

User Manual 

Mode D'emploi 

Bedienungsanleitung 

Digital Home Cinema Receiver

FR980



MPEG 



PHILIPS

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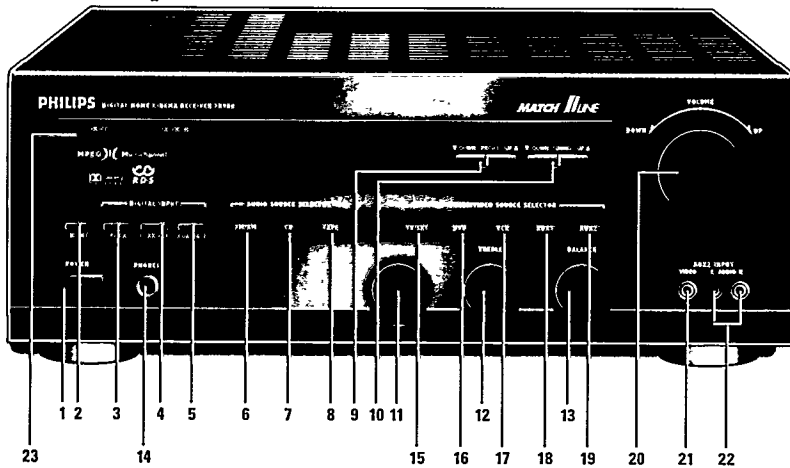
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CE MARKING

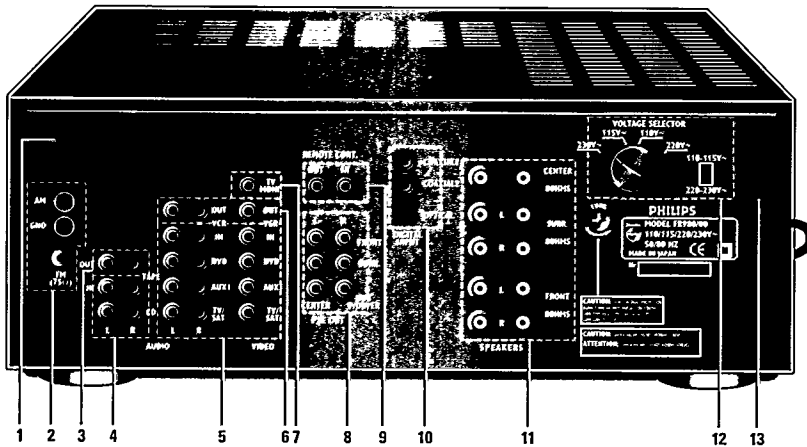
- CE** **English**
The FR980 is in conformity with the EMC directive and low-voltage directive.
- CE** **Français**
Le FR980 est conforme à la directive EMC et à la directive sur les basses tensions.
- CE** **Deutsch**
Das Modell FR980 entspricht den EMC-Richtlinien und den Richtlinien für Niederspannungsgeräte.

DIGITAL HOME CINEMA RECEIVER - FR980

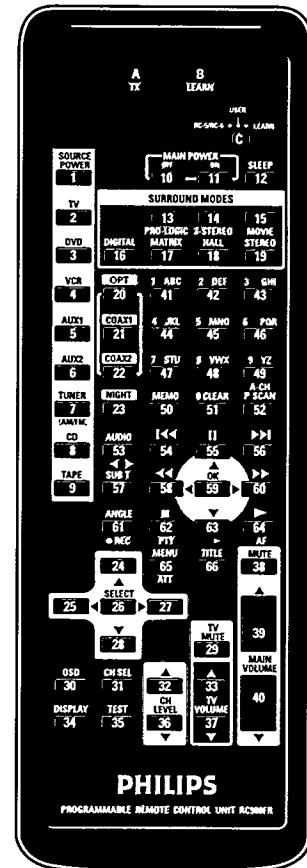
Front panel



Rear panel



Remote Control



Front panel

- 1 Power On/Off button
- 2 Night
- Digital input**
- 3 OPTICAL
- 4 COAXIAL1
- 5 COAXIAL2
- Audio source selector**
- 6 FM/AM
- 7 CD
- 8 TAPE
- Tuner controls**
- 9 Preset up/down
- 10 Tuning up/down
- Sound control**
- 11 BASS
- 12 TREBLE
- 13 BALANCE
- Phone**
- 14 Headphone jack
- Audio/video source selector**
- 15 TV/SAT
- 16 DVD
- 17 VCR
- 18 AUX 1
- 19 AUX 2
- Volume**
- 20 Control up/down
- AUX 2 input**
- 21 VIDEO
- 22 AUDIO left/right
- Indicator**
- 23 STANDBY on/off

Rear panel

- 1 AM tuning switch
- Antenne connections**
- 2 AM, GND, FM (coaxial)
- Audio output**
- 3 TAPE
- Audio input**
- 4 CD and TAPE
- Audio/Video input**
- 5 VCR, DVD, AUX 1, TV/SAT
- Audio/Video output**
- 6 VCR
- TV output**
- 7 TV/MONITOR
- Pre-amplifier output**
- 8 FRONT left/right, SURROUND left/right, CENTER, SUB-WOOFER
- Remote control**
- 9 IN and OUT
- Digital input**
- 10 COAXIAL1, COAXIAL2 and OPTICAL
- Speaker output**
- 11 CENTER left/right, SURROUND left/right, FRONT left/right
- Voltage selector**
- 12 110V, 115V, 220V and 230V
- 13 Mains

Remote Control

- LED indication**
- A LEARNING mode
- B TRANSMITTING mode
- Mode switch**
- C Switch remote into NORMAL

- operation/USER defined or LEARNING mode
- Source power**
- 1 Switch POWER on/off of selected source
- Audio/Video source selection**
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- 3 DVD
- 4 VCR
- 5 AUX1
- 6 AUX2
- Audio source selection**
- 7 TUNER
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Philips welcomes you to the brilliant new world of Digital Home Cinema. To the FR 980, the first Digital Home Cinema receiver, capable of decoding DVD-Video as well as other digital and analogue multichannel audio signals, and with five independent high-performance sound channels.

As the control centre for your Home Cinema or A/V system, this world-standard receiver features multistandard digital surround decoding and full audio and video interconnection and remote control facilities, together with multivoltage AC power input and a multistandard On-Screen Display output for your TV.

Safety precautions

Placement notes for cabinet:

To ensure proper ventilation for the amplifier, do not mount it in a rack or locate it inside a bookshelf.

