



PHILIPS

FW-V28

Mini Hi-Fi System



PHILIPS

Let's make things better.





English



**Optimum disc playability :
ensuring excellent picture quality**

Philips components and modules for the various CD applications have always enjoyed an excellent reputation in the market place for super disc playability - the ability to play discs which may be scratched, soiled or not fully according to the standard specification. This position has been underlined by tests showing the superior performance of the various Philips players, as well as by the positive experiences of millions of individual consumers around the world.

Constantly improving performance

As the penetration of the CD system has increased, and new applications like CD-ROM and Video CD have become commonplace, Philips Components - as the CD technology inventor and as one of the major suppliers of CD player modules in the industry - has constantly improved the performance of its products.

One of the ways in which this benefits users is by optimum disc playability. This is an important parameter for CD players other than CD Audio, and especially for the Video CD applications, because any loss of data from the disc will at best cause disturbances in the reproduced picture, and at worst can cause the player to lose track so that disc playing fails.

Presenting Super Error Correction

To ensure consistently good results when playing Video CD discs of all quality grades and conditions, Philips has introduced further improvements in the system's playability. These developments together are called Super Error Correction, a proprietary Philips technology optimizing the system's ability to handle less-than-perfect discs with the minimum disturbance to normal playing.

By effectively eliminating virtually all errors arising under normal playing conditions, Super Error Correction ensures that the picture quality as seen by the user is independent of disc play. The video encoding and processing during mastering of the disc, and the MPEG-1 decoding and video encoding in the signal processing stages, are now the only limiting factors for picture quality.





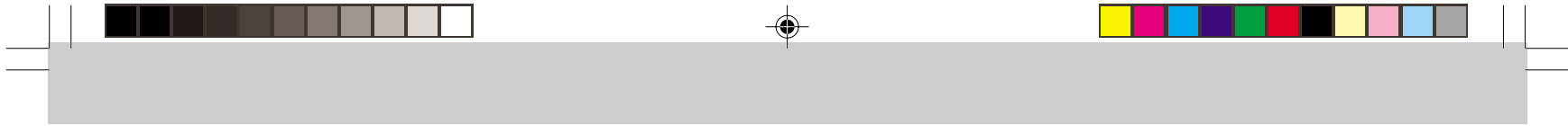
English 4 English



**CLASS 1
LASER PRODUCT**

3





English



4



Untitled-1

4



31/05/2001, 11:35 AM

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GENERAL INFORMATION

IMPORTANT:
PLEASE NOTE THAT THE
VOLTAGE SELECTOR
LOCATED AT THE REAR OF
THIS SYSTEM IS PRESET AT
220V FROM THE FACTORY.
FOR COUNTRIES THAT
OPERATE AT 110V, PLEASE
ADJUST TO 110V BEFORE YOU
SWITCH ON THE SYSTEM.

General Information

- **The type plate (which contains the serial number) is located at the rear of the system.**
- **Recording is permissible if copyright or other rights of third parties are not infringed.**

Environmental Information

All unnecessary packaging has been omitted. We have tried to make the packaging easy to separate into three materials: cardboard (box), polystyrene foam (buffer) and polyethylene (bags, protective foam sheet).

Your system consists of materials which can be recycled and reused if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packaging materials, exhausted batteries and old equipment.

Accessories (Supplied)

- Remote control
- Batteries (two AA size) for remote control
- AM loop antenna
- FM wire antenna
- AC power cord
- One Video cinch cable

Safety Information

- Before operating the system, check that the operating voltage indicated on the typeplate (or the voltage indication beside the voltage selector) of your system is identical with the voltage of your local power supply. If not, please consult your dealer. The typeplate is located at the rear of your system.
- When the system is switched on, do not move it around.
- Place the system on a solid base (e.g. a cabinet).
- Place the system in a location with adequate ventilation to prevent internal heat build-up in your system. Allow at least 10 cm clearance from the rear and the top of the unit and 5 cm from each side.
- Do not expose the system to excessive moisture, rain, sand or heat sources.

SAFETY INFORMATION

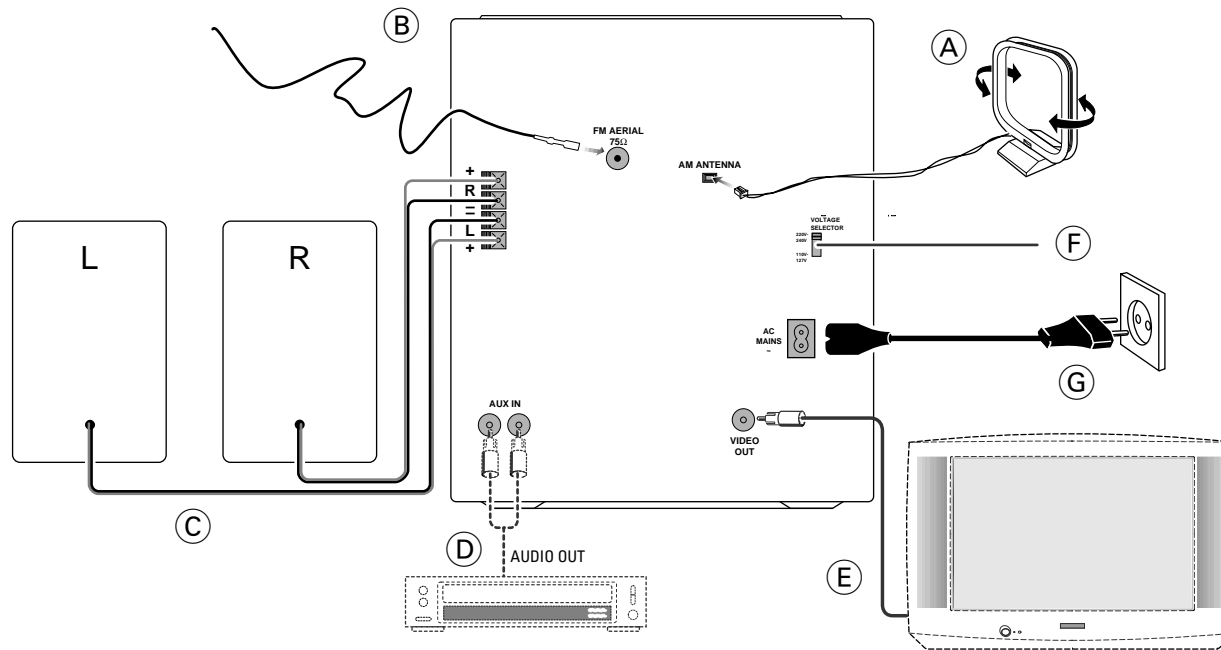
- Under no circumstances should you repair the system yourself, as this will invalidate the warranty!
- If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens of the disc unit inside the system. Should this occur, the disc player will not operate normally. Leave the power on for about one hour with no disc in the system until normal playback is possible.
- Electrostatic discharge may cause unexpected problems. See whether these problems disappear if you unplug the AC power cord and plug it in again after a few seconds.
- **To disconnect the system from the power supply completely, remove the AC power plug from the wall socket.**

English

PREPARATION

English

Rear Connections



PREPARATION

English

A AM Loop Antenna Connection

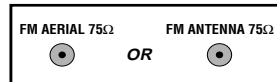
Connect the supplied loop antenna to the AM ANTENNA terminal. Place the AM loop antenna far away from the system and adjust its position for the best reception.

B FM Wire Antenna Connection

Connect the supplied FM wire antenna to the FM AERIAL (FM ANTENNA) 75 Ω terminal. Adjust the position of the FM antenna for the best reception.

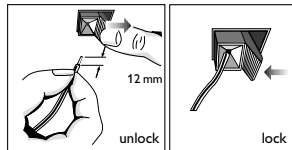
Outdoor Antenna

For better FM stereo reception, connect an outdoor FM antenna to the FM AERIAL (FM ANTENNA) 75 Ω terminal using a 75 Ω coaxial wire.



