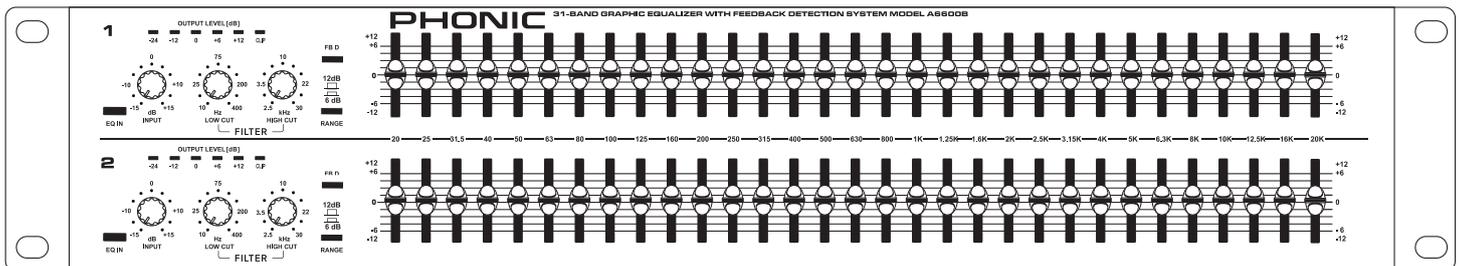


A6600B Graphic Equalizer

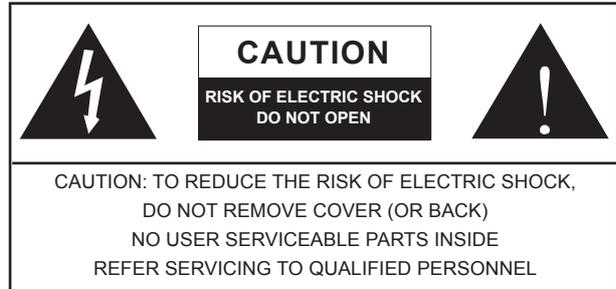


IMPORTANT SAFETY INSTRUCTIONS

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus. The MAINS plug is used as the disconnect device, the disconnect device shall remain readily operable.

Warning: the user shall not place this apparatus in the confined area during the operation so that the mains switch can be easily accessible.

1. Read these instructions before operating this apparatus.
2. Keep these instructions for future reference.
3. Heed all warnings to ensure safe operation.
4. Follow all instructions provided in this document.
5. Do not use this apparatus near water or in locations where condensation may occur.
6. Clean only with dry cloth. Do not use aerosol or liquid cleaners. Unplug this apparatus before cleaning.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. 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 is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plug, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. 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.



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 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 appliance.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

CAUTION: Use of controls or adjustments or performance of procedures other than those specified may result in hazardous radiation exposure.



A6600B

Graphic Equalizer

USER'S MANUAL

TABLE OF CONTENTS

INTRODUCTION	4
FEATURES	4
INITIAL SETUP.....	5
CONNECTIONS AND CONTROLS.....	5
FRONT PANEL	5
REAR PANEL	6
TYPICAL GRAPHIC EQUALIZER OPERATION.....	7
FREQUENCY CHART.....	8
APPLICATION	9
SPECIFICATIONS	10
DIMENSIONS	11
BLOCK DIAGRAM	12

INTRODUCTION

Congratulations on your purchase of another quality product from Phonic! We hope the A6600B graphic equalizer proves itself to be a worth investment, and provides you with years of dependable use for many years to come. These equalizers were meticulously designed by Phonic's skilled engineers, and should give you total control of your audio's various frequencies. Use the A6600B equalizer in your speaker path, or use it with your mixer's insert points to integrate it better into your system.

We know how eager you are to get started, however we advise that you take the time to read through this manual before storing it in an easy to remember place for future reference. Within this manual you'll find helpful information on the operation and treatment of the A6600B unit.

