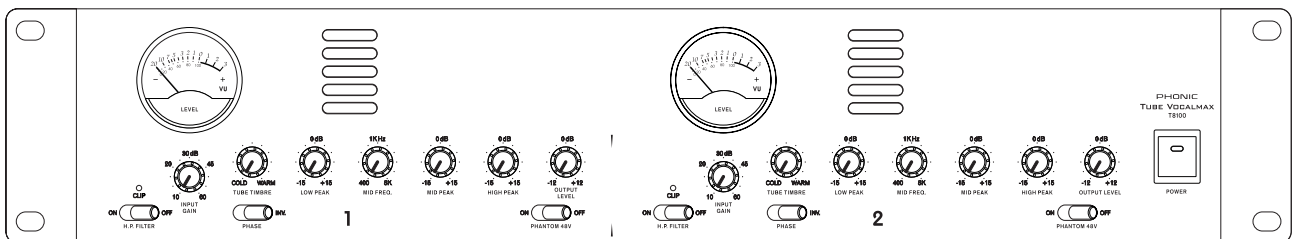


## T8100

### TUBE VOCALMAX

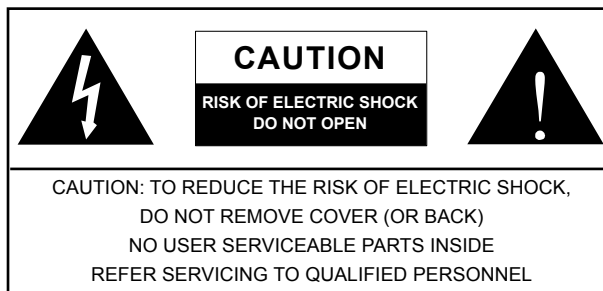


## IMPORTANT SAFETY INSTRUCTIONS

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.



# T8100

TUBE VOCALMAX

## USER'S MANUAL

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## INTRODUCTION

Thank you for choosing a Phonic professional audio product. The T8100 TUBE VOCALMAX is a two-channel microphone preamplifier that incorporates the latest vacuum tube technology.

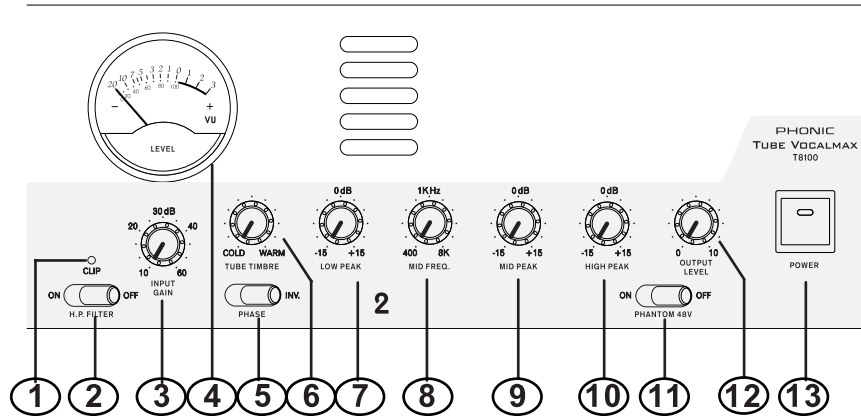
The TUBE VOCALMAX uses the high quality 12AX7 valve preamplifier to generate rich natural vocal sounds. In addition, the TUBE VOCALMAX uses a potentiometer control to fine tune the input difference between the tube and the conventional semiconductor preamplifier, thus giving you greater flexibility in controlling the "warmth" of the performer's voice.

Greater flexibility is made possible by other thoughtful features that our engineers have packed into the unit. For each channel there is a 3-band, mid-sweep equalizer, a high-pass filter, a phase inverter, phantom power, and a +4/-10 dB level-matching switch for the output.

This manual is designed to be both concise and comprehensive. It is concise, so you can quickly start using your new processor. It is also comprehensive, so you can gain a full understanding of the fine product that you have just purchased. We hope you will soon discover that you have made a wise investment in buying a Phonic product.

