

Brunetti

customwork

USER'S MANUAL

MERCURY EL34

MERCURY: ... A synonym of liquid metal... Elegant and escaping ... Just like those that are very difficult to domesticate....

This is how the personality of this amplifier can be defined. It transmits a huge emotional charge: the fluidity of the notes creates a net sensation of a liquid sound that is pure and present. The touch determines the harmonious consistency of the notes that surround everything, just like water when it flows. Adjectives that often clash in the description of a sound, here they are united in perfection...

ASSEMBLED/WIRED _____

ELECTRONIC TEST _____

PLAY TEST _____

LOCATION/DATE _____

This manual contains a lot of information required to have in-depth knowledge of the equipment. Therefore we recommend that you read this manual carefully in order to use its potentials to the very best. All of our products are made on an artisan basis and therefore you may find some small acoustic and/or structural differences. This is the very best guarantee of a truly hand-made product.





Customwork

is a project that I have been working on for a long time. Just like all projects, it was born from a very strong passion together with the need to build something that was simple yet complete, elegant and without compromises. All of this made me aware that I wanted to reach a new objective by launching a new challenge with myself and therefore starting off on a trip towards research into a new conception of sound.

This new range of products is completely new, developed through more than two years of research and analysis. All of this represents the very best that I ever wanted for this kind of product. The philosophy in terms of development redesigns classical guitar amplification, enhanced by technical solutions that are completely different and modern. Throughout my long experience in the field of tube amplification, I began in an attempt to find a new sound that would have allowed the Brunetti name to stand out from the rest and that could satisfy the greatest number of musicians demands, from amateurs to semi-professionals and right through to professionals. The results provided me with great satisfaction, so much so that they made my equipment unique, sought after and sometimes even difficult to find. During these years of activity I have listened to, repaired and modified a lot of amplifiers that have made their mark in history and have characterised modern sound, from Fender (Showman, Bassman, Twin) right through to Marshall (from Plexi to the "vintage" JCM800).

To do this I realised that I had to integrate the idea of building so-called modern amplifiers (High Gain) with the idea of creating softer sounds, well aware that I had to sacrifice "distortion" in favour of timber quality. This new kind of approach proved that I was right. By dedicating all of my experience to the study of a kind of amplification that could refer to "classical" sounds, I managed to create a range that included the complement or the completion of that kind of sound, but I made it current and modern.

Their field of action ranges from warm and round sounds of jazz/blues to the balanced and current sound of pop-rock, right through to the thick and heavy notes of hard rock.

Unique, with different characteristics and personalities but with a huge common denominator... a natural sound, fluid and free of any dynamic restriction.

Marco Brunetti



The components and the construction

In what was supposed to be an amplifier a step above the rest, I obviously had big ideas in terms of its construction and components, elements that had a macroscopic importance in the final results.

- * Plywood birtch cabinet 19mm (3/4")
- * Steel nichel coated CNC chassis 15/10 mm
- * 3,2mm thick fiberglass components support
- * Carbon composition resistors in the signal path
- * Polypropilen or silver mica capacitors
- * Opto switching
- * 24 mm multiwiper pots
- * F&T Germany electrolytic capacitors
- * MERCURY MAGNETICS custom made output transformers
- * Wired with Thermax/Belden PTFE silver/nichel

Everything used to create a *Customwork* is assembled by hand in Italy
Many of its components are built in Italy.

