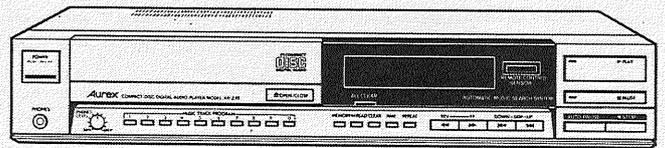


XR-Z70/XR-Z70K

COMPACT DISC DIGITAL AUDIO PLAYER

COMPACT
disc
DIGITAL AUDIO



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Features

■ Quick Random Access

Permits quick and easy location of the beginning of any track on a disc in the forward or reverse direction.

■ 16-Track Memory

Up to 16 tracks can be stored in the memory for play in any order you want.

■ Repeat Function

Repeatedly plays an entire disc side or the tracks in the memory with one-touch simplicity.

■ Soft-Touch Pushbutton Controls

All controls are feather-touch pushbuttons to make switching quick and responsive.

■ Full Range of Indicators and Displays

The front panel has eight indicators and three displays to permit quick visual confirmation of all major operating modes.

■ Wireless Remote Control

With the optional RM-75 remote control unit, play, pause, memory programming and memory play can be performed without using the front panel controls.

■ Multiple Real Time Display

The time display can be set to show the elapsed playing from the beginning of the disc or each track or the remaining time on a disc.

■ Automatic Pause Mode

In this mode, the player switches to the pause mode each time a track ends, a very useful function when using discs for sing-along fun.

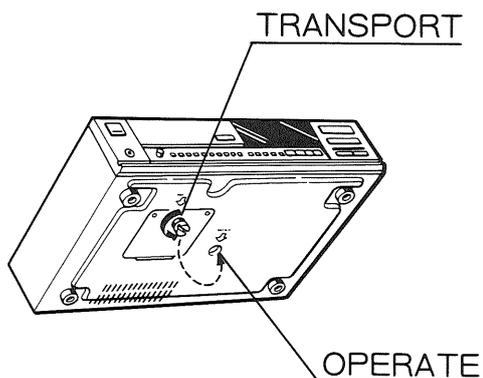
CAUTION: THIS COMPACT DISC DIGITAL AUDIO PLAYER EMPLOYS LASER SYSTEM. SO TO USE THIS MODEL PROPERLY, READ THIS OWNER'S MANUAL CAREFULLY AND KEEP THIS FOR YOUR FUTURE REFERENCE. IN CASE OF ANY TROUBLE OF THIS UNIT, PLEASE MAKE A CONTACT WITH TOSHIBA SERVICE STATION AS INFORMED IN THE ATTACHED CUSTOMER SERVICE NOTICE.

Before Using This Unit

■ The Pickup Attachment Screw

There is a pickup attachment screw on the bottom of the cabinet. Before playing a disc for the first time, this screw must be removed using a standard screwdriver. The player will not operate properly if this screw is left in place. Be sure to save the screw because it should be replaced if it is necessary to move or ship the player again. The OPERATE opening in the bottom panel is provided to store this screw when it is not in place.

Note: Before shipping the player, press the stop key, turn off the power switch and replace the attachment screw in the TRANSPORT opening in that order.



Precautions

■ Do Not Open The Cabinet.

If you open the cabinet, you may be exposed to dangerous voltages. Never open the cabinet under any circumstances.

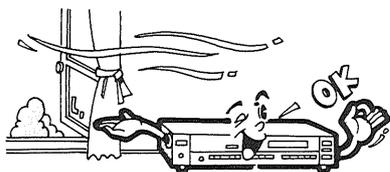
■ Do Not Touch The Player With Wet Hands.

Do not handle the player or power cord when your hands are wet or damp. If water or any other liquid enters the cabinet, take the player to an authorized service center for an inspection.

Locating the Player

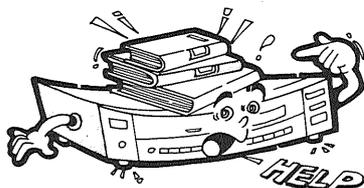
■ Place The Player In A Well Ventilated Location.

Be sure to provide adequate ventilation for the player on all sides, particularly when it is placed in an audio rack. If ventilation is blocked, the player may overheat and not operate properly. Also, be sure to use the player in a horizontal position. Never place the player on its side or on a slanted surface since this could result in a malfunction.



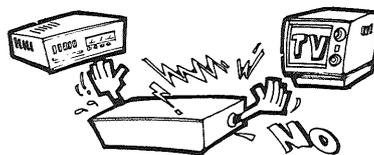
■ Do Not Place Objects on Top of the Player.

This player is carefully insulated to protect it from vibrations. Therefore, do not place amplifiers or other audio components directly on top of the player since this could lower the effectiveness of the insulation causing the player to be susceptible to vibrations.



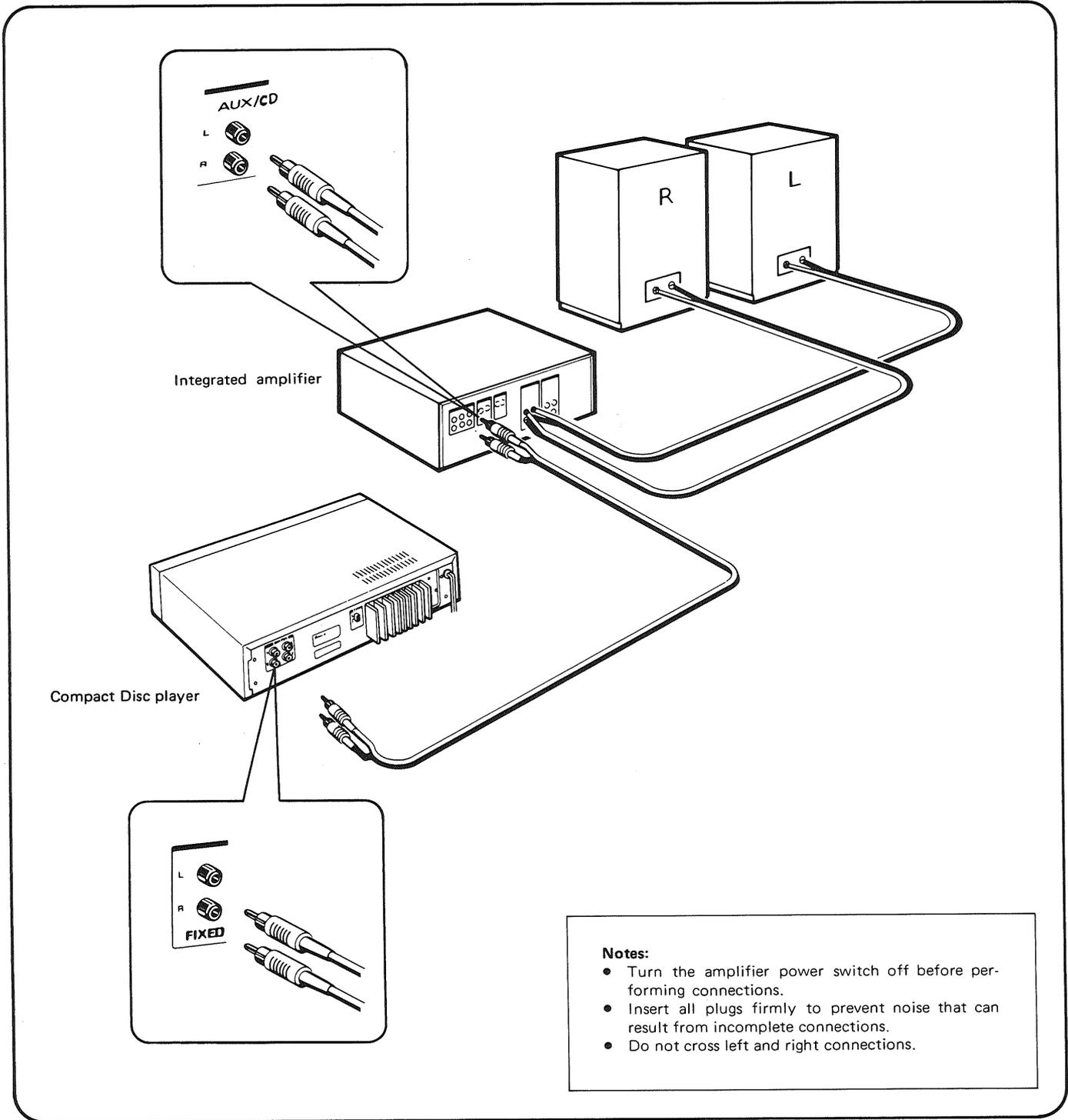
■ Do not Place Beside Tuners and TV Sets

If the player is placed near a tuner or television set, it could interfere with reception quality, or cause a hum in the tuner or TV.



If the shock occurring when other components and electric appliances are turned on and off causes this unit to operate incorrectly, the lifespan of the laser diode could be shortened. If turning power and off to other appliances affects the performance of this unit, use a power supply filter to protect the unit from these shocks or use a different wall socket.

Connections



■ Connection to the Amplifier

The FIXED Jacks

Using the included connection cables, connect the FIXED jacks on the rear panel of the player to the AUX/CD or AUX jacks on the rear panel of your integrated amplifier.

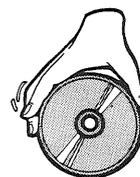
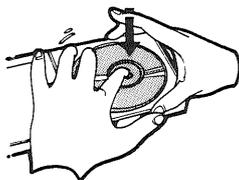
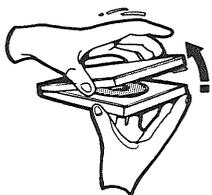
The VARIABLE Jacks

These jacks can be connected directly to the input jacks of a power amplifier. When the VARIABLE jacks are used, set the front panel PHONES LEVEL knob to about the "11:00" position. This knob also controls the volume level of the front panel headphones jack.

Handling Discs

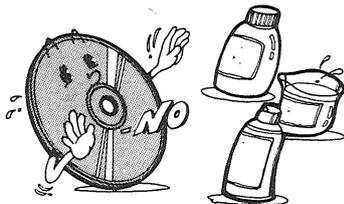
Please read this section carefully before handling a Compact Disc for the first time.

How to open a disc case and remove a disc.