FEATURES

- Ultra low-noise operation
- Professional 31-band stereo Graphic Equalizer for live and studio application alike
- FB.D Feedback Detection circuitry instantly reveals problem frequencies in your audio
- Low cut filter removes unwanted low-frequency sounds
- High cut filter helps users better determine frequencies they wish to work with
- Dedicated subwoofer output with crossover control
- Accurate 6-digit output level meter
- Gain control for adjusting input levels
- High quality workmanship and sturdy construction
- Balanced 1/4" TRS and XLR input and output connectors

INITIAL SETUP

1. After opening and unpacking the A6600B equalizer, inspect the unit for any noticeable damage. Though Phonic attempts to take every precaution possible in preventing damage occurring to its products in transit, it is sometimes unavoidable. If the product is noticeably damaged, users are advised to contact the dealer at which they purchased the product.
2. If you wish to mount the A6600B into a 19" rack, ensure it is not positioned above power amplifiers and that the unit has plenty of ventilation, as to avoid over-heating.
3. Plug any required devices into the A6600B's inputs and outputs. For example, a mixer's output signal could be sent to the inputs, and an amplifier and speakers connected to the outputs.
4. Plug the provided power cord into the power connector and into an appropriate AC power source. Be sure to check local voltage levels before connecting the unit. Do not under any circumstances defeat the ground-pin of the cord, as it is provided for your own protection.

CONNECTIONS AND CONTROLS

Front Panel

1. Output Level Meter

This 6-segment LED level meter will give you an accurate indication of when the output level of the A6600B equalizer reaches certain levels. If the red "Clip" LED illuminates, users are advised to reduce the level of that particular channel, either through use of the input level control or by lowering the frequency slide controls.

2. FB.D Switch

The FB.D Feedback Detection System is activated when this button is pushed. When feedback is detected, an LED will illuminate on the affected frequency's slide control. Users can lower the level of that frequency to eliminate the feedback.

3. Audio In/Out Switch

Pushing this button will enable and disable the equalizer function for the respecting input channel. When the equalizer is disabled, the input signal will be sent directly to the output channel without being altered.

4. Range Switch

This switch is used to change the boost/cut range of the frequency slide controls between ± 12 dB and ± 6 dB (switch depressed).

5. Input Control

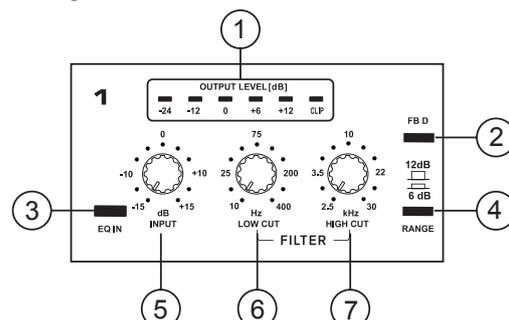
This control is used to adjust the input level for the corresponding channel. It gives you a boost/cut range between -15 and +15 dB.

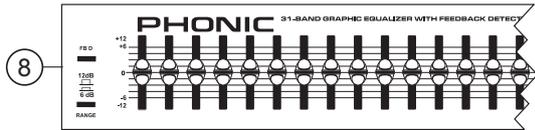
6. Low Cut Switch/Control

The A6600B features a low-cut control that will allow users to select the cut-off frequency of the low-cut filter between 10 and 400 Hz. Please note that this affects the signal sent through the subwoofer output, as well.

7. High Cut Control

The high-cut control allows users to select the cut-off frequency of the high-cut filter between 2.5 kHz and 30 kHz. All frequencies above your selected frequency will be cut, helping you to better define which frequencies you wish to be processed by a power amp (if one is connected to your outputs). Setting the frequency to 30 kHz will allow the signal to pass through unaltered by the high-cut filter.





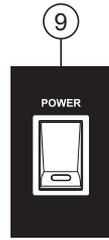
8. Frequency Slide Controls

These 31 small faders allow users to adjust each frequency band of the audio individually. At the “0” position, the frequency will not be processed. Slide a control up to boost that particular frequency; down to attenuate it.

