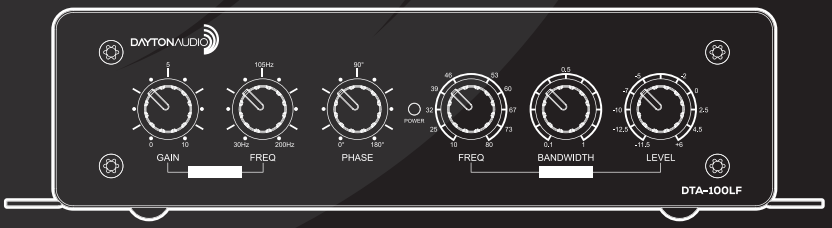
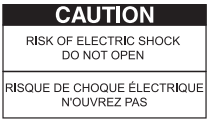
DESKTOP LOW-FREQUENCY AMPLIFIER WITH EQ

Model: DTA-100LF User Manual



Important Safety Instructions



CAUTION: To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.

APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR USAGE
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE PLUG TO WIDE SLOT, INSERT FULLY.
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.

Explanation of Graphical Symbols

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you 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 you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any 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 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. 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. Only use attachments/accessories specified by the manufacturer.
12. Use only with the 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.
15. 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.
16. **CAUTION:** Servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
17. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
18. Where an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

Introduction

Thank you for purchasing the Dayton Audio® DTA-100LF low-frequency desktop amplifier; one of the most versatile and compact subwoofer amplifiers available. The compact design is perfect for focused application where space is at a premium, while the in-depth EQ and crossover allow the amplifier to be custom-tailored to suit the listening environment.

Features

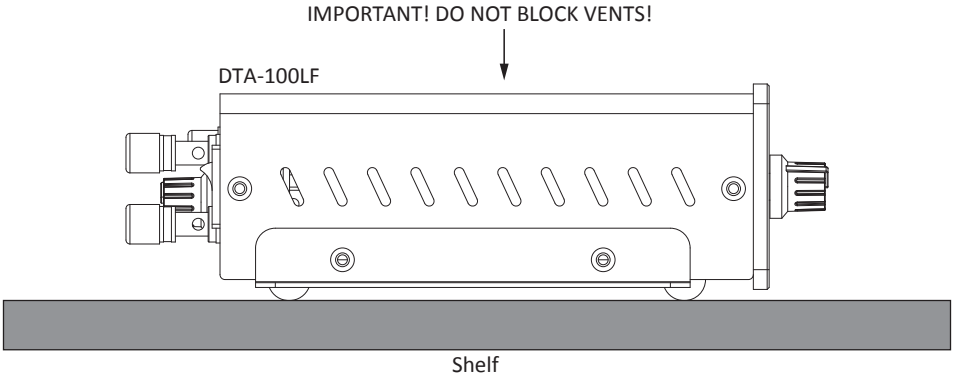
- Compact desktop size, perfect for big sound from a small package
- Adjustable low pass frequency and phase control for precise integration
- Subsonic filter for increased control and subwoofer protection
- A low frequency, fully adjustable PEQ band allows for bass to be adjusted to your preference, or for cutting down on an overpowering room mode
- Automatic turn on/off for set it and forget operation
- Built in power supply with automatic 110/220V input voltage switching

What's Included

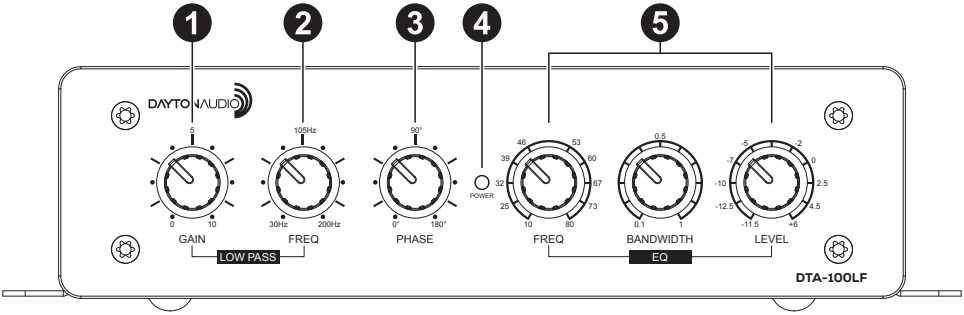
1x DTA-100LF amplifier
2x Mounting brackets
1x AC power cord
1x User manual

