

OCTAVE

JUBILEE 300 B

Owner's Manual

English

INTRODUCTION

Congratulations and thank you for choosing OCTAVE's Single Ended Mono Power Amplifiers

JUBILEE 300 B

With the JUBILEE 300 B you have purchased the latest and most advanced development from our company.

You often hear people claim that tube amplifier design has not progressed for years. The operating principles of tubes have indeed been documented extensively and are well known to amplifier designers. Of course, the same can be said for transistor amplifiers.

However, advances in both technologies are still possible thanks to the development of innovative and improved components, our greater appreciation of the fundamental principles and, of course, deeper and more advanced insights into the interaction of amplifier and loudspeaker. With tube amplifiers in particular, a general reluctance to depart from the classic circuit designs has not done the technology any favors. Although today's loudspeakers and source equipment provide better performance than ever before, they also present greater demands on amplifiers. Modern sound reproduction equipment delivers a level of performance at a price that simply would not have been possible 20 or even 10 years ago.

These advances have been achieved through the application of the latest technological developments as they become available and affordable. OCTAVE has specialized in tube amplification for more than 30 years, during which time we have developed a number of innovative technologies that have earned us a reputation as one of the leaders in the field.

Here's wishing you many happy hours of musical pleasure!



Andreas Hofmann

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1. DESCRIPTION OF THE JUBILEE 300 B

Octave has always been at the forefront of the development of powerful, sonically neutral, ultra-stable and extremely reliable push-pull tube power amplifiers that can drive virtually any speaker on the market. Our innovative design is now widely recognized: Thousands of satisfied listeners appreciate the refined sonic qualities and extreme practicality of their Octave amplifiers.

What if Octave's tube amplifier know-how was utilized in the development of a 300 B single-ended triode output stage? A concept that is said to have legendary sonic qualities. We have often been asked why we haven't developed a 300 B single ended power amp, even though this amplifier concept can offer outstanding performance.

The challenge for us was to combine our ideas regarding sound, dynamics, bandwidth and load stability with the tonal characteristics of single-ended triode power amps, which inherently lack performance in some regards and whose design concepts have limitations in key areas.

Our objective was to develop a 300 B amplifier that provides enough power for most speakers, while not interfering with the classic 300 B circuit. It was not about power for the sake of power, but about providing the 300 B with a perfect environment that enhances the tonal qualities of this tube. The concept of a 300 B single-ended amplifier delivering 20-30 W output power with three power tubes in indirect parallel operation was thus born.

There is a fundamental problem regarding "direct" heating of the triodes: Unlike indirectly heated tubes (such as the KT88, KT120, etc.), directly heated triodes cannot operate directly in parallel because of the complex demands on the heating system needed increase output power. The typical 50 Hz AC-heater voltage would cause unacceptably high hum and power disturbances in the speaker. Although DC-heating eliminates the hum, it also limits the sonic potential of the 300 B.

Octave's solution:

We have developed a **7 Hz power generator** that supplies each of the three 300 B tubes with a separate, regulated 7 Hz pure sine wave heating voltage.

- This makes it possible to connect several 300 B tubes in parallel.
- Sound-affecting ripple and RF disturbances of the line frequency are completely eliminated.
- Heating and operating voltage are electronically controlled, sound instabilities due the fluctuating mains voltage is a thing of the past.

Only then can the tonal potential of the 300 B be fully exploited. The 300 B tubes will now operate in the optimized region and can fully develop their tonal qualities. Now it becomes clear why she is called the "queen" of tubes.

Thus, the Octave JUBILEE 300 B is an absolutely modern and uncompromising implementation of arguably the finest amplification technology in the high-end sector. The amp offers an emotional, smooth, high-resolution, dynamic and expansive triode sound, not only in the mid/high frequency range, but for the first time, completely across the full audio band.

JUBILEE 300 B, a new generation of single ended amplifier technology without limitations.

2. SAFETY INSTRUCTIONS

2.1. Before you begin

In case of emergency: disconnect the plug from the mains supply

Never use an amplifier that is damaged or faulty. Make sure it has been labeled as defective and that it cannot be used until it has been repaired by a qualified service engineer. Make sure that there is easy access to the IEC socket and power cable.

Do not open the case



There are dangerously high voltages and hot tubes inside this equipment. To avoid a burn or the risk of electric shock, never allow anyone except qualified personnel to open the case or remove the grill.

Service and maintenance


For reasons of safety, please ensure that servicing, repairs and other modifications to OCTAVE equipment are carried out only by a qualified technician. Defective fuses should also only be replaced by a qualified technician. Always replace fuses with ones of the same type and rating. If your amplifier requires servicing, please ship or take your equipment directly to OCTAVE or to one of our authorized service centers.

Symbols and terms used in warnings

The following warnings, symbols and terms are used in this document in compliance with the American National Standard ANSI Z535.6-2011:

	The general danger symbol, in conjunction with the terms CAUTION , WARNING , or DANGER , warns of the risk of severe injury.
	The triangle symbol with the lightning bolt warns of non-isolated, dangerous voltages inside the case and of hazards posed by electrical shocks. This work must be performed by a professional.
ATTENTION	Indicates a danger that could lead to damage or destruction of the device.
CAUTION	Indicates a danger that represents a low or medium risk of injury.
WARNING	Indicates a danger that could lead to death or severe injury.

Warning format

 WARNING TERM
Type and source of danger
Consequences of ignoring the warning
▶ Action needed to avoid danger

Before connecting

Make sure that the voltage of your amplifier matches your local mains voltage.

Grounding

This amplifier is a protection class 1 device, with an earth conductor. Therefore a three-pin power cable with a protective earth contact must be used (included in the scope of delivery).

2. SAFETY INSTRUCTIONS

2.2. Placement

Location

- OCTAVE equipment is designed strictly for use in a dry domestic environment. Do not use it in open air or in damp environments!
- Never place plants or liquid-filled containers on your amplifier. Take care that objects do not fall or liquids are not spilled into the enclosure. Should this happen, disconnect the mains plug immediately and have your amplifier checked by a qualified service technician.
- Condensation may form if the amplifier is taken from a cold environment into a warm one. In this case, wait until the amplifier has reached room temperature and is dry before switching it on.
- Avoid installing the amplifier close to sources of heat, such as heaters, or anywhere that it may be in direct sunlight.
- Do not operate your OCTAVE amplifier near flammable materials, gases, or vapors. Avoid areas where there may be heavy accumulations of dust or where the amplifier may be subject to mechanical vibration.
- Place your OCTAVE amplifier on a stable, even surface.

