

Marshall
AMPLIFICATION

JMD:1

Owners Manual



Marshall

From Jim Marshall

I would like to take this opportunity to personally congratulate you on choosing this JMD:1 amplifier from Marshall.

We pride ourselves on our ability to invent, innovate and create new ways for guitarists to find their own sound, whether that be through all-valve, solid-state or hybrid technologies.

First released in 1992, the JMP-1 pre-amp offered guitarists unrivalled flexibility, with true Marshall tone at its heart. It proved to be a great success! Ever since the JMP-1's triumph, we have been eager to see how technology could be pushed even further and, as a result, we are pleased to introduce its successor, the JMD:1 Series.

The Marshall R&D team have always kept a keen eye (and of course their ears) on new technologies, and have implemented them when they were right for the product. Our number one rule - never sacrifice tone for technology's sake. Only now have all the components, state-of-the-art technology and nearly 50 years of experience come together to create this exciting amplifier range. The JMD:1 is the result of a unique collaboration with our friends at Softube™, leading to a true digital pre-amp, integrated into a product that I am proud to see the Marshall name on. Partnered with a traditional Marshall valve power amp, it becomes the most flexible and first, totally programmable valve digital hybrid amplifier series we have ever made. Never before has such a variety of great quality tone been available in one product.

I would like to wish you every success with your new Marshall. Welcome to the family.

Yours Sincerely,

Dr Jim Marshall OBE

*** 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 50 Watt is 25 amps. The Peak Inrush current for the 100 Watt is 25 amps.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- * Reorient or relocate the receiving antenna.
- * Increase the separation between the equipment and the receiver.
- * Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- * Consult the dealer or an experienced radio/TV technician for help.

Follow all instructions and heed all warnings
KEEP THESE INSTRUCTIONS !

Overview

Presenting the JMD:1 Series.

JMD100	100 Watt head
JMD50	50 Watt head
JMD102	100 Watt 2 x 12" combo
JMD501	50 Watt 1 x 12" combo

Immense versatility, extensive tonal control and that unmistakable Marshall sound is now yours. The JMD:1 is quite simply one of the most comprehensive and sophisticated amplifiers Marshall has created to date, combining state-of-the-art digital pre-amp technology with studio quality effects and sheer EL34 valve power. Working in close partnership with Swedish software house Softube™, the Marshall team have crafted the latest evolutionary benchmark in hybrid amplifiers that picks up where the renowned JMP-1 left off.

At the very heart of the JMD:1 Series is Marshall's proprietary EL34 power amp section. A fundamental element in many of Marshall's professional all-valve amplifiers, this steadfast power stage design has been driving the Marshall sound for decades. When it came to creating the all-new digital pre-amp, the Marshall engineers knew it had to lead rather than follow what had come before - that is to be the first to offer truly great valve tone. Enter Softube™ and their patented Natural Harmonic Technology™, used for the very first time in a guitar amplifier. This groundbreaking technology actually matches the dynamic reactions of the valve amplifier and the way it behaves to the various intensities of playing, just like their analogue counterparts, and ensures that every note feels right.

Switching between the JMD:1's 16 pre-amp options also affects the way in which the front panel controls respond to user input, such as the EQ section which automatically

reconfigures to match the original topology of the chosen pre-amp. The valve power-amp's analogue circuitry is also altered to complement the different pre-amps, with optimum resonance values automatically selected to maximise the JMD:1's response. The selectable pre-amps are divided into 4 sections - 'Clean', 'Crunch', 'Overdrive' and 'Lead'. Each pre-amp has been chosen for its individual character and its ability to complement, yet at the same time, differentiate itself from the others.

The digital nature of the pre-amp enables the JMD:1 to house both modern and classic tones from a variety of Marshall amplifiers, such as the 1959, JCM800, JCM2000, JVM and of course the JMP-1. These and many others have provided the JMD:1 with a comprehensive collection of tones, transcending the entire history of Marshall's heritage, particularly the EL34 years, due to the on-board valve power amp. New sounds have also been created by combining amplifier topologies, resulting in totally unique Marshall tones, exclusive to this Series!

The JMD:1 also has the ability to store complete pre-amp, EQ and FX settings. These presets can then be instantly recalled at any time from either the front panel, the supplied Stompware™ footcontroller or MIDI system for maximum versatility. Further to the JMD:1's vast array of features is a serial/parallel FX Loop, balanced XLR Emulated Line Out, Pre-Amp Out, Line In and Headphones socket.

The JMD:1 is the total standalone solution to any guitarist's requirements, from live performance and band rehearsal to bedroom practice and silent recording. It's all here in this extremely powerful package; a real cutting edge Marshall amp for those not bound by tradition and ready to embrace a new era of guitar amplification!

Getting started and powering up

NEVER use your amp without a (speaker) load attached when the Standby Switch (9) is in the 'On' position.

1. Make sure that the speaker cabinets are connected to the correct impedance Loudspeaker jacks on the rear panel (9).

Refer to the Speaker Output guide in this handbook for specifics regarding impedance matching. When using an extension cabinet make sure that you're using an unshielded speaker cable of good quality. Never use a screened (shielded) guitar cable for this purpose.

2. Ensure that the Master Volume control (6) on the front panel is initially set to zero.

3. Connect the supplied mains (power) lead into the Mains Input (1) on the rear panel first and then into an electrical outlet.

WARNING: Before going any further, make sure your amplifier is compatible with your electrical supply. If you have any doubt, please get help from a qualified technician, your Marshall dealer can help you in this respect.

4. Plug your guitar into the Input jack socket (1) on the front panel.

5. Turn the front panel Power switch (10) on. The front panel power LED will illuminate (8).

Standby Switch & Silent recording (9)

The Standby switch is used in conjunction with the Power switch (10) to 'warm up' the amplifier before use, and to prolong the life of the output valves and to mute the amplifier when required, such as when you are changing guitars or for short breaks in performance.

When the amplifier is in standby mode the whole pre-amplifier section is still functional whilst the power amplifier remains in a standby status. This allows the amplifier to be used for silent recording or pre-amplification purposes. Only when the Standby switch (9) is set to 'OFF' can the amplifier be used without a load. Always ensure a load is connected when switching the Standby switch on.

