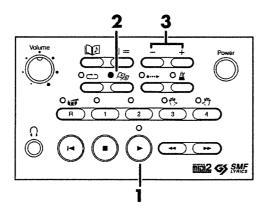
A marker is normally placed at the start of the selected measure, but you can also place a marker at a position part way through a measure. Take a look at "Placing a Marker in the Middle of a Measure" (p. 34).

NOTE

Markers are removed when you select a different song.
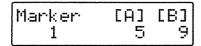
■ Playback from a Marker Location

1. Press the Play [▶ (Play)] button to start playback.

2. Press the [🏁 (Marker)] button.
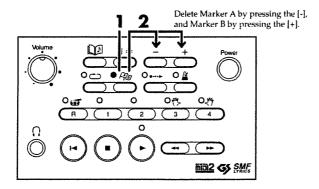
A Marker Screen like the one shown below appears.

Determine Markers A and B beforehand.

```
Marker    [A] [B]
    1       5   9
```
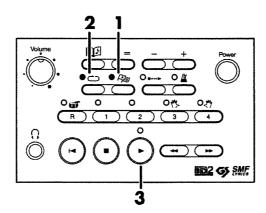
3. Press the [-] button to move to Marker A and start playback from there. Press the [+] button to move to Marker B and start playback from that point.

■ Erasing a Marker

Delete Marker A by pressing the [-], and Marker B by pressing the [+].

1. Press the [🏁 (Marker)] button.

The Marker Screen appears.

2. Pressing the [-] button while pressing the [🏁 (Marker)] button deletes Marker A. Pressing the [+] button while pressing the [🏁 (Marker)] button deletes Marker B.

■ Repeating Playback Between Two Markers

1. **Press the [🎵 (Marker)] button.**

The Marker Screen appears.

Determine Markers A and B beforehand.

2. **Press the [⊂⊃ (Repeat)] button; the button's indicator lights.**

The section is set to be repeated.

3. **Press the Play [▶ (Play)] button to start playback.**

The performance between Marker A and Marker B is repeated.

If you repeat playback with only Marker A placed...

Playback repeats between the Marker A and the end of the song.
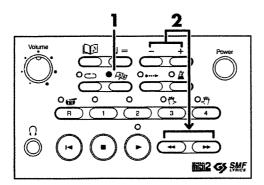
If you repeat playback with only Marker B placed...

Playback repeats between the beginning of the song and the Marker B.

MEMO

While the indicator of the [•••▶ (Count-In)] button is lit, the count-in sound will be played only for the first one of the repetitions. If desired, you can have it so the count sound is played throughout the repeated playback. Please refer to "Changing the Count Sound Settings" (p. 33).

■ Moving a Marker

1. Press the [📖 (Marker)] button.

The Marker Screen appears.

2. To move marker A, hold down the [-] button and press the [◄◄ (Bwd)] or [►► (Fwd)] button. To move marker B, hold down the [+] button and press the [◄◄ (Bwd)] or [►► (Fwd)] button.

You can move backward or forward one measure at a time with each press of the [◄◄ (Bwd)] or [►► (Fwd)] button, respectively. Hold down the buttons to make the marker move continuously.

Simultaneously Moving Markers A and B
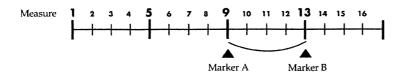
1. Hold down the [📖 (Marker)] button and press the [◄◄ (Bwd)] or [►► (Fwd)] button.

The Marker Screen appears.

For example, with Marker A set at the beginning of Measure 5 and Marker B at the beginning of Measure 9:

- Press the [◄◄ (Bwd)] button once to shift marker A to the beginning of the first measure and marker B to the beginning of the fifth measure.

- Press the [►► (Fwd)] button once to shift marker A to the beginning of the ninth measure and marker B to the beginning of the thirteenth measure.
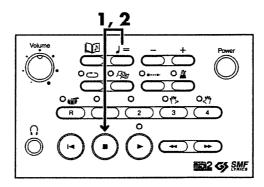
You can also use the following procedure to move Markers A and B simultaneously.

1. In the Marker Screen, while holding down the [-] button and the [+] button simultaneously, press the [◄◄ (Bwd)] or [►► (Fwd)] button.

Marker A and marker B move at the same time.

Practice without Tempo Changes

Practicing at a fixed tempo a song that incorporates tempo changes.

Playing back songs at a fixed tempo after suspending any tempo changes is called "Tempo Mute."

1. Hold down the [♩ = (Tempo)] button and press the [■ (Stop)] button.

A screen like the one shown below appears, and the song will be played back at a fixed tempo.

```
1:My Song
 1     4/4 ♩  80
```

The "=" disappears from the screen during Tempo Mute.

Try practicing after setting an easy tempo.

2. To release Tempo Mute, hold down the [♩ = (Tempo)] button and press the [■ (Stop)] button.

You can also release Tempo Mute by holding down the [♩ = (Tempo)] button and pressing the [► (Play)] button.

MEMO
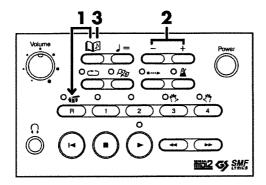
When you choose a different song, the tempo mute still stays off.