Cover

Never operate the amplifier without the cover.

Ventilation

- Ensure sufficient air circulation around your amplifier. If you intend to install your equipment in a cupboard or a shelf unit, ensure that there is at least a 15 centimeter gap between the ventilation slots and the walls all around the amplifier.
- To prevent heat accumulation, the back of the cupboard should have ventilation holes.
- Do not rest the equipment on a soft surface such as carpet or foam sheeting.

2.3. Warranty

OCTAVE can only guarantee the safety, reliability and performance of this unit if modifications and repairs are carried out by specialized personnel and if the amplifier is operated in accordance with the instructions contained in this manual.

3. GETTING STARTED

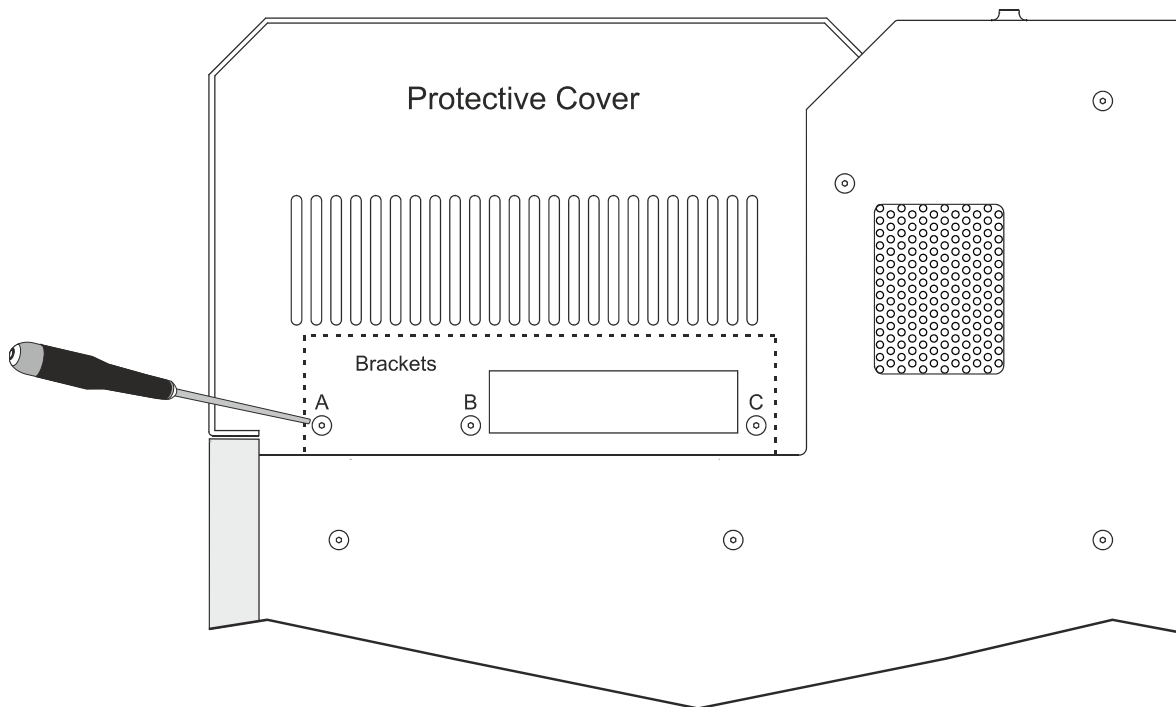
3.1. Unpacking, package contents

Scope of delivery

- 2 x tube mono power amplifier JUBILEE 300 B Single Ended.
- 2 x set of 3 pc power tubes 300 B.
- Power cord.
- Allen key size 2, to remove the cover and the transportation handles.
- Octave cleaning cloth and soft gloves.
- Owner's manual with certificate.

3.2. Removing the grille

Operation of the device without protective grid is not permitted and is at your own risk!

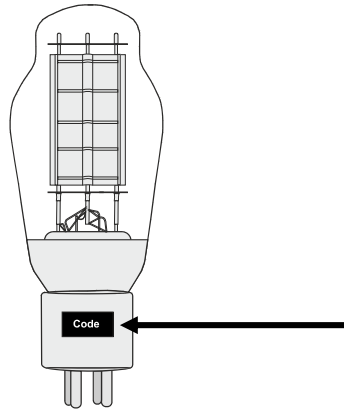


Procedure

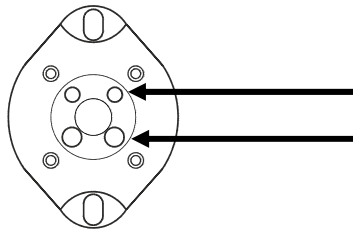
- ① For your own safety, make sure that the amplifier is not connected to mains.
- ② Completely remove the six hexagonal screws using the Allan key supplied. There are three screws on each side.
- ③ Carefully pull the grille upward to remove.
The dashed line indicated bracket can remain as a carrying aid.
The device can be worn on the brackets with gloves.
- ④ The brackets can be removed with the two screws visible inside (same size as above).
Then retighten these screws again.
When you reinstall the grille, the brackets must also be reinstalled.

3. GETTING STARTED

3.3. Installing the power tubes



The output tubes you get from Octave are matched with an identical match code. Therefore it does not matter where you plug in the tubes: position 1, 2 or 3.



The different size of the contact openings prevents incorrect insertion of the tubes.

3.4. Switching on for the first time – the Soft-Start feature

The JUBILEE 300 B is equipped with a multi-stage Soft-Start-Turn-On protection circuit which extends component as well as tube life considerably by protecting against stress caused by typical high inrush currents during switch on.

