

tangent

AMP-50

Operation Manual  
Integrated Amplifier



Accessories

- 1 1 x AMP-50 Integrated Amplifier
- 2 1 x Remote control
- 3 2 x Batteries (Optional)
- 4 1 x Operation Manual



This operation manual supplies all the information that you need to have about your Tangent Integrated Amplifier. Please read this operation manual carefully before you start using the unit!

**ACCESSORIES**

Accessories 01

**CONTENTS**

Contents 02

**SAFETY PRECAUTIONS**

Safety precautions 03

**IMPORTANT SAFETY INSTRUCTIONS**

Important safety instructions 04

**IMPORTANT INFORMATION**

Important information 06

**CONNECTION**

Connection to the mains 07

**REMOTE CONTROL**

Installation of batteries 08  
 Using the remote control 08  
 Remote control functions 09

**FRONT PANEL CONNECTIONS**

Front panel 10  
 Connections 11

**CONNECTION**

Audio connection layout 12

**OPERATION AND FUNCTIONS**

ON, OFF and Standby 13  
 Selecting the input source 13  
 Using the function menu 14  
 Volume control 14  
 Bass control 15  
 Treble control 15  
 Balance control 16  
 Loudness 16

**TROUBLESHOOTING**

Troubleshooting 17

**TECHNICAL DATA**

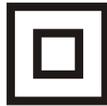
Technical data 18



A triangle with a lightning symbol draws the user's attention to "dangerous voltage" without insulation in the cabinet which may be high enough to entail a risk of electric shock.



A triangle with an exclamation mark draws the user's attention to important instructions for use and maintenance in the accompanying manual, which should be studied.



A symbol for CLASS II (double insulation)

**WARNING:**

**TO MINIMISE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE. DO NOT OPEN THE CABINET AS IT CONTAINS DANGEROUS VOLTAGE. ONLY QUALIFIED TECHNICIANS ARE ALLOWED TO CARRY OUT REPAIR AND SERVICE.**

**CAUTION:**

If the plug of the power cord needs to be replaced, it is important that the replacement is identical to the plug to be replaced, or that the new plug has been recommended by the manufacturer.

**TO AVOID ELECTRICAL SHOCK, IT IS IMPORTANT TO INSERT THE PLUG CORRECTLY INTO THE SOCKET.**

**WARNING: IT IS IMPORTANT THAT YOU READ AND OBSERVE BOTH THE INSTRUCTIONS IN THIS MANUAL AND THE INSTRUCTIONS ON THE UNIT. KEEP THIS MANUAL FOR FUTURE REFERENCE.**

This unit was designed and manufactured with a view to providing maximum safety for the user. Incorrect use of the unit may cause electrical shock or fire. The protection devices built into this unit will protect the user if the procedures below are observed in connection with installation, use and repair. This unit is fully electronic and contains no parts that can be repaired by the user.

**DO NOT REMOVE THE CABINET. RISK OF DANGEROUS VOLTAGE. ONLY QUALIFIED TECHNICIANS ARE ALLOWED TO REPAIR THE UNIT.**

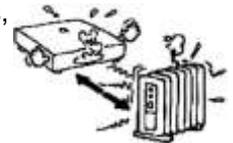
### Read the manual

Upon unpacking the unit, please read the manual carefully and observe all the instructions given.



### Heat

Do not place the unit near sources of heat such as radiators, heat registers, ovens or other units that produce heat.



### Power supply

Only the power supply indicated on the rating plate must be used for this unit. If you are not sure which power supply you have, please contact the distributor or the local electricity supplier.



### Water and moisture

The unit must not be placed close to water, such as bathtub, wash basin, kitchen sink or laundry tub, in a damp cellar or close to a swimming pool, etc.



### Cleaning

Unplug the unit before cleaning. Do not use liquid detergents and aerosol cleaning agents. Use a dry cloth.



### Earthing or polarisation

If the plug cannot be inserted properly into the socket, or if the plug does not fit, the unit must not be used in your country.



### Power cords

Wiring must be organised to prevent people from stepping on the cables and to avoid pinching by objects placed on or beside them. Take special care around sockets and plug boxes and where the power cords leave the unit.



### Ventilation

The cabinet is provided with slots and openings to ensure ventilation and reliable operation and to protect the unit against overheating. Do not block or cover these openings. The openings must never be blocked, for instance by placing the unit on a bed, a sofa, a carpet or similar surface.

### Overloading

Make sure that wall sockets, extension cords and plug boxes are not overloaded as this may lead to fire or electrical shock.



## Lightning

Unplug the unit for additional protection during thunder or when the unit is not used for prolonged periods. This will prevent damage to the unit from lightning and power surges.



