FUSION S SERIES

OWNER'S MANUAL

FUSION 500S
FUSION 800S
FUSION 1200S



PART # 160-1210-A

Congratulations!

Your purchase of a new Gallien-Krueger Fusion "S" Series amplifier is surely the result of much careful consideration on your part. For our part, we at Gallien-Krueger are pleased that you chose us, and are determined that you will be a satisfied customer. In choosing a Fusion Series amplifier, you now own an amplifier with many unique features which will allow you to create your own distinct sound.

To get the most out of your new purchase, please take a few minutes to read through this manual. If you are in a hurry, we suggest you at least read through the Quick Start section before setting up your new rig. This will help get you started and give you a few quick tips, but is not a substitute for reading the rest of the manual.

Your amplifier should have come with the following items, please check the contents of the box to ensure that you have everything.

Included with your Fusion S series Amplifier:

Power cord	1
Owner's manual	1
Single button foot switch	1
Foot Switch Cable	1

If your Fusion S Series amplifier did not come with all the items listed, or if you encounter problems while setting up your new equipment, please contact your local dealer or GK as soon as possible.

For Warranty Registration Visit Our Website
www.gallien-krueger.com

We wish you a lifetime of good playing and remember to always have fun!



GK Philosophy

I have never seen the point in doing things the way others have done them. I also have not been very interested in following the latest fad. I'm a Stanford educated engineer who worked my way through school as a musician. Like all musicians, I have lugged amplifiers up stairways and into car trunks, always wondering why these things had to be so heavy, bulky, and hard to handle.

As the principal innovator at GK, our products reflect my attitudes and life experiences. I don't model my designs after other manufacturers' products. Instead, I believe new and old problems are best solved with new solutions. Having taken our own path, GK products enjoy a unique, unmatched sound, allowing you every opportunity to make an original statement.

Having supported my products for over fifty years, I have learned from the story they tell. Gallien-Krueger is a reflection of that story, and has a commitment to support that legacy. Just as the products I created over fifty years ago are still telling their story, the products we create today will be talking to us tomorrow.

We'll be listening,

Robert Gallien

Robert Gallien
Founder and President

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*All Features and specifications are subject to change without notice

Please read the Safety Information section on page 4 and installation instructions on page 9 before continuing.

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Stockton, CA 95206
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email: info@gallien-krueger.com
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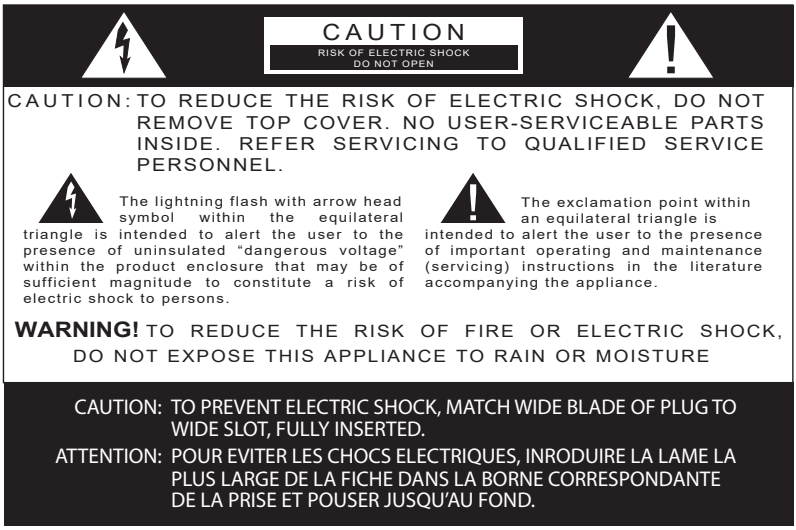
Warning!
This amplifier is capable of producing high sound pressure levels. Continued exposure to high SPL's can cause damage to your hearing. Always set the volume at a safe listening level or use hearing protection if the unit is operated at higher levels.



Read First! Important Safety Instructions!

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: To prevent electric Shock, do not remove the grounding plug on the power cord, or use any plug or extension cord that does not have a grounding plug provided. Make certain that the AC outlet is properly grounded. Do not use an adapter plug with this product



The Lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of non-insulated "dangerous voltage" within the apparatus's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the apparatus.

1. Read these instructions

All the safety and operating instructions should be read before the apparatus is operated.

2. Keep these instructions

The safety and operating instructions should be kept for future reference.

