CRYSTALACOUSTICS

Reference Speakers

Experience
Home Theatre
as the artist
intended





Enjoy the absolute reference in music and movies listening

- THX Ultra2 Certified Speakers
- NEW design and tuning for deep bass without any need for a Sub
- Triple chamber towers for optimum low frequency reproduction
- · Controlled dispersion, making every seat a good seat
- Luxurious combination of high gloss and black ash finish



Rotating top tweeter



Conical phase plug



Kevlar Woofer



Quick excursion suspension



Powerful woofer magnet



Gold plated, dual cable connectors



Black gloss finish with black ash wood veneer



Bass reflex



±1.5

Horizontal and vertical dispersion with extremely flat and accurate frequency response

Technical Specifications

Input Power (Watt RMS) 200 Triple Chamber Bass Control Sensitivity (dB/2.83V/1m) 92 Impedance (Ohm) 8 Frequency Response (Hz) 33 - 22k A' CHAMBER Woofer Midrange 3 x 6.5" Tweeter B' CHAMBER Crossover 3.5 way Maximum Power Handling (Watt) 400 Minimum Impedance (ohm) 3,2 Critically braced inert cabinet without resonance Cabin Sub-chambers 3 Two different bass reflex ports for ____ optimum low frequency tuning Bass Reflex Ports 2 Electronic Protection Yes C' CHAMBER Gold Platted Connectors Yes Bi-Wiring Magnetic Shielding Yes Dimensions WxHxD (mm) 210 x 1073 x 340 Color SE Black





TX-T2 Special Edition



Excellent sound quality Dual chamber enclosure and external top tweeter

- External, rotating tweeter for wide sound dispersion without diffractions.
- Excellent dispersion for a totally realistic, wide soundfield.
- Dual chamber design and bass reflex ports for powerful, room filling low frequencies.



Rotating top tweeter



Conical phase plug



Kevlar Woofer



Quick excursion suspension



Powerful woofer magnet



Gold plated, dual cable connectors



Black gloss finish with black ash wood veneer



Bass reflex port



±1.5

Horizontal and vertical dispersion with extremely flat and accurate frequency response

Technical Specifications

Input Power (Watt RMS) 150 **Dual Chamber Bass Control** Sensitivity (dB/2.83V/1m) 91 Impedance (Ohm) 8 Frequency Response (Hz) 35 - 22k Woofer Midrange 2 x 6.5" A' CHAMBER Tweeter 1" Crossover Maximum Power Handling (Watt) 300 Two different bass reflex ports for optimum low frequency tuning Critically braced inert cabinet without resonance Minimum Impedance (ohm) 3,2 Cabin Sub-chambers 2 Bass Reflex Ports 2 Electronic Protection Yes B' CHAMBER Gold Platted Connectors Yes Bi-Wiring Magnetic Shielding Yes Dimensions WxHxD (mm) 200 x 1011 x 300 Color SE Black







THX Ultra2 Certified Speaker for all placements

- THX Ultra2 Certified Speakers
- Reduced cabin depth for easy placement
- Suitable for the Front or Center channel
- · Elegant and discreet
- Wall mounting system attached on the speaker
- Controlled disperion for real-life dialogues anywhere you sit
- Black or white ash finish to match any décor



