



700RB-II & 1001 RB-II
Owner's Manual

Congratulations

Your purchase of a new Gallien-Krueger 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 GK, 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 amplifier 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 the 1001RB-II or 700RB-II Head:

Rack mount Ears with hardware	2
Power Cord	1
Owner's Manual	1
Warranty Card (US only)	1

If your 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.

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Always Listening

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 I am 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 thirty 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 thirty five years ago are still telling their story, the products we create today will be talking to us tomorrow.





We'll be listening,

Robert Gallien

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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.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE TOP COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		
	The lightning flash with arrow head symbol, within the equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product inclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons	
WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE		
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERTED.		
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.		

Safety Information

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

Your amplifier has been factory configured for use with the specific line voltage for your location only. For example, units set to operate within countries that supply 100-120 volt electrical service are not compatible with 230-240 volt systems used in other countries.

120 Volt/60Hz 15 amp circuit for the USA and Canada.

230 Volt/(50/60Hz) 10 amp circuit for the UK and Australia.

230 Volt/(50/60Hz) 10 amp circuit for Europe.

100 Volt/50Hz 15 amp circuit for Japan.

220 Volt/50Hz 10 amp circuit for Korea.

Proper AC circuit for all other countries.

Verify AC Circuit Capacity Before Use: The high power output of your amplifier may require heavy current draw under full load conditions. Connecting the amplifier to a line with specifications other than indicated above can create a safety or fire hazard and may damage the amplifier. 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.

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 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.

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: For proper ventilation, maintain a clearance of at least 8" above, sides, front and rear of the unit for combos and 1.75" (one rack space) of clearance above the unit for heads. 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.

Cleaning & Maintenance: 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. No other maintenance should be necessary.

Traveling: If traveling with the unit frequently, we recommend a road case or cover 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.

Quick Start

Connect your cabinets: Connect your GK bi-amp equipped or standard speaker cabinets to the 1/4" or Speakon outputs as described on page 7.

Initial front panel control settings: Set all EQ and boost controls to 12 o'clock. All other knobs should be set to the full counter clockwise position and all buttons to the off/out position.

Plug in your bass: Using an instrument (shielded) cable, connect your bass to the input jack and press the power switch on. 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 all tone and volume controls all the way up.

Level and Master Volume settings: Set the woofer control to 12 o'clock (higher settings will be necessary for maximum output). Turn the volume knob clockwise as you play until the desired output level is reached. If distortion occurs or the clip light flashes often even at low levels, press the -14db pad button to the on/in position and turn the volume knob up until the desired output volume is reached. If the signal is still distorting or the clip light flashing, reduce the volume on your bass. At this point you should be hearing your bass well and can experiment with different EQ, contour, voicing filter and tweeter settings.

Tech Talk

Active Equalization: The equalizer in GK amplifiers is unique in the industry and reflects over 30 years of continuous development and refinement. We've developed a rotary, four-band, active equalizer optimized for bass guitar. The active circuitry allows you to either boost or cut at a given frequency with greater integrity in signal reproduction. The treble is a shelving type control that boosts the high frequencies evenly. Respectively, the bass is a shelving control that evenly boosts the low frequencies. The high mid and low mid are peak (band pass) type controls with fairly wide Q (bandwidth) patterns which are much more 'musical' sounding. Each of the four bands are connected in series, meaning the output of the first band is fed directly into the input of the next and so on. This eliminates the rippling or combing that can happen with parallel EQ circuits. The overall result from all of this is an equalizer that's flexible, yet easy to use and sounds natural even at extreme settings.

