Marshall

AMPLIFICATION



HAND WIRED

2061X - 20 Watt Head

Owners Manual



From the Chairman

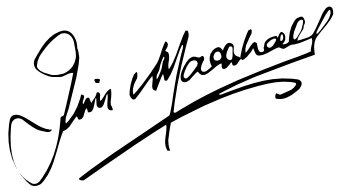
Congratulations on your purchase of this handwired re-issue of the model 2061 20 Watt, all-valve Lead and Bass 20 head. The original versions of this wonderful sounding amplifier were produced between the years 1967 and 1973 and are now highly collectable. This authentic reiteration of the 2061 is part of an ongoing series, which will feature handwired re-issues of revered historical Marshall products. The reason I have decided to do this is simple – public demand!

One of the things I love doing most is meeting and talking to Marshall users at the many trade shows, music fairs and shop appearances I do all over the world every year. A subject that almost always seems to come up in conversation at such events is hand-wiring. In fact, over the last few years so many people have asked me to please start building handwired re-issue products that I've lost count! One of the most frequently requested vintage Marshall amps to appear in such a guise is the model 2061X head you have just bought – hence its inclusion as one of our first handwired re-issues.

Like a great many vintage Marshall guitar amplifiers, the 2061X is relatively simple in terms of controls, features and circuitry, but sounds and feels fantastic. To recreate the tone and feel of the original 2061, as well as its eye-catching good looks, my team of designers have gone to enormous lengths to seek out and/or reproduce all of the original components and materials, plus revisit the original methods of construction we used back in the late 1960s/early 1970s. From the handwired tag-board circuit, to the custom-manufactured Dagnall output and mains transformers, I am extremely proud of the incredible accuracy and authenticity of this re-issue.

I sincerely hope that this handwired piece of Marshall history will provide you with countless hours of playing pleasure.

Yours Sincerely,



ENGLISH

Introduction

Overview: Historical, Tone and Tech Talk

The 2061X is an all-valve, 20 Watt, two-channel head with no negative feedback in its cathode-biased output stage. When building this handwired re-issue our goal was both obvious and simple: to make it as close as possible to the original.

As Jim has already pointed out, we went to incredible lengths to achieve maximum authenticity in terms of components, circuitry, constructional methods, materials, specifications, aesthetics, signal path, performance, tonal characteristics and feel. We are delighted to report that our suppliers were equally as exacting in their tasks – none more so than our long term partners Dagnall Transformers.

As you can see from its front panel layout, the 2061X is an extremely straightforward amplifier with both of its channels only boasting a Volume and Tone control each. Like all Marshall, all-valve amplifiers, the 2061X sounds at its very best when turned up full – and because of its relatively low wattage this can be done at ear friendly volumes, making it a wonderful recording tool.
In keeping with its bigger, non-master-volume, all-valve, Marshall brethren such as the 1962 'Bluesbreaker' combo and the legendary 100 Watt 'Plexi' head, the 2061X's sweetly distorted, harmonically rich, thick, musical tones result from the power valves being overdriven. As a result, when 'cranked' the 2061X is incredibly touch-sensitive, cleaning up or, if desired, sitting right on the edge of distortion when the guitar's volume is turned down. It responds well to picking dynamics too – sounding aggressive when you play like you really mean it and, once again, cleaning up as you pull back on your picking attack.

Unlike its 18 Watt predecessors which boasted an EZ81 rectifier, the 2061X features a solid-state, silicon diode rectifying device, and is a much more aggressive and surprisingly modern sounding amplifier, while still possessing that unmistakable and highly desirable, vintage all-valve tone.

