

Combo 60

1 - Safety information

Important safety information



This unit is intended for indoor use only. Do not use it in a wet, or extremely cold/hot locations. Failure to follow these safety instructions could result in fire, electric shock, injury, or damage to this product or other property.



Any maintenance procedure must be performed by a CONTEST authorised technical service. Basic cleaning operations must thoroughly follow our safety instructions.



This product contains non-isolated electrical components. Do not undertake any maintenance operation when it is switched on as it may result in electric shock.

Symbols used



This symbol signals an important safety precaution.



The WARNING symbol signals a risk to the user's physical integrity. The product may also be damaged.



The CAUTION symbol signals a risk of product deterioration.

Instructions and recommendations

1 - Please read carefully :

We strongly recommend to read carefully and understand the safety instructions before attempting to operate this unit.

2 - Please keep this manual :

We strongly recommend to keep this manual with the unit for future reference.

3 - Operate carefully this product :

We strongly recommend to take into consideration every safety instruction.

4 - Follow the instructions:

Please carefully follow each safety instruction to avoid any physical harm or property damage.

5 - Avoid water and wet locations :

Do not use this product in rain, or near washbasins or other wet locations.

6 - Installation :

We strongly encourage you to only use a fixation system or support recommended by the manufacturer or supplied with this product. Carefully follow the installation instructions and use the adequate tools.

Always ensure this unit is firmly fixed to avoid vibration and slipping while operating as it may result in physical injury.

7 - Ceiling or wall installation :

Please contact your local dealer before attempting any ceiling or wall installation.

8 - Ventilation :

The cooling vents ensure a safe use of this product, and avoid any overheating risk. Do not obstruct or cover these vents as it may result in overheating and potential physical injury or product damage. This product should never be operated in a closed non-ventilated area such as a flight case or a rack, unless cooling vents are provided for the purpose .

9 - Heat exposure :

Sustained contact or proximity with warm surfaces may cause overheating and product damages. Please keep this product away from any heat source such as a heaters, amplifiers, hot plates, etc...

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING : This unit contains no user-serviceable parts. Do not open the housing or attempt any maintenance by yourself. In the unlikely even your unit may require service, please contact your nearest dealer.
In order to avoid any electrical malfunction, please do not use any multi-socket, power cord extension or connecting system without making sure they are perfectly isolated and present no defect.

Sound levels

Our audio solutions deliver important sound pressure levels (SPL) that can be harmful to human health when exposed during long periods. Please do not stay in close proximity of operating speakers.

Recycling your device

- As HITMUSIC is really involved in the environmental cause, we only commercialise clean, ROHS compliant products.
- When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

10 - Electric power supply :

This product can only be operated according to a very specific voltage. These information are specified on the label located at the rear of the product.

11 - Power cords protection:

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at lugs, convenience receptacles and the point where they exit from the fixture.

12 - Cleaning precautions :

Unplug the product before attempting any cleaning operation. This product should be cleaned only with accessories recommended by the manufacturer. Use a damp cloth to clean the surface. Do not wash this product.

13 - Long periods of non use :

Disconnect the unit's main power during long periods of non use.

14 - Liquids or objects penetration :

Do not let any object penetrate this product as it may result in electric shock or fire. Never spill any liquid on this product as it may infiltrate the electronic components and result in electric shock or fire.

15 - This product should be serviced when :

Please contact the qualified service personnel if :

- The power cord or the plug has been damaged.
- Objects have fallen or liquid has been spilled into the appliance.
- The appliance has been exposed to rain or water.
- The product does not appear to operate normally.
- The product has been damaged.

16 - Inspection/maintenance :

Please do not attempt any inspection or maintenance by yourself. Refer all servicing to qualified personnel.

17 - Operating environment :

Ambient temperature and humidity: +5 - +35°C, relative humidity must be less than 85% (when cooling vents are not obstructed).
Do not operate this product in a non-ventilated, very humid or warm place.

1 - Introduction

Thank you for purchasing the COMBO60.

You are now in possession of a high-quality, intelligent product which will meet your every need.

This COMBO60 was designed after many years of experience and research and quickly became a top-of-the-range product in its category.

The user guide you are currently reading will help you getting familiar with your device.

Please keep it within reach during the first uses.

