



PPHP1596A PPHP1597A
OWNER'S MANUAL

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Safety Instructions



WARNING: To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture. To reduce the hazard of electrical shock, do not remove cover or back. No user serviceable parts inside. Please refer all servicing to qualified personnel. The lightning flash with an arrowhead symbol within an equilateral triangle, within the products 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 product.

Important Safety Instructions

1. Please read all instructions before operating the unit.
2. Keep these instructions for future reference.
3. Please heed all safety warnings.
4. Follow manufacturers instructions.
5. Do not use this unit near water or moisture.
6. Clean only with a damp cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers 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 third prong is provided for your safety. When the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on and pinched particularly at plugs, convenience receptacles and at the point at which they exit from the unit.
11. Unplug this unit during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified personnel. Servicing is required when the unit has been damaged in any way, such as power supply cord or plug damage, or if liquid has been spilled or objects have fallen into the unit, the unit has been exposed to rain or moisture, does not operate normally ,or has been dropped.

ABOUT THE PPHP1596A PPHP1597A

Applications

- Live sound reinforcement, speech and vocals, music playback in entertainment, A/V, and institutional venues - especially when ease of use and portability are important factors.
- Amplification, mixing, and monitoring for electronic musical instruments.

Features

- One of the most successful and influential professional speaker systems ever.
- 15" low-frequency driver with dual neodymium magnet for low-distortion and light weight.
- Built in 3-input mixer. One balanced mic/line input, two 1/4" phone line-level inputs. Two-band equalization.
- Balanced loop - through / mix output. "Daisy-chain" additional PPHP1596A PPHP1597A speakers or send the mixed output to a mixing console.
- Air movement in the finned ports dissipates heat - no internal or external cooling fans are required.
- Integral 35mm pole mount receptacle with securing thumb screw.
- Multi-angle enclosure for front of house or stage monitor application.
- Tailored dynamic processing protects amplifiers and speakers from being over-driven without producing extreme changes in frequency response as level varies.
- Extended low-frequency performance. Delivers powerful bass down to 40Hz.

QUICKSTART

1. Turn the INPUT 1,2,and 3 controls fully counter-clockwise.
2. Set the MIC/LINE switch.
 - If a microphone will be connected directly to INPUT 1, set the MIC/LINE position (disengaged). The MIC LED will not illuminate when power is turned on.
 - If a mixer, CD player, cassette tape, or electronic musical instrument (the "source")will be connected directly to INPUT 1, set the MIC/LINE switch to the LINE position (disengaged). The MIC LED will not illuminate when power is turned on.
3. Set the EQ HF and LF controls to their center detented position.
4. Plug the power cable into a properly grounded 3-wire AC power.
5. Plug the XLR cable from the mixer or microphone into the INPUT 1 connector.
6. Connect unbalanced sources (if used) to the LINE2 and LINE 3 input connectors.

7. POWER UP PROCEDURE

- First, switch on the power to the mixer, audio sources, or musical instruments that are feeding your PPHP1596A PPHP1597A
- Next, turn on the power switch (the back panel power indicator will illuminate).
- Reverse this process when shutting down your system.

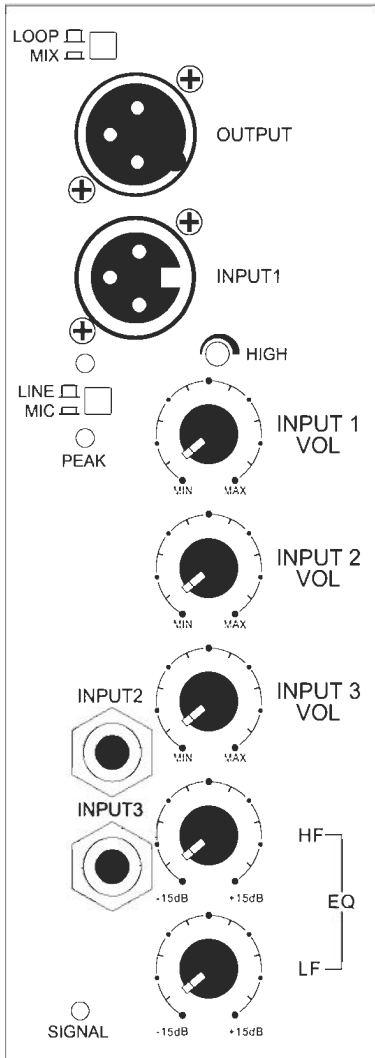
8.SET VOLUME

- If you are using an audio mixing console, refer to the manufacturer's instructions to properly set gain structure.
- Turn up your sources to the level that will be used in performance and talk, sing or play into the system.
- Bring the INPUT 1 control up (clockwise) until the desired volume has been reached. If you are using a microphone, turn the INPUT 1 control up slowly to avoid feedback.
- If you are using the INPUT 2 and INPUT 3 inputs, bring the INPUT 2 controls up until the desired volume has been reached.