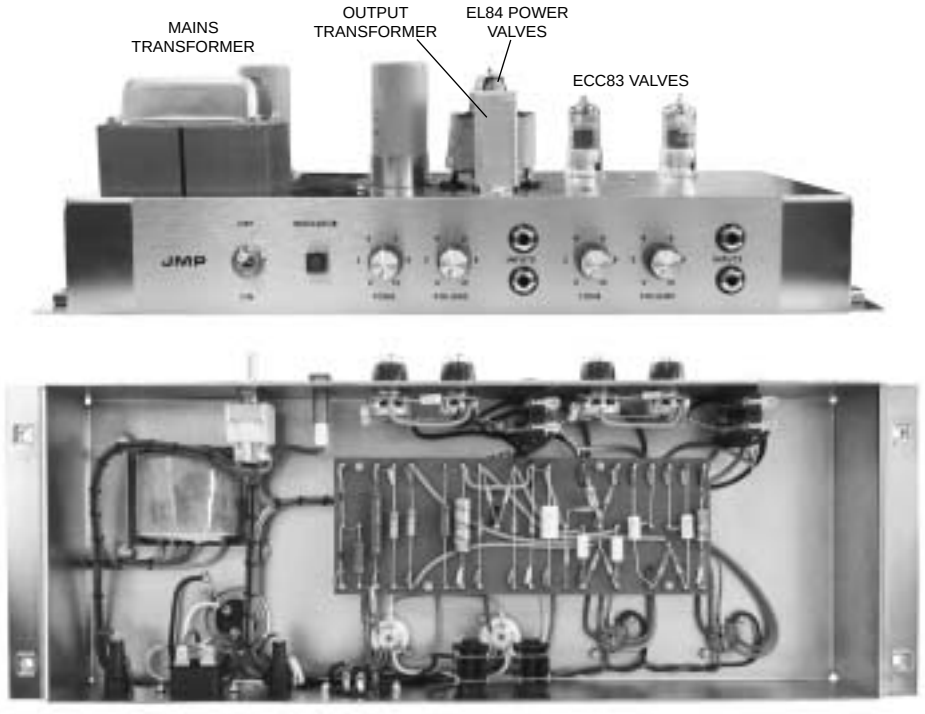
Valve complement: Two ECC83s (12AX7s) in the pre-amp and a pair of EL84 power valves working in push-pull. All valves are of the highest quality available and go through a meticulous grading and testing process.

The way the two ECC83s (V1 & V2) in the pre-amp are utilised is as follows:
V1 acts as the pre-amp gain stage for the Lead and Bass channels. As both channel's pre-amps have a single gain stage, each half of the valve (the ECC83 being a dual-triode) acts as a dedicated gain stage for each. V2 acts as the amplifier's phase-splitter. Due to the fact that the pair of EL84 output valves attain extremely high temperatures when the amplifier is in use, their valve bases are made from the highest-grade ceramic available.

Tone Circuit: In typical Marshall fashion, the tone network of both channels is post gain and passive. The tone circuit in the lead channel involves a blend of high frequency pre-emphasis and passive high frequency cut – the mix of which is dependant upon the setting of the Tone control on the channel being used. As one would expect, the bass channel is much darker sounding and is voiced for a tighter low-end.

Components: With the obvious exception of the valves, all components used were sourced from European and American manufacturers.

Tag Board: This is exactly the same as the original in terms of surface dimension, thickness and custom-drilled component holes loaded with avlugs. The material used is EM42. The reason we didn't use a board with the exact same chemical composition as in the original units is because that material doesn't pass current safety legislation regarding flammability.



Transformers: By the time the 2061 was designed and manufactured, Jim had struck up his now well-known relationship with transformer manufacturers, Dagnall and Drake. As a result, both the power and mains transformers used in the original 2061 were supplied by Dagnall.

As you probably know, the output and mains transformers are vital components in an amplifier as they influence performance, sound and feel. Consequently, we worked extremely closely with our associates in Dagnall's R&D department in order to duplicate the original transformers in all areas in the re-issue units. To do this, we spent a great deal of time and attention studying and analysing the constructional methods and materials (e.g.: lamination grade, insulation, coil spacing, etc.) used in both transformers so we could match everything as closely as possible, and also ensure that the all-important electrical characteristics and performance were identical. With Dagnall's expert help and dedication, we've done exactly that.

Output Transformer: The original 2061 didn't have an impedance selector of any shape or form, instead the two speaker output jacks were hardwired directly to the 8 Ohm tap on the transformer – thus making it possible to use a single 8 Ohm cabinet or two 16 Ohm cabinets in parallel. To make the re-issue more user-friendly in terms of cabinet compatibility, we have added an impedance selector***** to the rear panel, with three options – 4, 8 or 16 Ohms. This addition offers the user maximum flexibility when it comes to extension cabinet options.