C Speakers Connection

- Connect the right speaker to Front terminal R, with the colored wire to + and the black wire to -.
- Connect the left speaker to Front terminal L, with the colored wire to + and the black wire to -.
- Clip the stripped portion of the speaker wire as shown.



CAUTION:

- For optimal sound performance, it is recommended to use the supplied speakers.
- Do not connect more than one speaker to any one pair of + / - speaker terminal.
- Do not connect speakers with impedance lower than the speakers supplied. Please refer to SPECIFICATION section of this manual.

D Connecting other equipment to your system

You can connect the audio left and right OUT terminals of a TV, VCR, Laser Disc player, DVD player or CD Recorder to the AUX IN terminals at the rear of the system.

E Video Out Connection

Connect the VIDEO OUT terminal at the rear of the system to the TV or VCR VIDEO IN for viewing or recording.

F Adjusting the Operating Voltage

(for specific version only)

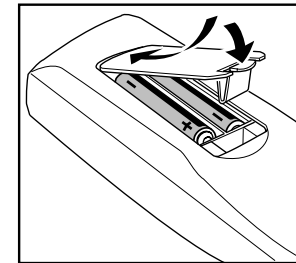
Before connecting the AC power cord to the wall outlet, make sure that the voltage selector at the rear of the system is set to the local power line voltage. If not, reset the selector before connecting to the wall outlet.

G AC Power Supply

After all other connections have been made, connect the AC power cord to the system and to the wall outlet.

Inserting batteries into the Remote Control

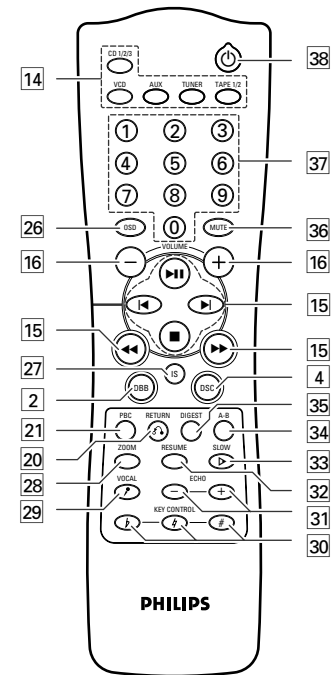
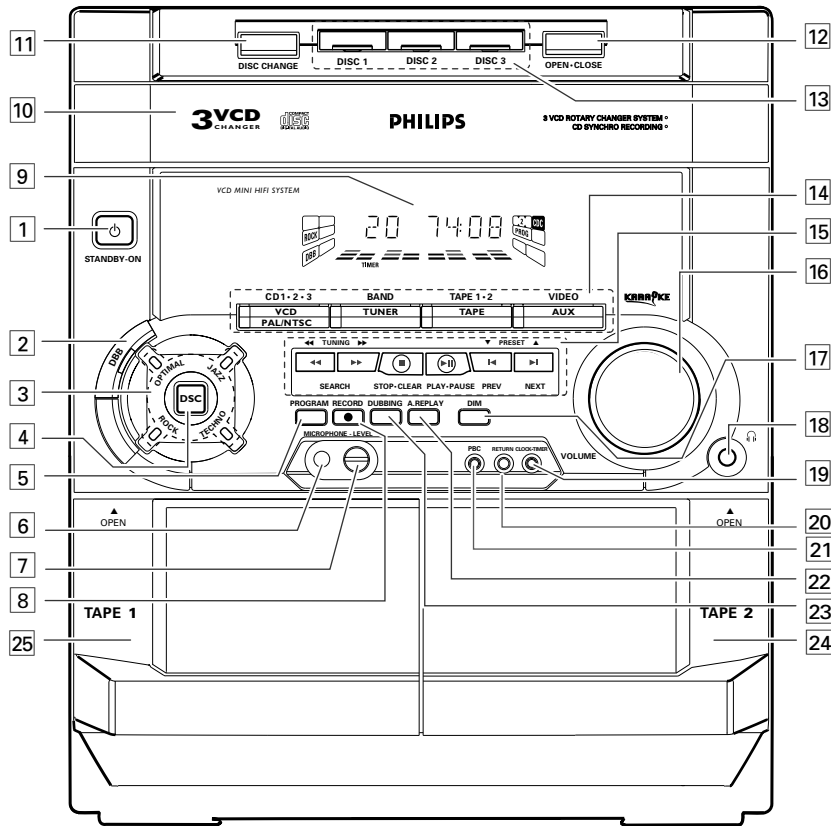
- Insert the batteries (Type R06 or AA) into the remote control as shown in the battery compartment.



- To avoid damage from possible battery leakage, remove dead batteries or batteries that will not be used for a long time. For replacement, use type R06 or AA batteries.

CONTROLS

English



CONTROLS

English

Controls on the system and remote control

1 **STANDBY ON**

- to switch the system on or to standby mode.
- to use for EASY SET.

2 **DBB (DYNAMIC BASS BOOST)**

- to switch on bass boost, to enhance bass response or to switch off bass boost.

3 **DIGITAL SOUND CONTROL DISPLAY PANEL**

- to view the desired DSC display.

4 **DSC (DIGITAL SOUND CONTROL)**

- to select the desired sound effect : OPTIMAL, JAZZ, ROCK or TECHNO.

5 **PROGRAM**

- for VCD/CD ... to program disc tracks.
- for TUNER to program preset radio stations.

- for CLOCK to select 12- or 24-hour in clock setting mode (*on the system only*).

6 **MICROPHONE**

- to connect microphones jack.

7 **MIC LEVEL**

- to adjust the mixing level for karaoke or microphone recording.

8 **RECORD**

- to start recording on tape deck 2 only.

9 **DISPLAY SCREEN**

- to view the current setting of the system.

10 **DISC CAROUSEL TRAY**

11 **DISC CHANGE**

- to change disc(s).

12 **OPEN•CLOSE**

- to open or close the disc carousel tray.

13 **DISC 1 / DISC 2 / DISC 3 (DISC DIRECT PLAY)**

- to select a disc tray for playback.

14 **SOURCE** – to select the following:

VCD / (CD 1•2•3)

- to select VCD/CD mode. When VCD/CD playback is stopped, press to select the disc tray 1, 2 or 3.

PAL / NTSC

- to select corresponding PAL or NTSC system of your TV set (exception Multi-system TV).

TUNER / (BAND)

- to select Tuner mode. When in tuner mode, press to select the waveband: FM or MW.

TAPE / (TAPE 1•2)

- to select Tape mode. When tape playback is stopped, press to select either tape deck 1 or 2.

AUX / (VIDEO)

- to select sound from an external source (e.g. TV, VCR, Laser Disc player, DVD player or CD Recorder).

15 **MODE SELECTION SEARCH•TUNING ◀▶**

- for VCD only .. to move the zoom picture to the left or right.

- for VCD/CD ... to search backward/forward.

- for TUNER to tune to a lower or higher radio frequency.

- for TAPE to rewind or fast forward on tape.

- for CLOCK to set the hour (*on the system only*).

STOP•CLEAR ■

- for VCD/CD ... to stop disc playback or to clear a program.

- for TUNER to stop programming.

- for TAPE to stop playback or recording on tape deck 2 only.

- for DEMO (*on the system only*) to start or stop demonstration mode.

PLAY•PAUSE ▶ II

- for VCD/CD ... to start or interrupt playback.

- for VCD only ... to watch a still picture.

- for TAPE to start playback.

PREV ◀ / NEXT ▶ (PRESET ▼▲)

- for VCD only ... to move the zoom picture down or up.

- for VCD with PBC on

- to select next or previous MENU.

- to select next or previous VCD entry level track during playback.

- for VCD/CD ... to skip to the beginning of the current, previous, or next track.

- for TUNER to select a preset station in memory.

- for CLOCK to set the minute (*on the system only*).

16 **VOLUME**

- to increase or decrease the volume.

17 **DIM**

- to select different brightness for the display screen : DIM 1, DIM 2, DIM 3 or DIM OFF.

18 **🎧**

- to connect headphones.

