



Marshall

THE VIRCO SIGNATURE AMPLIFIER
CAST THE FIRST SIGNATURE

Marshall
AMPLIFICATION
OWNER'S MANUAL



FROM JIM MARSHALL

I would like to thank you personally for choosing this limited AFD100 Slash Signature Series Amplifier – our tribute to one of the greatest rock tones ever recorded and one of the most influential guitarists of the past 25 years.

I have known Slash since the early '90s and I have rarely met a more humble rock star. I remember when we launched the JCM Slash Signature Amplifier back in 1996, the first signature Marshall amp ever, Slash was utterly flattered by the concept and kept asking “Why me?” My reason was, and still is, that in addition to being a truly great guitarist, Slash personifies the spirit of rock 'n' roll. That Silver Jubilee re-issue proved to be a huge success and has paved the way for numerous Marshall Signature Series amplifiers ever since. So, when Slash came to us with the idea of recreating his fabled *Appetite For Destruction* tone, I immediately put the challenge to the Marshall team. This would be no easy task as, unlike most signature models, there was no original amplifier to examine and replicate. Our Engineers had to rely on studying the original recordings and information from Slash himself to find that elusive sound. Yet, after countless hours of research and development, the first prototypes were ready for the ultimate test – a world tour! I'm pleased to say this latest addition to the Marshall Signature range is now a permanent fixture in Slash's rig.

This project represented another first for Marshall, as every stage of development was made public through the AFD100.com website. From initial research, including the intriguing AFD amplifier back-story, to prototypes and full production models, every move was documented and followed by thousands of fans around the globe. Visitors to the site were also treated to engineer blogs, news updates and even behind-the-scenes video footage, as well as being able to post comments and ask questions directly to the Marshall team. It was a great experience, one which I'm sure we'll use again.

I would like to take this opportunity to wish you every success with your new AFD100 Slash Signature Series Amplifier and I hope it brings you many years of playing pleasure.

Welcome to the Marshall family.

Yours Sincerely

Dr Jim Marshall OBE



OVERVIEW

Introducing the AFD100 – a dual mode, all-valve 100 Watt head that revisits the legendary tones of one of, if not the most important, rock albums of the last three decades. As well as reproducing what is regarded by many as the “Ultimate Rock Sound”, the AFD100 also contains some truly awesome features, the first being Marshall's new electronic power attenuation. This incredible technology allows you to precisely adjust the maximum power output of the AFD100 without losing any of that sought-after tone. No limited wattage choices to click between and no compromising your tone, just smooth and consistent power attenuation that is simple to use and makes the AFD100 ideal for stage, studio and home use.

The Presence, Bass, Middle and Treble controls dictate the overall tone of the AFD100's highly interactive EQ section, meaning that changes to one will affect the parameters of the others. This allows for a greater range of tonal possibilities, plus a more fluid and dynamic way of controlling your sound.

The power amp volume is controlled using the Master, while pre-amp distortion is governed by the Gain. By using these two controls, and depending on your guitar and playing style, it is possible to dial in both classic high gain Slash tones and biting bright cleans, with everything in between. Again, the overall output volume of the AFD100 can be governed by the Power control.

The twin modes – #34 and AFD – are based on two of Slash's legendary tones. The first is taken from Slash's 'modded' JCM800 2203 (complete with stenciled 34 on the side) that he has used since the late '80s. The second provides an additional gain stage and is of course based on the infamous 'Appetite Amp', widely believed to be a modified 1959 Tremolo from the mid '70s. Both modes provide a unique, harmonically rich, natural valve-driven tone, ideal for thick crunchy rhythm and wild soaring solos alike. As with traditional Marshall amplifiers, the AFD100 provides two sensitivity input options – one high and one low. Either input can be used and is a matter of personal taste.

The AFD100 rear panel features a series Effects Loop, where you can connect any outboard stomp boxes and/or rack equipment you may have. The Return Level control allows you to dial in the exact amount of Effects Loop signal you want and can even be used as a second master volume when left unconnected, providing a boost of up to +10dB or attenuating the signal to a lower volume. A valve fault indicator and self-biasing circuitry have been included as well, ensuring that any maintenance can be carried out quickly and that the amplifier's bias is always correctly configured. You can also choose to have other types of popular octal pentode or tetrode power valves installed (see Rear Panel features, section 3). This work should always be undertaken by a qualified engineer – ask your local Marshall dealer for more information. The included two-way footswitch connects via the rear panel also, allowing for quick #34/AFD mode changes and Effects Loop on/off toggling.

