



JOY

User Manual



WARNING!!!

READ INSTRUCTIONS BEFORE USE OF THE AMPLIFIER

CONTENIDO	
SPECIFICATIONS	3
DIMENSIONS	3
BEFORE STARTING	4
CONTROLS	5
FRONT PANEL	5
USE RECOMMENDATIONS	8
OUR COMPROMISE WITH ERGONOMICS	8
PLAYING AT LOW VOLUME	8
PLAYING AT HIGH VOLUME	9
MIDS CONTROL AND EQUALIZER	10
SPEAKERS CONECTION	13
TUBES SELECTION	14
BIAS ADJUSTMENT	14
PROBLEMS	15
CONTACT	16

Version 1.1

SPECIFICATIONS

- Full-tube single channel amplifier in combo format 110.
- Two 12AX7 tubes in preamp.

JOY12

- Two 6V6 tubes in power stage. Push/Pull A/B cathode bias 12W.
- WGS Veteran 10 speaker, 20W y 8ohm.

JOY22

- Two 6V6 tubes in power stage. Push/Pull A/B fixed bias 20W.
- Celestion G10 Vintage speaker, 60W y 8ohm.

JOY18

- Two EL84 tubes in power stage. Push/Pull A/B cathode bias 15W.
- Celestion G10 Greenback speaker, 30W y 8ohm.
- WGS ET10 speaker, 65W y 8ohm.
- Jack *INPUT* connector with MUTE when not connected.
- VOLUME, MIDS, BASS* and *TREBLE* potentiometer controls.
- Power on toggle switch and IEC connector with fuse.
- Bayonet Power on Light 6,3V 15mA.
- Impedance selector **4, 8, 16 OHM**, with two JACK parallel output.

DIMENSIONS

Width 345 X High 345 X Deep 245 (mm) Feet and Holder not included.

Weight:

JOY12 with WGS veteran10 speaker: 8 Kg

JOY22 with Celestion Vintage10 speaker: 9 Kg

JOY18 with Celestion Greenback10 speaker: 8,3 Kg

JOY18 with WGS ET10 speaker: 9,6 Kg

BEFORE STARTING

Carefully read the manual before using the amplifier, to safely commissioning and operating, and a complete function understanding. Tmain Amps is not responsible for possible damages due to incorrect usage of the product.

Do not locate the amplifier outdoor and keep it away from liquids and extreme temperatures. Avoid direct contact with sunlight or rain.

Any liquids or condensation may lead to electric problems or electrocution. If you think this condition may occur, do not plug it in until making sure it is completely dry.

Make sure the electric voltage supply matches with the amplifier one. It is indicated in the back face plate

-230V AC 50Hz en EU.

-120V AC 60Hz en USA y JPN.

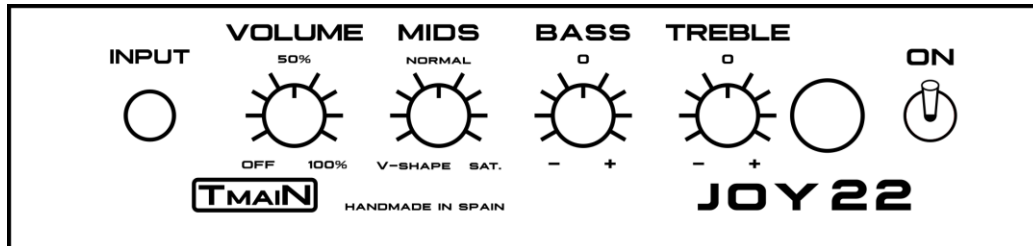
Speakers have to be conected to the amplifier in a determined way (extensively explained in this manual) and matching impedances.

Once properly connected, check the power on switch is in *OFF* position, plug the power cable in the IEC connector located on the bottom, and finally the Schuko connector to the power outlet, which must be properly connected to ground.

The amp must not be used if it is not properly connected to ground because of electrocution risk.

Check that the *VOLUME* control is at minimum and toggle the power on switch to the *ON* position. The light located next to the switch should turn on. Passed 30 seconds from turning it on, the amp is ready for its use.

Plug your instrument with a proper cable and connect this one to the amp Jack *INPUT*. After this you can adjust the *VOLUME* control to the desired level.

CONTROLS**FRONT PANEL****INPUT**

Here is where Jack cable from the instrument is plugged in. The amp will mute automatically when unplugged, avoiding unwanted noises.