Changing the Key
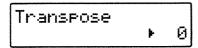
You can transpose a song for playback.

Even if your score and the music file is in a different key, you can easily match it by transposing the performance on the MT 90s.

1. **While pressing the [🔲 (Song)] button, also press the [R] button.**

A screen like the one shown below appears.


```
Transpose

                 ▶   0
```

2. **Press the [-] or [+] button to set the transposition value.**

You can transpose the song within a range from -24 to +24 (in semitone steps).

Pressing both the [-] and [+] buttons simultaneously returns the setting to "0."

If you want a song in "D" to play back in "C" for example, make a setting of -2.

3. **Pressing the [🔲 (Song)] button returns you the Basic Screen.**
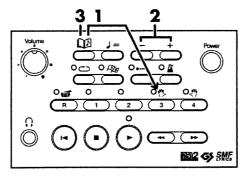
Changing the Reverberation (Reverb Effect)

You can choose the way the reverb effect is applied to the performance when playing back music files.
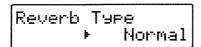
What is the reverb effect?

Reverberation is provided by the reverb effect. With the reverb effect, you can get a pleasant reverberation, making it sound as if you were performing in a concert hall or similar space.

1. While pressing the [🎵 (Song)] button, also press the [3] button.

A Reverb Setting Screen like the one shown below appears.

```
Reverb Type
          ▶    Normal
```

2. Press the [-] or [+] button to select how the reverb effect is applied.

Indication	Description
Listening	Adds an amount of reverb appropriate for music appreciation.
Normal	The song is played with the reverb settings set in the music file left unchanged.
Lesson	Adds an amount of reverb appropriate for practicing piano and other such times.

3. Pressing the [🎵 (Song)] button returns you the Basic Screen.

> The reverb effect can also be changed by the following method.
>
> **1.** While holding down the [🎵 (Song)] button, press the [◄◄ (Bwd)] or [►► (Fwd)] button to select the way the reverb is to be applied.
> The Reverb settings screen is displayed while the [🎵 (Song)] button is held down.
> When you release the button, the previous screen reappears.

NOTE

Some music files do not allow the reverb settings to be changed.

MEMO

When you select a different song, the reverb reverts to its original settings.
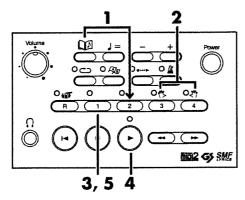
Listening to Specific Instruments

Commercial SMF music file ordinarily is composed of sixteen parts, with each individual part containing a recording of a different instrument.
You can select specific parts and play them individually, and you can mute the selected parts as well (muting of a single part during playback is referred to as "Minus One").

■ Playing Back a Single Part (Solo)
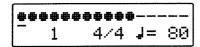
You can select a part and have only that part play. This is convenient for practice, as you can select the sound of an accompaniment instrument to listen to.
Playback of a single selected part is called "Solo."

1. While holding down the [📖 (Song)] button, press the [2] button.

The 16-Track screen, shown below, appears in the display.

Indication	Description
●	This Part is played back
○	This Part is not played back
—	There is no sound on this Part

2. Press the [3] or [4] button to move the cursor (_) in the upper part of the screen to the part you want to have played.

3. Press the [1] button.

A dot (●) appears only at the part indicated by the cursor, and only that part is selected for playback.

When you press the [3] or [4] button, the Solo part moves with the cursor.

4. Press the Play [▶ (Play)] button to play back the song.

Only the selected Part is played back.

5. To release the Solo function, press the [1] button once more.

The sounds for all parts are then played.

■ Preventing a Selected Part from Sounding (Mute)

You can select for each part whether or not that part is to be played back.

1. While pressing the [🎵 (Song)] button, also press the [2] button.

A 16-track screen like the one below appears.

```
●●●●●●●●●●──────
  1    4/4 ♩= 80
```

2. Press the [3] or [4] button to move the cursor (_) in the upper part of the screen to the part you want to set.

3. Using the [2] button or [+]/[-] buttons, select ● (play back) or ○ (do not play back).

Use the [2] button to switch between ● and ○.

Press the [-] button to have the part played back (●), and press the [+] button to mute the part (○).

```
●○●●●●●●●●──────
  1    4/4 ▶♩= 80
```

4. Press the [▶ (Play)] button to play back the song.

The sounds of parts designated by a "○ (not played back)", are not played.
Try playing those parts yourself.
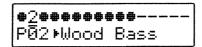
■ Displaying the Names of Tones Assigned to Parts

You can display the names of the tones assigned to each part.

1. While pressing the [🎵 (Song)] button, also press the [2] button.

The 16-Track screen is displayed.

2. Press the [R] button; the tone name is displayed.

```
●2●●●●●●●●──────
P02 ▶Wood Bass
```

The tone name appears for several seconds, then the original screen automatically reappears.

[NOTE]

Solo and Mute settings are discarded when you bring up a screen other than the 16-Track screen.

MEMO
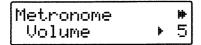
You can also use the [3] or [4] buttons to momentarily display the name of the tone assigned to the part indicated by the cursor.

Changing the Metronome's Settings

You can change the metronome settings, including the metronome sound and volume settings.