3. Heed all warnings

All warnings on the apparatus and in the operating instructions should be adhered to.

4. Follow all instructions

All operating and use instructions should be followed.

5. Water and moisture

Do not use this apparatus near water. For example, near a bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.

6. Cleaning

Clean only with dry cloth. Unplug this apparatus from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.

7. Ventilation

Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Slots and openings in the cabinet are provided for ventilation, and to ensure reliable operation of the apparatus, and to prevent it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surfaces. This apparatus should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided.

8. Heat sources

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Grounding or polarization

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Power-cord protection

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Attachments

Only use attachments/accessories specified by the manufacturer.

12. Place Carefully

Use only with the cart, stand, tripod, bracket, or table specified by the ma manufacturer, or sold with the apparatus. When a cart is used, use caution when mo moving the cart/apparatus combination to avoid injury from tip-over.



13. Nonuse periods

Unplug this apparatus during lighting storms or when unused for long periods of time.

14. Servicing

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards.

15. Power sources

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For product intended to operate from battery power, or other sources, refer to the operating instructions.

16. Overloading

Do not overload wall outlets, extension cords, or integral convenience receptacles, as this can result in electrical shock.

17. Object and liquid entry

Never push objects of any kind into this apparatus through openings, as they may touch dangerous voltage points or short-out parts that could result in fire or electrical shock. Never spill liquid of any kind on the apparatus.

18. Damage requiring service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. The power-supply cord or the plug has been damaged; or

b. Objects have fallen into, or liquid has been spilled into, the product; or

c. The product has been exposed to rain or water; or

d. The product does not operate normally when following the operating instructions. Adjust only those controls that are covered by the operating instructions, as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation; or

e. The product has been dropped or damaged in any way; or

f. The product exhibits a distinct change in performance – this indicates a need for service.

19. Replacement parts

When replacement parts are needed, be sure the service technician has used replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

20. Safety check

Upon completion of any service or repairs to this apparatus, ask the service technician to perform safety checks to determine that the apparatus is in proper operating condition.

21. Wall or ceiling mount

The apparatus is not to be mounted to a ceiling or wall in any way.

GK GALLIEN-KRUEGER

Safety Information

Please read all enclosed safety precautions before connecting or operating this product.

Verify Line Voltage and Amperage: Your amplifier has been factory configured to use with the line voltage 100-240Vac 50/60 Hz.

100-120 Volt/60Hz 15A circuit for USA and Canada.
220-240 Volt/(50/60Hz) 10A circuit for UK and Australia.
220-240 Volt/(50/60Hz) 10A circuit for Europe.
100-120 Volt/50Hz 15A circuit for Japan.
220-240 Volt/50Hz 10A circuit for Korea.
Proper AC circuit for all other countries.

Connecting the amplifier to a line with specifications other than indicated above can create safety and fire hazard, and may damage the amplifier. If you have any questions about the voltage requirements for your specific model, or about the line voltage in your area, contact your dealer before plugging the unit into a wall outlet.

Verify AC Circuit Capacity Before Use: The high power output of your amplifier may require heavy current draw under full-load conditions. To insure proper performance and avoid potential safety hazards, we recommend connection to line circuits with amperage specified "as above". Connecting to the same circuit used by other heavy power devices, such as high wattage lights, may cause circuit breakers to trip. It is always a good idea to avoid using any audio equipment on the same AC circuit as equipment with motors, such as air conditioners or refrigerators. This will lessen the possibility of power variation and electrical start-up noise affecting your sound.

Please refer to page 9 for more instructions concerning installation.

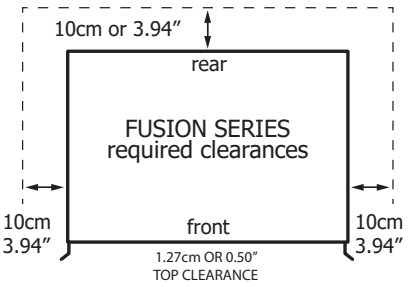
AC Power Cord: To avoid safety hazards, use only the power cord supplied with your unit. If a replacement cord is needed, make certain to use a standard IEC compliant cord. Damaged power cords should be replaced immediately. When setting up, make certain that the AC plug is easily accessible. If you do not intend to use the amplifier for a considerable length of time, disconnect the plug from the AC mains socket. Do not use an extension cord.

Earth Grounding Connection: To prevent electric shock, do not remove the grounding plug on the power cord, or use any plug or extension cord that does not have a grounding plug provided. Make certain that the AC outlet is properly grounded as well. Do not use an adapter plug with this product.

