

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorised in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits.
2. Any unauthorised design alterations or additions will void the manufacturer's guarantee ; furthermore the manufacturer cannot accept responsibility for personal injury or property damage resulting therefrom.
3. Essential safety critical components are identified by (\triangle) on the Parts List and by shading on the schematics ,and must never be replaced by parts other than those listed in the manual. Please note however that many electrical and mechanical parts in the product have special safety related characteristics . These characteristics are often not evident from visual inspection . Parts other than specified by the manufacturer may not have the same safety characteristics as the recommended replacement parts shown in the Parts List of the service manual and may create shock , fire , or other hazards .
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

Warning

1. Service should be performed by qualified personnel only.
2. This equipment has been designed and manufactured to meet international safety standards.
3. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
4. Repairs must be made in accordance with the relevant safety standards.
5. It is essential that safety critical components are replaced by approved parts.
6. If mains voltage selector is provided, check setting for local voltage .

Important for Laser Products

1. **CLASS 1 LASER PRODUCT**
2. **DANGER** : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION** : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. **CAUTION** : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. **CAUTION** : If safety switches malfunction, the laser is able to function.
6. **CAUTION** : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
7. **CAUTION** : The compact disc player provides a laser diode of wavelength 780-790nm and optical output power typical 3mW at the laser diode.

VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstrålning ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstrålning ved åbning, når sikkerhedsbryteren er avsiott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

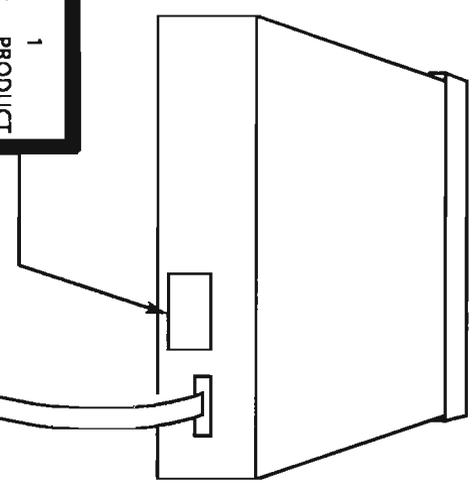
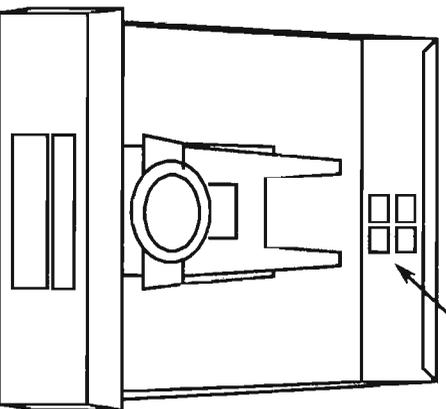
(Except for the U. S. A.)

DANGER: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

WARNING: Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)

ADVARSEL: Usynlig laserstrålning ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (d)

VARO: Avattaessa ja suojalukitus ohitettaessa olet alttina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)



**CLASS 1
LASER
PRODUCT**

CLASSIFICATION LABEL

(Except for the U. S. A. and Canada)

Table of Contents

Introduction	2
How This Manual Is Organized	2
Getting Started	3
Accessories	3
Putting Batteries in the Remote Control	3
Connecting the External Wire	3
Connecting the System Control Cords	4
Connecting the Speakers	4
Connecting the FM Antenna	5
Connecting the AM (MW/LW) Antenna	5
Connecting the Minidisc Recorder and Other Equipment	6
Switches, Buttons and Controls	7
Front Panel	7
Remote Control	9
Displays	10
Tuner Display	10
CD Player Display	10
Using the Amplifier	11
Turning the System On and Off	11
Turning the System On	11
Turning the System Off	11
Controlling the Sound	11
Volume Control	11
Speaker Balance Control	11
Bass Control	11
Treble Control	11
Using the CD DIRECT Function	12
Using the PRESENCE Function	12
Listening with Headphones	12
Using the Tuner	13
One Touch Radio	13
Tuning in Stations Manually	13
Receiving in Stereo or Monaural	13
Presetting Stations in Memory	13
Tuning in Preset Stations	14
Erasing the Preset Stations	14
Receiving FM Stations with RDS (Radio Data System)	15
What Information RDS Can Provide	15
Searching for Programs by PTY Codes	16
Setting EON Standby Reception	16
ALARM Function	17
Using the CD Player	18
Basics of Using the CD Player	18
Playing a CD	18
Finding the Track or a Particular Point You Want	18
Locating a Track with the Remote Control Directly	19
Programming the Playing Order of the Tracks	19
Repeating a Selection or the Entire Disc	20
Using the Cassette Deck (Listening to a Tape)	21
One Touch Play	21
Regular Play	21
Fast Left and Fast Right	22
Music Scan	22
Finding the Beginning of the Next Song	22
Finding the Beginning of the Current Song	22
Other Useful Features of the Cassette Deck	23
Reverse Mode	23
Continuous Play (only available when Reverse mode is on)	23
Dolby Noise Reduction	23
Dolby HX PRO	23
Listening to the Turntable or Other Equipment through Your System	24
Using JVC's Minidisc Recorder Connected to the COMPU LINK-3 • MD Terminal	24
Using the Cassette Deck (Recording)	25
Things to Know before You Start Recording	25
Standard Recording	26
Recording any Sound Source to Tape	26
CD to Tape Recording	27
Tape to Tape Recording (Dubbing)	28
Using the Timer	29
Setting the Clock	29
Setting the Recording (REC) Timer	29
Setting the Daily Timer	30
Setting the Sleep Timer	32
Timer Priority	33
Care and Maintenance—General Notes	34
Compact Discs	34
Moisture Condensation	34
Cassette Tapes	34
Cassette Deck	34
Troubleshooting	35
Specifications	36

Introduction



Here are some of the things that make your components (hereafter, called "System") easy to use.

- The controls and operations have been redesigned to make them easy to use so you can spend your time listening to music.
 - With the One Touch Play feature of JVC's COMPU PLAY, you can turn on the System and start the tuner, the cassette deck, or the CD player with a single touch. If the System is not ready, such as no CD or tape in place, the System still turns on and then pauses so you can put in a CD or tape.
 - Three timers, Recording, Daily, and Sleep Timers, are extremely easy to set so you can really use them.
- A home-use RDS tuner offers most of the RDS services. These services include the display of station names and program types, and scanning stations by using the program types.

How This Manual Is Organized

- This manual explains how to use the following four components.

– FM/MW/LW Tuner	FX-F3000R
– Integrated Amplifier	AX-F3000
– Compact Disc Player	XL-F3000
– Double Cassette Deck	TD-F3000
- This manual mainly explains operations using the buttons and controls on the front panels. If operation using the Remote Control is different from that using the buttons on the front panels, it is then explained.

IMPORTANT CAUTIONS

1 Installation of the System

- 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 System and your TV.
- Keep the speakers away from TV to avoid interference with TV.
- Do not use the System in a place subject to vibrations.

2 Power cord

- Do not handle the power cord with wet hands!
- The small amount of the power (11 watts) is always consumed as long as the power cord is connected to the wall outlet.
- When unplugging from the wall outlet, always pull the plug, not the power cord.

3 Malfunctions, etc.

- There are no user serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the cabinets.

Getting Started

Accessories

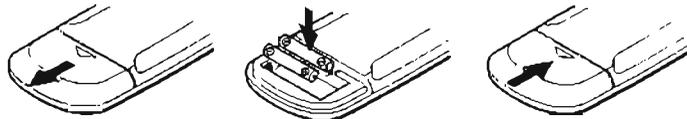
Check to be sure you have all of the following things, which are supplied with the System:

- FM Wire Antenna (1)
- AM (M/W/LW) Loop Antenna (1)
- Remote Control (1)
- Batteries (2)
- External Wire (1)

If any are missing, contact your dealer immediately.

Putting Batteries in the Remote Control

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



R03 (UM-4/AAA (24F))

If the range or effectiveness of the Remote Control decreases, replace the batteries. Use two R03 (UM-4/AAA (24F)) type dry-cell batteries.

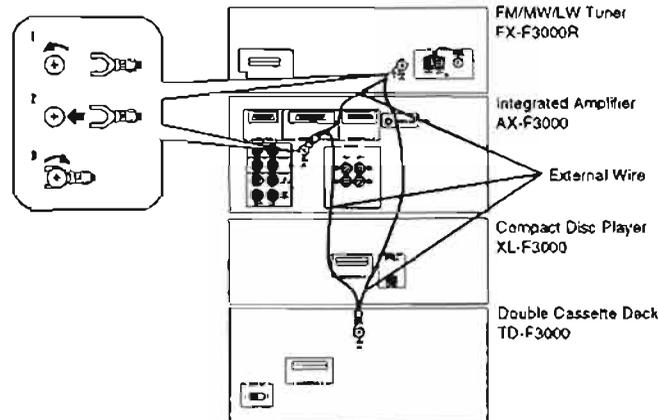
CAUTION

To avoid battery leakage or explosion:

- Remove batteries when the Remote Control is not 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 together with a new one.
- Do not use different types of batteries together.
- Do not expose batteries to heat or flame

Connecting the External Wire

To prevent malfunction, connect the supplied wire as illustrated below.

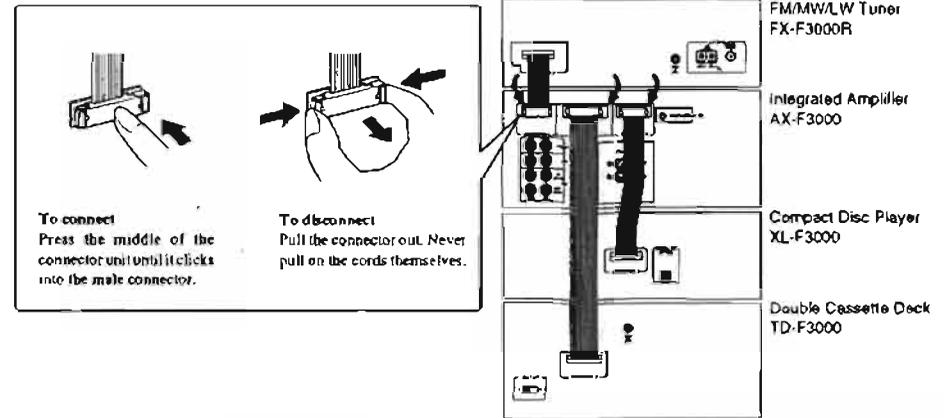


CAUTION

First make all connections before plugging the System into the AC power outlet.