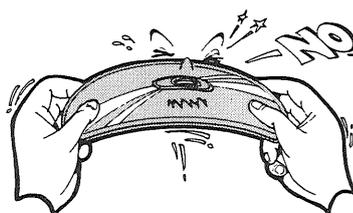


Precautions

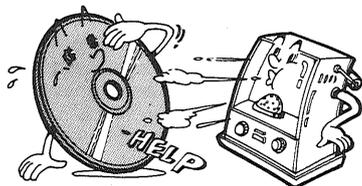
- Do not wipe with alcohol (particularly methyl alcohol), water, ordinary phonograph record cleansers or static electricity prevention solutions.



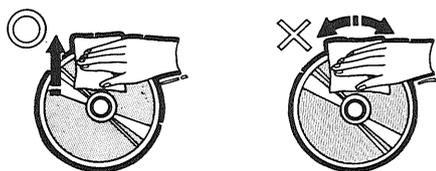
- Do not bend.



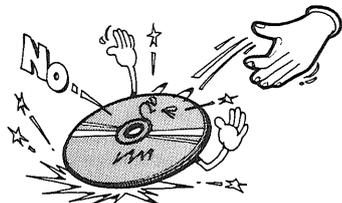
- Do not expose to excessive heat.



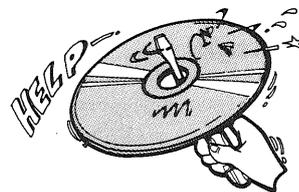
- Do not wipe with silicon cloths. To clean a disc, wipe gently with a soft cloth in a straight line from the center of the disc to the outside.



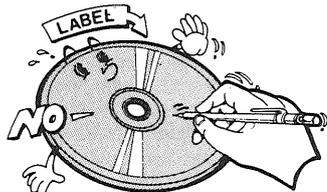
- Do not scratch the surface and be careful not to scratch discs when removing them from their cases and putting them back.



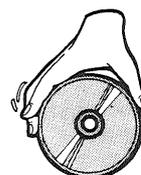
- Do not enlarge the spindle hole.



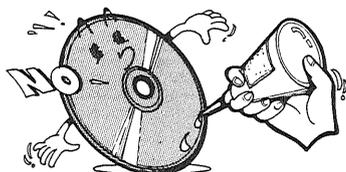
- Do not write on the label side.



- Hold discs by the edges so that no fingerprints are left on the surface.

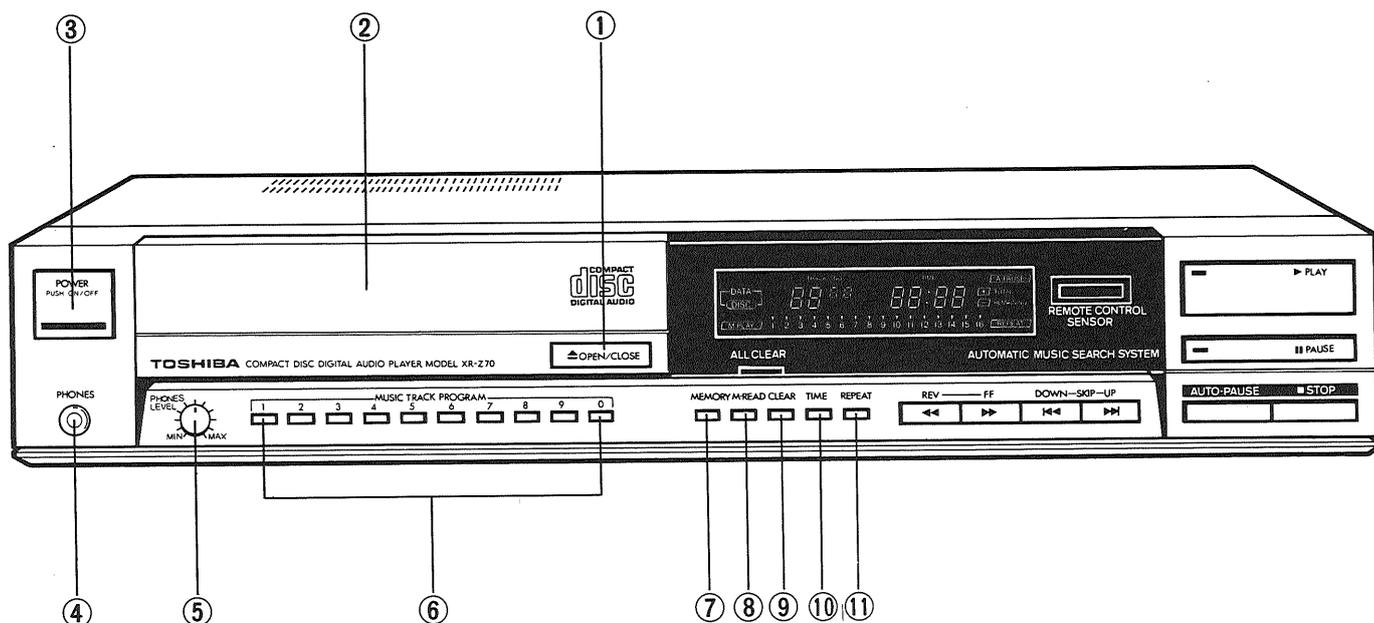


- Do not soil the surface with fingerprints, oil or dust. If necessary, gently wipe the surface with a soft cloth.



- Store discs in locations that are not subject to high temperatures and humidity. Heat and direct sunlight can cause discs to warp. Always store discs in the cases in which they came.

Names and Functions of Parts



① Open/Close Key (OPEN/CLOSE)

Press once to open the disc holder and once again to close the disc holder.

② Disc Holder

The holder is opened and closed by the OPEN/CLOSE key ①. When the holder has opened, place one disc in the center. Note that no more than one disc can be loaded at once.

③ Power Switch (POWER)

Press once to turn power on and once again to turn power off.

④ Headphones Jack (PHONES)

Connect a set of stereo headphones to this jack for private listening.

⑤ Phones Level Control Knob (PHONES LEVEL)

Controls the volume of the headphones and the output level of the rear panel VARIABLE jacks. (Rotate clockwise to raise the output level.)

⑥ Programming Keys (MUSIC TRACK PROGRAM)

Use these keys to input track and index numbers. Track numbers can be input alone, but index numbers must be accompanied by track numbers. When only a track number is input, the index number is automatically set to "01."

⑦ Memory Key (MEMORY)

Press this key to store track and index numbers set by the programming keys in the memory. The numbers just entered can be cancelled by pressing the CLEAR key ⑨ while the memory channel indicator is still flashing on and off. Once the channel indicator stops flashing on and off, memory contents can no longer be changed. Up to 16 track/index inputs can be stored in the memory at one time.

⑧ Memory Read Key (M-READ)

When this key is pressed, the first memory channel indicator flashes on and off and the track and index numbers stored in the first memory channel are displayed in the track and index number indicators. If this key is pressed again, the contents of the second memory channel will be displayed, then the third and so on.

If the PLAY key ⑲ is pressed during this process, disc play will begin from the track (and index) currently being displayed. If the PAUSE key ⑳ is pressed, the pickup will move to the beginning of the track (and index) currently being displayed after which the player will switch to the pause mode.

⑨ Clear Key (CLEAR)

After pressing the memory read key ⑧ within five seconds after pressing the memory key ⑦, press the clear key within three seconds after the memory read key to cancel the data just input. To cancel all memory contents at once, press this key while holding the memory read key ⑧ down.

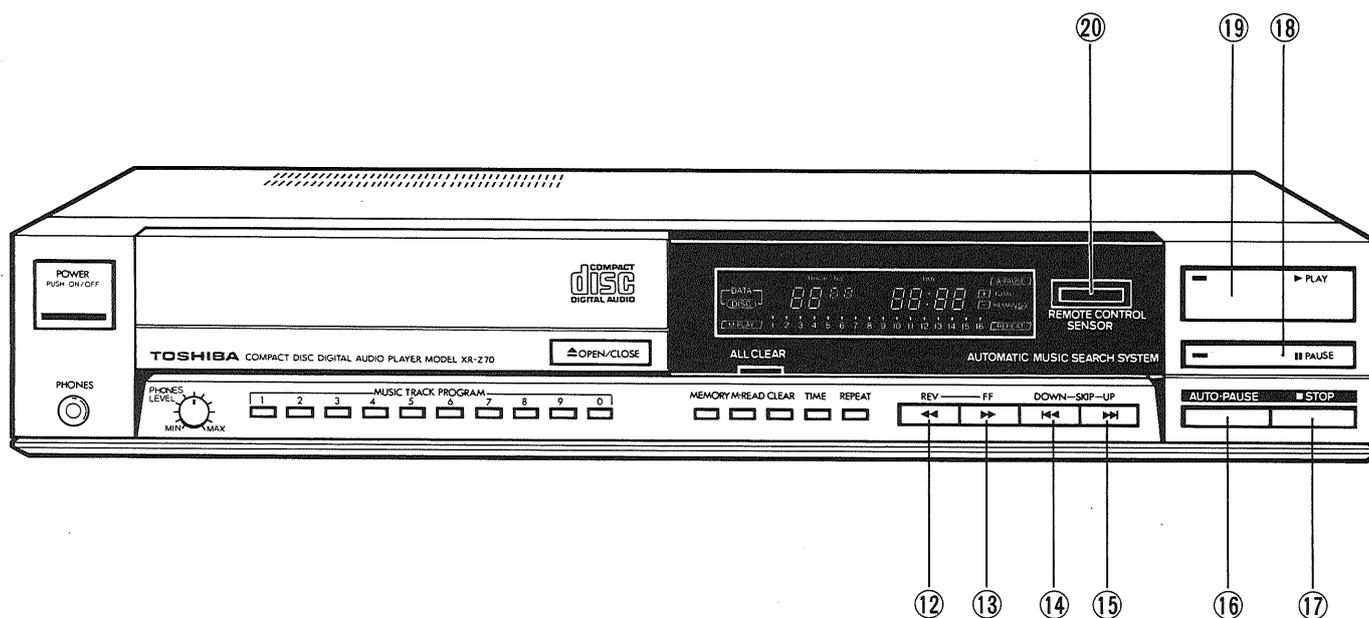
⑩ Time Key (TIME)

Press this key once to display the elapsed time since the beginning of the disc (⊕ TOTAL), press again to display the remaining playing time on the disc (⊖ REMAINING) and press a third time to display the elapsed time since the beginning of the current track.