1. While holding down the [📖 (Song)] button, press the [🎼 (Metronome)] button.

The Metronome Setting screen appears.

```
Metronome      ▶
Volume       ▶ 5
```

2. Press the [◀◀ (Bwd)] or [▶▶ (Fwd)] button to select the parameter to be set.

Parameter	Description
Volume	Metronome volume
Beat	Beat
Sound	Metronome sound (tone)
Pattern	Beat division pattern

3. Press the [+] and [-] buttons to change the value.

The values that can be set for each parameter are shown below.

Parameter	Value	Description
Volume	0–10	Increasing the value will raise the volume. With a setting of "0," no sound is produced. The setting is at "5" when the MT 90s is powered up.
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	When 0/4 is selected, only the weak beats sound.
Sound	Click	Conventional metronome sound
	Elec.	Electronic metronome sound
	Voice J	A voice counting ("one, two, three...") in Japanese
	Voice E	A voice counting ("one, two, three...") in English
	Animal	Dog and cat cries

| Parameter	Value	Description
Pattern	Normal	The metronome sounds in the ordinary way.
	𝅗𝅥	Counting starts at the beginning of the measure, in intervals of dotted half-note upbeats.
	𝅗𝅥	Counting starts at the beginning of the measure, in intervals of half-note upbeats.
	𝅘𝅥.	Counting starts at the beginning of the measure, in intervals of dotted quarter-note upbeats.
	𝅘𝅥	Counting starts at the beginning of the measure, in intervals of quarter-note upbeats.
	𝅘𝅥𝅮.	Counting starts at the beginning of the measure, in intervals of dotted eighth-note upbeats.
	𝅘𝅥𝅮	Counting starts at the beginning of the measure, in intervals of eighth-note upbeats.
	𝅘𝅥𝅯	Counting starts at the beginning of the measure, in intervals of sixteenth-note upbeats.
	+Doubl	The metronome plays with a backbeat added to each beat.
	+Tripl	Counting is with triplets for each beat.
	+Shufl	The added sounds are shuffled.

4. Press the [📖 (Song)] button to display the Basic Screen.

→ Take a look at "Sounding the Metronome" (p. 19).

* Metronome sound settings remain stored in memory even while the power is turned off. Please refer to "Restoring the Factory Settings (Factory Reset)" (p. 36) if you wish to restore the original settings.

* When "+Double" is selected for the triplet patterns (6/8, 9/8, and 12/8), the additional sound is played as triplets.

→ The volume setting of the metronome is also applied to the volume of the count sound (p. 22).

Changing the Count Sound Settings

You can change the Count-In and Intro Countdown sound setting.

1. **While holding down the [📖 (Song)] button, press the [•···► (Count-In)] button.**

   The Count-In/-down Setting screen appears.

   ```
   Count In/Down  ⊮
   Mode▶Both
   ```

2. **Press the [◄◄ (Bwd)] or [►► (Fwd)] button to select the parameter to be set.**

Parameter	Description
Count In/ Down Mode	Determines when the count sound is played.
Count Down Sound	Sets the tone of the count sound when Intro Countdown is used.
Count Down Trk/Part	Specifies the track (or part) to be used for detecting the melody when Intro Countdown is used.
Count In Sound	Sets the tone of the count sound when Count-in is used.
Count In Measure	Number of measures to be counted for the count-in
Count In Repeat	Repeat setting for the count-in

3. **Press the [+] and [-] buttons to change the value.**

   The values that can be set for each parameter are shown below.

Parameter	Value	Notes
Count In/ Down Mode	Both	The count sound is played both before the performance and at the end of the intro.
	Count In	The count sound is played only before the performance.
	Count Down	The count sound is played only at the end of the intro.

Parameter	Value	Notes
Count Down Sound	VoiceJ	A voice counting ("one, two, three...") in Japanese
	VoiceE	A voice counting ("one, two, three...") in English
Count Down Trk/Part (When you choose a different song, this item returns to "Trk 3+4.")	Trk 3+4	Left-hand and right-hand parts of piano songs. This is the setting selected when the power is turned on.
	Trk4	Right-hand parts of piano songs.
	Part1–16	
Count In Sound	Sticks	Sound of tapping with a stick
	Click	A bell and a clicking sound
	Elec.	Electronic sound
	Voice J	A voice counting ("one, two, three...") in Japanese
	Voice E	A voice counting ("one, two, three...") in English
	Animal	Dog and cat cries
Count In Measure	1, 2	Set to "2" (two measures) when the power is turned on.
Count In Repeat	First	The count is sounded only during the first playback. This is the setting selected when the power is turned on.
	Every	The count is sounded each time the song is played.

4. **Press the [📖 (Song)] button to display the Basic Screen.**

→ Refer to "Matching the Timing of the Performance" (p. 22), "Repeating Playback Between Two Markers" (p. 25).

* Count sound settings are saved even when the power is turned off and then later turned on again (except the setting of "Count Down Trk/Part"). Please refer to "Restoring the Factory Settings (Factory Reset)" (p. 36) if you wish to restore the original settings.

* If you change the setting for the "Count Down Sound" while the measure number indication is flashing in the basic or other screens (while importing song data), the song may play again from the beginning.