Connecting the System Control Cards

Connect the components with the system control cards as illustrated below.



Note

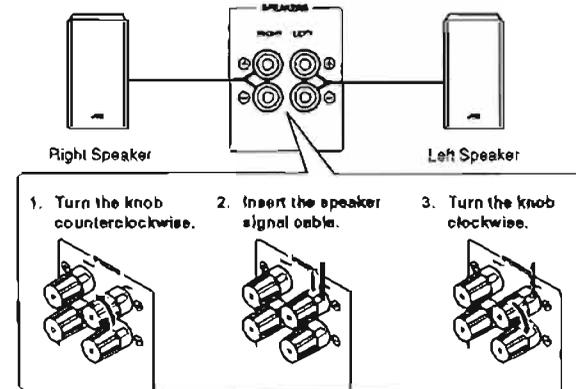
When connecting the components with the system control cards, make sure to connect the terminals having the same names like "CONNECTOR-A" or "CONNECTOR-B".

Connecting the Speakers



Twist and remove the insulation at the end of each speaker signal cable first, and then, connect the speakers to the SPEAKERS terminals by using the cables.

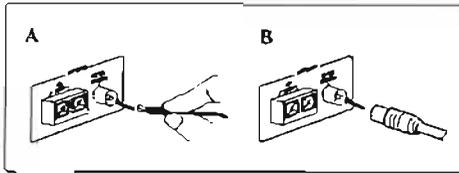
For each speaker, connect the black (-) and red (+) terminals on the rear panel to the black (-) and red (+) terminals marked on the speakers.



CAUTIONS

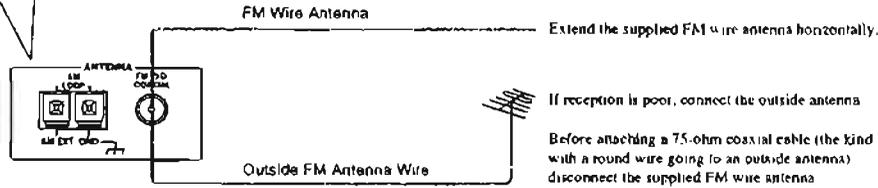
- Use speakers with the same speaker impedance indicated by the speaker terminals.
- If the TV is installed near speakers, irregular colors may result. In this case, set the TV away from the speakers.

Connecting the FM Antenna



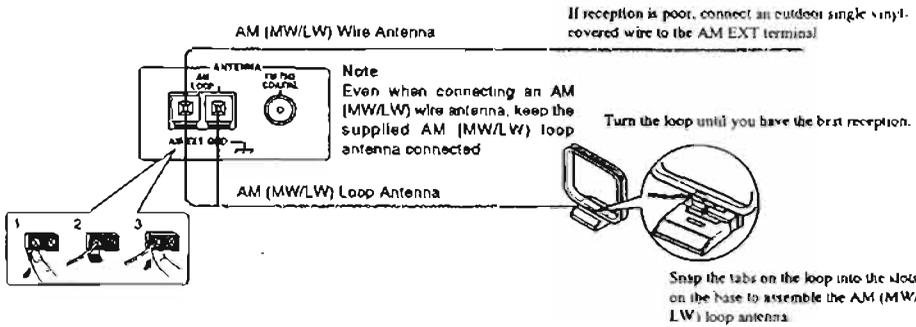
- A. Using the Supplied FM Wire Antenna**
The FM wire antenna provided can be connected to the FM 75-ohm COAXIAL terminal as temporary measure.
- B. Using the Standard Type Connector (Not Supplied)**
A standard type connector (IEC or DIN45325) should be connected to the FM 75-ohm COAXIAL terminal.

Note
Make sure the antenna conductors do not touch any other terminals, connecting cords or power cord. This could cause poor reception.



CAUTION
To avoid noise, keep antennas away from metallic parts of the System, connecting cords and the AC power cord.

Connecting the AM (MW/LW) Antenna



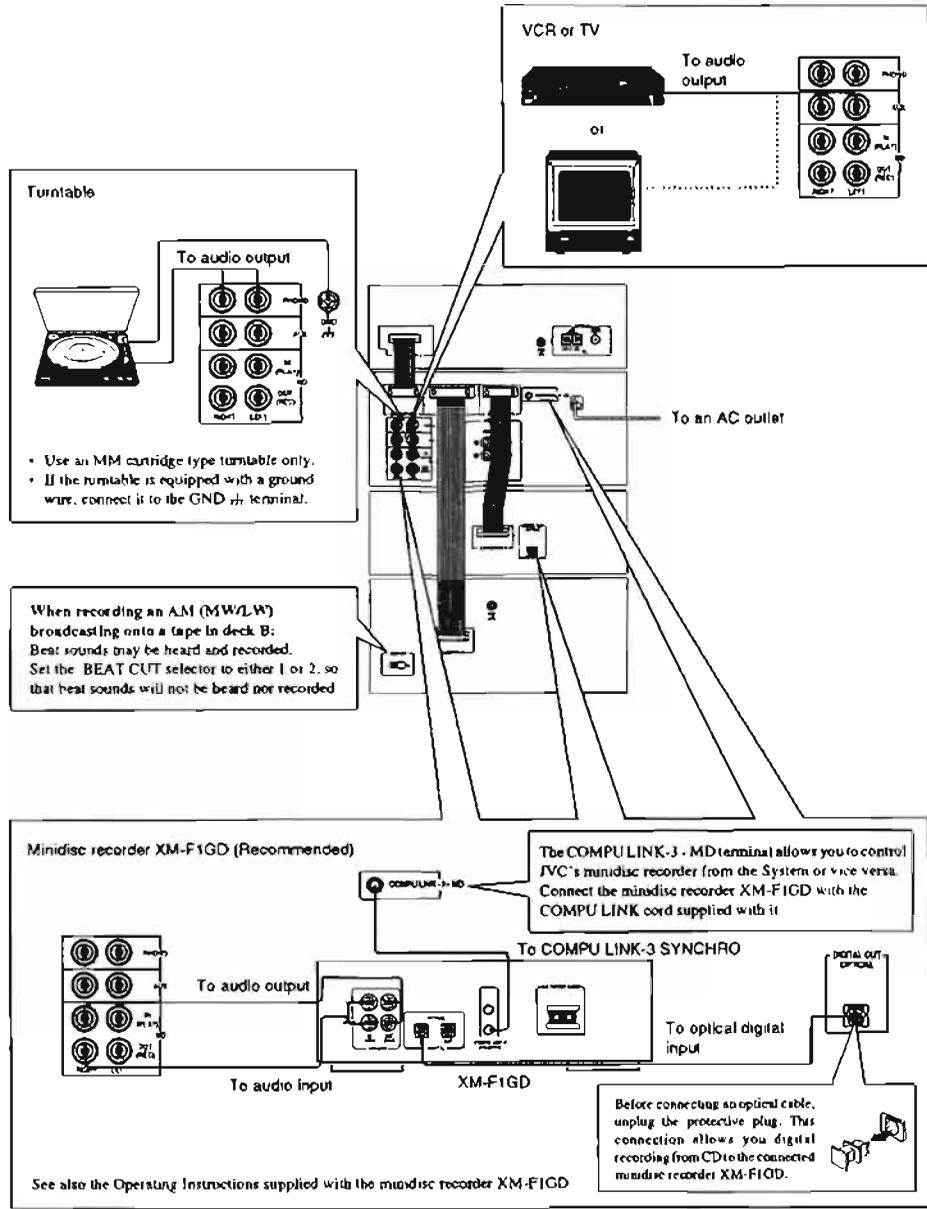
Note
Even when connecting an AM (MW/LW) wire antenna, keep the supplied AM (MW/LW) loop antenna connected.

Snap the tabs on the loop into the slots on the base to assemble the AM (MW/LW) loop antenna.

CAUTION

First make all connections before plugging the System into the AC power outlet.

Connecting the Minidisc Recorder and Other Equipment



- Use an MM cartridge type turntable only.
- If the turntable is equipped with a ground wire, connect it to the GND terminal.

When recording an AM (MW/LW) broadcasting onto a tape in deck B: Beat sounds may be heard and recorded. Set the BEAT CUT selector to either 1 or 2, so that beat sounds will not be heard nor recorded.

The COMPU LINK-3 MD terminal allows you to control JVC's minidisc recorder (from the System or vice versa). Connect the minidisc recorder XM-F1GD with the COMPU LINK cord supplied with it.

Before connecting an optical cable, unplug the protective plug. This connection allows you digital recording from CD to the connected minidisc recorder XM-F1GD.

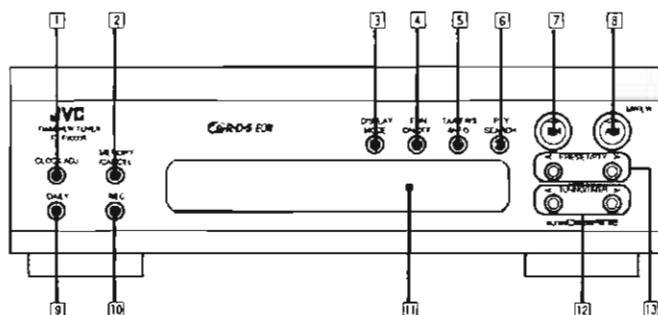
See also the Operating Instructions supplied with the minidisc recorder XM-F1GD

Switches, Buttons and Controls

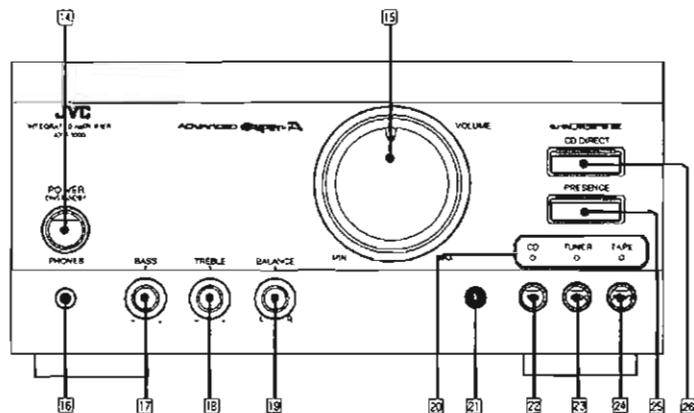
Become familiar with the buttons and controls on the front panels before use.

