

GB440

Owners Manual & Warranty

GIBSON GB410 ENCLOSURE

SPEAKER:	4 x 10" special designed, wide response, heavy duty bass drivers.
POWER:	240 watts capacity, 8 ohm.
CABINET:	Tuned reflex design. 3/4" birch ply, dado joint construction with multiple internal bracing. Covered in saddle brown tolex, with locking corners and recessed handles. Two 1/4" parallel inputs.
DIMENSIONS:	23" height x 23" width x 16" depth
WEIGHT:	60 lbs. net, 68.5 lbs. shipping.

GIBSON GB115 ENCLOSURE

SPEAKER:	1 x 15" cast frame, edge wound driver.
POWER:	220 watts capacity, 8 ohm.
CABINET:	Dual ported, thiel aligned reflex design. 3/4" birch ply dado joint construction with multiple internal bracing. Covered in saddle brown tolex, with locking corners and recessed handles. Two 1/4" parallel inputs.
DIMENSIONS:	23" height x 23" width x 16" depth
WEIGHT:	50 lbs. net, 58.5 lbs. shipping.

OWNER'S WARRANTY

Gibson Labs warrants this product to be free from defects in materials and workmanship for a period of one (1) year from date of purchase and will repair or replace defective products during the one year warranty period. Speakers and vacuum tubes will be warranted for a period of ninety (90) days. Obvious overpowering of speakers* will void warranty.

This warranty is extended only to the original retail purchaser. Warranty is subject to the conditions, exclusions and limitations herein set forth:

These limited warranties shall be void and of no effect if:

-The first purchase is for the purpose of resale, or

-The product has been damaged during shipment. (Retailer is responsible for making claims to the carrier) or

-The original purchase is not made from an Authorized Gibson Dealer, or

-The damage is due to unreasonable use, neglect, improper service or repair, or other causes not arising out of defects in material or workmanship, or

-The damage is due to repairs made by anyone other than an Authorized Gibson Labs Service Center or Gibson Labs, or

-The serial number affixed to the product has been altered, defaced or removed.

All parts costs will be covered by Gibson Labs within the warranty period. Labor costs will be covered within the warranty period as follows: All labor costs on repairs performed by Gibson Labs will be covered; labor costs on repairs performed by Authorized Gibson Labs Service Centers will be covered up to authorized rates established by Gibson Labs. Shipping costs involved in warranty service are the sole responsibility of the purchaser. Gibson Labs will not be liable for any lost profits, lost savings, incidental damages or any consequential damages arising out of the use or inability to use this product.

*Realizing speakers can often be accidentally overloaded causing failure, Gibson Labs will offer replacement speakers to the original retail purchaser for half of the then current retail price for life, regardless of reason. All speaker replacements, in and out of warranty require the original, damaged speaker be sent to Gibson Labs. Any additional original Gibson Labs speakers not intended for use in a Gibson Labs product can be purchased through an Authorized Gibson Dealer.

VALIDATING YOUR WARRANTY

In order to validate your warranty, the warranty registration must be filled out completely and returned to Gibson Labs within forty five (45) days from the date of purchase. Photocopy or facsimile of proof of purchase must accompany warranty registration.

Upon reception of warranty registration Gibson Labs will issue a warranty identification card. Retain this card for your records. It must be presented to an Authorized Gibson Labs Service Center to obtain warranty service.
Call Gibson Labs at (800) 765-4629 if do not receive your warranty identification card within ninety (90) days of mailing warranty registration.

TO OBTAIN WARRANTY SERVICE:

-Bring the defective item to any Authorized Gibson Labs Service Center. Remember to also bring original proof of purchase for warranty verification.

-In the event that there is not an Authorized Gibson Labs Service Center in your area, call Gibson Labs at (800) 765-4629 for warranty service instructions.

-You may be asked to return the defective item to Gibson Labs. If so, you will be given a return authorization number.

Ship the defective item, freight prepaid (C.O.D.'s will not be accepted) to

Gibson Labs/13345 Saticoy St./North Hollywood, CA 91605.

Return Authorization number must be clearly marked on outside of shipping carton. Items without a return authorization number will not be accepted.

Please include a detailed description of the problem.

-Gibson Labs will verify warranty status of the defective unit and accordingly will provide necessary repair or replacement of defective components. If the problem is not covered within the terms of the warranty, Gibson Labs will notify you by mail or phone, why the unit cannot be covered within the warranty, and the exact cost of repairs, including freight cost. All units, in and out of warranty will then be returned to the purchaser freight and repair charges collect.

-Gibson Labs reserves the right to repair or replace unit at their option.

WARRANTY REGISTRATION

Please fill out this card completely. The information on the top portion is required to obtain warranty service. The questionnaire is provided so that we can develop our future products around your needs as a musician. Please fill out as completely and detailed as possible! Every one of these forms will be read!