Rear Panel

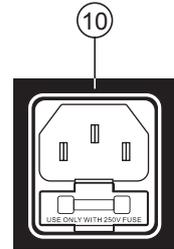
9. Power Switch

Flicking this switch will turn the A6600B equalizer on and off. Remember to keep the power switch in the “off” position when connecting or disconnecting the power cord to the unit.



10. Power Connector

Used for the addition of a power cable and supply, allowing power to be supplied to the mixer. Please use the power cable that is included with this mixer only. The Fuse holder, located above the AC Power connector, is for the A6600B’s fuse. If the fuse happens to blow, open the holder cover, and replace the fuse with a suitable replacement (as indicated next to the power connector).



11. Input Connectors

These balanced 1/4” TRS and XLR jacks are used for receiving signals to be sent to each input channel.

12. Output Connectors

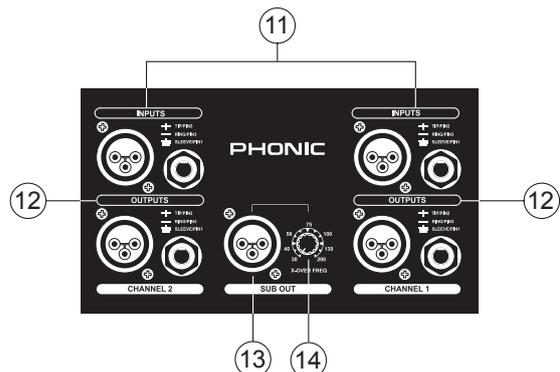
These output connectors, the same as featured on the input, send their corresponding signals. All outputs run in parallel to one another (meaning you can use the 1/4” and XLR outputs at the same time).

13. Subwoofer Output

The balanced subwoofer output connector can send the summed signal of the main left and right signals to a subwoofer. The signal sent from the subwoofer output has been processed by the internal crossover.

14. X-Over Frequency Control

This switch allows users to adjust the cross-over frequency of the subwoofer output. This function ensures that your subwoofer amplifier needs only process the low-frequency audio that you want sent to the subwoofer.



TYPICAL GRAPHIC EQUALIZER OPERATION

GENERAL TONE CONTROL

The graphic equalizer is a useful device for general tone shaping because it is simple and easy to adjust. The visual reference provided by the slide fader position gives an approximate idea of the frequency response generated: higher frequencies appear on the right, lower frequencies on the left. To use the equalizer, you must know the numerical frequency range of the tone you wish to produce.

The frequency range chart, located on page 10, is a useful tool when first using a graphic equalizer. Use the range chart as a guide, then adjust by ear. Unfortunately, even a good equalizer cannot offer a complete solution when a room has severe inherent acoustic problems. Nor can equalization overcome the lack of sound clarity caused by rooms with unduly long reverberation times.

FEEDBACK CONTROL

In live performance applications, graphic equalization is almost always applied separately to the stage monitor or foldback system to reduce the level of those frequencies that would otherwise cause feedback problems. These problems arise from monitor positioning, sound reflected from the stage walls, and peaks in the frequency response curves of the monitor speaker system. A graphic equalizer can provide some control over moderate feedback problems, but it hasn't enough flexibility or resolution to remedy a severe feedback response. The best results are achieved by eliminating feedback points. One or two feedback points can be eliminated by adjusting the slide faders, but no more than 6dB should be cut.

