



Marshall

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**SUPER 100JH
LIMITED EDITION
AMPLIFIER**

OWNERS MANUAL

From the Chairman

During the mid '60s a lot of well-known and up-and-coming guitarists used to visit me and see me at my music shop in Hanwell, West London, but there's one particular visitor that I'll never forget. One Saturday in the autumn of 1966, a tall, lanky American chap walked in with Johnny Mitchell or 'Mitch' Mitchell as most people know him. His name was James Marshall Hendrix and he quickly became the greatest ambassador my amplifiers have ever had.

Mitch used to work at my shop as a 'Saturday boy', when he was a teenager, and take drum lessons from me. He was a very talented lad and quickly became one of my top students. When Jimi Hendrix came over to England in 1966 he put a three-piece band together. Mitch auditioned and got the drumming job along with Noel Redding on bass guitar.

A key figure in Jimi's management company (Anim Ltd), 'Tappy' Wright, recalls that when Jimi started rehearsing with 'The Experience' he was trying various amplifier setups, none of which he was happy with. Chas Chandler had asked Pete Townsend for his advice, prompting Pete to send his roadie, Neville Chester, (later to become Jimi's roadie), over with a Marshall Super 100 head and two Marshall columns for Jimi to try. I'm delighted to say that Jimi fell in love with the Marshall sound straight away and knowing that Mitch knew me he said to him, "I've just got to have this Marshall stuff because it sounds so good. Can I meet up with this character that has my name - James Marshall?!"

Despite his somewhat wild appearance and his incredible, larger-than-life on-stage personality, Jimi was a very softly-spoken, charming and extremely polite young man with an unbelievable sense of humour. When he came to see me we talked about his sound and he asked me a lot of questions about Marshall equipment. We hit it off right away.

The very first words Jimi said to me were, "I've got to use your stuff! I don't want anything given to me; I want to pay full retail price for whatever I order." That impressed me greatly and then he added, "I'm going to need service wherever I am in the world!" My first thought was, "Oh no, he's going to expect me to put an engineer on an aeroplane every time a valve needs replacing!" As that wasn't exactly practical I suggested that we taught his roadie, Gerry Stickells, some basic amplifier servicing skills, like changing and biasing valves. Jimi liked the idea and so his roadie came to

the factory for several weeks. He must've been a very good learner because we were never called out at all! It was wonderful and Jimi was very happy. We remained good friends right up to his tragic and untimely death on September 18th 1970.

Sadly, because we both had such busy schedules I only got to see him perform three or four times but on those occasions I'd always go back stage for a chat and a laugh with him. Jimi was a fantastic character who loved to joke around, I always had a great time on those rare occasions we managed to get together.

In my book Jimi's playing is still the best ever and heaven above knows what he'd be doing if he was still with us today. Plus his showmanship was just fantastic! I can still remember him scaring the living daylights out of all the big name English guitarists when he first came over here because they'd never heard or seen anything like Jimi - no-one had. Jimi's talent was so extraordinary that he didn't only influence his generation; he's influenced every single generation since then. His records and videos continue to sell amazingly well, he still appears on the front cover of the world's biggest music and guitar magazines on a regular basis, and when I go out and do appearances, kids of all ages insist on having his poster! That's how impressive his legacy is, and it continues to grow.

I am extremely proud of the fact that Jimi chose to use Marshall Amplification and very pleased to celebrate the 40th anniversary of his legendary association with Marshall by way of this limited-edition Jimi Hendrix Super 100JH stack. I would also like to express my sincere gratitude to Janie Hendrix and all involved at Authentic Hendrix (the family company established by the late James Al Hendrix, Jimi's father) for collaborating with us in order to make this exciting joint-project a reality.

Only 600 of these authentic, handwired re-issues will be made. I sincerely hope that this unique looking and sounding landmark of Marshall history will provide you with countless hours of playing pleasure, inspiring you to push musical boundaries even further... just like Jimi did with the originals!

Yours Sincerely,



“Meeting Jim was beyond groovy for me. It was such a relief to talk to someone who knows and cares about sound. I love my Marshall amps; I am nothing without them!”

Jimi Hendrix



Dr Jim Marshall OBE and daughter Victoria (Managing Director)

Introduction

The Super 100JH Jimi Hendrix Head is a Class-A/B, all-valve, 100 Watt amp with two channels (High Treble & Normal) and a shared EQ network. It is a meticulously accurate, handwired re-issue of a 100-Watt head that Dr. Jim Marshall recalls naming the 'Super 100' when it first came out in 1966 because of the extra power it produced compared to the 50-Watt JTM50.