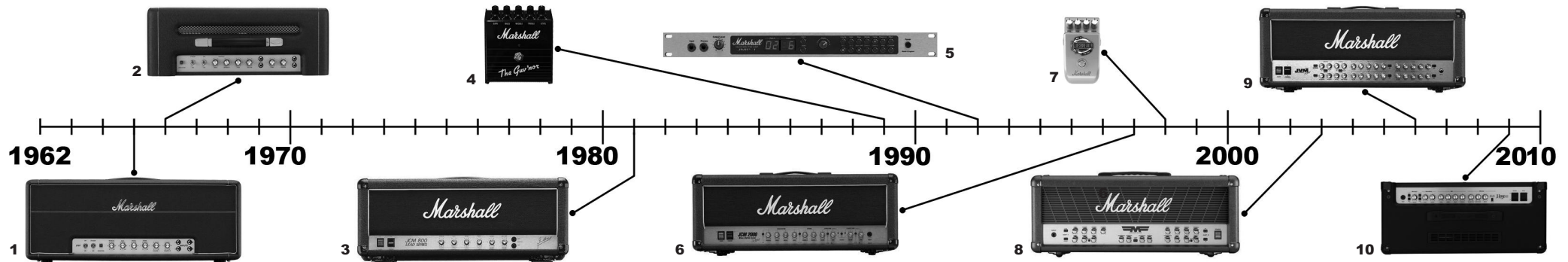
When powering up the amplifier we suggest engaging the Power switch (10) first, leaving the Standby switch (9) in the 'Off' position for two minutes to allow the valves to heat up.

6. After waiting, engage the Standby switch (9).

7. Adjust the Master Volume (6) to your required level - your amp is ready to play.

When switching the amplifier off, always disengage the Standby switch (9) a couple of seconds prior to the main Power switch (10).

JMD:1 – Time Line and Amp History



As previously stated the JMD:1 Series incorporates the tones and characteristics of a variety of Marshall amplifiers and FX pedals. This section provides a brief history of all these products.

1. 1959

Initially manufactured from the mid to late 60s, this legendary amplifier embodies the very essence of the vintage Marshall sound. Nicknamed 'The Plexi' due to the gold plexiglas front panel, the 1959 was born when The Who's guitarist, Pete Townshend, approached Marshall in the mid '60s and asked Jim to build him a 'weapon' that would allow him to play so loud that he wouldn't be able to hear what the members of the audience were saying, should they have the sheer audacity to talk whilst he was performing! Jim and his team obliged, and within weeks of Pete's request one of rock's most instantly recognisable icons was born - the 100 Watt Marshall stack. Although production of the 1959 continued long after the 1960s, the end of the Plexi-era began in '69 when gold anodised aluminium was introduced for the front panels. The original 'Plexis' have therefore become extremely rare and highly prized pieces of rock history.

2. 1974

Despite Marshalls iconic status as the creator of the stack, Marshall has also produced a number of undeniable icons in the amplifier combo world. Initially created back in 1966, the 1974 is a compact all-valve combo. The 1974 was designed to be an affordable valve amplifier for the masses and soon gained a healthy reputation. Set in a top loaded cabinet, this compact 18 Watt combo housed a single 12" speaker, which meant not only was it immensely portable but it also had the power and punch. Utilising EL84 valves, the overall feel and tone of the 1974 is inherently different to an EL34 amp. Separated into two separate channels, each with two inputs for low and high sensitivity, the 1974 originally came in two options, Reverb or Tremolo. The standard channel for the amplifier had just single tone and volume controls whilst the other channel had additional controls to adjust the effect applied. The 2004 re-issue of the 1974 featured only the more popular Tremolo option and, as with the original unit, these additional controls for this

channel adjust both the speed and intensity of the effect to the guitarists taste. The re-issue, like all of Marshalls re-issued vintage amplifiers, was a painstaking recreation of the original unit and even features the same valve tremolo circuitry. Featured twice in the JMD:1, the 1974 provides part of the new sound created for the Crunch Vintage mode where it couples the tonal qualities of the 1974 with the EQ of a monster 1959. The 1974 is also used for the Crunch Full pre-amp mode, where the 1974's sustain and clarity of individual notes is used, demonstrating why the 1974 is still popular with guitarists to this day in its new 1974X re-issue format.

3. JCM800 2203

The 2203 is quite simply one of the most important amplifiers Marshall has ever created. Evolving from the previously mentioned 100 Watt Plexi head, it was the first to house a Master Volume (MV) control. This groundbreaking feature allowed the pre-amp to distort fully without having to turn the amp up to ten, providing thick overdriven tone at a fraction of the volume. First available in the mid '70s, it wasn't until 1981 that the version of the 2203 we know today was unleashed as part of the mighty JCM800 series. This straightforward, yet highly versatile, single channel monster, immediately found favour with the rapidly growing heavy metal scene that dominated much of the '80s. The wide ranging tonal palette of the 2203 saw it prove just as popular in the Brit Pop and Grunge laden '90s and remains the benchmark by which all modern rock amps are judged. The 2203 has provided the muscle behind countless rock and metal legends and has appeared twice as a modified signature model. The 2203 provides the JMD:1 with two pre-amp options. Crunch Classic delivers a raw edgy tone, one that optimises the Marshall crunch sound. The Overdrive Deep pre-amp pairs the 2203 with Marshall Bluesbreaker pedal topology, creating hot-rod tones the way they should be.

4. The Guv'nor Distortion Pedal

Launched in the 1980's, the original Guv'nor (so called as this is Jim Marshall's nickname) became a classic footpedal known for high quality distortion tones. Much loved by pros, semi-pros and amateurs alike, the Guv'nor

earned itself a special place in the hearts of distortion smitten guitarists the world over.

5. JMP-1

Released in 1992, the JMP-1 was Marshall's first venture into MIDI controlled guitar pre-amps and the worlds first super hybrid pre-amp. Its no coincidence that the principles held by the JMP-1 have been carried forward to the JMD:1, just as the name suggests. This was a revolutionary rack unit, utilising the best of both analogue and digital MIDI technology. The JMP-1's success lay in its incredible tone, with the digital control capabilities adding a new degree of flexibility and versatility. Guitarists could now store and recall their favourite pre-amp tones using the JMP-1's built-in 100 patches. Greatly respected and highly prized by those who own them, the JMP-1 remains one of the most revered rack pre-amps ever.