Procedure

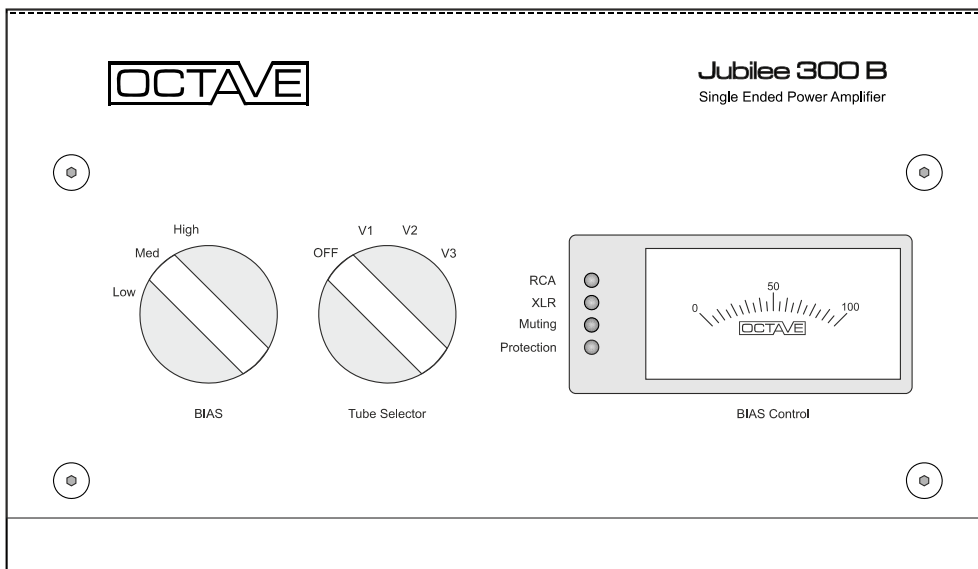
- ① Check if the mains switch (1) is in position 0.
- ② Connect the JUBILEE 300 B to the mains.
- ③ Turn on the JUBILEE 300 B with the power switch. Depending on the position of the input selection (back panel), the corresponding LED lights up: RCA, XLR or Muting. Make sure the BIAS selector (2) is set to MED. MED is the default position for almost all versions of the 300 B. After a few minutes start-up time, the JUBILEE 300 B is ready for use, the BIAS meter (5) then shows e.g. at position V 1 of the tube selector (3) the value 50 +/-10%.

3. GETTING STARTED

3.5. Checking the power tubes

For the first function check you don't have to connect the loudspeakers or the preamp. The operation without loudspeaker is permitted.

Use the Tube Selector to check the correct idle current of the three power tubes. The BIAS selector should be on MED. For each of the three 300 B power tubes, the value 50 should be displayed in the BIAS control meter. If a reading is clearly below or above 50, the tube is defective and should be replaced. (See chapter 6.3.) If the red Protection LED lights up during startup, the electronic protection system has activated. In this case the BIAS meter will show the value 0 for all three tubes. See chapter 5.2. Electronic - Protection



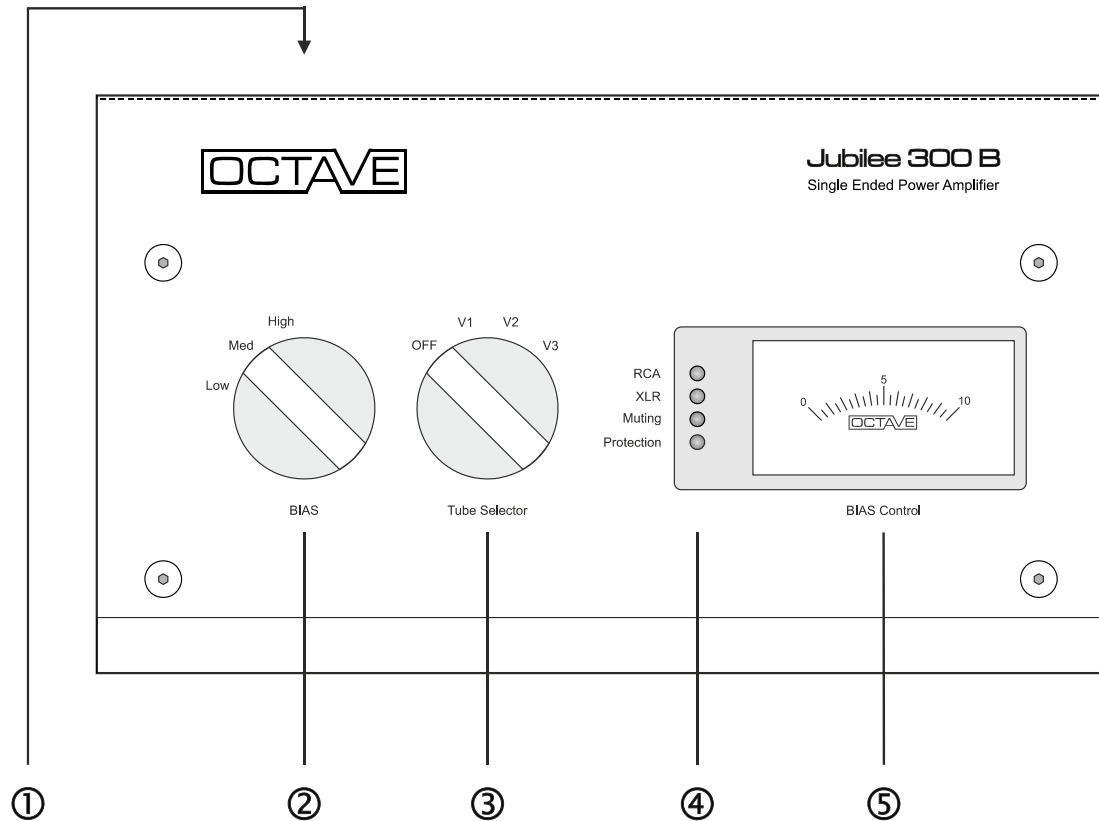
3.6. Connecting other components to the JUBILEE 300 B

Procedure

- ① **Be sure to switch off the JUBILEE 300 B again!**
- ② Connect the other components of your system to the appropriate sockets on the rear of the JUBILEE 300 B. (See chapter 5 "Connections – the rear panel").
- ③ Make sure that the switch settings of the top front and the rear panel (BIAS and input select) correspond to the desired settings.
- ④ Switch on the JUBILEE 300 B using the mains power switch and wait a few minutes. Now you can play music.