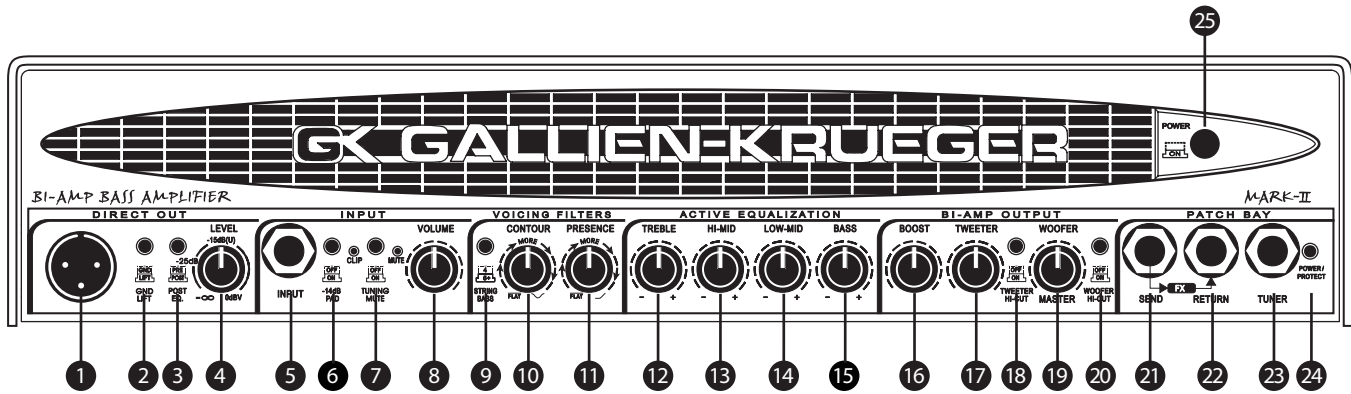
The Valve Effect (Boost): Your GK amplifier incorporates what we call the Valve Effect, or G.I.V.E (Gate Induced Valve Effect technology). We use field effect devices with the gate biased in such a way that emphasizes the optimum harmonic content of the signal. This is controlled by the Boost knob. Raising the Boost while lowering the Master will add more growl while keeping the sound level relatively consistent. The 'growl' is actually a small amount of even order harmonic distortion. For most playing situations, start with the Boost at 12 o'clock. Reduce for a cleaner sound or increase for more growl.

Horn Bi-Amp Operation: Bass players have always liked the growl they get from a slightly overdriven power amp. The problem is that growl sounds great through woofers but will destroy the horn (tweeter). In a typical full range system, there is no way to get that growl while keeping the definition that the horn provides. In GK's Horn Bi-Amp system, an active (electronic) crossover allows a full range signal through to the main (woofer) amplifier, while only the high frequency portion of the signal (5kHz and above) is allowed through to the 50 watt horn amplifier. **More BiAmp information on page 7.**

The primary benefits of a bi-amp system over a traditional full range system:

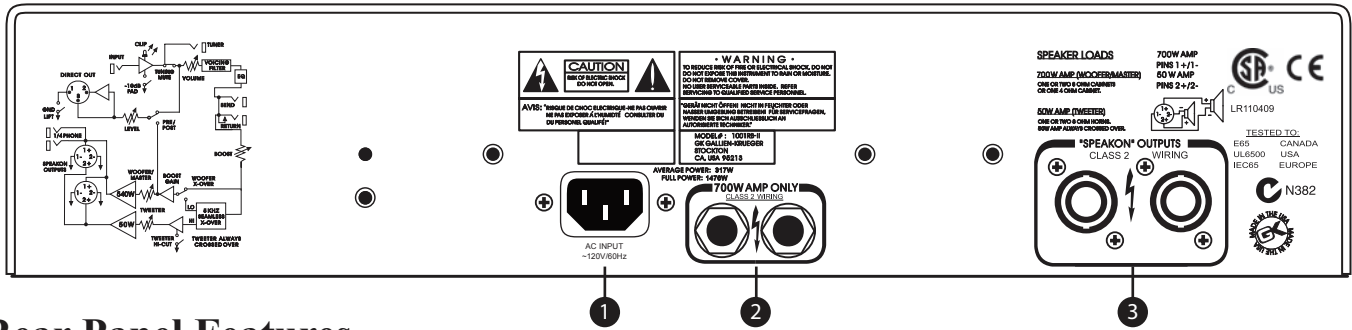
- Significantly reduces the risk of blowing out the horn's diaphragm.
- More accurate and natural sounding signal reproduction.
- Allows you to add as much growl to the woofer signal as you want while keeping the horn crystal clear.