During memory play, the elapsed time since memory play was started will be displayed, then the total remaining playing time of the remaining tracks in the memory and finally the elapsed time since the beginning of the current track.

⑪ Repeat Key (REPEAT)

Press once to turn the repeat mode on and once again to turn the repeat mode off. During normal disc play, the entire disc side will be played repeatedly. During memory disc play, all tracks in the memory will be played repeatedly in order.



12 Reverse Key (REV)

The pickup moves rapidly backward as long as this key is held down. The reverse key is used in the same manner as the fast forward key.

13 Fast Forward Key (FF)

The pickup moves rapidly forward as long as this key is held down and sound from the disc is heard as the pickup moves over the disc. Disc play resumes at the point where this key is released. If the player is in the pause mode when this key is pressed, the player will return to the pause mode when the key is released. In the memory play mode, the pickup will rapidly move over the tracks in the order they are programmed in the memory.

- The pickup moves six times more rapidly when the FF key is pressed while the player is in the pause mode than it does when the player is in the play mode.

14 Down Skip Key (DOWN SKIP)

When this key is pressed, disc play stops, the pickup returns to the beginning of the current track and disc play is automatically resumed from that point. Press this key again while the pickup is moving to the beginning of the current track to return to the beginning of the previous track. When this key is pressed during memory play, the pickup moves to the beginning of the current track in the memory, then the previous track and so on and disc play is resumed from that point.

15 Up Skip Key (UP SKIP)

When this key is pressed, disc play stops, the pickup advances to the beginning of the next track and disc play is automatically resumed from that point. When this key is pressed more than once, the pickup advances the same number of tracks ahead. When this key is pressed during memory play, the pickup moves to the beginning of the next track in the memory and disc play is resumed from that point.

16 Auto Pause Key (AUTO PAUSE)

Press once to turn on the auto pause mode (A-PAUSE indicator lights) and again to turn the auto pause mode off. In this mode, the player automatically switches to the pause mode each time the end of a track is reached during either normal disc play or memory disc play.

17 Stop Key (STOP)

When this key is pressed while a disc is being played, the pickup returns to the beginning of the disc, the motor stops and the laser pickup is turned off.

18 Pause Key (PAUSE)

Press to temporarily interrupt disc play (pause indicator lights). The laser remains on during the pause mode. To resume disc play, press the play key 19.

- (1) If the pause key is pressed after one of the programming keys 6 the pickup will move to the beginning of the track (and index) number just input and the pause indicator will light.
- (2) If the pause key is pressed after the memory read key 8, the pickup will move to the beginning of the track (and index) number being displayed and the pause indicator will light.
- (3) The player automatically switches to the stop mode if the pause mode is not cancelled after one hour.
- (4) No other keys can be operated for about five seconds after the pause key is pressed.

19 Play Key (PLAY)

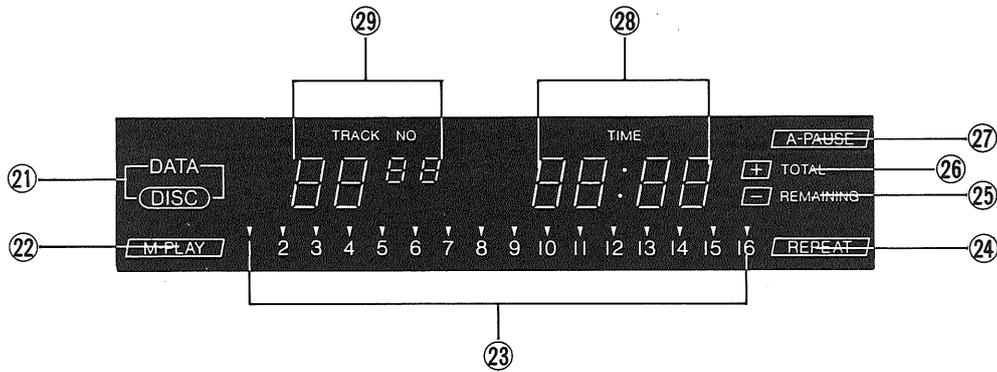
Press to start disc play or cancel the pause mode to resume disc play (play indicator lights).

- (1) If the play key is pressed after one of the programming keys 6, disc play will start from the beginning of the track (and index) number just input.
- (2) If the play key is pressed after the memory read key 8, disc play will start from the beginning of the track (and index) number being displayed.
- (3) If the play key is pressed when the disc holder is still open, disc play will start immediately after the disc holder has closed (if a disc is in place).

20 Remote Control Sensor

The signal from the optional wireless remote control unit is received here.

Indicator section



21 Disc Set Indicator (DISC DATA)

When a disc has been properly placed in the holder, the word DISC lights. The word DATA flashes on and off while the disc contents are being read and then remains lit once this procedure is completed. If the disc contents can not be read (because of a scratch or other problem on the disc), the DATA indicator will light but not flash on and off. Both the DISC and DATA indicators are lit while a disc is being played.

22 Memory Play Indicator (M-PLAY)

Lights when the player is in the memory play mode.

23 Memory Channel Indicator (MEMORY INDICATOR)

- (1) This indicator lights to show which tracks are contained in the memory.
- (2) When the memory read key ⑧ is pressed, the indicator of the first memory channel flashes on and off and its contents are displayed by the track and index number indicator. If the memory read key is pressed again, the second memory channel is displayed, then the third and so on.
- (3) During memory play, indicators of invalid memory channels (those with a track or index number not existing on the disc) will not light.

24 Repeat Indicator

Lights when the repeat key ⑪ is pressed and goes out when the repeat key is pressed again.

25 Remaining Time Indicator (REMAINING)

When the time key ⑩ is pressed so that this indicator lights, the time display 28 shows the remaining playing time on the disc or in the memory.

26 Elapsed Time Indicator (TOTAL)

When the time key ⑩ is pressed so that this indicator lights, the time display 28 shows the elapsed time from the point where disc play was started or when memory play was started.

27 Auto Pause Indicator (A-PAUSE)

Lights when the auto pause key ⑬ is pressed and goes out when the auto pause key is pressed again. When this indicator is lit, the player automatically switches to the pause mode at the end of each track.

28 Time Display (TIME)

Displays the elapsed time from the beginning of each track except when the remaining or elapsed time indicator is lit. When a new track is started, this display returns to 00 min. 00 sec. The reading decreases briefly during the between-tracks portions of a disc to show the time remaining before the next track begins.

29 Track/Index Number Display (TRACK NO)

The two digits on the left show the track number and the two digits on the right show the index number. The index number returns to 01 or 00 each time a new track is started. Refer to the disc instruction manual for details on the meaning of these numbers.

REAR PANEL

30 Fixed Output Jacks (FIXED)

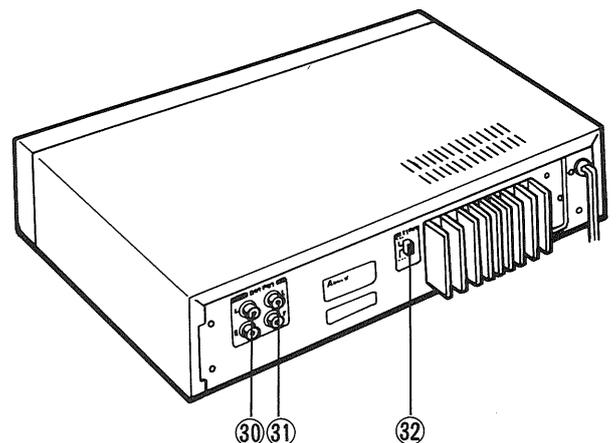
Connect these jacks to the AUX/CD jacks of your integrated amp or preamplifier.

31 Variable Output Jacks (VARIABLE)

The output level of these jacks is controlled by the output level control knob ⑤.

32 Timer Switch (TIMER)

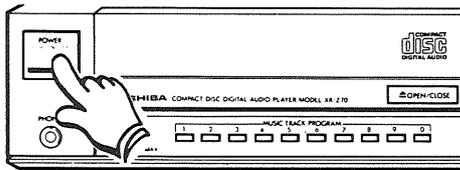
Set this switch to PLAY when using an audio timer to start disc play.



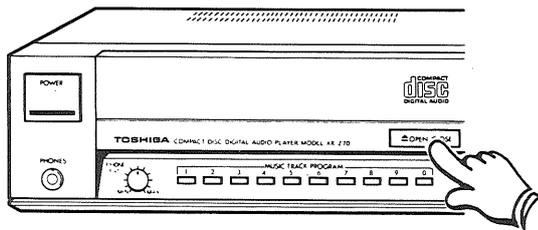
Before Playing a Disc

Turn on the amplifier power switch.

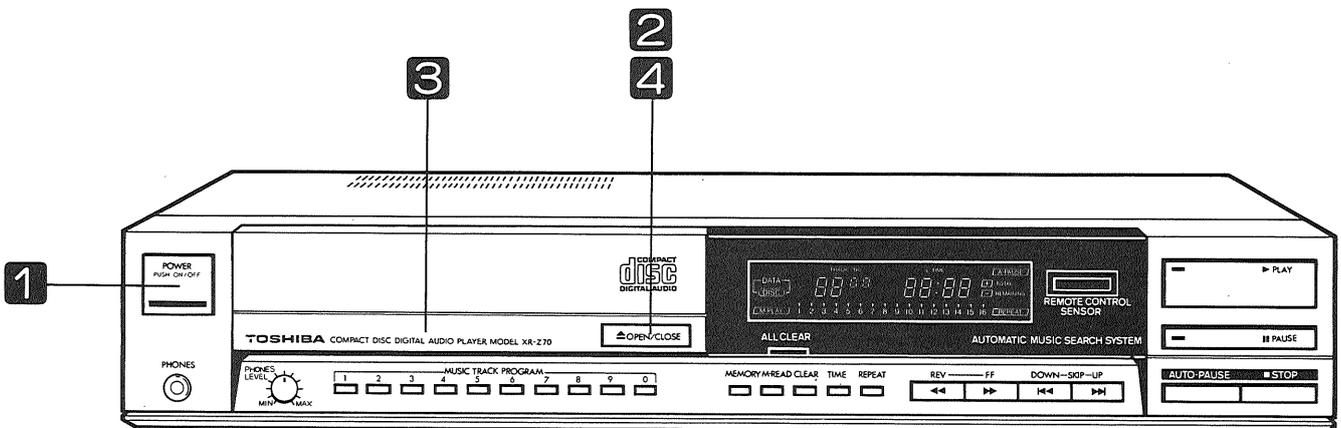
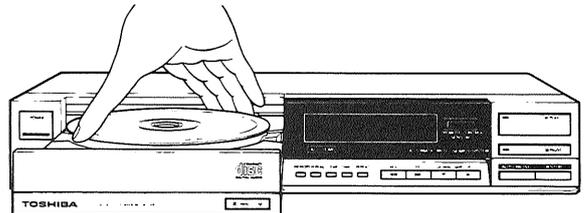
- 1** Turn on the front panel power switch.