Do Not Open the Amplifier Enclosure: There are no user serviceable parts inside this product. Opening the amplifier enclosure may present a shock hazard. Modification to the product will void your warranty. If liquid enters the unit, or any metal object such as a paper clip accidentally falls inside the enclosure, disconnect the unit from the AC power source immediately and consult an authorized service station.

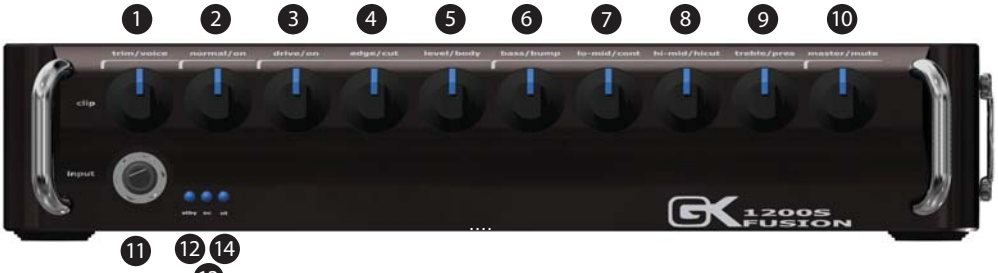
Setup: To insure proper operation and to avoid potential safety hazards, place the unit on a firm, level surface. Do not plug or unplug the instrument or speaker cable while the amplifier power is on.

Heat & Ventilation: Make sure there is space provided for proper ventilation. Avoid using in extremely hot or cold locations and areas that are exposed to direct sunlight or near heating equipment. Avoid using in moist or high humidity areas.



NEVER BLOCK THE FAN VENT HOLES ON THE SIDES OF THE UNIT!

USA: Indoor use only.
Norway: Apparatet må tilkoples jordet stikkontakt
Sweden: Apparaten skall anslutas till jordat uttag
Finland: Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan
Denmark: "Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord."
China: 在海拔高度 2000 米或更低和非热带位置仅用



1. **Trim/Voice:** Adjusts the level of signal from the 1/4" input. The knob indicator flashes red when the incoming signal exceeds the input circuit's capability. Pressing the knob engages/disengages additional EQ pre shaping to re-voice the amplifier. The knob indicator is lit blue when this additional voice is active.

2. **Normal/On**: Adjusts the volume level of the Normal channel. Pressing this knob engages the Normal channel. The knob indicator is lit blue when the Normal channel is active.

3. **Overdrive/On:** Adjusts the amount of overdrive when the Overdrive channel is active. Pushing this knob engages the Overdrive circuit. When Overdrive is active this knob indicator as well as Edge/Cut and Level/Body knob indicators are illuminated.

4. **Edge/Cut:** Adjusts the high frequency response of the Drive circuit. Pushing this knob engages/disengages the Cut function to reduce frequencies above 5kHz. The knob indicator changes from white to blue when Cut is engaged.

5. **Level/Body:** Adjusts the output level when Overdrive is active. Pushing the knob engages/disengages the Body function that adds low frequency enhancement post distortion when Overdrive is active. The knob indicator changes from white to blue when Body is engaged.

6. **Bass/Bump:** Boosts or cuts bass frequencies. Pressing the knob engages/disengages the Bump feature which applies additional low frequency enhancement. The knob indicator changes from white to blue when Bump is active.

7. **Lo-Mid/Cont:** Boosts or cuts low-mid frequencies. Pressing the knob activates the Contour feature to reduce mid frequencies while simultaneously boosting low and high frequencies. The knob indicator changes from white to blue when Contour is engaged.

8. **Hi-Mid/Hicut:** Boosts or cuts hi-mid frequencies. Pressing the knob activates the Hicut feature that reduces high frequencies to remove unwanted clicking and string noise. The knob indicator changes from white to blue when Hicut is engaged.

9. **Treble/Pres:** Boosts or cuts treble frequencies. Pressing the knob activates the Presence feature which applies high frequency enhancement. The knob indicator is lit blue when Presence is engaged.

10. **Master/Mute:** Adjusts the main output volume of the speaker and headphone output. Pressing the knob mutes the output from the speaker, headphone and direct output.

11. **Input:** ¼" analog input to receive instrument signal.

12. **Stby:** Indicates unit is attached to mains power and turns off during normal operating conditions.
Note: For Fusion 500s, this light turns on and the speaker output is muted if a fault condition occurs during operation.

