icon Audio

Instruction Manual Covering:

MB 805 SE Power Amplifier

designed by David Shaw

IMPORTANT!
THIS MANUAL CONTAINS ESSENTIAL HEALTH & SAFETY INFORMATION FOR YOU AND YOUR AMPLIFIER. PLEASE READ & KEEP SAFE AND REFER TO IF NECESSARY

Contents

1 Introduction

Thank you for purchasing the ***MB 805***. These pure valve mono block amplifiers are the result of years of careful design and listening tests with a wide range of speakers. The amplifiers are hand built using carefully selected audiophile components. The transformers are hand wound using low oxygen copper and special Japanese long grain iron. Finally each amplifier is valved, carefully commissioned and tweaked for best performance in Leicester UK.

In order to get the best out of your amplifier, please read the "SET UP" notes. These contain important information about the correct operation and safety. Should you be uncertain about anything please contact your dealer or one of our team.

Valve amplifiers do need a little more attention than their solid-state counterparts, but the sonic results are well worth it. In this manual we have tried to include everything that you need to know. Please let us know if you find any errors or feel that we have missed anything out.

ABOUT THE SE AMPLIFIER

The MB 805 are Single Ended (SE), this means that a single valve (805) has to do all the work of both the "up" and "down" parts of the waveform. In order to go "down" the valve must be running at 100% of its' maximum power, unlike push-pull amplifiers where the idle current is very low. Unfortunately the drawbacks of this system usually means that the power is limited to a few watts. We overcome the power restriction by using the very powerful 805 transmitter valve, for SE amplifiers this has the advantage that it is able to "swing" more negative than its sister 845.

As the 805 valve never "switches off" this gives the smoothest and most detailed mid range of any amplifier. This gives 100% Pure "Class A" power. The bass and upper treble can be relatively poor due to the difficulty in making transformers for this system. The difficulties in transformer design we have solved by using our "Tertiary Low Distortion" transformers that are wound in a complex way by hand using a third winding to reduce the distortion generated within the transformer. This makes them very wide band, with virtually "bottomless" bass.

Running in fixed-bias mode which gives the maximum power you MUST occasionally check the bias (say twice a year). The MB 805s are sensitive enough to be used with any pre-amplifier or a passive in most situations. Their simplicity coupled with point to point hand wiring without the use of printed circuit boards results in an open euphoric sound that is wonderfully detailed and warm.

Final Inspection - Your Guarantee of Quality

To assure you of optimum performance and reliability, this amplifier has passed our rigorous final inspection and listening test by the Icon Audio team in Leicester During which the final set up and adjustments were made.

To get the best out of your MB805s and to save time please read this information & keep it to hand for reference

Date	…./…./….
Model	…….
Amp Serial Number	…….
Customer	……

Check amplifier finish	…….
Internal wiring check	…….
Check Triode mode	N/A…..
Run min 6 hour test	…….
Check input	…….
Output Valve Bias level	……..v
Sound Quality	…….
Channel Balance	…….
Valve Microphony	…….
Valve Seating	…….
Hum level	L…...R…..mv
RF Test	…….
LED brightness	…….
Serial No sticker and recorded	…….
Mains voltage	117 / 230-240V

IEC Mains fuse	5A T ceramic
HT internal fuse	250ma T ceramic*
Bottom label	…….
Credit card receipt	…….
Bias meter	…….
Transformer Protection	N/A…..
Upgrades:	
Output valves 805	……..…….
Output driver 2A3	……..…….
1st Stage valves	…….
2nd Stage valves	…….
Capacitor grade (Audio)	…….
Mains lead	….STD