9.CHECK THE PEAK LED

The PEAK indicator flashes when the loudspeaker's on-board amplifier are approaching maximum output. Occasional flashes are normal for very loud operation, However, if the PEAK LED stays illuminated, the sound may be distorted and it is an indication that more speakers or a lower performance volume may be required for your specific application.

CONTROLS AND CONNECTIONS



The audio section of the PPHP1596A PPHP1597A includes powerful features that enhance the flexibility of your PPHP1596A PPHP1597A speakers.

Connectors

INPUT 1

This balanced input accepts a standard XLR (female) connector. A broad range of signals (-44 dBu to +20 dBu nominal) from microphones, audio mixing consoles, and electronic musical instruments may be connected here. When using a single audio input to the speaker, this is the input to use. The sensitivity of this input is controlled by the MIC/LINE SWITCH and the INPUT 1 rotary control.

INPUT 2 & INPUT 3

These 1/4" phone jacks are intended for use with audio devices including cassette tape, CD MP3 players, computer sound-card outputs, electronic keyboard, and electric/acoustic musical instruments. INPUT2 and INPUT3 are balanced (TRS) but will accept unbalanced inputs is controlled by the INPUT 2 and INPUT 3 rotary controls.

OUT

This XLR(male)output connector works with the MIX/LOOP SWITCH to provide a method of sending audio from your PPHP1596A PPHP1597A

Switches

MIC/LINE

The MIC/LINE switch effects only INPUT 1. It selects between two sensitivity ranges. This switch is used to match the input sensitivity of the PPHP1596A PPHP1597A with the output level of the device connected to INPUT1. Depressing the MIC/LINE switch selects MIC (most sensitive).

CAUTION: Before adjusting this switch, be certain to rotate the INPUT1 control fully counter-clockwise. After the MIC/LINE switch has been adjusted, slowly rotate the INPUT1 control clock-wise until the desired volume has been reached.

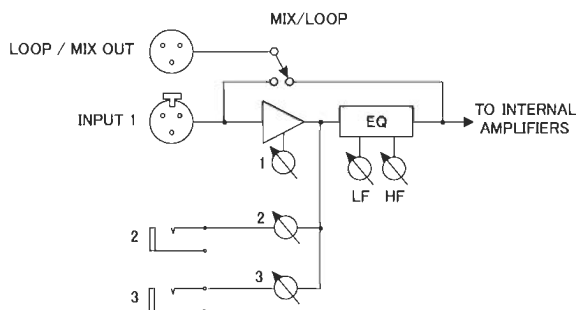
- Use the MIC position (depressed) when a microphone is connected to INPUT 1.
- Use the LINE position (disengaged) when a line level source such as an audio mixing console, audio playback device, or electronic musical instrument is connected to INPUT 1.

MIX/LOOP

This switch selects the source of the signal, for the OUT connector.

CAUTION: Before adjusting this switch, be certain to set the input level control of any equipment connected to this output to its minimum gain (least sensitive) setting.

- In the disengaged position, only the signal from the INPUT1 connector is routed directly to the OUT connector. Changing the other settings on the audio panel will not effect the OUT signal. The INPUT 2 and INPUT 3 inputs will not be present at the OUT connector. Use this setting when you want to feed multiple PPHP1596A PPHP1597A powered speakers the same signal.



- In The MIX position (depressed), a post-EQ blend of all inputs to the speaker (INPUT1, 2, and 3) will be sent to the OUT connector. Any changes to input level settings or EQ will affect the OUT signal. See the SYSTEM EXAMPLES section for details on how this mode may be used.

