

PC-0.5, PC-1.5, PC-3.5, PC-33.5, PC-9.5, PC-SURR-II

Thank you for choosing 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.

Our speakers are the result of over five decades of designing and manufacturing. We hold many 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 authorized 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.



PC-0.5

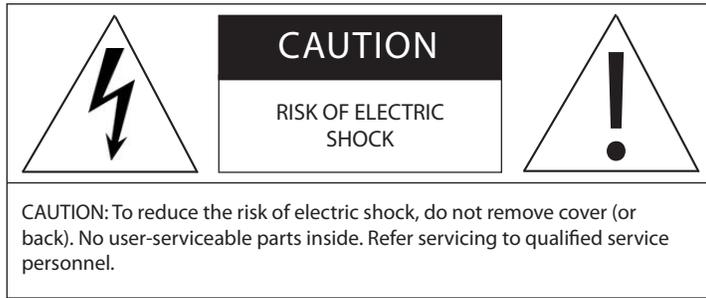
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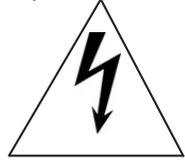
PC SERIES FEATURES:

- Handcrafted quality
- 2-Way, 3-Way, and 4-Way speakers
- RPF/Glass/Kevlar flat piston woofers
- Soft dome tweeter
- Absolute Phase™ Crossovers
- Magnetic shielding
- Key-hole style mounting bracket
- Black gloss, black satin, and natural cherry finishes

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 impede 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.

GETTING STARTED AND PRECAUTIONARY NOTES

For proper connection and therefore full enjoyment of your new Phase Technology speakers, we encourage you to read this owners' manual thoroughly, even if you are very familiar with installing speakers and home entertainment equipment.

Speaker placement is very subjective. Placement follows the guidelines for the developers of multi-channel home entertainment systems, yet is also guided by personal preferences. The proper spacing, location and adjustment of front, rear and center-channel speakers as well as subwoofers are critical for complete enjoyment of your new speakers. This manual covers these topics thoroughly.

Before connecting your new speakers or other system components, turn the system power off and unplug your amplifier to avoid any possibility of damage from power surges or unbalanced loads before the system is properly connected.

Observe speaker polarity carefully! Every cable, speaker terminal and amplifier connection are clearly marked to show their positive (+) and negative (-) polarities. For ideal system performance, always connect the positive side of the cable (marked with a stripe, color and /or other indicator) to the positive terminals on your speakers and amplifier and the negative side of the cable to the negative terminals.

Amplifier selection is critical to your enjoyment of your new speakers. If you are considering upgrading your current component amplifier or multi-function receiver, we suggest purchasing as much power as your budget can afford. It will always be preferable to have an affordable high-powered model with fewer "bells and whistles" than a lower-powered model straining to operate near its power limits.

High volume settings that produce audible distortion – indicating an under-powered amplifier – could eventually damage your speakers and your amplifier.

Begin and end listening sessions at low volume levels so you will not power up your system the next time with possibly harmful high voltages. A damaging surge also could result if you change the input source (from FM tuner to CD player, for example) at high volume levels.

If you suspect that one channel of your amplifier has failed, have it repaired immediately by your dealer. Damage to your speakers could occur if you switch between the good and defective channels.

TWO-CHANNEL (STEREO) SPEAKERS

Phase Technology audiophile speaker pairs for stereo applications can be affected by listening room geometry, furnishings and fixtures. Experimentation with placing your new speakers in your unique listening environment will dictate how you arrive at the final answer.

We recommend starting the positioning process by selecting a favorite recording to use as the reference source. Place your new stereo speakers 1-3 feet away from rear and side walls and 6-8 feet apart. With bookshelf models, the tweeters (small, high-frequency drivers) should be positioned at about ear level when you're seated in your favorite listening position.