## Penetration of objects and liquid

Never push any foreign objects through the openings into the unit, as they may touch dangerous voltage points or short-circuit parts and thus cause fire or electric shock. Do not spill liquid on the unit.



## Accessories

Do not place the unit on unstable surfaces such as a trolley, stand, tripod, shelf or table.

The unit may fall and injure children or adults or be seriously damaged. Use only trolley, stand, tripod, shelf or table that is very stable or provided with the Unit. The unit must be installed in accordance with the manufacturer's instructions and by means of installation equipment recommended by the manufacturer.

If the unit is placed on a trolley, the trolley must be moved very carefully. Sudden stops, unnecessary force and uneven surfaces may cause the trolley to turn over.



## Loads

Do not place heavy loads on the unit and do not step on it. The load may fall and cause serious injury to persons or damage to the unit.



## Damage

Unplug the unit and contact qualified technicians in the following cases:

- A) If the power cord or the plug is damaged.
- B) If liquid has been spilled on the unit or objects have fallen into the unit.
- C) If the unit has been exposed to rain or water.
- D) If the unit does not work properly after adhering to the instructions in the operation manual. Only the settings described in the operation manual must be made as incorrect setting may result in damage and often will make it difficult for a qualified technician to make the unit work properly again.
- E) If the unit has been dropped or damaged in any other way.
- F) When the operation of the unit changes drastically, the unit requires service.

## Service

Do not attempt to carry out any service work yourself. By opening or removing the cabinet, you will be exposed to dangerous voltage or other hazards. Any service work should be carried out by qualified technicians.



## Spare parts

If spare parts are required, make sure that the service technician uses spare parts specified by the manufacturer or spare parts with the same characteristics as the original. Unauthorised spare parts may cause fire, electrical shock, etc.

## Safety check

After service or repairs on the unit, ask the service technician to carry out a safety check to ensure that the unit is ready for use.



### Handling instructions

- The top and back panel of the unit may become warm after prolonged use. This is not due to a defect.
- Turn off the power when the unit is not used.

### Protect the power cord

Follow the instructions below to prevent abnormal operation, electrical shock, fire or personal injury:

- Hold the plug firmly when inserting it into the socket.
- Avoid heat-producing devices.
- Do not place objects on the power cord.
- Do not carry out service work on or change the power cord.

### Positioning

Do not place the unit in any of the following places:

- In sunlight, close to heat-producing devices or in an enclosed rack.
- In places with high temperatures (40C or more) or high relative humidity (90% or more).
- In dirty places as some internal parts may be damaged.

### Do not put your fingers or any other objects into the unit

- Touching the internal parts is dangerous and may cause injury or damage. Do not open the cabinet.
- Do not place any foreign matter in the unit.

### Interference

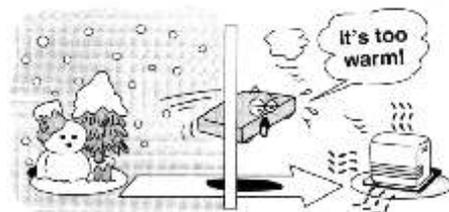
Placing the amplifier near a television set, radio or video player may cause poor picture and sound quality. In that case, move the amplifier further away from the television set, radio or video player.

### Condensation

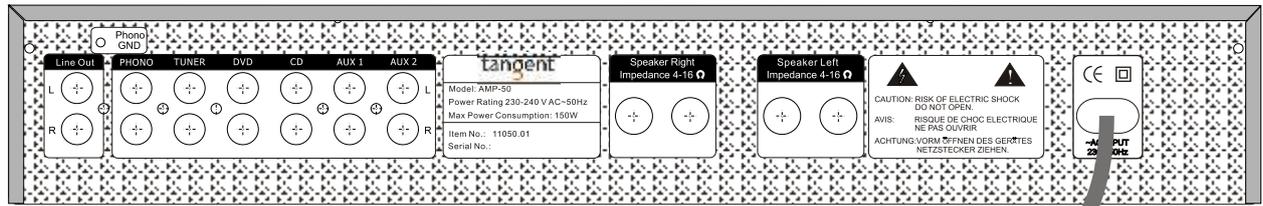
Condensation may occur in the following cases:

- When the amplifier is moved directly from a cold to a warm place.
- When the amplifier is used in a room where the radiator has just been switched on or a place where the cold air from the air-conditioning system is directed at the unit.
- If the amplifier is used in the summer in a warm and humid room just after it has been moved from an air-conditioned room.
- If there is steam or a high level of humidity in the room.

