

DP4000 IA

Thank you for purchasing the revolutionary dARTS Theater (Digital Audio Reference Theater System). This exciting entertainment system will provide the best possible sound reproduction of music and video programming in any room environment, and at every seat in that room.

Please take a few moments to study this Installation Guide to get the most out of your dARTS Theater system. Your professional installer will make every effort to place the speakers to take into account your room's natural acoustics, but will also accommodate your needs in making them fit into your decorating plans. dARTS Theater's perfectly matched speakers, and Audyssey MultEQ Pro® room correction software as implemented by your installer, will then work together to overcome the acoustic anomalies of your room and give you ideal sound at every seating location.

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DP4000 IA Features:

- Audyssey MultEQ Pro® calibration software
- Mini XLR mic input
- Large dual mode power supply
- Eight (8) XLR balanced Inputs
- Sixteen (16) configurable input/output channels
- Auto-on or I2V trigger



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Safety Instructions

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>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.</p>		

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.



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.

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.

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17. Grounding or Polarization - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.
18. 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.
19. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.
20. Appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

WARNING

21. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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Audyssey MultEQ Pro® Software Installation

Referring to Audyssey's calibration guide, your installer will use a professional calibrated microphone with his laptop computer to analyze your room's acoustic properties as they affect the entire seating area. This will give him the information to properly set up the volume levels and delays for each speaker, and then it will automatically generate a series of correction filters to load into your dARTS Theater DP4000 IA amplifier/speaker controller. This correction process will then return your speakers to their original perfectly matched levels, and remove the room's harmful acoustic contributions, leaving you with superb sonic performance that sounds the same at every seat in the room. One DP4000 IA can accommodate up to 8 speakers. For systems requiring more than 8 speakers use a second DP4000 IA.

Speaker Placement

dARTS Theater's ability to precisely match each speaker to one another yields a much more enveloping and accurate soundfield. This immersive entertainment experience will be enhanced if you follow a few basic rules of speaker placement. The front speakers (left, center, right) should all be placed in as close to a horizontal line as possible, and should be at or slightly above ear level while seated. The left and right speakers should be far enough apart (for example if seated 10 feet from your video display the speakers should be from 8-10 feet apart) to separate the information from each channel, but not so far as to create a discontinuity with the image on the video display. In addition to being in line with the front channels, the center speaker should be as close to the center of the display as possible, whether above/below the display, or behind a perforated projection screen. Please place the included rubber feet on the bottom corners of each speaker to keep it from vibrating against the shelf or stand on which it sits.

The surround speakers should be placed above ear level in most rooms. Whether you are using direct-radiating speakers or our switchable dipolar/bipolar speakers for the surround channels please pay attention to proper placement to create a large and enveloping soundfield. In a 5.1- channel configuration, you will use one pair of surround speakers. If your listening area is near the back wall, the best results can often be obtained by placing the surround speakers on the side walls, centered on your listening positions. With speakers directly to the sides, switching the surround speakers into "Dipole" mode (Not recommended) will create a very diffuse, nondirectional soundfield. If you prefer to have more localization of the surround effects, select the "Bipole" mode (Recommended) or use direct-radiating speakers to match the front channels. If your seating is away from the back wall, you can choose to mount your surround channels either beside or behind the listening position. For higher channel systems including Dolby Atmos® and DTS:X®, consult the Dolby or DTS website for proper speaker placement.

Experiment with both "Dipole" and "Bipole" surround settings with your installer to see which sounds best to you, so he can calibrate the room to your taste. Even if you choose Dipole mode the calibration must be done with speakers set in the Bipole mode. After calibration they can be change to the Dipole mode.

If you choose to implement 7.1-channel surround you will use a pair of surrounds to the sides, and another pair behind you, spaced evenly to fill the room. If you change your room's furnishings in any significant way (floor coverings, drapes, furniture) please have your installer recalibrate the room to return your system to its original target response curves.

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Your dARTS powered subwoofer(s) are specifically designed to blend with the dARTS main speakers. They perform well with either music or movies, augmenting the deep bass which is such an integral part of our emotional involvement. Although very deep bass is essentially nondirectional, the higher bass frequencies and the initial attacks of each note are often shared by the main speakers. Thus, subwoofers usually blend best when they are relatively close to the front channels. The dARTS Custom Built-In DCB2IOSUB is same width as the DCB660LR or slightly larger than the DCB535LR main speakers, so they can be readily used as speaker stands, ensuring proper integration and impact. If you do use the system in this way, please have your installer mount the included connecting brackets to lock the subs and main speakers together, with their fronts vertically aligned. The brackets allow for vertical adjustment of the main speakers to accommodate the use of isolation feet. The MultEQ Pro[®] room calibration software will account for sub placement (as it does for all speakers) while measuring your room and designing the correction curves, but the closer you can come to ideal placement, the better the results.