Note the following precautions:

- **Do not insert objects into the space underneath the amplifier.**
- **Do not block the vents on the top of the amplifier.**
- **Keep the area above the amplifier unobstructed for about one meter.**
- **Allow approximately 20 centimeters of space on all sides of the amplifier.**
- **Do not expose the equipment to rain or moisture.**
- **Do not remove the cover from the equipment.**
- **Do not push anything inside the equipment through the ventilation holes.**
- **Do not handle the mains lead with wet hands.**

This Philips product has been prepared to comply with the household power and safety requirements that exist in your area. On the rear panel, a voltage selector (4-position) is provided. Be sure to set the voltage selector to the mains voltage of your area before using the unit.

Unpacking

First check and identify the contents of your FR 980 receiver package, as listed below:

- FR 980 receiver;
- Multisystem remote control handset with separately-packed batteries;
- Line fuse 6.3A;
- User Manual;
- Warranty card.

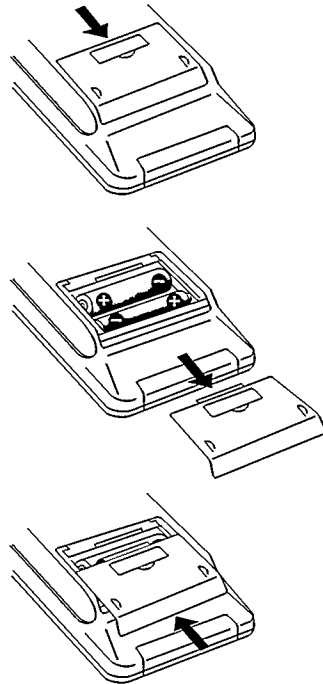
If any item should be damaged or missing, please inform your supplier without delay.

Keep the packaging materials: you may need them to transport your receiver in the future.

Placement

- Place the receiver on a firm, flat surface.
- Keep away from domestic heating equipment and direct sunlight.

Loading the batteries



- Open the battery compartment cover.
- Insert two 'AAA' (R03 or SUM4) batteries as indicated inside the battery compartment.
- Close the cover.

CAUTION

DO NOT MIX OLD AND NEW BATTERIES, AND NEVER MIX DIFFERENT TYPES OF BATTERIES (STANDARD, ALKALINE, AND SO ON).

NOTE

Batteries should be replaced within 10 minutes, or any already learned codes may be lost.

CONNECTIONS

The FR980 is designed to operate as the control centre for your complete Home Cinema, with full connection, selection, and remote control facilities for all the digital and analogue video and audio equipment in the installation.

When making connections: Consult the User Manuals for your video and audio sources and other peripheral equipment. Make sure the AC power is disconnected. Connect one equipment at a time, one cable at a time. Observe colour or other polarity codes on cables.

Connecting the power supply

- Set the Power Voltage Selector(s) to correspond to your local A.C. power supply.
- The installed 3.15A line fuse is correct for 220 or 230V AC supply. For a 110 or 115V AC supply, unscrew the line fuse holder cap, and fit the 6.3A line fuse supplied.
- Plug the receiver's power cable connector into a suitable AC outlet.

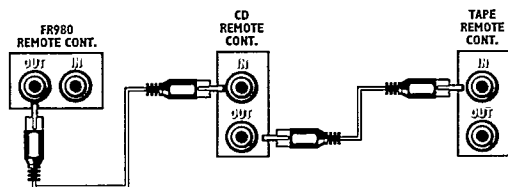
NOTE

When the receiver is plugged in, it always consumes some power, even in Standby. To remove the power completely, disconnect the power cable connector from the AC outlet.

Remote Control Bus

Philips audio and video equipment fitted with Remote Control In/Out connections can be controlled via the FR980. Connect the receiver's Remote Control Out socket to the Remote Control In socket of the first equipment to be controlled. Connect the Remote Control Out socket of the first equipment to be controlled to the Remote Control In socket of the second equipment to be controlled. Continue until all equipments to be controlled are linked together.

If you want to use a Philips Remote Control Extender, connect it to the receiver's Remote Control In socket.



Digital inputs

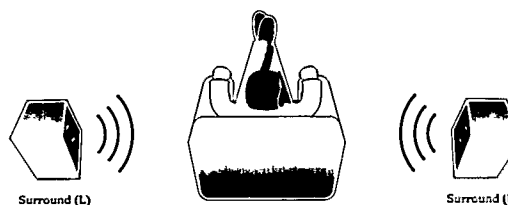
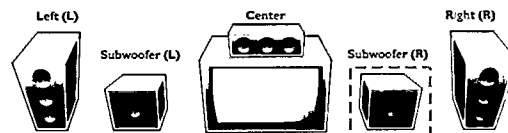
For digital surround sound, you must connect a digital output from your DVD-Video player to one of the digital inputs of the receiver. Use other digital inputs from e.g. CD and Laser Disc audio wherever possible.

Do not connect both optical and coaxial digital inputs from the same device.

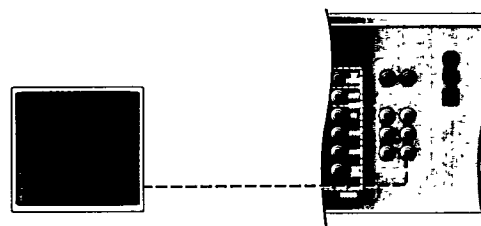
Unless you are using the optical digital input, leave the protective cap in place over the coupling.

Digital Home Cinema speaker configurations

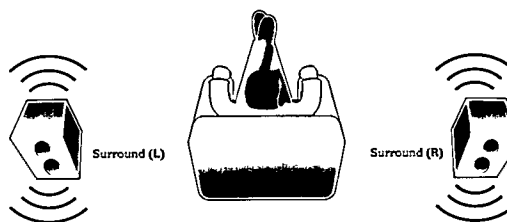
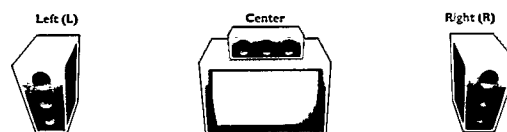
For the most realistic MPEG2 Digital Multichannel or Dolby Digital™ surround sound:



- Speaker configuration with sub-woofer (as shown above).
- Connect five identical high-quality multiway speakers (with Power Handling Capacity of at least 60W) to the Centre, Surround L/R and Front L/R speaker terminals. These speakers need not cover the lower bass range (below about 100 Hz), which is supplied by the subwoofer.
- Connect an active subwoofer (e.g. Philips FB201 or 202), or a separate amplifier and sub-woofer, to the Subwoofer pre-out socket. The Power Handling Capacity of the sub-woofer should be at least 60W.



Good results can also be obtained without a subwoofer (as shown below).



- Connect five identical high-quality multiway speakers (with Power Handling Capacity of at least 60W) to the Centre, Surround L/R and Front L/R speaker terminals. These speakers all need to be identical, full-frequency response types.
- The bass response of the five speakers creates a 'virtual subwoofer' centred on your seating area.

NOTE

Unless the front and surround speakers are full frequency response types, you must use a sub-woofer for satisfactory digital surround sound.