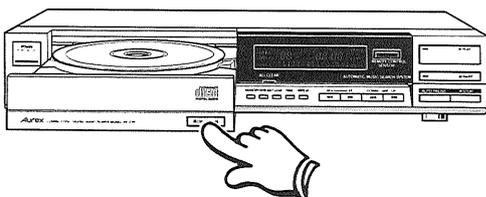
- 2** Press the open/close key to open the disc holder.



- 3** Place a disc in the holder with the label side facing upward. Do not insert more than one disc at once. Remember that only Compact Discs can be used with this player.



- 4** Press the open/close key again to close the disc holder.



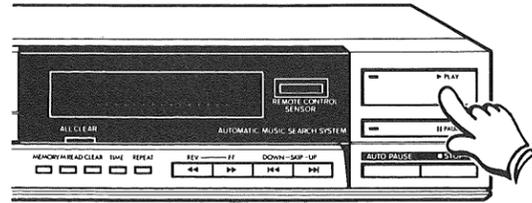
- 5** This completes disc play preparations. Follow the directions on page 10 for normal disc play and the directions on page 14 for memory disc play.

- Once the disc holder has closed, the disc will automatically begin to spin and the contents of the disc will be read. The DATA indicator flashes on and off while this process is taking place (about 5 seconds).
- If the DATA DISC indicator does not light, the disc may have been inserted upside-down. In this case, replace the disc in the holder properly.
- After disc contents have been read, both the DATA and DISC indicators will remain lit, the track and index number indicators will both read one and the time display will read 00 min. 00 sec.

To Play a Disc (I) Normal Play

To Play an Entire Disc Side

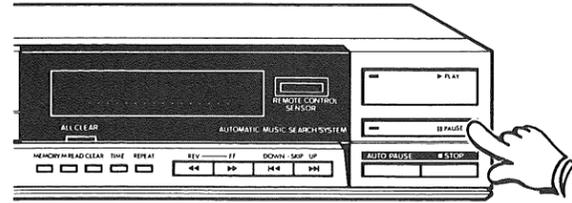
- 1 Press the play key.



- When the play key is pressed, the play indicator lights and the disc is played from track one. At this time, the time counter begins advancing from 00 min. 00 sec. After the last track has been played, the pickup returns to the beginning of the first track and the disc stops spinning.

To Use the Pause Mode

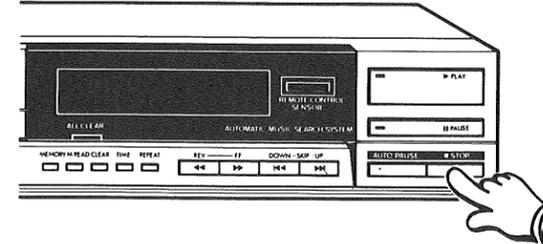
- 2 Press the pause key.



- When the pause key is pressed, disc play is stopped, the pause indicator lights and the pickup remains in its present location while the disc continues to spin. To resume disc play, press the play key.

To Stop Disc Play

- 3 Press the stop key.

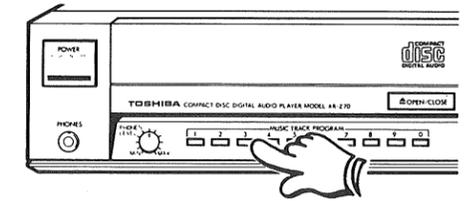


- When the stop key is pressed, disc play is immediately stopped, the pickup returns to the beginning of the first track and the disc stops spinning.

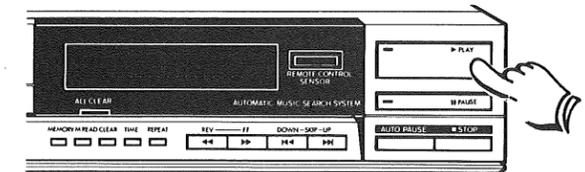
To Play a Disc From a Particular Track

- 4 Enter the track number using the programming keys.

- For example, to play track 3, press the third programming key from the left (or key 0 and then 3). You can also move the pickup to the beginning of track 3 using the up or down skip keys. The track number can be input while a disc is being played and it is also possible to input both track and index numbers.



- 5

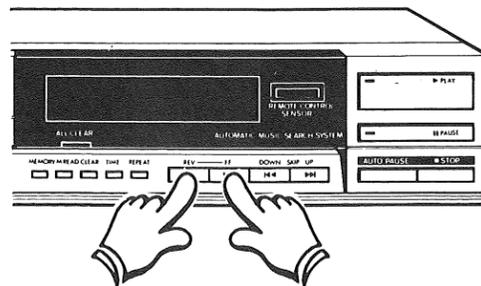


Press the play key within 5 seconds after pressing the programming key(s). The track indicator will display the input track (and index) number, flash on and off, and the pickup will move to the beginning of that track. At this point, the track (and index) indicator will remain lit, the play indicator will light and disc play will begin. When the last track has been played, the pickup will return to the beginning of the first track.

If the pause key is pressed instead of play, the pickup will move to the beginning of the input track after which the player will switch to the pause mode.

To Move the Pickup Forward and Backward

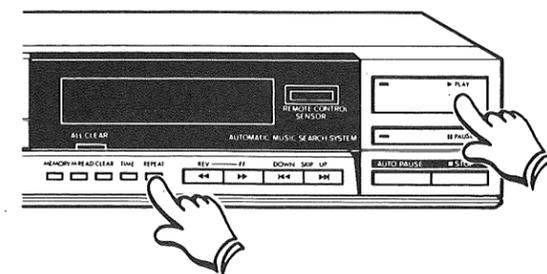
- 6 Press the fast forward key to move the pickup forward and the reverse key to move the pickup backward.



- When the fast forward or reverse key is pressed when a disc is being played, sound from the disc can still be heard to assist in locating specific points on the disc. To move the pickup rapidly (six times faster), press the pause key before pressing the fast forward or reverse key. No sound is heard during this rapid movement mode. To move the pickup to a specific point on a disc, press the fast forward or reverse key in single steps once the pickup is near the desired point.
- If the pickup is moved all the way to the end or the beginning of a disc with the fast forward or reverse key, the player will switch to the pause mode, the pause indicator will flash on and off and the pickup will stop moving.

To Repeatedly Play an Entire Side

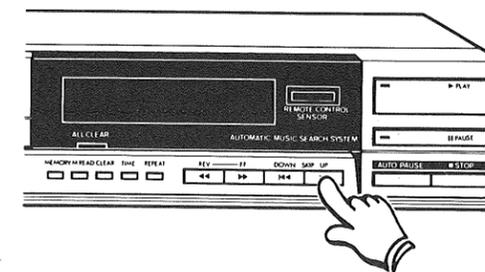
- 7 Press the repeat key.
- 8 Press the play key. It is also possible to press the repeat key after the play key.



- When the last track has been played, the pickup will return to the beginning of the first track and disc play will be resumed. The disc will be played repeatedly until the repeat mode is cancelled by pressing the repeat key again.

To Advance to the Next Track

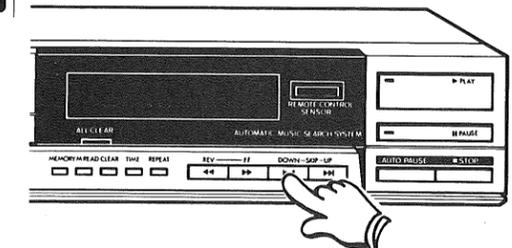
- 9 Press the up skip key.



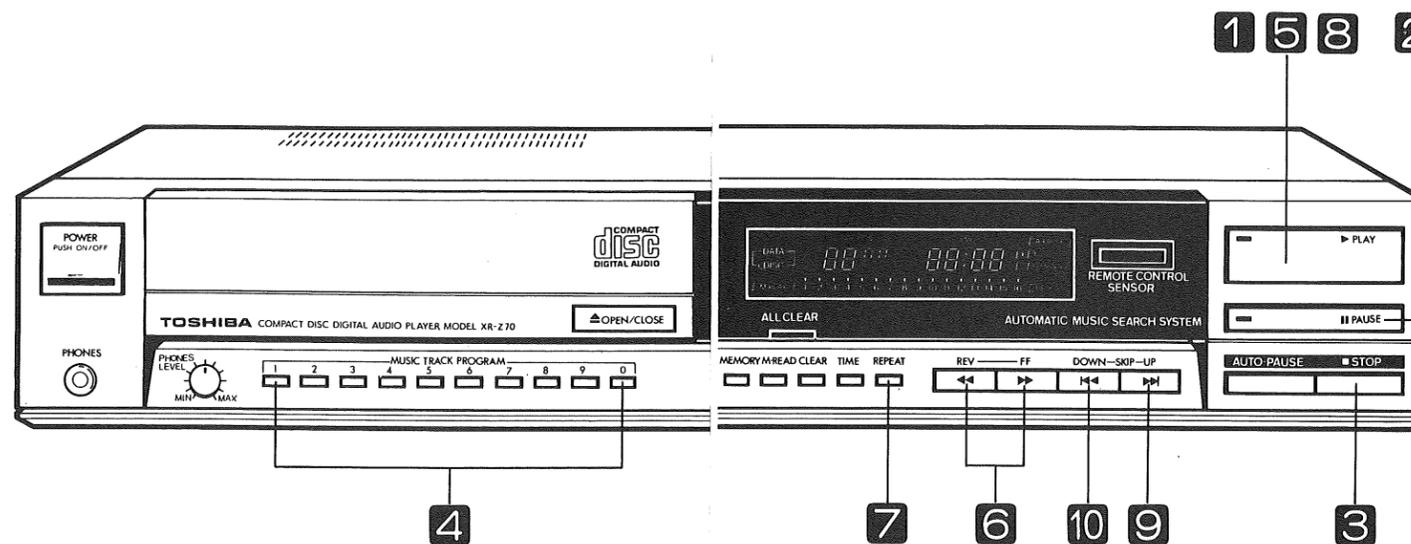
- When the up skip key is pressed, the track indicator displays the number of the next track and flashes on and off while the pickup moves to the beginning of the next track (the play indicator remains lit). Once the beginning of the next track is located, the track indicator remains lit and disc play is resumed from that point.
- If the up skip key is pressed more than once, the pickup will move the same number of tracks ahead. For example, if the up skip key is pressed four times, the pickup will move four tracks ahead after which disc play will be resumed. When the last track has been played, the pickup will return to the beginning of the first track.