Intelligent Protection Circuitry: Gallien-Krueger amplifiers use intelligent protection circuitry which constantly monitors for any unsafe operating conditions such as short circuits or improperly wired speaker cables. If an unsafe condition is detected, the output signal is immediately muted and the power light changes from blue to red. The amplifier will remain muted until the fault is removed. If the protection circuit activates while playing, turn the amplifier off and check that you have not exceeded the maximum recommended load described in this manual.



Front Panel Features

- 1 **Balanced Direct Out:** An electronically balanced low impedance output that you can run to your P.A. system via a mic cable.
- 2 **Ground/Lift:** Used to eliminate hum when connecting to equipment that is running on a different ground system.
- 3 **Pre/Post EQ Button:** Sets the Direct Out signal before or after the EQ.
- 4 **Direct Out Level:** Controls the output level of the Direct Out.
- 5 **Input:** A standard ¼" input jack to plug in active or passive basses using an instrument (shielded) cable.
- 6 **-14dB Pad & Clip LED:** Reduces the input signal from your bass. Press in if the Clip LED lights up excessively.
- 7 **Tuning Mute Button:** Mutes all output signals except for the Tuner output. LED turns on when 'Tuning Mute' is engaged.
- 8 **Volume:** Sets the pre-amp gain after the input stage.
- 9 **4/5 String Bass:** When engaged, this extends the low frequency range.
- 10 **Contour:** Cuts the mid-range frequencies while boosting lows & highs.
- 11 **Presence:** Adds edge and definition to higher frequencies.
- 12 **Treble:** Active shelving type control which boosts and cuts the high frequencies.
- 13 **High Mid:** Active band pass type control which boosts and cuts at about 1kHz.
- 14 **Low Mid:** Active band pass type control which boosts and cuts at about 250Hz.
- 15 **Bass:** Active shelving type control which boosts and cuts the low frequencies.
- 16 **Boost:** A post EQ gain stage using GK's exclusive Valve Effect technology, which adds 'growl' as it is turned up.
- 17 **Tweeter:** Master volume control for the 50 watt horn amp. Output signal is 5kHz and above.
- 18 **Tweeter Hi-Cut:** Cuts frequencies above 10kHz, which is useful for reducing hiss from the tweeter.
- 19 **Woofers/Master:** Master volume control for the woofer (Main) amplifier. Output signal is full-range.
- 20 **Woofers Hi-Cut:** Cuts frequencies above 5kHz from the woofer output.
- 21 **Effects Send:** This output allows signal from the pre-amp to be fed to outboard effects devices from a point after the EQ section.
- 22 **Effects Return:** This input allows the signal from outboard effects devices to be inserted before the boost section.
- 23 **Tuner Out:** Parallel output comes directly off of the input stage. Unaffected by the mute button or any of the pre-amp functions.
- 24 **Power/Protect LED:** The LED will be red for 5 seconds during power up, then turns blue when the amp is ready. Should a fault occur, the amp will mute and the LED will turn red until the fault is corrected.
- 25 **Power On/Off Button:** If you're not sure what this does, you should probably not be operating electronic equipment.