Working without a Centre speaker is also possible: in this case the Centre speaker's sound is distributed between the Front Left and Right speakers. This configuration is not recommended because most of the dialogue that locks the sound into the picture is carried by the centre channel.

If you wish to use external amplifiers to produce extra sound power, you can connect them to the Front L/R, Surround L/R and Center preamplifier outputs. In this case, the power handling capacity of the speakers should match the output power of the external amplifiers to which they are connected. In this configuration, no connections should be made to the Front L/R, Center, and Surround L/R speaker terminals.

These configurations are also suitable for Dolby Pro Logic™ and the other analogue surround sound modes, as well as stereo. In some cases some speakers will be inactive.

AM tuning step


Set this switch to 9 kHz to receive AM radio broadcasts in Europe, 10 kHz to receive them in the USA and Asia.

Antenna

- FM antenna terminal (75Ω).
For connecting an external FM antenna with a coaxial cable, or for connecting a cable network FM source.
- AM antenna and ground terminals.
For connecting the supplied AM loop antenna. Use the terminals marked AM and GND.

The supplied AM loop antenna will provide good AM reception in most areas. Position the loop antenna to the best reception.

Multisystem remote control

The remote control is programmed to operate Philips and related brand equipment using RC5 or RC6 remote control codes. But it also has a learning facility which allows it to be re-programmed for other equipment brands using other control codes. The learning procedure is explained on page 12 of this manual. Unless codes have been changed using the the learning procedure, the slider switch should be set to RC-5 (or User). When codes have been changed using the the learning procedure, the SLIDER SWITCH  should be set to User.

OPERATION / GETTING STARTED

Unless otherwise stated, all operations can be carried out with the remote control. Always point the remote control directly at the player, making sure there are no obstructions in the path of the infrared beam.

Equivalent keys on the front panel may also be used.

Switching on

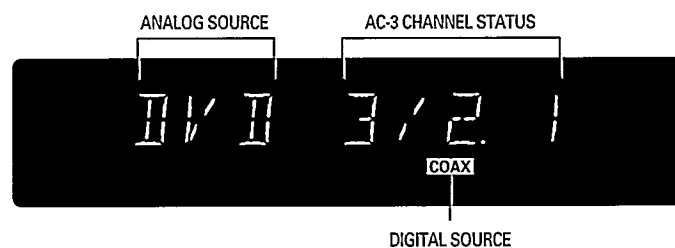
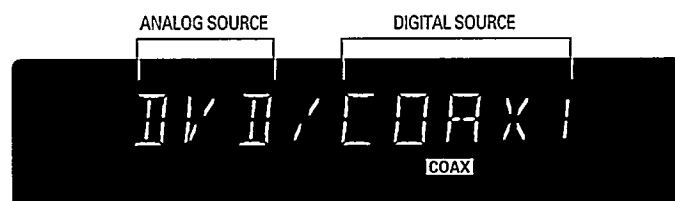
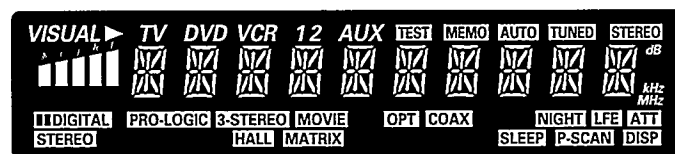
Switch on the TV and select the video input chosen for your receiver.

Switch on your receiver by pressing the POWER switch on the front panel [1]. The receiver can be turned on by pressing the MAIN POWER ON key [11] or one of the SOURCE SELECTION keys on the front. The standby indicator lights up when this unit is put in the standby mode by pressing the MAIN POWER OFF key [10] on the remote control.

When the switch on the front panel [1] is in the OFF position, the receiver is NOT disconnected from the AC supply mains.

Switch on the source or sources you intend to use.

Receiver Display



To help you operate the receiver, the alphanumeric section of the display presents dynamic operational messages, sometimes continuously, sometimes for just a few seconds.

Some examples include:

MASTER -64: Master volume control level in dBs.

DVD 3/2.1: Input source and sound channel configuration (DVD input, 3 front sound channels, 2 surround sound channels, 1 sub-woofer channel).

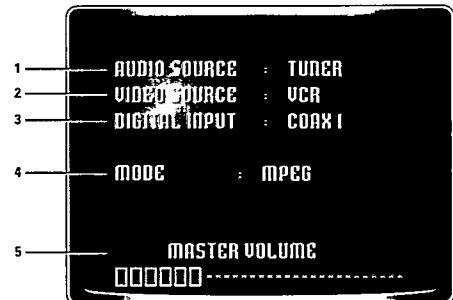
NO DATA: No digital input.

The current receiver settings are shown on the display: you can turn the display off and on by pressing the DISPLAY button [34]. When switched off, the display shows "DISP".

OSD On-Screen Display

You can call up the ON-SCREEN DISPLAY [30] on your TV to see the current receiver settings, to control most receiver functions, and to set up and test your receiver-loudspeaker configuration.

To see the current receiver settings displayed on the TV screen, press the OSD key [30].



1. Audio source.
2. Video source.
3. Digital input.
4. (Surround) Mode.
5. Master volume: the level is indicated by the number of blocks showing.

To turn off the OSD, press the OSD key again.

Changing the TV broadcast standard setting

The factory setting of the OSD is for the PAL TV broadcast standard. If your TV is a Secam or NTSC type, hold down the OSD key [30] until PAL appears on the Receiver Display, then press the OSD key once to set up Secam, or twice to set up NTSC (pressing the key a third time will return to PAL).

Digital Home Cinema:

DVD-Video with Digital Surround sound

The receiver is set to reproduce correctly synchronized Digital Surround sound in a listening area where the surround speakers are about 150 cm nearer to the listening position than the front speakers, and the centre speaker is in line with the front speakers. To adjust for other listening area arrangements, see Delay times in the Setup Section (page 11)

- Press the DVD key [3] twice: this selects the DVD-Video player as source, and sets the remote control to operate the player functions.
- Select the DVD-Video digital input by pressing the OPT [20], COAX 1 [21] or COAX 2 key [22] as appropriate.
- Press the SOURCE POWER key [1] to power up the DVD-Video player.
- Operate the DVD-Video player in accordance with the player User Manual: functions available on the remote control are shown in Table 2 on page 7.

NOTE

MPEG2 Digital Multichannel or Dolby Digital™ sound will be played automatically, depending on which is recorded on the disc.

Home cinema:

Playing video with Dolby Pro Logic™ surround sound

The receiver is set to reproduce correctly synchronized Dolby Pro Logic™ surround sound in a listening area where the surround speakers are about 150 cm nearer to the listening position than the front speakers. To adjust for other listening area arrangements, see Delay times in the Setup Section (page 11)

- Select your chosen video source by pressing the TV [2], VCR [4], AUX 1 [5] or AUX 2 key [6] twice: this selects the source, and sets the remote control to operate the source functions.
- Press the PRO LOGIC SURROUND mode key [13].
- Press the SOURCE POWER key [1] to power up the source.
- Operate the source in accordance with the relevant User Manual: functions available on the remote control are shown in Table 2.