4. THE OPERATION

4.1. Top front JUBILEE 300 B



Legend

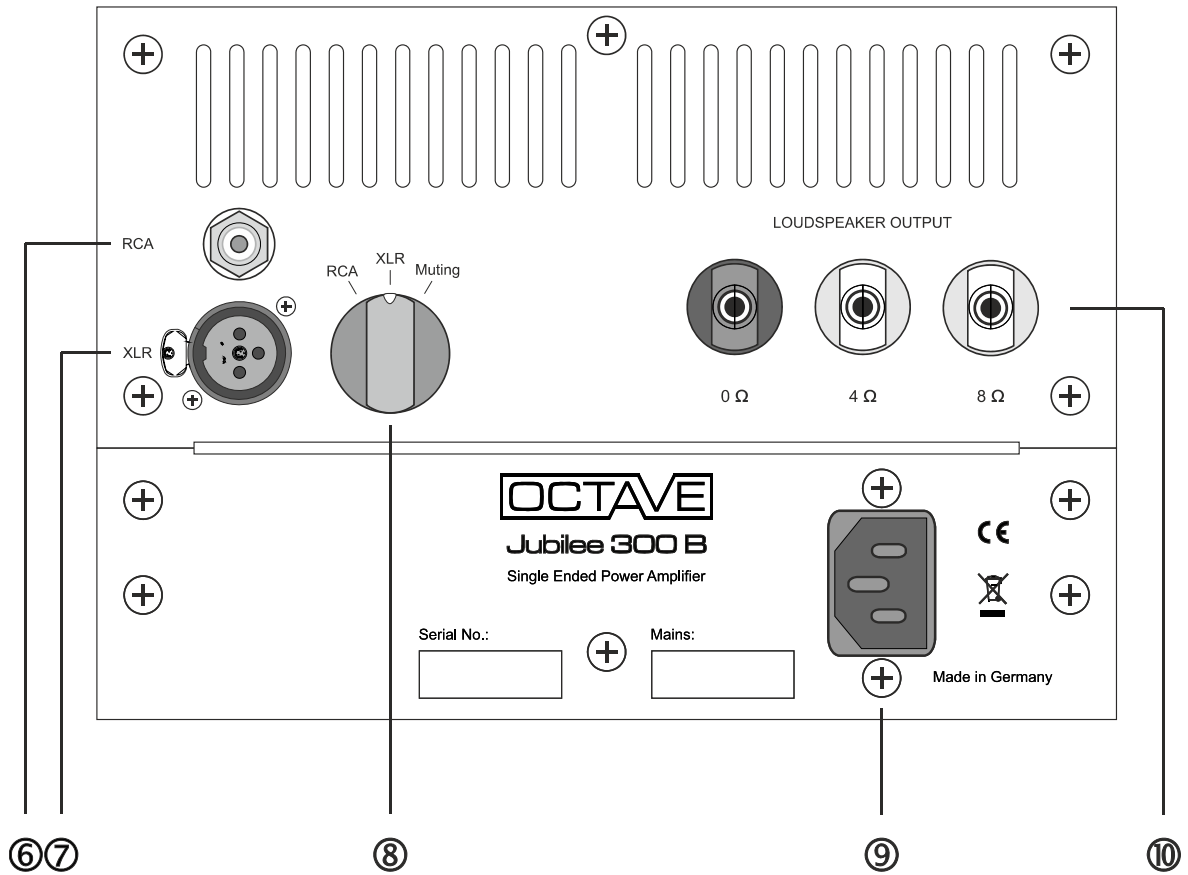
①	Mains Power Switch	0 = off; 1 = on A LED in 4 corresponding to the input selector ⑧ lights up.
②	BIAS	Idle current selector BIAS Low: for low playback. Idle current = 25-30 mA. BIAS Med: for playback at the highest level. Idle current: ca. 50 mA. BIAS High: Position for High Power 300 B tubes. Idle current: 70 mA (see chapter 6.3.).
③	Tube Selector	Here the tube is selected whose idle current is displayed in the BIAS meter. (See chapter 6.3.).
④	Status LEDs	RCA, XLR, Muting and Protection Light up according the Input Selector. Die Protection LED (red) lights up once the Electronic Protection is activated (see chapter 5.2.).
⑤	BIAS Control	BIAS Measurement Analog meter for displaying the idle current (BIAS) of the power tubes (See chapter 6.3.).

Note:

Due to the Soft Start and the resulting time delay, measuring the BIAS is not possible in this phase.

4. THE OPERATION

4.2. Rear panel JUBILEE 300 B



Legend

⑥	RCA-Input	RCA Line Level Input.
⑦	XLR-Input	Balanced Line Level Input Pin 1: Ground, Pin 2: +, Pin 3 –
⑧	Input Selector	RCA - XLR – Muting In Position Muting the Inputs are switched OFF (see chapter 5.3.).
⑨	Mains AC supply socket	IEC three pin socket.
⑩	Loudspeaker Outputs	Speaker connection terminals Red = positive terminal 4 ohms Red = positive terminal 8 ohms Black = negative terminal The negative speaker terminal is connected to ground.

5. ADVANCED FUNCTIONS

5.1. Soft-Start, Inrush Current Limitation

The JUBILEE 300 B input and output tube heaters as well as its high-voltage rails are logic controlled to ensure that the condition of the output tubes as well as input stage voltages are constantly monitored and controlled by the **Power Management System** to protect the vital internal parts (tubes, rectifier, electrolytic caps, switches, etc.) against excessive turn-on current. This increases the lifetime not only of the tubes, but also the caps, while all power related components derive benefit through this system.

The Soft-Start is always activated within the first 60 seconds after the unit is switched on. During this time you cannot listen.



During the Soft-Start-phase, adjusting the BIAS is not possible.

5.2. Electronic Protection System

The JUBILEE 300 B features a comprehensive electronic monitoring and protection system. This system will automatically switch off the JUBILEE 300 B in case of a fault occurring in the power section.

The protection system has been designed to keep the unit safe from the consequences of overloads of any kind and to protect the output tubes from current peaks.

The RED "Protection" LED lights up to indicate that the protection system has tripped.



The amplifier will not play music once the protection system has tripped and you will not be able to check or adjust the BIAS setting.

The following conditions can cause the protection system to trip:

- Overdriving the JUBILEE 300 B to excessive levels or with excessive levels of low frequency.
- A speaker cable short circuit while the speakers are being driven at high listening levels.
- A fault in one or more of the output tubes.
- A fault in one of the preamp tubes which overloads the output stage.

Once the protection system has cut in, the only way you can turn the JUBILEE 300 B back on, - is to turn the on/off switch off and then on again. Allow the unit two minutes to cool down before switching it back on. If possible, identify and eliminate the cause of the problem (See chapter 9 "Troubleshooting").

If it is not clear what has caused the protection system to trip, we recommend that you check the BIAS before attempting to use the amplifier again. Tube faults can often result in widely varying BIAS settings. When these settings exceed a particular value - close to the value 100 - they can cause the protection system to trip.

5.3. Input selection / Muting Function

The Muting Function is switching off the RCA- and the XLR-inputs of the unit. In this way you can connect or change the cables without the need of switching off the unit. You can connect or disconnect the signal or speaker cables in this mode.