VOLUME

Controls the amount of signal to the power amp modifying the delivery of power to the speaker and the volume level.

It fixes the differences between volumes that can generate when using the rest of the controls.

When at minimum, at OFF the amplifier is in mute and stops the sound. Turning it at maximum, in 100% we gain maximum power from the amplifier.

MIDS

This control, unlike the MIDDLE that is usually found out in most of the amplifiers, is interactive and fundamental to obtain a big variety of sounds. Around its central position, NORMAL, traditional middle frequencies are obtained, but turning to the left, V-SHAPE, lows and highs are more focused and the middle frequencies are cleaned up, allowing a more acoustical sound or SCOOP type of distortion. Turning it to the right SAT., the middle frequencies rise, building up distortion.

BASS

With central or balanced position in "0", BASS controls the gain in the lowest frequencies of the instrument. When pushing the power amp a higher value could fuzz the sound and lowering it would make the bass tighter and faster.

Turning it to the left, "-" it decreases, and to the right "+" it increases.

TREBLE

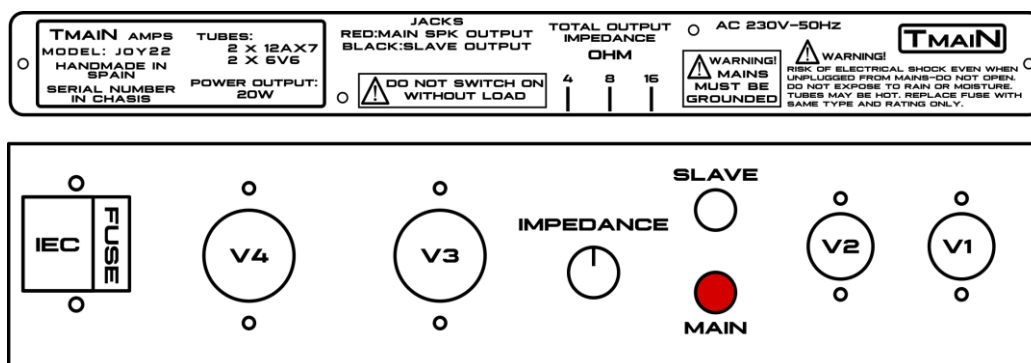
With central position in “0”, TREBLE controls the highest frequencies of the instrument. To the left, “-“ it is decreased, but it keeps the definition in the harmonics. To the right “+” it increases the harmonics and improves the sound of the humbucker pickups, in a similar way to a BRIGHT switch.

ON

The main switch is in charge of activate and deactivate all of the internal circuits. When turned on, must wait for a short period between 30 and 60 seconds for the heaters circuit* to arrive to the necessary work temperature and start making a sound. When you stop playing for more than 5 minutes you can turn off the amplifier to avoid tubes to wear out.

In more brief stops you can disconnect the Jack cable from the IMPUT jack of the instrument, leaving the amplifier completely silenced.

BACK AND LOW PANEL



IEC CONNECTOR IEC AND MAIN FUSIBLE

Electric power supply in the amplifier. You must make sure that the voltage of the electric power supply meets with that of the amplifier.

With a small screwdriver you can open the lid and watch the amp’s main fuse and a replacement one.

Replace it only with one of the same kind and values.

V3 AND V4

Poweramp tubes. They must be similar and be matched for a correct performance.



TOTAL OUTPUT IMPEDANCE

It allows to select the amplifier power output impedance. It is necessary that this one has the same impedance as the speakers you connect.

It can be selected at **4, 8 y 16 Ω** .

PARALLEL OUTPUTS

Jack output to connect the speakers. *MAIN* in red color is where a load must be connected. *SLAVE* is connected in parallel to *MAIN* and can be used to connect two different loads.

Speakers must be connected always before turning on the amplifier and do not disconnect them while on use.

V2

Phase inverter tube and last stage from preamp that connects directly with the power stage.

V1

Preamp tube which has most of the tone, gain and noise.

USE RECOMMENDATIONS

OUR COMPROMISE WITH ERGONOMICS

The instrument features and everything that we connect to the amplifier, plus environment variables will modify the amplifier behavior, affecting their values and reactions.

