

FL-8 FL-10 FL-12

Thank you for selecting Phase Technology speakers. We know there are a wide variety of choices available today, and we sincerely appreciate your purchase of our product. Phase Technology speakers are built to exacting standards and will provide many years of listening enjoyment.



Power FL-10

Our speakers are the result of over five decades of designing and manufacturing what many consider the finest sound reproduction products available. We hold several key patents in loudspeaker technology including the soft-dome tweeter. Our mission, our passion is to constantly advance the art and science of accurate audio reproduction. Our dedication insures your new speakers will accurately reproduce all the impact, detail and delicacy of today's digital technology.

Regardless of application, serious audiophile listening or home theater, we recommend that you take the time to read this manual thoroughly before connecting speakers to your amplifier or receiver. In the highly unlikely event that you should experience a problem with set-up or operation, please contact one of our carefully chosen dealers for assistance, or contact us directly.

We trust that your new Phase Technology speakers will enrich your enjoyment of music and movies beyond your expectations.

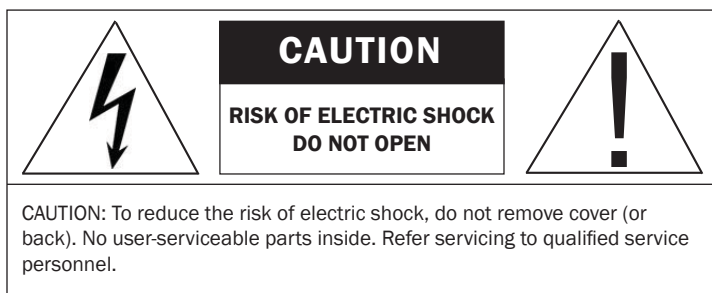
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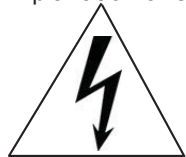
POWER FL SERIES FEATURES:

- 250 watt amplifier
- Signal sensing auto turn on/off
- Gain control
- Phase switch
- Variable crossover
- Line/level inputs
- LFE input
- Oversized surround for ultra long excursion
- Servo-control, which monitors and adjusts output for dynamic and undistorted response

SAFETY INSTRUCTIONS



Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of un-insulated "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 appliance.

- 1. Read Instructions** - All the safety and operating instructions should be read before the appliance is operated.
- 2. Retain Instructions** - The safety and operating instructions should be retained for future reference.
- 3. Heed Warnings** - All warnings on the appliance and in the operating instructions should be adhered to.
- 4. Follow Instructions** - All operating and other instructions should be followed.
- 5. Water and Moisture** - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
- 6. Carts and Stands** - The appliance should be used only with a cart or stand that is recommended by the manufacturer.

PORTABLE CART WARNING



- 7. Wall or Ceiling Mounting** - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 8. Ventilation** - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impeded the flow of air through the ventilation openings.

- 9. Heat** - The appliance should be situated away from heat sources such as radiators, stoves, or other appliances that produce heat.
- 10. Power Source** - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- 11. Power Cord Protection** - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed up or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- 12. Cleaning** - The appliance should be cleaned only as recommended by the manufacturer.
- 13. Nonuse Periods** - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- 14. Object and Liquid Entry** - Care should be taken so that neither objects fall nor liquids spill into the inside of the appliance.
- 15. Damage Requiring Service** - The application should be serviced by qualified service personnel when:
 - a. the power supply cord or the plug has been damaged,
 - b. Objects have fallen onto or liquid has been spilled into the appliance,
 - c. the appliance has been exposed to rain,
 - d. the appliance does not appear to operate normally or exhibits a marked change in performance, or
 - e. the appliance has been dropped or the cabinet damaged.
- 16. Servicing** - The user should not attempt to service the appliance beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.
- 17. Grounding or Polarization** - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

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 PRESE ET POUSSER JUSQU'AU FOND.

PLACEMENT

Subwoofers offer the greatest variety of placement options since very low frequencies are essentially non-directional. That is, the human ear cannot determine where low frequencies originate and, thus, speaker placement is open to a wide variety of choices. It is recommended that you place the subwoofer along the same wall as your front speakers. If using one subwoofer, corner placement will give you the most low frequency output. If using two subwoofers, they should be placed either next to the front left and right speakers, both front corners, or one in the corner and one 1/3 of the way along the front wall from the corner. Each room is different. Experiment with these options until you get the best results.

HOOKING UP YOUR POWER FL SUBWOOFER

Option 1: Low Level Setup

This is the recommended method for those amplifiers and receivers that are equipped with a “Subwoofer Out” or “Pre-Amp Out” connection. Virtually all audio/video receivers have this connection clearly marked on the rear panel. Run a dedicated interconnect cable from the subwoofer output jack to the LFE input on the subwoofer. In this setup, you will be using the internal crossover on your processor.

You may also connect a single output amplifier/receiver to both low level inputs by using an RCA-Type “Y” connector at the back of the amplifier and running two cables to the subwoofer inputs.

Note: Many more home theater receivers have a built-in processor to control how much bass is sent to the speakers. Please read the instruction manual for your own electronics and adjust these settings prior to playing your new subwoofer.

Option 2: High Level Input Setup

If your amplifier or receiver does not have a dedicated subwoofer output, it will be necessary to connect your new subwoofer directly to the speaker output terminals on the back of the unit. In this scenario, you will be running high quality speaker wires from the left and right front outputs of your amplifier/receiver to the high level inputs on the subwoofer. You will then need a second set of wires to carry the signal from the subwoofer back to the main speakers.