Specifications

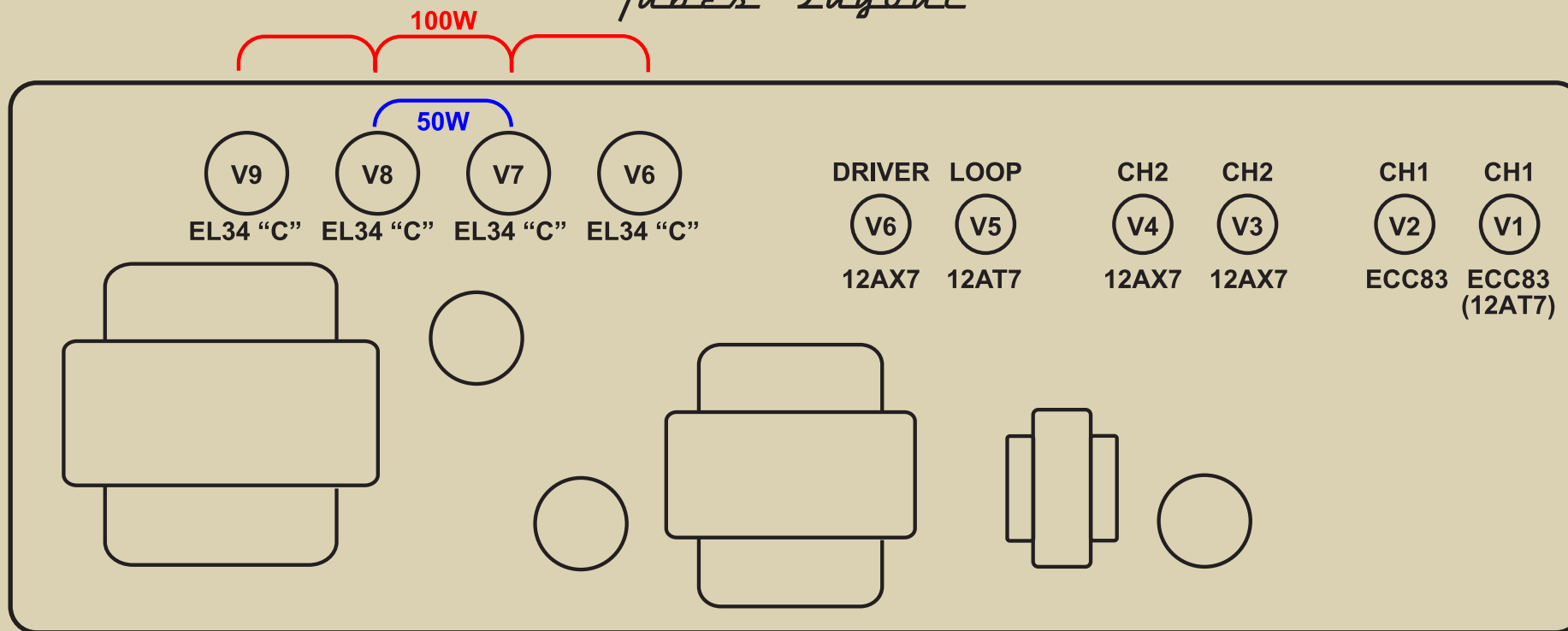
POWER	50W or 100W
CHANNELS	2 separated signal path, CH1 e CH2 (footsw)
BOOST	on CH2 adds gain (footsw)
MORE VOLUME	adds more volume on both channels (footsw)
LOOP	12AT7 buffered and trasparent. Serial/Parallel switch with adjustable Return level. True bypass function (footsw)
SWITCHING	Manual, Footswitch (supplied) and Remote jacks
TUBES	5 x12AX7/ECC83 - 1X12AT7 2 x EL34 SED "C" (50W) / 4 x EL34 SED "C" (100W)
DIMENSION	640 x 270 x 230 mm
WEIGHT	17kg

Equipment

- Power supply cord
- Footswitch with cable
- Operation manual
- Cover



Tubes Layout



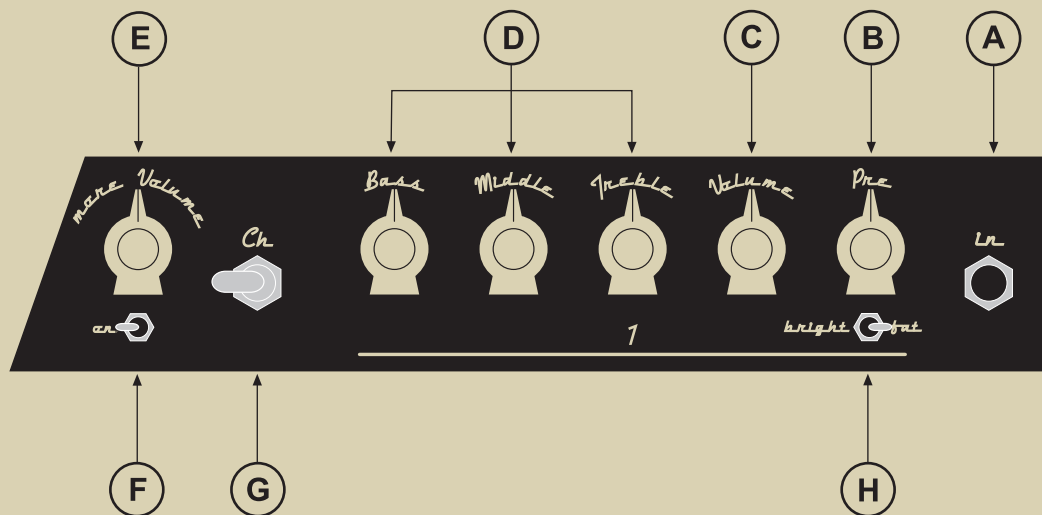
WARNING !!

