

**Brunetti**<sup>®</sup>

*Tube amplification*

# USER'S MANUAL

## *Silver Bullet*

Before using, please take few minutets to get familiar with your Amplifier and carefully read the advices, explanations hereby reported. All our units are hand made. For this reason you could find design or sound differences. All this as guarantee that you bought a true hand-made product.

*Finest Italian handmade*

## CONGRATULATION FOR YOUR CHOICE!

**Silver Bullet** was originally conceived as a natural integration for our hand-made tube amplification for professional use. It presents technical characteristics similar to those of its well-known predecessor, **Van der Graaf**, the only difference being the power supplied. **Silver Bullet** circuitry, endowed with the famous EL34 pentodes manufactured in Russia under Mullard specifications, guarantees hot and transparent sounds typical of HI END configurations. The output transformers are hand-made wired under Brunetti specifications and use particular techniques able to make the highest part of the sound become more natural.

Thanks to the use of our exclusive LFB configuration, **Silver Bullet** is able to satisfy the needs of the listener and, at the same time, follows the characteristics of the most modern musical instruments.

Always make sure to connect the speakers at the right impedance, i.e. if you are using 8 Ohms speaker connect to the 8 Ohms **Silver Bullet** jack; if you are using 16 Ohms speaker connect to the 16 Ohms **Silver Bullet** jack.

Playing without the speaker connected is very dangerous for the power tubes and for the output transformer. This operation doesn't create damages if the amplifier is still in Stand-by or if the general volume is placed on "0" position.

You can use your **Silver Bullet** mono with particular attentions. If you don't follow these rules, damages can happen. You must enter in B channel input and then connect the speaker to the B output (8/16Ohm), making sure you have turned down the channel A volume. In this way you only use 60W.

The advised position of input sensitivity switch, place on the **Silver Bullet** back, is HIGH; only in case the input signal is too high, you should place the switch in LOW position.

## TECHNICAL SPECIFICATIONS

Output Power:	60W for channel rms
Input Sensitivity (MAX POWER):	HI/LOW: (0/-20dB): 0.18V/1.8Vrms
Output Impedance:	8/16 Ohms (4/8 Ohm by request)
Max power supply:	215 VA max
Presence:	+6 dB at 4 kHz
Tubes:	1 x 5814A / 2 x 12AX7A / 4 x EL34
Dimensions:	3 U rack - 250mm depth
Weight:	10 Kg.

### EQUIPMENT

- Power cable
- Instruction manual
- Warranty Card

### ELECTRIC CONNECTION

- Electric safety and correct work are guarantee when the unit is correctly earthed.
- Ensure that voltage value printed on the rear panel correspond to available current.

### PREAMP TUBES

The preamp tubes are used to preamplify the signal. They usually last the entire life of the amplifier.

The possible problems of these kind of tubes are: microphonics and noise.

#### Microphonics

The microphonics is the ability of a tube to reproduce external vibrations further the signal. This phenomenon can be much more evident in high gain stage like the distortion channels.

Lightly tapping on the glass side of the preamp tubes, while the head is on, you'll hear a stroke through the speaker, this is normal don't worry.

But if you hear hi frequencies (ringing or squealing) and in some case a distorted sound, it means that the tube is microphonics.

You will note that the first tube is more subject to reproduce this stroke more than the others, because it's at the begin of the preamplification chain.

#### Noise

Tube has an own intrinsic floor noise that comes from its work and construction.

During tube life this noise may increase creating a sort of a ringing or squealing. In these two cases, you have to find the defective tube and replace it with a new one.

The preamp tube doesn't need to be selected, (normally this control has been made by the constructor), but be sure to replace with good quality tubes.

We suggest that you use tubes of same brand and model.

### POWER TUBES

Power tubes are the last amplification stage before the out transformer and speaker out, and they can get exhausted.

Normally a power tube working in A/B class lasts 800 - 1000 hours. It depends also on the volume used.

In an amplifier with same power, in A class, the tube lasts 600 - 800 hours. In this class work tubes are more stressed.

#### When replace power tubes

You can recognize an exhausted tube because there's a loss of power and volume. Sound has not the same impact, in particular on low frequencies.

Main faults on this kind of tube are :

- short inside the tube. In this case normally the HT fuse will blow.
- tube light off. It's easy to recognize this problem tube because you can't see any light inside the tube.
- tube become glowing. In this case there's an increase of noise (hum) and sound will be distorted.

In all the above cases tubes can't be fixed, and have to be replaced.

If the problem tube has worked more than 1 year, we suggest that you replace all power tubes, this to guarantee the best performance of your amp.

If the problem tube has less than 1 year you can replace only that one.

#### Warning!!

You have to mount only selected and matched tubes, with the same characteristics of the tube supplied on your amplifier. See the "Matching Reference" label on the tube.

If you mount tubes with different "Matching Reference" is necessary to adjust the Bias, to let the amp work properly.

### CLEANING

Before any kind of cleaning operation, disconnect the appliance from the electric supply.

- Do not throw water jets directly on the appliance.
- Do not use water steams to clean the appliance.
- Do not use solvents to clean the appliance.

Surface Cleaning: system suggested

Satin Aluminium: Soft cloth + product for metal parts

Stainless steel : Paper + product for chrome parts

### WARNINGS

- The manufacturer declines all responsibility for any kind of damage to persons, things and/or animals resulting from a wrong use of the appliance.
- The appliance' s conformity is proved by CE symbol on the rear side.
- The manufacturer reserves the right to make any useful and essential change to the products without compromise the main safety and working features.
- Do not use the appliance barefoot.
- Do not touch the appliance with wet or moist hands or feet.
- Do not allow children or incompetents to use the appliance.
- Do not leave inflammable materials near to the appliance.
- Do not pull up the appliance by control knobs.
- Read carefully, compile and deliver the warranty attached to the appliance.
- The appliance' s repair may be done during the warranty period only by us, in our laboratory, or by authorized staff, in conformity to the national previsions in force.
- Control periodically all cables supplied with the appliance, if they result damaged, you have to replace them immediately with another one with the same characteristics.
- In case of damage contact the shop where you bought the appliance.
- The appliance must be earthed in conformity to the national previsions in force.

For any further information and/or support contact us.

#### **Brunetti Marco & C. S.a.s**

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