Front Panel

FM/MW/LW Tuner FX-F3000R



Integrated Amplifier AX-F3000



Refer to the pages in parentheses for details.

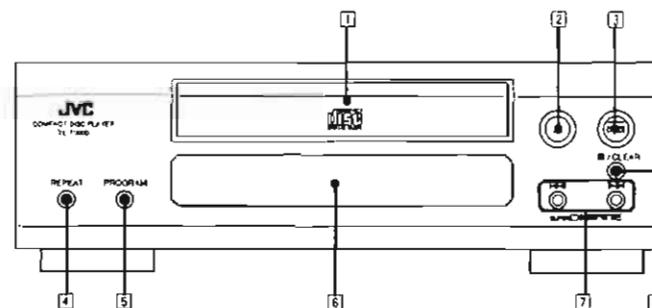
FM/MW/LW Tuner FX-F3000R

- 1 CLOCK ADJ. button (29)
- 2 MEMORY/CANCEL button (13, 14)
- 3 DISPLAY MODE button (15)
- 4 EON ON/OFF button (16)
- 5 TA/NEWS/INFO button (16)
- 6 PTY SEARCH button (16)
- 7 FM button and indicator (13)
- 8 AM (MW/LW) button and indicator (13)
- 9 DAILY button (30)
- 10 REC button (29)
- 11 Display (10)
- 12 TUNING/TIMER </> buttons (13, 29)
- 13 PRESET/PTY </> buttons (14, 16)

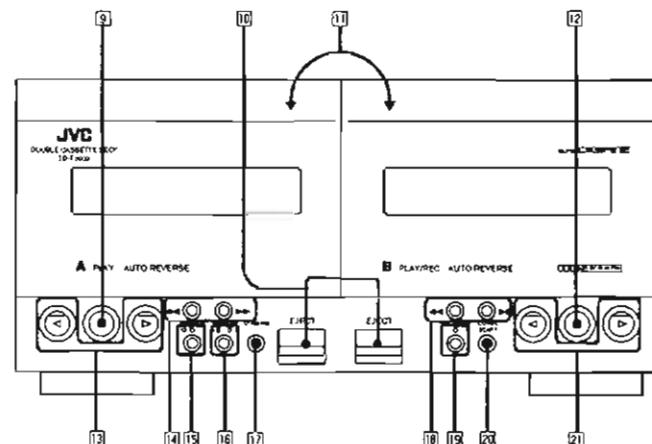
Integrated Amplifier AX-F3000

- 14 POWER button and ON/STANDBY indicator (11)
- 15 VOLUME control and indicator (11)
- 16 PHONES jack (12)
- 17 BASS control (11)
- 18 TREBLE control (11)
- 19 BALANCE control (11)
- 20 Source indicators (CD/TUNER/TAPE)
- 21 Remote sensor
- 22 MD button and indicator (24)
- 23 AUX button and indicator (24)
- 24 PHONO button and indicator (24)
- 25 PRESENCE button and indicator (12)
- 26 CD DIRECT button and indicator (12)

Compact Disc Player XL-F3000



Double Cassette Deck TD-F3000



Refer to the pages in parentheses for details.

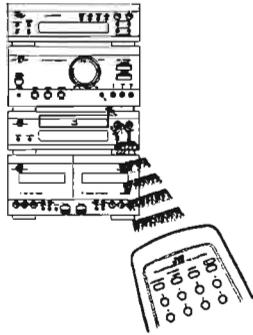
Compact Disc Player XL-F3000

- 1 CD tray (18)
- 2 Δ (Open/Close) button (18)
- 3 \triangleright/\square (Play/Pause) button and indicator (18)
- 4 REPEAT button (20)
- 5 PROGRAM button (20)
- 6 Display (10)
- 7 \lll/\ggg (Skip Left/Skip Right or Fast Forward/Fast Reverse) buttons (18)
- 8 \blacksquare (Stop)/CLEAR button (18, 20)

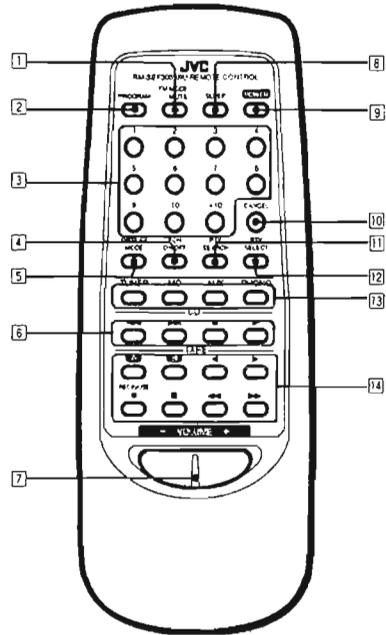
Double Cassette Deck TD-F3000

- 9 \square (Stop) button (for Deck A) (21)
- 10 EJECT buttons (21)
- 11 Cassette Holders
- 12 \square (Stop) button (for Deck B) (21)
- 13 \lll/\ggg (Play Forward/Play Reverse) buttons and indicators (for Deck A) (21)
- 14 \lll/\ggg (Fast Left/Fast Right) buttons (for Deck A) (22)
- 15 REVERSE button and indicator (23)
- 16 DOLBY NR button and indicators (21)
- 17 DUBBING button (28)
- 18 \lll/\ggg (Fast Left/Fast Right) buttons (for Deck B) (22)
- 19 REC PAUSE button and indicator (26)
- 20 CD REC START button (27)
- 21 \lll/\ggg (Play Forward/Play Reverse) buttons and indicators (for Deck B) (21)

Remote Control



When using the Remote Control, aim it to the remote sensor on the front panel.



Refer to the pages in parentheses for details.

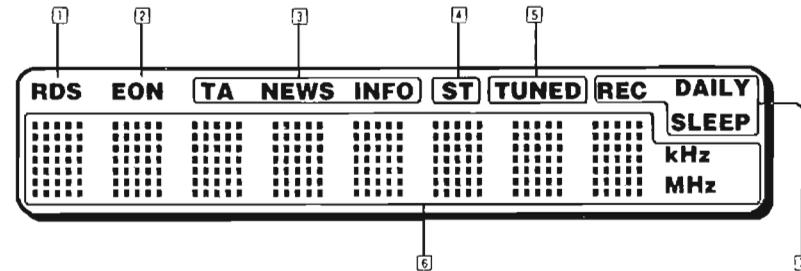
- | | |
|--|---|
| <p>1 FM MODE MUTE button (13)</p> <p>2 PROGRAM button (19)</p> <p>3 10 key pad (14, 19)</p> <p>4 EON ON/OFF button (16)</p> <p>5 DISPLAY MODE button (15)</p> <p>6 CD player control section (18)</p> <p>▶ (Play) button (18)</p> <p>■ (Stop) button (18)</p> <p>◀◀ / ▶▶ (Skip Left/Skip Right) buttons (18)</p> <p>7 VOLUME button (+ / -) (11)</p> <p>8 SLEEP button (32)</p> <p>9 POWER button (11)</p> | <p>10 CANCEL button (20)</p> <p>11 PTY SEARCH button (16)</p> <p>12 PTY SELECT button (16)</p> <p>13 Source selecting buttons (TUNER/MD/AUX/PHONO) (13, 24)</p> <p>14 Cassette deck control section (21)</p> <p>▶ (A) button (for Deck A) (21)</p> <p>▶ (B) button (for Deck B) (21)</p> <p>▶ / ▶ (Play) buttons (21)</p> <p>■ (Stop) button (21)</p> <p>◀◀ / ▶▶ (Fast Left/Fast Right) buttons (22)</p> <p>REC PAUSE ● button (for Deck B only) (26)</p> |
|--|---|

Note

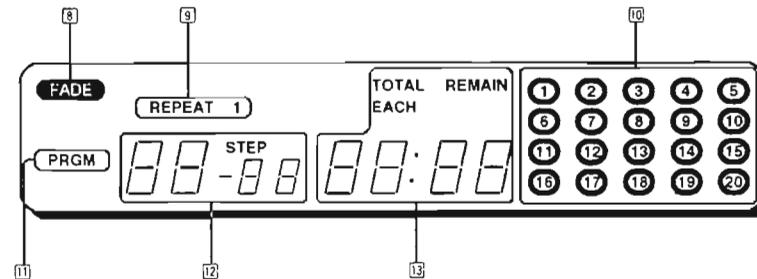
When you use the Remote Control, be sure which source the Remote Control is activated for.

- Before controlling the tuner and using the 10 key pad to select preset stations, press TUNER first on the Remote Control.
- Before controlling the CD player and using the 10 key pad to select CD tracks, press ▶, then ■ on the CD control section first.
- Before controlling the cassette deck, press ▶ (A) or ▶ (B) on the cassette deck control section first to select which deck to use.

Tuner Display



CD Player Display



Refer to the pages in parentheses for details.

Tuner Display

- | | |
|--|--|
| <p>1 RDS indicator (15)</p> <p>2 EON indicator (16)</p> <p>3 EON Standby reception indicator (T/NEWS/INFO) (16)</p> <p>4 ST (Stereo) indicator (13)</p> <p>5 TUNED indicator (13)</p> <p>6 Clock, frequency, timer-on time, timer-off time display (13, 29)</p> <p>7 Timer indicators (29, 30, 32)</p> | <p>8 FADE indicator (27)</p> <p>9 REPEAT indicator (20)</p> <p>10 Track number display</p> <p>11 PRGM (Program) indicator (19)</p> <p>12 Track and program step display</p> <p>13 Playing time, remaining time display</p> |
|--|--|

CD Player Display

- 8 FADE indicator (27)
- 9 REPEAT indicator (20)
- 10 Track number display
- 11 PRGM (Program) indicator (19)
- 12 Track and program step display
- 13 Playing time, remaining time display

Using the Amplifier

Here are some basic things to use this System. If something in a later procedure is unclear to you, check back here.

Turning the System On and Off

POWER
ON/STANDBY



Turning the System On

Press POWER so that the ON/STANDBY indicator goes off.

- The System comes on ready to do whatever it was doing when the power was last shut off.