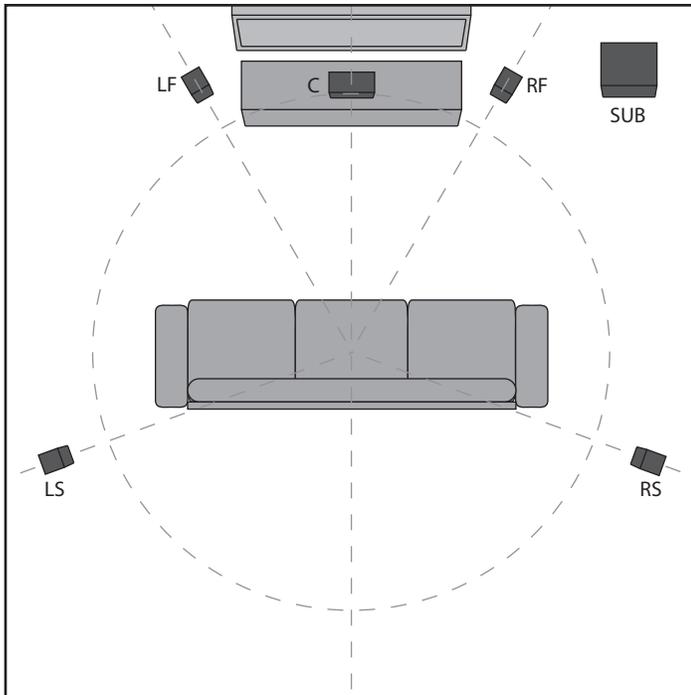
In most rectangular rooms, the speakers will sound best when placed along the short wall; but again, experimentation will provide the best answer. Move the speakers around slightly to determine any changes in sound balance and stereo imaging. Even try angling the speakers slightly toward your listening area. You may be surprised by the differences you will hear with even the slightest adjustments.

Owners of Phase Technology speakers equipped with the company's acclaimed variable-axis soft dome tweeter have additional latitude in speaker placement. Please see the Specifications chart on page 8.

HOME THEATER SYSTEMS SPEAKER PLACEMENT

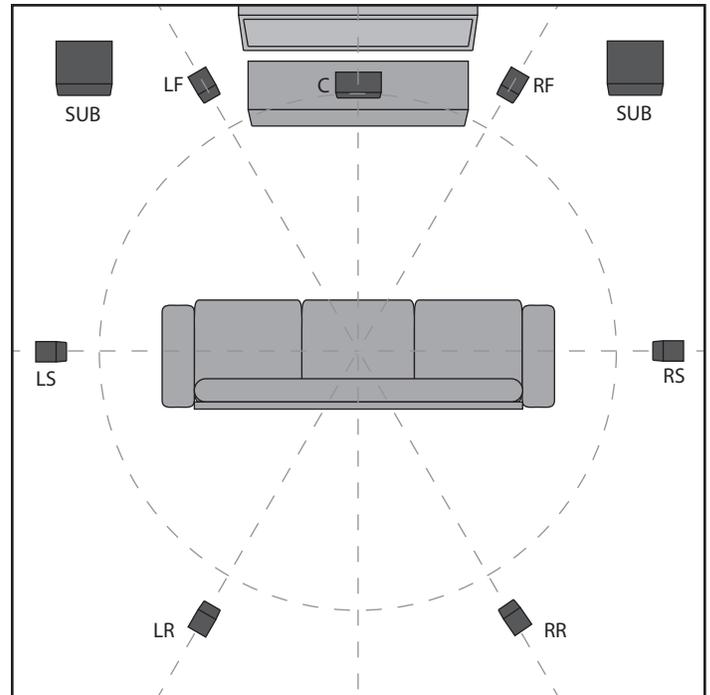
Today's digital multi-channel home theater technology has elevated the art of "surround sound" to reproduce the movie theater experience in your own home. Speaker requirements and placement are vitally important in reproducing these multi-media effects.