Home cinema:

Other analogue surround sound modes

Analogue video source material is often accompanied by stereo audio, and almost all audio source material is in stereo. The receiver allows you to select from several surround sound modes to create realistic surround sound effects from the stereo sound (as shown in the table below).

Mode	Characteristics
3-STEREO	Corrects the centre sound field directivity in Dolby Pro Logic™ systems with widely spaced Front Left and Right speakers.
MOVIE	5-channel analogue sound with extended delay time for large rooms.
HALL	4-channel analogue sound. Gives effect of medium-sized circular hall with rich reverberations.
MATRIX	Wide 4-channel analogue surround effect for sports events or live outdoor concerts.
STEREO	Regular 2-channel analogue sound.

To adjust the surround sound effect in Movie, Hall or Matrix surround mode, see Delay times in the Setup Section (page 11). No adjustment is necessary for 3-Stereo or Stereo mode.

- Select your chosen source by pressing the appropriate source key twice: this selects the source, and sets the remote control to operate the source functions.

Nr.	62	64	53	54	55	56	57	58	59	60	61	63	65	66
Name	■ PTY	▶ AF	AUDIO ◀▶	◀◀	▲	▶▶	SUBT	◀◀	OK	▶▶	ANGLE ● REC	▼	MENU ATT	TITLE
TV	--	--	BI-LANGUAL	CH-	--	CH+	--	CH-	--	CH+	LAST	--	--	--
DVD	STOP	PLAY	AUDIO	PREV	CURSOR UP	NEXT	SUBT	CURSOR LEFT	OK	CURSOR RIGHT	ANGLE	CURSOR DOWN	MENU	TITLE
VCR	STOP	PLAY	BI-LANGUAL	PREV	PAUSE	NEXT	--	REW	--	FF	REC	--	--	--
Aux 1 /Id	STOP	PLAY	BI-LANGUAL	PREV	PAUSE	NEXT	--	REW	--	FF	LAST	--	--	--
Aux 2	--	--	--	--	--	--	--	--	--	--	LAST	--	--	--
Tuner	RDS PTY	RDS AF	STEREO /MONO	PREV CH	RDS DISPLAY	NEXT CH	--	TUNING DOWN	--	TUNING UP	LAST	--	--	--
CD	STOP	PLAY	RANDOM	PREV	PAUSE	NEXT	--	REW	--	FF	LAST	--	--	--
Tapc	STOP	PLAY	DI-RECTION	PREV	PAUSE	NEXT	--	REW	--	FF	REC	--	--	--

Table 2

-- : No output before learning.
LAST: Refers to the last controlled system with recording capability: VCR, TAPE.

- Press the surround mode key appropriate to the source's audio material (see Table 2).
- Press the SOURCE POWER key [1] to power up the source.
- Operate the source in accordance with the relevant User Manual: functions available on the remote control are shown in Table 2.

Listening to a different audio source

while watching a video source: sound injection

- With the video source selected as above, select your chosen audio source by pressing the Tuner, CD or Tape (for Cassette play) key, or the appropriate Optical or Coaxial key if you have a digital audio input connected.
- Operate the audio source in accordance with the relevant User Manual: functions available on the remote control are shown in Table 2.

Recording from a video source

- Select and play your chosen source as above.
- Press the ANGLE / ● REC key [61] to start recording on the last selected recorder (VCR or TAPE).

Night

If you are listening to low-volume music from a digital source, as at night, press this key [23] to prevent large surges in volume. This function only operates if the digital signal contains sound compression data.

Setting the Sleep timer

When you set the Sleep timer by pressing the SLEEP key [12], the receiver continues to run for the selected time after you set it to Standby. While the timer is activated, the remaining Sleep time is displayed for about 2 seconds when you press the Sleep key.

To set the Sleep timer:

- Press the SLEEP key [12] more than 3 seconds. On the receiver display, 'SLEEP' and 'MEMO' starts to flash.
- Press the SLEEP key [12] successively to step through the sleep time (10-90 minutes and Off).

To check the timer setting, press the SLEEP key [12] shortly.

To cancel the timer, press the SLEEP key [12] more than 3 seconds, and retry to set 'SLEEP OFF' by pressing the SLEEP key [12] again.

The tuner

Tuning

- Press the TUNER key [7] twice: this selects the tuner as source, and sets the remote control to operate the tuner functions.
- Press the TUNER key [7] on the remote control or the AM/FM key [6] on the front panel to select the required waveband.
- Press the TUNING UP ▶▶ [60] or DOWN ◀◀ [58] key to find a station. Press the key for less than half a second to change the frequency by one step. Keep pressed longer to scan the band: release the key while scanning to tune automatically to the next station, when the Tuned and Signal Strength indicators light on the display and tuning stops.

OPERATION / GETTING STARTED

Presetting stations

You can preset a total of up to 30 stations either automatically or manually.

Auto presetting

- Press the TUNER key [7] on the remote control or the AM/FM key [6] on the front panel as necessary to select FM.
- Tune to the lowest receivable FM frequency.
- Start auto presetting by pressing the MEMO key [50], then hold down the TUNING UP ►► [60] key for at least 3 seconds. Memo starts to flash on the display.
- The first (lowest) frequency is preset and '1' appears on the display.
- The tuner scans to the next receivable frequency and remains tuned there for 5 seconds. During this time, you can:
 - Skip the frequency by pressing the TUNING UP ►► [60] key,
 - Press the AM/FM key [6] on the front panel to change the waveband.
- After 5 seconds, the frequency is preset, and '2' appears on the display.
- The procedure continues until:
 - All 30 preset locations are filled; or
 - Auto scanning reaches the top of both wavebands; or
 - You terminate auto presetting by pressing the 0 CLEAR key [51] (or TUNING DOWN ◀◀ [58] key or any function key).

Manual presetting

- Tune in to a station (see Tuning).
- Press the MEMO key [50]: on the receiver display, 'Memo' will flash for 5 seconds. During this time enter your chosen preset number (between 1 and 30) using the alphanumeric keys. For 2-digit numbers, enter the digits in quick succession.
- On the display, 'Memo' goes out, and the station preset is stored.

