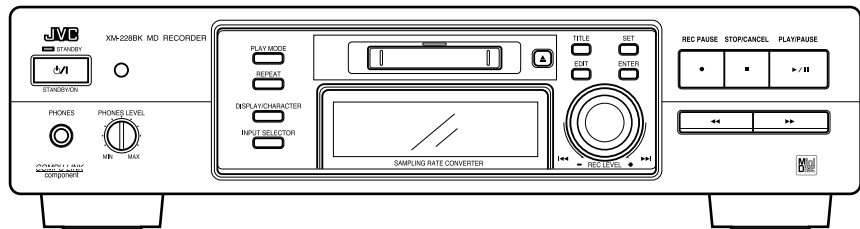
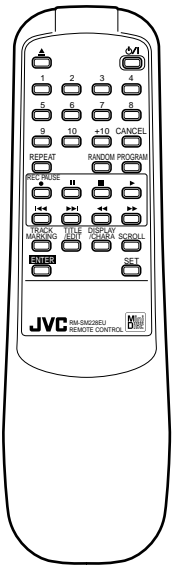


# JVC



**MINIDISC RECORDER  
MINIDISC-REKORDER  
ENREGISTREUR MINIDISC  
MINIDISC-RECORDER  
GRABADORA DE MINIDISC  
REGISTRATORE MINIDISC**

## **XM-228BK**



**INSTRUCTIONS  
BEDIENUNGSANLEITUNG  
MANUEL D'INSTRUCTIONS  
GEBRUIKSAANWIJZING  
MANUAL DE INSTRUCCIONES  
ISTRUZIONI**

**For Customer Use:**

Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

**Warnings, Cautions and Others / Warnung, Achtung und sonstige Hinweise / Mises en garde, précautions et indications diverses / Waarschuwingen, voorzorgen en andere mededelingen / Avisos, precauciones y otras notas / Avvertenze e precauzioni da osservare**

---

**IMPORTANT for the U.K.**

**DO NOT** cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

**BE SURE** to replace the fuse only with an identical approved type, as originally fitted.

If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not supplied fitted with a mains plug then follow the instructions given below:

**IMPORTANT:**

**DO NOT** make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue : Neutral  
Brown : Live

As these colours 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.

**IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.**

**Caution — ⏻/! switch!**

Disconnect the mains plug to shut the power off completely. The ⏻/! switch in any position does not disconnect the mains line. The power can be remote controlled.

**Achtung — ⏻/!-Schalter!**

Den Netzstecker aus der Steckdose ziehen, um die Stromversorgung vollkommen zu unterbrechen. Der Schalter ⏻/! unterbricht in keiner Stellung die Stromversorgung vollkommen. Die Stromversorgung kann mit der Fernbedienung ein- und ausgeschaltet werden.

**Attention — Commutateur ⏻/!**

Déconnecter la fiche de secteur pour couper complètement le courant. Le commutateur ⏻/! ne coupe jamais complètement la ligne de secteur, quelle que soit sa position. Le courant peut être télécommandé.

**Voorzichtig — ⏻/! schakelaar!**

Om de stroomtoevoer geheel uit te schakelen, trekt u de stekker uit het stopcontact. Anders zal er altijd een geringe hoeveelheid stroom naar het apparaat lopen, ongeacht de stand van de ⏻/! schakelaar. U kunt het apparaat ook met de afstandsbediening aan- en uitschakelen.

**Precaución — Interruptor ⏻/!**

Desconectar el cable de alimentación para desactivar la alimentación totalmente. Cualquier que sea la posición de ajuste del interruptor ⏻/!, la alimentación no es cortada completamente. La alimentación puede ser controlada remotamente.

**Attenzione — L'interruttore ⏻/!**

Disinserire la spina del cavo di alimentazione dalla presa della rete elettrica per staccare completamente l'alimentazione. L'interruttore ⏻/! in nessuna posizione stacca la linea di alimentazione elettrica principale. È possibile il controllo remoto dell'alimentazione.

---

**CAUTION**

To reduce the risk of electrical shocks, fire, etc.:

1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

**ACHTUNG**

Zur Verhinderung von elektrischen Schlägen, Brandgefahr, usw:

1. Keine Schrauben lösen oder Abdeckungen entfernen und das Gehäuse nicht öffnen.
2. Dieses Gerät weder Regen noch Feuchtigkeit aussetzen.

**ATTENTION**

Afin d'éviter tout risque d'électrocution, d'incendie, etc.:

1. Ne pas enlever les vis ni les panneaux et ne pas ouvrir le coffret de l'appareil.
2. Ne pas exposer l'appareil à la pluie ni à l'humidité.

**VOORZICHTIG**

Ter vermindering van gevaar voor brand, elektrische schokken, enz.:

1. Verwijder geen schroeven, panelen of de behuizing.
2. Stel het toestel niet bloot aan regen of vocht.

**PRECAUCIÓN**

Para reducir riesgos de choques eléctricos, incendio, etc.:

1. No extraiga los tornillos, los cubiertas ni la caja.
2. No exponga este aparato a la lluvia o a la humedad.

**ATTENZIONE**

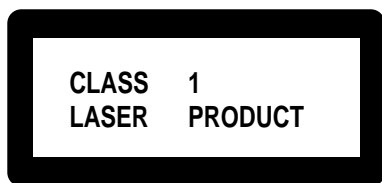
Per ridurre il rischio di shock elettrici, incendi, ecc...