Placing a Marker in the Middle of a Measure

Usually, a marker is place at the beginning of the selected measure, but you can change the settings for placing the marker so that it is set at another point within a measure (but on a beat).

1. While holding down the [🎵 (Song)] button, press the [🔖 (Mark)] button.

A screen like the one shown below appears.

```
MarkerResolution
          ▶Meas
```

2. Press the [+] and [-] buttons to change the value.

Indication	Description
Meas	The marker is placed at the beginning of the measure.
Beat	The marker is placed at the beginning of the beat.

3. Press the [🎵 (Song)] button to display the Basic Screen.

→ *When placing a marker somewhere other than at the beginning of the measure (when set to "Beat"), place the marker during playback of the song.*

→ *Refer to "Placing Markers at the Section You Want to Practice Repeatedly" (p. 23).*

Changing the Lyric Setting

You can set the language in which song lyrics are shown for music files that includes lyrics data.

You can change this setting when lyrics are not indicated properly in the display.

This setting is also applied to the display of the song title.

1. While pressing the [🎵 (Song)] button, also press the [4] button.

The Function screen is displayed.

2. Press the [◄◄ (Bwd)] or [►► (Fwd)] button until "Lyric Language" is displayed.

A screen like the one shown below appears.

```
Lyric Language ▶
          ▶English
```

3. Press the [-] or [+] button to select a value.

Indication	Description
Japanese	Lyrics are displayed in Katakana.
English	Lyrics are indicated with special character like "ü."

4. Press the [🎵 (Song)] button to display the Basic Screen.

→ *This setting is remembered, and will still be in effect the next time the MT 90s is switched on. Please refer to "Restoring the Factory Settings (Factory Reset)" (p. 36) if you wish to restore the original settings.*

Removing Lyrics from the Screen

Some music files used for karaoke include lyric data, with song lyrics being displayed on the screen. You can hide the on-screen lyrics displayed by such music files.

1. While pressing the [▢⫶ (Song)] button, also press the [4] button.

The Function screen is displayed.

2. Press the [◄◄ (Bwd)] or [►► (Fwd)] button until "Lyric Display" is displayed.

A screen like the one shown below appears.

```
Lyric Display ◄►
          ► ON
```

3. Press the [-] or [+] button to select a value.

Value	Description
ON	The lyrics are displayed (if the music file being played back includes the lyrics)
Off	Lyrics are not displayed.

4. Press the [▢⫶ (Song)] button to display the Basic Screen.

→ *If you press a [▢⫶ (Song)] button while playing back music files that contains lyrics, the display will switch, and the lyrics will no longer be displayed. To re-display the lyrics, press the [► (Play)] button once again.*

Playing Back All Songs in Random Order

The function which plays all of the songs on a disk in sequence, and then returns to the first after the last song is played is called "All Song Play."

With "All Song Play," you can also have the roster of songs played in random order.

1. While pressing the [▢⫶ (Song)] button, also press the [4] button.

The Function screen is displayed.

2. Press the [◄◄ (Bwd)] or [►► (Fwd)] button until "All Song Play" is displayed.

A screen like the one shown below appears.

```
All Song Play ◄►
Mode      ►Normal
```

3. Press the [-] or [+] button to select a value.

Value	Description
Normal	The songs are played back in the order in which they are registered on the disk.
Random	The songs are played back in random order.

4. Press the [▢⫶ (Song)] button to display the Basic Screen.

→ *Refer to "Listening to Continuous Repeated Playback of All Songs (All Song Play)" (p. 17).*

Restoring the Factory Settings (Factory Reset)

The following do not revert to their original settings, even when the MT 90s is turned off and then on again. You can return these settings to the original values set when the unit was shipped from the factory.

Restoring these factory settings is called "Factory Reset."

Stored Settings

Tuning settings	(p. 12)
Metronome sound	(p. 32)

Count sound settings (except the setting of "Count Down Trk/Part") (p. 33)

Lyric language setting (p. 34)

1. While pressing the [▭♪ (Song)] button, also press the [4] button.

The Function screen is displayed.

2. Press the [◄◄ (Bwd)] or [►► (Fwd)] button until "Factory Reset" is displayed.

A screen like the one shown below appears.

```
Factory Reset #
            OK?
```

To cancel Factory Reset, press the [▭♪ (Song)] button to return to the original screen.

3. Press the [+] button.

The following screen appears, and the [► (Play)] button's indicator begins flashing.

```
Factory Reset #
          Sure?
```
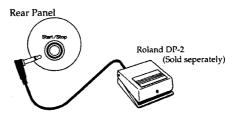
To cancel Factory Reset, press the [■ (Stop)] button.

4. Press the [► (Play)] button to execute Factory Reset.

5. Turn off the power, then on again.

Playback/Stop using a Pedal Switch

You can connect a pedal switch (the optional DP-2) to the MT 90s, then depress the pedal to start and stop playback of performances.

Rear Panel

Roland DP-2
(Sold seperately)

1. Connect the pedal switch to the Start/Stop jack on the rear panel.

2. Playback will begin when you press the pedal.

3. Press the pedal once more to stop playback.

* For the above application, you will first need to purchase the Roland DP-2 Pedal Switch. Please consult the dealer where you purchased these products when using them with the MT 90s.