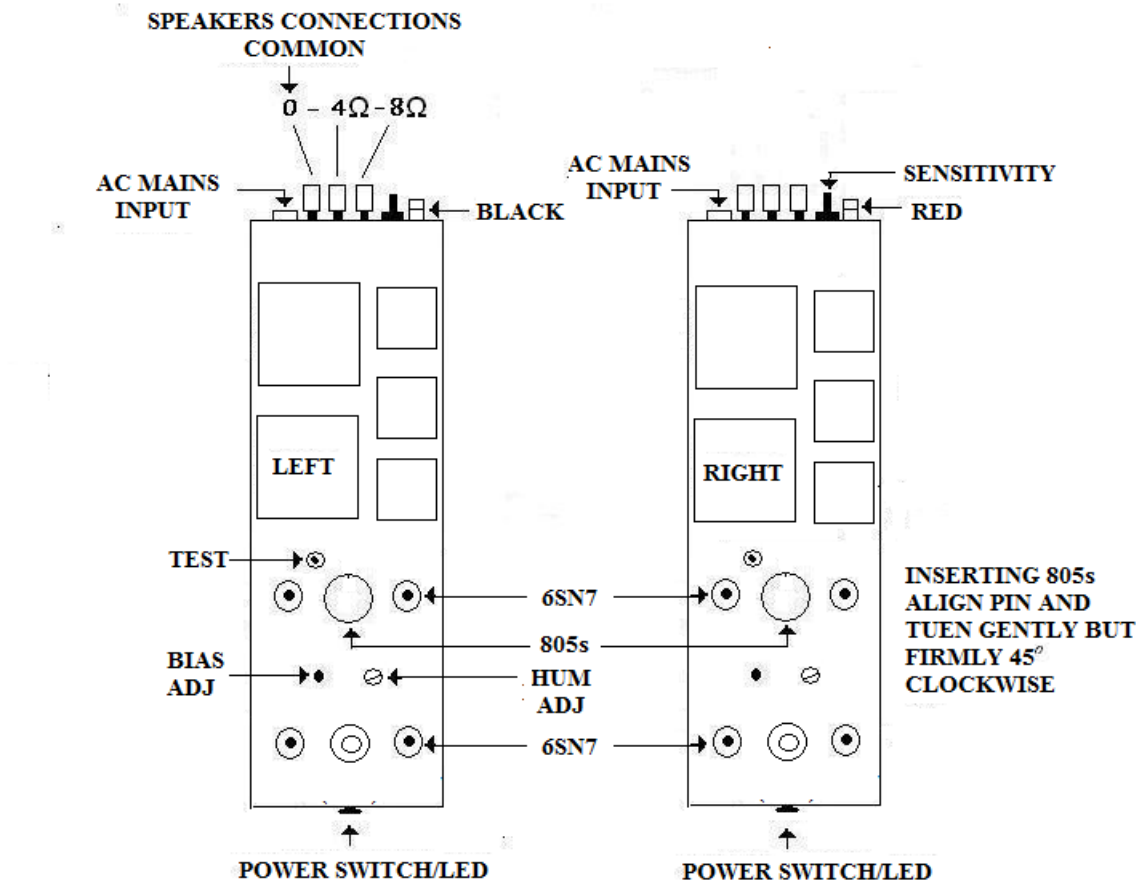
Signed off by …….

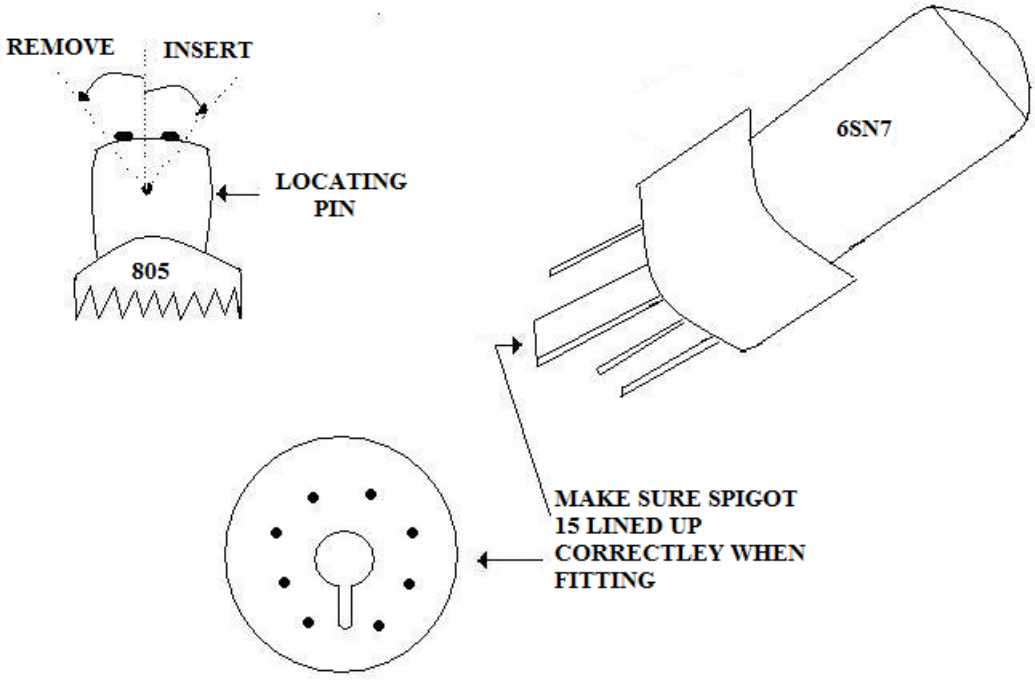
Notes:

*See engineers notes at rear

MB805

Layout and Features





If you are inserting the MB 805 valve for the first time, it may be helpful to observe the slot in the valve base to indicate the degree of rotation needed to fit the valve correctly.

*See engineers notes at rear

IMPORTANT READ THESE NOTES THROUGH FIRST!

2 QUICK SET UP GUIDE

Your safety is paramount to us. Big triode amplifiers like the MB 805s operate using high voltages. Please take care when setting up and adjusting. DO NOT OPERATE WITHOUT VALVES FITTED. If you are uncertain how to proceed at any point ask your dealer or Icon Audio.

1 Unpack each unit carefully. Make sure that it is in good condition. If not report to Icon Audio or your dealer. It is important that you keep the packaging for warranty/service return/shipping.
NOTE THE "LEFT" and "RIGHT" MB 805 orientation on each amplifier. Also keep the left and right amplifier valves separate.

2 If necessary fit the valves, or check that they are firmly in place. SEE PREVIOUS DIAGRAM. Fit the valves according to the numbers written on the base of the valve, and on the socket, normally V1-V6. Observe "Left" and "Right". The 805s should be fitted first to the **REAR** socket (the socket nearest the transformers). Fit by locating the bayonet pin at the side and twisting clockwise by 45 degrees. Then fit the 2A3. Double check the orientation of the small and large pins during fitting.
The small valves should be gently but firmly pushed into place. The four 6SN7s as marked and numbered.
Be careful to note the correct orientation of the small valves central "spigot" between the pins otherwise damage could occur.
To avoid damage to the valves, do not twist the glass envelopes excessively as they may become loose/detached. Hold the valves as close to the base as possible. Damage to valves is not covered by the warranty. These valves have already been fitted and tested for quality.

3 Connect to source unit, e.g. Pre amp, Passive pre amp etc via sockets on the rear.
4 Connect speaker terminals use "0" &"8 ohm" terminals unless you have 4 ohm speakers (see P5) Make sure that the polarity is correct. (See speaker connections chapter 3). If 'bi-wiring' both 'common' should go to the black terminal and both 'positive' (or red) should go to the red terminals.

5 Connect to mains supply using supplied IEC mains lead to 230/240v supply (or 117v)*. **If for some reason the welded plug must be removed, please remove plug fuse and dispose of immediately.** (As they can be a danger to children if plugged in). The replacement plug should be wired in the following way Brown to Live terminal, Blue to Neutral terminal and Green/Yellow to Earth terminal.

6 SWITCH ON! The blue mains indicator should light up. The 805s will glow bright yellow. You will likely hear a "humming noise" for a few seconds, this is normal. After about 20 seconds the amplifier should now be working. The small valves may have a visible orange glow from the cathode heaters. With the pre amp volume control set to minimum there should be no sound coming from the speakers except a barely discernable hum. If there are any unpleasant sounds coming from the speakers, switch off and refer to the 'Trouble Shooting' section or contact Icon Audio.