1. Non togliete viti, coperchi o la scatola.
2. Non esponete l'apparecchio alla pioggia e all'umidità.

**IMPORTANT FOR LASER PRODUCTS/ WICHTIGER HINWEIS FÜR LASER-PRODUKTE / IMPORTANT POUR LES PRODUITS LASER / BELANGRIJKE INFORMATIE VOOR LASERPRODUKTEN / IMPORTANTE PARA LOS PRODUCTOS LÁSER / IMPORTANTE PER I PRODOTTI LASER**

**REPRODUCTION OF LABELS/ANBRINGUNGSORTE FÜR LASER-PRODUKTE/REPRODUCTION DES ETIQUETTES/ VERKLARING VAN DE LABELS/REPRODUCCIÓN DE ETIQUETAS/RIPRODUZIONE DELLE ETICHETTE**

- ① CLASSIFICATION LABEL, PLACED ON REAR ENCLOSURE
- ② WARNING LABEL, PLACED INSIDE THE UNIT
- ① KLASSIFIKATIONSETIKETTE AN DER RÜCKSEITE
- ② WARNETIKETTE IM GERÄTEINNEREN
- ① ETIQUETTE DE CLASSIFICATION, PLACÉE A L'ARRIÈRE DU COFFRET
- ② ETIQUETTE D'AVERTISSEMENT PLACÉE À L'INTERIEUR DE L'APPAREIL
- ① KLASSIFIKATIELABEL, OP DE ACHTERZIJDE VAN HET APPARAAT
- ② WAARSCHUWINGSLABEL, IN HET APPARAAT
- ① ETIQUETA DE CLASIFICACIÓN, PEGADA EN LA PARTE POSTERIOR DE LA CAJA
- ② ETIQUETA DE ADVERTENCIA, PEGADA EN EL INTERIOR DE LA UNIDAD
- ① ETICHETTA DI CLASSIFICAZIONE, SITUATA SUL RIVESTIMENTO POSTERIORE
- ② ETICHETTA DI AVVERTENZA, SITUATA ALL'INTERNO DELL'APPARECCHIO



<b>DANGER:</b> Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)	<b>VARNING:</b> Osynlig laserstrålning när denna del är öppen och spärrar är urkopplad. Betrakta ej strålen. (s)	<b>ADVARSEL:</b> Usynlig laserstrålning ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling (d)	<b>VARO:</b> Avattaessa ja suojalukitus ohitettaessa olet alltime näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)
-------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the Unit; leave all servicing to qualified service personnel.

1. LASER-PRODUKT DER KLASSE 1
2. **GEFAHR:** Unsichtbare Laserstrahlung bei Öffnung und fehlerhafter oder beschädigter Spre. Direkten Kontakt mit dem Strahl vermeiden!
3. **ACHTUNG:** Das Gehäuse nicht öffnen. Das Gerät enthält keinerlei Teile, die vom Benutzer gewartet werden können. Überlassen Sie Wartungsarbeiten bitte qualifizierten Kundendienst-Fachleuten.

1. PRODUIT LASER CLASSE 1
2. **ATTENTION:** Radiation laser invisible quand l'appareil est ouvert ou que le verrouillage est en panne ou désactivé. Eviter une exposition directe au rayon.
3. **ATTENTION:** Ne pas ouvrir le couvercle du dessus. Il n'y a aucune pièce utilisable à l'intérieur. Laisser à un personnel qualifié le soin de réparer votre appareil.

1. KLAS 1 LASERPRODUKT
2. **GEVAARLIJK:** Onzichtbare laserstraling wanneer open en de beveiliging faalt of uitgeschakeld is. Voorkom het direct blootstaan aan de straal.
3. **VOORZICHTIG:** De bovenkap niet openen. Binnenin het toestel bevinden zich geen door de gebruiker te repareren onderdelen: laat onderhoud over aan bekwaam vakpersoneel.

1. PRODUCTO LASER CLASE 1
2. **PELIGRO:** En el interior hay radiación láser invisible. Evite el contacto directo con el haz.
3. **PRECAUCIÓN:** No abra la tapa superior. En el interior de la unidad no existen piezas reparables por el usuario; deje todo servicio técnico en manos de personal calificado.

1. PRODOTTO LASER CLASSE 1
2. **PERICOLO:** Radiazione laser invisibile quando l'apparecchio è aperto ed il dispositivo di sicurezza è guasto o disattivato. Evitare l'esposizione diretta ai raggi.
3. **ATTENZIONE:** Non aprire il coperchio superiore. Non vi sono parti adoperabili dall'utente all'interno di questo apparecchio; lasciare tutti i controlli a personale qualificato.

# Welcome !

We would like to thank you for purchasing one of our JVC products. Before connecting this unit to the wall outlet, please read the instructions carefully to ensure that you obtain the best possible performance. If you have any questions, please consult your JVC dealer.

## Important cautions

### Installation of the Unit

- Select a place which is level, dry and neither too hot nor too cold (Between 5°C and 35°C or 41°F and 95°F).
- Leave sufficient distance between the Unit and a TV.
- Be sure to place the Unit in a location with good ventilation.
- Do not use the Unit in a place subject to vibrations.
- Do not place the Unit on a carpet.
- Do not place the Unit on top of another heat-generating piece of equipment.