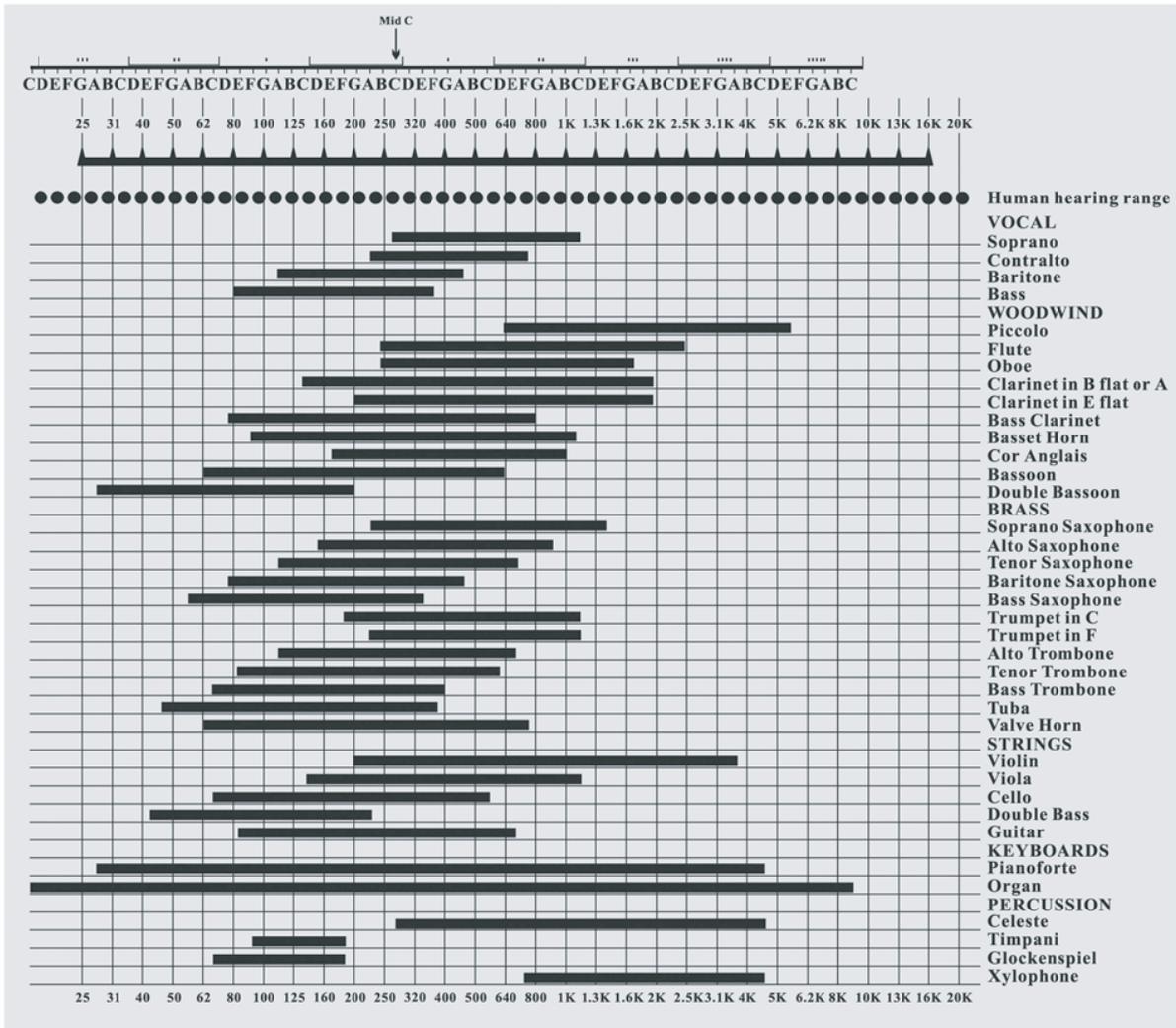
If you find feedback points covering many equalizer bands and cutting every affected band does not help, you must reduce the system gain. The combined use of a graphic equalizer for tone control and a parametric equalizer for feedback control is highly recommended.

MIXER CHANNEL EQUALIZATION

Many mixers provide only simple equalization for individual channels. If your mixer has channel inserts, you can patch your equalizer into a channel that is being used for something important and use it to tailor the sound of this channel exactly as you want.