Cosmetically, the AFD100 blends key characteristics of both an old-school 'seventies' style head and a mighty JCM800. The modern silver panel and matching knobs also pay homage to the 2555 Silver Jubilees on which Marshall's inaugural Slash Signature amplifier was based. Classic black Levant vinyl covering, a small vintage script logo and white piping complete the unique livery of this incredible tone machine.

We recommend that you read through the information in this owners manual carefully before powering up your AFD100 to ensure you get the best out of your new amplifier.

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ENGLISH



THE APPETITE TONE LEGACY

In 1987 Guns'n'Roses released their debut album *Appetite For Destruction*, the record that redefined rock music in the '80s. Raw, unrelenting and 'in-yer-face' from start to finish, the whole album was driven by Slash's inspired fretboard mastery and unique sound, regarded by many as the ultimate rock tone.

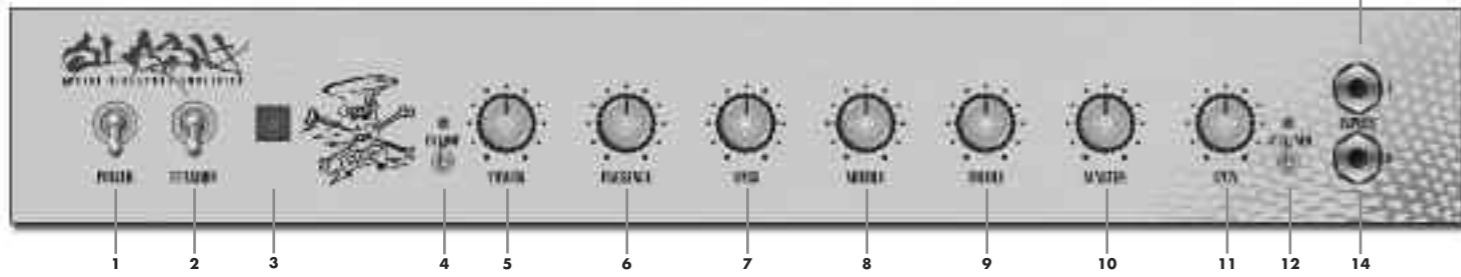
The intriguing history of the Marshall amp used by Slash on AFD and its subsequent disappearance has now passed into rock folklore. Widely believed to be a hot-rodded, 100 Watt, pre-master volume model from the early '70s, this legendary amp was hired specifically for the 'Appetite' sessions in 1986. Eager to hold on to the amplifier, Slash told rental company S.I.R. that it had been stolen, only to have it 'stolen' back a year later during tour rehearsals. Ever since, there has been little to no word on the whereabouts of that mysterious 100 Watt head, only time will tell whether it resurfaces again!

In January 2010, Slash and Marshall Amplification announced that they were to join forces to recreate that revered "Appetite Tone" with the launch of the AFD100 project. Rather than develop this Signature Series amp behind the closed doors of Marshall HQ, it was decided that every stage of this collaboration should be fully open to the public. www.AFD100.com was created for just this purpose, allowing the world to view and comment on project updates, picture galleries and blogs by the Marshall design team as well as exclusive Slash interviews and behind-the-scenes development videos. This was the very first truly interactive project between Marshall and guitarists from all over the world. We're pleased to say it has proven to be a huge success.

The Marshall AFD100 Slash Signature Series Amplifier you now own is arguably the most anticipated Marshall amplifier ever and part of the ever-growing "Appetite Tone" legacy.



FRONT PANEL (LEFT TO RIGHT FEATURE BY FEATURE)



IMPORTANT: READ BEFORE POWERING UP

Before powering-up your Marshall amplifier you must ensure that an appropriate speaker cabinet(s) or dummy load is connected to the correct impedance Loudspeaker jack on the rear panel. Failure to do this could result in serious damage being caused to your amplifier. Always use an unshielded speaker cable to connect the amp to the speaker cabinet, never use a screened (shielded) guitar lead. When powering-up the amplifier always engage the Power Switch (1) first to allow the power valves to warm-up, we would also recommend setting all volume controls to zero. After about two minutes the power valves will be at their correct operating temperature and the Standby Switch (2) can be engaged. To prolong valve life, the Standby Switch alone should be used to turn the amplifier on and off during breaks in a performance. Also, upon full power down, always disengage the Standby Switch prior to the main Power Switch. Always allow the amp to cool down before moving.

1. POWER SWITCH

On/Off Switch for mains power to the amplifier. Please ensure the amplifier is switched off and unplugged from the mains electricity supply before being moved.

2. STANDBY SWITCH

The Standby Switch is used in conjunction with the Power Switch (1) to 'warm up' the amplifier before use and to prolong the life of the output valves.