Model_____Serial #_____

Your Name_____Age_____
Your Address_____
_____
Dealer Name_____
Dealer Address_____
_____
Date of Purchase: Month_____Day____Year_____

What influenced your decision to by a Gibson amplifier?
___Features - Which features?_____
___Technical specifications ___Brand reputation ___Price ___Reliability
___Product literature ___Dealer recommendation ___Friend's recommendation
___Magazine Ad - Which one? _____
___Artist endorsement - Which artist?_____
___Other_____

Playing status: ___Amateur ___Semi-pro ___Full time Professional

What kind of music do you play?
___Rock ___Pop ___R&B ___Dance ___Alternative ___Progressive ___Blues
___Jazz ___Fusion ___Heavy Metal ___Thrash ___Country ___New Age
___Funk ___Reggae ___Other_____

What is your gigging environment?
___Bars ___Small clubs ___Large clubs ___Weddings, Bar mitzvah's etc.
___Demo sessions ___Professional studio sessions ___Garage
___Arenas ___Church ___Prison ___Cruise ship ___Other_____

How many years have you been playing?_____

How many other members in your ensemble?_____ What instruments?_____
_____

What instruments/brands do you use? _____

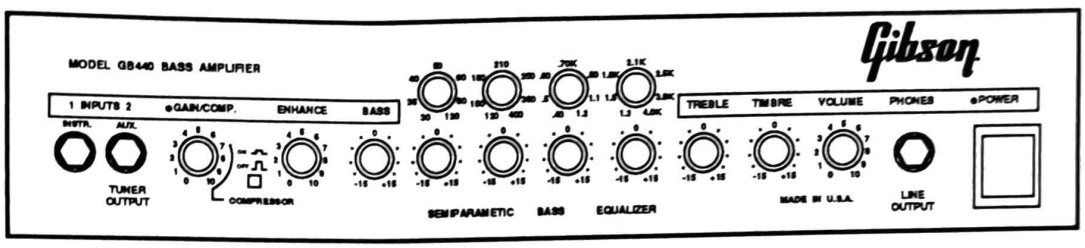
What other equipment do you use? Amplifiers, cabinets, outboard gear, midi devices, effects, etc._____
_____

What equipment would you like to see from Gibson Labs in the future?_____
_____
_____
_____

Congratulations on the purchase of your new Gibson GB440 bass amplifier. The Gibson GB440 incorporates extensive features to give the bass player complete control of his sound. Many of these features are not familiar to a lot of bass players. Read this manual carefully. Doing so will familiarize you fully with each feature, allowing you to obtain the sound you want.

Also included are tips and recommendations for arriving at an optimum setting on the semi-parametric equalizer.

FRONT PANEL CONTROLS



INPUTS

There are two input jacks on the front panel of the GB440. The first is to suit the output of a bass guitar. Since the GB440 has an adjustable input attenuator, the input will accept the output of any passive or active bass.

The second input jack is an auxiliary input with a 12K input ohm impedance. This is intended for a secondary audio source such as a tape machine, CD player or drum machine. You can use this simultaneously with the bass guitar without interfering with the bass guitar's signal-to-noise ratio. The bass guitar volume control can be adjusted to provide an even mix between the two signals. This input jack can also be used as an output from the bass guitar to feed a tuner.

INPUT GAIN/COMP CONTROL

In order to get the best results from your Gibson GB440 it is important to fully understand the correct use of the input gain/comp control.

The optimum setting is achieved with the input gain set as high as possible without excessive lighting of the red LED clip indicator. This provides the highest signal-to-noise ratio and allows you to take full advantage of the GB440's full power and dynamic range.

Allowing the LED clip indicator to light excessively may cause clipping in the early stages and an audible dirty sound. This is generally not desirable for most bass players.

To set this control correctly, use the following procedures:

1) Turn output level on amplifier to zero.
2) Turn compressor off.
3) Turn volume and preamp controls on your bass up to their maximum output position.
4) While playing your bass as hard as you are likely to during a performance, gradually turn up the gain/comp control until the red LED clip indicator occasionally flickers.
5) When the red clip LED lights, reduce gain slightly.
6) Occasional illumination of the clip indicator is OK. Continuous illumination is not good.

You may now turn up the master volume control to the desired playing volume and adjust the amplifier's other tone controls as desired.

COMPRESSOR

The compressor works in conjunction with the amp's input gain. The compressor is engaged by the gray button adjacent to the gain/comp control. The onset of compression is indicated by the lighting of the red LED indicator. When the compressor is engaged it is no longer possible to clip the input signal. Instead, before clipping, the signal starts to compress. This is useful for the bassist who generally plays very lightly, but may have occasion to play heavily with a lot of 'pull' and 'slap'. This sudden change in dynamics would drive the input to clipping without the compressor.

The compressor's threshold is set at a nominal level and stays the same regardless of the amount of compression. Compression is increased by increasing the input gain beyond the level that the red LED indicator lights. This is accomplished by the fact that you are still increasing the amount of signal going into the input stage, thus, the more signal, the more compression.

Note that increasing the compression decreases overall dynamics and vice-versa. In most live performance situations, you will probably want to set the compressor for only slight compression or disengage it completely. In most recording situations you will probably want the compressor engaged and adjusted to eliminate peaks that will cause distortion on tape and to keep a consistent overall level for the length of the recording. Experiment with this control and adjust to suit your playing style and situation.

ENHANCE

The enhance control is essentially a preset voicing built into the GB440 that is variable between completely flat to a preshape with a midrange cut centered approximately at 260Hz and boost in both the bass and treble range. Left at zero (with the rest of the tone controls flat) the amplifier will give you the natural sound of the bass guitar itself. Turned fully clockwise to ten, this control gives the bass a well defined, transparent sound without any muddiness. Set to your taste.

