RED NOTE amplification

MODEL Micra(μ)

OWNERS MANUAL


GAIN
TREBLE
BASS
VOLUME
INPUT
Rednote

GENERAL CHARACTERISTICS

The Micra (μ) amplifier is a very compact and lightweight single-channel combo with a 10" Celestion speaker. Focused on portability and comfort, perfect for practice, studio, and small or medium stages In addition, with the option of an external speaker output jack parallel to the internal 10", allows us to connect an external speaker such a RE112 or RE110 and substantially increase the sound pressure level (Spl) making it an amplifier more suitable for larger venues
Small and simple does not mean less quality, the used components are the same used in the other more complex amplifiers
The circuit is a 22W medium-gain circuit capable of producing both clean sounds as well as massive distortion. The circuit is a "custom" interpretation of a vintage cranked up Tweed De Luxe or Princeton. The overdrive is very gradual and stepped so the musician can control the exact amount of harmonic content

The power valves are fixed bias and delivers 22W.

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”. High settings in the control can produce overdrive, for clean sounds low to medium settings allows the output level of different picks types find the “sweet spot” range where the preamp tube gives the exact harmonic content to the sound

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

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. Its 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 to 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.

MAINTENANCE MANUAL

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

1)Tube replacement
2)Bias adjustement

<u>Tube replacement</u>

Tubes wear, that is the price you have to pay for great tone.
There are 8 tubes in your amplifier.

Position, type and function are as follows:

V1 ECC83 — channel first and second gain stage

V2 ECC83 — Phase inverter

V5 6V6 — Power amp positive cycle (matched pair)

V6 6V6 — Power amp negative cycle (matched pair)

MINIATURE DUAL TRIODES

V1,V2 — Are noval 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

V3,V4 are power pentodes. Power pentodes needs an exact bias voltage to perform correctly 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 450mV +/- 5% (0,45V DC)