TUBES REPLACEMENT

- CH1 ---> V1 **ECC83 JJ** or **12AX7 LPS (SOVTEK)**. **12AT7A TAD (SINO)** oR **ECC81 JJ** for **LOWER GAIN!!**
- CH1 ---> V2 **ECC83 JJ** or **12AX7 LPS (SOVTEK)**
- CH2 ---> V3 **12AX7A TAD (SINO)**
- CH2 ---> V4 **12AX7A TAD (SINO)**
- LOOP ---> V5 **12AT7 TAD (SINO)** o **ECC81 JJ**
- DRIVER ---> V6 **12AX7 TAD (SINO)** o **12AX7 LPS (SOVTEK)** o **12AX7 EH (Electro Harmonix)**
- EL34 ---> V6/V7/V8/V9 **EL34 SED "C" winged logo**

Ch1

A clean, full bodied and warm sound. It may generate a moderate level of saturation if overdriven, always maintaining a high level of definition and impact. The astonishing thing is the quantity of sound "information" returned, which is decisively above the average of all commercial amplifiers. A Stratocaster lets out extremely warm notes, with astounding dynamics. The Les Paul transmit their natural aggression with an extraordinary level of elegance.

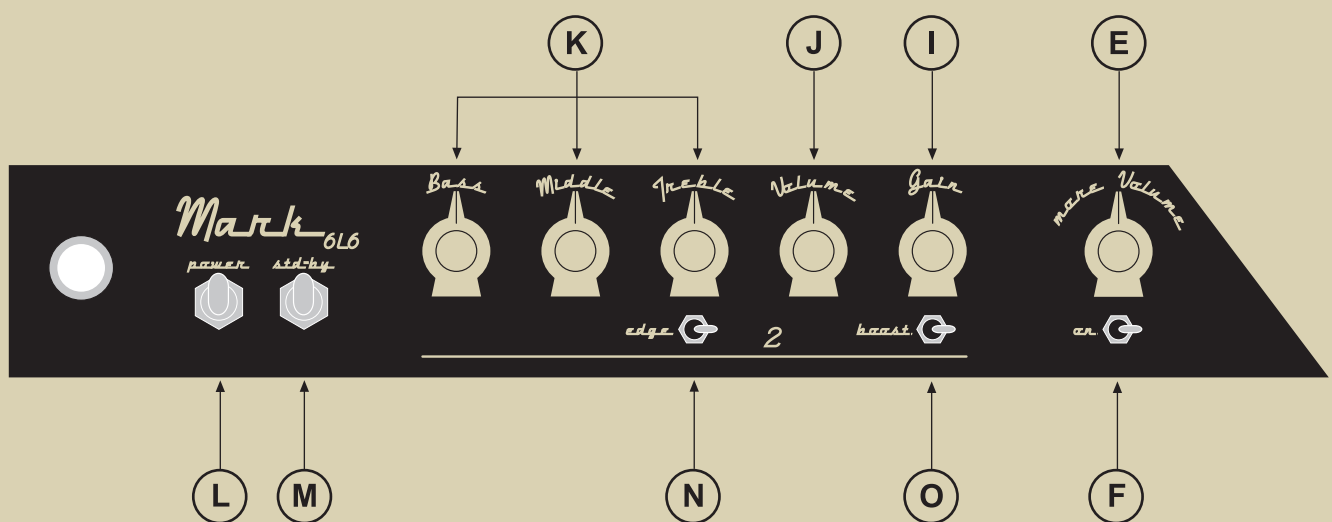


- A** Jack input. The head only has one jack input for both channels.
- B** Pre-amplification level control. A perfectly clean sound or a very dynamic and reactive "crunchy" sound can be created through regulation
- C** Channel volume control
- D** Tone controls
- E** **More Volume.** This function (that can be activated using the footsw on both channels) increases the volume of the channel selected, without changing the timber. When this function is inserted and it is regulated to zero, the level of volume is the same as the one regulated on the channel itself. Increasing this control leads to a progressive increase in volume that can be set according to your specific requirements.
- F** The switch for activation of the function. If the footsw is used together with the switch, it should be positioned to ON.
- G** Channel change switch. If the footsw is used, the switch should be positioned to channel 2.
- H** This control allows you to move the timber balances of the channel, generating a much more brilliant and dry (**Bright**) or a much more consistent sound (**Fat**)