6. JCM2000 DSL100

In its day the Dual Super Lead contained the largest amount of gain a Marshall amp had ever offered. The DSL's 2 channel dual mode design meant that guitarists could choose either a clean or crunch tone from the Classic Gain channel, whilst also picking between the 2 lead sounds provided by the Ultra Gain Channel. This tonal versatility was aided further by the channel spanning Deep and Tone Shift features, providing added punch and depth or extra cut and bite respectively. This enabled the DSL to deliver a huge range of all-valve tone, from 'Nashville Clean' to modern 'scooped' metal. With all this pure valve versatility, its easy to see why the DSL is still held in high regard by many of the world's top players.

7. Bluesbreaker II FX Pedal

The Bluesbreaker II takes the philosophy of the original Marshall Bluesbreaker pedal one step further, featuring not one but two modes, Blues and Boost. This effectively makes it two pedals in one. The Bluesbreaker II's Boost mode was designed with the vintage valve amp or 'tone purist' type of guitar player in mind. Ideal if you want to drive the front-end harder, pushing the amp further into natural overdrive and without altering the original tone.

8. Mode Four (MF350)

Featuring a true 'two-amps-in-one' design, the Mode Four

was created to offer the best of both classic and modern Marshall tone. Amp 1 and Amp 2 housed separate ECC83 driven pre-amp circuitry, with the shared 350 Watt power stage reconfiguring when switching between amplifiers. Both Amp 1 and Amp 2 featured two modes each, adding up to four (hence the name) in total – Clean, Crunch, OD1 and OD2. The enormous head room of the Mode Four gave it superior bottom-end clout and also retained the tonal definition at high stage volumes, making it ideal for metal and thrash styles.

9. JVM Series

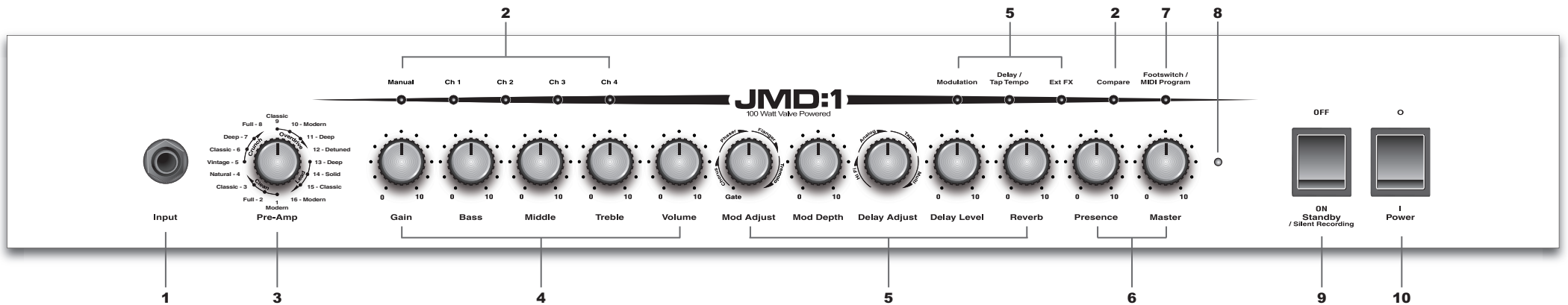
Launched in November 2006, the flagship JVM Series caused the guitar world to sit up and take note. Featuring 4 all-valve channels with 3 modes each, the JVM4 range offers guitarists a possible 12 unique tones, sophisticated channel switching technology and MIDI capabilities, confirming Marshall's place at the forefront of valve-driven guitar amplification. The 2 channel and aptly-named JVM2 range followed in January 2008, delivering a more streamlined and focused version of the multi-award winning JVM Series.

So revered has the JVM become, that its multi-mode topology has created three of the JMD:1's 16 pre-amp options. The JMD:1's Clean Modern pre-amp setting demonstrates the sparkling tonal clarity of the JVM's Clean channel in its initial gain stage, whereas Overdrive Modern cranks things up with a powerful contemporary crunch, derived from the JVM4's red 'moded' Crunch channel. Finally, the Lead Modern pre-amp utilises the JVM4's OD1 channel design to unleash an aggressive, full-bodied lead tone.

10. Haze40

The most recent amplifier to be included in these pre-amp selections, the Haze range, was launched in March 2009 and features both a 15 Watt mini-stack and 40 Watt 1x12" combo. Containing 2 channels, all-valve signal path and studio quality effects, the Haze40 was designed with the blues/jazz player firmly in mind. The amp responds just how you would expect, with picking dynamics and guitar controls playing a big role in achieving your tone. The amps design allows the effects circuitry to be totally bypassed, preserving that treasured all-valve signal path.

JMD:1 Front Panel



1. Input Jack Socket

You must always use a screened (shielded) guitar cable and never use an unscreened (unshielded) speaker cable. Also, this cable should be one of good quality. If you are in any doubt regarding this, your Marshall dealer will be more than happy to help and advise you.

2. Channel Controls

Manual - Switches the amp to manual mode. When selected, all of the JMD:1's settings will match the current physical positions of the controls, it will behave just like a conventional amplifier.

Manual mode will be automatically selected when the unit is switched on.

As the front panel effect switches (Ext FX, Delay/Tap Tempo, Modulation) do not have a set physical state you are free to set them as desired. Their settings will be remembered and recalled every time the amp is set to manual.

Channel 1, 2, 3 & 4 - For storage and recall of four of your favourite sounds when not using the footswitch or MIDI.

To Recall - Simply press the channel switch for the channel you wish to recall. The channel switch will illuminate to show it has been selected.

Remember: When a channel preset is recalled, the physical position of the pre-amp and FX section controls are unlikely to match the original settings used to program the recalled preset. The front panel switches will automatically be updated.

To Store - Dial in the tone and FX settings you require, when happy, select which channel to store your sound into by holding that channel switch down for more than 1 second. All channel lights will flash to indicate your settings have been successfully stored.