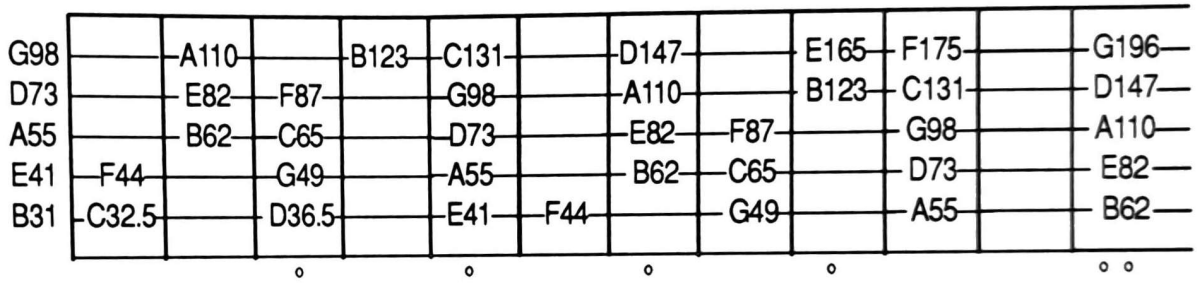
BASS CONTROL

The bass control allows a wide range of adjustment for the loudness of the bass frequencies. Continuous variation up to 15 dB boost or cut is available. Flat response occurs at the central position of the control, identified by a slight detent.

SEMI PARAMETRIC EQUALIZER

The semi parametric bass equalizer consists of four individual sections with two controls per section. For each section the upper control selects the particular frequency that will be affected by the setting of the level control located directly beneath it. Turning the level control counter-clockwise will cut the response in the area set by the frequency control just above it. Turning the level control clockwise will boost the response in the area set by the frequency control. Flat response occurs at the central position of each level control, identified by a slight detent. When the level control is in the flat position the frequency control will have no effect since no boost or cut is occurring.

In order to take full advantage of the semi parametric equalizer, it is helpful to understand the frequency range of the bass guitar and what inflections certain frequency ranges produce. First, the frequency range of the bass; The chart below represents the fundamental frequency of each note on each string. Frequencies are represented in Hz.



Note that we've included a low 'B' string, as the GB440 amplifier and speaker enclosures are well up to the task of reproducing the fundamental of that note. We've declined to include the high string of a six string bass because there is no standard tuning. To figure out the frequencies for your tuning, find the note and frequency on the 'G' string that your open string corresponds to, i.e. if you tune to 'C', the open note fundamental would be 131Hz as indicated at the 5th fret of the 'G' string. 'D' would be 147 Hz and so on. Simply double those figures for notes above the 12th fret.

That leaves us with a fundamental frequency range from 31Hz to 392 Hz (two octave up on the 'G' string) - not a very wide range. Keep in mind though, that the fundamental is just the lowest, purest portion of the note. When you strike a note, there is also a series of overtones or 'harmonics' produced and these extend up to the 6 KHz range.

Other frequencies are also produced by the attack portion of the note when the string is first struck. Depending on how you strike the string (flatpick, fingerstyle, slap and pop or tapping or whatever it is you do) different inflections of 'attack'

1) Turn output level on amplifier to zero.
2) Turn compressor off.
3) Turn volume and preamp controls on your bass up to their maximum output position.
4) While playing your bass as hard as you are likely to during a performance, gradually turn up the gain/comp control until the red LED clip indicator occasionally flickers.
5) When the red clip LED lights, reduce gain slightly.
6) Occasional illumination of the clip indicator is OK. Continuous illumination is not good.

You may now turn up the master volume control to the desired playing volume and adjust the amplifier's other tone controls as desired.

COMPRESSOR

The compressor works in conjunction with the amp's input gain. The compressor is engaged by the gray button adjacent to the gain/comp control. The onset of compression is indicated by the lighting of the red LED indicator. When the compressor is engaged it is no longer possible to clip the input signal. Instead, before clipping, the signal starts to compress. This is useful for the bassist who generally plays very lightly, but may have occasion to play heavily with a lot of 'pull' and 'slap'. This sudden change in dynamics would drive the input to clipping without the compressor.

The compressor's threshold is set at a nominal level and stays the same regardless of the amount of compression. Compression is increased by increasing the input gain beyond the level that the red LED indicator lights. This is accomplished by the fact that you are still increasing the amount of signal going into the input stage, thus, the more signal, the more compression.

Note that increasing the compression decreases overall dynamics and vice-versa. In most live performance situations, you will probably want to set the compressor for only slight compression or disengage it completely. In most recording situations you will probably want the compressor engaged and adjusted to eliminate peaks that will cause distortion on tape and to keep a consistent overall level for the length of the recording. Experiment with this control and adjust to suit your playing style and situation.

ENHANCE

The enhance control is essentially a preset voicing built into the GB440 that is variable between completely flat to a preshape with a midrange cut centered approximately at 260Hz and boost in both the bass and treble range. Left at zero (with the rest of the tone controls flat) the amplifier will give you the natural sound of the bass guitar itself. Turned fully clockwise to ten, this control gives the bass a well defined, transparent sound without any muddiness. Set to your taste.