Controls

INPUT 1

Adjusts the level of INPUT 1. Use this control to match the input sensitivity of the PPHP1596A PPHP1597A to the output level of the mixer, microphone, or instrument connected to INPUT1. It is a common misconception that this control changes the power of a system. Your PPHP1596A PPHP1597A will produce its rated output power no matter where this control is set. The INPUT 1 control determines how much signal is required at the input in order to drive the system to full output.

INPUT 2 & INPUT 3

These controls adjust the level of the inputs connected to INPUTS 2 and 3.

LF EQ

This control allows up to 15dB of cut or boost at 75 Hz. If the system seems too "boomy" or bass heavy, rotate this control counter clock-wise. If the system sounds too "thin" or lacks low-end power, rotate this control clock-wise. To set the low-frequency EQ to "flat" (no EQ cut or boost), set this control to the center detented position.

HF EQ

This control allows up to 15dB of cut or boost at 30KHz. If the system seems too "strident" or "tinny", rotate this control counter clock-wise. If the system sounds too "dark" or lacks "brilliance", rotate this control clock-wise. To set the low-frequency EQ to "flat" (no EQ cut or boost), set this control to the center detented position.

INDICATORS

PEAK

The PEAK LED (Light Emitting Diode) illuminates to indicate that the system is approaching clipping. The threshold for this light is actually about 2 dB below clipping. An occasional flickering of this light on the loudest peaks is acceptable. If this LED is on for more than the duration of brief dynamic peaks, the system is being overdriven. Continuously over-driving the system will result in unpleasant and fatiguing distortion and may lead to premature failure of your speaker system. If the PEAK LED illuminates excessively:

- Reduce INPUT 1, 2, and 3.
- Reduce the output level of the mixer, musical instrument, or other source connected to the speaker.
- If there is a great deal of LF EQ or HF EQ boost, return the controls to the "flat" (centered) position.

SIGNAL

illuminates to indicate a usable signal from INPUT 1.

MIC

This LED lights to indicate that the MIC/LINE switch is in the MIC (depressed) position.

VOLTAGE SELECTION AND FUSES

Changing Voltage

Before you set up your PPHP1596A PPHP1597A the first time verify that the setting of the selector is appropriate for the power in your area. In the event that you do need to change the voltage:

- Make sure that the speaker is powered off and the AC is disconnected from the speaker..
- Directly below the male IEC connector on the speaker is a voltage selector. Break the factory-applied seal and slide the switch to the appropriate setting.
- Set the voltage selector switch to the 115V or 230V setting as required for your area.
- After having reconfirmed that the correct voltage is selected, reconnect the AC (IEC connector) and power the unit up.

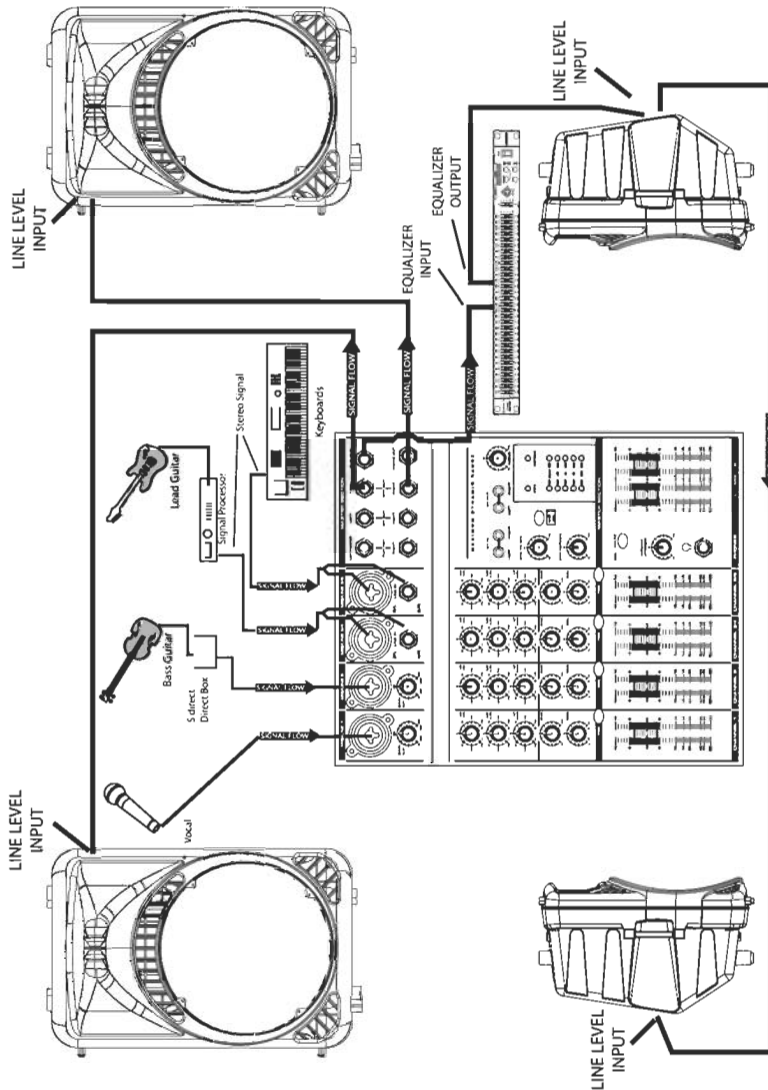
DO NOT UNDER ANY CIRCUMSTANCES OPERATE THE UNIT WITH THE WRONG VOLTAGE SELECTED. DOING SO MAY RESULT IN SERIOUS DAMAGE TO YOUR SPEAKER SYSTEM WHICH WILL NOT BE COVERED BY WARRANTY.