Selecting a preset station

- There are two methods of preset selection:
 - Enter the preset number using the alphanumeric keys. For 2-digit numbers, enter the digits in quick succession.
 - Press the PRESET UP ►► [56] or DOWN ◀◀ [54] key to choose a preset. Press the key for less than half a second to move to the next preset. Keep pressed longer to scan the presets: release the key at the chosen preset. If no preset was previously selected, the lowest preset number will be selected first. (Refer to Table 2 on page 7)

Preset scanning

- Press the P-SCAN key [52]: on the receiver display, 'P-Scan' flashes.
- Starting with the lowest, each preset stored is selected for five seconds.
- To scan rapidly, hold down the PRESET UP ►► [56] key.
- When you arrive at the desired preset, press the PRESET DOWN ◀◀ [54], P-SCAN [52] or 0 CLEAR key [51] to listen to the station.

Naming presets/Station names

The names of stations broadcasting Radio Data Services (RDS) are shown automatically on the receiver display when tuned. You can give similar 5-character names to non-RDS stations as follows:

- Select the preset station.
- Press the MEMO key [50] for more than 3 seconds: the station name bar appears on the receiver display, with the left-hand character space flashing.
- Enter the first character of the name using the alphanumeric keys: press the key for the required character 1, 2 or 3 times, until the character appears, flashing, on the display.
- Use the TUNING up [60] and down [58] keys on the front panel to select the required character. Keep pressed for highspeed selection.
- Press the MEMO key [50]: the selected character lights continuously, and the next character space begins to flash.
- Repeat the procedure until the complete name is lit continuously.
- Press the MEMO key [50] for at least 1 second.

Clearing presets

- Select the preset you want to clear (see 'Selecting a preset station').
- Press the MEMO key [50]: on the receiver display, 'Memo' flashes for 5 seconds. During this time, press the 0 CLEAR key [51] until 'Clear' appears on the display.
- If you wish to clear all presets, you can press the COAX 2 [22] and CD keys [8] together for more than 3 seconds.

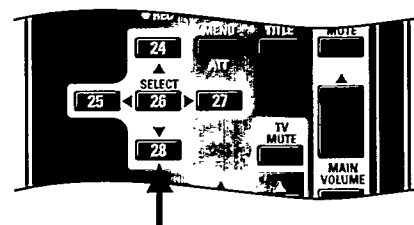
CAUTION

THIS, HOWEVER, WILL CLEAR THE ENTIRE MEMORY CONTENTS, INCLUDING THE VOLUME SETTING AND SURROUND SOUND MODE MEMORY, AND SET THE RECEIVER TO STANDBY.

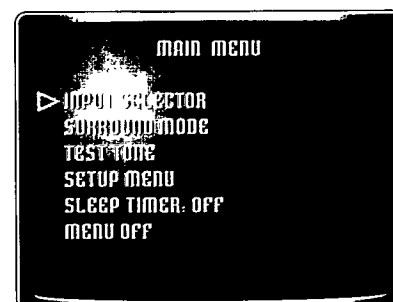
Operation using the OSD

Main Menu

Call up the main menu by pressing any one of the OSD cursor movement keys [24] to [28].

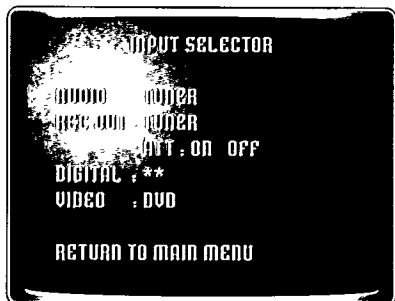


Move to a sub-menu as required with the OSD CURSOR UP ▲ [24] and DOWN ▼ [28] keys, then press SELECT [26].



Input Selector

(Input Selector Menu)



Audio: Move to your chosen audio source (Tuner, CD or Tape) with the OSD CURSOR LEFT ◀ [25] and RIGHT ▶ [27] keys, then press SELECT [26].

REC Out: If a digital source has been selected (see below) you can select an audio source for recording in the same way as for Audio. If no digital source has been selected, the same source is automatically selected for recording as for Audio.

Att On/Off: Too powerful an Audio/Video or Audio source signal can cause sound distortion even at low volume settings. To remedy such distortion, move to Att: On with the OSD CURSOR RIGHT ▶ [27] key and press SELECT [26].

Digital: Move to your chosen digital source (COAXIAL 1, COAXIAL 2 or OPTICAL) with the OSD CURSOR LEFT ◀ [25] and RIGHT ▶ [27] keys, then press SELECT [26].

Video: Move to your chosen video source (DVD, TV/SAT, VCR, AUX 1, AUX 2) with the OSD CURSOR LEFT ◀ [25] and RIGHT ▶ [27] keys, then press SELECT [26]. On completion, move down to Return to Main Menu and press SELECT [26].

Surround Mode

(Surround Mode Menu)

Mode: Move to your chosen Surround Mode (DIGITAL, PRO LOGIC, 3-STEREO, MOVIE, HALL, MATRIX or STEREO) with the OSD CURSOR LEFT ◀ [25] and RIGHT ▶ [27] keys, then press SELECT [26].



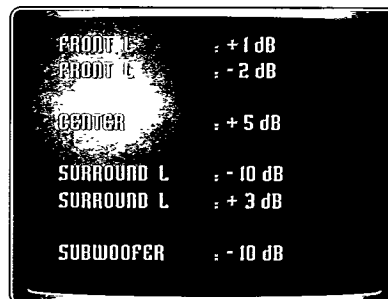
On completion, move down to Return to Main Menu and press SELECT [26].

NOTE

Delay time settings are described under Setup.

Speaker level adjustment

For adjustment during listening follow the next procedure. See "Speaker level calibration" in the setup section on page 11 for test tone based adjustment.



- Press CH.SEL [31] key, on the OSD the current adjustments appear.
- Adjust the level of the highlighted speaker with the CH.LEVEL Up [32] and Down [36] keys.
- Move to other channels by pressing the CH.SEL [31] key again.
- The OSD disappears after a timeout of 10 Seconds.

Setup Menu

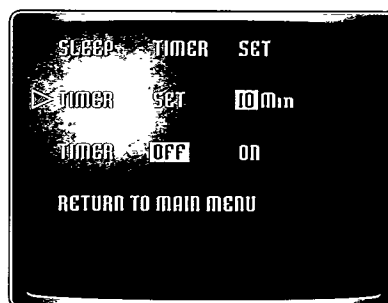
See "Setting up your home cinema system" in the Setup section at page 10.

Sleep Timer

(Sleep Timer Menu)

Timer Set: set the desired time (10 - 90 minutes) with the OSD CURSOR LEFT ◀ [25] or RIGHT ▶ [27] key, then press SELECT [26].

Timer Off/On: move to On or Off as desired with the OSD CURSOR LEFT ◀ [25] or RIGHT ▶ [27] key, then press SELECT [26].



Headphones

Conventional dynamic headphones can be plugged in here.

NOTE

When the headphones plug is inserted, the surround mode is switched automatically to STEREO and the sound from the speakers are muted. The surround mode returns to the previous mode as soon as the plug is removed from the jack.