1) Turn output level on amplifier to zero.
2) Turn compressor off.
3) Turn volume and preamp controls on your bass up to their maximum output position.
4) While playing your bass as hard as you are likely to during a performance, gradually turn up the gain/comp control until the red LED clip indicator occasionally flickers.
5) When the red clip LED lights, reduce gain slightly.
6) Occasional illumination of the clip indicator is OK. Continuous illumination is not good.

You may now turn up the master volume control to the desired playing volume and adjust the amplifier's other tone controls as desired.

COMPRESSOR

The compressor works in conjunction with the amp's input gain. The compressor is engaged by the gray button adjacent to the gain/comp control. The onset of compression is indicated by the lighting of the red LED indicator. When the compressor is engaged it is no longer possible to clip the input signal. Instead, before clipping, the signal starts to compress. This is useful for the bassist who generally plays very lightly, but may have occasion to play heavily with a lot of 'pull' and 'slap'. This sudden change in dynamics would drive the input to clipping without the compressor.

The compressor's threshold is set at a nominal level and stays the same regardless of the amount of compression. Compression is increased by increasing the input gain beyond the level that the red LED indicator lights. This is accomplished by the fact that you are still increasing the amount of signal going into the input stage, thus, the more signal, the more compression.

Note that increasing the compression decreases overall dynamics and vice-versa. In most live performance situations, you will probably want to set the compressor for only slight compression or disengage it completely. In most recording situations you will probably want the compressor engaged and adjusted to eliminate peaks that will cause distortion on tape and to keep a consistent overall level for the length of the recording. Experiment with this control and adjust to suit your playing style and situation.

ENHANCE

The enhance control is essentially a preset voicing built into the GB440 that is variable between completely flat to a preshape with a midrange cut centered approximately at 260Hz and boost in both the bass and treble range. Left at zero (with the rest of the tone controls flat) the amplifier will give you the natural sound of the bass guitar itself. Turned fully clockwise to ten, this control gives the bass a well defined, transparent sound without any muddiness. Set to your taste.

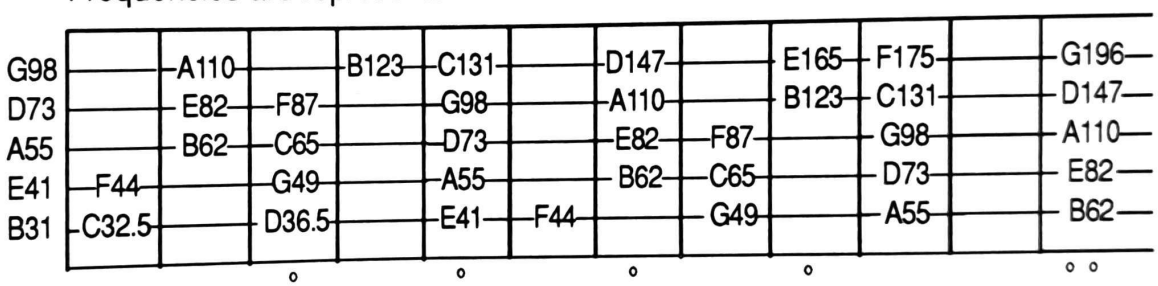
BASS CONTROL

The bass control allows a wide range of adjustment for the loudness of the bass frequencies. Continuous variation up to 15 dB boost or cut is available. Flat response occurs at the central position of the control, identified by a slight detent.

SEMI PARAMETRIC EQUALIZER

The semi parametric bass equalizer consists of four individual sections with two controls per section. For each section the upper control selects the particular frequency that will be affected by the setting of the level control located directly beneath it. Turning the level control counter-clockwise will cut the response in the area set by the frequency control just above it. Turning the level control clockwise will boost the response in the area set by the frequency control. Flat response occurs at the central position of each level control, identified by a slight detent. When the level control is in the flat position the frequency control will have no effect since no boost or cut is occurring.

In order to take full advantage of the semi parametric equalizer, it is helpful to understand the frequency range of the bass guitar and what inflections certain frequency ranges produce. First, the frequency range of the bass; The chart below represents the fundamental frequency of each note on each string. Frequencies are represented in Hz.

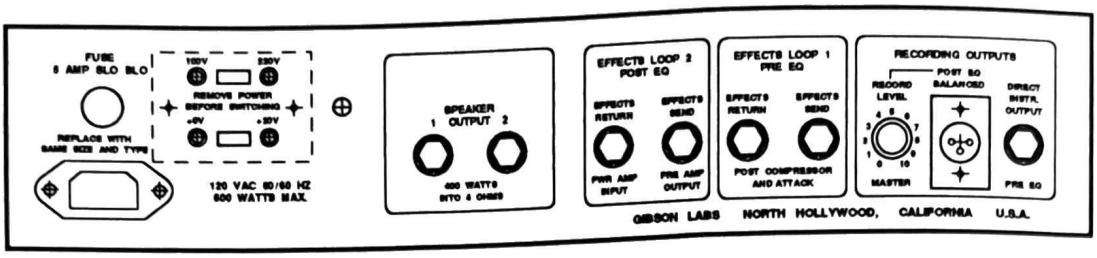


Note that we've included a low 'B' string, as the GB440 amplifier and speaker enclosures are well up to the task of reproducing the fundamental of that note. We've declined to include the high string of a six string bass because there is no standard tuning. To figure out the frequencies for your tuning, find the note and frequency on the 'G' string that your open string corresponds to, i.e. if you tune to 'C', the open note fundamental would be 131Hz as indicated at the 5th fret of the 'G' string. 'D' would be 147 Hz and so on. Simply double those figures for notes above the 12th fret.

