

[dARTS:™]

digital audio reference
theater system

535 SERIES CUSTOM BOX • 535 SERIES IN-WALL • 535 SERIES FREESTANDING
660 SERIES CUSTOM BOX • 660 SERIES IN-WALL • 660 SERIES FREESTANDING • 660 SERIES TOWER

In 1990, Phase Technology foresaw that the future of audio would morph into active digitally amplified speakers with complete DSP (digital signal processing) control over their performance. Years of R&D followed, with countless trials, and finally led to dARTS — digital Audio Reference Theater Systems. The original dARTS™ was received with astonishment by reviewers — it was the first sound reproduction system with predictable results in both the lab and the listening room. The latest version takes this technology a step further.

All of this world-class technology and sound quality wouldn't matter much if the system didn't fit into your home's style. Recognizing that, Phase Technology has developed numerous versions of dARTS™ systems to match your lifestyle and produce the necessary volume levels in your particular room. Phase Technology engineered all new drivers, utilizing manufacturing tolerance much tighter than any previously employed. Its efforts resulted in three-layer composite glass fiber/nomex honeycomb/ glass fiber drivers (3LC)—the best Phase Technology has ever built.

There are two different basic sizes of dARTS speakers, a 535 Series built around 5.25" woofers, and a larger 660 Series using 6.5" woofers. Within each family, Phase Technology offers three styles of speakers: In-Wall (IW) for discreet flush-mounting, with nothing protruding into your room; Custom Built-In (CB), which are painted black enclosures suitable for placement inside cabinets or behind perforated movie screens; and Freestanding (FS) beautiful curved and angled lacquer cabinets to make a bold statement in your room.

Since Phase Technology is a vertically-integrated manufacturer, building all its own dARTS speakers, customization capabilities are available so the perfectly matched speakers can perfectly match your listening room too. The CB versions in both the 535 and 660 Series can be customized in size and shape to fit within odd-shaped spaces.

The newest addition to the dARTS family, the 660T, is a powerful three-way tower speaker. As part of our 660 FS (freestanding) system, the 660T provides powerful performance for your visual and aural experience.

The minimum dARTS SPL spec is 105 dB in the last row of the theater. Each dARTS system is custom programmed and leaves our factory software-tuned with each speaker matching a target response curve within an inaudible +/- 0.5 dB. All systems use the DP-4000 amplifier (up to 250 watts x 16 channels @ 4 ohms; fully digital control of crossover points and slopes, frequency contouring, time/ phase alignment), and Audyssey Labs' MultEQ PRO® room correction system.



The Challenge – Two separate, but equally important challenges have long been recognized when building a world-class home theater or music system.

First, all speakers in a system must be able to create lifelike dynamics and be perfectly matched to produce a seamless and enveloping soundfield in the room. When all speakers ARE exactly matched, you'll hear just what the director intended as planes fly by overhead, as bullets whiz from one corner to another, and as characters walk across the screen as they talk.

The second is no matter how good (or expensive) a speaker is, it will sound different in every room. Walls, furniture, and other objects reflect and absorb the sound from your speakers, creating a sonic fingerprint, specific to your room.

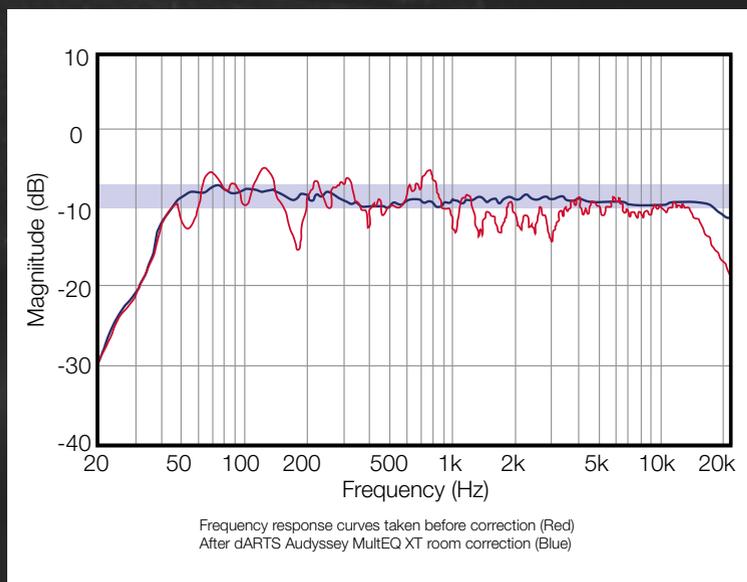
The System – Phase Technology has leveraged its speaker design expertise, spanning nearly six decades, to create the latest dARTS systems. Knowing that we needed to be able to perfectly match a complete multi-channel home theater system's speakers, we set out to engineer all-new drivers, utilizing manufacturing tolerances much tighter than any previously employed. The amplifiers for these new speakers would need to have very high output, and would also need to include very powerful DSP engines to allow us to control all of the various parameters of the speakers.