### Power cord

- Do not handle the power cord with wet hands!
- When unplugging the Unit from the wall outlet, always pull the plug, not the power cord.

### Malfunctions, etc.

- There are no user serviceable parts inside. If anything goes wrong, turn off the power immediately. If the same problem reoccurs when the power is turned on once more, turn off the power again, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the Unit.

## For safe use, observe the following

### Avoid moisture, water and dust

Do not set your machine in moist or dusty places.

### Avoid high temperatures

Do not expose your machine to direct sunlight or set near a heating device.

### Do not block the vents

Poor-ventilation may damage your machine. So do not block the vents or put the unit in a poorly ventilated place.

### When you're away

When away on travel or otherwise for an extended period of time, turn off the power and pull the plug from the electrical socket.

### Do not insert foreign matter into the machine

Do not insert wires, hairpins, coins, etc. into your machine.

### Care of the cabinet

When cleaning your machine, use a soft cloth and follow the relevant instructions on the use of chemically-coated cloths. Avoid applying benzene, thinner or other organic solvents and disinfectants. This may cause deformation or discoloring.

### If water gets inside the machine

Turn off the power and pull the plug from the electrical socket, then call the store where you made your purchase. Using the machine in this state may cause a fire or electrical shock.

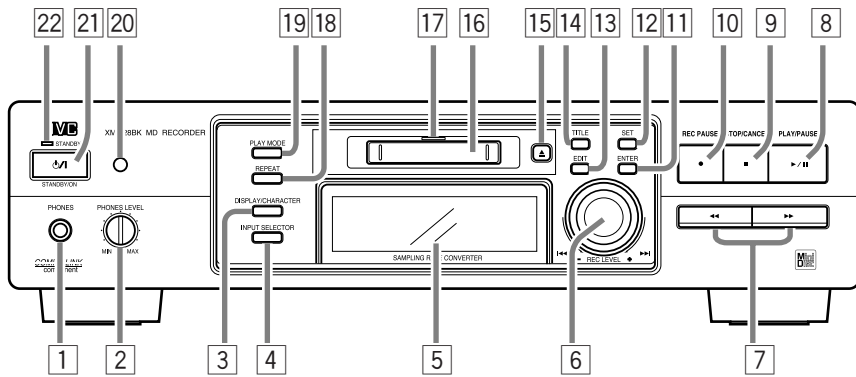
US and foreign patents licensed from Dolby Laboratories Licensing Corporation.

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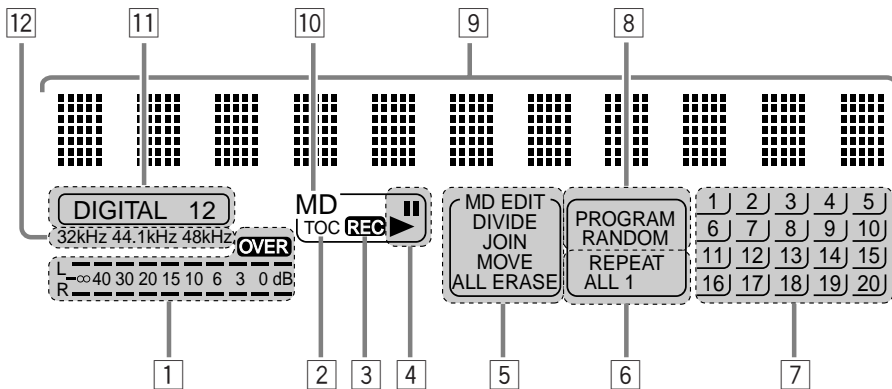
# Parts Index

## Front panel



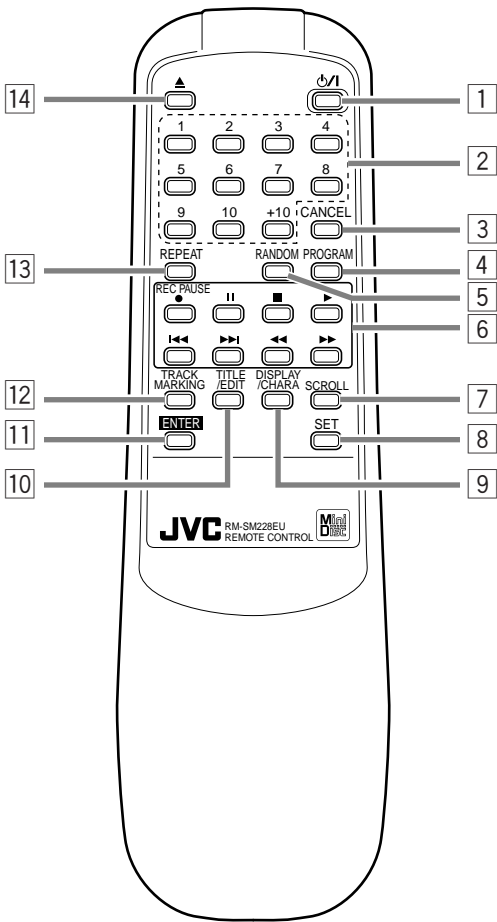
- |                               |                        |                          |
|-------------------------------|------------------------|--------------------------|
| 1 PHONES jack                 | 9 ■ STOP/CANCEL button | 17 Disc indicator        |
| 2 PHONES LEVEL control        | 10 ● REC PAUSE button  | 18 REPEAT button         |
| 3 DISPLAY/CHARACTER button    | 11 ENTER button        | 19 PLAY MODE button      |
| 4 INPUT SELECTOR button       | 12 SET button          | 20 Remote sensor         |
| 5 Display                     | 13 EDIT button         | 21 ⏻/⏺ STANDBY/ON button |
| 6 Jog dial (◀◀, ▶▶/REC LEVEL) | 14 TITLE button        | 22 STANDBY indicator     |
| 7 ◀◀, ▶▶ buttons              | 15 ▲ (Eject) button    |                          |
| 8 ▶/   PLAY/PAUSE button      | 16 MD insertion slot   |                          |