19 **CLOCK•TIMER**

- to view the clock, set the clock or set the timer.

20 **RETURN**

- for VCD with PBC on to return to the previous MENU level during playback (*for VCD version 2.0 only*).

21 **PBC (PLAYBACK CONTROL)**

- to switch on or off PBC mode (*for VCD version 2.0 only*).

22 **A. REPLAY (AUTO REPLAY)**

- to select playback mode either in continuous AUTO REPLAY or ONCE only.

23 **DUBBING**

- to dub a tape in normal speed.

24 **TAPE DECK 2**

25 **TAPE DECK 1**

CONTROLS

English

26 OSD (ON SCREEN DISPLAY)

- to switch on or off the on screen display on the TV screen.

27 INCREDIBLE SURROUND (not applicable for this model).

- to switch on or off the surround sound effect.

28 ZOOM

- to enlarge a still picture on the TV screen (for VCD operation only).

29 VOCAL

- to fade out the vocal of the original song during VCD playback or to switch between mono or stereo mode during audio disc playback (for VCD operation only).

30 KEY CONTROL (b h #)

- to change the key to suit your vocal range (for VCD operation only).
 - b to decrease vocal key level.
 - h to restore vocal key to original setting.
 - # to increase vocal key level.

31 ECHO -/+

- to adjust the echo level for karaoke (for VCD operation only).

32 RESUME

- to continue playback again from where you have stopped. Only when PBC mode is switched off (for VCD operation only).

33 SLOW

- to watch a VCD at a slower speed. There are 3 modes of selection (for VCD operation only).

34 A - B

- to playback a certain scene or passage of a disc repeatedly.

35 DIGEST

- to scan through a VCD or a particular track. There are 4 modes of selection (for VCD operation only).

36 MUTE

- to switch off the sound temporarily.

37 DIGIT 0 - 9

- (numbers consisting of two figures must be keyed in within 2 seconds.) for VCD with PBC on to select an entry level. for VCD/CD... to key in a disc track to start playback or to select another track during playback or to select a track for programming.

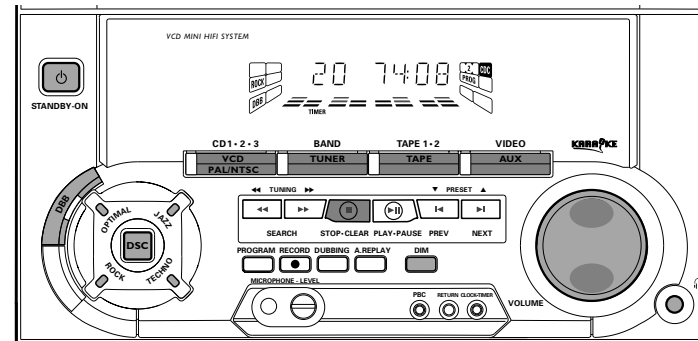
38

- to switch the system to standby mode.

Notes for remote control:

- **First select the source you wish to control by pressing one of the source select keys on the remote control (e.g. VCD, TUNER, etc.).**
- **Then select the desired function (▶, ◀, ▶, etc.).**

OPERATING THE SYSTEM



Important:
Before you operate the system, complete the preparation procedures.


Demonstration mode

The system has a demonstration mode that shows the various features offered by the system. **When the system is switched on for the first time, the demonstration mode will start automatically.**

Notes:

- During the demonstration, if you press any source (or standby-on) button, the system will switch to the respective mode (or standby).
- When the system is switched to standby mode, the demonstration will resume 5 seconds later.


To stop the demonstration mode

- Press and hold  (on the system only) for **5 seconds** when the system is in demonstration mode.
 - The demonstration will stop.
 - "DEMO OFF" is displayed.
 - The system will switch to standby mode.

Note:

- Even though the AC power cord is removed from and reconnected to the wall socket, the demonstration will remain off until it is switched on again.

To start the demonstration mode

- Press and hold  (on the system only) for **5 seconds** when the system is in standby mode.
 - The demonstration will begin.

OPERATING THE SYSTEM

English

Easy Set

EASY SET allows you to store all available radio stations automatically.

- Press and hold **STANDBY ON** (on the system only) for **5 seconds** when the system is in standby or demonstration mode.
 - "EASY SET" will be displayed, and followed by "TUNER" and then "AUTO".
 - EASY SET will start searching for all radio on FM band and then followed by radio stations on MW band.
 - All available radio stations with sufficient signal strength will be stored. Up to 40 presets may be stored.

Notes:

- EASY SET will start with the FM band, if there are still presets available, the system will continue to store the MW band.
- When EASY SET is used, all previously stored radio stations will be replaced.
- The last preset radio station will appear on the display when EASY SET is completed.


Switching the system ON

- Press **VCD, TUNER, TAPE** or **AUX**.

You can also switch on the system by pressing any one of the CD DIRECT PLAY buttons.

You can also switch on the system by pressing the **OPEN•CLOSE** or **DISC CHANGE** button.

Switching the system to standby mode

- Press **STANDBY ON** or  on the remote control.
 - The system will switch to standby mode.

Selecting the Source

- Press the respective source selection button: **VCD, TUNER, TAPE** or **AUX**.
 - The display indicates the selected source.

Note:

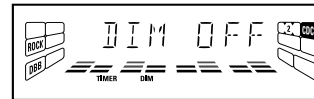
- For an external source, make sure you have connected the audio left and right OUT terminals of the external equipment (TV, VCR, Laser Disc player, DVD player or CD Recorder) to the AUX IN terminals.

DIM mode

You can select the desired brightness for the display.

- Press **DIM** to select DIM 1, DIM 2, DIM 3 or DIM OFF display mode.
 - The **DIM** appear on the display.
 - "DIM 1", "DIM 2", "DIM 3" or "DIM OFF" will be displayed depending on the mode selected.

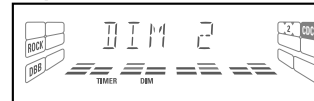
DIM OFF - normal brightness with Spectrum Analyzer On



DIM 1 - normal brightness with Spectrum Analyzer Off



DIM 2 - half brightness with Spectrum Analyzer On



DIM 3 - half brightness with Spectrum Analyzer Off and all LEDs on the system will be switched off.




Sound Control

VOLUME ADJUSTMENT

Adjust **VOLUME** to increase or decrease the sound level.

For Personal Listening

Connect the headphones plug to the  socket at the front of the system. The speakers will be muted.

OPERATING THE SYSTEM

English

DIGITAL SOUND CONTROL (DSC)

The DSC feature enables you to enjoy special sound effects that have preset equalizer settings, providing the best music reproduction.

- Press **DSC** to select OPTIMAL, JAZZ, ROCK or TECHNO.
 - The Digital Sound Control display panel will light up respectively.
 - "OPTIMAL, JAZZ, ROCK or TECHNO" and the respective flag will be displayed.

Note:

- When "OPTIMAL" sound is selected, DBB will be switched on automatically.

DYNAMIC BASS BOOST (DBB)

The DBB mode enhances the bass response.

- Press **DBB** to switch on bass response.
 - The DBB button lights up.
 - "DBB ON" and the DBB flag will be displayed.

To switch off DBB

- Press **DBB** again.
 - The DBB button light is switched off.
 - "DBB OFF" will be displayed.

Note:

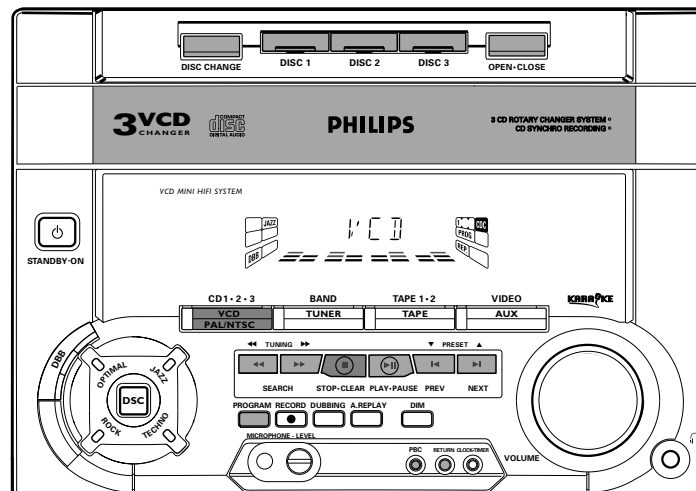
- Some CDs or tapes might be recorded in high modulation, which causes a distortion at high volume. If this occurs, switch off DBB or reduce the volume.