Two front speakers (left and right), two surround speakers (left and right), a center-channel speaker, and a subwoofer define the minimum arrangement for modern multi-channel systems. Placement of speakers in your room will impact the final listening experience. To position your speakers, there are some general guidelines that take room size, shape, and fixtures and furnishings into account. Use the following illustrations as a general guide for speaker placement in a typical home theater system.



5.1 HOME THEATER SYSTEM

In a 5.1 home theater system, the center channel (C) should be placed at 0° directly below or above the video screen, the left front (LF) and right front (RF) speakers should be placed at 30° from the listening area, and the left and right surrounds (LS and RS) should be placed at 110° . All five speakers should be placed at or near ear level.



7.2 HOME THEATER SYSTEM

In a 7.2 home theater system, the center channel (C) should be placed at 0° directly below or above the video screen, the left front (LF) and right front (RF) speakers should be placed at 30° from the listening area, and the left and right surrounds (LS and RS) should be placed at 90° . The left rear (LR) and right rear (RR) speakers should be placed at 150° . All seven speakers should be placed at or near ear level.

Front speakers should be placed 6-8 feet apart (or on the sides of your screen if your screen is wider) to fully separate the left and right channels. Whether placed on speaker stands or on shelves, your speakers should be at or slightly above ear level.

Rear surround speakers also should be placed at or slightly above your listening position for the best reproduction of surround-sound effects. Ideally, they should be facing into your favorite listening position from either side of the room

Center speaker placement should be, if possible, directly on top of or under your TV monitor or projection TV screen. Center speakers should be placed in a horizontal orientation, directly below (or above) the center of your video screen. This correctly positions the critical sound track information (usually dialogue) that filmmakers direct to the center channel. Phase Technology center speakers are magnetically shielded so that they will not interfere with the performance of a video monitor (TV). The two center channel speakers in the Premier Collection (PC-3.5 and PC-33.5) both include a table-top stand for placement on tables or shelves.

PC-SURROUND II PLACEMENT AND MOUNTING

The PC Surround rear-effects home-theater speaker offers you wide latitude of acoustic performance, system options and speaker placement (including wall, shelf and stand mounting.) Using the toggle switch located adjacent to the speaker terminals on the rear of the cabinet, the speaker can be changed from bipolar to dipolar mode to suit personal listening preferences.

In bipolar mode, the PC Surround serves as a full range speaker system to meet the recommended technical specifications for rear surround speakers in a Dolby Digital and DTS 5.1-7.2 home theater systems. As a dipolar speaker, it offers the diffused, subtle effect of out-of-phase drivers with a strong on-axis null polar pattern for more diffused surround effects.

In order for this effect to work in proper phase with the other speakers in your home theater they need to be placed in the proper orientation. Whether they are mounted on a stand, shelf or hung upside down on a wall the direction the arrows point on the rear of the cabinets will help you orient the surround speakers properly. For 5.1 systems when placed on a sidewall the arrows should point forward toward the front main speakers. When placed on a rear wall the speakers should be oriented so the arrows point away from each other. For 7.1 systems the rear speakers should be placed so the arrows are pointing toward each other. The side speakers remain as mentioned above.

The convenient “Key-hole” style mounting bracket on the rear of the speaker can be used for surface mounting with the appropriate mounting anchor. Please be sure that the anchor has a #8 or #10 screw head on it to properly fit the hanger. Other types of standard speaker mounts may be used with the speakers as well. Please check with your Phase Tech dealer for recommendations. *Note: It is very important whichever method you use to be certain the mounting screws or anchors will support the weight of the speaker. Self-stick rubber bumpers are provided with the PC Surround. A bumper should be attached to each rear corner of the cabinet. These bumpers space the speaker away from the wall to allow clearance for your speaker wires.*

SPEAKER CONNECTIONS Please refer to the diagram on the following page for speaker connections.

The following instructions apply whether you are using a separate amplifier or Home Theater receiver. For simplicity we will use the term “amplifier” throughout this manual to mean both. With system power off and your amplifier unplugged, please follow these steps:

Special Note: Observe Speaker Polarity Carefully!