## FEATURES

- Studio quality mic/line preamp vocal processor
- Warmth control for precise dosage of tube effect
- +48V phantom power
- Dual 3-band, mid-sweep equalizer
- High-pass filter and clip indicator
- Phase-reverse switch
- Classic VU meter for displaying input level
- Balanced XLR and 1/4" TRS connectors for input and output
- Operating levels of +4 dBu and -10dBV independently selectable at each channel's output
- Safety approval: CE, ETL/CETL in process



## CONTROLS & CONNECTIONS

The TUBE VOCALMAX has two channels which have identical controls and connections. The following descriptions apply to both channels.

### Front Panel

#### 1. CLIP indicator

This LED indicator lights up when high-level signals overload the circuit, resulting in the clipping of signal peaks. If this indicator lights up frequently, turn down **INPUT GAIN** to avoid distortion.

#### 2. H.P. FILTER switch

Turning this switch to ON will engage the high-pass filter. This function lets you "cut out" unwanted low frequency sounds below 100 Hz.

#### 3. INPUT GAIN control

This knob adjusts the gain for the channel input. The range of control is from 10 dB to 60 dB.

#### 4. LEVEL meter

This VU meter displays the input level of the channel.

#### 5. PHASE switch

This switch, when set to **INV.**, inverts the phase of the audio signals.

#### 6. TUBE TIMBRE control

This knob controls the timbre (tonal quality). Turn toward **WARM** for more harmonics, or toward **COLD** for less.

#### 7. LOW PEAK control

The knob controls the boost/cut level of the low

shelving EQ. The shelving frequency is 80 Hz, and the maximum amount of boost or cut is 15 dB.

#### 8. MID FREQ. control

This knob determines the center frequency of the sweepable mid EQ. The range of selection is between 400 Hz and 8 kHz.

#### 9. MID PEAK control

This knob controls the boost/cut level of the midrange peaking EQ. The center frequency is determined by the **MID FREQ.** control, and the maximum amount of boost or cut is 15 dB.

#### 10. HIGH PEAK control

This knob controls the boost/cut level of the high shelving EQ. The shelving frequency is 12 kHz, and the maximum amount of boost or cut is 15 dB.

#### 11. PHANTOM 48V switch

When this switch is set to **ON**, a 48-volt phantom power is sent through the channel input to drive the attached condenser microphone.

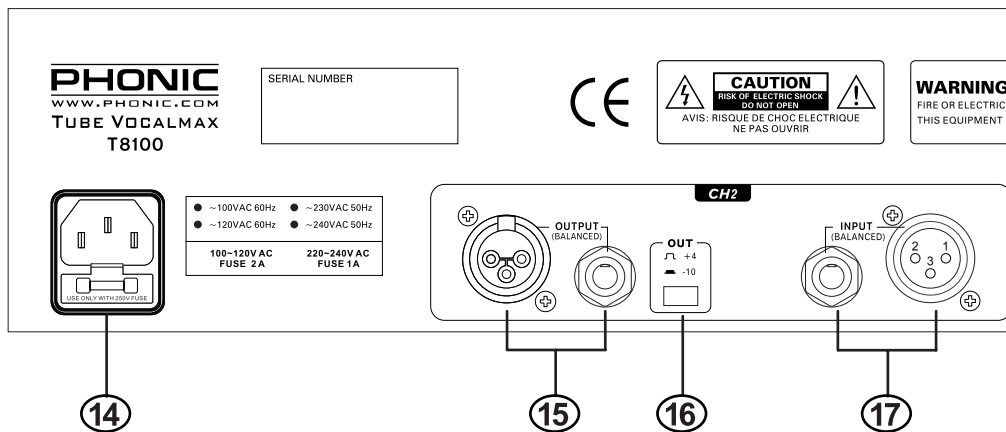
NOTE: Before turning on the phantom power, remember to mute your sound system to prevent the power-up noise.

#### 12. OUTPUT LEVEL control

This knob controls the output level of the channel. The range of control is from 0 dB to +10 dB.

#### 13. POWER button

This toggle button turns on the TUBE VOCALMAX when depressed, and turns it off when released.



## Rear Panel

### 14. Power inlet and fuse holder

Use the supplied power cord to connect the TUBE VOCALMAX to an AC power outlet of a suitable voltage. To change the fuse, use a screwdriver to slide open the fuse cover, then replace the fuse with one that is of identical type.