3. INDICATOR

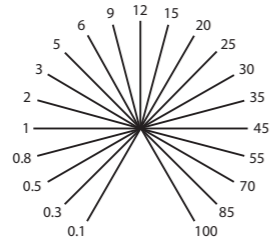
Indicates that power is being supplied to the amplifier.

4. FX LOOP SWITCH

Switches the AFD100's FX loop on and off. This can also be controlled from the included footswitch. The LED is on when the FX loop is enabled.

5. POWER

This control provides access to the AFD100's Electronic Power Attenuation (EPA) feature. The internal attenuator allows you to adjust the overall output volume of the amplifier whilst retaining all of your tone. This works by electronically reducing the voltages to components within the amplifier instead of placing resistive loads in the circuitry. Output of between 100% and 0.1% can be achieved, making the AFD100 ideal for stadium, studio and home use! The adjacent diagram shows the amount of power shown as a percentage in relation to the dial setting.



Equalisation

Note: The tone network is highly interactive; altering one control affects the behaviour of others. Experimentation is the best way to achieve your desired sound, a good place to start is to set all EQ dials to half way and adjust from there. If you are looking for a particular tone it is important to bear in mind that your choice of guitar plays an important role as well.

6. PRESENCE

This control adjusts the power amplifier's high frequency response, making your tone more cutting and 'present'.

7. BASS CONTROL

Controls the amount of low frequencies or bottom-end in your tone.

8. MIDDLE CONTROL

Dictates the middle register of the amplifier. Turning up this control will make your guitar sound fatter. Conversely, reducing the amount of middle in your tone will result in a sharper and thinner guitar sound for a more 'scooped' tone.

9. TREBLE CONTROL

Controls the high frequencies or top-end in your tone.

10. MASTER VOLUME

Controls the volume output from the AFD100's pre-power amp section. Used in conjunction with the POWER (5) function, it is possible to overdrive the power amplifier even at reduced power output.

11. GAIN

Governs the amount of signal passing through the pre-amp valves. Turning up this control overdrives the pre-amp and creates a desirable, harmonically rich distortion. Reducing the Gain level will begin to clean up your tone.

12. #34/AFD

This switch toggles between the AFD100's two distinct gain structure modes. The #34 mode of the amplifier replicates the modded Marshall JCM800 2203 that Slash has been using since the late '80s. Switching to AFD mode provides a thicker, more driven, higher gain tone, based of course on Slash's legendary *Appetite For Destruction* sound. The LED indicator will be lit when in AFD mode.

Inputs

Note: As with most vintage Marshall amplifiers, the AFD100 has more than one guitar input. Input 1 is the high sensitivity input for the amplifier, traditionally this was used for guitars with lower output pickups. Many guitarists now take advantage of this input, which allows them to drive the amplifier harder as it provides +6dB more than the low sensitivity input. Which input you choose is purely down to personal taste and experimentation. It is also possible to daisy-chain amps from the low input to the high input of the next amplifier.

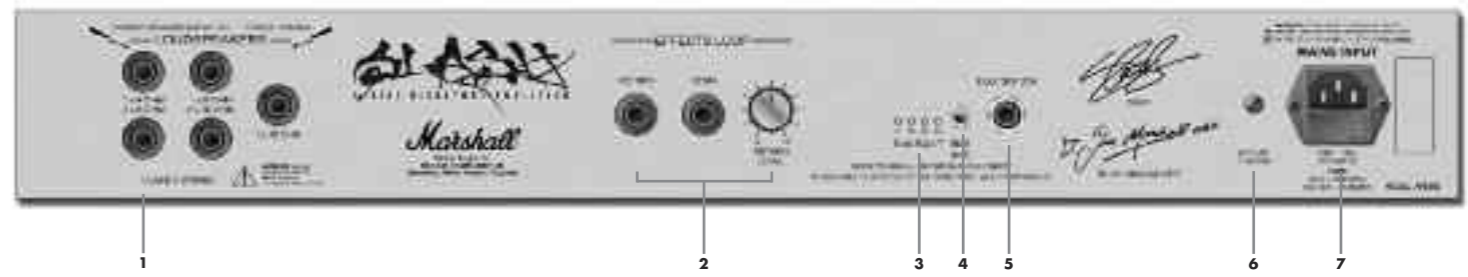
13. HIGH SENSITIVITY INPUT

Traditionally used for guitars with low output pickups.

14. LOW SENSITIVITY INPUT

Traditionally used for guitars with normal output pickups.

BACK PANEL (LEFT TO RIGHT FEATURE BY FEATURE)



1. LOUDSPEAKER OUTPUTS

WARNING! Never use the amplifier without a load attached! There are five speaker outputs available on the rear panel. They are labelled according to the intended impedances:

4Ω: Connect a single 4 ohm guitar cabinet or two 8 ohm guitar cabinets.