5. ADVANCED FUNCTIONS

5.4. Ecomode (power saving mode)

The **Ecomode** serves to reduce heat and unnecessary power consumption when the unit is switched on but not in use. After 10 minutes without receiving signal, the JUBILEE 300 B Ecomode is turning down the BIAS to LOW. Therefore the running unit produces less heat.

The Ecomode is activated, when the TUBE BIAS Selector is in position OFF.

In position tube 1, 2 or 3 the Ecomode is switched OFF and the unit remains in the BIAS setting "Med" or "High".

When the music signal is once again sensed by the JUBILEE 300 B, the Ecomode circuit will return to the selected BIAS level. This process is not audible.

The playback will not be interrupted when the Ecomode is working.

Note:

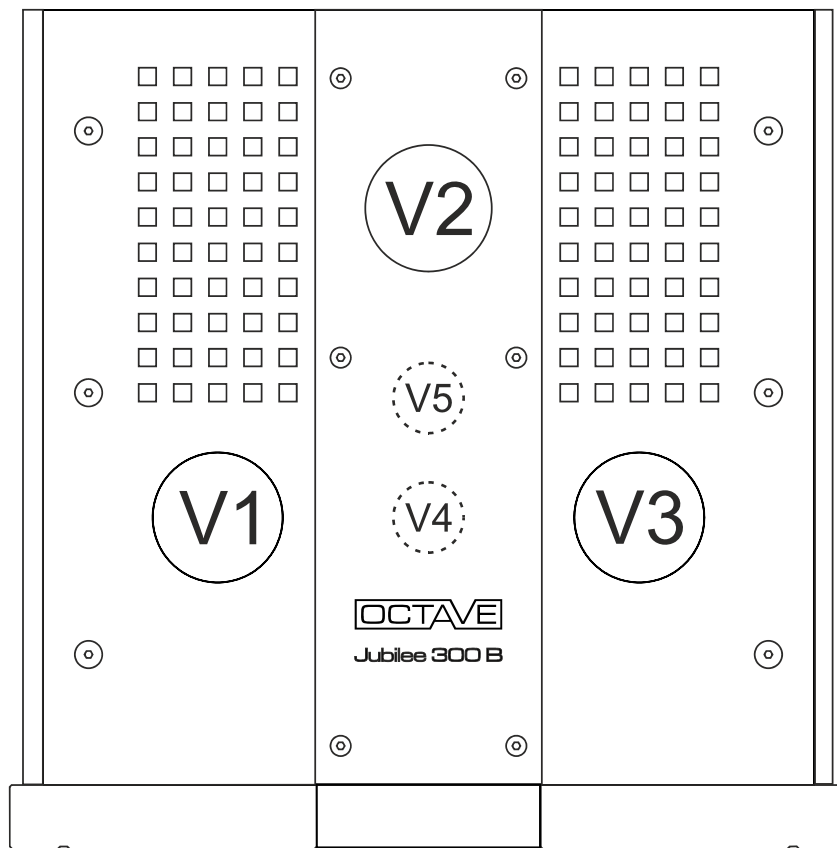
If you switch the JUBILEE 300 B on with Ecomode active, it will go through the start procedure. If it fails to detect a music signal, it will turn down the BIAS after 10 minutes. Ecomode is not the same as Standby, because all sections of the amplifier remain on.

6. TUBES

6.1. Removing the grille

Operation of the device without protective grille is not permitted and is at your own risk!
See chapter 3.2.

6.2. Tube layout



Output tubes: V1 – V3: 300 B as standard

Driver tubes: V4 ECC82 (= ECC 802, 12 AU 7, 5814, 6189)
V5 EF 800 (EF 184)

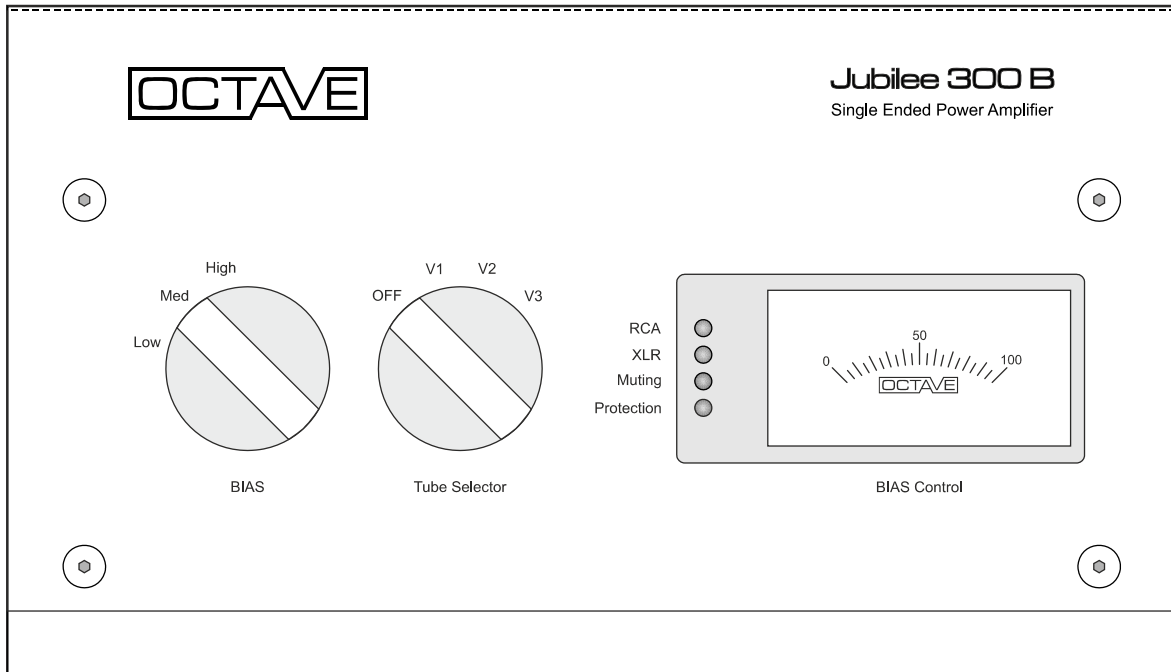


To replace the driver tubes V4 and V5, the center tube cover plate must be removed. The device must be turned off and should cool 10 minutes.

The replacement of the driver tubes may only be performed by a qualified technician.

6. TUBES

6.3. BIAS Adjustment and BIAS Meter



With the BIAS measuring device, the idle current of the end tubes is controlled. The correct BIAS adjustment of all three tubes is important for the sound characteristics of the power amplifier and the lifetime of the tubes. Therefore, a BIAS measuring device has been integrated in the JUBILEE 300 B, which makes it possible to control the BIAS without additional measuring devices.