### 15. OUTPUT connectors

The output connection is equipped with a male XLR and a 1/4" TRS jack. Both connectors are balanced.

### 16. Operating level button (OUT)

This toggle button determines the nominal operating level for the output (-10 dBV when depressed, and +4 dBu when released). This setting should match the nominal operating level of the target device. In general, consumer products use -10 dBV, while professional products use +4 dBu.

### 17. INPUT connectors

The input connection is equipped with a female XLR and a 1/4" TRS jack. Both connectors are balanced.

## INITIAL SETUP

Here is a recommended initial setup for the TUBE VOCALMAX.

1. Turn off all equipments before making connections.
2. Use the supplied power cord to connect the TUBE VOCALMAX to an AC power outlet of a suitable voltage. NOTE: Do not turn on the power yet. Wait until you have completed all of the following steps.
3. Plug a microphone into one of the input connectors in the rear panel of the TUBE VOCALMAX.
4. Use a balanced cable with XLR or 1/4" TRS plugs to connect the output of the TUBE VOCALMAX to your mixing console or recorder.
5. Depress or release the operating level button (labeled **OUT**) so that the output level of the TUBE VOCALMAX matches the nominal operating level of your mixing console or recorder.
6. Set the control knobs and switches of the TUBE VOCALMAX according to Table 1.
7. Turn on the TUBE VOCALMAX and all connected equipments.

<b>Controls</b>	<b>Settings</b>
<b>H.P. FILTER</b>	<b>OFF</b> (Or, set to <b>ON</b> if stage rumble or other low frequency noise is a concern for you.)
<b>INPUT GAIN</b>	<b>10 dB</b>
<b>PHASE</b>	Normal (switched to left)
<b>TUBE TIMBRE</b>	<b>COLD</b>
<b>LOW PEAK</b>	<b>0dB</b>
<b>MID FREQ.</b>	<b>1KHz</b>
<b>MID PEAK</b>	<b>0dB</b>
<b>HIGH PEAK</b>	<b>0dB</b>
<b>PHANTOM 48V</b>	<b>OFF</b> (Or, set to <b>ON</b> if you are using a condenser microphone that requires the 48-volt phantom power.)
<b>OUTPUT LEVEL</b>	<b>0dB</b>

*Table 1: Recommended initial settings*

## **APPLICATIONS**

### **Using the TUBE VOCALMAX as a microphone preamplifier**

This is the primary application of the TUBE VOCALMAX. Being a high-quality, low-noise mic preamp, the TUBE VOCALMAX faithfully boosts the low-level microphone signals to the level required by your mixer's line input.

### **Using the TUBE VOCALMAX as a tube processor**

Taking advantage of the tube technology, the TUBE VOCALMAX can add more "punch" to your drum beats or make your vocal sound richer by introducing additional harmonics to the audio signals.