Turning the System Off

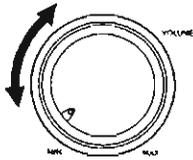
Press POWER again so that the ON/STANDBY indicator lights up and the display blinks, except for the clock indication.

- The small amount of the power (11 watts) is always consumed even in standby mode.
- To turn off the System completely, unplug the AC power cord from the AC outlet. When you unplug the AC power cord, the preset stations of the tuner will be erased in a few days.

POWER
ON/STANDBY



Controlling the Sound



The same set of buttons and knobs control the sound, no matter which sound source is producing it.

Volume Control

Rotate the VOLUME control clockwise to increase the volume, counterclockwise to reduce it.

On the Remote Control:

Press VOLUME + to increase the volume, VOLUME - to reduce it.



CAUTION

Be sure to turn down the volume before using the System, as high volume can damage both your hearing and ruin your speakers.

BALANCE



Speaker Balance Control

If the sounds you hear from the right and left speakers are not well-balanced, you can adjust the speaker output balance with the BALANCE control.

L R
BASS



Bass Control

Rotate the BASS control clockwise to increase bass reinforcement, counterclockwise to reduce bass reinforcement.

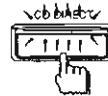
TREBLE



Treble Control

Rotate the TREBLE control clockwise to increase treble reinforcement, counterclockwise to reduce treble reinforcement.

Using the CD DIRECT Function



This function is useful when you want to listen to a CD with higher sound quality. The playback signal from the CD player is output directly, without passing through the BASS, TREBLE, BALANCE control circuits, and PRESENCE circuit.

To use this function, press CD DIRECT so that the indicator lights up.

To cancel this function, press CD DIRECT again so that the indicator goes off.

Notes

- If you press CD DIRECT while the power is on, CD play starts with a CD loaded.
- The CD DIRECT function and the PRESENCE function cannot be used at the same time. If you press CD DIRECT while using the PRESENCE function, the PRESENCE function will be canceled.

Using the PRESENCE Function



This function is useful when you listen to music at low volume or with small speaker systems.

To use this function, press PRESENCE so that the indicator lights up.

To cancel this function, press PRESENCE again so that the indicator goes off.

Note

The PRESENCE function and the CD DIRECT function cannot be used at the same time. If you press PRESENCE while using the CD DIRECT function, the CD DIRECT function will be canceled.

Listening with Headphones

A standard pair of headphones can be connected at the PHONES jack on the front panel. No sound can be heard from the speakers.

CAUTION

Be sure to turn down the volume before connecting or putting on headphones, as high volume can damage both the headphones and your hearing.

Using the Tuner

You can listen to both FM and AM (MW/LW) stations. Stations can be tuned manually, automatically, or from preset memory. Before listening to the radio, check that both the FM and AM (MW/LW) antennas are firmly connected. (See page 5.)

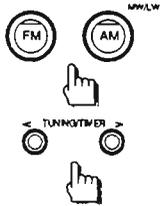
One Touch Radio



Just press AM (MW/LW) to turn on the System and start playing the most recent AM (MW/LW) station tuned in, or press FM to start the most recent FM station playing. If you press TUNER on the Remote Control instead, you can start playing the most recent station tuned in.

- You can switch from any other sound source to the tuner by pressing either AM (MW/LW) or FM.

Tuning in Stations Manually



1. Press FM or AM (MW/LW) to turn on the System.
2. Press and release TUNING/TIMER < or > to move from station to station until you find the one you want.
OR
Hold down TUNING/TIMER < or >, the frequency starts changing on the display. As soon as a station is tuned in, the TUNED indicator lights up on the display and the frequency stops changing. Repeat this procedure until a station you want is tuned in.

Receiving in Stereo or Monaural



- When an FM stereo broadcast is hard to receive or noisy:
- Press FM MODE MUTE on the Remote Control so that "FM MONO" appears on the display and reception improves, although you lose the stereo effect. In this state, you will hear some noise while tuning into a station.
 - To restore the stereo effect, press FM MODE MUTE again so that the "FM AUTO" appears on the display. In this state, when a program is broadcast in stereo, the ST (Stereo) indicator lights up on the display and you will hear the stereo sound; when in monaural, the ST indicator goes off and you will hear the monaural sound. Furthermore, in this state you will not hear noise while tuning in stations.

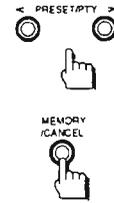
Presetting Stations in Memory

- Once stations are assigned to channel numbers, any of these stations can quickly be called up.
- You can preset a total of 40 stations, either FM or AM (MW/LW).
 - In order to use RDS broadcasting effectively, you need to preset stations in memory. Both PTY Search and EON function (which will be explained later) are applicable only to the preset FM stations.
 - In some cases, test frequencies have been already memorized for the tuner since the factory examined the tuner preset function before shipment. This is not a malfunction. You can preset the stations you want into memory by following the presetting method.

IMPORTANT

When you want to preset FM stations in stereo: Press FM MODE MUTE on the Remote Control so that "FM AUTO" appears on the display before presetting stations.

1. Tune in the station you want to preset (see above).
2. Press MEMORY/CANCEL.
"memo P_ _" appears on the display for about 5 seconds.



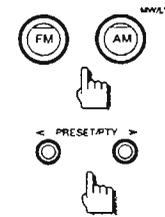
3. Press PRESET/PTY < or > to assign a channel number while "P_ _" is blinking on the display.
4. Press MEMORY/CANCEL.
"stored" appears on the display.
 - If you store a new station on a used number, the new station erases the previously stored one.
5. Repeat steps 1 to 4 for each station you want to store in memory.

CAUTION

If the System is unplugged or if a power failure occurs, the preset stations will be erased in a few days. If this happens, preset the stations again.

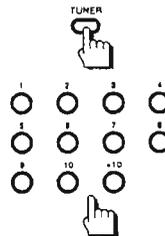
Tuning in Preset Stations

This method is possible after presetting stations by yourself.



1. Press FM or AM (MW/LW).
2. Press once and release PRESET/PTY > (or <) to go to the next (or previous) preset station, or hold PRESET/PTY < or > to cycle through the preset station; release the button when the preset station you want appears on the display.
The stations you have not preset are skipped.

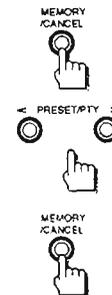
You can use the Remote Control to tune in preset stations



1. Press TUNER so that you can receive the most recent station tuned in.
2. Select the station by entering the preset number you want using the 10 key pad.
 - Example: For number 5, press 5. For number 15, press +10 then 5. For number 20, press +10 then 10.
 - If you select the stations you have not preset, "canceled" appears on the display.

Erasing the Preset Stations

You can also use the MEMORY/CANCEL button to cancel the preset stations.



1. Hold down MEMORY/CANCEL for about 5 seconds.
"canc. P_ _" appears on the display.
2. Press PRESET/PTY < or > to assign a channel number while "P_ _" is blinking on the display.
3. Press MEMORY/CANCEL.
"canceled" appears on the display.
4. Repeat steps 1 to 3 for each station you want to erase.

Receiving FM Stations with RDS (Radio Data System)



RDS is a broadcasting service a growing number of FM stations are now providing. It allows the FM stations to send additional signals along with their regular program signals. For example, the stations send their station names and information about what type of program they broadcast, such as sports or music, etc.

When tuned to an FM station providing the RDS service, the RDS indicator lights up on the display, the station frequency (and then the station name if sent) is displayed.

One convenient RDS service is "Enhanced Other Networks (EON)". This allows the tuner to automatically switch to a program of your choice when one starts in your broadcast area.

- Not all FM stations provide RDS service, nor do all RDS stations provide the same services. If in doubt, check with local radio stations for details on RDS services in your area.

Note

RDS may not operate correctly if the station tuned is not transmitting data properly or if the signal strength is weak.

What Information RDS Can Provide

The following RDS services are available and you can see the following RDS information by pressing DISPLAY MODE.

RDS Service Available

PS (Program Service name)
Identifies each station by a name.

Clock Time (Non-RDS service)
Displays the time.

RT (Radio Text)
Allows the RDS station to send text messages that appear on the tuner display.

PTY (Program Type)
Identifies the type of RDS program.

- While RDS information is being received from a station, "wait PS", "wait PTY" or "wait RT" may appear on the display.

The program types are as follows:

TRAFFIC: Traffic announcement (usually called "TA")
NEWS: News
INFO: Programs on medical service, weather forecast, etc.
POP M: Pop music
ROCK M: Rock music
M.O.R. M: Middle-of-the-road music (usually called "easy listening")
LIGHT M: Light music
CLASSICS: Classics
OTHER M: Other music
AFFAIRS: Topical program expanding on current news or affairs
SPORT: Sports events
EDUCATE: Educational programs
DRAMA: Radio plays
CULTURE: Programs on national or regional culture
SCIENCE: Programs on natural sciences and technology
VARIED: Other programs like comedies or ceremonies
NONE: Undefined

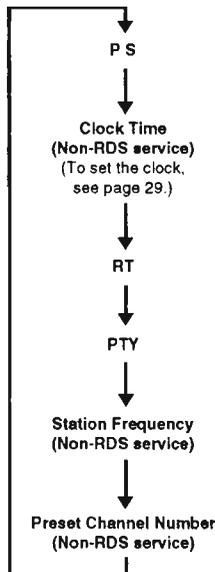
ALARM: Emergency broadcasts

Station Frequency (Non-RDS service)
Displays station frequencies.

Preset Channel Number (Non-RDS service)
Displays preset channel numbers.

Note

If you press DISPLAY MODE while receiving non-RDS FM stations or AM (MW/LW) stations, the display only shows the clock time, station frequency, and preset channel number in sequence.



Searching for Programs by PTY Codes

One of the advantages of the RDS service is that you can locate a particular kind of program by specifying the PTY (Program Type) codes.

- PTY Search can be used even while receiving AM (MW/LW) broadcasts or while playing the other source.
- PTY Search is applicable to preset FM stations only.

1. Press PTY SEARCH.

"PTY" and "select" alternates on the display.