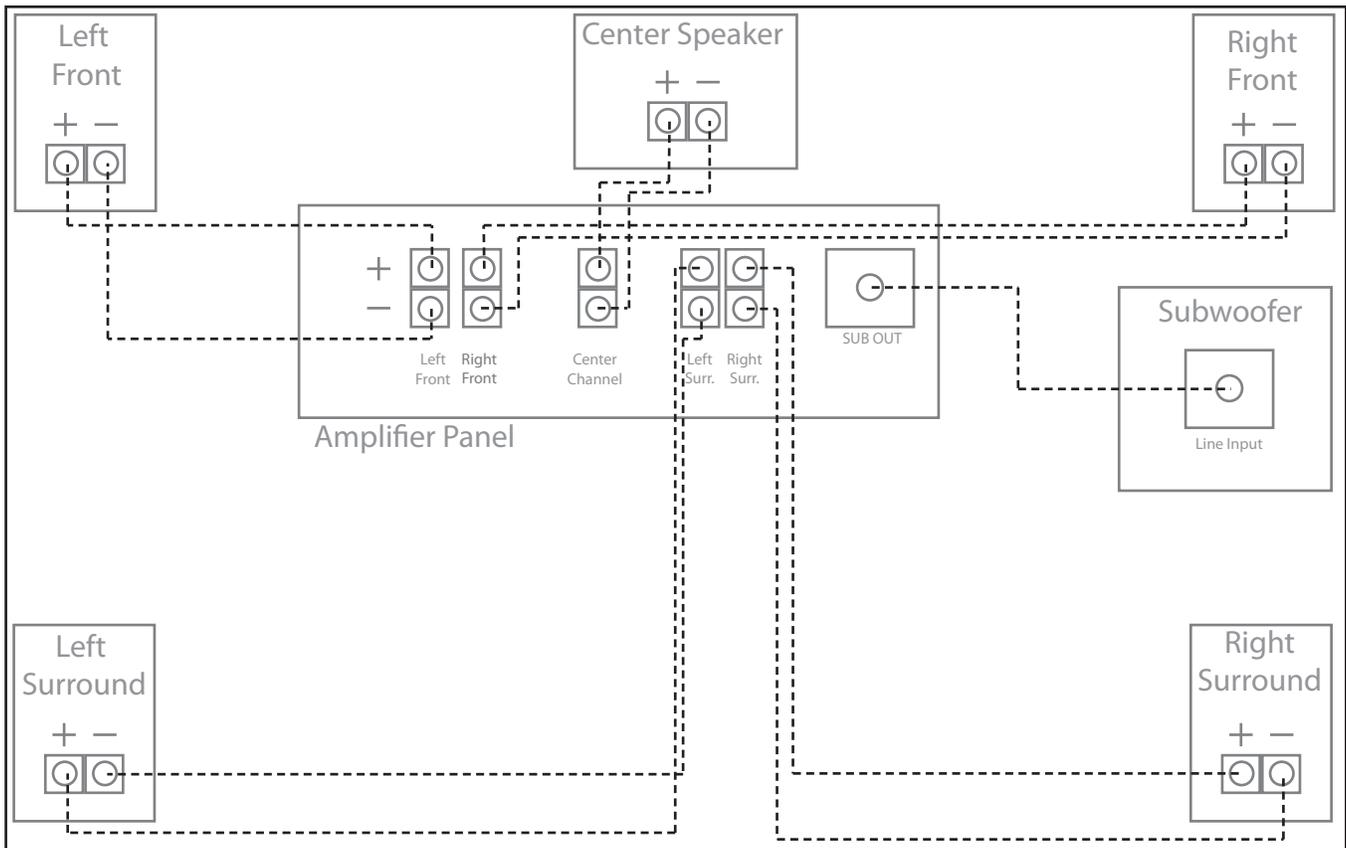
Every cable, speaker and amplifier is clearly marked to show their positive (+) and negative (-) terminals. Amps and speakers may use some combination of these symbols and/or colors to indicate positive (usually red) and negative (usually black or white) connections. One strand of your cable will also be ridged and/or marked with a colored line or other indicator on the positive side. For proper polarity and, thus, ideal system performance, always connect the positive side of the cable to the positive terminals on your speakers and amplifier and the negative side of the cable to the negative terminals.