Note: Many home theater receivers/amplifiers have a “Bass Management” feature that controls how the bass is processed/delivered to the subwoofers. Look carefully if your amplifier or receiver’s instruction manual for details on how to adjust this feature for your system. Then adjust the subwoofer controls for best sound.

POWER FL SERIES AMPLIFIER PANEL

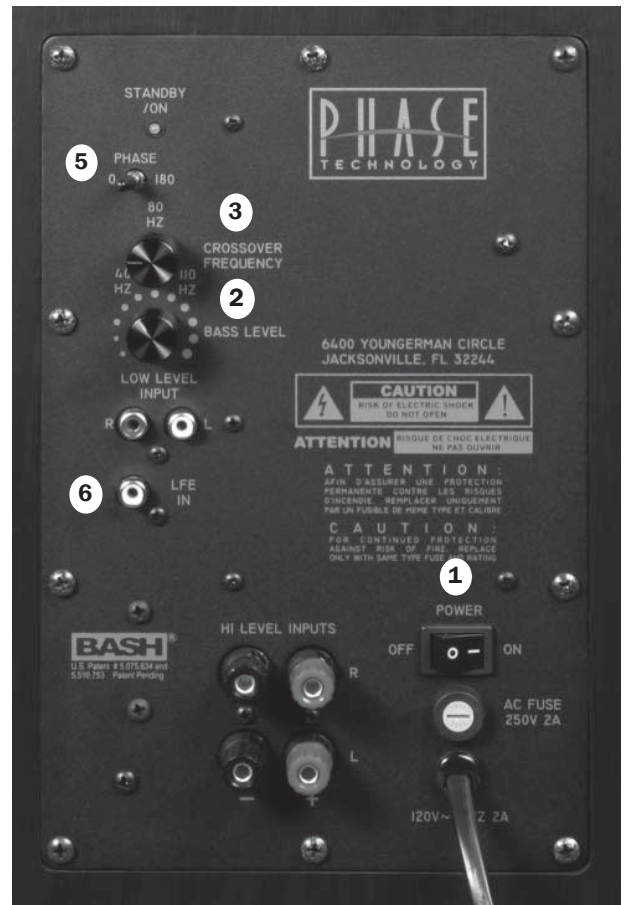
(See Power FL Amplifier Panel Image on Next Page)

1. **Power/Auto ON/OFF:** This switch, when left “ON,” automatically activates the subwoofer when an audio signal is detected and shuts the subwoofer off after approximately ten (10) minutes of silence.
2. **Level/Volume Control:** Adjusts the volume of bass energy allowing you to customize overall tonal balance to your individual room acoustics and personal taste.
3. **Crossover Control:** This adjustment varies the point at which the subwoofer takes over the task of creating low bass frequencies from the rest of the audio signal permitting additional fine tuning of the total system. A little experimentation with this control will allow you to match the performance of the subwoofer to the rest of your speakers resulting in extraordinary, accurate, deep bass response. This control is bypassed when the LFE input is used.

4. Servo Control: This features automatically protects the subwoofer against damage which can be caused by excessive amplifier power and/or distortion. Phase Tech’s servo control system constantly monitors the incoming signal. This active protection circuitry provides listeners with the full dynamic range of sound while protecting the subwoofer from potential damage.

5. Phase Control: This adjustment matches the phase - the in and out movement of speaker cones - to that of your main speakers. Adjusting this control provides the best possible bass frequency response and provides a method by which to match the performance of all speakers in the system.

6. LFE Input: The Low Frequency Effect (LFE) input or switch built into Phase Technology’s subwoofers bypasses the built-in crossover network, allowing accurate control of the subwoofer by A/V receivers equipped with their own “Subwoofer Out” connection. Depending on the model of your subwoofer, there will be an LFE input or an FFE switch. To use the LFE switch, connect your “Subwoofer Out” from the receiver to the “Low Level Input” on the subwoofer and turn the LFE switch on.



Power FL Subwoofer Amplifier

TROUBLESHOOTING

No Sound

1. Verify that all components are plugged in and turned on.
2. Check all speaker wires and audio cables for loose connections.
3. Check to see if you have selected a source on your amplifier to which nothing is connected.

Sound but no Bass

1. Verify that the subwoofer is plugged into an AC outlet and the power is switched on.
2. Check that the speaker wire or cable going from the amplifier or receiver to the subwoofer is securely fastened.
3. Check the volume control of the subwoofer. Increase if necessary.

SPECIFICATIONS

	Power FL-8	Power FL-10	Power FL-12
Woofer	8" ultra long throw with bass radiator	10" ultra long throw with bass radiator	12" ultra long throw with bass radiator
Frequency	32 Hz - 150 Hz	26 Hz-150 Hz	25 Hz-150 Hz
Amp Power (Watts, continuous)	250	250	250
Amp Power (Watts, peak)	400	400	400
Dimensions*	11 1/8" W x 14 5/8" H x 14 3/4" D	12 1/2" W x 16 3/8" H x 18" D	15 1/8" W x 18" H x 20 3/4" D
Finish	Black Rosewood Laminate	Black Rosewood Laminate	Black Rosewood Laminate

*Add 1" to depth for connection.