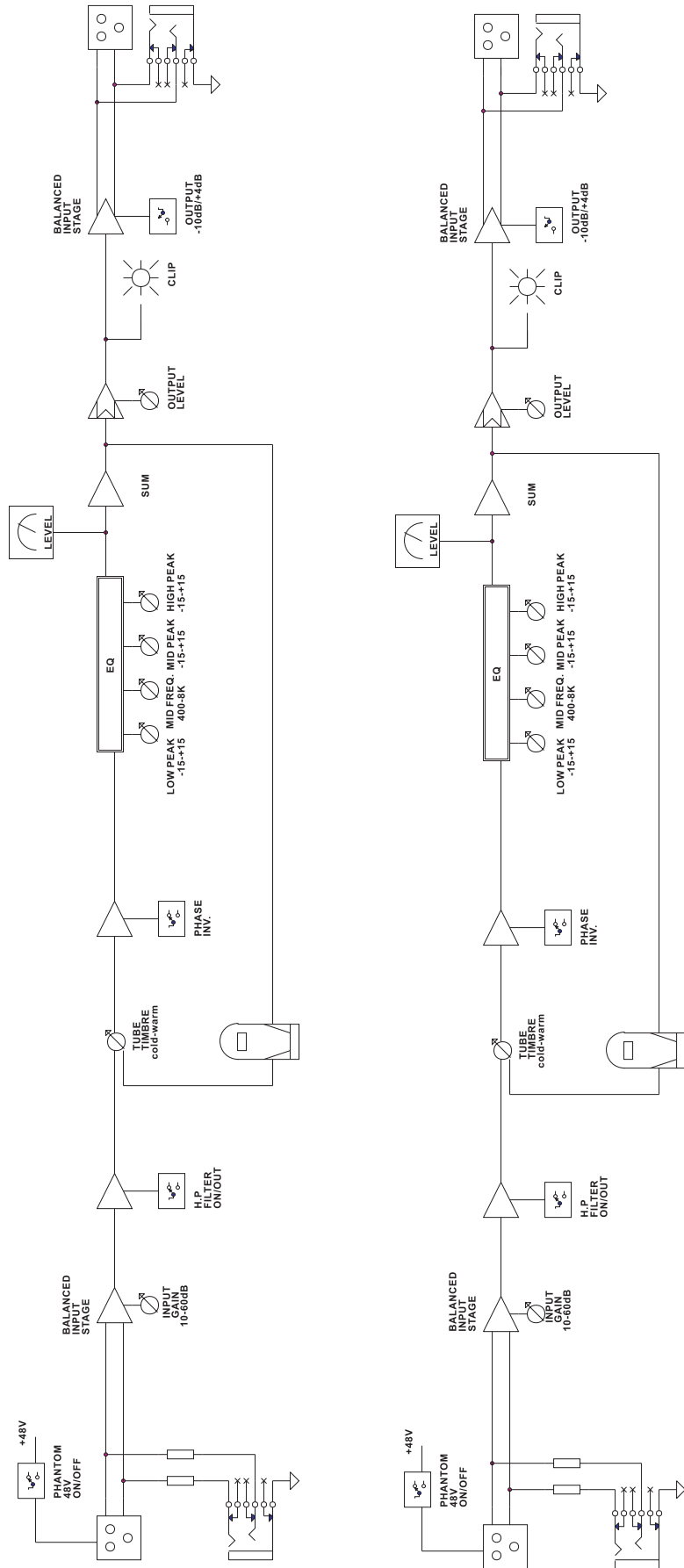
### **Using the TUBE VOCALMAX as a tube-enhanced equalizer**

The TUBE VOCALMAX features a tube-enhanced, 3-band, mid-sweep EQ, which provides a superior sound than the conventional EQ that are normally found on a mixer's channel strip.

### **Using the TUBE VOCALMAX as a level converter**

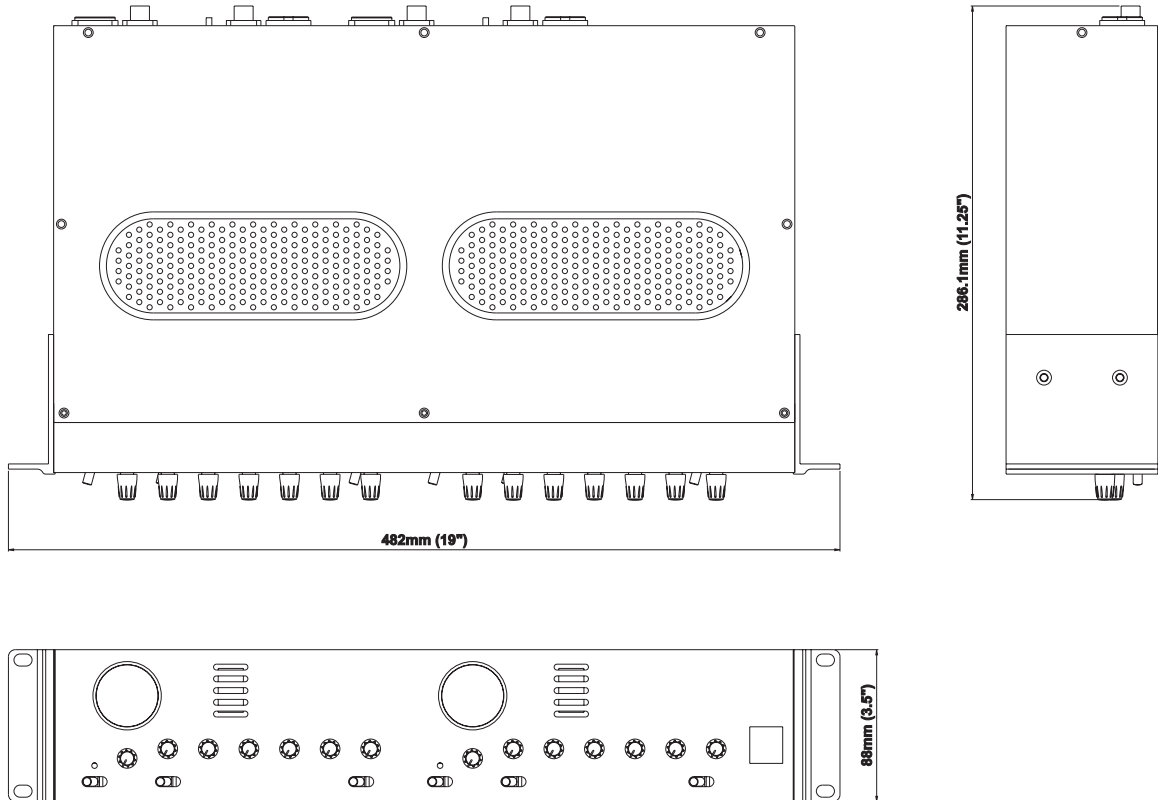
While most professional audio equipments have a nominal operating level of +4 dBu, consumer products generally operate at a much lower level of -10 dBV. In a system that contains both types of equipments, you need one or more level converters to make all units compatible with one another. The TUBE VOCALMAX is the ideal two-way level converter. It not only can raise the low-level input signal to the professional line level, but also lower a high-level signal for outputting to a consumer product.