In order to make the Super 100JH identical to the 1966, 100-Watt heads Jimi Hendrix used, the circuit, cosmetics, construction, sound and all-important dynamic characteristics have to be 100% correct - and they are. We went to incredible lengths to achieve maximum authenticity and are delighted to report that our suppliers were equally as exacting in their tasks, none more so than Drake and Celestion.

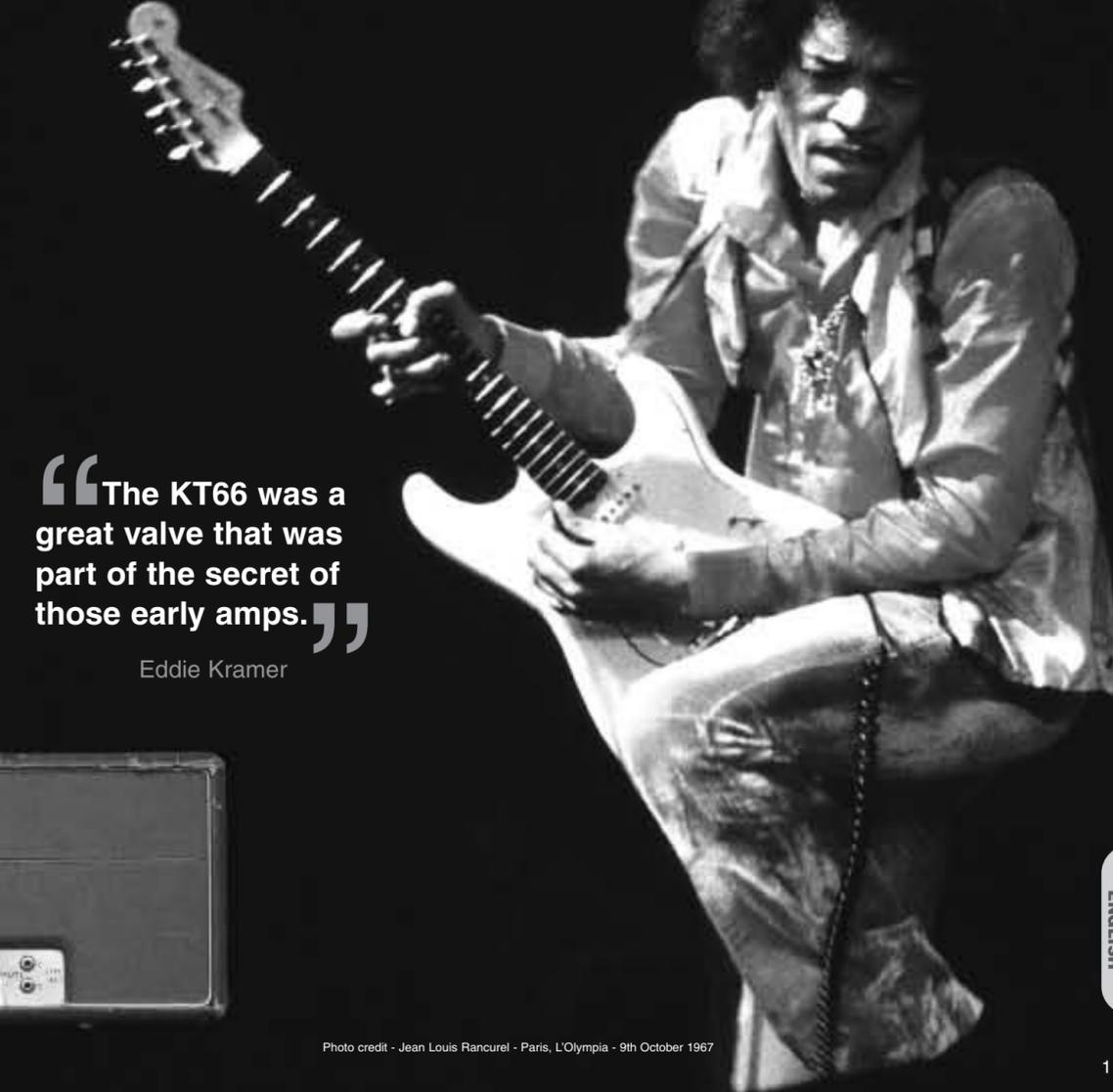
As you can see from its front panel layout, the controls of the Super 100JH are both familiar and straightforward. Its two channels - High Treble and Normal - each have two inputs (High and Low sensitivity) and separate Loudness (Volume) controls, both sharing the amplifier's four tone controls: Treble, Middle, Bass and Presence. Like all Marshall valve amplifiers, the Super 100JH performs optimally when turned up to deliver your personally preferred dynamic range. Due to its 100-Watt power rating and astonishing projection, it is a formidable live amplifier in even the largest of venues, a truth born out by Jimi time-and-time again.