New Compact Design



Satisfying reproduction of all types of music



Controlled Sonic Dispression



Gold-palted Connectors



Gold plated, dual cable connectors



Quick excursion suspension



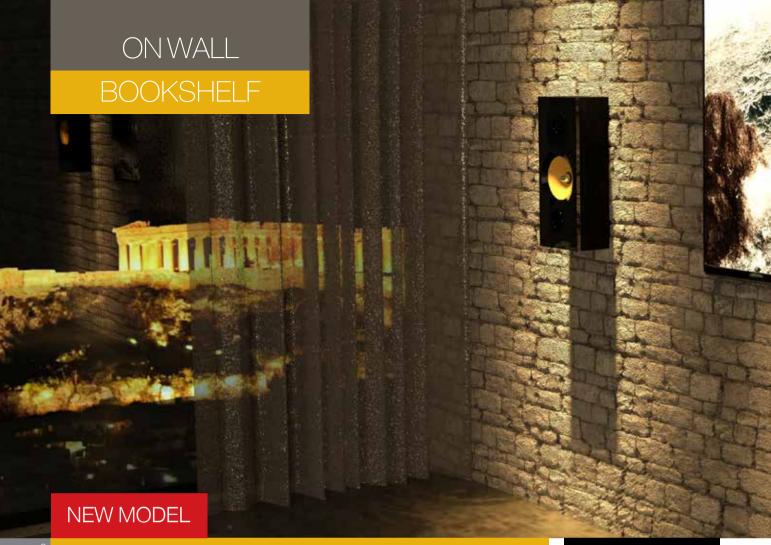
/" Woofer



Conical phase plug







LCR-S



THX Select 2 Certified Speaker for all placements

- THX Select Certified Speakers
- · Reduced cabin depth for easy placement
- Suitable for the Front or Center channel
- Elegant and discreet
- Wall mounting system attached on the speaker
- Controlled disperion for real-life dialogues anywhere you sit
- Black or white ash finish to match any décor



New Compact Design



Satisfying reproduction of all types of music



Controlled Sonic Dispression



Gold-palted Connectors



Gold plated, dual cable connectors



Quick excursion suspension



7" Woofer



Conical phase plug



Input Power (Watt RMS) 100 Sensitivity (dB/2.83V/1m) 89

Impedance (Ohm)

Frequency Response (Hz) 45 - 22k

Woofer Midrange 6.5"

Tweeter 1" Neodymium Magnet Crossover 2 way

Maximum Power Handling (Watt)

Minimum Impedance (ohm) 3,2

> Electronic Protection Yes

Gold Platted Connectors

Magnetic Shielding Yes

Dimensions WxHxD (mm) 210 x 460 x 140

> **Special Edition Black** Color

Horizontal and vertical dispersion with extremely flat and accurate frequency response







Create the real cinematic "in-the-action" sound for your Home Theatre setup

- Awarded THX Select Certified Dipoles
- Dipole design for immersing effects
- Electronic protection at the tweeters for safe function at high levels
- Balanced sound reproduction for realistic effects and ambient sounds
- Wall mounting system attached on the speaker
- · Luxurious combination of high gloss and black ash finish



Conical phase plug



Kevlar Woofer



Quick excursion suspension



Powerful woofer magnet



Gold plated, dual cable connectors



Black gloss finish with black ash wood veneer



Bass reflex port



Technical Specifications

extremely flat and accurate frequency response

Input Power (Watt RMS) 100 88 Sensitivity (dB/2.83V/1m)

> Impedance (Ohm) 8

Frequency Response (Hz) 45 - 22k

> Woofer Midrange 1 x 6.5"

> > Tweeter 1" Neodymium Magnet 2 way

Crossover Maximum Power Handling (Watt) 200

Minimum Impedance (ohm) 6,4

> Cabin Sub-chambers 1

Bass Reflex Ports 1

Electronic Protection Yes

Gold Platted Connectors Yes

Bi-Wiring

Magnetic Shielding Yes

Dimensions WxHxD (mm) 310 x 310 x 147

> Color SE Black

Yes





Dual chamber enclosure for rich and clean low frequencies

- Dual chamber design and bass reflex ports for powerful, room filling low frequencies.
- Excellent dispersion for a totally realistic, wide soundfield.
- Electronic protection for safe operation on high listening levels.



Conical phase plug



Kevlar Woofer



Quick excursion suspension



Powerful woofer magnet



Gold plated, dual cable connectors



Black gloss finish with black ash wood veneer



Bass reflex port



±1.5

Horizontal and vertical dispersion with extremely flat and accurate frequency response

Technical Specifications

Input Power (Watt RMS) 150 **Dual Chamber Bass Control** Sensitivity (dB/2.83V/1m) 91 Impedance (Ohm) 8 Frequency Response (Hz) 35 - 22k Woofer Midrange 2 x 6.5" Tweeter 1" A' CHAMBER Crossover 2 way Maximum Power Handling (Watt) 300 Minimum Impedance (ohm) 3,2 Critically braced inert cabinet without resonance Cabin Sub-chambers Two different bass 2 reflex ports for optimum low frequency tuning Bass Reflex Ports 2 Electronic Protection Yes Gold Platted Connectors Yes B' CHAMBER Bi-Wiring Yes Magnetic Shielding Yes Dimensions WxHxD (mm) 180 x 961 x 250 SE Black Color







TX-B1

Bookshelf speaker with external top tweeter

- External, rotating tweeter for wide sound dispersion without diffractions.
- Quick, tight and powerful low frequency output from the 6.5" woofer.
- Optimised low frequency output with bass reflex port. High quality performance from a small enclosure.
- Realistic music reproduction even without a subwoofer.