MUTE (only on remote control)

This feature allows you to temporarily switch off the sound of the system without switching off the system when you require a moment of silence.

- Press **MUTE** on the remote control to switch off the sound.
 - "MUTE" and the MUTE flag will be displayed.
- Press **MUTE** again on the remote control or increase the **VOLUME** to switch on the sound.

CD-VCD



Warning!

- 1) This system is designed for conventional Discs. Do not use any accessories such as disc stabilizer rings or disc treatment sheets, etc., which may damage the disc mechanism.
- 2) Do not load more than one disc into each tray.
- 3) When the disc changer is loaded with Discs, do not turn over or shake the system. This may jam the changer.

The CD part of this system also serves as a Video CD player if you connect it to your TV set. You can load up to three discs in the disc changer for continuous playback without interruption.

Before viewing the Video CD, ensure that the set is switched to corresponding PAL or NTSC system of your TV set (exception Multi-system TV).

Discs for playback

This system can playback all audio CD, finalized audio CD-Recorder format discs.



Loading the Disc Changer

- 1 Press **VCD** to select VCD/CD mode.
- 2 Press **OPEN•CLOSE**.
 - The disc carousel tray slides out.
- 3 Load a disc with the printed side up in the right tray.
 - You can load another disc in the left tray.
 - To load the third disc, press the **DISC CHANGE** button.
 - The disc carousel tray will rotate until the empty tray is ready for loading.
 - Playback will always start with the disc in the inner disc tray.
- 4 Press **OPEN•CLOSE** to close the disc carousel tray.
 - The total number of tracks and the playing time of the last selected disc appear on the display.

Note:

- To ensure good system performance, wait until the disc changer completely reads the disc(s) before proceeding.

Disc Direct Play

You can play a disc directly by pressing the **DISC 1**, **DISC 2** or **DISC 3** button.

Playing a normal disc

For normal VCD:
Ensure that the system is switched to the corresponding PAL or NTSC system of your TV set (except multi-system TV).

- 1 Press **PLAY ►II** to start playback.
 - The disc tray, track number and elapsed playing time of the current track appear on the display.
- To interrupt playback, press **PAUSE ►II**.
 - The playing time flashes.
- To resume playback, press **PLAY ►II** again.
- 2 To stop playback, press **■**.

Note:

- During Disc Reading mode, if you press any button, "PLEASE WAIT" will be displayed.

Disc Change

You can change the outer two discs while the third inner disc is stopped or is playing.

- 1 Press **DISC CHANGE**.
 - The disc carousel tray slides out.
- 2 Replace the discs in the left and right disc trays.
 - If you press **DISC CHANGE** again during playback, the disc will stop playing.
 - The disc carousel tray will rotate until the inner tray is rotated out and is ready for changing.
- 3 Press **OPEN•CLOSE** to close the disc carousel tray.

Selecting a desired track

Selecting a desired track when playback is stopped

- Press **digit 0 – 9** on the remote control to select the desired track.
 - Playback will start immediately for the selected track.
 - The selected track number and elapsed playing time appear on the display.

Selecting a desired track during playback

- Press **◀** or **▶** (or **digit 0–9** on the remote control) until the desired track appears on the display.
 - The selected track number and elapsed playing time appear on the display.
- If you press **◀** once it will skip to the beginning of the previous track and play the track.

Searching for a particular passage during playback

- Press **◀◀** or **▶▶** to select 4 different search speed.
 - "FRX1" ; "FRX2" ; "FRX3" or "FRX4" is displayed on the TV screen when you select a fast rewind search.
 - "FFX1" ; "FFX2" ; "FFX3" or "FFX4" is displayed on the TV screen when you select a fast forward search.
 - Normal playback will begin at the end of the fast rewinding or forwarding of the selected track.
- Play returns to normal when **PLAY ►II** is pressed or when a new track is selected.

CD - VCD

English

Programming Tracks

Programming tracks of a loaded disc is possible when playback is stopped. The display will indicate the total tracks stored in the program. Up to 99 tracks can be stored in the memory in any order. When 99 tracks are stored and you attempt to store another track, the display will show "PROGRAM FULL".

Note:

– Program cannot be used for VCDs when PBC is switched on. Switch off PBC before storing tracks from such a VCD.

- 1 Load the desired discs in the disc trays.
- 2 Press the **VCD** (CD 1•2•3) button to select the disc tray.
→ Programming can only be done on the selected disc.
- 3 Press **PROGRAM** to start programming.
→ The **PROG** flag starts flashing.
→ It will cancel any previously programmed tracks and selected repeat mode.
- 4 Press **◀** or **▶** (or digit 0–9 on the remote control) to select the desired track.
- 5 Press **PROGRAM** to store the track.
 - Repeat steps 4 to 5 to store other tracks.
- 6 Press **■** once to end programming.
→ The total number of tracks programmed and total playing time appear on the display.

Notes:

- If the total playing time is more than "99:59" then "----:--" appears on the display instead of the total playing time.
- During programming, if no button is pressed within 20 seconds, the system will exit program mode automatically.

Reviewing the program

Reviewing of program is possible only when playback is stopped.

- 1 Press **◀** or **▶** repeatedly to review the programmed tracks.
- 2 Press **■** to exit review mode.

Playing the program

- 1 Press **PLAY ▶||** to start program playback.
→ "PLAY PROGRAM" will be displayed.
→ The track number and elapsed playing time of the current track will appear on the display.
→ The **PROG** flags appear on the display.
- 2 Press **■** to stop program playback.

Note:

- If you press any other CD DIRECT PLAY buttons, the system will play the selected disc or track and the stored program will be cleared.

Erasing the program (when playback is stopped)

- Press **■**.
→ "PROGRAM CLEARED" will be displayed.

Note:

- The program will be erased when the system is disconnected from the power supply, the system is switched to standby mode, when you change source or when you change the program disc.

VIDEO CD

Adjusting the TV System

Before viewing the Video CD, ensure that the set is switched to corresponding PAL or NTSC system of your TV set (exception Multi-system TV).

- Press and hold **PAL/NTSC** for more than **2 seconds** to switch between PAL or NTSC TV system.
→ After TV system is selected, the set will automatically switch to the last TV system setting everytime the VCD source is selected.

OSD - On Screen Display

If you insert one or more VCDs/CDs, your TV screen will serve as an additional display for messages (e.g. PLAY, STOP), and information stored on the VCD/CD.

- Press **OSD** on the remote control repeatedly to switch ON or OFF.

When OSD is switched ON; you can see the following display on the TV screen.

Below is an example of the OSD message.

SINGLE ELAPSED

PLAY XX/TT MM:SS

Notes:

- "XX" is the current track.
- "TT" is the total tracks.
- "MM" is in minutes.
- "SS" is in seconds.

When OSD is switched off; there is no information indicated on the TV screen.

Playing a Video CD with PBC

VCDs with PBC (Play Back Control) will be indicated on the display of the set and on your TV screen as soon as they are inserted. PBC is a predefined play sequence stored on the VCD.

- 1 Switch on the TV, insert a VCD with PBC and press ►|| to start playback.
- 2 MENU appears on the TV screen.

If a menu consists of a list of titles you can select a sequence directly.

- 1 Select your choice with the **digit keys 0 - 9** on the remote control. The VCD starts playing of the selected sequence automatically.
- 2 Press **RETURN** (↵) to go back to the previous menu.

Note:

- If a menu consists of more than one page, it is possible to go through the pages with **PREV./NEXT** on the set or remote control.