If any changes are made to the amplifier once a channel has been recalled, the current channel light will flash to remind you that the current settings have been altered but not yet stored. When changing a control, if its value matches that stored in the currently recalled channel, the Footswitch / MIDI Program (7) switch will illuminate for a short time.

After altering a channel's settings, pressing Compare (2) allows you to toggle between the edited and the original channel settings allowing you to easily compare the changes you are making.

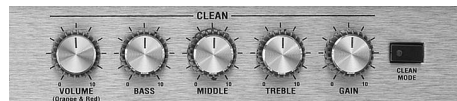
3. Pre-Amp

Selects one of the JMD:1's 16 Pre-Amps (3). Each Pre-Amp is not only tonally different, but the channel controls (4) - Gain, EQ and Volume will behave just like the original depending on the Pre-Amp selected. Experiment with these controls and your guitar to fully explore the full potential of each setting.

CLEAN SECTION 1-4

Clean 1. Modern

Pre-Amp: JVM410H
Settings: Clean Channel in Green Mode



Based on the mighty JVM Series' Clean channel, this pre-amp option produces one of the brightest clean tones ever to have come from a Marshall. The tight, controlled and well balanced tone provides plenty of clarity and punch, thanks to a tone network that lies before the channel's main gain stage.

Pre-amp Topology: Single ECC83 pre-amplifier stage driving a classic Marshall three band EQ feeding another ECC83 gain stage directly coupled to an ECC83 cathode follower

Clean 2. Full

Pre-Amp: JCM2000 DSL100
Settings: Clean Channel - Tone Shift on

One of Marshall's best selling all-valve amps to date, the DSL continues to be the weapon of choice for many of the world's top players. One reason for its immense popularity is its vibrant clean sound with glassy bright edge and fat resonant punch, which has been perfectly captured here.



Pre-amp Topology: ECC83 pre-amplifier stage followed by a tone shaping circuit set to boost bass and treble feeding into three ECC83 gain stages directly coupled to an ECC83 cathode follower connected to a lower mid frequency 'tone shifted' Marshall three band EQ.

Clean 3. Classic

Pre-Amp: JMP-1
Settings: Clean 1 - Bass Shift on



Straight out of the JMP-1 tonal vault comes this well rounded tone with distinctive mid characteristics, making this option ideal for rich chords and softer tones. Increasing the gain results in clean lead lines with a hint of vintage style distortion.

Pre-amp Topology: ECC83 pre-amplifier stage followed by a tone shaping circuit with tuned bass and a slight low mid cut feeding into an ECC83 gain stage followed by a three band EQ.

Clean 4. Natural

Pre-Amp: JMD:1

The first of the JMD:1's new sounds, this setting is designed to produce a totally flat response, letting the natural tone of your guitar and the JMD:1's power

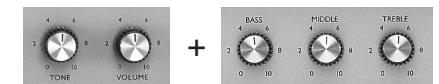
amplifier take centre stage. The well rounded and warm tone of this particular pre-amp makes it ideal for jazz style playing.

Pre-amp Topology: A linear pre-amp combined with a studio style EQ section, low-shelf at 100Hz, mid-peak at 500Hz, high-shelf at 3.5Khz. Uncoloured pre-amplification followed by a three band cutting EQ, where a totally flat response pre-amp gain is achieved when Bass, Middle and Treble are set on full.

CRUNCH SECTION 5-8

Crunch 5. Vintage

Pre-Amp: 1974 & 1959 combination



A unique marriage of the 1974 and 1959 models, two of Marshall's most revered vintage amplifiers. The tonal character of the 1974 has been matched perfectly with the 1959's EQ section and is ideal for classic rhythm sounds.

Pre-amp Topology: This pre-amp is the combination of a 1974 pre-amp and power amp used as a pre-amp stage: ECC83 pre-amplifier stage with preset tone and gain control feeding another ECC83 gain stage directly coupled to an ECC83 cathode follower driving a classic Marshall three band EQ followed by an 18 Watt EL84 push pull amplifier with no feedback driving a dummy load.

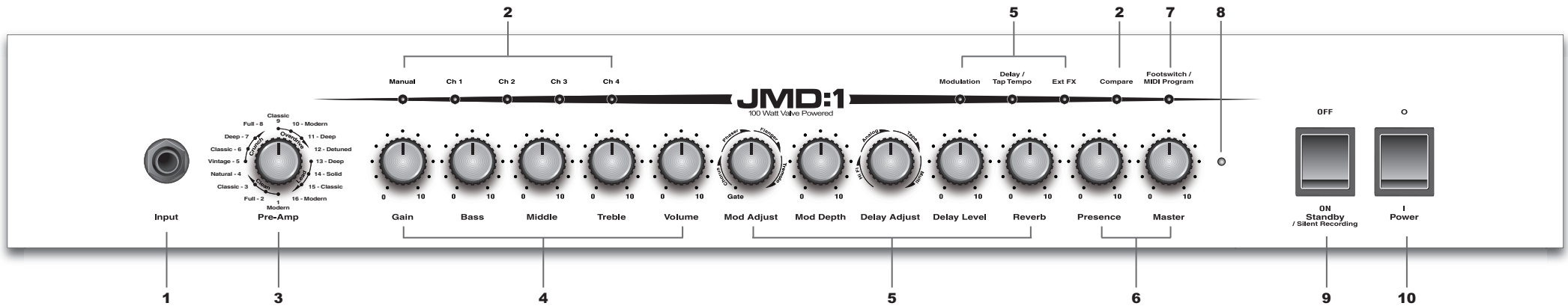
Crunch 6. Classic

Pre-Amp: JCM800 2203



Raw, rough and ready - what more would you expect from a pre-amp based on the legendary JCM800 2203! An upfront focussed sound which embodies the term 'crunch'.

JMD:1 Front Panel continued



3-6. Classic continued . . .

Pre-amp Topology: ECC83 pre-amplifier stage feeding into a gain control with treble boost followed by an ECC83 pre-amplifier clipping stage then into an ECC83 gain stage directly coupled to an ECC83 cathode follower, then to a classic Marshall three band EQ.

Crunch 7. Deep

Pre-Amp: Haze40
Settings: Normal Channel, Boost and Bright switches engaged.



A satisfyingly warm tone resembling the Marshall Haze40 with both its Boost and Bright switches engaged. Produces a darker overdrive with a smooth edge and enhanced bottom-end clout.