The DP-4000 digital/programmable amplifier manages the entire system with 16 channels of DSP and amplification. Each channel controls the crossover, time alignment, equalization and has 250-watt amplification for each individual driver (woofer, midrange, tweeter), and each subwoofer has its own 500-watt amplifier. To keep up with the resolution and dynamics of the amplifiers we utilized one of our unique woofer designs incorporating a three layer composite of glass fiber / nomex honeycomb / glass fiber, which is very light yet extremely rigid. By using digital control in a bi- and tri-amplified configuration we are able to achieve previously unreachable levels of accuracy and performance. Each system is then programmed to match within an incredibly tight 0.5 dB making it one of the most precise systems available.

The Room – In order to have predictable results in any room we partnered with Audyssey Laboratories, the inventors of the computerized MultEQ® system. Our customized version of MultEQ XT® analyzes a room's acoustics from multiple locations and based on the measurements, calculates a solution that corrects for both time and frequency response problems throughout the listening area creating an envelope of sound. This process equalizes multiple seating areas, making them all sound virtually the same.

The Installation – When your trained dARTS installer sets up the dARTS system in your room, he uses his laptop running the MultEQ XT Pro software with a calibrated microphone and digital interface to measure the acoustic properties of your room throughout the listening area. The acoustic properties of your room are then used to create a set of custom correction filters which are uploaded into the DP-4000. The result is a sound reproduction system that is perfectly matched and is restored to its target curve, just as it was when it left our lab. This performance can be achieved in virtually any room - large or small, bright or absorbent, open or enclosed - so you are assured of realistic, dynamic sound throughout YOUR listening area.

The Result – Phase Technology has developed a completely closed-loop system, where we knew from the very start how the system should sound in your room. Through digital technology we made it happen. With this amount of control over the entire process, the results are clearly audible. Now every seat is the best seat in the house.



Phase Technology's dARTS systems share similar performance parameters, regardless of series or style. Each dARTS system will meet its target curve and provide frequency response from 20 Hz - 30 kHz. All systems use the DP-4000 amplifier (up to 250 watts x 16 channels @ 4 ohms; fully digital control of crossover points and slopes, frequency contouring, time/phase alignment), and Audyssey Labs' MultEQ® XT room correction system. To choose the appropriate system for your room:

535 FS single sub systems will produce a minimum SPL of 105 dB (THX reference level) in a 2500 cubic foot room.
535 CB & IW dual sub systems will produce a minimum SPL of 105 dB (THX reference level) in a 8000 cubic foot room.
660 FS single sub systems will produce a minimum SPL of 105 dB (THX reference level) in a 5000 cubic foot room
660 CB, IW & T dual sub systems will produce a minimum SPL of 105 dB (THX reference level) in an 18,000 cubic foot room.

[dARTS: DP4000 amplifier]

A revolution in home audio, the DP4000 is a 4,000-watt digital signal processor/amplifier for dARTS. All crossovers, time, and equalization are done with the DP-4000 in the digital domain before amplification. Once the system is installed in the theater, it utilizes a custom integrated room correction program from Audyssey Laboratories® to calibrate the sound for your individual room's acoustics.