Connect Your MIDI Instrument

You can connect a MIDI keyboard, MIDI pad controller, or other such external MIDI device and use it to play sounds from the MT 90s's sound generator (the internal part that creates musical instrument sounds).

> *   *When operating the MT 90s with an external MIDI device connected, you must make the MIDI settings for the connected MIDI device. For more detailed instructions, refer to the owner's manual for the device you are using.*

About MIDI

MIDI stands for Musical Instrument Digital Interface, an international standard which allows performance information to be communicated among electronic musical instruments and computers. By using a MIDI cable to connect devices that are equipped with MIDI connectors, these devices are then able to send and receive data.

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

■ Connectors

Rear Panel

MIDI In Connector

Connect this to the MIDI Out connector on an external MIDI device using a MIDI cable (sold separately).
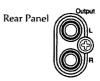
Performance messages from an external MIDI device are received here. These incoming messages may instruct the receiving MIDI instrument to play sounds or switch Tones.

Connecting to Audio Devices and Other Equipment

When you connect the MT 90s to audio equipment, you can play the sounds from the MT 90s through the speakers on the audio equipment or record your performances on a tape recorder or other recording device.

When connecting, please use an audio cable with a RCA pin plug, such as the PJ-1M (sold separately).

■ Connectors

Rear Panel

Output Jacks

You can connect the MT 90s to other audio devices with a regular audio cable, and play the sounds through the speakers of the connected system.

When you don't want the sound to be played through the MT 90s's speaker, set the Speaker switch to "Off."

■ When Connecting to an Electronic Piano

Making the Connections

When the MT 90s is connected to an electronic piano, you can have the MT 90s's sound be played through the piano's speakers.

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

1. **Using a commercially available audio cable, connect the Output R/L jack of the MT 90s to the digital piano's Input R/L jack.**

   This lets you play the sound from the MT 90s through the digital piano speakers as well as from the MT 90s's own speaker.

2. **Set the Speaker switch on the MT 90s's rear panel to "Off."**

   Sound from the MT 90s speaker now stops.

   When the Speaker switch is set to "On," sound is heard through the MT 90s's speaker.

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Chapter 4 About Music Files

What Are Music Files?

Music files contain information describing the details of a musical performance, such as "the C3 key on a keyboard was pressed for this amount of time, using this amount of force." By inserting the floppy disk into the disk drive on the MT 90s, the performance information is sent from the floppy disk to the piano, and played faithfully by the piano. This is different than a CD, since the music file does not contain a recording of the sound itself. This makes it possible to erase certain parts, or to change instruments, tempos and keys freely, allowing you to use it in many different ways.

Regarding Copyright

Use of the song data contained on the data disk supplied with this product 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.

Be aware that any other use may constitute copyright infringement. Roland Corporation assume no responsibility whatever for any copyright infringement that may result from a work that you create.

Music Files that can be Used with the MT 90s

- **Floppy disks saved on a Roland MT Series, or Roland Piano Digital HP-G/KR Series instrument**
- **Roland Digital Piano Compatible music files**
  Roland's original music file is made specifically for practicing the piano.
  Some follow an instructional curriculum, allowing for a complete range of lessons, such as "practicing each hand separately" or "listening to only the accompaniment."
- **SMF Music files (720 KB/1.44 MB format)**
  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.

* *If you wish to purchase SMF music files, please consult the retailer where you purchased your MT 90s.*
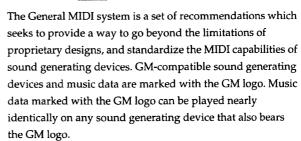
SMF with Lyric **SMF LYRICS**

"SMF with Lyrics" is SMF song data that includes song lyrics. When music data showing the "SMF with Lyrics" mark is played back on a similarly marked device, the lyrics can then be shown in the device's display.

About the MT 90s's Sound Generator

The MT 90s is equipped with a GM2/GS compatible sound generator.

General MIDI **GENERAL midi**

The General MIDI system 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. GM-compatible sound generating devices and music data are marked with the GM logo. Music data marked with the GM logo can be played nearly identically on any sound generating device that also bears the GM logo.
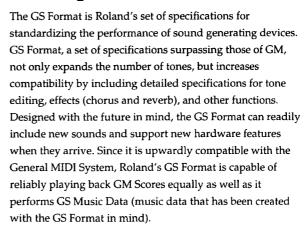
General MIDI 2 **GENERAL midi2**

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 **⑤**

The GS Format is Roland's set of specifications for standardizing the performance of sound generating devices. GS Format, a set of specifications surpassing those of GM, not only expands the number of tones, but increases compatibility by including detailed specifications for tone editing, effects (chorus and reverb), and other functions. 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 System, Roland's GS Format is capable of reliably playing back GM Scores equally as well as it performs GS Music Data (music data that has been created with the GS Format in mind).
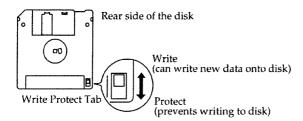
Using Computer-Created Song Data on the MT 90s (Disk Format)

When using the MT 90s to play back song data created with a computer, first save the SMF data on a floppy disk formatted by the MT 90s.