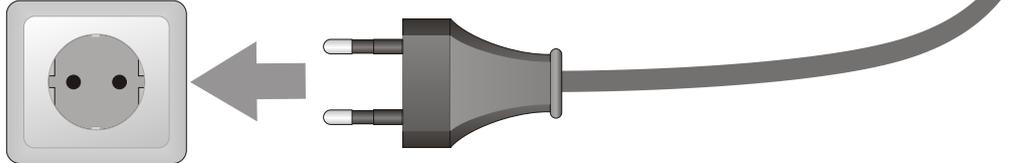
In case of condensation, the amplifier will not work properly. Turn off the unit. Unplug the unit and leave it for 2-3 hours. The amplifier will then have adapted to the environment and any condensation will have disappeared.



## Connection to the mains



230-240V AC~50Hz



Do not turn on the power before all connections have been made correctly. Check that all connections have been made correctly before turning on the power. Check that the mains voltage is 230-240V AC50Hz before turning on the power.

## Connection to the mains

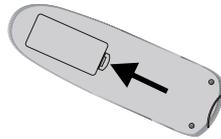
Check that all other connections have been made correctly before inserting the mains plug into the wall socket.

Then insert the plug into a suitable socket.

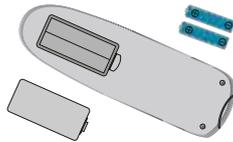
If the unit is to be used abroad, you may need an adapter.

## Installation of batteries

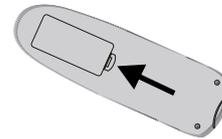
1 Remove the cover as illustrated.



2 Position two batteries of the type AAA/R03/UM4 in the battery compartment. Make sure that the orientation of the batteries is correct (see drawing at bottom).



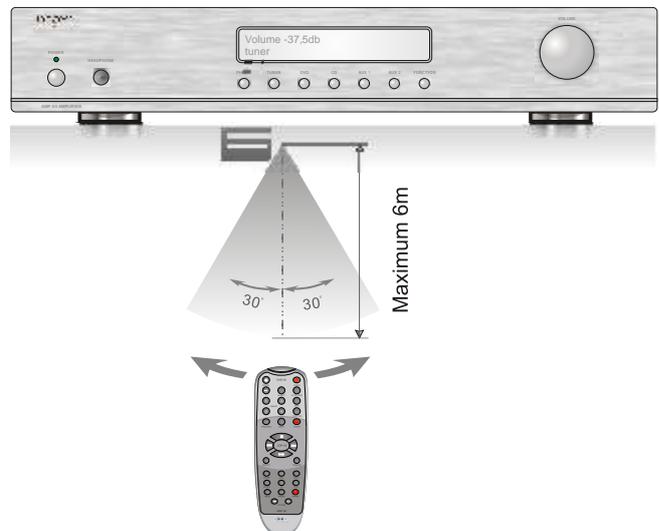
3 Replace the cover.



- Do not mix new and old batteries and do not use different types of batteries.
- If the remote control is not used for prolonged periods, remove the batteries from the remote control to avoid corrosion.

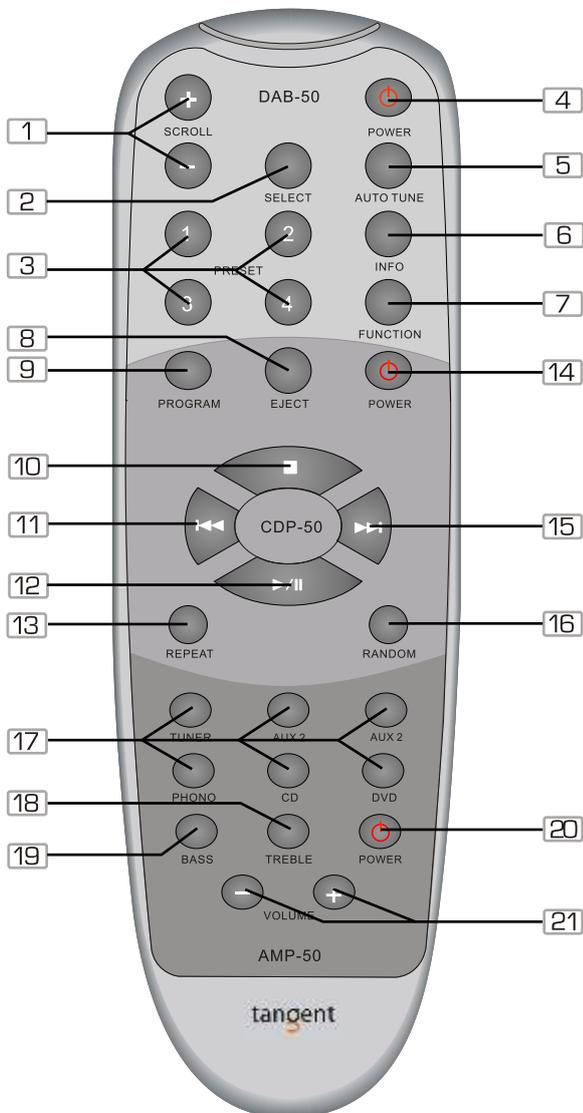
## Using the remote control

Direct the remote control at the sensor on the front panel of the amplifier. When the remote control signal is received, the unit reacts accordingly. The remote control works within a range of 6 metres.