DP4000



Class D 16-channel Digital Amp/Controller
 Crossover: DSP based, adaptive
 FR: 20 Hz-20 kHz (+/- .05 dB)
 Harmonic Distortion: 0.05% (@ 1,000 Hz)
 Power Output: 125 c/ch @ 8 Ohms; 250 w/ch @ 4 Ohms
 Inputs: 8 balanced (XLR), 16 unbalanced (RCA)
 Power Requirements: 120/240v; 50/60 Hz
 Programming Port: USB

[dARTS: 535 series]



DCB-535-LR

(2) Main Speaker
 Tweeter: 1.125" soft dome
 Woofer: (2) 5.25" 3LC
 12" H x 12" W x 7.5" D



DCB-535-C

Center Speaker
 Tweeter: 1.125" soft dome
 Woofer: (2) 5.25" 3LC
 7" H x 18" W x 9.25" D



DCB-535-SURR

(2) Surround Speaker
 Tweeter: (2) 1" soft dome
 Woofer: (2) 5.25" 3LC
 15.25" H x 10.5" W x 5" D



DCB-112-SUB

Subwoofer
 Driver: 12" Poly/NBR
 15.5" H x 14.5" W x 15" D



DIW-535-LCR

(3) Main Speaker
 Tweeter: 1.125" soft dome
 Woofer: (2) 5.25" 3LC
 19.25" H x 14.25" W x 3.9" D



DIW-535-SURR

(2) Surround Speaker
 Tweeter: (2) 1" soft dome
 Woofer: (2) 5.25" 3LC
 15.25" H x 10.5" W x 5" D



DCB-115-SUB

Subwoofer
 Driver: 15" Poly/NBR
 19.5" H x 15.25" W x 22.4" D



DFS-535-LR

(2) Main Speaker
 Tweeter: 1" soft dome
 Woofer: 5.25" 3LC
 11.5" H x 6.6" W x 9.6" D



DFS-535-C

Center Speaker
 Tweeter: 1" soft dome
 Woofer: (2) 5.25" 3LC
 6.6" H x 18" W x 9.6" D



DFS-535-SURR

(2) Surround Speaker
 Tweeter: (2) 1" soft dome
 Woofer: (2) 5.25" 3LC
 15.25" H x 10.5" W x 5" D



DFS-112-SUB

Subwoofer
 Driver: 12"
 15.5" H x 14.5" W x 15" D

[CUSTOM BOX]

[IN-WALL]

[FREESTANDING]

[dARTS: 660 series]



DFS-660-T

(2) Main Tower Speaker
Tweeter: 1.125" soft dome
Woofer: (3) 6.5" 3LC
45.5" H x 9" W x 14.7" D



DFS-660-C

Center Speaker
Tweeter: 1.125" soft dome
Woofer: (2) 6.5" 3LC
22" H x 7.9" W x 12.3" D



DFS-SURR

(2) Surround Speaker
Tweeter: (2) 1" soft dome
Woofer: (2) 6.5" 3LC
19.25" H x 10.5" W x 5" D



DFS-112-SUB

Subwoofer
Driver: 12" Poly/NBR
15.5" H x 14.5" W x 15" D

[TOWER]



DCB-1.0-LR

(2) Main Speaker
Tweeter: 1.125" soft dome
Woofer: (2) 6.5" 3LC
14" H x 14" W x 9" D



DCB-5.0-C

Center Speaker
Tweeter: 1.125" soft dome
Woofer: (2) 6.5" 3LC
8.25" H x 18.75" W x 12" D



DCB-SURR

(2) Surround Speaker
Tweeter: (2) 1" soft dome
Woofer: (2) 6.5" 3LC
19.25" H x 10.5" W x 5" D



DCB-210-SUB

Subwoofer
Driver: (2) 10" Poly/NBR
28" H x 14" W x 17" D

[CUSTOM BOX]



DIW-1.0-LCR

(3) Main Speaker
Tweeter: 1.125" soft dome
Woofer: (2) 6.5" 3LC
23.5" H x 14" W x 3.5" D



DIW-SURR

(2) Surround Speaker
Tweeter: (2) 1" soft dome
Woofer: (2) 6.5" 3LC
23.5" H x 14" W x 3.5" D



DCB-210-SUB

Subwoofer
Driver: (2) 10" Poly/NBR
28" H x 14" W x 17" D

[IN-WALL]



DFS-660-LR

(2) Main Speaker
Tweeter: 1.125" soft dome
Woofer: 6.5" 3LC
13.6" H x 7.9" W x 12.3" D



DFS-660-C

Center Speaker
Tweeter: 1.125" soft dome
Woofer: (2) 6.5" 3LC
22" H x 7.9" W x 12.3" D



DFS-SURR

(2) Surround Speaker
Tweeter: (2) 1" soft dome
Woofer: (2) 6.5" 3LC
19.25" H x 10.5" W x 5" D



DFS-112-SUB

Subwoofer
Driver: 12" Poly/NBR
15.5" H x 14.5" W x 15" D

[FREESTANDING]