■ Floppy Disk Formats

Formatting a floppy disk erases all information stored on the disk, and puts it in a format that is acceptable for the device in which it will be used. Floppy disks cannot be used on the MT 90s without changing the disk's format to that of the MT 90s.

* *Formatting a disk destroys all data previously stored on the disk. If you're formatting a used floppy disk for reuse, be sure to check first to make sure the disk doesn't contain any data you don't want to lose.*

* *If you're using the disk drive for the first time, be sure to read the important notes on p.5.*

1. Confirm that the disk's protect tab is in the "Write" position.

Rear side of the disk

Write
(can write new data onto disk)

Write Protect Tab

Protect
(prevents writing to disk)

2. Insert the floppy disk into the disk drive.

3. While pressing the [🎵 (Song)] button, also press the [4] button.
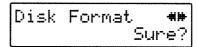
The Function screen is displayed.

4. Press the [◄◄ (Back)] or [►► (Forward)] button until "Disk Format" is displayed.

A screen like the one shown below appears.

```
Disk Format    ◄│►
Clear Disk OK?
```

5. Press the [+] button.

The following screen appears, and the [► (Play)] button's indicator begins flashing.

```
Disk Format    ◄│►
           Sure?
```

If you do not want to format the disk, press the [🎵 (Song)] button several times to return to the previous screen.

6. Press the [► (Play)] button to begin formatting.

The following message appears in the display: "Formatting...."

When the formatting is done, the previous screen is displayed.

* *Never switch off the power while this operation is in progress.*

7. Save the song data on the MT 90s-formatted disk to your computer.

Please observe the following when saving the data.
• Save the song data in SMF format.
• Name files using no more than eight alphanumeric characters.
• Add the extension ".MID" at the end of file names. If the filename extension is not added or if it is incorrect, the MT 90s will not be able to recognize that file.
• Convert to SMF Format 0. If the data is in format 1, it may not be played correctly.

Now the data can be played back on the MT 90s.

* *It may not be possible to play back excessively large files.*

* *Roland cannot recover nor provide any guarantee regarding data that may be lost or erased by a malfunction of the MT 90s.*

Troubleshooting

If you are encountering any problems with the equipment, please read the section below determining that there has been any malfunction.

Case	Cause/What to do
The MT 90s does not switch on.	Is the power cord properly connected? (p. 10)
No sound is produced.	Is the [Volume] knob completely to the left (turn-completely down)? (p. 11)
	Are headphones connected? (p. 11)
	Is the Speaker switch turned to "Off?" (p. 37)
	Are the MT 90s and other devices properly connected? (p. 37)
	Is the power to all equipment turned on?
Some notes are missing.	The MT 90s can play a maximum of 64 notes simultaneously. When performing with a song on a floppy disk, or when using the damper pedal a lot during a performance, the number of notes being expressed at any one moment may exceed 64. When the total exceeds 64 notes, then some will be omitted.
The song does not play.	Is the Track button indicator off? (p. 21) Sounds on buttons whose indicators are off are not played. Press the desired buttons to turn on their indicators.
	Have you inserted the floppy disk containing the desired song into the disk drive?
I can't play back songs on floppy disks right away.	There are two types of SMFs, Format 0 and Format 1. It can take a while for Format 1 data to begin playback. To determine the format of the music files you are using, please refer to the documentation that came with the data.
Certain instrument sounds are missing.	Have you selected the "Minus One" function? (p. 30)
You cannot forward or rewind data.	While the MT 90s is loading data from a floppy disk, you cannot fast-forward or rewind data (p. 15).
	When the size of a song is too large, it cannot be forwarded or rewound.
The song doesn't go the beginning, even if the [◄◄ (Reset)] button is pressed.	Some music files contain songs that are set to stop before the song finishes. With such songs, pressing the [◄◄ (Reset)] button returns you to the point where the performance stops. However, by pressing the button again a number of times, you can get back to the beginning of the song.

Case	Cause/What to do
The song goes out of tune, or the pitch drifts.	Has the song been transposed? (p. 28)
	Is the "Tuning" setting correct? (p. 12)
The Track buttons don't work.	Is the 16 Track screen displayed (p. 30)? When the 16 Track screen is displayed, the Track buttons do not work.
The pedals are not functioning.	Are the pedals connected properly? (p. 36) Make sure that the cord from the pedal switch is connected securely to the Start/Stop jack.
Lyrics are not indicated properly in the display.	With some music files, the lyrics cannot be displayed correctly.
	When the lyrics are displayed, pressing the [📖 (Song)] button or other buttons removes the lyrics from the screen. If you want the lyrics displayed again, press the [► (Play)] button once more.
	Changing the setting of the "Lyric Language" (p. 34) may display the lyrics correctly.