Installation

The DTA-100LF can be conveniently mounted onto or underneath a shelf or desk with the included mounting brackets. The brackets can be attached to the side of the amplifier by removing the screws on the sides of the amplifier with a Phillips screwdriver and replacing them with the brackets in place.



Do not block the side vents. Even though the DTA-100LF will typically run cool, the side vents allow air to circulate through the chassis. Do not block the vents for any reason.



Front Panel

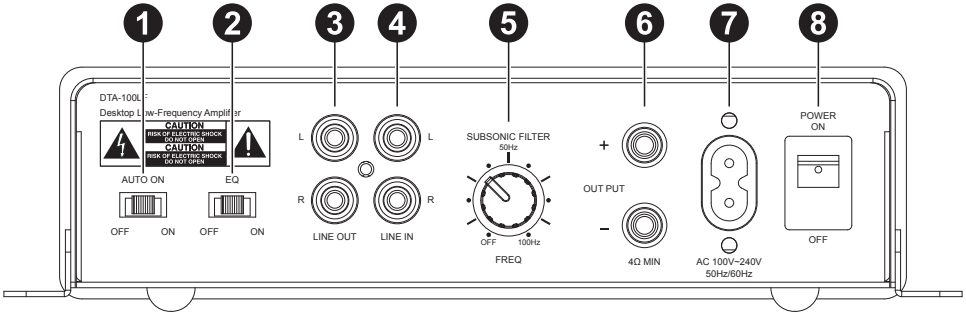
1. Gain - Sets the overall level of the amplifier, which is used to match the output of the subwoofer to the rest of the speakers in the system. Gain adjustment does not affect line out pass-through level.

2. Low Pass Frequency Adjustment - Adjusts the 24 dB/oct low-pass crossover frequency from 30 Hz to 200 Hz. This adjustment will allow you to properly integrate the subwoofer with main or satellite speakers. It is recommended to experiment with different settings until the smoothest transition between subwoofer and speakers is achieved. If you are using a source that already creates a low passed, line level (RCA) subwoofer output (like a sub out jack on a receiver), it is important that you only use the low pass filter adjustment on the receiver or on the DTA-100LF to avoid interaction between these filters. If you choose to use your receiver's low pass filter adjustment, set the FREQ knob on the DTA-100LF to its maximum setting of 200Hz.

3. Phase - The phase adjustment dial allows you to compensate for differences in the acoustical and electrical characteristics between the subwoofer and the main system speakers. The relative locations of speakers in the system can cause significant disturbances in speaker interaction due to time delay issues, or the destructive phase interferences that can occur at certain frequencies. Experimentation with this dial in conjunction with altering the location of the subwoofer can dramatically improve system integration.

4. Power LED - The amplifier can be turned on by either the main power switch or AUTO ON. When the indicator LED is red, the amplifier is in standby mode. When the LED is blue, the amplifier is fully active.

5. EQ - The EQ adjustment knobs enables you to custom-tailor one band of parametric equalization for their subwoofer, which can be used to add boost to the low-end of the response, or can be used to cut out an excessively loud room resonance. The FREQ knob selects the frequency for the filter between 10 to 80 Hz. The bandwidth knob selects how wide or narrow the filter is (the higher the bandwidth, the broader the effect). The level knob can be used to add up to 5dB of boost or 11.5 dB of cut.



Rear Panel

1. Auto On - The amplifier can sense signals on the RCA line-level inputs and automatically activate the amplifier. (pg. 6)

2. EQ - The single band EQ set on the front panel can be deactivated by completely removing it from the signal path. Enabling the EQ function will drop the overall output level of the amplifier by 6dB. This is to allow up to a 6dB boost using the EQ knobs without the risk of over-driving the amplifier.