8Ω: Connect a single 8 ohm guitar cabinet or two 16 ohm guitar cabinets.

16Ω: Connect any 16 ohm guitar cabinet to this jack.

WARNING: Although the AFD100 amplifier has five speaker outputs, never attempt to connect more speakers than rated, the safe combinations being 1x4 Ohm or 1x8 Ohm or 2x8 Ohm or 2x16 Ohm or 1x16 Ohm. Any other speaker configuration may stress the power amplifier section and in extreme cases may lead to valve and/or output transformer failure.

2. EFFECTS LOOP

The AFD100 provides a series Effects Loop where you can connect any outboard FX equipment you might have. This feature can be toggled on and off from either the front panel or the supplied footswitch.

Connect your external FX gear input to the SEND jack and the FX output to the RETURN jack.

Return Level – This control allows you to adjust the level of the return signal from your Effects Loop. Reducing the level to 0 will mute the signal from your Effects Loop, whereas increasing it to 10 will allow the maximum signal volume to be used. The loop can also be used as a second master volume for attenuating or boosting (up to +10dB) the signal by leaving it unconnected and using the Return Level as a solo boost/rhythm attenuation control.

3. BIAS FAULT

Like any high performance machine, parts such as valves wear out over time. It is essential that these all-important components are working properly and that's where the valve fault indicator comes in very useful. This system allows you to monitor the AFD100's power amp and clearly indicates any valve that has developed a fault while performing the biasing procedure. If lit under normal use, it may indicate that a valve is faulty or that some kind of temporary fault was detected and the valve needs to be examined. If all four LEDs are lit, this could signal that the HT fuse has blown and needs to be replaced. Only use the same HT fuse type as indicated on the rear panel.

NOTE: It is possible to have different octal pentode or tetrode power valves installed in your AFD100. Some popular options include EL34s, 6L6s, 5881s, KT66s, KT77s and KT88s.

WARNING: This work should only be carried out by a qualified engineer, never attempt to remove and replace the power valves yourself. Ask your local Marshall dealer for more information.

4. AUTO-BIAS AND BIAS CURRENT TRIMMER

The Bias setting of an amplifier ensures correct operation. In order to adjust the bias level of your amplifier press and hold the FX Loop switch on the front panel while powering the amplifier up until the

FX Loop and #34/AFD LEDs begin to flash. This procedure will take about three minutes after which the amplifier is ready to be used. Whilst setting the bias of an amplifier is not something that needs to be done everyday, having the correct bias will prolong the life of your valves and ensure your amplifier functions smoothly. We recommend either engaging the auto-bias function every time the amplifier is powered-up (like a warm-up procedure) or at least performing the operation every time the amplifier is moved to a different place. This will ensure that the amplifier is taking care of possible mains voltage variations and adjusting itself to the different conditions.

The desired biasing current can be selected by turning the trimmer control located to the right of the valve fault indicator LEDs before activating the bias procedure. Possible values range between 20mA and 50mA with every mark representing 3mA. Since there is not a 'perfect' bias setting, we recommend values between 30mA and 40mA.

The chart on page 25 can be used as a guide for setting bias levels for the AFD100

If you are unsure how to properly bias an amplifier, we suggest you speak to your authorised Marshall Amplification dealer who will be able to advise you.

5. FOOTSWITCH

Both the #34/AFD modes and Effects Loop can be accessed via the included AFD100 Footswitch (PEDL-00053). LEDs contained in the footswitch will illuminate when the AFD mode and Effects Loop are engaged.

The default setting for the FX circuit is off. The default setting for the amplifier is AFD mode.

NOTE: When the footswitch is connected to the amplifier, the relevant front panel switches will not function.

6. HT FUSE

This is the access point to replace the amplifier's HT fuse. This should only be done by a qualified engineer. The amplifier **MUST** be switched off and disconnected from the mains before replacing the HT fuse. If unsure, contact your local authorised Marshall dealer who will be able to assist you. Use a T1AE250V fuse only.

7. MAINS INPUT

Your amplifier is provided with a detachable mains (power) lead, which is connected here. The specific mains input voltage rating that your amplifier has been built for is indicated on the rear panel. **Warning:** Before going any further, make sure your amplifier is compatible with your electrical supply. If you have any doubt, please seek help from a qualified technician – your Marshall dealer can help you in this respect.

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 incorrect value.

PLEASE NOTE: Extreme control settings may result in compromised audio performance due to the extreme gain settings available in this ADF100 all-valve amplifier.



Marshall

AMPLIFICATION

Denbigh Road, Bletchley, Milton Keynes MK1 1DQ, England.
Tel : +44 (0)1908 375411 Fax : +44 (0)1908 376118

www.marshallamps.com

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