

# CINEMA SPEAKER CABLES

X-TUBE™ WITH POLYCORE TECHNOLOGY

XTC • XT Cinema Speaker Kit



September 2010  
**WHAT HI-FI?**  
SOUND AND VISION  
★★★★★



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Demand Better



QED are proud to present two new speaker cables designed specifically for the Home Cinema enthusiast. Both cables incorporate the significant technological advances born out of the QED Genesis Report while remaining excellent value for money given the extra cable required in a Home Cinema application.

Not everyone has the luxury of being able to install speaker cables beneath a new floor or in a newly constructed living room wall so in a Surround Sound system the cables need to be discreet so that they can be routed unobtrusively to all points of the room. This means a cable small enough to fit under the carpet or around the contours of the skirting boards; both QED XTC and XT-Cinema have been designed with this criterion in mind. At the same time a small cable means reduced cross sectional area and therefore higher cable impedance so both cables incorporate QED's X-Tube™ technology in order to even out cable impedance across the entire audio frequency range. In this way we have developed a small cable that performs just as well as many larger ones.

## XTC

QED XTC 99.9999% OFC WITH X-TUBE™ TECHNOLOGY

This cable is based upon the award winning Silver Anniversary X-Tube™ speaker cable but has received accolades of it's own.

Designed with the Home Cinema user in mind the cable is similar in construction to its more expensive sibling except for its all copper construction and jacket material. It features an easy to strip PE jacket in a traditional figure 8 arrangement with polarity markings. The conductors are constructed of three tightly woven 99.999% oxygen free copper braids surrounding a semi-hollow polyethylene core. The cable benefits from the reduced inductance and evenly distributed current density afforded by X-Tube™ technology (see right). Because of this the conductor spacing can be increased to achieve a corresponding decrease in the overall cable capacitance – this can lead to improvement in signal phase shift especially at high frequencies. The cable is available from all QED Preferred Dealers in custom terminated lengths using Airloc™ Speaker plugs.

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**WHAT HI-FI?**  
SOUND AND VISION



"Balanced sound, good dynamics and detailing"  
WHF 5 star review September 2010

### Features:

- 3 x 99.999% Oxygen Free copper braids
- Cross-sectional area 1.5mm<sup>2</sup>
- Capacitance 16.6pF/m
- Loop Inductance 0.69µH/m
- Loop resistance 25.0mΩ/m
- Dissipation Factor@10kHz: 0.0125
- Nominal outside diameter 4 x 10mm

## XT-Cinema Speaker Cable Kit

This kit is an all new design which contains everything you need to hook up a complete 5.1 Home Cinema Speaker System. It perfectly compliments the award winning Q Acoustics 7000 Speaker System. The cordage is designed to be a smaller and more discreet version of XTC optimised for use by the home installer and features the same X-Tube™ technology to reduce cable inductance – with a tiny 3mm outside diameter it can be routed unobtrusively to all corners of the room.

The easy strip PVC jacket can be removed with non-specialist tools and the ten gold plated 4mm speaker plugs provided in the kit require only an ordinary screwdriver in order to fit them. Ten channel labels are provided so that each cable can be easily identified at both ends. A speaker plug extension pack is available should both the speakers and amplifier feature 4mm socket connections rather than screw terminals or spring clips.



### Features (30m speaker cable kit for 5.1 systems):

- 3 x 99.999% Oxygen Free copper braids
- Cross-sectional area 1.25mm<sup>2</sup>
- Capacitance 52pF/m
- Loop Inductance 0.56µH/m
- Loop resistance 28.6mΩ/m
- Dissipation Factor@10kHz: 0.0547
- Nominal outside diameter 3 x 6.8mm

### X-TUBE™ WITH POLYCORE TECHNOLOGY - HOW IT WORKS

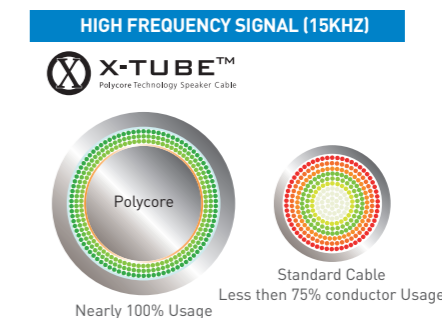
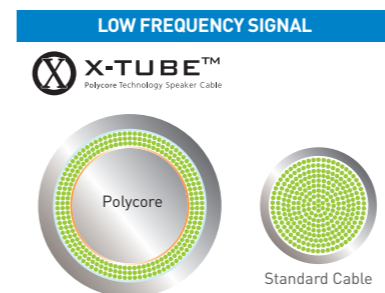
1. At low frequencies both X-Tube™ and conventional stranded/solid core speaker cable convey signals in a linear way. This is represented by the uniform green colour of the strands shown in the two diagrams below.
2. At higher frequencies, X-Tube™ retains a near-linear signal transfer, whereas the conventional stranded/solid core cable fails effectively to conduct higher frequencies uniformly across the entire conductor area.

The diagram shows excess current density at the periphery

(designated in red) and rapidly deteriorating current density (green through to white) towards the centre of the conductor.

The effect of this is to reduce the actual cross sectional area of the cable at 15kHz to less than 75% of that at low frequencies. The result induces distortion and compromises the performance of the cable.

X-Tube™ with Polycore technology exhibits much lower self-inductance and is therefore less affected by this problem. The Polycore reduces loop inductance to levels only achievable by using more costly and difficult to terminate cables.



As conductor size increases, one of the big problems is how to keep the inductance low. This is vital to reducing losses and avoid inaccuracies in the signal transfer process.

The accepted method is use more insulated conductors within a cable. This is typified in the design of our Genesis cable. However, this results in a product that is expensive to manufacture and difficult to terminate.

X-Tube™ forms the conductor in the shape of a tube with an inner aircore. This has the same effect as using multiple insulated conductors and ensures that the high frequencies are transmitted cleanly, with the added benefit of easy termination and low flux levels for much improved signal transparency.