To Return to a Previous Track

- 10 Press the down skip key



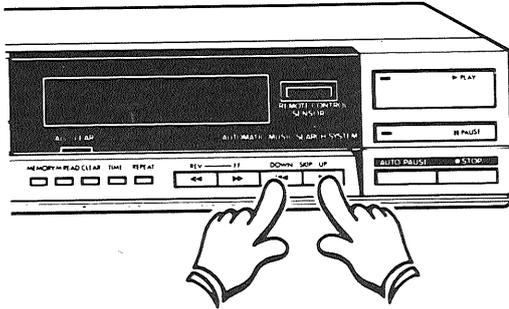
- When the down skip key is pressed, the track indicator flashes on and off, the pickup moves to the beginning of the current track and the play indicator lights. Once the beginning of the current track is located, the track indicator remains lit and disc play is resumed from that point.
- If the down skip key is pressed again while the track indicator of the current track is flashing on and off, the pickup will move back to the beginning of the previous track and the track indicator will switch to the number of that track. If the down skip key is held down, disc play will resume from the beginning of the track displayed by the track indicator when the down skip key is released.



To Locate a Specific Track

Using the Up/Down Skip Keys

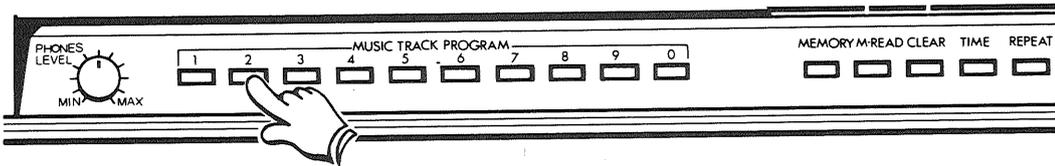
Press the up or down skip key while watching the track number display to move the pickup to a specific point on a disc. Remember that index numbers can not be located with the up and down skip keys.



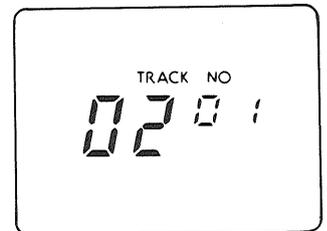
Using the Programming Keys

Be sure to confirm all settings by watching the display.

Example 1: To locate track 2

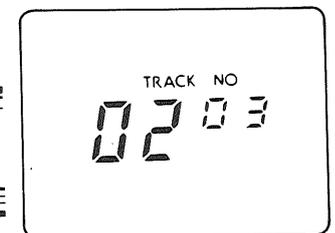
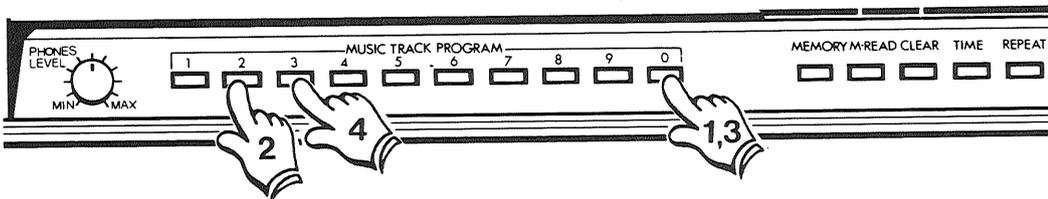


Display



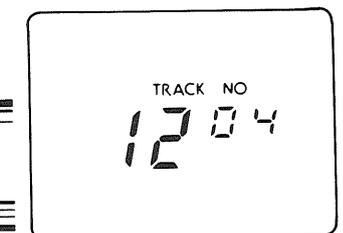
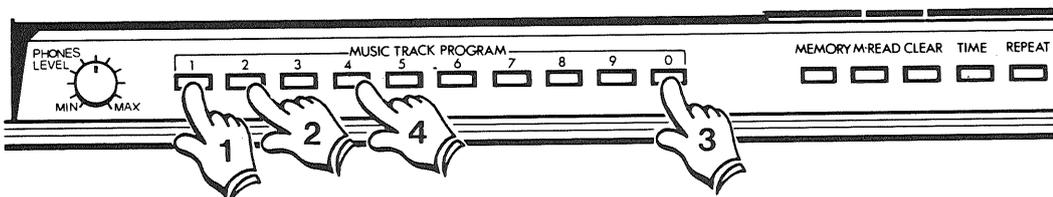
- Press programming key number 2 (or 0 and then 2). The index number will be automatically set to 01.

Example 2: To locate track 2, index 03



- Press the programming keys in this order: 0, 2, 0 and 3. The initial 0 is necessary even though the track number has a single digit because an index number is also being input.

Example 3: To locate track 12, index 04

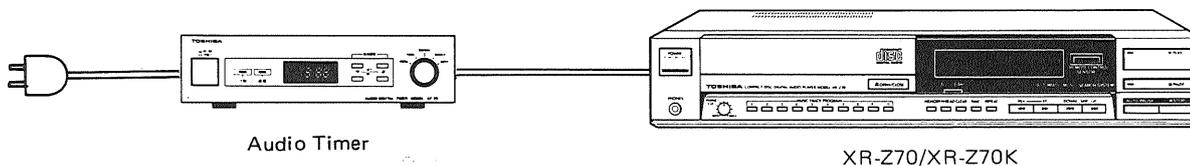


- Press the programming keys in this order: 1, 2, 0, 4. If you press the wrong key, press the clear key and start again.

Using the Timer Mode

This product provides facilities to use a timer unit.
A timer unit is an optional accessory.

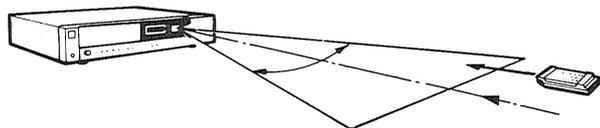
When an audio timer is connected to this unit, set the rear panel timer switch to the PLAY position. Then set the audio timer to turn power on and off at the desired times. Finally, turn power off at the audio timer, leaving the power switch of this unit on. Disc play will now begin at the preset time.



1. If the player is not set for memory play, the disc will be played from beginning to end.
2. If the player is set for memory play, the disc will be played according to memory contents.

Using the Wireless Remote Control Unit

This unit can be used with the optional RM-75 wireless remote control unit. When using the RM-75, perform the procedures for normal and memory play using the controls on the remote control unit instead of the front panel. Remember that power on/off and disc holder open/close can not be controlled by the remote control unit.

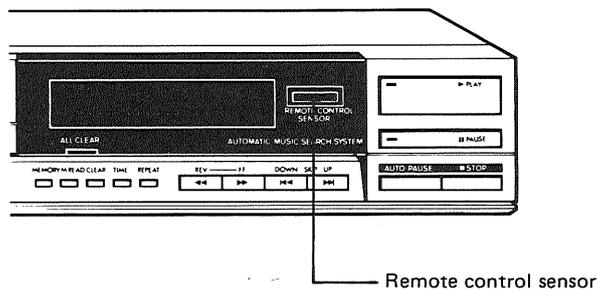


To cancel all entries in the memory:

1. Press the memory read key.
2. Press the clear key.

Memory contents will not be cleared if the clear key is pressed before the memory read key. Also be careful not to press more than one key at once since this could cause the player to malfunction.

- Remember that the remote control unit must be pointed at the player in order to operate and that there should be no obstacles between the remote control unit and the player. The remote control unit can be used from a distance of up to about 5 meters from the player and at an angle of up to 30 degrees.
- Refer to the remote control unit operating instructions for additional directions and precautions.

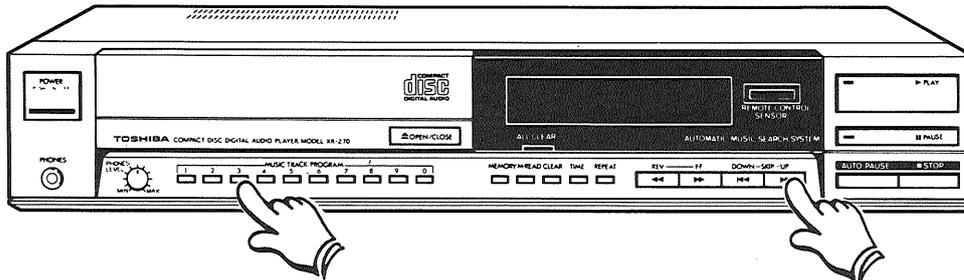


To Play a Disc (II) Memory Play

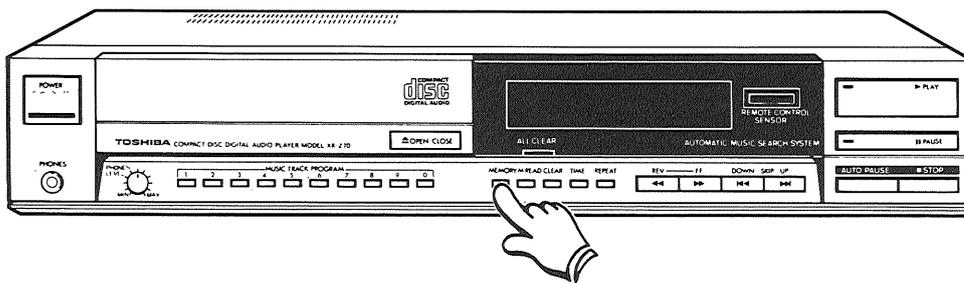
Use memory play to play up to 16 tracks in any order you want.