System Wiring and Connection

dARTS Theater systems are unique in that all speakers are either bi-amplified or triamplified. This means that each tweeter, and woofer set is connected to their own individual amplifier channel to allow for greater dynamic performance and flexibility in configuration. To take advantage of these connections, front main and surround channels need to be wired with four-conductor speaker wire. The horizontal box center channel is tri-amplified, (In-wall centers are bi-amplified), so it needs to have six conductors available. dARTS Theater recommends using 14 AWG speaker wire (no smaller than 16 gauge) for each of these connections. Wire with higher gauge numbers is thinner, and is not recommended.

The dARTS subwoofer includes its own 500-watt on-board power amplifier. It will need to have a shielded audio interconnect run to its "LINE INPUT L" jack from the DP4000 IA amplifier/controller's "SUB OUT 8" jack. The subwoofer's amplifier features both line-level inputs and outputs to daisy chain additional subwoofers which increase the bass performance in a large room. Have your installer run an additional shielded audio interconnect from the first sub's "LINE OUTPUT L" jack to the second sub's input "LINE INPUT L" jack, continuing on to as many subs as desired. The sub amp's volume control will be set during the calibration process, but can then be raised or lowered a bit to match your own desired bass levels in the room.

The heart of the dARTS system is the DP4000 IA digital amplifier/controller. It consists of a 16- channel power amplifier (up to 250 w/ch), the setup firmware used by dARTS Theater to individually match your speakers to each other (frequency response, crossover, time alignment), and space for the room correction program your installer will run to calibrate the system to your room. Each of your speakers will connect to the DP4000 IA with either two or three pairs of speaker wire. Your surround processor or receiver's preamp outputs will also be connected to the DP4000 IA. If desired, your installer can connect a 12 V DC trigger to the amplifier's "POWER CONTROL IN" jack from your surround processor or your automated control system to turn the amplifier on and off. There is also a "POWER CONTROL OUT" jack available to pass on the control voltage to another component in your theater system. The DP4000 IA also has automatic signal sensing circuitry that will turn the amp on when signal is present and turn it back off after 10 minutes without signal.

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The following tables show how each channel's wiring is connected to the amplifier/controller's input and output terminals:

Connections From DP4000 IA to Surround Preamp/Receiver

DP4000 Input	XLR Balanced Input	Preamp Output Channels
1	1	Left Front
2	2	Right Front
5	3	Center Channel
6	4	Subwoofer
9	5	Left Surround
10	6	Right Surround
13	7	Left Rear Surround in 7.1 System; Rear Center in 6.1
14	8	Right Rear Surround in 7.1 System

Connections From DP4000 IA to System's Speakers

DP4000 IA Output	Speaker Connections
1	Left Front Woofer
2	Left Front Tweeter
3	Right Front Woofer
4	Right Front Tweeter
5	Center Channel Woofer Note: Not connected if using a 2-way center channel speaker
6	Center Channel Woofer/Midrange
7	Center Channel Tweeter
8 (RCA "Sub Out 8" Jack)	To Subwoofer
DP4000 IA Output	Speaker Connections
9	Left Surround Woofer
10	Left Surround Tweeter
11	Right Surround Woofer
12	Right Surround Tweeter
13	Left Rear Woofer in 7.1 System (or Rear Center Woofer in 6.1 System)
14	Left Rear Tweeter; (or Rear Center Woofer in 6.1 System)
15	Right Rear Woofer
16	To Right Rear Tweeter

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Connections From DP4000 IA to Surround Preamp/Receiver

DP Input Number	XLR Balanced Input Number	Preamp Output Channels
1	1	Left Center Ceiling/Height
2	2	Right Center Ceiling/Height
9	9	Left Front Ceiling/Height
10	10	Right Front Ceiling/Height
13	13	Left Rear Ceiling/Height
14	14	Right Rear Ceiling/Height

Height or Ceiling speaker connections

DP4000 IA Speaker Output	Speaker Connections
1	Left Center Ceiling Woofer
2	Left Center Ceiling Tweeter
3	Right Center Ceiling Woofer
4	Right Center Ceiling Tweeter
9	Left Front Ceiling Woofer
10	Left Front Ceiling Tweeter
11	Right Front Ceiling Woofer
12	Right Front Ceiling Tweeter
13	Left Rear Ceiling Woofer
14	Left Rear Ceiling Tweeter
15	Right Rear Ceiling Woofer
16	Right Rear Ceiling Tweeter

PLEASE NOTE: Although these connecting directions are not "normal," based on conventional surround systems, they ARE correct for the dARTS system, and must be followed exactly for the system to operate properly and safely. Please do not plug the amplifier into AC power or turn it on until ALL system connections have been securely made.

Caring for Your DP4000IA

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. Aluminum enclosures may be cleaned with a damp cloth as necessary.

CAUTION: Avoid putting any liquids on any of the perforated areas of the enclosure

Maintenance and Service

Because of dARTS Theater's uncompromising quality control programs, it's unlikely that your DP4000 IA 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.

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Warranty

Limited Warranty

dARTS Theater 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 dARTS Theater. 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, the 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 dARTS Theater 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 913.663.5600 to obtain a Return Authorization number prior to shipping. Product repaired under this warranty will be returned to you freight collect.