Tone controls

- BASS control is used to boost or cut low frequencies for LEFT, RIGHT, CENTER and SUBWOOFER channel.
- TREBLE control is used to boost or cut high frequencies for LEFT, RIGHT, CENTER channel.

Balance control

- adjust the sound volume balance between LEFT and RIGHT frontspeakers and headphone channels.

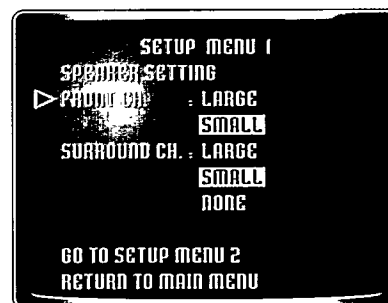
Setting up your Home Cinema system

In general, a large speaker is defined as a traditional full range speaker that includes a woofer and is capable of reproducing sounds below 100 Hz. For the purpose of this product, a small speaker is one that is not capable of delivering sounds below 100 Hz. Most satellite type speakers fall into this category.

Matching the receiver to the speaker configuration

Before using your Home Cinema for the first time, set up your Receiver audio outputs and other functions to match the speakers you have connected. You do this by calling up the receiver's On-Screen Display on the TV.

- Call up the main menu by pressing any one of the OSD cursor movement keys [24] to [28]. The OSD's Main Menu appears on the TV.
- Move the cursor down to 'Setup Menu' by pressing the OSD DOWN ▼ [28] key, then press SELECT [26] to obtain Setup Menu 1.



- Using the OSD LEFT ◀ [25] and RIGHT ▶ [27] keys, move the cursor to Large if your front L/R speakers are full-frequency types, Small if they do not go down below 100 Hz, then press the OSD DOWN ▼ [28] key.
- Repeat the procedure for the Surround L/R speakers. if you are not using Surround speakers, set to None.
- Move the cursor down to 'Go to Setup Menu 2' by pressing the OSD DOWN ▼ [28] key, then press SELECT [26] to obtain Setup Menu 2.



- Move the cursor to Centre Channel Large, Small, or None as appropriate and press the OSD DOWN ▼ [28] key.
- Move the cursor using the same procedure to set Subwoofer On or Off as appropriate.

NOTE

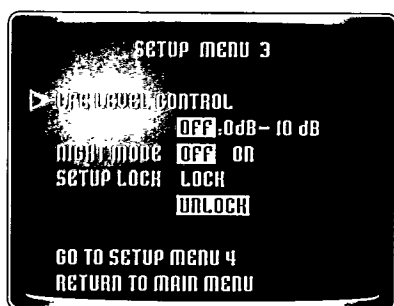
'Subwoofer' cannot be set off if the front speakers are set 'small'.

- Move the cursor down to Go to Setup Menu 3 and press SELECT [26].

- Set LFE (Low Frequency Effect) to Off, 0 dB or -10 dB to set your preferred bass response. If you have too loud low frequency sound with distortion, you can attenuate -10dB or mute the LFE signal. This setting is no relation for speaker setting. When "0dB" is selected, the FTD indicate "LFE". Press the OSD DOWN ▼ [28] key.
- If you want to listen to low-volume music from a digital source, as at night, set Night Mode to On (this function only operates if the digital source contains sound compression data) and press the OSD DOWN ▼ [29] key.
- Your Setup procedure is complete. If you like to prevent accidental changes move 'Setup lock' to lock.
- Move the cursor down to Return to Main Menu, and press SELECT [20].

NOTE

To change any set-up function, you must first go to Setup Menu 3 and select Setup Unlock.



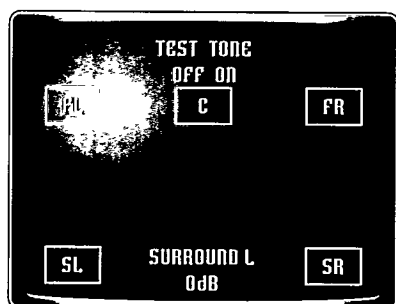
Speaker level calibration

Now that you have configured your amplifier to match your speaker configuration, you should calibrate the speaker levels:

- On the receiver front panel, ensure that the BASS [11], TREBLE [12] and BALANCE [13] controls are set to the centre position.
- Press the PRO LOGIC key [13].
- On the OSD Main Menu, move the cursor to Test Tone and press SELECT [26]. You will hear a test tone from the Front Left speaker. If necessary, adjust the tone to a clearly audible level with the master VOLUME control [20] on the receiver front panel.

NOTE

Press TEST Tone [35] to go directly to Test Tone menu.



- Press the CH SEL key [31]: the test tone moves over to the centre speaker. If necessary, adjust the tone to the same level as from the Front Left speaker by pressing the CH level UP ▲ [32] or DOWN ▼ [36] key.
- Repeat this procedure for the Front Right, Surround Left and Surround Right speakers in turn.
- Repeat the speaker cycle again until you are satisfied that all the test tone levels are equal.

NOTE

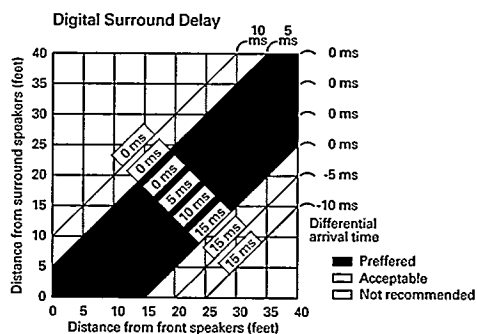
- Speakers not installed will of course not be tested.
- The test tone is not output to the subwoofer irrespective of ON or OFF selection.
- The volume levels of the speaker channels set above will be used in common for the DOLBY DIGITAL (AC-3), DOLBY PRO LOGIC and 3-STEREO surround modes.
- Set the test tone to Off. (This takes you back to Main Menu)
- In the Main Menu, move the cursor to Menu Off and press SELECT [26]. The OSD disappears.

Delay times

The receiver is set to reproduce correctly synchronized Digital Surround sound in a listening area where the surround speakers are about 150 cm nearer to the listening position than the front speakers, and the centre speaker is in line with the front speakers. To adjust for other listening area arrangements, proceed as follows:

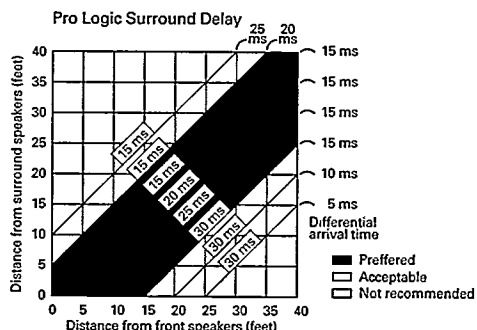
Digital Surround

- Measure the distances in centimetres from the front speaker plane and from the surround speaker plane to the listening position plane.
- Subtract the surround distance from the front distance and divide by 30. The result is the required Surround Channel delay time in milliseconds.
- If the centre speaker is on the front speaker plane, no centre delay is needed. If, however, it is nearer the listening position, measure the distance in centimetres between the front and centre speaker planes, and divide by 30. The result is the required Centre Channel delay time in milliseconds.