2 - Main characteristics

Amplifier:

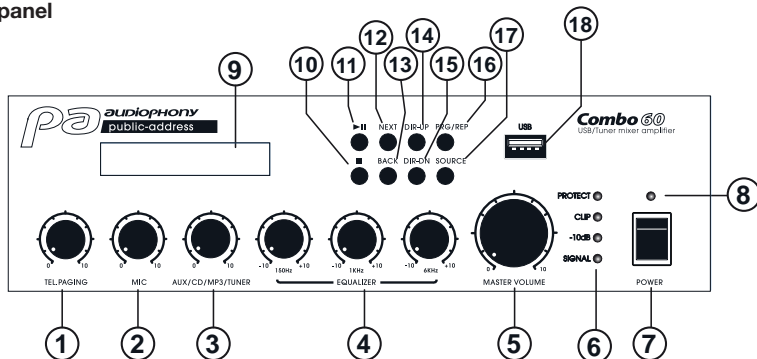
- 1 Mic input via asymmetrical Jack socket
- 1 USB input for built-in media player
- 2 Line inputs (selector via the rear panel)
- Tele-paging input with gain control
- Music on hold output
- 4, 8, 16 Ohms or 100V
- 3-way equalizer, +/-10 dB

Multimedia module (supplied)

- MP3 player via USB key
- AM/FM Tuner with frequencies memory
- LCD Display

4 - Description

4.1 - Front panel



[1] TEL PAGING Volume control fader

Allows you to configure the tele paging volume from 0 (minimum) to 10 (maximum). You can use the MIC-DESK (optional) microphone with the XLR/JACK 6.35 cable.

[2] MIC Volume control fader

Allows you to configure the volume of the microphone from 0 to 10.

[3] AUX/CD/MP3/TUNER Volume control fader

Allows you to configure the volume of the AUX, CD and internal module from 0 to 10.

[4] Equalizer buttons

Allow you to control the level of each frequency. There are 3 frequencies (as written below each fader): 150 Hz (basses), 1 kHz (mediums), 6 kHz (trebles). Variation range of +/-10 dB.

[5] Master Volume fader

Allows you to configure the main volume of the amplifier from 0 to 10.

[6] Volume output indicators

These LEDs light up to indicate the volume output. The PROTECT LED indicates the unit is in Protection mode. The protection mode is a safety mode preventing the unit from functioning when a problem occurs (short-circuit, excessive temperatures or sound levels). The CLIP LED lights up to indicate the amplifier is overheating or the speakers might be damaged.

[7] ON/OFF Power switch

Turns the unit ON or OFF.

[8] Power indicator

Lights up when the unit is turned ON.

[9] LCD display

Displays the information about the status of the module or the track currently being played.

[10] Stop button

In USB mode:
Stops the track currently being played.

[11] Play/Pause button

In USB mode:
Pauses or plays the track currently being played.

[12] NEXT button

In USB mode:
Skips to the next track.

[13] BACK button

In USB mode:
Goes back to the previous track.

[14] DIR-UP button

In USB mode:
Skips to the next folder.

In Tuner mode:

Press this button to skip to the next frequency memory.
Hold this button to browse through memories.

[15] DIR-DN Button

In USB mode:

Press this button to skip to the previous folder.

In Tuner mode:

Press this button to skip to the previous frequency memory.

Hold this button to browse through memories.

[16] PRG/REP Button

In USB mode:

Allows you to create programs (playlists).

To create a program, stop the track being played and press the **PGR/BND** button. The screen indicates **P01**.

- Select a folder and file.
- Press **PGR/BND** to confirm your choice. The screen indicates **P02**.
- Select a folder and file.
- Press **PGR/BND** to confirm your choice. The screen indicates **P03**.

Repeat the same steps until the playlist includes all the tracks you want.

Press the **PLAY/PAUSE** button to launch the playlist.

To cancel a program, press **STOP**, then press **STOP** a second time. The program has been erased.

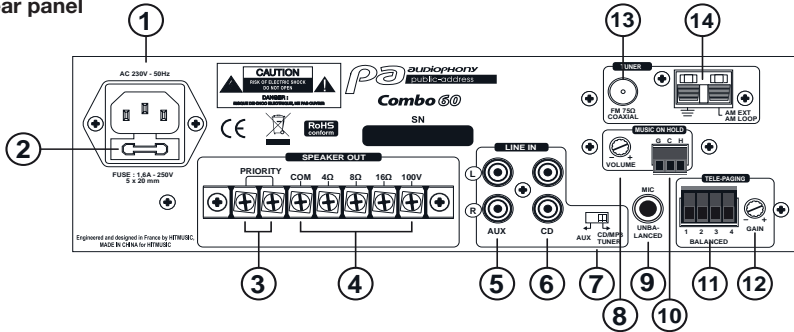
[17] SOURCE button

Allows you to select a source: Tuner AM, Tuner FM, CD, or USB. Press this button to browse through sources.