That is why we gave our amplifiers with the necessary controls (with potentiometers and switches) to adjust its response and obtain different results which will characterize your sound. This will require for you to use your ear and experience when using the potentiometers, but no worries, we dedicated hundreds of hours to make sure the controls of our amplifiers will offer you an amazing experience and endless ergonomics .

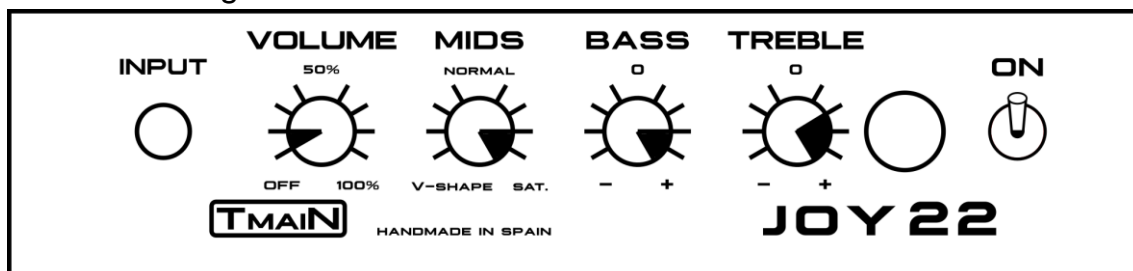
PLAYING AT LOW VOLUME

JOY does not need any power reduction method to obtain an excellent sound at a very low volume rate. We designed it thoughtfully to be able to work at room level volumes, and with insignificant volume, ideal to play or record without disturbing anyone.

To obtain the best results, please understand the speaker responds in a different way at low volume. Lowest frequencies will reduce more than the rest, so we recommend to rise up the *BASS* level to balance that flaw.

This works with the same theory as the LOUDNESS control does in Hi-Fi teams.

That is how we like it more, though MIDS control can be reduced much more for vintage sounds:



PLAYING AT HIGH VOLUME

JOY are amplifiers with a clean preamp sound and they will start overdriving when pushing the power tubes to its maximum level. They will start compressing and fattening the sound, leading to an overdrive that increase harmonics and finally distorts. Depending on the *BASS* level it could be fast and sharp, or slow getting into FUZZ.

It depends on the equipment and **JOY** model, when using *VOLUME* control it will start overdriving at different values. Dynamics and your way of playing will affect that value. This is completely normal and it is a signal that your equipment responds in a right way.

Thanks to our original circuit, we achieved that you could use your guitar volume control to act in a very similar way of the *VOLUME* control of the amplifier without losing its tone balance.

It must be you who adjust the *VOLUME* until you find the desired dynamic:

- Keeping a clean sound at all times.
- Allowing you to overdrive and fattening it a bit when strumming harder.
- Switching between overdrive and clean just with your hand dynamic or turning the volume control of your instrument.
- Play with two different distortion/fuzz or overdrive levels when you decrease your guitar volume.

...and those are some of the tips to help you get it!

Clean sound at every moment:

This is the easiest, you only have to keep *VOLUME* under the level that you consider starts compressing the sound. If you want to use overdrive or distortion of pedals make sure the *VOLUME* level is correct after turning them on. In general, natural compression of the power tubes together with distortion pedals create a perfect mix, less sterile than with the amplifier completely clean.

Compression and overdrive:

Tube sound is, undoubtedly clean and pleasant to the ear, which enriches with dynamics, of a slight overdrive.

Overdrive and clean:

Getting into the overdrive sound, you can enjoy a truly power tube distortion, that so much coveted. You can still play more gently or slightly

lower your instrument volume to get a clean sound, keeping a similar volume level.

Distortion and FUZZ:

Close to the tubes and speaker limits you can enjoy a distortion or fuzz that will turn into overdrive when you slightly lower your instrument volume, with compressing clean or dirty yet with enough volume level. The main difference between distortion and FUZZ when referring to tubes is *BASS* control, to avoid an excess of low when you have a high volume you must reduce the low levels, so that it sounds more balanced, faster and direct, a more bulky sound. If on the contrary you increase the *BASS* level, you will get a fuzz effect from the power tubes that will be completely saturated.

MIDS CONTROL AND EQUALIZER

MIDS control is the most important one, formed by the equalizer, due to its influence in the intermediate frequencies gain of the guitar, for that it will interact directly with *VOLUME* control, changing in addition dynamics, tone and grane.