13. **OT:** Indicates unit is experiencing a fault related to over temperature.

14. **OC**: Indicates unit is experiencing a fault related to over current draw.



Rear Panel Features

01 **AC Input**: The detachable power cord attaches here.

02 **Power Switch**: Turns the unit on or places it in standby. This does not disconnect the mains power.

03 **Pin 1 Lift**: Lifts or grounds pin 1 of the direct output.

04 **Direct Out**: Balanced XLR output for direct connection to P.A. or recording console.

05 **Source**: Selects the signal sent to the direct output to be before or after the EQ controls.

06 **Phones**: 3.5mm output for headphones.

07 **Aux In**: 3.5mm stereo input (summed to mono) for external playback device such as an MP3 player.

08 **Tuner**: Output for a tuner. This output is active at all times, even when Mute is selected on the front panel.

09 **Foot Sw**: Input for LF-1 footswitch to allow the Drive function to be activated remotely.

10 **Return**: Mono input for outboard effects devices.

11 **Send**: Mono output from the preamp section for processing by external effects devices.

12 **Load Impedance**: Selects the attached speaker load.
Note: Not required on Fusion 1200S.

13 **Speaker Outputs**: Parallel twist-lock speaker outputs.

Quick Start: These directions will take you through the basics and give you a good start for setting up your sound.

Connect your speakers: Connect your speaker cabinets to the amplifier outputs marked SPEAKER using a standard two conductor speakon cable or Gallien-Krueger four conductor speaker cable. Using the Load Impedance switch, select the speaker load that matches the total impedance of the attached speaker cabinets (500 and 800 watt models only).

Recommended speaker loads:
500W and 800W models:
(2 ohm total minimum load)
One 4 ohm cabinet
One 8 ohm cabinet
One 4 and one 8 ohm cabinet in parallel (2.7 ohms)
Two 8 ohm cabinets in parallel (4 ohms)
Two 4 ohm cabinets in parallel (2 ohms)
1200 watt models:
(4 ohm min. load per output)
One 4 ohm cabinet
One 8 ohm cabinet
One 4 and one 8 ohm cabinet
(one cab per output)
Two 8 ohm cabinets
Two 4 ohm cabinets (one cab per output)
*Higher ohm loads and no load are acceptable for all 500, 800 and 1200 watt models

Initial front panel control settings:
*Trim/Voice knob to maximum.
*Normal/On, Overdrive/On, Level/Body and Master/Mute to minimum.
*All EQ knobs and Edge knob to 12 o'clock.

Connect your Instrument: Using a shielded ¼" instrument cable, connect your bass to the input jack and press the power switch to the on (up) position. If you have active tone controls on your bass, turn all of the controls to the middle or flat position and turn the volume all the way up. If you have conventional, passive tone controls turn tone and volume controls all the way up.

Level and Master Volume settings:
Turn the Master/Mute knob up as you play until the desired volume is reached. If distortion is audible or the Trim/Voice knob indicator flashes red more than occasionally, turn the Trim/Voice knob counter clockwise until there is no distortion and the Trim/Voice indicator flashes red only as the instrument is played aggressively. Readjust the Master/Mute knob to the desired volume if necessary. You can now experiment with various EQ and Voicing Filter settings.

Drive Settings:
Press the Overdrive/On knob to activate the Overdrive channel. The Overdrive/On, Edge/Cut and Level/Body knobs will be illuminated to indicate they are active. Turn the Overdrive/On knob to the 12 o'clock position. Turn the Level/Body knob up as you play until the desired volume is reached. You can now experiment with various Overdrive, Edge, Cut and Body settings.

*As Overdrive is adjusted it may be necessary to adjust the Level/Body knob to maintain the desired volume level.

Installation

To insure proper operation and to avoid potential safety hazards, place the unit on a firm, level surface.

Ventilation: Make certain that proper space is provided for ventilation. Never block the fan vent holes located on the sides of the amplifier (see the diagram on pg. 4). If the amplifier will be installed in a rack or other enclosed area, make sure that there is sufficient air movement within the enclosure to allow proper cooling. Consult your dealer for more information. Avoid installation in extremely hot or cold locations, and areas that are exposed to direct sunlight, or near heating equipment. Avoid moist or humid locations. Remember, power amplifiers generate heat. The ventilation slots on the enclosure are specifically designed to remove this heat. Blocking or placing other electronic equipment near the heat dissipation system may possibly affect the long term reliability of both your amplifier and the other equipment.