Pre-amp Topology: ECC83 pre-amplifier stage with a slight mid boost feeding into an ECC83 gain stage directly coupled to an ECC83 cathode follower, then to a classic Marshall three band EQ.

Crunch 8. Full

Pre-Amp: 1974

The 1974 makes a return here as a full-fat rhythm tone with extra clarity in the mids. It effortlessly sustains chords, while individual notes still remain clear.

Pre-amp Topology: This pre-amp is also a combination of a 1974 pre-amp and power amp used as a pre-amp stage: ECC83 pre-amplifier stage with original 1974 tone (Treble) and gain control followed by a newly designed EQ where the Mid control is set at 650Hz and the Bass is controlled using a variable capacitor. This is fed into the original 1974 phase splitter and its EL84 push pull power amplifier with no feedback, feeding this time into a 1960 speaker load.

OVERDRIVE SECTION 9-12

Overdrive 9. Classic

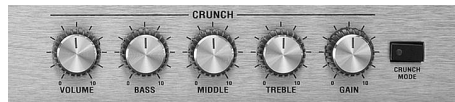
Pre-Amp: JMP-1
Settings: OD2

The JMD:1's forefather, the JMP-1 provides the tonal backbone to this pre-amp option, which is based on the latter's OD2 channel. This setting delivers an aggressive and focussed sound, yet remains smooth and fluid with distinctive mids.

Pre-amp Topology: The signal is fed into a distortion / booster circuit then into an ECC83 pre-amplifier stage followed by an ECC83 gain stage driving a three band EQ.

Overdrive 10. Modern

Pre-Amp: JVM410H
Settings: Crunch Channel in Red Mode



More gain within your face mids, courtesy of the JVM Crunch channel topology set to its highest gain stage. A full, forgiving and tonally balanced sound that possesses that inherent JVM cutting edge.

Pre-amp Topology: ECC83 gain stage followed by a mild treble boosting and tuned bass tone shaping circuitry with the gain control feeding into an ECC83 configured as a clipper, then into an ECC83 gain stage directly coupled to a cathode follower driving a classic Marshall three band EQ.

Overdrive 11. Deep

Pre-Amp: Bluesbreaker II + JCM800 2203
Settings: Bluesbreaker II in Boost mode with Drive set to max, plus a custom filter linked to bass control and 2203 topology.

Another fantastic tonal experiment, bringing together the raw might of the JCM800 2203 and Bluesbreaker FX pedal set to Boost. A custom filter enhances the bass and reduces the mids, with the blend of '80s roar and '70s bottom-end delivering hot-rod scooped tones as they should be.

Pre-amp Topology: A boost pedal driving a custom filter plugged into an ECC83 pre-amplifier stage followed by a treble boosting tone shaping circuitry and the gain control feeding into an ECC83 configured as a clipper, then into an ECC83 gain stage directly coupled to a cathode follower driving a classic Marshall three band EQ.

Overdrive 12. Detuned

Pre-Amp: Mode Four
Settings: OD2 Channel – Scoop on with Tone Matrix set to 3



This thoroughly aggressive and modern metal tone has been created from the Mode Four's menacing OD2 channel. Its intimidating character is aided further by a lowered mid frequency response in its EQ section, ideal for down-tuned/baritone guitars.

Pre-amp Topology: A high headroom gain booster followed by a gain control driving a cascaded double ECC83 gain stage followed by a lowered mid frequency Marshall three band EQ.

LEAD SECTION 13-16

Lead 13. Deep

Pre-Amp: Bluesbreaker II + Haze40
Settings: Bluesbreaker II in Boost mode with Drive set to max, plus Haze Normal Channel with Boost and Bright switches on.

A 'boosted' Bluesbreaker pedal and a Haze40 combo with Boost and Bright switches engaged have been combined to produce a truly deep and growling tone. The warm sustain of this pre-amp makes it ideal for soaring solo tones.

Pre-amp Topology: A boost pedal driving an ECC83 pre-amplifier stage followed by a gain control, then into an ECC83 gain stage directly coupled to a cathode follower driving a classic Marshall three band EQ.

Lead 14. Solid

Pre-Amp: Original Guv'nor Distortion pedal

Based on the original and highly-prized Guv'nor stomp box, this pre-amp setting delivers a throaty, pedal driven overdrive. Its unique mid character and resonant high frequency gives it both distinctive teeth and a ghostly howl, making it ideal for riding feedback.

Pre-amp Topology: A classic Marshall overdrive pedal with 2 gain stages, diode clipping and an enhanced mids three band EQ, as a full gain pre-amp.

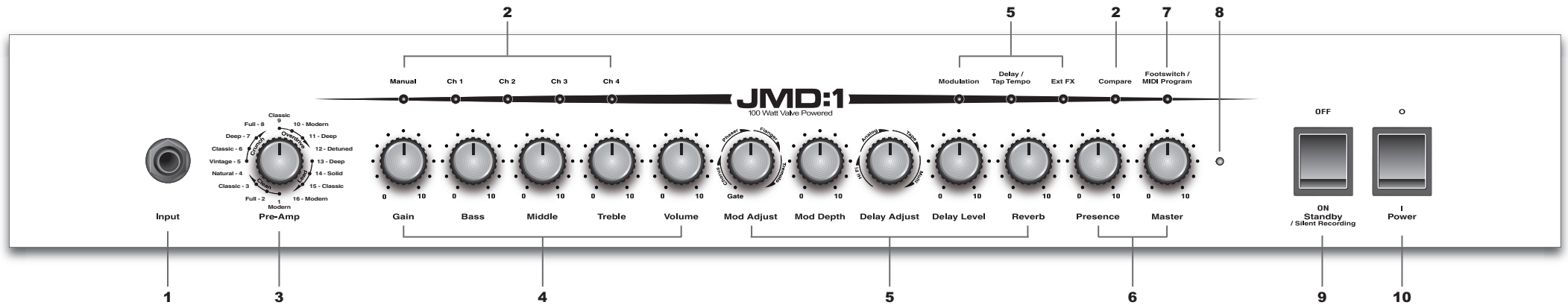
Lead 15. Classic

Pre-Amp: Bluesbreaker II + JCM2000 DSL100

Delivering the 'tone shifted' Crunch of the revered JCM2000 DSL Series and enhanced again with Bluesbreaker pedal topology, this pre-amp option creates expansive and cutting '90s lead tones.