- Sometimes the remote control does not work well in strong light. You may have to move the amplifier if it is a problem.
- Malfunction may occur if other remote controls are used near the amplifier.
- Do not place any objects on the remote control, as the batteries may become flat if a key is depressed constantly.
- Make sure that there are no obstacles between remote control and amplifier.
- Do not position the amplifier behind tinted glass as it may reduce the maximum range of the remote control.

## Remote control functions



### DAB-50 FUNCTIONS:

- 1 **Scroll +/-:** Switches between DAB and FM stations
- 2 **Select:** Switches between MONO and AUTO on the FM band, and selects the DAB station displayed.
- 3 **1-4 :** Selects stored stations. If depressed for more than two seconds, a station is stored under the number concerned.
- 4 **Power:** Sets the DAB-50 in standby mode.
- 5 **Autotune:** Press once to automatic tune in to DAB stations. Depress button for two seconds to initiate an international search. At FM, the autotune function will search for a station at a higher frequency.
- 6 **Info:** Displays RDS and DAB information.
- 7 **Function:** Switches between DAB and FM.

### CDP-50 FUNCTIONS:

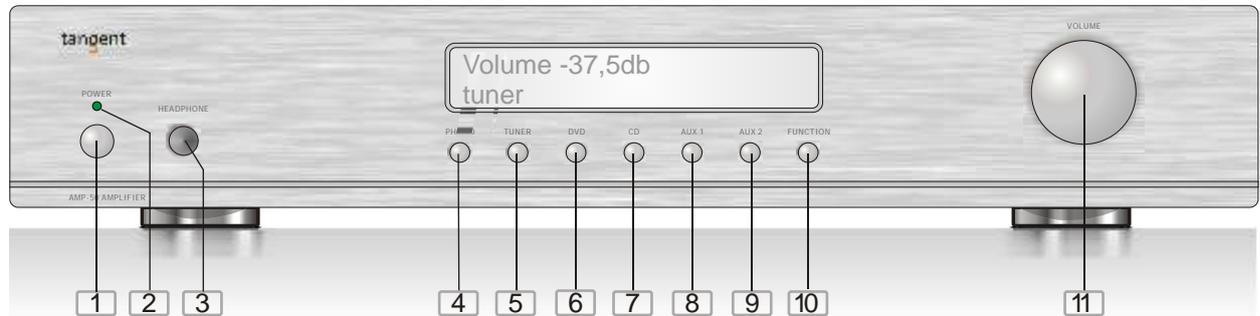
- 8 **Eject:** Opens the CD drive.
- 9 **Program:** Allows playback of the music tracks on a CD in a certain order.
- 10 **Stop:** Stops playback.
- 11 **Previous:** Selects the previous track. Depress button to rewind.
- 12 **Play/Pause:** Starts and pauses playback.
- 13 **Repeat:** Repeats a single track or all tracks on a CD.
- 14 **Power:** Sets the CDP-50 in standby mode.
- 15 **Next:** Selects the next track. Depress button for fast forward.
- 16 **Random:** All tracks are played in random order.

### AMP-50 FUNCTIONS:

- 17 **Input buttons:** Selects input of amplifier.
- 18 **Treble:** Adjusts treble level by means of VOL + and -.
- 19 **Bass:** Adjusts bass level by means of VOL + and -.
- 20 **Power:** Sets the AMP-50 in standby mode.
- 21 **Volume +/-:** Adjusts the master volume.

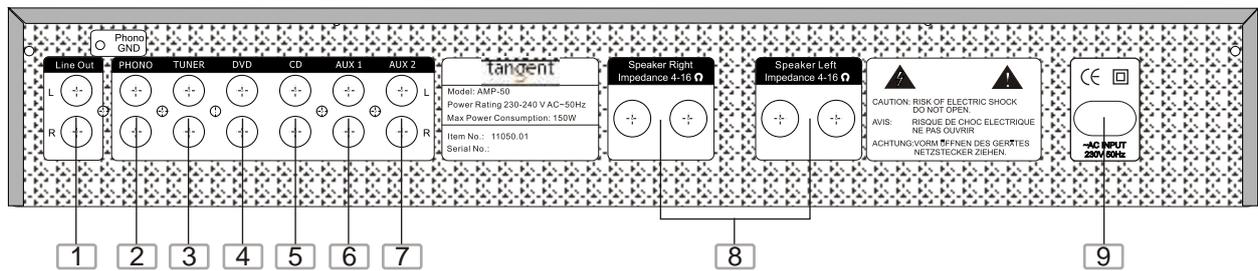
Some of the amplifier functions can only be performed by means of the remote control. Some functions are connected with the selected signal input source. Some buttons on the remote control may therefore not be available if the corresponding signal input source has not been selected.