Due to the automatic BIAS adjustment of the JUBILEE 300 B circuit, the value 50 / +/- 15 % should always be displayed for selected 300 B tubes in the BIAS MED setting. A higher match of the idle current is not necessary for sound and technical reasons. If one of the end tubes deviates higher in the BIAS, it should be renewed.



The BIAS setting: Operate classic 300 B tubes (Western Electric replicas) not with BIAS High!

- BIAS Selector - BIAS Low:** This setting is recommended if the JUBILEE 300 B is to play only quietly and without high demands on playback. The idle current per end tube is 25-30 mA.
- BIAS Selector - BIAS Med:** Default position for highest reproduction level. The idle current per 300 B is about 50 mA.
- BIAS Selector - BIAS High:** Special setting for modern High Power 300 B versions. The idle current per 300 B is about 70 mA. Equipping the JUBILEE 300 B with these tubes and/or this setting can provide tonal benefits to normal dynamic speakers.

6. TUBES

6.4. Replacing the tubes

WARNING TERM



Electric shock! Opening the cover may expose live parts and may result in electric shock.

→ Before opening the protection grill, switch OFF the device, disconnect the mains power plug and wait for 10 Minutes.

General procedure:

Switch off the amplifier and allow it to cool down for 10 minutes.
Remove the old tubes and fit the new ones.

Inserting new driver tubes

New driver tubes can be put into operation after replacement without further action or adjustment. For the EF 800/184, it may be necessary to adjust the operating point depending on the manufacturer and age of the tube. This setting is reserved for professionals.

Inserting new power tubes:

Procedure

1. Before switching ON the device with new tubes, set the BIAS selector to LOW.
2. Turn on the device. After the start phase, the BIAS reading value 25 - 30 must be displayed for each 300 B.
3. After a 30-minute warm-up, the BIAS can be set to MED. The BIAS meter should then read 50 +/- 15% for each of the 300 B. The device is now ready to play.
4. Now the protective grille can be put back on.

6.5. Running in

All OCTAVE equipment is subject to a 48-hour continuous operation test at the factory to burn in the tubes and the unit. The tubes are preselected and matched for the use in each particular model. The Output tubes have a match code on the socket. Tubes with the same or +/- 0.5 match code ensure low channel tolerances of +/- 0.2 dB.

Old and even new tubes can take up to one month to run in and start sounding their best.

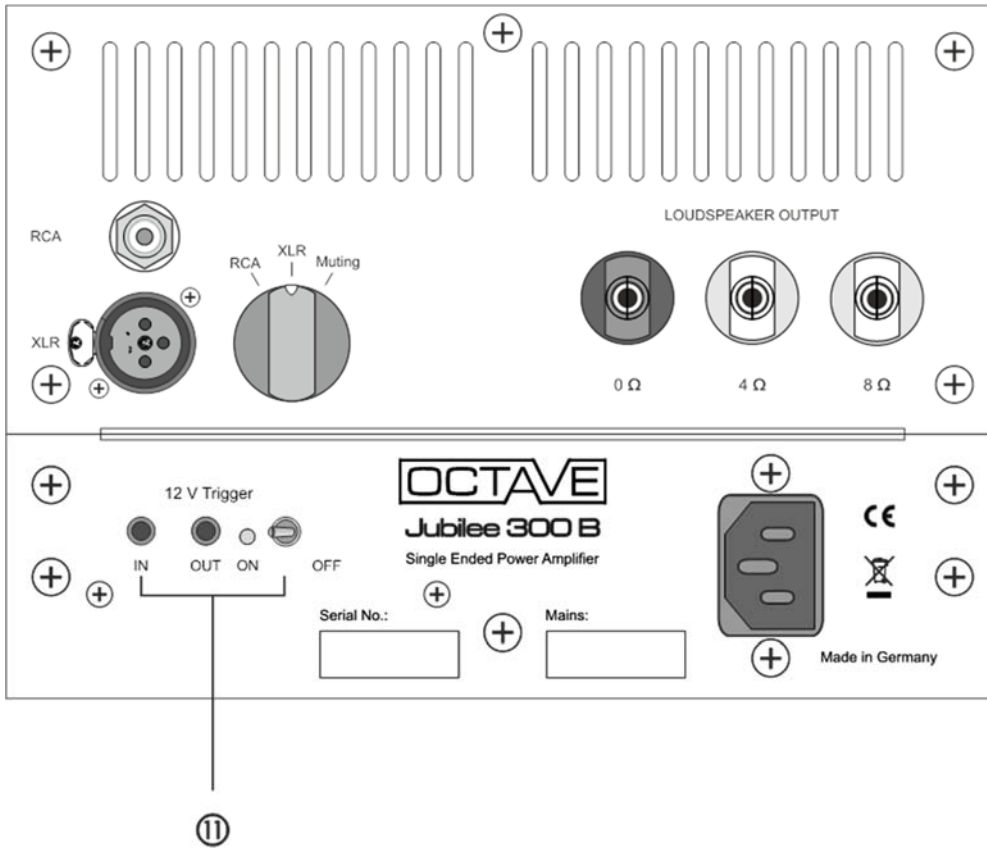
Daily use is beneficial in speeding up this process but is not mandatory. Continuous operation does very little to help reduce the running-in time and is therefore not recommended.

6.6. Tube service life

- Thanks to the protection circuits and soft-start electronics, the output tubes in your amplifier should achieve a service life of up to 3 - 5 years.
- Driver tubes can be used up to 10 years.
- Because tubes have different service lives, you will never have to renew the entire tube set at the same time. You can replace output tubes individually if you get 300 B tubes with the same match code/specs.
- Some tubes require a long time (up to 300 hours) to achieve their optimum sound quality.

7. Options

7.1. Remote Operation (12 V Trigger) (not retrofittable)



Legend

⑪ 3.5 mm jacks for 5-24 V trigger voltage

IN:	Connector to the master unit.
OUT:	3.5 mm jack to the second JUBILEE 300 B.
Toggle switch:	Remote function ON or OFF.
Switch „OFF“:	The LED lights up permanently in the OFF position.
Switch „ON“:	The LED will light in ON position only when the trigger voltage applied.

For remote operation "ON", the mains power switch of the JUBILEE 300 B must be set to 1 (ON). This means, that even with activated remote switching ON, the power amplifier can be switched OFF with the mains power switch.