## Display



- |                                                                        |                                                             |
|------------------------------------------------------------------------|-------------------------------------------------------------|
| 1 Level indicators and OVER indicator                                  | 7 Music calendar                                            |
| 2 TOC indicator                                                        | 8 Play mode indicators (PROGRAM, RANDOM)                    |
| 3 REC indicator                                                        | 9 Character display (11 digits)                             |
| 4 Play indicators (▶ (Play),    (Pause))                               | 10 MD indicator                                             |
| 5 MD editing mode indicators<br>(DIVIDE, JOIN, MOVE, ERASE, ALL ERASE) | 11 Input mode indicators (DIGITAL 1, DIGITAL 2)             |
| 6 Repeat mode indicators<br>(REPEAT ALL, REPEAT 1)                     | 12 Sampling frequency indicators<br>(32KHz, 44.1kHz, 48kHz) |

# Remote control unit



- 1 (STANDBY/ON) button
- 2 Numeric keys
- 3 **CANCEL** button
- 4 **PROGRAM** button
- 5 **RANDOM** button
- 6 MD control buttons
  - **REC PAUSE**
  - || **(Pause)**
  - **(Stop)**
  - ▶ **(Play)**
  - ⏮, ⏭
  - ⏪, ⏩
- 7 **SCROLL** button
- 8 **SET** button
- 9 **DISPLAY/CHARA** button
- 10 **TITLE/EDIT** button
- 11 **ENTER** button
- 12 **TRACK MARKING** button
- 13 **REPEAT** button
- 14 (Eject) button



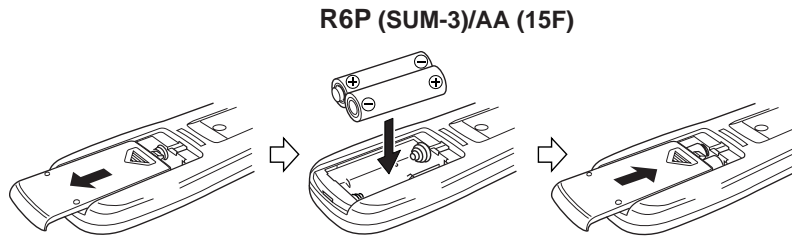
## Supplied Accessories

Before setting up your system make sure you received all of the following supplied accessories.

- AC power cord (1)
- Audio pin cord (2)
- Compu Link cable (1)
- Optical digital cable (1)
- Batteries R6P (SUM-3)/AA (15F) (2)
- Remote Control (1)

## Remote control batteries

Match the polarity (+ and -) on the batteries with the + and - markings in the battery compartment.



### **CAUTION: Handle batteries properly.**

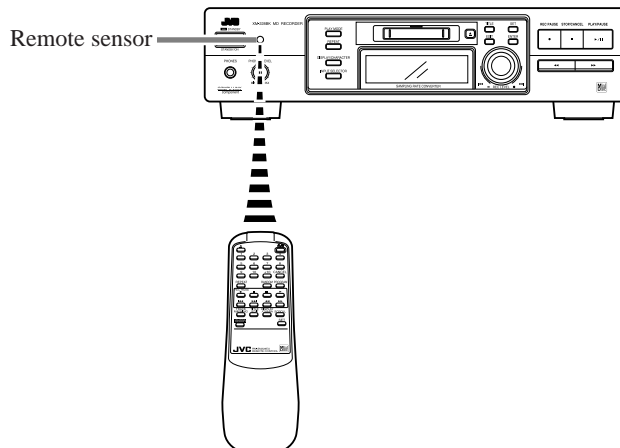
To avoid battery leakage or explosion:

- Remove batteries when the Remote Control will not be used for a long time.
- When you need to replace the batteries, replace both batteries at the same time with new ones.
- Do not use an old battery with a new one.
- Do not use different types of batteries together.

## Operating the Remote Control

The remote control makes it easy to use many of the functions of the system from a distance of up to 7 m (23 feet) away.

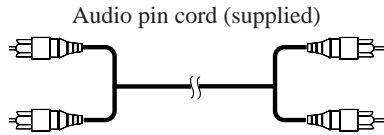
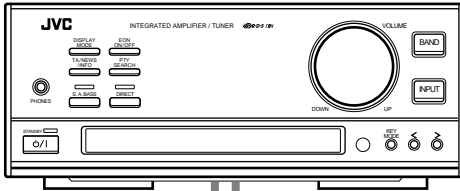
You need to point the remote control unit at the remote sensor on the front panel.