## Front panel



- 1 **Mains switch:** Used to interrupt the mains voltage.
- 2 **LED indicator:** Lights green when the amplifier is turned on. Lights red when the amplifier is in standby mode or in operation.
- 3 **Headphone jack:** 6-mm jack that suits most headphones.
- 4 **Phono:** Activates the Phono input.
- 5 **Tuner:** Activates the Tuner input.
- 6 **DVD:** Activates the DVD input.
- 7 **CD:** Activates the CD input.
- 8 **AUX 1:** Activates the AUX 1 input.
- 9 **AUX 2:** Activates the AUX 2 input.
- 10 **Function:** Gives the user access to menu functions such as Bass, Treble, Balance and Loudness.
- 11 **Volume:** Adjusts master volume, Bass, Treble, Balance and Loudness.

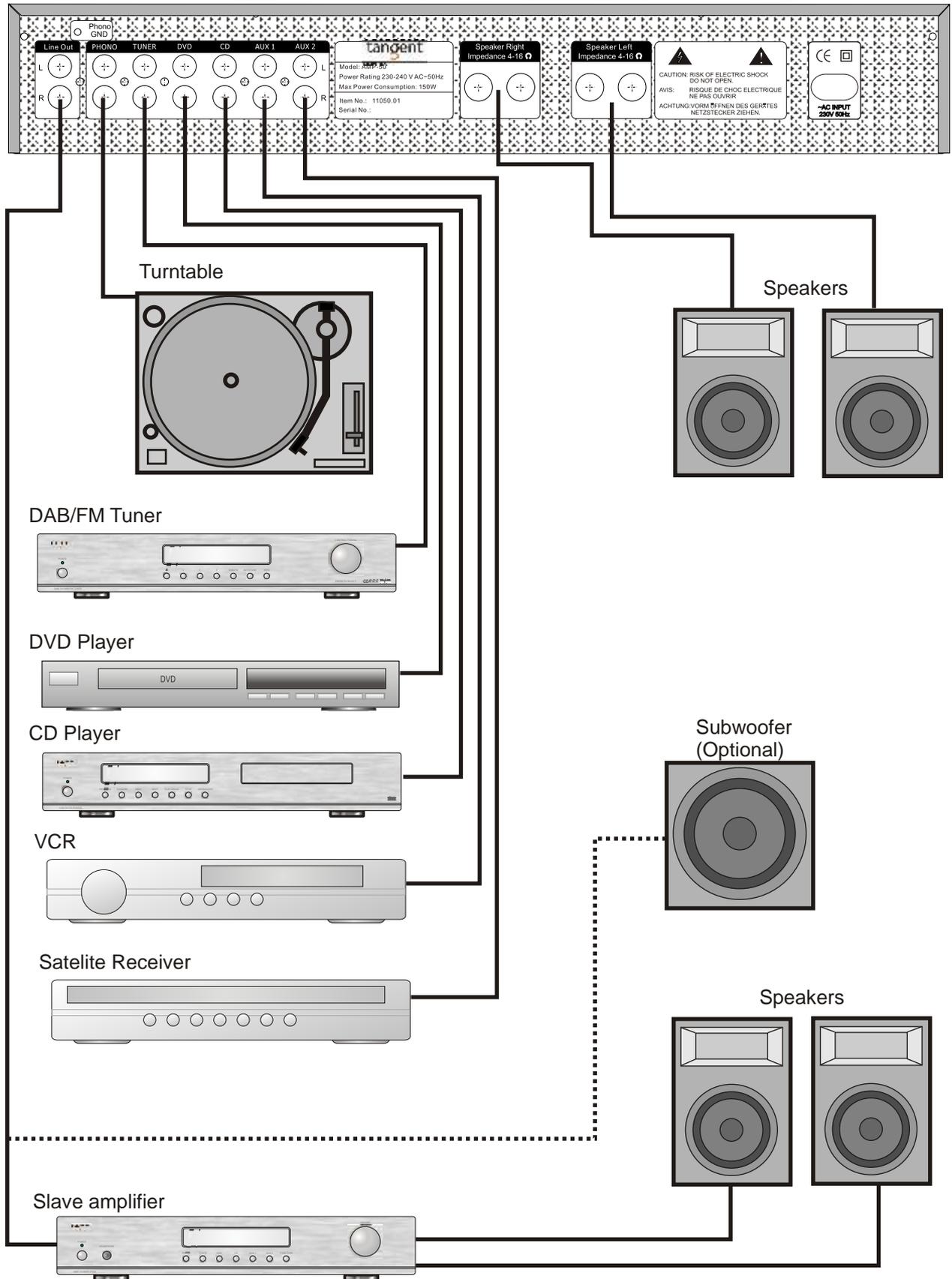
## Connections



- 1** **Line Output:** For connection of an external amplifier.
- 2** **Phono:** For connection of a record player (Note: Additional ground terminal available above inputs).
- 3** **Tuner:** For connection of FM/DAB radio.
- 4** **DVD:** For connection of DVD player (Note: Analogue stereo input).
- 5** **CD:** For connection of CD player.
- 6** **AUX 1:** For connection of optional equipment.
- 7** **AUX 2:** For connection of optional equipment.
- 8** **Speaker left & right:** For connection of loudspeakers.  
 Note: - The speaker impedance must be between 4 and 16 Ohm.  
 - For optimal sound quality there must be a proper connection between the Speaker terminals and the amplifier terminals.  
 - The cable ends must not be frayed to avoid that they come into contact with Each other or the cabinet back panel.