[18] USB connector

This USB slot is dedicated to USB Mass Storage devices. We strongly recommend to use only FAT-formatted devices.

4.2 Rear panel



[1] Power socket

Connector to be used with the supplied power cord. Please only use the supplied power cord or equivalent.

[2] Fuse compartment

If need to change the fuse, replace it with one with the exact same characteristics.

[3] Priority terminal

Connect here the microphone or tele-paging device you want to give priority to. In this case, other sources will be dimmed while you are using the mic or the tele-paging.

[4] Loudspeakers terminal

Connect your speakers here as follows:

- When using 100V speakers, connect the com to the COM connector and the positive to the connector corresponding to the chosen zone. When using a multi-zone system, connect all the coms to the COM connector. The total power of the speakers must not exceed the maximum power of the amplifier.
- When using 16 to 4 Ohms speakers (or a set of speakers), plug the GND connector and the + to the 4 Ohms connector. In this case, the total power of the speakers must be identical to the amplifier power (+/- 10%) and the total impedance must be below 4 Ohms.



WARNING: Dangerous output voltage (100V)
Please use electric cables compliant with the current safety regulations.

[5] AUX input

Connect to this unbalanced line level RCA socket (-10dB) your CD or MP3 player, etc.

[6] CD input

Connect to this unbalanced line level RCA socket (-10dB) your CD or MP3 player, etc.

[7] AUX/CD-MP3-Tuner selector

Allows you to choose between the AUX and CD inputs. The selected source will be the only one accessible from the SOURCE menu. Selecting the AUX input will cancel the use of the internal media player.

[8] MUSIC ON HOLD volume button

Allows you to adjust the MUSIC ON HOLD volume settings.

[9] Mic input

This unbalanced Jack 6.35 input allows you to connect a microphone.

[10] Music on Hold output

Allows you to choose the music on hold used by the COMBO60 when used with a telephone terminal equipment.

[11] Tele-paging input

Connect here your tele-paging system (remote messaging).

[12] Tele-paging gain control

Allows you to adjust the volume of the tele-paging.

[13] FM Antenna

Connect your FM antenna here.

[14] AM Antenna

Connect your AM antenna here.

4.3 - Functions and additional information

PRIORITY connectors

Allow you to connect a dry contact switch. When these two borns are connected, all the other sources (AUX and CD inputs) will be dimmed. The default parameter is -30dB.

MUSIC ON HOLD connectors

Allow you to connect an amplifier to your telephone switchboard in order to send a musical signal during the music on hold. Your switchboard must feature this function. The wiring must be operated by a qualified technician. Wiring: the signal must be sent to pins C and H.

TELE PAGING connectors

The TEL IN 1-3 connectors allow you to connect a public-address system to your amplifier. Any incoming signal will be a priority. The settings will go back to normal after the announcement.

Wiring: The PA system must be connected to pins 1 and 3.

Pin 1 is the negative (-Ve) Pin 2 is the mass, Pin 3 is the positive (+Ve) while Pin 4 is used for the Mute.

Any signal detected via Pin 4 is a priority signal.

Connecting your USB key

Connect your USB key before turning on the COMBO60. The default mp3 mode is "full loop", the unit will read all the tracks contained in a loop. Only use compatible formats: the key or HDD must be FAT-formatted, with a maximum of 500 Gb. Moreover, the player can read files up to 48 kHz. The sampling rate is limited to 320 kbs. We strongly advise against using devices containing other types of files (images, videos, etc).

USB folder tree

The USB key player can read up to 99 folders max. Each folder can contain up to 999 files. Beyond these limits, the player will not detect tracks. Moreover the tree folder cannot include more than 8 layers, including the root directory.

4.4 - Output terminal

The output terminal is located at the rear and can be used to plug Banana connectors or bare wires. The black socket is the com while the red sockets are the positive (the choice depends on the voltage).

Please only use loudspeakers whose transformers have a total power lower than the power of the amplifier.