Pro Logic

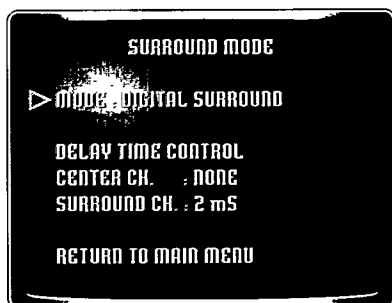
- Add 15 milliseconds to the Surround Channel delay time calculated for Digital Surround.
- If the centre channel in Digital Surround mode is set, to for example 5 ms, the centre channel in Pro Logic mode is automatically, shifted additionally 15 ms (to for example 20 ms).



Delay time settings

To set the the Digital Surround delay times:

- Press the SELECT button [26]: The OSD's Main Menu appears on the TV.
- Move the cursor to Surround Mode by pressing the OSD DOWN ▼ [28] or UP ▲ [24] key, then press SELECT [26]: the Surround Mode Menu appears.



- Select Digital Surround Mode.
- Press the cursor DOWN ▼ [28] key to move to Centre Channel, then select the required delay time with the cursor LEFT ◀ [25] and RIGHT ▶ [27] keys.
- Press the cursor DOWN ▼ [28] key to move to Surround Channel, then select the required delay time with the cursor LEFT ◀ [25] and RIGHT ▶ [27] keys.
- Press SELECT [26].
- Move the cursor to Return to Main Menu and press SELECT [26].

To set the Pro Logic delay time, repeat the above procedure, but select PRO LOGIC [13] instead of Digital Surround Mode.

Multisystem remote control

The multisystem remote control is pre-programmed at the factory to transmit RC5/6 remote control codes used by Philips and associated equipment. It can also 'learn' the remote control codes for equipment from other manufacturers.

Learning procedure

- Set the remote SLIDER SWITCH [C] to Learn.
- Press the SELECTOR keys [2] to [9] for the source to be programmed.
- On the multisystem remote control, press the key for the function to be learned: 'Learn' lights up. For a summary of learnable functions, refer to Table 3.

NOTE

If Learn flashes along with TX, the code cannot be learned, either because it is not compatible, or because the Learn memory is full.

- Take the remote control for the source and aim it at the receiver from a distance of about 20 cm, then press and hold the key of the function to be learned until 'Learn' flashes and then goes out.
- Repeat this procedure for all the codes to be learned.
- Set the remote control mode selector switch to User.

To 'unlearn' a code:

- Set the remote control mode selector switch to Learn.
- Simultaneously press the key which has learned a function and the Main Power Off key.
- Set the remote control mode selector switch to User.

To 'unlearn' all codes:

- Set the remote control mode selector switch to Learn.
- Simultaneously hold down the Main Power On and Off keys for at least 3 seconds. 'Learn' and 'TX' will flash, then go off.
- Set the remote control mode selector switch to User (or RC-5).

NOTE

Some keys can be learned dependent on the system selected e.g. digit keys and some keys can only be learned once (independent of the system) e.g. TV VOLUME UP.

Key Nr.	Name	TV	DVD	VCR	AUX 1	AUX 2	TUNER	CD	TAPE
1	Source Power	1	1	1	1	--	1	1	1
2	TV					0			
3	DVD					0			
4	VCR					0			
5	AUX 1					0			
6	AUX 2					0			
7	TUNER					0			
8	CD					0			
9	TAPE					0			
10	MAIN POWER off					0			
11	MAIN POWER on					0			
12	SLEEP					1			
13	PROLOGIC					1			
14	3-STEREO					1			
15	MOVIE					1			
16	DIGITAL					1			
17	MATRIX					1			
18	HALL					1			
19	STEREO					1			
20	OPTICAL					1			
21	COAX 1					1			
22	COAX 2					1			
23	NIGHT					1			
24	Cursor UP					1			
25	Cursor LEFT					1			
26	SELECT					1			
27	Cursor RIGHT					1			
28	Cursor DOWN					1			
29	TV MUTE					1			
30	OSD					1			
31	CH. SEL					1			
32	CH. LEVEL UP					1			
33	TV VOLUME UP					1			
34	DISPLAY					1			
35	TEST					1			
36	CH. LEVEL DOWN					1			
37	TV VOLUME DOWN					1			
38	MUTE					1			
39	VOLUME UP					1			
40	VOLUME DOWN					1			
41	1	1	1	1	1	--	1	1	1
42	2	1	1	1	1	--	1	1	1
43	3	1	1	1	1	--	1	1	1
44	4	1	1	1	1	--	1	1	1
45	5	1	1	1	1	--	1	1	1
46	6	1	1	1	1	--	1	1	1
47	7	1	1	1	1	--	1	1	1
48	8	1	1	1	1	--	1	1	1
49	9	1	1	1	1	--	1	1	1
50	MEMO	1	1	1	1	--	1	1	1
51	0 CLEAR	1	1	1	1	--	1	1	1
52	A. CH / P. SCAN	1	1	1	1	--	1	1	1
53	AUDIO	1	1	1	1	--	1	1	1
54	PREVIOUS / CH	1	1	1	1	--	1	1	1
55	PAUSE HIGHLIGHT UP	--	1	1	1	--	1	1	1
56	NEXT / CH+	1	1	1	1	--	1	1	1
57	SUBTITLE	--	1	--	--	--	--	--	--
58	Search Backward HIGHLIGHT LEFT	1	1	1	1	--	1	1	1
59	OK	--	1	--	--	--	--	--	--
60	Search Forward HIGHLIGHT RIGHT	1	1	1	1	--	1	1	1
61	ANGLE	0	1	1	0	0	0	0	1
62	STOP	--	1	1	1	--	1	1	1
63	HIGHLIGHT DOWN	--	1	--	--	--	--	--	--
64	PLAY	--	1	1	1	--	1	1	1
65	MENU	--	1	--	--	--	--	--	--
66	TITLE	--	1	--	--	--	--	--	--

0 : Not learnable.

1 : Learnable.

--: No output before learning.

Table 3 Learnable functions

If it appears that the receiver is faulty, first consult this checklist. It may be that something simple has been overlooked. Under no circumstances attempt to repair the receiver yourself: this will invalidate the Warranty.

Look for specific symptom(s). Then perform only the actions listed to remedy the specific symptom(s).