The Super 100JH's thick, pure and harmonically rich musical tone emanates not only from its pre-amp valves but from its power valves being driven into a dedicated 100W output transformer. The Super 100JH will produce all of Jimi's ground breaking tones and lends itself perfectly to the emotion-fuelled music that launched him to the peerless, legendary status he maintains to this very day. It reacts superbly to picking dynamics and even the subtlest variations of your guitar's volume control - going from 'in-your-face' when you play with unbridled aggression, to subtle 'in your ear' blues caresses when you pull back or turn down... as exemplified by Jimi's recordings where he made extensive use of this amp's astounding dynamic capability.

Thanks to extensive research, we have learned from technicians and roadies of the period that the 1966 Super 100 heads that Jimi used were 'stock' except for minor modifications to the tone circuitry that were implemented in response to his request for 'more treble.' There is evidence to support this in our reference, where we found two small but significant component changes to

the tone stack. Replacing a 56K resistor with a 33K, and a 250pf capacitor with a 500pf not only gives the amp a moderate treble boost (resulting from the capacitor increase) but also an increase in bottom end and low mids (due to the drop in the value of the resistor). There is also a small but noticeable decrease in the amount of mid-cut when compared to the JTM45* as a result of these changes. This 'more treble' modification is included in your Super 100JH, as it was in the amazing sounding, and pristine condition (in terms of circuitry) reference unit (serial number 7026) ** from 1966 that we used as one of our references.

***TONAL NOTE:** the original Super 100 was essentially a JTM45 pre-amp driving a 100-Watt output stage. The 'more treble' modification just described not only gave the amp more cut and edge but also gave it slightly more gain - basically the same sort of wave-shape but with a bit more drive. As the Marshall 100-watt head evolved due to more and more artists requesting 'more treble,' this was one of the modifications that eventually became standard in Marshall pre-amp circuits.



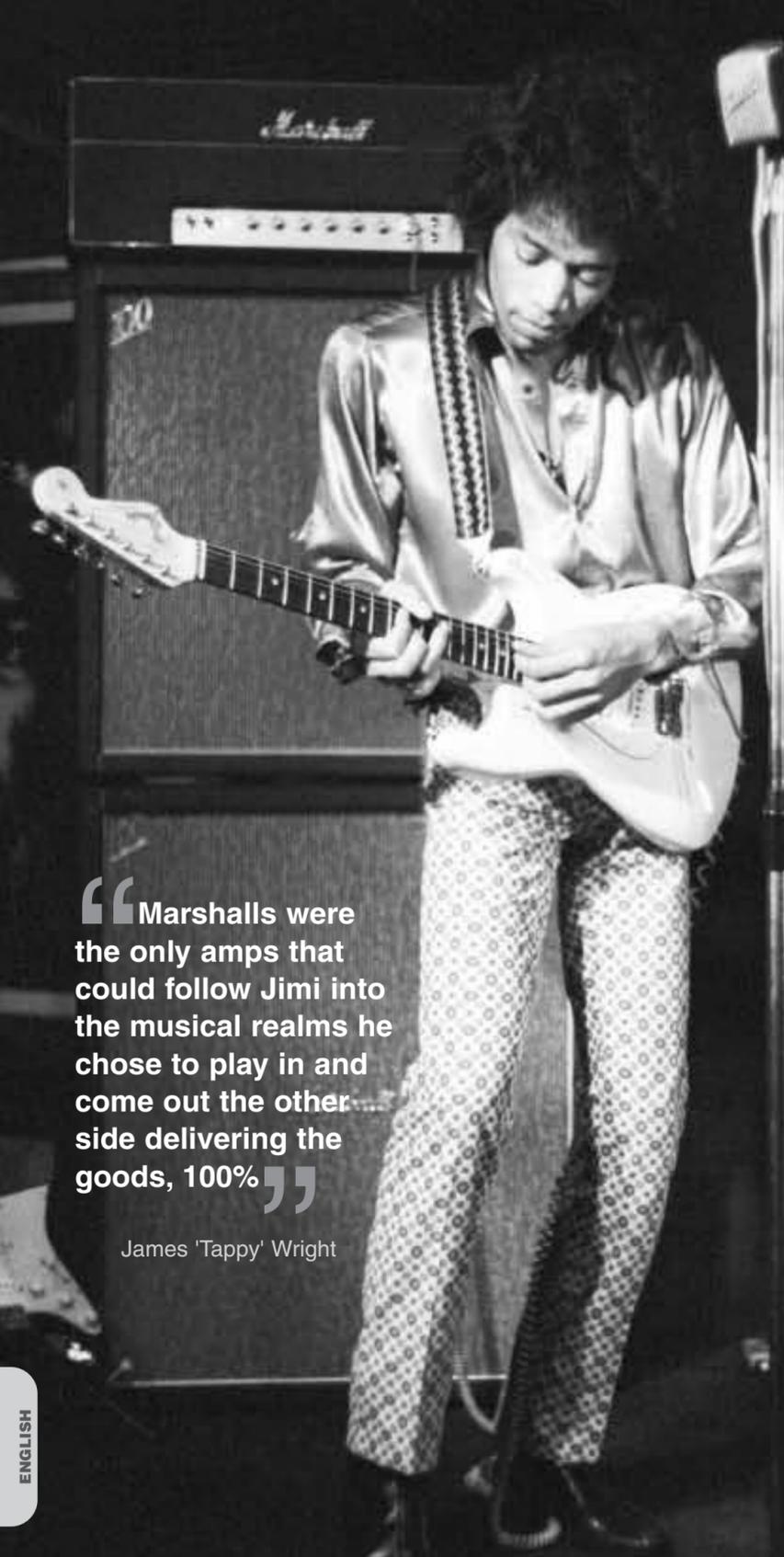
“The KT66 was a great valve that was part of the secret of those early amps.”

