

DEFINE  
YOUR TONE



# FAB5

## 5W ALL-TUBE GUITAR COMBO



USER'S MANUAL  
BEDIENUNGSANLEITUNG  
MANUEL D'UTILISATION  
MANUAL DE USUARIO



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## INTRODUCTION

Thank you for choosing the Palmer FAB5.

Your new amp is an all-tube amplifier with a Class-A design that is especially prized by countless guitarists because of its direct response and harmonious distortion and is frequently used to record guitar tracks in the studio. Because of their seemingly low output, single-ended amplifiers are usually pigeon-holed in the practice amp category. In conjunction with the powerful, built-in 10" Eminence Ragin Cajun speaker or an external speaker cabinet, however, the FAB5's 5 watts reach volume levels that are thoroughly band- and stage-compatible. Here, it is above all at high volume levels that the power stage distortion and natural compression preferred by tone aficionados come into their own. These can be controlled conveniently by means of picking dynamics and with the guitar volume control. The boost control lets you continually boost the volume and distortion yet again. This function can be activated via an additional footswitch for various rhythm and solo settings.

In keeping with the practice amp application, one special feature of FAB5 is a built-in power attenuator capable of reducing the volume to a level acceptable in living rooms and bedrooms. This allows you to use the overdrive of the amp even at drastically reduced levels without alarming your neighbours or the police.

The FAB5 is built using high-quality components and specially selected tubes that ensure maximum tone quality and reliable operation. The preamp uses a 12AX7 (ECC83) tube and the output stage a 6V6; the rectifier is an EZ81. If you should ever notice signs of wear such as high frequency loss, reduced output, hum or microphonics, have the tubes replaced only by a qualified technician.

We hope you have a lot of fun with your Palmer FAB5!



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## SAFETY INFORMATION

1. Please read these instructions carefully.
2. Keep all information and instructions in a safe place.
3. Follow the instructions.
4. Observe all safety warnings. Never remove safety warnings or other information from the equipment.
5. Use the equipment only in the intended manner and for the intended purpose.
6. Use only sufficiently stable and compatible stands and/or mounts (for fixed installations). Make certain that wall mounts are properly installed and secured. Make certain that the equipment is installed securely and cannot fall down.
7. During installation, observe the applicable safety regulations for your country.
8. Never install and operate the equipment near radiators, heat registers, ovens or other sources of heat. Make certain that the equipment is always installed so that is cooled sufficiently and cannot over-heat.
9. Never place sources of ignition, e.g., burning candles, on the equipment.
10. Ventilation slits must not be blocked.
11. Do not use this equipment in the immediate vicinity of water (does not apply to special outdoor equipment - in this case, observe the special instructions noted below. Do not expose this equipment to flammable materials, fluids or gases.
12. Make certain that dripping or splashed water cannot enter the equipment. Do not place containers filled with liquids, such as vases or drinking vessels, on the equipment.
13. Make certain that objects cannot fall into the device.
14. Use this equipment only with the accessories recommended and intended by the manufacturer.
15. Do not open or modify this equipment.
16. After connecting the equipment, check all cables in order to prevent damage or accidents, e.g., due to tripping hazards.
17. During transport, make certain that the equipment cannot fall down and possibly cause property damage and personal injuries.
18. If your equipment is no longer functioning properly, if fluids or objects have gotten inside the equipment or if it has been damaged in another way, switch it off immediately and unplug it from the mains outlet (if it is a powered device). This equipment may only be repaired by authorized, qualified personnel.
19. Clean the equipment using a dry cloth.
20. Comply with all applicable disposal laws in your country. During disposal of packaging, please separate plastic and paper/cardboard.
21. Plastic bags must be kept out of reach of children.

## FOR EQUIPMENT THAT CONNECTS TO THE POWER MAINS:

22. CAUTION: If the power cord of the device is equipped with an earth-  
ing contact, then it must be connected to an outlet with a protective