Rotating top tweeter



Conical phase plug



Kevlar Woofer



Quick excursion suspension



Powerful woofer magnet



Gold plated, dual cable connectors



Black gloss finish with black ash wood veneer



Bass reflex port





Horizontal and vertical dispersion with extremely flat and accurate frequency response

Technical Specifications

Input Power (Watt RMS) 100
Sensitivity (dB/2.83V/1m) 89
Impedance (Ohm) 8

Frequency Response (Hz) 45 - 22k

Woofer Midrange 1 x 6.5"

Tweeter 1" NEOD

Crossover 2 WAY

1" NEODYMIUM MAGNET

Maximum Power Handling (Watt) 200

Minimum Impedance (ohm) 3,8

Cabin Sub-chambers 1

Bass Reflex Ports 1

Electronic Protection Yes

Gold Platted Connectors Yes

Bi-Wiring Yes

Magnetic Shielding Yes

Dimensions WxHxD (mm) 194 x 330 x 230

Color SE Black





Compact

Slim speaker suitable for all Front, Center and Surround channels

- Slim and elegant speaker that can be placed anywhere
- · Suitable for the Front, Center or Surround channel
- Elegant and discreet
- Wall mounting system attached on the speaker
- 2x3" powerful woofers for clear and uncompressed sound
- To be partnered with a subwoofer to deliver a level of performance previously unheard of, at this modest price point



New Compact Design



Satisfying reproduction of all types of music



Electronic Tweeter Protection



Gold-Plated Connectors



Luurious Glossy Black Finish



3" Woofer





Horizontal and vertical dispersion with extremely flat and accurate frequency response

Technical Specifications

Input Power (Watt RMS) 100@120Hz, 150@150Hz

Sensitivity (dB/2.83V/1m) 90 8

Impedance (Ohm)

Frequency Response (Hz) 120 - 22k

Woofer Midrange 2 x 3"

> Tweeter 1" Aluminum

Crossover 2 way

Maximum Power Handling (Watt) 250@200Hz

Minimum Impedance (ohm)

Electronic Protection Yes

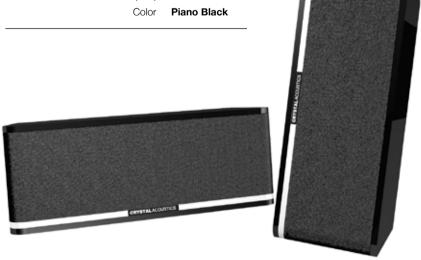
Gold Platted Connectors Yes Magnetic Shielding

Dimensions WxHxD (mm) 80 x 105 x 440



Designed to be used with **THX Select** Certified Subwoofers and 150Hz AV receiver crossover







Which amplifier should I choose?

Anyone!

Crystal Acoustics loudspeakers are "friendly" towards any amplifier because of their:

High Sensitivity

This means that even relatively low power amplifiers can yield high output. Even a few watts of power from your amplifier are more than enough, for an SPL output that will allow you to enjoy music and movies.

Nominal Impedance rating of 8 Ohm

This means that these loudspeakers are not considered a difficult load for amplifiers in general. The impedance of each loudspeaker is variable in accordance to the frequency and thus on many frequencies it happens to be far more than 8 Ohm. The best measurement is that of the lowest impedance.

Low impedance loudspeakers benefit from higher sensitivity and powerful output, because they draw more power from the amplifier. For this reason, loudspeakers with lower impedance are preferable, but no lower than 3.2 Ohm.

Many amplifiers offer two choices (6 or 8 Ohm) as per the

loudspeaker setting. It is best to choose the 6 Ohm setting in case you connect a second pair of loudspeakers with a minimum impedance between the 3 to 4 Ohm mark. This case would occur if you connected a pair of TX-B1 instead of a THX-D for the surround channels or on a second zone in another room.

High maximum power rating

If you crave high level listening, Crystal Acoustics loudspeakers are designed for high output without being prone to damage. The tweeters' electronic protection on all of our loudspeaker range protects and warns of imminent damage or failure of the high frequency units, as well as of your AV amplifier.

In case you surpass the safe operational levels of the loudspeaker or your amplifier outputs audible distortion, the electronic protection circuit will temporarily cut-off the audio signal from reaching the tweeters. In this case, you must lower your amplifier's volume.