Eddie Kramer



** REFERENCE UNIT - Serial Number 7026

Photo credit - Jean Louis Rancurel - Paris, L'Olympia - 9th October 1967



“Marshalls were the only amps that could follow Jimi into the musical realms he chose to play in and come out the other side delivering the goods, 100%”

James 'Tappy' Wright

Technical Information

Components: Wherever and whenever possible, we have gone back to the original manufacturers for all components to ensure maximum authenticity.

Valve compliment: Three ECC83s in the pre-amp and a quartet of KT66* valves in the power amp working in push-pull. All valves are of the highest quality available and are subjected to our stringent grading and testing processes.

*KT66: these output valves were standard issue in mid-sixties Marshall Amplifiers and yield a fat, round tone that has a distinctly vintage flavour.

The way the pre-amp's three ECC83s (labelled V1, V2 & V3 in the photograph) are utilised is as follows -

V1 is the first pre-amp gain stage for the High Treble and Normal channels. Each half of the valve (the ECC83 is a dual-triode which means it is literally two triode valves in one) acts as a dedicated gain/input buffer stage for each channel.

V2 is common to both channels which are summed at the input of this valve. The first half of V2 acts as a second gain stage which boosts the signal further and directly drives the second half of the valve which is configured as a cathode follower (providing a high input impedance and a low output impedance for the signal to drive the pre-amp's passive tone network).

V3 is the amplifier's phase inverter and sits at the very end of the pre-amp section. V3 divides the single ended input signal into two separate output signals that are inverted with respect to each other - hence the name 'phase inverter' (a.k.a. 'phase splitter'). The two resulting signals are then fed to the push-pull power output stage of the amplifier.

Tone Circuit: In typical Marshall fashion, the Super 100JH's shared tone network is both passive and interactive. By interactive we simply mean that the settings of the Bass and Treble controls affect the amount of mid-cut available via the Middle control.

Tag Boards: The tag boards used in your handwired Super 100JH are exactly the same as those in the original in terms of thickness and matrix pitch. The material we're using is made exclusively for us and is registered with UL as 'Marshall EM42 brown.' The reason we didn't use a board with the exact same chemical composition as in the original units is simple - that material doesn't pass current safety legislations concerning flammability!

Transformers: The mains (power) and output transformers are vital to the performance, sound and feel of an all-valve Marshall amplifier. In order to achieve authentic tone and performance, we went to Drake for these important components as they are the company that supplied us with the transformers used in the original Super 100. Fortunately, Drake still had all of their original documentation intact in their files.

Mains (Power) Transformer: The Mains Transformer in this re-issue is an exact duplicate of the original in terms of electrical performance and behaviour. This said, some constructional alterations had to be made in order to pass current Safety Legislations. These alterations have no impact on tone or performance whatsoever!