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- ground. Never deactivate the protective ground of a power cord.
23. If the equipment has been exposed to strong fluctuations in temperature (for example, after transport), do not switch it on immediately. Moisture and condensation could damage the equipment. Do not switch on the equipment until it has reached room temperature.
  24. Before connecting the equipment to the power outlet, first verify that the mains voltage and frequency match the values specified on the equipment. If the equipment has a voltage selection switch, connect the equipment to the power outlet only if the equipment values and the mains power values match. If the included power cord or power adapter does not fit in your wall outlet, contact your electrician.
  25. Do not step on the power cord. Make certain that the power cable does not become kinked, especially at the mains outlet and/or power adapter and the equipment connector.
  26. When connecting the equipment, make certain that the power cord or power adapter is always freely accessible. Always disconnect the equipment from the power supply if the equipment is not in use or if you want to clean the equipment. Always unplug the power cord and power adapter from the power outlet at the plug or adapter and not by pulling on the cord. Never touch the power cord and power adapter with wet hands.
  27. Whenever possible, avoid switching the equipment on and off in quick succession because otherwise this can shorten the useful life of the equipment.
  28. **IMPORTANT INFORMATION:** Replace fuses only with fuses of the same type and rating. If a fuse blows repeatedly, please contact an authorised service centre.
  29. To disconnect the equipment from the power mains completely, unplug the power cord or power adapter from the power outlet.
  30. If your device is equipped with a Volex power connector, the mating Volex equipment connector must be unlocked before it can be removed. However, this also means that the equipment can slide and fall down if the power cable is pulled, which can lead to personal injuries and/or other damage. For this reason, always be careful when laying cables.
  31. Unplug the power cord and power adapter from the power outlet if there is a risk of a lightning strike or before extended periods of disuse.

## CAUTION:



Never remove the cover, because otherwise there may be a risk of electric shock. There are no user serviceable parts inside. Have repairs carried out only by qualified service personnel.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated „dangerous voltage“ within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock.



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The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions.

### CAUTION - HIGH VOLUME LEVELS WITH AUDIO PRODUCTS!

This equipment is intended for professional use. Therefore, commercial use of this equipment is subject to the respectively applicable national accident prevention rules and regulations. As a manufacturer, Adam Hall is obligated to notify you formally about the existence of potential health risks. Hearing damage due to high volume and prolonged exposure: When in use, this product is capable of producing high sound-pressure levels (SPL) that can lead to irreversible hearing damage in performers, employees, and audience members. For this reason, avoid prolonged exposure to volumes in excess of 90 dB.

### CAUTION! IMPORTANT INFORMATION ABOUT LIGHTING PRODUCTS

1. Do not look into the beam from a distance of less than 40 cm.
2. Do not stare into the beam for extended periods at short-to-medium distances.
3. Do not view the beam directly with optical instruments such as magnifiers.
4. Under some circumstances, stroboscopic effects may trigger epileptic seizures in sensitive individuals! For this reason, persons who suffer from epilepsy should always avoid places where strobe lights are used.

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## DEFINE YOUR TONE

### 1) BEFORE SWITCHING THE AMP ON FOR THE FIRST TIME

- Make certain that the voltage selected next to the rear panel power connector of the FAB5 (mains voltage selector) matches the mains voltage in your country.
- Make certain that the amp is positioned safely and secured.
- Ensure sufficient air circulation through the cooling slits of the FAB5.

PLEASE MAKE CERTAIN THAT YOU READ ALL OF THE SAFETY INSTRUCTIONS CONTAINED IN THIS MANUAL BEFORE YOU BEGIN USING YOUR FAB5!

### 2) SINGLE-ENDED OR PUSH-PULL

Like tube and diode rectifiers, both "single-ended and "push-pull" amplifiers have a fixed place among guitarists because of their varying tone characteristics. Both terms actually refer only to the output stage. Single-ended amplifiers produce a complex, warm tone with distinctive harmonics, while push-pull amplifiers stand out because of high efficiency, direct response, and high dynamics.

Single-ended circuits usually use only one power tube (or multiple tubes connected in parallel for higher output). They always run at full power regardless of whether or not an input signal is present - in other words, the power tube is always "on". This mode of operation is also called "Class A".

The push-pull circuit requires a pair of power tubes (or multiple pairs connected in parallel for higher output). The input signal of a push-pull amplifier is split into a signal with the same phase as the original and a signal with the phase reversed by 180°. The two opposing signals now drive the power tubes alternately, i.e., while one tube amplifies the in-phase signal ("on"), the tube driven by the phase-reversed signal is "off". The difference between the two sides is picked up as the output signal. For this reason, push-pull amplifiers are also referred to as differential amplifiers. They are usually operated in "Class AB". The constant alternation produces distortion in the transition area ("on", "off"). Many guitarists love this aggressive, scratchy transition distortion.