Pre-amp Topology: An ECC83 pre-amplifier stage followed by a gain control into a cascaded double ECC83 clipping stage, then into an ECC83 gain stage directly coupled to a cathode follower driving a tone shifted Marshall three band EQ.

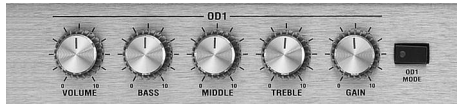
JMD:1 Front Panel continued



Lead 16. Modern

Pre-Amp: JVM410H

Settings: OD1 Channel in Orange Mode



The JVM Series provides the JMD:1 with an all-round modern lead sound, derived from the former's OD1 channel at its 2nd gain stage, delivering plenty of cut, edge and sustain.

Pre-amp Topology: Four cascaded stages of gain: An ECC83 gain stage followed by treble boosting and tuned bass tone shaping circuitry with the gain control feeding into an ECC83 gain stage, connected to an ECC83 pre-amplifier stage configured as a clipper into an ECC83 gain stage, directly coupled to a cathode follower driving a classic Marshall three band EQ.

4. Pre-Amp Controls

Gain - Controls the level of signal entering the pre-amp. At lower settings the sound will be cleaner and the amount of distortion is more controllable from your guitar or your playing style. At higher settings, more distortion is available. The overall effect on the signal will depend on the topology of the currently selected pre-amp.

Bass - Turning the Bass control will affect the amount of low frequencies, or bottom-end, in your guitar tone. Rotating this clockwise will increase the amount of lower tones, generally making your sound deeper and is especially useful at lower volumes. Turning this control anti-clockwise will reduce the bass frequencies in your tone, producing a more cutting sound – especially useful at higher volumes.

Middle - Adjusts the middle frequencies. Turning the control anti-clockwise will yield a more hollow sound with the bass and treble frequencies appearing to be more accentuated. Turning it back clockwise increases the middle, adding body to the sound.

Treble - By adjusting the Treble control you can add or take away the higher frequencies in your guitar tone. By increasing the amount of treble you will make your tone brighter, ideal for more percussive playing styles.

Volume - Controls the overall level of the pre-amp signal that is fed to the power amp section.

5. Effects Section

Modulation

Mod Adjust - As the control is turned clockwise it selects one of four modulation effects, increasing the modulation speed as it is turned through each section. Setting this control to minimum selects the noise gate.

Gate - An ultra fast studio quality noise reducer. Instead of abruptly cutting the sound once the threshold is reached like a standard noise gate, an expander progressively attenuates the signal following its dynamics. The Mod Depth control sets the threshold, the level at which the gate starts to effect the signal. The Gate senses the playing dynamics, adjusting its reaction accordingly. This preserves natural decay of held chords or notes and also a fast response to staccato style playing.

Adjust the Mod Depth control to set the point where the noise reduction begins to work. Make sure that when adjusting Mod Depth you are not picking up hum from the amplifier or other equipment, as it may result in a higher setting than needed.

Chorus - Based upon a classic bucket brigade circuit, the Chorus effect provides deeply detuned sweeps to subtle shimmers.

Phaser - Creates fluid waves which wash across your tone. Roll back the depth to create gentle vibe like ripples.

Flanger - Producing metallic edged textures that envelope your sound; at slow speeds the regen increases to create jet like sweeps, while at high speeds rotary speaker effects can be created.

Tremolo - The first new Marshall to feature a tremolo since the 1970s, it recreates the natural amplitude swell and decay of a valve-based design.

Mod Depth - Sets the depth of the currently selected modulation effect or the threshold of the gate.

Modulation - Turns the current modulation effect and gate on and off.


Delay

Delay Adjust - Selects one of four delay types. As the control is turned clockwise through each effect, the delay time is increased to a maximum delay time of 1000ms. As the delay time is increased, the number of repeats is also increased, providing short slap-back delays to long sprawling echoes.

Hi-fi - A pure delay line.

Analogue - Additional filtering recreates the sound of the guitar cascading through an old analogue delay circuit.

Tape - A darker delay line with wow and flutter, as found on old tape delays.

Multi - A multi tap delay line with two rhythmic repeats. The extra tap appears at $\frac{3}{4}$ of the current delay time. 

Delay Level - Controls the level of signal sent to the Delay effect.

Delay & Tap Tempo - When the delay is off, pressing this switch turns the delay on.

When the delay is on, tapping this switch sets the delay time to match the time between the taps. When the delay is on, holding this switch in for over half a second turns the delay effect off.

Reverb - Controls the level of signal sent to the reverb. The reverb decay is also adjusted as the level is increased, complementing your chosen setting.

FX Loop - This is a programmable FX Loop which features a MIX control on the rear panel and is located after the pre-amp, right before the effects section. Pressing the FX Loop switch engages this FX Loop. Please refer to the Serial / Parallel Loop description later on in the handbook for a more detailed explanation of its operation.

6. Master Section

Presence - This control emphasises the high frequencies in your tone. Turning this control up adds crispness and bite. Use the presence control to alter the overall sound of the amplifier to suit the acoustics of the room or venue you are playing in.

Master - Controls the overall level of the power amplifier. *Note:* Both the Presence and Master Volume power amp controls are not storable and have a global effect on the overall tone and volume of the amplifier.

7. Footswitch / MIDI Program

Enables the programming of the supplied 6-Way Footcontroller and assigning of complete set-ups via MIDI. See the Footcontroller & MIDI section of this handbook for more information.

8. Power LED indicator

This red LED will illuminate when the Power switch is turned on.