Front Speakers: The pair of front speaker connections (left and right) on your amplifier will be labeled “Front” or “Main.” Connect the speaker cables for your left and right front speakers using these terminals and then connect the cables to the front satellites. Observe positive and negative polarities.

Center Speaker: The center speaker connections on your amplifier will be labeled “Center” or “Center Channel.” Connect the speaker cables for your center channel speaker using these terminals and then connect the cables to the center speaker. Observe positive and negative polarities.

Surround Speakers: The pair of surround connections (left and right) on your amplifier will be labeled “Surround.” Connect the speaker cables for your left and right surround speakers using these terminals and then connect the cables to surround satellite speakers. Observe positive and negative polarities.

Rear Speakers (used in a 7.1 or 7.2 system): The pair of rear connections (left and right) on your amplifier will be labeled “Rear.” Connect the speaker cables for your left and right rear speakers using these terminals and then connect the cables to the rear satellite speakers. Observe positive and negative polarities.



SPECIAL PRODUCT FEATURES

Adjusting Variable-Axis, Soft-Dome Tweeters

Some Phase Technology speakers feature the company's acclaimed variable-axis soft-dome tweeter (refer to the model specifications on page 8 of this manual) offering even greater latitude in selecting speaker locations and listening positions.

This revolutionary tweeter can be adjusted by hand to direct the high frequencies towards a specific listening area for optimal tonal balance and channel separation. This enables owners of these Phase Technology models to place the speakers where they look or fit best and then aim the tweeter for best effect.

When adjusting these units, be careful to press on the outer rims only, avoiding contact with the center, or soft dome, of the speaker. A series of adjustments may be necessary to achieve the ideal clarity and smoothness of the high frequencies that the variable-axis soft-dome tweeter was designed to present.

Bi-Wired Connections

Some Phase Technology premium audiophile speakers are equipped for be-wiring, with four speaker terminals instead of two. This may enhance speaker performance by using an additional pair of speaker cables.

In order to bi-wire these speakers, remove the gold-plated strips between the speaker terminals and connect two cables between your amplifier's positive output terminal and the two positive (red) terminals on the speaker. Then connect the other two cables between the amp's negative output terminal and the two negative (black) terminals on the speakers.

If you chose not to bi-wire your speakers, do not remove the metal strips between the speaker terminals. Connect each cable in the standard manner, with one cable each between the positive and negative speaker terminals and your amplifier.

Floor Spikes

Floor spikes may have been provided with your new Phase Technology speakers to steady the speaker cabinets, especially on carpeting and uneven floor surfaces. Because most speakers tend to rock back and forth in small increments due to the force of the in/out motions of speaker drivers, these movements can affect the speakers' performance.

Attach the floor spikes by screwing them into the pre-drilled holes in the base of the speaker and tighten the nuts securely. The sharp points will penetrate the carpet to make a more solid contact with the underlying floor surface.

If your floor is not rigid, the spikes may actually add to the rocking motion, so we recommend you audition the speakers with and without the spikes inserted to see if you discover a personal preference in the sound quality.

Be especially careful when moving speaker cabinets with the spikes attached, as the points could damage carpeting or scratch floors.

CARING FOR YOUR SPEAKERS

All Phase Technology speakers are finished with a high degree of craftsmanship in either hand polished paint or vinyl laminates. We recommend using a lint-free rag with a small amount of glass cleaner to maintain the long-lasting beauty of the finish. Avoid products containing silicones, oils, oil derivatives, or solvents. Enclosures finished in vinyl laminates may be cleaned with a damp cloth as necessary.