Unlike the single-ended circuit ("always on"), the output transformer of a push-pull amplifier is not constantly under load. This means that it is less saturated and attains higher sound fidelity. Push-pull circuits are also more efficient, since the rest periods of the power tubes ("off") permit higher output levels when they are "on". However, odd overtones generated in the output stage are cancelled out by the push-pull function, while they are clearly predominant in single-ended amplifiers. In the end, the choice is a matter of taste. In the studio, professional guitarists like to use small single-ended amplifiers, while more powerful push-pull amplifiers are preferred on stage.



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## 3) WHAT DOES A RECTIFIER DO?

The Palmer FAB5 has a GZ34 rectifier tube.

Rectifiers convert the alternating current from the mains connection into direct current, which is required by the amplifier circuitry.

Early "classic" tube amplifiers used rectifier tubes that produce an elastic feeling when playing. The advent of transistor technology resulted in the increasing use of silicon diodes as rectifiers, which produce a direct, "crisp" response. They are cheaper, more efficient, and easier to integrate in amplifier circuits than tube rectifiers are. Today, one finds both tube and diode rectifiers in guitar amplifiers and has a choice; many models even use diode rectifiers that emulate the response and tone of a tube rectifier.

As a rule, diode rectifiers react more quickly to the high voltage requirements of heavily played notes and chords. The significantly longer rise time of a tube rectifier at first produces a voltage drop when the strings(s) are plucked, which is often referred to as "sag" in English. When the signal decays, the direct voltage increases again. This results in essentially the same effect as that of a compressor/sustainer. Many guitarists prefer tube rectifiers because of their quasi "breathing" response and the possibility of controlling the tone by means of the attack.

The maximum voltage and the rise time, i.e., the duration until the maximum voltage is generated, vary depending on the rectifier tube and type. A different tube type or a diode plug-in that plugs into the tube socket can change the playing feel, sound, and performance of an amplifier.

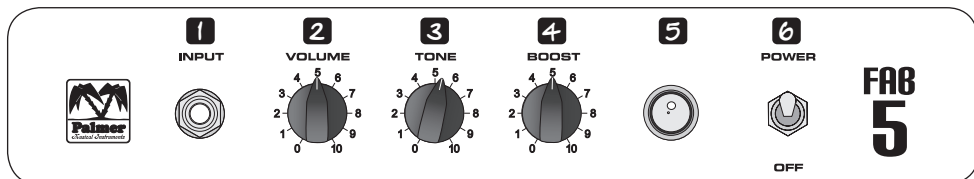
**ALWAYS CONSULT A QUALIFIED TECHNICIAN BEFORE ANY CHANGE - A DIFFERENT TUBE TYPE OR DIODE RECTIFIER COULD DAMAGE YOUR AMPLIFIER!**



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## 4) CONNECTIONS AND CONTROLS

### CONTROL PANEL (TOP)



#### 1 INPUT

Connect your guitar to this socket. Use a high-quality instrument cable for this.

#### 2 VOLUME

This control sets the volume of the FAB5. With single-coil pickups, light distortion sets in at around the 12-o'clock position, with humbuckers a little sooner; then the overdrive increases continuously. At very high settings and with a strong attack, the amp produces the typical, harmonious Class-A crunch with light compression.

#### 3 TONE

This control sets the tone reproduction of the FAB5. At 0, the treble is reduced, but the sound always remains defined and never becomes excessively muffled or flabby. In the middle position the treble is largely neutral, and turning the knob further to the right adds edge and presence.

#### 4 BOOST

This control is always activated unless a footswitch (see 11) is connected and increases the volume and overdrive as it is turned to the right. In conjunction with the VOLUME control (1), it makes it possible to adjust the level of distortion and volume of the FAB5 sensitively over a wide range from clean to crunch to medium gain overdrive. With a standard footswitch connected to the BOOST socket (11) on the rear of the amplifier, the boost function can be activated or deactivated. This makes it possible to set individual volume and distortion levels for rhythm and solo playing and retrieve them with the footswitch.

#### 5 POWER LAMP

This indicator shows that the FAB5 is turned on and connected to a suitable power supply.





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### 5) TUBE REPLACEMENT, MAINTENANCE, AND CARE

After "burn-in" (initial operation under load) the tubes used in the FAB5 undergo a sophisticated selection process in which their electrical specifications and mechanical characteristics (microphonics) are tested. Additionally, their tone behaviour is tested in an acoustical test in the finished equipment.

#### WHEN DOES IT MAKE SENSE TO REPLACE TUBES?

The tubes used in the FAB5 stand out because of exemplary workmanship and long service life. If a problem should nevertheless occur, before replacing the tubes, you should first please ask yourself the following questions: Was the fault or failure caused by the tube itself or perhaps by a peripheral device, e.g., a defective speaker cable as the cause for defective power tubes? (If the defect is not remedied, the problem could reoccur after the tube replacement.)