2. Press PRESET/PTY < or > (or PTY SELECT on the Remote Control) to select a PTY (Program Type) code.

When you press PRESET/PTY < or > on the front panel, the PTY codes change in the following order (when using the Remote Control, they change only rightward):

TRAFFIC ↔ NEWS ↔ INFO ↔ POP M ↔ ROCK M ↔ M.O.R. M ↔ LIGHT M ↔ CLASSICS ↔ OTHER M ↔ AFFAIRS ↔ SPORT ↔ EDUCATE ↔ DRAMA ↔ CULTURE ↔ SCIENCE ↔ VARIED ↔ NONE ↔ (back to the beginning)

3. Press PTY SEARCH again while the selected PTY code remains on the display.

Searching starts.

The selected PTY code blinks during PTY Search.



On the front panel



From the Remote Control



Notes

- Once the station broadcasting the selected PTY code is found, searching stops. Then the station is tuned in and the preset channel number appears on the display. The preset channel number stays blinking for 10 seconds before searching ends. If you press PTY SEARCH again during this period, search for the same PTY code will restart. PTY Search is only completed when the indicated preset channel number stops blinking and stays lit.
- If stations broadcasting a program of the selected PTY code is not found, "No PGM" appears on the display after going through the preset channels.

Setting EON Standby Reception

With the EON (Enhanced Other Networks) code, the System can perform a standby reception which enables you to obtain desired PTY code(s) available from other stations.

- The EON indicator will light up only while receiving stations with an EON code.
- You can set EON Standby reception with either band (FM or AM (MW/LW)) received.
- EON Standby reception is not applicable in the following cases:
 - While playing the other sources.
 - While receiving non-RDS FM stations and AM (MW/LW) stations. (EON indicator will not light up.)

1. Press EON ON/OFF so that "EON MODE" appears on the display.

Indicator of the PTY code(s) (TA/NEWS/INFO) previously selected lights up.

2. Select PTY code(s) you want by pressing TA/NEWS/INFO.

TA: Traffic announcement in your area.
NEWS: News
INFO: Programs on medical service, weather forecast, etc.

Each time you press TA/NEWS/INFO, the EON Standby reception (TA/NEWS/INFO) indicator changes as follows:

"TA NEWS INFO" → "TA" → "NEWS" →
 "INFO" → "TA INFO" → "NEWS INFO" →
 "TA NEWS" → (back to the beginning)

As soon as your selection is entered, the tuner goes into the EON Standby reception mode.



While the tuner is for EON Standby reception, the display changes as follows:

1. While waiting for EON data of your selection,

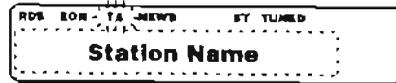


Notes

- If no EON data is received, the tuner remains in this mode.
 - If the information you are waiting for is available from the current station, the indicator of the received PTY code will blink.
2. When the information of desired PTY data is received, the tuner tunes into the station sending the PTY data (sound is muted).



3. When the station is tuned in, the indicator of received PTY code starts blinking.



If the reception is failed, the previous station name and "EON seek" alternates on the display and then, the indicator of the PTY code goes off and "EON fail" appears. The tuner then goes back to the station previously tuned.

4. When broadcasting of the desired PTY code ends, "EON end" appears and the tuner automatically goes back to the station previously tuned in.



To cancel the EON Standby reception, press EON ON/OFF (or TA/NEWS/INFO) while receiving the station tuned by EON Standby reception.

Notes

- EON broadcasts of some stations may not be compatible with the System. In the case of an incompatible EON broadcast, the EON indicator on the display may not light up.
- While receiving a program of the selected PTY code(s) by EON Standby reception, the station will not change to other stations even if a program of the same type is available from them.
- When a timer (recording or daily) starts operating while the EON Standby reception is operating, the EON Standby reception will be canceled, and the source selected by the timer will be played.
- While a timer (recording or daily) is operating, the EON Standby reception will not function.

ALARM Function

When an ALARM (Emergency) broadcast is being received, the tuner tunes in the station broadcasting the ALARM signal. "ALARM" and the station frequency will alternate on the display for your attention.

- ALARM function cannot work in the following cases:
 - While playing the other sources
 - While receiving non-RDS FM stations and AM (MW/LW) stations.

Using the CD Player

Here are the basic things you need to know to play a CD and locate the different selections on it. Each selection is called a track, so when we are talking about locating a track, we are also talking about how you find a certain song or performance.

Basics of Using the CD Player



The quickest way to start a CD is with One Touch Play.

- Press **P/▶** (Play) on the CD player (or **▶** on the CD player control section of the Remote Control). If a CD is already loaded, the System automatically turns on and starts playing the CD. If no CD is loaded, the CD tray comes out so you can put in a CD, with printed side up. Then press **P/▶** (or **▶** on the CD player control section). The tray closes and the CD starts playing.
- If you press **⏏** (Open), the System automatically turns on and the CD tray comes out.

IMPORTANT

When you use the Remote Control,

Remember you have to press **▶**, then **⏏** on the CD player control section to activate the 10 key pad for the CD player.

Playing a CD



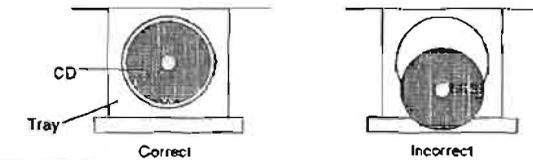
1. Press **⏏** (Open).

2. Put a CD, with printed side up, into the tray.

When using an 8 cm CD, place it on the inner circle of the tray.

CAUTION

Place the disc correctly on the circle of the tray.



On the front panel



From the Remote Control

3. Press **P/▶** (or **▶** on the CD player control section of the Remote Control).

- The CD tray closes automatically.
- The display shows the track being played and the length of time since it started.

To stop the CD, press **⏏**/CLEAR (or **⏏** on the CD player control section of the Remote Control).

To pause the play, press **⏏** (Pause) on the front panel while the CD is playing.

To resume playing, press **P/▶** (Play) again. (The Pause function cannot be used with **▶** on the CD player control section of the Remote Control.)

To remove a CD, press **⏏** (Open), take the CD out, and press **⏏** (Close) again to close the tray. Keep the tray closed except during loading and unloading to protect the mechanism from dust and damage.

Finding the Track or a Particular Point You Want

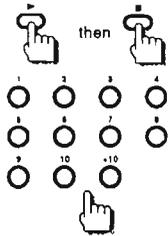
You can easily find the CD track and particular point you want by the following procedure:

- Each time you press briefly and release **⏏** or **⏏** (Skip Left or Skip Right) the track changes by one:
 - Press and release **⏏** to go ahead one track at a time.
 - Press and release **⏏** to go back one track at a time.
- Hold down **⏏** or **⏏** (when the CD player is stopped) allows you to change tracks continuously.
- Hold down **⏏** or **⏏** (Fast Forward or Fast Reverse) on the front panel during play will fast forward or fast reverse the CD so you can quickly find the particular point of a track you want to listen to. (The Fast Forward and Fast Reverse functions cannot be used from the Remote Control.)



Locating a Track with the Remote Control Directly

Using the 10 key pad on the Remote Control allows you to go directly to the beginning of any track.



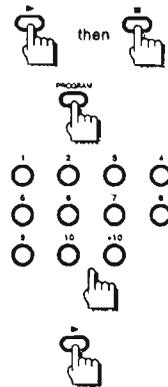
1. Press **▶**, then **■** on the CD player control section.
This activates the 10 key pad for controlling the CD player.
2. Enter the number of the track you want using the 10 key pad.
Example: For track 5, press 5. For track 15, press +10 then 5. For track 20, press +10 then 10.
3. As long as a CD is loaded and the System is on, the CD starts playing from the selected track.

Programming the Playing Order of the Tracks

You can arrange the tracks to play in any order you like. The Remote Control is very useful for this because you can select tracks by number with the 10 key pad. You can also use the buttons on the front panel.

- You can program up to 32 tracks in any desired order.
- You can only make or change a program when the CD player is stopped.

Programming the CD track order from the Remote Control by the following procedure:



1. Press **▶**, then **■** on the CD player control section.
This activates the 10 key pad for controlling the CD player.
2. Press **PROGRAM**.
The PRGM indicator lights up on the display.
3. Press the number of the first track, then the number of the second track, and so on until you enter all the track numbers you want to play.
 - Example: For track 5, press 5. For track 15, press +10 then 5. For track 20, press +10 then 10.
 - You can repeat the same tracks if you want.
4. Press **▶** on the CD player control section to start playing the tracks in the order you have programmed.

To stop the CD during programmed play, press **■**.

To erase the program, press **PROGRAM** after you stop playing.

Programming the CD from the front panel by the following procedure:



1. Press **PROGRAM**.
The PRGM indicator lights up on the display.
2. Press **◀◀** or **▶▶** (Skip Left or Skip Right) to select the track you want.
3. Press **PROGRAM** to store the selected track.
4. Repeat steps 2 and 3 until you enter all the tracks you want to play.
You can repeat the same tracks if you want.
5. Press **▶/■** (Play) to start playing the tracks in the order you have programmed.

To stop the CD during programmed play, press **■/CLEAR**.

To erase the program, press **■/CLEAR** after you stop playing.

Before you start playing, you can do the following:

- If you want to change the entire program, press **■/CLEAR** on the front panel (or **PROGRAM** on the Remote Control). You can also erase the entire program by pressing **⊕** (Open).
- If you want to erase the last track, press **CANCEL** on the Remote Control. Each time you press **CANCEL** the last track in the program will be erased.
- To add a track to your program, just press the number you want to add using the Remote Control. (This is also possible during play.)

Repeating a Selection or the Entire Disc

You can have either all tracks or the individual track currently playing repeat as many times as you like by pressing **REPEAT**.

- Each time you press **REPEAT**, it cycles in the following order:

REPEAT → **REPEAT 1** → **Off** (The **REPEAT** indicator goes off.) → (go back to the beginning)

REPEAT Repeat all tracks in order or according to the program you have made.
REPEAT 1 Repeat the currently playing track.
Off Repeat is canceled.



Using the Cassette Deck (Listening to a Tape)

You can play, record and dub audio tapes by using the cassette deck.

- To record or dub, see Recording on page 25.
- With Automatic Tape Type Detection, you can listen to Type I, II and IV tapes without changing any settings.
- Most tapes are now recorded with the Dolby NR system (B or C), so first check which type of the Dolby NR system is used on the tape.

IMPORTANT

When you use the Remote Control:
Remember you have to press **A** or **B** on the cassette deck control section to select which deck to use.