V-SHAPE

With *MIDS* in the *V-SHAPE* region we will turn middle gain at minimum making *BASS* and *TREBLE* more present, this way and to keep balance we can reduce them to accentuate a vintage sound, with the grain that reminds us to the 60s and 70s original amps and a more relaxed dynamic.

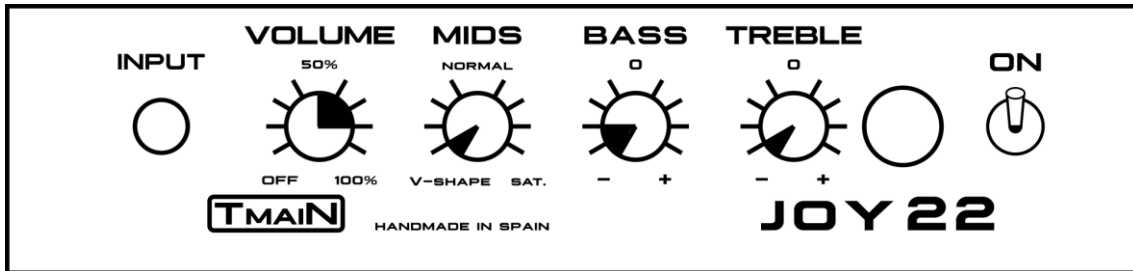
SAT. (SATURATED)

Turning *MIDS* to *SAT.* we obtain completely different results, with higher gain values, higher attack and punch, overloading sooner; characteristics of more modern sounds.

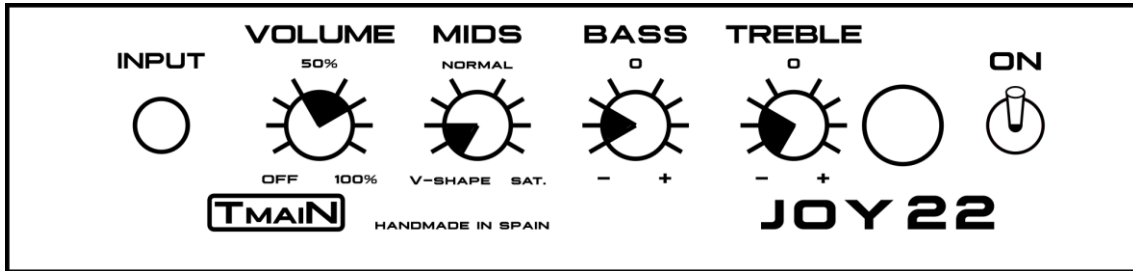
Increasing the *BASS* y *TREBLE* values we can balance any excess of middle frequencies, turning the sound more vivid.

Here are some example of sounds that called our attention taking as reference the *MIDS* level from minor to major:

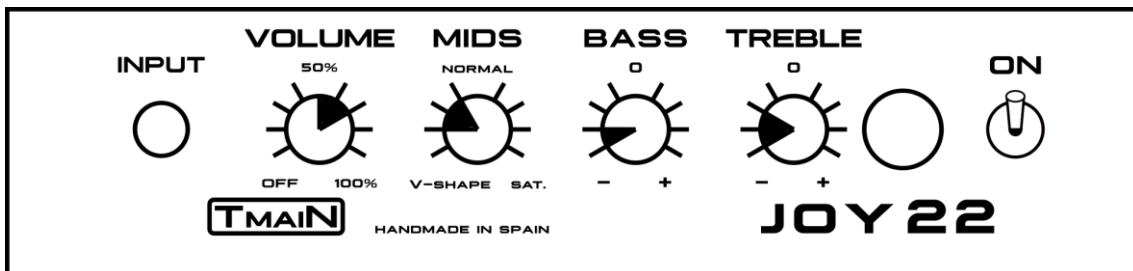
American Vintage



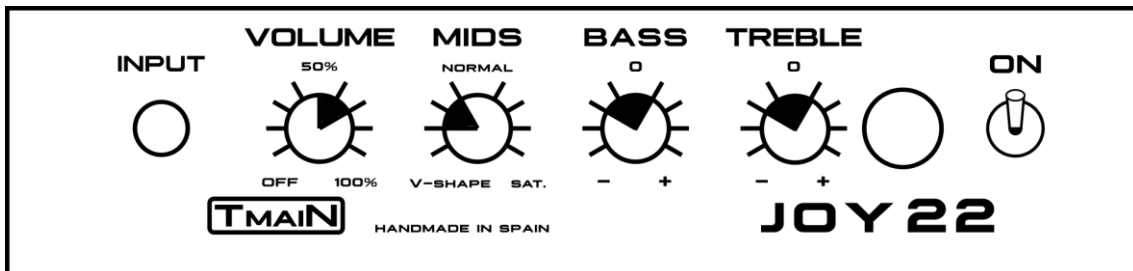
American 60s



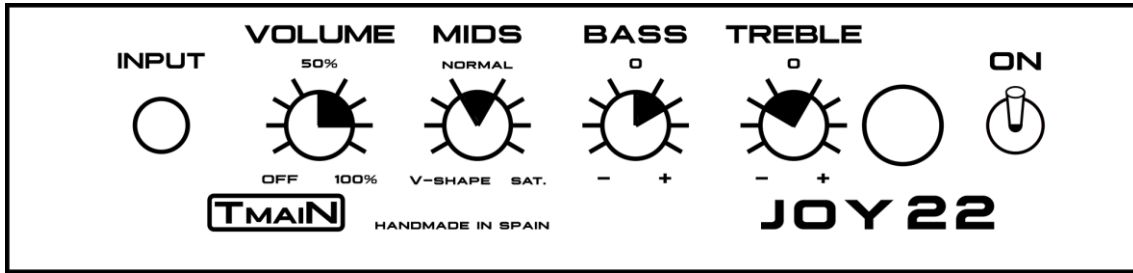
CHAMP



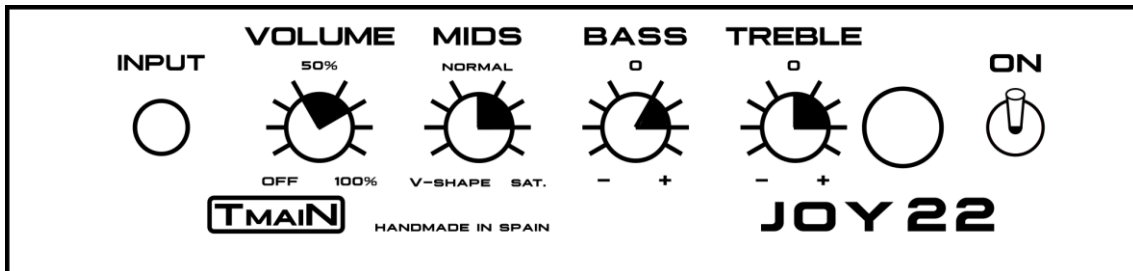
Modern American



Balanced



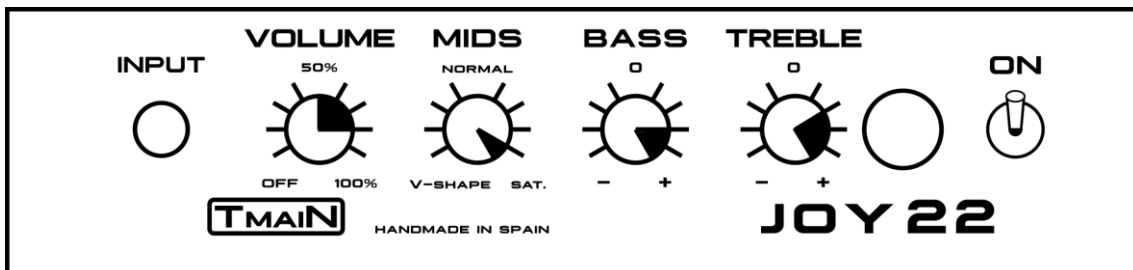
Compressed



Modern Vivid



Maximum attack



SPEAKERS CONECTION

Before connecting the amplifier to AC power make sure there is a load, speaker or screen properly connected. Otherwise power tubes, output transformer or speakers could be damaged. Otherwise power tubes, output transformer or speakers might be damaged.

To make a correct connection, we should know the impedance from the speaker or screen that we are going to use, and the work power from this one, that must be superior to the one the amplifier can supply. Using a less powerful speaker is possible, but is not advisable since there is risk of breaking if the power supported surpasses the power supplied from the amplifier.

There is two Jack speakers outputs, one of them is *MAIN* and the other one his slave in parallel or *SLAVE*. A charge must be always connected in *MAIN* and if you use another charge you can do it with *SLAVE* keeping in mind the total impedance in parallel.