In any case though, we encourage you to purchase the best and most powerful amplifier you can within your budget. The more powerful the amplifier, the lower the chance of distorted signal output. This way you will protect the loudspeakers and also, you will enjoy higher quality, uncompressed audio.



What is ?

THX, the trademark of THX Ltd., is the ultimate set of standards for home cinema sound. It incorporates a series of patented electronic and loudspeaker specifications designed to bring the cinema experience right into your home.

THX Certified home theatre products deliver cinema-quality picture and Hi-end sound to home environments. Through optimized audio-visual technology and speaker placement, you get a movie experience at home that's as faithful as possible to what the director intended.

Products certified by THX guarantee the best possible quality in music and theatre sound.

THX Certification is the "seal of approval" in loudspeaker quality. It is the absolute guarantee that your loudspeakers will reproduce all music and film material in the way that the composer and film director respectively intended.

Why should I choose THX certified loudspeakers?

THX Certified Home Theater products offer the most consistently accurate, trouble-free audio reproduction. THX certified equipment offers comprehensive solutions for multichannel audio formats based on their end to end home entertainment expertise and ensure:

- · Dialogue clarity
- · Sharp audio positioning
- Enveloping surround sound that puts the audience into the action
- · Thunderous bass and crystal clear highs
- Maximum contrast between quiet and loud sounds
- · Smooth and continuous audio steering

What are the advantages of front & centre THX Certified loudspeakers?

Front channel imaging is extremely important in producing accurate sound. For films, the audio has to match the picture perfectly. Home THX front channel speakers improve dialogue intelligibility and imaging in two ways:

First, they provide wide horizontal dispersion. This allows for people sitting off-axis, to benefit from a full and flat frequency response.

The second technique is to control the speakers' vertical dispersion. Audio engineers have found that the ceiling and floor reflections deteriorate a speaker's sound "image". In addition, the coloration that occurs due to these vertical reflections, negatively affect intelligibility.

Is THX a multichannel format like Dolby Digital and DTS?

Many consumers erroneously consider THX a multi-channel audio format, similar to Dolby and DTS. THX is a certification program which guarantees the finest picture and sound quality for cinemas, mixing studios, home cinemas, Blu-rays, multimedia products, and luxury automotive vehicles.

Are THX loudspeakers suitable for music listening as well?

Yes. The speakers in a THX home cinema system (both Ultra2 and Select) are optimized for multi-channel audio (4 or 5.1 channels), so you get better imaging and clarity from the front speakers, and more envelopment from the surround speakers. Both of these benefits are ideal for music reproduction.

The correct placement of loudspeakers

Placing your front speakers

The greater the distance of the speakers from the walls, the better their frequency response.

Place the main speakers slightly in front of the TV and not at the same line with it, so that he distance of the main speakers from the listening position is identical to that of the center speaker. Placing the speakers this way, reduces the reflections from the TV screen as well. The speakers must form an isosceles triangle with the listening position. The speakers are placed in font of the listener, just like a live

position. The speakers are placed in font of the listener, just like a live orchestra.

The greater the distance between the main speakers, the wider the stereo image. However you must be careful not to place the speakers too far apart, or you will create an acoustic "hole" between them.

The tweeter must be placed at ear level when seated at the listening position and there should be no obstacles in the direct path between the loudspeakers and your ears.

Slightly turning the speakers towards the listening position improves the audio focus, but it reduces the dimensions of the sound image. This affects some speakers more than others. Experimentation is the best way to determine this...

All loudspeakers have a break-in period. Run the loudspeakers in moderate playback volume for at least 30 hours before critical listening.

Placing your Center speaker

Align its front in parallel with the TV screen, in order to reduce diffraction. Diffraction is the secondary sound generated when a sound wave meets a discontinuity.

If the center speaker is placed below the TV, tilt it upwards, towards the listeners. If it is placed above the TV, tilt it downwards accordingly.

Make sure that the centrer speaker is not placed above or below the tweeter level of the main speakers, by more than 60-70 cm.

Placing your Surround speakers

The reflections from the dipole or bipolar surround speakers are useful, as opposed to the reflections of the main loudspeakers that have a negative effect in sound quality.

- The tweeter must not aim your ears.
- The sound must be directed towards a wall so that it reaches your ears indirectly (reflected sound).
- It is preferable that they are placed at least 50cm above ear level.

Placing your Subwoofer

The successful placement and adjustment of a subwoofer, requires extensive experimentation. A correctly placed and adjusted subwoofer generates sound waves that cannot be localized like the ones coming from a full range loudspeaker.