Output Transformers: The Output Transformer in your Super 100JH is identical in every single aspect to the original ones used back in 1966. The inclusion of the fully functional 100V Line tap, while being historically correct, is of little or no use on this particular model, if truth be told! The reason it was present in the 60s was because the same transformer was also used in the 100-watt Super PA heads (model 1968) as well - enabling the head to drive multiple remote 100V line speakers in various locations within a particular venue.

Power supply: This circuit has the same filtering on the H.T. (high voltage DC, a.k.a. the B+ voltage) line as the original versions, a factor that contributes to the Super 100JH having a unique, dynamic characteristic all of its own. The power supply on the Hendrix head is notably different to that of the post '68 Plexis and, when the amp is fully cranked, has a very different regulation (i.e. its ability to supply what is demanded from it). This coupled with the period correct smoothing capacitor values produces that characteristic 'sag' (compression).

Chassis: We are using a box-section chassis made from 16-gauge mild steel with butt-welded corner joints. The steel is also passivated, giving it lifelong resistance to corrosion. This is a deviation from an original 1966 Super 100 head as it had an aluminium chassis. The reason we have made this change is for strength, longevity and reliability reasons, and we can assure you that it has no tonal effect whatsoever. Aluminium is a very soft metal and the one thing that all chassis from this period have in common, is they are easily distorted, buckled, bent or even cracked - due to the material's inherent weakness. A lot of this can obviously be attributed to the sheer size and weight of the

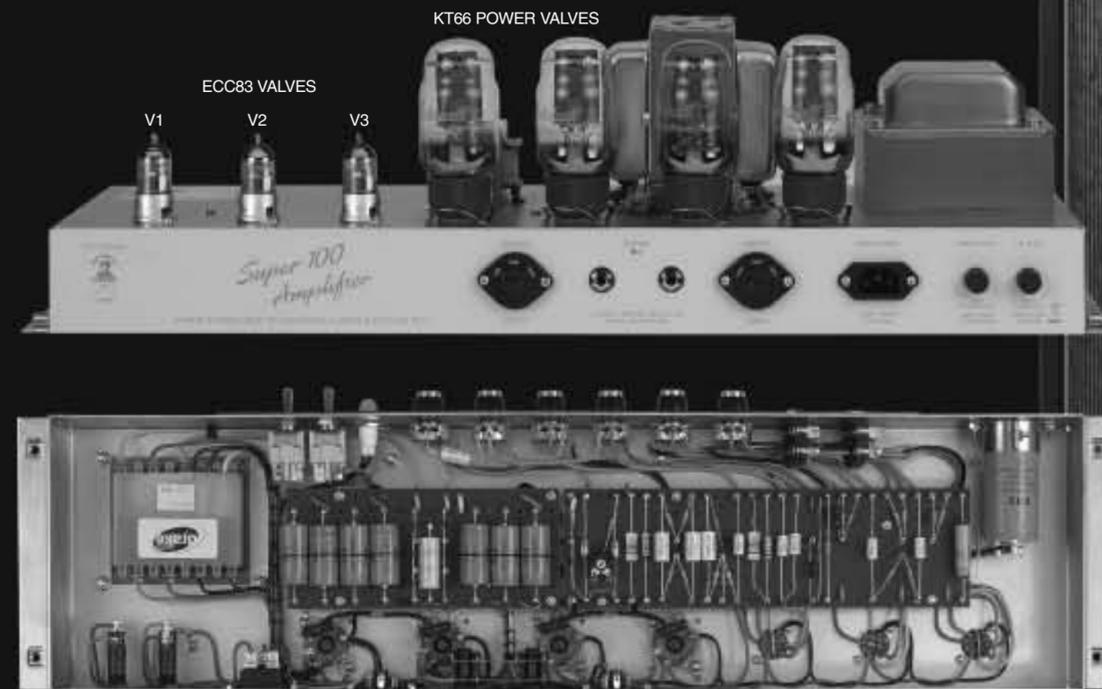
transformers. The steel chassis used in your Super 100JH doesn't suffer from such problems and is much more practical and roadworthy.

Front Panel: Extra thick, gold coloured Plexiglas (actually Perspex, causing some people to refer to it as 'Perplex!'), exactly the same as the original. And, just like the original, the front panel is that of a JTM45 (hence its 'JTM45' nomenclature) - used on the first Super 100s as standard. Specific details pertaining to the front panel features can be found on the next page of this manual.