The speaker impedance can be **4, 8 o 16 Ω** and it is necessary to select the following impedance in the rotatory control *TOTAL OUTPUT IMPEDANCE*.

In case of connecting a second charge, you should understand that being connected in parallel, impedance is reduced to half, and you have to select the new value in *TOTAL OUTPUT IMPEDANCE*.

As you can see in the example, if we connect a **8 Ω** speaker to the amplifier in *MAIN* , we must select **8 Ω** in *TOTAL OUTPUT IMPEDANCE*, but if we connect a second **8 Ω** speaker in *SLAVE* , impedance will change to a **4 Ω** value, which is half, and we must select it in *TOTAL OUTPUT IMPEDANCE*.

Speakers from different impedances must never be connected and you must not use two **4 Ω** in parallel, which results in **2 Ω** and is not suitable for this product.

TUBES SELECTION

The **JOY** have two 12AX7 preamp tubes which were manually selected for their sound and can be from different brand and models.

In the preamp, V1 and V2 all kind of tubes can be used 12AX7, ECC83, 7025, 12AX7WA, 12AX7WB, ECC82, 12AT7 etc. as long as they share the same scheme of pins as 12AX7.

In the power amp, V3 and V4 use the same pair of tubes, matched which share similar electric characteristics. Any unbalance between these will cause the incorrect performance of the amplifier.

The **JOY12** and **JOY22** models use 6V6 tubes which can be replaced for other octal models by a qualified technician.

The **JOY18** model use EL84 tubes which can be replaced for other novel models by a qualified technician.

It is necessary that the amplifier is turned off and unplugged before proceeding to change the tubes. Those can be warm and you must NEVER touch the tube's base. A high level voltage shock may occur, even if it's turned off and unplugged.

BIAS ADJUSTMENT

Inside the amplifier there is no control that the user should access. BIAS adjustment has to be carried out by a qualified technician which knows the right measurement methods and the ways of adjusting the amplifier. There's voltage shock risk inside the chassis of the amplifier, and therefore must be disassembled by such technician.

Pre-tubes V1 and V2 don't require any bias adjustment and can be changed by the user.

The **JOY18** and **JOY12** models work with a cathode bias, so they don't require an adjustment and they can be changed by the user at any moment. Old tubes must always be changed for new tubes which have been matched.

The **JOY22** is the only one with a fixed bias, and must be adjusted by a specialised technician for every change of power tubes.

PROBLEMS

It is essential to read and understand this instructions manual. Any adjustment, repair or tubes change must be carried out by a qualified technician.

If you think there is something wrong with your amplifier, first try to plug your instrument directly to the amplifier with a different cable to discard any defective cable or pedal. Check your instrument and cable as well.

Also try connecting other speakers and speaker cables to discard a defect.

If you experience a lot of hiss noise try to use a different V1 tube.

In case of microphonic or intermitent noise, go to your technician.

Tubes are very delicate and fragile against bumps, they wear while in use and have limited hours of life, which reduce their performance as time goes by. High temperature, work hours acumulation and other mechanic influences may and will affect their life time.

TmaiN doesn't make tubes and has not responsibility for these, which can be affected during transport or the amplifier handling. Tubes amplifiers require a maintenance and constant supervision and it is advisable to have a trustworthy technician in case of any failure.

In the absence of sound and or the front light doesn't work, this might be due to a burnt fuse.

The **JOY** have two fuse and only one of them is accesible for the user.

This is situated to the side of the IEC connector, behind a gate with the main fusible for AC voltage. Inside this cubicle there's a fuse which must be replaced if broken **ONLY** for one of the same kind and value. Otherwise you may risk your equipment or even your life.

In the same cubicle you can find a replacement fuse. Replace it and check if the amplifier works. In the mayority of cases the first fusible melts due to a pick power in your electric suply, but if it melts again, call us inmediately.



If you used the replacement fuse, buy a new one to avoid running out of them again.

Inside the chassis there is a fuse HT or high voltage that must only be replaced by a qualified technician. Be aware that there can be electric voltage in the capacitors even when the amplifier is turned off and unplugged. Those fuses can melt if a tube is in bad shape. Check out that your power tubes are in good shape and replace them with new ones if you suspect they can be the problem.

CONTACT

Tmain Amps

Tech support: tmainamps@gmail.com

General Info: tmainamps@gmail.com

www.tmainamps.com