To Program the Memory

- 1** Select the track (and index) to be memorized using the programming keys or the up/down skip keys.



- 2** Press the memory key. The memory channel indicator in which the track is to be entered will flash on and off for 3 seconds after which the indicator will remain lit. The track is now stored in the memory.



Example 1 Programming the memory using the up/down skip keys

Track number	
In channel 1: 03	Press the up/down skip key until the track number indicator displays the number 03 and then press the memory key.
2: 11	Press the up/down skip key until the track number indicator displays the number 11 and then press the memory key.
3: 04	Press the up/down skip key until the track number indicator displays the number 04 and then press the memory key.
4: 08	Press the up/down skip key until the track number indicator displays the number 08 and then press the memory key.

Example 2 With index numbers

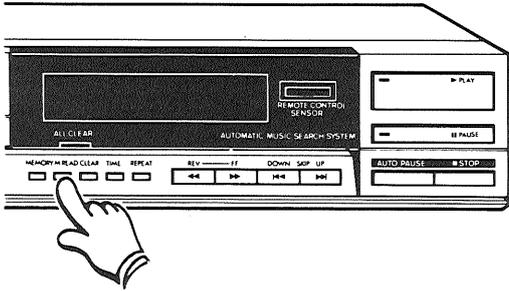
Track number	Index number	
In channel 1: 03	—	Press the 0 and 3 keys and then the memory key.
2: 11	—	Press the 1 key twice and then the memory key.
3: 04	03	Press the 0, 4, 0 and 3 keys and then the memory key.
4: 08	02	Press the 0, 8, 0 and 2 keys and then the memory key.

If you press the wrong key, press the clear key and start again. Input the track (and index) number again.

- Memory contents are preserved for about 24 hours after the power switch is turned off.
- Up to 16 tracks can be stored in the memory. The same track can be entered any number of times (up to 16).
- The next track (and index) number can be input before the 3 second waiting period after pressing the memory key has elapsed. Entering the next track automatically completes the previous entry.
- The track currently being played can be stored in the memory without stopping disc play by pressing the memory key alone.
- Track and index numbers can also be stored in the memory even when no disc is in the holder if the power switch is on.

To Check Memory Contents

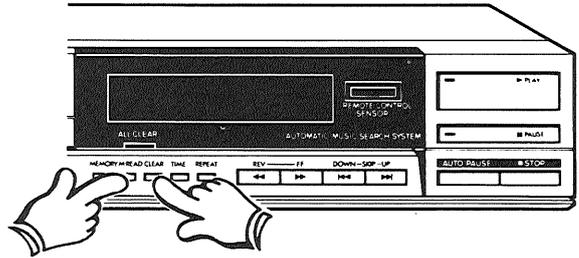
3 Press the memory read key.



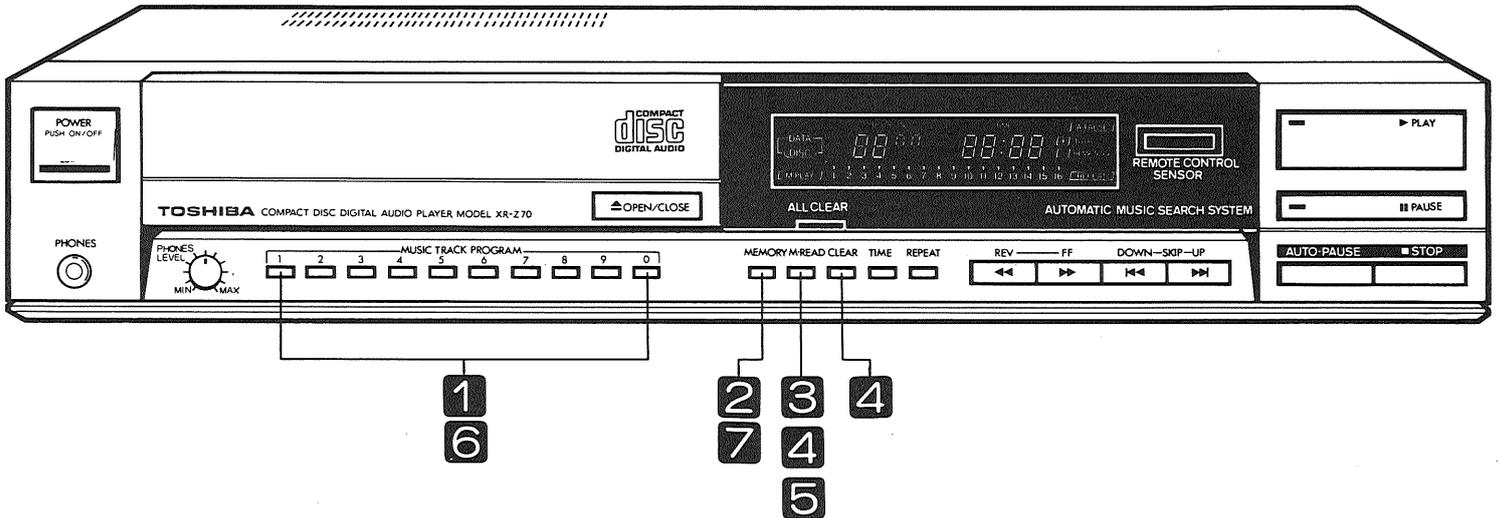
- When the memory read key is pressed, the first memory channel indicator flashes on and off and the track (and index) number contained in that channel is displayed by the track (and index) indicator for about 5 seconds. To check the next memory channel, press the memory read key again. To return the track (and index) indicator to the normal mode before the 5 second period has elapsed, press the clear key.

To Cancel Memory Contents

4 Press the clear key while holding the memory key down.



This clears all entries in the memory in a single step (the memory track indicator goes out). Remember that it is not possible to cancel specific memory entries.



To Change Memory Contents

5 Press the memory read key until the indicator of the memory channel to be changed flashes on and off.

6 Enter the new track (and index) number with the programming keys within 5 seconds.

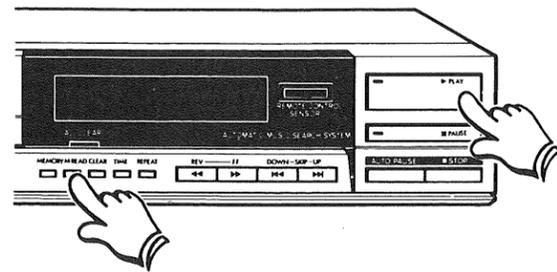


7 Press the memory key. The new entry will replace the previous one in 3 seconds.

If you press the wrong key, press the clear key and start again.

To Begin Memory Play

- 1 Press the memory read key until the memory channel indicator of the channel from which memory play is to begin flashes on and off.
- 2 Press the play key within 5 seconds.

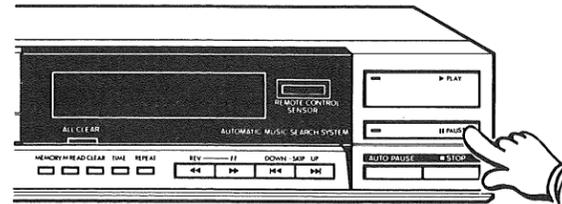


The track number display will flash on and off, the pickup will move to the beginning of the displayed track, the M-PLAY indicator will light, disc play will begin and the track number display will remain lit. When the last entry in the memory has been played, the pickup will return to the beginning of the first track and the disc will stop spinning.

- If an invalid entry (track or index number that does not exist on the disc) is encountered, the indication of that memory channel goes out and memory play will proceed to the next memory channel.

To Use the Pause Mode

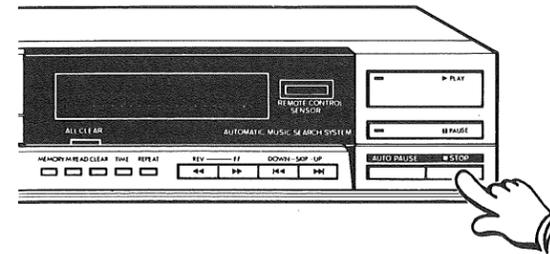
- 3 Press the pause key.



Disc play will be stopped but the pickup will remain where it was when the pause key was pressed and the disc will not stop spinning. To resume disc play, press the play key.

To Stop Memory Play

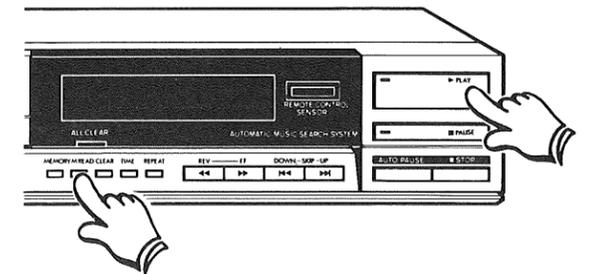
- 4 Press the stop key.



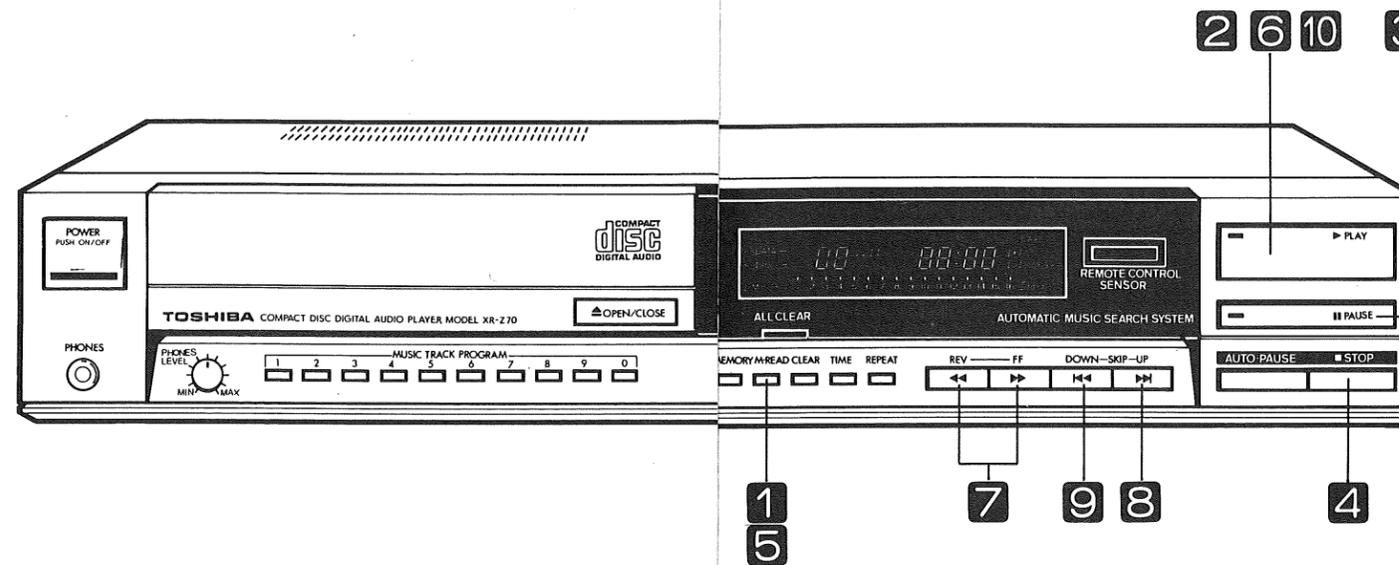
Disc play will stop, the pickup will return to the beginning of the first track and the disc will stop spinning.