Rear Panel: Made from cream styrene with gold print, just like the original reference units. Specific details pertaining to the rear panel features can be found on the next page of this manual.

Head Cabinet Construction: High-grade, flawless (knot-free) Baltic birch-ply with finger-locked (a.k.a. 'comb') joints for maximum strength. The main cabinet frame (sides, top and bottom) is 15mm ply; the front baffle is constructed from 12mm ply, while the back of the cabinet is 9mm ply. All edges have a 15mm radius.

Head Cabinet Cosmetics: The small gold Marshall script logo, black Levant covering, original venting, beading and piping all duplicate the look and style of the originals.

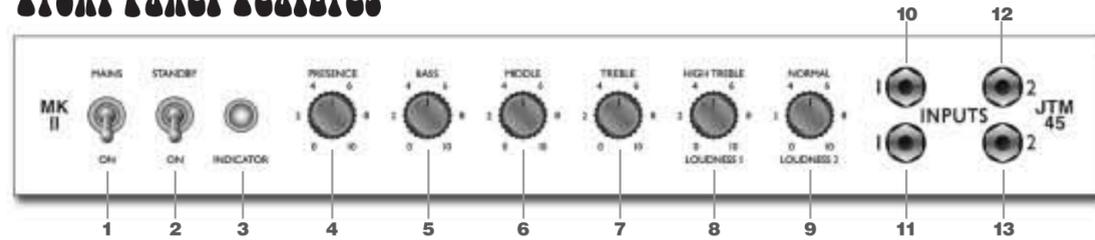


“Anybody wanting quotes from Jimi regarding his Marshall Amps will find hundreds recorded on his albums and videos.”

Neville Chester



Front Panel Features



1. MAINS (POWER) SWITCH

This is the On/Off switch for the mains electric power to the amplifier.

Note: Please ensure the amplifier is switched off and unplugged from the mains electricity supply whenever it is moved!

2. STANDBY SWITCH

The Standby Switch is used in conjunction with the Power Switch (item 1) to 'warm up' the amplifier before use and to prolong the life of the output valves. When powering up the amplifier always engage the Power Switch (1) first, leaving the Standby switch on 'Standby'. This enables the heater voltage, allowing the valves to come up to their correct operating temperature. After approximately two minutes the valves will have reached their correct operating temperature and the Standby Switch can be engaged, enabling the HT without 'shocking' cold valves. In order to prolong valve life, the Standby Switch alone should also be used to turn the amplifier on and off during breaks in a performance. Also, when switching off, always disengage the Standby Switch prior to the main Power Switch.

3. INDICATOR

This 6.3 Volt incandescent filament indicator will light up whenever the Super 100JH is plugged into the mains and the Mains Switch (1) is on.

4. PRESENCE CONTROL

This control affects high frequency content in the negative feedback derived from the Super 100JH's power section and fed back to the phase inverter. Turning it clockwise adds an extra high cut to your sound.

5. BASS CONTROL

This adjusts the bottom end. Turning it clockwise increases the amount of low frequencies in the sound.

6. MIDDLE CONTROL

This adjusts the level of those all-important mid-range frequencies. Turning it clockwise increases the mids and fattens your sound, giving it more punch. Turning it anticlockwise reduces the mids, producing a more 'scooped' tone.

7. TREBLE CONTROL

This adjusts the top-end. Turning it clockwise increases the amount of high frequencies present in the sound, giving your guitar tone a brighter edge.

Note: The previous four controls - PRESENCE (item 4), BASS (item 5), MIDDLE (item 6) & TREBLE (item 7) - are all shared, meaning that they are common to both of the amp's channels - Channel 1 and Channel 2. They are very interactive and, consequently, altering one control can change the way the others behave. For this reason, experimentation is recommended.

8. LOUDNESS 1

This controls the overall output level of Channel 1, turning it clockwise increases the volume. This channel is voiced for a higher treble response than the amp's other channel, Channel 2, hence its 'High Treble' labelling.

9. LOUDNESS 2

This controls the overall output level of Channel 2, turning it clockwise increases the volume level. This channel is voiced for a flatter, more 'normal' response and is labelled 'Normal' accordingly.

10. TOP (HIGH SENSITIVITY) INPUT FOR CHANNEL 1

This is the 'high sensitivity' guitar input for Channel 1, the High Treble channel. It is the most commonly used input.

Note: Always use a high quality screened guitar lead.