Error Messages/Other Messages

Indication	Meaning
PU	When a song with a pickup (a song that does not start on the first beat) is played back, the measure numbers will be indicated in the display as PU, 1, 2, and so forth.
E.02: Protected	The protect tub on the floppy disk is set to the Protect position. Change it to the Write position (p.5).
E.03: Master Disk	This floppy disk cannot store the format.
E.10: No Disk	No floppy disk is connected to the disk drive.
E.12: Unknown Disk	This floppy disk is not formatted or the songs stored on this floppy disk cannot be played in the MT 90s.
E.13: Disk Ejected	The floppy disk has been disconnected during operation, repeat the procedure from the beginning.
E.14: DamagedDisk	This floppy disk is damaged and cannot be used.
E.15: Can't Read	This song cannot be read into the piano.
E.16: Can't Play	The MT 90s cannot read the floppy disk quickly enough. Press the [■ (Stop)] button, then press the [|◄ (Reset)] button and [► (Play)] button to play the song.
E.30: Memory Full	Because there is no more free space in the MT 90s, operations other than playback (such as rewind and fast forward) are not possible.
E.40: Buffer Full	The MT 90s cannot deal with the excessive MIDI data sent from the external MIDI device. Reduce the amount of MIDI data sent to the MT 90s.
E.41: Comm.Error	A MIDI cable or computer cable has been disconnected. Connect it properly and securely.
E.43: MIDI.I/F Err	Check the connections with MIDI devices, and the MIDI cable itself (p. 37).
E.51: Memory Error	There is something wrong 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.

Disk Song List

No.	Title	Composer	Copyright
1	Piano Concerto in A Minor Op. 16 1st Mov. (Excerpt)	E. Grieg	© 1994 Roland Corporation
2	Mazurka No.5 Op. 7-1	F. Chopin	© 1995 Roland Corporation
3	Für Elise	L. v. Beethoven	© 1996 Roland Corporation
4	Golliwog's Cakewalk from Suite "Children's Corner"	C. Debussy	© 1996 Roland Corporation
5	Sonatine Op. 36, No. 3 in C Major 1st Mov.	M. Clementi	© 1996 Roland Corporation
6	The Entertainer	S. Joplin	© 1994 Roland Corporation
7	Merrily We Roll Along	American Folk Song	© 1998 Roland Corporation
8	Etude No. 88 from "Beyer Piano Textbook"	Beyer	© 1996 Roland Corporation
9	Etude No. 14 "La Styrienne" from "25 Etudes" Op.100	F. Burgmüller	© 1996 Roland Corporation
10	Etude No.1 from "Czerny 30 Etudes De Mécanisme"	C. Czerny	© 1994 Roland Corporation
11	Greensleeves	English Folk Song	© 1993 Roland Corporation
12	Romance D'Amour	Spanish Folk Song	© 1996 Roland Corporation
13	3rd Mov. Menuet from "Quintet for Strings No. 5 Op.11"	L. Boccherini	© 1996 Roland Corporation
14	Gavotte from Opera "Rosine"	F. Gossec	© 1994 Roland Corporation
15	Menuet from "L'Arlésienne" 1st Suite	G. Bizet	© 1994 Roland Corporation
16	Meditation from "Thaïs"	J. Massenet	© 1998 Roland Corporation
17	Scene from "The Swan Lake" Op. 20	P. Tschaikovsky	© 1998 Roland Corporation
18	Scrambled Eggs	Masashi Hirashita & Kazuko Hirashita	© 1992 Roland Corporation
19	Milky Way	Masashi Hirashita & Kazuko Hirashita	© 1992 Roland Corporation
20	Amazing Grace	American Folksong	© 1998 Roland Corporation
21	When The Saints Go Marching In	American Folksong	© 1993 Roland Corporation
22	Little Brown Jug	American Folksong	© 1998 Roland Corporation
23	A Maiden's Prayer	T.Badarzewska	© 1996 Roland Corporation
24	Turkisch March (Piano Sonate No. 11 in A Major, 3rd Movement "Alla Turca")	W.A.Mozart	© 1993 Roland Corporation
25	Mondschein Sonata	L.v.Beethoven	© 1994 Roland Corporation
26	Nocturne No. 2 in E-flat Major, Op. 9-2	F. Chopin	© 1993 Roland Corporation
27	Le Coucou [Rondeau]	L.C.Daquin	© 1996 Roland Corporation
28	Summertime	G.Gershwin	© 1994 Roland Corporation
29	Ave Maria	C.Gounod	© 1993 Roland Corporation
30	Londonderry Air	Irish Folksong	© 1993 Roland Corporation
31	Amapola	J.M.Lacalle	© 1993 Roland Corporation
32	Liebestraume III	F.Liszt	© 1993 Roland Corporation
33	"Promenade" from "Tableaux d'une exposition"	M.Musorgsky	© 1995 Roland Corporation
34	Csikos Post	H.Necke	© 1996 Roland Corporation
35	Canon	J.Pachelbel	© 1993 Roland Corporation
36	Clarinet Polka (Excerpt)	Polish Folksong	© 1998 Roland Corporation

No.	Title	Composer	Copyright
37	Gymnopedie No. 1	E.Satie	© 1997 Roland Corporation
38	Radetzky March	J.Strauss	© 1996 Roland Corporation
39	Air sul G	J.S.Bach	© 1993 Roland Corporation
40	Les Patineurs, Valse, Op.183	E.Waldteufel	© 1998 Roland Corporation
50	Twinkle Twinkle Little Star (English Lyric)	French Folksong	© 1998 Roland Corporation
51	Guess Note (English)		© 2000 Roland Corporation
52	Guess Phrase (English)		© 2000 Roland Corporation
53	Guess Chord (English)		© 2000 Roland Corporation
70	Butterfly (Japanese Lyric)	Spanish Folksong	© 2000 Roland Corporation
71	Guess Note (Japanese)		© 2000 Roland Corporation
72	Guess Phrase (Japanese)		© 2000 Roland Corporation
73	Guess Chord (Japanese)		© 2000 Roland Corporation

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Note Guessing Game (No.51 to 53: English, No.71 to 73: Japanese)

Recorded on the disk included with the MT 90s are the note guessing games that use the MT 90s's sounds.