MAINTENANCE AND SERVICE

Because of Phase Technology's uncompromising quality control programs, it's unlikely that your speakers will ever need service if connected and used as outlined in this Owners' Manual. In the unlikely event that a problem does occur, please contact your Phase Technology dealer. Your dealer has the necessary factory-authorized parts and trained technicians to quickly restore your speaker to its original performance specifications.

WARRANTY

LIMITED WARRANTY

Phase Technology warrants its loudspeakers to be free from defects in material and workmanship for a period of ten (10) years for speaker product and three (3) years for the electronic components to the original purchaser. Purchase must be made from an authorized Phase Technology dealer.

This warranty does not cover service or parts to repair damage caused by misuse, abuse, damage while in transit, alterations, unauthorized repairs, failure to follow instructions, fire, flood or any other cause beyond the reasonable control of Phase Technology. Defects in speaker cabinets or grilles must be brought to the attention of your dealer immediately after purchase. This warranty will be void if the products' serial number has been altered or removed.

To obtain warranty service, defective product must be shipped in its original carton or equivalent together with original invoice or bill of sale, insured and prepaid to your authorized Phase Technology dealer or the factory when warranty service is requested.

If you choose to return the defective product to the factory you must first call us at (888) phase-tk to obtain a Return Authorization number prior to shipping. Product repaired under this warranty will be returned to you freight collect.

SPECIFICATIONS PC-0.5**PC-1.5****PC-9.5**

Woofer	5.25" RPF/Glass/Kevlar flat piston	6.5" RPF/Glass/Kevlar flat piston	(3) 6.5" RPF/Glass/Kevlar flat piston
Midrange	N/A	N/A	1.5" woven, synthetic soft dome
Tweeter	1" woven, synthetic soft dome	1" woven, synthetic soft dome	1" woven, synthetic soft dome
Impedance	4 ohms	4 ohms	4 ohms
Frequency Response	58 Hz - 22 kHz	40 Hz - 22 kHz	32 Hz - 22 kHz
Sensitivity	88 dB	90 dB	91 dB
Recommended Amp Power	20 - 120 watts	20 - 150 watts	20 - 250 watts
Dimensions*	6.9" W x 11.5" H x 9.6" D*	7.9" W x 13.6" H x 12.3" D*	14.75" W x 45.5" H x 9" D*
Finish	Black Gloss or Natural Cherry	Black Gloss or Natural Cherry	Black Gloss or Natural Cherry
Optional Accessories	SST-28 speaker stand	SST-28 speaker stand	N/A

*Add 1" to depth for connection.

SPECIFICATIONS PC-3.5**PC-33.5****PC-Surr II**

Woofer	(2) 6.5" RPF/Glass/Kevlar flat piston	(2) 5.25" RPF/Glass/Kevlar flat piston	6.5" RPF/Glass/Kevlar flat piston
Midrange	1.5" woven, synthetic soft dome	N/A	(2) 4" polypropylene
Tweeter	1" woven, synthetic soft dome	1" woven, synthetic soft dome	(2) 1" woven, synthetic soft dome
Impedance	4 ohms	4 ohms	4 ohms
Frequency Response	36 Hz - 22 kHz	56 Hz - 22 kHz	60 Hz - 22 kHz
Sensitivity	90 dB	90 dB	89 dB
Recommended Amp Power	20 - 250 watts	20 - 200 watts	20 - 150 watts
Dimensions*	7.9" W x 22" H x 12.3" D*	6.9" W x 18" H x 9.6" D*	14.5" W x 15.25" H x 5.15" D*
Finish	Black Gloss or Natural Cherry	Black Gloss or Natural Cherry	Black Gloss or White
Optional Accessories	SST-28 speaker stand	SST-28 speaker stand	SST-28 speaker stand

*Add 1" to depth for connection.

Phase Technology Corporation www.phasetech.comMSE Audio 8005 W. 110th St., Suite 208 Overland Park, KS 66210 855.663.5600 www.mseaudio.com