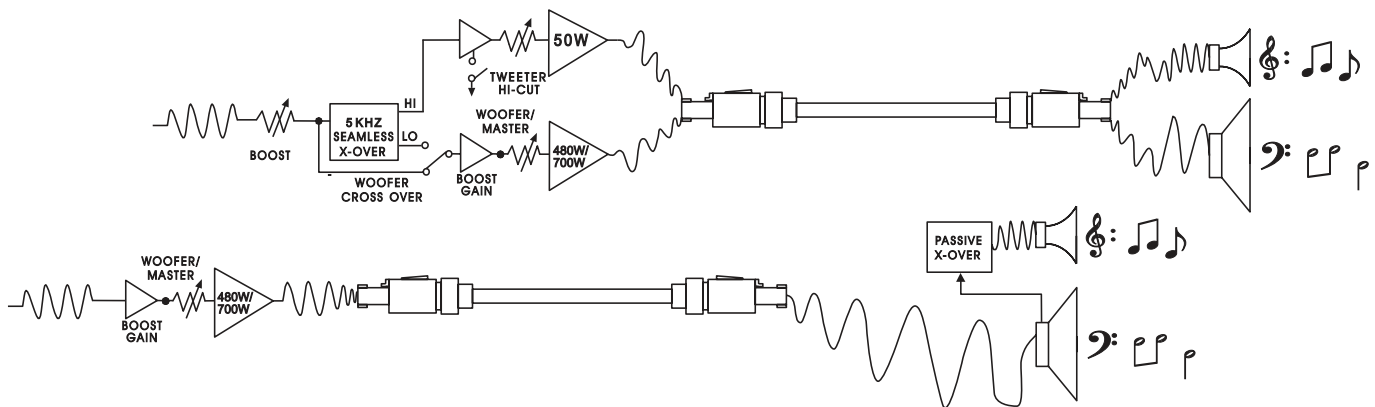
Rear Panel Features

AC Receptacle: Standard IEC receptacle. The power cord plugs in here.

700W or 480W Amp Only: ¼” speaker output jacks. Impedances lower than 4 Ohms should not be used. Higher impedances such as 8 Ohms, 16 Ohms, or no load are acceptable. One 4 Ohm, one 8 Ohm, or two 8 Ohm cabinets are okay. One 4 Ohm and one 8 Ohm together is not recommended.

Horn Bi-Amp System

Your amplifier incorporates GK’s unique horn bi amp system. This feature is automatically engaged when you connect to a GK HBA compatible enclosure, giving you completely independent control of the tweeter and woofer signals. Now you can push the woofers to the max while the tweeter remains clean, crisp, and free of clipping distortion. A smooth tight tone is easily dialed in by adjusting the tweeter and woofer master controls on the amplifier front panel.



Horn Bi-Amp Mode: This mode requires a GK horn bi amp compatible bass cabinet. Use a properly wired four conductor Speakon cable to connect to your cabinet. Set the switch on the back of your GK HBA compatible enclosure to bi amp. In this mode, the cabinet’s internal crossover is bypassed. Use the woofer/main knob to control the output signal to the woofer, and the tweeter knob to control the output signal to the horn.

Note: The 50W horn amplifier has a fixed frequency output of 5kHz and up (high frequencies only). It will not provide a usable signal to drive a separate speaker cabinet.

GK Speakon Cable Wire Configuration:

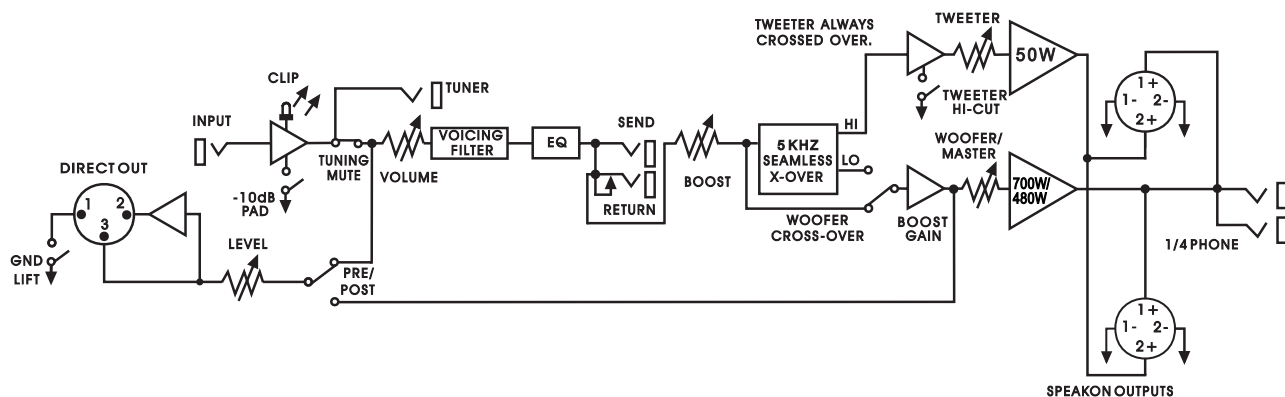
- 1+ Woofer Amp +
- 1- Woofer Amp -
- 2+ Horn Amp +
- 2- Horn Amp -