Was the mains voltage constant during operation? With all-tube amplifiers, a breakdown can be caused by a mains voltage surge. Surges occur, e.g., with generators or faulty high-voltage circuits.

Is it possible that merely a circuit breaker/fuse has been tripped without there being a real defect? "Old" circuit breakers/fuses, tube de-ionization, or arcing due to voltage peaks could be the cause. Then it would make little sense to replace the tubes. After being used for a certain amount of time, tubes evidence signs of fatigue (increased microphonics, susceptibility to hum, loss of treble, reduced output, etc.). Signs like this necessitate replacement, because they not only lead to decreased sound quality, but also indicate that the affected tubes are about to fail.

Note: replacing tubes for experimentation purposes is a bad idea. The resulting costs in the event of improper actions can be surprisingly high.

#### WHAT IS IMPORTANT TO KEEP IN MIND WHEN REPLACING TUBES?

Tube replacements should be left to qualified professionals. Before removing the rear panel, the mains plug of the FAB5 must be unplugged and the equipment must be allowed to discharge for a minimum period of 2 minutes. Loosen the rear panel screws and pull them out together with the electronics chassis. Take care of the speaker connection when doing so. Now the tubes can be removed carefully from their sockets. No bias adjustment is required when replacing power tubes.

IMPORTANT: THERE MUST BE A TUBE IN EVERY TUBE SOCKET!

#### HOW CAN TUBE SERVICE LIFE BE EXTENDED?

Never operate the FAB5 without a load (speaker)! Thus a high-quality, kink-proof speaker cable is absolutely necessary if you want to connect an external speaker.

Avoid vibration, especially when the equipment is on. Before transport, turn the amp off and let the tubes cool down.

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A correctly set bias current and heating symmetry ("hum balance") extend service life. In case of increased tube wear, these settings should be checked.

HERE ARE A FEW MORE BASIC RULES YOU CAN FOLLOW TO EXTEND THE SERVICE LIFE OF YOUR AMP SIGNIFICANTLY:

- Condensation may form inside the equipment if it is suddenly moved from a cold place to a warm one. This is especially important where tube equipment is concerned. Do not turn the equipment on until it has reached room temperature.
- Always ensure that any peripheral devices and equipment are technically flawless!
- Where the FAB5 is concerned, open ventilation slits for unimpeded air circulation are vitally important.
- Extreme heat and penetration by dust and especially moisture should always be avoided.
- Always comply precisely with the specifications of additional devices. Never operate the FAB5 when it is connected to speaker cabinets with an impedance (ohm rating) that is too low. Never operate the device unless it is connected to a speaker or an appropriate load. Never connect equipment with a level that is too high (e.g., power amps) to the amp.
- Always check the local mains voltage before connecting the device. In case of doubt, contact the stage technician, maintenance supervisor, or the like.
- Do not make "do-it-yourself" repairs in the event of trouble! Even replacement of internal fuses is best left to an experienced technician.

## 6) TROUBLESHOOTING

THE FAB5 WILL NOT TURN ON:

- There is no mains voltage present: verify that the power cord is connected correctly!
- The mains fuse is defective: replace the mains fuse with a fuse of the same type with the same rating. If the defect occurs again, you should contact a PALMER dealer.
- The local mains voltage does not match the operating voltage of the amplifier.

THE FAB5 IS CONNECTED CORRECTLY, BUT NO SOUND IS AUDIBLE:

- The guitar VOLUME control is turned all the way down.
- The volume on the amp is turned all the way down!
- The anode fuse has blown. You should contact a PALMER dealer.

THE AMP MAKES "RINGING" NOISES WHEN PLAYING AND TENDS TO FEED BACK

- One or more tubes are microphonic. Have the tubes tested by a technician and, if necessary, replaced with new tubes of the same type with the same characteristic.



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## 7) SPECIFICATIONS

Product type:	guitar amplifier
Type:	combo
Technology:	tube
Class:	A
Output power:	5 W
Number of inputs:	1
Input connections:	6.3 mm jack
Input impedance:	1 M ohm
Number of outputs:	1
Output connections:	6.3 mm jack
Output impedance:	8 ohms
Speaker type:	Eminence Ragin Cajun
Speaker diameter:	10" / 254 mm
Number of channels:	1
Indicators:	Power
Controls:	Volume, tone, mains voltage selector attenuator, boost
FX loop:	no
Tubes (preamp):	12AX7
Tubes (power stage):	6V6
Rectifier:	tube EZ81
Power supply:	230/115 VAC
Power consumption	70 W
Cabinet material:	sheet steel, plywood
Dimensions (W x D x H):	360 x 230 x 345 mm
Weight:	10 kg

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## 8) MANUFACTURER'S WARRANTY

This warranty covers the Adam Hall, LD Systems, Defender, Palmer, and Cameo brands.