- 9** **AC input:** For connection of mains voltage. Make sure that the plug is correctly inserted, and that the voltage corresponds to the text printed on the cabinet back panel.

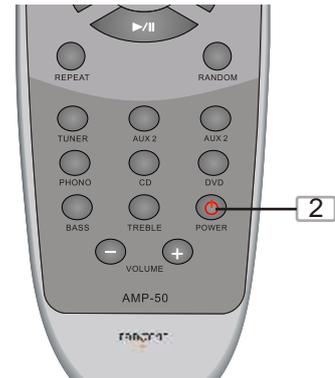
# Audio connection layout

AMP-50 Integrated Amplifier



## On, Off and standby

- 1 Turn on the amplifier by pressing the mains switch.
- 2 Press the standby button on the remote control to switch to standby mode. The display will turn off and all functions will be reduced to a minimum to make sure that the amplifier uses minimal power. When in standby mode the unit only reacts to the standby button of the remote control.
- 3 If you wish to turn off the unit to avoid any power consumption, you must press the mains switch.



Protect the environment and turn off the unit after use.



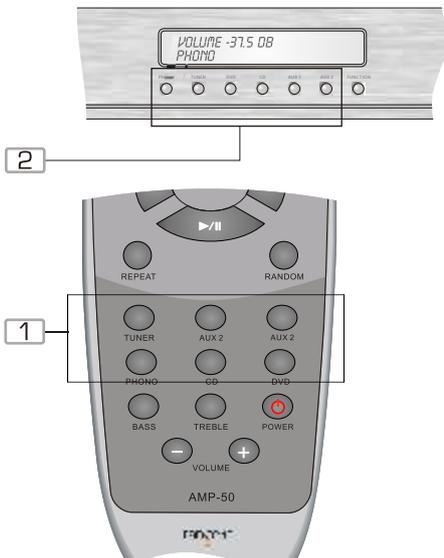
## Selecting the input source

Turn on the AMP-50.

Now you can call the input source that is active at the moment. Select Tuner to listen to the radio, CD to listen to a CD, DVD, Phono, AUX1 or AUX2 if units have been connected to these inputs.

If you do not know which input has been selected, the LCD display will clearly indicate it.

Note: All inputs are analogue stereo inputs. It means that you cannot connect a digital sound source through a digital cable (optical or co-axial).

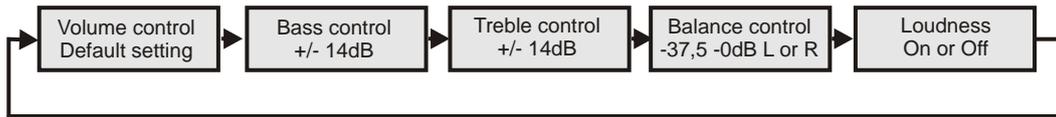


- 1 Press the Phono, DVD, CD, Tuner AUX 1 or AUX 2 button on the remote control to select the corresponding input.
- 2 Press the Phono, DVD, CD, Tuner, AUX 1 or AUX 2 button on the front panel to select the corresponding input.