	SYMPTOM	CAUSE	SOLUTION
Trouble occurring regardless of sources, i.e. during CD playback, tape playback and FM reception, etc.	The display lights but no sound or picture is produced.	<ul style="list-style-type: none"> The input/output cord connections are incomplete. The MUTING switch is ON. The position of the function selector is not correct. The VOLUME control is turned down all the way. 	<ul style="list-style-type: none"> Make sure all connections are made securely. Press the MUTING button to turn it off. Press the function selector of the desired source. Turn the control to an appropriate level.
	Sound is output only from the left or right channel.	<ul style="list-style-type: none"> The input/output cord connections are incomplete. The left/right balance is off-center. 	<ul style="list-style-type: none"> Make sure all connections are made securely. Adjust the CH. LEVEL control correctly.
Trouble occurring during surround playback.	No sound is produced from the surround speakers.	<ul style="list-style-type: none"> The surround mode is STEREO or 3-STEREO. The input signal is monaural. A headphone is inserted. 	<ul style="list-style-type: none"> Select a mode other than STEREO or 3-STEREO. The surround channel signal is not output from monaural signals. Remove the headphone to fully enjoy Surround Sound.
	No sound is produced from the center speaker.	<ul style="list-style-type: none"> The surround mode is other than DOLBY PRO LOGIC SURROUND, 3-STEREO or MOVIE SURROUND. The center mode is 'NONE' position. 	<ul style="list-style-type: none"> Select one of the DOLBY or MOVIE modes. Select SMALL or LARGE.
Trouble in On Screen Display.	On-screen display does not display stable on the screen.	<ul style="list-style-type: none"> The OSD System is not in the correct TV System. 	<ul style="list-style-type: none"> See 'Changing the TV broadcast standard setting' on page 6.
Trouble related to remote control unit.	Remote control operation is not normal.	<ul style="list-style-type: none"> The batteries are exhausted. The remote control unit is operated too far away from the main unit. 	<ul style="list-style-type: none"> Replace both batteries with new ones. Operate the remote control unit at a closer distance to the main unit.

General malfunction

If the equipment malfunctions, this may be because an electrostatic discharge or AC line interference has corrupted the information in the equipment memory circuits.

Therefore:

- Disconnect the plug from the AC line supply.
- After waiting at least three minutes, reconnect the plug to the AC line supply.
- Re-attempt to operate the equipment.

How to reset the unit

Should the operation or display seem to be abnormal, reset the unit with the following procedure:

turn the main unit on and press and hold the COAX 2 and CD buttons simultaneously for more than 3 seconds.

Remember that the procedure will reset the settings of the function selector, Surround mode, delay time, TUNER PRESET etc., to their initial settings.

Memory backup

- In case a power outage occurs or the power cord is accidentally unplugged, the FR980 is equipped with a backup function to prevent memory data such as the preset memory from being erased. The memory functions are backed up for up to about one week.

TECHNICAL SPECIFICATIONS FR980

GENERAL FUNCTIONALITY

MPEG2 multichannel decoding (5.1)
Dolby Digital (AC-3) decoding (5.1)
3x Digital input, 1x optical + 2x coaxial
Dolby Pro Logic decoding by DSP
Output 5 x 120W Music Power
3 mode OSD; PAL, NTSC and Secam
System remote capability
Learnable remote control
AM/FM 30 random preset tuner
RDS capabilities
Auto preset memory, preset scan
Pre-out terminals

FMTUNER SECTION

Frequency range	87.5 - 108.0 Mhz
Usable sensitivity	1.3 μ V / 13.5 dBf
S/N mono/stereo	76 dB / 68 dB
THD mono/stereo	0.2 % / 0.5%
Stereo separation, 1 kHz	40 dB
ACS, \pm 300 kHz	60 dB
Image rejection, 98 Mhz	70 dB
Output level, 1 kHz \pm 40 kHz	800 mV

AMTUNER SECTION

Frequency range	531 - 1602 kHz
Usable sensitivity	500 μ V
S/N	50 dB
THD, 1 kHz at 30% mod.	0.5 %
Selectivity, \pm 9 kHz	25 dB

AUDIO SECTION

Power out stages		
Front L / R, 20 -20 kHz, 8 Ω	60W x 2	
Center, 20 -20 kHz, 8 Ω	60W x 1	
Surround, 40 - 20 kHz, 8 Ω	60W x 2	
THD front	0.05 %	
Input sens./imp.	220 mV /50 k Ω	
L/R Channel crosstalk, 1 kHz	80 dB	
Frequency response, -2 dB	10 -50 kHz	
S/N	85 dB	
Dolby channel sep. L/C/R/S	55 dB	
MPEG2 channel sep L/C/R/S	55 dB	

Delay time	AC-3:	0 -15 mSec
	MPEG2:	0 -15 mSec
	Pro Logic:	15-30 mSec
	Others:	40-90 mSec

VIDEO SECTION

Input level/imp. on comp.	1.0 Vpp/ 75 Ω
Output level/imp. on comp.	1.0 Vpp/ 75 Ω
Frequency response, -1 dB	10 - 8 Mhz
S/N	55 dB
Crosstalk	50 dB

CABINET / DIMENSIONS

Overall 439 x 158 x 458 mm (wxhxd) (include feet)
Weight 13 kg

FRONT PANEL

LED Standby
FTD-Display
Tuning frequency
Band
Memory
Auto
Stereo
Signal
Station name
Preset number
DSP mode
Multi channel mode
Night light
Delay time
Test tone indicator
Sleep mode
Volume level
Source indicator
Mute
Front controls
Power On/Off
Sources selection, 3x audio, 5x video
Digital input selector 3x

Night On/Off
Volume control
Bass control
Treble control
Balance
Pre-Set up/down
Tuning up/down
Front inputs
Headphone 6.3 mm
AUX 2 A/V in, 3 x cinch

REAR PANEL

Antenna terminal	1 x 2 screw (AM, Ground) 1 x 75 Ω , FM
AM Tuning switch	9 kHz/10 kHz
Audio input	6 x pair cinch, CD,TAPE, TV,DVD,VCR,AUX1
Audio output	2 x pair cinch,TAPE,VCR
Video input	4 x cinch,TV,DVD, VCR,AUX 1
Video output	2 x cinch,TV,VCR
Digital input (AC-3, MPEG2, PCM)	1 x optical 2 x coaxial
Pre-amplifier out	6 x cinch, front L/R, center, surround L/R and sub-woofer
Speaker terminals	5 x pair screw, front L/R, center, surround L/R
RC 5-6	2 x cinch, in, out
AC input	2 pin CE type, fixed
Voltage selector	Rotary, 110V, 115V, 220V, 230V
Fuse holder	yes

ACCESSORIES SUPPLIED

Remote control	RC 980 + batteries, 2 x AAA
FM feeder antenna	1 x ribbon type
AM loop antenna	1 x
Fuse	1 x 110V/115V (T6,3A)