That leaves us with a fundamental frequency range from 31Hz to 392 Hz (two octave up on the 'G' string) - not a very wide range. Keep in mind though, that the fundamental is just the lowest, purest portion of the note. When you strike a note, there is also a series of overtones or 'harmonics' produced and these extend up to the 6 KHz range.

Other frequencies are also produced by the attack portion of the note when the string is first struck. Depending on how you strike the string (flatpick, fingerstyle, slap and pop or tapping or whatever it is you do) different inflections of 'attack'

BACK PANEL FEATURES



DIRECT INSTRUMENT OUTPUT

This 1/4" jack gives an output signal equal to what's coming through the instrument input jack. This signal is completely unaffected by the preamp and useful for sending a low noise, low distortion, unmodified sample of your instrument signal directly to a mixing board.

POST E.Q. BALANCED D.I.

This balanced XLR output is post e.q. and therefore affected by all of the front panel controls except the volume control. This output can be used to send a replica of the fully processed preamp output signal, including effects routed through effects loop 1, to a recording console or P.A. mixing board. Remember that any changes to your control settings (except volume) on the front panel will effect this output. Also remember that effects loop 2 is an insert between the preamp output and the power amp input and that the post e.q. balanced D.I. is taken before the preamp output, so effects routed through effects loop 2 will not be sent through the post e.q. balanced D.I.

The post e.q. balanced D.I. is also equipped with a master record level control for attenuating the signal to suit whatever device your sending the signal to.

EFFECTS LOOP 1

The effects loop is used to send signals to and from any desired signal processor or group of signal processors. Placing them in the effects loop usually provides better results than placing them between the instrument and the amplifier input. The input stage on the GB440 will optimize the signal to noise ratio of any effect you might use,reducing any noise that the effects might otherwise introduce. Another advantage to the effects loop is that it is also after the compressor and enhance control so the risk of clipping the input signal to the effects processor is reduced and the effects processor is receiving a pre-e.q.'d signal for an overall cleaner sound.

PREAMP OUTPUT JACK

This is the final stage before the power amp. This jack can be used to send the preamp signal to the power amp input (see below) of an additional GB440 if you need to drive more than two 8 ohm cabinets. It can also be used to send the preamp signal to another effects device. As mentioned earlier, since this signal will return to the power amp input, it will not be sent to the post e.q. balanced D.I. If you need your effects to be routed to the post e.q. balanced D.I., use effects loop 1.

POWER AMP INPUT JACK

The power amp input jack is used to insert a signal directly into the power amplifier section of the GB440. Plugging a signal into the power amp input jack automatically disconnects the internal connection of the GB440 preamp output from the power amp input. This is useful because the preamp signal from a GB440 can be used to drive an additional GB440 via this input as described above. This jack can also be used as an effects return for a signal sent to an effects processor via the preamp output jack.