## BLOCK DIAGRAM





DIMENSIONS



## SPECIFICATIONS

### Microphone Inputs

Connectors	XLR
Type	Transformer, DC-decoupled input
Impedance	3k ohms balanced
Gain	-50 dB to 0 dB
Maximum Input Level	+10 dBu balanced and unbalanced
CMRR	60 dB @ 1 kHz

### Line Inputs

Connectors	XLR and 1/4" TRS
Type	Transformer, DC-decoupled input stage
Impedance	50k ohms balanced, 25k ohms unbalanced
Gain	-50 dB to 0 dB
Maximum Input Level	+26 dBu balanced and unbalanced
CMRR	60 dB @ 1 kHz

### Outputs

Connectors	XLR and 1/4" TRS
Type	Electronic servo-balanced output stage
Impedance	60 ohms balanced, 30 ohms unbalanced
Maximum Output Level	+22 dBu balanced and unbalanced

### System

Bandwidth	18 Hz to 30 kHz, +/- 2 dB
Noise	< -90 dB
THD	0.1% @ 0 dB, 1 kHz
Crosstalk	< -80 dB

### Controls

Micro Trim	Variable +10 dB to +60 dB
High-Pass Filter	100 Hz
Low Frequency Gain	80 Hz, +/- 15 dB
Mid Frequency Gain	+/- 15 dB
Mid Frequency Range	Variable 400 Hz to 8 kHz
High Frequency Gain	12 kHz, +/- 15 dB
Warmth	Variable cold to warm
Output Level Control	Variable 0 dB to +10 dB

### Phantom Power

### Function Switches

### Function Controls

+48 V
+48V phantom power, phase reverse, high pass
mic/line gain, tube control, low frequency, mid frequency range, mid frequency, high frequency, output level

### Power Supply

Power Consumption	30 watts maximum
Power Connector	Standard IEC connector
Operating Voltages	100-120 V, 200-240 V, AC 50-60 Hz
Fuse	100-120 V AC : 1Ah ; 200-240 V AC: T500 mAh

### Physical

Dimensions (W x H x D)	482 x 88 x 286 mm (19 x 3.5 x 11.25 in.)
Weight	4.6 kg (10.1 lbs.)

## **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](http://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**

Phonic has over 100 service centers worldwide. 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 [www.phonic.com](http://www.phonic.com).

## **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>.

## **CUSTOMER SERVICE AND TECHNICAL SUPPORT**

We encourage you to visit our online help at <http://www.phonic.com/help/>. 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.

**Phonic America Corporation**  
**6103 Johns Road, #7**  
**Tampa, FL 33634**  
**(813) 890-8872**  
**support@phonic.com**  
**<http://www.phonic.com>**

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