Switching off PBC

- It is possible to switch off PBC in STOP mode by pressing the **PBC** button. Now this VCD can be treated like a normal VCD.
 - The TV display will show **< PBC OFF >**.

Notes:

- In PBC mode **PROGRAM** is not active.
- The **MENU** structure depends on the program stored on the VCD. Please refer to the information supplied with the disc.

Slow

- 1 Press **SLOW** on the remote control to watch a VCD in a slow speed. There are 3 types of slow modes to select.
 - "SLOW 1", "SLOW 2" or "SLOW 3" appears on the TV screen.
- 2 Press ►|| again to resume playback at normal speed.

Note:

- Audio is muted in Slow mode.

Resume

This feature is also applicable to audio CD.

- 1 Press ■ to stop playback.
- 2 Press **RESUME** on the remote control to start playback again from where you have stopped.
 - "RESUME" appears on the display.

Note:

- Resume information is lost if you select another disc or the set is disconnected from the mains, the system is switched to standby mode or when you change source.
- Resume is not available when PBC mode is switched on.

Pause

- 1 Press ►|| to have a still picture on the TV screen.
 - "PAUSE" appears on the TV screen.
- 2 Press ►|| again to continue playback.

Note:

- Audio is muted during Pause.

Zoom

This feature enables you to view a still picture frame in an enlarge mode.

After you have pressed ►|| to have a still picture on the TV screen.

- 1 Press **ZOOM** once to enlarge the still picture by 2 times.
 - "ZOOM" appears on the TV screen.
 - You can move the zoom picture left or right by pressing ◀◀ or ▶▶ respectively.
 - You can move the zoom picture down or up by pressing ◀ or ▶ respectively.
- 2 Press **ZOOM** once more to return to normal still frame.
- 3 Press ►|| again on the remote control to continue playback.

A-B Repeat

This feature is also applicable to audio CD. To play a certain scene or passage of the disc repeatedly.

- 1 Press **A-B** on the remote control during playback to mark the start of the chosen scene or passage.
 - "SET A" appears on the display.
- 2 Press **A-B** again to mark the end of the chosen scene or passage.
 - "SET B" appears on the display.
 - The selected scene or passage is played repeatedly.
 - "PLAY A.B" appears on the display.

CD - VCD

English

- 3** Press **A-B** once more to return to normal playback.
→ "CLEAR AB" appears on the display.

Notes:

- You can also cancel A-B Repeat by pressing **◀** or **▶**.
- You can only repeat a maximum of one track. Once it cross from one track to the next, the A-B marking is reset.

Return ↶

- Press **RETURN** to return to the previous VCD disc MENU level. It is functional only for Video CD when PBC is switched on.

Digest

This feature allows you to scan through a VCD for a quick review. PBC mode must be switched off. There are four digest mode for selection.

- 1** Press **DIGEST**.
→ "DIGEST" appears on the display.
→ "1.INTRO SCAN", "2.DIGEST DISC", "3.DIGEST TRACK" and "4.EXIT DIGEST MENU" appear on the TV screen.

1. INTRO SCAN
2. DIGEST DISC
3. DIGEST TRACK
4. EXIT DIGEST MENU

- Press **digit 1** on the remote control to select "INTRO SCAN".
→ The first 10 seconds of each track are played.
- Press **digit 2** on the remote control to select "DIGEST DISC".
→ The first frame of each track appears on the TV screen.
→ Press **digit 0 – 9** on the remote control to playback the desired tracks.
→ Press **◀** or **▶** to view the previous or next page for additional information.
- Press **digit 3** on the remote control to select "DIGEST TRACK".
→ The first track of the selected disc will be divided into 9 parts and displayed on the TV screen.
→ Press **digit 0 – 9** on the remote control to playback the desired parts.
→ Press **◀** or **▶** to digest the next track.

- 2** Press **digit 4** on the remote control to select "EXIT DIGEST MENU".
→ Digest mode will be exited.

Vocal

This feature allows you to fade out the original vocal from a karaoke VCD. This feature is used together with Echo mode. You can also use it to select the different audio modes.

- **STEREO** – same effect as the original recorded disc.
- **STEREO VOCAL LEFT/RIGHT** – fade out the original vocal for special recorded Karaoke disc only (with the ECHO mode switched on).
- **MONO LEFT/RIGHT** – select the language on a bilingual VCD.

Ensure that Echo mode is switched on when press **VOCAL** to fade out the original vocal during STEREO VOCAL LEFT/RIGHT mode.

- Pressing **VOCAL** repeatedly allows you to select the following modes.
→ STEREO → STEREO VOCAL LEFT → STEREO VOCAL RIGHT → MONO LEFT → MONO RIGHT → STEREO ...

Echo

This feature allows you to add echo while singing or talking through a microphone .

- Press **ECHO –/+** to decrease or increase the echo effect.
→ "ECHO –" or "ECHO +" appears on the display.

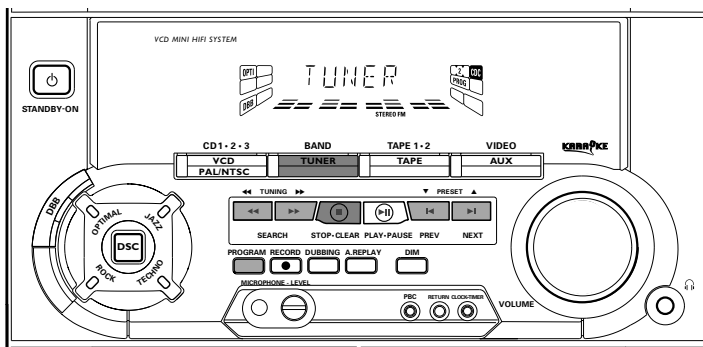
Note:

- You are advised to put echo to the minimum level when you are not using the feature. Echo mode is switched off when echo is at the minimum level.

Key Control (b h #)

This feature allows you to change the key of your vocal range.

- Press **b** to decrease vocal key level.
→ "KEY DOWN" appears on the display.
- Press **#** to increase vocal key level.
→ "KEY UP" appears on the display.
- Press **h** to restore vocal key to original setting.
→ "KEY FLAT" appears on the display.

**Note:**

- For 'EASY SET' feature, please refer to page 11.

Tuning to radio stations

- 1 Press **TUNER (BAND)** to select TUNER mode.
→ "TUNER" will be displayed.
A few seconds later, the current radio frequency will be displayed.
- 2 Press **TUNER (BAND)** again to select the desired waveband : FM or MW.
- 3 Press **◀◀** or **▶▶** for more than one second, then release.
→ The display will show "SEARCH" until a radio station with sufficient signal strength is found.

- Repeat this procedure until the desired station is reached.
- To tune to a weak station, briefly press **◀◀** or **▶▶** repeatedly until the display shows the desired frequency and/or when the best reception has been obtained.

Storing Preset Stations

You can store up to 40 radio stations in the memory. When a preset radio station is selected, the preset number appears next to the frequency on the display.

Automatic programming

- 1 Press **TUNER (BAND)**.
- 2 Press **PROGRAM** for more than one second.
 - The PROG flag starts flashing and "AUTO" will be displayed.
 - The system will search for every available station in the FM waveband first, then search the MW waveband.
 - All available stations will be stored automatically. The frequency and preset number will be displayed briefly.
 - The system will stop searching when all the available radio stations are stored or when the memory for 40 preset radio stations is used.
 - The system will remain tuned to the last stored preset radio station.

Notes:

- You can cancel the automatic programming by pressing **PROGRAM** or **■** (on the system only).
- If you want to reserve a section of preset numbers, for example preset numbers 1 to 9, select preset 10 before starting automatic programming, only the preset numbers 10 to 40 will be programmed.

Manual programming

- 1 Press **TUNER (BAND)**.
 - 2 Press **TUNER (BAND)** again to select the desired waveband : FM or MW.
 - 3 Press **PROGRAM** for less than one second.
 - The PROG flag starts flashing.
 - The next available preset number will be displayed for selection.
 - 4 Press **◀◀** or **▶▶** to tune to the desired frequency.
 - If you wish to store the radio station to another preset number, press **▼** or **▲** to select the desired preset number.
 - 5 Press **PROGRAM** again.
 - The PROG flag disappears and the radio station will be stored.
- Repeat **steps 3 – 5** to store other preset radio stations.