9. Standby switch

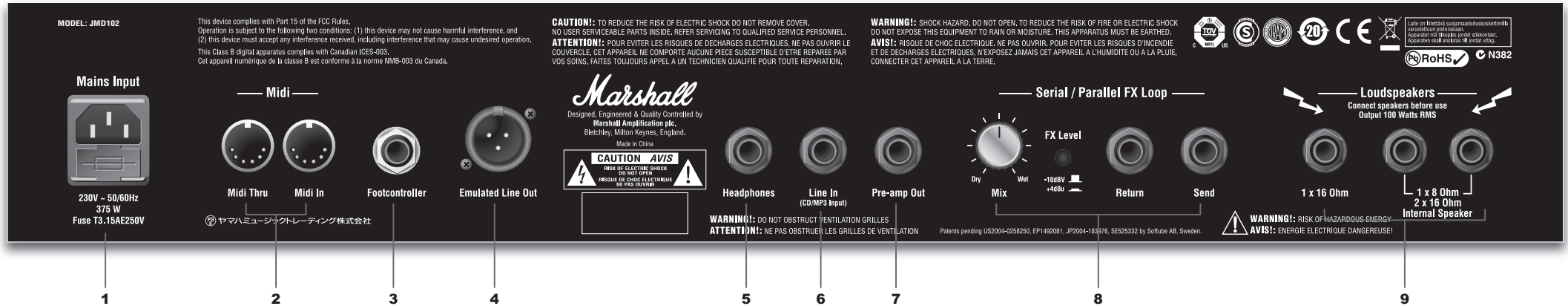
The Standby switch is used in conjunction with the Power switch (10) to 'warm up' the amplifier before use, to prolong the life of the output valves and to mute the amplifier when required, such as short breaks in performance or when using the amp for silent recording.

10. 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!

JMD:1 Rear Panel



1. Mains Input & Fuse

Your amp is provided with a detachable mains (power) lead, which is connected on the rear panel. The specific mains input voltage rating that your amplifier has been built for is indicated on the back panel.

WARNING: Before going any further, make sure your amplifier is compatible with your electrical supply. If you have any doubt, please get help from a qualified technician, your Marshall dealer can help you in this respect.

The correct value of mains fuse, located in the small drawer at the bottom of the mains socket, is also specified on the rear panel of the amplifier. The drawer also contains one spare fuse.

Note: It is wise to carry spare fuses at all times.

NEVER attempt to bypass the fuse or fit one of the incorrect value.

2. MIDI In & MIDI Thru

Connect any external MIDI devices to the MIDI In DIN socket. A copy of the signal entering this connector will be available on the MIDI thru socket to allow daisy chaining of MIDI equipment.

Note: The JMD:1 only accepts and retransmits incoming data. It is not designed to generate its own MIDI commands. See the Footcontroller & MIDI section of this handbook for more information.

3. Footcontroller

Connect the supplied footcontroller using any standard 1/4" jack mono lead, e.g. a guitar lead. Using any other type of footswitch other than the supplied will have no effect and will be ignored by the amplifier. See the Footcontroller & MIDI section of this handbook for more information.

4. Emulated Line Out

An electronically balanced pre-amp signal, processed

through a power amp, 4x12" speaker cabinet and microphone emulation is made available at this connector. It is also available at the Headphones output.

IMPORTANT: This output cannot be muted when the amplifier is switched off. To prevent loud pop noises on power down, disconnect before switch off or switch off external equipment first.

5. Headphones

Headphone output providing the JMD:1's pre-amp processed through a power amp, 4x12" speaker cabinet and microphone emulation.

6. Line In

Connect an external audio source such as an MP3, CD or tape track. This signal will appear on the Headphones output only, to allow private practice.

7. Pre-amp Out

Output providing a direct feed from the JMD:1's pre-amp for connection to an external power amplifier.

Note: The External FX Loop, Emulated Line Out, Headphones, Line In and Pre-Amp Out are still operational when the JMD:1 is in standby, allowing you to use the amplifier in silent recording mode.

8. Serial / Parallel FX Loop

Mix, FX Level, Return and Send
The JMD:1 is equipped with a programmable serial / parallel FX Loop. Connect your external FX device input to the JMD:1's Send socket and the device's output to the JMD:1's Return socket. As described previously, this FX Loop can be bypassed and programmed from the front panel.

The +4dBu/-10dBV switch allows you to configure the loop for use with either professional equipment (+4dBu setting) or with guitar level effects like effects pedals (-10dBV setting). When Mix is set to Wet, all the signal goes through the external loop, adding more direct

(unprocessed) signal as you turn it towards Dry. This allows you to mix any amount of the external effect without losing or degrading the direct signal quality.

When mixing the Wet and Dry signals, the external effects processor's output should be configured to remove the direct (unprocessed) signal because unpleasant phasing effects may occur when mixing it again in the amplifier.

Note: The position of the Mix control is storable and its current setting may not reflect the physical position of the control when you have changed to a new preset. If you are having problems with the FX Loop, always turn the Mix control first to ensure it is set to the value you expect.

9. Speaker Outputs

WARNING! Never switch the Standby to On without a load (speaker cabinet/s) attached!

There are three speaker outputs available on the rear panel, they are labelled according to the intended impedances:

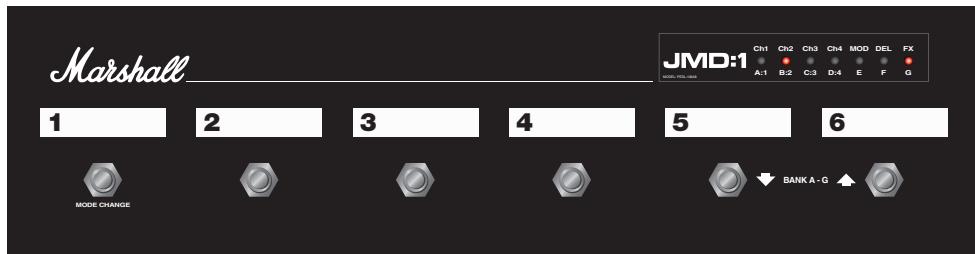
- 1x16 Ohm: Connect to this output when only using a single 16 Ohm cab.
- 1x8 Ohm / 2x16 Ohm: Connect a single 8 Ohm guitar cabinet to one of these sockets or two 16 Ohm cabinets.

WARNING: Although there are three speaker outputs, never attempt to connect more speakers than rated. The safe combinations are 1x16 Ohm or 1x8 Ohm or 2x16 Ohm only. Any other speaker configuration may stress the power amplifier section and, in extreme cases, may lead to valve and/or output transformer failure.