6a Sensitivity Switch
Located on the rear, this switch is "UP" (H) for (high sensitivity) operation. If use with a pre-amplifier is required, the switch should normally be "DOWN" in the low sensitivity position, but this is down to your personal preference.

7 Your unit should now be functioning. If not check wiring again. Do not operate at a high volume for the first five minutes to allow the valves to warm up properly.

Please note all these things are normal for valve amplifiers:

A, 805 Valves get very hot, BEWARE!
B, The transformer covers will get quite warm
C, There may be a "new" smell for a few weeks.
D, Mobile phone 'breakthrough' is normal. Move your phone further away to cure this.
E, Valves may make a 'tinkling' sound when warming up and cooling down.
F, One channel may come on before the other at switch on.
G, There may be a 'click' when switching off.
H, The occasional "click" or "pop" is normal.
I, The hum level may higher for about 30 secs after switching on.

8 Health and Safety. The valves when operating have high surface temperatures. Keep out of reach of children and pets. The use of the supplied guard is recommended in these circumstances. Always unplug when making adjustments. **Like all amplifiers there are potentially lethal high voltages inside, which when switched off can take twenty minutes to discharge!** Do not remove bottom panel unless you are a competent engineer. There are no user serviceable parts inside. **Like other household electrical appliances do not leave unattended whilst switched on.** Do not adjust the 805 bias pre sets without reference to the manual. Incorrect adjustment could cause the valves to overheat, with resulting in damage to valves and amplifier.

Bias Adjustment:

The bias adjustment is factory set. No initial adjustment is necessary.
To maintain the best performance of the amplifier you should check the bias of the output valves from time to time (say twice a year). Full details will be found in section 6.

3 Connecting inputs & outputs

Many problems associated with electronic equipment involves connecting leads, which are usually either **'BAD CONNECTION' or a 'WRONG CONNECTION'**. So it's worth making sure that you have good connections and that your leads are the right way round.

Inputs
These power amplifiers require some kind of pre amplifier to accomplish switching and volume control. This could either be achieved by either a "passive" or powered unit. Icon Audio makes ideal pre amps. You may wish to consult your dealer. If you wish to use a turntable you will need a suitable phono pre-amp. Your dealer or Icon Audio can advise you. Either of our highly rated PS1 or PS3 MM/MC all valve phono stages would be an ideal partner.

Connecting loudspeakers
It is important to use good quality loudspeaker cable. This should be relatively thick and muti-stranded. i.e. QED 'Original' or better. Take care to connect the correct polarity. The use of 'Banana plugs' or 'spade' connections will ensure a good connection whilst minimising the risk of 'shorts'.
In our experience Icon valve amplifiers are more tolerant of cables; therefore the benefits of some very 'exotic' cables may be less apparent. But this is also personal taste. The losses in speaker cables is less than in interconnects.
You can either 'hard wire' your cable to the amplifier by baring enough cable to fit in the connector and twist together to avoid any spare strands touching anywhere else (soldering the stands together helps). **Be warned this amplifier does not have an output protection device, which would degrade the sound. So a prolonged short due to strands of wire touching could cause damage.** Alternatively use good quality 'banana' plugs or spade connections, once fitted they are trouble free.

Speaker polarity. When using a pair of MB 805s it is essential that you observe the polarity of the terminals; they must be the same for the left/right connections at each amplifier end and at the loudspeaker end. Otherwise the sound will be 'out of phase' with the sound stage 'inside out' with reduced bass. **If you are unable to check this or confirm the polarity** (e.g. if you have 'built in' wiring), try the following; Connect the system up and play some music with plenty of bass (e.g. dance music), preferably in mono (FM tuners are usually switchable to mono) and stand the speakers close together. If correct you should hear plenty of bass, if not **reverse the terminals for one channel only, either at the amp or speaker.** You will now hear more, or less bass. The higher bass output is the correct setting to use. Another alternative is to use a test disc. If you are 'bi-wiring' your speakers use only two terminals, you must use only 4 or 8 ohms, not both, as this will not load the amplifier properly.