TUNER

English

Notes:

- When 40 radio stations are stored and you attempt to store another radio station, the display will show "PROGRAM FULL". If you want to change an existing preset number, repeat steps 3 – 5.
- You can cancel manual programming by pressing **■** (on the system only).
- During programming, if no button is pressed within 20 seconds, the system will exit program mode automatically.

Tuning to Preset Radio Stations

- Press **▼** or **▲** to select the desired preset number.
 - The preset number, radio frequency, and waveband appear on the display.

Changing the MW tuning grid (for specific version only)

The frequency step can be changed if necessary. In North and South America, the frequency step between adjacent channels in the MW band is 10 kHz. In other parts of the world, it is 9 kHz. The frequency step preset in the factory is 9 kHz.

For MW Band

To change from 9 kHz to 10 kHz or vice versa

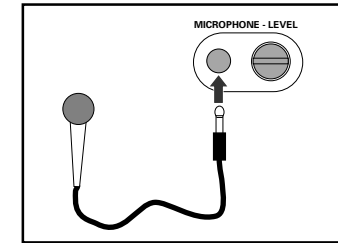
Changing of tuning grid will erase all previously stored preset stations.

- 1 Disconnect the system from the AC power supply (pull out the AC power cord).
- 2 Press and hold **TUNER** and **TUNING** **▶▶** while reconnecting the system to the AC power supply.
 - Display will show "GRID 10" or "GRID 9".

Notes:

- GRID 9 indicates that the tuning grid is in step of 9 kHz in MW band. GRID 10 indicates that the tuning grid is in step of 10 kHz in MW band.
- FM tuning grid will also be changed from 50 kHz to 100 kHz or vice versa. All preset stations will also be erased.

KARAOKE



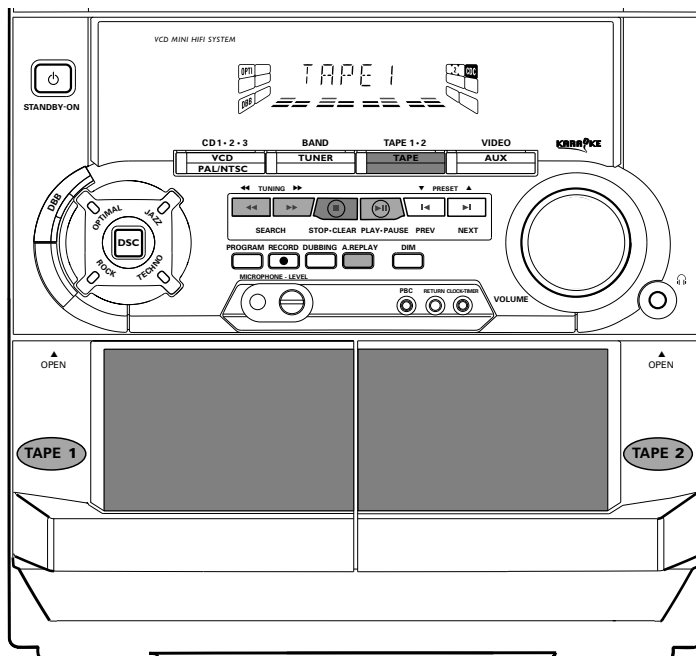
Microphone Mixing

- 1 Set the **MIC LEVEL** control to the minimum level to prevent acoustic feedback (e.g. a loud howling sound) before you connect the microphone.
- 2 Connect a microphone to the **MICROPHONE** socket.
- 3 Press **VCD**, **TUNER**, **TAPE** or **AUX**.
- 4 Play the selected source.
- 5 Adjust the volume level with **VOLUME** control.
- 6 Adjust the **MIC LEVEL** control to the mixing level that you want.
- 7 Start singing or talking through the microphone.

Note:

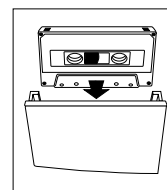
- Keep the mic away from the speakers to prevent howling

TAPE



Loading a tape

- 1 Press **OPEN**.
- 2 The tape deck door opens.
- 3 Load the tape with the open side downward and the full spool to the left.



- 4 Close the tape deck door.

Auto Replay

- Press **A. REPLAY** to select either continuous AUTO REPLAY or ONCE during tape playback.
 - "AUTO REPLAY" () or "ONCE" () will be displayed.

Notes:

- This feature is available during tape playback only.
- When "AUTO REPLAY" is selected, the tape will rewind automatically at the end of playback for the selected side. Then it will start playing again. It will replay up to a maximum of 20 times until you press **■**.
- When "ONCE" is selected, the tape will play the selected side once and then stop.

Tape Playback

- 1 Press **TAPE** (TAPE 1•2) to select TAPE mode.
 - "TAPE 1" or "TAPE 2" will be displayed and followed by "T 1 >>>" or "T 2 >>>".
- 2 Load the tape into the selected tape deck.
- 3 Press **▶** to start playback.
 - "T 1" or "T 2" with ">" scrolling right will be displayed.
 - Press **A. REPLAY** to select the different type of playback mode (see Auto Replay).
- 4 Press **■** to end playback.
 - "T 1" or "T 2" with ">>>>" will be displayed.

Rewind/Fast Forward

When playback is stopped

- 1 You can rewind or fast forward the tape by pressing **◀** or **▶** respectively.
 - If rewinding, "T 1 <" or "T 2 <" with "<" scrolling left will be displayed.
 - If fast forwarding, "T 1 >" or "T 2 >" with ">" scrolling right will be displayed.
 - The tape will stop automatically at the end of rewinding or fast forwarding.
- 2 Press **■** to stop rewinding or fast forwarding.

English

TAPE

English

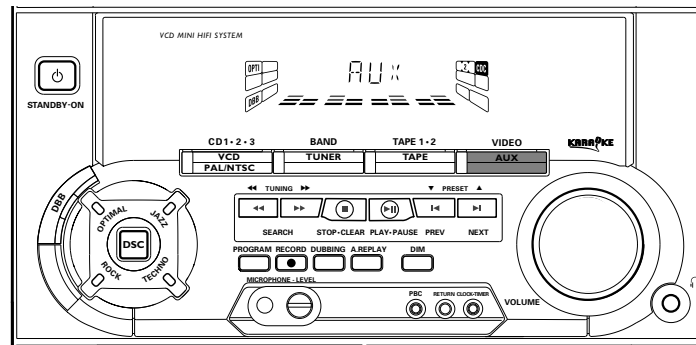
During playback

- Press and hold ◀◀ or ▶▶ until the desired passage is located.
 - "T 1 or T 2" with "<<< or >>>" scrolling left or right will be displayed depending on which button is pressed.
 - During searching, the sound is reduced to a low volume.
 - When you release ◀◀ or ▶▶, the tape continues playing.

Notes:

- During rewinding or fast forwarding of a tape, it is also possible to select another source (e.g. VCD, TUNER or AUX).
- Before playing a tape, check and tighten slack tape with a pencil. Slack tape may get jammed or may burst in the mechanism.
- C-120 tape is extremely thin and is easily deformed or damaged. It is not recommended for use in this system.
- Store the tapes at room temperature and do not put them too close to a magnetic field (for example, a transformer, TV, or speaker).