JMD:1 combo amplifiers internal speaker(s) must be connected to the socket marked 'Internal Speaker(s)' only.

ALWAYS ensure you use good quality speaker (unshielded) cables. NEVER use guitar (shielded) cables.

Footcontroller & MIDI



Footcontroller

The provided 6-way Footcontroller works in two modes:

- In **Switch Store** mode you can assign any front panel switch (Manual, Channel 1-4, Modulation, Delay, Tap Tempo, FX Loop & Compare) to any of the six footswitches, thereby enabling access to that function remotely.

- In **Preset Store** mode you can store and recall up to 28 complete presets, effectively giving you 28 channels!

A full list and description of the 28 factory presets is also included with the JMD:1.

The Footcontroller is supplied in Switch Store mode with the following default assignments:

FSW #1: Channel 1
 FSW #2: Channel 2
 FSW #3: Channel 3
 FSW #4: Channel 4
 FSW #5: Manual
 FSW #6: Modulation

To change between modes, unplug the Footcontroller from the amplifier, hold down footswitch 1 and reconnect the Footcontroller to the amplifier while the amplifier is switched on.

The Ch1 LED will illuminate green when entering Switch Store mode.

The FX LED will illuminate red when entering Preset Store mode.

The Footcontroller will remain in your chosen mode even after switching off the amplifier or disconnecting the Footcontroller.

Switch Store Mode

In Switch Store mode, any of the footswitches can be configured to replicate any of the front panel switches and the amplifier will react in exactly the same way as when you operate them on the front panel.

All the front panel switches can be mapped to any of the footswitches without any limitation. The only exception of course, is the Footswitch / MIDI Program (7) switch, which

cannot be assigned to the footswitch.

To assign a front panel switch to a footswitch simply:

1. Enter Footswitch Program mode by pressing the Footswitch / MIDI Program (7) switch once (red light on).
2. Press and hold the desired footswitch.
3. While holding the footswitch down, in less than three seconds, press the front panel switch you wish to assign to it.

The FX footswitch LED will flicker a couple of times indicating that the switch has been mapped. From now on the selected footswitch will act in exactly the same way as if you press the equivalent front panel switch.
4. Once you have finished assigning switches to the Footcontroller, press the Footswitch / MIDI Program (7) twice (red light off) to exit the Footswitch Program mode.

The Delay switch can be assigned to a footswitch to either turn the delay effect on or off or act as the tap tempo (both features can be assigned to two different footswitches).

To assign delay on / off to a footswitch, assign the switch while the delay effect is off.

To assign the tap tempo to a footswitch, assign the switch while the delay effect is on.

In Switch Store mode the Footcontroller's LED display reflects the current status of the JMD:1, following the line of text above the LEDs, displaying current Channel, Modulation, Delay and FX Loop settings.

Preset Store Mode

In Preset Store mode the Footcontroller allows you to store and recall entire front panel set-ups in one of 28 memory locations divided up into seven banks (A to G) of four presets.

Switches 5 (bank up) and 6 (bank down) select which bank you require, indicated by the red LED.

Switches 1 to 4 select the presets within the current bank, indicated by the green LED.

When the preset and bank LEDs overlap i.e. A1, B2, C3, D4, the LEDs will mix and light orange. When the current bank is changed, the green LED will flash indicating that you have moved banks; switch 1 to 4 needs to be selected before a preset is recalled.

To Store - Dial in the tone you require, when you are happy, press the Footswitch / MIDI Program switch twice (LED is flashing). Using the Footcontroller, select the bank you require and then press the chosen preset. The Footswitch / MIDI Program switch will stop flashing and your settings will have been stored.

To exit this mode without storing a preset, press the Footswitch / MIDI Program switch again.

To Recall - Simply select the required bank and press the chosen preset.

The four presets in bank A - A1, A2, A3 and A4 are the same as the JMD:1's 4 channels, allowing you to store and recall the sounds stored via the front panel.

Note: When connecting the Footcontroller in Preset Store mode, or after turning the amplifier on with the Footcontroller connected, the Footcontroller's LEDs will indicate the last recalled preset, reminding you of which preset you played last. The amplifier will not change any settings until you have pushed one of the preset footswitches (1-4), allowing you to recall the last preset used or to select another.

MIDI

The JMD:1 can store and recall 128 presets via program change commands received from its MIDI IN socket. **To Store** - Dial in the tone you require, when happy, press the Footswitch / MIDI Program switch twice, the LED will flash until a valid MIDI program change command is received. On reception of a MIDI program change command the amplifier stores the current settings in the MIDI program number received.

The JMD operates in OMNI mode; it will respond to MIDI program change messages transmitted on any MIDI channel.

To exit this mode without waiting for incoming MIDI data, press the Footswitch / MIDI Program switch again.

To Recall - Simply transmit the required program change command and the preset will be recalled.

The first four program changes 0, 1, 2 and 3 are the same as the JMD:1's 4 channels. The first 28 program changes (0 to 27) are the same as the 28 locations as accessed via the supplied Footcontroller.

Restoring Settings - WARNING: All user settings will be lost.

To restore the unit to factory settings you must hold the MODULATION and DELAY switches (5) while powering on the unit. The JMD:1's channel switches will begin to flash. You can then release the switches. On release the channel switches will change from flashing to lit and the factory settings will be restored.

Resetting the amplifier will erase all user channel settings, memories and Footcontroller switch store assignments, replacing them with the factory presets.

JMD:1 Series Technical Specifications

	JMD100 Head	JMD50 Head	JMD102 Combo	JMD501 Combo
Power (RMS)	100W	50W	100W	50W
Valves	1 x ECC83, 4 x EL34	1 x ECC83, 2 x EL34	1 x ECC83, 4 x EL34	1 x ECC83, 2 x EL34
Guitar - Input Impedance	1MΩ	1MΩ	1MΩ	1MΩ
Emulated Output - Level	+4dBu	+4dBu	+4dBu	+4dBu
FX Send Level - Selectable	-10dBV / +4dBu	-10dBV / +4dBu	-10dBV / +4dBu	-10dBV / +4dBu
Dimensions (mm) w, h, d	750 x 310 x 220	750 x 310 x 220	685 x 530 x 255	635 x 530 x 255
Weight (kg)	20.2	15.7	31	22.6



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