4 or 8 Ohms?
Many modern loudspeakers have an impedance which can vary from 2-16 ohms. The best power match is (1) the loudest, and (2) the most pleasing tonal balance.
The MB 805 is designed to work with full range, low to medium efficiency speakers having impedance between 3 ohms to 10 ohms. Speakers having efficiency of lower than 84db will have greater difficulty in providing a high sound level. But this will also depend upon individual speakers, room size, type of music and positioning etc.

4 Getting the best performance from your amplifier

- UNDER NO CIRCUMSTANCES OPERATE WITHOUT VALVES FITTED!
- NEVER REMOVE THE BOTTOM COVER
- Use the provided valve cover for the safety of others
- Switch on your pre-amp first. This will limit "switch on thump" in your speakers.
- Do not leave the amplifier switched on all the time. This is not necessary
- Do not switch off and on without a short rest of 60 seconds (to reset the 'soft start')
- Do not adjust the output valve grid bias without reading the manual
- Do not operate the amplifier without loudspeakers connected
- Do not use valves other than listed, as there could be danger of shock or damage
- Do check the bias once or twice a year or if you have cause to suspect a problem
- Make sure the speakers are in phase

What is safe maximum volume?
The MB 805 will run happily all day long at maximum power; the valves hardly stressed any more than at zero volume. Running into distortion will however stress the whole amplifier. Generally speaking if the sound is not distorted then the amplifier is not stressed. But beware of heavy musical transients at high volume which could also damage your speakers and blow fuses.

Leaving the amp switched on
DO NOT LEAVE THE AMPLIFIER SWITCHED ON ALL THE TIME 24/7. Whilst the amplifier will sound at its best when it is properly warmed up, there is no advantage leaving it switched on when

*See engineers notes at rear

it is not in use. It is using electricity and valves have a finite life. (About 9 months continuous use).

'Burning in'
Although the amplifier should sound good within about 10 mins it can take up to an hour to sound at its best and will take several months of regular use before it is fully 'run in'.

Upgrading Valves!
Quality valves should sound better and have a better service. The valves supplied with selected models are the result of careful comparison with other makes. But beware of paying a premium for "New Old Stock" valves where you may be paying for rarity value and not performance. Icon Audio normally keep a range of upgrade valves in stock.

Cabinet Care
To remove dust we suggest gentle brushing of the polished stainless steel cabinet with a soft paintbrush. Other marks can usually be removed with a damp cloth. The Perspex valve cover may need a gentle wipe with soapy water and drying with a duster. Never use anything wet on the amplifier, and always clean with the power disconnected.

5 Trouble Shooting

Amplifier Dead
Check the 5 amp mains fuse at the back of the amplifier. To gain access, remove the mains lead. The fuse is in a small plastic drawer, which forms part of the socket assembly. To open insert a flat blade screwdriver or similar and prise open. **The fuse in use is the innermost** the outer is a spare. Should the replacement fuse also blow there is a fault you should disconnect from the mains and seek qualified help or Icon Audio. Replacements should be 5 Amp 'anti-surge'.
The fuse in the wall plug should be a 5 amp fuse, although unlikely to fail, this should be checked if the amplifier fuse is OK.
There is also a HT fuse inside the amplifier. This would not normally blow unless there is a valve fault or an overload condition. Ideally this should be checked by a competent engineer. Disconnect amplifier from the mains power and wait 20 minutes before removing bottom plate. If the HT fuse has blown, there are replacements inside. Replace bottom cover afterwards and check bias immediately after switching on. Should the fuse blow again the amplifier will need a service.

No sound
Have you selected the right input? Is the "Tape Monitor" switch up? Are all the connections OK? Is everything switched on? Are the speakers connected?

Distorted sound.
Could be your source, the speakers or the amplifier, check all wiring, and try swapping things around to eliminate or prove which component is the problem.
Left or right amplifier? If both probably the source unit. Try another source. If one amplifier is distorted check the bias. No bias reading means either a fuse blown or a faulty valve. This could be due a faulty 805 or one of the 805 internal fuses blowing. A symptom of this would be no bias voltage at the test point. Also the valve would not be as hot as normal. Refer to an engineer or to Icon Audio. Spare internal fuses are secured inside the chassis. Replacements are available free of charge from Icon Audio.
If the amplifier lights up and there is no sound/distorted sound this could be due to failure of one of the small valves, see also section 7.