To Play a Disc From a Particular Track

- 5 Press the memory read key until the memory channel indicator of the desired channel flashes on and off.
- 6 Press the play key.

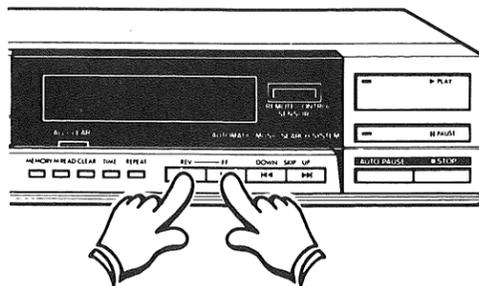


- This can also be done while memory play is in progress. The pickup will move to the beginning of the track number in the memory channel whose indicator is flashing on and off, the track number display will light continuously and memory disc play will begin from that point. When the last track in the memory has been played, the pickup will move to the beginning of the first track and the disc will stop spinning. If the pause key is pressed instead of the play key, the player will switch to the pause mode when the beginning of the desired track is located.



To Move the Pickup Forward or Backward

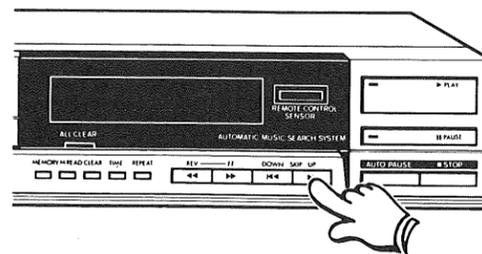
- 7 Press the fast forward key or reverse key.



If the fast forward or reverse key is pressed during memory play, the pickup will go forward or backward over the tracks in the order in which they are programmed in the memory. Press the key in single steps once the pickup is near the desired point. The fast forward and reverse movement speed is the same as during normal disc play.

To Advance to the Next Memorized Track

- 8 Press the up skip key.

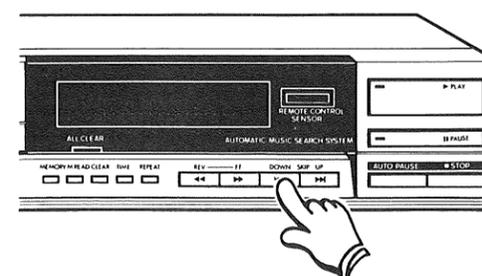


If the up skip key is pressed during memory disc play, the next memory channel indicator will flash on and off, the pickup will move to the beginning of that track after which the indicator will remain lit and disc play will resume from that point.

If the up skip key is pressed more than once, the pickup will skip ahead the same number of memorized tracks. When the last memorized track has been played, the pickup returns to the beginning of the first track and the disc stops spinning.

To Return to the Previous Memorized Track

- 9 Press the down skip key.

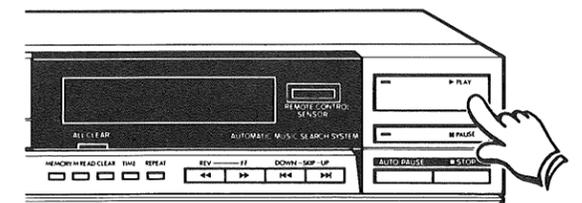


If the down skip key is pressed during memory disc play, the pickup will move to the beginning of the present track and disc play will resume from that point.

If the down skip key is pressed again while the pickup is moving back to the beginning of the present track, the pickup will go back to the beginning of the previous memorized track. To go back even more, hold the down skip key down, releasing when the memory track number indicator displays the desired track.

To Return to Normal Play

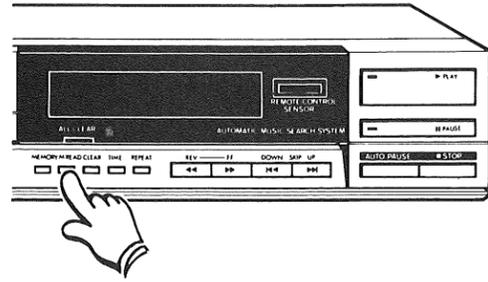
- 10 Press the play key.



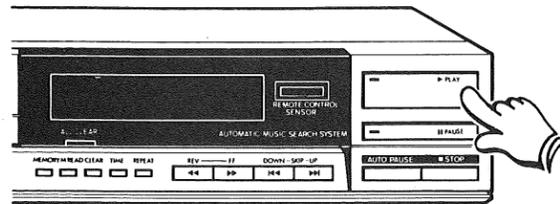
- The M-PLAY indicator will go out and disc play will continue to the end of the disc after which the pickup will return to the beginning of the first track and the disc will stop spinning.

To Repeatedly Play Memory Contents

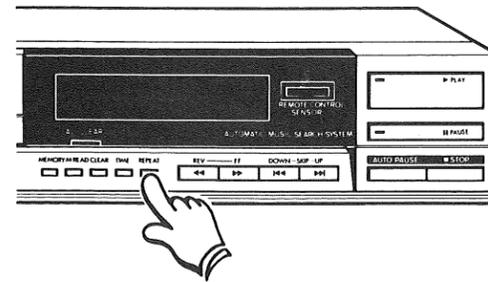
- 1 Press the memory read key until the memory track indicator of the desired channel flashes on and off.



- 2 Press the play key.



- 3 Press the repeat key.

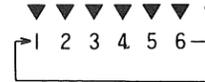


When only there is only one memory entry:

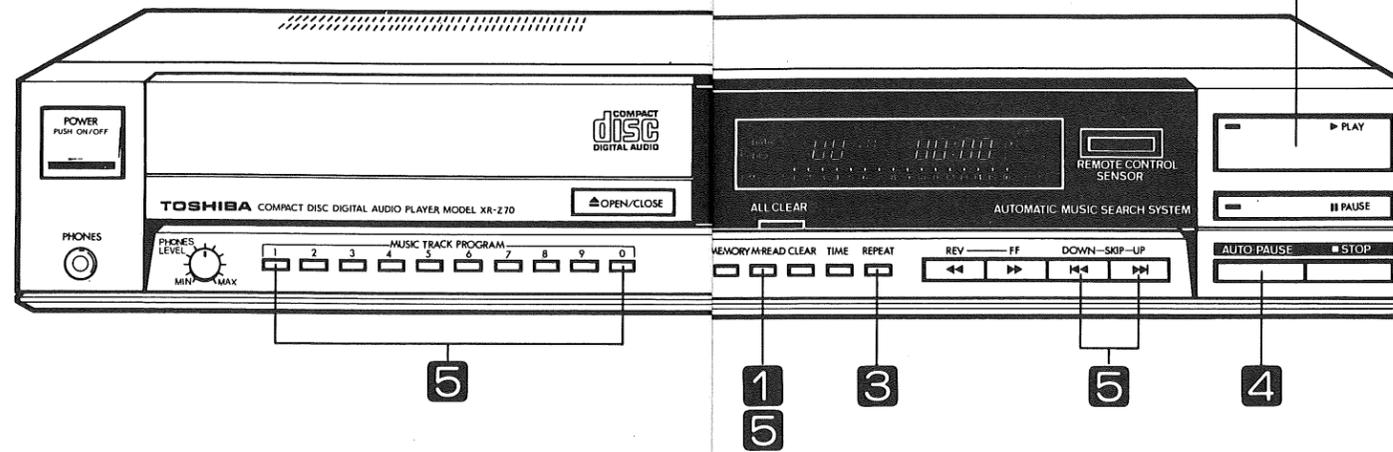


Only that one track will be played repeatedly.

When there is more than one entry:

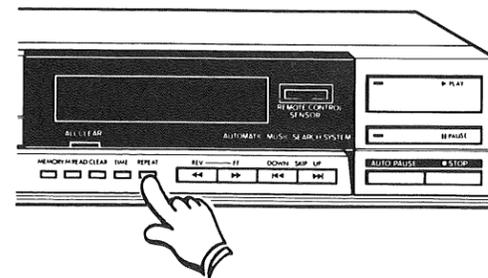


All tracks in the memory will be played repeatedly in order.



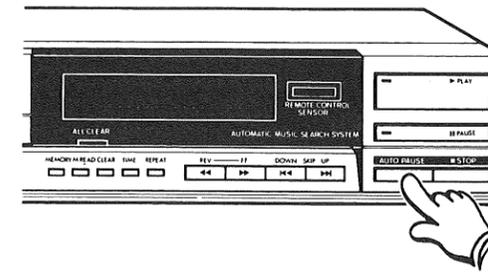
To Cancel Memory Repeat

When the last track in the memory has been played, the pickup will move to the beginning of the first track in the memory and disc play will be resumed from that point. Repeat play will continue until the repeat mode is cancelled by pressing the repeat key again.