If using a loudspeaker system between 4 and 16 Ohms, use the corresponding 4-16 Ohms output. In this case, the total power of the speakers must be closed to the total power of the amplifier (+/-10%).

The impedance must not be lower than 4 Ohms or high than 16 Ohms in order to prevent any damage to the amplifier.

5 - Cable diameter depending on the installation:



WARNING :
The SPEAKER OUTPUT delivers a dangerous voltage of 100 V
Please turn your system off when changing cables.



You will find below an indicative table of the cable diameter to use depending on the power and distance:

Amplifier power: 100V	0,75mm ²	1,0mm ²	1,5mm ²	2,5mm ²	4,0mm ²
30W	800m	1000m	1600m	2600m	4200m
60W	400m	500m	800m	1300m	2100m
120W	200m	250m	400m	600m	1000m
240W	100m	130m	200m	300m	500m

The speakers should always be wired in parallel and the sum of the speakers power must never exceed the nominal power, failing which severe damages to the amplifiers may occur.

Please use cables compliant with the current electrical standards and safety regulations.

6 - Wiring a 100V line:

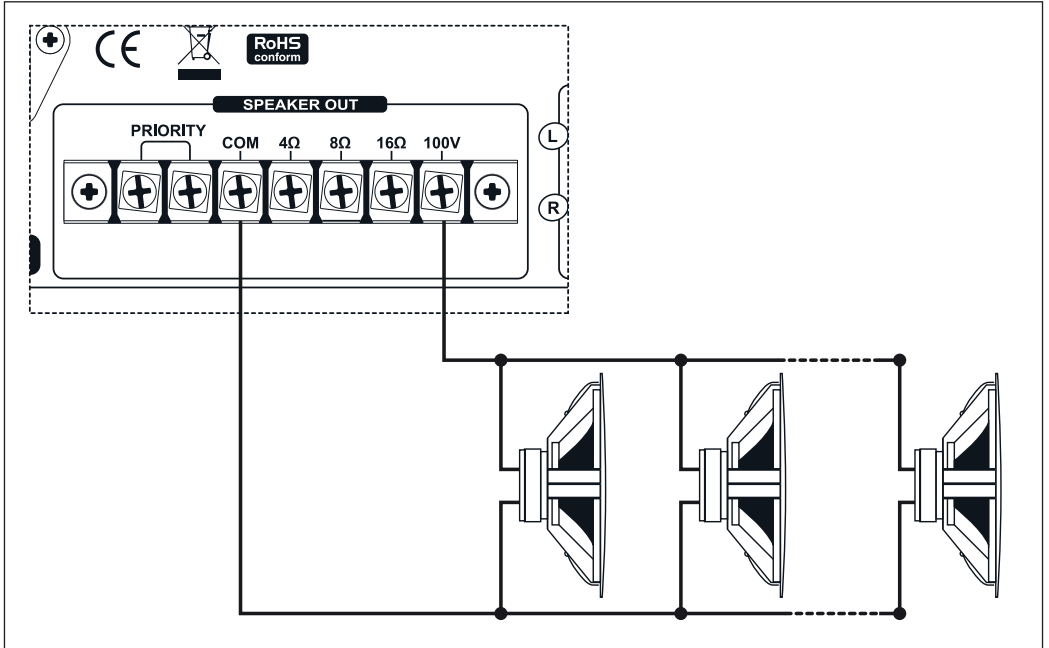
Wiring the speakers:

The COM terminal regroups the connectors of each zone.

The speakers can be wired in parallel.

The sum of the speakers power must not exceed the power of the amplifier.

The total impedance of the speakers must not be lower than the minimum output impedance.



7 - Technical data

RMS power	60 W
Power supply	230V - 50Hz
Fuse	1,6 A - 250V
THD	2.5%
Minimum output impedances	4Ω, 8Ω, 16Ω, 166Ω at 100V and 82Ω at 70V
Frequency response	100Hz – 20KHz
Microphone input	1mV @ 600Ω
AUX input	200mV @ 50KΩ
CD input	500mV @ 50KΩ
Tele-paging input	100mV – 900mV (Bal.)
Music on hold output	1w max@ 32Ω
Signal to noise ratio for mic	>60dB
Signal to noise ratio for AUX/CD	>70dB
Equalizer settings range	±10dB
Dimensions HxWxD mm	90x270x260mm
Weight	5 kg

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