Hum Problems
If you notice a gradual increase in hum over a period of time, the hum balance of the 805 may have drifted out of "balance" Using a long flat blade screw driver carefully adjust for minimum hum, if your speaker is far away the use of a second person with their ear to the speaker may be helpful. If the above does not work and you have tried the advice in the next paragraph, you may have a fault.
If not the above and the hum is at a relatively high level, especially when you are installing or making changes to your system: try disconnecting all inputs, if hum persists this is probably an amplifier fault.
If not, identify which input is causing hum. Connect one input at a time. A common cause is a 'hum loop' caused by having too many earths, and may be identified by unplugging each input source from the mains. One remedy for this is to use an interconnect which only has the screen connected at one end. Other causes of low-level hum can be from adjacent equipment, so experiment with moving equipment around to see if this makes the hum better or worse.

Strange noises coming from speakers
Turn volume to minimum on unused input, if the noise disappears, the fault is with the source or the connection. If noise persists, the problem is with amplifier.

If the whole 805 output valve glows red (other than the heater), often accompanied by a noticeable hum through the speakers, switch off immediately, and refer to Icon Audio or a service engineer, as this could be valve failure.

Service: Should you suspect a problem, you could return the unit to your dealer or Icon Audio for a periodic service or return the valves for testing free of charge. You should carefully remove the valves (the 805s should be held by the base when removing, to prevent damage) numbering them with a marker from left to right as you do so in order that that may be replaced in the same position. They should be well packed in cardboard & foam or similar, and returned to Icon Audio for testing. (Valves are very rugged if packed properly).

Mains Supply
This amplifier is hard wired to work on 230/240v ac. The transformer may be re-configured for 117v ac by a qualified engineer. Contact for more information.

This manual is provided for guidance only, and is not intended as a comprehensive service manual. In case of problems you should refer to your dealer or directly to Icon Audio.

*See engineers notes at rear

6 Bias Adjustment

Read these notes all the way through first.

If you are changing either the 805 or the 2A3 you must readjust the Bias and probably the hum adjustment.

If you are unsure about any aspect contact your retailer, Icon Audio or a competent service engineer.

When checking the bias ensure that any "Active" pre-amp or source is "off" with zero volume to prevent false readings. Passive pre-amps should be set at "zero" volume. On a test bench "short circuit" the input.

The MB 805s use the "fixed bias' mode of valve operation which is controlled by the 2A3. This has the advantage of higher power, and cooler running. However occasionally (twice a year) it is advisable to check the bias reading using the supplied meter to ensure best performance from the amplifier. This is a safe procedure which involves measuring 0.4v (400mv) DC in the sockets next to each 805 and adjusting if necessary.
See P3 diagram.

1, Tools you will need: The supplied meter or one set to measure approx 2v DC (2000mv), and a small flat blade screwdriver. Adjustment is done at zero volume with speakers connected. Run the amplifier for about 10 mins (if possible) first.

2, Connect: the black probe to the chassis 'ground' by unscrewing the '0' speaker terminal and tightening the probe in the exposed hole. And the red probe in the test socket adjacent to the valve on test. Set the 'Icon' meter to 2000mv or the 'black mark'. See pics.

Making the 'ground' connection.

3, Checking Bias: You should get a reading of ideally 400mV if each valve is conducting correctly. But this can vary from about 350mV to 420mV max. Bear in mind that your mains voltage fluctuations can affect your readings by up to 10%.
So if both the 805 valves are reading slightly high or slightly low, this usually means this is due to your mains. In this case no adjustment is necessary.

Showing a probe in output valve test point

4, Adjusting: If all the valves are high or low, set the 400mv by inserting a small screwdriver in each adjuster. **The adjustment is very sensitive so adjust very carefully.** If the reading appears a little unstable this is normally due to mains fluctuations.
5, If one or more valves are showing erratic readings or you cannot set the 400mv, then that valve is probably faulty or out of specification. If you are unable to set the reading high enough this means the emission of the valve is low. Icon Audio can test the valve for you, or ideally a matched pair or single valve be substituted*.