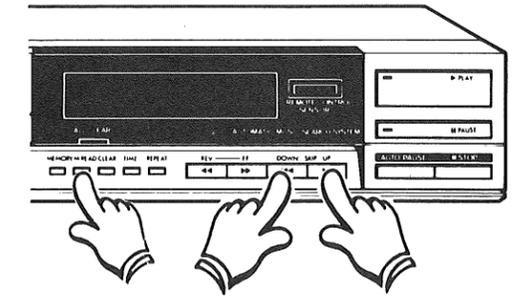


To Activate Auto Pause After Each Track

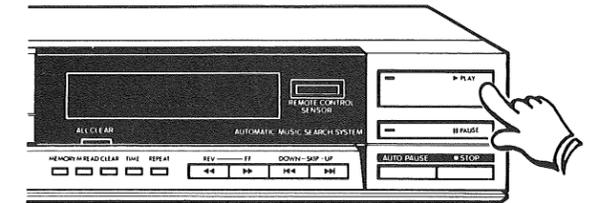
- 4 Press the auto pause key (A-PAUSE indicator lights).



- 5 Press the up or down skip key or press the memory read key and then the track number to be played using the programming keys.



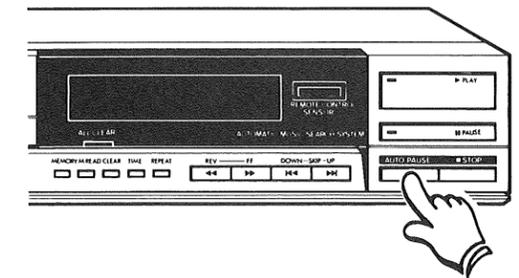
- 6 Press the play key.



The player will automatically switch to the pause mode when the end of the track is reached. Perform steps 5 and 6 to play a specific track using the auto pause mode.

To Cancel Auto Pause

To return to normal disc play, press the auto pause key again (A-PAUSE indicator goes out).



When a Disc Can Not Be Played

- If a disc can not be played, check the following points.

Problem	Cause	Remedy
Disc holder opens by itself.	<ol style="list-style-type: none"> 1. The disc has been inserted upside-down and one of the operation keys (PLAY, PAUSE, FF, REV) has been pressed. 2. The disc is dirty. 3. There is dew on the laser pickup. 	<ol style="list-style-type: none"> 1. Insert the disc properly with the label facing upward. 2. Wipe off the disc and insert again. 3. Dew can prevent the pickup from operating properly. Leave power on and wait about one hour for the dew to evaporate.
Track number is input but disc is not played when the play or pause key is pressed.	A track number that does not exist on the disc has been input.	Read the disc instruction manual again and input a correct track number.
Track and index numbers are input and play or pause key is pressed but the display section flashes on and off and the pickup returns to the beginning of the disc.	An index number that does not exist in the track number has been input.	Read the disc instruction manual again and input a correct index number.
Memory play is started but all the memory channel indicators flash on and off and memory play is not performed.	All track and index numbers in the memory do not exist on the disc.	Read the disc instruction manual again and input correct track and index numbers.

TRACK NO.

This is the number assigned to each song on a disc. Usually, the first song is track number one, the second song track number two, and so on. A list of songs and their numbers is included in the instruction leaflet included with each Compact Disc. These track numbers are used when programming songs in the memory and for direct access operation to locate a particular song directly. Track numbers can go from 01 to 99, but some discs begin with a track number other than 1 (3 or 4, for example).

INDEX NO.

In some discs, tracks are divided into several sections called indexes. Index numbers are used to identify these sections on such discs. In classical music, index numbers are often used to identify each movement of a symphony or concerto. Some Compact Disc players are not equipped to handle index numbers, but the XR-Z70 is fully capable of both memory and direct access operation using index numbers for your convenience.

TIME

This is the elapsed playing time from the beginning of each track. A quartz crystal is used to guarantee extremely accurate time-keeping.

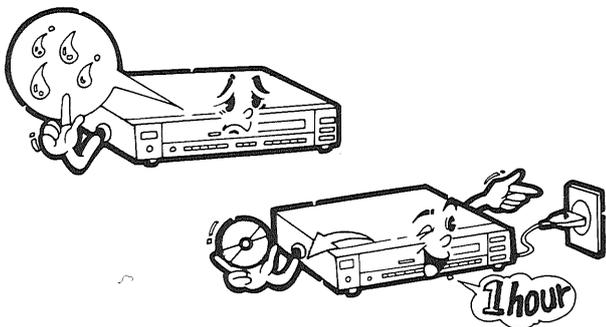
Before Having the Player Repaired

- Check the following points before requesting professional servicing.

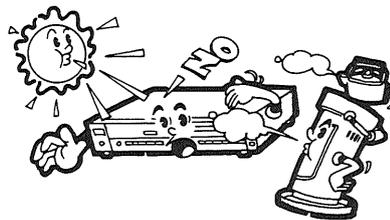
Problem	Cause	Remedy
Disc is inserted but no sound is heard.	Play key has not been pressed.	Press the play key. The disc will stop spinning if the play key is not pressed immediately after data has been read (the display section stops flashing on and off).
Sound is distorted.	<ol style="list-style-type: none"> 1. The variable jacks are being used with the output level control knob in the maximum setting. 2. The player is connected to the amp phono jacks. 3. The disc is soiled. 4. There are scratches on the surface of the disc (the side without the label). 	<ol style="list-style-type: none"> 1. Lower the output level as needed (about the 11:00 position is usually appropriate). 2. Connect to the AUX jacks. (The output of this player - up to 2 volts - is too high for phono jacks.) 3. Clean with a soft, dry cloth. 4. Use a different disc.
Skipping occurs.	<ol style="list-style-type: none"> 1. The side of the disc with the label has been scratched by a pen or other hard, sharp object. 2. The disc is scratched. 3. The disc is soiled. 4. The player is being affected by vibrations. 5. The player is not level. 6. The disc holder has been touched. 	<ol style="list-style-type: none"> 1. Use a different disc. (The side with the label is easily scratched because it has a very thin protective coating.) 2. Use a different disc. 3. Clean with a soft, dry cloth. 4. Protect the player from shocks and vibrations. 5. Be sure the player is level before playing discs. 6. Do not touch the disc holder during disc play.
Operation key is pressed but nothing happens.	Key was pressed while the display section was flashing on and off.	Wait until the display section stops flashing on and off.
Pickup wears out after a short time.	<ol style="list-style-type: none"> 1. The player is used in a very hot environment. 2. Appliances that emit sparks are nearby (fluorescent lights, refrigerators, etc.) 	<ol style="list-style-type: none"> 1. Do not expose the player to very high temperatures. Therefore, do not place it on top of an amplifier or in a confined space. 2. Use a power supply filter, a different wall socket or separate the player and problem appliances more.
Search time (locating a specific track) is unusually long.	<ol style="list-style-type: none"> 1. The area over the inner tracks is soiled (DATA indicator does not light). 2. There is only one track on the disc divided into index numbers. 	<ol style="list-style-type: none"> 1. Clean with a soft, dry cloth. If the disc is scratched, use a different disc. 2. Search time is always slow with discs having only one track.
Noise is heard during search operation.	This is mechanical noise created by the pickup movement.	This is not a malfunction. The sound stops when search operation ends.
Play of one index number of a track number not possible.	The player is in the normal play mode.	Input the index number in the memory and locate and play the section in the memory play mode.

Points to Remember

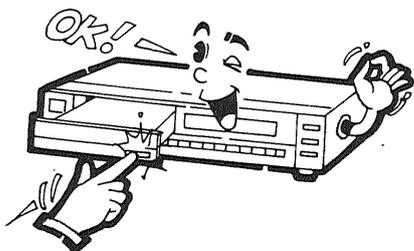
- If the player is brought from a cold environment to a warm one or is in a cold room that is quickly heated, dew may form on the pickup. Since this can prevent the pickup from operating properly, remove the disc and leave power on for about one hour to remove the dew.



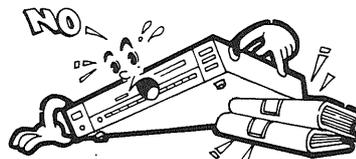
- Do not expose the player to direct sunlight or a heating appliance since the internal temperature could rise too high.



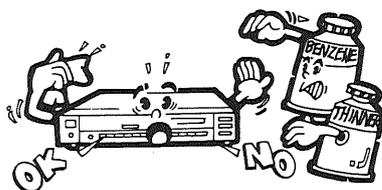
- Always close the disc holder when not loading and unloading discs to protect delicate internal parts from dust.



- Do not use the unit in a slanted or perpendicular position. It should only be used in a horizontal position.



- Wipe off the cabinet with a soft, dry cloth. Dampen the cloth with water to remove more stubborn stains. Never use benzene, thinner, alcohol or other chemical solvents since they can discolor the cabinet and remove the lettering. Also protect the cabinet from insecticides, hair sprays, paint and other substances that could cause stains.



- When you carry the unit, be careful not to bump it against walls and other objects.

Specifications

Type:	Compact Disc player with optical pickup
Quantization:	16 bit linear
Channels:	2 (stereo)
Frequency response:	20 Hz – 20 kHz \pm 0.5 dB
Dynamic range:	Over 90 dB
Total harmonic distortion:	Under 0.007% (1 kHz)
Channel separation:	Over 85 dB (1 kHz)
Wow and flutter:	Unmeasurable
Output:	FIXED: 2.0 volts VARIABLE: 0 – 5 volts
Pickup:	Semiconductor laser type
Memory:	Contains up to 16 tracks
Track location:	By track and index number
Power supply:	120V ~, 60 Hz
Power consumption:	22 watts
Dimensions:	420(W) x 85(H) x 337(D) mm
Weight:	6.8 kg
Accessories:	Connection cables

Specifications are subject to change without notice.

■ The disc speed varies from 500 to 200 rpm.

Unlike phonograph records which are played from the outside to the inside and rotate at a constant speed, Compact Discs are played from the inside to the outside and the speed at which the disc rotates varies so that the pits in the disc surface constantly pass the laser pickup at the same speed. This is called constant linear velocity (CLV) since the disc speed as seen by the laser pickup remains the same. To maintain a constant linear velocity, the disc rotates rapidly for inner tracks and then gradually slows down as the pickup moves toward the outer edge of the disc. The speed at which the disc rotates is determined by a special control signal that is included in all Compact Discs along with the audio signal. Consequently, it is quite normal for the disc speed to change noticeably when an outer track is played immediately after an inner track for example.



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