11. BOTTOM (LOW SENSITIVITY) INPUT FOR CHANNEL 1*

This is the 'low sensitivity' guitar input for Channel 1. Its sensitivity is configured to be 6dB (decibels) lower than the channel's 'high sensitivity' input.

***Note:** There is photographic and film evidence that Jimi used this input rather than the high sensitivity input on certain occasions. A particularly famous example of this can be seen in the footage of his now legendary live performance of 'Hey Joe' and 'Purple Haze' at the Marquee Club, London, on March 2nd, 1967, for the TV show, Beat Club.

12. TOP (HIGH SENSITIVITY) INPUT FOR CHANNEL 2

This is the 'high sensitivity' guitar input for Channel 2, the Normal channel.

13. BOTTOM (LOW SENSITIVITY) INPUT FOR CHANNEL 2

This is the 'low sensitivity' guitar input for Channel 2. Once again it is 6dB lower than the channel's 'high sensitivity' input.

Performance Note: 'Jumping' the two channels and 'Daisy Chaining' amps.

Because both channels of the Super 100JH have the same number of gain stages and are in phase with each other, it is possible to 'jump' (a.k.a. 'link' or 'bridge') them together and use them both at the same time. Doing this enables you to expand upon the amp's tonal capabilities.

The most common way of doing this is to plug your guitar into the top input of Channel 1 and then run a short 'jumper' guitar cable (i.e. a screened cable) from Channel 1's bottom input to the top input of Channel 2, (Fig. 1). Adjust Loudness 1 & 2 controls until the desired mix of tone is achieved.

The reverse is also possible, i.e. plugging your guitar into Channel 2's top input and then running the 'jumper' cable from Channel 2's bottom input to Channel 1's top input (Fig. 2).

Whether the channels are linked or not is entirely the choice of the individual player's taste in tone. As always, experimentation is the key.

It is possible to 'Daisy Chain' or Link a number of amplifiers together using the same principals described above. As illustrated in numerous photographs, Jimi would often use this facility to 'split' his guitar signal between two or more full stacks - his guitar would be plugged into the top input of Channel 1 on his main amp and then a relatively long 'jumper' cable went from the bottom input of the same channel to the top input of Channel 1 of the second amp.



Fig. 1

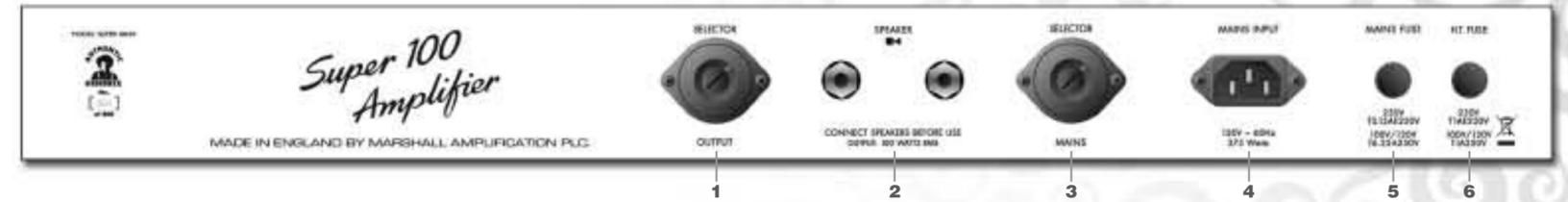


Fig. 2

“They were his partners in crime. Of all the amps he used, they were the most reliable, packed the biggest punch and had the best tone.”

Eddie Kramer

Rear Panel Features



1. OUTPUT IMPEDANCE SELECTOR

Matches the amplifier's output to the load (speaker) impedance.

Important Note: Your Super 100JH should be completely powered down before the Output Impedance Selector is turned.

It is imperative that: a) at least one of the speaker outputs of the amplifier is connected to a load whilst in operation and b) the impedance on the output selector matches the total impedance of the speaker cabinet(s) being used. The following combinations are our recommendations -

1x16 Ohm cabinet - Selector set to 16 Ohm
2x16 Ohm cabinets - Selector set to 8 Ohm
1x8 Ohm cabinet - Selector set to 8 Ohm

WARNING! Use of any other combination/configuration of cabinets and/or impedances may result in sub standard sound and possible damage to the amplifier and/or the speaker cabinet(s)

WARNING! Failure to comply with any of the points raised in this section may result in damage to the amplifier.

2. LOUDSPEAKER OUTPUTS

There are two parallel loudspeaker output jacks provided for connection to the speaker cabinets. Please always ensure that the amplifier's output impedance selector is set correctly (see item 1) and **ALWAYS** ensure you use good quality, unshielded (unshielded) speaker cables for this purpose. **NEVER** use guitar (screened/shielded) cables.