# Connection

## Signal cable connections

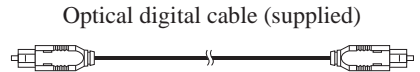
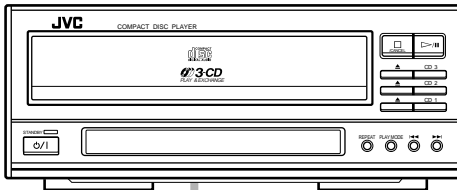
### Example: Amplifier/Tuner



#### Audio pin cords

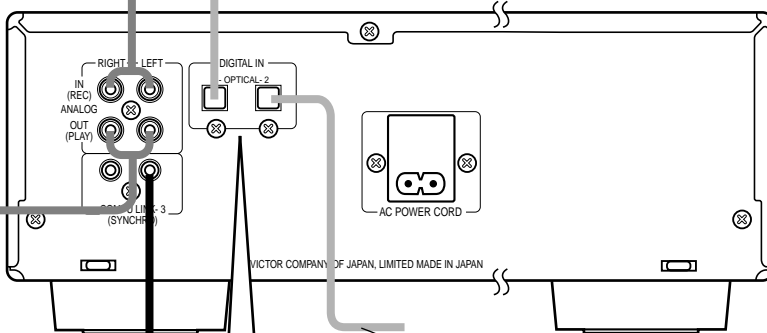
Connect to the MD jacks, TAPE jacks, etc. of an external unit. Always connect the jacks with the plugs of the same colors so as not to mistake the L (Left) and R (Right) connections. Connect the OUT (PLAY) jacks to the IN (PLAY) jacks of the external unit, and the IN (REC) jacks to its OUT (REC) jacks.

### Example: CD player



#### Optical digital cable

Connect to the DIGITAL OUT jack of the CD player, for example.



#### Optical digital cable

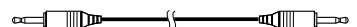
Connect to the DIGITAL OUT jack of your DBS tuner, etc.

Be sure to remove the protective cap before using the DIGITAL IN jack. Keep the cap in a safe place so you can replace it when not using the DIGITAL IN jack.

#### Compu Link cable

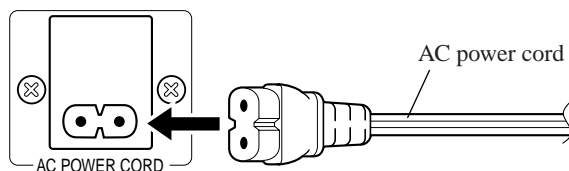
Connect to the COMPU LINK-3 (SYNCHRO) jack of another component equipped with the Compu Link remote control system.

Compu link cable (supplied)



## AC power cord connection

First, firmly insert the supplied AC power cord into the AC inlet on the back of the unit. Next, plug the AC power cord plug into the wall outlet.



### Cautions

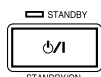
- Use only the JVC AC power cord provided with this system to avoid malfunction or damage to the system.
- Be sure to unplug the power cord from the outlet when going out or when the system is not in use for an extended period of time.

# Turning the Power On and Off

## Power On

- 1 Press **⏻/I** **STANDBY/ON** on the main unit or the remote control unit.

The STANDBY indicator goes out, the disc indicator lights in green, and the display comes on. The MD indicator lights up on the display.



### When no MD is loaded:

“NO DISC” is shown on the display.

### When an MD is already loaded:

The following messages are shown on the display in succession.

- “TOC Reading”
- The disc title, if the MD has.
- Number of tracks and the total playing time of the MD

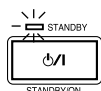
You can play the MD by pressing **▶/II** on the main unit or **▶** on the remote control unit. For detailed description, see “Playback” on the next page.

## Power Off

- 1 Press **⏻/I** **STANDBY/ON** again.

The STANDBY indicator lights up, the disc indicator goes out, and the display becomes blank.

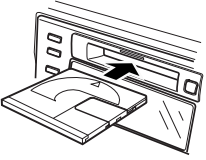
- Some power (7W) is always consumed even though power is turned off (called Standby mode).
- To switch off the system completely, unplug the AC power cord from the AC outlet.



# Playback

## Normal playback

The basic operation for playing an MD is described below. When no MD is loaded yet, "NO DISC" is shown on the display.



### 1 Load an MD.

Hold an MD with the side on which an arrow is marked facing up, and insert it into the slot in the direction of the arrow. The MD will be pulled in automatically from the middle.

- If the MD has a disc title, the display shows the disc title then the number of tracks and total playing time of the MD.
- The tracks in the MD appears on the music calender.

```

Loading
  ↓
TOC Reading
  ↓
 6      32:00
Number of tracks  Total playing time
  
```

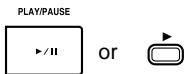
**Note:** To allow easy insertion, insert the MD along the upper part of the MD insertion slot.

### Caution

- **Do not mistake the MD insertion direction, otherwise malfunction will result.**

### Shortcut:

You can insert an MD in Standby mode. Then, the power is turned on and the MD is pulled in automatically.



### 2 Press ▶/|| on the main unit or ▶ on the remote control unit.

Playback starts.

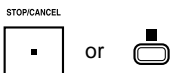
The ▶ indicator blinks for a while and then stays lit.

The playback level for the L and R channels are shown on the level indicators.

- If the track has a title, the track title will be displayed before playing the track.
- The track number that has been played disappears from the music calender.
- The MD automatically stops when the last track of the MD has finished playing.

### Shortcut:

When you press ▶/|| on the main unit or ▶ on the remote control unit in Standby mode, power is turned on and the MD is automatically played. However, if no MD is loaded, "NO DISC" is shown on the display.