Speakon Outputs: High current twist lock Speakon output connectors. Pins 1+ and 1- send a full range signal from the main (woofer) amplifier. Pins 2+ and 2- send a signal 5kHz and above from the tweeter amplifier. Use a four conductor Speakon cable when connected to a GK horn bi-amp compatible speaker cabinet. Use a standard two conductor Speakon cable when connected to a non GK cabinet or if you’re using a Speakon to ¼” adapter.

Full range Mode: This mode is compatible with virtually any standard bass cabinet. Use a two conductor Speakon cable or a ¼” speaker cable to connect to your cabinet. If using a GK HBA compatible enclosure, set the switch on the back of the cabinet to full range. In this mode, the cabinet’s internal passive crossover is used to split the signal between the woofer and horn. Use the woofer/main knob on the front of the amplifier to control your output level. The tweeter knob is not used.

Note: To avoid the risk of damage to the amplifier, do not use a four-conductor Speakon cable with non GK cabinets. Instead use a two-conductor Speakon or ¼” speaker cable.

Block Diagram



Output Power:	
Main Amp	
1001RB-II	460W rms@ 8 Ohms
	700W rms@ 4 Ohms
700RB-II	320W rms@ 8 Ohms
	480W rms@ 4 Ohms
Horn Amp	50W rms@ 8 Ohms
	75W rms@ 4 Ohms
Audio Inputs:	
Instrument Input	¼" Mono, Unbalanced
Level	0.6V Rms
w/ -14dB pad	1.6V Rms
Impedance	1M Ohm
Return Input	¼" Mono, Unbalanced
Impedance	50k Ohm
Audio Outputs:	
Send Output	¼" Mono, Unbalanced
Impedance	220 Ohm
Tuner Output	¼" Mono, Unbalanced
Impedance	10k Ohm
DI Output	XLR, Balanced
Impedance	500 Ohms
Speaker Out	¼" Mono, Unbalanced x2
	Neutrik Speakon® x2
Equalizer:	
Bass	+10dB @ 60Hz
Lo-Mid	+6dB/-10dB @ 250Hz
Hi-Mid	+6dB/-10dB @ 1kHz
Treble	+12/-17dB @ 7kHz
Voicing Filters:	
4/5 String Bass	+11dB@20Hz
Contour	+2dB@50Hz /
	-10dB@500Hz /
	+3dB@7kHz
Presence	+9dB@10kHz

Crossover:	Triple pole constant voltage crossover at 5kHz
Noise:	-90dB "A" weighted
Cooling:	Variable Speed Fan
Protection:	Full short circuit, thermal & RF protection. Stable into reactive and mismatched loads. Five second muted warm-up.
Dimensions:	
700RBII / 1001RB-II	3.5H x 17W x 8.2D
Weight:	
1001RB-II	21.5 lbs
700RB-II	18 lbs
Consumption:	
1001RB-II	1476W(full), 317W(average)
700RB-II	994W(full), 230W(average)
Fuse:	100V - 120V T 15 A 220V - 240V T 10 A
Mains Voltage:	USA/Canada 120 Volt/60Hz UK/Australia 230 Volt/50Hz Europe 240 Volt/50Hz Japan 100 Volt/50Hz Korea 220 Volt/50Hz
Mains Connect:	Standard IEC Receptacle