Ch.2

With the typical setting of the British Seventies/Eighties, the versatility of this channel will definitely go beyond your expectation. The work field of the Gain is very broad, from a clean "light dirty" that can be used to provide greater consistency to the clean rhythmic parts, right through to the extremely powerful "Brown drive" without any indecision whatsoever. The Boost function divides the channel into two parts: one is very vintage (Boost Off) while the other (Boost On) pushes saturation by expanding the gain and literally "fluidifying" sound.

Control of the gain mixed with the volume of the guitar will allow you to play using this channel alone.



- E** **More Volume.** This function (that can be activated using the footsw on both channels) increases the volume of the channel selected, without changing the timber. When this function is inserted and it is regulated to zero, the level of volume is the same as the one regulated on the channel itself. Increasing this control leads to a progressive increase in volume that can be set according to your specific requirements.
- F** The switch for activation of the function. If the footsw is used together with the switch, it should be positioned to ON.
- I** Gain level control
- J** Channel volume control
- K** Tones control
- L** Power "on" switch
- M** Stand-by "on" switch
- N** The **Edge** function increase the hi-freq giving a more aggressive tones
- O** The **Boost** function (it works on CH2 only), increase the saturation of the channel, very usefull to play "solo" or hard rhythm



Switching

As a construction choice the front panel does not contain any leds or lights (except for the power light). Furthermore, the head has been fitted with three switching systems for the channels and other functions: manual, footsw (supplied) or with the Remote Jacks located on the rear panel of the head. No midi controls are included.

We recommend the use of Remote jacks separate to the footsw in order to avoid any conflicts in the switching system. In any case, even if they are both used, no damage can be made to the amp.

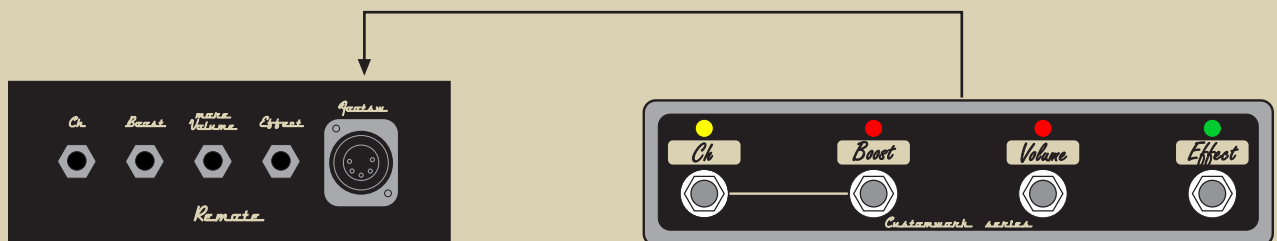
MANUAL

If the footsw or an external switching system is not connected, the change of channel and of the other functions may simply be performed using the relative mini-switches on the front and rear panels.

FOOTSWITCH

CAUTION!! In order to use the footsw supplied, it is extremely important to position the switch of the channel change to channel 2, the boost switch to Boost and the More Volume and Effect switches in the ON position.