SPEAKER OUTPUTS 1 AND 2

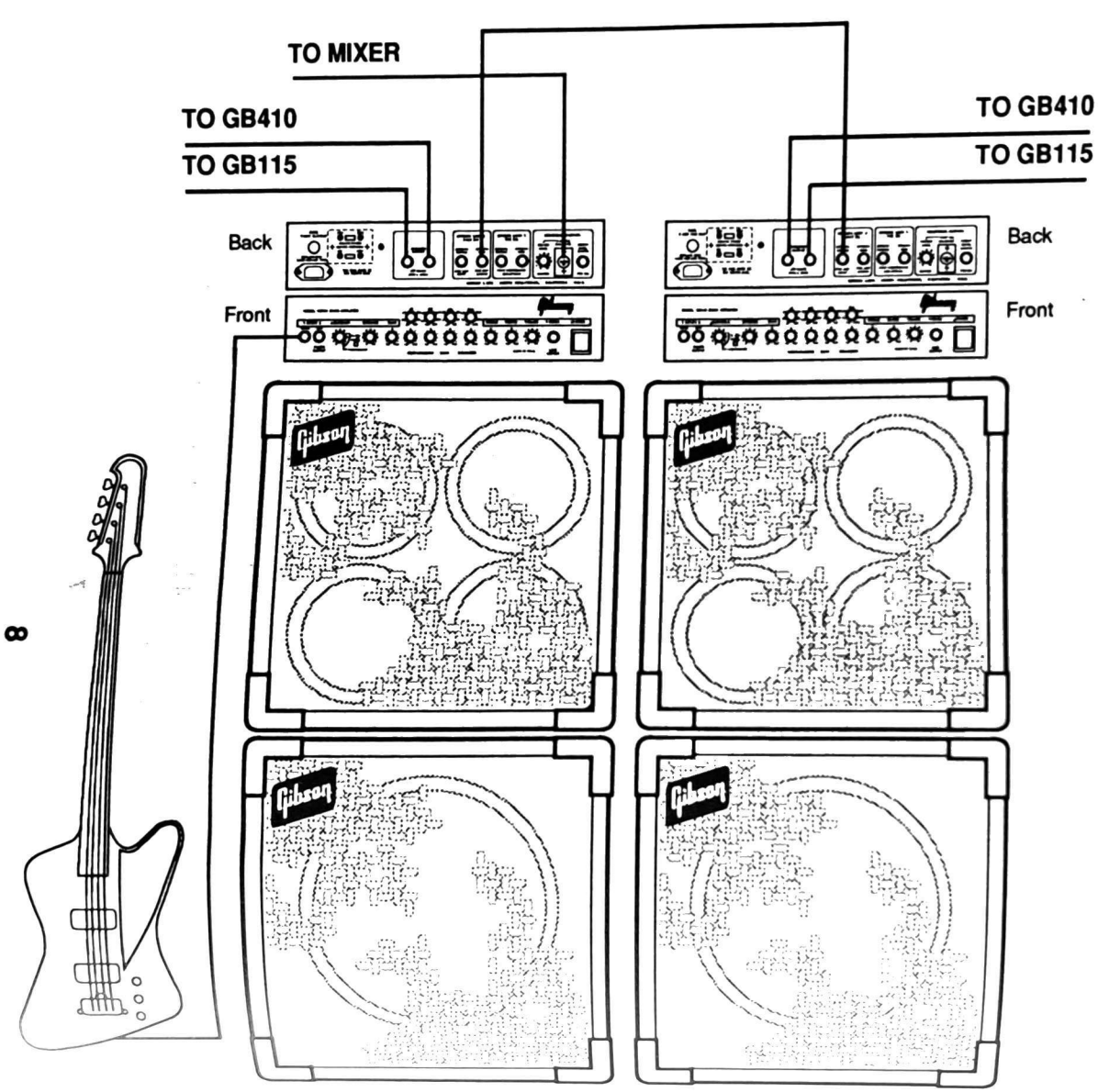
Speaker output jacks 1 and 2 are the power amplifier output jacks. They're wired in parallel, so either one can be used to drive your cabinet. The output of the amplifier will drive 220 watts into an 8 ohm load and 400 watts into a 4 ohm load. Two 8 ohm cabinets, each plugged into one speaker jack, combine to make a 4 ohm load. Operating the amp at a high level into a load of less than 4 ohms can cause overheating and damage to the unit. If more cabinets are required, use an additional amplifier to drive the cabinets by utilizing the preamp output jack to drive the power amp input of another GB440 operating as a slave.

ADDITIONAL NOTES

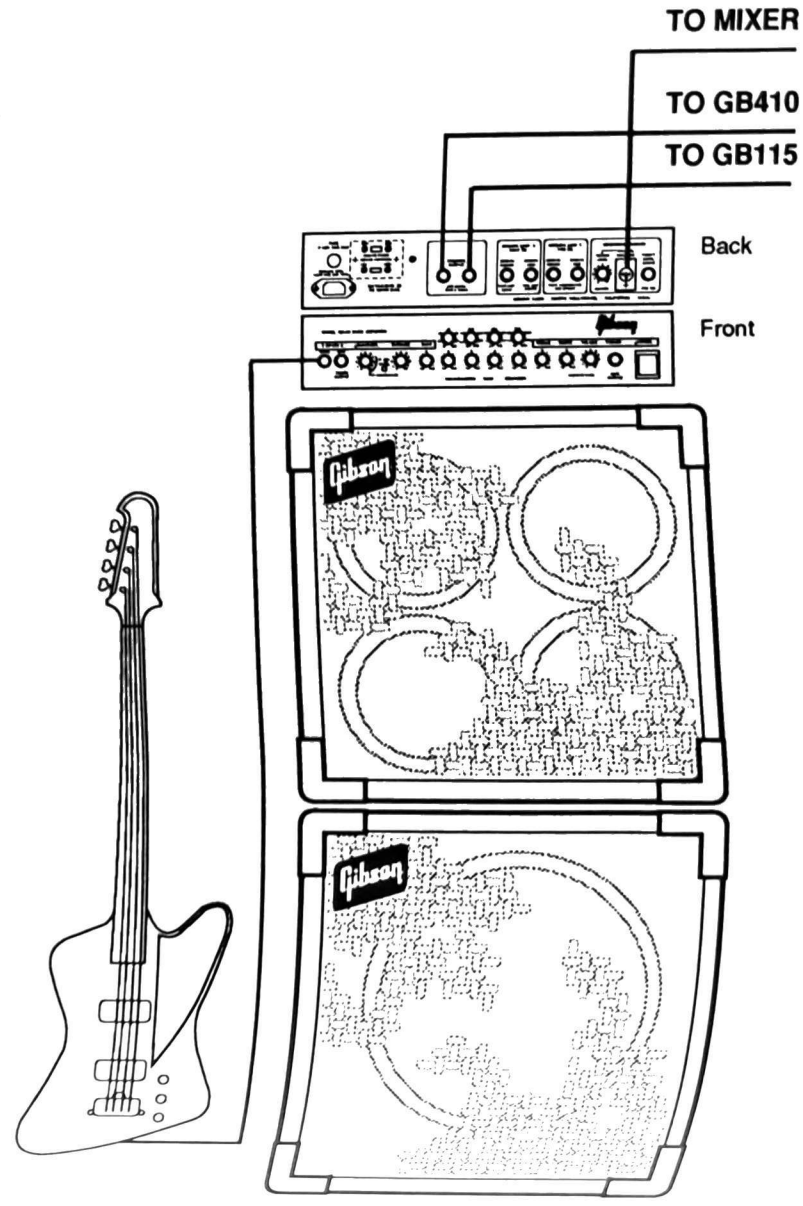
Under normal use the chassis area may become very hot. This is normal since the entire chassis is being used as a heat sink. If you're using the GB440 with the optional sleeve, do not obstruct the airspace between the chassis and the sleeve as it is there specifically for cooling.