Fuse Replacement

The PPHP1596A PPHP1597A has no user-serviceable fuses. Failure of fuses is most frequently a symptom of problems requiring service by a competent technician.

APPLICATION EXAMPLES

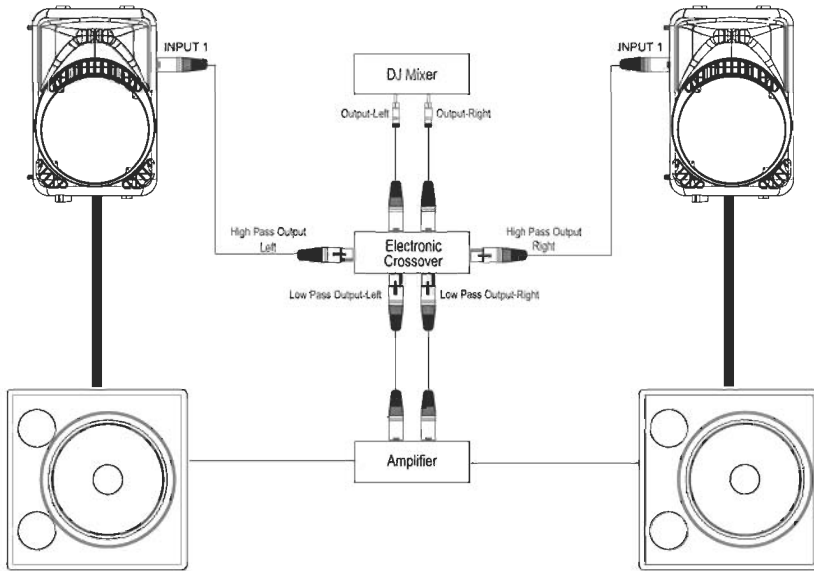
Live Band PA System With Monitors



This example shows a typical PA system using mixer with a pair of PPHP1596APPHP1597A for the main left and right mix. A separate signal from the mixer's AUX/MONITOR bus is sent to two additional PPHP1596A PPHP1597A, placed in the tilt-back, wedge positions for use as floor monitors.

DJ System with Passive Subwoofers

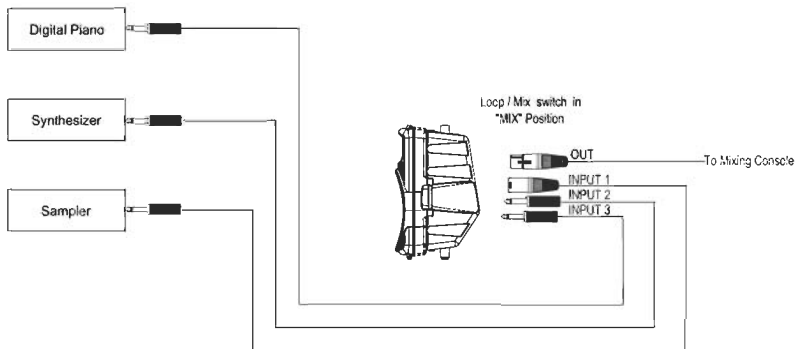
This system combines a pair of PPHP1596A PPHP1597A powered speakers with externally powered subwoofers for extra power at very low frequencies. Note that many, but not all DJ mixers use RCA (phono) outputs as illustrated. Your DJ mixer may use another type of connector.