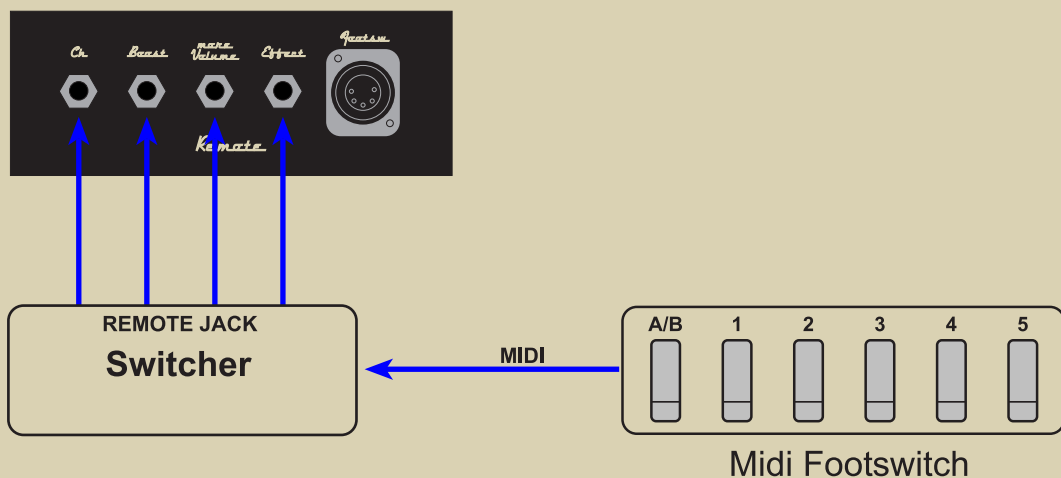
Thanks to the leds on the footsw you can control the channel and the functions activated at any time. The "Bright/Fat" functions on channel 1, "Edge" on channel 2 and the Serial/Parallel in the loop section are excluded from the footsw.



REMOTE JACK

CAUTION!! For correct use of the remote jack, it is extremely important to position the switch of the channel change to CH2, the boost switch to Boost and the More Volume and Effect switches in the ON position

With this switching system it is possible to handle the head using an external switcher (including MIDI) as shown in the diagram.



Effects Loop

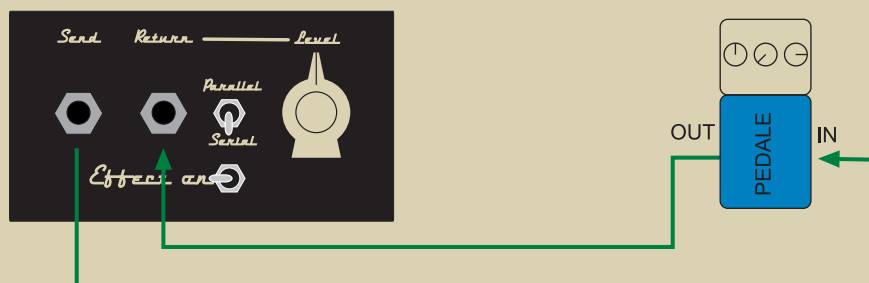
The use of effects with the amplifiers is a subject that is often neglected and that should be handled with extreme care and attention. Do not underestimate the quality of the cables and the effects because they may influence the quality of sound. We recommend serial pedal effects or rack effects in the loop section, always in parallel with the original sound of the amp.

In order to activate the loop section, move the **Effect** switch to the "ON" position. Special attention should be made when the loop function is excluded. This operation excludes the effects but also part of the internal circuit, so as not to lose any of the original signal. Thanks to a specific switch, you may select a sound-effect combination, in serial or in parallel, using the relative Return Level control.

Pedal effects

The very best combination is definitely with analogical and/or tubes pedal effects. Furthermore, we recommend the use of modulation effects only in the loop: reverberations, delay etc, while synthesis effects such as booster, overdrive, wha/wha, etc. between the guitar and input of the amplifier.

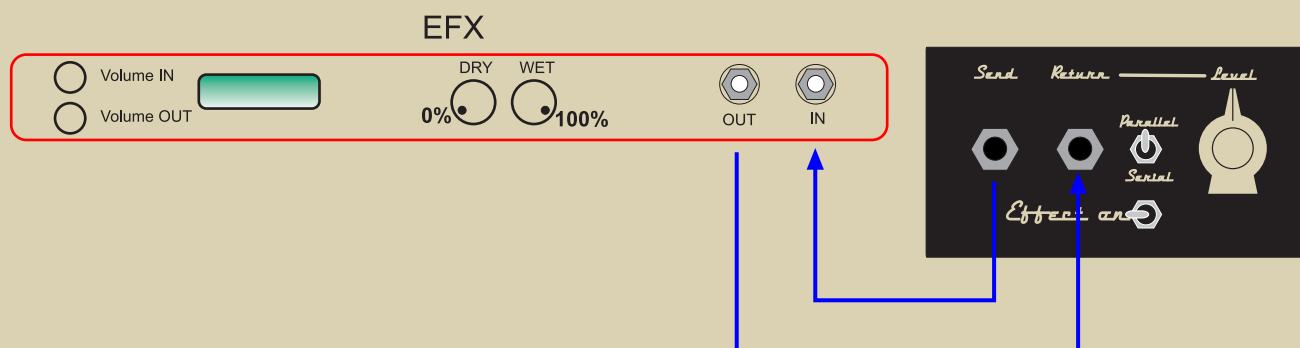
For pedal effects in the loop, set the switch to the "Serial" (serial loop) position. The entire signal will move from the effects inserted. You may regulate the quantity of the desired effect using the pedals. We recommend that you do not use volumes on the pre-amplifier that are too high, in order to avoid saturation of the pedals with the signal sent by Send.



