

# Nuance Model B18-10 Combo Guitar Amplifier

***A professional quality portable battery powered amplifier with elegant visual design and uncompromising sound quality and performance.***

The aim when designing the Nuance B18-10 was to produce a truly professional guitar amplifier that sounds beautiful, looks beautiful and is suitably loud, yet liberates the guitarist from the need for a power cable, putting him on an equal footing with the louder brass instruments. The absence of a power connection also guarantees electrical safety in untried venues and eliminates the need for PAT certification. There are no high voltages within the amplifier.

At home, the elegant and unique appearance of the amplifier will grace any living room or studio.

## Features and Specification - Nuance B18-10

- Amplifier** The power amplifier can provide 18 Watts rms with a fully charged battery. The B18-10 circuit bears little resemblance to the common forms of solid state amplifier. It uses a pair of identical power transistors in push-pull, fed from a phase splitter and driving the speaker through an output transformer. Both transformer and overall feedback are carefully designed so that the amplifier gives the speaker room to “breathe” just like a valve amplifier.
- Speaker** The standard loudspeaker is a 10 inch Jensen Neo 10-100, chosen for its smooth response combined with high sensitivity and light weight. The combination of a clean 18 Watts of power and the loudspeaker’s high sensitivity gives the amplifier a huge reserve of loudness, 111 dB at full output.
- Inputs** The amplifier has two inputs. The high gain input “H” has the usual high input impedance of one megohm and is meant for guitar. The other, “L”, has a lower input impedance of 140 k ohms and half the sensitivity.
- Controls** The model B18-10 has three pointer style “chicken head” control knobs and a treble switch. Separate circuitry is used for each function, so that adjusting one control doesn’t affect the others. The controls have been carefully chosen to combine range with usability. In many situations the neutral setting gives good results, but the full range of control is always available.
1. **Volume** A true gain control. The amplifier is designed so that with a guitar input, only the output stage can be overloaded and the preamp has the capacity to push it well into overload.
  2. **Middle** This control, with zero at 2 o’clock allows a modest boost or a deeper cut to the mid range, centred roughly on A on the top string. Cutting the middle is equivalent to boosting both bass and treble. When playing rhythm, for example, one can turn down the middle and move the tilt control a little towards the bass. This will give a clear, bass heavy rhythm tone.
  3. **Tilt** This control, again centred roughly at A on the top string is in its zero or flat position at 12 o’clock. Turning it clockwise increases treble while reducing bass; turning it anti-clockwise enhances the bass while reducing the treble. The control thus tilts the amplifier response in various degrees towards bass or treble.
  4. **Treble Switch** This switch provides an extra fixed treble boost.
- Battery** 12 Volt 12 Ampere Hour sealed Lead Acid
- Power Switch** The power switch, marked by a lightning bolt, is mounted on the right hand side of the control panel with the power LED below it. In order to give the player confidence and to protect the battery in extreme circumstances, the power switch operates via a circuit that continuously monitors the battery charge.

When the battery is fully charged the power LED will be green, turning to orange as the battery discharges. As the battery charge approaches the lowest safe limit, the LED colour will change to red. Further use, depleting the charge will cause the amplifier to turn off automatically to protect the battery, even though

the switch remains in the “on” position.

## Charger

External 15 Volt 2 Amp Universal Power Supply. The charging regulator is built into the power amplifier. With a discharged battery, the current is limited to a safe value. This is indicated by the charging LED showing red.

As the battery charges, the applied voltage rises towards a fixed target. This is indicated by the charging LED showing orange.

Finally, when the battery is fully charged, the LED shows green. The small current flowing into the battery in this state is controlled by the battery itself.

The supply can be left connected indefinitely without any fear of overcharging. The cost in electricity will be very small and the amplifier will always be ready for use. If the amplifier is not going to be used for a while, it should be fully charged before being left and should then be recharged at two monthly intervals to make up for the gradual loss of charge inherent in sealed batteries. The life of the battery will be maximised if it is always kept as fully charged as possible.

The power supply module provided has a rated supply voltage range of 100 to 240Vac and is fitted with an IEC power connector so that with a suitable power lead the amplifier can be charged anywhere in the world. Connection to the amplifier is via a 2.5mm DC connector with the *centre pin positive*. The voltage required for charging is 15Vdc. If using a power source other than the one supplied, it is *essential* to make sure that the *polarity is correct* before connecting it to the amplifier.

## Safety

The amplifier contains no high voltages and is inherently safe. In particular, since it is not normally connected to the mains supply when performing, it does not need to be Portable Appliance Tested and it insulates the player from any risks due to faulty power wiring at the venue.

If the battery is removed for any reason, it should be treated with care and never short-circuited. The battery positive lead is fitted with a short stub that changes the gender of the connector tab in order to make it extremely difficult to connect the battery with the wrong polarity. Connecting the battery with the wrong polarity will destroy the output transistors.

The battery is permanently connected to the power amplifier, which is switched electronically (see “power switch” opposite). Metal objects should not be placed in the bottom compartment with the power amplifier.

## Transport

For carrying between locations, the B18-10 is supplied with an adjustable webbing strap which attaches using strap locks for security. In the studio or on a gig, it is convenient to remove the strap and carry the amplifier by lifting under the back rail.

## Dimensions

The dimensions of the B18-10 are:

Width	330mm
Height	385mm
Depth	147mm

## Weight

The weight, including battery, is 9.5 kg

## ***The B18-10 offers the player:***

Unsurpassed sound quality

Superior electronic design

Superior aesthetic design

Total Freedom