One Touch Play

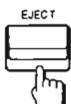


By pressing either \triangleright or \triangleleft on either deck A or B, the System automatically turns on, and if a tape is in the deck, it starts playing. If no tape is loaded, the System turns on and wait for further instructions.

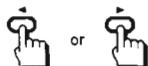
Regular Play

When power is already on, you can use these basic procedures:

1. Press EJECT for the deck you want to use.
2. When the cassette holder opens, put the cassette tape in, with the exposed part of the tape down toward the base of the holder.
If the cassette holder does not open, turn the System off once and turn it on again, then press EJECT.
3. Close the cassette holder gently.
4. Press DOLBY NR repeatedly to set the same Dolby NR system as was used for recording the tape.
5. Press \triangleleft (or \triangleleft on the cassette deck control section of the Remote Control) to play the reverse side, or \triangleright (or \triangleright on the cassette deck control section) to play the front side.
 - Tape starts playing.
 - The indicator on the pressed button (\triangleleft or \triangleright) starts blinking slowly, showing which way the tape is running.



On the front panel



From the Remote Control

To stop playing, press \square (or \blacksquare on the cassette deck control section of the Remote Control).
The indicator on the button (\triangleleft or \triangleright) stops blinking, showing which way the tape was running last.

To remove the tape, press EJECT.



Fast Left and Fast Right

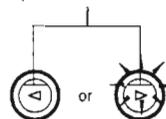
- While the tape is stopped, press \ll and the tape will wind rapidly onto the left side of the cassette tape without playing.
- While the tape is stopped, press \gg and the tape will wind rapidly onto the right side of the cassette tape without playing.

CAUTION

The use of C-120 (120 minutes turn around) or thinner tape is not recommended, since characteristic deterioration may occur and these tapes easily jam in the pinch and the capstan.

Music Scan

Shows the direction the tape runs



You can use Music Scan to locate the beginning of a song. Music Scan searches for blank portions that usually separate recorded songs, then plays the next song.

Finding the Beginning of the Next Song

During play, press \ll or \gg in the same direction as the tape play.
Searching stops automatically at the beginning of the next song, and the next song starts automatically.

Finding the Beginning of the Current Song

During play, press \ll or \gg in the opposite direction to the tape play.
Searching stops automatically at the beginning of the current song, and the current song starts automatically.

Notes

- Music Scan works by detecting a 4-second long blank between each song, so it will not work well in the following cases.
 - No blank at the beginning of a song.
 - Noise (often caused by much use or poor quality dubbing) which fills the blank with noise.
 - Long, very soft passages or pauses in a song.
- Music Scan only works on one tape at a time.
 - If you use Music Scan on deck A during recording on deck B, deck B enters recording pause mode (except during "CD to Tape Recording").
 - If you start recording on deck B while Music Scan is used on deck A, Music Scan stops.



Reverse Mode

Use Reverse Mode to make the tape automatically reverse at the end of a side and start playing the other side. Press REVERSE to change Reverse Mode from on (when the indicator is lit) to off and vice versa.

Continuous Play (only available when Reverse Mode is on)

Use Continuous Play to play the tapes in both deck A and B.

When Reverse Mode is set to on (the indicator is lit):

When the reverse side (◀) of a tape finishes playing on one deck, the System always checks to see if a tape is in the other deck. If there is, it automatically starts playing. This happens regardless of which deck starts first.



Dolby Noise Reduction

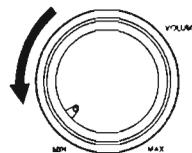
Press DOLBY NR to switch Dolby Noise Reduction (B or C) on (the selected one's indicator lights up) or off (both indicators go off). If a tape is recorded with the Dolby NR system, playing it back with the same Dolby NR on, it will reduce tape noise and improve the clarity of the sound.

Dolby HX PRO

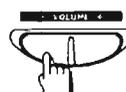
Dolby HX PRO provides linearity in high-range frequency response during recording. Tapes recorded with this System retain the same characteristic even played back with any other deck. With Dolby HX PRO, the effective bias current is controlled in response to fluctuations in high-range frequency of the input signal, ensuring dynamic sound recording with minimal distortion and noise.

Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen. "DOLBY", the double-D symbol and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

Listening to the Turntable or Other Equipment through Your System



On the front panel



From the Remote Control



By playing the sound from a minidisc recorder, a turntable or other connected equipment through the System, you can often dramatically improve the quality, and gain control over how the music or program sounds.

1. Connect the other equipment as shown on page 6.
2. Turn down the volume using the VOLUME control on the front panel (or VOLUME – on the Remote Control).
3. Press MD, AUX or PHONO .
The System is turned on and MD, AUX or PHONO indicator lights up.
4. Switch on the connected equipment and start playing.
See the manuals supplied with the other equipment.

To cancel the MD, AUX or PHONO setting, change the source by starting any one of sound sources, such as the tuner or CD player.

Using JVC's Minidisc Recorder Connected to the COMPU LINK-3 - MD Terminal



When your minidisc recorder is JVC's XM-F1GD, you can connect it to the COMPU LINK-3 - MD terminal. You can control the minidisc recorder from the System or vice versa. About the connection, see page 6.

What you can do:

Automatic power on/off function:

When you turn on or off the System, the minidisc recorder automatically turns on or off.

Playing the minidisc recorder:

When you press MD on the System or ▷/⏮ (Play) on the minidisc recorder in standby mode, the System and minidisc recorder turn on and start playing if a minidisc is already loaded.

Recording from the minidisc recorder, see page 26.

Recording onto the minidisc:

1. Prepare the CD or cassette tape you want to record from.
 2. Prepare the minidisc in the minidisc recorder.
 3. Press REC PAUSE on the minidisc recorder.
 4. Press ▷/⏮ (for the CD) or ◀ / ▷ (for the cassette tape) on the front panel.
- As soon as the System starts playing, the minidisc recorder starts recording.

Using the Cassette Deck (Recording)

Recording onto cassette tape from any of the sound sources is easy and the System does most of the work. Just have a tape in deck B, have the source ready, make one or two settings, and you are ready to record.

For each source the procedure is a little different and now we explain just what to do for each one. If you forget, just come back to the each section. But first, here are a few things to make your recordings better.

Things to Know before You Start Recording

- It may be unlawful to record or playback copyrighted material without the consent of the copyright owner.
- To reduce hiss noise, press DOLBY NR to select either B or C. (See page 23.)
- The recording level, which is the volume at which the new tape is being made, is automatically set correctly, so it is not affected by the VOLUME control on the front panel (or VOLUME – or + on the Remote Control). Thus, you can adjust the sound you are actually listening without changing the recording. If you do not want to listen to the sound, you can turn down the volume using the VOLUME control on the front panel (or VOLUME – on the Remote Control).
- The BASS/TREBLE controls, and the CD DIRECT/PRESENCE function cannot be used for recording.
- Cassette tapes have a special feature so you will not accidentally record over a tape you want to save. Two small tabs on the back, one for side A and one for side B, can be removed to prevent erasure or re-recording. To record on a cassette with the tabs removed, you must cover the holes with tape first. However, when a Type II tape is used, only cover part of the hole as shown below, since the other part of the hole is used to detect the tape type.



- Type I, II and IV tapes can be used for recording.

CAUTION

If recordings you make have excessive noise or static, the System may be too close to a TV during the recording. Either turn off the TV or increase the distance between the TV and the System.

Standard Recording

This is the basic method for recording any source. The System also has special ways for recording CD to tape, and tape to tape, which save you time and effort, as well as give you some special effects. However, when you need to add a selection to a tape you have made, or are combining selections from several sources on one tape, use the method we describe here. You can record from a minidisc recorder, a turntable or other sources with this procedure.

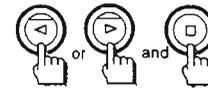
Recording any Sound Source to Tape

Follow the procedure to record from any sound source onto a tape in deck B.

IMPORTANT

When you use the Remote Control:

Remember you have to press **▶** or **◀** on the cassette deck control section to select which deck to use. Press **▶** first before starting the following procedure.



On the front panel



From the Remote Control



1. Put the cassette tape to record onto into deck B.
2. Press **<** (or **◀** on the cassette deck control section of the Remote Control) or **>** (or **▶** on the cassette deck control section) and **□** (or **■** on the cassette deck control section) to select the side for recording on deck B.
 - When you want to record on the front side (A), press **>** (or **▶** on the cassette deck control section), then **□** (or **■** on the cassette deck control section).
 - When you want to record on the reverse side (B), press **<** (or **◀** on the cassette deck control section), then **□** (or **■** on the cassette deck control section).
3. Press REC PAUSE.

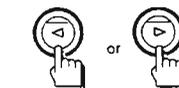
The REC PAUSE indicator lights up.

When you want to record on both sides of the tape, press REVERSE on the cassette deck to set Reverse Mode on and be sure to start recording from the front side (A). If you start recording from the reverse side (B), the deck stops after recording the reverse side (B) without going to the front side (A), even if Reverse Mode is on.
4. Prepare the source, for example, tuning in a radio station, turning on the connected equipment and then, start playing the source.
 - When you want to record from the CD player or minidisc recorder, you need to do the next step first.
 - When you want to record from JVC's minidisc recorder XM-F1GD connected with COMPU LINK cord, you do not need to do the next step since recording starts automatically.
5. To start recording, press either **<** (or **◀** on the cassette deck control section of the Remote Control) or **>** (or **▶** on the cassette deck control section) (the same button you have pressed in step 2).

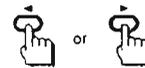
To stop recording any time during the process, press **□** on deck B (or **■** on the cassette deck control section).

To pause recording any time during the process, press REC PAUSE again.

To resume recording, press **<** / **>** (or **◀** / **▶** on the cassette deck control section of the Remote Control) (the same button you have pressed in step 5).



On the front panel



From the Remote Control

CD to Tape Recording

Everything on the CD goes onto the tape in the order it is on the CD or according to an order you have set in a program. To make a program, see page 19.
During "CD to Tape Recording", you cannot change the sound sources.

IMPORTANT

When you use the Remote Control:
Remember you have to press **A** or **B** on the cassette deck control section to select which deck to use. Press **B** first before starting the following procedure.

1. Put the cassette tape in deck B.

Press REVERSE so that the REVERSE indicator lights up if you want to record on both sides of the tape.