The GB440 can be set to operate at 100, 120, 220 or 240 volts to match line voltages found throughout the world. Any qualified technician can remove the small rear switch cover and select the two switch settings that add up to the desired operating voltage. Be sure this is done with the AC cord removed from the wall outlet and the power switch off.

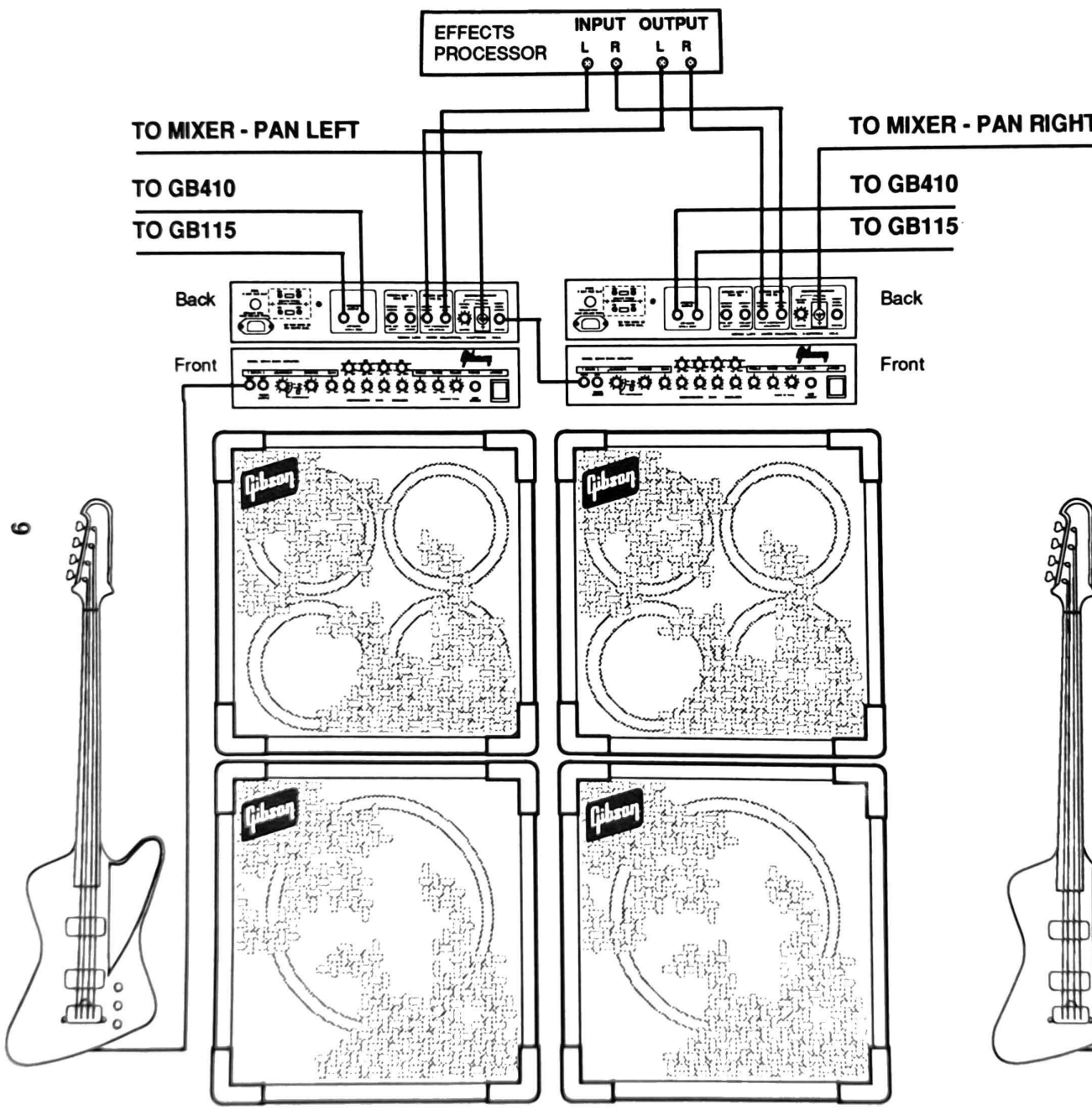
The Gibson GB440 is built with very high grade electronic components. In the unlikely event that failure should occur, have the unit repaired only at an authorized Gibson service center to ensure that the parts are being replaced with parts of the same quality. Parts of lesser quality will compromise the reliability and sonic integrity of the amp.