It applies to all products distributed by Adam Hall.

This warranty declaration does not affect the statutory warranty claims against the manufacturer, but expands them with additional warranty claims vis-a-vis Adam Hall.

Adam Hall warrants that the Adam Hall product that you have purchased from Adam Hall or from an Adam Hall authorized reseller is free from defects in materials or workmanship under normal use for a period of 2 or 5 years (please inquire on a product-by-product basis) from the date of purchase.

The warranty period begins on the date on which the product was purchased, proof of which must be produced (through presentation of the invoice or the delivery note with the date of purchase) in the event of a warranty claim. Should products of the brands named above be in need of repair within the limited warranty period, you are entitled to warranty service according to the terms and conditions stated here.

During the Limited Warranty Period, Adam Hall will repair or replace the defective component parts or the product. In the event of repair or replacement during the Limited Warranty Period, the replaced original parts and/or products become property of Adam Hall.

In the unlikely event that the product which you purchased has a recurring failure, Adam Hall has the right, at its discretion, to replace the defective product with another product, provided that the new product is at least equivalent to the product being replaced with regard to the technical specifications.

Adam Hall does not warrant that the operation of this product will be uninterrupted or error-free. Adam Hall is not responsible for damage that occurs as a result of your failure to follow the instructions included with the Adam Hall branded product. The manufacturer's warranty does not cover - expendable parts (e. g., rechargeable batteries) - products from which the serial number has been removed or with a serial number that has been damaged as a result of an accident - damage due to improper use, user error or other external reasons

- damage to devices operated outside the usage parameters stated in the documentation included with the product
  - damage due to the use of replacement parts not manufactured, sold or recommended by Adam Hall,
  - damage due to modification or servicing by anyone other than Adam Hall.
- These terms and conditions constitute the complete and exclusive warranty agreement between you and Adam Hall regarding the Adam Hall branded product you have purchased.



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## LIMITATION OF LIABILITY

If your Adam Hall branded hardware product fails to work as warranted above, your sole and exclusive remedy shall be repair or replacement. Adam Halls' maximum liability under this limited warranty is expressly limited to the lesser of the price you have paid for the product or the cost of repair or replacement of any components that malfunction under conditions of normal use.

Adam Hall is not liable for any damages caused by the product or the failure of the product, including any lost profits or savings or special, incidental, or consequential damages. Adam Hall is not liable for any claim made by a third party or made by you for a third party.

This limitation of liability applies whether damages are sought, or claims are made, under this Limited Warranty or as a tort claim (including negligence and strict product liability), a contract claim, or any other claim, and cannot be rescinded or changed by anyone. This limitation of liability will be effective even if you have advised Adam Hall or an authorized representative of Adam Hall of the possibility of any such damages, but not, however, in the event of claims for damages in connection with personal injuries.

This manufacturer's warranty grants you specific rights; depending on jurisdiction (nation or state), you may be entitled to additional claims. You are advised to consult applicable state or national laws for a full determination of your rights.

## REQUESTING WARRANTY SERVICE

To request warranty service for the product, contact Adam Hall or the Adam Hall authorized reseller from which you purchased the product.

## EC DECLARATION OF CONFORMITY

The equipment marketed by Adam Hall complies (where applicable) with the essential requirements and other relevant specifications of Directives 1999/5/EC (R&TTE), 2004/108/EC (EMC) und 2006/95/EC (LVD). Additional information can be found at [www.adamhall.com](http://www.adamhall.com).

## PROPER DISPOSAL OF THIS PRODUCT

### (WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT)



(Valid in the European Union and other European countries with waste separation)

This symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. This is to avoid environmental damage or personal injury due to uncontrolled



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waste disposal. Please dispose of this product separately from other waste and have it recycled to promote sustainable economic activity.

Household users should contact either the retailer where they purchased this product, or their local government office, for details on where and how they can recycle this item in an environmentally friendly manner. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal

## ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION

Energy conservation is an active contribution to environmental protection. Please turn off all unneeded electrical devices. To prevent unneeded devices from consuming power in standby mode, disconnect the mains plug.