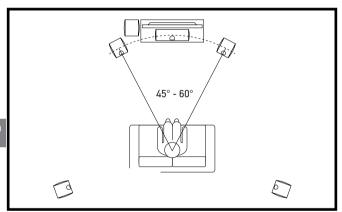
Place the subwoofer near the listening position. Play a jazz track with abundant, continuous low frequencies. Get down on your knees and start crawling around the edges of your room. Mark the exact point where the bass sounds the clearest. Now change places. Place the subwoofer on that exact spot and sit at your main listening position. You should hear the same, clean low frequencies.

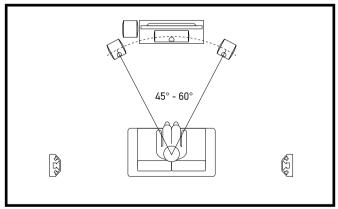
Avoid placing the subwoofer in an equidistant position between two walls. If for example the width of the room is 8m, avoid placing the subwoofer at the middle of this distance (4 m).

Also, avoid placing your subwoofer in the corner and at the same distance from the two corner walls. Place the subwoofer as close to the listening position as possible. This way you will experience more of the direct output from your subwoofer, instead of the reflections of your room.

The use of two subwoofers, on the left and on the right of the listening position is ideal, albeit a more expensive solution.

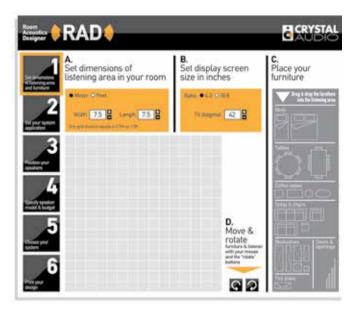
The ideal location for the subwoofer may not be practical. Think of the decor of the room and make sure the subwoofers are not in the way. Experiment with various locations based on the above suggestions. You will be rewarded with a much better audio experience.





Room Acoustics Designer®

Easily design the placement in your room



The Room Acoustics Designer is an interactive application, entirely designed by Crystal Acoustics. Through this tool, the user can choose various loudspeaker models, based on his personal preference as well as the room's size. At the same time, the program advises the user as for the placement of the loudspeakers, based on the room's dimensions as well as any furniture that is present.

The Room Acoustics Designer is more than a simple application that chooses loudspeakers according to user input.

The benefits of using RAD are:

- Optimal placement of the loudspeakers based on room dimensions as well as TV/projection screen size.
- A pleasant user interface that is easy to understand.
- \bullet When the user changes his listening position, all of the defined elements (loudspeakers, TV/projection screen) are automatically realigned to the acoustic principles.

The Room Acoustics Designer is a patented application and is free to use on Crystal Acoustics main website.

www.crystalacoustics.com

WiSound's Research & Development engineers cooperate with leading technology universities, organizations and institutes in order to develop new technologies and bring them to the use of the final customer.

We are especially proud for our cooperation with the leading Audio Laboratory of Patras University and professor Mourjopoulos.

The results of our engineering research have been presented on many major AES (Audio Engineering Society) conferences. The themes include digital equalization of subwoofers and satellites with variable placement options, and a pioneering measurement, evaluation and design system for the digital equalization of Home Theatre.

Research and Development

Features and Benefits



Ultra narrow front baffle for clear, precise and focused stereo image.



A separate woofer unit that radiates sound from the back of the loudspeaker for pleasant and room filling sound

that is as realistic as possible.



Diffused high frequency soundfield. An indirect portion of sound reaches the listener, creating a spacious and enveloping sensation.



Bipolar pair with wide dispersion, according to the THX specifications. Enjoy a perfect sense of depth like in a real live concert or action flick.



Downfiring woofer with Uniform LFE dispersion. The subwoofer is not localizable, even at higher crossover settings.



Extremely linear behavior. Very rigid and low mass material. Ultra fast response. Clear, smooth, detailed low and mid frequencies.



Magnetic shielding for the protection of CRT TVs, magnetic storage media and other sensitive equipment.



Electronic tweeter protection for the early warning against possible loudspeaker or AV receiver damage.



8-inch woofer made of light, rigid material for extended low frequency output, despite the small enclosure.



10-inch woofer made of light, rigid material for extended low frequency output in normal sized rooms.



12-inch light material woofer Thunderous bass and excellent extension for lifelike realism in music and movies.