## Using the function menu

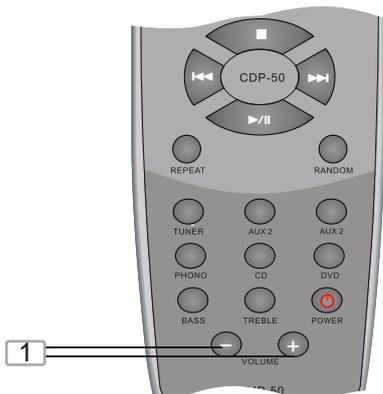
The AMP-50 features a "function menu" that allows adjustment of the following: Master volume, bass, treble, balance and loudness (see menu structure below).

A description of the individual functions will follow on the next few pages.



## Volume control

- 1 Press the VOL+ button to increase volume and press VOL- to reduce volume.
- 2 Turn the volume control to the right to increase the volume and turn the volume control to the left to reduce the volume.

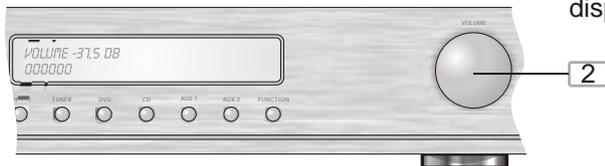


**Note:**

dB is a professional term for indicating the amplitude of an audio signal where 0 dB is the maximum output. You will see that the LCD display of the unit indicates - dB up to 0 dB which is the maximum volume.

The volume control on the front panel can be turned both clockwise and anticlockwise to change the volume. The volume control includes 64 steps, from -78,75 dB for minimum volume and up to 0 dB for maximum volume. The display also features a bar in the second line that consists of 16 squares that indicate the volume. The longer the bar, the higher the volume.

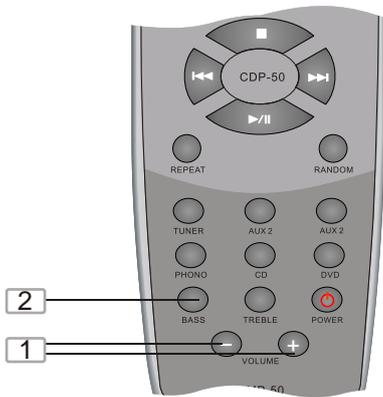
When the volume control is operated, the first line of the display will switch from information on input source to information on volume. When the volume control is no longer operated, information on input source will be displayed again after five seconds.



## Bass control

This amplifier features bass control that allows adjustment of the bass level by +/- 14 dB, from 45Hz to 259Hz.

Please note that the high bass boost level offered by the bass control may lead to permanent damage to your loudspeakers if the high volume is used for prolonged periods.



- 1 Press the BASS button on the remote control to activate the bass tone control.
- 2 Press VOL+ and VOL- to adjust the bass level.
- 3 If you wish to adjust the bass level through the front panel, you must press the FUNCTION button once until information on bass adjustment is displayed.
- 4 Then turn the volume control to adjust the bass level.

**Note:**

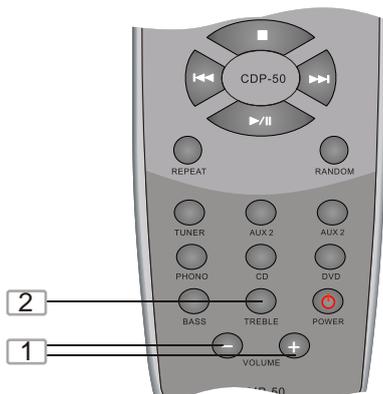
If the bass control is not operated within five seconds, the display will return to the volume information display.



## Treble control

This amplifier features treble control that allows adjustment of the treble level by +/- 14 dB, from 2KHz to 20KHz.

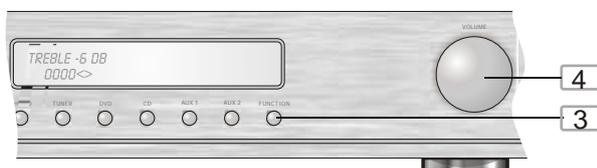
Please note that the high treble boost level offered by the treble control may lead to permanent damage to your loudspeakers if the high volume is used for prolonged periods.



- 1 Press the TREBLE button on the remote control to activate the treble tone control.
- 2 Press VOL+ and VOL- to adjust the treble level.
- 3 If you wish to adjust the treble level through the front panel, you must press the FUNCTION button once until information on treble adjustment is displayed.
- 4 Then turn the volume control to adjust the treble level.

**Note:**

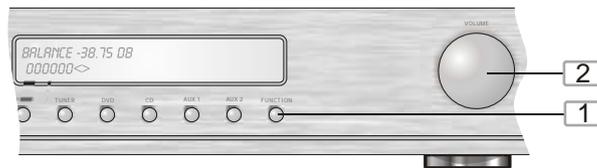
If the treble control is not operated within five seconds, the display will return to the volume information display.