AUX



Selecting External Equipment

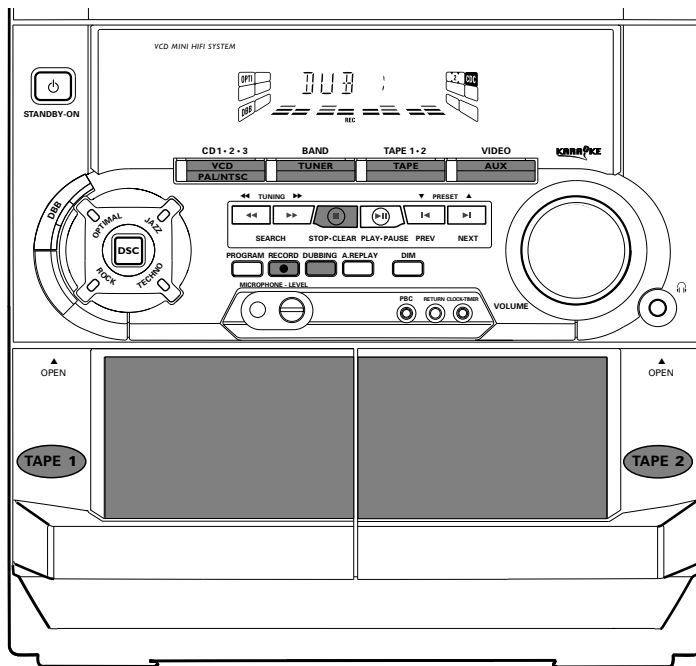
If you have connected the audio out terminals of the external equipment (TV, VCR, Laser Disc player, DVD player or CD Recorder) to the AUX IN terminals, you can hear the enhanced sound from the system.

- Press **AUX (VIDEO)** to select the external equipment.
 - "AUX" will be displayed.

Note:

- All the sound control features (e.g. DSC, DBB, etc.) are available for selection.

RECORDING



Notes:

- If you do not intend to record via the microphone, unplug the microphone to avoid accidental mixing with other recording source.
- For recording, use only tape of IEC type I (normal tape) or IEC type II (CrO₂).
- The tape is secured at both ends with leader tape. At the beginning and end of tape, nothing will be recorded for six to seven seconds.
- The recording level is set automatically, regardless of the position of VOLUME, DBB, Incredible Surround, DSC or VEC.
- To prevent accidental recording, break out the tab on the left shoulder of the tape side that you want to protect.
- If "CHECK TAPE" is displayed, the protection tab has been broken. Put a piece of clear adhesive tape over the opening. Do not cover the CrO₂ tape detection hole when covering the tab opening.

Recording the mixed sound / One Touch Recording

- During microphone mixing, you can record the mixed sound on a tape in tape deck 2 except dubbing mode.
- For One Touch Recording, as soon as you press RECORD, the current source (VCD, TUNER or AUX) will be recorded on tape deck 2.

- 1 Load a blank tape in tape deck 2.
- 2 Press **RECORD** to start recording.
→ The REC flag starts flashing.
- 3 Press **■** to stop recording.

Note:

- When you press RECORD while in TAPE mode, "SELECT SOURCE" will be displayed. One Touch Recording is not possible in TAPE mode.

Recording from other sources

(only on tape deck 2)

- 1 Press **TAPE** (TAPE 1•2) to select tape deck 2.
- 2 Load a blank tape into tape deck 2 with the open side downward.
- 3 Press **VCD, TUNER** or **AUX**.
 - Start playback of the selected source.
- 4 Press **RECORD** to start recording.
→ The REC flag starts flashing.
- 5 Press **■** to stop recording.

English

RECORDING

English

Note:

- During recording, it is not possible to listen to another source.

Dubbing tapes (from tape deck 1 to tape deck 2)

- 1 Press **TAPE** (TAPE 1•2) to select tape deck 2.
- 2 Load the prerecorded tape into tape deck 1 and a blank tape into tape deck 2 with full spool to the left.
- 3 Press **DUBBING**
→ "DUB" with ">" scrolling right will be displayed.
 - Dubbing will start immediately.
→ The **REC** flag starts flashing.
- 4 Press **■** to stop dubbing.

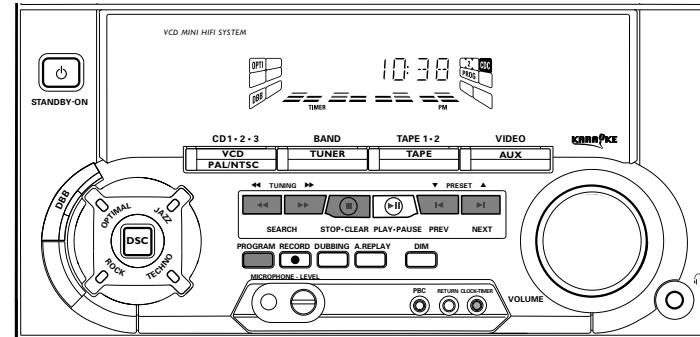
Notes:

- At the end of side A, flip the tapes to side B and repeat the procedure.
- Dubbing of tapes is only possible from tape deck 1 to tape deck 2.
- To ensure good dubbing, use tapes of the same length.
- You can listen to other source while dubbing.

VCD/CD Synchro Start Recording

- 1 Load a blank tape into tape deck 2 and a disc into a disc tray.
- 2 Press **VCD** to select VCD/CD mode.
 - You can program the tracks in the order you want them to be recorded (see Programming Tracks). If not, select the disc by pressing **VCD** (CD 1•2•3) and the tracks are recorded according to the order on the selected disc.
- 3 Press **RECORD** to start recording.
→ The **REC** flag starts flashing.
 - Disc will start playback automatically.
- 4 Press **■** to stop recording.

CLOCK



View Clock

You can view the clock (if it is set) if the system is in Standby mode or when any sound source is selected (VCD, TUNER, etc.). The clock will be displayed for about seven seconds.

- Press **CLOCK•TIMER** briefly.
→ "10:38 PM" or "22:38" (the current time in either 12- or 24-hour mode) will be displayed depending on whether you have selected 12- or 24-hour mode.
→ "--:--" will be displayed if the clock is not set.

Clock Setting

The clock can be set in either 12- or 24-hour mode, e.g. "12:00 AM" or "00:00". Before setting the clock, you must be in the View Clock mode.

- 1 Press **CLOCK•TIMER** to select clock mode.
- 2 Press **PROGRAM** to select 12- and 24-hour mode.
→ If 12-hour mode is selected, "12:00" starts flashing and the **AM** lights up.
→ If 24-hour mode is selected, "00:00" starts flashing.
- 3 Set the hour with **◀** or **▶** on the system.
- 4 Set the minute with **◀** or **▶** on the system.

- 5 Press **CLOCK•TIMER** again to store the setting.
→ The clock starts.
- To exit without storing the setting, press **■** on the system.

Notes:

- During clock setting, if no button is pressed within 90 seconds, the system will exit clock setting mode automatically.
- When a power interruption occurs, the clock setting is erased.

Timer Setting

- The system can switch on to VCD, TUNER or TAPE 2 mode automatically at a preset time. It can serve as an alarm to wake you up.
- Before setting the timer, make sure the clock is set correctly.
- The timer will always be switched on once it is set.
- **The volume of the timer will increase from the minimum level until the volume level before the set is switched to standby mode.**

- 1 Press and hold **CLOCK•TIMER** for more than **2 seconds** to select timer mode.
→ " 12:00 AM " or " 00:00 " or the last timer setting starts flashing depending on whether you have selected 12- or 24-hour mode.
→ The **TIMER** flag starts flashing.
→ The selected source is lit while other available sources are flashing.

- 2 Press **VCD, TUNER** or **TAPE** to select the desired source.
 - Before selecting VCD or TAPE, make sure a disc or tape is loaded in the disc tray or tape deck 2.

- 3 Press **◀** or **▶** on the system to set the hour for the timer to start.

- 4 Press **◀** or **▶** on the system to set the minute for the timer to start.

- 5 Press **CLOCK•TIMER** to store the start time.
 - The timer is now set.
 - The **TIMER** flag remains on the display.
 - At the preset time, the timer will be activated.
→ The selected source will be played.

Notes:

- During timer setting, if no button is pressed within 90 seconds, the system will exit timer setting mode automatically.

- If the source selected is **TUNER**, the last tuned frequency will be switched on.
- If the source selected is **VCD**, playback will begin with the first track of the disc tray 1 or other trays if disc tray 1 is empty. If all the disc trays are empty, the **TUNER** will be selected instead.
- The timer will not activate if a recording is in progress.