For remote switching "OFF": the amplifier can be switched ON and OFF normally with the mains power switch.

Power consumption: Trigger input 5-24 V – 10 mA each power amplifier.



In case you combine the JUBILEE Preamp with the JUBILEE 300 B you need a cable with a 3.5 mm jack and a 6.3 mm jack for the connection with the JUBILEE Preamp.

7. Options

7.2. Bi-Amping Package (not retrofittable)

An unique option for the JUBILEE 300 B, the bi-amping package dramatically expands the application possibilities of these mono amplifiers, as even 30 pure Class A watt amplifiers will have limits.

If you wish to enjoy the sound of the JUBILEE 300 B in very large rooms or with power-hungry speakers, it is often beneficial to control the bass region by utilizing a separate power amplifier for the low frequencies. However, such traditional bi-amping requires a level of customization, thus this optional package includes all important features to optimally integrate the JUBILEE 300 B with the bass amplifier.

- The most important tool is a level adjustment to optimize the sensitivity of the JUBILEE 300 B to the bass amplifier. With this controller you can perfectly integrate any amplifier into the system.
- A low-cut filter that relieves the JUBILEE 300 B of frequencies below 100 Hz.
- Both functions are switchable independently.
- The gain of the JUBILEE 300 B can be set to two values. The default setting for normal operation is Gain Low. For bi-amping the Gain High setting is recommended to adjust the Gain of the JUBILEE 300 B to the bass amp using the internal level adjustment.

**The controls of the bi-amping package are not accessible from the outside.
The bi-amping package will be set up by your dealer**

8. TROUBLESHOOTING

■ Hum in the speakers

Possible cause: multiple grounds

Hum in an audio system is often caused by several system components having their own separate grounds. It is particularly common in systems containing tuners, VCRs or satellite receivers, as these components are connected to an aerial. Because aeriels and cables are always grounded, ground loops can form between the aerial connection and other grounded equipment. Other equipment that is normally grounded may include PCs with sound cards, and some CD/DVD players and DACs.

Although the JUBILEE 300 B is grounded, its signal ground is a "floating" ground, which means that the JUBILEE 300 B cannot itself create ground loops. Hum can only be caused when it is connected to other units of equipment.

To fix the problem

Before trying to fix the problem, find out which of your system components is responsible for generating the hum.

Procedure:

- Check the signal connectors if the ground is properly connected
- Unplug all source equipment, including any equalizer if used, from the JUBILEE 300 B, leaving only the loudspeakers connected.
- Reconnect the components back to the JUBILEE 300 B one at a time. As soon as the hum reappears, you have two grounded components connected to the JUBILEE 300 B via the preamp. Consult a technician if there is a possibility to eliminate this grounding problem.

■ Tube faults caused by output tubes

There are 3 different symptoms indicating a faulty output tube:

1. Broken heater filament: the tube stops glowing.
2. Defective cathode layer: the tube glows, but no current can flow. You can confirm this fault using the bias meter.
3. Internal short circuit: Normally, the electronic protection cuts in and the red "off" LED illuminates. In this case a BIAS reading with the BIAS Meter is not possible

With faults 1 and 2, the amplifier will still operate, although the channel containing the faulty tube will be quieter than normal. At low listening levels, the fault may not be obvious, but distortion will become evident at higher listening levels.

If fault 3 occurs, the protection circuits will normally switch off the amplifier. You may also hear loud background noises just before it switches off, although these will not harm the amplifier.

You can find the faulty tube by removing one tube at a time. Operating the power amplifier with just a single output tube is allowed for test purposes and will not damage the power amplifier.

Only a qualified technician must carry out this test.

■ Tube faults caused by driver tubes

Increased noise in one channel.

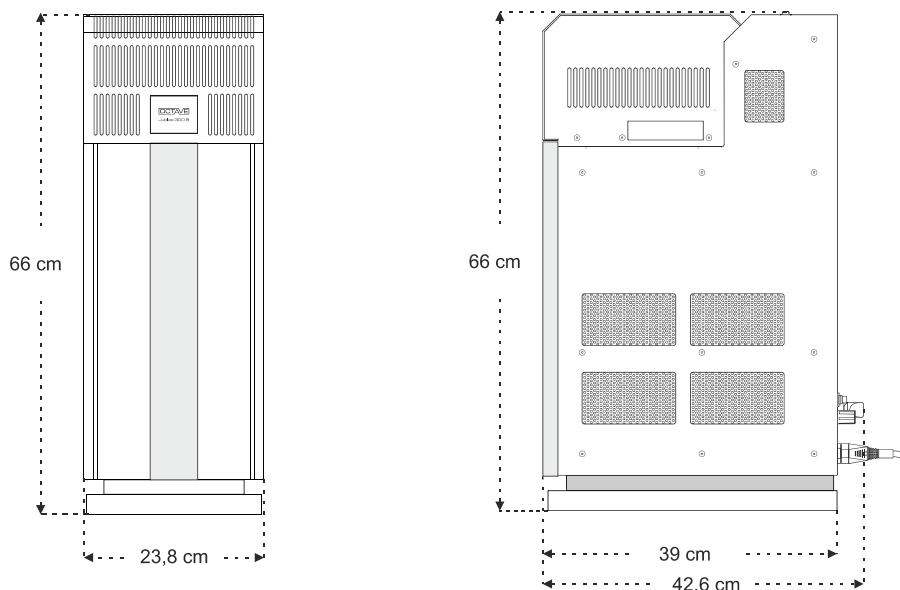
Normally the noise level of a driver tube is stable during its lifetime. Depending on the production and type of tube, the noise can noticeably increase over some time.