## Balance control

This amplifier features balance control that allows adjustment of the volume of one loudspeaker at a time by +/- 38,75 dB, divided into 32 steps.

This function is used to compensate for a non-centred listening position, and makes it possible to get back the stereo perspective.



- 1 Press the FUNCTION button on the front panel three times until information on balance control is displayed.
- 2 Turn the volume control to adjust balance.

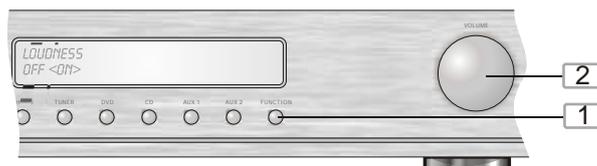
### Note

If the balance control is not operated within five seconds, the display will return to the volume information display.

## Loudness

This amplifier features a loudness function that allows boosting of the volume of the low frequencies at low volume.

This function is active at frequencies between 20Hz and 800Hz, and the function is dampened when the amplifier volume is increased. When the volume is at the maximum setting, the loudness function is completely cut out.



- 1 Press the FUNCTION button on the front panel four times until information on loudness is displayed.
- 2 Turn the volume control to the right to activate the loudness function and to the left to deactivate the loudness function.

### Note

If the loudness function is not operated within five seconds, the display will return to the volume information display.

## Troubleshooting

PROBLEM	CAUSE/REMEDY
No power when the amplifier is turned on.	<ul style="list-style-type: none"> <li>-Switch on the electric current at the socket.</li> <li>-Check that the plug has been correctly inserted into the socket.</li> <li>-The internal fuse has blown and must be replaced by a qualified service technician.</li> <li>-The power cord has been damaged and must be replaced</li> </ul>
No sound.	<ul style="list-style-type: none"> <li>-The amplifier has not been turned on.</li> <li>-The volume control is set at a minimum (see page 14).</li> <li>-The speaker cables have not been correctly connected.</li> <li>-A wrong input source has been selected.</li> <li>-No input source has been connected.</li> </ul>
There is sound in one channel only.	<ul style="list-style-type: none"> <li>-The balance control is not correctly adjusted (see page 16).</li> <li>-The audio input cables have been incorrectly connected or damaged.</li> <li>-The input source is defective.</li> <li>-The speaker cables have been incorrectly connected or damaged.</li> <li>-The speakers are defective.</li> </ul>
High buzzing.	<ul style="list-style-type: none"> <li>-The audio input cables have been incorrectly connected or damaged.</li> <li>-The ground cable for the record player has not been connected.</li> <li>-The record player pick-up is defective.</li> </ul>
Weak bass and poor stereo perspective	<ul style="list-style-type: none"> <li>-The speaker connection is out of phase. Check that the positive and negative poles have been correctly connected, both at the back of the amplifier and at the back of the speaker.</li> </ul>
Distortion of sound.	<ul style="list-style-type: none"> <li>-Some of the conductor wires of the speaker cable are in contact with each other which causes distortion.</li> <li>-Bass and treble controls are set too high in relation to speaker specifications.</li> <li>-The volume is set too high.</li> </ul>
The LCD display does not display any information.	<ul style="list-style-type: none"> <li>-The amplifier is defective and should be serviced by a qualified technician.</li> </ul>
"ERROR 1" is displayed on the LCD display	<ul style="list-style-type: none"> <li>-The amplifier is defective and should be serviced by a qualified technician.</li> </ul>
The unit does not switch between inputs modes	<ul style="list-style-type: none"> <li>- The amplifier is defective and should be serviced by a qualified technician.</li> </ul>

## Technical data

<b>Phono input</b>		
Input impedance		47 KOhm
Input sensitivity		3.8mV
<b>Line level inputs</b> (Tuner, CD, DVD, AUX1, AUX2)		
Input impedance		47 Kohm
Input sensitivity		200mV
<b>Line level outputs</b>		
Output impedance	Line out	100KOhm
	Headphones	300Ohm
Maximum output level	Line out	740mV
	Headphones	1.25V
<b>Tone control</b>		
Treble		+/- 14dB
Bass		+/- 14dB
Output power		2 x 40 Watt at 4 Ohm 2 x 30 Watt at 8 Ohm
Frequency response		10Hz to 63KHz (-3dB)
Distortion		<0.05%
Signal/noise ratio		>90dB
Voltage and power consumption		See back panel
Dimensions (WxDxH)		430 x 290 x 75mm
Weight		5.3Kg

We reserve the right to change the technical data and the design of the product without notice as a result of further development.

tangent

[www.tangent-audio.com](http://www.tangent-audio.com)