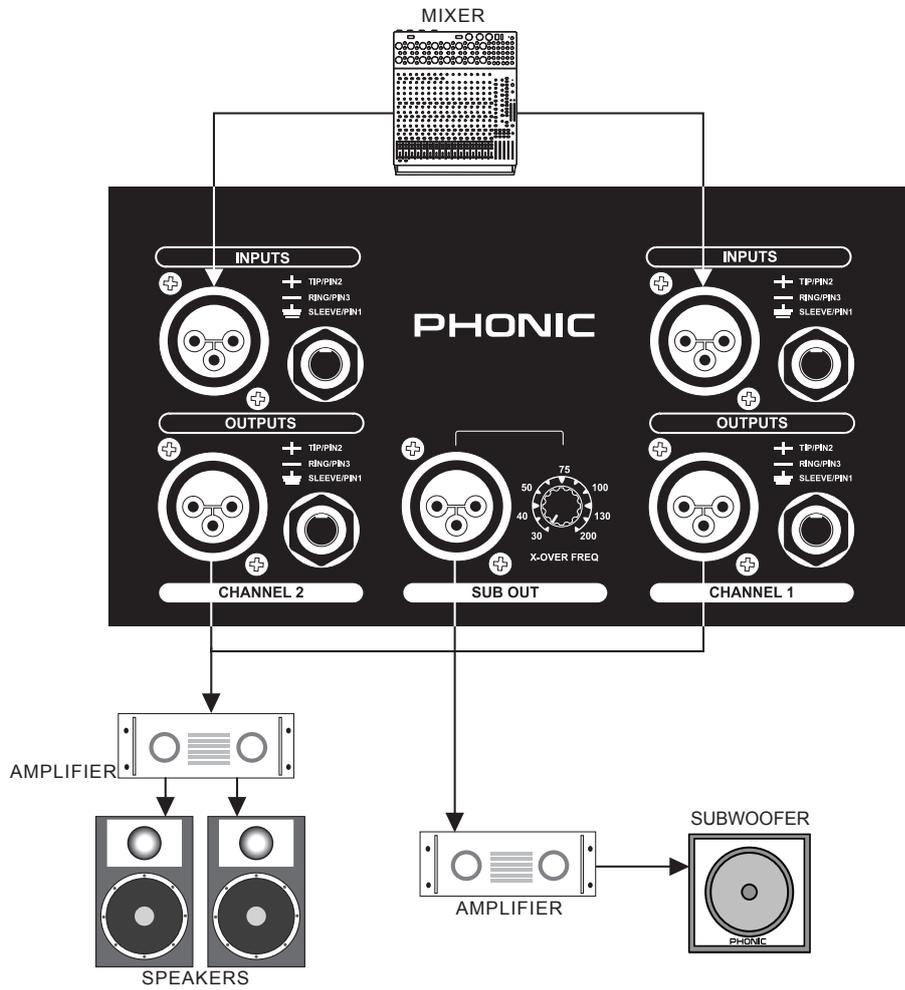
LARGE ROOM EQUALIZATION

Large rooms tend to suffer from multiple reflections with long time delays and long reverberation intervals factors which lead to reduced intelligibility and a generally muddy sound. As sound travels long distances, high frequencies attenuate more than low frequencies. In general, a large room benefits from some low frequency roll-off and some high frequency boost. Therefore, reducing the low frequency output may be advantageous in buildings made of concrete or stone, where much of the bass is reflected rather than absorbed. Rolling off the high frequency end above 5kHz may also contribute to a more natural sound. The shape of the optimal house curve varies according to the individual sound system and acoustic environment; a degree of experience is indispensable to achieving the best result.