Rack effects

Using a rack effect, we recommend that you move the switch to the "Parallel" position (parallel loop), you exclude the direct (dry) from the effect and you handle the mix between the sound of the amp and that of the effect (wet) using the **Level** control and with the **volume OUT** control of the effect, according to your personal tastes.

The input volume (IN) of the effect should be regulated with the real volumes used by the head, checking to make sure that the Send signal does not saturate the effect.





Speaker & Cabinet

As we know, construction of the cabinet and the type of speakers assembled have an important effect on the final sound.

A 4x12" (CW412) cabinet has been inserted into the Customwork line with specific characteristics that highlight the sound of these amplifiers in the best way possible. It is possible to use other cabinets without any problem whatsoever. Some advice on the choice of speakers can be found below:

For soft and round mid freq, deep bass ---> **Celestion V30**

For a brilliant and aggressive sound, and generally much more present ---> **Celestion Green Back**

The amp is fitted with two Speaker Out. If one single cabinet is connected, the same level of impedance of the cabinet should be selected on the impedance selector (at the back of the head).

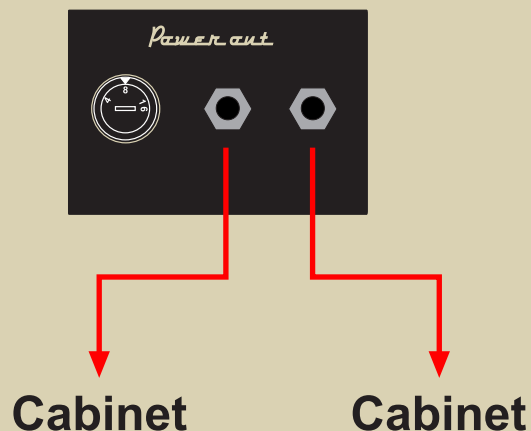
The impedance selector at the back of the head allows for selection of 4/8/16ohm. The connection cable between the amplifier and the cabinet must have a power cable (big section, not screened). The two speaker outputs are in parallel and facilitate any possible connection between two cabinets without having to build special cables.

By connecting two cabinets with the same impedance, the selector on the head should be set to the value equivalent or immediately below **parallel (//)** the impedance of the two cabinets.

Examples of connections of two speakers:

Paralleling two Cabinets

1x16ohm + (parallel) 1 x 16ohm	---> OK --->	Selector on 8ohm
1x 8ohm + (parallel) 1 x 8ohm	---> OK --->	Selector on 4ohm
1x16ohm + (parallel) 1 x 8ohm	---> OK --->	Selector on 4ohm
1x 8ohm + (parallel) 1x4ohm	---> NO! --->	Too much low impedance
1x 4ohm + (parallel) 1x 4ohm	---> NO! --->	Too much low impedance





Important notes

- The manufacturer declines all responsibilities in terms of damages to people, things and/or animals caused by incorrect use of the appliance.
- Compliance of the appliance is highlighted by the EC symbol shown on the back.
- The manufacturer reserves the right to make any modifications to its product that it may consider necessary and useful, without compromising the functional characteristics and safety of the product.
- Do not use the appliance when bare footed.
- Do not use the appliance with wet hands and/or feet.
- Do not leave the appliance exposed to atmospheric agents (rain, sun, humidity etc.)
- Do not allow children or any unskilled individuals to use the appliance.
- Avoid putting inflammable material close to the appliance.
- Fill in the warranty form that you will find on the website WWW.BRUNETTI.IT, otherwise the warranty will not be valid.
- Repairs to the appliance may only be carried out in our premises during the warranty period and, in any case, only by authorised technicians in accordance with applicable national norms and directives.
- Periodically check the cables supplied together with the appliance. If they appear to be scratched, cut or burnt etc. replace them immediately with similar cables.
- In the event of a fault contact the shop that you bought the appliance from.
- Make sure that the appliance is correctly earthed in accordance with applicable national norms and regulations.