### To stop the MD:

Press ■ on the main unit or the remote control unit.

- If the MD has a disc title, the display shows the disc title then the number of tracks and total playing time of the MD.

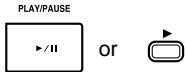
### To eject the MD:

Press ▲ on the main unit or the remote control unit.

The MD is ejected and the display changes as follows:

```

EJECT → NO DISC
  
```



### To pause the MD:

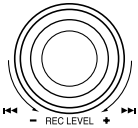
Press ►/II on the main unit or press II on the remote control unit.

The II indicator lights up.

To cancel pause, press ►/II on the main unit or press ► on the remote control unit. The MD starts from the position where it has paused.

### To select a track

You can select a desired track during playback or in Stop mode. When you use the numeric keys on the remote control unit in Stop mode, the selected track automatically starts playing.



#### Main unit:

During playback, turn the jog dial to the right or left to select the track you want. Then, the selected track starts playing.

- Turn the jog dial to the right by one click to skip to the beginning of the next track.
- Turn the jog dial to the left by one click to skip to the beginning of the current track being played. While “--:--” is shown on the display, you can play the previous track by turning the jog dial to the left.

In Stop mode, you can select a track in the same way. To start playback, press ►/II.

#### Remote control unit:

##### Using |◀◀ or ▶▶| :



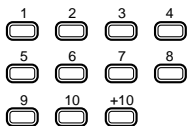
During playback, press |◀◀ or ▶▶| to select the track you want. Then, the selected track starts playing.

- Press ▶▶| once to skip to the beginning of the next track.
- Press |◀◀ once to skip to the beginning of the current track being played. While “--:--” is shown on the display, you can play the previous track by pressing |◀◀.

In Stop mode, you can select a track in the same way. To start playback, press ►.

#### Using the numeric keys:

During playback or in Stop mode, select a track with the numeric keys. Then, the selected track starts playing.



#### Selecting a track with the numeric keys:

To select track No. 5 : Press 5.

To select track No. 15: Press +10 then 5.

To select track No. 20: Press +10 then 10.

To select track No. 52: Press +10 five times then press 2.

- When you try to select a track number greater than the recorded tracks in the MD, the last track is automatically selected.

### Search play



or



During playback, you can fast forward/backwards the MD to quickly find a particular passage in the track you are listening to.

To perform this, press and hold ◀◀ or ▶▶ on the main unit or the remote control unit.

### Using headphones

Connect a pair of headphones (not supplied) to the PHONES jack to listen to the playback sound of the MD or rec-monitor sound.

- The output from the unit is not cut off even if the headphones are used.

#### Caution

- **Be sure to turn down the PHONES LEVEL control before connecting or putting on headphones.**

# Switching the displayed information

The display can show the disc title, track title and remaining time (recording time available when a recordable MD is loaded) information.

DISPLAY/CHARACTER



OR



6 32:00

Number of tracks and total playing time



6 41:54

Number of tracks and remaining recording time

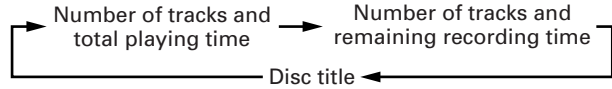


MY SONGS

Disc title

## When no track is selected (In Stop mode):

Press DISPLAY/CHARACTER on the main unit or the remote control unit. Each press of the button switches the displayed information as follows.

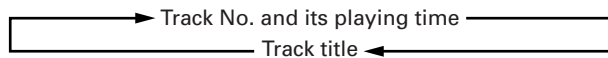


- A disc title composed of more than 11 characters is scrolled, and the first 11 characters are displayed after scrolling.
- The display shows “NO TITLE” if the disc has no title assigned to it.

NO TITLE

## When a track has already been selected (During playback or in Stop mode):

Press DISPLAY/CHARACTER on the main unit or the remote control unit. Each press of the button switches the displayed information as follows.



- A track title composed of more than 11 characters is scrolled, and the first 11 characters are displayed after scrolling.
- The display shows “NO TITLE” if the track has no title assigned to it.

# Program playback

You can program up to 32 tracks in any desired order including the same tracks.

- You can only make a program in Stop mode.

## 1 Load an MD.

See “Normal playback ” on page 8.

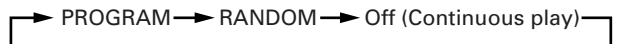
## 2 Select Program mode.

### Main unit:

Press PLAY MODE until “PROGRAM” is shown. Then, the PROGRAM indicator lights up.

Each time PLAY MODE is pressed, the play mode indicators switches as follows:

PROGRAM



### Remote control unit:

Press PROGRAM. The “PROGRAM” is shown and the PROGRAM indicator lights up.

To exit Program mode, press PROGRAM once again. Then, the PROGRAM indicator goes out.

PLAY MODE

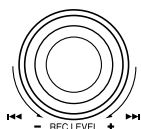


PROGRAM



The display shows the following for programming.