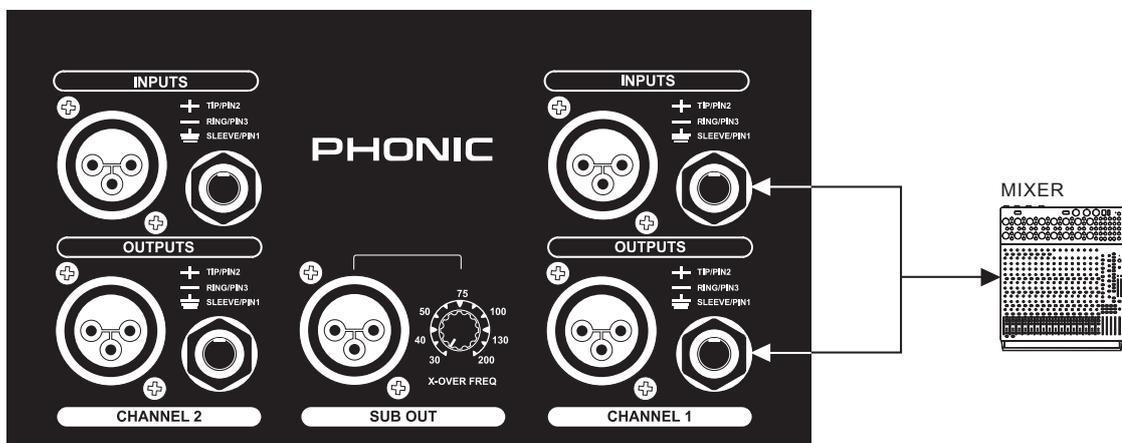


APPLICATION

IN THE PATH OF
AN AMP AND SPEAKERS



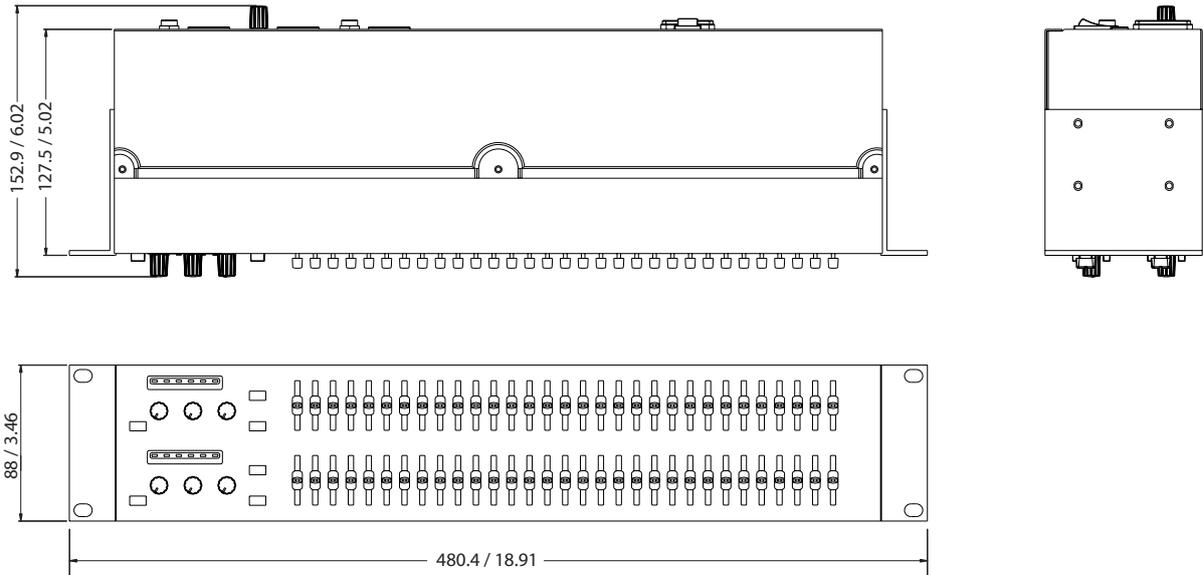
USING AN INSERT POINT



SPECIFICATION

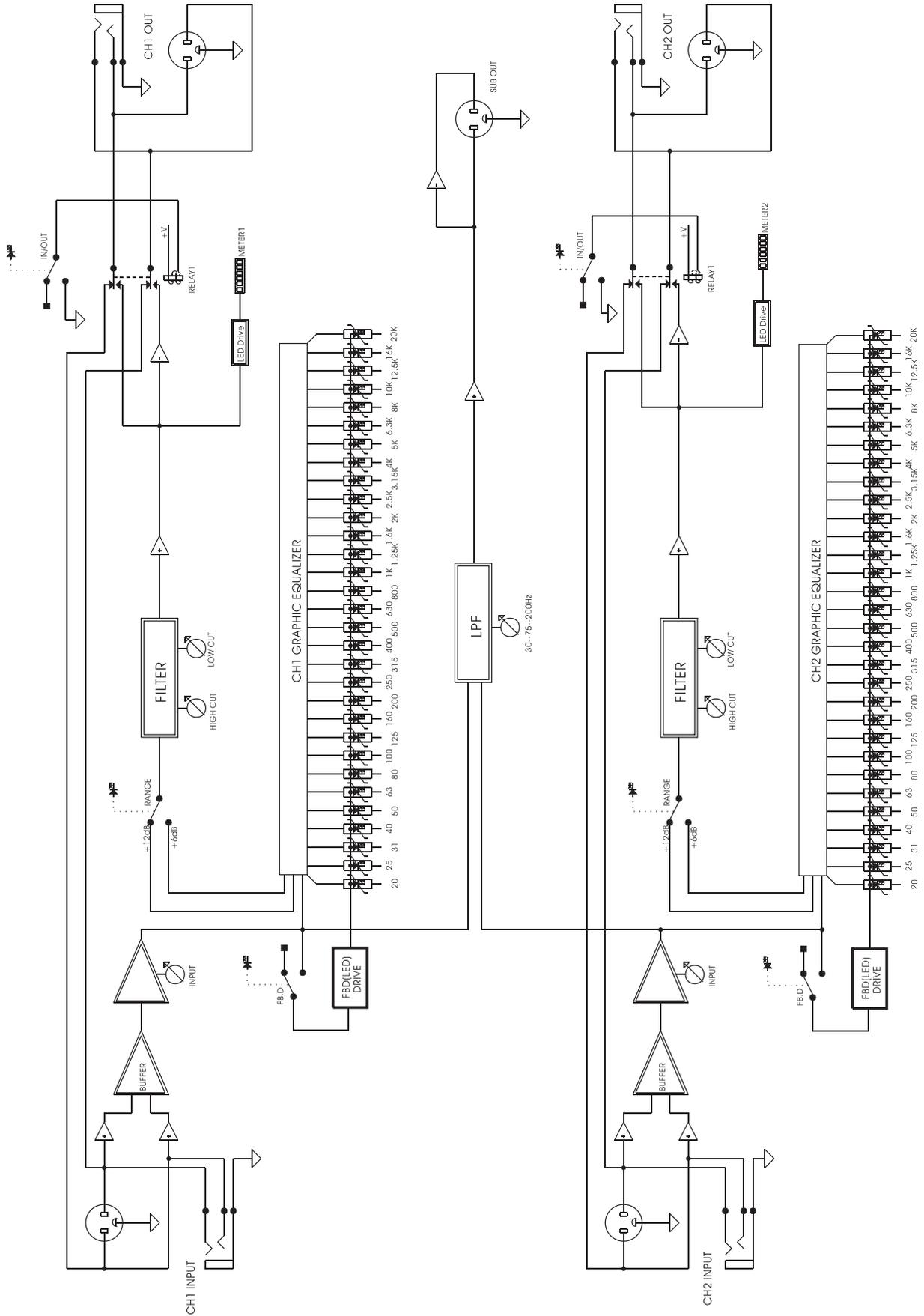
Audio Inputs	
Inputs	Balanced XLR and 1/4" TRS connectors
Impedance	40 kΩ balanced and unbalanced
Maximum Input Level	+21 dBu balanced and unbalanced
CMRR	typ. 40 dB, >55 dB @ 1 kHz
Audio Outputs	
Outputs	Balanced XLR and 1/4" TRS connectors
Subwoofer Out	Balanced XLR connector
Crossover Frequency	Variable, 30 - 200 Hz
System Specifications	
Frequency Response	10 Hz to 30 kHz, +/-3 dB
S/N Ratio	22 Hz to 22 kHz >94 dB @ +4 dBu
Distortion (THD)	typ. 0.006% @ +4 dBu, 1 kHz, Gain 1
Crosstalk	typ. -70 dB @ 1kHz
Roll-Off Filter Section	
Type	12 dB/oct., Butterworth
Input	Variable (-15 dB to +15 dB)
Low Cut	Variable (10 Hz to 400 Hz)
High Cut	Variable (2.5 kHz to 30 kHz)
Graphic Equalizer	
Type	Stereo 31-band equalizer
Frequency Range	20 Hz to 20 kHz in 31 1/3-octave bands (ISO frequencies)
Bandwidth	1/3 octave
Control Range	+/-6 dB or +/-12 dB (switchable)
Function Switches	
FBQ	Activates the FBQ Feedback Detection System
Audio In/Out	Switch to bypass the equalizer functions
I/O Meter In/Out	switches the meter display from input to output
Range	Shift of the maximum cut/boost range for all 31/15 bands
Indicators	
Input/output Level	12-segment output display: -30/-24/-18/-12/-6/-3/0/+3/+6/+9/+12 dB/CLIP
Power Supply	
Mains Voltage	USA/Canada 120 V~, 60 Hz
	Europe/U.K./Australia 230 V~, 50 Hz
	Japan 100 V~, 50 - 60 Hz
	General export model 120/230 V~, 50 - 60 Hz
Power Consumption	35 W
Fuse	100 - 120 V~:T630mAH
	100 - 120 V~:T315mAH
Mains Connection	Standard IEC receptacle
Dimensions/Weight	
Dimensions (W x H x D)	480 mm x 88 mm x 148 mm (18.9" x 3.5" x 6.0")
Weight	2.5 kg (5.51 lbs)