Select the number below and press the [▶ (Play)] button to start the game.

You can change the pace of the game by changing the tempo.

The game progress through each problem as shown below. Each game has ten tries.

1   The reference sound is played.

2   The new note or chord is played twice.

Listen carefully and think of the name of the note or chord.

3   "Answer is..." appears in the display, showing the correct answer.

* *In addition to the MT 90s, this game can also be used with the Roland MT 300, MT 300s, Roland Digital Piano KR-277, and KR-375 models.*

Music Player
Model MT 90s

MIDI Implementation Chart

Date : Sep. 1, 2000
Version : 1.00

Function...		Transmitted	Recognized		Remarks
Basic Channel	Default	x	1–16		
	Changed	x	1–16		
Mode	Default	x	Mode 3		
	Messages	x	Mode 3, 4(M=1)		*2
	Altered	•••••••••••••			
Note Number :	True Voice	x	0–127		
		•••••••••••••	0–127		
Velocity	Note ON	x	O		
	Note OFF	x	x		
After Touch	Key's	x	O	*1	
	Ch's	x	O	*1	
Pitch Bend		x	O	*1	
Control Change	0, 32	x	O	*1	Bank select
	1	x	O	*1	Modulation
	5	x	O	*1	Portamento time
	6, 38	x	O	*1	Data entry
	7	x	O	*1	Volume
	10	x	O	*1	Panpot
	11	x	O	*1	Expression
	64	x	O	*1	Hold 1
	65	x	O	*1	Portamento
	66	x	O	*1	Sostenuto
	67	x	O	*1	Soft
	84	x	O	*1	Portamento control
	91	x	O (Reverb)	*1	Effect1 depth
	93	x	O (Chorus)	*1	Effect3 depth
	98, 99	x	O	*1	NRPN LSB, MSB
	100, 101	x	O	*1	RPN LSB, MSB
Prog Change	: True #	x	O	*1	
		•••••••••••••	0–127		Program number 1–128
System Exclusive		x	O		
System Common	: Song Pos	x	x		
	: Song Sel	x	x		
	: Tune	x	x		
System Real Time	: Clock	x	x		
	: Commands	x	x		
Aux Message	: All sound off	x	O (120, 126, 127)		
	: Reset all controllers	x	O		
	: Local Control	x	x		
	: All Notes OFF	x	O (123–125)		
	: Active Sensing	x	O		
	: Reset	x	x		
Notes		*1 O x is selectable by SysEx. *2 Recognized as M=1 even if M≠1.			

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

Main Specification

MT-90s: Music Player

<Sound Source>

Conforms to GM2/GS

● Max.Polyphony

64 voices

● Tones

369 variations (including 8 drum sets, 1 SFX set)

● Master Tuning

415.3 Hz–466.2 Hz (0.1 Hz step)

● Transpose

Playback Transpose (-24 to +24 Half-steps)

● Effects

Reverb

Chorus

<Sequencer>

● 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

Volume:10 levels

Pattern: 11 patterns

Sounds: 5 types

● Tracks

5 or 16 tracks

● Tempo

Quarter note = 20 to 250

● Resolution

120 ticks per quarter note

● Control

Reset, Stop, Play, Bwd, Fwd

Track Select, Repeat, Marker, Count In,

Metronome, Song Select, Tempo, +, -

< Disk Drive >

3.5 inch Micro Floppy Disk

● Disk Format

720 K bytes (2DD)

1.44 M bytes (2HD)

● Playable Software

Standard MIDI File (Format0/1)

Roland Original Format (i-Format)

<Others>

● Rated Power Output

5 W x1

● Speakers

10 cm x 1

● Display

Beat Indicator

16 x 2 Character LCD

● Lyrics

Yes (Built-in Display)

● Control

Volume

Microphone Volume, Microphone Echo

Speaker switch

● Connectors

Output jacks (Stereo, RCA-Pin)

Microphone jack (with echo)

Headphones jack (Stereo Mini)

MIDI IN connector

Start/Stop jack

● Power supply

AC117 V/AC230 V/AC240 V

● Power Consumption

2000 mA

● Dimensions

165 mm (W) x 186 mm (D) x 270 mm (H)

6-1/2 (W) x 7-3/8 (D) x 10-11/16 (H) inches

● Weights

2.4 kg

5 lbs 5 oz

● Accessories

Owner's manual, Power cord, AC Adaptor, Ferrite Core, Music File Disk

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

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