To switch off the TIMER

- 1 Press and hold **CLOCK•TIMER** for more than **2 seconds**.
- 2 Press **■** on the system to cancel the timer.
 - The timer is now switched off.
 - The display will show "CANCEL" and the **TIMER** flag disappears.

To start the TIMER again (for the same preset time and source)

- 1 Press and hold **CLOCK•TIMER** for more than **2 seconds**.
- 2 Press **CLOCK•TIMER** again to store the start time.
 - The timer is now on.
 - The **TIMER** flag appears on the display.

SPECIFICATIONS

English

Specifications

AMPLIFIER

| | |
|-----------------------------|--|
| Output power | 600 W PMPO / 2 X 15 W RMS ⁽¹⁾ |
| Signal-to-noise ratio | ≥ 67 dBA (IEC) |
| Frequency response | 50 – 15000 Hz, ± 3dB |
| Input sensitivity | |
| AUX In | 700 mV |
| Microphone | 3.5 mV |
| Output | |
| Speakers | ≥ 6 Ω |
| Headphones | 32 Ω – 1000 Ω |
| Subwoofer Out | 1.5 V |

(1) (6Ω, 1kHz, 10% THD)

DISC PLAYER

| | |
|-------------------------------------|-----------------|
| Number of programmable tracks | 99 |
| Frequency response | 20 – 20000 Hz |
| Signal-to-noise ratio | ≥ 80 dBA |
| Channel separation | ≥ 60 dB (1 kHz) |
| Total harmonic distortion | < 0.003% |
| MPEG 1 | VCD version 2.0 |

TUNER

| | |
|------------------------------|----------------|
| FM wave range | 87.5 – 108 MHz |
| MW wave range (9 kHz) | 531 – 1602 kHz |
| MW wave range (10 kHz) | 530 – 1700 kHz |
| Tuning grid | 9/10 kHz |
| Number of presets | 40 |
| Antenna | |
| FM | 75 Ω wire |
| AM | Loop antenna |

TAPE DECK

| | |
|-----------------------------|----------------------|
| Frequency range | |
| Chrome tape (type II) | 80 – 12500 Hz (8 dB) |
| Normal tape (type I) | 80 – 12500 Hz (8 dB) |
| Signal-to-noise ratio | |
| Chrome tape (type II) | ≥ 52 dBA |
| Normal tape (type I) | ≥ 48 dBA |
| Wow and flutter | ≤ 0.4% DIN |

SPEAKERS

| | |
|------------------------------|--------------------------------|
| System | 2 way; double port bass reflex |
| Impedance | 6 Ω |
| Woofer | 1 x 5.25" |
| Tweeter | 1 x 2.5" |
| Dimensions (w x h x d) | 210 x 310 x 233 (mm) |
| Weight | 2.5 kg each |

GENERAL INFORMATION

| | |
|---------------------------------|---|
| Material | Polystyrene |
| AC Power | 110 - 127 / 220 - 240 V; 50/60Hz; Switchable |
| Power Consumption | |
| Active | 35 W |
| Standby | < 15 W |
| Dimensions (w x h x d) | 265 x 310 x 320 (mm) |
| Weight (without speakers) | 5.6 kg |

Subject to modification

MAINTENANCE

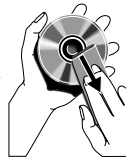
Maintenance

Cleaning the Cabinet

- Use a soft cloth slightly moistened with a mild detergent solution. Do not use a solution containing alcohol, spirits, ammonia or abrasives.

Cleaning Discs

- When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center out.
- Do not use solvents such as benzine, thinner, commercially available cleaners, or antistatic spray intended for analog records.



Cleaning the disc lens

- After prolonged use, dirt or dust may accumulate at the disc lens. To ensure good playback quality, clean the disc lens with Philips CD Lens Cleaner or any commercially available cleaner. Follow the instructions supplied with cleaner.

Cleaning the Heads and the Tape Paths

- To ensure good recording and playback quality, clean the heads, the capstan(s), and pressure roller(s) after every 50 hours of tape operation.
- Use a cotton swab slightly moistened with cleaning fluid or alcohol.
- You can also clean the heads by playing a cleaning tape once.

Demagnetizing the heads

- Use a demagnetizing tape available at your dealer.

Warning! Under no circumstances should you try to repair the set yourself as this will invalidate the guarantee. Do not open the set as there is a risk of electric shock.

- If a fault occurs, check the points listed below before taking the system for repair.
- Should any problems persist after you have made these checks, consult your nearest dealer or service center.

Disc Player Operation

"UNREADABLE DISC" is displayed.

- The disc is inserted upside down.
→ *Place disc with printed side up.*
- Moisture condensation at the lens.
→ *Wait until lens has adjusted to normal room temperature.*
- The disc is dirty, badly scratched or warped.
→ *Clean or replace the disc.*
- The disc lens is dirty or dusty
→ *See section under Maintenance (page 25).*

"NO DISC" is displayed.

- There is no disc in the disc tray.
→ *Insert a disc.*

TROUBLESHOOTING

No picture on TV screen.

- The video cable is not connected
→ *Connect the cable between the system and TV.*

No colour on TV.

- The system switch is not correct.
→ *Change the system to respective setting (PAL or NTSC).*

Radio Reception

Poor radio reception.

- The signal is too weak.
→ *Adjust the antenna.*
→ *Connect an external antenna for better reception.*
- The TV or VCR is too close to the stereo system.
→ *Separate the stereo system from the TV or VCR.*

Cannot tune to station

- Wrong tuning grid.
→ *Switch to the correct tuning grid.*

English

TROUBLESHOOTING

English

Tape Deck Operation

"RECORDING ACTIVE" is displayed.

- A recording is in progress.
- Stop the recording or wait until it is finished.

"TAPE DUBBING ONLY" is displayed.

- Tape dubbing is only possible in tape mode.
- Switch source to tape mode.

Recording or playback cannot be made or there is a decrease in audio level.

- Dirty tape heads, capstans or pressure rollers.
- See section on tape deck maintenance (page 25).
- Magnetic build-up in the record/playback head.
- Use demagnetizing tape.

Tape deck door cannot open.

- Power failure or AC power plug disconnect from the wall outlet during tape playback.
- Reconnect the AC power plug and switch on the system again.

General

System does not react when any button is pressed.

- Electrostatic discharge.
- Press STANDBY ON to switch the system off. Remove the AC power plug from the wall outlet, then reconnect the power plug and switch on the system again.

No or poor sound.

- Volume is not turned up.
- Adjust VOLUME.
- The headphones are connected.
- Disconnect the headphones.
- Speakers are not connected or are connected wrongly.
- Check that the speakers are connected correctly.
- Make sure the stripped speaker wire is clamped.

Reversed left and right sound.

- Speakers are connected wrongly.
- Check the speaker connections and location.

Lack of bass sound or apparently imprecise physical location of musical instruments.

- Speakers are connected wrongly.
- Check the speaker connection for proper phasing, colored/black wires to colored/black terminals.

Remote control has no effect on the system.

- Wrong source is selected.
- Select the source (VCD, TUNER, etc.) before pressing the function button, (▶, ◀, ▶, etc.).
- The distance to the system is too large.
- Reduce the distance.
- Batteries are inserted incorrectly.
- Insert the batteries with their polarities (+/- signs) as indicated.
- Batteries are exhausted.
- Replace the batteries.

Timer is not working.

- Clock is not set.
- Set the clock.
- Timer is not switched on.
- Press CLOCK•TIMER to switch on the timer.
- Recording is in progress.
- Stop recording.

Clock setting is erased.

- There was a power failure.
- Reset the clock.

System displays features automatically; buttons flash continuously.

- Demonstration mode is switched on.
- Press and hold ■ (on the system only) for 5 seconds to switch off the demonstration.

All lighted buttons are not lit.

- Display is switch on in DIM 3 mode.
- Press DIM until DIM OFF display mode is shown.