

**RED NOTE amplification**

**MODEL xi ( $\bar{\text{—}}$ )**

**(Jazz)**

**OWNERS MANUAL**



## **GENERAL CHARACTERISTICS**

The Xi Jazz amp it's a 25W or 50W single channel combo built with high quality components with a 12" Celestion speaker. Mainly Jazz oriented - although not only confined to it - the amp is built around a minimalist circuit, derived from the ones used by Ampeg amplifiers in the 60's, whose clarity and balance in the mid/ high range is perfect to achieve naturalness and precision. In the design, emphasis has been placed on several musical criteria such warmth, dynamic efficiency and high/mid frequency control, so, when performing complex chords, the sound can translate them with sweetness, accuracy, intelligibility and transparency

## **SWITCHING THE AMPLIFIER ON AND OFF**

Power Switch - This switch activates the filament circuit.

Standby Switch - This switch activates the high voltages to the tubes (B+)

To operate the amplifier, first switch on the filament circuit, wait for 30 seconds until the tubes warm up and then activate the standby switch. Reverse the sequence for switching the amplifier off Following this procedure will extend tube life

Standby switch is also useful during short breaks; using it instead of switching the power off will also extend the tube life

Please be sure the amplifier is connected to the speaker and the Headphone/Speaker selector located at the rear panel is in speaker position otherwise the signal is muted and routed to the headphone amplifier

## FRONT PANEL CONTROLS



**Input jack** - Input jack give access to channel

**Gain** - This potentiometer controls the gain and works together with the volume control allowing fine tuning the exact amount of drive relative to "master volume". This control it's not intended to produce any overdrive, but to bring the output of different pick ups level to the "sweet spot" range where the preamp tube gives colour to the sound

**Drive** - This mini switch maximizes gain and drive to the preamp stage

**Treble** - Turning up or down the potentiometer controls the amount of treble signal

**Bass** - Turning up or down the potentiometer controls the amount of bass

**Volume** - This potentiometer controls the signal feeding the power amp and balances the channel gain relative volume

**Colour** - This mini switch increases clarity and harmonic content to the sound

**Reverb** - This controls the amount of Reverb going to the mix stage

**Dwell** - This controls how hard the reverb springs are driven, so the amount of the signal going to the tank changes depth, decay perception and intensity of the reverb effect

## REAR PANEL CONTROLS



**Main Fuse** - This fuse protects the power transformer primary and the value is 3A/250V Slow- Blown type. Please it is very important to change the fuse with the same type and value. Failing to do that will invalidate the warranty

**AC Receptacle** - Plug the power chord to the receptacle and be sure that the mains has a reliable ground connection. This is imperative for both personal safety and to keep the noise of the amplifier at minimums

**HT Fuse** - HT fuse protects the output transformer and other sensitive components in the event of an output tube short. If a tube fails the fuse will blow protecting expensive parts of the circuit. Fuse value is 500mA/250V. Using greater values will invalidate the warranty

**Power Switch (on/off)** - This switch activates the filament circuit.

**Standby Switch (Standby/operate)** - This switch activates the high voltages to the tubes (B+)

To operate the amplifier, first switch on the filament circuit, wait for 30 seconds until the tubes warm up and then activate the standby switch. Reverse the sequence for switching the amplifier off. Following this procedure will extend tube life.

Standby switch is also useful during short breaks; using it instead of switching the power off will also extend the tube life.

Please be sure the amplifier is connected to the speaker and the Headphone/Speaker selector located at the rear panel is in speaker position otherwise the signal is muted and routed to the headphone amplifier.

**External speaker** – This mono 1/4" jack is for external speaker cabinets. It is parallel connected to 8 Ohm combo internal speaker.

**Speaker impedance** – This switch selects the output transformer impedance tap.

*Note about speaker loads.*

*Please connect the correct load to the amplifier. The internal and external speaker combination has to be the same as indicated by the speaker selector switch. If you cannot match the impedance try to combine impedances so the total load will be always greater than the indicated by the impedance selector switch; in this case you will have a different response from the amplifier but you will not harm it.*

If the external speaker is

8 Ohm, then the net impedance will be – 4 Ohm – Selector position – 4 ohm

16 Ohm, then the net impedance will be - 5,3 Ohm selector position -  
4 Ohm

4 Ohm, then the net impedance will be - 2,6 Ohm WARNING DO NOT  
CONNECT. Such load combination is too low for both 4 and 8 Ohm  
position. If you want to use a 4 Ohm external speaker system please  
disconnect the internal speaker and switch the selector to 4 Ohm

**Headphone jack** - This stereo 1/4" jack output is for dynamic  
headphones,

Headphone/speaker switch - This high quality mini switch mutes the  
power amp so you can use the amplifier with your headphones.