The first track 1 P 0

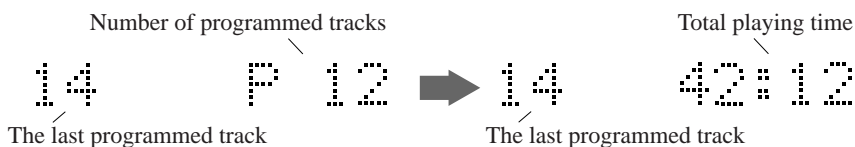


### 3 Select desired track numbers to be programmed.

#### Main unit:

- Turn the jog dial to the right or left to select the desired track number to be programmed. (Turning it to the right increases the track number and vice versa.) The selected track number will blink.
- Press SET.  
The track number stays lit and the program number increases by 1. Also, the programmed track is indicated on the music calendar.  
Then, the total playing time is displayed instead of the program number.

Example)



- Repeat steps 1 and 2 to select the other tracks for the program.

#### Remote control unit:

- Select the desired track number with the numeric keys.  
The selected track number is programmed and the program number is displayed.  
Then, the total playing time is displayed instead of the program number.  
To select a track, see “Selecting a track with the numeric keys” on page 9.
- Repeat step 1 to select the other tracks for the program.

### 4 Press ►/II on the main unit or ► on the remote control unit.

Program playback starts in the programmed order.

- Program playback stops after having played all programmed tracks.
- To stop playing, press ■ on the main unit or the remote control unit.
- To skip the programmed track, turn the jog dial on the main unit to the right or left or press ◀◀ or ▶▶ on the remote control unit.

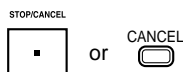
#### To check the programmed tracks and their order (In Stop mode):

Press ◀◀ or ▶▶ on the remote control unit in Stop mode. The programmed tracks will be successively displayed in the programmed order. (The track title will be displayed before the track number, if it is written.)



#### If you make a mistake in programming (In Stop mode):

Press ■ STOP/CANCEL on the main unit or CANCEL on the remote control unit in Stop mode to clear the last track. Each press of the button clears the last track in the program. Press the button repeatedly until the track you programmed by mistake is cleared and then re-program tracks from that point.



#### To exit Program Play mode (In Stop mode):

##### Main unit:

Press PLAY MODE in Stop mode to select any mode other than Program Play mode.

##### Remote control unit:

Press PROGRAM in Stop mode to light off the PROGRAM indicator.

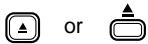


OR



The program contents remain in memory even after the unit has exited Program Play mode.

**Note:** The program contents are cleared from memory when the power cord is unplugged or in case of power failure.



**To clear the program:**

Press on the main unit or the remote control unit. The programmed tracks are cleared then the MD is ejected.

**To play programmed tracks repeatedly:**

Combine the program playback and repeat playback to play the programmed tracks repeatedly. For the repeat playback, see page 13.



# Random playback

Tracks in the MD can be played in a randomly selected order. The random playback may bring you a surprising effect by playing tracks in a different order every time.

- You can only select the random play in Stop mode.

**1 Load an MD.**

See “Normal playback” on page 8.

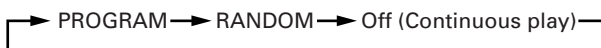
**2 Press PLAY MODE to select RANDOM.**

**Main unit:**

Press PLAY MODE until “RANDOM” is shown. Then, the RANDOM indicator lights up.



Each time PLAY MODE is pressed, the play mode indicators switches as follows:



**Remote control unit:**

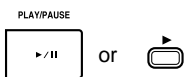
Press RANDOM. The “RANDOM” is shown and the RANDOM indicator lights up. To exit Random mode, press RANDOM once again. Then, the RANDOM indicator goes out.



**3 Press ►/II on the main unit or ► on the remote control unit.**

Random playback starts.

- Random playback stops after having played every track once.
- To stop playing, press on the main unit or the remote control unit.



**To exit Random Play mode (In Stop mode):**

**Main unit:**

Press PLAY MODE in Stop mode to select any mode other than Random Play mode.



**Remote control unit:**

Press RANDOM in Stop mode to light off the RANDOM indicator.

**To repeat random playback:**

Combine the random playback and repeat playback to play tracks repeatedly in random orders. The order tracks are played differs every time random playback is repeated. For the repeat playback, see page 13.

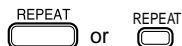


# Repeat playback

You can repeat all the tracks or single track in each playback mode.

## 1 Press REPEAT on the main unit or the remote control unit to select Repeat Play mode.

Each time REPEAT is pressed, the repeat mode indicators switches as follows.



**REPEAT ALL** : In Normal Play mode, repeats all the tracks.

In Program Play mode, repeats all the tracks in the program.

In Random Play mode, repeats all the tracks in random order.

**REPEAT 1** : Repeats one track.

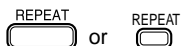
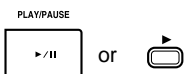
## 2 Press ►/II on the main unit or ► on the remote control unit.

Repeat playback starts.

- To stop playing, press ■ on the main unit or the remote control unit.

### To cancel repeat playback:

Press REPEAT on the main unit or the remote control unit until the repeat mode indicator goes out.

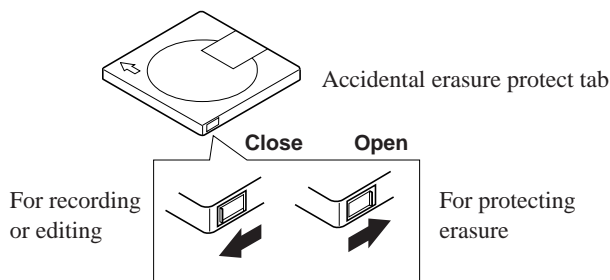


# Recording

An audio signal from a variety of sources can be recorded by using either digital or analog input as required.