9. SPECIFICATIONS AND DIMENSIONS

Technical Specifications	
Output power:	between 15 and 30 W selectable
Power bandwidth:	20 Hz - 50 kHz / - 3 dB
Gain:	Gain low : 19.5 dB into 4 ohms; 22.5 dB into 8 ohms Gain high : 30 dB into 4 ohms; 33 dB into 8 ohms Default Setting is gain LOW
Signal to Noise Ratio:	Gain High > 100 dB @ 20 W Gain Low > 110 dB @ 20 W
Input sensitivity:	Gain High : 0.5 V Gain Low : 1.7 V
Damping factor:	4.5
Inputs and Outputs:	RCA, XLR Inputs 4 and 8 ohms loudspeaker outputs
Pin configuration XLR	1 = ground, 2 = +, 3 = -
Tubes	Output tubes: 3 x 300 B (EH or JJ) Driver tubes: 1 x ECC 82, 1 x EF 800 (EF 184)
BIAS	Idle Current selectable between 25, 50 and 70 mA
General Data	
Power consumption	400 W each power amplifier, BIAS MED
Dimensions	24 x 66 x 40 cm (W x H x D)
Weight:	54 kg

Construction

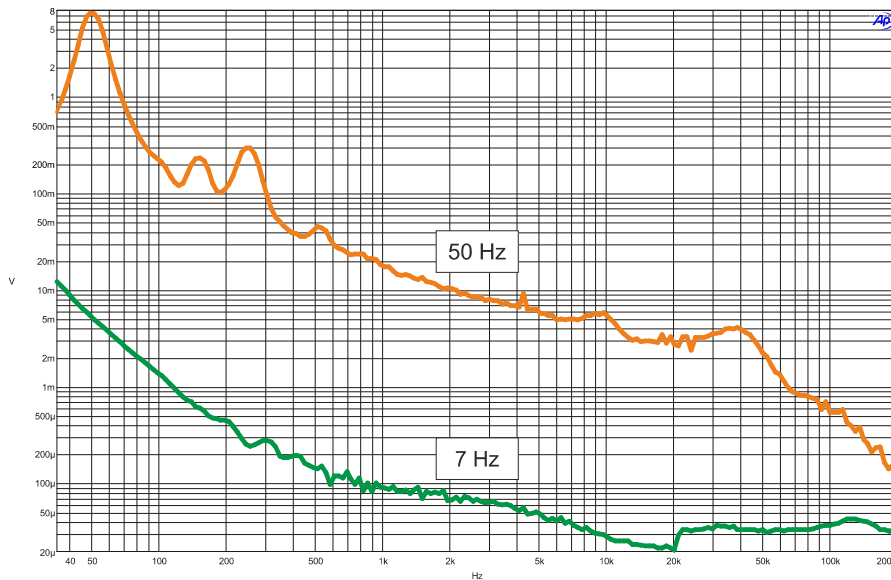
- Double sided layer PCBs using 70 µm copper.
- Ceramic tube sockets with silver contacts.
- Specially selected long-life tubes.
- Professional, low inductance storage electrolytic capacitors, LH grade 105° C.
- Mains input with HF filter and overvoltage protection.



9. SPECIFICATIONS AND DIMENSIONS

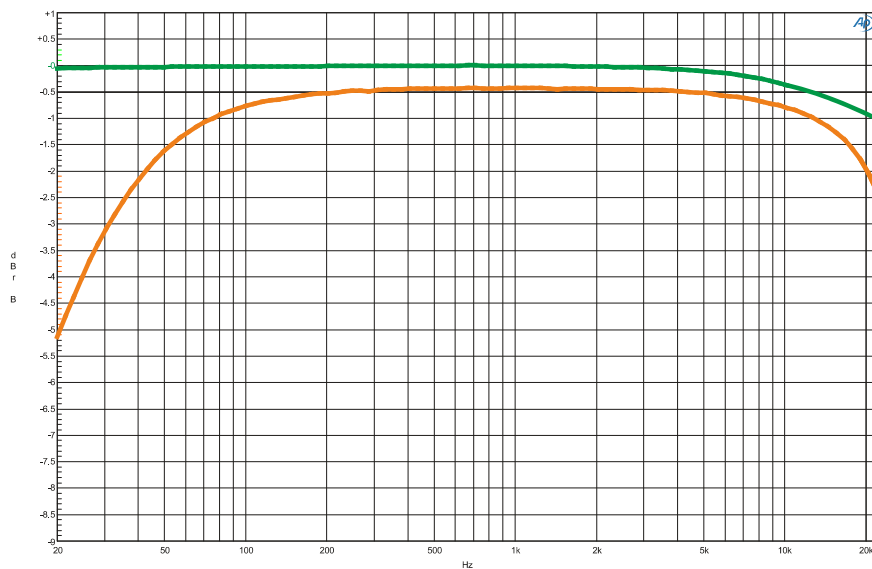
Diagrams

Distortions of the 7 Hz sine wave heating voltage compared to 50 Hz mains generated AC voltage



The distortions of the 7 Hz heating voltage are 200 times lower compared to the mains generated Heater voltage, thus mains distortions are ruled completely out.

Frequency response of the JUBILEE 300 B (green) and a classic SE amplifier (orange)



The frequency response of the JUBILEE 300 B is flat down to 20 Hz in the opposite to the low frequency roll off of a classic SE design.

10. FAQ

1. Can you operate the JUBILEE 300 B when no loudspeakers are connected?

Yes. The JUBILEE 300 B, like all OCTAVE amplifiers, is fully protected against open circuit operation, i.e. the amplifier will come to no harm if it is operated without loudspeakers connected and the input level is in the magnitude of normal listening levels.

2. How do you recognize a faulty tube?

See troubleshooting

3. Is there a loss of sound quality as tubes age?

No. Tubes normally sound the same throughout their service life. Our soft-start technology contributes greatly to extending the service life of tubes. You can tell when an output tube has reached the end of its useful life: it becomes impossible to adjust it correctly. Driver tubes cannot be checked, but these will generally last up to 10 years.

4. Does the JUBILEE 300 B have to have all of its tubes fitted?

In principle, the JUBILEE 300 B will also operate without output tubes. Of course, it is not possible to play music under these circumstances.

For test purposes, or as a temporary measure, one channel may be fitted with just a single power tube, although its power output will - of course - be reduced. The amplifier will come to no harm if it is operated continuously like this.

Operation without driver tubes is also possible for test purposes, although, for obvious reasons, music playback is not possible.

5. What is the significance of loudspeaker impedance and efficiency?

The impedance and efficiency of modern loudspeakers is not an issue for OCTAVE amplifiers. The often-quoted damping factor is not normally a guarantee that an amplifier will exert tight control over the loudspeakers. In practice, speakers of 85 dB efficiency and above are suitable for use with tube amplifiers. The high stability of the OCTAVE power amplifier technology even allows the use of speakers whose impedance dips as low as 2 ohms.

6. What cables are suitable for tube power amplifiers?

The cable manufacturers are now offering cables that have supposedly been designed specifically for tube amplifiers. Although such cables may be of good quality, there is no need to use special cables with tube amplifiers. Speaker cable can exhibit high values of capacitance and inductance, and tube power amplifiers deal with such loads better than transistor power amplifiers. The only exception would be if you want to use a tube pre-to-power amp interconnect cable longer than 5 meters. In that case, a low capacitance cable would be advisable.



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