2. Load the CD into the CD Player.

If the CD is already loaded, be sure the System is on.

3. Press **<** (or **<** on the cassette deck control section of the Remote Control) or **>** (or **>** on the cassette deck control section) and **□** (or **■** on the cassette deck control section) to select the side for recording.

- When you want to record on the front side (A), press **>** (or **>** on the cassette deck control section), then **□** (or **■** on the cassette deck control section).
- When you want to record on the reverse side (B), press **<** (or **<** on the cassette deck control section), then **□** (or **■** on the cassette deck control section).

4. Press CD REC START on the cassette deck.

The FADE indicator lights up on the CD display.

- As soon as deck B starts recording, the CD starts playing. At the end of the tape, the System automatically goes back to the beginning of the last track and rerecords it, this time gently fading out at the end. If you set Reverse Mode on, the reverse side (B) starts with the last track on the front side (A) and will be faded out at the end again. (A 10 second blank is created on the beginning of the reverse side (B).)
- For "CD to Tape Recording" using more than one disc, use a blank tape. If you use a prerecorded tape, prerecorded material may not be erased between newly-recorded tracks.

To stop recording any time during the process, press either **■**/CLEAR on the CD player (or **■** on the CD player control section of the Remote Control) or **□** on deck B.

When you press **■**/CLEAR (or **■** on the cassette deck control section), you can make a 4-second blank at the end of recording.

CAUTION

⏮ (Skip Left) or **⏭** (Skip Right), and **REPEAT** will work during "CD to Tape Recording". If you press these buttons, recording will be interrupted.



On the front panel



From the Remote Control



Tape to Tape Recording (Dubbing)

Recording from one tape to another is called dubbing.

- Dolby NR is inactive in dubbing mode regardless of the setting of the DOLBY NR. The dubbed tape automatically contains the same processing as the source tape. The DOLBY NR indicator goes off automatically.
- It is preferable that the tape type (Type I, II and IV) you record from be the same as the tape type you record onto.
- To dub both sides of a tape, start from the front side (A) for both deck A and B, and press REVERSE so that the REVERSE indicator lights up.

1. Put the cassette tape you want to copy from into deck A for playback.

2. Put the cassette tape you want to copy onto into deck B for recording.

The cassette tape in deck B will be erased as the new sound from the cassette tape in deck A is recorded.

3. Press DUBBING.

Deck A starts playing and deck B starts recording.

- When dubbing, you can also listen to the another source such as the radio or the CD player.

To stop dubbing, press **□** for deck B.

Recording selections from several different tapes

When you want to take selections from several different tapes and combine them on one tape during dubbing, follow these steps:

1. Press **□** on deck A.

This causes deck A to stop, so you can change tapes, and deck B makes pauses.

2. Change the cassette tape in deck A.

3. Press DUBBING to start deck A playing and deck B recording again.



On deck A



Using the Timer

The timers let you control recording and playing sources automatically. Three types of timers are available:

- Recording (REC) Timer**—Unattended recording of radio broadcasts that works only once.
- Daily Timer**—The System turns on and plays a source at a particular time every day.
- Sleep Timer**—Fall asleep and have your System turn off automatically after a certain length of time.

Setting the Clock

The timers depend on the clock. If the clock is right, the timers will work like you expect, but if the time is incorrect on the clock then the timers will also be incorrect.

Special Notice: The clock must be set, or the timers cannot be set!
So, let's set the clock first.

- You can set the clock whether the System is on or off.

1. Press **CLOCK ADJ.**
2. Set the hours by pressing **TUNING/TIMER < or >**.
Pressing > increases the hour, and pressing < decreases it.
3. Press **MEMORY/CANCEL.**
4. Set the minutes by pressing **TUNING/TIMER < or >**.
Pressing > increases the minute, and pressing < decreases it.
5. Press **MEMORY/CANCEL** again.
The clock is set and starts from zero second.



CAUTION

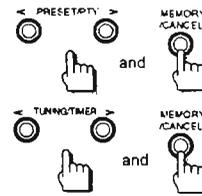
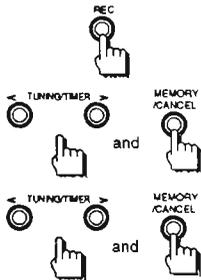
If the System is unplugged or if a power failure occurs, the clock loses its setting, the tuner display shows "0:00" and it must be reset.

Setting the Recording (REC) Timer

With the recording timer you can make a tape of a radio broadcast automatically even when you are not there to start the System. For the timer to work correctly, you need to make sure that the tape you want to record onto must be in deck B when you want to record.

- You can set the recording timer whether the System is on or off.
- When you want to record on both sides of the cassette tape, press **REVERSE**, with the power turned on, so that the **REVERSE** indicator lights up.

1. Press **REC**.
The REC indicator blinks on the tuner display.
2. Set the time you want to start recording.
Use **TUNING/TIMER < or >** and **MEMORY/CANCEL** just like setting the clock. See instructions above.
3. Set the time you want to stop recording.
Use **TUNING/TIMER < or >** and **MEMORY/CANCEL** just like setting the clock. See instructions above.



4. Select a preset channel with **PRESET/PTY < or >** and **MEMORY/CANCEL**.

5. Select the equipment (either deck B or minidisc recorder XM-F1GD) you want to use for recording with **TUNING/TIMER < or >** and **MEMORY/CANCEL**.

Each time you press **TUNING/TIMER < or >**, the System gives you one of the following:

TAPE?	Records onto a tape
MD?	Records onto a minidisc
	For connecting and operating the minidisc recorder, see page 6 of this manual and the manuals supplied with the minidisc recorder.

When you select **TAPE** as the equipment, you need to check that tape direction is correct. This is important especially when **Reverse Mode** is off.

Set **Reverse Mode** on and start recording from the front side (A) if you want to record on both sides of the tape.

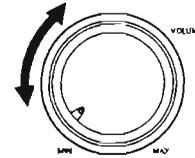
6. Press **REC** again.

The REC indicator stops blinking and remains lit. The display, then, shows the settings you have done in step 2 to 5.

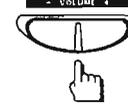
- Notice that the REC indicator lights up on the display whenever the timer is set.
- A few seconds before the on-time for the recording, (the System automatically turns on if it is off and) the REC indicator blinks on the display. When the on-time comes, recording starts. When the off-time comes, recording stops and the System automatically turns off.
- Once the recording timer has worked, the REC indicator goes off. (The recording timer also turns off. However, the contents stored in the timer will not be erased.)



7. Adjust the volume with the **VOLUME** control (or **VOLUME - or +** on the Remote Control).



On the front panel



From the Remote Control

To cancel the recording timer, press **REC** so that the REC indicator on the display goes off.

To change the timer settings, repeat the setting procedure from the beginning and change the contents as you want.

To erase all the contents stored in the timer:

1. Press **REC** so that on-time for the timer blinks on the display.
2. Hold down **MEMORY/CANCEL**.
3. Press **REC** again.

Note

If you change the source while the recording timer is operating, the recording timer will be canceled but the recording continues.

CAUTION

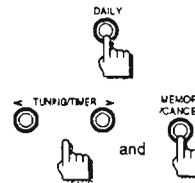
If the System is unplugged or if a power failure occurs, the timer setting will be erased. If settings are erased, reset the timer settings.

Setting the Daily Timer

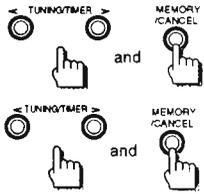
With the timer you can play the sound source at the specified time without recording them. The daily timer executes the timer operation at the specified time every day.

- You can set the daily timer whether the System is on or off.

1. Press **DAILY**.
The **DAILY** indicator blinks on the tuner display.
2. Set the time you want the sound source to turn on.
Use **TUNING/TIMER < or >** and **MEMORY/CANCEL** just like setting the clock.



(continued)

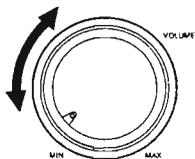


3. **Set the time you want the sound source to shut off.**
Use TUNING/TIMER < or > and MEMORY/CANCEL just like setting the clock.
4. **Select the sound source to play with TUNING/TIMER < or > and MEMORY/CANCEL.**
Each time you press TUNING/TIMER < or >, the System gives you one of the following:
 P - _ _ ch Tunes into a preset station
 CD Plays a CD from the beginning
 TAPE Plays a tape
 MD Plays a minidisc recorder from the beginning
 For connecting and operating the minidisc recorder, see page 6 of this manual and the manuals supplied with the minidisc recorder.

- When you select the tuner as the source, you need to designate a preset station by pressing PRESET/PTY < or >.
- When you select TAPE as the source:
 - You need to check that the tape direction is correct. This is important especially when Reverse Mode is off.
 - Deck B has priority, so if tapes are in both decks, the tape in deck B plays first. Set Reverse Mode on if you want to play both sides of the tape.



5. **Press DAILY again.**
The DAILY indicator stops blinking and remains lit. The display, then, shows the settings you have done in step 2 to 4.
 - Notice that the DAILY indicator lights up on the display whenever the timer is set.
 - A few seconds before the on-time for the timer, (the System automatically turns on if it is off and) the DAILY indicator blinks on the display. When the on-time comes, playback starts using the selected source. When the off-time comes, playback stops and the System automatically turns off.



On the front panel



From the Remote Control

6. **Adjust the volume with the VOLUME control (or VOLUME - or + on the Remote Control).**

To cancel the daily timer, press DAILY so that the DAILY indicator on the display goes off.

To change the timer settings, repeat the setting procedure from the beginning and change the contents as you want.

To erase all the contents stored in the timer:

1. Press DAILY so that on-time for the timer blinks on the display.
2. Hold down MEMORY/CANCEL.
3. Press DAILY again.

Note
If you change the source while the daily timer is operating, the daily timer will be canceled.

CAUTION
If the System is unplugged or if a power failure occurs, the timer setting will be erased. If settings are erased, reset the timer settings.

Setting the Sleep Timer



Using this timer, you can fall asleep to music and know your System will turn off by itself rather than play all night.

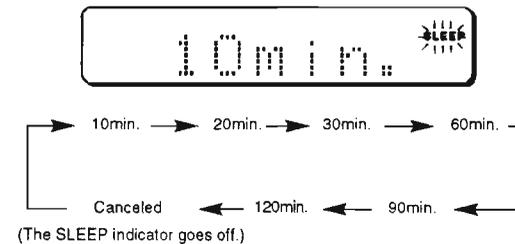
- You can only set the sleep timer when the System is on.