Moving the Unit: Before moving the unit, be certain to disconnect any cords connected to other components, and make sure that you disconnect the unit from the AC outlet.

Cleaning: When the unit gets dirty, clean only with a dry cloth. Never use benzene, thinner, alcohol, or other volatile cleaning agents. Do not use abrasive cleaners, as they may damage the finish of metal parts. Avoid spraying insecticides near the unit.

Maintenance: Your new amplifier is rugged. It was built to give you a lifetime of trouble free operation, if it is operated in accordance with the instructions contained in this manual. The only maintenance required is cleaning. If you are going to move your amplifier around frequently, we recommend a road case or GK carrying bag to protect it from scratches and road wear.

Packaging: The carton and packing materials used in shipping your new amplifier were specifically designed to cushion it from the shocks and vibration that occur during transport. We suggest that you save the carton and packing materials for use in shipping, in the event you move, or the amplifier needs repair.

Output Power:
Fusion 500S:

180W @ 1% THD+N, 8Ω
300W @ 1% THD+N, 4Ω
450W @ 1% THD+N, 2.7Ω
300W @ 1% THD+N, 2Ω

Fusion 800S:

400W @ 1% THD+N, 8Ω
800W @ 1% THD+N, 4Ω
800W @ 1% THD+N, 2.7Ω
800W @ 1% THD+N, 2Ω

Fusion 1200S:
1 CHANNEL: 400W @ 1% THD+N, 8Ω
800W @ 1% THD+N, 4Ω

2 CHANNELS: 800W TOTAL @ 1 %THD+N,
8Ω PER CHANNEL

1100W TOTAL @ 1%THD+N
4Ω PER CHANNEL

950W TOTAL @1 %THD+N
4Ω ON ONE CHANNEL
AND 8Ω ON THE OTHER
CHANNEL .

Input/Output Specs:

Maximum Input Level	0.6V RMS
Input Impedance	1M Ohms
Send Output Impedance	750 Ohms
Return Input Impedance	10K Ohms
Tuner Output Impedance	100K Ohms
Direct Output Impedance	1K Ohms

Noise:

Fusion 500S	-90 dB reference to 300W/450W, 'A' weighted
Fusion 800S	-90 dB reference to 400W/800W, 'A' weighted
Fusion 1200S	-90 dB reference to 800W/1100W, 'A' weighted

Equalizer:

Bass	+/-10dB @ 60Hz
Lo-Mid	+6dB/-10dB @ 250Hz
Hi-Mid	+6dB/-10dB @ 1KHz
Treble	+/-14dB @ 7KHz

Voicing Filters:
Contour +2dB @ 50Hz/ -10dB @ 500Hz/
+3dB @ 7 KHz

Amplifier Protection: Full short circuit, thermal and RF protection. Stable into reactive and mismatch loads. 15 seconds muted warm-up.

Cooling: Two 40X40X20 mm Variable Speed Fans
12Vdc, 1.6Watt Per Fan
8500 RPM
10.91 CFM / FAN

Dimensions: (HxWxD):
2.4"(61mm) X 11.5"(291.3mm) X 10.7"(271mm)

Weight:

Fusion 500S	5 Lbs (2.3 kgs)
Fusion 800S	5.8Lbs (2.6 kgs)
Fusion 1200S	6.5Lbs (2.9 kgs)

Power requirements:
U.S.A./Canada 120V/60Hz.

Fusion 500S	552W(full pwr.), 96.4W(avg. pwr.)
Fusion 800S	1199W(full pwr.),168W(avg. pwr.)
Fusion 1200S	1432W(full pwr.),215W(avg. pwr.)

Europe 230V/50Hz/60Hz.

Fusion 500S	552W(full pwr.), 96.4W(avg. pwr.)
Fusion 800S	1199W(full pwr.),168W(avg. pwr.)
Fusion 1200S	1432W(full pwr.),215W(avg. pwr.)

Japan 100V/50Hz.

Fusion 500S	552W(full pwr.), 96.4W(avg. pwr.)
Fusion 800S	1199W(full pwr.),168W(avg. pwr.)
Fusion 1200S	1432W(full pwr.),215W(avg. pwr.)

LR110409

This device has been tested and found to comply with: CAN/CSA 60065-03 Safety Requirements. UL std. No. 60065-2007 Safety Requirements.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.
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.