NOTE!
If there is no reading at all the internal fuse individual to each 805 should be checked by a qualified engineer. Spares should be located inside.

7 Valve Replacement

Important! Do not attempt to change the 805 output valves without reading these notes. Failure to do so could be both dangerous to you and damaging to the amplifier. Keep these notes handy.
USE ONLY 805 WITHOUT TOP CAP.

6SN7 Pull gently but firmly to remove. Take care that you orient the valve correctly before inserting. Line up the centre "Spigot" first. They are easy to break.
2A3 Pull gently but firmly to remove. Has 4 pins two are larger than the other. Please note the positioning before insertion.
805 Twist anti-clockwise 45 degrees to remove. Insert by locating pin in slot and rotating clockwise about 45 degrees.

Health & safety; High voltages are present inside the amplifier and on exposed valve sockets when valves are removed, so take suitable care. It is not necessary to remove the bottom cover. Beware valves get hot in operation!

How do I know when to replace valves?

Generally speaking valve failure may be one of these:
1, The valve continues to work but the emission gets low. In the case of output valves this will result in not being able to set the bias properly.
2, The valve gets noisy/microphonic. Usually happens to the small valves, can be confirmed by tapping with a pen, and swapping a valve from the same position in the other amplifier.
3, Heater fails. No glow in centre of valve. Valve is cold.
A valve that is lit up is not a guarantee that it is working properly; conversely a valve that is not lit up will not be working at all.
4, Dramatic Failure. Occasionally the demise of a power valve may be obvious with internal sparks and noise through the speakers. In that case, switch off and do not use until a replacement is available. Before use see chapter 6 "Bias Adjustment". If there was any associated burning smell etc, we would recommend a qualified person examines the inside of the amplifier first.

If the amplifier sounds OK the valves are probably fine. If the emission drops you will have difficulty setting the bias for the output valves.

Valve life will depend upon such things as hours of use and number of on/off cycles. It is not good practice to switch the amplifier on and off unnecessarily, or by removing the valves unnecessarily as this can strain the pins and cause tiny air leaks.

5, Changing valves:
Before changing the 805 valves ensure that it safe to do so by switching off and removing the mains plug at least 20 minutes beforehand. This will enable dangerous voltages to dissipate, and the valves to cool down.
If possible check the bias setting before you attempt to change the valve(s), in order to familiarise yourself with the procedure.
If changing both 805s, be ready to adjust the bias in order not to overload the power supply. Don't worry how low the reading goes this will not cause damage. Do final adjustment when the amplifier is fully warmed up.
If all is well there should be no more than a barely detectable hum from the speakers, and the amplifier should sound OK when tested. Note that only 805 valves are compatible with the amplifier, 845, 211 and similar looking valves will damage the amplifier, and will be dangerous.

6, If you cannot set up 400mv, then the valve is probably faulty or is unsuitable. (If reading zero the HT fuse may have blown).
If the valves are brand new, you will need to check again after approximately 10 & 100 hours, after that only occasionally or if you suspect a problem.

7, To avoid damage to the amplifier and electric shock hazard you must use only valves marked 805, 2A3, 6SN7 or equivalent. Use only valves which you know to be new or good condition and test the amplifier thoroughly before resuming normal use.

8, Replacing the small valves:
The 2A3 will require bias adjustment as it controls the 805**. The 6SN7s** do not require any set up procedure. It's just 'plug and play'.

Icon Audio is happy to check the valves/amp or re-bias your amp free of charge.