*Recommended crossover frequency = 80-150Hz. (Season to taste)

Keyboard Amplification and Mixing

In this set-up, the 3-channel mixer of the PPHP1596A PPHP1597A combines the outputs from a digital piano, a synthesizer and a sampler. The "LOOP / MIX" switch is set to the "MIX" position and the "out" connector sends the combined signal to the main mixing console.



REFERENCE

Connections - Balanced and Unbalanced

There are two basic types of audio system interconnections for audio signals: Balanced and Unbalanced. Your PPHP1596A PPHP1597A can accept either type of input.

Balanced Lines

In audio, a balanced line is a three-conductor system in which the two signal wires carry an equal, but opposite voltage with respect to the ground wire. The ground wire acts only as a shield and does not carry any audio signal current. Outside interference (such as RFI-Radio Frequency Interference) is either shielded from the internal signal conductor, or if it gets into the cable is cancelled out by the opposite signals at the receiving end. Balanced connections are preferred for any longer cable runs.

Unbalanced Lines

Unbalanced cable is a two-wire system where the shield (ground wire) acts as one of the current carrying signal conductors. The center conductor enclosed by the shield is commonly known as the "hot" conductor. Unbalanced audio cables do not reject noise as well as balanced lines. Unbalanced lines are typical in home hi-fi type systems and on the outputs of electronic musical instruments. These work well if the distance between the components is short, the signal level is relatively high and all of the electronics used in the system are same AC service.

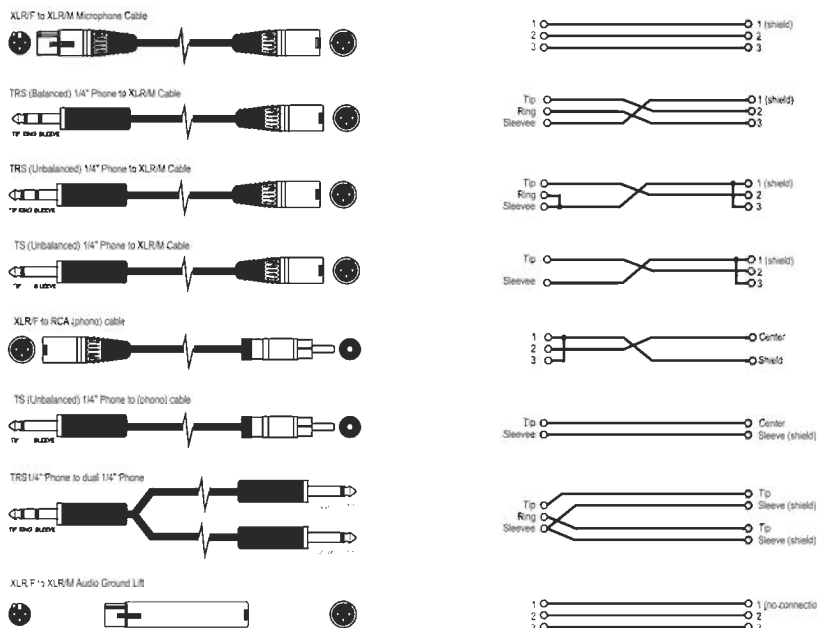
Unbalanced Sources to PPHP1596A PPHP1597A Powered Loudspeakers

If you need to connect your PPHP1596A PPHP1597A speakers to an unbalanced source you have two options:

- Use the LINE 2 and LINE 3 connectors. These inputs are balanced but will accept unbalanced inputs without the need for any special adapters.
- Use an adapter or special cable (see the section "Cables and Connectors")