***Important Note:** Adding the impedance selector has no effect on the tonal authenticity of the 2061X re-issue, it merely adds to its potential flexibility.

Mains (Power) Transformer: In order to satisfy strict current-day safety legislation, the custom-manufactured Dagnall re-issue transformer we're using is physically a little larger than the one used in the original but, as with the output transformer, we went to great lengths to ensure that its performance mirrors that of the original. We paid particular attention to exactly replicating an effect called 'regulation' – which is the way that the voltage from the transformer that feeds the valve circuitry varies according to load.

Chassis: As in the original, we're using a box-section chassis made from 16 gauge mild-steel, with butt-welded corner joints. The steel is also 'yellow passivated' – an electroplating process that deposits a coating of zinc onto the steel to provide lifelong resistance to corrosion.

Front Panel: Gold, brushed anodised aluminium – exactly as the originals we used as references. Specific details pertaining to the front panel features of the 2061X can be found on page 4 of this manual.

Note: While a few early 2061s boasted Plexiglas front panels, gold, brushed anodised aluminium panels were more commonplace on this model as we stopped using Plexiglas for front panels in mid 1969.

Rear Panel: Again gold, brushed anodised aluminium – exactly as the originals we used as references. Specific details pertaining to the rear panel features of the 2061X can be found on page 5 of this manual.

Cabinet Construction: High-grade, flawless (knot-free) Baltic birch ply with fingerlocked (a.k.a. comb) joints for maximum strength. The main cabinet frame (both sides, top and bottom) and the front baffle are constructed from 12mm ply while the back of the cabinet is 9mm ply. All edges have a 22mm radius.

Cabinet Cosmetics: The black Levant, beading, piping and small 6" gold logo are exactly as the original.

Rear Panel Improvements

The features listed below are all 'deviations' from the original that have been added for user-friendliness, practicality, added flexibility, and/or improved serviceability. Please note that none of these have any sonic impact (positive or negative) on the head what-so-ever!

Impedance Switch: A feature that wasn't present on the original but, in conjunction with the two Speaker Output Jacks, obviously adds to the unit's flexibility when it comes to pairing it up with extension speaker cabinet options.

H.T. and Mains Fuses: In the original these two fuses were located within the chassis itself, making it extremely time consuming and cumbersome to access should one blow. Making both fuses easily accessible via the rear panel is another obvious improvement we're sure you'll agree.

Mains Cord: The original was hardwired to the unit. For serviceability and sheer practicality, the mains chord on the re-issue is detachable.



Technical Specification

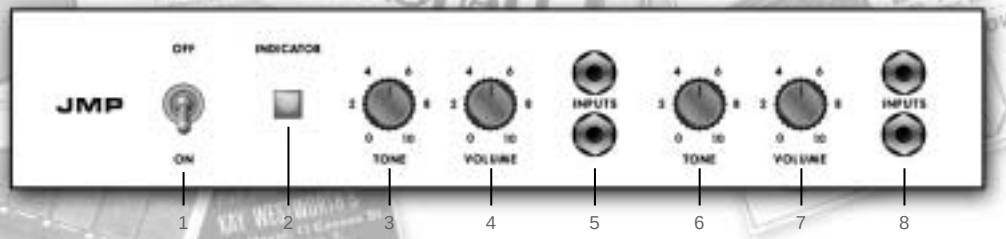
Power Output	20W RMS
Weight	9.6kg
Size	508mm x 227mm x 210mm

EUROPE ONLY CE - 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 2061X is 11 amps.

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2061X Front Panel



1. POWER SWITCH
This is the On/Off switch for mains power to the amplifier.

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

2. INDICATOR
This 6.3 Volt incandescent filament indicator will light up when your amplifier is switched on. It will not be lit when the amplifier is switched off and/or is not receiving mains power.

LEAD CHANNEL

3. TONE CONTROL
This adjusts the tonal character of the Lead Channel. Turning this control clockwise increases the amount of high frequencies (treble) in the sound.