WARNING! Never use the amplifier without a speaker load attached!

3. MAINS SELECTOR

This matches the amplifier's mains transformer to the incoming mains voltage.

WARNING! ALWAYS ensure that this rotary selector is set to the correct mains voltage applicable for the country where the SUPER 100JH is being used.

Important Note: Your SUPER 100JH should always be completely powered down before the mains selector is turned.

Technical Note: Adjusting the selector from 230V to 120V or 100V or vice-versa will require the mains fuse (item 5) to be changed to the correct value as detailed on the rear panel.

4. MAINS INPUT

Your amplifier is provided with a detachable mains (power) lead, which is connected here. Before connecting for the first time, please ensure that your amplifier's mains selector (item 3) is set to your country's domestic electricity supply voltage. If you have any doubt, please get advice from a qualified technician. Your Marshall dealer will be able to assist you.

Important Note: Always ensure that there is a (speaker) load attached before connecting the mains lead.

5. MAINS FUSE

The correct value of this MAINS fuse is specified on the rear panel of the amplifier. For safety reasons **NEVER** attempt to bypass the fuse or fit one of incorrect value.

6. H.T. FUSE

The correct value of this H.T. fuse is specified on the rear panel of the amplifier. For safety reasons **NEVER** attempt to bypass the fuse or fit one of incorrect value.

Note: In the original heads this fuse was mounted internally, making a quick change impossible and anything but convenient! For obvious reasons we have made it accessible via the rear panel.



Speaker Cabinet Features 1982AJH & 1982BJH

4x12" Cabinet Construction: High-grade, flawless (knot-free) Baltic birch-ply with finger-locked (a.k.a. 'comb') joints for maximum strength. The main cabinet frame (sides, top, bottom and back) is constructed from 15mm ply and all edges have a 15mm radius. The front baffle onto which the four speakers are mounted is constructed from 15mm ply.

Note: The extra tall, straight fronted 1982BJH cabinet is 6 3/4" (173mm) taller than a regular Marshall 1960B cabinet.

4x12 Cabinet Cosmetics: The small, gold Marshall Script logo, '100' corner logo, black Levant covering, leather strap handles (placed on the top of the 1982AJH and on the right hand side of the 1982BJH), gold beading, white piping and pinstripe grille cloth duplicate the look and style of the originals. To this end, the input jacks on both cabinets are placed near the bottom of the back panel. The original grey and white, pinstriped 'Bluesbreaker' grille cloth (used from 1965 to 1968) is no longer available, and wouldn't satisfy modern safety legislations regarding flammability because of its rubber content. Our supplier, 'Somic Plc' has worked with us to come up with a cosmetically similar, modern alternative.

Speakers: Both of these 100 Watt, mono, cabs are loaded with Celestion G12C 25 Watt Speakers which have been specially developed by Marshall and Celestion to duplicate the smooth, balanced sound of the original 25 Watt Greenback speakers found in authentic reference cabinets. In keeping with that time period, a black and gold Marshall label is on the back of the magnet cover, ensuring the look is as authentic as the sound.

TECHNICAL SPECIFICATION

SUPER 100JH Head	
Power Output	100W RMS
Weight	22 kg
Size	741mm x 270mm x 210mm

1982AJH & 1982BJH Cabinets	
Power Handling (per cabinet)	100W RMS
Impedance	16 Ohms per cabinet
Inputs	Mono 1/4" jacks
Weight - 1982AJH	36.4 kg
Weight - 1982BJH	41.5 kg
Dimensions - 1982AJH	754mm x 741mm x 355mm
Dimensions - 1982BJH	754mm x 914mm x 355mm

EUROPE ONLY - **Note:** This equipment has been tested and found to comply with the requirements of the EMC Directive (Environments E1, E2 and E3 EN 55103-1/2) and the Low Voltage Directive in the E.U.
EUROPE ONLY - **Note:** The Peak Inrush current for the Super 100JH is 39 amps.

We would like to thank the following people
for their valuable help with this project:

Janie Hendrix, Ken Bran, Rich & Jamie Dickinson,
James 'Tappy' Wright, Neville Chester, Eddie Kramer, Mitch Colby,
Nick Bowcott, Jean Louis Rancurel, John Steel, Tony Garland,
Bruce Kuhlman, Tommie Paxton, James Gulperin

and last, but not least, Jimi himself.



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