High quality 120W power amplifier for clean, extended low frequencies with quick transitions.



High quality 200W power amplifier for high, undistorted output and clean, extended low frequencies with quick transitions.



On wall installation for less cables and more free space on your floor.



Wireless amplifiers for the conversion of any loudspeaker to a cable-free unit, with high quality uncompressed digital sound.



Rotating, top mounted tweeter for a more precise high frequency focus and wide stereo imaging with no diffractions.



High gloss finish with real wood veneer sides, for the extra elegance your room is craving for.



Bass Reflex port for a wide 360 degree dispersion. Realistic, clean bass with excellent separation from the mid and high frequencies.



High power magnet woofer for extensive output with low distortion, even with small amplifiers.



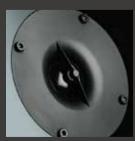
Molded frame made of high quality mechanical parts with excellent magnetic properties.



Conical phase plug for wide mid and high frequency dispersion.



Kevlar woofer for extremely linear mid and low frequency response.



Tweeter with protective "lens" for a precise, wide stereo image with no diffractions.



Alucone woofer from a synthetic, high mass material of extreme rigidity and velocity, for precise reproduction, clean transitions and undistorted sound



Aluminum 1" tweeter with high density magnet, for excellently detailed high frequencies.

SPEAKER TYPES

MAIN

SURROUND









TX-B1



INPUT POWER (Watt RMS)

SENSITIVITY (dB/2.83V/1m)

FREQUENCY RESPONSE (Hz)

MAX POWER HANDLING (WATT)

MINIMUM IMPEDANCE (OHM)

ELECTRONIC PROTECTION GOLD PLATTED CONNECTORS

CABIN SUB-CHAMBERS

BASS REFLEX PORTS

IMPEDANCE (Ohm)

SUBWOOFER WOOFER /MID

MIDRANGE

TWEETER CROSSOVER

BI-WIRING MAGNETIC SHIELDING

WALL MOUNT

200 91 8 33-22k 3 x 6.5" 1" NEODYMIUM MAGNET 3,5 WAY 400 3,2 2 210 x 1073 x 340

TX-T2 SE SPECIAL EDITION 150 91 8 35 - 22k 2 x 6.5" 1" NEODYMIUM MAGNET 2 WAY 300 3,2 2

150 91 8 36 - 22k 2 x 6.5" 1" SILK DOME 2 WAY 300 180 x 961 x 250 100 89 8 45 - 22k 1 x 6.5" 1" NEODYMIUM MAGNET 2 WAY 200 3,8 1 194 x 330 x 230

LCR-U

150 91 8 35 - 22k 2 x 6.5" 1" NEODYMIUM MAGNET

300 3,2 300 x 600 x 170

2 WAY

SE BLACK

SE BLACK

Black gloss finish with black ash wood veneer

DIMENSIONS WxHxD (mm) HORIZONTAL & VERTICAL PLACEMENT

2.0 2.1

SE BLACK

200 x 1011 x 300

SE BLACK

SE BLACK

TYPE OF USE

5.1 7.1

TX-T3-12 7.1



TX-T2-12

SUGGESTED SYSTEMS



for the best performance in your room!

CENTER















TX-12 SUB

LCR-S	
100	
89	
8	
45 - 22k	
1 x 6.5"	
1" SILK DOME	
2 WAY	
200	
3,8	
1	
1	
•	
•	
•	



тнх-с	
100	
89	
8	
45 - 22k	
1 x 6.5"	
1" NEODYMIUM MAGNET	
2 WAY	
200	
3,2	
1	
2	
•	
•	
•	
•	
550 x 215 x 162	
•	

DIPOLE
100
88
8
45 - 22k
1 x 6.5"
2 x 1" SILK DOME
2 WAY
200
6,4
1
1
•
•
•
310 x 310 x 147
•

SE BLACK

TX-8 SUB
100
45- 180 8"
200
1
•
• 22 x 42 x 39

100
20-350
10"
THX & VARIABLE
240
1
2
•
•
28 x 47 x 47

BLACK

_		
	200	
	-	
	15-350	
	12"	
	THX & VARIABLE	
	400	
	-	22
	1	23
	- 1 2	23
		23
		23
		23
		23
		23
	•	23
	•	23

✓

√

210 x 460 x 140

SE BLACK







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✓
✓

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Awarded products Best value for money















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www.crystalacoustics.com