Cables and Connectors

| | |
|---|--|
| XLR/F to XLR/M Microphone Cable | The standard cable for interconnection of microphone and line level signal in professional audio systems. Microphone to mixer Microphone to PPHP1596A PPHP1597A INPUT 1 Professional audio mixer to PPHP1596A PPHP1597A INPUT 1 "Daisy chaining" PPHP1596A PPHP1597A speaker systems |
| TRS (Balanced) 1/4" Phone to XLR/M | For connecting balanced devices with 1/4" connector to PPHP1596A PPHP1597A XLR input. |
| TRS (Unbalanced) 1/4" Phone to XLR/M | For connection of instruments with unbalanced outputs to balanced XLR input . Sources (signal processors, electronic instruments) with 1/4" unbalanced outputs to ,processors, and powered speakers with balanced XLR/F inputs. |
| TS (Unbalanced) 1/4" Phone to XLR/M | This cable is electrically identical to "TRS(unbalanced) 1/4" Phone to XLR/M above and may be used interchangeably. |
| XLR/F to RCA(phono) cable | Connects consumer audio products and some DJ mixer outputs to professional audio equipment inputs. |
| TS (Unbalanced) 1/4" Phone to (phono) cable | Connects outputs of consumer audio equipment to unbalanced line inputs of PPHP1596A PPHP1597A and mixers Connects unbalanced line outputs to many mixers to the inputs of consumer audio recorder. |
| TRS 1/4" Phone to dual 1/4" Phone | Splits a stereo output into separate left/right signals. Connects stereo electric guitar to two unbalanced audio inputs. Connects a headphone output to two unbalanced audio inputs. Change to a TRS mini-phone to connect to the output of portable CD players and computer sound cards to a mixer or powered speakers. Also used to connect signal processors to the "insert" of many mixing consoles. |
| XLR/F to XLR/M Audio Ground Lift | Used to "telescope" a ground to eliminate hum caused by "ground loops". For use only with balanced inputs and outputs. |



Loudspeaker Placement and Mounting

The following guidelines will help you achieve optimum sound wherever you use your PPHP1596A PPHP1597A loudspeakers:

Raise the speakers as high as possible. For best results try to get the high frequency horn at least 2 to 4 feet above the heads of the audience. If the speakers are too low, the people in the back of the audience will not receive the best quality of sound.

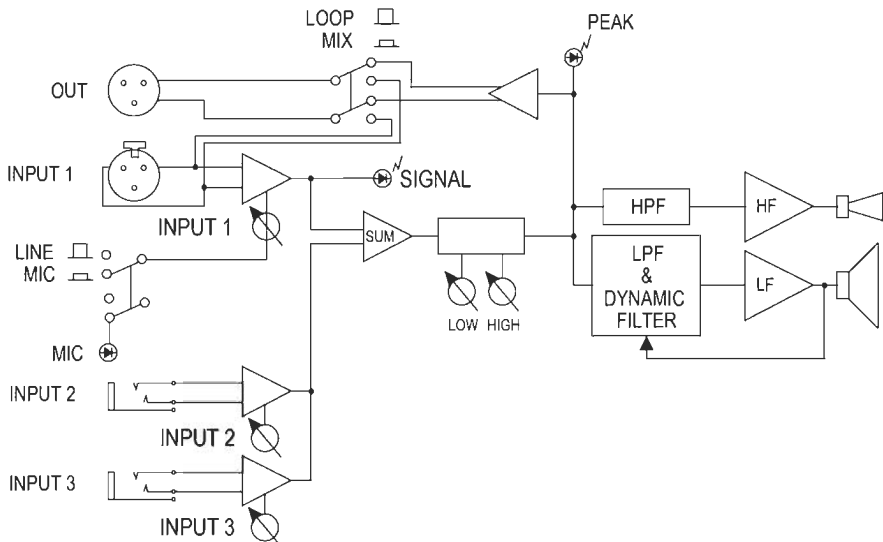
Place the speakers between the microphones and the audience. Feedback occurs when the microphones pick up sound from the speakers and "feed" the sound back through the sound system. If space is limited, point the speakers away from the microphones to reduce feedback.

Locate the speakers away from turntables. Low-frequency feedback occurs when the output of the speaker is picked up by the tone arm of the turntable and is re-amplified. A heavy, solid turntable base and shock mounting can also reduce this type of feedback in DJ applications.

Use more speakers in large or highly reverberant spaces. Spreading speakers throughout these spaces will produce much better sound than trying to compensate with loudness level or equalization. For very long distances, the use of another set of speakers on a delay is recommended.

Stand speakers upright for PA-Tilt the speakers back for stage monitoring. Upright stance Provides even Coverage over a wide,PPHP1596A PPHP1597A speakers are also designed with two slanted Positions for stage monitoring applications.