1. **Press SLEEP on the Remote Control while playing a source.**

The SLEEP indicator blinks on the tuner display.

2. **Set the length of time you want the source to play before shutting off.**

Each time you press SLEEP while the SLEEP indicator is blinking, it changes the number of minutes shown on the display in the following sequence:



3. **When the number of minutes you want is shown on the display, just wait about 5 seconds until the SLEEP indicator stops blinking, and remains lit.**

The System is now set to turn off after the number of minutes you set.

To cancel the sleep timer, press SLEEP until the SLEEP indicator goes off on the display. When you turn off the System, the sleep timer is also canceled.

To change the shut-off time, press SLEEP until the number of minutes you want appears on the display.

To check the remaining time, after setting the sleep timer, you can check the time remaining until the System turns off.

Pressing SLEEP shows you the remaining time in minutes on the display for about 5 seconds.

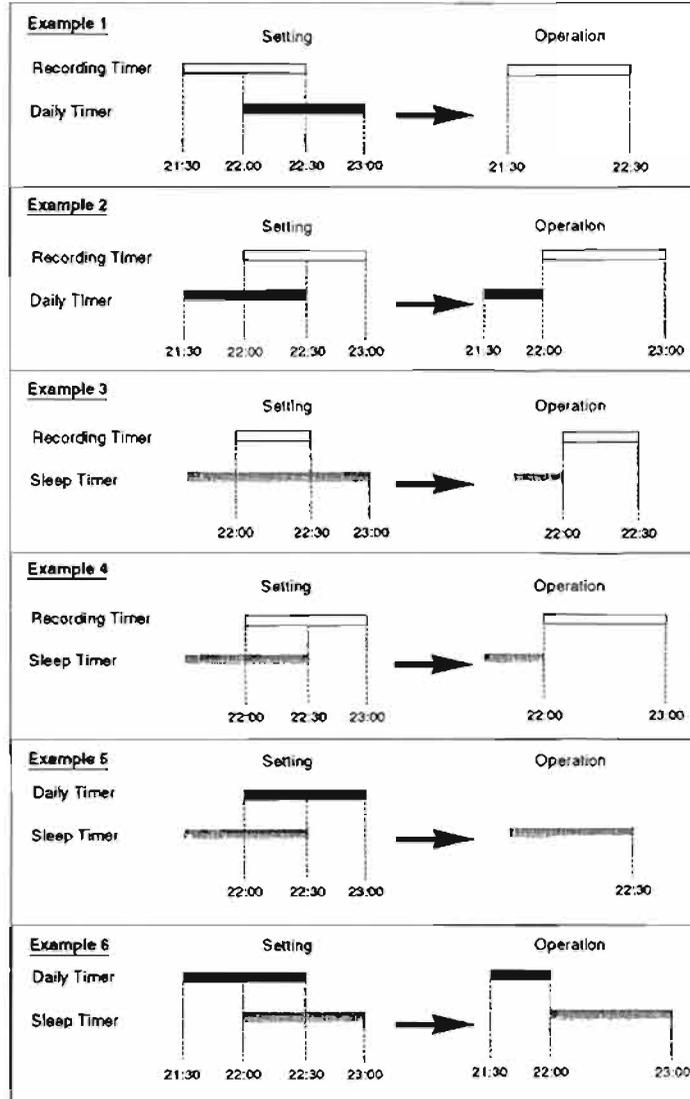
Timer Priority

Since each timer can be set independently, you may have wondered what happens if the settings overlap. Here are the priorities for each timer.

Recording Timer > Sleep Timer > Daily Timer

□ The recording timer always has priority. This means that:

- If the recording and daily timer has the same starting time, the recording timer will be activated.
- If another timer is set to come on during a time when the recording timer is operating, the other timer just will not come on at all, so you will always get the entire program on a tape.
- If the recording timer is set to come on while another timer is operating, the other timer will shut off about 10 seconds before the recording timer is set to come on, and the recording timer will then take over.



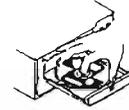
Care and Maintenance—General Notes

Compact Discs

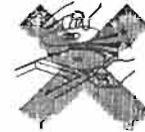
Handle your compact discs, cassette tapes, and cassette deck carefully, and they will last a long time.



- Remove the CD from the case by holding it at the edges while pressing the center hole lightly.
- Do not touch the shiny surface of the CD, or bend the CD.



- Place the CD into the open tray with the printed side up.



- Put the CD back in its case after use to prevent warping.
- Be careful not to scratch the surface of the CD when placing it back in the case.
- Avoid exposure to direct sunlight, temperature extremes, and moisture.



- A dirty CD may not play correctly. If a CD does become dirty, wipe it with a soft cloth in a straight line from center to edge.

CAUTION
Do not use any solvent (for example, conventional record cleaner, spray, thinner, benzene, etc.) to clean a CD.

Moisture Condensation



Moisture may condense on the lens inside the CD player in the following cases:

- After starting the hearing in the room
- In a damp room
- If the System is brought directly from a cold to a warm place

Should this occur, the System may malfunction. In this case, leave the System turned on for a few hours until the moisture evaporates, unplug the AC power cord, and then plug it in again.

In general, you will have the best performance by keeping your tapes, CDs, and the mechanism clean.

- Store tapes and CDs in their cases, and keep them in cabinets or on shelves.
- Keep the cassette holders and the CD tray closed when not in use.

Cassette Tapes



- If the tape is loose in its cassette, take up the slack by inserting a pencil in one of the reels and rotating.
- If the tape is loose it may get stretched, cut, or caught in the cassette.



- Do not touch the tape surface.



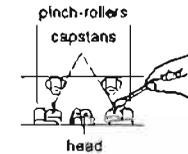
- Do not store the tape:
 - In dusty places
 - In direct sunlight or heat
 - In moist areas
 - On a TV or speaker
 - Near a magnet

Cassette Deck

- If the heads, capstans, and pinch-rollers of the cassette deck become dirty, the following will occur:

- Impaired sound quality
- Discontinuous sound
- Fading
- Incomplete erasure
- Difficulty in recording

- Clean the heads, capstans, and pinch-rollers using a cotton swab moistened with alcohol.



- If the heads become demagnetized, they will produce noise or loose high frequencies.

- To demagnetize the heads, turn off the System, and use a head demagnetizer (available at electronics and record shops).

Troubleshooting

- If you are having a problem with your System, check this list for a possible solution before calling for service.
- If you cannot solve the problem from the hints given here, or the System has been physically damaged, call a qualified person, such as your dealer, for service.

Symptom	Possible Cause	ACTION
No sound is heard.	Connections are incorrect, or loose.	Check all connections and make corrections. (See pages 4 to 6.)
Impossible to record.	Cassette record protect tabs are removed.	Cover holes on back edge of cassette with tape.
Hard to listen to broadcasts because of noise.	The antenna is disconnected. The loop antenna is too close to the system. The wire antenna is not properly extended and positioned.	Reconnect the antenna securely. Change the position and direction of the loop antenna. Extend wire antenna at the best reception position.
The CD sound is discontinuous.	The CD is scratched or dirty.	Clean or replace the CD.
Unable to operate the Remote Control.	The path between the Remote Control and the sensor on the front panel is blocked. The batteries are discharged.	Remove the obstruction. Replace the batteries.
The CD tray cannot be operated.	The AC power cord is not plugged in.	Plug in the AC power cord.
The CD does not play.	The CD is upside down.	Put the CD in with the printed side up.
Operations are disabled.	The built in microprocessor may malfunction due to external electrical interference.	Unplug the System then plug it back in.
The cassette holder cannot be opened.	The System was turned off because the timer was operated while the tape was running.	Turn on the System.
The FM station tuned alternates between the currently selected one and another when using the EON Standby reception.	An incorrect EON signal is being sent.	Press EON ON/OFF to cancel the EON Standby reception.

Specifications

Integrated Amplifier AX-F3000

Output Power (IEC 268-3/DIN) Front Speakers	40 watts per channel, min. RMS, both channels driven, into 4 ohms at 1 kHz with no more than 0.9% total harmonic distortion.
Input Sensitivity/Impedance (1 kHz)	MD 610 mV/50 kohms AUX 300 mV/50 kohms PHONO 3.0 mV/47 kohms
Output Load/Impedance (1 kHz)	MD 260 mV/380 ohms
Speaker Impedance	4 – 16 ohms
Power Requirements	AC 230 V \pm 50 Hz
Power Consumption	140 watts 11 watts (in standby mode)
Dimensions (Approx.)	245 x 120 x 328 mm (w/h/d) (9 11/16 x 4 3/4 x 12 15/16 in.)
Mass (Approx.)	5.1 kg (11.3 lbs)

FM/MW/LW Tuner FX-F3000B

FM Tuner Tuning Range	87.5 – 108.0 MHz
AM (MW/LW) Tuner MW-Tuning Range LW-Tuning Range	522 – 1,629 kHz 144 – 288 kHz
Dimensions (Approx.)	245 x 81 x 303 mm (w/h/d) (9 11/16 x 3 1/4 x 11 15/16 in.)
Mass (Approx.)	1.7 kg (3.8 lbs)

Double Cassette Deck TD-F3000

Frequency Response	
Metal (Type IV):	30 – 17,000 Hz
CrO ₂ (Type II):	30 – 16,000 Hz
Normal (Type I):	30 – 15,000 Hz
Wow and Flutter	0.09% (WRMS) \pm 0.2% (DIN)
Dimensions (Approx.)	245 x 120 x 292 mm (w/h/d) (9 11/16 x 4 3/4 x 11 1/2 in.)
Mass (Approx.)	3.0 kg (6.7 lbs)

Compact Disc Player XL-F3000

Wow and Flutter	Unmeasurable
Digital output	OPTICAL DIGITAL OUTPUT
Dimensions (Approx.)	245 x 81 x 300 mm (w/h/d) (9 11/16 x 3 1/4 x 11 13/16 in.)
Mass (Approx.)	2.2 kg (4.9 lbs)

Supplied Accessories

FM Wire Antenna (1)
AM (MW/LW) Loop Antenna (1)
Remote Control (1)
Batteries (2)
External Wire (1)

Design and specifications are subject to change without notice.

— MEMO —