3. Line Output - Stereo RCA jacks allow the line level stereo input signal to be output to other audio equipment. This full range signal mirrors the audio on the input and is not summed to mono or affected by the gain, EQ, low pass filter, phase, or subsonic filter adjustments.

4. Line Input - Stereo RCA jacks receive the audio signal from standard line-level audio sources. When possible, both the left and right audio inputs should be connected and are internally summed to a mono output. If using a mono RCA SUB OUT or another mono input source, simply connect it to the LEFT RCA input and leave the RIGHT RCA input disconnected.

5. Subsonic Filter - Adjusts the 12 dB/oct high-pass filter from 0 Hz to 100 Hz. This helps remove subsonic information from the signal and tighten the low-end response of some subwoofer systems. This can be particularly useful for protecting ported subwoofer systems.

6. Speaker Output - Speaker level output connections carry the amplified signal to a passive subwoofer or bass shaker. The included terminals can accept bare wire, spade plugs, or banana plugs. The minimum rated load for the DTA-100LF output is 4 ohms.

7. AC Power - The DTA-100LF is capable of 110V and 220V operation. The internal power supply can automatically sense the power input and operate appropriately; simply connect the appropriate AC power cord to your wall outlet.

8. Power Switch - The rear panel power switch turns the amplifier on and off. When the front power indicator is red, the amplifier is in standby mode. When the LED is blue, the amplifier is fully active.

Connections

Input - Using a stereo or mono RCA cable, connect the LFE OUT, Sub OUT or other line level audio output to the DTA-100LF's LINE IN. Since the LINE OUT sends a full range audio output and is not affected by the built in EQ, crossover, or subsonic filter the DTA-100LF can be placed either before or after a full range amplifier or powered speakers.

Output - Using 16AWG (minimum) 2-conductor stranded speaker wire strip approximately 1/2" of shielding from each end and twist together so that there are no loose stands that can cause shorts and damage the amplifier. With the amplifier powered off connect the prepared wire to the appropriate + and - terminals on both the amplifier and an unpowered subwoofer. Verify that the amp and subwoofer are connected using the same polarity to experience the full power of the DTA-100LF.

Operation

Power - To power on the DTA-100LF toggle the POWER ON/OFF switch. If the AUTO-ON switch is "off" the amplifier will begin working immediately.

Automatic Power Sensing - The AUTO ON feature is handy when using the DTA-100LF in conjunction with other audio equipment and can automatically turn on when audio is detected. When an 8 mV signal is detected on the RCA inputs the amplifier turns from STANDBY to ON mode. The amplifier will automatically enter STANDBY when no audio has been detected for fifteen minutes.

Crossover - The low pass filter adjustment sets the frequency at which audio content will pass to the DTA-100LF Speaker Output. A low pass filter means that the frequencies below the target frequency will be unaffected, and the higher frequencies will be removed. Removing higher frequencies will allow the amplifier and connected subwoofer to produce clear distortion-free audio. Adjust the low pass filter frequency between 30 Hz to 200 Hz so there is a natural sounding transition from the main speakers and the connected subwoofer. This value will change depending on the size of the speakers and subwoofer being used.

Phase - The phase setting is used to compensate for the subwoofer's location relative to the main speakers, and create a smoother transition from the main speakers to the connected subwoofer.

Specifications

Maximum Output Power	70W/8Ω; 100W/4Ω
THD	1%
Frequency Response	20 Hz - 180 Hz +/-3dB
Signal to Noise Ratio	95dB
Input Sensitivity	200mV
Low Pass Crossover Range	30 Hz - 200 Hz
Phase Adjustment	0° - 180°
Line Input Impedance	22 kΩ
Line Out Impedance	4 kΩ

Power Input Voltage Range	100 - 240 VAC
Standby Power	1.8W
Max Power Consumption	150W
Dimensions	7.5" x 2" x 5.5"
Overall Length (including knobs and connectors)	8.74"
Weight	3.3 lbs.

5-Year Limited Warranty
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