**Mode switch** - Looking at the amplifier from behind, just below the  
bias control section, there is a switch that controls the operational  
mode of the preamp tubes, pointing the switch externally activates the  
"normal" position and pointing internally activates the "cold"  
position. Since we are switching DC bias voltage to the tubes, it is  
recommended to turn down the volume before changing position, this  
ensures switching free of annoying "pop" noise

Normal mode - The amp operates in normal mode as expected from a tube  
amp with a clean, fat sound with rich harmonic content

Cold mode - The amp works in cold mode delivering a more HiFi, more  
transistorized sound, this mode works very well with Humbuckers or  
with some fine Archtops where a more acoustic or line sound is  
required

## **MAINTENANCE MANUAL**

Although not complicated, maintenance in tube amplifiers it is not completely free:

- 1) Tube replacement
- 2) Bias adjustment

### Tube replacement

Tubes wear, that is the price you have to pay for great tone. There are 7 tubes in your amplifier

Position, type and function are as follows:

- V1 5751 – channel first gain stage (both triodes in paralel)
- V2 5751 – channel recovery stage (both triodes in paralel)
- V3 5751 – Phase inverter
- V4 ECC81 – Reverb tank driver
- V5 ECC83 – Reverb recovery/mix amplifier
- V6 6L6GC – Power amp positive cycle (matched pair)
- V7 6L6GC – Power amp negative cycle (matched pair)

### MINIATURE DUAL TRIODES

V1,V2,V3,V4,v5 – Are dual triodes, No adjustment is necessary when changing any of these tubes. All dual triode are self bias

Dual triodes had to be substituted when:

Having more than 2.000 hours of use

Evident malfunction of the tube such microphonic noise or other problems

#### POWER AMP PENTODES

V6, V7 are power pentodes. Power pentodes need bias adjustment when substituted. ALWAYS USE MATCHED TUBES of the same type

What is bias?:

Bias is the most critic voltage in the amplifier

It is a negative voltage applied to the tube. This negative voltage controls current flow through the tube and sets his operating point. Bias set incorrectly with too much negative voltage applied to the grid can degrade sound quality delivering lots of crossover distortion (non musical distortion). The inverse situation is even worst: making the grid voltage less negative tube draws too much current and can damage the amplifier

#### **BIAS ADJUSTEMENT**

*WARNING! Setting bias incorrectly can damage the amplifier and it is not covered by the warranty*

Who can set the bias?

Setting the bias can be done if:

- 1) You are a qualified technician
- 2) You are an advanced user with a good knowledge about tube amplifiers.

If you don't know nothing about amplifiers, please refer to a qualified technician . Remember that a wrong set bias can make your amplifier sound bad and/or damage it.

The bias has to be checked when:

- 1)New power tubes are installed
- 2)A change in sound is perceived due to tube wear.

Tools needed:

Special bias adjustment cable (supplied)

Digital multi-meter

Screwdriver

Procedure:

MATCHED TUBES ARE IMPERATIVE

Connect amplifier

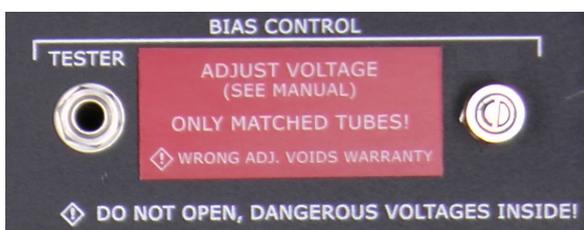
No input signal

Insert jack in the TESTER monitor jack located I rear panel next to headphones jack

Connect Digital multi-meter trough special cable supplied

Set the voltmeter to read DC mV in 2V range

Adjust bias potentiometer until you read 800mV +/- 5% (0,8V DC)



Red Note Tube amps

[www.red-note.net](http://www.red-note.net)