DIMENSION



* All measurements are shown in mm/inches.

BLOCK DIAGRAM



TO PURCHASE ADDITIONAL PHONIC GEAR AND ACCESSORIES

To purchase Phonic gear and optional accessories, contact any authorized Phonic distributor. For a list of Phonic distributors please visit our website at www.phonic.com and click on Get Gear. You may also contact Phonic directly and we will assist you in locating a distributor near you.

SERVICE AND REPAIR

For replacement parts, service and repairs please contact the Phonic distributor in your country. Phonic does not release service manuals to consumers, and advice users to not attempt any self repairs, as doing so voids all warranties. You can locate a dealer near you at <http://www.phonic.com/where/>.

WARRANTY INFORMATION

Phonic stands behind every product we make with a no-hassles warranty. Warranty coverage may be extended, depending on your region. Phonic Corporation warrants this product for a minimum of one year from the original date of purchase against defects in material and workmanship under use as instructed by the user's manual. Phonic, at its option, shall repair or replace the defective unit covered by this warranty. Please retain the dated sales receipt as evidence of the date of purchase. You will need it for any warranty service. No returns or repairs will be accepted without a proper RMA number (return merchandise authorization). In order to keep this warranty in effect, the product must have been handled and used as prescribed in the instructions accompanying this warranty. Any tempering of the product or attempts of self repair voids all warranty. This warranty does not cover any damage due to accident, misuse, abuse, or negligence. This warranty is valid only if the product was purchased new from an authorized Phonic dealer/distributor. For complete warranty policy information, please visit <http://www.phonic.com/warranty/>.

CUSTOMER SERVICE AND TECHNICAL SUPPORT

We encourage you to visit our online help at <http://www.phonic.com/support/>. There you can find answers to frequently asked questions, tech tips, driver downloads, returns instruction and other helpful information. We make every effort to answer your questions within one business day.

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