BLOCK DIAGRAM



TROUBLESHOOTING

| Symptom | Likely Cause | What to do |
|--|---|--|
| No sound | Speaker not connected to active AC power | Verify that speaker is connected and that the circuit is on |
| | Power not switched on | Switch on power and verify that power LED is on |
| No sound, speaker is connected to working AC power but won't come on. | Speaker power cable is faulty or improperly connected. | <ul style="list-style-type: none"> ● Re-seat the power cable at both ends. ● Substitute a known-good power cable |
| | Blown fuse | There are no user-serviceable fuses in the PPHP1596A PPHP1597A. Take your speaker to a competent servicer. |
| NO sound. Speaker comes on. | Signal source(mixer, instrument, etc.) Is not sending. | <ul style="list-style-type: none"> ● Check VU meters on the source mixer. ● Verify that the tape or CD is playing. ● Use headphones to verify that the instrument is actually sending an audio signal |
| | Faulty cables and connections | <ul style="list-style-type: none"> ● Disconnect and re-seat signal cables. Replace suspected cable with a known-good cable |
| No sound with microphone connected directly to the MIC / LINE 1 input | Microphone requires phantom power | The PPHP1596A PPHP1597A does not supply phantom power. Switch to a dynamic microphone, use a battery in the microphone (if possible), use an external phantom power supply. |
| Signal sounds distorted and very loud, PEAK light is lit most of the time. | Excessive input signal, trying to exceed the capabilities of the speakers | <ul style="list-style-type: none"> ● Reduce the output level of the source. ● Turn down the level controls on the speaker. ● Use additional speakers. |
| Signal sounds distorted even at moderate volumes, PEAK light is not lit. | Mixer or other source is overdriven | <p>Review the Owner's Manual for your mixer and adjust controls as needed.</p> <ul style="list-style-type: none"> ● Input sensitivity (gain) ● Channel faders ● Master faders <p>Once this is done, review the instructions in the Quick Start section of this guide.</p> |
| Lots of hiss in the sound, the mixer controls are at very low settings. | Improper gain structure | <ul style="list-style-type: none"> ● Make sure that the MIC/LINE switch is in the LINE (disengaged) position. ● Review the level settings at speaker. <p>Review the Owner's Manual for your mixer and adjust controls as needed.</p> <ul style="list-style-type: none"> ● Input sensitivity (gain) ● Channel faders ● Master faders |

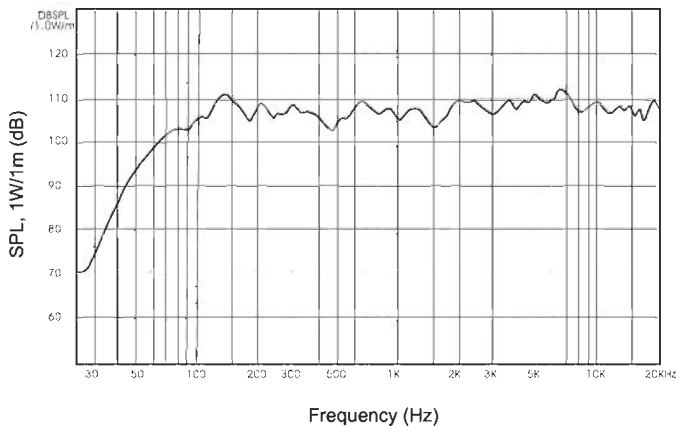
| | | |
|--|--|--|
| Noise or hiss heard at output | Noisy source device | Disconnect the devices that are connected to your speaker one at a time. If the noise goes away, the problem is with the source or the connecting cable. |
| Hum or Buzz that increases or decreases when the mixer level controls are moved. | Improper A/C ground or faulty equipment connected to mixer input | Disconnect or mute channels one at a time to isolate the problem. Refer to the owner's manual of the faulty equipment for troubleshooting help. |
| | Faulty cable between source equipment and mixer | Substitute a known-good cable for the suspected faulty cable. |
| Hum or Buzz | Improper A/C grounding, ground loops | <ul style="list-style-type: none"> ● "Telescope" the audio ground by using an XLR/F to XLR/M adapter on one end. ● Re-route audio cables away from AC power and lighting cables. |
| | Excessively long unbalanced cable run | <ul style="list-style-type: none"> ● Use the balanced outputs (if available) of your mixer or source equipment to drive your speakers. ● Use a "DI" (direct injection) box to convert your unbalanced equipment output to a balanced output. |
| | Improper system gain structure | Reduce the INPUT 1, 2 and 3 controls and increase the output level of your source devices. |
| The inputs from INPUT 2 and INPUT 3 aren't coming out of the OUT connector | MIX/LOOP SWITCH set improperly | Set the MIX/LOOP SWITCH to the MIX OUT position (depressed). See the CAUTION in the "Switches" section of this manual. |
| The speaker connected to the OUT connector goes up in volume when I adjust the INPUT 1 control on the first speaker. | MIXED/LOOP SWITCH set improperly | Disengage the MIX OUT switch. See the CAUTION in the down in "Switches" section of this manual. |
| Speakers feed back and howl when the microphone volume is turned up | Microphones are pointed into the speakers | Move the speakers so they do not point the microphone's pickup pattern. |
| | Equalizer settings are incorrect | Locate the feedback frequency and reduce it using the mixer EQ or an external equalizer. |
| | Excessive gain | Reduce the gain at the mixer and move the microphone closer to the sound source. |