4. VOLUME CONTROL
This controls the volume of the Lead Channel. Turning it clockwise increases the volume level of the channel.

5. LEAD CHANNEL INPUTS
These are the guitar inputs for the Lead Channel. The top input is 'high sensitivity' and the bottom input is 'low sensitivity', the latter being 6dB lower in volume than the former with a darker sound. Always use a high-quality, screened guitar lead.

BASS CHANNEL

6. TONE CONTROL
This adjusts the tonal character of the Bass Channel. Turning this control clockwise increases the amount of high frequencies (treble) in the sound.

7. VOLUME CONTROL
This controls the volume of the Bass Channel. Turning it clockwise increases the volume level of the channel.

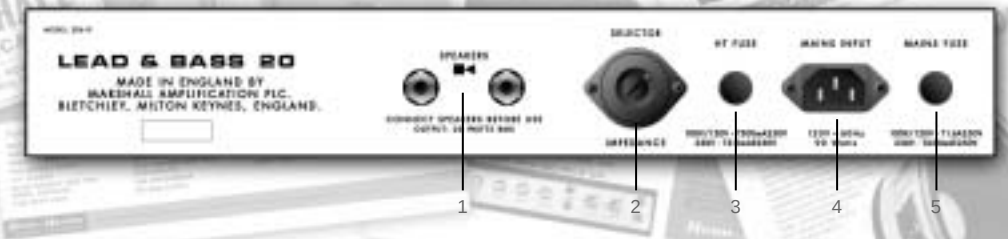
8. BASS CHANNEL INPUTS
These are the guitar inputs for the Bass Channel. The top input is 'high sensitivity' and the bottom input is 'low sensitivity', the latter being 6dB lower in volume than the former with a darker sound. Always use a high-quality, screened guitar cable.

Performance Note: Bridging or 'jumping' the two channels
Because both Channels of the 2061X have the same number of gain stages (one) and are therefore in phase with each other, it is possible to bridge them together (a.k.a. 'slaving', 'jumping', 'linking' or even 'daisy-chaining') and use them both at the same time, enabling you to expand upon the amps tonal possibilities by mixing the Lead and Bass channels together.

The most common way of doing this is to plug your guitar into the top (high sensitivity) input of one of the two channels and then run a short 'jumper' guitar cable (i.e. a screened cable) from that channel's bottom (low sensitivity) input to one of the other channel's two inputs.

It is also possible to plug your guitar into the bottom (low sensitivity) input of one of the two channels and then run the 'jumper' cable from its top (high sensitivity) input to one of the other channel's two inputs. This less-common approach can also yield some interesting tonal variations.

2061X Rear Panel



1. LOUDSPEAKER OUTPUTS
There are two parallel loudspeaker output jacks provided for connection to speaker extension cabinet(s). Please always ensure that the amplifier's output impedance is set correctly (item 2).

WARNING! Never use the head without a load attached!

Always use a non-screened Marshall approved speaker lead when connecting an extension cabinet to these units.

2. OUTPUT IMPEDANCE SELECTOR
Matches the amplifier's output to the load (speaker) impedance.

As is the case with any Marshall all-valve amplifier it is imperative that: a) the amplifier is connected to a load whilst in operation and b) the impedance selected on the amplifier matches the total impedance of the extension speaker cabinets being used.

WARNING! An extension speaker cabinet with an impedance of less than 4 Ohms, or two extension cabinets of 4 Ohms or less should NOT be used with this head.

The amp should be completely powered down before the Output Impedance Selector is turned.

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

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

4. MAINS INPUT
Your amp is provided with a detachable mains (power) lead, which is connected here. The specific mains input voltage rating of your amplifier is shown on the back panel. Before connecting for the first time, please ensure that your amplifier is compatible with your electricity supply. If you have any doubt, please get advice from a qualified technician. Your Marshall dealer will help you in this respect.

5. MAINS FUSE
The correct value of mains fuse is specified on the rear panel of the amplifier. **NEVER** attempt to bypass the fuse or fit one of the incorrect value.

Follow all instructions and heed all warnings
KEEP THESE INSTRUCTIONS !

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