8 Specification & Features

(Typical conditions @ 240v 50Hz)

- 805 Triode output valves
- 2A3 Triode driver valve
- 4x 6SN7 double triodes for first stages (CV181)
- Hand wired point to point components
- Ceramic valve bases for low noise/leakage
- 40w RMS at clipping 1kH
- Signal to noise level -95db
- Freq response 20Hz-20kHz - 1dB
- Power bandwidth -3db=10Hz-30kHz
- 0.3% THD typical 8w (0.1% 1w) 1khz
- Custom hand wound transformers using grain oriented steel
- Supplied with attractive valve cover
- Minimal feedback used
- Audiophile oversized metal film resistors
- Audiophile High quality polypropylene or Jensen audio capacitors (optional upgrade)
- Internal audio cable using silver plated PTFE
- Valves carefully matched for best performance
- Gold plated Input & speaker terminals
- 400 mv sensitivity for full output (High)
- 1v sensitivity for full output (Low)
- 5 amp T mains rear fuse (with spare)
- 250ma F 805 ceramic anode fuses (with spares)
- W: 24cm. D: 57cm. H: 28cm. Weight:35kg
- 230-240v AC 50-60 Hz (or 117v for US)
- IEC mains lead, (5amp fused)
- CE certified. ROHS & WEEE compliant

Specification subject to change without notice.

9 Guarantee

Thank you for purchasing one of our amplifiers. We hope you will be pleased with it.

This amplifier is guaranteed by the dealer you purchased from for 12 months from the date of purchase for parts and labour, excluding shipping. Valves are consumables and therefore on a 12 months pro-rata wear basis. Please keep your receipt as proof of purchase, this will be needed.

All units are individually tested for performance for at least six hours before despatch to you. In the unlikely event that you believe the unit is not functioning correctly, it may be helpful to contact us first as we may be able to assist you. Then we would request that you return the item to us for further action.

You are advised to inform us of any change of address or change of ownership in order that we may keep you up to date of any upgrades or improvements. Check our website.

Exclusions
Claims for any damage to either amplifiers or valves must be reported within three days of receipt.

This amplifier is designed for normal domestic hi fi use. It is not guaranteed for commercial, Public Address use, or use in other situations. The guarantee becomes void if the unit has been modified in any way not approved by Icon Audio. Please contact us.

10 Packing Instructions

It is essential that the original box and packing be kept in good condition, as this provides vital protection during transit, so will be needed for service etc.. Please do not write on box, but use removable labels. Should the original box and packaging be lost or become unusable a repacking charge of one hundred pounds will be made.

- Re-use the supplied plastic bag to keep the amp clean and free from damp.
- The mains lead fits in a foam cut-out underneath the amplifier.
- **Send the valve covers and valves in the separate supplied box. See above for valve removal.**
- Valves should be removed, numbered and packed in “Bubblewrap” or similar for protection inside the valve cover.
- If the amplifier is stored in the box, keep upright.
- Do not store in damp conditions as the transformer windings will corrode.
- If the amplifiers are shipped insurance is desirable due to the high unit value.

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Engineers Notes

These notes are only intended for use by an engineer qualified to work with high voltage triodes like the 845/805. Owners should refer any problems to a dealer or service agent.
The amplifier may be inverted by supporting the transformers on non abrasive surface (e.g. dense foam, books etc) which allows space between the 805s and the work surface.

Safety
Before removing base disconnect the power cord. Allow 20 minutes for the HT to discharge.

Amplifier dead.
Check the 20mm mains fuse in the IEC socket at rear of the amplifier, if dead there is a spare included. Or the fuse in the plug (if applicable).
Amplifier lit but not working.
There is a 250ma HT fuse located on the chassis, with spares attached to the base. If the fuse blows again a VARIAC or variable transformer will be useful to operate the amplifier on reduced power in order the trace the fault or overload.
Make sure the bias for the 805s is correct. If the AC fuse is blowing with the HT fuse disconnected suspect the bridge rectifier or power supply.

230v to 120v Conversion.
Take the precautions as above. It is necessary to change the primary power windings from series to parallel. Remove either AC lead from the bridge rectifier and join it to the other terminal. The “centre” tap are the two leads that will be found joined together. Replace with these two and solder to the first terminal. A larger value AC fuse will be needed in the IEC socket.
120v to 230v Conversion.
This is changing the two primary windings to series.
Remove either pair of AC leads from an AC input to the bridge rectifier. Join together and insulate. The other pair of AC leads should be separated and soldered to each AC input of the bridge rectifier. A lower value AC fuse will be needed in the IEC socket.