Specifications

2-Way 15" Powered Speaker

- Rugged, Light-Weight Co-Polymer Enclosure
- Multi-angle enclosure for Front of House or Stage Monitor Application
- Two Separate Amps w/ Toroidal Transformers
- Built in 3-Input Mixer w/ 2 Band EQ
- Intergrated 35mm Speaker Mount
- Amplifier Power LF: 350W RMS 700W Peak
- Amplifier Power HF: 175W RMS 350W Peak
- Active built-in crossover: 2KHz Crossover Frequency
- LF Driver: 15" Woofer w/Dual Neodymium Magnets and 2" Kapton VC
- HF Driver: 1.75" Titanium Compression Driver, Ferro-Fluid Cooled
- Frequency Response (± 3 dB): 35Hz-20kHz
- 1W@1M SPL: 108dB
- Impedence: 8 Ohms
- Input 1: XLR/F Balanced (-20dBu for Rated Output)
- Inputs 2 & 3: 1/4" TRS Balanced (-21 dBu to +20 dBu for Rated Output)
- Loop/Mix Out: XLR/M Balanced
- Output Level: +30 dBu (peak), Loop/Mix switch at Mix Position
- Limiting: LF Amplifier Controlled by Dynamic Filter
- 2 Band EQ: HF Shelving ± 15 dB @ 30K Hz, LF Shelving ± 15 dB @ 75Hz
- AC Input: 115/230V AC
- Dimensions: 27.5"(H) x 17.5"(W) x 14.1"(D)
- Weight: 35.2 lb

Frequency Response



Place
Stamp
Here



Limited Warranty

All PYLE PRO products are carefully constructed and tested before shipment. Units purchased in the USA are warranted to be free of defects in material and workmanship for one (1) year from the date of purchase. This warranty is limited to the original retail purchaser of the amplifier.

Should the unit fail due to factory defects in material or workmanship, your unit will be repaired or replaced at the sole discretion of PYLE.

To obtain warranty service, you must first call our Consumer Return Hotline at (718) 236-6948 to obtain a Return Authorization Number. This R.A. # must appear on the outside of your package and on all paperwork relating to your return.

When returning the unit to us for warranty service, it must be carefully packed and shipped, prepaid, to:



R.A.# _____
PYLE PRO Service Center
1600 63rd Street
Brooklyn, NY 11204

You must also include the following items with your return:

A copy of your sales receipt or other proof of purchase
A brief letter, indicating the problem you are experiencing
with the product

Include in your letter your return address, daytime phone
number and R.A. number

Also include a check or money order for \$30.00 for return
shipping, handling and insurance, or provide your Visa/MC
number with expiration date.

Our obligation under this warranty is limited to the repair or replacement of the defective unit when it is returned to us prepaid. This warranty will be considered void if the unit was tampered with, improperly serviced or subject to misuse, neglect or accidental damage.

▼ Please complete warranty card, detach and return ▼

Thank you for purchasing this PYLE product. To activate your warranty, please mail this card within 10 days.

warranty registration card

PYLE PRO AMPLIFIERS

Name _____

Address _____

City, State ZIP _____

Model No. _____

Serial # (if available) _____

Date of Purchase _____

Purchased at:

Music Products Store

Sound Contractor/Installer

Mail Order

Catalog Merchandiser

Other _____