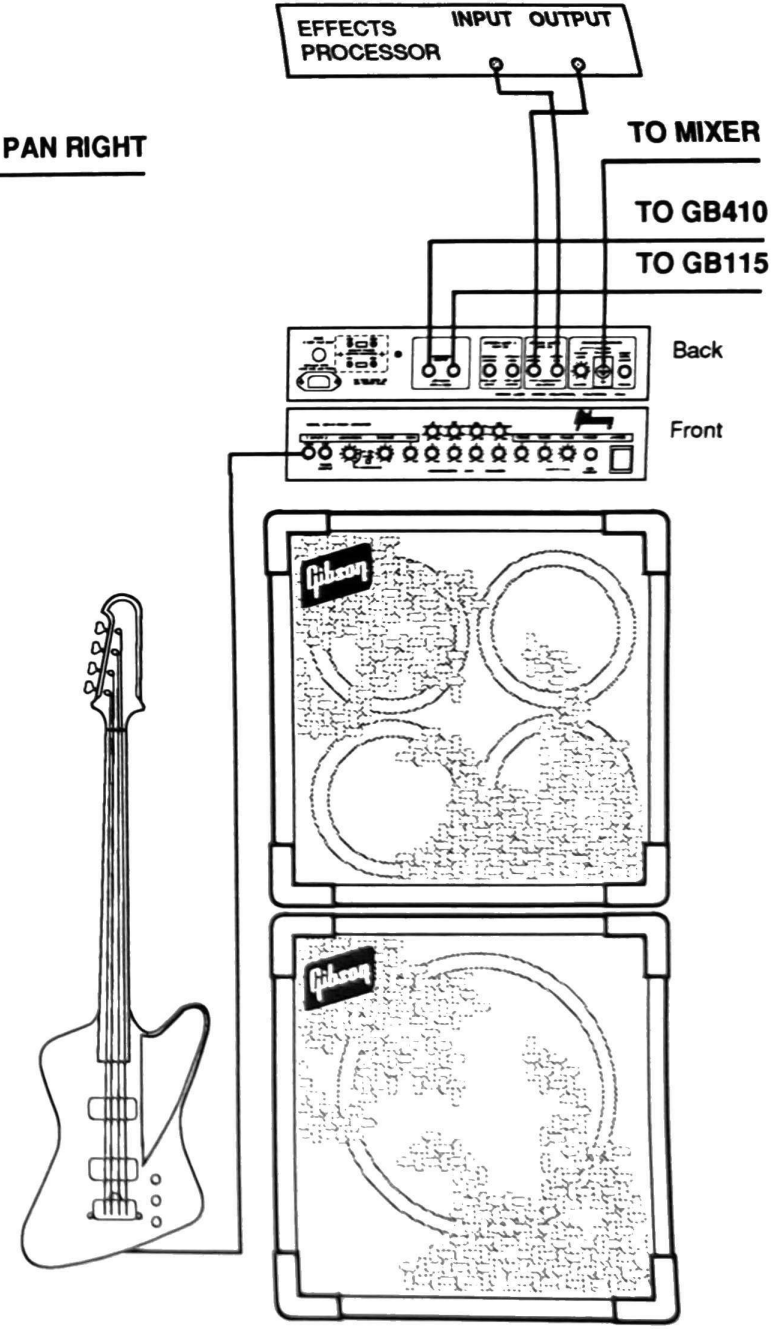
SLAVE HOOKUP



BASIC HOOKUP



STEREO EFFECTS HOOKUP



MONO EFFECTS HOOKUP

OWNER'S WARRANTY

Gibson Labs warrants this product to be free from defects in materials and workmanship for a period of one (1) year from date of purchase and will repair or replace defective products during the one year warranty period. Speakers and vacuum tubes will be warranted for a period of ninety (90) days. Obvious overpowering of speakers* will void warranty.

This warranty is extended only to the original retail purchaser. Warranty is subject to the conditions, exclusions and limitations herein set forth:

These limited warranties shall be void and of no effect if:

-The first purchase is for the purpose of resale, or

-The product has been damaged during shipment. (Retailer is responsible for making claims to the carrier) or

-The original purchase is not made from an Authorized Gibson Dealer, or

-The damage is due to unreasonable use, neglect, improper service or repair, or other causes not arising out of defects in material or workmanship, or

-The damage is due to repairs made by anyone other than an Authorized Gibson Labs Service Center or Gibson Labs, or

-The serial number affixed to the product has been altered, defaced or removed.

All parts costs will be covered by Gibson Labs within the warranty period. Labor costs will be covered within the warranty period as follows: All labor costs on repairs performed by Gibson Labs will be covered; labor costs on repairs performed by Authorized Gibson Labs Service Centers will be covered up to authorized rates established by Gibson Labs. Shipping costs involved in warranty service are the sole responsibility of the purchaser. Gibson Labs will not be liable for any lost profits, lost savings, incidental damages or any consequential damages arising out of the use or inability to use this product.

*Realizing speakers can often be accidentally overloaded causing failure, Gibson Labs will offer replacement speakers to the original retail purchaser for half of the then current retail price for life, regardless of reason. All speaker replacements, in and out of warranty require the original, damaged speaker be sent to Gibson Labs. Any additional original Gibson Labs speakers not intended for use in a Gibson Labs product can be purchased through an Authorized Gibson Dealer.