## Things to know before recording

- It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.
- Carefully read the “Rule on Digital Copying” on page 31.
- The MD recorder supports the following sampling frequencies for digital sources DIGITAL 1 and DIGITAL 2 and lights the sampling frequency being received on the display.  
32 kHz, 44.1 kHz and 48 kHz
- Recording level adjustment:  
When recording a digital input, the recording level is automatically set correctly. When recording an analog input, it is necessary to adjust the recording level properly.
- The accidental erasure protect tab is provided on the back of an MD cartridge to prevent accidental erasure or recording. It must be set to the close position before recording. Otherwise, “DISC PROTECTED” will appear when you try to record a signal to the MD.

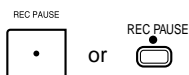


- When you stick an adhesive label onto the MD cartridge, adhere it securely. If it peels off, ejection trouble, etc. will occur.
- Be sure that the MD is not the Playback-only type one. (See “Two disc types” on page 32.)
- Be sure that the MD has enough space for recording. If not, carry out ERASE ALL or ERASE function to erase all the tracks or desired tracks in the MD. You can check the recordable remaining time of the MD. (See “To display the remaining recording time” on page 16.)

## Recording operation

### 1 Load a recordable MD.

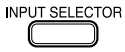
### 2 Press ● REC PAUSE on the main unit or the remote control unit.



The MD recorder enters Rec/Pause mode. The REC and II (Pause) indicators light up and the first track to be recorded is displayed. Also, the disc indicator lights in red.

Example) When 14 tracks are already recorded





### 3 Select the input by pressing INPUT SELECTOR on the main unit.

Each press of INPUT SELECTOR switches the inputs as follows.



**DIGITAL 1 IN:** Select this to record the digital input from the digital source component connected to the DIGITAL IN 1 optical jack.

The DIGITAL 1 indicator lights up.

**DIGITAL 2 IN:** Select this to record the digital input from the digital source component connected to the DIGITAL IN 2 optical jack.

The DIGITAL 2 indicator lights up.

**ANALOG IN :** Select this to record the analog input from the analog source component (cassette deck, tuner, etc.) connected to the ANALOG IN (REC jacks).

### 4 Play the source to be recorded.

The level indicators show the input levels.

- The input level should be adjusted when the analog input is recorded (see “To adjust the analog input level” below).
- The input level for the digital inputs does not need adjustment.
- When DIGITAL 1 or DIGITAL 2 is selected, one of the sampling frequency indicators lights up. For example, 44.1kHz indicator is displayed for a CD player input.

However, if no source component is connected to the digital input or the sampling frequency input is other than 32 kHz, 44.1 kHz, or 48 kHz, “DIGITAL IN UNLOCK” scrolls on the display showing that the recording is impossible.



### 5 Press ►/II on the main unit or ► on the remote control unit.

Recording starts.

The ► indicator lights up.

- When the MD becomes full, “UTOCwriting” is displayed indicating that the recording is successfully completed. Then, the MD stops. The disc indicator lights in green.

#### To stop recording:

Press ■ on the main unit or the remote control unit.

“UTOCwriting” is displayed and the MD stops. The disc indicator lights in green.

#### To pause the MD:

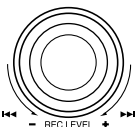
Press ● REC PAUSE on the main unit or the remote control unit.

To resume recording, press ►/II on the main unit or ► on the remote control unit.

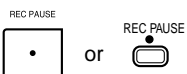
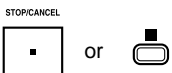
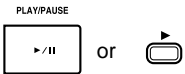
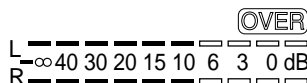
## To adjust the analog input level

The input level should be adjusted before recording the analog input.

- 1 In Rec/Pause mode, start playing the source for level adjustment. The level indicators show the input levels.
- 2 Turn the jog dial on the main unit to the right or left or press ◀◀ or ▶▶ on the remote control unit to increase or decrease the recording level. As you adjust the recording level, “VOL. -10” will appear, for example. You can adjust the recording level between VOL.-50 and VOL.0 (-50 dB and 0 dB), or to VOL. --- (below -50 dB).



or

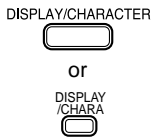


- Normally the input level should be adjusted so that the segments for 0 dB blink at the peak level.
- When the input level is too high, the OVER indicator will light up, resulting in distorted recording.

### To display the remaining recording time

In Rec/Pause or during recording, press DISPLAY/CHARACTER on the main unit or the remote control unit.

Each press of the button switches the elapsed recording time display and remaining recording time display alternately.



### Track marking

The track numbers on the MD are marked at the beginning of each track. The track numbers are identified by these "track markings" and each section between two track markings are considered as a track.

#### For analog input:

You can create the track marking automatically or manually.

##### Automatic track marking:

Press TRACK MARKING on the remote control unit to select "AUTO".



- A track marking is automatically recorded every time a blank of more than 3 seconds is detected.

##### Manual track marking:

1 Press TRACK MARKING on the remote control unit to select "MANUAL".



2 When the point you want to record a track marking comes during recording, press SET on the remote control unit.

This operation records a track marking at the point where the button is pressed.

#### For digital input:

When tracks are recorded from a CD player by digital input, track markings are recorded automatically at the points where the CD tracks change.



